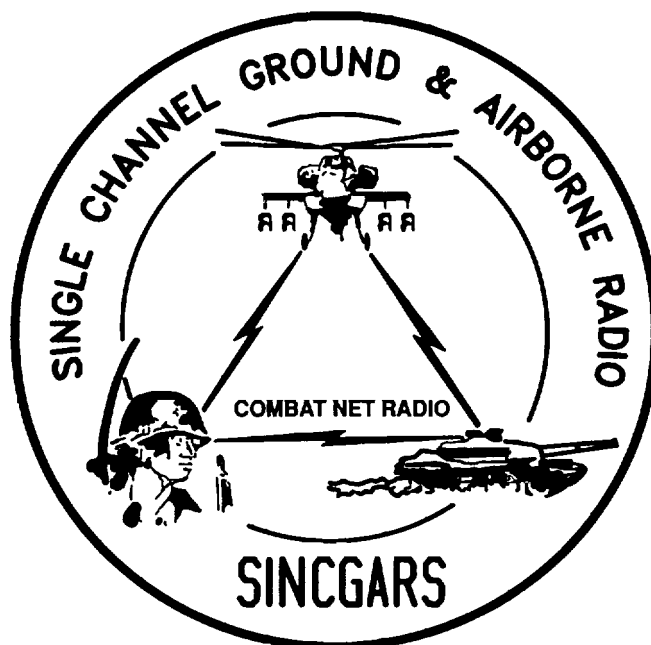**TECHNICAL BULLETIN**

**INSTALLATION INSTRUCTIONS FOR
INSTALLATION KIT,
ELECTRONIC EQUIPMENT, MK-2330/VRC
(NSN 5895-01-285-2347) (EIC: N/A)
TO PERMIT INSTALLATION OF
RADIO SET AN/VRC-89/91/92 SERIES
INTO
FIRE DIRECTION CENTER, ARTILLERY:
OA-8389/GSG-10(V) AND OA-8390/GSG-10(V)**

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

1 SEPTEMBER 1993

TECHNICAL BULLETIN

NO. 11-820-890-20-32

**INSTALLATION INSTRUCTIONS FOR
INSTALLATION KIT,
ELECTRONIC EQUIPMENT MK-2330/VRC
(NSN 5895-01 -285-2347) (EIC: N/A)
TO PERMIT INSTALLATION OF RADIO SET
AN/VRC-89/91/92 SERIES
INTO
FIRE DIRECTION CENTER, ARTILLERY:
OA-389/GSG-10(V) AND OA-390/GSG-10(V)**

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 Form 2028-2 located in the back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-ME-PS, Fort Monmouth, New Jersey 07703-5007.

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

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LIST OF TABLES

0.1   SCOPE.

This technical bulletin provides Installation Instructions for Installation Kit, Electronic Equipment, MK-2330NRC, commonly referred to as the Mounting Kit (MK). The MK shall be installed into the following type of shelter(s):

- Fire Direction Center, Artillery OA-8389/GSG-10(V)

- Fire Direction Center, Artillery OA-8390/GSG-10(V)

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 shelters.

- This technical bulletin does not establish quantity or types of shelters 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, TM 11-5820-890-20-4 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 shelter 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 are:

- Radio Set AN/VRC-89/91/92 (for RT-1439/VRC)

- Radio Set AN/VRC-89A/91A/92A (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-2330NRC (MK) contains the items needed to mount Radio Set AN/VRC-89A/91A/92A in a Fire Direction Center, Artillery: OA-8389/GSG-10(V) and OA-8390/GSG-10(V) (shelter). If Radio Set AN/VRC-89/91/92 is to be installed, communications security equipment (TSEC/KY-57) will need to be installed also; see section 5.4 for information. If Radio Set AN/VRC-92 or AN/VRC-92A 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 one person, a total of 3.5 work hours is required. Typical shelter 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 shelter downtime.

ITEM	SECTION	TIME
Antenna AS-3900NRC	5.1	0.5
Mounting Base, Electrical Equipment MT-6352NRC	5.2	0.5
Cables	5.3	1.0

4. PREPARATION FOR INSTALLATION.

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

4.1 Preparation of Shelter. To prepare the shelter for installation, insure that the site includes adequate lighting and a power source when drilling is required. Inspect the shelter 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 11-5820401-20-1 (used without intercom systems), and TM 11-7440-241-20.

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 450015.

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. Refer to Table 4-3 and figure 4-3 to identify additional items required to install when using RT-1439/VRC.

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.

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Table 4-1. MK Parts List for Installation of Radio Set AN/VRC-89191192 Series

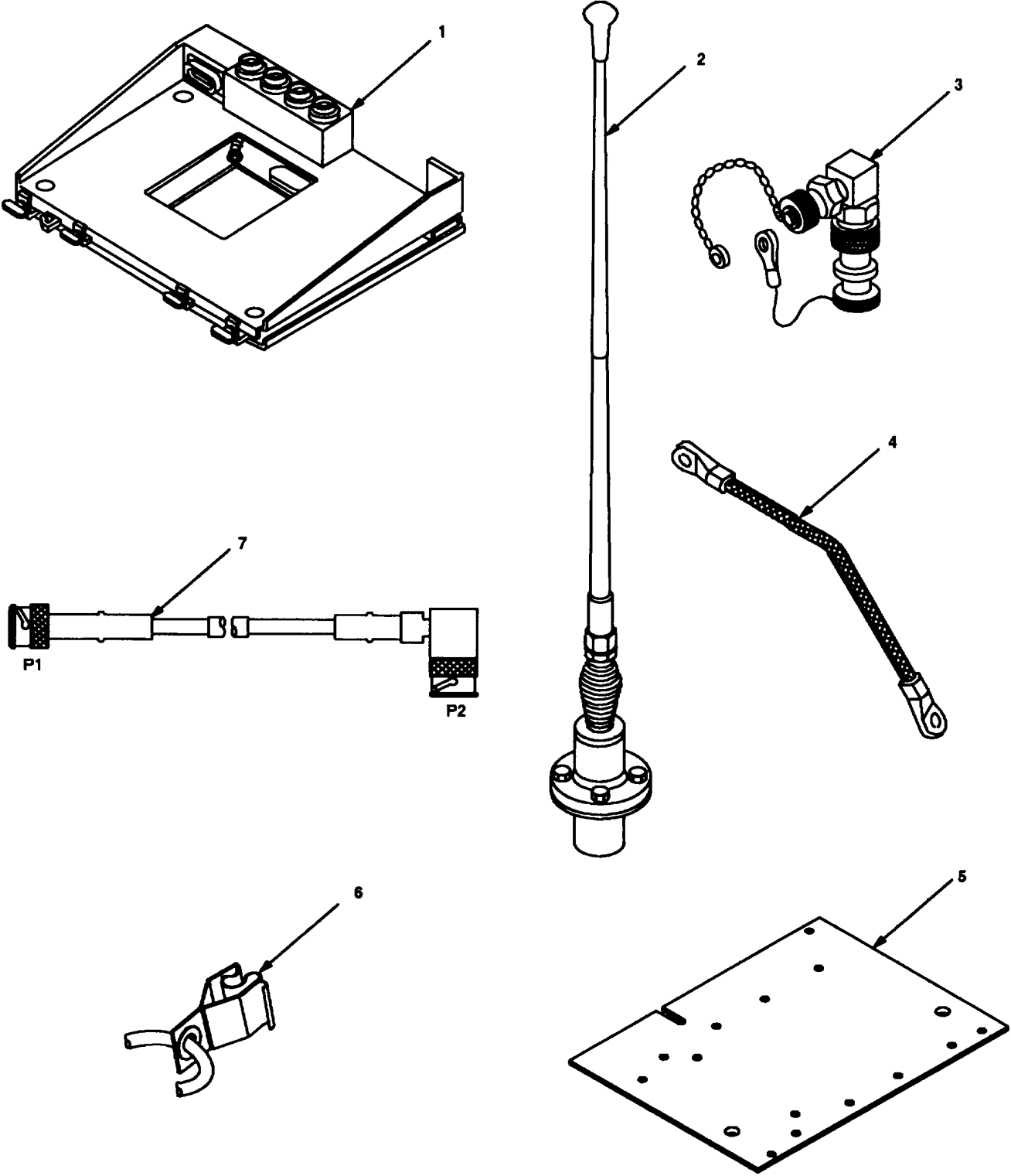| NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5985-01-297-2971	Antenna AS-3900/VRC (A3017899-1)	2	PAOOFA	4-1, 2
5305-00-847-1159	Screw, Cap, Hexagon (3/8-16 x 1 3/4 in) MS35307-365	8	PAOZZA	
5310-00-913-8881	Nut, Hexagon (3/8-16 in) MS51971-3	8	PAOZZA	
5310-00-061-1258	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)	2	PAOZZA	
5975-01-188-8873	Mounting Base, Electrical Equipment MT-6352/VRC (A3013367-1)	1	PAOOFA	4-1, 1
5306-00-225-9089	Bolt, Machine (5/16-24 x 1 in) MS90726-34 (Not Used)	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 (Not Used)	5	PAOZZA	
5995-01-219-7035	Cable Assembly, Radio Frequency CG-3855/VRC (18 FT, 0 IN) (A3014031-8)	1	PAOZZA	4-1, 7
5995-01-225-1659	Cable Assembly, Radio Frequency CG-3855/VRC (2 FT, 0 IN) (A3014031-9)	2	PAOZZA	4-1, 7
5995-01-219-7030	Cable Assembly, Radio Frequency CG-3855/VRC (7 FT, 0 IN) (A3014031-3)	1	PAOZZA	4-1, 7
	Adapter, Antenna OE-254 (A3018320-1)	2	XBOZZA	4-1, 3
5306-00-225-8499	Bolt, Machine (5/16-18 x 1 in) MS90725-34	10	PAOZZA	
4020-01-341-8795	Fiber Rope Assembly, Single Leg (A3167672-1)	2	PAOZZA	4-1, 6
	Lead, Electrical Ground Strap (A3013552-5)	1	XBOZZA	4-1, 4
	Lead, Electrical Ground Strap (A3013552-3)	1	XBOZZA	4-1, 4
	Nut, Sheet Spring (A3018691-1)	10	XBOZZA	
	Plate, Mounting (A3014089-1)	1	XBOZZA	4-1, 5
5305-00-984-7353	Screw, Machine, Flat-Head (5/16-24 x 3/4 in) MS35191-306	4	PAOZZA	
5305-00-146-2524	Screw, Tapping, Hex-Head (1/4-14 x 3/4 in) MS51850-86	1	PAOZZA	
5975-00-111-3208	Strap, Tiedown, Electrical Components MS3367-5-9	20	PAOZZA	
5310-00-889-2528	Washer, Lock, Internal/External-Toothed (1/4 in) MS45904-68	2	PAOZZA	
5310-00-889-2527	Washer, Lock, Internal/External-Toothed (5/16 in) MS45904-72	1	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 (Not Used)	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 (3 Not Used)	6	PAOZZA	
5310-00-081-4219	Washer, Flat (5/16 in) MS27183-12	2	PAOZZA	
	(Not Used) 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
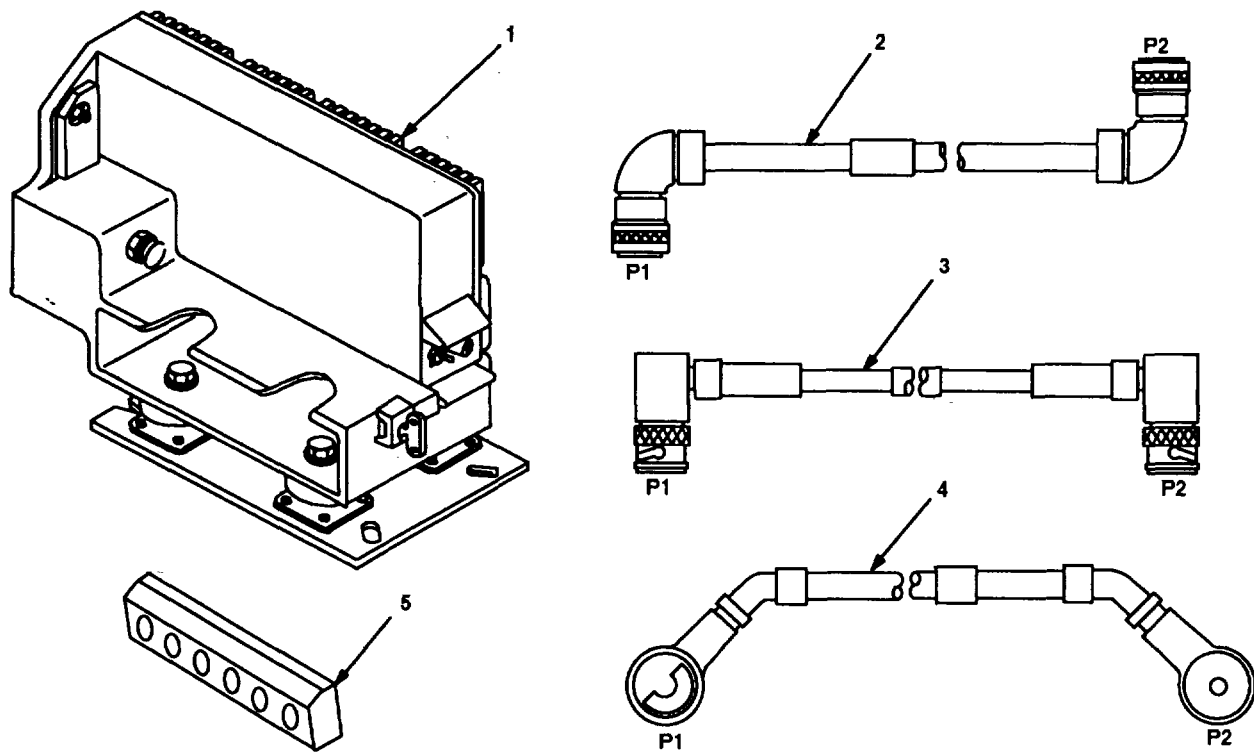
Figure 4-2. Illustrated Parts List for Table 4-2

Table 4-3. Additional Items Required for Installation When Installing RT-1439/VRC

NSN	ITEM DESCRIPTION AND PART NUMBER	QUANTITY IN MK	SMR CODE	FIGURE, ITEM NO.
5995-01-222-4210	Cable Assembly, Special Purpose, Electrical CX-13293/VRC (4 FT, 0 IN) (A3014034-1)	2	PAOZZA	4-3, 1
5995-01-225-1655	Cable Assembly, Power, Electrical CX-13303/VRC (1 FT, 6 IN) (A3014040-6)	1	PAOZZA	4-3, 2
5995-01-226-5482	Cable Assembly, Power, Electrical CX-13303/VRC (2 FT, 6 IN) (A3014040-5)	1	PAOZZA	4-3, 3
5305-00-984-7353	Screw, Machine, Flat-Head (5/16-24 x 3/4 in) MS35191-306	4	PAOZZA	
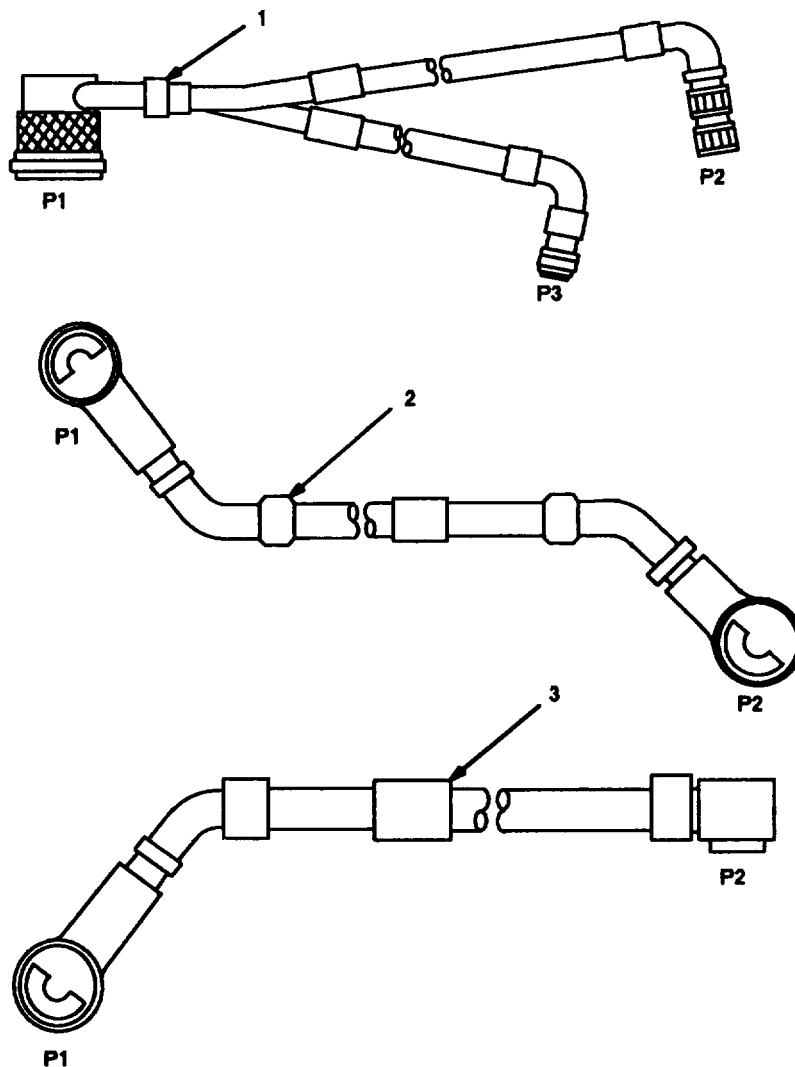
Figure 4-3. TSEC/KY-57 Illustrated Parts List

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

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
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
5/16 in	5120-00-228-9503	1
3/4 in	5120-00-228-9510	1
Handle, Socket Wrench	5120-00-240-5364	1
Socket: 3/8 in	5120-00-227-6702	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 Bits: 21/32 in		1
No. 27 (.144 in)	5133-00-189-9272	1
Size 1 (.228 in)	5133-00-189-9246	1

* Use radio issued with your shelter if available.

5.   INSTALLATION PROCEDURES.

This section describes where and how to install MK items in the shelter. See figure 5-1 for an overall view of where the 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-89/91/92 is to be installed, communications security equipment (TSEC/KY-57) will need to be installed also; see section 5.4 for information. If Radio Set AN/VRC-92 or AN/VRC-92A is authorized, see section 5.5 for instructions to install MT-6353/VRC mounting base.
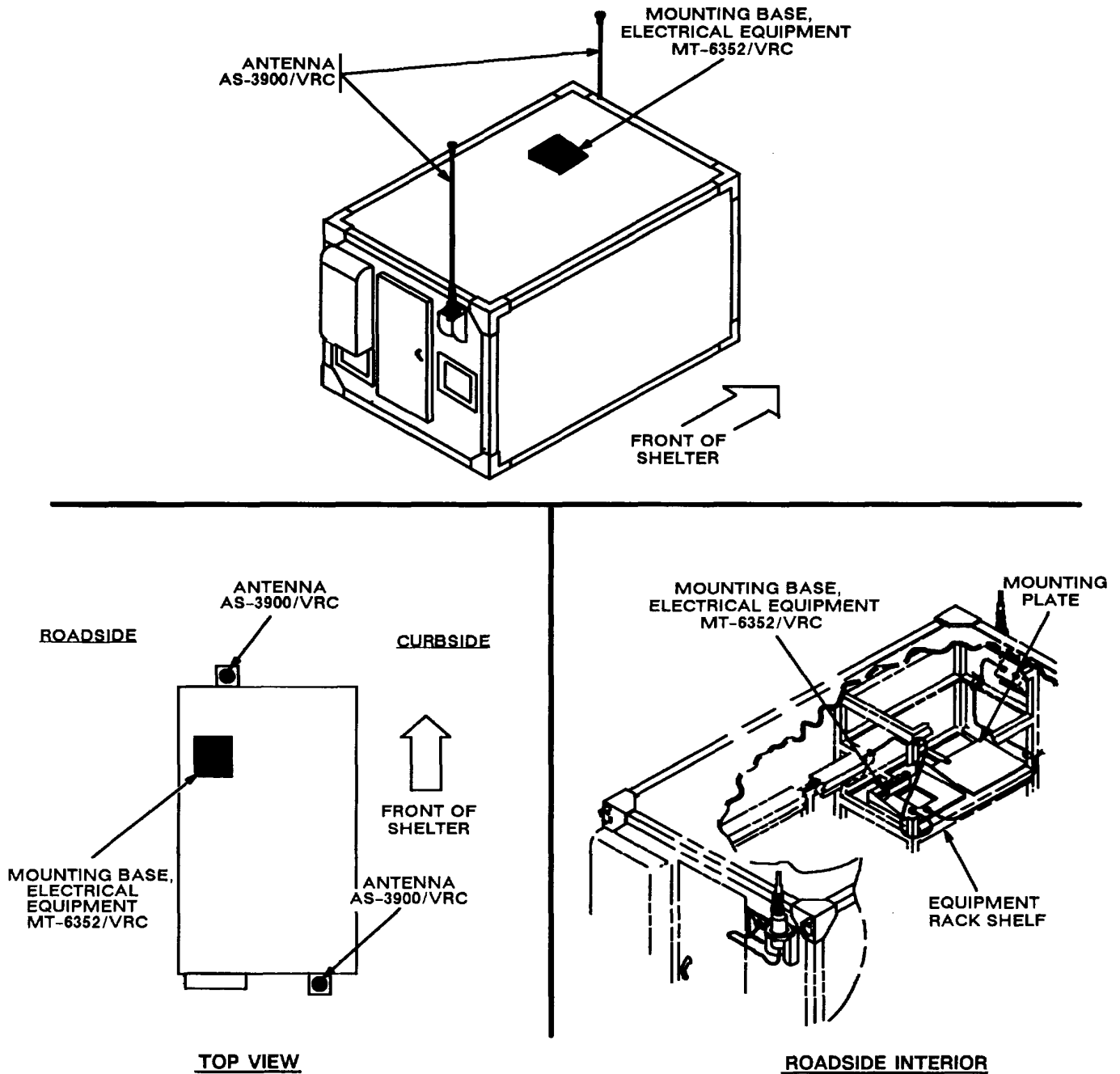
Figure 5-1 (1). MK and Radio Installation: MK Equipment Locations

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5.   INSTALLATION PROCEDURES. Continued.

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

RADIO SET   MT-6353/VRC

MOUNTING
PLATE

EQUIPMENT RACK SHELF

INSTALLATION
FOR
AN/VRC-89/91/92

RADIO SET   TSEC/KY-57   MT-6353/VRC

MOUNTING
PLATE
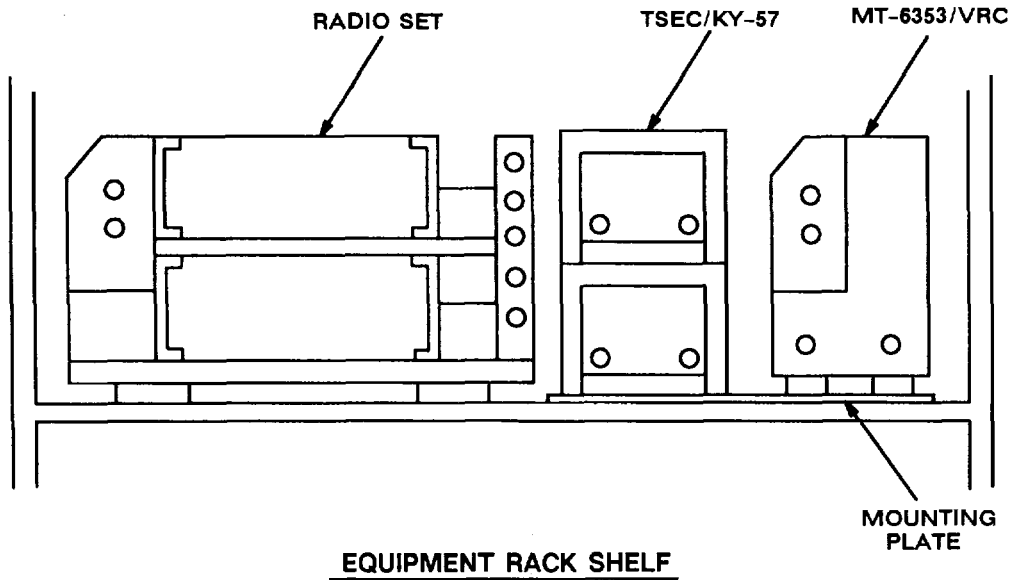
EQUIPMENT RACK SHELF
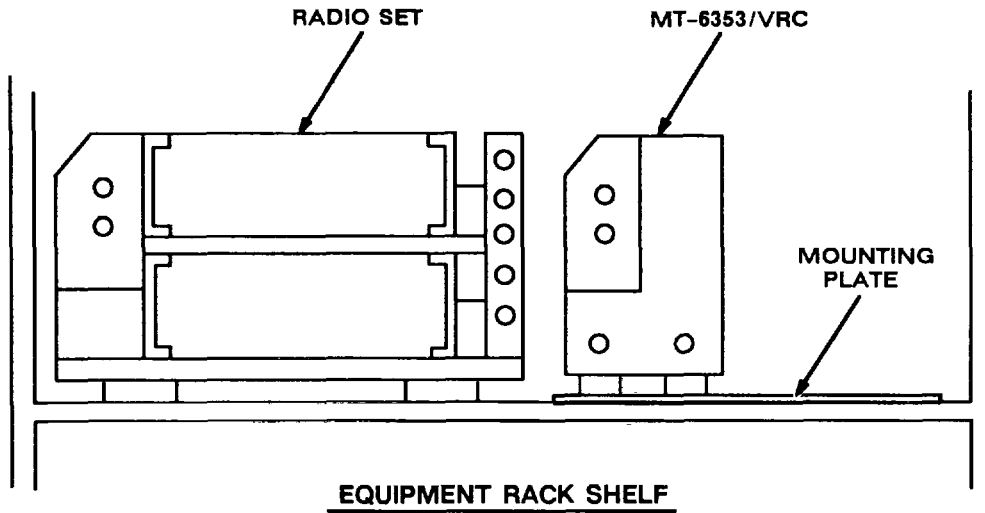
Figure 5-1 (2). MK and Radio Installation: Radio Equipment Locations

5.1 Installation of Antenna AS-3900/VRC (antenna). Use the following procedure to install both 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 (4).

Place on existing antenna bracket and aline with mounting holes. See figure 5-2.

b. Antenna base (1).

Place on top of gasket (4) and antenna bracket; then aline mounting holes.

c. Four cap screws (2), eight IET washers (3) and four nuts (5).

Install and secure to antenna base (1) and antenna bracket.

Tools: 9/16 in socket and 9/16 in wrench.

DETAIL A

1. ANTENNA BASE
2. CAP SCREW (3/8-16 x 1 3/4 in)
3. IET WASHER (3/8 in)
4. GASKET
5. NUT (3/8 -16 in)
6. IET WASHER (5/16 in)
7. GROUND STRAP
8. MACHINE SCREW
9. ELECTRICAL COVER
10. NUT
11. OE-254 ANTENNA ADAPTER
12. LOCK WASHER
13. NUT
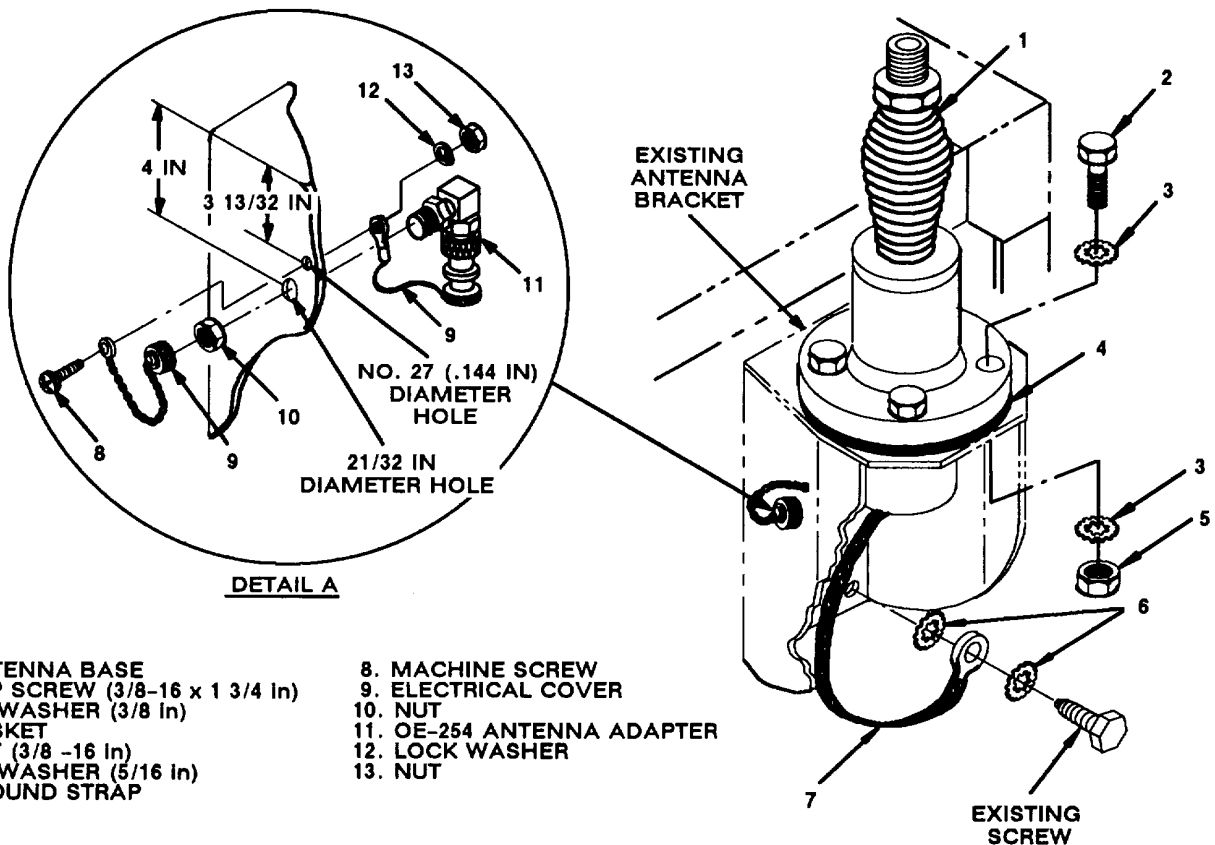
Figure 5-2. Antenna Base Installation: Front and Rear Walls

5.1.1   Installation of Antenna Base. Continued

ITEM	ACTION	REMARKS
d. Ground strap (7), two IET washers (6) and existing screw.	Install and secure to bottom right hole in antenna bracket and front wall. See figure 5-2.	Tools: 1/2 in socket.
e. Mounting holes for OE-254 antenna adapter (11).	Using dimensions shown, drill a No. 27 (.144 in) diameter hole and 21/32 in diameter hole through antenna bracket. See figure 5-2, detail A.	Tools: Electric drill, No. 27 and 21/32 in drill bits.
f. OE-254 antenna adapter (11), nut (10), two electrical covers (9), panhead machine screw (8), lock washer (12) and nut (13).	Install and secure to holes drilled in step e.	Tools: 3/4 in wrench, 5/16 in wrench and Phillips screwdriver.

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.	
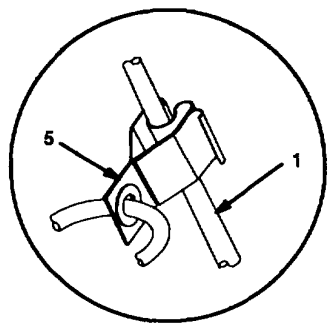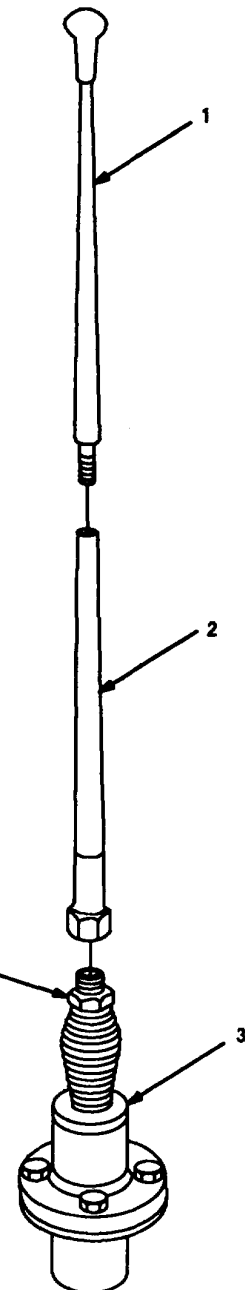
DETAIL B
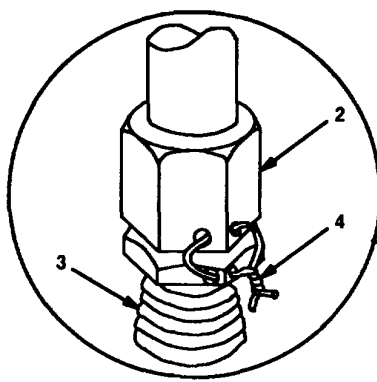
DETAIL A

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

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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 ensure good electrical grounding, any rust, corrosion or paint around mounting holes in equipment shelf should be removed before installing mounting bases. See figure 5-4 and perform the following steps.
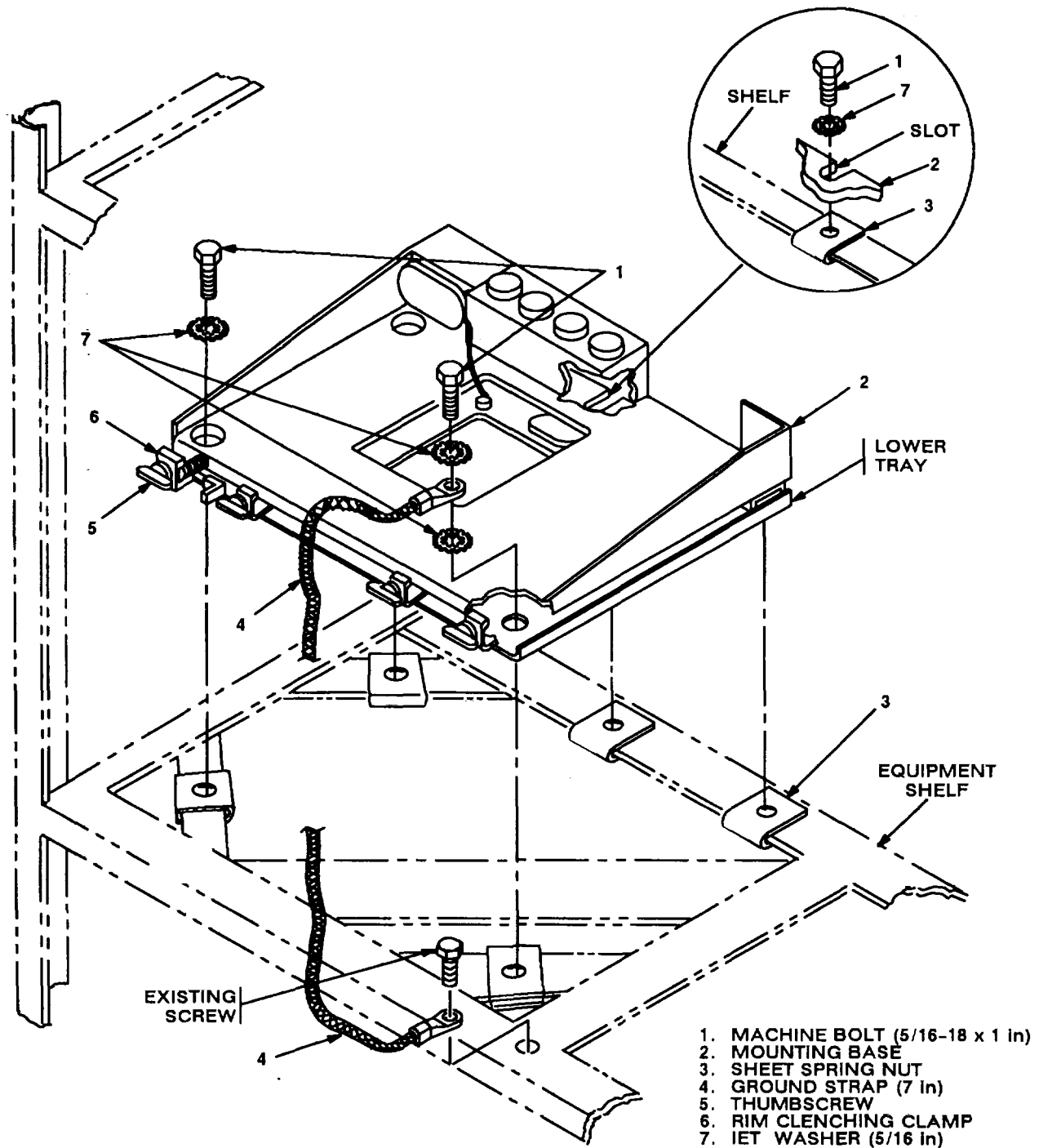

1. MACHINE BOLT (5/16-18 x 1 in)
2. MOUNTING BASE
3. SHEET SPRING NUT
4. GROUND STRAP (7 in)
5. THUMBSCREW
6. RIM CLENCHING CLAMP
7. IET WASHER (5/16 in)

Figure 5-4. Mounting Base Installation: Equipment Rack

5.2   Installation of Mounting Base, Electrical Equipment MT-63521VRC (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.

	ITEM	ACTION	REMARKS
a.	Five sheet spring nuts (3).	Slide over existing holes on left side of equipment shelf. See figure 5-4.	
b.	Mounting base (2).	Place on shelf over sheet spring nuts (3).	
c.	Two outer thumbscrews	Turn ccw until both sets of threads (5). have cleared center of holes.	
d.	Mounting base (2).	Aline four holes and rear slot with holes in sheet spring nuts (3).	
e.	Ground strap (4), two IET washers (7) and machine bolt (1).	Install and secure to lower tray of mounting base (2). See figure 5-4 for location.	Tools: 1/2 in socket.
f.	Four machine bolts (1) and four IET washers (7).	Install and secure to remaining three holes and rear slot in mounting base (2).	Tools: 1/2 in socket.
g.	Two outer thumbscrews (5).	Tighten and secure to rim clenching clamps (6) and mounting base (2).	
h.	Loose end of ground strap (4) and existing screw.	Install and secure to existing hole in equipment shelf.	

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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 clamps and tiedown straps.

WARNING

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

ITEM	ACTION	REMARKS
a. RF cable (2) connector	Connect and secure to antenna base (1) P1. connector J1. See figure 5-5.	
b. RF cable (2) connector	Connect and secure to antenna connector P2. panel B.	
c. RF cable (4) connector	Connect and secure to antenna connector P1. panel B.	
d. RF cable (4) connector P2.	Position on top of mounting base (5).	
e. Two tiedown straps (3).	Wrap around RF cable (4) and install loosely to side of equipment rack. See figure 5-5 for location(s).	

1. ANTENNA BASE (FRONT)
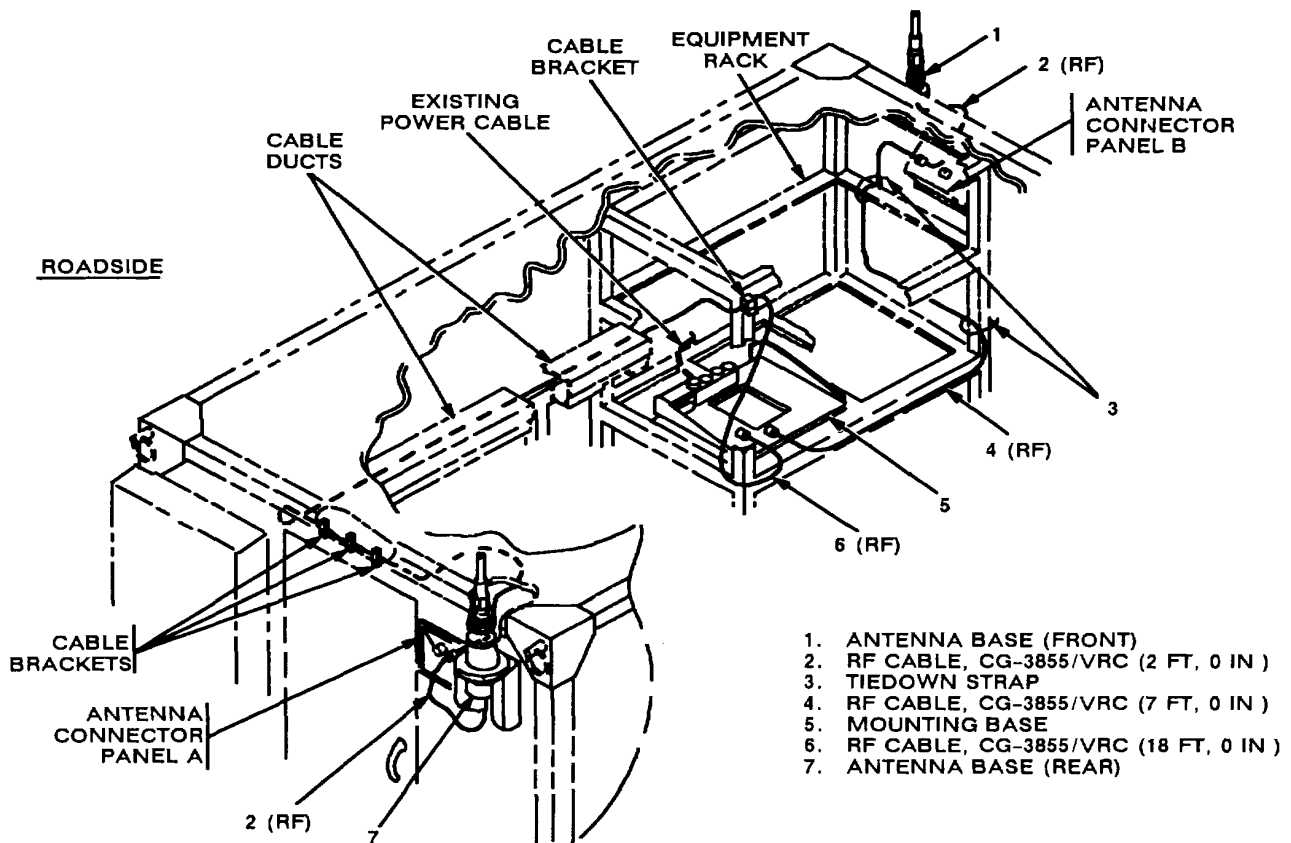2. RF CABLE, CG-3855/VRC (2 FT, 0 IN)
3. TIEDOWN STRAP
4. RF CABLE, CG-3855/VRC (7 FT, 0 IN)
5. MOUNTING BASE
6. RF CABLE, CG-3855/VRC (18 FT, 0 IN)
7. ANTENNA BASE (REAR)

Figure 5-5. Cable Installation: Exterior and Interior Cabling

5.3 Installation of Cables. Continued

ITEM	ACTION	REMARKS
f. RF cable (2) connector P1.	Connect and secure to antenna base (7) connector J1. See figure 5-5.	
g. RF cable (2) connector P2.	Connect and secure to antenna connector panel A.	
h. RF cable (6) connector P1.	Connect and secure to antenna connector panel A.	
i. RF cable (6).	Route above rear doorway to roadside cable ducts; then position inside three existing cable brackets. See figure 5-5. for location(s).	
j. Two cable ducts.	Open. See figure 5-5.	
k. RF cable (6).	Route through two cable ducts to equipment rack.	
l. Two cable ducts.	Close.	
m. RF cable (6) connector P2.	Position on top of mounting base (5).	
n. Existing cable bracket on equipment rack.	Position RF cable (6) inside. See figure 5-5 for location(s).	
o. Existing power cable.	Connect and secure to mounting base (5) connector J1. See figure 5-5.	
p. Existing cable brackets (located above rear door-way and on equipment rack).	Adjust RF cable (6) slack; then close and secure.	

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5.4 Installation of MK-24991VRC. For Radio Set AN/VRC-89/91/92, install MK-2499/VRC (TSEC/KY-57 security equipment) to mounting plate with four flat-head machine screws (5/16-24 x 3/4 in) in the location shown in figure 5-1 (2). Refer to section 5.6 for connection of cables.

5.5 Installation of Mounting Base, Electrical Equipment MT-63531VRC. If Radio Set AN/VRC-92 or AN/VRC-92A 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. If only Radio Set AN/VRC-89/91 or AN/VRC-89A/91A is authorized, perform steps a, f, and g to install mounting plate.

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. Five sheet spring nuts (8). Slide over existing holes in equipment rack shelf. See figure 5-6.

1. MT-6353/VRC MOUNTING BASE
2. NUT (5/16-24 in)
3. IET WASHER (5/16 in)
4. GROUND STRAP (13 in)
5. IET WASHER (1/4 in)
6. TAPPING SCREW (1/4-14 x 3/4 in)
7. MACHINE SCREW (5/16-24 x 3/4 in)
8. SHEET SPRING NUT
9. MOUNTING PLATE
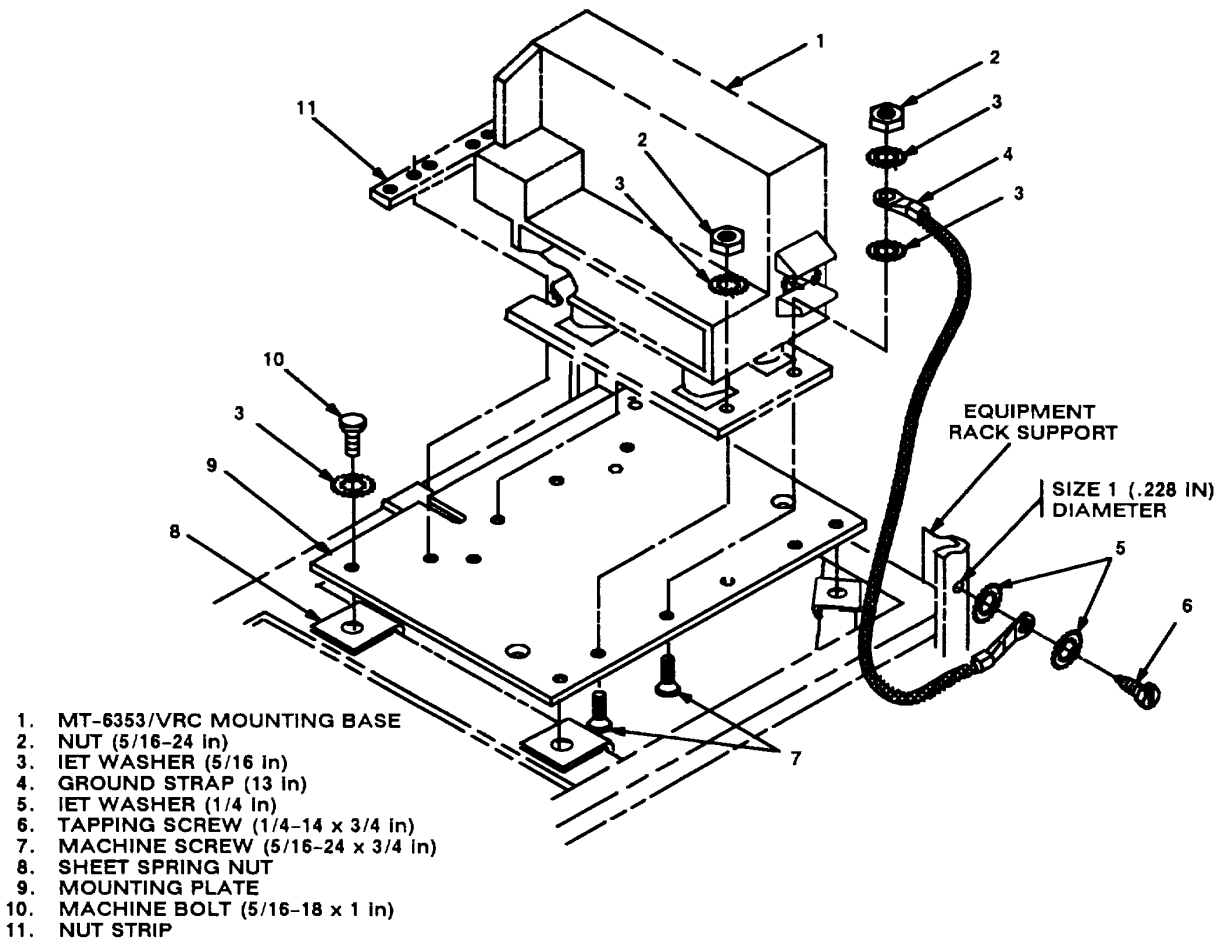10. MACHINE BOLT (5/16-18 x 1 in)
11. NUT STRIP

Figure 5-6. MT-6353/VRC Mounting Base Installation: Equipment Rack Shelf

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

ITEM	ACTION	REMARKS
b. MT-6353/VRC mounting base (1).	Place on mounting plate (9) over matching hole pattern. See figure 5-6.	

NOTE

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.)

ITEM	ACTION	REMARKS
c. MT-6353/VRC mounting base (1).	Aline front holes and rear slots with matching hole pattern in mounting plate (9).	
d. Two flat-head machine screws (7) and nut strip (11).	Install and secure to rear slots in MT-6353/VRC mounting base (1) and mounting plate (9).	Tools: Phillips screwdriver.
e. Ground strap (4), two flat-head machine screws (7), three IET washers (3) and two nuts (2).	Install and secure to front holes in MT-6353/VRC mounting base (1) and mounting plate (9).	Tools: Phillips screwdriver and 1/2 in wrench.
f. Mounting plate (9).	Place on shelf; then aline four mounting holes and rear slot with holes in sheet spring nuts (8).	
g. Five machine bolts (10) and five IET washers (3).	Install and secure to mounting plate (9) and shelf.	Tools: 1/2 in socket.
h. Mounting hole for ground strap (4).	Drill a Size 1 (.228 in) diameter hole in equipment rack support. See figure 5-6 for approximate location.	Tools: Electric drill and Size 1 drill bit.
i. Ground strap (4), hex-head tapping screw (6) and two IET washers (5).	Install and secure to hole drilled in step h.	Tools: 3/8 in socket.

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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 5-7 for cable connections. Unused cables should be stowed in appropriate place inside the shelter.	
c. Loop clamps.	Check that all have been properly installed and tightened.	
d. Protective covers.	Ensure that all installed cables are covered when not in use or connected.	
e. Radio issued with shelter.	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.	
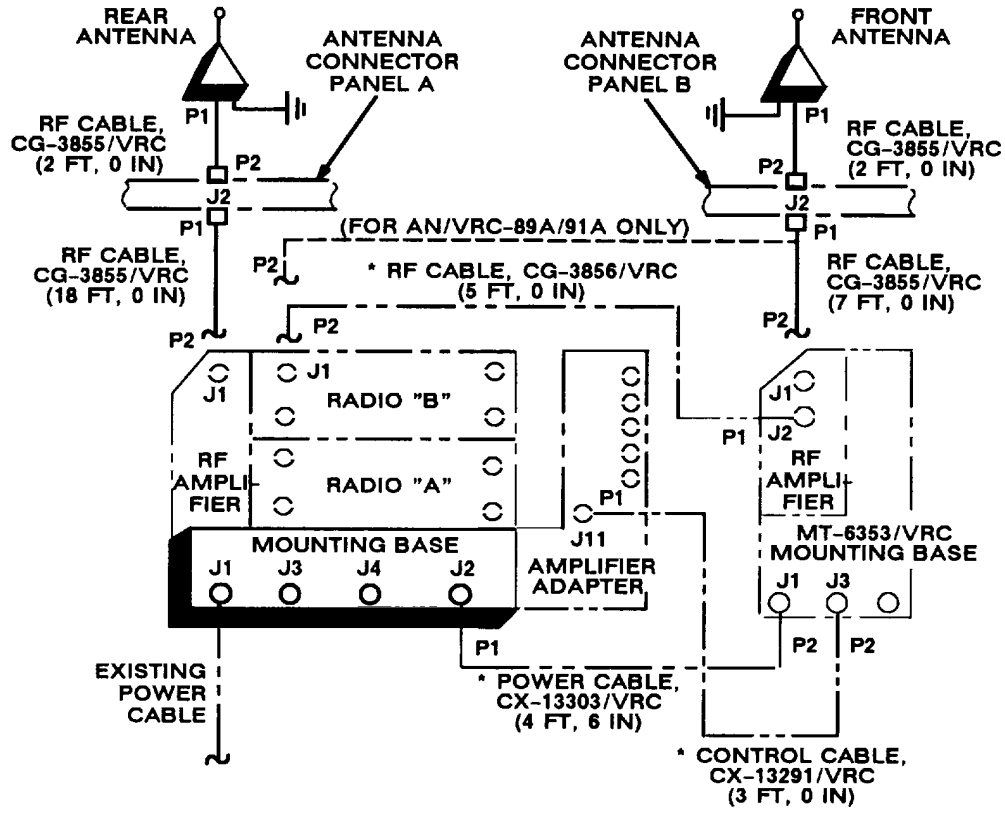
20

5.6 Post-Installation and Checkout. Continued

* NOT SUPPLIED IN THIS MK.

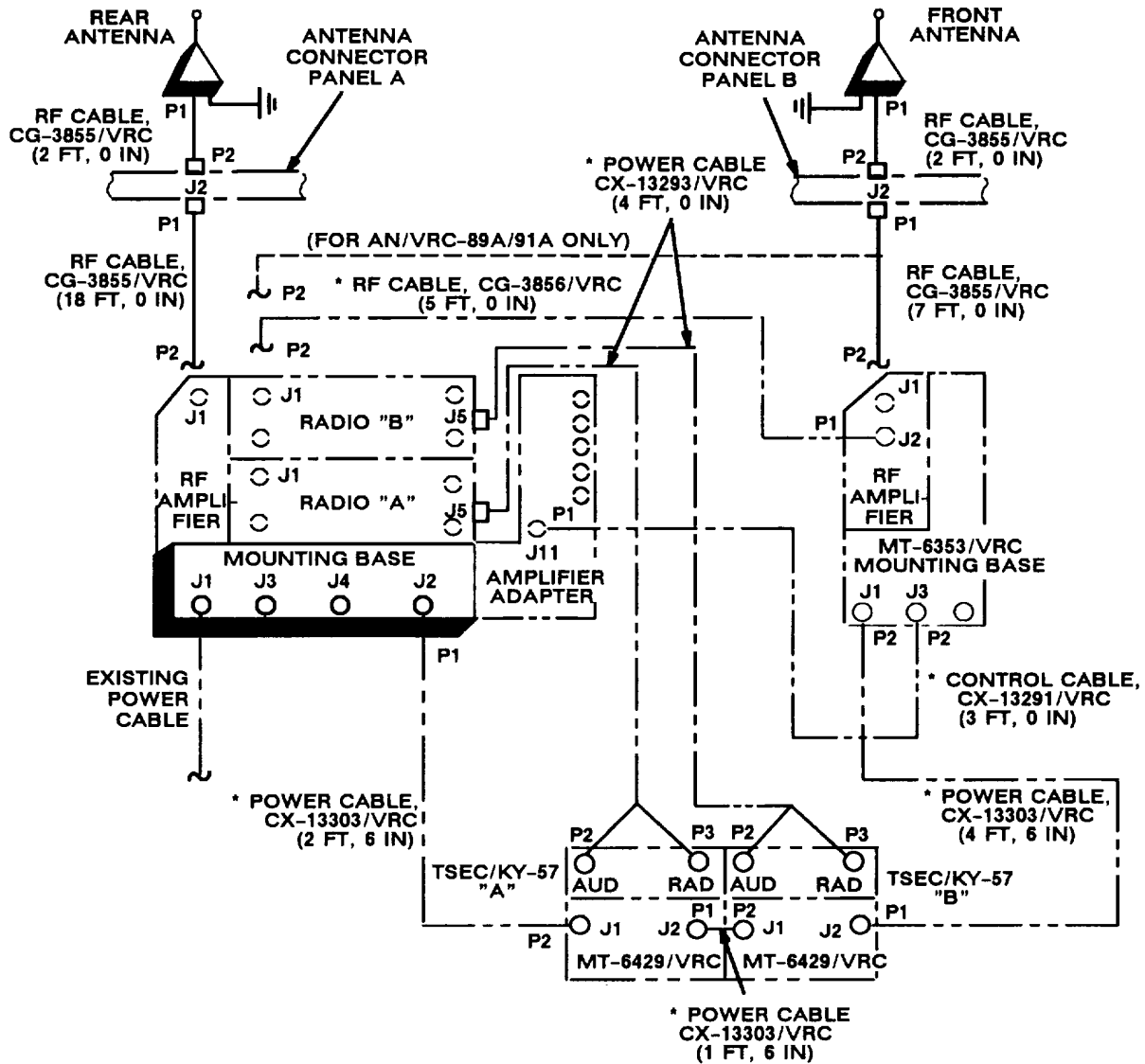| CABLE ASSEMBLY	FROM				TO	
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CG-3855/VRC (2 FT, 0 IN)	P1	Rear antenna base	J1	P2	Antenna connector panel A	J2
CG-3855/VRC (18 FT, 0 IN)	P1	Antenna connector panel A	J2	P2	RF amplifier (mounting base)	J1
CG-3855/VRC (2 FT, 0 IN)	P1	Front antenna base	J1	P2	Antenna connector panel B	J2
CG-3855/VRC (7 FT, 0 IN)	P1	Antenna connector panel B	J2	P2	Radio "B" or RF amplifier (MT-6353/VRC)	J1
Existing power cable		Power supply unit			Mounting base	J1

Figure 5-7 (1). Cable Diagram: For AN/VRC-89A/91A/92A

5.6   Post-Installation and Checkout. Continued

CABLE ASSEMBLY	FROM				TO	
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
* CX-13291/VRC (3 FT, 0 IN)	P1	Amplifier-adapter	J11	P2	MT-6353/VRC mounting base	J3
* CG-3856/VRC (5 FT, 0 IN)	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 (1). Cable Diagram: For AN/VRC-89A/91A/92A Continued

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5.6 Post-Installation and Checkout. Continued

* NOT SUPPLIED IN THIS MK.

CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CG-3855/VRC (2 FT, 0 IN)	P1	Rear antenna base	J1	P2	Antenna connector	J2 panel A
CG-3855/VRC (18 FT, 0 IN)	P1	Antenna connector panel A	J2	P2	RF amplifier (mounting base)	J1
CG-3855/VRC (2 FT, 0 IN)	P1	Front antenna base	J1	P2	Antenna connector panel B	J2

Figure 5-7 (2). Cable Diagram: For AN/VRC-89/91/92

5.8 Post-Installation and Checkout. Continued

CABLE ASSEMBLY	FROM			TO		
	CABLE CONN.	UNIT	UNIT CONN.	CABLE CONN.	UNIT	UNIT CONN.
CG-3855/VRC (7 FT, 0 IN)	P1	Antenna connector panel B	J2	P2	Radio "B" or RF amplifier (MT-6353/VRC)	J1
Existing power cable		Power supply unit			Mounting base	J1
* CX-13303/VRC (1 FT, 6 IN)	P1	MT-6429/VRC "A"	J2	P2	MT-6429/VRC "B"	J1
* CX-13303/VRC (2 FT, 6 IN)	P1	Mounting base	J2	P2	MT-6429/VRC "A"	J1
* CX-13293/VRC (4 FT, 0 IN)	P1	Radio "B"	J5	P2 P3	TSEC/KY-57 "B"	AUD RAD
* CX-13293/VRC (4 FT, 0 IN)	P1	Radio "A"	J5	P2 P3	TSEC/KY-57 "A"	AUD RAD
* CX-13291/VRC (3 FT, 0 IN)	P1	Amplifier-adapter	J11	P2	MT-6353/VRC mounting base	J3
* CG-3856/VRC (5 FT, 0 IN)	P2	Radio "B"	J1	P1	RF amplifier (MT-6353/VRC)	J2
* CX-13303/VRC (4 FT, 6 IN)	P1	MT-6429/VRC "B"	J2	P2	MT-6353/VRC mounting base	J1

* Not supplied in this MK.

Figure 5-7 (2). Cable Diagram: For AN/VRC-89191192 Continued

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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 11-5820890-20-1	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 11-5820-89020P	Repair Parts and Special Tools List

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