

T7-531

# TM 11-2714

WAR DEPARTMENT TECHNICAL MANUAL

## INSTALLATION OF RADIO EQUIPMENT IN CARRIER, PERSONNEL, HALF-TRACK, M3

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WAR DEPARTMENT • DECEMBER, 1944



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Washington 25, D. C., 9 December 1944

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TM 11-2714, Installation of Radio Equipment in Carrier, Personnel, Half-track, M3, is published for the information and guidance of all concerned.

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For explanation of symbols, see FM 21-6.



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## RESTRICTED

### CONTENTS DESTRUCTION NOTICE

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**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 the 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 ADJUSTMENTS INSIDE THE EQUIPMENT WITH THE POWER 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.



# RESTRICTED

## SECTION II

### 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 equipment in Carrier, Personnel, Half-track, M3. Items required to make a complete operating installation are listed for each set. Official nomenclature followed by ( ), 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-193-H	SCR-528-( )
SCR-245-S	RC-58-( )
SCR-506-( )	SCR-608-( )
SCR-508-( )	SCR-610-( )
SCR-510-( )	SCR-628-( )

#### 3. Holes and Brackets

Holes and brackets required for installation of

the radio sets are normally located prior to delivery of Carrier, Personnel, Half-track, M3. 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:* Carrier, Personnel, Half-track, M3 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; 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 CARRIER, PERSONNEL, HALF-TRACK, M3

## 6. General

Excessive ignition or other electrical noises may interfere with the operation of radio equipment in Carrier, Personnel, Half-track, M3. 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:

<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.

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 still cannot be found by any of the preceding methods, connect a probe antenna (fig. 27) 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.



## SECTION III

# RADIO SET SCR-193-H

### 8. Required Parts

Items necessary for the installation of Radio Set SCR-193-H in Carrier, Personnel, Half-track, M3, are listed below:

Quantity	Stock Number	Item
1	2Z1108	Box BX-8, for transmitter spare tubes.
1	2Z1119	Box BX-19-( ), for receiver spare tubes.
1	2Z1121	Box BX-21, for Boxes BX-8, BX-19, headset, etc.
2	2Z1203-320	Bracket FT-320.
1	2Z1560	Cabinet CH-60.
1	2Z1848	Case CS-48, for transmitter tuning unit.
1	2Z2651-421	Clamp MC-421, for securing Mast Sections MS-49 and MS-50.
1	2Z2651-422	Clamp MC-422, for securing Mast Sections MS-50 and MS-51.
1	2Z2651-423	Clamp MC-423, for securing Mast Sections MS-51 and MS-52.
1	2Z2651-424	Clamp MC-424, for securing Mast Sections MS-52 and MS-53.
2	6Z3147	Connector No. 61007 and Bondnut BL-50 (Appleton), for power cable connection.
1	3E2170A	Cord CO-170-A, connects Dynamotor Unit BD-77-( ) to terminal box.
1	3E1226	Cord CD-226, connects Radio Transmitter BC-191-( ) to Dynamotor BD-77-( ).
1	3E1307A-5.5	Cord CD-307-A, 65-inch, for Headset HS-30-( ).
1	3E1411	Cord CD-411, connects Radio Receiver BC-312-( ) to terminal box.
1	3E1440	Cord CD-440, connects Radio Transmitter BC-191-( ) to Dynamotor BD-77-( ).
1	3E1603	Cord CD-603, connects Radio Transmitter BC-191-( ) to terminal box.
1	3E1604	Cord CD-604, 6-inch, for connecting Cord CD-307-A to Headset HS-30-( ).
1	3E1267	Cord CD-267 for Loudspeaker LS-3.
1	2Z3367	Cover BG-67-( ), for mast base.
1	2Z3375	Cover BG-75-( ), for Radio Receiver BC-312-( ).
1	2Z3378	Cover BG-78-( ), for Radio Transmitter BC-191-( ).
1	3H1359	Cover BG-79-( ), for Dynamotor Unit BD-77-( ).
1	3H1777	Dynamotor Unit BD-77-( ), including Mounting FT-107.
1	6L50-193V12	Hardware bag.
1	2B830	Headset HS-30-( ).
2	3G604	Insulator IN-104.
2	3G598	Insulator IN-98.
1	3G621	Insulator IN-121.
1	3Z3445	Key J-45.
1	2A2087	Mast Base MP-37 or MP-57 (2A2088-57).
1	2A2090-53	Mast Base Bracket MP-53.
1	2A2349	Mast Section MS-49.
1	2Z6303.1	Loudspeaker LS-3.
1	2A2350	Mast Section MS-50.
1	2A2351	Mast Section MS-51.
1	2A2352	Mast Section MS-52.
1	2A2353	Mast Section MS-53.
1	2B1617	Microphone T-17-( ).
1	2Z6691	Mounting FT-151-( ), for Radio Transmitter BC-191-( ).
1	2Z6712	Mounting FT-172, snubber for Radio Transmitter BC-191-( ).
1	2Z6718	Mounting FT-178, snubber for Radio Receiver BC-312-( ).
1	2Z6721-284	Mounting FT-284.
1	2C4312	Radio Receiver BC-312-( ), including Mounting FT-162.
1	2C6191	Radio Transmitter BC-191-( ), less Mounting FT-151-( ).
1	2Z8056	Roll BG-56-( ), for mast sections.
1	2Z8973	Socket Cap M-163-( ).
1	2Z9313	Terminal Block TM-183, for terminal box.
1	2C8005	Transmitter Tuning Unit TU-5-( ).
1	2C8006	Transmitter Tuning Unit TU-6-( ).
10 ft.	1B128	Wire W-128.



## 9. Assembly and Installation

a. PROCEDURE. Components of Radio Set SCR-193-H should be installed as shown in figures 1 and 2 and as directed below. Figure 3 shows the installation of brackets and mounting frames in the vehicle. Figure 4 shows mounting holes and location.

Part and location	Method and materials
Mast Base Bracket MP-53, on left rear of vehicle, as shown in fig. 2.	Drill and tap two holes in the mast base bracket for Insulators IN-104. (See fig. 3.) Secure mast base bracket to floor and top flange of vehicle (fig. 2), with the hardware provided.
Insulators IN-104, on Mast Base Bracket MP-53.	Install as shown in figure 2, in the tapped holes provided.
Mast Base MP-37 or MP-57, on Mast Base Bracket MP-53.	Assemble as follows: See figure 5 and place item 1 over hole in mast base bracket, and item 2 over item 1. Place item 3 over item 2 and insert item 4 through the hole. Place item 5 over item 6 and insert latter through bottom of hole in mast base bracket. Place items 7 and 8 beneath item 6, and fasten entire assembly with items 9 and 10. When using Mast Base MP-57, assemble as shown in figure 6. See figure 7 for details of hole in canvas top of vehicle.
Insulator IN-98, on back panel of Cabinet CH-60.	Fasten on inside of cabinet as shown in figure 2 with hardware provided.
Insulator IN-121:	Install through left end panel of Cabinet CH-60. (See fig. 2.)
Mounting FT-284, on rear of left seat platform.	Secure to seat platform with the hardware provided. (See fig. 3.)
Cabinet CH-60, on Mounting FT-284.	Provide a hole in the bottom plate of the cabinet for routing cords to the terminal box. (See fig. 2.) Drill the bottom plate of the cabinet (fig. 8), and fasten to the Mounting FT-284 with the hardware provided.
Mounting FT-162, in upper right compartment of Cabinet CH-60.	Secure to the cabinet with the hardware provided.
Mounting FT-151-( ), in left compartment of Cabinet CH-60.	Secure to the cabinet with the hardware provided.
Mounting FT-107, in lower right compartment of Cabinet CH-60.	Secure to the cabinet with the hardware provided.
Mounting FT-178.	Remove receiver chassis from the receiver cabinet. Drill the receiver cabinet (fig. 9) and fasten the small bracket, item 1 (fig. 10), in place with stopnuts on the outside. Install mounting, item 2 (fig. 10), on Cabinet CH-60, as shown in figure 1. Replace receiver chassis in the receiver cabinet and place on Mounting FT-162, and complete the assembly with items 3 and 4 (fig. 10). Item 3 may be bent to suit conditions and excessive length removed.
Radio Receiver BC-312-( ), on Mounting FT-162.	Place receiver on its mounting in Cabinet CH-60, tighten thumbscrews and lock complete unit in place with the snap-slide catches.



Cover BG-75-( ), on Radio Receiver BC-312-( ).	Disengage Mounting FT-178 from the receiver and place Cover BG-75-( ) over receiver. Cut a hole in the cover to admit item 1 (fig. 10), before Mounting FT-178 is re-fastened to the receiver box.
Mounting FT-172.	Use the reinforcing plate (fig. 10) as a template and drill eight holes in the top of the transmitter (fig. 11): Fasten the small bracket, item 1 (fig. 10), and reinforcing plate in place with the stopnuts on the outside. Assemble mounting (fig. 10) and fasten item 2 to Cabinet CH-60 as shown in figure 1. Item 3 may be bent to suit conditions and the excessive length removed.
Loudspeaker LS-3 on Cabinet CH-60.	Drill cabinet CH-60 and fasten loudspeaker to the cabinet with existing hardware. (See fig. 33.)
Radio Transmitter BC-191-( ) on Mounting FT-151-( ).	Install necessary tubes, place transmitter on mounting, and lock in position.
Cover BG-78-( ), on Transmitter BC-191-( ).	Disengage Mounting FT-172 from the transmitter and place the cover over the transmitter. Cut a hole in the cover to admit item 1 (fig. 10), before Mounting FT-172 is fastened to the transmitter.
Dynamotor Unit BD-77-( ), on Mounting FT-107.	Place dynamotor on mounting and lock in place with the snap-slide fasteners. (See fig. 1.)
Cover BG-79-( ).	Place over Dynamotor Unit BD-77-( ).
Transmitter Tuning Units TU-5-( ) and TU-6-( ).	Insert one transmitter tuning unit into the transmitter. Carry the unit not in use in Case CS-48.
Case CS-48, Boxes BX-8 and BX-19-( ).	Disposition left to discretion of using arms. Stow in Box BX-21 when not in use, if BX-21 is carried in the vehicle.
Box BX-21.	Disposition left to discretion of using arms.
Headset HS-30-( ), Microphone T-17, and Key J-45.	Plug Cord CD-307-A into jack of Radio Receiver BC-312-( ). Attach Cord CD-604 to Cord CD-307-A and connect Headset HS-30-( ) to Cord CD-604. Plug the cords attached to Microphone T-17 and Key J-45 to the proper jacks in Radio Receiver BC-312-( ).
Mast Section MS-49 to MS-53, and Clamps MC-421 to MC-424, on Mast Base MP-37 or MP-57.	Screw the mast sections together, securing with the clamps. Fasten the clamps to the male end of the mast sections. Then screw the mast antenna into the mast base. Carry mast sections and clamps in Roll BG-56-( ) when not in use.
Roll BG-56-( ).	Disposition left to discretion of using arms.
Cover BG-67-( ).	Place over mast base when mast sections are not in use.
Socket Cap M-163-( ).	Plug into unused socket of transmitter.
Connectors No. 61007 and Bond-nuts BL-50.	Install through knockout holes in terminal box to bush and secure power cord.



b. **CORDING AND WIRING.** (1) Cord and wire Radio Set SCR-193-H as shown in figures 1 and 2. Secure cords in place (fig. 2) with the six No. 10 clamps (fig. 26) provided. Connect and secure so as not to interfere with the accessibility and operation of the equipment. Enough slack must be left to permit free movement of all units having shock mountings. Cording or cable likely to rub against sharp edges should be taped with at least two layers to prevent damage. Solder-tin all wire ends. When installing Cord CO-170-A at the dynamotor end, it may be necessary to ream the entrance hole provided in the dynamotor. If necessary, it is permissible to modify the dynamotor end of this cord by removing excess length of leads. When this is done, the terminals must be resoldered to the leads before completing the electrical connections.

(2) To prevent accidental shorts of the battery, do not connect the positive and negative 12-volt leads (in the terminal box) until all other connections have been completed.

Drill cabinet CH-60 and fasten loudspeaker to the cabinet with existing hardware. (See fig. 33.)	Loudspeaker LS-3 on Cabinet CH-60.
Install necessary tubes, place transmitter on mounting, and lock in position.	Radio Transmitter BC-191- ( ) on Mounting FT-151- ( )
Disengage Mounting FT-172 from the transmitter and place the cover over the transmitter.	Cover BC-78- ( ) on Transmitter BC-191- ( )
Cut a hole in the cover to admit item 1 (fig. 10), before Mounting FT-172 is fastened to the transmitter.	
Place dynamotor on mounting and lock in place with the snap-slide fasteners. (See fig. 1.)	Dynamotor Unit BD-77- ( ) on Mounting FT-107.
Place over Dynamotor Unit BD-77- ( )	Cover BC-79- ( )
Insert one transmitter tuning unit into the transmitter.	Transmitter Tuning Units TU-5- ( ) and TU-6- ( )
Carry the unit not in use in Case CS-48.	
Disposition left to discretion of using arms. Stow in Box BX-21 when not in use, if BX-21 is carried in the vehicle.	Case CS-48, Boxes BX-8 and BX-19- ( )
Disposition left to discretion of using arms.	Box BX-21.
Plug Cord CD-307-A into jack of Radio Receiver BC-312- ( ). Attach Cord CD-604 to Cord CD-307-A and connect Headset HS-30- ( ) to Cord CD-604. Plug the cords attached to Microphone T-17 and Key J-45 to the proper jacks in Radio Receiver BC-312- ( ).	Headset HS-30- ( ) Microphone T-17, and Key J-45.
Screw the mast sections together, securing with the clamps. Fasten the clamps to the mast end of the mast sections. Then screw the mast antenna into the mast base. Carry mast sections and clamps in Roll BC-26- ( ) when not in use.	Mast Section MS-49 to MS-53, and Clamps MC-421 to MC-424 on Mast Base MP-37 or MP-57.
Disposition left to discretion of using arms.	Roll BC-26- ( )
Place over mast base when mast sections are not in use.	Cover BC-67- ( )
Plug into unused socket of transmitter.	Socket Cap M-163- ( )
Install through knockout holes in terminal box to push and secure power cord.	Connectors No. 61007 and Bond-nuts BI-50.



## SECTION IV

### RADIO SET SCR-245-S

#### 10. Required Parts

Items necessary for the installation of Radio Set SCR-245-S in Carrier, Personnel, Half-track, M3 are listed below:

Quantity	Stock Number	Item
1	2Z1119	Box BX-19-( ), for receiver spare tubes.
1	2Z1121	Box BX-20, for transmitter spare tubes.
2	2Z1203-320	Bracket FT-320.
1	2Z1560	Cabinet CH-60.
1	2Z1856	Case CS-56, for transmitter tuning unit.
1	2Z2651-421	Clamp MC-421, for securing Mast Sections MS-49 and MS-50.
1	2Z2651-422	Clamp MC-422, for securing Mast Sections MS-50 and MS-51.
1	2Z2651-423	Clamp MC-423, for securing Mast Sections MS-51 and MS-52.
1	2Z2651-424	Clamp MC-424, for securing Mast Sections MS-52 and MS-53.
1	3E2170A	Cord CO-170-A, connects Dynamotor Unit PE-55-( ) to terminal box.
1	3E1307A-5.5	Cord CD-307-A, 65-inch, for Headset HS-30-( ).
1	3E1441	Cord CD-441, connects Radio Transmitter BC-223-A to Dynamotor Unit PE-55-( ).
1	3E1442	Cord CD-442, connects Radio Receiver BC-312-( ) to Radio Transmitter BC-223-A.
1	3E1604	Cord CD-604, 6-inch, for connecting Cord CD-307-A to Headset HS-30-( ).
1	2Z3367	Cover BG-67-( ), for mast base.
1	2Z3375	Cover BG-75-( ), for Radio Receiver BC-312-( ).
1	3H1357	Cover BG-77-( ), for Dynamotor Unit PE-55.
1	2Z3386	Cover BG-86-( ), for Radio Transmitter BC-223-A.
1	2Z3531	Crystal Holder FT-171-( ) with crystal.
1	3H1855	Dynamotor Unit PE-55-( ), includes Mounting FT-185.
1	6L50-245V12	Hardware bag.
1	2B830	Headset HS-30-( ).
1	3G598	Insulator IN-98.
1	3Z3445	Key J-45.
1	2A2087	Mast Base MP-37 or MP-57 (2A2088-57).
1	2A2090-53	Mast Base Bracket MP-53.
1	2A2349	Mast Section MS-49.
1	2A2350	Mast Section MS-50.
1	2A2351	Mast Section MS-51.
1	2A2352	Mast Section MS-52.
1	2A2353	Mast Section MS-53.
1	2B1617	Microphone T-17-( ).
1	2Z6712	Mounting FT-172, snubber for Radio Transmitter BC-223-A.
1	2Z6718	Mounting FT-178, snubber for Radio Receiver BC-312-( ).
1	2Z6721-284	Mounting FT-284.
1	2C4312	Radio Receiver BC-312-( ), includes Mounting FT-162.
*1	2C6223A	Radio Transmitter BC-223-A, includes calibration chart and Mounting FT-173.
1	2Z8056	Roll BG-56-( ) for mast sections.
*1	2C8017	Transmitter Tuning Unit TU-17-( ).
*1	2C8018	Transmitter Tuning Unit TU-18-( ).
20 ft.	1B128	Wire W-128.

\*The serial number and the order number of the calibration chart and of Transmitter Tuning Units TU-17-( ) and TU-18-( ) must agree with that of Radio Transmitter BC-223-A used.

#### 11. Assembly and Installation

a. PROCEDURE. Components of Radio Set SCR-245-S should be installed as shown in figure 12 and as directed below. Figure 3 shows the installation of brackets and mounting frames in the vehicle. Figure 4 shows mounting holes and location.



- Mast Base Bracket MP-53, on left rear top of body frame brace. Secure with hardware provided. (See fig. 3.)
- Mast Base MP-37 or MP-57, on Mast Base Bracket MP-53. When Mast Base MP-37 is supplied, see figure 5, and assemble as follows: place item 1 over hole in mast base bracket, and item 2 over item 1. Place item 3 over item 2 and insert item 4 through the hole. Place item 5 over item 6 and insert the latter through the bottom of the hole in the mast base bracket. Place items 7 and 8 beneath item 6, and fasten entire assembly with items 9 and 10. When using Mast Base MP-57, assemble as shown in figure 6. See figure 7 for details of hole in canvas top of vehicle.
- Mounting FT-284, on left rear of seat platform. Drill any necessary additional holes not already provided in the seat platform of the vehicle for installing Mounting FT-284. Secure to seat platform with the hardware provided. (See fig. 3.)
- Cabinet CH-60, on Mounting FT-284. Drill the cabinet for attaching to Brackets FT-320 and Mounting FT-284. (See fig. 8.) Drill a  $\frac{3}{4}$  inch hole in the bottom of the cabinet at the right end to permit installation of Cord CO-170-A from Dynamotor Unit PE-55-( ) to the car terminal box. Fasten Cabinet CH-60 to Mounting FT-284 with the hardware provided. Attach Brackets FT-320 to the upper rear of the cabinet with the hardware furnished. Fasten the foot of the brackets to the top rail on the wall of the vehicle with the hardware provided. (See fig. 3.)
- Mounting FT-162, on upper right compartment of Cabinet CH-60. Secure to cabinet with the hardware provided.
- Mounting FT-173, in left compartment of Cabinet CH-60. Secure to cabinet with the hardware provided.
- Mounting FT-185, in lower right compartment of Cabinet CH-60. Secure to cabinet with the hardware provided.
- Mounting FT-178. Remove receiver chassis from the receiver cabinet. Drill the receiver cabinet (fig. 9) and fasten the small bracket, item 1 (fig. 10) in place with stopnuts on the outside. Install mounting, item 2 (fig. 10) on the Cabinet CH-60 (fig. 12). Replace the receiver chassis in the receiver cabinet and place on the Mounting FT-162, and complete assembly with items 3 and 4 (fig. 10). Item 3 may be bent to suit conditions and excessive length removed.
- Radio Receiver BC-312-( ), on Mounting FT-162. Place receiver on its mounting in Cabinet CH-60, tighten thumbscrews, and lock complete unit in place with the snap-slide catches.
- Cover BG-75-( ) on Radio Receiver BC-312-( ). Disengage Mounting FT-178 from receiver and place Cover BG-75-( ) over the receiver. Cut hole in the cover to admit item 1 (fig. 10), before Mounting FT-178 is re-fastened to the receiver cabinet.



Mounting FT-172.	Remove tuning unit from the transmitter. With two small holes (in top center of transmitter) as a guide, drill additional holes necessary, by using, as a template, the small reinforcing plate shown in figure 10. Fasten the small bracket, item 1 (fig. 10), and reinforcing plate in place with stopnuts on the outside. Assemble mounting (fig. 10) and fasten item 2 to the Cabinet CH-60 (fig. 12). Item 3 may be bent to suit conditions and excessive length removed.
Radio Transmitter BC-223-A, on Mounting FT-173.	Install necessary tubes, place transmitter on mounting, and lock in position. (See fig. 12.)
Cover BG-86-( ), on Radio Transmitter BC-223-A.	Disengage Mounting FT-173 from transmitter and place Cover BG-86-( ) over the transmitter. Cut hole in the cover to admit item 1 (fig. 10), before refastening Mounting FT-172 to the transmitter.
Calibration charts.	To be carried in side pocket of radio transmitter or mounted in some convenient location by drilling small holes in the corners and securing with screws.
Dynamotor Unit PE-55-( ), on Mounting FT-185.	Place dynamotor on mounting and lock in position with snap-slide fasteners.
Cover BG-77-( ).	Place on Dynamotor Unit PE-55-( ).
Transmitter Tuning Units TU-17-( ) and TU-18-( ).	Insert one transmitter tuning unit into the transmitter. Carry the unit not in use in Case CS-56.
Case CS-56.	Disposition left to discretion of using arms.
Mast Sections MS-49 to MS-53, and Clamps MC-421 to MC-424, on Mast Base MP-37 or MP-57.	Screw the mast sections together, securing with the clamps. Fasten the clamps to the male ends of the mast sections. Then screw the mast antenna into the mast base. Carry mast sections and clamps in Roll BG-56-( ) when not in use.
Roll BG-56-( ).	For mast sections when not in use. Disposition left to discretion of using arms.
Cover BG-67-( ).	To be placed over mast base when mast sections are not in use.
Box BX-19-( ).	Mount in upper left section of Cabinet CH-60 with the hardware provided.
Box BX-20.	Mount in upper right section of left compartment of Cabinet CH-60 with the hardware provided.
Headset HS-30-( ) and Cords CD-307-A and CD-604.	Plug Cord CD-307-A into jack of Radio Receiver BC-312-( ). Attach Cord CD-604 to Cord CD-307-A and connect Headset HS-30-( ) to Cord CD-604.



Microphone T-17-( ) and Key J-45. Plug the cords attached to Microphone T-17-( ) and Key J-45 into the proper jacks in Radio Receiver BC-312-( ).

Crystal Holder FT-171-( ), with crystal. Carry in Transmitter Tuning Unit TU-17-( ) or TU-18-( ), according to frequency designated on holder.

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-245-S as shown in figure 12 and as directed below. Connect and secure so as not to interfere with the accessibility and operation of the equipment. Enough slack must be left to permit free movement of all units having shock mountings. Cording and cable likely to rub against sharp edges should be taped with at least two layers to prevent damage. All wire ends must be solder-tinned. When installing Cord CO-170-A at the dynamotor end, it may be necessary to ream the entrance hole provided in the dynamotor. If necessary, it is permissible to modify the dynamotor end of this cord by removing excess length of leads. When this is done the terminals must be resoldered to the leads before completing the electrical connections.

(2) To prevent accidental shorts to the battery, do not connect the 12-volt positive and negative leads (in the terminal box) until all other connections have been completed.

To be carried in side pocket of radio transmitter or mounted in some convenient location by drilling small holes in the corners and securing with screws.	Calibration charts.
Place dynamotor on mounting and lock in position with snap-slide fasteners.	Dynamotor Unit PE-25-( ), on Mounting FT-182.
Place on Dynamotor Unit PE-25-( ).	Cover BG-77-( ).
Insert one transmitter tuning unit into the transmitter. Carry the unit not in use in Case CS-26.	Transmitter Tuning Units TU-17-( ) and TU-18-( ).
Disposition left to discretion of using arms.	Case CS-26.
Screw the mast sections together, securing with the clamps. Fasten the clamps to the male ends of the mast sections. Then screw the mast antenna into the mast base. Carry mast sections and clamps in Roll BG-26-( ) when not in use.	Mast Sections MS-49 to MS-53, and Clamps MC-421 to MC-424 on Mast Base MP-37 or MP-27.
For mast sections when not in use. Disposition left to discretion of using arms.	Roll BG-26-( ).
To be placed over mast base when mast sections are not in use.	Cover BG-67-( ).
Mount in upper left section of Cabinet CH-60 with the hardware provided.	Box BX-19-( ).
Mount in upper right section of left compartment of Cabinet CH-60 with the hardware provided.	Box BX-20.
Plug Cord CD-307-A into jack of Radio Receiver BC-312-( ). Attach Cord CD-604 to Cord CD-307-A and connect Headset HS-30-( ) to Cord CD-604.	Headset HS-30-( ) and Cords CD-307-A and CD-604.



## SECTION V

### RADIO SETS SCR-508-( ), SCR-528-( ), SCR-608-( ), AND SCR-628 ( )

#### 12. Required Parts

Items necessary for the installation of Radio Set SCR-508-( ), SCR-528-( ), SCR-608-( ), or SCR-628-( ) in Carrier, Personnel, Half-track, M3, are listed below:

Quantity		Stock Number	Item
Radio Set SCR-508-( ) SCR-528-( )	Radio Set SCR-608-( ) SCR-628-( )		
1	1	2A262	Antenna A-62 (phantom)
1	1	2Z1250.56	Bracket, steel, for Antenna A-62 (phantom).
0	1	2Z1140	Box BX-40, for 40 Crystal Holders FT-241-( ).
31	0	2Z2599-264	Chest CH-264.
1	1	2Z1574	Cabinet CH-74-A.
2	2	6Z3147	Connector No. 61007 and Bondnut BL-50 (Appleton).
1	1	2Z2651-424	Clamp MC-424, for securing Mast Sections MS-52 and MS-53.
1	0	3E1307A-5.5	Cord CD-307-A, 65-inch, for Headset HS-30-( ).
1	0	3E1604	Cord CD-604, 6-inch, for connecting Cord CD-307-A to Headset HS-30.
0	1	3E1605	Cord CD-605.
1	1	2Z3400-108	Cover BG-108, for mast base.
0	1	6F796	Chest CH-96, for Box BX-40, headsets, etc.
25 ft.	25 ft.	3E2218	Cordage CO-218.
12	22	3H1634	Dynamotor DM-34-( ), 12-volt, includes attached spare parts.
1	1	3H1635	Dynamotor DM-35-( ), 12-volt, includes attached spare parts.
1	1	6L50-508V12	Hardware bag.
1	1	2B830	Headset HS-30-( ).
1	1	2C1738	Interphone Control Box BC-606-( ).
1	1	2A2088-48	Mast Base MP-48 or MP-48-A.
1	1	2A2090-52	Mast Base Bracket MP-52.
1	1	2A2352	Mast Section MS-52.
1	1	2A2353	Mast Section MS-53.
1	1	2B1617	Microphone T-17-( ).
1	1	2Z6721-237	Mounting FT-237-( ), includes Cord CO-278 and necessary mounting bolts, etc.
1	1	2Z6721-284	Mounting FT-284.
12	0	2C4403	Radio Receiver BC-603-( ), including set of tubes installed.
0	22	2C4460-683	Radio Receiver BC-683-( ), including set of tubes installed.
1	0	2C6494	Radio Transmitter BC-604-( ), including one set of tubes installed and necessary crystals.
0	1	2C6530-684	Radio Transmitter BC-684-( ), including one set of tubes installed and necessary crystals.
1	1	2Z8056	Roll BG-56-( ), for antenna mast sections.
7 ft.	7 ft.	1B128	Wire W-128.

<sup>1</sup>For Radio Set SCR-528-( ), only one Dynamotor DM-34-( ) and one Radio Receiver BC-603-( ) are required.

<sup>2</sup>For Radio Set SCR-628-( ), only one Dynamotor DM-34-( ) and one Radio Receiver BC-683-( ) are required.

<sup>3</sup>When used with Radio Set SCR-508-( ), Chest CH-264 is stored in any convenient location in the vehicle. When used with Radio Set SCR-528-( ), Chest CH-264 is installed on Mounting FT-237-( ) in the vacant space between Transmitter BC-604-( ) and Receiver BC-603-( ).

#### 13. Assembly and Installation

a. PROCEDURE. Components of Radio Set SCR-508-( ), SCR-528-( ), SCR-608-( ), or SCR-628-( ) should be installed as shown in figures 13 and 14, and as directed below. Figure 3 shows installation of brackets and mounting frames in the vehicle. Figure 4 shows mounting holes and location.



Mounting FT-284, on rear left seat platform.	Fasten to seat platform in left rear of vehicle with the hardware provided. (See fig. 3.) When Radio Set SCR-508-( ), SCR-528-( ), SCR-608-( ), or SCR-628-( ) is installed in conjunction with Radio Set SCR-193-H in Carrier, Personnel, Half-track, M3, Radio Set SCR-508-( ), SCR-528-( ), SCR-608-( ), or SCR-628-( ) should be installed in the right rear of the vehicle in the space normally occupied by Radio Set SCR-506-( ). (See fig. 15.)
Cabinet CH-74-A, on Mounting FT-284.	Attach to Mounting FT-284 with the hardware furnished with the cabinet. Figure 17 shows details of the cabinet and figure 25 shows its assembly.
Mounting FT-237-( ), in Cabinet CH-74-A.	Fasten to bottom of Cabinet CH-74-A with hardware furnished with the mounting.
Antenna A-62 (phantom) and Bracket A-62 (phantom) on Mounting FT-237-( ).	Attach the phantom antenna to the bracket with the hardware provided. (See fig. 30.) Remove the two screws and lockwashers from the left front corner of Mounting FT-237-( ) and secure the bracket (with the antenna attached) to Mounting FT-237-( ) with the hardware provided. (See position 3, fig. 30.) The ground clamp connected to the binding post marked GND must be fastened securely to the tip of the bracket. Use of Antenna A-62 (phantom) is covered in the technical manual issued with radio set concerned.
Mast Base Bracket MP-52, on top, left front of Cabinet CH-74-A.	Remove the blank cover over the 2-inch hole in the top left front of the cabinet. (See fig. 17.) Mount the mast base bracket over the 2-inch hole with the hardware supplied in top of cabinet.
Mast Base MP-48 or MP-48-A, on Mast Base Bracket MP-52.	When Mast Base MP-48 is supplied, proceed as follows: (This installation requires assembly 6, fig. 16.) Cut the antenna lead-in Wire W-128, to the proper length. Strip off 1/2-inch of insulation from one end, clean and tin this end, solder plug (item 6B) to it (fig. 16); loosen setscrews 8 and 9, and, if assembly 7 is installed inside, remove and stow it. Install the prepared Wire W-128, assembly 6, inside the mast base, through the hollow stem, item 1. Make certain item 6B is inserted into the slot as far as possible. Tighten the setscrews 8 and 9. Place item 1 (fig. 16), through hole in the mast base bracket. Place item 2 over item 1, and tighten in place with item 3. Place item 4 over item 1 and tighten firmly with item 5. Next, slip insulator 6E, neoprene washer 6D, and insulator 6C over Wire W-128 and install inside the hollow stem, item 1. Follow up with washer, item 17, and retaining collar, item 18. Leave sufficient slack wire to allow for flexing of the mast base. When using Mast Base MP-48-A assemble as shown in figure 18, using Wire W-128 internal lead-in.



- Dynamotors DM-34-( ), in cabinets of Radio Receivers BC-603-( ) or BC-683-( ). (Only one dynamotor is used in Radio Set SCR-528-( ) or SCR-628-( ).) If Dynamotors DM-34-( ) are not already installed in Radio Receivers BC-603-( ) or BC-683-( ), proceed as follows: Remove chassis from receiver cabinet by loosening the screw lock in the rear center of the cabinet. Install the dynamotor unit on the top rear of receiver chassis and secure with four screws in its base. Restore chassis to the cabinet and secure.
- Dynamotor DM-35-( ), in cabinet of Radio Transmitter BC-604-( ) or BC-684-( ). If Dynamotor DM-35-( ) is not already installed in Radio Transmitter BC-604-( ) or BC-684-( ), proceed as follows: Remove crystal case from transmitter cabinet by loosening the two screw locks on the front panel and pulling the crystal case out. Loosen the four screw locks holding cover on top of transmitter and remove cover. Install the dynamotor unit in left rear of transmitter chassis and secure with four screws in its base. Restore crystal case and cover and secure.
- Radio Transmitter BC-604-( ) on Mounting FT-237-( ). Mount in position as shown in figure 13 and secure with the thumbscrew locks.
- Radio Receivers BC-603-( ), on Mounting FT-237-( ). (Only one used in Radio Set SCR-528-( ).) Mount in position as shown in figure 13 and secure with the thumbscrew locks.
- Radio Transmitter BC-683-( ) on Mounting FT-237-( ). Mount in position (fig. 13) and secure with the thumbscrew locks.
- Radio Receivers BC-683-( ), on Mounting FT-237-( ). (Only one used in Radio Set SCR-628-( ).) Mount in position (fig. 13) and secure with the thumbscrew locks.
- Cover BG-108. Place over mast base when not in use.
- Headset HS-30-( ), Cords CD-307-A, CD-604 and CD-605. Connect Cords CD-307-A and CD-604. Connect Headset HS-30-( ) to Cord CD-604. Plug Cord CD-307-A into the proper jack on Radio Receiver BC-603-( ). Use Cord CD-605 to connect Headset HS-30-( ) to Radio Receiver BC-683-( ).
- Microphone T-17. Plug microphone cord into jack of Radio Transmitter BC-604-( ) or BC-684-( ) or Interphone Control Box BC-606-( ), as required.
- Mast Sections MS-52 and MS-53 and Clamp MC-424. Screw the mast sections together and secure with the clamp. Fasten the clamp to the male end of the mast section. Screw the mast antenna into the mast base. When mast sections are not in use, stow in Roll BG-56-( ).
- Roll BG-56-( ). Disposition left to discretion of using arms.



**Interphone Control Box BC-606-( )** Mount the control box on the instrument panel in the place occupied by the nameplate.

**Connector No. 61007 and Bondnut BL-50** Mount in hole in stowage bin cover and in knockout hole in car terminal box to bush and secure power cord.

**b. CORDING AND WIRING.** (1) Cord and wire Radio Set SCR-508-( ), SCR-528-( ), SCR-608-( ), or SCR-628-( ). (See figs. 13 and 14.) Connect and secure so as not to interfere with the accessibility or operation of the equipment. Enough slack must be left to permit free movement of all units having shock mountings. Cording or cable likely to rub against sharp edges should be taped with at least two layers to prevent damage. Solder-tin all wire ends.

(2) Cordage CO-218 is used for connecting Interphone Control Box BC-606-( ) and Mounting FT-237-( ). Prepare Cordage CO-218 as follows: Remove 3 inches of outer rubber cover and approximately 2½ inches of shielding at each end of Cordage CO-218, leaving approximately ½ inch of exposed shielding. Obtain two 8-inch lengths of ordinary hook-up wire. Wind and solder three turns of each length of hook-up wire around each end of the exposed shielding of Cordage CO-218. Figure 19 shows the wiring of Cordage CO-218 to Interphone Control Box BC-606-( ) and Mounting FT-237-( ). Wire the ends of the shielding to the No. 8 terminals on Interphone Control Box BC-606-( ) and Mounting FT-237-( ) as illustrated. Carefully clamp end of the cordage at Interphone Control Box BC-606-( ) and Mounting FT-237-( ). Use the clamps provided with the control box to properly fasten the cordage to the floor or wall of the vehicle as required.

(3) To prevent accidental shorts of the battery, do not connect the positive or negative 12-volt leads (in the terminal box) until all other connections have been completed.

Mount in position (fig. 13) and secure with the thumbcrew locks. Radio Transmitter BC-683-( ) on Mounting FT-237-( ).

Mount in position (fig. 13) and secure with the thumbcrew locks. Radio Receivers BC-683-( ) on Mounting FT-237-( ). (Only one used in Radio Set SCR-628-( ).)

Place over mast base when not in use. Cover BC-108.

Connect Cords CD-307-A and CD-604. Connect Headset HS-30-( ) to Cord CD-604. Plug Cord CD-307-A into the proper jack on Radio Receiver BC-603-( ). Use Cord CD-605 to connect Headset HS-30-( ) to Radio Receiver BC-683-( ). Headset HS-30-( ), Cords CD-307-A, CD-604 and CD-605.

Plug microphone cord into jack of Radio Transmitter BC-604-( ) or BC-684-( ) or Interphone Control Box BC-606-( ), as required. Microphone T-17.

Screw the mast sections together and secure with the clamp. Fasten the clamp to the male end of the mast section. Screw the mast antenna into the mast base. When mast sections are not in use, stow in Roll BC-26-( ). Mast Sections MS-52 and MS-53 and Clamp MC-124.

Disposition left to discretion of using arms. Roll BC-26-( ).



## SECTION VI

### RADIO SET SCR-510-( ) OR SCR-610-( )

#### 14. Required Parts

Items necessary for the installation of Radio Set SCR-510-( ) or SCR-610-( ) in Carrier, Personnel, Half-track, M3, are listed below:

Quantity		Stock Number	Item
Radio Set SCR-510-( )	Radio Set SCR-610-( )		
1	1	6Q338-150	Alignment Tool TL-150.
*1	*1	3A41	Battery BA-41, internal.
0	1	2Z1140	Box BX-40, for crystals.
0	1	2Z2651-423	Clamp MC-423, for securing Mast Sections MS-51 and MS-52.
1	1	2Z2651-424	Clamp MC-424, for securing Mast Sections MS-52 and MS-53.
1	1	6Z3147	Connector No. 61007 and Bondnut BL-50 (Appleton), for terminal box.
1	1	3E1509	Cord CD-509, for power connection.
1	1	3E1605-6.5	Cord CD-605, 78-inch, for headset.
1	1	2Z3400-108	Cover BG-108, for mast base.
1	0	2Z4648	Frame FM-48.
1	1	6L50-510V12	Hardware bag.
1	1	2B830	Headset HS-30-( ).
1	1	2A2088-48	Mast Base MP-48,
		2A2088-48A	or MP-48-A.
1	1	2A2090-54	Mast Base Bracket MP-54.
0	1	2A2351	Mast Section MS-51.
1	1	2A2352	Mast Section MS-52.
1	1	2A2353	Mast Section MS-53.
1	1	2B1617	Microphone T-17-( ).
2	2	2Z6721-250	Mounting FT-250.
1	1	3H4496-120	Power Unit PE-120-( ), with spare parts.
1	0	2C5360	Radio Receiver and Transmitter BC-620-( ), including necessary crystals.
0	1	2C5379	Radio Receiver and Transmitter BC-659-( ), with crystals, tubes and spare parts.
1	1	2Z8056	Roll BG-56-( ), for mast sections.
1	1	3H6713	Vibrator VB-13.
7 ft.	7 ft.	1B128	Wire W-128, for antenna lead-in.

\*To be requisitioned from the nearest Signal Corps depot or Signal Section or an Army Service Forces depot.

#### 15. Assembly and Installation

a. PROCEDURE. Components of Radio Set SCR-510-( ) or SCR-610-( ) should be installed as shown in figures 20 and 21, and as directed below. Figure 3 shows installation of brackets and mounting frames in the vehicle. Figure 4 shows mounting holes and location.

<i>Part and location</i>	<i>Method and materials</i>
Mast Base Bracket MP-54, on flange, front right of vehicle.	Mount on top flange of vehicle over radio set (fig. 20), with the hardware provided.
Mast Base MP-48 or MP-48-A, on Mast Base Bracket MP-54.	See figure 16 and loosen setscrews, items 8 and 9. Pull out the internal lead-in, assembly 7, from the bottom of the mast base. Connect Wire W-128 (fig. 18), external lead-in. When connecting Wire W-128 to mast base be sure to provide sufficient slack to allow for the flexing of the mast base spring.



- Frame FM-48, on right wall, over gas tank. Fasten to right front wall of vehicle, over the gas tank, with the hardware provided.
- Mounting FT-250 (for receiver and transmitter unit) on Frame FM-48. Attach to Frame FM-48 with the hardware provided.
- Battery BA-41, in battery box inside Radio Receiver and Transmitter BC-659-( ) or BC-620-( ). Install Battery BA-41 as follows: Remove the receiver and transmitter from the case by removing the 10 screws around the outer edge of the front panel and pull out the chassis. Remove cover of the battery box, located on the chassis near the front panel. Place Battery BA-41 in the box, being careful to engage plug into socket of battery. Replace cover. While the chassis is out of the case, see that all tubes are in their proper sockets and pushed down tight. See that crystals for proper operating frequencies are in their proper sockets and the retaining clip in position to hold them securely. Do not interchange these crystals. Before replacing chassis in case, see that the two toggle switches near the left edge of the chassis are in the ON position.
- Radio Receiver and Transmitter BC-620-( ) or BC-659-( ), on Mounting FT-250. Attach to Mounting FT-250 with snap catches provided at each corner of the receiver and transmitter unit.
- Mounting FT-250, on front floor, between seats. Fasten to floor of vehicle with the hardware provided. (See fig. 21.)
- Power Supply Unit PE-120-( ), on Mounting FT-250, as shown in figure 22. Open lid of power supply unit and remove power pack cover. Consult diagram on cover and make sure that the change-over plug is in the 12-volt position, (arrow pointing to 12) and that the connector link is set properly for BC-620 or BC-659. Plug Vibrator VB-13 into its socket and replace power pack cover. Close lid of case and place power supply unit on Mounting FT-250, securing with hook fasteners provided.
- Connector No. 61007 and Bondnut BL-50. Remove knockout from the bottom of the terminal box that is most convenient for advantageous connection of the power cord and install the connector and bondnut to bush and secure the power cord.
- Headset HS-30-( ) and Cord CD-605. Connect headset to Cord CD-605 and plug Cord CD-605 into the proper jack in Receiver and Transmitter BC-620-( ) or BC-659-( ).
- Microphone T-17. Plug microphone cord into the proper jack in Receiver and Transmitter BC-620-( ) or BC-659-( ).



Mast Sections MS-51, MS-52 and MS-53, and Clamps MC-423, MC-424, on Mast Base MP-48. (For SCR-610- ( ) see figs. 20 and 21.)

Screw the mast sections together and secure with the clamp. Fasten the clamp to the male end of the mast section. Screw the mast antenna into the mast base. When mast sections are not in use, stow in Roll BG-56- ( ) .

Roll BG-56- ( ) .

Disposition left to discretion of using arms.

16. Required Parts

Items necessary for assembly of Mast are listed below:

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-510- ( ) or SCR-610- ( ) (figs. 20 and 21), and as directed below. Connect and secure so as not to interfere with the accessibility and operation of the equipment. Enough slack must be left to permit free movement of all units having shock mountings. Cording or cable likely to rub against sharp edges should be taped with at least two layers to prevent damage. Solder-tin all wire ends.

(2) To prevent accidental shorts of the battery, do not connect the positive or negative 12-volt leads (in the terminal box) until all other connections have been completed.

Wire W-146	1B146	716
Roll BG-56- ( ) for mast sections	228056	1
Radio Transmitter BC-653- ( ) including one set of tubes installed	2C6530-653	1
Radio Receiver BC-653- ( ) with necessary tubes and Crystal Unit DC-12 installed	2C4452	1
Hardware in attached cloth bag		
Mounting FT-284 ( ) includes two Cords CO-280, attached, and spare laces and	228721-284	1
Microphone T-17	2B1617	1
Mast Section MS-51	2A2351	1
Mast Section MS-52	2A2352	1
Mast Section MS-53	2A2353	1
Mast Section MS-54	2A2354	1
Mast Section MS-55	2A2355	1
Mast Section MS-56	2A2356	1
Mast Section MS-57	2A2357	1
Mast Base Bracket MP-52	2A2090-52	1
Bracket A-27 (phantom)	2A2350-82	1
Antenna A-27 (phantom)	2A2352-27	1
Loudspeaker I.S.-3	226911	1
Key J-45	2A2442	1
Headset HS-30- ( )	2B2320	1
Hardware bag	6150-800V12	1
Dynamotor DM-43- ( ) 12-volt, for Radio Transmitter BC-653- ( )	2H1642	1
Dynamotor DM-40- ( ) 12-volt, for Radio Receiver BC-653- ( )	2H1640	1
Cover BG-97- ( ) for mast base	223367	1
Cord CD-904, 6-inch, for connecting Cord CD-307-A to Headset HS-30- ( )	2E1604	1
Cord CD-314, for Loudspeaker I.S.-3	2E1314	1
Cord CD-307-A, 48-inch, for Headset HS-30- ( )	2E1307A-4	1
	2E2314	1
	2E2315	1
	2E2316	1
	2E2317	1
	2E2318	1
	2E2319	1
	2E2320	1
	2E2321	1
	2E2322	1
	2E2323	1
	2E2324	1
	2E2325	1
	2E2326	1
	2E2327	1
	2E2328	1
	2E2329	1
	2E2330	1
	2E2331	1
	2E2332	1
	2E2333	1
	2E2334	1
	2E2335	1
	2E2336	1
	2E2337	1
	2E2338	1
	2E2339	1
	2E2340	1
	2E2341	1
	2E2342	1
	2E2343	1
	2E2344	1
	2E2345	1
	2E2346	1
	2E2347	1
	2E2348	1
	2E2349	1
	2E2350	1
	2E2351	1
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	2E2361	1
	2E2362	1
	2E2363	1
	2E2364	1
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	2E2367	1
	2E2368	1
	2E2369	1
	2E2370	1
	2E2371	1
	2E2372	1
	2E2373	1
	2E2374	1
	2E2375	1
	2E2376	1
	2E2377	1
	2E2378	1
	2E2379	1
	2E2380	1
	2E2381	1
	2E2382	1
	2E2383	1
	2E2384	1
	2E2385	1
	2E2386	1
	2E2387	1
	2E2388	1
	2E2389	1
	2E2390	1
	2E2391	1
	2E2392	1
	2E2393	1
	2E2394	1
	2E2395	1
	2E2396	1
	2E2397	1
	2E2398	1
	2E2399	1
	2E2400	1

17. Assembly and Installation

a. PROCEDURE. Components of Radio Set SCR-506- ( ) should be installed as shown in figure 23, and as directed below. Figure 3 shows the installation of brackets and mounting frames in the vehicle. Figure 4 shows mounting holes and location.

Mounting FT-284, on right seat platform (see fig. 3).	Fasten to the seat platform with the existing hardware in the vehicle.
Cabinet CH-74-A, on Mounting FT-284	Fasten the cabinet to the mounting with the hardware provided. Figure 17 shows details of the cabinet and figure 23 shows its assembly.



## SECTION VII

### RADIO SET SCR-506-( )

#### 16. Required Parts

Items necessary for the installation of Radio Set SCR-506-( ) in Carrier, Personnel, Half-track, M3, are listed below:

Quantity	Stock Number	Item
1	2Z1574A	Cabinet CH-74-A.
1	2Z2651-421	Clamp MC-421, for securing Mast Sections MS-49 and MS-50.
1	2Z2651-422	Clamp MC-422, for securing Mast Sections MS-50 and MS-51.
1	2Z2651-423	Clamp MC-423, for securing Mast Sections MS-51 and MS-52.
1	2Z2651-424	Clamp MC-424, for securing Mast Sections MS-52 and MS-53.
4	6Z3147	Connector No. 61007 and Bondnut BL-50 (Appleton), for power cord.
1	3E1307A-4	Cord CD-307-A, 48-inch, for Headset HS-30-( ).
1	3E1314	Cord CD-314, for Loudspeaker LS-3.
1	3E1604	Cord CD-604, 6-inch, for connecting Cord CD-307-A to Headset HS-30-( ).
1	2Z3367	Cover BG-67-( ), for mast base.
1	3H1640	Dynamotor DM-40-( ), 12-volt, for Radio Receiver BC-652-( ).
1	3H1642	Dynamotor DM-42-( ), 12-volt, for Radio Transmitter BC-653-( ).
1	6L50-506V12	Hardware bag.
1	2B830	Headset HS-30-( ).
1	3Z3445	Key J-45.
1	2Z6303.1	Loudspeaker LS-3.
1		Loudspeaker bracket.
1	2A275-27	Antenna A-27 (phantom).
1	2Z1250.82	Bracket A-27 (phantom).
1	2A2090-52	Mast Base Bracket MP-52.
1	2A2087	Mast Base MP-37 or MP-57 (2A2088-57).
1	2A2349	Mast Section MS-49.
1	2A2350	Mast Section MS-50.
1	2A2351	Mast Section MS-51.
1	2A2352	Mast Section MS-52.
1	2A2353	Mast Section MS-53.
1	2B1617	Microphone T-17.
1	2Z6721-284	Mounting FT-284.
1	2Z6721-253	Mounting FT-253-( ), includes two Cords CO-280, attached, and spare fuses and hardware in attached cloth bag.
1	2C4452	Radio Receiver BC-652-( ), with necessary tubes and Crystal Unit DC-15 installed.
1	2C6530-653	Radio Transmitter BC-653-( ), including one set of tubes installed.
1	2Z8056	Roll BG-56-( ), for mast sections.
7 ft.	1B146	Wire W-146.

#### 17. Assembly and Installation

a. PROCEDURE. Components of Radio Set SCR-506-( ) should be installed as shown in figure 23, and as directed below. Figure 3 shows the installation of brackets and mounting frames in the vehicle. Figure 4 shows mounting holes and location.

<i>Part and location</i>	<i>Method and materials</i>
Mounting FT-284, on right seat platform, (see fig. 3.)	Fasten to the seat platform with the existing hardware in the vehicle.
Cabinet CH-74-A, on Mounting FT-284	Fasten the cabinet to the mounting with the hardware provided. Figure 17 shows details of the cabinet and figure 25 shows its assembly.



- Mast Base Bracket MP-52**, on right front corner of Cabinet CH-74-A. Fasten the bracket to the top of the cabinet with the hardware provided.
- Mounting FT-253-( )**, in Cabinet CH-74-A. Fasten the mounting to the bottom of the cabinet with the hardware provided.
- Dynamotor DM-40-( )**, on top of Radio Receiver BC-652-( ) chassis. Install Dynamotor DM-40-( ) as follows:  
Remove screws around edge of receiver panel and the screw in the rear center of the cabinet. Pull receiver chassis from the case and secure the dynamotor to the receiver chassis with the snap-slide fasteners. All connections to the dynamotor are made by the flexible lead terminating in Plug PL-250. Installation of proper dynamotor automatically adjusts the receiver circuits for correct operating voltage. The nameplate on the front panel of the receiver should be turned to read 12-VOLTS OPERATION.
- Dynamotor DM-42-( )**, in dynamotor compartment, lower right end of Radio Transmitter BC-653-( ). To install Dynamotor DM-42, slide it into the dynamotor compartment and secure front panel of the dynamotor chassis with the four screws provided. Remove patch cover plate located at top of radio transmitter right end, and connect the six connector links for 12-volt operation as indicated by the arrow on terminal link terminal strip. Turn the nameplate to read 12 VOLTS.
- Radio Receiver BC-652-( )**, on left end of Mounting FT-253-( ). Place the receiver on the mounting and secure with the thumbscrew locks.
- Radio Transmitter BC-653-( )** on Mounting FT-253-( ). Place the transmitter on the mounting and secure with the thumbscrew locks.
- Mast Base MP-37 or MP-57**, on Mast Base Bracket MP-52. If Mast Base MP-37 is supplied, refer to figure 5 and assemble as follows: Place item 1 over the hole in the mast base bracket, and item 2 over item 1. Place item 3 over item 2, and insert item 4 through hole. Place item 5 over the flange in item 6 and insert latter through bottom of hole in mast base bracket. Place items 7 and 8 beneath item 6, and fasten entire assembly with items 9 and 10. When using Mast Base MP-57, assemble as shown in figure 6. See figure 7 for details of hole in canvas top of vehicle.
- Connector No. 61007 and Bondnut BL-50**. Remove knockouts that are most convenient for advantageous routing of the power cords to the car terminal box; install the connectors and bondnuts to bush and secure Power Cords CO-280.
- Headset HS-30-( ) and Cords CD-307-A and CD-604**. Plug Cord CD-307-A into the proper jack of the receiver. Connect Cord CD-604 to Cord CD-307-A and connect the headset to Cord CD-604. (See fig. 23.)



- Microphone T-17-( ) and Key J-45.** Plug the cords attached to the microphone and key into the proper jacks of the transmitter. (See fig. 23.)
- Loudspeaker LS-3 and Cord CD-314.** Connect the loudspeaker to the cord and plug the cord into the proper jack of the receiver.
- Mast Sections MS-49 to MS-53, and Clamps MC-421 to MC-424, on Mast Base MP-37 or MP-57.** Screw the mast sections together, securing with the clamps. Fasten the clamps to the male end of the mast sections. Screw the mast antenna into the mast base. Carry the mast sections and clamps in Roll BG-56-( ) when not in use.
- Antenna A-27 (phantom) and Bracket A-27 (phantom) on Cabinet CH-74-A.** Drill the top portion of Cabinet CH-74-A (fig. 28) and mount the bracket (fig. 29) with the hardware provided.
- Cover BG-67.** Place over Mast Base MP-37 when mast sections are not in use.
- Roll BG-56-( ).** To carry mast sections when not in use. Disposition left to discretion of using arms.

**Loudspeaker LS-3 on Cabinet CH-74-A.** Drill top of Cabinet CH-74-A (fig. 34), and mount loudspeaker bracket (fig. 35) with hardware requisitioned.

**b. CORDING AND WIRING.** (1) Cord and wire Radio Set SCR-506-( ). (See fig. 23.) Connect and secure so as not to interfere with the accessibility and operation of the equipment. Enough slack must be left to permit free movement of all units having shock mountings. Cording or cables likely to rub against sharp edges should be taped with at least two layers to prevent damage. Solder-tin all wire ends.

(2) To prevent accidental shorts of the battery, do not connect the positive and negative 12-volt leads (in the terminal box) until all other connections have been completed.

Remove knockouts that are most convenient for advantage routing of the power cords to the car terminal box; install the connectors and bondnuts to push and secure Power Cords CO-280.

Connector No. 61007 and Bondnut BL-50.

Headset HS-30-( ) and Cords CD-307-A and CD-604.

Plug Cord CD-307-A into the proper jack of the receiver. Connect Cord CD-604 to Cord CD-307-A and connect the headset to Cord CD-604. (See fig. 23.)

If Mast Base MP-37 is supplied, refer to figure 5 and assemble as follows: Place item 1 over the hole in the mast base bracket, and item 2 over item 1. Place item 3 over item 2, and insert item 4 through hole. Place item 5 over the flange in item 6 and insert later through bottom of hole in mast base bracket. Place items 7 and 8 beneath item 6, and fasten entire assembly with items 9 and 10. When using Mast Base MP-57, assembly as shown in figure 6. See figure 7 for details of hole in canvas top of vehicle.



## SECTION VIII

### FACSIMILE EQUIPMENT RC-58-( )

#### 18. Required Parts

Items necessary for the installation of Facsimile Equipment RC-58-( ) in Carrier, Personnel, Half-track, M3, are listed below:

Quantity	Stock Number	Item
1	2C408	Amplifier BC-908-( ), includes 2 Dynamotors DM-21-( ) (one spare), Mounting FT-318-( ), set of installed tubes, and spare parts, etc.
1		Bracket. (See fig. 32(A).)
2		Bracket. (See fig. 32(B).)
1	2Z2599-108	Chest CH-108-( ), for spare parts group.
1	2Z3400-128	Cover BG-128.
1	6Z3147	Connector No. 61007 and Bondnut BL-50 (Appleton).
1	3E1606	Cord CD-606, connects Amplifier BC-908-( ) to Recorder-Scanner BC-918-( ).
1	3E1608	Cord CD-608-( ), connects Amplifier BC-908-( ) to vehicle battery.
1	3E1999-18	Cord CD-1018-( ), connects Amplifier BC-908-( ) to radio receiver.
1	3E1999-19	Cord CD-1019-( ), connects Amplifier BC-908-( ) to radio transmitter.
1	2Z3400-118	Cover BG-118-( ), for Recorder-Scanner BC-918-( ).
1	2Z4660-89	Frame FM-89, includes hardware.
1		Hardware bag containing: 2 Clamps No. 8 (fig. 26). 9 Clamps No. 5 (fig. 26). 6 Lockwashers, 1/4-inch std. 6 Nuts, hex. 1/4-inch—20. 6 Screws, hex. hd., mach. 1/4-inch—20x3/4-inch. 4 Screws, hex., hd., mach. 5/16-inch—24 x 1 1/4-inch. 2 Shakeproof washers, 1/4-inch. 2 Terminals.
1	6C262-918	Recorder-Scanner BC-918-( ), 12 volts, includes 2 Motors MO-28-( ) (one spare), one Mounting FT-328-( ), one set of installed tubes, 2 Vibrators VB-3-( ) (one spare), 2 Resistors RS-288 (one spare), 2 resistors, regulator, Amperite No. 77-11 (one spare).
50	6M1540	Rolls Tape M-298.
1	6C25-58/SP	Spare parts group consisting of: 8 Fuses FU-11. 2 Lamps, GE No. 75A/S8SC. 3 Lamps LM-27, pilot. 2 Boxes, pencil lead. 2 Pencils, Scripto No. 4-47. 1 Resistor RS-288. 1 Resistor, ballast, Amperite No. 77-11. 12 Rollers, ink. 6 Rolls, Tape M-298.
1	6C25-58/SP	Spare parts group consisting of: 2 Tubes JAN-12A6 (VT-134), vacuum. 1 Tube JAN-12H6 (VT-214), vacuum. 2 Tubes JAN-12SJ7 (VT-162), vacuum. 3 Tubes JAN-12SL7GT (VT-289), vacuum. 2 Tubes JAN-12SN7GT (VT-268), vacuum. 1 Tube JAN-OC3/VR-105 (VT-200), vacuum. 1 Tube JAN-927, vacuum.
1	6D13047	Technical Manual for Facsimile Equipment RC-58-( ).
2 ft.	1B128	Wire W-128.
1	6M2200	Writing Stand MC-308-( ).



## 19. Assembly and Installation

Locate and assemble the component parts of this equipment in accordance with figure 31 and in the manner and sequence as directed below. Before proceeding with this installation perform all necessary drilling as shown in figure 31.

<i>Part and location</i>	<i>Method and materials</i>
Brackets (fig. 32A and 32B).	See view A-A, figure 31. Place brackets (fig. 32 ⊕) on seat locker lid and line up holes. Secure bracket (fig. 32 ⊕) to seat locker with existing screws in manner shown.
Frame FM-89.	Place on brackets (fig. 32 ⊕), line up holes, and secure to seat locker lid with four $\frac{5}{16}$ -inch screws, nuts, and eight shakeproof washers provided (one shakeproof washer under head of each screw and one under each nut).
Wire W-128 and terminals.	Prepare two ground wires by cutting two 8-inch lengths of Wire W-128. Strip and solder-tin $\frac{1}{2}$ inch at each end. Solder a terminal (found in hardware bag) to one end of each length.
Mounting FT-318-( ).	Secure to lower portion of Frame FM-89 with four $\frac{1}{4}$ -inch screws and shakeproof washers provided and secure terminal of one of ground wires by a screw securing front of Mounting FT-318-( ).
Mounting FT-328-( ).	Secure mounting to center brackets of Frame FM-89 with four $\frac{1}{4}$ -inch screws, nuts, and shakeproof washers provided. Secure terminal of one of ground wires by a screw securing front of Mounting FT-328-( ).
Amplifier BC-908-( ).	Place amplifier on Mounting FT-318-( ) and secure with snap slide fasteners provided. Connect ground wire from Mounting FT-318-( ) to GROUND binding post on amplifier.
Recorder-Scanner BC-918-( ) on Mounting FT-328-( ).	Place recorder-scanner on Mounting FT-328-( ) and secure with snap slide fasteners provided. Connect ground wire from Mounting FT-328-( ) to GROUND binding post on recorder-scanner.
Writing Stand MC-308-( ).	Stow writing stand in compartment provided in top of Frame FM-89.
Cord CD-606.	Use Cord CD-606 to connect Amplifier BC-908-( ) to Recorder-Scanner BC-918-( ). Push excess cordage beneath amplifier.
Cord CD-608, with connector No. 61007 and Bondnut BL-50.	See figure 31. Connect Cord CD-608 to Amplifier BC-908-( ) and route to terminal box on left side of vehicle. Secure cord in place with clamps provided. Install connector No. 61007 and Bondnut BL-50 through knock-out hole in vehicle terminal box to secure Cord CD-608. Connect white lead of Cord CD-608 to positive terminal black lead to negative terminal inside vehicle terminal box.



*Part and location*

*Method and materials*

Cover BG-118-( ).

Place over Recorder-Scanner BC-918-( ).

Cover BG-128-( ).

Place over Amplifier BC-908-( ).

Cords CD-1018-( ) and CD-1019-( ).

When Facsimile Equipment RC-58-( ) is installed in combination with Radio Set SCR-193-( ), route cords along seat locker on left side of vehicle. Route cords along seat locker on right side of vehicle when used with Radio Set SCR-506-( ). Insert Plugs PL-55 and PL-68 on cords into either of the MICRO and PHONES jacks on front of Amplifier BC-908-( ), and insert plugs on other end of cords into microphone and headphone jacks on radio set. Secure cords in place with clamps and hardware provided.

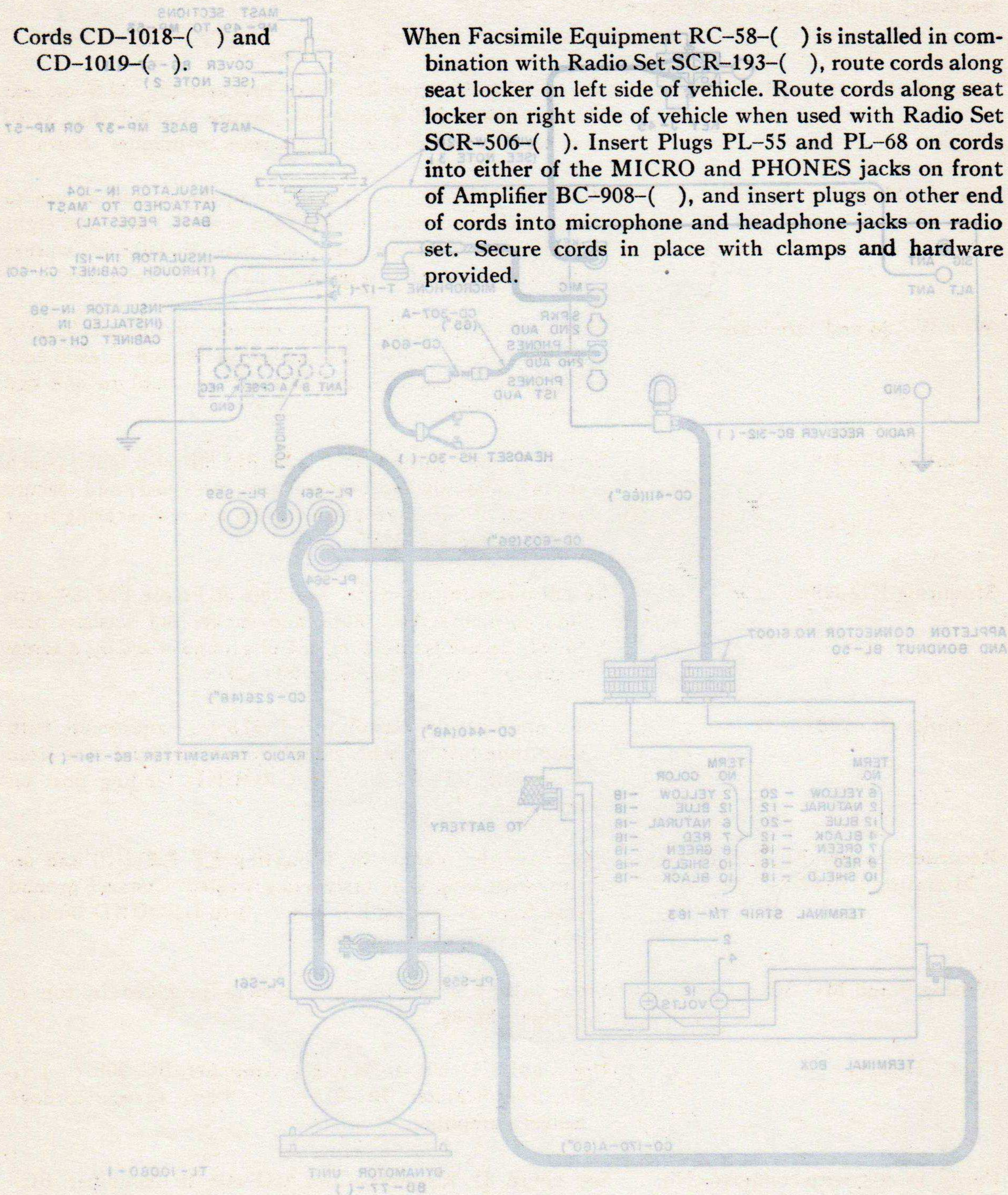


Figure 1. Wiring diagram for Radio Set SCR-191-H



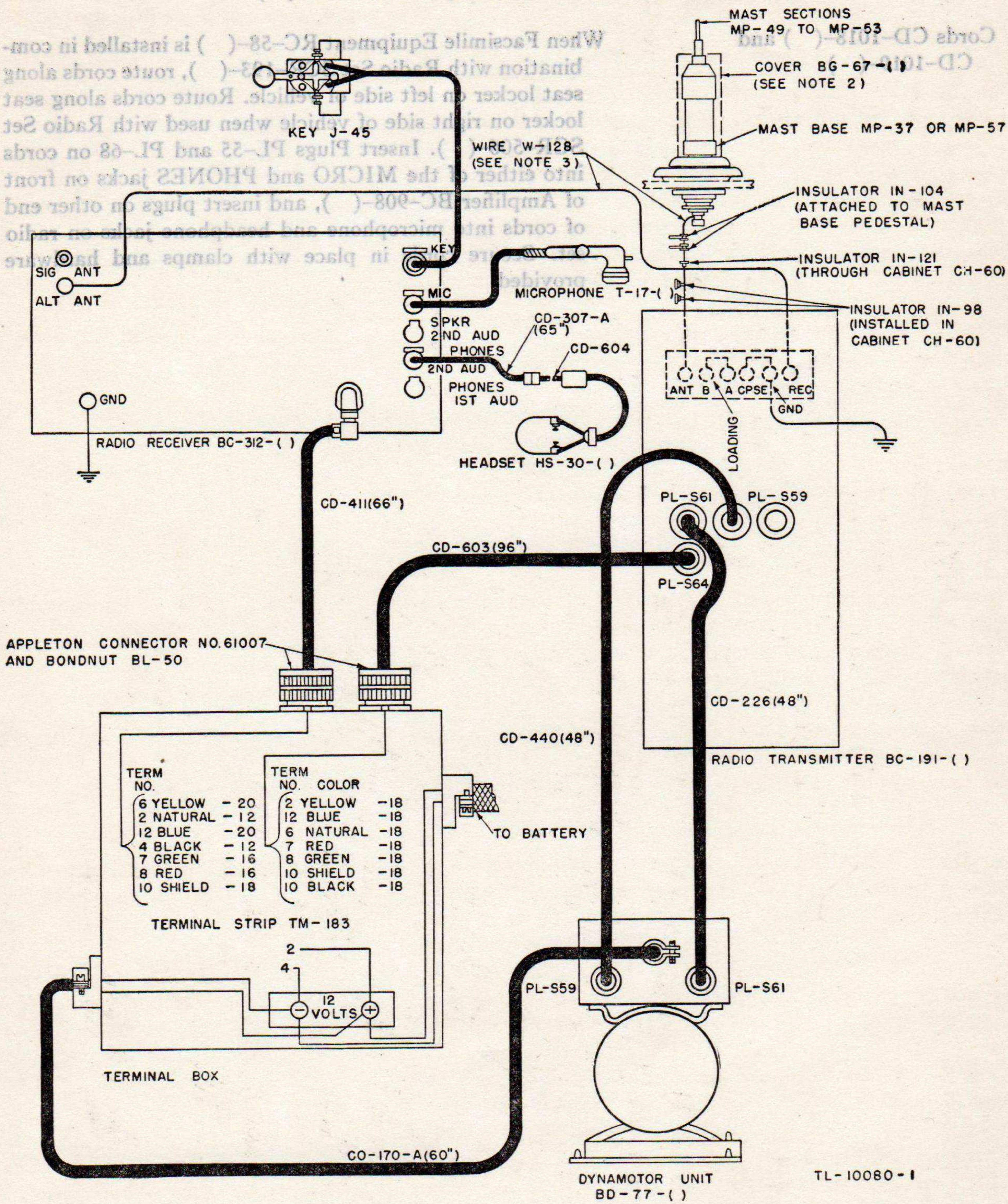
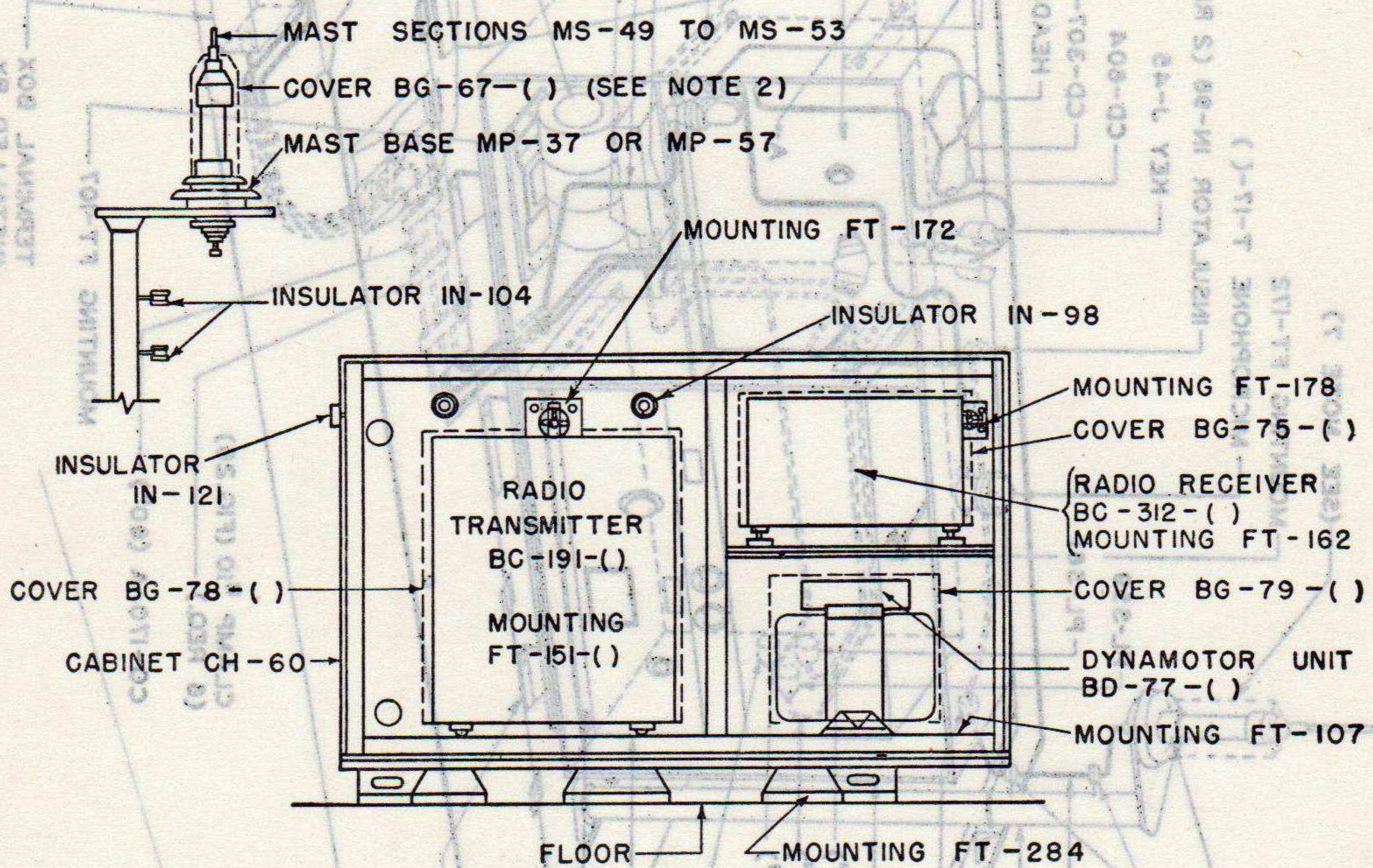
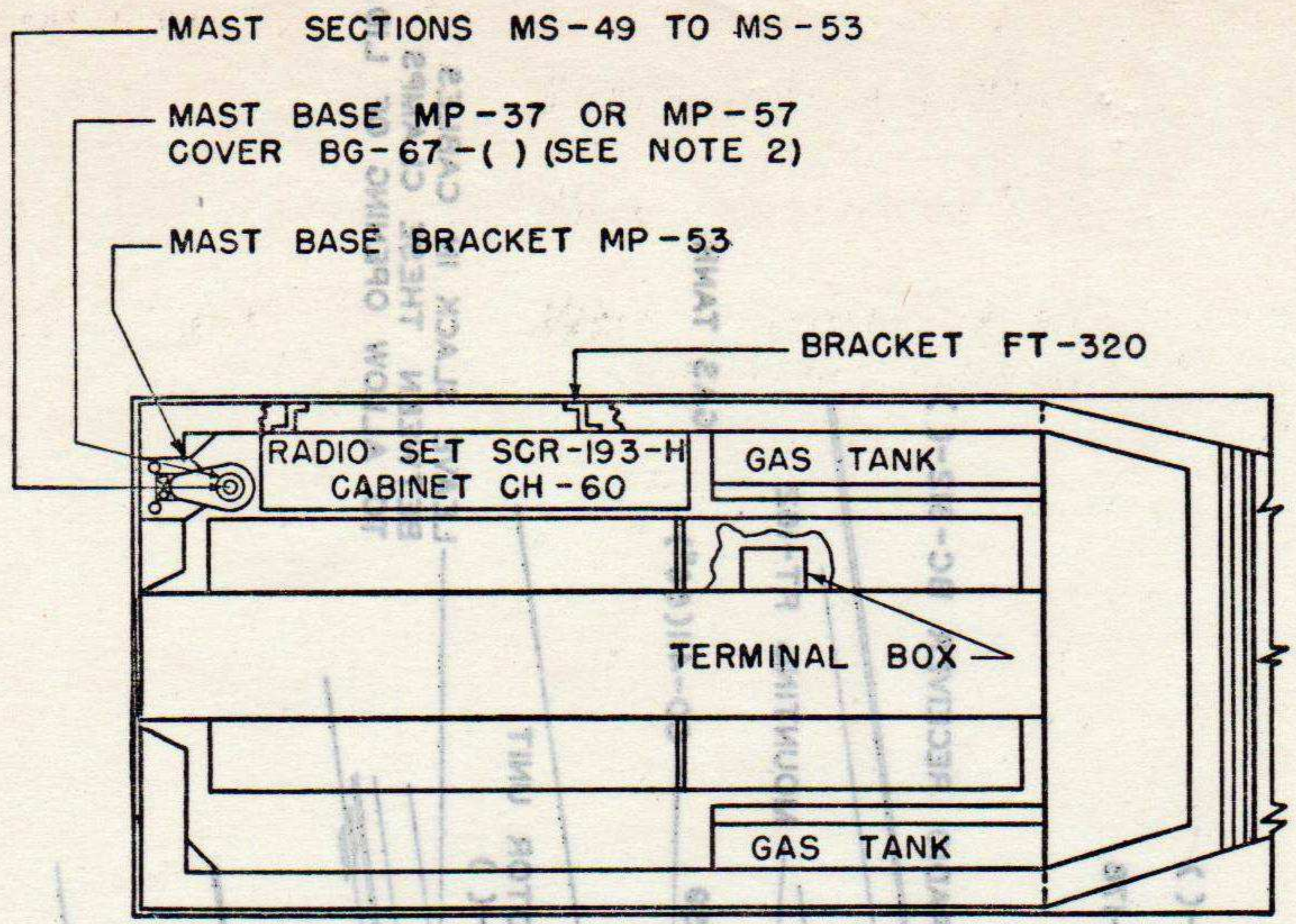


Figure 1. Cording diagram for Radio Set SCR-193-H

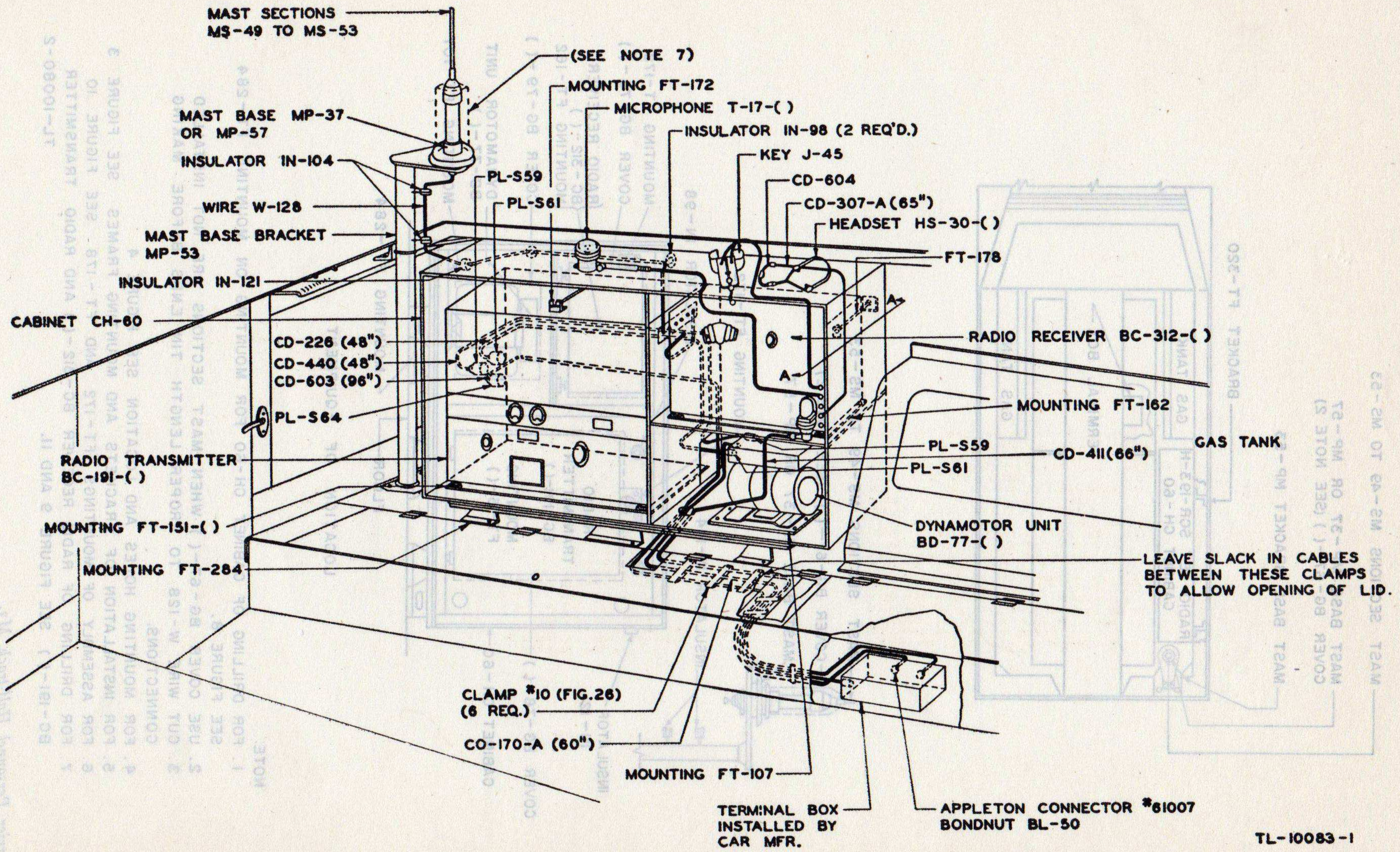




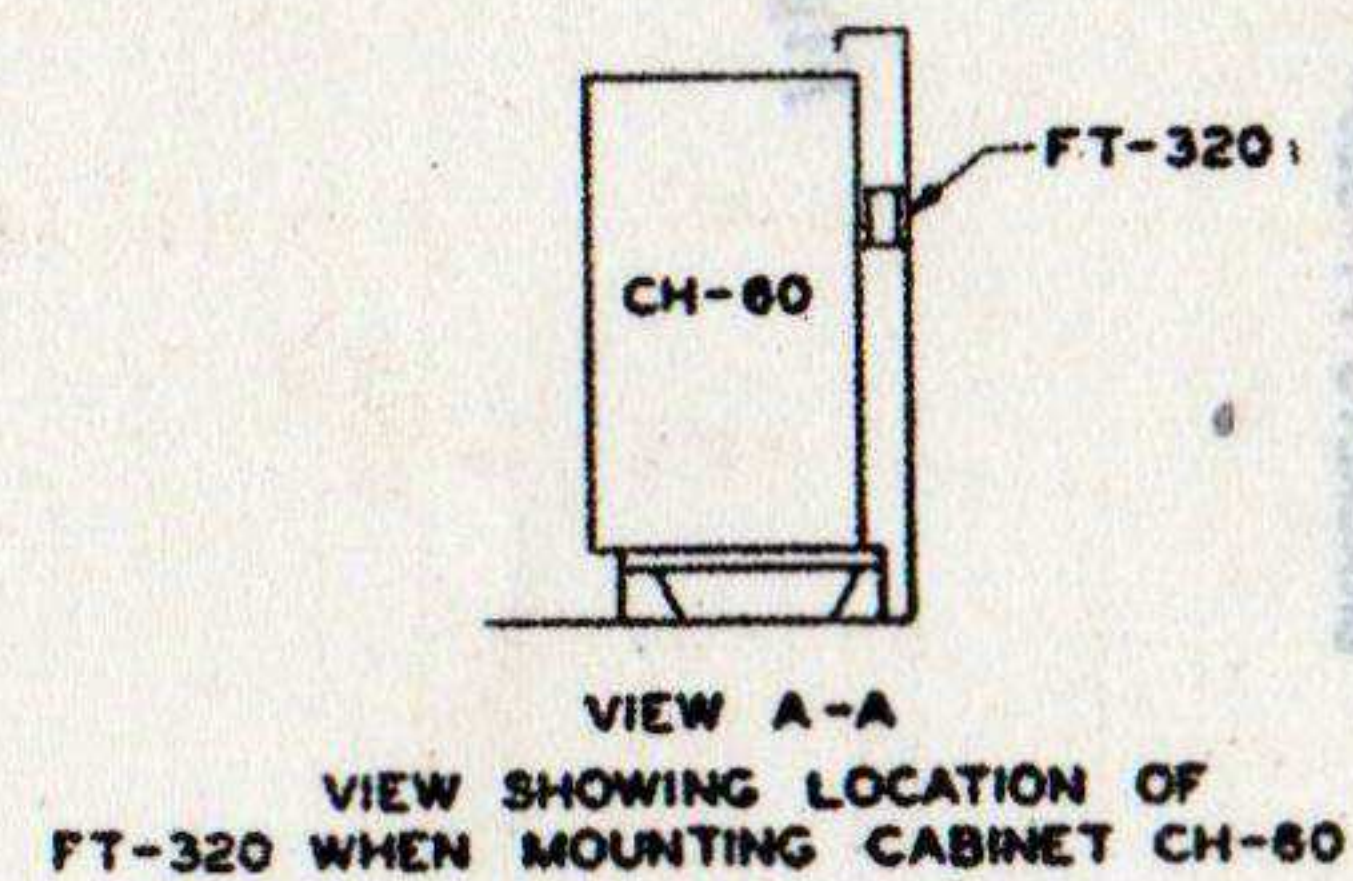
LOCATION OF EQUIPMENT

- NOTE:
1. FOR DRILLING OF CABINET CH-60 FOR MOUNTING ON MOUNTING FT-284 SEE FIGURE 8.
  2. USE COVER BG-67-( ) WHEN MAST SECTIONS ARE NOT INSTALLED
  3. CUT WIRE W-128 TO PROPER LENGTH TIN ENDS BEFORE MAKING CONNECTIONS.
  4. FOR MOUNTING HOLES AND LOCATION SEE FIGURE 4
  5. FOR INSTALLATION OF BRACKETS AND MOUNTING FRAMES SEE FIGURE 3
  6. FOR ASSEMBLY OF MOUNTINGS FT-172 AND FT-178 SEE FIGURE 10
  7. FOR DRILLING OF RADIO RECEIVER BC-312-( ) AND RADIO TRANSMITTER BC-191-( ) SEE FIGURE 9 AND II.
- TL-10080-2









- HARDWARE REQUIRED:**
- MOUNTING FT-284 (SEE NOTE 1)**  
 6-3/8"-24 X 1" OVAL HD. MACH. SCREWS  
 6-3/8"-24 HEX. NUTS  
 6-3/8" STD. LOCKWASHERS
- CABINET CH-60**  
 5-1/4"-20 X 3/4" LG. RD. HD. MACH. SCREWS  
 5-1/4"-20 HEX. NUTS  
 5-1/4" LOCKWASHERS
- MOUNTING FT-151-( )**  
 8-1/4"-20 X 3/4" LG. HEX. HD. MACH. SCREWS  
 8-1/4"-20 ELASTIC STOP NUTS
- MOUNTING FT-162**  
 10-10-32 X 3/4" LG. RD. HD. MACH. SCREWS  
 10-10-32 ELASTIC STOP NUTS
- MOUNTING FT-107**  
 6-1/4"-20 X 3/4" LG. HEX. HD. MACH. SCREWS  
 6-1/4"-20 ELASTIC STOP NUTS
- MAST BASE BRACKET MP-53 (SEE NOTE 2)**  
 2-3/8"-24 X 1/4" LG. HEX. HD. MACH. SCREWS  
 2-3/8"-24 ELASTIC STOP NUTS  
 2-1/4"-28 X 3/4" LG. RD. HD. MACH. SCREWS  
 2-1/4"-28 ELASTIC STOP NUTS
- INSULATORS IN-98**  
 6-8-32 X 3/4" RD. HD. MACH. SCREWS  
 6-8-32 HEX. NUTS  
 6-8 LOCKWASHERS
- MOUNTING FT-172 AND FT-178**  
 8-10-32 X 1/2" LG. RD. HD. MACH. SCREWS  
 8-10-32 HEX. NUTS  
 8-10 LOCKWASHERS
- CLAMPS (FIG. 26)**  
 CLAMP #10 (6 REQ.)  
 6-8-32 X 3/4" RD. HD. MACH. SCREWS  
 6-8-32 HEX. NUTS  
 6-8 LOCKWASHERS  
 6-8 FLATWASHERS

- NOTE:**
1. MOUNTING FT-284 TO BE MOUNTED WITH HARDWARE EXISTING IN VEHICLE.
  2. SCREWS AND ELASTIC STOP NUTS ARE FURNISHED WITH MAST BASE BRACKET MP-53.
  3. FOR MOUNTING HOLES AND LOCATION SEE FIG. 4.
  4. FOR INSTALLATION OF BRACKETS AND MOUNTING FRAMES SEE FIG. 3.
  5. FOR CORDING DIAGRAM SEE FIG. 1.
  6. FOR DRILLING OF CABINET CH-60 FOR MOUNTING ON MOUNTING FT-284 SEE FIG. 8.
  7. USE COVER BG-67-( ) WHEN MAST SECTIONS ARE NOT INSTALLED.
  8. FOR RADIO SETS SCR-193-H AND SCR-510-( ) OR SCR-610-( ) COMBINATION USE THIS FIGURE AND FIG. 20.
  9. ANTENNA AND GROUND CONNECTIONS SHALL BE MADE WITH WIRE W-128. ENDS OF WIRE W-128, AFTER BEING CUT TO PROPER LENGTH, SHALL BE TINNED BEFORE MAKING CONNECTIONS.

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Figure 2. Pictorial view of Radio Set SCR-193-H in Carrier, Personnel, Half-track, M3.



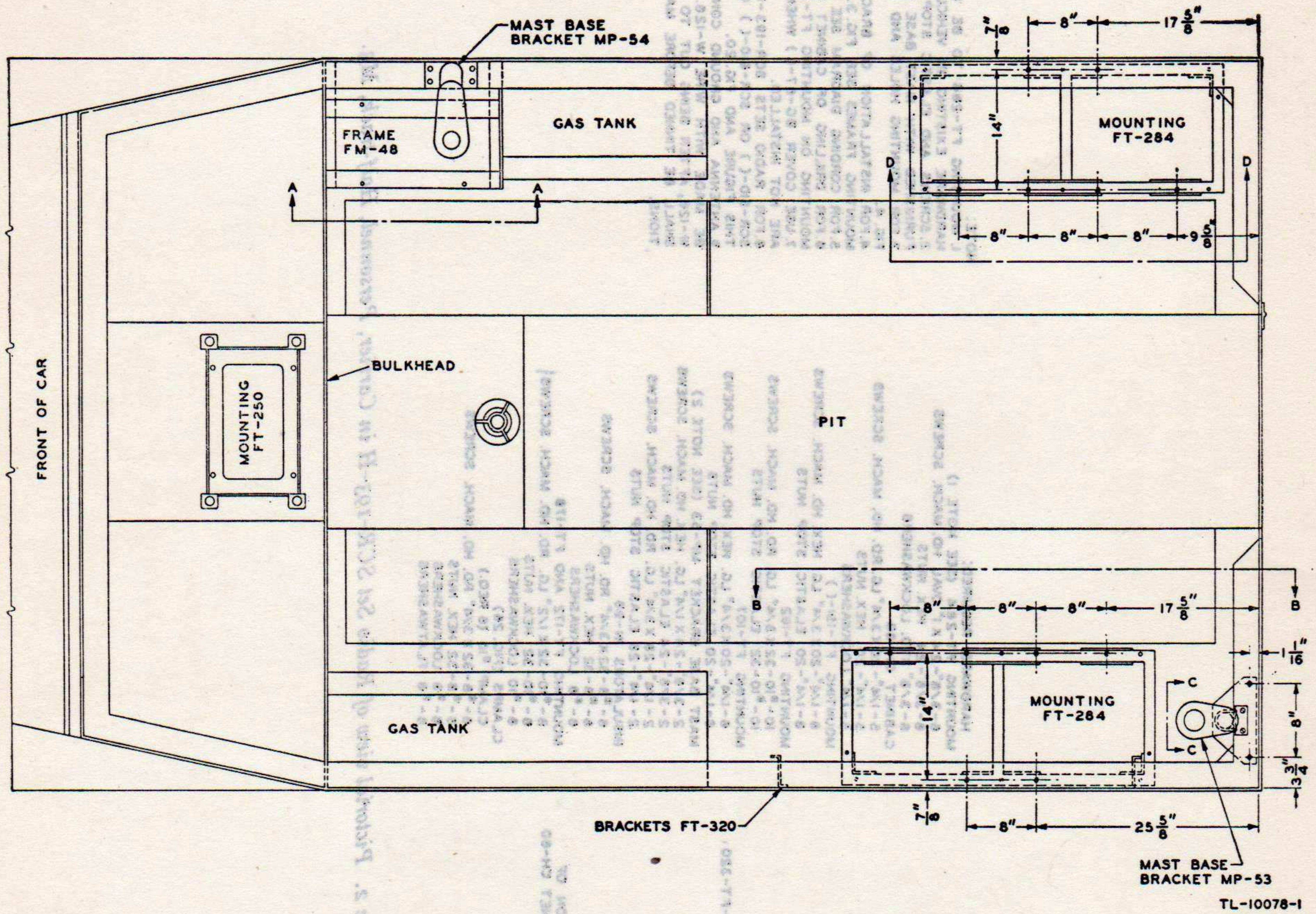


Figure 3. Installation of brackets and mounting frames



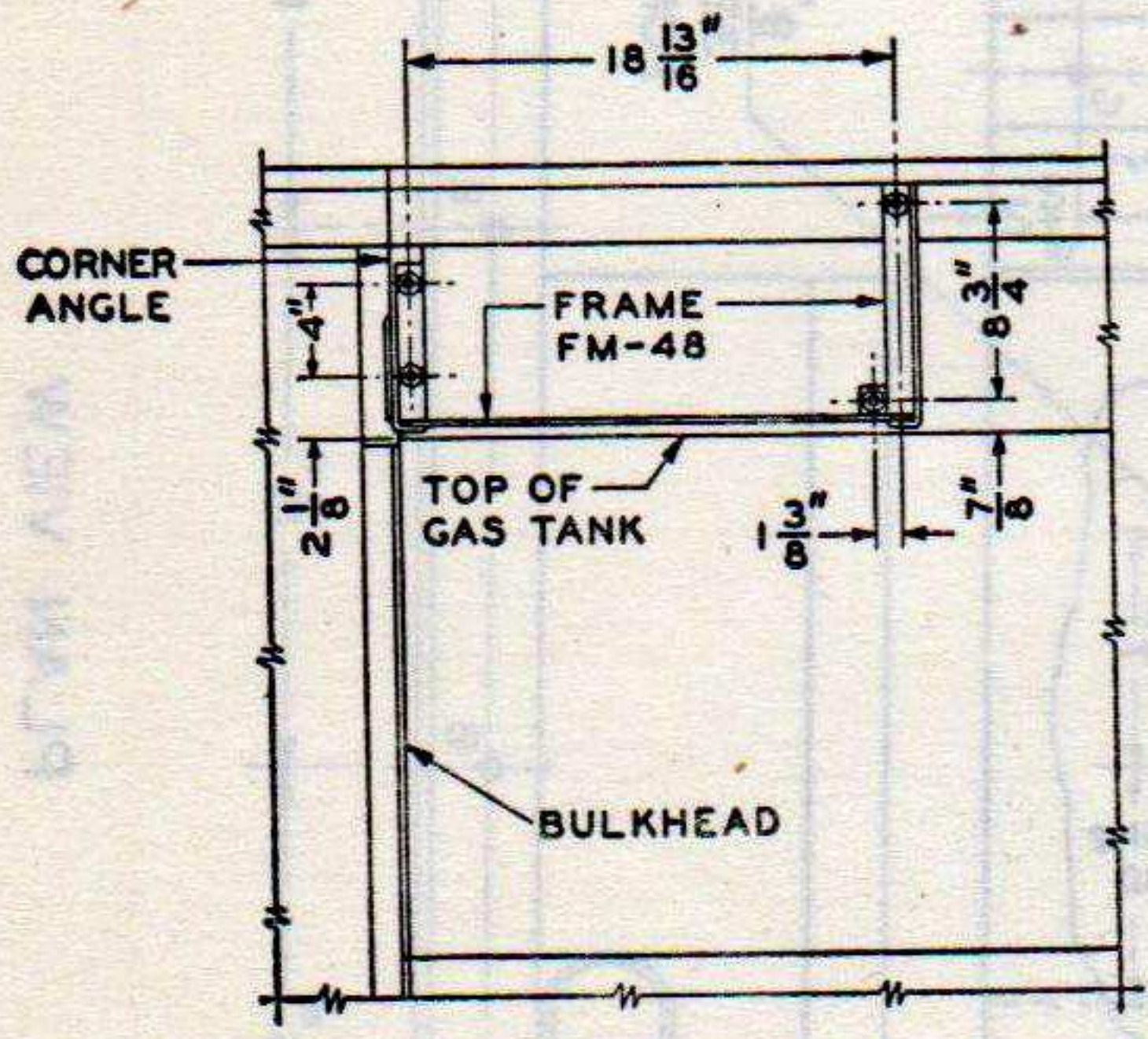
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(FOR MOUNTING BRACKET NO-27)  
MOUNT 5-HOLE

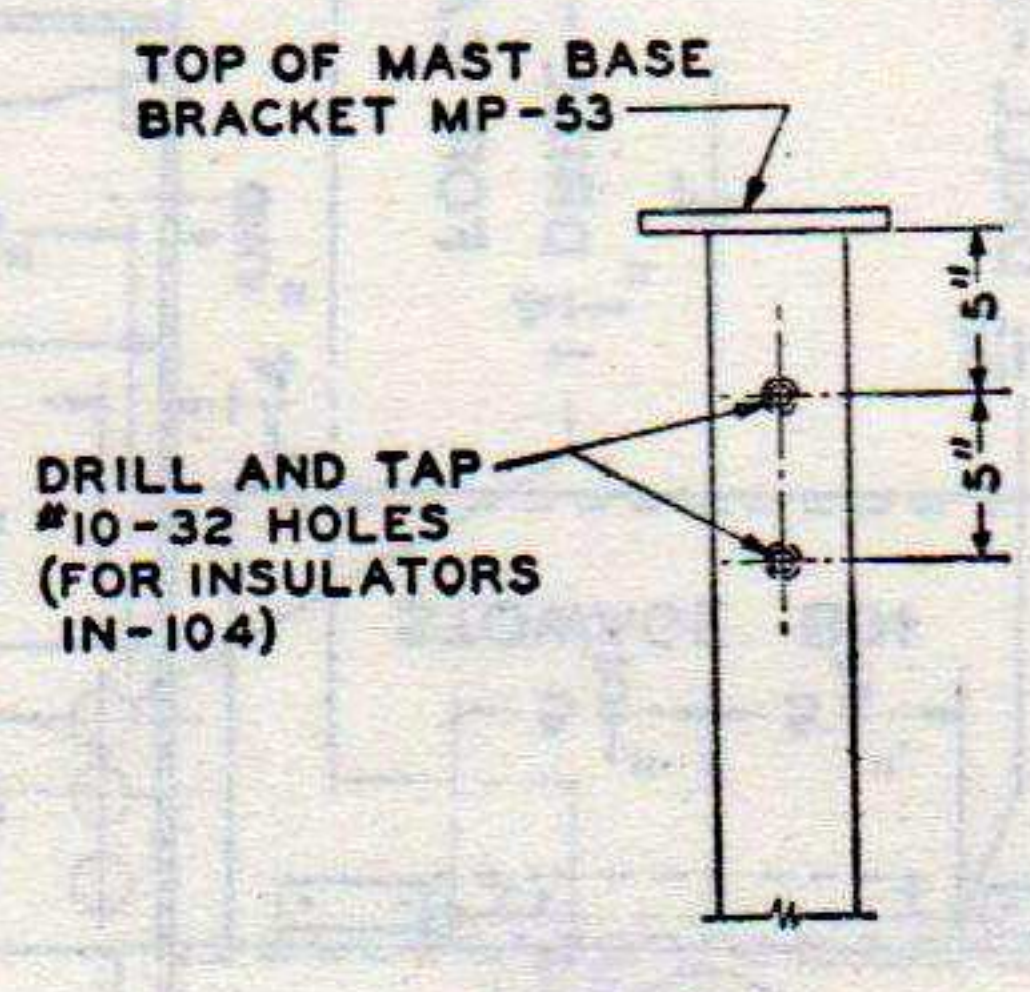
(FOR MOUNTING BRACKET NO-27)  
MOUNT 5-HOLE

(AS DESCRIBED SEE FIGURE)  
MOUNT 3-HOLE

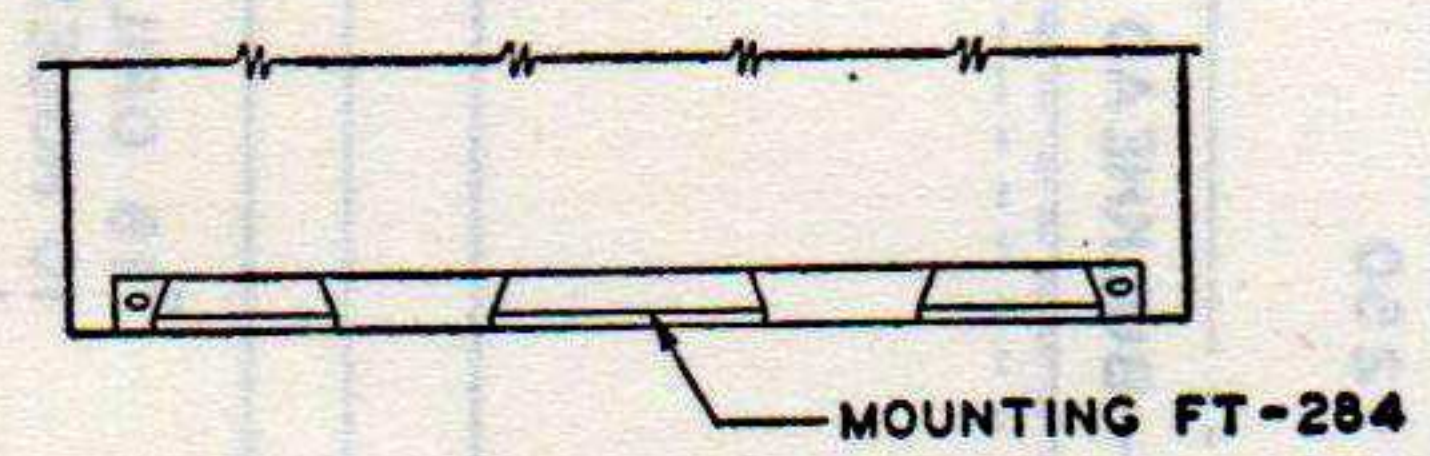
MOUNT 2-HOLE



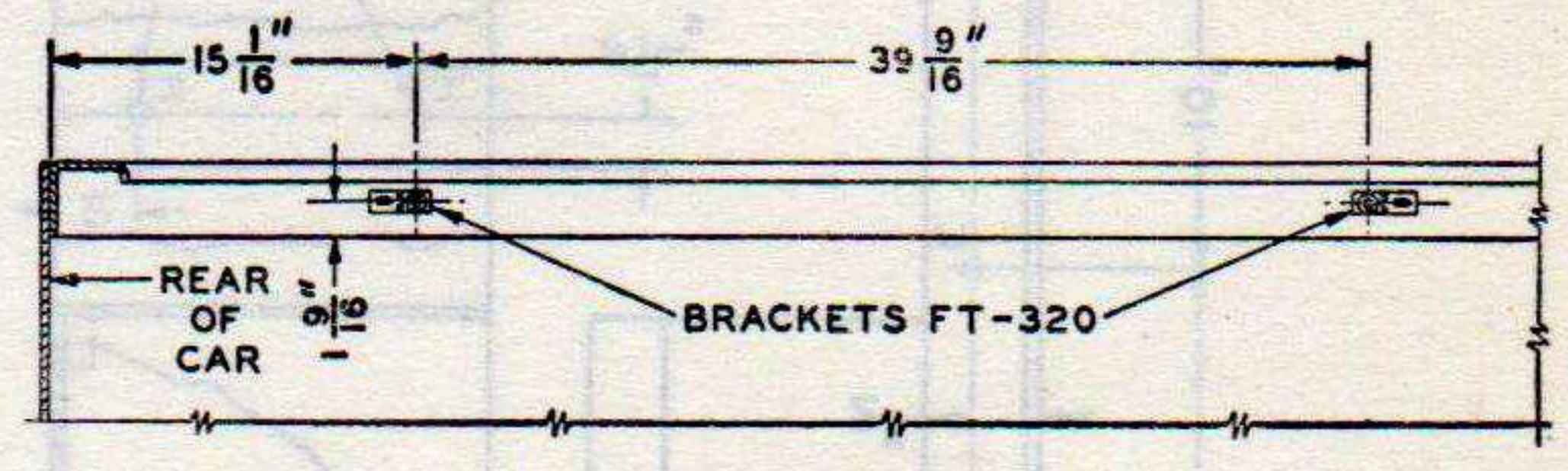
VIEW A-A



VIEW C-C



VIEW D-D



VIEW B-B

- NOTES:
1. ALL DIMENSIONED HOLES INDICATE EXISTING BOLT HOLES IN VEHICLE TO WHICH MOUNTING FRAMES AND BRACKETS ARE SECURED.
  2. PRESENT BOLTS TO BE REUSED.
  3. FOR MODIFICATION OF CABINET CH-60 SEE FIG. 8.
  4. FOR MODIFICATION OF CABINET CH-74-A AND MOUNTING FT-284 SEE FIG. 24.
  5. FOR MOUNTING HOLES AND LOCATION SEE FIG. 4.

TL-10078-2

in Carrier, Personnel, Half-track, M3.

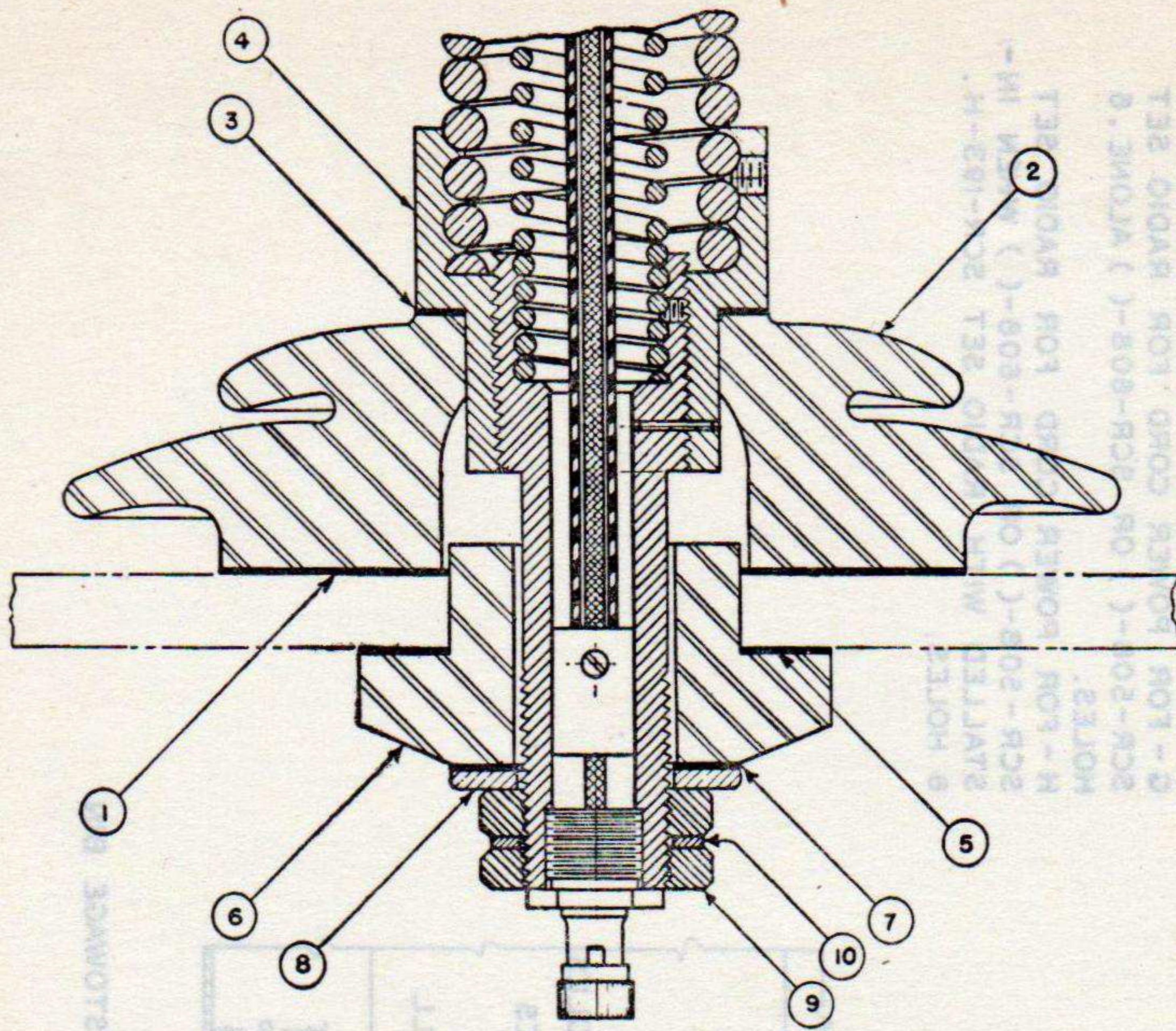






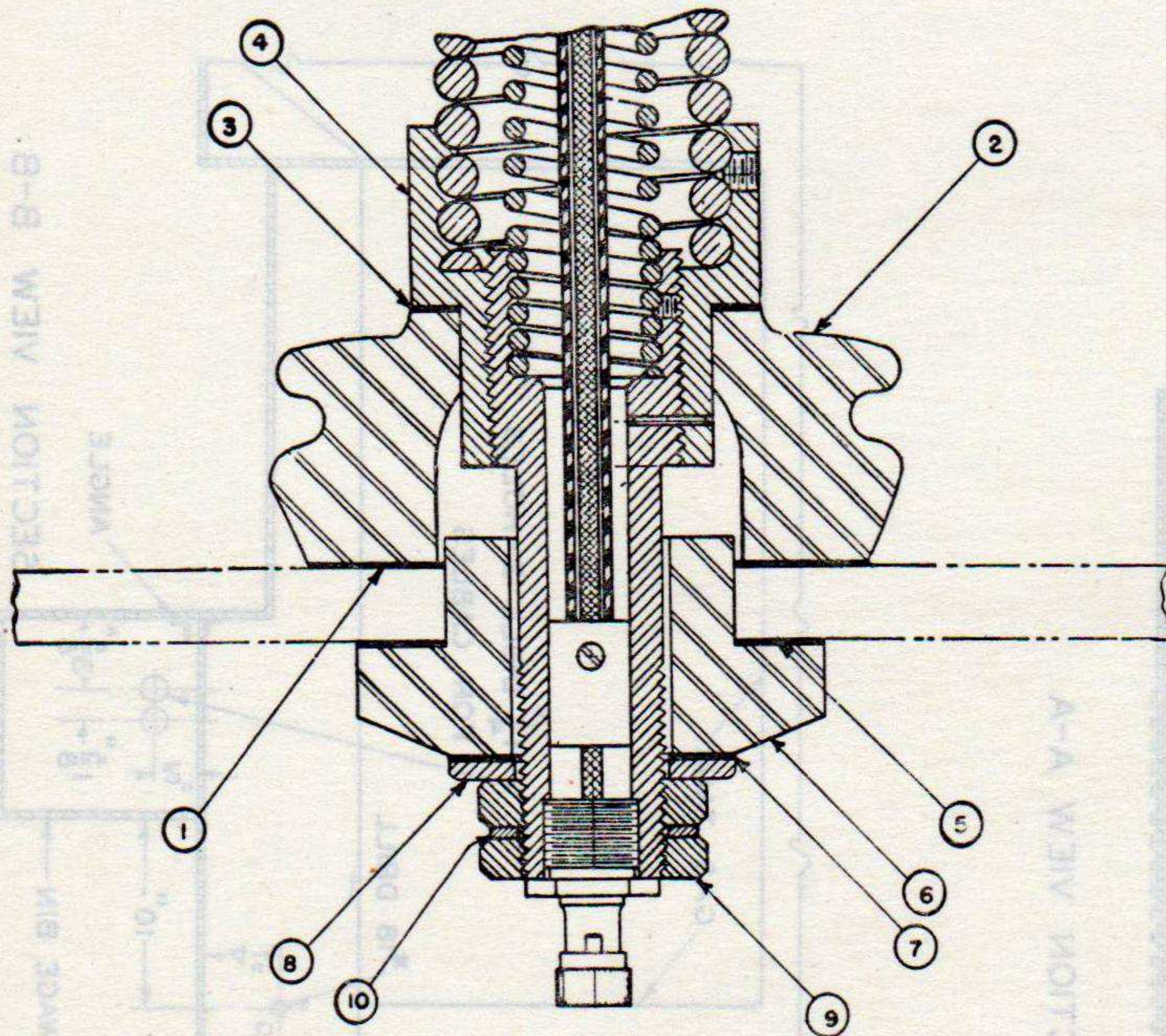






- ① - FIBER WASHER
- ② - PORCELAIN INSULATOR
- ③ - FABRIC WASHER
- ④ - SPRING RETAINER
- ⑤ - FIBER WASHER
- ⑥ - PORCELAIN INSULATOR
- ⑦ - FABRIC WASHER
- ⑧ - STEEL WASHER
- ⑨ - STEEL NUT
- ⑩ - LOCKWASHER

Figure 5. Mast Base MP-37—assembly for installation.



- ① - FIBER WASHER
- ② - PORCELAIN INSULATOR
- ③ - FABRIC WASHER
- ④ - SPRING RETAINER
- ⑤ - FIBER WASHER
- ⑥ - PORCELAIN INSULATOR
- ⑦ - FABRIC WASHER
- ⑧ - STEEL WASHER
- ⑨ - STEEL NUT
- ⑩ - LOCKWASHER

Figure 6. Mast Base MP-57—assembly for installation.



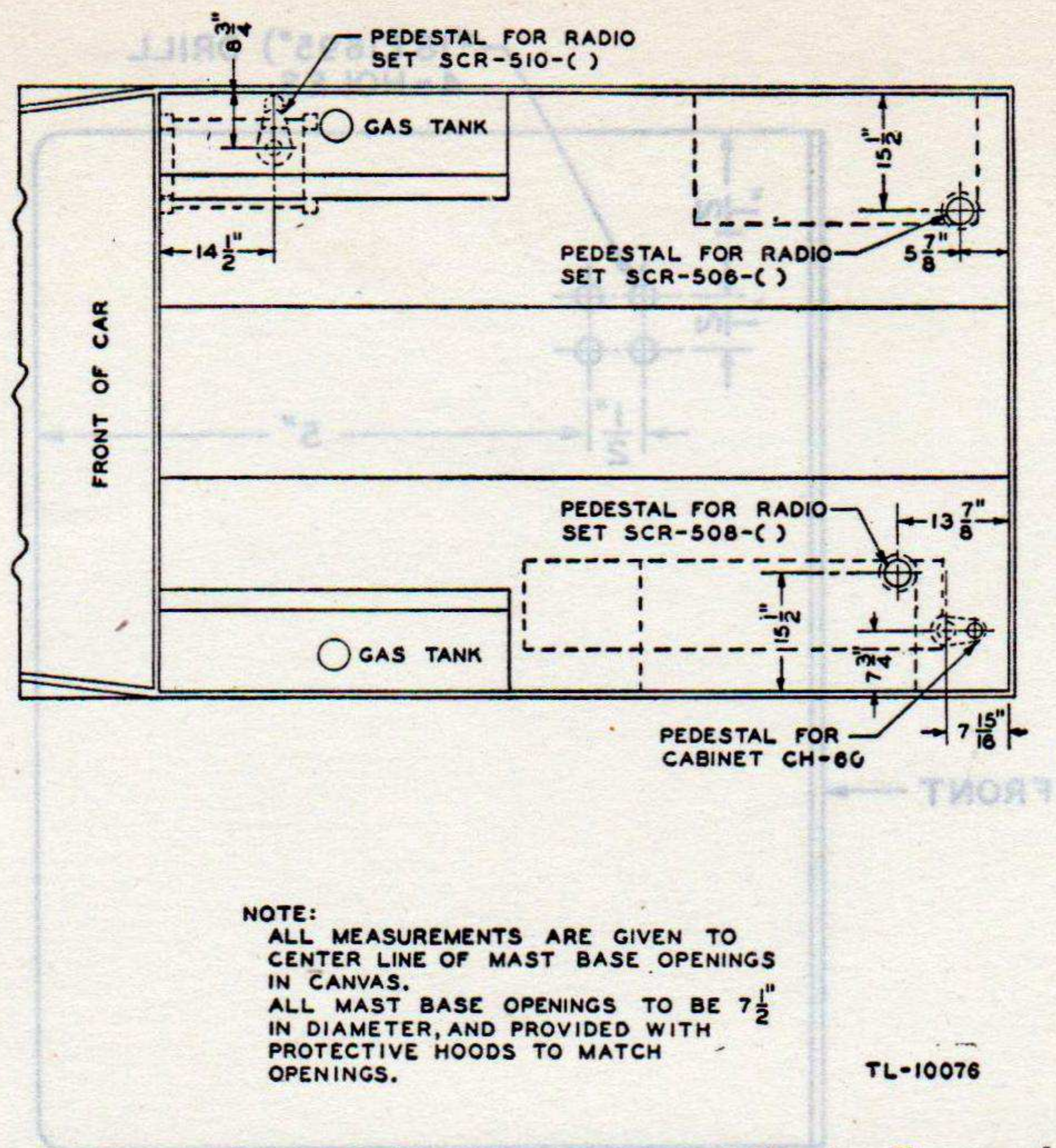


Figure 7. Diagram of mast base openings in canvas top of Carrier, Personnel, Half-track, M3.

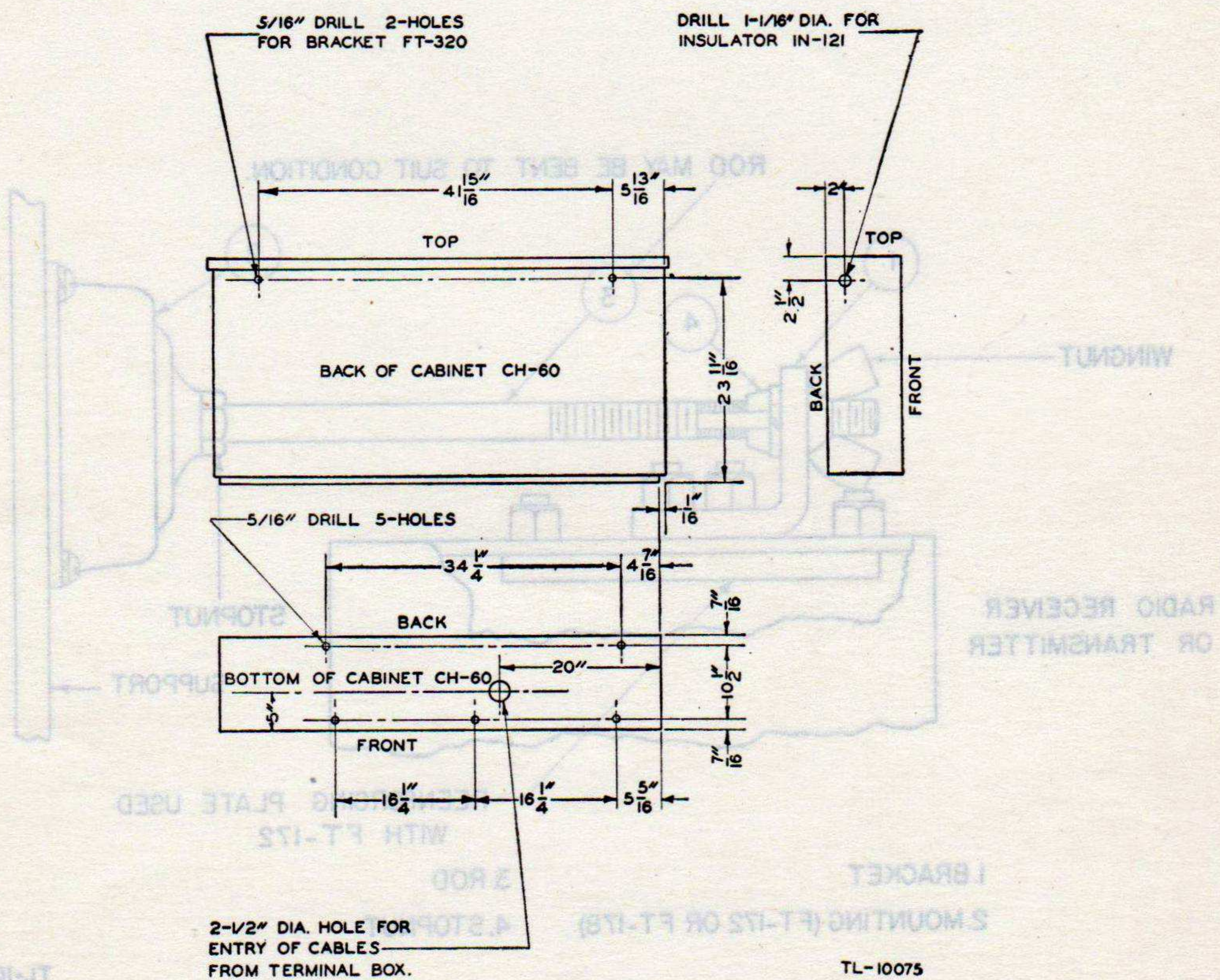
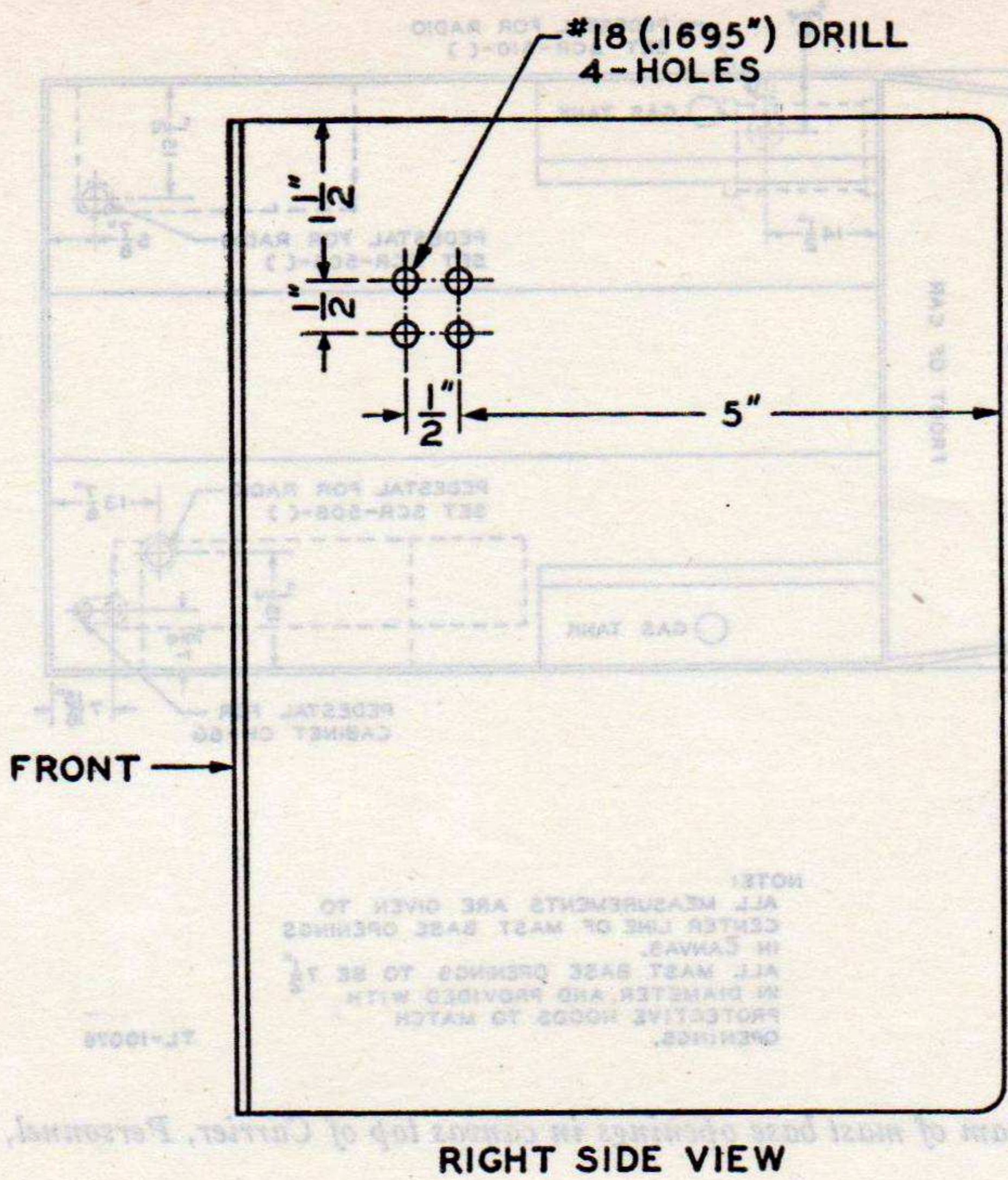


Figure 8. Drilling Cabinet CH-60 for mounting on Mounting FT-284 in Carrier, Personnel, Half-track, M3.

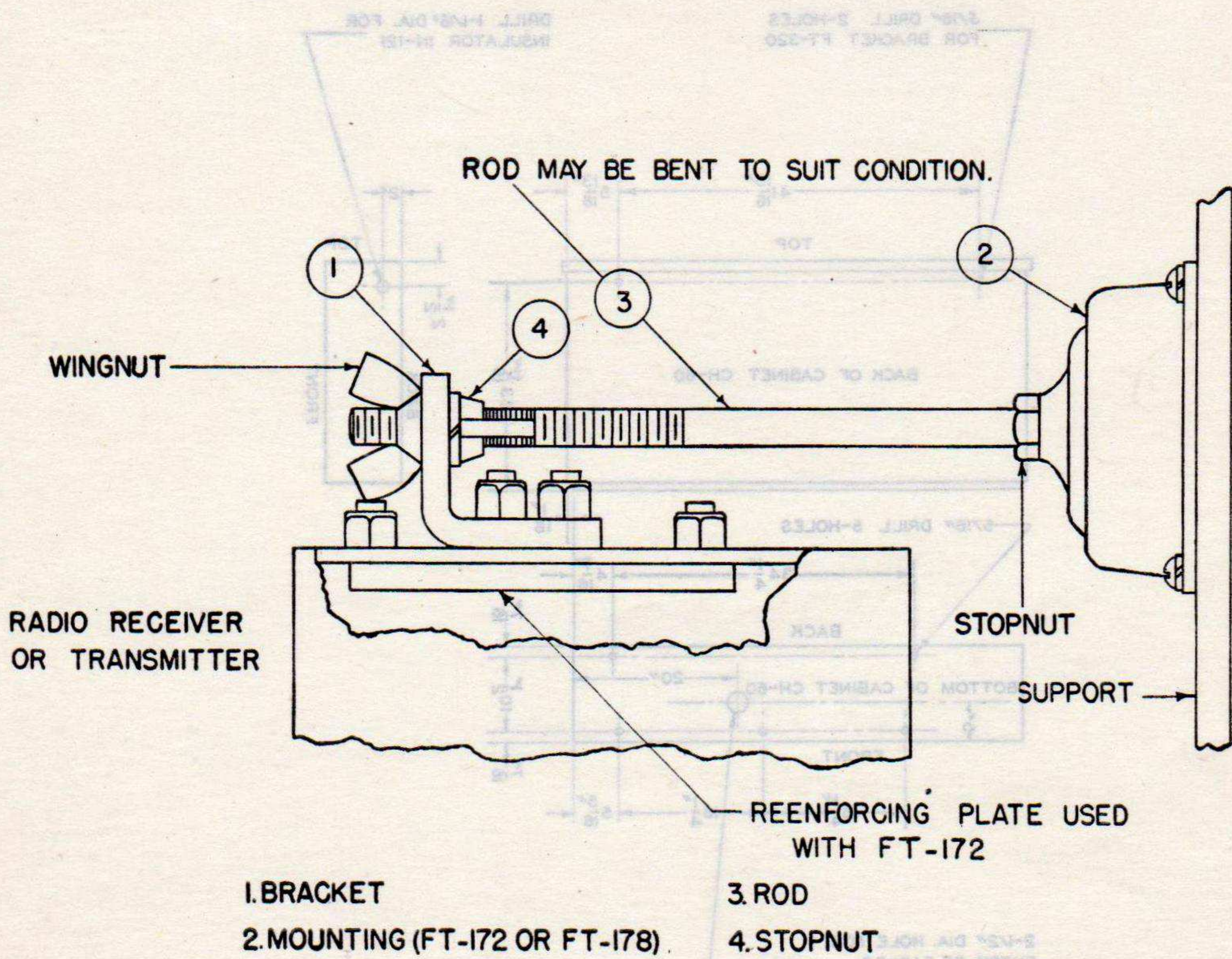




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SC-A-2894-B

TL9506

Figure 9. Drilling data for side of cabinet of Radio Receiver BC-312-( ) for Mounting FT-178.



TL-10137

Figure 10. Assembly of Mounting FT-172 or FT-178.



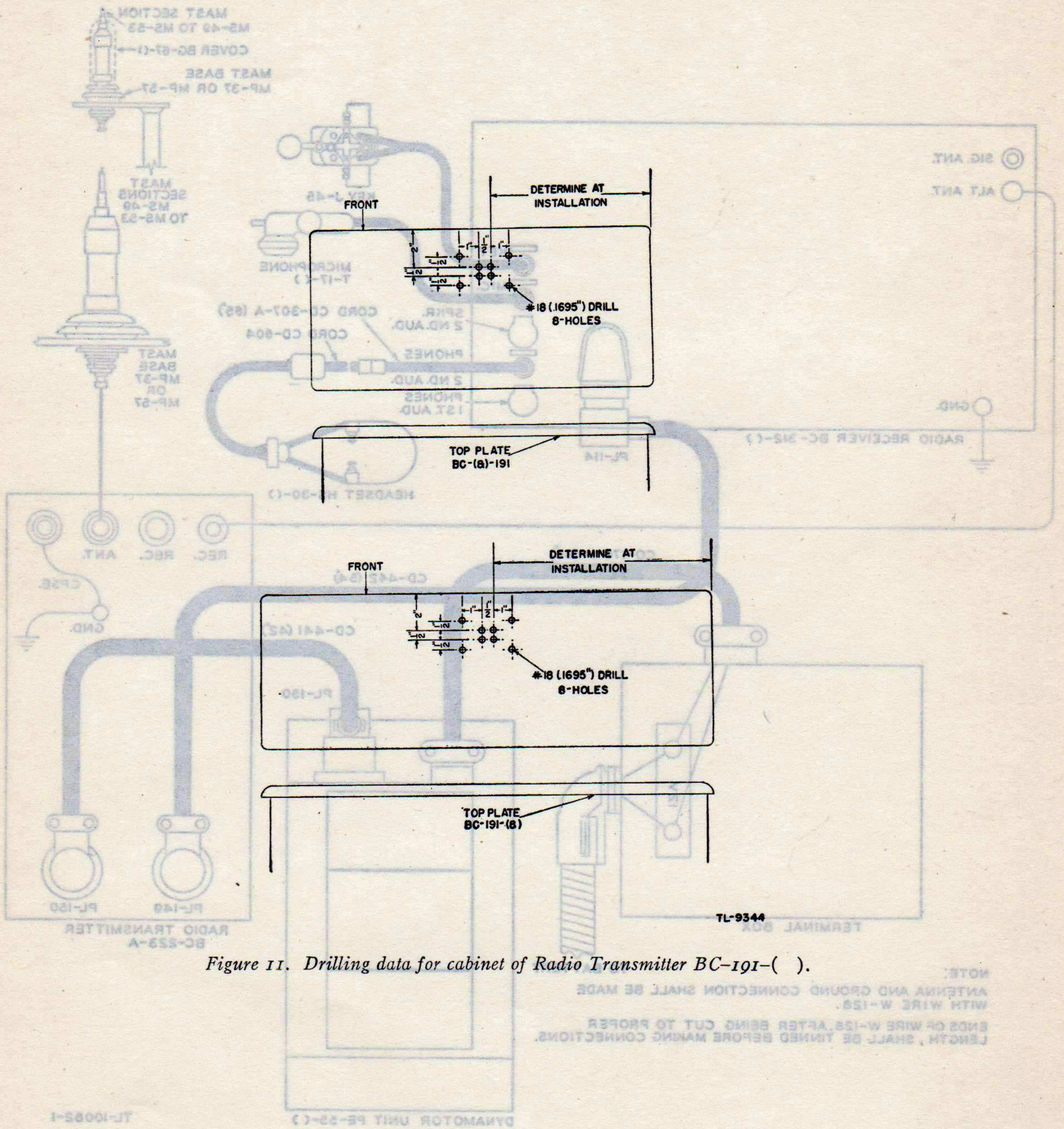


Figure 11. Drilling data for cabinet of Radio Transmitter BC-191-( ).

Figure 12. Wiring diagram of Radio Set SCR-242-2



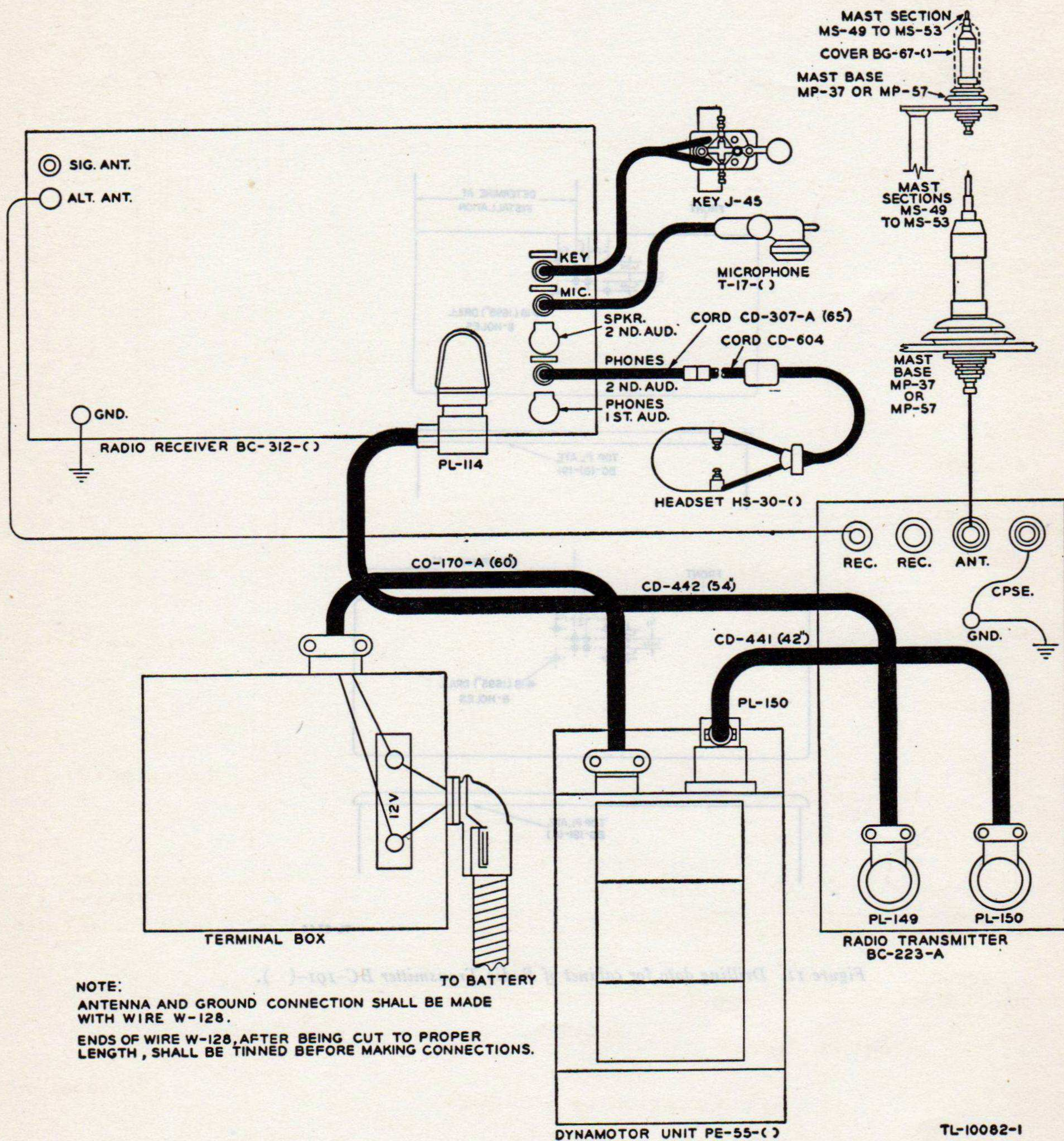
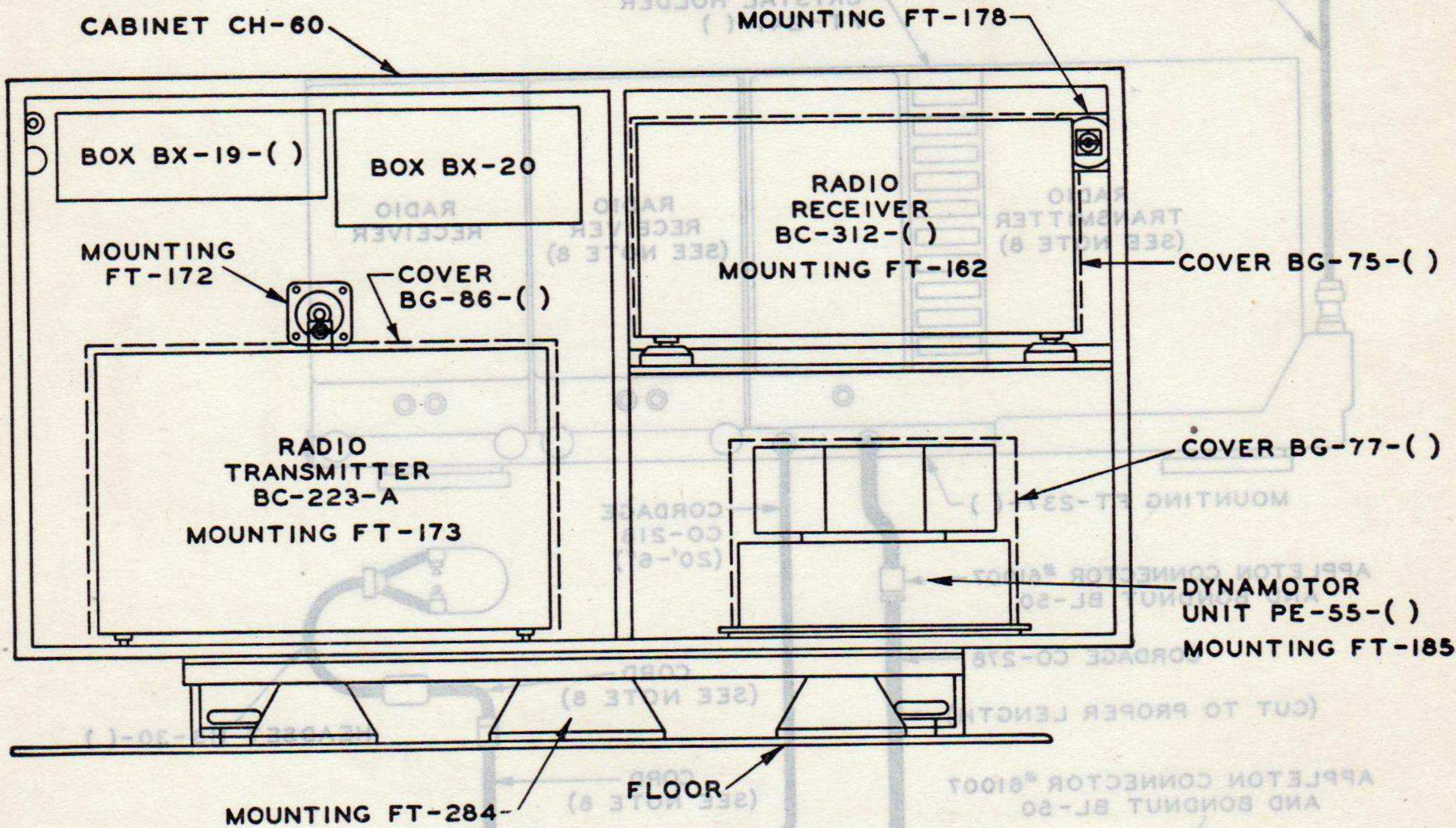
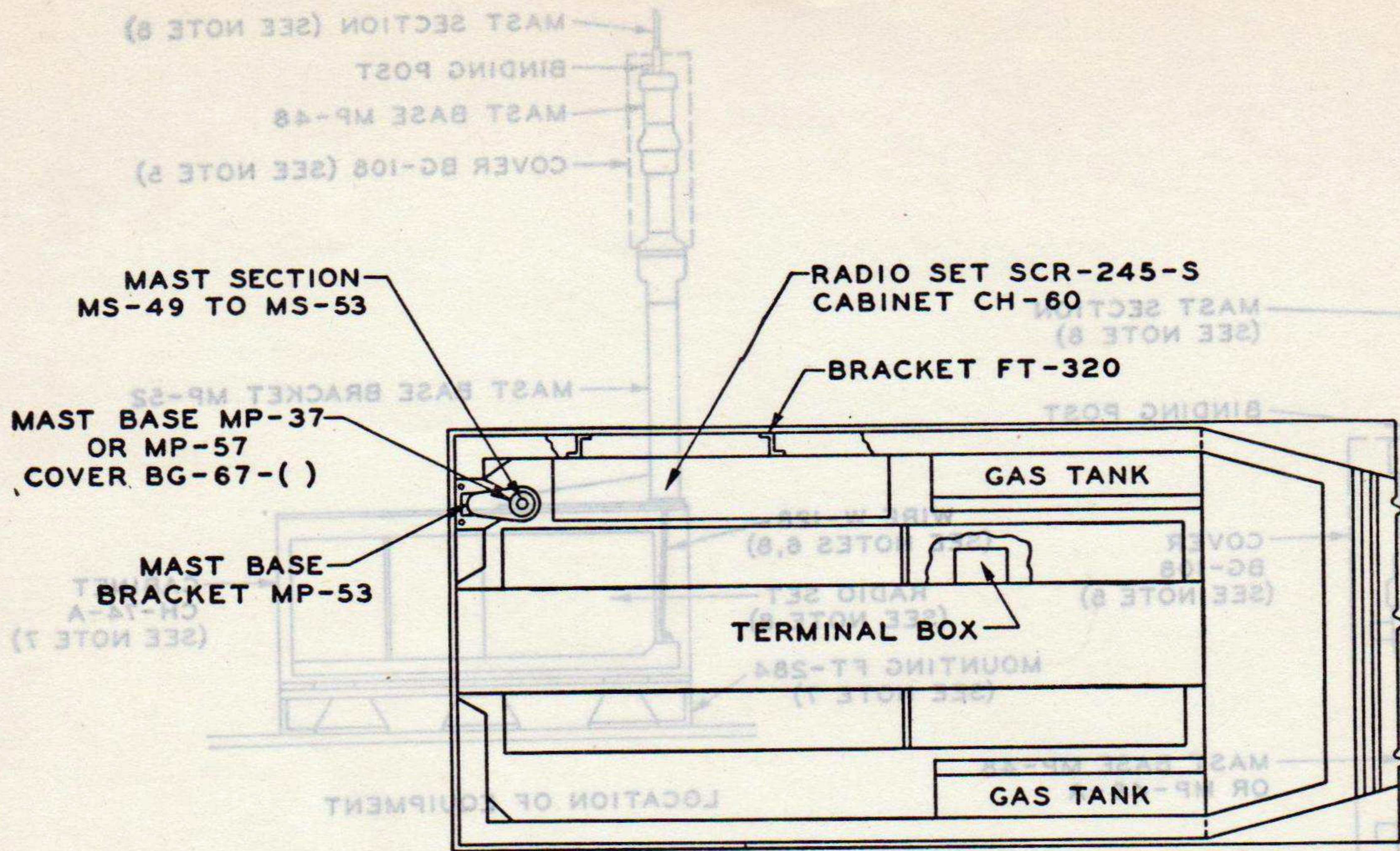


Figure 12. Cording diagram of Radio Set SCR-245-S





LOCATION OF EQUIPMENT

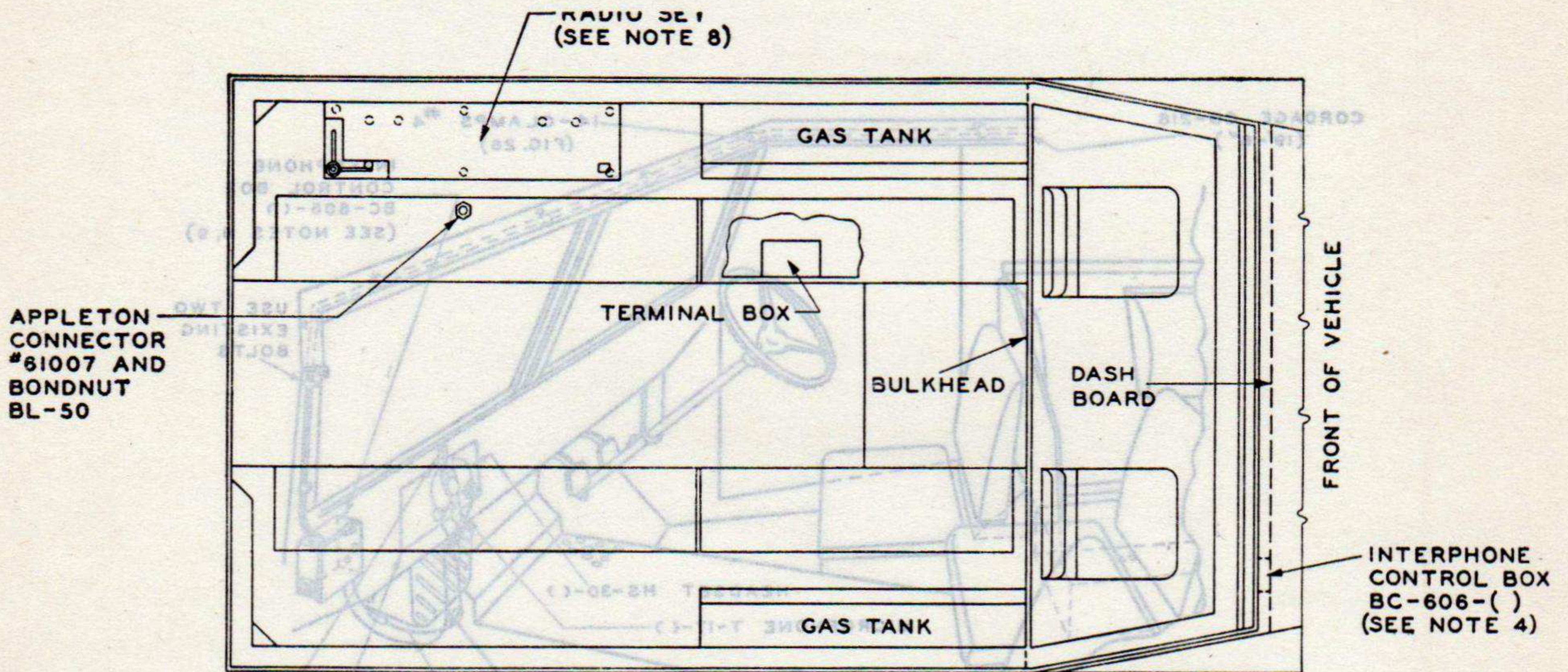
TL-10082-2

in Carrier, Personnel, Half-track, M3.









**NOTES:**

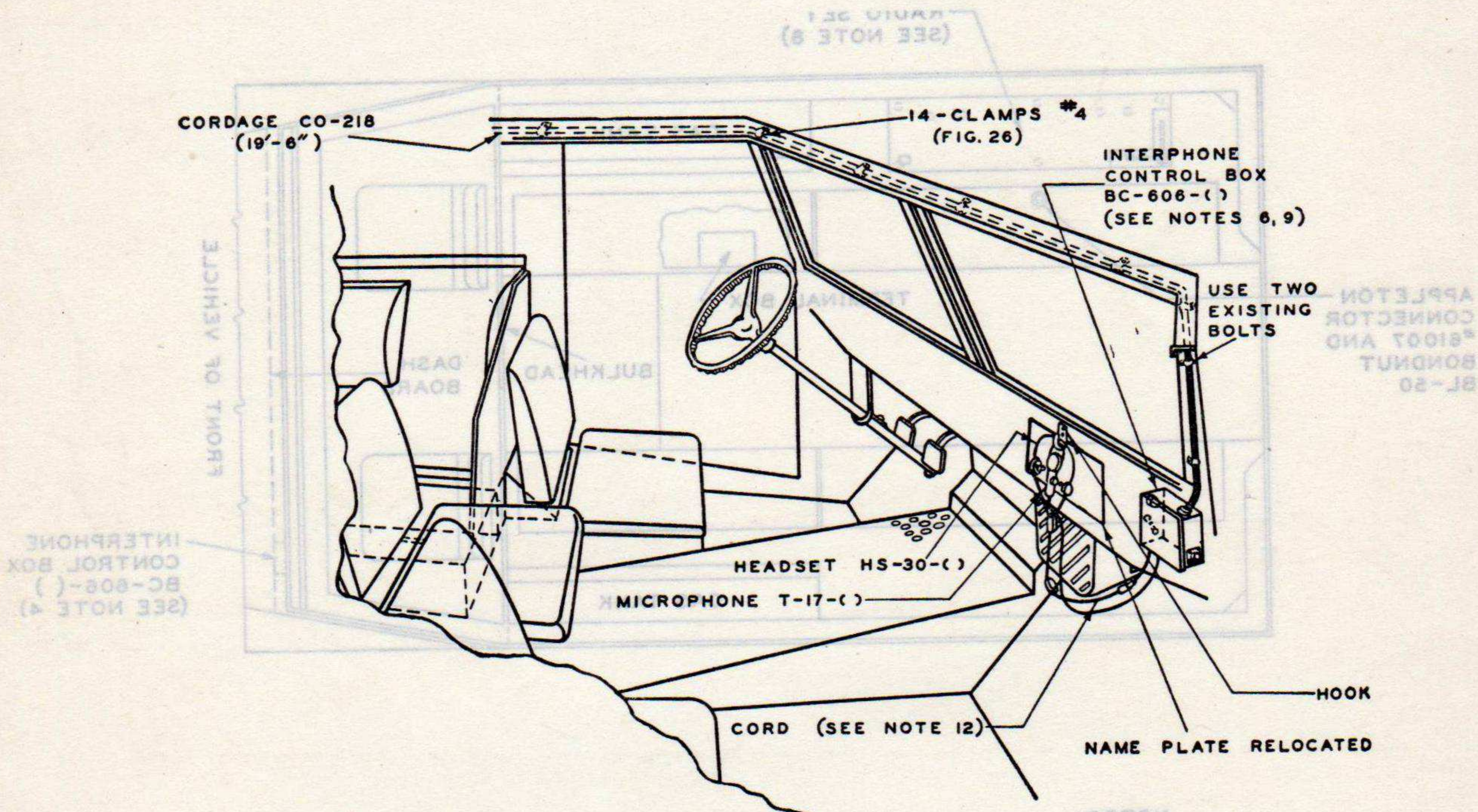
1. FOR MOUNTING HOLES AND LOCATION, SEE FIG. 4.
2. FOR INSTALLATION OF BRACKETS AND MOUNTING FRAMES, FIG. 3.
3. SCREWS AND STOP NUTS ARE FURNISHED WITH MOUNTING FT-237-( ) AND CABINET CH-74-A.
4. REFER TO FIG 19 FOR WIRING FOR REMOTE CONTROL FROM INTERPHONE CONTROL BOX BC-606-( ).
5. USE COVER BG-108 WHEN MAST SECTIONS ARE NOT INSTALLED
6. CUT WIRE W-128 TO PROPER LENGTH, TIN ENDS BEFORE MAKING CONNECTIONS.
7. FOR MODIFICATION OF CABINET CH-74-A AND MOUNTING FT-284, SEE FIG. 24.
8. INSTALLATION COMPONENTS:

RADIO SET	SCR-508-( )	SCR-528-( )	SCR-608-( )	SCR-628-( )
MAST SECTIONS	MS-52, 53	MS-52, 53	MS-52, 53	MS-52, 53
RADIO TRANSMITTER	BC-604-( )	BC-604-( )	BC-684-( )	BC-684-( )
RADIO RECEIVER	2-BC-603-( )	BC-603-( )	2-BC-683-( )	BC-683-( )
ANTENNA LEAD-IN WIRE W-128	52"	52"	52"	52"
HEAD SET CORDS	CD-604, CD-307-A (65")		CD-605 (78")	

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SCR-608-( ), or SCR-628-( ) in Carrier, Personnel, Half-track, M3.





**NOTES:**

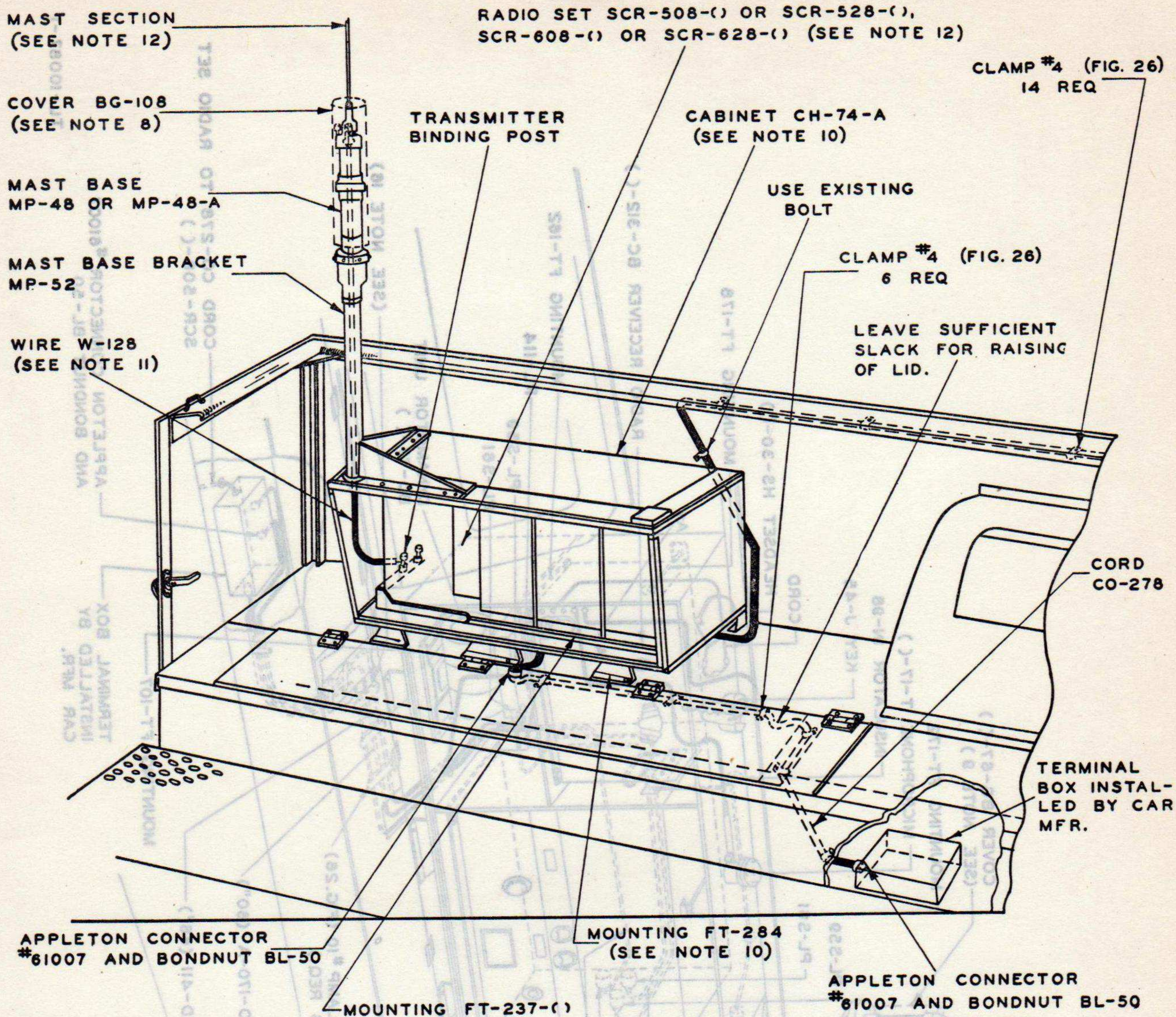
1. FOR MOUNTING HOLES AND LOCATION SEE FIG. 4
2. FOR INSTALLATION OF BRACKETS AND MOUNTING FRAMES SEE FIG. 3
3. FOR CORDING DIAGRAM SEE FIG. 13
4. MOUNTING FT-284 TO BE MOUNTED WITH EXISTING HARDWARE IN VEHICLE.
5. SCREWS AND STOPNUTS ARE FURNISHED WITH CABINET CH-74-A AND MOUNTING FT-237-(-).
6. HARDWARE, HOOKS AND 8 CLAMPS #4 ARE FURNISHED WITH INTERPHONE CONTROL BOX BC-606-(-)
7. FOR SCR-508-(-), SCR-528-(-), SCR-608-(-) OR SCR-628-(-), IN COMBINATION WITH SCR-506-(-) USE THIS FIGURE AND FIGURE 23
8. USE COVER BG-108 WHEN MAST SECTIONS ARE NOT INSTALLED.
9. SEE FIG. 19 FOR WIRING OF INTERPHONE CONTROL BOX BC-606-(-) FOR REMOTE CONTROL.
10. FOR MODIFICATION OF MOUNTING FT-284 AND CABINET CH-74-A SEE FIG. 24
11. CUT WIRE W-128 TO PROPER LENGTH. TIN ENDS BEFORE MAKING CONNECTIONS.
12. INSTALLATION COMPONENTS:

RADIO SET	SCR-508-(-)	SCR-528-(-)	SCR-608-(-)	SCR-628-(-)
MAST SECTIONS	MS-52, 53	MS-52, 53	MS-52, 53	MS-52, 53
ANTENNA LEAD-IN WIRE W-128	52"	52"	52"	52"
RADIO TRANSMITTER	BC-604-(-)	BC-604-(-)	BC-684-(-)	BC-684-(-)
RADIO RECEIVER	2-BC-603-(-)	BC-603-(-)	2-BC-683-(-)	BC-683-(-)
HEADSET CORDS	CD-307 (65") CD-604	CD-307 (65") CD-604	CD-605- (78")	CD-605 (78")

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Figure 14. Pictorial view of Radio Set SCR-508-(-), SCR-528-(-),





**HARDWARE REQUIRED:**

MOUNTING FT-284 (SEE NOTE 4)  
6-3/8"-24X1" OVAL HD. MACH. SCREWS  
6-3/8"-24 HEX. NUTS

CABINET CH-74-A (SEE NOTE 5)  
6-1/4"-28X3/4" LG. HEX. HD. MACH. SCREWS  
6-1/4"-28 ELASTIC STOP NUTS.

MOUNTING FT-237-( ) (SEE NOTE 5)  
8-5/16"-24X3/4" LG. HEX. HD. MACH. SCREWS  
8-5/16"-24 ELASTIC STOP NUTS.

CLAMP, (FIG. 26) CLAMP #4 (20 REQ)  
15-#8-32X3/4" LG. RD. HD. MACH. SCREWS  
2-#8-32X1-1/4" RD. HD. MACH. SCREWS  
17-#8-32 HEX NUTS  
20-#8 LOCKWASHERS

HOOK (SEE NOTE 6)  
2-#8-32X3/8" LG. RD. HD. MACH. SCREWS  
2-#8-32 HEX. HD. NUTS  
2-#8 LOCKWASHERS

INTERPHONE CONTROL BOX BC-606-( ) (SEE NOTE 6, 9)  
3-#8-32X3/8" RD. HD. MACH. SCREWS  
3-#8-32 HEX. HD. NUTS.  
3-#8 LOCKWASHERS

SCR-608-( ), or SCR-628-( ) in Carrier, Personnel, Half-track, M3.

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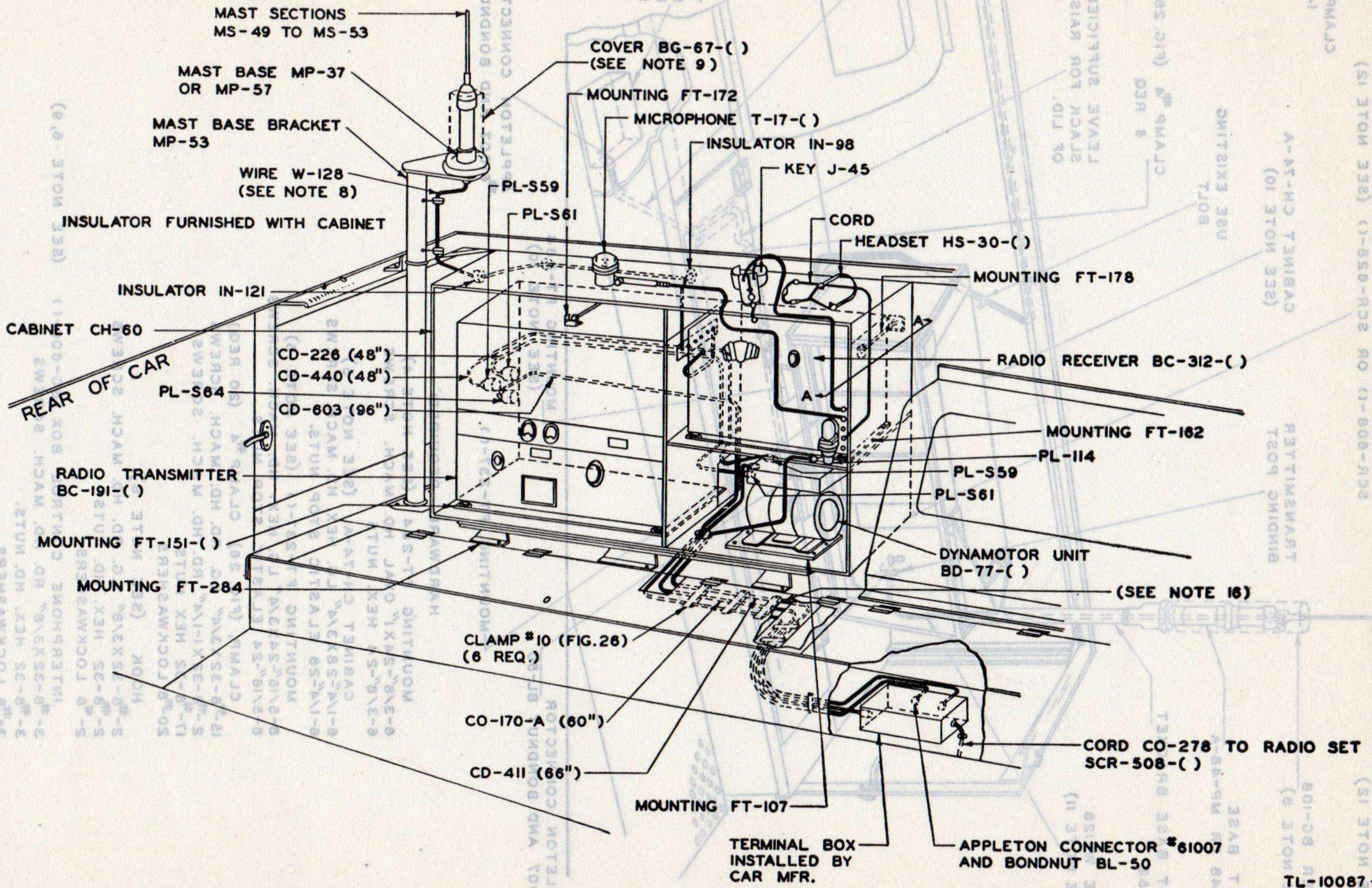
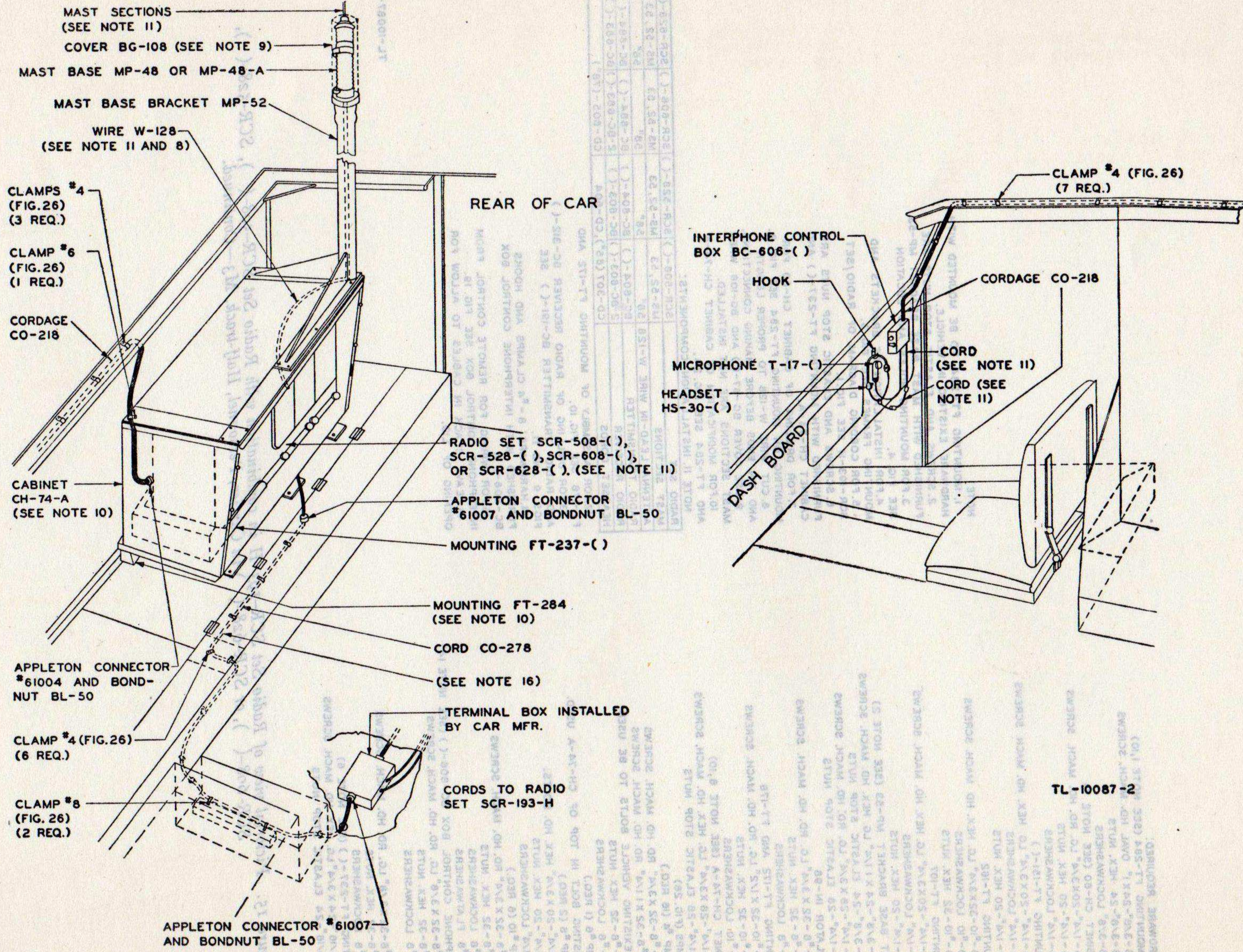


Figure 15. Pictorial view of Radio Set SCR-193-H in combination with Radio Set



SCR-508- ( ), SCR-528- ( ), SCR-608- ( ), or SCR-628- ( ) in Carrier, Personnel, Half-track, M3.



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**HARDWARE REQUIRED:**

- 2-MOUNTING FT-284 (SEE NOTE 1,10)
- 6-3/8"-24 X 1" OVAL HD. MACH. SCREWS
- 6-3/8"-24 HEX. NUTS
- 6-3/8" LOCKWASHERS
- CABINET CH-60 (SEE NOTE 7)
- 5-1/4"-20 X 3/4" LG. RD. HD. MACH. SCREWS
- 5-1/4"-20 HEX. NUTS
- 5-1/4" LOCKWASHERS
- MOUNTING FT-151-( )
- 8-1/4"-20 X 3/4" LG. HEX. HD. MACH. SCREWS
- 8-1/4" LOCKWASHERS
- 8-1/4"-20 HEX. NUTS
- MOUNTING FT-162
- 10-#10-32 X 3/4" LG. HEX. HD MACH. SCREWS
- 10-#10 LOCKWASHERS
- 10-#10-32 HEX. NUTS
- MOUNTING FT-107
- 6-1/4"-20 X 3/4" LG. HEX. HD. MACH. SCREWS
- 6-1/4" LOCKWASHERS
- 6-1/4"-20 HEX. NUTS
- MAST BASE BRACKET MP-53 (SEE NOTE 2)
- 2-3/8"-24 X 1 1/4" LG. HEX. HD. MACH. SCREWS
- 2-3/8"-24 ELASTIC STOP NUTS
- 2-1/4"-28 X 3/4" LG. RD. HD. MACH. SCREWS
- 2-1/4"-28 ELASTIC STOP NUTS
- INSULATOR IN-98
- 6-#8-32 X 3/4" LG. RD. HD. MACH. SCREWS
- 6-#8-32 HEX. NUTS
- 6-#8 LOCKWASHERS
- MOUNTING FT-172 AND FT-178
- 8-#10-32 X 1/2" LG. RD. HD. MACH. SCREWS
- 8-#10-32 HEX. NUTS
- 8-#10 LOCKWASHERS
- CABINET CH-74-A (SEE NOTE 6,10)
- 6-1/4"-28 X 3/4" LG. HEX. HD. MACH. SCREWS
- 6-1/4"-28 ELASTIC STOP NUTS
- CLAMPS (FIG. 26)
- CLAMP #4 (16 REQ.)
- 13-#8-32 X 3/4" RD. HD. MACH. SCREWS
- 1-#8-32 X 1 1/4" RD. HD. MACH. SCREWS
- 2-EXISTING VEHICLE BOLTS TO BE USED.
- 14-#8-32 HEX. NUTS
- 14-#8 LOCKWASHERS
- CLAMP #6 (1 REQ.)
- EXISTING BOLT IN TOP OF CH-74-A USED.
- CLAMP #8 (2 REQ.)
- 2-1/4"-20 X 3/4" HEX. HD. BOLTS.
- 2-1/4"-20 HEX. NUTS
- 2-1/4" LOCKWASHERS
- CLAMP #10 (6 REQ.)
- 6-#8-32 X 3/4" RD. HD. MACH. SCREWS
- 6-#8-32 HEX. NUTS
- 6-#8 LOCKWASHERS
- 6-#8 FLATWASHERS
- INTERPHONE CONTROL BOX BC-606-( ) (SEE NOTE 14)
- 3-#8-32 X 3/8" LG. RD. HD. MACH. SCREWS
- 3-#8-32 HEX. NUTS
- 3-#8 LOCKWASHERS
- HOOK
- 2-#8-32 X 3/8" LG. RD. HD. MACH. SCREWS
- 2-#8-32 HEX. NUTS
- 2-#8 LOCKWASHERS
- MOUNTING FT-237-( ) (SEE NOTE 6)
- 8-5/16"-24 X 3/4" LG. HEX. HD. MACH. SCREWS
- 8-5/16"-24 ELASTIC STOP NUTS

**NOTE:**

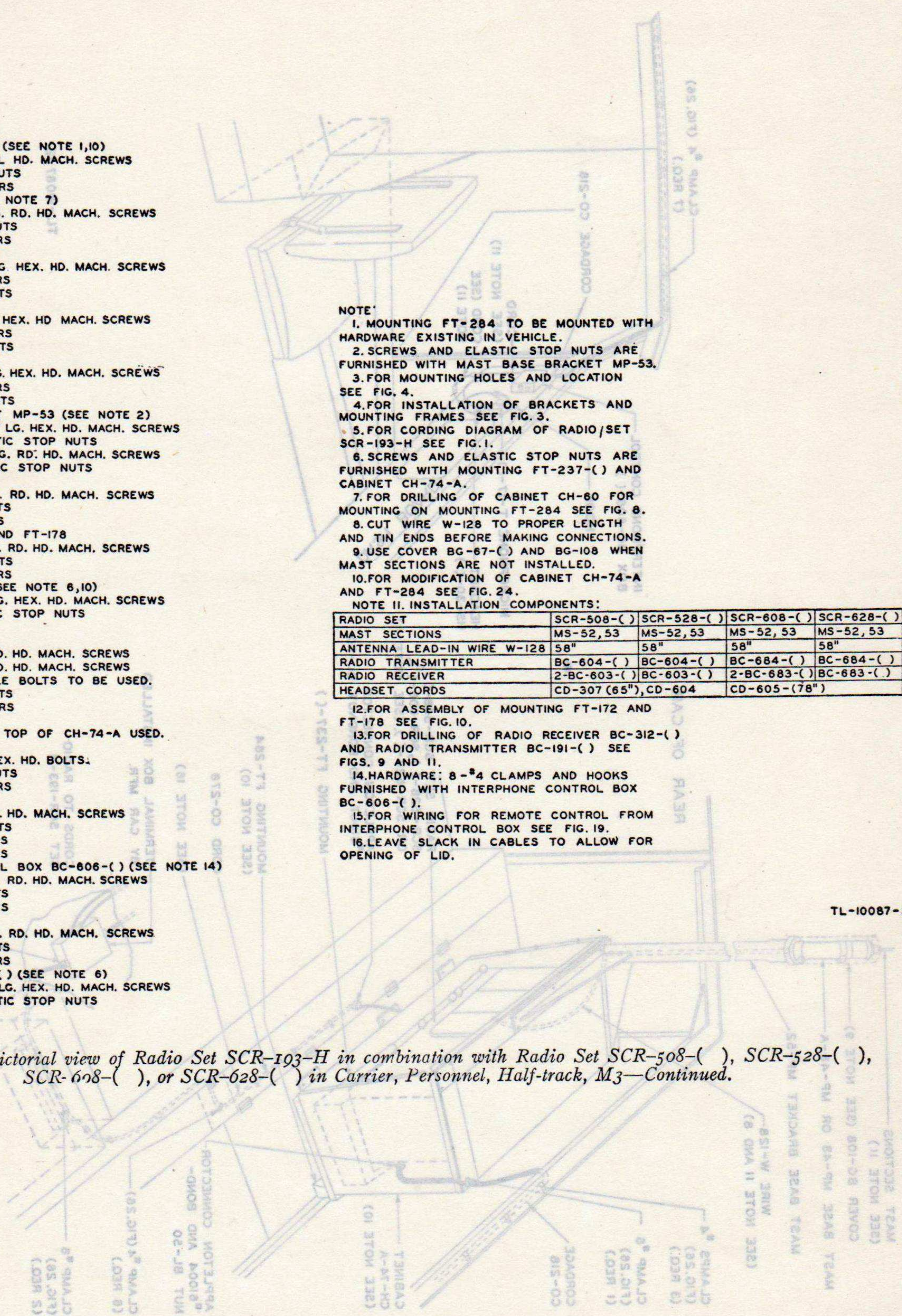
1. MOUNTING FT-284 TO BE MOUNTED WITH HARDWARE EXISTING IN VEHICLE.
2. SCREWS AND ELASTIC STOP NUTS ARE FURNISHED WITH MAST BASE BRACKET MP-53.
3. FOR MOUNTING HOLES AND LOCATION SEE FIG. 4.
4. FOR INSTALLATION OF BRACKETS AND MOUNTING FRAMES SEE FIG. 3.
5. FOR CORDING DIAGRAM OF RADIO/SET SCR-193-H SEE FIG. 1.
6. SCREWS AND ELASTIC STOP NUTS ARE FURNISHED WITH MOUNTING FT-237-( ) AND CABINET CH-74-A.
7. FOR DRILLING OF CABINET CH-60 FOR MOUNTING ON MOUNTING FT-284 SEE FIG. 8.
8. CUT WIRE W-128 TO PROPER LENGTH AND TIN ENDS BEFORE MAKING CONNECTIONS.
9. USE COVER BG-67-( ) AND BG-108 WHEN MAST SECTIONS ARE NOT INSTALLED.
10. FOR MODIFICATION OF CABINET CH-74-A AND FT-284 SEE FIG. 24.

**NOTE II. INSTALLATION COMPONENTS:**

RADIO SET	SCR-508-( )	SCR-528-( )	SCR-608-( )	SCR-628-( )
MAST SECTIONS	MS-52, 53	MS-52, 53	MS-52, 53	MS-52, 53
ANTENNA LEAD-IN WIRE W-128	58"	58"	58"	58"
RADIO TRANSMITTER	BC-604-( )	BC-604-( )	BC-684-( )	BC-684-( )
RADIO RECEIVER	2-BC-603-( )	BC-603-( )	2-BC-683-( )	BC-683-( )
HEADSET CORDS	CD-307 (65"), CD-604	CD-605-(78")		

12. FOR ASSEMBLY OF MOUNTING FT-172 AND FT-178 SEE FIG. 10.
13. FOR DRILLING OF RADIO RECEIVER BC-312-( ) AND RADIO TRANSMITTER BC-191-( ) SEE FIGS. 9 AND 11.
14. HARDWARE: 8-#4 CLAMPS AND HOOKS FURNISHED WITH INTERPHONE CONTROL BOX BC-606-( ).
15. FOR WIRING FOR REMOTE CONTROL FROM INTERPHONE CONTROL BOX SEE FIG. 19.
16. LEAVE SLACK IN CABLES TO ALLOW FOR OPENING OF LID.

Figure 15. Pictorial view of Radio Set SCR-193-H in combination with Radio Set SCR-508-( ), SCR-528-( ), SCR-608-( ), or SCR-628-( ) in Carrier, Personnel, Half-track, M3—Continued.



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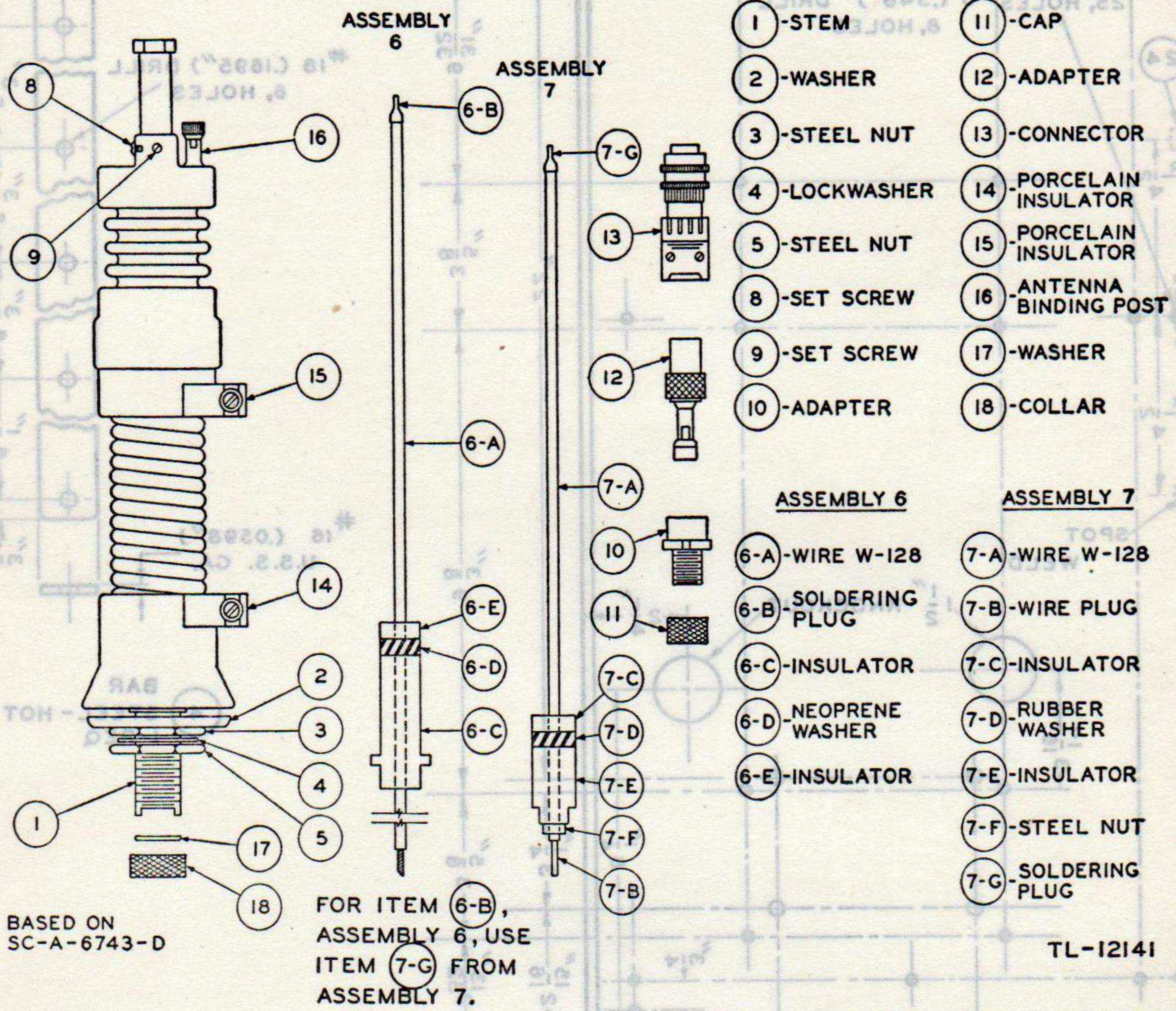
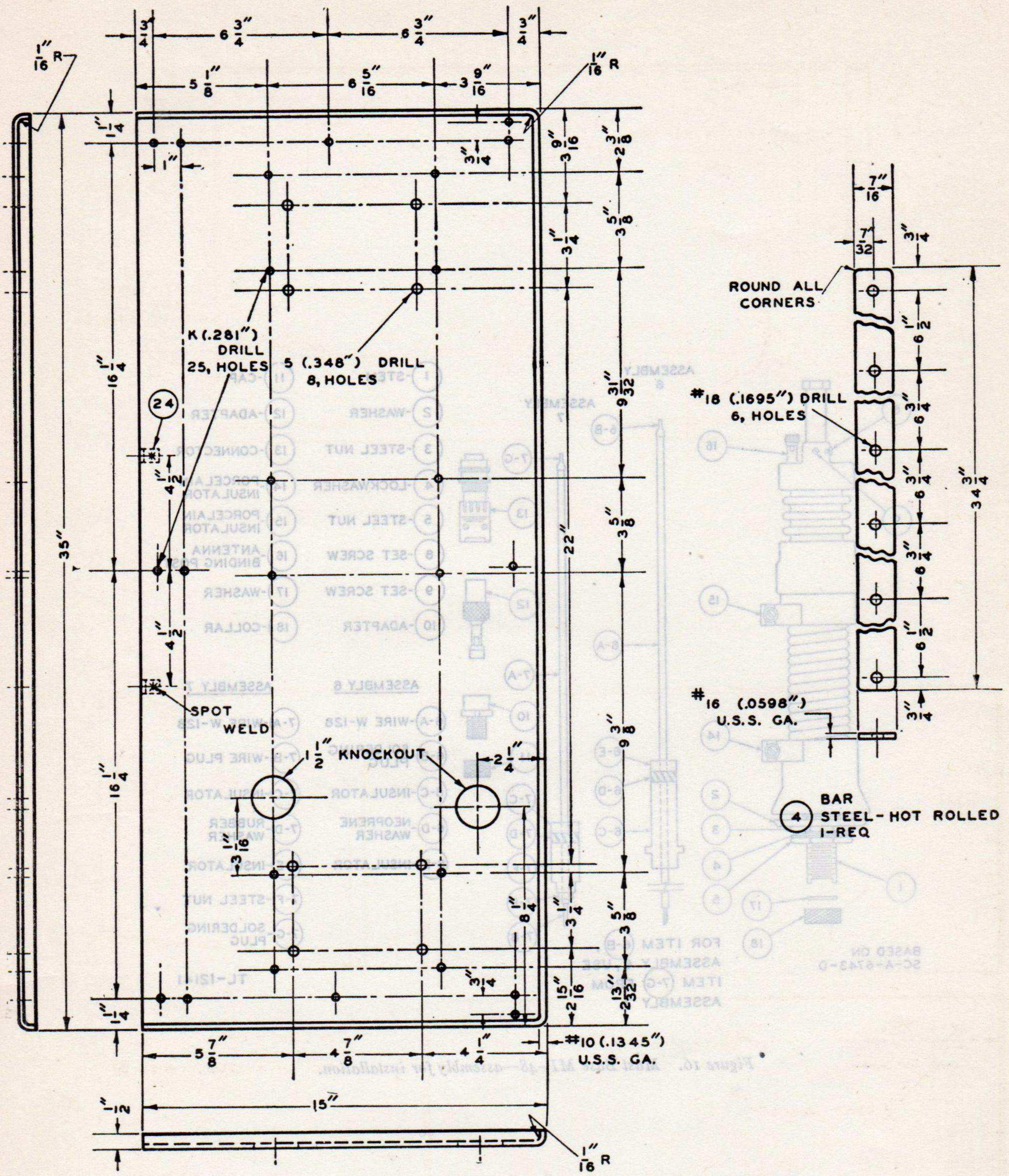


Figure 16. Mast Base MP-48—assembly for installation.



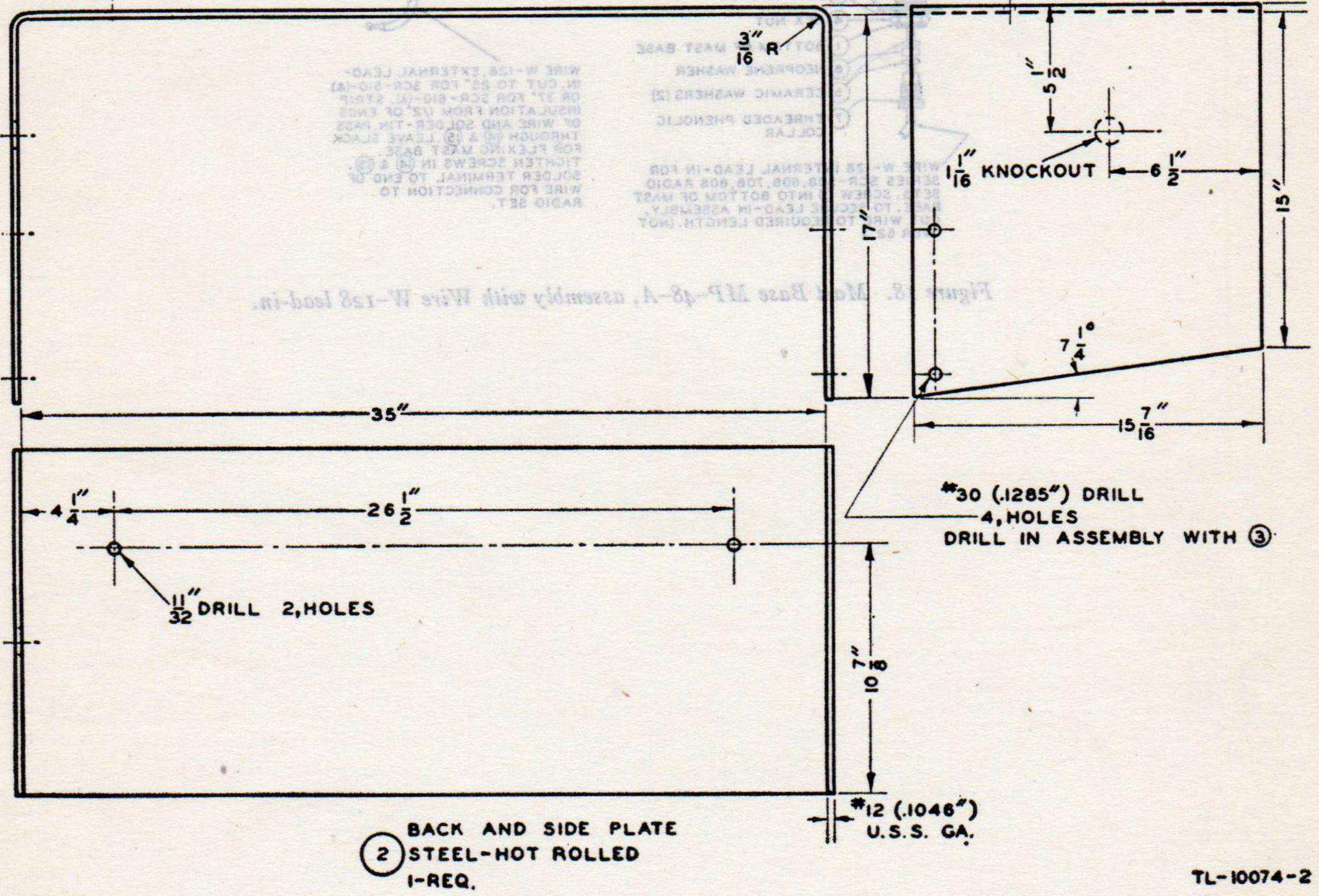
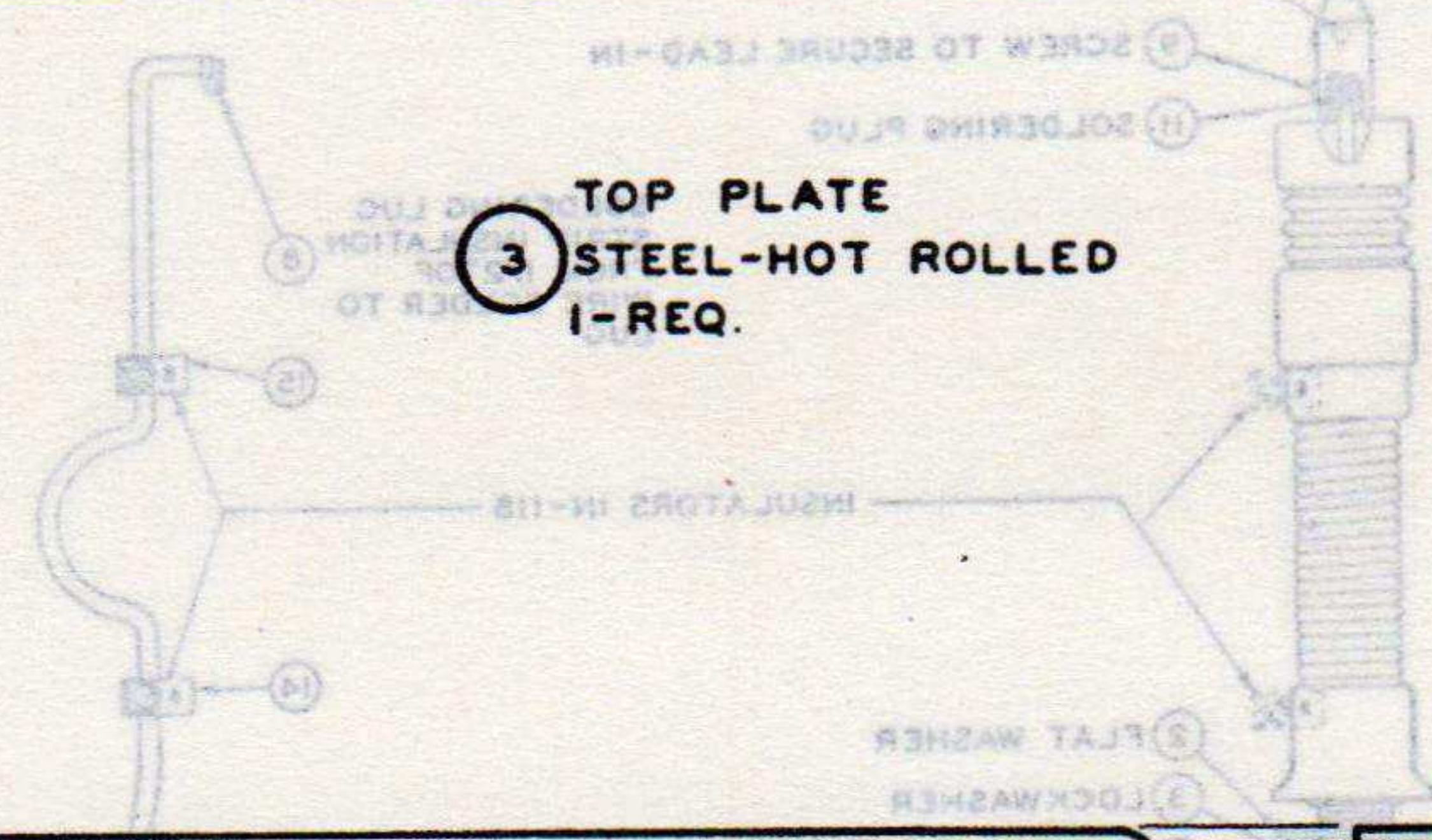
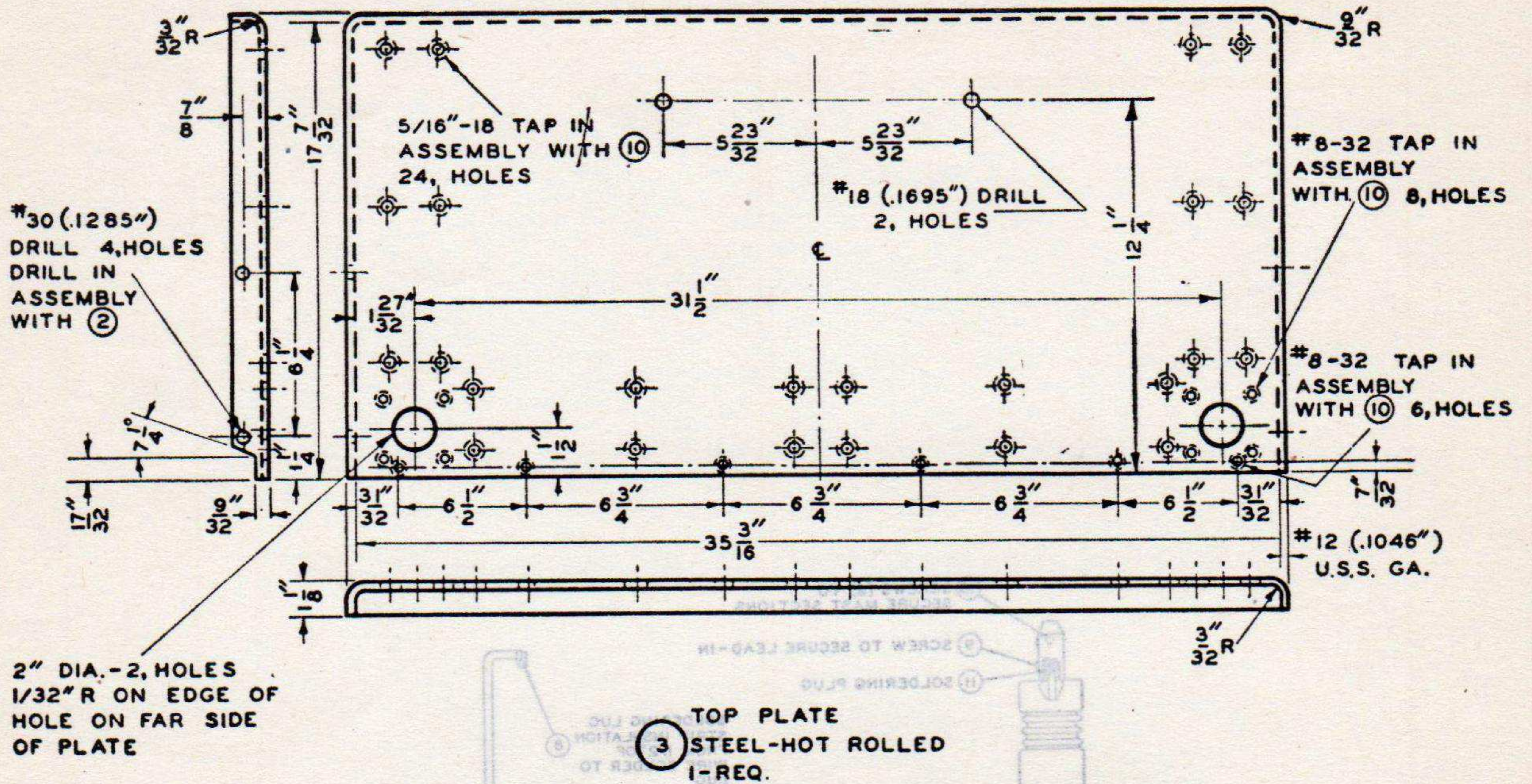


(1) BASE PLATE  
 STEEL - HOT ROLLED  
 1-REQ

ROUND ALL CORNERS  
 #18 (.1695") DRILL  
 6, HOLES  
 #16 (.0598")  
 U.S.S. GA.  
 (4) BAR  
 STEEL - HOT ROLLED  
 1-REQ

TL-10074-1  
 Figure 17. Cabinet











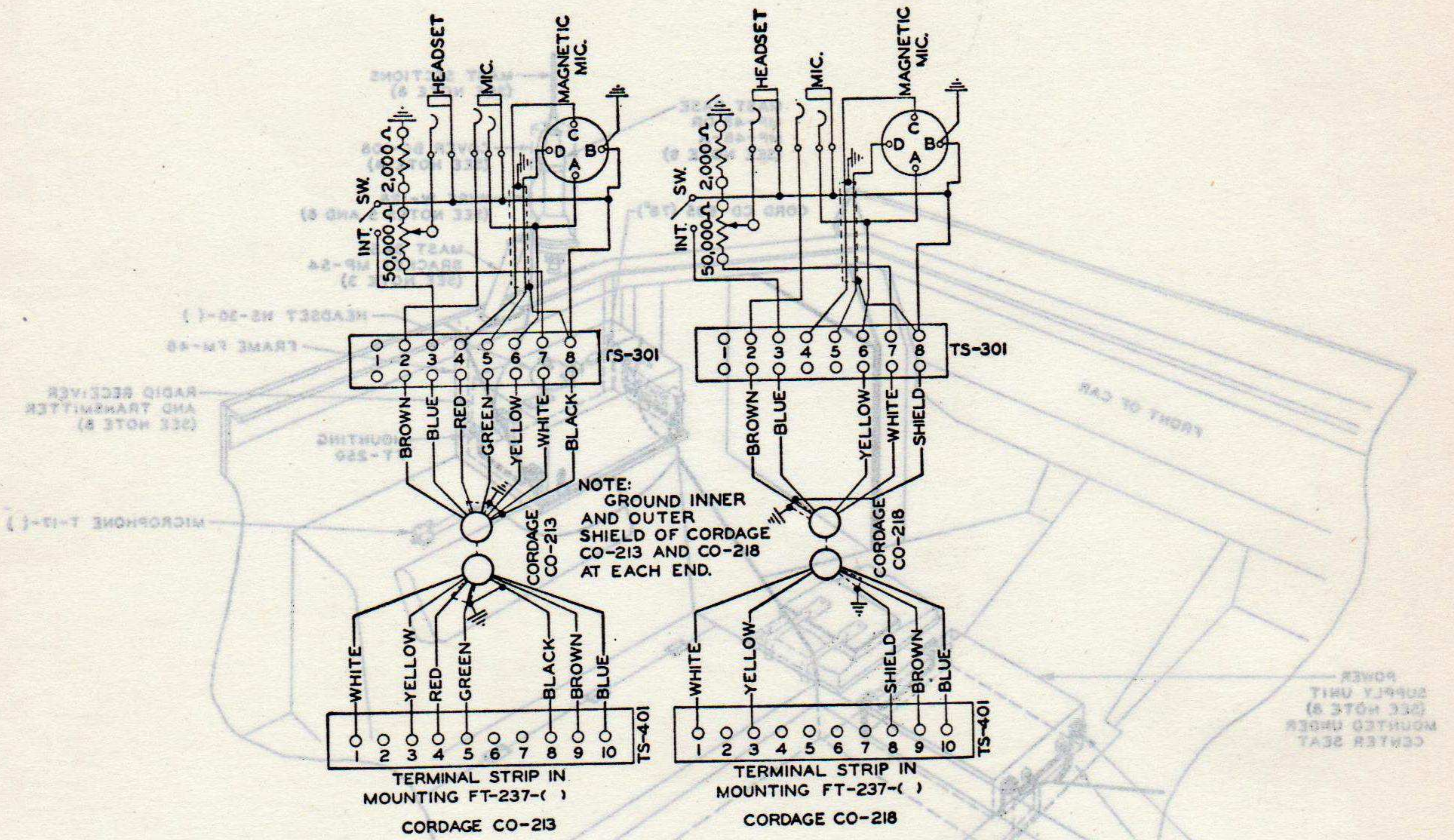


Figure 19. Wiring diagram for remote control of Radio Set SCR-508-( ), SCR-528-( ), SCR-608-( ), or SCR-628-( ) from Interphone Control Box BC-606-( ).



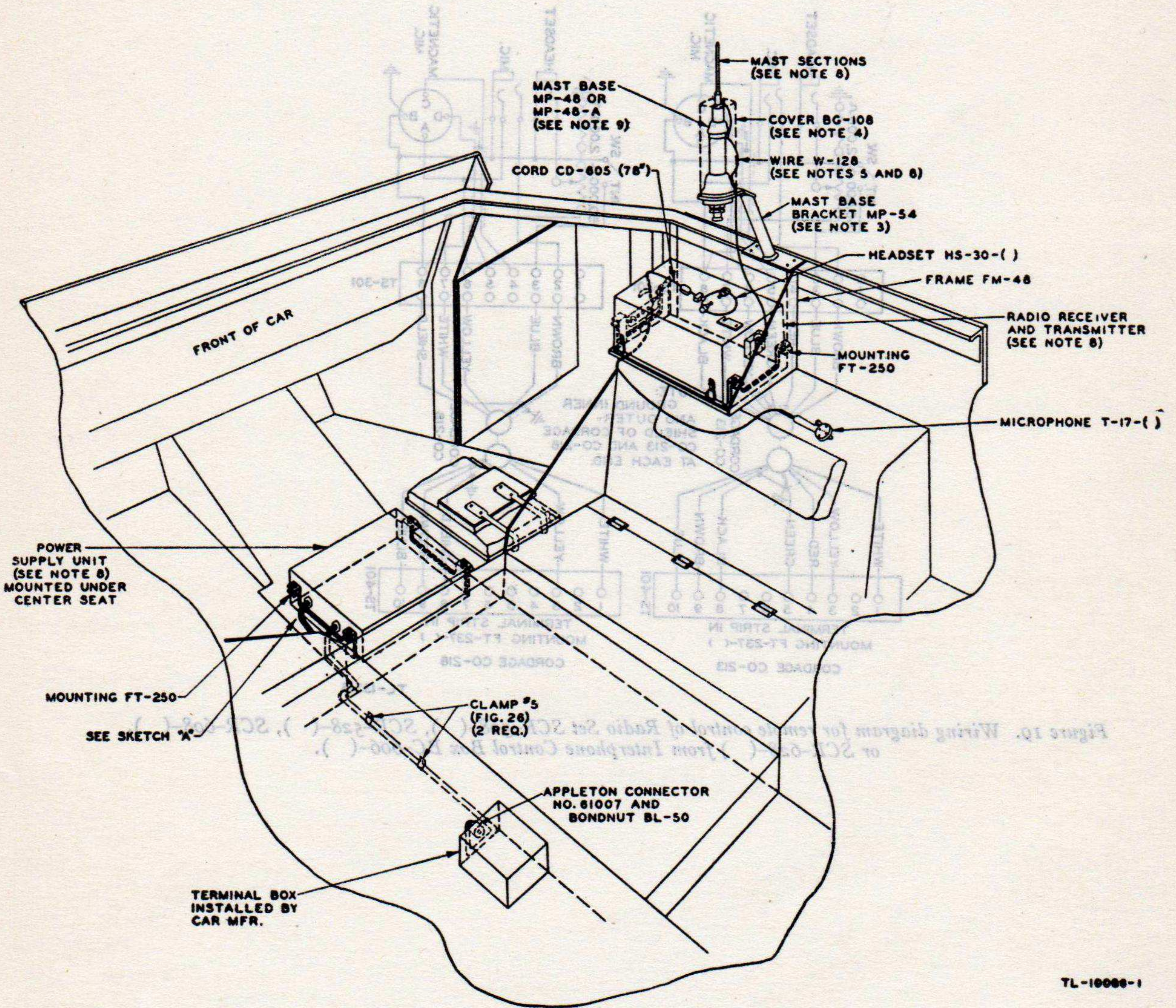
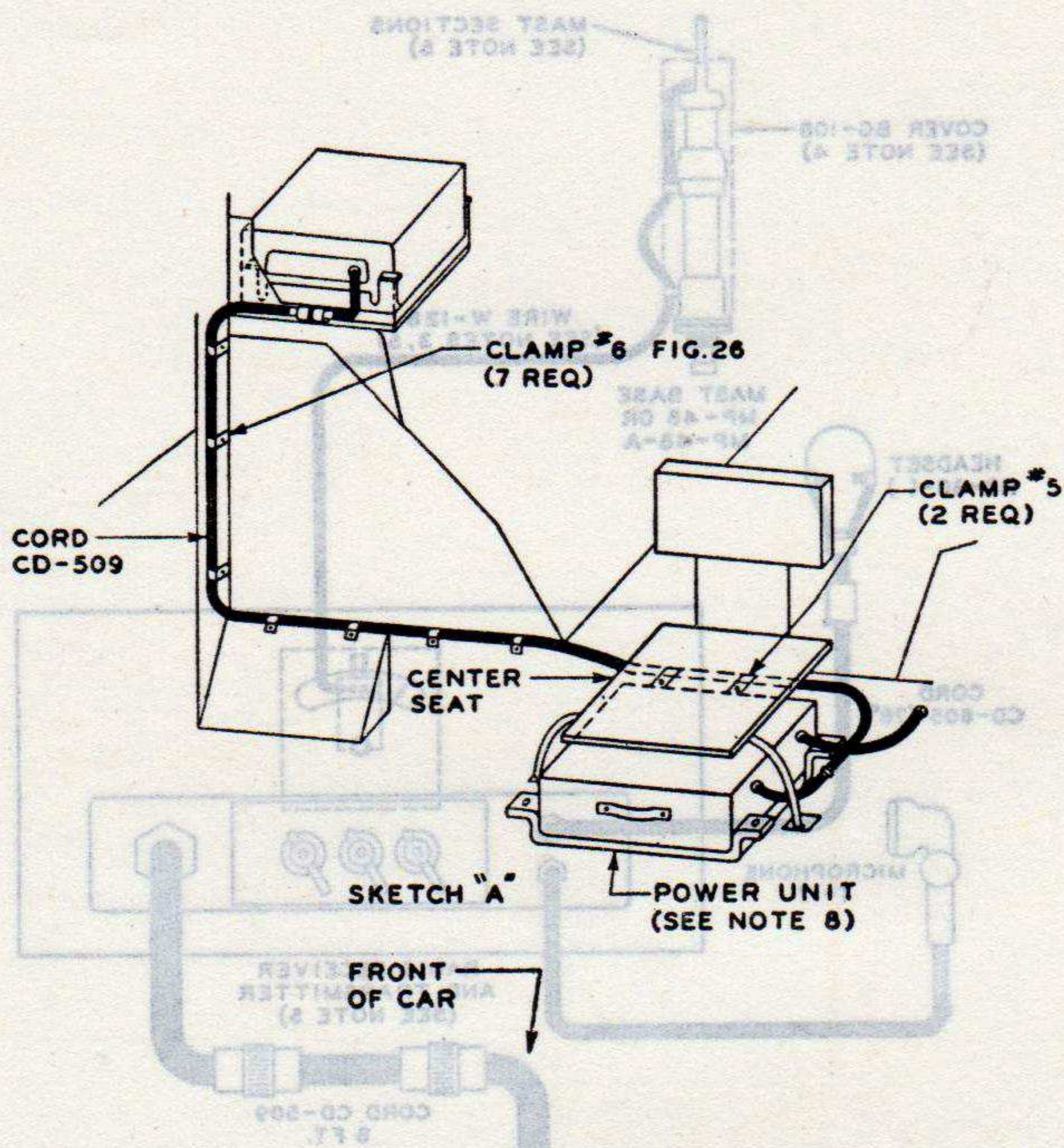


Figure 20. Pictorial view of Radio Set SCR-510-( ),





**NOTE:**

**HARDWARE REQUIRED**

- MOUNTING FT-250
- 8-1/4"-20 X 1" LONG HEX. MACH. SCREWS.
- 8-1/4"-20 ELASTIC STOP NUTS
- FRAME FM-48
- MOUNTED WITH HARDWARE EXISTING IN THE CAR.
- MAST BASE BRACKET MP-54 (SEE NOTE #3)
- 4- 5/16"-24 X 1" HEX. HEAD MACH SCREWS
- 4- 5/16"-24 STOP NUTS
- CLAMPS (FIG. 26)
- CLAMP #5 (4 REQ)
- (USE EXISTING BOLTS)
- CLAMP #6 (7 REQ)
- (USE EXISTING BOLTS)

1. FOR CORDING DIAGRAM (SEE FIG. 21)
2. FOR INSTALLATION OF BRACKETS AND MOUNTING FRAMES (SEE FIGS. 3 AND 22)
3. SCREWS AND STOP NUTS ARE FURNISHED WITH MAST BASE BRACKET MP-54
4. USE COVER BG-108 WHEN MAST SECTIONS ARE NOT INSTALLED.
5. CUT WIRE W-128 TO PROPER LENGTH. TIN ENDS BEFORE MAKING CONNECTIONS.
6. FOR RADIO SETS SCR-510-( ) OR SCR-610-( ) AND SCR-506-( ) COMBINATION USE THIS FIGURE AND FIG. 23.
7. FOR RADIO SETS SCR-510-( ) OR SCR-610-( ) AND SCR-193-H COMBINATION USE THIS FIGURE AND FIG. 2
8. INSTALLATION COMPONENTS:

RADIO SET	SCR-510-( )	SCR-610-( )
MAST SECTIONS	MS-52,53	MS-51,52,53
LEAD-IN WIRE W-128	32"-NOT STANDARD	36" ± 1"
RADIO RECEIVER AND TRANSMITTER	BC-620-( )	BC-659-( )
POWER UNIT	PE-120-( ) OR PE-97-( )	PE-120-( ) OR PE-117-( )

9. REMOVE INTERNAL LEAD (ASSEMBLY 7) FROM MAST BASE MP-48

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SCR-610-( ) in Carrier, Personnel, Half-track, M3.



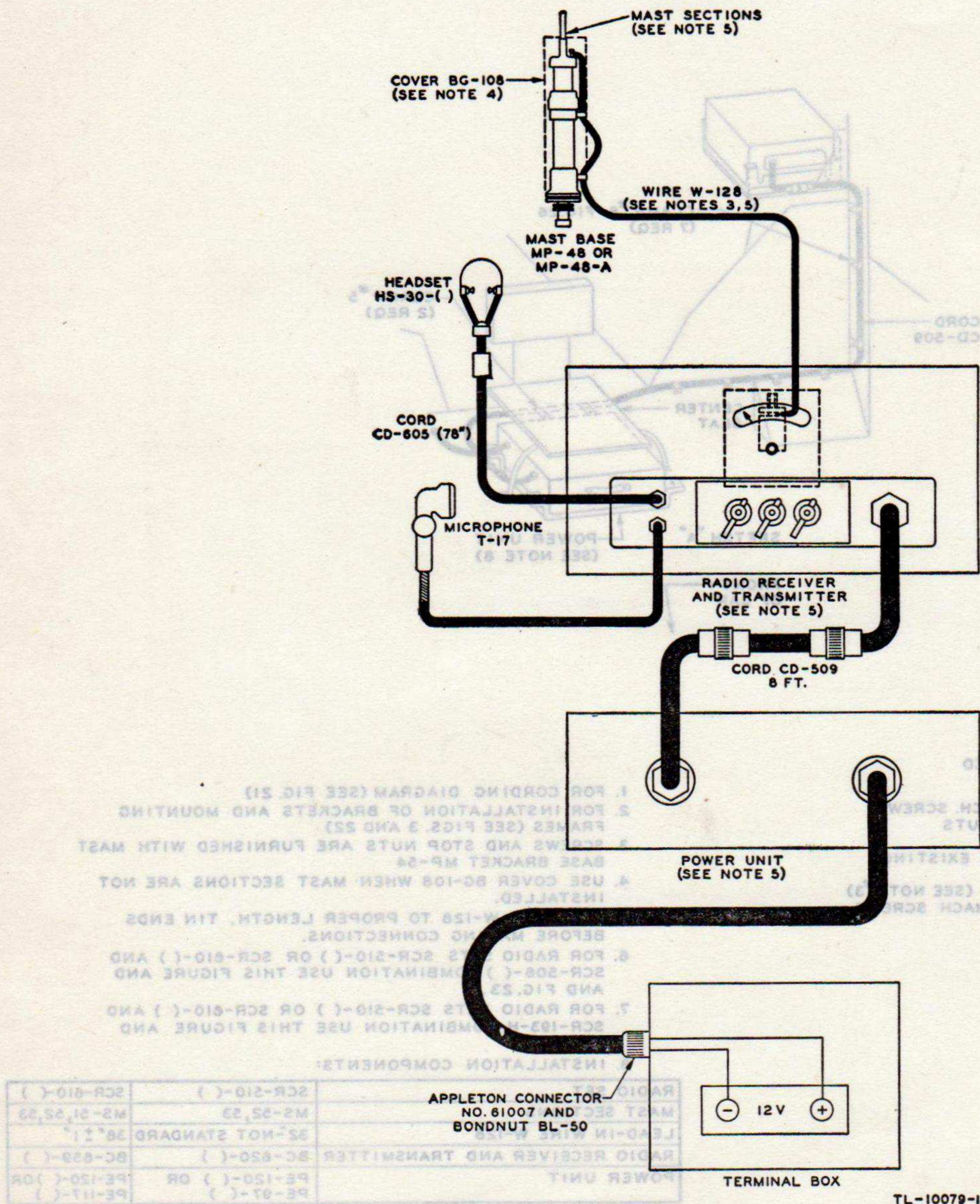
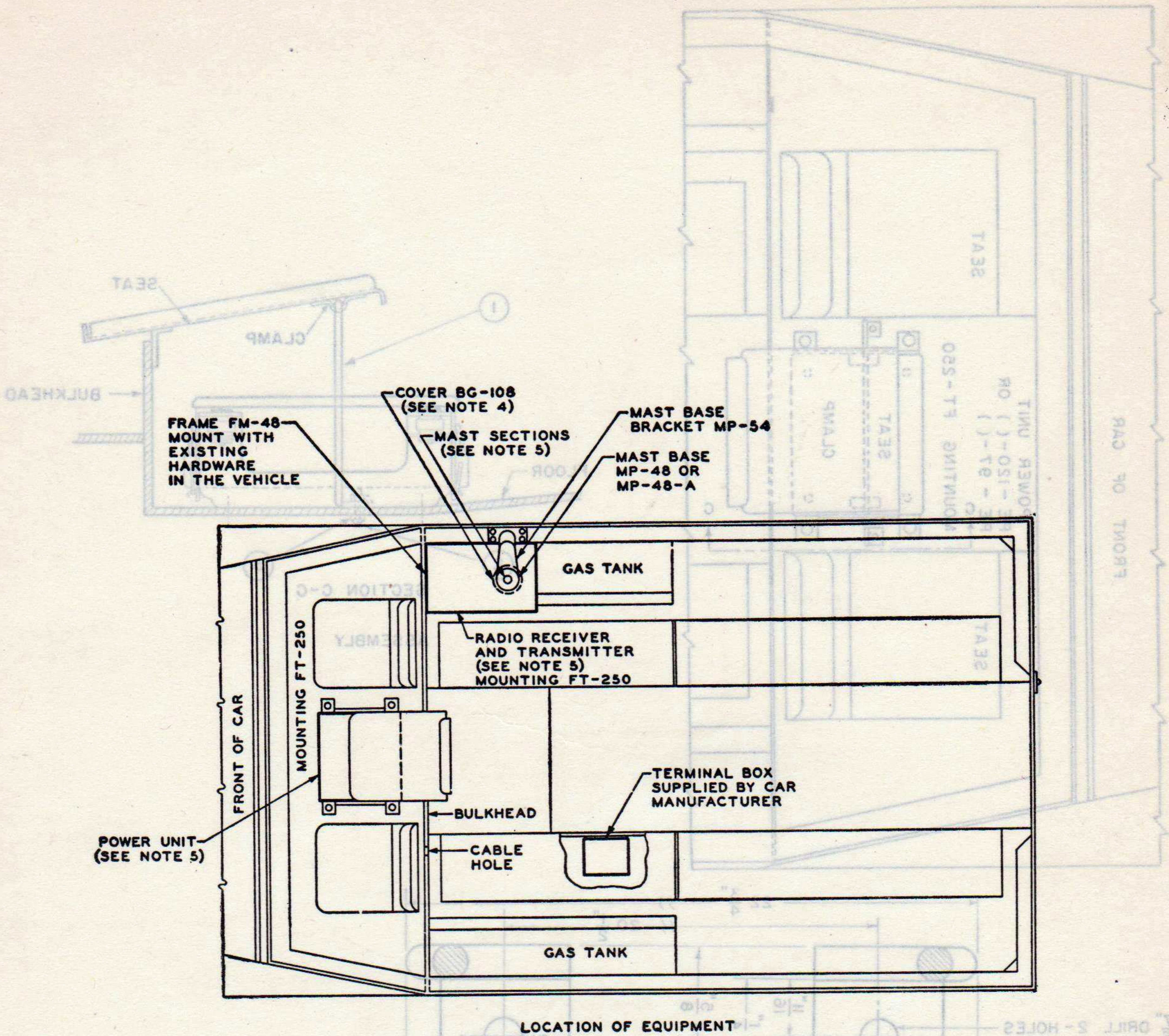


Figure 21. Cording diagram of Radio Set SCR-510-( ) or





**NOTES:**

1. FOR MOUNTING HOLES AND LOCATION SEE FIG. 4.
2. FOR INSTALLATION OF BRACKETS AND TERMINAL BOX SEE FIG. 3.
3. CUT WIRE W-128 TO PROPER LENGTH. TIN ENDS BEFORE MAKING CONNECTIONS.
4. USE COVER BG-108 WHEN MAST SECTIONS ARE NOT INSTALLED.
5. INSTALLATION COMPONENTS:

RADIO SET	SCR-510-( )	SCR-610-( )
MAST SECTION	MS-52, 53	MS-51, 52, 53
LEAD-IN WIRE W-128	32" (NON-STANDARD)	36" ± 1"
RADIO RECEIVER AND TRANSMITTER	BC-620-( )	BC-659-( )
POWER UNIT	PE-120-( ) OR PE-97-( )	PE-120-( ) OR PE-117-( )

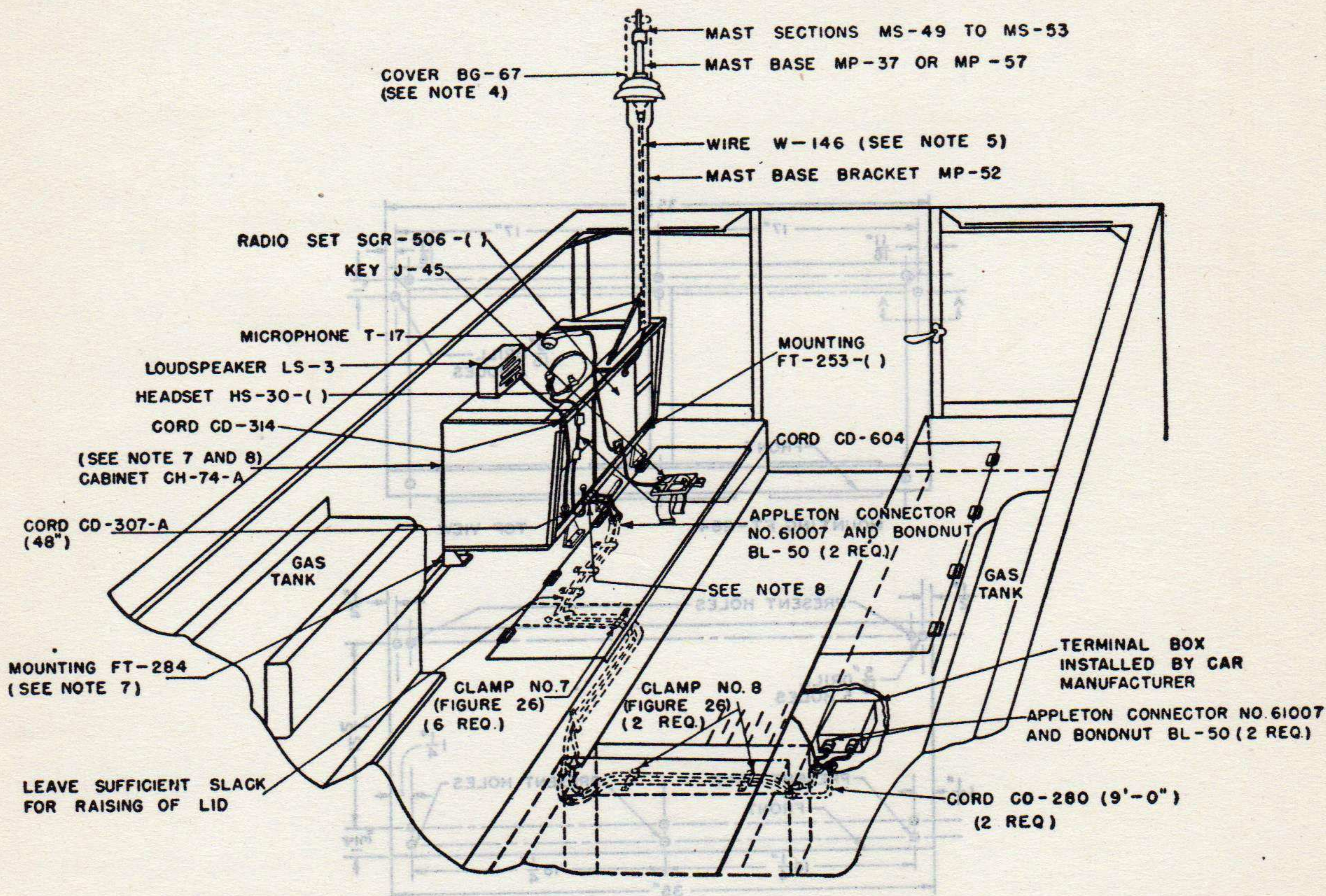
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SCR-610-( ) in Carrier, Personnel, Half-track, M3.









**HARDWARE REQUIRED:**

- MOUNTING FT-284 (SEE NOTE NO. 3 AND 7)
- 6-3/8" -24 X 1" OVAL HD. MACH. SCREWS
- 6-3/8" -24 HEX. NUTS
- 6-3/8" LOCKWASHERS
- CABINET CH-74-A (SEE NOTE NO. 2 AND 7)
- 6-1/4" -28 X 3/4" LG. HEX. HD. MACH. SCREWS
- 6-1/4" -28 ELASTIC STOP NUTS
- MOUNTING FT-253-() (SEE NOTE NO. 2)
- 12-1/4" -20 X 3/4" LG. HEX. HD. MACH. SCREWS
- 12-1/4" -20 ELASTIC STOP NUTS
- CLAMPS (FIGURE 26)
- CLAMP NO. 7 (6 REQ.)
- 6-NO. 8 -32 X 3/4" LG. RD. HD. MACH. SCREWS
- 6-NO. 8 -32 HEX. NUTS
- 6-NO. 8 LOCKWASHERS
- CLAMP NO. 8 (2 REQ.)
- 2-1/4" -20 X 3/4" LG. HEX. HD. BOLTS
- 2-1/4" -20 HEX. NUTS
- 2-1/4" LOCKWASHERS

**NOTE.**

1. FOR INSTALLATION OF BRACKETS AND MOUNTING FRAMES SEE FIGURE 3.
2. MACHINE SCREWS AND STOP NUTS ARE FURNISHED WITH MOUNTING FT-253-() AND CABINET CH-74-A.
3. FOR MOUNTING FT-284 USE HARDWARE EXISTING IN CAR
4. USE COVER BG-67-() WHEN MAST SECTIONS ARE NOT INSTALLED.
5. CUT WIRE W-146 TO PROPER LENGTH TIN ENDS BEFORE MAKING CONNECTIONS
6. FOR RADIO SETS SCR-506-() AND SCR-510-() OR SCR-610-() COMBINATION USE THIS FIGURE AND FIGURE 20
- FOR RADIO SETS SCR-506-() AND SCR-508-(), SCR-528-(), SCR-608-(), OR SCR-628-() COMBINATION USE THIS FIGURE AND FIGURE 14
7. FOR MODIFICATION OF CABINET CH-74-A AND MOUNTING FT-284 SEE FIGURE 24
8. IF CABINET CH-74-A IS ISSUED WITHOUT KNOCK-OUTS. IN BOTTOM, MODIFY AS SHOWN IN FIGURE 16

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Figure 23. Pictorial view of Radio Set SCR-506-() in Carrier, Personnel, Half-track, M3.



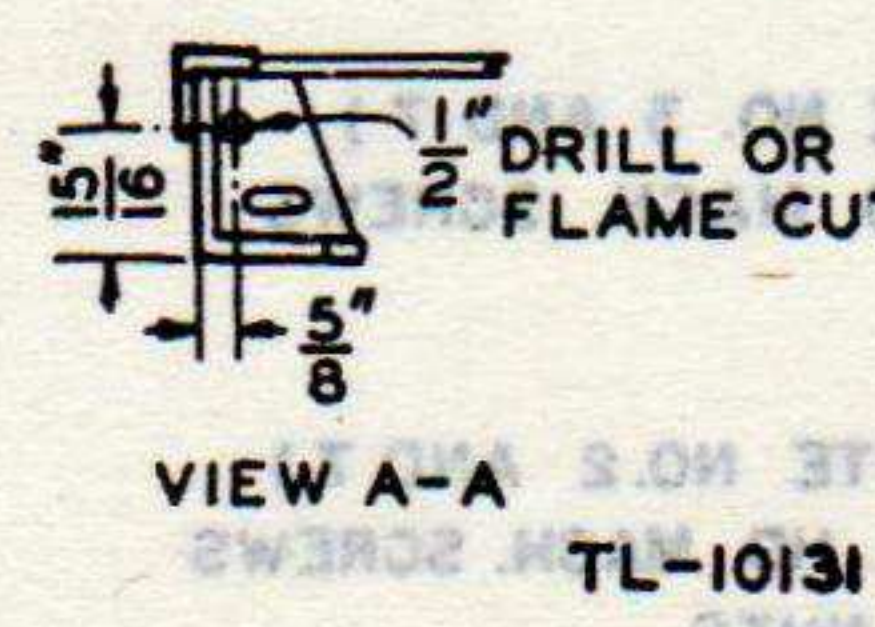
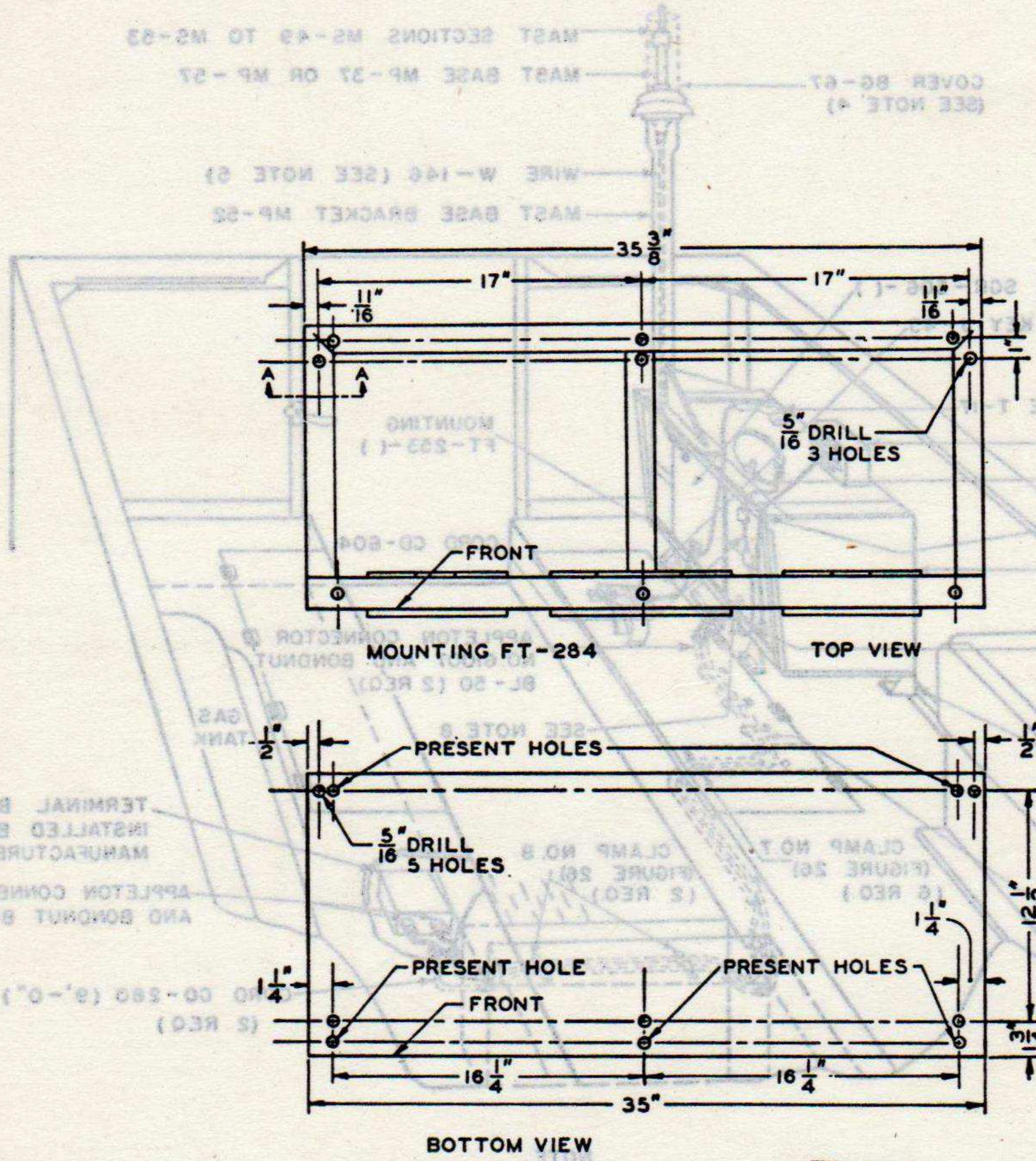


Figure 24. Drilling of Mounting FT-284 and Cabinet CH-74-A for installation.

HARDWARE REQUIRED:  
 MOUNTING FT-284 (SEE NOTE 1)  
 6-3/8" - 24 X 1" OVAL FLAME CUT  
 6-3/8" - 24 HEX NUTS  
 6-3/8" LOCKWASHERS  
 CABINET CH-74-A (SEE NOTE 2)  
 6-1/4" - 28 X 3/4" LG. HEX. HD. MACH. SCREWS  
 6-1/4" - 28 ELASTIC STOP NUTS  
 MOUNTING FT-284 (SEE NOTE 3)  
 12-1/4" - 20 X 3/4" LG. HD. MACH. SCREWS  
 12-1/4" - 20 ELASTIC STOP NUTS  
 CLAMPS (FIGURE 25)  
 CLAMP NO. 7 (6 REQ.)  
 6-NO. 8 - 32 X 3/4" LG. HD. MACH. SCREWS  
 6-NO. 8 - 32 HEX. NUTS  
 6-NO. 8 LOCKWASHERS  
 CLAMP NO. 8 (2 REQ.)  
 2-1/4" - 20 X 3/4" LG. HEX. HD. BOLTS  
 2-1/4" - 20 HEX. NUTS  
 2-1/4" LOCKWASHERS

1. FOR MODIFICATION OF CABINET CH-74-A AND MOUNTING FT-284 SEE FIGURE 24.  
 2. IF CABINET CH-74-A IS ISSUED WITHOUT KNOCK-OUTS IN BOTTOM, MODIFY AS SHOWN IN FIGURE 24.  
 3. FOR MODIFICATION OF CABINET CH-74-A AND MOUNTING FT-284 USE THIS FIGURE AND FIGURE 20.  
 4. FOR RADIO SETS SCR-505-(-) AND SCR-510-(-) OR SCR-510-(-) COMBINATION USE THIS FIGURE AND FIGURE 20.  
 5. MACHINE SCREWS AND STOP NUTS ARE FURNISHED WITH FT-284 (-) AND CABINET CH-74-A. 3. FOR MOUNTING FT-284 USE HARDWARE EXISTING IN CAR.  
 6. USE COVER BG-67-(-) WHEN MAST SECTIONS ARE NOT INSTALLED.  
 7. USE COVER BG-67-(-) WHEN MAST SECTIONS ARE NOT INSTALLED.  
 8. USE COVER BG-67-(-) WHEN MAST SECTIONS ARE NOT INSTALLED.  
 9. USE COVER BG-67-(-) WHEN MAST SECTIONS ARE NOT INSTALLED.  
 10. USE COVER BG-67-(-) WHEN MAST SECTIONS ARE NOT INSTALLED.

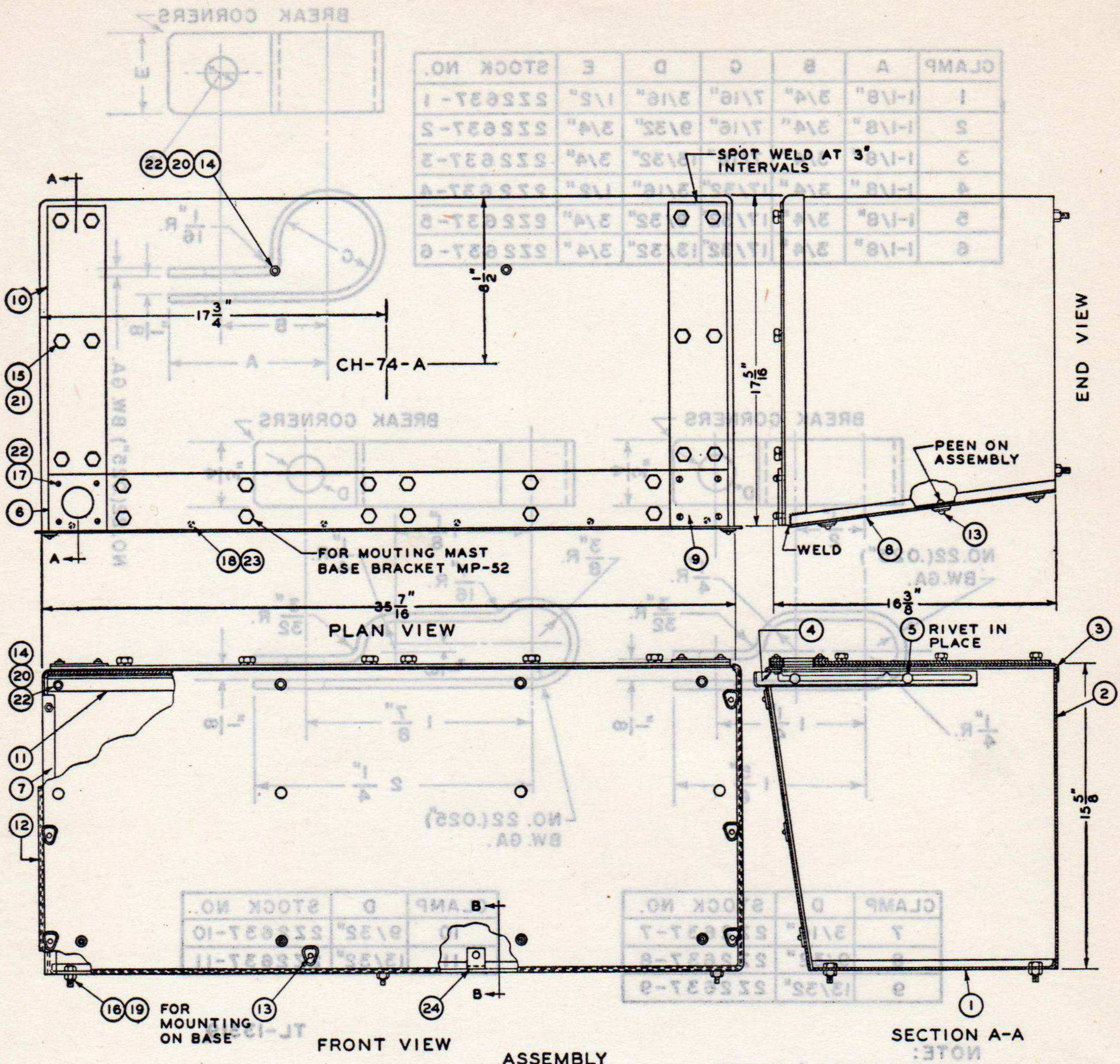
BASED ON SC-A-8137-C  
 CABINET CH-74-A,  
 MOUNTING FT-284

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Figure 25. Pictorial view of Radio Set SCR-505-(-) in Carrier, Personnel, Half-track, M3.



CLAMP	A	B	C	D	E	STOCK NO.
1	1-1/8"	3/4"	7/16"	3/16"	1/2"	228837-1
2	1-1/8"	3/4"	7/16"	3/16"	1/2"	228837-2
3	1-1/8"	3/4"	7/16"	3/16"	1/2"	228837-3
4	1-1/8"	3/4"	7/16"	3/16"	1/2"	228837-4
5	1-1/8"	3/4"	7/16"	3/16"	1/2"	228837-5
6	1-1/8"	3/4"	7/16"	3/16"	1/2"	228837-6



ITEM NO.	NAME OF ITEM	QUAN. REQ.	REMARKS
1	BASE PLATE	1	
2	BACK AND SIDE PLATE	1	
3	TOP PLATE	1	
4	BAR	1	
5	STUD	4	
6	PLATE	1	
7	ANGLE L.H.	1	
8	ANGLE R.H.	1	
9	PLATE	1	
10	PLATE	1	
11	BRACKET	1	
12	COVER ASSEMBLY	1	
13	STUD (UNITED-CARR)	8	#8-32 X 1/4" LG. CAT. #680
14	STUD	6	#8-32 X 3/8" LG. CAT. #559
15	HEX. HEAD MACH. SCREW	24	5/16"-18 X 1/2" LONG
16	HEX. HEAD MACH. SCREW	6	1/4"-28 X 3/4" LONG
17	ROUND HEAD MACH. SCREW	8	#8-32 X 3/8" LONG
18	" " " "	6	#8-32 X 5/16" LONG
19	STOP NUT (ELASTIC)	6	1/4"-28 CAT. #42E048
20	HEX. NUT	6	#8-32 STANDARD
21	LOCK WASHER	24	S.A.E. REG. FOR 5/16" SCREW
22	" " " "	14	S.A.E. REG. FOR #8 SCREW
23	" " " "	6	S.A.E. REG. FOR #8 SCREW
24	CLIP	2	

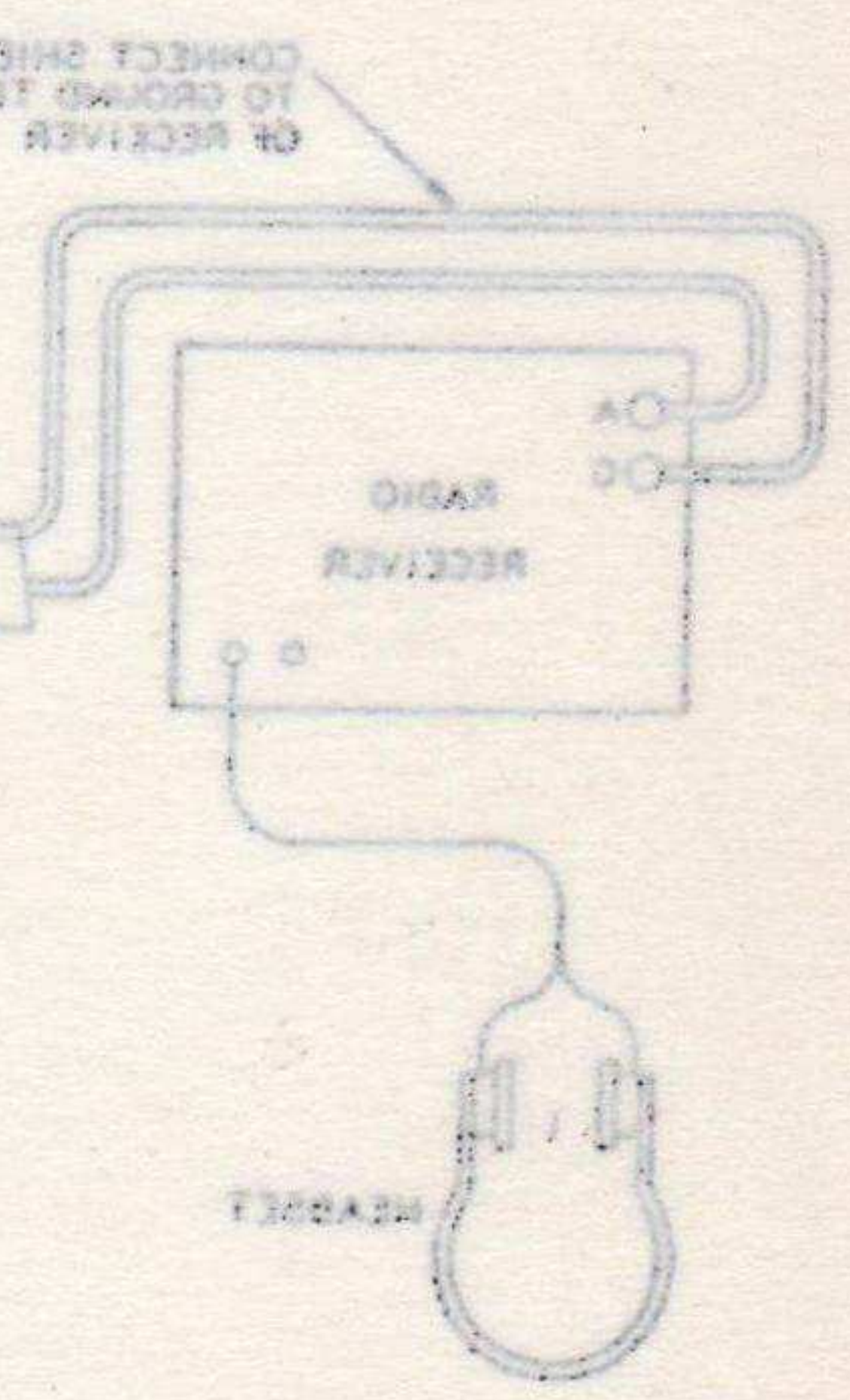
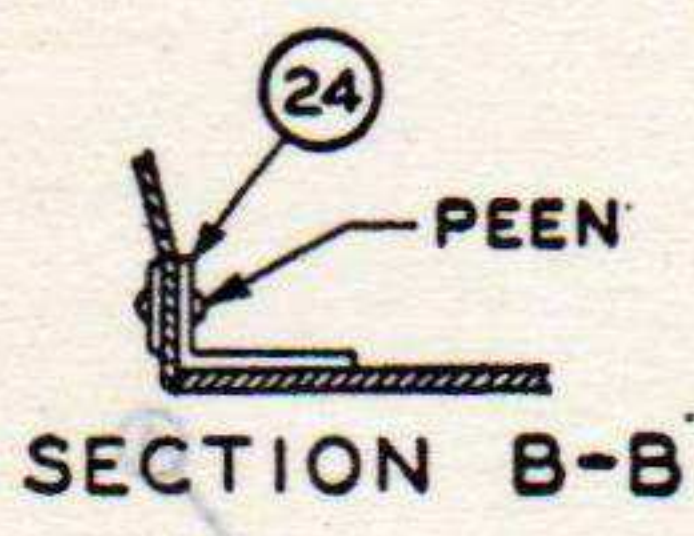
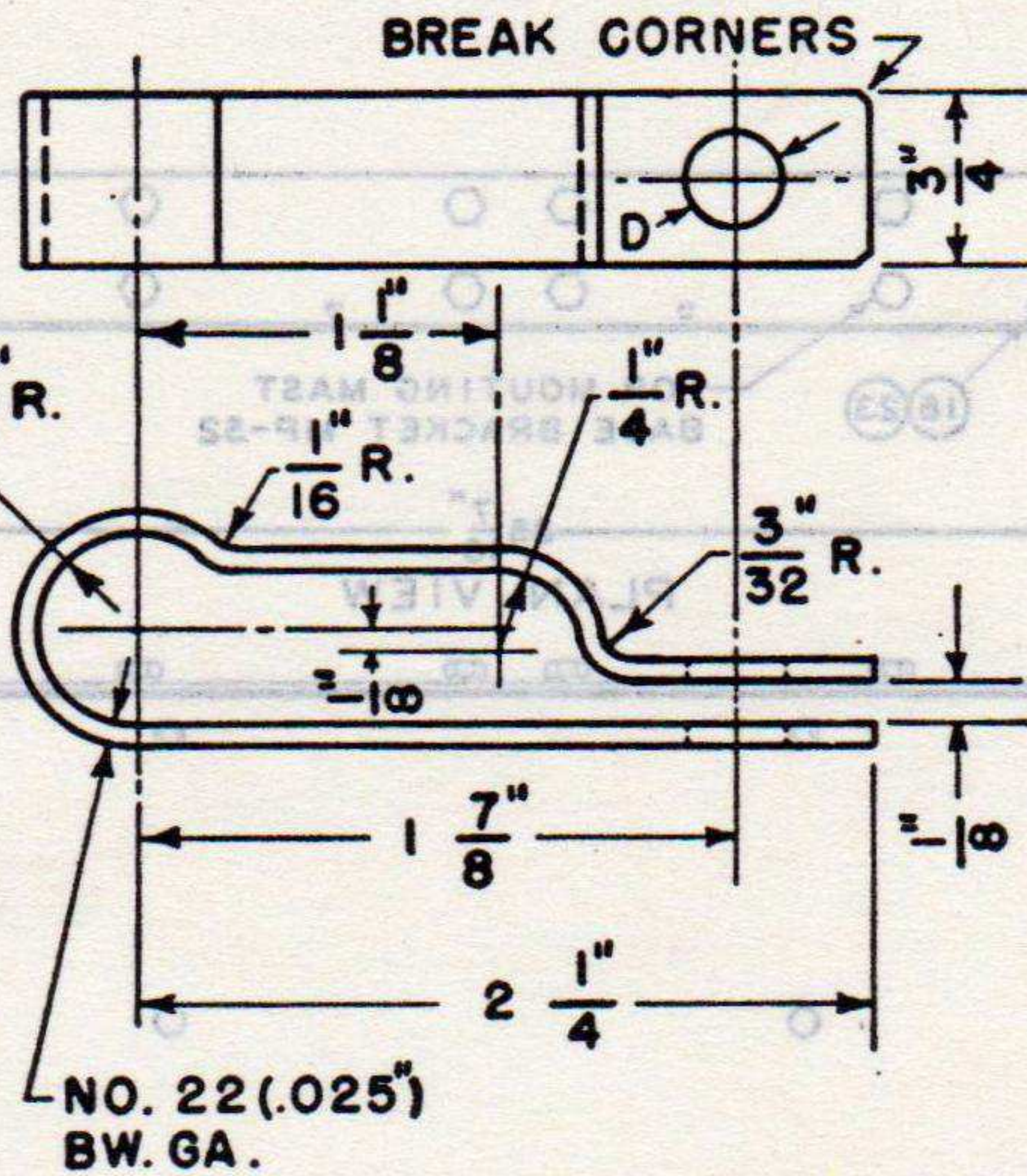
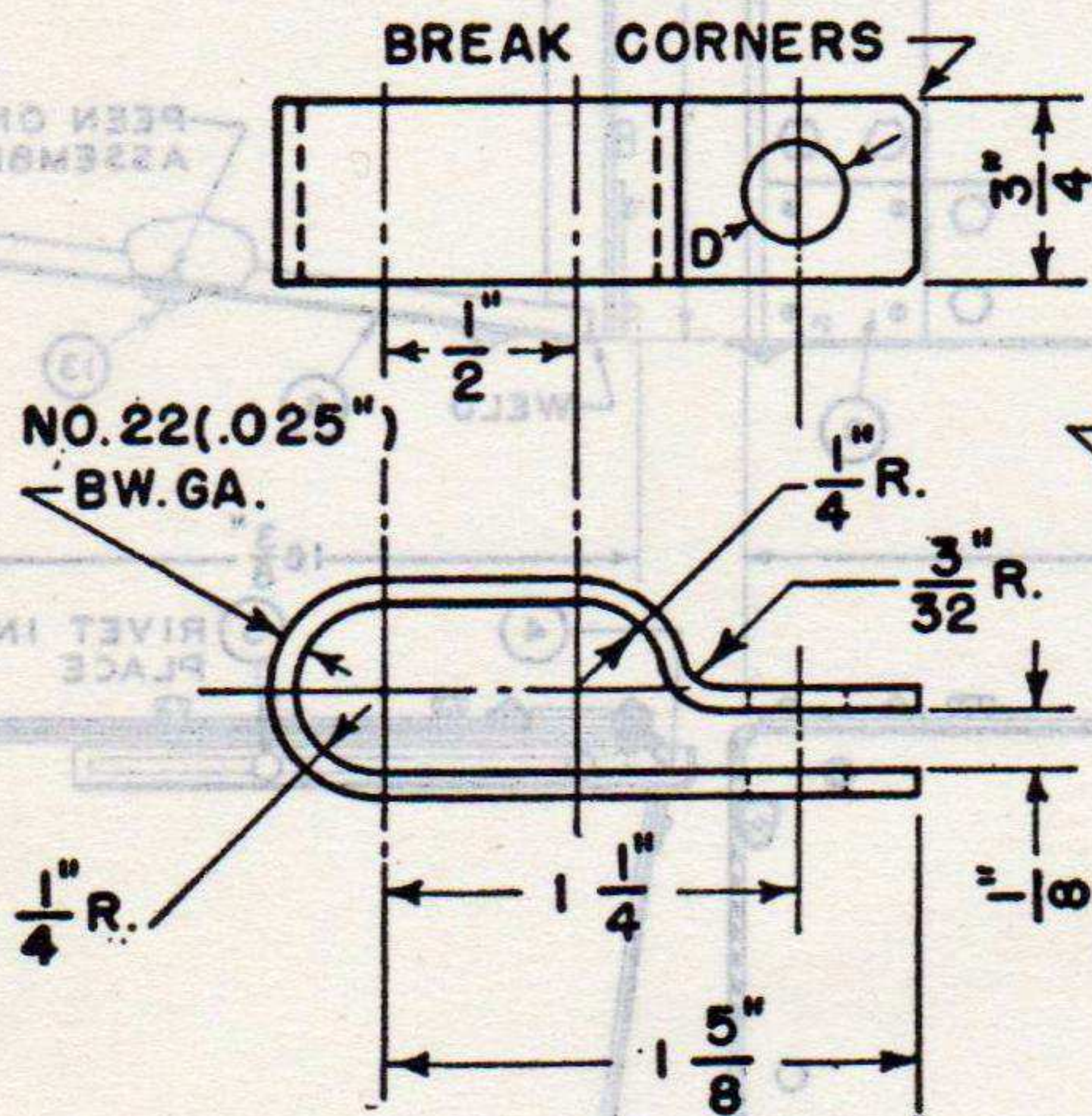
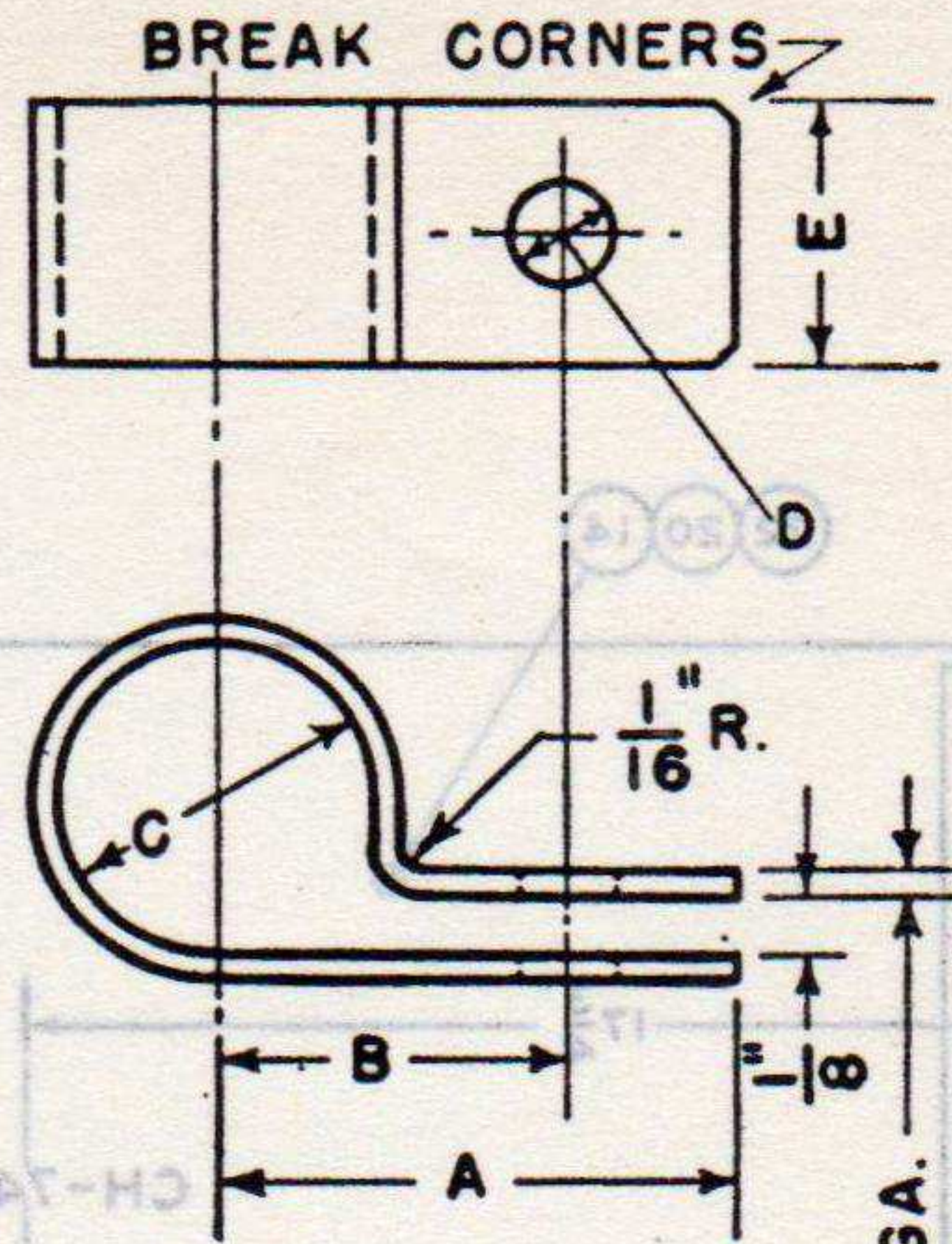


Figure 25. Cabinet CH-74-A—assembly.



CLAMP	A	B	G	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



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  $\pm 1/32"$

Figure 26. Clamps for radio cordage.

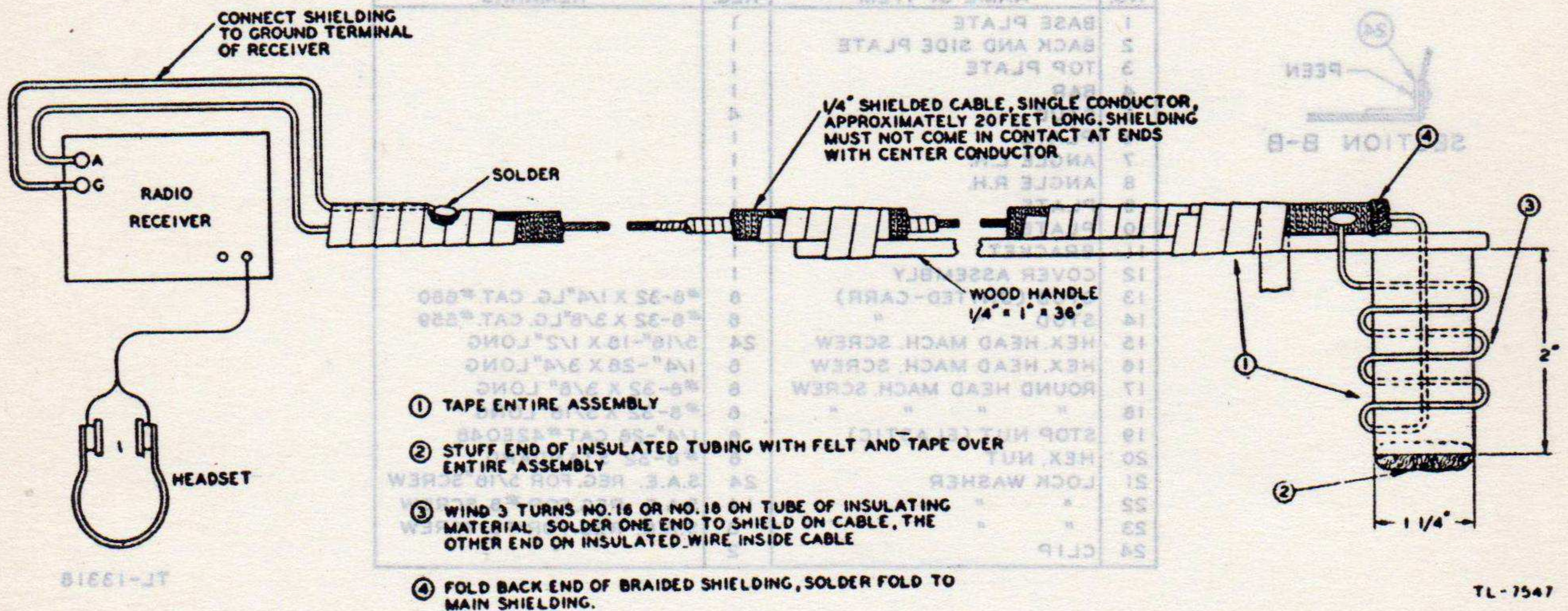


Figure 27. Probe antenna.



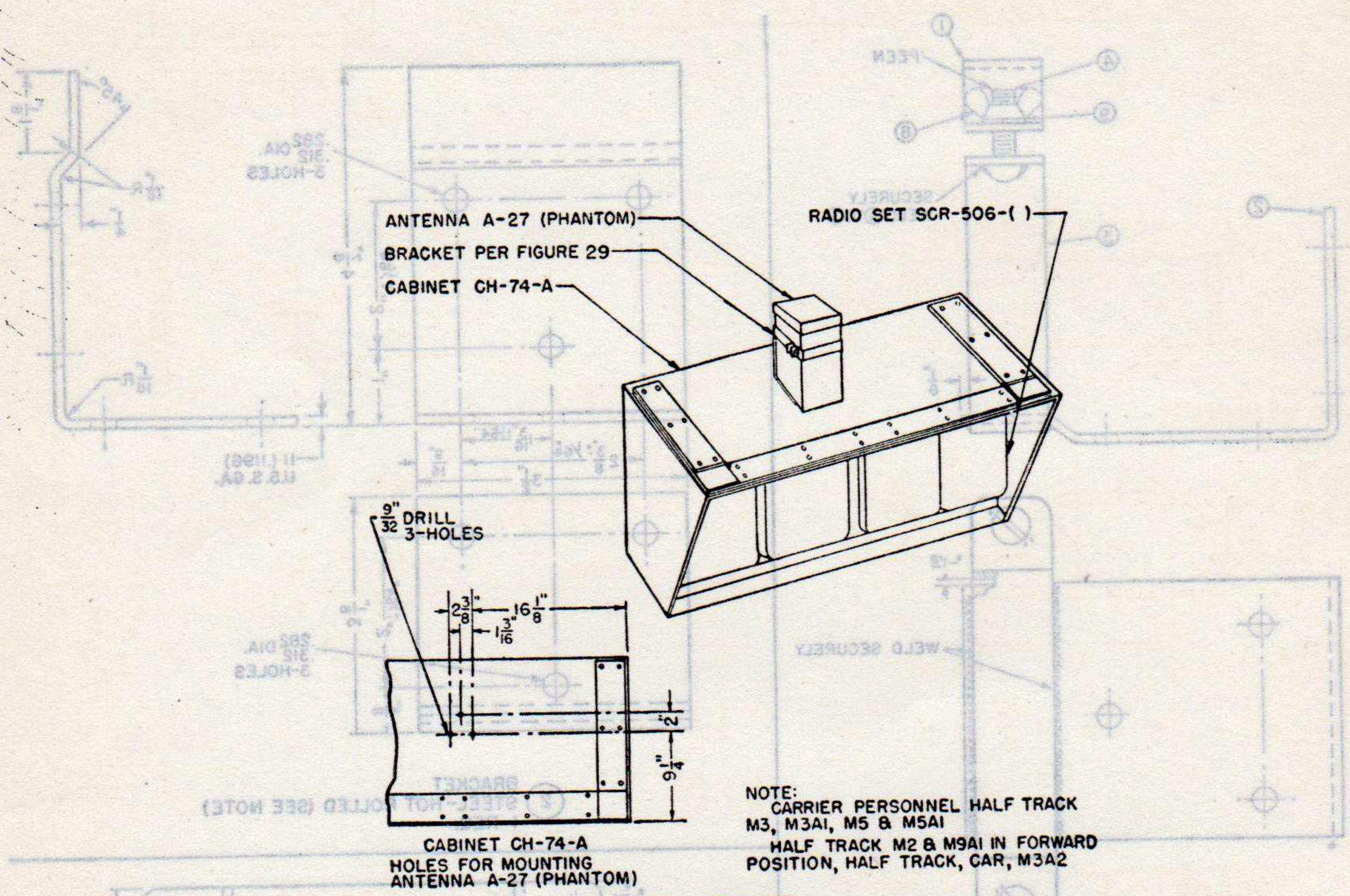


Figure 28. Location of Antenna A-27 (Phantom) for Radio Set SCR-506-() in Carrier, Personnel, Half-track, M3.

NOTE:  
REMOVE ALL BURRS  
AFTER WELDING (A) TO (C) SHALL BE  
BORDERED AND THEN GIVEN ONE SPRAY COAT OF METAL  
PRIMER, GLASS JOI, AND ONE SPRAY COAT OF SEMI-GLOSS  
OLIVE DRAB BAKING ENAMEL, GLASS JOI, TOUCH UP  
HEADS OF (A) TO MATCH SURROUNDING SURFACE. ALL  
PAINTS AND METHODS OF APPLICATION SHALL BE IN  
ACCORDANCE WITH ORDNANCE TENTATIVE SPECIFICATION  
TAG 22-NO. 880.

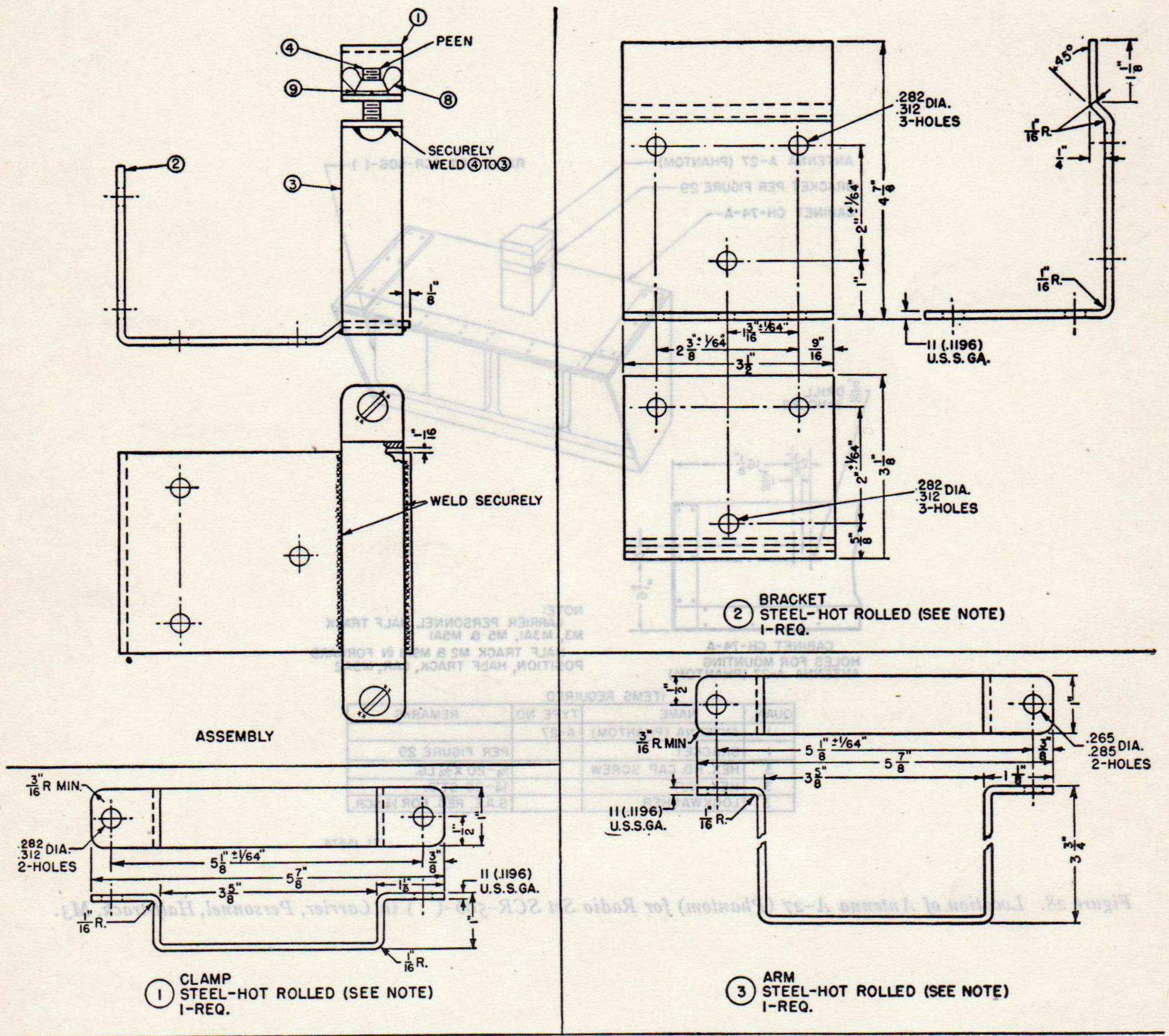
(A) & (B) ARE USED FOR INSTALLATION AND  
SHALL BE PLACED IN A HEAVY CLOTH BAG RAINY AND  
PERMANENTLY MARKED. THIS BAG CONTAINS SCREWS, NUTS  
AND LOCKWASHERS FOR INSTALLATION SPARES ARE  
INCLUDED IN QUANTITIES. THIS BAG SHALL BE TIED TO THE  
BRACKET.  
TL 15078

QUAN.	NAME OF ITEM	MATERIAL	TYPE NO.	REMARKS
1	CLAMP	STEEL		
1	BRACKET	STEEL		
2	RD. HD. CAP. SCREW			1/4-20 X 1/2 LONG
2	HEX. HD. CAP. SCREW			1/4-20 X 1/2 LONG
2	HEX. HD. CAP. SCREW			1/4-20 X 1/2 LONG
1	HEX. NUT			1/4-20 STD.
1	WING NUT			A-50
2	LOCKWASHER			S.A.E. REG. FOR WASHER

BASED ON SC-C-1501

Figure 29. Bracket for Antenna A-27 (Phantom)—assembly and details.





ITEMS REQUIRED

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

BASED ON SC-D-7367

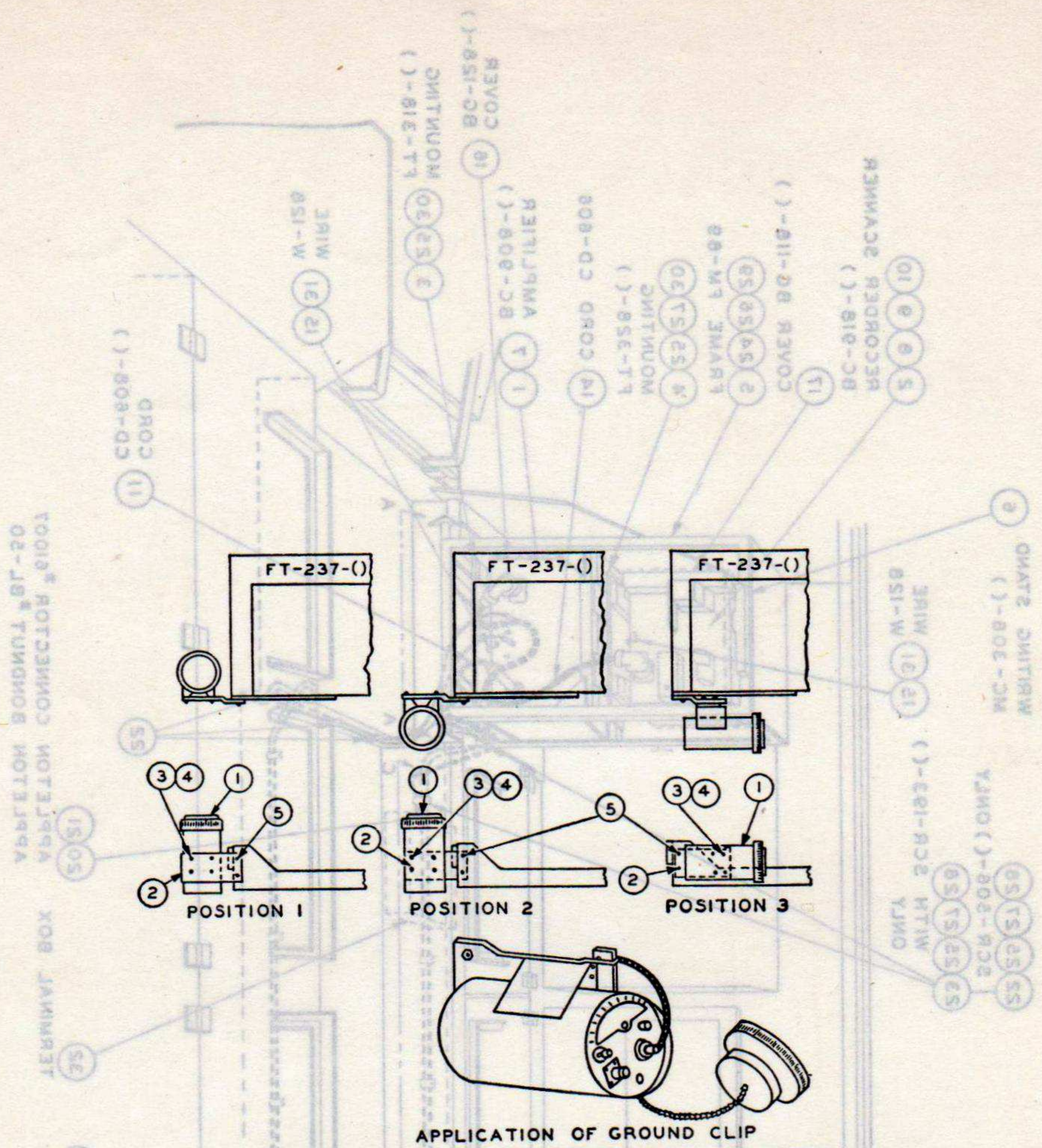
NOTE:

REMOVE ALL BURRS.  
AFTER WELDING ② & ④ TO ③, ①, ② & ③ SHALL BE BONDERIZED AND THEN GIVEN ONE SPRAY COAT OF METAL PRIMER, CLASS 101, AND ONE SPRAY COAT OF SEMI-GLOSS OLIVE DRAB BAKING ENAMEL, CLASS 440. TOUCH UP HEADS OF ④ TO MATCH SURROUNDING SURFACE. ALL PAINTS AND METHODS OF APPLICATION SHALL BE IN ACCORDANCE WITH ORDNANCE TENTATIVE SPECIFICATION TAC ES-NO. 680.  
⑤, ⑥, ⑦ & ④ OF 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.

TL 15087

Figure 29. Bracket for Antenna A-27 (Phantom)—assembly and details.





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 LOCK-WASHERS.

TL13376

Figure 30. Installation of Antenna A-62 (Phantom) on Mounting FT-237-().



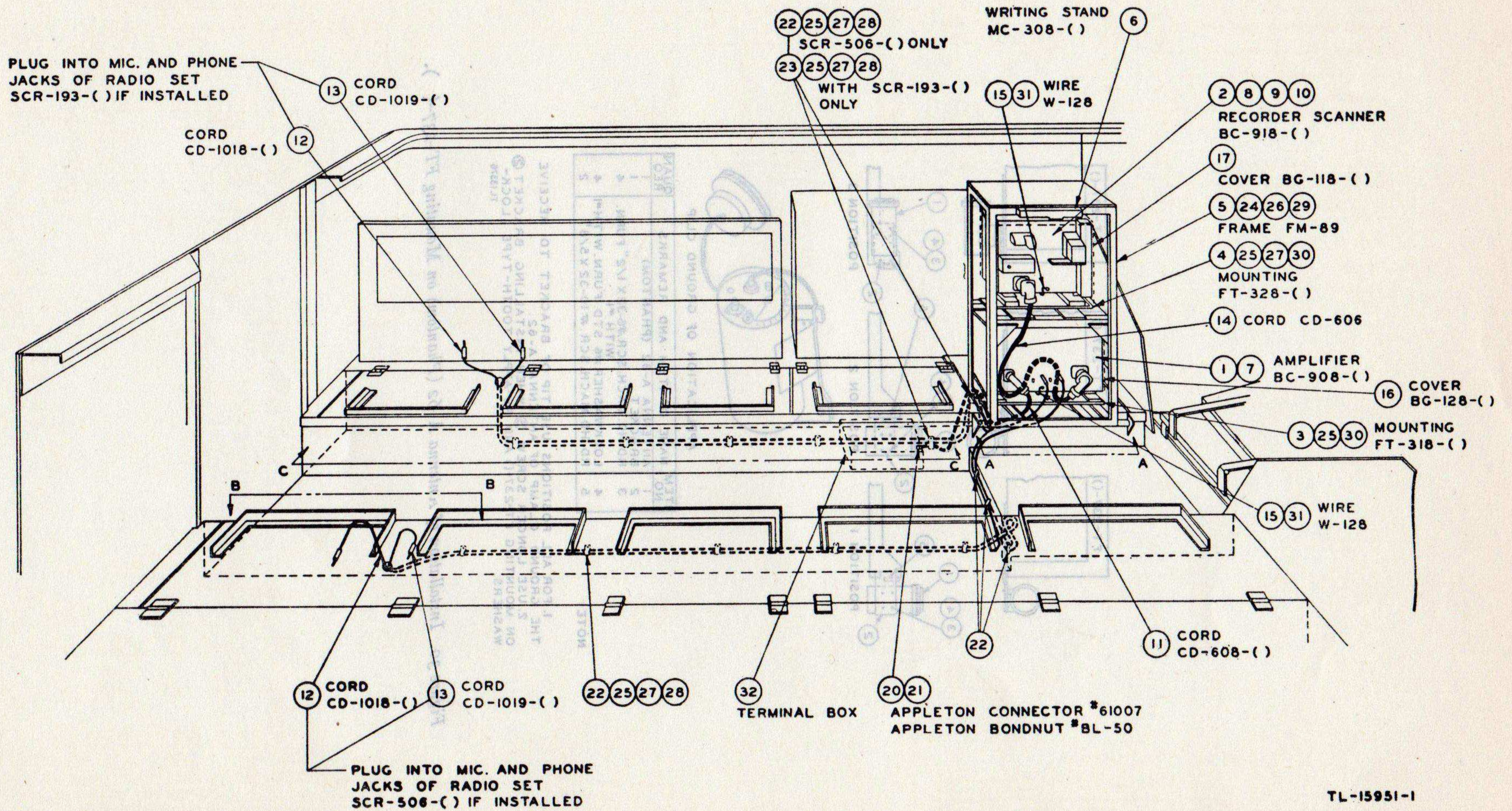
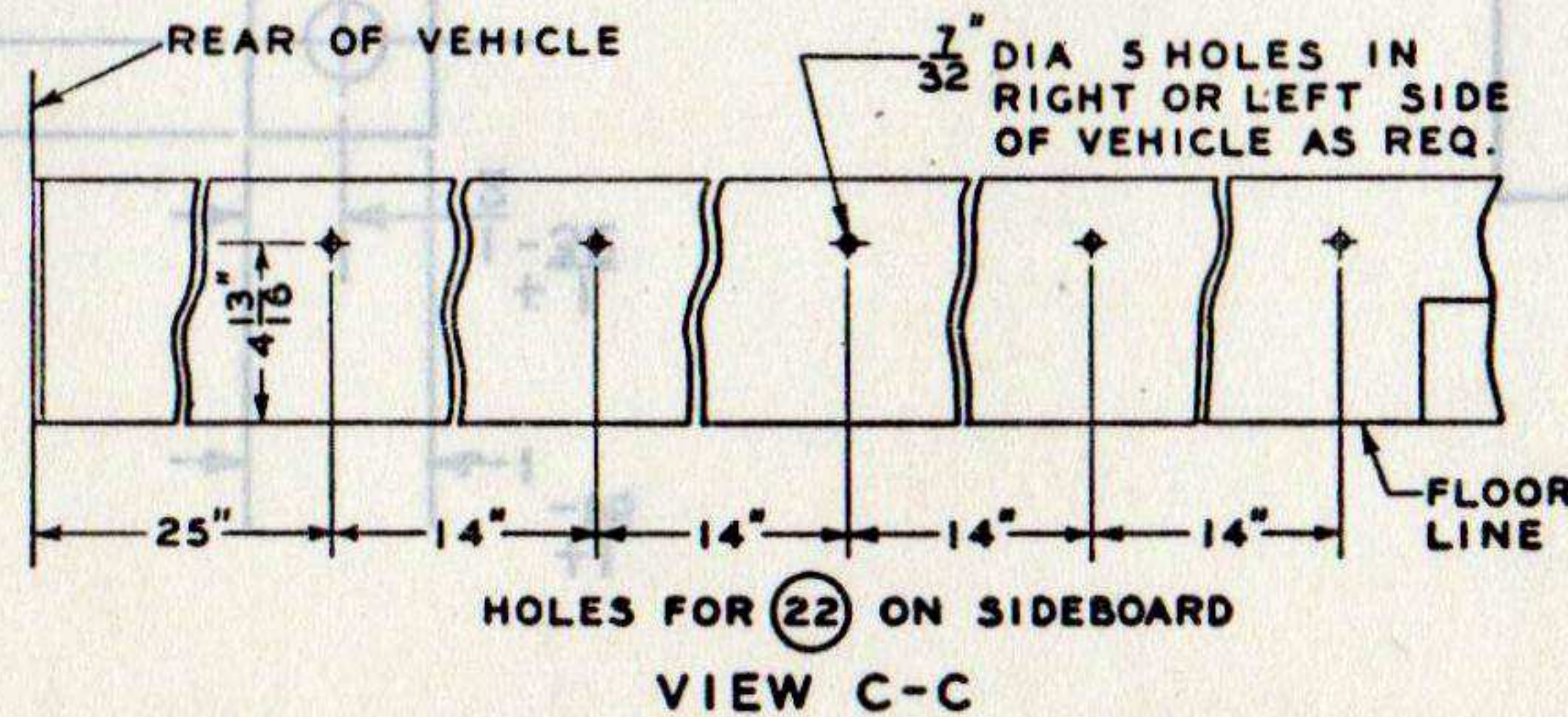
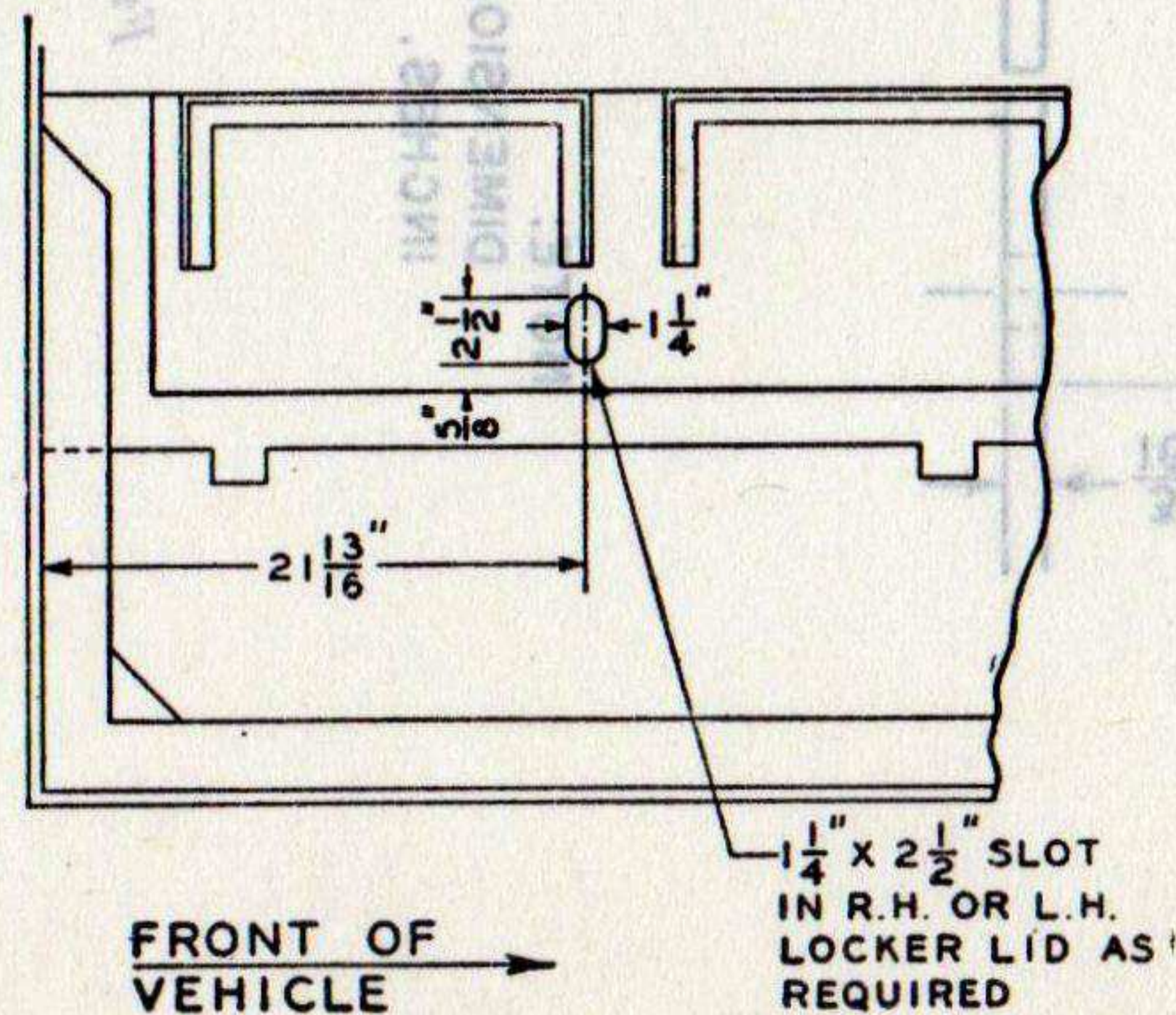
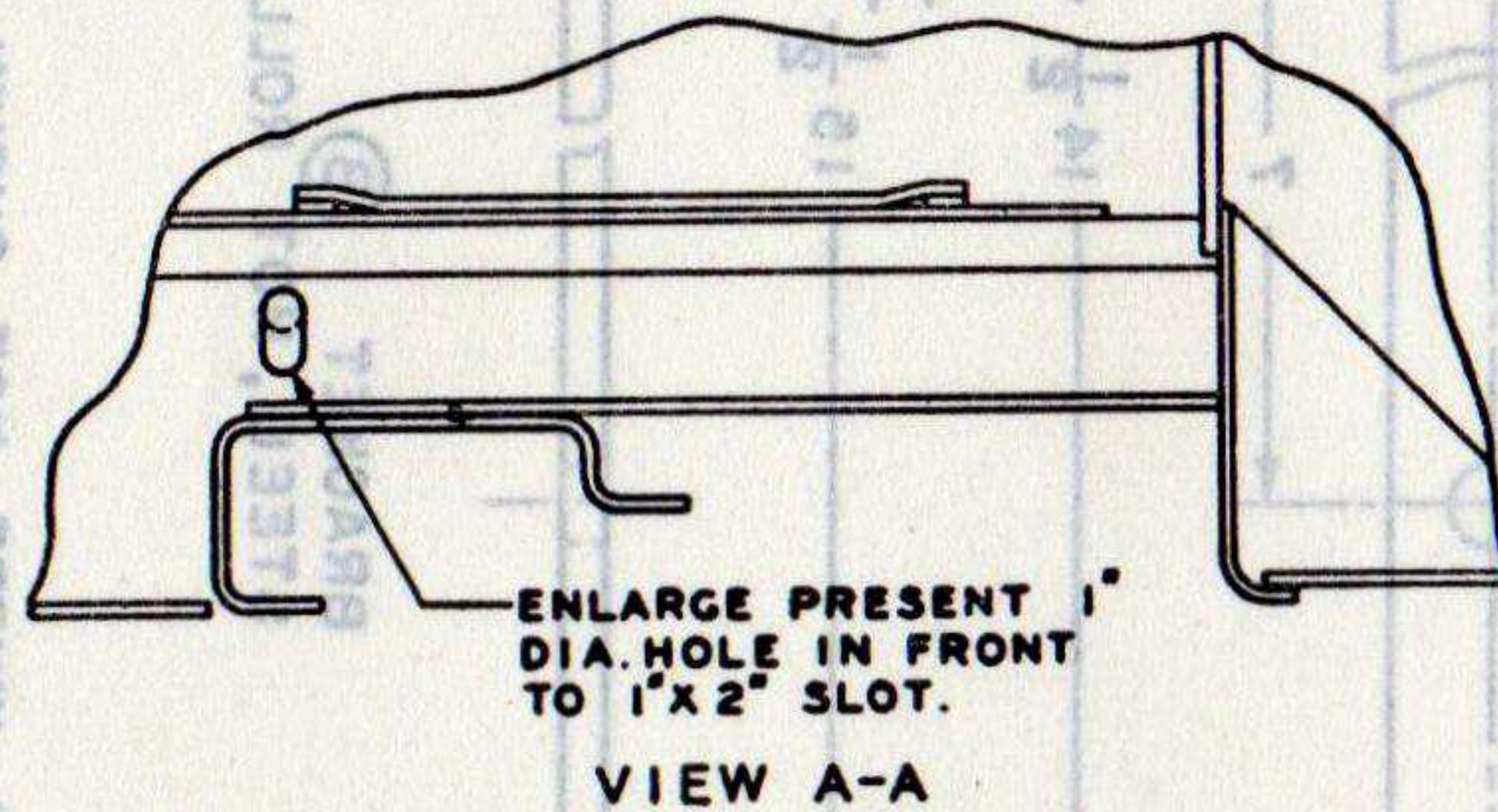
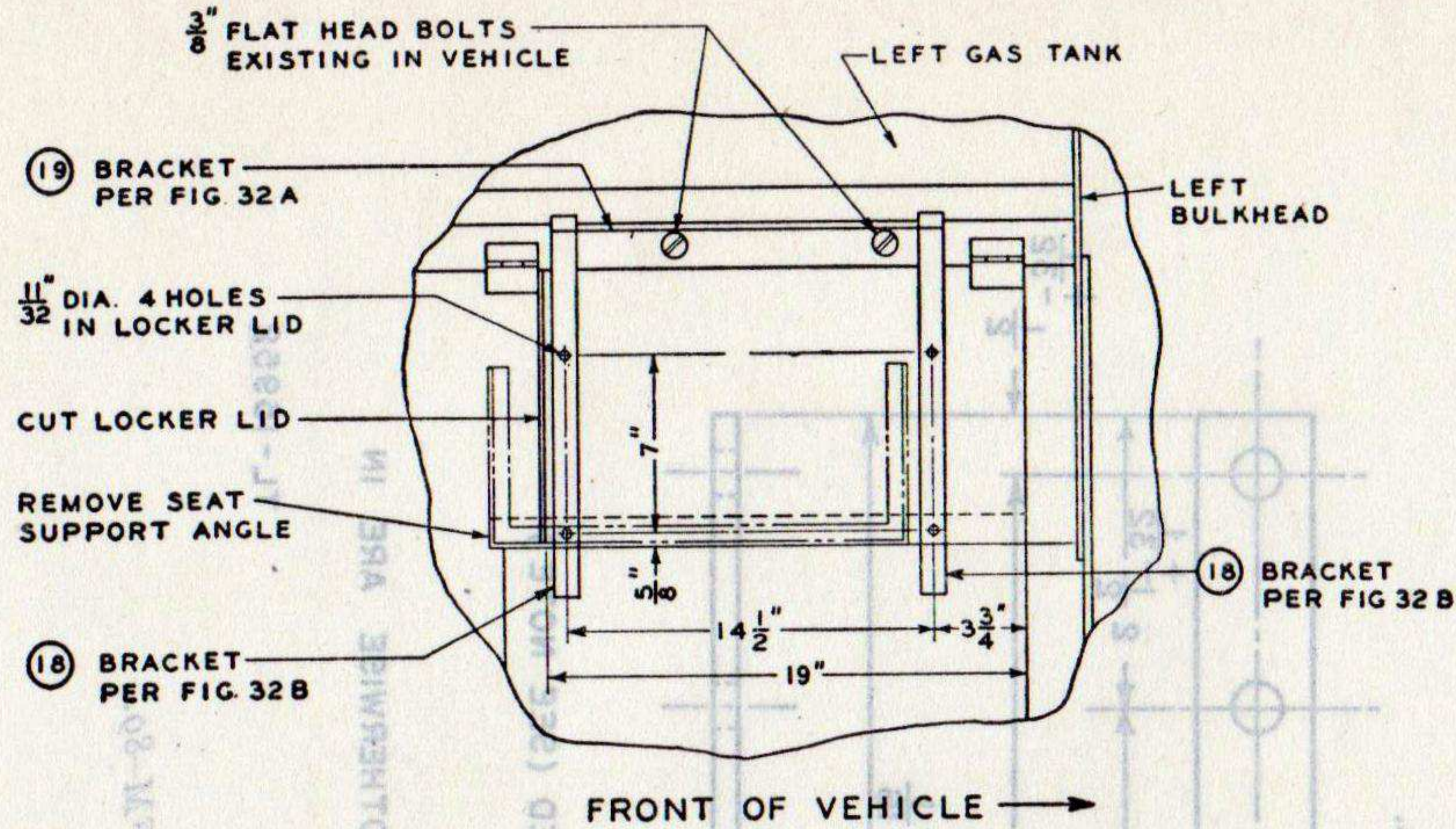


Figure 31. Installation of Facsimile Equipment





LOCATION OF HOLES AND BRACKETS

ITEM NO.	NAME OF ITEM	QUAN. REQ.
1	AMPLIFIER BC-908- ( )	1
2	RECORDER-SCANNER BC-918- ( )	1
3	MOUNTING FT-318- ( )	1
4	MOUNTING FT-328- ( )	1
5	FRAME FM-89	1
6	WRITING STAND MC-308- ( )	1
7	DYNAMOTOR DM-21- ( )	1
8	VIBRATOR VB-3- ( )	1
9	MOTOR MD-28- ( )	1
10	RESISTOR RS-288- ( )	1
11	CORD CD-608- ( )	1
12	CORD CD-1018- ( ) 10 FT LONG	1
13	CORD CD-1019- ( ) 10 FT LONG	1
14	CORD CD-606	1
15	WIRE W-128 8 IN. LONG	2
16	COVER BG-128- ( )	1
17	COVER BG-118- ( )	1
18	BRACKET PER. 32B	2
19	BRACKET PER. 32A	1
20	APPLETON CONNECTOR CAT. #61007	1
21	APPLETON BORNHUT CAT. #BL50	1
22	CLAMP #5 SEE NOTE #6	9
23	CLAMP #8 SEE NOTE #8	2
24	HEX HEAD MACH SCREW 5/16 - 24 x 1-1/4" LONG	4
25	HEX HEAD MACH SCREW 1/4 - 20 x 3/4" LONG	14
26	HEX NUT 5/16" - 24 STD	4
27	HEX NUT 1/4" - 20 STD	10
28	LOCKWASHER SAE REG FOR 1/4" SCREW	6
29	SHAKEPROOF WASHER CAT. #4018-24 FOR 5/16" SCREW	8
30	SHAKEPROOF WASHER CAT. #4014-22 FOR 1/4" SCREW	14
31	TERMINAL PER. SC-A-8127 SEE NOTES #3 AND #9	2
32	TERMINAL BOX C-85555 SEE NOTE #4	1

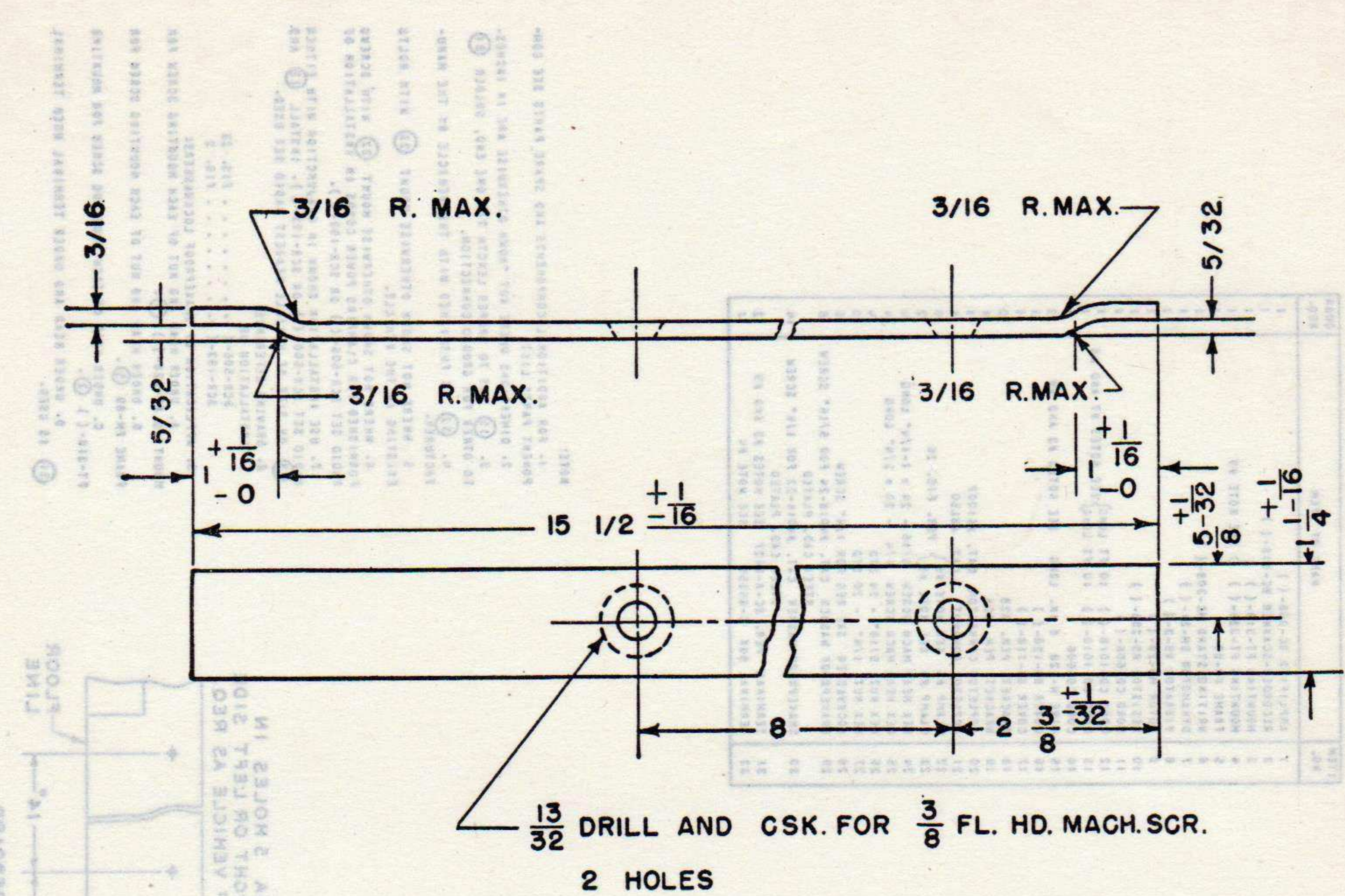
NOTE:

- FOR ADDITIONAL COMPONENTS AND SPARE PARTS SEE COMPONENT PARTS LIST.
- DIMENSIONS WHERE NOT SHOWN OTHERWISE ARE IN INCHES.
- CUT TO PROPER LENGTH IN ONE END, SOLDER TO OTHER FOR GROUND CONNECTION.
- IS FURNISHED WITH THE VEHICLE BY THE MANUFACTURER.
- WHERE NOT SHOWN OTHERWISE MOUNT WITH BOLTS EXISTING IN THE VEHICLE.
- WHERE NOT SHOWN OTHERWISE MOUNT WITH SCREWS FURNISHED FOR CLAMPING POWER CORDS IN INSTALLATION OF RADIO SET SCR-506- ( ) OR SCR-193- ( ).
- USE INSTALLATION SHOWN IN CONJUNCTION WITH EITHER RADIO SET SCR-506- ( ) OR SCR-193- ( ). INSTALL AND ON SIDE OF VEHICLE NEAREST RADIO SET USED.
- DRAWING REFERENCE:
  - INSTALLATION OF SCR-506- ( ) . . . . . FIG. 23
  - SCR-193- ( ) . . . . . FIG. 2
- APPLICATION OF SHAKEPROOF LOCKWASHERS:
  - A. UNDER HEAD AND NUT OF EACH MOUNTING SCREW FOR MOUNTING FT-328- ( )
  - B. UNDER HEAD AND NUT OF EACH MOUNTING SCREW FOR FRAME FM-89
  - C. UNDER HEAD OF EACH MOUNTING SCREW FOR MOUNTING FT-318- ( )
  - D. UNDER HEAD AND UNDER TERMINAL WHEN TERMINAL IS USED.



LOCATION OF HOLES AND BRACKETS

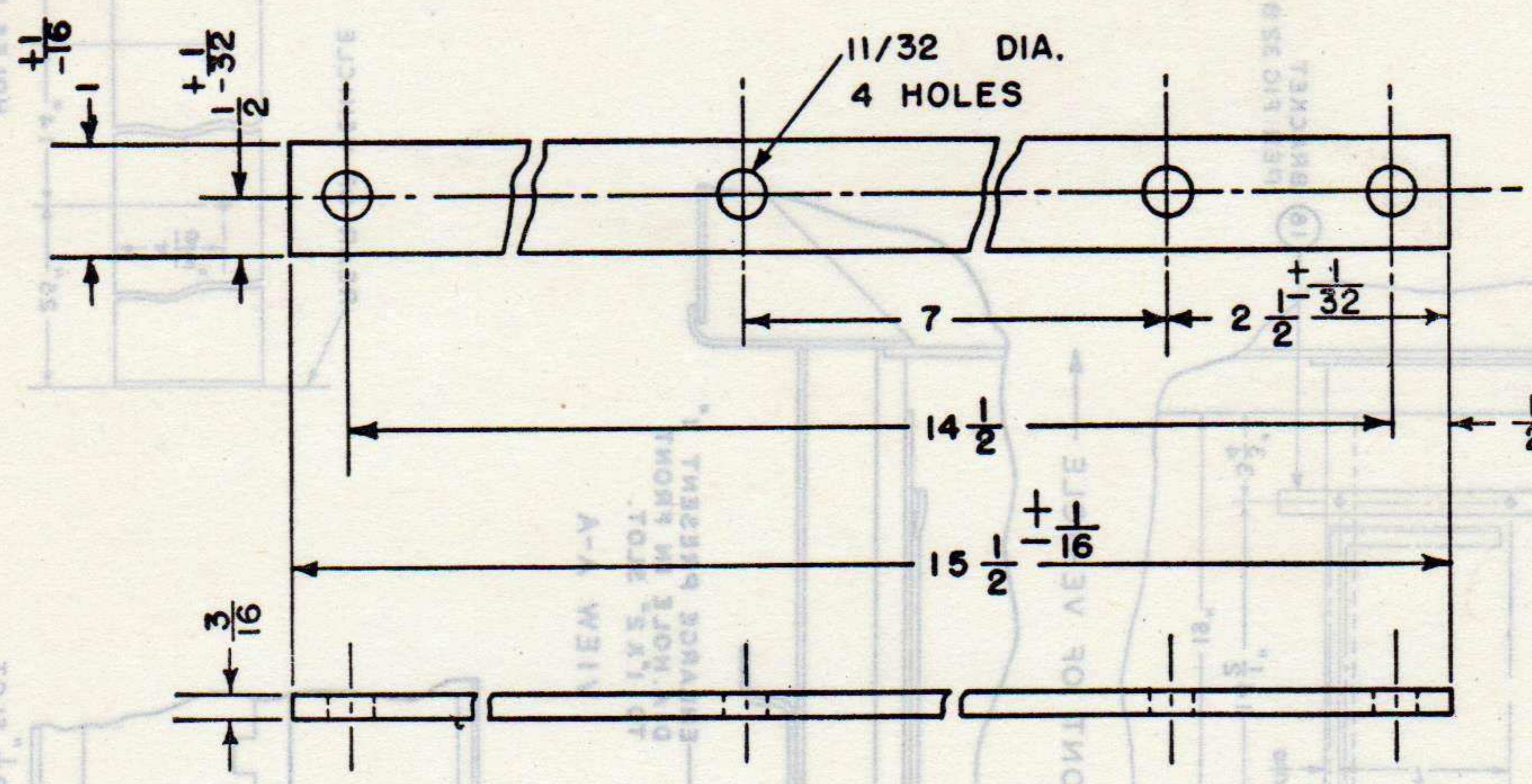
VIEW C-C



BRACKET (A)  
STEEL, HOT ROLLED (SEE NOTE)

VIEW B-B

REQUIRED  
FOCKER TID V3  
IN 1/4" OR 1/2"  
1 1/2" x 5 1/2" STOL



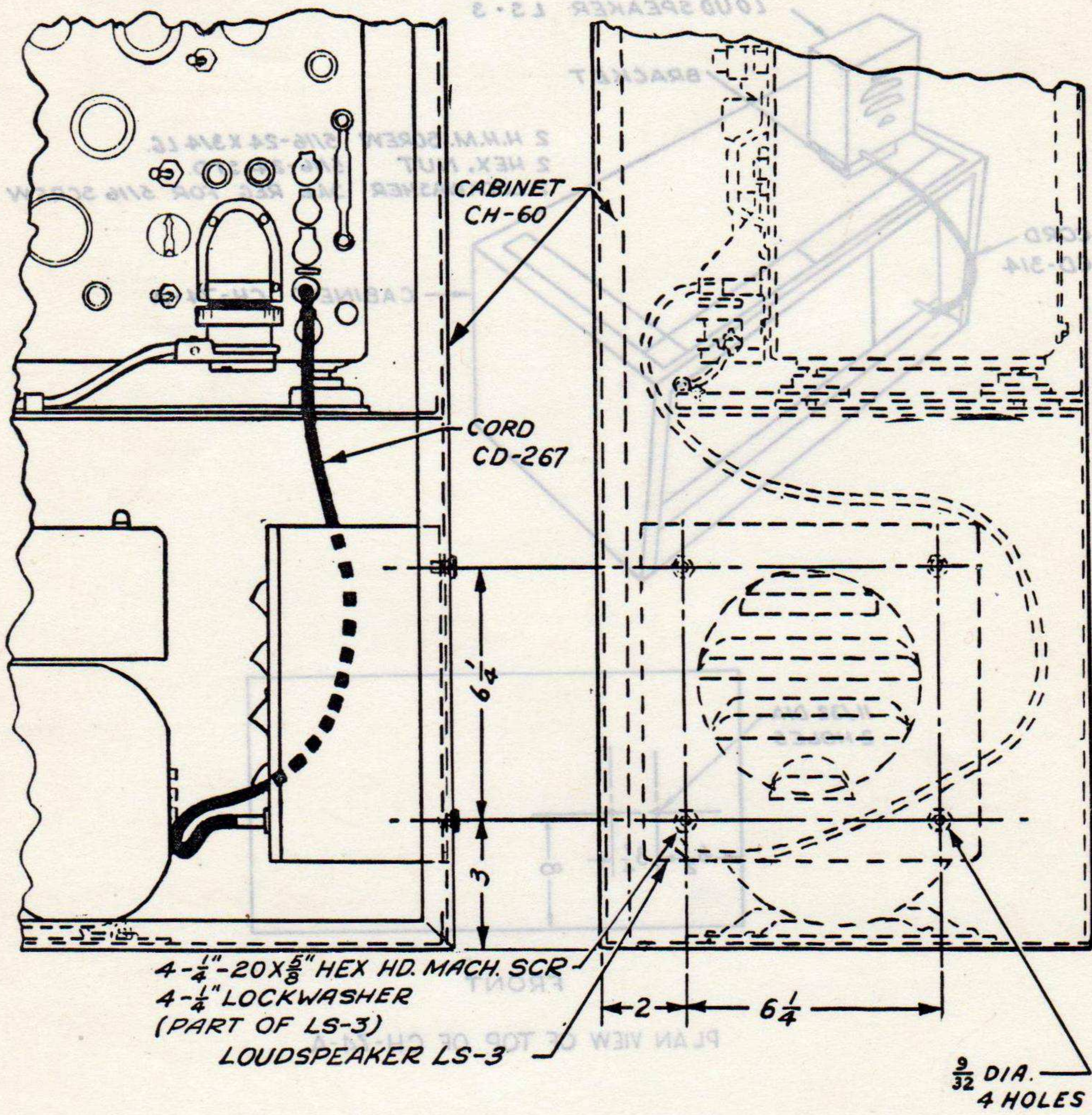
BRACKET (B)  
STEEL, HOT ROLLED (SEE NOTE)

NOTE:  
DIMENSIONS WHERE NOT SHOWN OTHERWISE ARE IN  
INCHES.

TL-15952

Figure 32. Brackets for Frame FM-89.





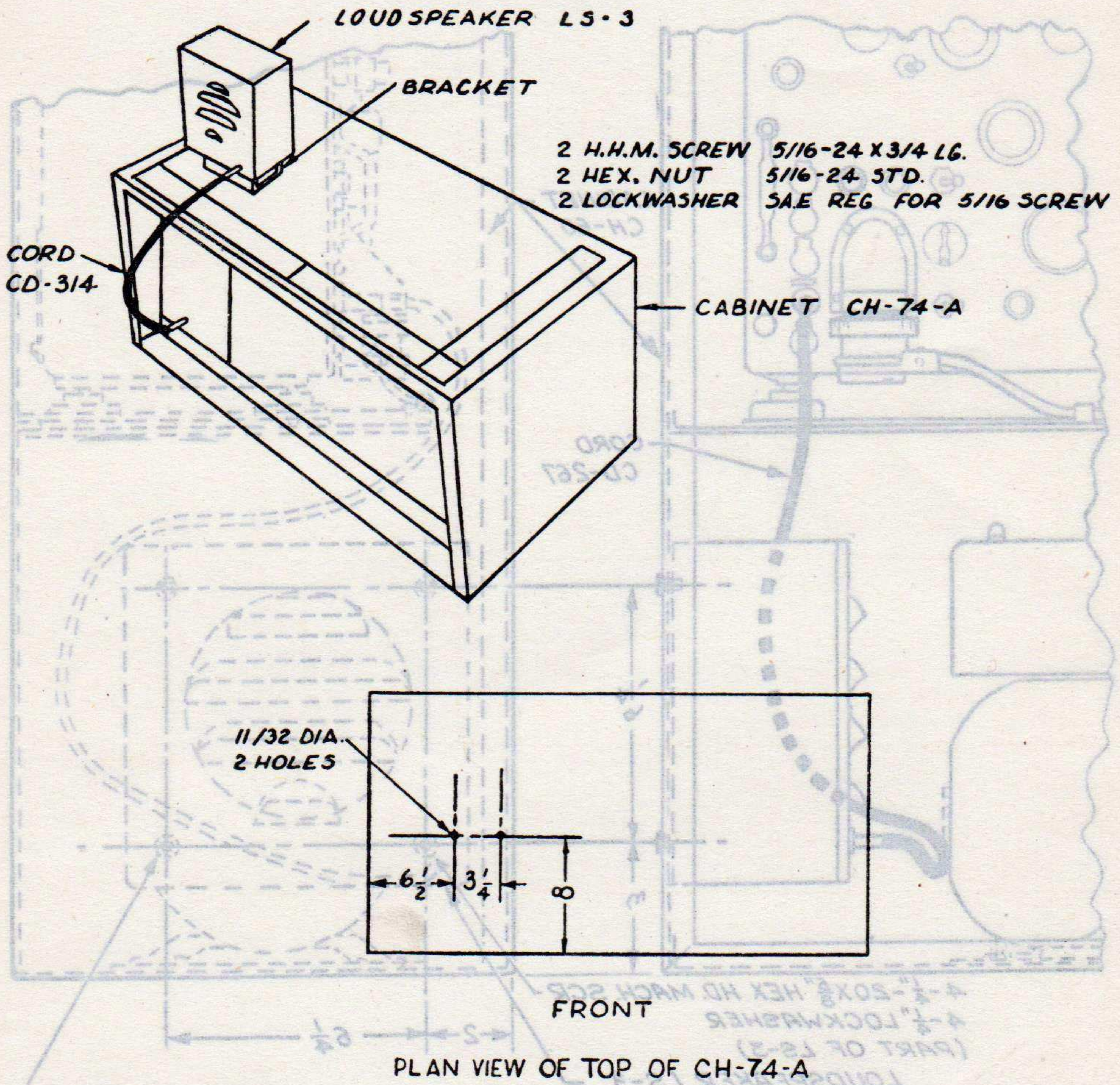
ITEMS REQUIRED

QUAN.	NAME	TYPE NO.
1	LOUDSPEAKER	
1	CORD	CD-267

TL11900

Figure 33. Location of Loudspeaker LS-3 for Radio Set SCR-193-H in Carrier, Personnel, Half-track, M3.





ITEMS REQUIRED

QUAN.	NAME	TYPE NO.	REMARKS
1	LOUDSPEAKER	LS-3	
1	BRACKET		(FIG. 35)
1	CORD	CD-314	
2	H.H.M. SCREW		5/16-24 X 3/4 LG.
2	HEX NUT		5/16-24 STD.
2	LOCKWASHER		SAE REG. FOR 5/16 SCREW

TL11903 A

Figure 34. Location of Loudspeaker LS-3 for Radio Set SCR-506-( ) in Carrier, Personnel, Half-track, M3.







**THE END!**