TM 11-5820-890-10-7

TECHNICAL MANUAL

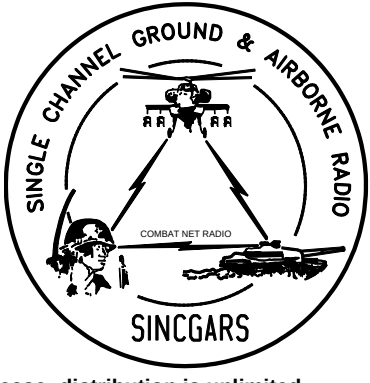
SINCGARS GROUND ICOM RADIOS

Used with
Automated Net Control Device (ANCD)
AN/CYZ-10;
Precision Lightweight GPS Receiver (PLGR)
AN/PSN-11;
Handheld Remote Control Radio Device (HRCRD)
C-12493/U;
Simple Key Loader (SKL) AN/PYQ-10

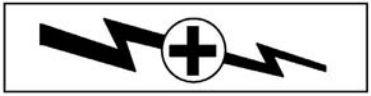
NET CONTROL STATION (NCS) POCKET GUIDE

MANPACK RADIOS
AN/PRC-119A/D/F
(NSN: N/A)(EIC: N/A)

VEHICULAR RADIOS
AN/VRC-87A/D/F
thru
AN/VRC-92A/D/F
(NSN: N/A)(EIC: N/A)



HEADQUARTERS, DEPARTMENT OF THE ARMY
1 AUGUST 2007



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.

WARNING

RECHARGEABLE BATTERIES

This includes BB-390/U Nickel-Metal Hydride (Ni-MH) and BB-2590/U Lithium-Ion (Li-Ion).

Do not leave batteries in equipment for long term storage (more than 30 days).

Charge batteries in long term storage at least annually, and charge them before inserting in equipment.

Before opening original packaging always examine the package for signs of leakage, staining or other indications of battery damage.

DO NOT use a damaged battery.

Always charge a rechargeable battery on the appropriate charger according to the dictates of the manufacturer.

NEVER disassemble, heat, burn, or incinerate these or any batteries.

CO_2 or Dry Chemical fire extinguishers are suggested for fires involving these batteries.

Turn in batteries for disposal. Dispose of them in accordance with local regulations.

WARNING

NON-RECHARGEABLE ZINC-AIR BATTERIES

This includes BA-8180/U Zinc-Air (Zn-Air).

Do not leave batteries in equipment for long term storage (more than 30 days).

Before opening original packaging always examine the package for signs of leakage, staining or other indications of battery damage.

DO NOT use a damaged battery.

Zn-Air batteries contain gelled Potassium Hydroxide (KOH) as an electrolyte. This is corrosive and will burn the skin. If it comes in contact with the skin, wash thoroughly with soap and water. If it comes in contact with the eyes, flush with copious amounts of water and seek immediate medical attention.

NEVER disassemble, heat, burn, or incinerate these or any batteries.

CO_2 or Dry Chemical fire extinguishers are suggested for fires involving these batteries.

Turn in batteries for disposal. Dispose of them in accordance with local regulations.

WARNING

LITHIUM NON-RECHARGEABLE BATTERIES

Lithium Non-Rechargeable Batteries contain a great deal of energy. They must never be charged or abused. Attempting to do so could result in leakage, fire or even an explosion.

Lithium-Sulfur Dioxide (Li-SO_2) batteries, such as BA-5590, contain a toxic, pressurized, and liquefied gas. It has a strong pungent odor. Lithium-Manganese Dioxide (Li-MnO_2) batteries such as BA-5372 (Hold Up Battery) and BA-5390 contain a flammable electrolyte. Both types of batteries contain pure Lithium which reacts violently with water.

DO NOT heat, incinerate, short circuit, puncture, mutilate or attempt to disassemble any battery.

DO NOT USE any battery which shows signs of damage, such as bulging, swelling, disfigurement, leaking or staining inside the plastic packaging. Keep all batteries in their original packaging until ready for use.

DO NOT test Lithium batteries for capacity with a test set. No external test set exists that provides a reliable result.

DO NOT store batteries in unused equipment for more than 30 days.

If a battery compartment becomes hot to the touch, if it hisses or makes a burping sound, or if you smell an irritating gas:

TURN OFF the equipment immediately and clear the area if you smell the pungent Sulfur Dioxide.

Let the equipment cool for at least an hour.

After the equipment is cool and the odor has cleared, remove the battery or batteries.

Install new battery or batteries and resume operation.

If the equipment again becomes hot to the touch, go through the above steps but do not install new batteries.

DO NOT place Lithium batteries in ordinary trash; turn them in for disposal in accordance with local regulations.

DO NOT store Lithium batteries with other hazardous materials and keep them away from open flame or heat.

DO NOT use water to fight a Lithium battery fire. This is an extremely intense fire frequently characterized by a bright red flame. Carbon Dioxide or dry chemical fire extinguishers are effective in fighting fires

of other combustibles and in keeping the batteries cool when exposed to fires in the vicinity. Sprinklers are recommended for storage areas to douse fires of other combustible materials and to keep batteries cool.

NEVER use a Halon type fire extinguisher on a Lithium battery fire. This will only increase the intensity of the fire.

In the event of a Lithium fire, immediately EVACUATE THE AREA and contact the appropriate emergency authorities. Class D fire extinguishers are to be used only by professional fire fighters.

If you experience a safety hazard or incident, notify your unit Safety Officer; file a SF 368 (Product Quality Deficiency Report); and notify the CE-LCMC Safety Office, Ft. Monmouth, NJ, DSN 987-7445 or commercial (732) 427-7445.

MANPACK LONG ANTENNA SAFETY PRECAUTIONS

WARNING

DEATH OR SERIOUS INJURY CAN OCCUR IF THE ANTENNA COMES INTO CONTACT WITH OVERHEAD POWER LINES

Never fully extend the long antenna directly under power lines. If you must fully extend the long antenna near power lines, power line poles or towers, or buildings with overhead power line connections, never come closer than two times the antenna height from the base of the power line, pole tower, or building.

Stop before you get close to the power line and check for clearance before passing. If needed, either tie down the antenna or remove the antenna to make sure that you can safely pass under the power line.

When mission permits, use the short antenna during operations on the move. If you must use the long antenna on the move, never pass under power lines if there is any doubt about overhead clearance.

For additional safety information, refer to TB 43-0129, Safety Requirements for Use of Antenna and Mast Equipment.

VEHICULAR ANTENNA SAFETY PRECAUTIONS

WARNING

DEATH OR SERIOUS INJURY CAN OCCUR IF THE ANTENNA COMES INTO CONTACT WITH OVERHEAD POWER LINES

Do not stop your vehicle under power lines.

When mobile, never pass under power lines if there is any doubt about overhead clearance.

If you are not sure that an antenna on your vehicle will clear a power line, stop before you get close to the power line and either tie down the antenna or, if necessary, remove the antenna to make sure that you can safely drive under the power line.

During cross-country operations, do not allow anyone to stick an arm, leg, or weapon over the sides of the vehicle. If your antenna accidentally touches a power line, individuals who are in contact with vegetation or the ground could suffer death or severe injury.

For additional safety information, refer to TB 43-0129, Safety Requirements for Use of Antenna and Mast Equipment.

CAUTION

SINCGARS HUB and ANCD batteries look similar and can be physically interchanged. The HUB battery is 6.5 Volts, while ANCD batteries are 3 Volts each. If three HUB batteries are mistakenly placed in an ANCD, the ANCD will be destroyed. Placing one ANCD battery in the SIP radio HUB position will cause the RT to lose its fill of data.

Be sure you know which battery you are installing. Always read the label before installing either HUB or ANCD batteries!

CAUTION

TURN RADIO OFF WHEN NOT IN USE.

Turn Loudspeaker LS-671 power switch **OFF** when radio is not in use to prevent drain on vehicle batteries.

Technical Manual
No. 11-5820-890-10-7

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 1 AUGUST 2007

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(NSN: N/A) (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), directly to: Commander, U.S. Army Communications-Electronics Life Cycle Management Command (C-E 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.

Our e-mail address is MONM-AMSELLEOPUBSCHG@conus.army.mil.

Our fax number is 732-532-1556, DSN 992-1556

Our online web address for submitting DA Form 2028 is http://edm.monmouth.army.mil/pubs/2028.html

A reply will be furnished to you.

*This manual supersedes TM 11-5820-890-10-7, dated 1 December 1998.

Distribution Statement A: Approved for public release; distribution is unlimited.

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Chapter 1. General Information

WP 0001: General Information

Purpose

To provide Net Control Station (NCS) personnel with an easy to carry, quick reference guide to assist in task performance. Using this pocket guide, NCS personnel are expected to be proficient in the performance of all operator and NCS tasks.

Scope

This Pocket Guide covers the basic SINCGARS/ANCD tasks that an NCS operator must be able to perform during field operations. It also covers use of the PLGR, HRCRD, FHMUX, EGR and CDU by an NCS. Actions to take under jamming conditions and a checklist for the NCS operator are also provided. Tasks are presented in flowchart format, with the minimum essential explanation. For NCS special purpose tasks, electronic updating and STU transfer, see SINCGARS Operator's Manual TM 11-5820-890-10-8.

Nomenclature

Sincgars radio system nomenclatures indicate which version of the RT (and VAA) is used.

RT	Type	Radio System Nomenclature
RT-1523 RT-1523A RT-1523B	ICOM	Manpack: AN/PRC-119A Vehicular: AN/VRC-87A thru AN/VRC-92A
RT-1523C RT-1523D	SIP	Manpack: AN/PRC-119D Vehicular: AN/VRC-87D thru AN/VRC-92D
RT-1523E RT-1523F	ASIP	Manpack: AN/PRC-119F Vehicular: AN/VRC-87F thru AN/VRC-92F

Auxiliary Items

The Automated Net Control Device (ANCD), Simple Key Loader (SKL) and Precision Lightweight GPS Receiver (PLGR) are to be authorized and employed in conjunction with SINCGARS.

References:
SINCGARS Operator's Pocket Guide, TM 11-5820-890-10-6
SINCGARS Operator's manual, TM 11-5820-890-10-8
PLGR Operator and Maintenance manual, TM 11-5825-291-13
ANCD (Used with SINCGARS), TB 11-5820-890-12
ANCD Operator and Maintenance manual, TB 11-5810-394-12
SKL Operator and Maintenance manual, TM 11-7010-354-12&P

END OF WORKPACKAGE

Chapter 2. Operator Tasks

WP 0002: RT-1523E/F (ASIP) Preparation Tasks

Preparation Task 1: Select RT Preparation Settings from MENU

SUBTASKS	ACTION	RESULTS
a. Set RT Volume	1. Press MENU 2. Press number key (1-9) for Vol Setting, (0) for Whisper Mode	Display shows Vol level; WHSP if 0 is entered
b. Set RT Channel	1. Press MENU (until CHAN) 2. Press number key (1-6) for Channel desired; (0) for MAN, (7) for CUE	Display shows (1-6), (M) for Manual, (Q) for CUE,
c. Set RT Power	1. Press MENU (until PWR) 2. Press CHG for desired PWR setting	Display reads (LO, M, HI, PA)
d. Set RT Mode	1. Press MENU (until MODE) 2. Press CHG for desired MODE	Display reads (SC, FH, FHM, FH2, FH2M)*
e. Set COMSEC	1. Press MENU (until CMSC) 2. Press CHG for desired CMSC setting	Display reads (PT, CT, TD, RV)

(continued next page)

f. Set Backlight	1. Place RT in SQ ON 2. Press FREQ/Backlight 3. Press CHG until desired setting	Backlight lights (4 settings Low to High, then OFF)

Default settings are:

VOL (5), CHAN (1), PWR (LO), MODE (FH), COMSEC (CT)

FH2 and FH2M are used for Enhanced Operating Mode (EOM). The RT must have FH fill for FH2 mode to be selectable. In FH2 mode, RT display shows M2. Radios must use the same FH mode to communicate, either FH or FH2.

DO NOT use FH2 or FH2M unless directed to do so.

END OF WORKPACKAGE

WP 0003: Primary NCS Tasks

Primary Task 1: **Transfer Partial COMSEC/FH Data, ANCD to ANCD***
Used to download selected COMSEC keys or FH data elements from one ANCD to another. Supplements Special Operator Task 1 which transfers complete loads.

Primary Task 2: **Transfer Selected SOI Information, ANCD to ANCD***
Used when partial SOI load is to be downloaded from one ANCD to another. Supplements Special Operator Task 2.

Primary Task 3: **Conduct Hot Start Net Opening**
Principal method used for net openings. Operators load required data and sync time, then request to enter the secure FH net.

Primary Task 4: **Conduct Cold Start Net Opening**
An alternate method for net openings in which NCS sends ERF to all net members. This method requires close coordination and correct operator actions.

Primary Task 5: **Respond to CUE Calls**
Performed when CUE message appears in NCS RT display; requires NCS to answer CUE sender and send ERF if needed.

For all tasks: RT-1523E/F Settings are set in MENU
***For SKL, see TM 11-7010-354-12&P**

Primary Task 1: Transfer Partial COMSEC/FH Data, ANCD to ANCD*

SOURCE ANCD**
1. select: Soi Radio sUpervisor
2. Send Receive Database sEtup Comsec Time
3. send to: Radio Ancd Stu Pc
4. select: Database Loadset Eset Key Time**
5. select: Loadset*** (name) ENTR
6. Do you want to include time? (Y/N)
7. Connect to ANCD and press [SEND](WAIT)****
8. Transfer successful [↓]

TARGET ANCD**
1. select: Soi Radio sUpervisor
2. Send Receive Database sEtup Comsec Time
3. receive from: Ancd Cfd Stu Pc Mx
4. select: Database Loadset Eset Key Time**
5. Connect to ANCD and press [RCV]****
6. select: Replace iNsert (data item name)*****
7. Transfer successful [↓]

***** This task is primarily used to transfer specific loadsets, Esets, keys, or time from one ANCD to another. When replacing/overwriting keys, new COMSEC and FH keys must be named the same as those to be replaced or overwritten.

****** You may select Loadset, Eset, Key, or Time. Item selected for Target ANCD must be the same as that selected for the Source ANCD.

******* Press [P UP]/[P DN] to scroll.

******** DO NOT press SEND until ready to press RCV. Press RCV within 20 seconds of pressing SEND.

********* This screen will appear only if data item name exists in Target ANCD.

Option 1A: Transfer COMSEC Key, ANCD to RT*

1. select: Soi Radio sUpervisor	5. Select key qUit (name/number) [ENTR]
2. Send Receive Database sEtup Comsec Time	6. Select key qUit (key selected) XMT
3. vG Ld Rv Ak Mk vU	7. Connect ANCD to RT** [↓]
4. select: Tek* Kek	8. Press [LOAD] on RT***

***** Caution: CUE & MAN channels use COMSEC key stored in Chan 5.

****** Set RT FCTN to LD. (This procedure may be used to transfer COMSEC keys to KYK-13 and other COMSEC devices.)

******* RT display will show H TEK; press STO, then CHAN in which you want to store the COMSEC key.

Option 1B: Designate New Default Loadset

1. select: Soi Radio sUpervisor	4. select: Loadset None
2. Send Receive Database sEtup Comsec Time	5. select: Loadset (name)[ENTR] (DI)**
3. select: iCom* Nonicom	6. ICOM Fill will now load new DI loadset.

***** ICOM is also selected for RCU.

****** Loadsets are identified with "D" indicating default loadset, followed by "I" for ICOM or "N" for Non-ICOM.

Option 1C: Change Eset in One Channel

1. select: Soi Radio sUpervisor	6. select: Eset qUit
2. Send Receive Database sEtup Comsec Time	7. select: Eset (name)**[ENTR]
3. select: Display Modify Remove Copy bUild	8. Modify another loadset element? (Y/N)
4. select: Loadset (name)[ENTR] (DI)	9. select: Replace iNsert (name)
5. Replace Delete ESET#: (name)*[ENTR]	

***** Select the Eset you wish to replace.

****** Select your replacement Eset by name.

Primary Task 2: Transfer Selected SOI Information, ANCD to ANCD*

SOURCE ANCD	TARGET ANCD
1. select: Soi Radio sUpervisor	1. select: Soi Radio sUpervisor
2. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo	2. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo
3. select: Choose Send Receive	3. select: Choose Send Receive
4. Scroll **(↑/↓)** and press ENTR to select SOI [↓]	4. receive from: Ancd Pc Broadcast
5. SOI Set: (name/nr) Edn: (name/tp)	5. Connect ANCD to ANCD [↓]
6. Do you want to transfer QREF?** (Y/N)	6. Press [RCV] to receive***
7. Do you want to specify groups to send? (Y/N)	7. Processing. Please wait (shows nr of bytes sent)
8. Scroll **(↑/↓)** and press ENTR to select groups	8. Receive operation was successful [↓]
9. 1 groups selected Keep selecting? (Y/N)	
10. Do you want to specify a time pd to send?(Y/N)	
11. Enter Time Pd (#-#) => ##	

(See Notes next page)
(Source ANCD steps continue next page.)

12. Include Suffix & Smoke/Pyro data? (Y/N)
13. Send to: Ancd Pc Broadcast
14. Do you want to save this new SOI set? (Y/N)
15. New SOI set name: => ??????????
16. Connect ANCD to ANCD [↓]
17. (WAIT)*** Press [SEND] to send
18. Processing. Please wait (shows % of bytes sent)
19. Sending of SOI data is completed [↓]

(Source ANCD steps continued)

***** For transfer of QREF file from ANCD to ANCD, use Operator Special Task 2 procedure.

****** If this screen appears, enter NO. Either the set or QREF may be transferred, but not both at one time.

******* DO NOT press SEND until ready to press RCV. Press RCV within 20 seconds of pressing SEND.

Primary Task 3: Conduct Hot Start Net Opening

SUBTASK	ACTION	RESULT
a. Load NCS RT w/COMSEC/FH data and time*****	(See Opr Primary Task 2 for ICOM Fill Procedure)	COMSEC/FH data and time are loaded into all 6 RT channels******
b. Load net RTs w/COMSEC/FH data and time	Direct net members to perform Opr Primary Task 3 (Hot Start)*******	Net member RTs are prepared to enter FH, CT net upon request
c. Admit member sto net	Respond to call in FH, CT mode	Hot Start net opening is complete

***** If ANCD message "RT cannot accept time from ANCD" appears during ICOM fill procedure, go to Operator Primary Task 3, perform Subtasks "c" and "d", then standby while members request net entry.

****** ANCD or SKL converts current date to two-digit Julian Date.

******* Unit SOP should specify whether net RTs are loaded by individual operators, communications specialists or designated unit NCOs.

Primary Task 4: Conduct Cold Start Net Opening

SUBTASK	ACTION	RESULT
a. Load NCS RT with data	1. Load CUE, MAN, and SC freq as required	Perform Primary Opr Task 1
	2. Load COMSEC, FH data, sync time	Perform Primary Opr Task 2
b. Set proper RT controls	Set: CHAN to MAN MODE to FH-M COMSEC to CT FCTN to LD	Prepares NCS radio for alert of net members
c. Alert Oprs that net will open at prescribed time	1. Announce time net is to be opened	Gives Oprs time to load COMSEC/FH
	2. Alert net for ERF on MAN, using CT	Alerts Oprs to stand by for receipt of ERF
	3. Direct Alt NCS to follow up*	NCS focus is on Oprs who respond
d. Send ERF	1. Press LOAD	Causes RT to obtain data from memory
	2. Enter Chan in which data is stored	Display shows "HF xxx," blinks, beeps
	3. Press ERF	Display shows "SEND"
	4. Press STO and CHAN # to store*	Display shows “STO_,” “STO x,” beeps
e. Confirm receipt	1. Allow Oprs time to store the ERF	N/A

SUBTASK	ACTION	RESULT
	2. Direct Oprs ACK receipt and storage	NCS and Oprs continue to use MAN in CT
f. Perform Comm. check	1. Direct Oprs go to Opnl Chan, SQ ON	Net goes to FH mode of communications
	2. Check comm with net members	Note which Oprs do not respond
	3. Direct Alt NCS to enter other net oprs**	FH SINCGARS net is now open

***** An alternate procedure is to move the FCTN switch from LD to SQ ON.

****** For various reasons, some net operators may not be available, or ready, to receive and store the Cold Start net opening ERF at the time specified by the NCS. Unit SOP should require one or more Alternate NCS to monitor the Cold Start net opening, note which operators do not enter at the prescribed time, and when possible, bring each into the FH, secure net.

Primary Task 5: Respond to CUE Calls

SUBTASK	ACTION	RESULT
a. Note "CUE" in RT display	1. Switch to CUE channel	Caller CUEs in PT, listens in CT
	2. Call CUE caller on CUE freq, in CT	QUE caller gets response
	3. Direct CUEer to go to MAN/CT	
	4. Determine CUE caller's need	Authenticate if required
	5. Provide ERF if appropriate	If CUEer wishes to enter net
	6. Return: to Opnl Channel	
	7. Displace if Enemy has DF capability	CUE and MAN freqs can be DF'd
b. Have Alt NCS Reply to CUE calls	1. Continue to control the net	NCS primary responsibility
	2. Ensure Alt NCS takes above steps*****	Alt responds, then displaces

***** To send an ERF, the Alt NCS must go to FH-M. The Alt NCS may use FH-M on MAN (SC freq) while the NCS continues to use FH-M on a FH channel. But, it is important for the Alt NCS to switch to the MAN channel before changing to FH-M, and equally important for the Alt NCS to switch back to FH before returning to the operational channel.

END OF WORKPACKAGE

WP 0004: PLGR Tasks

PLGR Task 1: Obtain Date and GPS Zulu Time from PLGR

SUBTASKS	ACTION	RESULT
a. Place PLGR into operation	1). Press PLGR [ON] key	Power is applied to the PLGR
	2). Observe PLGR perform self-test	No action required of operator
b. Select proper screen and TFOM	1). At end of self-test, note this screen***** >>>	FIX****** FOM 5 18T MGRS-New WK 82223e 63528n EL-00027m ↑/↓ P
	2). Press down arrow on PLGR, and note this screen >>>	2124:43Z TFOM 4******* 25-12-95 SUN Speed too slow GS < 1mph ↑/↓ P
c. Read date and time from PLGR screen	1). Read date as 25-12-95********	N/A
	2). Read time as 2124, 43 sec, Zulu	PLGR Task 1, Obtaining Date & Time, completed

***** In this section, PLGR screens are shown in double lined boxes.

****** A battery powered PLGR will automatically go to standby as soon as satellites have been acquired.

******* Time Figure of Merit (TFOM) of 8 or less indicates that PLGR is tracking at least one satellite and GPS time is accurate.

******** When the date read from the PLGR is entered into the ANCD or SKL, it is automatically converted to the two-digit Julian Date needed for SINCGARS sync time.

PLGR Task 2: Manually Load PLGR Date and Zulu Time into ANCD

SUBTASKS	ACTION	RESULT
a. Determine GPS date and Zulu time	1). Perform PLGR Task 1 as shown above	N/A
	2). Read date and time from PLGR (with TFOM of 8 or less)	2124:43Z TFOM 4 25-12-95 MON Speed too slow GS < 1mph ↑/↓ P
b. Prepare ANCD for	1). Turn ANCD ON	select: Soi Radio sUpervisor
	2). Enter: SUPERVISOR	Are you authorized to use this feature? (Y/N)
	3). Respond: YES	WARNING – This could cause data loss. [↓]
	4). Press down arrow [↓]	Are you sure you want to continue? (Y/N)
	5). Respond YES	Appl Date Time Setup Util Bit {MAIN}
c. Load new date and time	1). Enter: DATE	Date is Mon 12-25-1995 New mm-dd-yy:
	2). Enter new date as mm-dd-yy	Date is Mon 12-25-1995 New mm-dd-yy:12-25-95
	3). Press: ENTR	Appl Date Time Setup Util Bit {Main}

SUBTASKS	ACTION	RESULT
	4). Enter TIME	Time is 14:53:27 New hh:mm:ss:
	5). Enter new time as hh:mm:ss*****	Time is 14:53:27 New hh:mm:ss:21:25:00
	6). When PLGR reads 25:00, press ENTR	Appl Date Time Setup Util Bit {MAIN}
	7). Enter APPL	SOI RADIO RDS
	8). Enter RDS	select:****** Soi Radio sUpervisor

***** Enter one minute beyond PLGR time and wait until PLGR seconds reach 00 to press ENTR on ANCD. Because the ANCD requires time to load, you may find that pressing ENTR on the ANCD when PLGR time reads :59 gives you a more accurate entry.

****** To check the accuracy of your ANCD time entry, enter RADIO, then TIME. You can then read ANCD time in running format and compare it with running time in the PLGR. If the two times are more than one second different, reload PLGR time into your ANCD.

PLGR Task 3: Electronically Load PLGR Date and Time into RT

SUBTASKS	ACTION	RESULT
a. Prepare PLGR for task	1). Turn PLGR ON	N/A
	2). Observe PLGR self-test	N/A
	3). Note this PLGR screen >>>	FIX FOM 5 18T MGRS-New WK 82223e 63528n EL-00027m ↑/↓
	4). Press PLGR MENU key twice; note this screen >>>	DATA-XFR SV-SEL DOP-CALC ALERTS SINCGARS KOI-18 <more>P
	5). Press PLGR right arrow 4 times to Highlight SINCGARS	DATA-XFR SV-SEL DOP-CALC ALERTS SINCGARS KOI-18 <more>P
	6). Press PLGR down arrow to select SINCGARS	SINCGARS Start time fill ACTIVATE QUIT
	7). Press left arrow to highlight ACTIVATE (Do NOT press [↓] yet)	SINCGARS Start time fill ACTIVATE QUIT
b. Prepare RT for transfer	1). Connect PLGR to RT AUD/FILL	N/A
	2). Set RT FCTN to LD	N/A

SUBTASKS	ACTION	RESULT
c. Perform date/time Transfer from PLGR to RT	1). Press PLGR down arrow to select ACTIVATE	SINCGARS Press LOAD key on radio QUIT
	2). Press LOAD on SIP/ASIP RT	SINCGARS time fill successful QUIT
	3). Press PLGR down arrow to select QUIT	Date/time transfer is completed

PLGR Task 4: Load PLGR Key from ANCD into PLGR*

SUBTASK	ACTION	RESULT
a. Prepare PLGR	1). Turn PLGR ON	N/A
	2). Observe PLGR self-test	N/A
	3). Note when this screen appears >>>	FIX FOM 5 18T MGRS-New WK 82223e 63528n EL-00027m ↑/↓ P
	4). Connect W4 to PLGR, but NOT to ANCD yet	N/A
b. Prepare ANCD	1). Turn ANCD ON	select: Soi Radio sUpervisor
	2). Enter RADIO	Send Receive Database sEtup Comsec Time
	3). Enter COMSEC	vG Ld Rv Ak Mk vU
	4). Enter LD	select: Tek Kek
	5). Enter TEK, press PgDN; ENTR	Select key qUit (name/number)
	6). Press PgUP/DN to view, then ENTR	Select key qUit (PLGR key name) XMT
	7). Enter QUIT	Connect ANCD to RT (WAIT)* [↓]

SUBTASK	ACTION	RESULT
c. Load key	1). Press [↓], Do not connect to RT**	Press [LOAD] on RT***
	2). Now connect W4 to ANCD	Key loaded

***** For SKL, see TM 11-7010-354-12&P.

****** Do not connect W4 to ANCD until directed to do so by the ACTION column. Sequence of task requires that you connect W4 to PLGR, select key to be transferred, and then connect the W4 to the ANCD. When you connect the W4 to the ANCD, the PLGR key is immediately transferred.

******* Ignore this reference to the RT; only the ANCD and PLGR are involved for this task.

END OF WORK PACKAGE

SUBTASK	ACTION	RESULT
a. Set POWER switch.	Set POWER switch to ON.	Power indicator illuminates continuously. The 4 BIT indicators should blink for 5 seconds after Power ON, then extinguish.*****
b. Set RADIO PRIORITY switch.	Set RADIO PRIORITY switch to*:	
	EQUAL	All connected RTs have equal communications priority.
	or 1A	RT 1A has highest communications priority.
	or 1B	RT 1B has highest communications priority.
	or 2A	RT 2A has highest communications priority.
	or 2B	RT 2B has highest communications priority.
	or RXMT (1A+1B)	RTs 1A and 1B have highest communications priority (retransmit).

*****For any other indication, call Unit level maintenance.

******Select the RADIO PRIORITY switch position based on the desired operating scenario (which radio, if any, should get highest communications priority).

END OF WORKPACKAGE

WP 0006: EGR Tasks

EGR Task 1: Load Combat Identification

SUBTASK	ACTION	RESULT
a. Set RT to receive load	Set RT FCTN to LD	N/A
b. Select CID*	Press CID/8 key on RT	RT display shows: NO ID or CID.
c. Clear RT display	Press CLR on RT keypad	RT displays: - - - - -
d. Enter the CID Number*	Press five keypad number buttons to enter CID	RT displays shows CID number (e.g.: 12345).
e. Store the CID in the RT	Press STO on RT	RT display will blink and change to CID. CID number will not be displayed again.

*Your CID will be established by unit SOP.

EGR Task 2: Enable GPS

SUBTASK	ACTION	RESULT
a. Verify RT is in CT mode	Observe RT display	Display reads CT. If not, set up the RT for CT operation.
b. Show GPS mode	Press GPS/5 on RT keypad	RT display shows OFF, AUTO, PER, or MOV*. (OFF indicates GPS is OFF. AUTO, PER, and MOV turn GPS on. AUTO transmits your position with each message. PER transmits your position with each message or if a transmission has not occurred with the previous two minutes. MOV transmits your position with each message or if your RT has moved a minimum distance since the last transmission. The MOV distance is 100 ± 10 meters in manpack or 300 ± 30 meters in vehicular configuration.)
c. Set GPS mode	Press CHG/7 on RT keypad, as often as needed	RT display will change to OFF, AUTO, PER, or MOV.

* "–" means no GPS synchronization (e.g. "–AUTO")

EGR Task 3: Enable Situation Awareness

SUBTASK	ACTION	RESULT
a. Verify RT is in CT mode	Observe RT display	Display reads CT. If not, set up the RT for CT operation.
b. Show SA mode	Press SA/6 on RT keypad	RT display shows OFF or ON. A "– " indicates no GPS sync, it goes away when you have GPS sync.
c. Set SA mode	Press CHG/7 on RT keypad, as often as needed	RT display changes to ON.

EGR Task 4: Load EGR Key from ANCD into EGR

SUBTASK	ACTION	RESULT
a. Prepare RT to load key	1. Set FCTN to LD	N/A
	2. Set COMSEC to CT	N/A
	3. Set MODE to FH	N/A
	4. Connect GPS Fill Cable (W20) to RT only	N/A

SUBTASK	ACTION	RESULT
b. Prepare ANCD to load key	1. Turn ANCD ON	select: Soi Radio sUpervisor (NOTE: ANCD may go directly to next display.)
	2. Enter RADIO	Send Receive Database sEtup Comsec Time
	3. Enter COMSEC	vG Ld Rv Ak Mk vU
	4. Enter LD	select: Tek Kek
	5. Enter TEK, press PgDN and ENTR to select	Select key qUit (name/number)
	6. Press PgUP/ PgDN to view, ENTR to select	Select key qUit (GPS key name) XMT
	7. Enter QUIT	Connect ANCD to RT [↓] (NOTE: Do not connect cable W20 to ANCD until directed to do so in step c2 below.)

c. Transfer key from ANCD to EGR	1. Press [↓]	Sending TEK XXXX
		Press [LOAD] on RT
	2. Connect GPS Fill Cable (W20) to ANCD	
	3. On RT, press GPS, LOAD, CHG, and LOAD	Key loaded
		RT display shows “WAIT” then “DONE”. The RT will display “WAIT” for several seconds.
	4. Turn ANCD OFF	
	5. Disconnect W20	

EGR Task 5: Obtain Date and GPS Zulu Time from EGR

SUBTASK	ACTION	RESULT
a. Set RT to receive load	Set RT FCTN to LD	N/A
b. Select GPS	Press GPS/5 key on RT	RT display shows AUTO, PER, or MOV. (NOTE: If display shows –AUTO, –PER, or –MOV, GPS time may not be available.)
c. Select time	Press TIME on RT	N/A
d. Store time in RT	Press STO key on RT	RT display shows GPS date (e.g.: 33G).

END OF WORKPACKAGE

CDU Task 1: RT Control

Description: Allows the operator to set the following RT functions: channel, RF power, SC/FH, and PT/CT.

Detailed Procedure:

1. Set the RT FCTN switch to REM.
2. Observe CDU display.
3. Using UP (▲) and DOWN (▼) keys, select the RT control field. The selected field is boxed.

NOTE: If necessary, use ESC Key as needed to return to main display.

4. Press ENT to enter RT control.
5. Use UP (▲) and DOWN (▼) keys, select the RT control function: CH, PWR, Mode (SC,FH,FH/M), CT/PT.
6. As each function is selected, the selection is highlighted (boxed). Press the ENT key to select it for editing. It will now be displayed in reverse video.
7. Change the setting by using any arrow key to scroll through the available settings. Press ENT to store. At any point, use the ESC key to return to the previous condition.

CDU Task 2: Local Position Display and Copy

Description: Shows the present position of the RT according to the military grid reference system (MGRS).

Detailed Procedure:

1. Verify that GPS is not OFF. (See EGR Task 2.)

Observe CDU display.

Local Position Field

2. Using UP (▲) and DOWN (▼) keys, select the local position field. The selected field has a highlighted border.

NOTE: If necessary, use ESC key as needed to return to main display.

3. Either a local position (POS) or a Waypoint (WP) display is available in the second field. Use the ENT and arrow keys to select POS.

5. When the local position display (POS) is selected, the down arrow (▼), followed by the ENT key may be used to copy the local position into memory for pasting into a waypoint. The entire field will change to reverse video when the down arrow (▼) is pressed.

CDU Task 3: Waypoint Display

Description: Shows the waypoint solution to the last selected waypoint. Waypoints are selected and created in CDU Task 5, Navigation Display.

Detailed Procedure:

1. Verify that GPS is not OFF. (See EGR Task 2.)

Waypoint Display

2. Observe CDU main display.

3. Using UP (▲) and DOWN (▼) keys, select the second field. The selected field has a high-lighted border.

NOTE: If necessary, use ESC key as needed to return to main display.

4. Either a local position (POS) or a waypoint (WP)display is available in this box. Use the ENT and arrow keys to select WP.

CDU Task 4: Keypad Display

Description: This task allows the operator to access all RT control functions from the CDU.

Detailed Procedure:

1. Set the RT FCTN switch to REM.
2. Observe CDU main display.

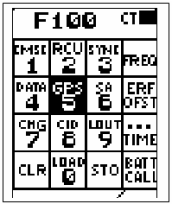
NOTE: If necessary, use ESC key as needed to return to main display.

3. Using UP (▲) and DOWN (▼) keys, select the MENU display field. The selected field is boxed. Press the ENT key to go to the menu.

4. The selected menu item is boxed. using UP (▲) and DOWN (▼) keys, select KEYPAD.

5. Press ENT key. The keypad is displayed.

6. Use the arrow keys and the ENT key to select the keypad controls. The ESC key will always return you to the previous condition. The selected control is highlighted in reverse video. To activate the selected control, press ENT.



NOTE: The display will time out in a few seconds if the keypad is inactive. If this happens during a key procedure, you must begin again.

CDU Task 5: Navigation Display

Description: This task allows the operator to access all RT control functions from the CDU.

Detailed Procedure:

1. Verify that GPS is not OFF. (See EGR Task 2.)

2. Observe CDU display.

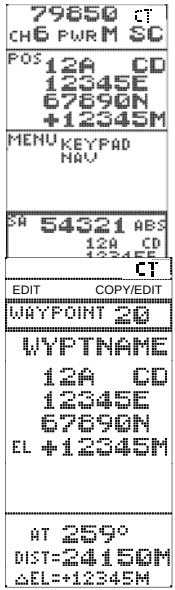
3. Using UP (▲) and DOWN (▼) keys select the MENU field. (The selected field is boxed.)

NOTE: If necessary, use ESC key as needed to return to main display.

4. Press ENT. The selected menu item is boxed. Using UP (▲) and DOWN (▼) keys, select NAV.

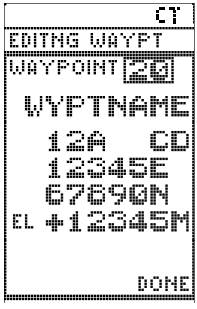
5. Press ENT key. A waypoint is displayed. Press ENT again to change waypoint number.

NOTE: The navigation solution to the waypoint, shown on the bottom of the display, is automatically updated every six second to provide "real time" navigation.

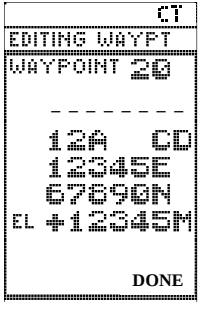


6. To change the waypoint, (#, name, and coordinates), select EDIT using the ARROW and ENT keys (step 7). To paste a previously copied position (Local or SA), and thus find the navigation solution to arrive at that waypoint, select COPY/EDIT using the arrow keys (step 8). The new position will appear in the display.

7. If EDIT was selected, the waypoint number is boxed. The highlighted field is selected for editing by pressing the ENT key which causes the first character of the field to change to reverse video, indicating the character can be edited. The UP (▲) and DOWN (▼) arrow keys are used to scroll to a new alpha or numeric character, while the LEFT (◄) and RIGHT (►) arrow keys are used to select the other characters in the field. Once a selected data field is edited, pressing the ENT key stores the data in that field and selects the next field. Pressing ENT while DONE is boxed stores all edits.



8. When COPY/EDIT is selected, a previously copied position (Local or SA) is displayed. Press ENT to further edit the waypoint (see step 7). Pressing ENT when DONE is boxed stores all edits and returns to the new navigation solution. Pressing ESC at any time during waypoint copy/edit returns to the previous condition and/or restores the original waypoint data.



CDU Task 6: Situational Awareness Display and Copy

Description: This task allows the operator to view either the current RT position or the position of the originator of the last transmission received. The position may be copied for pasting into a waypoint.

Detailed Procedure:

1. Verify that SA is not OFF. (See EGR Task 3.)
2. Observe CDU display.
3. Using UP (▲) and DOWN (▼) arrow keys, select the SA display field. The selected field has a highlighted border.

SA Display

NOTE: If necessary, use ESC key as needed to return to main display.

4. Press ENT to enter Situational Awareness (SA) display.
5. The default selection is ABS (absolute), which is the actual location of the respective RT. The selection of REL (relative) gives a navigational solution to the location of the respective RT. The operator may toggle between ABS and REL using the ENT, UP (▲), LEFT (◄), and RIGHT (►) arrow keys. The navigation solution provided by the REL display option is updated every six seconds to provide real-time tracking of received positions while the RT is moving.
6. The DOWN (▼) arrow and ENT key may be used to copy the SA position into memory for pasting into a specific waypoint. The entire field will change to reverse video when the DOWN (▼) arrow is pressed.

END OF WORKPACKAGE

WP 0008: RECAP OF PRIMARY OPERATOR TASKS

For all tasks: RT-1523E/F Settings are set in MENU
For SKL, see TM 11-7010-354-12&P

Primary Task 1: Load Single Channel Frequencies into Radio

ACTION	RESULT
1. Obtain required frequencies from ANCD or SKL*****	Load CUE only if directed.
2. Set RT to CT, SC, LD, and CHAN to MAN/CUE/or 1-6	N/A
3. Press FREQ, CLR, XXXXX, and STO	Display shows 00000/30000, -----, XXXXX, & blinks (data is stored)
4. Repeat: Step 3 for each freq	(As directed by NCS or SOP)
5. Set FCTN to SQ ON	SC freq loading is complete

***** In units using CT, FH nets, Oprs normally load only a MAN freq routinely. CUE and SC freqs for Chan 1-6 are loaded only as needed.

Primary Task 2: Load COMSEC/FH Data/Sync Time Using ANCD*

NOTE: Set RT controls to CT, LD, FH, MAN, and DATA OFF. (There is no requirement to clear a COMSEC alarm.) RT settings for RT-1523E/F are set via MENU

1. select: Soi Radio sUpervisor	6. Set FCTN switch to LD on RT [↓]
2. Send Receive Database sEtup Comsec Time	7. Do you want to include time?*** (Y/N)
3. send to: Radio Ancd Stu Pc	8. Press [LOAD] on RT
4. select:** iCom Nonicom Abn Rcu Haveq	9. Transfer in progress/ Transfer successful
5. Connect to RT AUD/FILL Connector [↓]	10. RT cannot accept time from ANCD****

* This ICOM Fill procedure loads the radio with COMSEC keys, FH data, and sync time for all six SINCGARS channels.

** Select "Rcu" to fill an RCU, C-11561, with COMSEC keys. Procedure is the same as that shown for "iCom."

*** Load time as part of ICOM Fill during net openings and Hot Start Late Net Entry only, not net updates.

**** If this message appears, load date and time manually.

Primary Task 3: Perform Hot Start Net Opening

1. Load RT w/COMSEC/FH, Date and Time*	2. Call NCS and request to enter CT, FH net

*If message "RT cannot accept time from ANCD" appears, set FCTN to LD and go to steps 3 & 4 to load time.

3. Load Julian Day in RT** (Read down this column)	4. Load Sync Time in RT (Read down this column)
select: Soi Radio sUpervisor	Julian Day: X X [↓]
Send Receive Database sEtup Comsec Time	ANCD Time: (running) HH:MM:SS (22:45:15)
Julian Day: X X [↓]	Press TIME on RT; Display shows "HH MM"
Press TIME on RT; Display shows "D D"	Press CLR on RT; Display shows "_ _ _ _"
Press CLR on RT; Display shows "_ _"	Enter HH from ANCD; Display shows "HH"
Enter X X (JD) in RT; Display shows "X X" (JD)	Enter MM (min ahead of ANCD) Display shows "HH MM"
Press STO on RT; Display blinks and JD is stored	Press STO when ANCD MM:SS are same as RT MM:SS***

** Use ANCD or other time standard.

*** Time stored in RT should be within 1 sec of that in ANCD; if not, repeat proceddure.

Primary Task 4: Perform Passive Late Net Entry

1. Press FREQ Display shows "F XXX"	3. Wait for traffic***** Display shows "F XXX" (No L)
2. Press SYNC Display shows "LF XXX"	4. Call NCS and re-enter net (Passive LNE is complete)

***** Do NOT PTT while waiting; if no traffic after 3 min, use CUE and ERF LNE or Hot Start method of net entry.

Primary Task 5: Obtain SOI Information from ANCD (QREF in ANCD)

1. To look at any of the QREF items, perform the following steps:

1. select: Soi Radio sUpervisor	2. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo

2. QREF displays up to 40 items from Net, sufX, Pyro, or C/s, available by scrolling. For each net stored as QREF items, the following information is available to the QREF user: net name, CUE frequency, MAN frequency, time period, call sign, net ID, and call word. To view items in Group, Tmpd, Set, Find, and Memo, as extensions of QREF entries, return to the main SOI menu and select the type of information needed. In viewing QREF or extension entries, be sure you have the correct time period selected.

3. Rules to remember in obtaining SOI information from the ANCD:

ABORT	Causes ANCD to return to SOI menu
Arrow down (shown as [↓])	You must press the down arrow to go to next screen
Arrow right/arrow left	Allows viewing of additional information and return

Arrow up/arrow down	Allows viewing of each item
DELETE	To delete SOI set, enter SOI, then Set, and press DELE key
ENTER (shown as [ENTR])	Causes activation of the entry you have selected
Hot keys	Capital letter of selection (e.g., sufX). Allows direct shift from QREF to full SOI file category.
"J" key (for JUMP)	In Find, causes ANCD to continue search for next item
"K" key (for KEEP)	Causes item being viewed to be stored in QREF file
MAIN MENU	Returns you to SOI/RADIO/SUPERVISOR menu
PgUP/PgDN	Moves to top or bottom of list
ZERO (red button)	Used in combat emergency only; DO NOT use for deletions

4. Examples of information available in a full SOI information file are:*****

a. GROUP: (Group)

1. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo	2. TO1 Set:52ID DEM 003 003 52ID SPT

***** Once a time period has been selected, the same time period will appear each subsequent time the ANCD is turned on. Thus, you need to change the time period only when advancing to the next day. To change the time period, enter SET and make time period selection.

b. NET: (Net)

1. qRef Group <u>Net</u> sufX Pyro Tmpd Set C/s Find Memo	3. TO6 1-4 FA BN W7T Callwrd: BULLDOG****
2. TO6 1-4 FA BN W7T C81975 M74800 0424	

**** Callword is obtained by pressing right arrow; then left arrow to return to NET display.

c. SUFFIX: (sufX)

1. qRef Group Net <u>sufX</u> Pyro Tmpd Set C/s Find Memo	2. Commander 02 COFS/XO 27

d. PYRO: (Pyro)

1. qREf Group Net sufX <u>Pyro</u> Tmpd Set C/s Find Memo	3. Safe to land or drop supplies here****
2. GREEN SMOKE**** [↓/→] ****Press right arrow to obtain explanation; left arrow to return to Pyro menu.	

e. TIME PERIOD: (Tmpd)

1. qRef Group Net sufX Pyro <u>Tmpd</u> Set C/s Find Memo	2. Enter Time Pd: => # #

f. SET: (Set)

1. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo	3. Scroll ↑/↓, press ENTR to select set [↓]
2. select: Choose Send Receive	4. Set: (name/nr) Edn: (name/tp) [ENTR]

g. SIGN/CNTRSIGN: (C/s)

1. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo	2. TO1 Sign: HARDWOOD Cntrsign: SNEAKER

h. FIND: (Find)

1. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo	2. Find: Net nEtid Sfx Word Clsgn Grp gRp# Des Frq

i. MEMO:* (Memo)

1. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo	2. Memo: 1- 2- 3- 4-

* Four memos may be 6 lines, 22 spaces each; part of QREF/SOI transfer

END OF WORKPACKAGE

WP 0009: Recap of Special Operator Tasks

Special Task 1: Transfer COMSEC/FH Data, ANCD to ANCD

SOURCE ANCD	TARGET ANCD
1. select: Soi Radio sUpervisor	1. select: Soi Radio sUpervisor
2. Send Receive Database sEtup Comsec Time	2. Send Receive Database sEtup Comsec Time
3. send to: Radio Ancd Stu Pc	3. receive: Ancd Cfd Stu Pc Mx
4. select: Database***** Loadset Eset Key Time	4. select: Database Loadset Eset Key Time
5. Do you want to include time? (Y/N)	5. Want to delete******* FH & COMSEC data? (Y/N)
6. (WAIT)****** Connect to ANCD and press [SEND]	6. Connect to ANCD and press [RCV]
7. Transfer in progress/ Transfer successful	7. Transfer in progress/ Transfer successful

***** You must enter "DATABASE" to proceed.

****** DO NOT press [SEND] until you are ready to press [RCV]. Then press [RCV] within about 20 seconds of pressing [SEND].

******* You must enter "YES" to proceed.

NOTE:

You can clear your ANCD of COMSEC/FH data by performing Target ANCD Steps 1-5, above, and pressing ABORT.

Special Task 2: Transfer QREF SOI Information, ANCD to ANCD***

SOURCE ANCD
1. Select: Soi Radio sUpervisor
2. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo
3. Select: Choose Send Receive
4. Scroll (↑/↓) & press ENTR to select Set [↓]
5. Set: (name/nr) Edn: (name/tp)
6. Do you want to transfer QREF?* (Y/N)
7. Send to: Ancd Pc Broadcast
8. Connect ANCD to ANCD [↓]
9. Press [SEND] to send (WAIT)**
10. Processing. Please wait (shows % of bytes sent)
11. Sending of SOI data is completed [↓]

TARGET ANCD
1. Select: Soi Radio sUpervisor
2. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo
3. Select: Choose Send Receive
4. Receive from: Ancd Pc Broadcast
5. Connect ANCD to ANCD [↓]
6. Press [RCV] to receive**
7. Processing. Please wait (shows number sent)
8. Receive operation was successful [↓]

***** You must select YES.
****** DO NOT press SEND until ready to press RCV; then press RCV within 20 seconds of pressing SEND.
******* See Opr Special Task 2 (Alt) if full SOI data is required.

Special Task 2 (Alt): Transfer Full SOI Information, ANCD to ANCD

SOURCE ANCD
1. select: _Soi Radio sUpervisor
2. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo
3. select: Choose Send Receive
4. Scroll (↑/↓) and press ENTR to select Set [↓]
5. Set: (name/nr) Edn: (name/tp)
6*. Do you want to transfer QREF?** (Y/N)
7*. Do you want to specify groups to send?** (Y/N)
8*. Do you want to specify a time pd to send? (Y/N)
9*. Include Suffix & Smoke/Pyro data? (Y/N)
10. Send to: Ancd Pc Broadcast
11. Connect ANCD to ANCD [↓]

TARGET ANCD
1. select: _Soi Radio sUpervisor
2. qRef Group Net sufX Pyro Tmpd Set C/s Find Memo
3. Select: Choose Send Receive
4. receive from: Ancd Pc Broadcast
5. Connect ANCD to ANCD [↓]
6. Press [RCV] to receive***
7. Processing. Please wait (shows number sent)
8. Receive operation was successful [↓]

(See Notes next page)
(Source ANCD steps continue next page.)

12. (WAIT)*** Press [SEND] to send
13. Processing. Please wait (shows % of bytes sent)

(Source ANCD steps continued)

***** Screens 6-9 appear only if related data is in ANCD.

****** You must enter NO to transfer full SOI.

******* DO NOT press [SEND] until ready to press [RCV]; then press [RCV] within 20 seconds of pressing [SEND].

Special Task 3: Perform Cold Start Net Opening

1. Load MAN freq into RT	5. Press STO; Display shows "STO __"
2. Load RT with COMSEC/FH data	6. Press X (1-6); Display shows "STO X", blinks
3. Set RT to LD, CT*****, MAN, & FH	7. Set CHAN to X (1-6) and FCTN to SQ ON
4. Standby for ERF; Display shows "HF XXX"	8. Call or respond to NCS comm. check******

***** Net may open in PT if COMSEC is not a consideration.

****** If NCS contact fails, standby on MAN for NCS call.

Special Task 4: Receive Net Update ERF from NCS

1. Set RT FCTN to LD (stay on net operational channel)	4. Enter X (1-6)*****; Display shows "STO X", blinks
2. Standby for update ERF; Display shows "HF XXX"	5. Set CHAN to X (1-6) and FCTN to SQ ON
3. Press STO; Display shows "STO __"	6. Call or respond to NCS call (Net update is complete)******

***** NCS directs Chan for storage. When update is effective, go to this Chan.

****** Assumes same COMSEC key in Chan 1-5 or 1-6.

Special Task 5: CUE and ERF Late Net Entry*

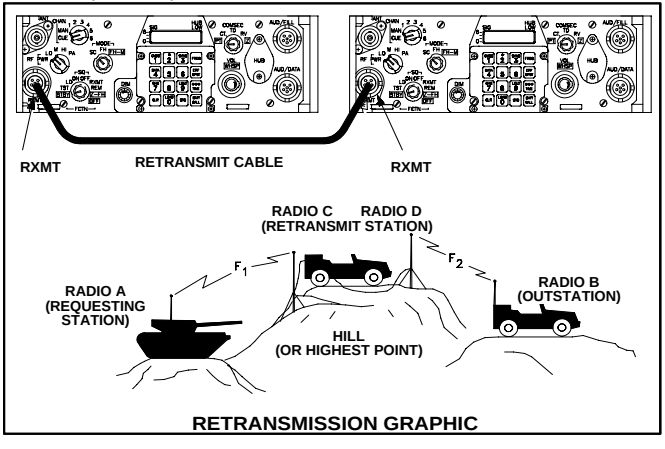
1. Load CUE and MAN freq if not already loaded	6. Repeat every 15 sec (CUE goes thru only if net is quiet)
2. Set CHAN-CUE, COMSEC-PT	7. Request ERF (when NCS responds)
3. Press PTT for 4-5 seconds (Do not talk)	8. Store ERF (when received)
4. Set COMSEC-CT (at once) (NCS responds in CT)	9. Re-enter net (CUE & ERF LNE is complete)
5. Wait for NCS to respond	

***** The Hot Start net opening procedure may be used in lieu of CUE and ERF when a loaded ANCD or SKL and GPS time are available.

Special Task 6: Conduct RXMT Operations

1. Obtain RXMT COMSEC/ FH data	6. Send ERF to RT-B if needed*****
2. Load RXMT radios	7. Install RXMT cable, RT-C to D
3. Move to RXMT site	8. Set RT-C&D FCTN to RXMT
4. Call RT-A on F1 using RT-C	9. Set RT-C to FH, RT-D to FH-M
5. Call RT-B using RT-D	10. Have RT-A call RT-B via RXMT

*****See Special Operator Task 7, below.



RETRANSMISSION GRAPHIC

NOTES:

1. RXMT RT's should be set to CT to enable RXMT crew to monitor RT-A to RT-B communications.
2. An RXMT station operating in EDM mode will pass both EDM and SDM data traffic, as well as voice messages.
3. For RXMT of RS-232 data, both RXMT radios must be set to the data rate used for RS-232 data transfer. Transfer of data by RS-232 mode through an RXMT station requires a longer time than FH only RXMT or point-to-point RS-232 traffic.
4. Mixed mode RXMT (SC to FH, FH to SC) of data traffic can be passed in SDM mode only, not in EDM mode

Special Task 7: Send an ERF as Part of RXMT Operation

1. Obtain data to be sent by ERF	7. Press ERF
2. Load data into RT	8. Press STO*****
3. Alert receiver; ERF to be sent	9. Enter chan for storing data*****
4. Set RT to LD and FH-M	10. Wait for receiver to store ERF
5. Press LOAD	11. Confirm receipt of ERF
6. Enter chan where ERF data is stored	12. Set RT to FH and SQ ON; resume normal communications

***** Or, move FCTN switch from LD to SQ ON.

Special Task 8: Change Net ID

1. Set RT to LD*****	4. Enter new net ID (XXX)******
2. Set Chan to 1-6 (one to change)	5. Press STO
3. Press FREQ, then CLR	6. Set RT to SQ ON, chan desired

***** Some versions of the RT require the FCTN to be set to the FH-M position in order to change the Net ID of any channel. When the FH-M position is required for a Net ID change, it is important that the RT be changed from FH-M back to FH upon task completion (except for NCS).

****** Some versions of the SINCGARS radio will allow you to change only the last two Net ID numbers.

Special Task 9: Use SIP/ASIP RT as an RCU

STEP	ACTION	RESULT
1.	Load RT & RCU(RT) with proper data	Prepares SIP RTs for remote operations*****
2.	Install wire link from RCU(RT) to Rem radio	(See TM 11-5820-890-10-8 for setup instructions)
3.	Set Rem RT FCTN switch to REM position	Enables RCU(RT) to control Rem radio
4.	Set RCU(RT) FCTN switch to SQ ON	(LD, SQ OFF, and RXMT may also be used)
5.	Set RCU(RT) DATA to any option	N/A

6.	Press [RCU] key on RCU(RT); select "RCU"	"RT," "RCU," "EXT," and "LDE" show in RT display
7.	Wait 7 sec; then note RCU(RT) display blink	SIP RT is now ready to perform as an RCU(RT)
8.	Set RCU(RT) FCTN to REM position ***	Enables RCU(RT) Opr to call remote radio by wire
9.	Press RCU(RT) CALL key & PTT at same time; hold for 4 to 7 seconds	Produces ring tone and CALL message at Rem RT; oprs can talk on orderwire
10.	Set RCU(RT) FCTN to SQ ON	Remoted radio is now controlled by RCU(RT)

***** For use of a SIP RT as either a manpack RCU or a manpack remoted radio, Battery Box CY-8523A/B is required. ASIP requires a two wire adapter.

****** RCU, C-11561, may be used for remote control of a SIP radio for voice and SDM data only, not for EDM data.

******* RCU (RT) COMSEC must be set to PT to talk over orderwire.

Special Task 10: Use SIP/ASIP RT to Send Data Via RS-232 Mode

STEP	ACTION	RESULT
1.	Load PC with commercial comm SW*****	Use any SW program offering "Xmodem"
2.	Connect PC to SIP RT AUD/DATA port	RS-232 method does not require SW in SIP VAA
3.	Alert net data is to be sent via RS-232 mode	If not fixed, coordinate data rate to be used******
4.	Select data rate to be used for RS-232 data*******	Sending and receiving RTs must use same data rate
5.	Prepare data message or load PC with data	N/A
6.	Check to ensure net is clear of traffic	Need clear net to ensure data goes through********
7.	Follow comm SW procedures to send/ receive RS-232 data	Control is from computer; SIP radio serves as data communications carrier

***** Both sending and receiving stations must use the same or compatible communications programs.

****** Depending upon the distance between sending and receiving stations, any one of four enhanced data rates may be used for RS-232 traffic: 1200N, 2400N, 4800N, and 9600N.

******* To select data rate, select RS-232 at SIP RT, press ENTER on PC, and note data rate displayed on PC screen.

******** If voice mode has priority of use on your net, it may be necessary to wait for a quiet period to send data messages. (Pressing PTT will not interrupt data flow except to your radio.

END OF WORKPACKAGE

WP 0010: HRCRD Operations

General
The HRCRD is used with the SINCGARS manpack radio, AN/PRC-119A/D/F, and dismount kits of vehicular radios AN/VRC-88A/D/F and AN/VRC-91A/D/F.

Radio Control
Using the HRCRD, a manpack radio operator can control the Channel, RF Power, Mode, and COMSEC functions of the radio, without requiring access to the RT. RT FCTN switch must be set to REM for HRCRD to be functional.

Volume
The level of audio volume at the HRCRD can be adjusted by use of the thumb wheel on the side of the HRCRD.

Back Light
The HRCRD back light can be turned on with one press of the round light button. A second press of the light button turns the back light off.

Cabling
The cable of the HRCRD forms a "Y," with one end connected to the RT AUD/DATA or AUD/FILL port. The other end is connected to the 6-pin connector on Battery Box CY-8523C or AUX connector of the RT-1523E/F. Battery Box CY-8523C is required for use of the HRCRD in normal manpack radio configuration.

RT Keypad
Access to the RT keypad is required whenever it is necessary to change the FCTN switch, to adjust audio volume at the RT, and to change the light level in the RT display.

Vehicular Use
Although the HRCRD is intended for use with manpack radios, it can be employed with vehicular configurations that do not include a control-monitor. To do so, connect one end of the "Y" cable to the RT (A position) AUD/DATA or AUD/FILL port and the other end to J9 connector (C-M) at the rear of the VAA.

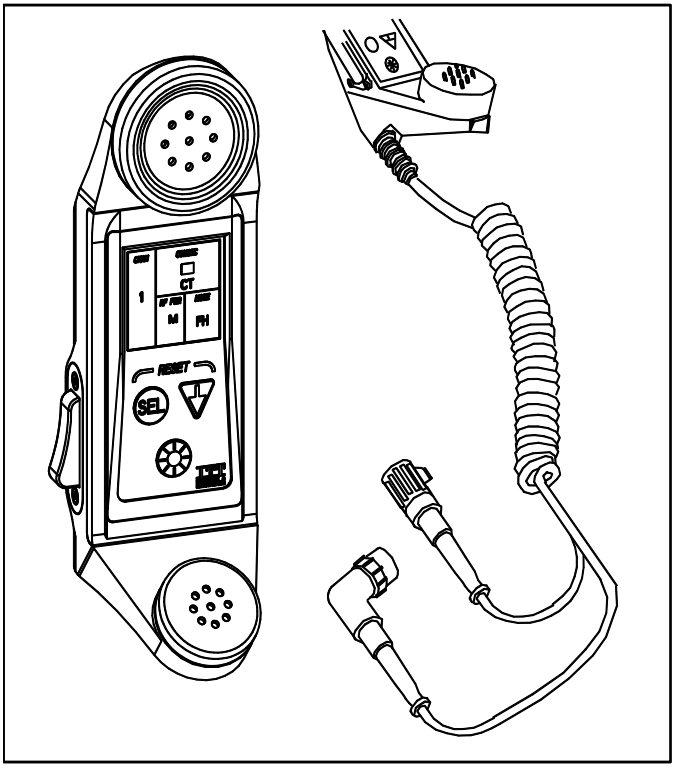


Figure 1. HRCRD

END OF WORKPACKAGE

Chapter 3. PMCS

WP 0011: PMCS for SINCGARS

Perform PMCS Before (B), During (D), and After (A) Operation.

Item/Interval	Check/Service	Equipment Not Ready/Available If:
1. (B, D, A) **Controls:** (Front of RT and on VAA)	a. Cracked/broken? b. Loose? c. Frozen? d. Missing?	Any RT or VAA control is missing or cannot be used
2. (B, D, A) **Cables:** (W2, RF, W4, and PA Pwr)	a. Missing? b. Installed properly? c. Connectors tight? d. Obvious damage?	Any cable is missing, or damaged and cannot be used
3. (B, D, A) **Antennas:** (Manpack short and long; vehicular regular and SLPA)	a. Installed properly? b. Grounded? c. Broken parts? d. Missing parts? e. Tips and tie-downs present?	 b. Not grounded c. Cannot be used d. Missing e. Missing

4. (B) **Power:** Manpack Vehicular Manpack or vehicular	a. Main battery present? b. Vehicle power available? c. Move COMSEC from Z to PT, adjust DIM, move FCTN from OFF to Z-FH, and check that RT display lights?	a. Missing, cannot be replaced b. No power, cannot correct c. RT display does not light
5. (B) **Self-Test:**	a. (FCTN in Z-FH) Display shows GOOD? b. (COMSEC to CT) Alarm will clear? c. (FCTN to TST) self-test results in GOOD?	a. Display does not show GOOD b. COMSEC alarm will not clear c. Display shows other than GOOD

6. (B) **Keypad:**	(RT at CT, SC, LD, and CHAN as shown: a. Press FREQ, CLR, and enter frequency: CUE 31000 MAN 32000 CHAN 1 43000 CHAN 2 54000 CHAN 3 65000 CHAN 4 76000 CHAN 5 87000 CHAN 6 87975 b. Press STO for each frequency entered	a. Any test frequency (0-9) cannot be entered into the RT b. Cannot store any frequency
7. (B) **Data Loading:** (SC freq, COMSEC key, FH data, sync time)	a. Load SC frequency b. Load COMSEC key c. Load FH data d. Load sync time	a. Will not load b. Will not load c. Will not load d. Will not load

8. (B, D, A) **Comm Check:** (Voice/data in SC/FH modes; PT/CT and RXMT as required by mission	a. Check sidetone b. Check voice comm in SC-PT and FH-CT c. If data comm is to be used, check using mission-related data device d. If RXMT is to be used, check in mission-related modes	a. Not heard b. No voice comm in SC-PT or FH-CT c. No data comm using mission-related data device d. No RXMT capability in mission-related modes

Handheld Remote Control Radio Device (HRCRD) PMCS

NOTE:
HRCRD is mission capable as long as transmit and receive functions are operable. If controls are not functioning, place radio function switch to normal operating positions. (SQ ON)/(LD) and change functions via keypad/switches.

Perform PMCS Before (B), During (D), and After (A) Operation.

Check/ Service	Operator Procedure	Equipment Not Ready/ Available If:
CONTROLS: (B,D,A)	To control radio functions, press [SEL] until the required function is highlighted (CHAN; COMSEC;RF PWR; MODE). Then press the [DOWN ARROW] until specific item you need appears in the display.	HRCRD cannot control RT
LIGHT: (B,D,A)	To turn backlight on, press the light button. To turn the light off, press the light button a second time.	Backlight required for mission but not functioning
VOLUME: (B,D,A)	To change the level of audio volume, rotate the volume control knob on the side of the HRCRD to reach desired level.	HRCRD cannot control RT volume

CABLE: (B,D,A)	Check for proper installation. Check for tightness of connectors. Check for obvious damage to cable.	Cable is damaged
CONNECTORS: (B,D,A)	Check for obvious damage to connectors. Check for missing O-rings. Check for bent/broken pins.	Connectors are damaged
COMM CHECK: (B,D,A)	Check for sidetone. Check voice comm.	Cannot transmit or receive.

CONTROL DISPLAY UNIT (CDU) PMCS

Perform PMCS Before (B), During (D), and After (A) Operation.

Check/Service	Operator Procedure	Equipment Not Ready/ Available If:
SELF-TEST (B,D,A)	Turn on radio with CDU connected. CDU passes self-test.	CDU fails self-test.
CONTROLS: (B,D,A)	To control radio functions, set radio FCTN to REM, use UP (▲) and DOWN (▼) arrows to select control field. Press ENT to enter radio control, use UP (▲) and DOWN (▼) and ENT to change settings.	CDU does not control radio.
GPS DISPLAY (B,D,A)	With GPS on and satellite acquired, CDU displays your position.	CDU does not display position.
BACKLIGHT: (B,D,A)	To turn backlight on, press the light button. To turn the backlight off, press the light button a second time.	Backlight required for mission but not functioning
CABLE: (B,D,A)	a. Check for proper installation. b. Check for tightness of connectors. c. Check for obvious damage	Cable is damaged
CONNECTOR: (B,D,A)	a. Check for obvious damage. b. Check for bent or broken connectors.	Connectors are damaged

END OF WORKPACKAGE

Chapter 4. Jamming/Anti-Jamming Procedures

WP 0012: Jamming/Anti-Jamming Actions

Definition

Jamming is the intentional transmission of signals that interrupt your ability to transmit and receive. Interference is the accidental disruption of communications by friendly sources. For practical purposes, the following coverage of jamming includes both situations. Anti-jamming includes any corrective action taken by the operator to work through intentional jamming and accidental interference.

Identification

If you are being jammed, you may hear strong static, strange noises, random noise, or no noise or signals at all. These signals depend upon the type of jamming signals and whether your net is operating in single channel (SC) or frequency hopping (FH) mode. The simplest method the enemy can utilize to disrupt your communications is to transmit noise or audio signals on your single channel operating frequency, or on multiple FH frequencies during FH operation. If the enemy can generate enough power on your hopset frequencies, it is possible that your communications capability will be disrupted or even stopped. While SINCGARS is jam-resistant due to it's frequency hopping capability, in the event that SINCGARS is jammed, it may be necessary for you to take corrective actions. The action you take depends on the type of jamming or interference that is disrupting net communications as well as the authorized FH hopset frequencies that are available to your net. If you suspect you are being jammed, look for one of the specific symptoms shown in the table below.

Jamming/Anti-Jamming Procedures: SC Mode of Operations

SYMPTOM	POSSIBILITIES	ACTIONS
You hear no traffic, and you are not transmitting. SIG display is lit and shows a signal higher than LO.	Your handset could be stuck, producing a "hot mike" situation.	Press PTT several times to free up mike. If necessary, replace handset with known good one.
	You are being jammed. In SQ OFF, you hear strong static or random noise. When antenna is disconnected, SIG display drops and noise disappears or is reduced.	If feasible, try to place an obstacle between you and the enemy. Notify your supervisor and, if appropriate, prepare a MIJI feeder report and submit to NCS. Continue to operate.
	Your RT is faulty or locked up. With handset and antenna disconnected, your SIG display remains lit and above LO.	Set RT FCTN to STBY position and then back to SQ ON. If problem continues, contact your unit maintenance.

You hear random radio traffic. Your SIG display is lit and shows a signal higher than LO.	You are experiencing friendly or enemy radio interference.	Set RT FCTN to SQ OFF and try to communicate. Change to a longer range antenna. Try to place an obstacle between you and the source of interference. Advise NCS of your problem. Continue to operate.
You may or may not hear any noise. SIG display goes on and off at regular intervals or in random order.	You are probably experiencing enemy sweep jamming.	Set RT FCTN to SQ OFF, and you hear noise or static each time the SIG display lights. If feasible, try to place an obstacle between you and the enemy. Advise NCS of your problem. Continue to operate.

Jamming/Anti-Jamming Procedures: FH Mode of Operations

SYMPTOM	POSSIBILITIES	ACTIONS
You hear loud noise or strong static making net traffic difficult to impossible to hear. Your SIG display remains on or goes on and off at regular intervals. Signal strength is greater than LO.	You are being jammed if disconnecting the antenna causes the SIG display to drop to LO and noise level is reduced.	If feasible, try to place an obstacle between you and the enemy. Notify your supervisor. If appropriate, prepare and submit MIJI report to NCS. Advise NCS of your problem. Continue to operate.
	You may be experiencing interference from a friendly communication system (called a co-site problem).	Try to get interfering system shut down momentarily to determine if it is the source of your problem. If it is, change your location, remote your antenna or RT, or try to place an obstacle between you and the interfering station. Continue to operate.

SYMPTOM	POSSIBILITIES	ACTIONS
You hear a constant hiss or background noise in the handset but no loud noise or net traffic.	There is a captured RT in your net, constantly transmitting to act as a jammer.	Press your PTT two times. Net should clear. Advise NCS of your action.
	There is a stuck mike or bad handset in you net that is locked in the PTT position.	Press your PTT two times. Net should clear. Advise NCS of your action.
	Your own handset is stuck if you hear sidetone without pressing PTT. SIG display drops to LO or below when handset is disconnected.	Free up PTT or replace handset with a known good one.
You hear background popping or static when receiving, and your operating range is reduced. Your SIG display is flickering.	You are probably experiencing co-site interference from a friendly radio.	Identify interfering radio and request operator to reduce RF PWR setting, move your radio at least 50 meters, or remote your RT or antenna. Advise NCS of your action. Continue to operate.

NCS Corrective Actions:

For RT-1523 E/F pure nets with software version 7.0 or greater:

1. Perform a CUE call to the net.
2. Instruct all net members to switch to FH 2 mode.
3. Continue to operate normally.
4. NCS forwards MIJI to IEWO.

For RT-1523 E/F non-pure nets with software version 6.6 or lower or other SINCGARS models:

1. Perform a CUE call to the Net.
2. Instruct all non RT-1523 E/F (with S/W 7.0 or greater) radios to switch to backup single channel secure frequency SC CT.
3. Instruct RT 1523 E/F (with S/W 7.0 or greater) radios to switch to FH 2 mode.
4. NCS will operate the net in a mixed net operation utilizing a SINCGARS mixed mode retransmission site/station to provide communications between SC and FH net members.
5. Once jamming source is neutralized, NCS will instruct the net to switch back to normal FH mode.
6. NCS forwards MIJI to IEWO.

NOTES

1. Operate SINCGARS radios in SC CT mode only when absolutely necessary.
2. When operating in a jamming environment, all net members load CUE frequency (typically only Alt NCS and NCS load CUE frequency). ALL net members switch to CUE channel and wait for NCS instructions.

END OF WORKPACKAGE

WP-0013: NCS Checklist

Use the following general checklist to ensure you are ready to meet all NCS requirements.

Use the PMCS Checklist in TM 10-6 to check your radio and ability to communicate.

Ensure you and net operators have the correct COMSEC/FH/SOI data.

Use your PLGR or EGR as a ready source of Julian Date and GPS Zulu time.

Designate one or more Alt NCS to follow up net openings, respond to CUE calls, and displace when required.

Have RXMT crew(s) ready for employment when needed.

Once every 24 hours, check your RT's sync time against PLGR or EGR GPS time; if more than 2 seconds off, reload time.

When operating over midnight of 31 December, reset JD to 01. Options are (1) Reload time from ANCD, (2) Change JD using RT keypad, or (3) NCS change JD and send net update ERF on MAN.

When changing to another channel, change to FH

Hold administrative traffic to a minimum, and wait until net is quiet.

Talk operators through tasks whenever appropriate.

Make best use of second/third radios to monitor key operations.

Ensure that only the NCS radio is set to FH-M.

When net traffic is heavy, transmit (or push PTT) at least every half-hour.

Keep an informal record of which operators are active in the net.

END OF WORKPACKAGE

Abbreviations:

ACK ..... Acknowledge
AK ..... Automatic Key
ANCD ..... Automated Net Control Device
APPL ..... Application
ASIP ..... Advanced System Improvement Program
BCAST ..... Broadcast
BPS ..... Bits Per Second
CID ..... Combat Identification
CDU ..... Control Display Unit
C/S ..... Sign/Countersign
CALWD ..... Call Word
CFD ..... COMSEC Fill Device
CLR ..... Clear
COMSEC ..... Communications Security
CNTRSIGN ..... Countersign
CT ..... Cipher Text
DBS ..... Databases
DD ..... Days shown as two-digit number
DF ..... Direction Finding
DI ..... Default Identification
DTD ..... Data Transfer Device
DTG ..... Date-time-group
ECCM ..... Electronic Counter Counter-Measures
EDITN/EDN ..... Edition
EDM ..... Enhanced Data Mode
EGR ..... Embedded GPS Receiver
EOM ..... Enhanced Operating Mode

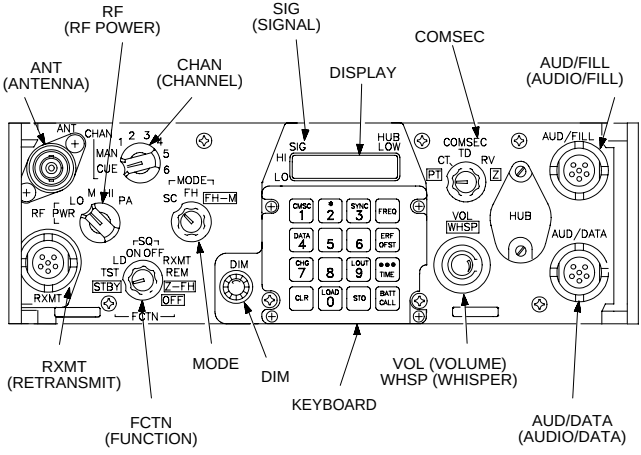
ERF ..... Electronic Remote Fill
ESET ..... FH Data for one channel
EXT ..... External
FCTN ..... RT Function Control
FH-M ..... Frequency Hopping-Master
FHMUX ..... Frequency-Hopping Multiplexer
FREQ/FRQ ..... Frequency
FSK ..... Frequency Shift Keying
GPS ..... Global Positioning System
GRP ..... Group
HRCRD ..... Handheld Remote Control Radio Device
HH:MM:SS ..... Hours:Minutes:Seconds
ICOM ..... Integrated Communications Security
ID ..... Identification/Infantry Division
INC ..... Internet Controller
INTCM ..... Intercom
JD ..... Julian Date/Day
KEK ..... Key Encryption Key
LD ..... Load
LDE ..... Local Data Entry
LNE ..... Late Net Entry
MAN ..... Manual Frequency
MK ..... Manual Key
MM-DD-YY ..... Month-Day-Year
MX ..... Nomenclature for Fill Device
N ..... New or Enhanced Data Mode
NCS ..... Network (Net) Control Station
NETID ..... Net ID
NR ..... Number
OPR ..... Operator

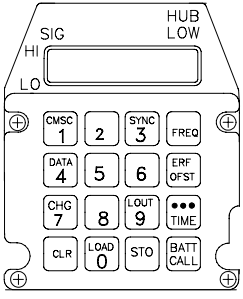
OTAR ..... Over-The-Air-Rekey
PC ..... Personal Computer
PCKT ..... Packet Data Mode
PLGR ..... Precision Lightweight GPS Receiver
PT ..... Plain Text
PTT ..... Push-To-Talk [Switch]
PYRO ..... Pyrotechnics
QREF ..... Quick Reference
RCU ..... Remote Control Unit
RCU (RT) ..... SIP/ASIP used as an RCU
RCV ..... Receive
RDS ..... RBECS DTD software
RT ..... Receiver-Transmitter
RV ..... Receive variable
RXMT ..... Retransmission
SA ..... Situational Awareness
SC ..... Single Channel
SOI ..... Signal Operating Instructions
SIP ..... System Improvement Program
SKL ..... Simple Key Loader
SQ ON ..... Squelch On
STO ..... Store
STU ..... Secure Telephone Unit
SUFX ..... Suffix
TD ..... Time Delay
TEK ..... Traffic Encryption Key
TFOM ..... Time Figure of Merit
TMPD/TP ..... Time Period
TSK ..... Transmission Security Key
VAA ..... Vehicular Amplifier-Adapter

VG ..... Variable generate
VU ..... Variable update
XMT ..... Transmit
Z-FH ..... Zero Frequency Hopping Data

END OF WORKPACKAGE

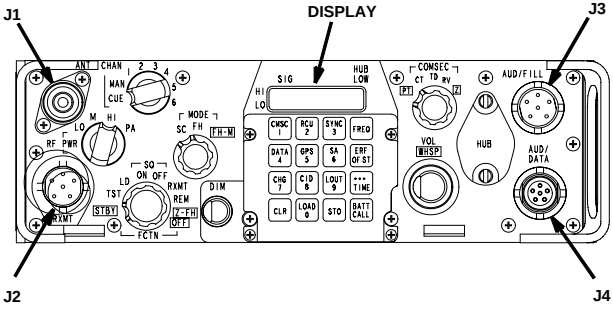
WP 0015: Graphics

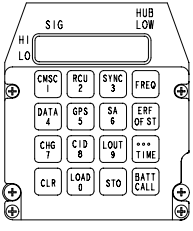




RT-1523/A/B KEYBOARD

Figure 1. RT-1523/A/B FRONT PANEL - ICOM





RT-1523C/D (SIP) KEYBOARD

Four keys redesignated on SIP keypad:

SA – Situational Awareness

CID – Combat Identification

RCU – enables use of SIP RT as an RCU

GPS – displays current GPS setting: OFF, AUTO, PER, MOV.

Figure 2. RT-1523C/D FRONT PANEL - SIP

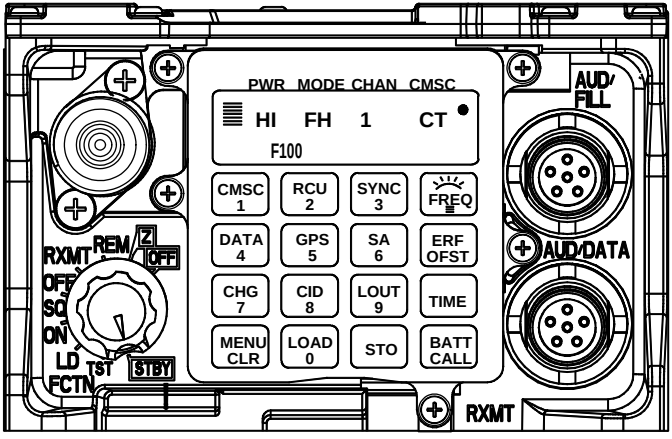
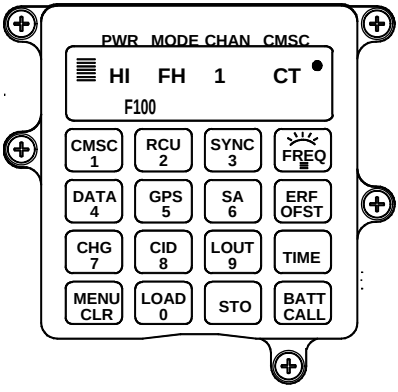


Figure 3. RT-1523E/F FRONT PANEL - ASIP



Six keys redesignated on ASIP keypad:

MENU key scrolls through MENU options.

FREQ/Backlight key controls backlight brightness. RT must be in SQ ON; CHG key scrolls brightness level.

GPS – displays current GPS setting: OFF, AUTO, PER, MOV; Also enables loading EGR key.

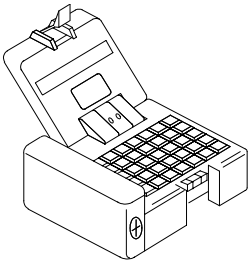
RCU – enables use of SIP RT as an RCU

SA – displays current SA receive selection: ON or OFF.

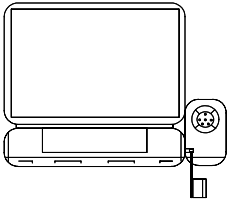
CID – displays CID status: NO ID or CID.

Figure 4. RT-1523E/F KEYBOARD - ASIP

FRONT VIEW >



REAR VIEW >
(cover open)



LAMP	ZERO	MAIN MENU	RCV	SEND	ABORT	ON/ OFF
A P UP	B BAT	C CLR	D DELE	E 7	F 8	G 9
H P DN	I ↑	J	K	L 4	M 5	N 6
O ←	P SPACE	Q →	R	S 1	T 2	U 3
LOCK LTR	V ↓	W -	X /	Y 0	Z .	ENTR

Figure 5. ANCD, AN/CYZ-10

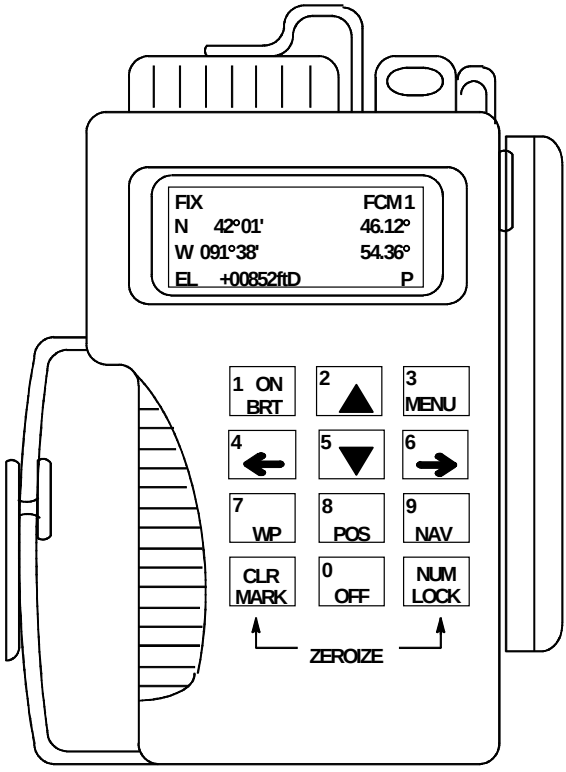
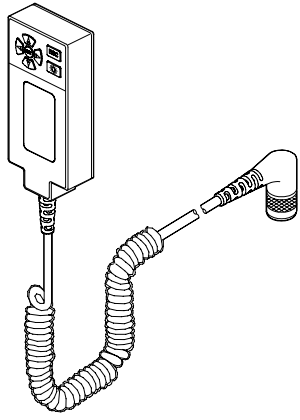


Figure 6. PLGR, AN/PSN-11



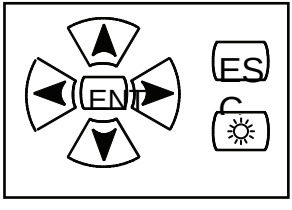


Figure 7. CONTROL DISPLAY UNIT

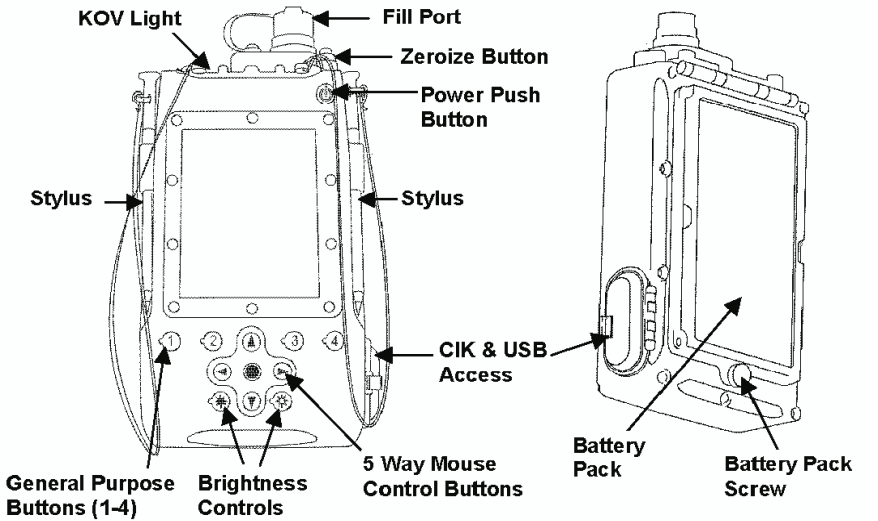


Figure 8. SIMPLE KEY LOADER AN/PYQ-10

By Order of the Secretary of the Army:

GEORGE W. CASEY, JR
General, United States Army
Chief of Staff

Official:

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
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