

OPERATOR'S, ORGANIZATIONAL,
DIRECT SUPPORT, GENERAL SUPPORT,
AND DEPOT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS
AND SPECIAL TOOLS LISTS

CONTROL- KEYBOARD
C-7185, PG

This copy is a reprint which includes current
pages from Changes 1 through 4.

WARNING
DANGEROUS VOLTAGES EXIST IN THIS EQUIPMENT

Be careful when working anywhere within the enclosure of this equipment. Serious injury or death may result from contact with high-voltage terminals.

DON'T TAKE CHANCES!

**Operator, Organizational, Direct Support, General Support, and Depot,
 Maintenance Manual Including Repair Parts and Special Tools Lists
 CONTROL-KEYBOARD C-7185/G**

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4-12 - 4-13.....	4	D-10 Blank.....	4
4-14.....	1	1.....	4
4-15.....	3	2-8.....	3
4-16.....	4	9-10.....	4
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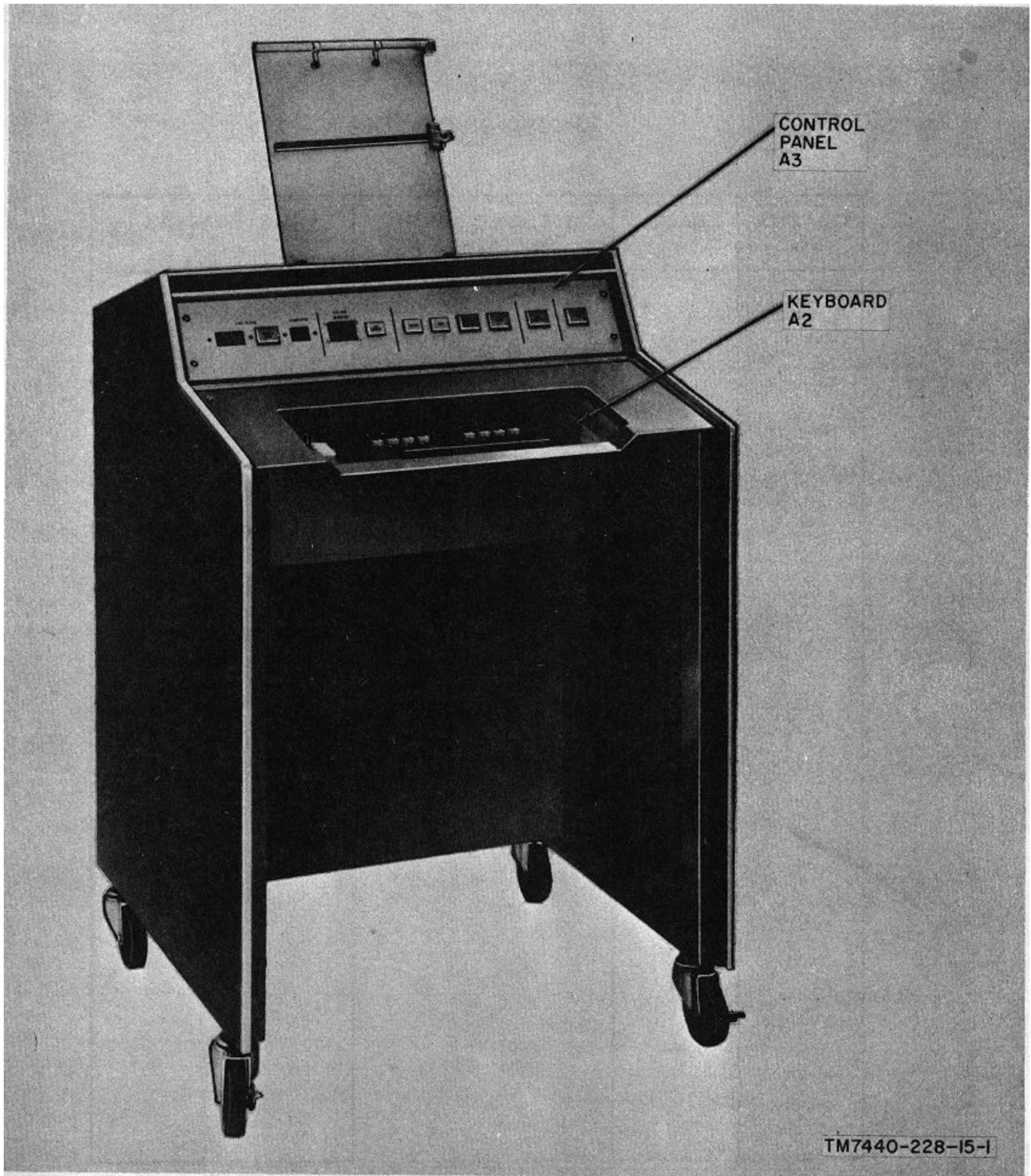


Figure 1-1. Control-Keyboard C-7185/G, less running spares

CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual describes Control-Keyboard C-7185/G (control-keyboard) (fig. 1-1), and contains operation and maintenance information. It also covers detailed functioning of the control-keyboard and includes the list of Basic Issue Items (app B) and Maintenance Allocation chart (app C). Refer to TM 11-7440-239-, 15, NAVSHIPS 0967-324-0110, TO 31W4-4-11, (app A) for installation and checkout procedures.

1-2. Indexes of Equipment Publications

a. New Editions, Changes, or Additional Publications. Determine if there are any new editions, changes, or additional information pertaining to this equipment by referring to DA Pam 310-4 (Army), NAVSANDA Publication 2002 (Navy), or Numerical Index and Requirement table TO 0-1-01N (Air Force).

b. Modification Work Orders. Refer to the latest edition of DA Pam 310-7 to determine if there are any Modification Work Orders (MWO's) pertaining to the equipment.

1-3. Forms and Records

a. Report of Unsatisfactory Equipment. Report unsatisfactory equipment in accordance with Procedures in TM 38-750 (Army), NW 00-25-546 (Navy), or TO-00-35D-54 (Air Force).

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Report of Packaging

and Handling Deficiencies) as prescribed in AR 700-58 (Army), NAVSHIP Publication 378 (Navy), or AFR 714 (Air Force).

c. Discrepancy in Shipment Report. Fill out and forward Discrepancy in Shipment Report (DIS REP) (SF 361) as prescribed in AR 55-38 (Army), NAVSHIP Publication 459 (Navy), or AFM 75-34 (Air Force).

d. Reports of Maintenance. Records and reports of preventive maintenance and repairs must be made in accordance with procedures in TM 38-750 (Army), OPNAV Form 4700, Subject: Planned Maintenance System Feedback Report (Navy), or AFM 66-1 (Air Force) and with any special reporting procedures established for the AUTODIN system.

c. Reporting of Equipment Manuals Improvements. Report of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Submit reports on DA Form 2028 (Recommended Changes to DA Publications) to: Commanding (General U.S. Army Electronics Command, ATTN: AMSEL-ME-NMP-AD), Fort Monmouth, N.J. 07703 (Army); on NAVSLIPS 5600/2 (REV 10-67) (formerly NAVSHIPS 4914) and forward to: Commander, Naval Electronics Systems Command, ATTN: 0451C, Washington, D. C. (Navy); or on AFTO Form 22 (Technical Order System Publications Deficiency Report) and forward to: Commander, Oklahoma City Air Materiel Area, ATTN: OCNDDT (B-F), Tinker Air Force Base, Oklahoma 73415 (Air Force).

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

a. The control keyboard (fig. 1-1) is an off-line component of all standard Digital Subscriber Terminal Equipment (DST) sets in the Automatic Digital Network (AUTODIN) military communications system. In normal use, the direct interconnectivity afforded individually between it and the paper tape punches and low speed card punch is intended to provide for manual preparation of card and tape messages at low volume-low speed terminals. At these and other terminals, the control keyboard is also intended to provide a capability for message servicing functions, for the manual preparation of headers, trailers, pilots, etc. (fig. 1-2), and for troubleshooting the low speed card and tape punches. Ordinarily, it is expected that traffic for

the DST will be prepared at separate off-line positions using existing teletypewriter or card punch equipment.

b. The control-keyboard generates electrical outputs representing the characters in eight-bit American Standard Code for Informational Interchange (ASCII). The keyboard of the C-7185/GT consists of 65 keys which can produce 58 normal level characters, 20 shift level characters, and 26 control level characters (fig. 1-3). The eight bit ASCII data is transferred to an external output tape or card punching device on a parallel-bit, character-serial basis with the eighth bit of each character maintaining odd parity. Keys for characters that are not required are blocked so that these characters cannot be punched. The same applies to characters that are invalid in a particular code when the control-keyboard is operating with punching device which uses that code.

the current official listing of components, see the basic issue Items list (app B).

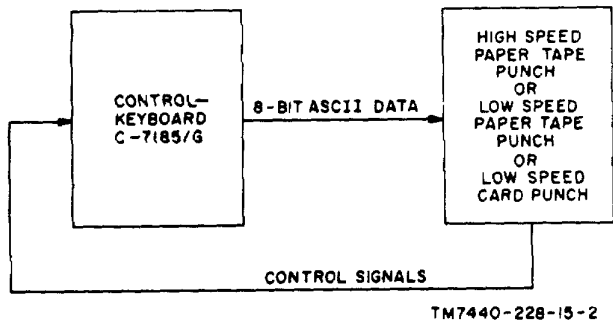


Figure 1-2. Typical system application, block diagram.

1-5. Technical Characteristics

Output data	Generates eight-bit electrical data in ASCII form on a bit-parallel, character-serial basis with the eighth bit maintaining odd parity.
Keyboard layout	Consists of 65 keys as shown in fig. 1-3.
Operating speed	Sufficient to maintain a modulation rate up to and including 150 band (18.75 characters per second).
Electrical interface	In accordance with MIL-STD-188B.
Key pressure	Adjustable front 2 to 8 ounces.
Power requirements	+4.5 volts dc, +12 volts dc, and -12 volts de (furnished by associated card or tape punch). Use of control-keyboard adds 0.8 amp to ac input power requirements of card or tape punch.
Output voltage	+6.2 volts for binary 1. -6.2 volt for binary 0.
Heat dissipation	50 watts.

1-6. Components and Dimensions of Control/Keyboard

Note

This listing is based on the original shipment by the contractor on Order No. DA 36-030-AMC-05598 (E). For

a. Components. Control-Keyboard C-7185/G is 45-in. high, 24-in. wide, and 24-in. deep; it weighs approximately 50 pounds. Assemblies of the C-7185/G are listed below.

Quantity	Item
1-----	Keyboard assembly A2 (fig. 1-1)
1-----	Control panel assembly A3 (fig. 1-1)
1-----	Logic assembly A1 (fig. 1-4)
1-----	Relay panel assembly (fig. 1-4)
1-----	Copy holder assembly (fig. 1-1)
1-----	Fuse panel assembly (fig. 1-4)
1-----	Enclosure assembly (figs. 1-1 and 1-4)

b. Running Spares. Refer to appendix B, Basic Issue Items, for a list of the running spares.

c. Common Names.

Reference

designation	Item name	Common name	Mfg. part No.
A1-----	Logic as.....	Logic assembly sembly.	
A1A1 --	PC card	Lamp driver	A65309001
A1A2 --	PC cards.....	Hundreds counter .	A65313-001
A1A4 --	PC card	Block counter	A65305-001
A1A5 --	PC card	Block counter	A65305-001
A1A6 --	PC card	Character counter.	A65317-001
A1A7 --	PC card	Switch logic	A65329-001
A1A8 --	PC card	Data strobe.....	A65321-001
A1A9 --	PC card	Data register.....	A65325-001
A1A10-	PC card	Receive/transmit ..	A65301-001 or A65341-0001
A1A11-	PC card	Transmit inter-..... face.	A65333-001 A65337-001
A2-----	Keyboard as ...	Keyboard sembly	
A3-----	Control panel	Control panel- assembly.	

1-7. Description of Control-Keyboard

When ready for operation, the components of the control-keyboard are assembled as shown in figure 1-1.

a. Keyboard A2 (fig. 1-1). The keyboard is mounted in the enclosure assembly. It consists of a cast aluminum alloy base which supports the key

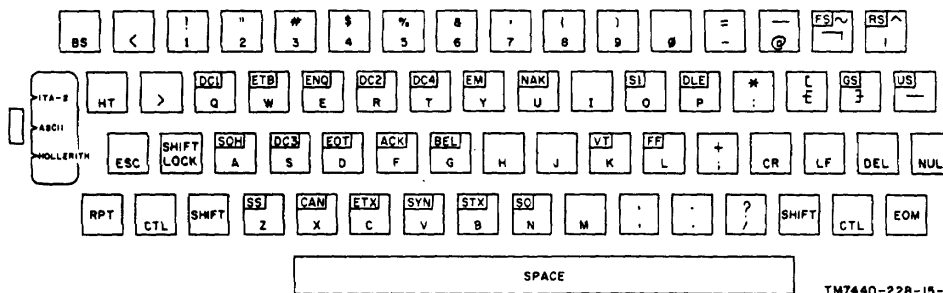


Figure 1-3. Control-Keyboard C-7185/G, keyboard layout.

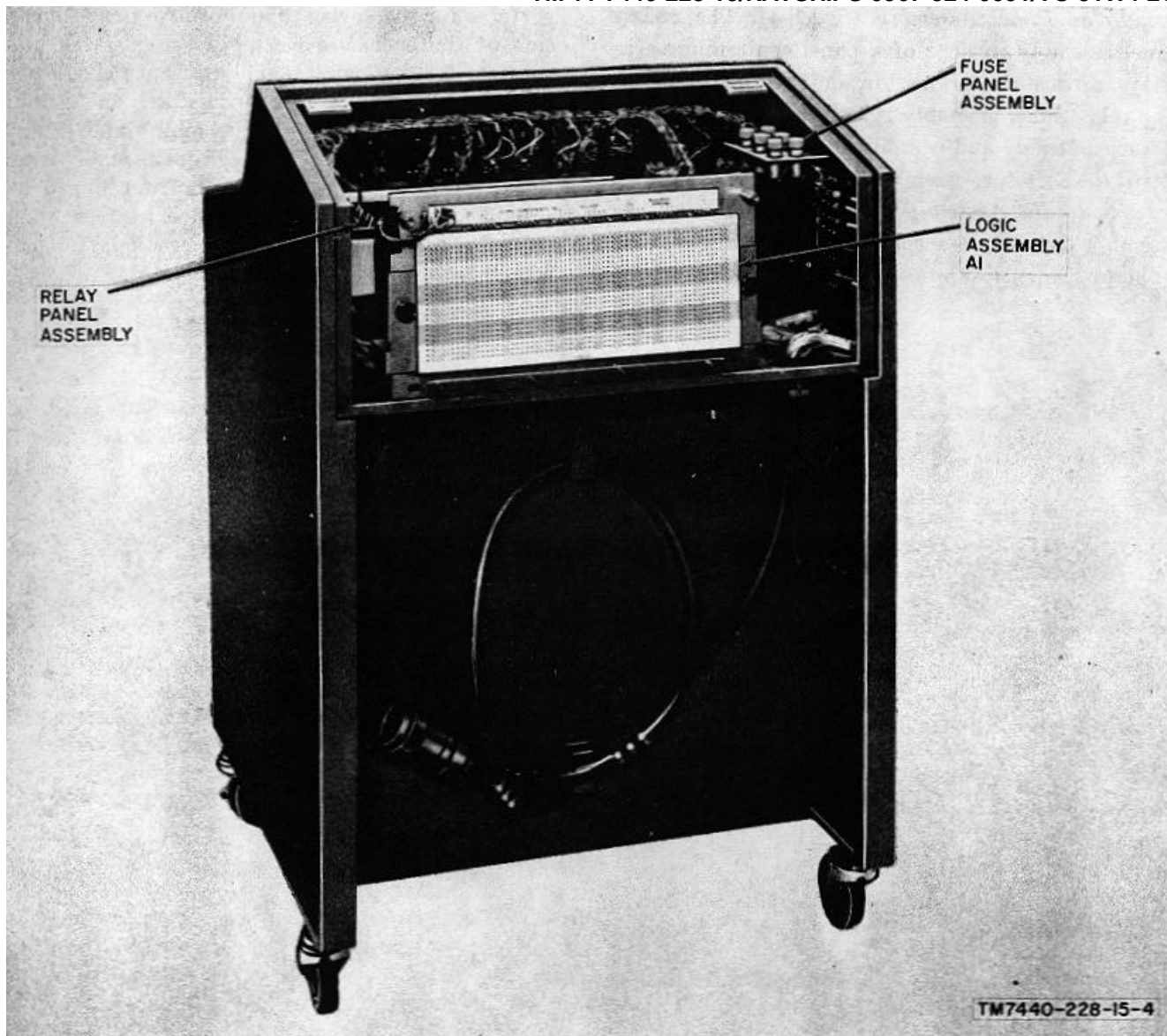


Figure 1-4. Control-keyboard, showing location of major assemblies.

board, enclosed within a high-impact, high-temperature styrene cover. The keyboard has 65 keys, a selector switch, a read head, and a lamp, all necessary for the operation of the equipment. Two electrical connectors are located at the rear of the keyboard for interconnection with the control panel and logic assembly.

b. Logic Assembly A1 (fig. 1-4). The logic assembly is an 11-connector mounting board, which supports the 10 printed circuit (PC) cards required for the logic functions, and interface (circuitry for the control-keyboard). The logic assembly is hinge mounted, and is easily accessible from the rear of the enclosure assembly. Connections front the logic assembly to the keyboard and control panel are provided by the connectors at the rear of logic assembly.

The hinge mounting permits easy access to the PC cards for maintenance.

c. Control Panel A3 (fig. 1-1). The control panel consists of a panel containing the switch controls, indicators, and digital counters necessary for operation of the equipment. The control panel is mounted to the enclosure assembly above and to the rear of the keyboard and just below the copy holder assembly. This location provides for simultaneous viewing of the copy and the indicators on control panel.

d. Fuse Panel Assembly (fig. 1-4). The fuse panel assembly consists of a panel containing six fuseholders and fuses (three active fuses and three spare fuses) and a terminal board. The fuse panel assembly is mounted within the enclosure assembly. The fuses are easily accessible through the top of the enclosure assembly.

e. *Relay Panel Assembly (fig. 1-4).* The relay panel assembly consists of a panel containing three relays, a resistor, a transistor, and a terminal board. The relay panel assembly is mounted within the enclosure assembly and is easily accessible through the top of the enclosure assembly.

f. *Enclosure Assembly (fig. 1-4).* The enclosure assembly consists of a console on four wheels. The front of the enclosure assembly provides mounting

surfaces for the keyboard and control panel. The inside of the enclosure assembly provides mounting surfaces for the logic assembly, fuse panel assembly, relay panel assembly, and loudspeaker, and contains cabling for connecting the assemblies and external interface connections. The enclosure assembly is provided with two hinged doors. The front hinged door provides access to the keyboard. The rear hinged door provides access to the logic circuits, relay panel assembly, and fuse panel assembly.

Change 1 1-4

**CHAPTER 2
OPERATING INSTRUCTIONS**

2-1. Controls and Indicators

(fig. 2-1)

Control or Indicator	Function
LINE/BLOCK counter (Z5, Z6, Z7).	Indicates total number of blocks accumulated within card message, or number of lines within tape message.
COUNTER RESET switch (S5).	Resets LINE/BLOCK counter.
CHARACTER counter (Z3, Z4).	Indicates number of characters perforated since last CR (carriage return) code was delivered to tape punch, or since last EOB (end of block) signal was transmitted to low speed card punch. Automatically returns to zero after 80th character.
SET EOB WARNING thumbwheel switches (S3, S4).	Preset number of characters to be perforated before EOB WARNING indicator and audible alarm are activated.
EOB WARNING indicator (DS3).	Lights (amber) when operator has entered preset number of characters for current message block or line.
CAUTION indicator (DS2).	Lights (amber) upon occurrence of operator alarm (low tape or cards, etc).
STOP indicator (DS1)	Lights (red) upon occurrence of a fault or stop condition at card or tape punch.
REJECT/BACKSPACE switch-indicator (Z2).	Lights (red) when punch error is detected. It is extinguished when pressed and either punched paper tape is backspaced or punched card is rejected.
RESET switch (S2)	Prepares equipment for start of new message.
LAMP/AUDIO TEST switch (S1).	Provides means of testing all indicators and audible alarm of control-keyboard (except POWER switch-indicator).
POWER switch-indicator (Z1).	Lights (white) when AC and DC power is applied to control-keyboard. When depressed, it provides on-off control for control-keyboard.
Code selector switch code	Selects appropriate preparation (ITA-2 when preparing ITA-2 paper tape, ASCII when preparing ASCII paper tape, HOLLERITH when preparing punched cards). Keys for characters that are invalid in selected code are mechanically blocked.

RPT key-----	Causes repeated punching of code corresponding to whatever character key is simultaneously depressed.
CTL keys-----	When either key is depressed, provides for punching of characters enclosed, in upper left-hand corner of keys or operation of control keys.
SHIFT keys-----	When either key is depressed, provides for punching of characters indicated on top portion of keys (except characters enclosed in upper left-hand corner of keys).
EOM key-----	Initiates automatic end-of-message sequence of characters, in conjunction with preparation of messages on punched paper tape only.

2-2. Types of Operation

a. The only variation in the type of operation of the control-keyboard is the mechanical blocking of particular keys when different code sets are used by the punching device connected to the keyboard. For example, when the keyboard provides ASCII inputs to a card punch using 12-bit Hollerith code, certain characters on the keyboard are not applicable. The code selector switch on the keyboard is used to make the keyboard compatible with the code being punched in the paper tape or cards.

b. Perform the following sequence of procedures when operating the control-keyboard:

- (1) Preliminary starting procedure (para 2-3).
- (2) Starting procedure (para 2-4).
- (3) Operating procedure (para 2-5).
- (4) Stopping procedure (para 2-6).
- (5) Special operating procedure (para 2-7).
- (6) Operation checkout procedures (para 2-8).

2-3. Preliminary Starting Procedure

a. Connect the cable of the control keyboard to the cable connector of the output device to be used (high or low speed paper tape punch or low speed card punch). Be sure the interconnecting cable is connected securely.

b. Set the code selector switch on the keyboard to the code corresponding to the selected output device (*ITA-2* or *ASCII* for low or high speed paper tape punch; *HOLLERITH* for low speed card punch).

2-4. Starting Procedure

a. Depress the POWER switch-indicator and RESET switch.

b. Check that the following indicators are not lit:

- (1) REJECT/BACKSPACE
- (2) CAUTION
- (3) EOB WARNING

c. The STOP indicator will be lit. Press the REJECT/BACKSPACE switch to put the associated punch into a start condition. When the associated punch is in start, the STOP indicator at the control-keyboard will go out.

2-5. Operating Procedure

a. Set the EOB WARNING thumbwheel switches to the character count desired for Operation of the EOB WARNING indicator and the audible alarm.

b. During operation with a card punch, the CHARACTER counter resets to zero and the LINE/BLOCK counter advances automatically after generation of the 80th character, or immediately upon generation of the line feed (LF)

character. When operating with a paper tape punch, the CHARACTER counter resets to zero when a carriage return (CR) occurs and the LINE/BLOCK counter advances on depression of the line feed (LF) key.

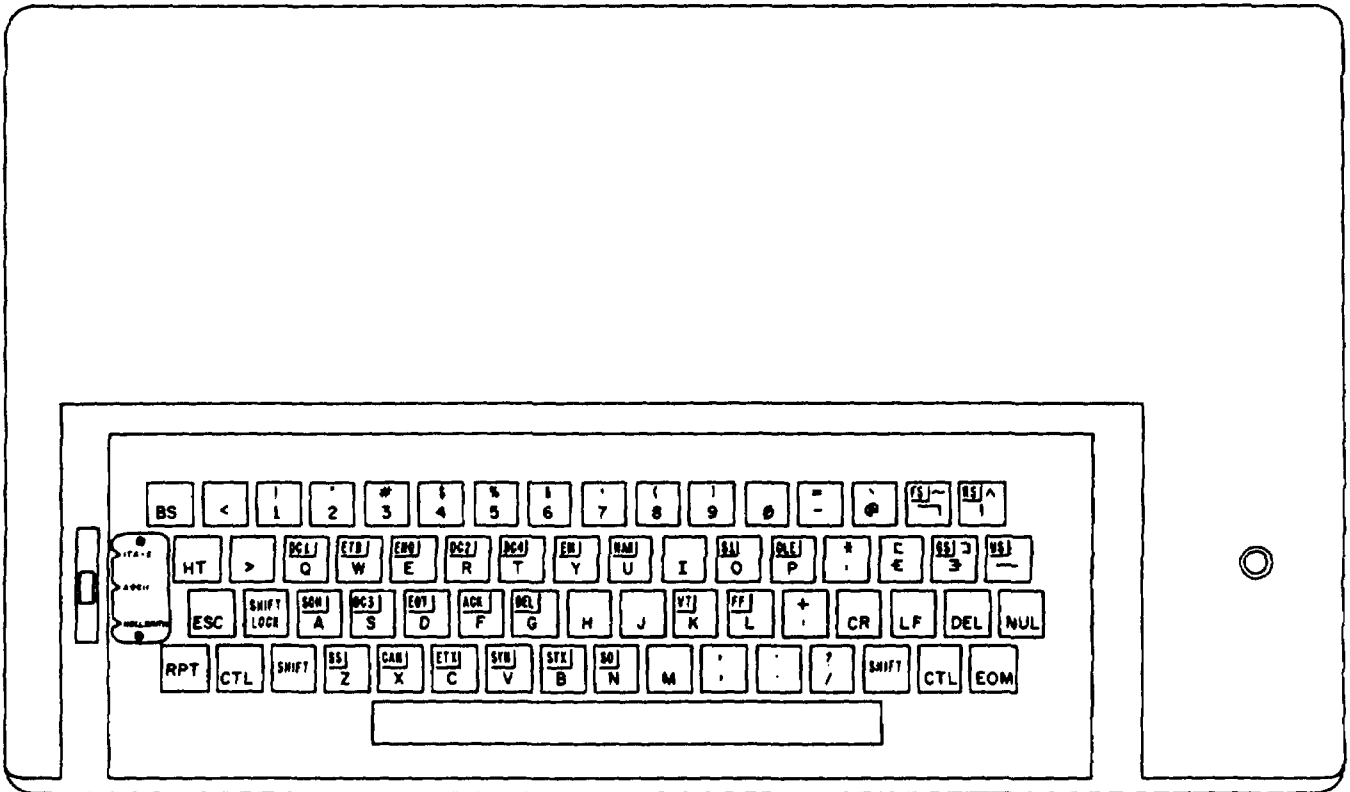
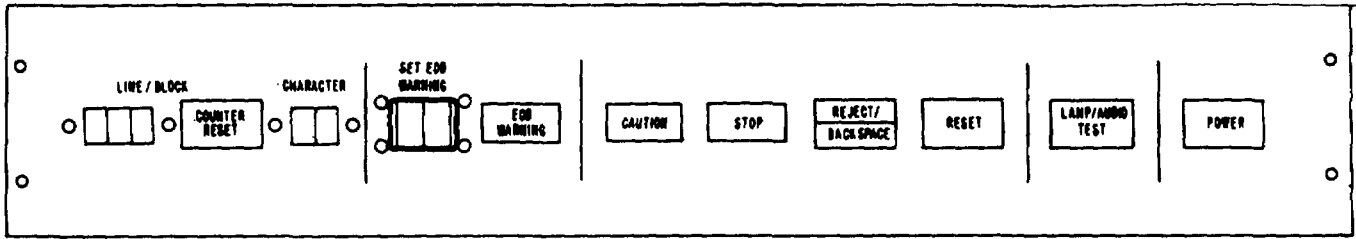
c. When a shift level character is required, first depress the SHIFT key and then the shift level character key. If a series of shift level characters are required, depress the SHIFT key and then the SHIFT LOCK key. This will lock the SHIFT keys in place and the shift level characters can then be produced by depressing only the shift level character keys required.

d. When a control level character is required, press either CTL key and the control level character key simultaneously. When either CTL key is pressed, all keys are blocked except those required for ASCII control characters.

NOTE

Control level characters normally are used by maintenance personnel only.

e. When a character is to be repeated, depress the RPT key and the character key simultaneously until the required number of repetitions of the character is produced.



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Figure 2-1. Control-keyboard, control, and indicators.

Change 4 2-3

2-6. Stopping Procedure

To stop the control-keyboard, press the POWER switch-indicator.

2-7. Special Operating Procedure

a. If a typing error is made when punching cards, press the REJECT/BACKSPACE switch and the card is rejected.

b. If a typing error is made when punching paper tape, press the REJECT/BACKSPACE switch to backspace the tape, press the DEL key on the keyboard to superimpose the delete code into the tape, and then proceed with the message preparation, starting with the correct character(s) to replace the character(s) just deleted.

c. If either the CAUTION or STOP indicator lights, check the output device for the cause of the CAUTION or STOP indication.

Note

A STOP condition locks the keyboard until the fault is corrected;

message preparation can be continued during a CAUTION condition.

d. If two keys are pressed simultaneously, and stick in the downward position, use a wire hook, made from a paper clip, to pull the top of one of the keys upward, releasing both keys.

e. The keyboard is also blocked during the time interval that the card punch is unable to accept data during the print or stacking cycle.

2-8. Operating Checkout Procedure

To check for proper operation of the control-keyboard, interconnect and operate the control-keyboard with the low or high speed tape punch or the low speed card punch and check for proper operation as described in TM 11-7440-238-15, NAV SHIPS 0967-324-0100, TO 31W42G-101.

Change 4 2-4

FUNCTIONING OF CONTROL-KEYBOARD C7185/G

Section I. GENERAL

3-1. Control-Keyboard, Block Diagram

(fig. 3-1)

Keyboard data originates in the keyboard which contains 65 keys and a read head which generates electrical signals corresponding to the keys that are depressed. These signals are processed by electronic circuits in the logic assembly and transmitted to the output device, which may be a tape punch or a card punch. (controls and indicators on the control panel provide additional controls and indicators necessary for operation. Refer to paragraphs 3-2 through 3-10 for additional information on general functioning of the control-keyboard.

3-2. Initial Communication with Output Device

a. Keyboard Enable. Before the control-keyboard can be turned on, the output device must supply a keyboard enable signal indicating that the output device is not assigned to the CCU or in local test. A switch on the control panel can now be operated to turn on power to the control-keyboard. This is accomplished with the aid of switching control circuits on logic assembly A1 which operate power relays on the relay panel assembly to switch d-c power from the output device to the control-keyboard logic circuits. When power is turned on, a master reset signal is generated to reset the control-keyboard logic circuits. Also, a reset, signal is supplied to the output device to reset the logic circuits in that device. Finally the keyboard interlock line to the output device is activated. This permits the output device to accept further data and data control signals from the control-keyboard.

b. Ready. Before the control-keyboard can begin sending data to the output device for punching on tape or cards, the output device must send a ready signal to the control-keyboard. This signal is routed through receive interface circuits in the logic assembly to transmit interface circuits where a select signal is generated (fig. 3-2). This signal is routed through transmit interface circuits to the output device and enables the output device to request data from the control-keyboard.

Note

All signals shown in figure 3-2 are high when active. This is the logic format used in the control-keyboard. Conversion by the receive and

transmit Interface circuits causes some of the actual received and transmitted signals to be the inverse (low when active).

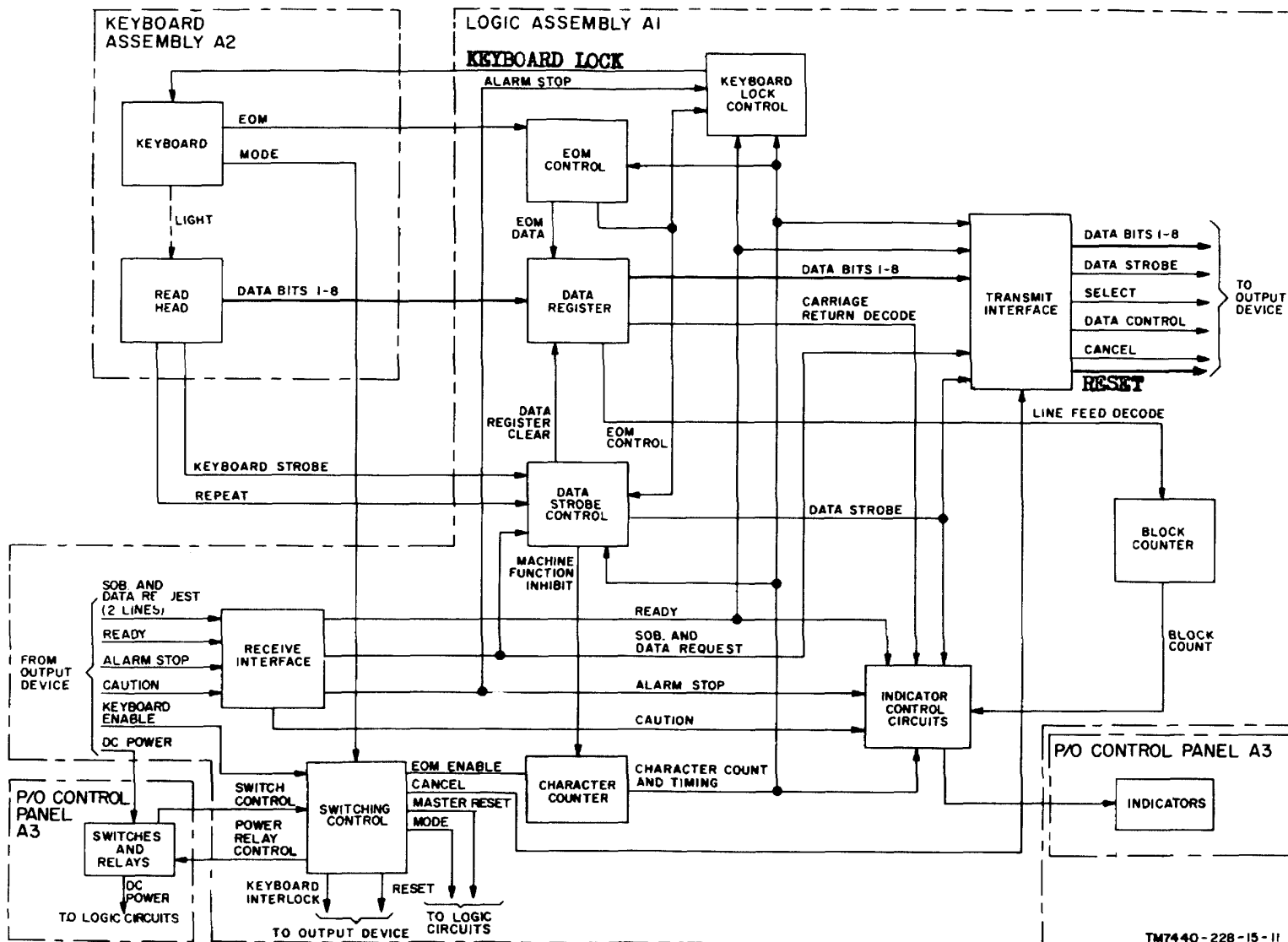
c. Data Request. No character of data can be sent to the output device until the output device requests the data for that character by means of a data request pulse. Two separate lines are used for data request pulses. When operating with a card punch, the first data request pulse of each data block of 80 characters is called the start of block pulse (SOB) and is transmitted on the SOB line. The data request pulses for the remaining 79 characters of each data block are sent on the data request line. Following the data request pulse for the 80th character of a data block, the output device sends an 81st data request pulse on the data request line (fig. 3-3). This is used for synchronization purposes only and does not result in data to the output, device. The SOB and data request pulses are routed through the receive interface circuits to the logic circuits which require them. When operating with a tape punch, the SOB pulse is sent only at the beginning of a new message. Following the end of a message, the output device sends an extra data request pulse which is used for synchronization in a manner similar to the 81st data request pulse in card punch operation.

3-3. Keyboard Operation

a. Normal Keyboard Data. Normally, a single data character for the output device is generated by pressing a character key on the keyboard. A pattern of holes punched in the key allows a limited number of beams of light from a light source to reach a set of photocells on a read head in the keyboard. The read head decodes the pattern of light beams to produce eight data bits on eight corresponding lines representing the ASCII code for that character (para 3-12).

b. Shift and Control-Keyboard Data. To expand the number of characters which can be transmitted by the control-keyboard, many character keys can be used to generate more than one character. This function is controlled by the shift (SHIFT) and control (CTL) keys. When the shift or control key is pressed at the same time as a character key, the light pattern is modified so that a different ASCII code is produced by the read head. This ASCII code is the code for the shift or control character.

c. Transmission of Keyboard Data. The eight data bit signals from the read head are shaped into data



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Figure 3-1. Control-keyboard, block diagram.

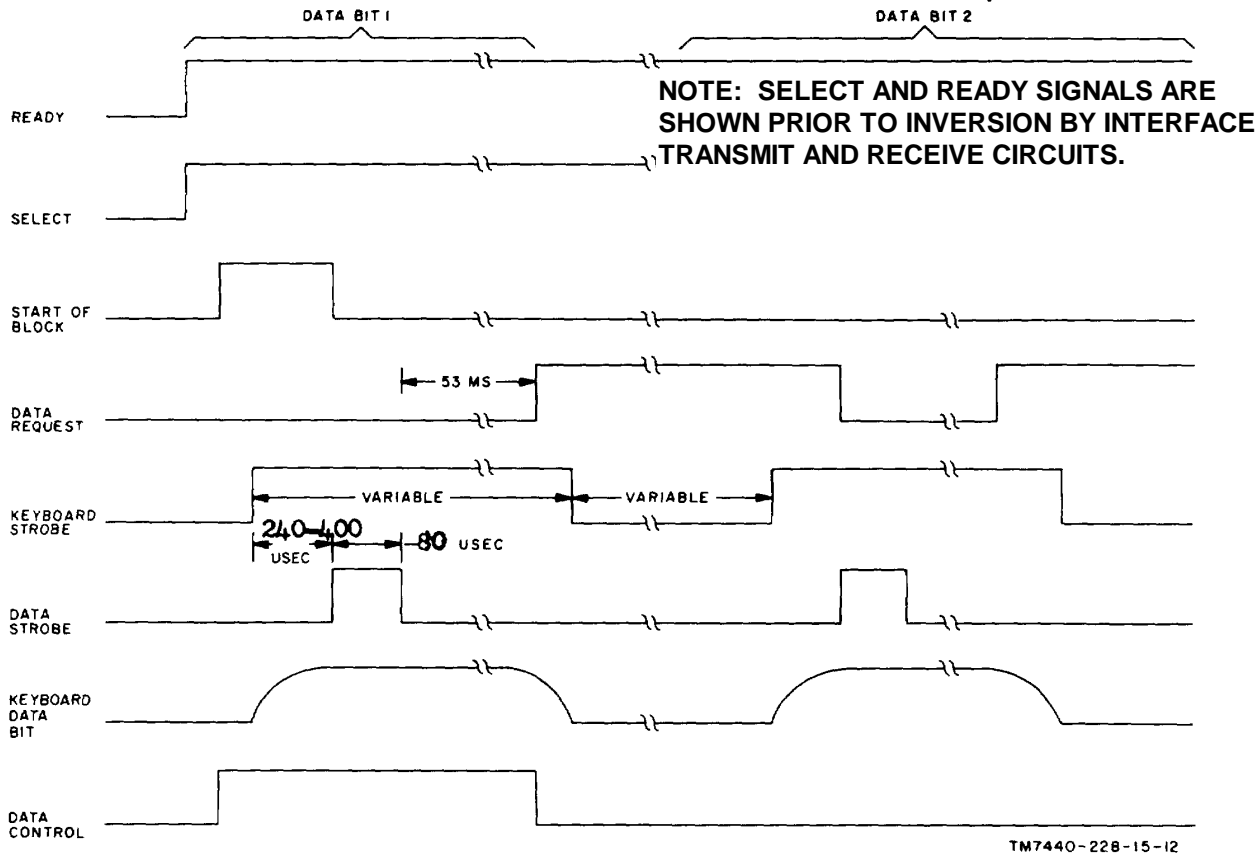


Figure 3-2. Beginning of first data block, timing diagram.

pulses for transmission to the output device by a data register until the logic assembly. To ensure that no data is transmitted until a key is completely depressed, a separate beam of light is interrupted when any key (except CTRL, SHIFT, or RPT), is in the down position. This causes the read head to generate a keyboard strobe pulse which lasts as long as the key is down (fig. 3-2). The keyboard strobe pulse is routed to data strobe control circuits.

d. *Data Strokes for Keyboard Data.* The output device cannot accept data unless it is accompanied by a data strobe pulse which occurs 240 microseconds (μsec) after the leading edge of the transmitted data.

(1) This Data strobe pulse is generated by the data strobe control circuits and is transmitted to the output device through the transmit interface circuits. No data strobe pulse is generated until either a start-of-block or data request level is received from the output device.

(2) Once the start-of-block or data request level is present, a 80- μsec wide data strobe pulse is generated anywhere between 240 and 400 μsec after the start of the keyboard strobe pulse. Normally, on receipt of the leading edge of the data strobe pulse, the

output device terminates the start-of-block or data request level. A new data request level is generated by the output device when the output device mechanism has completed the punching operation and a new character can be accepted.

(3) The data strobe control circuits also generate a data register control signal following each data strobe. This is used to allow the data hits for the character to be stored in the data register.

3-4. Repeat and Cancel Characters

a. *Repeat Characters.* Any character can be continuously repeated by pressing the repeat, key (RPT) prior to the character key. This interrupts a special beam of light used only for this purpose. The resulting repeat signal from the read head causes the data strobe control circuits to generate a new data strobe pulse each time a data request level is received from the output device. If the repeat key is not pressed, no new data strobe pulses are generated until the character key is released and then pressed again.

b. *Cancel Characters.* If the operator wishes to cancel a character which he has just caused to be punched, he operates a switch on control panel A3. The resulting

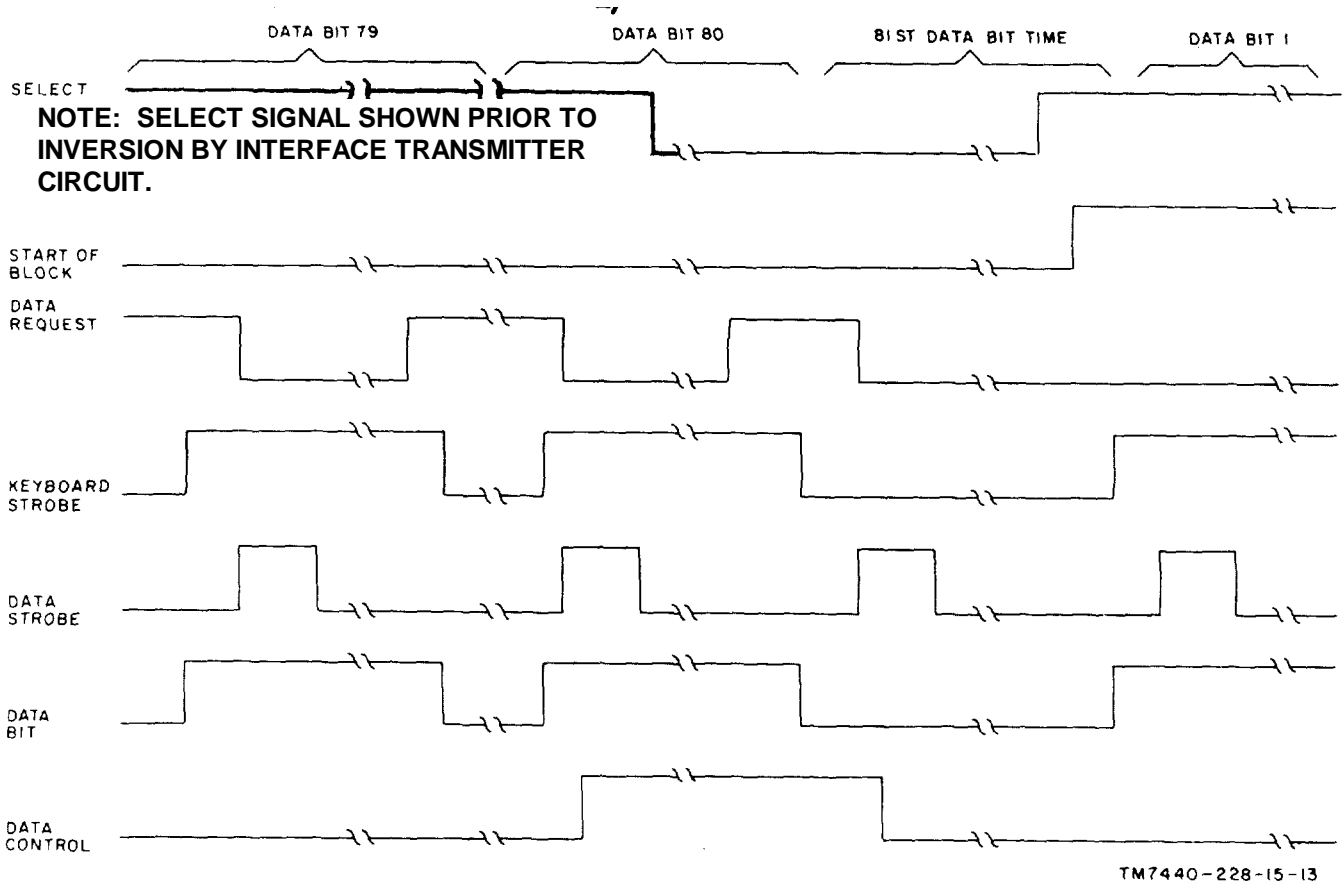


Figure 3-3. End of data block, timing diagram.

cancel switching signal causes the data strobe control circuits to generate a data strobe pulse even though no data is being transmitted by the read head. The cancel signal is also transmitted directly through the transmit interface circuits to the output device. If the output device is a tape punch, the cancel signal causes the tape to be backspaced. To delete the character, the operator now presses the DEL key. The delete (DIEL) character transmitted to the tape punch causes holes to be punched in all eight bits. If the output device is a card punch, the cancel signal causes the card that is being punched to be discarded.

3-5. Mode Switching

a. A three position lever on the keyboard must be set to the position corresponding to the data code of the output device. When the output device is a card punch, the lever is set to the HOLLERITH position. This causes those keys which are not used with a card punch to be mechanically blocked.

b. Similarly, when the output device is a tape punch, the lever is set to either the ASCII or ITA-2 position, depending on the code being used by the tape punch in question. In all cases, the data is transmitted in ASCII code. However, different character keys are invalid for each mode of operation. Therefore, a different set of keys is blocked in each case.

The three-position lever also actuates electrical mode switches which cause switching control circuits in the logic assembly to generate mode signals for the logic circuits.

3-6. Character, Block, and End of Message Control

a. *Character Count for Keyboard Data.* To ensure that the beginning and end of data blocks are properly identified, a character counter in the logic assembly is reset, and the start of each data block end goes through a sequence of 80 counts corresponding to the 80 characters. The character counter is prevented from counting machine function characters (bell, line feed, carriage return, shift in, shift out, and delete). Thus, the machine function characters are decoded in the data register to result in a machine function inhibit signal which inhibits the character counter. When operating with a card punch, on the 81st count of the character counter, a data strobe pulse is generated. This pulse identifies the end of a block since it is not accompanied by data. The data strobe pulse resets the character counter before it call step to count 81. The count in the character counter at any time is displayed to the operator by indicator control circuits which operate a numerical readout indicator. The operator can select ally specific character count

to activate an end-of-block visual indicator and audio alarm to warn him that he is nearing the end of an 80-character block.

b. *End-of-Data Block.* When operating with a card punch, at the end of each 80-character data block, the select signal to the output device is momentarily dropped (fig. 3-3). This signal goes low at the trailing edge of the 80th data strobe, and goes high again at the trailing edge of the 81st data strobe. The output device does not send the SOB data request for the first character of the next data block until the select signal is high again.

c. *End-of-Message.* When operating with a tape punch, a 21-character data block is transmitted at the end of each message.

(1) The 21-character sequence is generated automatically when the EOM key on the keyboard is operated. The end-of-message (EOM) control circuits in logic assembly A1 operate in conjunction with the character counter circuits to automatically generate the 21 coded characters on eight data bit lines and to automatically generate the associated data strobe pulses. The 21-characters are: shift in, two carriage returns, eight line feeds, four N's, and six blanks.

(2) A total of 22 data strobe pulses are generated by the data strobe control circuits in response to EOM control signals. The first 21 data strobe

pulses accompany the 21 end-of-message characters. The 22d data strobe pulse corresponds to the 81st data strobe pulse of a normal data Block, thus, it is used for synchronization purposes only (fig. 3-4).

(3) The timing of the end-of-message sequence is dependent on the operation of the output device, since a new character cannot be transmitted until the previous character has been punched. Thus, as each data character is punched, a data request pulse is transmitted from the output device to enable the generation of a data strobe. Following the end of the data strobe, the character counter is stepped to the next count. This switches the data bit lines to the code for the next character in the 21-character sequence. However, the data bit lines are not strobed until the next data request pulse is received.

(4) The end-of-message sequence cannot be generated unless the output device is a tape punch. A tape mode signal from the mode switching circuits must be present at both the end-of-message control and character control circuits for end-of-message generation.

3-7. Data Control

As an additional input for correct operation of the output device, pulses are transmitted on a data control line through the transmit interface circuits. The

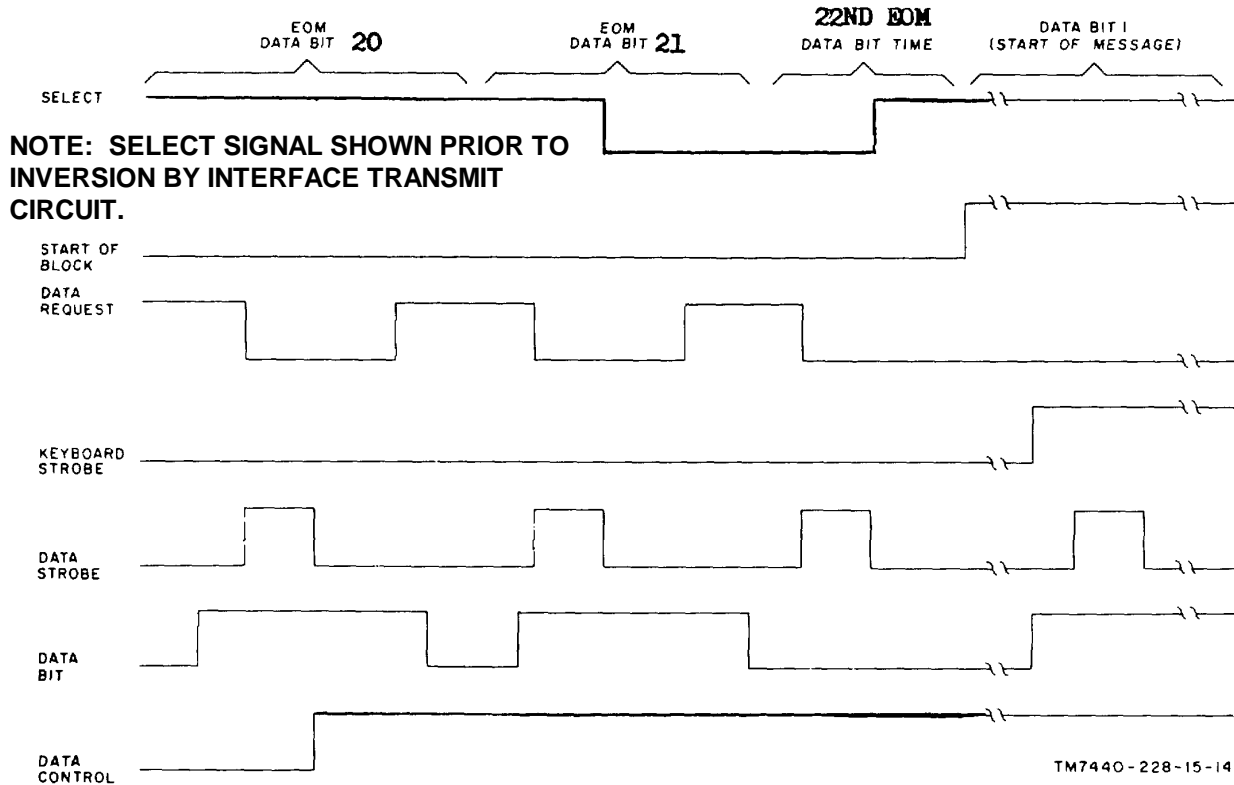


Figure 3-4. End-of-message, timing diagram.

data control generator which produces these pulses receives end-of-message timing and data request signals to control the generation of a data control pulse synchronous with the first character of the first data block after an end of message sequence. Under control of count signals from the character counter, another data control pulse is generated during the 80th character of each data block when operating with a card punch. Finally, end-of-message timing and character count signals are used to enable the generation of a data control pulse during the 21 bits of each end-of-message sequence when operating with a tape punch.

3-8. Keyboard Lock

a. Between data blocks, a keyboard lock command is generated by keyboard lock circuit in the logic assembly. This signal deactuates a solenoid in the keyboard which locks the keyboard mechanically to prevent any key from being depressed until the next data block starts. The interval between data blocks is identified by a character count signal from the character counter circuits.

b. A keyboard lock command is also generated during an end-of-message sequence. This is initiated by an EOM control signal from the EOM control circuits.

c. A keyboard lock command is also generated when the output device generates an alarm stop signal. This is routed through the receive interface circuits to actuate a front panel indicator and to initiate a keyboard lock.

d. The keyboard lock command is also generated when the ready signal from the output device is absent. The ready signal is routed from the receive interface circuits to the keyboard lock control circuit for this purpose.

3-9. Block Counter

When operating with a tape punch, the control keyboard maintains a running count of the number of completed

blocks transmitted in one message by counting the number of line feed characters. This function is performed by a block counter which monitors the occurrence of line feed characters decoded by the data register. When operating with a card punch, the block counter is advanced one count after each block. The count in the block counter at any time is displayed to the operator by indicator control circuits which operate numeric readout indicators.

3-10. Stop and Caution Indicators

When the output device initiates an alarm stop signal, an indicator is lit on the control-keyboard to instruct the operator to cancel the character and to back space in case of a tape punch. When the output device indicates a caution signal, a CAUTION indicator lights on the control panel of the control-keyboard.

3-11. Master Reset Control

A master reset signal is generated whenever power is turned on to the equipment and when the RESET switch on the control panel is pressed. This results in the transmission of a master reset signal from the switching control circuits to the various logic circuits in the logic assembly and to the output device.

3-12. Signaling Code

The signaling code used by the control-keyboard to transmit data to the output is the eight-bit ASCII code shown in figure 3-5. Seven of the ASCII bits contain the data. The eighth is a parity bit which is either added or left out, as necessary, to have odd parity for each character. Figure 3-5 shows the applicable modes for each character (normal, shift, and control), and also shows which characters are blocked for the three positions of the code select lever (ASCII, ITA-2, or HOLLERITH).

KEY NO.	MODE	CHARACTER	ASC II DATA BITS								KEYS
			8	7	6	5	4	3	2	1	
A1	CONTROL	BS (NOTE 1)									BS
A2	NORMAL	< (NOTE 2)									<
	SHIFT	< (NOTE 2)									
A3	NORMAL	1									1
	SHIFT	!									
A4	NORMAL	2									"
	SHIFT	"									
A5	NORMAL	3									##
	SHIFT	##									
A6	NORMAL	4									\$
	SHIFT	\$									
A7	NORMAL	5									%
	SHIFT	% (NOTE 2)									
A8	NORMAL	6									&
	SHIFT	&									
A9	NORMAL	7									'
	SHIFT	' (APSTR)									
A10	NORMAL	8									(
	SHIFT	(
A11	NORMAL	9)
	SHIFT)									
A12	NORMAL	0									0
A13	NORMAL	-									-
	SHIFT	= (NOTE 2)									
A14	NORMAL	@ (NOTE 1)									\
	SHIFT	\ (NOTE 2)									
A15	NORMAL	~ (NOTE 1)									FS
	SHIFT	~ (NOTE 2)									
	CONTROL	FS (NOTE 1)									
A16	NORMAL	^ (NOTE 1)									RS
	SHIFT	^ (NOTE 2)									
	CONTROL	RS (NOTE 1)									
B1	CONTROL	HT (NOTE 1)									HT
B2	NORMAL	> (NOTE 2)									>
	SHIFT	> (NOTE 2)									
B3	NORMAL	Q									DC1
	SHIFT	Q									
	CONTROL	DC 1 (NOTE 1)									
B4	NORMAL	W									ETB
	SHIFT	W									
	CONTROL	ETB (NOTE 1)									
B5	NORMAL	E									ENQ
	SHIFT	E									
	CONTROL	ENQ (NOTE 1)									
B6	NORMAL	R									DC2
	SHIFT	R									
	CONTROL	DC 2 (NOTE 1)									
B7	NORMAL	T									DC4
	SHIFT	T									
	CONTROL	DC 4 (NOTE 1)									
B8	NORMAL	Y									EM
	SHIFT	Y									
	CONTROL	EM (NOTE 1)									
B9	NORMAL	U									NAK
	SHIFT	U									
	CONTROL	NAK (NOTE 1)									
B10	NORMAL	I									I
	SHIFT	I									

LEGEND:  DATA BIT ABSENT (0) DATA BIT PRESENT (1) TM7440-228-15-15 ①

Figure 3-5. Signaling code chart (part 1 of 3).

KEY NO	MODE	CHARACTER	ASC II DATA BITS								KEYS
			8	7	6	5	4	3	2	1	
B11	NORMAL	O									SI O
	SHIFT	O									
	CONTROL	SI									
B12	NORMAL	P									DLE P
	SHIFT	P									
	CONTROL	DLE (NOTE 1)									
B13	NORMAL	:									*
B14	SHIFT	* (NOTE 2)									:
	NORMAL	[(NOTE 1)									[
B15	SHIFT	[(NOTE 2)									[
	NORMAL	] (NOTE 1)]
B16	SHIFT	] (NOTE 2)									GS]
	CONTROL	GS (NOTE 1)]
	NORMAL	— (NOTE 2)									—
B16	SHIFT	— (NOTE 2)									—
	CONTROL	US (NOTE 1)									US
C1	CONTROL	ESC (NOTE 1)									ESC
C3	NORMAL	A									SOH A
	SHIFT	A									
	CONTROL	SOH (NOTE 1)									
C4	NORMAL	S									DC 3 S
	SHIFT	S									
	CONTROL	DC 3 (NOTE 1)									
C5	NORMAL	D									EOT D
	SHIFT	D									
	CONTROL	EOT (NOTE 1)									
C6	NORMAL	F									ACK F
	SHIFT	F									
	CONTROL	ACK (NOTE 1)									
C7	NORMAL	G									BEL G
	SHIFT	G									
	CONTROL	BEL (NOTE 3)									
C8	NORMAL	H									H
C9	SHIFT	H									H
	NORMAL	J									J
C9	SHIFT	J									J
	NORMAL	K									VT K
C10	SHIFT	K									VT K
	CONTROL	VT (NOTE 1)									K
	NORMAL	L									FF L
C11	SHIFT	L									FF L
	CONTROL	FF (NOTE 1)									L
	NORMAL	;									+
C12	SHIFT	;									+
	NORMAL	+ (NOTE 2)									;
C13	NORMAL	CR (NOTE 3)									CR
	SHIFT	CR (NOTE 3)									
	CONTROL	CR (NOTE 3)									
C14	NORMAL	LF (NOTE 3)									LF
	SHIFT	LF (NOTE 3)									
	CONTROL	LF (NOTE 3)									
C15	NORMAL	DEL (NOTE 3)									DEL
	SHIFT	DEL (NOTE 3)									
	CONTROL	DEL (NOTE 3)									
C16	NORMAL	NUL (NOTE 3)									NUL
	SHIFT	NUL (NOTE 3)									
	CONTROL	NUL (NOTE 3)									
D4	NORMAL	Z									SS Z
	SHIFT	Z									
	CONTROL	SS (NOTE 1)									



LEGEND:  DATA BIT ABSENT (0)
 DATA BIT PRESENT (1) TM7440-228-15-15(2)

Figure 3-5. Signaling code chart (part 2 of 3).

KEY NO.	MODE	CHARACTER	ASC II DATA BITS								
			8	7	6	5	4	3	2	1	
D5	NORMAL	X									KEYS CAN X
	SHIFT	X									
	CONTROL	CAN (NOTE 1)									
D6	NORMAL	C									ETX C
	SHIFT	C									
	CONTROL	ETX (NOTE 1)									
D7	NORMAL	V									SYN V
	SHIFT	V									
	CONTROL	SYN (NOTE 1)									
D8	NORMAL	B									STX B
	SHIFT	B									
	CONTROL	STX (NOTE 1)									
D9	NORMAL	N									SO N
	SHIFT	N									
	CONTROL	SO (NOTE 1)									
D10	NORMAL	M									M
	SHIFT	M									
D11	NORMAL	,									,
	SHIFT	,									
D12	NORMAL	.									.
	SHIFT	.									
D13	NORMAL	/									/?
	SHIFT	?									
D16	NORMAL	EOM*(NOTE 4)									EOM
	SHIFT	EOM*(NOTE 4)									
	CONTROL	EOM*(NOTE 4)									
SP	NORMAL	SPACE									[]
	SHIFT	SPACE									
	CONTROL	SPACE									

LEGEND:  DATA BIT ABSENT (0)
 DATA BIT PRESENT (1)

NOTES:

1. ASC II TAPE PUNCH ONLY
2. HOLLERITH CARD PUNCH OR ASCII TAPE PUNCH ONLY
3. ITA NO.2 OR ASCII TAPE PUNCH ONLY
4. ITA NO.2 OR ASCII TAPE PUNCH ONLY, COMPLETE EOM SEQUENCE.

TM7440-228-15-15(3)

Figure 3-5. Signaling code chart (part 3 of 3).

Section II. MECHANICAL FUNCTIONING

3-13. Keyboard Assembly A2, Block Diagram

(fig. 3-6)

a. Keyboard Assembly A2 generates the eight-bit ASCII character code (with required shift and control functions) by interrupting a set of 16 light beams (from the optics assembly to the read head). The interrupted beams represented binary 1's and the uninterrupted beams, **binary** 0's. When a key is depressed, the pattern of holes in the key determines which light beams are passed, and therefore, which character code is generated by the read head. The last 0.015-incli travel of the key interrupts the "readnow" or strobe light beam channel. This causes the read head to generate a strobe pulse for the character.

b. An interlock assembly prevents more than one key from being actuated at one time by blocking all other keys once any key, except the RPT, SHIFT, SHIFT LOCK, or CTL key is -pressed. The interlock

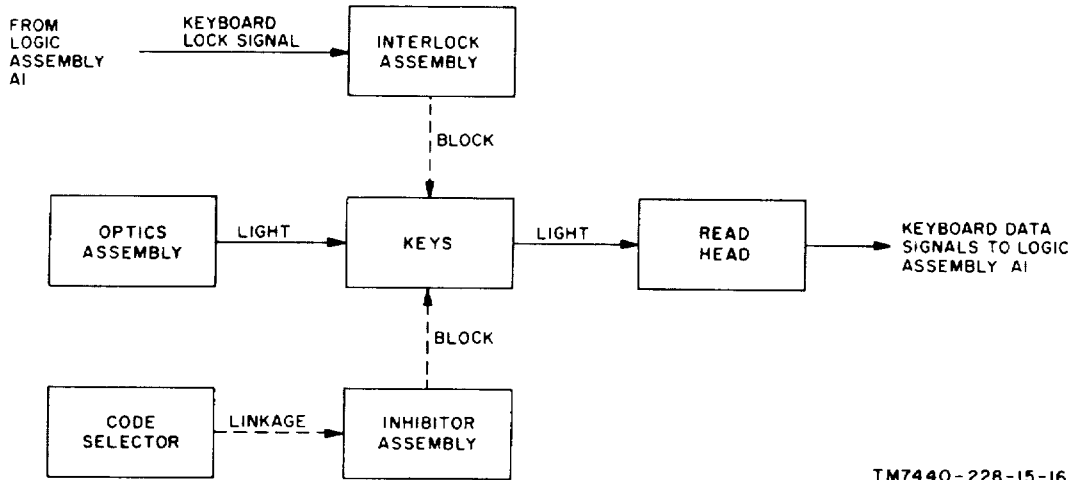
assembly also block all the keys when a solenoid in this assembly is actuated by a keyboard lock signal from logic assembly A1.

c. A code selector lever on the keyboard is used to select one of three possible output device codes (ASCII or ITA-2 for tape punch; HOLLERITH for card punch). This lever simultaneously operates electrical switches to signal the code selected to the logic assembly and operates through a mechanical linkage to position an inhibitor assembly which mechanically blocks those keys not applicable to the selected code.

3-14. Keys and Interlock Assembly

(figs. 3-7 and 3-8)

a. The keys are depressed manually, rotating on the key pilot to the down position. When released, the keys are returned to normal position by the ten



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Figure 3-6. Keyboard Assembly A2, block diagrams.

sion applied from formed springs beneath the keys.

The downward movement of each key is stopped by the bottom of the key striking against tile lockout angle assembly. This assembly runs the width of the keyboard. Key pressure or feel is provided by a magnet located on the bridge assembly. The key pressure is adjusted by moving the bridge assembly.

b. To permit mechanical blocking of those keys which are not applicable to the selected code, the lockout angle assembly can be moved to any one of three positions (ASCII, ITA-2, OR HOLLERITH) by the inhibitor assembly (para 3-15). A key cannot be fully depressed unless it has a cutout at the point where the lockout angle assembly makes contact. The keys containing characters are not applicable to the selected code (fig. 3-5) lack cutouts at the position of the lockout angle assembly for that selection; thus, the keys cannot travel to their full down position and cannot interrupt the read now light beam.

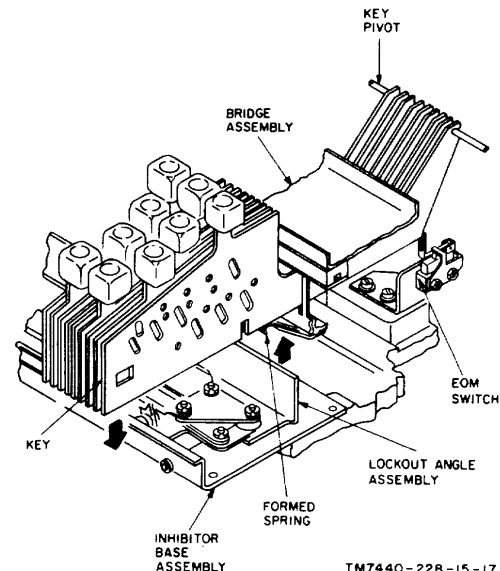
c. For generation of the EOM control signals, depression of the keyboard EOM key actuates a miniature switch which closes to apply 4.5 volts dc to the EOM signal circuit.

d. To prevent double keying, each key (except SHIFT, SHIFT LOCK, CTL, and RPT keys) is fitted into a slot of the interlock assembly. When a key is depressed, its thickness separates two interlock rollers (fig. 3-8). The displacement of these rollers limits the freedom of motion of similar rollers in the other slots. Thus, the rollers in the other slots prevent any other key from being depressed.

3-15. Inhibitor Assembly

(fig. 3-9)

The inhibitor assembly has a 3-position slide lever



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Figure 3-7. Typical key.

which operates electrical switches to signal the code selected and mechanically impedes movement of the keys not applicable in the selected output device code (ASCII, ITA-2, or HOLLERITH). The lockout angle assembly is linked to the selector by a pivot pin extending through the selector bell crank assembly into the slot in the selector. The linkage is made on the other side of the lockout angle assembly by another pivot pin through the rods and upper and lower bell crank assemblies. When the selector is moved in one direction or the other, the lockout angle assembly is moved in the same direction through this linkage system.

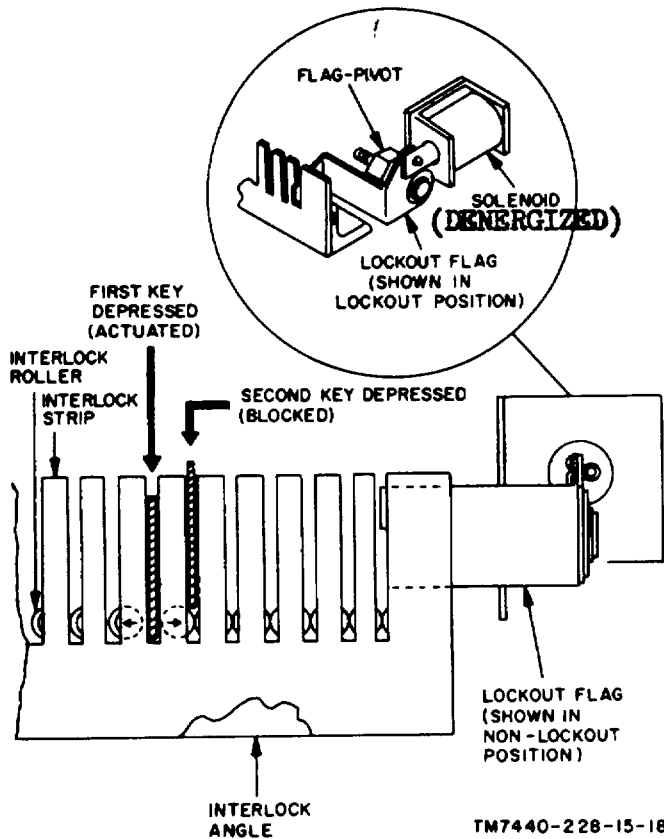


Figure 3-8. Interlock assembly.

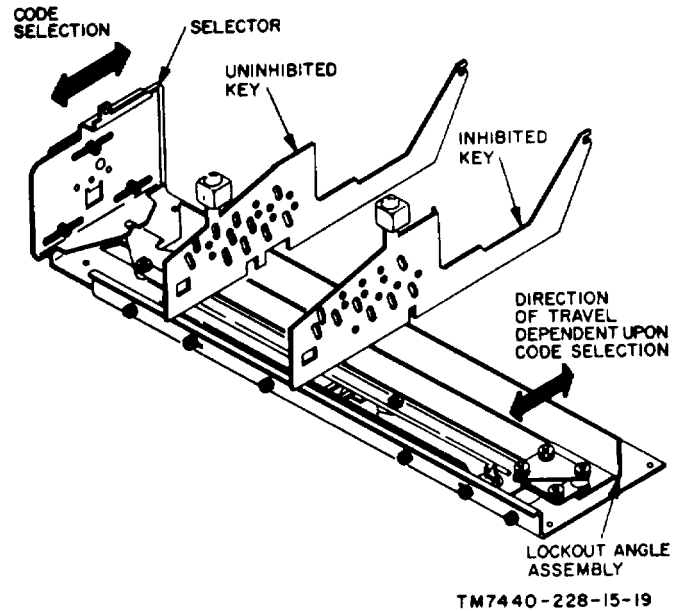


Figure 3-9. Inhibitor assembly.

Section III. ELECTRICAL FUNCTIONING

3-16. Logic Diagrams

a. Most of the data processing and control functions of the control-keyboard are performed by logic circuits on the PC cards in logic assembly A1. Thus, the electrical operation of each PC card is represented in Chapter 8 by a logic diagram rather than a conventional schematic diagram. The logic diagram shows all input and output connections of the card including power connections, but does not show the circuit components which make up the individual logic elements.

b. Most of the logic elements in the control keyboard are mounted in integrated circuit modules. Thus, detailed circuit components are not applicable. (Each integrated circuit logic element is considered to be a single electrical component.) For those logic elements that are made up of discrete circuit components, the schematic representation and a description of the circuit operation for each type of logic element is given in paragraphs 3-73 through 3-77.

Note

For convenience, all cards in logic assembly A1 are identified only by their distinguishing reference designations (A1, A2, A3, etc.). It should be understood that these designations are prefixed by A1.

3-17. Logic Signal Notation

a. In general, logic signals in the control-keyboard switch between a high level of + 4.5 volts and a low level of 0 volts. Some signal lines are considered activated when the level is high, whereas others are considered activated when the level is low. The state indicators (small circles) at the input and outputs of logic elements indicate which lines are activated by a high level (state indicator absent) and which lines are activated by a low level (state indicator present).

b. All significant logic signals are assigned a functional name. Many of the functional names are also assigned mnemonic designations. To permit the active state of a signal to be indicated by its functional name or mnemonic designation, the high level is arbitrarily designated true or logic 1 for signal naming purposes, whereas the low level is arbitrarily designated false or logic 0. Thus, the signal is a true function if it is active on a high level and a not-function if it is active on a low level. Not-function signals are identified by a not-bar over the functional name and mnemonic designation; for example, ready signal RDY. See the following mnemonic chart.

c. In the functional descriptions, the terms high

and low are used for +4.5-volt and 0-volt levels. Pulses or steps going from 0 to +4.5 volts are called positive pulses or steps, and those going from +4.5 to 0 volts are called negative pulses or steps.

3-18. Logic Diagram Symbol Notation

a. Typical integrated circuit and discrete circuit logic elements are shown in figure 8-10. Inputs and outputs of integrated circuit logic elements are identified by the wire terminal numbers of the integrated circuit modules in which the elements are located.

b. Two tagging lines are used within each logic symbol for identification purposes.

(1) The first tagging line in each logic symbol identifies the logic element type. The various types of integrated circuit and discrete circuit logic elements are described in paragraphs 3-19 through 3-23.

(2) The second tagging line in each logic symbol identifies the electrical reference designation of the logic element (para 3-19b and 3-23b). This reference designation is prefixed by the reference designation of the PC card on which it is located.

3-19. Integrated Circuit Modules

a. The integrated circuit modules used in the control-keyboard are of several types as described in the following paragraphs. However, they are all of standard construction and wired to the PC cards through 10 terminals (1 through 10). Reference designations for the integrated circuit modules are Z1, Z2, Z3, etc.

b. Some of the integrated circuit modules contain only one logic element, whereas others contain two. In those cases where two logic elements are contained in one integrated circuit module, the two elements are shown separately on the logic diagrams and are designated A and B; for example, Z1A and Z1B. The output signal terminal of the A element in each integrated circuit module is always terminal 2, and the output signal terminal of the B element is always terminal 10.

c. Power supply inputs to the individual logic elements are not shown on the logic diagrams since there is no provision for them in logic symbology. However, all integrated circuit modules receive power supply inputs of +4.5 volts at terminal 6, and 0 volt at terminal 1.

d. Since the integrated circuits are of standard construction, not all inputs to AND gates and OR gates are used in each application. Unused gating inputs are always wired to one of the used gating inputs; thus, more than one terminal may be listed at an input on the logic diagram symbol.

e. Most integrated circuit logic elements can function in more than one way; thus, every AND gate for high inputs is an OR gate for low inputs, and every OR gate for high-inputs is an ANI) gate for low inputs. A noninverting OR gate becomes a simple buffer if the inputs are wired together, and an inverting OR gate becomes an inverter if the inputs are wired together.

f. The logic operation of each integrated circuit module type is described in paragraph 3-20.

3-20. Operation of Individual Integrated Circuit Modules

The operation of the individual integrated circuit modules used in the control-keyboard is described below. Logic symbols are given for each type of module, using typical tagging lines.

a. *Type A-1 Module.* Two type A-1 gates are located on each type A-1 module (fig. 3-10). These may be noninverting AND gates for high inputs (case A), or noninverting OR gates for low inputs (case B). Open circuit inputs are equivalent to high levels.

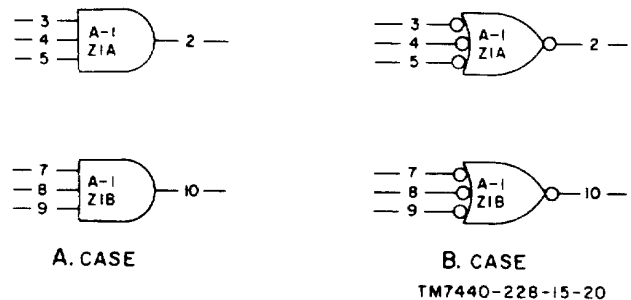


Figure 3-10. Type A-1 module, logic symbols.

b. *Type N-1 Module.* Two type N-1 gates are located on each type N-1 module (fig. 3-11). These may be inverting OR gates for high inputs (case A), or inverting AND gates for low inputs (case B). Type N-1 gates may also act as simple inverters (case C). This is accomplished by tying all input terminals together. Open circuit inputs are equivalent to low levels.

c. *Type N-2 Module.* One type N-2 gate is located on each type N-2 module (fig. 3-12). This may be an inverting OR gate for high inputs (case A), or an inverting AND gate for low inputs (case B).

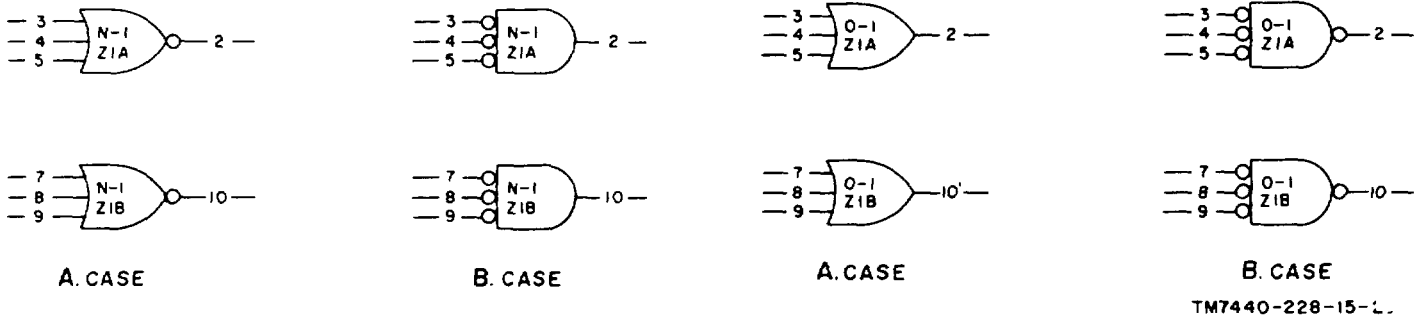
d. *Type 0-1 Module.* Two type 0-1 gates are located on each type 0-1 module (fig. 3-13). These may be noninverting OR gates for high inputs (case A), or noninverting AND gates for low inputs (case B). Type 0-1 gates may also act as simple buffers (case C). This is accomplished by tying all input terminals together. Open circuit inputs are equivalent to low levels.

<i>*Mnemonic</i>	<i>Definition</i>
ABC	Advance Block Counter
ACC	Advance Character Counter
ALM	Alarm
ALS	Alarm Stop
APG	Amplifier Ground
BCA	Block Counter Advance
BCR	Block Counter Reset
BKS	Back Space
CAN	Cancel
CAU	Caution
CCA	Character Counter Advance
CCR	Character Counter Reset
CL	Clock
CLK	Clock
CPC	Cancel Punched Character
CPM	Card Punch Mode
CR	Carriage Return
CRC	Counter Reset, Closed Side
CRD	Carriage Return Decoder
CRO	Counter Reset, Open Side
DB	Data Bit
DBE	Data Block End
DCT	Data Control
DRC	Data Register Control
DRI	Data Request Inhibit
DRQ	Data Request
DSD	Data Strobe Delayed
DSI	Data Strobe Inhibit
DST	Data Strobe
EBW	End of Block Warning
ED	End of Message Data
EML	End of Message Level
EMP	End of Message Pulse
EOB	End of Block
EOM	End of Message
ESI	End of Message Select Inhibit
EST	End of Message Strobe
GPR	Gate Pulse Relay
GPS	Gate Pulse Switch
HSN	High Speed Neutral
ICA	Indicator Counter Advance
INH	Inhibit
KBL	Keyboard Lock
KD	Keyboard Data
KIA	Relay Enable
KST	Keyboard Strobe
LAT	Lamp Audio Test
LF	Line Feed
LKB	Lock Keyboard
LSI	Lamp Switch Inhibit

<i>*Mnemonic</i>	<i>Definition</i>
LTS	Lamp Switch Test
MFI	Machine Function Inhibit
MRS	Master Reset
MSE	Message End
OAL	Operator Alarm
ODR	Output Device Ready
OGP	On Gate Pulse
OND	Signal Ground
PRC	Power-On Reset (Normally Open)
PRO	Power-On Reset (Normally Closed)
R	Receiver
RBC	Reset Block Counter
RCC	Reset Character Counter
RDY	Ready
REL	Request Reset Error Lock
RPC	Reject Punched Card
RPT	Repeat
RSC	Reset Switch, Closed Side
RSO	Reset Switch, Open Side
RTE	Reset Tens Counter
SEL	Select
SOB	Start of Block
SOM	Start of Message
STP	Stop
TET	Tens Toggle
THS	Toggle Hundreds
TPC	Tape Punch Cancel
TPE	Tape Punch Error
TPM	Tape Punch Mode
TTS	Toggle Tens Stage
TZI	Ten Zero Inhibit
UKE	Keyboard Enable
UKIL	Keyboard Interlock
UKL	Keyboard Lock
UNT	Units Toggle
X	Transmitter

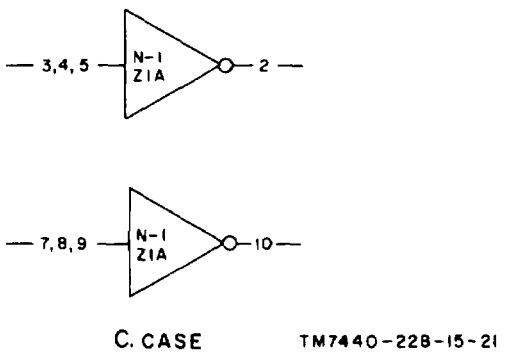
* Fourth letter suffix to above three-letter mnemonics indicates the following:

B	Buffer
C	Closed side of switch
D	Driver
L	Lamp
O	Open side of switch
R	Receive
S	Switch
T	Tens
U	Units
X	Transmit



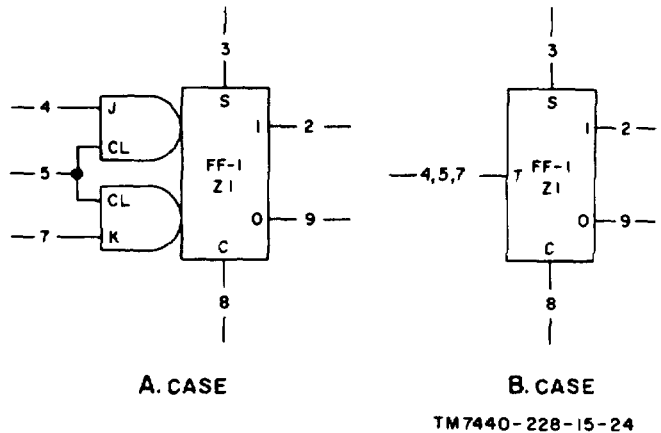
TM7440-228-15-L

Figure 3-13. Type 0-1 module, logic symbols.



TM7440-228-15-21

Figure 3-11. Type N-1 module, logic symbols.



TM7440-228-15-24

Figure 3-14. Type FF-1 module, logic symbols.

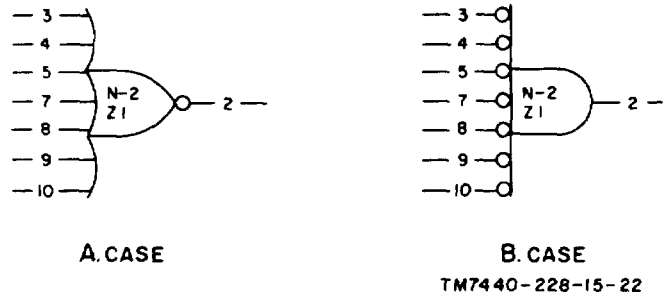
S and C inputs are low, the flip-flop is toggled between the set and clear states by negative steps at the T input; otherwise, the flip-flop is set by a high level at the S input and cleared by a high level at the C input.

(3) Open circuits at the J, K, CL, or T inputs are equivalent to high levels. Open circuits at the S or C inputs cause intermittent erroneous changes of state.

(4) Unused S and C input are wired to terminal 1 (0 volt). To permanently enable J, K, or CL inputs, these inputs are wired to terminal 6 (+4.5 volts).

3-21. Integrated Circuit Latch

a. A special combination of N-1 OR gates called a latch (fig. 3-15) is used extensively in the control-keyboard logic circuits. The latch functions as a flip-flop to register the occurrence of momentary signals. The two OR gates which make up the latch are called



TM7440-228-15-22

Figure 3-12. Type N-2 module, logic symbols.

e. *Type FF-1 Module.* One type FF-1 flip-flop is located on each type FF-1 module (fig. 3-14).

(1) In the case A configuration, the flip-flop can be set by either a high level at the S input, or a high level at the J input which is clocked by a negative step at the CL input. The flip-flop can be cleared by either a high level at the C input, or a high level at the K input which is clocked by a negative step at the CL input.

(2) In the case B configuration, terminals 4, 5, and 7 are tied together to form a T input. When the

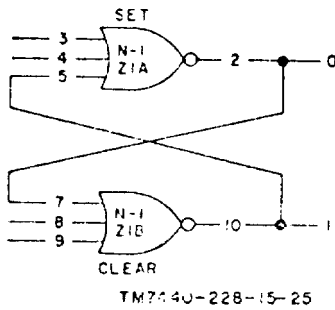


Figure 3-15. Latch logic symbol.

the set and clear sides of the latch. The 1 output of the latch, which goes high when the latch is set, is produced by the clear side, whereas the 0 output, which goes high when the latch is cleared, is produced by the set side of the latch.

b. To set the latch, both inputs to the clear side must be low, and a high level must occur at either of the two inputs to the set side. The resulting low output of the set side on line 0 inhibits the clear side which then produces a high level on the 1 line. This high level reinforces the external input to the set side so that even if the external input goes low, the latch remains set.

c. To clear the latch, both inputs to the set side must be low and a high level must be applied to either of the clear side inputs. This causes the 1 output to go low and the 0 output to go high; thus, the clear condition is reinforced and remains even after the high level to the clear side goes low again.

3-22. Integrated Circuit Single Shot

A special combination of N-1 OR gates and discrete circuit components is used on card A1 to function as a single shot (fig. 3-16). The single shot produces a positive output pulse whenever it is triggered by a positive input step. The pulse

width depends on the value of the discrete circuit components used.

a. Each positive input step is differentiated by capacitor C1 and resistor R69 to form a sharp positive spike. This is inverted by OR gate Z1A whose other input is returned to ground through resistor R70. The leading edge of the spike results in a negative step at the output of Z1B which enables AND gate Z1B only when the gating input to this AND gate is low.

b. When the gating input is low, AND gate Z1B produces a positive step output which is coupled through capacitor C2 to OR gate Z1A, maintaining the low Z1A output and the high Z1B output. Capacitor C2 now discharges through resistor R70 so that the voltage at the junction of C2 and R70 drops toward ground. After approximately 500 milliseconds (ms), the voltage at the junction of C2 and R70 is too low to keep OR gate Z1A activated. Thus, the Z1A output returns to a low level. Diode CR1 prevents the level at the junction of C2 and R70 from overshooting into the negative region.

3-22.1. Transmitter and Receiver Microcircuit Logic Elements

Some models of the Control Keyboard use thick film microcircuits as interface transmitters and receivers on PC cards A10 and A11. The thick film circuit components are encapsulated within a square plastic case. These circuits are type SM-63 microcircuits and are wired to the printed circuit card through 14 terminals (1 through 14). Reference designations of the microcircuit modules are Z1, Z2, Z3, etc. Four types of transmitter and receiver microcircuits are supplied. The operation of each type is described as follows:

a. *Type T00023 Polar Transmitter.* Polar transmitters convert a 0 volt logic level to a -6 volt output, and a +4.5 volt input to a +6 volt output. Provisions are made to AND up to three input signals to the polar transmitter. When this option is used, all inputs must be high before +6 volts is transmitted. When one or more inputs are low, -6 volts is maintained at the output. Five slightly different variations of polar transmitter microcircuit modules exist, because of different output rise and fall time characteristics and number of inputs that may be ANDed together. Inputs are ANDed by applying the signals to terminals of the microcircuit module designated as diode inputs. If the input signal is applied to the direct input terminal, the output signal switches between -6 and +6 volts as the input signal varies between 0 and

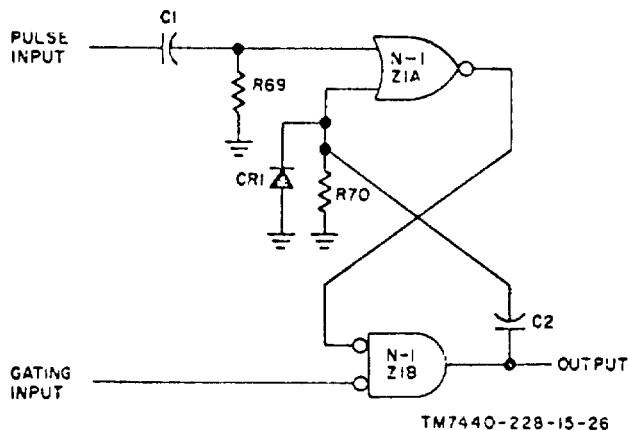


Figure 3-16. Integrated circuit single shot, logic symbols.

+4.5 volts, as described previously. Each type of polar transmitter is identified by the basic type number (T00023) and a dash number. Power supply inputs, and input and output terminals for each dash number polar transmitter is shown below. A dash in the chart indicates no connection for that function. Terminals not listed are not used.

Function	Terminal number T00023				
	-001	-002	-003	-004	005
Direct input.....	14	14	14	14	14
Diode input 1.....	2	2	....	2	....
Diode input 2.....	3	3	....	3	....
Diode input 3.....	12	....	....	....	....
Output	8	8	8	8	8
+12 volt dc supply	13	13	13	13	13
-12 volt dc supply	1	1	1	1	1
Ground.....	7	7	7	7	7

b. *Type T00024 Polar Receiver.* Polar receivers convert a +6 volt input to +4.5 volts and a -6 volt input to 0 volts. Provision is also made to allow the receiver output to be clamped to the 0 volt output level by applying a high level on the inhibit input. Two variations of polar receiver microcircuit module are supplied. One (T00024-001) contains two separate but identical circuits inside the module while the other (T00024-002) contains a single receiver circuit. Power supply and input and output connections for the polar receivers are shown below. A dash in the chart indicates no connection for that function. Terminals not listed are not connected.

Function	Terminal number T00024	
	-001	-002
Input No. 1	1	1
Output No. 1	11	11
Inhibit No. 1.....	13	13
Input No. 2	7	....
Output No. 2	9	....
Inhibit No. 2.....	2	....
+12 volt dc supply	12	12
-12 volt dc supply	6	6
+4.5 volt dc supply	10	10
Ground.....	4	4

c. *Type T00121 Neutral Receiver.* Neutral receivers convert a 0 volt input from the CCU to +4.5 volts and an open circuit input to 0 volts. In addition, some variations of the microcircuit neutral receivers have provisions for maintaining the output at 0 volts by application of a separate inhibit signal. Four variations of neutral receiver microcircuits are supplied, with the differences being, in the number of separate circuits contained in each module and inhibit levels used. Microcircuits T00121-001 and -002 contain three similar, but separate, receiver circuits, while T00121-003 and -004 modules contain only two. The T00121-002 and -

004 modules also provide connections for inhibit signals. Inhibit A requires a high level to clamp the output to 0 volts, and inhibit B requires a low level (0 volt) signal to maintain the 0 volt output. The chart below shows input, output, and power supply connections for the neutral receivers. A dash in the chart indicates no connection for that function. Terminals not listed are not connected.

Function	Terminal number T00121			
	--001	--002	-003	-004
Circuit 1:				
Direct input	14	14	14	14
Diode input	112	....	....	....
Inhibit A ^a .....	....	....	....	3
Inhibit B ^b .....	....	3	....	....
Output.....	8	8	8	8
Circuit 2:				
Direct input	13	13	13	13
Diode input	2	....	....	....
Inhibit B ^b .....	....	4	....	....
Output.....	10	10	10	10
Circuit 3:				
Diode input	9	9	....	....
Output.....	6	6	....	....
+12 volt dc supply..	11	11	11	11
- 12 volt dc supply..	1	1	1	1
+4.5 volt dc supply.	7	7	7	7
Ground	5	5	5	5

a. Requires high level to inhibit

b. Requires low level to inhibit

d. *Type T00122 Neutral Transmitter.* Neutral transmitters convert + 4.5 volt logic levels to 0 volts for transmission and low level inputs to an open circuit. Four variations of neutral transmitter are supplied, with each having two or three similar, but separate, circuits and diode inputs which may be connected to provide an AND function for input signals. The following chart lists the input, output, and power supply connections for the neutral transmitters. A dash in the chart indicates no connection for that function. Terminals not listed are not connected.

Function	Terminal number T00122			
	-001	-002	-003	-004
Circuit 1:				
Direct input	13	13	13	13
Diode input	2	2	....	2
Diode input	3	3	....	3
Output.....	1	1	1	1
Circuit 2:				
Diode input	10	....	....	....
Diode input	11	....	....	....
Output.....	5	....	....	....

Function	Terminal number T00122			
	-001	-002	-003	-004
Circuit 3:				
Direct input	8	8	8	8
Diode input	9	9	....	....
Diode input	6	6	....	....
Output.....	7	7	7	7
+12 volt dc supply	12	12	12	12
-12 volt dc supply	14	14	14	14
Ground.....	4	4	4	4

e. Transmitter and receiver microcircuit modules are connected through 14 terminals. Figure 5-1.2 shows the location of these terminals.

3-23. Discrete Circuit Logic Elements

a. There are several types of discrete circuit logic elements as described in paragraph 3-24. Each discrete circuit logic element consists of a combination of standard circuit components such as resistors, diodes, etc; thus, wire terminal numbers for inputs and outputs are not assigned as for integrated circuit logic elements.

b. Reference designations for discrete circuit logic elements are A, B, C, etc, prefixed by the reference designation of the PC card on which they are located.

3-24. Operation of Discrete Circuit Logic Elements

The logic operation of each discrete circuit logic element type is described below. Logic symbols for each type are given, using typical tagging lines. The logic elements are grouped by the PC card on which they are located. Schematic diagrams and detailed circuit operation of each type of discrete circuit logic element are given in paragraphs 3-73 through 3-77.

a. *PC Cards A1, A4, and A5.* The only discrete circuit logic element located on PC cards A1, A4, and A5 (fig. 3-17) is the type LAMP DR-1 lamp driver. The type LAMP DR-1 lamp driver converts a high level input to a high current ground to drive a +4.5 or +12-volt lamp and converts a low level input to a low current ground to keep lamp filaments warm.

b. *PC Card A2.* The only discrete circuit logic element located on PC card A2 (fig. 3-18) are the type LAMP DR-2 and DR-3 lamp drivers. They operate in essentially the same way as the LAMP DR-1 lamp driver on PC cards A1, A4, and A5.

c. *PC Card A10.* The following discrete circuit logic elements are located on PC card A10 (fig. 3-19):

- (1) *Type AMPL-1.* The type AMPL-1 buffer

amplifier is used as a buffer and shaper for keyboard strobe pulses from the read head. The voltage levels of these signals (0 and +4.5 volts) are inverted by the buffer amplifier. Also, the buffer amplifier squares off slow rising and falling edges of the input pulses.

(2) *Type OSC.* The type OSC oscillator generates positive 12.5-kc pulses, switching between 0 and +4.5 volts.

(3) *Type RCVR-1.* The type RCVR-1 interface receiver converts 0-volt inputs from the output device to +4.5 volts, and an open circuit input to 0 volt.

(4) *Type RCVR-2.* The type RCVR-2 interface receiver converts +6.2-volt inputs from the output device to +4.5 volts, and -6.2-volt inputs to 0 volt.

(5) *Type XMTR-1A.* The type XMTR-1A interface transmitter converts a high level input from the control-keyboard to + 6.2 volts for transmission to the output device, and a low level input to -6.2 volts for the output device. Bias supply inputs are +12, 0, and -12 volts.

d. *PC Card A11.* Two types of discrete circuit logic elements are located on PC card A11 (fig. 3-20). The type XMTR-1B logic element functions in essentially the same way as the type XMTR-1A logic element on PC card A10. The type XMTR-2 logic element converts a high level input from the control-keyboard to 0 volt for transmission to the output device, and a low level input to +6.2 volts for the output device.

3-25. Dc Circuits (fig. 8-4)

All dc power in the control-keyboard is derived from three dc power supply inputs (+12 volts, -12 volts, and + 4.5 volts) received from the out put device. These inputs are protected by fuses F3, F2, and F1, respectively.

a. *Power Turn-On.* Application of dc power to the control-keyboard is initiated by pressing POWER switch-indicator Z1 on the control panel. A special turn-on sequence is used so that the same switch can be used to turn power on and off in successive switch operation.

(1) Prior to the operation of switch-indicator Z1, relays K1, K2, and K3 are deenergized. However, +12 volts dc from the output device is routed on line LC2 to PC card A10 in logic assembly A1, where it activates voltage divider R76, R72, R78. Thus, the voltage divider maintains a positive voltage level on line UKE. On operation of switch-indicator Z1, the UKE voltage is passed to the GPS line. The positive-going step voltage on this line is differentiated by capacitor C7 and resistor R77 on PC card A10 to produce a positive pulse on line GPR.

NOTE

The UKE pulse is developed on PC card A-10 of the control-keyboard. Connector P3 is connected to the output device to develop the UKE pulse (open circuit condition at pin e of P3 enables generation of UKE). On PC and A10, UKE on pin 21 from the output device must have an open circuit condition. At the same time, +12 volts dc must be present at pin 23 (LC2) to produce a +4.5-volt de UKE signal across resistor R72 to fire SCR CR13 which produces ground output to energize relay K1 and K2.

(2) The positive pulse on line GPR is routed through the 1 and 7 contacts of deenergized relay K2 to line OGP which feeds the trigger input to silicon-controlled rectifier (SCR) CR13. Thus, the SCR is driven into conduction when POWER switch-indicator Z1 is operated. Current supplied by

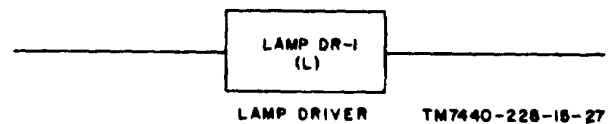


Figure 3-17. PC Cards A1, A4, and A5 discrete circuit logic elements.

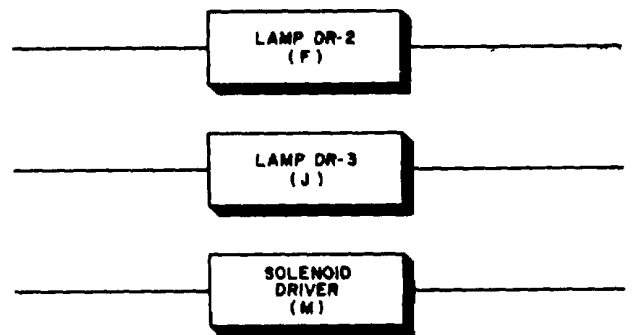


Figure 3-18. PC Card A2, discrete circuit logic elements.

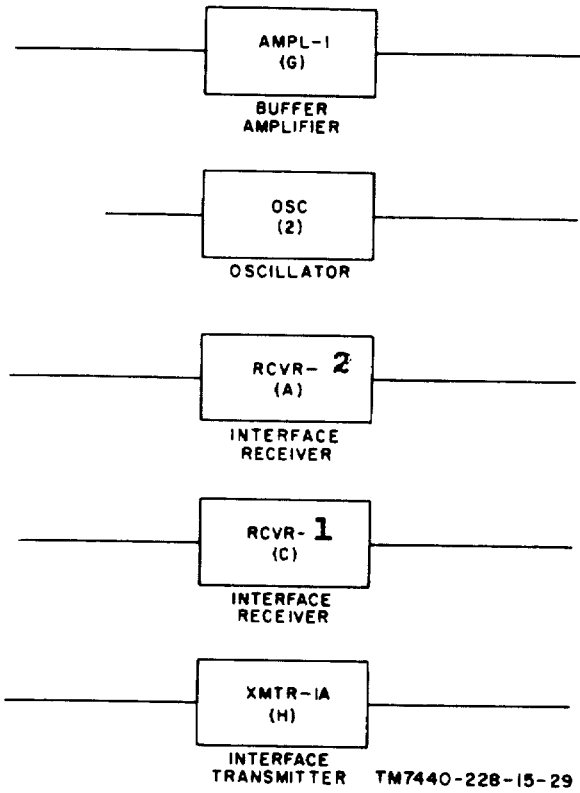


Figure 3-19. PC card A10, discrete logic elements.

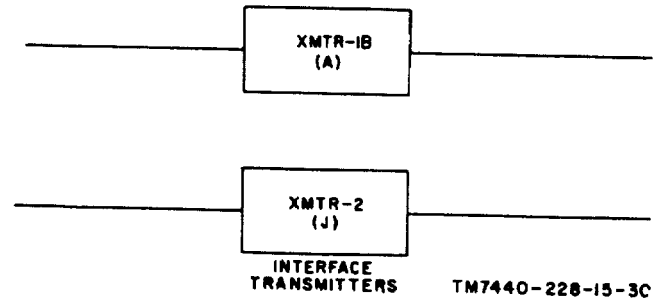


Figure 3-20. PC card A11, discrete circuit logic elements.

the Z1-4 contacts is now drawn through the solenoids of relays K1 and K2.

(3) Once K1 and K2 are energized, they pass the dc power sources of + 12 volts, -12 volts, and +4.5 volts to the PC cards in the logic assembly. This power is monitored by power detector (N) on PC card A10. When this circuit detects that all three voltages are at satisfactory levels, a ground level is produced on line K3. This is fed to the coil of relay K3 whose other side is connected to the -12-volt dc supply. Thus, K3 is energized and its contacts bypass the contacts of Z14 connecting the + 12-volt power to the coils of K1 and K2. Therefore, K1 and K2 remain energized even after Z1 is released.

(4) Since operation depends upon relay K3 remaining energized, if power detector (N) detects unsatisfactory levels-in any of the three source voltages, the resultant low level on line K3 shuts down all power.

b. Power Turn-Off. To turn off power, POWER switch-indicator Z1 is again pressed. This connects ground to line OND at the junction of resistors R78 and R79 on PC card A10.

(1) Prior to the power turn-off, this junction was at + 12 volts obtained through line LC1 from relay K3. This condition kept capacitor C8 on PC card A10 charged to +12 volts since the other side of C8 is connected to ground through SCR CR13.

(2) The sudden appearance of ground at the junction of R78 and R79 momentarily results in a negative voltage from C8 at the K1, K2 return line. This provides a reverse current path to drive SCR CR13 back into cutoff. Capacitor C8 quickly charges up and insufficient current is available to keep K1 and K2 energized. The loss in supply voltages results in a low level from power detector (N) on PC card A10 causing K3 to deenergize; thus, all three relays are deenergized. When Z1 is released, the OND line is opened and the junction of R78 and R79 on PC card A10 returns to + 12 volts available on line LC2.

c. +4.5-Volt Power. When the power turn-on sequence is completed, + 4.5-volt power from relay K2 is routed to terminal board TB1 in logic assembly A1 for distribution to all integrated circuits on the PC cards of the logic assembly. Integrated circuits are mounted on all PC cards. The +4.5-volt power is applied to the cards through pins 2 and B. The signal ground dc return for the +4.5-volt power is tied together with the dc returns for the + 12-volt and 12-volt power inputs, and routed to TB1 for distribution to pins 1 and A of the circuit cards. The +4.5-volt power is also fed to various switches on the control panel to generate switched logic signals. One of these switches is POWER switch Z1. When this switch is pressed its Z1-1 contacts switch

+4.5 volts from line PRC to line PRO. This initiates a master reset of all logic circuits (para 3-26). When the switch is released, the +4.5 volts on line PRC is routed through line UKIL to provide an interlock to the output device. The +4.5-volt power is also routed to the keyboard to operate the logic circuits in read head A1.

d. +12-Volt Power. The +12-volt power is switched through relay K1. This power is used to supply control panel A3 indicators DS1, DS2, DS3, and Z2. These indicators are lit by ground signals from logic circuits in logic assembly A1 by switching a ground connection to their return lines. In addition, the + 12-volt power is routed through terminal board TB1 to supply discrete circuit logic elements in PC cards A1, A2, A4, A5, A10, and A11. The lamps are tested by operating LAMP/AUDIO TEST switch S1. The resulting ground level on line LTS is routed through isolation diodes CR11 through CR15 on PC card A11 (fig. 8-17) to, the various indicators.

e. 12-Volt Power. The 12-volt power is routed through relay K1 to light optics assembly lamp DS01 in the keyboard. This is the lamp which provides the light beam for operation at read head A2A1. Transistor Q1 is connected into the lamp common line for the 12-volt power to provide surge current protection for the lamp. In addition, the 12-volt is routed through terminal board TB1 in logic assembly A1 to supply discrete circuit logic elements in PC cards A1, A2, A4, A5, A10, and A11. Filtering for the -12-volt power is provided by capacitors C9, C10, and C11 on PC card A1 (fig. 8-8).

f. Regulated Voltages. Voltage regulator circuits are located on PC cards A10 and A11 (fig. 8-16 and 8-17) to supply +6.2-volt and -6.2-volt power for operation of the interface receivers and transmitters. On PC card A10, the + 6.2-volt power is derived from the + 12-volt power source by Zener diode VR5 and resistor R86. The -6.2-volt power is derived in a similar manner from the -12-volt power source by Zener diode VR6 and resistor R87. Similar Zener diodes are used on PC card A11.

3-26. Master Reset Control Circuit

Whenever power is turned on to the control-keyboard, POWER switch-indicator Z1 on the control panel must be operated. In addition to turning on power, this action resets flipflops throughout the logic circuits in the control-keyboard and the output device by activating a master reset line. After initial turn-on, the master reset line may be activated by operating RESET switch S2.

a. When POWER switch-indicator Z1 on the control panel (fig. 8-3) is initially operated, its contacts transfer a +4.5-volt level from normally closed line

PRC to normally open line PRO. These lines are connected to debouncing latch Z8 on PC card A7 (fig. 8-13); thus the latch is set when the switch is operated. Similarly, the latch is cleared when the switch is released.

b. The purpose of the latch is to act as a debounce circuit which removes the effects of switch bounce from the signals and converts them to logic levels, switching between 0 and +4.5 volts; thus, when the switch is operated, the latch is set on the first contact of the switch. The resulting high level at the 1 output is passed through OR gate Z12B to activate master reset line MRS. Switch bounce has no effect on the latch and, therefore, no effect on the output. When the switch is released, the latch is cleared and the master reset line goes low again. Resistors R3 and R4 provide a connection to ground for the two inputs when the switch contacts are open.

c. When RESET switch S2 on the control panel is operated, its contacts transfer a +4.5-volt level from line RSC to line RSO. These lines are connected to debouncing latch Z4 on PC card A7. Thus, the latch is set when the RESET switch is operated, and reset when the RESET switch is released. During the time when the latch is set, the high level at its 1 output is passed through OR gate Z12B to activate master reset line MRS.

d. The master reset line is connected to the clear inputs of various latches and flip-flops throughout the logic circuits of the control-keyboard to provide the reset capability and also activates the transmit interface circuits to cause a reset signal to be sent to the output device.

3-27. Read Head

The signals produced by the read head are derived from 16 photocells arranged as shown in figure 3-21. Photocells 1 through 14 are used to control the eight data bit lines. Photocell 15 controls the repeat signal which is activated when tile RPT key is pressed, and photocell 16 controls the keyboard strobe signal which is activated when any character key is pressed.

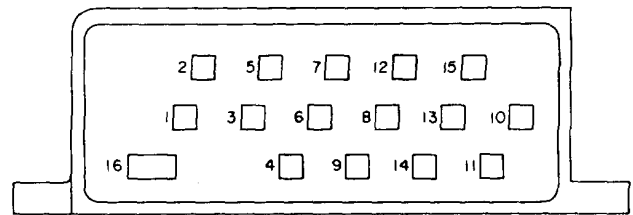
3-28. Data Bits 1 through 8

The generation of the eight data bits is controlled by the pattern of cutouts in the positions corresponding to photocells 1 through 14.

a. A typical cutout pattern on a character key is illustrated in figure 3-22. Either a circular or oval-shaped cutout is located at each of the 14 photocell positions. Oval cutouts allow light to pass through to the corresponding photocells whether the key is up or down. When the key is up, light passes through the lower portion of the oval to the photocell. When the key is down, light passes through the upper portion of the oval.

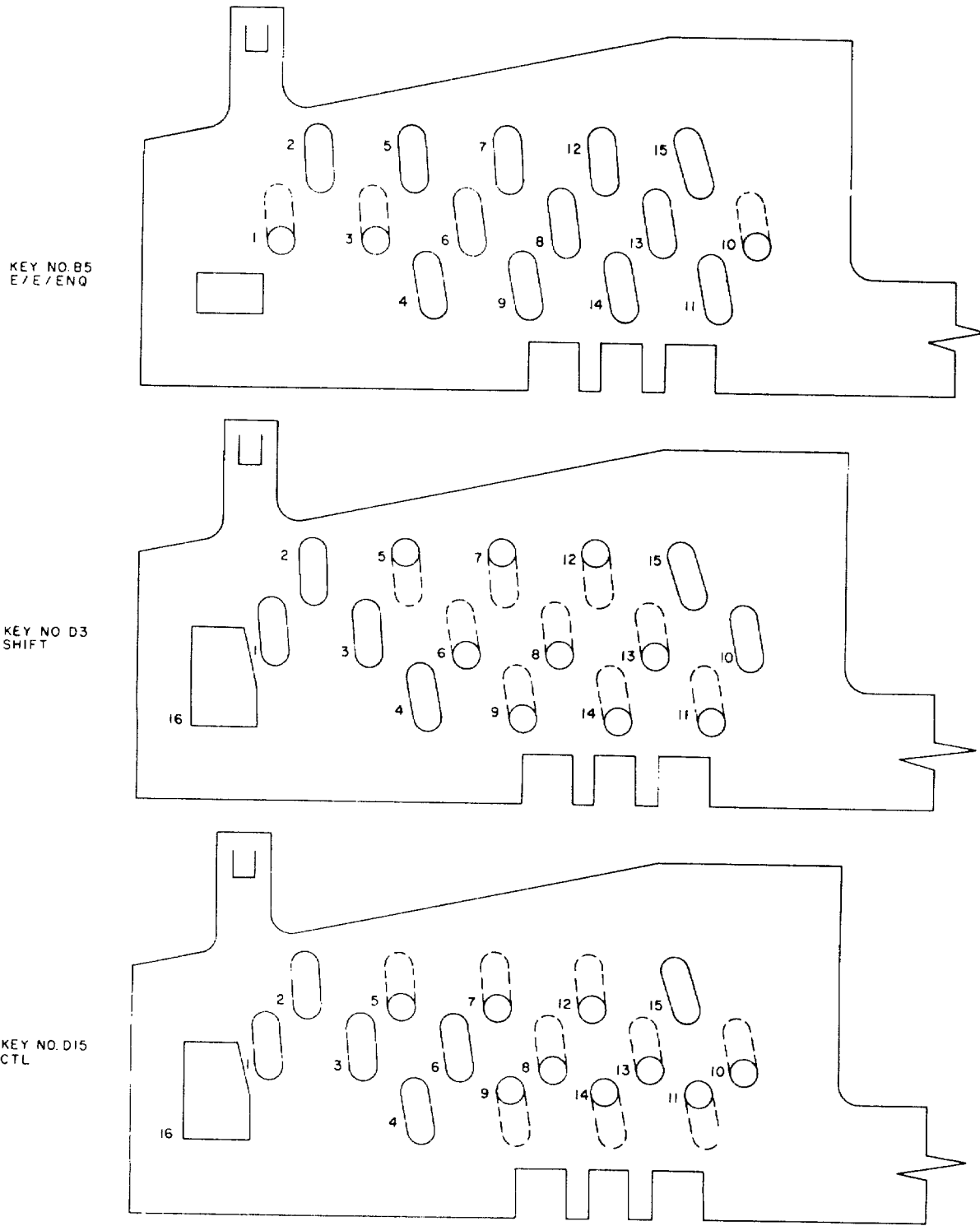
b. Circular cutouts are generally placed in the lower portion so that light can pass through when the key is up, but is blocked when the key is down. Thus, all of the character keys are cut out to pass the 14 beams of light when they are up, but to block specific beams of light when they are down.

c. Photocells 1 through 14 function in four groups. Photocells 1 through 4 control data bits 1 through 4 in all modes. Photocells 6, 8, 10, and 13 control data bits 5 through 8 in the normal mode (shift and control keys up). Photocells 5, 7, and 12 provide supplementary control for data bits 5, 6, and 8 when the shift keys are down. Photocells 9, 11, and 14 provide supplementary control for data bits 6, 7, and 8 when the control keys are down.



TM7440-228-15-31

Figure 3-21. Read photocell layout.



TM7440-228-15-32

Figure 3-22. Typical key cutout patterns.

3-29. Logic for Data Bits 1 Through 4

Photocells 1 through 4 are always lighted when all the keys are up. Pressing any of the character keys in any mode causes a specific combination of these photocells to be darkened; all photocells to be darkened have a circular cutout. Those photocells which are darkened indicate the presence of a data bit by producing a low output (fig. 8-6). This is inverted to a high level on data bit lines 1 through 4 by a corresponding PHOTO AMPL-1 photocell amplifier. Thus, if the key that is pressed has circular cutouts for photocells 1 and 3 (fig. 3-22), these photocells are darkened and the output code for data bits 4 through 1 is 0101.

3-30. Logic for Data Bits 5 Through 8, Normal Mode

Photocells 6, 8, 10, and 13 in the center row of photocells control data bits 5 through 8 in the normal mode.

a. The outputs of photocells 6, 8, 10, and 13 are low when these photocells are darkened and are used to enable AND gates A through D, respectively. The other inputs to these AND gates are low when the shift and control keys are up (c below).

b. When any one of AND gates A through D is enabled, its low output is inverted by a corresponding photocell amplifier to produce a high level on data bit line 5, 6, 7, or 8. Thus, in the normal mode, the eight data bits are controlled by the cutouts corresponding to photocells 1, 2, 3, 4, 6, 8, 10, and 13. These eight photocells are all lighted when all keys are up so that all data bit lines are inactive. Any one character key being pressed causes a combination of these photocells to be darkened corresponding to the ASCII code for that character. The other inputs to these four AND gates are supplied by photocells 5, 7, 9, 10, 11, and 14. When the shift and control keys are up, all of these photocells are darkened, resulting in low outputs to allow the AND gates to be controlled by photocells 6, 8, 10, and 13.

c. There are two shift keys (D3 and D14) which are ganged together. Key D14 has oval cutouts in every position so that it has no effect on the photocells whether it is up or down. Key D3 (fig. 3-22) has oval cutouts in photocell positions 1 through 4 and 10 so that it does not affect these photocells, and has circular cutouts in photocell positions 5 through 9 and 11 through 14.

(1) The circular cutouts in photocell positions 5, 7, and 12 are in the upper positions so that these photocells are lighted only when the shift key is down. When the shift, key is up, these three photocells are darkened, thereby providing an enabling condition to AND gates A, B, and D for the normal mode.

(2) The circular cutouts in photocell positions 6, 8, 9, 11, 13, and 14 are in the lower position so that these photocells are not affected by the shift key when the key is up. When the shift key is down, all of these photocells are darkened (para 3-31).

d. There are two control keys (D2 and D15) which are ganged together. Key D2 has oval cutouts in every position so that it has no effect on the photocells whether it is up or down. Key D15 (fig. 3-22) has oval cutouts in photocell positions 1 through 4 and 6 so that it does not affect these photocells, and has circular cutouts in photocell positions 5 and 7 through 14.

(1) The circular cutouts in photocell positions 9, 11, and 14 are in the upper positions so that these photocells are lighted only when the control key is down. When the control key is up, these three photocells are darkened, thereby providing an enabling condition to AND gates B, C, and D for the normal mode.

(2) The circular cutouts in positions 5, 7, 8, 10, 12, and 13 are in the lower position so that these photocells are not affected by the control key when the key is up. When the control key is down, all of these photocells are darkened.

3-31. Logic for Data Bits 5 through 8, Shift Mode

When either shift key is pressed, the D3 key (fig. 3-22) unblocks photocells 5, 7, 10, and 12, and blocks photocells 6, 8, 9, 11, 13, and 14. Photocells 1 through 4 remain unblocked and are controlled by the individual character keys to determine data bits 1 through 4 (para 3-28).

a. *Data Bit 5.* Since photocell 6 is darkened, an enabling condition is supplied to ANT) gate A, which controls data bit 5 (fig. 8-6). Thus, data bit T is controlled by photocell 5 which is not blocked by the shift key but may be blocked by the individual character key, depending on whether bit. 5 code for that character is a 1 or 0.

b. *Data Bit 6.* Since photocells 8 and 9 are darkened, two inputs to AND gate B, which control data bit 6, are active (fig. 8-6). Thus, data bit, 6 is controlled by photocell 7 which is not blocked by the shift key but may be blocked by the individual character key, depending on whether the bit 6 code for that character is a 1 or 0.

c. *Data Bit 7.* Since photocell 11 is darkened, an enabling condition is supplied to AND gate C which controls data bit 7 (fig. 8-6). Thus, data bit 7 is controlled by photocell 10 which is not blocked by the shift key but may be blocked by the individual character key, depending on whether the bit 7 code for that character is a 1 or 0.

d. *Data Bit 8.* Since photocells 13 and 14 are darkened, two inputs to AND gate D, which control data

bit 8, are active (fig. 8-6). Thus, data bit 8 is controlled by photocell 12 which is not blocked by the shift key but may be blocked by the individual character key, depending on whether the bit 8 code for that character is a 1 or 0.

3-32. Logic Data for Bits 5 through 8, Control Modes

When either control (CTL) key is pressed, the D15 key (fig. 3-22) unblocks photocells 6, 9, 11, and 14, and blocks photocells 5, 7, 8, 10, and 13. Thus, data bits 5 through 8 are controlled by the character key pattern for photocells 6, 9, 11, and 14 in a manner similar to the shift mode (para 3-31). The other inputs to the AND gates which control these four characters are active because the photocells are blocked by key D13.

3-33. Character Key Cutout Patterns for Data Bits 1 through 8

a. Data bits 1 through 8 are controlled by photocells 1 through 14. The specific cutout pattern for each character key is given in table 3-1. The table specifies whether the key blocks or does not block each of the 14 photocells when the key is down. None of these photocells is blocked by any character key when the key is up. Those photocells which are blocked when

the key is down are marked by a 1, and those which are unblocked are marked by a 0.

b. To convert the cutout pattern for each key to the resulting ASCII code, it is necessary to check only eight of the 14 photocells. The coding for these eight photocells is identical to the coding for the eight ASCII bits for the character (fig. 3-5). The eight photocells which control the eight data bits in each of the three modes are listed below :

Data bits	1	2	3	4	5	6	7	8
Photocells for normal	1	2	3	4	6	8	10	13
Photocells for shift.....	1	2	3	4	5	7	10	12
Photocells for control.....	1	2	3	4	6	9	11	14

3-34. Repeat Photocell

Photocell 15 is the repeat photocell. Each of the keys on the keyboard, except the RPT key (D1) has an oval cutout at this photocell position so that the photocell remains lighted whether the keys are up or down. The RPT key has a circular cutout positioned so that the photocell remains lighted when the key is up, but, is darkened when the key is pressed. This results in a low level from photocell 15 to photocell amplifier 9 (fig. 8-6) which produces a high repeat signal.

TABLE 3-1. CHARACTER KEY CUTOUT CODING

Key No.	Normal	Shift	Control	Photocells													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14
A1			BS	0	0	0	1	1	0	1	1	0	1	0	1	1	0
A2	<	<		0	0	1	1	1	1	1	1	1	0	1	1	1	1
A3	1	!		1	0	0	0	0	1	1	1	1	0	1	1	0	1
A4	2	"		0	1	0	0	0	1	1	1	1	0	1	1	0	1
A5	3	#		1	1	0	0	0	1	1	1	1	0	1	0	1	1
A6	4	\$		0	0	1	0	0	1	1	1	1	0	1	1	0	1
A7	5	%		1	0	1	0	0	1	1	1	1	0	1	0	1	1
A8	6	&		0	1	1	0	0	1	1	1	1	0	1	0	1	1
A9	7	(APSTR)		1	1	1	0	0	1	1	1	1	0	1	1	0	1
A10	8	(		0	0	0	1	0	1	1	1	1	0	1	1	0	1
A11	9	)		1	0	0	1	0	1	1	1	1	0	1	0	0	1
A12	∅	∅		0	0	0	0	1	1	1	1	1	0	1	1	1	1
A13	-	-		1	0	1	1	1	0	1	1	1	0	1	0	1	1
A14	@	\		0	0	0	0	0	0	0	1	1	1	1	0	1	1
A15	7	~	FS	0	0	1	1	1	1	0	1	0	1	0	1	0	0
A16	|	Λ	RS	0	1	1	1	1	1	0	1	0	1	0	0	1	1

TABLE 3-1. CHARACTER KEY CUTOUT CODING (Cont)

Key No.	Normal	Shift	Control	Photocells													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14
B1			HT	1	0	0	1	1	0	1	1	0	1	0	1	1	1
B2	>	>		0	1	1	1	1	1	1	1	1	0	1	0	0	1
B3	Q	Q	DC1	1	0	0	0	1	1	0	0	0	1	0	0	0	1
B4	W	W	ETB	1	1	1	0	1	1	0	0	0	1	0	0	0	1
B5	E	E	ENQ	1	0	1	0	0	0	0	0	0	1	0	0	0	1
B6	R	R	DC2	0	1	0	0	1	1	0	0	0	1	0	0	0	1
B7	T	T	DC4	0	0	1	0	1	1	0	0	0	1	0	0	0	1
B8	Y	Y	EM	1	0	0	1	1	1	0	0	0	1	0	1	1	0
B9	U	U	NAK	1	0	1	0	1	1	0	0	0	1	0	1	1	0
B10	I	I		1	0	0	1	0	0	0	0	1	1	1	0	0	1
B11	O	O	S1	1	1	1	1	1	0	0	0	0	1	0	0	0	1
B12	P	P	DLE	0	0	0	0	1	1	0	0	0	1	0	1	1	0
B13	:	*		0	1	0	1	0	1	1	1	1	0	1	0	1	1
B14	{	[		1	1	0	1	1	1	0	1	1	1	1	0	1	1
B15	}	]	GS	1	0	1	1	1	1	0	1	0	1	0	0	1	1

TABLE 3-1. CHARACTER KEY CUTOUT CODING (Cont)

Key No.	Normal	Shift	Control	Photocells													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14
B16	-	-	US	1	1	1	1	1	1	0	0	0	1	0	1	1	0
C1			ESC	1	1	0	1	1	1	1	1	0	1	0	1	1	1
C3	A	A	SOH	1	0	0	0	0	0	0	0	0	1	0	1	1	0
C4	S	S	DC3	1	1	0	0	1	1	0	0	0	1	0	1	1	0
C5	D	D	EOT	0	0	1	0	0	0	0	0	0	1	0	1	1	0
C6	F	F	ACK	0	1	1	0	0	0	0	0	0	1	0	0	0	1
C7	G	G	BEL	1	1	1	0	0	0	0	0	0	1	0	1	1	0
C8	H	H		0	0	0	1	0	0	0	0	1	1	1	1	1	1
C9	J	J		0	1	0	1	0	0	0	0	1	1	1	0	0	1
C10	K	K	VT	1	1	0	1	0	0	0	0	0	1	0	1	1	0
C11	L	L	FF	0	0	1	1	0	0	0	0	0	1	0	0	0	1
C12	;	+		1	1	0	1	0	1	1	1	1	0	1	1	0	1
C13	CR	CR	CR	1	0	1	1	0	0	0	0	0	0	0	0	0	0
C14	LF	LF	LF	0	1	0	1	0	0	0	0	0	0	0	1	1	1
C15	DEL	DEL	DEL	1	1	1	1	1	1	1	1	1	1	1	0	0	0

TABLE 3-1. CHARACTER KEY CUTOUT CODING (Cont)

Key No.	Normal	Shift	Control	Photocells														
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	
C16	NUL	NUL	NUL	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
D4	Z	Z	SS	0	1	0	1	1	1	0	0	0	1	0	1	1	0	
D5	X	X	CAN	0	0	0	1	1	1	0	0	0	1	0	0	0	1	
D6	C	C	ETX	1	1	0	0		0		0		1			0		
D7	V	V	SYN	0	1	1	0	1	1	0	0	0	1	0	1	1	0	
D8	B	B	STX	0	1	0	0	0	0	0	0	0	1	0	1	1	0	
D9	N	N	SO	0	1	1	1	1	0	0	0	0	1	0	1	1	0	
D10	M	M		1	0	1	1	0	0	0	0	1	1	1	1	1	1	
D11	,	,		0	0	1	1	0	0	1	1	1	0	1	0	0	1	
D12	.	.		0	1	1	1	0	0	1	1	1	0	1	1	1	1	
D13	/	?		1	1	1	1	1	0	1	1	1	0	1	1	0	1	
SP	SPACE	SPACE	SPACE	0	0	0	0	0	0	1	1	1	0	0	0	0	0	

3-35. Keyboard Strobe Photocell

Photocell 16 is the keyboard strobe photocell. Each of the keys on the keyboard has a square cutout at this photocell position so that the photocell remains lighted when all the keys are up. When any character key is pressed, it blocks photocell 16 resulting in a low input to photocell amplifier 10 (fig. 8-6) which, in turn, produces a high keyboard strobe signal.

3-36. Data Register

The eight data bits generated in either the keyboard or the end-of-message circuit are shaped in the data register. The data register consists essentially of eight latches on PC card A9 (fig. 8-15) whose 1 outputs represent the eight data bits (DB1 through DB8) for the transmit interface circuit.

a. *Keyboard Data.* The clear input to each latch is the data register control signal (DRC) from the data strobe control circuits. This signal is normally high, thereby maintaining the latches in the clear state and the data bit outputs low. After a key is pressed, the DRC line goes low for 480 usec. This allows the eight keyboard data inputs (KD1 through KD8) to be applied to the set side of the latches to set those latches for which the data bits are active. At the end of the 480 usec, the DRC line returns to a high level. This clears all the latches and terminates the output data bit pulses.

b. *End-of-Message Data.* After the EOM key is pressed, the DRC line goes low for 320 usec. This allows end of message data bits, applied to the set side of the eight latches from the end of message generator on the same card, to set those latches for which the data bit is active. At the end of the 320 usec, the DRC line goes high again, clearing the latches and terminating the output data bits.

c. *Carriage Return Decoder.* Whenever carriage return key CR is pressed, the carriage return character code (00001101 in bits 8 through 1, respectively) is generated by the read head and stored in the data register. When this code occurs, it is decoded at the output of the data register by the carriage return decoder on PC card A9 (fig. 8-15). The resulting carriage return decode (CRD) signal is used to reset the character counter.

(1) The 0 in bits 5, 6, and 7 of the carriage return character is indicated by low level inputs to AND gate Z9A, resulting in a low level output to AND gate Z12A. The 0 in bit 2 and the 1 in bits 1, 3, and 4 result in low levels applied directly to Z12A from the corresponding stages of the data register. Bit 8 is a parity bit dependent on the values of the other bits and is, therefore, not monitored.

(2) When the conditions for enabling AND gate Z12A are satisfied, this AND gate produces a high level which is gated through AND gate Z17B to activate the carriage return decode line (CRD).

(3) Since the character return code generated during the end-of-message sequence must not be interpreted as a real carriage return command, the carriage return decoder is inhibited during the end-of message sequence. In addition, the carriage return decoder must be inhibited during the card punch mode since variable line length is only used with tape. The two invalid conditions for carriage return decoding are represented by high levels of end-of-message level (EML) and tape punch mode (TPM) signal lines.

(4) The CRD output of AND gate Z17B on PC card A9 goes high only during the data strobe which occurs as the CR key is depressed. This is controlled by the data strobe signal (DST) which serves as an enabling input to Z17B.

d. *Line Feed Decoder.* Whenever line feed key LF is pressed, the line feed character code (10001010 in bits 8 through 1, respectively) is generated by the read head and stored in the data register. When this code occurs, it is decoded at the output of the data register on PC card A9 (fig. 8-15). The resulting line feed character signal (ABC) is used to advance the block counter.

(1) The 0 in bits 5, 6, and 7 of the line feed character is detected by the same AND gate (Z9A) which performs this function for the carriage return decoder. The low output of this gate is applied to AND gate Z11A which monitors the other data bit states for the line feed character. Thus, the 1 in bits 2 and 4, and the 0 in bits 1 and 3, result in low levels from the corresponding stages of the data register to Z11A. As for the carriage return decoder, there is no need to monitor bit 8. Also, as for the carriage return decoder, the line feed decoder is disabled during the end of message sequence and during the card punch mode, since valid line feed characters are inappropriate in either case. The same signal (TPM + EML) is used to disable the line feed decoder for this purpose as the carriage return decoder.

(2) When the conditions for enabling AND gate Z11A are satisfied, this AND gate produces a high level which is gated through AND gate Z17A to activate the advance block counter line (ARC). The ABC output is permitted to go high only during the data strobe which occurs when the LIF key is depressed. This is controlled by the data strobe signal (DST) which serves as an enabling input to Z17A.

e. *Machine Function Decoder.* Whenever any one of the six characters associated with machine

functions is received by the data register, the machine function inhibit (MFI) line is activated to inhibit the character counter. The six machine functions are as follows: CR (carriage return), LF (line feed), BEL (bell), SI (shift in), SO (shift out) and DEL (delete).

(1) The CR and LF characters are monitored by the corresponding AND gates (Z12A and Z11A) used in the carriage return decoder and the line feed decoder. The other four machine characters are monitored by similar AND gates as listed in the machine function inhibit and gates chart below.

Character	Code (Bite 8 through 1)	AND gate
CR	00001101	Z12A
LF	10001010	Z11A
BEL	00000111	Z16A
S1	10001111	Z15A
SO	00001110	Z13A
DEL	01111111	Z10A

(2) The outputs of the six decoder AND gates are combined in OR gates Z14B, Z9B, and Z14A so that when any one of the six AND gates is enabled, the MFI (machine function inhibit) output line goes high. This line inhibits the advance of the character counter for the machine function characters.

3-37. Receive Interface Circuits

a. The signals received from the output device switch between levels of 0 and +6.2 volts, or between 6.2 and + 6.2 volts. These signals are generated by transmitter circuits in the output device with high frequency components (sharp turn-on, turn-off) removed to minimize rfi problems in the cables. The receive interface circuits on PC card A10 (fig. 8-16) provide an impedance match for the output device signals, convert them to control-keyboard logic format (+4.5 volts and 0 volt), and restore the sharp turn-on, turn-off required for reliable logic operation in the control-keyboard.

b. Five signals are received from the output device. Two of these (start of block SOBR and data request DRQR) are received in true function form with a high level of +6.2 volts active and a low level of -6.2 volts inactive. These two signals are converted to equivalent true-function control-keyboard logic signals SOB and DRQ by interface receivers A and B. Thus, the SOB and DRQ outputs are at +4.5 volts when active, and 0 volt when inactive.

c. One of the five signals received from the output device (ready RDYR) is received in not-function form, but used in the control-keyboard in true-function form. Thus, interface receiver C inverts the input signal to produce a true-function output (RDY). This circuit produces a +4.5-volt active output level for a 0-volt

active input level, and a 0-volt inactive output level for a + 6.2-volt inactive input level.

d. The remaining two of the five received signals (alarm stop (ALSR) and caution (CAUR)) are received in true-function form, but must be inverted to not-function for use by subsequent control-keyboard logic circuits. Thus interface receivers D and E are used to produce not-function outputs ALS and CAU.

3-38. Card-Tape Mode Switching

The code selector switch on the keyboard must be set to correspond to the output device used. The ITA-2 and ASCII positions are used for the two types of tape punches, and the HOLLERITH position is used for the card punch. Besides operating mechanical linkages to block invalid keys in each of these three modes, the switch operates electrical switch contacts S1 and S2 (fig. 8-5) which control the routing of a 0-volt level to either card punch mode line CPM (for the HOLLERITH position), or tape punch mode line TPM for either the ASCII or ITA-2 position. The outputs for these two positions are wired together at PC card A11 (fig. 8-17). When the CPM line from switch S2 is open, it is connected to the +4.5-volt supply through resistor R89 on this PC card to provide a high logic level. Similarly, unless TPM lines are grounded by one of the switch contacts, a +4.5-volt level is connected to the combined TPM line through resistor, R87 and R88.

3-39. Cancel Switching Circuit

The cancel switching circuit initiates cancel signals when Reject/BACKSPACE switch-indicator Z2 on the control panel is operated (fig. 8-3).

a. The output of Reject/BACKSPACE switch Z2 is converted into logic levels by latch Z6 on card A8 (fig. 8-14). The normally closed contacts of the switch-indicator connect +4.5 volts to the clear side of the latch on line CANC, thereby maintaining a low level at the 1 output on cancel line CAN and a high level at the 0 output on cancel line CAN. When the switch-indicator is operated, the + 4.5-volt CANC clear input is disconnected by the switch-indicator and replaced with a 0-volt level through resistor R2. Also, +4.5 volts is connected through the normally open contacts on line CANO to the set side of tile latch, thereby producing a high level on the CAN output line and a low level on the CAN output line. The CAN line causes one of the interface transmitters on PC card A10 to actuate the cancel line to the output device.

b. Latch Z6 prevents contact bounce in the switch-indicator from having any effect. The outputs of the latch switch back again only after the switch-indicator

is returned to its inactive position in which + 4.5 volts is again switched to the clear side (CANC). At this time, 0-volt level through resistor RI is present at the set side.

c. A cancel punched character (CPC) pulse is generated by AND gate Z10B on PC card A8 when the REJECT/BACKSPACE switch-indicator is operated. The AND gate is conditioned by a low level on the CAN line when the switch-indicator is operated. The actual timing of the CPC pulse is determined as 160 usec by flip-flops Z17 and Z21 in the data strobe control circuit. The positive, CPC pulse is used to produce a data strobe which is sent to the output device to enable the output device to accept the signal on the cancel line. When punching cards, the card which contains the canceled character is offset from the stack, and the outfit device is ready to accept a new block. When punching tape, the tape punch backspaces. The CPC pulse also clears the counter in the card mode.

3-40. Data Strobe Control Circuit

The data strobe control circuit controls the generation of data strobe pulses during normal data, repeat data, repeat data, end-of-message data, and cancel data.

3-41. Data Strobe for Normal Data

When any normal data character key is pressed, the read head produces a positive keyboard strobe pulse. This is used to initiate the data strobe for the output

a. Since the keyboard strobe pulse is generated by the action of a photocell gradually being covered as the key is depressed, the pulse does not have a sharp leading edge. Shaping to obtain sharp edges is performed by buffer amplifier (G) on PC card A10 (fig. 8-16). This amplifier converts the positive keyboard strobe pulses (KSTR) into squared negative (KSTR) pulses (fig. 3-23).

b. When the KST line goes negative, it enables AND gate Z1513 on PC card A8 (fig. 8-14), but only if the repeat key (RPT) is not pressed. As long as the repeat key is not pressed, the repeat input from latch Z11 to Z15B is low and Z15B is enabled by each KS1 pulse. Thus, each KST pulse causes Z15B to produce a positive normal strobe pulse which lasts approximately as long as the character key is depressed.

c. The positive normal strobe pulse is routed through OR gates Z16B and Z9B to result in a negative strobe pulse at the output of Z9B. This pulse enables AND gate Z9A since the other two inputs to Z13A are normally low at this time.

d. The high output of Z9A allows the trailing edge of the next CL2 clock pulse from the clock circuit, para 3-46) to set flip-flop Z17. Since the period of the CL2 clock pulses is 160 μ sec, this may take up 160 μ sec. The resulting high output of Z17 enables the next CL2 clock pulse trailing edge to clear Z17 160 μ sec later. The positive 160 μ sec pulse output of Z17

(fig. 3-23) is designated the data strobe delay pulse (DSD).

e. The data strobe delayed pulse is applied to the J input of flip-flop Z21. This flip-flop is cleared by CL2 clock pulses at the K and CL inputs before the appearance of the DSD pulse. Thus, the negative-going trailing edge of the same CL2 pulse which resets Z17 sets Z21. Flip-flop Z21 remains set only for 160 μ sec when the trailing edge of the next CL2 clock pulse appears at the K and CL inputs.

f. The negative 160 μ sec pulse at the O output of flip-flop Z21 is gated through AND gate Z3B and OR gate Z27A to form the data strobe pulse (DST) for the output device. The conditions for enabling this AND gate are a low level on the CL2 clock line and a low level on output device ready line ODR from OR gate Z3A.

g. Since line CL2 is the inverse of line CL2, it goes low for 160 μ sec when CL2 goes high. Thus, the DST output is permitted to go high for only 80 μ sec out of the 160 μ sec duration of the Z21 output.

h. The ODR signal is initiated by the data request input from the output device. For the first character of a block, the data request input is received as a high level on start-of-block line SOB from the receive interface circuits on PC card A10. For subsequent characters, the data request is received as a high level on data request line DRQ from A10. In either case, the resulting low level ODR signal from OR gate Z3A enables the generation of the data strobe output by AND gate Z3B. On receipt of the data strobe, the output device drops the DRQ input to Z3A, however, Z3A continues to maintain a low output for Z3B because the Z3B output is fed back regeneratively to Z3A. Thus, the data strobe output of Z3B (and Z27A) is permitted to extend for 80 μ sec, and the OD-R output, of Z3A extends from the beginning of DRQ to the end of DST.

i. To prevent the next DST pulse from being generated unless the character key is released before the next key is pressed, the DSD signal, which goes high 240usec before the start of DST, is used to set latch Z13. The resulting high level at the 1 output of the latch disables AND gate Z9A. This AND gate remains disabled, preventing generation of any further data strobes until the character key is released. At that time, the positive-going edge of KST pulse gated through Z15B, Z16B, and Z9B clears latch Z13, resulting in a low level enabling condition for Z9A.

j. Normally, a new data request pulse is received from the output device within 53 ms of the time that

the data strobe is generated. However, the new data request pulse is prevented from initiating a new data strobe during this time.

(1) This time is measured by a timing circuit on PC card A2 (fig. 8-9). The positive data strobe (DST) is inverted by inverter Z1B, and the positive-going trailing edge of the resulting pulse is converted into a positive spike by differentiator C1, R48. This spike sets latch Z2 to produce a high output on the data request inhibit line (DRI) at the 1 output of the latch. At the same time, the low level at the 0 output of the latch (DRI) actuates the time delay circuit formed by transistors Q14 and Q15 ((3) below). After approximately 53 ms, the time delay circuit produces a positive pulse which clears the latch, terminating the DRI pulse.

(2) The positive 53-ms data request inhibit pulse is routed to card A8 (fig. 8-14) where it disables AND gate Z9A. This prevents a new KST pulse from initiating a new data strobe until 53 ms have passed.

(3) The time delay circuit formed by transistors Q14 and Q15 operates as follows: Initially, with a +4.5-volt input applied across impedance matching resistors R49 and R50, transistor Q14 is conducting and timing capacitor C3 is discharged. Unijunction transistor Q15 is not conducting. The time delay is triggered by a negative input pulse switching from +4.5 volts to 0 volt which is applied across R49 and R50 to cut off transistor Q14. This allows C3 to charge through charging resistor R51 and potentiometer R54. If the input pulse is still low after 53 ms, the voltage across C3 becomes sufficiently high to fire Q15. This results in a +4.5-volt output established by resistors R52 and R53. Once Q15 is fired, the current drawn from capacitor C3 to the Q15 emitter discharges C3 quickly until not enough current is available to maintain conduction through Q15. Thus, Q15 is cut off and the output pulse is terminated. The 53-ms time delay is adjusted by potentiometer R54.

3-42. Data Strobe for Repeat Data

When the RPT key is pressed and then another key is pressed, data strobe pulses are continuously generated to transmit the character for that key as data request pulses are received from the output device.

a. When the RPT key (D1) is pressed, the read head produces a high output on repeat line RPT. This sets latch Z11 on card A8 (fig. 8-14). The latch remains set until the key is released, at which time the keyboard strobe input (KST) to the clear side of the latch goes positive.

b. The high level, which appears at the 1 output of latch Z11 when the RPT key is pressed, disables AND gate Z15B1. Thus, a normal data strobe cannot be generated (para 3-41b).

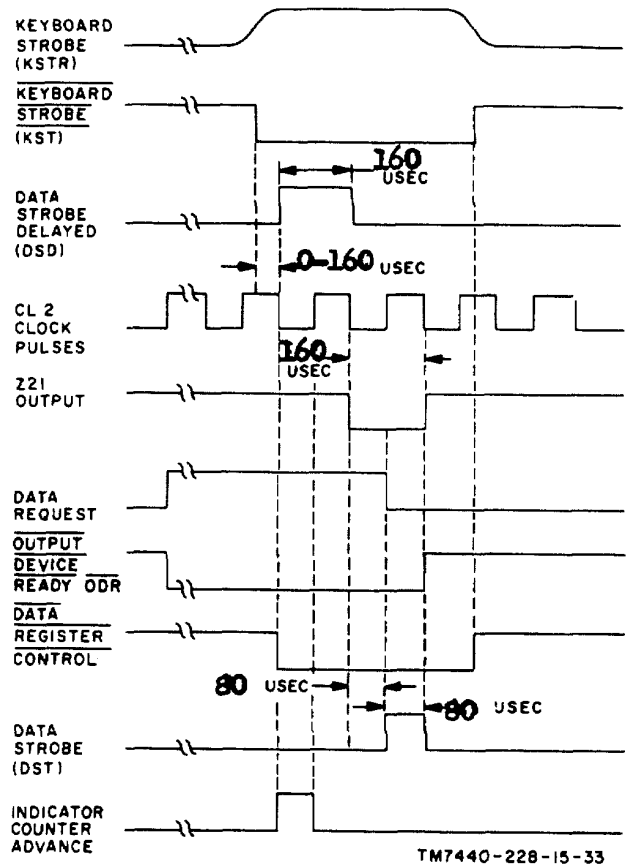


Figure 3-23. Data strobe control circuits, timing diagram.

c. The low level repeat signal at the 0 output of latch Z11 provides an enabling condition for AND gate Z16A. Another enabling condition is a low level, which is present on the KST line when another key is depressed. The controlling input to Z16A is the output device ready line (ODR) from OR gate Z3A. This line goes low at the occurrence of a data request (DRQ) from the output device and remains low until the end of the data strobe pulse (h below).

d. As described in c above, AND gate Z16A is enabled at the occurrence of a data request from the output device. The resulting low output of Z16A enables AND gate Z15A, since the other input to Z15A is normally low throughout the data block. This other input is controlled by latch Z12 which was set by a high level from the 0 output of latch Z11 before the repeat (RPT) key was pressed (h below).

e. The resulting high level which appears at the output of AND gate Z15A on the receipt of the data request pulse is routed through OR gates Z16B and Z9B to produce a low strobe pulse. This pulse initiates the generation of a data strobe pulse in the same way as described in paragraphs 3-41c through h. The strobe pulse lasts until the end of the data strobe pulse (DST) at which time the ODR line returns to a

high level. At that time, latch Z13 (para 3-41*i*) is cleared and the next data strobe can be generated.

f. The next data strobe is initiated by the DRQ pulse from the output device since this signal causes ODR line to go low again, thereby enabling AND gate Z16A (*c* above).

g. When operating with a tape punch, the data strobe generation cycle, described in *a* through *f* above, is continually repeated until the RPT key or the other key pressed for the character to be repeated is released. The resulting positive step on the KST line clears latch Z11 so that AND gate Z16A is disabled by a high level from the 0 output of the latch.

h. When operating with a card punch, the data strobe generation cycle continues until the end of the block, when the positive 81E pulse from the data block end circuit clears latch Z12, disabling AND gate Z16A. To start a new repeat cycle, the RPT key and the character key must now be released, allowing the resulting high level at the 0 output of latch Z11 to set latch Z12 again. Then, when the RPT and character keys are pressed again, a new repeat cycle is started.

3-43. End-of-Block Data Strobe

When operating with a card punch, the 81st data strobe at the end of a normal data block is controlled by AND gate Z1B on PC card A8 (fig. 8-14).

a. When the 80th character key is released, the strobe output of OR gate Z9B goes high, clearing latch Z13 (para 3-41*i*). The resulting low level at the 1 output of the latch provides an enabling condition for AND gate Z1B. Another enabling condition is provided by the inverted 81E pulse which is generated by the data block end circuit at the end of the data block.

b. The third condition for the 81st data strobe is the 81st data request pulse from the output device. This pulse (DRQ) is routed through the receive interface circuits to inverter Z2B to result in a negative pulse which enables AND gate Z1B. The resulting high output of Z1B is routed through OR gate Z5B to OR gate Z9B to form a data strobe pulse, as described in paragraphs 3-41*c* through *h*.

3-44. End-of-Message Data Strobes

A data strobe is generated during each of the 21 characters of an end-of-message sequence as well as during the 22nd character position.

a. The 21 data strobe pulses during an end-of-message sequence are controlled by AND gate Z25B on PC card A7. This AND gate is conditioned by a low level on end of message level line EML from the end-of-message control circuits when the EOM key on the keyboard is operated. Flip-flop Z13 in the end-of-message control circuits produces an output which goes high for 160 μsec after the start of the EML signal. At

the end of the μsec, the Z13 output goes low, providing a second conditioning input to Z25B. If the output device is in a ready condition, line ODR from the PC card A8 is low, enabling Z25B to produce a high level on end-of-message strobe line EST. This is routed through OR gates Z16B and Z9B on PC card A8 to function as the strobe pulses which initiate DST data strobe pulses (para 3-41*c-h*).

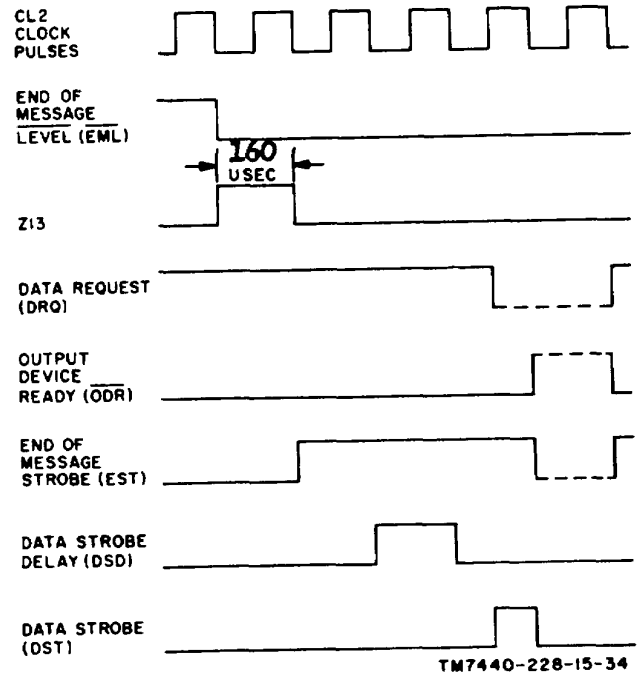


Figure 3-24. End-of-message data strobe, timing diagram.

b. At the completion of the 21-character end-of-message block, a 22nd data strobe is generated under control of AND gate Z1A. The completion of the end-of-message sequence is marked by the negative message end pulse (EMP) from PC card A7. This pulse, which extends from the end of the 21st data strobe until the beginning of the next start-of-block request from the output device, provides an enabling condition for AND gate Z1A. Another enabling condition is provided by the 22nd data request pulse from the output device. When this pulse (DRQ) is received, a low data request level is applied from inverter Z2B to AND gate Z1A (fig. 3-24). The next negative CL2 clock pulse received enables Z1A, resulting in a high output which is routed through OR gates Z5B and Z9B to initiate a data strobe. On receipt of the data strobe, the output device terminates the data request signal. Thus subsequent CL2 pulses have no further effect on AND gate Z1A.

3-45. Cancel Character Data Strobe

When power is first applied to the control-keyboard, the output device is usually in a stop condition. The output device, if not in an alarm stop condition, will go to a start condition when it receives a high cancel level (CAN) and a data strobe.

a. Each time REJECT/BACKSPACE switch-indicator Z2 is operated, a high cancel level (CAN) is produced by latch Z6 in the cancel switching circuit on PC card A8 (para 3-39). This is routed through OR gate Z9B (fig. 8-14) to initiate the generation of a data strobe pulse as described in paragraph 3-41c through h. To generate another cancel data strobe, the REJECT switch-indicator must be released, allowing the CAN line to return to a low level. Then, when the REJECT switch-indicator is operated again, another data strobe pulse is generated.

b. When in the stop condition, the output device will not transmit a data request or a first data request to the control-keyboard. If no data request signal is received from the output device and the REJECT/BACKSPACE switch-indicator is operated, a data strobe is still sent and extends for 1160 Use instead of 80 μ sec, as is the case for a normal data strobe. The generation of this special cancel punched character data strobe is controlled by AND gate Z26B which performs the functions performed by AND gate Z3B for normal data strobes (para 3-41).

c. Instead of receiving the negative 160 μ sec data strobe timing pulse directly from flip-flop Z21, as is the case for AND gate Z3B (para 3-41f), the negative pulse is gated with the low CAN level in AND gate Z10B to produce the positive 160 used card punch cancel pulse (CPC) as described in paragraph 3-39. This pulse enables AND gate Z26B for 160 μ sec. Thus, OR gate Z27A is activated to produce a full 160 μ sec DST data strobe pulse.

d. However, whereas AND gate Z3B is conditioned by the active state of output device ready line ODR caused by receipt of a data request (DRQ) signal from the output device, AND gate Z26B operates on the opposite condition. Thus, when do data request has been received, ODR is high and causes inverter Z7B to produce a low output which enables AND gate Z7A unless data request inhibit line DRI is high. The resulting high output of Z7A conditions AND gate Z26B. The DRI input to AND gate Z7A prevents response to the REJECT switch-indicator, unless it is operated more than 53 ms after the previous data strobe (para 3-41j).

3-46. Clock Circuit

The 6.25-kHz clock pulses used by the data strobe control circuits are originated by 12.6 kHz oscillator (L) on PC card A10 (fig. 8-16). The resulting 12.5-kHz C11 clock pulses are divided down to 6.25 kHz by flip-flop Z7 on PC card A7 (fig. 8-13). Flip-flop Z7 changes state on each negative-going transition of the CL1 clock pulses. The resulting CL2 clock pulses produced in complementary form by Z7 are in the form of a square wave whose period is 160 μ sec.

3-47. Data Register Clear Circuit

The data register control signal (DRC) is generated as a low level during a data strobe to allow the data register to store the data bits for the character to be transmitted at that time.

a. The DRC signal is generated as a low level by setting flip-flop Z25 on PC card A8 (fig. 8-14). This is accomplished by activating either of the two inputs to OR gate Z5A which controls the set input of Z25.

b. During an end-of-message sequence, only the input to OR gate Z5A from AND gate Z14A is used. This AND gate is conditioned by a high level on the end-of message level line (EML). Each time a data strobe is generated, flip-flop Z21 in the data strobe generator circuit is set for 160 μ sec (fig. 3-23). The resulting high level at the 1 output of flip-flop Z21 enables AND gate Z14A to set flip-flop Z25, allowing data to be read into the data register. Flip-flop Z25 is not reset until output device ready signal ODR returns to a high level (fig. 3-23). At that time, the K input of Z25 is activated. Thus, the next negative transition on clock line CL2 resets the flip-flop to clear the data register.

c. For normal data, the EML level is low, disabling AND gate Z14A and conditioning AND gate Z22A. The data register character loading function now occurs as soon as data strobe delayed (DSD) flip-flop Z17 in the data strobe generator circuits is set (fig. 3-3). When this occurs, the not-function DSD line goes low, enabling AND gate Z22A and setting flip-flop Z25. A third input to AND gate Z22A (21 EML) prevents the AND gate from being enabled during the 2ist character time following an end-of-message sequence.

3-48. Character Counter Circuits

The character counter circuits count the number of characters transmitted since the start of a

data block to provide control signals which mark the end of a data block. These circuits are described in paragraphs 3-49 through 3-53. The character counter consists essentially of two decade counters of four flip-

flops on PC card A6 (fig. 8-12). The first four flip-flops count the units digit of the character number, and the second four flip-flops count the tens digit.

Change 1 3-31

3-49. Units Digit Character Counter

a. Initially, the four units flip-flops are cleared by a high reset signal on reset character counter line RCC from the character counter reset control circuits. This level is applied directly to flip-flops Z17 and Z20, and through OR gate Z22 to flip-flops Z18 and Z19.

b. The occurrence of each character is identified by a positive units toggle (UNT) pulse from the character counter advance control circuit on PC card A8. This pulse is applied to the T or CL inputs of the units counter flip-flops so that the count is stepped at the negative-going trailing edge of each UNT pulse.

c. After the first stage, the gating inputs to each flip-flop of the units counter are controlled by an OR gate fed by two AND gates. One AND gate is conditioned by cancel signal CAN from the cancel control circuit and is used to control normal forward counting as long as the control panel reject switch-indicator is not operated. The other AND gate is conditioned by cancel signal CAN and is used to cause a reverse count each time the reject switch-indicator is operated.

d. To achieve forward counting, any flip-flop is permitted to change states only when all previous flip-flops are set. Thus, AND gate Z26A monitors the 1 output of flip-flop Z17, AND gate Z27B monitors the 1 outputs of flip-flops Z17 and Z18, and AND gate Z24 monitors the output of OR gate Z23B (high only when Z17 and Z18 are set) and the 1 output of flip-flop Z19.

e. The various counts from 0 to 9 are monitored by 10 AND gates which produce high outputs on lines OC through 9C, respectively, when the corresponding counts are recorded in the units counter. The counts of 0, 1, and 2 require that neither the 4-bit nor 8-bit flip-flops (Z19 and Z20) be set, as indicated by low inputs to OR gate Z28A. The resulting low output is a condition for the OC, 1C, and 2C AND gates. The other two inputs to each AND gate are low when the corresponding combination of the first two flip-flops occurs (00, 01, and 10). Since the maximum allowable count in the units counter is 9, the other decoder AND gates monitor only three of the four flip-flops. In every case, the three lines being monitored specify the binary value of one particular number in the range 3 to 9.

f. To reset the units counter when the count of 9 is reached, the 9C output of AND gate Z12A is fed back through OR gate Z22B to clear flip-flops Z18 and Z19, and through AND gate Z21A and OR gate Z23A to toggle flip-flop Z20 to its alternate state. Since Z20 is initially set on the count of 9 (1001), it is toggled to the clear state by the next UNT pulse. The first flip-flop (Z17), which is also set for the count of 9, is toggled to the clear state by the same pulse. Thus, the 10th UNT pulse returns the count to 0000 and the count cycle repeats again.

g. To achieve reverse counting, any flip-flop is permitted to change state only when all previous stages are reset. This condition is implemented by the alternate AND gate in each pair controlling flipflops Z18, Z19, and Z20. Thus, each successive UNT pulse causes the count to be reduced by one. When the count reaches 0000, the next UNT must bring the count to 9 (1001). No special control is needed to set the first and fourth flip-flops since they are set following the normal rules of reverse counting. However, to prevent flip-flops Z18 and Z19 from being set, the OC line is applied through OR gate Z22B to the clear inputs of these two flip-flops.

3-50. Tens Character Counter

a. Initially, the four flip-flops of the character counter are cleared by reset tens signal RTE. Then, each time the units counter completes a count cycle and returns to the count of 0, a tens toggle (TET) pulse is received. This steps the tens counter forward or backward in the same way that the units toggle (UNT) pulse steps the units counter.

b. The first seven counts in the tens counter are designated 10 through 70 and are decoded by AND gates to produce outputs 10C through 70C. Since the maximum value of the tens character is 80, there is no need for gating control to clear the fourth flip-flop (binary weight 8). This flip-flop is set by AND gate Z21B when the 70C, 9C, and UNT levels go high. This occurs on the character after 79. Thus, the 1 output of Z9 indicates the 80th character.

c. The 0 state of the tens counter is indicated by AND gate Z28B. This gate produces a low output on the OT line only when low levels are received from the 1 outputs of flip-flops Z8, Z7, and Z5.

3-51. Character Counter Advance Control Circuit

The character counter advance control circuit produces the units toggle (UNT) and tens toggle (TET) pulses which are used to step the two characters counter sections during either normal forward counting or during reverse counting for a cancel.

a. The units toggle pulse (UNT) is developed by OR gate Z24A on PC card A8 (fig. 8-14) under control of either AND gate Z18A or Z19A. These two AND gates are used to control forward and reverse counting, respectively.

b. For forward counting, AND gate Z18A requires that cancel level (CAN) from the cancel control circuit be low, and that machine function inhibit level (MFI) from the data register circuits be low. When

these conditions are satisfied, each time a data strobe pulse is produced, inverter Z18B supplies a negative enabling pulse to Z18A. This is derived from the corresponding positive ICA pulse produced by AND gate Z22B. The positive ICA pulse is defined by the 80 μ sec interval in which the CL2 clock, the data strobe delayed level (DSD) from flip-flop Z17, and the 1 output of flip-flop Z21 are all low (fig. 3-23).

c. For reverse counting AND gate Z19A produces a positive pulse each time a negative data strobe pulse (DST) is detected if the REJECT switch has been operated (CAN is low) and the count in the character counter is not 00 (AND gate Z14B has a low output). If the count in the character counter is 00, AND gate Z14B is enabled by a high OC level from the units portion of the character counter and the inversion of a low OT level from the tens portion of the character counter.

d. Similarly, OR gate Z24B produces the tens toggle (TET) pulse under control of either AND gate Z20B or Z20A. For forward counting AND gate Z20B produces a positive pulse each time the units portion of the character counter registers the count of 9 (9C is high) and the units toggle conditions are satisfied (AND gate Z18A has a high output). Similarly, for reverse counting, AND gate Z20A produces a positive pulse each time the units toggle conditions are satisfied (AND gate Z19A has a high output) and the count in the counter has a units value of 0 (OC is high) but not a tens value of 0 (OT is high).

3-52. Character Counter Rest Control

The character counter is reset each time the master reset line is activated, each time an end of message sequence is generated, each time character position 81 is detected at the end of a data block, each time the front control REJECT/BACKSPACE switch-indicator is operated when in the card punch mode, and each time the carriage return key is pressed in the tape punch mode.

a. When power is first turned on to the control-keyboard, or when the control panel RESET switch is operated, master reset line MRS on PC card AT (fig. 8-18) is activated. The high level on this line is passed through OR gates Z26B, Z27B, and Z26A to reset character counter line RCC.

b. When an end-of-message sequence is initiated, it is necessary to immediately reset the character counter since the generation of the end-of-message sequence is controlled by the counts developed in the character counter. The reset is accomplished by a high level which appears at the 1 output of flip-flop Z13 in the end-of-message control circuits when the sequence is initiated. This high level is routed through Z26A to the RCC line. At the end of the end-of-message sequence, it is necessary to reset the character counter in preparation for the next block. This is accomplished by

the end of message pulse (EMP) which is generated at the end of the sequence. The EMP pulse is routed through OR gates Z26B, Z27B, and Z26A to line ICC.

c. At the end of each block in the card punch mode, the character counter circuits place a high level on line 81E for one character interval. This line conditions AND gate Z23B so that the data strobe delayed (DSD) pulse, occurring during this interval enables the AND gate. The resulting positive pulse is gated through OR gates Z27B and Z26A to line RCC.

d. During the card punch mode, line TPM to AND gate Z7B on PC card A5 (fig. 8-11) is high. The other input to this AND gate (CAN) is a positive pulse when the control panel REJECT switch is operated. The resulting high level on the CAN TPM line from Z7B is fed to PC card A7 where it is routed through OR gates Z27B and Z26A to line RCC.

e. In the tape mode, when the carriage return key (CR) is pressed, the carriage return decoder in the data register circuits produces a high level on line CRD. This is gated through OR gate Z26A to line RCC.

3-53. Character Count Indicator

The count registered in the character counter at any time is visually displayed by control panel CHARACTER indicators Z38 and Z4 (fig. 8-3). Each indicator contains 10 separate lamps with projection lenses and film negatives of digits 0 through 9, respectively. When any lamp is lit by a 0-volt logic level, the corresponding digit is projected on the indicator screen. The required 0-volt logic levels are developed by lamp drivers on PC card A1 (fig. 8-8). For units digit indicator Z3, the 10 lamps are controlled by signals OC through 9C, respectively, from the units portion of the character counter. Similarly, for tens digit indicator Z4, nine lamps for digits 0 through 8 are controlled by signals 10C through 80C from the tens portion of the character counter. When any character counter output goes high, the corresponding lamp driver produces a high current 0-volt output to energize the corresponding lamp.

3-54. End-of-Block Warning Control

The specific character count at which an end of block warning is to be generated, is selected by SET EOB WARNING thumbwheel switches S3 and S4 (fig. 8-3).

a. Switches S3 and S4 select the units and tens digits of the character count, respectively. Depending on the switch settings, switch S3 monitors one of the 10 lines (0C through 9C) from the units portion of the character counter, and switch S4 monitors one

of five lines (40C through 80C) from the tens portion. Then the character counter reaches the selected count, both input lines being monitored are simultaneously low. This results in low outputs from the two switches end-of-block warning units line EBWU and end-of-block warning tens line EBWT, respectively.

b. The EBWU and EBWT outputs are routed to PC card A7 (fig. 8-13) where they are applied to AN D gate Z17A. The AND gate is conditioned by cancel signal CAN to prevent an end of block warning indication when the REJECT/BACKSPACE switch-indicator is operated. If the CAN signal is low, Z17A is enabled as soon as the selected character occurs. The resulting high output of Z17A sets latch Z21 to produce a high end of block warning level on line EBW. This level remains high until Z21 is cleared by the same signal (RCC) which is used reset the character counter.

c. The EBW signal is routed to PC card A1 (fig. 8-8) where its leading edge is converted to a narrow positive pulse by differentiator C1, R69. This pulse triggers one shot Z1, resulting in a positive pulse of ½-second duration at the output of inverter Z1A. This pulse is initially coupled through capacitor C2 to OR gate Z1 to maintain the pulse output even though the input pulse has decayed. However, capacitor charges through resistor R70 that the pulse is terminated after ½-second when the voltage at the junction of C2 and R70 is too low to maintain OR gate Z1B activated.

d. The second pulse from Z1A is routed through OR gate diode CR2-to drive switch Q18 into cutoff for the ½-second duration. This allows the audio frequency produced by phase shift oscillator Q21 to pass through compound-connected audio amplifier stages Q19 and Q20 to the SPK-1 speaker output. This output is used to sound the audio warning for ½ second.

e. At the end of the ½-second interval, Q18 is permitted to go back into conduction. This shorts the audio signal from Q21 to ground, disabling the SPK-1 speaker output.

f. Tie audio tone can also be activated by the lamp test circuit which produces a high level on line LT1 when the front panel LAMP/AUDIO TEST switch is operated. The LAT is gated through OR gate CR4 to maintain Q18 in cutoff for as long as desired.

g. The SPK-1 output of PC card A1 is routed to activate loudspeaker LS1 (fig. 8-3). This loudspeaker is powered by the -12-volt source.

h. The EBW signal produced on PC card A7 (*b* above) is also routed to PC card A2 (fig. 8-9) where it activates lamp driver K. The resulting high current 0-volt level on line EBWL energizes EOB WARNING indicator DS3 on the control panel (fig. 8-3).

3-55. Data Block End Circuit

When operating with a card punch, the data block end circuit produces a data block end gating signal which extends from the end of the 80th data strobe in a normal data block to the next start-of-block signal from the output device. The data block end can also be initiated by a cancel signal when operating with a card punch

a. The data block end function is controlled by latch Z24 on PC card AT (fig. 8-13). This latch is cleared at the start of each data block by the start-of-block signal SOB from the receive interface circuits on PC card A10.

b. At the end of the data block, after the 79th data strobe has been transmitted, the character counter goes to a count of 80. This results in a high level on line 80 to AND gate Z19A. When operating with a card punch, the other input to the AND gate is a high level on tape punch signal TPM. Thus, the AND gate is enabled to set the latch. This results in a high data block end level on signal line 81E at the 1 output of the latch. The 81E signal remains high until the start of the next data block when the SOB signal clears the latch again.

3-56. End-of-Message Control Circuit

The end-of-message control circuits (paras 3-57, 3-58, and 3-59) control the generation of the end-of-message sequence and the associated timing control signals.

3-57. End-of-Message Switching Circuit

The end-of-message switching circuit initiates the end-of-message sequence when EOM key D16 on the keyboard is operated (fig. 8-5).

a. The positive end-of-message switch signal EOMS from the keyboard. is routed to PC card A7 (fig. 8-13) where it sets latch Z9. The latch prevents contact bounce in the switch from having any effect.

b. The positive level produced at the output of latch Z9 enables the J input of flip-flop Z18. Thus the next negative C12 clock transition sets Z18. Both Z9 and Z18 were initially cleared by master reset line (MRS). Flip-flop Z18 remains set for only one clock pulse interval (160 #sec) after which the next negative-going CL2 clock transition clears the flip-flop (fig. 3-25).

c. The positive 160 μsec pulse at the 1 output of flip-flop Z13 is routed to OR gate Z26A in the character counter control circuits to reset the character counter. In addition, this pulse sets latch Z22, resulting in a high level on end of message level line EML and a low level on its complement line (EML).

The high EML signal is used to clear latch Z9 so that it can be used to initiate the next end-of-message sequence.

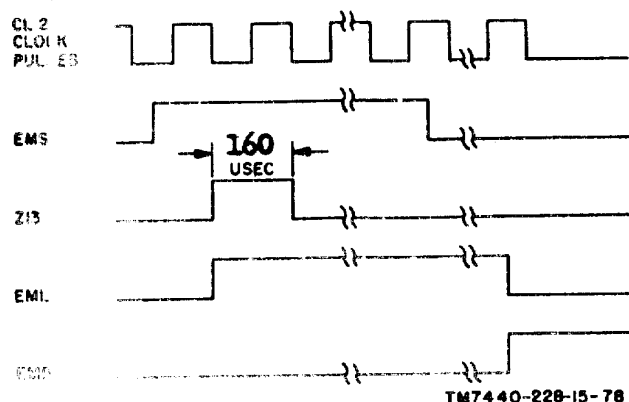


Figure 3-25. End-of-message switching circuit, timing diagram

d. Latch Z22 remains set until the end-of-the end of message sequence. At that time, end of message pulse signal EMP from the message end control circuit clears the latch. This terminates the EML signal.

3-58. End-of-Message Generator

The end-of-message generator produces a sequence of 21 characters which are inserted into the data register during the end-of-message more in place of data from the keyboard read head. The 21 characters are one SI (shift in), two carriage returns, eight line feeds, four N's and six blanks.

a. *One SI.* The SI character at the beginning of the end-of-message sequence is controlled by latch Z25 on PC card A9 (fig. 8-15).

(1) Latch Z25 is set at the beginning of the end-of-message sequence by units count 1 signal IC from the character counter. To prevent this latch from being set at the beginning of any block other than an end-of-message block, the end of message level signal (EML) is applied to the clear side of the latch. During any other block, the EML signal is high, preventing the latch from being set.

(2) The code for the SI character is 10001111 in data bits 8 through 1, respectively. To simulate this code, it is necessary to set the latches in the data register corresponding to data bits 8, 4, 3, 2, and 1. This is accomplished by connecting the 1 output of latch Z25 to OR gates Z21B and Z21A. Thus, these two OR gates are both activated to produce high outputs which, in turn, activate OR gates Z22A, Z22B, and Z23B. These five OR gates activate the set inputs to the latches for bits 1 through 4 and bit 8 in the data register. However, the Z23B output is also fed back to the clear side of latch Z25, thereby clearing the latch. Since the

1C line is still high, the latch output oscillates between the set and clear states.

(3) The data register is loaded by the first positive oscillation after data register control line DRC goes low. However, latch Z25 continues to oscillate until the character counter advances to the next count. At that time, the 1C lines goes low and Z25 remains in the clear state in which it is placed by the Z23B output.

b. *Two Carriage Returns.* The two carriage returns in the second and third character positions of the end of message sequence are controlled by latch Z26. This latch is set at character 2 by the units count 2 signal 2C from the character counter. The resulting high level at the 1 output of the latch activates OR gates Z21B and Z22B. The output of OR gate Z21B, in turn, activates OR gate Z22A. The high outputs of OR gates Z21B, Z21A, and Z22A are used to set the latches for data bits 1, 2, and 4 in the data register, simulating the carriage return character. The carriage return character continues to be generated until latch Z26 is reset. This is accomplished after the third character by units count 4 signal 4C from the character counter. This signal activates OR gate Z23A which resets latch Z26.

c. *Fight Line Feeds.* The eight line feed characters in character positions 4 through 11 of the all message sequence are controlled by latch Z27. This latch is set at the beginning of character 4 by count 4 signal 4C from the character counter. The 1 output of the latch activates OR gate Z21A which, in turn, activates OR gates Z22B and Z23B. The outputs of these OR gates set the latches for data bits 2, 4, and 8 in the data register. This simulates the code for line feed (10001010). The line feed code continues to be simulated until latch Z27 is reset. This does not happen until eight characters later when count 12 is reached in the character counter. At that time, latch Z27 is reset as part of the process of initiating the four N's

d. *Four N's.* The four N's in character positions 12 through 15 of the end-of-message sequence are controlled by latch Z24. This latch is set at the beginning of character 12 by a high level from AND gate Z20B. The AND gate is activated at this time by the combination of high levels on tens count 10 and units count 2 signals, C10 and C2, respectively, from the character counter. The 1 output of the latch activates OR gates Z21A and Z22A and (through Z21A) OR gates Z22B and Z23B. In addition, the 1 output of latch Z24 resets the latch which controlled the eight line feeds (Z27) and sets the latch for bit 7 in the data register. The four OR gates set the latches for bits 2, 3, 4, and 8. The combined effect is to simulate the N character code (11001110 in data bits 8 through 1, respectively). This character

is repeatedly generated four characters until the beginning of character 16. At that time, latch Z27 is reset as part of the process of initiating six blanks.

e. *Six Blanks.* The six blanks in character positions 16 through 21 of the end-of-message sequence are controlled by latch Z28. This latch is set at the beginning of character 16 by AND gate Z20A which is enabled by the combination of tens count 10 signal 10C and units count signal C6 from the character counter. The high AND gate output also resets latch Z24 which was used to control the four N's. The 1 output of Z28 activates OR gate Z23B which sets the latch for data bit 8 in the data register. This simulates the code for the space character (10000000 in data bits 8 through 1, respectively). This character is repeatedly generated until the end-of-message sequence is completed, at which time the end-of-message level signal (EML) goes high and resets latch Z28.

3-59. Message End Control

The end-of-message sequence is terminated by the message end control circuit on the 21st count of the character counter.

a. On the 21st count of the character counter, the decoded 20C and 1C lines from the character counter are both high. These lines are connected to AND gate Z7B on PC card A4 (fig. 8-10). If an end-of-message sequence is in process, the end-of-message level (EML) input to this AND gate from the end-of-message switching circuits is also high. Thus, the AND gate produces a high output on line 21 · EML which is routed to PC card A7 (fig. 8-13) where it is coupled through buffer Z27A to AND gate Z23A.

b. Following the completion of the 21st data strobe, output device ready line ODR from the data strobe control circuits goes high. This line enables AND gate Z23A to produce a high output which sets latch Z28, resulting in a high level on end-of-message pulse level line EMP and a low level on its complement (EMP). Latch Z28 remains set until the start of the next data block, at which time start-of-block signal SOB from the receive interface circuits goes high. This signal clears Z28, terminating the EMP and EMP signals. The EMP signal is routed to the end-of-message switching circuits to terminate the end-of-message level (EML) signal.

3-60. Transmit Interface Circuits

The transmit interface circuits include a data control generator which generates the data control signal for the output device (para 3-61), a select generator which

generates the select signal for the output vice (para 3-62) and interface transmitters which convert all output signals to the form required to drive the cables (para 3-63).

3-61. Data Control Generator

The data control line to the output device goes high initially on master reset. Normally, the line goes low on the appearance of the first data request from the output device after the start-of-block (SOB.) data request. The line then remains low until the 80th character of the data block when operating with a card punch. This process is repeated for each data block. When an end-of-message sequence is initiated, the data control line also goes low and remains low until the 21st character of the end-of-message sequence.

a. Data control signal DCT is developed by latch Z20 on PC card A7 (fig. 8-13). Initially, this latch is set by master reset line MRS. This causes the DCT line to go high.

b. If no end-of-message sequence is initiated, the latch is cleared by the first data request. The data request signal (DRQ) is differentiated by capacitor C2 and resistor R9 to produce a narrow positive pulse at the DRQ leading edge. This pulse is coupled through buffer Z2B to AND gate Z19B which is conditioned by high levels on end of message line EML and on the end of message pulse line EMP from flip-flops Z22 and Z28. Thus, if no end-of-message sequence is initiated, Z19B is enabled to reset latch Z20.

c. The latch remains cleared until character 80 at the end of the block when operating with a card punch. Thus, AND gate Z11 B is conditioned by tape punch mode signal TPM which is coupled through buffer Z15A. Then, when the character counter generates the count 80 signal, the AND gate is enabled during the time when the data strobe delayed pulse (DSD) is high. The resulting high output of Z11 is applied to OR gate Z15B to initiate a block counter advance (BCA), and is also passed through OR gate Z12A to set latch Z20. This returns the DCT signal to a high level.

d. When an end of message sequence is initiated, the start end of message pulse produced by flip-flop Z13 clears latch Z20, insuring that the DCT signal is at a low level. This condition exists until the end of the end-of-message sequence when AND gate Z6A becomes enabled by the combination of character count 20 signal 20C, data request signal DRQ from the receive interface circuits, and end-of, message level signal EML. The high output Z6A is passed through OR gate Z12A to set latch Z20, returning the DCT signal to a high level.

3-62. Select Generator

The select signal to the output device is initiated at the receipt of a ready signal from the output device and remains high for all data blocks as long as the output device remains in the ready condition; however, in the card punch mode, the select signal goes low between data blocks and when a cancel character is generated by operation of the REJECT/BACKSPACE switch-indicator. In the tape punch mode, the select signal goes low only between messages.

a. The select signal is controlled by AND gate Z17B on PC card A7 (fig. 8-13). The inputs to this AND gate from flip-flops Z14 and Z18 are normally low. When the ready signal from the output device is received, the ready line (RDY) at the third input to AND gate Z17B goes low, resulting in a high select output (SEL).

b. In the card punch mode, at the end of each data block prior to the 80th data strobe, line 81E from the data block end circuit goes high. This enables AND gate Z11A which is conditioned by tape punch mode signal TPM through buffer Z15A. The resulting high output of Z11A is passed through OR gate Z10B. This conditions both the J and K inputs to flip-flop Z14. Since the flip-flop was initially placed in the clear state by master reset line MRS, the flip-flop is now set as soon as its CL input goes low. This occurs at the end of the 80th data strobe (DST) signal which is passed through OR gate Z10A. Once flip-flop Z14 is set, its high output disables AND gate Z17B so that the SEL line goes to a low level.

c. With the J and K inputs to flip-flop Z14 still conditioned by the Z10B output flip-flop Z14 becomes cleared by the trailing edge of the 81st DST data strobe pulse. The negative transition at the Z14 output toggles flip-flop Z18 to the set state. Since Z18 is now set, Z17B remains disabled and the select line remains low. At the next positive-going transition on the CL2 clock line, flip-flop Z18 is cleared so that Z17B becomes enabled and the select line returns to a high level.

d. In the card punch mode, when the REJECT/BACKSPACE switch-indicator is operated, the low levels on the CPM and CAN lines enable AND gate Z25A. The resulting high level output is routed through OR gate Z1B to condition the J and K inputs to flip-flop Z14. The high Z25A output also conditions AND gate Z6B. The data strobe delay (DSD) pulse resulting from the switch operation enables Z6B. The resulting positive output pulse from Z6B is passed through OR gate Z10A to the CL input of flip-flop Z14. Thus, Z14 is set at the negative-going trailing edge of the DSD pulse. The Z14 output then inhibits AND gate Z17B and the select line goes low. The data strobe (DST) pulse (also a

result of the switch operation) is generated after the DSD pulse and passed through OR gate Z10A to toggle flip-flop Z14 to the clear state. The negative transition at the Z14 output toggles flip-flop Z18 to the set state. Thus, AND gate Z17B remains disabled and the select line remains low. However, the next positive transition on the CL2 clock line clears Z18 so that AND gate Z17B is again enabled and the select line returns to a high level.

e. In the tape punch mode, the select line is not permitted to go low until the end of an end-of-message sequence. At that time, the 21 EML line goes high. This high level is routed through OR gate Z10B to condition the J and K inputs to flip-flop Z14. The 21st DST data strobe toggles the flip-flop to the set gate. Thus, AND gate Z17B is disabled and the select line goes low. The 22nd DST data strobe clears Z14. The trailing edge of the Z14 output toggles flip-flop Z18 to the set state. This keeps the select line low until the next positive-going transition on the CL2 line clears flip-flop Z18.

3-63. Interface Transmitters

a. The various signals to be transmitted to the output device are shifted from control-keyboard switch levels (0 and +4.5 volts) to the interface switch levels (+6.2 or -6.2 volt) by the transmit interface circuits on PC cards A10 and A11 (figs. 8-16 and 8-17). Interface transmitters are used for the individual output lines which remove high frequency components from the logic signals to minimize rfi problems in the cables.

b. Identical interface transmitters A through H on PC card A11 are used for the eight data bits (DB1 through DB8). The resulting outputs (DB1X through DB8X) have the same polarity as the inputs (high for high and low for low).

c. Identical inverting transmitters J and K are used for the select line (SEL) and the master reset line (MRS). Because of the inversion, the transmitted outputs are not-functions (SELX and MRSX).

d. Identical noninverting transmitters H, J, and K on PC card A10 (fig. 8-16) are used for data strobe (DST), data control (DCT), and cancel (CAN) lines to the output device. Each of these transmitters has an inhibit input (INH) which is tied to the signal input line and is, therefore, not functional.

3-64. Block Counter

The block counter consists of three separate BCD counters in sequence to record the three decimal digits specifying the block count at any time. The three BCD counters corresponding to the units digit, the tens digit, and the hundreds digit of the block count are located on

PC cards A5, A4, and A2, respectively (figs. 8-11, 8-10, and 8-9).

a. Each BC counter consists of four flip-flops connected in a binary counter configuration (bits 1, 2, 4, and 8) for the counts from 0 to 9. On the count of 9, the counter is reset to 0 so that the count is repeated. The units counter on PC card A5 is advanced one count each time the block counter advance (BCA) line goes low (at the trailing edge of a positive BCA pulse). In the tape punch mode, this represents the detection of the line feed (LF) character in the input register. In the card punch mode, this occurs at the end of each data block. The tens counter is advanced by a negative transition on the toggle tens (TTS) line each time the units counter is reset. Similarly, the hundreds counter is advanced by a negative transition on the toggle hundreds (THS) line each time the tens counter is reset. Thus, the tens counter advances once for each 10 line feed characters and the hundreds counter advances once for each 100 line feed characters.

b. The count registered in each of the three BCD counters at any time is indicated in binary form by the state of the four flip-flops. The flip-flop outputs are thus decoded to produce a numerical signal on one of 10 decimal lines for each of the three BCD counters. These are designated 0B to 9B for the units counter, 00B to 90B for the tens counter, and 100B to 500B for the hundreds counter. The counters are described in greater detail in paragraphs 3-65 and 3-66. The 30 decimal output lines are fed through lamp drivers to operate the BLOCK COUNTER indicators on the control panel.

3-65. Detailed Block Counter Operation

Since the units and tens BCD counters are essentially identical, the detailed logic operation is described for the units counter on PC card A5 only (fig. 8-11)

a. The first flip-flop (Z9) is toggled on each negative-going transition of the BCA input. Each subsequent flip-flop is toggled by the 1 output of the preceding flip-flop so that it changes states each time the preceding flip-flop is reset. This satisfies the requirements for binary counting. The count of 10 (1010) is monitored by AND gate Z7A. When this count occurs, the 1 outputs of the 2 bit and 8 bit flip-flops (Z10 and Z12) are both high. Thus, the AND gate is enabled to produce a high output which is routed through OR gate Z1B to reset the four flip-flops. This recycles the counter each 10 counts.

b. The BCD counter is also reset by a high level reset block counter (RBC) signal from the reset control circuits on PC card A7 (para 3-66) when any one of the following four reset conditions occurs:

- (1) Power on reset.
- (2) Pressing the control panel RESET switch.

(3) Pressing the control panel COUNTER RESET switch.

c. The 10 possible combinations of states of the four flip-flops are decoded by 10 AND gates which feed the 0B to 9B signals to corresponding lamp drivers. Each combination of states results in enabling only one AND gate and the activation of only one lamp driver. The first decoder AND gate (Z2B) for the count of 0000 (0B) is enabled only when all four flip-flops are reset. The reset state of the 4-bit and 8-bit flip-flops (Z11 and Z12) is indicated by low levels from the 1 outputs of these flip-flops to OR gate Z8B. The resulting low output of Z8B permits a low level from OR gate Z8A. This is one enabling condition for Z2B. The other conditions are low levels from the 1 outputs of the 1-bit and 2-bit flip-flops (Z9 and Z10). The second decoder AND gate for the count of 1 (0001) is similar, except that the 0 output of the 1-bit flip-flop (Z9) must be low, indicating that this flip-flop is set. Similarly, the third decoder AND gate for the count of 2 (0010) requires that the 0 output of the 2-bit flip-flop (Z10) be high.

d. Similar techniques are used for the AND gates which decode the counts of 3 through 7, except that the state of the 8-bit flip-flop (Z12) is not monitored since the only numbers under 10 in which the first three binary bits' assume the value 3 through 7 are the numbers 3 through 7, however, for numbers 8 and 9, the 8-bit must be monitored. The distinction between 8 (1000) and 9 (1001) is made by the state of the 1-bit flip-flop whose 1 output is used as a condition for the 8 count AND gate (Z6B), and whose 0 output is used as a condition for the 9 count AND gate (Z6A). The 1 output of the 4-bit flip-flop (Z11) is also used. However, this is a redundant input, since the 4 bit must always be a 0 whenever the 8 bit is a 1 or the number would exceed 9.

e. The output of the 9-count decoder AND gate (Z6A) is also used to toggle the next counter. Thus, as the count proceeds, the 10 AND gates are enabled in turn. Following the count of 9, the counter is reset and the first AND gate (Z2B) is again enabled. This transition from a high to a low state at the Z6A output toggles the next counter.

f. When the hundreds BCD counter has not been stepped to the count of 1, there is no need to display the 0 hundreds digit. Also, in that case, if the tens BCD counter has not been stepped to the count of 1, there is no need to display the 0 tens digit. As long as the block count is less than 10, only the units digit need be displayed. The 0 hundreds digit is never displayed. However, when the hundreds BCD counter is still registering a value of 0, the tens zero inhibit line (TZI) to PC card A4 is activated to prevent a 0 from being displayed in the tens digit. This signal activates OR gate Z8A which disables the 0 count decoder AND gate Z2B for the tens digit. This is done only if the hundreds digit has a value of 0, otherwise, the tens digit should be displayed.

g. The hundreds BCD counter on PC card A2 (fig. 8-9) differs from the units and tens BCD counters in that there are only three flip-flops: Z4, Z6, and Z8. This is because the maximum permissible value for the hundreds digit is 5. Also, there is no lamp driver for the 0 counter decoder AND gate Z8B. Thus the 0 hundreds digit is never displayed. Instead, the output of this AND gate is used as the tens zero inhibit line (TZI) to inhibit the display of a 0 for the tens digit.

h. The BLOCK COUNTER indicator display consists of indicator assemblies Z5, Z6, and Z7 on the control panel (fig. 8-3). Each assembly contains a battery of independent projection lamps focused on the display screen. When any one lamp is energized by a lamp driver which grounds the control input to the lamp, the lamp is lighted by +4.5 volts power applied to its other side. This causes the film negative in the lamp lens to be projected on the display screen. Since only one lamp in each battery is lighted at one time, only one numeral should appear on the screen.

3-66. Block Counter Reset Control

The block counter is reset each time the master reset line is activated, each time the control panel COUNTER RESET switch is operated, and each time an end-of-message sequence is generated.

a. When power is first turned on to the control keyboard or when the control panel RESET switch is operated, master reset line MRS on PC card A7 (fig. 8-13) is activated. The high level on this line is passed through OR gates Z26B and Z2B to place a high level on reset block counter line RBC.

b. When COUNTER RESET switch S5 on the control panel (fig. 8-3) is operated, its contacts transfer a +4.5-volt level from line CRC to line CRO. These lines are connected to debouncing latch Z16 on PC card A7. Thus, the latch is set when the switch is operated. The resulting high level from its 1 output is passed through OR gate Z2B to the RBC output.

c. When an end-of-message sequence is generated, the end-of-message pulse on line EMP is gated through OR gates Z26B and Z2B to the RBC output.

3-67. Indicator Control Circuits

Control of various control panel indicators is described in paragraphs 3-68 through 3-72.

3-68. Caution Indicator Circuit

When the output device generates a caution signal on line CAU, receiver E on PC card A10 (fig. 8-16) produces a low level on line CAU. This is routed to PC card A2 (fig. 8-9) where it is inverted by inverter Z1A. The resulting high CAU level activates lamp driver F on

the same PC card to place a ground on line CAUL. This energizes CAUTION indicator DS2 on the control panel (fig. 8-3).

3-69. Stop Indicator Circuit

If the output device is not ready to receive data, it activates the RDYR line to receiver C in the receive interface circuits on PC card A10 (fig. 8-16).

The resulting low level on line RDY is inverted to a high level on line RDY by inverter Z4A on PC card A8 (fig. 8-14). The high RDY signal is routed to PC card A2 (fig. 8-9) where it activates lamp driver H. The resulting high current 0-volt level energizes STOP indicator DS1 on the control panel (fig. 8-3) and activates the keyboard lock circuit.

3-70. Reject Indicator Circuit

An indication is provided to the operator to perform a reject (cancel) operation when the output device is a card punch in the ready condition and supplies an alarm stop signal.

a. The alarm stop signal results in a low level on line ALS from the receive interface circuits to PC card A11 (fig. 8-17). Here the ALS signal enables AND gate Z3A if the output device is in a ready condition. The ready condition is indicated by a high level on line RDY from the receive interface circuits. This is inverted to a low level on line RDY by inverter Z4A on PC card A8 (fig. 8-14).

b. If both ALS and RDY are low, AND gate Z3A on PC card A11 produces a high output which is gated in AND gate Z2A with a high level on tape punch mode line TPM when the output device is a card punch. This results in a high output from Z2A on cancel line CAND.

c. The CAND signal is routed to PC card A2 (fig. 8-9) where it activates lamp driver J. This results in a high current 0-volt level on line CANL which energizes the REJECT indicator in REJECT/ BACKSPACE switch-indicator Z2, thus indicating to the operator that he should press the switch-indicator. The CANL signal also activates the keyboard lock circuit, locking the keyboard to prevent the operation of any other character key.

3-71. Backspace Indicator Circuit

An indication is provided to the operator to perform a backspace operation when the output device is a tape punch in the ready condition and supplies an alarm stop signal.

a. The alarm stop signal and the ready condition of the output device cause AND gate Z3A on PC (card A11 (fig. 8-17) to be enabled as described in paragraph 3-70a. The resulting high output is gated in AND gate Z2B with a high level on card punch mode line CPM when the output device is a tape punch This causes Z2B to produce a high output on backspace line BKSD.

b. The BKSD signal is routed to PC card A2 (fig. 8-9) where it activates lamp driver (L). This results in a high-current 0-volt level on line-BKSD which energizes the BACKSPACE indicator in REJECT/BACKSPACE switch-indicator Z2, thus indicating to the operator that he should press the switch-indicator. The BKSD signal also activates the keyboard lock circuit, locking the keyboard to prevent the operation of any other character key.

3-72. Keyboard Lock Control Circuit

A keyboard lock command is generated between data blocks during an end-of-message sequence, during an alarm stop condition, and when either the ready signal or data request signal from output device is absent.

a. *Between Data Blocks.* The interval between normal data blocks is marked by a high level on line 81E from PC card A7. This signal is routed through OR gate Z8B on PC card A8 (fig. 8-14) to produce a high level on the keyboard lock line (KBL). The KBL output activates solenoid driver (M) on PC card A2 (fig. 8-9) which removes a gnd return on line LKB to solenoid L1 in the keyboard (fig. 8-5).

b. *End of Message Sequence.* During an end of message sequence, a high level end of message level signal (EML) from PC card A7 is routed through OR gates Z8A and Z8B on PC card A8 to the keyboard lock line (KBL).

c. *Ready Absent.* Whenever the ready signal from the output device is absent, the RDY line from the receive interface circuits on PC card A10 goes low. This is routed to PC card A8 where it is inverted to a high level by inverter Z4A. This is then gated through OR gates Z8A and Z8B to the KBL line.

d. *Alarm Stop.* In case of an alarm stop in the output device, either the cancel (CAND) or backspace line (BKSD) on PC card A11 (fig. 8-17) goes high. In either case, OR gate Z1B is activated, resulting in : 1 high level on the control-keyboard lock line (UKL) to PC card A8. The high UKL level is gated through OR gates Z8A and Z8B to the KBL line.

e. *Data Request Absent.* Whenever the data request signal from the output device is absent, the output device ready line (ODR) from the data strobe generator circuits on PC card A8 goes high. This is inverted to a low level by inverter Z7B. This enables AND gate Z7A, except during 53 ms following a data strobe. During the 53 ms, the data strobe is inhibited under control data request inhibit signal DRI. Thus,

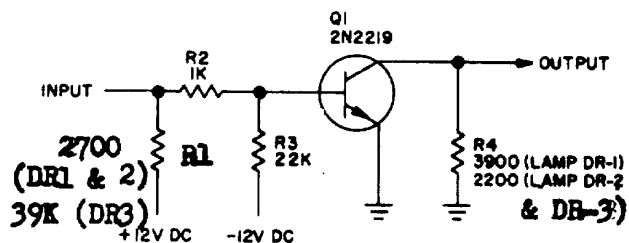
there is no need for keyboard lock. The DRI line is, therefore, connected to AND Z7A to disable the AND gate for the 53 ms. If the inverted ODR line is still high after this time, Z7A produces a high output which is passed through OR gate Z8B to keyboard lock line KBL.

3-73. Detailed Operation of Discrete Circuit Logic Elements

The detailed circuit operation of discrete circuit logic elements is described in paragraphs 3-74 through 3-77. The component makeup of each type of logic element is shown in figures 3-26 through 3-33. However, since one example of each type is shown in these figures, refer to table 3-2 for a detailed listing of the corresponding components in the logic element of each type.

3-74. Detailed Operation of Discrete Circuit Logic Elements on PC Cards A1, A4, and A5

The only type of discrete circuit logic element on PC cards A1, A4, and A5 is the type LAMP DR-1 lamp driver (fig. 3-26). When power is turned on to the equipment, a 0-volt level appears at the lamp driver input. The resulting voltage applied to the base of transistor Q1 by bias network R1, R2, R3 keeps Q1 cut off. However, resistor R4 provides a path from ground to one side of the lamp and the other side of the lamp is connected to + 12 volts. Thus, a warming current is supplied to the lamp even though it is not lighted. When the input voltage switches to +4.5 volts, Q1 is driven into conduction and provides a high current path to ground for the lamp. This lights the lamp.



NOTE:
UNLESS OTHERWISE INDICATED,
ALL RESISTANCES ARE IN OHMS.

TM 7440-228-15-35

Figure 3-26. Type LAMP DR-1 lamp driver, schematic diagram

Table 3-2. Discrete Circuit Logic Element Components

<i>PC card</i>	<i>Logic element type</i>	<i>Logic element reference designation</i>	<i>Component reference designations</i>												
A1	LAMP DR-1.	A	R1	R2	R3	R4	Q1								
		B	R5	R6	R7	R8	Q2								
		C	R9	R10	R11	R12	Q3								
		D	R13	R14	R15	R16	Q4								
		E	R17	R18	R19	R20	Q5								
		F	R21	R22	R23	R24	Q6								
		H	R25	R26	R27	R28	Q7								
		J	R29	R30	R31	R32	Q8								
		K	R33	R34	R35	R36	Q9								
		L	R37	R38	R39	R40	Q10								
		M	R41	R42	R43	R44	Q11								
		N	R45	R46	R47	R48	Q12								
		O	R49	R50	R51	R52	Q13								
		A2	LAMP DR-2.	P	R53	R54	R55	R56	Q14						
R	R57			R58	R59	R60	Q15								
S	R61			R62	R63	R64	Q16								
T	R65			R66	R67	R68	Q17								
A	R1			R2	R3	R4	Q1								
B	R5			R6	R7	R8	Q2								
C	R9			R10	R11	R12	Q3								
D	R13			R14	R15	R16	Q4								
E	R17			R18	R19	R20	Q5								
F	R21			R22	R23	R24	Q6								
H	R25			R26	R27	R28	Q7								
K	R33			R34	R35	R36	Q9								
A2	LAMP DR-3.			J	R29	R30	R31	R32	Q8						
				L	R37	R38	R39	R40	Q10						
A4, A5	LAMP DR-1.	A	R1	R2	R3	R4	Q1								
		B	R5	R6	R7	R8	Q2								
		C	R9	R10	R11	R12	Q3								
		D	R13	R14	R15	R16	Q4								
		E	R17	R18	R19	R20	Q5								
		F	R21	R22	R23	R24	Q6								
		G	R25	R26	R27	R28	Q7								
		H	R29	R30	R31	R32	Q8								
		J	R33	R34	R35	R36	Q9								
		K	R37	R38	R39	R40	Q10								
		(G)	R29	R30	R31	R32	R33	R34	R35	Q10	Q11	Q12			
A10	AMPL-1	(L)	R66	R67	R68	R70	R71	C4	C5	CR10	VR4	Q25	Q26		
A10	OSC	A	R1	R2	R3	R4	5	R6	R7	R8	Q1	Q2	Q3		
A10	RCVR-2	B	R9	R10	R11	R12	R13	R14	R15	R16	Q4	Q5	Q6		

Change 4 3-41

Table 3-2. Discrete Circuit Logic Element Components-Continued

<i>PC card</i>	<i>Logic element type</i>	<i>Logic element reference designation</i>	<i>Component reference designations</i>																	
A10	RCVR-1	C	R17	R18	R19	R20	Q7	CR1	VR1											
		D	R21	R22	R23	R24	Q8	CR2	VR2											
		E	R25	R26	R27	R28	Q9	CR3	VR3											
A10	XMTR-1A	H	R36	R37	R38	R39	R40	R41	R42	R43	R44	R45	Q13	Q14	Q15	Q16	CR4	CR5	C1	
		J	R46	R47	R48	R49	R50	R51	R52	R53	R54	R55	Q17	Q18	Q19	Q20	CR6	CR7	C2	
		K	R56	R57	R58	R59	R60	R61	R62	R63	R64	R65	Q21	Q22	Q23	Q24	CR8	CR9	C3	
A11	XMTR-1B	A	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	C1	CR1	Q1	Q2	Q3	Q4		
		B	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20	C2	CR2	Q5	Q6	Q7	Q8		
		C	R21	R22	R23	R24	R25	R26	R27	R28	R29	R30	C3	CR3	Q9	Q10	Q11	Q12		
		D	R31	R32	R33	R34	R35	R36	R37	R38	R39	R40	C4	CR4	Q13	Q14	Q15	Q16		
		E	R41	R42	R43	R44	R45	R46	R47	R48	R49	R50	C5	CR5	Q17	Q18	Q19	Q20		
		F	R51	R52	R53	R54	R55	R56	R57	R58	R59	R60	C6	CR6	Q21	Q22	Q23	Q24		
		G	R61	R62	R63	R64	R65	R66	R67	R68	R69	R70	C7	CR7	Q25	Q26	Q27	Q28		
A11	XMTR-2	H	R71	R72	R73	R74	R75	R76	R77	R78	R79	R80	C8	CR8	Q29	Q30	Q31	Q32		
		J	R81	R82	R83	CR9	Q33													
		K	R84	R85	R86	CR10	Q34													

3-75. Detailed Operation of Discrete Circuit Logic Element on PC Card A2

a. *Type LAMP DR-2 and LAMP DR-3 Lamp Drivers.* PC card A2 contains both the type LAMP DR-2 and LAMP DR-3 lamp drivers. These lamp drivers are essentially identical to the type LAMP DR-1 lamp driver on PC cards A1, A2 and A5, with the only difference being changes in component values.

b. *Solenoid Driver.* PC card A2 also contains a solenoid driver (fig 8-9) which supplies a ground return

for solenoid A2L01 in the keyboard. Transistor A2Q11 is biased to conduct when a low level is present on the KBL line. The conduction of A2Q11 causes A2Q12 to conduct also. A2Q12 collector current flow (through A2R46 reverse biases diode A2CR1 and allows transistor A2Q13 to conduct, providing a ground path on the LKB line. When a high level is applied to the KBL line, all three transistors cut off and the LKB line becomes an open circuit.

3-76. Detailed Operation of Discrete Circuit Logic Elements on PC Card A10

a. *Type AMPL-1 Buffer Amplifier* (fig. 3-27). The type AMPL-1 buffer amplifier receives an input pulse signal with long rise and fall times from read head A2A1.

(1) The input signal is applied across bias resistor R29 to one side of difference amplifier Q10, Q11. Resistors R32 and R30 are the collector load resistors for the two transistors, and resistor R31 is the common emitter load resistor. The input to the other side of the difference amplifier at the base of Q11 is obtained by feeding the output at the collector of Q10 through voltage divider R33, R34. Since this signal is inverted from the input signal by Q10 it is applied to Q11 in phase opposition to the input signal at the base of Q10. Thus, as the Q10 base rises, the Q11 base falls and a large difference voltage appears across the difference amplifier. Thus, the difference amplifier provides high gain.

(2) To decrease the rise and fall times, the difference amplifier is driven into cutoff and saturation by the positive and negative extremes of the input signal. The resulting squared pulse signal at the collector of Q11 is in phase with the input signal. This squared signal is inverted by transistor Q12 to produce an output signal which is 0 volt when the input is high, and +4.5 volts when the input is low. Resistor R35 is the load resistor for Q12.

b. *Type OSC Oscillator* (fig. 3-28). The type OSC oscillator produces 12.5-kHz clock pulses.

(1) When power is turned on, current flows from the +12-volt power source through resistor R71, diode CR10 potentiometer R66, and resistor R67 to charge capacitor C4. The output voltage from the oscillator is +4.5 volts at this time, as determined by the voltage regulator circuit consisting of Zener diode VR4, resistor R71, and filter capacitor C5. The 8.2-volt output of the voltage regulator is applied to voltage divider R69, R70 to produce a +4.1-volt output.

(2) When the voltage across C4 is sufficient to fire unijunction transistor Q25, the charging current is bypassed through Q25 and resistor R68. The resulting positive voltage across R68 drives transistor Q26 into conduction, causing the output of the circuit to fall to 0 volt.

(3) After capacitor C4 has discharged through the emitter of Q25, the current into the emitter of Q25 is insufficient to maintain conduction, thus, Q25 goes into cutoff. The resulting 0-volt output across R68 causes

Q26 to go into cutoff, thus, the output voltage return to +4.1 volts.

(4) Capacitor C4 now begins charging again, as described in (1) above. The cycle repeats indefinitely as long as power is present. The repetition rate is determined by the time required to charge capacitor C4. This is adjusted by potentiometer R66 (para 4-40).

c. *Type RCVR-1 Interface Receiver* (fig. 3-29). The type RCVR-1 interface receiver converts a 0-volt input from the output device to +4.5 volts and an open circuit input to 0 volt. When the transmitting source becomes an open circuit, the input signal becomes +6.2 volts because of the reference voltage established by Zener diode VR1. This voltage is coupled to the base of Q7, driving the transistor into conduction, and resulting in a 0-volt output at the collector of Q7. When the input signal goes to 0 volt, the low level is coupled through constant voltage drop diode CR1 and resistor R17 to the base of Q7, cutting off the transistor. As a result, +4.5 volts is coupled through resistor R20 to the load.

d. *Type RCVR-2 Interface Receiver* (fig. 3-30). The type RCVR-2 interface receiver converts a +6.2 volt input to +4.5 volts and a -6.2 volts input to 0 volt. A +6.2 volt input causes transistor Q1 or difference amplifier Q1, Q2 to go into conduction and causes transistor Q2 to go into cutoff. The negative voltage at the collector of Q1 is coupled through resistor R5 to drive transistor Q3 into cutoff. Thus, the output assumes the +4.5-volt level supplied through resistor R8. If, however the input to the circuit is -6.2 volts, the base of Q1 assumes a negative potential established through resistors R1 and R2, and Q1 is driven into cutoff and Q2 into conduction. The positive level at the collector of Q1 drives Q3 into conduction so that the output goes to 0 volt.

e. *Type XMTR-1A Interface Transmitter* (fig. 3-31). Input from the control keyboard logic circuits switching between 0 volt and +4.5 volts are applied to the XMTR-1A circuit through AND gate diodes CR4 and CR5. When both inputs are +4.5 volts, the diodes are cut off and bias network R36, R37, R38 drives transistor Q13 into conduction. Loading for Q13 is provided by resistors R39 and R40. The drop in voltage at the junction of R39 and R40 turns on transistor Q14 to result in a +12 volt level at the Q14 collector. This drives transistor Q15 into conduction and transistor Q16 into cutoff. Thus, the +6.2-volt supply voltage is drawn

through Q15 and resistor R8 to the output. When a 0-volt level is applied to either input diode CR4 or CR5, bias network R36, R37, R38, allows Q13 to go into cutoff. The resulting positive + 12 volt output of Q13 cuts off Q14 so that a negative voltage appears at the Q14 collector. This voltage drives Q16 into conduction and Q15 into cutoff. Thus, the -6.2 volt supply is drawn through Q16 and resistor R44 to the circuit output. Capacitor C1 is used to improve the high frequency response of the circuit.

NOTE

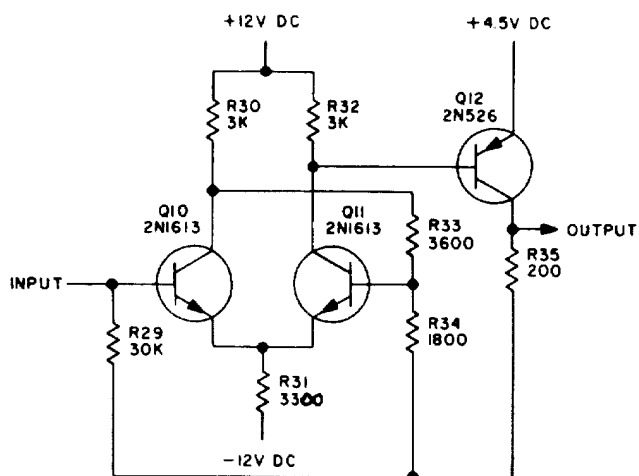
PC card A10 may be either part number A65301 (all discrete components), or part number A65341 which contains both discrete components and microcircuit logic elements. Correspondence between reference designators of similar circuits on the two different PC cards are given in tables 3-2.1 and 3-2.2.

Table 3-2.1. Logic Element Type OSC Components (PC card A10)

PC card No.	Component reference designations											
PC card A65301.....	R66	R67	R68	R70	R69	F71	CR10	VR4	Q25	Q26	C4	C5
PC card A66341.....	R8	R9	R10	R11	R12	R7	CR2	VR1	Q3	Q4	C1	C2

Table 3-2.2. Logic Element Type AMP-1 Components (PC card A10)

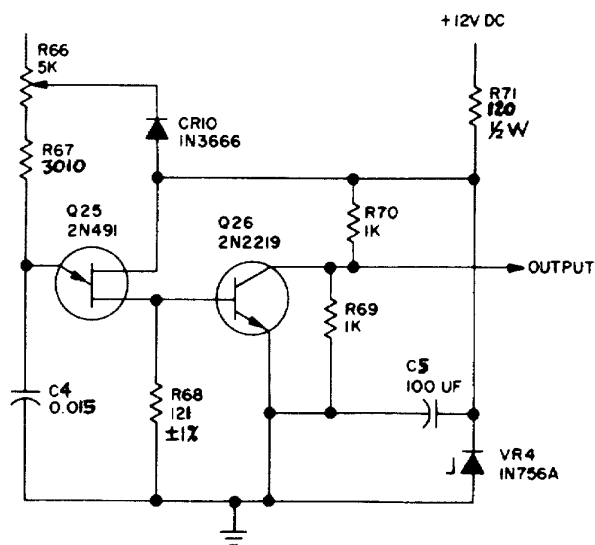
PC card No.	Component reference designations									
PC card A66301.....	R29	R31	R30	R33	R34	R32	R35	Q10	Q11	Q12
PC card A65341.....	R13	R17	R16	R16	R18	R19	R14	Q5	Q6	Q7



NOTE:
UNLESS OTHERWISE INDICATED
RESISTANCES ARE IN OHMS.

TM7440-228-15-36-1

Figure 3-27. Type AMPL-1 buffer amplifier, schematic diagram.



NOTE:
UNLESS OTHERWISE INDICATED,
ALL RESISTANCES ARE IN OHMS.

TM7440-228-15-37-1

Figure 3-28. Type OSC oscillator, schematic diagram.

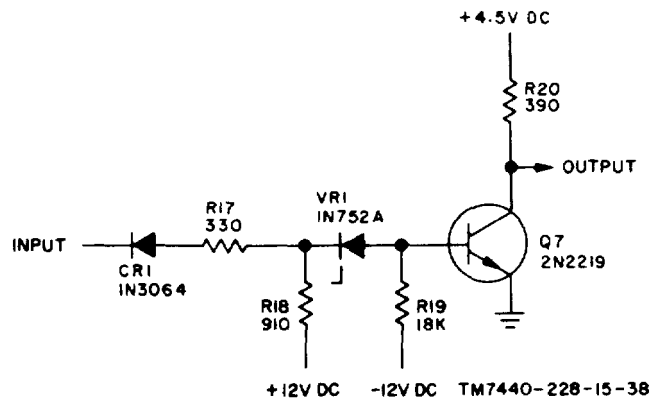
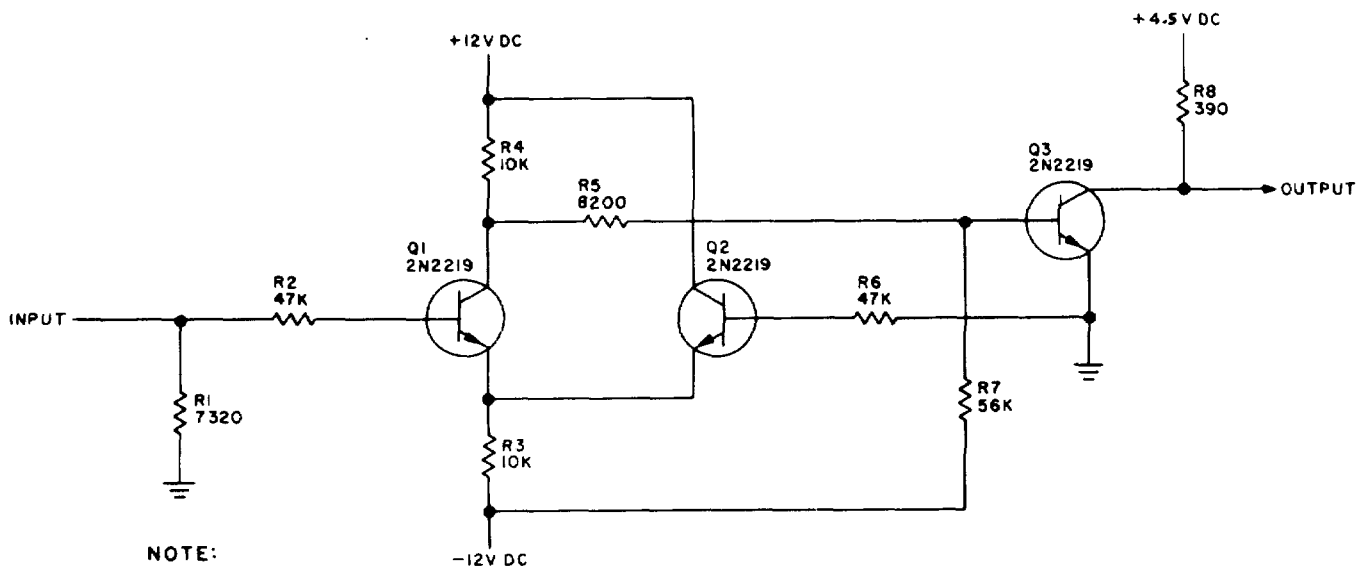


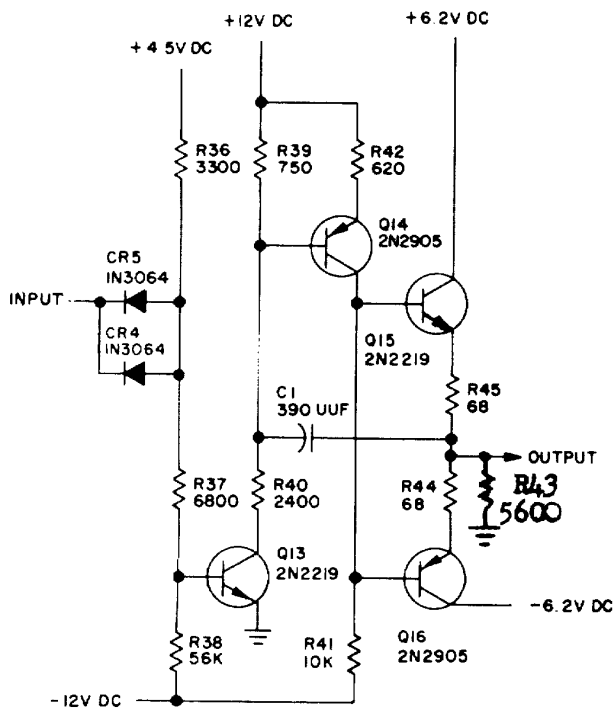
Figure 3-29. Type RCVR-1 interface receiver, schematic diagram.



NOTE:
UNLESS OTHERWISE INDICATED,
RESISTANCES ARE IN OHMS.

TM7440-228-15-39-1

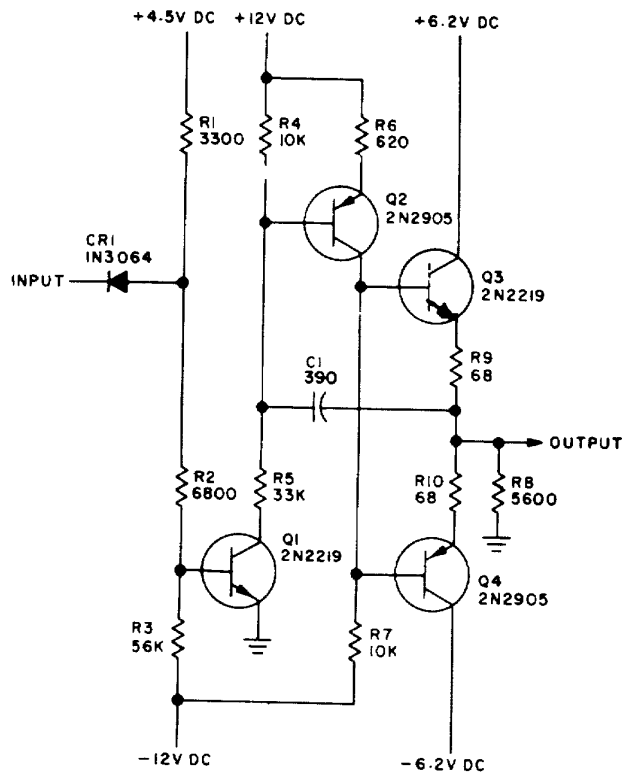
Figure 3-30. Type RCVR-2 interface receiver, schematic diagram.



NOTE:
UNLESS OTHERWISE INDICATED,
ALL RESISTANCES ARE IN OHMS.

TM7440-228-15-40

Figure 3-31. Type XMTR-1A interface transmitter, schematic diagram.



NOTE:
UNLESS OTHERWISE INDICATED,
RESISTANCES ARE IN OHMS,
CAPACITANCES ARE IN UUF

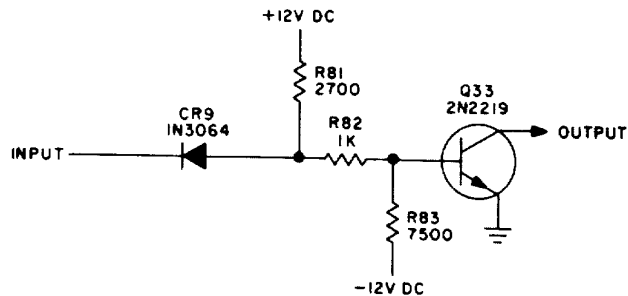
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Figure 3-32. Type XMTR-1B interface transmitter, schematic diagram.

3-77. Detailed Operation of Discrete Circuit Logic Elements on PC Card A11

a. Type XMTR-1B Interface Transmitter (fig. 3-32). The type XMTR-1 interface transmitter on PC card A11 is identical to the type XMTR-1 interface transmitter on PC card A10 except that one of the two input diodes is deleted.

b. Type XMTR-2 Interface Transmitter (fig. 3-33). Inputs from the control keyboard logic circuits switching between 0 volt and +4.5 volts are applied through constant voltage-dropping diode CR9 and through impedance matching network R81, R82, R83 to the base of inverter Q33. When the input is 0 volt, Q33 is cut off and supplies an open circuit to the output device which provides a connection through a load resistor to +6.2 V. When the input is +4.5 volts, Q33 is driven into conduction, resulting in a 0-volt output to the output device.



NOTE:
UNLESS OTHERWISE INDICATED
RESISTANCES ARE IN OHMS.

TM7440-228-15-41

Figure 3-33. Type XMTR-2 interface transmitter, schematic diagram.

CHAPTER 4

MAINTENANCE INSTRUCTIONS

Section I. GENERAL

4-1. Scope of Maintenance

a. This chapter includes instructions for performing preventive and corrective maintenance operations and testing procedures at all maintenance categories. For repair of printed circuit cards, refer to chapter 5.

b. Maintenance of the control-keyboard includes the following:

- (1) Preventive maintenance (paras 4-3 - 4-8)
- (2) Troubleshooting (paras 4-9 - 4-11)
- (3) Removal and replacement (paras 4-12 - 4-37)

- (4) Repair and adjustments (paras 4-38 - 4-43)

4-2. Tools, Materials, and Test Equipment Required

a. *Tools and Test Equipment.* Refer to appendix C, Maintenance Allocation Chart, for a list of the tools and test equipment required for maintenance of the control-keyboard.

b. *Materials.*

- (1) Paint, gray, FSN 8010-087-0109 (1-qt can)
- (2) Paint, blue, FSN 8010-721-9753 (15-oz spray can)

Section II. PREVENTIVE MAINTENANCE

4-3. Scope of Preventive Maintenance

a. Preventive maintenance is the systematic care, inspection, and servicing of the control-keyboard to maintain it in serviceable condition, prevent breakdowns, and assure maximum operational capability. Preventive maintenance includes the inspection, testing, and replacement of parts, subassemblies, or units that inspection and tests indicate would probably fail before the next scheduled periodic service.

b. The preventive maintenance checks and services charts (paras 4-4, 4-5, and 4-6) outline functions necessary to maintain the control-keyboard in good operating condition. The charts indicate what to check, how to check, and the normal conditions; the *References* column lists the illustrations, paragraphs, or manuals that contain detailed maintenance procedures.

c. Weekly and monthly preventive maintenance periods are specified as follows: A week and a month are defined as approximately 7 and 30 calendar days of 8-hour-a-day operation, respectively. If the control-keyboard is operated 16 hours a day, the weekly and monthly preventive maintenance checks and services should be performed at 4-day and 15-day intervals, respectively. Adjustment of the preventive maintenance interval should be made to compensate for any unusual operating conditions.

d. If the control-keyboard is in a standby (ready for immediate operation) status, the preventive maintenance checks and services listed in paragraph 4-4 must be performed weekly.

e. Records and reports of the preventive maintenance checks and services must be made in accordance with the requirements specified in TM 38-750.

4-4. Daily Preventive Maintenance Checks and Services Chart

Note: Prior to performing sequence Nos. 4 or 6, the control keyboard must be connected to either the low or high speed tape punch or the low speed card punch.

Sequence No.	Item to be inspected	Procedure	Reference
1	Exterior surfaces of keyboard.	Check for cleanliness. Clean, if required.	Para 4-7.
2	Exterior surfaces of logic assembly, control panel, and enclosure assembly.	Check for cleanliness. Clean, if required.	Para 4-7.
3	Code selector switch.	Check for smooth movement without binding and firm detent in selected position.	Para 2-1
4	Keys.....	Check for smooth movement and desired pressure. Check for missing, loose, or damaged key tops.	
5	Switches.....	Check mechanical action of switches for smooth and free operation without binding.	

6	POWER switch indicator lamps.	Depress POWER switch-indicator; indicator lamps should light.	Fig. 2-1.	2	Installation.....	See that equipment is properly installed.	
7	Switches, counters, and lights.	Connect control-keyboard to low speed paper tape punch (or high speed speed paper tape punch or low speed card punch). Depress POWER switch-indicator and operate keyboard in all modes. Check switches, counters, and lights for proper operation.		3	Cleanliness.....	See that equipment is clean.	Para 4-7.
				4	Preservation.....	Check all surfaces for evidence of fungus. Remove rust and corrosion, and spot-paint bare spots.	Para 4-7.
				5	Fuses and lamps.....	See that all operating fuses and lamps are of correct value. Check spare fuses and lamps for proper value and quantity.	
				6	Subassembly mountings.	See that all mounting screws, nuts, and washers are correctly positioned and properly tightened. Check for cracked, bent, or broken brackets.	
				7	Connections.....	Check to be sure that connectors (plugs and receptacles) are clean, intact, and not loosefitting, and all interconnecting cables are properly routed and connected.	
				8	Switches and counters.	While operating control-keyboard as specified in para 4-4, item 7, check mechanical action of switches and operation of counters.	

4-5. Weekly Preventive Maintenance Checks and Services Chart

Sequence No.	Item to be inspected	Procedure	Reference
1	Interior surfaces of keyboard, control panel, and enclosure assembly.	See that all interior surfaces and mechanical assemblies are free of dirt, dust, oil, grease, moisture, corrosion, and rust.	Para 4-7.
2	Clean, if required. Internal wiring	Inspect all internal wiring and cables for broken, cracked, or defective insulation, deposits of oil, grease, dust, or dirt. Clean, if required.	Para 4-7.
3	Connectors (plugs and receptacles)	Inspect for breakage, firm seating, loose screws or nuts, corrosion, and grease or oil deposits. Clean if required.	Para 4-7.
4	Control-keyboard operation.	Perform complete check of all operational features.	Para 4-4, item 7.

4-6. Monthly Preventive Maintenance Checks and Services Chart

Sequence No.	Item to be inspected	Procedure	Reference
1	Completeness.....	See that equipment is complete for operation.	Appx B.

4-7. Cleaning and Touchup

- a. *External Cleaning.* Use a vacuum cleaner aid a lint-free cloth to clean the control-keyboard externally.
- b. *Internal cleaning.* Use a vacuum cleaner and a lint-free cloth to clean the control-keyboard internally.
- c. *Touchup Painting Instructions.* Remove rust and corrosion from metal surfaces by lightly sanding with fine sandpaper. Brush two coats of paint on bare metal to keep it from further corrosion. (Refer to TB 746-10)

4-8. Lubrication

No lubrication of the control-keyboard is required.

Section III. TROUBLESHOOTING

4-9. Use of Troubleshooting Data

Troubleshooting information on the control-keyboard is given in the control-keyboard troubleshooting chart (para 4-10). When a particular trouble symptom is observed, the particular trouble or troubles can be

corrected by replacing one or more of the components listed in the checks and corrective measures column. First check resistors, capacitors, relays, and other non-plug-in electrical or mechanical components before replacing tile component.

Resistance data on relays and nonstandard items is given in paragraph 4-11. When a PC card trouble is suspected, check the PC card by substituting a new car.

Always recheck operation of the control-keyboard after repair.

4-10. Control-Keyboard Troubleshooting Chart

<i>Item No.</i>	<i>Trouble symptom</i>	<i>Probable trouble</i>	<i>Checks and corrective measures</i>
1	POWER switch indicator will not light when depressed.	a. Fuse F1..... b. Fuse F2..... c. Fuse F3..... d. PC card A10.....	a. Replace fuse. If fuse blows, check for short. b. Replace fuse. If fuse blows, check for short. c. Replace fuse. If fuse blows, check for short. d. Replace PC card.
2	Keyboard remains locked. a. STOP indicator lights..... b. REJECT/BACKSPACE switch-indicator lights. c. No alarm indications.....	(1) PC card A7..... (2) PC card A8..... (3) PC card A10..... (1) PC card A10..... (2) PC card A11..... (1) PC card A2..... (2) PC card A7..... (3) PC card A8..... (4) PC card A10..... (5) Warped key jammed in keyboard assembly interlock assembly. (6) Flag lock jammed in keyboard assembly interlock assembly.	(1) Replace PC card. (2) Replace PC card. (3) Replace PC card. (1) Replace PC card. (2) Replace PC card. (1) Replace PC card. (2) Replace PC card. (3) Replace PC card. (4) Replace PC card. (5) Replace warped key. (6) Replace flag lock.
3	CHARACTER counter operates improperly. a. CHARACTER counter fails to advance. b. CHARACTER counter will not back space, while punching tape. c. CHARACTER counter will not reset d. CHARACTER counter will not reset while punching tape if CR key is depressed. e. CHARACTER counter will not reset while punching tape after EOM sequence f. CHARACTER counter will not reset while punching card when 80th character is punched g. CHARACTER counter will not reset while punching card if card is rejected h. CHARACTER counter will not reset if RESET switch is depressed	(1) PC card A1..... (2) PC card A6..... (3) PC card A7..... (4) PC card A8..... (5) PC card A9..... (1) PC card A6..... (2) PC card A8..... PC card A6..... (1) PC card A7..... (2) PC card A9..... (3) Keyboard assembly read head..... (4) Keyboard assembly lamp..... PC card A7..... (1) PC card A6..... (2) PC card A7..... (1) PC card A5..... (2) PC card A8..... PC card A7.....	(1) Replace PC card. (2) Replace PC card. (3) Replace PC card. (4) Replace PC card. (5) Replace PC card. (1) Replace PC card. (2) Replace PC card. Replace PC card. (1) Replace PC card. (2) Replace PC card. (3) Replace read head. (4) Replace lamp. Replace PC card. (1) Replace PC card. (2) Replace PC card. (1) Replace PC card. (2) Replace PC card. Replace PC card.
4	LINE/BLOCK counter operates improperly. a. LINE/BLOCK counter does not advance while punching card. b. LINE/BLOCK counter does not advance while punching tape. c. LINE/BLOCK counter tens readout will not advance. d. LINE/BLOCK counter will not reset	(1) PC card A6..... (2) PC card A7..... (3) PC card A8..... (1) PC card A7..... (2) PC card A9..... (3) Keyboard assembly read head..... (4) Keyboard assembly lamp..... (1) PC card A4..... (2) PC card A5..... (1) PC card A2..... (2) PC card A4..... (3) PC card A5..... (4) PC card A7.....	(1) Replace PC card. (2) Replace PC card. (3) Replace PC card. (1) Replace PC card. (2) Replace PC card. (3) Replace read head. (4) Replace lamp. (1) Replace PC card. (2) Replace PC card. (1) Replace PC card. (2) Replace PC card. (3) Replace PC card. (4) Replace PC card.
5	EOB WARNING indicator does not light.....	a. PC card A2..... b. PC card A6..... c. PC card A7.....	a. Replace PC card. b. Replace PC card. c. Replace PC card.

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
6	End of block audible warning does not sound.....	PC card A1	Replace PC card.
7	Punch receiving data will not advance.....	a. PC card A7..... b. PC card A8..... c. PC card A10..... d. Punch receiving data	a. Replace PC card. b. Replace PC card. c. Replace PC card. d. Repair punch.
8	Tape punch receiving data will not backspace.....	a. PC card A8..... b. PC card A10.....	a. Replace PC card. b. Replace PC card.
9	Card punch receiving data will not reject card.....	a. PC card A7..... b. PC card A8..... c. PC card A10..... d. PC card A11.....	a. Replace PC card. b. Replace PC card. c. Replace PC card. d. Replace PC card.
10	Data output failure.		
	a. Incorrect data output.....	(1) PC card A9..... (2) PC card A11..... (3) Keyboard assembly read head..... (4) Keyboard assembly lamp.....	(1) Replace PC card. (2) Replace PC card. (3) Replace read head. (4) Replace lamp.
	b. No data output.....	(1) PC card A8..... (2) PC card A9..... (3) PC card A11..... (4) Keyboard assembly read head.....	(1) Replace PC card. (2) Replace PC card. (3) Replace PC card. (4) Replace read head.
	c. No EOM sequence generated.....	(5) Keyboard assembly lamp..... (1) PC card A7..... (2) Keyboard assembly end of message miniature switch.....	(5) Replace lamp. (1) Replace PC card. (2) Replace switch.
11	Keyboard assembly does not operate properly		
	a. No data output or incorrect data output.	(1) Read head..... (2) Lamp.....	(1) Replace read head. (2) Replace lamp.
	b. No data strobe.....	(1) Read head..... (2) Lamp.....	(1) Replace read head. (2) Replace lamp.
	c. RPT key inoperative.....	(1) Read head..... (2) Lamp.....	(1) Replace read head. (2) Replace lamp.
	d. Keyboard remains locked when solenoid is energized.	(1) Warped key jammed in interlock..... (2) Flag lock jammed in interlock.....	(1) Replace warped key assembly. (2) Replace flag lock assembly.
	e. EOM key inoperative.....	End of message miniature switch.....	Replace switch.

4-11. Troubleshooting Reference Data

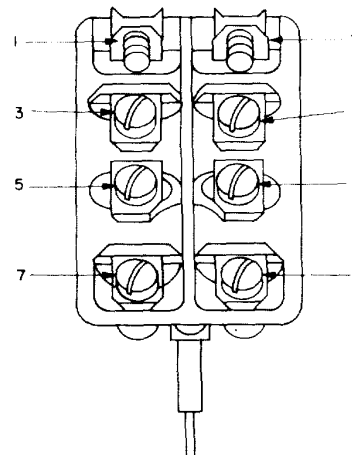
a. *General.* The dc resistance data (b, c, and d below) are provided as an aid in troubleshooting. When using the data, do not use the resistance measurements as the sole basis for discarding a solenoid or relay because the use of broad winding tolerances during manufacture results in resistance variations from one solenoid or relay to another; therefore the values are typical average values. The normal resistance of replacement solenoid or relay may differ greatly from the values given.

b. *Solenoid Winding Data.* The dc resistance of the solenoid used in the keyboard is approximately 33 ohms.

c. *Relay Terminal Winding Data.*

(1) The winding resistance of relays K1 and K2, located on the relay panel assembly, is from 64.8 to 79.2 ohms, measured across the relay terminals 5 and 6 shown in figure 4-1.

Note. The relay terminals designated as 5 and 6 in figure 4-1 do not appear at the terminals. These numbers are arbitrarily assigned.



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Figure 4-1. Relays K1 and K2, terminal identification.

(2) The winding resistance of relay K3, also located on the relay panel assembly, is from 63.9 to 78.1 ohms, measured across the relay terminals 5 and 6 shown in figure 4-2.

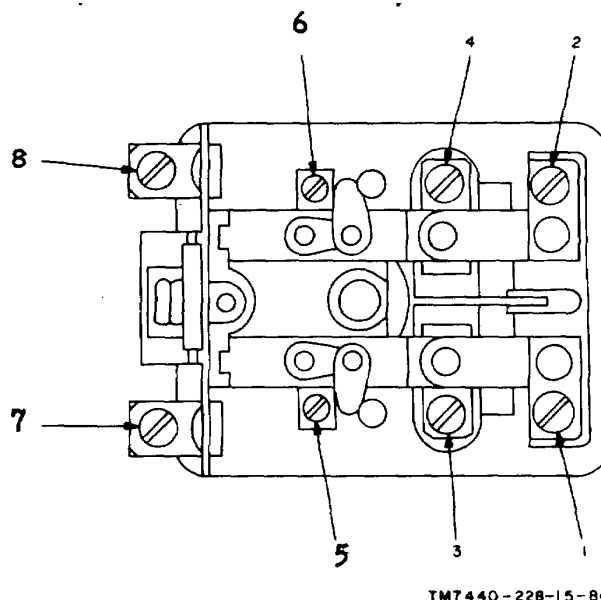
Note. The relay terminals designated as 5 and 6 in figure 4-2 do not appear at the terminals. These numbers are arbitrarily assigned.

d. *Switch Terminal Data.* The SET EOB WARNING thumbwheel switches, located on control panel, consist of two similar switches. The left-hand switch (S3) has 10 positions marked 0 to 9, and the righthand switch (S4) has five positions marked 4 to 8.

A properly operating switch will have continuity between the common terminal (C) and the terminal number corresponding to the switch position. The terminals are identified, from bottom to top, as follows: 0, 1, 2, 3, 4, C, 5, 6, 7, 8, and 9.

e. *Additional Reference Data.* Illustrations that will help maintenance personnel to troubleshoot the control-keyboard are referenced below.

Fig. No.	Subject
8-1	Color code marking for MIL-STD resistors.
8-2	Color code marking for MIL-STD capacitors.
8-3	Control-keyboard, interconnection schematic diagram.
8-4	De circuits, schematic diagram.
8-5	Keyboard, schematic diagram.
8-6	Read head, logic diagram.
8-7	Logic assembly, interconnection chart.



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Figure 4-2. Relay K3, terminal identification.

Section IV. REMOVAL AND REPLACEMENT

4-12. General

This section includes instructions for the removal, disassembly, assembly, and replacement of the major assemblies, subassemblies, and components of the control-keyboard. Use these procedures in conjunction with the troubleshooting procedures (para 4-9, 4-10, and 4-11) and repair and adjustment procedures (para 4-38 through 4-43).

a. Removal and Disassembly.

(1) Disassemble the control-keyboard to the extent necessary to inspect, clean, or replace a defective part. or to make the necessary adjustment.

(2) When removing shims, note the number and thickness of the shims used at each point. Be sure to replace the same shim pileup at each point (unless otherwise necessary) when reassembling the control keyboard.

(3) When removing springs that are very similar in appearance, tag or otherwise identify each spring to assure proper identification during reassembly.

(4) When disconnecting wiring, tag or otherwise identify each wire to assure proper connection during reassembly.

b. Reassembly and Replacement.

Caution: When securing parts in place, be careful not to tighten the mounting screws or nuts excessively. Failure to observe this caution frequently results in broken screws or stripped threads.

(1) Inspect all removed parts for evidence of excessive wear or damage. Install only parts that are unquestionably serviceable.

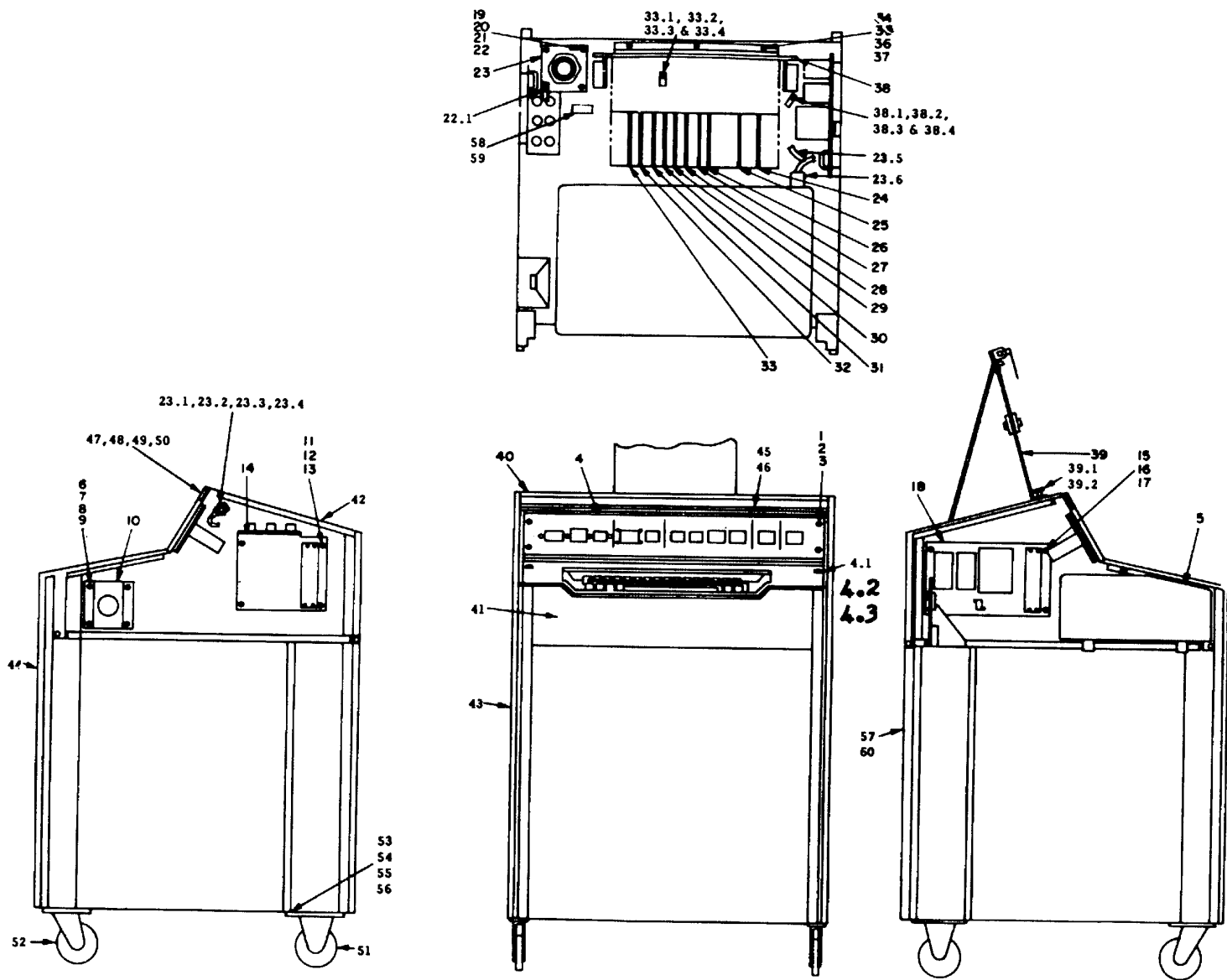
(2) Check to be sure that mechanical linkages are engaged properly before tightening the mounting screws or nuts.

c. *Post Replacements Checks.* After replacing a part or an assembly, perform the operation checkout procedures given in paragraphs 2-2 through 2-8.

4-13. Removal and Replacement of Control Panel

a. *Removal.* Remove the four panhead screws (1, fig. 4-3), lockwashers (2), flat washers (3), and separate the control panel (4) from the enclosure assembly (40).

b. *Replacement.* To replace the control panel, reverse the removal procedure in a above.



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Figure 4-3. Control-Keyboard, component location diagram

Change 4 4-6

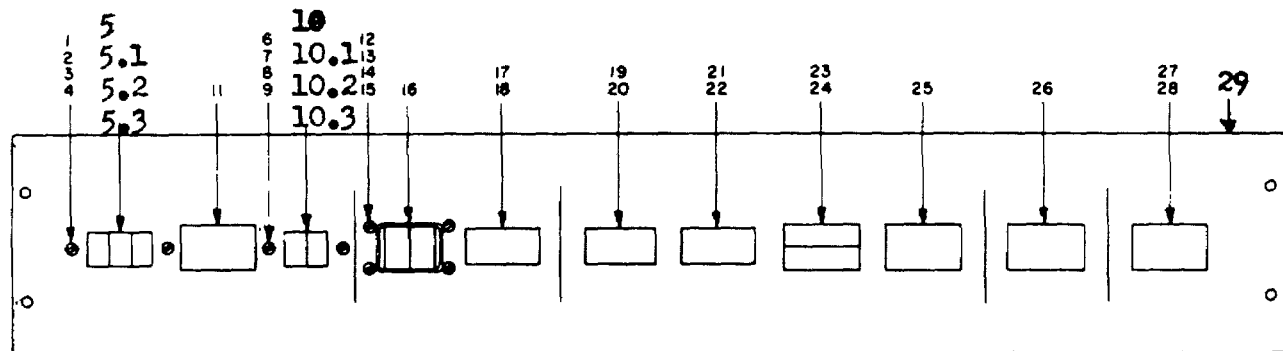
1	Screw, panhead, No. 8-32, 5/8 in. long	32	PC card A1A10
2	Lockwasher, No. 8	33	PC card A1A11
3	Washer, flat, No. 8	33.1	Screw, panhead, No. 8-32, 5/8 in. long
4	Control panel assembly (A3)	33.2	Lockwasher, No. 8
4.1	Screw, panhead, No. 8-32, 5/8 in. lg.	33.3	Washer, flat, No. 8
4.2	Washer, flat, No. 8	33.4	Cable clamp
4.3	Lockwasher, No. 8	34	Screw, panhead, No. 6-32, 7/16 in. long
5	Keyboard assembly (A2)	35	Nut, No. 6-32
6	Screw, panhead, No. 8-32, 7/16 in. long	36	Lockwasher, No. 6
7	Nut, No. 8-32	37	Washer, flat, No. 6
8	Lockwasher, No. 8	38	Logic assembly (A1)
9	Washer, flat, No. 8	38.1	Screw, panhead, No. 8-32, 5/8 in. long
10	Loudspeaker (LS1)	38.2	Lockwasher, No. 8
11	Screw, panhead, No. 8-32, 7/16 in. long	38.3	Washer, flat, No. 8
12	Lockwasher, No. 8	38.4	Cable clamp
13	Washer, flat, No. 8	39	Copyholder assembly
14	Fuse panel assembly	39.1	Plunger
15	Screw, panhead, No. 8-32, 5/8 in. long	39.2	Grommet
16	Lockwasher, No. 8	40	Enclosure assembly
17	Washer, flat, No. 8	41	Cover, front
18	Relay panel assembly	42	Cover, rear
19	Screw, panhead, No. 8-32, 5/8 in. long	43	Chassis, electrical equipment
20	Nut, No. 8-32	44	Vertical trim
21	Lockwasher, No. 8	45	Logo trim
22	Washer, flat, No. 8	46	Logo Mylar
22.1	Cable clamp	47	Screw, flathead, 10-32, .370-in long
23	Special purpose cable assembly W1	48	Nut, hex 10-32
23.1	Washer, flat, 1/4-in.	49	Lockwasher, No. 10
23.2	Lockwasher, 1/4-in.	50	Washer, flat, No. 10
23.3	Nut, hex, 1/4 x 20	51	Caster, swivel
23.4	Terminal lug	52	Caster (with brake)
23.5	Wiring assembly	53	Spacer
23.6	Connector J5	54	Screw, panhead, 10-32, 3/4-in. long
24	PC card A1A1	55	Washer, flat, No. 10
25	PC card A1A2	56	Nut, hex, 10-32, self-locking
26	PC card A1A4	57	Vertical trim
27	PC card A1A5	58	Identification plate
28	PC card A1A6	59	Drive screw
29	PC card A1A7	60	Clip, retaining
30	PC card A1A8		
31	PC card A1A9		

4-14. Disassembly and Reassembly of Control Panel Assembly A3

a. Disassembly. Disassemble control panel assembly A3 by following the sequence of index

numbers in figure 4-4.

b. Reassembly. To reassemble control panel A3, reverse the disassembly procedure in a above.



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- | | | |
|---|----------------------------|---|
| 1 Screw, flathead, No. 4-40, 1/2 in. long | 5.1 Lamp | 16 Printed circuit rotary switch (S3, S4) |
| 2 Nut, No. 4-40 | 5.2 Screen | 17 Indicator light (DS3) |
| 3 Lockwasher, No. 4 | 5.3 Terminal cap connector | 18 Lamp |
| 4 Washer, flat, No. 4 | | 19 Indicator light (DS2) |
| 5 Projection readout assembly (Z5, Z6, Z7) | | 20 Lamp |
| 6 Screw, flathead, No. 4-40, 1/2 in. long | | 21 Indicator light (DS1) |
| 7 Nut, No. 4-40 | | 22 Lamp |
| 8 Lockwasher, No. 4 | | 23 Illuminated push switch (Z2) |
| 9 Washer, flat, No. 4 | | 24 Lamp |
| 10 Projection readout assembly (Z3, Z4) | | 25 Push switch (S2) |
| 11 Push switch (S5) | | 26 Push switch (S1) |
| 12 Screw, panhead, No. , 3/8 in. long, 2-56 | | 27 Illuminated push switch (Z1) |
| 13 Nut, No. 2-56 | | 28 Lamp |
| 14 Lockwasher, 2 | | 29 Panel |
| 15 Washer, flat, 2 | | |
| | | 10.1 Lamp |
| | | 10.2 Screen |
| | | 10.3 Terminal cap connector |

Figure 4-4. Control panel A3, parts location diagram.

4-14.1. Removal and Replacement of Control Panel Cable Assembly

a. Removal.

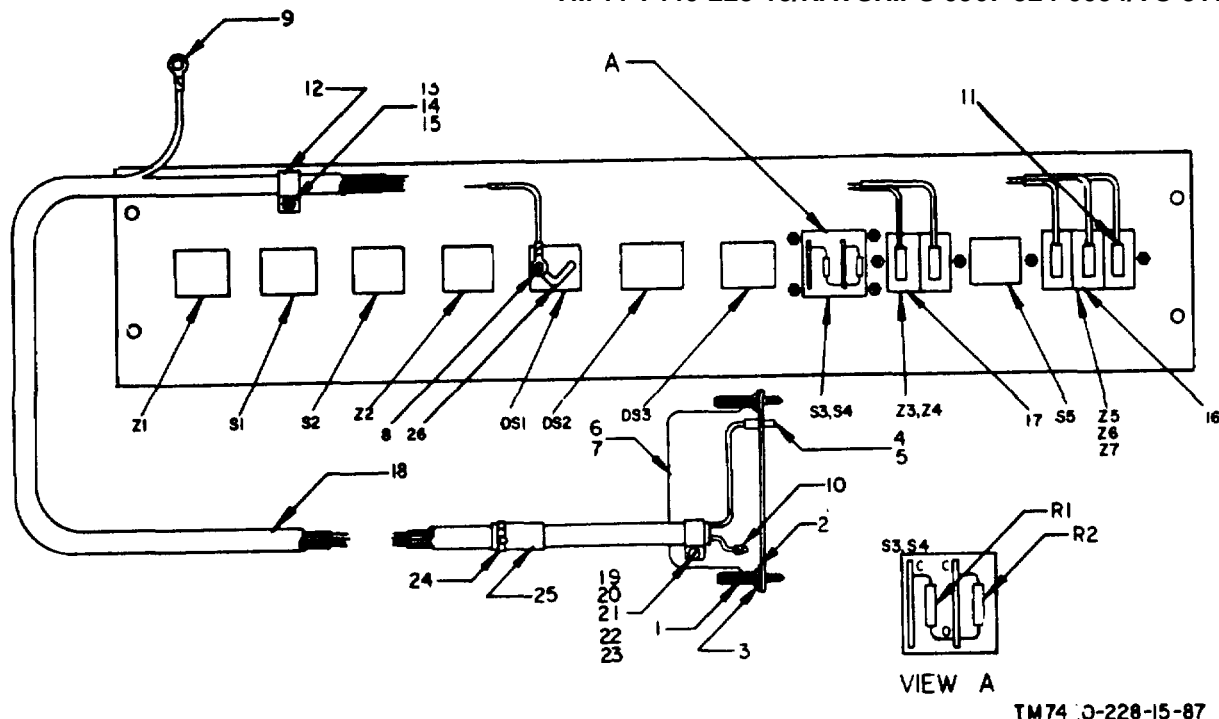
- (1) Loosen two screws (1, fig. 4-4.1) and disconnect contact Assembly P1 (7) from jack (A1J1).
- (2) Remove screw (38.1, fig. 4-3), lockwasher (38.2), washer (38.3), and cable clamp (38.4).
- (3) Remove three nuts (13, fig. 4-4.1), lockwashers (14), washers (15), and cable clamps (12).
- (4) Disconnect terminals (8), connectors (11), and terminals (9).
- (5) Unsolder and mark remaining leads.

b. Replacement. To replace the control panel cable assembly (18) reverse the disassembly procedure in a above.

4-14.2. Disassembly and Reassembly of Control Panel Cable Assembly

a. Disassembly. Disassemble the control panel cable assembly (18) by following the sequence of index numbers in figure 4-4.1.

b. Reassembly. To reassemble the relay panel assembly, reverse the disassembly procedure in a above.



- | | | |
|----------------------------------|---------------------------|--|
| 1 Screw, external, relieved body | 10 Ferrule | 19 Cable clamp |
| 2 Washer, flat, No. 6 | 11 Connector | 20 Nut, hexagon, No. 4-40 |
| 3 Lockwasher, No. 6 | 12 Cable clamp | 21 Lockwasher, No. 4 |
| 4 Contact, electrical | 13 Nut, hexagon, No. 8-32 | 22 Washer, flat, No. 4 |
| 5 Insulator, bushing | 14 Lockwasher, No. 8 | 23 Screw, flathead, No. 4-40, 5/8 in. lg |
| 6 Bracket, angle | 15 Washer, flat, No. 8 | 24 Cable strap |
| 7 Contact assembly P1 (A1J1) | 16 Sleeve, retaining | 25 Nameplate |
| 8 Terminal lug | 17 Sleeve, retaining | 26 Jumper |
| 9 Terminal lug | 18 Wiring harness | |

Figure 4-4.1. Control panel cable assembly, part location diagram.

4-15. Removal and Replacement of Keyboard

a. *Removal.* Remove two screws (4.1, fig. 4-3). Open cover (41), disconnect connectors from J01 and P02 (14 and 15, fig. 4-8), and remove keyboard A2 (5).

b. *Replacement.* To replace keyboard A2, reverse the removal procedure in a above.

4-16. Disassembly and Reassembly of Keyboard A2

Refer to paragraphs 4-24 through 4-37 for disassembly and reassembly instructions for keyboard A2.

4-17. Removal and Replacement of Fuse Panel Assembly

a. *Removal.*

(1) Open rear cover (41, fig. 4-3).

(2) Remove the four panhead screws (11), lockwashers (12), flat washers (13), and separate the fuse panel assembly (14) from the enclosure assembly (40).

b. *Replacement.* To replace the fuse panel assembly, reverse the removal procedure in a above.

4-18. Disassembly and Reassembly of Fuse Panel Assembly (fig. 4-5)

a. Disassembly. Disassemble the fuse panel assembly by following the sequence of index numbers in figure 4-5.

b. Reassembly. To reassemble the fuse panel assembly reverse the disassembly procedure in *a* above.

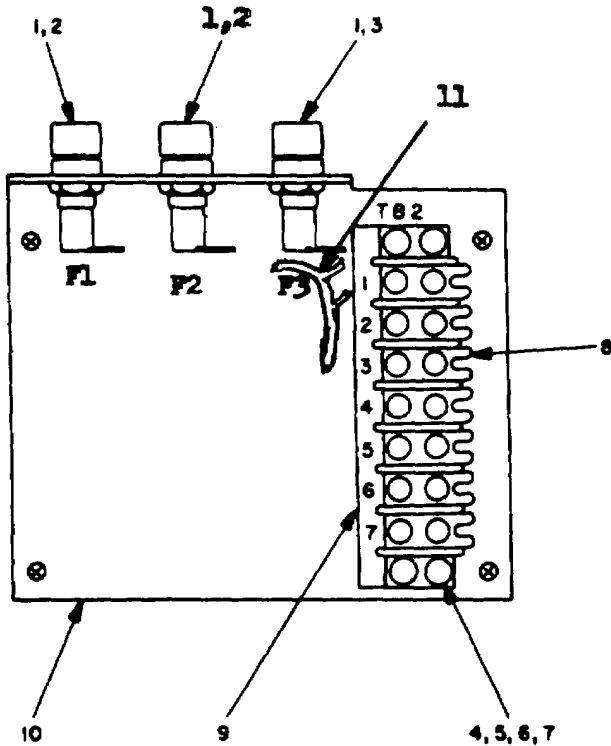
4-19. Removal and Replacement of Relay Panel Assembly (fig. 4-3)

a. Removal.

(1) Open the rear door on the enclosure assembly (40, fig. 4-3).

(2) Remove the four panhead screws (15), lockwashers (16), flat washers (17), and separate the relay panel assembly (18) from the enclosure assembly (40).

b. Replacement. To replace the relay panel assembly, reverse the removal procedure in *a* above.



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- 1 Fuseholder (supplied with attaching hardware)
- 2 Fuse, cartridge (250V, 5A, silver-plated) (F1, F2)
- 3 Fuse, cartridge (250V, 2A, silver-plated) (F3)
- 4 Screw, panhead, No. 8-32, 3/4 in. long
- 5 Nut, hexagonal, No. 8-32
- 6 Lockwasher, No. 8
- 7 Washer, flat, No. 8
- 8 Terminal block
- 9 Marker strip
- 10 Fuse bracket
- 11 Wiring harness

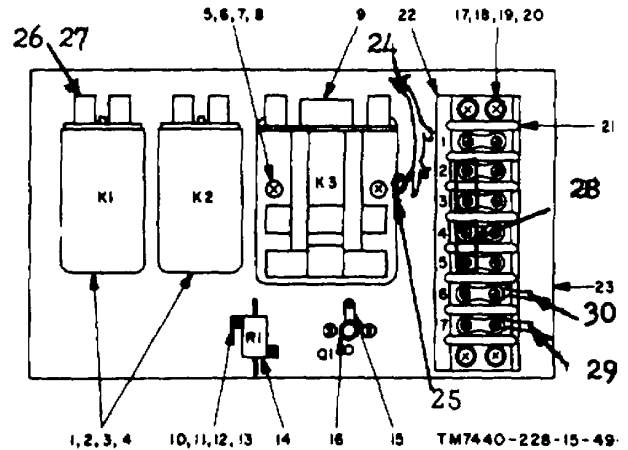
Figure 4-5. Fuse panel assembly, parts location diagram.

4-20. Disassembly and Reassembly of Relay Panel Assembly

(fig. 4-6)

a. *Disassembly.* Disassemble the relay panel assembly by following the sequence of index numbers in figure 4-6.

b. *Reassembly.* To reassemble the relay panel assembly, reverse the disassembly procedure in a above.



- 1 Nut, 8-32
- 2 Lockwasher, No. 8
- 3 Washer, flat, No. 8
- 4 Relay (K1, K2)
- 5 Screw, panhead No. 8-32, 7/8 in. long
- 6 Nut, No. 8-32
- 7 Lockwasher, No. 8
- 8 Washer, flat, No. 8
- 9 Relay (K3)
- 10 Screw, panhead, No. 2-56, 3/8 in. long
- 11 Nut, No. 2-56
- 12 Lockwasher, No. 2
- 13 Washer, flat, No. 2
- 14 Resistor, 100 ohms, -w (R1)
- 15 Transistor (Q1)
- 16 Transistor mounting kit
- 17 Screw, panhead, No. 8-32, 7/8 in. long
- 18 Nut, No. 8-32
- 19 Lockwasher, No. 8
- 20 Washer, flat, No. 8
- 21 Terminal block (TB3)
- 22 Marker strip
- 23 Panel
- 24 Wiring Harness
- 25 Terminal lug
- 26 Terminal lug
- 27 Terminal lug
- 28 Jumper
- 29 Terminal lug
- 30 Terminal lug

Figure 4-6. Relay panel assembly, parts location diagram.

4-21. Removal and Replacement of PC Cards

(fig. 4-3)

a. *Removal.*

(1) Open the rear cover (41, fig. 4-3).

(2) Unlock the two door latches (17, fig. 4-7) and pivot logic assembly A1 (38, fig. 4-3).

(3) Remove PC cards (24 through 33) from logic assembly A1 (38).

b. *Replacement.*

To replace the PC cards, reverse the removal procedure in a above.

4-22. Removal and Replacement of logic Assembly A1

(fig. 4-3)

a. *Removal.*

(1) Remove the PC card assemblies (para 4-21).

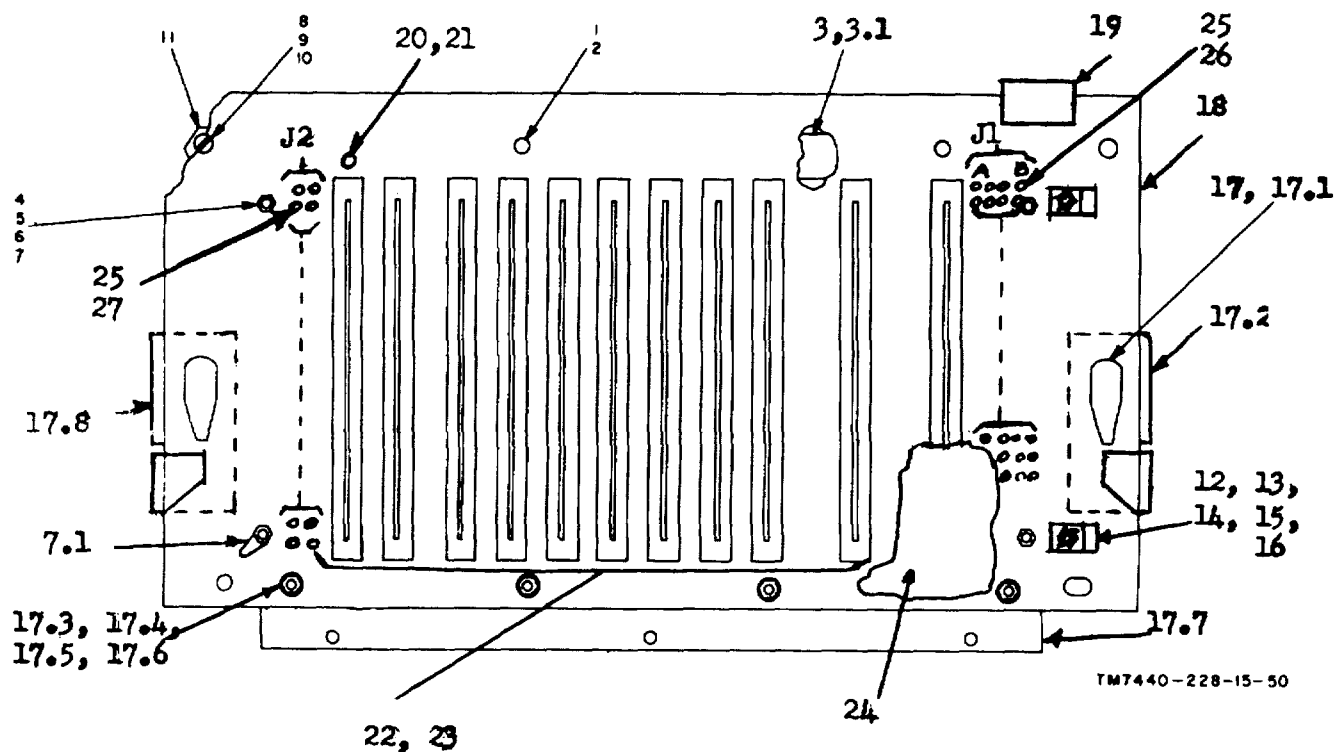
(2) Remove the three panhead screws (34), nuts (35), lockwashers (36), flat washers (37), and logic assembly A1 (38) from the enclosure assembly (40).

b. *Replacement.* To replace logic assembly A1, reverse the removal procedure in a above.

4-23. Disassembly and Reassembly of Logic Assembly A1
(fig. 4-7)

a. *Disassembly.* Disassemble logic assembly A1 by following the sequence of index numbers in figure 4-7.

b. *Reassembly.* To reassemble logic assembly A1, reverse the disassembly procedure in a above.



1	Screw, nylon, No. 6-32, 5/8 in. long	14	Lockwasher, No. 6	21	Lockwasher, No. 6
2	Nut, nylon, No. 6-32	15	Washer, Flat, No. 6	22	Connector pin
3	Busbar TB1 (fig. 4-7.2)	16	Cable clamp	23	Insulator
3.1	Insulating strip	17	Door latch	24	Plate, pin designation
4	Screw, No. 6-32, 3/8 in. long	17.1	Washer, flat, No. 12	25	Insulator
5	Lockwasher, No. 6	17.2	Bracket top	26	Contact pin (92 ea) (A1J1)
6	Washer, flat, No. 6	17.3	Screw, No. 6-32 7/16 in. Long	27	Contact pin (46 ea) (A1J2)
7	Spacer	17.4	Lockwasher, No. 6		
7.1	Terminal lug	17.5	Washer, flat, No. 6		
8	Screw, No. 8-32, 3/4 IN. LONG	17.6	Nut, No. 6		
9	Lockwasher, No. 8	17.7	Contact plate hinge		
10	Washer, fat, No. 8	17.8	Bracket stop		
11	Standoff	18	Contact plate		
12	Screw, No. 632, 7/16 in. long	19	Plastic trim		
13	Nut, No. 6-32	20	Screw, 6-32, 7/16-in. long		

Figure 4-7. Logic Assembly A1, parts location diagram

23.1. Removal and Replacement of Cable Assembly W1

a. Removal.

(1) Remove the four nuts (20, fig. 4-3), lockwashers (21), washers (22), cable clamp (22.1), and screw (19).

(2) Loosen two screws (7, fig. 4-7.1) and disconnect connector P2 (3) from connector A1J2 of the logic assembly.

(3) Disconnect connector P4 (16) from connector A2J01 (14, fig. 4-8) of the keyboard.

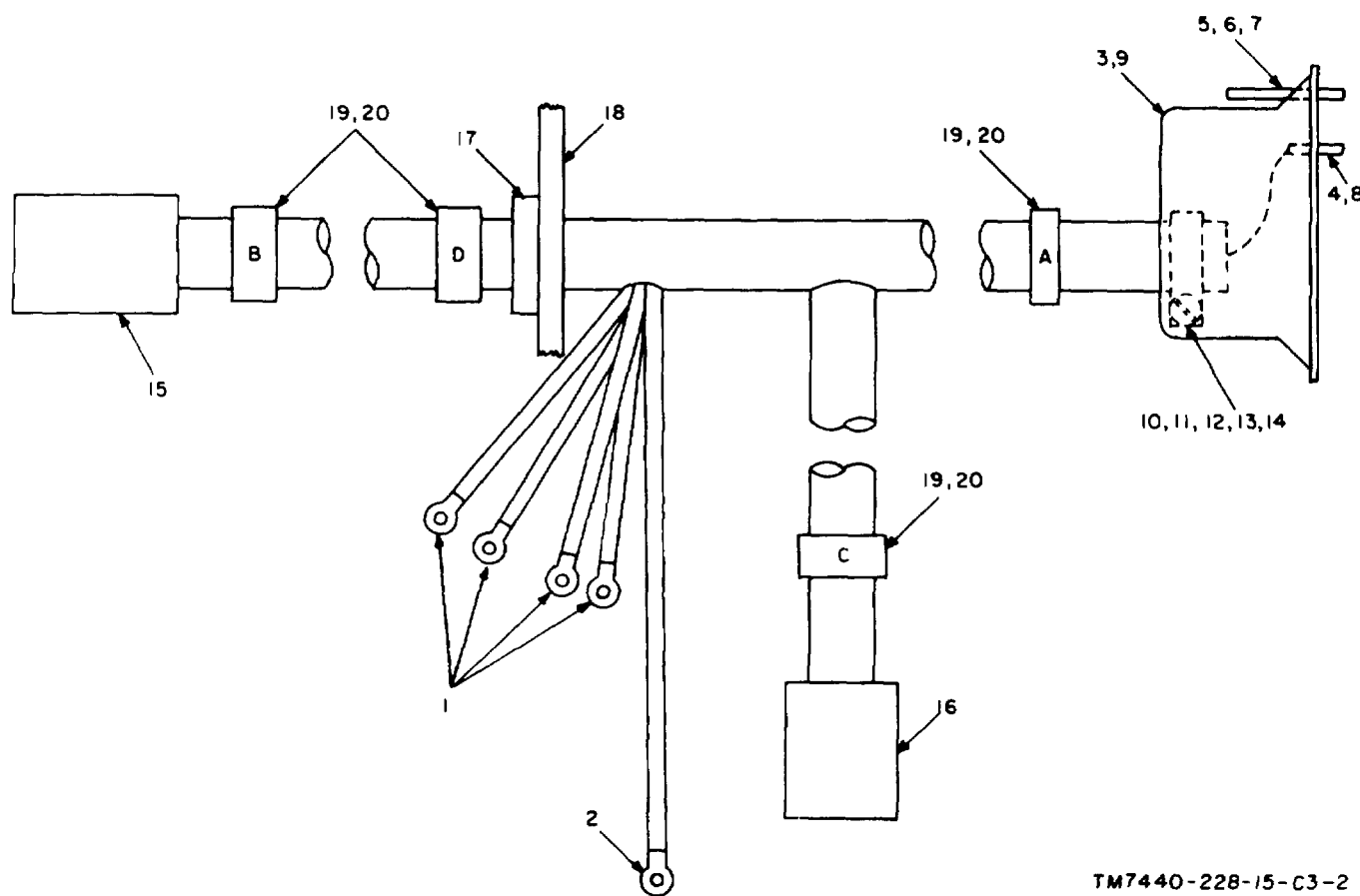
(4) Disconnect the four terminals (1, fig. 4-7) from terminal board TB2 (14, fig. 4-3).

(5) Disconnect terminal (2, fig. 4-7.1) from ground by removing the nut and washers (23.1, 23.2, and 23.3, fig. 4-3).

(6) Remove cable clamp (33.4) by removing the screw and washers (33.1, 33.2, and 33.3).

b. Disassembly and Reassembly. Removal and replacement of any of the parts of the cable assembly are evident upon examination. When replacing any of the connectors, be careful to note the terminal from which each wire is disconnected and connect the same wire to the same terminal of the new connector.

c. Replacement. Replace the cable assembly by reversing the removal procedure (a above).



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- | | | |
|---------------------------------|---|---|
| 1 Terminal lug | 9 Bracket, contact | 15 Connector P3 |
| 2 Terminal lug | 10 Nut, hex 4-40 | 16 Connector P4 |
| 3 Contact assembly P2 | 11 Lockwasher, No. 4 | 17 Adapter cable |
| 4 Contact (male) | 12 Washer, flat, No. 4 | 18 Cable plate (A-P2; B-P3; C-P4; D-W1) |
| 5 Lockwasher No. 6 | 13 Screw, flathead, No. 4-40, 5/8-in long | 19 Cable strap |
| 6 Washer, flat, No. 6 | 14 Cable clamp, .66-in dia. | 20 Nameplate |
| 7 Screw, external relieved body | | |
| 8 Insulator bushing | | |

Figure 4-7.1. Cable assembly W1, component location diagram.

4-23.2. Removal and Replacement of A1J1 and A1J2 Connector Contact Pins

(fig. 4-7)

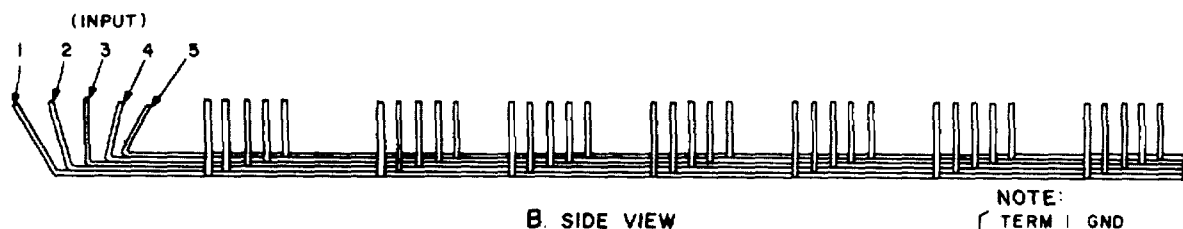
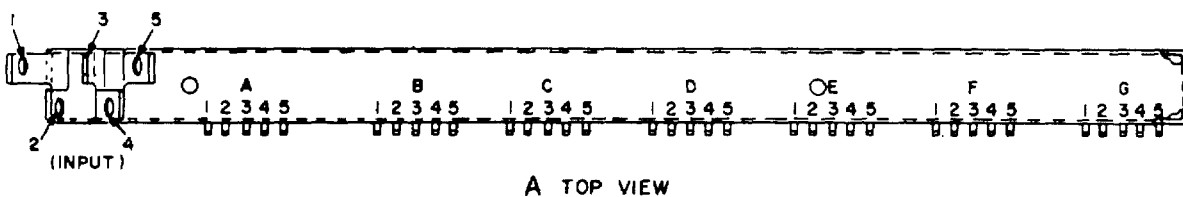
a. *Removal.* Disconnect and tag the wires from the pins to be removed.

(1) Disconnect and tag the wire(s) from the pin to be removed.

(2) Carefully pull the contact pin (26 or 27) from the insulator (25).

(3) Remove the insulator from the contact plate (18).

b. *Replacement.* Reverse the removal procedure (a above) to install a replacement contact pin.



NOTE:
 FROM POWER SUPPLY {
 TERM 1 GND
 TERM 2 +45 VDC
 TERM 3 +12 VDC
 TERM 4 -12 VDC
 TERM 5 GND
 EL7440-228-15-C2-TM-1

Figure 4-7.2. Bus Bar A1TB1, terminal and connection data.

Section V. DISASSEMBLY AND REASSEMBLY OF KEYBOARD A2

4-24. General

The disassembly and reassembly of keyboard A2 is effected by removal and replacement of assemblies, subassemblies, and components as described in the following paragraphs. These paragraphs also describe the disassembly and reassembly of assemblies and

subassemblies when not in the order of index numbers on exploded views. Use these procedures in conjunction with the troubleshooting procedures (para 4-9, 4-10, and 4-11) and repair and adjustment procedures (para 4-38 through 4-43).

4-25. Removal and Replacement of Read Head

(fig. 4-8)

a. Removal.

(1) Remove the four panhead screws (5, fig. 4-8) and felt washers (6) and the cover (7).

(2) Remove the two panhead screws (161) and felt washers (162) and withdraw the tab connector (164) from the read head (168).

(3) Remove the two panhead screws (165), lockwashers (166), and flat washers (167) and lift the read head (168) off the standoffs (229).

b. Replacement. To replace the read head, reverse the removal procedure in a above. Before tightening the two panhead screws (165), align the read head as described in paragraph 4-41.

4-26. Removal and Replacement of Key Tops

(fig 4-8)

a. Removal.

(1) Remove the four panhead screws (5, fig. 4-8) and felt washers (6) and the cover (7).

(2) Remove the key tops (22-85) by grasping the keys (86-149) and pushing tile key tops off the keys.

b. Replacement. Properly orient the new key tops in place and press on the keys.

Caution: Since the key tops press on with difficulty, exercise care not to bend the keys.

Note. When more than one key top is being replaced, be certain the key tops are placed on the correct keys. Refer to figure 1-3.

4-27. Removal and Replacement of Keys

(fig 4-8)

a. Removal.

(1) Remove the four pan head screws (5, fig. 4-8) and felt washers (6) and the cover (7).

(2) Remove the two panhead screws (8) and washers (9) and lift the bridge assembly (10) from the base (232).

(3) (Carefully disconnect the space key torque bar (191) from the space bar assembly (20).

(4) Swing the space bar assembly (20) back until it rests against the pivot assembly (19).

(5) Select, the keys (86-149) to be removed, swing up to a vertical position, and lift free from the pivot assembly (19).

Note. When removing the SHIFT LOCK, CTL, or SHIFT keys, first disconnect the torque bars (184, 185, or 186, respectively), from the keys.

Caution: During replacement of keys, be careful when assembling keys on the pivot assy and when pivoting the keys into the proper position in the interlock assembly (159).

b. Replacement. To replace the keys (86-149),

reverse the removal procedure in a above. Before tightening the two panhead screws (8) align the bridge assembly (10) as described in paragraph 4-43.

Note. When more than one key is being replaced, be certain the keys are replaced in the correct order. (Refer to fig. 1-3).

4-28. Removal and Replacement of Interlock Assembly

(fig. 4-8)

a. Removal.

(1) Remove the four panhead screws (5, fig. 4-8) and felt washers (6) and the cover (7).

(2) Remove the bridge assembly as described in paragraph 4-27a(2).

(3) Disconnect the space key torque bar (191) from the space bar assembly (20) and swing the space bar assembly (20) and the keys (86 through 149) back to expose the interlock assembly (159). (Refer to paragraph 4-27a (3), (4), and (5).).

Note. Be sure not to remove any of the keys from the pivot assembly (19).

(4) Remove the three screws (156, fig. 4-8), lockwashers (157), and flat washer (158), and lift the interlock assembly (159) from the base (232).

Note. Be careful to avoid damaging the lockout flag (211).

b. Replacement. To replace the interlock assembly, reverse the removal procedure in a above. Before tightening the two panhead screws (8), align the bridge assembly (10) as described in paragraph 4-43.

4-29. Disassembly and Reassembly of Interlock Assembly (fig. 4-9)

a. Disassembly. Disassemble the interlock assembly following the sequence of index numbers in figure 4-9.

b. Reassembly. To reassemble the interlock assembly, reverse the disassembly procedure in a above. Perform the interlock roller gap adjustment (para 4-42).

4-30. Removal and Replacement of Solenoid A2L01

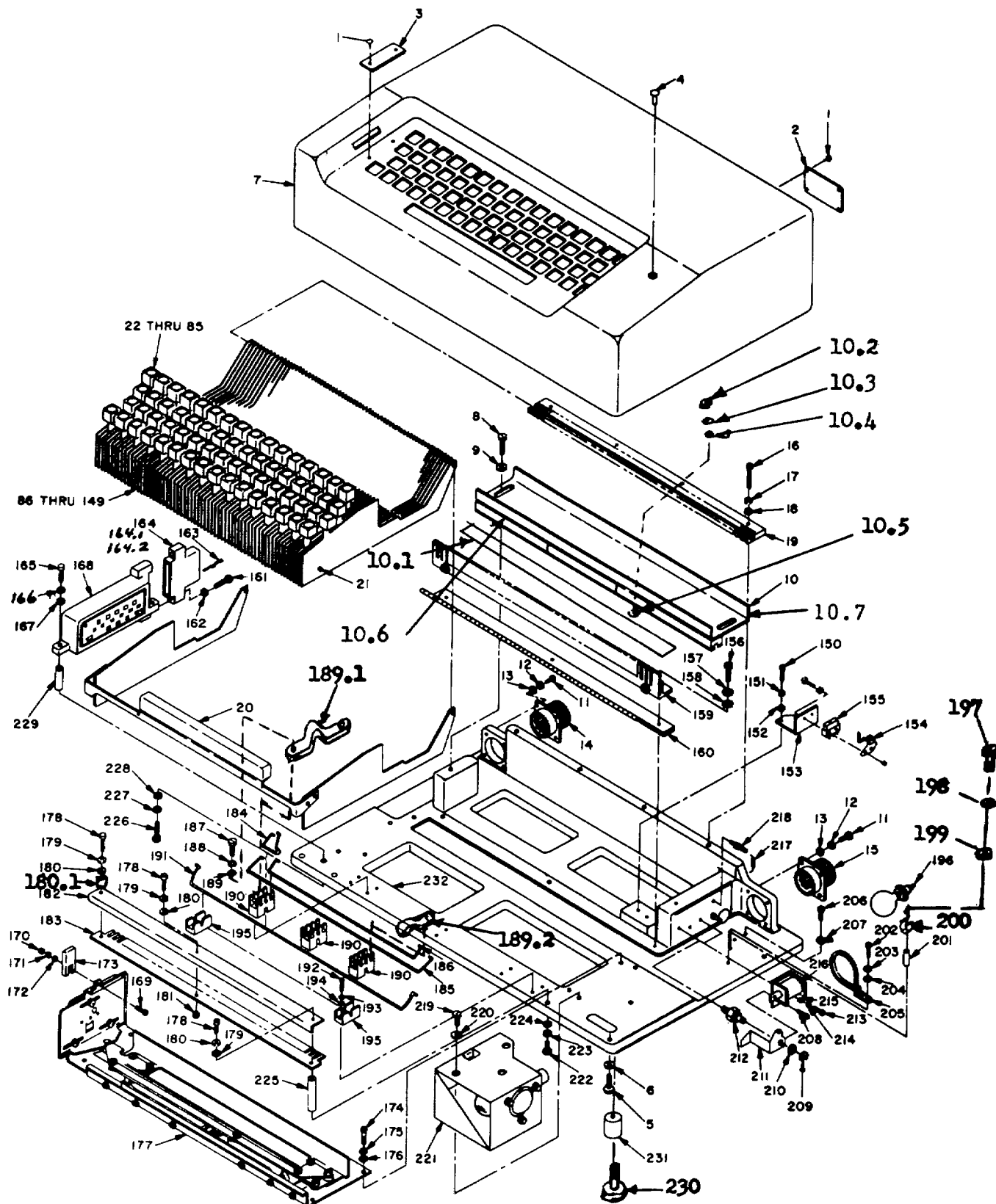
(fig. 4-8)

a. Removal.

(1) Remove the four panhead screws (5, fig. 4-8) and felt washers (6) and cover (7).

(2) Disconnect the leads from solenoid A2L01 (216).

(3) Remove the cotter pill (208), the two panhead screws (213), lockwashers (214), and flat washers (215), and lift solenoid A2L01 (216) from the base (232).



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Figure 4-8. Keyboard, exploded view.

Change 4 4-12

1	Screw, drive	159	Interlock assembly	195	Torque rod pivot
2	Identification plate	160	Formed spring	196	Lamp (spare for optics assembly)
3	Control identification plate	161	Screw, panhead, No. 6-32, 5/8 in. long	197	Screw, panhead, No. 4-40, 3/4 in. long
4	Molded lens				Lockwasher, No. 4
5	Screw, panhead, No. 10-32 5/8 in. long	162	Washer, flat, No. 6	198	Washer, flat
6	Washer, flat, No. 10	163	Plug	199	Component holder
7	Cover	164	Tab connector	200	Standoff
8	Screw, panhead, 1/4-20, 1/2 in. long	164.1	Wiring harness	201	Screw panhead No. 8-32, 5/16 in. long
		164.2	Contact, electrical	202	Lockwasher, No. 8
9	Washer, flat, No. 1/4	165	Screw, panhead, No. 8-32, 1/2 in. long	203	Washer, flat, No. 8
10	Bridge assembly	166	Lockwasher	204	Cable strap
10.1	Shim face	167	Washer, flat	205	Screw, panhead, No. 6-32, 1/4 in. long
10.2	Nut, hex 6-32	168	Read head	206	Terminal
10.3	Lockwasher No. 6	169	Screw, panhead, No. 4-40, 5/8 in. long	207	Pin, cotter, 1/16 dia, 1/2 in. long
10.4	Washer, flat No. 6			208	E ring, external
10.5	Screw, T-head, 6-32, 1/2-in. long	170	Nut, hexagonal, No. 4-40	209	Washer, flat, No. 10
10.6	Channel magnet	171	Lockwasher	210	Lockout flag
10.7	Support	172	Washer, flat	211	Flag pivot
11	Screw, panhead, No. 4-40, 3/8 in. long	173	Selector knob	212	Screw, panhead, No. 8-32, 3/8 in. long
12	Lockwasher, No. 4	174	Screw, panhead, No. 8-32, 5/16 in. long	213	Lockwasher, No. 8
13	Washer, flat No. 4	175	Lockwasher, No. 8	214	Washer, flat, No. 8
14	Connector (A2J01)	176	Washer, flat, No. 8	215	Solenoid (A2L01)
15	Connector (A2P02)	177	Inhibitor assembly	216	Resistor, 180 ohms, 2 watts (A2R01)
16	Screw, panhead, No. 10-32, 5/8 in. long	178	Screw, panhead, No. 10-32, 1/2 in. long	217	Insulated terminal (A2E01, A2E02)
17	Lockwasher, No. 10	179	Lockwasher, No. 10	218	Screw, panhead, No. 10-32, 3/8 in. long
18	Washer, flat, No. 10	180	Washer, flat No. 10	219	Washer, flat, No. 10
19	Pivot assembly	180.1	Spacer	220	Optics assembly
20	Space bar assembly	181	Nut, hexagonal, No. 10-32	221	Screw, panhead, No. 10-32, 1/2 in. long
21	Spacer	182	Guide support	222	Lockwasher, No. 10
22	through 85 Key tops	183	Key guide	223	Washer, flat, No. 10
86	through 149 Keys	184	Shift lock key torque bar	224	Standoff
150	Screw, panhead, No. 4-40, 5/16 in. long	185	Control key torque bar	225	Screw, panhead, No. 8-32, 1/2 in. long
151	Lockwasher, No. 4	186	Shift key torque bar	226	Lockwasher, No. 8
152	Washer, flat, No. 4	187	Screw, panhead, No. 4-40, 3/4 in. long	227	Washer, flat, No. 8
153	Bracket	188	Lockwasher, No. 4	228	Standoff
154	Actuator (supplied with mounting hardware)	189	Washer, flat, No. 4	229	Screw, panhead, No. 8-32, 1/2 in. long
155	Miniature switch	189.1	Torque rod retainer	230	Lockwasher, No. 8
156	Screw, panhead, No. 8-32, 1/2 in. long	189.2	Torque rod clip	231	Washer, flat, No. 8
157	Lockwasher, No. 8	190	Torque rod pivot	232	Standoff
158	Washer, flat, No. 8	191	Space key torque bar		Screw, panhead, No. 4-40, 3/4 in. long
		192	Screw, panhead, No. 4-40, 3/4 in. long		Bumper
		193	Lockwasher, No. 4		Base
		194	Washer, flat, No. 4		

Figure 4-8. Keyboard, exploded view (cont).

b. *Replacement.* To replace solenoid A2L01, reverse the removal procedure in a above.

4-31. Removal and Replacement of Keyboard Connectors A2J01 and A2P02

(fig. 4-8)

a. *Removal.*

(1) Remove the four panhead screws (5, fig. 4-8) and felt washers (6) and cover (7).

(2) Disconnect the leads from connectors A2J01 (14) and A2P02 (15).

(3) Remove the eight panhead screws (11), lockwashers (12), and flat washers (13) and lift connectors A2J01 (14) and A2P02 (15) from the base (232).

b. *Replacement.* To replace keyboard connectors A2J01 and A2P02, reverse the removal procedure in a above.

4-32. Removal and Replacement of Lamp

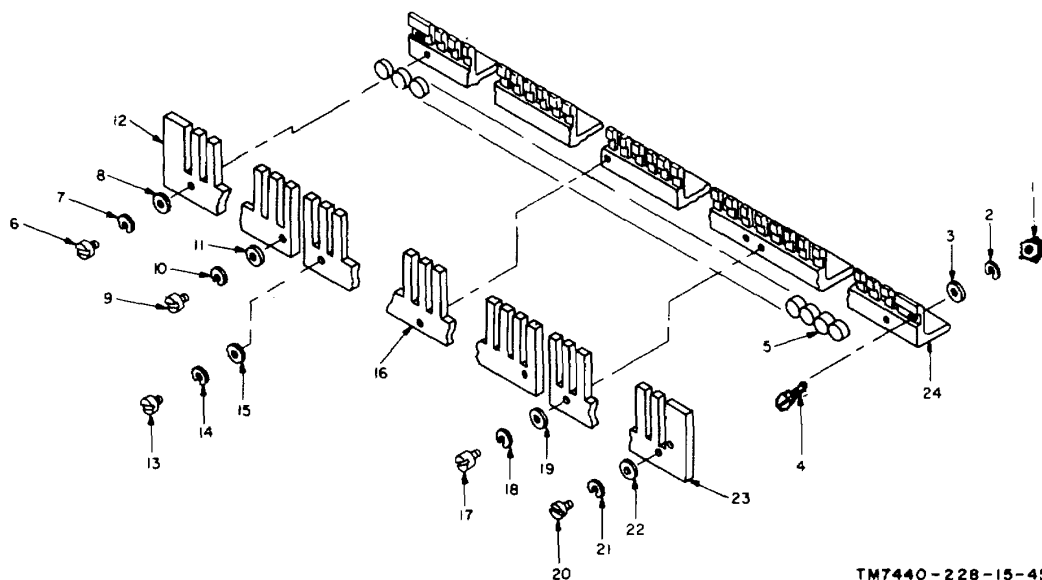
(fig. 4-10)

a. *Removal.*

(1) Remove the four panhead screws (5, fig. 4-8) and felt washers (6) and cover (7).

(2) Remove a burned-out lamp (1, fig. 4-10) by reaching through the opening in optics mount (18), grasping the lamp firmly, and rotating it counterclockwise. The lamp should snap free. If the lamp does not snap free, remove the optics assembly (221, fig. 4-8) as described in paragraph 4-33 and disassemble as described in paragraph 4-34.

b. *Replacement.* Rotate replacement lamp properly to orient it with the prefocus socket (17, fig. 4-10) before placing the mounting flange on the lamp over the three mounting posts on the prefocus socket. When properly oriented, seat the lamp mounting flange against the prefocus socket flange and twist the lamp clockwise until it snaps in place.



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- | | | | |
|----|---|----|--|
| 1 | Nut, hex., No. 4-40 | 13 | Screw, panhead, No. 4-A, 1/4 in. long |
| 2 | Lockwasher, No. 4 | 14 | Lockwasher, No. 4 |
| 3 | Washer, flat, No. 4 | 15 | Washer, flat, No. 4 |
| 4 | Cam screw | 16 | Interlock strip (type 2) |
| 5 | Interlock roller | 17 | Screw, panhead, No. 440, 1/4 in. long |
| 6 | Screw, panhead, No. 4 40, 3/16 in. long | 18 | Lockwasher, No. 4 |
| 7 | Lockwasher, No. 4 | 19 | Washer, flat, No. 4 |
| 8 | Washer, flat, No. 4 | 20 | Screw, panhead, No. 410, 3/16 in. long |
| 9 | Screw, panhead, No. 4-40, 1/4 in. long | 21 | Lockwasher, No. 4 |
| 10 | Lockwasher, No. 4 | 22 | Washer, fiat, No. 4 |
| 11 | Washer, flat, No. 4 | 23 | Interlock strip (type 3) |
| 12 | Interlock strip (type 1) | 24 | Interlock angle |

Figure 4-9. Interlock assembly, exploded view.

4-33. Removal and Replacement of Optics Assembly
(fig. 4-8)

a. Removal.

(1) Remove the four panhead screws (5, fig. 4-8) and felt washers (6) and the cover (7).

(2) Disconnect the leads at the rear of the prefocus socket (17, fig. 4-10) from the connector (15, fig. 4-8).

(3) Remove the lamp (para 4-32a).

(4) Loosen the cable strap (205) and slide the leads through the strap.

(5) Remove the panhead screws (219) and felt washers (220) and lift the optics assembly (221) from the base (232).

b. Replacement. To replace the optics assembly, reverse the removal procedure in *a* above.

4-34. Disassembly and Reassembly of Optics Assembly
(fig. 4-10)

a. Disassembly. Disassemble the optics assembly following the sequence of index numbers in figure 4-10.

Note. The reflector (5, fig. 4-10) is cemented to the mirror holder (6). Do not separate the parts unless replacement is required.

b. Reassembly. To reassemble the optics assembly, reverse the disassembly procedure in *a* above.

Note. If either the reflector (5) or the mirror holder (6) is replaced, cement the reflector (5) to the mirror holder, using epoxy adhesive (Rabinow Electronics Inc. Part No. 95000000).

4-35. Removal and Replacement of Inhibitor Assembly
(fig. 4-8)

a. Removal.

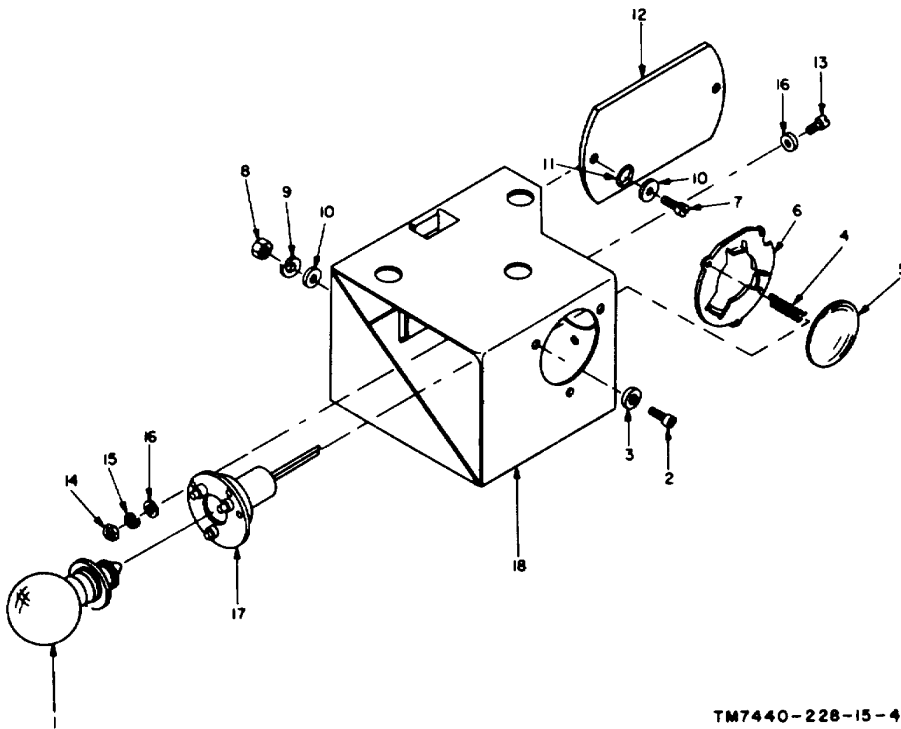
(1) Remove the read head as described in paragraph 4-25a.

(2) Remove the interlock assembly as described in paragraph 4-28a.

(3) Remove the formed spring (160, fig. 4-8) from the base (232).

(4) Remove the screw (169), nut (170), lockwasher (171), flat washer (172), and selector knob (173).

Note. During (5) below, use care to avoid damaging torque bars (184, 185, 186, and 191).



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- | | |
|---|---|
| 1 Lamp DS1 | 10 Washer, flat, No. 4 |
| 2 Screw, cap, socket head, No. 2-56, 1/2 in. long | 11 O-ring |
| 3 Washer, flat, No. 2 | 12 Lens |
| 4 Helical compression spring | 13 Screw, panhead, No. 4-40, 1/4 in. long |
| 5 Reflector | 14 Nut, hex, No. 40 |
| 6 Mirror holder | 15 Lockwasher, No. 4 |
| 7 Screw, panhead, No. 4-40, 5/8 in. long | 16 Washer, flat, No. 4 |
| 8 Nut, hexagonal No. 4 40 | 17 Prefocus socket |
| 9 Lockwasher, No. 4 | 18 Optics mount |

Figure 4-10. Optics assembly, exploded view.

(5) Remove the four screws (174), lockwasher (175), flat washer (176), and lift the inhibitor assembly (177) from the base (232).

b. Replacement. To replace the inhibitor assembly, reverse the removal procedure in a above.

4-36. Disassembly and Reassembly of Inhibitor Assembly
(fig. 4-11)

a. Disassembly. Disassemble the inhibitor assembly following the sequence of index numbers in figure 4-11.

b. Reassembly. To reassemble the inhibitor assembly, reverse the disassembly procedure in a above.

4-37. Removal and Replacement of Miniature Switch

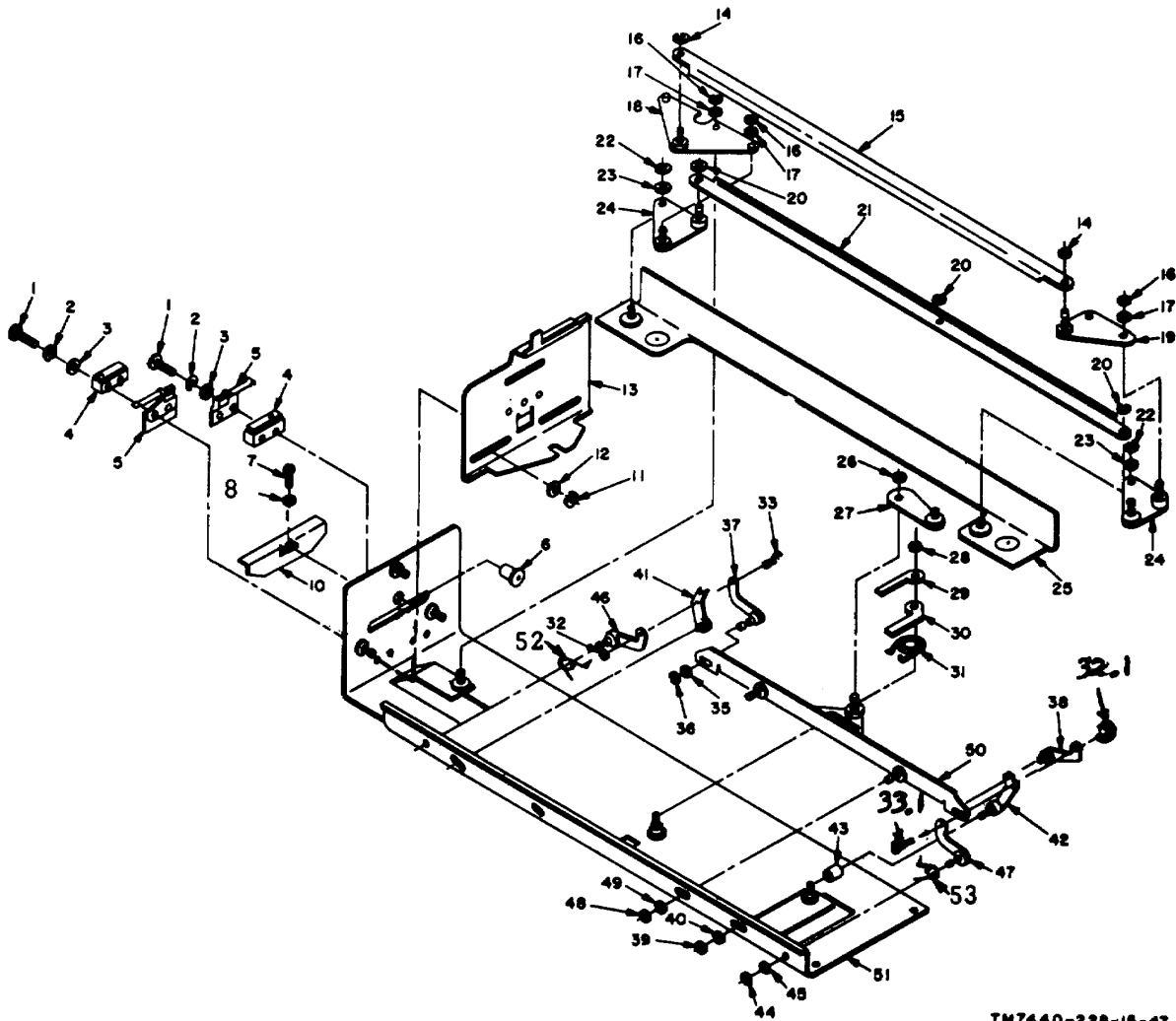
a. Removal.

(1) Perform the procedures described in paragraphs 4-28a (1), (2), and (3).

(2) Disconnect the leads from the miniature switch (155, fig. 4-8).

(3) Remove the hardware supplied with the actuator (154) and remove the actuator (154) and the miniature switch (155) from the bracket (153).

b. Replacement. To replace the miniature switch, reverse the removal procedure in a above.



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- | | | | | | |
|----|--|------|-----------------------------|----|-------------------------|
| 1 | Screw, panhead, No. 2-56,
7/16 in. long | 18 | Selector bellcrank assembly | 35 | E-ring, external |
| 2 | Lockwasher, No. 2 | 19 | Upper bellcrank assembly | 36 | Washer, flat, No. 4 |
| 3 | Washer, flat, No. 2 | 20 | E-ring, external | 37 | Pivot link assembly |
| 4 | Miniature switch | 21 | Tie rod | 38 | Pivot link assembly |
| 5 | Actuator switch formed lever | 22 | E-ring, external | 39 | E-ring, external |
| 6 | Ball valve | 23 | Washer, flat, No. 4 | 40 | Washer, flat, No. 10 |
| 7 | Screw, panhead, No. 4-40,
3/16 in. long | 24 | Lower Bellcrank assembly | 41 | Actuator Assembly |
| 8 | Lockwasher, No. 4 | 25 | Lockout angle assembly | 42 | Actuator assembly |
| 9 | Not used | 26 | E-ring, external | 43 | Roller |
| 10 | Cam switch actuator | 27 | Connector link assembly | 44 | E-ring, external |
| 11 | E-ring, external | 28 | E-ring, external | 45 | Washer, flat, No. 4 |
| 12 | Washer, flat, No. 4 | 29 | Upper centering lever | 46 | Link assembly |
| 13 | Selector | 30 | Lower centering lever | 47 | Link assembly |
| 14 | E-ring, external | 31 | Centering spring | 48 | E-ring, external |
| 15 | Tie rod | 32 | E-ring, external | 49 | Washer, flat, No. 4 |
| 16 | E-ring, external | 32.1 | E-ring external | 50 | Slide assembly |
| 17 | Washer, flat, No. 4 | 33 | Pivot pin | 51 | Inhibitor base assembly |
| | | 33.1 | Pivot pin | 52 | Actuator spring |
| | | 34 | Not used | 53 | Actuator spring |

Figure 4-11. Inhibitor assembly, exploded view.

Section VI. REPAIRS AND ADJUSTMENTS

4-38. General

There are no special repair procedures recommended for the keyboard and control assembly. There are no adjustment procedures required for the control assembly. There is a requirement that read head be inline with the key flags, the lamp, and the lens. The read head position is preset at the factory and will not change with normal keyboard usage; however, should repositioning or replacement of the read head be required as a result of damage or test failure, proper alignment must be made (para 4-41). Replacement of the lamp or lens will not necessitate read head realignment. There is an interlock roller gap adjustment requirement (para 4-42). There is also one discretionary adjustment available in which the key pressure can be altered to the feel of the operator (par 4-43).

4-39. Repair

Repair normally consists of removing and replacing a defective part as described in the removal and replacement procedures (paras 4-12 through 4-23), or disassembly and reassembly procedures (paras 4-24 through 4-37).

4-40. Mechanical and Electrical Adjustment Procedures

a. Mechanical Adjustments. The following paragraphs contain the adjustment procedures and tolerance requirements for the keyboard. Adjustment procedures are arranged in the proper sequence for a complete readjustment of the keyboard. When making individual adjustments, check all related adjustments. Where removal of parts or subassemblies is necessary to make an adjustment, reference is made to specific paragraphs for removal and replacement instructions.

b. Electrical Adjustments. Perform the following PC card adjustments during initial installation of the control keyboard and whenever a new PC card A10 or A2 is installed.

(1) *Oscillator frequency adjustment (PC card A10).* Connect a frequency counter (Beckman model 7350A or equal) to pin 10 of PC card connector XA10; connect the other lead to ground. Adjust R66 (fig. 5-2) to obtain a frequency of 12.5 kHz (± 1 percent).

(2) *Data request inhibit timer adjustment.* Connect the start and stop inputs of a frequency counter (Beckman model 7350A or equal) to pin E of PC card connector XA2. Adjust the frequent counter controls to measure time, starting on the positive slope and ends

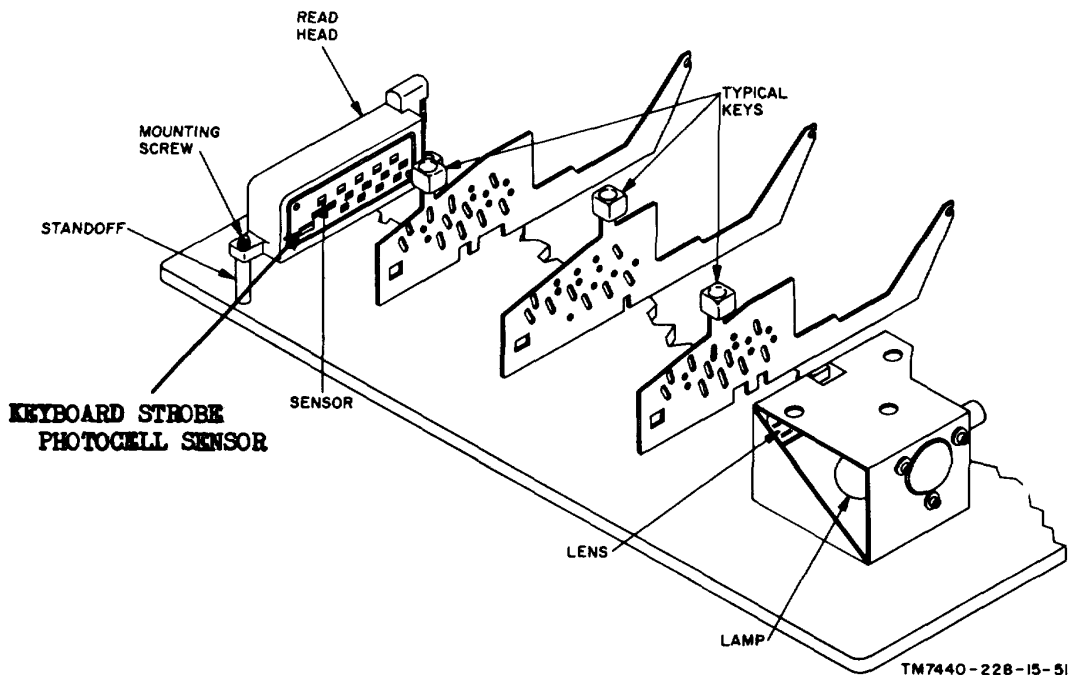


Figure 4-12. Read head Alignment requirement.

ing on the negative slope. Press any key of the keyboard and adjust R54 (fig. 5-5) to obtain a pulse length of 54 ms 1 ms).

4-41. Read Head Alignment
(fig. 4-12)

a. *Requirement.* The read head should be properly aligned with the key flags, the lens, and the lamp so that when the lamp is illuminated, each sensor on the read head is centered in its respective light beam.

b. *Adjustment.* Loosen the read head mounting screws, observe the light beam for the keyboard strobe photocell, position the read head to center the light beam, Ad tighten the mounting screw.

4-42. Interlock Roller Gap Adjustment
(fig. 4-13)

a. *Requirement.* There should be 0.028 to 0.032 inch between the interlock rollers. The gap must be centered between the interlock strip and must be obtained at all points on the interlock strips.

b. *Adjustment.* Remove the interlock assembly as described in paragraph 4-28a. Slightly loosen the

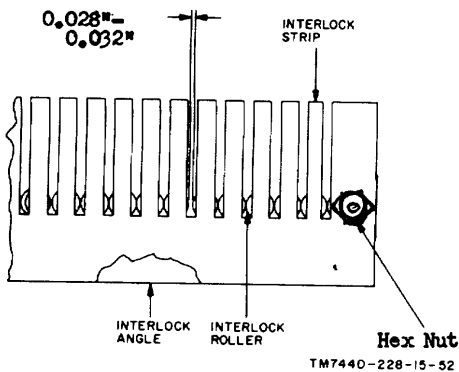


Figure 4-13. Interlock roller gap requirement.

hex nuts (1, fig. 4-9) securing the cam screws (4). Turn the cam screws (4) within the grooves in the interlock angle (24) to meet the requirement. Tighten the screws. Replace the interlock assembly as described in paragraph 4-28b. Use a spare or broken key, or equivalent gage, to check the adjustment.

4-43. Key Breakaway Pressure Adjustment
(fig. 4-14)

a. *Requirement.* There should be a key breakaway pressure between 2 and 10 ounces for all the keys, except the shift and control keys. This range allows the operator to select the breakaway pressure which feels best for optimum operator performance.

b. *Method of Checking.* Place a spring gage on the center of each key top (except the shift and control keys) in at vertical plane (to prevent binding) and measure the breakaway pressure when the key moves downward.

Caution

To avoid damage to keys, hold the lockout solenoid A2L01 manually to the energized position to permit pressing of the keys with the power off.

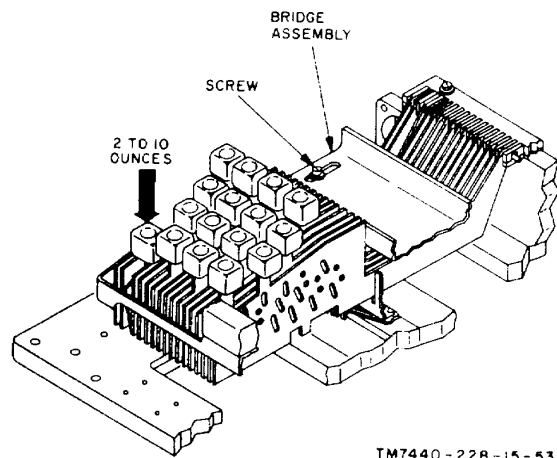


Figure 4-14. Key breakaway pressure requirement.

c. *Adjustment.* Loosen the bridge assembly mounting screws and slide the bridge assembly forward (to increase pressure), or to the rear (to decrease pressure) to meet the requirement. Tighten the bridge assembly mounting screws.

CHAPTER 5

PRINTED CIRCUIT CARD MAINTENANCE INSTRUCTIONS

Section I. GENERAL

5-1. Scope

a. This chapter includes instructions for performing corrective maintenance procedures on PC cards. Isolation of a malfunction in the control-keyboard to a PC card is given in chapter 4. The instructions in chapter 5 are used to isolate the malfunction to a defective part in the PC card and to replace the defective part.

b. PC card maintenance includes:

- (1) Testing a PC card suspected to be defective.

- (2) Troubleshooting using manual techniques.
- (3) Replacement of defective parts.

5-2. Tools and Test Equipment Required

Refer to the maintenance allocation chart (appx C) for a list of the tools and test equipment required for maintenance of the printed circuit cards of the control-keyboard.

Section II. TROUBLESHOOTING PRINTED CIRCUIT CARDS

5-3. Testing Procedure

If a PC card is suspected to be defective, install it in a control-keyboard which is known to be otherwise operable. Then operate the control-keyboard with a card punch and a tape punch to check if each possible type of character can be punched (fig. 3-5). If all characters are correctly punched and the controls and indicators on control panel A3 operate normally, the PC card being checked is considered good. If a malfunction occurs, locate and correct the fault as described in paragraphs 5-4 through 5-19.

5-4. General Troubleshooting Procedure

The first step in servicing a defective PC card is to perform a visual inspection. If this does not help in localizing the fault, signal tracing and signal substitution techniques are required.

5-5. Visual Inspection

Carefully inspect the PC card for evidence of overheating. Check for corrosion, or loose connections.

5-6. Signal Tracing

a. Place the PC card on an extender board and, with power off, install it in an otherwise operable control-keyboard. Operate the control-keyboard to simulate the condition under which the malfunction was observed, then, use standard signal tracing techniques to isolate the defective part. A thorough knowledge of the operation of the control-keyboard circuits, as given in chapter 3, is required to effectively use signal tracing techniques.

b. The voltages and wave forms at most test points can be observed with the oscilloscope. In general, signals at inputs and outputs of integrated circuit logic element modules switch between + 4.5 volts dc (high) and 0 volt dc (low). The technician should determine whether the voltage at a specific terminal is high or low at any time by studying the operating conditions at that time. For voltages at inputs and outputs of discrete component logic circuits, refer to paragraph 3-24.

c. For the location of parts on PC cards refer to figures 5-2 through 5-10. For the location of terminals on integrated circuit logic element modules, refer to figure 5-1. Refer to figure 5-1.1 for the location of microcircuit module terminals.

5-7. Signal Substitution

In some cases, isolating a malfunction within a complex logic circuit can be simplified by using signal substitution techniques. Specifically, any point or points at the input to a logic element may be grounded, thereby making the operation of the logic elements easily predictable. This method cannot normally be used to insert a high level (+ 4.5 volts) without physically disconnecting the signal input from the logic element. Therefore, it is not recommended to use signal substitution for high level inputs.

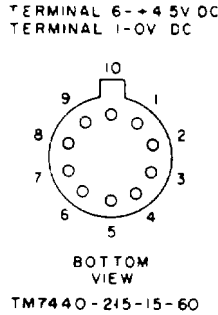


Figure 5-1. Location of terminals on integrated circuit modules.

Section III. REPAIR

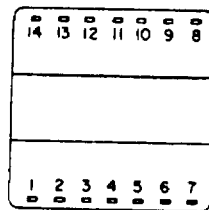
5-8. General Parts Replacement Techniques

Most of the parts on a PC card can be replaced easily without special procedures. Refer to TB SIG 222 for solder and soldering techniques. When replacing integrated circuit logic elements, it is important to unsolder only one terminal at a time, using a solder syringe to remove the solder before unsoldering the next terminal.

5-9. Parts Location

The location of all replaceable parts on the PC cards of the control-keyboard is shown in figures 5-2 through 5-10.

POWER INPUT	TERMINAL			
	T00023	T00024	T00121	T00122
+12 VOLTS DC	13	12	11	12
-12 VOLTS DC	1	6	1	14
+ 4.5 VOLTS DC	-	10	7	-
GROUND	7	4	5	4



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Figure 5-1.1. Location of terminals on microcircuit modules.

5-10. Test Data Charts

a. The test data charts contained in this section may be used when troubleshooting printed circuit cards to determine the type of signal which should be present under certain conditions. This should prove helpful as an aid in localizing a malfunction to a particular circuit on the suspected defective card.

b. For all cards installed in logic assembly A1, ground is available on pin 1 or A of the printed circuit card connector. Pin 2 or B of each PC card connector supplies + 4.5 volts to the printed circuit cards. By using a short lead terminated at both ends with alligator clips, these pins can be used as a source of ground (0 volts) or active (+4.5 volt) signals for troubleshooting the printed circuit card.

c. Test data charts are arranged to show the point of test (*Test Point* column) to which the meter, oscilloscope, or other test equipment is connected; the conditions under which the measurement should be made (*Test condition* column); and the results which should be obtained if the circuit being tested is good (*Normal indication* column). It should be noted that the *Normal indication* column gives the expected results for the specified test conditions, and not necessarily the results for normally operating equipment.

d. Unless otherwise specified, all test data in the charts assumes the printed circuit board connected to an otherwise operable equipment, with the equipment operating as part of a terminal configuration.

5-11. PC Card A1 (A65309-001) Test Data Chart

(fig. 5-4 and 8-8)

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>
XA1-M Typical Lamp DR-1 output (XA1-V).	Power on, reset condition Remove PC card A6 from logic assembly A1, power on, and: a. +4.5 volts dc applied to input (XA1-18). b. ground applied to input (XA1-18) - -	Audio frequency 2000Hz. a. 0 volts dc. b. +4.5 volts dc.

5-12. PC Card A2 (A65313-001) Test Data Chart

(fig. 5-5 and 8-9)

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>
Typical LAMP Dr-2 (circuits A through E) outputs (XA2-10).	Remove PC card A4 from the logic assembly A1, power on and apply a 6.25 kHz CL2 signal from XA7-H to input of counter (XA2-5).	Train of 160 μ sec wide +4.5 volt pulses.
Typical LAMP DR-2 and DR-3 (circuits F through L) outputs (XA2-20). (XA2-21).	Remove PC card A11 from logic assembly A1, power on and: a. +4.5 volts dc applied to input b. ground applied to input (XA2-21) -	a. 0 volts dc. b. +12 volts dc.
Solenoid driver output (XA2-7)	Remove PC card A8 from logic assembly A1, power on, and: a. Open applied to input (XA2-6) b. Ground applied to input (XA2-6) -	a. +12 volts dc. b. 0 volts dc.

5-13. PC Cards A4 and A5 (A65305-001) Test Data Chart

(fig. 5-3 and 8-10)

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>
PC card A4	Install A4 into the AS position and test as described below.	
PC card A5 XA5-17	Power on ASCII or ITA #2 mode, any +4.5 volts. count.	
LAMP DR-1 outputs (circuits B through K).	Number of pulses applied to input (XA5-23) (LF key pressed this number of times).	

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>	
XA5-16	1	0 volts; otherwise	+4.5 volts
-14	2		
-15	3	"	"
-12	4-	"	"
-10	6	"	"
-7	6	"	"
-8	7	"	"
-6	8	"	"
-4	9	"	"

5-14. PC Card A6 (A65317-001) Test Data Chart
(fig. 5-6 and 8-12)

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>	
XA6-Y	Power on, Hollerith code, reset condition.	+4.5 volt dc level	
XA6-X,N,L,W,P,J,H,F,E,V, 7,9,10,15,16,19 or 20.	Power on, Hollerith code, reset condition.	0 volts dc	
	Number of pulses applied to input to counter (XA6-AA): (any character key pressed this number of times).		
XA6-Y	0 -	+4.5 volts, otherwise	0 volts
XA6-X	1	"	"
XA6-N	2	"	"
XA6-L	3	"	"
XA6-W	4	"	"
XA6-P	5	"	"
XA6-J	6	"	"
XA6-H	7	"	"
XA6-F	8	"	"
XA6-E	9	"	"
XA6-V	11 to 80	"	"
XA6-7	10 to 19	"	"
XA6-9	20 to 29	"	"
XA6-10	30 to 39	"	"
XA6-15	40 to 49	"	"
XA6-16	50 to 59	"	"
XA6-19	60 to 69	"	"
XA6-20	70 to 79	+4.5 volts, otherwise	0 volts
XA6-22	80 5	"	"

5-15. PC Card A7 (A65329-001) Test Data Chart
(fig. 5-9 and 8-13)

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>	
XA7-M	Power on, COUNTER RESET switch pressed.	+4.5 volt pulse when switch pressed.	
XA7-F	Power on, RESET switch pressed	+4.5 volt pulse when switch pressed.	
XA7-H	Power on and CL1 pulses (12.6 KHz present at XA7-E).	CL2 pulses present (6.25 kHz ± 62.5 Hz).	

5-16. PC Card A8 (A65321-001) Test Data Chart
(fig. 5-7 and 8-14)

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>	
XA8S-	Power on, Hollerith mode, LAMP/AUDIO TEST switch pressed.	+4.5 volt level as long as switch held pressed.	
XA-17	Power on, Hollerith code, normal operation.	80 µsec wide positive-going pulse when any character key pressed.	
XA8-P	Power on, Hollerith code, normal operation.	160 µsec wide, positive-going pulse when REJECT/BACKSPACE switch pressed.	

5-17. PC Card A9 (A65325-001) Test Data Chart

(fig. 5-8 and 8-15)

Test point	Test condition	Normal indication
XA9-18	Power on, ASCII or ITA-2 mode, CR key pressed.	+4.5 volt pulse when CR key pressed.
XA9-20	Power on, ASCII or ITA-2 mode, LF key pressed.	+4.5 volt pulse when LF key pressed.
XA9-19	Power on, ASCII or ITA-2 mode, machine function keys pressed.	Single +4.5 volt pulse when CR,LF,BEL, SI,SO, or DEL key pressed.
XA9-X,J,10,E,Z,U,16, and 4	Power on, ASCII or ITA-2 mode, EOM key pressed.	Train of 0 to +4.5 volt pulses at each pin as shown on accompanying chart for EOM sequence when EOM key pressed.

EOM SEQUENCE CHART (PC card A9)

Data bit	Pin	Character																Total pulses						
		SI	CR	CR	LF	LF	LF	LF	LF	LF	LF	LF	LF	N	N	N	N		BL	BL	BL	BL	BL	BL
DB1	XA9-X	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
DB2	VA9-J	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	15
DB3	XA9-10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	5
DB4	XA9-E	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	15
DB5	XA9-Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DB6	XA9-U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DB7	XA9-16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	4
DB8	XA9-4	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19

0=No pulse present.
1=+4.5 volt pulse present.

5-18. PC Card A10 (A65301-001) Test Data Chart

(fig. 5-2 and 8-16)

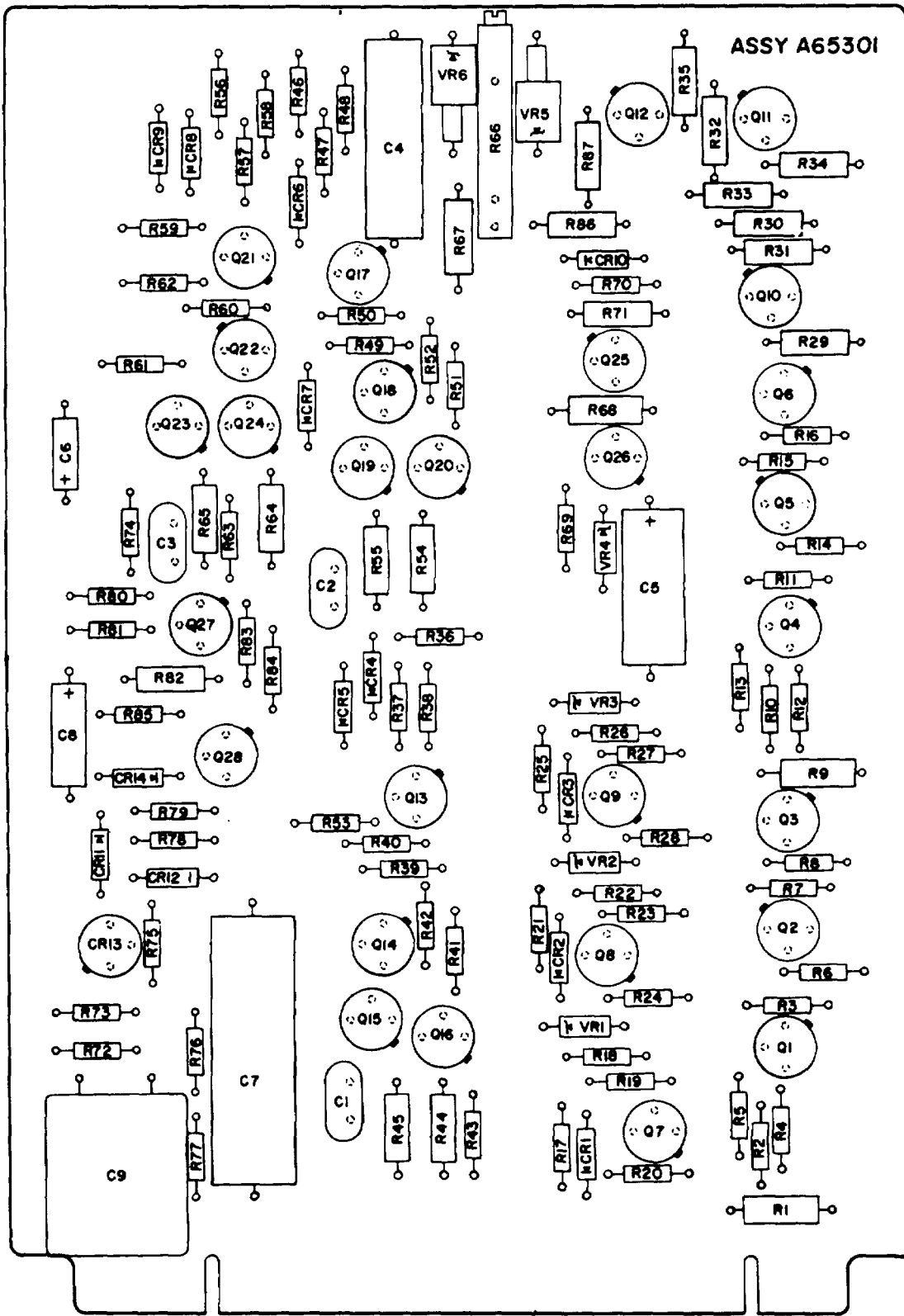
Typical RCVR-1 output (XA10-7) ssembly A1 and:	Power on, plug P2 removed from logic as-	
	a. ground applied to input (XA10-L)	a. +4.5 volt level
	b. open circuit at input (XA10-L)	b. 0 volts
Typical RCVR-2 output (XA10-D)	Remove P2 from the logic assembly A1, power on and:	
	a. +6.2 volts dc applied to input (XA10-4).	a. +4.5 volt level
	b. -6.2 volt dc applied to input (XA10-4)	b. 0 volts
Typical XMTR-1 output (XA10-N)	Remove PC cards A8 and A9 from assembly A1, power on and:	
	a. +4.5 volts dc applied to both inputs (XA10-11 and XA10-12).	a. +6.2 volt level
	b. ground applied to either input (XA10-11 or XA10-12).	b. -6.2 volt level
OSC-1 output (XA10-10) ---	Power on, normal operation	12.5 kHz + .125 kHz
AMPL-1 output (XA10-F)	Power on, normal operation: with any character key depressed several times.	Pulse developed each time a key is depressed switching between 0 and +4.5 volts.

Change 2 5-2.3

5-19. PC Card A11 (A65333-001) Test Data Chart
(fig. 5-10 and 8-17)

<i>Test point</i>	<i>Test condition</i>	<i>Normal indication</i>
Typical XMTR-1 output (XA11-D)	Remove PC card A9 from the logic assembly A1, power on and: a. +4.5 volts de applied to input (XA11-4). b. ground applied to input (XA11-4)	a. +6.2 volt level b. -6.2 volt level
Typical XMTR-2 output (XA11-20)	Remove PC card A1 from logic assembly, power on and: a. +4.5 volts de applied to input (XA11-X). b. ground applied to input (XA11-X)	a. 0 volt level b. Open circuit (+6.2 volts present from associated receiving circuit in connected punch device having power on).

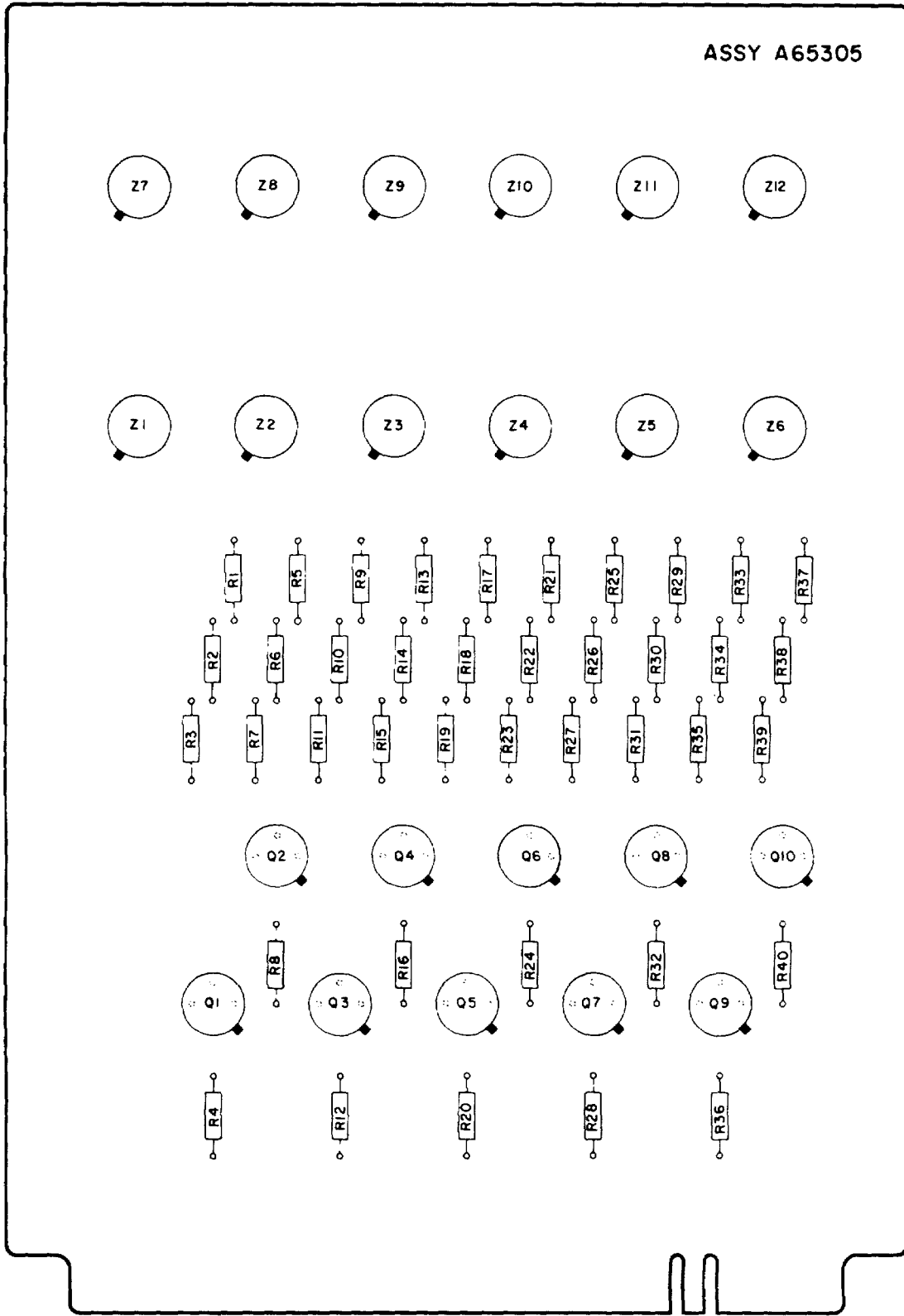
Change 2 5-2.4



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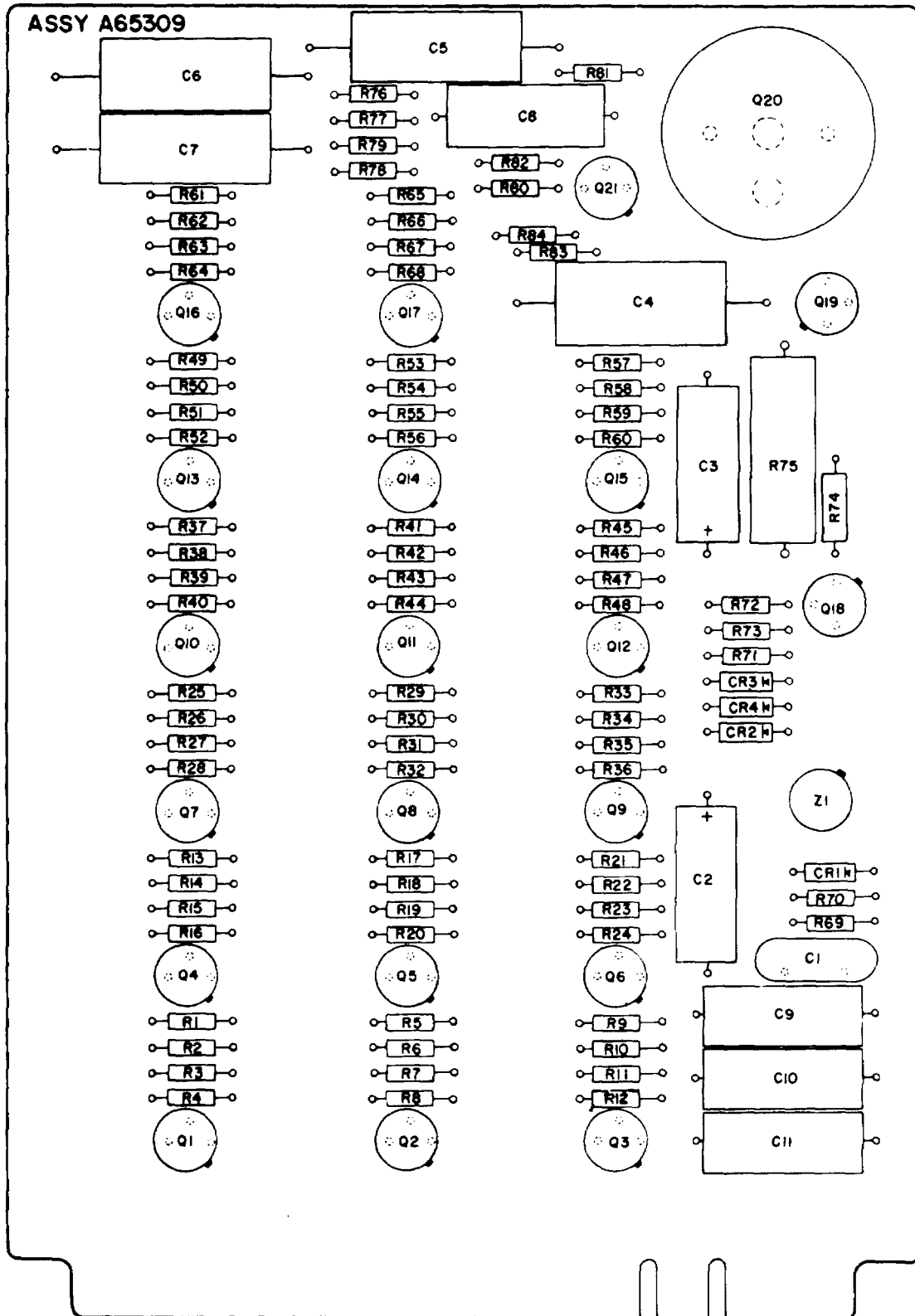
Figure 5-2. PC card A10 (No. A65301-001), component location diagram

Change 4 5-3



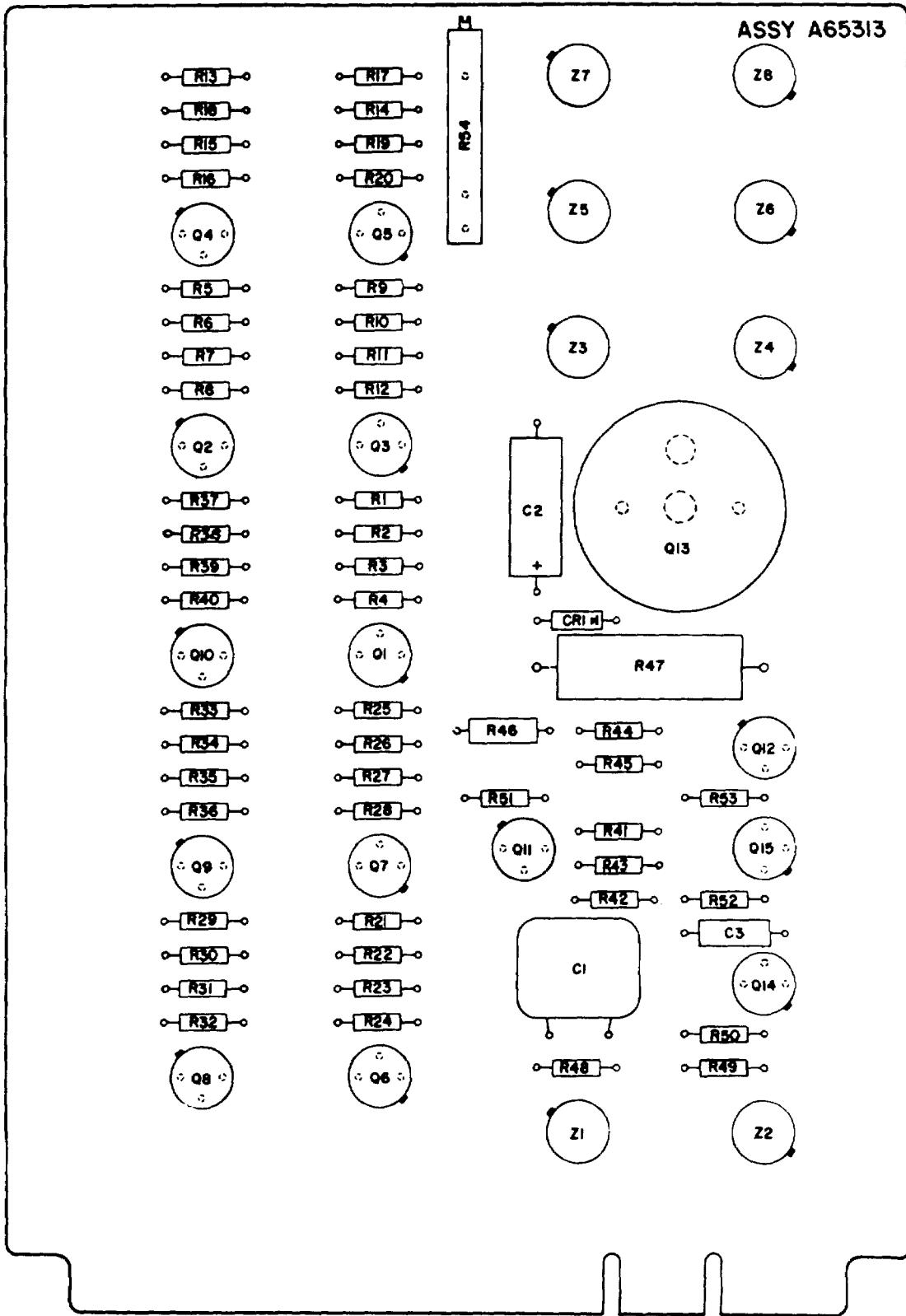
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Figure 5-3. PC cards A4 and A5 (No. A65305-001), component location diagram.



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Figure 5-4. PC card A1 (No. A65309-001), component location diagram.



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Figure 5-5. PC card A1 (No. A65313-001), component locator diagram.

Change 4 5-6

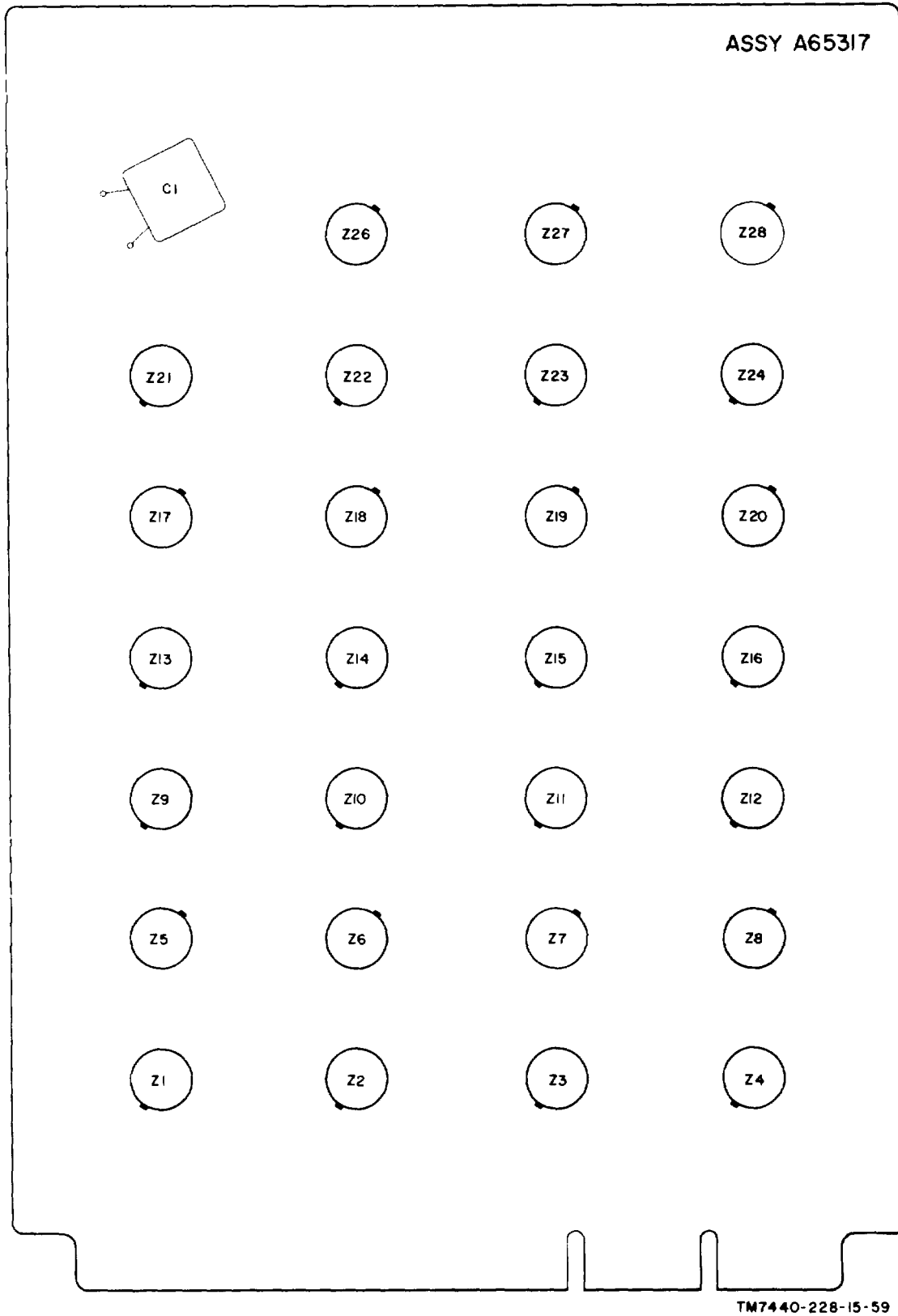


Figure 5-6. PC card A6 (No. A65317-001), component location diagram.

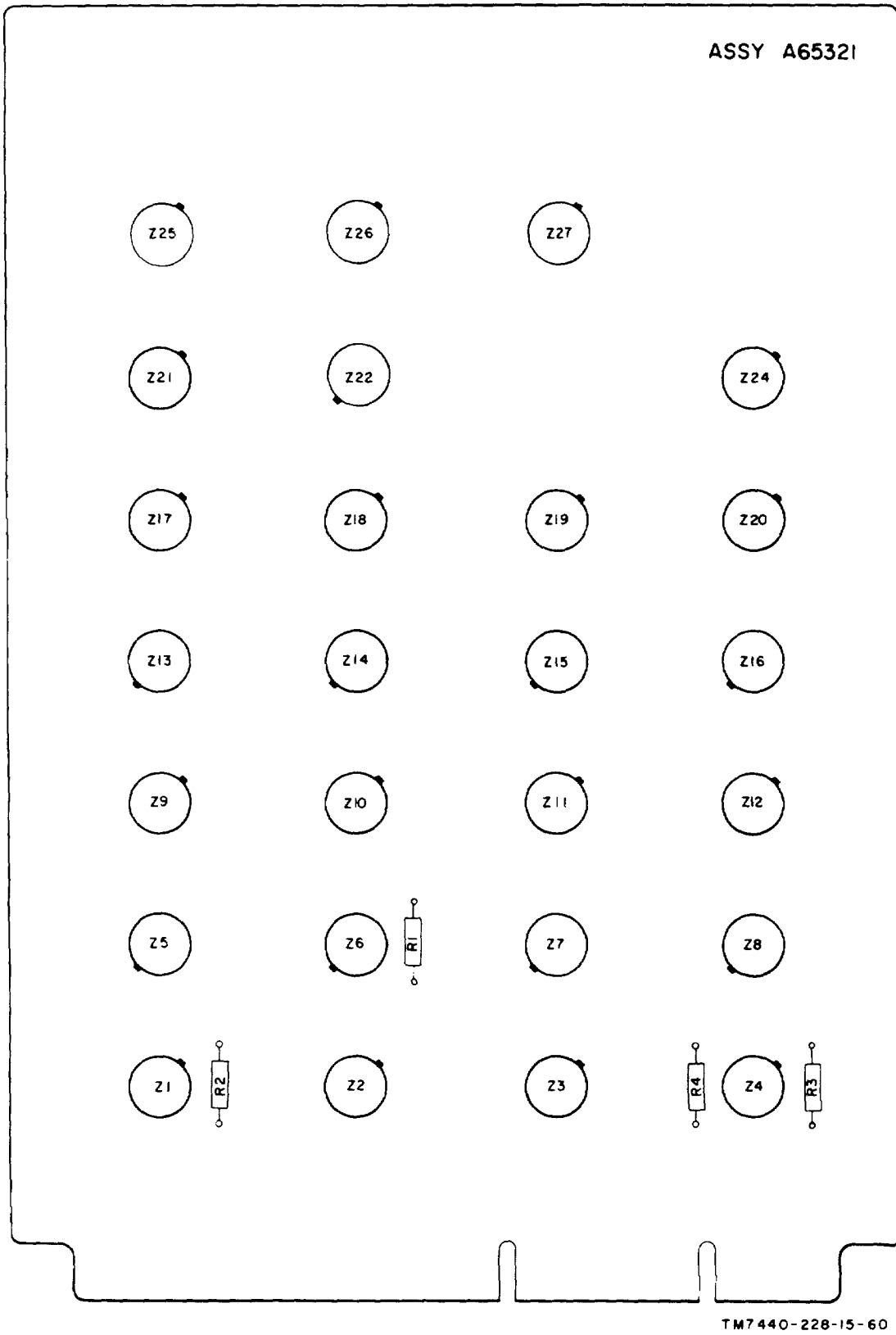


Figure 5-7. PC card A8 (No. A65321-001), component location diagram.

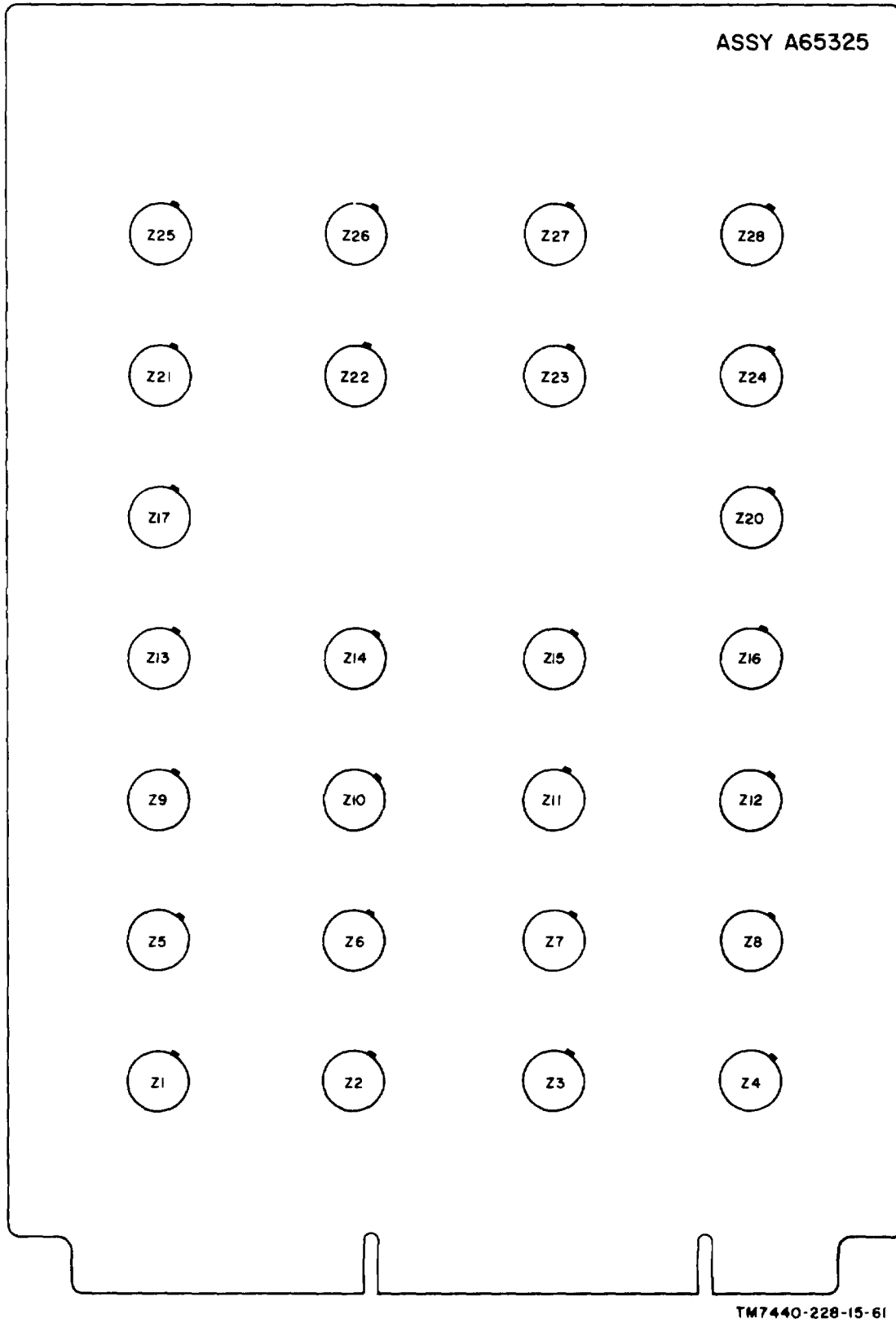
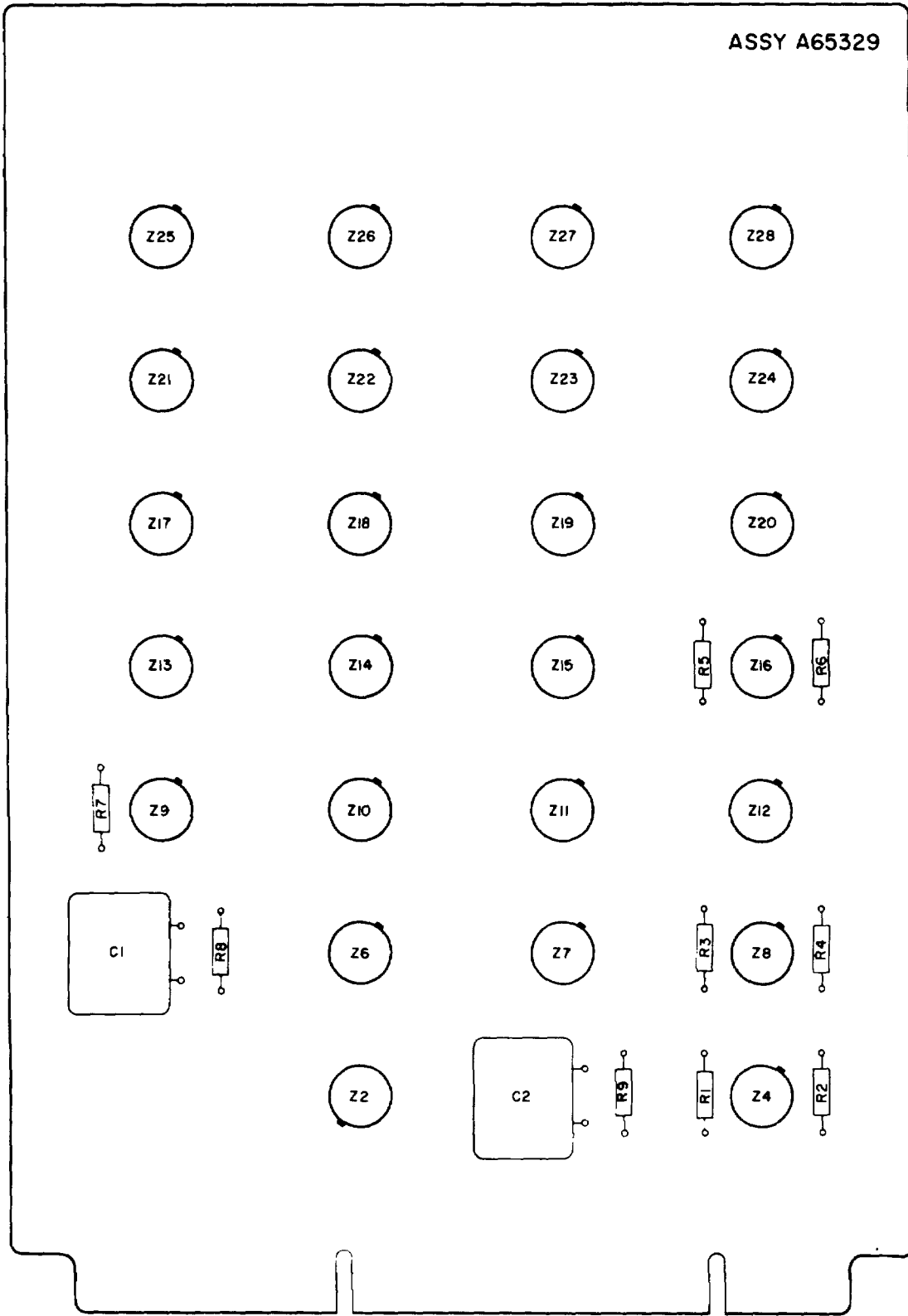
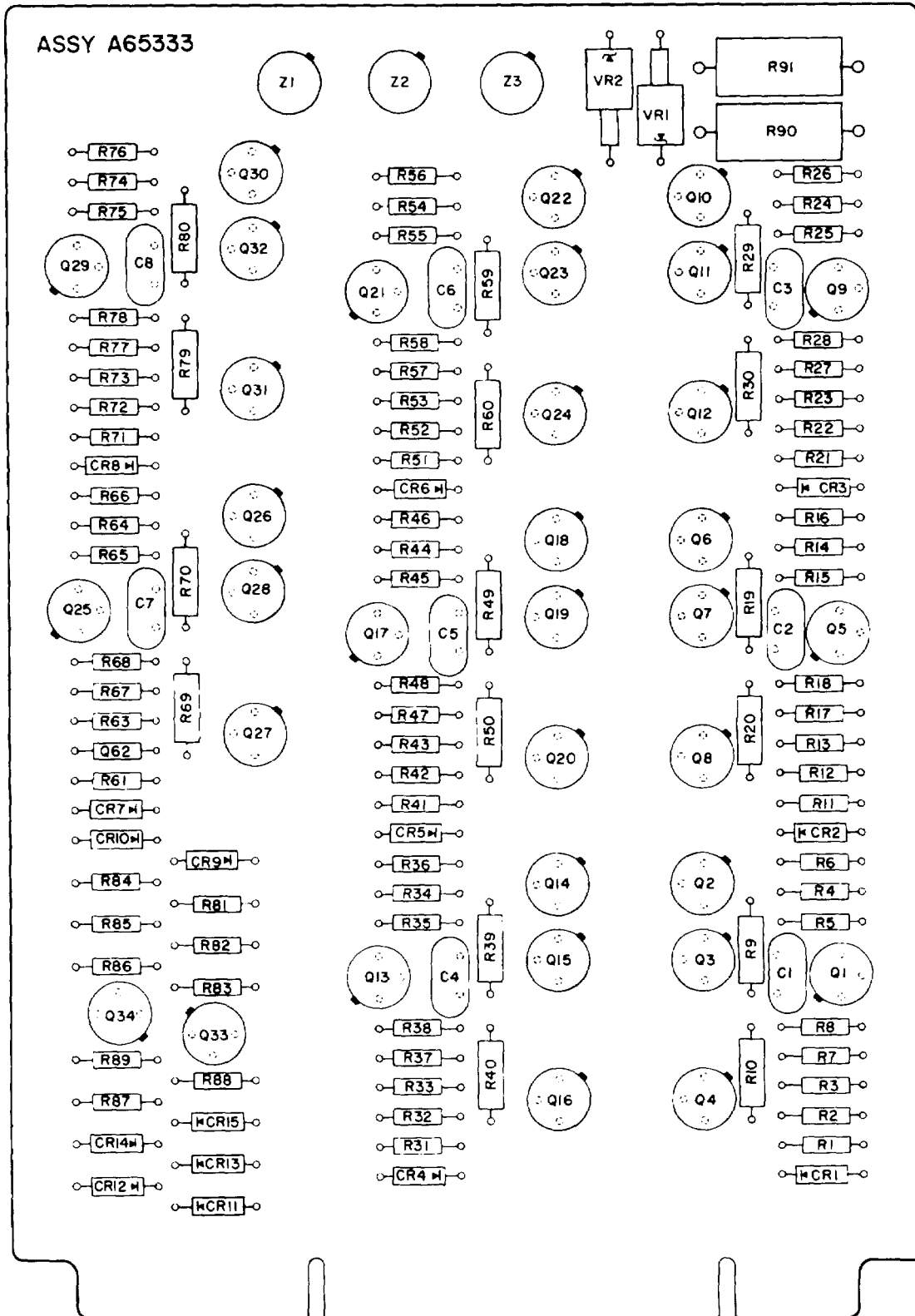


Figure 5-8. PC card A9 (No. A65325-001), component location diagram.



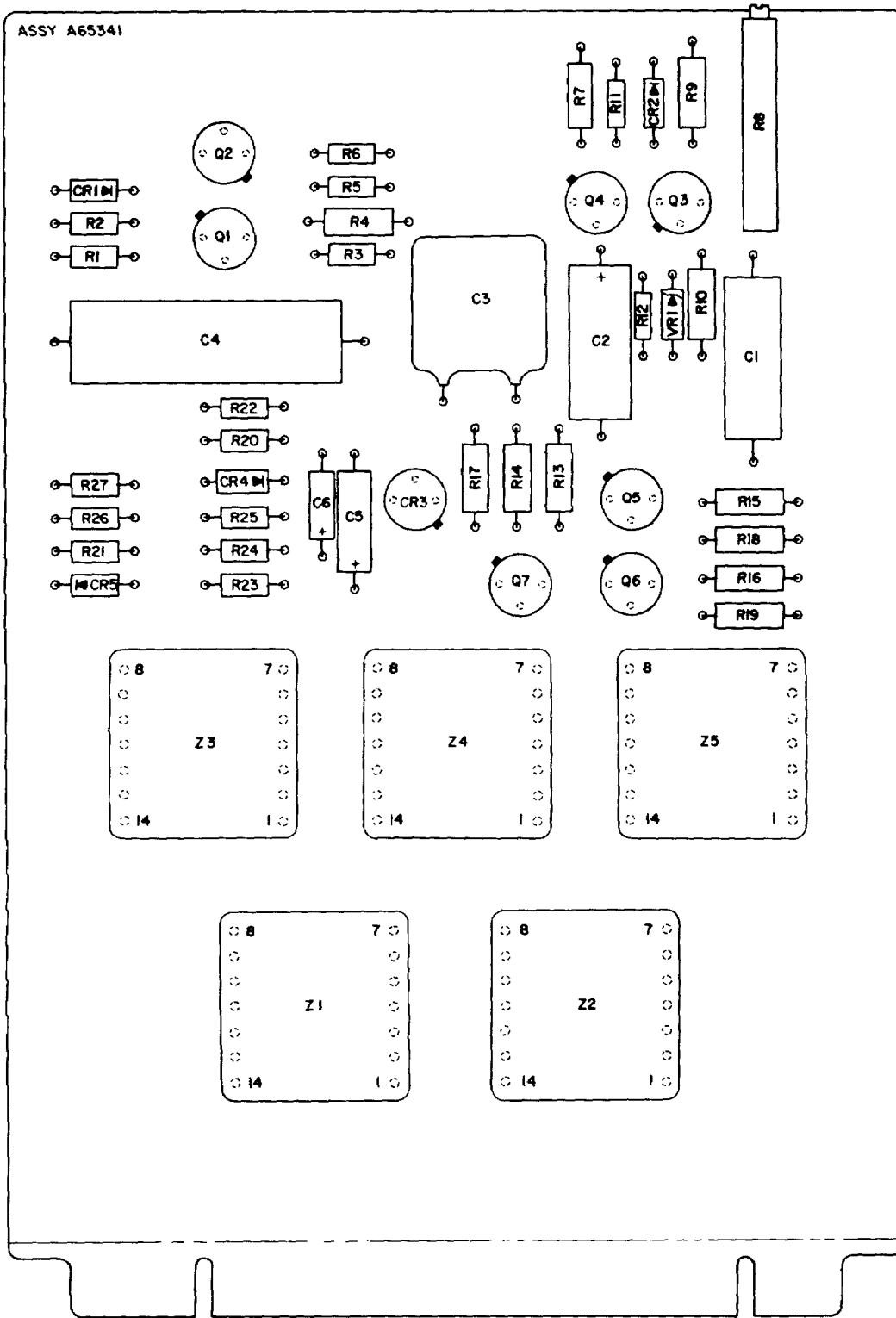
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Figure 5-9. PC card A7 (No. A65329-001), component location diagram.



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Figure 5-10. PC card A11 (No. A65333-001), component location diagram.



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Figure 5-11. PC card A10 (A65341-001), component location diagram.

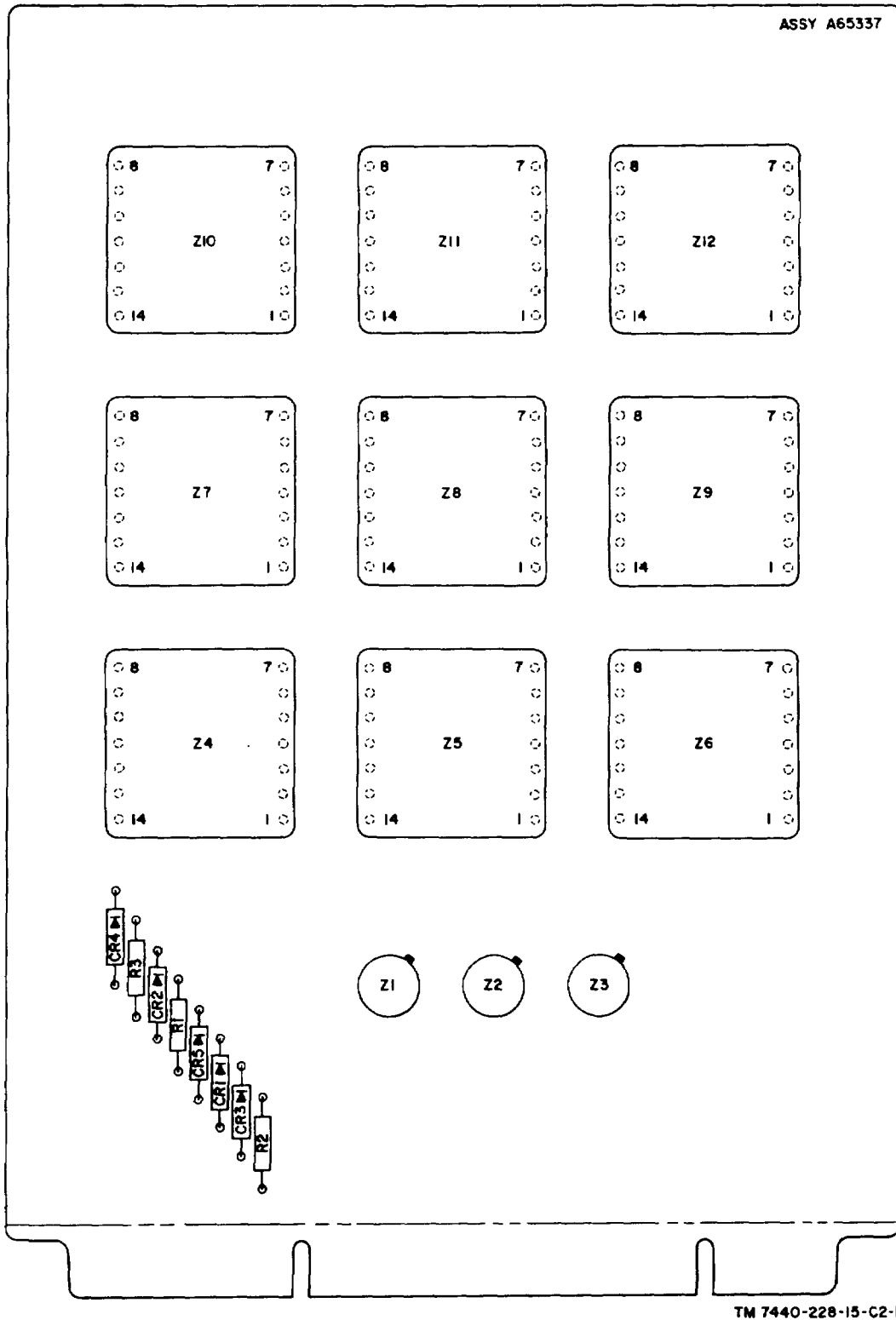


Figure 5-12. PC card A11 (A65337-001), component location diagram

Change 2 5-13

CHAPTER 6

DEPOT MAINTENANCE

Section I. DEPOT REPAIR

6-1. General

Complete rebuild of the control keyboard may be accomplished by depot maintenance facilities, when authorized by appropriate authority. Rebuild action includes all repairs, rebuild, and replacement necessary to make this equipment equivalent to new material and suitable for return to the military supply system for reissue to using organizations.

6-2. Depot Repair

Depot repair includes all repair procedures described in chapters 4 and 5, in addition to the part fabrication and refinishing procedures possible with the metal-working and refinishing facilities available a depot.

Section II. DEPOT OVERHAUL STANDARDS

6-3. Applicability of Depot Overhaul Standards

Control-Keyboard C-7185/G (control-keyboard or C-K) must be tested thoroughly after repair to insure that it meets adequate performance requirements for return to stock and reissue. Use the tests described in this section to measure the performance of the repaired device. Equipment that is to be returned to stock should meet all of the performance standards given in this section.

6-4. Applicable References

a. Repair Standards. Applicable procedures of the depots performing this test and the general standards for repaired equipment given in TB SIG 355-1, TB SIG 355-2, and TB SIG 3553 form a part of the requirements for testing this equipment.

b. Technical Publications. The technical publications applicable to the equipment to be tested are listed in appendix A.

c. Modification Work Orders. Perform the work specified by modification work orders pertaining to this equipment before making the tests specified. DA Pam 310-4 lists all available MWO's.

6-5. Test Facilities Required

In addition to the tools and test equipment listed in appendix C, the following special tools and test equipment are required to perform the Depot Overhaul Standards tests.

Item	Description
Universal Keyboard Test Set	General Dynamics Electronics Division Model 48200666, Complete with test cable

6-6. General Test Conditions and Requirements

Before the tests (para 6-8) are made, the equipment shall meet the mechanical requirements specified in a below. The general test conditions of b below shall be established.

a. Mechanical Requirements. The control-keyboard should be adjusted to meet the requirements of paragraphs 4-40 through 4-43.

b. Test Conditions.

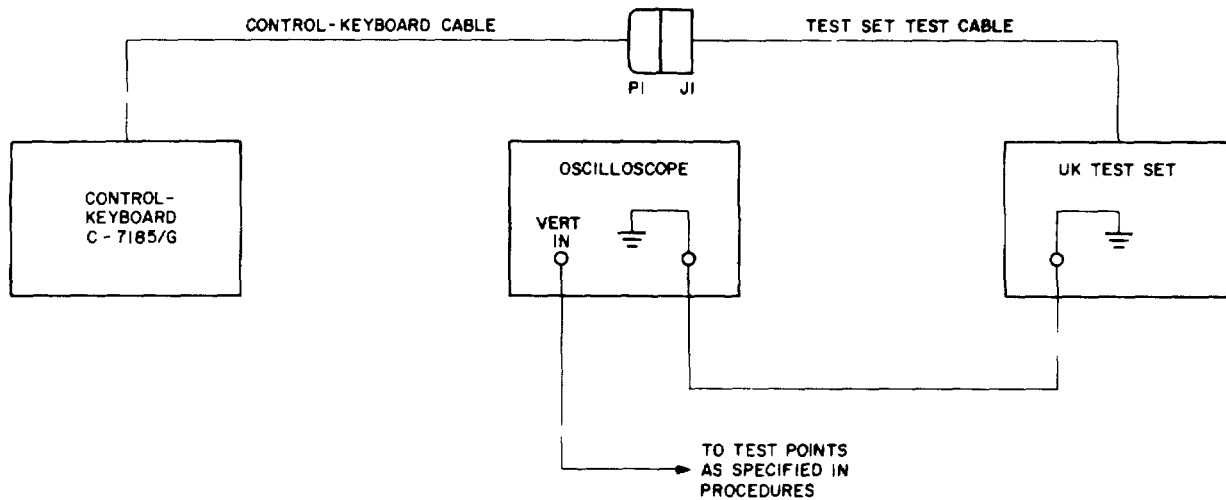
(1) Unless otherwise specified, all tests will be performed under the following test conditions:

Temperature Ambient, 15°C. to 35°C.
 Altitude Normal ground
 Humidity Room ambient up to 98%

(2) Connect the control-keyboard to the test equipment as shown in figure 6-1.

6-7. Visual Tests

Check the general physical condition of the control-keyboard as follows:



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Figure 6-1. Test setup.

a. *Exterior and interior surfaces.* All surface finishes must be free from rust, scratches, or other damage. Surfaces must not be damaged.

b. *Cables.* The lead connections of all cables must be secure. All cable connectors must be undamaged and cables should not be cracked, frayed, or routed to place strain on the wires.

c. *Hardware.* All bolts and screws, such as slide mounting screws, panel mounting screws, motor mounting bolts and mechanism mounting screws must be tight.

d. *P-C cards.* Check that all printed circuit cards in logic assembly A1 are mounted securely in the proper connector (para 1-6).

6-8. Operational Tests

a. *Preliminary Procedure.*

- (1) Position the keyboard code selector switch to ASCII.
- (2) Position switches on the Universal Keyboard Test Set (test set) as follows:
 115 VAC circuit breaker CB-1 to OFF.
 UK ENABLE to ON
 ALARM SIMULATOR to OFF
 COMPARATOR to off (down)
 READY to OFF
 1st DATA REQUEST to AUTO
 MODE TO MAN
 ST SW to off (down)
 COMPARATOR INPUTS to OFF
 ALM to off (down)
- (3) Turn on test set by placing 115 VAC circuit breaker CB-1 to ON.

(4) Check that test set dc power supplies are supplying proper output levels; with current limiting control set fully clockwise. Proper output levels are:

- +4.75 VDC ±0.1 VDC
- +12.0 VDC ±0.1 VDC
- 12.0 VDC ±0.1 VDC

(5) Press the C-K POWER switch and verify the following:

- C-K POWER indicator lamp lights.
- UK INTERLOCK indicator lamp on test set lights.
- Test set SOM indicator lamp lights.
- Test set 1st DATA REQUEST lamp indicator lights.

(6) Verify that the C-K STOP lamp is lighted and the keyboard is locked.

NOTE

Keyboard is locked when none of the keys can be pressed except the SHIFT, SHIFT LOCK, RPT and CTL keys.

(7) Press the POWER switch on the C-K and verify that the POWER indicator lamp extinguishes.

(8) Open the logic compartment cover of the C-K and remove the +12 VDC fuse, F3.

(9) Momentarily press the POWER switch on the C-K and verify that the POWER indicator lamp does not light.

(10) Replace fuse F8 and remove the -12 VDC fuse F2.

(11) Repeat step (9) above.

(12) Replace fuse F2 and remove +4.5 VDC fuse F1.

- (13) Repeat step (9) above.
- (14) Replace fuse F1 and close the logic compartment cover.
- (15) Position the UK ENABLE switch on the test set to OFF.
- (16) Repeat step (9) above.
- (17) Return the UK ENABLE switch on the test set to ON.
- (18) Momentarily press the POWER switch on the C-K and verify that the POWER indicator lamp lights.
- (19) Position the test set READY switch to READY and verify the following:
Control-keyboard STOP lamp is not lighted.
Keyboard is not locked.
- (20) Verify the following test set lamp conditions:
SELECT lamp is lighted.
DATA REQUEST lamp is lighted.
READY lamp is lighted.
UK INTERLOCK lamp is lit.
Remaining lamps are not on.

(21) Press the C-K RESET switch and verify that the LINE/BLOCK and CHARACTER counters indicate a count of zero.

b. Lamp Test. Press the LAMP/AUDIO TEST switch on the C-K and verify that the audio end of block warning signal sounds and the following switches and indicators light:

<i>Switch Indicator</i>	<i>Color</i>
STOP	red
CAUTION	amber
EOB WARNING	amber
REJECT/BACKSPACE	red (both halves)

c. Waveforms and Timing.

NOTE

In the following steps, the fall time is defined as the negative going edge of a pulse, and the rise time is defined as the positive going edge of a pulse. Rise and fall times are to be measured between 10 and 90 percent of the voltage transition.

(1) Position the oscilloscope controls for chopped operation, using the data pulse for a positive external trigger to observe waveforms as shown in figure 6-2. Connect oscilloscope channel 1 input to the test set DATA LINE TEST POINTS 1 test point. Connect channel 2 of the oscilloscope to the test set STROBE test point.

Press and hold the RPT and then the DEL key on the keyboard. Verify the following parameters on the oscilloscope:

- (a) Data strobe pulse width is 80 μ sec \pm 10 percent.
- (b) Delay between leading edge of data strobe is 240 μ sec \pm 10 percent.

(2) Position oscilloscope input selector to channel 1. Verify the parameters listed below by pressing and holding, first the RPT key and then the DEL key for data lines 1 through 7; and by pressing and holding the RPT and then the NUL key for data line P. The data lines are to be checked sequentially at the test set DATA LINE TEST POINTS test points 1 through 7.

- (a) High level of \pm 6.0 1.0 VDC.
- (b) Low level of -6.0 \pm 1.0 VDC.
- (c) Fall time of 21 to 35 μ sec maximum.
- (d) Rise time of 21 to 35 μ sec maximum.

(3) Connect oscilloscope channel 1 and external trigger input leads together. Connect the two leads to the test set STROBE test point and verify the parameters listed below by pressing and holding, first the RPT key, and then the space bar.

- (a) High level of +6.0 VDC \pm 1.0 VDC.
- (b) Low level of -6.0 \pm 1.0 VDC.
- (c) Fall time of 21 to 35 μ sec maximum.
- (d) Rise time of 21 to 35 μ sec maximum.

(4) Connect the oscilloscope channel 1 and external trigger input leads to the test set CANCEL test point. Press the C-K REJECT/BACKSPACE switch and verify the following parameters:

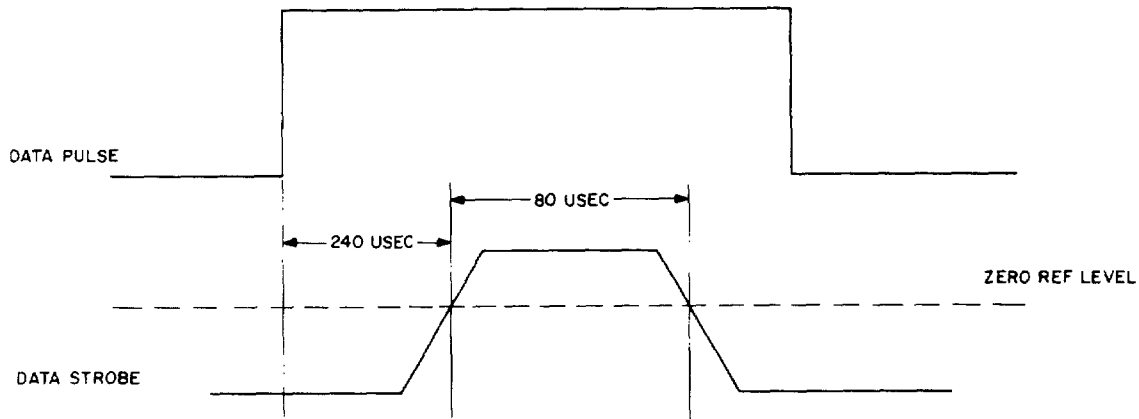
- (a) High level of +6.0 \pm 1.0 VDC.
- (b) Low level of -6.0 \pm 1.0 VDC.
- (c) Fall time of 21 to 35 μ sec maximum.
- (d) Rise time of 21 to 35 μ sec maximum.

(5) Connect the oscilloscope channel 1 and external trigger input leads to the test set CONTROL test point. Position the keyboard code selector switch to HOLLERITH and verify the parameters listed below by pressing and holding, first the RPT key, and then the space bar.

- (a) High level of +6.0 \pm 1.0 VDC.
- (b) Low level of -6.0 \pm 1.0 VDC.
- (c) Fall time of 21 to 35 μ sec maximum.
- (d) Rise time of 21 to 35 μ sec maximum.

(6) Connect the oscilloscope channel 1 and external trigger input leads to the test set SELECT test point and verify the parameters listed below by pressing the REJECT/BACKSPACE switch.

- (a) High level of +6.0 \pm 1.0 VDC.
- (b) Low level of +0.5 \pm 0.5 VDC.



PULSE PARAMETERS:

1. DATA PULSE TO DATA STROBE DELAY:	240 USEC ± 10%
2. DATA STROBE PULSE WIDTH:	80 USEC ± 10%
3. DATA PULSE RISE TIME:	21 TO 35 USEC MAX
4. DATA PULSE FALL TIME:	21 TO 35 USEC MAX
5. DATA STROBE RISE TIME:	LESS THAN 21 TO 35 USEC
6. DATA STROBE FALL TIME:	LESS THAN 21 TO 35 USEC

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Figure 6-2. Data and data strobe pulse timing.

(7) Connect oscilloscope channel 1 and external trigger input leads to the test set RESET test point. Press the C-K RESET switch and verify the parameters listed below:

- (a) High level of $+6.0 \pm 1.0$ VDC.
- (b) Low level of $+0.5 \pm 0.5$ VDC.

(8) Connect the oscilloscope to the test set 1st DATA REQUEST test point. Press the keyboard RESET switch and verify a high level of $+6.0 \pm 1.0$ VDC. Press any one of the non-blocked keys on the keyboard and verify that the level switches to -6.0 ± 1.0 VDC.

(9) Connect the oscilloscope to the test set DATA REQUEST test point and verify a high level of $+6.0 \pm 1.0$ VDC. Press any one of the nonblocked keys on the keyboard and verify that the signal switches to -6.0 ± 1.0 VDC and then returns to the positive level.

d. CHARACTER and LINE/BLOCK Counters.

(1) Repeatedly press the space bar on the keyboard and verify that C-K CHARACTER counter advances one count for each time the space bar is pressed.

(2) Press the CR key on the keyboard and verify the CHARACTER counter resets to zero.

(3) Press the LF key and verify that the LINE/BLOCK counter advances one count each time the key is pressed.

(4) Press any one of the nonblocked keys on keyboard until the CHARACTER counter indicates several counts.

(5) Press the COUNTER RESET switch on the C-K and verify the following:

- (a) LINE/BLOCK counter resets to zero.
- (b) CHARACTER counter does not reset to zero.

(6) Advance the CHARACTER counter to a count of 79 by pressing and holding, first the RPT key, and then the space bar.

NOTE

The control-keyboard EOB WARNING indicator lamp will light and the audible alarm will sound during the sequence.

(7) Press the REJECT/BACKSPACE switch on the C-K and verify that the CHARACTER counter decreases by one each time the switch is pressed.

(8) Continue to backspace the CHARACTER counter to a count of zero. Press the REJECT/BACKSPACE switch again and verify that the CHARACTER counter remains at zero.

(9) Alternately press the LF key and the space bar until both the LINE/BLOCK and CHARACTER counters indicate several counts.

(10) Press the C-K RESET switch and verify the following:

- (a) CHARACTER counter is reset to zero.
- (b) LINE/BLOCK counter is reset to zero.

(11) Press the CR key on the keyboard and verify that the CHARACTER counter does not advance.

(12) Press and hold the CTL key, then momentarily press the following keys and verify that the CHARACTER counter does not advance: SI, SO, BEL.

(13) Release the CTL key, press the LF key, and verify the following:

(a) CHARACTER counter does not advance.

(b) LINE/BLOCK counter advances one count.

e. End-of-Block Warning.

(1) Place the keyboard code selector switch to ASCII.

(2) Place SET EOB WARNING switch to first number (40) in chart below:

40	41	42	43	44	45	46
47	48	49	59	69	79	

(3) Advance CHARACTER counter to one less (39) than the number on the SET EOB WARNING switch by first pressing and holding the RPT key and then the space bar.

(4) Press the space bar one more time and verify the following:

(a) EOB WARNING indicator lamp lights.

(b) Audible alarm sounds.

(c) CHARACTER counter indicates number (40) on SET EOB WARNING switch.

(5) Press the CR key and verify that the CHARACTER counter resets to zero and the EOB WARNING indicator lamp goes out.

(6) Repeat steps (2) through (5) above for each of the numbers in the chart of step (2) above.

f. Repeat.

(1) Place the SET EOB WARNING switch to 59.

(2) Verify that the keyboard code selector switch is set to ASCII, and press the C-K RESET switch.

(3) Connect the frequency counter input to the test set STROBE test point and adjust the frequency counter for EPUT.

(4) Press and hold, first the RPT key, and then the space bar, and verify that the frequency counter reading is 18.7 Hz ±8 percent.

(5) Disconnect frequency counter.

(6) Position the keyboard code selector switch to HOLLERITH and actuate the RESET switch.

(7) Advance the C-K CHARACTER counter to a count of 79 by pressing and holding, first the RPT key and then any one of the nonblocked keys on the keyboard.

NOTE

The C-K EOB WARNING indicator lamp will light and the audible alarm will sound during the sequence.

(8) Press any one of the unblocked keys on the keyboard and verify the following:

(a) C-K CHARACTER counter resets to zero.

(b) LINE/BLOCK counter advance one count.

(9) Press and hold, first the RPT key, and then any of the unblocked keys on the keyboard. Release the keys when the CHARACTER counter no longer advances and verify the following:

(a) CHARACTER counter indicates a count of zero.

(b) LINE/BLOCK counter advances one count.

(c) EOB WARNING indicator lamp lights and audible alarm sounds during the sequence and resets at the end of the sequence.

g. End-of-Message Sequence.

(1) Position switches on control-keyboard and test set as follows:

(a) Keyboard code selector switch to ASCII.

(b) Press the C-K RESET switch.

(c) Set test set 1st DATA REQUEST switch to INHIBIT.

(2) Press the CR key on the keyboard and verify that the test set SOM lamp goes out.

(3) Press and release the LF key until the LINE/BLOCK counter indicates 5.

(4) Press the space bar on the keyboard repeatedly until the CHARACTER counter indicates 5.

(5) Position the test set switches as follows:

(a) COMPARATOR switch to ON.

(b) MODE selector switch to EOM.

(6) Press the keyboard EOM key and verify the following:

(a) Keyboard locks during the sequence.

(b) At the end of the sequence, the test set EOB lamp lights first, then the EOM lamp lights.

NOTE

The test set automatically compares the end-of-message sequence to detect any error. If the sequence is incorrect, the

C-K CHARACTER counter will stop and the test set ERROR indicator lamp will light.

(c) Control-keyboard CHARACTER and LINE/BLOCK counters indicate a count of zero.

(d) Test set SOM lamp lights.

(7) Momentarily press the C-K RESET switch and verify the following:

(a) Test set EOB lamp goes out.

(b) Test set EOM lamp goes out.

(c) Test set 1st DATA REQUEST lamp lights.

(8) Press the keyboard EOM key to generate another 21-character sequence. Verify that test set SOM lamp goes out at the start of the sequence.

h. Cancel.

(1) Position the keyboard code selector switch to HOLLERITH and position the C-K and test set switches as follows:

(a) Test set MODE switch to MAN.

(b) Test set 1st DATA REQUEST switch to AUTO.

(c) Test set COMPARATOR switch to off.

(d) Press control-keyboard RESET switch.

(2) Press and hold, first the RPT key and then the less than (<) key on the keyboard to generate 80 characters. Place the ALARM SIMULATOR switch on the test set to PARITY ERROR between characters 5 and 58.

(3) Verify the following:

(a) Test set ERROR lamp lights.

(b) C-K REJECT indicator lamp lights.

(c) Keyboard locks.

(4) Press the control-keyboard REJECT/BACKSPACE switch and verify the following:

(a) CHARACTER counter resets to zero.

(b) Test set ERROR lamp goes out.

(c) Test set CANCEL lamp lights.

(d) C-K REJECT indicator lamp goes out.

(5) Press the space bar on the keyboard and verify the following:

(a) Test set CANCEL light goes out.

(b) Keyboard is no longer locked.

(6) Position the keyboard code selector switch to ITA #2 and press the C-K RESET switch.

(7) Position the test set ALARM SIMULATOR switch to STOP and verify that the C-K STOP indicator lamp lights and the keyboard locks.

(8) Position the test set ALARM SIMULATOR switch to OFF and press the C-K REJECT/ BACKSPACE switch. Verify the following:

(a) C-K STOP lamp goes out.

(b) Keyboard is not locked.

(9) Position the test set ALM switch to ON and verify the following:

(a) C-K CAUTION indicator lamp lights.

(b) Keyboard is not locked.

(10) Position the test set ALM switch to off.

(11) Press and hold, first the RPT key, and then the numerical one (1) key on the keyboard to generate 80 characters. Place the ALARM SIMULATOR switch to PARITY ERROR between characters 5 and 58.

(12) Verify the following:

(a) Test set ERROR indicator lamp lights.

(b) BACKSPACE indicator lamp on control-keyboard lights.

(c) Keyboard locks.

(13) Press the C-K REJECT/BACKSPACE switch and verify the following:

(a) Control-keyboard CHARACTER counter decreases by one count.

(b) C-K BACKSPACE indicator lamp extinguishes.

(c) Test set ERROR lamp goes out.

(d) Test set CANCEL lamp lights.

(14) Press the space bar on the keyboard and verify the following:

(a) Test set CANCEL lamp goes out.

(b) Keyboard is not locked.

i. Date Control and Select.

(1) Position the keyboard code selector switch to HOLLERITH and press the RESET switch on the control-keyboard. Verify that the test set 1st DATA REQUEST and SOM lamps lights.

(2) Press the space bar and verify the following:

(a) Test set SOM lamp goes out.

(b) Test set DATA REQUEST lamp lights.

(c) Test set 1st DATA REQUEST lamp goes out.

(3) Using the RPT key and space bar, achieve a character count of 79; and verify that the SELECT lamp is lighted up to a count of 79.

NOTE

The C-K EOB WARNING indicator lamp will light and audible alarm will sound during the sequence.

(4) Press and hold the space bar and verify the following:

(a) Test set EOB lamp lights.

(b) Test set SELECT lamp goes out.

(c) C-K EOB WARNING indicator lamp goes out.

one count. (d) C-K LINE/BLOCK counter advances

(5) Release the space bar and verify the following:

- (a) Test set SELECT lamp lights.
- (b) Test set 1st DATA REQUEST lamp

lights.

(c) Test set EOB lamp goes out.

(6) Position the keyboard code selector switch to ASCII and press the RESET switch on the control-keyboard. Verify that the test set 1st DATA REQUEST and SOM lamps light.

(7) Press the space bar and verify the following:

- (a) Test set SOM lamp goes out.
- (b) Test set DATA REQUEST lamp

lights.

(c) Test set 1st DATA REQUEST lamp goes out.

(8) Using the RPT key and space bar, achieve a character count of 79.

NOTE

The C-K EOB WARNING indicator lamp will light and audible alarm will sound during the sequence.

(9) Press and hold the space bar and verify the following:

- (a) Test set EOB lamp does not light.
- (b) Test set SELECT lamp remains

lighted.

(Next printed page is 6-7)

Change 4 6-6.1

- (10) Release the space bar and verify the following:
 - (a) Test set DATA REQUEST lamp lights.
 - (b) Test set 1st DATA REQUEST lamp does not light.

j. Keyboard Character Generation.

- (1) Press the C-K RESET switch.
- (2) Position the test set switches as follows:
 - (a) MODE to AUTO.
 - (b) Momentarily press the 1st DATA REQUEST switch to RESET, then place to AUTO.
 - (c) COMPARATOR INPUTS switch to UK IN.
 - (d) COMPARATOR switch to ON.

Note:

In the following steps, the test set will automatically compare the character generated by the keyboard with an internally generated character. If the two do not compare, the test set ERROR lamp will light.

- (3) Starting in the upper left hand corner of the keyboard, press key in the chart below just once. Press the keys in the following sequence.

Row

Key

Top	<	1	2	3	4	5	6	7	8	9	Ø	-	@	¬	|
Second	>	Q	W	E	R	T	Y	U	I	0	P	:	{	}	=
Third	A	S	D	F	G	H	J	K	L	;	CR	LF	DEL	NUL	
Bottom	Z	X	C	V	B	N	M	,	.	/	Space bar				

(4) Hold down left hand SHIFT key and press the following keys in the sequence given.

Row

Key

Top	<	!	"	#	\$	%	&	'	()	=	\	~	^
Second	>		E	I	O	*	[]						
Third	A	S	F	G	H	J	K	L	+	CR	LF	DEL	NUL	
Bottom			C	B	N	M	,	.	?	Space bar				

(5) Hold down right hand SHIFT key and press the following keys in the sequence given:

Row

Key

Top														
Second	Q	W	E	R	T	Y	U	I	O	P				
Third	A	S	D	F	G	H	J	K	L					
Bottom	Z	X	C	V	B	N	M	,	.	Space bar				

(6) Hold down left hand CTL key and press the following keys in the sequence given:

Row

Key

Top	FS	RS												
Second	DC1	ETB	ENQ	DC2	DC4	EM	NAK	SI	DLE	GS	US			
Third	SOH	DC3	EOT	ACK	BEL	VT	FF							
Bottom	SS	CAN	ETX	SYN	STX	SO								

(7) Hold down the right hand CTL key and press the following keys in the sequence given:

Row

Key

Top	BS				
Second	HT				
Third	ESC	CR	LF	DEL	NUL
Bottom					

k. Key Blocking.

- (1) Position the test set 1st DATA REQUEST switch to AUTO, and disconnect the data cable from the keyboard; i. e., disconnect P1 plug on the cable from J1 jack on the keyboard.
- (2) Verify that the keyboard code selector switch is positioned to ASCII.
- (3) Starting at the upper left hand corner of the keyboard, attempt to press each key. Each should be able to be pressed except the following keys, which should be blocked:

Row

Blocked Keys

Top		BS
Second		HT
Third		ESC
Bottom		

- (4) Press the SHIFT key, and then the SHIFT LOCK key to retain the shift condition and press each key again. Blocked keys are as follows:

Row Blocked Keys

Top		BS	Ø
Second		HT	
Third		ESC	
Bottom		CTL	CTL

- (5) Momentarily press SHIFT key to remove shift condition, then press and hold CTL key. Press each key again and verify that only the following keys are blocked:

Row Blocked Keys

Top	All keys except BS				↵	|
Second	>	l	:	£		
Third	SHIFT LOCK	H	J	;		
Bottom	SHIFT	M	,	.	/	SHIFT

- (6) Release CTL key. Place keyboard code selector switch to ITA #2 and attempt to press each key. The following keys should be blocked:

CHANGE 4 6-10

Row Blocked Keys

Top	BS	<	@	↵	|
Second	HT	>	€	⌋	-
Third	ESC				
Bottom					

(7) Press the SHIFT key and then the SHIFT LOCK key to retain the shift condition. Keys which should be blocked are as follows:

Row Blocked Keys

Top	BS	<	5	∅	-	@	↵	|
Second	HT	>	:	€	⌋	_		
Third	ESC	;						
Bottom	CTL	CTL						

(8) Momentarily press the SHIFT key to remove the shift condition, then press and hold the CTL key. Press each key again and verify that only the following keys are blocked:

Row Blocked Keys

Top	All keys blocked					
Second	All except	SI				
Third	All except	BEL	CR	LF	DEL	NUL
Bottom	All except	RPT	CTL	SO	CTL	

(9) Release CTL key. Place keyboard selector switch to HOLLERITH and attempt to press each key. Only the following keys should be blocked.

Row Blocked Keys

Top	BS	@	¬	|	
Second	HT	E	∫		
Third	ESC	CR	LF	DEL	NUL
Bottom	CTL	CTL	EOM		

(10) Press the SHIFT key and then the SHIFT LOCK key to retain the shift condition. Keys which should be blocked are as follows:

Row Blocked Keys

Top	BS	∅			
Second	HT				
Third	ESC	CR	LF	DEL	NUL
Bottom	CTL	CTL	EOM		

6-9. Shutdown

- a. Press POWER switch on C-K control-keyboard.
- b. Place circuit breaker CB-1 on test set to OFF.
- c. Disconnect control-keyboard from test set.

CHANGE 4 6-12

CHAPTER 7

TO PREVENT ENEMY USE

SHIPMENT LIMITED STORAGE AND DEMOLITION

7-1. Disassembly of Equipment

Disconnect the control-keyboard from the associated output device.

7-2. Repackaging for Shipment or Limited Storage

Repackaging of equipment for shipment or limited storage normally will be performed at a packaging facility or by a packaging team. Package the equipment in accordance with the original packaging insofar as possible with available materials (see TM 11-7440-239-15).

7-3. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. Use the destruction procedures outlined in paragraph 7-4 to prevent further use of the equipment.

7-4. Methods of Destruction

Use any or all of the following methods to destroy the equipment:

a. Smash. Smash the controls, magnets, switches, capacitors, transformers, and castings; use sledges, axes, handaxes, pickaxes, hammers, or crowbars.

b. Cut. Cut the interunit cable and all base wiring; use axes, cutting pliers, bayonets, or machetes.

Warning:

Be extremely careful in the use of explosives and incendiary devices. Use these items only when extreme urgency requires their use.

c. Burn. Burn wiring diagrams, technical manuals, coils, and relays; use gasoline, kerosene, oil, flame-throwers, or place an incendiary grenade within the cover of the equipment.

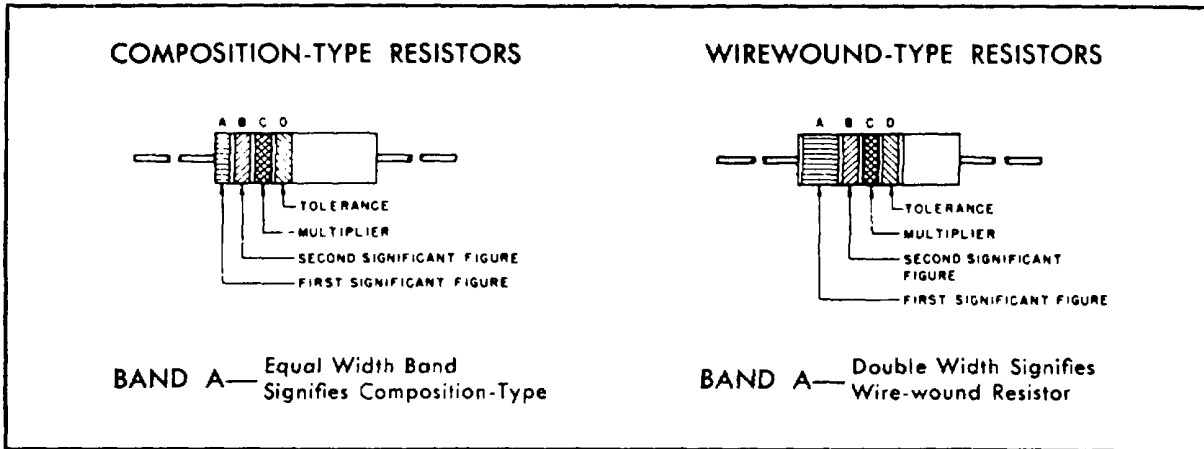
d. Bend. Bend covers, consoles, and bases.

e. Explode. Use a thermite grenade or charge. Follow the prescribed procedure for activating the type of grenade or charge used. If time permits, examine the remains of the control-keyboard to ensure that the destruction is complete.

CHAPTER 8

ILLUSTRATIONS

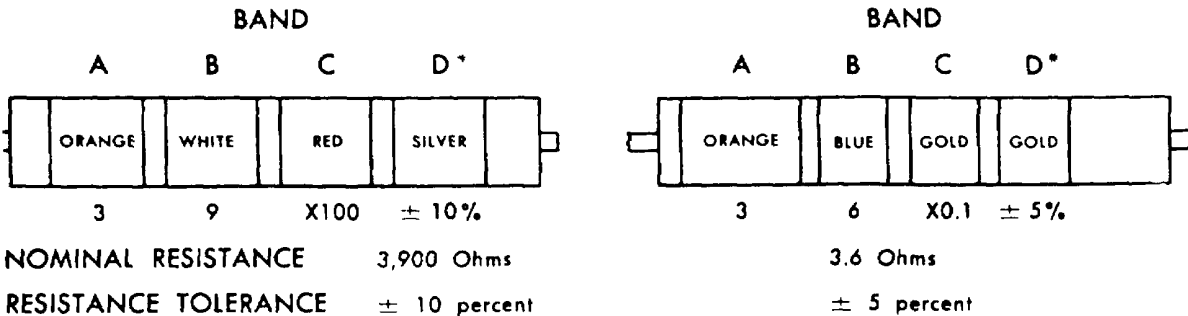
COLOR CODE MARKING FOR MILITARY STANDARD RESISTORS



COLOR CODE TABLE

BAND A		BAND B		BAND C		BAND D*	
COLOR	FIRST SIGNIFICANT FIGURE	COLOR	SECOND SIGNIFICANT FIGURE	COLOR	MULTIPLIER	COLOR	RESISTANCE TOLERANCE (PERCENT)
BLACK	0	BLACK	0	BLACK	1		
BROWN	1	BROWN	1	BROWN	10		
RED	2	RED	2	RED	100		
ORANGE	3	ORANGE	3	ORANGE	1,000		
YELLOW	4	YELLOW	4	YELLOW	10,000	SILVER	+ 10
GREEN	5	GREEN	5	GREEN	100,000	GOLD	+ 5
BLUE	6	BLUE	6	BLUE	1,000,000		
PURPLE (VIOLET)	7	PURPLE (VIOLET)	7				
GRAY	8	GRAY	8	SILVER	0.01		
WHITE	9	WHITE	9	GOLD	0.1		

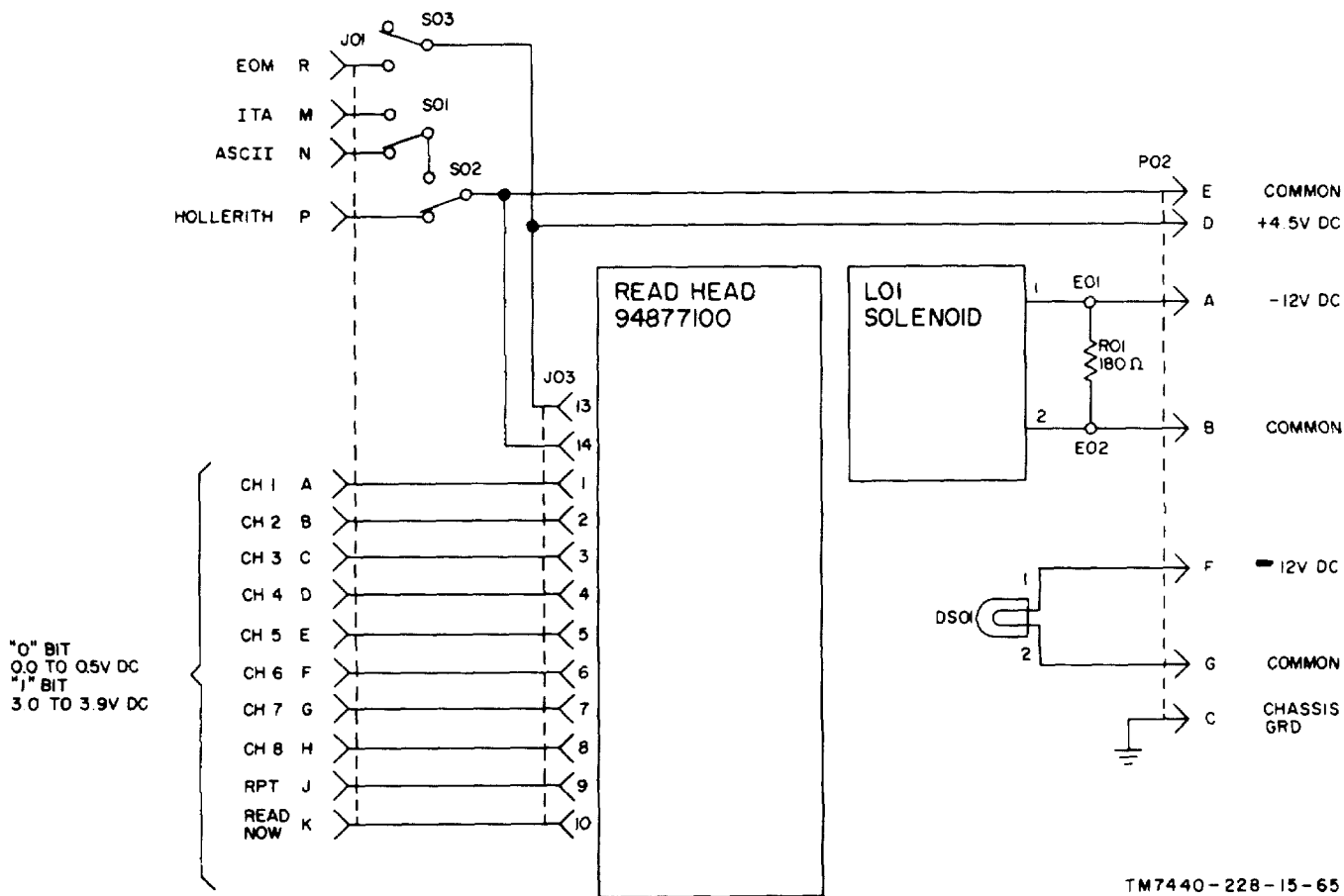
EXAMPLES OF COLOR CODING



*If Band D is omitted, the resistor tolerance is ± 20%, and the resistor is not Mil-Std.

STD-R2

Figure 8-1. Color code marking for MIL-STD resistors.
8-1



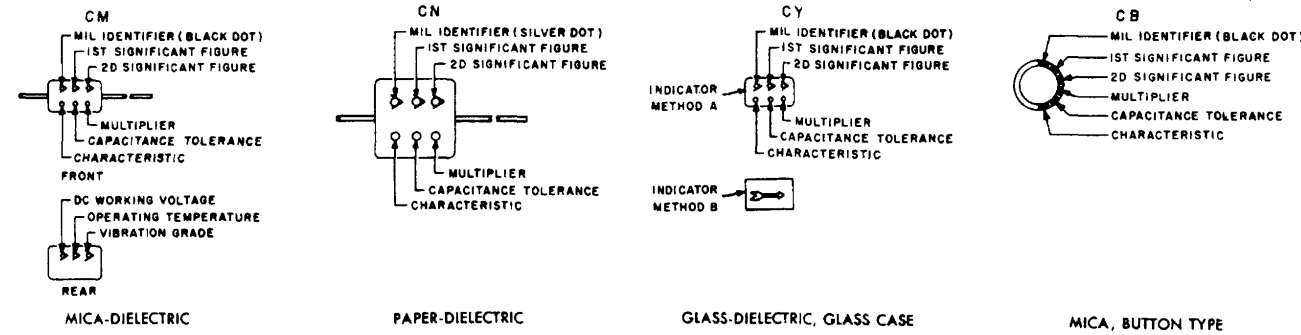
TM7440-228-15-65

Figure 8-5. Keyboard assembly A2, schematic diagram.

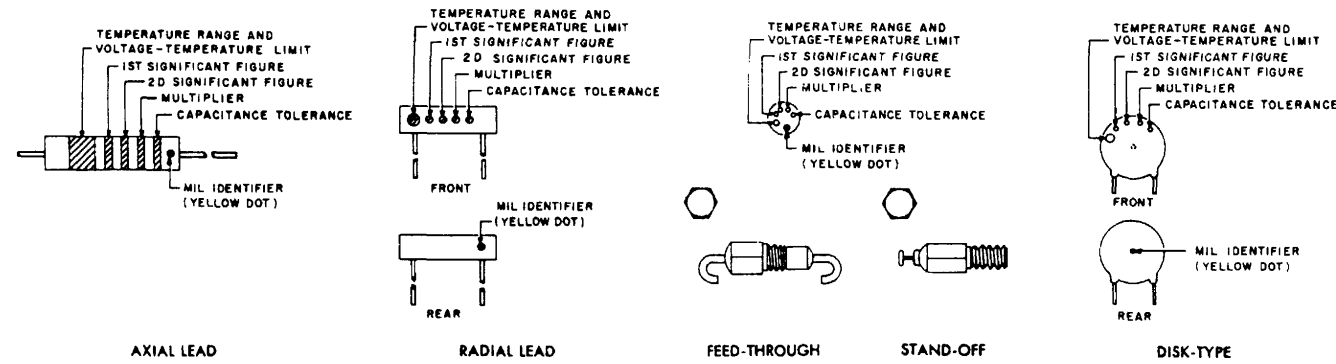
Change 2 8-2

COLOR CODE MARKING FOR MILITARY STANDARD CAPACITORS

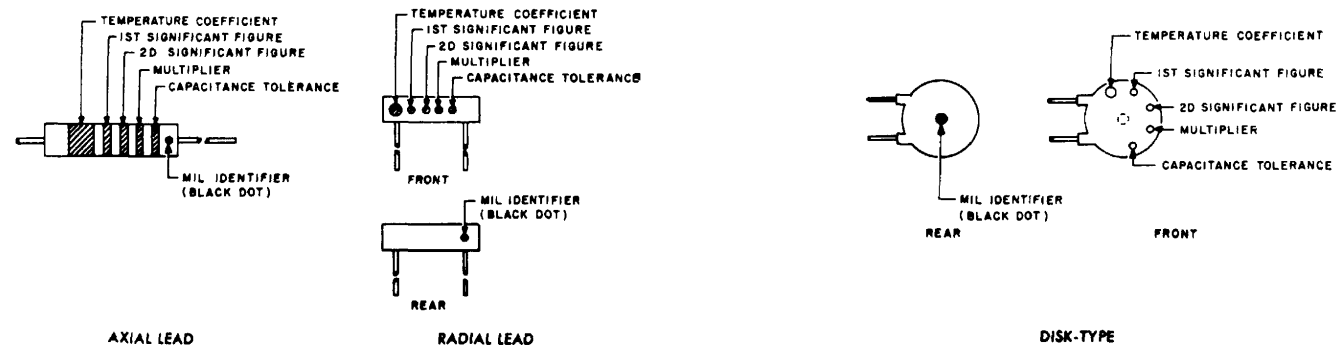
GROUP I Capacitors, Fixed, Various-Dielectrics, Styles CM, CN, CY, and CB



GROUP II Capacitors, Fixed Ceramic-Dielectric (General Purpose) Style CK



GROUP III Capacitors, Fixed, Ceramic-Dielectric (Temperature Compensating) Style CC



COLOR CODE TABLES

TABLE I - For use with Group I, Styles CM, CN, CY and CB

COLOR	MIL ID	1st SIG FIG	2nd SIG FIG	MULTIPLIER ¹	CAPACITANCE TOLERANCE				CHARACTERISTIC ²				DC WORKING VOLTAGE	OPERATING TEMP. RANGE	VIBRATION GRADE
					CM	CN	CY	CB	CM	CN	CY	CB			
BLACK	CM, CY, CB	0	0	1			± 20%	± 20%		A				-55° to +70°C	10-55 cps
BROWN		1	1	10					B	E	B				
RED		2	2	100	± 2%		± 2%	± 2%	C		C			-55° to +85°C	
ORANGE		3	3	1,000			± 30%		D		D	300			
YELLOW		4	4	10,000					E			500		-55° to +125°C	10-2,000 cps
GREEN		5	5		± 5%				F						
BLUE		6	6											-55° to +150°C	
PURPLE (VIOLET)		7	7												
GREY		8	8												
WHITE		9	9												
GOLD				0.1			± 5%	± 5%							
SILVER	CN				± 10%	± 10%	± 10%	± 10%							

TABLE II - For use with Group II, General Purpose, Style CK

COLOR	TEMP. RANGE AND VOLTAGE - TEMP. LIMITS ³	1st SIG FIG	2nd SIG FIG	MULTIPLIER ¹	CAPACITANCE TOLERANCE	MIL ID
BLACK		0	0	1	± 20%	
BROWN	AW	1	1	10	± 10%	
RED	AX	2	2	100		
ORANGE	BX	3	3	1,000		
YELLOW	AY	4	4	10,000		CK
GREEN	CZ	5	5			
BLUE	BY	6	6			
PURPLE (VIOLET)		7	7			
GREY		8	8			
WHITE		9	9			
GOLD						
SILVER						

TABLE III - For use with Group III, Temperature Compensating, Style CC

COLOR	TEMPERATURE COEFFICIENT ⁴	1st SIG FIG	2nd SIG FIG	MULTIPLIER ¹	CAPACITANCE TOLERANCE		MIL ID
					Capacitances over 10uuf	Capacitances 10uuf or less	
BLACK	0	0	0	1		± 2.0uuf	CC
BROWN	-30	1	1	10	± 1%		
RED	80	2	2	100	± 2%	± 0.25uuf	
ORANGE	150	3	3	1,000			
YELLOW	-220	4	4				
GREEN	-330	5	5		± 5%	± 0.5uuf	
BLUE	-470	6	6				
PURPLE (VIOLET)	-750	7	7				
GREY		8	8	0.01			
WHITE		9	9	0.1	± 10%		
GOLD	+100					± 1.0uuf	
SILVER							

- The multiplier is the number by which the two significant (SIG) figures are multiplied to obtain the capacitance in uuf.
- Letters indicate the Characteristics designated in applicable specifications: MIL-C-5, MIL-C-91, MIL-C-11272, and MIL-C-10950 respectively.
- Letters indicate the temperature range and voltage-temperature limits designated in MIL-C-11015.
- Temperature coefficient in parts per million per degree centigrade.

Figure 8-2. Color code marking for MIL-STD capacitors.

8-2.1/(8-2.2 blank)

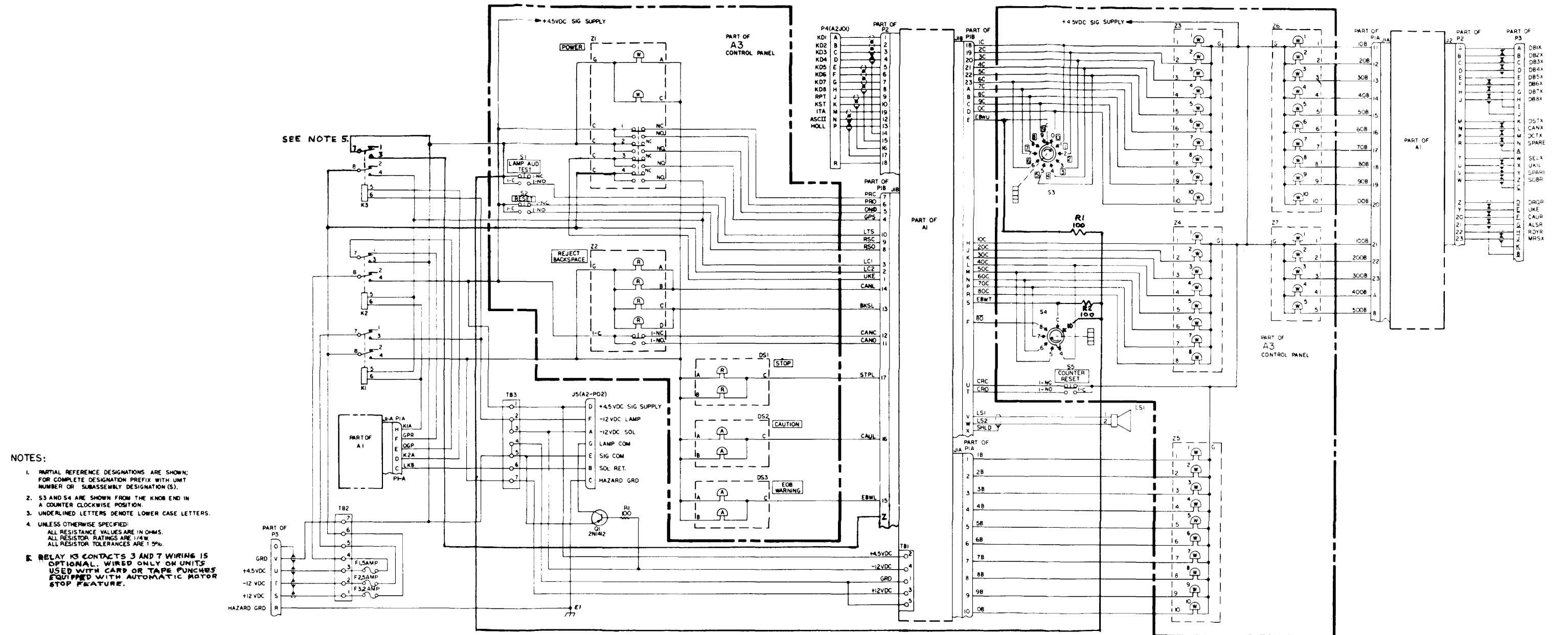


Figure 8-3. Control-keyboard, interconnection schematic diagram.

Change 4 8-2.3/(8-2.4 blank)

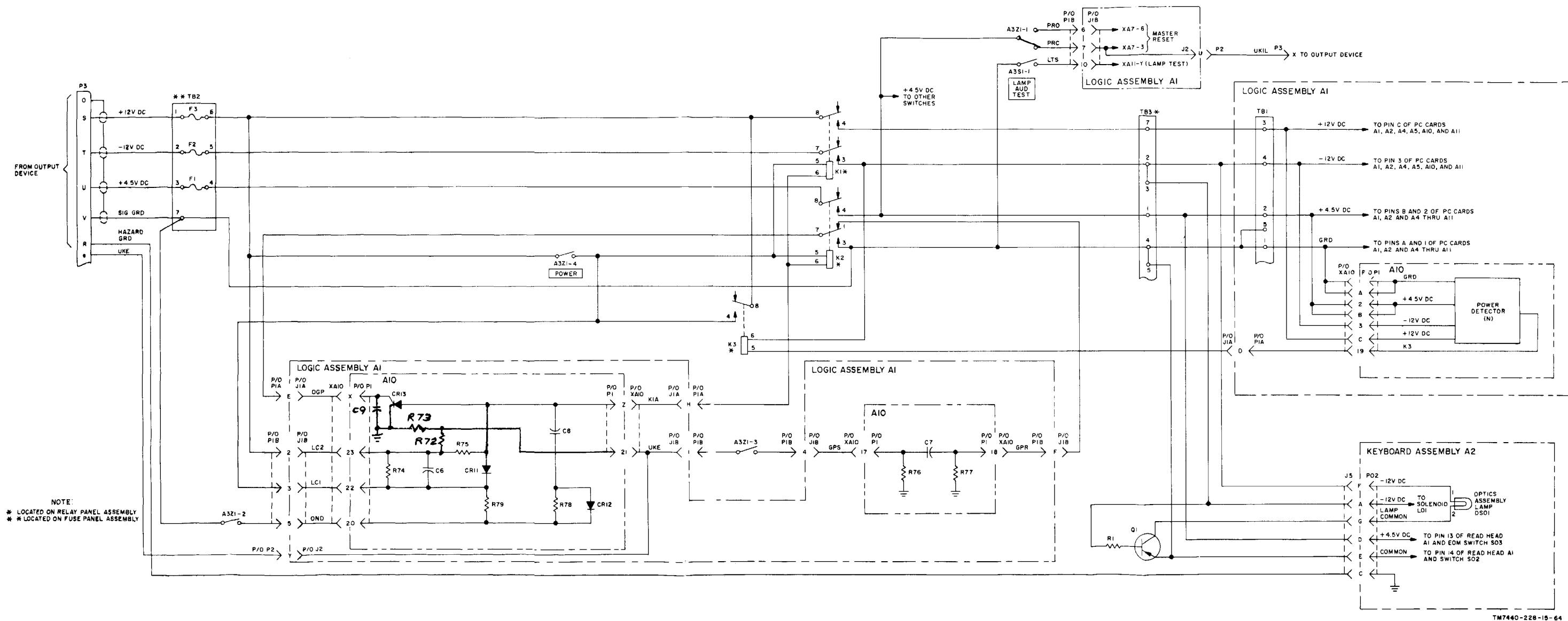
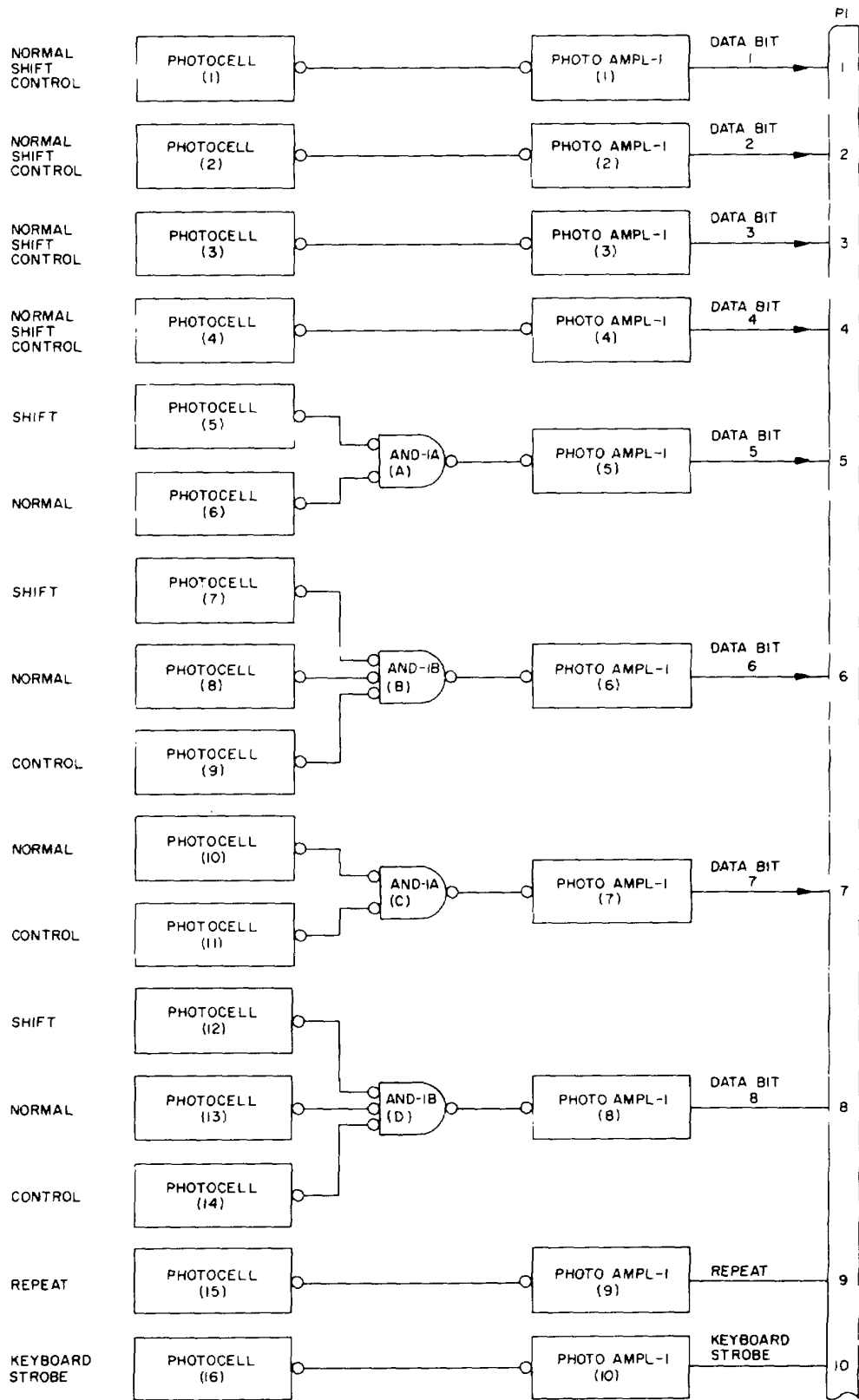


Figure 8-4. Dc circuits, schematic diagram.

NOTE: SEE PAGE 8-2 FOR FIGURE 8-5.



TM7440-228-15-66

Figure 8-6. Read head A2A1, logic diagram.

LOGIC ASSEMBLY A1 WIRE LIST

FROM	TO	FROM	TO	FROM	TO	FROM	TO
CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN
-	-	J01B-21	XA01- P	XA01- V	J01B- D	XA04- X	XA04- V
-	-	J01B-22	XA01- H	XA01- W	J01B-20	XA04- Y	XA07- R
-	-	J01B-23	XA01- X	XA01- X	J01B-23	XA04- Z	XA01-12
-	-	J02 - A	XA11- D	XA01- Y	J01B- C	XA04- Z	XA06- X
-	-	J02 - B	XA11-06	XA01- Z	J01B- K	XA04-AA	XA06-09
-	-	J02 - C	XA11- F	XA01-AA	J01B- N	XA04-AA	XA01-10
-	-	J02 - D	XA11- L	XA01-01	XA02-01	XA04-01	XA05-01
-	-	J02 - E	XA11-10	XA01-02	XA02-02	XA04-02	XA05-02
-	-	J02 - F	XA11-08	XA01-03	TE1A-04	XA04-03	XA05-03
-	-	J02 - H	XA11-15	XA01-03	J01B- W	XA04-04	J01A-19
J01A- A	XA02-23	J02 - J	XA11-13	XA01-04	XA08-03	XA04-05	XA02-05
J01A- B	XA02-15	J02 - M	XA10- N	XA01-06	TE1A-05	XA04-06	J01A-18
J01A- C	XA02-07	J02 - N	XA10-16	XA01-07	XA06- N	XA04-07	J01A-16
J01A- D	XA10-19	J02 - P	XA10-13	XA01-08	XA06- P	XA04-08	J01A-17
J01A- E	XA10- X	J02 - Y	XA11-20	XA01-09	XA06- F	XA04-10	J01A-15
J01A- F	XA10-18	J02 - U	XA07-03	XA01-10	XA04-AA	XA04-12	J01A-14
J01A- H	XA10- Z	J02 - W	XA10-04	XA01-11	XA06-16	XA04-14	J01A-12
J01A-01	XA05-16	J02 - Y	XA10-21	XA01-12	XA04- Z	XA04-15	J01A-13
J01A-02	XA05-14	J02 - Z	XA10-05	XA01-13	XA06- W	XA04-16	J01A-11
J01A-03	XA05-15	J02 -01	XA05-23	XA01-14	XA06- H	XA04-17	J01A-20
J01A-04	XA05-12	J02 -02	XA09- K	XA01-15	XA06-07	XA04-18	XA04- X
J01A-05	XA05-10	J02 -03	XA09- H	XA01-16	XA06-15	XA04-19	XA07- N
J01A-06	XA05-07	J02 -04	XA09-03	XA01-17	XA06-20	XA04-20	XA05-20
J01A-07	XA05-08	J02 -05	XA09- Y	XA01-18	XA06- Y	XA04-20	XA02- F
J01A-08	XA05-06	J02 -06	XA09- T	XA01-19	XA06- L	XA04-21	XA05-21
J01A-09	XA05-04	J02 -07	XA09-12	XA01-20	XA06- J	XA04-22	XA02-08
J01A-10	XA05-17	J02 -08	XA09-05	XA01-21	XA06- E	XA04-23	XA05-05
J01A-11	XA04-16	J02 -09	XA0B- L	XA01-22	XA06-10	XA05- A	TE1C-01
J01A-12	XA04-14	J02 -10	XA10-06	XA01-23	XA06-19	XA05- A	XA04- A
J01A-13	XA04-15	J02 -12	J02 -19	XA02- A	XA01- A	XA05- B	XA04- B
J01A-14	XA04-12	J02 -12	XA11- W	XA02- A	TE1A-01	XA05- B	TE1C-02
J01A-15	XA04-10	J02 -13	XA11- Z	XA02- B	TE1A-02	XA05- C	XA04- C
J01A-16	XA04-07	J02 -18	XA07- Z	XA01- B	XA01- B	XA05- C	TE1C-03
J01A-17	XA04-08	J02 -19	J02 -12	XA02- C	TE1B-03	XA05- V	XA07-19
J01A-18	XA04-06	J02 -20	XA10-09	XA02- E	XA08- E	XA05- W	XA07-15
J01A-19	XA04-04	J02 -21	XA10- L	XA02- F	XA04-20	XA05- W	XA05-18
J01A-20	XA04-17	J02 -22	XA10-08	XA02- J	XA02- L	XA05- X	XA07-11
J01A-21	XA02-10	J02 -23	XA11-21	XA02- K	XA10- M	XA05- Y	XA05-AA
J01A-22	XA02-22	TE1A-01	XA02- A	XA02- L	XA02- J	XA05- Z	XA07- J
J01A-23	XA02-14	TE1A-02	XA02- B	XA02- L	XA10- M	XA05-AA	XA05- Y
J01B- A	XA01- R	TE1A-03	XA01- C	XA02- M	XA02-13	XA05-AA	XA06- T
J01B- B	XA01- J	TE1A-04	XA01-03	XA02- N	XA08-09	XA05-01	XA04-01
J01B- C	XA01- Y	TE1A-05	XA01-06	XA02- P	XA07- S	XA05-01	XA06- A
J01B- D	XA01- V	TE1E-01	XA02-01	XA02-01	XA01-01	XA05-02	XA04-02
J01B- E	XA07-22	TE1E-02	XA02-02	XA02-01	TE1B-01	XA05-02	XA06- B
J01B- F	XA06-23	TE1E-03	TE1E-03	XA02-02	XA01-02	XA05-03	XA04-03
J01B- H	XA01- S	TE1E-04	XA02-03	XA02-02	TE1B-02	XA05-03	TE1C-04
J01E- J	XA01- K	TE1C-01	XA05-22	XA02-03	TE1B-04	XA05-04	J01A-09
J01E- K	XA01- Z	TE1C-01	XA05- A	XA02-05	TE1B-02	XA05-04	J01A-09
J01E- L	XA01- T	TE1C-02	XA05- B	XA02-06	XA04-05	XA05-05	XA04-23
J01E- M	XA01- L	TE1C-03	XA05- C	XA02-07	XA08- D	XA05-06	J01A-08
J01E- N	XA01-AA	TE1C-04	XA05-03	XA02-07	J01A- C	XA05-07	J01A-06
J01E- P	XA01- U	TE1D-01	XA07- A	XA02-08	XA04-22	XA05-08	J01A-07
J01E- S	XA07-23	TE1E-01	XA07- B	XA02-09	XA07-21	XA05-10	J01A-05
J01E- T	XA07-04	TE1E-02	XA09- A	XA02-10	J01A-21	XA05-12	J01A-04
J01E- U	XA07-07	TE1E-02	XA09- B	XA02-11	J01B-17	XA05-14	J01A-02
J01E- V	XA01- E	TE1F-01	XA11- A	XA02-11	XA11-AA	XA05-15	J01A-03
J01E- W	XA01-03	TE1F-02	XA11- B	XA02-12	J01B-16	XA05-16	J01A-01
J01B- X	J01E-AA	TE1F-03	XA10- C	XA02-12	XA11-19	XA05-17	J01A-10
J01E-AA	J01B- X	TE1F-04	XA10-03	XA02-13	XA02- M	XA05-18	XA05- W
J01B-01	XA10-21	XA11-01	XA11-01	XA02-14	J01A-23	XA05-19	XA09-11
J01B-02	XA10-23	TE1G-01	XA11-02	XA02-15	J01A- B	XA05-20	XA04-20
J01B-03	XA10-22	TE1G-02	XA11-02	XA02-16	J01B-14	XA05-20	XA07- M
J01B-04	XA10-17	TE1G-03	XA11- C	XA02-16	XA11-23	XA05-21	XA04-21
J01B-05	XA10-20	TE1G-04	XA11-03	XA02-17	XA11- U	XA05-21	XA07- M
J01B-06	XA07-06	XA01- A	XA02- A	XA02-18	J01B-15	XA05-22	TE1C-01
J01B-07	XA07-03	XA01- B	XA02- B	XA02-18	XA11- V	XA05-23	XA07- T
J01B-08	XA07- C	XA01- C	TE1A-03	XA02-19	XA07-18	XA06- A	XA07- A
J01B-09	XA07-05	XA01- D	XA02-19	XA02-19	XA01- D	XA06- A	XA05-01
J01E-10	XA08-04	XA01- E	J01B- V	XA02-20	J01B-13	XA06- B	XA07- 8
J01E-11	XA08- T	XA01- F	J01B-19	XA02-20	XA11-16	XA06- B	XA05-02
J01B-12	XA08-23	XA01- H	J01B-22	XA02-21	XA11- T	XA06- E	XA08- F
J01B-13	XA02-20	XA01- J	J01B- B	XA02-22	J01A-22	XA06- E	XA01-21
J01B-14	XA02-16	XA01- K	J01B- J	XA02-23	J01A- A	XA06- F	XA01-09
J01B-15	XA02-18	XA01- L	J01B- M	XA04- A	XA05- A	XA06- H	XA01-14
J01E-16	XA02-12	XA01- N	J01B-18	XA04- B	XA05- B	XA06- J	XA09-08
J01E-17	XA02-11	XA01- P	J01B-21	XA04- C	XA05- C	XA06- J	XA01-20
J01B-18	XA01- N	XA01- R	J01B- A	XA04- V	XA04- X	XA06- K	XA06- Z
J01B-19	XA01- F	XA01- S	J01B- H	XA04- W	XA07- F	XA06- L	XA01-19
J01B-20	XA01- W	XA01- T	J01B- L	XA04- X	XA04-18	XA06- N	XA01-07
		XA01- U	J01B- P	XA04- X	XA08-06	XA06- N	XA09-06

J01B-Z *

J02-R

J02-R *

J01B-Z

*Used with automatic motor stop feature.

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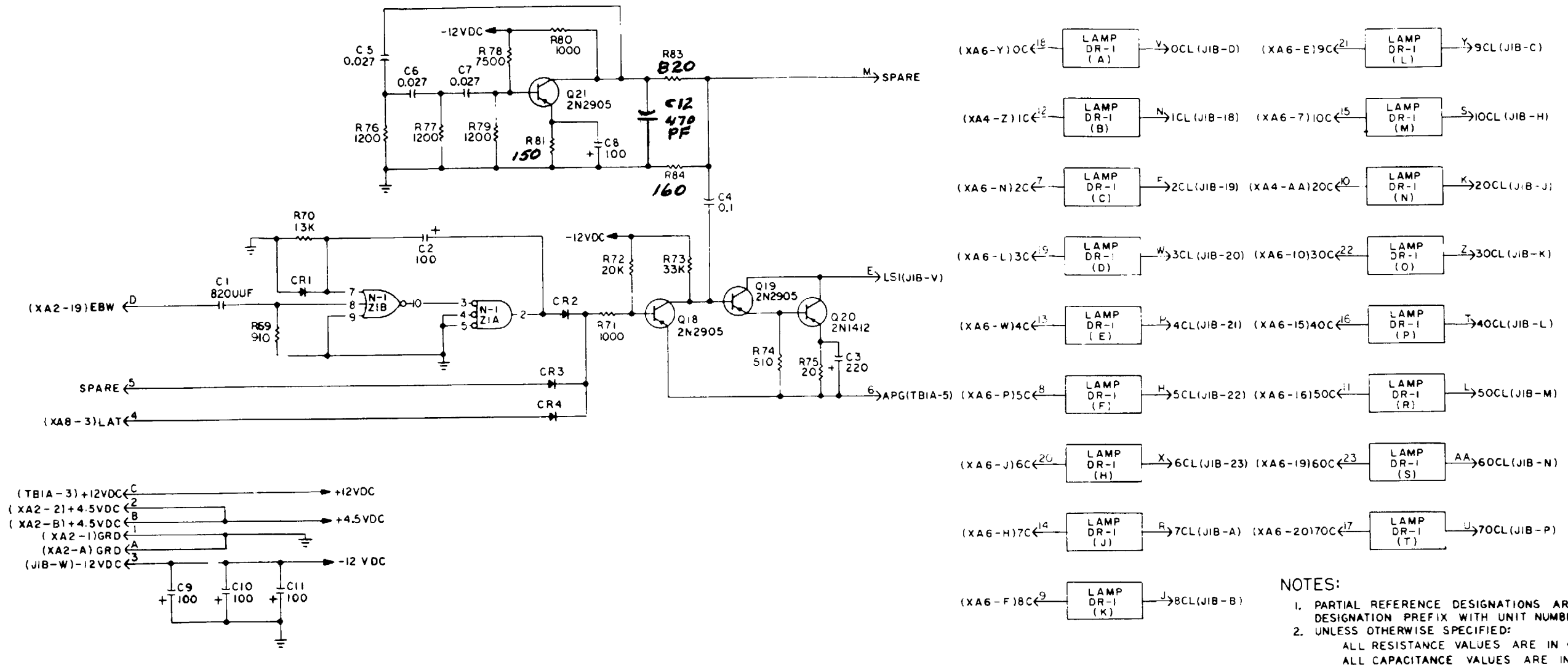
Figure 8-7. Logic assembly A1, interconnection chart (part 1 of 2).

LOGIC ASSEMBLY A1 WIRE LIST (Cont)

FROM	TO	FROM	TO	FROM	TO	FROM	TO
CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN
XA06- P	XA01-08	XA07-18	XA02-19	XA05-04	XA11-14	XA11- 2	XA11- P
XA06- T	XA05-AA	XA07-19	XA06- Z	XA05-05	J02 -08	XA11-AA	XA02-11
XA06- T	XA07- V	XA07-19	XA05- V	XA05-06	XA06- N	XA11-01	XA10-01
XA06- T	XA10- U	XA07-20	XA11- X	XA05-07	XA06-07	XA11-01	TB1G-01
XA06- U	XA07-17	XA07-21	XA08-05	XA05-08	XA06- J	XA11-02	XA10-02
XA06- V	XA08- K	XA07-21	XA02-09	XA05-09	XA06- W	XA11-02	TB1G-02
XA06- W	XA01-13	XA07-22	J01B- E	XA05-10	XA11- E	XA11-03	TB1G-04
XA06- W	XA09-09	XA07-23	J01B- S	XA05-11	XA05-19	XA11-04	XA09- X
XA06- X	XA09-17	XA0E- A	XA05- A	XA05-12	J02 -07	XA11-05	XA09- J
XA0E- X	XA04- Z	XA0E- A	XA07-01	XA05-16	XA11-16	XA11-06	J02 - B
XA0E- Y	XA08-18	XA0E- B	XA09- B	XA05-17	XA06- X	XA11-07	XA08-05
XA0E- Y	XA01-1B	XA0E- B	XA07-02	XA05-18	XA07-16	XA11-0E	J02 - F
XA06- Z	XA07-19	XA0E- C	XA10-07	XA05-19	XA08-21	XA11-09	XA09- U
XA06- Z	XA06- K	XA0E- D	XA02-06	XA05-20	XA07-13	XA11-10	J02 - E
XA0E-AA	XA08- H	XA0E- E	XA02- E	XA05-21	XA08-07	XA11-11	XA09- Z
XA06-01	XA07-01	XA0E- F	XA06- E	XA05-23	J02 -01	XA11-12	XA09- E
XA0E-02	XA07-02	XA0E- H	XA06-AA	XA1G- A	XA11- A	XA11-13	J02 - J
XA06-07	XA09-07	XA0E- J	XA06-21	XA1G- A	XA09-01	XA11-14	XA09-04
XA0E-07	XA01-15	XA0E- K	XA06- V	XA1G- B	XA09-02	XA11-15	J02 - H
XA0E-09	XA04-AA	XA0E- L	J02 -09	XA1G- B	XA11- B	XA11-16	XA09-16
XA06-10	XA01-22	XA0E- M	XA07- P	XA1G- C	TB1F-03	XA11-17	XA08-20
XA06-15	XA01-16	XA0E- N	XA10- F	XA1G- D	XA08-12	XA11-18	XA02-20
XA0E-16	XA01-11	XA0E- R	XA11- P	XA1G- E	XA08-14	XA11-19	XA02-12
XA0E-19	XA01-23	XA0E- R	XA07-09	XA1G- F	XA08- N	XA11-20	J02 - T
XA06-20	XA01-17	XA0E- S	XA07-17	XA1G- H	XA11- J	XA11-21	J02 -23
XA0E-21	XA08- J	XA0E- T	J01B-11	XA1G- L	J02 -21	XA11-22	XA11- R
XA0E-22	XA07- K	XA0E- Y	XA07-14	XA1G- M	XA02- K	XA11-22	XA07- U
XA0E-23	J01B- F	XA0E- Z	XA07-10	XA1G- M	XA02- L	XA11-23	XA02-16
XA07- A	XA06- A	XA0E-AA	XA07- H	XA1G- N	J02 - M		
XA07- A	TB1D-01	XA0E-01	XA09-01	XA1G- T	XA08-16		
XA07- B	XA06- B	XA0E-02	XA09-02	XA1G- U	XA06- T		
XA07- B	TB1D-02	XA0E-03	XA01-04	XA1G- X	J01A- E		
XA07- C	J01B-08	XA0E-04	XA11- Y	XA1G- Z	J01A- H		
XA07- D	XA08-12	XA0E-04	J01B-10	XA1G- 2	XA11-01		
XA07- E	XA10-10	XA0E-05	XA07-21	XA1G-01	XA11-02		
XA07- F	XA04- W	XA0E-05	XA11-07	XA1G-02	TB1F-04		
XA07- H	XA08-AA	XA0E-06	XA04- X	XA1G-04	J02 - W		
XA07- J	XA05- Z	XA0E-07	XA07- R	XA1G-05	J02 - Z		
XA07- K	XA06-22	XA0E-07	XA09-21	XA1G-06	J02 -10		
XA07- L	XA08-22	XA0E-08	XA11- S	XA1G-07	XA08- C		
XA07- M	XA05-20	XA0E-09	XA02- N	XA1G-08	J02 -22		
XA07- M	XA05-21	XA0E-10	XA07-AA	XA1G-09	J02 -20		
XA07- N	XA04-19	XA0E-11	XA09-AA	XA1G-10	XA07- E		
XA07- N	XA07- X	XA0E-11	XA07- S	XA1G-11	XA09-AA		
XA07- P	XA08- M	XA0E-11	XA10-12	XA1G-12	XA08-11		
XA07- R	XA08-07	XA0E-12	XA10- D	XA1G-13	J02 - P		
XA07- R	XA04- Y	XA0E-12	XA07- D	XA1G-14	XA07-08		
XA07- S	XA02- P	XA0E-14	XA10- E	XA1G-15	XA07-08		
XA07- S	XA08-11	XA0E-14	XA07- W	XA1G-16	J02 - N		
XA07- T	XA05-23	XA0E-15	XA07-12	XA1G-17	J01B-04		
XA07- U	XA11-22	XA0E-16	XA10- T	XA1G-18	J01A- F		
XA07- V	XA06- T	XA0E-16	XA07- V	XA1G-19	J01A- D		
XA07- V	XA08-16	XA0E-18	XA06- Y	XA1G-20	J01B-05		
XA07- W	XA08-14	XA0E-19	XA09- W	XA1G-21	J02 - Y		
XA07- X	XA07- N	XA0E-20	XA11-17	XA1G-21	J01B-01		
XA07- Y	XA08-20	XA0E-20	XA07- Y	XA1G-22	J01B-03		
XA07- Z	J02 -18	XA0E-21	XA09-19	XA1G-23	J01B-02		
XA07-AA	XA08-10	XA0E-22	XA07- L	XA11- A	XA10- A		
XA07-01	XA06-01	XA0E-23	J01B-12	XA11- A	TB1F-01		
XA07-01	XA08- A	XA05- A	XA08- A	XA11- B	XA10- B		
XA07-02	XA06-02	XA05- A	TB1E-01	XA11- B	TB1F-02		
XA07-02	XA08- B	XA05- B	XA08- B	XA11- C	TB1G-03		
XA07-03	J02 - U	XA05- B	TB1E-02	XA11- D	J02 - A		
XA07-03	J01B-07	XA05- E	XA11-12	XA11- E	XA09-10		
XA07-04	J01B- T	XA05- H	J02 -03	XA11- F	J02 - C		
XA07-05	J01B-09	XA05- J	XA11-05	XA11- J	XA10- H		
XA07-06	J01B-06	XA05- K	J02 -02	XA11- L	J02 - U		
XA07-07	J01B- U	XA05- T	J02 -06	XA11- P	XA06- R		
XA07-08	XA10-14	XA05- U	XA11-09	XA11- P	XA11- Z		
XA07-08	XA10-15	XA05- W	XA08-19	XA11- R	XA11- W		
XA07-09	XA08- R	XA05- X	XA11-04	XA11- R	XA11-22		
XA07-10	XA08- Z	XA05- Y	J02 -05	XA11- S	XA08-08		
XA07-11	XA05- X	XA05- Z	XA11-11	XA11- T	XA02-21		
XA07-12	XA08-15	XA05-AA	XA08-11	XA11- U	XA02-17		
XA07-13	XA09-20	XA05-AA	XA10-11	XA11- V	XA02-18		
XA07-14	XA08- Y	XA05-01	XA08-01	XA11- W	XA11- R		
XA07-15	XA05- W	XA05-01	XA10- A	XA11- W	J02 -12		
XA07-16	XA09-18	XA05-02	XA06-02	XA11- X	XA07-20		
XA07-17	XA06- U	XA05-0E	XA10- B	XA11- Y	XA08-04		
XA07-17	XA08- S	XA05-03	J02 -04	XA11- Z	J02 -13		

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Figure 8-7. Logic assembly A1, interconnection chart (part 2 of 2).



POWER INPUT PINS	
	21
+4.5VDC	6
GRD	1

Figure 8-8. PC card A1 (No. A65309-001), schematic diagram.

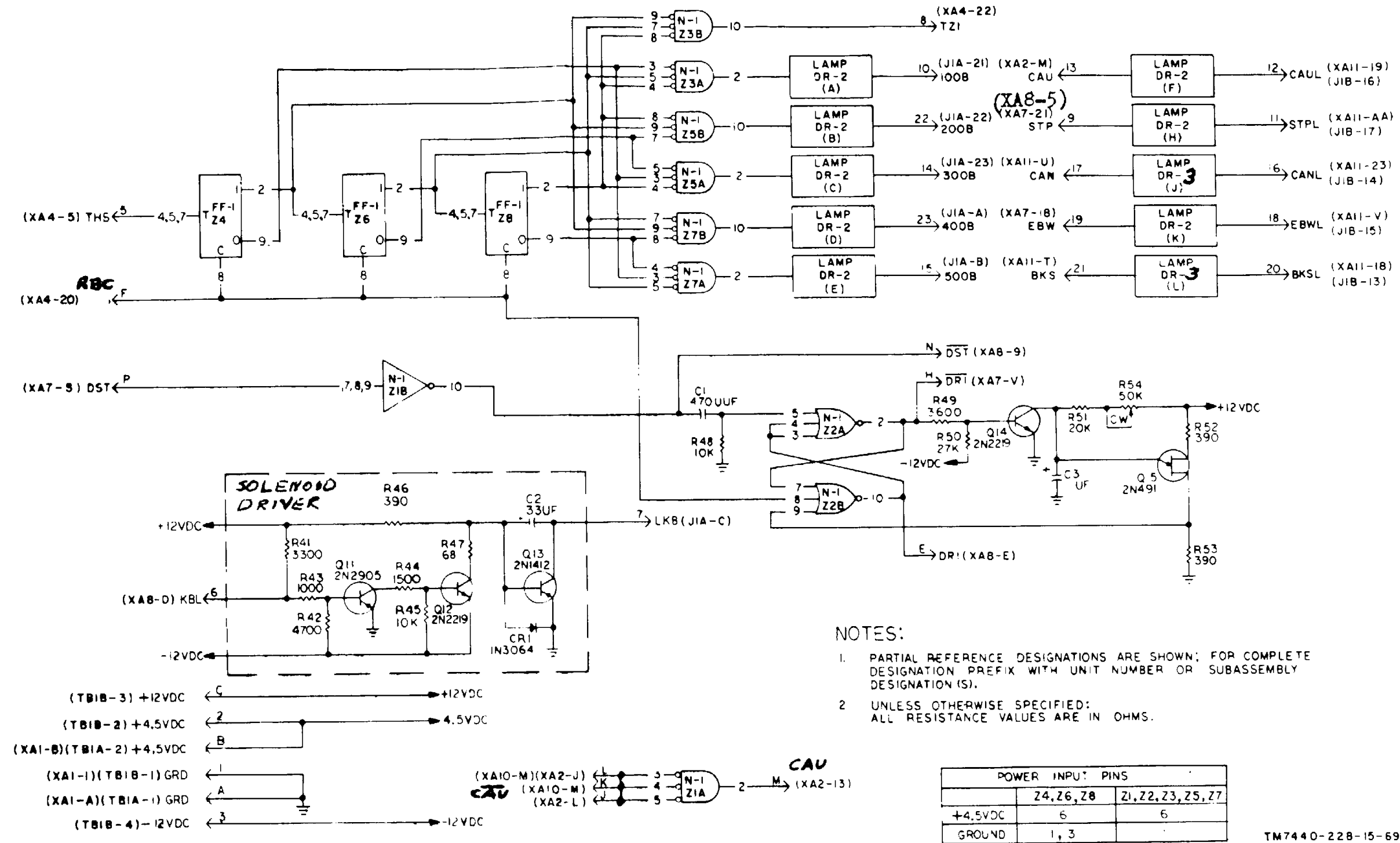


Figure 8-9. PC card A2 (No. A65313-001), schematic diagram.

Change 2 8-9/(8-10 blank)

NOTES:
 1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
 2. UNLESS OTHERWISE SPECIFIED ALL RESISTANCE VALUES ARE IN OHMS.

POWER INPUT PINS		
	Z1 THRU Z8	Z9 THRU Z12
+4.5 VDC	6	6
GRD	1	1 & 3

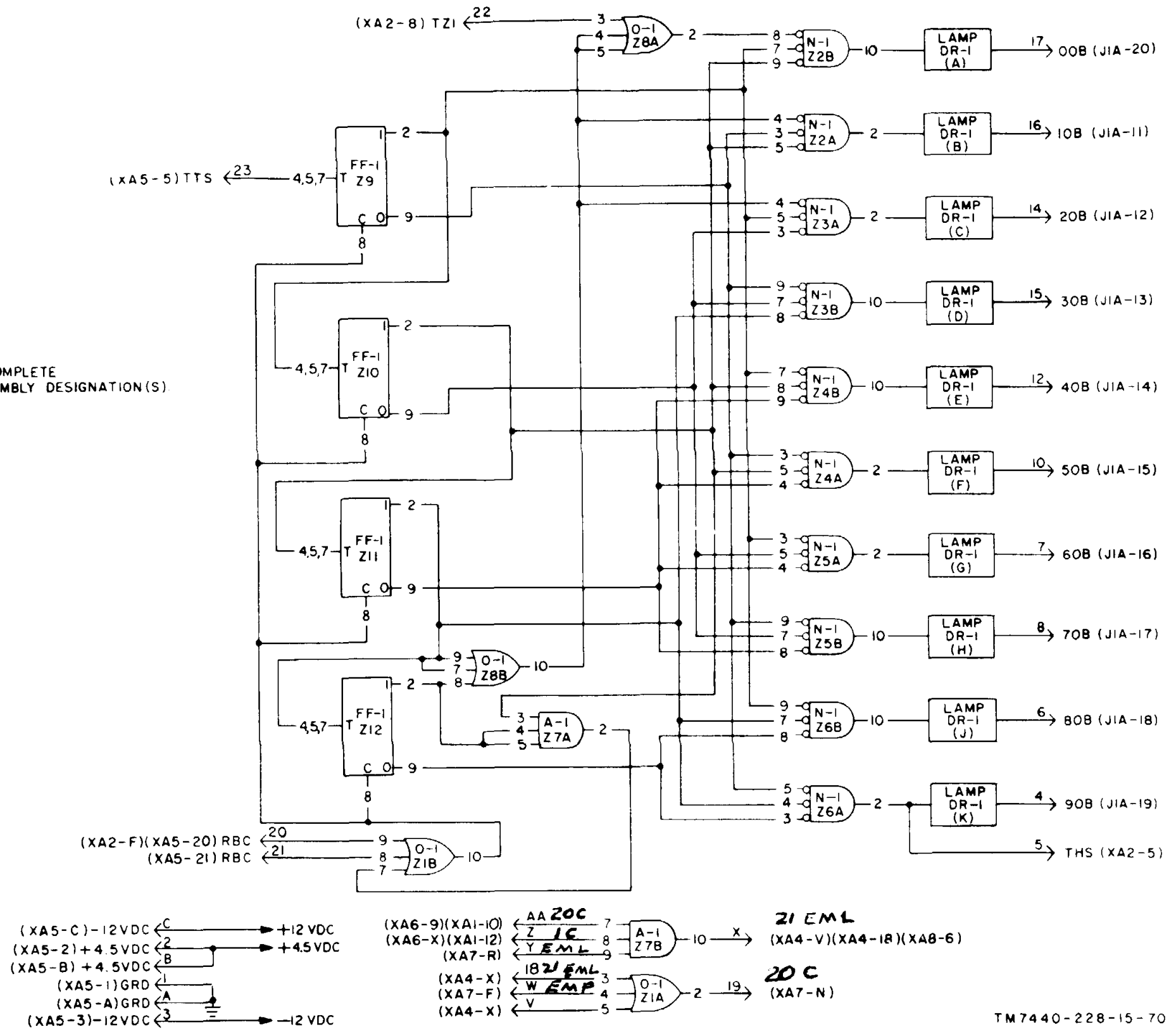


Figure 8-10. PC card A4 (No. A65305-001), schematic diagram.

Change 2 8-11 (8-12 blank)

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).
2. UNLESS OTHERWISE SPECIFIED ALL RESISTANCE VALUES ARE IN OHMS.

POWER INPUT PINS		
	Z1 THRU Z8	Z9 THRU Z12
+4.5VDC	6	6
GRD	1	1 & 3

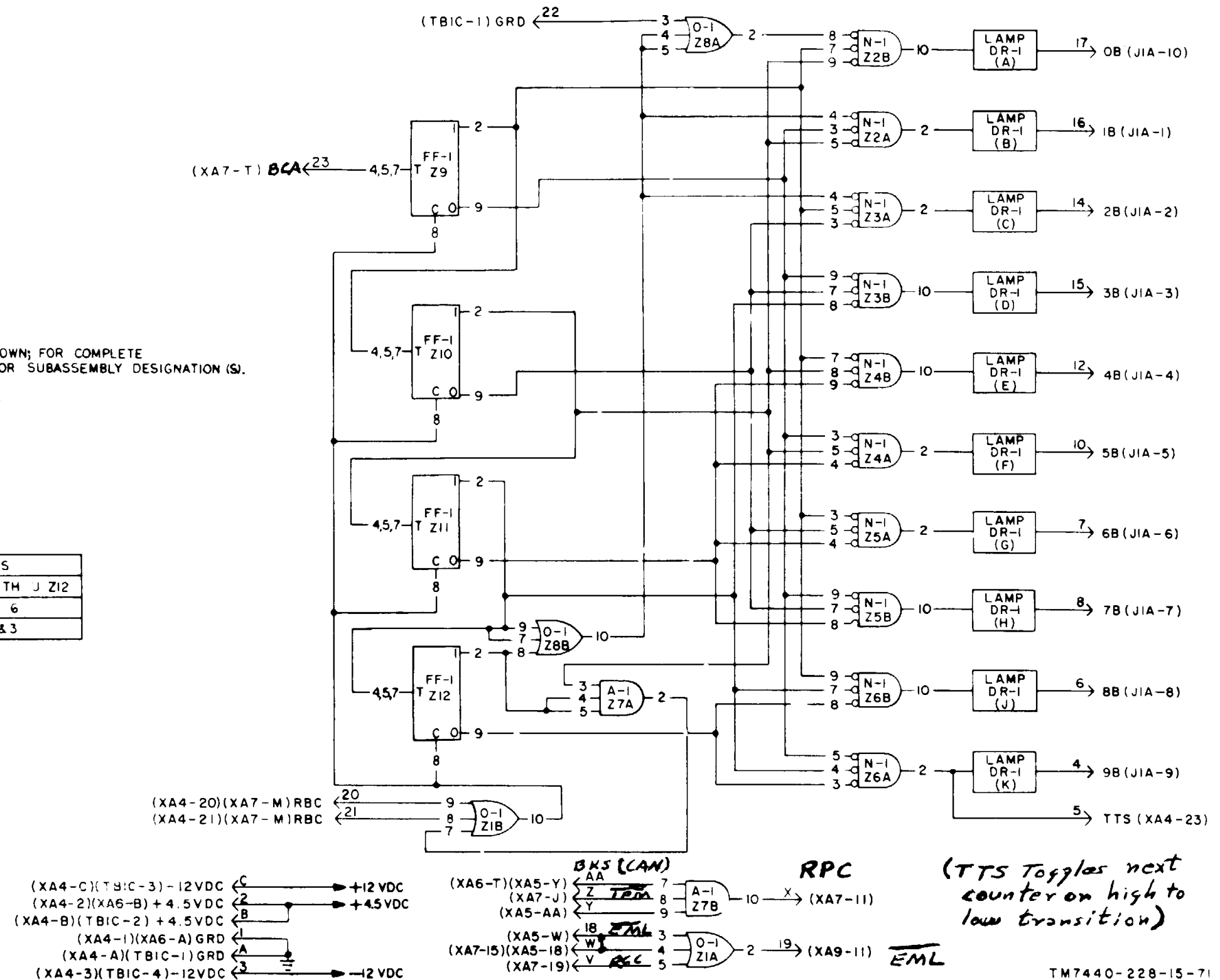


Figure 8-11. PC card A5 (No. A65305-001), schematic diagram.

Change 1 8-13

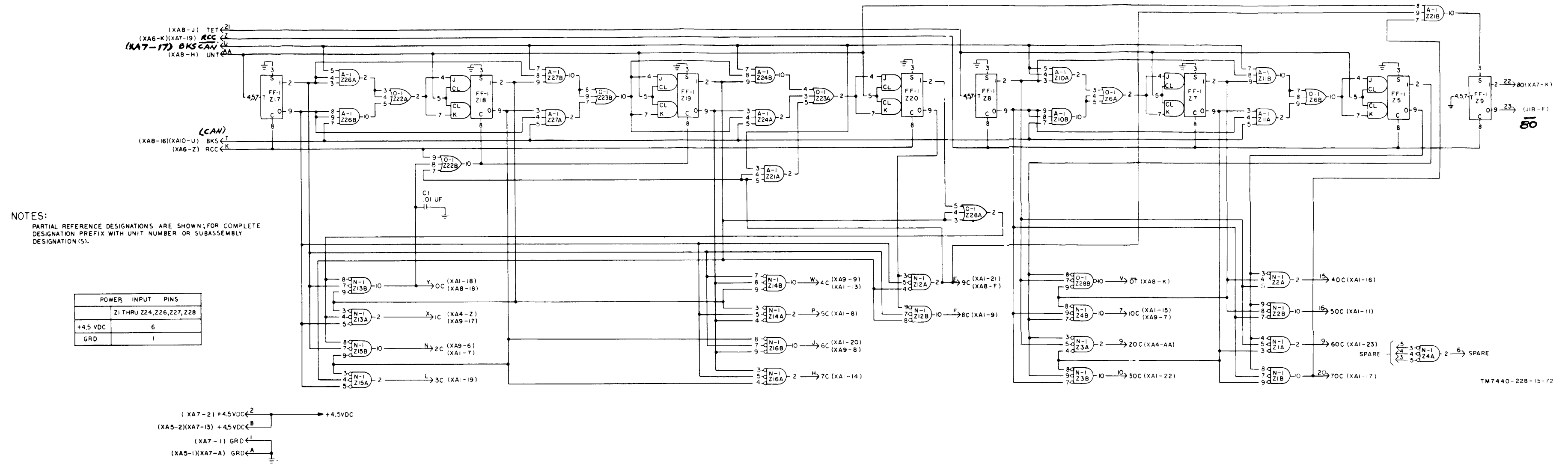


Figure 8-12. PC card A6 (No. A65317-001), schematic diagram.

Change 1 8-15

NOTES:

- PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
- UNLESS OTHERWISE SPECIFIED ALL RESISTANCE VALUES ARE IN OHMS.

POWER INPUT PINS			
	Z2,Z4,Z6,Z8 THRU Z12	Z7	Z13,Z14,Z18
+ 4.5VDC	6	6	6
GRD	1	1,3&8	1&3

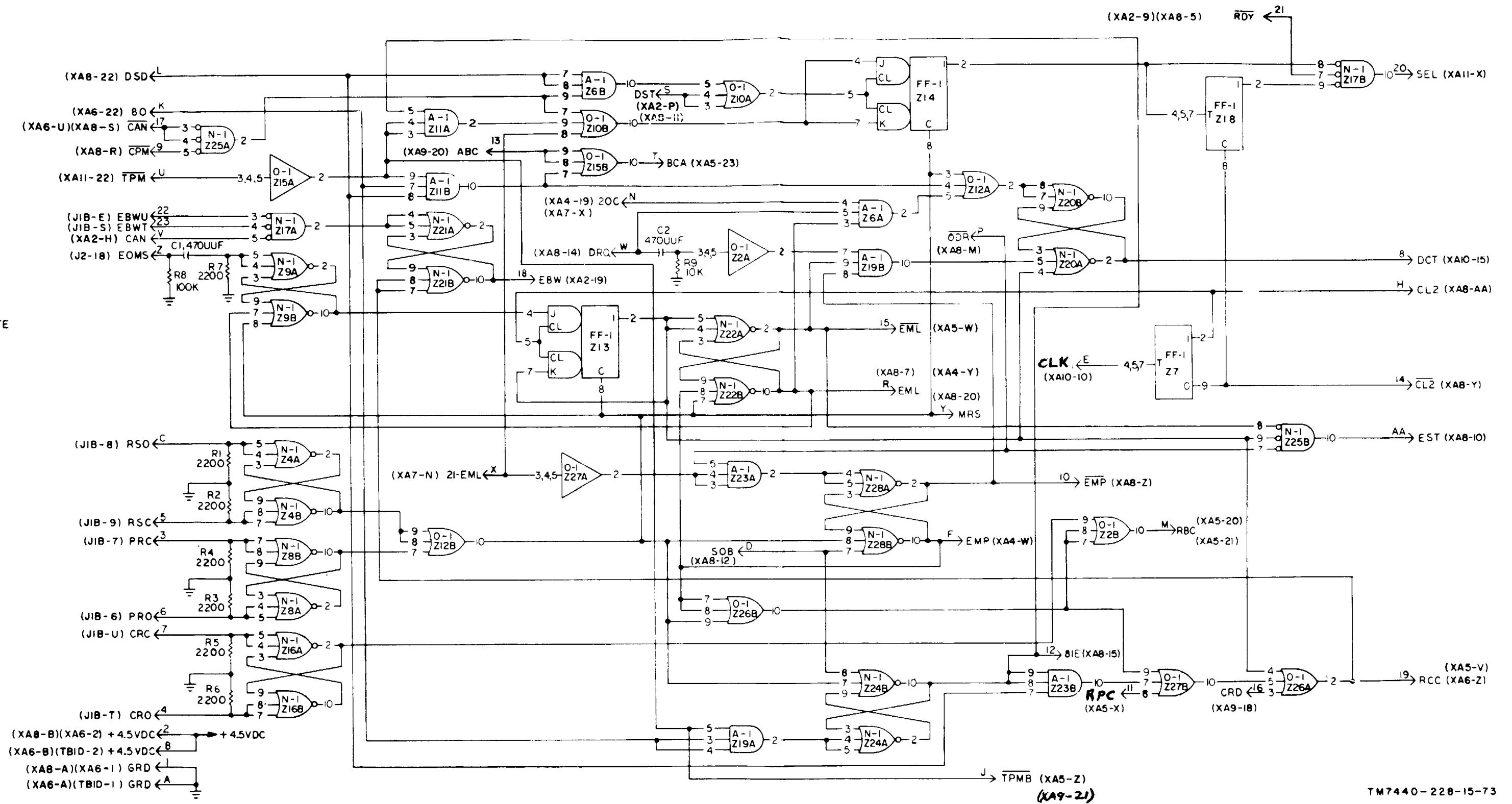


Figure 8-13. PC card A7 (No. A65329-001), schematic diagram.

- NOTES:**
- PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
 - UNLESS OTHERWISE SPECIFIED: ALL RESISTANCE VALUES ARE 2200 OHMS.

POWER INPUT PINS		
	Z1 THRU Z13, Z14, Z15, Z16, Z18, Z19, Z17, Z21	
+4.5VDC	6	6
GRD	1	1&3

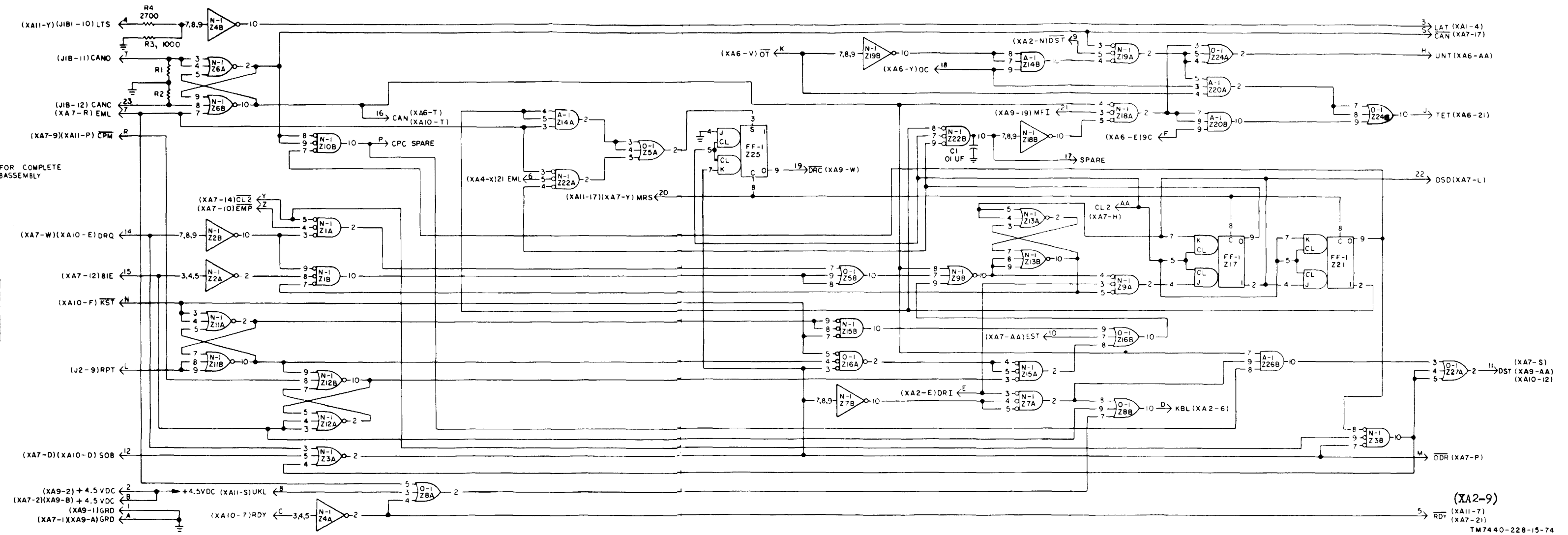


Figure 8-14. PC card A8 (No. A65321-001), schematic diagram.

Change 2 8-19 (8-20 blank)

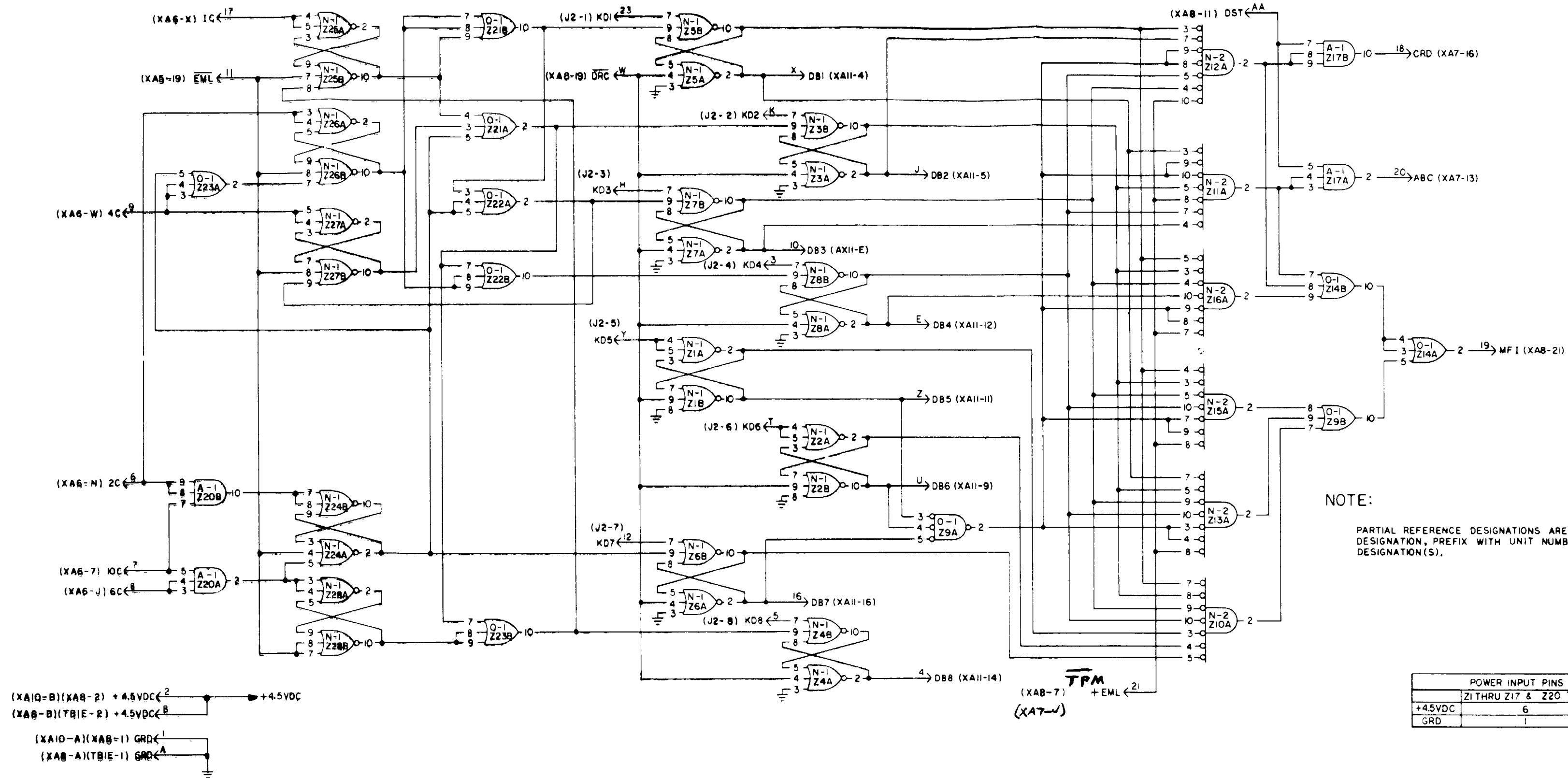
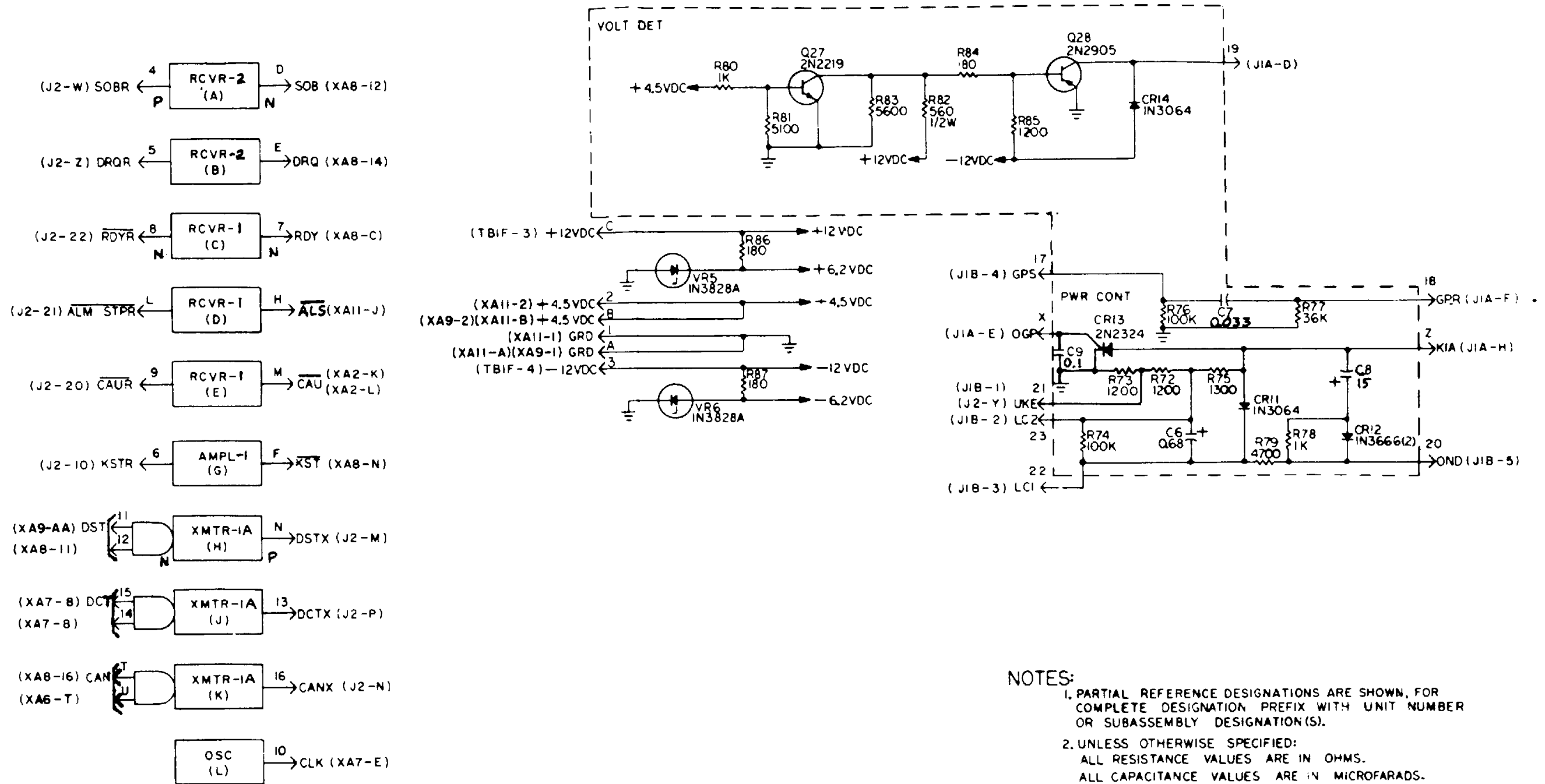


Figure 8-15. PC card A9 (No. A65325-001), schematic diagram.



- NOTES:
- PARTIAL REFERENCE DESIGNATIONS ARE SHOWN, FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
 - UNLESS OTHERWISE SPECIFIED:
ALL RESISTANCE VALUES ARE IN OHMS.
ALL CAPACITANCE VALUES ARE IN MICROFARADS.

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Figure 8-16. PC card A10 (No. A65301-001), schematic diagram.

Change 4 8-23/(8-24 blank)

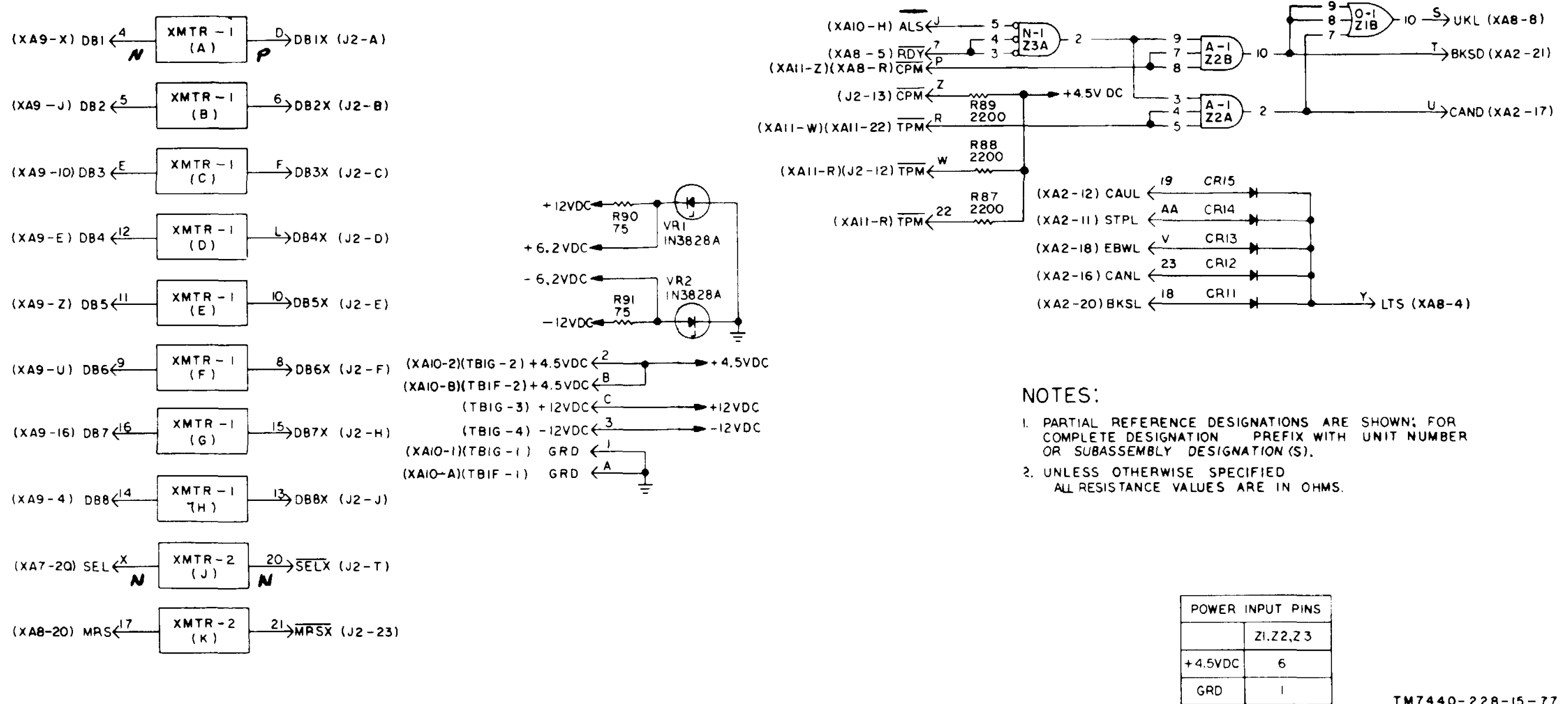


Figure 8-17. PC card A11 (No. A65333-001), schematic diagram.

Change 1 8-25

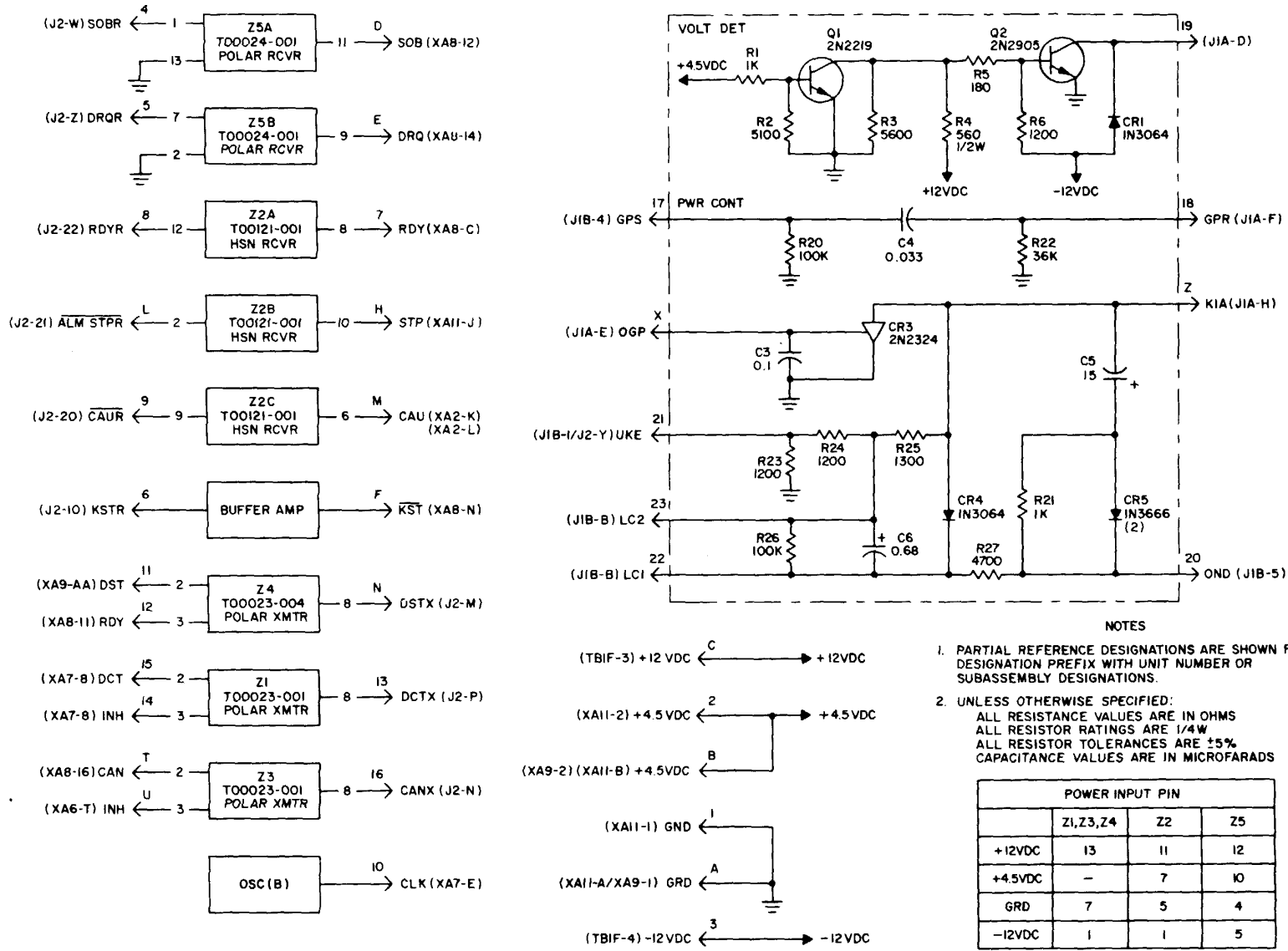
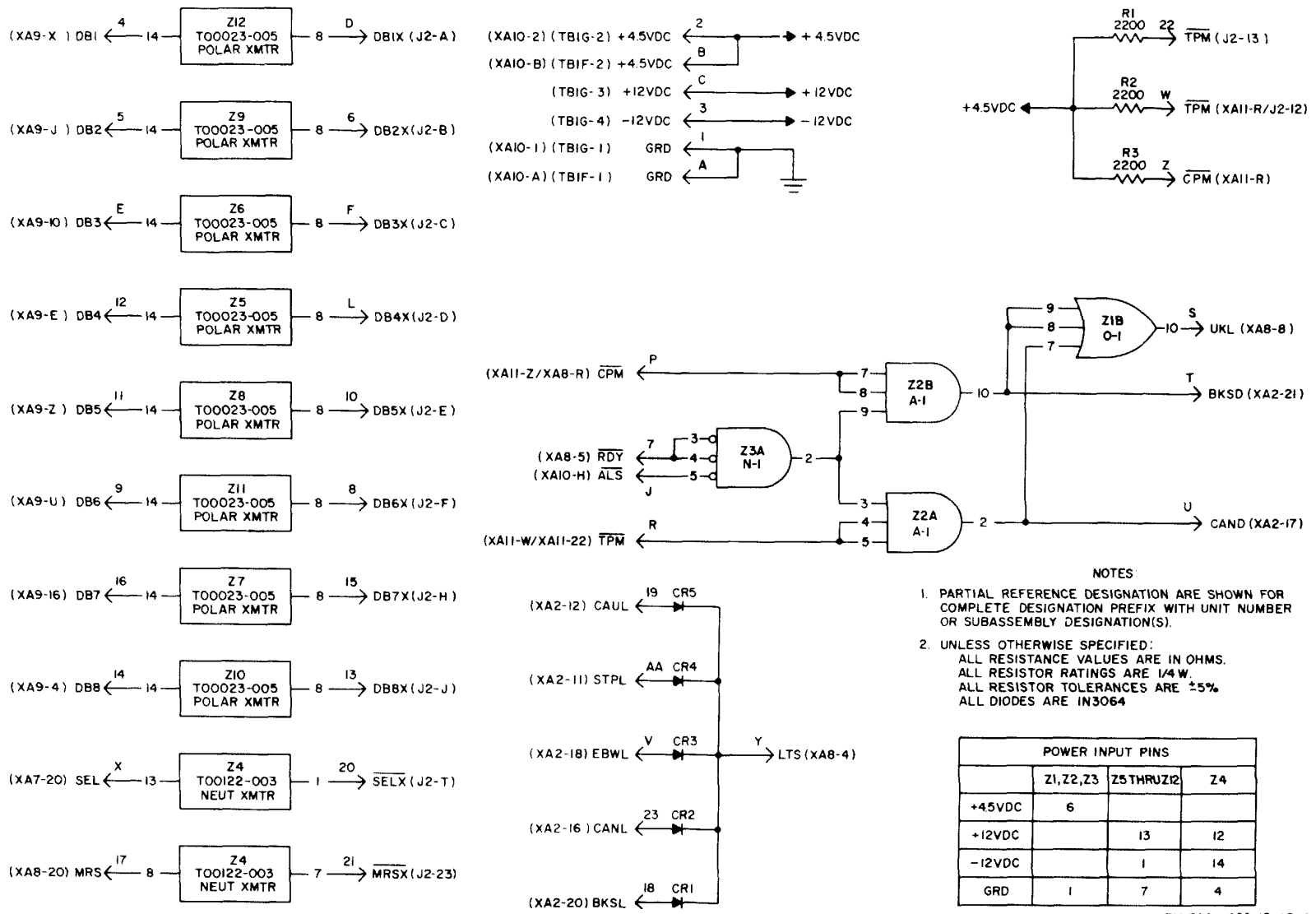


Figure 8-16.1. PC card A10 (A65341-001), schematic diagram.

Change 2 8-24.1



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Figure 8-16.2. PC card A11 (A65S337-001), schematic diagram.

Change 2 8-24.2

**APPENDIX A
REFERENCES**

The following publications apply to operations and maintenance of the equipment covered in this manual:

- DA Pam 310-4 Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.
- DA Pam 310-7 U.S. Army Equipment Index of Modification Work Orders.
- SB 38-100..... Preservation, Packaging and Packing Materials, Supplies, and Equipment Used by the Army.
- TB SIG 22 Solder and Soldering.
- TB 746-10 Field Instructions for Painting and Preserving Electronics Command Equipment.
- TM 38-750 The Army Maintenance Management System (TAMMS).
- TM 11-7440-238-15 TO 31W4- Operator, Organizational, Direct Support, General Support, and Depot
4-1 NAVSHIPS 0967-32..... Maintenance Manual, Digital Subscriber Terminal Sets AN/FYA-71 (V) 1
0100. through AN/FYA-71(V)6.
- NW 00-15PA-1..... Technical Inspection Manual, Soldering for Electric and Electronic Appli-
cation (Navy).
- TO 0(-251234..... General Shop Practice Requirements for the Repair, Maintenance, and Test
of Electronic Equipment.
- TM 11-7440-239-15 TO 31W4- Operator, Organizational, DS, GS, and Depot Maintenance Manual,
4-11 NAVSHIPS 096'7-34 AUTODIN Digital Subscriber Terminals.
0110.
- TB SIG 355-1..... Depot Inspection Standard for Repaired Signal Equipment.
- TB SIG 355-2..... Depot Inspection Standard for Refinishing Repaired Signal
Equipment.
- TB SIG 355-3..... Depot Inspection Standard for Moisture and Fungus Resist-
ant Treatment.

Change 4 A-1 /(A2 blank)

APPENDIX B

BASIC ISSUE ITEMS

Section I. INTRODUCTION

B-1. General

This appendix lists items for Control-Keyboard C7185/G, the component items comprising it, and the items which accompany it, or are required for installation, operation, or operator's maintenance.

B-2. Explanation of Columns

An explanation of the columns in section II is given below.

a. *Source, Maintenance, and Recoverability Codes (col. 1).*

(1) Source code, column 1a. The selection status and source for the listed item is noted here. The source code used is:

<i>Code</i>	<i>Explanation</i>
P	Applies to repair parts which are stocked in or supplied from the GSA/DSA, or Army Supply System, and authorized for use at indicated maintenance categories.
G	Applies to major assemblies that are procured with PEMA funds for initial issue only to be used as exchange assemblies at DSU and GSU category. These assemblies will not be stocked above DSU and GSU category or returned to depot supply category.

(2) Maintenance code, column 1b. The lowest category of maintenance authorized to install the listed item is noted here. The maintenance code used is as follows:

<i>Code</i>	<i>Explanation</i>
H	General Support Maintenance Category (Using organization authorized to perform H category maintenance on this equipment)

(3) Recoverability code, column 1C. The information in this column indicates whether unserviceable items should be returned for recovery or salvage. Recoverability codes and their explanations are as follows:

Note. When no code is indicated in the recoverability column, the part will be considered expendable.

<i>Code</i>	<i>Explanation</i>
R	Applies to repair parts and assemblies that are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis.

b. *Federal Stock Number, Column 2.* The Federal stock number for the item is indicated in this column.

c. *Description, Column 3.* The Federal item name, a five digit manufacturer's code, and a part number are included in this column.

d. *Unit of Issue, Column 4.* The unit used as a basis of issue (e.g., ea, pr, ft, yd, etc.) is noted in this column.

e. *Quantity Incorporated in Unit Pack, Column 5.* Not used.

f. *Quantity Incorporated in Unit, Column 6.* The total quantity of the item used in the equipment is given in this column.

g. *Quantity Authorized, Column 7.* The total quantity of an item required to be on hand and necessary for the operation and maintenance of the equipment is given in this column.

h. *Illustrations, Column 8.*

(1) Figure number, column 8a. The number of the illustration in which the item is shown is indicated in this column.

(2) Item or symbol number, column 8b. Not used.

B-3. Federal Supply Codes

This paragraph lists the Federal supply code with the associated manufacturer's name.

<i>Code</i>	<i>Manufacturer</i>
08806	Cleveland Electric Co.
21282	Control Data Corp.
58189	General Dynamics-Electronics.
81349	MILSPEC item.

Section II. BASIC ISSUE ITEMS LIST

(1)			BASIC ISSUE ITEMS LIST						(4)	(5)	(6)	(7)	(8)		
(A) S O U R C E C D	(B) M A I N T. C D	(C) R E C. C O D E	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION						UNIT OF ISSUE	QTY INC IN UNIT PACK	QTY INC IN UNIT	QTY AUTH	ILLUSTRATIONS	
				MODEL										(A)	(B)
				1	2	3	4	5	6					FIGURE NUMBER	ITEM OR SYMBOL
			74409976213												
								PART 1 - OPERABLE EQUIPMENT							
								CONTROL, KEYBOARD; C-7185/G; 58189; Mfr. Part No. A64825-001 Electrical Data: +4.5 VDC, -12 VDC Technical Data: The control Circuitry Assembly accepts the 8 level ASC11 data from the keyboard mechanism and implements the required control signal with this data to properly interface the universal keyboard.	EA		1		1-1		
								Technical Manual, TM 11-7440-228-15	EA		1	1			
								PART 2 - RUNNING SPARES							
P	H		59204746125					FUSE, CARTRIDGE: 81349; Mfr. Part No. F02A250V2AS	EA		2	5	4-5	3	
P	H		59200602424					FUSE, CARTRIDGE; 81349; Mfr. Part No. F02A250V5AS	EA		4	3	4-5	2	
P	H		62409291123					LAMP, INCANDESCANT; 08806; Mfr. Part No. 330	EA		12	4	4-4	18	
P	H		62401680161					LAMP, INCANDESCANT; 21282; Mfr. Part No. 94880100 08806 GE1933	EA		1	1	4-10	1	
P	H		62401155043					LAMP, PROJECTION; 05464; Mfr. Part No. C1	EA		55	1	4-4	10.1	

APPENDIX C

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General

This appendix provides a summary of the maintenance operations covered in the equipment maintenance manual for Control-Keyboard C-7185/G. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

C-2. Explanation of Format for Maintenance Allocation Chart

a. Group Number. Group numbers correspond to the reference designation prefix assigned in accordance with ASA Y32.16, Electrical and Electronics Reference Designations. They indicate the relation of listed items to the next higher assembly.

b. Component Assembly Nomenclature. This column lists the item names of components units, assemblies, subassemblies, and modules on which maintenance is authorized.

c. Maintenance Function. This column indicates the maintenance category at which performance of the specific maintenance function is authorized. Authorization to perform a function at any category also includes authorization to perform that function at higher categories. The codes used represent the various maintenance categories as follows:

Code *Maintenance category*

- C.....Operator/Crew.
- H.....Central Support Maintenance.
- D.....Depot Maintenance.

d. Tools and Equipment. The numbers appearing in this column refer to specific tools and equipment which are identified by these numbers in section III.

e. Remarks. Self-explanatory.

C-3. Explanation of Format for Tool and Test Equipment Requirements

The columns in the tool and test equipment requirements chart are as follows:

a. Tools and Equipment. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tools for the maintenance function.

b. Maintenance Category. The codes in this column indicate the maintenance category normally allocated the facility.

c. Nomenclature. This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

d. Federal Stock Number. This column lists the Federal stock number.

e. Tool Number. Not used.

SECTION II. MAINTENANCE ALLOCATION CHAR

GROUP NUMBER	Component Assembly Nomenclature	Maintenance functions										Tools and equipment	Remarks	
		I N S P E C T	T E S T	S E R V I C E	A D J U S T	A L I G N	C A L I B R A T E	I N S T A L L	R E P L A C E	R E P A I R	O V E R H A U L			R E B U I L D
1.0	CONTROL-E0 ARD C-7185/G	C H	H	H	H				H	H			None 9 1 thru 7, 9 8 and 9 2 thru 7, 9 9 9 1 thru 7, 9 thru 13 1 thru 7, 9 thru 13	Eternal Internal All on-site tests Clean Repetition rate, circuit card A10; time delay, circuit card A2; mechanical adjustments in keyboard assembly. Replace defective plug-in circuit card assemblies Replace defective piece parts in keyboard assembly and hard- wired electrical component. Defective circuit card assemblies Restore Control-keyboard C-7185/G to serviceable condi- tion.
	NOTE: OPERATING ORGANIZATIONS PERFOH ON-SITE EQUIVLENT TO H LEVEL MAINTENANCE.													

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
		C-7185/C (Continued)		
1	H,D	MULTIMETER AN/USM-210 (SIMPSON MODEL 260)	6625-019-0815	
2	H,D	OSCILLOSCOPE (HEWLETT-PACARD MODEL 140A)	6625-957-0509	
3	H,D	DUAL TRACE AMPLIFIER (HEWLETT-PACARD MODEL 3601405A)	6625-937-3610	
4	H,D	TIME BASE AND DELAY GENERATOR (HEWLETT -PACARD MODEL 1421A)	6625-930-8119	
5	H,D	PHOBE, VOLTAGE DIVIDER (HEWLETT-PACKARD No. 10003B)-2 ea Reqd.	66258028018	
6	H,D	PROBE TIP, COIL SPRING(TECTRONIX No. 206-0061-)-2 Reqd.	66250540231	
7	H,D	CART, OSCILLOSCOPH (HEWLETT-PACKARD MODEL 1119B)		
8	H	CLEANER, VACUUM, HAND TYPE (IDEAL MFG. CO. NO. 22-113)	7910-250-8039	
9	H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-610-8177	
10	D	ANALTZER -3()/U (CAPACITOR TEST SFT)	6625-229-1060	
11	D	TEST SET, TRANSISTOR TS-1836A/U (SIERRA MODEL 219C)	6625-926-6996	
12	H,D	EXTENDER, PRINTED CIRCUIT BOARD (GENERAL DYNAMICS/ELECTRON NO. A65445-001)	74401343729	
13	D	TEST FACILITY, PRINTED CIRCUITCARD		
NOTE: DEPOT MAY SUBSTITUTE EQUIVALENT TEST EQUIPMENT				

APPENDIX D

ON-SITE, AREA RESUPPLY, AND DEPOT REPAIR PARTS

Section I. INTRODUCTION

D-1. Scope

a. The equipment covered in this appendix is categorized as a "FIXED STATION INSTALLATION." Maintenance functions have been authorized to *site* (ORG thru GSU), *Area Resupply*, and *depot*.

b. This equipment is used by electronic service organizations organic to the theater headquarters or communications zones to provide theater communications. These repair parts authorized up to and including general support maintenance are to be stocked by the organization operating this equipment, therefore a separate display of "Organizational" and "Direct Support" maintenance repair parts would be repetitious and are not included in this appendix.

D-2. General

a. The Prescribed Load Allowance (PLA) is not required since this information is adequately defined under "Site Stockage Allowance," Column 7.

b. This list includes all replaceable parts and defines repair parts authorized for maintenance performance at site (ORG and GSU) and depot categories. This list also includes allowances for propositioned resupply of repair parts based on equipment density per geographical locations. This resupply requirement is established to support each Military Department's concentration of DSTE devices to meet the Defense Communication System operational requirement.

c. The repair parts listing is preceded by a cross-reference index.

D-3. Explanation of Columns

An explanation of the columns is given below.

a. *Source, Maintenance, and Recoverability Codes (SMRP), Column 1.* This column lists the applicable SMR codes for the part as follows:

(1) *Source code (A).* The source code indicator is the letter appearing on the left in the

SMR column. It indicates the source from which the item is obtained in accordance with the following:

NOTE

See (4) below for cross-reference to Air Force SMR codes.

<i>Code</i>	<i>Explanation</i>
P—	Applies to repair parts that are stocked in or supplied from the GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories.
M—	Applies to repair parts that are not procured or stocked but are to be manufactured at indicated maintenance categories.
A—	Applies to assemblies that are not procured or stocked as such but are made up of two or more units, each of which carries an individual stock number and description and is procured and stocked and can be assembled by units at indicated maintenance categories.
X—	Applies to parts and assemblies that are not procured or stocked; the mortality of which normally is below that of the applicable end item; and the failure of which should result in retirement of the end item from the supply system.
X1—	Applies to repair parts that are not procured or stocked, the requirement for which will be supplied by the use of next higher assembly or component.
X2—	Applies to repair parts that are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization; such repair parts will be requisitioned with supporting justification through normal supply channels.
C—	Applies to repair parts authorized for local procurement. If not obtainable from local procurement, such repair parts will be requisitioned through normal supply channels with a supporting statement of nonavailability from local procurement.
G—	Applies to major assemblies that are procured with PEMA funds for initial issue only to be used as exchange assemblies at DSU and GSU category. These assemblies will not

Code *Explanation*
 be stocked above DSU and GSU category or returned to depot supply category.
 (2) *Maintenance code (B)*. The maintenance code indicator is the letter appearing in the center of the SMR column. It indicates the lowest category of maintenance authorized to install the listed item. The codes are—

Code *Explanation*
 *C Operator/crew
 *O Organizational maintenance
 *F Direct support maintenance
 H General support maintenance
 D Depot support maintenance

NOTE

***Codes "C" "O" and "F" have not been utilized in this manual. Site maintenance functions have been designated "H" which includes "C" through "F".**

(3) *Recoverability code (C)*. The third, or right-hand letter in the SMR column indicates whether the item should be returned for recovery or salvage. Recoverability codes and their explanations are as follows:

NOTE

When no code is indicated in the recoverability column, the part will be considered expendable.

Code *Explanation*
 R—Applies to repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis.
 T—Applies to high dollar value recoverable re pair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.
 U—Applies to repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value reusable casings or castings.

(4) *Cross-reference Army to Air Force SMR code*. The following SMR codes represent a cross-reference from Army SMR codes displayed in this appendix to appropriate Air Force SMR codes. This coding has been coordinated with OCAMA symbol OCNDTB.

AIR FORCE SMR CODE

Army SMR code		Source code (AFLCM 65-3)		Expendable recoverable (AFM67-1, vol. 1. ch: 9 atch. 5)		Repair level code (AFLCR 65-2)
PH	P	1	--	N	S	--
PHR	P	1	--	T	D	--
PHT	P	1	--	T	D	--
PD	P	1	D	N	S	--
PDR	P	1	--	T	D	--
X1H	X	1	--	--	F	--
X1D	X	1	--	--	D	--
X2H	X	2	--	--	F	--
AH	A	--	--	--	F	--
AHR	A	--	--	--	F	--
C	L	--	P	--	--	--
G	G	--	--	--	--	--
MH	M	--	--	--	H	--
MD	M	--	--	--	D	--

b. *Federal Stock Number, Column 2*. The Federal stock number for the item is listed in this column.

c. *Description, Column 3*. This column includes a sequence number, the federal item name, a five-digit Federal supply code for Manufacturer's an indenture code and a part number. The five-digit Federal supply code is followed by the manufacturer's part number. For subsequent appearances of the same item, the manufacturer's code and part number are omitted. The words "same as" followed by the index number

assigned to the item when it first appeared in the list will follow the item name, e.g., "RESISTOR, FIXED, COMPOSITION: SAME AS A298." Model column is not used.

d. *Unit of Issue, Column 4*. The unit used as a basis of issue (e.g., ea, pr, ft, yd, etc.) is indicated in this column.

e. *Quantity Incorporated in Unit Pack Column 5*. Not used.

f. *Quantity Incorporated in Unit Column 6*. The total quantity of the item used in the equipment is given in this column. Subsequent appearances

of the same item in the same assembly are indicated by the letters "REF."

g. Site Stockage Allowance, Column 7.

(1) The maintenance allowance columns are divided into subcolumns. The total quantity of items authorized for the number of equipments supported is indicated in each subcolumn opposite the first appearance of each item. Subsequent appearances of the same item will have no entry in the allowance columns, but will have a reference in the description column to the first appearance of the item. Items authorized for use as required, but not for initial stockage, are identified with an asterisk in the allowance column.

(2) The quantitative allowances for Site (ORG thru GSU) maintenance represents one initial prescribed load for the number of equipments supported.

(3) Subsequent changes to Site (ORG thru GSU), allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to Commanding General, U. S. Army Electronics Command, ATTN: AMSELME-NMP-CW, Fort Monmouth, N. J. 07703, for exception or revision to the allowance list. Revisions to the range of items authorized will be made by USAECOM National Maintenance point based upon engineering experience, demand data, or TAERS information.

h. Forty-Five Day Area Resupply Allowance Based on Number of DSTE Devices Supported, Column 8.

(1) The allowance column is divided into three subcolumns. The total quantity of items authorized for the number of equipments supported is indicated in each subcolumn opposite the first appearance of each item.

(2) The quantitative resupply allowances for the area resupply, represents one initial prescribed

load for the number of DSTE equipments to be supported.

(3) Subsequent changes to Area Resupply allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to Commanding General, U. S. Army Electronics Command, ATTN: AMSEL-ME-NMP-CW, Fort Monmouth, N.J. 07703, for exception or revision to the allowance list. Revisions to the range of items authorized will be made by USAECOM National Maintenance Point based upon engineering experience, demand data, or TAERS information.

i. One-Year Allowances per 100 Equipments/Contingency Planning Purposes, Column 9.

Contingency planning requirements must be computed on a per equipment basis for fixed plant equipment, therefore column 9 will not be utilized. Contingency Plan requirements for this equipment will be satisfied by furnishing 1 load of repair parts per quantities displayed under column 7, Site Stockage Allowance.

j. Depot Maintenance Allowance per 100 Equipments, Column 10.

This column indicates the total quantity of each item authorized depot maintenance for 100 equipments. Subsequent appearances of the same item will have no entry in this column, but will have a reference in the description column to the first appearance of the item.

k. Illustrations, Column 11.

(1) *Figure number, column 11a.* The number of the illustration in which the item is shown is indicated in this column.

(2) *Item No. or reference designation, column 11b.* The callout number or reference designation used to reference the item in the illustration appears in this column.

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE
TO INDEX NUMBER (Continued)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	
4-3	1	A024M	4-4	38.4	A022B	
	2	A026M		39	A002	
	3	A025M		39.1	A0028	
	4	A023		39.2	A002A	
	4.1	A185		40	A182	
	4.2	A185A		41	A184	
	4.3	A18SB		42	A186	
	5	A195		43	A183	
	6	A555		44	A187	
	7	A556M		45	A188	
	8	A554M		46	A190	
	9	A553M		47	A189A	
	10	A552		48	A189B	
	11	A122		49	A189C	
	12	A124M		50	A189D	
	13	A123M		51	A191	
	14	A121		52	A192	
	15	A147M		53	A193A	
	16	A149M		54	A193D	
	17	A148M		55	A193C	
	18	A146		56	A193B	
	19	A004A		57	A194	
	20	A007A		58	B339	
	21	A006A		59	B340	
	22	A005A		60	A187A	
	22.1	A003AM				
	23	A007B			1	A081A
	23.1	A009B			2	A082M
	23.2	A009C			3	A083M
	23.3	A009A			4	A084M
	23.4	B337			5	A080
	23.5	B333			5.1	A080A
23.6	B338		5.2	A080C		
24	A834		5.3	A080D		
25	A961		6	A076A		
26	A704		7	A077M		
27	A769		8	A078M		
28	B049		9	A079M		
29	8139		10	A075		
30	B079		10.1	A075A		
31	B111		10.2	A075CM		
32	A557		10.3	A075D		
	A701C		11	A048		
33	B177		12	A071A		
	B332A		13	A072A		
33.1	A002D		14	A073A		
33.2	A002F		15	A074A		
33.3	A002E		16	A070		
33.4	A002C		17	A038A		
34	A098M		18	A084		
35	A101M		19	A028A		
36	A100M		20	A085		
37	A099		21	A033A		
38	A097		22	A085		
38.1	A022C		23	A058		
38.2	A022E		24	A085		
38.3	A022D		25	A043		

**SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE
TO INDEX NUMBER (Continued)**

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	
4-4	26	A053		11	A171M	
	27	A064		12	A173M	
	28	A085		13	A172	
	29	A027		14	A170	
4-4.1	1	A093M		15	A169	
	2	A094		16	A176	
	3	A094A		17	A168	
	4	A087		18	A165M	
	5	A096		19	A167M	
	6	A092		20	A166M	
	7	A091		21	A163	
	8	A090		22	A164	
	9	A089		23	A175	
	10	A088		24	A177	
	11	A075B		25	A178	
	12	A085A		26	A179	
	13	A085D		27	A180	
	14	A085C		28	A181A	
	15	A085B		29	B335M	
	16	A080E		30	B334	
4-5	1	A131		4-7	1	A103A
	2	A137		2	A104	
	3	A141		3	A102	
	4	A130		3.1	A102A	
	5	A127M		4	A112	
	6	A129M		5	A114M	
	7	A128M		6	A113	
	8	A125		7	A111	
	9	A126A		7.1	A114A	
	10	A143		8	A100	
	11	A144	9	A110M		
4-6	1	A151M	10	A109M		
	2	A153M	11	A107		
	3	A152M	12	A119E		
	4	A150	13	A119B		
	5	A162	14	A119C		
	6	A159M	15	A119D		
	7	A161M	16	A119A		
	8	A160M	17	A106		
	9	A158	17.1	A106A		
	10	A174	17.2	A105E		
		17.3	A116M			
		17.4	A118M			
		17.5	A117			
		17.6	A119M			
		17.7	A115			
		17.8	A105D			
		18	A105			
		19	A105F			
		20	A105C1			
		21	A105C2			
		22	A105BM			
		23	A105AM			

**SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE
TO INDEX NUMBER (Continued)**

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-7	24	A120		22	A280
	25	A105G		23	A284
	26	A105H		24	A287
	27	A105J		25	A290
	26	A293		26	
4-7.1	1	A008		27	A296
	2	A009		28	A299
	3	A011		29	A302
	4	A010		30	A305
	5	A015A		31	A308
	6	A015		32	A311
	7	A014M		33	A314
	8	A017		34	A317
	9	A012		35	A320
	10	A017B		36	A323
	11	A017C		37	A326
	12	A017D		38	A329
	13	A017E		39	A332
	14	A017A		40	A335
	15	A018		41	A338
	16	A019A		42	A341
	17	A022A		43	A344
	18	A020		44	A347
	19	A021M		45	A350
	20	A022M		46	A353
4-8				47	A356
	1	A198		48	A359
	2	A199		49	A362
	3	A197		50	A365
	4	A196A		51	A368
	5	A202A		52	A371
	6	A202B		53	A374
	7	A201		54	A377
	8	A223		55	A380
	9	A224M		56	A383
	10	A222		57	A386
	10.1	A224AM		58	A389
	10.2	A227A		59	A392
	10.3	A229A		60	A395
	10.4	A228A		61	A398
	10.5	A226A		62	A401
	10.6	A225		63	A404
	10.7	A230		64	A407
	11	A247M		65	A410
	12	A247A		66	A413
	13	A248		67	A416
14	A246		68	A419	
15	A249		69	A422	
16	A273B		70	A425	
17	A273D		71	A428	
18	A273C		72	A431	
19	A273A		73	A434	
20	A276		74	A437	
21	A282		75	A440	

**SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE
TO INDEX NUMBER (Continued)**

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-8	76	A443		130	A414
	77	A446		131	A417
	78	A449		132	A420
	79	A452		133	A423
	80	A455		134	A426
	81	A458		135	A429
	82	A461		136	A432
	83	A464		137	A435
	84	A467		138	A438
	85	A470		139	A441
	86	A281		140	A444
	87	A285		141	A447
	88	A288		142	A450
	89	A291		143	A453
	90	A494		144	A456
	91	A297		145	A459
	92	A300		146	A462
	93	A303		147	A465
	94	A306		148	A468
	95	A309		149	A471
	96	A312		150	A550C2
	97	A315		151	A550C3
	98	A318		152	A550C1
	99	A321		153	A550C
	100	A324		154	A550E
	101	A327		155	A550D
	102	A330		156	A473M
	103	A333		157	A473AM
	104	A336		158	A474M
105	A339		159	A472	
106	A342		160	A483A	
107	A345		161	A232	
108	A348		162	A233	
109	A351		163	A234	
110	A354		164	A231A	
111	A357		164.1	A234A	
112	A360		164.2	A234B	
113	A363		165	A236M	
114	A366		166	A236AM	
115	A369		167	A237M	
116	A372		168	A235	
117	A375		169	A488A	
118	A378		170	A488B	
119	A381		171	A488C	
120	A384		172	A488D	
121	A387		173	A487	
122	A390		174	A490	
123	A393		175	A490BM	
124	A396		176	A490AM	
125	A399		177	A489	
126	A402		178	A254	
127	A405		179	A256	
128	A408		180	A255	
129	A411		180.1	A255A	

**SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE
TO INDEX NUMBER (Continued)**

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-8	181	A253M	4-9	1	A481B
	182	A252		2	A481C
	183	A257		3	A481D
	184	A262		4	A481A
	185	A261		5	A482
	186	A263		6	A47SE
	187	A265		7	A479A
	188	A265AM		8	A478A
	189	A266		9	A477M
	189.1	A267AM		10	A479A
	189.2	A268BM		11	A478A
	190	A264		12	A475C
	191	A267		13	A477M
	192	A269		14	A479A
	193	A261A		15	A478A
	194	A270		16	A475D
	195	A268		17	A477M
	196	A550H		18	A479A
	197	AS50B3		19	A478A
	198	A550B1		20	A475E
	199	AS50B2		21	A479A
	200	A550B		22	A478A
	201	A550A		23	A474B
	202	A233B		24	A480
	203	A233C	4-10	1	A207AM
	204	A233D		2	A219
	205	A233A		3	A220A
	206	A233G		4	A216A
	207	A233F		5	A217A
	208	A239		6	A218
	209	A243		7	A210A
	210	A244		8	A209
211	A242	9		A209A	
212	A245	10		A211	
213	A240	11		A211A	
214	A240AM	12	A208		
215	A241M	13	A214M		
216	A238	14	A213		
217	A234C	15	A213A		
218	A233E	16	A215		
219	A205	17	A212A		
220	A206	18	A221		
221	A204	4-11	1	A492	
222	A259		2	A494	
223	A259AM		3	A493M	
224	A260		4	A491	
225	A258		5	A495	
226	A234D		6	A503	
227	A234F		7	A497M	
228	A234E		8	A499M	
229	A234G		10	A496	
230	A550		11	A501	
231	A549				
232	A203				

**SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE
TO INDEX NUMBER (Continued)**

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-11	12	A502M	5-2	A10	A557
	13	A500	5-3	A4	A704
	14	A505		A5	A769
	15	A504	5-4	A1	A834
	16	A509		A2	A961
	17	A510M	5-5	A6	B049
	18	A508	5-6	A8	B079
	19	A511		A9	B111
	20	A507	5-8	A7	B139
	21	A506	5-9	A11	B177
	22	A515		A10	A701C
	23	A515AM	5-10	A11	B332A
	24	A514		A10	
	25	A516	5-11		
	26	A518			
	27	A517	5-12		
	28	A520			
	29	A519			
	30	A521			
	31	A522			
	32	A528			
	32.1	A532			
	33	A527			
	33.1	A531A			
	35	A541			
	36	A542M			
	37	A540			
	38	A526			
	39	A535			
	40	A536M			
	41	A534			
	42	A537			
	43	A533A			
	44	A545			
	45	A546M			
	46	A530A			
	47	A544			
	48	A524			
	49	A525M			
	50	A523			
	51	A548			
	52	A543			
	53	A547			

Change 4 D-9/(D-10 blank)

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
A	H	R	74409976213						A	A001	CONTROL-IKYBOARD: C-7185/G	EA	1								-15		
X2	H								B	A002	HOLDER ASSEMBLY: 58189; V00139-001	EA	1								1-1		
P	H		53258650478						C	A002A	GROMMET: 83014; H559-2-1	EA	2	2	4	6	2	4	6		8	-15	39
P	H		53408854836						C	A002B	PLUNGER: 83014; H323-2-121	EA	2	2	4	6	2	4	6		8	-15	39.2
X2	H		53403365164						B	A002C	CLAMP, CABLE: 12357; HP1ON	EA	4									-15	39.1
C	H		53050546671						*	A002D	SCREW, MACHINE: 96906; MS51957-46	EA	16									-15	33.4
C	H		53105586207						*	A002E	WASHER, FIAT: 88044; AN960C8L	EA	38									-15	33.1
C	H		53109338119						*	A002F	WASHER, LOCK: 96906; MS35338-137	EA	47									-15	33.3
			53403368164						B	A003AM	CLAMP, CABLE: SAME AS A002C	EA	REF									-15	33.2
			53050546671						*	A004A	SCREW, MACHINE: SAME AS A002D	EA	REF									-15	22.1
			53105586207						*	A005A	WASHER, FIAT: SAME AS A002E	EA	REF									-15	19
			53109338119						*	A006A	WASHER, LOCK. SAME AS A002F	EA	REF									-15	22
C	H		53109249759						*	A007A	NUT,PLAIN,HEXAGON: 96906; MS35649-284	EA	20									-15	21
M	H								B	A0078	CABLE ASSEMBLY, SPECIAL ELECTRICAL: 58189; A65352-001	EA	1									-15	20
																						-15	23

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL									(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5	6					1-5	6-10	11-20	1-5	6-10			11-20	FIG. NO.	ITEM NO. OR REF DESIGN		
				I N D E X										C											
C	H		59405571628						C	A008	TERMINAL LUG: 96906; MS25036-56	EA		4										-15	
C	H		59406603634						C	A009	TERMINAL LUG: 96906; MS25036-57	EA		1										-15	1
C	H								*	A009A	NUT, PLAIN, HEXAGON: 58189; 639361-091	EA		1										-15	2
C	H								*	A009B	WASHER, FLAT: 88044; AN960C416	EA		1										-15	23.3
C	H								*	A009C	WASHER, LOCK: 96906; MS35335-61	EA		1										-15	23.1
P	H		74400193468						C	A010	CONTACT, ELECTRICAL: 16512; 540362-06	EA	113	50	100	150	50	100	150		339			-15	23.2
A	H		74409335070						C	A011	CONTACT ASSEMBLY: 58189; A53847-001	EA		1										-15	4
X2	H								D	A012	BRACKET, ANGLE: 58189; A53846-001	EA		1										-15	3
																							-15	9	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
X2	H							*	A014 M	SCREW, EXTERNAL RE- LIEVED BODY: 80063; SMB546131	EA	4								-15 4-7.1	7		
C	H		53106389857					*	A015	WASHER, FLAT: 88044 AN960C6L	EA	21								-15 4-7.1	6		
C	H		53109296395					*	A015A	WASHER, LOCK: 96906; MS35338-136	EA	17								-15 4-7.1	5		
C	H							*	A016A	RING, RETAINING: 58189; 540661-012	EA	4								-15 4-7.1	5		
X2	H							D	A017	INSULATOR, BUSHING: 16512; P550009-09	EA	138								-15 4-7.1	8		
X2	H							C	A017A	CABLE, CLAMP: 12357; HP11N	EA	1								-15 4-7.1	14		
C	H		53109349748					*	A017B	NUT, PLAIN, HEXAGON: 96906; MS35649-244	EA	6								-15 4-7.1	10		
C	H		53109338119					*	A017C	WASHER, LOCK: 96906; MS35338-135	EA	12								-15 4-7.1	11		
C	H		53105956425					*	A017D	WASHER, FLAT: 88044; AN960C4L	EA	21								-15 4-7.1	12		
C	H		53057637827					*	A017E	SCREW, MACHINE: 96906; MS51959-18	EA	2								-15 4-7.1	13		
P	H		59350544244					C	A018	CONNECTOR, RECEP- TICAL, ELECTRICAL: 07418; A06-327P202	EA	1	1	2	3	1	2	3		3	-15 4-7.1	15	
P	H		59358875187					C	A019A	CONNECTOR, PLUG, ELECT: 71468; CA06R22-14P	EA	1	1	2	3	1	2	3		3	-15 4-7.1	16	
X2	H							C	A020	CABLE, PLATE: 58189; A64849-001	EA	1									-15 4-7.1	18	

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY I N C I N I N P K	(6) QTY I N C I N U N	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5	6					C D	1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
X2	H		53400742072						C	A021 M	STRAP, LNE SUPPORT: 96906; MS17821-1-9	EA	15										-15	
M	H								C	A022 M	NAMEPLATE: 59730: TC125	EA	5										4-7.1	19
X2	H								C	A022A	ADAPTER, CABLE: 07418; S683-20	EA	1										4-7.1	20
			53403365164						B	A022B	CLAMP, CABLE: SAME AS A002C	EA	REF										4-7.1	17
			53050546671						*	A022C	SCREW,MACHINE: SAME AS A002D	EA	REF										-15	38.4
			53105586207						*	A022D	WASHER, FLAT: SAME AS A002E	EA	REF										4-3	38.1
			53109338119						*	A022E	WASHER, LOCK: SAME AS A002F	EA	REF										-15	38.3
																							4-3	38.2

Change 3

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
A	H	R	53050546671						B	A023	CONTROL PANEL: 58189; A64827-001	EA	1								-15 4-3	4	
			53105586207						*	A024 M	SCREW, MACHINE: SAME AS A002D	EA	REF								-15 4-3	1	
			53109338119						*	A025 M	WASHER, FLAT: SAME AS A002E	EA	REF								-15 4-3	3	
									*	A026 M	WASHER, LOCK: SAME AS A002F	EA	REF								-15 4-3	2	
X2	H								C	A027	CONTROL PANEL: 58189; A64830-001	EA	1								-15 4-4	29	
A	H								C	A028B	LIGHT, INDICATOR: 96182; 80EA1F1AL2N12 CAUTION	EA	1								-15 4-4	19	
X2	H		62100195599						D	A029	HOUSING LITE CAPSULE 96182; 80EA1	EA	3								-15 4-4		
X2	H		62109273519						D	A030	FILTER, COLOR: 96182; 80EF1A	EA	2								-15 4-4		
X2	H								D	A032	FRONT LENS: 96182; 80EL2N12CAUTION	EA	1								-15 4-4		
A	H								C	A033B	LIGHT, INDICATOR: 96182; 80EA1F1RL2N12STOP	EA	1								-15 4-4	21	
			62100195599						D	A034	HOUSING LITE CAPSULE SAME AS A029	EA	REF								-15 4-4		

Change 3 5

(A) S O U R C E C D	(1) (B) M A I N T E N C E C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E C D	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS					
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN			
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20			
X2	H		62100119338						D	A035	FILTER, COLOR: 96182; 80EF1R	EA	1											-15 4-4	
X2	H								D	A037	FRONT LENS: 96182; 80EL2N12STOP	EA	1											-15 4-4	
A	H								C	A038B	LIGHT, INDICATOR: 96182; 80EA1F1AL2N13 EOBWARNING	EA	1											-15 4-4	17
			62100195599						D	A039	HOUSING LITE CAPSULE: SAME AS A029	EA	REF											-15 4-4	
			62109273519						D	A040	FILTER, COLOR: SAME AS A030	EA	REF											-15 4-4	
X2	H								D	A042	FRONT LENS: 86182; 80EL2N 13EOBWARNING	EA	1											-15 4-4	
A	H								C	A043	SWITCH, PUSH BUTTON: 96182; 1197-29	EA	1											-15 4-4	25
X2	H		66059410561						D	A044	SWTTCH-LIGHT UNIT: 96182; 10EA1C1	EA	5											-15 4-4	
P	H		59309593427						D	A045	SWITCH ASSEMBLY: 96182; 10EF1	EA	4	1	2	3	1	2	3		12			-15 4-4	
X2	H								D	A046A	DISPLAY SCREEN: 96182; 10EN1	EA	4											-15 4-4	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10			(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5															6	I N D C D
X2	H							D	A047A	FRONT LENS: 96182; 10ER1TSV12RESET	EA	1							-15 4-4					
A	H							C	A048	SWITCH, PUSH BUTTON: 96182; 1197-23	EA	1							-15 4-4	11				
								D	A049	SWITCH-LIGHT UNIT: SAME AS A044	EA	REF							-15 4-4					
								D	A055	SWITCH ASSEMBLY: SAME AS A045	EA	REF							-15 4-4					
								D	A05A	DISPLAY SCREEN: SAME AS A046A	EA	REF							-15 4-4					
X2	H							D	A052A	FRONT LENS: 96182; 100ERITSV13COUNTER RESET	EA	1							-15 4-4					
A	H							C	A053	SWITCH, PUSH BUTTON: 96182; 1197-23	EA	1							-15 4-4	26				
								D	A054	SWITCH-LIGHT UNIT: SAME AS A044	EA	REF							-15f 4-4					
								D	A055	SWITCH ASSEMBLY: SAME AS A045	EA	REF							-15 4-4					
								D	A056A	DISPLAY SCREEN: SAME AS A046A	EA	REF							-15 4-4					
X2	H							D	A057A	FRONT LENS: 96182; 10ER1TSV 13LAMP/AUDIO TEST	EA	1							-15 4-4					

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS											
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)									
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN							
A	H		66059410561 59309593427						C	A058	SWITCH, PUSH BUTTON: 96182; 1197-43	EA	1														-15 4-4	23			
										D	A059	SWITCH-LIGHT UNIT: SAME AS A044	EA	REF																-15 4-4	
										D	A060	SWITCH ASSEMBLY: SAME AS A045	EA	REF																-15 4-4	
X2	H									D	A061. M	COLORED BULB FILTER: 96182; 10ELRRRR	EA	4																-15 4-4	
X2	H									D	A062A	DISPLAY SCREEN: 96182; 10EN2	EA	1																	-15 4-4
X2	H									D	A063A	FRONT LENS: 96182; 10EN2RITS5V6REJECT/ BACKSPACE	EA	1																-15 4-4	
A	H		66059410561 59309205994						C	A064	SWITCH, PUSH BUTTON: 96182; 1197-44	EA	1															-15 4-4	27		
										D	A065	SWITCH-LIGHT UNIT: SAME AS A044	EA	REF																	-15 4-4
P	H									D	A066	SWITCH ASSEMBLY: 96182; IOEF2	EA	1	1	2	3	1	2	3			3								-15 4-4
X2	H									D	A067. M	COLORED BULB FILTER: 96182; 10ELWOOW	EA	4																	-15 4-4
										D	A068A	DISPLAY SCREEN: SAME AS A046A	EA	REF																	-15 4-4
X2	H									D	A069A	FRONT LENS: 96182; 10ER1TSVSPower	EA	1																	-15 4-4

(A) S O U R C E C D	(1) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A)	(B)	
				1	2	3	4	5						6	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		59300544353						C	A070	SWITCH ROTARY PRINTED CIRCUIT: 58189; V00075-001	EA		1	2	3	1	2	3		3	-15 4-4	16	
C	H		53050545649						*	A071A	SCREW, MACHINE: 96906; MS51957-5	EA		4								-15 4-4	12	
C	H		53109382013						*	A072A	NUT, PLAIN, HEXAGON: 96906; MS35649-224	EA		6								-15 4-4	13	
C	H		53109282690						*	A073A	WASHER, LOCK, SPLIT: 96906; MS35338-134	EA		6								-15 4-4	14	
C	H								*	A074A	WASHER, FLAT: 88044; AN960C2L	EA		4								-15 4-4	15	
P	H		74401348215						C	A075	READOUT ASSEMBLY: 05464; 15521-2	EA		1	2	3	1	2	3		2	-15 4-4	10	
P	H		62401155043						D	A075A	LAMP: 05464; C1	EA		55	10	20	30	10	20	30		1100	-15 4-4	10.1
P	H		59351345694						D	A075B	CONNECTOR: 05464; 13827-1	EA		5	*	*	*	1	2	3		15	-15 4-4.1	11
X2	H								D	A075CM	SCREEN: 05464; 15657-2	EA		2									-15 4-4	10.2
P	H		59351345695						D	A075D	TERMINAL CAP CONNecTOR: 05464; 13881-1	EA		5	*	*	*	1	2	3		15	-15 4-4	10.3
X2	H								C	A075E	SLEEVE, RETAINING: 58189; A64858-002	EA		1									-15 4-4.1	17
C	H		53057680336						*	A076A	SCREW, MACHINE: 96906; MS51959-17	EA		4									-15 4-4	6
			53109349748						*	A077 M	NUT, PLAIN, HEXAGON: SAME AS A017B	EA		REF									-15 4-4	7

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS						
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)				
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN		
P C	H H		53109338119						*	A078 M	WASHER, LOCK, SPLIT: SAME AS A017C	EA				REF						-15 4-4	8			
			53105956425						*	A079 M	WASHER, FLAT: SAME AS A017D	EA						REF					-15 4-4	9		
			74401348214							C	A080	READOUT ASSEMBLY: 05464; 15521-3	EA	1	2	3	1	2	3	2			-15 4-4	5		
			62401155043							D	A080A	LAMP: SAME AS A075A	EA											-15 4-4	5.1	
			59351345694							D	A080B	CONNECTOR: SAME AS A075B	EA											-15 4-4.1	11	
										D	A080C	SCREEN: SAME AS A075CM	EA												-15 4-4	5.2
			59351345695							D	A080D	TERMINAL CAP CONNec- TOR: SAME AS A075D	EA												-15 4-4	5.3
			53057680336							C	A080E	SLEEVE, RETAINING: 58189; A64858-001	EA	1											-15 4-4.1	16
							*	A081A	SCREW, MACHINE: SAME AS A076A	EA												-15 4-4	1			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			53109349748					*	A082 M	NUT, PLAIN, HEXAGON: SAME AS A017B	EA	REF								-15			
			53109338118					*	A083 M	WASHER, LOCK, SPLIT: SAME AS A017C	EA	REF								4-4	2		
			53105956425					*	A084 M	WASHER, FLAT: SAME AS A017D	EA	REF								4-4	3		
P	H		62408514352					C	A085	LAMP, INCANDESCENT: 08806; 330	EA	12	5	10	15	5	10	15	600	4-4	4		
X2	H							C	A085A	CABLE CLAMP: 71616; CPC1953-7B	EA	3								4-4	18,20,22, 24,28		
C	H		53101670812					*	A085B	WASHER, FLAT: 88044; AN960C10L	EA	24								4-4.1	12		
C	H		53109338120					*	A085C	WASHER, LOCK: 96906; MS35338-138	EA	7								4-4.1	15		
C	H		53109349765					*	A085D	NUT, PLAIN, HEXAGON: 96906; MS35650-304	EA	5								4-4.1	14		
M	H							C	A086	WIRING HARNESS: 58189; A65359-001	EA	1								4-4.1	13		
			74400193468					D	A087	CONTACT, ELECTRICAL: SAME AS AO10	EA	REF								4-4.1	18		
X2	H		59409479947					D	A088	FERRULE: 00779; 2-323932-2	EA	1								4-4.1	4		
C	H		59405571629					D	A089	TERMINAL LUG: 96906; MS25036-49	EA	4								4-4.1	10		
C	H		59402048966					D	A090	TERMINAL LUG: 96906; MS25036-2	EA	11								4-4.1	9		
			53403365164					D	A090A	CABLE CLAMP SAME AS A002C	EA	12								4-4.1	8		
								D	A090A	CABLE CLAMP SAME AS A002C	EA	REF								4-4.1	19		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20		
A X2	H H		53109349748						*	A090B	NUT, PLAIN, HEXAGON: SAME AS A017B	EA	REF							-15 4-4.1	20			
			53109338119						*	A090C	WASHER, LOCK: SAME AS A017C	EA	REF								-15 4-4.1	21		
			53105956425						*	A090D	WASHER, FLAT: SAME AS A017D	EA	REF									-15 4-4.1	22	
									*	A090E	SCREW, MACHINE: SAME AS A017E	EA	REF										-15 4-4.1	23
									D	A091	CONTACT ASSEMBLY: 80063; SMC546217	EA	1										-15 4-4.1	7
									E	A092	BRACKET, ANGLE: 80063; SMC546130-3	EA	1										-15 4-4.1	6
									*	A093 M	SCREW, EXTERNAL RE- LIEVED BODY: SAME AS A014 M	EA	REF										-15 4-4.1	1

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	J N D C D	1-5	6-10	11-20			1-5			6-10	11-20
P X2 A C	H H H	R	53106389857						*	A094	WASHER, FLAT: SAME AS A015	EA	REF							-15 4-4.1	2		
			53109296395							*	A094A	WASHER, LOCK: SAME AS A015A	EA	REF							-15 4-4.1	3	
			59056832238							E	A096	INSULATOR, BUSHING: SAME AS AO17	EA	REF							-15 4-4.1	5	
										D	A096A	RESISTOR, FDCED, COM- POSITION: 81349; RC07GF101J	EA	2	1	2	3	1	2	3	6	-15 4-4.1	R1
										D	A096B	RESISTOR, FIXED, COM- POSITION: SAME AS A096A	EA	REF								-15 4-4.1	R2
										D	A096C	NAMEPLATE: SAME AS A022 M	EA	REF								-15 4-4.1	25
										*	A096D	STRAP, LINE SUPPORT: SAME AS A021 M	EA	REF								-15 4-4.1	24
										D	A096E	JUMPER: 80063; SMB634809	EA	3								-15 4-4.1	26
										B	A097	CONTACT, PLATE, ASSEM- BLY: 58189; A64832-001	EA	1								-15 4-3	38
										*	A098 M	SCREW, MACHINE: 96906; MS51957-29	EA	9								-15 4-3	4
							*	A099	WASHER, FLAT: SAME AS AO15	EA	REF								-15 4-3	37			
							*	A100 M	WASHER, LOCK: SAME AS A015A	EA	REF								-15 4-3	36			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	J N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
C	H		53109349761					*	A101 M	NUT, PLAIN, HEXAGON: 96906; MS35649-264	EA	9								-15			
X2	H							C	A102	BUSS BAR: 58189; A53856-001	EA	1								4-3	35		
X2	H							C	A102A	INSULATING STRIP: 80063; SMD634807-3	EA	1								4-7	3		
C	H							*	A103A	SCREW, MACHINE: 96906; MS18212-31	EA	2								4-7	3		
C	H							*	A104	NUT, PLAIN, HEXAGON: 80063; SMB546299	EA	2								4-7	1		
X2	H							C	A105	CONTACT, PLATE: 58189; A64833-001	EA	1								4-7	2		
X2	H							D	A105AM	INSULATOR: 16512; 200150-01	EA	10								4-7	18		
P	H		59991345933					D	A105BM	PIN: 16512; 540111-04	EA	460	50	100	150	50	100	150	50	4-7	23		
C	H							*	A105C1	SCREW, MACHINE: 96906; MS35223-29	EA	20								4-7	22		
C	H							*	A105C2	WASHER, LOCK: 96906; MS35338-117	EA	20								4-7	20		
X2	H							D	A105D	BRACKET, STOP: 58189; A64853-002	EA	1								4-7	21		
X2	H							D	A105E	BRACKET, STOP: 58189; A64853-001	EA	1								4-7	17.8		
X2	H							D	A105F	TRIM, PLASTIC: 80063; SMB546196-1	EA	1								4-7	17.2		
																				4-7	19		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
X2	H							D	A105G	INSULATOR: 16512; 550056-01	EA	138								-15 4-7	25			
P	H	59991392510						D	A105H	PIN, ELECTRICAL CON- TACT: 16512; 540123-03	EA	138	*	*	*	*	*	*	60	-15 4-7	26			
								D	A105J	PIN, ELECTRICAL CON- TACT: SAME AS A105H	EA	REF								-15 4-7	27			

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(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20		
X2	H		53406849956						C	A106	LATCH: 94222;49-1-1-0	EA	2										-15	
C	H								C	A106A	WASHER, FLAT: 88044; AN960C416	EA	4										4-7	17
X2	H								C	A107	STANDOFF: 58189; 688014-038	EA	2										-15	17.1
C	H		53050546672						*	A108	SCREW, MACHINE: 96906; MS51957-47	EA	6										4-7	11
			53105586207						*	A109 M	WASHER, FLAT: SAME AS A002E	EA	REF										-15	8
			53109338119						*	A110 M	WASHER, LOCK: SAME AS A002F	EA	REF										4-7	10
C	H								C	A111	SPACER: 80063; SMB546132	EA	4										-15	9
C	H		53050546652						*	A112	SCREW, MACHINE: 96906; MS51957-28	EA	4										4-7	7
			53106389857						*	A113	WASHER, FLAT: SAME AS A015	EA	REF										-15	4
			53109296395						*	A114 M	WASHER, LOCK: SAME AS A015A	EA	REF										4-7	6
C	H		59408272653						*	A114A	LUG, TERMINAL: 96906; MS77068-2	EA	3										4-7	5
X2	H								C	A115	HINGE: 58189; A64851-001	EA	1										4-7	7.1
			53050546653						*	A116 M	SCREW, MACHINE: SAME AS A098 M	EA	REF										-15	17.7
			53106389857						*	A117	WASHER, FLAT: SAME AS A015	EA	REF										4-7	17.3
																							4-7	17.5

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
			53109296395					*	A118 M	WASHER, LOCK: SAME AS A015A	EA	REF								-15 4-7	17.4		
			53109349761					*	A119 M	NUT, PLAIN, HEXAGON: SAME AS A101 M	EA	REF								-15 4-7	17.6		
C	H		53406197754					C	A119A	CLAMP, CABLE: 12357; HP3N	EA	2								-15 4-7	16		
			53109349761					*	A119B	NUT, PLAIN, HEXAGON: SAME AS A101 M	EA	REF								-15 4-7	13		
			53109296395					*	A119C	WASHER, LOCK: SAME AS A015A	EA	REF								-15 4-7	14		
			53106389857					*	A119D	WASHER, FLAT: SAME AS AO 15	EA	REF								-15 4-7	15		
			53050546653					*	A119E	SCREW, MACHINE: SAME AS A098 M	EA	REF								-15 4-7	12		
M	H							C	A120	PLATE, DESIG: 58189; A64850-001	EA	1								-15 4-7	24		
C	H							B	A121	FUSE, BRACKET, ASSEM- BLY: 58189; A64838-001	EA	1								-15 4-3	14		
C	H		53050546669					*	A122	SCREW, MACHINE: 96906; MS51957-44	EA	8								-15 4-3	11		
			53105586207					*	A123 M	WASHER, FLAT: SAME AS A002E	EA	REF								-15 4-3	13		
			53109338119					*	A124 M	WASHER, LOCK: SAME AS A002F	EA	REF								-15 4-3	12		
X2	H							C	A125	TERMINAL BOARD: 75382; 602GMF3-4ST7 UH	EA	2								-15 4-5	8		
M	H							C	A126A	MARKER, STRIP: 75382; MS602-7XXXP1A	EA	2								-15 4-5	9		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
			53109249759						*	A127 M	NUT, PLAIN, HEXAGON: SAME AS A007A	EA	REF									-15 4-5	5
			53105586207						*	A128 M	WASHER, FLAT: SAME AS A002E	EA	REF									-15 4-5	7
			53109338119						*	A129 M	WASHER, LOCK: SAME AS A002F	EA	REF									-15 4-5	6

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5					6	J N D C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		53050546672						*	A130	SCREW, MACHINE: SAME AS A108	EA	REF								-15 4-5	4		
			59205560144							C	A131	FUSEHOLDER:: 81349: FHN20G	EA	6	1	2	3	1	2	3		18	-15 4-5	1
			59205560144							C	A132	FUSEHOLDER: SAME AS A131	EA	REF									-15 4-5	1
			59205560144							C	A133	FUSEHOLDER: SAME AS A131	EA	REF									-15 4-5	1
			59205560144							C	A134	FUSEHOLDER: SAME AS A131	EA	REF									-15 4-5	1
			59205560144							C	A135	FUSEHOLDER: SAME AS A131	EA	REF									-15 4-5	1
			59205560144							C	A136	FUSEHOLDER: SAME AS A131	EA	REF									-15 4-5	1
P	H		59200602424						C	A137	FUSE, CARTRIDGE: 81349: F02A250V5AS	EA	4	8	16	24	8	16	24		400	-15 4-5	2	
			59200602424							C	A138	FUSE, CARTRIDGE: SAME AS A137	EA	REF								-15 4-5	2	
			59200602424							C	A139	FUSE, CARTRIDGE: SAME AS A137	EA	REF								-15 4-5	2	
			59200602424							C	A140	FUSE, CARTRIDGE: SAME AS A137	EA	REF								-15 4-5	2	
P	H		59204746125						C	A141	FUSE, CARTRIDGE: 81349: F02A250V2AS	EA	2	2	4	6	2	4	6		6	-15 4-5	3	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5					6	J N D C D	1-5	6-10	11-20			1-5	6-10	11-20		
X2 M A	H H R		59204746125						C	A142	FUSE, CARTRIDGE: SAME AS A141	EA	REF								-15 4-5	3		
									C	A143	BRACKET, FUSE: 58189; A64842-001	EA	1									-15 4-5	10	
										C	A144	WIRING HARNESS: 58189; A65351-001	EA	1									-15 4-5	11
										B	A146	RELAY BRACKET ASSEMBLY: 58189; A64834-001	EA	1									-15 4-3	18
P	H	R	53050546671						*	A147 M	SCREW, MACHINE: SAME AS A002D	EA	REF									-15 4-3	15	
			53105586207						*	A148 M	WASHER, FLAT: SAME AS A002E	EA	REF									-15 4-3	17	
			53109338119						*	A149 M	WASHER, LOCK: SAME AS A002F	EA	REF										-15 4-3	16
			59450544379							C	A150	RELAY, ARMATURE: 77342; AK4018-1	EA	2	1	2	3	1	2	3	6			-15 4-6	4
			53109249759					*	A151 M	NUT, PLAIN HEXAGON: SAME AS A007A	EA	REF										-15 4-6	1	
			53105586207					*	A152 M	WASHER, FLAT: SAME AS A002E	EA	REF										-15 4-6	3	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20		
P	H		53109338119						*	A153 M	WASHER, LOCK: SAME AS A002F	EA									-15 4-6	2		
			59450544379							C	A154	RELAY, ARMATURE: SAME AS A150	EA									-15 4-6	4	
			53109249759							*	A155 M	NUT, PLAIN HEXAGON: SAME AS A007A	EA									-15 4-6	1	
			53105586207							*	A156 M	WASHER, FLAT: SAME AS A002E	EA									-15 4-6	3	
			53109338119							*	A157 M	WASHER, LOCK: SAME AS A002F	EA									-15 4-6	2	
			59459311915								C	A158	RELAY, ARMATURE: 77342; PR3521-2	EA	1	1	2	3	1	2	3	3	-15 4-6	9
			53109249759							*	A159 M	NUT, PLAIN HEXAGON: SAME AS A007A	EA										-15 4-6	6
			53105586207							*	A160 M	WASHER, FLAT: SAME AS A002E	EA										-15 4-6	8
			53109338119							*	A161 M	WASHER, LOCK: SAME AS A002F	EA										-15 4-6	7
			C	H		53050546673						*	A162	SCREW, MACHINE: 96906; MS51957-48	EA									-15 4-6	5
										C	A163	ZERMINAL BOARD: SAME AS A125	EA								-15 4-6	21		
										C	A164	MARKER, STRIP SAME AS A126A	EA								-15 4-6	22		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
			53109249759					*	A165 M	NUT, PLAIN HEXAGON: SAME AS A007A	EA		REF									-15 4-6	18
			53105586207					*	A166 M	WASHER, FLAT: SAME AS A002E	EA		REF									-15 4-6	20
			53109338119					*	A167 M	WASHER, LOCK: SAME AS A002F	EA		REF									-15 4-6	19
			53050546673					*	A168	SCREW, MACHINE: SAME AS A162	EA		REF									-15 4-6	17
P	H		59618536454					C	A169	TRANSISTOR: 81349; 2N1412	EA	1	1	2	3	1	2	3		5		-15 4-6	15
P	H		59058787275					C	A170	RES, FXD, WIREWOUND 81349; RE65G1000	EA	1	1	2	3	1	2	3		3		-15 4-6	14
			53109382013					*	A171 M	NUT, PLAIN HEXAGON: SAME AS A072A	EA		REF									-15 4-6	11
C	H		53105956761					*	A172	WASHER, FLAT: 96906; MS15795-802	EA		2									-15 4-6	13
			53109282690					*	A173 M	WASHER, LOCK: SAME AS A073A	EA		REF									-15 4-6	12
C	H		53050545639					*	A174	SCREW, MACHINE: 96906; MS51957-5	EA		2									-15 4-6	10
X2	H							C	A175	RELAY, BRACKET: 58189; A64841-001	EA		1									-15 4-6	23
X2	H		58217041602					C	A176	TRANSISTOR MOUNTING ASSEMBLY: 16758; 7274633	EA		1									-15 4-6	16
P	H		59700616731					D	A176A	INSULATOR PLATE: 16758; 7268668	EA	1	2	4	6	2	4	6		3		-15 4-6	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS							
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)					
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	(B) ITEM NO. OR REF DESIGN			
M	H	R	59405571629						C	A177	WIRING HARNESS: 58189; A65350-001	EA	1												-15 4-6	24	
				59402048966						D	A178	TERMINAL LUG: SAME AS A089	EA	REF												-15 4-6	25
				59405340970						D	A179	TERMINAL LUG: SAME AS A090	EA	REF												-15 4-6	26
C	H									D	A180	TERMINAL LUG: 96906; MS25036-7	EA	8												-15 4-6	27
X2	H									D	A181A	JUMPER: 75382; 602J	EA	2												-15 4-6	28
A	H									B	A182	ENCLOSURE: 05439; 600831-1	EA	1												-15 4-8	40
X	H									C	A183	CHASSIS, ELECTRICAL EQUIPMENT: 05439; 600832	EA	1												-15 4-3	43
X2	H									C	A184	FRONT COVER: 05439; 600833	EA	1												-15 4-3	41
				53050546671						*	A185	SCREW, MACTIINE: SAME AS A002D	EA	REF												-15 4-3	4.1
				53105586207						*	A185A	WASHER, FLAT: SAME AS A002E	EA	REF												-15 4-3	4.2
				53109338119						*	A185B	WASHER, LOCK: SAME AS A002F	EA	REF												-15 4-3	4.3
X2	H									C	A186	REAR COVER: 05439; 600834	EA	1												-15 4-3	42
X2	H									C	A187	TRIM, METAL: 05439; 600836-2	EA	2												-15 4-3	44
P	H			53404519149						*	A187A	CLIP, RETAINING: 78553; C29943-014-1	EA	18	10	20	30	10	20	30			18			-15 4-3	60

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS		
			(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION								(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20			(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				MODEL																		
				1	2	3	4	5														6	(C) I N D C D
X2	H							C	A188	TRIM, METAL: 05439; 600110-3	EA		1								-15 4-3	45

Change 4 22.1/(22.2 blank)

(A) S O U R C E C D	(1) M A I N T C D	(C) R E C C D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS						
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN				
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20				
C	H		53109349751						*	A189A	SCREW, MACHINE: 96906; MS35191-270	EA										-15 4-3	47			
C	H									*	A189B	NUT, PLAIN, HEXAGON: 96906; M535650-302	EA										-15 4-3	48		
C	H									*	A189C	WASHER, LOCK: 96906; MS35338-43	EA										-15 4-3	49		
			53101670812						*	A189D	WASHER, FLAT: SAME AS A085B	EA											-15 4-3	50		
X2	H									C	A190	LOGO, MYLAR: 05439; 600835	EA											-15 4-3	46	
X2	H									C	A191	CASTER, SWIVEL: 06004; SBH13696X5	EA											-15 4-3	51	
X2	H									C	A192	CASTER, FIXED; 06004; H13696X5	EA											-15 4-3	52	
X2	H									C	A193A	SPACER: 05439; 600831-2	EA											-15 4-3	53	
X2	H								*	A193B	NUT, SELF LOCK, HEXAGON: 21282; 22-NTM-02	EA												-15 4-3	56	
			53101670812						*	A193C	WASHER, FLAT: SAME AS A08SB	EA												-15 4-3	55	
C	H									*	A193D	SCREW, MACHINE: 96906; MS35207-265	EA												-15 4-3	54
X2	H		53059931848							C	A194	TRIM, METAL: 05439; 600836-1	EA												-15 4-3	57
										*	A194A	CLIP, RETAINING: SAME AS A187A	EA												-15 4-3	60

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5					6	J N D C D	1-5	6-10	11-20			1-5	6-10	11-20		
A	H	R	53052535609						B	A195	KEYBOARD ASSEMBLY: 21282; 48507700	EA	1								-15 4-3	5		
X2	H								C	A196A	LENS, CAP: 21282; 48510700	EA	1									-15 4-8	4	
M	H								C	A197	PLATE, IDENTIFICA- TION: 21282; 48503800	EA	1									-15 4-8	3	
C	H								*	A198	SCREW, MACHINE: 96906; MS21318-13	EA	5										-15 4-8	1
M	H								C	A199	PLATE, IDENTIFICA- TION: 21282; 48503600	EA	1										-15 4-8	2
			53052535609						*	A200	SCREW, MACHINE: SAME AS A198	EA	REF									-15 4-8	1	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
X2	H							C	A201	COVER, KEYBOARD: 21282; 48501700	EA	1								-15 4-8	7		
C	H		53055434358					*	A202A	SCREW, MACHINE: 96906; MS35234-64	EA	8								-15 4-8	5		
C	H		53106191148					*	A202B	WASHER, FLAT: 96906; MS15795-308	EA	19								-15 4-8	6		
A	H	R						C	A203	BASE ASSEMBLY: 21282; 48508000	EA	1								-15 4-8	232		
A	H	R						D	A204	OPTICS ASSEMBLY: 21282; 48507900	EA	1								-15 4-8	221		
C	H		53055434356					*	A205	SCREW, MACHINE: 96906; MS35234-61	EA	3								-15 4-8	219		
			53106191148					*	A206	WASHER, FLAT: SAME AS A202B	EA	REF								-15 4-8	220		
P	H		62401680161					E	A207AM	LAMP, INCANDESCANT: 08806; GE1933	EA	2	2	4	6	2	4	6	50	-15 4-10	1		
X1	H		58159749875					E	A208	LENS: 21282; 48501200	EA	1								-15 4-10	12		
X1	H		53102714642					*	A209	NUT, HEXAGON: 96906; MS35649-44	EA	6								-15 4-10	8		
C	H		53100429609					*	A209A	WASHER, LOCK: 96906; MS35338-78	EA	28								-15 4-10	9		
C	H		53055767493					*	A210A	SCREW, MACHINE: 96906; MS35233	EA	10								-15 4-10	7		
X1	H		53105956211					*	A211	WASHER, FLAT: 96906; MS15795-303	EA	29								-15 4-10	10		
X2	H		53302526048					D	A211A	PACKING, PREFORM: 96906; MS29513-6	EA	2								-15 4-10	11		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		59351999508						E	A212A	SOCKET, PREFOCUS: 13445; 2789	EA		1	1	2	3	1	2	3		2	-15 4-10	17
			53102714642						*	A213	NUT, PAIN, HEXAGON: SAME AS A209	EA	REF										-15 4-10	14
			53100429609						*	A213A	WASHER, LOCK: SAME AS A209A	EA	REF										-15 4-10	15
C	H		5305505002						*	A214 M	SCREW, MACHINE: 96906; MS35233-13	EA	8										-15 4-10	13
			53105956211						*	A215	WASHER, FLAT: SAME AS A211	EA	REF										-15 4-10	16
X1	H		53409468347						E	A216A	SPRING, HELI-COIL, EXTE:NSION: 96906; MS24585C37	EA	3										-15 4-10	4
X1	H		49208666940						E	A217A	REFLECTOR: 06175; 43-35-01	EA	1										-15 4-10	5
X1	H								E	A218	HOLDER, REFLECTOR: 21282; 48507000	EA	1										-15 4-10	6
X1	H		59300545641						*	A219	SCREW, MACHINE: 96906; MS35233-7	EA	3										-15 4-10	2
C	H								*	A220A	WASHER, FLAT: 96906; MS15795-302	EA	7										-15 4-10	3
X1	H		58159339616						E	A221	MOUNT, OPTICS: 21282; 48507500	EA	1										-15 4-10	18
A	H								D	A222	BRIDGE ASSEMBLY: 21282; 48507300	EA	1										-15 4-8	10
C	H		53055309761						*	A223	SCREW, MACHINE: 96906; MS35233-79	EA	2										-15 4-8	8

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
C	H		53108497733					*	A224 M	WASHER, FLAT: 96906; MS15795-311	EA	4								-15 4-8	9		
X2	H							E	A224AM	SHIM, FACE: 21282; 48500500	EA	1								-15 4 - 8	10.1		
X2	H		59999338567					E	A225	MAGNET, CHANNEL: 21282; 94875000	EA	3								-15 4-8	10.6		
C	H							*	A226A	SCREW, T-HEAD: 21282; 48510100	EA	6								-15 4-8	10.5		
C	H							*	A227A	NUT, PLAIN HEXAGON: 88044; MS35649-64	EA	6								-15 4-8	10.2		
C	H		53105775506					*	A228A	WASHER, FLAT: 96906; MS15795-30611	EA	6								-15 4-8	10.4		
X2	H		53100111041					*	A229A	WASHER, LOCK: 2128296906; MS35338-79	EA	13								-15 4-8	10.3		
X2	H							E	A230	SUPPORT, MAGNET: 21282; 48507400	EA	1								-15 4-8	10.7		
X2	H							D	A231A	CONNECTOR ASSEMBLY: 212800779; 48510500	EA	1								-15 4-8	164		
C	H		5305620158					*	A232	SCREW, MACHINE: 96906; MS35233-31	EA	2								-15 4-8	161		
C	H		53105408119					*	A233	WASHER, FLAT: 96906; MS15795-305	EA	2								-15 4-8	162		
X2	H							D	A233A	CABLE STRAP: 21282; 94877400	EA	3								-15 4-8	205		
C	H		53055432783					*	A233B	SCREW, MACHINE: 96906; MS35233-42	EA	7								-15 4-8	202		
C	H							*	A233C	WASHER, LOCK: 96906; MS35337-80	EA	5								-15 4-8	203		

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A)	(B)
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
C	H		53108805978						*	A233D	WASHER, FLAT: 96906; MS15795-307	EA	16								-15 4-8	204		
X2	H								D	A233E	TERMINAL,INSULATED: 96906; MIL-T55155/18-2	EA	2									-15 4-8	218	
									D	A233F	LUG, TERMINAL: SAME AS A114A	EA	REF									-15 4-8	207	
C	H								*	A233G	SCREW, MACHINE: 96906: MS35233-26	EA	1									-15 4-8	206	
X2	H		10259121152						E	A234	PLUG, KEYING: 00779; 582507-1	EA	1										-15 4-8	163

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
M	H							D	A234A	WIRING HARNESS: 21282; 48502300	EA	1									-15 4-8	164.1	
P	H		59359294814					E	A234B	CONTACT, ELECTRICAL 00779; 66143-2	EA	13	26	52	78	26	52	78		39		-15 4-8	164.2
P	H		59052560412					E	A234C	RESISTOR, FIXED COMPOSITION: 81349; RC42GF181J	EA	1	1	2	3	1	2	3		3		-15 4-8	217
C	H		53050546670					*	A234D	SCREW, MACHINE: 96906; MS35233-45	EA	7										-15 4-8	226
			53108805978					*	A234E	WASHER, FLAT: SAME AS A233D	EA	REF										-15 4-8	228
								*	A234F	WASHER, LOCK: SAME AS A233C	EA	REF										-15 4-8	227
X2	H							D	A234G	STAND OFF 21282; 48500100	EA	2										-15 4-8	229
P	H		58159716195					D	A235	READ HEAD: 21282; 94877100	EA	1	1	2	3	1	2	3		2		-15 4-8	168
			53050546670					*	A236 M	SCREW, MACHINE: SAME AS A234D	EA	REF										-15 4-8	165
			53109338119					*	A236AM	WASHER, LOCK: SAME AS A002F	EA	REF										-15 4-8	166
			53108805978					*	A237 M	WASHER, FLAT: SAME AS A233D	EA	REF										-15 4-8	167
P	H		59459826517					D	A238	SOLENOID: 21282; 94876100	EA	1	1	2	3	1	2	3		3		-15 4-8	216
C	H		53158151405					*	A239	PIN, COTTER: 96906; MS24665-151	EA	1										-15 4-8	208

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
C	H		53050546668						*	A240	SCREW, MACHINE: 96906; MS35233-43	EA		2								-15 4-8	213	
			53109338119						*	A240AM	WASHER, LOCK: SAME AS A002F	EA		REF									-15 4-8	214

(A) S O U R C E C O D E	(1) (B) M A I N T E N A N C E	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D E X	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
X2	H		53108805978						*	A241 M	WASHER, FLAT: SAME AS A233D	EA	REF								-15			
C	H		53402056552						D	A242	IND, LOCK OUT: 21282; 48506300	EA	1								4-8	215		
C	H								*	A243	RING, RETAINING: 96906; MS16633-4025	EA	1								-15	211		
X2	H		58159339312						*	A244	WASHER, FLAT: 96906; MS15795-309	EA	1								-15	209		
P	H		59358423532						D	A245	PIVOT, INDICATOR: 21282; 48506700	EA	1								-15	210		
C	H		53055767493						D	A246	CONNECTOR, RECEP- TACLE, ELECTRICAL: 96906; MS3102R22-14S	EA	1	1	1	1	1	1	1	3	-15	212		
P	H		59358144109						D	A247 M	SCREW, MACHINE: SAME AS A210A	EA	REF								4-8	14		
			53100429609						*	A247A	WASHER, LOCK: SAME AS A209A	EA	REF								-15	11		
			53105956211						*	A248	WASHER, FLAT: SAME AS A211	EA	REF								-15	12		
			59358144109						D	A249	CONNECTOR, RECEP- TACLE, ELECTRICAL: 96906; MS3102R20-16P	EA	1	1	1	1	1	1	1	3	-15	13		
			53055767493						*	A250 M	SCREW, MACHINE: SAME AS A210A	EA	REF								4-8	15		
			53100429609						*	A250A M	WASHER, LOCK: SAME AS A209A	EA	REF								-15	11		
																					4-8	12		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) D E S C R I P T I O N	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10			(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5															6	I N D E X
X2	H		53105956211					*	A251	WASHER, FLAT: SAME AS A211	EA	REF							-15				
C	H		53102708810					*	A252	SUPPORT, GUIDE: 21282; 48505600	EA	1							4-8	13			
C	H		53055434357					*	A253 M	NUT, HEXAGON: 96906; MS35650-104	EA	3							4-8	182			
			53106191148					*	A254	SCREW, MACHINE: 96906; MS35234-63	EA	5							4-8	181			
X2	H		53100582951					*	A255	WASHER, FLAT: SAME AS A202B	EA	REF							4-8	178			
C	H		53100582951					D	A255A	SPACER, STANDOFF: 21282; 48501300	EA	2							4-8	180			
X2	H		53055434357					*	A256	WASHER, LOCK: 96906; MS35337-81	EA	7							4-8	180.1			
X2	H		53109338120					D	A257	GUIDE, KEY: 21282; 48505500	EA	1							4-8	179			
X2	H		53106191148					D	A258	STANDOFF: 21282; 48509700	EA	2							4-8	183			
			53100429609					*	A259	SCREW, MACHINE: SAME AS A254	EA	REF							4-8	225			
			53109338120					*	A259A M	WASHER, LOCK: SAME AS A085C	EA	REF							4-8	222			
			53106191148					*	A260	WASHER, FLAT: SAME AS A202B	EA	REF							4-8	223			
X2	H		53100429609					D	A261	TORQUE BAR: 21282; 48506200	EA	1							4-8	224			
			53100429609					*	A261A	WASHER, LOCK: SAME AS A209A	EA	REF							4-8	185			
																			4-8	193			

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
X2	H							D	A262	TORQUE BAR: 21282; 48506900	EA	1								-15			
X2	H							D	A263	TORQUE BAR: 21282; 48506201	EA	1								4-8	184		
X2	H							D	A264	PIVOT: 21282; 48506400	EA	3								-15	186		
C	H		53055432768					*	A265	SCREW, MACHINE: 96906; MS35233-19	EA	7								4-8	190		
			53109338118					*	A265A M	WASHER, LOCK, SPLIT: SAME AS A017C	EA	REF								-15	187		
			53105956211					*	A266	WASHER, FLAT: SAME AS A211	EA	REF								4-8	188		
X2	H							D	A267	TORQUE BAR: 21282; 48506100	EA	1								-15	189		
X2	H							D	A267A M	TORQUE ROD RETAINER: 21282; 48511400	EA	3								4-8	191		
X2	H							D	A268	PIVOT: 21282; 48505900	EA	2								-15	189.1		
X2	H							D	A268B M	TORQUE ROD CLIP: 21282; 48511500	EA	2								4-8	195		
C	H		53055432766					*	A269	SCREW, MACHINE: 96906; MS35233-16	EA	4								-15	189.2		
			53105956211					*	A270	WASHER, FLAT: SAME AS A211	EA	REF								4-8	192		
A	H							D	A273A	PIVOT ASSEMBLY: 21282; 48510000	EA	1								-15	194		
			53055434358					*	A273B	SCREW MACHINE: SAME AS A202A	EA	REF								4-8	19		
																				-15	16		

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCTY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
			53106191148					*	A273C	WASHER, FLAT: SAME AS A202B	EA									-15			
			53100582951					*	A273D	WASHER, LOCK: SAME AS A256	EA										4-8	18	
P	H		58159716192					D	A276	SPACE BAR ASSEMBLY: 21282; 48506000	EA	1	1	2	3	1	2	3		1	-15	17	
P	H		58159716168					D	A279	KEY ASSEMBLY: 21282; 48507518	EA	1	*	*	*	1	1	2		1	-15	20	
X1	H							E	A280	KEYTOP: 21282; 48501519	EA	1									-15		
X1	H							E	A281	KEY: 21282; 48500311	EA	1									-15	22	
X1	H							E	A282	SPACER: 21282; 48504700	EA	1									-15	86	
P	H		58159716167					D	A283	KEY ASSEMBLY: 21282; 485076008	EA	1	*	*	*	1	1	2		1	-15	21	
X1	H							E	A284	KEYTOP: 21282; 48501501	EA	1									-15		
X1	H							E	A285	KEY: 21282; 48500301	EA	1									-15	23	
																					-15	87	

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407990451						D	A286	KEY ASSEMBLY: 21282; 48507601	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A287	KEYTOP: 21282; 48501502	EA	1										-15	24
X1	H								E	A288	KEY: 21282; 48500305	EA	1										-15	88
P	H		7440T990492						D	A289	KEY ASSEMBLY: 21282; 48507602	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A290	KEYTOP: 21282; 48501503	EA	1										-15	25
X1	H								E	A291	KEY: 21292; 48500309	EA	1										-15	89
P	H		74407990499						D	A292	KEY ASSEMBLY: 21282; 48507603	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A293	KEYTOP: 21282; 48501504	EA	1										-15	26
X1	H								E	A294	KEY: 21282; 48530313	EA	1										-15	90
P	H		74407999711						D	A295	KEY ASSEMBLY: 21282; 48507604	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A296	KEYTOP: 21282; 48501505	EA	1										-15	27
X1	H								H	A297	KEY: 21282; 48500317	EA	1										-15	91

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A)	(B)
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407999809						D	A298	KEY ASSEMBLY: 21282; 48507605	EA	1	*	*	*	1	1	2		1	-15		
X1	H								B	A299	KEYTOP: 21282; 48501506	EA	1									-15	28	
X1	H								E	A300	KEY: 21282;48500321	EA	1									-15	92	
P	H		74407999739						D	A301	KEY ASSEMBLY: 21282; 48507606	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A302	KEYTOP: 21282; 48501507	EA	1									-15	29	
X1	H								E	A303	KEY: 21282: 4850325	EA	1									-15	93	
P	H		74407999719						D	A304	KEY ASSEMBLY: 21282; 48507607	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A305	KEYTOP: 21282; 48501508	EA	1									-15	30	
X1	H								E	A306	KEY: 21282; 48500329	EA	1									-15	94	
P	H		74407999818						D	A307	KEY ASSEMBLY: 21282; 48507608	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A308	KEYTOP: 21282; 48501509	EA	1									-15	31	
X1	H								E	A309	KEY: 21282; 48500333	EA	1									-15	95	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS		
			(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION								(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20			(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				MODEL																		
				1	2	3	4	5														6	(C) I N D E X
P	H	74407999816						D	A310	KEY ASSEMBLY: 21282; 48507609	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A311	KEYTOP: 21282; 48501510	EA	1									-15	32
X1	H							E	A312	KEY: 21282; 48500337	EA	1									-15	96
P	H	74407999817						D	A313	KEY ASSEMBLY: 21282; 48501511	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A314	KEY TOP: 21282; 48501511	EA	1									-15	33
X1	H							E	A315	KEY: 21282; 48500341	EA	1									-15	97
P	H	74407999814						D	A316	KEY ASSEMBLY: 21282; 48507611	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A317	KEYTOP: 21282; 48501512	EA	1									-15	34
X1	H							E	A318	KEY: 21282; 4850045	EA	1									-15	98
P	H	74407999815						D	A319	KEY ASSEMBLY: 21282; 48507612	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A320	KEYTOP: 21282; 48501513	EA	1									-15	35
X1	H							E	A321	KEY: 21282; 48500349	EA	1									-15	99

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION								(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20			(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				MODEL																			
				1	2	3	4	5														6	(C) I N D C D
P	H	74407987292						D	A322	KEY ASSEMBLY: 21282; 48507613	EA	1	*	*	*	1	1	2		1	-15		
X1	H							E	A323	KEYTOP: 21282; 48501514	EA	1									-15	36	
X1	H							E	A324	KEY: 21282; 48500353	EA	1										-15	100
P	H	74407987297						D	A325	KEY ASSEMBLY: 21282; 48507614	EA	1	*	*	*	1	1	2		1	-15		
X1	H							E	A326	KEYTOP: 21282; 48501515	EA	1										-15	37
X1	H							E	A327	KEY: 21282; 48500357	EA	1										-15	101
P	H	74407989852						D	A328	KEY ASSEMBLY: 21282; 48507615	EA	1	*	*	*	1	1	2		1	-15		
X1	H							E	A329	KEYTOP: 21282; 48501515	EA	1										-15	38
X1	H							E	A330	KEY: 21282; 48500361	EA	1										-15	102
P	H	74407989851						D	A331	KEY ASSEMBLY: 21282; 48507616	EA	1	*	*	*	1	1	2		1	-15		
X1	H							E	A332	KEYTOP: 21282; 48501517	EA	1										-15	39
X1	H							E	A333	KEY: 21282; 48500303	EA	1										-15	103

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. C N T G C Y P L A N	(10) D E P O T M A I N T A L W P E R 100 E Q U I P	(11) I L L U S T R A T I O N S				
			(2) F E D E R A L S T O C K N U M B E R	(3) M O D E L								I N D E X C O D E	D E S C R I P T I O N	(A)	(B)	(C)	(A)			(B)	(C)	(A)	(B)	
				1	2	3	4	5						6	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407989955						D	A334	KEY ASSEMBLY: 21282; 48507617	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A335	KEYTOP: 21282; 48501518	EA	1									-15	40	
X1	H								E	A336	KEY: 21282; 48500307	EA	1									-15	104	
P	H		74407989867						D	A337	KEY ASSEMBLY: 21282; 48507619	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A338	KEYTOP: 21282; 48501520	EA	1									-15	41	
X1	H								E	A339	KEY: 21282; 48500315	EA	1									-15	105	
P	H		74407989904						D	A340	KEY ASSEMBLY: 21282; 48507620	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A341	KEYTOP: 21282; 48501521	EA	1									-15	42	
X1	H								E	A342	KEY: 21282; 48500319	EA	1									-15	106	
P	H		74407990040						D	A343	KEY ASSEMBLY: 21282; 48507621	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A344	KEYTOP: 21282; 48501522	EA	1									-15	43	
X1	H								E	A345	KEY: 21282; 48500323	EA	1									-15	107	

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D E X C O D E	(3) D E S C R I P T I O N	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6															
P	H	74407990031						D	A346	KEY ASSEMBLY: 21282; 48507622	EA	1	*	*	*	1	1	2		1	-15			
X1	H							E	A347	KEYTOP: 21282; 48501523	EA	1									-15	44		
X1	H							E	A348	KEY: 21282; 48500327	EA	1										-15	108	
P	H	74407990062						D	A349	KEY ASSEMBLY: 21282; 48507623	EA	1	*	*	*	1	1	2		1	-15			
X1	H							E	A350	KEYTOP: 21282; 48501524	EA	1										-15	45	
X1	H							E	A351	KEY: 21282; 48500331	EA	1										-15	109	
P	H	74407990063						D	A352	KEY ASSEMBLY: 21282; 48507624	EA	1	*	*	*	1	1	2		1	-15			
X1	H							E	A353	KEYTOP: 21282; 48501525	EA	1										-15	46	
X1	H							E	A354	KEY: 21282; 48500335	EA	1										-15	110	
P	H	74407990459						D	A355	KEY ASSEMBLY: 21282; 48507625	EA	1	*	*	*	1	1	2		1	-15			
X1	H							E	A356	KEYTOP: 21282; 48501526	EA	1										-15	47	
X1	H							E	A357	KEY: 21282; 48500339	EA	1										-15	111	

(A) S O U R C E C D	(B) M A I N T E N C E C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407988100						D	A358	KEY ASSEMBLY: 21282; 48507626	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A359	KEYTOP: 21282; 48501527	EA	1									-15	48
X1	H								E	A360	KEY: 21282; 48500343	EA	1									-15	112
P	H		74407987726						D	A361	KEY ASSEMBLY: 21282; 48507527	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A362	KEYTOP: 21282; 48501528	EA	1									-15	49
X1	H								E	A363	KEY: 21282; 48500347	EA	1									-15	113
P	H		74407987725						D	A364	KEY ASSEMBLY: 21282; 48507628	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A365	KEYTOP: 21282; 48501529	EA	1									-15	50
X1	H								E	A366	KEY: 21282; 48500351	EA	1									-15	114
P	H		74407987724						D	A367	KEY ASSEMBLY: 21282; 48507629	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A368	KEYTOP: 21282; 48501530	EA	1									-15	
X1	H								E	A369	KEY: 21282; 48500355	EA	1									-15	115

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	(3) MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407987559						D	A370	KEY ASSEMBLY: 21282; 48507630	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A371	KEYTOP: 21282; 48501531	EA	1										-15	52
X1	H								E	A372	KEY: 21282; 48500359	EA	1										-15	116
P	H		74407987328						D	A373	KEY ASSEMBLY: 21282; 48507631	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A374	KEYTOP: 21282; 48501532	EA	1										-15	53
X1	H								E	A375	KEY: 21282; 48500363	EA	1										-15	117
P	H		74407987327						D	A376	KEY ASSEMBLY: 21282; 48507632	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A377	KEYTOP: 21282; 48501533	EA	1										-15	54
X1	H								E	A378	KEY: 21282; 48500304	EA	1										-15	118
P	H		74407989960						D	A379	KEY ASSEMBLY: 21282; 48507633	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A380	KEYTOP: 21282; 48501534	EA	1										-15	55
X1	H								E	A381	KEY: 21282; 48500308	EA	1										-15	119

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS		
			(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION								(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20			(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				MODEL																		
				1	2	3	4	5														6	(A) C D
P	H	74407989959						D	A382	KEY ASSEMBLY: 21282; 48507634	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A383	KEYTOP: 21282; 48501535	EA	1									-15	56
X1	H							E	A384	KEY: 21282; 48500312	EA	1									-15	120
X2	H	74407986248						D	A385	KEY ASSEMBLY: 21282; 48507635	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A386	KEY TOP: 21282; 48501536	EA	1									-15	57
X1	H							E	A387	KEY: 21282; 48500316	EA	1									-15	121
P	H	74407987325						D	A388	KEY ASSEMBLY: 21282; 48507636	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A389	KEYTOP: 21282; 48501537	EA	1									-15	58
X1	H							E	A390	KEY: 21282; 48500320	EA	1									-15	122
P	H	74407987320						D	A391	KEY ASSEMBLY: 21282; 48507637	EA	1	*	*	*	1	1	2		1	-15	
X1	H							E	A392	KEYTOP: 21282; 48501538	EA	1									-15	59
X1	H							E	A393	KEY: 21282; 48500324	EA	1									-15	123

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407989590						D	A394	KEY ASSEMBLY: 21282; 48507637	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A395	KEYTOP: 21282; 48501539	EA	1										-15	60
X1	H								E	A396	KEY: 21282; 48500328	EA	1										-15	124
P	H		74407989552						D	A397	KEY ASSEMBLY: 21282; 48507639	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A398	KEYTOP: 21282; 48501540	EA	1										-15	61
X1	H								E	A399	KEY: 21282; 48500332	EA	1										-15	125
P	H		74407989453						D	A400	KEY ASSEMBLY: 21282; 48507640	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A401	KEYTOP: 21282; 48501541	EA	1										-15	62
X1	H								E	A402	KEY: 21282; 48500336	EA	1										-15	126
P	H		74407989460						D	A403	KEY ASSEMBLY: 21282; 48507641	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A404	KEYTOP: 21282; 48501542	EA	1										-15	63
X1	H								E	A405	KEY: 21282; 48500340	EA	1										-15	127

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407989470						D	A406	KEY ASSEMBLY: 21282; 48507642	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A407	KEYTOP: 21282; 48501543	EA	1									-15	64
X1	H								E	A408	KEY: 21282; 48500344	EA	1									-15	128
P	H		74407989356						D	A409	KEY ASSEMBLY: 21282; 48507643	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A410	KEYTOP: 21282; 48501544	EA	1									-15	65
X1	H								E	A411	KEY: 21282; 48500348	EA	1									-15	129
P	H		74407989567						D	A412	KEY ASSEMBLY: 21282; 48507644	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A413	KEYTOP: 21282; 48501545	EA	1									-15	66
X1	H								E	A414	KEY: 21282; 48500352	EA	1									-15	130
P	H		74407989572						D	A415	KEY ASSEMBLY: 21282; 48507645	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A416	KEYTOP: 21282; 48501546	EA	1									-15	67
X1	H								E	A417	KEY: 21282; 48500356	EA	1									-15	131

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407988935						D	A418	KEY ASSEMBLY: 21282; 48507646	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A419	KEYTOP: 21282; 48501547	EA	1									-15	68
X1	H								E	A420	KEY: 21282; 48500360	EA	1									-15	132
P	H		74407989640						D	A421	KEY ASSEMBLY: 21282; 48507647	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A422	KEYTOP: 21282; 48501548	EA	1									-15	69
X1	H								E	A423	KEY: 21282; 48500364	EA	1									-15	133
P	H		74407989614						D	A424	KEY ASSEMBLY: 21282; 48507648	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A425	KEYTOP: 21282; 48501549	EA	1									-15	70
X1	H								E	A426	KEY: 21282; 48500302	EA	1									-15	134
P	H		74407989600						D	A427	KEY ASSEMBLY: 21282; 48507649	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A428	KEYTOP: 21282; 48501550	EA	2									-15	71
X1	H								E	A429	KEY: 21282; 48500306	EA	1									-15	135

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	(3) M O D E L								(3) D E S C R I P T I O N	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5					6	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	FIG. NO.	ITEM NO. OR REF DESIGN	
P	H		74407989641						D	A430	KEY ASSEMBLY: 21282; 48507650	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A431	KEYTOP: 21282; 48501551	EA	2										-15	72
X1	H								E	A432	KEY: 21282; 48500310	EA	1										-15	136
P	H		74407989486						D	A433	KEY ASSEMBLY: 21282; 48507651	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A434	KEYTOP: 21282; 48501552	EA	1										-15	73
X1	H								E	A435	KEY: 21282; 48500314	EA	1										-15	137
P	H		74407987326						D	A436	KEY ASSEMBLY: 21282; 48507652	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A437	KEYTOP: 21282; 48501553	EA	1										-15	74
X1	H								E	A438	KEY: 21282; 48500318	EA	1										-15	138
P	H		74407989845						D	A439	KEY ASSEMBLY: 21282; 48507653	EA	1	*	*	*	1	1	2		1	-15		
X1	H								E	A440	KEYTOP: 21282; 48501554	EA	1										-15	75
X1	H								E	A441	KEY: 21282; 48500322	EA	1										-15	139

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	(3) MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407988916						D	A442	KEY ASSEMBLY: 21282; 48507654	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A443	KEY TOP: 21282; 48501555	EA	1									-15	76
X1	H								E	A444	KEY: 21282; 48500326	EA	1									-15	140
P	H		74407989021						D	A445	KEY ASSEMBLY: 21282; 48507655	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A446	KEYTOP: 21282; 48501556	EA	1									-15	77
X1	H								E	A447	KEY: 21282; 48500330	EA	1									-15	141
P	H		74407988765						D	A448	KEY ASSEMBLY: 21282; 48507656	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A449	KEYTOP: 21282; 48501557	EA	1									-15	78
X1	H								E	A450	KEY: 21282; 48500334	EA	1									-15	142
P	H		74407998678						D	A451	KEY ASSEMBLY: 21282; 48507657	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A452	KEYTOP: 21282; 48501558	EA	1									-15	79
X1	H								E	A453	KEY: 21282; 48500338	EA	1									-15	143

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) D E S C R I P T I O N	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	H		74407998534						D	A454	KEY ASSEMBLY: 21282; 48507658	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A455	KEYTOP: 21282; 48501559	EA	1									-15	80
X1	H								E	A456	KEY: 21282; 48500342	EA	1									-15	144
P	H		74407998490						D	A457	KEY ASSEMBLY: 21282; 48507659	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A458	KEYTOP: 21282; 48501560	EA	1									-15	81
X1	H								E	A459	KEY: 21282; 48500346	EA	1									-15	145
P	H		74407998440						D	A460	KEY ASSEMBLY: 21282; 48507660	EA	1	*	*	*	1	1	2		1	-15	
X1	H								E	A461	KEYTOP: 21282; 48501561	EA	1									-15	82
X1	H								E	A462	KEY: 21282; 48500350	EA	1									-15	146
P	H		74407998295						D	A463	KEY ASSEMBLY: 21282; 48507561	EA	1	*	*	*	1	1	2		1	-15	
									E	A464	KEYTOP: SAME AS A431	EA	REF									-15	83
X1	H								E	A465	KEY: 21282; 48500354	EA	1									-15	147

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20		
P	H		74407988915						D	A466	KEY ASSEMBLY: 21282; 48507662	EA	1	*	*	*	1	1	2		1	-15 4-8		
X1	H								E	A467	KEYTOP: SAME AS A428	EA	REF										84	
P	H		58159716148						D	A468	KEY: 21282; 48500358	EA	1									1	-15 4-8	148
X1	H								D	A469	KEY ASSEMBLY: 21282; 48507663	EA	1	*	*	*	1	1	2		1	-15 4-8		
X1	H								E	A470	KEYTOP: 21282; 48501500	EA	1										-15 4-8	85
X1	H								E	A471	KEY: 21282; 48500362	EA	1										-15 4-8	149
A	H								D	A472	INTERLOCK ASSEMBLY: 21282; 48501000	EA	1										-15 4-8	159
			53050566670						*	A473 M	SCREW, MACHINE SAME AS A234D	EA	REF										-15 4-8	156
			53109338119						*	A473A M	WASHER, LOCK: SAME AS A002F	EA	REF										-15 4-8	157
			53108805978						*	A474 M	WASHER, FLAT SAME AS A233D	EA	REF										-15 4-8	158
X2	H								E	A474B	STRIP, INTERLOCK: 21282; 48511100	EA	1										-15 4-9	23
X2	H								E	A475C	STRIP, INTERLOCK: 21282; 48510900	EA	1										-15 4-9	12

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
				I N D E X									C D										
X2	H							E	A475D	STRIP, INTERLOCK: 21282; 4851100	EA	1								-15			
C	H	53055505001						*	A475E	SCREW, MACHINE; 96906; MS35233-12	EA	3								4-9	16		
		53055505002						*	A477 M	SCREW, MACHINE; SAME AS A214 M	EA	REF								4-9	6, 20		
C	H							*	A478A	WASHER, FLAT: 80205 NAS620C	EA	7								4-9	9,13,17		
		53100429609						*	A479A	WASHER, LOCK: SAME AS A209A	EA	REF								-15	8,11,15 19,22		
X2	H							E	A480	ANGLE, INTERLOCK: 21282; 48500600	EA	1								4-9	7,10,14 18,21		
2	H							E	A481A	CAM SCREW: 21282; 48501400	EA	2								-15	24		
		53102708810						*	A481B	NUT, PLAIN HEXAGON: SAME AS A253 M	EA	REF								4-9	4		
C	H							*	A481C	WASHER, LOCK: 96906; MS35338-81	EA	2								-15	1		
		53106191148						*	A481D	WASHER FLAT SANE AS A202B	EA	REF								4-9	2		
X2	H	58159716164						E	A482	ROLLER, INTERLOCKING: 21282; 48500800	EA	67								-15	3		
X2	H							D	A483A	SPRING, FORMED: 21282; 485100200	EA	1								4-9	5		
P	H	53551447063						D	A487	KNOB, SELECTOR: 21282; 48506800	EA	1	1	2	3	1	2	3		2	-15	160	
C	H							*	A488A	SCREW, MACHINE: 96906; MS35233-14	EA	3								4-8	173		
																				4-8	169		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS		
			(2) FEDERAL STOCK NUMBER	MODEL									(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6					I N D C D	1-5	6-10	11-20	1-5			6-10	11-20	
A	H	R	53102714642						*	A488B	NUT, PLAIN HEXAGON: SAME AS A209	EA	REF							-15			
			53100429609							*	A488C	WASHER, LOCK: SAME AS A209A	EA	REF							4-8	170	
			53106191148							*	A488D	WASHER, FLAT: SAME AS A202B	EA	REF							-15	171	
										D	A489	INHIBITOR ASSEMBLY: 21282; 48509400	EA	1							4-8	172	
			53055432783							*	A490	SCREW, MACHINE: SAME AS A233B	EA	REF								-15	177
																				4-8	174		

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
			53108805978					*	A490AM	WASHER, FLAT SAME AS A233D	EA	REF								-15 4-8	176		
			53109338119						A490BM	WASHER, LOCK SAME AS A002F	EA	REF								-15 4-8	175		
P	H		59306464619					E	A491	SWITCH, SENSITIVE: 96906 MS25085-1	EA	3	1	2	3	1	2	3	9	-15 4-11	4		
C	H		53055432761					*	A492	SCREW, MACHINE 96906; MS35233-6	EA	2								-15 4-11	1		
								*	A493 M	WASHER, FLAT SAME AS A220A	EA	REF								-15 4-11	3		
C	H		53100582950					*	A494	WASHER, LOCK: 96906 MS35337-77	EA	4								-15 4-11	2		
X2	H							E	A495	ACTVATOR: 21282: 93714001	EA	2								-15 4-11	5		
X2	H							E	A496	CAM, SWITCHACTUATOR 21282: 48502500	EA	1								-15 4-11	10		
			53055505001					*	A497 M	SCREW, MACHINE: SAME AS A475E	EA	REF								-15 4-11	7		
C	H		53109651805					*	A499 M	WASHER, LOCK: 96906; MS35337-78	EA	1								-15 4-11	8		
X2	H							E	A500	SELECTOR: 21282; 48505200	EA	1								-15 4-11	13		

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
C	H		53405981138					*	A501	RING, RETAINER: 96906; MS1633-4012	EA	22								-15 4-11	11		
			53105956425					*	A502 M	WASHER, FLAT: SAME AS A017D	EA	REF								-15 4-11	12		
X2	H							E	A503	BALL VALVE: 24981; 94875900	EA	1								-15 4-11	6		
X2	H							E	A504	TIE ROD: 21282; 48503301	EA	1								-15 4-11	15		
			53405981138					*	A505	RING, RETAINING: SAME AS A501	EA	REF								-15 4-11	14		
X2	H							E	A506	TIE ROD: 21282; 48503300	EA	1								-15 4-11	21		
			53405981138					*	A507	RING, RETAINING: SAME AS A501	EA	REF								-15 4-11	20		
X2	H							E	A508	BELLCRANK ASSEMBLY: 21282; 48508500	EA	1								-15 4-11	18		
			53405981138					*	A509	RING, RETAINING: SAME AS A501	EA	REF								-15 4-11	16		
			53105956425					*	A510 M	WASHER, FLAT: SAME AS A017D	EA	REF								-15 4-11	17		
X2	H							E	A511	BELLCRANK ASSEMBLY: 21282; 48508800	EA	1								-15 4-11	19		
			53405981138					*	A512	RING, RETAINING: SAME AS A501	EA	REF								-15 4-11	16		

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
X2	H		53105956425					*	A513 M	WASHER, FLAT: SAME AS A017D	EA	REF							-15				
									E	A514	BELLCRANK ASSEMBLY: 21282; 48508700	EA	2							4-11	17		
X2	H		53405981138					*	A515	RING, RETAINING: SAME AS A501	EA	REF							-15				
									E	A515AM	WASHER, FLAT SAME AS A017D	EA	REF							4-11	22		
X2	H		53105956425					*	A516	ANGLE ASSEMBLY: 21282; 48508900	EA	1							-15				
X2	H							E	A517	LINK ASSEMBLY: 21282; 48509500	EA	1							-15	25			
X2	H		53405981138					*	A518	RING RETAINING: SAME AS A501	EA	REF							-15				
									E	A519	LEVER, CENTERING 21282; 48502900	EA	1							4-11	26		
X2	H		53405981138					*	A520	RING, RETAINING: SAME AS A501	EA	REF							-15				
									E	A521	LEVER, CENTERING: 21282,48503100	EA	1							4-11	29		
X2	H							E	A522	SPRING, FORMED 21282; 48509300	EA	1						-15					
X2	H							E	A523	SLIDE ASSEMBLY: 21282; 48508600	EA	1							4-11	30			
X2	H							E											-15	31			
X2	H							E											-15	50			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
			53405981138					*	A524	RING, RETAINING: SAME AS A501	EA	REF							-15				
			53105956425					*	A525	M WASHER, FLAT: SAME AS A017D	EA	REF							4-11	48			
X2	H							E	A526	LINK ASSEMBLY: 21282; 48509100	EA	1							4-11	49			
X2	H							*	A527	PIN, PIVOT: 21282; 48504600	EA	1							4-11	38			
C	H		53405433981					*	A528	RING, RETAINING: 96906; MS16633-4009	EA	2							4-11	33			
X2	H							E	A530A	LINK ASSEMBLY: 21282; 48509000	EA	1							4-11	32			
X2	H							*	A531A	PIN, PIVOT: 21282; 48503900	EA	1							4-11	46			
			53405433981					*	A532	RING, RETAINING: SAME AS A528	EA	REF							4-11	33.1			
C	H							*	A532A	WASHER, FIAT: 88044; AN960C4	EA	1							4-11	32.1			
X2	H							E	A533A	ROLLER: 21282; 48500801	EA	1							4-11	45			
X2	H							E	A534	ACTUATOR ASSEMBLY: 21282; 48509200	EA	1							4-11	43			
C	H		53407250969					*	A535	RING, RETAINING: 96906; MS16633-4018	EA	2							4-11	41			
																			4-11	39			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
X2	H		53101670812						*	A536	M WASHER, FLAT: SAME AS A085B	EA	REF							-15			
									E	A537	ACTUATOR ASSEMBLY: 21282; 48509201	EA	1							4-11	40		
			53407250969						*	A538	RING, RETAINING: SAME AS A535	EA	REF							-15	4-11	42	
X2	H		53101670812						*	A539 M	WASHER, FLAT: SAME AS A085B	EA	REF							-15	4-11	39	
									E	A540	LINK ASSEMBLY: 21282; 48509101	EA	1							-15	4-11	40	
			53405981138						*	A541	RING, RETAINING: SAME AS A501	EA	REF							-15	4-11	37	
X2	H		53105956425						*	A542 M	WASHER, FLAT: SAME AS A017D	EA	REF							-15	4-11	35	
									E	A543	SPRING, FORMED 21282; 48505100	EA	1							-15	4-11	36	
			53405981138						*	A544	LINK ASSEMBLY: 21282; 48509001	EA	REF							-15	4-11	52	
X2	H		53105956425						*	A545	RING, RETAINING: SAME AS A501	EA	REF							-15	4-11	47	
									*	A546	M WASHER, FLAT: SAME AS A017D	EA	REF							-15	4-11	44	
			53105956425						E	A547	SPRING, FORMED: 21282; 48505101	EA	1							-15	4-11	45	
																			-15	4-11	53		

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	(3) MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20		
X2	H							E	A548	BASE ASSEMBLY: 21282: 48508400	EA	1								-15 4-11	51		
X2	H							D	A549	BUMPER, MOLDED 70485: 1743-W-406	EA	4								-15 4-8	231		
C	H	53055432764						*	A550	SCREW, MACHINE: 96906: MS35233-9	EA	4								-15 4-8	230		
X2	H							D	A550A	STANDOFF: 21282 93110204	EA	1								-15 4-8	201		
X2	H							D	A550B	HOLDER, COMPONENT 21282: 94880500	EA	1								-15 4-8	200		
		53100429609						*	A550B1	WASHER, LOCK: SAME AS A209A	EA	REF								-15 4-8	198		
		53105956211						*	A550B2	WASHER, FLAT: SAME AS A211	EA	REF								-15 4-8	199		
		53055432768						*	A550B3	SCREW, MACHINE: SAME AS A265	EA	REF								-15 4-8	197		
X2	H							D	A550C	BRACKET: 21282: 48511200	EA	1								-15 4-8	153		
		53108497733						*	A550C1	WASHER, FLAT: SAME AS A224 M	EA	REF								-15 4-8	152		
								*	A550C2	SCREW, MACHINE: SAME AS A488A	EA	REF								-15 4-8	150		
		53100429609						*	A550C3	WASHER, LOCK: SAME AS A209A	EA	REF								-15 4-8	151		
		59306464619						D	A550D	SWITCH, SENSITIVE SAME AS A491	EA	REF								-15 4-8	155		
X2	H							D	A550E	ACTUATOR: 21282: 48511300	EA	1								-15 4-8	154		

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS					
			(2) FEDERAL STOCK NUMBER	(3) MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)			
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN	
X2 P	H H		62401680161						D	A550FM	CLIP: SAME AS A268BM	EA	REF								-15 4-8	189.2			
									D	A550GM	RETAINER: SAME AS A267AM	EA	REF										-15 4-8	189.1	
									D	A550H	LAMP, INCANDESCENT: SAME AS A207AM	EA	REF											-15 4-8	196
									D	A551	BASE: 21282; 48500200	EA	1											-15 4-8	232
									B	A552	LOUDSPEAKER: 26234 5803096	EA	1	1	2	3	1	2	3		1			-15 4-3	10

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
			53105586207					*	A553 M	WASHER, FLAT: SAME AS A002E	EA	REF								-15 4-3	9		
			53109338119					*	A554 M	WASHER, LOCK: SAME AS A002F	EA	REF								-15 4-3	8		
			53050546669					*	A555	SCREW, MACHINE: SAME AS A122	EA	REF								-15 4-3	6		
			53109249759					*	A556 M	NUT, PLAIN, HEXAGON: SAME AS A007A	EA	REF								-15 4-3	7		
P	H	T	74409352416					B	A557	CIRCUIT, CARD ASSEM- BLY: 58189; A65301-001	EA	1	1	2	3	1	2	3	3	-15 4-3	32		
X1	D							C	A558	PRINTED CIRCUIT BOARD 58189; A65302-001	EA	1								-15 4-3			
P	D		59107028057					C	A559	CAPACITOR, FIXED, MICA 81349; CM05F331J03	EA	11							36	-15 5-2	C1		
			59107028057					C	A560	CAPACITOR, FIXED, MICA SAME AS A559	EA	REF								-15 5-2	C2		
			59107028057					C	A561	CAPACITOR, FIXED, MTCA SAME AS A559	EA	REF								-15 5-2	C3		
P	D		59109412356					C	A562 M	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE107M	EA	7							30	-15 5-2	C5		

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCT PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS		
			(2) FEDERAL STOCK NUMBER	MODEL									(3) I N D C D D E S C R I P T I O N	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10			(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6														
P	D		59101145286						C	A563	CAPACITOR, FIXED, PLASTIC: 99515; XL5-223A1SC	EA		1						3	-15 5-2	C4	
P	D		59109363863						C	A564 M	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BF684M	EA		2						5	-15 5-2	C6	
P	D		59108231024						C	A565 M	CAPACITOR, FIXED, PAPER: 81349; CP09A1KB154K3	EA		2						3	-15 5-2	C7	
P	D		59109045644						C	A566A	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE156M	EA		1						5	-15 5-2	C8	
P	D		59109024050						C	A567A	CAPACITOR, FIXED, FILM 96733; 4M104	EA		1						3	-15 5-2	C9	
P	D		59050518012						C	A568	RESISTOR, FIXED, FILM: 81349; RN60D7321F	EA		2						6	-15 5-2	R1	
			59050518012						C	A569	RESISTOR, FIXED, FILM: SAME AS A568	EA		REF								-15 5-2	R9
P	D		59056832246						C	A570	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF473J	EA		4						12	-15 5-2	R2	
			59056832246						C	A571	RESISTOR, FIXED, COM- POSITION: SAME AS A570	EA		REF								-15 5-2	R6
			59056832246						C	A572	RESISTOR, FIXED, COM- POSITION: SAME AS A570	EA		REF								-15 5-2	R10

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS					
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A)	(B)		
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN		
P	D		5905bB3226						C	A573	RESISTOR, FIXED, COM- POSITION SAME AS A570	EA		REF											-15 5-2	R14
			59056832238						C	A574	RESISTOR, FIXED, COM POSITION: 81349; RC07GF103J	EA		29							87				-15 5-2	R3
			59056832238						C	A575	RESISTOR, FIXED, COM POSITION SAME AS A574	EA		REF											-15 5-2	R4
			59056832238						C	A576	RESISTOR, FIXED, COM POSITION: SAME AS A574	EA		REF											-15 5-2	R11
			59056832238						C	A577	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA		REF											-15 5-2	R12
			59056832238						C	A578	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA		REF											-15 5-2	R39
			59056832238						C	A579	RESISTOR, FIXED, COM POSITION : SAME AS A574	EA		REF											-15 5-2	R41
			59056832238						C	A580	RESISTOR, FIXED, COM POSITION: SAME AS A574	EA		REF											-15 5-2	R49
			59056832238						C	A581	RESISTOR, FIXED, COM POSITION: SAME AS A574	EA		REF											-15 5-2	R51
			59056832238						C	A582	RESISTOR, FIXED, COB- POSITION SAME AS A574	EA		REF											-15 5-2	R59

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E C D	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS								
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)						
				1	2	3	4	5					6	1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN					
				I N D C D																								
P	D		59051858510						C	A583	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA		REF												-15 5-2	R14	
			59056819970						C	A584 M	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF822J	EA		2											6	-15 5-2	R3	
			59056819970						C	A585	RESISTOR, FIXED, COM- POSITION: SAME AS A584 M	EA		REF												-15 5-2	R13	
P	D		59058000179						C	A586A	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF563J	EA		13											36	-15 5-2	R7	
			59058000179						C	A587A	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA		REF												-15 5-2	R15	
			59058000179						C	A588A	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA		REF												-15 5-2	R38	
			59058000179						C	A589A	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA		REF												-15 5-2	R48	
			59058000179						C	A590A	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA		REF												-15 5-2	R58	
P	D		59056832236						C	A591	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF39iJ	EA		7												21	-15 5-2	R8
			59056832236						C	A592	RESISTOR, FIXED, COM- POSITION: SAME AS A591	EA		REF												-15 5-2	R16	

(A) S O U R C E C D	(1) M A I N T D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS	
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5	6																
P	D		59056832236						C	A593	RESISTOR, FIXED, COM- POSITION: SAME AS A591	EA		REF							-15 5-2	R20			
			59056832236						C	A594	RESISTOR, FRIED, COM- POSITION: SAME AS A591	EA		REF							-15 5-2	R24			
			59056832236						C	A595	RESISTOR, FIXED, COM- POSITION: SAME AS A591	EA		REF							-15 5-2	R28			
			59056863369						C	A596	RESISTOR, FIXED, COM- POSITION: 81349; RC07CG331J	EA		3					9		-15 5-2	R17			
			59056863369						C	A597	RESISTOR, FIXED, COM- POSITION: SAME AS A596	EA		REF							-15 5-2	R21			
			59056863369						C	A598	RESISTOR, FIXED, COM- POSITION: SAME AS A596	EA		REF							-15 5-2	R25			
P	D		59058016444						C	A599	RESISTOR, FIXED, COM- POSITION: 81319; RC07GF911J	EA		3					9		-15 5-2	R18			
			59058016444						C	A600	RESISTOR, FIXED, COM- POSITION: SAME AS A599	EA		REF							-15 5-2	R22			
			59058016444						C	A601	RESISTOR, FIXED, COM- POSITION: SAME AS A599	EA		REF							-15 5-2	R26			
P	D		59056870000						C	A602	RESISTOR, FIXED, COM- POSITION:	EA		3					9		-15 5-2	R19			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6															
			59056870000						C	A603	RESISTOR, FIXED, COMPOSITION: SAME AS A602	EA		REF							-15 5-2	R23		
			59056870000						C	A604	RESISTOR, FIXED, COMPOSITION: SAME AS A602	EA		REF							-15 5-2	R27		
P	D		59051923978						C	A605 M	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF303J	EA		2						3	-15 5-2	R29		
P	D		59052791751						C	A606 M	RESISTOR, FIXED, COMPOSITION: 81349; RC20F302J	EA		4						6	-15 5-2	R30		
			59052791751						C	A607 M	RESISTOR, FIXED, COMPOSITION: SAME AS A606 M	EA		REF								-15 5-2	R32	
P	D		59052793506						C	A608 M	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF332J	EA		2						3	-15 5-2	R31		
P	D		59051712001						C	A609 M	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF362J	EA		2						3	-15 5-2	R33		
P	D		59051908881						C	A610 M	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF182J	EA		2						3	-15 5-2	R34		
P	D		59052792674						C	A611 M	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF201J	EA		2						3	-15 5-2	R35		
P	D		59056819969						C	A612	RESISTOR, FIXED, COMPOSITION: 81349; RC076F332J	EA		12						36	-15 5-2	R36		

(A) S O U R C E C D	(1) (B) M A I N T D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS	
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5	6																
P	D		59056819969						C	A613	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA		REF							-15 5-2	R46			
			59056819969						C	A614	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA		REF							-15 5-2	R56			
			59056869997						C	A615	RESISTOR, FIXED, COM- POSITION: 81349; RC07GFCP62J	EA		11					33		-15 5-2	R37			
			59056869997						C	A616	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA		REF							-15 5-2	R47			
			59056869997						C	A617	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA		REF							-15 5-2	R57			
P	D		59056863903						C	A618	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF333J	EA		12					36		-15 5-2	R40			
			59056863903						C	A619	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA		REF							-15 5-2	R50			
			59056863933						C	A620	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA		REF							-15 5-2	R60			
P	D		59058016998						C	A621	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF621J	EA		11					33		-15 5-2	R4			
			59058016998						C	A622	RESISTOR, FIIED, COM- POSITION: SAME AS A621	EA		REF							-15 5-2	R52			

(A) S O U R C E C D	(1) (B) M A I N T D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS					
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN					
				1	2	3	4	5	6																				
P	D		59058016998						C	A623	RESISTOR, FIXED, COMPOSITION: SAME AS A621	EA		REF														-15 5-2	R62
			59056910195						C	A624	RESISTOR, FIXED, COMPOSITION: 81349; RC07GF562J	EA		13														-15 5-2	3 R43
			59056910195						C	A625	RESISTOR, FIXED, COMPOSITION: SAME AS A624	EA		REF														-15 5-2	R53
			59056910195						C	A626	RESISTOR, FIXED, COMPOSITION: SAME AS A624	EA		REF														-15 5-2	R63
P	D		59051955571						C	A627	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF680J	EA		22														-15 5-2	R44
			59051955571						C	A628	RESISTOR, FIXED, COMPOSITION: SAME AS A627	EA		REF														-15 5-2	R45
			59051955571						C	A629	RESISTOR, FIXED, COMPOSITION: SAME AS A627	EA		REF														-15 5-2	R54
			59051955571						C	A630	RESISTOR, FIXED, COMPOSITION: SAME AS A627	EA		REF														-15 5-2	R55
			59051955571						C	A631	RESISTOR, FIXED, COMPOSITION: SAME AS A627	EA		REF														-15 5-2	R64
			59051955571						C	A632	RESISTOR, FIXED, COMPOSITION: SAME AS A627	EA		REF														-15 5-2	R65

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A)	(B)
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P	D	59056896799						C	A633 M	RESISTOR, VARIABLE: 81349; RT12C2P502	EA	2						5	-15 5-2	R66				
P	D	59050787777						C	A634	RESISTOR, FIXED, FILM: 81349; RN60D2741F	EA	1						3	-15 5-2	R67				
P	D	59059695851						C	A635AM	RESISTOR, FIXED, FILM: 81349; RN60D1210F	EA	2						3	-15 5-2	R68				
P	D	59056816462						C	A636	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF102J	EA	61						174	-15 5-2	R69				
		59056816462						C	A637	RESISTOR, PIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-2	R70				
		59056816462						C	A638	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-2	R78				
		59056816462						C	A639	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-2	R80				
P	D	59052525434						C	A640 M	RESISTOR, FIXED, COM- POSITION: 81349; RC20GF121J	EA	2						3	-15 5-2	R71				
P	D	59056869994						C	A641	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF122J	EA	9						18	-15 5-2	R72				
		59056869994						C	A642	RESISTOR, FIXED, COM- POSITION: SAME AS A641	EA	REF							-15 5-2	R73				

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCT PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A)	(B)	(C)	(A)			(B)	(C)	FIG. NO.	ITEM NO. OR REF DESIGN
														(A)	(B)	(C)	(A)			(B)	(C)		
			59056869994						C	A643	RESISTOR, FIXED, COM- POSITION: SAME AS A641	EA		REF							-15 5-2	R85	
P	D		59056864530						C	A644	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF104J	EA		5							9	-15 5-2	R74
			59056864530						C	A645	RESISTOR, FIXED, COM- POSITION: SAME AS A644	EA		REF								-15 5-2	R76
P	D		59056863119						C	A646 M	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF132J	EA		2							3	-15 5-2	R75
P	D		59056837726						C	A647 M	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF363J	EA		2							3	-15 5-2	R77
P	D		59056869998						C	A648 M	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF472J	EA		3							6	-15 5-2	R79
P	D		59056832241						C	A649 M	RESISTOR, FIXED, COM- POSITION: 81349; RC07GFS12J	EA		2							3	-15 5-2	R81
P	D		59054956800						C	A650 M	RESISTOR, FIXED, COM- POSITION: 81349; RC20GF561J	EA		2							3	-15 5-2	R82
			59056910195						C	A651	RESISTOR, FIXED, COM- POSITION: SAME AS A624	EA		REF								-15 5-2	R83
P	D		59056824107						C	A652 M	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF181T	EA		2							3	-15 5-2	R84

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A)	(B)	(C)	(A)			(B)	(C)	FIG. NO.	ITEM NO. OR REF DESIGN
														C	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59052793514						C	A653	RESISTOR, FIXED, COMPOSITION: 81349; RC20GFT81J	EA							3	-15 5-2	R86		
			59052793514						C	A654	RESISTOR, FIXED, COM POSITION: SAME AS A653	EA		REF						-15 5-2	R87		
P	D		59618140768						C	A655	SEMI-CONDUCTOR DEVICE, DIODE: 81350; JAN1N3064-	EA		38					93	-15 5-2	CR1		
			59618140768						C	A656	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-2	CR2		
			59618140768						C	A657	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A6N550	EA		REF						-15 5-2	CR3		
			59618140768						C	A658	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-2	CR4		
			59618140768						C	A659	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-2	CR5		
			59618140768						C	A660	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-2	CR6		
			59618140768						C	A661	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-2	CR7		
			59618140768						C	A662	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-2	CR8		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
				I N D C D																			
			59618140768						C	A663	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF							-15 5-2	CR9	
			59618140768						C	A664	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF							-15 5-2	CR11	
			59618140768						C	A665	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF							-15 5-2	CR14	
P	D		59619593742						C	A666A	SEMI-CONDUCTOR DEVICE, DIODE: 81349; JAN1N3666M1	EA		2					6		-15 5-2	CR10	
			59619593742						C	A667A	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A666A	EA		REF							-15 5-2	CR12	
P	D		59619858929						C	A668 M	TRANSISTOR: 81350; JAN2N2324	EA		2						5		-15 5-2	CR13
P	D		59619952310						C	A669	SEMI-CONDUCTOR DEVICE, DIODE: 81349; JAN1N752A	EA		3						9		-15 5-2	VR1
			59619952310						C	A670	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A669	EA		REF							-15 5-2	VR2	
			59619952310						C	A671	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A669	EA		REF							-15 5-2	VR3	
P	D		59618456458						C	A672 M	SEMI-CONDUCTOR DEVICE, DIODE: 81350; JAN1N756A	EA		2						3		-15 5-2	VR4

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCTY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A)	(B)	(C)	(A)			(B)	(C)	FIG. NO.	ITEM NO. OR REF DESIGN
				C	D	C	D	C					D	1-5	6-10	11-20	1-5			6-10	11-20		
P	D		59610680687						C	A673	SEMI-CONDUCTOR DEVICE, DIODE: 81350; JAN1N3828A	EA		4					12	-15 5-2	VR5		
			59610680687						C	A674	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A673	EA		REF						-15 5-2	VR6		
P	D		59610507499						C	A675	TRANSISTOR: 81350; JAN2N2219	EA		86					420	-15 5-2	Q1		
			59610507499						C	A676	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q2		
			59610507499						C	A677	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q3		
			59610507499						C	A678	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q4		
			59610507499						C	A679	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q5		
			59610507499						C	A680	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q6		
			59610507499						C	A681	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q7		
			59610507499						C	A682	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q8		
			59610507499						C	A684	TRANSISTOR: SAME AS A675	EA		REF						-15 5-2	Q9		
			59610507499						C	A684	TRANSISTOR: SAME AS A575	EA		REF						-15 5-2	Q13		

(A) S O U R C E C D	(1) M A I N T D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE								(4) U N I T O F I S S U E	(5) QTY I N U N I T P K	(6) QTY I N U N I T	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS		
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D				(3) DESCRIPTION	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10			(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6															
			59610507499						C	A685	TRANSISTOR: SAME AS A675	EA	REF							-15				
			59610507499						C	A686	TRANSISTOR: SAME AS A675	EA	REF							5-2	Q15			
			59610507499						C	A687	TRANSISTOR: SAME AS A675	EA	REF							-15	Q17			
			59610507499						C	A688	TRANSISTOR: SAME AS A675	EA	REF							5-2	Q19			
			59610507499						C	A689	TRANSISTOR: SAME AS A675	EA	REF							-15	Q21			
			59610507499						C	A690	TRANSISTOR: SAME AS A675	EA	REF							5-2	Q23			
			59610507499						C	A691	TRANSISTOR: SAME AS A675	EA	REF							5-2	Q26			
P	D		59618139360						C	A692 M	TRANSISTOR: 81350; JAN2N1613	EA	4					10		5-2	Q27			
			59618139360						C	A693 M	TRANSISTOR: SAME AS A692 M	EA	REF							-15	Q10			
P	D		59618923473						C	A694 M	TRANSISTOR: 81350; JAN2N526	EA	2					5		5-2	Q11			
P	D		59618804779						C	A695	TRANSISTOR: 81350; JAN2N2905	EA	28					135		-15	Q12			
			59618804779						C	A696	TRANSISTOR: SAME AS A695	EA	REF							5-2	Q14			
																				-15	Q16			

(A) S O U R C E C D	(B) M A I N T E N A N C E	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCTY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
P X2 A X P	D D H D D	T	59618804779						C	A697	TRANSISTOR: SAME AS A695	EA	REF							-15	Q18		
			59618804779						C	A698	TRANSISTOR: SAME AS A695	EA	REF							-15	Q20		
			59618804779						C	A699	TRANSISTOR: SAME AS A695	EA	REF							-15	Q22		
			59618804779						C	A700	TRANSISTOR: SAME AS A695	EA	REF							-15	Q24		
			59618804779						C	A701	TRANSISTOR: SAME AS A695	EA	REF							-15	Q28		
			59618088393						C	A701A	TRANSISTOR: 81350; JAN2N491	EA	2					10		-15	Q25		
			59709564972						C	A701B M	INSULATOR, DISK: 07047; 10079	EA	37							-15			
									B	A701C	CIRCUIT CARD ASSEMBLY: 58189; A65341-001	EA	1							-15	32		
									C	A701D	PRINTED CIRCUIT BOARD: 58189; A65342-001	EA	1							-15			
									C	A701E	CAPACITOR, FIXED, PLASTIC: 99515; XL5-153A5	EA	1					3		-15	C1		
			59101772640					C	A701E	CAPACITOR, FIXED, PLASTIC: 99515; XL5-153A5	EA	1						-15					
			59109412356					C	A701F M	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A562 M	EA	REF						5-11	C2				

(A) S O U R C E C D	(1) (B) M A I N T E N C E C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCT PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A)	(B)	(C)	(A)			(B)	(C)	FIG. NO.	ITEM NO. OR REF DESIGN
				C	D	C	D	C					D	1-5	6-10	11-20	1-5			6-10	11-20		
P	D	59107288634						C	A701G	CAPACITOR, FIXED MICA: 81349; CM07FD103J03	EA	1						3	-15 5-11	C3			
		59108231024						C	A701HM	CAPACITOR, FIXED, PAPER SAME AS A565 M	EA	REF							-15 5-11	C4			
P	D	59109043985						C	A701J	CAPACITOR, FIXED ELECTROLYTIC: 81349; CS13BF685M	EA	1						3	-15 5-11	C5			
		59109043982						C	A701KM	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A564 M	EA	REF						3	-15 5-11	C6			
P	D	74401343719						C	A701L	ELECTRONIC COM- PONENT ASSEMBLY: 58189; T00023-004	EA	3						9	-15 5-11	Z1			
		74401343719						C	A701M	ELECTRONIC COM- PONENT ASSEMBLY: SAME AS A701L	EA	REF							-15 5-11	Z3			
		74401343719						C	A701N	ELECTRONIC COM- PONENT ASSEMBLY: SAME AS A701L	EA	REF							-15 5-11	Z4			
P	D	74401343720						C	A701P	ELECTRONIC COM- PONENT ASSEMBLY: 58189; T00121-001	EA	1						3	-15 5-11	Z2			
P	D	74401343718						C	A701Q	ELECTRONIC COM- PONENT ASSEMBLY: 58189; T00024-001	EA	1						3	-15 5-11	Z5			
		59056816462						C	A701R M	RESISTOR, FIXED COMPOSITION: SAME AS A636	EA	REF							-15 5-11	R1			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A)	(B)	(C)	(A)			(B)	(C)	FIG. NO.	ITEM NO. OR REF DESIGN
														C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056816462						C	A701S M	RESISTOR, FIXED, COMPOSITION: SAME AS A636	EA	REF							-15 5-11	R11		
			59056816462						C	A701T M	RESISTOR, FIXED, COMPOSITION: SAME AS A636	EA	REF							-15 5-11	R12		
			59056816462						C	A701U M	RESISTOR, FIXED, COMPOSITION: SAME AS A636	EA	REF							-15 5-11	R21		
			59056832241						C	A701V M	RESISTOR, FIXED, COMPOSITION: SAME AS A649 M	EA	REF							-15 5-11	R2		
			59056910195						C	A701W M	RESISTOR, FIXED, COMPOSITION: SAME AS A624	EA	REF							-15 5-11	R3		
			59051956800						C	A701X M	RESISTOR, FIXED, COMPOSITION: SAME AS A650 M	EA	REF							-15 5-11	R4		
			59056824107						C	A701Y M	RESISTOR, FIXED, COMPOSITION: SAME AS A652 M	EA	REF							-15 5-11	R5		
			59056869994						C	A701Z M	RESISTOR, FIXED, COMPOSITION: SAME AS A641	EA	REF							-15 5-11	R6		
			59056869994						C	A702A M	RESISTOR, FIXED, COMPOSITION: SAME AS A641	EA	REF							-15 5-11	R23		
			59056869994						C	A702B M	RESISTOR, FIXED, COMPOSITION: SAME AS A641	EA	REF							-15 5-11	R24		

(A) S O U R C E C D	(1) M A I N T D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS		
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5	6																	
P	D		59052525434						C	A702CM	RESISTOR, FIXED, COMPOSITION: SAME AS A640 M	EA	REF									-15 5-11	R7			
			59056896799						C	A702DM	RESISTOR, VARIABLE: SAME AS A633 M	EA	REF										-15 5-11	R8		
			59059522148						C	A702E	RESISTOR, FIXED, FILM: 81349; RN60D3011F	EA	1										-15 5-11	R9		
			59059695851						C	A702F M	RESISTOR, FIXED, FILM: SAME AS A635AM	EA	REF											-15 55-11	R10	
			59051923978						C	A702GM	RESISTOR, FIXED, COMPOSITION: SAME AS A605 M	EA	REF											-15 5-11	R13	
			59052792674						C	A702HM	RESISTOR, FIXED, COMPOSITION: SAME AS A611 M	EA	REF												-15 5-11	R14
			59052791751						C	A702J M	RESISTOR, FIXED, COMPOSITION: SAME AS A606 M	EA	REF												-15 5-11	R15
			59052791751						C	A702KM	RESISTOR, FIXED, COMPOSITION: SAME AS A606 M	EA	REF												-15 5-11	R19
			59051712001						C	A702LM	RESISTOR, FIXED, COMPOSITION: SAME AS A609 M	EA	REF												-15 5-11	R16
			59052793506					C	A702MM	RESISTOR, FIXED, COMPOSITION: SAME AS A608 M	EA	REF											-15 5-11	R17		

(A) S O U R C E C D	(1) (B) M A I N T D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY I N C I N C I N G P K	(6) QTY I N C I N G I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
P	D		59051908881						C	A702NM	RESISTOR, FIXED, COMPOSITION: SAME AS A610 M	EA	REF							-15 5-11	R18			
			59056863124						C	A702PM	RESISTOR, FIXED, COMPOSITION: SAME AS A644	EA	REF							-15 5-11	R20			
			59056863124						C	A702QM	RESISTOR, FIXED, COMPOSITION: SAME AS A644	EA	REF							-15 5-11	R26			
			59056837726						C	A702RM	RESISTOR, FIXED, COMPOSITION: SAME AS A647 M	EA	REF							-15 5-11	R22			
			59056863119						C	A702SM	RESISTOR, FIXED, COMPOSITION: SAME AS A646 M	EA	REF							-15 5-11	R25			
			59056869998						C	A702TM	RESISTOR, FIXED, COMPOSITION: SAME AS A648 M	EA	REF							-15 5-11	R27			
			59618140768						C	A702UM	SEMI-CONDUCTOR, DEVICE, DIODE: SAME AS A655	EA	REF							-15 5-11	CR1			
			59618140768						C	A702V M	SEMI-CONDUCTOR, DEVICE, DIODE: SAME AS A655	EA	REF							-15 5-11	CR4			
			59612265139						C	A702W	SEMI-CONDUCTOR, DEVICE, DIODE: 81349; JAN1N3666(2)	EA	2							-15 5-11	CR2			
	59612265139						C	A702X	SEMI-CONDUCTOR, DEVICE, DIODE: SAME AS A702W	EA	REF							-15 5-11	CR5					

(A) S O U R C E C D	(1) M A I N T D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS						
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN						
				1	2	3	4	5	6																					
			59619858929						C	A702Y M	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A668 M	EA		REF														-15 5-11	CR3	
			59618456458						C	A702ZM	DIODE, ZENER: SAME AS A672 M	EA		REF														-15 5-11	VR1	
			59610507499						C	A703A M	TRANSISTOR: SAME AS A675	EA		REF														-15 5-11	Q1	
			59610507499						C	A703BM	TRANSISTOR: SAME AS A675	EA		REF														5-11	Q4	
			59618804779						C	A703CM	TRANSISTOR: SAME AS A695	EA		REF														-15 5-11	Q2	
			59618088398						C	A703DM	TRANSISTOR: SAME AS A701A	EA		REF														-15 5-11	Q3	
			59618139360						C	A703EM	TRANSISTOR: SAME AS A692 M	EA		REF														5-11	Q5	
			59618139360						C	A703FM	TRANSISTOR: SAME AS A692 M	EA		REF														-15 5-11	Q6	
			59618923473						C	A703GM	TRANSISTOR: SAME AS A694 M	EA		REF														-15 5-11	Q7	
			59709564972						C	A703HM	INSULATOR, DISK: SAME AS A701B M	EA		REF														-15 5-11		
P	H	T	74409352415						B	A704	CIRCUIT, CARD ASSEMBLY: 58189; A65305-001	EA	2		1	2	3	1	2	3				3				-15 4-3	26	
X1	D								C	A705	PRINTED, CIRCUIT, BOARD: 58189; A65306-001	EA		2															-15 4-3	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
P	D		59627910994						C	A706	INTEGRATED CIRCUIT, LOGIC GATE: 8324; C7580K	EA		26						75	-15 5-3	Z1		
			59627910994						C	A707	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF							-15 5-3	Z8		

(A) S O U R C E C D	(1) M A I N T D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6															
P	D		59627911082						C	A708	INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7090K	EA	66					195	-15 5-3	Z2				
			59627911082						C	A709	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF					54	-15 5-3	Z3				
			59627911082						C	A710	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF					78	-15 5-3	Z4				
			59627911082						C	A711	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF						-15 5-3	Z5				
			59627911082						C	A712	INTEGRATED CIRCUIT: LOGIC GATE: SAME AS A708	EA	REF						-15 5-3	Z6				
P	D		59629111001						C	A713	INTEGRATED CIRCUIT LOGIC GATE: 18324; C7088K	EA	19					54	-15 5-3	Z7				
P	D		59627911393						C	A714	INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7091K	EA	26					78	-15 5-3	Z9				
			59627911393						C	A715	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF						-15 5-3	Z10				
			59627911393						C	A716	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF						-15 5-3	Z11				
			59627911393						C	A717	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF						-15 5-3	Z12				

(A) S O U R C E C D	(1) (B) M A I N T D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS	
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5	6																
P	D		59056863798						C	A718	RESISTOR, FIXED, COMPOSITION: 81349; RC07GF272J	EA	49						153	-15 5-3	R1				
			59056863798						C	A719	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R5				
			59056863798						C	A720	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R9				
			59056862798						C	A721	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R13				
			59056863798						C	A722	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R17				
			59056863798						C	A723	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R21				
			59056863798						C	A724	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R25				
			59056863798						C	A725	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R29				
			59056863798						C	A726	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R33				
			59056863798						C	A727	RESISTOR, FIXED, COMPOSITION: SAME AS A718	EA	REF							-15 5-3	R37				

(A) S O U R C E C D	(1) M A I N T D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN				
				1	2	3	4	5	6																			
P	D		59056816462						C	A728	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF													-15 5-3	R2
			59056816462						C	A729	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF													-15 5-3	R6
			59056816462						C	A730	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF													-15 5-3	R10
			59056870002						C	A731	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF223J	EA		47						141							-15 5-3	R7
			59056870002						C	A732	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF													-15 5-3	R11
			59056870002						C	A733	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF													-15 5-3	R15
			59056870002						C	A734	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF													-15 5-3	R19
			59056870002						C	A735	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF													-15 5-3	R23
			59056870002						C	A736	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF													-15 5-3	R27
			59056870002						C	A737	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF													-15 5-3	R31

(A) S O U R C E C D	(1) M A I N T D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS	
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5	6																
P	D		59056870002						C	A738	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF									-15 5-3	R35		
			59056870002						C	A739	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF									-15 5-3	R39		
			59056824098						C	A740	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF392J	EA	37					111				-15 5-3	R4		
			59056824098						C	A741	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF									-15 5-3	R8		
			59056824098						C	A742	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF									-15 5-3	R12		
			59056824098						C	A743	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF									-15 5-3	R16		
			59056824098						C	A744	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF									-15 5-3	R20		
			59056824098						C	A745	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF									-15 5-3	R24		
			59056824098						C	A746	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF									-15 5-3	R28		
			59056816462						C	A747	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF									-15 5-3	R14		

(A) S O U R C E C D	(1) M A I N T C D	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
			59056816462						C	A748	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R18			
			59056816462						C	A749	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R22			
			59056816462						C	A750	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R26			
			59056816462						C	A751	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R30			
			59056816462						C	A752	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R34			
			59056816462						C	A753	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R38			
			59056870002						C	A754	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R3			
			59056824098						C	A755	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R32			
			59056824098						C	A756	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R36			
			59056824098						C	A757	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R40			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL						I N D C D	(3) DESCRIPTION	(A) 1-5				(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	(A) FIG. NO.			(B) ITEM NO. OR REF DESIGN				
				1	2	3	4	5	6																			
			59610507499								C	A758	TRANSISTOR: SAME AS A675	EA	REF												-15	Q1
			59610507499								C	A759	TRANSISTOR: SAME AS A675	EA	REF												-15	Q2
			59610507499								C	A760	TRANSISTOR: SAME AS A675	EA	REF												-15	Q3
			59610507499								C	A761	TRANSISTOR: SAME AS A675	EA	REF												-15	Q4
			59610507499								C	A762	TRANSISTOR: SAME AS A675	EA	REF												-15	Q5
			59610507499								C	A763	TRANSISTOR: SAME AS A675	EA	REF												-15	Q6
			59610507499								C	A764	TRANSISTOR: SAME AS A675	EA	REF												-15	Q7
			59610507499								C	A765	TRANSISTOR: SAME AS A675	EA	REF												-15	Q8
			59610507499								C	A766	TRANSISTOR: SAME AS A675	EA	REF												-15	Q9
			59610507499								C	A767	TRANSISTOR: SAME AS A675	EA	REF												-15	Q10
			59709564972								C	A768	INSULATOR DISK: SAME AS A703	EA	REF												-15	
			74409352415								B	A769	CIRCUIT, CARD ASSEMBLY: SAME AS A704	EA	REF												-15	27

(A) S O U R C E C D	(1) M A I N T C D	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) D E S C R I P T I O N	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	(A) F I G. N O.	(B) I T E M N O. O R R E F D E S I G N
				1	2	3	4	5	6															
			59627910994						C	A770	PRINTED, CIRCUIT, BOARD: SAME AS A705	EA							-15					
			59627910994						C	A771	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA							-15 5-3	Z1				
			59627910994						C	A772	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA							-15 5-3	Z8				
			59627911082						C	A773	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA							-15 5-3	Z2				
			59627911082						C	A774	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA							-15 5-3	Z3				
			59627911082						C	A775	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA							-15 5-3	Z4				
			59627911082						C	A776	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA							-15 5-3	Z5				
			59627911082						C	A777	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA							-15 5-3	Z6				
			59627911001						C	A778	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA							-15 5-3	Z7				
			59627911393						C	A779	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA							-15 5-3	Z9				

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A)	(B)	(C)	(A)			(B)	(C)	FIG. NO.	ITEM NO. OR REF DESIGN
														(A)	(B)	(C)	(A)			(B)	(C)		
			59627911393						C	A780	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF							-15 5-3	Z10		
			59627911393						C	A781	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF							-15 5-3	Z11		
			59627911393						C	A782	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF							-15 5-3	Z12		
			59056863798						C	A783	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R1		
			59056863798						C	A784	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R5		
			59056863798						C	A785	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R9		
			59056863798						C	A786	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R13		
			59056863798						C	A787	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R17		
			59056863798						C	A788	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R21		
			59056863798						C	A789	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R25		

(A) S O U R C E C D	(1) M A I N T C D	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY I N C I N C I N U N I T P K	(6) QTY I N C I N U N I T	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
			59056863798						C	A790	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R29			
			59056863798						C	A791	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R33			
			59056863798						C	A792	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-3	R37			
			59056816462						C	A793	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R2			
			59056816462						C	A794	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R6			
			59056816462						C	A795	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R10			
			59056816462						C	A796	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R14			
			59056816462						C	A797	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R18			
			59056816462						C	A798	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R22			
			59056816462						C	A799	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R26			

(A) S O U R C E C D	(1) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N I N P K	(6) QTY I N C I N U N	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) D E S C R I P T I O N	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056816462						C	A800	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R30		
			59056816462						C	A801	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R34		
			59056870002						C	A802	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-3	R38		
			59056870002						C	A803	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R3		
			59056870002						C	A804	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R7		
			59056810002						C	A805	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R11		
			59056870002						C	A806	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R15		
			59056870002						C	A807	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R19		
			59056870002						C	A808	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R23		
			59056870002						C	A809	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R27		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056870002						C	A810	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R31		
			59056870002						C	A811	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R35		
			59056870002						C	A812	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-3	R39		
			59056824098						C	A813	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R4		
			59056824098						C	A814	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R8		
			59056824098						C	A815	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R12		
			59056824098						C	A816	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R16		
			59056824098						C	A817	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R20		
			59056824098						C	A818	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R24		
			59056824098						C	A819	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R28		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056824098						C	A820	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R32		
			59056824098						C	A821	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R36		
			59056824098						C	A822	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-3	R40		
			59610507499						C	A823	RESISTOR, FIXED, COM- SAME AS A740	EA	REF							-15 5-3	Q1		
			59610507499						C	A824	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-3	Q2		
			59610507499						C	A825	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-3	Q3		
			59610507499						C	A826	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-3	Q4		
			59610507499						C	A827	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-3	Q5		
			59610507499						C	A828	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-3	Q6		
			59610507499						C	A829	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-3	Q7		
			59610507499						C	A830	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-3	Q8		

(A) S O U R C E C D	(1) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
			59610507499						C	A831	TRANSISTOR:- SAME AS A675	EA	REF								-15 5-3	Q9	
			59610507499						C	A832	TRANSISTOR:- SAME AS A675	EA	REF								-15 5-3	Q10	
			59700579700						C	A833	INSULATOR, DISK: SAME AS A703	EA	REF								-15 5-3		
P	H	T	74409352414						B	A834	CIRCUIT, CARD ASSEMBLY: 58189; A65309-001	EA	1	1	2	3	1	2	3	3		-15 4-3	Z4
X1	D								C	A835	PRINTED, CIRCUIT, BOARD: 589189; A65310-001	EA	1									-15 5-4	
P	D		59100432933						C	A836	CAPACITOR, FIXED, MICA: SAME AS A562 M	EA	1							3		-15 5-4	C1
			59109412356						C	A837 M	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A562 M	EA	REF									-15 5-4	C2
			59109412356						C	A838 M	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A562 M	EA	REF									-15 5-4	C8
			59109412356						C	A839 M	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A562 M	EA	REF									-15 5-4	C9
			59109412356						C	A840 M	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A562 M	EA	REF									-15 5-4	C10

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59109412356						C	A841 M	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A562 M	EA	REF							-15 5-4	C11		
P	D		59107819527						C	A841A	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CK12AAX471M	EA	1						5	-15 5-4	C12		
P	D		59109960666						C	A842	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BC227M	EA	1						5	-15 5-4	C3		
P	D		59108994395						C	A843	CAPACITOR, FIXED PAPER: 81349; CP09A1KB104K3	EA	1						3	-15 4-3	C4		
P	D		59108994392						C	A844	CAPACITOR, FIXED, PAPER: 81349; CP09A1KB104K3	EA	3						9	-15 5-4	C5		
			59108994392						C	A845	CAPACITOR, FIXED, PAPER: SAME AS 844	EA	REF								-15 5-4	C6	
			59108994392						C	A846	CAPACITOR, FIXED, PAPER: SAME AS A844	EA	REF								-15 5-4	C7	
			59627911082						C	A847	CAPACITOR, FIXED, LOGIC GATE: SAME AS A708	EA	REF								-15 5-4	Z1	
			59056863798						C	A848	CAPACITOR, FIXED, COMPOSITION: SAME AS A718	EA	REF								-15 5-4	R1	
			59056863798						C	A849	CAPACITOR, FIXED, COMPOSITION: SAME AS A718	EA	REF								-15 5-4	R5	
			59056863798	C						A850	RESISTOR, FIXED COMPOSITION: SAME AS A718	EA	REF								-15 5-4	R9	

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056863798						C	A851	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R13		
			59056863798						C	A852	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R17		
			59056863798						C	A853	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R21		
			59056863798						C	A854	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R25		
			59056863798						C	A855	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R29		
			59056863798						C	A856	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R33		
			59056863798						C	A857	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R37		
			59056863798						C	A858	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R43		
			59056863798						C	A859	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R45		
			59056863798						C	A860	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R49		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056863798						C	A861	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R53		
			59056863798						C	A862	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R57		
			59056863798						C	A863	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R61		
			59056863798						C	A864	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R65		
			59056863798						C	A865	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-4	R69		
			59056816462						C	A866	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R2		
			59056816462						C	A867	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R6		
			59056816462						C	A868	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R70		
			59056816462						C	A869	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R74		
			59056816462						C	A870	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R78		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056816462						C	A871	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R22		
			59056816462						C	A872	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R26		
			59056816462						C	A873	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R30		
			59056816462						C	A874	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R34		
			59056816462						C	A875	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R38		
			59056816462						C	A876	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R42		
			59056816462						C	A877	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R46		
			59056816462						C	A878	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R50		
			59056816462						C	A879	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R54		
			59056816462						C	A880	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R58		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGNCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	I N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056816462						C	A881	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R62		
			59056816462						C	A882	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R66		
			59056816462						C	A883	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R71		
			59056816462						C	A884	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF							-15 5-4	R80		
			59056870002						C	A886	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R3		
			59056870002						C	A887	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R7		
			59056870002						C	A888	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R77		
			59056870002						C	A889	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R79		
			59056870002						C	A890	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R79		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056870002						C	A891	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R23		
			59056870002						C	A892	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R27		
			59056870002						C	A893	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R31		
			59056870002						C	A894	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R35		
			59056870002						C	A895	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R39		
			59056870002						C	A896	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R43		
			59056870002						C	A897	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R47		
			59056870002						C	A898	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R51		
			59056870002						C	A899	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R55		
			59056870002						C	A900	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R59		

(A) S O U R C E C D	(1) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056870002						C	A901	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R63		
			59056870002						C	A902	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA	REF							-15 5-4	R67		
			59056863798						C	A903	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R4		
			59056863798						C	A904	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R9		
			59056863798						C	A905	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R12		
			59056863798						C	A906	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R16		
			59056863798						C	A907	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R20		
			59056863798						C	A908	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R24		
			59056863798						C	A909	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R28		
			59056863798						C	A910	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R32		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056863798						C	A911	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R36		
			59056863798						C	A912	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R40		
			59056863798						C	A913	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R44		
			59056863798						C	A914	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R48		
			59056863798						C	A915	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R52		
			59056863798						C	A916	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R56		
			59056863798						C	A917	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R60		
			59056863798						C	A918	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R64		
			59056863798						C	A919	RESISTOR, FIXED, COM- POSITION: SAME AS A740	EA	REF							-15 5-4	R68		
			590580182728						C	A920	RESISTOR, FIXED, COM- POSITION: 81349; RC07GP511J	EA	REF							-15 5-4	R69		

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N I N C I N C I N C	(6) QTY I N C I N C I N C	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCTY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59057024439						C	A921	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF133J	EA	1						3	-15 5-4	R70		
P	D		59056869996						C	A922A	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF821J	EA	1						3	-15 5-4	R83		
P	D		59058255592						C	A922B	RESISTOR, FIXED, COMPOSITION: 81349: RC07GP161J	EA	1						3	-15 5-4	R84		
P	D		59056863368						C	A923	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF203J	EA	2						6	-15 5-4	R72		
			59056863903						C	A924	RESISTOR, FIXED, COMPOSITION: SAME AS A618	EA	REF							-15 5-4	R73		
P	D		59052793511						C	A925	RESISTOR, FIXED, COMPOSITION: 81349: RC20GF511J	EA	1						3	-15 5-4	R74		
P	D		59059511591						C	A926	RESISTOR, FIXED, WIRFEWOUND: 81349: RW67V200	EA	1						3	-15 5-4	R75		
			59056869994						C	A927	RESISTOR, FIXED, COMPOSITION: SAME AS A641	EA	REF							-15 5-4	R76		
			59056869994						C	A928	RESISTOR, FIXED, COMPOSITION: SAME AS A641	EA	REF							-15 5-4	R77		
			59056869994						C	A929	RESISTOR, FIXED, COMPOSITION: SAME AS A641	EA	REF							-15 5-4	R79		
P	D		59056824101						C	A930	RESISTOR, FIXED, COMPOSITION: 81349: RC070GF752J	EA	3						9	-15 5-4	R78		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59056932243						C	A934	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF151J	EA	1							3	-15 5-4	C81	
			59618140768						C	A932	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-4	C81	
			59618140768						C	A933	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-4	C82	
			59618140768						C	A934	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-4	C83	
			59618140768						C	A935	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-4	Q20	
			59610507499						C	A936	TRANSISTOR: SAME AS A675	EA	REF								-15 5-4	Q1	
			59610507499						C	A937	TRANSISTOR: SAME AS A675	EA	REF								-15 5-4	Q2	
			59610507499						C	A938	TRANSISTOR: SAME AS A675	EA	REF								-15 5-4	Q3	
			59610507499						C	A939	TRANSISTOR: SAME AS A675	EA	REF								-15 5-4	Q4	
			59610507499						C	A940	TRANSISTOR: SAME AS A675	EA	REF								-15 5-4	Q5	
			59610507499						C	A941	TRANSISTOR: SAME AS A675	EA	REF								-15 5-4	Q6	

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS										
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN								
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20								
			59610507499						C	A942	TRANSISTOR: SAME AS A675	EA	REF																-15	
			59610507499						C	A943	TRANSISTOR: SAME AS A675	EA	REF																5-4	Q7
			59610507499						C	A944	TRANSISTOR: SAMES AS A675	EA	REF																5-4	Q8
			59610507499						C	A945	TRANSISTOR: SAME AS A675	EA	REF																5-4	Q9
			59610507499						C	A946	TRANSISTOR SAME AS A675	EA	REF																-15	Q10
			59610507499						C	A947	TRANSISTOR: SAME AS A675	EA	REF																5-4	Q11
			59610507499						C	A948	TRANSISTOR: SAME AS A675	EA	REF																5-4	Q12
			59610507499						C	A949	TRANSISTOR: SAME AS A675	EA	REF																-15	Q13
			59610507499						C	A950	TRANSISTOR SAME AS A675	EA	REF																5-4	Q14
			5961050-7499						C	A951	TRANSISTOR: SAME AS A675	EA	REF																-15	Q15
			59610507499						C	A952	TRANSISTOR: SAME AS A675	EA	REF																5-4	Q16
			59618804779						C	A953	TRANSISTOR: SAME AS A695	EA	REF																5-4	Q17
																													-15	Q18

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS							
			(2) FEDERAL STOCK NUMBER	(3) MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN					
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20					
P C P X1 P P	D D H D D	T	59618804779						C	A954	TRANSISTOR: SAME AS A695	EA	REF									-15					
			59618804779						C	A955	TRANSISTOR: SAME AS A695	EA	REF										5-4	Q19			
			59618920821						C	A956	TRANSISTOR: 81350; JAN2N1412	EA	2										10	-15			
			53109338120						C	A957 M	WASHER, LOCK: SAME AS A085C	EA	REF											5-4	Q20		
			53109349765						C	A958 M	NUT, PLAIN, HESAGON: SAME AS A085D	EA	REF											-15			
			58415151918						C	A959	WASHER, FLAT: 58189; 688000-066	EA	2												5-4		
			59709564972						C	A960	INSULATOR, DISK: SAME AS A701BM	EA	REF												5-4		
			74409352420						B	A961	CIRCUIT, CARD ASSEM- BLY:	EA	1	1	2	3	1	2	3						3	-15	25
			59107170167						C	A962	PRINTED CIRCUIT BOARD: 58189; A65314-001	EA	1													4-3	
			59109045643						C	A963	CAPACITOR, FIXED, MICA: 81349; CM06F471J03	EA	3												9	-15	
						C	A964	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE336M	EA	1												5	5-5	C1			
																						5-5	C2				

(A) S O U R C E C D	(B) M A I N T D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	(3) MODEL								I N D C D	D E S C R I P T I O N	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5						6	1-5	6-10	11-20			1-5	6-10	11-20		
P	D		59109040519						C	A965	CAPACITOR, FIXED, ELECTROLYTIC.: 81349; CS18BF105M	EA	1						5	-15 5-5	C3			
			59627911082						C	A966	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z1			
			59627911082						C	A967	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z2			
			59627911082						C	A968	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z3			
			59627911082						C	A969	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z5			
			59627911082						C	A970	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z7			
			59627911393						C	A971	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z4			
			59627911393						C	A972	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z6			
			59627911393						C	A973	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-5	Z8			
			59056863798						C	A974	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF							-15 5-5	R1			

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59056863798						C	A975	RESISTOR, FDIXED, COM- POSITION: SAME AS A718	EA		REF							-15 5-5	R5	
			59056863798						C	A976	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA		REF							-15 5-5	R9	
			59056863798						C	A977	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA		REF							-15 5-5	R13	
			59056863798						C	A978	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA		REF							-15 5-5	R17	
			59056863798						C	A979	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA		REF							-15 5-5	R21	
			59056863798						C	A980	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA		REF							-15 5-5	R25	
			59056863358						C	A981AM	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF393J	EA		2					6		-15 5-5	R29	
			59056863798						C	A982	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA		REF							-15 5-5	R33	
			59056863358						C	A983AM	RESISTOR, FIXED, COM- POSITION: SAME AS A981AM	EA		REF							-15 5-5	R37	
			59056816462						C	A984	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R2	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) D E S C R I P T I O N	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10			(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5															6	I N D E X
			5056816462						C	A985	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R6	
			5056816462						C	A986	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R10	
			5056816462						C	A987	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R14	
			5056816462						C	A988	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R18	
			5056816462						C	A989	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R22	
			5056816462						C	A990	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R26	
			5056816462						C	A991	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R30	
			5056816462						C	A992	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R34	
			5056816462						C	A993	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R38	
			59056870002						C	A994	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R3	

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59056870002						C	A995	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R7	
			59056870002						C	A996	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R11	
			59056870002						C	A997	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R15	
			59056870002						C	A998	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R19	
			59056870002						C	A999	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R23	
			59056870002						C	B001	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R27	
			59056870002						C	B002	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R31	
			59056870002						C	B003	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R35	
			59056870002						C	B004	RESISTOR, FIXED, COM- POSITION: SAME AS A731	EA		REF							-15 5-5	R39	
			59057235251						C	B005	RESISTOR, FIXED, COM- POSITION: 81349; RC07GF222J	EA		25					66		-15 5-5	R4	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY I N C I N U N P K	(6) QTY I N C I N U N	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) D E S C R I P T I O N	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59055779596						C	B006	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R8
			59055779596						C	B007	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R12
			59055779596						C	B008	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R16
			59055779596						C	B009	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R20
			59055779596						C	B010	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R24
			59055779596						C	B011	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R28
			59055779596						C	B012	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R32
			59055779596						C	B013	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R36
			59055779596						C	B014	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA		REF								-15 5-5	R40
			59056819969						C	B015	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA		REF								-15 5-5	R41

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
P	D	D	59056869998						C	B016	RESISTOR, FIXED, COM- POSITION: SAME AS A648	EA		REF							-15 5-5	R42	
			59056816462						C	B017	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA		REF							-15 5-5	R43	
			59056817723						C	B018	RESISTOR, FIXED, COM- POSITION: 81349; RC07GP152J	EA	1					3			-15 5-5	R44	
			59056832238						C	B019	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA		REF							-15 5-5	R45	
			59056832238						C	B020	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA		REF							-15 5-5	R48	
			59052791890						C	B021	RESISTOR, FIXED, COM- POSITION: 81349; RC07GP152J	EA	1					3			-15 5-5	R46	
			59059751146						C	B022	RESISTOR, FIXED, COM- POSITION: 81349; RW67V680	EA	1					3			-15 5-5	R47	
			59058059714						C	B023	RESISTOR, FIXED, COM- POSITION: 81349; RCO7GM852J	EA	1					3			-15 5-5	R49	
P	D	D	59056863838					C	B024	RESISTOR, FIXED, COM- POSITION: 81349; RCO7GP273J	EA	1				3			-15 5-5	R50			
			59056863368						C	B025	RESISTOR, FIXED, COM- POSITION: SAME AS A923	EA		REF						-15 5-5	R51		

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59059132840						C	B026	RESISTOR, VARIABLE POSITION: 81349; RJ12BP503	EA	1						5	-15 5-5	R54		
			59056832236						C	B027	RESISTOR, FIXED, COM- POSITION: SAME AS A591	EA	REF							-15 5-5	R52		
			59056832236						C	B028	RESISTOR, FIXED, COM- POSITION: SAME AS A591	EA	REF							-15 5-5	R53		
			59618140768						C	B029	SEMI-CONDUCTOR DEVICE- DIODE SAME AS A655	EA	REF							-15 5-5	CR1		
			59610507499						C	B030	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-5	Q1		
			59610507499						C	B031	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-5	Q2		
			59610507499						C	B032	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-5	Q3		
			59610507499						C	B033	TRANSISTOR:- SAME AS A675:	EA	REF							-15 5-5	Q4		
			59610507499						C	B034	TRANSISTOR:- SAME AS A675	EA	REF							-15 5-5	Q5		
			59610507499						C	B035	TRANSISTOR:- SAME AS A675:	EA	REF							-15 5-5	Q6		
			59610507499						C	B036	TRANSISTOR:- SAME AS A675:	EA	REF							-15 5-5	Q7		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCTY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59610507499						C	B037	TRANSISTOR: SAME AS A675	EA	REF									-15 5-5	Q8
			59610507499						C	B038	TRANSISTOR: SAME AS A675	EA	REF									-15 5-5	Q9
			59610507499						C	B039	TRANSISTOR: SAME AS A675	EA	REF									-15 5-5	Q10
			59610507499						C	B040	TRANSISTOR: SAME AS A675	EA	REF									-15 5-5	Q12
			59610507499						C	B041	TRANSISTOR: SAME AS A675	EA	REF									-15 5-5	Q14
			59618804779						C	B042	TRANSISTOR: SAME AS A675	EA	REF									-15 5-5	Q11
			59618920821						C	B043	TRANSISTOR: SAME AS A675	EA	REF									-15 5-5	Q13
			59618088393						C	B044	TRANSISTOR: SAME AS A956	EA	REF									-15 5-5	Q15
			53109349765						C	B045 M	NUT, PLAIN, HEXAGON: SAME AS A085D	EA	REF									-15 5-5	
			58415151918						C	B046	WASHER, FLAT: SAME AS A959	EA	REF									-15 5-5	
			59709564972						C	B047 M	WASHER, LOCK: SAME AS A085C	EA	REF									-15 5-5	
			59709564972						C	B048	INSULATOR, DISK: SAME AS A701BM	EA	REF									-15 5-5	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN		
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20		
P	H	T	74409352421						B	B049	CIRCUIT, CARD ASSEMBLY.: 58189; A65317-001	EA	1	1	2	3	1	2	3		3	-15 4-3	28	
K1	D								C	B050	PRINTED CIRCUIT, BOARD: 58189; A65318-	EA	1										-15 5-6	
P	D		59108579192						C	B051	CAPACITOR, FIXED, MICA: 81349; CK06CW103M	EA	1									3	-15 5-6	C1
			59627911082						C	B052	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF										-15 5-6	Z1
			59627911082						C	B053	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF										-15 5-6	Z2
			59627911082						C	B054	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF										-15 5-5	Z3
			59627911082						C	B055	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF										-15 5-6	Z4
			59627911082						C	B056	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF										-15 5-6	Z12
			59627911082						C	B057	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF										-15 5-6	Z13
			59627911082						C	B058	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A708	EA	REF										-15 5-6	Z14

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCGY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS						
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)				
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN		
			59627911082						C	B059	INTEGRATED CIRCUIT,- LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z15
			59627911082						C	B060	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z16
			59627911393						C	B061	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA		REF					3						-15 5-6	Z5
			59627911393						C	B062	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z7
			59627911393						C	B063	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z8
			59627911393						C	B064	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF											-15 5-5	Z9
			59627911393						C	B065	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z17
			59627911393						C	B066	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z18
			59627911393						C	B067	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z19
			59627911393						C	B068	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A708	EA		REF											-15 5-6	Z20

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCGY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59627910994						C	B069	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF								-15 5-6	Z6	
			59627910994						C	B070	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF								-15 5-6	Z22	
			59627910994						C	B071	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF					3			-15 5-6	Z23	
			59627910994						C	B072	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF								-15 5-6	Z28	
			59627911001						C	B073	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-6	Z10	
			59627911001						C	B074	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-5	Z11	
			59627911001						C	B075	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-6	Z21	
			59627911001						C	B076	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-6	Z24	
			59627911001						C	B077	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-6	Z26	
			59627911001						C	B078	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A713	EA	REF								-15 5-6	Z27	

(A) S O U R C E C D	(1) (B) M A I N T D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5					6	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	FIG. NO.	ITEM NO. OR REF DESIGN
				I N D E X									C										
P	H	T	74409352421						B	B079	CIRCUIT, CARD ASSEMBLY: 58189; A65321-001	EA	1	1	2	3	1	2	3		3	-15 4-3	30
X1	D								C	B080	PRINTED CIRCUIT, BOARD: 58189; A65322-	EA	1									-15	
			59108579192						C	B081	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A708	EA	1								3	-15 5-6	Z1
			59627911082						C	B082	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF									-15 5-6	Z2
			59627911082						C	B083	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF									-15 5-6	Z3
			59627911082						C	B084	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF									-15 5-5	Z4
			59627911082						C	B085	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF									-15 5-6	Z6
			59627911082						C	B086	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF									-15 5-6	Z7
			59627911082						C	B087	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF									-15 5-6	Z8
			59627911082						C	B088	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A708	EA	REF									-15 5-6	Z10

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGNCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59627911082						C	B089	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA										-15 5-7	Z11
			59627911082						C	B090	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA										-15 5-7	Z12
			59627911082						C	B091	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA						3				-15 5-7	Z13
			59627911082						C	B092	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA										-15 5-7	Z15
			59627911082						C	B093	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA										-15 5-7	Z18
			59627911082						C	B094	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA										-15 5-7	Z19
			59627911082						C	B095	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA										-15 5-7	Z22
			59627910994						C	B096	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA										-15 5-7	Z5
			59627910994						C	B097	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA										-15 5-7	Z8
			59627910994						C	B098	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A713	EA										-15 5-7	Z16

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59627910994						C	B099	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF								-15 5-7	Z24	
			59627910994						C	B100	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF								-15 5-7	Z27	
			59627911001						C	B101	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF					3			-15 5-7	Z14	
			59627911001						C	B102	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-7	Z20	
			59627911001						C	B103	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-7	Z26	
			59627911393						C	B104	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF								-15 5-7	Z17	
			59627911393						C	B105	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF								-15 5-7	Z21	
			59627911393						C	B106	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF								-15 5-7	Z25	
			59055779596						C	B107	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B005	EA	REF								-15 5-7	R1	
			59055779596						C	B108	INTEGRATED CIRCUIT LOGIC GATE: SAME AS B005	EA	REF								-15 5-7	R2	

(A) S O U R C E C D	(B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) 30 DAYS SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS						
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN				
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20				
P X1	H D	T	59056816462						C	B109	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA				REF						-15 5-7	R3			
			59056863798						C	B110	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA				REF							-15 5-7	R4		
			74409352418						B	B111	CIRCUIT, CARD ASSEM- BLY: 58189; A65325-001	EA	1	1	2	3	1	2	3					-15 4-3	31	
									C	B112	PRINTED, CIRCUIT, BOARD: 58189; A65326-001	EA	1												-15	
			59627911082						C	B113	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA													-15 5-8	Z1
			59627911082						C	B114	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA													-15 5-8	Z2
			59627911082						C	B115	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A708	EA													-15 5-8	Z3
			59627911082						C	B116	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA													-15 5-8	Z4
			59627911082						C	B117	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA													-15 5-8	Z5
			59627911082				C	B118	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA													-15 5-8	Z5		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)		
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
			59627911082						C	B119	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA				REF							-15 5-8	Z7
			59627911082						C	B120	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA				REF							-15 5-8	Z8
			59627911082						C	B121	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA				REF							-15 5-8	Z24
			59627911082						C	B122	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA				REF							-15 5-8	Z25
			59627911082						C	B123	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA				REF							-15 5-8	Z26
			59627911082						C	B124	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA				REF							-15 5-8	Z27
			59627911082						C	B125	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA				REF							-15 5-8	Z28
			59627910994						C	B126	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA				REF							-15 5-8	Z9
			59627910994						C	B127	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA				REF							-15 5-8	Z14
			59627910994						C	B128	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA				REF							-15 5-8	Z21

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) D	1-5	6-10	11-20			1-5	6-10	11-20	
P	D		59627910994						C	B129	INTGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF							-15 5-8	Z22		
			59627910994						C	B130	INTGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF							-15 5-8	Z23		
			59627910994						C	B131	INTGRATED CIRCUIT, LOGIC GATE: 18324; C7089K	EA	6					18		-15 5-8	Z10		
			59627910994						C	B132	INTGRATED CIRCUIT, LOGIC GATE: SAME AS B131	EA	REF							-15 5-8	Z11		
			59627910994						C	B133	INTGRATED CIRCUIT, LOGIC GATE: SAME AS B131	EA	REF							-15 5-8	Z12		
			59627910994						C	B134	INTGRATED CIRCUIT, LOGIC GATE: SAME AS B131	EA	REF							-15 5-8	Z13		
			59627910994						C	B135	INTGRATED CIRCUIT, LOGIC GATE: SAME AS B131	EA	REF							-15 5-8	Z15		
			59627910994						C	B136	INTGRATED CIRCUIT, LOGIC GATE: SAME AS B131	EA	REF							-15 5-8	Z16		
			59627911001						C	B137	INTGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF							-15 5-8	Z17		
			59627911001					C	B138	INTGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF							-15 5-8	Z20			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS				
			(2) FEDERAL STOCK NUMBER	MODEL									I N D E X	(3) D E S C R I P T I O N	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5	6																
P	H	T	74409352417						B	B139	CIRCUIT, CARD ASSEMBLY: 58189; A65329-001	EA		1	1	2	3	1	2	3		3	-15 4-3	29	
P	H	T							B	B140	PRINTED; CIRCUIT, BOARD: 58189; A65330-001	EA		1										-15	
P	H	T	59107170167						B	B141	CAPACITOR, FIXED, MIC-A: SAME AS A963	EA		REF										-15 5-9	C1
P	H	T	59107170167						B	B142	CAPACITOR, FIXED, MIC-A: SAME AS A963	EA		REF										-15 5-9	C2
P	H	T	59627910994						B	B143	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF										-15 5-9	Z2
P	H	T	59627910994						B	B144	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF										-15 5-9	Z10
P	H	T	59627910994						B	B145	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF										-15 5-9	Z12
P	H	T	59627910994						B	B146	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF										-15 5-9	Z15
P	H	T	59627910994						B	B147	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF										-15 5-9	Z26
P	H	T	59627910994						B	B148	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA		REF										-15 5-9	C27

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59627911082						C	B149	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z7	
			59627911082						C	B150	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z8	
			59627911082						C	B151	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z9	
			59627911082						C	B152	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z16	
			59627911082						C	B153	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z17	
			59627911082						C	B154	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z20	
			59627911082						C	B155	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z21	
			59627911082						C	B156	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z22	
			59627911082						C	B157	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z24	
			59627911082						C	B158	NTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z25	

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59627911082						C	B159	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z28	
			59627911001						C	B160	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-9	Z6	
			59627911001						C	B161	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z11	
			59627911001						C	B162	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z19	
			59627911001						C	B163	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-9	Z23	
			59627911393						C	B164	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF								-15 5-9	Z7	
			59627911393						C	B165	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF								-15 5-9	Z13	
			59055779596						C	B166	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF								-15 5-9	Z14	
			59055779596						C	B167	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A714	EA	REF								-15 5-9	Z18	
			59055779596						C	8168	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B005	EA	REF								-15 5-9	R1	

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
P X1	H D	T	59055779596						C	B169	RESISTOR, FIXED, COM POSITION: SAME AS B005	EA	REF							-15 5-9	R2			
			59055779596						C	B170	RESISTOR, FIXED, COM POSITION: SAME AS B005	EA	REF								-15 5-9	R3		
			59055779596						C	B171	RESISTOR, FIXED, COM POSITION: SAME AS B005	EA	REF								-15 5-9	R4		
			59055779596						C	B172	RESISTOR, FIXED, COM POSITION: SAME AS B005	EA	REF								-15 5-9	R5		
			59055779596						C	B173	RESISTOR, FIXED, COM POSITION: SAME AS B005	EA	REF								-15 5-9	R6		
			59055779596						C	B174	RESISTOR, FIXED, COM POSITION: SAME AS B005	EA	REF								-15 5-9	R7		
			59056864530						C	B175	RESISTOR, FIXED, COM POSITION: SAME AS A644	EA	REF								-15 5-9	R8		
			59056832238						C	B176	RESISTOR, FIXED, COM POSITION:	EA	REF								-15 5-9	R9		
			74400190127						C	B177	CIRCUIT, CARD ASSEM- BLY:	EA	1	1	2	3	1	2	3	3	-15 4-3	33		
							C	B178	S8189; A65333-001 PRINTED, CIRCUIT, BOARD: S8189; A65334-001	EA	1								-15					

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	J N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59107028057						C	B179	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C1	
			59107028057						C	B180	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C2	
			59107028057						C	B181	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C3	
			59107028057						C	B182	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C4	
			59107028057						C	B183	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C5	
			59107028057						C	B184	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C6	
			59107028057						C	B185	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C7	
			59107028057						C	B186	CAPACITOR, FIXED, MIC A: SAME AS A559	EA	REF								-15 5-10	C8	
			59627910994						C	B187	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF								-15 5-10	Z1	
			59627911001						C	B188	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-10	Z2	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									I N D C D	(3) DESCRIPTION	(A)	(B)	(C)	(A)			(B)	(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
				1	2	3	4	5	6						1-5	6-10	11-20	1-5			6-10	11-20		
			59056819959						C	B189	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF							-15 5-10	Z3			
			59056819959						C	B190	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R1			
			59056819959						C	B191	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R11			
			59056819959						C	B192	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R21			
			59056819959						C	B193	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R31			
			59056819959						C	B194	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R41			
			59056819959						C	B195	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R51			
			59056819959						C	B196	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R61			
			59056819959						C	B197	RESISTOR, FIXED, COM- POSITION: SAME AS A612	EA	REF							-15 5-10	R71			
			59056819959						C	B198	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF							-15 5-10	R2			

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056869997						C	B199	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF								-15 5-10	R12	
			59056869997						C	B200	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF								-15 5-10	R22	
			59056869997						C	B201	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF								-15 5-10	R32	
			59056869997						C	B202	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF								-15 5-10	R42	
			59056869997						C	B203	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF								-15 5-10	R52	
			59056869997						C	B204	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF								-15 5-10	R62	
			59056869997						C	B205	RESISTOR, FIXED, COM- POSITION: SAME AS A615	EA	REF								-15 5-10	R72	
			59058000179						C	B206	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF								-15 5-10	R3	
			59058000179						C	B207	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF								-15 5-10	R13	
			59058000179						C	B208	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF								-15 5-10	R23	

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59058000179						C	B209	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF							-15 5-10	R33		
			59058000179						C	B210	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF							-15 5-10	R43		
			59058000179						C	B211	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF							-15 5-10	R53		
			59058000179						C	B212	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF							-15 5-10	R63		
			59058000179						C	B213	RESISTOR, FIXED, COM- POSITION: SAME AS A586A	EA	REF							-15 5-10	R73		
			59056832238						C	B214	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R4		
			59056832238						C	B215	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R7		
			59056832238						C	B216	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R14		
			59056832238						C	B217	RESISTOR, FIXED, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R17		
			59056832238						C	B218	RESISTOR, FIXED, COM- POSITION: SAME AS A574A	EA	REF							-15 5-10	R24		

(A) S O U R C E C D	(B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59056832238						C	B219	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R27		
			59056832238						C	B220	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R34		
			59056832238						C	B221	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R37		
			59056832238						C	B222	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R44		
			59056832238						C	B223	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R47		
			59056832238						C	B224	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R54		
			59056832238						C	B225	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R57		
			59056832238						C	B226	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R64		
			59056832238						C	B227	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R67		
			59056832238						C	B228	RESISTOR, FIELD, COM- POSITION: SAME AS A574	EA	REF							-15 5-10	R74		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
			59056832238						C	B229	RESISTOR, FIXED, COM- POSITION; SAME AS A574	EA	REF								-15 5-10	R77	
			59056863903						C	B230	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R5	
			59056863903						C	B231	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R15	
			59056863903						C	B232	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R25	
			59056863903						C	B233	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R35	
			59056863903						C	B234	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R45	
			59056863903						C	B235	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R55	
			59056863903						C	B236	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R65	
			59056863903						C	B237	RESISTOR, FIXED, COM- POSITION: SAME AS A618	EA	REF								-15 5-10	R75	
			59058016998						C	B238	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF								-15 5-10	R6	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
			59058016998						C	B239	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF							-15 5-10	R16		
			59058016998						C	B240	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF							-15 5-10	R26		
			59058016998						C	B241	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF							-15 5-10	R36		
			59058016998						C	B242	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF							-15 5-10	R46		
			59058016998						C	B243	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF							-15 5-10	R56		
			59058016998						C	B244	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF							-15 5-10	R66		
			59058016998						C	B245	RESISTOR FIXED, COM- POSITION: SAME AS 621	EA	REF							-15 5-10	R76		
			59056910195						C	B246	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R8		
			59056910195						C	B247	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R18		
			59056910195						C	B248	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R28		

(A) S O U R C E C D	(1) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) I N D C D D E S C R I P T I O N	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10			(C) 11-20	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5															6
			59056910195						C	B249	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R38		
			59056910195						C	B250	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R48		
			59056910195						C	B251	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R58		
			59056910195						C	B252	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R68		
			59056910195						C	B253	RESISTOR FIXED, COM- POSITION: SAME AS 624	EA	REF							-15 5-10	R78		
			59051955571						C	B254	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R9		
			59051955571						C	B255	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R10		
			59051955571						C	B256	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R19		
			59051955571						C	B257	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R20		
			59051955571						C	B258	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R29		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59051955571						C	B259	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R30		
			59051955571						C	B260	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R39		
			59051955571						C	B261	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R40		
			59051955571						C	B262	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R49		
			59051955571						C	B263	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R50		
			59051955571						C	B264	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R59		
			59051955571						C	B265	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R60		
			59051955571						C	B266	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R69		
			59051955571						C	B267	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R70		
			59051955571						C	B268	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF							-15 5-10	R79		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59051955571						C	B269	RESISTOR, FIXED, COM- POSITION: SAME AS A627	EA	REF									-15 5-10	R80
			59056863798						C	B270	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF									-15 5-10	R81
			59056863798						C	B271	RESISTOR, FIXED, COM- POSITION: SAME AS A718	EA	REF									-15 5-10	R84
			59056816462						C	B272	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF									-15 5-10	R82
			59056816462						C	B273	RESISTOR, FIXED, COM- POSITION: SAME AS A636	EA	REF									-15 5-10	R85
			59056824101						C	B274	RESISTOR, FIXED, COM- POSITION: SAME AS A930	EA	REF									-15 5-10	R83
			59056824101						C	B275	RESISTOR, FIXED, COM- POSITION: SAME AS A930	EA	REF									-15 5-10	R86
			59055779596						C	B276	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA	REF									-15 5-10	R87
			59055779596						C	B277	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA	REF									-15 5-10	R88
			59055779596						C	B278	RESISTOR, FIXED, COM- POSITION: SAME AS B005	EA	REF									-15 5-10	R89

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5			(B) 6-10	(C) 11-20		
														C D C D									
P	D		59052792627						C	B279	RESISTOR, FIXED, COM- POSITION: 81319; RC42GF50J	EA		2						-15 5-10	R90		
			59052792627						C	B280	RESISTOR, FIXED, COM- POSITION: SAME AS B279	EA		REF						-15 5-10	R91		
			59618140768						C	B281	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR1		
			59618140768						C	B282	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR2		
			59618140768						C	B283	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR3		
			59618140768						C	B284	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR4		
			59618140768						C	B285	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR5		
			59618140768						C	B286	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR6		
			59618140768						C	B287	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR7		
			59618140768						C	B288	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA		REF						-15 5-10	CR8		

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59618140768						C	B289	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA										-15 5-10	CR9
			59618140768						C	B290	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA										-15 5-10	CR10
			59618140768						C	B291	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA										-15 5-10	CR11
			59618140768						C	B292	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA										-15 5-10	CR12
			59618140768						C	B293	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA										-15 5-10	CR13
			59618140768						C	B294	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA										-15 5-10	CR14
			59618140768						C	B295	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA										-15 5-10	CR15
			59610680687						C	B296	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A673	EA										-15 5-10	VR1
			59610680687						C	B297	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A673	EA										-15 5-10	VR2
			59610507499						C	B298	TRANSISTOR: SAME AS A675	EA										-15 5-10	Q1

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	C D	1-5	6-10	11-20			1-5	6-10	11-20	
			59610507499						C	B299	TRANSISTOR: SAME AS A675	EA	REF								-15		
			59610507499						C	B300	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q3	
			59610507499						C	B301	TRANSISTOR: SAME AS A675	EA	REF								-15	Q5	
			59610507499						C	B302	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q7	
			59610507499						C	B303	TRANSISTOR: SAME AS A675	EA	REF								-15	Q9	
			59610507499						C	B304	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q11	
			59610507499						C	B304	TRANSISTOR: SAME AS A675	EA	REF								-15	Q13	
			59610507499						C	B305	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q15	
			59610507499						C	B306	TRANSISTOR: SAME AS A675	EA	REF								-15	Q17	
			59610507499						C	B307	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q19	
			59610507499						C	B308	TRANSISTOR: SAME AS A675	EA	REF								-15	Q21	
			59610507499						C	B309	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q23	
			59610507499						C	B310	TRANSISTOR: SAME AS A675	EA	REF								-15	Q25	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGNCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
			59610507499						C	B311	TRANSISTOR: SAME AS A675	EA	REF								-15		
			59610507499						C	B312	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q27	
			59610507499						C	B313	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q29	
			59610507499						C	B314	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q31	
			59610507499						C	B315	TRANSISTOR: SAME AS A675	EA	REF								5-10	Q33	
			59618804779						C	B316	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q34	
			59618804779						C	B317	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q2	
			59618804779						C	B318	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q4	
			59618804779						C	B319	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q6	
			59618804779						C	B320	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q8	
			59618804779						C	B321	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q10	
			59618804779						C	B322	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q12	
			59618804779						C	B322	TRANSISTOR: SAME AS A695	EA	REF								5-10	Q14	

(A) S O U R C E C D	(1) (B) M A I N T C D	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	J N D C D	1-5	6-10	11-20			1-5	6-10	11-20	
A X	H D	T							C	B323	TRANSISTOR SAME AS A695	EA	REF							-15			
										C	B324	TRANSISTOR SAME AS A695	EA	REF							-15	Q16	
										C	B325	TRANSISTOR SAME AS A695	EA	REF							-15	Q18	
										C	B326	TRANSISTOR SAME AS A695	EA	REF							-15	Q20	
										C	B327	TRANSISTOR SAME AS A695	EA	REF							-15	Q22	
										C	B328	TRANSISTOR SAME AS A695	EA	REF							-15	Q24	
										C	B329	TRANSISTOR SAME AS A695	EA	REF							-15	Q26	
										C	B330	TRANSISTOR SAME AS A695	EA	REF							-15	Q28	
										C	B331	TRANSISTOR SAME AS A695	EA	REF							-15	Q30	
										C	B332	INSULATOR, DISK: SAME AS A701BM	EA	REF							-15	Q32	
										B	B332A	CIRCUIT, CARD ASSEMBLY: 58189; A65337-001	EA	1							-15		
										C	B332B	PRINTED CIRCUIT BOARD: 58189; A65338-001	EA	1							-15	33	

(A) S O U R C E C D	(1) (B) M A I N T D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTGCV PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
			59627910994						C	B322C	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A706	EA	REF								-15 5-12	Z1	
			59627911001						C	B332D	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A713	EA	REF								-15 5-12	Z2	
			59627911082						C	B332E	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A708	EA	REF								-15 5-12	Z3	
P	D		74401343716						C	B332F	ELECTRONIC COM- PONENT ASSEMBLY: 58189; T00122-003	EA	1					3			-15 5-12	Z4	
P	D		74401343726						C	B332G	ELECTRONIC COM- PONENT ASSEMBLY: 58189; T00023-005	EA	8					24			-15 5-12	Z5	
			74401343726						C	B332H	ELECTRONIC COM- PONENT ASSEMBLY: SAME AS B332G	EA	REF								-15 5-12	Z6	
			74401343726						C	B332J	ELECTRONIC COM- PONENT ASSEMBLY: SAME AS B332G	EA	REF								-15 5-12	Z7	
			74401343726						C	B332K	ELECTRONIC COM- PONENT ASSEMBLY: SAME AS B332G	EA	REF	-							-15 5-12	Z8	
			74401343726						C	B332L	ELECTRONIC COM- PONENT ASSEMBLY: SAME AS B332G	EA	REF								-15 5-12	Z9	
			74401343726						C	B332M	ELECTRONIC COM- PONENT ASSEMBLY: SAME AS B332G	EA	REF								-15 5-12	Z10	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) C D	1-5	6-10	11-20			1-5	6-10	11-20	
			74401343726						C	B332N	ELECTRONIC COMPONENT ASSEMBLY: SAME AS 8332G	EA	REF								-15 5-12	Z11	
			74401343726						C	B332P	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B332G	EA	REF								-15 5-12	Z12	
			59057235251						C	B332QM	RESISTOR, FIXED, COMPOSITION: SAME AS B005	EA	REF								-15 5-12	R1	
			59057235251						C	B332RM	RESISTOR, FIXED, COMPOSITION SAME AS B005	EA	REF								-15 5-12	R2	
			59057235251						C	B332SM	RESISTOR, FIXED, COMPOSITION: SAME AS B005	EA	REF								-15 5-12	R3	
			59618140768						C	B332TM	SEMI-CONDUCTOR, DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-12	CR1	
			59618140768						C	B332UM	SEMI-CONDUCTOR, DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-12	CR2	
			59618140768						C	B332VM	SEMI-CONDUCTOR, DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-12	CR3	
			59618140768						C	B332WM	SEMI-CONDUCTOR, DEVICE, DIODE: SAME AS A655	EA	REF								-15 5-12	CR4	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE							(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL									(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A)	(B)	
				1	2	3	4	5	6					(C) D	1-5	6-10	11-20	1-5			6-10	11-20	FIG. NO.	ITEM NO. OR REF DESIGN
														(C) D										
M	H		59618140768						C	B332XM	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A655	EA	REF									-15 5-12	CR5	
			59405571629						B	B333	WIRING HARNESS: 58189; A65353-001	EA	1									-15 4-3	23.5	
									C	B334	TERMINAL LUG: SAME AS A089	EA	REF									-15 4-6	30	

(A) S O U R C E C D	(1) (B) M A I N T C D C	(C) R E C O D E	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE						(4) U N I T O F I S S U E	(5) QTY INC IN UN PK	(6) QTY INC IN UN	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9) 1 YR ALW PER 100 EQUIP. CNTG CY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATIONS			
			(2) FEDERAL STOCK NUMBER	MODEL								(3) DESCRIPTION	(A)	(B)	(C)	(A)	(B)			(C)	(A) FIG. NO.	(B) ITEM NO. OR REF DESIGN	
				1	2	3	4	5					6	(C) I N D E X	1-5	6-10	11-20			1-5	6-10	11-20	
			59405571627						C	B335 M	TERMINAL LUG: 96906; MS25036-53	EA	9								-15 4-6	29	
			59405340970						C	B336	TERMINAL LUG: SAME AS A180	EA	REF								-15 4-6	27	
C	H		59406603631						C	B337	TERMINAL LUG: 96906; MS25036-50	EA	1								-15 4-3	23.4	
P	H		59354361180						C	B338	CONNECTOR, PLUG, ELECTRICAL 71468; CA06R20-16S	EA	1	1	2	3	1	2	3	3		-15 4-3	23.6
M	H								C	B339	IDENTIFICATION PLATE: 58189; A53906-001	EA	1									-15 4-3	58
C	H		53052535603						*	B340	SCREW, DRIVE: 96906; MS21318-1	EA	2									-15 4-3	59

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* symbol indicates existing heading.

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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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