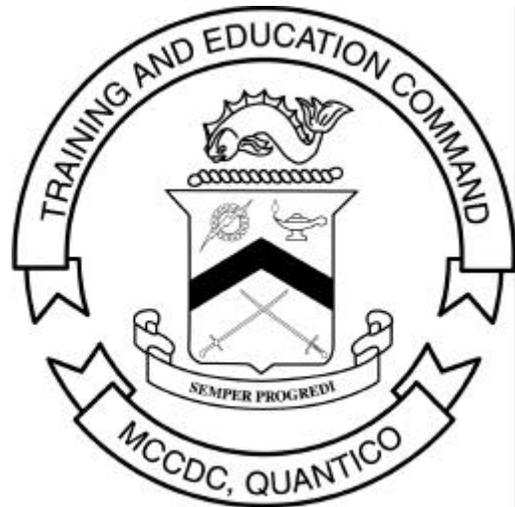


# MARINE CORPS INSTITUTE



## AN/PRC-113 (V) AND AN/VRC-83 (V) 2 PROGRAMMING GUIDE

MARINE BARRACKS  
WASHINGTON, DC



## UNITED STATES MARINE CORPS

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### AN/PRC-113 (V) 3 AND AN/VRC-83 (V) 2 PROGRAMMING GUIDE (MCI 0632)

1. Purpose. This handbook for ECCM programming is published to provide instruction to all Marines whose duties require them to program and operate the AN/PRC-113 (V) 3 and AN/VRC-83 (V) 2.
2. Scope. This handbook for ECCM programming addresses the procedures for loading frequencies and preset frequencies, programming single word of day and multiple word of day, establishing time of day, and determining the active net number. It also provides instruction for programming frequencies for training net and frequency management training operation.
3. Applicability. This handbook is intended for instructional purposes only. It is designed for use by Marines of all grades in the communications field.
4. Recommendations. Comments and recommendations on the content of the handbook are invited and will aid in subsequent course revisions. Please complete the course evaluation questionnaire at the end of the course text. Return the questionnaire to your proctor.

T. M. FRANUS  
By Direction

# AN/PRC-113 (V) 3 AND AN/VRC-83 (V) 2 PROGRAMMING GUIDE

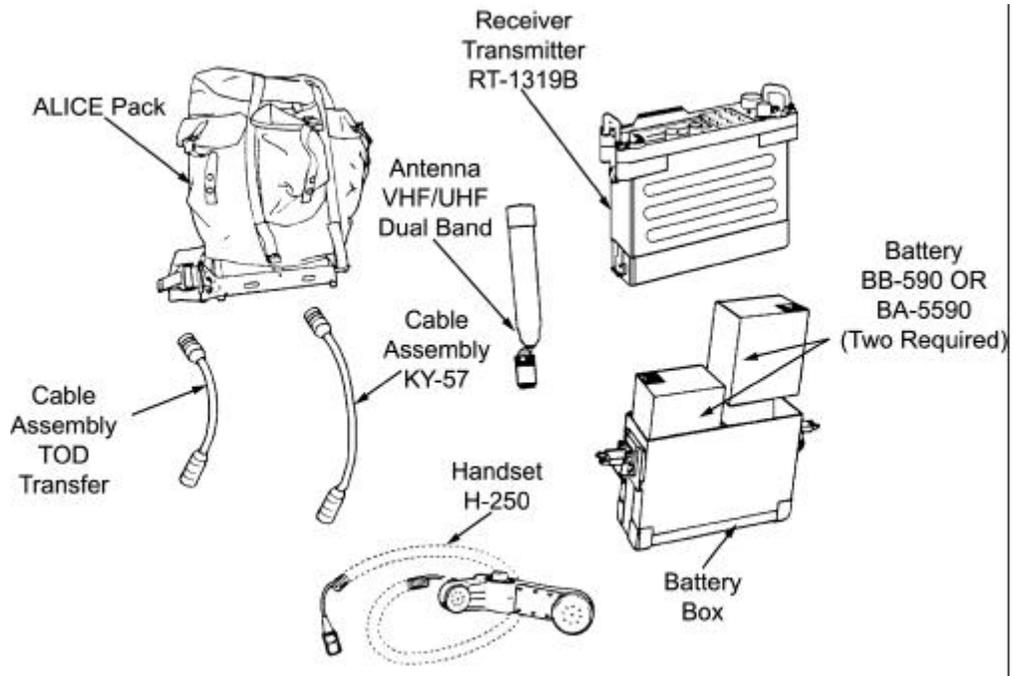
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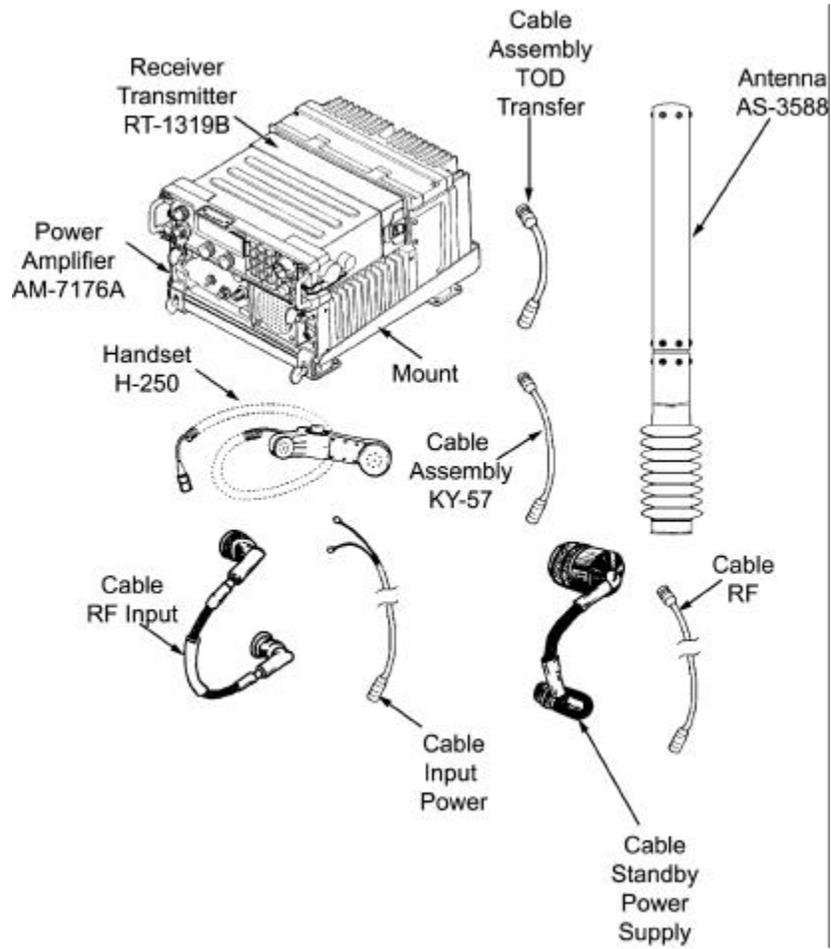
# AN/PRC-



## AN/PRC-113 (V) 3 Technical Characteristics

Characteristics	Description
Frequency Selection	Manual, using keyboard 8 programmable presets
Power Requirements	24 to 30 VDC
Frequency Range	116.000 to 149.975 MHz (VHF) 1360 VHF frequencies  225.000 to 399.975 MHz (UHF) 7000 UHF frequencies
Channel Spacing	25 kHz
Output Power	Low power – 2 watts High power – 10 watts
Types of Modulation	AM voice AM secure voice Direction Finding (DF)
Modes of Operation	Single channel ECCM
Guard Receiver	Fix-tuned to 243.000 MHz

## AN/VRC-83 (V) 2 Major Components



## AN/VRC-83 (V) 2 Technical Characteristics

Characteristics	Description
Frequency Selection	Manual, using keyboard 8 programmable presets
Power Requirements	24 to 30 VDC
Frequency Range	116.000 to 149.975 MHz (VHF) 1360 VHF frequencies  225.000 to 399.975 MHz (UHF) 7000 UHF frequencies
Channel Spacing	25 KHz
Output Power    BYPASS mode PA mode	2 watts (RT-1319B low power) 10 watts (RT-1319B high power)
Types of Modulation	AM voice AM secure voice Direction Finding (DF)
Modes of Operation	Single channel ECCM
Guard Receiver	Fix-tuned to 243.000 MHz

## RT-1319B Controls and Connectors

Control	Action	Result
OFF/ VOLUME	Rotate clockwise	Turns radio on, then increases volume
	Rotate counterclockwise	Decreases volume, then turns radio off
DIM	Rotate clockwise	Turns back-lighting on, then increases intensity
		Decreases intensity, then turns back-lighting off
SQUELCH	Rotate clockwise	Increases squelch level
	Rotate counterclockwise	Decreases squelch level
ANTENNA	Connect antenna	(Self explanatory)
REMOTE	Connect TOD transfer cable	Provides HWT interface
	Connect standby power supply cable	Provides connection to AM-7167A
AUDIO	Connect handset	Permits secure voice communication
	Connect KY-57 cable	

## RT-1319B Keyboard Functions

Key	Function
1	Enters the number 1 Used with software revision check
2	Enters the number 2
3	Enters the number 3 Used with forced clock start
4 LPR	Enters the number 4 Controls power output level
5 ACT	Enters the number 5 Controls ECCM operation
6 GD	Enters the number 6 Controls Guard Receiver
7 SQL	Enters the number 7 Controls Main Receiver squelch
8 TOD	Enters the number 8 Commands RT to accept TOD signal
9 DF	Enters the number 9 Controls the DF mode
CLR HWT	Clears (CLR) number errors Transmits TOD via Hard Wire Transfer (HWT)
0 PST	Enters the number 0 Allows access to preset (PST) registers
ENT	Commands RT to process programmed information and relight display

## AM-7176A Controls and Indicators

<b>Controls</b>	<b>Action</b>	<b>Results</b>
BYPASS/ PA	Place in BYPASS position	PA is not in use; power level determined by RT-1319B. Power is 2 watts or 10 watts.
	Place in PA position	PA is in use, power level is 30 watts.
FAULT Lamp	If lit in BYPASS	Normal indication
	If lit in PA	System fault
SPKR/ VOL	Rotate clockwise	Turns speaker on, then increases volume
	Rotate counterclockwise	Decreases volume, then turns speaker off
RF IN	Connect RF input cable	Interfaces with RT-1319B
PWR/OFF	Place in OFF position	No power to system
	Place in PWR position	System power applied
ANT	Connect RF output cable	Interfaces with the AS-3588
J7	Connect standby power supply cable	Powers RT-1319B if main power sources is lost

## Preparing the AN/PRC-113 (V) 3 For Operation

Step	Action
1	Unlatch the battery box from the bottom of the RT-1319B to gain access to the battery box. Place the batteries inside the two compartments in the battery box with the two connectors outboard. Gently place the RT-1319B back down on the battery box to seat the connectors. When the batteries are seated, latch the battery box back to the RT-1319B.
2	Place the connector end of the antenna over the ANT connector on the RT-1319B.
3	<p>Turn the antenna in a clockwise direction to thread it on the radio. Once the antenna becomes snug, do not continue tightening. If you tighten it too much, you'll need a wrench to take it off.</p> <p><u>Note:</u> Most communicators prefer a coat of saliva on the o-ring to aid in fastening the handset. While it does make the connection easy, it does not prevent moisture. A light coat of silicone grease will make the connection both easy <u>and</u> moisture resistant.</p>
4	<p>Turn the OFF/VOLUME switch on the RT-1319B clockwise to turn the radio on. You should immediately hear rushing noise in the handset. Continue to turn the OFF/VOLUME switch clockwise to increase the volume. If you cannot hear any rushing noise, look for "SQL" on the LCD. Press the "7/SQL" key on the keyboard if you see that squelch is enabled. The radio will automatically return to the operating modes and frequency that were in use the last time it was on. As you turned OFF/VOLUME switch clockwise, you should have also seen the liquid crystal display (LCD) "glow" green (called backlighting). You can turn the DIM control left or right to adjust the intensity of backlighting.</p> <p><u>Note:</u> Backlighting will automatically go out 30 seconds after power-up or when the keyboard is not used for 30 seconds. To re-light, push the ENT key.</p>

## Preparing the AN/VRC-83 (V) 2 For Operation

Step	Action
1	Connect the input power cable to the mounting base.
2	Slide the AM-7176A/RT-1319B assembly into the mounting base. Tighten the clamps to secure the assembly.
3	Connect the standby power supply cable between the AM-7176A (J7) and the RT-1319B (Remote).
4	Connect the RF input coaxial cable between the AM-7176A (RF IN) and the RT-1319B (ANT).
5	Connect the output RF cable to the AM-7176A at the ANT connector.  <u>CAUTION:</u> To prevent internal damage, make sure that the output cable is terminated at the AS-3588 or at another antenna.
6	Apply a light coat of silicone grease to the O-ring inside the H-250 handset cable. This procedure is a moisture preventative that also makes connecting cable easier.
7	Connect the H-250 to the RT-1319B at the AUDIO connector.
8	Flip the AM-7176A power switch to the PWR position.
9	Turn on the RT-1319B and adjust volume in the handset.
10	Turn on the AM-7176A speaker, if desired, and adjust volume.
11	Adjust the backlighting for comfortable viewing or tactical conditions.
12	Keep the BYPASS/PA switch in BYPASS until directed or if communication is not possible without 30 watts of RF power.

## Entering a Frequency

Press	Display Shows	Remarks
3	3 .	
1	31 .	
5	315.	
4	315.4	
7	315.475	“75” is automatically entered because of the 25 KHz spacing. The display will flash, giving you enough time to make sure it is correct.
ENT	315.475	The frequency will now become solid, indicating the frequency change has taken effect.

## Entering Frequencies into Preset Channels

The table below shows how to enter frequencies into preset channels using 246.225 MHz and preset channel #4 as an example.

Press	Display Shows	Remarks
2	2 .	
4	24 .	
6	246.	
2	246.2	
2	246.225	“25” is automatically entered because of the 25 KHz spacing. The display will flash, giving you enough time to make sure it is correct.
O/PST	LP-	The radio is asking in what preset you wish to enter the frequency.
4	LP-4	The radio is telling you that it will put the frequency in preset channel #4.
ENT	246.225	The frequency is now in preset channel #4 and is in use.

## Recalling Preset Frequencies

The table below shows how to recall a preset frequency using preset channel #6 as an example.

<b>Press</b>	<b>Display Shows</b>	<b>Remarks</b>
O/PST	P-*	The radio will show P-0 through P-8 depending on how you selected the last frequency.
4	P-6	The radio is showing that you are accessing preset #6.
ENT	382.900	The frequency had been previously entered. The RT-1319B is now tuned to this frequency.

## Operating Codes

ECCM Access Code	Mode	Usage
220.000	Normal operation/ SWOD load	You enter the code of “220.000” into preset 20 to access this mode, the basic mode for the RT-1319B. By programming “220.000” in preset 20, you are telling the radio that you wish to operate in single channel or ECCM, you desire access to your eight preset frequencies, and you want the ability to load WOD. Do not forget that this is the basic mode for the RT-1319B.
220.025	MWOD load	You enter the code of “220.025” into preset 20 to access this mode. This tells the RT-1319B you wish to load WOD entries for two or more day's worth of ECCM operation. You are also telling it that you do not desire access to your eight preset frequencies.
220.050	WOD erase mode	Enter “220.050” into preset 20 to erase every WOD entry the RT-1319B has stored in memory. By placing “220.050” into preset 20, you are commanding the RT-1319B to erase all WOD entries. Use this code with caution.
220.075	FMT load mode	Enter “220.075” into preset 20 to access this mode. You are telling the RT-1319B you wish to load FMT frequencies into memory. These frequencies are what the RT-1319B will use to hop on when you use the FMT net. You will not have access to the eight preset frequencies from this mode.

## Entering Operating Codes

Use the table to enter operating codes. Use code 220.000 as an example.

Press	Display Shows	Remarks
2	2 .	
2	22 .	
0	220.	
0	220.0	“0” will flash: disregard.
0	220.000	“00” is automatically entered. The display will flash, giving you enough time to make sure it is correct.
O/PST	LP-	The radio is asking in what preset you wish to enter the code.
20	LP-20	The radio is telling you that it will put the code in preset #20.
ENT	220.000	The RT-1319B is now in the Normal/SWOD mode.

Note: LP – indicates Normal/SWOD Load  
 LC – indicates MWOD Load  
 LF – indicates FMT Load

## Loading SWOD

Use the following WOD segments as an example: 245.600, 297.250, 233.275, 267.050, and 312.000.

Note: A WOD consists of up to six segments but is not less than one.

<b>Press/ Enter</b>	<b>Display Shows</b>	<b>Remarks</b>
220.000	220.000	This entry will enable or make sure that the RT-1319B is in the normal/SWOD load mode.
0/PST	LP-	
20	LP-20	Operating codes always go in preset #20.
ENT	220.000	The RT is now ready to accept WOD.
245.600	245.600	This is the first WOD segment.
0/PST	LP-	
20	LP-20	Programming is done in descending order; 20 is first.
ENT	245.600	The first WOD segment has been loaded.
297.250	297.250	This is the second WOD segment.
0/PST	LP-	
19	LP-19	Programming is done in descending order; 19 is second.
ENT	297.250	The second WOD segment has been loaded.
233.375	233.375	This is the third WOD segment.
0/PST	LP-	
18	LP-19	Programming is done in descending order; 18 is third.
ENT	233.375	The third WOD segment has been loaded.

Note: Load presets 17-15 in the same manner.

## WOD and Date Information

The following table shows six individual WOD entries with date tags.

### ENTRIES

WOD #1		WOD #2	
Segment	#1 275.900 -- Preset 20	Segment	#1 225.000 -- Preset 20
Segment	#2 247.950 -- Preset 19	Segment	#2 267.900 -- Preset 19
Segment	#3 230.825 -- Preset 18	Segment	#3 329.025 -- Preset 18
<b>Date</b>	<b>318.000 – Preset 14</b>	Segment	#4 227.275 -- Preset 17
		Segment	#5 216.650 -- Preset 16
		Segment	#6 399.975 -- Preset 15
		<b>Date</b>	<b>319.000 – Preset 14</b>
WOD #3		WOD #4	
Segment	#1 321.625 -- Preset 20	Segment	#1 256.475 -- Preset 20
Segment	#2 273.300 -- Preset 19	Segment	#2 287.075 -- Preset 19
Segment	#3 245.550 -- Preset 18	Segment	#3 227.375 -- Preset 18
Segment	#4 255.925 -- Preset 17	Segment	#4 398.675 -- Preset 17
Segment	#5 295.250 -- Preset 16	<b>Date</b>	<b>321.000 – Preset 14</b>
Segment	#6 341.375 -- Preset 15		
<b>Date</b>	<b>320.000 – Preset 14</b>		
WOD #5		WOD #6	
Segment	#1 306.075 -- Preset 20	Segment	#1 299.975 -- Preset 20
<b>Date</b>	<b>322.000 – Preset 14</b>	Segment	#2 246.650 -- Preset 19
		Segment	#3 399.975 -- Preset 18
		<b>Date</b>	<b>323.000 – Preset 14</b>

## Loading MWOD Entries

Use the table as an example of loading MWOD entries for ECCM operation.

<b>Press/ Enter</b>	<b>Display Shows</b>	<b>Remarks</b>
220.025	220.025	This entry will enable the MWOD load mode.
0/PST	LP-	Remember that the radio will not indicate "LC" until after you have entered the code.
20	LP-20	Operating codes always go in preset #20.
ENT	220.025	The MWOD load mode has been accessed. You are ready to load the first WOD entry.
225.000	225.000	This is the first WOD segment for the first entry.
0/PST	LC-	"LC" is used during MWOD load.
20	LC-20	The first segment always goes in preset #20.
ENT	225.000	The first segment for the first WOD has been loaded.
267.900	267.900	This is the second segment for the first entry.
0/PST	LC-	
19	LC-19	The second segment always goes in preset #19.
ENT	267.900	The second segment for the first WOD has been loaded.

## Loading MWOD Entries, Continued

Press/ Enter	Display Shows	Remarks
368.025	368.025	This entry is the third and final segment for the first WOD.
0/PST	LC-	
18	LC-18	The third segment always goes in preset #18.
ENT	368.025	The final WOD segment for the first WOD has been loaded.
322.000	322.000	The example shows the 22 <sup>nd</sup> as the date for the first WOD.
0/PST	LC-	
14	LC-14	Date information always goes in preset #14.
ENT	322.000	The first WOD can now be identified by the date 322.000.

Note: You can now start loading the second WOD entry. Regardless of whether a WOD uses only preset #20 or fills up presets #20 through #15, the date information ALWAYS goes in preset #14. Continue until all six WODs are loaded and dated.

## Selecting a Previous WOD

The table below shows how to access a WOD entry programmed into MWOD using a day loaded with 325.000 as an example.

<b>Press/ Enter</b>	<b>Display Shows</b>	<b>Remarks</b>
220.025	220.025	You must fill in the MWOD load mode.
0/PST	LP-	The radio will display “LC” if it is already in the MWOD load mode.
20	LP-20	
ENT	220.025	You have entered the MWOD load mode.
225.000	325.000	This is the date for the WOD entry to be used.
0/PST	LC-	
20	LC-1	The date of 325.000 must be placed in preset #1.
ENT	325.000	The date of the 325.000 has been entered into preset #1. The RT-1319B will scan all preset #14 entries. When it finds 325.000, that WOD entry will be used for ECCM operation.

Note: You can verify if a specific date has been loaded into memory. Enter the first three digits of the date entry, then press “ENT.” The display will show PASS or FAIL.

## Loading FMT Frequencies

Press/ Enter	Display Shows	Remarks
220.075	220.075	This entry will enable the FMT load mode.
0/PST	LP-	Remember that the display will not show “LF” until after the code has been loaded.
20	LP-20	Operating codes always go into preset #20.
ENT	220.025	The FMT load mode has been accessed. You are ready to load FMT frequencies.
225.000	293.450	This is your first frequency.
0/PST	LF-	“LF” is used during FMT load.
20	LF-20	The first frequency always goes in preset #20.
ENT	293.450	The first frequency has been loaded.
267.900	315.675	This is your second frequency.
0/PST	LF-	
19	LF-19	The second frequency always goes in preset #19.
ENT	315.675	The second frequency has been loaded.

Note: Continue loading FMT frequencies in the same manner. There must be at least five frequencies but not more than 16.

## Performing a Forced Clock Start

<b>Step</b>	<b>Action</b>
1	Press the “3” key on the RT-1319B keyboard.
2	Press the “ENT” key on the RT-1319B keyboard.

## Transferring TOD

Follow the steps below to transfer TOD over the air.

Step	Action
1	If your radio does not already have TOD, perform a forced start clock.
2	Establish single channel communication with all members on the net.
3	Direct all members to press the “8/TOD” key on their RT-1319B keyboards.
4	Give all members on the net sufficient time to press their “8/TOD” keys.
5	Press the “9/DF” key on your RT-1319B. You will hear two different tones in your handset.
6	Again, press the “9/DF” key on the RT-1319B keyboard.
7	Allow sufficient time for all members on the net to enter their TOD.
8	Contact all members on the net to make sure that they received TOD. Perform steps 3 through 8 for those who did not.
9	TOD must be retransferred or updated at least every 4 hours to keep radios synchronized. A forced clock start is not required to do this procedure.

## Transferring DOY

Follow the steps below to transfer DOY over the air.

Step	Action
1	Select the appropriate WOD for use on the day desired by entering the WOD date in preset #1.
2	Perform a forced clock start. This step is mandatory.
3	Establish single channel communication with all members on the net.
4	Direct all members to press the "8/TOD" key on their RT-1319B keyboards.
5	Give all members on the net sufficient time to press their "8/TOD" keys.
6	Press the "9/DF" key on the RT-1319B keyboard. You will hear two different tones in your handset.
7	Again, press the "9/DF" key on the RT-1319B keyboard.
8	Allow sufficient time for all members on the net to enter their TOD.
9	Contact all members on the net to make sure they received TOD. Perform steps 4 through 9 for those who did not.

## Receiving TOD and DOY

Follow the steps below to receive TOD and DOY over the air.

Step	Action
1	Contact the Net Control Station (NECOS) and inform them that you need TOD or DOY.
2	When directed by NECOS, press the “/TOD” key on the RT-1319B and observe “3” on the display. This indicates the radio is awaiting TOD or DOY.  <u>Note:</u> The display will show the first number of the frequency of operation. For example, if the frequency is “288.550,” the display will show “2.”
3	Observe the display for reception of the TOD or DOY signal. The display will read “3.tod” or “2.tod” when the signal has been received.
4	Press the “ENTR” key. This entry will process the TOD or DOY signal.

## Entering the Active Mode

Follow the steps below to enter the active (or ECCM) mode.

<b>Step</b>	<b>Action</b>
1	Make sure you have a valid WOD, TOD, and your frequency of operation will result in a valid active net number.
2	On the RT-1319B keyboard, press the “5/ACT” key. Observe the first number of the frequency of operation change to a solid “A.” The radio is now in the ECCM mode and is frequency hopping.
3	If the “A” is flashing, you have an invalid WOD, an illegal ANN, or no TOD.
4	If a flashing “5” is shown rather than a solid “A,” you are attempting to go active using a VHF frequency.

## Erasing all WOD Entries

Use the table below to erase previously loaded WOD entries.

<b>Press/ Enter</b>	<b>Display Shows</b>		<b>Remarks</b>
220.050		220.050	Display will flash.
0/PST		LP-	
20		LP-20	Operating codes always go into preset #20.
ENT		Erase	Entry will be displayed for about 6 seconds. All WOD entries are being erased (SWOD and MWOD).

## Radio Set Shutdown Procedures

Use the following table to perform shutdown procedures for the AN/PRC-113 (V) 3 and the AN/VRC-83 (V) 2 radio sets.

<b>AN/PRC-113 (V) 3</b>	<b>AN/VRC-83 (V) 2</b>
Turn the VOL switch to the OFF position.	Turn the VOL switch to the OFF position.
Remove the handset.	Remove the handset.
Detach the antenna	Disconnect all cables.
Remove and store batteries.	Remove the AM-7176A/RT-1319B assembly from the mount.

## Acronyms, Meanings, and Descriptions

ACRONYM	MEANING	DESCRIPTION
LOS	Line of Sight	A direct path for communication from one point to another, for example, between aircraft or from the ground to an aircraft. You don't have to be able to see the other radio to talk to it, but the antennas on the radio do.
IDF	International Distress Frequency	Used to prevent friendly fires or when you are in immediate danger with no other means of communication available.
GD	Guard Receiver	Activated by the operator and fix tuned to 243.000 MHz. Monitors the UHF IDF.
DF	Direction Finding	Transmits a constant 1 KHz tone at 90 percent modulation to transmit TOD.
LPR	Low Power	RT-1319B output of 2 watts
ECCM	Electronic Counter-Counter Measures	Using passive security to deny the enemy knowledge of friendly activities
	Nets	Various hopping patterns
PT	Plain Text	Automatically selected when no COMSEC device is in use.

## Acronyms, Meanings, and Descriptions, Continued

ACRONYM	MEANING	DESCRIPTION
ACT	Active	Enables the ECCM capability of the radio.
WOD	Word of Day	<p>This code sets the frequency hopping and rate. It is manually entered into the RT-1319B's memory using the front panel keyboard. A tape of predetermined codes that will service from 1 to 6 days.</p> <p>The WOD segments look like valid UHF frequencies but they are not. They are only six bits of information to be processed by the RT-1319B.</p>
TOD	Time of Day	TOD places the radios on the net in synchronization with each other. Use this input to update the internal clock. The operator using the keyboard, from another RT-1319B or from an external timing device, can update TOD.
ANN	Active Net Number	Determines the hopset of frequencies and what frequencies in that hopset are used. There are 1,600 legal net numbers that can be assigned. Allows multiple nets with common WOD and TOD to operate without interference.

## Acronyms, Meanings, and Descriptions, Continued

ACRONYM	MEANING	DESCRIPTION
SWOD	Single Word of Day	The basic mode for the RT-1319B. The operator has presets 1 – 8 available for frequency storage and can load one WOD entry for ECCM operation.
WOD Erase	Word of Day Erase	Use this mode to clear all WOD entries in memory.
FMT Net	Frequency Management Training Net	Allows the radio to use the frequencies loaded into the presets as the actual hopset. The RT will hop on the frequencies that are loaded.
RF	Radio Frequency	Electromagnetic energy
HWT	Hard Wire Transfer	Transferring electronic data through a wire system external to the receiver transmitter.
CONF	Conferencing	The name given to the radios used to receive and process two simultaneous transmissions without interference.

## Operator's Troubleshooting Checklist

Before calling for help, perform the following checks if you are having trouble with your radio:

- Make sure you have set all switches properly.
- Check all cable connections to make sure they are clean and tight.
- Make sure the antenna is properly connected and positioned.
- Make sure the radio has adequate power, especially in the AN/PRC-113 (V) 3 configuration.
- Replace the battery when the decimal point in the display begins to blink.
- Check all numbers and codes because they may need to be reprogrammed.

If you have performed these procedures and still have a problem, turn in your radio to your unit's maintenance shop.

# Advanced Programming Chart

## Training Nets

PRESET REGISTERS									
20	19	18	17	16	15	14	NET #	CONF	FUNCTION
300.0xx	Any	Any	Any	Any	Any	XXX.XXX	A00.X00	ON	T-NET
-	-	-	-	-	-	-	25	ON	FMT-NET
-	-	-	-	-	-	-	50	--	ILLEGAL
-	-	-	-	-	-	-	75	--	ILLEGAL

## Operational Nets

PRESET REGISTERS									
Single segment WOD									
20	19	18	17	16	15	14	NET #	CONF	FUNCTION
300.0xx						XXX.XXX	A00.000	ON	A&B NET
to							25	ON	NATO
399.9xx							50	ON	NON-NATO
-							75	--	ILLEGAL
2 or more segment WOD									
225.1XX	XXX.X00	Any	Any	Any	Any	XXX.XXX	00	ON	A&B NET
	-	-	-	-	-		25	ON	NATO
	-	-	-	-	-		50	ON	NON-NATO
	-	-	-	-	-		75	--	ILLEGAL
	XXX.X25	-	-	-	-		00	OFF	A&B NET
	-	-	-	-	-		25	OFF	NATO
	-	-	-	-	-		50	OFF	NON-NATO
	-	-	-	-	-		75	--	ILLEGAL
	XXX.X50	-	-	-	-		00	ON	A&B NET
	-	-	-	-	-		25	ON	NATO
	-	-	-	-	-		50	ON	NON-NATO
	-	-	-	-	-		75	--	ILLEGAL
	XXX.X75	-	-	-	-		00	OFF	A&B NET
	-	-	-	-	-		25	OFF	NATO
	-	-	-	-	-		50	OFF	NON-NATO
299.9XX	-	-	-	-	-	XXX.XXX	75	--	ILLEGAL

## Using the Advanced Programming Chart

The Advanced Programming Chart will enable you to manipulate certain RT-1319B ECCM capabilities. These include controlling the conferencing mode, training/operational net selection, and specific net selection.

1. Training/Operational Net Selection. This selection is done by the second, third, and fourth digits of the WOD segment in preset #20. If these digits are all zeros, a training net will be selected. Any non zero number in the second, third, or fourth position will force an operational net selection.

2. Net Selection. The ANN will determine which of the two training nets or which of the three operational nets are selected.

a. Training Net. If the ANN ends with “00,” the T-Net will be selected. The FMT net will be selected if the ANN ends with “25.”

b. Operational Net. If the ANN ends with “00,” the A&B Net will be selected. The NATO net will be selected if the ANN ends with “25” and the non-NATO net will be selected if the ANN ends with “50.” An ANN ending with “75” is illegal.

3. Conferencing. Conferencing is controlled by the contents of preset register 19.

a. Training Nets. Conferencing is automatically enabled while using the T-net or the FMT net.

b. Operational Nets. If the contents of the WOD segment in preset #19 end with “25” or “75,” conferencing will be disabled. A WOD segment in preset #19 ending with “00” or “50” enables conferencing. Not having a WOD segment in preset #19 will automatically enable conferencing.