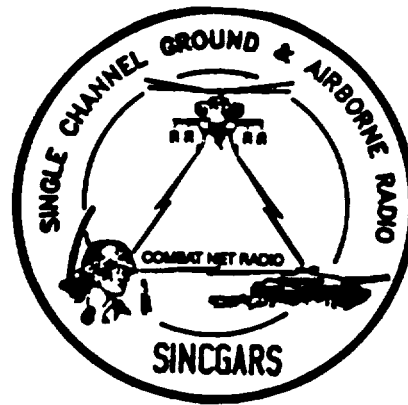


TB 11-5821-333-10-2

**SINGGARS AIRBORNE ICOM RADIO  
OPERATOR'S POCKET GUIDE**



**SINGGARS AIRBORNE ICOM RADIOS  
used with  
AUTOMATED NET CONTROL DEVICE  
(ANCD) AN/CYZ-10**

Approved for public release;  
distribution is unlimited

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**Headquarters, Department of the Army  
1 July 1995**

LITHIUM BATTERY WARNINGS

Your manpack radio uses a Lithium battery as the main power source. All SINCGARS radios use a lithium battery for the HUB, and the ANCD uses three 3-volt lithium batteries for power. Batteries contain pressurized toxic, sulfur dioxide gas. Batteries can explode; treat them with CARE.

For safety's sake, follow these rules when handling lithium batteries:

DO NOT ABUSE LITHIUM BATTERIES IN ANY WAY.

DO NOT HEAT, SHORT CIRCUIT, CRUSH, PUNCTURE, OR CUT THEM.

DO NOT USE ANY LITHIUM BATTERY SHOWING SIGNS OF DAMAGE.

DO NOT TEST FOR STATE OF CHARGE (MAINTAINER TASK ONLY).

DO NOT ATTEMPT TO RECHARGE LITHIUM BATTERIES.

DO NOT PLACE THEM IN ORDINARY TRASH; TURN IN USED BATTERIES TO UNIT SUPPLY OR WHEN OPERATIONAL FOLLOW UNIT SOP REGARDING DISPOSAL.

DO NOT USE A HALON-TYPE FIRE EXTINGUISHER ON A LITHIUM FIRE. IN CASE OF FIRE, DO USE WATER CO2 (CARBON DIOXIDE) EXTINGUISHER, OR CLASS D (GRAPHITE BASED) EXTINGUISHER.

DO NOT STORE BATTERIES IN UNUSED EQUIPMENT.

DO NOT STORE LITHIUM BATTERIES WITH OTHER HAZARDOUS MATERIAL

DO NOT STORE LITHIUM BATTERIES NEAR FLAME OR HEAT SOURCE.

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

TURN OFF EQUIPMENT.

LET EQUIPMENT COOL FOR AT LEAST AN HOUR.

AFTER EQUIPMENT IS COOL, REMOVE BATTERY/BATTERIES.

INSTALL NEW BATTERY/BATTERIES; RESUME OPERATION.

If you experience a safety hazard or incident notify your unit Safety Officer; file Form 368 (Product Quality Deficiency Report); and notify CECOM Safety Office, Ft. Monmouth, NJ (DSN 995-3112).

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REFERENCES:

TB 11-5820-890-12, ANCD Or & Unit Mt  
TM 11-5820-890-17, SINCGARS NCS Pocket Guide  
TM 11-5821-333-1, SINCGARS Operator and AVUM Manual  
PM-SINCGARS New Equipment Handbook

PURPOSE:

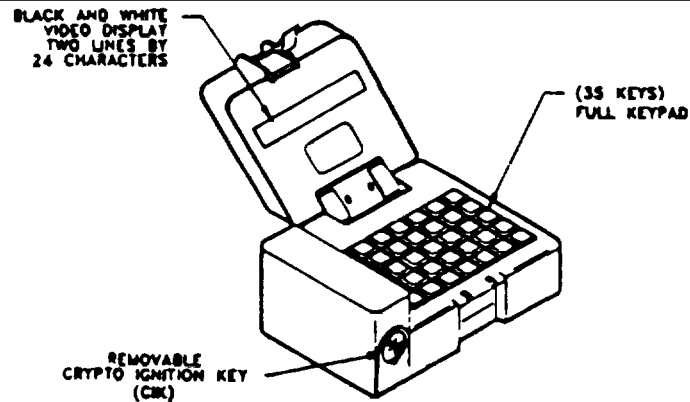
This Pocket Guide is designed for use by SINCGARS Airborne COM Radio operators who are equipped with, or have ready to, an ANCD and have been trained on both items equipment its purpose is to provide Airborne SINCGARS/ANCD operators with quick reference, memory joggers that can be easily carried on the job during field operations. Users should make reference to other manuals and handbooks, as appropriate, to supplement the summary guidance contained in this Pocket Guide.

SCOPE:

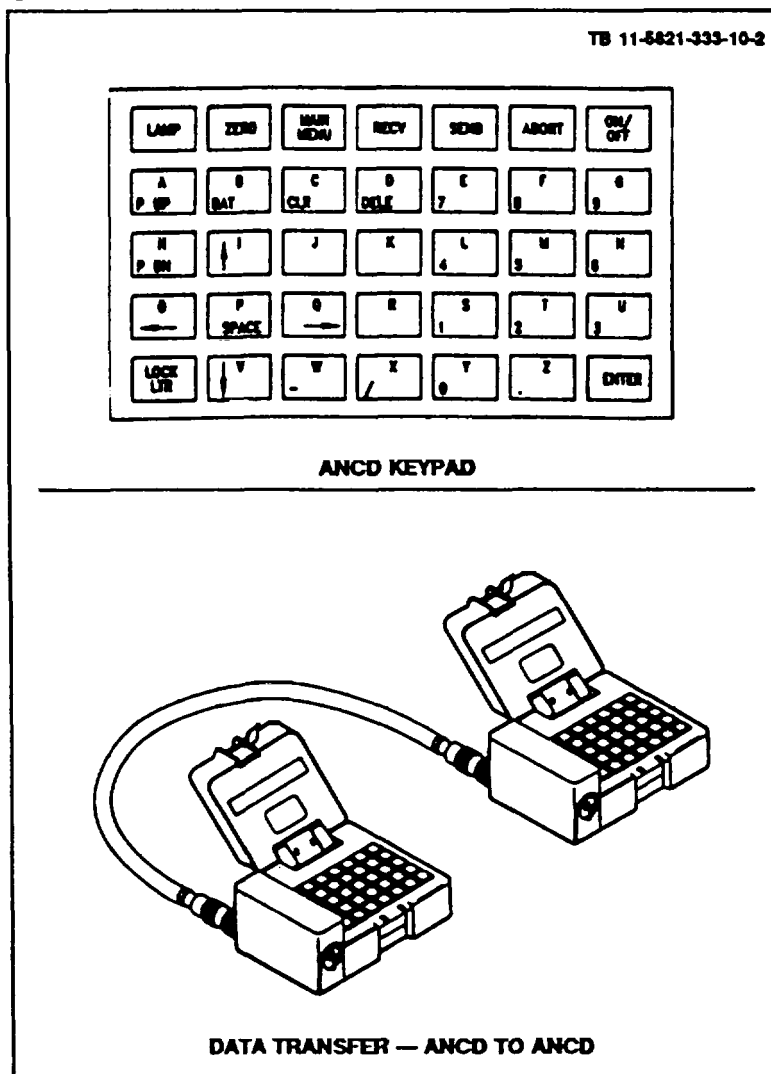
This Pocket Guide covers the six Primary Airborne Operator Tasks which the SINCGARS/ANCD operator must be able to perform, plus seven Special Airborne Operator Tasks that operators may be required to perform after additional training and/or extensive experience. Except for a few brief notes, there are no explanations contained in this pocket guide. Each task is presented in flowchart format. Radio related tasks are dated in terms of "Actions" and "Results." ANCD tasks are shown as sequential display screens. The option the operator should select is bolded and underlined. Wherever some explanation is required, foot notes are used. This Pocket Guide applies to SINCGARS Airborne Radios using RT-1476A/RT-1476C and RT-1477A/RT-1477C only; no RT-1478A/RT-1478C.)

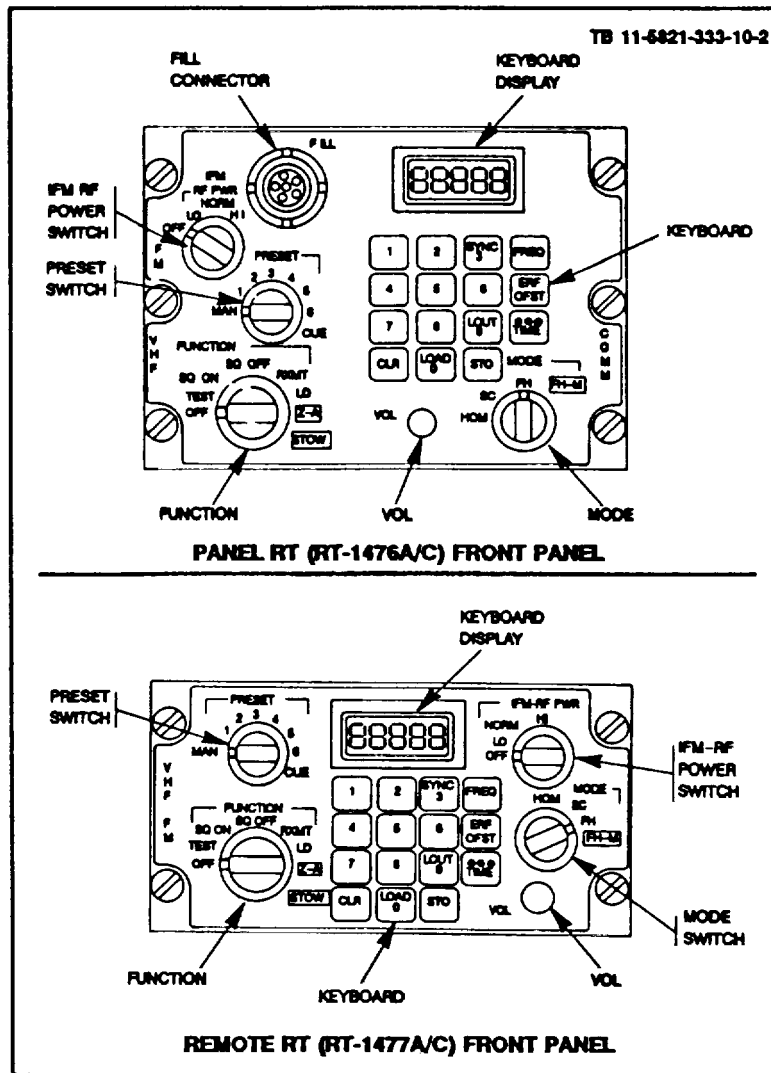
HOW TO USE THIS POCKET GUIDE

Trained ANCD/SINCARS airborne radio operators are encouraged to carry this Pocket Guide on their person when operating the radio and using the ANCO. Normally, only the Primary Airborne Operator Tasks will be performed. In some situations, selected operators may be required to perform any or all of the seven Special Operator Tasks. Even after you are confident you can perform required task, it is strongly recommended that you follow your Pocket Guide to be sure you do not make procedural errors. Your Pocket Guide is intended to be a "memory jogger" that helps you perform your job without memorizing anything. Make use of it!



AUTOMATED NET CONTROL DEVICE AN/CYZ-10





SUMMARY OF PRIMARY AIRBORNE OPERATOR TASKS

- PRIMARY TASK 1: Load SC Frequencies into SINCGARS RT  
Required for Cold Start Net Opening, CUE and ERF method of late net entry, single channel communications and SC frequency updates.
- PRIMARY TASK 2: Load COMSEC/FH Data in KY-58/RT Using Airborne Fill Procedure  
Required for Hot Start Net Opening, Cold Start net opening, and COMSEC/FH Data updates.
- PRIMARY TASK 3: Perform Hot Start Net Opening  
Required when net has been down and is to become operational at a prescribed time; may be used when an individual operator has been out of the net for any reason and wishes to re-enter the net without resort to CUE and ERF.
- PRIMARY TASK 4: Perform Passive Late Net Entry  
Required when RT sync time become more than 4 seconds but less than one minute off from net sync time; enables individual operator to re-enter net without action on the part of the NCS.
- PRIMARY TASK 5: Obtain SOI Information from ANCD  
Required when SOI info on Nets, Suffixes, Pyro/Smoke, or Sign/Countersign needed; may be used to view QREF related items in Group, Time Period, Set, Find, and Memo; used to obtain net ID of net not in loadset being used.
- PRIMARY TASK 6: Change Net ID  
Used to contact non-loadset station.



## PRIMARY TASK 1: Load Single Channel Frequencies in SINCGARS RT

CONTROLS	ACTION	RESULT*
	(1) Obtain proper freqs from ANCD**	(Load CUE freq only if directed)***
	(2) Set RT controls: MODE to SC FCTN to LD PRESET to MAN, CUE, or 1-6	RT display shows [30000](MAN) or [Fill X] (1-6)
	(3) Press: FREQ  CLR  XXXXX (Freq)  STO	Display shows [00000/30000] Display shows [ _ _ _ _ ] Display shows freq entered Display blinks (data is stored)
	(4) Repeat (3) above for each freq	directed by NCS or unit SOP)
	(5) Set: FCTN to SQ ON	Loading of SC freqs is complete

- \* ANCD display is shown as a dark bordered box. RT messages state "Display shows," without dark border.
- \*\* In unit using FH net, operators normally load only a MAN frequency on a routine basis. A CUE and SC frequencies for CHAN 1-6 are loaded only as needed.
- \*\*\* Only NCS and Alt NCS routinely load a CUE frequency.

PRIMARY TASK 2: Load COMSEC/FH Data in KY-58/ICOM RT Using Airborne Fill Procedure\*

LOAD COMSEC (KY58) (All RT Versions)
1)select: Sol <u>R</u> adio s <u>U</u> pervisor
2) <u>S</u> end Receive Database setup Comc Tme
3)send to: <u>R</u> adio Ancd Stu Pc
4)select: ICom Nonicom <u>A</u> bn Rcu Haveq
5)Do you want to load COMSEC to a KY58? ( <u>Y</u> /N)
6)Connect to KY58 fill port [↓]
7)Set KY58 mode switch to LD [↓]
8)Set Fill Switch to POS 1: Press PTT to load**
9)Transfer successful [↓]

LOAD-FH DATA (ABN RT)) RT-1476C/77 only)
10)Do you want to load an Abn radio? (Y/ <u>N</u> )
11)Send to: <u>R</u> adio Ancd Stu Pc
12)Select: <u>I</u> Com Nonicom Abn Rcu Haveq
13)Connect to RT AUD/Fill Connector [↓]
14)Set FCTN switch to LD on RT [↓]
15)Do you want to include time? ( <u>Y</u> /N)
16)Press <u>L</u> OAD on RT
17)Transfer in progress
18)Transfer successful [↓]

(Continued on next page.)

\* Throughout this manual, when [↓] appears in the lower right corner of a screen, you must press the down arrow to proceed.

\*\* Repeat for each KY58 position and RT preset to be filled.

\*(ICOM Ariboure Fill Procedure Continued)

LOAD DATA IN RT (RT-1476A/77A only)
19}Do you want to load an Abn radio? (Y/N)
20}Connect ANCD to RT [↓]
21}Set FCTN switch to LD on RT [↓]
22}After pressing ↓ Press LOAD, STO, 1 on RT
23}COM transfer successful [↓]
LOAD JUAN DATE IN RT (RT-1476A/77A only)
24}select: Sol Radio sUpervisor
25}Send Receive Database sEtap Comsec Time
26}Juilan Day: X X [↓]
27}Press TIME on RT once RT display shows [D D]
28}Press CLR on RT RT display shows [ _ _ ]

29}Enter now JD in RT Display show [ X X]
30}Press STO on RT: New Julian Date is stored
LOAD SYNC TIME IN RT (RT-1476A/77A only)
31}Press ↓ on ANCD
32}ANCD Time: (running) HH:MM:SS (22:45:15)
33}Press TIME on RT; Display shows [ HH MM ]
34}Press CLR on RT; Display shows [ _ _ _ _ ]
35}Enter HH from ANCD; Display shows [ H H ]
36}Enter MM one minute ahead of ANCD time
37}Display shows[HH MM); DO NOT press STO yet!
38}When ANCD MM=RT MM & 00 sec, press STO
39}Time in RT should be within 1 sec of ANCD time

PRIMARY TASK 3: Perform Hot Start Net Opening

SUTASK	ACT	RESULT
a. Load COMSEC keys in KY-58	(See Abn Opr Task 2 above)	Provides for CT communications
b. Load FH Data	(See Abn Opr Task 2 above)	Provides for FH communications
c. Load Sync Time in RT*	(See Abn Opr Task 2 above)	Allows Opr to enter SC, FH net
d. Enter nt	(1) Call NCS using CT, FH	NCS responds
	(2) Request net entry	Hot Start net opening is complete for this Opr

- \* Use a PLQR, if available, for your source of sync time. It provides the most accurate GPS time. Your ANCD will maintain time within the +/- four second window for at least 24 hours. If time was loaded into your ANCD more than 24 hours ago, you could check its accuracy before using.

PRIMARY TASK 4: Perform Passive Late Net Entry (LNE)

SUBTASK	ACTION	RESULT
a. Note that net has no traffic	Try to contact NCS another station	Your calls fail to make contact
b. Prepare RT for Passive LNE	(1) Press [FREQ] on RT	Display shows [LF XXX]
	(2) Press [SYNC] on RT	Display shows [LF XXX]
c. Allow RT time to make adjustments	(1) Do <u>not</u> press PTT in LNE mode	Display continues to show [LF XXX]
	(2) Wait until you hear traffic on net*	Note that "L" drops from the display
d. Re-establish contact with NCS	Call your NCS and re-enter the net	Passive Late Net Entry is completed

- \* If traffic is not heard after using Passive Late Net Entry method for 3 minutes or so, use Hot Start procedure (Task 3) or CUE and ERF Late Net Entry Method (Special Task 5) to enter desired net.

PRIMARY TASK 5: Obtain SOI Information from ANCD  
 (Assumes QREF has been loaded Into Operator's ANCD)

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

select: SoI Radio sUpervisor
qRef* Group Net sufX Pyro TmPd Set C/s Find Memo

Last item viewed appears in display.

2. QREF displays up to 40 items from Net, sufX Pyro, or C/s available by scrolling. For each net stored a 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 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 are:

ABORT	Cause 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 election (eg, 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. Following are examples of the information which may be available in a full SOI information file.\*

L GROUP , (roup)

qRef Group Net sufX Pyro TmPd Set C/s Find Memo
----------------------------------------------------

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 TMPD and make time period selection. QREF file that was transferred from another ANCD is available by entering Set in target ANCD. Items available by entering QREF are those selected by the target ANCD operator.

b. NET:

(Net)

qRef Group <u>Net</u> sufX Pyro TmPd Set C/s Find Memo
T06 1-4 FA W7T C81975 M74800 0424
T06 1-4 FA BN W7T Callwrd:BULLDOG*

\* Obtained by pressing right arrow.  
(Press left arrow to return.)

c. SUFFIX

(sufX)

qRef Group Net <u>sufX</u> /Pyro TmPd Set C/s Find Memo
Commander 02 COFS/XO 27

d. PYRO:

(Pyro)

qREf Group Net sufX <u>Pyro</u> TmPd Set C/s Find Memo
GREEN SMOKE** [↓/→]
Safe to land or drop supplies here**

\*\* Meaning of signal is obtained by pressing  
right arrow. (Press left arrow to return.)



e. TIME PERIOD:

(TmPd)

qRef Group Net sufX Pyro TmPd Set C/s Find Memo
Enter Time Pd: = > # #

f. SET:

(Set)\*

qRef Group Net sufX Pyro TmPd Set C/s Find Memo
select: Choose Send Receive
Scroll ↑/↓, press ENTR select set                      [↓]
Set: (name/nr) Edn: (name/tp)                      [ENTR]

\* A set may be deleted by entering Set and pressing the DELE key on the ANCD.

g. SIGN/CNTRSIGN.

(C/s)

qRef Group Net sufX Pyro TmPd Set C/s Find Memo
TO1 Sign: HARDWOOD Cntrasign: SNEAKER

h. FIND:\*

(Find)

qRef Group Net sufX Pyro TmPd Set C/s <u>Find</u> Memo
Find: Net nEtld Sfx Word Clsn Grp gRp# Des Frq

- \* FIND is used with full SOI file for quick location of item desired. If first item viewed is not the desired one, press "J" to cause ANCD to continue search.

I. MEMO:\*\*

(memo)

qRef Group Net sufX Pyro TmPd Set C/s Find <u>Memo</u>
Memo: 1- 2- 3- 4-

- \* Each of 4 Memos may be 6 lines of 22 space each. Memos are included in the transfer of SOI data (QREF or Full SOI File).

PRIMARY TASK 6: Change Net ID

SUBTASK	ACTION	RESULT
a. Prepare RT for net ID change	(1) Set FCTN to LD*	N/A
	(2) Set PRESET to 1-6 (3) Set MODE FH-M*	(Where net ID is to be changed) (Do <u>not</u> transmit while in FH-M)
b. Enter new Net ID in RT	(1) Press [FREQ]	Display shows [F XXX]
	(2) Pre [CLR]	Display shows [F ___]/[FX__]**
	(3) Enter net ID numbers (2 or 3)**	Display shows [F XXX](new net ID)
	(4) Press [STO]	Display blinks, net ID is stored
c. Resume communication	(1) Set FCTN to SQ ON	N/A
	(2) Set PRESET to 1-6 as desired	(New net ID is now available for use)

\* All Abn RTs require MODE to be set to the FH-M in order to change a Net ID. When you use the FH-M position, it is important that you not transmit and that you change back to FH as soon as the net ID has been changed (except for NCS).

\*\* RT-1476A and RT-1477A radios will allow you to change only the last two Net ID numbers

SUMMARY OF SPECIAL AIRBORNE OPERATOR TASKS

- SPECIAL TASK 1: Transfer CMSEC/FH Data, ANCD to ANCD  
Used when individual operators are required to load their own ANCD from one being passed around.
- SPECIAL TASK 2: Transfer QREF SOI Information ANCD to ANCD  
Used when individual operators are required to load their own ANCD from one being passed around.
- SPECIAL TASK 3: Perform Cold Start Net Opening  
Provides NCS an alternate method of net opening, if desired.
- SPECIAL TASK 4: Receive Net Update ERF from NCS  
Used when NCS needs to update some element FH data using electronic transfer means.
- SPECIAL TASK 5: Perform CUE & ERF Late Net Entry  
Required when sync time in RT is more than 60 sec different from that of operational net and Hot Start procedure cannot be used.
- SPECIAL TASK 6: Conduct RXMT Operations.  
Used when one or more net stations are out of normal SINCARS range, or an obstacle blocks line sight communications.
- SPECIAL TASK 7: Send an ERF  
Used during RXMT operations to establish initial contact with distant station.

SPECIAL TASK 1: Transfer COMSEC/FH Data, ANCD to ANCD

SOURCE ANCD	TARGET ANCD
1)select: Sol Radio sUpervisor	1)select: Sol Radio sUpervisor
2)Send Receive Database sEtap Comsec Time	2)Send Receive Database sEtap Comsec Time
3)send to: Radio Ancd Stu Pc	3)receive: Ancd Cfd Stu Pc Mx
4)Loadset Database* Time Key Eset Mwod	4)Loadset Database Time Key Eset Mwod
5)Do you want to include time? (Y/N)	5)Want to delete FH & COMSEC data?**** (Y/N)
6)Connect t ANCD and press [SEND](WAIT)	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 ANCD of COMSEC/FH data by performing Target ANCD Steps 1-6,above, and pressing ABORT.

SPECIAL TASK 2: Transfer QREF SOI Information ANCD to ANCD

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

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

\* Do not press SEND until ready to pre RCV then

Press RCV within 20 sec.

\*\*See 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: Sol 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)	[ENTR]
6**}Do you want to transfer QREF?***	(Y/N)
7**}Want to specify group to send?***	(Y/N)
8**}Want to specify a time pd to send?	(Y/N)
9**}Include Suffix & Smoke/Pyro data?	(Y/N)
10}sent to: Ancd Pc Broadcast Stu	
11}Connect ANCD to ANCD	[↓]

12}Press SEND to end (WAIT)****	
13}Processing. Please wait how % of byte sent)	
14}Sending of SOI data is completed	[↓]
TARGET ANC	
1}select: Sol 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 Stu	
5}Connect ANCD to ANCD	[↓]
6}Press [RCV] to receive ****'	
7}Processing. Please wait (shows nr of bytes sent)	
Receive operation was successful	[↓]

- \* Special Task 2 enables the Opr to download quick reference (QREF) file containing up to 40 data items. The QREF gives the Opr easy and quick access to selected items of SOI information. Special Task 2 (Alt) enables those Oprs who need more SOI information than is contained in the QREF to download the complete SOI information file in addition to, or in lieu of, the QREF.
- \*\* Screens 6 thru 9 appear only when related data is stored in the 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

SUBTASK	ACTION	RESULT
a. Prepare radio to receive an ERF	(1) Load MAN (SC) freq Into R	(See Abn Opr Task 1)
	(2) Load COMSEC in KY-58	(See Abn Opr Task 2)
	(3) Load FH data in RT	(See Abn Or Task 2)
	(4) Set RT FCTN to LD	N/A
	(5) Set KY-58 to CT*	N/A
	(6) Set PRESET to MAN	Display shows [COLD] (ready)
	(7) Set RT MODE to FH	N/A
Receive and store ERF	(1) Standby until NCS sends ERF	NA
	(2) Note rushing noise	Display shows [HF XXX]
	(3) Press STO	Display shows [STO _]
	(4) Press X (1-6)	Display shows [STO X], and blinks

SUBTASK	ACTION	RESULT
c. Check communications	(1) Set PRESET to X (1-6)	N/A
	(2) Set FCTN to SQ ON	N/A
	(3) Call NCS** or answer NCS call	Cold Start net opening is complete

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

\*\* If you are unable to contact the NCS, or the NCS fails to contact you, switch back to the MAN PRESET and standby for the NCS to contact you there.

SPECIAL TASK 4: N1 Update ERF from NCS

SUMISK	W	I RESULT I
a. Prepare to receive net update	(1) Stay on net opnl PRESET	N/A
	(2) Set FCTN to LD	N/A
b. Receive and store net update	(1) Standby for NCS to end ERF	N/A
	(2) Note signal display activation	Display ho [HF XXX]
	(3) Press STO	Display shows [STO _ ]
	(4) Enter X (1-6)	Display shows [STO X], blinks
c. Check communications	(1) Set PRESET to X (1-6)	(Preset In which ERF was stored)
	(2) Set FCTN to SQ ON	N/A
	(3) Call NCS answer NCS all	Net update ERF is complete**

\* NCS will direct preset for storage of ERF. When update becomes effective, this preset becomes new net operational preset.

\*\* It is assumed that the Opr used the same TEK for KY-58 position 1-6 (or 1-5).

SPECIAL TASK 5: Perform CUE & ERF Late Net Entry (LNE)\*

SUBTASK	ACTION	RESULT
a. Prepare RT for CUE and ERF LNE	(1) Load CUE and MAN frequencies	(See Primary Abn Opr Task 1)
	(2) Set KY-58 to OFF	(Must be in PT to end CUE)
b. CUE the NCS	(1) Press PTT (4-5 sec)	(Press PTT, but do not talk)
	(2) Set (at once) KY-58 to CT	(NCS/Alt NCS will answer in CT)
	(3) Wait for NCS to respond	(CUE requires quiet net)
	(4) CUE every 15 sec until answered	(You do not know when net is quiet)
b Obtain ERF	(1) Request NCS end you an ERF	(Go to MAN when NCS directs)
	(2) Receive and store ERF	(So Special Abn Opr Task 3)
	(3) Re-enter the net	CUE & ERF LNE is complete

\* This method of LNE is used if Passive method fails to bring you back into the net. Remember that use of the CUE and ERF method requires your NCS (or Alternative) to leave the operational net in order to respond to your call. If you have an ANCD, the Hot Start procedure offers a good alternative to CUE and ERF.

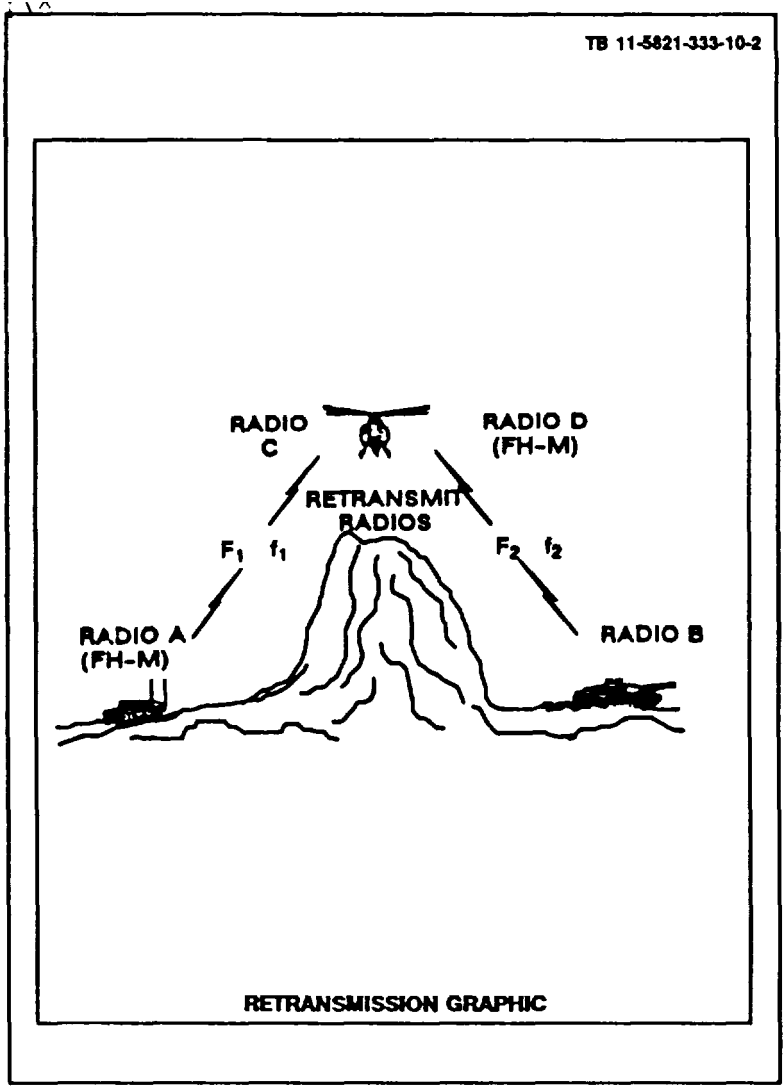
SPECIAL TASK 6: Conduct Retransmission (RXMT) Operations

SUBTASK	ACTION	RESULT
a. Prepare for RXMT mission	(1) Obtain SC/FH data for RXMT use	From ANCD or unit SOP
	2) Load RXMT radios	Ready to fly to RXMT area
b. Establish comm to A/B	(1) Call NCS on F1 using Radio-C	Radio-C to Radio-A comm is on F1
	(2) Call Radio-B using Radio-D	Radio-D to Radio-B comm is on F2
	(3) Send ERF to Radio-B if required	(See Special Abn Opr Task 7)
c. Initiate Radio-A to Radio-B RXMT	(1) Set Radio-C MODE to FH	(Radio-A remains NCS on F1)
	(2) Set Radio-D MODE to FH-M	(Radio-D NCS on F2; Radio-B in FH)
	(3) Set Radio-C/D KY-58 to CT/PT**	(Most aircraft have only one KY-58)
	(4) Request Radio-A call Radio-B	Perform Step 5 at once
	(5) Set Radio-C & D FCTN to RXMT	RXMT is now being performed

\*

\*\*

See RXMT Graphic below for identification of RTs and nets  
 In secure RXMT (FH-FH/SC-SC/FH-SC), either RT-C or RT-D may be secure (CT). Aircraft crew is thus able to monitor one side of the secure RXMT traffic.



SPECIAL TASK 7: Send an ERF a Part of RMT Operation

SUBTASK	ACTION	RESULT
a. Obtain data to be sent, by ERF	Load data into Radio-D	Prepare RT to send an ERF
b. Contact distant station (Radio-B)	Alert Radio-B that ERF is to be sent	ERF is sent on operational preset
c. Prepare Rt to send ERF	(1) Set FCTN to LD	Required for sending an ERF
	(2) Set MODE to FH-M**	Required for sending an ERF
d. Send ERF	(1) Press [LOAD] on RT	Display shows [HLD]
	2) Enter preset where data stored	Display shows [HF XXX]
	(3) Press [ERF] on RT keypad	Display shows [SEND]
	(4) Set FCTN to SQ ON	(Clears temporary memory of RT)
e. Check communications	(1) Wait or Radio-B to store ERF	(20-30 sec should be adequate)
	(2) Call Radio-B confirm ERF	(Task is completed)

\* Any radio may be used, but in preparing for an RXMT mission, use of RT-D simplifies the process.

\*\* If sending an ERF in any situation other than preparing for an RXMT operation, it is important to switch back to FH after using FH-M for transmitting the ERF.

SINGGARSIANCD OPERATOR' CHLCKUST

If you have difficulty communicating, or getting your ANCD or radio to respond properly, take time to perform the following checks before you decide that something serious is wrong with your equipment

- CHECK FOR ERROR MESSAGES AND WARNING LIGHTS, ANCD/RADIO.
- CHECK FOR POWER; BATTERES AND MAIN POWER SOURCE, AS FEASIBLE.
- MAKE SURE YOU HAVE ALL CONTROLS SET CORRECTLY.
- CHECK ALL CABLE CONNECTIONS; BE SURE THE ARE TIGHT.
- RE-RUN RADIO SELF-TEST. NOT RUN ANCO SELF-TEST.)
- CHECK ANC, KY-58, AND RT FOR PROPER COMSEC, FH DATA AND SYNC TIME.
- CHECK FOR LINE-OF-SIGHT WITH STATIONS YOU ARE TRYING TO CONTACT.
- IF FEASIBLE, CHANGE YOUR POSITION AND CHECK COMMUNICATIONS.
- IF YOU DO NOT HEAR TRAFFIC, PERFORM PASSIVE LATE NET ENTRY.
- CHECK FOR NEAR-BY STATION THAT MAY BE INTERFERING WITH YOUR RADIO.
- CHECK FOR ENEMY JAMMING; IF BEING JAMMED, TAKE APPROPRTE ACTION.

Any of these checks may solve your problem and put you back into communications. All are worth trying. If you still have a problem after making these operator checks, contact your unit maintenance.



ABBREVIATIONS USED

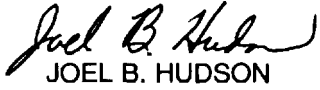
ABN .....	Airborne
ANCD .....	Automated No Control Device
APPL .....	Application
BIT .....	Built-in Test
CALWD .....	Call Word
C/S .....	Sign/Countersign
CFD .....	COMSEC Fill Device
CLR .....	Clear
CLSGN .....	Callsign
CNTRSIGN .....	Countersign
COMSEC .....	Communications Security
CT .....	Cipher Text
DBS .....	Databases
DD .....	Days shown two-digit number
DI .....	Default ICOM
ECCM .....	Electronic Counter Counter-Measure
EDITN/EDN .....	Edition
ENTR .....	Enter
ERF .....	Electronic Remote Fill
ESET .....	FH Data to one preset
FCTN .....	Function
FH-M .....	Frequency Hopping-Mater
FREQ/FRQ .....	Frequency
GRP .....	Group
HH .....	Hours shown as two-digit number
ICOM .....	Integrated COMSEC
JD .....	Julian Date/Day
KEK .....	Key Encryption Key
LD .....	Load
LNE .....	Late Net Entry
MAN .....	Manual [Frequency]
MM .....	Minutes shown as two-digit number

NCS.....	Net Control Station
NETID.....	Net Identification
NR.....	Number
OPR.....	Operator
PC.....	Personal Computer
PLGR.....	Precision Lightweight GPS Receiver
PT.....	Plain Text
PTT.....	Push-To-Talk [Switch]
PYRO.....	Pyrotechnics
QREF.....	Quick Reference
RCU.....	Remote Control Unit
RCV.....	Receive
RDS.....	Revised Data Transfer Device (DTD) Software
RT.....	Receiver-Transmitter
RXMT.....	Retransmission
SC.....	Single Channel
SOI.....	Signal Operating Instructions
SQ ON.....	Squelch On
SS.....	Second shown as two-digit number
STO.....	Store
SUFX.....	Suffix
SYNC.....	Synchronization
TEK.....	Traffic Encryption Key
TMPD/TP.....	Time Period
TSK.....	Transmission Security Key
UTIL.....	Utilities
XFR.....	Transfer
YY.....	Years shown as two-digit number
Z-A.....	Zero-Frequency Hoping [D]

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