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TM 5-6350-264-14&P-9
NAVELEX EE 181-AA-
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T.O. 31S9-2FSS9-1 9

TECHNICAL MANUAL

OPERATOR'S ORGANIZATIONAL DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

ALARM, AUDIBLE
BZ-204/FSS-9(V)
NSN 6350-00-228-2514

DEPARTMENT OF THE ARMY, THE NAVY, AND THE AIR FORCE
30 SEPTEMBER 1982

CHANGE

NO. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY, NAVY
AND THE AIR FORCE
WASHINGTON, D.C., 29 July 1994

Operator's, Organizational,
Direct Support and General Support
Maintenance Manual
(including Repair Parts and Special Tools List)

ALARM, AUDIBLE
BZ-204/FSS-9(V)
NSN 6350-00-2282514

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Operator's, Organizational,
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ALARM, AUDIBLE
BZ-204/FSS-9(V)
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WASHINGTON, D.C., 20 May 1986

Operator's, Organizational,
Direct Support and General Support
Maintenance Manual
(Including Repair Parts and Special
Tools List)

ALARM, AUDIBLE
BZ-204/FSS-9(V)
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Remove pages	Insert pages
i and ii	i and ii
1-1 and 1-2	1-1 and 1-2
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WARNING

The Audible Alarm presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel. Authorized protective equipment must be worn by all personnel in the work area. If the Audible Alarm is installed, it must be disabled BEFORE any troubleshooting procedures are attempted. Disable the alarm by setting the key operated switch on Control Unit to TEST/RESET position, opening Audible Alarm, removing faceplate, and turning off power switch. After troubleshooting the Audible Alarm must be reactivated. Activate the Alarm by setting the key-operated switch on Control Unit to TEST/RESET position, turn Alarm power switch on, replace faceplate, close and clock Audible Alarm door. Turn key-operated switch on Control Unit to SECURE or ACCESS.

WARNING

HIGH VOLTAGE

High voltage is used in the operation of this equipment. Death on contact may result if personnel fail to observe safety precautions. A 115-volt ac potential may cause death under certain conditions; therefore, precautions should be taken at all times. Be careful not to contact connections for 115-volt ac input when installing or repairing this equipment. Never work on electronic equipment unless there is another person nearby who is familiar with the hazards of the equipment and who is competent in administering first aid.

WARNING

HYDROGEN GAS

The Audible Alarm contains a rechargeable battery which may generate ignitable amounts of hydrogen gas if certain failures occur. This is a potential safety hazard. Do not smoke when opening the door. After opening, allow the unit to ventilate with the door open for 2 minutes before turning off the Power Switch or performing any other maintenance action. If excessive heat or fumes of any nature are being emitted from the Audible Alarm, immediately open the enclosure door and ventilate for 2 minutes before performing any maintenance action.

HEADQUARTERS
DEPARTMENTS OF THE ARMY, NAVY, AND AIR FORCE
WASHINGTON, D.C., 30 September 1982

Operator's Organizational, Direct Support, and General Support Maintenance Manual
(Including Repair Parts and Special Tools List)

ALARM, AUDIBLE
BZ-204/FSS-9(V)
NSN 6350-00-228-2514

Current as of 2 August 1985

REPORTING OF ERRORS

You can help improve this manual. If you find any mistakes or if you know of a way to**l** improve the procedures, please let us know. ARMY: Your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual should be mailed directly to: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow, St Louis, MO 63120-1798. AIR FORCE: Completed AFTO Form 22 (Technical Order Publication Improvement Report and Reply) should be forwarded to: HQ, SA-ALC/MMEDT, Kelly AFB, TX 78241. NAVY: Completed DA Form 2028 (Recommended Changes to Publications and Blank Forms), User Activity Technical Manual Comment Sheet Feedback Report, or other suitable reporting form should be mailed to: Naval Electronics Systems Command Training and Publications Management Office, ATTN: ELEX Code 8122, Washington, DC 20360.

List of Illustrations

List of Tables

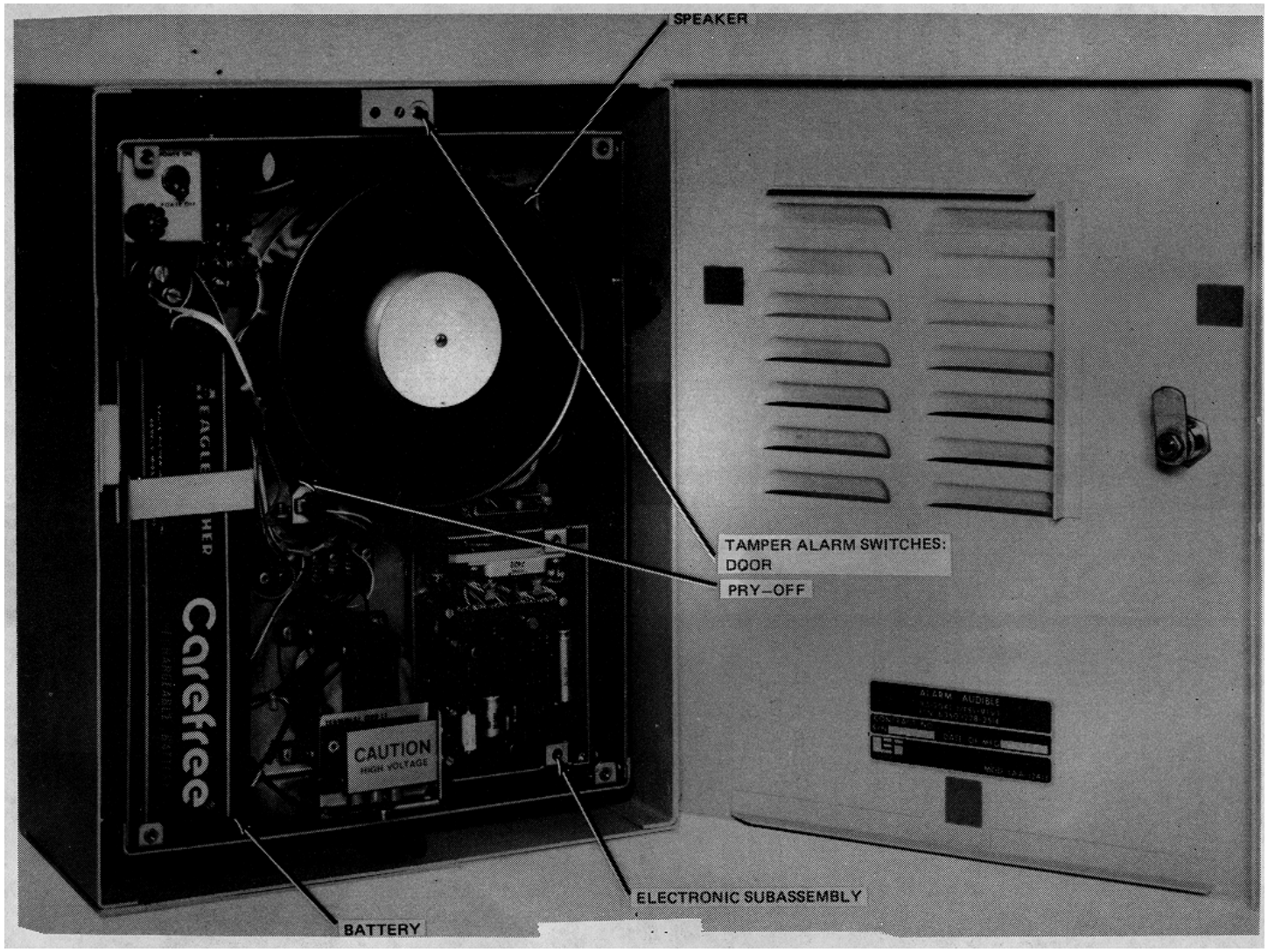


Figure 1-1. Audible Alarm

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. SCOPE. This manual is for your use in operating and maintaining the Audible Alarm (AA), Model BZ-204/FSS9(V), under normal operating conditions. The Audible Alarm is an integral part of the Joint-Services Interior Intrusion Detection System (-SIIDS). For information on other major assemblies of the J-SIIDS, refer to the applicable manuals listed in appendix **A.**

1-2. MAINTENANCE FORMS AND RECORDS.

Equipment maintenance forms and procedures for their use are contained in DA PAM 738750, The Army Maintenance Management System (TAMMS).

1-3. ADMINISTRATIVE STORAGE. Instructions for administrative storage are contained in TM 7, 40-901.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Instructions for the **destruc**tion of Army materiel to prevent enemy use are contained in TM 750-244-3.

1-5. **QUALITY ASSURANCE/QUALITY CONTROL** There are no Quality Assurance/Quality Control technical manuals applicable to this equipment

1-6. **REPORTING** EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). EIR's will be prepared **I** on Standard Form 368, Quality Deficiency Report Instructions for preparing El R's are provided in DA PAM 738-750. EIR's should be mailed directly to Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDO, **I** 4300 Good fellow Blvd., St Louis, Missouri 63120-1798. A reply be furnished directly to you.

1-7. **EQUIPMENT SERVICEABILITY** CRITERIA) (ESC). This equipment is not covered by an ESC.

Section II. DESCRIPTION AND DATA

1-8. DESCRIPTION. The AA is an integral part of the J-SIIDS. It receives operating power from and sends tamper alarm signals to the J-SIIDS Control Unit The AA (fig. II) consists of a sounding device (speaker), a battery for emergency power supply, electronic components which include the primary power supply, battery charger, signal circuit, and tamper alarm switches. The AA is protected by a double-walled, steel enclosure, with a lockable hinged cover.

1-9. TABULATED DATA.

a. Identification Data An identification plate (fig. 1-2) is mounted on the inside of the Audible Alarm access door.

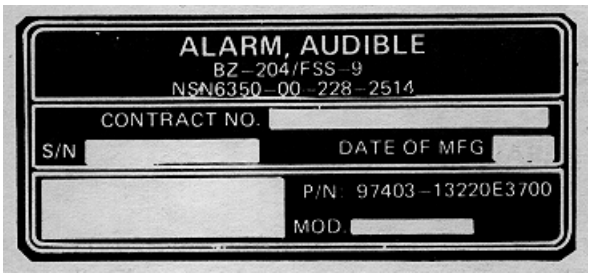


Figure 1-2. Identification Plate

b. Equipment Characteristics.

(1) Enclosure.

Weight (without battery) 23.50 pounds (10.65 kg)

Dimensions (overall)

Height 15.13 inches (38.43 cm)

Width 12.31 inches (31.26 cm)

Depth 5.95 inches (15.11 cm)

Color (enclosure) Gray per Federal l Standard 595, color chip 36440 MIL-C-22751

Environmental (operational)

Temperature range -20° to +150°F (-29° to +650C)

Relative humidity ..... Up to 95%

Environmental (non-operational and storage)

Temperature range .....-30° to +165°F (-34° to +740C)

Relative humidity Up to 95%

Shock ..... 20 g for 11 ms duration plus bench handling shock (without battery)

Vibration .....Withstands transportation conditions (without battery)

Audible alarm output ..... 108 db, referenced to 0.0002 microbar

Power requirements ..... 110 - 125 vac, 48 - 62 Hz

Tamper alarm criteria ..... Movement of cover 1/4 inch (0.635 cm) or more

Weather resistance .....Designed for exterior installation

(2) Battery.

Weight .....6.00 pounds (2.72 kg)

Height ..... 2.55 inches (6.477 cm)

Width ..... 3.10 inches (7.874 cm)

Depth ..... 9.15 inches (23.241 cm)

Voltage capacity 24 vdc, 2.5 ampere hours

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. OPERATING PROCEDURES

2-1. CONTROLS AND INDICATORS. There are no operator controls or indicators applicable to this equipment.

2-2. NORMAL OPERATING PROCEDURES. The AA is ready for operation after it is installed, tested, and connected to the J-SIIDS Control Unit. Since the startup and shutdown of the AA is dependent upon the presence or absence of power from the J-SIIDS Control Unit, no operating procedures are required.

2-3. EMERGENCY OPERATION. Operation with incomplete surveillance coverage or faulty tamper circuit should be held to a minimum. Extended periods of operation on battery (stand-by) power should be avoided.

2-4. UNUSUAL OPERATING CONDITIONS. Relocation or storage of large objects within close proximity of equipment cabinet will reduce effectiveness of audible signal.

Section II. THEORY OF OPERATION

2-5. FUNCTIONAL DESCRIPTION. The Audible Alarm provides an audible indication of an alarm condition when it receives an alarm signal from the J-SIIDS Control Unit. An alarm signal switches on electronic circuitry that produces a loud (min 108 db @ 10 ft), varying (500 to 2, 000 Hz) tone. This alarm indication will continue until the cause of the alarm has been removed and the Control Unit (CU) has been reset. Primary ac power is provided by the CU. This ac power is rectified to dc and used to operate all electronic circuitry including the battery charger. Emergency power is provided by the battery. If ac power fails, the AA will automatically draw operating power from the battery. A tamper alarm is automatically initiated if the AA enclosure door is opened, if the enclosure is pried away from its mounting surface, or if the inner and outer enclosures are shorted together. Figure 2-1 is a simplified block diagram.

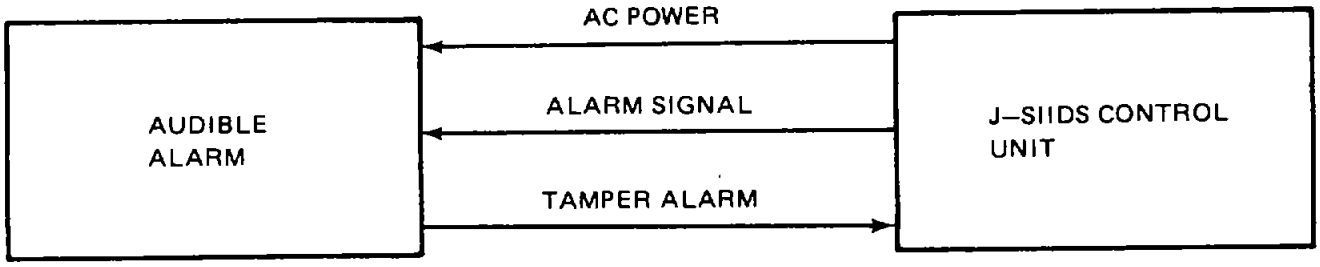


Figure 2-1. Audible Alarm Simplified Block Diagram

CHAPTER 3

OPERATOR MAINTENANCE INSTRUCTIONS

This chapter is not applicable to this equipment.

CHAPTER 4

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

This chapter is not applicable to this equipment.

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section I. OPERATING PROCEDURES

5-1. SPECIAL TOOLS. No special tools or equipment are required for the Audible Alarm.

5-2. REPAIR PARTS. Repair parts are listed and illustrated in the repair parts and special tools list covering direct and general support maintenance for this equipment in appendix C of this manual.

Section II. TROUBLESHOOTING

5-3. GENERAL.

a. This section contains troubleshooting information for locating and correcting most of the operating troubles which may develop in the Audible Alarm. Each malfunction or trouble for an individual component, unit, or system is followed by a probable causes and a list of tests or inspections which will help you to determine corrective actions to take. You should perform the test/inspections in the corrective actions column 'in the order listed.

b. Table 5-1 does not list all malfunctions that may occur, nor all tests or inspections and corrective actions to be made. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

c. The table lists the common malfunctions which you may find during the operation or maintenance of the Audible Alarm. You should perform the test/ inspections in the corrective actions column in the order listed.

NOTE

Before you use table 5-1, be sure you have performed all applicable operating checks.

d. Check all available information on the equipment for aid in diagnosing problems.

e. Make a visual inspection of the equipment.

(1) Inspect the equipment for evidence of physical damage.

(2) Inspect terminal strips for clean and secure connections.

(3) Inspect all wiring and cabling for worn or frayed insulation and broken wires.

(4) Inspect all resistors for discoloration due to overheating.

(5) Inspect the complete subsystem for the presence of dirt, corrosion,

moisture, and bits of wire or solder inside the housings.

NOTE

Touchup paint is recommended instead of refinishing whenever practical.

(6) Inspect all metal surfaces intended to be painted for condition of finish and legibility of panel lettering.

WARNING

HIGH VOLTAGE is used in the operation of this equipment DEATH ON CONTACT may result if personnel fail to observe safety precautions Learn the areas containing high voltage in the equipment. Be careful not to contact high voltage connections when installing or operating this equipment Never work on electronic equipment unless there is another person nearby who is familiar with the hazards of the equipment and is competent in administering first aid.

WARNING

Power to the J-SIID system must be shut down before any repairs or replacements can be performed on the Audible Alarm.

WARNING

The Audible Alarm presents a noise hazard to personnel in the area The noise level exceeds the allowable limits for unprotected personnel. Authorized ear protective equipment must be worn by all personnel in the work area Before any troubleshooting procedures are at tempted the Audible Alarm must be disabled.

CAUTION

While performing maintenance or troubleshooting on the Audible Alarm, ensure that test points and terminals are never grounded or shorted to each other or to the chassis This will cause serious damage to the internal components.

CAUTION

When taking measurements with a multimeter, ensure that the meter is set to the proper scale and range before inserting probes into the circuit.

f. To disable the Audible Alarm (AA) for maintenance or troubleshooting, notify proper authorities per installation/site security procedures Enter the Control Unit area and turn the operating mode switch (key operated) to TEST/RESET position If the audible signal device in the CU sounds, ignore it for a moment. Inspect the Control Unit door to ensure that it is flat, straight, and completely closed. Open the door, pull the Tamper Alarm Switch (TAS) plunger all the way out, and ensure that there is no debris between the door and enclosure.

NOTE

There are six Light Emitting Diodes (LED's) on PC board A12 in the upper right corner of the Control Unit Note any of these LED's that are on Any LED that is on indicates a sensor that has been activated and should be investigated before troubleshooting the Audible Alarm.

Turn the operating mode switch to ACCESS.

(1) If the AA is silent, put on ear protection and open the AA door Pull the TAS plunger all the way out. Remove screws that secure faceplate, and remove faceplate Turn off power switch located in the upper left corner of the AA Tag, disconnect, and insulate speaker wire from TB3-7.

(2) If the AA continues to sound, tag, disconnect, and insulate green wire (from status processor) from TB4-1 in the Control Unit Install a jumper between TB4-4 and TB4-1 AA should be silenced Put on ear protection and open AA door Pull the TAS plunger all the way out Remove screws that secure the faceplate, and remove the faceplate.

Turn off power switch located in the upper left corner of the AA. Tag, disconnect, and insulate speaker wire from TB3-7 in the Control Unit, remove the AA interconnecting wire from TB4-3 and connect a jumper wire from TB4-4 and TB43 Turn on power switch in AA. The AA speaker is now disabled and maintenance and troubleshooting may be performed.

(3) When maintenance or troubleshooting has been completed, turn off power switch in AA In the Control Unit, remove jumper wire from TB4-4 and TB4-3 Connect AA interconnecting wire to TB4-3 In the AA, connect speaker wire to TB3-7; turn on power switch Install and secure faceplate Close door on AA On Control Unit, turn operating mode switch to TEST/ RESET and then to SECURE.

g Inspect varistors for evidence of physical damage or overheating Disconnect one lead from each varistor from TB1. Set multimeter to ohms and connect one lead to each varistor lead Meter should indicate over 100, 000 ohms. Check both varistors.

h Refer to figure 5-1 for all test points found in troubleshooting table 5-1 Figure 5-2 is a wiring diagram of the Audible Alarm Step-by-step troubleshooting procedures, including Trouble, Probable Cause, and Corrective Action, are listed in table 5-1.

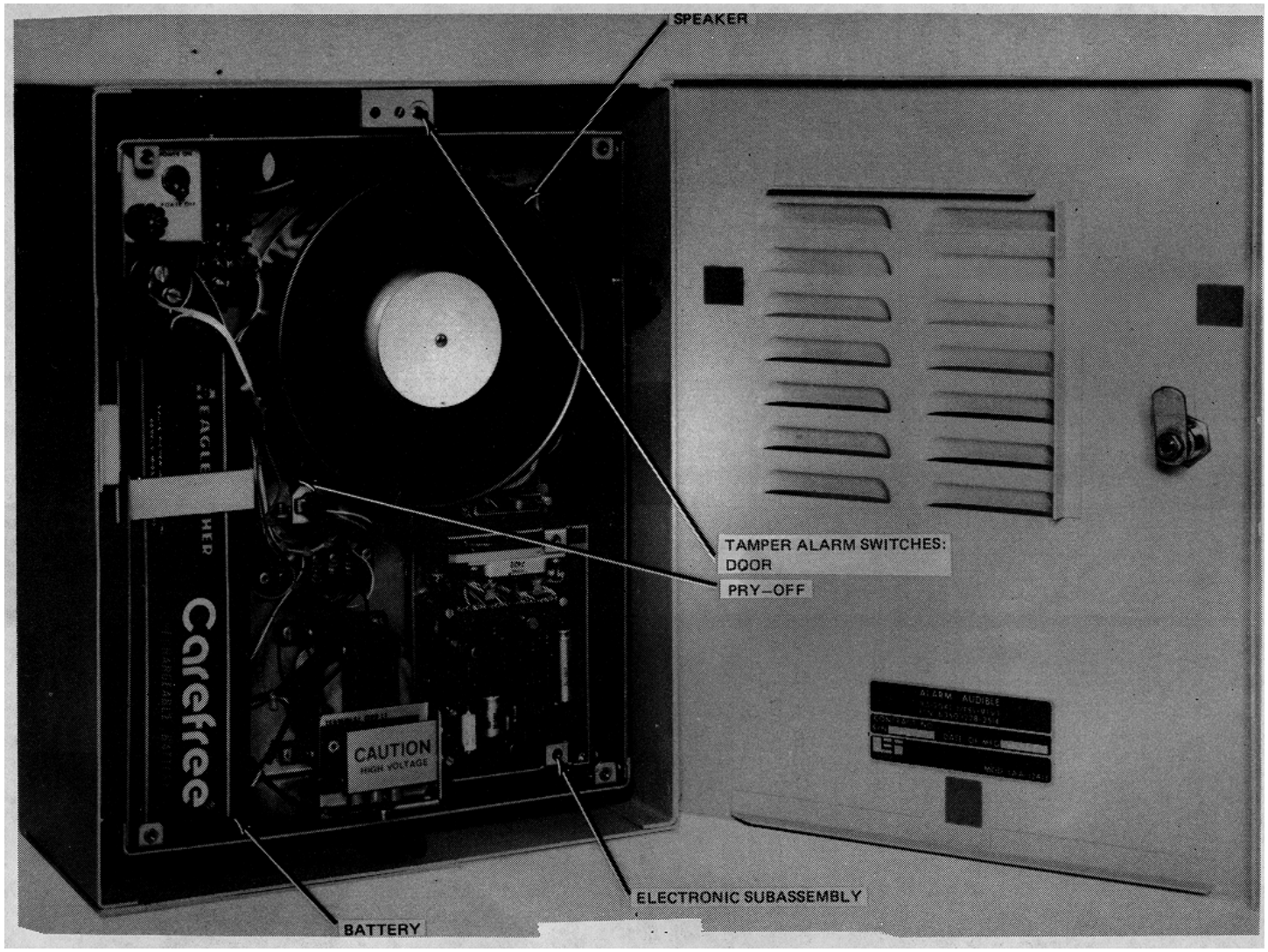


Figure 5-1. Audible Alarm with Troubleshooting Test Points

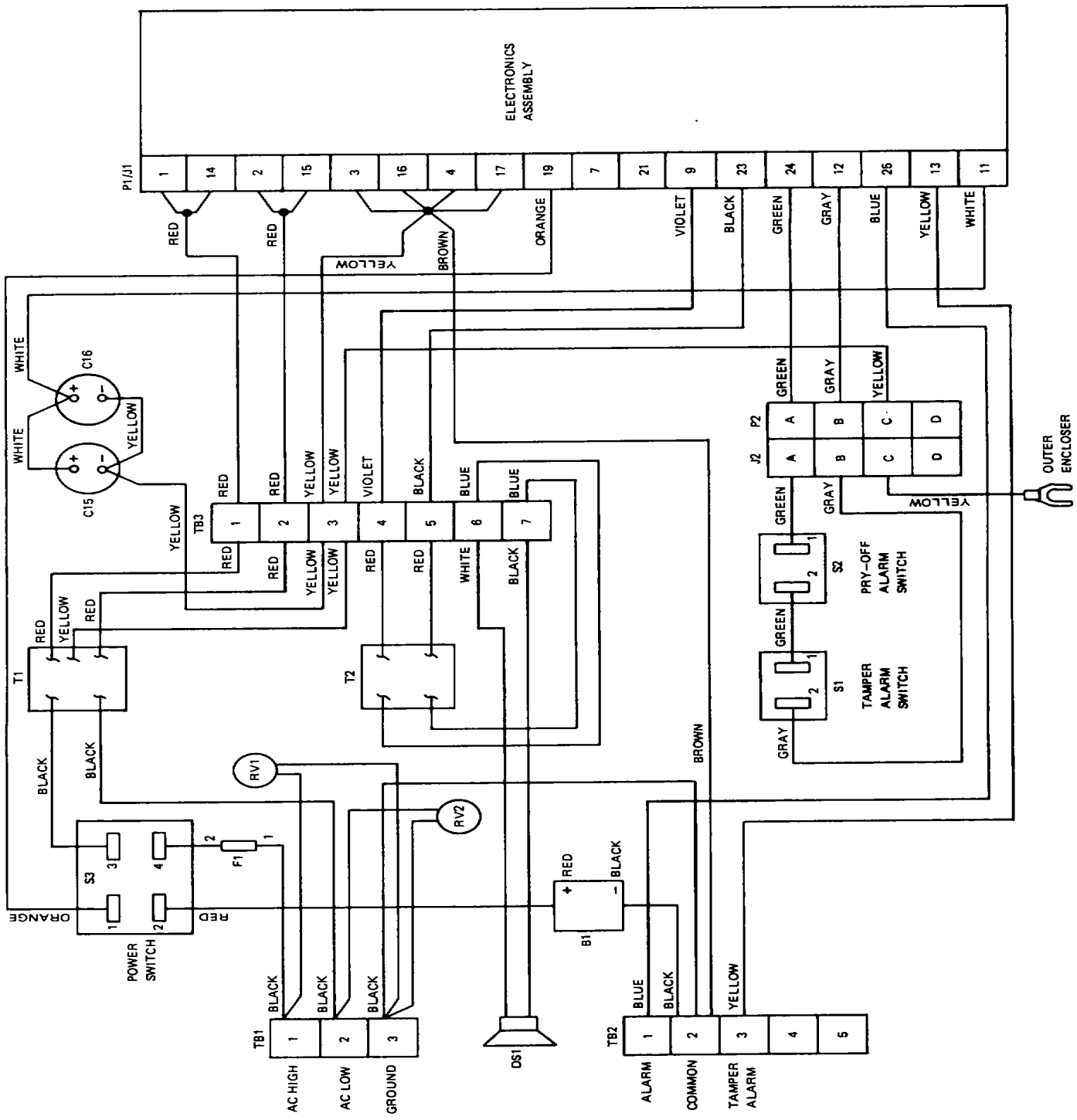


Figure 5-2. Audible Alarm Wiring Diagram.

NOTE

Troubleshooting procedures listed in table 5-1 may require more than one person to perform corrective action.

Covers should be removed as necessary to perform troubleshooting procedures.

Never disconnect a wire without first marking that wire to assure proper reconnection.

Table 5-1 Troubleshooting Procedures

Trouble	Probable cause	Corrective action
1 Constant alarm.	a Poor or broken ground connectors	a Set multimeter to dc volts Connect positive meter lead to TB2-1 and negative meter lead to TB2-2. Meter should indicate more than 1 vdc. (1) If meter does not indicate more than 1 vdc for both tests, turn power switch S3 to POWER OFF. (2) Set multimeter to ohms Connect leads to TB2-1 and TB2-2, and then to TB2-2 and TB2-3 Meter should indicate 100, 000 ohms or more for both tests. (3) If the meter indicates less than 100, 000 ohms, inspect wiring and P1 for shorts, broken or loose connections, or bent pins. b Connect meter leads to the following points: TB2-1 to P1-25; TB2-3 to P1-13; TB2-2 to outer enclosure; TB2-2 to P1-3, 4, 16, 17; TB2-2 to P1-23; TB2-2 to battery negative lead; TB2-2 to TB3-3. Meter should indicate 0 ohms at each point. c If the multimeter reads more than 0 ohms at any of the above points, inspect wiring for broken or loose connections, inspect plugs for bent or broken pins and inspect conduit for poor connections. Repair or replace defective wiring or connectors.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	b. Defective electronics assembly or power transformer.	a. Turn on switch S3 on power supply. Set multimeter to dc volts. Connect positive meter lead to TB2-1 and negative meter lead TB2-2. Meter should indicate less than 1 vdc. b. If meter indicates 1 vdc or more replace the electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing from outer enclosure. (1) To remove electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers and disconnect connector J1 from P1. Remove mounting screws from rear of inner enclosure and remove electronics assembly. (2) To install new electronics assembly, position assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers, and washers. Slide inner enclosure into outer enclosure. Route wires through hole in rear of inner enclosure. Connect wires that run from terminal boards to conduits. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2. c. Set multimeter to dc volts. Connect positive meter lead to TB2-3 and negative meter lead to TB2-2. Meter should indicate 5 i0.5 vdc. d. If meter indicates less than 1 vdc, connect positive meter lead to P1-13 and negative meter lead to TB2-2.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	b. (Cont)	e. If meter indicates 5 +0.5 vdc, inspect wiring from TB2 to P1 for broken or loose connections. Repair or replace defective wiring. f. If meter indicates less than 1 vdc, connect positive meter lead to P1-24 and negative meter lead to TB2-2. g. If meter indicates less than 1 vdc, replace the electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing from outer enclosure. (1) To remove electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers and disconnect connector J1 from P1. Remove mounting screws from rear of inner enclosure and remove electronics assembly. (2) To install new electronics assembly, position assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers, and washers. Slide inner enclosure into outer enclosure. Route wires through hole in rear of inner enclosure. Connect wires that run from terminal boards to conduits. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2. h. Turn off switch S3 on power supply. Set the multi-meter to ohms. Tag, remove, and isolate terminals of C15 and C16. Set multimeter to ohms and connect

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	b. (Cont)	leads to inner enclosure and negative terminal of C15. Note indication. Connect meter leads to inner enclosure and negative terminal of C16. Meter should indicate less than 100,000 ohms in both tests. Meter may not give correct indication immediately. i. If either indication is greater than 100,000 ohms, replace electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing from outer enclosure. (1) To remove electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers and disconnect connector J1 from P1. Remove mounting screws from rear of inner enclosure and remove electronics assembly. (2) To install new electronics assembly, position assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers, and washers. Slide inner enclosure into outer enclosure. Route wires through hole in rear of inner enclosure. Connect wires that run from terminal boards to conduits. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2. j. Reconnect leads to negative terminals of C15 and C16. Turn on switch S3 on power supply. Set multimeter to ac volts. Connect positive lead to P1-l and negative lead to P1-2.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	b. (Cont)	k. If meter indicates 68 +7 vac, turn off power switch S3. Disconnect Pi/J1 and connect meter leads to P1-1 and P1-2. Turn on switch S3. 1. If voltage is not within tolerance (68 +7 vdc), replace power transformer. (1) To remove transformer, note length and connection points of transformer wires. Disconnect wires. Remove mounting screws and washers. Remove transformer. (2) To install new transformer, cut transformer wires to proper length and install crimp lugs. Position transformer on inner enclosure and install mounting screws and washers. Connect transformer wires. m. If voltage is within tolerance, replace electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing outer enclosure. (1) To remove electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers and disconnect connector J1 from P1. Remove mounting screws from rear of inner enclosure and remove electronics assembly. (2) To install new electronics assembly, position assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washer, and washers. Slide inner enclosure into outer enclosure.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	b. (Cont)	Route wires through hole in rear of inner enclosure. Connect wires that run from terminal boards to conduits. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2.
	c. Defective power switch, S3.	a. Ensure that power switch S1 in Control Unit is turned off. Slide inner enclosure part way out. Remove screws that secure switch bracket. Lower switch bracket to gain access to switch terminals. Ensure that power switch S3 is on. Set multi-meter to ohms. Connect meter leads to S3-1 and 2 (red wires). Note meter indication. Connect meter leads to S3-3 and 4 (black wires). Note meter indication. b. If meter indicates over 100,000 ohms, replace switch S3. (1) To remove switch S3, unscrew and remove knurled nut from front of switch bracket. Push switch through hole in bracket. Tag wires and use a soldering iron of 50 watts maximum to remove wires from switch terminals. (2) To install new switch S3, use a soldering iron of 50 watts maximum to connect wires to switch terminals. Insert switch through hole in switch bracket. Place knurled nut over switch and tighten to secure switch. Place switch bracket in position inside upper left corner or inner enclosure. Insert screws through enclosure and tighten to secure switch bracket. Slide inner enclosure all the way into outer enclosure.
	d. Defective power trans-former T1	a. Ensure that power switch S1 in Control Unit is turned off. Disconnect negative lead from battery. Slide inner enclosure part way out. Remove screws that secure switch bracket. Lower switch bracket to gain access to terminals on

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	d. (Cont)	switch S3. Ensure that switch S3 is on. Set multimeter to ohms. Connect meter leads to S3-1 and 2 (red wires). Note meter indication. Connect meter leads to S3-3 and 4 (black wires). Note meter indication. b. If meter indicates 0 ohms, inspect wiring for broken or loose connections at the following points: fuse F1 to S3-4; S3-3 to T1; T1 to TB3-1 and 2; TB3-1 and 2 to P1-1 and 2; battery red lead to S3-2; S3-1 to Pl-19. c. If wiring connections are good, replace power transformer. (1) To remove transformer, note length and connection points of transformer wires. Disconnect wires. Remove mounting screws and washers. Remove transformer. (2) To install new transformer, cut transformer wires to proper length and install crimp lugs. Position transformer on inner enclosure and install mounting screws and washers. Connect transformer wires. d. Set multimeter to ac volts. Disconnect P1/J1 and connect meter leads to P1-i and P1-2. Turn on switch S3. If voltage is not within tolerance, 68 +7 vac),replace power transformer. If voltage is within tolerance, replace electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing from outer enclosure. (1) To remove electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	d. (Cont)	enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers and disconnect connector J1 from P1. Remove mounting screws from rear of inner enclosure and remove electronics assembly. (2) To install new electronics assembly, position assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers, and washers. Slide inner enclosure into outer enclosure. Route wires through hole in rear of inner enclosure. Connect wires that run from terminal boards to conduits. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2.
	e. Defective tamper switch.	a. Set multimeter to dc volts. Connect positive meter lead to P1-24 and negative meter lead to TB2-2. b. If meter indicates 6 +0.5 vdc, connect positive meter lead to P1-12 and negative meter lead to TB2-2. c. If meter indicates less than 1 vdc, turn power switch S3 to POWER OFF. Remove P2 from J2. d. Set the multimeter to ohms. Connect leads to tamper switch terminals that have wires connected. (1) Depress the switch plunger. Meter should indicate 0 ohms. (2) Release the switch plunger. Meter should indicate more than 100,000 ohms. e. If meter indications are not correct, replace tamper switch.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	e. (Cont)	(1) To remove door tamper switch, remove tamper switch support mounting screws. Push switch through outer enclosure. Tag wires. Use a soldering iron of 50 watts maximum to unsolder wires. Unscrew switch from switch support and remove. (2) To install new door tamper switch, screw switch into switch support. Solder wires. Position switch and support on outer enclosure. Install tamper switch support mounting screws. (3) To remove pry-off tamper switch, remove mounting screws from tamper switch bracket. Remove snap on button cap. Remove hex nut and push switch through switch bracket. Tag wires. Use a soldering iron of 50 watts maximum to unsolder wires. Remove pry-off tamper switch. (4) To install new pry-off tamper switch, solder wires and position switch in switch bracket. Install hex nut and snap on button cap. Position switch and switch bracket on inner enclosure mounting bracket and install mounting screws.
	f. Defective capacitor.	a. Set multimeter to dc volts. Connect positive meter lead to P1-12 and negative meter lead to TB2-2. b. If the meter indicates 6 +0.5 vdc, turn power switch S3 to POWER OFF. c. Turn off power switch S3. Set multimeter to ohms. Connect leads to inner enclosure and outer enclosure. Ensure that good contact is made, as paint will act as an insulator. Reverse the multi-meter leads and note indications in both directions. d. If the highest multimeter indication is less than 9,500 ohms, remove P2 from J2 while checking enclosures with the multimeter.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	f. (Cont)	e. If the highest multimeter indication is greater than 13,000 ohms, tag, remove, and isolate the yellow wires (-) from C15 and C16. f. Connect leads to inner enclosure and negative terminal of C15, then to inner enclosure and negative terminal of C16. g. If either capacitor check is less than 100,000 ohms, replace the capacitor. (1) To remove capacitor, tag and remove wires. Loosen screw on mounting bracket and remove capacitor. (2) To install new capacitor, position capacitor in mounting bracket and tighten mounting screws. Connect wires to capacitor terminals. h. If after removing P2 meter indicates less than 13,000 ohms, inspect enclosures for foreign matter, conduit contacting both enclosures, frayed wires, leaking battery or any other material that will allow continuity between enclosures. i. Set multimeter to ac volts. Connect leads to P1-l and P1-2. Meter should indicate 68 +7 vac. (1) If meter does not indicate 68 +7 vac, turn power switch S3 to POWER OFF. (2) Tag, remove, and isolate white wire (+) from C15. Turn power switch S3 to POWER ON. Connect multimeter leads to P1-1 and P1-2. If meter does not indicate 68 +7 vac, turn power switch S3 to POWER OFF and install C15 white wire (+). If meter indicates 68 +7 vac, replace C15. (a) To remove capacitor, tag and remove wires. Loosen screw on mounting bracket and remove capacitor.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	f. (Cont)	(b) To install new capacitor, position capacitor in mounting bracket and tighten mounting screw. Connect wires to capacitor terminals.
		j. Tag, remove, and isolate white wire (+) from C16. Turn power switch S3 to POWER ON. Connect multimeter leads to P1-i and P1-2. If meter does not indicate 68 +7 vac, turn power switch S3 to POWER OFF and install C16 white wire (+). If meter indicates 68 +7 vac, replace C16. (1) To remove capacitor, tag and remove wires. Loosen screws on mounting bracket and capacitor. (2) To install new capacitor, position capacitor in mounting bracket and tighten mounting screw. Connect wires to capacitor terminals.
	g. Defective battery.	a. Set multimeter to dc volts. Connect positive meter lead to red battery terminal and negative meter lead to black battery terminal. Ensure that power switch S3 is set to POWER ON. Meter should indicate 26 vdc or more. b. If meter indicates less than 26 vdc, disconnect red lead from battery. Ensure that red lead is not shorted to chassis. Connect positive meter lead to red wire and negative meter to lead to black battery terminal. Meter should indicate 27 + 1 vdc. c. If meter indicates 27 +1 vdc, replace battery. (1) To remove battery, disconnect battery wires from battery. Remove screw and washer from battery clamp bracket and remove battery. (2) To install new battery, position battery and battery clamp bracket. Install screw and washer. Connect battery wires to battery.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
1. (Cont)	h. Defective fuse.	a. Set multimeter to ohms. b. Remove fuse from fuse holder. Connect meter leads to each end of fuse. c. If meter indicates more than 100,000 ohms, replace fuse.
2. Nuisance alarms.	a. Audible Alarm unit mounting.	Ensure that the Audible Alarm unit is mounted rigidly to a flat surface, that the door is flat, and there is no play when the door is locked.
	b. Defective tamper switch.	a. Set the multimeter to ohms. Connect meter leads to tamper switch terminals that have wires connected. (1) Depress the switch plunger. Meter should read 0 ohms. (2) Release the switch plunger. Meter should read more than 100,000 ohms. b. If meter indications are not correct, replace tamper switch. (1) To remove door tamper switch, remove tamper switch support mounting screws. Push switch through outer enclosure. Tag wires and use a soldering iron of 50 watts maximun to unsolder wires. Unscrew switch from switch support and remove switch. (2) To install new door tamper switch, screw switch into switch support. Use a soldering iron of 50 watts maximum to solder wires. Position switch enclosure support bracket and install tamper switch support mounting screws. (3) To remove pry-off tamper switch, remove mounting screws from tamper switch bracket. Remove snap on button cap. Remove hex nut and push switch through switch

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
2. (Cont)	b. (Cont)	bracket. Tag wires and use a soldering iron of 50 watts maximum to unsolder wires. Remove pry-off tamper switch. (4) To install new pry-off tamper switch, solder wires and position switch in switch bracket. Install hex nut and snap on button cap. Position switch and switch bracket on inner enclosure mounting bracket and install mounting screws.
	c. Intermittent continuity between inner and outer enclosures.	a. Set multimeter to dc volts. Connect positive meter lead to TB2-3 and negative meter lead to TB2-2. b. If meter indication changes during periods of nuisance alarms to below 1 vdc, place positive meter lead on inner enclosure and negative meter lead on outer enclosure. Ensure good contact is made at the outer enclosure. c. If meter indication drops below 0.9 vdc, turn power switch S3 to POWER OFF. Remove P2 from J2. d. Set multimeter to ohms. Connect meter leads to inner and outer enclosure. e. If meter indicates less than 13,000 ohms, inspect enclosures for foreign matter, conduit contacting both enclosures, frayed wires, leaky battery, or any other material that will allow continuity between enclosures.
	d. Defective capacitor.	a. Set multimeter to ohms. Connect meter leads to inner and outer enclosure. b. If meter indicates more than 13,000 ohms, tag, remove, and isolate the yellow wires (-) from C15 and C16. c. Connect leads to inner enclosure and negative terminal of C15, then to inner enclosure and negative terminal of C16.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
2. (Cont)	d. (Cont)	d. If either capacitor check is less than 100,000 ohms, replace the capacitor. (1) To remove capacitor, tag and remove wires. Loosen screw on mounting bracket and remove capacitor. (2) To install new capacitor, position in mounting bracket and tighten mounting screw. Connect wires to capacitor terminals.
	e. Defective electronics assembly.	a. Tag, remove, and isolate the yellow wires (-) from C15 and C16. b. Set the multimeter to ohms. Connect leads to inner enclosure and negative terminal of C15, then to inner enclosure and negative terminal of C16. If the multimeter indications at C15 and C16 are greater than 100,000 ohms, replace the electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing from outer enclosure. (1) To remove electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers. Disconnect connector J1 from P1. Remove electronic assembly mounting screws from rear of inner enclosure. Remove electronics assembly. (2) To install new electronics assembly, position assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers, and washers. Slide inner enclosure

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
2. (Cont)	e. (Cont)	into outer enclosure. Route wires through hole in rear of inner enclosure. Connect wires that run from terminal boards to conduits. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2.
	f. Poor ground connections.	Set multimeter to ohms. Connect meter leads to each of the following points: TB2-2 to outer enclosure; TB2-2 to TB3-3; TB2-2 to P1-3, 4, 16, 17; TB2-2 to battery negative lead. If the multimeter indicates more than 0 ohms at any of the above points, inspect wiring for broken or loose connections, inspect plugs for bent or broken pins, and inspect conduit for poor connections.
3. No alarms.	a. Shorted or broken wires, loose connections, or bent pins.	a. Set multimeter to dc volts. Connect positive meter lead to TB1-2 and negative meter lead to TB2-2. Ensure that an alarm condition is being presented by the Control Unit. b. If meter indicates 5 +0.5 vdc, turn power switch S3 to POWER OFF. Inspect wiring and Pi/J1 for shorts, frayed wires, bent pins, or foreign material. P1-12, 13, and 24 carries 5 vdc, which is shorted to P1-25 will not allow an alarm to be received by the Audible Alarm. c. Set multimeter to ac volts. Connect leads to P1-9 and P1-23. If meter indicates 12 +2 vac, inspect wiring from P1 to TB3 and T2 for broken wires, loose connections, or bent pins. d. Connect meter leads to TB3-6 and TB3-7. If meter indicates 18 ±2 vac, inspect wiring from T2 to TB3 and speaker DS1.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
3. (Cont)	b. Defective electronics assembly.	a. Set multimeter to dc volts. Connect positive meter lead to TB2-3 and negative meter lead to TB2-2. b. If meter indicates 5 +0.5 vdc, replace the electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing from outer enclosure. (1) To remove electronics assembly, loosen collar on connect P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers and disconnect connector J1 from P1. Remove electronics assembly mounting screws from rear of inner enclosure. Remove electronics assembly. (2) To install new electronics assembly, position assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers, and washers. Slide inner enclosure into outer enclosure. Route wires through hole in rear of inner enclosure. Connect wires that run from terminal boards to conduits. Align notch on P2 to J2. Lock metal tabs together and tighten collar on connector P2. c. Set multimeter to ac volts. Connect leads to P1-9 and P1-23. d. If meter indicates less than 1 vac, replace electronics assembly.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
3. (Cont)	c. Defective audio output transformer T2.	a. Set multimeter to ac volts. Connect leads to TB3-6 and TB3-7. b. If meter indicates less than 1 vac, replace audio output transformer. (1) To remove audio output transformer, note length and location of transformer wires. Disconnect wires. Remove mounting screws and lock washers and remove transformers. (2) To install new transformer, cut transformer wires to proper length and install crimp terminals. Position transformer on inner enclosure and install mounting screws and lock washers. Connect wires to terminal board.
	d. Defective speaker.	a. Set multimeter to ac volts. Connect leads to TB3-6 and TB3-7. b. If meter indicates 18 +2 vac replace speaker. (1) To remove speaker loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Note length and location of speaker wires. Disconnect wires from terminal board. Remove mounting screws from rear of enclosure and remove speaker. (2) To install new speaker, cut speaker wires to proper length and install crimp lugs. Position speaker on inner enclosure. Install mounting screws through rear of inner enclosure. Connect wires to terminal board.
	e. Defective tamper switch.	a. Set the multimeter to ohms. Connect meter leads to tamper switch terminals that have wires connected. Depress the switch plunger. Meter

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
3. (Cont)	e. (Cont)	should indicate 0 ohms. Release the switch plunger. Meter should indicate more than 100,000 ohms. b. If these indications are not correct, replace tamper switch. (1) To remove door tamper switch, remove tamper switch support mounting screws. Push switch through outer enclosure. Tag wires. Use a soldering iron of 50 watts maximum to unsolder wires. Unscrew switch from switch support and remove switch. (2) To install new door tamper switch, screw switch into switch support. Solder wires. Position switch and support on outer enclosure. Install tamper switch support mounting screws. (3) To remove pry-off tamper switch, remove mounting screws from tamper switch bracket. Remove hex nut and push switch through switch bracket. Tag wires. Use a soldering iron of 50 watts maximum to unsolder wires. Remove pry-off tamper switch. (4) To install new pry-off tamper switch, solder wires and position switch in switch bracket. Install hex nut and snap on button cap. Position switch and switch bracket on inner enclosure and install mounting screws.
	f. Poor or unbroken ground connections.	a. Set multimeter to ohms. Connect meter leads to each of the following points: TB2-2 to outer enclosure; TB2-2 to TB3-3; TB2-2 to P1-3, 4, 16, 17; TB2-2 to P1-23; TB2-2 to battery negative lead.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
3. (Cont)	f. (Cont)	b. If the multimeter indicates more than 0 ohms at any of the above points, inspect wiring for broken or loose connections, inspect plugs for bent or broken pins, and inspect conduit for poor connections.
	g. Defective power transformer T1.	a. Ensure that power switch S1 in Control Unit is turned off. Slide inner enclosure part way out. Remove screws that secure switch bracket. Lower switch bracket to gain access to terminal on switch S3. Ensure that switch S3 is on. Set multimeter to ohms. Connect meter leads to S3-1 and 2 (red wires). Note meter indication. Connect meter leads to S3-3 and 4 (black wires). Note meter indication. b. If meter indicates 0 ohms, inspect wiring for broken or loose connections at the following points: fuse F1 to S3-4; S3-3 to T1; T1 to TB3-1 and 2; TB3-1 and 2 to P1-l and 2; battery red lead to S3-2; S3-1 to P1-19. c. If wiring connections are good, replace power transformer. (1) To remove transformer, note length and connection points of transformer wires. Disconnect wires. Remove transformer. (2) To install new transformer, cut transformer wires to proper length and install crimp lugs. Position transformer on inner enclosure and install mounting screws and washers. Connect transformer wires.
	h. Defective battery.	a. Interrupt ac power from Control Unit. Set multimeter to dc volts. Connect positive meter lead to red battery terminal and negative meter lead to black battery terminal. Ensure that power switch S3 is set to POWER ON. Meter should indicate 26 vdc or more.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
3. (Cont)	h. (Cont)	b. If meter indicates less than 21 vdc, replace battery. (1) To remove battery, disconnect battery wires from battery. Remove screw and washer from battery clamp bracket and remove battery. (2) To install new battery, position battery and battery clamp bracket. Install screw and washer. Connect battery wires to battery.
4. Low Audible Alarm sound level.	a. Defective battery.	a. Interrupt ac power from Control Unit. Set multimeter to dc volts. Connect positive meter lead to red battery terminal and negative meter lead to black battery terminal. Ensure that power switch S3 is set to POWER ON. Meter should indicate 21 vdc or more. b. If meter indicates less than 21 vdc, replace battery. (1) To remove battery, disconnect battery wires from battery. Remove screw and washer from battery clamp bracket and remove battery. (2) To install new battery, position battery and battery clamp bracket. Install screw and washer. Connect battery wires to battery.
	b. Defective power transformer T1.	a. Set multimeter to ac volts. Connect leads to TB3-1(+) and TB3-2(-). b. If meter indicates less than 60 vac, replace defective power transformer. (1) To remove transformer, note length and connection location of transformer wires. Disconnect wires. Remove mounting screws and washers. Connect transformer wires. (2) To install new transformer, cut transformer wires to proper length and install crimp terminals. Position transformer on inner enclosure and install mounting screws and washers. Connect transformer wires.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
4. (Cont)	c. Defective electronics assembly.	a. Set multimeter to ac volts. Connect leads to P1-9 (+) and P1-23 (-). b. If meter indicates less than 10 vac, replace the electronics assembly. **CAUTION** Inner enclosure is heavy. Use caution when removing from outer enclosure. (1) To remove electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Remove screws, lock washers, and washers and disconnect connector J1 from P1. Remove electronics assembly mounting screws from rear of of inner enclosure. Remove electronics assembly. (2) To install new electronics assembly, position electronics assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers, and washers. Slide inner enclosure into outer enclosure. Route wires through closure. Connect wires that run from terminal boards to conduits. Align notch on P2 to J2. Connect P2 to J2. Lock metal tabs together and tighten collar on connector P2.
	d. Broken wires, loose connections, or bent pins.	a. Set multimeter to ac volts. Connect leads to P1-9 (+) and P1-23(-). b. If meter indicates 12 +2 vac, inspect wiring from P1 to TB3 and T2 for broken wires, loose connections, or bent pins. c. Connect leads to TB3-6 and TB3-7. If meter indicates 18 +2 vac, inspect wiring from T2 to TB3 and the speaker.

Table 5-1. Troubleshooting Procedures - Continued

Trouble	Probable cause	Corrective action
4. (Cont)	e. Defective audio output transformer T2.	a. Set multimeter to ac volts. Connect leads to TB3-6 and TB3-7. If meter indicates less than 16 vac, replace audio output transformer. (1) To remove transformer, note length and location of transformer wires. Disconnect wires. Remove mounting screws and lock washers and remove transformer. (2) To install new transformer, cut transformer wires to proper length and install crimp terminals. Position transformer on inner enclosure and install mounting screws and lock washers. Connect wires to terminal board.
	f. Defective speaker.	a. Set multimeter to ac volts. Connect leads to TB3-6 and TB3-7. If meter indicates 18 +2 vac, replace speaker. (1) To remove speaker, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide the inner enclosure out of the outer enclosure. Place inner enclosure on bench. Note length and location of speaker wires. Disconnect wires from terminal board. Remove mounting screws from rear of enclosure and remove speaker. (2) To install new speaker, cut speaker wires to proper length and install crimp lugs. Position speaker on inner enclosure. Install mounting screws through rear of inner enclosure. Connect wires to terminal board.

Section III. GENERAL MAINTENANCE.

5-4. MAINTENANCE ACTION. The extent of direct and general support maintenance is governed by the Maintenance Allocation Chart (MAC), Appendix B. The MAC authorizes on-site test and replacement of the electronics assembly, fuse holder assembly, speaker, audible output transformer, power switch, tamper switches, power transformer, battery, capacitors, and connectors. The MAC also authorizes inspection and replacement of the fuse holder assembly, battery, and connectors. Periodic testing of the Audible Alarm is not scheduled because the J-SIIDS is maintained in continuous operation. Cleaning the exterior of equipment cabinets is required periodically to maintain equipment free of debris. Maintain louvers in cabinet door and holes in face plate in an open and free condition.

Section IV. REMOVAL AND REPLACEMENT OF MAJOR COMPONENTS AND ASSEMBLIES

WARNING

Before removing any components turn off power switch S1. After replacement of components, turn on power switch S1.

5-5. REMOVAL AND INSTALLATION PROCEDURES.

a. To remove the electronics assembly, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide inner enclosure out of outer enclosure. Place inner enclosure on bench. Remove screws, lock washers and washers, and disconnect connector J2 from P1. Remove electronics assembly mounting screws from rear of inner enclosure.

b. To install, position new electronics assembly on inner enclosure. Install mounting screws through rear of inner enclosure. Connect J1 to P1 and install screws, lock washers and washers. Slide inner enclosure into outer enclosure. Route wires through hole in rear of inner enclosure. Connect wires running from terminal boards to conduits. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2.

c. To remove speaker, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Tag and disconnect wires that run from terminal boards to conduit. Slide inner enclosure out of outer enclosure. Place inner enclosure on bench. Note length and location of speaker wires. Disconnect wires from terminal board. Remove mounting screws from rear of enclosure and remove speaker.

d. To install new speaker, cut speaker wires to same length as wires on old speaker. Trim insulation from 1/8 inch (3.175 mm) of end of wires and install crimp lugs. Insert mounting screws from rear of enclosure and tighten to secure. Connect wires to terminal boards.

e. To remove audio output transformer, note length and location of transformer wires. Disconnect wires. Remove mounting screws and lock washers, and remove transformer.

f. To install new transformer, cut transformer wires to proper length and install crimp terminals. Position transformer on inner enclosure and install mounting screws and lock washers. Connect wires to terminal board.

g. To remove capacitor, tag and remove wires. Loosen screw on mounting bracket and remove capacitor.

h. To install, position new capacitor in mounting bracket and tighten mounting screw. Connect wires to capacitor terminals.

i. To remove door tamper switch, remove tamper switch support mounting screws. Push switch through outer enclosure. Tag wires and use a soldering iron of 50 watts maximum to unsolder wires. Unscrew switch from switch support and remove switch.

j. To install new door tamper switch, screw switch into switch support. Solder wires to switch terminals. Position switch and support on outer enclosure. Install tamper switch support mounting screws.

k. To remove pry-off tamper switch, remove mounting screws from tamper switch bracket. Remove snap on button cap. Remove hex nut and push switch through switch bracket. Tag wires and use a soldering iron of 50 watts maximum to unsolder wires. Remove tamper switch.

l. To install new pry-off tamper switch, solder wires to switch terminals and position in switch bracket. Install hex nut and snap on button cap. Position switch and switch bracket on inner enclosure mounting bracket and install mounting screws.

m. To remove power transformer, note length and connector location of transformer wires. Disconnect wires. Remove mounting screws and washers and remove transformer.

n. To install new transformer, cut transformer wires to proper length and install crimp terminals. Position transformer on inner enclosure and install mounting screws and washers. Connect transformer wires.

o. To remove power switch, slide inner enclosure part way out of outer enclosure. Remove screws from switch bracket. Lower switch bracket to gain access to power switch. Tag wires and use a soldering iron of 50 watts maximum to unsolder wires. Remove knurled nut and remove power switch.

p. To install, position new power switch bracket and install knurled nut. Solder switch wires to switch terminals. Position switch bracket on inner enclosure and install mounting screws. Slide inner enclosure into outer enclosure.

q. To remove battery, disconnect battery wires from battery. Remove screw and washer from battery clamp bracket and remove battery.

r. To install, position new battery and battery clamp bracket. Install screw and washer. Connect battery wires to battery.

s. To remove connector P2/J2, loosen collar on connector P2. Turn metal tab 90 degrees and disconnect P2 from J2. Unscrew collar and tag wires. Use a soldering iron of 50 watts maximum to unsolder wires on P2 and J2. Remove hex nut and remove connector.

t. To install new connector P2/J2, position J2 on inner enclosure mounting bracket and install hex nut. Position collar and metal tab on wire. Solder wires on P2/J2. Align notch on P2 with J2 and connect P2 to J2. Lock metal tabs together and tighten collar on connector P2.

u. To remove connector P1, loosen screws and disconnect P1 from J2. Tag wires. Use a soldering iron of 50 watts maximum to unsolder wires.
Remove connector P1.

v. To install new connector P1, solder wires to connector. Connect to J1 and tighten screws.

w. To remove fuse holder assembly, slide inner enclosure part way out of outer enclosure. Remove screws from switch bracket. Lower switch bracket to gain access to fuse holder assembly. Tag wires and use a soldering iron of 50 watts maximum to unsolder wires. Remove hex nut and remove fuse holder assembly.

x. To install new fuse holder assembly, position assembly in switch bracket and install hex nut. Solder wires. Position switch bracket on inner enclosure and install mounting screws. Slide inner enclosure into outer enclosure.

y. To remove varistor, remove screws from barrier strip cover and remove barrier strip cover. Note varistor wire connection on TB1. Loosen terminal screws and remove varistor.

z. To install new varistor, install insulation tubing on varistor wires. Connect wires to TB1 and tighten terminal screws. Position barrier strip cover and install mounting screws.

WARNING

Operation of this equipment presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel. Authorized protective equipment must be worn by all personnel in the work area.

aa. After replacing major components or assemblies, test the Audible Alarm for proper operation. Set Control Unit POWER switch to ON. Set Control Unit mode switch to SECURE. Initiate an intrusion alarm. The alarm should sound after expiration of time-delay period. Set Control Unit mode switch to TEST/ RESET and then to ACCESS. The alarm should stop. Using the key, unlock and slowly open Audible Alarm outer enclosure door. The Audible Alarm should sound when door is opened 1/8 to 1/4 inch. Place the door tamper switch in the maintenance position. Set the Control Unit mode switch to TEST/RESET and then to ACCESS. The alarm should stop. Short the outer enclosure to the inner enclosure. The Audible Alarm should sound. Remove the short. Set the Control Unit mode switch to TEST/ RESET and then to ACCESS. The alarm should stop. Using the key, close and lock the Audible Alarm outer enclosure door. The Audible Alarm should sound. Set the Control Unit mode switch to TEST/RESET and then to ACCESS. The alarm should stop.

CHAPTER 6

REPAIR OF AUDIBLE ALARM

This chapter is not applicable to this equipment.

APPENDIX A

REFERENCES

1. DEMOLITION — Procedures for Destruction of Equipment to Prevent Enemy Use
   TM 750-244-3

2. FIRE PROTECTION — Hand Portable Fire Extinguishers Approved for Army Users
   TB5-4200-200-10

3. MAINTENANCE — The Army Maintenance Management System
   DA PAM 738-750.

4. TRI-SERVICE MANUALS

   DMWR 5-6350-264 — Depot Maintenance Work Requirement
   NAVELEX EE181-AA-MMD-010/E121
   J-SIIDS MWR
   AIR FORCE T.O. 31S9-4-1-213

   TM 5-6350-264-14-1 — Installation, Operation and Checkout Procedures
   NAVELEX EE181-AA-INM-020/E121
   J-SIIDS INS
   AIR FORCE T.O. 31S9-4-1-201

   TM 5-6350-264-14&P-2 — Transceiver, Ultrasonic Signal and Processor, Ultrasonic Motion Signal
   NAVELEX EE181-AA-OMI-030/E121
   RT1161 M9443
   AIR FORCE T.O. 31S9-2FSS9-1-2

   TM 5-6350-264-14&P-3 — Receiver Passive Signal, Ultrasonic and Processor, Passive Signal, Ultrasonic
   NAVELEX EE181-AA-OMI-040/E121
   R1860 M9443
   AIR FORCE T.O. 31S9-2FSS9-1-3

   TM 5-6350-264-14&P-4 — Detector, Vibration Signal and Processor, Vibration Signal
   NAVELEX EE181-AA-OMI-050/E121
   DT546 M9442
   AIR FORCE T.O. 31S9-2FSS9-1-4

   TM 5-6350-264-14&P-5 — Switch, Balanced Magnetic
   NAVELEX EE181-AA-OMI-060/E121
   SA-1955
   AIR FORCE T.O. 31S9-2FSS9-1-5

   TM 5-6350-264-14&P-6 — Sensor, Grid Wire
   NAVELEX EE181-AA-OMI-070/E121
   DT-545
   AIR FORCE T.O. 31S9-2FSS9-1-6

   TM 5-6350-264-14&P-7 — Sensor, Capacity Proximity
   NAVELEX EE181-AA-OMI-080/E121
   DT-548
   AIR FORCE T.O. 31S9-2FSS9-1-7

TM 5-6350-264-14&P-8 NAVELEX EE181-AA-OMI-090/E121 SA-1954 AIR FORCE T.O. 31S9-2FSS9-1-8	Switch, Alarm Latching
TM 5-6350-264-14&P-9 NAVELEX EE181-AA-OMI-100/E121 DZ-204 AIR FORCE T.O. 31S9-2FSS9-1-9	Alarm, Audible
TM 5-6350-264-14&P-10 NAVELEX EE181-AA-OMI-11O/E121 C-9412 AIR FORCE T.O. 31S9-2FSS9-1-10	Control Unit, Alarm Set
TM 5-6350-264-14&P-11 NAVELEX EE181-AA-OMI-120/E121 C-7359-60-1 AIR FORCE T.O. 31S9-2FSS9-1-11	Cabinet, Monitor, Type A, Type B, Type C and Monitor Module, Status, Monitor Module, Alarm
TM 5-6350-264-14&P-12 NAVELEX EE181-AA-OMI-130/E121 R1861-T1257 AIR FORCE T.O. 31S9-2FSS9-1-12	Receiver, Data and Transmitter, Data
TM 5-6350-264-14&P-13 NAVELEX EE181-AA-OMI-140/E121 DT-547 AIR FORCE T.O. 31S9-2FSS9-1-13	Sensor, Magnetic Weapons (DT-547)
TB 5-6350-264 NAVELEX EE181-AB-OMI-010/E121 J-SIIDS AIR FORCE T.O. 3159-4-1-111	Selection and Application of Joint Services Interior Intrusion Detection System

5.	PAINTING SB 11-573	Painting and Preservation Supplies Available for Field Use for Electronic Equipment
	TM 43-0139	Painting Instructions for Field Use
6.	RADIOACTIVE MATERIAL TB 43-0141	Instructions for Safe Handling, Maintenance, Storage, and Disposal of Radioactive Commodities
7.	SHIPMENT AND STORAGE TM 740-90-1	Administrative Storage of Equipment

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced from section II.

d. Section IV contains supplemental instructions or explanatory notes for a particular maintenance function. (Not Applicable)

B-2. MAINTENANCE FUNCTIONS. Maintenance functions are defined as follows:

a. **Inspect**. To determine the serviceability of an item by comparing its physical, mechanical and/or electrical characteristics with established standards through examination.

b. **Test.** To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. **Service.** Operations required periodically to keep an item in proper operating condition, i.e., to clean, to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. **Adjust.** To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. **Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.

f. **Calibrate.** To determine and cause corrections to be made, or to be adjusted on instruments for test, measuring and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standing of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. **Install.** The act of emplacing, seating, or fixing into position an item, part, or module in a manner to allow the proper functioning of an equipment or system.

h. **Replace.** The act of substituting a serviceable like part, subassembly, or module for an unserviceable counterpart.

i. **Repair.** The application of maintenance services (inspect, test, service, adjust, align, calibrate, or replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module, end item or system.

j. **Overhaul.** That maintenance effort (service/ actions) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. **Rebuild.** Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipments/components.

B-3. COLUMN ENTRIES.

a. **Column 1, Group Number.** Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. **Column 2, Component/Assembly.** Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. **Column 3, Maintenance Function.** Column 3 lists the functions to be performed on the item listed in column 2.

d. **Column 4, Maintenance Level.** Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3.This figure represents the active time required to perform the maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate "work time" figures will be shown for each level. The number of man-hours specified by the "work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

C.....Operator or crew

O .....Organization maintenance

F .....Direct support maintenance

H.....General support maintenance

D.....Depot maintenance

e. **Column 5, Tools and Equipment.** Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, test, and support equipment required to perform the designated function.

f. **Column 6, Remarks.** Column 6 contains an alphabetic code which leads to the remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

Section II. MAINTENANCE ALLOCATION CHART

for

Audible Alarm (BZ-204)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
01	Audible Alarm	Inspect			0.4				
		Test			2.3			1	
		Repair			7.4			1	
		Replace			1.5				
	Electronics Assy	Test			0.4			1	
		Replace			0.9				

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

for

Audible Alarm (BZ-204)

(1) Reference Code	(2) Maintenance Category	(3) Nomenclature	(4) National Stock number (NSN)	(5) Tool number
1.	F	Multimeter	6625-00-019-0815	Vom

APPENDIX C

ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

1. SCOPE. This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of organizational, direct support, general support of the Audible Alarm. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

2. GENERAL. In addition to this section, Introduction, this Repair Parts and Special Tools List is divided into the following sections:

a. Section II. *Repair Parts List.* A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name sequence. Repair parts kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in this section. Items listed are shown on the associated illustration(s)/figure(s).

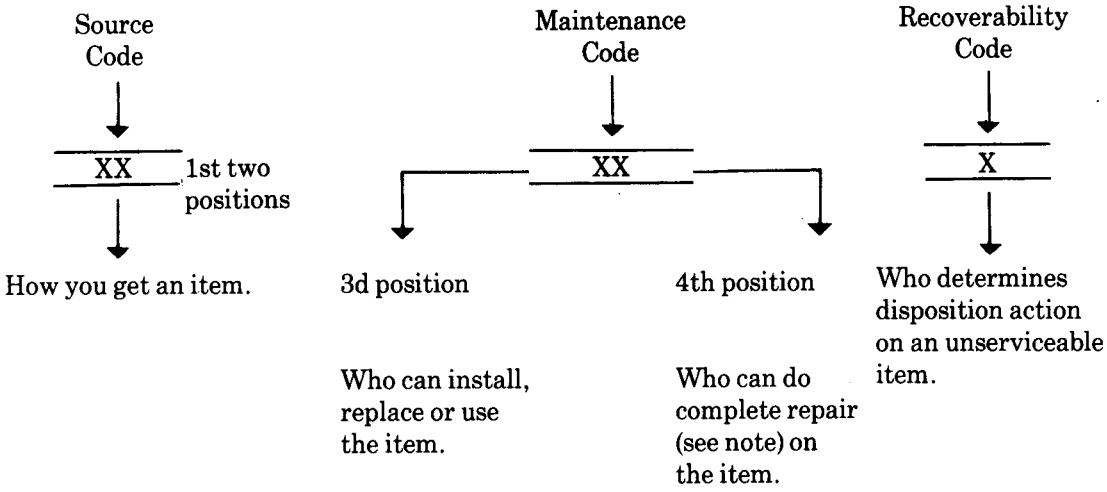
b. Section III. *Special Tools List.* A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

c. Section IV. *National Stock Number and Part Number Index.* A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

3. EXPLANATION OF COLUMNS (SECTIONS II AND III).

a. ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

b. SMR Code (Column (2)). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end/equipment. Explanations of source codes follows:

Code	Explanation
PA PB PC PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3d position of the SMR code. **NOTE: Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.

Code	Explanation
MO—Made at org/ AVUM category MF—Made at DS/ AVUM category MH—Made at GS category ML—Made at Specialized Repair Activity (SRA) MD—Made at Depot	Items with these codes are not to be requested/requistitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION and USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in the RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

AO —Assembled by org/AVUM category AF —Assembled by DS/AVUM category AH —Assembled by GS category AL —Assembled by SRA AD —Assembled by Depot	Explanation Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the items are assembled at a higher level, order the item from the higher level of maintenance.

Code	Explanation
XA -	Do not requisition an "XA" -coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
XB -	If an "XB" item is not available from salvage, order it using the FSCM and part number given.
XC -	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD -	Item is not stocked. Order an "XD" -coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 70042.

(2) Maintenance Code. Maintenance codes tells you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance.

Code	Application/Explanation
C	-Crew or operator maintenance done within organizational or aviation unit maintenance.
0	-Organizational or aviation unit category can remove, replace, and use the item.
F	-Direct support or aviation intermediate level can remove, replace, and use the item.
H	-General support level can remove, replace, and use the item.
L	-Specialized repair activity can remove, replace, and use the item.
D	-Depot level can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions.) NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes. This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	-Organizational or (aviation unit) is the lowest level that can do complete repair of the item.
F	-Direct support or aviation intermediate is the lowest level that can do complete repair of the item.

Code	Application/Explanation
H	-General support is the lowest level that can do complete repair of the item.
L	-Specialized repair activity repair of the item.
D	-Depot is the lowest level that can do complete repair of the item.
Z	-Nonreparable. No repair is authorized.
B	-No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item). However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability Codes	Application/Explanation
Z	-Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SMR Code.
O	-Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit level.
F	-Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support or aviation intermediate level.
H	-Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.

Recoverability Codes	Application/Explanation
D	-Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
L	-Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).
A	-Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. FSCM (Column (3)). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. PART NUMBER (Column (4)). Indicates the primary number used by the manufacturer, (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE

When you use a NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. DESCRIPTION AND USABLE ON CODE (UOC) (Column (5)). This column includes the following information:

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The physical security classification of the item is indicated by the parenthetical entry, e.g., Phy Sec C1 - Confidential, Phy Sec C1 (S) - Secret, Phy Sec C1 (T) - Top Secret.

(3) Items that are included in kits and sets are listed below the name of the kit or set.

(4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.

(5) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.

(6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC).

(7) The usable on code, when applicable (see paragraph 5, Special Information).

(8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.

(9) The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

f. QTY (Column (6)). The QTY (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and may vary from application to application.

4. EXPLANATION OF COLUMNS (SECTION IV).

a. NATIONAL STOCK NUMBER (NSN) INDEX.

(1) STOCK NUMBER column. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN, i.e. (5305-01-5741467). When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) FIG. column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

(3) ITEM column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. PART NUMBER INDEX. Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

(1) FSCM column. The Federal Supply Code for Manufacturer (FSCM) is a 5digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) *PART NUMBER column.* Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

(3) STOCK NUMBER column. This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and FSCM columns to the left.

(4) FIG. column. This column lists the number of the figure where the item is identified/located in Sections II and III.

(5) ITEM column. The item number is that number assigned to the item as it appears in the figure referenced in adjacent figure number column.

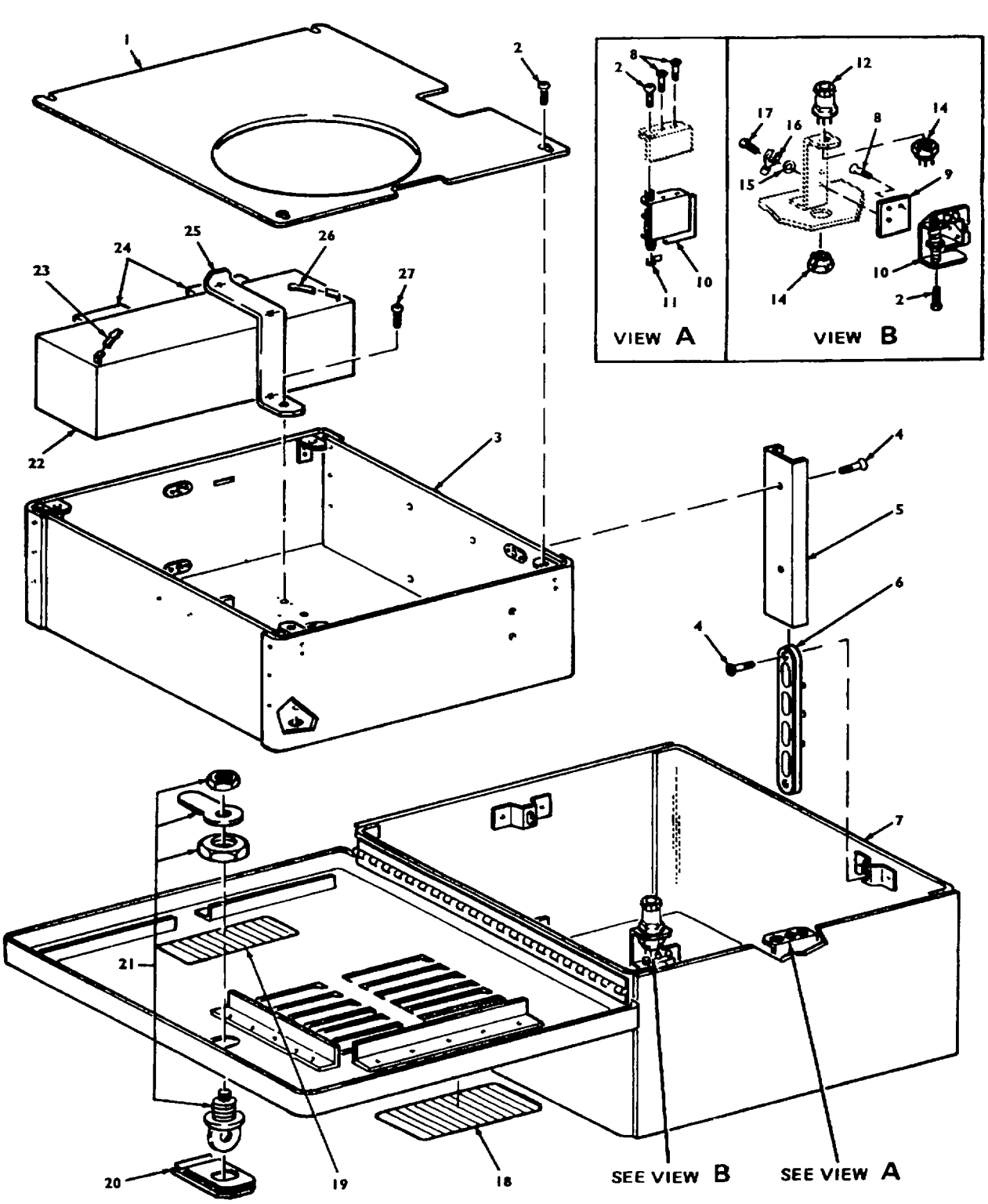


Figure C-1. Audible Alarm BZ-204/FSS-9(V) (Sheet 1 of 2)

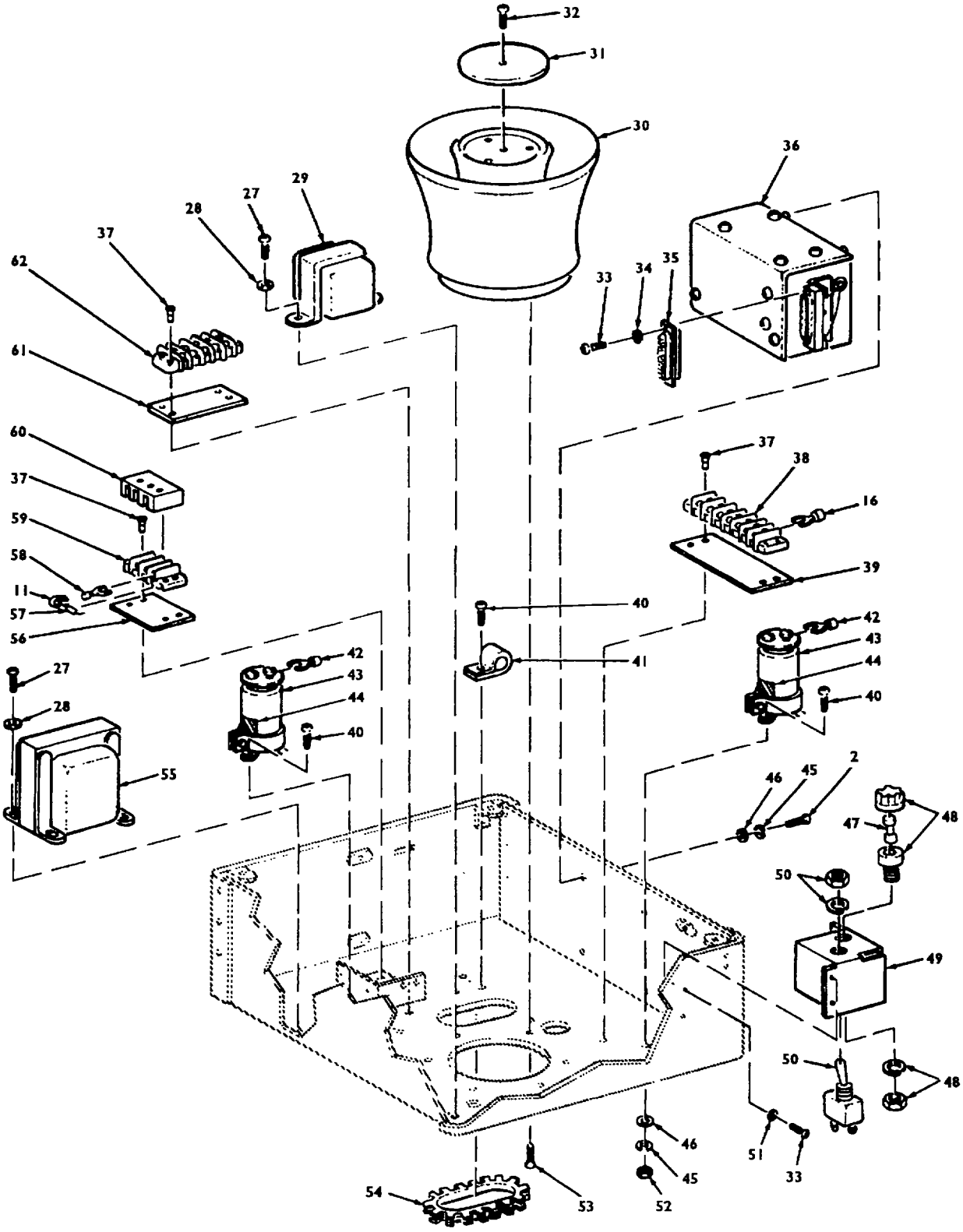


Figure C- 1. Audible Alarm BZ-204/FSS-9(V) (Sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01 AUDIBLE ALARM	
				FIG. C-1 AUDIBLE ALARM BZ-204/FSS-9 (V)	
1	XBFZZ	97403	13220E3721	COVER, INNER HOUSING	1
2	PAFZZ	96906	MS35206-230	SCREW, MACHINE, PNH	9
3	XBFZZ	97403	13220E3718	HOUSING	1
4	PAFZZ	96906	MS35190-250	SCREW, MACHINE	12
5	XBFZZ	97403	13220E3705	SUPPORT, HOUSING	3
6	XBFZZ	97403	13220E3742	SUPPORT, ENCLOSURE	3
7	XBFZZ	97403	13220E3743	ENCLOSURE, AUDIBLE	1
8	XDFZZ	96906	MS35 190-234	SCREW, MACHINE	2
9	XDFZZ	97403	13220E3767	SUPPORT, SPACER	1
10	PAFZZ	96906	MS 16106-1	SWITCH, SENSITIVE	2
11	PAFZZ	96906	MS3367-4-9	STRAP, TIEDOWN	35
12	PAFZZ	13511	126-214-1000	CONNECTOR, RECEPTACLE	I
13	PAFZZ	13511	126-215-1002	CONNECTOR, RECEPTACLE	I
14	XBFZZ	97403	13220E3726	PLUG, HOLE	I
15	XBFZZ	96906	MS35335-29	WASHER, LOCK	2
16	XDFZZ	97403	13220E3829- 1	TERMINAL	26
17	PAFZZ	96906	MS35206-21 2	SCREW, MACHINE	2
18	XDFZZ	97403	13220E3766	PLATE, CAUTION	1
19	XBFZZ	97403	13220E3740	PLATE	1
20	XBFZZ	97403	13220E3713	COVER, LOCK	1
21	PAFZZ	24153	60-4055-104-1012	LOCK, SECURITY CAM	1
22	PCFZZ	97403	13220E3712	BATTERY, AUDIBLE ALARM	1
23	PAFZZ	00779	41274	TERMINAL QUICK DISC	1
24	XDFZZ	81348	ZZ-R-765	RUBBER, SILICONE CLASS I B-GRADE40, 50, 600R70-COLOR, GRAY-SIZE, I IN X I INX062TK	2
25	XBFZZ	97403	13220E376 I1	CLAMP, BATTERY	1
26	XDFZZ	97403	13220E3623	TAB, CRIMP	1
27	PAFZZ	97403	MS35206-245	SCREW, MACHINE, PNH	7
28	XDFZZ	96906	MS27183-41	WASHER, FLAT	6
29	PAF7Z	07618	34A013-1	TRANSFORMER, POWER	1
30	PAFZZ	97403	13220E3708	LOUDSPEAKER, PERMANENT	1
31	XBFZZ	97403	13220E3714	PLATE, SPEAKER	1
32	PAFZZ	96906	MS35206-233	SCREW, MACHINE, PNH	1
33	PAFZ7	96906	MS35206-213	SCREW, MACHINE, PNH	18
34	PAF7Z	96906	MS35338-40	WASHER, LOCK	2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
35	PAFZZ	97403	13220E3732-2	CONNECTOR	1
36	PAFZZ	97403	13220E3701	ELECTRONICS ASSEMBLY	1
37	XDFZZ	97403	13220E2998-6	RIVET, BLIND	6
38	XBFZZ	97403	13220E3823-7	BARRIER STRIP	1
39	XBFZZ	97403	13220E3840-7	STRIP, MARKER	1
40	PAFZZ	96906	MS35206-227	SCREW, MACHINE	7
41	XBFZZ	97403	13220E3621-3	CLAMP, CABLE	3
42	PAFZZ	96906	MS35431-7	TERMINAL LUG	4
43	PAFZZ	97403	13220E37 15-1	CAPACITOR	2
44	XDFZZ	81349	MIL-1-695 TYPE F	1NSULATION ELEC PAPER 2.50 X .75 X.005 THK	2
45	PAFZZ	96906	MS35338-41	WASHER, LOCK	8
46	PAFZZ	96906	MS27183-6	WASHER, FLAT	8
47	PAFZZ	81349	FO2B250V2A	FUSE	1
48	PAFZZ	81349	FHN-20G	FUSEHOLDER	1
49	XBFZZ	97403	13220E3717	BRACKET, SWITCH, ALARM	1
50	PAFZZ	27193	7590K6	SWITCH, TOGGLE	1
51	PAFZZ	96906	MS27183-4	WASHER, FLAT	4
52	PAFZZ	96906	MS35649-262	NUT, PLAIN-HEXAGON	4
53	PAFZZ	96906	MS24629-46	SCREW	6
54	PAFZZ	96906	MS21266-2N	GROMMET, NONMETALLIC	1
55	PAFZZ	07618	34A012-1	TRANSFORMER, AUDIO	1
56	XBFZZ	97403	13220E3725-3	STRIP, MARKER	1
57	PAFZZ	03508	VISOLAIOA	RESISTOR, VOLTAGE SE	2
58	XDFZZ	97403	13220E3405	TERMINAL, LUG	3
59	XBFZZ	97403	13220E4026-3	BARRIER STRIP	1
60	XBFZZ	97403	13220E3769	COVER, BARRIER	1
61	XBFZZ	97403	13220E3840-5	STRIP, MARKER	1
62	XBFZZ	97403	13220E3823-5	BARRIER STRIP	1

Section III. SPECIAL TOOLS LIST

(Not Applicable)

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5935-00-018-6256	1	12			
5310-00-045-4007	1	45			
5310-00-082-1404	1	46			
6140-00-111-0512	1	22			
5920-00-228-7882	1	47			
6350-00-360-7750	1	29			
6350-00-360-7751	1	55			
5965-00-368-8204	1	30			
6350-00-368-8206	1	36			
5905-00-487-1614	1	57			
5930-00-519-8144	1	10			
5310-00-543-2410	1	34			
5930-00-655-1575	1	50			
5940-00-683-4339	1	42			
5975-00-727-5153	1	11			
5305-00-855-0957	1	53			
5940-00-874-9033	1	23			
5305-00-889-3000	1	2			
5305-00-889-3116	1	33			
5310 00-934-9747	1	52			
5310-00-950-1310	1	51			
5305-00-958-5474	1	4			
5305-00-984-4984	1	40			
5305-00-984-4993	1	32			
5305-00-993-0191	1	17			
5325-01-024-4930	1	54			
5935-01-044-8620	1	13			
5935-01-094-1875	1	35			
9905-01-116-4497	1	18			

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
81349	FHN-20G		1	48
81349	F02B250V2A	5920-00-228-7882	1	47
81349	M11-1-695 TYPE F 2.50x.75x.005THK		1	44
96906	MS 16106-1	5930-00-519-8144	1	10
96906	MS21266-2N	5325-01-024-4930	1	54
96906	MS24629-46	5305-00855-0957	1	53
96906	MS27183-41		1	28
		5310-00-950-1310	1	51
96906	MS27183-6	5310-00-082-1404	1	46
96906	MS3367-4-9	5975-00-727-51531	1	11
96906	MS35190-234		1	8
96906	MS35 190-250	5305-00-958-5474	1	4
96906	MS35206-212	5305-00-993-0191	1	17
96906	MS35206-213	5305-00-889-3116	1	33
96906	MS35206-227	5305-00-984-4984	1	40
96906	MS35206-230	5305-00-889-3000	1	2
96906	MS35206-233	5305-00-984-4993	1	32
97403	MS35206-245		1	27
96906	MS35335-29		1	15
96906	MS35338-40	5310-00-543-2410	1	34
96906	MS35338-41	5310-00-045-4007	1	45
96906	MS35431-7	5940-00-683-4339	1	42
96906	MS35649-262	5310-00-934-9747	1	52
03508	V1501A10A	5905-00-487-1614	1	57
81348	ZZ-R-765		1	24
13511	126-214-1000	5935-00-018-6256	1	12
13511	126-215-1002	5935-01-044-8620	1	13
97403	13220E2998-6		1	37
97403	13220E3621-3		1	41
97403	13220E3623		1	26
97403	13220E3701	6350-00-368-8206	1	36
97403	13220E3705		1	5
97403	13220E3708	596500-368-8204	1	30
97403	13220E3712	6140-00-111-0512	1	22
97403	13220E3713		1	20
97403	13220E3714		1	31
97403	13220E3715-1		1	43
97403	13220E3717		1	49
97403	13220E3718		1	3
97403	13220E3721		1	1
97403	13220E3725-3		1	56
97403	13220E3726		1	14
97403	13220E3732-2	5935-01-094-1875	1	35
97403	13220E3740		1	19

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
97403	13220E3742		1	6
97403	13220E3743		1	7
97403	13220E3761		1	25
97403	13220E3766	9905-01-116-4497	1	18
97403	13220E3767		1	9
97403	13220E3769		1	60
97403	13220E3823-5		1	62
97403	13220E3823-7		1	38
97403	13220E3829-1		1	16
97403	13220E3840-5		1	61
97403	13220E3840-7		1	39
97403	13220E4026-3		1	59
07618	34A012-1	6350-00-360-7751	1	55
07618	34A013-1	6350-00-360-7750	1	29
00779	41274	5940-00-874-9033	1	23
24153	60-4055-104-1012		1	21
27193	7590K6	5930-00-655-1575	1	50

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FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
97403	13220E3742		1	6
97403	13220E3743		1	8
97403	13220E3761		1	29
97403	13220E3766	9905-01-116-4497	1	21
97403	13220E3767		1	10
97403	13220E3769		1	63
97403	13220E3823-5		1	65
97403	13220E3823-7		1	42
97403	13220E3829-1		1	19
97403	13220E3840-5		1	64
97403	13220E3840-7		1	43
97403	13220E4026-3		1	62
07618	34A012-1	6350-00-360-7751	1	58
07618	34A013-1	6350-00-360-7750	1	33
00779	41274	5940-00-874-9033	1	27
24153	60-4055-104-1012		1	24
27193	7590K6	5930-00-655-1575	1	53
06001	88F235ALA		1	47

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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 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 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 milliters = .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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