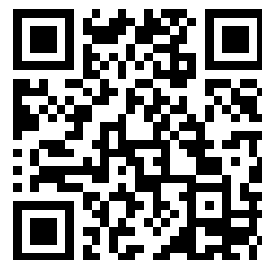
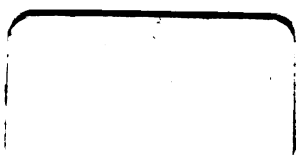

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TM 11-2753

WAR DEPARTMENT TECHNICAL MANUAL



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INSTALLATION OF RADIO AND INTERPHONE EQUIPMENT IN VEHICLE, LANDING, TRACKED (ARMORED) MARK IV, LVT-(A)-4

RESTRICTED. DISSEMINATION OF RESTRICTED MATTER.

No person is entitled solely by virtue of his grade or position to knowledge or possession of classified matter. Such matter is entrusted only to those individuals whose official duties require such knowledge or possession. (See also paragraph 23b, AR 380-5, 15 March 1944.)

WAR DEPARTMENT

FEBRUARY 1945

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TM 11-2753

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WAR DEPARTMENT
WASHINGTON 25, D. C., 6 February 1945

TM 11-2753, Installation of Radio and Interphone Equipment in Vehicle, Landing, Tracked (Armored), Mark IV, LVT-(A)-4, is published for the information and guidance of all concerned.

[A. G. 300.7 (10 Jan 45)]

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The Adjutant General

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For explanation of symbols, see FM 21-6.

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DESTRUCTION NOTICE

WHY—To prevent the enemy from using or salvaging this equipment for his benefit.

WHEN—When ordered by your commander.

HOW—1. Smash—Use sledges, axes, handaxes, pickaxes, hammers, crowbars, heavy tools.
2. Cut—Use axes, handaxes, machetes.
3. Burn—Use gasoline, kerosene, oil, flame throwers, incendiary grenades.
4. Explosives—Use firearms, grenades, TNT.
5. Disposal—Bury in slit trenches, fox holes, other holes. Throw in streams. Scatter.

USE ANYTHING IMMEDIATELY AVAILABLE FOR DESTRUCTION OF THIS EQUIPMENT

WHAT—1. Smash—All vacuum tubes, crystals, control dials, coupling coils, transformers, speakers in receivers, external loudspeakers, microphones, headsets, dynamotors, and cable connectors.
2. Cut—All connecting wires, cording, and cabling.
3. Burn—All equipment and all associated training, technical, and installation manuals.
4. Bury or scatter—All remains, after destroying their usefulness.

DESTROY EVERYTHING

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SAFETY NOTICE

This equipment uses high voltages which are dangerous to life. Observe all safety precautions.

- 1. Make no adjustment with the power switch on.**
- 2. Do not operate the equipment with the shields removed.**
- 3. Do not connect power to any unit of the radio set until operating instructions have been read completely.**

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SECTION I

GUIDE TO USE OF THIS MANUAL

1. Purpose

This manual provides methods and procedure, based upon actual field experience, for installation of radio and interphone equipment in Vehicle, Landing, Tracked (Armored), Mark IV, LVT-(A)-4. Items required to make a complete operating installation are listed for each set. Official nomenclature followed by empty parentheses, such as Headset HS-30-(), is used to indicate any model of equipment regardless of its procurement.

2. Equipment

Installations covered include Radio Sets: SCR-508-(), SCR-528-().

3. Holes and Brackets

Brackets required for installation of the radio set are normally drilled and installed prior to delivery of Vehicle, Landing, Tracked (Armored), Mark IV, LVT-(A)-4. Drilling instructions are given in this manual for any other necessary holes and brackets. Do not relocate any holes or brackets unless absolutely necessary.

4. Preliminary Check

Study the illustrations, the installation methods outlined, and any subsequent changes to this manual before proceeding with installations.

Caution: Vehicle, Landing, Tracked (Armored), Mark IV, LVT-(A)-4 has a 12-volt electrical system. Before installing the radio sets, be sure they are designed for 12-volt operation, or tubes may burn out or dynamotors may be damaged.

5. Operating Check

Carefully study the Technical Manual covering the radio set before trying to operate it; then, make a thorough operating check to determine whether the equipment has been properly installed and is in working order.

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9. Assembly and Installation

Components of Radio Set SCR-508-() or SCR-528-() should be installed in Vehicle, Landing, Tracked (Armored), Mark IV, LVT-(A)-4 as shown in figure 5 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Radio cabinet, in driver's compartment starboard side.	Install as shown in figures 5 and 7 if not already installed.
Antenna A-62 and bracket, on Mounting FT-237-().	Refer to position 3 of figure 3 and install Antenna A-62 as follows: Remove and discard two No. 10 screws from front of left end of Mounting FT-237-(). Secure Antenna A-62 to bracket (fig. 2) provided with four No. 6-32 x 1/4" screws supplied. Secure bracket to left end of Mounting FT-237-() with two No. 10-32 x 1/4" screws supplied.
Cordage CO-213.....	Cut two 36-inch lengths of Cordage CO-213. Strip 6 inches of outer rubber covering from each end of one 36-inch length of cordage. Strip 6 inches of outer rubber covering from one end of other 36-inch length of cordage, and 3 inches of outer rubber covering from other end. Cut exposed part of inner and outer shields, on both ends of each length of cordage, with a pointed instrument. Divide wires of both shields and form two pigtail leads by twisting wires together. Strip insulation from about 1/2-inch of black lead, at point exposed by separation of shield. Twist pigtails formed from shields exposed conductor of black lead and solder joint, using a minimum of solder. Black lead is used for ground as shown in figure 6. Strip insulation from about 1 inch of tip of black lead, and 1/4 inch of other leads. Solder-tin tips.
Mounting FT-237-() and Impedance Matching Kit MX-337/UR, to floor of upper radio cabinet on starboard side of vehicle.	Secure Mounting FT-237-() in driver's compartment as shown in figure 5. Secure Coupling Unit CU-66/UR on bracket (fig. 4) (Item 21, fig. 5) with hardware provided. Secure bracket with coupling unit attached to radio cabinet as shown in figure 5. Connect 3-inch leads from one end of 36-inch length of Cordage CO-213, with 1-inch lengths of spaghetti tubing (Item 29, fig. 5) over each lead, to terminals on Coupling Unit CU-66/UR as shown in figure 6. Slip 1-inch lengths of spaghetti tubing over terminals and tape ends of unused wires. Connect other end of cordage to terminal strip on Mounting FT-237-() as shown in figure 6. Route power Cord CO-278, supplied with Mounting FT-237-(), through hole in right end of mounting, and connect to terminal block on mounting. Pass end of length of Cordage CO-213 with 6-inch prepared ends through other hole in right end of mounting, and connect wires to terminal strip as shown in figure 6. Install connector No. 61007 and Bondnut BL-50 through knock-out holes in top of terminal box located on inside of radio cabinet. Pass Cordage CO-213 and power Cord CO-278 from Mounting FT-237-() through connectors. Make connections to terminal strip inside terminal box as shown in figure 6, using Sta-kon terminals supplied.

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Part and location

Radio Transmitter BC-604-() and Radio Receiver BC-603-().

Dynamotor DM-35, in cabinet of Radio Transmitter BC-604-().

Dynamotor DM-34, in cabinet of Radio Receiver BC-603-(). (Two Dynamotors DM-34 and two Receivers BC-603-() required for Radio Set SCR-508-().)

Radio Transmitter BC-604-(), including necessary crystals, on Mounting FT-237-().

Radio Receiver BC-603-(), on Mounting FT-237-(). (Two Radio Receivers BC-603-() required for Radio Set SCR-508-().)

Remote control unit, Navy type No. 23429, for use with low-impedance accessories.

Remote control unit, Navy type No. 23429, for use with high-impedance accessories.

Method and materials

Radio Transmitter BC-604-() and Radio Receiver BC-603-() used in LVT installations must have modification for receiver disabling and additional modification for increased audio output. Units having receiver-disabling modification are identified by letter M stamped after nomenclature on nameplate. For example, BC-603-DM. See MWO SIG 11-600-4 for receiver-disabling modification. Units modified for increased audio output will be identified by MWO number lettered on unit. See MWO SIG 11-600-6 for increased audio-output modification.

If dynamotor is not already installed in transmitter, install it as follows: Remove crystal case from transmitter cabinet by loosening two screw locks on front panel and pulling out crystal case. Loosen four screw locks holding cover on top of transmitter and remove cover. Dynamotor unit is installed in left rear of transmitter chassis by means of four bolts in its base. Replace crystal case and top cover.

In case Dynamotor DM-34 is not already installed in receiver, install it as follows: Remove chassis from receiver cabinet by loosening screw lock in rear center of cabinet. Dynamotor unit is installed on top rear of receiver chassis by means of four bolts in its base. Replace chassis in case.

Mount in position as shown in view of upper radio cabinet in figure 5, by means of thumbscrew locking devices.

Mount in position as shown in view of upper radio cabinet in figure 5, by means of thumbscrew locking devices.

Remote control unit, Navy type No. 23429 is supplied wired for operation of Navy TCS radio equipment and must be modified for operation with Radio Set SCR-508-() or SCR-528-(). Modify remote control unit using Coupling Unit CU-66/UR with Microphone Assembly AN/URA-1 as shown in figure 6 and as follows: Remove jumpers between terminals 6 and 8 and between terminals 10 and 11. Retain jumper between terminals 5 and 9 and add jumper between terminals 9 and 10. Remove radio I. C. switch from remote control units. Turn switch 180° and replace in remote control units so that switch will be open when in RADIO position.

When Coupling Unit CU-66/UR is not available, modify for use with Headset HS-30-() as shown in figure 8 and as follows: Remove jumpers between terminals 6 and 8, terminals 5 and 9, and terminals 10 and 11. Connect a jumper between terminals 5 and 10. Remove Radio I. C. switch from remote control unit. Turn switch 180 degrees and

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Part and location

Method and materials

Remote control unit, Navy type No. 23429 (item 6, fig. 5) on three junction boxes and radio cabinet terminal box provided.

Headset-Microphone Assembly AN/URA-1.

Mast Base AB-15/GR (item 7, fig. 5), in mast base bracket on top of vehicle, starboard side.

Insulator IN-121 and rubber washer (items 19 and 20, fig. 5), in cab bulkhead, starboard end.

Cable WC-562 (item 15, fig. 5)...

replace in remote control unit so that switch will be open in RADIO position.

Remove covers from three junction boxes and radio cabinet terminal box. Place rubber gasket supplied with remote control unit over rim of boxes. Connect leads from remote control unit to numbered terminals in boxes as shown in figure 6, and secure remote control units to four boxes.

Use Impedance Matching Kit MX-337/UR with Coupling Unit CU-66/UR when Radio Set SCR-508-() or SCR-528-() is wired for low-impedance load (fig. 6). When Headset-Microphone Assembly AN/URA-1 is not available, substitute Headset HS-30-() with Cords CD-933 and CD-307-A and Microphone T-45 with Cord CD-318 for use with impedance matching kit. If impedance Matching Kit MX-337/UR is not available, wire Radio Set SCR-508-() or SCR-528-() for high-impedance load as shown in figure 8. In this case, do not use Headset-Microphone Assembly AN/URA-1. Headset HS-30-() with Cords CD-604 and CD-307-A and Microphone T-45 with Cord CD-318 will be used. Microphone T-17, which is carried as a spare, will also be substituted.

Disassemble Mast Base AB-15/GR by holding lower insulator and turning body of mast base counterclockwise. Install mast base on bracket. Refer to figure 10 and proceed to assemble as follows: Place upper insulator, item 5, and item 6 over hole in mast base bracket. Place small neoprene washer, item 4, over item 5, and place plain washer, item 3, over item 4. Insert body of mast base, item 2, through holes in items 3, 4, 5, and 6, and through mast base bracket. Place large I. T. lockwasher over item 6 and flange of lower insulator, item 7. Insert bolt, item 8 (attached to insulator, item 7), into item 2, from underneath. Turn item 2 clockwise until mast base is tightened securely. Tighten mast base by hand, but be sure that large-toothed lockwasher makes good contact to under side of mast base bracket.

Place rubber washer over Insulator IN-121 to protect flange and install Insulator IN-121 through hole in cab bulkhead as shown in figure 5. Secure insulator with spring clip provided. Insulator IN-121 and connector No. 61007 provided on radio cabinet may be placed over Cable WC-562 during preparation of cable, if desired, to facilitate installation of cable in vehicle

Cut a 10-foot length of Cable WC-562 and prepare one end of it as follows: Strip $4\frac{1}{2}$ inches of outer insulation, $3\frac{1}{2}$ inches of shielding, and 1 inch of inner insulation, leaving 1 inch of inner conductor and 1 inch of shielding exposed. Flare exposed end of shield and fold shield back over outer insulation. Place a No. 1 clamp (fig. 12) over shield and solder

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Part and location

Method and materials

to shield. Use a minimum of heat so that inner insulation will not be injured. Solder-tin 1-inch tip of inner conductor. Connect 1-inch prepared tip of cable to TR binding post on Mounting FT-237-(). Secure clamp, attached to cable, on Mounting FT-237-() by means of No. 10 screw adjacent to TR binding post. Pass Cable WC-562 through connector No. 61007 on corner of radio cabinet and through Insulator IN-121 as shown in figure 5. Refer to figure 10 for preparation of other end of cable for connection to Plug PL-259 (part of Mast Base AB-15/GR). Strip 1 inch of outer insulation, $\frac{3}{8}$ inch of shielding, and $\frac{1}{8}$ inch of inner insulation, leaving $\frac{3}{8}$ inch of inner conductor, $\frac{1}{4}$ inch of inner insulation, and $\frac{3}{8}$ inch of shielding exposed. Remove coupling nut (item 16A, fig. 10) from Plug PL-259 by turning knurled portion clockwise, and place coupling nut over end of cable. Screw insert assembly (item 16B, fig. 10) of Plug PL-259 over end of cable. Solder tip of inner conductor to contact of item 16B, figure 10. Solder insert assembly through four holes and to shield of cable. Replace coupling nut (item 16A, fig. 10) on item 16B, figure 10 by turning knurled portion counterclockwise. Secure Cable WC-562 along starboard bulkhead with clamps provided as shown in figure 5.

Mast Sections MS-116, MS-117,
and MS-118 (items 8, 9, and
10, fig. 5).

Screw mast sections together and install in mast base. Tape joints of sections to prevent loss. When not in use stow sections in Roll BG-56-(). When Mast Sections MS-51, MS-52, and MS-53 are used with Mast Base MP-48 or MP-48-A, Clamps MC-423 and MC-424 are used to secure joints. If Mast Base MP-48 or MP-48-A is used, refer to figure 11 for assembly instructions.

Chest CH-264

Stow spare parts, spare tubes, and headsets in chest. When used with Radio Set SCR-528-(), chest will be placed on Mounting FT-237-() in space provided for a second receiver. When used with Radio Set SCR-508-(), chest will be placed in lower radio cabinet.

Cover BG-96

Place Cover BG-96 over radio set.

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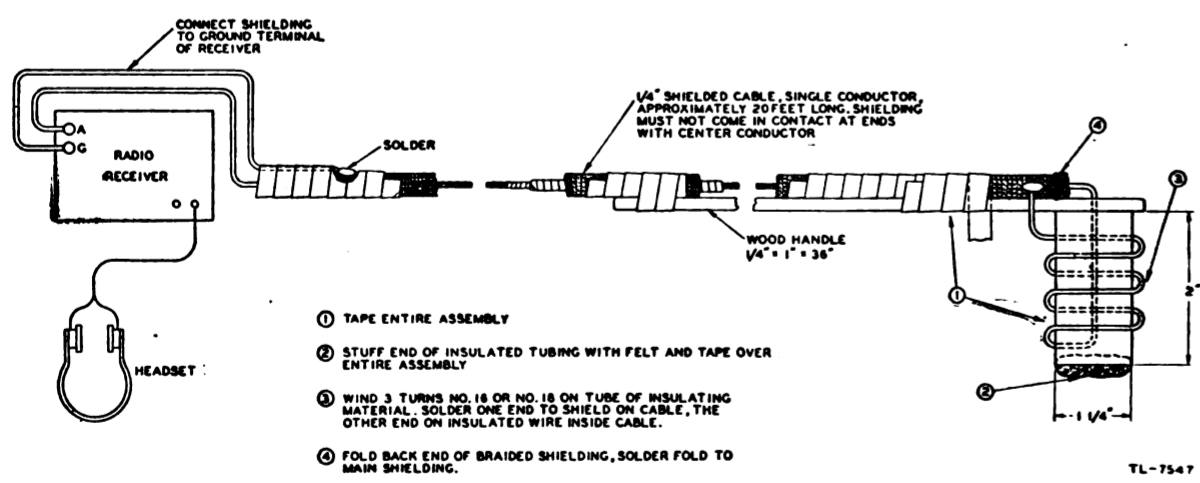


Figure 1. Probe antenna.

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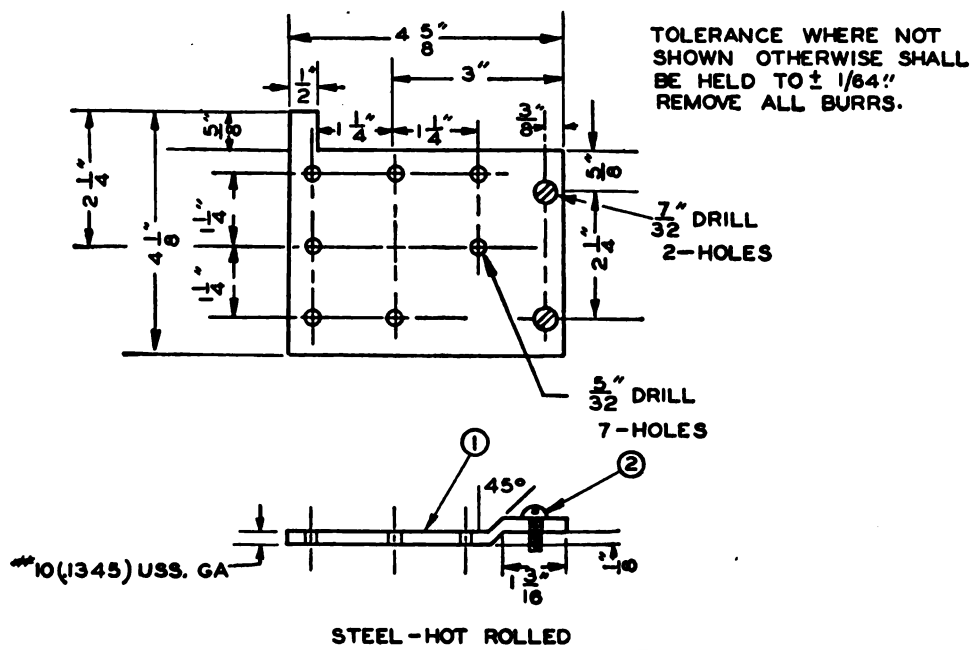
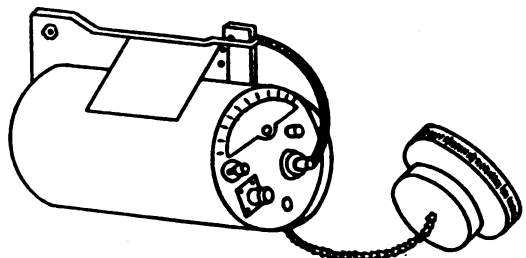
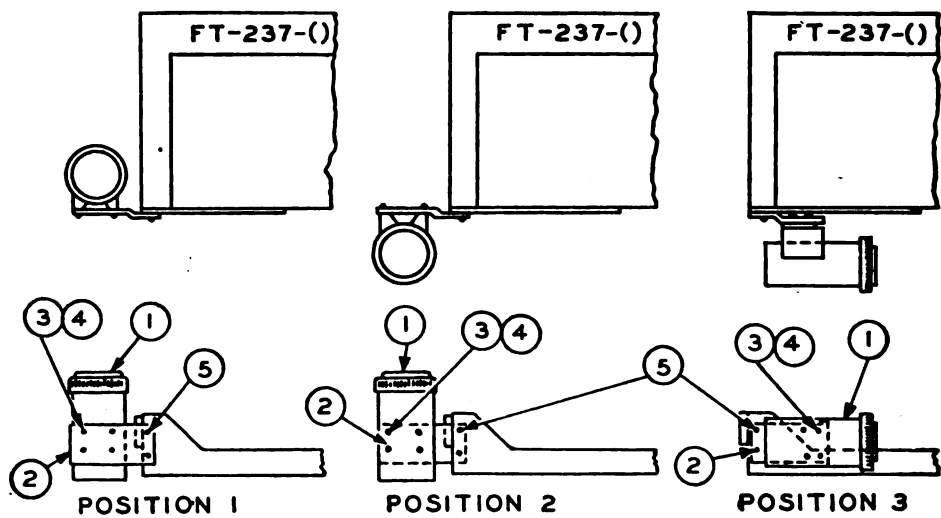


Figure 2. Bracket for Antenna A-62, phantom.

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APPLICATION OF GROUND CLIP

ITEM NO.	NAME OF ITEM AND REMARKS	QUAN. REQ.
1	ANTENNA A-62 (PHANTOM)	1
2	BRACKET	1
3	RD. HD. MACH. SCR. #6-32 X 1/2" FURN. WITH #1	4
4	LOCKWASHER #6 STD. FURN. WITH #1	4
5	RD. HD. MACH. SCR. #10-32 X 5/8"	2

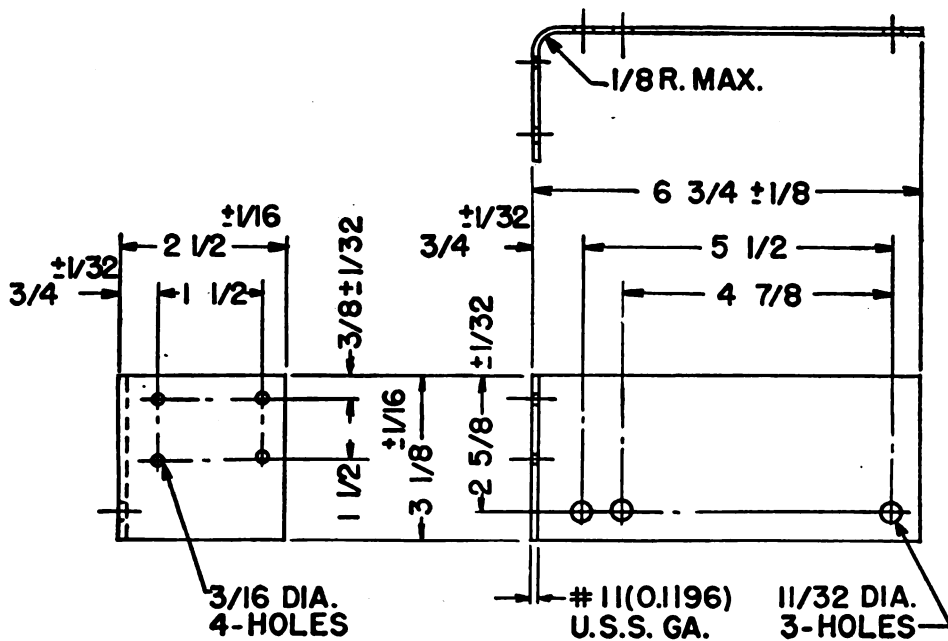
NOTE:

1. FOR ALL POSITIONS USE TIP OF BRACKET TO RECEIVE THE GROUND CLAMP OF ANTENNA A-62.
2. USE LONGER SCREW (5) WHEN INSTALLING BRACKET (2) ON MOUNTING FT-237-() AND RE-APPLY TOOTH-TYPE LOCKWASHERS.

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Figure 3. Installation of Antenna A-62, phantom, on Mounting FT-237- ().

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**BRACKET
STEEL - HOT ROLLED**

NOTE:

**UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.**

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Figure 4. Bracket for Coupling Unit CU-66/UR.

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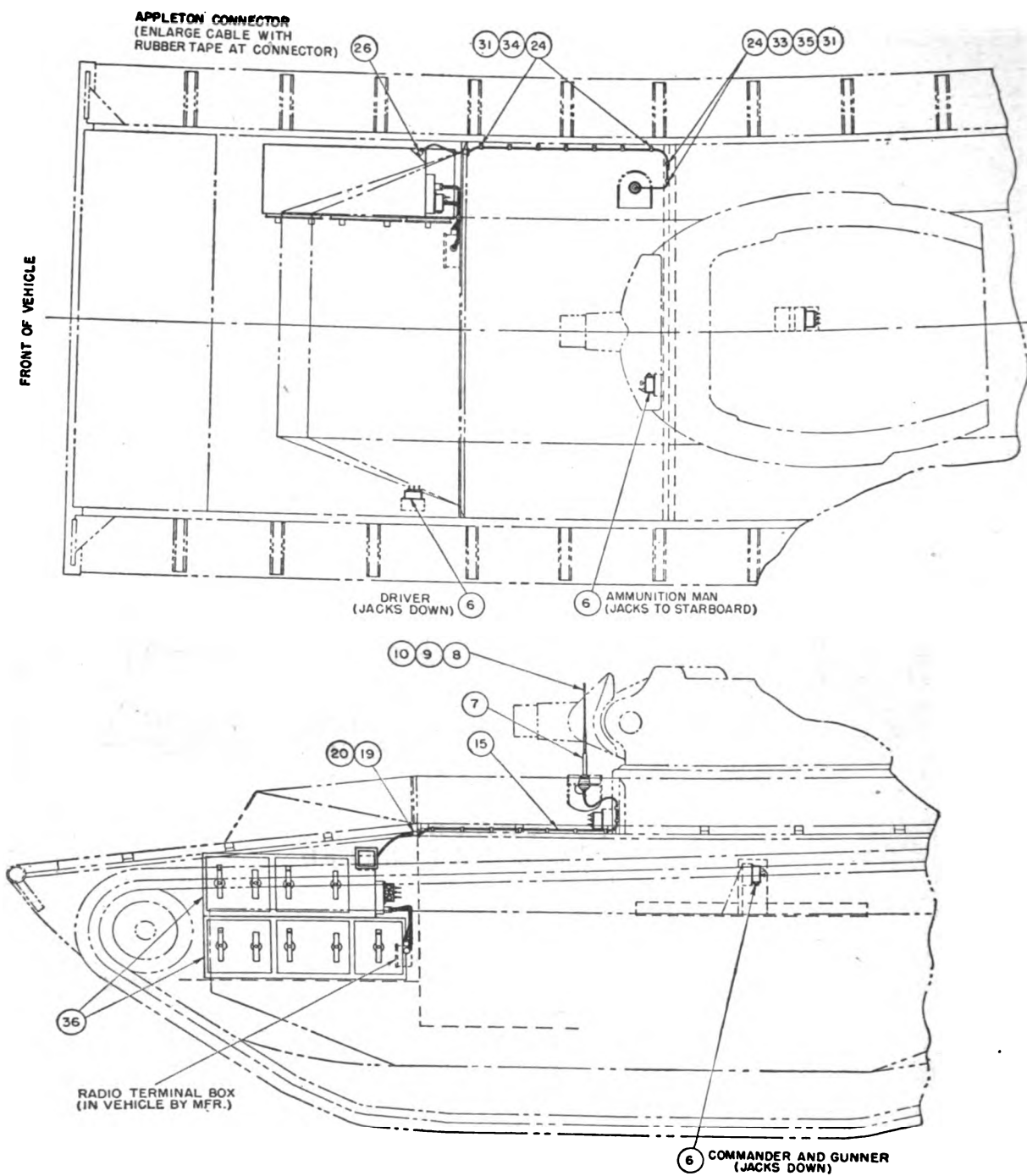
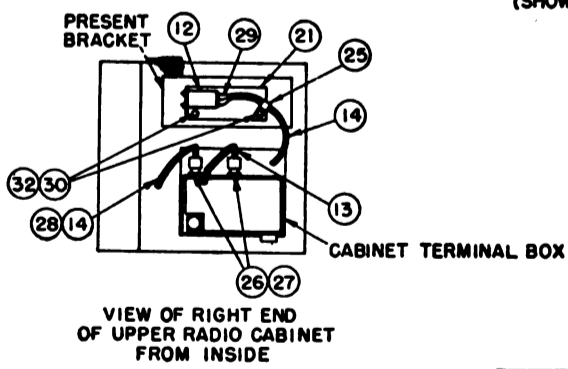
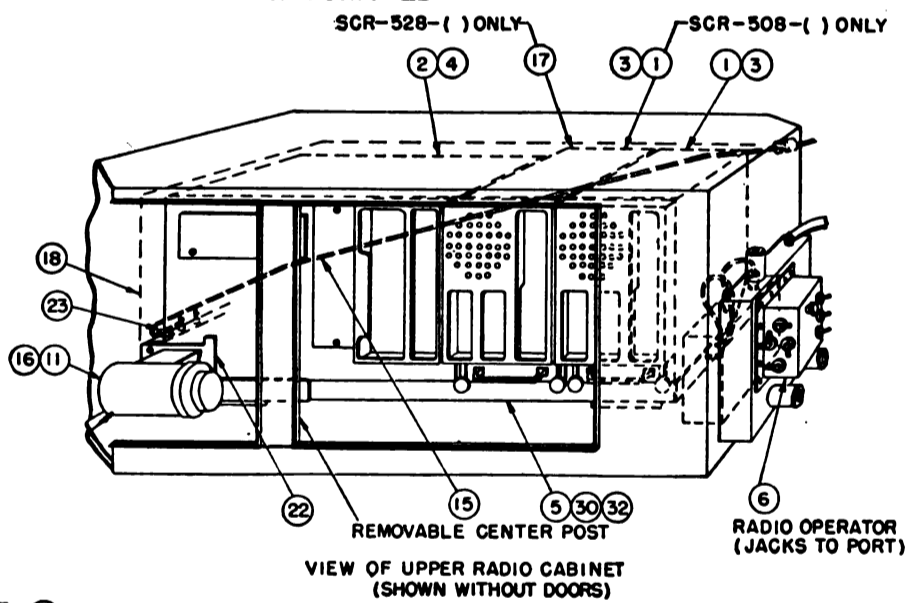


Figure 5. Installation of Radio Set SCR-508- () or SCR-528- () and interphone system in Vehicle, Landing, Tracked (Armored), Mark IV, LVT-(A)-4.

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- NOTES:
- FOR ADDITIONAL COMPONENTS AND SPARE PARTS, SEE COMPONENT PARTS LIST.
 - REMOVE JUNCTION BOX COVERS AND COVER PROVIDED ON OUTSIDE OF CABINET TERMINAL BOX. REPLACE WITH (2) USING HARDWARE PROVIDED FOR COVERS.
 - IF (7) TO (11) INCLUSIVE ARE NOT AVAILABLE, USE MAST BASE MP-48 OR MP-48-A; MAST SECTIONS MS-51, MS-52 AND MS-53 AND CLAMPS MC-423 AND MC-424.
 - HARDWARE REQUIRED FOR MOUNTING TO (1) IS PROVIDED WITH (3).
 - CUT (4) TO PROPER LENGTH. TIN ENDS FOR ANTENNA CONNECTIONS.
 - (22) AND NECESSARY HARDWARE ARE PROVIDED WITH (1).
 - BEFORE INSTALLING RADIO EQUIPMENT, MODIFY VEHICLE PER FIG. 7 AND FIG. 9 EXCEPT ON LATER PRODUCTION OF VEHICLE IN WHICH MODIFICATIONS ARE INCORPORATED BY THE MANUFACTURER.
 - FOR RADIO SET SCR-508, (7) IS TO BE STOWED IN THE VEHICLE AT THE DISCRETION OF THE USING ARM.
 - FOR METHOD OF MOUNTING (23) AND GROUNDING (15) SEE INSTALLATION INSTRUCTIONS.
 - FOR INSTALLATION OF (7) FOR USE WITH (15) SEE FIG. 10.
 - (28) INCLUDING EXTERNAL POWER AND INTERPHONE CABLES IS FURNISHED AND INSTALLED BY THE VEHICLE MFR. IN PRESENT PRODUCTION.
 - IF (12) IS NOT AVAILABLE, DO NOT USE ONE (14) (21) (25) TWO (24) OR TWO (22) AND WIRE INTERPHONE SYSTEM PER FIG. 8 USING HIGH IMPEDANCE HEADSET AND CORD COMBINATION. IF (12) IS AVAILABLE, INSTALL AS SHOWN AND WIRE INTERPHONE SYSTEM PER FIG. 6 USING LOW IMPEDANCE HEADSET AND CORD COMBINATION.
 - (12) ONE (14) (21) (25) (23) TWO (15) AND TWO (22) ARE CONTAINED IN THE IMPEDANCE MATCHING KIT MC-337/UR.

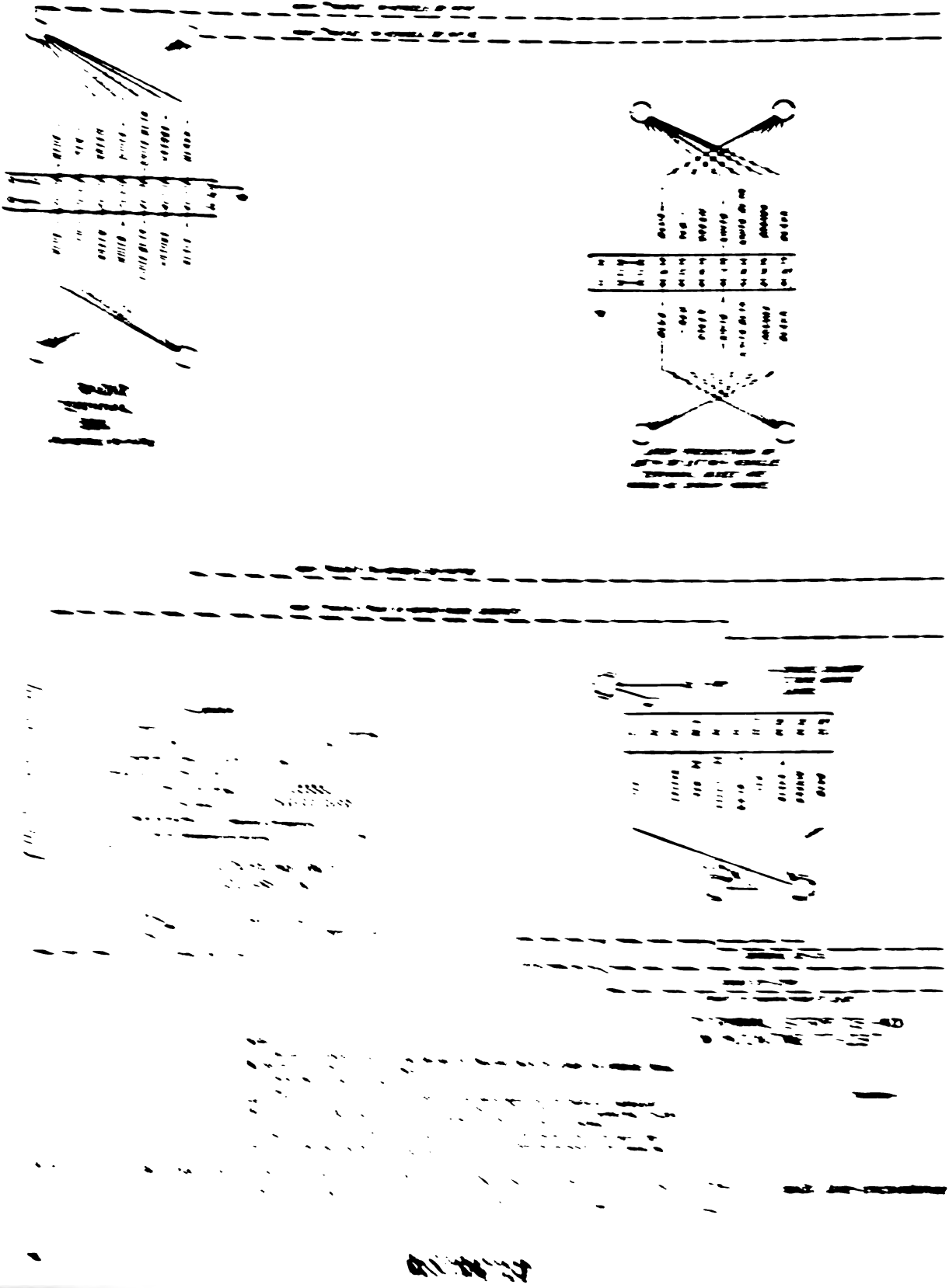
ITEM NO.	NAME OF ITEM	QUAN. REQ.
1	RADIO RECEIVER BC-603-()	1
2	RADIO TRANSMITTER BC-604-()	1
3	DYNAMOTOR DM-34	1
4	DYNAMOTOR DM-35	1
5	MOUNTING FT-237-()	1
6	REMOTE CONTROL UNIT NAVY TYPE #23420 SEE NOTE 2	4
7	MAST BASE 10-15/0R SEE NOTE 10	1
8	MAST SECTION MS-116	1
9	MAST SECTION MS-117 SEE NOTE 3	1
10	MAST SECTION MS-118	1
11	ANTENNA A-82 PHANTOM SEE NOTE 6	1
12	COUPLING UNIT CU-66/UR SEE NOTES 4 AND 12	1
13	CORD CO-278	1
14	CORDAGE CO-213	2
15	CABLE MC-562 SEE NOTES 9 AND 10	1
16	WIRE #128 20 IN. LONG SEE NOTE 5	1
17	CHEST CH-264 SEE NOTE 8	1
18	COVER BG-96	1
19	INSULATOR IN-121	1
20	WASHER	1
21	BRACKET PER FIG. 4	1
22	BRACKET PER FIG. 2 SEE NOTE 6	1
23	CLAMP #1 SEE NOTE 9	1
24	CLAMP #2 PER FIG. 12	9
25	CLAMP #3	1
26	APPLETON CONNECTOR #61007	1
27	APPLETON BONDHUT #BL-50	2
28	T AND B "STA-KON" TERMINAL #B 5	5
29	AMPHENOL SPAGHETTI #9746-133	45
30	SHAKEPROOF LOCKWASHER CAT. NO. 4018-24 FOR 5/16 SCREW	10
31	SHAKEPROOF LOCKWASHER CAT. NO. 4010-18 FOR #10 SCREW	9
32	HEX. HEAD CAP SCREW 5/16-24 X 9/16 LONG	10
33	ROUND HEAD MACH. SCREW #10-32 X 3/4 LONG	2
34	ROUND HEAD MACH. SCREW #10-32 X 3/8 LONG	7
35	HEX. NUT #10-32 X 3/8 LONG	2
36	RADIO CABINET KIT STOCK ORDER 69-5700200 SEE NOTE 11	1

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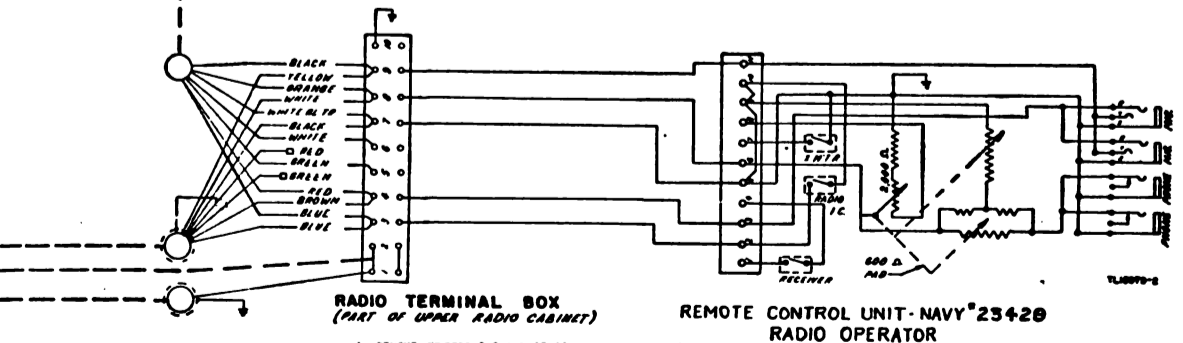
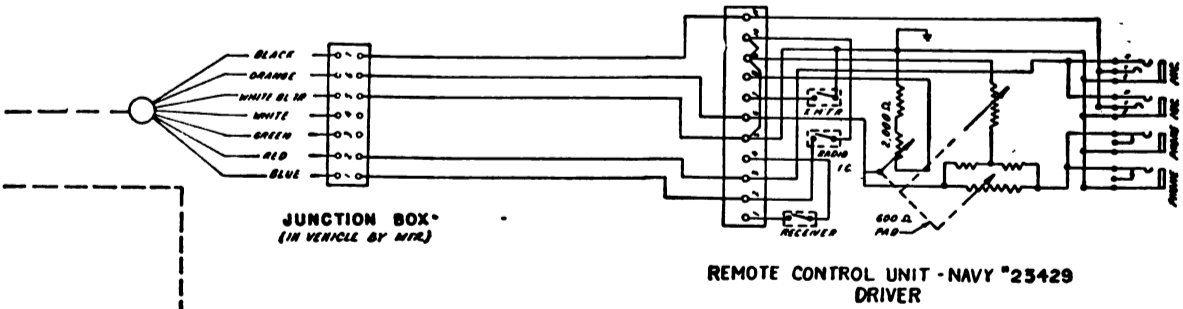
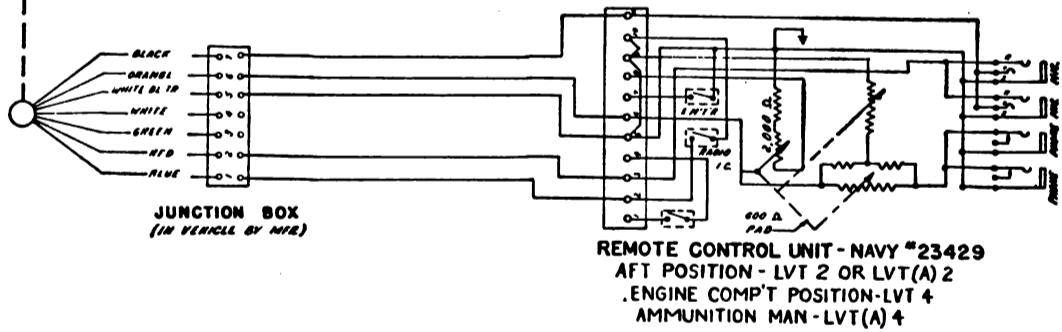
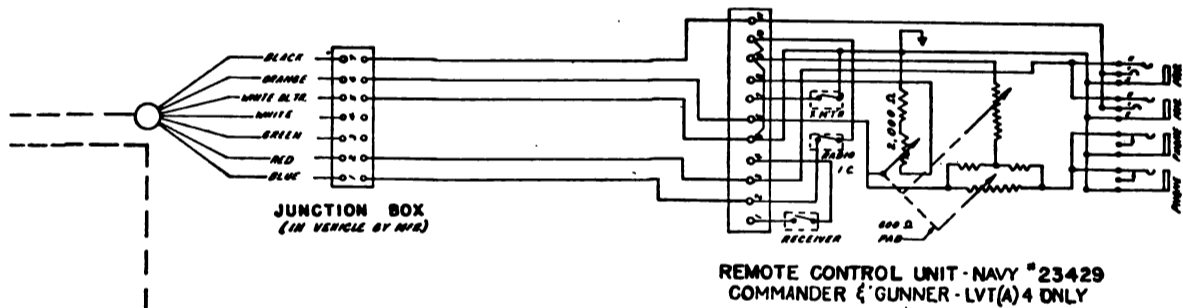
Figure 5. Installation of Radio Set SCR-508-() or SCR-528-() and interphone system in Vehicle, Landing, Tracked (Armored), Mark IV, LVT-(A)-4—Continued.

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- A. REMOVE JUMPERS 6-8 AND 10-11. ADD JUMPER 9-10.
 - B. RELOCATE LEADS ON TERMINAL STRIP PER DIAGRAM.
 - C. ROTATE THE "RADIO I.C." SWITCH 180° IN PANEL TO MAKE SWITCH OPEN IN "RADIO" POSITION.
- NAVY TYPE 23429 REMOTE CONTROL UNIT INTERCONNECTING WIRES ARE NOT COLOR CODED. WIRES MUST BE TRACED FROM NUMBERED TERMINAL BLOCK.
USE HEADSET MICROPHONE ASSEMBLY 8A70A-12 OR IF NOT AVAILABLE, HEADSET 85-30 WITH LOW IMPEDANCE ACCESSORIES MAY BE SUBSTITUTED. IF COMPTON UNIT CU-667M IS NOT AVAILABLE REFER TO WIRING DIAGRAM FIGURE 6, AND USE HEADSET 85-30 WITH HIGH IMPEDANCE ACCESSORIES.
- DRAWING REFERENCES:
LVT(A) 4 FIGURE 5

Figure 6. Wiring diagram of interphone system for Radio Set SCR-508-() or SCR-528-() with low-impedance combination in LVT-2, LVT-(A)-2, LVT-4, and LVT-(A)-4—Continued.

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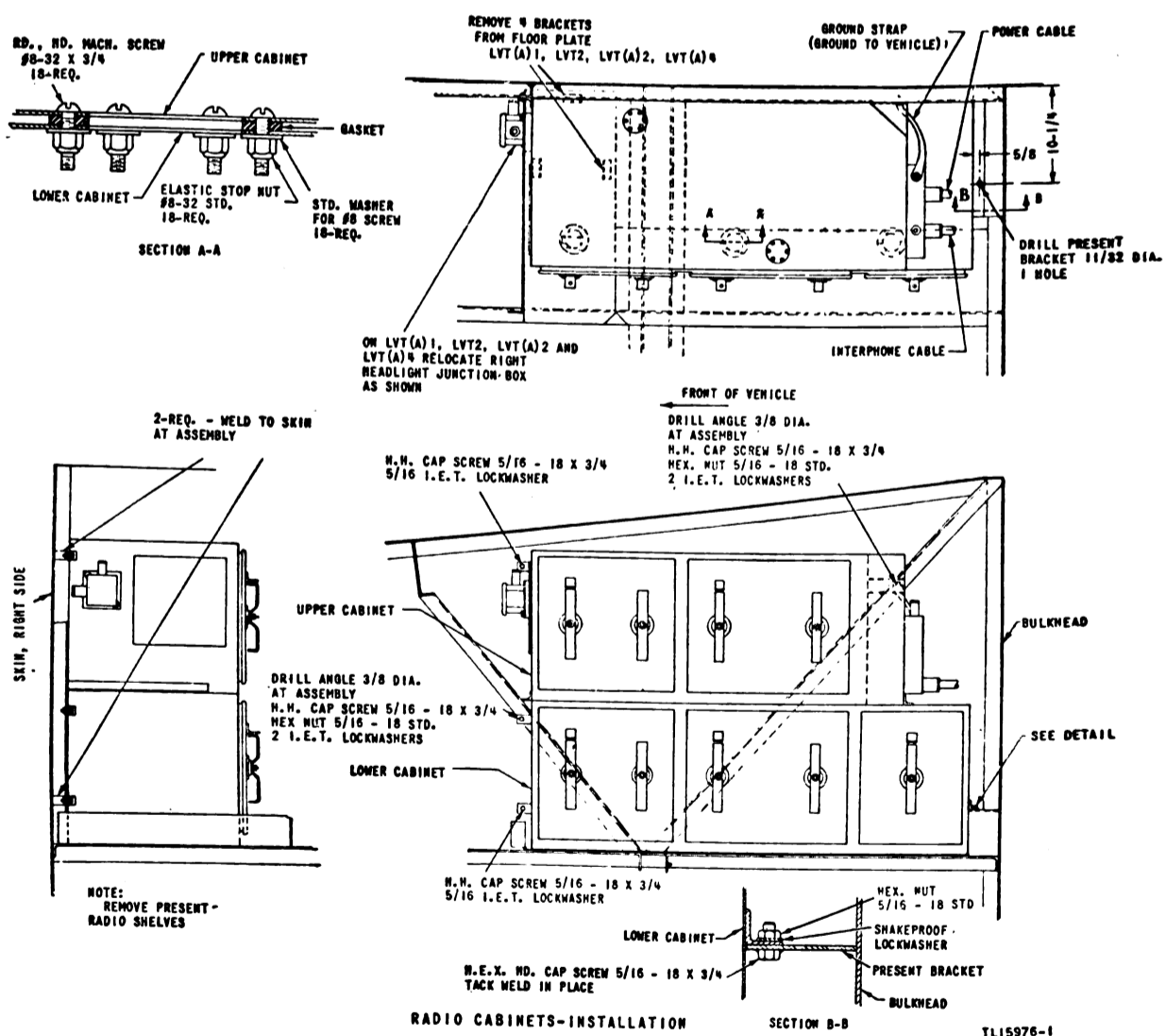
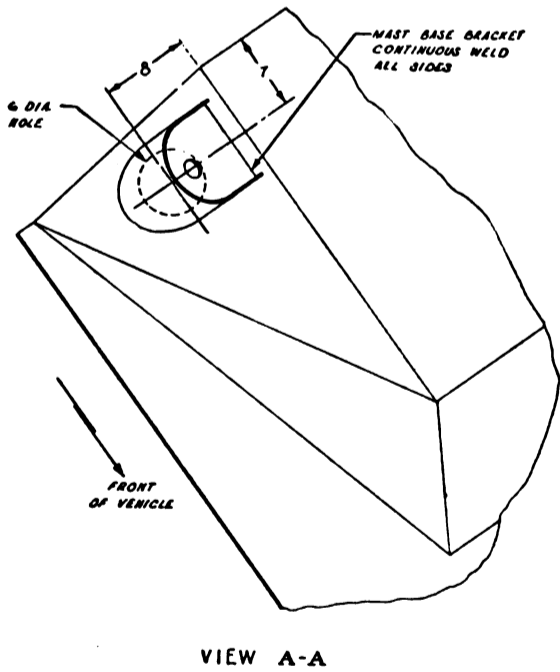
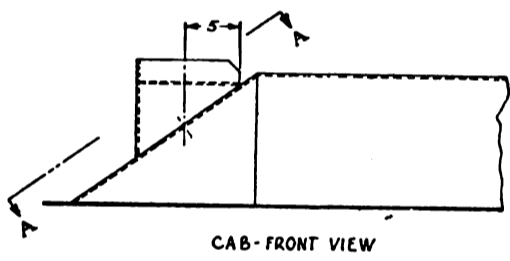


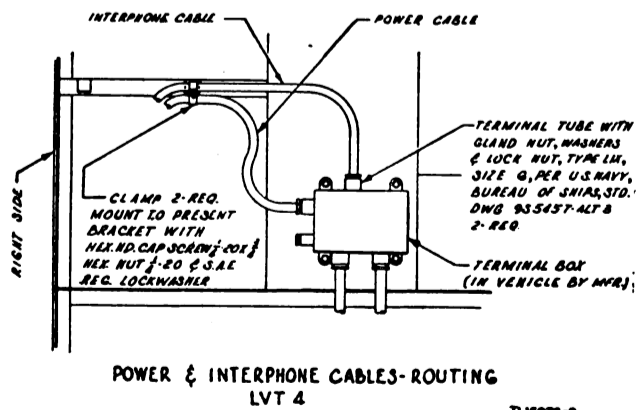
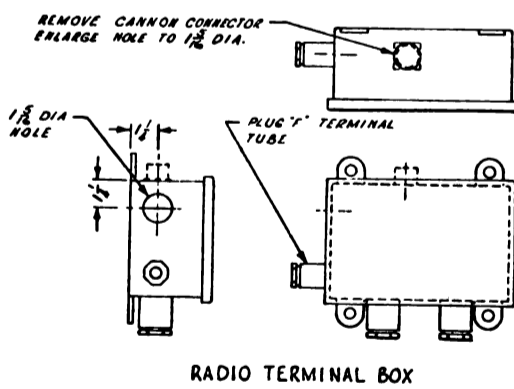
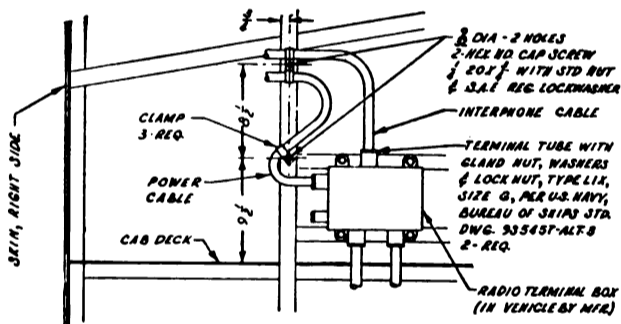
Figure 7. Modification of LVT-(A)-1, LVT-2, LVT-(A)-2, LVT-4, LVT-(A)-4, for installation of Radio Set SCR-508-() or SCR-528-().

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LOCATION OF MAST BASE BRACKET, LVT(A)1

NOTE:
DIMENSIONS WHERE NOT SHOWN OTHERWISE ARE IN INCHES.
BREATHER PIPE FROM OIL TANK UNDER DECK OF CAB IN LVT 4 INTERFERES WITH INSTALLATION OF LOWER RADIO CABINET. REMOVE BREATHER PIPE. ELONGATE PRESENT HOLE IN DECK 2 INCHES TOWARD BULKHEAD. ROTATE TEE PIPE FITTING UNDER DECK 90° TOWARD REAR OF VEHICLE. REBEND AND REINSTALL BREATHER PIPE SO THAT IT ENTERS ENGINE COMPARTMENT AS FORMERLY.

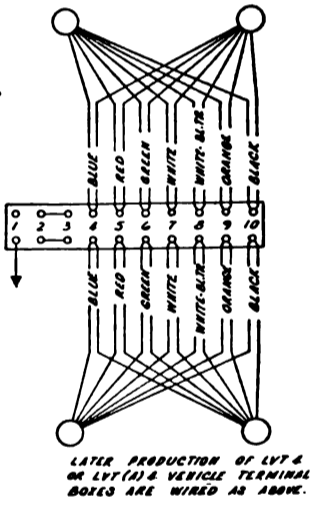
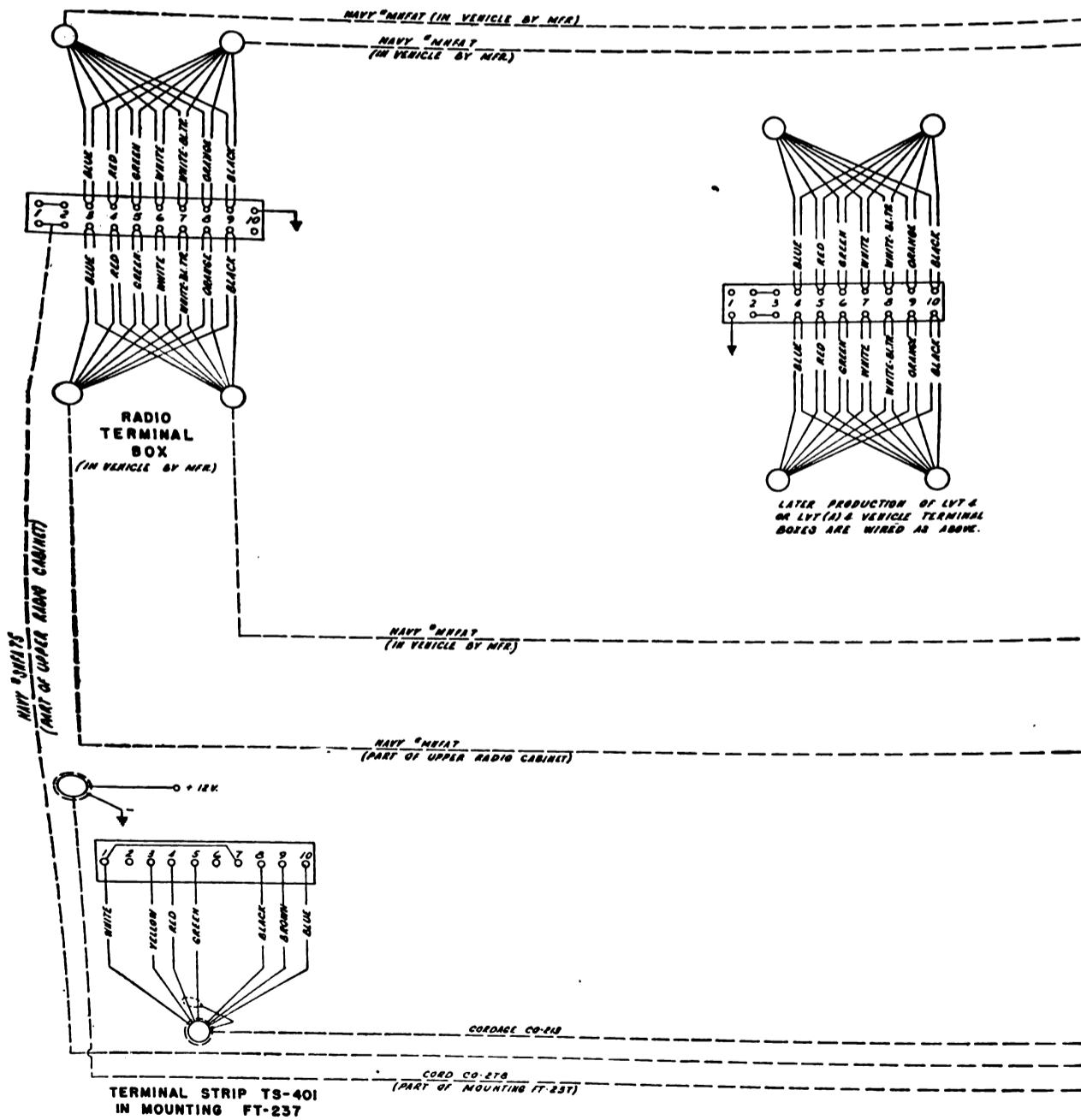


TJ5976-2

Figure 7. Modification of LVT-(A)-1, LVT-2, LVT-(A)-2, LVT-4, LVT-(A)-4, for installation of Radio Set SCR-508-() or SCR-528-()—Continued.

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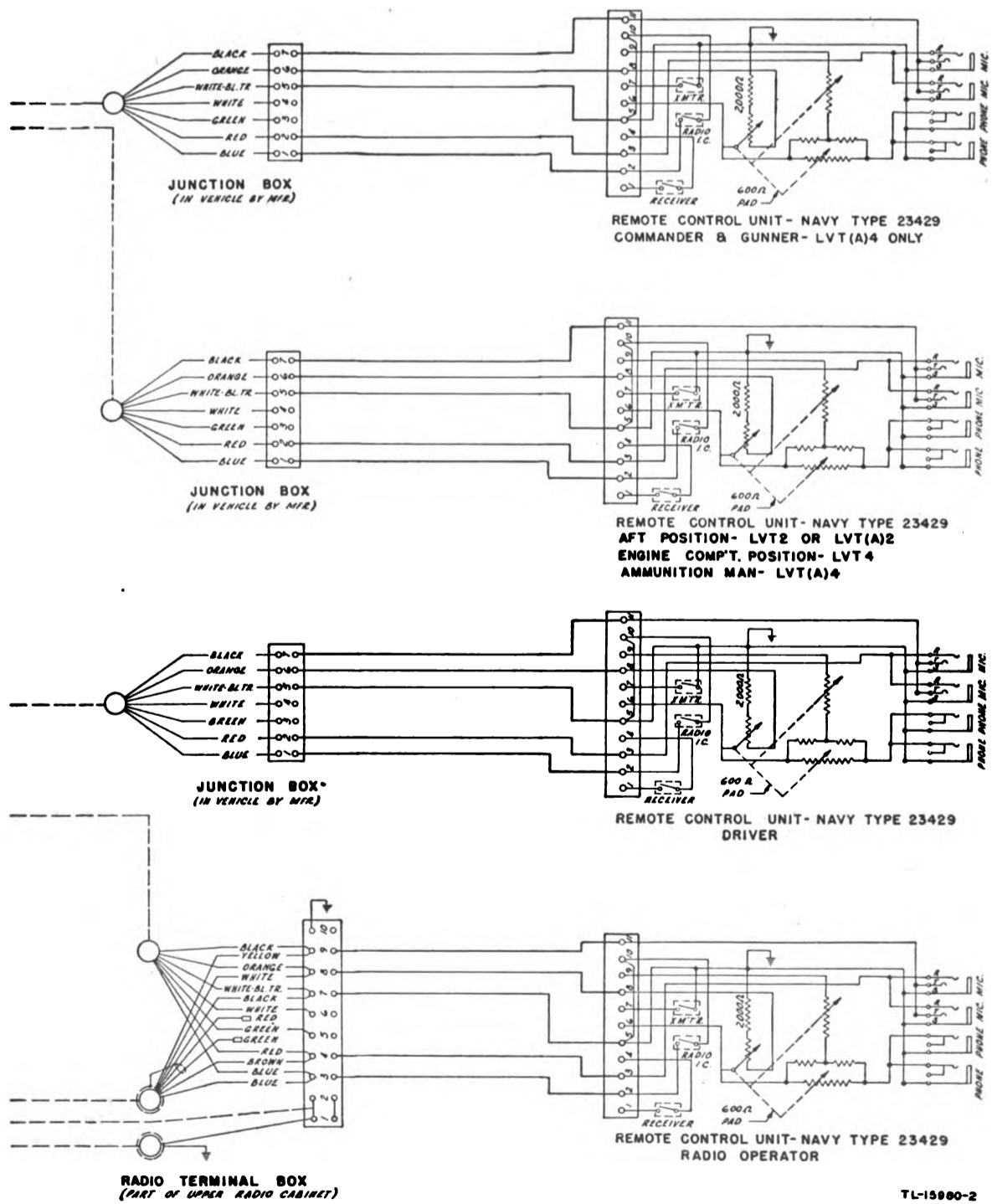
TL-15980-1

NOTE:
 SHIELD OF CORDAGE CO-212 AND SHIELD OF TWISTED PAIR OF LEADS IN CORDAGE SHALL BE SECURELY GROUNDED AT EACH END.
 TAPE ENDS OF UNUSED LEADS.
 RADIO SETS SCR-508 OR SCR-528 WHICH HAVE BEEN MODIFIED TO PROVIDE INCREASED AUDIO OUTPUT WILL INCLUDE JUMPER 1-7 ON TERMINAL STRIP TS-401 OF MOUNTING FT-237.
 NAVY TYPE 23428 REMOTE CONTROL UNITS ARE WIRED FOR OPERATION WITH NAVY TCS EQUIPMENT. TO ADAPT THEM FOR USE WITH RADIO SET SCR-508 OR SCR-528 AND HIGH IMPEDANCE HEADSET AND CORD COMBINATION THE FOLLOWING IS NECESSARY:

Figure 8. Wiring diagram of interphone system for Radio Set SCR-508-() or SCR-528-() with high-impedance combination in LVT-2, LVT-(A)-2, LVT-4, and LVT-(A)-4.

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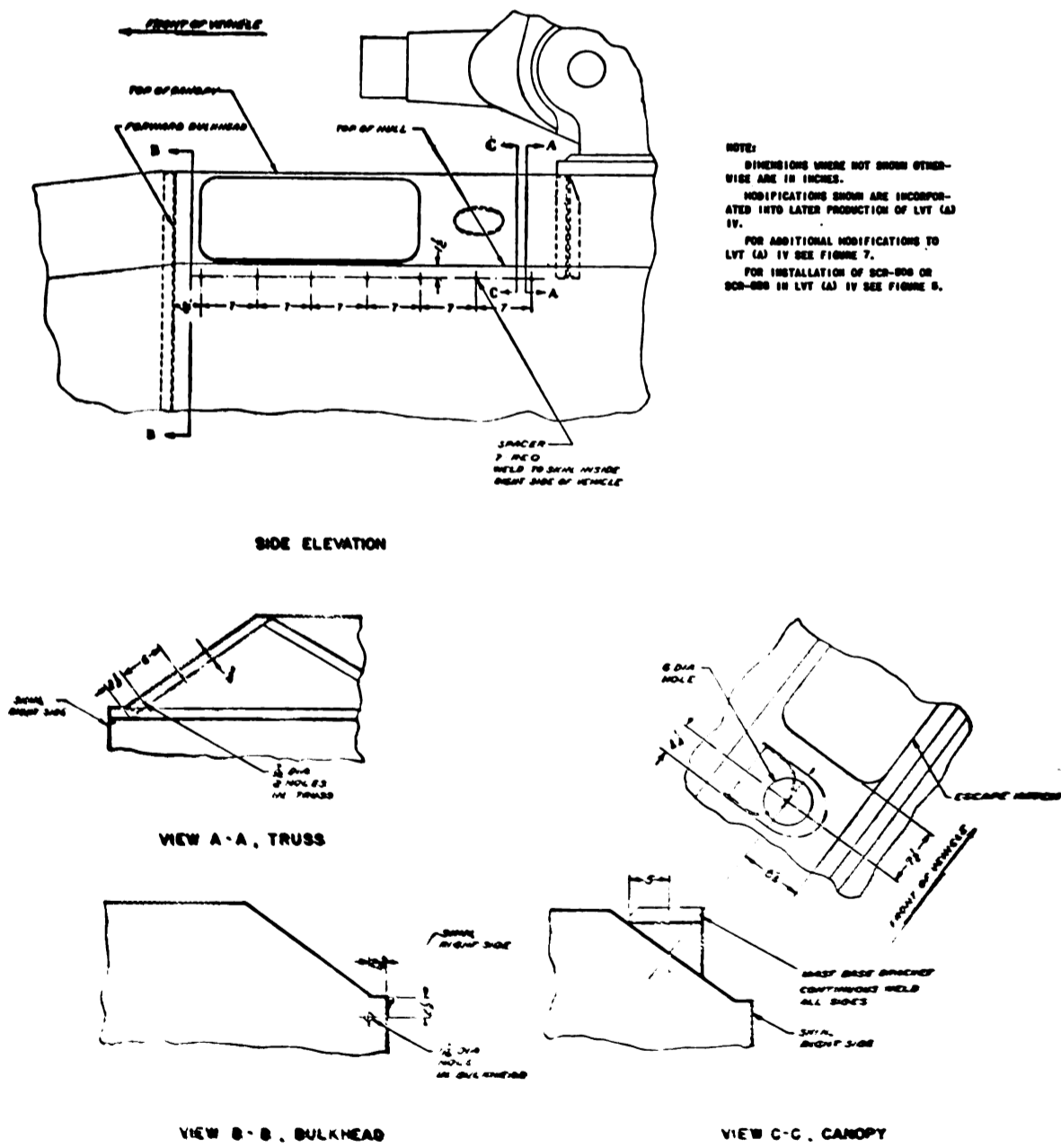
TL-15980-2

A-REMOVE JUMPERS 6-9, 6-8 AND 10-11. ADD JUMPER 6-10.
B-RELOCATE LEADS ON TERMINAL STRIP PER DIAGRAM.
C-ROTATE THE "RADIO-I.C." SWITCH 180° IN PANEL TO MAKE SWITCH OPEN IN "RADIO" POSITION.
NAVY TYPE 23429 REMOTE CONTROL UNIT INTERCONNECTING WIRES ARE HOT COLOR CODED. WIRES MUST BE TRACED FROM NUMBERED TERMINAL BLOCK.
REPAIRING REFERENCES:
INSTALLATION SCR-508 OR SCR-528 IN LVT(A) 5-----FIGURE 5
WIRING DIAGRAM OF INTERPHONE FOR SCR-508 OR SCR-528 (LOW IMPEDANCE)-FIGURE 6

Figure 8. Wiring diagram of interphone system for Radio Set SCR-508-() or SCR-528-() with high-impedance combination in LVT-8, LVT-(A)-2, LVT-4, and LVT-(A)-4-Continued.

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NOTE:
DIMENSIONS WHERE NOT SHOWN OTHERWISE ARE IN INCHES.
MODIFICATIONS SHOWN ARE INCORPORATED INTO LATER PRODUCTION OF LVT (A) IV.
FOR ADDITIONAL MODIFICATIONS TO LVT (A) IV SEE FIGURE 7.
FOR INSTALLATION OF SCR-508 OR SCR-509 IN LVT (A) IV SEE FIGURE 8.

Figure 9. Modification of LVT (A) IV for installation of Radio Set SCR-508- () or SCR-538- ().

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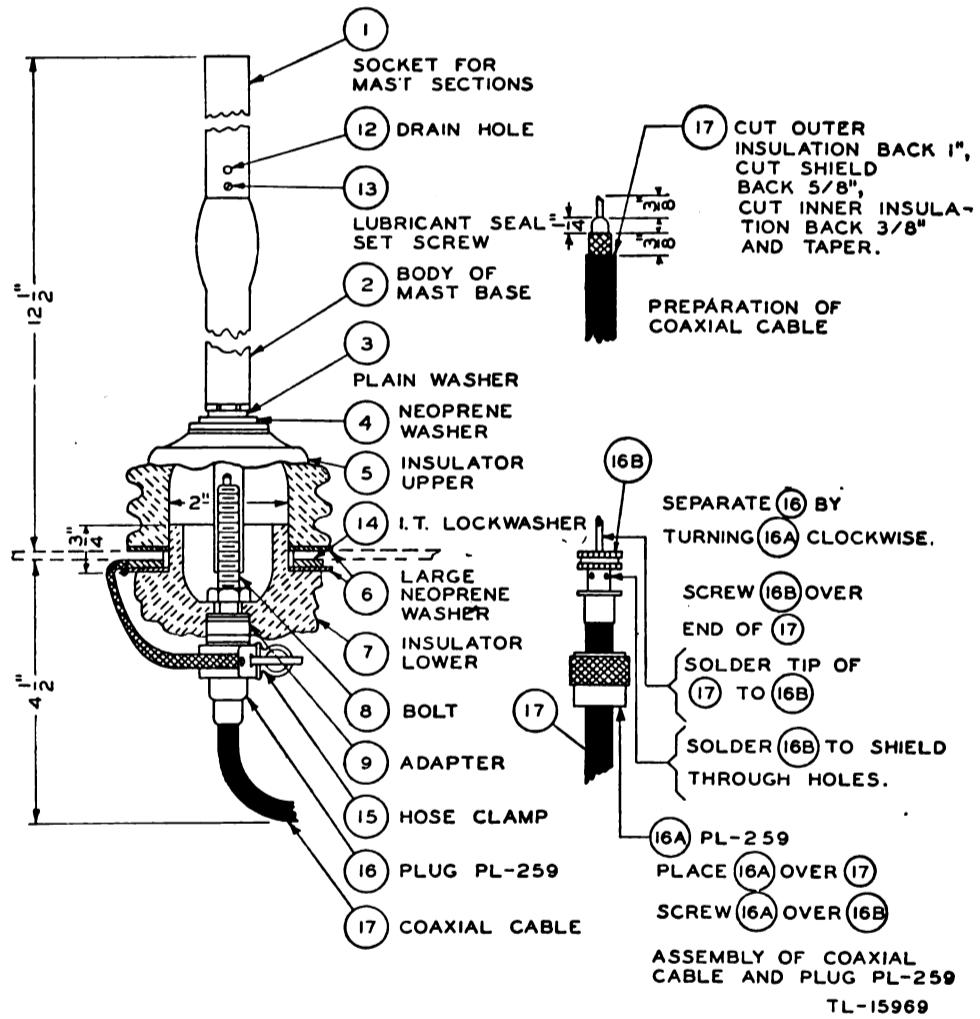
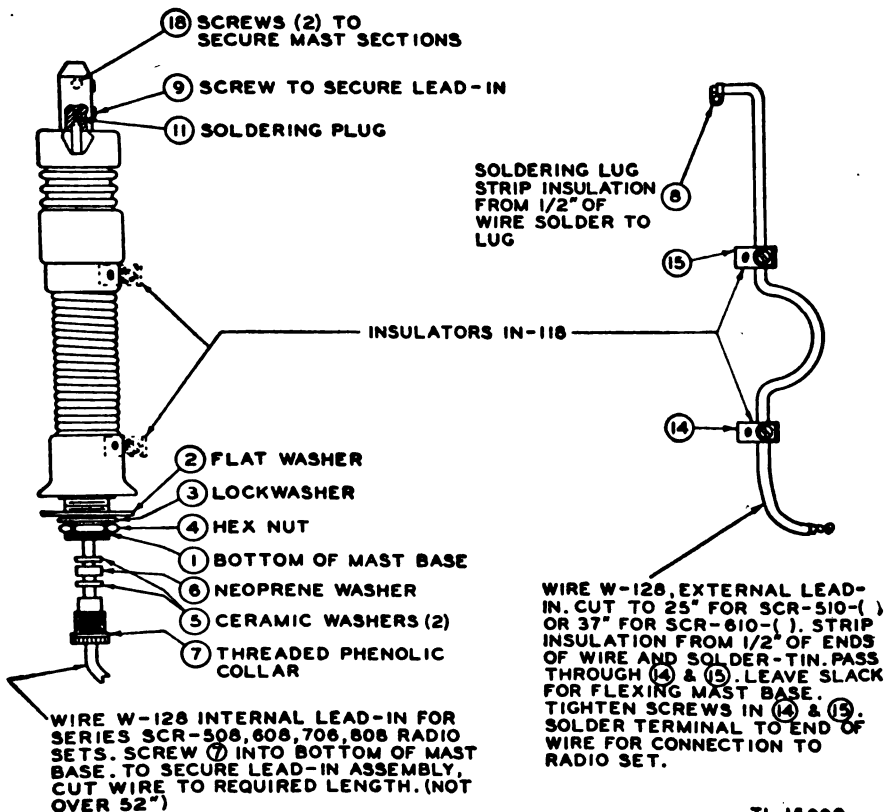
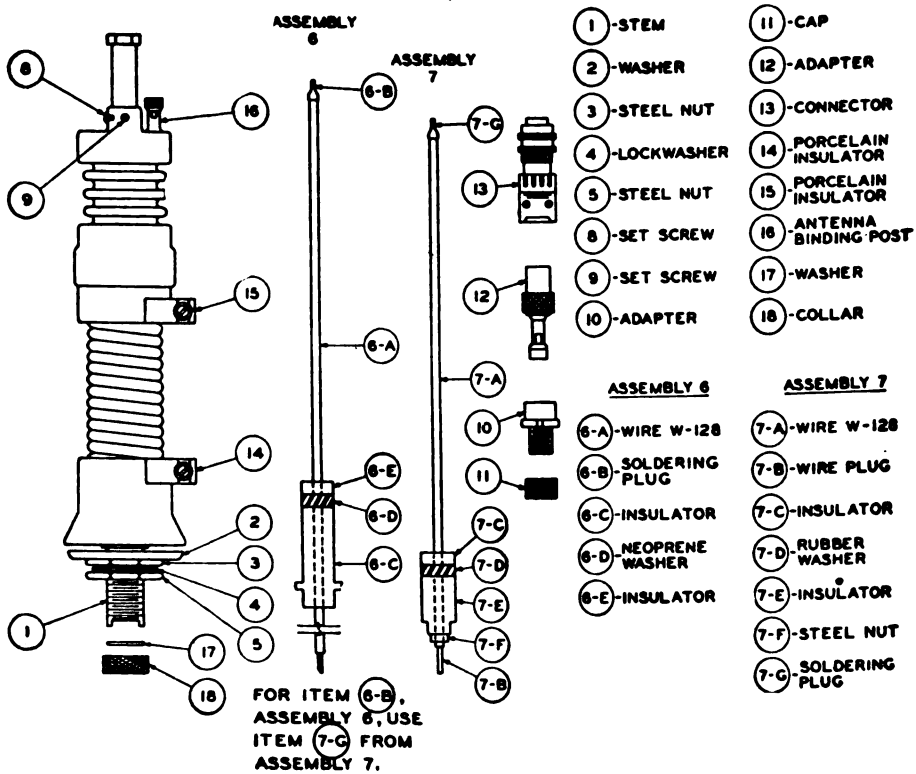


Figure 10. Mast Base AB-15/GR, assembly for coaxial lead-in.

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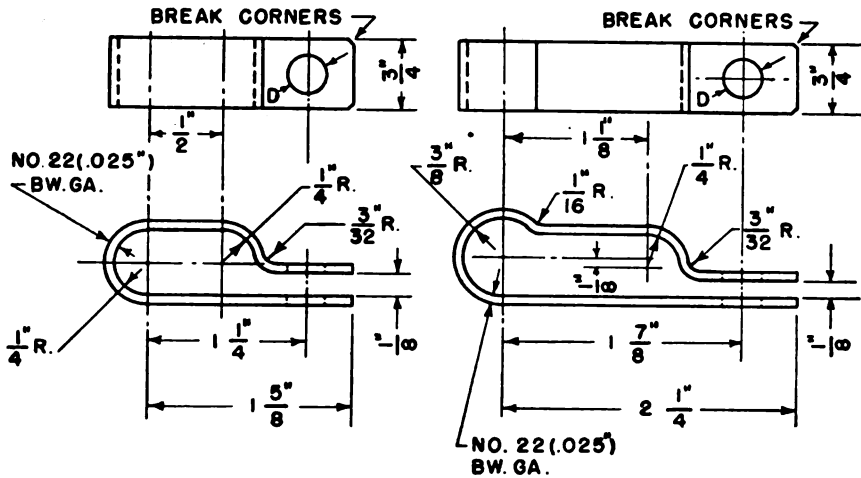
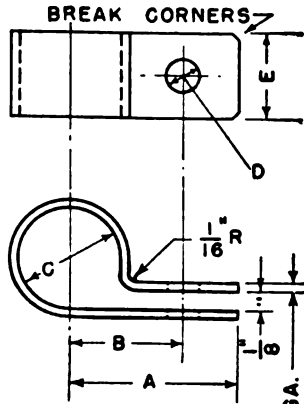
TL 15900

Figure 11. Mast Base MP-48 or MP-48-A, assembly for installation.

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CLAMP	A	B	C	D	E	STOCK NO.
1	1-1/8"	3/4"	7/16"	3/16"	1/2"	222637-1
2	1-1/8"	3/4"	7/16"	9/32"	3/4"	222637-2
3	1-1/8"	3/4"	7/16"	13/32"	3/4"	222637-3
4	1-1/8"	3/4"	17/32"	3/16"	1/2"	222637-4
5	1-1/8"	3/4"	17/32"	9/32"	3/4"	222637-5
6	1-1/8"	3/4"	17/32"	13/32"	3/4"	222637-6



NO. 22(.025") BW. GA.

CLAMP	D	STOCK NO.
7	3/16"	222637-7
8	9/32"	222637-8
9	13/32"	222637-9

CLAMP	D	STOCK NO.
10	9/32"	222637-10
11	13/32"	222637-11

NOTE:
TOLERANCES $\pm 1/32"$

TL-13319

Figure 12. Clamp.

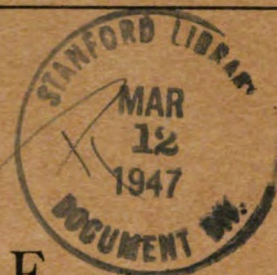


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TM 11-2754

WAR DEPARTMENT TECHNICAL MANUAL



INSTALLATION OF RADIO AND INTERPHONE EQUIPMENT IN TANK, LIGHT, M24

RESTRICTED. DISSEMINATION OF RESTRICTED MATTER.
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to knowledge or possession of classified matter. Such matter
is entrusted only to those individuals whose official duties
require such knowledge or possession. (See also paragraph
23b, AR 380-5, 15 March 1944.)

WAR DEPARTMENT • FEBRUARY 1945

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TM 11-2754

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FEBRUARY 1945

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WAR DEPARTMENT
WASHINGTON 25, D. C., 19 February 1945

TM 11-2754, Installation of Radio and Interphone Equipment in Tank, Light, M24, is published for the information and guidance of all concerned.

[AG 300.7 (11 Jan 45.)]

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OFFICIAL:

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Major General
The Adjutant General

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17-56, 17-73

For explanation of symbols, see FM 21-6.

15024E.

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DESTRUCTION NOTICE

WHY —To prevent the enemy from using or salvaging this equipment for his benefit.

WHEN—When ordered by your commander.

HOW —1. Smash—Use sledges, axes, handaxes, pickaxes, hammers, crowbars, heavy tools.
2. Cut—Use axes, handaxes, machetes.
3. Burn—Use gasoline, kerosene, oil, flame throwers, incendiary grenades.
4. Explosives—Use firearms, grenades, TNT.
5. Disposal—Bury in slit trenches, fox holes, other holes. Throw in streams. Scatter.

USE ANYTHING IMMEDIATELY AVAILABLE FOR DESTRUCTION OF THIS EQUIPMENT

WHAT—1. Smash—All vacuum tubes, crystals, control dials, coupling coils, transformers, speakers in receivers, external loudspeakers, microphones, headsets, dynamotors, and cable connectors.
2. Cut—All connecting wires, cording and cabling.
3. Burn—All equipment, and all associated training, technical, and installation manuals.
4. Bury or scatter—All remains, after destroying their usefulness.

DESTROY EVERYTHING

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SAFETY NOTICE

This equipment uses high voltages which are dangerous to life. Observe all safety precautions.

1. Make no adjustment with the power switch ON.
2. Do not operate the equipment with the shields removed.
3. Do not connect power to any unit of the radio set until operating instructions have been read completely.

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SECTION I

GUIDE TO USE OF THIS MANUAL

1. Purpose

This manual provides methods and procedure, based upon actual field experience, for installation of radio and interphone equipment in Tank, Light, M24. Items required to make a complete operating installation are listed for each set. Official nomenclature followed by empty parentheses, such as Headset HS-30-(), is used to indicate any model of equipment regardless of its procurement.

2. Equipment.

Installations covered include the following Radio Sets in Tank, Light, M24:

SCR-506-()	SCR-528-()
SCR-508-()	AN/VRC-3

3. Holes and Brackets

Brackets required for installation of the radio set are normally drilled and installed prior to delivery of Tank, Light, M24. Drilling instructions

are given in this manual for any other necessary holes and brackets. Do not relocate any holes or brackets unless absolutely necessary.

4. Preliminary Check

Study the illustrations, the installation methods outlined, and any subsequent changes to this manual.

Caution: Tank, Light, M24 has a 24-volt electrical system. Before installing the radio sets, be sure they are designed for 24-volt operation, or tubes may burn out or dynamotors may be damaged.

5. Operating Check

Carefully study the Technical Manual covering the radio set before trying to operate it; then, make a thorough operating check to determine whether the equipment has been properly installed and is in working order.

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SECTION II

IGNITION NOISE SUPPRESSION IN TANK, LIGHT, M24

6. General

Excessive ignition or other electrical noises may interfere with the operation of radio equipment in Tank, Light, M24. The Technical Manual issued with the vehicle will be helpful in locating the source of the noise, since it describes the suppression system used. Instructions for operating radio equipment used in the vehicle also should be studied.

7. Procedure

Locate and suppress ignition noises as follows:

a. Start the motor of the vehicle and turn on the radio set. Put the receiver sensitivity control at *maximum*; then, listening to the receiver output with a headset, slowly tune the receiver over the entire range of frequencies to be used for communication.

b. When the frequency (or frequencies) with greatest noise level is found, turn off the vehicle engine. If this noise continues, the source is outside the ignition system. If noise stops, the trouble is in the ignition system.

c. Start the engine again. Adjust the receiver sensitivity control until engine noises can be distinguished easily from static, etc. Interference may then be identified as follows:

d. Interference from other electrical parts and circuits of the vehicle, such as panel gauges and heater fans, can usually be identified by turning off the gauges, fans, or other suspected mechanisms individually.

e. If the source of interference still cannot be found by any of the preceding methods, connect a probe antenna (fig. 14) to the antenna terminal of the radio set. Slowly move the loop of the probe antenna over the various parts of the electrical system of the vehicle. Keep the loop close to, but not in contact with, the part being examined. Noise from interference-producing parts should be heard in the receiver.

f. Usually interference can be eliminated by cleaning, tightening, or replacing noise-producing parts. Examine and tighten all suppressor and shielding components, and all connections and grounding bonds. Clean the surface under them. This will assure good electrical contact between wires and terminals, and between metal casings and the frame of the vehicle. (Insulated but ungrounded metal parts absorb and reradiate electrical noises.)

g. If interference persists, suppressor components should be checked by substituting new ones. If a replacement is not available, disconnect the suspected component, and test capacitors, resistors, and chokes within it. Replace any that are defective.

Interference	Usual source
Popping sound: corresponds to ignition firing; stops when engine is turned off; accelerates when engine is raced.	Ignition system.
Intermittent, clicking sound: lingers for several seconds when ignition is turned off.	Generator regulator.
Whining sound: varies with speed of engine; ceases only when generator stops rotating.	Generator.
Sparking, or continuous crackling noise.	Brushes and commutator of generator.

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SECTION III
RADIO SET SCR-506-()

8. Required Parts

Items necessary for installation of Radio Set SCR-506-() in Tank, Light, M24 are listed below:

Quantity	Stock No.	Item
1	2A275-27	Antenna A-27, phantom.
1	2A224	Antenna AN-24-A, auxiliary.
1		Bracket (fig. 3) for Loudspeaker LS-3.
1	2Z1250.80	Bracket (fig. 2) for Antenna A-27, phantom.
1	2Z2599-263	Chest CH-263, for spare parts, etc.
2	6Z3147	Connector No. 61007 and Bondnut BL-50.
*2	4B417-4	Chest Set TD-4.
1	3E1314	Cord CD-314, for Loudspeaker LS-3.
1	6C18-41	Cover CW-41/U, for Loudspeaker LS-3.
1	3H1641	Dynamotor DM-41-(), 24-volt, for Radio Receiver BC-652-().
1	3H1643	Dynamotor DM-43-(), 24-volt, for Radio Transmitter BC-653-().
*1		Guy set.
1	6L50-506V85	Hardware bag.
*2	2B800-16	Headset H-16/U.
1	2A224/1	Instructions for installation of Antenna AN-24-A.
3	3G586	Insulator IN-86, two for auxiliary antenna, one for tying down mast sections.
1	3G601	Insulator IN-101.
2	3G604	Insulator IN-104.
2	3Z3445	Key J-45.
1	2Z6303.1	Loudspeaker LS-3.
2	6D13136	TM 11-630, for Radio Set SCR-506-().
*1	2A2088-65	Mast Base MP-65.
9	2A2416	Mast Section MS-116, six with guy set for stationary operation, three for mobile operation.
*2	2A2417	Mast Section MS-117.
*2	2A2418	Mast Section MS-118.
*1	2B1617	Microphone T-17, including two Microphone Covers M-367.
*1	2B1645	Microphone T-45.
1	2Z6721-253	Mounting FT-253-(), including two Cords CO-280 attached, spacer plates, spare fuses, and hardware in attached cloth bag.
1	2C4452	Radio Receiver BC-652-(), including necessary tubes and Crystal Unit DC-24-() installed, spare fuses, and lamps.
1	2C6530-653	Radio Transmitter BC-653-(), including one set of tubes installed, spare fuses, and lamps.
1	2Z8056	Roll BG-56-(), for mast sections.
50 ft.	6Z7926	Rope RP-5, for auxiliary antenna and tying down mast sections.
1	2C7978	Switch Box BC-653-().
15 ft.	1B146	Wire W-146, 8 feet required for lead-in and one spare.

* If Chest Set TD-4 is not available, issue two Cords CD-307-A and one Cord CD-318-A.
 † For use with Mast Sections MS-116, MS-117, and MS-118, the guy set consists of one Guy GY-42, one Guy GY-12, four Stakes GP-27, one Bag BG-125, and one Reel RL-29. For use with Mast Sections MS-49 to MS-54, inclusive, Guy Set GY-40 is issued.
 ‡ If Headset H-16/U is not available, issue two Headsets HS-30-() and two Cords CD-604.
 § Mast Base MP-57 may be used in place of Mast Base MP-65. In this case, two each Mast Sections MS-49 to MS-53, inclusive, two each Clamps MC-421 to MC-424, inclusive, one Roll BG-56-() and one Cover BG-67-() are issued.
 • Use Microphone T-45 or Microphone T-17, whichever is available.

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9. Assembly and Installation

Components of Radio Set SCR-506-() should be installed in Tank, Light, M24 as shown in figure 1 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Bracket (fig. 2) and Antenna A-27, phantom (items 16 and 26, fig. 1).	Weld the special mounting bracket as shown in figure 22 on the right wall of hull 9 inches above the floor of the tank as shown in figure 1 (side elevation). Attach bracket per figure 2 to bracket per figure 22 with hardware provided as shown in figure 1. Secure phantom antenna in bracket.
Bracket (fig. 3), Loudspeaker LS-3, and Cover CW-41/U (items 15 and 25, fig. 1).	Remove smoke-bomb rack from torsion bar housing at rear of co-driver's seat. Secure bracket (fig. 3) to torsion bar housing with hardware provided as shown in figure 1. Secure Loudspeaker LS-3 to bracket with screws provided on loudspeaker. Remove screws from outer edge of front panel on loudspeaker. Place Cover CW-41/U over front of loudspeaker (flap opening upward) and secure by replacing screws in front panel of speaker.
Mast base bracket (item 23 and note 8, fig. 1), Insulator IN-101 (item 22, fig. 1), and rubber washer (in hardware bag).	Remove machine gun from right front of vehicle. Secure mast base bracket in place provided for machine gun, using same screws that secured machine gun. Place rubber washer over insulator. Insert insulator through hole in mast base bracket from outer side and secure by means of spring clip provided.
Mounting FT-253-() on frame (items 5, 24, and note 8, fig. 1).	Place mounting on frame with right end of mounting adjacent to vertical portion of frame and secure with screws, nuts, and shakeproof washers provided. See detail of figure 1, showing application of shakeproof washers. Place left end of frame on bracket attached to top of stowage cabinet, between driver's and co-driver's seats in hull. Hook rear of frame in bracket and secure front of frame to bracket by means of long bolt provided. Secure vertical portion of frame to hull ceiling with screws provided, as shown in side elevation of figure 1.
Two power Cords CO-280, connector No. 61007 and Bondnut BL-50 (items 19, 13, and 14, fig. 1).	Secure power cords to terminal strip on Mounting FT-253-(). Route to terminal box at lower part of support post in hull and install connectors and bondnuts through knock-out holes in terminal box for cords. (One of the cords may be cut in two, and terminals placed on ends, and one complete cord may be returned to stock.) Secure power cords with clamps (fig. 5) and patch cords from Switch Box BC-658-(), with clamps as shown in figure 1.
Switch Box BC-658-() (item 17, fig. 1).	Secure on outside of vertical portion of frame hardware provided, as shown in side elevation of figure 1. Plug one pair of patch cords on switch box into co-driver's Interphone Control Box BC-606-(), and plug other pair of patch cords into Radio Set SCR-506-(). For location of Control Box BC-606-() see figure 6. Secure cords with clamps secured by screws on top of Radio Transmitter BC-653-(), as shown in figure 1.

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- | <i>Part and location</i> | <i>Method and materials</i> |
|---|---|
| Dynamotor DM-41-() and Radio Receiver BC-652-() (items 3 and 1, fig. 1). | If dynamotor is not installed, remove screws around edge of receiver panel and screw in rear center of cabinet. Pull receiver chassis from case, put dynamotor in place provided, and secure with snap slide fasteners. All connections to dynamotor are made by flexible lead terminating in Plug P-250. Installation of proper dynamotor and inserting plug in socket automatically adjusts receiver circuits for correct operating voltage. Nameplate on front panel of receiver should be turned to indicate 24-VOLT OPERATION. Place receiver on Mounting FT-253-() and secure with thumbscrews provided. Connect antenna wire from Radio Transmitter BC-653-() to ANT post on receiver. |
| Dynamotor DM-43-() and Radio Transmitter BC-653-() (items 4 and 2, fig. 1). | If dynamotor is not installed, slide it into dynamotor compartment at lower right end of transmitter and secure with five screws provided. Remove patch cover plate located on top of radio transmitter, extreme right, and see that six connector links are in position for 24-volt operation as indicated by arrow on link terminal strip. Voltage indicator plate on dynamotor panel should be turned to indicate 24 VOLTS. Place transmitter on mounting and secure with thumbscrews provided. |
| Two Insulators IN-104 (item 21, fig. 1). | See figure 1. Drill hole in each cover plate on top of Radio Transmitter BC-653-() and attach two insulators as shown. |
| Mast Base MP-65 (item 6, fig. 1)..... | Install mast base on mast base bracket. Assemble mast base as shown in figure 4. For Mast Base MP-57 see figure 15. |
| Wire W-146 (item 20, fig. 1)..... | Cut a 40-inch length of Wire W-146. Strip insulation from 1 inch of each end, and solder-tin tips. Secure one end of wire to binding post on Mast Base MP-65, route through Insulators IN-101 and IN-104, and connect to antenna binding post on Radio Transmitter BC-653-(). |
| Cord CD-314 (item 18, fig. 1)..... | Insert Plug PL-68 on Cord CD-314 into jack on Loudspeaker LS-3, and Plug PL-55 into SPEAKER jack on Radio Receiver BC-652-(). |
| Mast Sections MS-116, MS-117, and MS-118 (items 7, 8, and 9, fig. 1). | Screw mast sections together, place tape over joints to prevent loss of sections, and screw assembled sections into Mast Base MP-65. When removed, mast sections may be stowed in Roll BG-56-() and Mast Base MP-65 protected with Cover BG-67-() when issued. |
| Chest CH-263 | Store in convenient place in vehicle. |

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SECTION IV

RADIO SET SCR-508-() OR SCR-528-()
AND ASSOCIATED INTERPHONE EQUIPMENT

10. Required Parts

Items necessary for the installation of Radio Set SCR-508-() or SCR-528-() and associated interphone equipment in Tank, Light, M24 are listed below:

Quantity	Stock No.	Item
1	2A262	Antenna A-62, phantom; including Wire W-128, bracket, and necessary hardware.
1	2Z2599-264	Chest CH-264.
8 ft.	1F562	Cable WC-562-(), coaxial.
3	6Z3147	Connector No. 61007 and Bondnut BL-50.
*6	4B417-4	Chest Set TD-4.
29 ft.	3Z2213	Cordage CO-213.
1	2Z3396	Cover BG-96.
*2	3H1636	Dynamotor DM-36-(), 24-volt, including attached spare parts.
1	3H1637	Dynamotor DM-37-(), 24-volt, including attached spare parts.
1	6L50-508B85	Hardware bag.
*6	2B800-16	Headset H-16/U.
1	3G601	Insulator IN-101.
5	2C1738	Interphone Control Box BC-606-(), including hardware.
*1	2A2081-15	Mast Base AB-15/GR.
*2	2A2416	Mast Section MS-116.
*2	2A2417	Mast Section MS-117.
*2	2A2418	Mast Section MS-118.
*1	2B1617	Microphone T-17, including two Microphone Covers M-367.
*5	2B1645	Microphone T-45.
1	2Z6721-237	Mounting FT-237-(), including mounting hardware and spare parts.
*2	2C4403	Radio Receiver BC-603-(), including set of installed tubes, spare fuses, and lamps.
1	2C6494	Radio Transmitter BC-604-(), including spare fuses and lamps, one set of tubes installed, and 80 crystals in Crystal Holder FT-241-().
*1	2Z8056	Roll BG-56-().
2	6D13113	TM 11-600, for Radio Sets SCR-508-(), SCR-528-(), and SCR-538-().

- * If Chest Set TD-4 is not available, issue six Cords CD-307-A and five Cords CD-318-A.
- † Only one Dynamotor DM-36-() and one Radio Receiver BC-603-() are required for Radio Set SCR-528-().
- ‡ If Headset H-16/U is not available, issue six Headsets HS-30-() and six Cords CD-604.
- § Mast Base MP-48 or MP-48-A, with Cover BG-108, may replace Mast Base AB-15/GR. When Mast Base MP-48-A is supplied, add one Cord CD-689.
- ¶ When Mast Base MP-48 or MP-48A is supplied in place of Mast Base AB-15/GR, two each Mast Sections MS-51, MS-52, and MS-53, with Clamps MC-423 and MC-424 are supplied in place of Mast Sections MS-116, MS-117, and MS-118.
- ‡ If Microphone T-45 is not available, substitute Microphone T-17.
- § Usually issued with Mast Sections MS-51, MS-52, and MS-53.

11. Assembly and Installation.

Components of Radio Set SCR-508-() or SCR-528-() and associated interphone equipment should be installed in Tank, Light, M24 as shown in figure 6 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Mounting FT-237-(), on floor of turret bulge (item 6, fig. 6).	Secure Mounting FT-237-() to platform with eight 5/16-inch screws, and shakeproof washers provided, as shown in figure 6.

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<i>Part and location</i>	<i>Method and materials</i>
Antenna A-62, phantom (item 57, fig. 6), on Mounting FT-237-(), left end.	See figure 9 and install Antenna A-62 in position 1, as follows: Remove and discard two No. 10 screws from left front corner of Mounting FT-237-(). Secure antenna to bracket (fig. 10) provided, with four No. 6-32 x 3/8-inch screws supplied on case of antenna. Secure bracket to Mounting FT-237-() with two No. 10-32 x 3/8-inch screws supplied. When using Antenna A-62 in alignment of Radio Transmitter BC-604-(), disconnect antenna lead-in wire from Mounting FT-237-() and connect Antenna A-62 to TR binding post with 20-inch length of Wire W-128 supplied with antenna.
Mast Base AB-15/GR and Cable WC-562-(), on mast base bracket, left side of turret (items 7 and 23, fig. 6).	Remove top plate of mast base bracket by removing three bolts securing it to bracket. (See fig. 11.) Assemble Mast Base AB-15/GR to plate as indicated on the drawing. Large toothed lockwasher, item 14, must make contact with under side of plate. Tighten mast base by hand. Apply a slight additional pressure, if necessary, with a hex. wrench on hexagonal portion of body of mast base, item 2, to insure good contact of toothed lockwasher to plate. Pass Cable WC-562-() through hole in mast base bracket. Secure Insulator IN-101 in hole with clip provided. Place hose clamp (item 15, fig. 11) over Plug PL-259, item 16. Secure Plug PL-259 to adapter, item 9, and tighten hose clamp around Plug PL-259. Place plate on mast base bracket and secure by replacing three screws. Route and secure Cable WC-562-() as shown in figure 6, plan view. Connect 1 inch prepared tip of cable to TR binding post on Mounting FT-237-(). Secure clamp, attached to Cable WC-562-(), to Mounting FT-237-() by means of No. 10 screw adjacent to TR binding post. See figure 16 for Mast Base MP-48 or figure 17 for Mast Base MP-48-A.
Interphone Control Box BC-606-() (driver) (item 13, fig. 6).	Locate on bracket attached to hull ceiling, near turret ring, and to left vehicle center line. Secure in position shown in figure 6 with No. 8 screws and lockwashers provided.
Interphone Control Box BC-606-() (co-driver) (item 13, fig. 6).	Locate on bracket (near hull ceiling) attached to support post. Secure in position shown in figure 6 with No. 8 screws and lockwashers.
Interphone Control Box BC-606-() (gunner) (item 13, fig. 6).	Locate on bracket (fig. 13) attached to left wall of turret, near ceiling. Secure in position shown in figure 6 with No. 8 screws and lockwashers.
Interphone Control Box BC-606-() (commander) (item 13, fig. 6).	Locate on bracket at rear of turret, below turret bulge. Secure on bracket in position shown in figure 6 with No. 8 screws and lockwashers.
Interphone Control Box BC-606-() (loader) (item 13, fig. 6).	Locate on same bracket with commander's Interphone Control Box BC-606-(). Secure in position shown in figure 6 with No. 8 screws.
Hooks (D of fig. 12) (item 21, fig. 6), for Microphones and headsets.	Locate as shown in figure 6.

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<i>Part and location</i>	<i>Method and materials</i>
Dynamotor DM-37-() and Radio Transmitter BC-604-(), on Mounting FT-237-() (items 4 and 2, fig. 6).	If dynamotor is not already installed, proceed as follows: Remove crystal case from transmitter cabinet by loosening screw locks on front panel and pulling out crystal case. Loosen four screw locks holding cover on top of transmitter and remove cover. Plug dynamotor unit into receptacle on left rear of transmitter chassis and tighten screws in its base. Place transmitter on Mounting FT-237-() and secure by means of thumbscrew locking devices provided.
Dynamotor DM-36-() and Radio Receiver BC-603-(), on Mounting FT-237-() (items 3 and 1, fig. 6).	If dynamotor is not already installed, remove case from receiver by loosening screw lock in rear center of case. Plug dynamotor into receptacle on top of chassis and tighten screws in its base.
Mast Sections MS-116, MS-117, and MS-118 (items 8, 9, and 10, fig. 6).	Screw mast sections together. Screw assembled mast sections in Mast Base AB-15/GR. When mast sections are removed, stow them in Roll BG-56-() when available. When Mast Sections MS-51, MS-52, and MS-53 are used with Mast Base MP-48 or MP-48-A, place Clamps MC-423 and MC-424 on joints to prevent loss of sections.
Spare headsets, cords, tubes, etc.....	Stow in Chest CH-264. See chart supplied with chest for location of items.
Chest CH-264	When used with Radio Set SCR-508-(), place chest in tool box of vehicle or in any convenient place. When used with Radio Set SCR-528-(), place chest on Mounting FT-237-(), in space provided for second radio receiver.
Cordage CO-213 (items 25, 26, 27, 28, 29, and 30, fig. 6).	Figure 7 lists approximate length of cordage required for connecting interphone components. Make a trial or pilot installation in vehicle to determine exact lengths required before cutting cordage. <i>Wire up as much of equipment as possible before installing in vehicle.</i> After cordage has been cut to proper lengths, prepare lengths as follows: Strip back 3½ inches of outer rubber and 2½ inches of inner and outer shields for connections to interphone control boxes. Strip back 6 inches of outer rubber and 5 inches of shields for connections to Mounting FT-237-(). Using a pointed instrument, separate weave of exposed 1-inch ends of shield braids. Strip about ½ inch of insulation from black lead at point exposed by separation of shields. Twist separated wires of both shield braids around prepared portion of black lead and solder together, using a minimum of solder. Use black lead for ground connection as shown in figure 7. Prepare ends of cordage for connection to vehicle terminal boxes as explained above, except that 8½ inches of outer rubber and 7½ inches of outer shielding are stripped back and shielded pair of red and green wires is taped as shown in figure 7. Solder properly numbered lugs (obtained from terminal box) to wires as shown in figure 7. Insert prepared cordage through appropriate hole in Interphone Control Box BC-606-() and fasten by means of clamp provided. Solder ends of wires to numbered terminals on terminal block in-

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Part and location

Method and materials

side interphone control boxes as shown in figure 7. Insert cordage (connecting to radio set) through appropriate hole in Mounting FT-237-() and secure with clamp provided at terminal board inside Mounting FT-237-(). Connect cordage to terminals on terminal board as shown in figure 7. Use connectors and bond-nuts to secure cordage through knock-out holes in terminal boxes and connect cordage wires to terminals in terminal box as shown in figure 7. See figure 8 for wiring diagram of slip rings and terminal boxes.

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SECTION V
RADIO SET AN/VRC-3

12. Required Parts

Items necessary for installation of Radio Set AN/VRC-3 in Tank, Light, M24 are listed below:

Quantity	Stock No.	Item
1	2A275-130	Antenna AN-130.
2	2Z299-359A	Adapter M-359.
1	3A70	Battery BA-70.
2	2Z1250.112	Bracket, for Switchbox BC-658-C.
2	3G1837-52.1	Bushing, for Cord CG-102/TRC-7.
1	6F428	Case CS-128.
2	6Z3147	Connector No. 61007 and Bondnut BL-50.
1	1F430-102.84	Cord CG-102/TRC-7.
1	4B417-4	Chest Set TD-4.
6 ft.	3E2144	Cordage CO-144, for Switchbox BC-658-C.
6 ft.	3E2145	Cordage CO-145, for Switchbox BC-658-C.
8 ft.	3E2213	Cordage CO-213.
1	4B1115	Handset TS-15.
1	6L50-VRC-3-V85	Hardware bag.
1	2B800-16	Headset H-16/U.
1	2A2081-15	Mast Base AB-15/GR.
1		Mast base bracket (fig. 23).
2	2A2417	Mast Section MS-117-A.
2	2A2418	Mast Section MS-118-A.
1	2B1645	Microphone T-45.
1		Mounting. (See fig. 24.)
1		Plate for antenna lead-in. (See fig. 25.)
1	2C5395-1000	Radio Receiver and Transmitter BC-1000- ().
1	2Z8056	Roll BG-56- ().
1	2Z9050	Strap ST-50.
2	2C7978	Switchbox BC-658-C.
2		TM 11-637.
1	2Z9299-217	Terminal Box TM-217.
1	2Z9940-410.1	Transformer C-410.
6 ft.	1B128	Wire W-128, for ground and substitute antenna.

* If Mast Base AB-15/GR and Mast Sections MS-117-A and MS-118-A are not available, one Mast Base MP-48-A or MP-48, two Mast Sections MS-53, and two Mast Sections MS-52 shall be issued; Cord CG-102/TRC-7 and Terminal Box TM-217 shall be deleted. Cord CG-102/TRC-7 and Terminal Box TM-217 shall be issued only if Mast Base AB-15/GR is issued.

† Includes Mounting FT-507. If Switchbox BC-658-C is not available, Switchbox BC-658-A or BC-658-B may be issued.

‡ If Chest Set TD-4 is not available, one Cord CD-307-A and one Cord CD-318-A shall be issued.

§ If Headset H-16/U is not available, one Headset HS-30 and one Cord CD-604 shall be issued.

¶ If bushing is not available, two Insulators IN-121 shall be issued.

‡ Required only for vehicles not equipped with production provisions for installation of Radio Set AN/VRC-3.

• The mounting, if not available complete, may be made by modifying a Mounting FT-250.

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13. Assembly and Installation

Components of Radio Set AN/VRC-3 should be installed in Tank, Light, M24 as shown in figures 19 and 20 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Plate (fig. 25) over smoke mortar outlet (item 19, fig. 19).	Remove smoke mortar, and remove 30 caliber ammunition box from right side of turret wall. Weld plate (fig. 25) over smoke mortar outlet.
Mast base bracket (fig. 23) on right front of turret top plate (item 10, fig. 19).	Weld mast base bracket (fig. 23) to turret as shown in figure 19.
Spacers (item 21, fig. 19) inside turret front top plate.	Weld spacers, found in hardware bag, to turret front top plate, inside, as shown in detail C of figure 19.
Bracket, for Switchbox BC-658-C, on turret (item 18, fig. 19).	Weld brackets to turret in positions shown on <i>Plan View</i> of figure 19.
Mounting (fig. 24), as shown in details A and C of figure 19 or 20.	Secure mounting (fig. 24) to tapped spacers (item 21, fig. 19) with hardware provided, as shown in detail A, figure 19 or 20.
Switchbox BC-658-C (item 11, fig. 19) (item 10, fig. 20) and Transformer C-410 (item 5, figs. 19 and 20) (fig. 18).	Before two Switchboxes BC-658-C are installed in vehicle, remove circular knock-out plate that is sweated over hole in top side of two Switchboxes BC-658-C. Secure connector No. 61007 and Bondnut BL-50 in hole for entrance of Cordage CO-213. Remove headset and microphone patch cords from radio side of commander's Switchbox BC-658-C. Close exposed holes by a piece of cordage or solid rubber, or remove connector No. 59967 and Bondnut BL-38 and cover with a strip of metal sweated over both holes to make switchbox watertight. Replace headset patch cord on radio side of loader's switchbox with a 5½ foot length of Cordage CO-144, and replace microphone patch cord with a 5½ foot length of Cordage CO-145. Remove Plugs PL-55 and PL-68 from patch cords just removed from switchbox and install Plug PL-55 on free end of Cordage CO-144 and Plug PL-68 on free end of Cordage CO-145. Cut Cordage CO-144 terminating in Plug PL-55 about 4 inches from switchbox and prepare free ends of cordage for installation of two Terminals TM-163 (found in hardware bag) to prepared tips by soldering. Open case of Transformer C-410 by removing four screws in flat side of case. See figure 18 and note that terminals 1 and 2 on Transformer C-410, marked <i>headset</i> , will be used for connection to Cordage CO-144 terminating in Plug PL-55. Terminals 3 and 4, marked <i>cord</i> , will be used to connect 4-inch piece of Cordage CO-144 from Switchbox BC-658-C. Secure Mounting FT-507 to brackets with hardware provided. Place loader's Switchbox BC-658-C on right side of turret as shown in figure 19 or 20. Commander's Switchbox BC-658-C is located on left side of turret. Route Cordage CO-213 as shown in figures 19 and 20 and connect to switchboxes as shown in figure 18. In event Switchbox BC-658-C is not available for installation in vehicle, Switchbox BC-658-A or BC-658-B may be used. Note

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that models other than Switchboxes BC-658-C do not have knock-out plate on top side of box, nor are they equipped with Mounting FT-507. Perform modification as shown in detail D in figure 19 for early production vehicles. Modify switchbox as shown in detail B in figure 20 for late production vehicles, drilling $\frac{1}{16}$ -inch holes for entrance of Cordage CO-213. For early production vehicles, proceed as outlined for loader's switchbox above. In late production vehicles, cut headset patch cord on radio side of loader's switchbox about 6 inches from switchbox and proceed as indicated above. Secure Cordage CO-213 in Switchbox BC-658-A or BC-658-B with clamp No. 4 as shown in figure 5. Switchboxes are secured to brackets as shown in figures 19 and 20 with hardware provided.

Battery BA-70 and Radio Receiver and Transmitter BC-1000-(), on mounting. (See fig. 24.)

Install Battery BA-70 in Case CS-128, as directed in TM 11-637 (supplied with equipment). Place Radio Receiver and Transmitter BC-1000-() on mounting (fig. 24) and secure in place with strap and wingnuts provided on mounting, as shown in detail A of figure 19 or 20. Prepare a grounding lead of sufficient length of Wire W-128 as shown in figure 19 or 20 by soldering Terminal TM-91 to each end. Secure one end of ground wire to *Ground* binding post on panel of Radio Receiver and Transmitter BC-1000-(), and other end of ground wire as shown in detail B of figure 19 or detail C of figure 20. Insert Plug PL-68, on patch Cord CO-145 from loader's Switchbox BC-658-C, into microphone jack, and insert Plug PL-55, on patch Cord CO-144 from loader's Switchbox BC-658-C, into No. 1 phone jack.

Mast Base AB-15/GR in mast base bracket as shown in figure 23 located on forward top of turret.

See figure 11. Disassemble Mast Base AB-15/GR by holding lower insulator and turning body of mast base counterclockwise. Remove binding post from adapter socket on bottom of mast base. Place upper insulator, item 6, over hole in the mast base bracket. (See fig. 23.) Note that a large neoprene washer, item 6, is cemented to each insulator, items 5 and 7. A small neoprene washer, item 4, is placed on top of upper insulator, item 5, and a plain washer, item 3, is placed over small neoprene washer, item 4. Insert body of Mast Base AB-15/GR, item 2, through holes in items 3, 4, 5, and 6; and through mast base bracket. (See fig. 23.) Place large I. T. lockwasher, item 14, over flange of lower insulator, item 7. Insert bolt, item 8, into body of Mast Base AB-15/GR from underneath mast base bracket (fig. 23), and turn body of mast base clockwise until mast base is tightened securely. It is necessary that large toothed lockwasher, item 4, make good contact with underside of mast base bracket. If additional pressure is necessary to make good contact, apply a wrench to hexagon portion of mast base body, being careful not to damage insulators, items 5 and 7.

Terminal Box TM-217, Adapter M-359, Cord CG-102/TRC-7, and bushing for Cord

Insert threaded stud on Terminal Box TM-217 into antenna socket; tighten firmly by turning Terminal Box TM-217 clockwise. Connect ground lead from Terminal Box TM-217 to *Ground* binding

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CG-102/TRC-7 (items 6, 17, and 15 of figs. 19 and 20.)

post on Radio Receiver and Transmitter BC-1000-(). Secure one Adapter M-359 to adapter socket (item 9, fig. 11) on bottom of Mast Base AB-15/GR. Secure another Adapter M-359 to socket of Terminal Box TM-217. Connect Cord CG-102/TRC-7 to two Adapters M-359 on Mast Base AB-15/GR and Terminal Box TM-217. Coil excess cordage and tape coil to mounting (fig. 24) in such a manner as to not restrict motion of shock mounts. (See figs. 19 or 20.) Bushing for Cord CG-102/TRC-7 is installed in hole in plate for antenna lead-in (fig. 25) and Cord CG-102/TRC-7 is passed through bushing as shown in figure 19. If bushing for Cord CG-102/TRC-7 is not available, install Insulator IN-121 in hole through plate (fig. 25) before Cord CG-102/TRC-7 is installed. In this case one Plug PL-259, which is part of Cord CG-102/TRC-7, must be removed from cord in order to pass it through insulator. If Mast Base AB-15/GR is not available, Mast Base MP-48 or MP-48-A with Mast Sections MS-52 and MS-53, may be used by cutting a 32-inch lead-in of Wire W-128. Install, in place of Cord CG-102/TRC-7 and Terminal TM-217, between Mast Base MP-48 or Mast Base MP-48-A and Radio Receiver and Transmitter BC-1000-(). Solder a copper-tinned No. 18 terminal (found in hardware bag) to one end of 32-inch lead-in wire and secure to antenna socket with hexagon head screw $\frac{3}{8}$ -24 x $\frac{1}{2}$ -inch and $\frac{3}{8}$ -inch standard lockwasher (found in hardware bag). See figure 16 for assembly of Mast Base MP-48 or figure 17 for assembly of Mast Base MP-48-A. See figure 21 for Wire W-128 antenna lead-in when used with Mast Base AB-15/GR.

Mast Sections MS-117-A and MS-118-A, on Mast Base AB-15/GR.

Screw mast sections together. Screw assembled antenna into Mast Base AB-15/GR. Carry mast sections in Roll BG-56-() when not in use. When Mast Base MP-48 or MP-48-A is substituted for Mast Base AB-15/GR, issue Mast Sections MS-52 and MS-53 with Clamp MC-424. Clamp MC-424 is placed on joints of Mast Sections MS-52 and MS-53 to prevent loss of mast sections.

Microphone T-45 and Headset H-16/U.

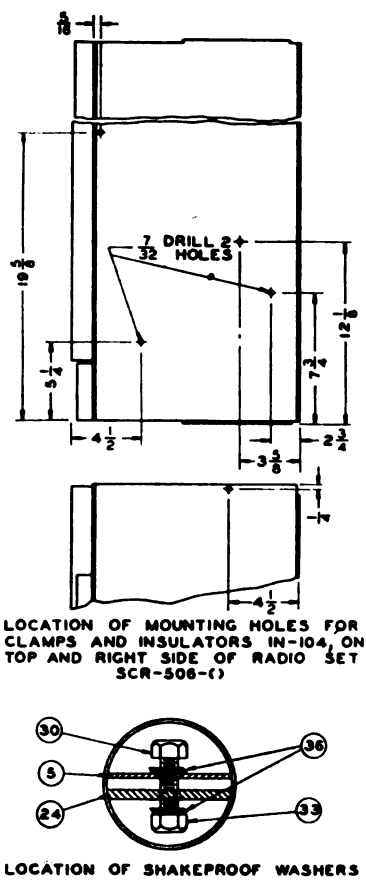
Headset H-16/U is used with Microphone T-45 and Chest Set TD-4. Headset H-16/U and Chest Set TD-4 must be used in conjunction with interphone equipment in tank, and may *not* be used for portable operation of radio set, since impedance of Headset H-16/U does not match impedance of radio set.

Antenna AN-130, Handset TS-15, and Strap ST-50.

These items are for use in field operation of radio set, when it is removed from the tank. Stow these items and TM 11-637 in any convenient place in vehicle.

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ITEM NO.	NAME OF ITEM	QUAN. REQ.
1	RADIO RECEIVER BC-852-()	1
2	RADIO TRANSMITTER BC-853-()	1
3	DYNAMOTOR DM-41-()	1
4	DYNAMOTOR DM-43-()	1
5	MOUNTING FT-253-()	1
6	MAST BASE MP-65 OR MP-57 SEE NOTE 3	1
7	MAST SECTION MS-116 OR MS-49 AND CLAMP MC-421	1
8	MAST SECTION MS-117 OR MS-50 AND CLAMP MC-422	1
9	MAST SECTION MS-118 OR MS-51 AND CLAMP MC-423	1
10	MAST SECTION MS-52 AND CLAMP MC-424	1
11	MAST SECTION MS-53	1
12	COVER BC-87-() SEE NOTE 5	1
13	APPLETON CONNECTOR CAT. #81007	2
14	APPLETON BONDNUIT CAT. #BL-50	2
15	LOUDSPEAKER LS-3	1
16	ANTENNA (PHANTOM) A-27	1
17	SWITCH BOX BC-858-()	1
18	CORD CD-314 SEE NOTE 6	1
19	CORD CO-280	2
20	WIRE W-146 40 IN. LONG SEE NOTES 7, 7 AND 13	1
21	INSULATOR IN-104	2
22	INSULATOR IN-101	1
23	MAST BASE BRACKET } SEE NOTE 8	1
24	FRAME	1
25	BRACKET PER FIG 3 SEE NOTE 9	1
26	BRACKET PER FIG 2	1
27	CLAMP #7	3
28	CLAMP #8	2
29	CLAMP #9	2
30	HEX. HD. CAP SCR. 1/4-20X3/4 LONG	12
31	RD. HD. MACH. SCR. #8-32X1/2 LONG SEE NOTE 10	3
32	RD. HD. MACH. SCR. #8-32X5/8 LONG	3
33	HEX. NUT 1/4-20 ST'D. SEE NOTE 6	12
34	HEX. NUT #8-32 ST'D.	3
35	LOCKWASHER S.A.E. ST'D. FOR #8 SCR.	3
36	SHAKEPROOF WASHER 1/4 I.E.T. SEE NOTE 11	24
37	WASHER RUBBER	1
38	TERMINAL BOX SEE NOTE 6	1



- NOTE:
- FOR ADDITIONAL COMPONENTS AND SPARE PARTS, SEE COMPONENT PARTS LIST.
 - DIMENSIONS UNLESS OTHERWISE SHOWN ARE IN INCHES.
 - USE MP-37, IF ① IS NOT AVAILABLE.
 - CUT TO PROPER LENGTH. TIN ENDS FOR ANTENNA CONNECTIONS.
 - USE ② WHEN MAST SECTIONS ARE NOT INSTALLED.
 - ⑥ AND ⑬ FURNISHED WITH ④.
 - WHEN USING ⑥ FOR ALIGNING TRANSMITTER, MOUNT THE ANTENNA IN POSITION PROVIDED ON ②. DISCONNECT ② FROM ANTENNA BINDING POST ON ②, AND CONNECT ⑥ TO ANTENNA BINDING POST ON ②.
 - ⑧ SHALL BE FURNISHED WITH THE VEHICLE BY THE VEHICLE MANUFACTURER, ⑨ AND ⑩ BY ORDNANCE, AS REQUIRED.
 - SMOKE BOMB RACK SHALL BE REMOVED AND ⑫ SHALL BE WELDED ON TOP OF TORSION BAR HOUSING, TO THE REAR OF CO-DRIVER'S SEAT.
 - REPLACE PROVIDED SCREWS WITH ⑬, TO MOUNT ⑭. USE PROVIDED WASHERS.
 - ⑮ SHALL BE CAT. #4014-22, AS MADE BY SHAKEPROOF, INC., CHICAGO, ILL., OR EQUAL.
 - DRAWING REFERENCES:
 - INSTALLATION OF SCR-506-(), SCR-528-() FIG. 6
 - WIRING DIAGRAM OF INTERPHONE EQUIPMENT FOR SCR-506-(), SCR-528-() FIG. 7
 - WIRING DIAGRAM OF SLIP RINGS AND TERMINAL BOXES FIG. 8
 - ISSUE CABLE WC-562-() WHEN MAST BASE AB-15/GR IS USED.

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Figure 1. Installation of Radio Set SCR-506-() in Tank, Light, M24.

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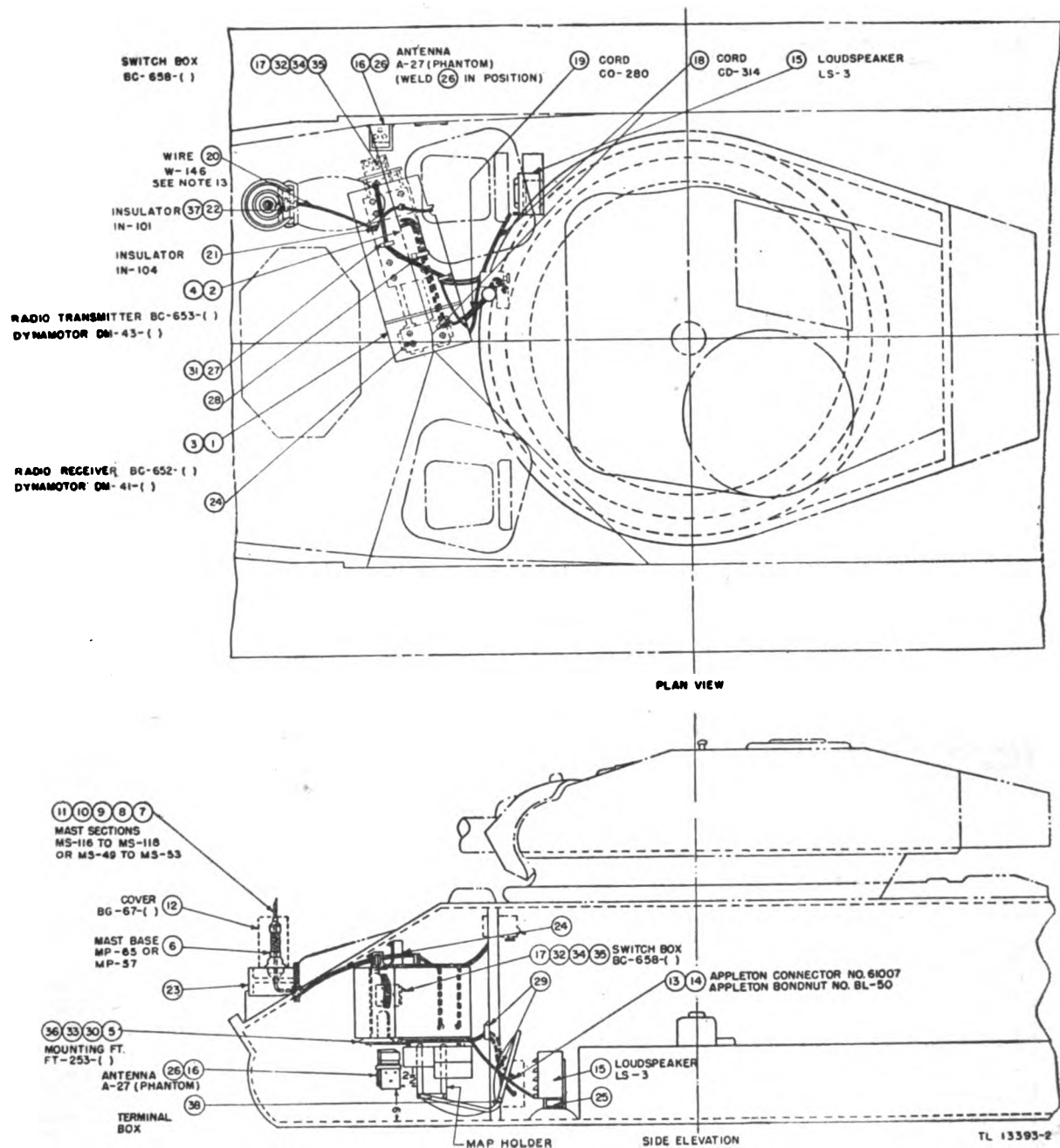
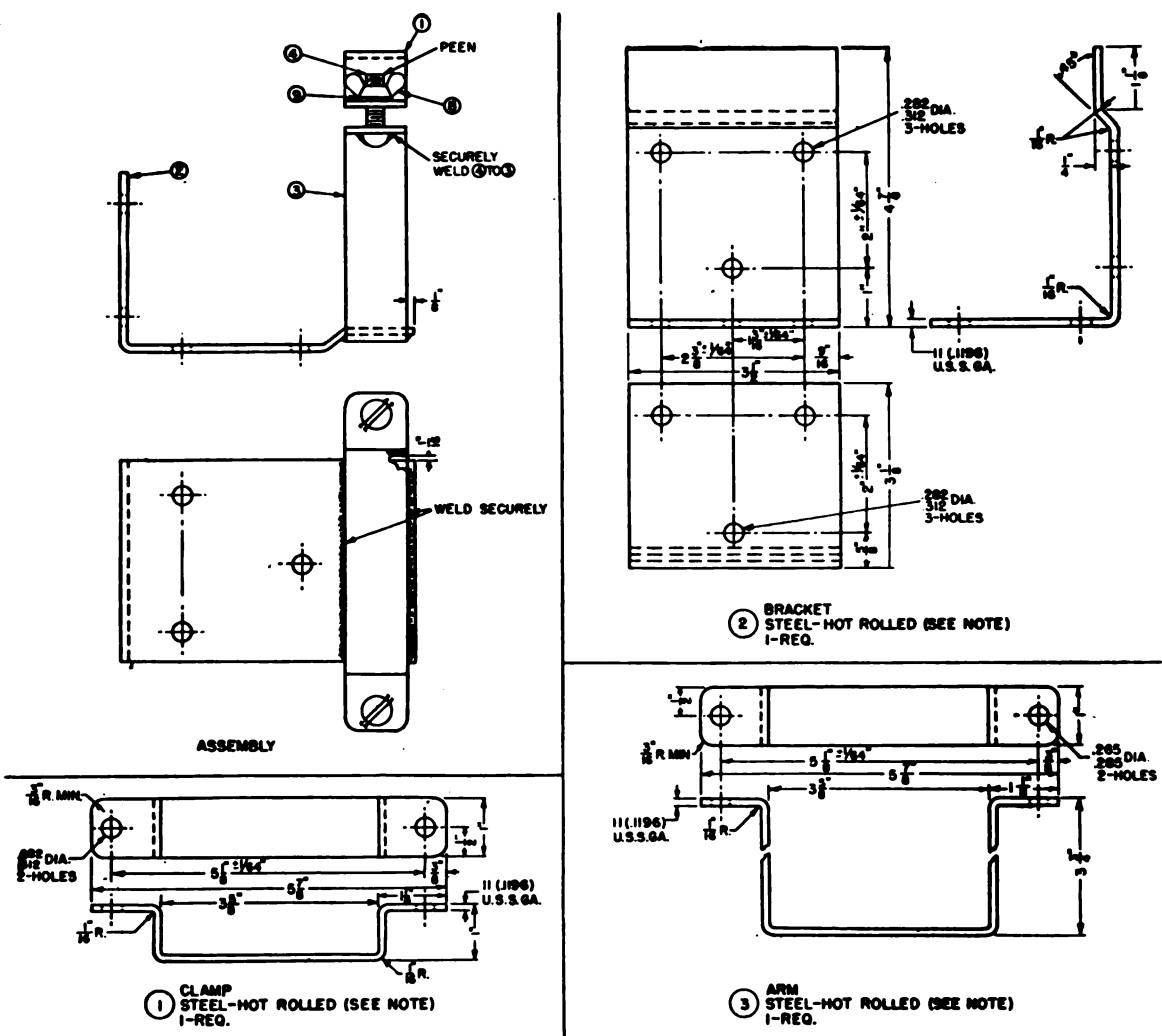


Figure 1. Installation of Radio Set SCR-506-() in Tank, Light, M24—Continued.

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QUAN. REQ.	NAME OF ITEM	MATERIAL	TYPE NO.	ITEM NO.	REMARKS
6	LOCKWASHER		SEE NOTE	9	S.A.E. REG. FOR 1/4 SCREW
2	WING NUT			8	1/4-20
4	HEX. NUT	STEEL		7	1/4-20 STD.
4	HEX. HD. CAP SCREW	ELECTRO-GALVANIZED	SEE NOTE	6	1/4-20 X 1/2 LONG
4	HEX. HD. CAP SCREW			5	1/4-20 X 1/2 LONG
2	RD. HD. MACH. SCREW			4	1/4-20 X 1 LONG
1	ARM			3	
1	BRACKET	STEEL		2	
1	CLAMP			1	

NOTE:
 REMOVE ALL BURRS.
 AFTER WELDING (2) & (3) TO (1), (2) & (3) SHALL BE BONDERIZED AND THEN GIVEN ONE SPRAY COAT OF METAL PRIMER, CLASS 01, AND ONE SPRAY COAT OF SEMI-GLOSS OLIVE DRAB BAKING ENAMEL, CLASS 440. TOUCH UP HEADS OF (1) TO MATCH SURROUNDING SURFACE. ALL PRINTS AND METHODS OF APPLICATION SHALL BE IN ACCORDANCE WITH ORDNANCE TENTATIVE SPECIFICATION TAC ES-NO. 600.
 (1), (2) & (3) ARE USED FOR INSTALLATION AND SHALL BE PLACED IN A HEAVY CLOTH BAG PLAINLY AND PERMANENTLY MARKED "THIS BAG CONTAINS SCREWS NUTS AND LOCKWASHERS FOR INSTALLATION SPARES ARE INCLUDED IN QUANTITIES. THIS BAG SHALL BE TIED TO THE BRACKET."
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Figure 2. Bracket for Antenna A-27, phantom.

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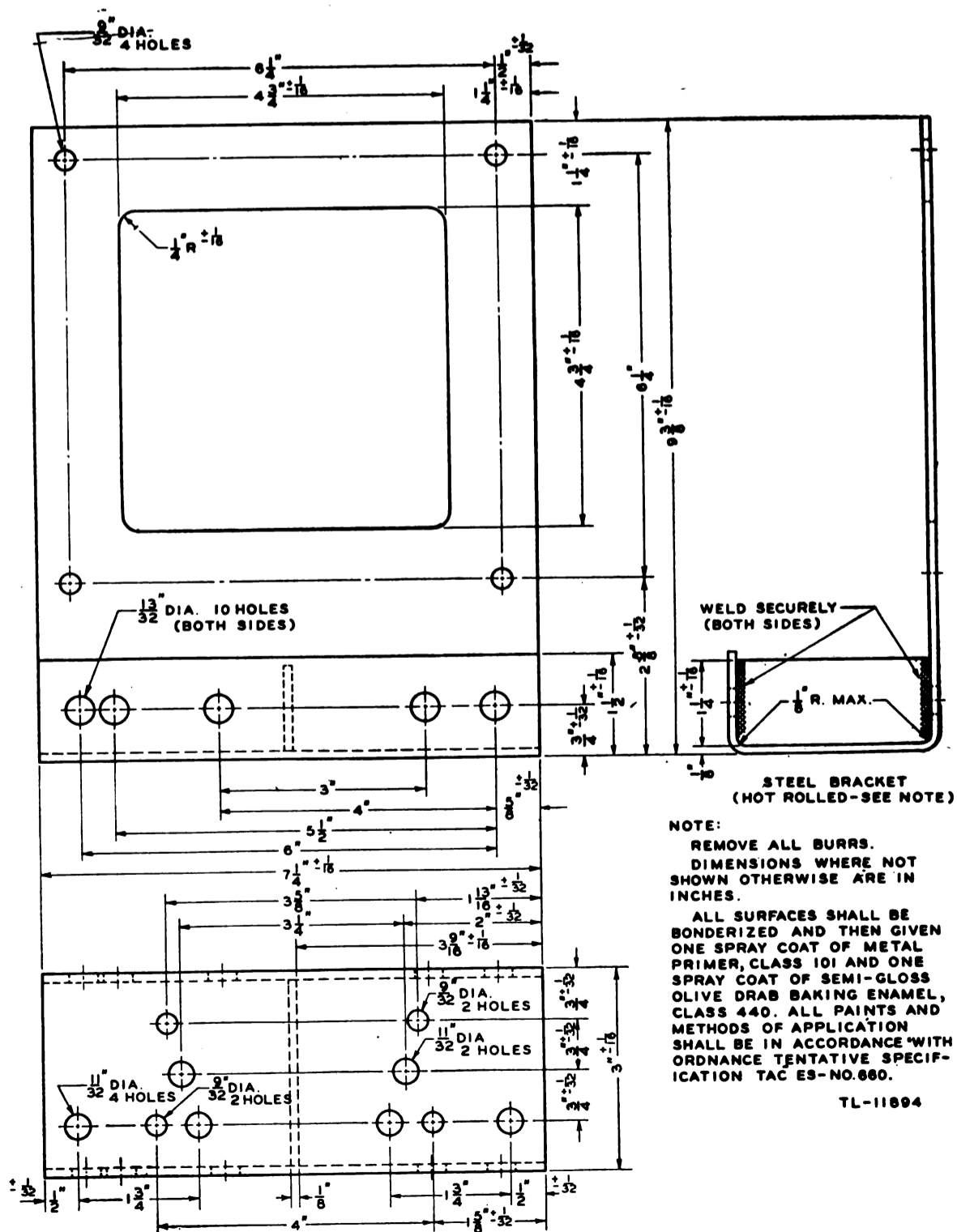


Figure 3. Bracket for Loudspeaker LS-3.

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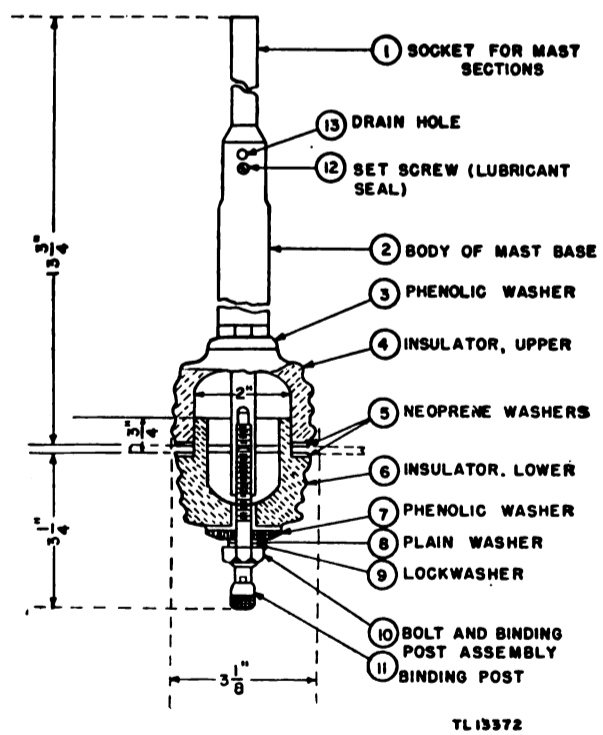
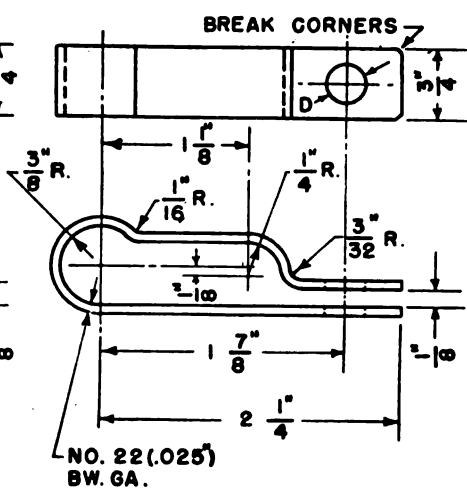
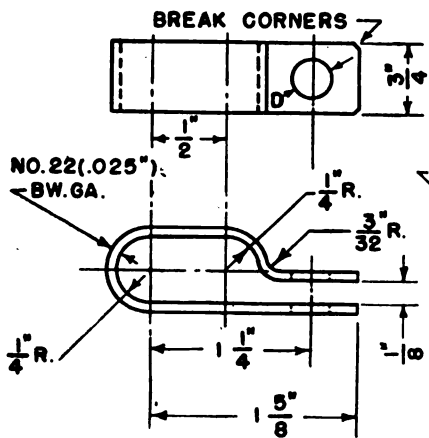
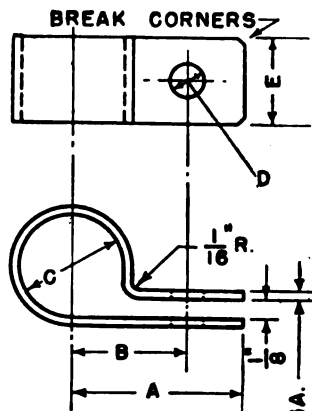


Figure 4. Mast Base MP-65-A.

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GLAMP	A	B	C	D	E	STOCK NO.
1	1-1/8"	3/4"	7/16"	3/16"	1/2"	222637-1
2	1-1/8"	3/4"	7/16"	9/32"	3/4"	222637-2
3	1-1/8"	3/4"	7/16"	13/32"	3/4"	222637-3
4	1-1/8"	3/4"	17/32"	3/16"	1/2"	222637-4
5	1-1/8"	3/4"	17/32"	9/32"	3/4"	222637-5
6	1-1/8"	3/4"	17/32"	13/32"	3/4"	222637-6



NO. 22(.025\"/>

GLAMP	D	STOCK NO.
7	3/16"	222637-7
8	9/32"	222637-8
9	13/32"	222637-9

GLAMP	D	STOCK NO.
10	9/32"	222637-10
11	13/32"	222637-11

NOTE:
TOLERANCES $\pm 1/32$ "

TL-13319

Figure 5. Clamps.

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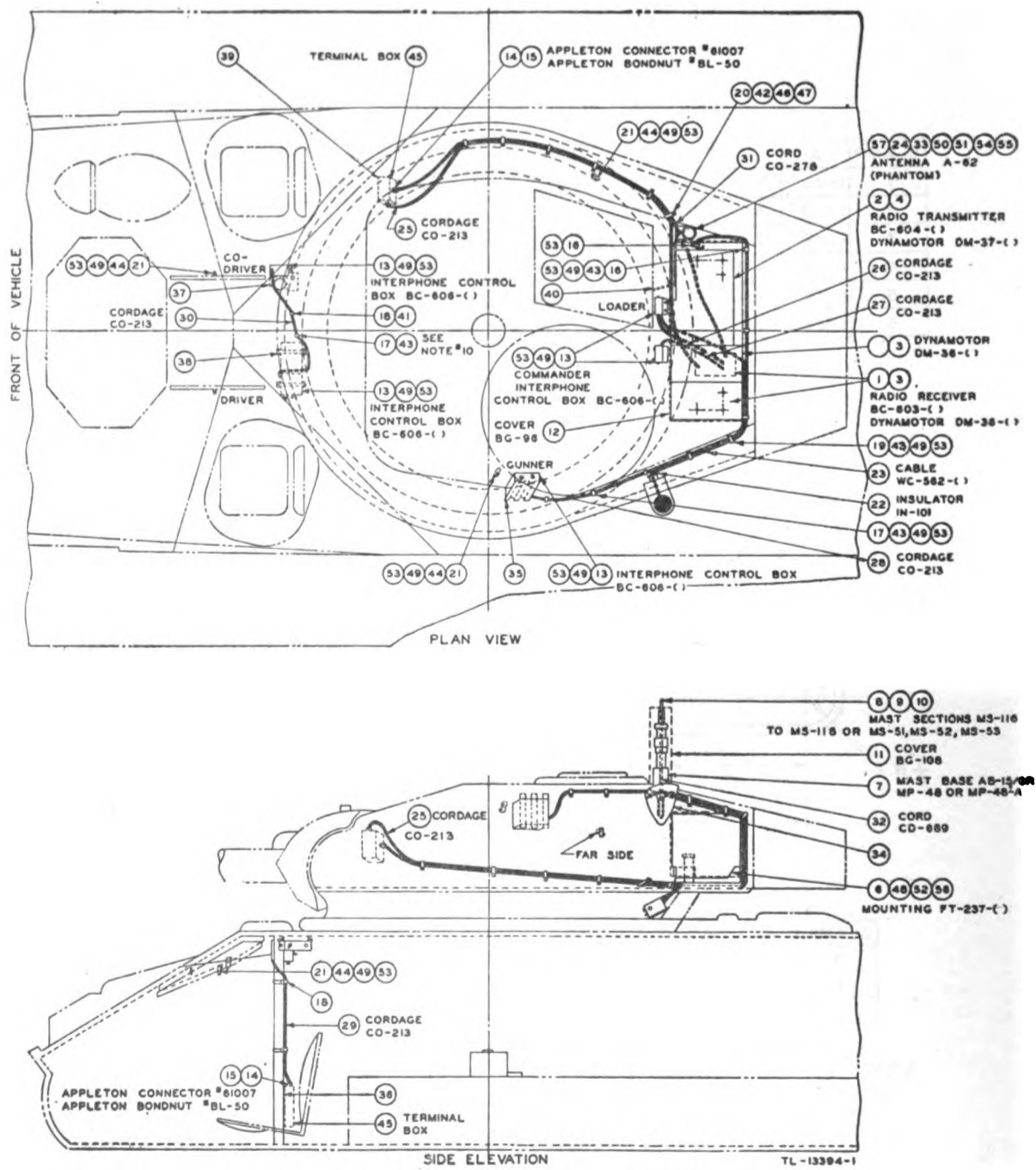
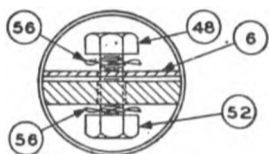


Figure 6. Installation of Radio Set SCR-508-() or SCR-528-() and associated interphone equipment in Tank, Light, M24.

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LOCATION OF SHAKEPROOF WASHERS

NOTE.

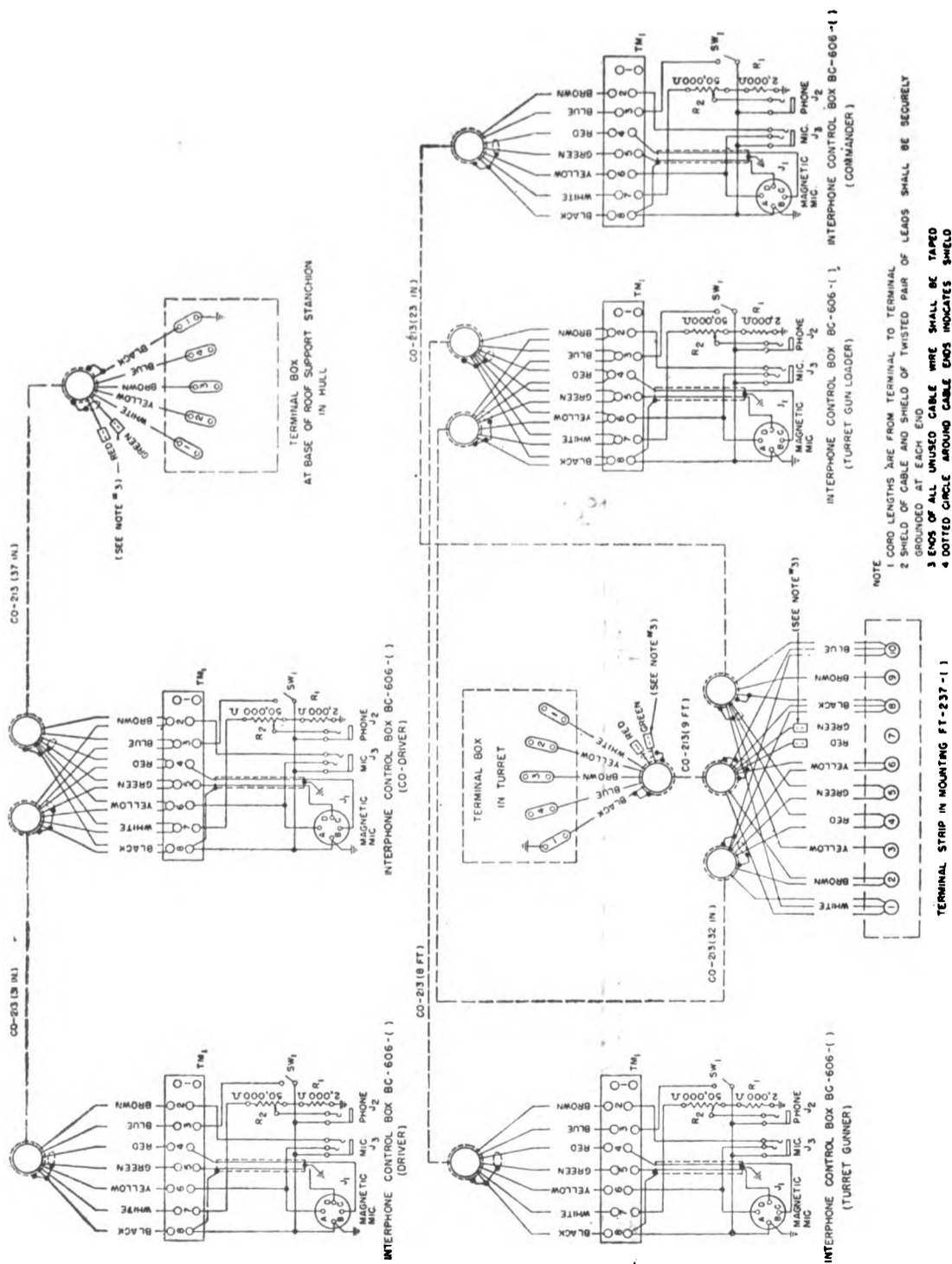
1. FOR ADDITIONAL COMPONENTS AND SPARE PARTS, SEE COMPONENT PARTS LIST.
2. IF (7) IS NOT AVAILABLE, USE MP-48, LESS CORD CD-689.
3. (24) CUT TO PROPER LENGTH. TIN ENDS FOR ANTENNA CONNECTIONS. SOLDER (16) TO SHIELD OF (23) FOR GROUND CONNECTION TO (6).
4. USE (11) WHEN MAST SECTIONS ARE NOT INSTALLED.
5. (34) TO (47) INCLUSIVE SHALL BE FURNISHED WITH THE VEHICLE BY THE MANUFACTURER.
6. (17), (21), (49), AND (53) ARE FURNISHED WITH (13).
7. (31), (48), AND (52) ARE FURNISHED WITH (6).
8. DIMENSIONS UNLESS OTHERWISE SHOWN ARE IN INCHES.
9. WHEN USING ANTENNA A-62 (PHANTOM) FOR ALIGNING TRANSMITTER, DISCONNECT FROM MOUNTING FT-237-(), AND CONNECT FROM ANTENNA A-62 (PHANTOM) TO ANTENNA POST ON MOUNTING FT-237-().
10. (17) AND (18) MOUNTED WITH HARDWARE PROVIDED WITH THE VEHICLE BY THE MANUFACTURER.
11. (56) SHALL BE CAT. #42-4018-24 AS MADE BY SHAKEPROOF, INC., CHICAGO, ILL., OR EQUAL.
12. DRAWING REFERENCES:
 INSTALLATION OF SCR-508-() FIG. 1.
 WIRING DIAGRAM OF INTERPHONE EQUIPMENT FOR SCR-508-(), SCR-528-() FIG. 7.

ITEM NO.	NAME OF ITEM	QUANTITY REQUIRED	
		RADIO SET SCR-528-()	RADIO SET SCR-508-()
1	RADIO RECEIVER BC-603-()	1	2
2	RADIO TRANSMITTER BC-604-()	1	1
3	DYNAMOTOR DM-36-()	1	2
4	DYNAMOTOR DM-37-()	1	1
5			
6	MOUNTING FT-237-()	1	1
7	MAST BASE AB-15/GR OR MP-48-A SEE NOTE 2	1	1
8	MAST SECTION MS-118 OR MS-53	1	1
9	MAST SECTION MS-117 OR MS-52 AND CLAMP MC-424	1	1
10	MAST SECTION MS-116 OR MS-51 AND CLAMP MC-423	1	1
11	COVER BG-108 SEE NOTE #4	1	1
12	COVER BG-96	1	1
13	INTERPHONE CONTROL BOX BC-606-()	5	5
14	APPLETON CONNECTOR CAT. NO. 61007	3	3
15	APPLETON BONDNUT CAT. NO. BL-50	3	3
16	CLAMP PER FIG. 5	3	3
17	CLAMP SEE NOTE #10 PER FIG. 5	4	4
18	CLAMP SEE NOTE #10 PER FIG. 5	3	3
19	CLAMP PER FIG. 5	3	3
20	CLAMP PER FIG. 5	6	6
21	HOOK SEE NOTE #6 PER FIG. 12 D	4	4
22	INSULATOR IN-101	1	1
23	CABLE WC-562-() SEE NOTES #3 AND #9 8 FT. LONG	1	1
24	WIRE W-126 SEE NOTES #3 AND #9 20 IN. LONG	1	1
25	CORDAGE CO-213 9 FT. LONG	1	1
26	CORDAGE CO-213 32 IN. LONG	1	1
27	CORDAGE CO-213 23 IN. LONG	1	1
28	CORDAGE CO-213 8 FT. LONG	1	1
29	CORDAGE CO-213 37 IN. LONG	1	1
30	CORDAGE CO-213 31 IN. LONG	1	1
31	CORD CO-278 SEE NOTE #7	1	1
32	CORD CD-689	1	1
33	BRACKET PER FIG. 10	1	1
34	MAST BASE BRACKET	1	1
35	BRACKET B-210579 PER FIG. 13	1	1
36	BRACKET C-7051198	1	1
37	BRACKET 7051180	1	1
38	BRACKET C-136627	1	1
39	BRACKET B-163663	1	1
40	BASE RING PLATE C-7051417 } SEE NOTE #5	1	1
41	SPACER 7050875	1	1
42	SPACER A-261970	8	8
43	SPACER A-260933	9	9
44	SPACER A-227966	4	4
45	TERMINAL BOX C-100443	2	2
46	HEX. HEAD CAP SCREW 3/16"-24 X 5/8" LONG	6	6
47	LOCKWASHER S.A.E. STD. FOR 3/16" SCREW	6	6
48	HEX. HEAD CAP SCREW 5/16"-24 X 1 3/8" LONG	6	6
49	ROUND HEAD MACH. SCREW #8-32 X 3/8" LONG	32	32
50	ROUND HEAD MACH. SCREW #10-32 X 5/8" LONG	2	2
51	ROUND HEAD MACH. SCREW #8-32 X 1/2" LONG	4	4
52	STOP NUT 5/16"-24 STD.	6	6
53	LOCKWASHER S.A.E. STD. FOR #8 SCREW	33	33
54	LOCKWASHER S.A.E. STD. FOR #6 SCREW	4	4
55	LOCKWASHER S.A.E. STD. FOR #10 SCREW	2	2
56	SHAKEPROOF WASHER SEE NOTE #11 5/16" I.E.T.	12	12
57	ANTENNA (PHANTOM) A-62	1	1

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Figure 6. Installation of Radio Set SCR-508-() or SCR-528-() and associated interphone equipment in Tank, Light, M24—Continued.

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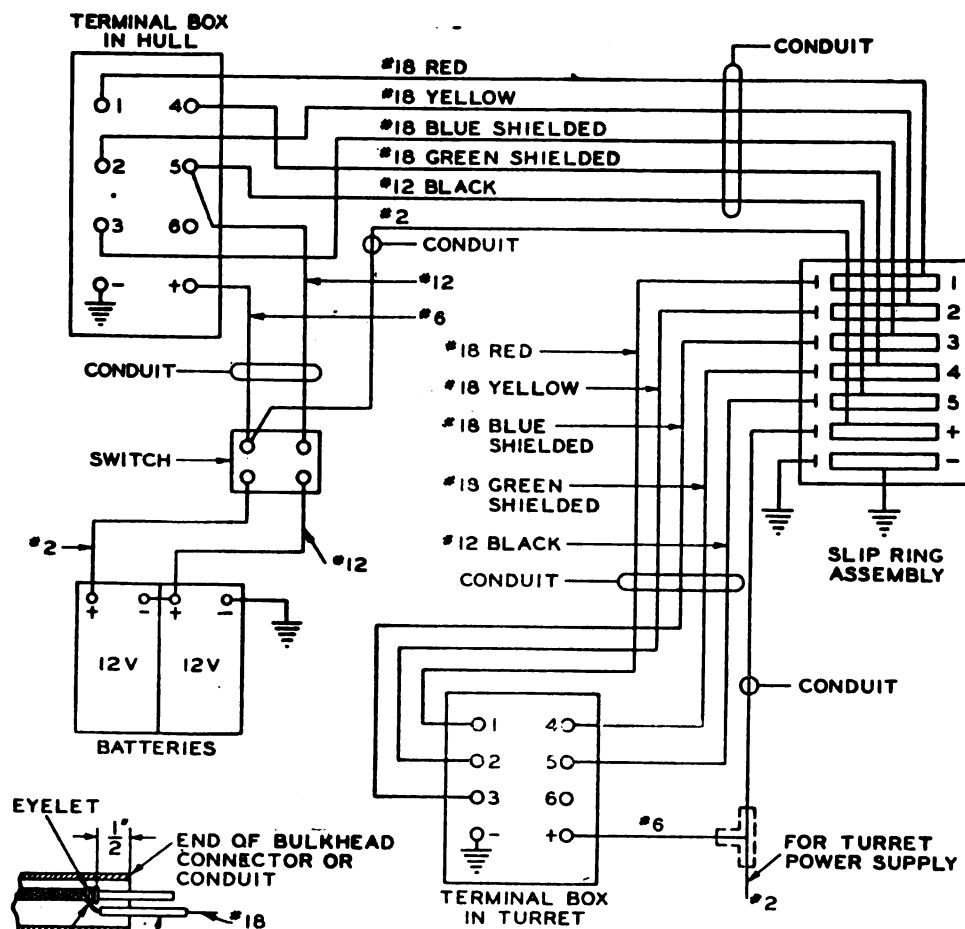


NOTE

- 1 CORD LENGTHS ARE FROM TERMINAL TO TERMINAL
- 2 SHIELD OF CABLE AND SHIELD OF TWISTED PAIR OF LEADS SHALL BE SECURELY GROUNDED AT EACH END
- 3 DOTTED CABLE SHALL BE TAKEN FROM THE TURRET
- 4 DOTTED CABLE AROUND CABLE ENDS INDICATES SHIELD
- 5 DRAWING REFERENCES
- 6 SCR-508-11, OR SCR-528-11 AND ASSOCIATED INTERPHONE EQUIPMENT FIGURE 6
- 7 WIRING OF SLIP RINGS AND TERMINAL BOXES FIGURE 6
- 8 TL-13398

Figure 7. Wiring diagram of interphone equipment for Radio Set SCR-508- () or SCR-528- () in Tank, Light, M24.

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SHALL BE SECURELY SOLDERED

ALL WIRING, TERMINAL BOXES AND SLIP RING ASSEMBLY SHALL BE FURNISHED AND INSTALLED BY MANUFACTURER OF VEHICLE.
 ALL SHIELDS ON SHIELDED WIRES SHALL BE GROUNDED ON BOTH ENDS.
 THESE TERMINAL BOXES ARE TO BE USED FOR RADIO AND INTERPHONE WIRING ONLY.
 WIRE SIZES INDICATED ARE B & S GAUGE.

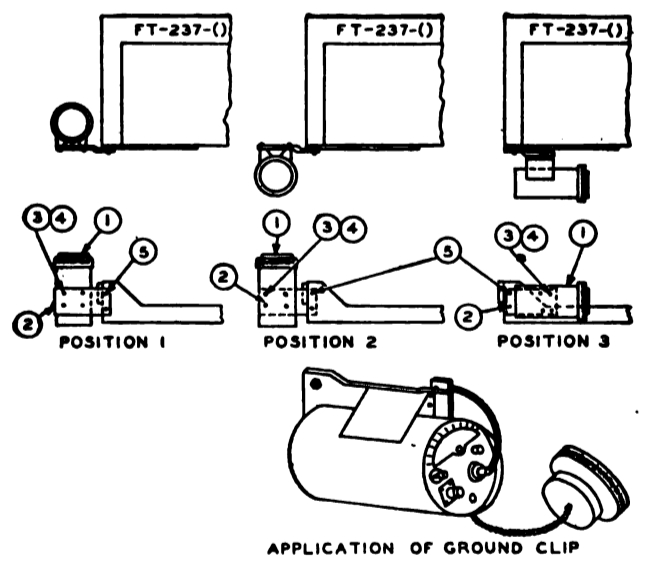
BASED ON SC-A-6758-D

TL-10665

Figure 8. Wiring diagram of slip rings and terminal boxes.

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APPLICATION OF GROUND CLIP

ITEM NO.	NAME OF ITEM AND REMARKS	QUAN. REQ.
1	ANTENNA A-62 (PHANTOM)	1
2	BRACKET	1
3	RD. HD. MACH. SCR. #6-32 X 1/2" FURN. WITH #1	4
4	LOCKWASHER #6 STD. FURN. WITH #1	4
5	RD. HD. MACH. SCR. #10-32 X 5/8"	2

NOTE:

1. FOR ALL POSITIONS USE TIP OF BRACKET TO RECEIVE THE GROUND CLAMP OF ANTENNA A-62
2. USE LONGER SCREW (5) WHEN INSTALLING BRACKET (2) ON MOUNTING FT-237(-) AND RE-APPLY TOOTH-TYPE LOCKWASHERS.

Figure 9. Antenna A-62, phantom.

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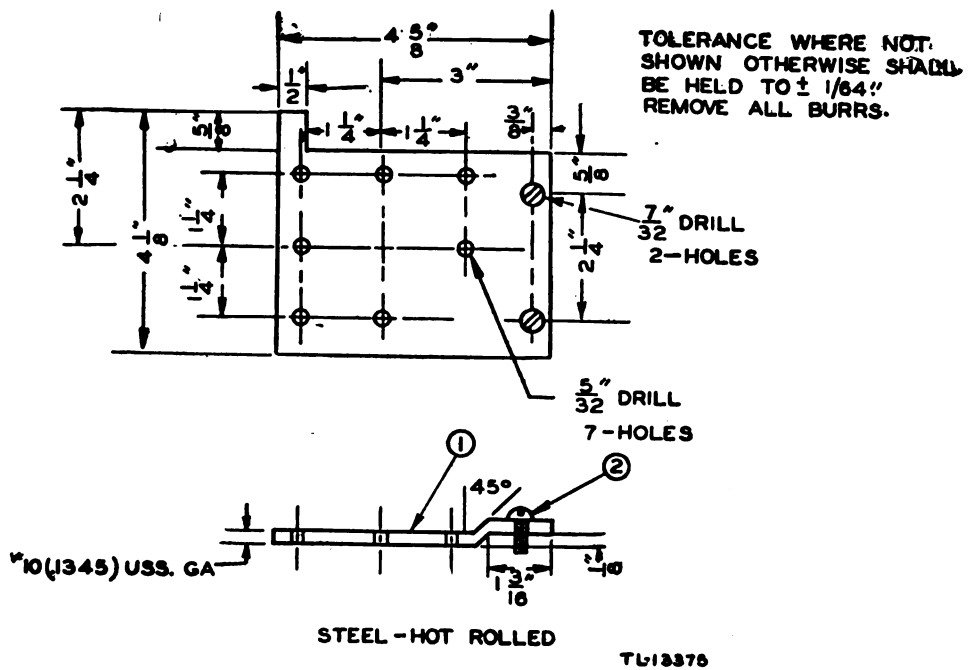


Figure 10. Bracket for Antenna A-62, phantom.

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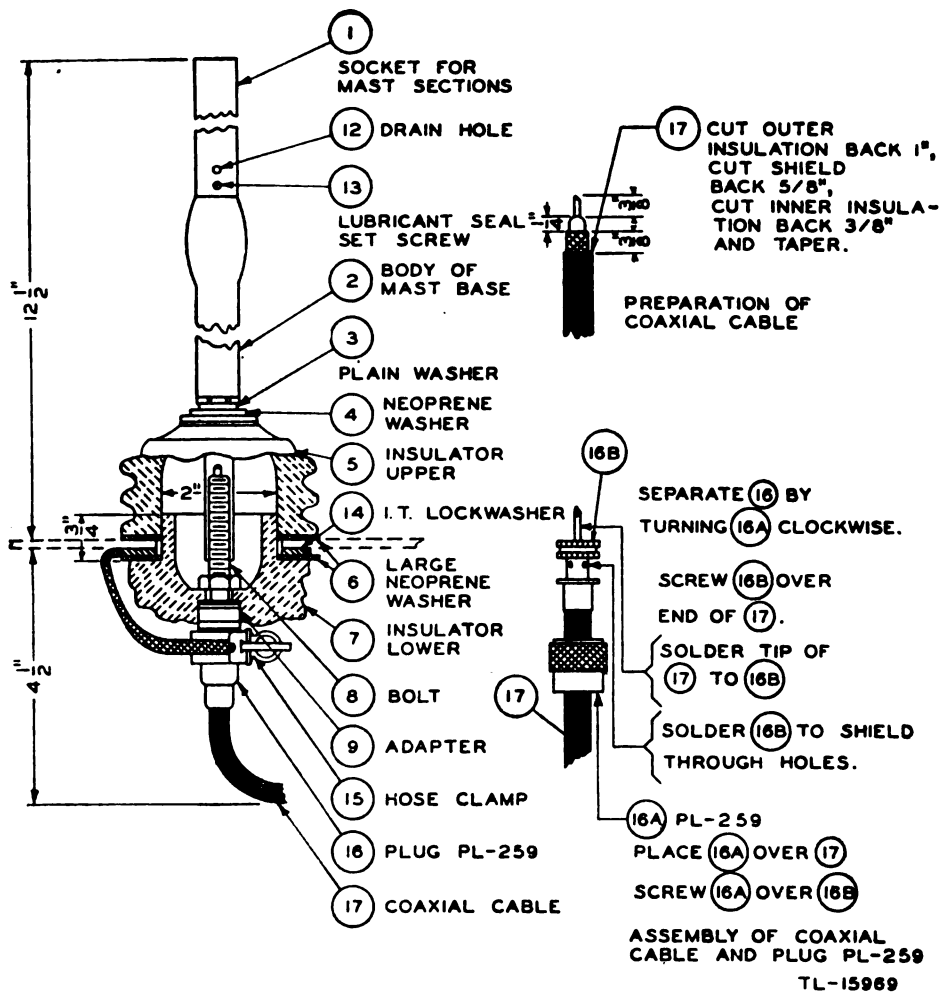


Figure 11. Mast Base AB-15/GR, assembly for coaxial Cable WC-562-() lead-in.

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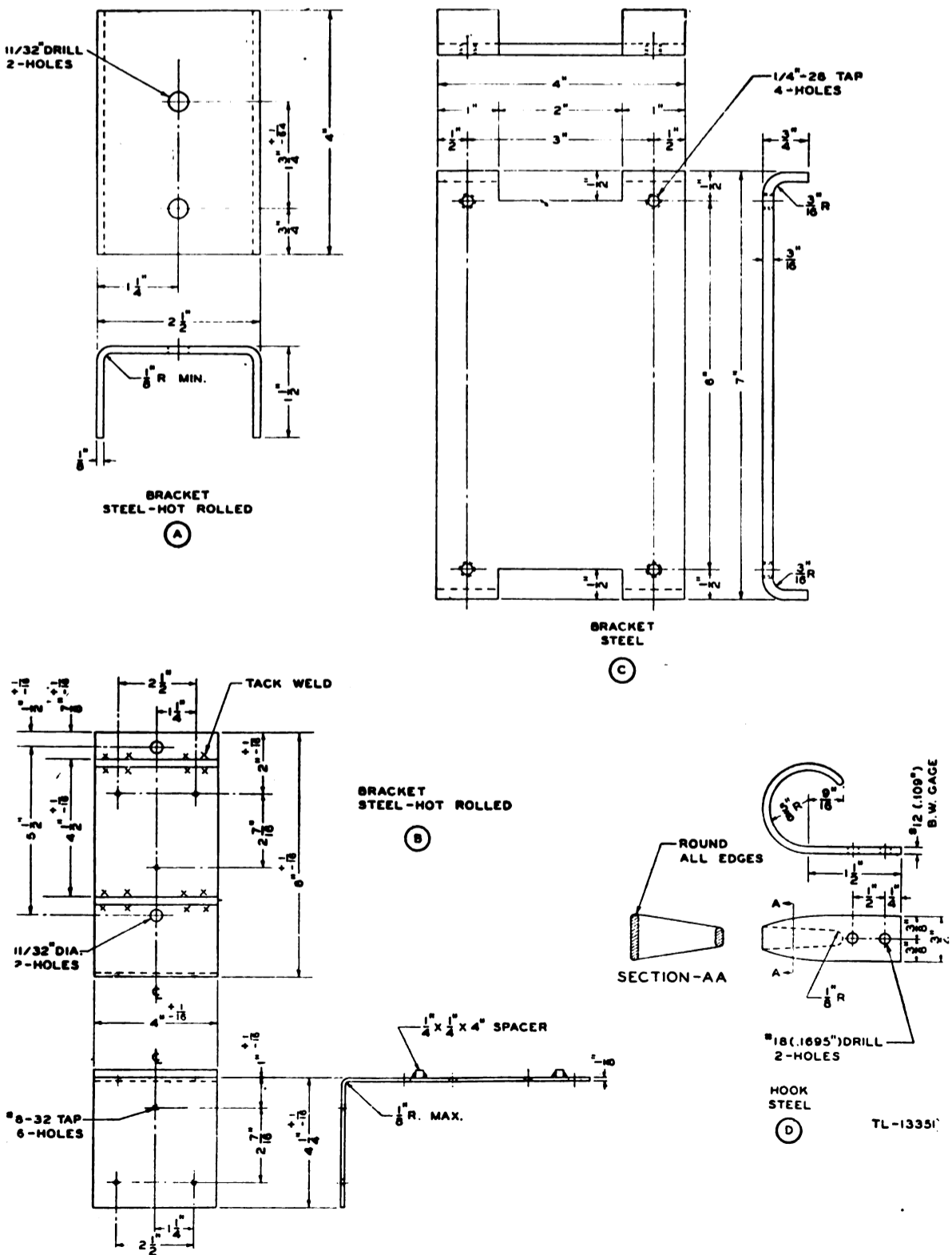
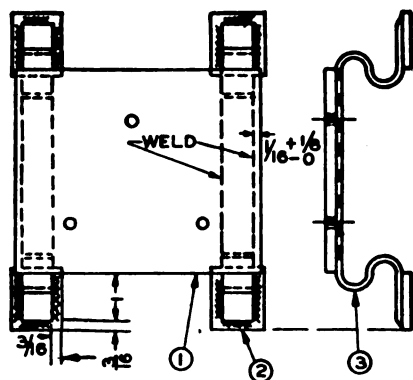


Figure 12. Brackets and hook.

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NOTE:

REMOVE ALL BURRS:
DIMENSIONS WHERE NOT SHOWN OTHERWISE ARE
IN INCHES.
TOLERANCE WHERE NOT SHOWN OTHERWISE SHALL
SHALL BE HELD TO $\pm \frac{1}{16}$.
BRACKET SHALL BE PAINTED TO MATCH SURROUNDING
SURFACES AT THE TIME OF INSTALLATION.
DO NOT PAINT TAPPED HOLES.

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Figure 13. Bracket, interphone.

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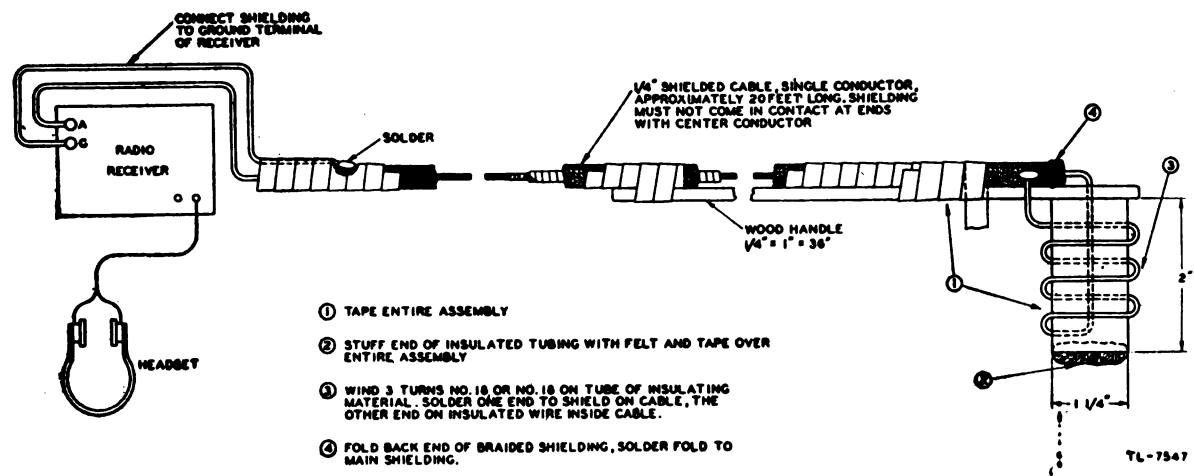
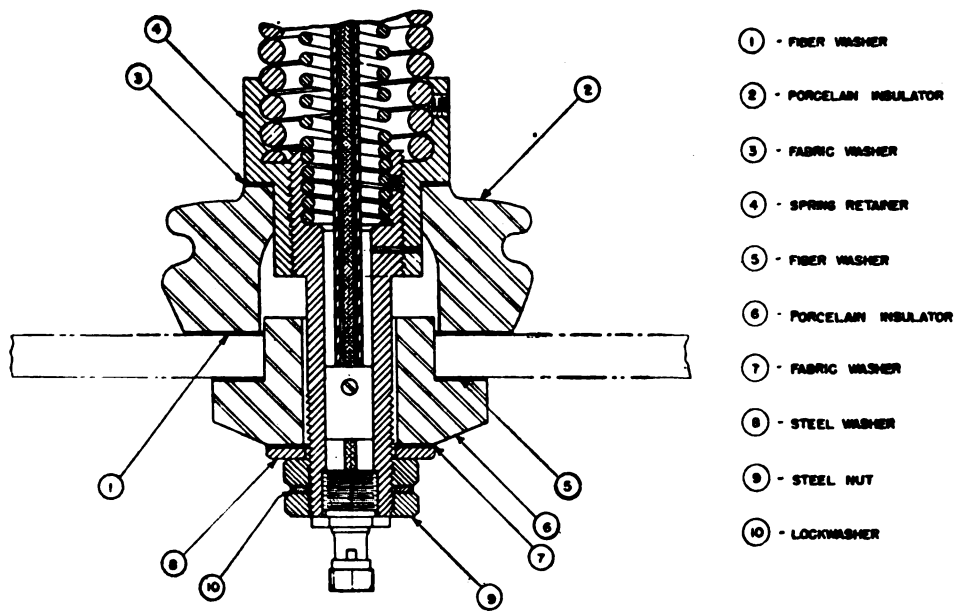


Figure 14. Probe antenna.

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BASED ON
DD-D-1244-N

TL7540

Figure 15. Mast Base MP-57, assembly.

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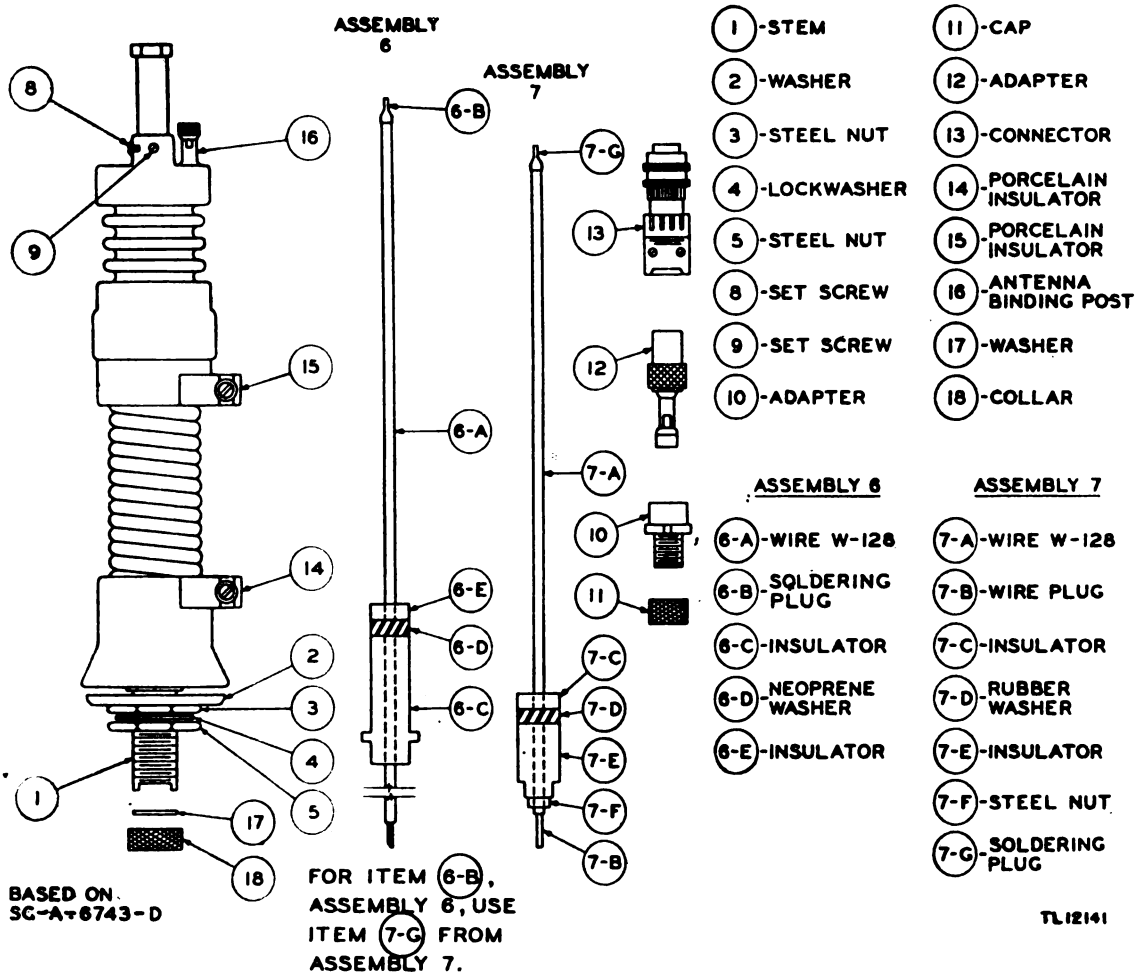
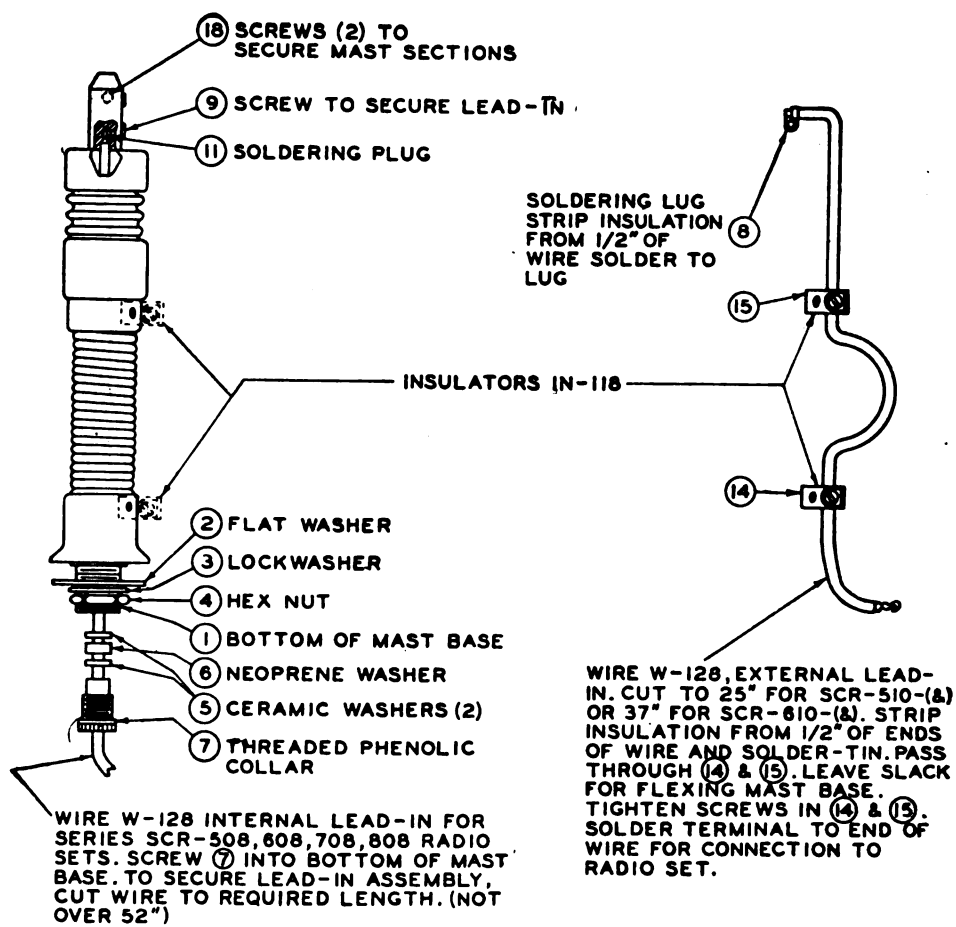


Figure 16. Mast Base MP-48, assembly.

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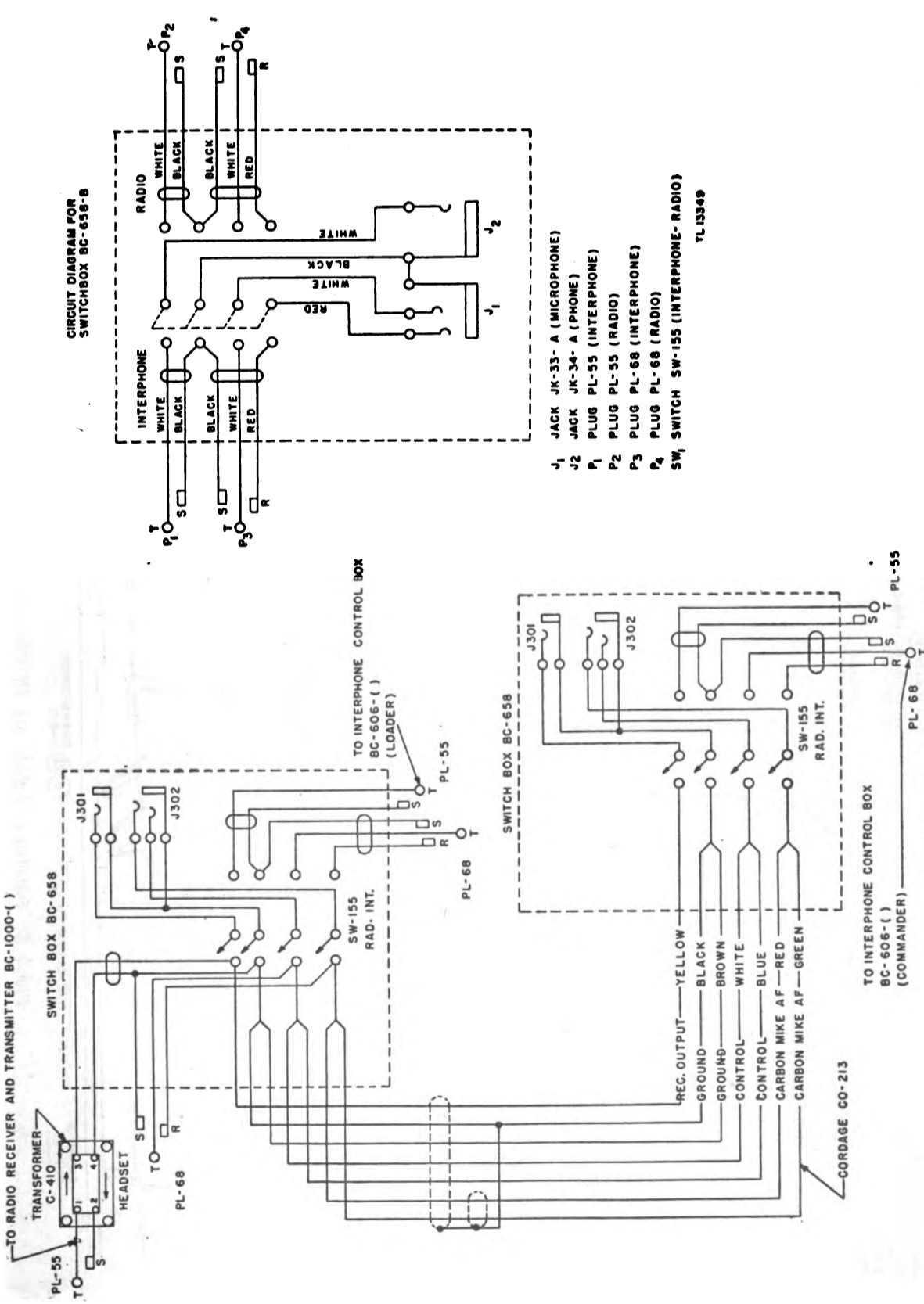


BASED ON
SC-A-7166-A

TL10134

Figure 17. Mast Base MP-48-A, assembly.

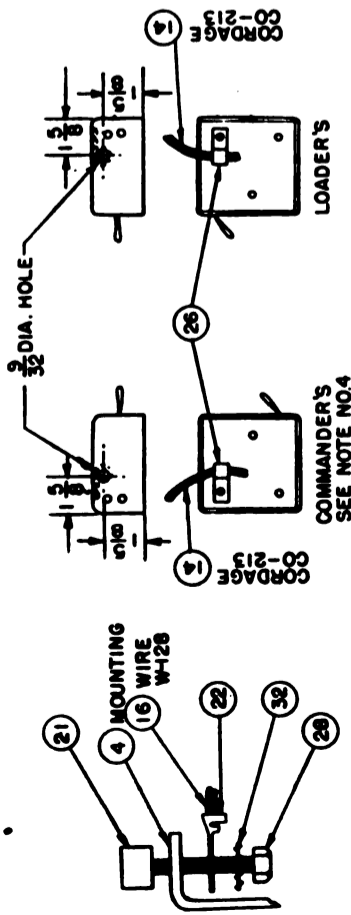
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Figure 18. Wiring diagram of interconnection of Switchbox BC-658-C.

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APPLICATION OF LOCKWASHER WITH TERMINAL (22) DETAIL "B"

MODIFICATION OF SWITCHBOXES BC-658 A OR B DETAIL "D"

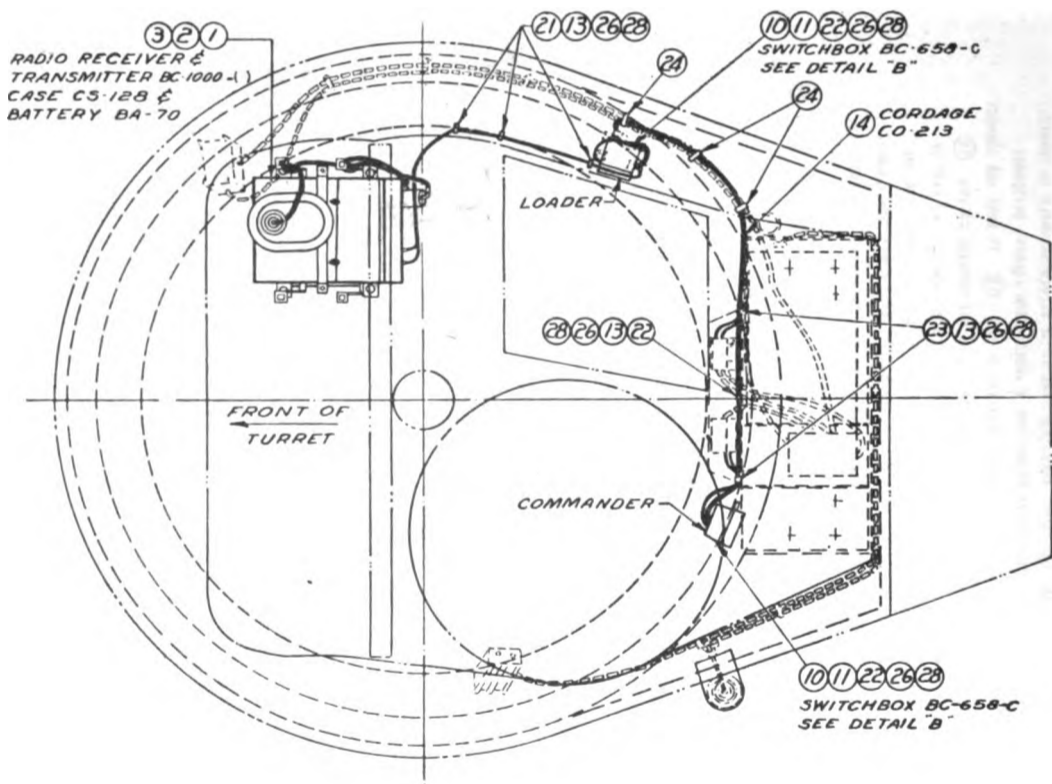
- NOTES:
- FOR ADDITIONAL COMPONENTS AND SPARE PARTS, SEE COMPONENT PARTS LIST.
 - UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
 - (16) (17) AND (21) ARE TO BE WELDED SECURELY TO TURRET.
 - CUT "RECEIVER" PATCH CORD 4 INCHES FROM LOADERS SWITCHBOX BC-658-C (1) SOLDER TERMINAL TH-103 (2) TO ENDS AND CONNECT TRANSFORMER C-410 (6) AS PER FIG. 10 USE CORDAGE CO-145 (12) AND CORDAGE CO-145 (13) IF PATCH CORDS FURNISHED AS PART OF LOADERS SWITCHBOX BC-658-C WILL NOT REACH RADIO RECEIVER AND TRANSMITTER BC-1000-() REMOVE UNUSED PATCH CORDS FROM COMMANDERS SWITCHBOX BC-658-C (1) AND SHORTEN OTHER PATCH CORDS OF SWITCHBOXES BC-658-C (1) AS REQUIRED.
 - TIN ENDS OF WIRE W-128 (16) AND SECURELY SOLDER (22) AND (28) TO ENDS. SEE DETAIL "B".
 - IF TERMINAL BOX TH-217 (6) AND CORD CO-102/TRC-7 (15) ARE NOT AVAILABLE, A WIRE LEAD-IN SYSTEM MAY BE SUBSTITUTED CONSISTING OF ONE EACH AB-15/WR (7), MAST SECTION MS-117 (8) AND MS-118 (9) TERMINAL, NET-HEAD MACH-SCREEN 3/8 - 24 X 1/2, LOCKWASHER 3/8 I.E.T. AND 32 INCHES OF WIRE W-128. MAST BASE MS-90-A AND MAST SECTIONS MS-91 AND MS-92 MAY BE USED INSTEAD OF MAST BASE AB-15/WR (7), MAST SECTIONS MS-117 (8) AND MS-118 (9) IN THE WIRE LEAD-IN SYSTEM BUT NOT IN THE COAXIAL SYSTEM.
 - (22) SMALL SW 4020-25 AS MADE BY ILLINOIS TOOL WORKS, CHICAGO, ILL. OR EQUAL.
 - REMOVE SMOKE MORTAR AND WELD PLATE PER FIG. 25 (19) ON SMOKE MORTAR OUTLET. REMOVE CAL. 30 AMMUNITION BOX FROM THE TURRET WALL NEXT TO RADIO SET.
 - REMOVE BELT CARRIER BRACKETS FROM CASE CS-128 (2)
 - SECURE (25) - AND (27) USING TAPPED SPACERS ALREADY IN VEHICLE FOR RADIO SET SCR-500-() SERIES.
 - COIL EXCESS LENGTH OF CORD CO-102/TRC-7 (15) ABOVE RADIO SET, AND TAPE TO (4) IN A MANNER THAT WILL NOT RESTRICT MOVEMENT OF SMOKE MOUNTS.
 - DRAWING REFERENCE:
 - INSTALLATION OF RADIO SET SCR-500-() OR SCR-520-() FIG. 6
 - WIRING DIAGRAM OF INTERCONNECTION OF SWITCH BOXES BC-658-C FIG. 10
 - MOUNTING OF RADIO SET AN/VRC-3 FIG. 29
 - INSTALLATION OF RADIO SET AN/VRC-3 IN LIGHT TANK M 29 (FOR VEHICLES EQUIPPED WITH PRODUCTION INSTALLATION PROVISIONS) FIG. 20

ITEM NO.	NAME OF ITEM	QUAN. REQ.
1	RADIO RECEIVER AND TRANSMITTER BC-1000-() SEE NOTE 4	1
2	CASE CS-128 SEE NOTE 8	1
3	BATTERY BA-70	1
4	MOUNTING SEE DETAIL "A" AND "C" FIG. 29	2
5	TRANSFORMER C-410 SEE NOTE 4	1
6	TERMINAL BOX TH-217 SEE NOTE 6	1
7	MAST BASE AB-15/WR	1
8	MAST SECTION MS-117 SEE NOTE 6	1
9	MAST SECTION MS-118	1
10	MAST BASE BRACKET PER FIG. 23 SEE NOTE 3	2
11	SWITCHBOX SEE DETAIL D SEE NOTE 4	1
12	CORDAGE CO-145 5 FT. LONG SEE NOTE 4	2
13	CORDAGE CO-145 5 FT. LONG SEE NOTE 4	2
14	CORDAGE CO-213 7 FT. LONG	1
15	CORD CO-102/TRC-7 7 FT. LONG SEE NOTES 6 AND 11	1
16	WIRE W-128 11 IN. LONG SEE NOTE 5	2
17	ADAPTER M-308	2
18	BRACKET B-201/979 SEE NOTE 8	2
19	PLATE PER FIG. 25 SEE NOTE 3 AND 6	1
20	SMOKE MOUNT	1
21	SPACER A-281070 SEE NOTE 3	4
22	TERMINAL TH-43 SEE NOTE 4	1
23	TERMINAL TH-81 SEE NOTE 5	1
24	CLAMP WA. 8 SEE NOTE 10	2
25	CLAMP WA. 9 SEE NOTE 10	2
26	NET-HEAD MACH-SCREEN 3/8-24 X 3/8 LONG	1
27	LOCKWASHER 3/8 I.E.T. REGULAR FOR 3/8 SCREEN	1
28	LOCKWASHER 3/8 I.E.T. REGULAR FOR 3/8 SCREEN	1
29	LOCKWASHER 3/8 I.E.T. REGULAR FOR 3/8 SCREEN	1
30	LOCKWASHER 3/8 I.E.T. REGULAR FOR 3/8 SCREEN	1
31	LOCKWASHER 3/8 I.E.T. REGULAR FOR 3/8 SCREEN	1
32	LOCKWASHER 3/8 I.E.T. FOR 3/8 SCREEN	1

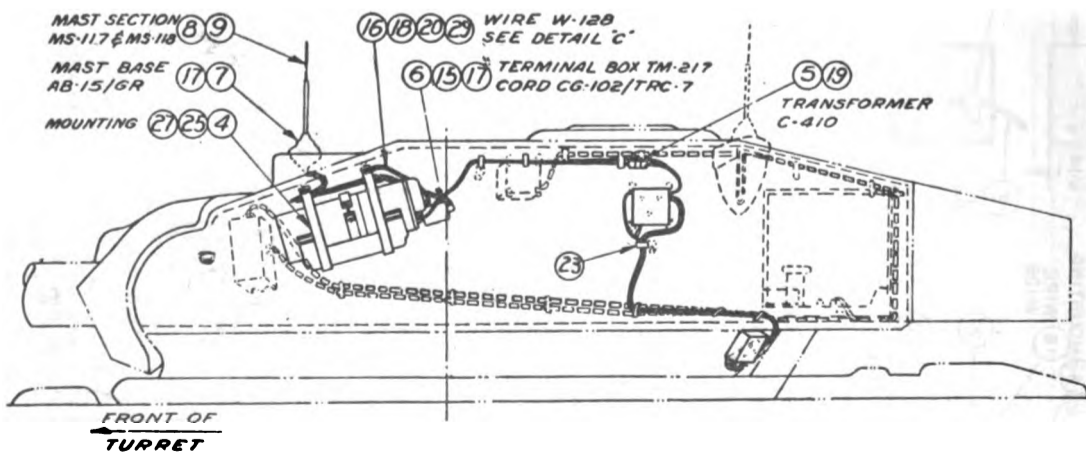
Figure 19. Installation of Radio Set AN/VRC-3 in Tank, Light, M24, early production—Continued.

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PLAN VIEW, TURRET



SIDE ELEVATION

TL 10802-1

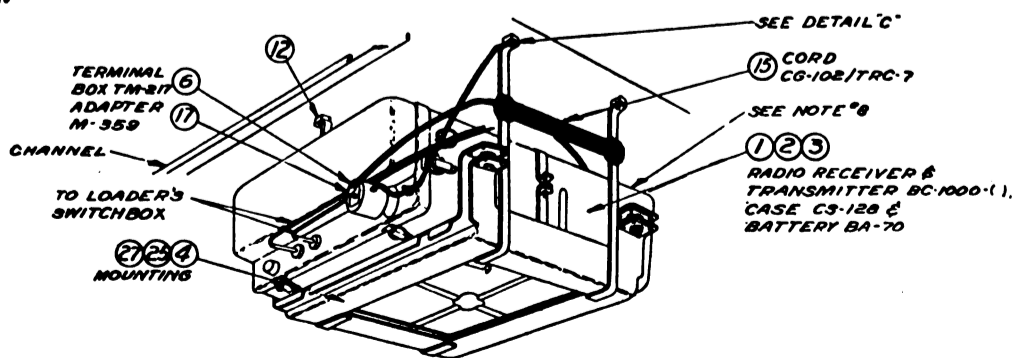
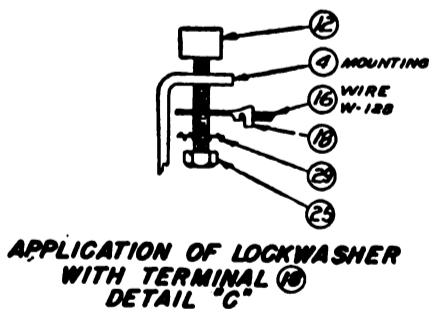
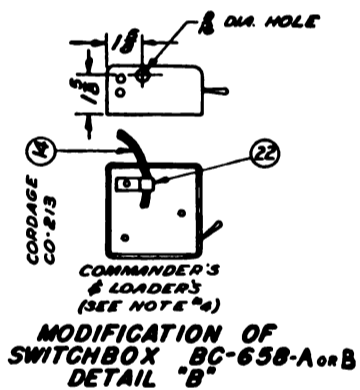
Figure 20. Installation of Radio Set AN/VRC-3 in Tank, Light, M24, late production.

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ITEM NO.	NAME OF ITEM	QTY REQ.
1	RADIO RECEIVER AND TRANSMITTER BC-1000-()	1
2	CASE CS-128 SEE NOTE 8	1
3	BATTERY BA-70	1
4	MOUNTING SEE DETAIL "A" AND "C" FIG. 20	1
5	TRANSFORMER C-410 SEE NOTE 9	1
6	TERMINAL BOX TH-217 SEE NOTE 6	1
7	MAST BASE AD-15/GR	1
8	MAST SECTION MS-117	1
9	MAST SECTION MS-118	1
10	SWITCHBOX BC-658-C SEE DETAIL "B" SEE NOTE 10	2
11	BRACKET B-201570	2
12	SPACER A-281870	2
13	SPACER A-284000	2
14	CORNAME CO-218 6 FT. 6 IN. LONG	1
15	CORD CG-102/TRC-7 7 FT. LONG SEE NOTE 10	1
16	WIRE W-120 11 IN. LONG SEE NOTE 10	1
17	ADAPTER M-359	2
18	TERMINAL SEE NOTE 6	1
19	TERMINAL TH-163 SEE NOTE 10	1
20	TERMINAL TH-91 SEE NOTE 10	1
21	CLAMP NO. 1	3
22	CLAMP NO. 6	3
23	CLAMP NO. 7 SEE NOTE #11	3
24	CLAMP NO. 9 SEE NOTE 10	3
25	HEX. HEAD MACHINE SCREW 3/8-24 X 3/4 LONG	3
26	RD. HEAD MACHINE SCREW 10-32 X 3/3 LONG	12
27	LOCKWASHER S.A.E. REGULAR FOR 3/8 SCREW	3
28	LOCKWASHER S.A.E. REGULAR FOR 10 SCREW	12
29	LOCKWASHER I.E.T. FOR 3/8 SCREW SEE NOTE 7	1

- NOTES:
- FOR ADDITIONAL COMPONENTS AND SPARE PARTS SEE COMPONENT PARTS LIST.
 - UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
 - ① TO ④ INCL. ARE TO BE INSTALLED IN THE VEHICLE BY THE MANUFACTURER.
 - CUT "RECEIVER" PATCH CORD ⑬ INCHES FROM LOADER'S SWITCHBOX BC-658-C ⑭. SOLDER TERMINAL TH-163 ⑮ TO ENDS AND CONNECT TRANSFORMER C-410 ⑯ AS PER FIG. 10. REMOVE UNUSED PATCH CORDS FROM COMMANDER'S SWITCHBOX BC-658-C ⑰ AND SHORTEN OTHER PATCH CORDS OF SWITCHBOX BC-658-C ⑱ AS REQUIRED.
 - TIN ENDS OF WIRE W-120 ⑲ AND SECURELY SOLDER ⑲ AND ⑳ TO ENDS. SEE DETAIL "C".
 - IF TERMINAL BOX TH-217 ① AND CORD CG-102/TRC-7 ⑫ ARE NOT AVAILABLE, A WIRE LEAD-IN SYSTEM MAY BE SUBSTITUTED CONSISTING OF ONE EACH MAST BASE AD-15/GR ⑦ MAST SECTION MS-117 ⑧ & MS-118 ⑨, TERMINAL, HEX. HD. MACH. SCREW 3/8-24 X 1/2, LOCKWASHER 3/8 I.E.T., AND 32 IN. OF WIRE W-120. MAST BASE MP-50 OR MP-48-A, AND MAST SECTION MS-51 & MS-52 MAY BE USED INSTEAD OF MAST BASE AD-15/GR ⑦ MAST SECTIONS MS-117 ⑧ & MS-118 ⑨ IN THE WIRE LEAD-IN SYSTEM BUT NOT THE COAXIAL SYSTEM.
 - ⑳ SHALL BE #1020-26 AS FURNISHED BY SHAKEPROOF INC., CHICAGO, ILL., OR EQUAL.
 - REMOVE BELT CARRIER BRACKETS FROM CASE CS-128 ②.
 - SECURE ② USING TAPPED SPACERS ALREADY IN VEHICLE FOR RADIO SET SCR-500-() SERIES.
 - COIL EXCESS LENGTH OF CORD CG-102/TRC-7 ⑫ ABOVE RADIO SET, AND TAPE TO ① IN A MANNER THAT WILL NOT RESTRICT MOVEMENT OF SHOCK MOUNTS.
 - ③ IS SECURED ON MIC. HOOK SPACER BELOW LOADER'S SWITCHBOX BC-658-C ⑰.
 - DRAWING REFERENCE:
 INSTALLATION OF RADIO SET SCR-500-() FIG. 6
 OR SCR-500-()
 WIRING DIAGRAM OF INTERCONNECTION OF SWITCHBOXES BC-658-C FIG. 10
 INSTALLATION OF RADIO SET AN/VRC-3 IN LIGHT TANK M24 (FOR VEHICLES NOT EQUIPPED WITH PRODUCTION INSTALLATION PROVISIONS. FIG. 19



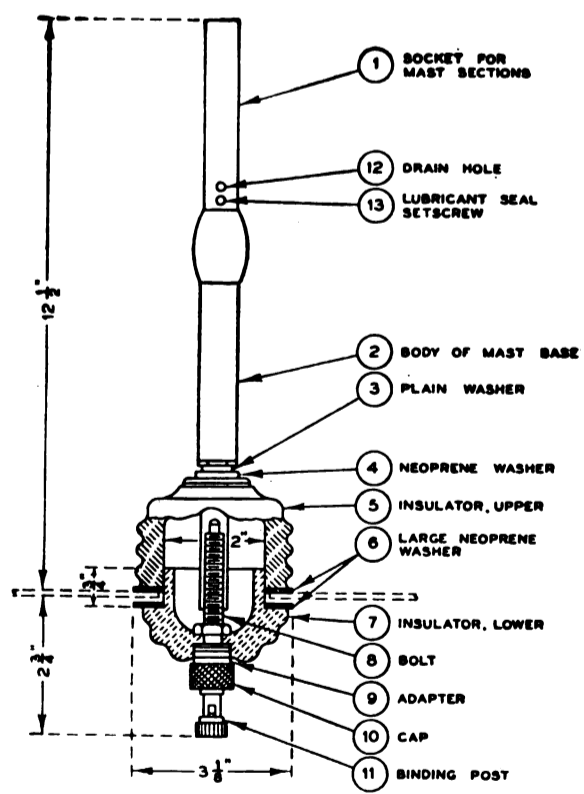
ENLARGED VIEW OF MOUNTING FOR RADIO SET AN/VRC-3 DETAIL "A"

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Figure 20. Installation of Radio Set AN/VRC-3 in Tank, Light, M24, late production—Continued.

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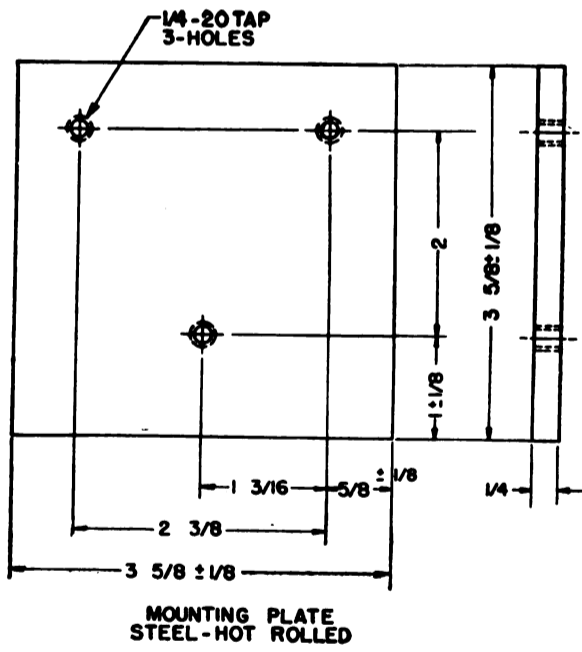


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Figure 21. Mast Base AB-15/GR, assembly for Wire W-128 lead-in.

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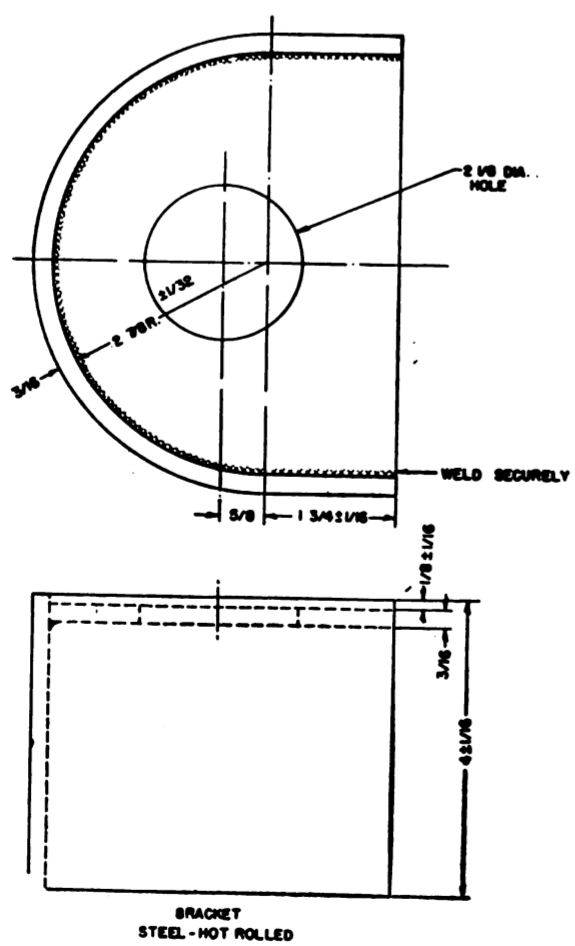
NOTE:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES

TL 18503

Figure 22. Bracket, special mounting.

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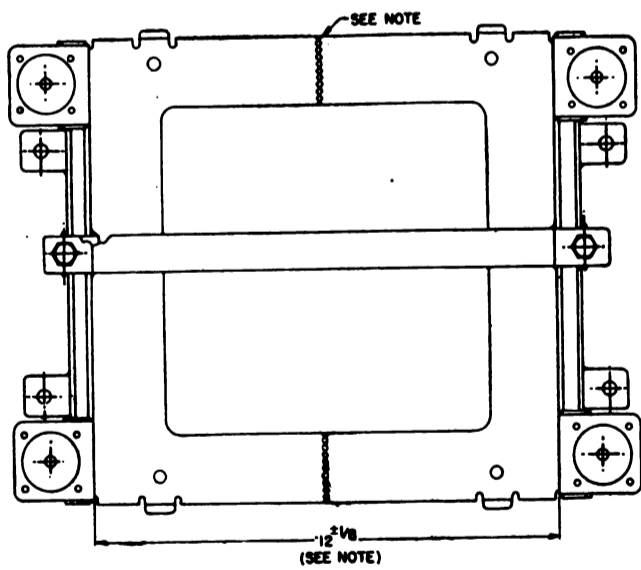
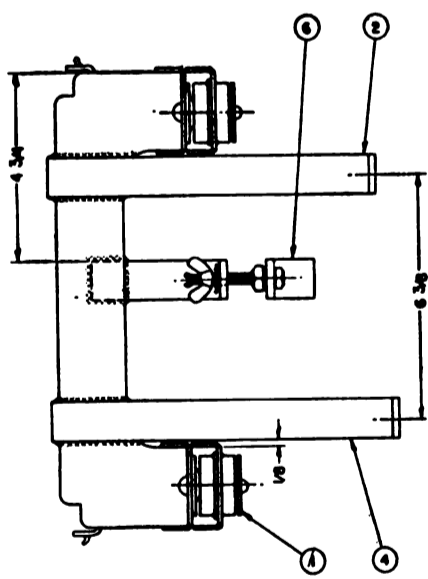
NOTE:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.

TL-10000

Figure 23. Bracket, for mast base.

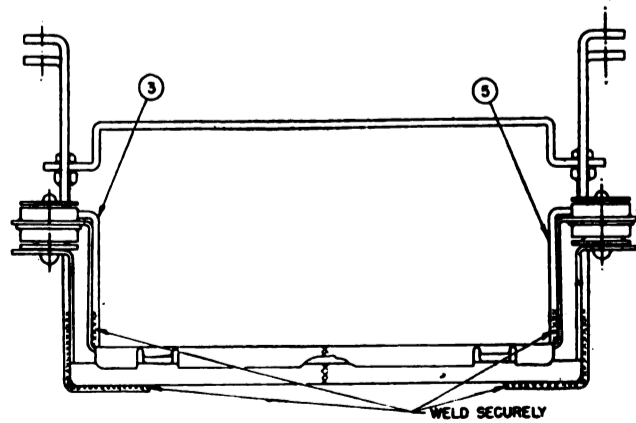
RESTRICTED

RESTRICTED



NOTES:
 ① SHALL BE MOUNTING FT-250 CUT AND SECURELY WELDED TO DIMENSION SHOWN, AND GROUND OFF SMOOTH. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. WELDED ITEMS SHALL BE GIVEN ONE SPRAY COAT OF METAL PRIMER AND ONE SPRAY COAT OF SEMI-GLOSS OLIVE DRAB AIR DRYING ENAMEL. ALL PAINTS AND METHODS OF APPLICATION SHALL BE IN ACCORDANCE WITH SPECIFICATION NO. 72-53

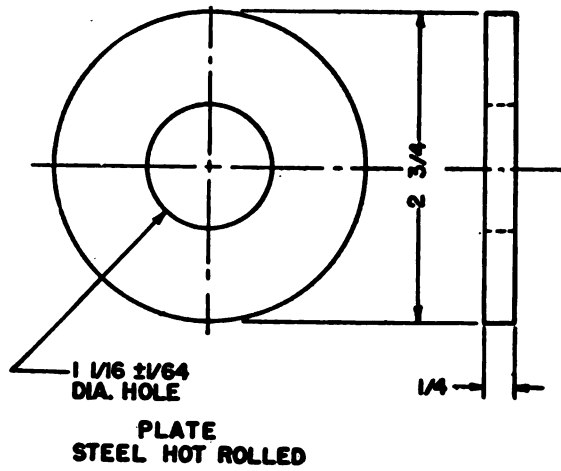
ITEM NO.	NAME OF ITEM	QUAN. REQ.
1	MOUNTING	1
2	SUPPORT	2
3	BRACKET	1
4	SUPPORT	2
5	BRACKET	1
6	CLAMP	1



TL 4855

Figure 24. Mounting for Radio Set AN/VRC-3 in Tank, Light, M24.

RESTRICTED



NOTE:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES

TL 18806

Figure 25. Plate for antenna lead-in.

35:11-2755

TM 11-2755

WAR DEPARTMENT TECHNICAL MANUAL



INSTALLATION OF RADIO AND INTERPHONE EQUIPMENT IN VEHICLE, LANDING, TRACKED (UNARMORED), MARK III, LVT-3

RESTRICTED. DISSEMINATION OF RESTRICTED MATTER.
No person is entitled solely by virtue of his grade or position
to knowledge or possession of classified matter. Such matter
is entrusted only to those individuals whose official duties
require such knowledge or possession. (See also paragraph
23b, AR 380-5, 15 March 1944.)

WAR DEPARTMENT

MARCH 1945

WAR DEPARTMENT TECHNICAL MANUAL
TM 11-2755

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AND INTERPHONE EQUIPMENT IN
VEHICLE. LANDING, TRACKED
(UNARMORED), MARK III, LVT-3**



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(See also paragraph 23b, AR 380-5, 15 March 1944.)

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WAR DEPARTMENT
Washington 25, D. C., 9 March 1945

TM 11-2755, Installation of Radio and Interphone Equipment in Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3, is published for the information and guidance of all concerned.

[AG 300.7 (10 Feb 45)]

BY ORDER OF THE SECRETARY OF WAR:

OFFICIAL:

J. A. ULIO
Major General
The Adjutant General

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For explanation of symbols, see FM 21-6.

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III. RADIO SET SCR-508-() OR SCR-528-() AND ASSOCIATED INTERPHONE EQUIPMENT

Required parts	8	3
Assembly and installation	9	4

DESTRUCTION NOTICE

WHY —To prevent the enemy from using or salvaging this equipment for his benefit.

WHEN—When ordered by your commander.

- HOW**
1. Smash—Use sledges, axes, handaxes, pickaxes, hammers, crowbars, heavy tools.
 2. Cut—Use axes, handaxes, machetes.
 3. Burn—Use gasoline, kerosene, oil, flame throwers, incendiary grenades.
 4. Explosives—Use firearms, grenades, TNT.
 5. Disposal—Bury in slit trenches, fox holes, other holes. Throw in streams. Scatter.

USE ANYTHING IMMEDIATELY AVAILABLE FOR DESTRUCTION OF THIS EQUIPMENT

- WHAT**
1. Smash—All vacuum tubes, crystals, control dials, coupling coils, transformers, speakers in receivers, external loudspeakers, microphones, headsets, dynamotors, and cable connectors.
 2. Cut—All connecting wires, cording and cabling.
 3. Burn—All equipment, and all associated training, technical, and installation manuals.
 4. Bury or scatter—All remains, after destroying their usefulness.

DESTROY EVERYTHING

SAFETY NOTICE

This equipment uses high voltages which are dangerous to life. Observe all safety precautions.

1. Make no adjustment with the power switch on.
2. Do not operate the equipment with the shields removed.
3. Do not connect power to any unit of the radio set until operating instructions have been read completely.

SECTION I

GUIDE TO USE OF THIS MANUAL

1. Purpose

This manual provides method and procedure, based upon actual field experience, for installation of radio and interphone equipment in Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3. Items required to make a complete operating installation are listed for each set. Official nomenclature followed by empty parentheses, such as Headset HS-30-(), is used to indicate any model of equipment regardless of its procurement.

2. Equipment

Installations covered include the following radio sets: SCR-508-() and SCR-528-().

3. Holes and Brackets

Brackets required for installation of the radio set are normally drilled and installed prior to delivery of Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3. Drilling instructions are given

in this manual for any other necessary holes and brackets. Do not relocate any holes or brackets unless absolutely necessary.

4. Preliminary Check

Study the illustrations, the installation methods outlined, and any subsequent changes to this manual.

Caution: Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3, has a 12-volt electrical system. Before installing the radio sets, be sure they are designed for 12-volt operation; otherwise, tubes may burn out or dynamotors may be damaged.

5. Operating Check

Carefully study the technical manual covering the radio set before trying to operate it; then, make a thorough operating check to determine whether the equipment has been properly installed and is in working order.

SECTION II

IGNITION NOISE SUPPRESSION IN VEHICLE, LANDING, TRACKED
(UNARMORED), MARK III, LVT-3

6. General

Excessive ignition or other electrical noises may interfere with the operation of radio equipment in Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3. The technical manual issued with the vehicle will be helpful in locating the source of the noise, since it describes the suppression system used. Instructions for operating radio equipment used in the vehicle also should be studied. For further information on suppression of radio noises see TM 11-483.

7. Procedure

Locate and suppress ignition noises as follows:

a. Start the motor of the vehicle and turn on the radio set. Put the receiver sensitivity control at *maximum*; then, listening to the receiver output with a headset, slowly tune the receiver over the entire range of frequencies to be used for communication.

b. When the frequency (or frequencies) with greatest noise level is found, turn off the vehicle engine. If this noise continues, the source is outside the ignition system. If noise stops, the trouble is in the ignition system.

c. Start the engine again. Adjust the receiver sensitivity control until engine noises can be distinguished easily from static, etc. Interference may then be identified as follows:

<i>Interference</i>	<i>Usual source</i>
Popping sound: corresponds to ignition firing; stops when engine is turned off; accelerates when engine is raced.	Ignition system
Intermittent, clicking sound: lingers for several seconds when ignition is turned off.	Generator regulator

<i>Interference</i>	<i>Usual source</i>
Whining sound: varies with speed of engine; ceases only when generator stops rotating.	Generator
Sparking, or continuous crackling noise.	Brushes and commutator of generator

d. Interference from other electrical parts and circuits of the vehicle, such as panel gauges and heater fans, can usually be identified by turning off the gauges, fans, or other suspected mechanisms individually.

e. If the source of interference cannot be found by any of the preceding methods, connect a probe antenna (fig. 10) to the antenna terminal of the radio set. Slowly move the loop of the probe antenna over the various parts of the electrical system of the vehicle. Keep the loop close to, but not in contact with, the part being examined. Noise from interference-producing parts should be heard in the receiver.

f. Interference can usually be eliminated by cleaning, tightening, or replacing noise-producing parts. Examine and tighten all suppressor and shielding components, as well as all connections and grounding bonds. Cleaning the surface under them will assure good electrical contact between wires and terminals and between metal casings and the frame of the vehicle. (Insulated but ungrounded metal parts absorb and reradiate electrical noises.)

g. If interference persists, suppressor components should be checked by substituting new ones. If a replacement is not available, disconnect the suspected component and test capacitors, resistors, and chokes within it. Replace any that are defective.

SECTION III

RADIO SET SCR-508-() OR SCR-528-() AND ASSOCIATED INTERPHONE EQUIPMENT

8. Required Parts

Items necessary for installation of Radio Set SCR-508-() or SCR-528-() in Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3 are listed below :

Quantity		Stock No.	Item
Basic unit 2S508/12	Basic unit 2S528/12		
1	1	2A262	Antenna A-62, phantom.
1	1	2Z1250.56	Bracket for Antenna A-62.
1	1	2Z2599-264	Chest CH-264.
2	2	6Z3147	Connector No. 61007 and Bondnut BL-50.
1	1	2Z3396	Cover BG-96.
2	1	3H1634	Dynamotor DM-34.
1	1	3H1635	Dynamotor DM-35.
1 ¹	1 ¹	2A2081-15	Mast Base AB-15/GR.
2 ¹	2 ¹	2A2417	Mast Section MS-117 (1 spare).
2 ¹	2 ¹	2A2418	Mast Section MS-118 (1 spare).
1	1	2Z6721-237	Mounting FT-237-().
2	1	2C4403	Radio Receiver BC-603-().
1	1	2C6494	Radio Transmitter BC-604-().
1	1	2Z8056	Roll BG-56.
2	2	6D13113	TM 11-600.
6 ft.	6 ft.	1B128	Wire W-128.

Quantity		Stock No.	Item
Installation unit			
SCR-508-() 2S508-V87/50	SCR-528-() 2S508-V87/50		
4 ft.	4 ft.	3E2213	Cordage CO-213.
7	7	2Z307-26	Gas Mask Adapter, Navy type No. CW-10327 (includes spares).
1	1	6L50-508V86	Hardware kit.
5 ²	5 ²	2B1055-1	Headset-Microphone Assembly AN/URA-1.
1 ²	1 ²	2Z5731-337	Impedance Matching Kit MX-337/UR:
1	1	2Z3265-66	Coupling Unit CU-66/UR.
1	1		Bracket for Coupling Unit CU-66/UR (fig. 6).
4 ft.	4 ft.	3E2213	Cordage CO-213.
6 in.	6 in.		Spaghetti tubing.
			3 screws, hex. hd., cap, 5/16"-24 x 1/2".
			3 lockwashers, 5/16" I. E. T.
			2 clamps, No. 6 (fig. 9).
2 ¹	2 ¹	2A2416	Mast Section MS-116 (includes spare).
1	1	2B1617	Microphone T-17 (spare).
2	2	2B1567	Microphone Cover M-367 (includes spare).
4	4	2C7609	Remote Control Unit, Navy type No. 23429.

¹ If basic unit 2S508/12 or 2S528/12 contains Mast Base MP-48 or MP-48-A, Mast Sections MS-52 and MS-53 in place of Mast Base AB-15/GR, Mast Sections MS-117 and MS-118, use Mast Sections MS-51 with Clamp MC-423 in place of Mast Section MS-116 issued with installation unit.

² If Headset-Microphone Assembly AN/URA-1 is not available use 4 Microphones T-45, 5 Headsets HS-30 (one spare), 4 Cords CD-318, 5 Cords CD-307-A (one spare) and 5 Cords CD-933 (one spare).

³ If Impedance Matching Kit MX-337/UR is not available, delete 5 Headset-Microphone Assemblies AN/URA-1 and add 4 Microphones T-45, 4 Cords CD-318, 5 Headsets HS-30 (one spare), 5 Cords CD-307-A (one spare), and 5 Cords CD-604 (one spare).

9. Assembly and Installation

Components of Radio Set SCR-508-() or SCR-528-() and associated interphone equipment should be installed in Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3 as directed below (fig. 2):

<i>Part and location</i>	<i>Method and materials</i>
Radio cabinet (Item 31, fig. 2) in driver's compartment on port side of vehicle.	Waterproofed radio cabinet is already installed in vehicle by manufacturer.
Antenna A-62, phantom, and bracket (figs. 4 and 5).	Refer to position 3, figure 4. Attach phantom antenna to bracket (fig. 5) as shown in figure 4. Remove two screws and lockwashers from left front corner of Mounting FT-237-(), and secure bracket, with antenna attached to mounting, with two No. 10-32 x 5/8 screws supplied.
Cordage CO-213.	Cut one 42-inch length and one 48-inch length of Cordage CO-213. Strip 6 inches of outer rubber covering from each end of 48-inch length of cordage. Strip 6 inches of outer rubber covering from one end of 42-inch length of cordage and 3 inches of outer rubber covering from other end. Cut exposed shields back 1 inch. Separate the fine wires of the inner and outer shields, now exposed, with a pointed instrument and twist wires so as to form a pigtail. Strip 1 inch of insulation from tip of black lead, and 1/2 inch of insulation from all other leads on each end of both lengths of cordage. Strip 1/2 inch of insulation from black lead at point nearest junction of outer rubber covering and exposed shields so that pigtail formed from shields can be joined around exposed part of black lead. Solder joint formed using a minimum of solder. Solder-tin tips of all leads. Black lead is used for ground connection (fig. 1).
Mounting FT-237-() (Item 5, fig. 2) and Impedance Matching Kit MX-337/UR.	Secure Mounting FT-237-() to top shelf in radio cabinet with hardware provided (fig. 2). Secure Coupling Unit CU-66/UR (Item 45) to bracket (Item 44, fig. 2) (fig. 6) with hardware provided. Secure bracket (fig. 6), with coupling unit attached, by means of two bolts used to secure Mounting FT-237-() to shelf in radio cabinet (detail D, fig. 2). Cut four 1-inch lengths of spaghetti tubing and place one length over each of 3-inch prepared leads on 42-inch length of Cordage CO-213 (fig. 1). Connect leads to terminals on Coupling Unit CU-66/UR and slip spaghetti tubing over terminals. Tape ends of unused wires. Connect other end of 42-inch length of cordage to terminal strip on Mounting FT-237-() (fig. 1). Cord CO-278, supplied with Mounting FT-237-(), is routed through the opening in left end of mounting and connected to terminal block located near terminal strip in mounting. Route one end of 48-inch length of Cordage CO-213 (Item 12, fig. 2) through opening in left end of Mounting FT-237-() and connect cordage to terminal strip in mounting (fig. 1). Secure cord and cordage with clamps (Item 22, fig. 2).
Connector No. 61007 and Bondnut BL-50 (Items 20 and 21, fig. 2).	Install Connector No. 61007 and Bondnut BL-50 through knockout holes in top of junction box (Item 29) located on

Part and location

Radio Transmitter BC-604-() and Radio Receiver BC-603-().

Dynamotor DM-35, in cabinet of Radio Transmitter BC-604-().

Dynamotor DM-34, in cabinet of Radio Receiver BC-603-(). (Two Dynamotors DM-34 and two Radio Receivers BC-603-() required for Radio Set SCR-508-().)

Radio Transmitter BC-604-(), including necessary crystals, on Mounting FT-237-().

Radio Receiver BC-603-(), on Mounting FT-237-(). (Two Radio Receivers BC-603-() required for Radio Set SCR-508-().)

Remote Control Unit, Navy type No. 23429 for use with low impedance accessories.

Remote Control Unit, Navy type No. 23429 for use with high impedance accessories.

Method and materials

inside of radio cabinet. Pass Cordage CO-213 and Cord CO-278 from Mounting FT-237-() through connectors. Make connections to terminal strip inside radio junction box (fig. 1). Secure with Sta-kon terminals supplied.

Radio Transmitter BC-604-() and Radio Receiver BC-603-() used in LVT installations must have modification for receiver disabling and additional modification for increased audio output. Units having receiver disabling modification are identified by the letter *M* stamped after nomenclature on nameplate; for example, BC-603-DM. Units modified for increased audio output will be identified by MWO number lettered on unit. (See MWO Sig 11-600-4 and MWO Sig 11-600-6.)

If Dynamotor is not already installed in transmitter, remove crystal case from transmitter cabinet by loosening two screw locks on front panel and pulling crystal case out. Loosen four screw locks holding cover on top of transmitter and remove cover. Fasten dynamotor unit in left rear of transmitter chassis with four bolts in its base. Replace crystal case and top cover.

In case Dynamotor DM-34 is not already installed in receiver, remove chassis from receiver cabinet by loosening screw lock in rear center of cabinet. Fasten dynamotor unit on top rear of receiver chassis with four bolts in its face. Replace chassis in case.

Place Radio Transmitter BC-604-() on Mounting FT-237-() and secure by means of provided thumbscrew locking devices.

Place Radio Receiver BC-603-() on Mounting FT-237-() and secure by means of provided thumbscrew locking devices.

Remote Control Unit, Navy type No. 23429 (Item 11, fig. 2) is supplied wired for operation of Navy TCS Radio Equipment and must be modified for operation with Radio Set SCR-508-() or SCR-528-(). Modify remote control unit using Coupling Unit CU-66/UR with Headset-Microphone Assembly AN/URA-1 (fig. 1) as follows: Remove the jumpers between terminals 6 and 8 and between terminals 10 and 11. Retain the jumper between terminals 5 and 9 and add a jumper between terminals 9 and 10. Remove the Radio I. C. switch from the remote control units. Turn switch 180° and replace in remote control units so that switch will be open when in RADIO position.

When Coupling Unit CU-66/UR is not available, modify for use with Headset HS-30 (fig. 3) as follows: Remove jumpers between terminals 6 and 8, terminals 5 and 9, and terminals 10 and 11. Connect a jumper between terminals 5 and 10. Remove Radio I. C. switch from remote control

*Part and location**Method and materials*

Remote Control Unit, Navy type No. 23429 (Item 11, fig. 2) located on three junction boxes (Items 26, 27, 28, fig. 2).

Headset-Microphone Assembly AN/URA-1.

Mast Base AB-15/GR with Wire W-128 (fig. 7).

Mast Sections MS-116, MS-117, and MS-118.

Chest CH-264.

units. Turn switch 180° and replace in remote control units so that switch will be open in the RADIO position.

Remove cover from three junction boxes. Place rubber gasket supplied with remote control unit over rims of junction box. Connect leads from remote control unit to numbered terminals in junction boxes (fig. 1). Secure units to the three junction boxes.

Use Impedance Matching Kit MX-337/UR employing Coupling Unit CU-66/UR when Radio Set SCR-508-() or SCR-528-() is wired for low impedance load (fig. 1). When Headset-Microphone Assembly AN/URA-1 is not available substitute Headset HS-30 with Cords CD-933 and CD-307-A and Microphone T-45 with Cord CD-318 for use with impedance matching kit. If Impedance Matching Kit MX-337/UR is not available, wire Radio Set SCR-508-() or SCR-528-() for high impedance load (fig. 3). In this case do not use Headset-Microphone Assembly AN/URA-1. Headset HS-30 with Cords CD-604 and CD-307 and Microphone T-45 with Cord CD-318 will be used. Microphone T-17 is carried as a spare and may be used as a substitute microphone.

Disassemble Mast Base AB-15/GR by holding the lower insulator and turning the body of mast base counterclockwise. Install mast base on mast base bracket (also called antenna mount) located on port side of vehicle above radio cabinet (Item 32, detail A, fig. 2) as follows: Place insulator (Item 5, fig. 7) over hole in mast base bracket. Place small neoprene washer Item 4 over Item 5 and place plain washer Item 3 over Item 4. Insert body of mast base, Item 2, through hole in Items 3, 4, 5, 6 and mast base bracket. Insert bolt, Item 8, into Item 2 from under side and turn Item 2 clockwise until mast base is tightened securely. Connect Wire W-128 to binding post on bottom of Mast Base AB-15/GR and route wire through connector in top of radio cabinet and connect to TR antenna binding post on Mounting FT-237-(). If Mast Base AB-15/GR is not available substitute Mast Base MP-48 or MP-48-A with suitable waterproofed cover. See figure 8 for assembly of Mast Base MP-48 or Mast Base MP-48-A.

Screw mast sections together. Screw assembled mast sections into Mast Base AB-15/GR. When mast sections are removed stow in Roll BG-56. If Mast Sections MS-51, MS-52, and MS-53 are used with Mast Base MP-48 or Mast Base MP-48-A place Clamps MC-423 and MC-424 over joints to prevent loss of sections.

When used with Radio Set SCR-528-(), Chest CH-264 shall be placed on Mounting FT-237-() in space provided for a second radio receiver. When used with Radio Set SCR-508-(), Chest CH-264 shall be placed in lower left corner of Radio Cabinet (fig. 2). Stow headsets, spare tubes, and spare parts in Chest CH-264.

Part and location

Cover BG-96.

Mast base stowage.

Method and materials

Place cover over the radio set.

Mast Base AB-15/GR, MP-48, or MP-48-A may be lowered to stowed position by loosening two wingnuts on under side of mast base bracket (also called antenna mount), disconnecting the lead-in from mast base, and pivoting antenna mount (detail A, fig. 2).

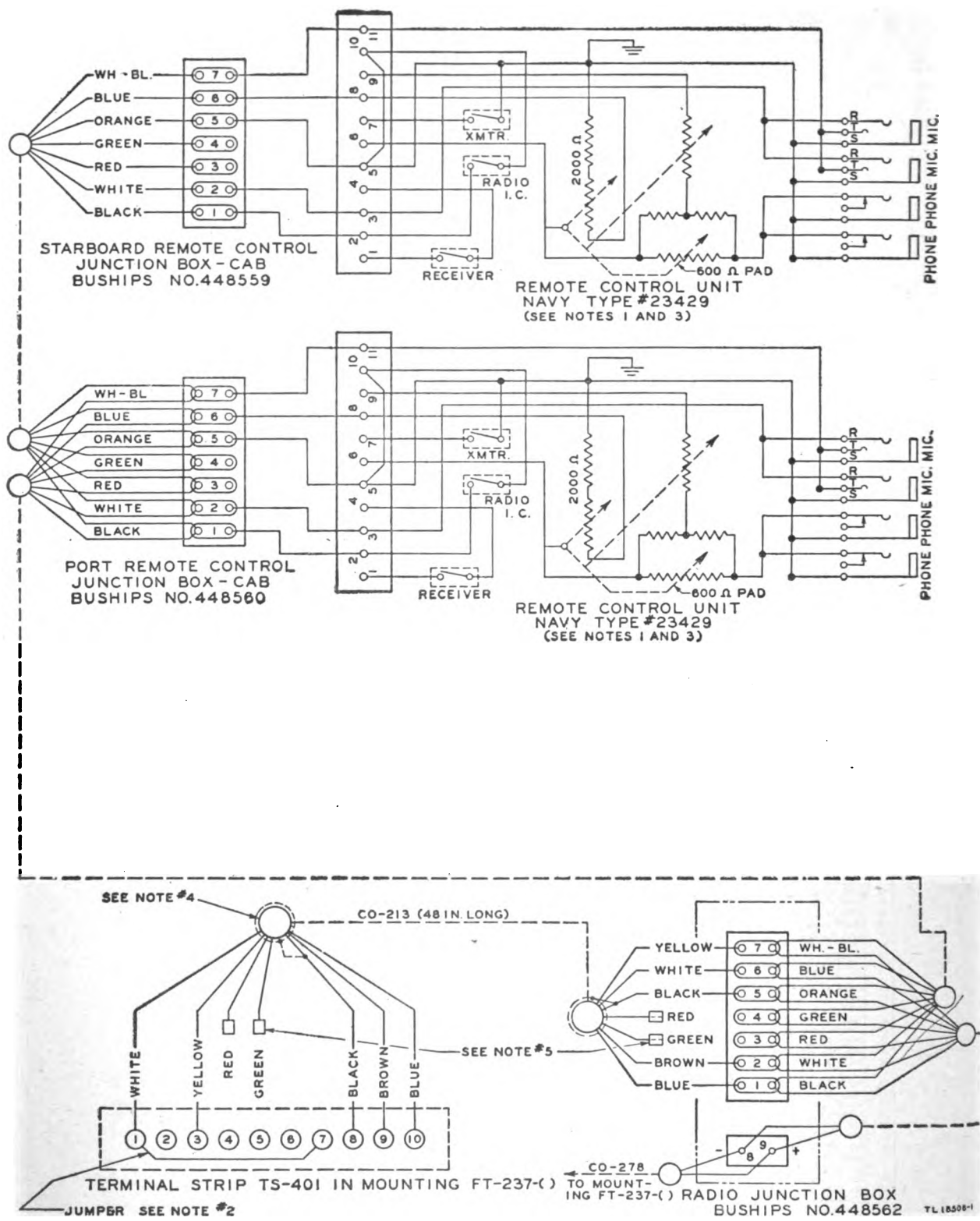
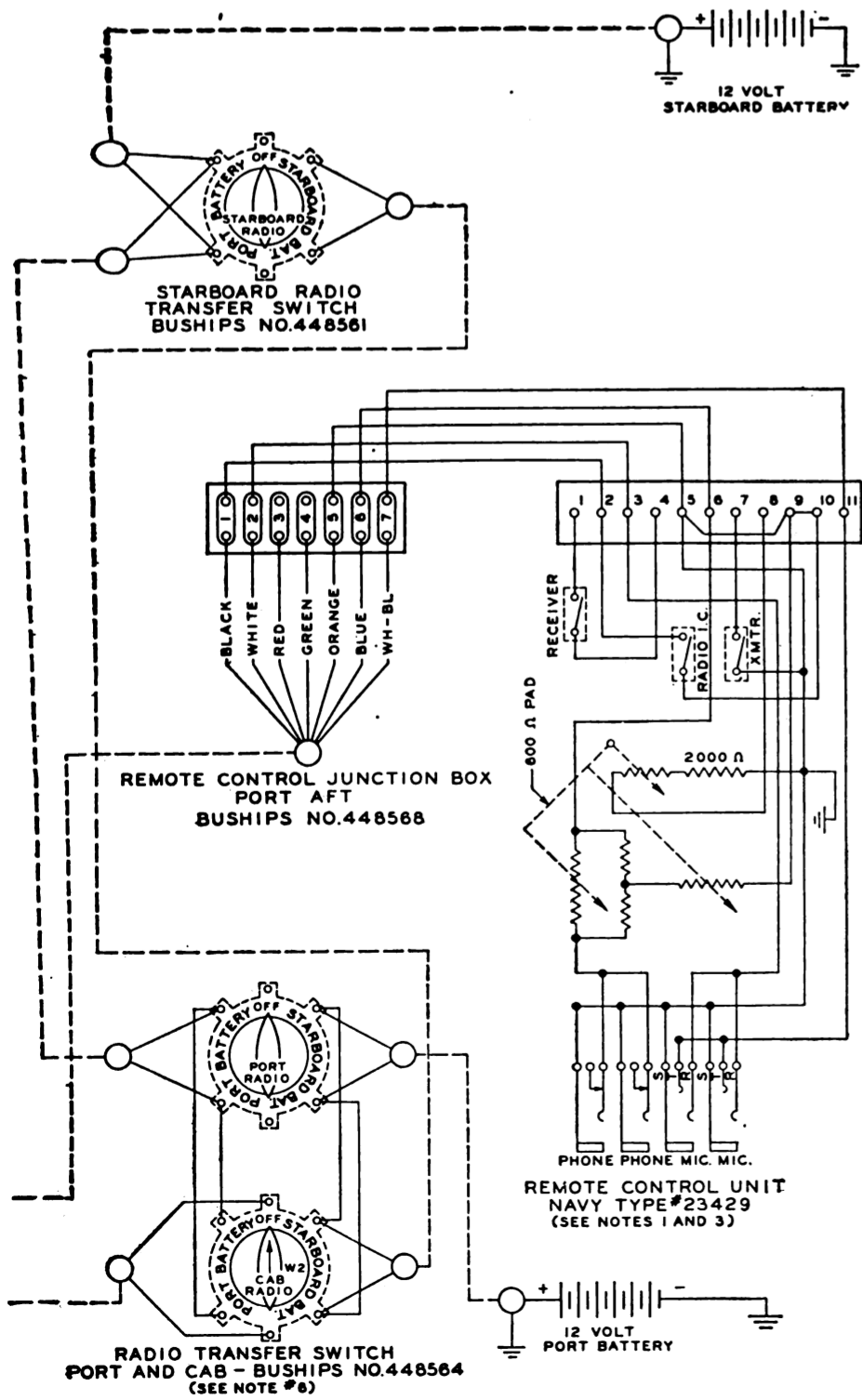


Figure 3. Wiring diagram of interphone system for Radio Set SCR-508-() or SCR-528-()



- NOTES:
- NAVY TYPE 23429 REMOTE CONTROL UNIT (6-TERMINAL) WIRING IS NOT COLOR CODED. WIRES MUST BE TRACED FROM TERMINAL BLOCKS.
 - RADIO SETS SCR-508 OR SCR-522 WHICH HAVE BEEN MODIFIED TO PROVIDE INCREASED AUDIO OUTPUT WILL INCLUDE JUMPER 1-7 ON TERMINAL STRIP OF MODELING PT-227. JUMPER MUST BE REMOVED WHEN INTERPHONE SYSTEM IS WIRED AS SHOWN.
 - NAVY TYPE 23429 REMOTE CONTROL UNITS ARE WIRED FOR OPERATION WITH NAVY TCS EQUIPMENT. TO ADAPT THEM FOR USE WITH RADIO SET SCR-508 OR SCR-522 WITH COUPLING UNIT CU-64/DR THE FOLLOWING IS NECESSARY:
 - REMOVE JUMPER 8-9, 6-8 AND 10-11 AND REPLACE JUMPER 8-9 AND 9-10.
 - RELOCATE LEADS ON TERMINAL STRIP PER DIAGRAM.
 - ROTATE THE "RADIO I.C." SWITCH 180° IN PANEL TO MAKE SWITCH OPER IN "RADIO" POSITION.
 - DOTTED CIRCLES AROUND CABLE ENDS INDICATES SHIELD.
 - ENDS OF UNUSED WIRE SHALL BE TAPED.
 - RADIO TRANSFER SWITCH MARKED CAB RADIO IS USED TO SELECT PORT OR STARBOARD BATTERY AS A SOURCE OF POWER FOR OPERATION OF RADIO SET.
 - THE FOLLOWING UNITS AND WIRING, SHOWN IN THIS FIGURE ARE FURNISHED WITH THE VEHICLE BY THE WFL:
 - STARBOARD REMOTE CONTROL JUNCTION BOX CAB BU-448568
 - PORT REMOTE CONTROL JUNCTION BOX CAB BU-448568
 - REMOTE CONTROL JUNCTION BOX PORT AFT BU-448568
 - RADIO JUNCTION BOX BU-448564
 - STARBOARD RADIO TRANSFER SWITCH BU-448561
 - RADIO TRANSFER SWITCH-PORT AND CAB BU-448564
 - 12 VOLT PORT AND STARBOARD BATTERIES
 - WIRING INTERCONNECTING THE UNITS LISTED IN 7A TO 7E
 - THE UNITS AND WIRING NOT LISTED IN NOTE NO. 7 ARE PROVIDED AND INSTALLED WITH THE RADIO AND INTERPHONE EQUIPMENT.
- USE HEADSET-MICROPHONE ASSEMBLY AN/URA-1 OR IF NOT AVAILABLE HEADSET SET HS-30 WITH LOW IMPEDANCE ACCESSORIES. MAY BE SUBSTITUTED IF COUPLING UNIT CU-64/DR IS NOT AVAILABLE REFER TO WIRING DIAGRAM, FIG. 3, AND USE HEADSET SET HS-30 WITH HIGH IMPEDANCE ACCESSORIES FOR INSTALLATION OF SCR-508 OR SCR-522, SEE FIG. 2.

low impedance combination in Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3.

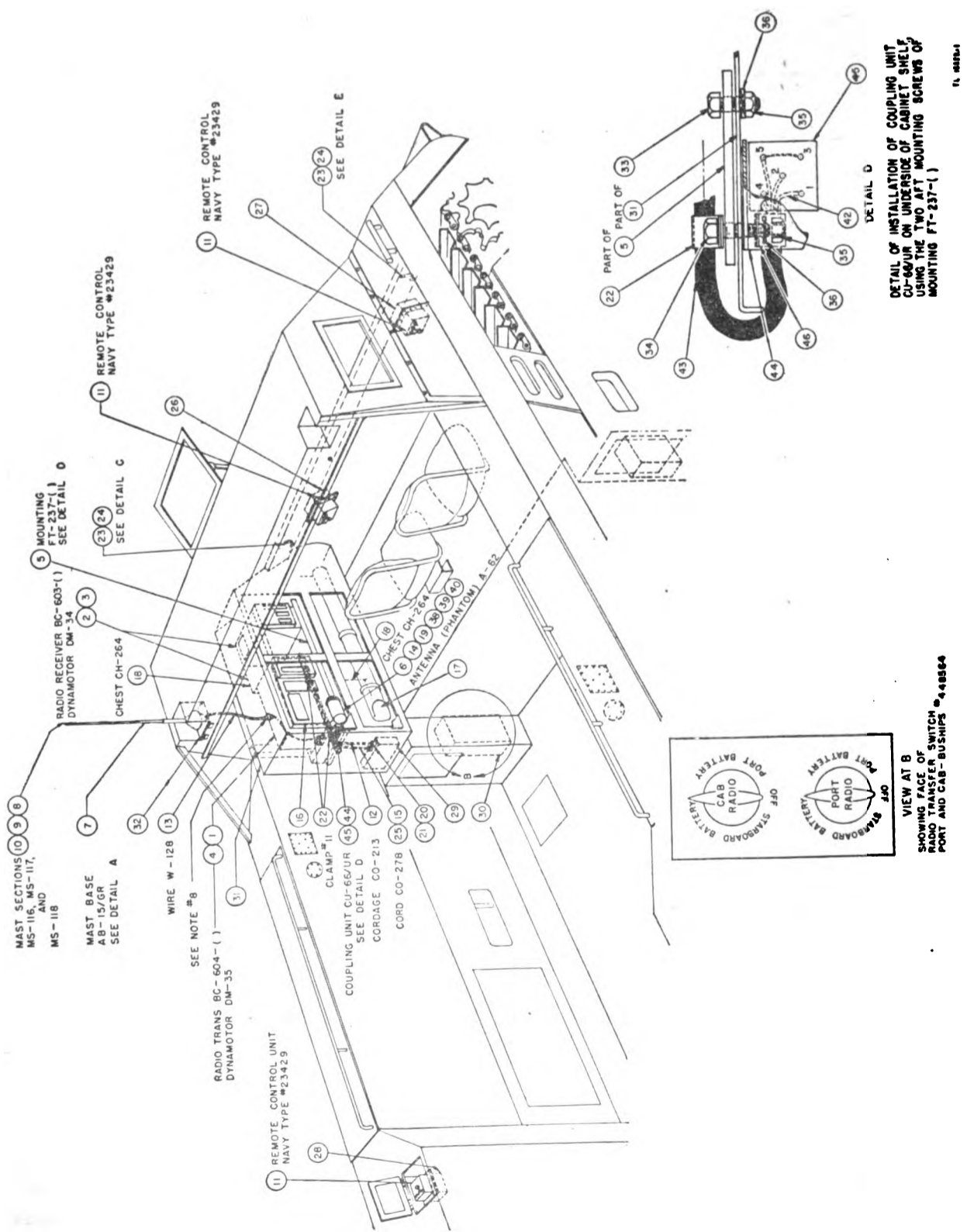
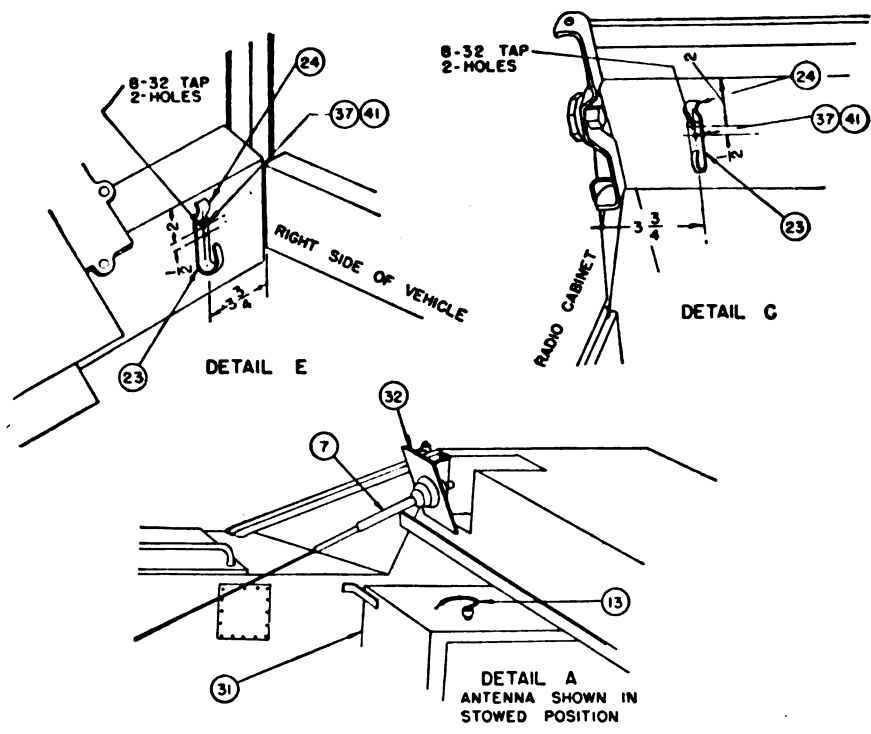


Figure 2. Installation of Radio Set SCR-508- () or SCR-528- () and associated



RADIO SET SCR-508(-)
RADIO SET SCR-508(-)

NOTES:

1. FOR ADDITIONAL COMPONENTS AND SPARE PARTS, SEE COMPONENT PARTS LIST.
2. IF (7) (8) (9) AND (10) ARE NOT AVAILABLE USE MUST BASE MP-48 OR MP-48-1; MUST SECTIONS MS-51, MS-52, MS-53; CLAMPS MC-23 AND MC-24, AND COVER 88-108.
3. (11) AND (12) CUT TO PROPER LENGTH, TIN ENDS FOR ANTENNA CONNECTIONS.
4. (13) TO (15) INCL. ARE FURNISHED IN THE VEHICLE BY THE MANUFACTURER.
5. CORD LENGTHS ARE FROM TERMINAL TO TERMINAL.
6. WHEN USING ANTENNA A-82, PHANTOM, FOR ALIGNING TRANSMITTER, DISCONNECT (13) FROM ANTENNA POST ON MOUNTING FT-237(-) AND CONNECT (13) FROM ANTENNA A-82, PHANTOM, TO ANTENNA POST ON MOUNTING FT-237(-).
7. (16) MARKED "CAR RADIO" IS USED TO SELECT PORT ON STARBOARD BATTERY AS A SOURCE OF POWER FOR OPERATION OF THE RADIO SET.
8. USE RUBBER TAPE AROUND (17) FOR WATER TIGHT FIT IN CONNECTOR NO. 61007.
9. DRAWING REFERENCES:
WIRING DIAGRAM OF INTERPHONE EQUIPMENT FOR LOW IMPEDANCE HEADSET FIG. 1.
WIRING DIAGRAM OF INTERPHONE EQUIPMENT FOR HIGH IMPEDANCE HEADSET FIG. 2.
10. (18) IS PLACED BETWEEN (1) AND (2) FOR SCR-508(-) INSTALLATIONS, AND IF THE LOWER LEFT CORNER OF RADIO CABINET FOR SCR-508(-) INSTALLATIONS.
11. (19) SHALL BE STA-508 85 TERMINAL AS MADE BY THOMAS & BETTS, ELIZABETH, N.J., OR EQUAL.
12. REMOVE COVER OF JUNCTION BOX AND MOUNT (1) WITH HARDWARE PROVIDED FOR COVER.
13. (20) SHALL BE CAT. #9018-28 AS MADE BY SHAKPROOF, INC., CHICAGO, ILL., OR EQUAL.
14. IF (21) IS NOT AVAILABLE DO NOT USE (22) AND (23) AND WIRE INTERPHONE SYSTEM PER FIG. 3 IF IT IS AVAILABLE. INSTALL AND WIRE INTERPHONE SYSTEM PER FIG. 1 USING LOW IMPEDANCE HEADSET AND CORD CONNECTION.
15. (24) IS FURNISHED WITH (25).
16. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
17. (26) TO (28) INCL. ARE CONTAINED IN IMPEDANCE MATCHING KIT MC-137/UR.

ITEM NO.	NAME OF ITEM	QUAN. REQ.
1	RADIO TRANSMITTER SC-408(-)	1
2	RADIO RECEIVER MC-408(-)	1
3	DYNAMOTOR DM-28	1
4	DYNAMOTOR DM-28	1
5	MOUNTING FT-237(-)	1
6	ANTENNA A-82, PHANTOM PER FIG. 4 SEE NOTE 6	1
7	MUST BASE 88-108	1
8	MUST SECTION MS-114	1
9	MUST SECTION MS-117 SEE NOTE 2	1
10	MUST SECTION MS-118	1
11	REMOTE CONTROL UNIT HARTY TYPE 23429 SEE NOTE 12	1
12	CORDAGE CO-213 42 IN. LONG	1
13	WIRE W-128 24 IN. LONG SEE NOTES 3 AND 8	1
14	WIRE W-128 20 IN. LONG SEE NOTE 3	1
15	CORD CO-278 SEE NOTE 15	1
16	COVER 88-108	1
17	WIRE W-128	1
18	WIRE W-128 24 IN. LONG SEE NOTE 10	1
19	BRACKET PER FIG. 5	1
20	CONNECTOR NO. 61007	1
21	BRACKET BL-50	1
22	CLAMP NO. 11 PER FIG. 9	1
23	HOOK	1
24	CLIP	1
25	TERMINAL SEE NOTE 11	1
26	JUNCTION BOX BU #448560 CAB-PORT REMOTE CONTROL	1
27	JUNCTION BOX BU #448550 CAB-ST'B REMOTE CONTROL	1
28	JUNCTION BOX BU #448568 PORT-AFT REMOTE CONTROL	1
29	RADIO JUNCTION BOX BU #448562	1
30	RADIO TRANSFER SWITCH BU #448564 PORT AND CAB SEE NOTE 7	1
31	RADIO CABINET BU #448558	1
32	ANTENNA MOUNT HS-1528	1
33	HEX. HEAD CAP SCREW 5/16-24 x 3/4 LONG	6
34	HEX. HEAD CAP SCREW 5/16-24 x 1-3/8 LONG	2
35	HEX. NUT 5/16-24	6
36	SHAKPROOF WASHER 5/16 I.D.T. SEE NOTE 13	6
37	RD. HEAD MACH. SCREW NO. 8-32 x 1/2 LONG	6
38	RD. HEAD MACH. SCREW NO. 10-32 x 5/8 LONG	2
39	RD. HEAD MACH. SCREW NO. 6-32 x 3/8 LONG	4
40	LOCKWASHER S.A.E. REG. FOR NO. 8 SCREW	4
41	LOCKWASHER S.A.E. REG. FOR NO. 8 SCREW	4
42	IMPERMEAL SPAGHETTI TUBING	AS REQ.
43	CORDAGE CO-213 42 IN. LONG	1
44	BRACKET PER FIG. 5	1
45	CORPLING UNIT CO-86/UR	1
46	CLAMP NO. 6 PER FIG. 9	1

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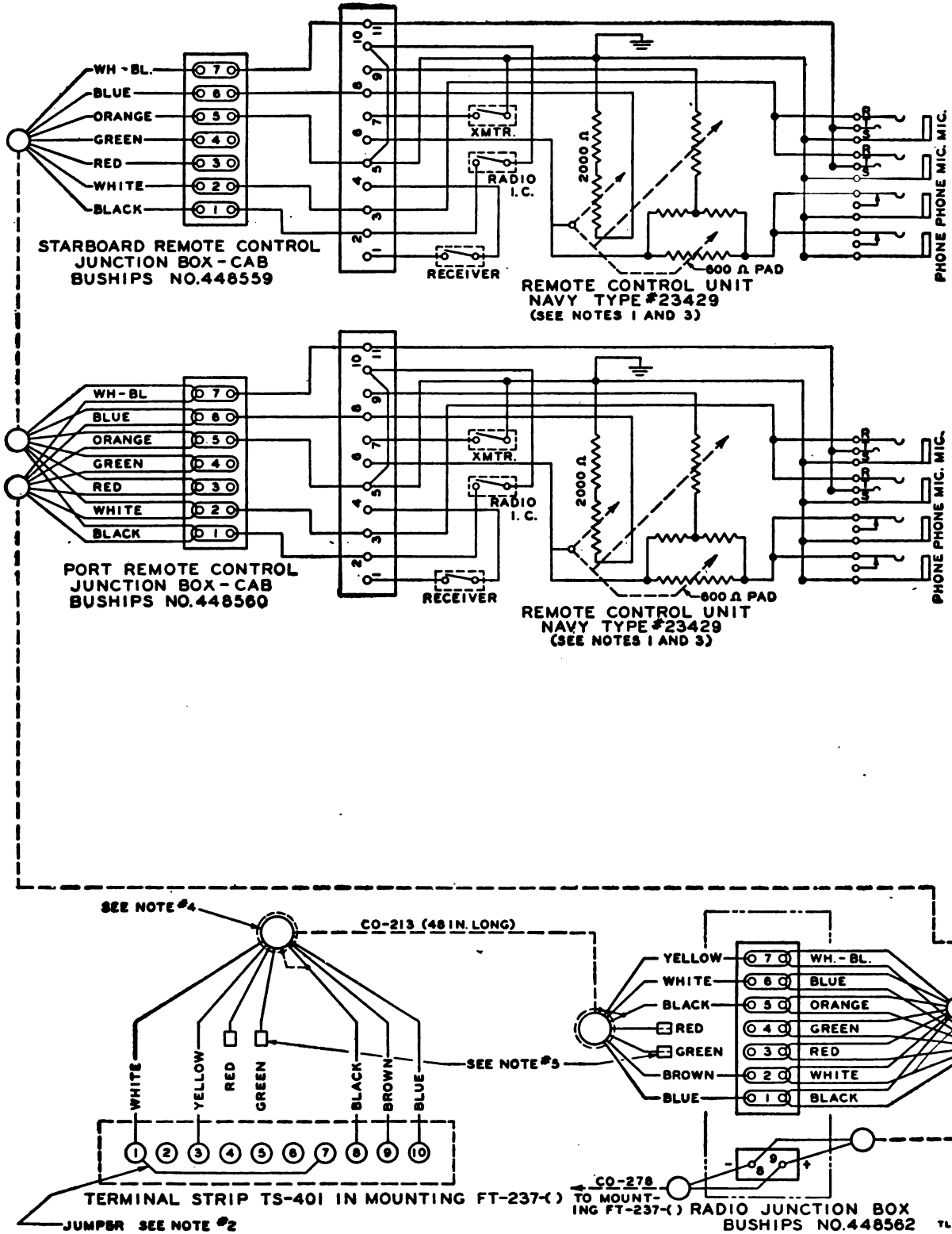
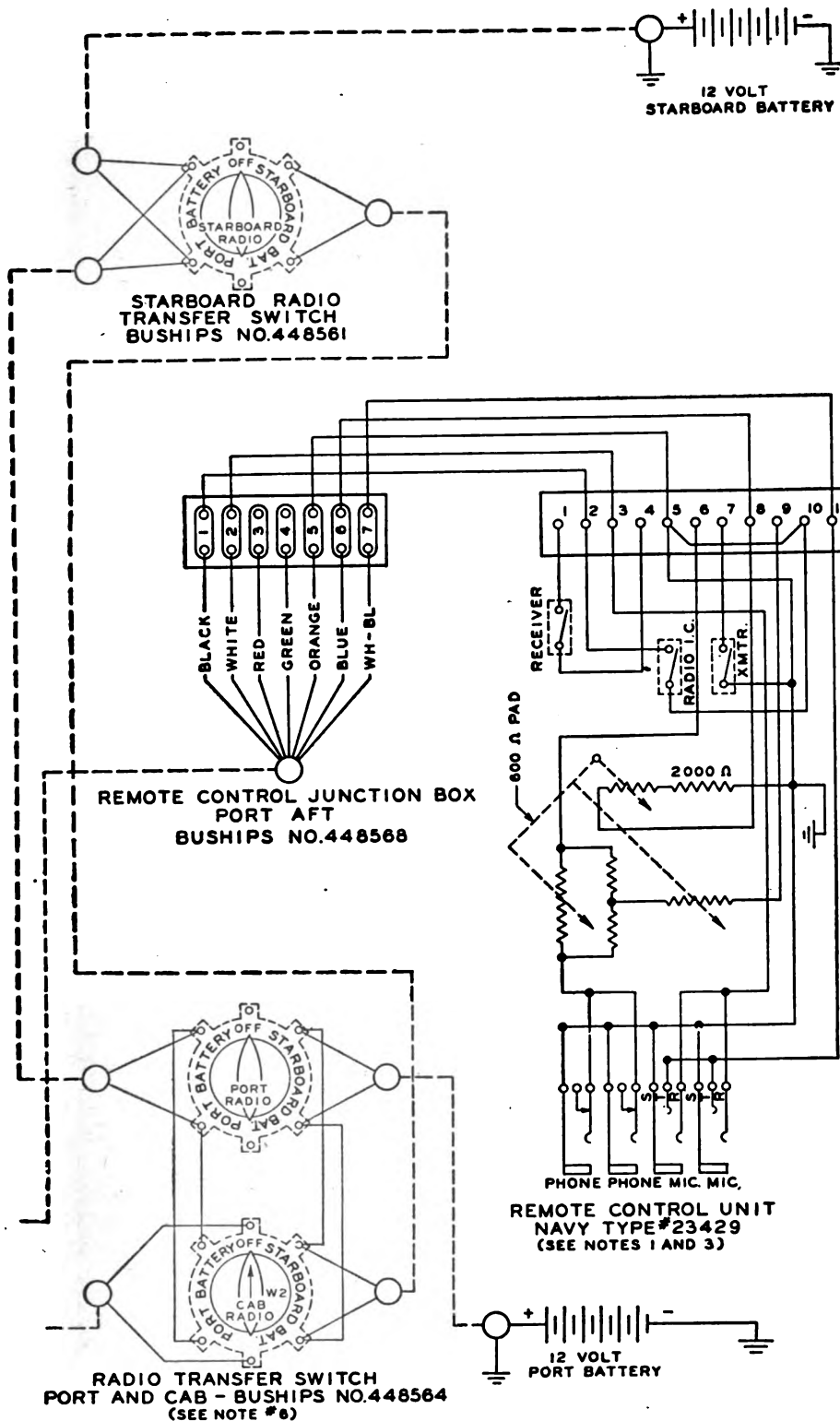


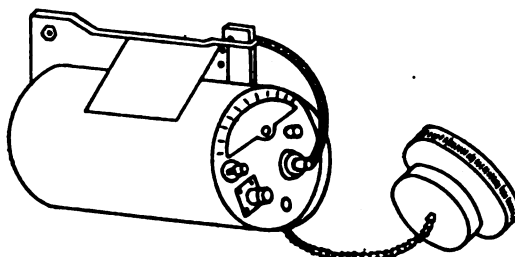
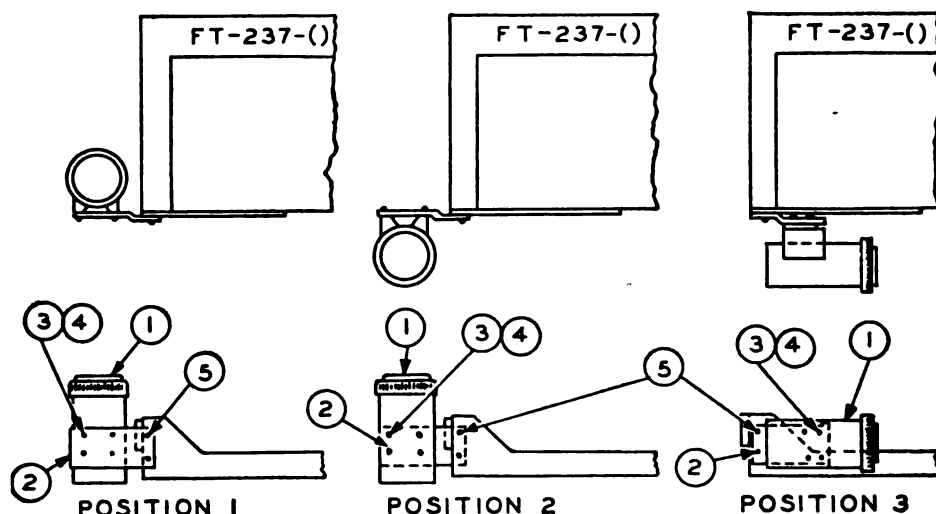
Figure 3. Wiring diagram of interphone system for Radio Set SCR-508-() or SCR-528-()



NOTES:

1. NAVY TYPE 23429 REMOTE CONTROL UNIT INTERCONNECTING WIRES ARE NOT COLOR CODED. WIRES MUST BE TRACED FROM NUMBERED TERMINAL BLOCK.
2. RADIO SETS SCR-508 OR SCR-528 WHICH HAVE BEEN MODIFIED TO PROVIDE INCREASED AUDIO OUTPUT WILL INCLUDE JUMPER 1-7 ON TERMINAL STRIP OF MOUNTING FT-237.
3. NAVY TYPE 23429 REMOTE CONTROL UNITS ARE WIRED FOR OPERATION WITH NAVY TCS EQUIPMENT. TO ADAPT THEM FOR USE WITH RADIO SET SCR-508 OR SCR-528 AND HEADSET HS-30 WITH CORD CD-604 (HIGH IMPEDANCE OUTPUT) THE FOLLOWING IS NECESSARY:
 - A. REMOVE JUMPERS 5-9, 6-8, AND 10-11 AND REPLACE WITH JUMPER 5-10.
 - B. RELOCATE LEADS ON TERMINAL STRIP PER DIAGRAM.
 - C. ROTATE THE "RADIO I.C." SWITCH 180° IN PANEL TO MAKE SWITCH OPEN IN "RADIO" POSITION.
4. DOTTED CIRCLE AROUND CABLE ENDS INDICATES SHIELD.
5. ENDS OF UNUSED WIRE SHALL BE TAPED.
6. RADIO TRANSFER SWITCH MARKED "CAB RADIO" IS USED TO SELECT PORT OR STARBOARD BATTERY AS A SOURCE OF POWER FOR OPERATION OF SET.
7. THE FOLLOWING UNITS AND WIRING SHOWN IN THIS FIGURE ARE FURNISHED WITH THE VEHICLE BY THE MFR.
 - A. STARBOARD REMOTE CONTROL JUNCTION BOX -CAB BU-448558
 - B. PORT REMOTE CONTROL JUNCTION BOX -CAB BU-448560
 - C. REMOTE CONTROL JUNCTION BOX -PORT AFT BU-448568
 - D. RADIO JUNCTION BOX BU-448562
 - E. STARBOARD RADIO TRANSFER SWITCH BU-448561
 - F. RADIO TRANSFER SWITCH PORT AND CAB BU-448564
 - G. 12 VOLT PORT AND STARBOARD BATTERIES
 - H. WIRING INTERCONNECTING THE UNITS LISTED IN NOTES 7A TO 7G
8. THE UNITS AND WIRING NOT LISTED IN NOTE 7 ARE PROVIDED AND INSTALLED WITH THE RADIO AND INTERPHONE EQUIPMENT.
9. DRAWING REFERENCES:
 - INSTALLATION OF SCR-508 OR SCR-528FIG. 2
 - WIRING DIAGRAM OF INTERPHONE FOR SCR-508 OR SCR-528 USING 23429 CONTROL UNIT WITH COUPLING UNIT CU-68/URFIG. 1

high impedance combination in Vehicle, Landing, Tracked (Unarmored), Mark III, LVT-3.



APPLICATION OF GROUND CLIP

ITEM NO.	NAME OF ITEM AND REMARKS	QUAN. REQ.
1	ANTENNA A-62 (PHANTOM)	1
2	BRACKET	1
3	RD. HD. MACH. SCR. #6-32 X 1/2" FURN. WITH #1	4
4	LOCKWASHER #6 STD. FURN. WITH #1	4
5	RD. HD. MACH. SCR. #10-32 X 5/8"	2

NOTE

1. FOR ALL POSITIONS USE TIP OF BRACKET TO RECEIVE THE GROUND CLAMP OF ANTENNA A-62.
2. USE LONGER SCREW ⑤ WHEN INSTALLING BRACKET ② ON MOUNTING FT-237-() AND RE-APPLY TOOTH-TYPE LOCKWASHERS.

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Figure 4. Antenna A-62, phantom, on Mounting FT-237- ().

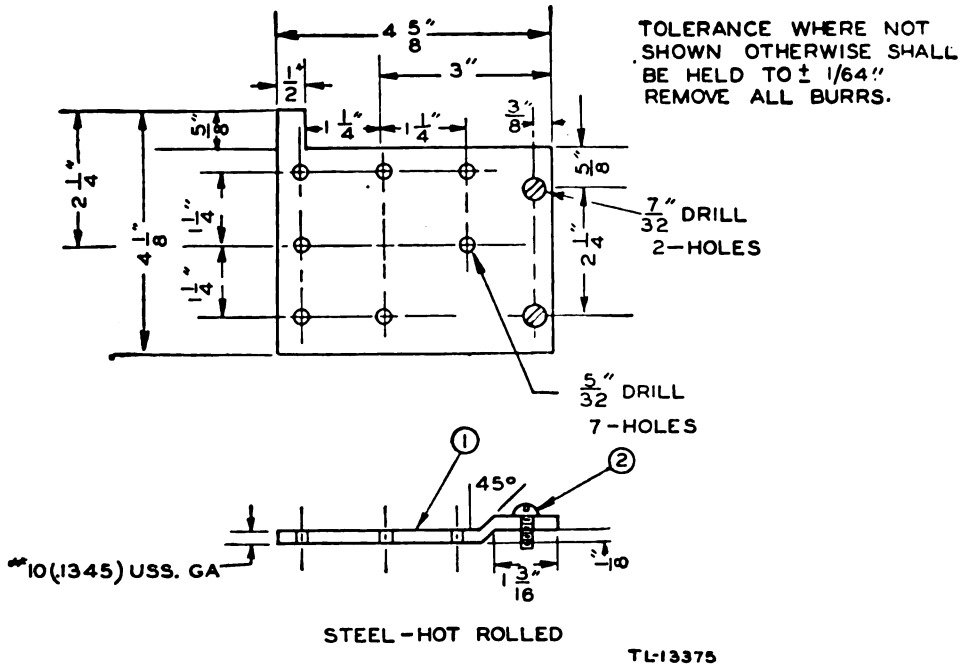
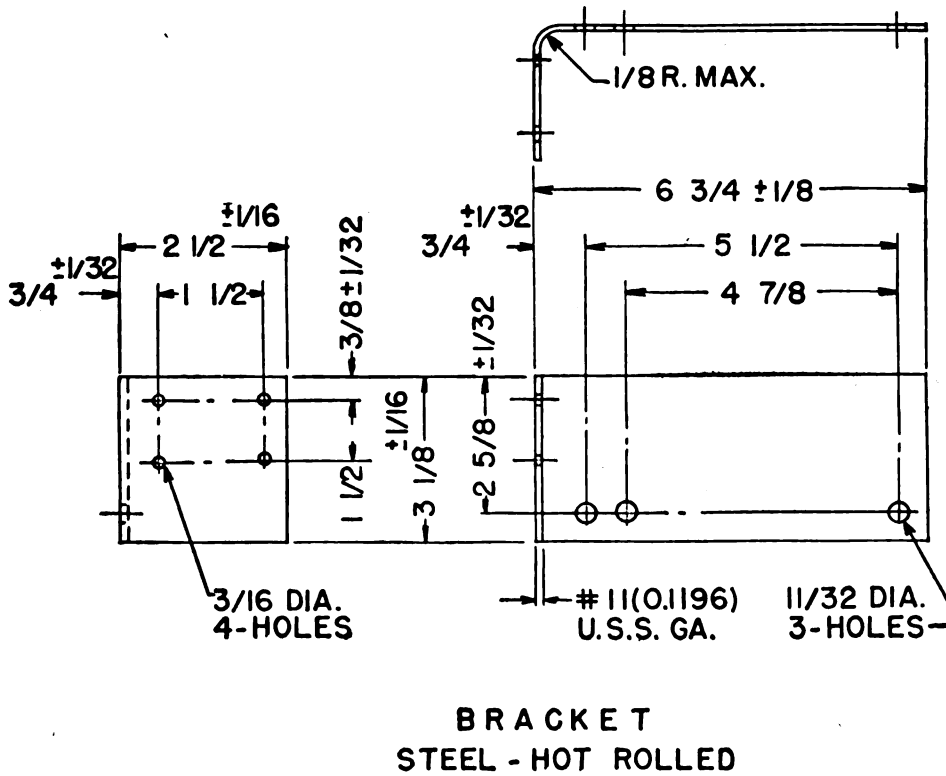


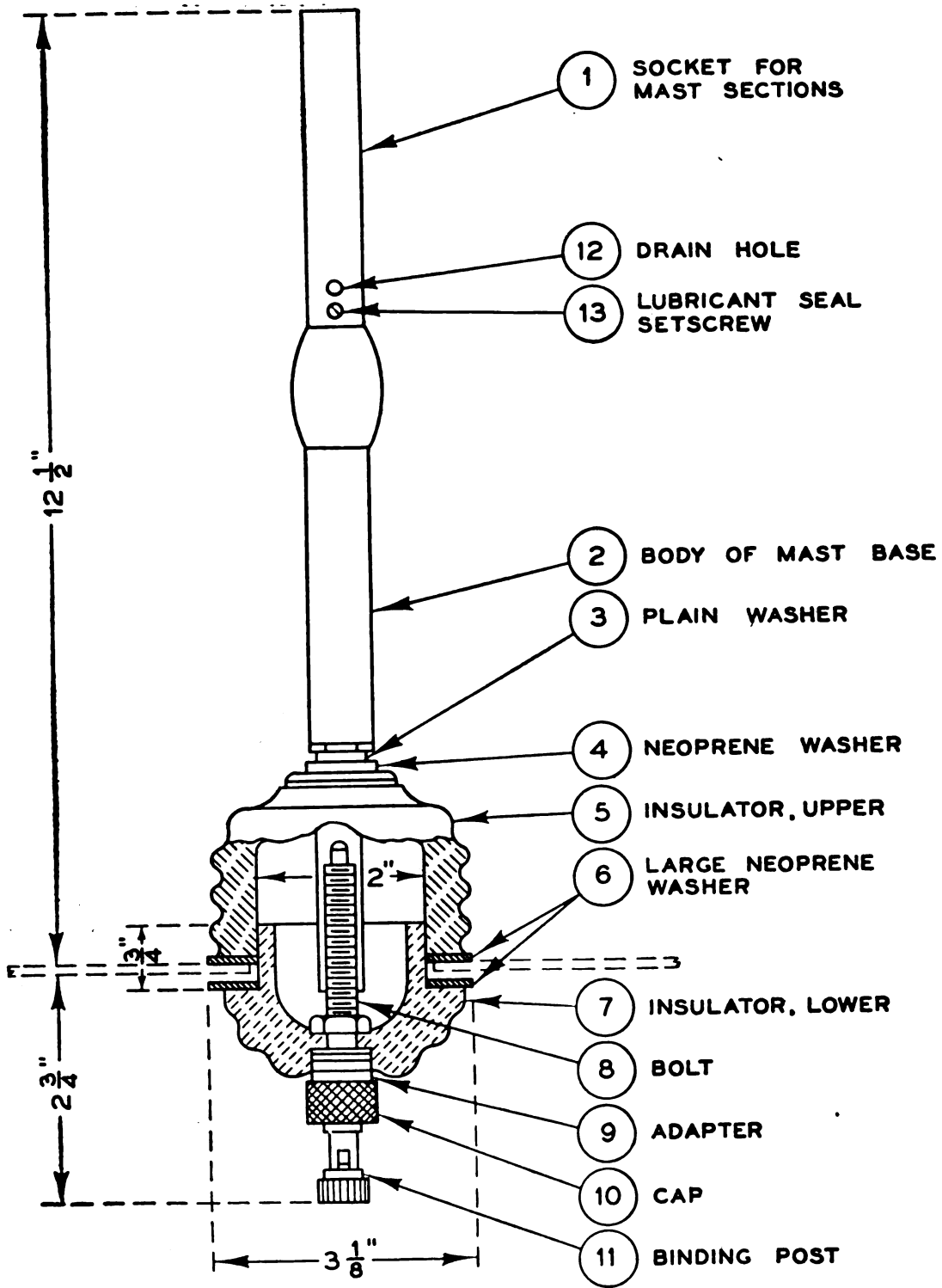
Figure 5. Bracket for Antenna A-62, phantom, assembly and details.



NOTE:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.

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Figure 6. Bracket for Coupling Unit CU-66/UR.

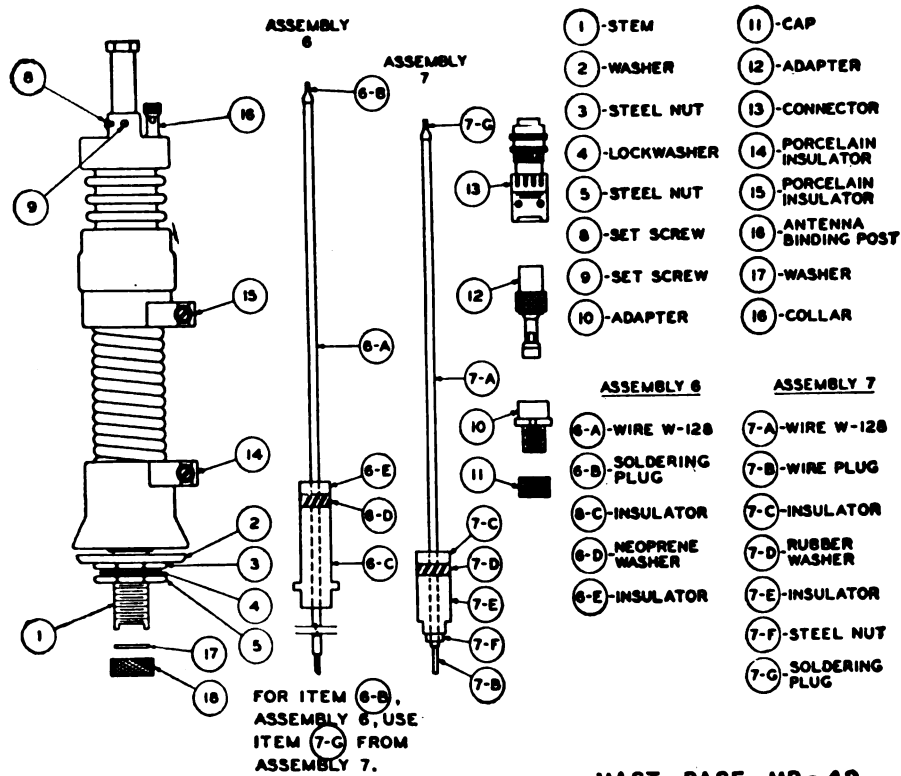


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Figure 7. Mast Base AB-15/GR, assembly for Wire W-128 lead-in.

RESTRICTED

TM 11-2755



MAST BASE MP-48

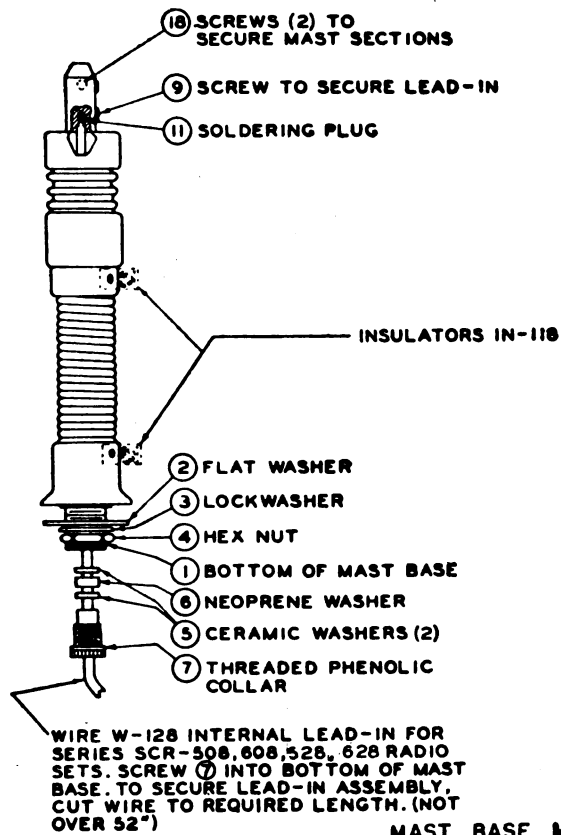
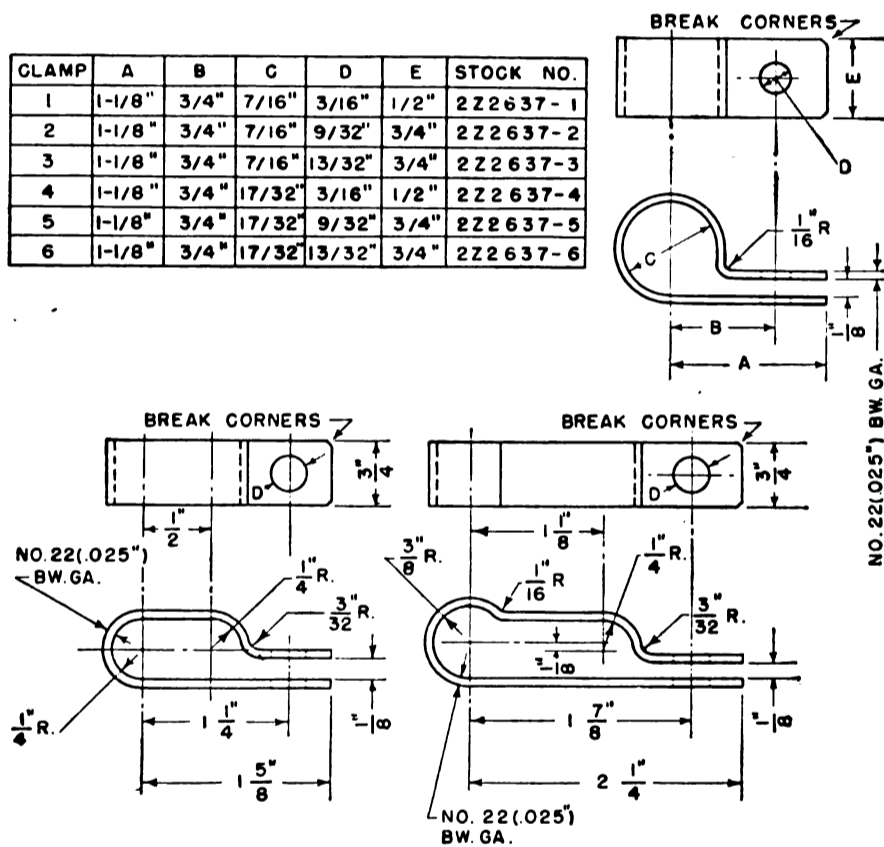


Figure 8. Mast Base MP-48 or MP-48-A, assembly for installation.

RESTRICTED



CLAMP	D	STOCK NO.
7	3/16"	222637-7
8	9/32"	222637-8
9	13/32"	222637-9

CLAMP	D	STOCK NO.
10	9/32"	222637-10
11	13/32"	222637-11

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NOTE.
TOLERANCES $\pm 1/32$ "

Figure 9. Clamp for radio cordage.

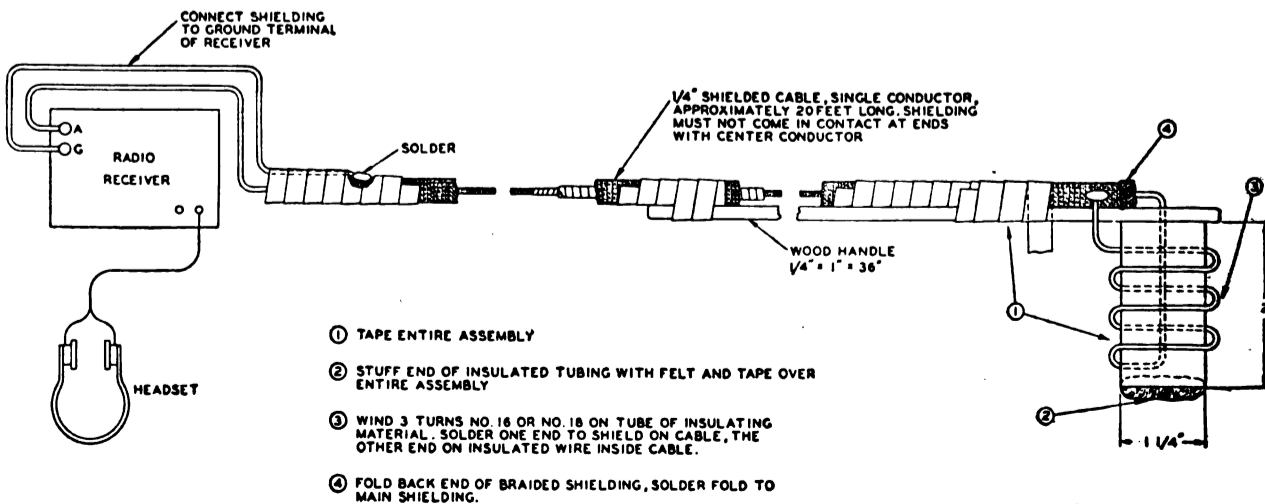


Figure 10. Probe antenna.



