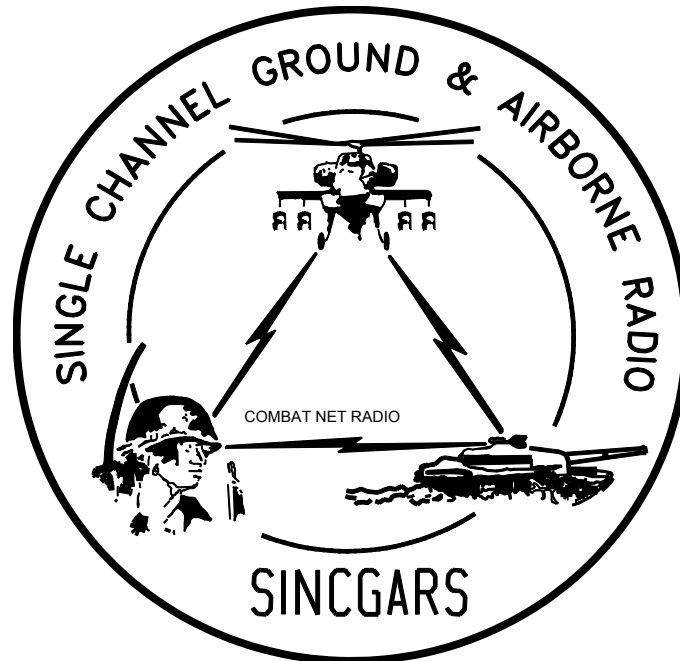


**TECHNICAL BULLETIN**



**INSTALLATION OF  
EMBEDDED GPS RECEIVER (EGR)  
INTO  
SINGARS RECEIVER-TRANSMITTER  
RT-1523E(C)/U OR RT-1523F(C)/U  
WITH  
MANPACK GPS KIT (NSN 5820-01-523-9646) (EIC: N/A)  
OR  
VEHICULAR GPS KIT (NSN 5820-01-523-9758) (EIC: N/A)**

Approved for public release; distribution is unlimited.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY**

**1 MAY 2008**





# 5

## **SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK**

**1**

**DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL**

**2**

**IF POSSIBLE, TURN OFF THE ELECTRICAL POWER**

**3**

**IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A DRY WOODEN POLE OR A DRY ROPE OR SOME OTHER INSULATING MATERIAL**

**4**

**SEND FOR HELP AS SOON AS POSSIBLE**

**5**

**AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION**

**FOR ARTIFICIAL RESPIRATION, REFER TO FM 4-25.11.**



TB 11-5820-890-30-5

INSERT LATEST CHANGED PAGES/WORK PACKAGES. DESTROY SUPERSEDED DATA.

### LIST OF EFFECTIVE PAGES

NOTE: The portion of text affected by the changes is indicated by a vertical line in the outer margin of the page. Changes to illustrations are indicated by a vertical line adjacent to the title.

Date of issue for the original manual and changed pages/work packages are:

Original: 1 May 2008

TOTAL NUMBER OF PAGES IS 40 CONSISTING OF THE FOLLOWING:

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Warnings a/(b blank)	0
i-ii	0
1-18	0
A-1/(A-2 blank)	0
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**INSTALLATION OF  
EMBEDDED GPS RECEIVER (EGR)  
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OR  
VEHICULAR GPS KIT (NSN 5820-01-523-9758) (EIC: N/A)**

**REPORTING 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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms) located in the back of this manual, directly to: Commander, U.S. Army CECOM Life Cycle Management Command (LCMC) and Fort Monmouth, ATTN: AMSEL-LC-LEO-E-ED, Fort Monmouth, NJ 07703-5006. You may also send in your recommended changes via electronic mail or by fax.

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**GENERAL INFORMATION.****SCOPE.**

This Technical Bulletin (TB) provides information and procedures for installing Embedded GPS Receiver (EGR) CCA into the RT-1523E(C)/U and the RT-1523F(C)/U.

**CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS.**

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

**MAINTENANCE FORMS, RECORDS, AND REPORTS.**

**Reports of Maintenance and Unsatisfactory Equipment.** Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 750-8, as contained in Maintenance Management Update.

**Reporting of Item and Packaging Discrepancies.** Fill out and forward SF 364 (Supply Discrepancy Report (SDR)) as prescribed in AR 735-11-2.

**DESTRUCTION OF ARMY ELECTRONICS MATERIEL.**

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

**REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).**

If your equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to <https://aeps.ria.army.mil/aepspublic.cfm> (scroll down and choose the "Submit Quality Deficiency Report" bar). The Internet form lets you choose to submit an Equipment Improvement Recommendation (EIR), a Product Quality Deficiency Report (PQDR) or a Warranty Claim Action (WCA). You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. We will send you a reply

**TB 11-5820-890-30-5**

1. **INTRODUCTION.** This Technical Bulletin provides information and procedures for installing Embedded GPS Receiver (EGR) CCA into the RT-1523E(C)/U and the RT-1523F(C)/U.
2. **PURPOSE OF INSTALLATION.** Provide RT-1523E(C)/U and the RT-1523F(C)/U with EGR capability.
3. **ITEMS TO BE INSTALLED.** Embedded GPS Receiver (EGR) CCA will be installed into the RT-1523E(C)/U and the RT-1523F(C)/U.

<u>Items affected</u>	<u>Changes to be made</u>	<u>Reason for changes</u>
RT-1523E(C)/U RT-1523F(C)/U	Install Embedded GPS Receiver (EGR) CCA in RT-1523E(C)/U and RT-1523F(C)/U.	Provide RT-1523E(C)/U and RT-1523F(C)/U with EGR capability.

4. **PREPARATION FOR INSTALLATION.** Either a Manpack or Vehicular GPS kit will be issued for this procedure. Upon opening the kit, the contents should be inspected and compared with the appropriate list below to verify all items are included.

a. Manpack GPS kit (NSN 5820-01-523-9646) contents. See figure 1.

Item	NSN	Reference Number	Quantity
Antenna, VHF, GPS, Whip, Manpack	5985-01-533-3398	CP1400163-1	1
Cable Assembly – DBL Shield, 36 IN, SMA RA to SMA RA	N/A	CP1800013-36IN	1
Cable, RF GPS	6145-01-538-9920	A3272738-2	1
Connector, RCPT, Elect – GPS Adapter	5935-01-539-8738	A3316777-1	1
Control Display Unit	6610-01-533-2158	A3307716-1	1
Embedded GPS Receiver (EGR) CCA	5998-01-533-3754	A3271388-1	1
Plate, Self-Adhering Equip Mod Record	N/A	A3307344-1	1
Screw, Panhead, Phillips, Self Tapping	N/A	CP1900016-3	5
Shroud, Alignment, Connector	N/A	CP1900046-1	2
SINGARS ASIP Radio Software (Release 7.0) Upgrade CD includes:	N/A	SWTPA3272658-1 SWTPA3271344-7	1
Strap, Webbing – Hook and Loop, cable Tie, Black, Wrap Around 1” Wide x 6” Long	N/A	CP1400238-1 (6605K51)	3
Strap, Webbing – Hook and Loop, cable Tie, Black, Wrap Around 1” Wide x 24” Long	5340-01-508-7187	CP1400237-1 (3955T354)	1
Technical Bulletin	N/A	TB 11-5820-890-30-5	1

b. Vehicular GPS kit (NSN 5820-01-523-9758) contents. See figure 2.

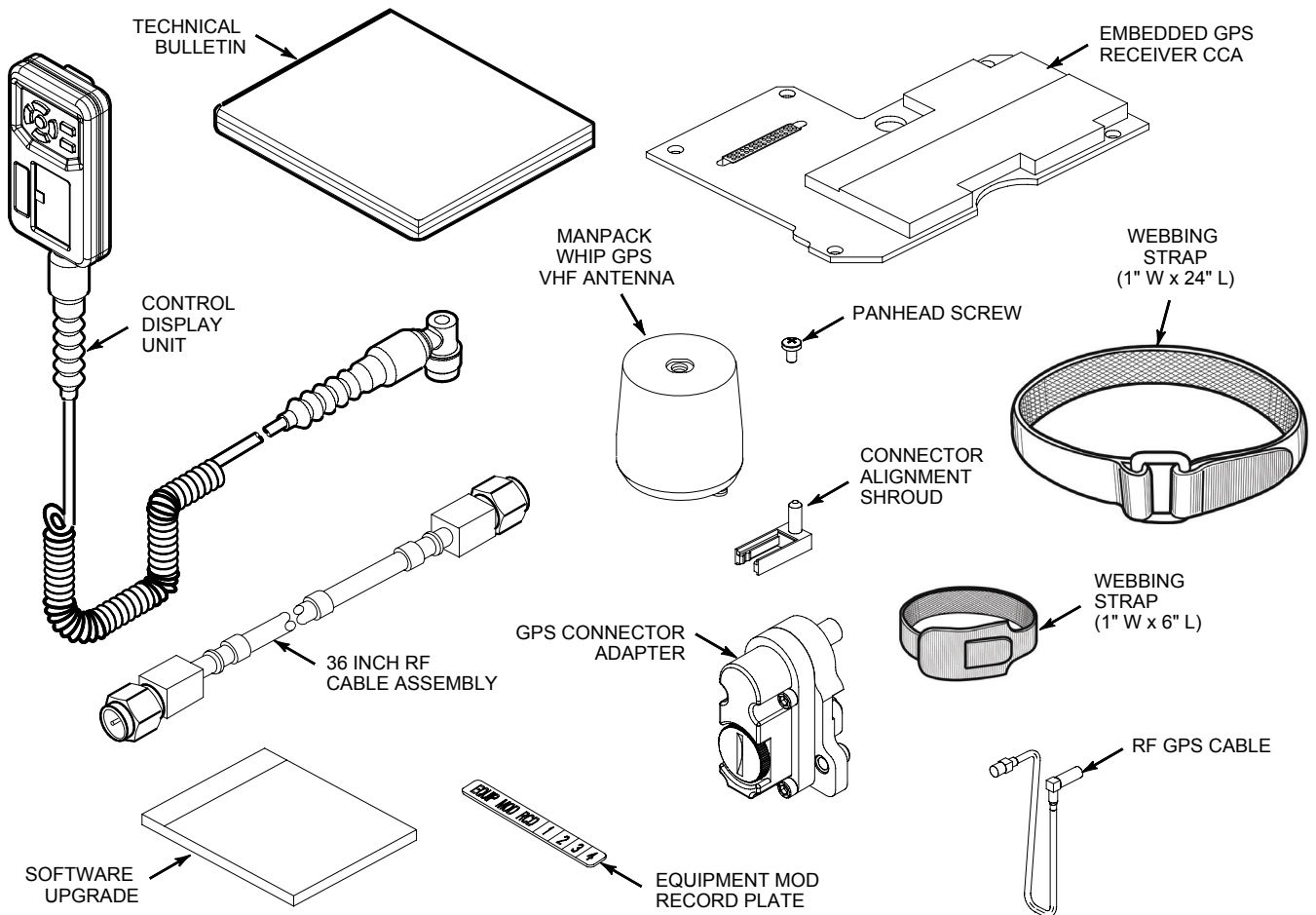
Item	NSN	Reference Number	Quantity
Cable Assembly, Special Purpose, Electrical-CDU	N/A	A3316776-1	1
Cable, RF GPS	6145-01-538-9920	A3272738-2	1
Control Display Unit	6610-01-533-2158	A3307716-1	1
Embedded GPS Receiver (EGR) CCA	5998-01-533-3754	A3271388-1	1
Plate, Self-Adhering Equip Mod Record	N/A	A3307344-1	1
Screw, Panhead, Phillips, Self Tapping	N/A	CP1900016-3	5
Shroud, Alignment, Connector	N/A	CP1900046-1	2
SINCGARS ASIP Radio Software (Release 7.0) Upgrade CD includes:	N/A	SWTPA3271344-7 SWTPA3272658-1	1
Technical Bulletin	N/A	TB 11-5820-890-30-5	1

c. Additional Authorization List items. Prior to vehicular installation some of these items need to be acquired by the unit.

Item	NSN	Reference Number	Quantity
Antenna, RA-1 Remote	5985-01-502-6692	013-1981-010	As required
Cable, DAGR to RA-1 (5 Meters)	5995-01-504-1762	987-4640-001	As required
Cable, DAGR to RA-1 (10 Meters)	5995-01-521-4244	987-5016-001	As required
Antenna, RA-2 Remote	5985-01-521-1775	013-1981-020	As required
Cable, DAGR to RA-2 (10 Meters)	5995-01-521-2941	987-5015-001	As required

**TB 11-5820-890-30-5**  
d. Tools required.

Item	NSN	Reference Number	Quantity
Automated Net Control Device	5810-01-343-1194	AN/CYZ-10	1
Cable Assembly, Special Purpose Electrical-GPS Fill (W20)	5995-01-542-8966	A3272739-1	1
Interconnecting Group	5895-01-459-8523	ON-373B/GRC	1
Multimeter	6625-01-265-6000	AN/PSM-45A	1
Silicone Compound	6850-00-177-5094	MIL-S-8660 Clear	1
Test Set, Radio	6625-01-432-8369	AN/GRM-122	1
Tool Kit	5180-00-064-5178	TK-101/G	1
Tool Kit	5180-01-460-9328	TK-105A/G	1



**Figure 1. Manpack GPS Kit.**

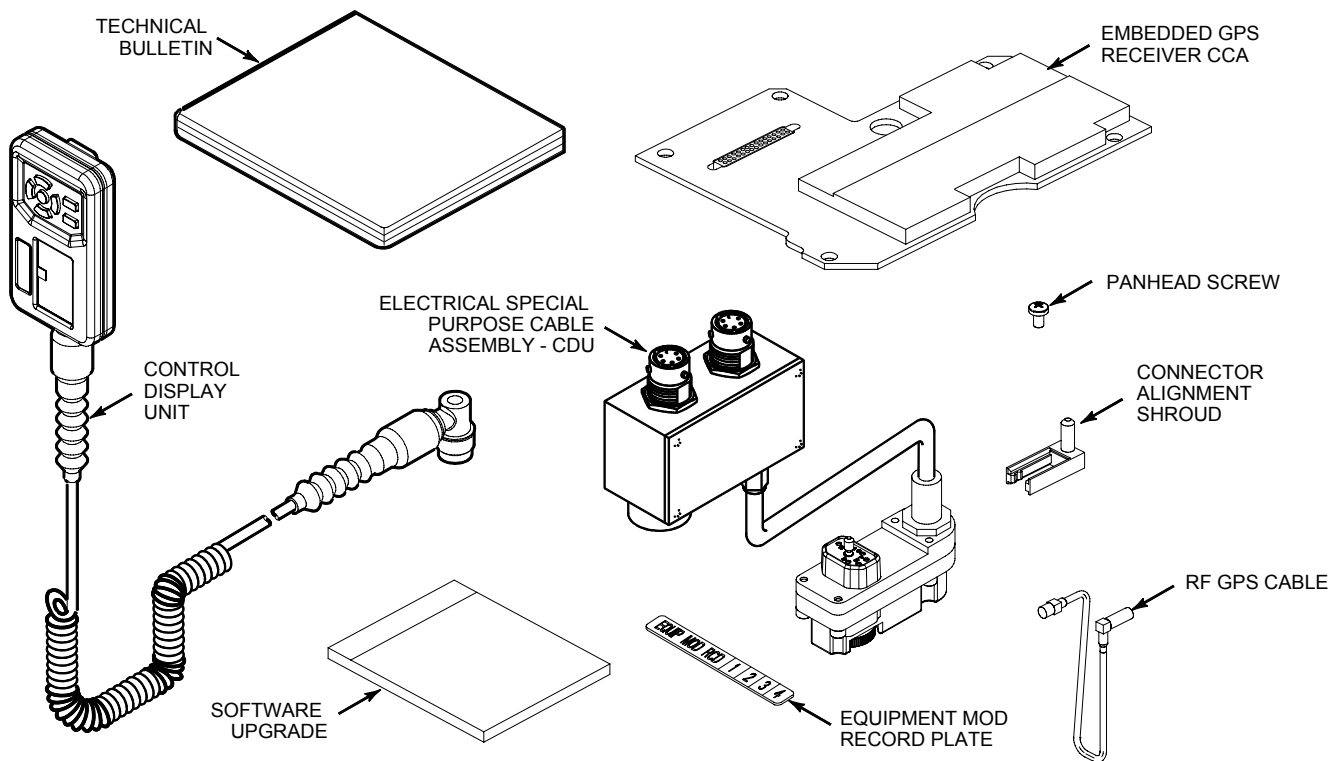


Figure 2. Vehicular GPS Kit.

5. **RT REPROGRAMMING.** Perform RT reprogramming with supplied RT software upgrade. Upon completion of RT software upgrade, perform RT Built-In-Test (BIT) to verify RT software version has been updated.

**CAUTION**

DO NOT perform RT reprogramming with supplied RT software upgrade if RT currently has version 7.0 or later.

**5.1 RT BIT**

ACTION	RESPONSE
<p>a. Set FCTN switch to TST.</p>	<p>RT displays "WAIT", "SW 7.0 ", "WAIT", then "GOOD".</p> <p>If not and "SW - - " is displayed, reprogram again and repeat BIT. If RT still will not successfully pass BIT or reprogram, turn RT in for repair.</p>

**6. INSTALLATION PROCEDURES.** The following instructions provide detailed information for installation of the Embedded GPS Receiver (EGR) CCA and required hardware.



**CAUTION**



Static electricity can damage the RT modules. Ground the RT and all tools before installing/removing a module. Use a grounded wrist strap when handling a module.

**CAUTION**

Steps marked with **HCP** must be performed exactly as written. They are critical in maintaining the nuclear hardness of the RT. Seals must not be damaged. All screws must be torqued to the limits specified in the installation procedures.

**NOTE**

Procedures apply to the RT-1523E(C)/U and RT-1523F(C)/U unless otherwise stated.

ITEM	ACTION	REMARKS
<b>REMOVAL</b>		
a. RT	Set on work surface with top side up and make sure powered off with battery removed and disconnected.	
b. Top cover (1)	Use cross tip screwdriver. Fully loosen 12 captive screws securing top cover (1) to chassis assembly (1A6) (5). Remove top cover (1).	See figure 3 for RT-1523E(C)/U component locations and figure 4 for RT-1523F(C)/U component locations.
c. Restraint screw (7)	Use flat tip screwdriver. Fully loosen restraint screw (7) at top rear of chassis assembly (1A6) (5).	
d. Screw (10)	Use cross tip screwdriver. Remove screw (10) securing rear cover flex assembly (1A5W1P4) (11) to chassis assembly (1A6) (5).	RT-1523F(C)/U only.
e. Rear cover flex assembly (1A5W1P4) (11)	Disconnect rear cover flex assembly (1A5W1P4) (11) from connector 1A6W2XA3 on chassis assembly (1A6) (5).	RT-1523F(C)/U only.

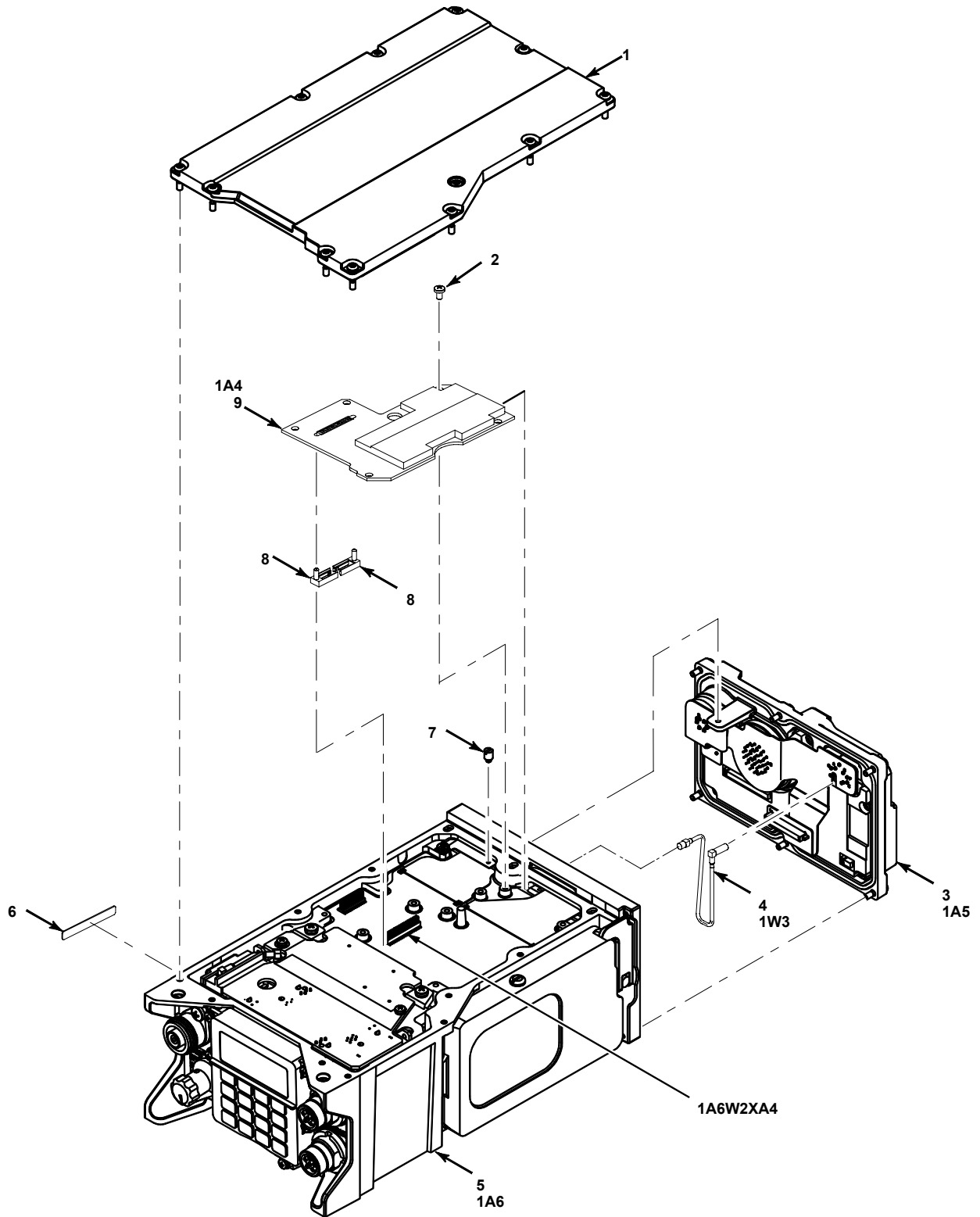


Figure 3. Installation of EGR CCA into RT-1523E(C)/U.

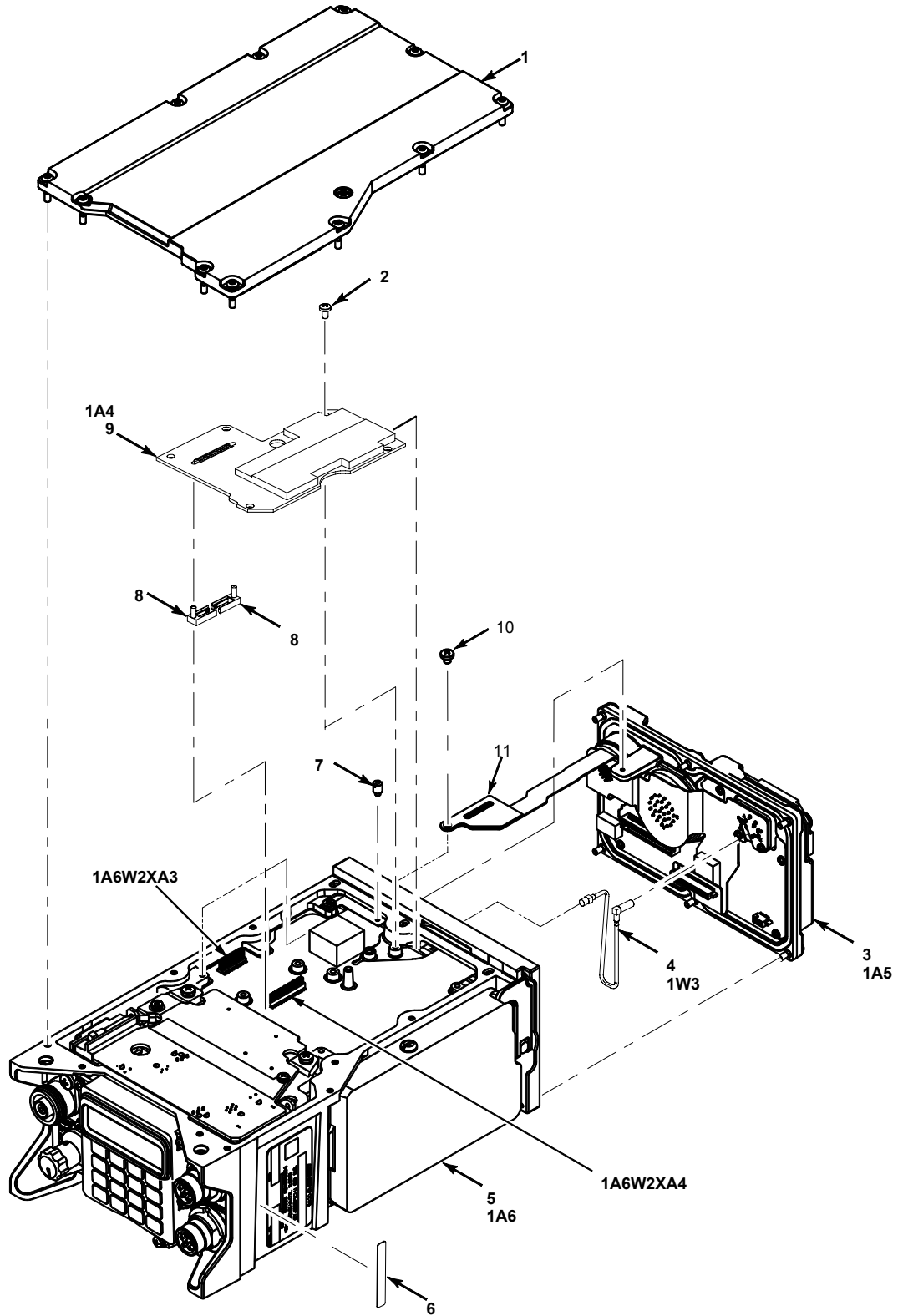


Figure 4. Installation of EGR CCA into RT-1523F(C)/U.



ITEM	ACTION	REMARKS
<b>REMOVAL</b> Continued		
f. Six captive screws	Use cross tip screwdriver. Fully loosen six captive screws securing rear cover assembly (1A5) (3) to chassis assembly (1A6) (5).	
g. Rear cover assembly (1A5) (3)	Pull rear cover assembly (1A5) (3) straight back from chassis assembly (1A6) (5).	
<b>INSTALLATION</b>		
h. Alignment shrouds	Obtain alignment shrouds for installation.	See figure 3 for RT-1523E(C)/U component locations and figure 4 for RT-1523F(C)/U component locations.
i. Alignment shrouds (8)	Position alignment shrouds (8) to chassis flex assembly connector (1A6W2XA4).	
j. RF cable (1W3)	Obtain RF cable (1W3) for installation.	
k. RF cable (1W3) (4)	Use needle nose pliers. Connect RF cable (4) connector (1W3P1) to EGR CCA (9) connector (1A4J2).	Run other end through rear of chassis assembly (1A6) (5).
l. EGR CCA (1A4) (9)	Position EGR CCA (1A4) (9) to connector 1A6W2XA4 on chassis assembly (1A6) (5).	
m. Five screws (2)	Use cross tip screwdriver. Install five screws (2) securing EGR CCA (1A4) (9) to chassis assembly (1A6) (5).	
n. RF cable (1W3) (4)	Use needle nose pliers. Connect RF cable (4) connector (1W3P2) to GPS connector (1A5J5).	
o. Rear cover assembly (1A5) (3)	Position rear cover assembly (1A5) (3) to chassis assembly (1A6) (5).	
p. <b>HCP</b> Six captive screws	Use torque screwdriver. Torque six captive screws securing rear cover assembly (1A5) (3) to chassis assembly (1A6) (5) to 8 to 10 in-lb.	
q. Restraint screw (7)	Use flat tip screwdriver. Tighten restraint screw (7) at top rear of chassis assembly (1A6) (5).	

ITEM	ACTION	REMARKS
<b>INSTALLATION</b> Continued		
r. Rear cover flex assembly (1A5W1P4) (11)	Connect rear cover flex assembly (1A5W1P4) (11) to connector 1A6W2XA3 on chassis assembly (1A6) (5).	RT-1523F(C)/U only.
s. Screw (10)	Use cross tip screwdriver. Install screw (10) securing rear cover flex assembly (1A5W1P4) (11) to chassis assembly (1A6) (5).	RT-1523F(C)/U only.
t. <span style="border: 1px solid black; padding: 2px;">HCP</span> Top cover (1)	Position top cover (1) on chassis assembly (1A6) (5). Use torque screwdriver. Torque 12 captive screws to 8 to 10 in-lb.	
u. Mod Record Plate (6)	For RT-1523E(C)/U install Self Adhering Mod Record Plate (6) to left side of RT just below existing Identification Plate. Scratch off revision number 1. For RT-1523F(C)/U install Self Adhering Mod Record Plate (6) to right side of RT just left of existing Identification Plate. Scratch off revision number 1.	

7. **POST-INSTALLATION VERIFICATION.** Perform in the following order: (a) an RT Detailed BIT to verify the EGR CCA is installed and good. RT will display “EGR XXXX/XXXX” where XXXX/XXXX indicates the four digit software serial number and the four digit hardware serial number respectively of the EGR CCA; (b) an RF path check to verify that the RF path to the EGR CCA is good; (c) a CDU/EGR check to verify that the CDU and EGR CCA are communicating with each other; (d) an EGR fill check to verify EGR fill lines; (e) Upon verification of EGR CCA installation, perform the operational check found in TM 11-5820-890-30-6 to verify proper operation of the RT.

7.1 **DETAILED BIT**

ACTION	RESPONSE
a. Apply power or install battery into RT.	No response.
b. Set FCTN switch to SQ ON.	Check display for other than fail.
c. Press and hold any key while setting FCTN switch to TST. Release key.	RT displays “WAIT”, then “GOOD”.
	If not and “FAIL EGR“ is displayed, replace EGR CCA with known good EGR CCA. Repeat Detailed BIT and RT passes, turn bad EGR CCA in for repair. If RT still fails, turn RT in for repair.
d. Press CHG/7 key.	RT displays “MANUAL TEST?”.
e. Press STO key.	RT displays “RUN CONFIG”.
f. Press STO key.	RT displays “CP SWXXXXHWXX”.
g. “CP SWXXXXHWXX” displayed, press CHG/7 key four times.	RT displays “EGR XXXX/XXXX”.
	If not, replace EGR CCA with known good EGR CCA. Repeat Detailed BIT and RT passes, turn bad EGR CCA in for repair. If RT still fails, turn RT in for repair.
h. Set FCTN switch to Z.	RT displays “CV ZERO”, “COMSEC ZERO”, “FH ZERO”, then “GOOD”.
	If not, replace EGR CCA with known good EGR CCA. Repeat Detailed BIT and RT passes, turn bad EGR CCA in for repair. If RT still fails, turn RT in for repair.
i. Set FCTN switch to OFF.	No response.

7.2 RF PATH CHECK

Refer to Figure 5 for steps a and b.

ACTION	RESPONSE
a. Connect GPS antenna adapter to RT GPS connector.	No response.
b. Connect RF cable to GPS antenna adapter and then to GPS antenna.	No response.
c. Set RT FCTN switch to LD.	RT displays "WAIT", NOKEY", then "FILL1".
d. Press CID/8 key.	RT displays "NO ID".
e. Press MENU/CLR key.	RT displays "_____".
f. Press RCU/2 key five times.	RT displays "22222".
g. Press STO key.	RT displays "CID".
h. Press SA/6 key.	RT displays "OFF".
i. Press CHG/7 key.	RT displays "-ON".
j. Press GPS/5 key.	RT displays "OFF".
k. Press CHG/7 key.	RT displays "-AUTO".
l. Set RT FCTN switch to SQ ON.	RT displays "FILL1".
m. After 15 minutes, press GPS/5 key.	RT displays "AUTO".
	If not and "-AUTO" still displayed, verify that GPS antenna is located in an area with good GPS signal.
	If "-AUTO" still displayed, use multimeter to check that RF cable is good. If not, replace RF cable with known good RF cable. RF cable passes, turn bad RF cable in for repair.
	If "-AUTO" still displayed, use multimeter to check that antenna adapter connector is good. If not, replace antenna adapter connector with known good antenna adapter connector. Antenna adapter connector passes, turn bad antenna adapter connector in for repair.
	If "-AUTO" still displayed, replace GPS antenna with known good GPS antenna. GPS antenna passes, turn bad GPS antenna in for repair.

## 7.3 CDU/EGR CHECK

Refer to Figure 5 for step a.

ACTION	RESPONSE
a. Connect CDU to RT AUX connector J6.	CDU displays "BUILT IN TEST IN PROGRESS", then "BUILT IN TEST PASSED".  If not, replace CDU with known good CDU. CDU passes, turn bad CDU in for repair.
b. Verify local position is displayed in the CDU Local Position (POS) display.	If not, replace CDU with known good CDU. If local position is displayed, turn bad CDU in for repair. If still bad, replace EGR CCA with known good EGR CCA, If local position is displayed, turn in bad EGR CCA for repair. If still bad, turn RT in for repair.
c. Verify the CID "22222" is displayed in the CDU Situational Awareness (SA) display. This will take a few minutes to display.	If not, replace CDU with known good CDU. CDU passes, turn bad CDU in for repair.
d. Press CDU down arrow to Local Position (POS) display, then ENT.	Local Position (POS) display highlighted and POS highlighted.
e. Press CDU down arrow, then ENT.	Waypoint (WP) display highlighted.
f. Press CDU down arrow to MENU display, then ENT.	MENU display highlighted and keypad selected (boxed).
g. Press CDU down arrow, then ENT.	Navigation (NAV) display displayed and WAYPOINT 00 selected (boxed).
h. Press CDU ENT.	WAYPOINT 00 is displayed with first 0 highlighted.
i. Press CDU up arrow, then ENT.	WAYPOINT 10 is displayed and selected (boxed).
j. Press CDU up arrow, right arrow, then ENT.	Local Position stored. Waypoint Edit display highlighted and WAYPOINT 10 selected (boxed).
k. Press CDU down arrow, then ENT.	Waypoint Edit display highlighted and "-" - - - - - selected (boxed) with first digit highlighted.
l. Press CDU up or down arrow to the letter D, then right arrow.	Waypoint Edit display highlighted and D "-" - - - - - selected (boxed) with second digit highlighted.
m. Press CDU up or down arrow to the letter O, then right arrow.	Waypoint Edit display highlighted and DO "-" - - - - - selected (boxed) with third digit highlighted.
n. Press CDU up or down arrow to the letter G, then ENT.	Waypoint named.
o. Press CDU down arrow to E (Easting), then ENT.	E (Easting) selected (boxed) with first digit highlighted.
p. Press CDU right arrow two times.	E (Easting) selected (boxed) with third digit highlighted.

7.3 CDU/EGR CHECK Continued

ACTION	RESPONSE
q. Press CDU up arrow, then ENT.	E (Easting) location changed by 100 meters.
r. Press CDU down arrow to DONE, then ENT.	Validate that DIST= 100M ±25M from Local Position.  If not, replace EGR CCA with known good EGR CCA. Repeat Detailed BIT, RF Path Check, CDU/EGR Check and RT passes, turn bad EGR CCA in for repair. If still fails, turn RT in for repair.

7.4 EGR FILL CHECK

ACTION	RESPONSE
Refer to EGR tasks in TM 11-5820-890-10-8 to load EGR key from ANCD into EGR.	EGR fills successfully.  If not, replace EGR CCA with known good EGR CCA. Repeat Detailed BIT, RF Path Check, CDU/EGR Check, EGR Fill Check and RT passes. If successful, turn bad EGR CCA in for repair. If still fails, turn RT in for repair.

7.5 RT-1523E/RT-1523F OPERATIONAL CHECK

ACTION	RESPONSE
Refer to operational check in TM 11-5820-890-30-6. See NOTE for additional information needed when running operational check.	Verify proper operation of RT.

**NOTE**

At this time, GPS Time Load Operational Check (LIT 780) is a PLGR check. It does not test the EGR CCA and will fail. During Function Switch BIT Check of operational check, when operator instructions indicate to connect P4 to UUT J4 (PLGR) **do not connect P4**. Upon failure of GPS Time Load (LIT 780) the debug mode screen will appear twice. Both times press F4 (CRT label "Cont F") to continue operational check after the fault and finish operational check.

**8. MANPACK GPS ASSEMBLY INSTRUCTIONS.** The following steps explain how to assemble the Manpack GPS radio set.

ITEM	ACTION	REMARKS
a. RT	Set FCTN switch to OFF.	See figure 5 for component location.
b. Battery (10)	Remove cover (9) from RT. Straighten battery flex (8). Position battery (10) into battery cavity of RT. Connect battery flex (8) to battery connector, so bail is laying on top of battery flex. Install cover (9).	
c. GPS adapter connector (7)	Connect to RT GPS connector (16).	
d. CDU (6)	Connect to RT AUX connector J6 (15).	
e. Antenna base (14)	Screw onto RT ANT connector (13). Hand tighten until snug.	
f. GPS antenna whip (2)	Lubricate threads with silicone compound: then install on antenna base (14).	If threads do not match, loosen hex nut on bottom of GPS antenna whip (2), and flip top and bottom threaded inserts.
g. RF cable (3)	Connect one end to GPS adapter connector (7) and other end to GPS antenna whip (2).	
h. Webbing strap (4)	Install 3 webbing straps (4) around antenna base (14) and RF cable (3).	
i. Webbing strap (5)	Install one webbing strap (5) around RT and RF cable (3).	
j. Antenna element (1)	Lubricate threads with silicone compound: then install on GPS antenna whip (2).	
k. Handset (11)	Lubricate connector o-ring with silicone compound. Connect to RT AUD/DATA connector (12).	
l. RT	Place in backpack sleeve with antenna on the left.	
m. Field pack	Tighten straps to secure RT.	

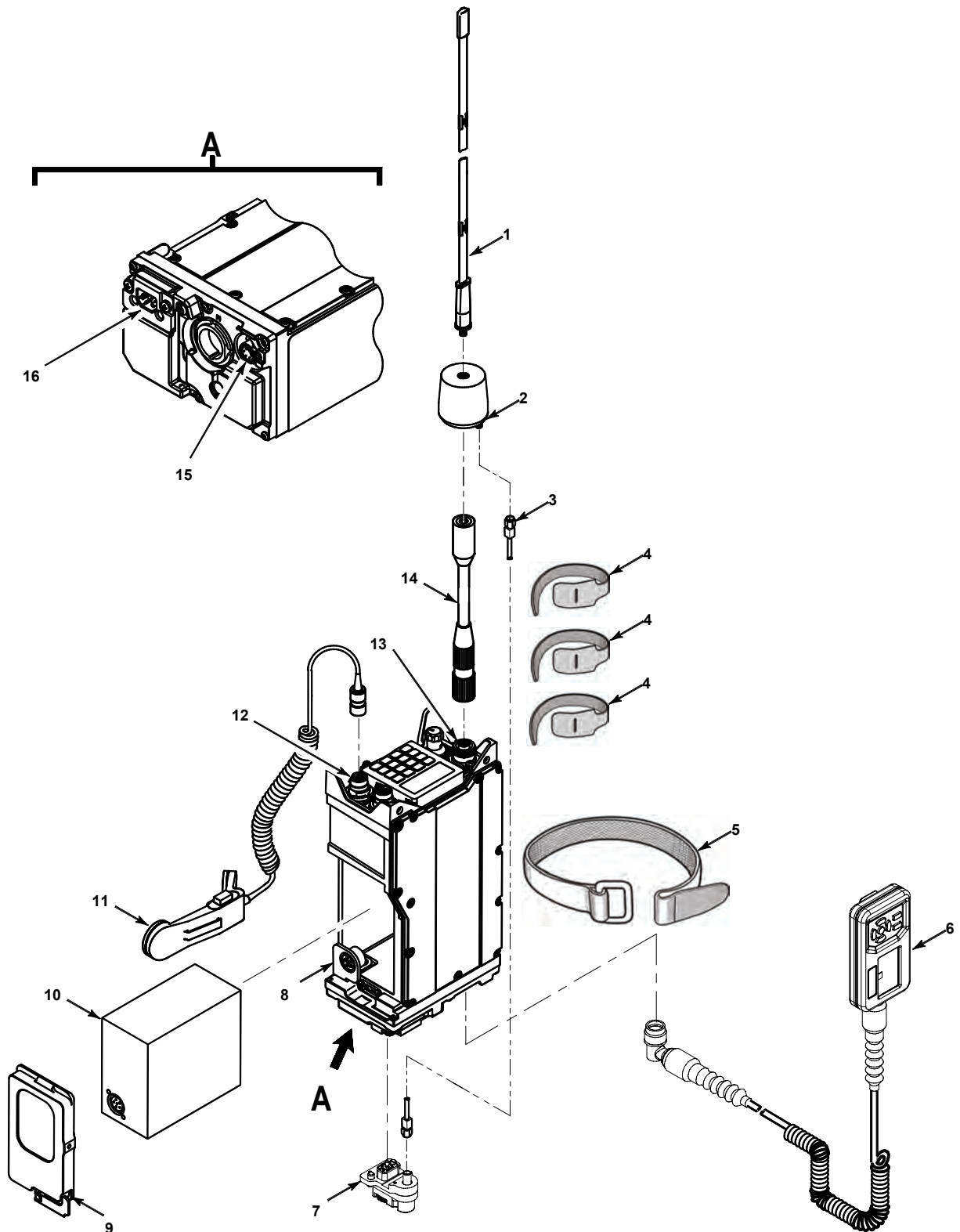


Figure 5. Manpack GPS Assembly.



9. **GPS VEHICULAR ASSEMBLY INSTRUCTIONS.** The following steps explain how to assemble the Vehicular GPS radio set.

ITEM	ACTION	REMARKS
a. VAA	Set CB1 to OFF.	See figure 6 for component location.
b. RT	Set FCTN switch to OFF.	
c. HUB insert (9)	Remove cover (8) from RT. Straighten battery flex (10). Position HUB insert (9) into battery cavity of RT. Connect battery flex (10) to HUB insert connector, so bail is laying on top of battery flex. Install cover (8).	
d. RT	Install in lower shelf (RT-A position) of VAA.	
e. CDU vehicular adapter cable P1 (4)	Connect to VAA CONTROL MONITOR connector J9 (5).	
f. CDU vehicular adapter cable P2 (7)	Connect to VAA GPS-IN connector J12 (6).	
g. CDU (2)	Connect to CDU vehicular adapter cable connector J1 (3).	
h. VAA GPS ANT connector J16 (11)	Remove protective dust cap (1).	
i. GPS Antenna	Connect GPS Antenna via RF cable to VAA GPS ANT connector J16 (11).	

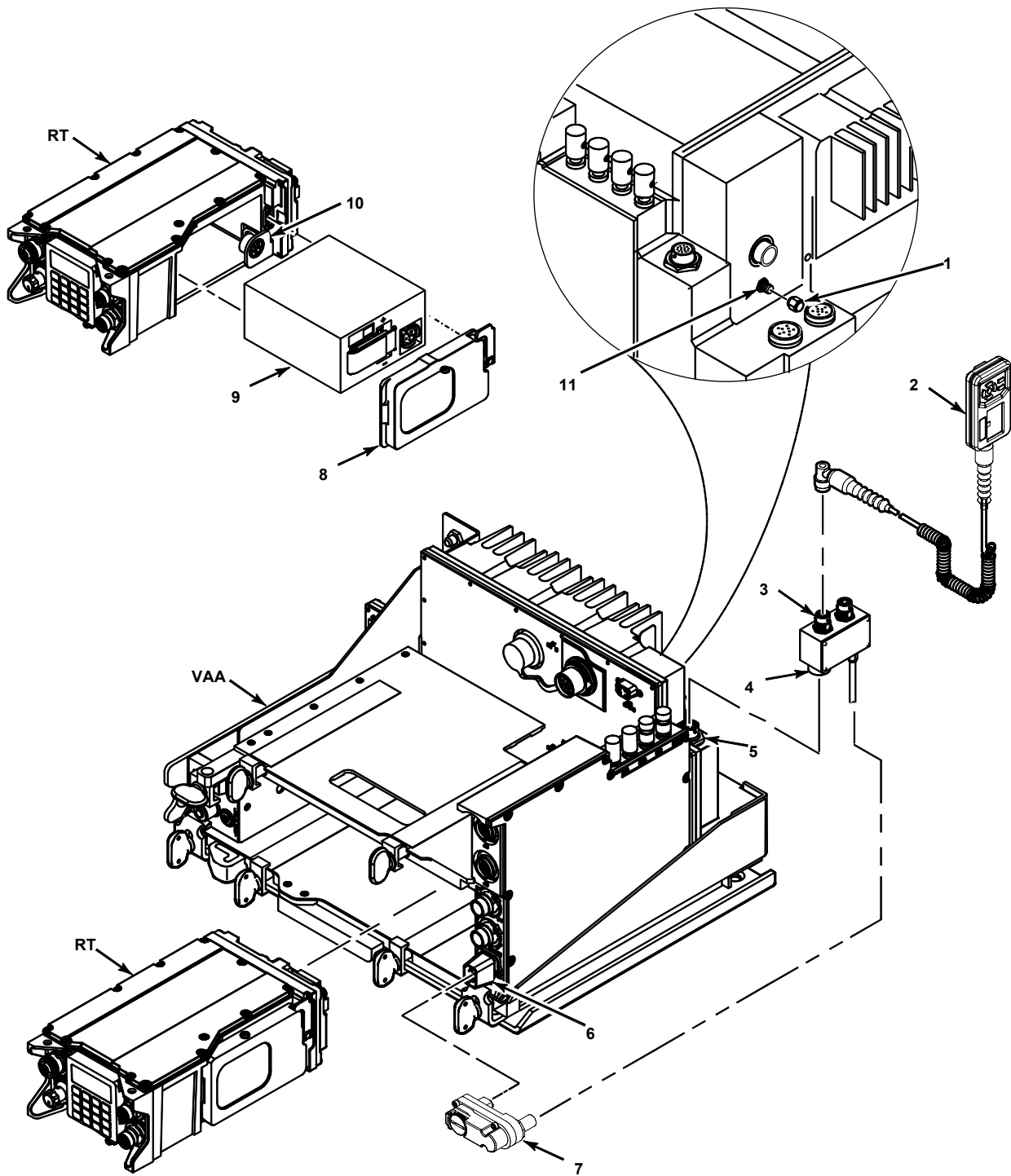


Figure 6. Vehicular GPS Assembly.

10. CDU/EGR OPERATION. Refer to TM 11-5820-890-10-8 for CDU and EGR operational procedures.

## APPENDIX A

### REFERENCES

#### A-1. **SCOPE**

This appendix lists all forms, field manuals, technical manuals, and miscellaneous publications referenced in this manual.

#### A-2. **FORMS**

DA Form 2028  
SF 364  
SF 368

Recommended Changes to Publications and Blank Forms  
Supply Discrepancy Report  
Product Quality Efficiency Report

#### A-3. **FIELD MANUALS**

FM 4-25.11

First Aid For Soldiers

#### A-4. **TECHNICAL MANUALS**

TM 11-5820-890-10-8

Operator's Manual SINCGARS Ground ICOM Combat NET Radios

TM 750-244-2

Procedure for Destruction of Electronics Materiel to Prevent Enemy Use

#### A-5. **ARMY REGULATIONS**

AR 735-11-2

Reporting of Supply Discrepancies

#### A-6. **ARMY PAMPHLETS**

DA Pam 25-30  
DA Pam 750-8

Consolidated Index of Army Publications and Blank Forms  
The Army Maintenance Management System (TAMMS)



<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> For use of this form, see AR 25-30; the proponent agency is OAASA					Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).		DATE 30 August 2002		
<b>TO:</b> (Forward to proponent of publication or form) (Include ZIP Code) Commander, US Army C-E LCMC ATTN: AMSEL-LC-LEO-E-ED Fort Monmouth, NJ 07703-5006					<b>FROM:</b> (Activity and location) (Include ZIP Code) Jane Q. Doe, SFC 1234 Any Street Anytown, AL 34565				
<b>PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS</b>									
PUBLICATION/FORM NUMBER TM 11-1234-567-14					DATE 16 Sep 2001		TITLE Operator, Field and Sustainment Support Maintenance Manual for Radio, AN/ABC-123		
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON			
1	WP0005 PG 3		2			Test or Corrective Action column should identify a different WP number.			
TYPED NAME, GRADE OR TITLE Jane Q. Doe, SFC				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION 123-4567		SIGNATURE			

EXAMPLE

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PUBLICATION/FORM NUMBER				DATE		TITLE		
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<b>EXAMPLE</b>								
<b>PART III - REMARKS</b> (Any general remarks, recommendations, or suggestions for improvement of publications and blank forms. Additional space may be used if more space is needed.)								
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PUBLICATION/FORM NUMBER			DATE		TITLE			
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ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
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