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TECHNICAL MANUAL

INSTRUCTION

INTERCOMMUNICATION SET

AN/UIC-5

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INTRODUCTION

This manual contains operating and maintenance instructions for the AN/UIC-5 Intercommunication Set. The contents include the necessary information required to install, operate, and maintain the AN/UIC-5.

Chapter 1 provides a functional and physical description. Chapter 2 provides installation instructions, Chapter 3 contains operating instructions. Chapter 4 contains the principles of operation. Chapter 5 provides maintenance instructions. Chapter 6 contains the illustrated parts breakdown and chapter 7 contains foldout illustrations used to support the text.

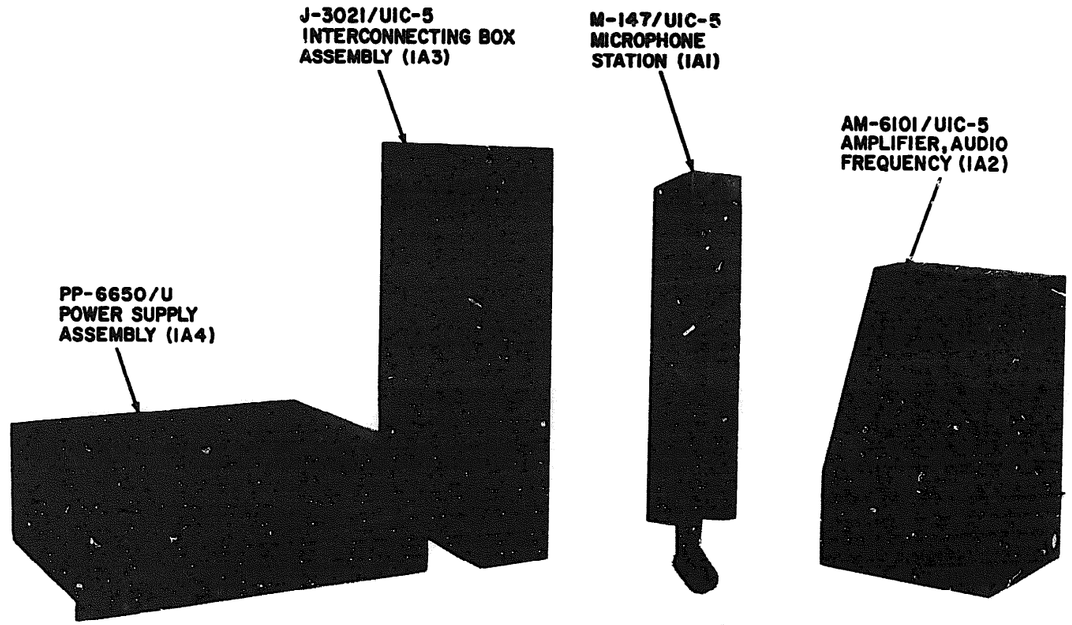


Figure 1-1. -AN/UIC-5 Intercommunication Set.

CHAPTER 1

DESCRIPTION OF EQUIPMENT

I - CLASSIFICATION

1-1 CLASSIFICATION OF EQUIPMENT. - AN/UIC-5 Intercommunication Set and this instruction manual are UNCLASSIFIED. However, the AN/UIC-5 and associated manual may be used in classified areas where secure voice communication between stations is required.

I I - FUNCTIONAL DESCRIPTION

1-2. FUNCTION OF EQUIPMENT. - AN/UIC-5 Intercommunication Set (AN/UIC-5) consists of an AM-6101/UIC-5 Amplifier, Audio Frequency (AM-6101), M-147/UIC-5 Microphone Station (M-147), PP-6650/U Power Supply Assembly (PP-6650), and a J-3021/UIC-5 Interconnecting Box Assembly (J-3021). See figure l-l. The AM-6101 and M-147 are normally used as one station of a voice intercommunication system. However, the PP.6650 and J-3021 are normally common to all stations within a system. The AM-6101 contains an amplifier and loudspeaker and is the receiving unit of the equipment. The M-147 contains a preamplifier and control circuitry and is the sending unit. The M-147 can operate up to 20 AM-6101 units within the same intercommunication system by utilizing 20 station selector pushbutton switches. The configuration of the equipment permits the operator to send and receive simultaneously, Figure 1-2 shows a typical system configuration. The M-147 and AM-6101 units contain individual amplifier and control circuits that allow two or more simultaneous conversations within the same system. Any free AM-6101 in the system may be selected at any time, regardless of other conversations occurring at the same time between other stations of the system. The only time an AM-6101 cannot be selected by an M-147 is when the AM-6101 has already been selected and engaged by another M-147. Any number of AN/UIC-5 sets can be used in a system; however, each M-147 can operate only with 20 AM-6101 units of the same system.

a. Function of M-147/UIC-5 Microphone Station. - The M-147 functions as the transmitting unit of the AN/UIC-5. When the operator presses a station selector pushbutton switch on the M-147, the audio output of the unit is routed through the J-3021 to the audio input terminal of the selected AM-6101. The M-147 control circuit automatically disables any other M-147 in the network that may try to select the same AM-6101. Front panel red and green indicator lamps on the M-147 indicate the status of any selected circuit. For example, if the operator selects an M-147 that is busy, the red lamp remains on; if the M-147 is not in use, the audio circuit is completed and the green lamp lights to show that the audio circuit is complete and ready for transmission. A 6-Vdc power source (both + and -) is required to provide power to the amplifier and control circuit boards within the M-147. However, no 6-Vdc source is supplied with the AN/UIC-5.

b. Function of AM-6101/UIC-5 Amplifier, Audio Frequency - The AM-6101 **functions** as the receiving unit of the AN/UIC-5. Operation of the AM-6101 is automatic, except for the power ON-OFF switch and the VOLUME control. The unit **is** activated automatically when it is selected by an M-147. One or more **AM**-6101 tits may be used as a “receive” station. However, when more than one

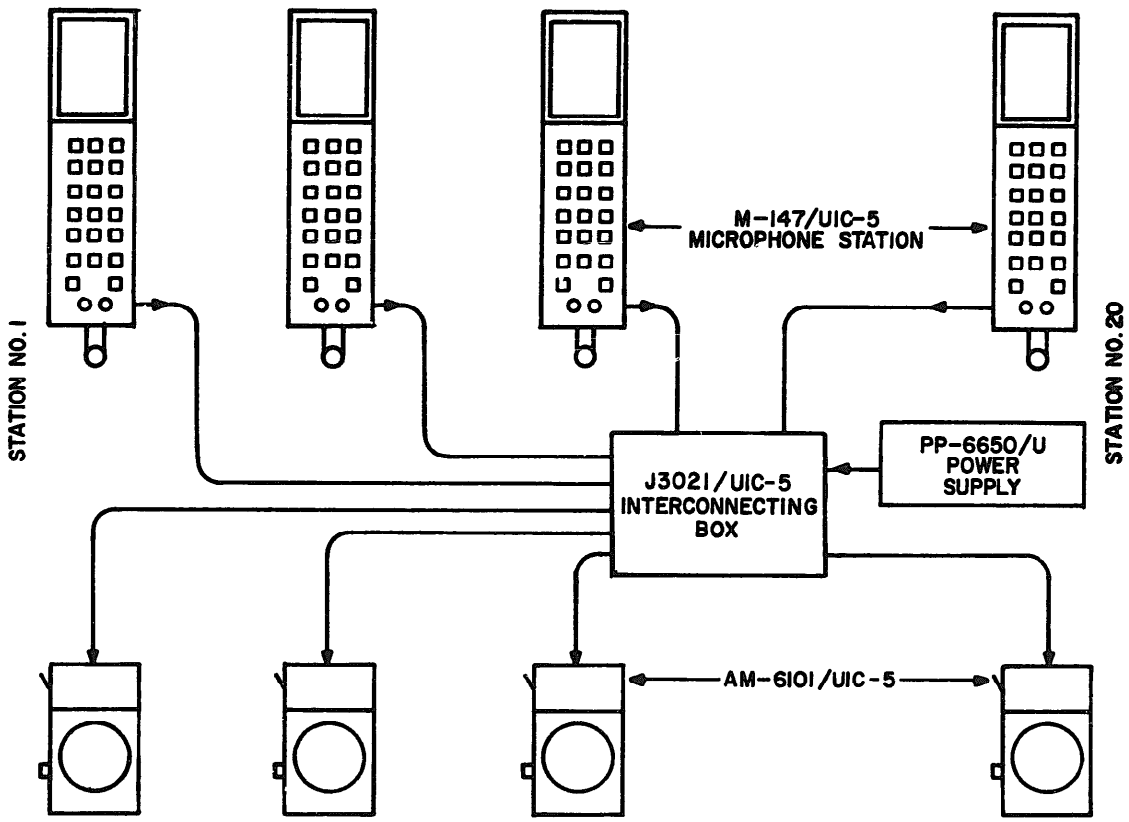


Figure 1-2. - AN/UIC-5 Intercommunication Set, Simplified Typical System Configuration.

unit is used, the audio, control, and power circuits are connected in parallel at the time of installation.

c. Function of PP-6650/U Power Supply. — The PP-6650 supplies the AN/UIC-5 with the required 48-Vdc. Input power to the PP-6650 is 100/130 Vac, 60 Hz. In a typical installation, one PP-6650 is adequate for the entire system. However, two or more PP-6650 units may be required in hybrid installations (two or more subsystems), or where stations are separated by extreme distances.

d. Function of the J-3021/UIC-5 Interconnecting Box. — The J-3021 is used to accommodate station interconnections at the time of installation. Normally, one J-3021 is required for one system. However, two or more J-3021 units may be required in hybrid systems, or where stations are separated by a great distance.

III - PHYSICAL DESCRIPTION

1-3. PHYSICAL CHARACTERISTICS. — The AN/UIC-5 consists of four major subassemblies as described in the following paragraphs and listed in Table 1-1, Equipment Supplied. Table 1-2 lists technical characteristics of the AN/UIC-5.

a. M-147 Physical Description. — The M-147 (figure 1-3) is designed for mounting on a wall, or on the flat surface formed where two equipment racks are joined together. The front panel of the unit contains 20 station selector switches and two status indicator lamps. The microphone is mounted at the bottom of the case and extends forward at a 45-degree angle. The front panel of the case may be removed to provide access to internal components and circuit cards. The unit is 22-1/4 inches high, 3-1/8 inches wide, 6-inches deep, and weighs approximately 12-1/2 pounds.

b. AM-6101 Physical Description. — The AM-6101 (figure 1-4) is designed for mounting from an overhead position. The lower portion of the front panel is sloped, and houses the loudspeaker. A power ON—OFF switch and VOLUME control are located on the side of the enclosure. The front panel of the unit may be removed to provide access to internal components. The rear panels may be removed to provide access to the amplifier and loudspeaker. The unit is 15 inches high, 9-1/2 inches wide, 9-1/2 inches deep, and weighs approximately 15 pounds.

c. PP-6650/U Physical Description. — The PP-6650 (figure 1-5) is designed for mounting in a standard 19-inch equipment rack or cabinet. Operation of the unit is automatic, therefore no controls are provided. The PP-6650 is 6-3/8 inches high, 19 inches wide, 16-1/2 inches deep, and weighs approximately 60 pounds.

d. J-3021 Physical Description. — The J-3021 (figure 1-6) is supplied with the equipment to accommodate station interconnections at the time of installation. The J-3021 contains two telephone-type solderless terminal blocks and two screw-type solderless terminal blocks. Each telephone-type terminal block contains 50 rows of six parallel connections to provide a maximum total of 12 two-connection terminals for a total of 24 two-connection terminals. Access to the terminal blocks can be obtained by removing the 10 screws holding the front cover. The J-3021 is 4-1/8 inches deep, 22 inches wide, 15 inches high, and weighs approximately 15 pounds.

Table 1-1. Equipment Supplied

Reference Designator	Nomenclature	Quantity
1	AN/UIC-5 Intercommunication Set	1
1A1	M-147/UIC-5 Microphone Station	1
1A2	AM-6101/UIC-5 Amplifier, Audio Frequency	1
1A3	J-3021/UIC-5 Interconnecting Box Assembly	1
1A4	PP-6650/U Power Supply Assembly	1

Table 1-2. Physical Characteristics

Equipment	Height (inches)	Width (inches)	Depth (inches)	Weight (pounds)
M-147/UIC-5	22-1/4	3-1/8	6	12-1/2
AM-6101/UIC-5	15	9-1/2	9-1/2	15
J-3021/UIC-5	15	22	4-1/8	25
PP-6650/U	6-3/8	19	16-1/2	60
Total weight of AN/UIC-5 is approximately 112 pounds.				

1-4. TECHNICAL CHARACTERISTICS. - Table 1-3 lists the technical characteristics of the AN/UIC-5.

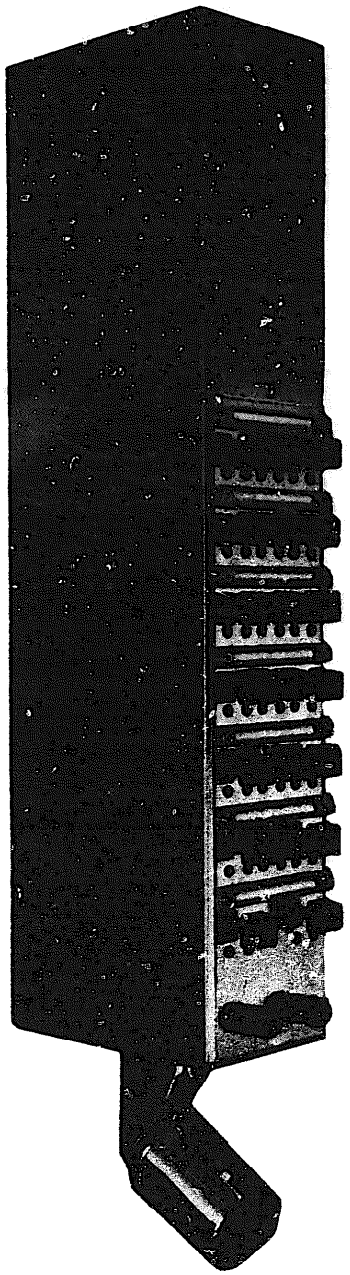


Figure 1-3. - M-147/UIC-5 Microphone Station.

Figure 1-4. - AM-6101/UIC-5 Amplifier, Audio Frequency.

Figure 1-5. PP-6650/U Power Supply.

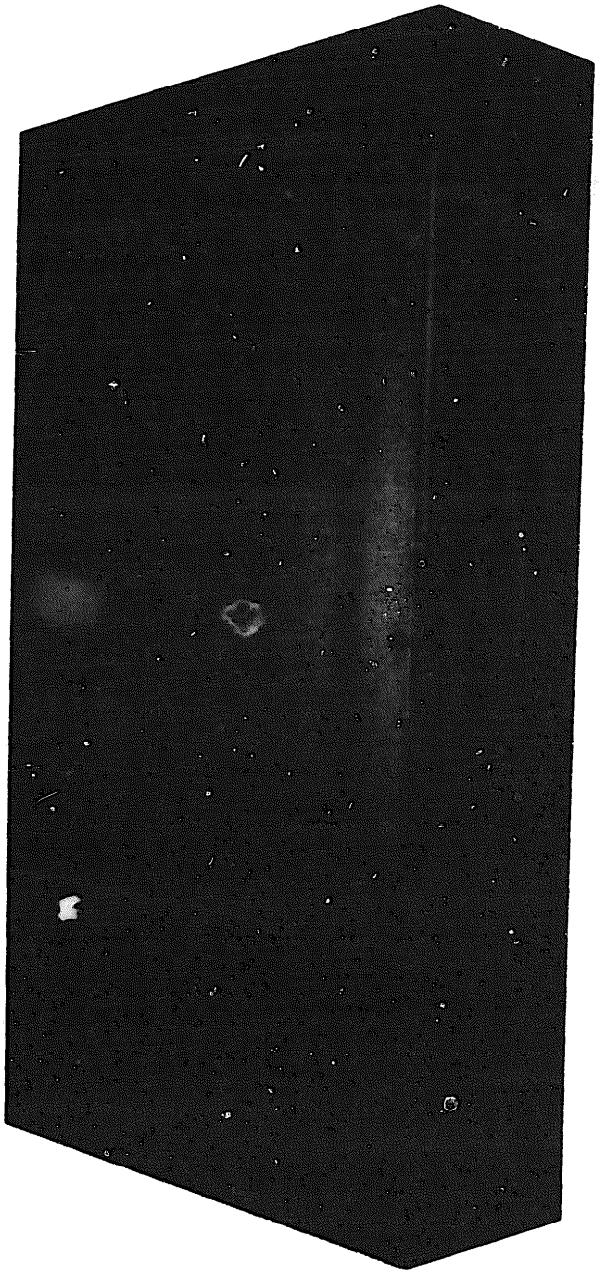


Figure 1-6. - J-3021/UIC-5 Interconnecting Box.

Table 1-3. Technical Characteristics

Item	Characteristic
AN/UIC-5	
Type of service:	Continuous, attended
Stations per system	20 stations maximum. **One M-147 operates** with a maximum of 20 **AM-6101 units.**
Audio output power	10 watts peak derived from AM-6101/ **UIC-5**
Power requirements:	
Ac power	100/130 Vac, 60 Hz, single phase, 4.0 amperes per station
Dc power	+6 Vdc, 0.25 ampere per station (not supplied with AN/UIC-5)
	-6 Vdc, 0.05 ampere per station ('not supplied with AN/UIC-5)
	48 Vdc (supplied by PP-6650)
Current requirements:	
PP-6650/U	10 amperes (see Note)
AM-6101/UIC-5	288 mA each station
M-147/UIC-5	16 mA each station
Note: - If system requirement exceeds 10 amperes, two PP-6650 units are required with load divided equally.	

Amplifier and Preamplifier
Specifications

Amplifier, NSA Part No. 1660

Freq. Response	1OOHz - 15KHz
Impedance Input	5K
output	100ohms
Output Distortion	2.5%
Signal Level In	IV P/P
Cross Talk Rejection	None

Preamplifier, NSA Part No. 1638

Freq. Response	100Hz - 15KHz
Impedance Input	**100K**
Output	**100ohms**
Output Distortion	**1%**
Input Signal Level	**100mv**
Cross Talk Rejection	None

CHAPTER 2

INSTALLATION

I - INSTALLATION PROCEDURES

2-1. SITE SELECTION.-When the new equipment is received, select a location where the shipping containers may be unpacked without exposure to the elements, and convenient to the permanent or semipermanent location of the equipment installation.

2-2. UNPACKING AND HANDLING. -The M-147, AM-6101, PP-6650, and J-3021 must be removed from the shipping containers carefully to avoid breakage or other damage to the equipment. Avoid penetrating the shipping containers with sharp tools or hammers. After the equipment has been unpacked, perform the inspection routines below for obvious damage that might impair proper operation. Inventory the contents of the shipping containers; all equipment listed in table 1-1 should be included. Report any damage prior to installation.

a. Equipment Inspection - Make visual inspection of the following.

(1) Check exterior of equipment for dents, scratches, bent or broken parts.

(2) Loosen or remove all securing hardware to gain access to internally mounted components.

(3) Ensure all internally mounted components, circuit boards, etc., are secure, and all mounting hardware is tight.

(4) Replace all covers.

2-3. EQUIPMENT MOUNTING. - General mounting instructions for each major subassembly of the AN/UIC-5 are listed below.

a. M-147/UIC-5 Microphone Station. - Outline and dimensions of the M-147 are shown in figure 2-1. All dimensions must be taken into consideration before mounting the equipment to allow proper clearances and maintenance access. The M-147 may be mounted on any firm surface that affords a convenient operating location. The rear or side panels of the unit may be drilled to accomodate 10-32 mounting hardware.

> CAUTION. - Before drilling the case of the M-147, remove the front panel amplifier card and control card to prevent damage while drilling. Ensure mounting hardware remains clear of internal components when the unit is reassembled.

Typical mounting locations are sides of standard equipment racks, or the surface formed where two equipment racks are joined together. Such locations normally provide operator convenience and facilitate installation wiring. See paragraph 2-4.

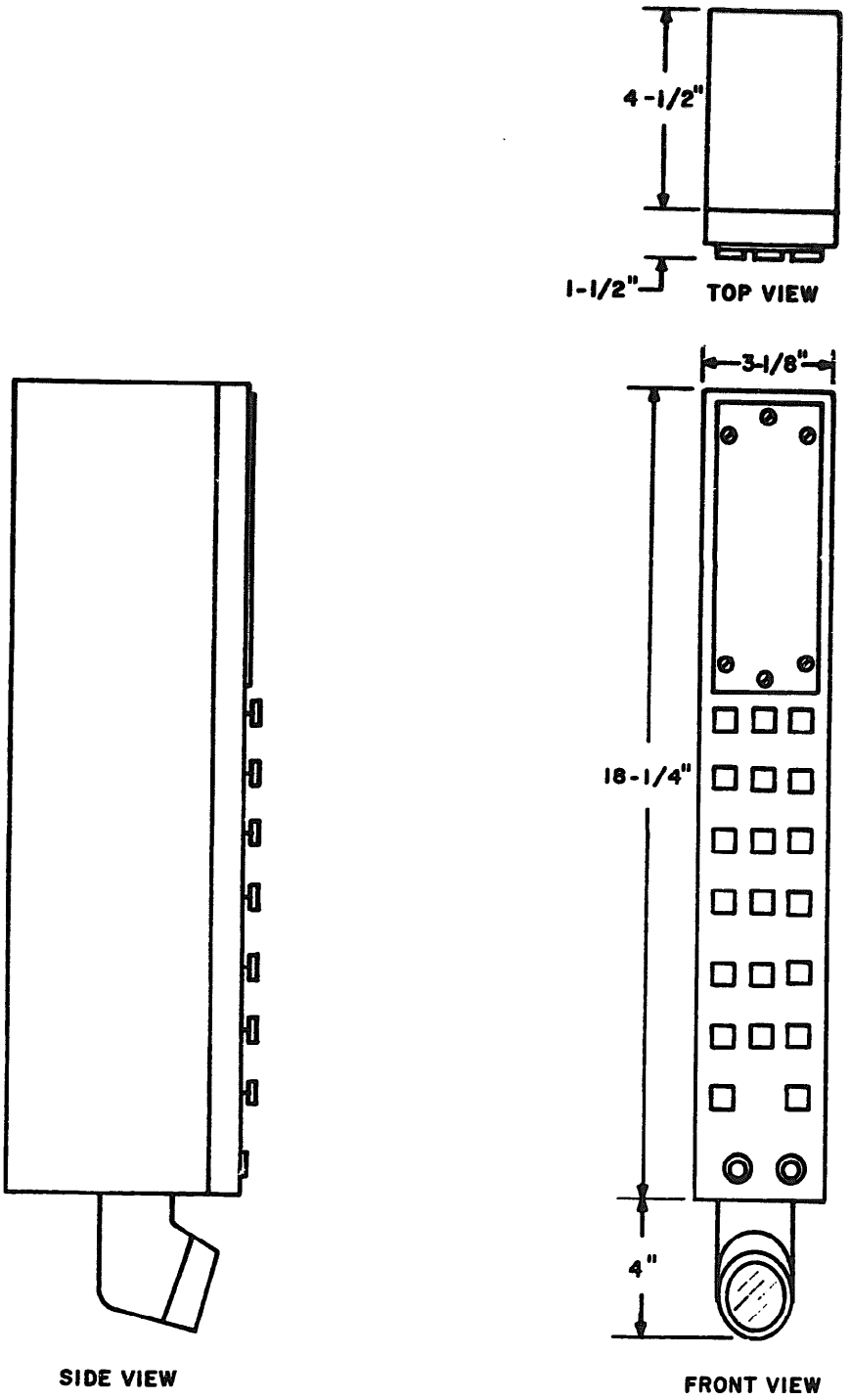


Figure 2-1. - M-147/UIC-5 Microphone Station Outline Dimensions.

b. AM-6101/UIC-5 Amplifier, Audio Frequency. – Outline and dimensions of the AM-6101 are shown in figures 2-2. Before mounting, ensure the mounting location affords maintenance access at both the front and rear of the unit. Operator access may be provided for operating the ON–OFF switch and VOLUME control. (However, the POWER switch is primarily intended for maintenance use.) The top and side panels of the AM-6101 may be drilled to accommodate 10-32 mounting hardware. (See preceding CAUTION in paragraph 2-3a.) In some cases, it may be feasible to support the AM-6101 with steel conduit installed through the top of the equipment case.

c. PP-6650/U Power Supply Assembly. — Outline and dimensions of the PP-6650 are shown in figure 2-3. The PP-6650 is designed for mounting in a standard 19-inch equipment rack or cabinet. Choose a location close to the applicable J-3021 to allow power leads to be as short as possible. Primary power (100/130 Vac, 60 Hz) should be wired to an individual circuit breaker to facilitate system shutdown.

Note: — The 48-Vdc output (10 amperes) of the PP-6650 should be fused. The fuse may be located (mounted) inside the case, on the chassis, or an in-line fuse may be used in the output wire.

d. J-3021/UIC-5 Interconnecting Box Assembly. — Outline and dimensions of the J-3021 are shown in figure 2-4. The J-3021 should be mounted for easy removal of the front cover to allow access to the terminal boards. Mounting brackets are provided, but are not mandatory for use when installing the J-3021.

2-4. INSTALLATION WIRING. - General wiring information on the various types of wiring connections is provided below.

a. Audio and Control Connections. — When all M-147 and AM-6101 units of the system have been properly mounted, audio and control connections are made from each M-147 to each AM-6101 operating with the station. Connections are not made between an M-147 and the AM-6101 of the same station. Connections are also omitted when communication between two stations is not required.

b. DC Power Connections. — Dc power sources are connected normally by running one multiple-conductor power cable to a station, then making parallel connections between the M-147 and AM-6101. Power wiring should be installed using at least No. 10 AWG conductors.

c. Interconnect Connections. — The J-3021 is normally used to terminate and interconnect all system wiring. The wiring from each unit is terminated inside the J-3021; internal strapping is used to provide all of the desired interconnections.

2-5. STATION CONNECTIONS - Figure 7-1 shows inter-station connections and the audio and control connections necessary for a typical two-station system, shown as typical of any system. It can be seen that the input terminals to each AM-6101 form a common line to which all M-147 outputs are connected. Notice that no M-147 is connected to the AM-6101 of the same station. Figure 7-1 shows only two stations, however, the same connections are made for any number of stations. For example, if a third station were added to the system, switch S3 of all M-147 units would be parallel-connected to the common audio input of the

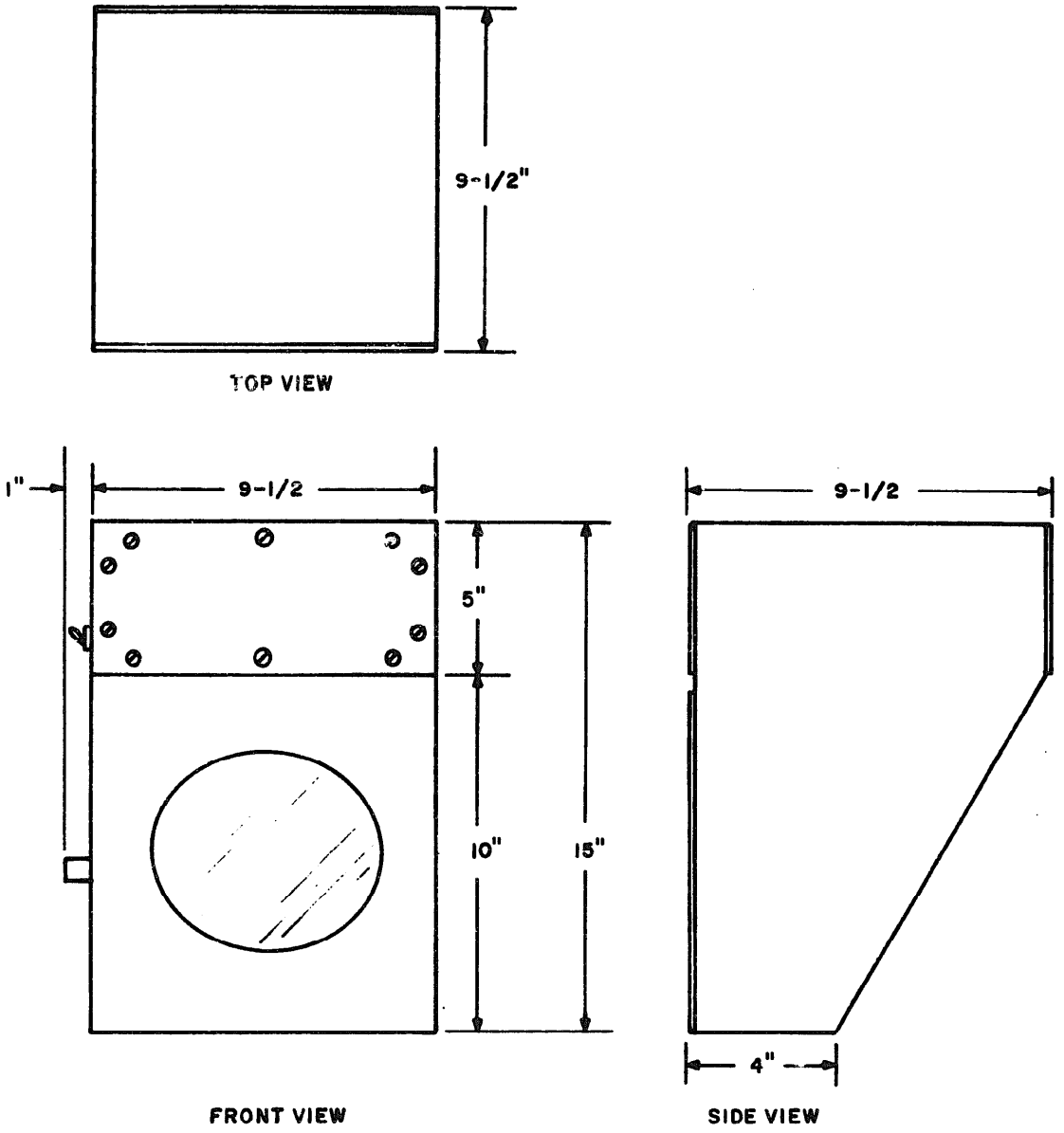


Figure 2-2. - AM-6101/UIC-5 Amplifier, Audio Frequency Outline Dimensions.

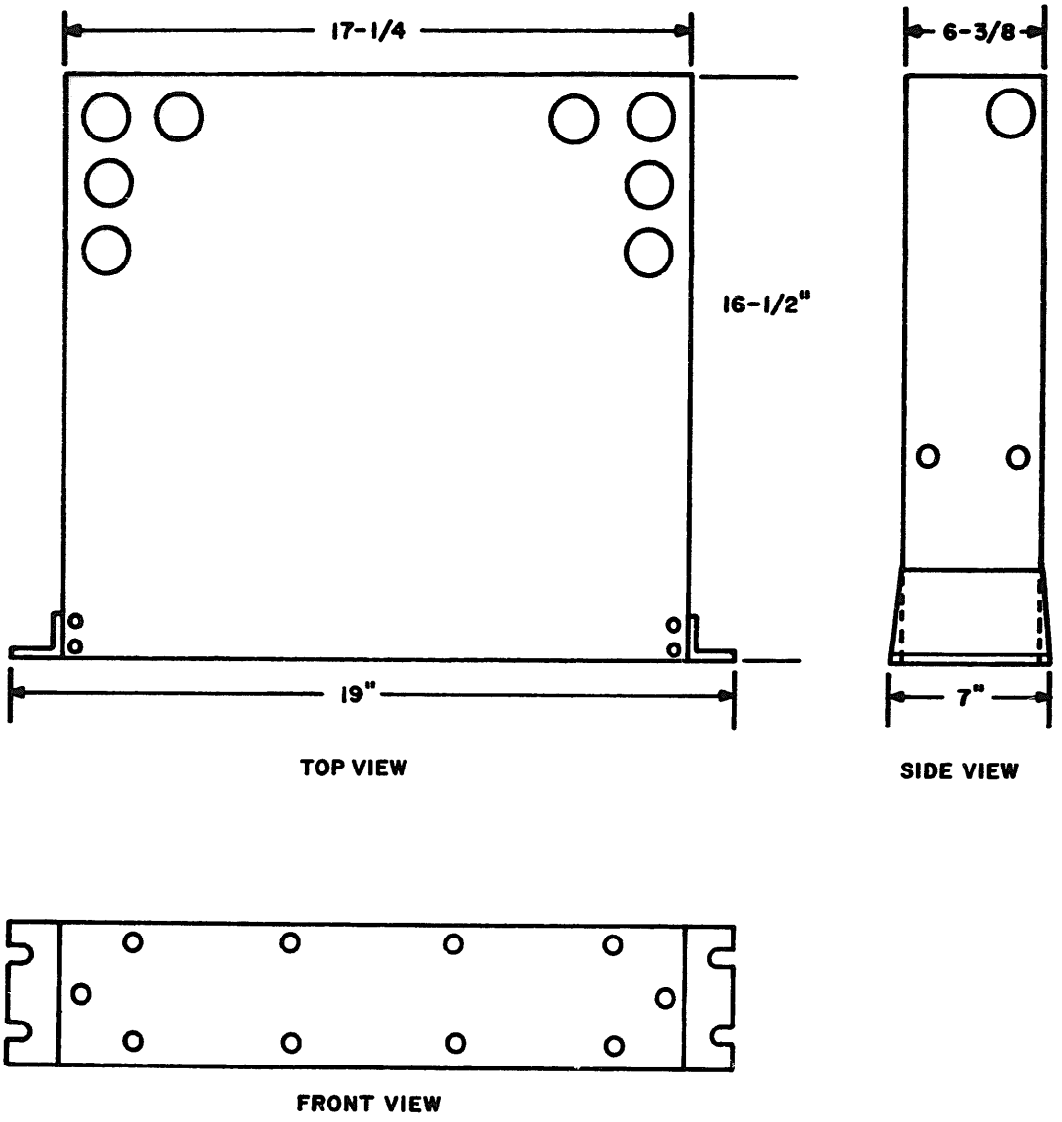


Figure 2-3. - PP-6650/U Power Supply Assembly, Outline Dimensions.

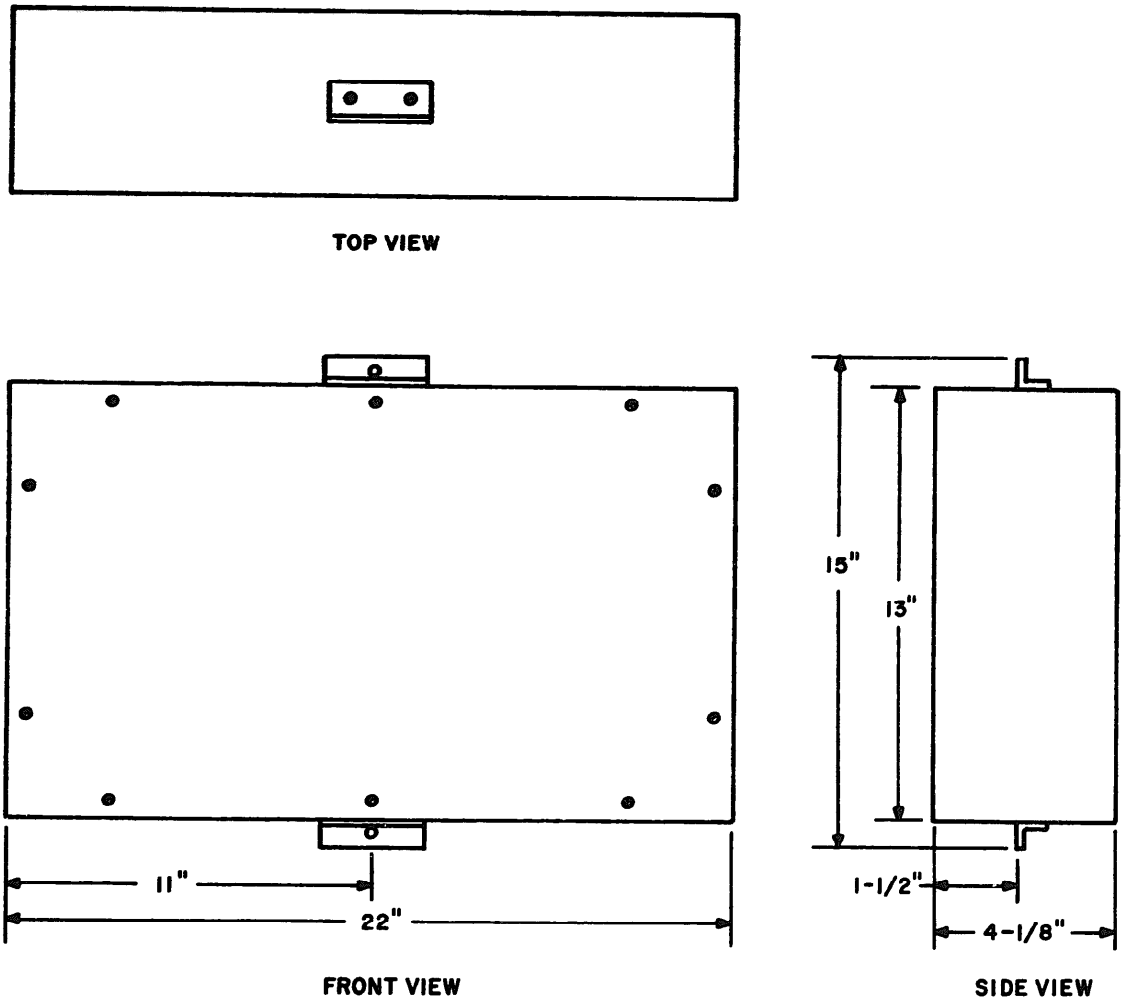


Figure 2-4. - J-3021/UIC-5 Interconnecting Box Assembly, 0utline Dimensions.

third AM-6101. Figure 7-2, M-147/UIC-5 Wiring Diagram, shows the terminal strip connections for up to 20 stations, and the associated switches on the M-147. Figure 7-3 shows the AM-6101 wiring diagram and figure 2-5 shows the PP-6650 wiring diagram. All audio wiring (audio and ground return) should be fabricated using twisted pairs. Power wiring should be at least No. 10 AWG. All power and signal wiring should be enclosed in steel conduit. mock-out holes are provided on the AM-6101, M-147, and J-3021 to accommodate standard conduit fittings.

2-6. REPACKING. - Packaging of the AN/UIC-5 major assemblies is relatively simple. Pack each assembly in separate cardboard containers and ensure dunnage is used on all sides. For additional packing information, refer to MIL-P-116.

2-7. STORAGE. - To prepare the AN/UIC-5 for storage, pack the assemblies for storage as described in paragraph 2-6. The AN/UIC-5 should be stored in a protected environment with less than 95 percent relative humidity. If packaging is for long term storage, or the relative humidity is expected to exceed 95 percent, the AN/UIC-5 should be enclosed in vapor-seal packing and protected by replaceable dessicant packets (MIL-P-116, Method II).

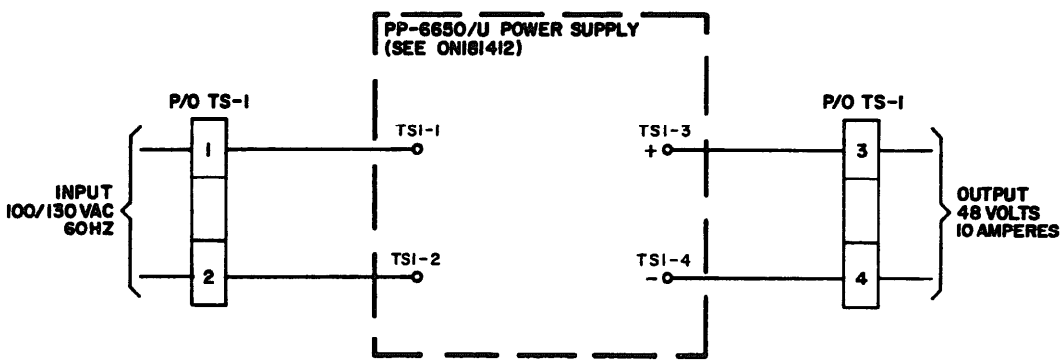


Figure 2-5. - PP-6650/U Power Supply Assembly Wiring Diagram

CHAPTER 3

OPERATING INSTRUCTIONS

3-1. GENERAL. - The information in this chapter covers the function and use of controls and indicators located on the M-147 and AM-6101.

3-2. M-147/UIC-5 CONTROLS AND INDICATORS. - All controls and indicators for the M-147 are located on the front panel. The controls and indicators are listed by function in table 3-1, Refer to figure 3-1.

3-3. AM-6101/UIC-5 CONTROLS, - The AM-6101 contains a 48 VDC ON/OFF switch and a VOLUME control. For normal operation, the ON/OFF switch must be set to the ON position, and the VOLUME control must be set to provide the desired audio level. Both controls are mounted on the side of the unit and are clearly marked.

3-4, AN/UIC-5 TURN-ON PROCEDURE. - The following steps provide instructions required to initially energize the AN/UIC-5 after all external power has been applied to the equipment.

a, On the AM-6101, set 48 VDC ON/OFF switch to ON.

b. On the AM-6101, set VOLUME control to desired level.

c. On the M-147, ensure that the red status indicator lamp is on.

d. To initiate a call, follow the guidelines defined in paragraph 3-5.

e. To respond to an incoming call, refer to paragraph 3-6.

3-5. INITIATING A CALL. - When an operator wishes to communicate with another station within the system, he must press the applicable selector switch for the desired station. The pushbutton must remain pressed during the call. After the pushbutton has been pressed, the operator must wait momentarily for the green indicator lamp to light. When the green lamp lights, the operator must speak closely into the microphone, keeping a normal voice level. When a reply is required, it is necessary for the operator to identify the station from which he is calling in order for the reply call to be made to the proper station.

3-6, RESPONDING TO INCOMING CALL. - An operator responds to an incoming call by first pressing the pushbutton to select the station that has initiated a call. Operation is identical to that described in paragraph 3-5.

Table 3-1. M-147/UIC-5 Controls and Indicators

Control/Indicator	Type	Function
Station selector switches (S1 through S20)	Push switches	Used to select individual AM-6101 units. To speak to a station, the operator must press the applicable selector switch for that station.
Green Indicator (DS1)	Lamps incandescent	The green indicator indicates an operative condition. The green lamp becomes energized when a pushbutton is pressed and all relay connections have been properly made to the selected station.
Red Indicator (DS2)	Lamps incandescent	The red indicator indicates a non-operative condition. The lamp remains energized while no switches are pressed, and will remain energized when a selected station is busy.

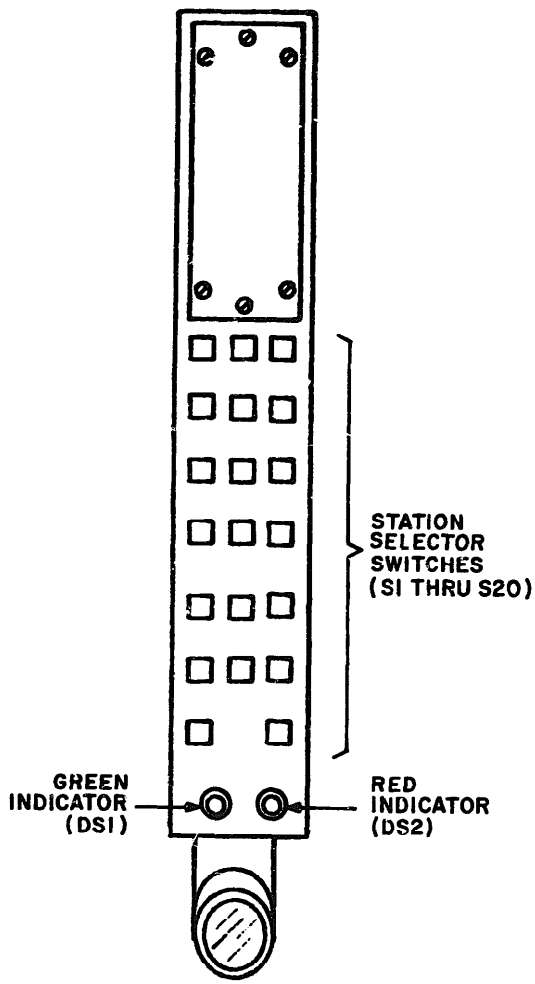


Figure 3-1. - M-147/AN-UIC-5 Microphone Station Controls and Indicators.

CHAPTER 4

PRINCIPLES OF OPERATION

I - BLOCK DIAGRAM DESCRIPTION

4-1. GENERAL, - The AN/UIC-5 is used to provide short distance station-to-&&ion voice communication. One M-147 is capable of operating in a net of 20 stations, Refer to figure 7-1 for a typical two-station configuration.

4-2. AN/UIC-5 FUNCTIONAL DESCRIPTION. - The following paragraphs describe a simplified block analysis of the AN/UIC-5.

a, Transmit Mode. - To initiate operation, an operator must press the station selector pushbutton for the station he is calling, This action, when another station is not-on the line, automatically connects audio and control lines between the M-147 and the selected AM-6101. When the operator speaks into the microphone, the transmission is amplified by the preamplifier. The output of the preamplifier, a low-level audio signal, is routed through control relay K1 (pins 20 to 19 on the control circuit board when the green status light is on), through the selected station selector switch, through the J-3021 assembly, to TS1-5 of the selected AM-6101.

b. Receive Mode. - The received audio signal is applied to the AM-6101 at TS1-5, connected across the VOLUME control, and routed through the energized contacts of K1 (with green light on M-147 on) and applied to the amplifier board. The signal is amplified and drives the loudspeaker. When the operator desires to respond to the received communication, he must press the pushbutton to select the AM-6101 at the calling station. Control circuits interfaced between the M-147 and AM-6102 prevent "cutting in" on a busy line. An operator can communicate with an AM-6101 station only if the line to that station is free. A system can be used to carry on numerous conversations simultaneously. Since all stations have independent AM-6101 units, any operator can communicate with any free AM-6101 unit, regardless of the status of other stations within the system.

II - FUNCTIONAL CIRCUIT DESCRIPTION

4-3. SCOPE. - The following paragraphs describe the theory of operation of the AN/UIC-5 in detail. The functional operation of each major subassembly is given, followed by the circuit theory of the associated circuit boards. Therefore, both schematic and wiring diagrams must be used together to support the text.

4-4. M-147/UIC-5 FUNCTIONAL CIRCUIT DESCRIPTION. - The following paragraphs describe the functional operation of the M-147 in detail. The M-147 consists of a preamplifier circuit card, a control circuit card, 20 station selector switches, microphone, and two status indicator lamps. Refer to figures 7-2, 7-4, and 7-5.

a. Functional Description. - Primary power is connected to the M-147 on terminal strip TS4. The -48 Vdc is connected to TS4-1, -6.0 Vdc to TS4-3, and +6.0 Vdc to TS4-2. Capacitor Cl provides filtering for the -48 Vdc. Terminal strips TS1, TS2, and TS3 are used for audio and control connections only. The

output of the microphone is routed through a coax cable directly to the input (pin 4) of preamplifier (1A1A1). The signal is amplified and the output of the preamplifier (pin 28) is coupled directly to pin 20 of control circuit card (1A1A2). When no station selector switch is pressed, the audio signal terminates at K1-10, an open relay contact within the control circuit card. when any one of the 20 station selector switches (S1-S20) is pressed, all stations in the system are free, and green status indicator DS1 is on, the following sequence of events occurs. As an example, assume that the operator presses station selector switch (520).

(1) The tongue contact of switch S20-D picks up -6 Vdc from the common -6-Vdc bus circuit. The -6-Vdc potential is applied through TS4-4 to pin 17 of the control circuit card, activating the control circuits and allowing relay K1 to energize.

(2) When relay K1 becomes energized, the audio signal is coupled through K1-9, through pin 19 of the control circuit card, through TS4-6, and the closed contacts of S20-A to TS3-18. From this point, the audio signal is routed to the input of the selected AM-6101.

(3) Simultaneously, +6 Vdc is routed through K1 (pins 6 to 7), through pin 23 of the control circuit card, through TS4-5 and S20-C1 to TS3-20 and is coupled to the common control line for the selected AM-6101.

(4) In addition, relay K1 (pins 12 to 13) applies a ground to pin 24 on the control circuit card, thus energizing the green status indicator lamp. The green indicator shows the operator that a circuit has been completed and that he may communicate with the selected station.

b. Control Circuit. - A control circuit is used in the M-147 to prevent the operator from "cutting in" on a line that may be in use. Assume that the operator presses station selector switch S20, and that the associated AM-6101 has been selected by another station, the following sequence will occur.

(1) The tongue contact of S20-C will pick up +6 Vdc present on the control line (the +6 Vdc will be present on the line when any pushbutton on any M-147 is pressed in the system). The +6 Vdc is applied through TS4-5 to pin 23 of the control circuit card, operating the control circuitry.

(2) The control circuitry holds relay K1 deenergized, therefore, the audio line remains open and the red status indicator lamp remains on. In this condition, the operator cannot communicate with the selected station. However, when the station becomes free, the +6-Vdc potential will not be present on the control line, and normal operation can be resumed.

c. Preamplifier Board (1A1A1). - The preamplifier board consists of transistors Q1, Q2 and Q3, diode CR1, and associated components. The preamplifier is a conventional direct-coupled, two-stage audio amplifier with an emitter-follower output stage. Power for the unit is -48 Vdc at pin 32. The microphone audio input is connected to pin 4, and taken from the junction of R12 and R13 and coupled through Cl to the base of Q1. Resistors R12 and R13 form a fixed input attenuator network. Transistors Q1 and Q2 form a direct-coupled, two-stage audio amplifier. The amplified signal taken from the collector of Q2 is

applied to the base of Q3, a conventional emitter-follower that provides an isolated low impedance output to pin 28.

d. Control Circuit Board (1A1A2). - The control circuit board consists of transistors Q1 and Q2, relay K1, and diode CR1. The unit provides control functions for status indication, and ensures that audio is never connected to an associated receiving station when the receiving station is communicating with any other station. During "normal operation' (no other stations on-line and station selector switch pressed at local station), a -6-Vdc control signal is applied to pin 17. The control potential at pin 17 is connected through resistors R4 and R3 to the base of Q1, causing Q1 to conduct and relay K1 to energize. With relay K1 energized, the +6 Vdc is connected from pin 1 to pin 23 through K1-A. This potential is connected to the control bus and provides a busy control signal to prevent other stations from cutting in on a line in use. Audio is coupled from pin 20, through K1-B, to pin 19; ground is applied through K1-C to pin 24, allowing the green status light to come on, indicating the circuit has been completed. During "busy operation" (another station on-line and station selector switch pressed at local station) a +6-Vdc potential (busy control signal) is connected to pin 23, routed through the deenergized contacts of K1-D, through resistor R5 to the base of Q2. This action causes Q2 to conduct and essentially grounds the collector. With Q2 conducting, the base of Q1 is positive and the junction of R3 and R4 is clamped at ground potential. Therefore, Q1 remains cut off since the -6 Vdc at pin 17 is disabled. With Q1 cut off, relay K1 remains deenergized and, therefore, the audio line remains open and the red status indicator remains on, preventing the operator from communicating with the selected station.

4-5. AM-6101/UIC-5 AMPLIFIER, AUDIO FREQUENCY. - The following paragraphs describe the functional operation of the AM-6101. The AM-6101 consists of an amplifier board, volume control, power switch, loudspeaker, control relay, two fuses, and bracket-mounted transistors Q6 and Q7. Refer to figures 7-3 and 7-6.

a. Functional Description. - Terminal strip TS1 is used to connect power, audio, and control signals to the AM-6101. Primary power required is + and -6 Vdc and -48 Vdc. Cabinet-mounted 48V ON/OFF switch S1 controls the -48-Vdc input voltage. When the AM-6101 is selected by an M-147, a +6-Vdc control signal (originating at pin 23 of the control circuit card in the M-147) is applied through TS1-4 to pin 1 of amplifier board (1A2A1). This voltage activates control circuitry that provides an output at pin 2 of the amplifier to energize K1. The audio signal applied to TS1-5 is coupled through the VOLUME control, and contacts of relay K1 to the audio input of the amplifier (pin 11). The amplifier utilizes a complementary phase-inverter circuit, therefore, audio outputs are connected to pins 27 and 31 and applied to the base of cabinet-mounted output transistors QS and Q7. Therefore, the collector-emitter junction of transistors Q6 and Q7 is the output of the amplifier. The audio developed at this point is coupled through capacitor C4 to the loudspeaker voice coil. Fuses F1 and F2 provide over-current protection for the output stage.

b. Amplifier Board (1A2A1). - The amplifier consists of control signal amplifiers Q1 and Q2, audio amplifier Q3, phase inverter circuit Q4 and Q5 and associated components. The control amplifiers are used to operate external control relay K1. Transistors Q3, Q4, and Q5 amplify the audio input signal. A -6 Vdc

source (both + and -) and a -48-Vdc source are required for operation of the amplifier. When the amplifier has been selected by an associated M-147, a +6-Vdc control signal is present at pin 1. Therefore, a positive signal is developed at the junction of resistors R2 and R4 and applied to the base of Q1, The positive voltage reverse biases Q1, allowing the collector to go to approximately -6 Vdc. This negative transition is felt at the base of Q2, which forward biases Q2 and allows Q2 to conduct. When Q2 conducts, the collector current is applied to pin 2 of the amplifier to energize external control relay K1, With K1 energized, an audio signal is applied to pin 11, coupled through C1, and applied to the base of Q3. The signal is amplified by Q3, and direct-coupled to the bases of transistors Q4 and Q5, a complementary phase inverter circuit. Audio is taken off the collector of Q4 and the emitter of Q5 and applied to output pins 31 and 27 respectively. These signals are amplified by two additional amplifiers mounted in the AM-6101 cabinet (see figure 7-3), The output of the cabinet-mounted amplifiers is common-corrected to pin 30. Therefore, pin 30 is considered the audio output of the amplifier, and is connected to the loudspeaker.

4-6. PP-6650/U POWER SUPPLY ASSEMBLY. - The PP-6650 provides a regulated -48 Vdc to the AN/UIC-5. The PP-6650 consists of transformer T1, diode rectifier CR1 and CR2, and an output filter. Refer to figure 7-7.

2. Input Regulation. - AC input voltages (100/130 Vac, 60 Hz) are applied to the primary of constant voltage transformer T1. Transformer T1 converts the incoming line voltage to the desired level (48 Vdc) and also functions as the regulating element for the unit. Transformer T1 uses a magnetic core structure different from conventional transformers. T1 contains a magnetic shunt with a fixed air gap interposed between the primary and secondary windings. The secondary winding is shunted by capacitor Cl. When the primary voltage is applied, the secondary voltage increases to the point at which that portion of the magnetic core directly under the secondary winding approaches saturation due to the capacitative load connected across the secondary winding. As the core approaches saturation, its magnetic flux carrying capacity is limited and the increase in secondary voltage is less than any proportional increase in primary voltage. Therefore, a stable secondary voltage is obtained over the range of the primary voltage since the core under the secondary winding is magnetically saturated. However, due to the magnetic shunt between the primary and secondary windings, that part of the core under the primary is not saturated. To equalize the effect of increasing primary voltage on the secondary. a compensating coil is wound over the primary coil and is connected in series with the secondary load circuit, but out of phase with the secondary. Therefore, when the primary voltage increases, the voltage in the compensating coil also increases, but since it is out of phase with the secondary voltage, it subtracts from the secondary voltage an amount equal to the slight increase induced in the secondary winding by the increase of primary voltage. Likewise, when the primary voltage decreases, the compensating coil voltage decreases in proportion to the primary voltage and subtracts from the secondary voltage. This allows the vector sum of the compensating coil voltage and the secondary voltage to be practically constant throughout the input voltage range.

b. Rectifier and Filter. - Diode CR1 and CR2 form a full wave rectifier to convert the ac output of transformer T1 to a dc potential. Capacitors C2 and C3 provide a conventional output filter network to reduce the magnitude of ripple. The regulated output voltage (48 Vdc at 10 amperes) is taken across resistor R1.

CHAPTER 5

MAINTENANCE

I - GENERAL

5-1. SCOPE. - This chapter contains preventive and corrective maintenance routines for the AN/UIC-5. Preventive maintenance provides general preventive maintenance instructions, inspection routines and cleaning procedure. Corrective maintenance provides fault isolation and troubleshooting guidelines.

5-2. TOOLS AND TEST EQUIPMENT. - No special tools or test equipments are required for preventive maintenance. Test equipment required for corrective maintenance is listed in table 5-1. Equipment equivalent to that listed may be used as an alternate.

Table 5-1. Test Equipment

Item	Manufacturer	Type, Model, or FSN
Multimeter	Simpson	Model 260 (AN/PSM-6)
Audio Signal Generator	Hewlett Packard	HP-200CD

II - PREVENTIVE MAINTENANCE

5-3. PREVENTIVE MAINTENANCE SCHEDULES AND PROCEDURES. - Perform preventive maintenance on the AN/UIC-5 at intervals determined by actual use. A unit in constant use will require frequent periods of preventive maintenance. If the AN/UIC-5 is used infrequently, the period of preventive maintenance will depend upon practical judgment, scheduling, ambient operating temperature, and similar factors. Recommended periods for inspection and cleaning routines are given in the following paragraphs.

a. General Preventive Maintenance Instructions. - Use the following guidelines when performing preventive maintenance.

(1) If the situation permits, remove all system power when performing internal inspections.

(2) Use a clean, dry, lint-free cloth or brush for dusting.

(3) Remove corrosion with a very fine sandpaper. Do not use steel wool, emery paper or crocus cloth,

(4) Ensure maintenance area is well ventilated before using cleaning solvents.

(5) Do not use cleaning solvents near a flame.

(6) Clean metallic parts (except electrical contacts) with a clean cloth moistened with an approved cleaning solvent.

(7) Clean electrical contacts with a few drops of an approved electrical cleaning solvent or a contact burnishing tool,

b. Inspection. - Inspection schedules and procedures are listed in table 5-2.

c. Cleaning. - Table 5-3 lists recommended procedures for cleaning various areas of the AN/UIC-5. When using cleaning solvents, remove all excess deposits before the solvent dries.

Table 5-2. Inspection Procedures

Time	Item	Procedure
Monthly	Electrical chassis	Inspect for overheating that causes discoloration, blistering, distortion of components, or peculiar odors.
Monthly	Hardware-overall	Inspect for dirt, chipped paint, corrosion, or deformed panels. Inspect for loose or deformed hardware, Inspect for improper latching or binding, and damaged or worn slides.
Monthly	Electrical leads	Inspect for looseness, separation, torn insulation, corrosion, or other damage.
Monthly	Terminal connection	Inspect for corrosion, dirt or damage.
Monthly	Mechanical assemblies	Inspect for looseness, insecure mounting or damage.
Monthly	Switches and controls	Inspect for loose mounting or connections, pitting, dirt, corrosion, or wear of accessible contacts; restricted action, loose knobs or mounting hardware.
Monthly	Indicators	Inspect for cracked, scratched, or missing lenses.

Table 5-3. Cleaning Procedures

Part/Area	Procedure
Inaccessible areas or areas where loose dirt has accumulated	Use dry compressed air at a maximum pressure of 60 psi. Direct first blasts of air at the floor to clean moisture from air line. Keep air nozzle far enough away from parts and wiring to avoid damaging them.
External surfaces	Wipe surfaces with a lint-free cloth moistened with an approved commercial detergent.
Corroded switch contacts	Burnish with a burnishing blade. Wipe blade frequently with a clean, lint-free cloth moistened with electrical cleaning solvent.
Terminals and connector contacts	
Corrosion	Remove corrosion with very fine sandpaper.
Dirt, mildew, or fungus	Wipe clean with a lint-free cloth or brush moistened with electrical cleaning solvent.

III.- CORRECTIVE MAINTENANCE

5-4. GENERAL TROUBLE ANALYSIS AND SCOPE OF REPAIR. - When maintenance of the AN/UIC-5 becomes necessary, the technician must be able to recognize the general nature of the malfunction, so that troubleshooting procedures may be used to isolate malfunctions to a particular functional section (station selection, control, audio amplification, etc.) of the AN/UIC-5. When this is accomplished, the trouble can be further isolated to a particular circuit card or component within the functional section. When a malfunction exists on a printed circuit card, it is possible to quickly determine the source of trouble by replacing suspected cards with a spare. When this substitution process shows a card to be defective, repairs can be made promptly, and down-time is kept to a minimum. While the equipment operates with a substituted card, the defective card may be repaired at a more convenient bench location. Proper use of test equipment and familiarity with components and schematics are also helpful in fault isolation.

a, Using Test Equipment. - The multimeter should be used to check operating voltages, continuity$_9$ and as an aid in isolating components. In addition, the technician should be familiar with the schematic and wiring diagrams located in chapter 7. The circuit card connectors are inaccessible, which necessitates the

removal of the circuit cards when checking for proper voltages at the connector pins. When checking for proper operation of audio circuits, either in the M-147 or AM-6101, it is recommended that an audio signal be applied to the base of any transistor amplifier stage which is to be checked. Normally, the card connector will have to be removed and pulled out to gain access to points on a circuit card.

CAUTION When applying an audio signal to the input of pre-amplifier card (1A1A1A) in the M-147, disconnect the microphone connector to avoid damaging the microphone.

A small audio amplifier may be used to provide an audible indication of operation. However, it is recommended that the input of the amplifier always be fed through a small capacitor. Operation of each stage of both the M-147 and AM-6101 can be checked by first injecting a test signal at the input of the unit under test, and then connecting the test amplifier to the collector of each transistor stage, in turn, until the defective stage is isolated. Any small audio amplifier may be used for test pruposes, such as a phono amplifier, signal tracer, etc. However, it is recommended that the amplifier have a high input impedance to prevent possible damage to the equipment under test.

b. Component Identification and Location. - Figure 5-1 shows the lead location of solid state devices used in the AN/UIC-5. Refer to Chapter 6, Illustrated Parts List, for location of all components in the AN/UIC-5.

5-5. TROUBLESHOOTING. - For troubleshooting purposes, the AN/UIC-5 should be considered a simple audio amplifier, with the microphone preamplifier located in the M-147 and the power amplifier and speaker located in the AM-6101. When a malfunction occurs, the faulty section can quickly be located by first determining whether the trouble is located in the M-147 or AM-6101. For example, when an M-147 cannot communicate with any other station in the system, it is highly probable that the trouble is located within the M-147. When an AM-6101 does notoperate with any M-147, it is equally probable that the trouble is located within the AM-6101. A malfunction in the PP-6650 is usually obvious. For example, receiving and transmission capabilities are disabled and no relay action can be heard when applicable switches are operated. The following paragraphs provide guidelines for troubleshooting each of the major subassemblies and associated control circuits.

a. AM-6101-AN/UIC-5. - When a trouble has been isolated to an AM-6101, the-fuses in the output amplifier circuit (Q6 and Q7) should be checked initially, and replaced if necessary. Normally, blown fuses indicate a shorted output transistor. Other audio circuits can be checked quickly by applying an audio signal to the input terminals, then checking the amplifier, stage-by-stage, until the defective stage has been located. See paragraph 5-6 for guidelines to circuit card repair.

b. M-147—AN/UIC-5. - When a trouble has been isolated to an M-147, similar audio troubleshooting methods can be used. However, the output of the M-147 must be temporarily patched to the AM-6101 at the same station to provide an audible indication of operation to the technician. If temporary strapping cannot be readily accomplished, a small audio amplifier (or signal tracer) with a high input impedance can be connected to the output of the M-147 to provide an audible indication of operation.

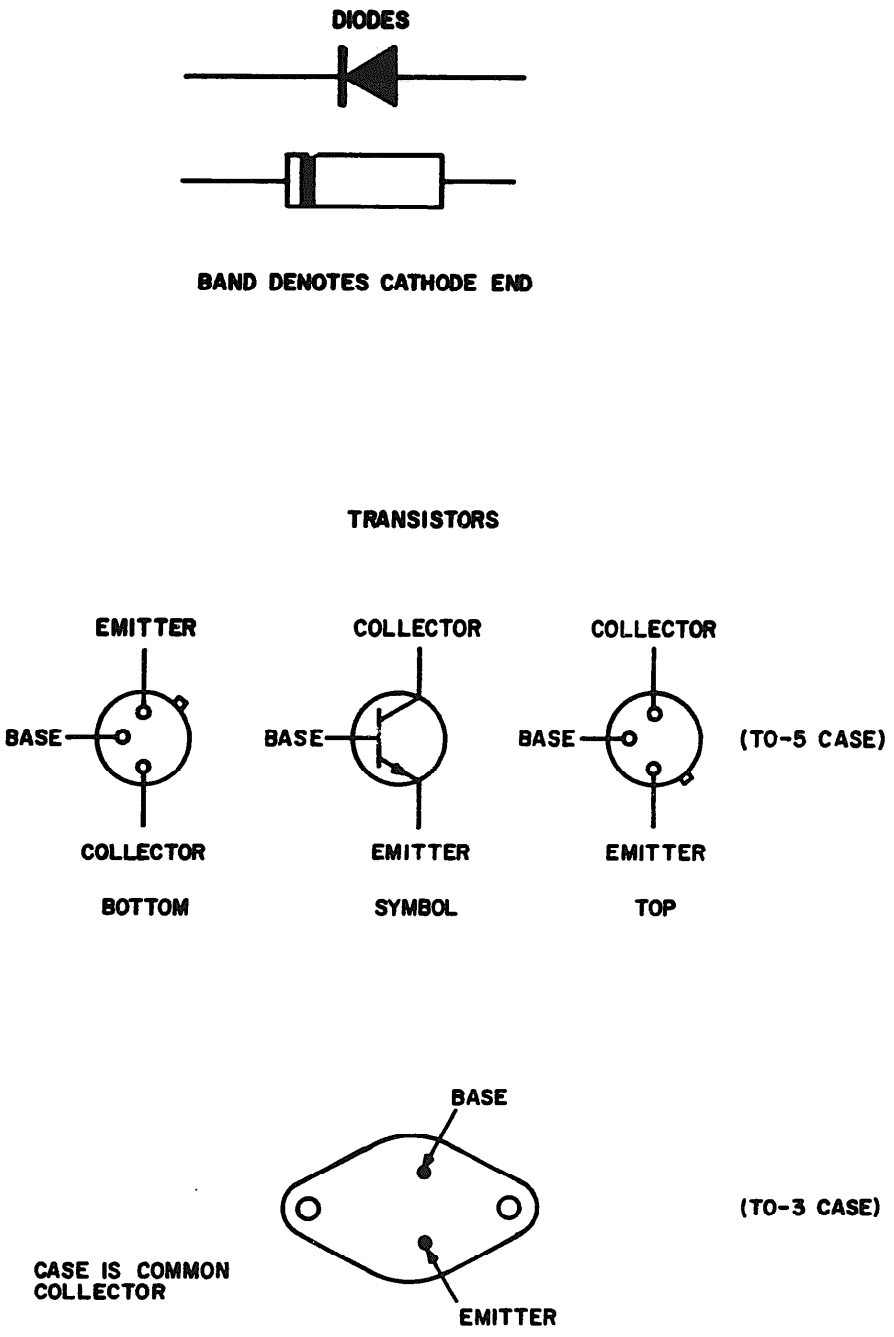


Figure 5-1. - Solid State Component Lead Configurations.

c. Control Circuits. - The control circuits of both the AM-6101 and M-147 can be checked by momentarily strapping +6.0 Vdc to the control line. In this manner, operation of the control circuits and associated relays can be checked for proper operation locally, rather than using a station-to-station control signal.

d. PP-6650/U. - The PP-6650 requires little or no maintenance. However, under certain system operating conditions, the PP-6650 may require some maintenance. Table 5-4 provides general guidelines to be followed when the specified symptoms occur.

WARNING

Ensure line voltage is off or disconnected before performing any repair on the PP-6650. Discharge any residual charge on filter capacitors C2 and C3 by connecting a jumper across the output terminals, or across the capacitor terminals, or allow at least 1 minute for the capacitor to discharge.

Table 5-4. PP-6650/U General Troubleshooting Chart

Symptom	Probable Cause	Remedy
Output voltage too high	(1) Load current less than minimum rated load	(1) Correct load current requirements.
	(2) Line frequency too high	(2) Correct line frequency.
Output voltage too low	(1) Load current greater than maximum rated load	(1) Reduce load current requirements.
	(2) Line voltage too low	(2) Increase line voltage to within specified tolerance.
	(3) Line frequency too low	(3) Correct line frequency.
	(4) Defective filter capacitor C2 or C3	(4) Replace C2 or C3 or both as required.
	(5) Defective shunt capacitor C1	(5) Replace C1.

Table 5-4. PP-6650/U General Troubleshooting Chart (continued)

Symptom	Probable Cause	Remedy
Output voltage too low (continued)	(6) Defective rectifier CR1, CR2	(6) Replace CR1 or CR2 or both as required.
No output voltage	(1) Open connection	(1) Check all connections and repair bad connections.
	(2) Open transformer winding	(2) Check continuity of transformer windings. Replace transformer if open.

5-6. PRINTED CIRCUIT CARD REPAIR. - After trouble has been isolated to a component on a printed circuit card, procedures for removal and replacement of components should be carefully adhered. Refer to the IPB in Chapter 6 for component locations.

a. Component Removal and Replacement. - Use the following guidelines to remove and replace components on a printed circuit card.

(1) Clip leads of defective component on the component side of the board. (Transistors must be clipped from the circuit side.)

(2) Use low-wattage soldering iron to melt solder on the circuit side of board; remove bits of wire by pulling gently with long-nosed pliers, or by tapping board gently to dislodge component leads.

(3) Clean excess solder from component mounting holes.

(4) Insert new component, leaving approximately 3/16-inch space between component and card.

(5) Use low-wattage iron to solder new component in place. Clip off excess leads and clean solder joint.

SECTION 6

INTRODUCTION

1-1. GENERAL

1-2. This section lists and describes the parts for the AN/UIC-5 lntercommunication Set which uses the M-147/ UIC-5 Microphone Station, the AM-6101/UIC-5 Amplifier Audio Frequency, the J-3021/UIC-5 Junction Box Assembly, and the PP-6650/U Power Supply Assembly.

1-3. The illustrated Parts Breakdown is divided into four sections: Section I, Introduction; Section II, Group Assembly Parts list; Section III, Numerical Index; and Section IV, Reference Designation Index. An explanation of the content of each section is provided in the following paragraphs.

1-4. GROUP ASSEMBLY PARTS LIST.

GENERAL. The Group Assembly Parts List (GAPL) lists all major components, assemblies, subassemblies, and detail parts in the most logical disassembly sequence. An explanation of the column entries is given in paragraphs 1-6 through 1-10.

1-6. FIGURE AND INDEX NUMBER. Figure and index numbers for each illustration are listed in order of disassembly, except in those cases where sequence of disassembly cannot be maintained. Figure numbers are followed by a dash and appear at the beginning of each listing and at the first line entry on continuing pages. Index numbers correspond to index numbers on the applicable illustration.

1-7. REFERENCE DESIGNATION. This column contains the Reference Designations shown on schematics and wiring diagrams and those contained in the Text of Operating, Service, Maintenance or Overhaul Publications pertaining to the AN/UIC-5.

1-8. DESCRIPTION. The description column contains descriptive and source information for the Part numbers listed. Part number nomenclatures are indented, preceded by periods, to show their relationship to the next higher assembly. The number of periods corresponds to the indenture numbers appearing in the description block. For example, a part listed under indenture "3" is a component of the assembly listed immediately above under indenture "2." Federal manufacturer's codes appear in parentheses following the description. Refer to Cataloging Handbook H4-2 for a crass-reference between Federal manufacturer's codes and manufacturer's names and addresses. Source and/ or Specification Control Drawing numbers appear, when applicable, in the Description column. Reference to the next higher assembly or to a "breakdown" figure is indicated in the Description column.

1-9. PART NUMBER. This column contains the Military number or true manufacturer's identifying number for the ports identified in each illustration.

1-10. UNITS PER ASSEMBLY. This column contains the quantity for the next higher assembly.

1-11. NUMERICAL INDEX. This index is provided os on aid in locating part numbers in the GAPL, Section II. An explanation of the column entries is given in paragraphs 1-12 through 1-14.

1-12. PART NUMBER. This column lists, in alphanumeric order, all the part numbers contained in the GAPL.

1-13. FIGURE AND INDEX NUMBER. This column lists the figure and index numbers, as applicable, for the Part numbers appearing in the Part Number column.

1-14. REFERENCE DESIGNATION INDEX. This index is provided as on aid in locating a part when only the Reference Designation is known. The Reference Designation also appears in DESCRIPTION Column of the GAPL, Section II. An explanation of the Column entries is given in paragraphs 1-16 through 1-18.

1-15. REFERENCE DESIGNATION. This Column lists, alphanumeric within numeric, all electronic parts contained in the GAPL.

1-16. FIGURE AND INDEX NUMBER. This column lists the figure and index numbers, as applicable, for the reference designation appearing in the REFERENCE DESIGNATION Column.

1-17. PART NUMBER. This Column lists the part number that corresponds to the reference designation appearing in the REFERENCE DESIGNATION Column.

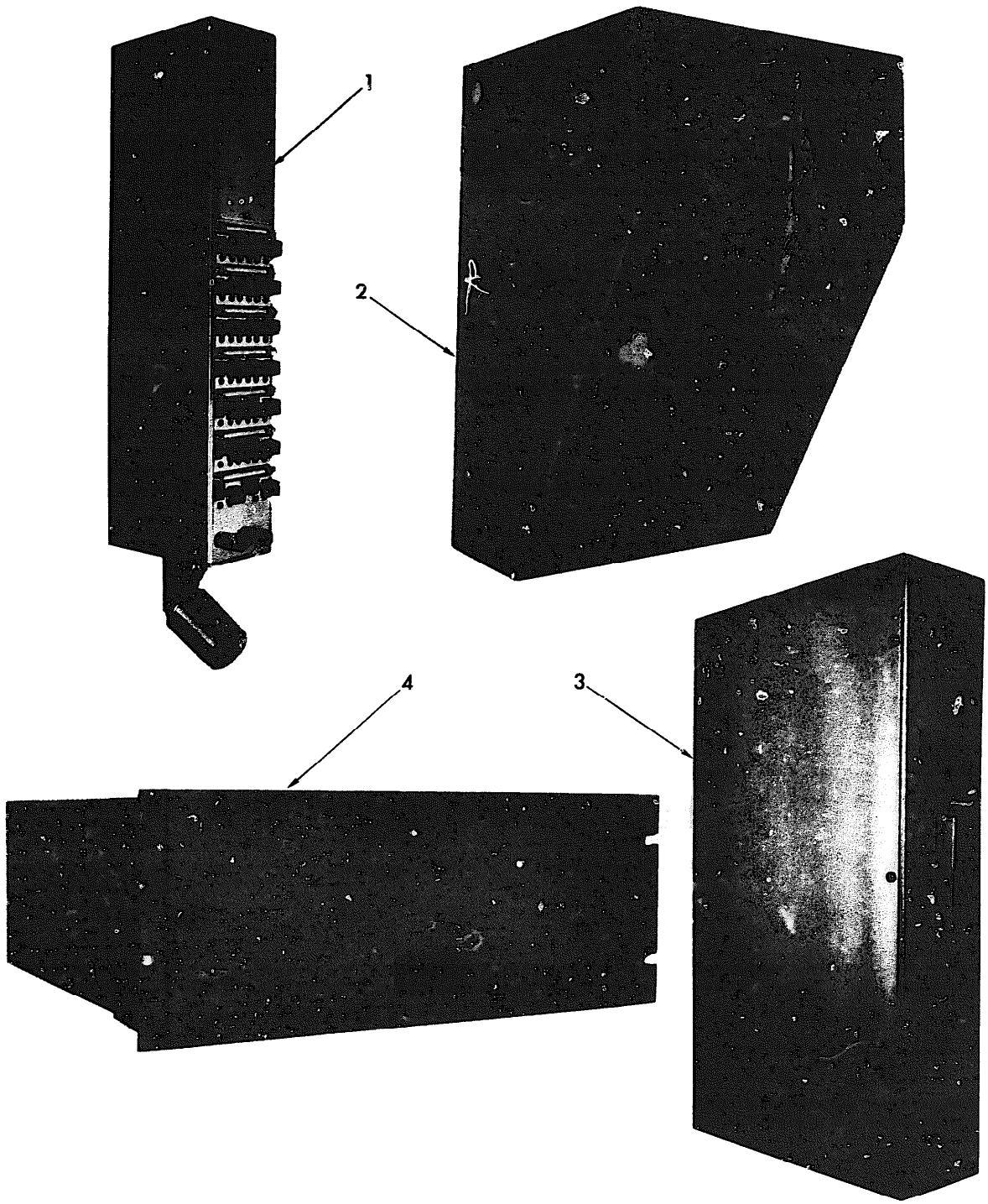


Figure 6-1. INTERCOMMUNICATION SET, AN/UIC-5

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-1-	1	INTERCOMMUNICATION SET, AN/UIC-5----------	ON125280	
-1	1A1	.MICROPHONE STATION,M-147/UIC-5 (See Figure 6-2 for Breakdown)----------	1675	1
-2	1A2	.AMPLIFIER, AUDIO FREQUENCY, AM-6101/UIC-5 (See Figure 6-5 for Breakdown)----------	ON125281	1
-3	1A3	.INTERCONNECTING BOX, J-3021/UIC-5 (See Figure 6-7 for Breakdown)----------	ON125246	1
-4	1A4	.POWER SUPPLY SUBASSEMBLY,PP-6650/U(See Figure 6-8 for Breakdown)----------	ON125425	1

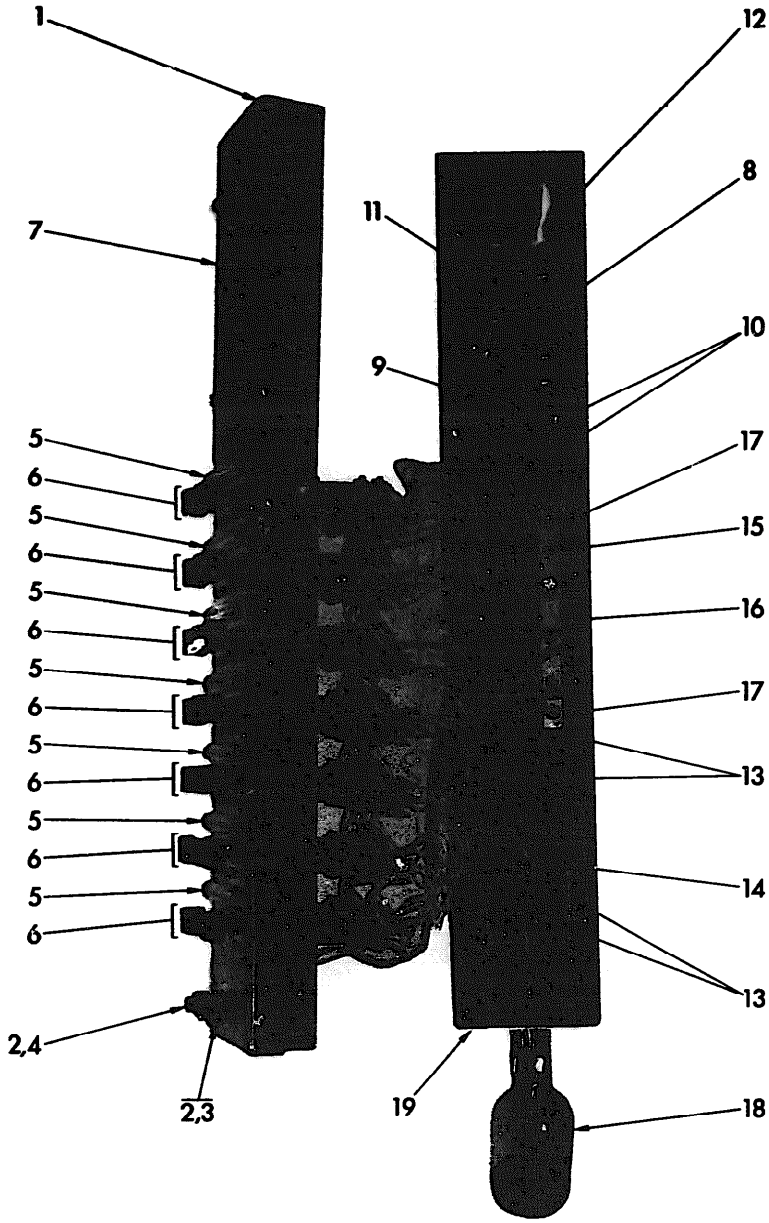


Figure 6-2. MICROPHONE STATION, M-147/UIC-5

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-2-	1A1	MICROPHONE STATION, M-147/UIC-5 (See Figure 6-1 for NHA)	1675	1
-1		FRONT PANEL	1682	1
		(Attaching Parts)		
		SCREW	MS51957-28	12
		WASHER, LOCK	MS35338-136	12
-2	1A1XDS1	LAMPHOLDER (72619) NSADWG ON175218	508-8738-504	1
	1A1XDS2	LAMPHOLDER (72619) NSADWG ON175218	508-8738-504	1
-3	1A1DS1	LAMP GREEN (72619) NSADWG ON17521702	507-3905-1472-600	1
-4	1A1DS2	LAMP; RED (72619) NSADWG ON175217-1	507-3905-1471-600	1
-5	1A1S1	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S2	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S3	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S4	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S5	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S6	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S7	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S8	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S9	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S10	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S11	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S12	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S13	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S14	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S15	SWITCH,. PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S16	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S17	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S18	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S19	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
	1A1S20	SWITCH, PUSH (04773) NSADWG ON125785	PK850Y	1
		(Attaching Parts)		
		SCREW (04773)	MP2807A	4
-6		STRIP, INDICATOR	1686	7
		(Attaching Parts)		
		SCREW	MS51959-17	14
-7		PLATE	1683	1
		(Attaching Parts)		
		SCREW	MS51957-28	6
		WASHER, LOCK	MS35338-136	6
-8	1A1A1	PREAMPLIFIER BOARD ASSEMBLY (See Figure 6-3 for Breakdown)	1638	1
-9	1A1A2	CONTROL CIRCUIT BOARD ASSEMBLY (See Figure 6-4 for Breakdown)	1661	1
-10	1A1XA1	CONNECTOR, RECEPTACLE, ELECTRICAL (95328) NSADWGON175202	600-62-4GD	1
	1A1XA2	CONNECTOR, RECEPTACLE, ELECTRICAL (95328) NSADWGON175202	600-62-4GD	1
		(Attaching Parts)		
		SCREW	MS51957-17	4
		WASHER, LOCK	MS35338-135	4
		SCREW	MS51959-28	4
		INSULATOR, STANDOFF, CONNECTOR	1685	4
-10A	1A1C1	CAPACITOR.(02288) NSADWG ON181409-1	39D507G050GL4	1
-11	1A1R2	RESISTOR	RCR07G104JM	1
-12	1A1R1	RESISTOR	RCR07G103JM	1
-13	1A1TS1	TERMINAL BOARD (75382) NSADWG ON175215	410C20	1
	1A1TS2	TERMINAL BOARD (75382) NSADWG ON175215	410C20	1
	1A1TS3	TERMINAL BOARD (75382) NSADWG ON175215	410C20	1
	1A1TS4	TERMINAL BOARD (75382)' NSADWG ON175215	410C20	1
		(Attaching Parts)		

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASS'Y
6-2-		.NUT	MS35649-224	16
		.WASHER, LOCK	MS35338-134	16
		.SCREW	MS51959-5	16
		---*---		
-14		.TERMINAL, LUG (59730) NSADWG ON175216	RZ22-4	80
		(Attaching Part)		
		.SCREW	MS51957-5	80
		---*---		
-15		.BOLT, MACHINE	8-32UNC2A38LG	4
-16		.BUSS BAR	ON125599	1
		(Attaching Part)		
		.SCREW	MS51957-13	2
		---*---		
-17		.BRACKET, BUS BAR	ON125598	2
		(Attaching Part)		
		.SCREW	MS51959-3	4
		---*---		
-17A	1A1P1	.CONNECTOR, ELECTRICAL (02660) ON181411	75MCIF	1
-18		.MICROPHONE, DIFFERENTIAL DYNAMIC 607	1678	1
		(Attaching Parts)		
		.SCREW	MS51958-61	1
		.WASHER, LOCK	MS35338-138	1
		---*---		
-18A	1A1CP1	.PLUG, MICROPHONE	ON125659	1
-19		.ENVELOPE, MICROPHONE STATION	1684	1
		.PLATE, IDENTIFICATION	ON125303	1
		(Attaching Parts)		
		.NUT	MS35649-224	2
		.SCREW	MS51957-2	2
		.WASHER, LOCK	MS35338-134	2
		---*---		

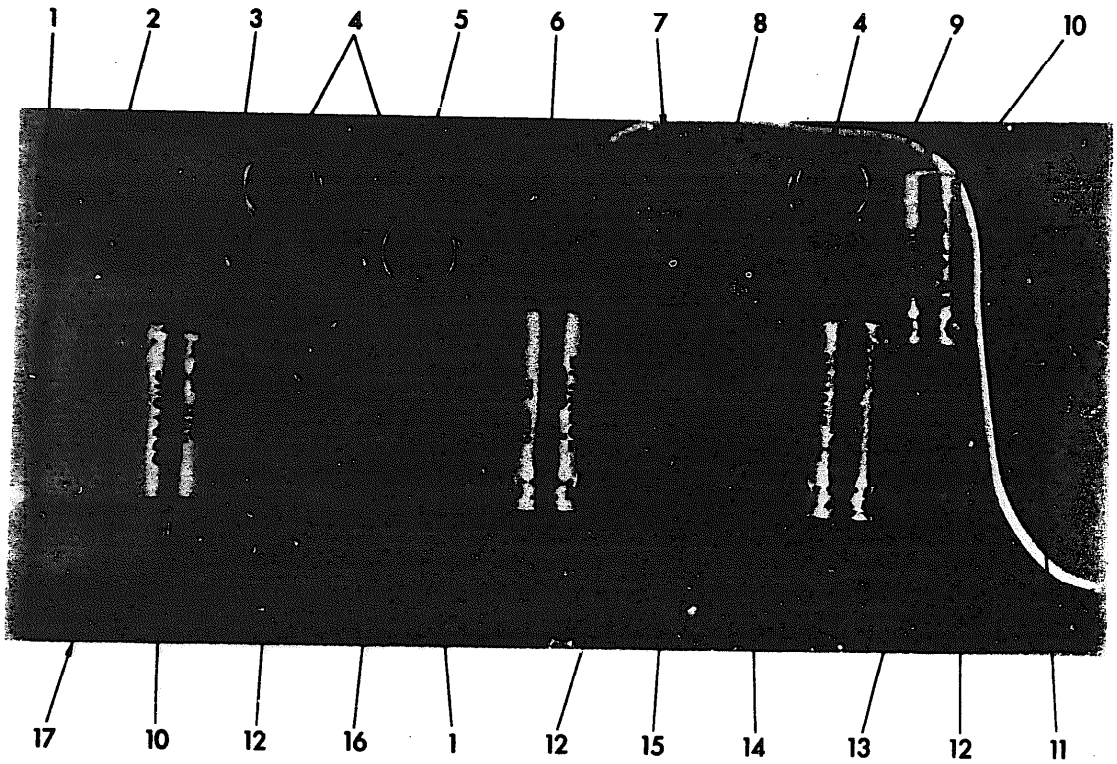


Figure 6-3. PREAMPLIFIER BOARD ASSEMBLY

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-3-	1A1A1	PREAMPLIFIER BOARD ASSEMBLY (See Figure 6-2 for Next Higher Assembly)	1638	1
-1	1A1A1R6	.RESISTOR	RCR07G272JM	1
	1A1A1R10	.RESISTOR	RCR07G272JM	1
-2	1A1A1CR1	.DIODE, ZENER	1N969B	1
-3	1A1A1R11	.RESISTOR	RCR07G222JM	1
-4	1A1A1Q1	.TRANSISTOR (04713) NSADWG ON175219	2N508	1
	1A1A1Q2	.TRANSISTOR (04713) NSADWG ON175219	2N508	1
	1A1A1Q3	.TRANSISTOR (04713) NSADWG ON175219	2N508	1
-5	1A1A1R8	.RESISTOR	RCR07G123JM	1
-6	1A1A1C4	.CAPACITOR, FIXED, ELECTROLYTIC (56289) NSADWG ON175214-3-	TE1102	1
-7	1A1A1R4	.RESISTOR	RCR07G203JM	1
-8	1A1A1C3	.CAPACITOR, FIXED, CERAMIC DIELECTRIC (56289) NSADWG ON175223	TG-P10	1
-9	1A1A1C2	.CAPACITOR, FIXED, ELECTROLYTIC (56289) ON175214-2	TE1064	1
-10	1A1A1C1	.CAPACITOR, FIXED, ELECTROLYTIC NSADWG (56289) ON175214-4-	TE1157	1
	1A1A1C5	.CAPACITOR, FIXED, ELECTROLYTIC NSADWG (56289) ON175214-4-	TE1157	1
-11	1A1A1R13	.RESISTOR	RCR07G512JM	1
-12	1A1A1R5	.RESISTOR	RCR07G104JM	1
	1A1A1R9	.RESISTOR	RCR07G331JM	1
	1A1A1R12	.RESISTORT	RCR07G104JM	1
-13	1A1A1R1	.RESISTOR	RCR07G152JM	1
-14	1A1A1R2	.RESISTOR	RCR07G470JM	1
-15	1A1A1R3	.RESISTOR	RCR07G334JM	1
-16	1A1A1R7	.RESISTOR	RCR07G820JM	1
-17	1A1A1E1	.PRINITED CIRCUIT BOARD	1598	1

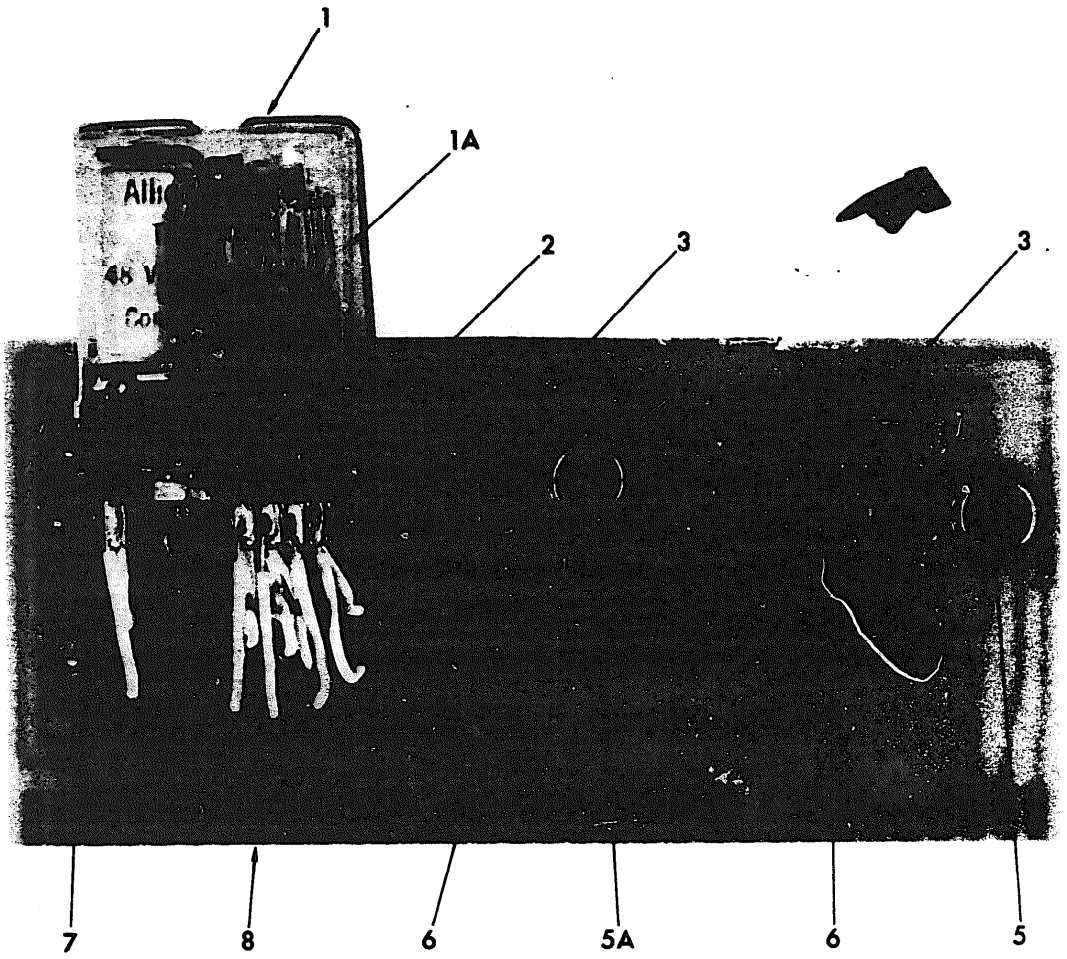


Figure 6-4. CONTROL CIRCUIT BOARD ASSEMBLY

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-4-	1A1A2	CONTROL CIRCUIT BOARD ASSEMBLY (See Figure 6-2 for Next Higher Assembly)	1661	1
-1	1A1A2MP1	.RETAINER, RELAY (02288)	0228-001-002	1
-1A	1A1A2K1	.RELAY, ARMATURE (02288) NSADWG ON175201-2	T154CCCC48VDC	1
-2	1A1A2XK1	.SOCKET, RELAY (02288) NSADWG ON175200-2	30055-2	1
		(Attaching Parts)		
		.NUT	MS35649-244	2
		.SCREW	MS51957-14	2
		.WASHER	MS35338-135	2
		.MOUNT, RELAY	1438	1
		---*---		
-3	1A1A2R2	.RESISTOR	RCR07G103JM	1
	1A1A2R5	.RESISTOR	RCR07G103JM	1
-5	1A1A2Q1	.TRANSISTOR (8134) NSADWG ON175232	2N398	1
-5A	1A1A2Q2	.TRANSISTOR (81349)	2N388	1
-6	1A1A2R3	.RESISTOR	RCR07G222JM	1
	1A1A2R4	.RESISTOR	RCR07G222JM	1
-7	1A1A2CR1	.DIODE (27832) NSADWG ON175211	HD2149-D07	1
-8	1A1A2E1	.PRINTED CIRCUIT BOARD	1599	1

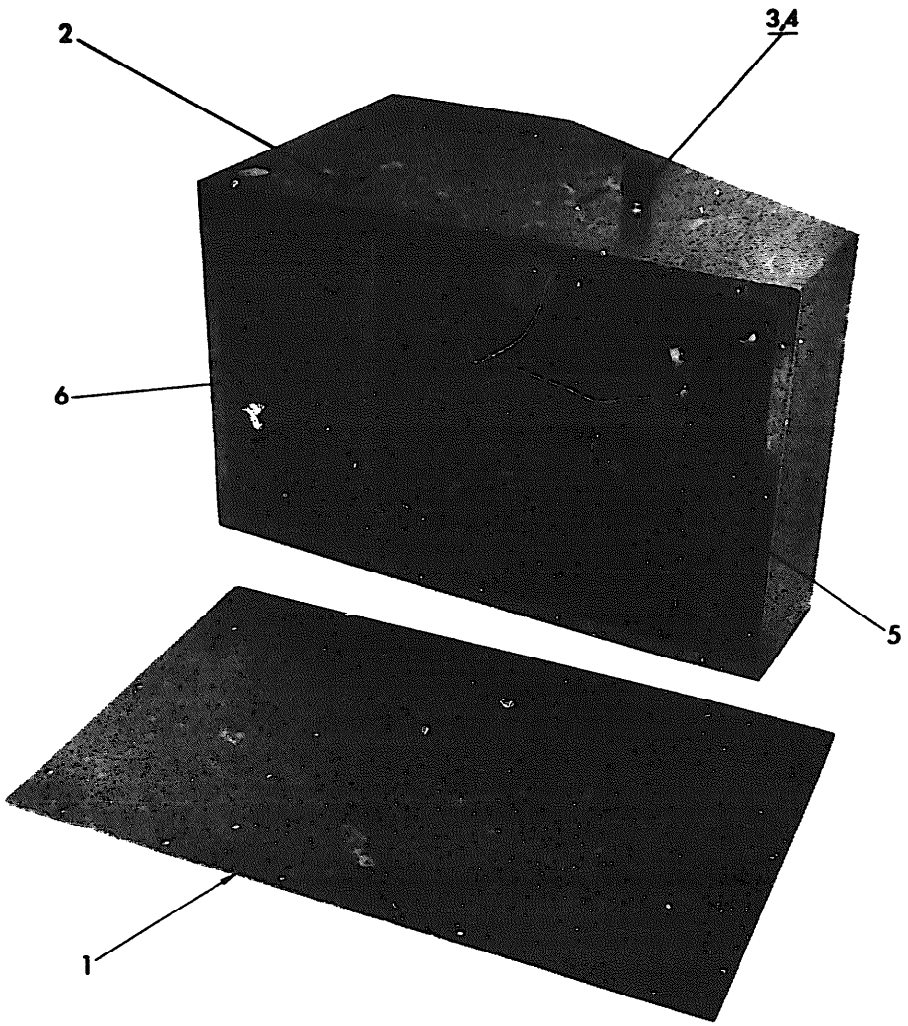


Figure 6-5. AMPLIFIER, AUDIO FREQUENCY, AM-6101/UIC-5 (Sheet 1)

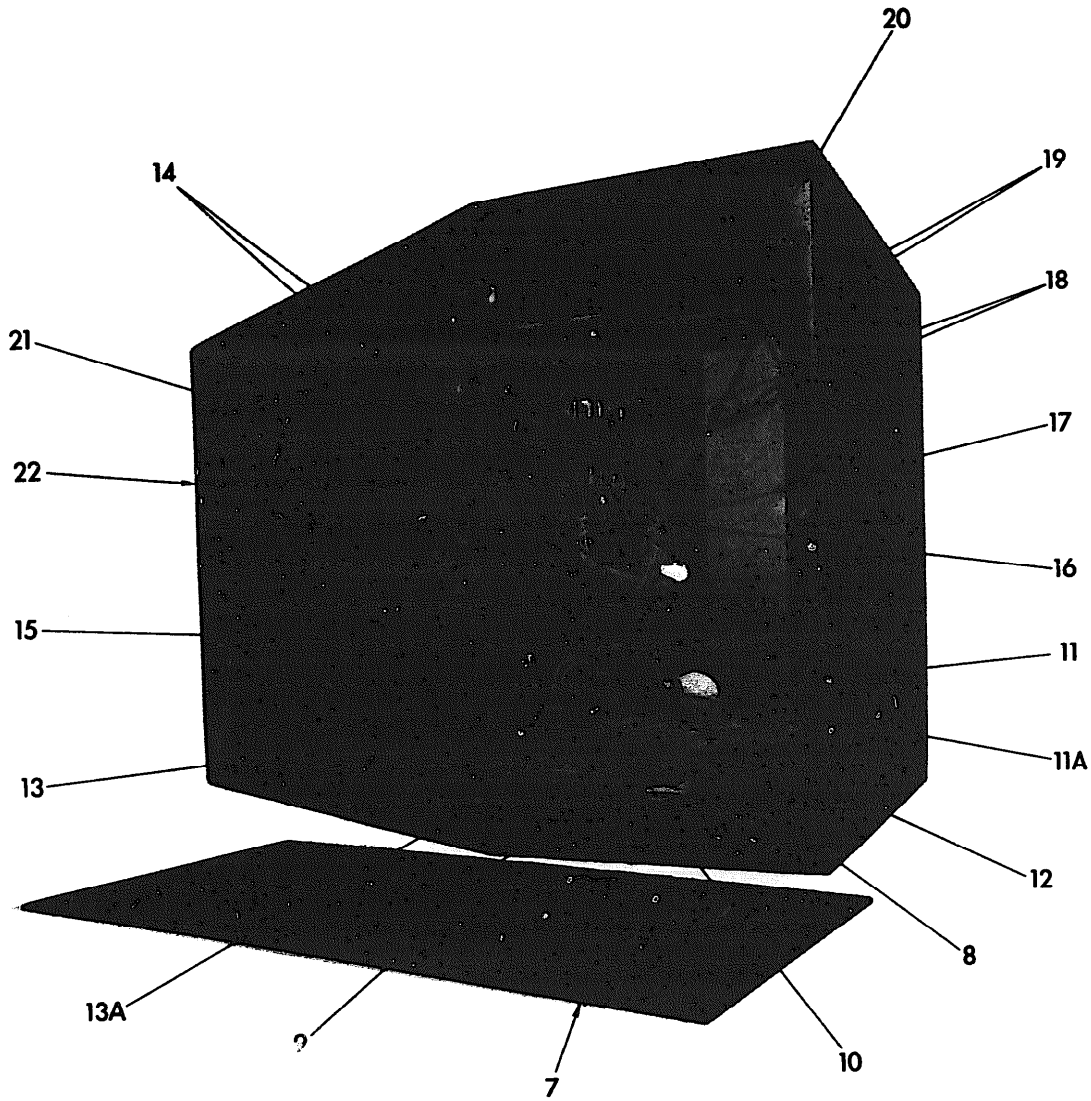


Figure 6-5. AMPLIFIER, AUDIO FREQUENCY, AM-6101/UIC-5 (Sheet 2)

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-5	1A2	AMPLIFIER, AUDIO FREQUENCY, AM-6101/UIC-5 (See Figure 6-1 for Next Higher Assembly)	ON125281	1
-1		.COVER, REAR	ON125278	1
		(Attaching Parts)		
		.SCREW	MS51957-43	19
		.WASHER, LOCK	MS35338-136	19
		---*---		
-2	1A2S1	.SWITCH, TOGGLE (91929) NSADWG ON 175203	6AT1	1
-3		.KNOB	MS91528-1D2B	1
-4	1A2R1	.RESISTOR, VARIABLE, MOLDED COMPOSITION (44655) NSADWG ON 175208 CU5021208	CU5021	1
-5	1A2LS1	.LOUDSPEAKER, PERMANENT MAGNET (07109) NSADWG ON 175209	QA45	1
		Attaching Parts)		
		.NUT	MS35650-304	4
		.SCREW	MS51958-63	4
		.WASHER, LOCK	MS35338-138	4
		---*---		
-6	1A2C1	.CAPACITOR, FIXED, CERAMIC DIELECTRIC (81349)	CK70AX470K	1
	1A2C2	.CAPACITOR, FIXED, CERAMIC DIELECTRIC (81349)	CK70AX470K	1
	1A2C3	.CAPACITOR, FIXED, CERAMIC DIELECTRIC (81349)	CK70AX470K	1
	1A2C4	.CAPACITOR, FIXED, CERAMIC DIELECTRIC (81349)	CK70AX470K	1
-7		.COVER, FRONT	ON125277	1
		Attaching Parts)		
		.SCREW	MS51957-43	10
		.WASHER, LOCK	MS35338-137	10
		---*---		
-8	1A2A1	.AMPLIFIER BOARD ASSEMBLY (See Figure 6-6 for Breakdown)	1660	1
-9	1A2XA1	.CONNECTOR, RECEPTACLE, ELECTRICAL (95238) NSADWG ON 175202	600-62-4GD	1
		(Attaching Parts)		
		.SCREW	MS51957-13	4
		.INCULATOR, STANDOFF	ON175195	2
		.WASHER, LOCK	MS35338-135	2
		---*---		
-10	1A2R2	.RESISTOR	RCR42G100JM	1
-11	1A2C6	.CAPACITOR (56289) NSADWG ON 181409-2	39D128G075JS4	1
-11A	1A2MP1	.RETAINER, RELAY (02288)	0228-001-001	1
-12	1A2K1	.RELAY, ARMATURE (02288) NSADWG ON 175201-1	T154CC	1
-13	1A2XK1	.SOCKET, RELAY (02288) NSADWG ON 175200-1	30055-1	1
		(Attaching Parts)		
		.SCREW	MS51957-13	2
		.INSULATOR, STANDOFF (83330) NSADWG ON 175195	8323	1
		.WASHER, LOCK	MS35338-135	1
		---*---		
-13A	1A2CR2	.DIODE (27832) NSADWG ON 175211	HD2149-D07	1
-14	1A2Q6	.TRANSISTOR (81349) NSADWG ON 175199	2N553	1
	1A2Q7	TRANSISTOR (81349) NSADWG ON 175199	2N553	1
		(Attaching Parts)		
		.NUT	MS35649-244	4
		.SCREW	MS51957-15	4
		.WASHER, LOCK	MS35338-135	4
		.MOUNTING KIT, RESISTOR (04713) NSADWG ON 175207	MK20	2
		---*---		
-15		.BRACKET, TRANSISTOR	ON125279	1
		(Attaching Parts)		
		.NUT	MS35649-244	4
		.SCREW	MS51957-15	4
		.WASHER	MS35338-135	4
		---*---		
-16	1A2TB1	.TERMINAL BOARD (81349) NSADWG ON 175204	37TB6	1
		(Attaching Parts)		
		.NUT	MS35649-244	4
		.SCREW	MS51957-17	4
		.WASHER	MS35338-135	4
		---*---		

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-5-17		.TERMINAL, LUG (59730) NSADWG ON 175194	RA1103	6
		(Attaching Parts)		
		.SCREW (Furnished With Item 16)	6-32X0.25BH	12
		---*---		
-18	1A2F1	FUSE, CARTRIDGE (71400) NSADWG ON 175198	F02A250V1-2A	1
	1A2F2	.FUSE CARTRIDGE (71400) NSADWG ON 175198	F02A250V1-2A	1
-19	1A2XF1	.FUSEHOLDER (71400) NSADWG ON 175197	4406	
	1A2XF2	.FUSEHOLDER (71400) NSADWG ON 175197	4406	1
		(Attaching Parts)		
		.NUT	MS35649-244	2
		.SCREW	MS51957-15	2
		.WASHER, LOCK	MS35338-135	2
		---*---		
-20	1A2C5	.CAPACITOR, ELECTROLYTIC (90201) NSADW ON 175206	CG152D150B1	1
		(Attaching Parts)		
		.NUT	MS35649-284	2
		.SCREW	MS51957-43	2
		.WASHER, LOCK	MS35338-137	2
		.RETAINER, CAPACITOR (56289) NSADWG ON 175205	4586-97A	1
		---*---		
-21		.PLATE, IDENTIFICATION	ON125302	1
		(Attaching Parts)		
		.NUT	MS35649-224	2
		.SCREW	MS51957-2	2
		.WAHER, LOCK	MS35338-134	2
		---*---		
-22		.ENVELOPE, AMPLIFIER & SPEAKER	ON125276	1

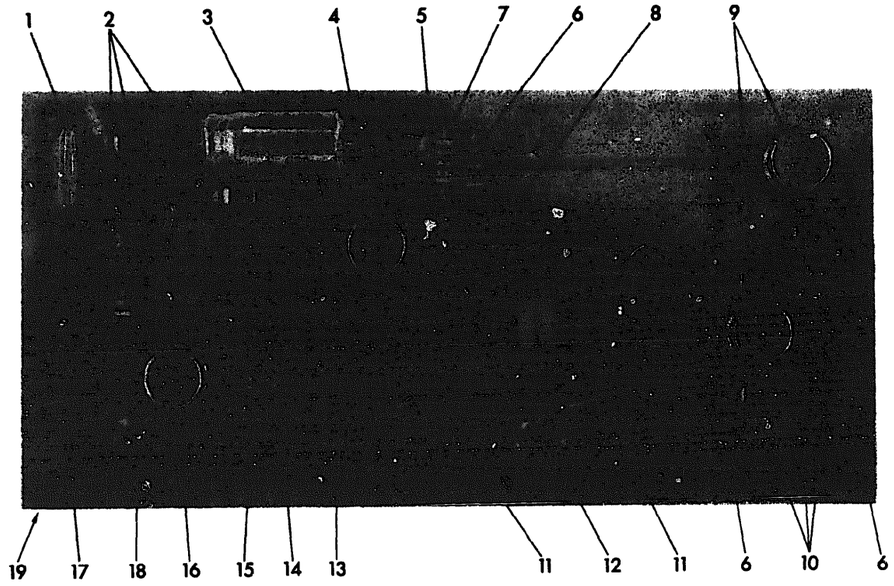


Figure 6-6. AMPLIFIER BOARD ASSEMBLY

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-6-	1A2A1	AMPLIFIER BOARD ASSEMBLY (See Figure 6-5 for Next Higher Assembly)	1660	1
-1	1A2A1C6	.CAPACITOR, FIXED, CERAMIC DIELECTRIC (56289) NSADWG ON 175224	5C023224X0500B3	1
-2	1A2A1R11	.RESISTOR	RCR07G391JM	1
	1A2A1R14	.RESISTOR	RCR07G391JM	1
	1A2A1R15	.RESISTOR	RCR07G391JM	1
-3	1A2A1C4	.CAPACITOR, FIXED, ELECTROLYTIC (56289) NSADWG ON 175214-1	TE1059-5	1
-4	1A2A1Q3	.TRANSISTOR (01295) NSADWG ON 175230	2N1925	1
-5	1A2A1C2	.CAPACITOR, FIXED, MYLAR DIELECTRIC (19396) NSADWG ON 175213	DM10F121G	1
-6	1A2A1R4	.RESISTOR	RCR07G103JM	1
	1A2A1R6	.RESISTOR	RCR07G103JM	1
1A	1A2A1R9	.RESISTOR	RCR07G103JM	1
-7	1A2A1R10	.RESISTOR	RCR07G333JM	1
-8	1A2A1R8	.RESISTOR	RCR07G134JM	1
-9	1A2A1Q1	.TRANSISTOR (04713) NSADWG ON 175232	2N398	1
	1A2A1Q2	.TRANSISTOR (047313) NSADWG ON 175232	2N398	1
-10	1A2A1R2	.RESISTOR	RCR07G222JM	1
	1A2A1R3	.RESISTOR	RCR07G222JM	1
	1A2A1R5	.RESISTOR	RCR07G222JM	1
-11	1A2A1C1	CAPACITOR, FIXED, ELECTROLYTIC (16508) NSADWG ON 175212-	PTT132	1
	1A2A1C3	CAPACITOR, FIXED, ELECTROLYTIC (16508) NSADWG ON 175212-	PTT132	1
-12	1A2A1R7	.RESISTOR	RCR07G272JM	1
-13	1A2A1CR1	.DIODE (80131) NSADWG ON 175233	1N4154	1
-14	1A2A1R12	.RESISTOR	RCR07G682JM	1
-15	1A2A1R13	.RESISTOR	RCR07G152JM	1
-16	1A2A1Q5	.TRANSISTOR (01295) NSADWG ON 175229	2N1924	1
-17	1A2A1R16	.RESISTOR	RCR07G220JM	1
-18	1A2A1Q4	.TRANSISTOR (93332) NSADWG ON 175231	2N697	1
-19	1A2A1E1	.PRINTED CIRCUIT BOARD	1600	1

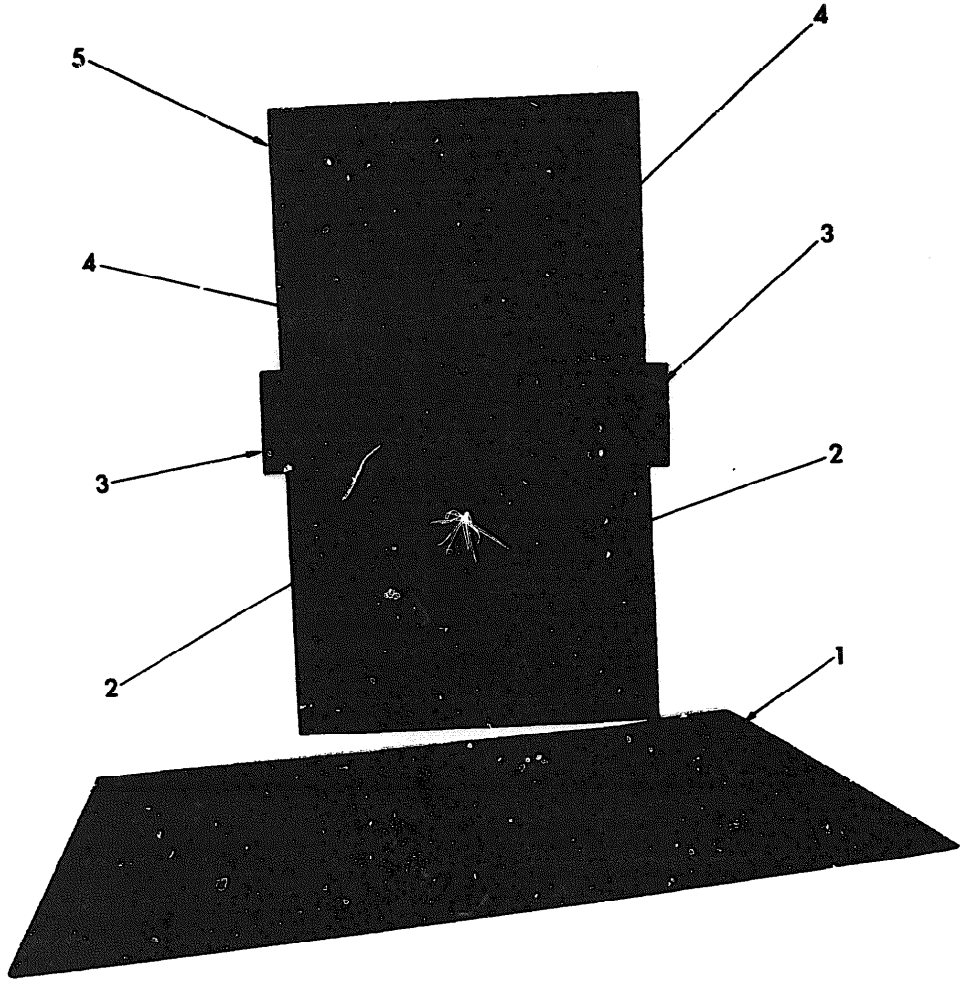


Figure 6-7. JUNCTION BOX, J3021/UIC-5

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-7-	1A3	INTERCONNECTING BOX, J-3021/UlC-5 (See Figure 6-1 for NHA)	ON125246	1
-1		. COVER, JUNCTION BOX	2162	1
		(Attaching Parts)		
		.SCREW	MS51957-43	10
		. WASHER, LOCK	MS35338-137	10
-2	1A3TB3	.TERMINAL BOARD (89020) NSADWG DN175191	125	1
	1A3TB4	.TERMINAL BOARD (89020) NSADWG ON175191	125	1
		(Attaching Parts)		
		. NUT	MS35649-244	4
		. SCREW	MS51957-15	4
		.WASHER, LOCK	MS35338-135	4
		. END, TERMINAL BLOCK (89020) NSADWG ON175191	130	4
-3		. BRACKET	ON125645	2
		(Attaching Parts)		
		. NUT	MS35649-284	4
		.SCREW	MS51957-43	4
		. WASHER, LOCK	MS35338-137	4
-4	1A1TB1	TERMINAL BOARD (88600) NSADWG ON175190	R66B1-25	1
	1A1TB2	: TERMINAL BOARD (88600) NSADWG ON175190	R66B1-25	1
		(Attaching Parts)		
		.NUT	MS35649-284	8
		. SCREW	MS51957-55	8
		.WASHER	MS35338-137	8
		. BASE, TERMINAL BOARD	ON125284	2
-5		JUNCTION BOX	2163	1
		. PLATE, IDENTIFICATION	ON125671	1
		(Attaching Parts)		
		NUT	MS35649-224	2
		. SCREW	MS51957-2	2
		. WASHER, LOCK	MS35338-134	2

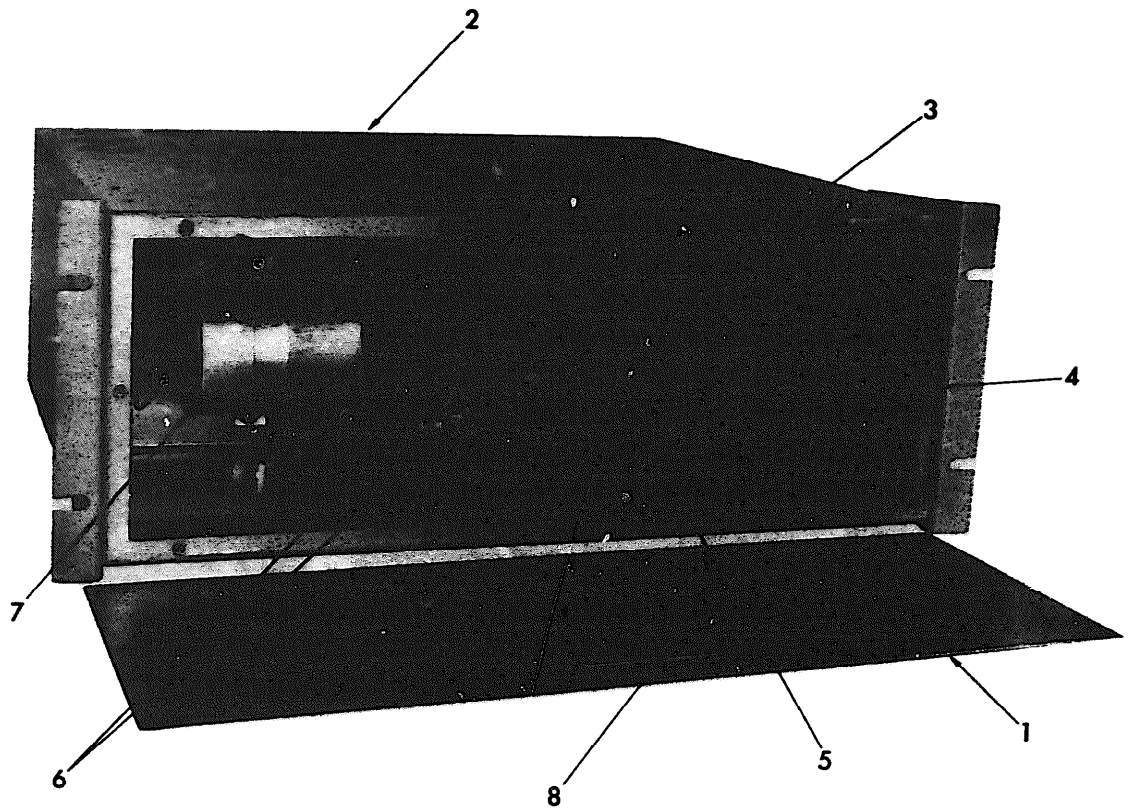


Figure 6-8. POWER SUPPLY ASSEMBLY, PP-6650/U (Sheet 1)

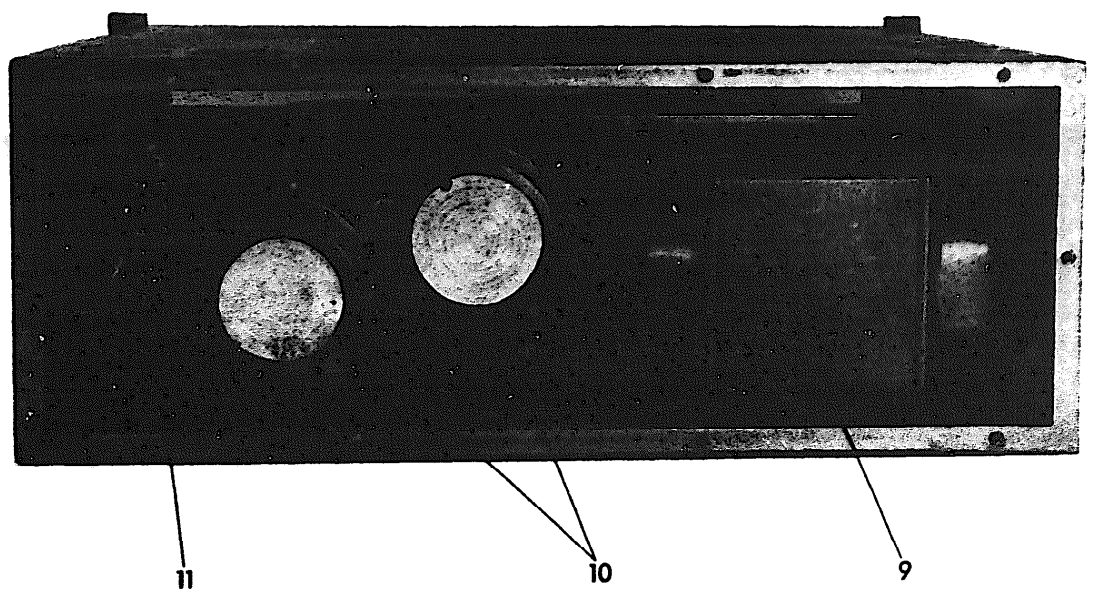


Figure 6-8. POWER SUPPLY ASSEMBLY, PP-665O/U (Sheet 2)

FIGURE & INDEX NO.	REFERENCE DESIGNATION	1 2 3 4 5 6 7 8 DESCRIPTION	PART NUMBER	UNITS PER ASSY
6-8-	1A4	POWER SUPPLY ASSEMBLY, PP-6650/U (See Figure 6-1 for Next High Assembly)	ON125425	1
-1		.COVER, FRONT	ON125427	1
		(Attaching Parts)		
		.THUMBSCREW (71279) NSADWG ON 175221	1120B	10
		---*---		
-2		.COVER, REAR	ON125440	1
		(Attaching Parts)		
		.SCREW	MS51957-43	10
		WASHER, LOCK	MS35338-137	10
		---*---		
-3	1A4A1	.POWER SUPPLY (55814) NSADWG ON 175220	28-1561-1	1
		(Attaching Parts)		
		.NUT	MS35650-304	4
		.SCREW	MS51958-64	4
		.WASHER, LOCK	MS35338-138	4
		---*---		
-4		.SHIM	ON181414	1
-5	1A4A1R1	. .RESISTOR (37942)	2HJ500	1
-6	1A4A1CR1	. .DIODE	1N3210	1
	1A4A1CR2	. .DIODE	1N3210	1
-7	1A4A1C1	. .CAPACITOR (55814)	211-02-14217	1
		(Attaching Parts)		
		. .NUT	MS35649-284	2
		. .SCREW	MS51957-55	2
		. .BRACKET CONDENSER (55814)	9914-30	1
		---*---		
-8		.PLATE, IDENTIFICATION	ON125672	1
		(Attaching Parts)		
		.NUT	MS35649-224	2
		.SCREW	MS51957-2	2
		.WASHER, LOCK	MS35338-134	2
		---*---		
-9	1A4A1T1	. .TRANSFORMER (55814)	9-1628	1
		(Attaching Parts)		
		. .NUT	MS35649-284	2
		. .SCREW	MS-51957-55	2
		. .WASHER	MS-35338-137	2
		---*---		
-10	1A4A1C2	. .CAPACITOR (55814)	215-02-24864-5	1
	1A4A1C3	. .CAPACITOR (55814)	215-02-24864-5	1
		(Attaching Parts)		
		. .NUT	MS35649-284	4
		.SCREW	MS-51957-55	4
		. .BRACKET, CAPACITOR MOUNTING (55814)	24839-3	2
		---*---		
-11	1A4A1TB1	. .TERMINAL BOARD (75382)	601-YA	1
		(Attaching Parts)		
		. .NUT	MS35649-244	4
		. .SCREW	MS51957-17	4
		. .WASHER	MS35338-135	4
		. .INSULATOR (55814	9977	1

Part Number	FIGURE & INDEX NO.	QTY. PER ART	SOURCE CODE	REPAIR CODE	KIT
CG152D15G81	6-5-20	1			
CK70AX470K	6-5-6	4			
CU5021	6-5-4	1			
DM1F121G	6-6-5	1			
FO2A250V1/2A	6-5-18	2			
HD2149-D07	6-4-7	2			
	6-5-13A	1			
MK20	6-5-	2			
MP2807A	6-2-	80			
MS35338-134	6-2-	24			
	6-5-				
	6-7-				
	6-8-				
MS35338-135	6-4-	31			
	6-2-				
	6-5-				
	6-7-				
	6-8-				
MS35338-136	6-2-	37			
	6-5-				
MS35338-137	6-2-	47			
	6-5-				
	6-7-				
	6-8-				
MS35338-138	6-5-	8			
	6-8-				
MS35649-224	6-2-	6			
	6-5				
	6-7				
	6-8				
MS35649-244	6-2-	24			
	6-4-				
	6-5-				
	6-8-				
MS35650-304	6-5-	8			
	6-8-				
MS51957-13	6-2-	8			
	6-5-				
MS51957-14	6-4-	2			
MS51957-15	6-5-	14			
	6-7-				
MS51957-17	6-2-	12			
	6-5-				
	6-8-				
MS51957-2	6-2	8			
	6-5				
	6-7				
	6-8				
MS51957-28	6-2-	18			
MS51957-43	6-5-	55			
	6-7-				
	6-8-				

PART NUMBER	FIGURE & INDEX NO.	QTY. PER ART	SOURCE CODE	REPAIR CODE	KIT
MS51957-5	6-2-	80			
MS1957-55	6-7-	16			
	6-8-				
MSS1958-61	6-2-	1			
MS1958-63	6-5-	4			
MS51958-64	6-8-	4			
MS51959-17	6-2-	14			
MS1959-28	6-2-	4			
MS51959-3	6-2-	4			
MS51959-5	6-2-	16			
MS91528-1D2B	6-5-3	1			
PK850Y	6-2-5	20			
PTT132	6-6-11	2			
QA45	6-5-5	1			
RA1103	6-5-17	6			
RCR07G103JM	6-2-12	6			
RCR07G103JM	6-4-3				
	6-6-6				
RCR07G104JM	6-2-11	3			
	6-3-12				
RCR07G123JM	6-3-5	1			
RCR07G134JM	6-6-8	1			
RCR07G152JM	6-3-13	2			
	6-6-15				
RCR07G203JM	6-3-7	1			
RCR07G220JM	6-5-17	1			
RCR07G222JM	6-3-3	6			
	6-4-6				
	6-6-10				
RCR07G272JM	6-3-1	3			
	6-6-12				
RCR07G333JM	6-5-7	1			
RCR07G334JM	6-3-15	1			
RCR07G391JM	6-6-2	3			
RCR07G470JM	6-3-14	1			
RCR07G512JM	6-3-11	1			
RCR07G682JM	6-6-14	1			
RCR07G82OJM	6-3-16	1			
RCR42G100JM	6-5-10	1			
RZ22-4	6-2-14	80			
T154CC	6-5-12	1			
T154CCCC48VDC	6-4-1A	1			
TE1059-5	6-6-3	1			
TE1064	6-3-9	1			
TE11O2	6-3-6	1			
TE1157	6-3-10	2			
TG-P10	6-3-8	1			
ON125246	6-1-3	1			
	6-7-				
ON125276S	6-5-22	1			
ON125277	6-5-7	1			
ON125278	6-5-1	1			
ON125279	6-5-15	1			
ON125280	6-1	1			
ON125281	6-1-2	1			

PART NUMBER	FIGURE & INDEX NO.	QTY. PER ART	SOURCE CODE	REPAIR CODE	KIT
ON125281					
ON125284	6-7-	2			
ON125302	6-5-21	1			
ON125303	6-2-	1			
ON125425	6-1-4	1			
	6-8-				
ON125427	6-8-1	1			
ON125440	6-8-2	1			
ON125598	6-2-17	2			
ON125599	6-2-16	1			
ON125645	6-7-3	2			
ON125671	6-7-	1			
ON125672	6-8-8	1			
ON175200-2	6-4-2	1			
ON175221					
ON131414	6-8-4	1			
0228-001-001	6-5-11A	1			
0228-001-02	6-4-1	1			
1N3210	6-8-6	2			
1N4154	6-6-13	1			
1N969B	6-3-2	1			
11208	6-8-	10			
125	6-7-2	2			
1438	6-4-	1			
1598	6-3-17	1			
1599	6-4-8	1			
1600	6-6-19	1			
1638	6-2-8	1			
1660	6-3- 6-5-8	1			
1661	6-6- 6-2-9	1			
1675	6-4- 6-1-1	1			
1678	6-2- 6-2-18	1			
1682	6-2-1	1			
1683	6-2-7	1			
1684	6-2-19	1			
1685	6-2[illegible]	4			
1686	6-2-6	7			
2HJ500	6-8-5	1			
2N398	6-4-5	3			
2N508	6-6-9 6-3-4	3			
2N553	6-5-14	2			
2N697	6-6-18	1			
2N1924	6-6-16	1			
2N1925	6-6-4	1			
211-02-14217	6-8-7	1			
215-02-24864-5	6-8-10	2			
2T62	6-7-1	1			
2163	6-7-5	1			
24839-3	6-8-	2			
28-1561-1	6-8-	1			
39D507G50GL4	6-2-10A	1			
30055-2	6-4-2	1			
410C20	6-2-13	4			
4406	6-5-19	2			
4586-97A	6-5-	1			
507-3905-1471-600	6-2-4	1			
507-3905-1472-600	6-2-3	1			
508-8738-504	6-2-2	2			
5C026224X0500B3	6-6-1	1			
6AT1	6-5-2	1			
600-62-4GD	6-2-10	3			
	6-5-9				
601-YA	6-8-	1			
6-32X0-25BH	6-5-	12			
8-32UNC2A38LG	6-2-15	4			
8323	6-5-	1			
9-1628	6-8-9	1			
9914-30	6-8-	1			
9977	6-8-	1			

REFERENCE DESIGNATION	FIGURE & INDEX NO.	PART NUMBER
1	6-1	ON125280
1A1	6-1-1	1675
	6-2	
1A1A1	6-2-8	1638
	6-3	
1A1A1CR1	6-3-2	1N969B
1A1A1C1	6-3-10	ON175214-4
1A1A1C2	6-3-9	ON175214-2
1A1A1C3	6-3-8	ON175223
1A1A1C4	6-3-6	ON175214-3
1A1A1C5	6-3-10	ON175214-4
1A1A1E1	6-3-17	1598
1A1A1Q1	6-3-4	ON175219
1A1A1Q2	6-3-4	ON175219
1A1A1Q3	6-3-4	ON175219
1A1A1R1	6-3-13	RCR07G152JM
1A1A1R2	6-3-14	RCR07G470LM
1A1A1R3	6-3-15	RCR07G334JM
1A1A1R4	6-3-7	RCR07G203JM
1A1A1R5	6-3-12	RCR07G104JM
1A1A1R6	6-3-1	RCR07G272JM
1A1A1R7	6-3-16	RCR07G820JM
1A1A1R8	6-3-5	RCR07G123JM
1A1A1R9	6-3-12	RCR07G331JM
1A1A1R10	6-3-1	RCR07G272JM
1A1A1R11	6-3-3	RCR07G222JM
1A1A1R12	6-3-12	RCR07G104JM
1A1A1R13	6-3-11	RCR07G512JM
1A1A2	6-2-9	1661
	6-4	
1A1A2CR1	6-4-7	ON175211
1A1A2E1	6-4-8	1599
1A1A2K1	6-4-1A	ON175201-2
1A1A2MP1	6-4-1	0228-001-002
1A1A2Q1	6-4-5	ON175232
1A1A2Q2	6-4-5A	2N388
1A1A2R2	6-4-3	RCR07G103JM
1A1A2R3	6-4-6	RCR07G222JM
1A1A2R4	6-4-6	RCR07G222JM
1A1A2R5	6-4-3	RCR07G103JM
1A1A2XK1	6-4-2	ON175200-2
1A1CP1	6-2-18A	ON125659
1A1C1	6-2-10A	ON181409-1
1A1DS1	6-2-3	ON175217-2
1A1DS2	6-2-4	ON175217-1
1A1P1	6-2-17A	ON181411
1A1R1	6-2-12	RCR07G103JM
1A1R2	6-2-11	RCR07G104JM
1A1S1	6-2-5	ON125785
1A1S2	6-2-5	ON125785
1A1S3	6-2-5	ON125785
1A1S4	6-2-5	ON125785
1A1S5	6-2-5	ON125785
1A1S6	6-2-5	ON125785
1A1S7	6-2-5	ON125785
1A1S8	6-2-5	ON125785
1A1S9	6-2-5	ON125785
1A1S10	6-2-5	ON125785
1A1S11	6-2-5	ON125785
1A1S12	6-2-5	ON125785
1A1S13	6-2-5	ON125785

REFERENCE DESIGNATION	FIGURE & INDEX NO.	PART NUMBER
1A1S14	6-2-5	ON125785
1A1S15	6-2-5	ON125785
1A1S16	6-2-5	ON125785
1A1S17	6-2-5	ON125785
1A1S18	6-2-5	ON125785
1A1S19	6-2-5	ON125785
1A1S20	6-2-5	ON125785
1A1TS1	6-2-13	ON175215
1A1TS2	6-2-13	ON175215
1A1TS3	6-2-13	ON175215
1A1TS4	6-2-13	ON175215
1A1XDS1	6-2-2	ON175218
1A1XDS2	6-2-2	ON 175218
1A2	6-1-2	ON125281
	6-5	
1A2A1	6-5-8	1660
	6-6	
1A2A1CR1	6-6-13	ON175233
1A2A1C1	6-6-11	ON175212
1A2A1C2	6-6-5	ON175213
1A2A1C3	6-6-11	ON175212
1A2A1C4	6-6-3	ON175214-1
1A2A1C6	6-6-1	ON175224
1A2A1E1	6-6-19	1600
1A2A1Q1	6-6-9	ON 175232
1A2A1Q2	6-6-9	ON175232
1A2A1Q3	6-6-4	ON 175230
1A2A1Q4	6-6-18	ON175231
1A2A1Q5	6-6-16	ON175229
1A2A1R2	6-6-10	RCR07G222JM
1A2A1R3	6-6-10	RCR07G222JM
1A2A1R4	6-6-6	RCR07G103JM
1A2A1R5	6-6-10	RCR07G222JM
1A2A1R6	6-6-6	RCR07G103JM
1A2A1R7	6-6-12	RCR07G272JM
1A2A1R8	6-6-8	RCR07G134JM
1A2A1R9	6-6-6	RCR07G103JM
1A2A1R10	6-6-7	RCR07G333JM
1A2A1R11	6-6-2	RCRO7G391JM
1A2A1R12	6-6-14	RCR07G682JM
1A2A1R13	6-6-15	RCR07G152JM
1A2A1R14	6-6-2	RCR07G391JM
1A2A1R15	6-6-2	RCR07G391JM
1A2A1R16	6-6-17	RCR07G220JM
1A2CR2	6-5-13A	ON175211
1A2C1	6-5-6	CK70AX470K
1A2C2	6-5-6	CK70AX470K
1A2C3	6-5-6	CK70AX470K
1A2C4	6-5-6	CK70AX47OK
1A2C5	6-5-20	ON175206
1A2C6	6-5-11	ON181409-2
1A2F1	6-5-18	ON175198
1A2F2	6-5-18	ON175198
1A2K1	6-5-12	ON175201-1
1A2LS1	6-5-5	ON175209
1A2MP1	6-5-11A	0228-001-001
1A2Q6	6-5-14	ON175199
1A2Q7	6-5-14	ON175199
1A2R1	6-5-4	ON175208
1A2R2	6-5-10	RCR42G100JM
1A2S1	6-5-2	ON 175203
1A2TB1	6-5-16	ON175204

REFERENCE DESIGNATION	FIGURE & INDEX NO.	PART NUMBER
1A2XA1	6-5-9	ON175202
1A2XF1	6-5-19	ON175197
1A2XF2	6-5-19	ON175197
1A2XK1	6-5-13	ON175200-1
1A3	6-1-3	ON125246
	6-7	
1A3TB1	6-7-4	ON175190
1A3TB2	6-7-4	ON175190
1A3TB3	6-7-2	ON175191
1A3TB4	6-7-2	ON175191
1A4	6-1-4	ON125425
	6-8	
1A4A1	6-8-3	ON175220
1A4A1CR1	6-8-6	1N3210
1A4A1CR2	6-8-6	IN3210
1A4A1C1	6-8-7	211-02-14217
1A4A1C2	6-8-10	215-02-24864-5
1A4A1C3	6-8-10	215-02-24864-5
1A4A1R1	6-8-5	2HJ500
1A4A1TB1	6-8-11	601-YA
1A4A1T1	6-8-9	9-1628

REFERENCE DESIGNATION	FIGURE & INDEX NO.	PART NUMBER

☆ U. S. Government Printing Office: 1979 - 671-064/1784

CHAPTER 7

DIAGRAMS

71. GENERAL. - This chapter contains the following illustrations for the AN/UIC-5. Illustrations include schematic, wiring and connection diagrams and are listed below by figure number and title.

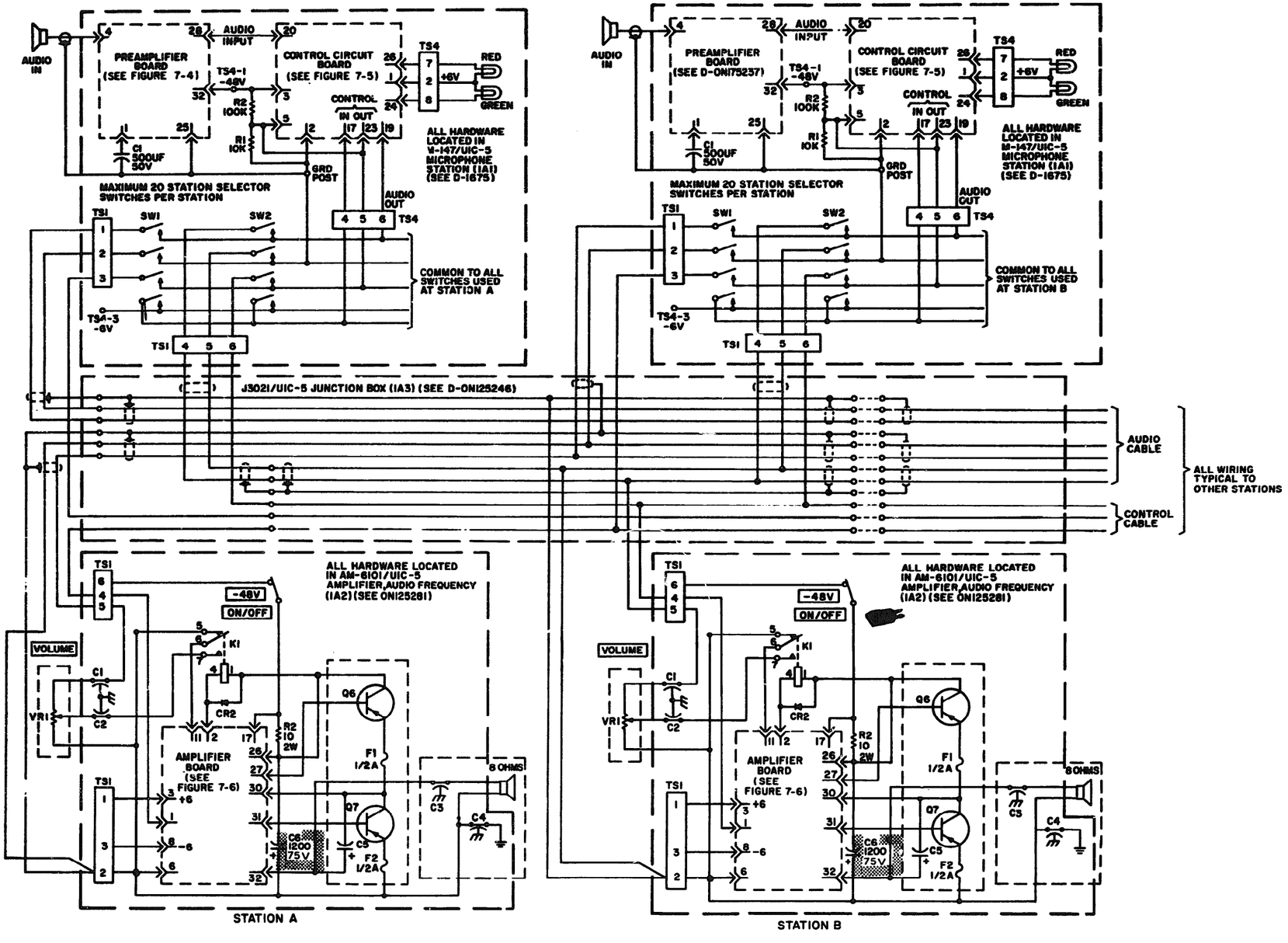


Figure 7-l. AN/UIC-5 Station Interconnection Diagram
(Sheet 1)

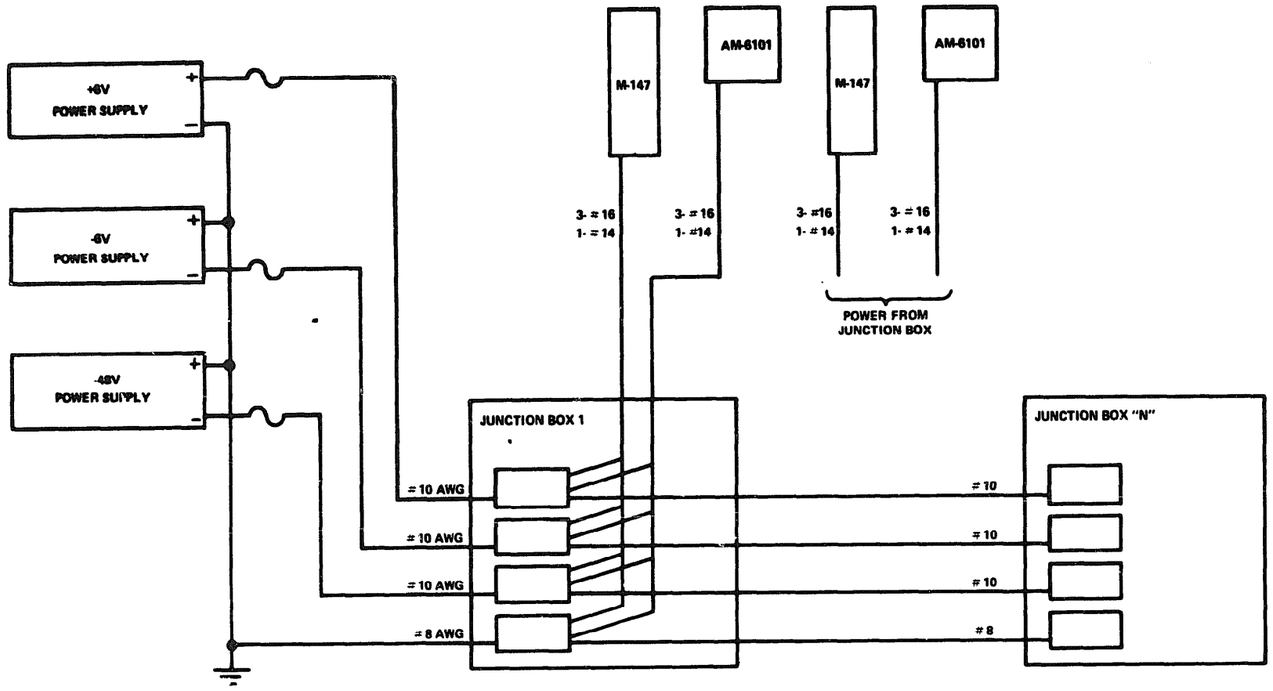


Figure 7-1. AN/UIC-5 Station Interconnection Diagram

(sheet 2)

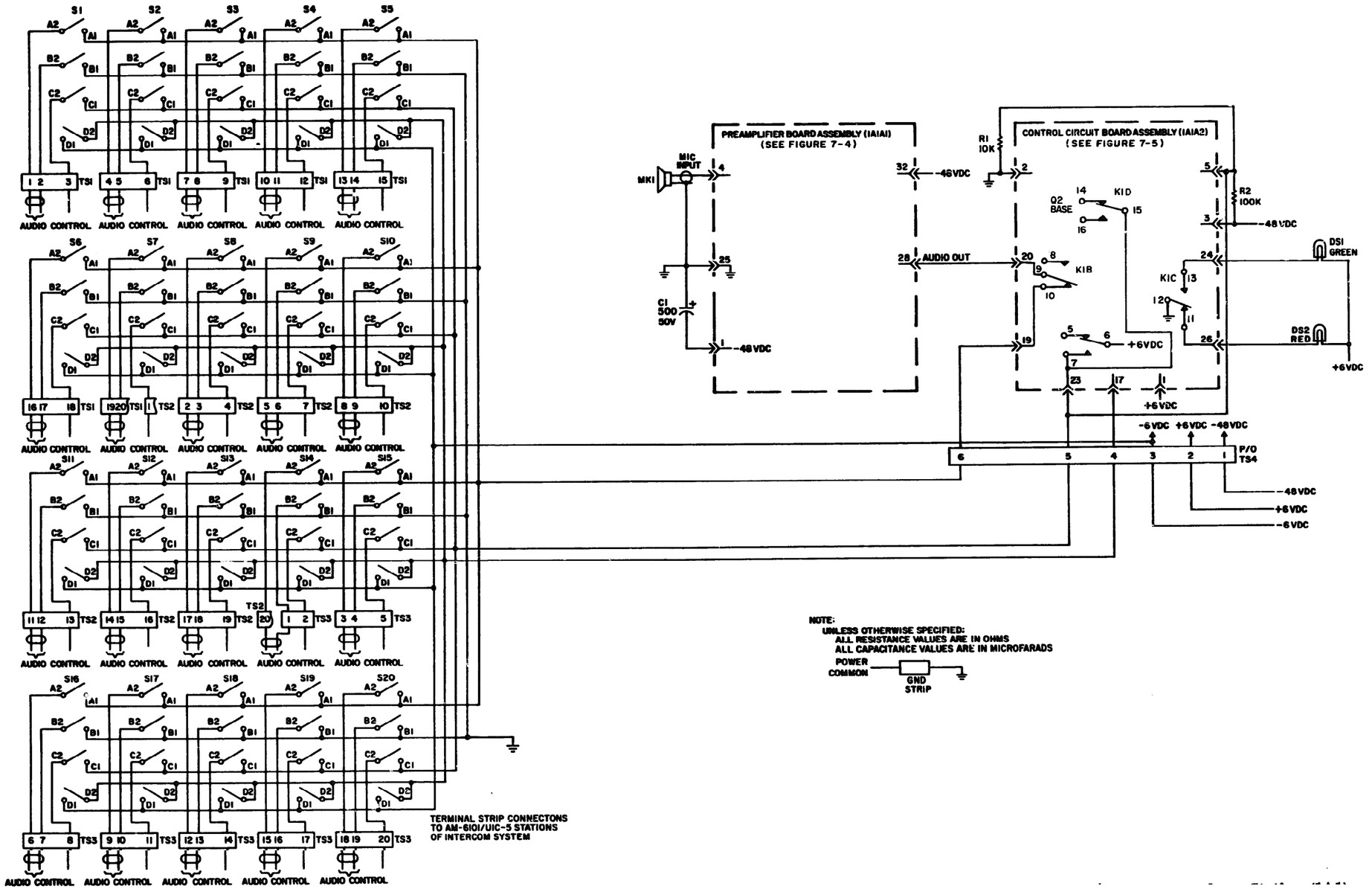
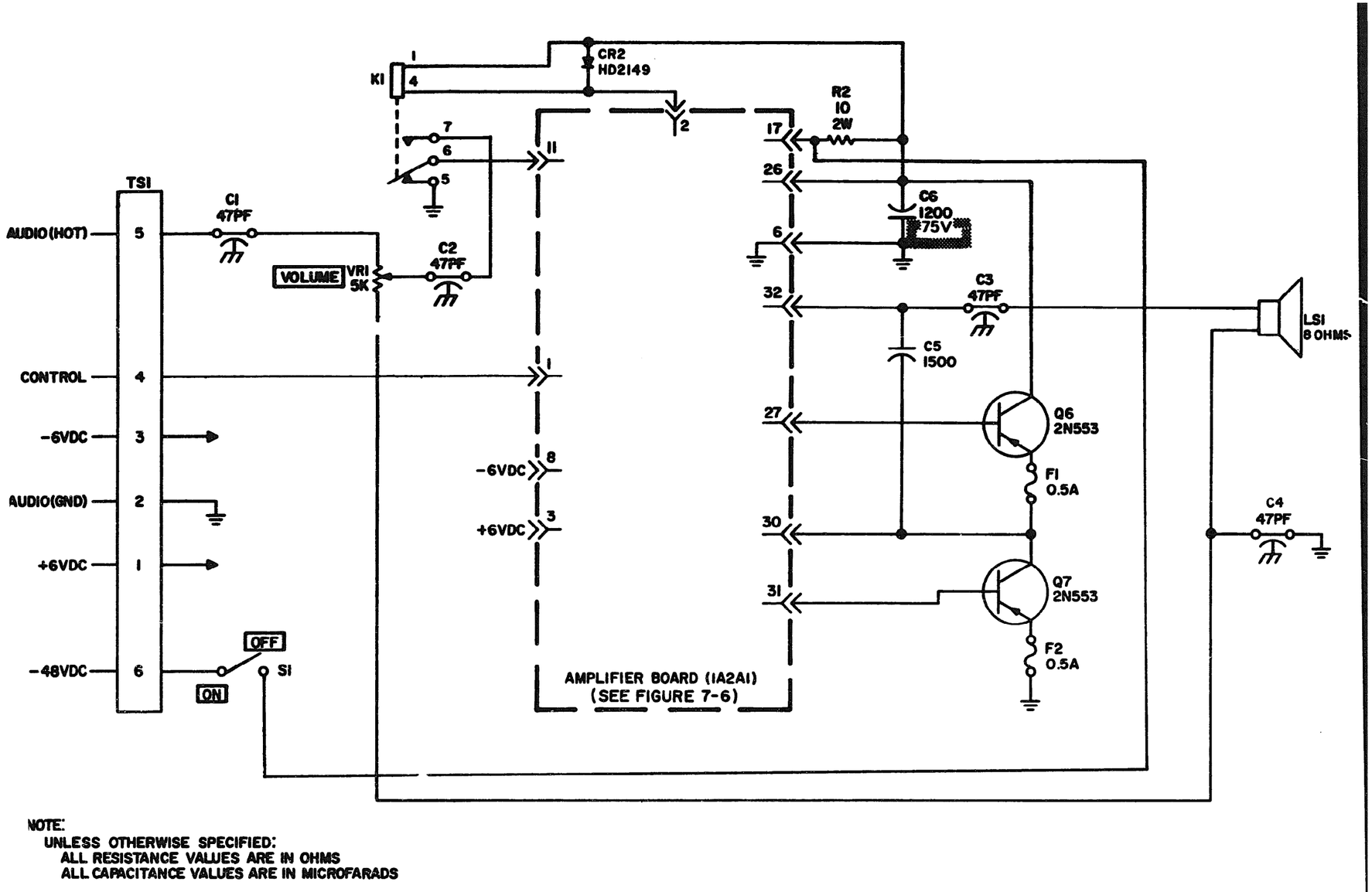
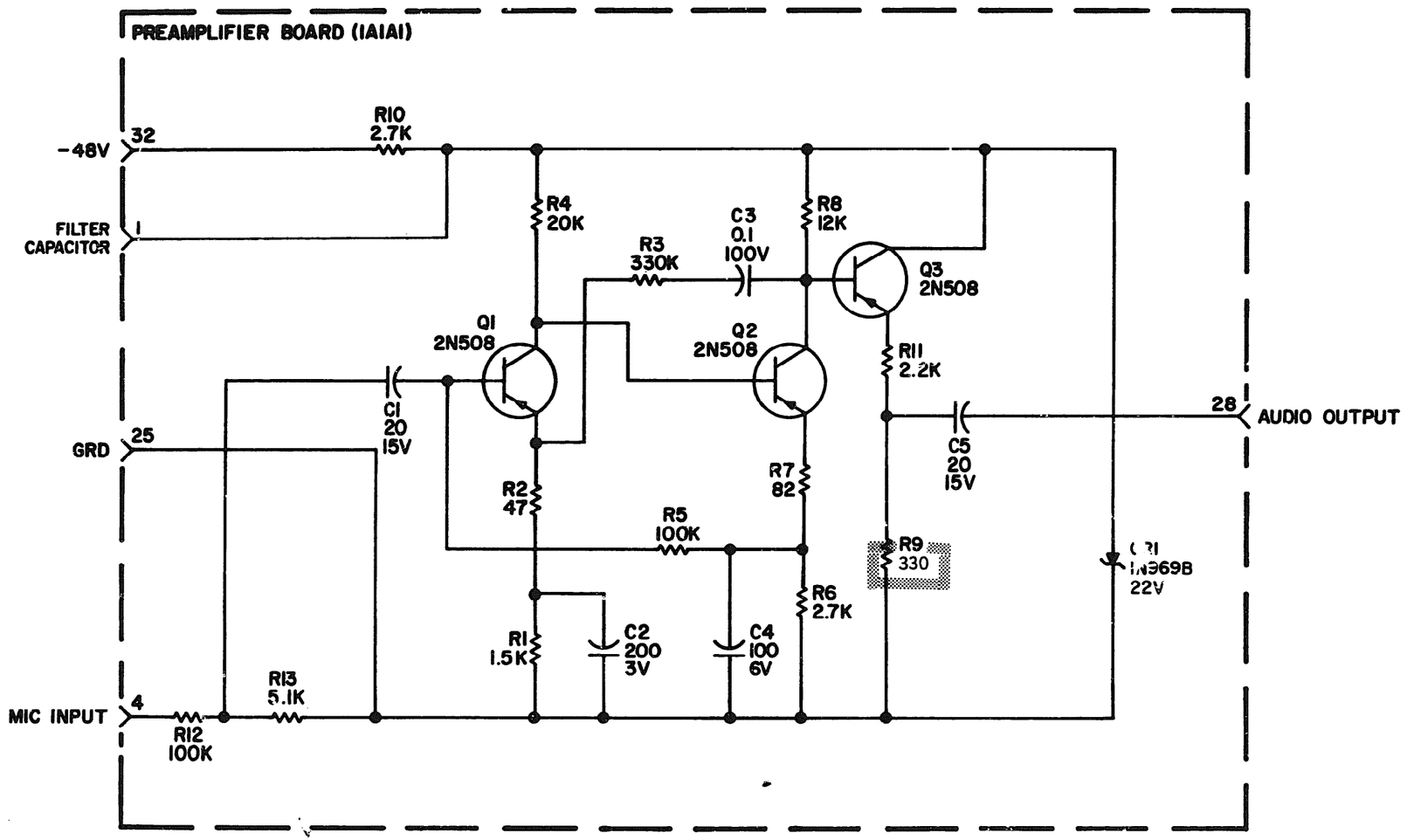


Figure 7-2. M-147/UIC-5 Microphone Station (1Al), Wiring Diagram



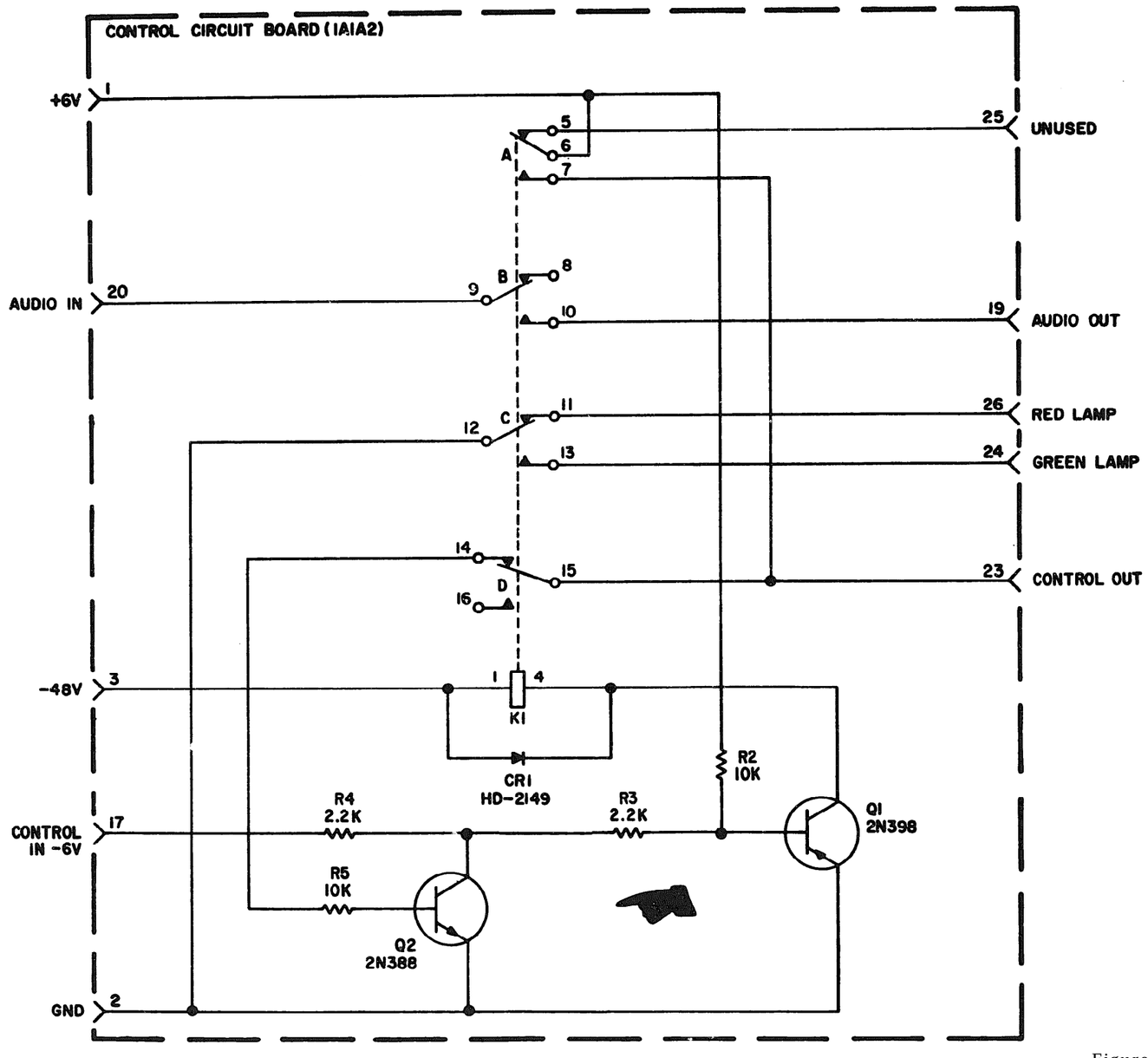
NOTE:
UNLESS OTHERWISE SPECIFIED:
ALL RESISTANCE VALUES ARE IN OHMS
ALL CAPACITANCE VALUES ARE IN MICROFARADS

Figure 7-3. AM-6101/UIC-5 Amplifier, Audio Frequency (1A2), Wiring Diagram



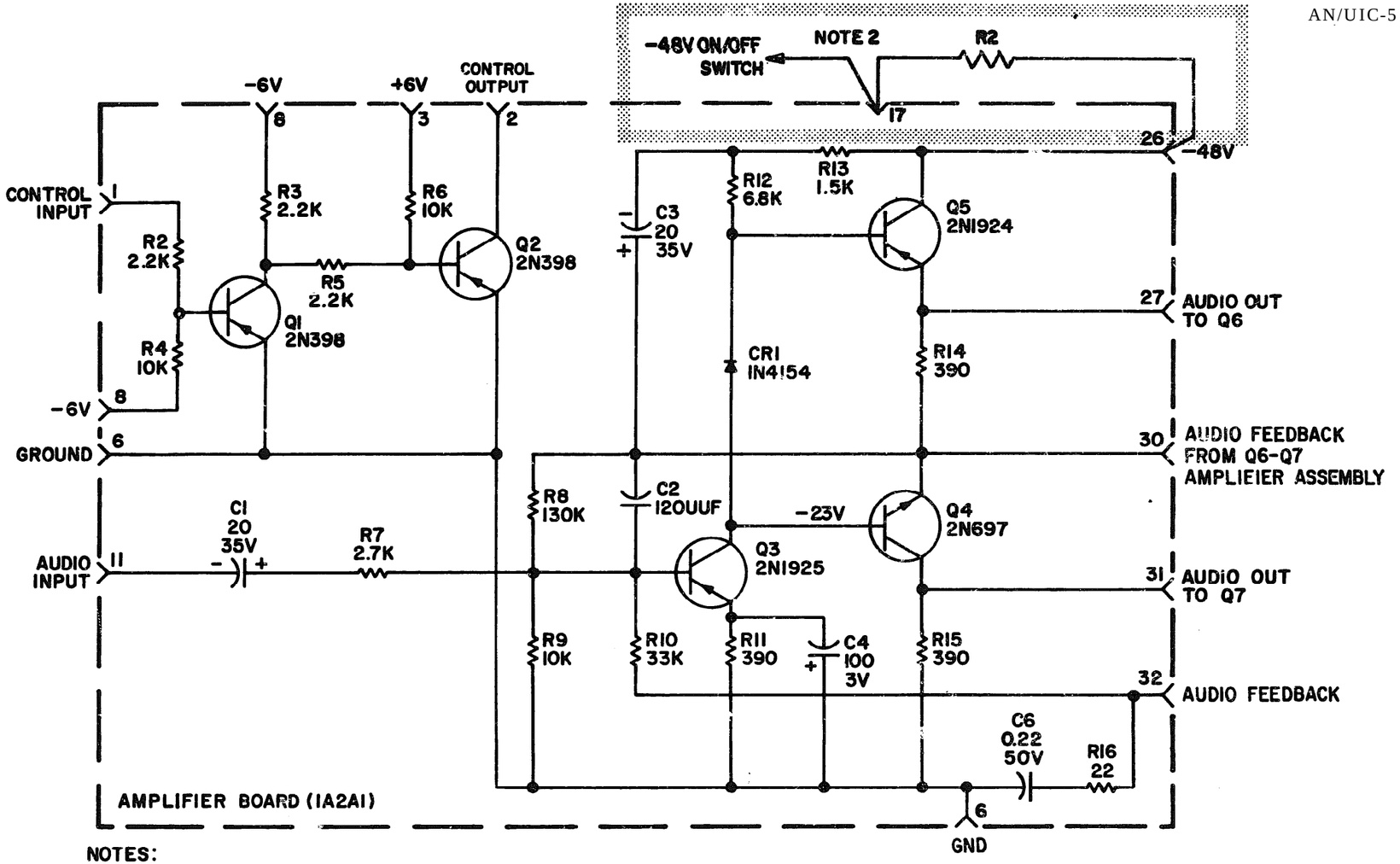
NOTE:
UNLESS OTHERWISE SPECIFIED:
ALL RESISTANCE VALUES ARE IN OHMS
ALL CAPACITANCE VALUES ARE IN MICROFARADS

Figure 7-4. Preamplifier Board (1A1A1), Schematic Diagram



NOTE:
UNLESS OTHERWISE SPECIFIED:
ALL RESISTANCE VALUES ARE IN OHMS

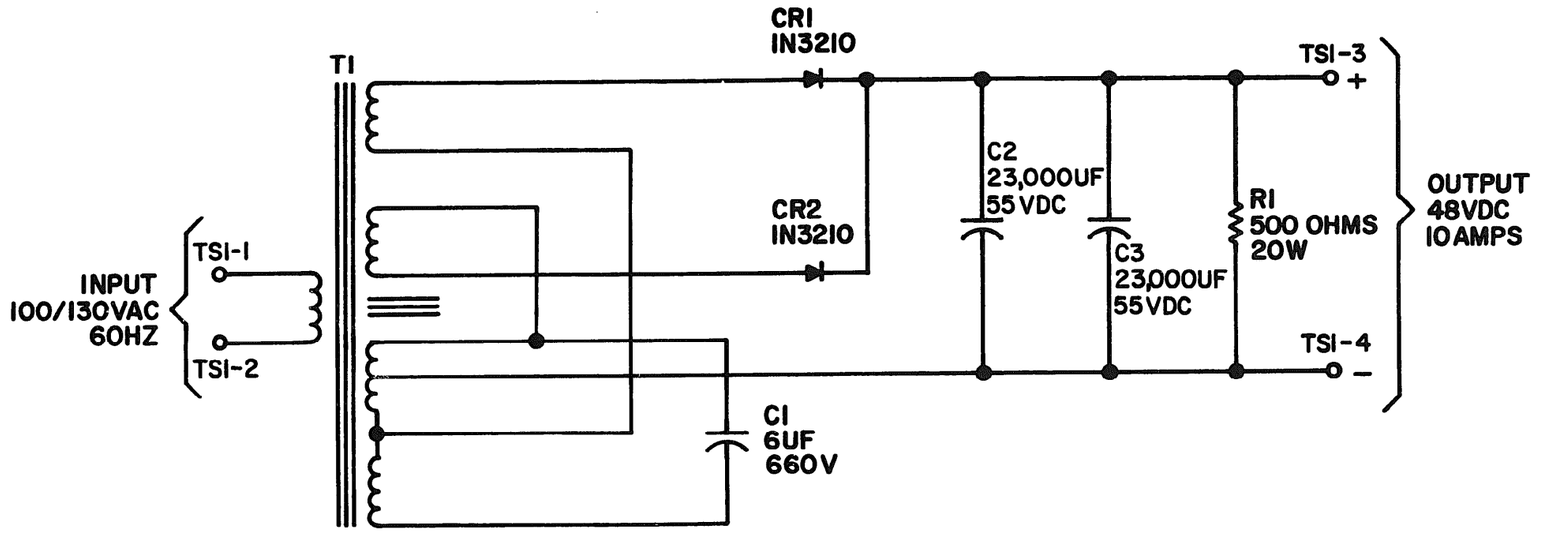
Figure 7-5. Control CIrcuit Board (1A1A2), Schematic Diagram



NOTES:

1. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS
   ALL CAPACITANCE VALUES ARE IN MICROFARADS
2. TERMINAL 17 IS A BLANK PIN AND IS USED AS A TIE POINT FOR RESISTOR R2.

Figure 7-6. Amplifier Board (1A2A1), Schematic Diagram



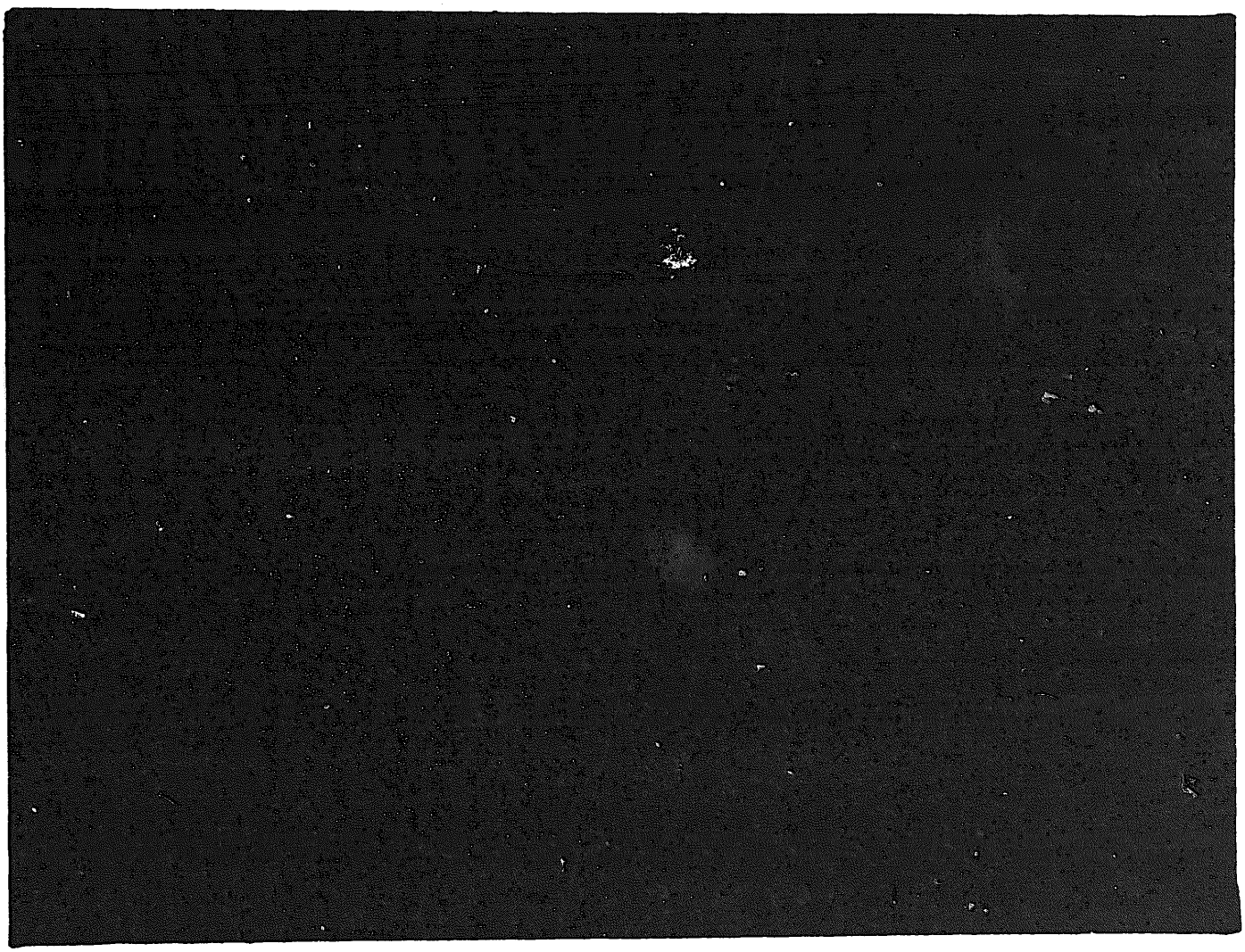
NOTE:
TO OBTAIN –48VDC CONNECT HOT LEAD TO TSI–4. CONNECT GROUND LEAD FROM AN EXISTING POWER SUPPLY TO TSI–3.

Figure 7-7. PP-6650/U Power Supply Assembly (1A4), Schematic Diagram

END

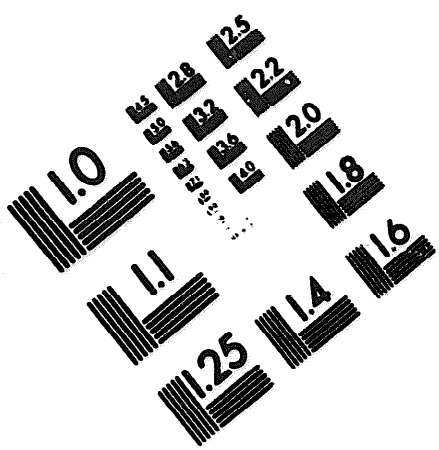
11-26-82

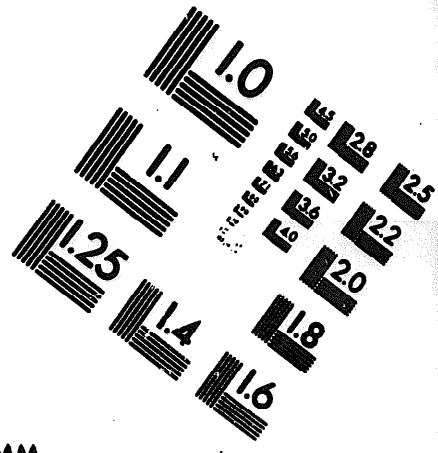
DATE



DEPARTMENT OF THE ARMY

MICROFORM
TEST TARGET





150 MM

1.0 mm (e= .81 mm)

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abcdefghijklmnopqrstuvwxyz$¢£/%#½¼¾—=+×&@*

1.5 mm (e= 1.09 mm)

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abcdefghijklmnopqrstuvwxyz$¢£/%#½¼¾—=+×&@*

2.0 mm (e= 1.37 mm)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890$¢£/%#½¼¾—=+×&@*

2.5 mm (e= 1.77 mm)

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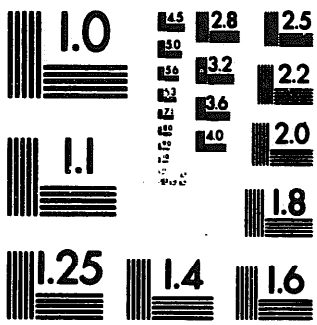

1.0 mm (e= .81 mm)

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abcdefghijklmnopqrstuvwxyz$¢£/%#½¼¾—=+×&@*

1.5 mm (e= 1.09 mm)

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abcdefghijklmnopqrstuvwxyz$¢£/%#½¼¾—=+×&@*

2.0 mm (e= 1.37 mm)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890$¢£/%#½¼¾—=+×&@*

2.5 mm (e= 1.77 mm)

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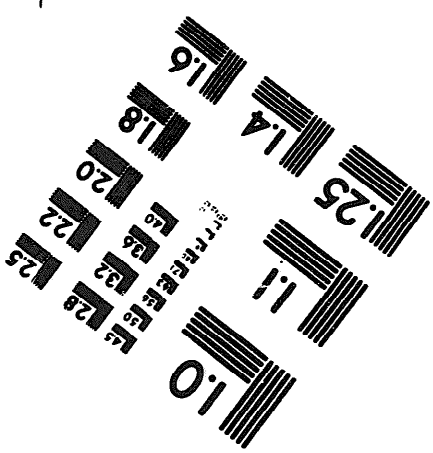
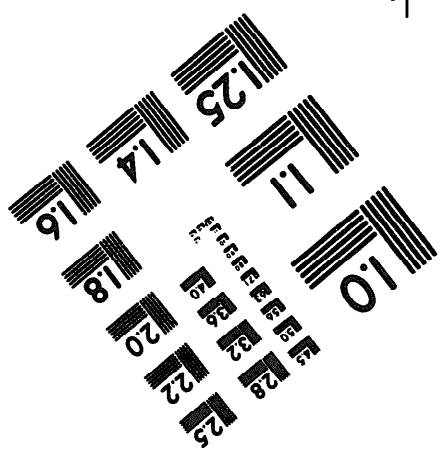
200 MM





250 MM