

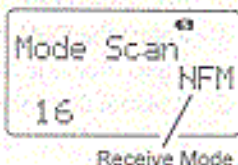
Memory Mode

Mode Scan

The VR-500 may be programmed to scan only those Memory Channels on which a particular emission mode has been programmed (such as NFM, AM, etc.).

To set up Mode Scanning:

- ① Switch to the VFO mode by pressing the [CLR (P.SET)] key.
- ② Press the [ENT(SET)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the **DIAL** knob to select Menu #16 [Mode Scan].
- ④ Rotate the **DIAL** knob while pressing the [FUNC] key to select the Receive Mode which you wish to scan during Memory Scanning (all channels set to other modes will be ignored).
- ⑤ Press the [CLR (P.SET)] key to exit to normal operation.
- ⑥ Press the [1(MEMO)] key while pressing the [FUNC] key to enter the Memory mode.
- ⑦ Press the [3(SCH/SCN)] key while pressing the [FUNC] key to initiate Mode Scanning. Only the channels which were stored with the same Receive Mode will be scanned.
- ⑧ To return to *normal* Memory Channel Scanning, re-enter the "Set" (Menu) mode, and set Menu #16 to OFF.

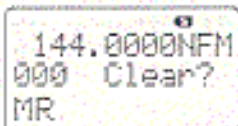


DELETING MEMORY CHANNELS

You may wish to delete a certain Memory Channel's data, when you no longer have a reason to recall that channel.

To delete a channel's data:

- ① Recall the Memory Channel to be deleted.
- ② Press the [2(MW/MC)] key while pressing the [FUNC] key. You will observe "Clear?" on the display.
- ③ Press the [2(MW/MC)] key again while pressing the [FUNC] key to delete the Memory Channel.



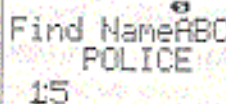
Important Note: Deleted Memory Channel data can not be restored.

Memory Mode

ALPHA-NUMERIC MEMORY RECALL

You can use the VR-500's powerful microprocessor system to search for Memory Channels according to their alpha-numeric label. In the example below, we shall set up the VR-500 to find all channels programmed with "POLICE" as an alpha-numeric label (e.g. POLICE 1, POLICE 2, etc.).

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key.
- ② Press the [ENT(SET/NAME)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the **DIAL** knob to select Menu #15 [Find Name].
- ④ Rotate the **DIAL** knob one click while pressing the [FUNC] key to enable setup of Alpha-Numeric Memory Recall.
- ⑤ Program the alpha-numeric "label" which you wish to recall using the **DIAL** knob and keypad, as described previously.
In this case, program "POLICE" as the label. Now press the [ENT(SET/NAME)] key (do not press the [FUNC] key in this step).
- ⑥ Now press the [CLR(P.SET)] key to exit to normal operation.
- ⑦ Press the [1(MEMO)] key while pressing the [FUNC] key to return to the Memory mode.
- ⑧ Rotate the **DIAL** knob. You will observe that only channels beginning with "POLICE" are now appearing on the display.
- ⑨ To return to normal Memory Recall operation, re-enter the "Set" (Menu) mode, select Menu #15, then clear the alpha-numeric "Tag." The easiest way to do this is to enter [•(STEP)] (from the "ABC" selection option) for each digit in the alpha-numeric label within Menu #15.



Find NameABC
POLICE
15

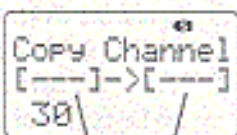
Important Note: You can recall Memory Channels alpha-numerically using just one or two letters of a label within Menu #15. In the above example, if you programmed "PO" in Menu #15 instead of "POLICE," you could then recall channels such as "PONTIAC," "PORTER," "PORTLAND," and "POWER" in addition to "POLICE." But if you set "POR" in Menu #15, only "PORTER" and "PORTLAND" would be recalled.

Memory Mode

MEMORY CHANNEL COPYING

This feature allows to copy and paste the Memory Channel data between any two desired Memory Channels.

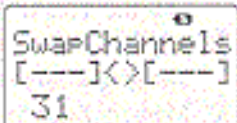
- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key.
- ② Press the [ENT(SET/NAME)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the DIAL knob to select Menu #30 [Copy CH].
- ④ Rotate the DIAL knob one click clockwise while pressing the [FUNC] key to enable the setup of Memory Channel Copying.
- ⑤ Key in the *Source* Memory Channel number (three digits) from the keypad, then key in the *Destination* Memory Channel number (three digits) from the keypad. Memory Channel Copying is now complete.
- ⑥ Press the [CLR(P.SET)] key to exit to normal operation.



MEMORY CHANNEL SWAP

This feature allows you to swap (exchange) Memory Channel data between any two Memory Channels.

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key.
- ② Press the [ENT(SET/NAME)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the DIAL knob to select Menu #31 [Swap CH].
- ④ Rotate the DIAL knob one click clockwise while pressing the [FUNC] key to enable the setup of Memory Channel Swap.
- ⑤ Key in the two Memory Channel numbers (each three digits) to be swapped from the keypad.
- ⑥ Memory Channel Swap is now complete.
- ⑦ Press the [CLR(P.SET)] key to exit to normal operation.



Memory Mode

MEMORY BANK COPY

This feature allows you to copy and paste the all Memory Channels in a particular Memory Bank to a different Memory Bank.

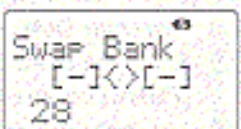
- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key.
- ② Press the [ENT(SET)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the **DIAL** knob to select Menu #27 [Copy Bank].
- ④ Rotate the **DIAL** knob while pressing the [FUNC] key to enable the setup of Memory Bank Copy.
- ⑤ Key in the *Source* Memory Bank number (one digit) from the keypad, then key in the *Destination* Memory Bank number (one digit) from the keypad.
- ⑥ Memory Bank Copy is now complete.
- ⑦ Press the [CLR(P.SET)] key to exit to normal operation.



MEMORY BANK SWAP

This feature allows to swap (exchange) all the Memory Channels in any two Memory Banks.

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key.
- ② Press the [ENT(SET)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the **DIAL** knob to select Menu #28 [Swap Bank].
- ④ Rotate the **DIAL** knob while pressing the [FUNC] key to enable the setup of Memory Bank Swap.
- ⑤ Key in the two Memory Bank numbers (each one digit) to be swapped from the keypad.
- ⑥ Memory Bank Swap is now complete.
- ⑦ Press the [CLR(P.SET)] key to exit to normal operation.

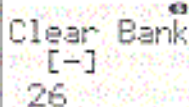


Memory Mode

CLEARING OF A MEMORY BANK

This feature allows to mask (clear) the all memory channels in the desired memory bank at the same time.

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key.
- ② Press the [ENT(SET)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the **DIAL** knob to select Menu #26 [Clear Bank].
- ④ Rotate the **DIAL** knob one click clockwise while pressing the [FUNC] key to enable the setup of Memory Bank Clearing.
- ⑤ Key in the memory bank number (one digit) to be cleared from the keypad.
- ⑥ The display will now indicate "Clear ..." for about four seconds. Thereafter, clearing of the prescribed Memory Bank will be complete.
- ⑦ Press the [CLR(P.SET)] key to exit to normal operation.



Clear Bank
[-]
26

Important Note: A cleared Memory Bank can not be restored. All data for that bank will have to be re-entered.

MEMORY CHANNEL CHECK

This feature allows you to view the number of Vacant Memory Channels in the each Memory Bank (or all Memories).

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key.
- ② Press the [ENT(SET)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the **DIAL** knob to select Menu #29 [Vacant Memory].
- ④ Rotate the **DIAL** knob while pressing the [FUNC] key to review the number of Vacant Memory Channels in the each Memory Bank. The total number of available Memory Channels will also be displayed after the display of Bank #9's available space.
- ⑤ Press the [CLR(P.SET)] key to exit to normal operation.

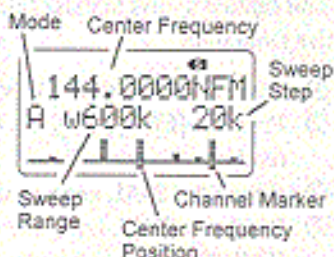


Vacant Memory
BANK:0 095
29

Band Scope

If you have to be away from your radio for a while, the Band Scope allows viewing of operating activity on channels above or below the current operating channel (in the VFO mode).

The display will indicate the relative signal strengths of signals on channels immediately adjacent to the current operating frequency. A convenient "Channel marker" can then be used to zero in on one of the stations displayed; when you turn off the Band Scope, the VR-500 will be set to the frequency set by the Channel Marker.



While the Band Scope is engaged, reception is not possible, as the incoming RF energy is diverted to the Band Scope.

Two basic operating modes for Band Scope are available:

"A" Mode:

Sweep range is selectable (300 kHz or 600 kHz).

Sweep steps are selectable (9/10/12.5/20/25/50 or 100 kHz).

Therefore, the Sweeping channels are flexible (e.g. 3 channels @ [Sweeping range: 300 kHz, Sweeping step: 100 kHz] + 60 channels @ [Sweeping range: 600 kHz, Sweeping step: 10 kHz]).

Range	Step	Channels	Range	Step	Channels
600 kHz	9 kHz	60	300 kHz	9 kHz	30
	10 kHz	60		10 kHz	30
	12.5 kHz	48		12.5 kHz	24
	20 kHz	30		20 kHz	15
	25 kHz	24		25 kHz	12
	50 kHz	12		50 kHz	6
	100 kHz	6		100 kHz	3

"B" Mode:

Sweeping channel capacity is fixed (60 channels).

Sweeping Steps are selectable (50/100/1k/5k/6.25k/9k/10k/12.5k/15k/20k/25k/30k/50k or 100 kHz).

Therefore, the Sweeping range is flexible (e.g. 3 kHz @ [Sweeping step: 50 Hz] + 6 MHz @ [Sweeping step: 100 kHz]).

Step	Range	Step	Range
50 Hz	3 kHz	12.5 kHz	750 kHz
100 Hz	6 kHz	15 kHz	900 kHz
1 kHz	60 kHz	20 kHz	1.2 MHz
5 kHz	300 kHz	25 kHz	1.5 MHz
6.25 kHz	375 kHz	30 kHz	1.8 MHz
9 kHz	540 kHz	50 kHz	3 MHz
10 kHz	600 kHz	100 kHz	6 MHz

While the Band Scope mode is engaged (see next section), press the [0(MODE)] key while holding in the [FUNC] key to toggle the Band Scope mode between "A MODE" and "B MODE."



Band Scope

TO ACTIVATE THE BAND SCOPE

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key, if necessary.
- ② Press the [B.S(B.W)] key momentarily.

When the Band Scope is activated, rotate the **DIAL** knob to move the Channel Marker.

When the Band Scope is activated, you can select the Sweep steps by the rotating the **DIAL** knob while pressing the [FUNC] key. The Sweep range may be set by pressing the [B.S(B.W)] key while pressing the [FUNC] key ("A" mode only).

Two methods of turning off the Band Scope are available:

- ① Press the [B.S(B.W)] key to turn the Band Scope off and operate on the channel where the Channel Marker is marked.
- ② Press the [CLR(P.SET)] key to turn the Band Scope off and operate on the *centered* (and displayed) channel (with no effect from the Channel Marker).

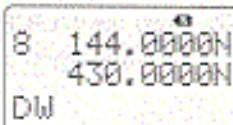
Dual Watch

The Dual Watch feature allows you to monitor two frequencies, with the radio rapidly switching between the two channels, looking for activity. As with scanning operation, the VR-500 will halt when one of the channels becomes occupied by a signal strong enough to open the Squelch.

The Dual Watch system includes special memories which can store up to ten pairs of Dual Watch frequencies. These memories are pre-programmed at the factory, but can quickly be programmed by you for monitoring of your favorite frequencies on a priority basis.

To activate Dual Watch:

- ① Press the **[7(DW)]** key while pressing the **[FUNC]** key. The radio will begin Dual Watch operation.
- ② Once you have initiated Dual Watch operation, press the key corresponding to the *Dual Watch Memory* as shown below. Dual Watch will cause the radio to switch back and forth (rapidly) between the Pre-Programmable Frequency pair selected (for example, if you press **[8]**, Dual Watch will switch every 0.2 second between 144.000 MHz and 430.000 MHz.



8 144.0000
430.0000
DW

Search Band Memory	Pre-Programmable Frequency Pair
0	0.5200 MHz (AM) / 1.8000 MHz (AM)
1	1.8000 MHz (AM) / 3.6000 MHz (AM)
2	3.6000 MHz (AM) / 10.5000 MHz (AM)
3	10.5000 MHz (AM) / 21.0000 MHz (USB)
4	21.0000 MHz (USB) / 30.0000 MHz (NFM)
5	30.0000 MHz (NFM) / 50.0000 MHz (AM)
6	50.0000 MHz (AM) / 108.0000 MHz (WFM)
7	50.0000 MHz (AM) / 144.0000 MHz (NFM)
8	144.0000 MHz (NFM) / 430.0000 MHz (NFM)
9	430.0000 MHz (NFM) / 1240.0000 MHz (NFM)

- ③ Dual Watch will halt when the VR-500 receives a signal strong enough to break through the Squelch threshold. The radio will then hold on that frequency according to the setting of the "RESUME" mode, described previously.
- ④ To stop Dual Watch manually, just rotate the **DIAL** knob one click. If you like, you can then tune manually back and forth between the two Dual Watch memories by rotating the **DIAL** knob.
- ⑤ Press the **[CLR(P.SET)]** key to cancel Dual Watch operation and return to the previous operating mode (VFO or Memory).



Dual Watch

You can change any or all of the Dual Watch frequency pairs in accordance with your operating preferences.

To program a Dual Watch Memory frequency pair:

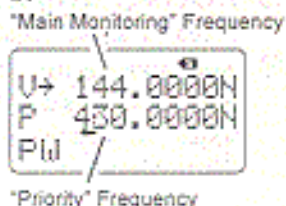
- ① Select one of the frequencies you wish to utilize for Dual Watch, using the keypad or main **DIAL**.
- ② Press and hold in the **[7(DW)]** key for 2 seconds while pressing the **[FUNC]** key. "DWA Write!" (Dual Watch Channel "A") will appear on the display.
- ③ Now select the second frequency you wish to utilize for Dual Watch.
- ④ Press and hold in the **[7(DW)]** key for 2 seconds while pressing the **[FUNC]** key. "DWB Write!" (Dual Watch Channel "B") will appear on the display.
- ⑤ Press the **[7(DW)]** key while pressing the **[FUNC]** key, to activate Dual Watch between the above frequency pair.
- ⑥ Now, store this frequency pair into one of the ten available Dual Watch Memory registers. Just press and hold in the key corresponding to the Dual Watch Memory into which you want to store this Frequency Pair (e.g. press **[5]** to store this pair into Dual Watch Memory #5).

Priority Monitoring

The "Priority" feature, which is somewhat similar to Dual Watch, allows you to monitor a VFO frequency while checking a "Priority Memory" channel every five seconds for activity. If the Priority Memory channel becomes active with a signal strong enough to open the Squelch, the radio will halt on that frequency and will hold there in accordance with the setting of the "RESUME" mode, described previously.

To set up Priority Monitoring:

- ① Select the frequency you wish to be the "Priority" frequency, using the keypad or main DIAL.
- ② Press and hold in the [6(PW)] key for 2 seconds, while pressing the [FUNC] key, to store the frequency into the Priority Memory Channel.
- ③ Select the desired "main monitoring" frequency on the VFO.
- ④ Press the [6(PW)] key while pressing the [FUNC] key to activate Priority Channel monitoring. The display will show both the VFO frequency and the Priority Memory Channel frequency, with a small arrow indicating the frequency being monitored. Every five seconds, you will notice the arrow jumping to the Priority Memory frequency. If activity appears on the Priority Memory, the radio will hold on that frequency per the programming of the "RESUME" mode.
- ⑤ Press the [CLR(P.SET)] key to cancel Priority Monitoring operation.

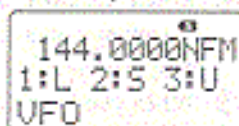


Smart Search™

The Smart Search™ feature allows you to load frequencies automatically according to where activity is encountered by your radio. The radio includes a special 31-channel Smart Search™ Memory Bank which is separate from the main memory system.

To set up Smart Search™ operation:

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key, if necessary.
- ② Tune the radio to the *lower* frequency limit for the Smart Search™ sweep.
- ③ Press and hold in the [5(S.SCH)] key for 2 seconds while pressing the [FUNC] key, then press the [1(MEMO)] key to store the *Lower* frequency limit into the Smart Search™ "L" memory.
- ④ Tune the radio to the *Starting* frequency for the Smart Search™ sweep.
- ⑤ Press and hold in the [5(S.SCH)] key for 2 seconds while pressing the [FUNC] key, then press the [2(MW/MC)] key to store the *Start* frequency into the "S" Smart Search™ memory.
- ⑥ Tune the radio to the *Upper* frequency limit for the Smart Search™ sweep.
- ⑦ Press and hold in the [5(S.SCH)] key for 2 seconds while pressing the [FUNC] key, then press the [3(SCH/SCN)] key to store the *Upper* frequency into the Smart Search™ "U" memory.

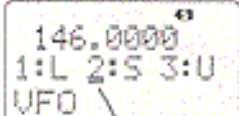


144.0000NFM
1:L 2:S 3:U
VFO

To initiate Smart Search operation:

- ⑧ Press and hold in the [5(S.SCH)] key for 2 seconds while pressing the [FUNC] key, then press the [ENT(SET)] key. Smart Search scanning will now begin. All channels where activity is present (up to 15 in each direction) will be loaded into the Smart Search™ memories. Whether or not all 31 memories are filled, the Smart Search™ scan will stop after one sweep in each direction.
- ⑨ Now you can turn the DIAL to select the Smart Search™ memories.
- ⑩ To disable Smart Search™ operation, press the [CLR(P.SET)] key.

Note: You can see the Lower/Start/Upper Frequencies for the Smart Search™ feature. To do this, press and hold the [5(S.SCH)] key for 2 second while pressing the [FUNC] key, then turn the DIAL, appear the under bar "—" and change the frequency display according to the DIAL rotation.



146.0000NFM
1:L 2:S 3:U
VFO

Underbar "—"

Smart Search™

The Smart Search™ feature has 31 channels available as a default channel capacity. Several other channel capacity values are available, using the Menu system:

- ① Set the radio to the VFO mode by pressing the [CLR(P.SET)] key, if necessary.
- ② Press the [ENT(SET)] key while pressing the [FUNC] key to activate the "Set" (Menu) mode.
- ③ Rotate the **DIAL** knob to select Menu #2 [Smart Search].
- ④ Rotate the **DIAL** while holding in the [FUNC] key to review the number of channels allocated for Smart Search operation. You may select 11, 21, 31, or 41 channels.
- ⑤ When you have made your selection, press the [CLR(P.SET)] key to exit to normal operation.

Smart Search
31 CH
20

SYSTEM RESET

- ① Turn the radio off.
- ② Press and hold the **[FUNC]** and **[MONI(LOCK)]** keys while turning the radio on.
- ③ Press the **[1(MEMO)]** key.
- ④ Press the **[ENT(SET)]** key to reset the all settings to their factory defaults (press the **[CLR(P.SET)]** key to cancel the Reset procedure).

ALL RESET

(To reset the Function mode and Set mode settings to their factory defaults)

- ① Turn the radio off.
- ② Press and hold the **[FUNC]** and **[MONI(LOCK)]** keys while turning the radio on.
- ③ Press the **[2(MW/MC)]** key.
- ④ Press the **[ENT(SET)]** key to reset the Function mode and Set mode settings to their factory defaults (press the **[CLR(P.SET)]** key to cancel the Reset procedure).