

TM 11-2710

WAR DEPARTMENT TECHNICAL MANUAL

T7-529

INSTALLATION OF RADIO EQUIPMENT IN TRUCK, 3/4-TON, 4 X 4, CARRYALL

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WAR DEPARTMENT

• 22 JULY 1944

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WAR DEPARTMENT,

WASHINGTON 25, D. C., 22 July 1944.

TM 11-2710, Installation of Radio Equipment in Truck, $\frac{3}{4}$ -ton, 4x4, Carryall, is published for the information and guidance of all concerned.

[A. G. 300.7 (20 June 44).

BY ORDER OF THE SECRETARY OF WAR:

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Chief of Staff.

OFFICIAL:

J. A. ULIO,
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The Adjutant General.*

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9: T/O 9-65.

11: T/O 11-7; 11-18; 11-47; 11-107; 11-127; 11-147S; 11-237;
11-257; 11-587; 11-592; 11-597.

17: T/O 17-2; 17-19; 17-20-1; 17-29; 17-46S; 17-49S; 17-56;
17-60-1; 17-116.

18: T/O 18-10-1; 18-28; 18-36.

For explanation of symbols, see FM 21-6.

DESTRUCTION NOTICE

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

WHEN—When ordered by your commander.

- HOW**—
1. Smash—Use sledges, axes, handaxes, pickaxes, hammers, crow-bars, 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

DESTRUCTION NOTICE

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.

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SECTION I

GUIDE TO USE OF THIS MANUAL

1. Purpose

This manual provides methods and procedures, based upon actual field experience, for installation of radio equipment in Truck, $\frac{3}{4}$ -ton, 4x4, Carryall. Items required to make a complete operating installation are listed for each radio 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-J SCR-245-T SCR-508-(&)
SCR-528-(&) SCR-510-(&) SCR-610-(&)
SCR-506-(&) SCR-608-(&) SCR-628-(&)

3. Holes and Brackets

Holes and brackets required for installation of the radio sets are normally located prior to

delivery of Truck, $\frac{3}{4}$ -ton, 4x4, Carryall. 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. Before Beginning Installation

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

Caution: Truck, $\frac{3}{4}$ -ton, 4x4, Carryall has a 12-volt electrical system. Before installing the radio sets be sure that they are designed for a 12-volt installation, or tubes may burn out and dynamotors may be damaged.

5. Immediately after Installation

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

RADIO SET SCR-193-J

6. Required Parts

Items necessary for the installation of Radio Set SCR-193-J in Truck, $\frac{3}{4}$ -ton, 4x4, Carryall, are listed below:

Quantity	Stock No.	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 and BX-19, headset, etc.
1.....	2Z1250.29.....	Bracket (view A-A, fig. 7).
1.....	2Z1848.....	Case CS-48, for transmitter tuning unit.
1.....	3E2188A.....	Cord CO-188-A, to connect Dynamotor Unit BD-77-(&) to terminal box.
1.....	3E1269.....	Cord CD-269, to connect Radio Receiver BC-312-(&) to terminal box.
1.....	3E1307A-5.5.....	Cord CD-307-A, 65", for Headset HS-30-(&).
1.....	3E1410.....	Cord CD-410, to connect Radio Transmitter BC-191-(&) to terminal box.
1.....	3E1604.....	Cord CD-604, for Headset HS-30-(&).
1.....	3E1670.....	Cord CD-670, to connect Radio Transmitter BC-191-(&) to Dynamotor Unit BD-77-(&).
1.....	3E1676.....	Cord CD-676, to connect Radio Transmitter BC-191-(&) to Dynamotor Unit BD-77-(&).
1.....	2Z3367(&).....	Cover BG-67-(&), for mast base.
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.....	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.....	2Z4643.....	Frame FM-43.
2.....	2B830(&).....	Headset HS-30-(&).
1.....	6L50-193V14.....	Hardware bag.
1.....	3G586.....	Insulator IN-86, for tying down vertical mast antenna.
1.....	3G621.....	Insulator IN-121.

Quantity	Stock No.	Item
1	3G604	Insulator IN-104.
1	3Z3445	Key J-45.
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	2B1567	Microphone Cover M-367.
^b 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	2C4312(&)	Radio Receiver BC-312-(&), including Mounting FT-162 and set of tubes installed.
1	2C6191(&)	Radio Transmitter BC-191-(&), including set of tubes installed, less Mounting FT-151-(&).
1	2Z8056(&)	Roll BG-56-(&), for mast sections.
50 ft.	6Z7926	Rope RP-5, for tying down vertical mast antenna.
1	2Z8793(&)	Socket Cap M-163-(&).
1	2Z9313	Terminal Block TM-183, for terminal box.
^b 1	2C8005(&)	Transmitter Tuning Unit TU-5-(&).
^b 1	2C8006(&)	Transmitter Tuning Unit TU-6-(&).
15 ft.	1B128	Wire W-128.

^aMicrophone T-45 [2B1645] and Cord CD-318-(&) [3E1318(&)] may be substituted for Microphone T-17-(&).
^bThe serial number and order number on the tuning unit must agree with that of the radio transmitter in which it is used.

7. Assembly and Installation

a. PROCEDURE. Components of the radio set should be installed as shown in figures 5, 6, and 7, and as directed below. Certain drilling of Radio Transmitter BC-191-(&) and Radio Receiver BC-312-(&) will be necessary before installation. Complete drilling data will be found in figures 1 and 2.

Part and location

Mast Base MP-37, on bracket on left side of vehicle (fig. 6).

Method and materials

Assemble as follows: Refer to figure 3; place item 1 over hole in bracket (fig. 6), and item 2 over item 1. Place item 3 over item 2, and insert item 4 through 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 4. Refer to figure 5 for termination of antenna lead before cutting wire.

Part and location

Method and materials

Insulator IN-121 (item 31, fig. 7), in hole through vehicle and mast base bracket.

Refer to figure 6. Remove plug button in hole through vehicle and install insulator as shown in figure 7.

Insulator IN-104 (item 29, fig. 7), on top of Radio Transmitter BC-191-(&).

Install as shown in figure 7.

Terminal Block TM-183, on brackets in terminal box.

Secure in place with hardware supplied.

Bracket (view A-A, fig. 7), on upper left side of vehicle.

Secure in place, using bolt for mast base bracket as shown in figure 7.

Mounting FT-162, on top right side of Frame FM-43; Mounting FT-151-(&), on top left side of Frame FM-43; and Mounting FT-107, on lower right section of Frame FM-43.

Secure to frame, as shown in figure 5, with the hardware provided.

Frame FM-43, on floor, left side of vehicle.

Fasten to floor, as shown in figure 6, using hardware supplied. Refer to figure 8 for mounting holes.

Mounting FT-178, on receiver cabinet, and Cover BG-75-(&) on receiver.

Remove receiver and drill cabinet as shown in figure 2. Assemble the mounting as shown in figures 5 and 9. Replace receiver in cabinet. Cut a slot in top of cover to admit item 1, figure 9, and place the cover over receiver cabinet before completing installation of Mounting FT-178.

Radio Receiver BC-312-(&), on Mounting FT-162 (fig. 5).

Place receiver in its cabinet on the mounting, tighten thumbscrews, and lock in place with snap-slide catches.

Mounting FT-172, on transmitter cabinet (fig. 5), and Cover BG-78-(&), on transmitter.

Drill top of cabinet as shown in figure 1. Assemble the mounting as shown in figures 5 and 9. Figure 18 shows bracket details for the mounting. Cut a slot in top of cover to admit item 1, figure 9, and place cover over transmitter before completing installation of Mounting FT-172.

Radio Transmitter BC-191-(&), on Mounting FT-151-(&).

Install the transmitter on the mounting, as shown in figure 5, and lock in position with snap-slide fasteners.

Dynamotor Unit BD-77-(&), on Mounting FT-107.

Place the dynamotor on the mounting, as shown in figure 5, and lock in position with snap-slide fasteners.

Cover BG-79-(&).

Place over Dynamotor Unit BD-77-(&).

Transmitter Tuning Units TU-5-(&) and TU-6-(&).

Install one unit in transmitter and carry the spare in Case CS-48.

Case CS-48, Boxes BX-8, BX-19, and BX-21.

Disposition left to discretion of using arms. When not in use, stow the case and other boxes in Box BX-21 if latter is carried in vehicle.

Part and location

Method and materials

Headset HS-30-(&), Microphone T-17-(&), and Key J-45.

Plug Cord CD-307-A into jack of Radio Receiver BC-312-(&). Plug Cord CD-604 into Cord CD-307-A, and connect the headset to Cord CD-604. Plug the cords attached to the microphone and the key to proper jacks in Radio Receiver BC-312-(&)

Mast Sections MS-49 to MS-53, 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 antenna into the mast base. Carry mast sections and clamps in Roll BG-56-(&) when not in use.

Roll BG-56-(&).

Carry in any convenient place in vehicle.

Cover BG-67-(&).

Place over mast base when mast sections are not in use.

Socket Cap M-163-(&).

Plug into unused socket at left end of transmitter (fig. 5).

Socket Caps M-163-(&), M-164-(&), and two M-165-(&), supplied with transmitter.

Plug into four unused sockets underneath Radio Transmitter BC-191-(&).

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-193-J as shown in figure 5. Tighten the plug locks on the cords by hand, *never by tool*. Follow the color coding specified, and leave sufficient slack in cording and wiring connections to permit free motion of all units with shock mountings.

(2) Complete all other connections *before* connecting the positive 12-volt and negative 12-volt leads between Terminal Block TM-183 and the battery terminal block in the truck terminal box. This prevents accidental shorting of the battery. When installing Cord CO-188-A at the dynamotor end, the entrance hole in the dynamotor housing may have to be reamed.

(3) Use Wire W-128, as shown in figure 5, to make antenna and ground connections. Make the connections from the transmitter and receiver as short as possible. Insure good electrical connection by solder-tinning all wire ends.

(4) Connect and drape all cords so they do not interfere with accessibility and operation of the radio equipment.

SECTION III

RADIO SET SCR-245-T

8. Required Parts

Items necessary for the installation of Radio Set SCR-245-T in Truck, $\frac{3}{4}$ -ton, 4x4, Carryall, are listed below:

Quantity	Stock No.	Item
1	2Z1119(&)	Box BX-19-19-(&), for receiver spare tubes.
1	2Z1120	Box BX-20, for transmitter spare tubes.
1	2Z1121	Box BX-21, for Boxes BX-19-(&), BX-20-(&), headsets, etc.
1	2Z1203-344	Bracket FT-344.
1	2Z1203-334	Bracket FT-334.
1	2Z1856	Case CS-56, for storing transmitter tuning unit not in use.
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	3E1307A-5.5	Cord CD-307-A, 65", for Headset HS-30-(&).
1	3E1356	Cord CD-356, to connect Radio Transmitter BC-223-(&) Dynamotor Unit PE-55-(&).
1	3E1442	Cord CD-442, to connect Radio Receiver BC-312-(&) to Radio Transmitter BC-223-(&).
1	3E2188A	Cord CD-188-A, to connect Dynamotor Unit PE-55-(&) to terminal box.
1	3E1604	Cord CD-604, 6", for connecting Headset HS-30-(&) to Cord CD-307-A.
1	2Z3367(&)	Cover BG-67-(&), for mast base when antenna is not installed.
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-(&).
1	2Z3531(&)	Crystal Holder FT-171-(&), with crystals.
1	3H1855(&)	Dynamotor Unit PE-55-(&), including Mounting FT-185.
1	2Z4643	Frame FM-43.
1	6L50-245V14	Hardware bag.
1	2B830(&)	Headset HS-30-(&).

*Quantity of Crystal Holder FT-171-(&) and frequency of crystals will be as authorized for each using organization.

Quantity	Stock No.	Item
1.....	3G601.....	Insulator IN-101.
1.....	3Z3445.....	Key J-45.
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.....	2Z6712.....	Mounting FT-172, snubber for Radio Transmitter BC-223-(&).
1.....	2Z6718.....	Mounting FT-178, snubber for Radio Receiver BC-312-(&).
1.....	2C4312(&).....	Radio Receiver BC-312-(&), including Mounting FT-162 and one set of tubes installed.
^b 1.....	2C6223(&).....	Radio Transmitter BC-223-(&), including calibration chart, complete set of tubes installed, and Mounting FT-173.
1.....	2Z8056(&).....	Roll BG-56-(&), for mast sections.
^b 1.....	2C8017(&).....	Transmitter Tuning Unit TU-17-(&).
^b 1.....	2C8018(&).....	Transmitter Tuning Unit TU-18-(&).
7 ft.....	1B128.....	Wire W-128.

^bThe serial number and order number of the calibration chart and of Transmitter Tuning Units TU-17-(&) and Tu-18-(&) must agree with that of the Radio Transmitter BC-223-(&) with which they are used.

9. Assembly and Installation

a. PROCEDURE. Components of the radio set should be installed as shown in figure 10 and as directed below. Certain drilling of Radio Transmitter BC-223-(&) and Radio Receiver BC-312-(&) will be necessary before installation. Drilling data will be found in figure 2.

Part and location

Method and materials

Mast Base MP-37, on mast base bracket on left side of vehicle, shown in figure 10.

Refer to figure 3 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 hole in bracket. Place item 5 over item 6 and insert latter through bottom of hole. 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 4. Refer to figure 10 for termination of antenna lead before cutting wire.

Insulator IN-101, in hole through vehicle and mast base bracket (fig. 6).

Remove plug button (fig. 6) through hole in vehicle and install as shown in figure 10.

Brackets (items 1 and 2, fig. 18) for Mountings FT-172 and FT-178, on rear of Frame FM-43.

Secure brackets to rear of frame, as shown in figure 10, using hardware supplied.

<i>Part and location</i>	<i>Method and materials</i>
Mounting FT-162, on top, right side of Frame FM-43; Mounting FT-173, on top, left side of Frame FM-43; Mounting FT-185, on lower right section of Frame FM-43.	Secure to frame, as shown in figure 10, using hardware supplied.
Frame FM-43, on floor, left side of vehicle.	Fasten to floor of vehicle, as shown in figure 10, using hardware provided. Refer to figure 8 for mounting holes.
Mounting FT-178, on receiver cabinet, and Cover BG-75-(&), on receiver.	Remove receiver from cabinet and drill the top of the cabinet as shown in figure 2. Assemble the mounting as shown in figures 9 and 10. Replace receiver in cabinet. Cut a slot in top of cover to admit item 1, figure 9, and place cover over receiver cabinet before completing installation of Mounting FT-178.
Radio Receiver BC-312-(&), on Mounting FT-162 (fig. 10).	Place receiver on the mounting, tighten thumb-screws, and lock in place with snap-slide catches.
Mounting FT-172, on transmitter cabinet, and Cover BG-86-(&), on transmitter.	Remove tuning unit from transmitter. Using the small reinforcing plate as a template, drill top of cabinet, and assemble the mounting as shown in figures 9 and 10. Replace tuning unit. Cut a slot in top of cover to admit item 1, figure 9, and place cover over transmitter cabinet before completing installation of Mounting FT-172.
Radio Transmitter BC-223-(&), on Mounting FT-173 (fig. 10).	Place the transmitter on the mounting and lock in position with snap-slide fasteners.
Calibration charts.	Place in side pocket of radio transmitter or mount in convenient location by drilling small holes in corners and securing with machine screws.
Dynamotor Unit PE-55-(&), on Mounting FT-185.	Install the dynamotor on the mounting as shown in figure 10, and lock in position with snap-slide fasteners.
Cover BG-77-(&).	Place over Dynamotor Unit PE-55-(&).
Transmitter Tuning Units TU-17-(&) and TU-18-(&).	Install one unit in the transmitter and carry the one 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 end of the mast sections. Then screw the mast antenna into the mast base. Carry 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.

Part and location

Method and materials

Cover BG-67-(&).

Place over mast base when mast sections are not in use, as shown in figure 10.

Boxes BX-19-(&), BX-20, and BX-21.

Disposition left to discretion of using arms. When not in use, stow the other boxes in Box BX-21, if latter is carried in the vehicle.

Headset HS-30-(&), Microphone T-17-(&), and Key J-45.

Plug Cord CD-307-A into jack of Radio Receiver BC-312-(&). Plug Cord CD-604 into Cord CD-307-A, and connect the headset to Cord CD-604. Plug the cords attached to the microphone and key to proper jacks in Radio Receiver BC-312-(&).

Crystal Holder FT-171-(&), with crystal.

To be carried 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-T as shown in figure 10. Tighten the plug locks on the cords by hand, *never by tool*. Follow the color coding specified, and leave sufficient slack in cording and wiring connections to permit free motion of all units with shock mountings.

(2) Complete all other connections before connecting the positive 12-volt and negative 12-volt leads between Terminal Block TM-183 and the battery terminal block in the truck terminal box. This prevents accidental shorting of the battery. When installing Cord CD-188-A at the dynamotor end, the entrance hole in the dynamotor housing may have to be reamed.

(3) Use Wire W-128, as shown in figure 10, to make antenna and ground connections. Make the connections from the transmitter and receiver as short as possible. Insure good electrical connection by solder-tinning all wire ends.

(4) Connect and drape all cords so that they **do not interfere** with accessibility and operation of the radio equipment.

SECTION IV

RADIO SET SCR-508-(&)

10. Required Parts

Items necessary for the installation of Radio Set SCR-508-(&) in Truck, $\frac{3}{4}$ -ton, 4x4, Carryall, are listed below:

Quantity	Stock No.	Item
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.....	3E1307A-5.5.....	Cord CD-307-A, 65", for headset.
1.....	3E1604.....	Cord CD-604, 6", for connecting Headset HS-30-(&) to Cord CD-307-A.
1.....	6Z3147.....	Connector No. 61007 and Bondnut BL-50 (Appleton), for power cable connection.
1.....	2Z3400-108.....	Cover BG-108, for Mast Base MP-48 or MP-48-A.
2.....	3H1634(&).....	Dynamotor DM-34-(&), 12-volt, including attached spare parts.
1.....	3H1635(&).....	Dynamotor DM-35-(&), 12-volt, including attached spare parts.
1.....	2Z4643.....	Frame FM-43.
1.....	2B830-(&).....	Headset HS-30-(&).
1.....	6L50-508V14.....	Hardware bag.
1.....	3G601.....	Insulator IN-101.
1.....	2A2088-48(&).....	Mast Base MP-48 or MP-48-A.
1.....	2A2351.....	Mast Section MS-51.
1.....	2A2352.....	Mast Section MS-52.
1.....	2A2353.....	Mast Section MS-53.
1.....	2B1617(&).....	Microphone T-17-(&).
1.....	2Z6721-237(&).....	Mounting FT-237-(&), including Cord CO-278 for connection to truck terminal box, and necessary hardware.
2.....	2C4403(&).....	Radio Receiver BC-603-(&), including one set of tubes installed.
1.....	2C6494(&).....	Radio Transmitter BC-604-(&), including one set of tubes installed and necessary crystals.
1.....	2Z8056(&).....	Roll BG-56-(&), for antenna mast sections.
7 ft.....	1B128.....	Wire W-128.

11. Assembly and Installation

a. PROCEDURE. Components of the radio set should be installed as shown in figures 11 and 14 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Frame FM-43, on floor, left side of vehicle.	Fasten to floor of vehicle in position shown in figures 11 and 14, using hardware supplied in vehicle. Refer to figure 8 for mounting holes.
Mounting FT-237-(&), including Cord CO-278, on Frame FM-43.	Fasten to frame as shown in figure 11, using hardware provided with mounting.
Mast Base MP-48 or MP-48-A, on bracket at left side of vehicle.	When Mast Base MP-48 is supplied, proceed as follows: This installation requires assembly 6, figure 12. Cut the antenna lead-in, Wire W-128, to proper length. Strip one-half inch of insulation from one end, clean and tin this end, and solder plug (item 6B) to it as shown in figure 12. Loosen setscrews 8 and 9, remove assembly 7 and stow it. Install the prepared Wire W-128 inside the mast base, through the hollow stem (item 1). Make certain item 6B is inserted in the slot as far as possible. Tighten setscrews 8 and 9. Place item 1, figure 12, through hole in 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 6C, neoprene washer 6D, and insulator 6E over Wire W-128, and install inside hollow stem (item 1). Follow up with washer (item 17) and retaining collar (item 18). Leave sufficient slack wire inside the stem to allow for flexing of the mast base. When using Mast Base MP-48-A, assemble as shown in figure 16, using Wire W-128 internal lead-in.
Dynamotors DM-34-(&), in cabinets of Radio Receivers BC-603-(&).	If the dynamotors are not already installed, refer to figure 11. Loosen screwlock in rear center of the receiver cabinets and remove the receiver chassis. Bolt the dynamotor units on top rear of each chassis, return chassis to their cabinets, and tighten screwlocks.
Dynamotor DM-35-(&), in cabinet of Radio Transmitter BC-604-(&).	If the dynamotor is not already installed, refer to figure 11. Loosen the two screwlocks on the front panel of the cabinet and pull out the crystal case. Loosen the four screwlocks and remove the top cover of the transmitter. Bolt the dynamotor unit in the left rear of the transmitter chassis, and replace and secure the crystal case.

Part and location

Radio Transmitter BC-604-(&), on Mounting FT-237-(&).

Radio Receivers BC-603-(&), on Mounting FT-237-(&).

Cover BG-108.

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

Insulator IN-101, in hole through vehicle and mast base bracket (fig. 6).

Microphone T-17-(&).

Mast Sections MS-51, MS-52, and MS-53 and Clamps MC-423 and MC-424, on Mast Base MP-48 or MP-48-A.

Roll BG-56-(&).

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-508-(&) as shown in figures 11 and 14. 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 mounting. 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 12-volt and negative 12-volt leads (in the truck terminal box) until all other connections have been completed.

Method and materials

Mount in position as shown in figures 11 and 14, securing with thumbscrews provided.

Mount in position as shown in figures 11 and 14, securing with thumbscrews provided.

Place over mast base when mast sections are not in use.

Connect Cord CD-307-A to jack in Radio Receiver BC-603-(&); connect Cord CD-604 to Cord CD-307-A; connect the headset to Cord CD-604.

Remove plug button (fig. 6) from hole in vehicle and install as shown in figure 11.

Insert plug of cord into microphone jack of Radio Transmitter BC-604-(&).

Screw the mast sections together and secure with the clamps. Fasten the clamps to the male end of the mast sections. Then screw the antenna into the mast base. When using Mast Base MP-48-A, secure with item 18, figure 16. When mast sections are not in use, carry in Roll BG-56-(&).

Disposition left to discretion of using arms.

SECTION V

RADIO SET SCR-528-(&)

12. Required Parts

Items necessary for the installation of Radio Set SCR-528-(&) in Truck, $\frac{3}{4}$ -ton, 4x4, are listed below:

Quantity	Stock No.	Item
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.....	3E1307A-5.5.....	Cord CD-307-A, 65", for Headset HS-30-(&).
1.....	3E1604.....	Cord CD-604, 6" for connecting Headset HS-30-(&) to Cord CD-307-A.
1.....	6Z3147.....	Connector No. 61007 and Bondnut BL-50 (Appleton) for power cable connection.
1.....	2Z3400-108.....	Cover BG-108, for Mast Base MP-48, or MP-48-A.
1.....	3H1634(&).....	Dynamotor DM-34-(&), 12-volt, including spare parts.
1.....	3H1635(&).....	Dynamotor DM-35-(&), 12-volt, including spare parts.
1.....	2Z4643.....	Frame FM-43.
1.....	2B830(&).....	Headset HS-30-(&).
1.....	6L50-508V14.....	Hardware bag.
1.....	3G601.....	Insulator IN-101.
1.....	2A2088-48(&).....	Mast Base MP-48 or MP-48-A.
1.....	2A2351.....	Mast Section MS-51.
1.....	2A2352.....	Mast Section MS-52.
1.....	2A2353.....	Mast Section MS-53.
1.....	2B1617(&).....	Microphone T-17-(&).
1.....	2Z6721-237(&).....	Mounting FT-237-(&), including Cord CO-278 for connection to truck terminal box, and necessary hardware.
1.....	2C4403(&).....	Radio Receiver BC-603-(&), including set of tubes installed.
1.....	2C6494(&).....	Radio Transmitter BC-604-(&), including set of tubes installed and necessary crystals.
1.....	2Z8056(&).....	Roll BG-56-(&), for antenna mast sections.
7 ft.....	1B128.....	Wire W-128.

13. Assembly and Installation

a. PROCEDURE. Components of the radio set should be installed as shown in figures 11 and 14 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Frame FM-43, on floor, left side of vehicle.	Secure to floor of vehicle as shown in figures 11 and 14, using hardware already provided in vehicle. Refer to figure 8 for mounting holes.
Mounting FT-237-(&), including Cord CO-278, on Frame FM-43.	Secure to frame as shown in figure 11, using hardware supplied with the mounting.
Mast Base MP-48 or MP-48-A, on bracket on left side of vehicle.	When Mast Base MP-48 is supplied, refer to figure 12. This installation requires assembly 6. Cut the antenna lead-in, Wire W-128, to proper length. Strip one-half inch of insulation from one end, clean and tin this end, and solder plug (item 6B) to it as shown in figure 12. Loosen setscrews 8 and 9, remove assembly 7 and stow it. Install the prepared Wire W-128 inside the mast base, through the hollow stem (item 1). Make certain item 6B is inserted in the slot as far as possible. Tighten setscrews 8 and 9. Place item 1 through the 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 6C, neoprene washer 6D, and insulator 6E over Wire W-128, and install inside hollow stem (item 1). Follow up with washer (item 17) and retaining collar (item 18). Leave sufficient slack wire inside the stem to allow for flexing of the mast base and then tighten item 18. When Mast Base MP-48-A is supplied, assemble as shown in figure 16, using Wire W-128 internal lead-in.
Dynamotor DM-34-(&), in cabinet of Radio Receiver BC-603-(&).	If the dynamotor is not already installed refer to figure 11. Loosen screw lock in rear center of the receiver cabinet, and remove the receiver chassis. Bolt the dynamotor unit on top rear of the chassis, return chassis to the cabinet, and tighten the screw locks.
Dynamotor DM-35-(&), in cabinet of Radio Transmitter BC-604-(&).	If the dynamotor is not already installed, refer to figure 11. Loosen the two screw locks on front panel of the cabinet and pull out the crystal case. Loosen the four screw locks and remove the top cover of the transmitter. Bolt the dynamotor unit in left rear of the transmitter chassis and replace and secure the cover and the crystal case.

Part and location

Method and materials

Radio Transmitter BC-604-(&), on Mounting FT-237.	Mount as shown in figures 11 and 14. Secure with screw locks furnished.
Radio Receiver BC-603-(&), on Mounting FT-237-(&).	Mount as shown in figures 11 and 14. Secure with the screw locks furnished.
Cover BG-108.	Place over the mast base when mast sections are not in use.
Headset HS-30-(&) and Cords CD-307-A and CD-604.	Plug Cord CD-307-A into proper jack in the receiver; connect the two cords and connect the headset to Cord CD-604.
Insulator IN-101, in hole through vehicle and mast base bracket (fig. 6).	Remove plug button (fig. 6) in side of vehicle and install insulator as shown in figure 11.
Microphone T-17-(&).	Insert plug of cord into microphone jack of Radio Transmitter BC-604-(&).
Mast Sections MS-51, MS-52, MS-53; Clamps MC-423 and MC-424, on Mast Base MP-48 or MP-48-A.	Screw the mast sections together and secure with the clamps. Fasten the clamps to the <i>male</i> end of the mast sections. Then screw mast antenna into the mast base. When using Mast Base MP-48-A, secure with item 18, figure 16. When removed, stow in Roll BG-56-(&).
Roll BG-56-(&).	Disposition left to discretion of the using arms.

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-528-(&) as shown in figures 11 and 14. Connect and secure so as not to interfere with accessibility and operation of the equipment. Enough slack must be left to permit free movement of all units having shock mounting. 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 12-volt and negative 12-volt leads (in the truck terminal box) until all other connections have been completed.

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 Truck, $\frac{3}{4}$ -ton, 4x4, Carryall, are listed below:

Quantity		Stock No.	Item
SCR-510-(&)	SCR-610-(&)		
^a 1	^a 1	6Q349	Alignment Tool TL-207.
^b 1	^b 1	3A41	Battery BA-41, for internal use.
1	1	6Z3147	Connector No. 61007 and Bondnut BL-50 (Appleton).
^c 1	0	3E1636	Cord CD-636.
1	1	2Z3400-108	Cover BG-108.
1	1	2Z3400-153	Cover BG-153.
1	1	3E1605-6.5	Cord CD-605.
1	1	2Z4643	Frame FM-43.
1	0	6L50-510V14	Hardware bag.
0	1	6L50-610V14	Hardware bag.
1	1	2B830(&)	Headset HS-30-(&).
1	1	3G601	Insulator IN-101.
1	1	2A2088-48(&)	Mast Base MP-48 or MP-48-A.
1	1	2A2351	Mast Section MS-51.
1	1	2A2352	Mast Section MS-52.
1	1	2A2353	Mast Section MS-53.
1	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	2B1617(&)	Microphone T-17-(&).
1	1	2Z6721-250	Mounting FT-250.
^d 1	^d 1	3H4496-120(&)	Power Unit PE-120-(&), including installed tubes.
1	0	2C5360(&)	Radio Receiver and Transmitter BC-620-(&), including set of tubes and necessary crystals installed.
0	1	2C5379(&)	Radio Receiver and Transmitter BC-659-(&), including set of tubes and necessary crystals installed.
1	1	2Z8056(&)	Roll BG-56-(&).
^e 1	0	5C2806	Terminal Box TM-206.
^d 1	^d 1	3H6713	Vibrator VB-13.
^e 7 ft.	7 ft.	1B128	Wire W-128.

^aAlignment Tool TL-150 (6Q338-150) may be substituted.

^bTo be requisitioned from the nearest Signal Corps Depot or Signal Section of an Army Service Forces Depot.

^cWhen Cord CD-636 and Terminal Box TM-206 are not available, Wire W-128 may be substituted. The lead-in should then be as short as possible.

^dPlate Supply Unit PE-97-(&) for Radio Set SCR-510-(&) or Plate Supply Unit PE-117-(&) for Radio Set SCR-610-(&) (Vibrator VB-13 not required) may be substituted for Power Unit PE-120-(&).

15. Assembly and Installation

a. PROCEDURE. Components of the radio set should be installed as shown in figure 13 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Frame FM-43, on floor, left side of vehicle.	Fasten to floor as shown in figure 13, using hardware provided in vehicle. Refer to figure 8 for mounting holes.
Mounting FT-250-(&), on Frame FM-43.	Secure to frame as shown in figure 13, using provided hardware.
Power Unit PE-120-(&) and Vibrator VB-13, on Mounting FT-250-(&).	Open the power unit case, remove chassis cover, and install the vibrator in its socket. Make certain that the connector link is in the BC-620 position for Radio Set SCR-510-(&) and in the BC-659 position for Radio Set SCR-610-(&); that the change-over plug is set for 12 volts; and that tubes are pressed down firmly in their proper sockets. Replace chassis cover, close case, and secure the unit on the mounting with catch clips supplied.
Battery BA-41, in battery compartment inside Radio Receiver and Transmitter BC-620-(&) or BC-659-(&).	Remove the receiver and transmitter by removing screws from the front panel, or loosening the two catch clips, and pulling out the chassis. Remove cover of battery box, located near front panel of chassis, and insert the battery. Engage plug into socket of battery, and replace cover. See that all tubes are pressed down firmly in their proper sockets. Make sure the two crystals for desired operating frequencies are held securely in their sockets by the retaining clip. <i>Do not interchange these crystals.</i> Place the two toggle switches near left edge of chassis in the ON position, then slide chassis back into case and replace screws or fasten the two catch clips.
Radio Receiver and Transmitter BC-620-(&) or BC-659-(&), on Power Unit PE-120-(&).	Mount the receiver and transmitter, as shown in figure 13, and secure with hook fasteners provided.
Insulator IN-101, in hole through vehicle and mast base bracket (fig. 6).	Remove plug button (fig. 6) from hole in vehicle and install with flange on outside of vehicle.
Mast Base MP-48 or MP-48-A, on mast base bracket on left side of vehicle.	Radio Set SCR-510-(&): If Mast Base MP-48 is supplied, refer to figure 12. If the internal lead-in (assembly 7) is not already installed, proceed as follows: Loosen set-screws (items 8 & 9) in the top of the mast base and insert assembly 7 upward through the mast base stem (item 1). Make certain

Terminal Box TM-206 (antenna), on Radio Receiver and Transmitter BC-620-(&).

Cord CD-636 (coaxial), on Mast Base MP-48 or MP-48-A and Terminal Box TM-206.

that the soldering plug (item 7G) is inserted as far as possible into the slot in the top of the mast base and lock in place with the setscrews (items 8 & 9). Remove items 2, 3, 4, and 5 from the stem (item 1). Then mount the mast base by inserting the stem through the hole in the mast base bracket (fig. 6) and secure in place with items 2, 3, 4, and 5. Insert the adapter (item 10) into the stem (item 1) and lock in place with the collar (item 18). One end of coaxial Cord CD-636 may now be attached to the adapter (item 10). If Mast Base MP-48-A is supplied, refer to figure 21. If the internal lead-in, Cord CD-689, is not already installed, proceed as follows: Loosen the screw (item 9) in the top of the mast base, and insert Cord CD-689 upward through the mast base stem (item 1). Make certain that the soldering plug (item 11) is inserted as far as possible into the mast base and fasten item 11 by tightening the screw (item 9). Remove items 2, 3, and 4 from the bottom of the mast base. Insert the mast base through the hole in the mast base bracket and lock in place with items 2, 3, and 4. Screw the adapter coupling (item 15) firmly into the mast base stem (item 1). Then connect one end of Cord CD-636 to the adapter coupling (item 15).

Radio Set SCR-610-(&): Install the supplied mast base in the same manner as directed for Radio Set SCR-510-(&), except that the internal lead-in is not used. Refer to figures 12 and 16, and install the external Wire W-128 lead-in as shown in figure 16. Connect the other end of Wire W-128 to the antenna post of Radio Receiver and Transmitter BC-659-(&) as shown in figure 13.

Mount the terminal box on the antenna post guard of the receiver and transmitter as shown in figures 13 and 19. *Warning: Refer to the instructions supplied with the terminal box for information covering changes in the antenna loading coil, necessitated by use of the terminal box.*

Use the cord to connect the mast base and terminal box as shown in figure 13. If Cord CD-636 is not supplied, substitute 9' 4" of Cable WC-562 (or Cordage CO-282) and coupling, Lapp No. 26243 (Stock No. 2A2088-48/C4). Figures 20 and 21 show details for the preparation of the cordage.

<i>Part and location</i>	<i>Method and materials</i>
Microphone T-17-(&).	Plug into designated jack on panel of Radio Receiver and Transmitter BC-620-(&) or BC-659-(&).
Headset HS-30-(&), and Cord CD-605.	Plug Cord CD-605 into proper jack on panel of Radio Receiver and Transmitter BC-620-(&) or BC-659-(&) and connect the headset to the cord.
Mast Sections MS-51, MS-52, MS-53, and Clamps MC-423 and MC-424, on Mast Base MP-48 or MP-48-A.	Screw the mast sections together and secure with the clamps. Fasten the clamps to the male end of the mast sections. Then screw the mast antenna into the mast base. Secure with item 18, figure 16, when using Mast Base MP-48-A. When removed, stow mast sections and clamps in Roll BG-56-(&).
Roll BG-56-(&).	Stow in any convenient place in vehicle.
Cover BG-108.	Place over mast base when mast sections are not installed.
Connector No. 61007 and Bondnut BL-50.	Install through knockout hole in car terminal box to bush and secure power cord of Power Unit PE-120-(&).

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-510-(&) or SCR-610-(&) as shown in figure 13. 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 mounting. 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 12-volt and negative 12-volt leads (in the terminal box) until all other connections have been completed.

SECTION VII

RADIO SET SCR-506-(&)

16. Required Parts

Items necessary for the installation of Radio Set SCR-506-(&) in Truck, $\frac{3}{4}$ -ton, 4x4, Carryall, are listed below:

Quantity	Stock No.	Item
1.....	2A275-27.....	Antenna A-27, phantom antenna.
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.....	2Z2599-263.....	Chest CH-263, for spare parts.
2.....	6Z3147.....	Connector No. 61007 and Bondnut BL-50 (Appleton), for power cord.
2.....	3E1307A-5.5.....	Cord CD-307-A, 65" for Headset HS-30-(&).
1.....	3E1314.....	Cord CD-314, for Loudspeaker LS-3.
1.....	3E1318(&).....	Cord CD-318-(&), for microphone connection.
2.....	3E1604.....	Cord CD-604, 6", for connecting Headset HS-30-(&) to Cord CD-307-A.
1.....	2Z3367(&).....	Cover BG-67-(&), for mast base.
1.....	2Z3400-103.....	Cover BG-103, for radio receiver and transmitter.
1.....	3H1640(&).....	Dynamotor DM-40-(&), 12-volt, for Radio Receiver BC-652-(&), including attached spare parts.
1.....	3H1642(&).....	Dynamotor DM-42-(&), 12-volt, for Radio Transmitter BC-653-(&), including attached spare parts.
1.....	2Z4643.....	Frame FM-43, for Mounting FT-253-(&), including attached hardware.
2.....	2B830(&).....	Headset HS-30-(&).
1.....	3G586.....	Insulator IN-86, for tying down mast sections.
1.....	3G601.....	Insulator IN-101.
1.....	3Z3445.....	Key J-45.
1.....	2Z6303.1.....	Loudspeaker LS-3.
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.

Quantity	Stock No.	Item
1.....	2A2352.....	Mast Section MS-52.
1.....	2A2353.....	Mast Section MS-53.
1.....	2B1617.....	Microphone T-17-(&).
1.....	2B1645.....	Microphone T-45.
2.....	2B1567.....	Microphone Cover M-367.
1.....	2Z6721-253-(&)...	Mounting FT-253-(&), including Cord CO-280, for power connection.
1.....	2C4452-(&).....	Radio Receiver BC-652-(&), including necessary fuses, tubes and crystals.
1.....	2C6530-653-(&)...	Radio Transmitter BC-653-(&), including necessary tubes and fuses.
1.....	2Z8056(&).....	Roll BG-56-(&), for mast sections.
50 ft....	6Z7926.....	Rope RP-5, for tying down mast sections.
15 ft....	1B146.....	Wire W-146, for antenna and ground leads.

17. Assembly and Installation

a. **PROCEDURE.** Components of the radio set should be installed as shown in figure 15 and as directed below:

<i>Part and location</i>	<i>Method and materials</i>
Frame FM-43, on left side of vehicle.	Fasten to floor as shown in figure 15, using hardware provided in vehicle. Refer to figure 8 for mounting holes.
Mounting FT-253-(&), on Frame FM-43.	Secure to frame as shown in figure 15, using hardware provided.
Mast Base MP-37 or MP-57, on bracket on left side of vehicle.	If Mast Base MP-37 is supplied, refer to figure 3. Place item 1 over hole in bracket (fig. 6), and item 2 over item 1. Place item 3 over item 2, and insert item 4 through hole in bracket. Place item 5 over item 6 and insert latter through bottom of hole. Place items 7 and 8 beneath item 6 and fasten entire assembly with items 9 and 10. When Mast Base MP-57 is supplied, assemble as shown in figure 4.
Insulator IN-101, in hole through vehicle and mast base bracket.	Remove plug through hole in vehicle and install as shown in figure 15.
Dynamotor DM-40-(&), on top of chassis of Radio Receiver BC-652-(&).	If the dynamotor has not been installed, proceed as follows: Remove the screws around the edge of the receiver panel and the screw in the rear center of the cabinet. Pull receiver chassis from its cabinet and secure dynamotor to receiver chassis with snap-slide fasteners. The nameplate on the front panel of the receiver should be turned to read 12-VOLT OPERATION.

Dynamotor DM-42-(&), in dynamotor compartment in the lower right end of Radio Transmitter BC-653-(&).

Radio Receiver BC-652-(&), on left end of Mounting FT-253-(&).

Radio Transmitter BC-653-(&), on Mounting FT-253-(&).

Connectors No. 61007 and Bondnuts BL-50.

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

Loudspeaker LS-3 and Cord CD-314.

Mast Sections MS-49 to MS-53 and Clamps MC-421 to MC-424, on Mast Base MP-37 or MP-57.

Roll BG-56-(&).

Cover BG-67-(&).

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-506-(&) as shown in figure 15. 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 12-volt and negative 12-volt leads (in the terminal box) until all other connections have been completed.

If the dynamotor has not been already installed, merely slide it into the dynamotor compartment and secure front panel of dynamotor chassis with the five screws provided. Remove patch cover plate located on the top of the radio transmitter, right end, and connect the six connector links for 12-volt operation as indicated by the arrow on terminal link terminal strip. The name plate on the dynamotor panel should read 12-VOLTS.

Place the receiver on the mounting and lock in place with the thumbscrews provided.

Place the transmitter on the mounting and secure with the thumbscrew locking devices.

Install through knock-out holes in terminal box for power Cord CO-280, as shown in figure 15.

Plug Cord CD-307-A into the proper jack of the radio receiver. Plug Cord CD-604 into Cord CD-307-A. Connect the headset to Cord CD-604.

Plug the cord into the proper jack in the front panel of the radio receiver and connect the loudspeaker to the cord.

Screw the mast sections together and secure with the clamps. Secure the clamps to the male end of the mast sections. Then screw the antenna into the mast base. When removed, stow mast sections and clamps in Roll BG-56-(&).

Disposition left to the discretion of using arms.

Place over the mast base when the mast sections are not in use.

SECTION VIII

RADIO SET SCR-608-(&) OR SCR-628-(&)

18. Required Parts

Items necessary for the installation of Radio Set SCR-608-(&) or SCR-628-(&) in Truck, 3/4-ton, 4x4, Carryall, are listed below:

Quantity		Stock No.	Item
SCR-608-(&)	SCR-628-(&)		
1.....	1.....	2A283.....	Antenna A-83, phantom.
1.....	1.....	2Z1140.....	Box BX-40, for crystals.
1.....	1.....	2Z2651-423.....	Clamp MC-423.
1.....	1.....	2Z2651-424.....	Clamp MC-424.
1.....	1.....	6Z3147.....	Connector No. 61007 and Bondnut BL-50 (Appleton).
2.....	2.....	3E1605-6.5.....	Cord CD-605, 78", for Headset HS-30-(&).
120.....	120.....	2Z3541-A.4.....	Crystal Holder FT-241-(&), with crystal.
1.....	1.....	2Z3400-108.....	Cover BG-108, for Mast Base MP-48 or MP-48-A.
2.....	1.....	3H1634(&).....	Dynamotor DM-34-(&), 12-volt, for Radio Receiver BC-683-(&); includes attached spare parts.
1.....	1.....	3H1635(&).....	Dynamotor DM-35-(&), 12-volt, for Radio Transmitter BC-684-(&); includes attached spare parts.
1.....	1.....	2Z4643.....	Frame FM-43, for Mounting FT-237-(&), includes attached bag of hardware.
2.....	2.....	2B830(&).....	Headset HS-30-(&).
1.....	1.....	6L50-508V14...	Hardware bag.
1.....	1.....	3G601.....	Insulator IN-101.
1.....	1.....	2A2088-48-(&)	Mast Base MP-48 or Mast Base MP-48-A.
1.....	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-(&).
1.....	1.....	2B1645.....	Microphone T-45.
2.....	2.....	2B1567.....	Microphone Cover M-367.
1.....	1.....	2Z6721-237(&)	Mounting FT-237-(&), includes Cord CO-278 for power connection.

Quantity	Stock No.	Item
2..... 1.....	2C4460-683(&)	Radio Receiver BC-683-(&), includes necessary fuses, lamps, and tubes.
1..... 1.....	2C6530-684(&)	Radio Transmitter BC-684-(&), includes necessary fuses, lamp, and tubes.
1..... 1.....	2Z8056(&)	Roll BG-56-(&), for antenna mast sections.
8 ft..... 8 ft.....	1B128.....	Wire W-128.

19. Assembly and Installation

a. PROCEDURE. Components of the radio set should be installed as shown in figure 17 and as directed below:

Part and location

Frame FM-43, on left side of vehicle.

Mounting FT-237-(&), on Frame FM-43.

Mast Base MP-48 or MP-48-A, on mast base bracket on left side of vehicle.

Method and materials

Fasten to floor as shown in figure 17, using hardware provided in vehicle. Refer to figure 8 for mounting holes.

Fasten to frame as shown in figure 17, using hardware provided.

If Mast Base MP-48 is supplied, refer to figure 12. Loosen and remove items 2, 3, 4, and 5. If internal lead-in, assembly 7, is installed in the mast base, it should be removed and stowed. Remove the setscrews, items 8 and 9, and pull assembly 7 out of the mast base. Strip 1/2 inch of insulation from one end of Wire W-128 and solder plug (item 6B) to it. Insert Wire W-128 inside mast base, making certain that the soldering plug is inserted in the slot at the top of the mast base as far as possible; this may be viewed through the holes for the setscrews, items 8 and 9. Replace setscrews and tighten them firmly. Mount the mast base by inserting the stem (item 1) through the hole in the mast base bracket. Place items 2, 3, 4, and 5 over the stem and tighten firmly. Slip insulator (item 6C) neoprene washer (item 6D) and insulator (item 6E) over Wire W-128 and install inside hollow stem of mast base. Place the washer (item 17) on the wire and follow up with the retaining collar (item 18). Tighten the retaining collar securely to hold the entire lead-in assembly in place. Provide enough slack wire inside the mast base by flexing the mast base spring 90° before tightening the retaining collar

Part and location

Dynamotor DM-34-(&), on chassis of Radio Receiver BC-683-(&), in position shown in figure 17.

Dynamotor DM-35-(&), on chassis of Radio Transmitter BC-684-(&), in position shown in figure 17.

Radio Transmitter BC-684-(&), on Mounting FT-237-(&), as shown in figure 17.

Radio Receiver BC-683-(&), on Mounting FT-237-(&), as shown in figure 17.

Cover BG-108.

Insulator IN-101, in hole through vehicle and mast base bracket, shown in figure 17.

Mast Sections MS-51 to MS-53, and Clamps MC-423 and MC-424, on Mast Base MP-48 or MP-48-A.

Connector No. 61007 and Bondnut BL-50.

Method and materials

(item 18). If Mast Base MP-48-A is supplied, refer to figure 16. Prepare one end of Wire W-128 as directed above. Attach soldering plug (item 11) to the end of the wire. Insert the wire into the mast base and secure in place by tightening setscrew (item 9). Remove items 2, 3, and 4, from the bottom of the mast base. Mount the mast base through the hole in the mast base bracket on the side of the vehicle. Replace items 2, 3, and 4, tightening securely. Slip the ceramic and neoprene washers (items 5 and 6) and the threaded phenolic collar (item 7) over the end of Wire W-128 and insert into the bottom of the mast base. Flex the mast base 90°, and tighten the phenolic collar (item 7) securely.

Remove receiver chassis from cabinet and fasten dynamotor in place with the four screws provided.

Remove crystal case from the transmitter cabinet by loosening the screwlocks on the front panel and pulling the crystal case out. Loosen the four screwlocks holding the top cover on transmitter and remove the cover. Install the dynamotor on the left rear of the transmitter chassis by means of four bolts through its base.

Mount in position and secure in place by means of the thumbscrew locks.

Mount in position and secure by means of the thumbscrew locks.

Place over the mast base when the mast sections are not installed.

Remove plug button from hole inside of vehicle and install the insulator with porcelain flange on the outside.

Screw the mast sections together and secure with the clamps. Fasten the clamps to the male end of the mast sections. Then screw the antenna into the mast base. Secure with item 18, figure 16, when using Mast Base MP-48-A. Carry the mast sections and the clamps in Roll BG-56-(&) when they are not in use.

Install on the end of the terminal box to bush and secure Cord CO-278, as shown in figure 17.

Part and location

Method and materials

Roll BG-56-(&).

Stow in convenient place in the vehicle.

b. CORDING AND WIRING. (1) Cord and wire Radio Set SCR-608-(&) or SCR-628-(&) as shown in figure 17. 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 12-volt and negative 12-volt leads (in the terminal box) until all other connections have been completed.

Bracket on the side of the vehicle. Replace nuts 2, 3, and 4, tightening securely. Slip the ceramic and neoprene washers (item 3 and 6) and the threaded phenolic collar (item 7) over the end of Wire W-12B and insert into the bottom of the mast base. Flex the mast base 90°, and tighten the phenolic collar (item 7) securely.

Remove receiver chassis from cabinet and fasten dynamotor in place with the four screws provided.

Remove crystal case from the transmitter cabinet by loosening the screws on the front panel and pulling the crystal case out. Loosen the four screws holding the top cover on transmitter and remove the cover. Install the dynamotor on the left side of the transmitter chassis by means of four bolts through its base.

Mount in position and secure in place by means of the thumbcrew lock.

Mount in position and secure by means of the thumbcrew lock.

Place over the mast base when the mast sections are not installed.

Remove ring bottom from hole inside of vehicle and install the transmitter with proper lead hange on the outside.

Secure the mast sections together and secure with the clamps. Fasten the clamps to the mast end of the mast sections. Tighten the antennas into the mast base. Secure with item 18, figure 16, when using Mast Base MP-48-A. Carry the mast sections and the clamps in Roll BG-56-(&) when they are not in use.

Install on the end of the terminal box to both and secure Cord OO-47B, as shown in figure 17.

Dynamotor DM-54-(&), on chassis of Radio Receiver RI-683-(&), in position shown in figure 17.

Dynamotor DM-55-(&), on chassis of Radio Transmitter RC-684-(&), in position shown in figure 17.

Radio Transmitter RC-684-(&), on Mast Base FT-237-(&), as shown in figure 17.

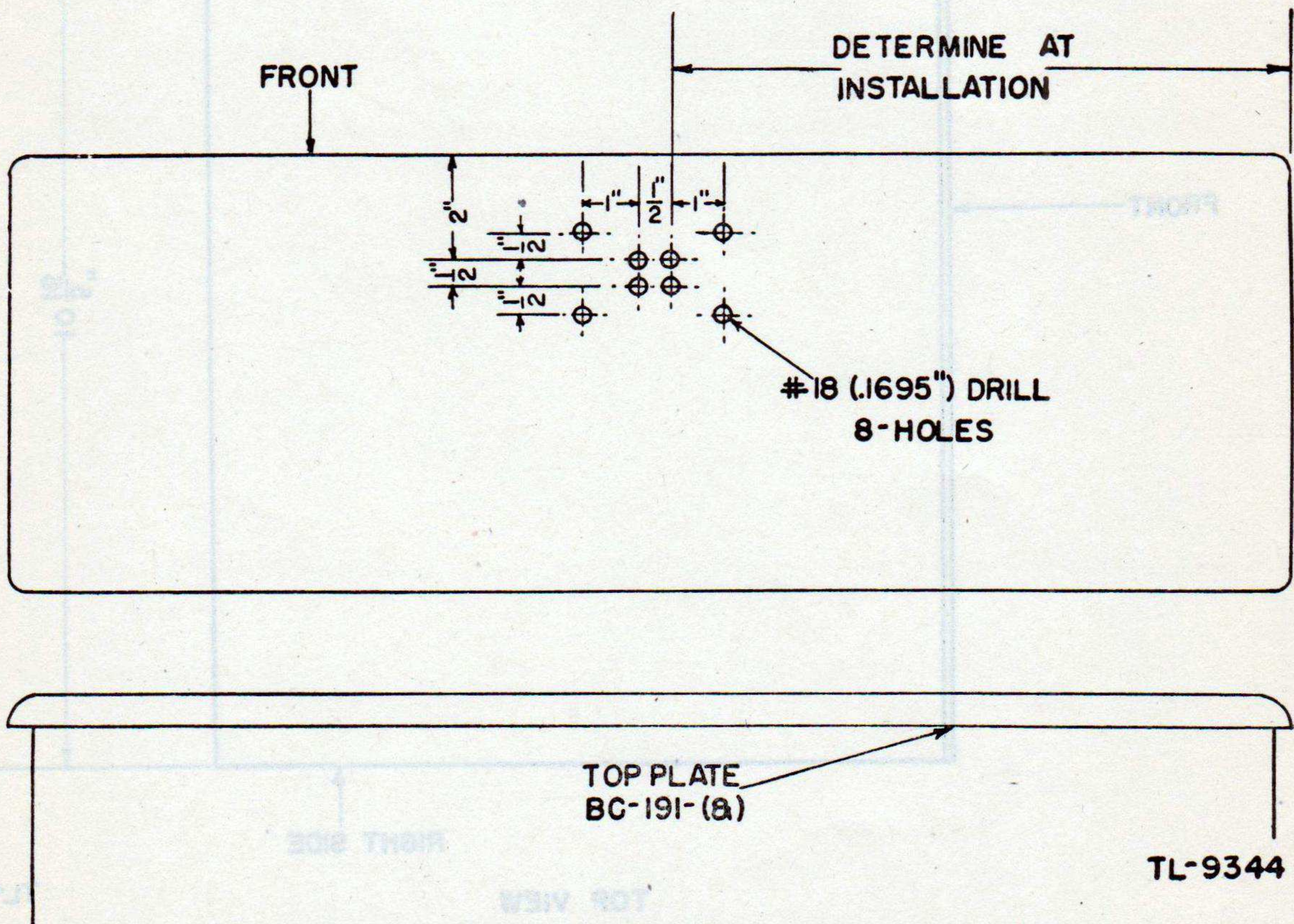
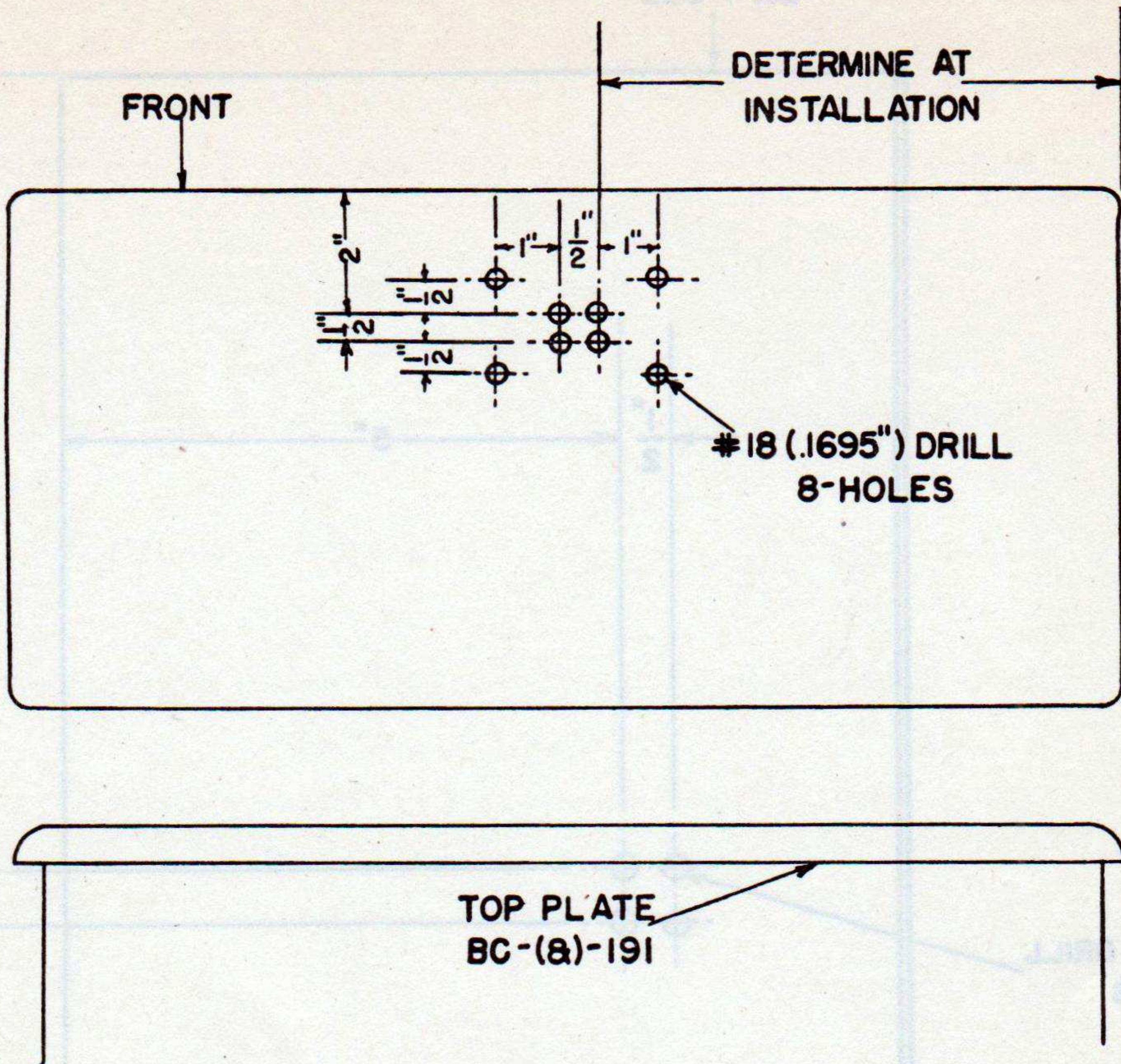
Radio Receiver RI-683-(&), on Mast Base FT-237-(&), as shown in figure 17.

Cover BG-108.

Leadhanger LH-101, in hole through vehicle and mast base bracket, shown in figure 17.

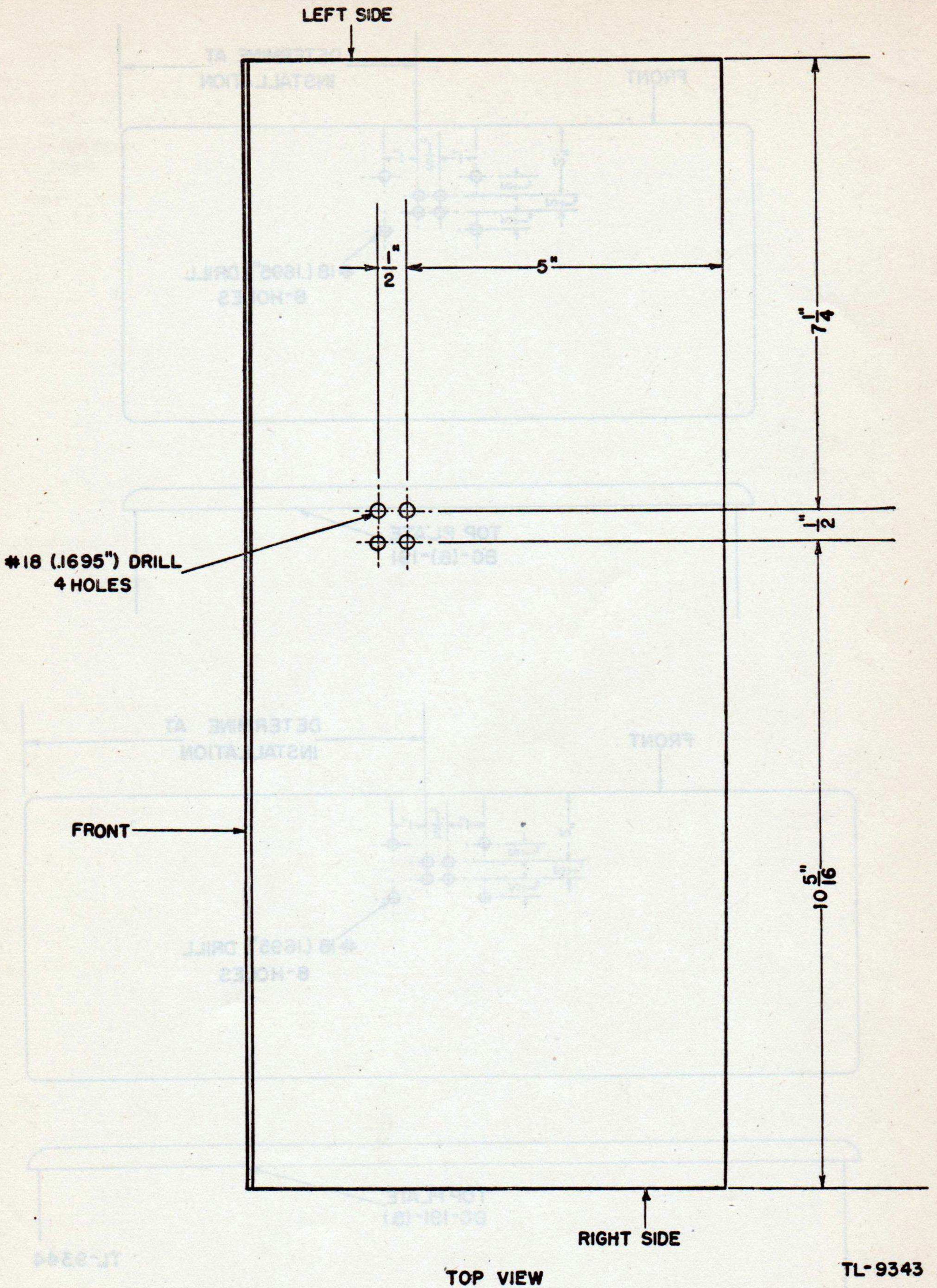
Mast Sections MS-51 to MS-55, and Clamps MC-42A and MC-42B, on Mast Base MP-48 or MP-48-A.

Dynamotor No. C1007 and Receiver RI-58.



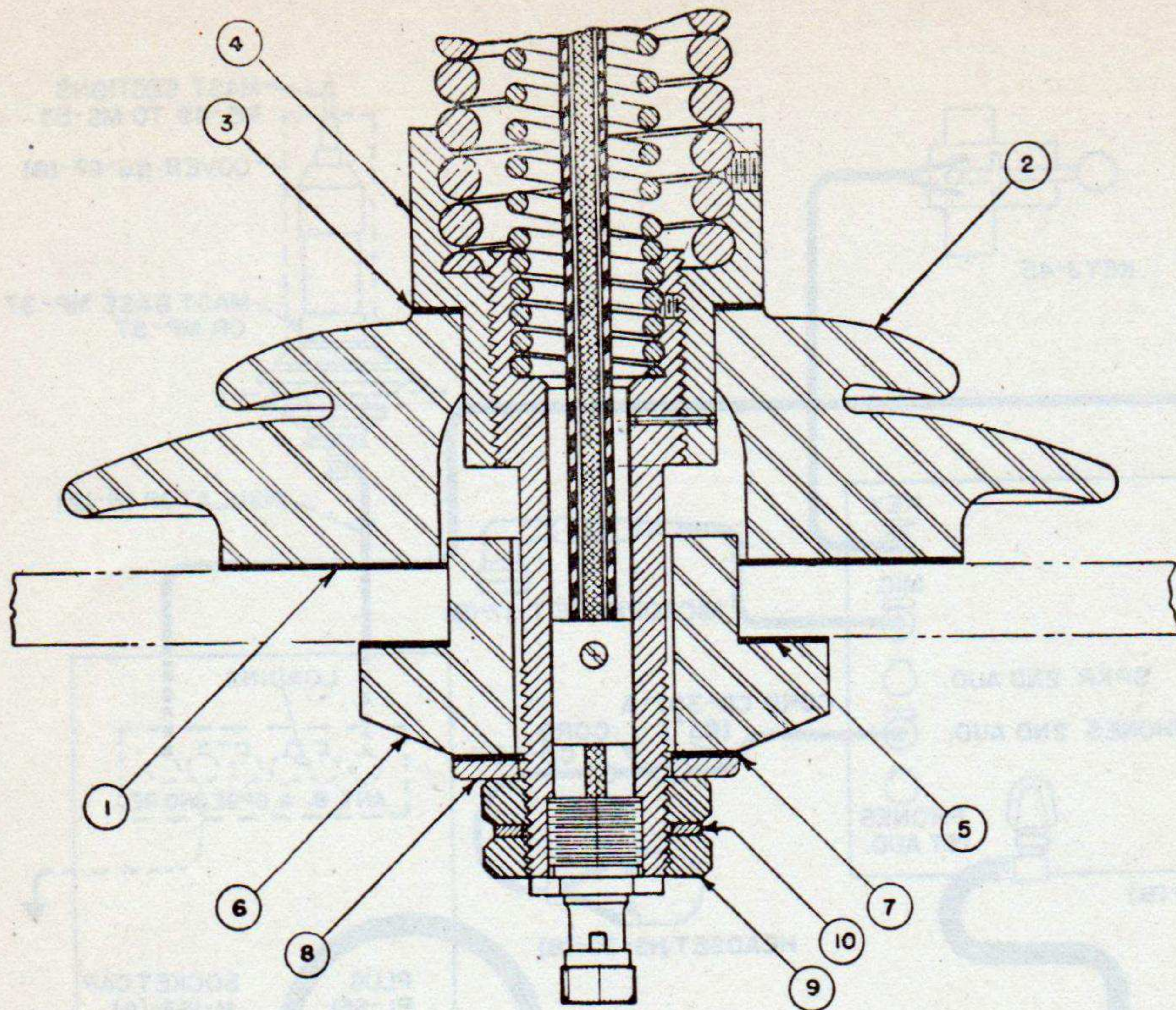
TL-9344

Figure 1. Drilling data for Radio Transmitter BC-191-(8).



TL-9343

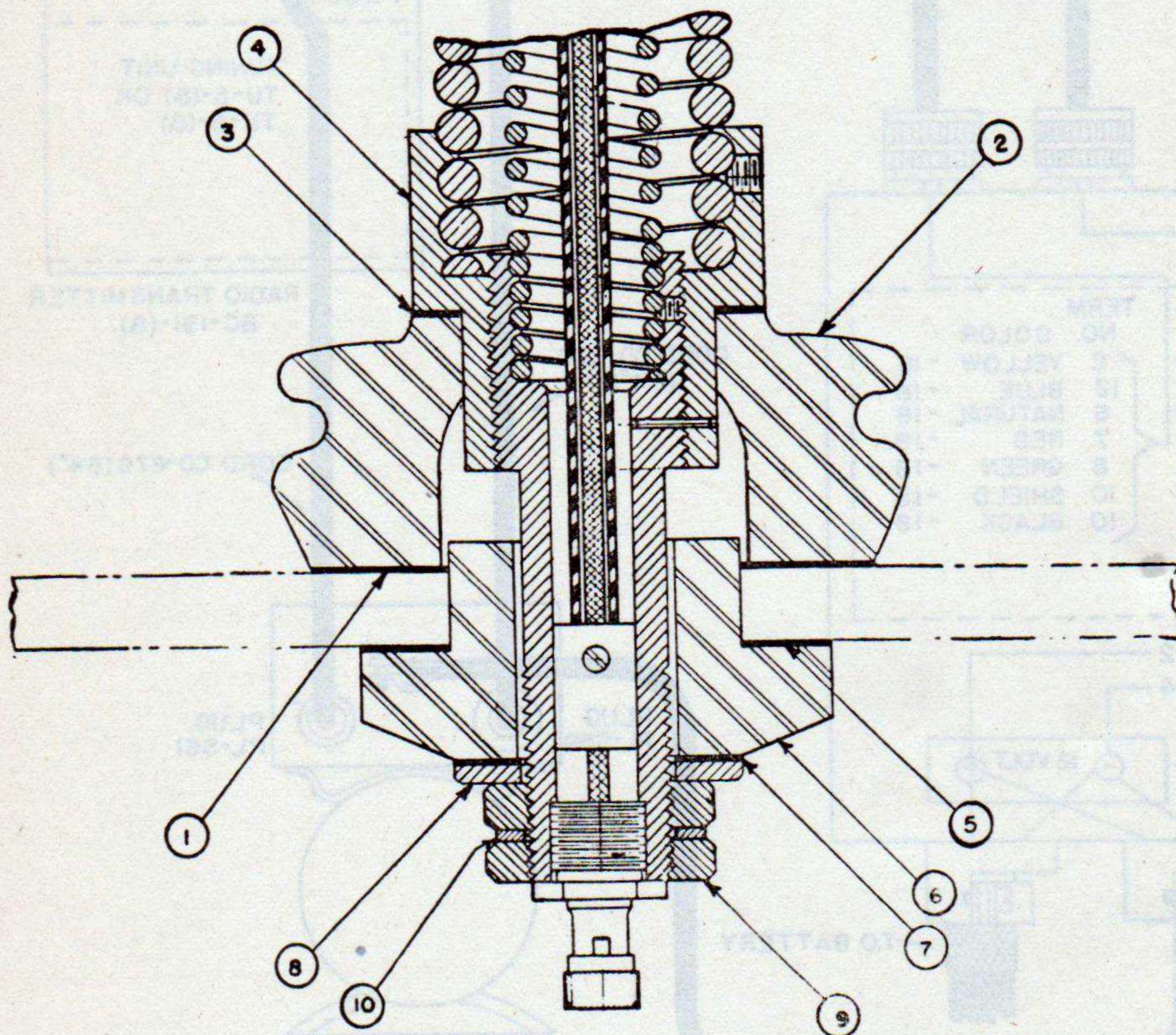
Figure 2. Drilling cabinet of Radio Receiver BC-312-(G) for Mounting FT-178.



- 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

TL-7539

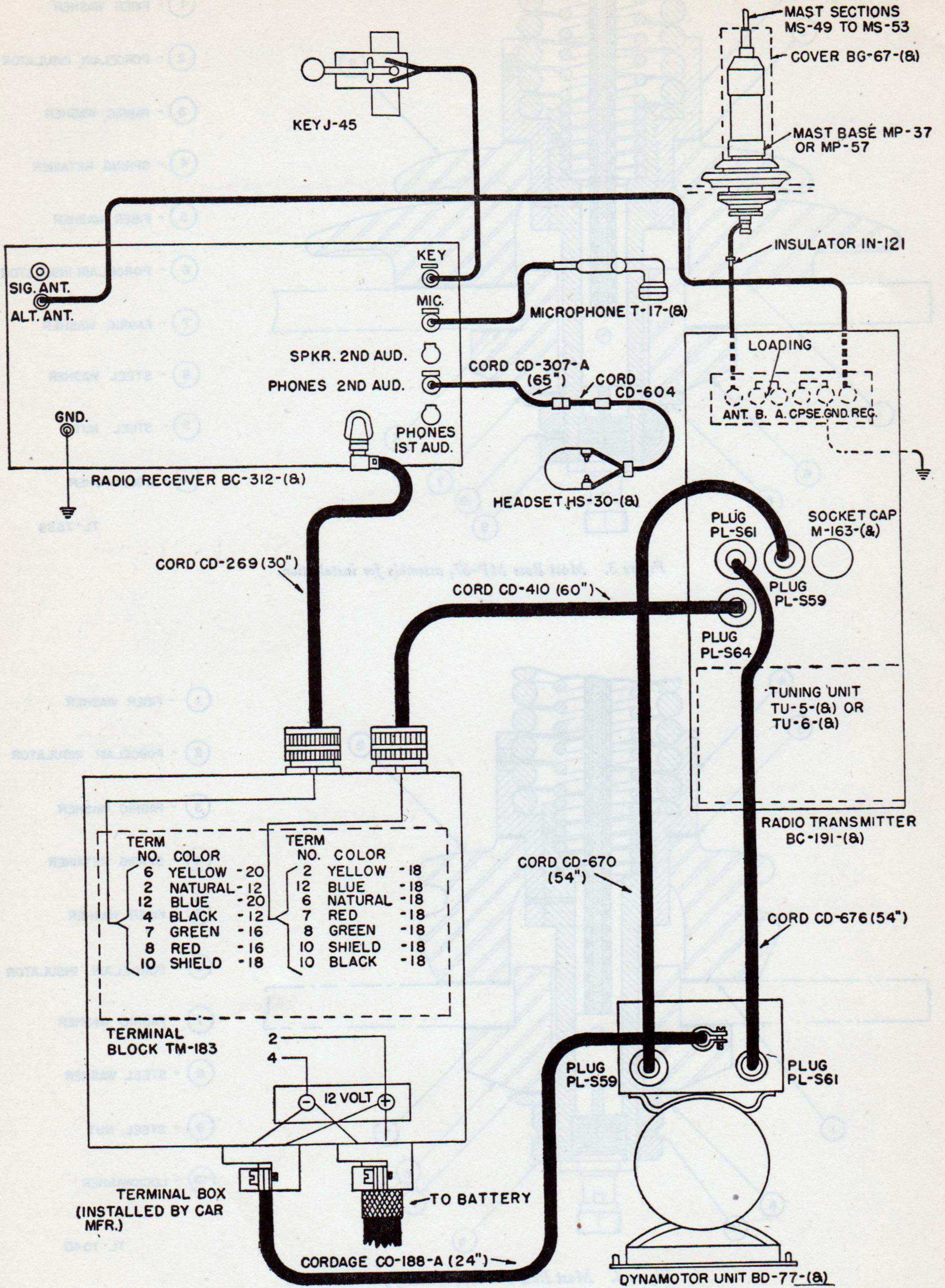
Figure 3. Mast Base MP-37, assembly for installation.



- 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

TL-7540

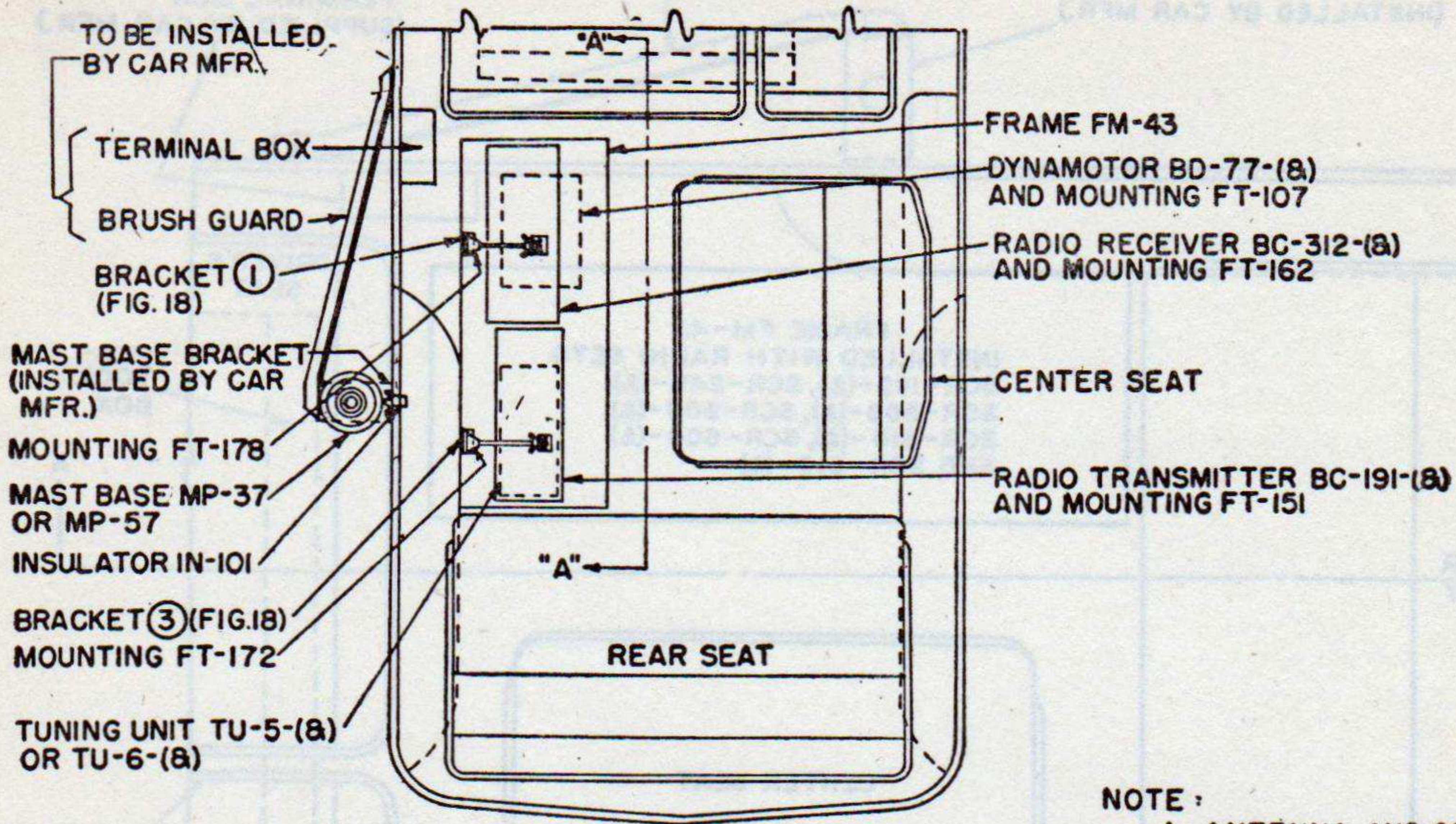
Figure 4. Mast Base MP-57, assembly for installation.



TL-11269-1

Figure 5. Cording diagram for Radio Set SCR-193-J in Truck, 3/4-ton, 4x4, Carryall.

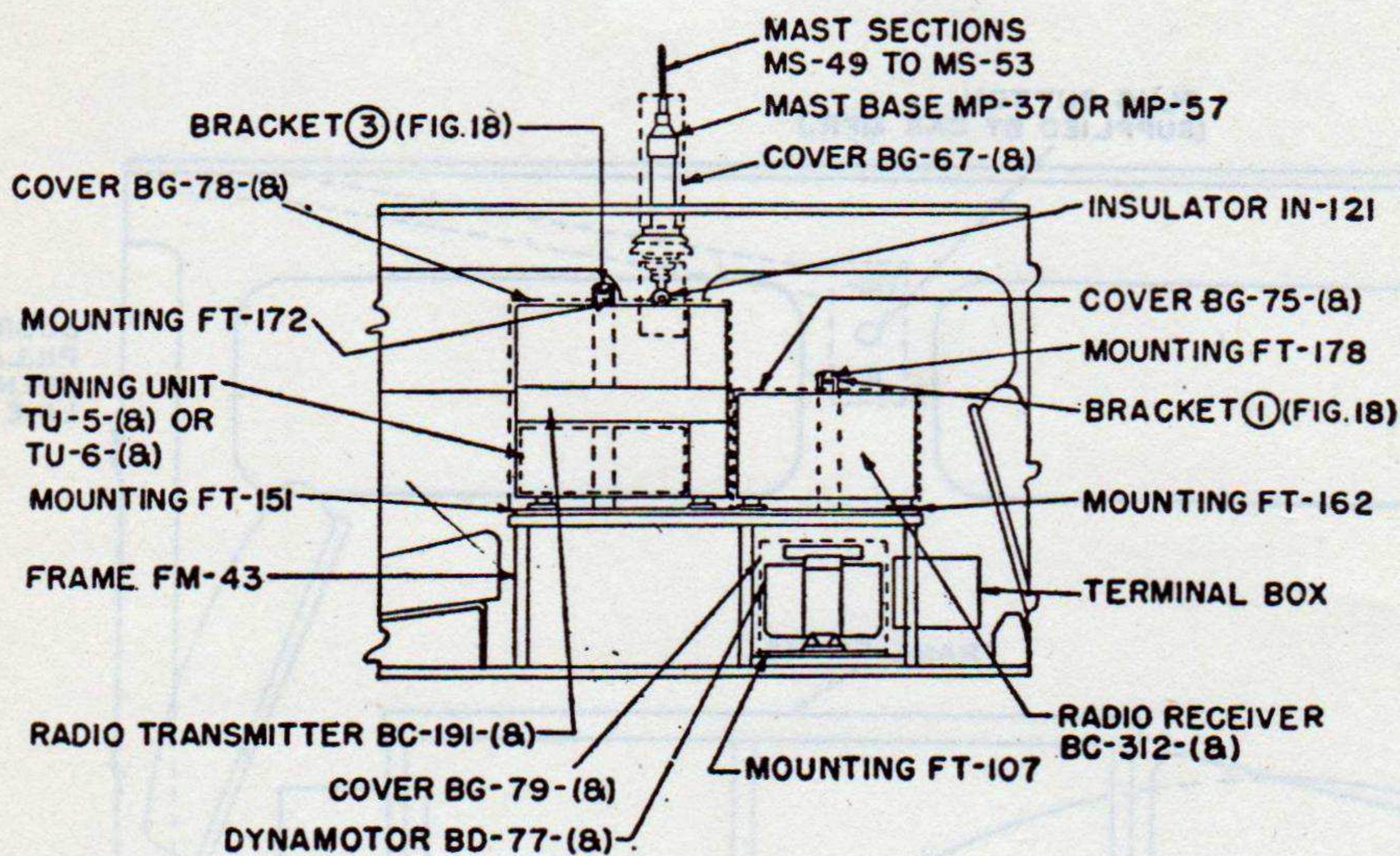
FRONT OF CAR



PLAN VIEW

NOTE :

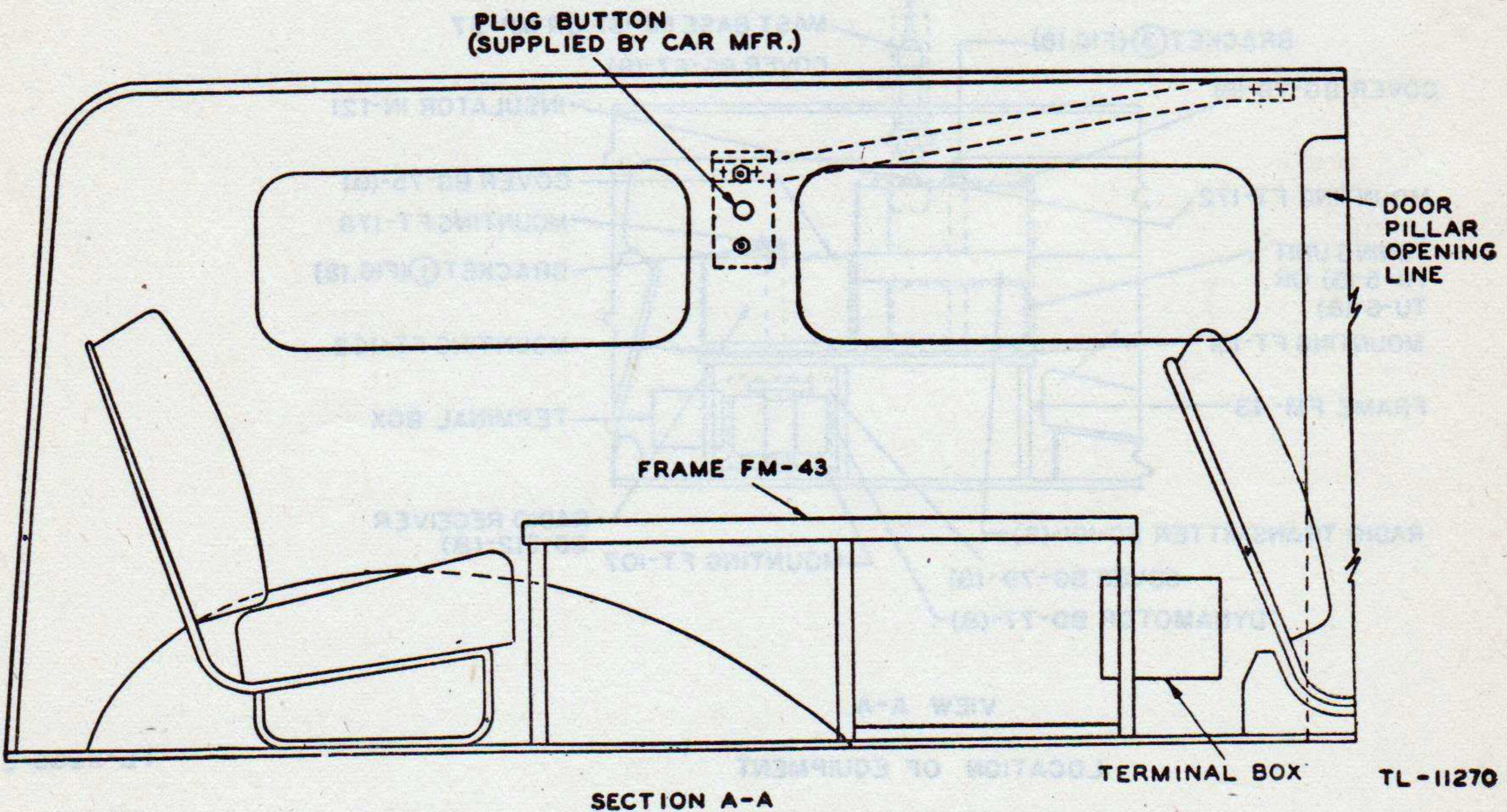
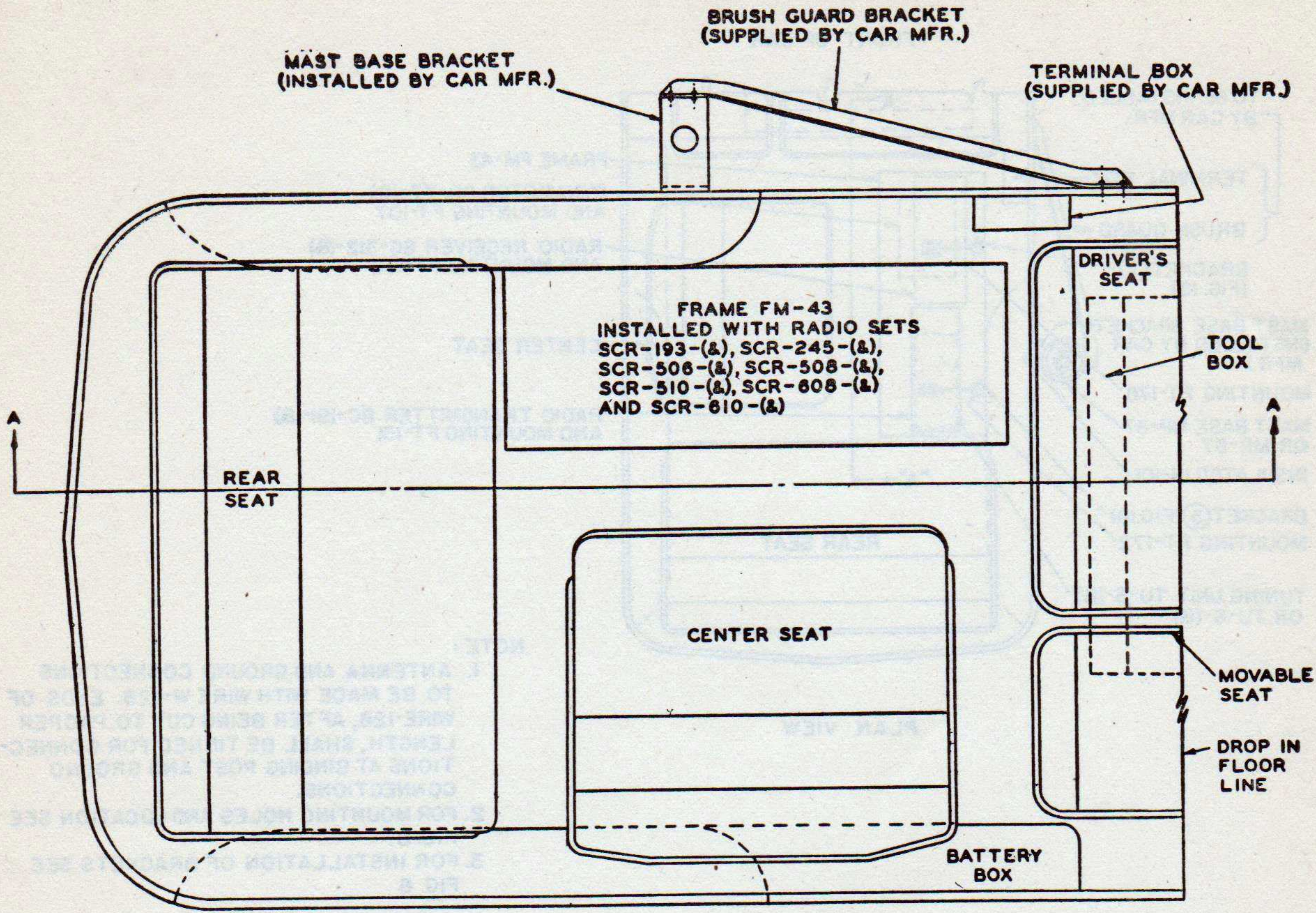
1. ANTENNA AND GROUND CONNECTIONS TO BE MADE WITH WIRE W-128. ENDS OF WIRE-128, AFTER BEING CUT TO PROPER LENGTH, SHALL BE TINNED FOR CONNECTIONS AT BINDING POST AND GROUND CONNECTIONS.
2. FOR MOUNTING HOLES AND LOCATION SEE FIG. 8.
3. FOR INSTALLATION OF BRACKETS SEE FIG. 6



VIEW A-A

LOCATION OF EQUIPMENT

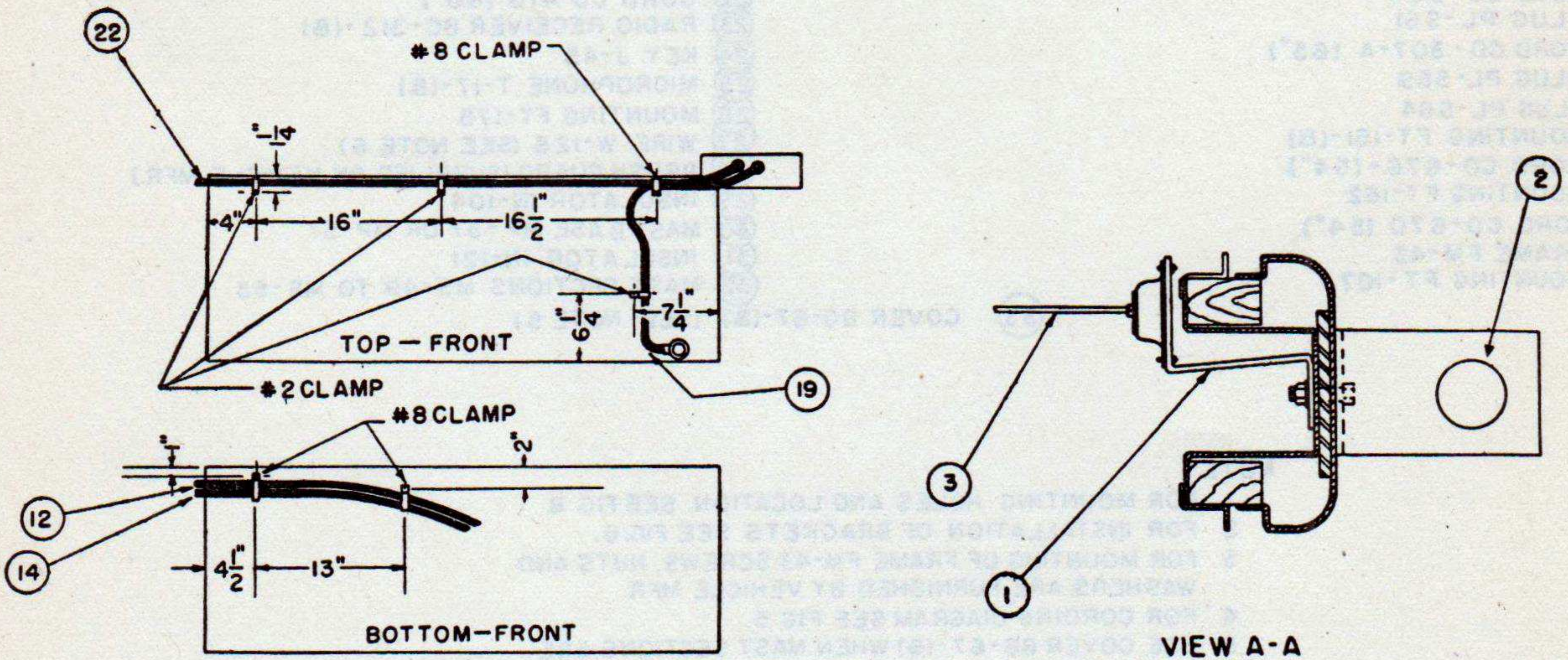
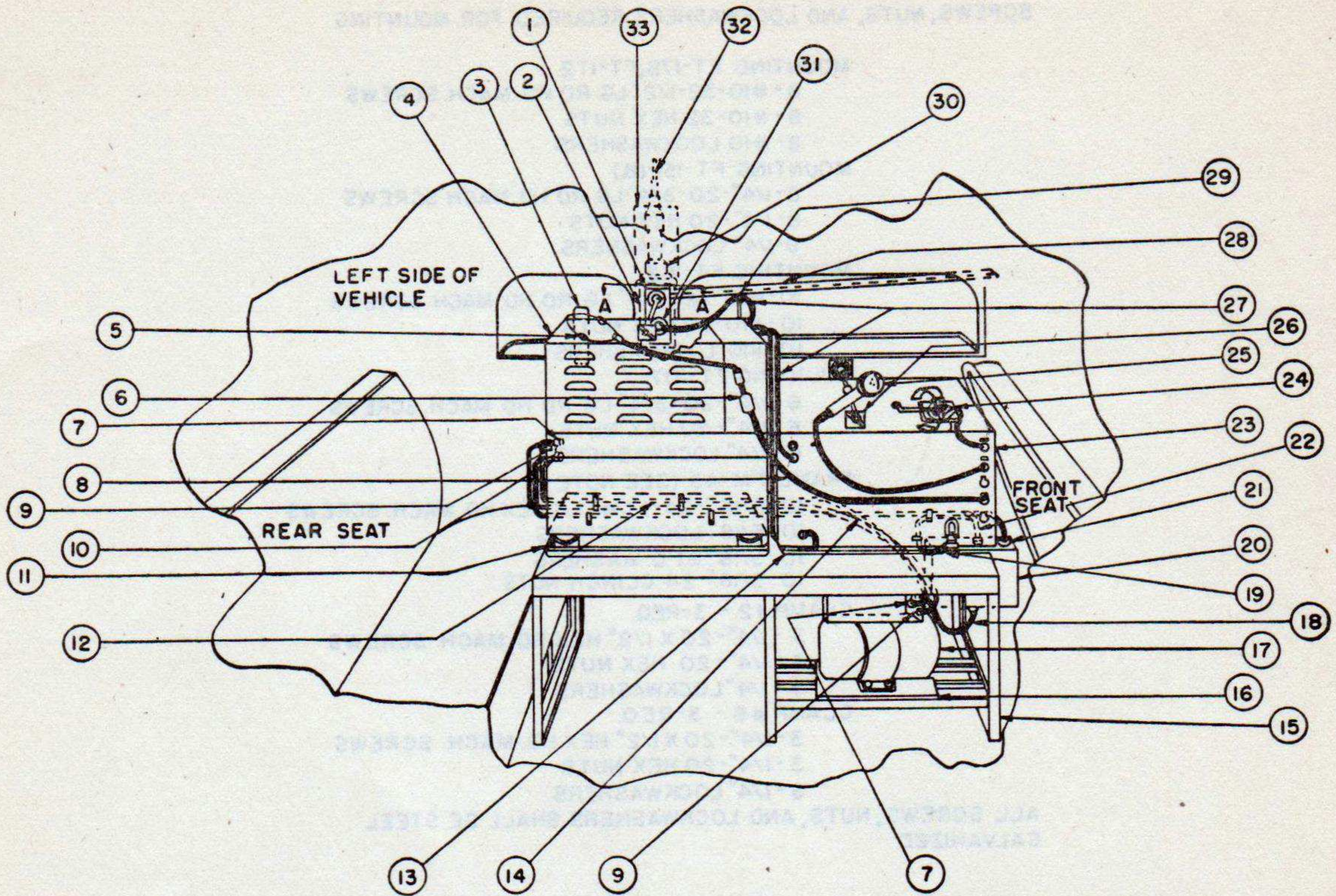
TL-11269-2



SECTION A-A

TL-11270

Figure 6. Installation of mounting bracket on Truck, 3/4-ton, 4x4, Carryall.



FRAME FM-43

TL-11271-1

Figure 7. Installation of Radio Set SCR-193-J in Truck, 3/4-ton, 4x4, Carryall.

SCREWS, NUTS, AND LOCKWASHERS REQUIRED FOR MOUNTING

MOUNTING FT-178, FT-172

8 - #10-32-1/2" LG. RD HD MACH. SCREWS
8 - #10-32 HEX NUTS
8 - #10 LOCKWASHERS

MOUNTING FT-151-(8)

8-1/4"-20-3/4" LG RD HD MACH SCREWS
8-1/4"-20 HEX NUTS
8-1/4" LOCKWASHERS

MOUNTING FT-162

10-#10-32-3/4" LG. RD.HD. MACH SCREWS
10-#10-32 HEX NUTS
10-#10 LOCKWASHERS

MOUNTING FT-107

6-1/4"-20-3/4" LG. RD HD MACH. SCREWS
6-1/4"-20 HEX NUTS
6-1/4" LOCKWASHERS

FRAME FM-43 (SEE NOTE 3)

10-5/16"-24-1 1/4" LG. HEX HD. MACH. SCREWS
10-5/16" LOCKWASHERS
10-5/16" ST'D. WASHERS
10-5/16"-24 CLINCH NUTS

CLAMP #2 - 3-REQ.

3-1/4"-20 X 1/2" HEX HD. MACH. SCREWS
3-1/4"-20 HEX NUTS
3-1/4" LOCKWASHERS

CLAMP #8 - 3-REQ.

3-1/4"-20 X 1/2" HEX HD. MACH. SCREWS
3-1/4"-20 HEX NUTS
3-1/4" LOCKWASHERS

ALL SCREWS, NUTS, AND LOCKWASHERS SHALL BE STEEL GALVANIZED.

- | | |
|--|---|
| <ul style="list-style-type: none"> ① BRACKET ② MAST BASE BRACKET (SUPPLIED BY VEHICLE MFR.) ③ MOUNTING FT-172 ④ RADIO TRANSMITTER BC-191-(8) ⑤ HEADSET HS-30-(8) ⑥ CORD CD-604 ⑦ PLUG PL-S61 ⑧ CORD CD-307-A (65") ⑨ PLUG PL-S59 ⑩ PLUG PL-S64 ⑪ MOUNTING FT-151-(8) ⑫ CORD CD-676-(54") ⑬ MOUNTING FT-162 ⑭ CORD CD-670 (54") ⑮ FRAME FM-43 ⑯ MOUNTING FT-107 | <ul style="list-style-type: none"> ⑰ DYNAMOTOR UNIT BD-77-(8) ⑱ CORDAGE CO-188-A (24") ⑲ CORD CD-269 (30") ⑳ TERMINAL BOX (INSTALLED BY VEHICLE MFR.) ㉑ APPLETON CONNECTOR #61007, BOND NUT BL-50 ㉒ CORD CD-410 (60") ㉓ RADIO RECEIVER BC-312-(8) ㉔ KEY J-45 ㉕ MICROPHONE T-17-(8) ㉖ MOUNTING FT-178 ㉗ WIRE W-128 (SEE NOTE 6) ㉘ BRUSH GUARD (SUPPLIED BY VEHICLE MFR.) ㉙ INSULATOR IN-104 ㉚ MAST BASE MP-37 OR MP-57 ㉛ INSULATOR IN-121 ㉜ MAST SECTIONS MS-49 TO MS-53 |
|--|---|
- ⑬③ COVER BG-67-(8) (SEE NOTE 5)

NOTE:

- 1 FOR MOUNTING HOLES AND LOCATION SEE FIG. 8
- 2 FOR INSTALLATION OF BRACKETS SEE FIG. 6.
- 3 FOR MOUNTING OF FRAME FM-43 SCREWS, NUTS AND WASHERS ARE FURNISHED BY VEHICLE MFR
- 4 FOR CORDING DIAGRAM SEE FIG. 5.
- 5 USE COVER BG-67-(8) WHEN MAST SECTIONS ARE NOT INSTALLED.
- 6 WIRE W-128 SHALL BE CUT TO PROPER LENGTH, ENDS SHALL BE TINNED FOR ANTENNA AND GROUND CONNECTIONS

TL-11271-2

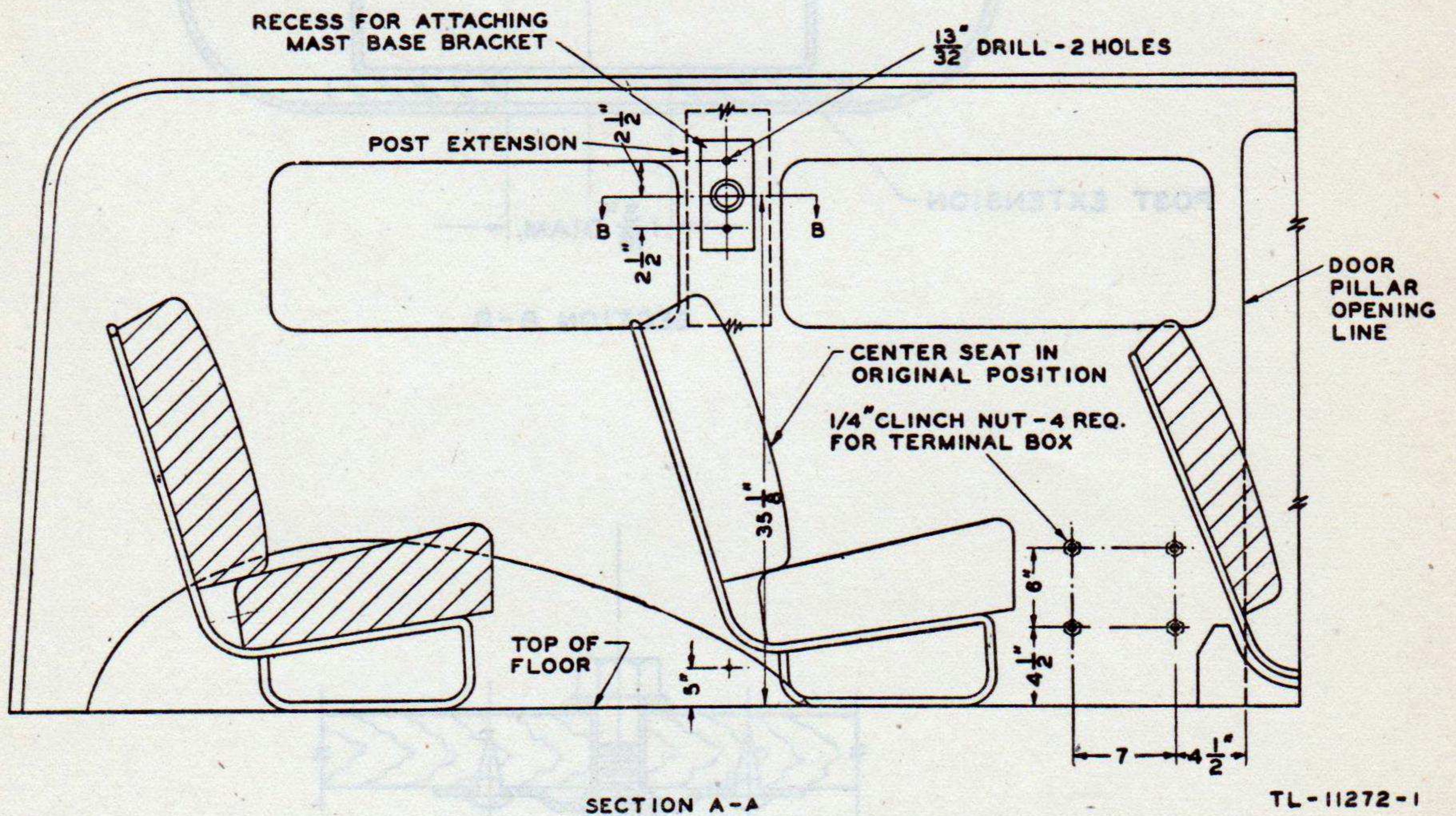
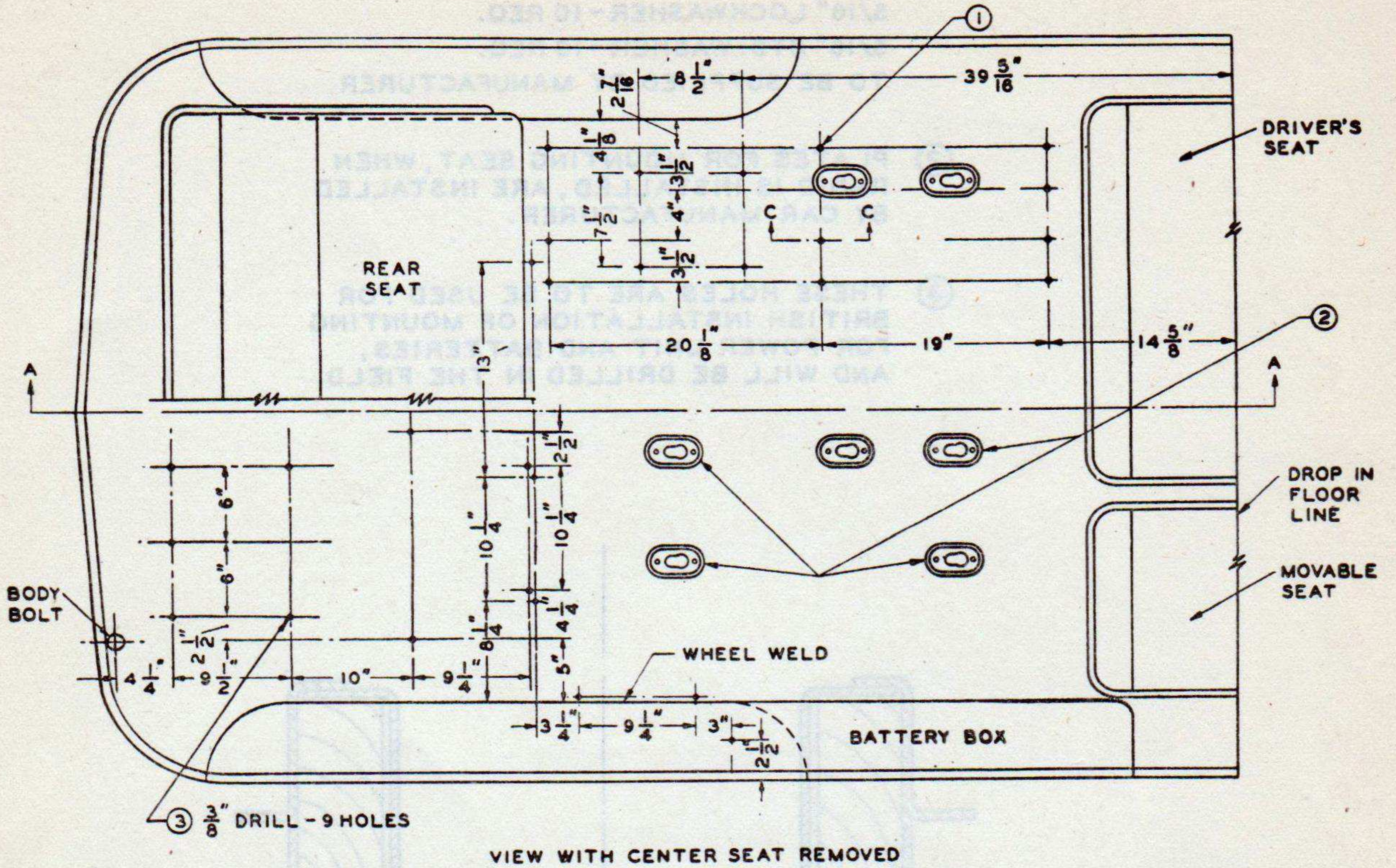
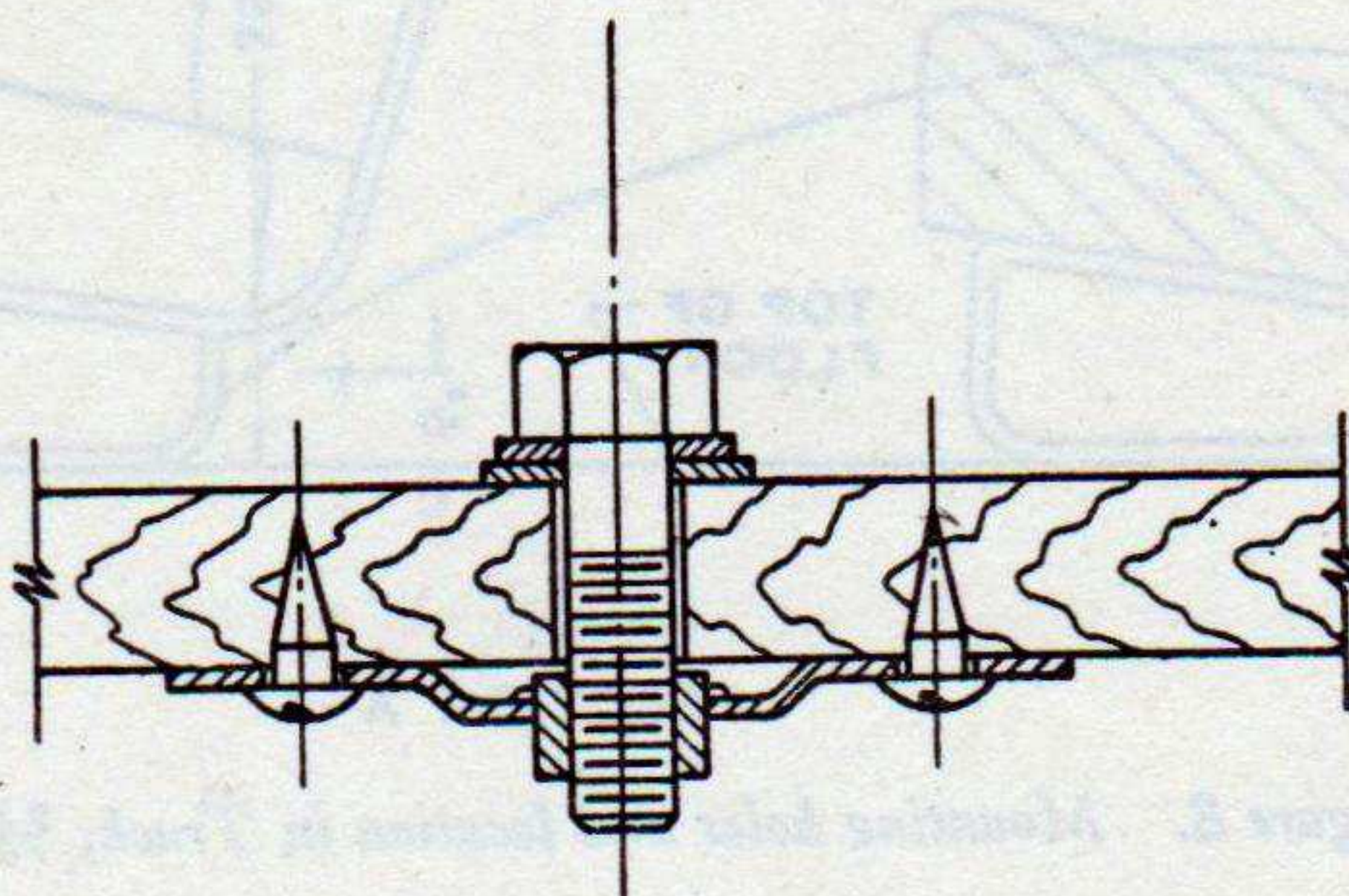
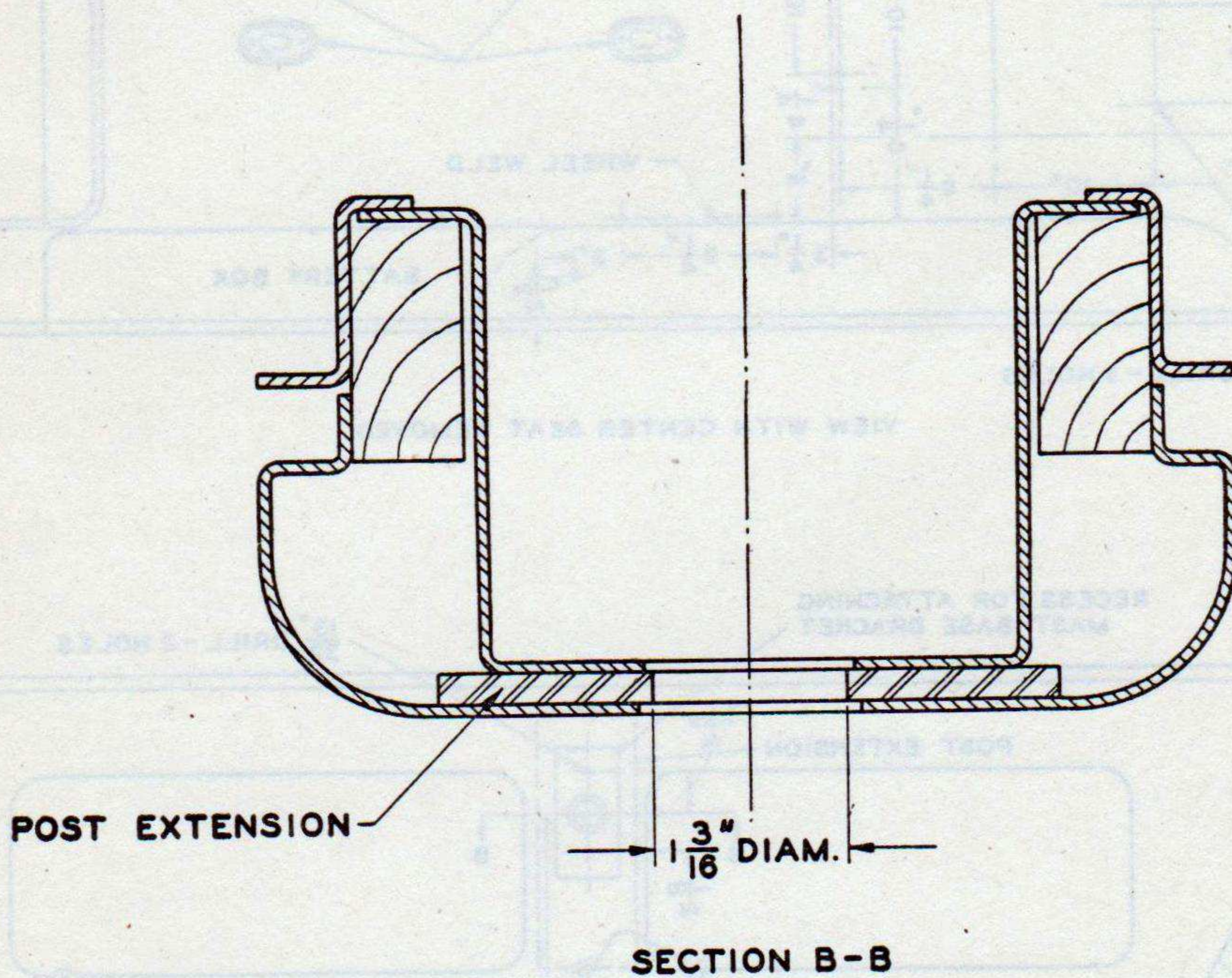


Figure 8. Mounting holes and location in Truck, 3/4-ton, 4x4, Carryall.

- ① (FOR FRAME FM-43 OR MOUNTING)
5/16"-24 CLINCH NUTS - 10 REQ.
5/16"-24 x 1-1/2" HEX. HD. BOLT - 10 REQ.
5/16" LOCKWASHER - 10 REQ.
5/16" STD. WASHER - 10 REQ.
TO BE SUPPLIED BY MANUFACTURER.

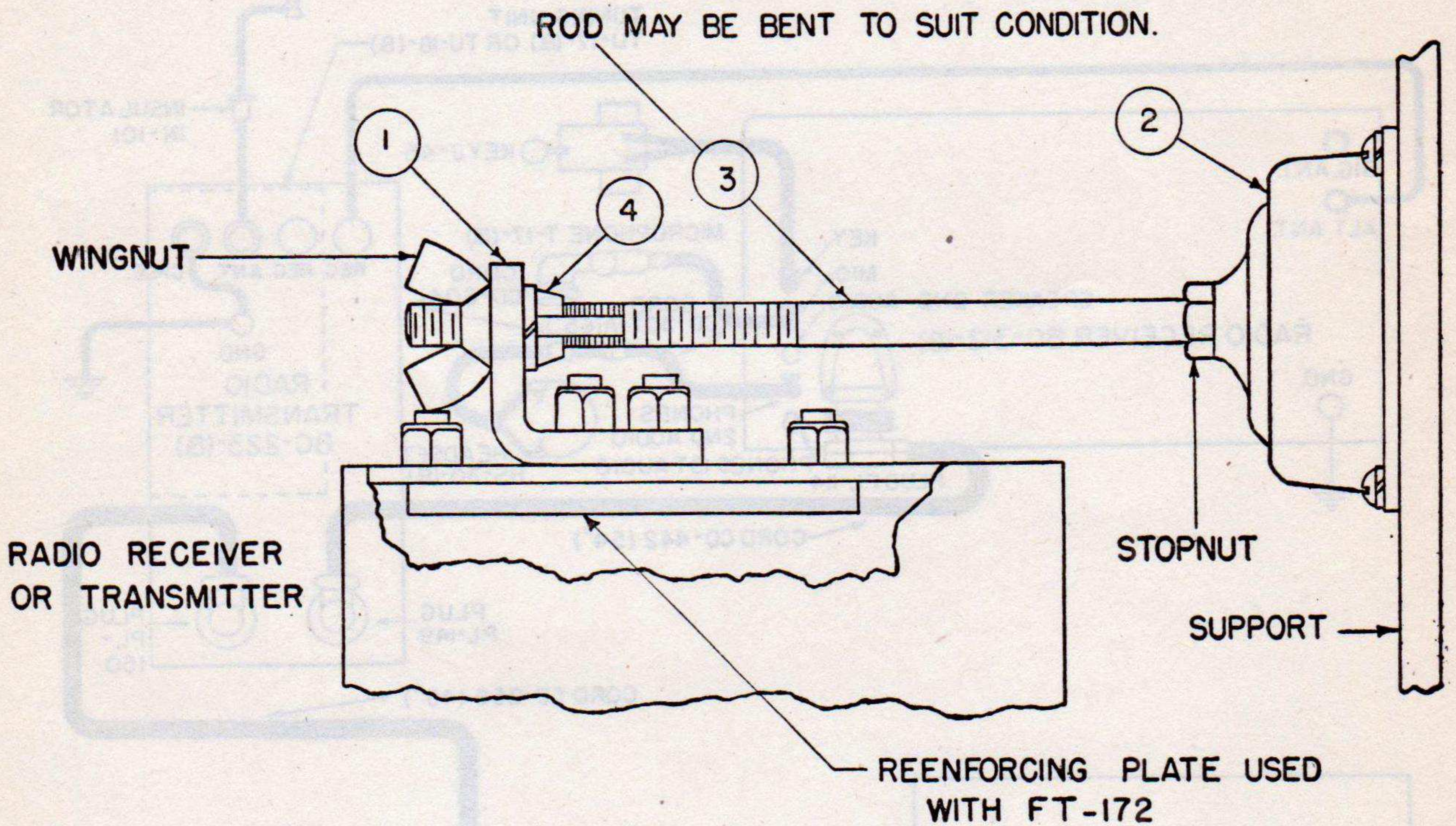
- ② PLATES FOR MOUNTING SEAT, WHEN
RADIO IS INSTALLED, ARE INSTALLED
BY CAR MANUFACTURER.

- ③ THESE HOLES ARE TO BE USED FOR
BRITISH INSTALLATION OF MOUNTING
FOR POWER UNIT AND BATTERIES,
AND WILL BE DRILLED IN THE FIELD.



SECTION C-C

TL-11272-2



- | | |
|--------------------------------|------------|
| 1. BRACKET | 3. ROD |
| 2. MOUNTING (FT-172 OR FT-178) | 4. STOPNUT |

TL-10137

Figure 9. Assembly of Mounting FT-172 or FT-178

NOTE:

1. ANTENNA AND GROUND CONNECTIONS TO BE MADE WITH WIRE W-128.
2. ENDS OF WIRE W-128, AFTER BEING CUT TO PROPER LENGTH, TO BE TINNED FOR CONNECTIONS AT BINDING POST AND GROUND CONNECTIONS.
3. FOR MOUNTING HOLES AND LOCATIONS SEE FIG. 8.
4. FOR INSTALLATION OF BRACKETS SEE FIG. 6.
5. FOR ASSEMBLY OF MOUNTINGS FT-172 AND FT-178 SEE FIG. 9.

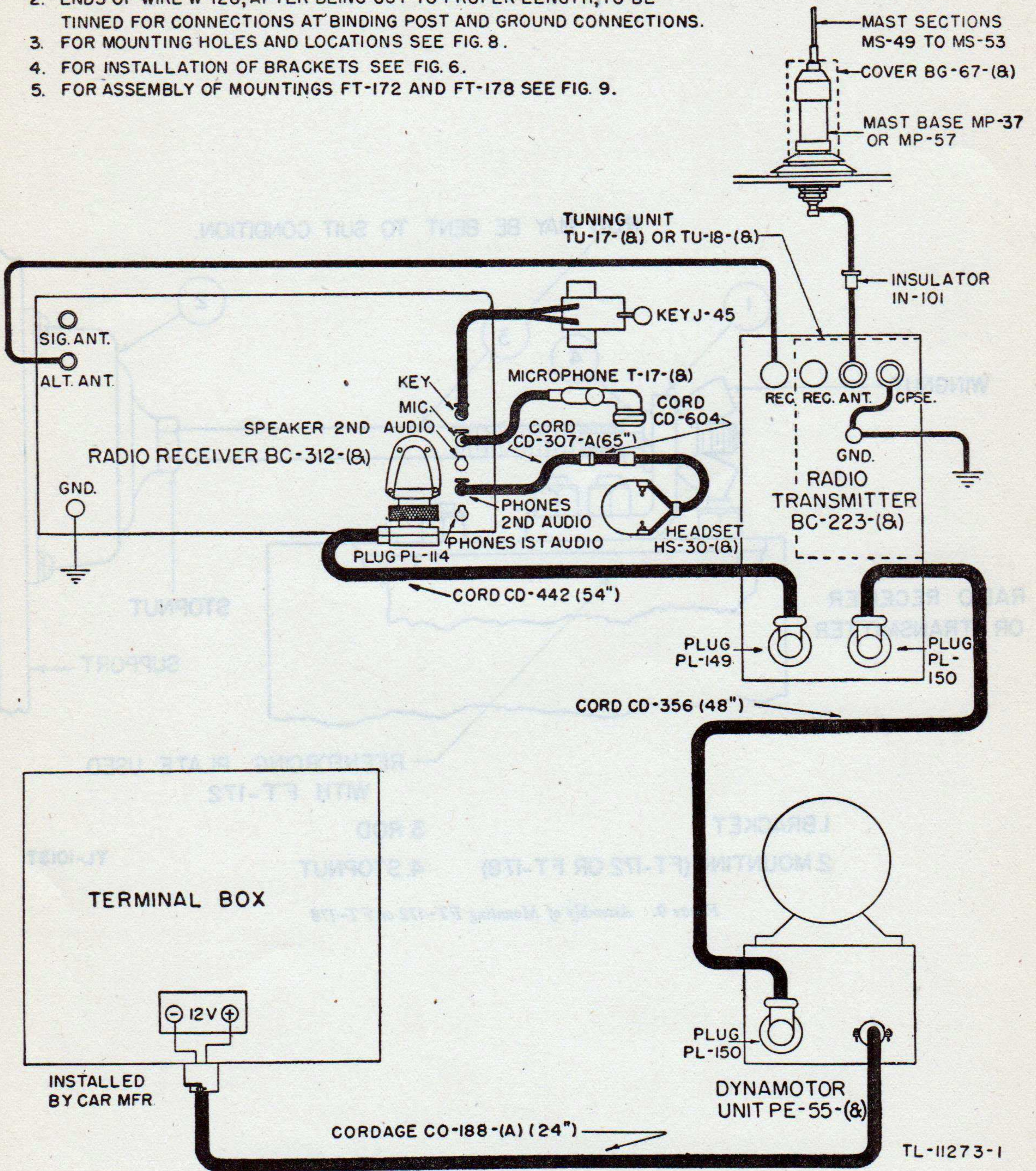
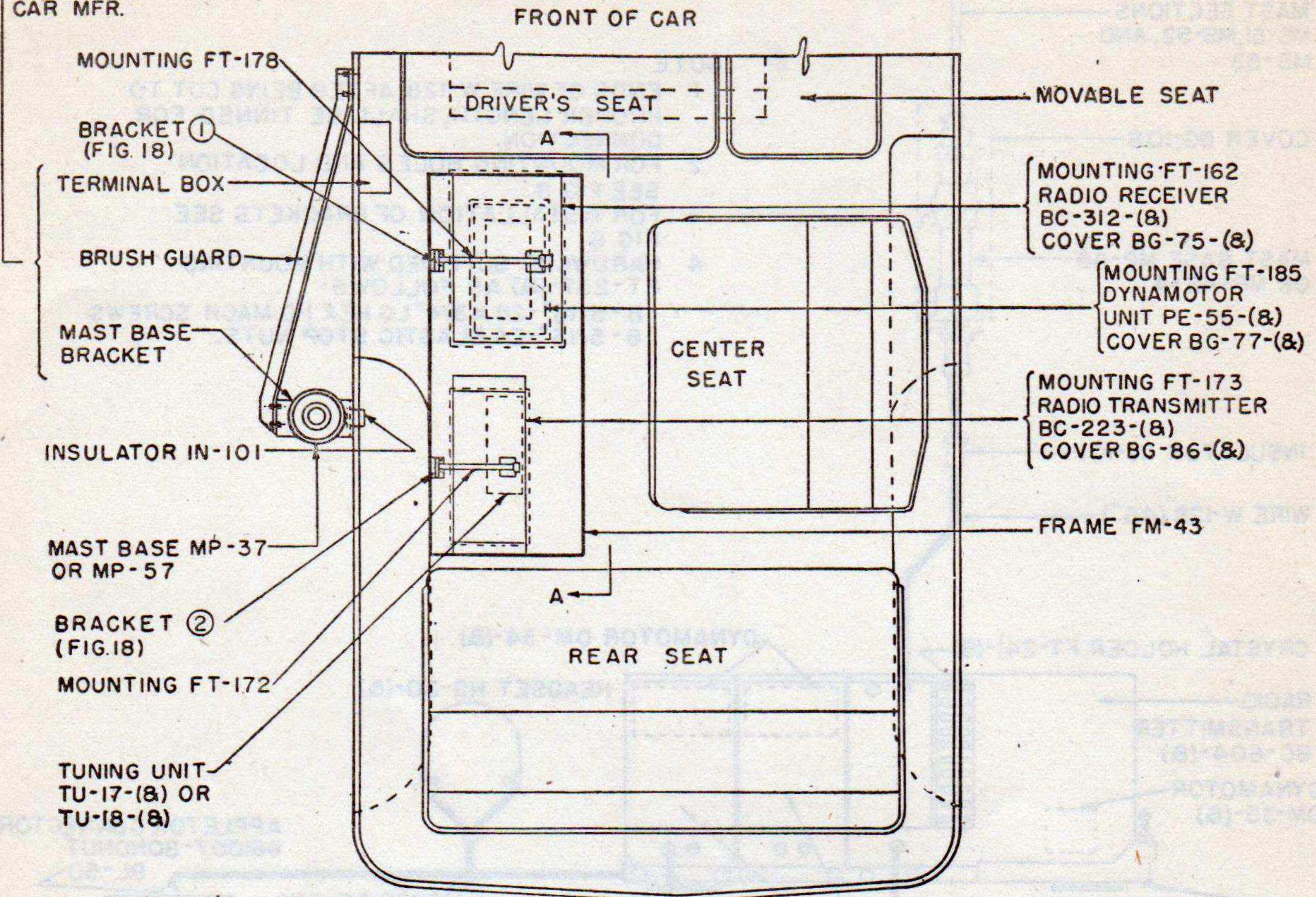
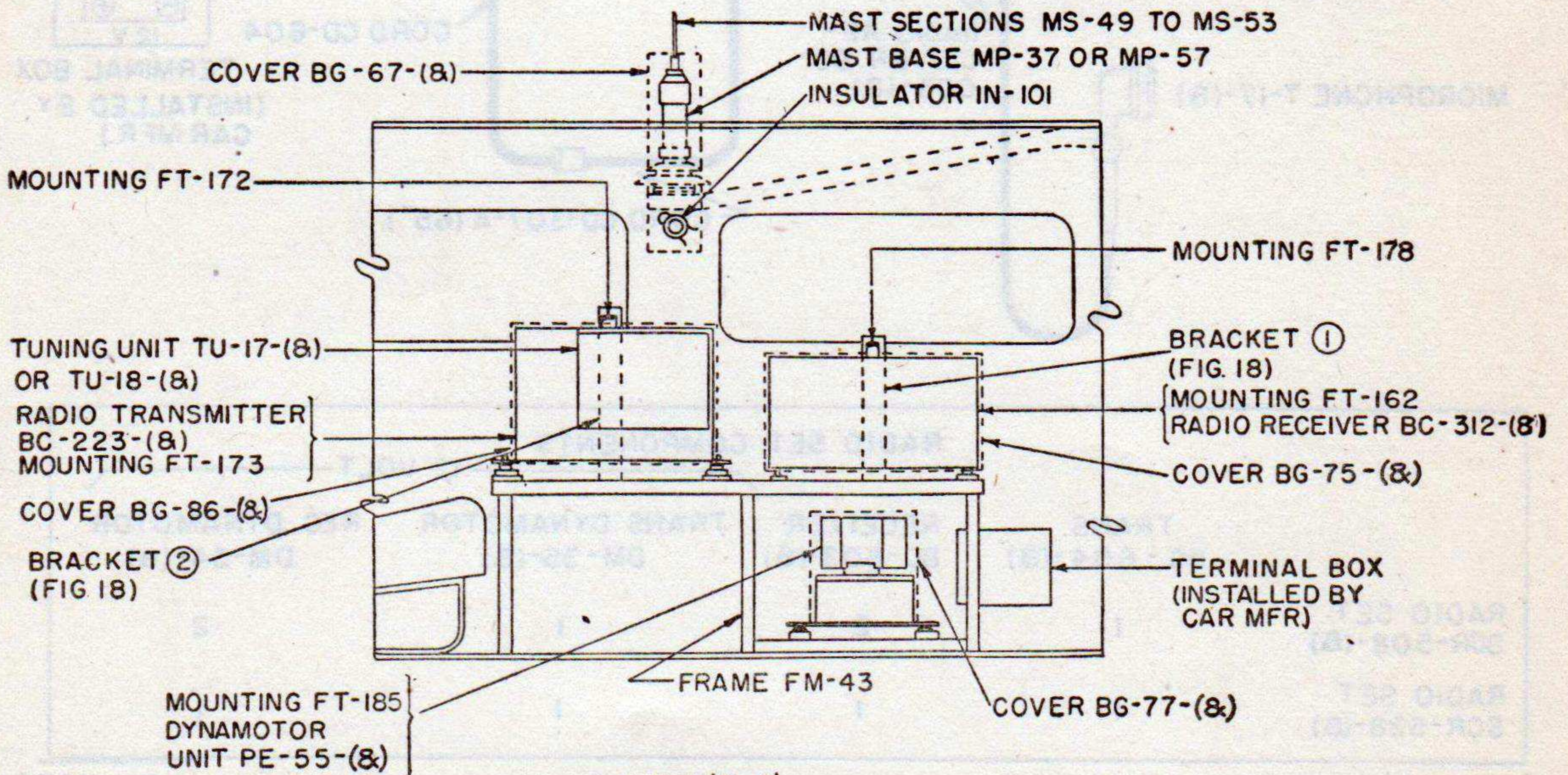


Figure 10. Cording diagram for Radio Set SCR-245-T in Truck, 3/4-ton, 4x4, Carryall

TO BE INSTALLED BY
CAR MFR.

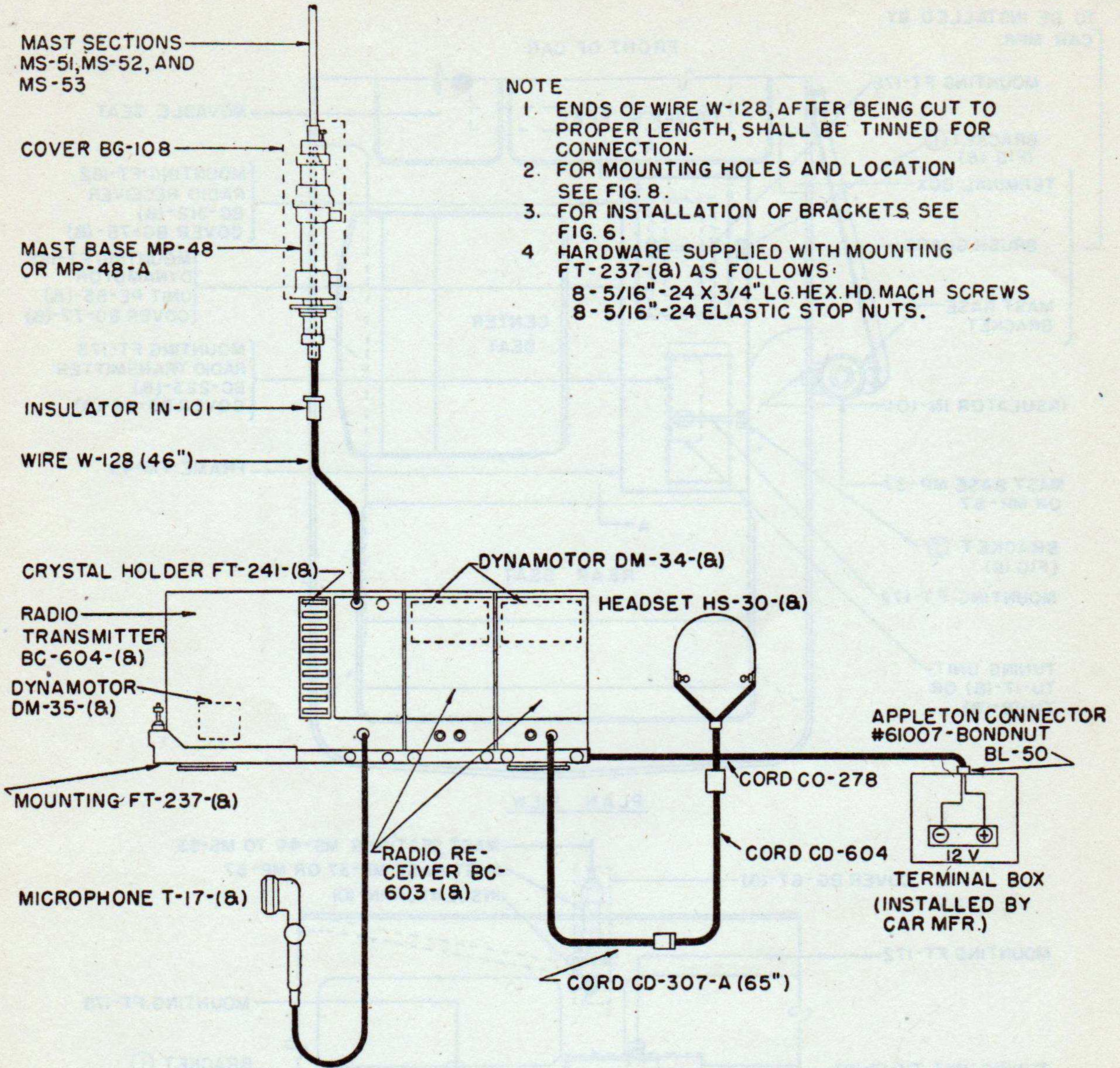


PLAN VIEW



VIEW 'A-A'
LOCATION OF EQUIPMENT

TL-11273-2

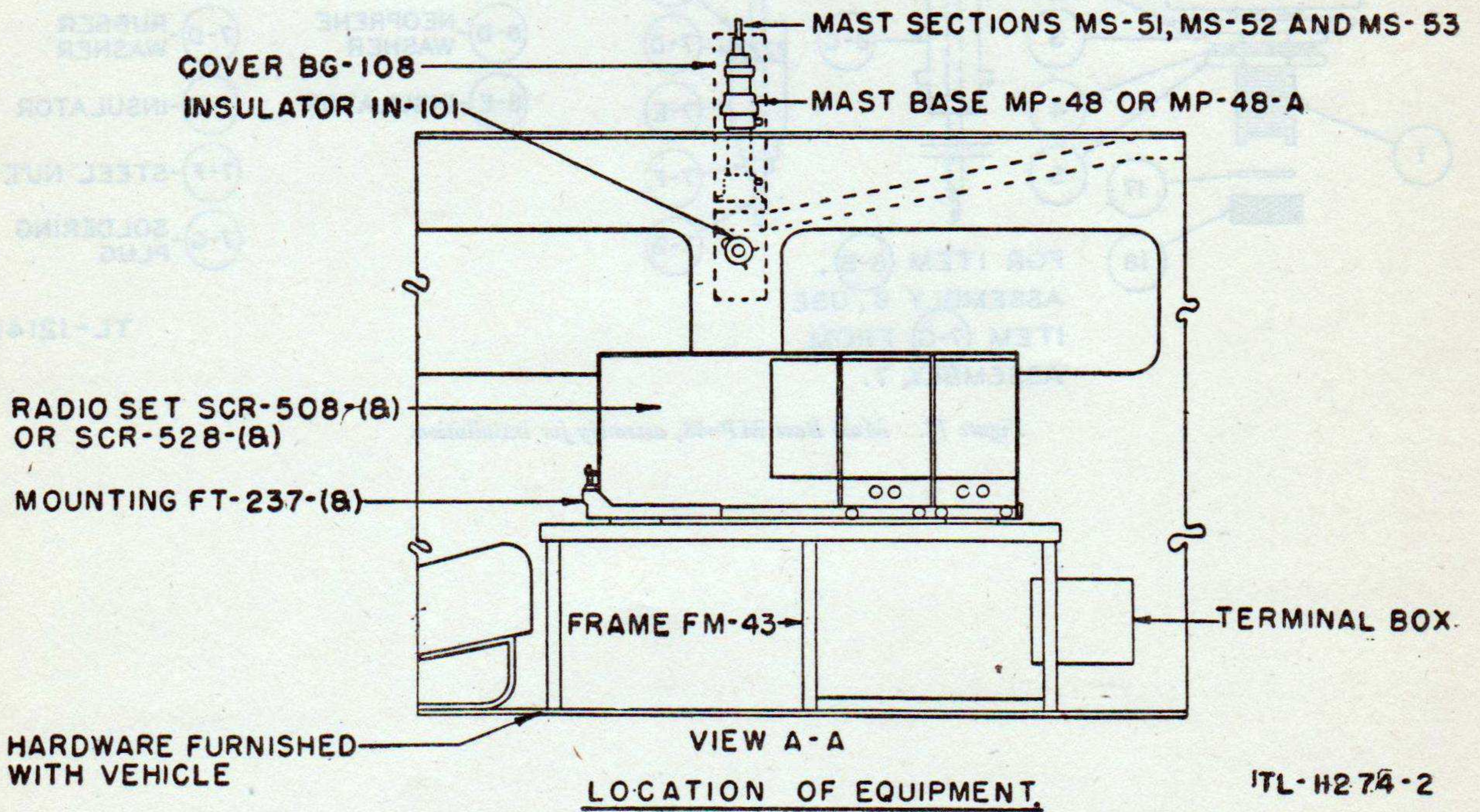
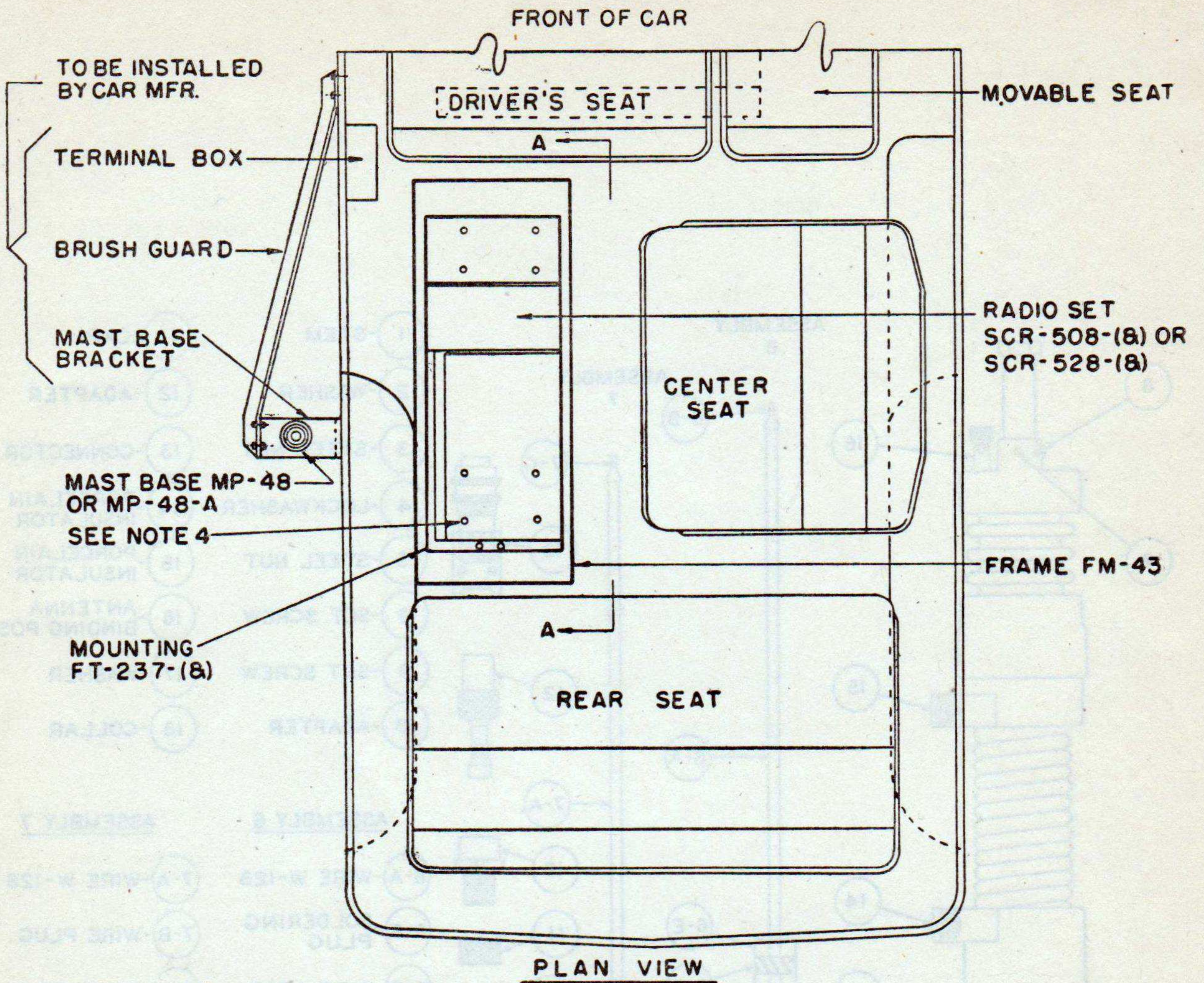


- NOTE
1. ENDS OF WIRE W-128, AFTER BEING CUT TO PROPER LENGTH, SHALL BE TINNED FOR CONNECTION.
 2. FOR MOUNTING HOLES AND LOCATION SEE FIG. 8.
 3. FOR INSTALLATION OF BRACKETS SEE FIG. 6.
 4. HARDWARE SUPPLIED WITH MOUNTING FT-237-(8) AS FOLLOWS:
 8- 5/16"-24 X 3/4" LG. HEX. HD. MACH. SCREWS
 8- 5/16"-24 ELASTIC STOP NUTS.

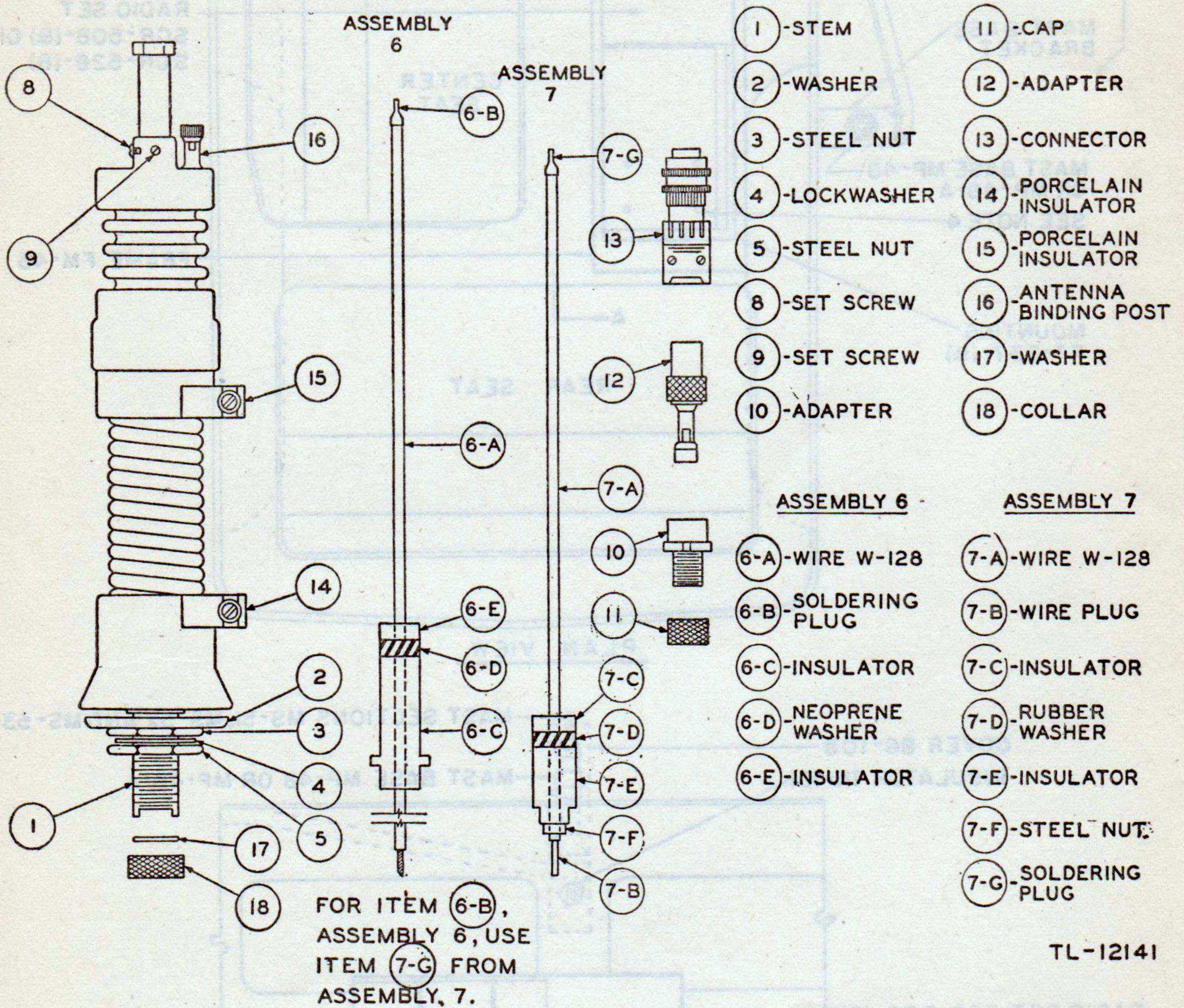
	RADIO SET COMPONENTS			
	TRANS BC-604-(8)	RECEIVER BC-603-(8)	TRANS DYNAMOTOR DM-35-(8)	REC DYNAMOTOR DM-34-(8)
RADIO SET SCR-508-(8)	1	2	1	2
RADIO SET SCR-528-(8)	1	1	1	1

TL-11274-1

Figure 11. Cording diagram for Radio Set SCR-508-(8) or SCR-528-(8) in Truck, 3/4-ton, 4x4, Carryall.

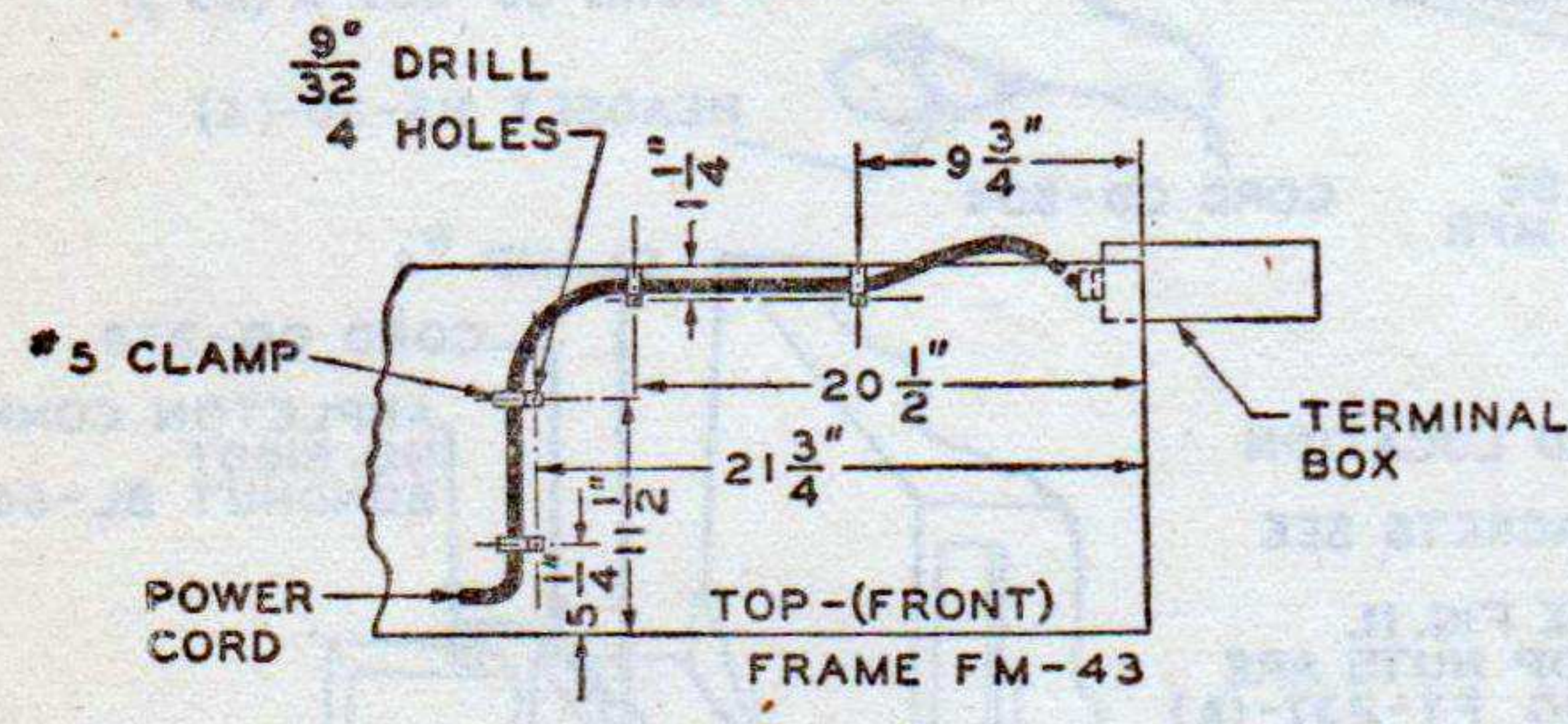
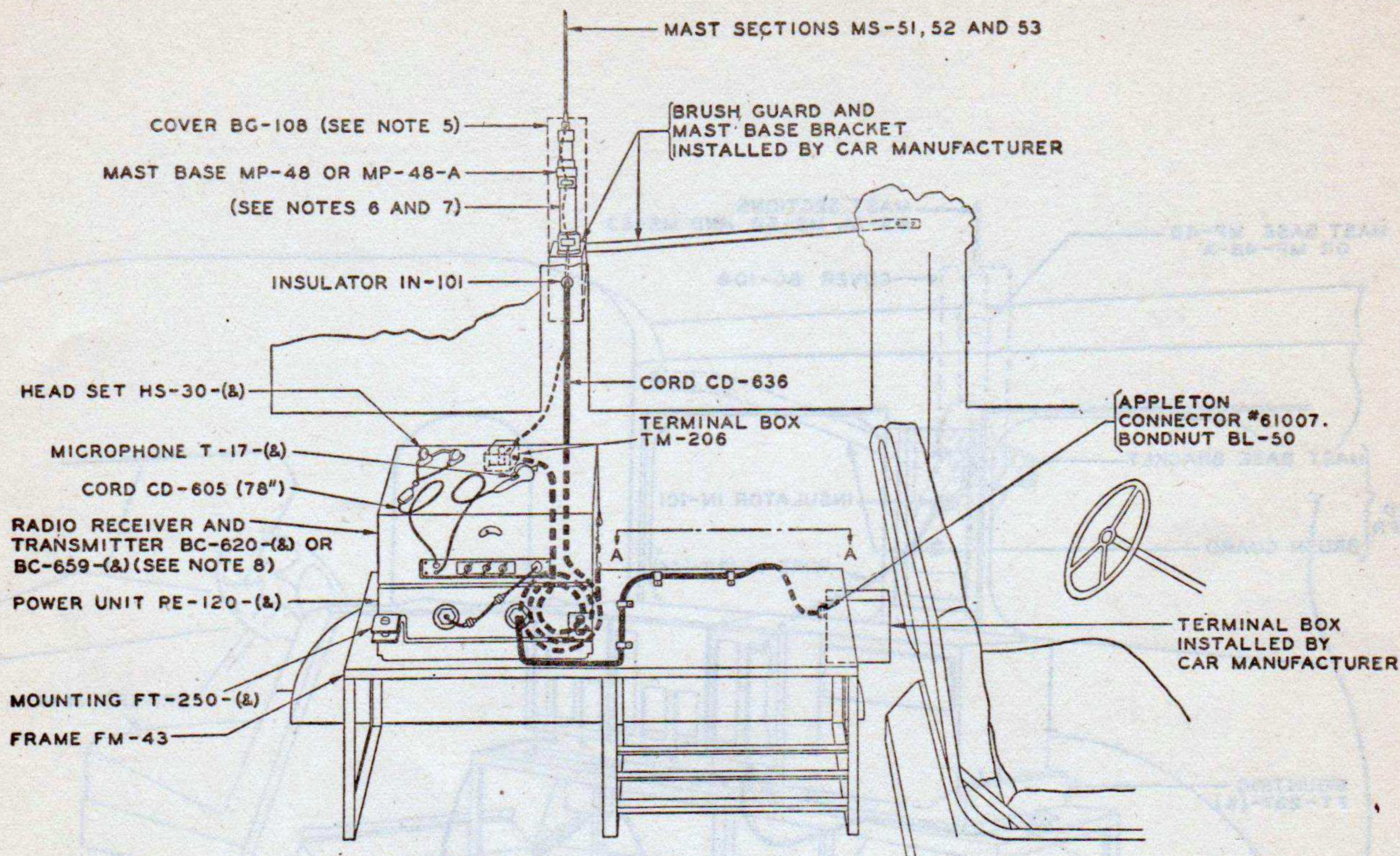


ITL-H274-2



TL-12141

Figure 12. Mast Base MP-48, assembly for installation.



CLAMP LOCATIONS FOR POWER CORD

HARDWARE REQUIRED:

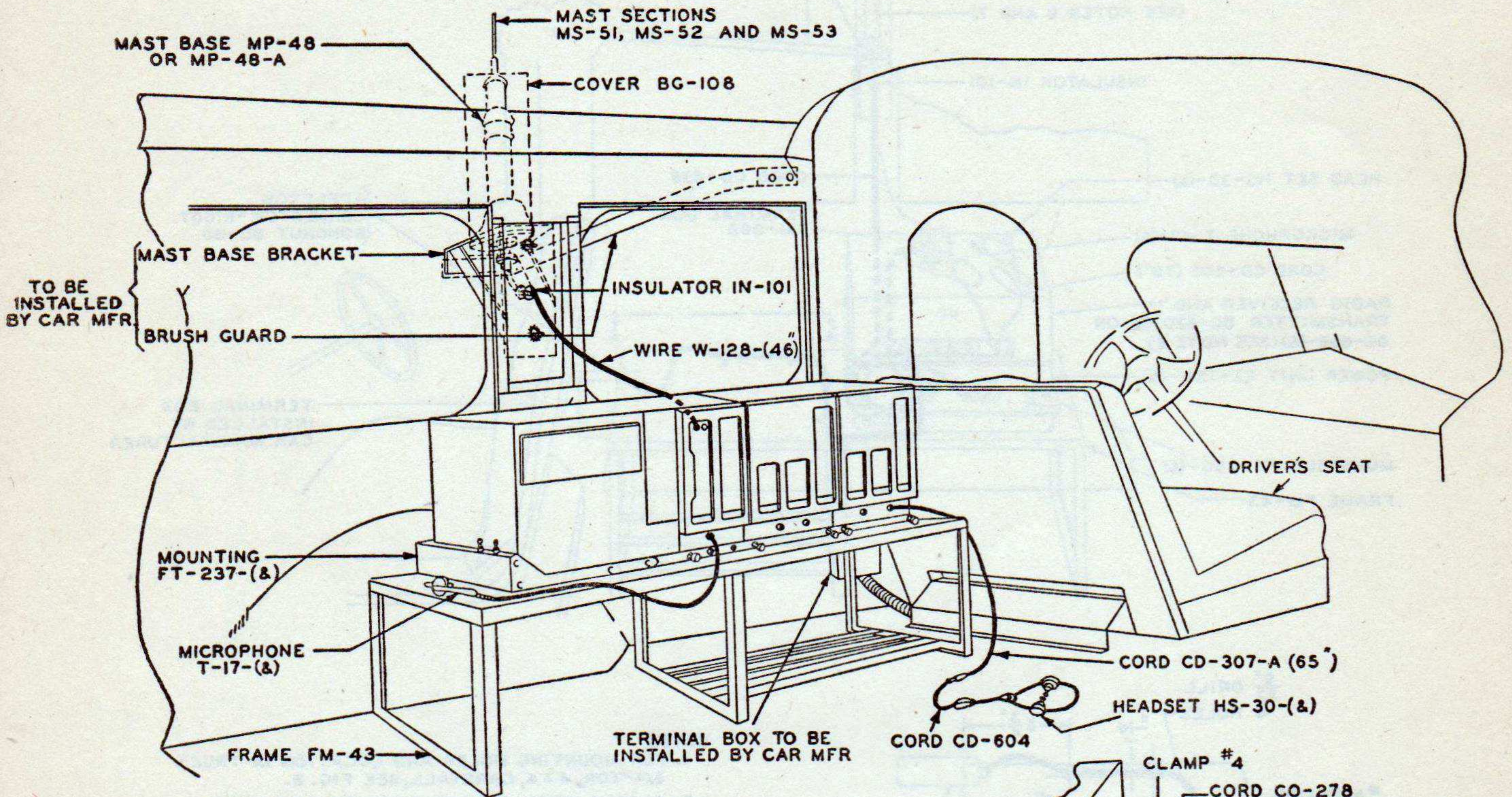
- MOUNTING FT-250-(8)
- 4-1/4"-20 x 3/4" LG. HEX. HD. MACH. SCREWS
- 4-1/4"-20 HEX. NUTS
- 4-1/4" LOCKWASHERS
- FRAME FM-43 (SEE NOTE 2)
- 10-5/16"-24 x 1 1/4" HEX. HD MACH SCREWS
- 10-5/16" LOCKWASHERS
- 10-5/16" CLINCH NUTS
- 10-5/16" STD. WASHERS
- CLAMP #5 - 4 REQ.
- 4-1/4"-20 x 1/2" HEX. HD. MACH. SCREWS
- 4-1/4"-20 HEX. NUTS
- 4-1/4" STD. LOCKWASHERS
- ALL SCREWS, NUTS AND WASHERS SHALL BE STEEL, GALVANIZED

NOTES:

1. FOR MOUNTING HOLES AND LOCATION IN TRUCK 3/4-TON, 4 x 4, CARRYALL, SEE FIG. 8.
2. CLINCH NUTS, SCREWS, WASHERS AND LOCK-WASHERS ARE FURNISHED BY CAR MANUFACTURER FOR FRAME FM-43.
3. FOR INSTALLATION OF BRACKETS SEE FIG. 6.
4. SPOT AND DRILL, 4-5/16" HOLES FOR MOUNTING FT-250-(8) LOCATED AS SHOWN ON FRAME FM-43.
5. USE COVER BG-108 WHEN MAST SECTIONS ARE NOT INSTALLED.
6. WHEN SCR-610-(8) IS INSTALLED USE WIRE W-128 (36" ± 1" LG.), AS SHOWN IN DOTTED LINES, FOR ANTENNA CONNECTIONS.
7. WHEN SCR-610-(8) IS INSTALLED, REMOVE INTERNAL LEAD-IN ASSEMBLY FROM MAST BASE MP-48 OR MP-48-A.
8. FOR INSTALLATION OF SCR-510-(8) USE RECEIVER AND TRANSMITTER BC-620-(8). FOR SCR-610-(8) USE RECEIVER AND TRANSMITTER BC-659-(8).

TL-11275

Figure 13. Installation of Radio Set SCR-510-(8) or SCR-610-(8) in Truck, 3/4-ton, 4x4, Carryall.

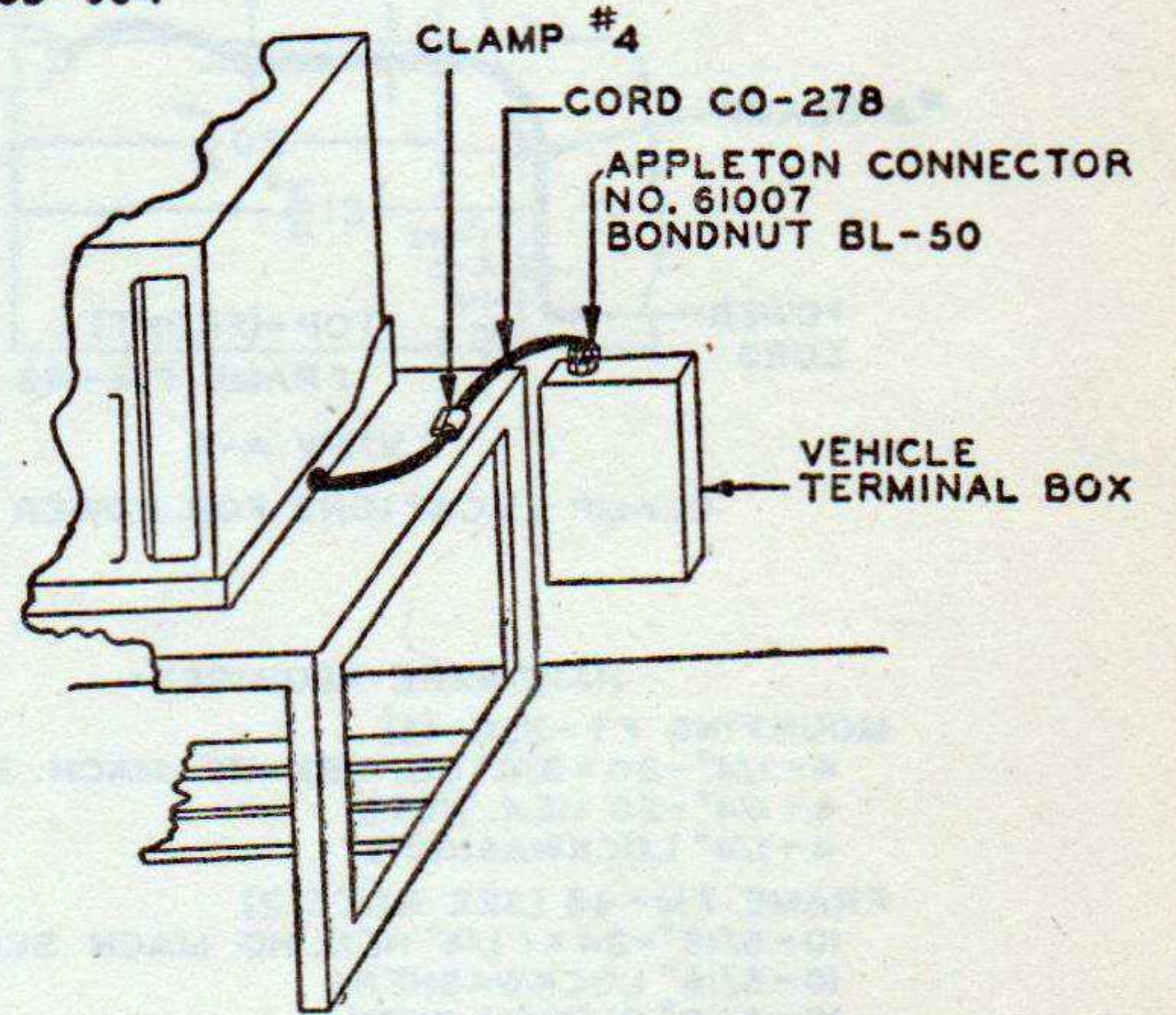


HARDWARE REQUIRED

- MOUNTING FT-237-(8) (SEE NOTE-4)
- 8-5/16"-24X3/4" LG. HEX. HD. MACH. SCREWS.
- 8-5/16"-24 ELASTIC STOP NUTS
- FRAME FM-43 (SEE NOTE - 5)
- 10-5/16"-24 CLINCH NUTS.
- 10-5/16"-24 X1 1/4" HEX. HD. MACH. SCREWS.
- 10-5/16" LOCK WASHERS.
- 10-5/16" ST'D WASHERS.
- # 2 CLAMP (I-REQ.)
- 1-1/4"-20 X 1/2" HEX. HD. MACH. SCREW
- 1-1/4"-20 HEX. NUT
- 1-1/4" LOCKWASHER
- ALL SCREWS, NUTS AND LOCKWASHERS SHALL BE STEEL, GALVANIZED

NOTE

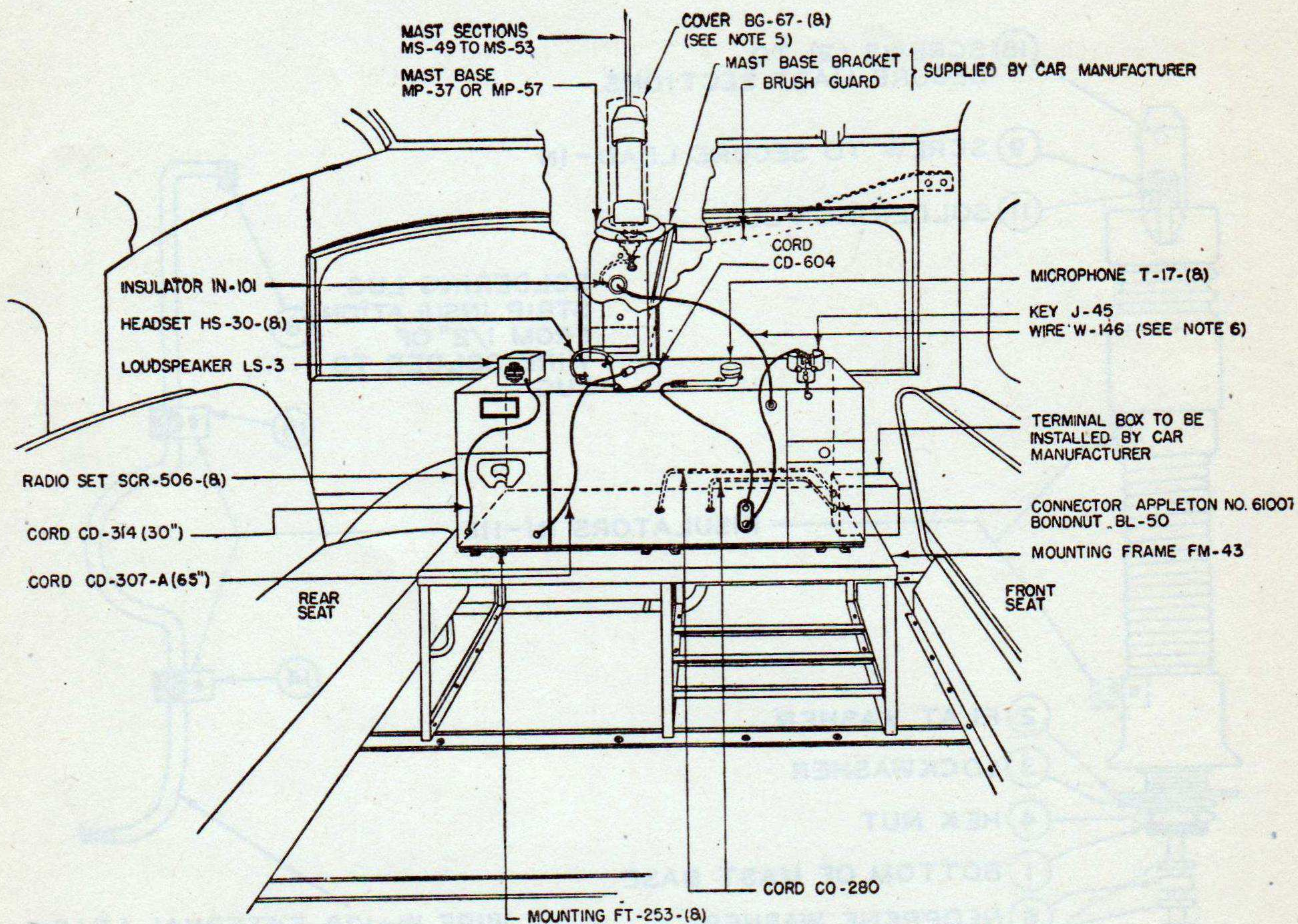
- 1 FOR MOUNTING HOLES AND LOCATION SEE FIG. 8.
2. FOR INSTALLATION OF BRACKETS SEE FIG. 6.
3. FOR CORDING DIAGRAM SEE FIG. 11.
4. SCREWS AND ELASTIC STOP NUTS ARE SUPPLIED WITH MOUNTING FT-237-(8)
5. CLINCH NUTS, SCREWS, WASHERS, AND LOCK WASHERS FOR MOUNTING FRAME FM-43 ARE FURNISHED BY CAR MFR.
6. WIRE W-128 SHALL BE CUT TO PROPER LENGTH. ENDS SHALL BE TINNED FOR CONNECTION.
- 7 COVER BG-108 SHALL BE USED WHEN MAST SECTIONS ARE NOT INSTALLED.



RIGHT END VIEW OF FRAME FM-43 AND TERMINAL BOX

TL-11276

Figure 14. Installation of Radio Set SCR-508-(8) or SCR-528-(8) in Truck, 3/4-ton, 4x4, Carryall.



HARDWARE REQUIRED

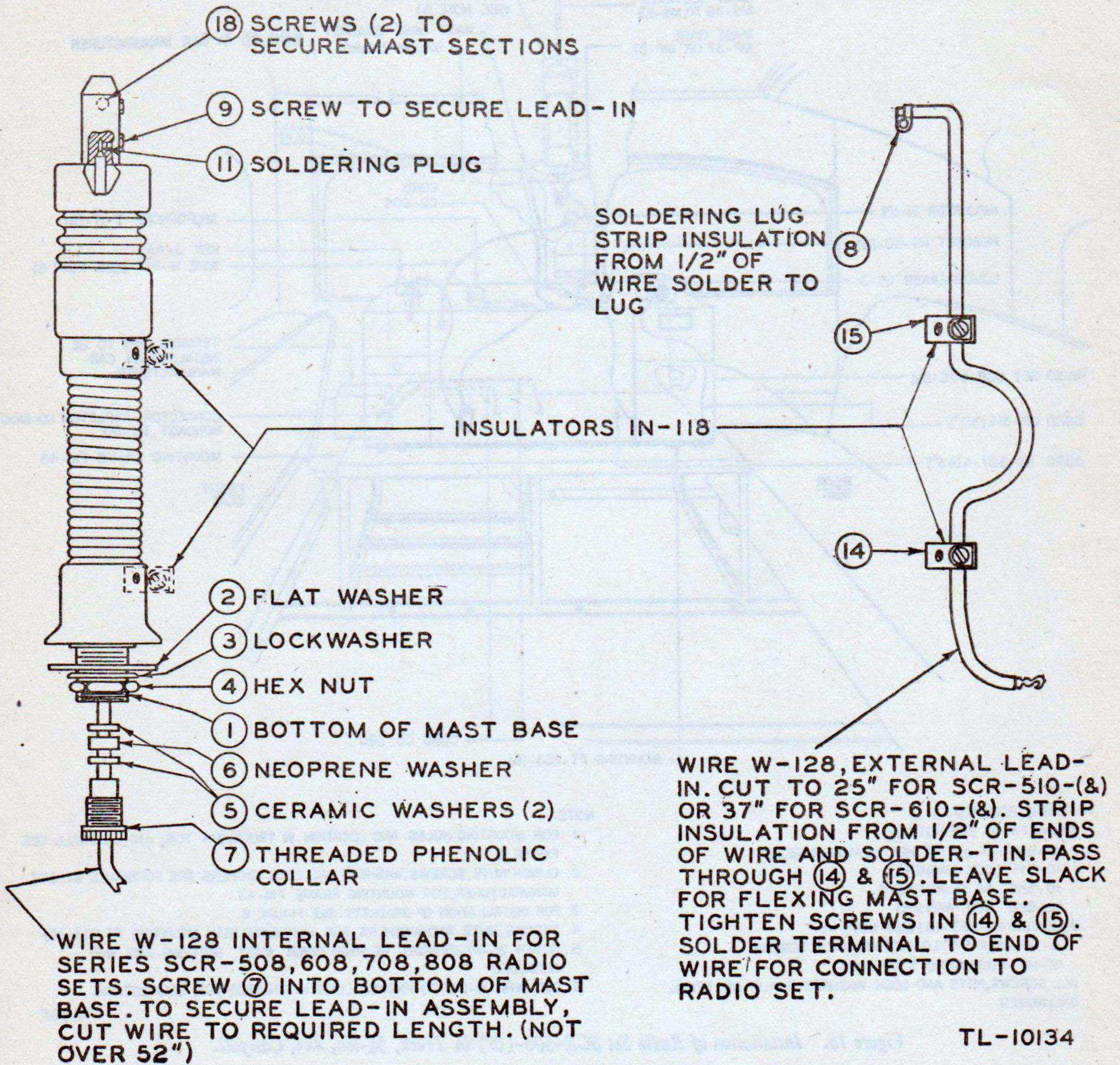
- FRAME FM-43 (SEE NOTE 2)
- 10-5/16"-24 X 1 1/4" HEX. HD. MACH. SCREWS
- 10-5/16" LOCK WASHERS
- 10-5/16"-24 CLINCH NUTS
- 10-5/16" STD WASHERS
- MOUNTING FT-253-(8) (SEE NOTE 4)
- 12-1/4"-20 X 3/4" LG. HEX. HD. MACH. SCREWS
- 12-1/4"-20 ELASTIC STOP NUTS
- ALL SCREWS, NUTS AND LOCK WASHERS SHALL BE STEEL GALVANIZED

NOTE:

1. FOR MOUNTING HOLES AND LOCATION IN TRUCK, 3/4 TON, 4/4, CARRYALL SEE FIGURE 8
2. CLINCH NUTS, SCREWS, WASHERS AND LOCK WASHERS ARE FURNISHED BY CAR MANUFACTURER, FOR MOUNTING FRAME FM-43.
3. FOR INSTALLATION OF BRACKETS SEE FIGURE 6.
4. SCREWS, NUTS AND WASHERS ARE FURNISHED WITH MOUNTING FT-253-(8)
5. COVER BG-67-(8) SHALL BE USED WHEN MAST SECTIONS ARE NOT INSTALLED
6. CUT WIRE W-146 TO PROPER LENGTH. TIN ENDS FOR CONNECTIONS.

TL-12195

Figure 15. Installation of Radio Set SCR-506-(8) in Truck, 3/4-ton, 4x4, Carryall.

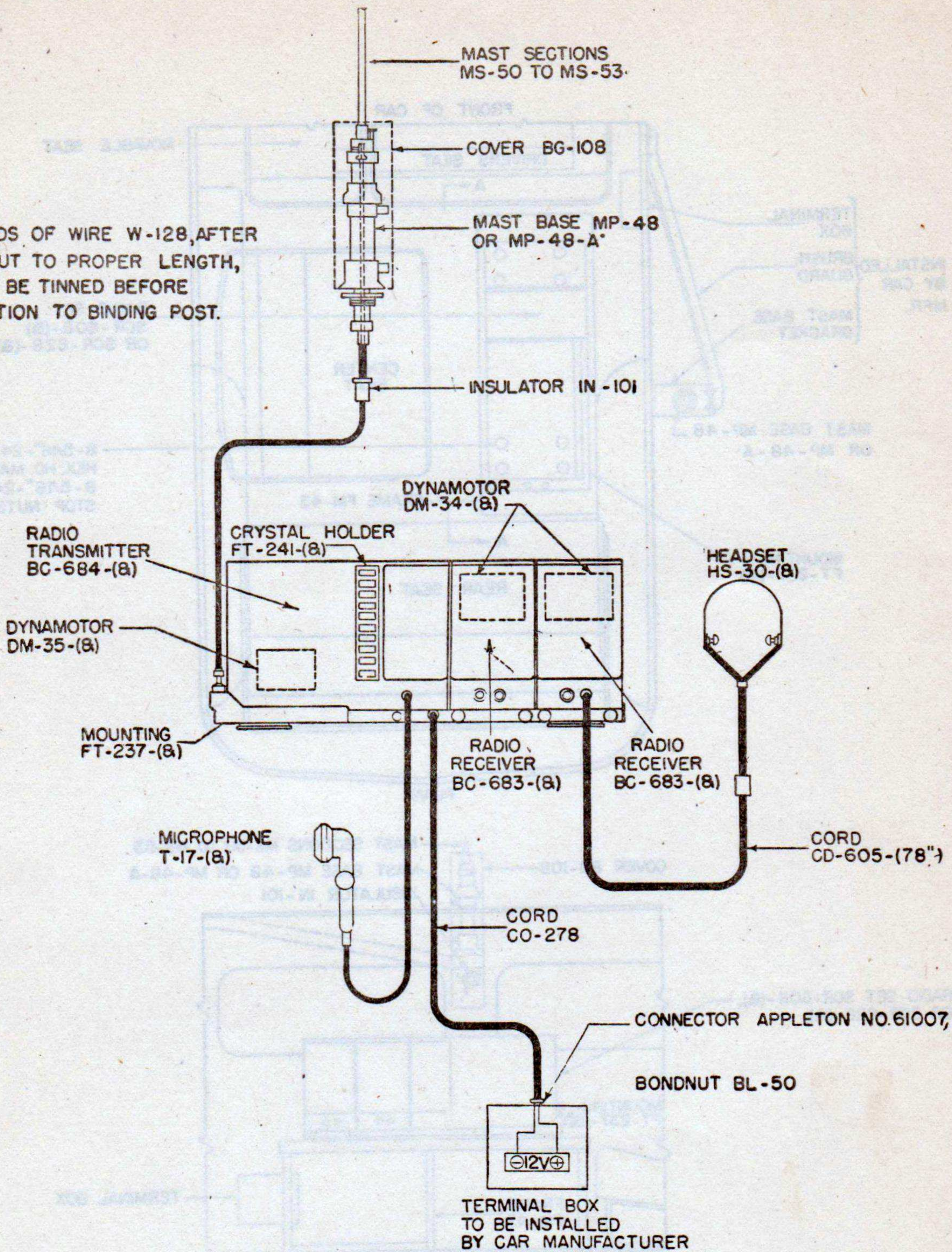


TL-10134

Figure 16. Mast Base MP-48-A, assembly with Wire W-128 lead-in.

NOTE:

ENDS OF WIRE W-128, AFTER BEING CUT TO PROPER LENGTH, SHOULD BE TINNED BEFORE CONNECTION TO BINDING POST.

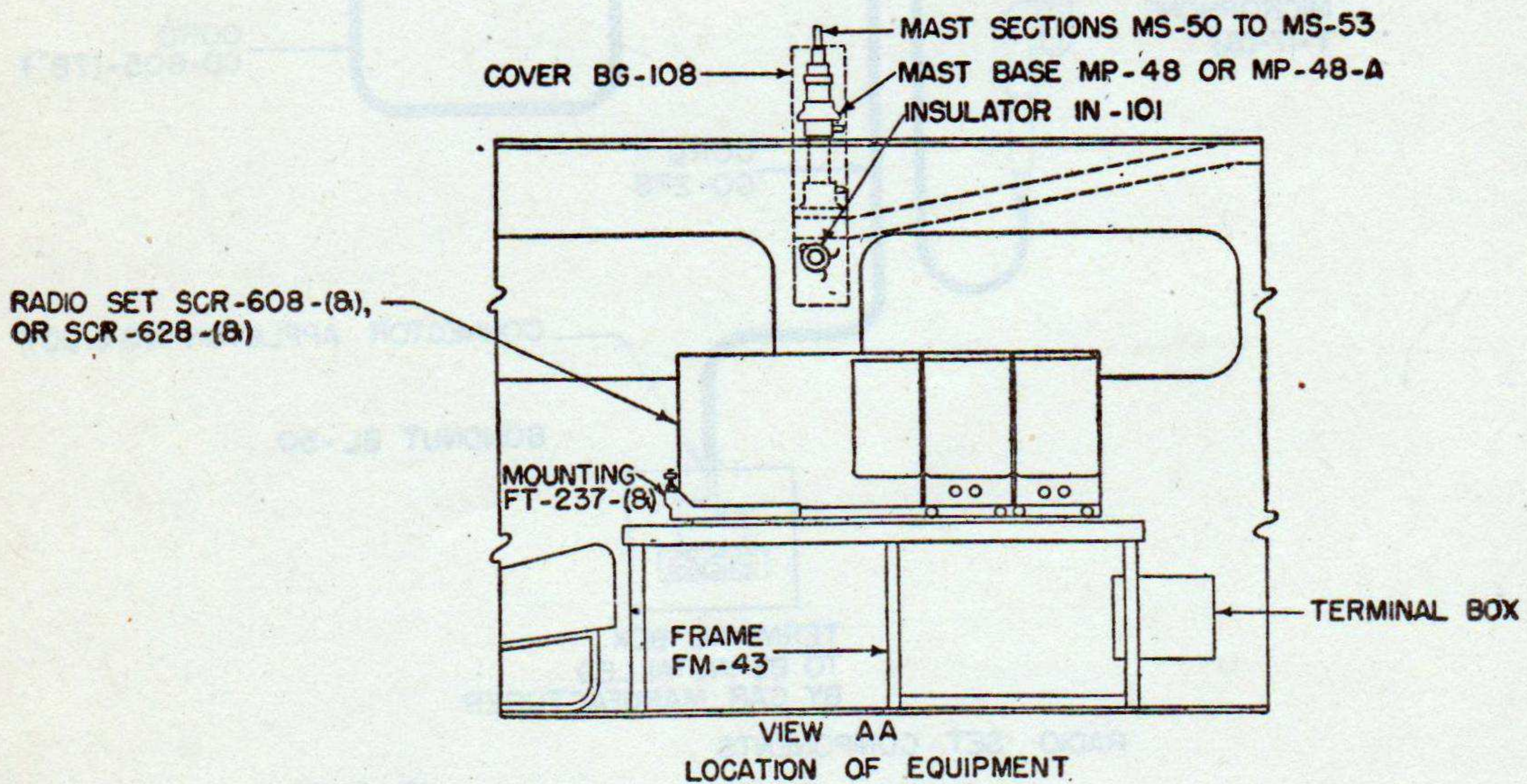
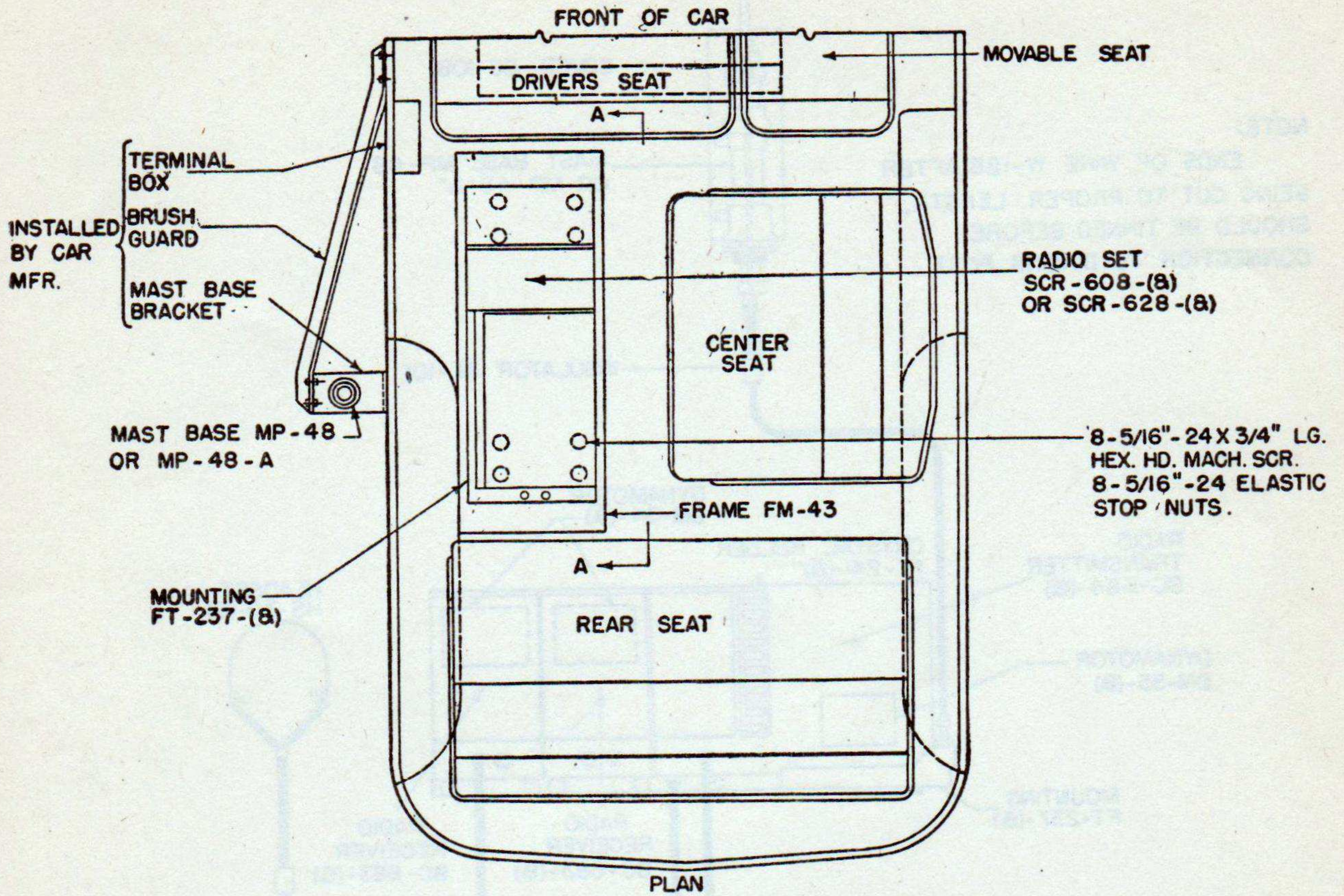


RADIO SET COMPONENTS

	TRANSMITTER BC-684-(8)	RECEIVER BC-683-(8)	TRANS. DYN DM-35-(8)	RECEIVER DYN. DM-34-(8)
RADIO SET SCR-608-(8)	1	2	1	2
RADIO SET SCR-628-(8)	1	1	1	1

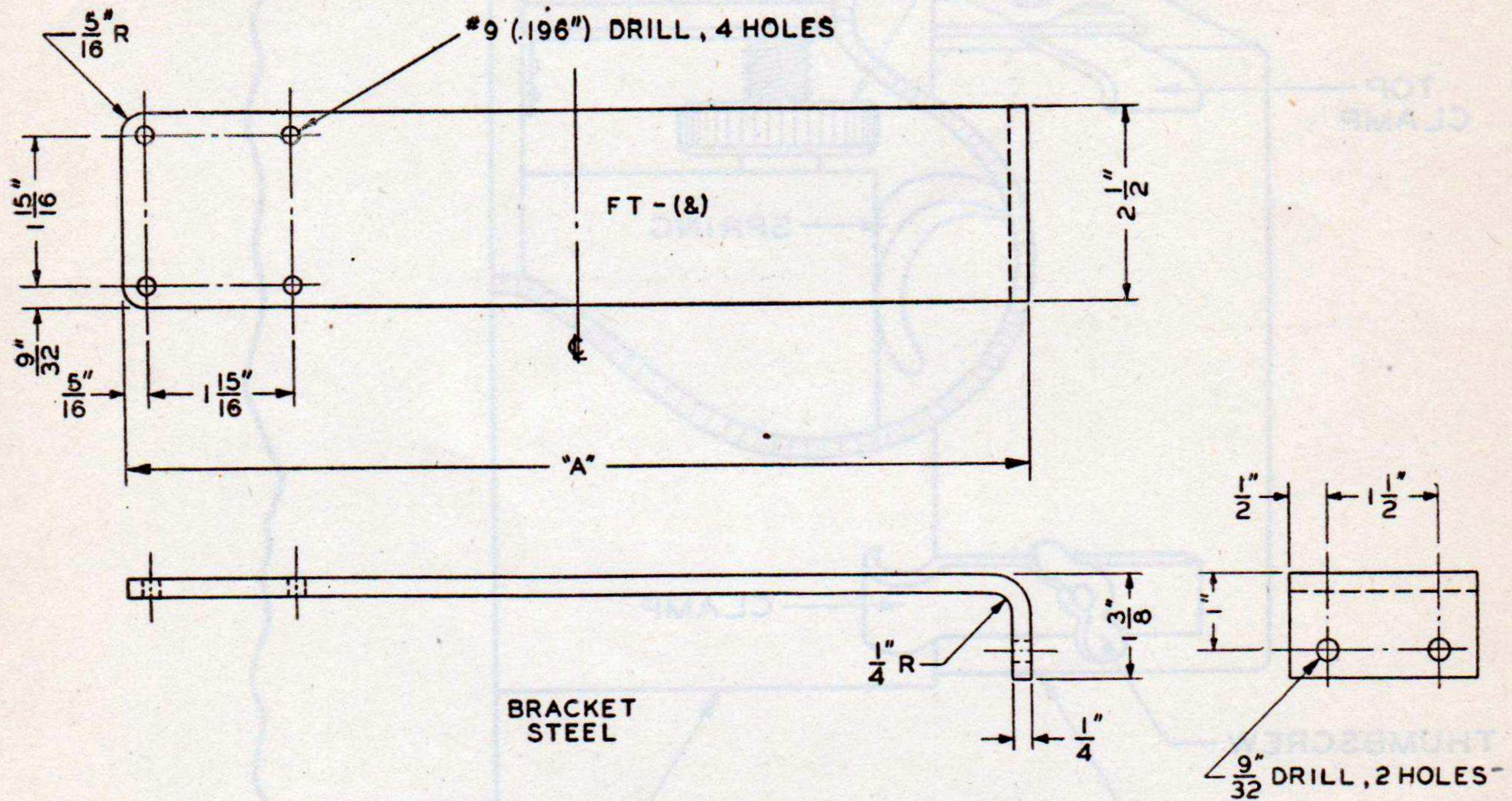
TL-12199-1

Figure 17. Installation of Radio Set SCR-608-(8) or SCR-628-(8) in Truck, 3/4-ton, 4x4, Carryall.



NOTE:
 FOR MOUNTING HOLES AND LOCATION SEE FIGURE 8.
 FOR INSTALLATION OF BRACKETS SEE FIGURE 6.
 STOP NUTS AND SCREWS ARE SUPPLIED WITH
 MOUNTING FT-237-(8).

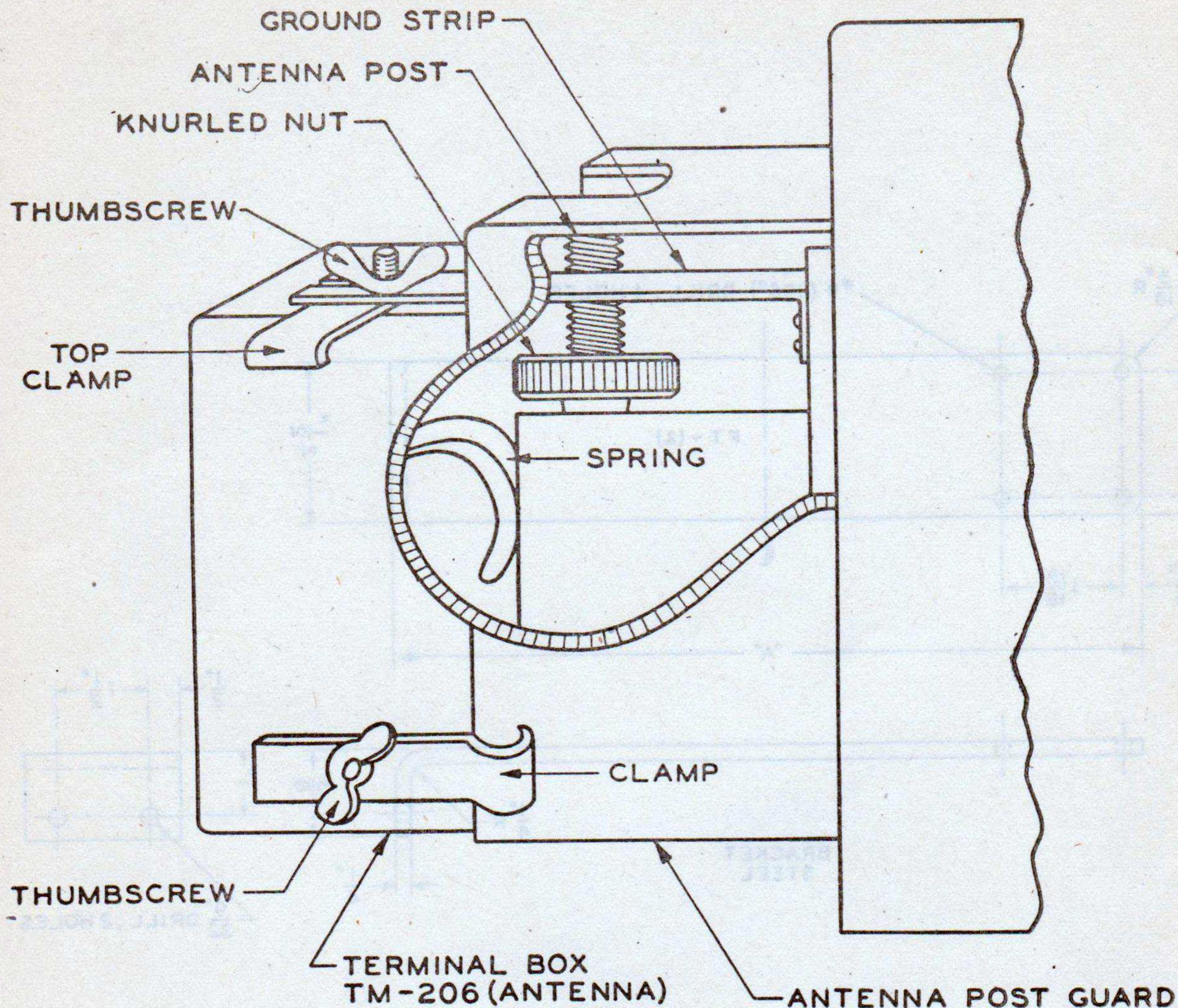
TL-12199-2



- ① FT - 344 A = $12 \frac{3}{4}$ " FOR MOUNTING FT-178 FOR RECEIVER BC-312-(&)
- ② FT - 334 A = $16 \frac{5}{16}$ " FOR MOUNTING FT-172 FOR TRANSMITTER BC-223-(&)
- ③ FT - 364 A = $23 \frac{1}{8}$ " FOR MOUNTING FT-172 FOR TRANSMITTER BC-191-(&)

TL-10136

Figure 18. Bracket details for Mounting FT-172 and FT-178.

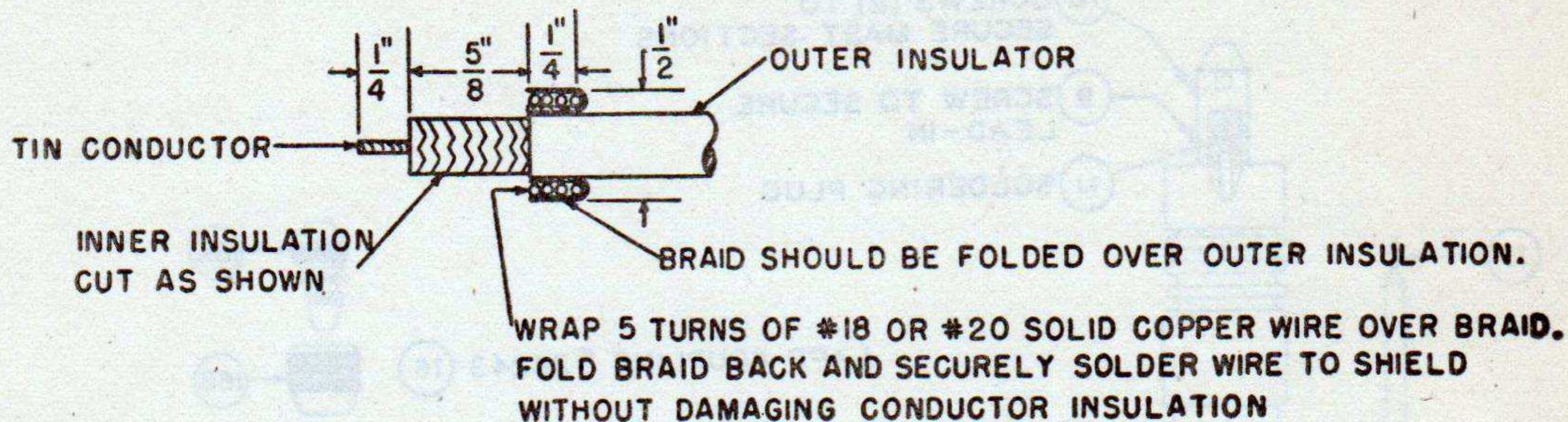


1. REMOVE CHASSIS OF RADIO RECEIVER AND TRANSMITTER BC-620-(8) FROM CASE.
2. MOUNT GROUND STRIP, SECURING WITH UPPER RIGHT HAND SCREW IN ANTENNA POST GUARD
3. TIGHTEN KNURLED NUT ON ANTENNA POST.
4. TURN TERMINAL BOX TM-206 FOR MOST DIRECT CONNECTION OF CORD CD-636
5. TURN TOP CLAMP SIDEWISE
6. PRESS TERMINAL BOX INTO POSITION AGAINST ANTENNA POST GUARD AND SECURE SLOTTED END OF GROUND STRIP BENEATH WASHER WITH THUMBSCREW.
7. SECURE THE THREE REMAINING CLAMPS TO THE ANTENNA POST GUARD BY TIGHTENING THE THUMBSCREWS.

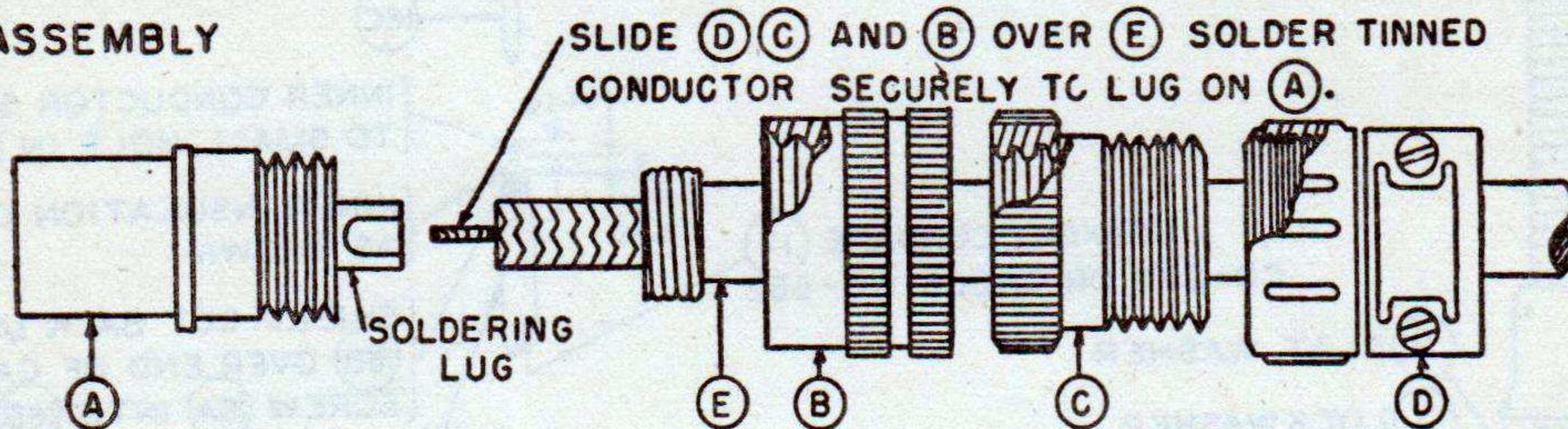
TL-12167

Figure 19. Terminal Box TM-206, mounting on Radio Receiver and Transmitter BC-620-(8).

PREPARATION OF CORDAGE

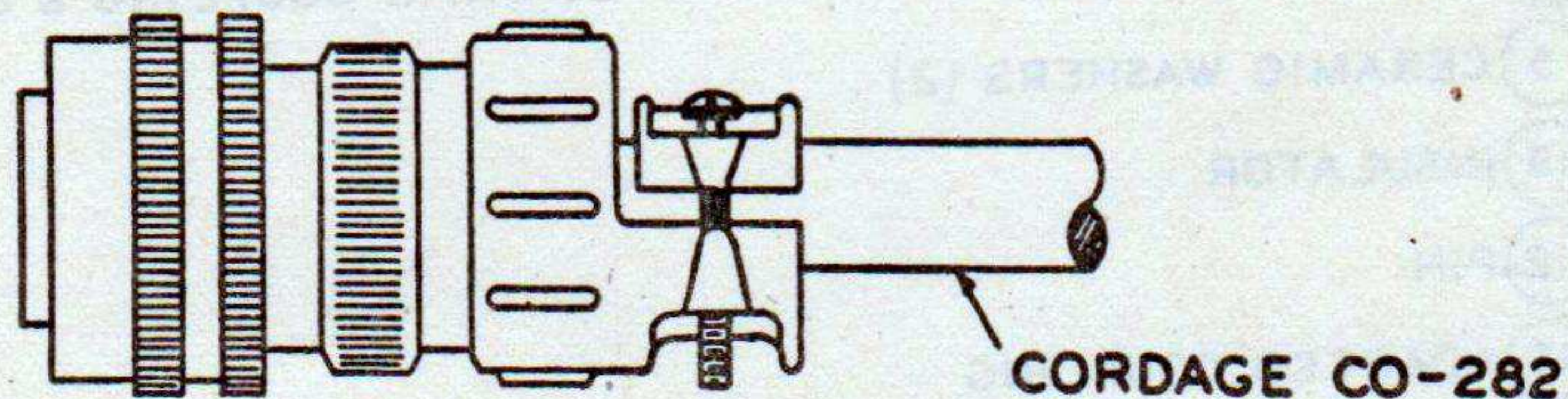


PRE-ASSEMBLY



SLIDE (D), (C) AND (B) OVER CORDAGE (E), THEN SOLDER CONDUCTOR TO LUG ON (A).

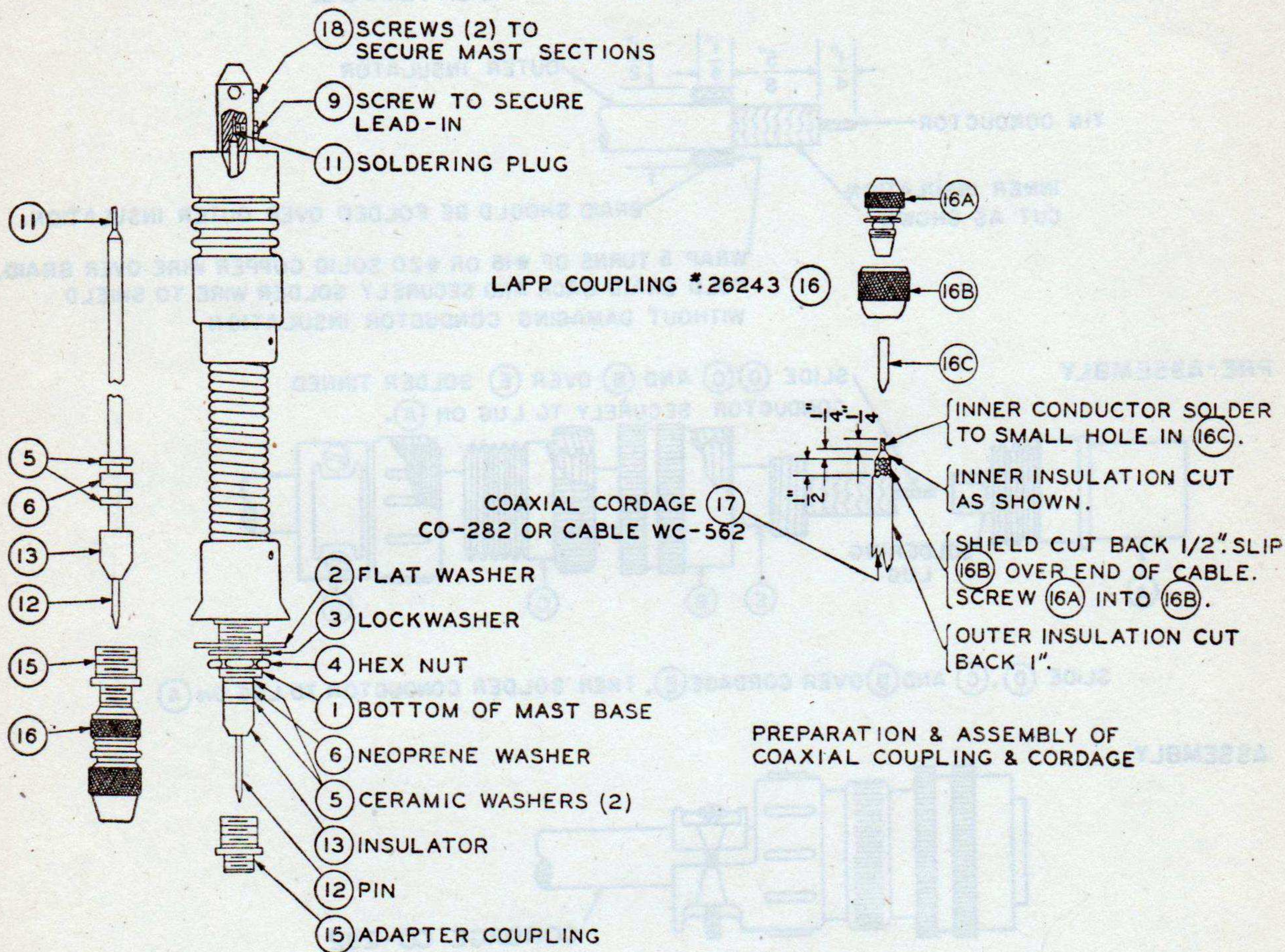
ASSEMBLY



HOLD (A) FIRMLY. SCREW (C) TO (A) THEN (D) TO (E) FINALLY FASTEN CLAMP (D)
 OVER PREPARED BRAID. (DO NOT CRUSH BRAID WHEN FASTENING CLAMP (D))

TL-10133

Figure 20. Coaxial connector for Mast Base MP-48 and Cordage CO-282, assembly for installation.

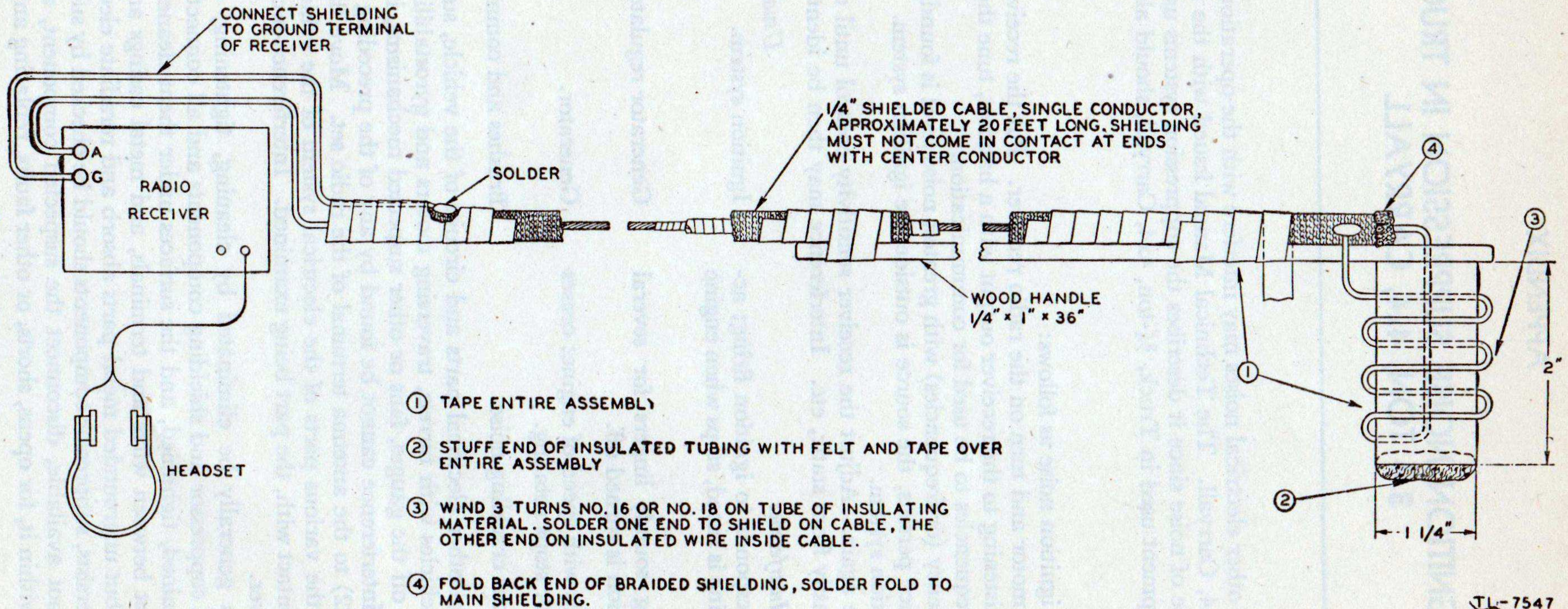


CORD CD-689 FOR COAXIAL LEAD-IN CONNECTION. SECURE PLUG 11 WITH SCREW 9. SCREW 15 INTO BOTTOM OF MAST BASE TO SECURE ASSEMBLY.

TL-10132

Figure 21. Mast Base MP-48-A, assembly with coaxial lead-in.

Figure 22. Probe antenna.



TL-7547

APPENDIX

IGNITION NOISE SUPPRESSION IN TRUCK 3/4 TON, 4x4, CARRYALL

1. General

Excessive ignition or other electrical noises may interfere with the operation of radio equipment in Truck, 3/4-ton, 4x4, Carryall. The Technical Manual issued with the truck will be helpful in locating the source of noise since it describes the suppression systems used. Instructions for operating radio equipment used in Truck, 3/4-ton, 4x4, Carryall, should also be studied.

2. Procedure

Locate and suppress ignition noise as follows:

- a. Start the truck motor and turn on the radio receiver. Put the receiver sensitivity control at *maximum*. Then, listening to the receiver output with a handset, tune the receiver *slowly* 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 interference persists, 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 most easily from static, etc. Interference may then be identified as follows:

<i>Interference</i>	<i>Usual source</i>
Popping sound; corresponds to ignition firing; accelerates when engine is raced, stops when engine is turned off.	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, heater fans and, in vehicles with turrets, traversing motors and gyro stabilizers, can usually be identified by turning off the gauges, fans or other suspected mechanisms, individually.

e. If the source of interference cannot be found by any of the preceding methods, connect a probe antenna (fig. 22) to the antenna terminal of the radio set. Move the loop of the probe antenna slowly 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. Interference-producing parts should be heard in the receiver.

f. Interference can generally be eliminated by cleaning, tightening, or replacing noise-producing parts. All suppressor and shielding components and all connections and grounding bonds should be examined, tightened, and the surfaces under them cleaned. This will assure good electrical contact between wires and terminals, and metal casings and the frame of the vehicles. (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, for opens, shorts, or other faults, replacing any that are defective.

