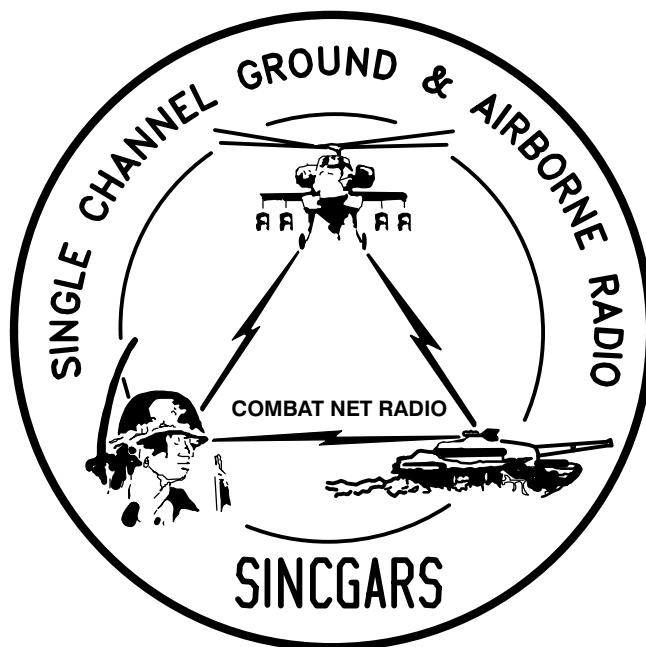


TECHNICAL BULLETIN



**INSTALLATION INSTRUCTIONS FOR
INSTALLATION KIT, ELECTRONIC EQUIPMENT,
MK-2395/VRC (NSN 5895-01-299-5868) (EIC: N/A)
TO PERMIT INSTALLATION OF
RADIO SETS AN/VRC-89/91/92 SERIES
INTO
CARRIER, CARGO, TRACKED, 1 1/2 TON,
SMALL UNIT SUPPORT VEHICLE (SUSV) M973
M923A, M1066, AND M1067**

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

1 SEPTEMBER 1999

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 SMALL UNIT SUPPORT VEHICLE (SUSV) M973, M923, M1066, AND M1067**

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command Fort Monmouth, ATTN: AMSEL-LC-LEO-D-CS-CFO, Fort Monmouth, New Jersey 07703-5000. The Fax number is 732-532-1413, DSN 992-1413. You may also e-mail your recommendation to AMSEL-LC-LEO-PUBS-CHG@cecom3.monmouth.army.mil.

In either case a reply will be furnished direct to you.

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*This manual supersedes TB 11-5820-890-20-70, dated 1 September 1993

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0.1 SCOPE.

This technical bulletin provides Installation Instructions for Installation Kit, Electronic Equipment, MK–2395/VRC, commonly referred to as the Mounting Kit (MK). The MK shall be installed into the following type of vehicle(s):

- Carrier, Cargo, Tracked, 1 1/2 Ton, Small Unit Support Vehicle (SUSV) M973, M923A, M1066 and M1067

The MK is used for installation of radio set components at field locations. The information contained in this technical bulletin is the official authorization to perform the installation at the unit maintenance level.

NOTES

- This technical bulletin is not an authorization for requisition or turn-in of vehicles.
- This technical bulletin does not establish quantity or types of vehicles assigned to using units.

This technical bulletin does not contain information on the maintenance or replacement of the MKs. This information is contained in the MAC of TM 11–5820–890–20–2, and RPSTL of TM 11–5820–890–20P.

0.2 GENERAL INFORMATION.

The MK becomes operable when all the radio set components are installed in the vehicle and correct power is supplied. Refer to TM 11–5820–890–20–1 or TM 11–5820–890–20–4 for installation, Operational (OP) Check instructions, and required maintenance procedures. Refer to TM 11–5820–890–20P for repair parts.

Included in the Radio Set AN/VRC–89/91/92 Series is:

- Radio Set AN/VRC–89/91/92 Series (for RT–1523(C)/U)

0.3 MAINTENANCE FORMS, RECORDS AND REPORTS.

0.3.1 Reports of Maintenance and Unsatisfactory Equipment. See section 4.2.2.3 for information.

0.3.2 Report of Packaging and Handling Deficiencies. See section 4.2.2.1 for information.

0.3.3 Discrepancy in Transportation Deficiency Report (TDR) (SF361). See section 4.2.2.2 for information.

0.4 CONSOLIDATED INDEX OF ARMY PUBLICATIONS.

Refer to the latest issue of DA Pam 25–30 to determine whether there are new changes, or additional publications pertaining to the equipment.

1. PURPOSE OF INSTALLATION.

The Installation Kit, Electronic Equipment, MK–2395/VRC (MK) contains the items needed to mount Radio Set AN/VRC–89/91/92 Series in a Carrier, Cargo, Tracked, 1 1/2 Ton, Small Unit Support Vehicle (SUSV) M973, M923A, M1066, and M1067 (vehicle). If Radio Set AN/VRC–92 Series is authorized, see section 5.5 for instructions to install MT–6353/VRC mounting base.

2. END ITEM OR SYSTEM TO BE MODIFIED.

Not applicable.

3. APPLICATION TIMES.

3.1 Time for Completion of Installation. Using two people, a total of 2.5 work hours is required. Typical vehicle downtime is 3.0 hours.

3.2 Time for Installation of One Assembly or Component. The following table lists the time required to install one component. All times have been rounded off to the nearest half hour. The sum of these times will not reflect the typical vehicle downtime.

ITEM	SECTION	TIME
Antenna AS–3900/VRC	5.1	0.5
Mounting Base, Electrical Equipment MT–6352/VRC	5.2	1.5
Cables	5.4	1.0

4. PREPARATION FOR INSTALLATION.

This section explains how to prepare the vehicle and MK for installation.

4.1 Preparation of Vehicle. To prepare the vehicle for installation, insure that the site includes adequate lighting and a power source when drilling is required. Inspect the vehicle for damage that could affect installation. Have any such damage repaired before installing MK.

4.1.1 Items to be Removed. Remove existing AN/VRC–12 radio family installation kit/harness. See TM 11–5820–401–20–2 for removing items used with intercom systems or TM 11–5820–401–20–1 (used without intercom systems).

4.1.2 List of Items to be Retained. Not applicable.

4.2 Preparation of MK. To prepare MK, unpack, inspect and check inventory.

4.2.1 Precautions During Handling. Observe these steps to prevent equipment damage.

- a. Keep dust covers in place on connectors.
- b. Do not disassemble or modify parts in MK unless authorized to do so.
- c. Keep mounting hardware covered and protected until needed.
- d. When exposed to moisture, rain or salt water, keep all parts dry to prevent corrosion.

4.2.2 Unpack and Inspect Equipment.

4.2.2.1 Inspect Packaging for Evidence of Damage. Any shipping damage should be reported on SF364 Report of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-64/MCO 4430.3F.

4.2.2.2 Unpack and Inventory MK. If any item is missing, fill out and forward Transportation Deficiency Report (TDR) (SF361) as described in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

4.2.2.3 Examine Each Item for Damage. If any item is damaged, fill out and forward SF364 Report of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-64/MCO 4430.3F. All damages should be reported as prescribed by DA Pam 738-750, as contained in Maintenance Management Update.

4.3 MK, Distribution and Consumables.

4.3.1 Items Supplied in MK and/or Required for Installation. Use Table 4-1 and figure 4-1 to identify and inventory MK parts supplied to install Radio Set AN/VRC-89/91/92 series. Refer to Table 4-2 and figure 4-2 to identify additional items required to install Radio Set AN/VRC-92 Series.

4.3.2 Distribution and Issue Instructions.

- a. US Forces: Do not requisition MK. They will be shipped automatically.
- b. US Army Depots: Requisition MK through supply channels.
- c. Multiservice: Instructions shall be included for multiservice modifications.
- d. MAP/MAS Countries: Instructions shall be provided for MAP/MAS countries.

Table 4-1. Parts List for Installation of Radio Set 89/91/92 Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5985-01-297-2971	Antenna AS-3900/VRC (A3017899-1)	2	PAOOF A	4-1, 2
5305-00-847-1159	Screw, Cap, Hexagon (3/8-16 x 1 3/4 in) MS35307-365 (Not Used)	8	PAOZZA	
5310-00-913-8881	Nut, Hexagon (3/8-16 in) MS51971-3	8	PAOZZA	
5310-00-061-1258	Washer, Lock, Internal/External-Toothed (3/8 in) MS45904-76	16	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	4	PAOZZA	
5306-00-225-9086	Bolt, Machine (5/16-24 x 5/8 in) MS90726-31 (Not Used)	2	PAOZZA	
5330-01-205-2864	Gasket (A3013655-1)	2	PAOZZA	
5965-01-222-1420	Loudspeaker-Control Unit LS-671/VRC (A3014065-1)	2	PAOFF A	4-1, 5
5975-01-188-8873	Mounting Base, Electrical Equipment MT-6352/VRC (A3013367-1)	1	PAOOF A	4-1, 1
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34	5	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	10	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5	5	PAOZZA	
5995-01-219-1843	Cable Assembly, Power, Electrical CX-13302/VRC (13 FT, 0 IN) (A3014039-2)	1	PAOZZA	4-1, 8
5995-01-219-7031	Cable Assembly, Radio Frequency CG-3855/VRC (9 FT, 0 IN) (A3014031-4)	1	PAOZZA	4-1, 9
5995-01-219-7030	Cable Assembly, Radio Frequency CG-3855/VRC (7 FT, 0 IN) (A3014031-3)	1	PAOZZA	4-1, 9
5995-01-219-4704	Cable Assembly, Special Purpose, Electrical CX-13292/VRC (6 FT, 0 IN) (A3014038-3)	2	PAOZZA	4-1, 7
5306-00-225-8496	Bolt, Machine (5/16-18 x 5/8 in) MS90725-31	2	PAOZZA	
5340-00-088-1254	Clamp, Loop (5/8-1/4 in) MS21333-104	1	PAOZZA	
5340-00-809-1490	Clamp, Loop (1/4-1/4 in) MS21333-98	4	PAOZZA	
4020-01-341-8795	Fiber Rope Assembly, Single Leg (A3167672-1)	2	PAOZZA	4-1, 4
5965-00-043-3463	Handset H-250/U	2	PAOZZA	4-1, 3
	Plate, Mounting - Antenna (A3018994-1)	2	XBOZZA	4-1, 6
5305-00-543-4406	Screw, Cap, Hexagon (3/8-16 x 3 in) MS35307-370	8	PAOZZA	
5305-00-432-4253	Screw, Tapping, Pan-Head (1/4-14 x 3/4 in) MS51861-67	3	PAOZZA	
5975-00-074-2072	Strap, Tiedown, Electrical Components MS3367-1-9	10	PAOZZA	
5310-00-933-8121	Washer, Lock (1/4 in) MS35338-139	5	PAOZZA	

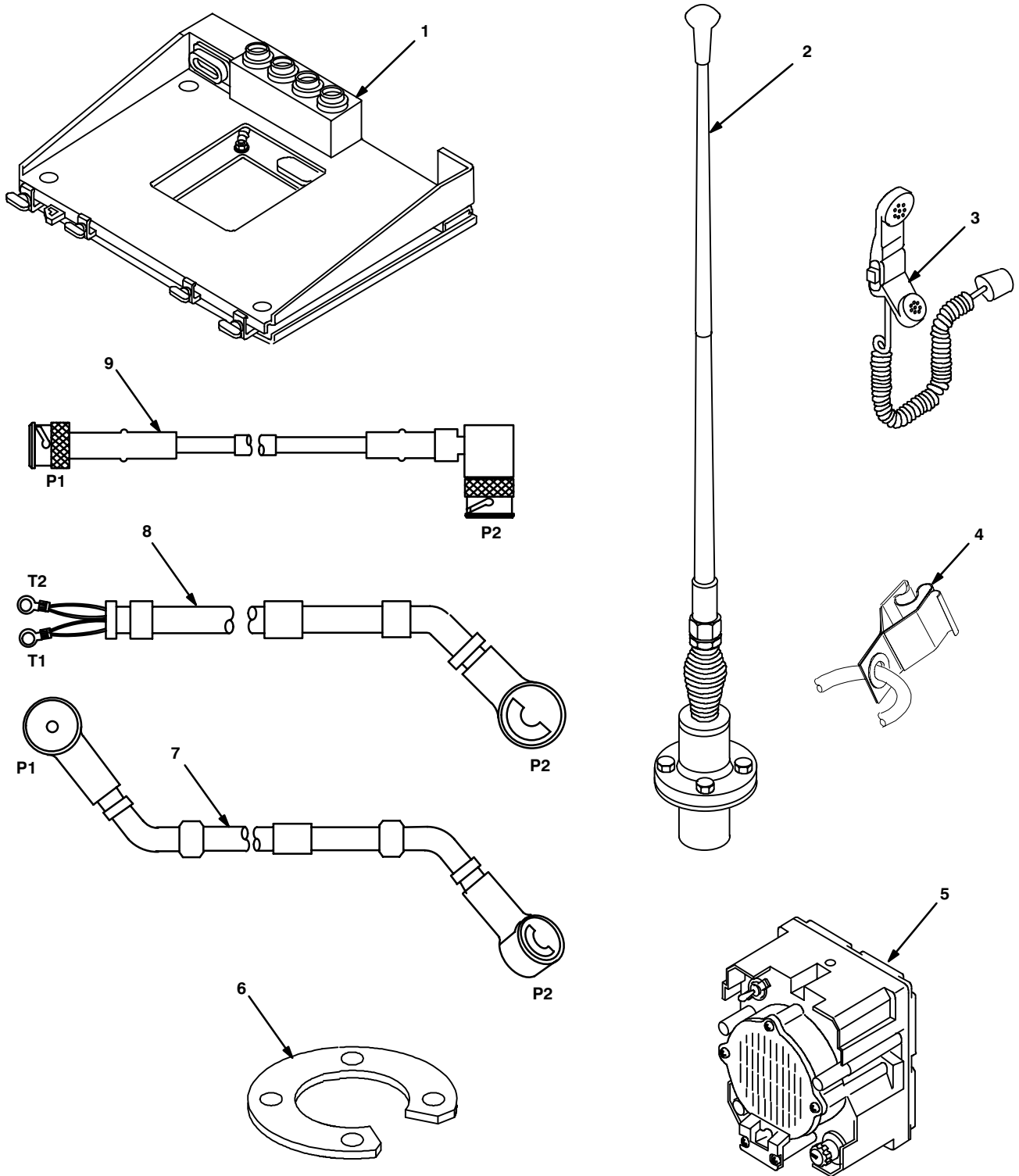


Figure 4-1. MK Illustrated Parts List

Table 4-2. Additional Items Required for Installation of Radio Set AN/VRC-92 Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5975-01-235-1962	Mounting Base, Electrical Equipment MT-6353/VRC (A3014053-1)	1	PAOOHA	4-2, 1
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34	4	PAOZZA	
5310-00-880-7746	Nut, Hexagon (5/16-24 in) MS51968-5	2	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	6	PAOZZA	
5310-00-081-4219	Washer, Flat (5/16 in) MS27183-12 (Not Used)	2	PAOZZA	
	Nut Strip (A3014064-1)	1	XBOZZA	4-2, 5
5975-00-111-3208	Strap, Tiedown, Electrical Components MS3367-5-9	4	PAOZZA	
5995-01-300-9324	Cable Assembly, Power, Electrical CX-13303/VRC (4 FT, 6 IN) (A3014040-9)	1	PAOZZA	4-2, 4
5995-01-222-4209	Cable Assembly, Special Purpose, Electrical CX-13291/VRC (3 FT, 0 IN) (A3014037-1)	1	PAOZZA	4-2, 2
5995-01-219-7025	Cable Assembly, Radio Frequency CG-3856/VRC (5 FT, 0 IN) (A3014032-3)	1	PAOZZA	4-2, 3

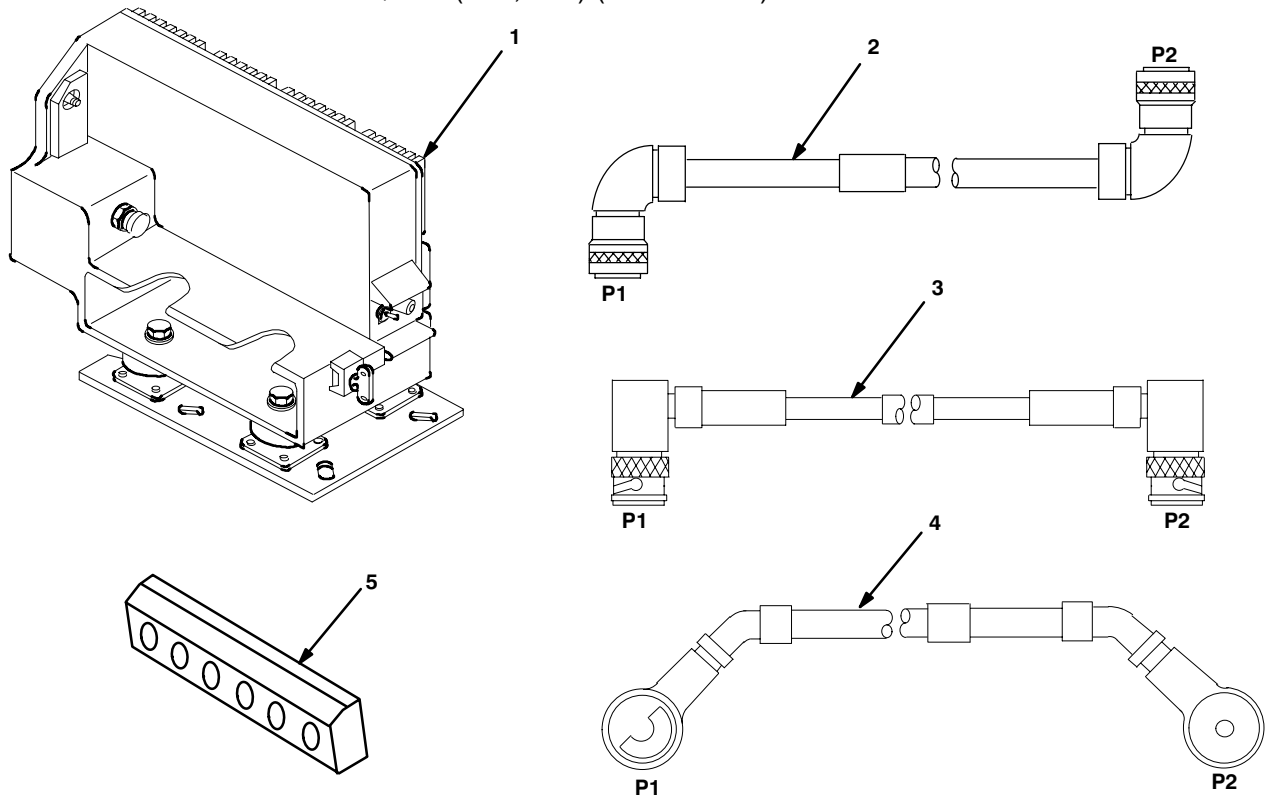


Figure 4-2. Illustrated Parts List for Table 4-2

4.3.3 Consumable Materials. The table below lists materials required for installation but not supplied with MK.

NSN	NOMENCLATURE
8040-00-117-8510	Adhesive-Sealant, Clear, RTV
6850-00-880-7616	Silicone Compound, MIL-S-8660
8030-00-292-1102	Conductive Anti-seize Compound

4.4 Tools and Test, Measurement and Diagnostic Equipment (TMDE) Required. The following tools and TMDE are needed for installation.

NOMENCLATURE	NSN	QUANTITY
Radio Set*		1
Electric Grinder or Equivalent		1
Pocket Knife, Electrician's	5110-00-240-5943	1
Screwdriver, No. 2 Point Phillips, 4 in	5120-00-234-8913	1
Screwdriver, 1/4 in Flatblade, 4 in	5120-00-222-8852	1
Pliers, Round Nose	5120-00-240-6172	1
Pliers, Diagonal Cutting	5110-00-965-0974	1
Wrench, Open/Box: 1/2 in	5120-00-228-9506	1
9/16 in	5120-00-228-9507	1
Handle, Socket Wrench	5120-00-240-5364	1
Socket: 1/2 in	5120-00-237-0977	1
9/16 in	5120-00-227-6704	1
Electric Drill	5130-00-889-8994	1
Drill Bit: 11/32 in	5133-00-227-9664	1
No. 7 (.201 in)		1

* Use radio issued with your vehicle if available.

5. INSTALLATION PROCEDURES.

This section describes where and how to install MK items in the vehicle. See figure 5-1 for an overall view of where vehicular MK equipment, as well as radio components, typically will be installed. When installing MK equipment, be sure to read and follow instructions and illustrations carefully. If Radio Set AN/VRC-92 Series is authorized, see section 5.5 for instructions to install MT-6353/VRC mounting base.

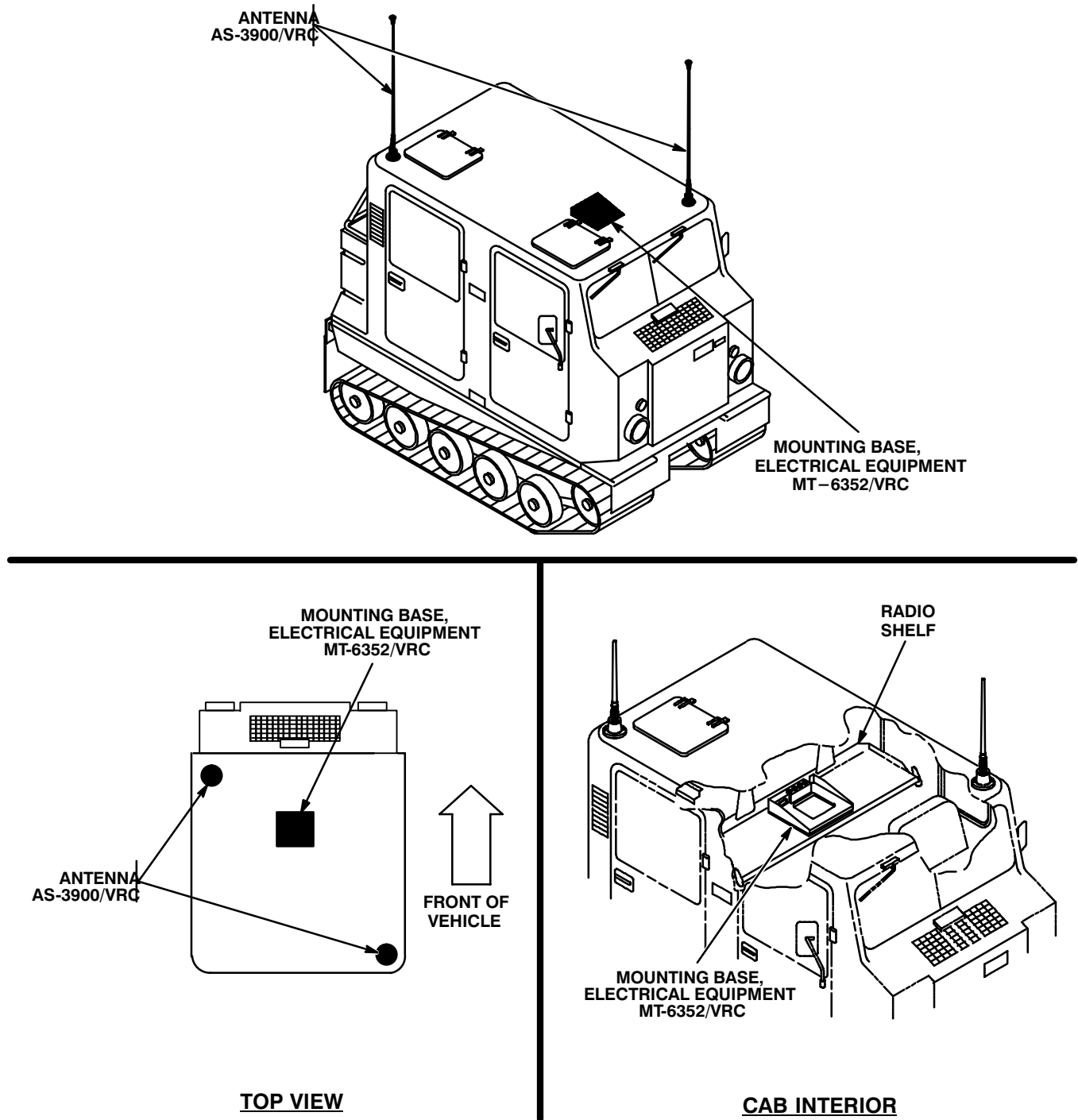


Figure 5-1 (1). MK and Radio Installation: MK Equipment Locations

5. INSTALLATION PROCEDURES. Continued.

INSTALLATION
FOR
AN/VRC-89/91/92 Series

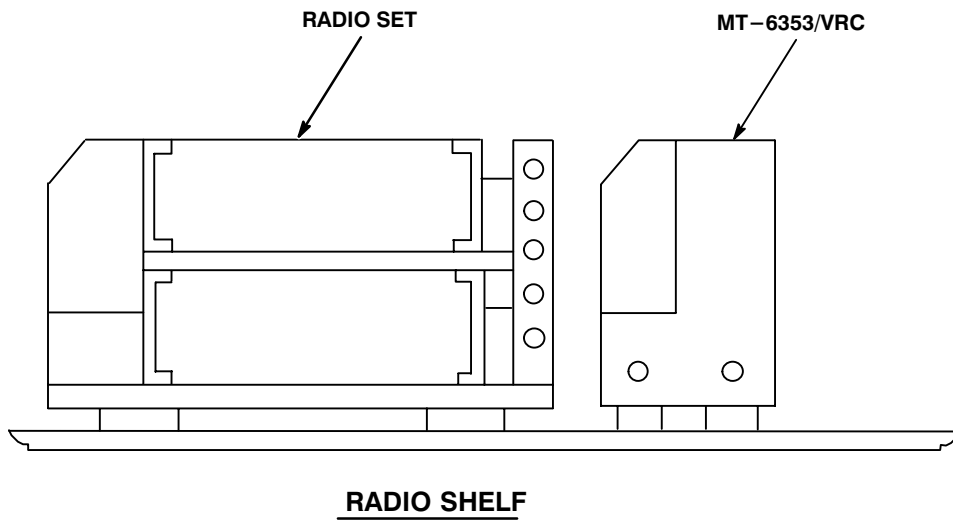


Figure 5-1 (2). MK and Radio Installation: Radio Equipment Locations

5.1 Installation of Antenna AS-3900/VRC (antenna). Use the following procedures to install front and rear antennas. See figure 5-1 (1) for locations.

5.1.1 Installation of Antenna Base.

ITEM	ACTION	REMARKS
NOTE		
Apply a thin coat of adhesive-sealant to both sides of each internal/external-toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed.		
a. Gasket (2).	Apply a thin coat of silicone compound to both sides; then place on port and align mounting holes. See figure 5-2.	
b. Antenna base (1).	Place on top of gasket (2) and port; then align mounting holes.	
c. Mounting plate (8), four cap screws (9), eight IET washers (7) and four nuts (6).	See CAUTION below; then install and secure to antenna base (1) and port.	Ensure opening in mounting bracket is aligned with existing tapped hole used to secure ground strap (4).
		Tools: 9/16 in socket.
d. Ground strap (4), two IET washers (3) and machine bolt (5).	Install and secure to existing tapped hole in ceiling.	Tools: 1/2 in socket.

CAUTION
 TO PREVENT DAMAGE TO TOP OF
 VEHICLE, DO NOT OVER TIGHTEN
 ANTENNA MOUNTING HARDWARE.

1. ANTENNA BASE
2. GASKET
3. IET WASHER (5/16 in)
4. GROUND STRAP
5. MACHINE BOLT (5/16-18 x 5/8 in)
6. NUT (3/8-16 in)
7. IET WASHER (3/8 in)
8. MOUNTING PLATE
9. CAP SCREW (3/8-16 x 3 in)

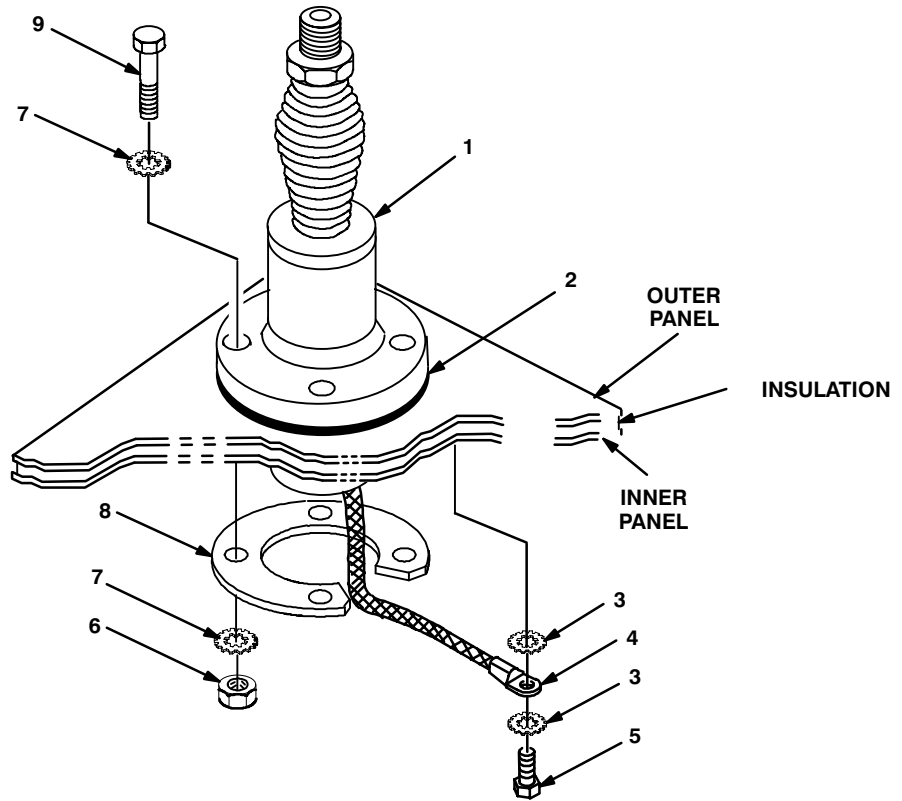
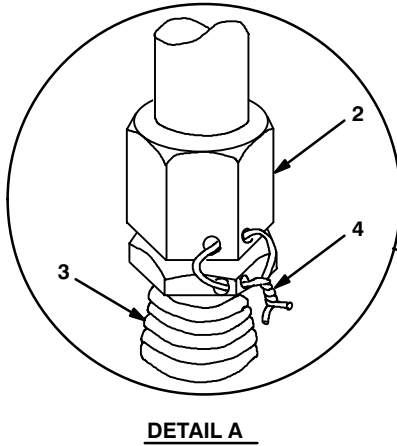
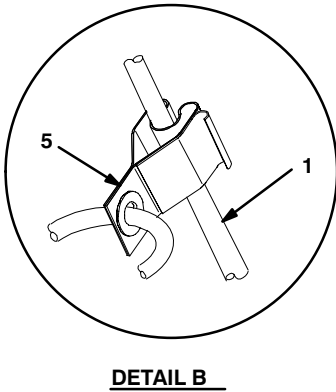


Figure 5-2. Antenna Base Installation: Front and Rear Antenna Bases

5.1.2 Installation of Top Antenna Assembly. The top portion of the antenna includes a lower element and an upper element (with installed cap). Use the following procedure to assemble, install and tie down all antennas.

ITEM	ACTION	REMARKS
a. Antenna elements (1, 2).	Apply silicone compound to element threads and assemble. See figure 5-3.	
b. Antenna element (2).	Install and hand-tighten to antenna base (3).	
c. Lock wire (4).	Install to antenna element (2) and antenna base (3). See figure 5-3, detail A.	
	Cut and remove excess wire with diagonal cutting pliers.	
d. Fiber rope assembly (5).	Attach clip to antenna element (1). Tie rope to vehicle to position antenna in desired location. See figure 5-3, detail B.	



- 1. ANTENNA ELEMENT (UPPER)
- 2. ANTENNA ELEMENT (LOWER)
- 3. ANTENNA BASE
- 4. LOCK WIRE
- 5. FIBER ROPE ASSEMBLY

Figure 5-3. Top Antenna Assembly Installation

5.2 Installation of Mounting Base, Electrical Equipment MT-6352/VRC (mounting base). Remove and retain attaching bag of 5/16 in mounting hardware for installation. To insure good electrical grounding, any rust, corrosion or paint around mounting holes in equipment shelf should be removed before installing mounting base. See figure 5-4 and perform steps.

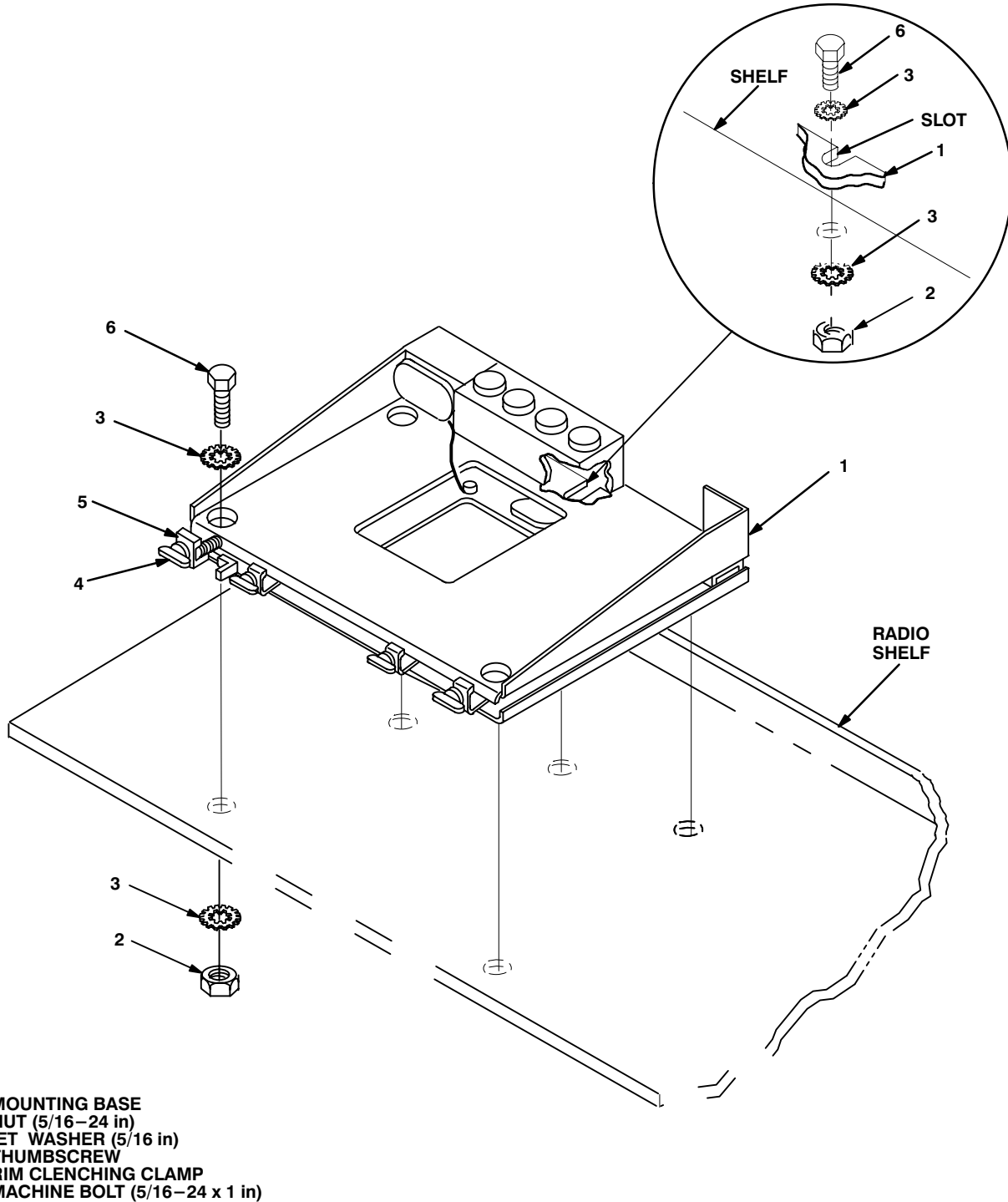


Figure 5-4. Mounting Base Installation: Radio Shelf

5.2 Installation of Mounting Base, Electrical Equipment MT–6352/VRC (mounting base). Continued

ITEM	ACTION	REMARKS
NOTE		
Apply a thin coat of adhesive–sealant to both sides of each internal/external–toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed.		
a. Mounting base (1) and existing radio shelf.	Remove a 2” square area of paint on the underside of the mounting base (1) around left front and rear mounting holes. Remove a 2” square area of paint on the existing radio shelf around the existing mounting holes that mate with left front and rear mounting holes of mounting base (1). Clean paint removed areas and apply a thin coat of conductive anti–seize compound.	Tools: Electric grinder or equivalent.
b. Mounting base (1).	_Place on radio shelf. See Figure 5–4.	
c. Two outer thumbscrews (4).	Turn ccw until both sets of threads have cleared center of holes. See Figure 5–4.	
d. Mounting base (1).	Align four holes and rear slot with matching hole pattern in shelf.	
e. Five machine bolts (6), ten IET washers (3) and five nuts (2).	Install and secure to mounting base (1) and shelf.	Tools: 1/2 in socket and 1/2 in open/box wrench.
f. Two outer thumbscrews (4).	Tighten and secure to rim clenching clamps (5) and mounting base (1).	

5.3 Installation of Loudspeaker – Control Unit LS-671/VRC (speaker). Use the following procedure to install both speakers. Mounting locations for speakers may be determined by the vehicle commander.

ITEM	ACTION	REMARKS
a. Mounting hole for speaker (4).	If required, drill a 11/32 in diameter hole through mounting surface. See figure 5-5.	Tools: Electric drill and 11/32 in drill bit.
b. Speaker (4).	Position top under 11/32 in diameter hole.	
c. Machine bolt (1), lock washer (2) and flat washer (3).	Install and secure to speaker (4) and mounting surface.	Tools: 1/2 in socket.
d. Handset (5).	Connect and secure to speaker (4) connector J2.	

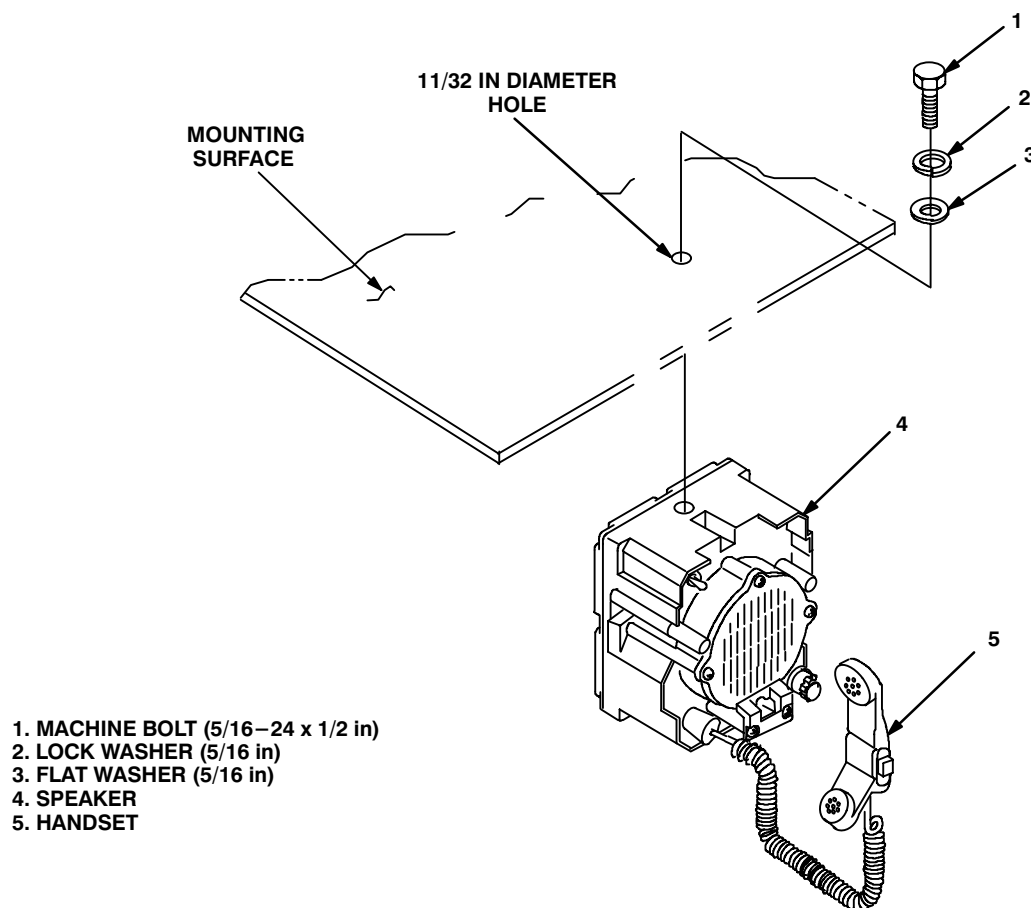


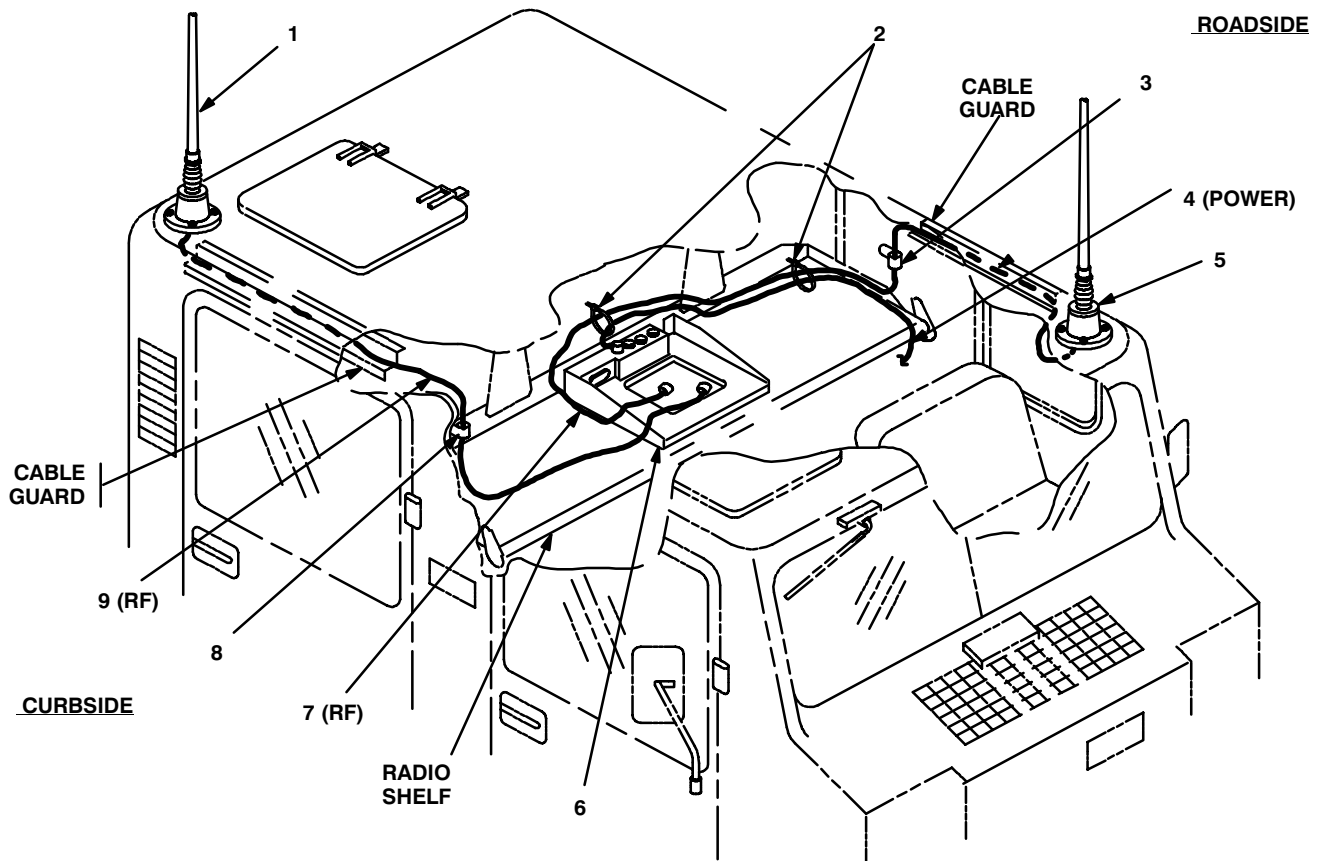
Figure 5-5. Speaker Installation

5.4 Installation of Cables. To accomplish the installation, leave loop clamps and tiedown straps loose enough to adjust cable slack and allow easy adjustment of equipment. When installation is complete, tighten and secure clamps and tiedown straps.

WARNING

Make sure vehicle power source is positioned OFF or disconnected before installing cables.

ITEM	ACTION	REMARKS
a. RF cable (7) connector P1.	Connect and secure to antenna base (5) connector J1. See figure 5-6 (1).	
b. RF cable (7).	Route through roadside cable guard to radio shelf.	
c. Mounting hole for loop clamp (3).	Drill a No. 7 (.201 in) diameter hole in roadside wall. See figure 5-6 (1) for location(s).	Tools: Electric drill and No. 7 drill bit.



- 1. ANTENNA BASE (CURBSIDE)
- 2. TIEDOWN STRAP
- 3. LOOP CLAMP (1/4-1/4 in)
TAPPING SCREW (1/4-14 x 3/4 in)
LOCK WASHER (1/4 in)
- 4. POWER CABLE, CX-13302/VRC (13 FT, 0 IN)
- 5. ANTENNA BASE (ROADSIDE)

- 6. MOUNTING BASE
- 7. RF CABLE, CG-3855/VRC (7 FT, 0 IN)
- 8. LOOP CLAMP (1/4-1/4 in)
TAPPING SCREW (1/4-14 x 3/4 in)
LOCK WASHER (1/4 in)
- 9. RF CABLE, CG-3855/VRC (9 FT, 0 IN)

Figure 5-6 (1). Cable Installation: RF and Power Cabling

5.4 Installation of Cables. Continued+

ITEM	ACTION	REMARKS
d. Loop clamp (3), pan-head tapping screw (1/4–14 x 3/4 in) and lock washer (1/4 in).	Wrap clamp around RF cable (7); then install to hole drilled in step c. See figure 5–6 (1) for location(s).	Tools: Phillips screwdriver.
e. RF cable (7) connector P2.	Position on top of mounting base (6). See figure 5–6 (1).	
f. Power cable (4) connector P2.	Position on top of mounting base (6).	
g. Power cable (4).	Route across shelf and down roadside wall to floor behind driver's seat.	
h. Two tiedown straps (2).	Install loosely around RF cable (7) and power cable (4). See figure 5–6 (1) for location(s).	
i. RF cable (9) connector P1.	Connect and secure to antenna base (1) connector J1. See figure 5–6 (1).	
j. RF cable (9).	Route through curbside cable guard to radio shelf.	
k. Mounting hole for loop clamp (8).	Drill a No. 7 (.201 in) diameter hole in curbside wall. See figure 5–6 (1) for location(s).	Tools: Electric drill and No. 7 drill bit.
l. Loop clamp (8), pan-head tapping screw (1/4–14 x 3/4 in) and lock washer (1/4 in).	Wrap clamp around RF cable (9); then install to hole drilled in step k.	Tools: Phillips screwdriver.
m. Power cable (4).	Route behind roadside kickplate to battery box. See figure 5–6 (2).	
n. Mounting hole for loop clamp (1).	Drill a No. 7 (.201 in) diameter hole in curbside wall. See figure 5–6 (2) for location(s).	Tools: Electric drill and No. 7 drill bit.
o. Loop clamp (1), pan-head tapping screw (1/4–14 x 3/4 in) and lock washer (1/4 in).	Wrap clamp around power cable (4); then install to hole drilled in step n.	Tools: Phillips screwdriver.
p. Rear seat and battery box cover.	Temporarily remove from battery box. See figure 5–6 (2).	Seat and battery box cover are not shown.
q. Power cable (4) terminal leads: T1 (red) and T2 (black).	Insert through battery box entry hole; then connect and secure to proper battery terminal posts. See figure 5–6 (2), detail A.	T1 connects to positive (+) post. T2 connects to negative (–) post.

5.4 Installation of Cables. Continued

ITEM	ACTION	REMARKS
<p>The diagram illustrates the power cabling installation. It shows a battery box with terminals T1 (RED +) and T2 (BLACK -). A power cable (4) is connected to these terminals. The cable runs through a kickplate and is secured to a mounting base (6) with a loop clamp (1), tapping screw, and lock washer. The cable then runs through an entry hole in the rear wall towards the driver's seat. A detail view (DETAIL A) shows the terminal connections. A list of parts is provided: 1. LOOP CLAMP (5/8-1/4 in), TAPPING SCREW (1/4-14 x 3/4 in), LOCK WASHER (1/4 in); 4. POWER CABLE, CX-13302/VRC (13 FT, 0 IN).</p>		
<p>r. Rear seat and battery box cover.</p>	<p>Reinstall to battery box. See figure 5-6 (2).</p>	<p>Seat and battery box cover are not shown.</p>
<p>s. Power cable (4) connector P2.</p>	<p>Connect and secure to mounting base (6) connector J1. See figure 5-6 (1).</p>	

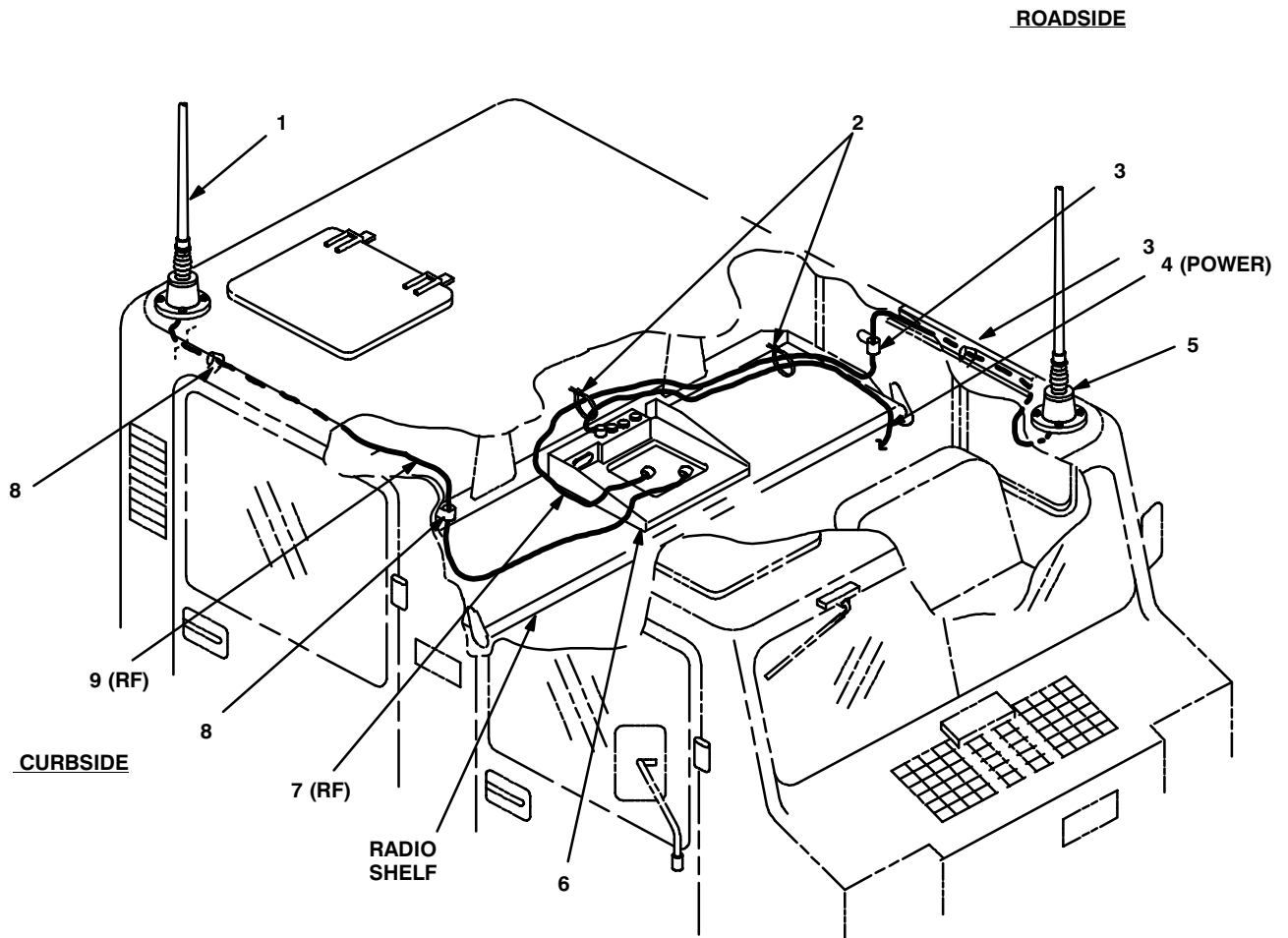
Figure 5-6 (2). Cable Installation: Power Cabling

5.4.1 Installation of RF Cables (M923A, M1066 and M1067 ONLY).**WARNING**

Make sure vehicle power source is positioned OFF or disconnected before installing cables.

ITEM	ACTION	REMARKS
a. RF cable (9) connector P1.	Connect and secure to antenna base (1) connector J1. See Figure 5–6 (3).	
b. RF cable (9).	Route along curbside wall to radio shelf. radio shelf.	
c. Mounting holes for loop clamp (8).	Drill a No. 7 (.201 in) diameter hole in curbside wall. See Figure 5–6 (3) for location(s).	Tools: Electric drill and No. 7 drill bit.
d. Two loop clamps (8), two pan–head tapping screws (1/4–14 x 3/4 in), and two lock washers (1/4 in)	Wrap clamps around RF cable (9); then install to holes drilled in step c. See Figure 5–6(3) for location(s).	Tools: Phillips screwdriver.
e. RF cable (9) connector P2.	Position on top of mounting base (6).	
f. RF cable (7) connector P1.	Connect and secure to antenna base (5) connector J1. See Figure 5–6(3).	
g. RF cable (7).	Route along roadside wall to radio shelf.	
h. Mounting holes for loop clamps (3).	Drill two No. 7 (.201 in) diameter holes in roadside wall. See Figure 5–6(3) for locations.	Tools: Electric drill and No. 7 drill bit.
i. Two loop clamps (3), two pan–head tapping screws (1/4–14 x 3/4 in), and two lock washers (1/4 in)	Wrap clamps around RF cable (7); then install to holes drilled in step c. See Figure 5–6(3) for location(s).	Tools: Phillips Screwdriver.
j. RF cable (7) connector P2.	Position on top of mounting base (6).	
k. Power cable (4) connector P2.	Position on tops of mounting base (6).	
l. Power cable (4).	Route across shelf and down roadside wall to floor behind driver’s seat.	
m. Two tiedown straps (2).	Install loosely around RF cable (7) and power cable (4). See Figure 5–6(3) for locations.	

5.4.1 Installation of RF Cables (M923A, M1066 and M1067 ONLY).



- | | |
|---|---|
| <ol style="list-style-type: none"> 1. ANTENNA BASE (CURBSIDE) 2. TIEDOWN STRAP 3. LOOP CLAMP (1/4-1/4 in)
TAPPING SCREW (1/4-14 x 3/4 in)
LOCK WASHER (1/4 in) 4. POWER CABLE, CX-13302/VRC (13 FT, 0 IN) 5. ANTENNA BASE (ROADSIDE) | <ol style="list-style-type: none"> 6. MOUNTING BASE 7. RF CABLE, CG-3855/VRC (7 FT, 0 IN) 8. LOOP CLAMP (1/4-1/4 in)
TAPPING SCREW (1/4-14 x 3/4 in)
LOCK WASHER (1/4 in) 9. RF CABLE, CG-3855/VRC (9 FT, 0 IN) |
|---|---|

Figure 5-6 (3). Cable Installation: M923A, M1066, and M1067

5.5 Installation of Mounting Base, Electrical Equipment MT-6353/VRC. If Radio Set AN/VRC Series is authorized, use the following instructions to install MT-6353/VRC mounting base in the location shown in Figure 5-1(2). Refer to Section 5.6 for connection of cables.

ITEM	ACTION	REMARKS
NOTE		
Apply a thin coat of adhesive-sealant to both sides of each internal/external-toothed (IET) washer during installation, and to the area of contact where IET washer is to be placed. Before proceeding, connect and secure CX-13291/VRC control cable and CX-13303/VRC power cable to MT-6353/VRC mounting base. (Refer to Section 5.6, step b.)		
a. MT-6353/VRC mounting base (1) and radio shelf.	Remove a 2" square area of paint on the underside of the mounting base (1) around the front two mounting holes. Remove a 2" square area of paint on the radio shelf around the two front mounting holes. Clean the paint removed areas and apply a thin coat of conductive anti-seize compound.	Tools: Electric grinder or equivalent.
b. MT-6353/VRC mounting base (1).	Place on radio shelf over 11/32 in diameter holes. See Figure 5-7.	
c. MT-6353/VRC mounting base (1).	Align front holes and rear slots with matching hole patten in radio shelf. See Figure 5-7.	
d. Two machine bolts (4), two IET washers (3), and nut strip (5).	Install and secure to rear slots MT-6353/VRC mounting base (1) and radio shelf.	Tools: 1/2 in socket.
e. Two machine bolts (4), four IET washers (3) and two nuts (2).	Install and secure to front holes in MT-6353/VRC mounting base (1) and radio shelf.	Tools: 1/2 in socket and 1/2 in open/box wrench.

5.5 Installation of Mounting Base, Electrical Equipment MT-6353/VRC. Continued.

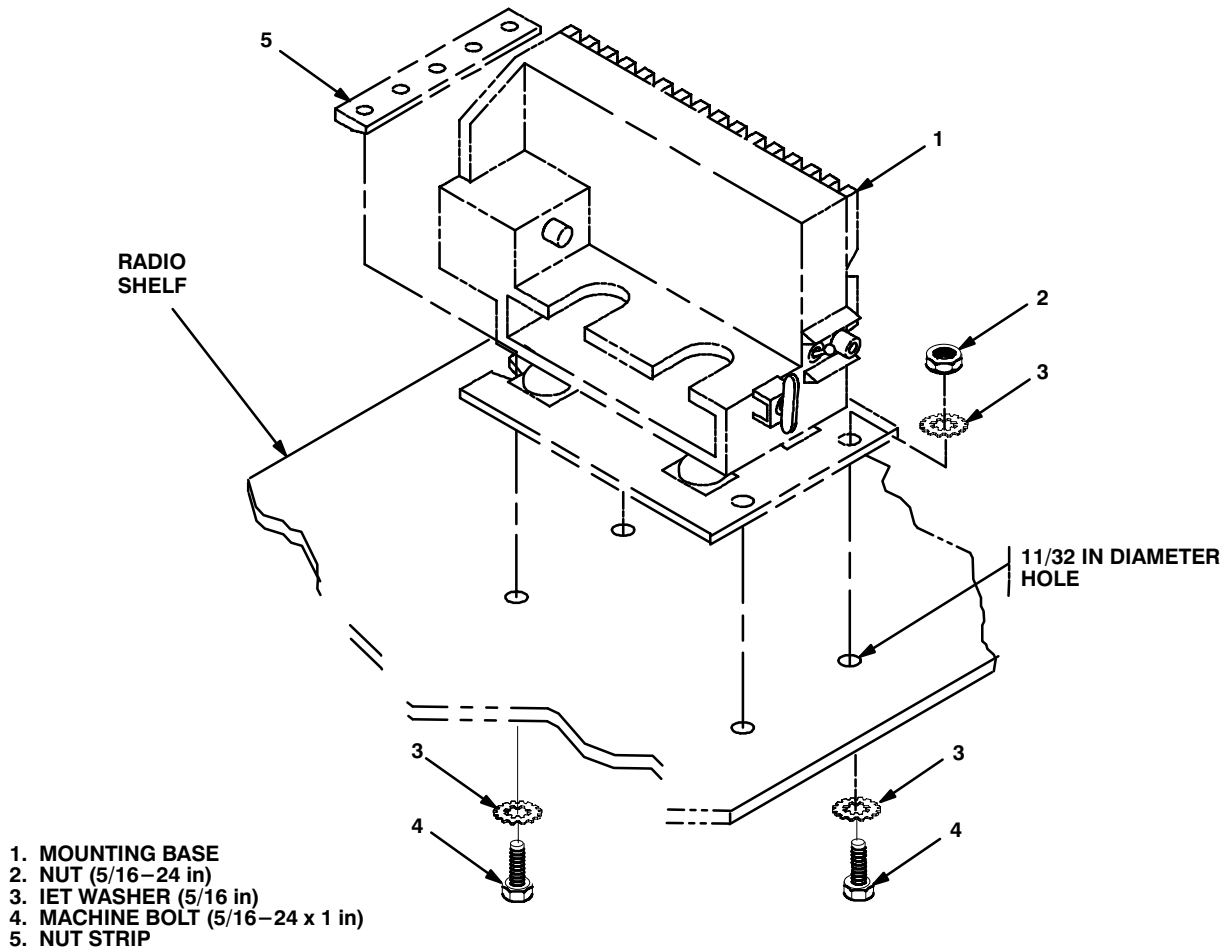
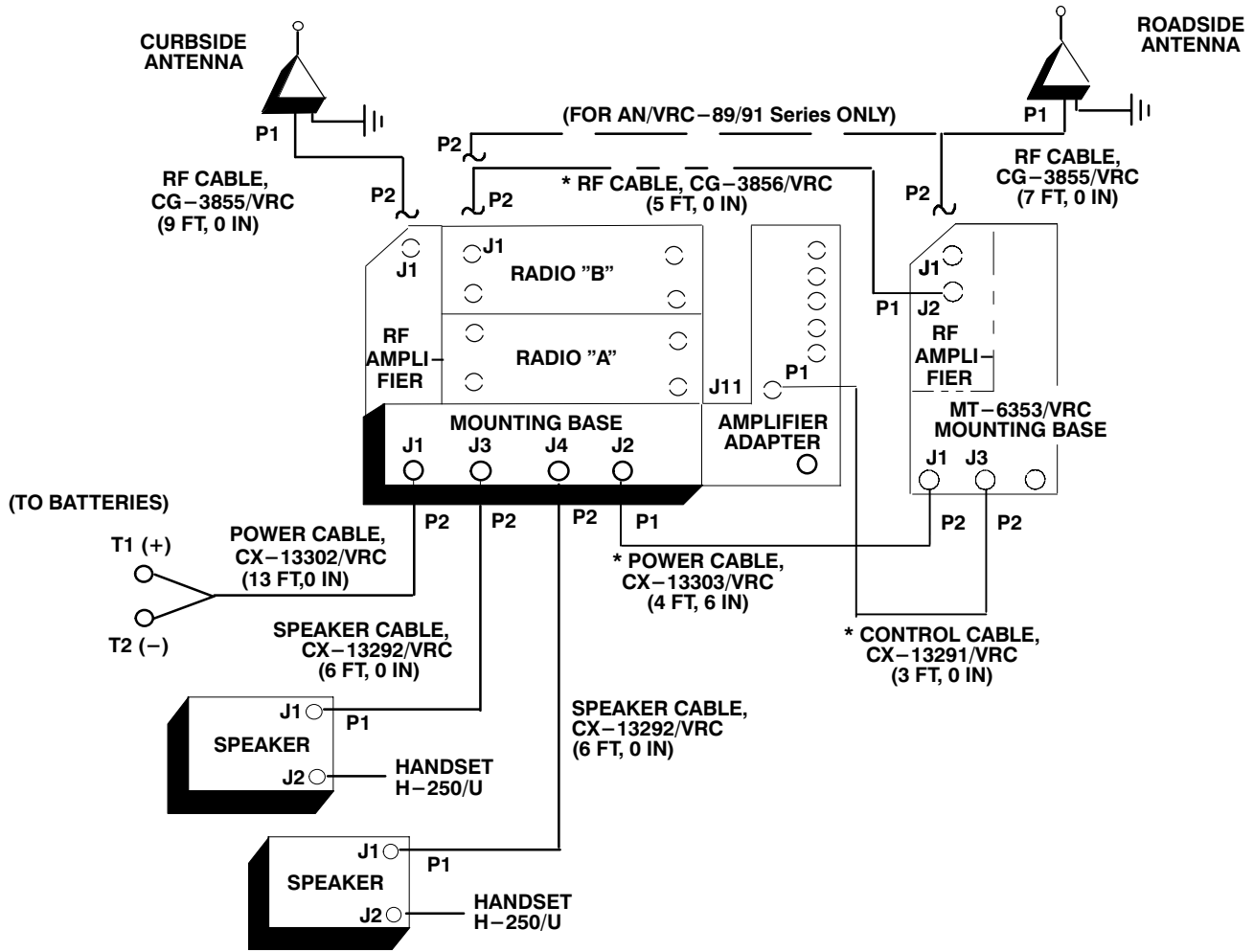


Figure 5-7. MT-6353/VRC Mounting Base Installation

5.6 Post-Installation and Checkout. After equipment is installed and cables are connected, perform the following steps.

ITEM	ACTION	REMARKS
a. Equipment.	Check for secure mounting. Check for loose parts, connectors and mounting hardware.	
b. Cables.	Check for proper installation and connection of cables. See figure 5-8 for cable connections. Unused cables should be stowed in appropriate place inside the vehicle.	
c. Loop clamps.	Check that all have been properly installed and tightened.	
d. Protective covers.	Insure that all installed cables are covered when not in use or connected.	
e. Radio issued with vehicle.	Install and connect cables. See TM 11-5820-890-20-1 or TM 11-5820-890-20-4 for installation and Operational (OP) Check instructions.	
f. MK line replaceable units.	See TM 11-5820-890-20P for Repair Parts and Special Tools List (RPSTL) information.	

5.7 Post-Installation and Checkout. Continued



* NOT SUPPLIED IN THIS MK.

CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CX-13302/VRC (13 FT, 0 IN)	P2	Mounting base	J1	T1: Red (+) T2: Black (-)	Batteries	(+) post (-) post
CX-13292/VRC (6 FT, 0 IN)	P2	Mounting base	J3	P1	Speaker	J1
CX-13292/VRC (6 FT, 0 IN)	P2	Mounting base	J4	P1	Speaker	J1
CG-3855/VRC (9 FT, 0 IN)	P2	RF amplifier	J1	P1	Curbside antenna base	J1

Figure 5-8. Cable Diagram: For AN/VRC-89/91/92 Series

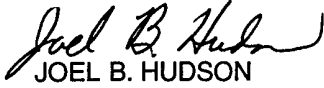
APPENDIX A

REFERENCES

AMDF	Army Master Data File (Microfiche)
AR 710-2	Supply Policy Below the Wholesale Level as Contained in Unit Supply UPDATE
AR 725-50	Requisitioning, Receipt and Issuing System in UPDATE
DA Pam 25-30	Consolidated Index of Army Publications (Microfiche)
DA Pam 710-2-1	Using Unit Supply System Manual Procedures as Contained in Unit Supply UPDATE
SB 11-131-2	Vehicular Radio Sets and Authorized Installations (SINCGARS)
TM 11-5820-890-10-1	Operator's Manual (ICOM Radio Sets)
TM 11-5820-890-10-3	Operator's Manual (Non-ICOM Radio Sets)
TM 11-5820-890-20-1	Unit Maintenance Manual (ICOM Radio Sets, Vol. 1)
TM 11-5820-890-20-2	Unit Maintenance Manual (ICOM Radio Sets, Vol. 2)
TM 11-5820-890-20-3	Unit Maintenance Manual handbook (ICOM Radio Sets)
TM 11-5820-890-20-4	Unit Maintenance Manual (Non-ICOM Radio Sets)
TM 11-5820-890-20P	Repair Parts and Special Tools List

By Order of the Secretary of the Army:

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3-10	3-3		3-1
5-6	5-8		
		FO-3	

Recommend that the installation antenna alignment procedure be changed throughout to specify a 20 IFF antenna lag rather than 10

REASON: Experience has shown that with only a 10 lag, the antenna servo system is too sensitive to gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 20 without degradation of operation.

Item 5, Functional column. Change 2 dB" to 3 dB".

REASON: The adjustment procedure for the TRANS POWER FAULT indicator call for a 3 dB (500 watts) adjustment to light the TRANS POWER FAULT indicator.

Add new step f.1 to read, Replace cover plate removed in step d above."

REASON: To replace the cover plate.

ZONE C 3. On J1-2, change +24 VDC" to +5 VDC".

REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.

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