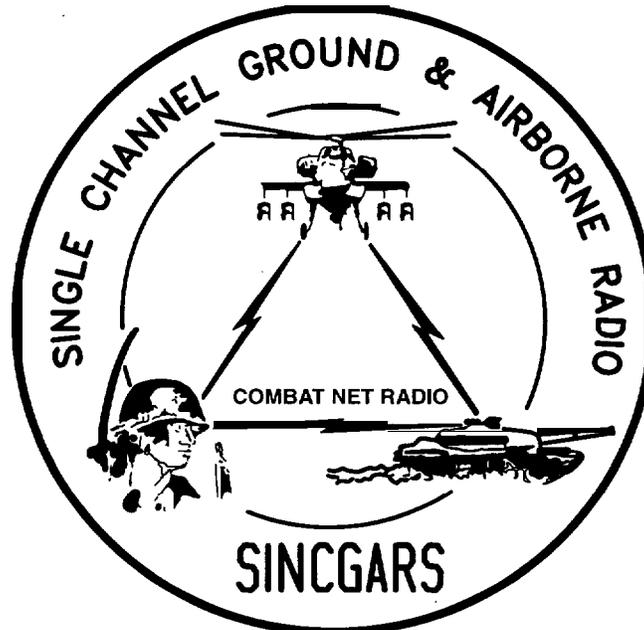


TECHNICAL BULLETIN



**INSTALLATION INSTRUCTIONS FOR
INSTALLATION KIT,
ELECTRONIC EQUIPMENT MK-2394/VRC
(NSN 5895-01-218-3962) (EIC: N/A)
TO PERMIT INSTALLATION OF RADIO SET
AN/VRC-87/88/90 SERIES OR AN/VRC-89/91/92 SERIES
IN A
FIGHTING VEHICLE, INFANTRY: FULL-TRACKED
M2 AND M2A1/A2/ODS
AND
FIGHTING VEHICLE, CALVARY: FULL-TRACKED
M3A1/A2/ODS**

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HEADQUARTERS, DEPARTMENT OF THE ARMY

1 AUGUST 1999

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AND
FIGHTING VEHICLE, CALVARY: FULL-TRACKED
M3 AND M3A1/A2/ODS**

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 11-5820-890-20-69, dated 1 September 1993.

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0.1 SCOPE

This technical bulletin provides Installation Instructions for Installation kit, Electronic Equipment MK-2394/VRC, commonly referred to as the Mounting Kit (MK). The MK shall be installed into the following type of vehicle(s):

- Fighting Vehicle, Infantry: Full-Tracked M3 and M3A1/A2/ODS
- Fighting Vehicle, Cavalry: Full-Tracked M2 and M2A1/A2/ODS

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-87/88/90 Series or AN/VRC-89/91/92 Series is:

- Radio Set AN/VRC-87/88/90 Series or 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-2394/VRC (MK) contains the items needed to mount Radio Set AN/VRC-87/88/90 Series or AN/VRC-89/91/92 Series in a Fighting Vehicle, Infantry: Full-Tracked M2 and M2A1/A2/ODS, and Fighting Vehicle, Calvary: Full-Tracked M3 and M3A1/A2/ODS. If radio set AN/VRC-92 Series is authorized, see Section 5.4 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 3.0 work hours is required. Typical vehicle downtime is 3.5 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-3916/VRC	5.1	1.0
Mounting Base, Electrical Equipment MT-6352/VRC	5.2	1.5
Cables	5.3	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), and TM 9-2320-289-20.

4.1.2 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 AN/VRC-87/88/90 Series or AN/VRC-89/91/92 Series

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5985-01-353-4943	Antenna, Vehicular AS-3916/VRC (A3207487-1)	2	PAOOF A	4-1, 2
5305-00-847-1159	Screw, Cap, Hexagon (3/8-16 x 1 3/4 in) MS35307-365	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) (Not Used)	2	PAOZZA	
4010-01-381-1521	Wireless assembly (A3207523-1)	2	PAOZZA	
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 (3 Not Used)	5	PAOZZA	
5995-01-219-1845	Cable Assembly, Power, Electrical CX-13306/VRC (8 FT, 0 IN) (A3014043-4)	1	PAOZZA	4-1, 6
5995-01-219-7030	Cable Assembly, Radio Frequency CG-3855/VRC (7 FT, 0 IN) (A3014031-3)	1	PAOZZA	4-1, 5
5995-01-219-7029	Cable Assembly, Radio Frequency CG-3855/VRC (5 FT, 0 IN) (A3014031-2)	1	PAOZZA	4-1, 5
5995-01-225-7628	Cable Assembly, Special Purpose, Electrical CX-13300/VRC (2 FT, 0 IN) (A3014044-1)	2	PAOZZA	4-1, 3
5995-01-303-4951	Cable Assembly, Special Purpose, Electrical CX-13313/VRC (2 FT, 7 IN) (A3018360-1)	1	PAOZZA	4-1, 4
5340-00-809-1490	Clamp, Loop (1/4-1/4 in) MS21333-98	4	PAOZZA	
5340-00-809-1500	Clamp, Loop (1-1/4 in) MS21333-107	1	PAOZZA	
5340-00-984-8540	Clamp, Loop (1/2-1/4 in) MS21333-102	1	PAOZZA	
5340-00-809-1494	Clamp, Loop (3/4-1/4 in) MS21333-105	2	PAOZZA	
5975-00-111-3208	Strap, Tiedown, Electrical Components MS3367-5-9	15	PAOZZA	
5310-00-045-3296	Washer, Lock (No. 10) MS35338-43	4	PAOZZA	
5310-00-889-2528	Washer, Lock, Internal/External-Toothed (1/4 in) MS45904-68	2	PAOZZA	
5310-00-582-5965	Washer, Lock (1/4 in) MS35338-44	2	PAOZZA	
5305-00-068-0500	Screw, Cap, Hexagon (1/4-20 x 1/2 in) MS90725-3	4	PAOZZA	
5305-00-984-6210	Screw, Machine, Pan-Head (No. 10-24 x 1/2 in) MS35206-263	4	PAOZZA	

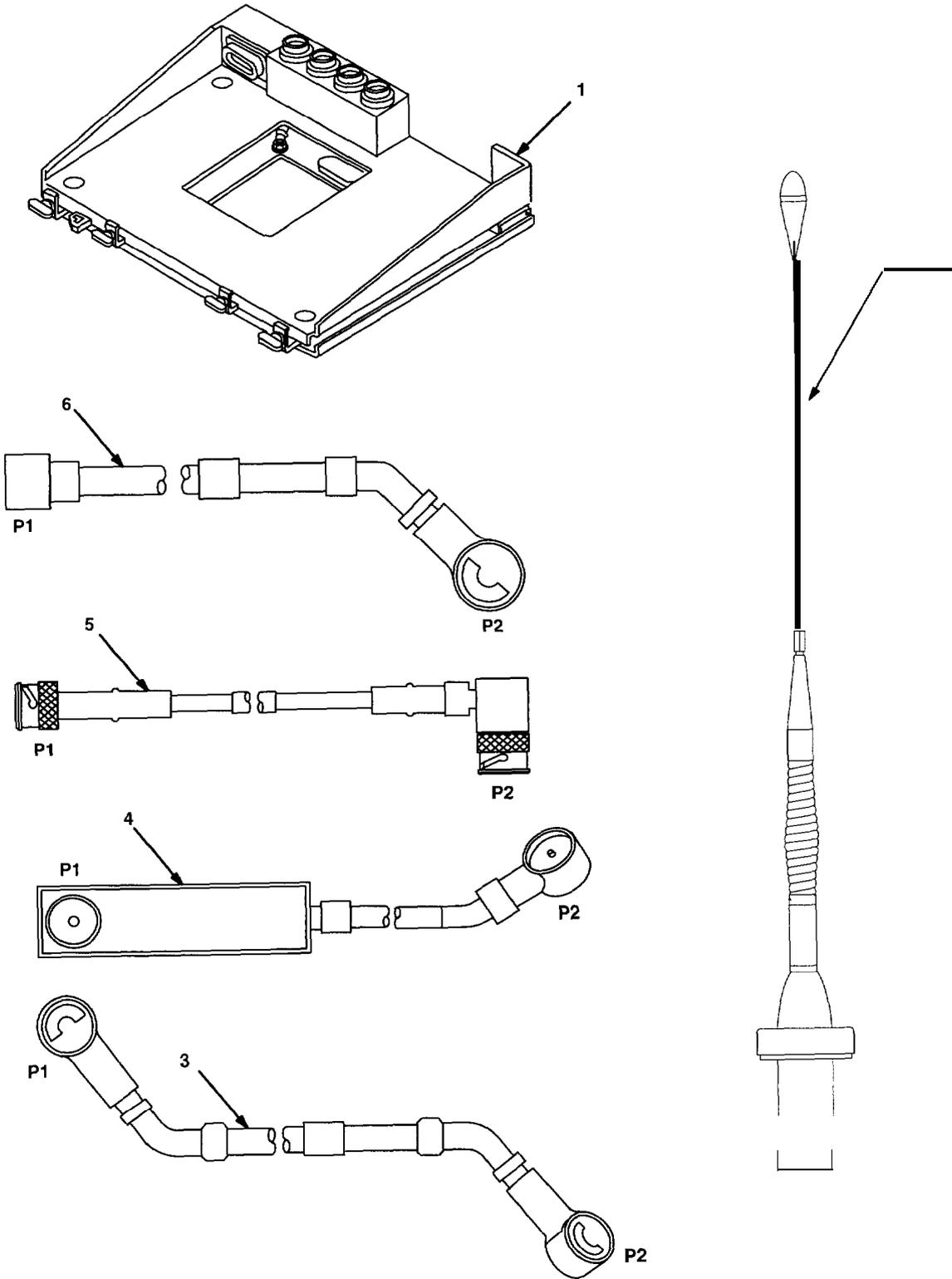


Figure 4-1. MK Illustrated Parts List

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	1	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)	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

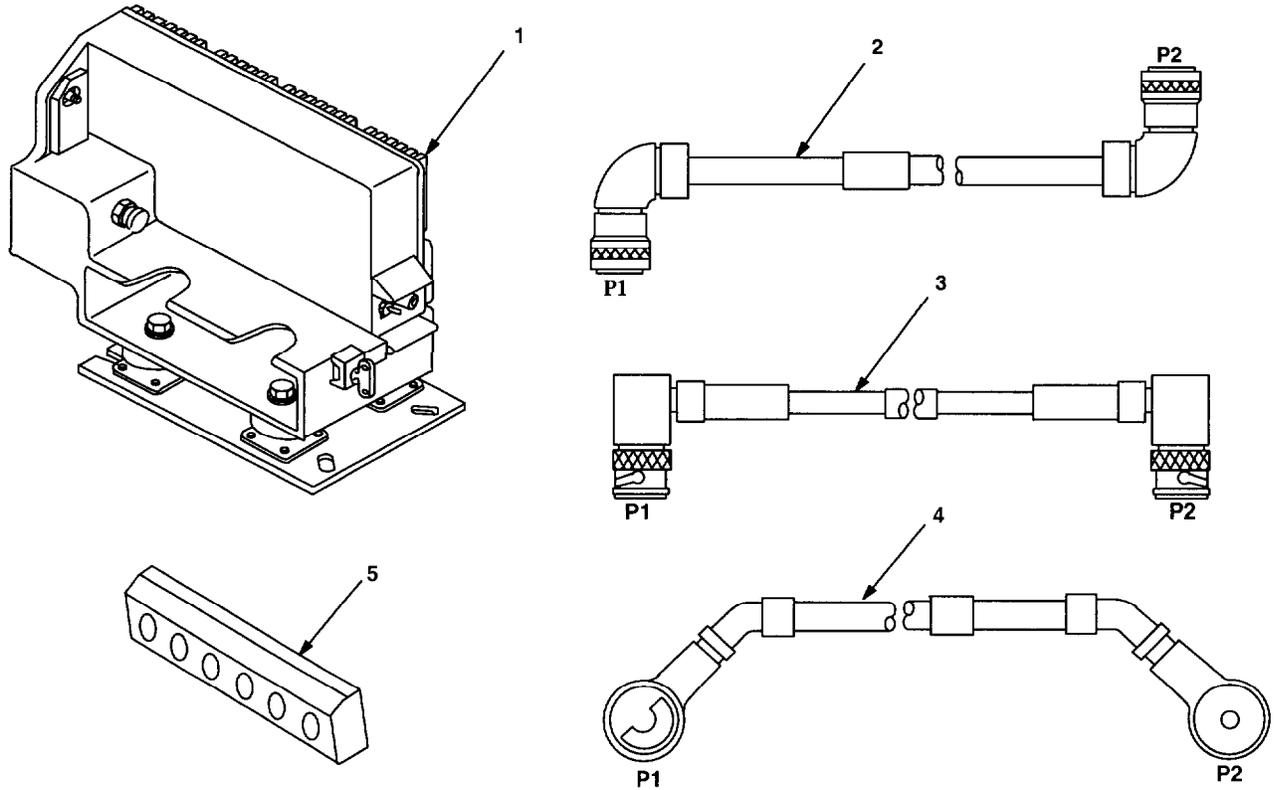


Figure 4-2. Illustrated Parts List for Table 4-2

4.3.3 Consumable Materials. The table below lists materials required for installation but not 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:		
7/16 in	5120-00-228-9505	1
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:		
7/16 in	5120-00-227-6703	1
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

* 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 and 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 5.4 for instructions to install MT-6353/VRC mounting base.

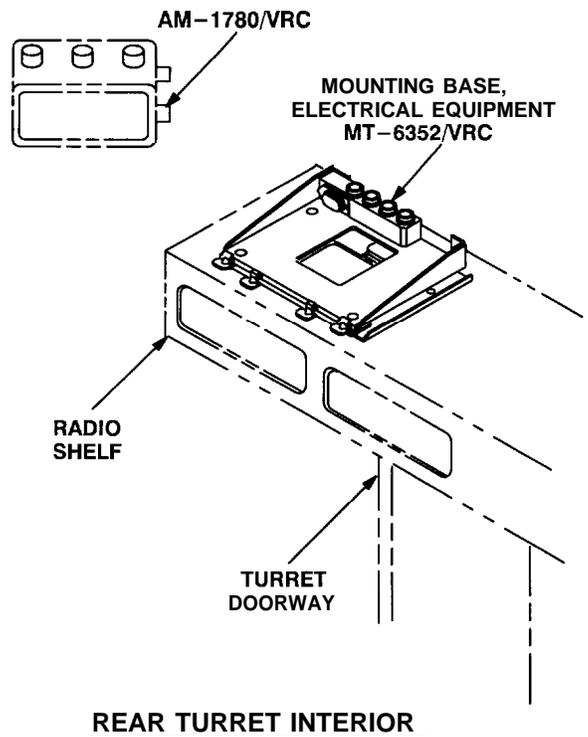
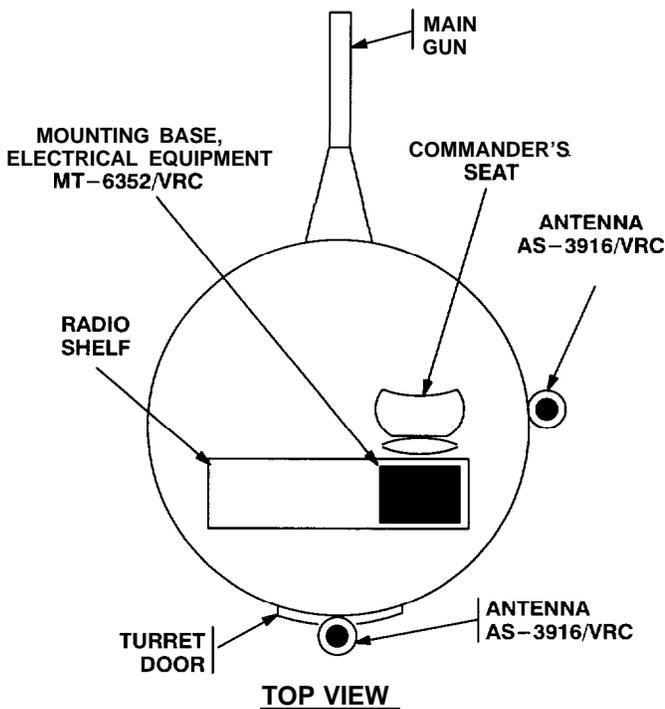
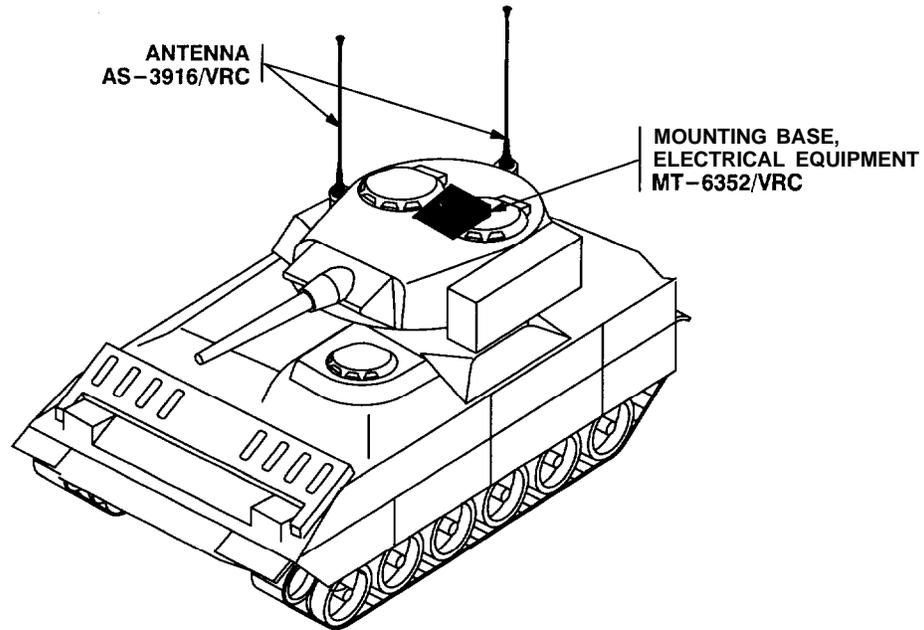
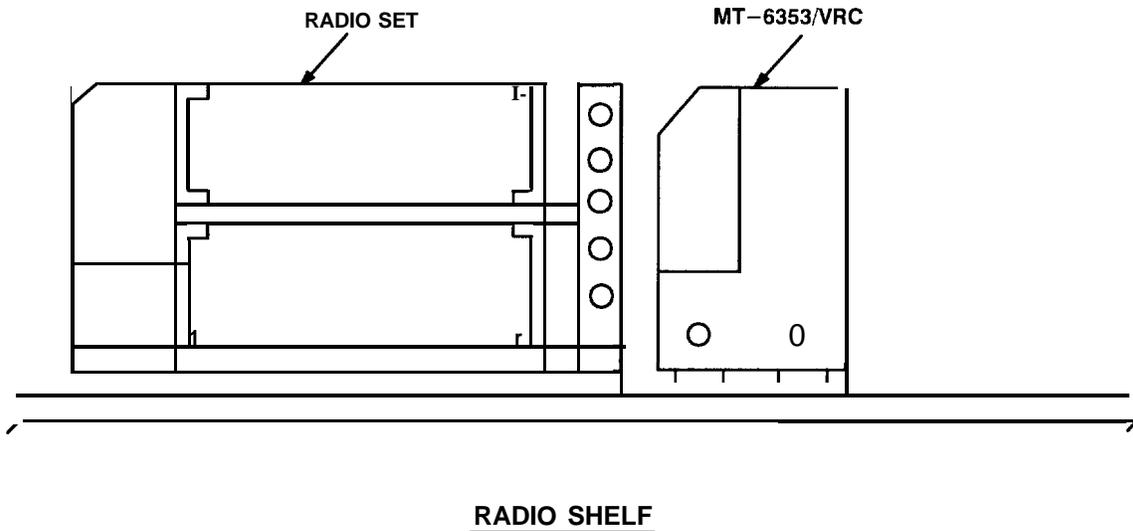


Figure 5-1 (1). MK and Radio Installation: MK Equipment Locations

5. INSTALLATION PROCEDURES. Continued

INSTALLATION
FOR
AN/VRC-89/91/92



INSTALLATION
FOR
AN/VRC-87/88/90

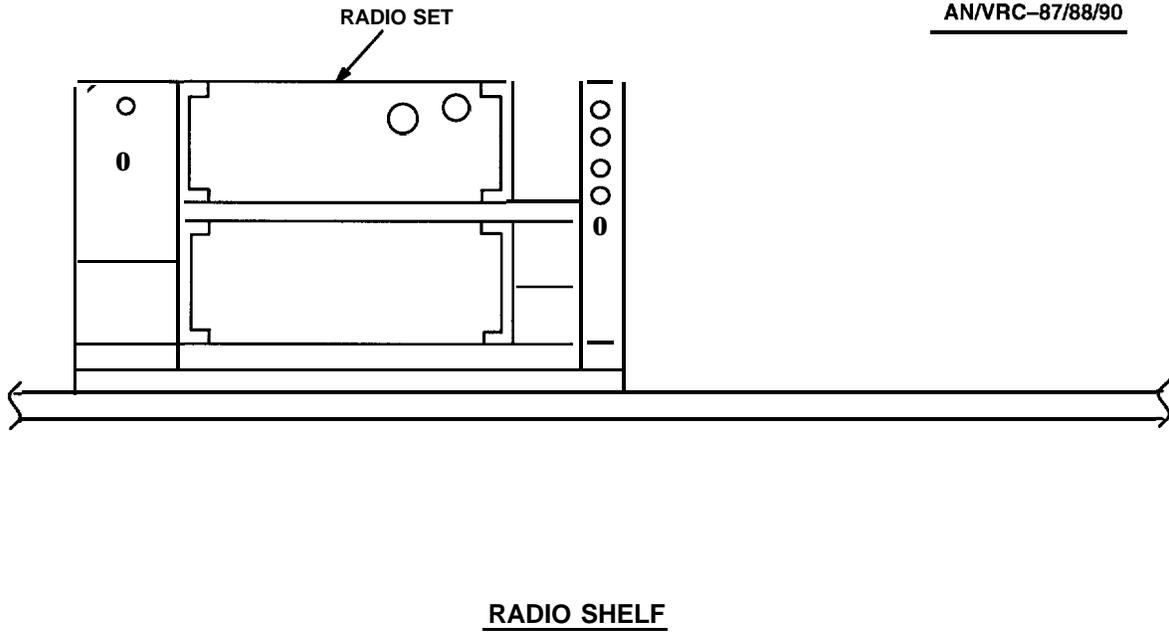
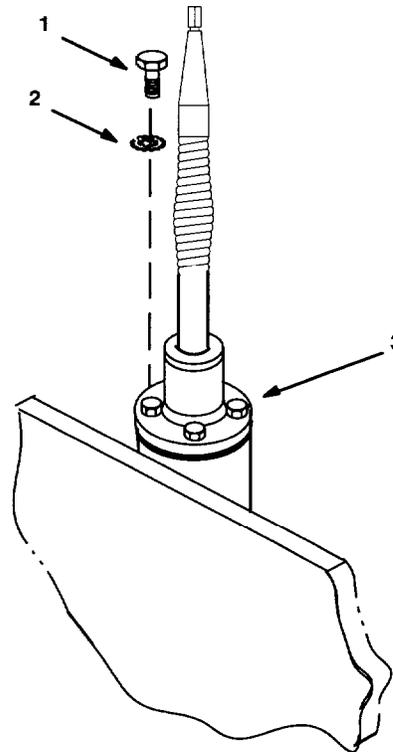


Figure 5-1(2). MK and Radio Installation: Radio Equipment Locations

5.1 Installation of Antenna, Vehicular, AS–3916/VRC (antenna).

5.1.1 Installation of Antenna Base. Use the following procedures to install both antenna bases. See Figure 5–1(1) for locations. Remove ground strap from antenna base(s).

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. Existing antenna bracket	Remove the paint (1" strip) for 360° centered around the four mounting holes. Clean the paint removed area and apply a thin coat of conductive anti-seize compound (CASC)	Tools: Electric grinder or equivalent.
b. Antenna base (3).	Place on top of antenna port; then align mounting holes.	
c. Four cap screws (1) and four internal/external-toothed (IET) washers (2).	Install and secure to antenna base (3) and antenna port.	Tools: 9/16 in socket.
d. Antenna base (3) and antenna port.	Apply a bead of adhesive-sealant/silicon compound 360° around the seam between antenna base (3) and antenna port.	



- 1. CAP SCREW (3/8–16 x 1 3/4 in)
- 2. IET WASHER (3/8 in)
- 3. ANTENNA BASE

Figure 5–2. Antenna Base Installation

5.1.2 Installation of Top Antenna Assembly. The top portion of the antenna consists of one element (with installed cap). Use the following procedure to install and tie down antenna.

ITEM	ACTION	REMARKS
a. Antenna element (1).	Install and secure to antenna base.(2)	
b. Wire rope assembly (3).	Attach clip to antenna element (1). Tie rope to vehicle to position antenna in desired location. See Figure 5-3, Detail A.	

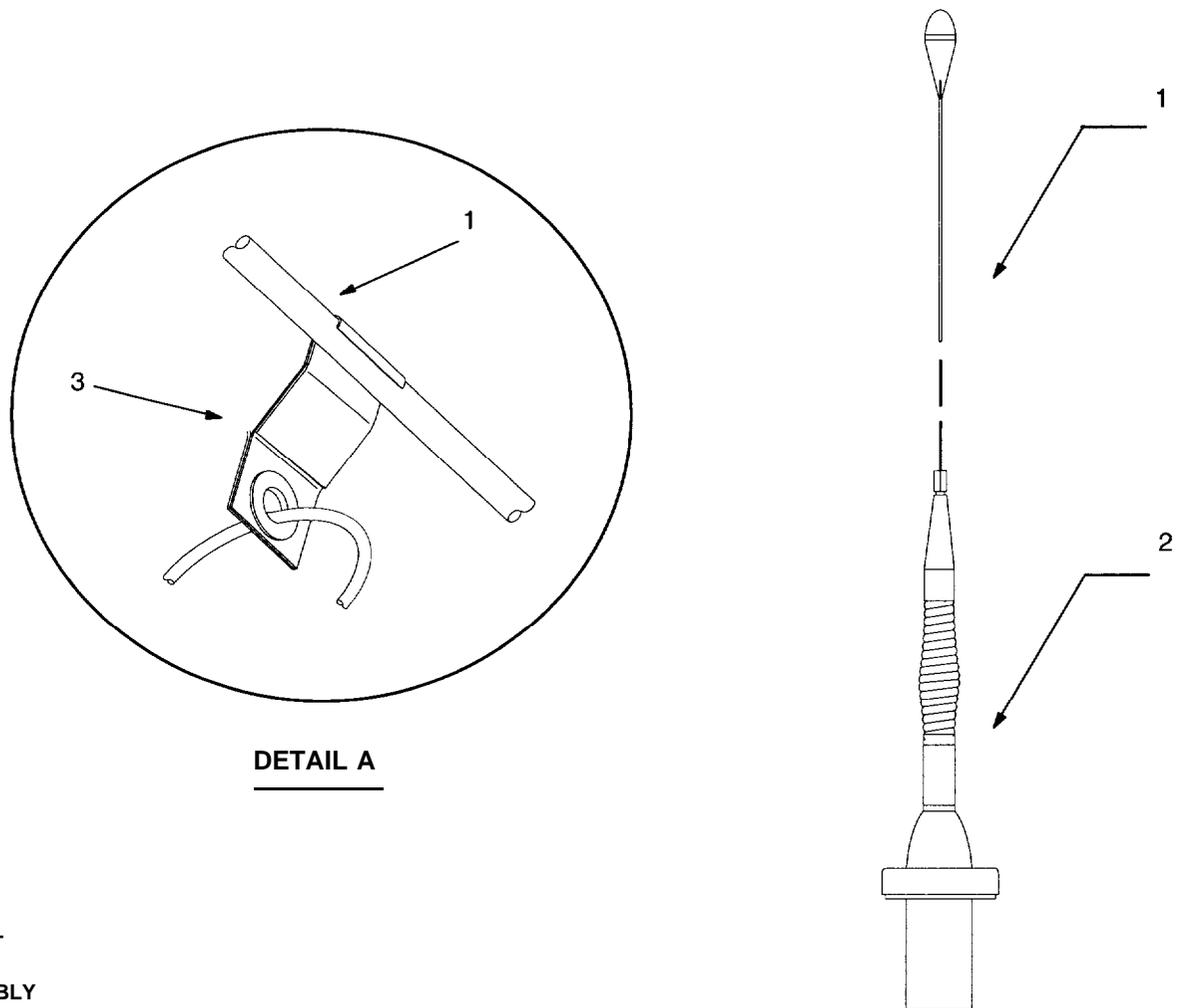


Figure 5-3. Top Antenna Assembly Installation

5–2 Installation of Mounting Base, Electrical Equipment MT–6352/VRC (mounting base). Remove and retain attaching bag of 5/16 mounting hardware. To insure good electrical grounding, any rust, corrosion or paint around mounting holes in radio shelf should be removed before installing the mounting base. See figure 5–1(1) for location; then see Figure 5–4 and perform the following steps.

ITEM	ACTION	REMARKS
NOTE		
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 the paint removed areas and apply a thin coat of CASC.	Tools: Electric grinder or equivalent.
b. Mounting base (1).	Place on existing radio shelf over existing holes. See Figure 5–4.	
c. Two outer thumbscrews (4).	Turn ccw until both sets of threads have cleared center of holes.	
d. Mounting base (1).	Align four holes and rear slot with matching hole pattern in radio shelf.	
e. Five machine bolts (6), ten internal/external-toothed (IET) washers (3) and five nuts (2).	Install and secure to mounting base (1) and radio 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).	

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

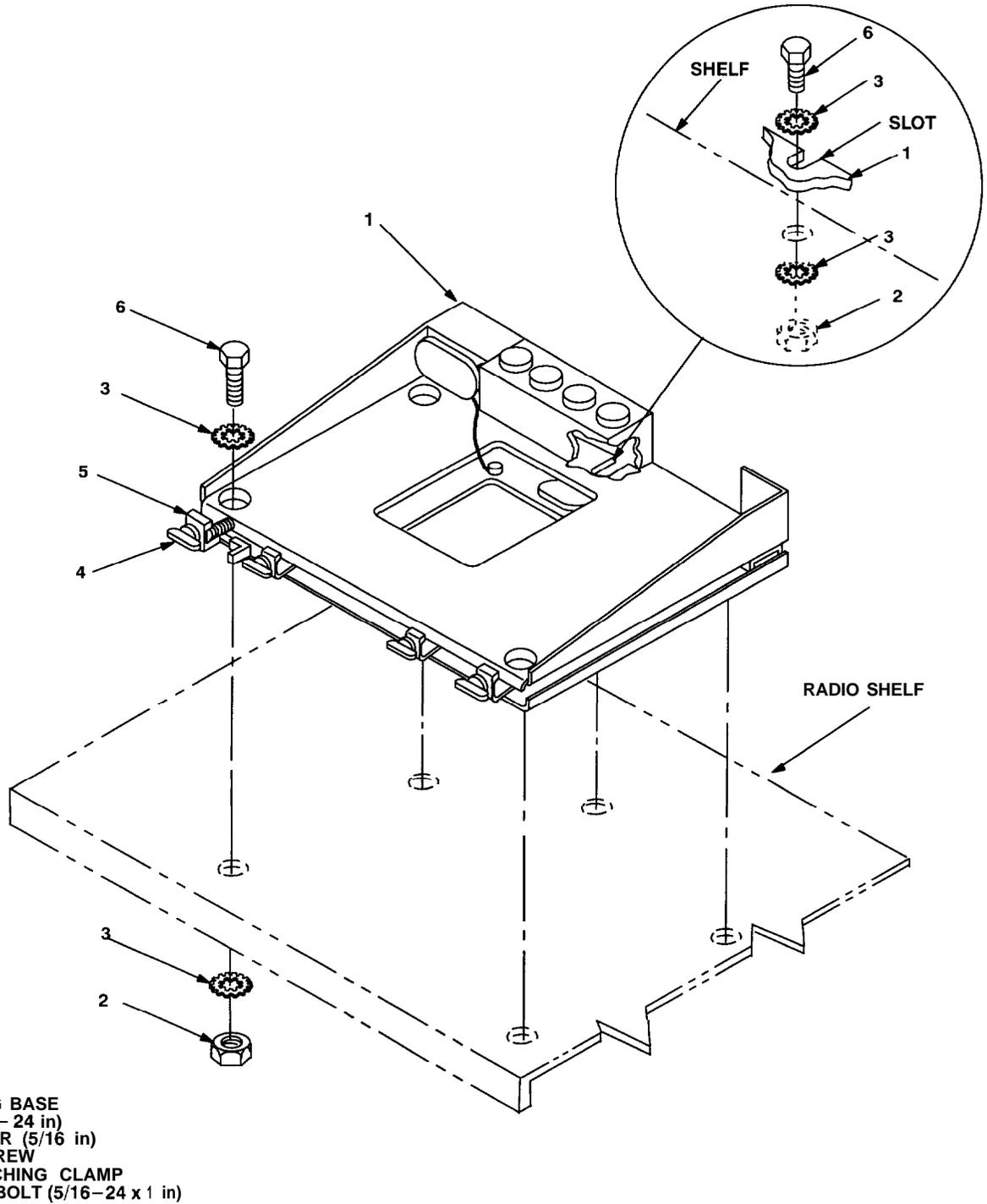


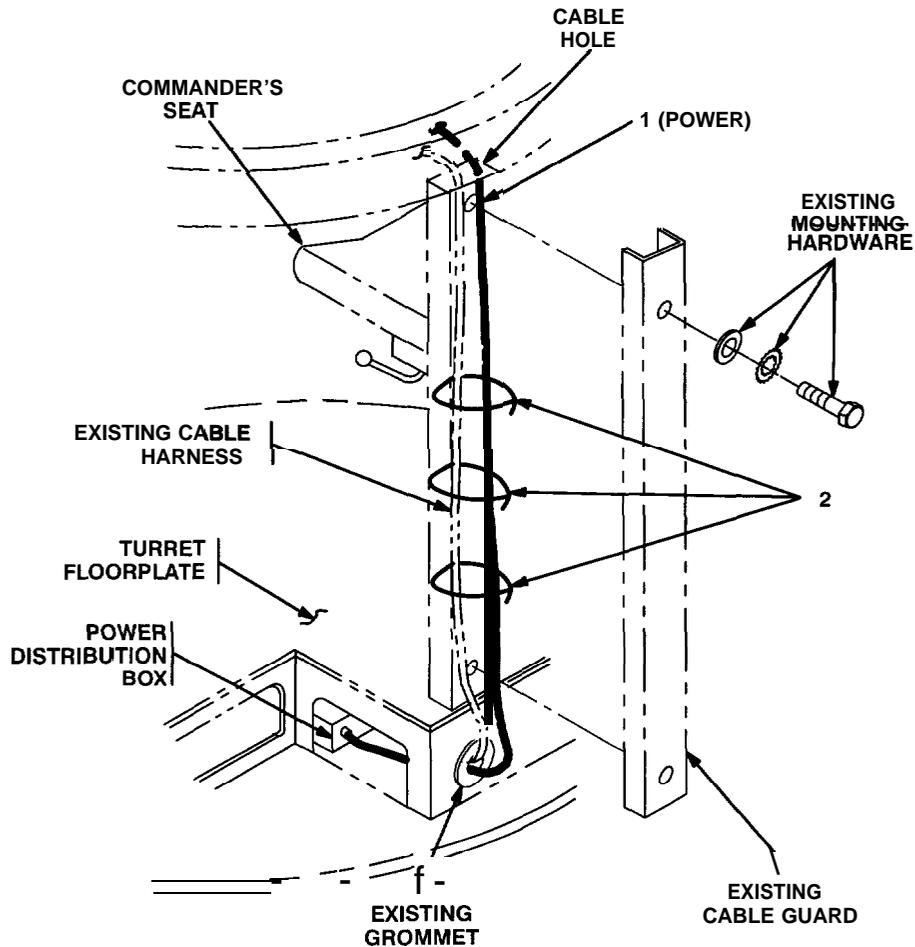
Figure 5-4. Mounting Base Installation

5.3 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 all clamps, clips and tiedown straps.

WARNING

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

ITEM	ACTION	REMARKS
a. Existing cable guard and mounting hardware.	Temporarily remove. See figures 5-5 (1).	
b. Power cable (1) connector P1.	Insert through existing grommet at bottom of turret, below floorplate; then connect and secure to power distribution box connector J2.	



- 1. POWER CABLE, CX-13306/VRC (8 FT, 0 IN)
- 2. TIEDOWN STRAP

Figure 5-5 (1). Cable Installation: Turret Doorway

5.3 Installation of Cables. Continued

ITEM	ACTION	REMARKS
c. Power cable (1)	Route up turret wall along existing cable harness; then insert connector P2 through cable hole and position on lower level of radio shelf (behind commander's backrest). See figures 5–5 (1) and 5–5 (2).	
d. Commander's backrest and existing mounting hardware.	Temporarily remove from front of radio shelf. See figure 5–5 (2).	
e. Power cable (1) connector P2.	Position on top of mounting base (13).	
f. Existing loop clamp and mounting hardware (on lower level of radio shelf, behind commander's seat).	Wrap clamp around power cable (1); then reinstall to existing boss. See figure 5–5 (2) for location.	
g. Three tiedown straps (2).	Install loosely around power cable (1) and existing cable harness. See figure 5–5 (1) for locations.	
h. RF cable (11) connector P1.	Connect and secure to antenna base (12) connector J1. See Figure 5–5(2).	
i. RF cable (11).	Route down and across rear turret wall to radio shelf.	
j. RF cable (11) connector P2.	Position on top of mounting base (13).	
k. RF cable (3) connector P1.	Connect and secure to antenna base (2) connector J1.	
l. RF cable (3).	Route across wall towards rear of turret; then temporarily position across top of AM–1780/VRC.	
m. RF cable (11, 3), two loop clamp (1), two cap screws (2) and two washers (3).	Wrap loop clamp around RF cable (11, 3); then secure loop clamp to existing boss See Figure 5–5 (2) and 5–5 (3).	Tools: 7/16 in socket.
n. Two loop clamps (5), one loop clamp (4), three pan-head machine screws (no. 10–24 x 1/2 in) and three lock washers (no 10)	Wrap clamps around RF cable (3); then install to existing bosses on turret wall. See Figure 5–5 (2) for locations.	i Tools: Phillips screwdriver
o. Two loop clamps (7) two cap screws (1/4–20 x 1/2 in) and two lock washers (1/4 in)	Wrap clamps around RF cable (3); then install to existing bosses on turret wall. See Figure 5–5 (2) for locations.	Tools: 7/16 in socket.

5.4 Installation of Cables. Continued

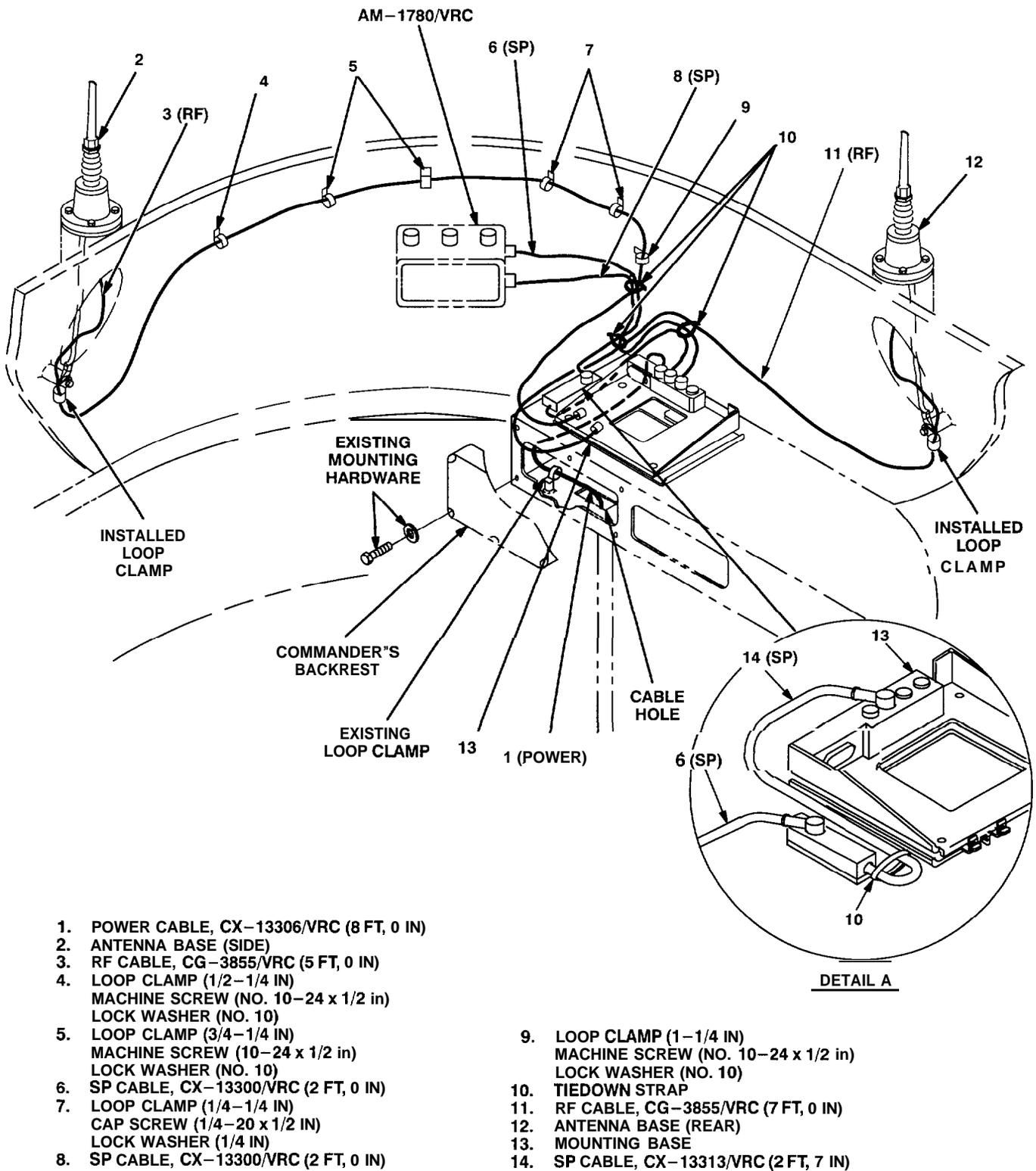


Figure 5-5 (2). Cable Installation: Turret Interior

5.4 Installation of Cables. Continued

ITEM	ACTION	REMARKS
p. RF cable (3) connector P2.	Position on top of mounting base (13).	
q. Loop clamp (9), pan-head machine screw (no. 10–24 x 1/2 in) and lock washer (no. 10)	Wrap around RF cable (3); then install to existing boss on turret wall. See Figure 5–5 (2).	Tools: Phillips screwdriver
r. SP cable (8) connector P1.	Connect and secure to AM – 1780/VRC connector J503. See Figure 5–5 (2).	
s. SP cable (8) connector P2.	Connect and secure to mounting base (13) connector J4.	
t. SP cable (6) connector P1.	Connect and secure to AM – 1780/VRC connector J501. See Figure 5–5 (2).	
u. SP cable (6) connector P2.	Connect and secure to SP cable (14) connector P1. See Figure 5–5(2) Detail A.	
v. SP cable (14) connector P2.	Connect and secure to mounting base (13) connector J3.	
w. SP cable (14).	Position on left side of mounting base (13); then secure with tiedown strap (1).	
x. Tiedown strap (10).	Install loosely around RF cable (3) and SP cables (6, 8). See figure 5–5 (2) for location.	
y. Tiedown strap (10).	Install loosely around RF cable (11) and SP cables (8,14).	
z. Tiedown strap (10).	Install loosely around SP cables (6, 8) and RF cable (11).	
aa. All previously installed tiedown straps.	Adjust cable slack, then tightly secure.	
ab. Existing cable guard and mounting hardware (removed in step a).	Reinstall and secure over power cable (1) and existing cable harness. See figure 5–5 (1).	
ac. Commander's backrest and existing mounting hardware (removed in step d).	Reinstall. See figure 5–5 (2).	
ad. Power cable (1) connector P2.	Connect and secure to mounting base (13) connector J1.	

5.4 Installation of Cables. Continued

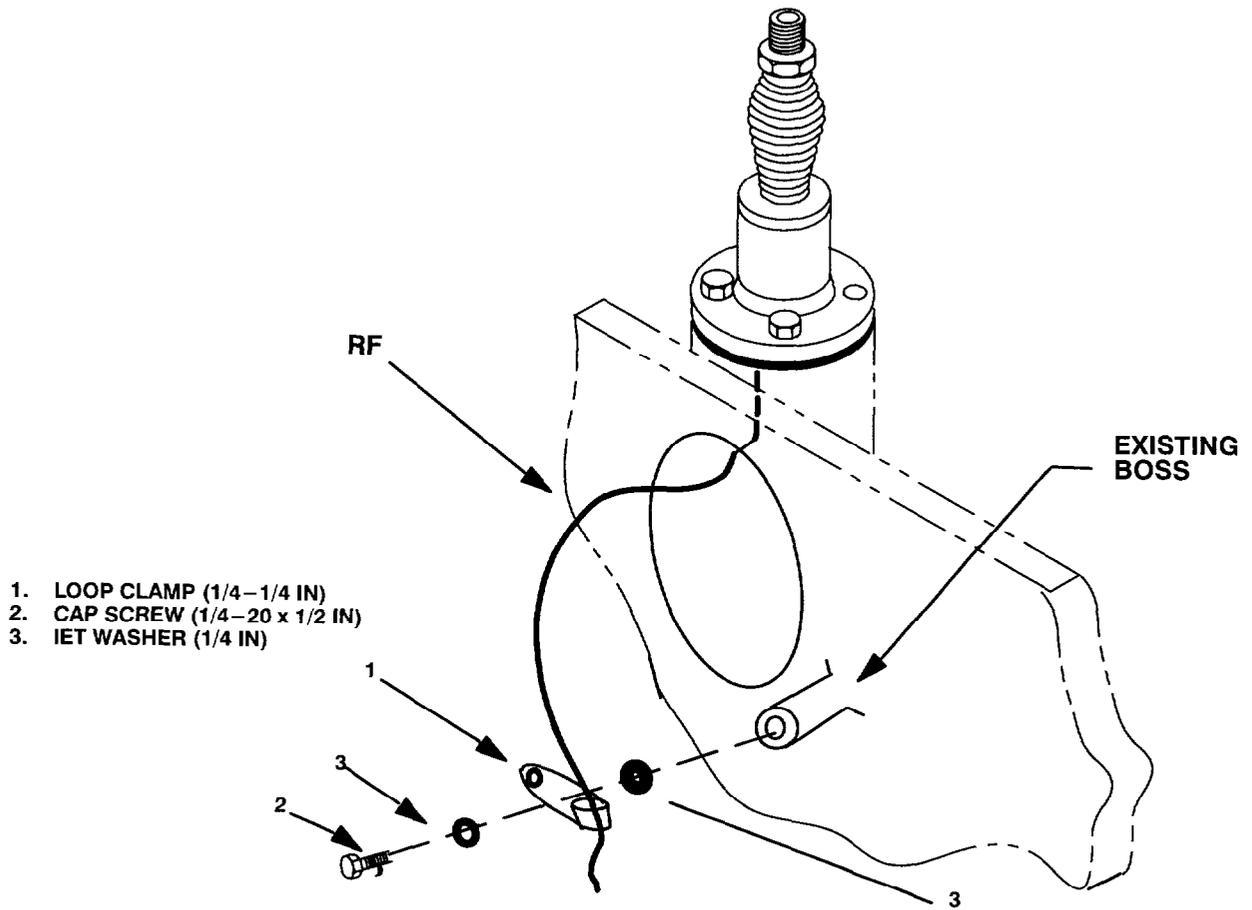


Figure 5-5 (3). Cable Installation: Loop Clamp Installation

5.4 Installation of Mounting Base, Electrical Equipment MT-6353/VRC. Use the following instructions to install MT-6353/VRC mounting base. Refer to Section 5.5 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 5.5, step b)

a. MT-6353/VRC mounting	Place MT-6353/VRC mounting base (1) on radio shelf to right of the MT-6352/VRC mounting base. Align the center of the front mounting holes 2 1/2 inches from the front of the radio shelf. Align the center of the left front mounting hole 13 inches from the center of the right front mounting hole of the MT-6352/VRC mounting base (1) as a template to mark the four mounting holes to be drilled.	
b. MT-6353/VRC mounting base (1).	Temporarily remove and drill the four mounting holes.	Tools: Electril drill and 11/32 inch drill bit.
c. 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 drilled in step b. Clean the paint removed areas and apply a thin coat of CASC.	Tools: Electric grinder or equivalent.
d. MT-6353/VRC mounting base (1).	Placea on radio shelf over holes drilled in . step b. See Figure 5-6.	
e. MT-6353/VRC mounting base (1)	Align front holes and rear slots with matching hole pattern in radio shelf. See Figure 5-6.	
f. Two machine bolts (2), two IET washers (3) and nut strip (5).	Install and secure to rear slots in in MT-6353/VRC mounting base (1) and radio shelf.	Tools: 1/2 in socket.
g. Two machine bolts (2), four IET washers (3) and two nuts (4).	Install and secure to front holes in MT-6353/VRC mounting base (1) and 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

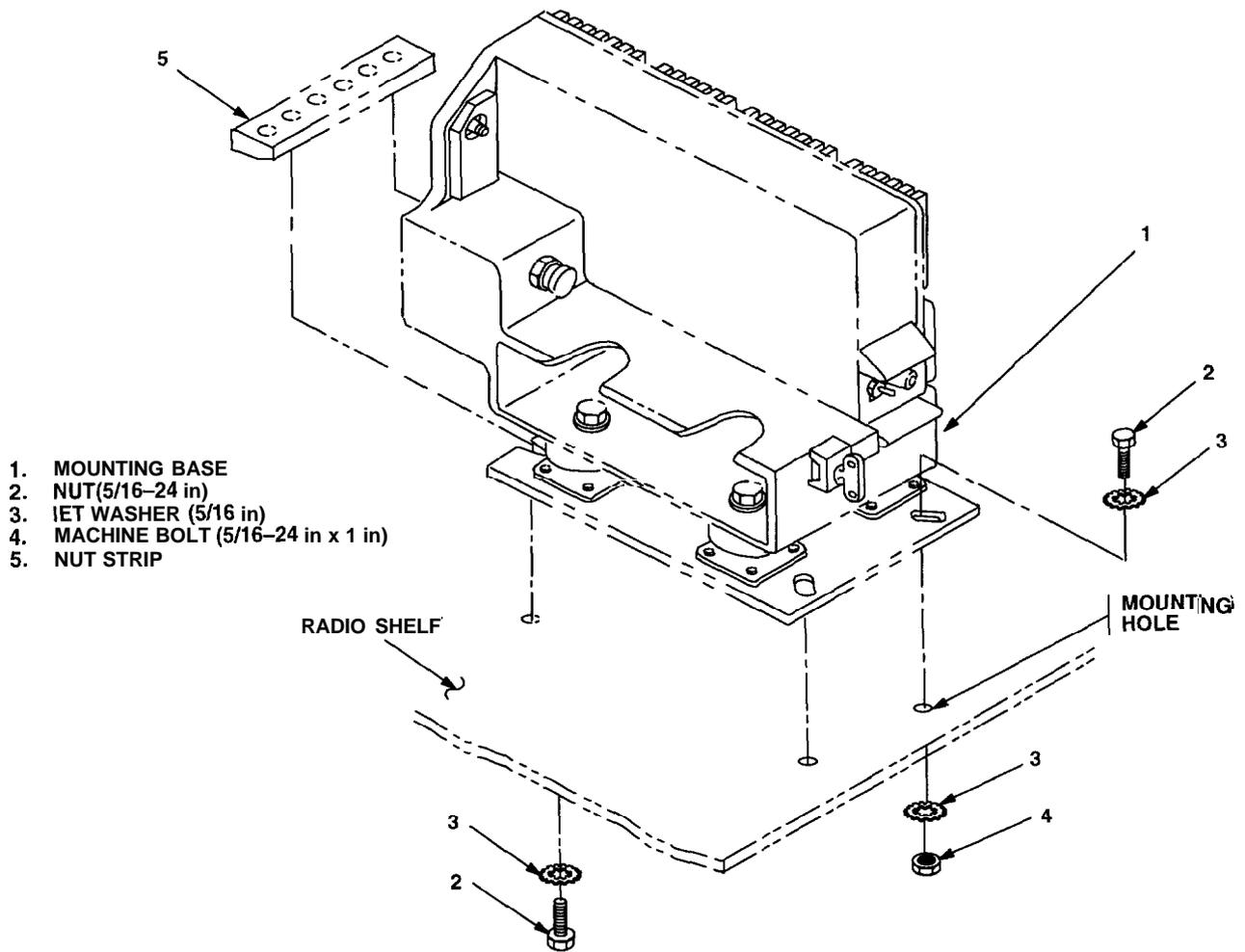


Figure 5-6. MT-6353/VRC Mounting Base Installation

5.5 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 5-7 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.	

5.5 Post-Installation and Checkout. Continued

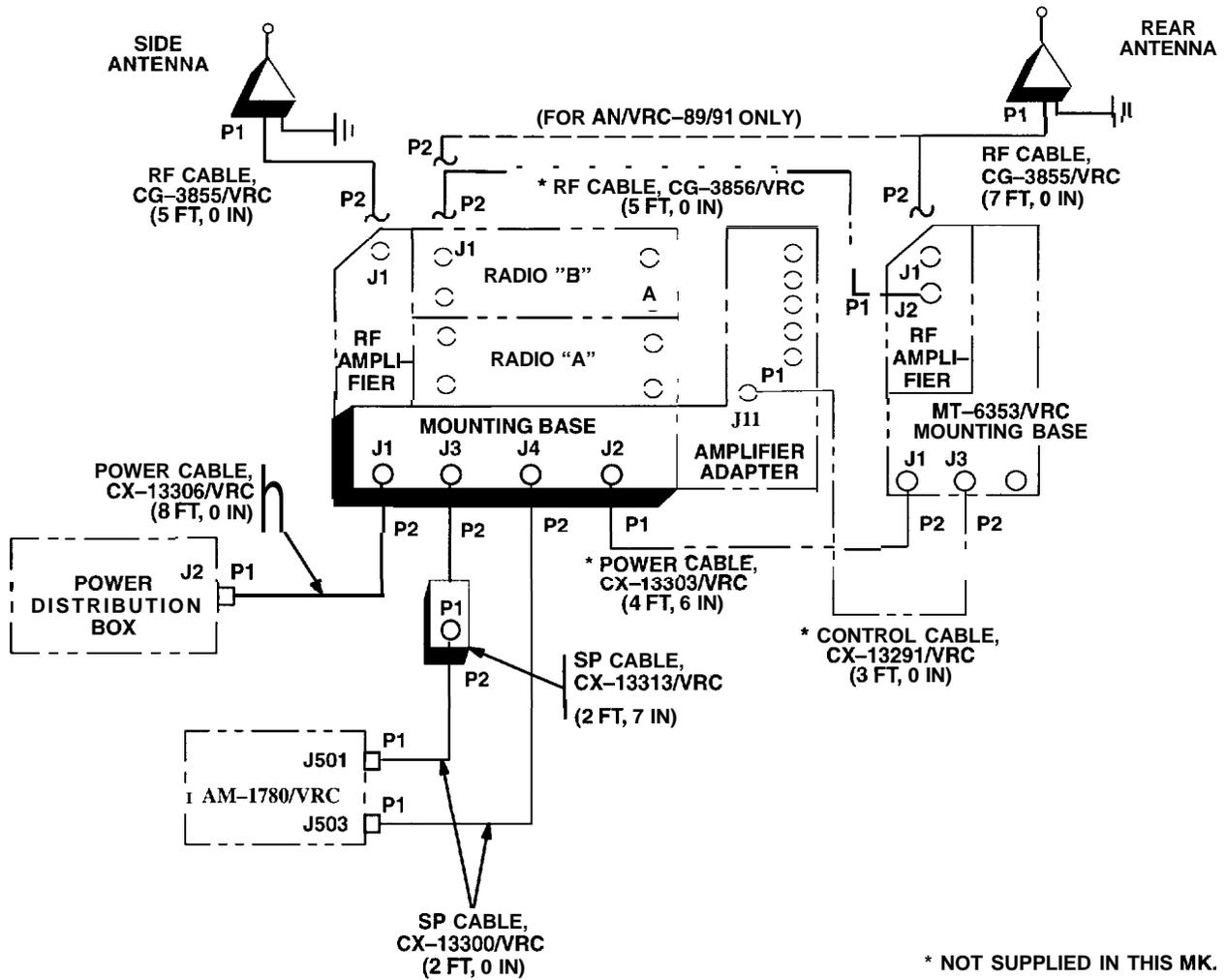


Figure 5-7. Cable Diagram: For AN/VRC-87/88/90 Series or AN/VRC-89/91/92 Series.

5.5 Post-Installation and Checkout. Continued

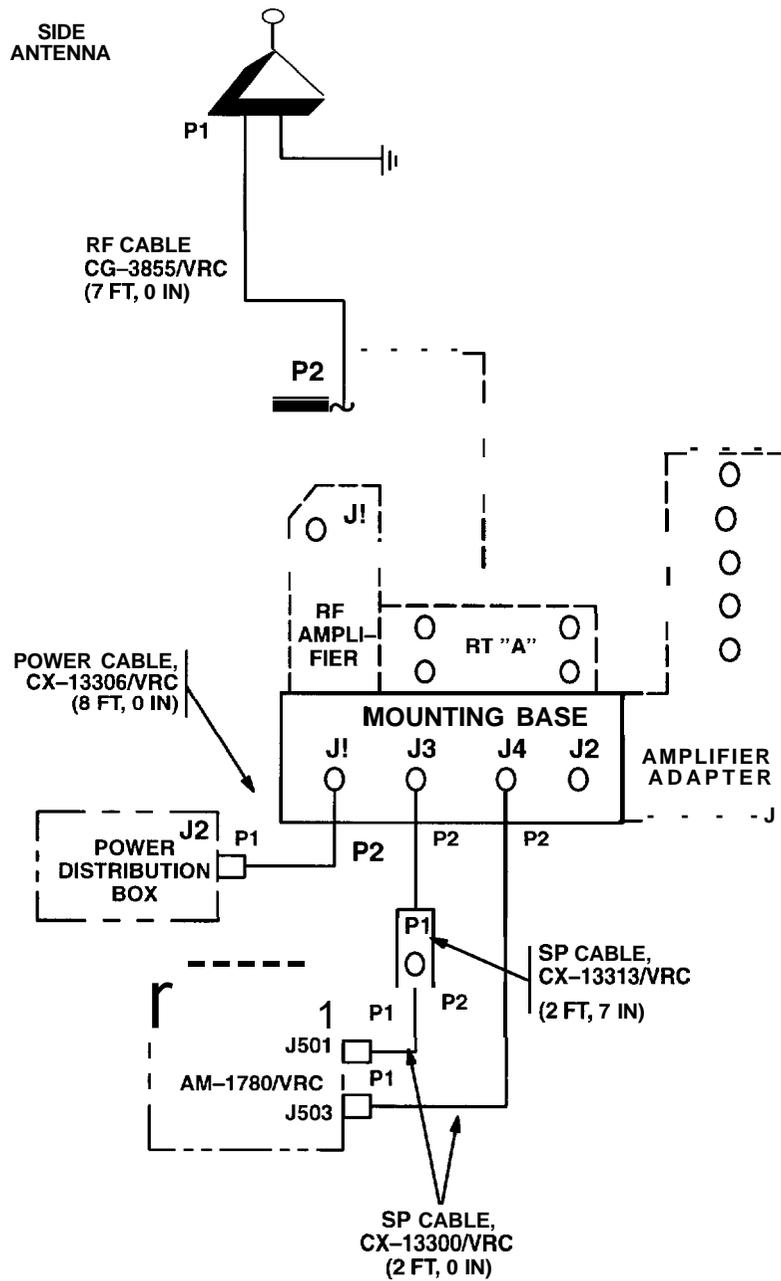


Figure 5-7. Cable Diagram: For AN/VRC-87/88/90 Series or AN/VRC-89/91/92 Series. Continued

5.5 Post-Installation and Checkout. Continued

CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CX-13306/VRC (8 FT, 0 IN)	P2	Mounting base	J1	P1	Power distribution box	J2
CG-3855/VRC (5 FT, 0 IN)	P2	RF amplifier	J1	P1	Side antenna base	J1
CG-3855/VRC (7 FT, 0 IN)	P2	RT "B"	J1	P1	Rear antenna base	J1
CX-13313/VRC (2 FT, 7 IN)	P2	Mounting Base	J3	P1	CX-1300/VRC (2 FT, 0 IN)	P2
CX-13300/VRC (2 FT, 0 IN)	P2	CX-13313/VRC (2 FT, 7 IN)	P1	P1	AM-I 780/VRC	J501
CX-13300/VRC (2 FT, 0 IN)	P2	Mounting Base	J4	P1	AM-I 780/VRC	J503
*CX-13291/VRC (3 FT, 0 ON)	P1	Amplifier-adapter	J11	P2	MT-6353/VRC Mounting Base	J3
*CG-3855/VRC (5 FT, 0 ON)	P2	Radio "B"	J1	P1	RF Amplifier MT-6353/VRC	J2
*CX-13303/VRC (4 FT, 6 IN)	P1	Mounting Base	J2	P2	MT-6353/VRC Mounting Base	J1

* Not supplied in this MK.

Figure 5-7. Cable Diagram: For AN/VRC-87/88/90 Series or AN/VRC-89/91/92 Series. Continued

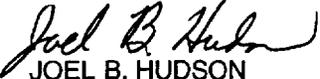
APPENDIX A

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 (SINGARS)
TM 11-5820-890-1 O-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

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		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 wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing stress to the drive train. Hunting is minimized by adjusting the lag to 20 without degradation of operation.

Item 5, Functional Test. Change $\square 2$ dB" to $\square 3$ dB".

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

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

REASON: To replace the cover plate.

Zone C 3. On J1-2, change $\square +24$ VDC" to $\square +5$ VDC".

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

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