

## Operating Manual

### General Description

The **VX-8R** is a Dual Receive fourthband FM transceiver with extensive receive frequency coverage, providing leading-edge features for VHF and UHF two-way amateur communications along with unmatched monitoring capability.

The **VX-8R**'s small size allows you to take it anywhere - hiking, skiing, or while walking around town, and its operating flexibility brings the user many avenues of operating enjoyment. Besides 50, 144, (225MHz) and 430 MHz transceive operation, the **VX-8R** provides receive coverage of the AM (MF) and FM broadcast bands, HF Shortwave Bands up to 30 MHz, VHF and UHF TV bands, the VHF AM aircraft band, and a wide range of commercial and public safety frequencies! And the optional Barometer pressure Sensor Unit provides readout of barometric pressure and altitude while mountain climbing or hiking.

The transmitter section provides 5 Watts of clean power output on the FM operation on the 50 MHz, 144 MHz, and 430 MHz bands with the supplied FNB-101LI Battery Pack, and 5 Watts output on 145MHz and 430 MHz, (1.5 Watts output on 225MHz) also 1.0 Watts output on AM operation on 50 MHz. A wide variety of tone signaling formats are built into the **VX-8R**, in addition to Yaesu's exclusive ARTS™-(Auto-Range Transponder System), which "beeps" the user when you move out of communications range with another ARTS™-equipped station.

We appreciate your purchase of the **VX-8R**, and encourage you to read this manual thoroughly, so as to learn about the many exciting features of your exciting new Yaesu hand-held transceiver!

### Front Panel Control & Switches



### Control & Connections

Antenna Jack	Connect the supplied rubber flex antenna (or another antenna presenting a 50-Ohm impedance) here.
MIC/SP Jack	This 7-pin miniature jack connects an optional MH-74A6J Speaker Microphone or MH-74 GPS receiver Speaker Microphone.
DIAL Knob	The main tuning Dial is used for setting the operating frequency, and is used for audio volume level, menu selections, and other adjustments.
LED Light	This white LED glow (or flash) during “Emergency Channel” operation. Also, this LED can be useful as a flash light in a dark environment via the Menu Mode Item 55: LED LIGHT.
PTT Switch	Press this switch inward to transmit, and release it (to receive) after your transmission is completed.
MONI Key	Pressing this key disables the noise squelching action, allowing you to hear very weak signals near the background noise level.
VOL Key	Rotate the DIAL knob while pressing and holding this key to adjust the audio volume level.
F/W Key	Pressing this key activates the “Alternate” key function of the keypad.
EAR Jack	This 3-pin miniature jack allows connection to stereo earphone. When using after-market stereo earphones with this jack, you may enjoy the FM broadcast band in stereo.
EXT DC Jack	This coaxial DC jack allows connection to an external DC power source (10-16V DC). The center pin of this jack is the Positive (+) line.
PWR Switch	Press and hold this switch for 2 seconds to toggle the transceiver’s power “on” and “off”. Press this switch momentarily while the transceiver is turned “on” to toggle the key lockout feature “on” or “off”.
Speaker	The internal speaker is located hear.
Keypad	These front panel’s 20 keypads select many of the most important operating features on the VX-8R. These functions of the keys are described in details on pages 4 and 5.
MIC	The internal microphone is located hear.

**Keypad Function**

Key	Primary Function (Press key)	Secondary Function (Press + [F/W] key)	Third Function (Press & Hold key)
[A]	Switches the “Upper” frequency to be the “Operating” (TX) Band.	Switches the “Upper” frequency display between the “Large Character” and “Small Character” mode.	Activates the Dual Receive Feature.
[B]	Switches the “Lower” frequency to be the “Operating” (TX) Band.	Switches the “Lower” frequency display between the “Large Character” and “Small Character” mode.	Activates the Dual Receive Feature.
[UP]	Increases the VFO frequency by one step or moves the memory channel to the next-highest channel.	Tunes the VFO frequency upward in 1 MHz steps.	Activates the Scanner Upward (toward a higher frequency or a higher channel number).
[DOWN]	Decreases the VFO frequency by one step or moves the memory channel to the next-lowest channel.	Tunes the VFO frequency downward in 1 MHz steps.	Activates the Scanner Downward (toward a lower frequency or a lower channel number).
[MENU]	Activate the APRS (Automatic Position Reporting System) function.	No Action	Enter the Menu Mode.
[BAND]	(1) Moves operation to the next-highest frequency band.	Moves operation to the next-lowest frequency band	Activates the Scanner Upward (toward a higher

	(2) Activates the Memory Bank feature.		frequency or a higher channel number).
[MODE]	Selects the receive mode among AM, FM, and Wide FM.	Activates the CTCSS or DCS operation.	Engage the Special Search mode.
[HM/RV]	Reverses transmit and receive frequencies while working through a repeater.	Switches operation to the "Home" (favorite frequency) channel.	Activates the EMERGENCY function.
[V/M]	Switches frequency control between the VFO and Memory System.	Activates the "Memory Tune" mode while in the Memory Recall mode.	Activates the Priority (Dual Watch) function.
[Internet]	Activates the Internet Connection feature.	Selects the desired transmit power output level.	No Action.
[1]	Frequency entry digit "1".	Selects the synthesizer steps to be used during VFO operation.	Store the current setting into the Direct Memory Recall Channel "1".
[2]	Frequency entry digit "2".	Selects the CTCSS Tone or DCS code number.	Store the current setting into the Direct Memory Recall Channel "2".
[3]	Frequency entry digit "3".	Selects the DTMF mode.	Store the current setting into the Direct Memory Recall Channel "3".
[4]	Frequency entry digit "4".	Activates the ARTS feature.	Store the current setting into the Direct Memory Recall Channel "4".

[5]	Frequency entry digit "5".	Activates the Memory Scan "Skip" channel selection mode.	Store the current setting into the Direct Memory Recall Channel "5".
[6]	Frequency entry digit "6".	Selects the direction of the uplink frequency shift (either "-", "+" or "simplex" during repeater operation.	Store the current setting into the Direct Memory Recall Channel "6".
[7]	Frequency entry digit "7".	Activates the AF Dual function while receiving the Broadcast Stations.	Store the current setting into the Direct Memory Recall Channel "7".
[8]	Frequency entry digit "8".	Activates the Spectrum Analyzer (Spectra-Scope™) feature.	Store the current setting into the Direct Memory Recall Channel "8".
[9]	Frequency entry digit "9".	Enters the "Special Memory" mode.	Store the current setting into the Direct Memory Recall Channel "9".
[0]	Frequency entry digit "0".	Enters the Broadcast Reception mode.	Store the current setting into the Direct Memory Recall Channel "0".
[MONI/T-CALL]	<p>USA Version:          Disables the Noise and Tone Squelch System.</p> <p>EXP Version:          Activates the T.CALL (1750 Hz) for repeater access.</p>	Adjusts the Squelch threshold level.	<p>USA Version:          Disables the Noise and Tone Squelch System.</p> <p>EXP Version:          Activates the T.CALL (1750 Hz) for repeater access.</p>

[VOL]	No Action	Toggle the DIAL knob function between the “Frequency Control” and “Receiver Audio Control”.	Rotate the DIAL knob while holding this key to adjust the audio volume level.
[F/W]	Activates the “Secondary” key function.	Disables the “Secondary” key function.	Activates the “Memory Write” mode (for memory channel storage).

**Note:** The [A] and [B] keys glows green when the squelch opens, and turns red during transmission.

### Accessories & Options

#### Accessories Supplied with the VX-8R

- YHA-65 (Q3000185)                      Antenna
- FNB-101LI (AAG10X001)              Lithium Ion Battery Pack (7.4V/1,100mAh)
- NC-86B (Q9500149)                    Battery Charger
- Belt Clip (RA1053600)
- Operating Manual
- Warranty Card

#### Available Options for your VX-8R

- FNB-101LI              Lithium Ion Battery Pack (7.4V/1,100mAh)
- FNB-102LI              Lithium Ion Battery Pack (7.4V/1,800mAh)
- NC-86B/C/F/U        Battery Charger
- CD-41                    Rapid Charger
- FBA-39                  3 x “AA” Cell Battery Case (batteries not supplied)
- FGPS-2                  GPS Antenna
- MH-74                    Speaker/Microphone
- BU-1                      Bluetooth Adapter Unit
- BH-1                      Bluetooth Headset w/Stereo Earphone Jack
- BH-2                      Bluetooth Headset
- CT-131                    Microphone Adapter
- CT-134                    GPS Antenna Adapter
- CN-3                      BNC-to-SMA Adapter
- E-DC-5B                  DC Cable w/Noise Filter

E-DC-6	DC Cable; plug and wire only
CSC-98	Soft Case

Availability of accessories may vary. Some accessories are supplied as standard per local requirements, while others may be unavailable in some regions. Consult your Yaesu Dealer for details regarding these and any newly-available options. Connection of any non-Yaesu-approved accessory, should it cause damage, may void the Limited Warranty on this apparatus.

## **Installation of Accessories**

### **Antenna Installation**

The supplied antenna provides good results over the entire frequency range of the transceiver. However, for enhanced base station medium-wave and shortwave reception, you may wish to connect an external (outside) antenna.

The supplied antenna consists of two sections: the “Base Antenna” (used for operation above 50 MHz), and the “Extender Element” (used for monitoring of frequencies below 50 MHz).

#### To Install the Supplied Antenna

Hold the bottom end of the antenna, then screw it onto the mating connector on the transceiver until it is snug. Do not over-tighten by use of extreme force.

When operating the VX-8R on the 50 MHz band and lower frequencies, disconnect the antenna cap from the base antenna, then screw the Extender Element onto the Antenna Base. Of course, the VX-8R may be operated on frequencies higher than the 50 MHz band while the Extender Element is still attached onto the Antenna Base.

Notes:

- Never transmit without having an antenna connected.
- When installing the supplied antenna, never hold the upper part of the antenna while screwing it onto the mating connector on the transceiver.
- If using an external antenna for transmission, ensure that the SWR presented to the transceiver is 1.5:1 or lower.
- Take care not lose the antenna cap when removing it from the Base Antenna.

### **Installation of FNB-101LI Battery Pack**

The FNB-101LI is a high-performance Lithium-Ion battery providing high capacity in a very compact package. Under normal use, the FNB-101LI may be used for approximately 300 charge cycles, after which operating time may be expected to decrease. If you have an old

battery pack which is displaying capacity which has become diminished, you should replace the pack with a new one.

1. Install the FNB-101LI as shown in the illustration.
2. Close the Battery Pack Latch on the bottom of the radio.

If the battery has never been used, or its charge is depleted, it may be charged by connecting the NC-86B/C Battery Charger, as shown in the illustration, to the EXT DC jack.

If only 12 ~ 16 Volt DC power is available, the optional E-DC-5B or E-DC-6 DC Adapter (with its cigarette lighter plug) may also be used for charging the battery, as shown in the illustration.

While the battery is being charged, the display will indicate "CHARGING" and the key will glow red. The S-meter will deflect according to the charging status. When charging is finished, the display will change to indicate "COMPLETE" and the key will glow green.

#### **Installation of FBA-39 Alkaline Battery Case (Option)**

The optional FBA-39 Battery Case allows receive monitoring using three "AA" size Alkaline batteries. Alkaline batteries can also be used for transmission in an emergency, but power output will only be selectable 1 W and 50 mW.

To Install Alkaline Batteries into the FBA-39

1. Slide the batteries into the FBA-39 as shown in the illustration, with the Negative [-] side of the batteries touching the spring connections inside the FBA-39.
2. Open the Battery Pack Latch on the bottom of the radio.
3. Install the FBA-39 as shown in the illustration, with the [+] side facing the bottom of the transceiver.
4. Close the Battery Pack Latch on the bottom of the radio.

The FBA-39 does not provide connections for charging, since Alkaline cells cannot be re-charged. Therefore, the NC-86B/C, E-DC-5B, or E-DC-6 may safely be connected to the EXT DC jack when the FBA-39 is installed.

Notes:

- The FBA-39 is designed for use only with AA-type Alkaline cells.
- If you do not use the VX-8R for a long time, remove the Alkaline batteries from the FBA-39, as battery leakage could cause damage to the FBA-39 and/or the transceiver.

#### **Battery Life Information**

When the battery charge is almost depleted, a "Low Voltage" indicator will appear on the display. When this icon appears, it is recommended that you charge the battery soon.



(1) TX 6 sec., RX 6 sec. and Squelched 48 sec.

(2) Continuous signal reception

The current battery voltage can be displayed manually on the LCD, by following the instructions on page ??.

Battery capacity may be reduced during extremely cold weather operation. Keeping the radio inside your parka may help preserve the full charge capacity.

### **AC Operation Using NC-86B/C (Receiving only)**

The VX-8R may be operated from your house current by use of the supplied NC-86B/C Battery Charger. The NC-86B/C should only be used for reception, because it is not capable of supplying sufficient current to support transmission.

To use the NC-86B/C, turn the transceiver off, then plug the miniature connector of the Battery Charger into the EXT DC jack on the side of the radio. Now plug the Battery Charger into the wall outlet. You may now turn on the transceiver.

### **Interface of Packet TNC**

The VX-8R may be used for Packet operation, using the optional CT-131 microphone adapter (available from your Yaesu dealer) for easy interconnection to commonly-available connectors wired to your TNC. You may also build your own cable using a four-conductor miniature phone plug, per the diagram below.

The audio level from the receiver to the TNC may be adjusted by using the VOLUME knob, as with voice operation. The input level to the VX-8R from the TNC should be adjusted at the TNC side; the optimum input voltage is approximately 5 mV at 2000 Ohms.

Be sure to turn the transceiver and TNC off before connecting the cables, so as to prevent voltage spikes from possibly damaging your transceiver.

### **Operation**

**Note:** Hi! I'm R. F. Radio, and I'll be helping you along as you learn the many features of the VX-8R. I know you're anxious to get on the air, but I encourage you to read the "Operation" section of this manual as thoroughly as possible, so you'll get the most out of this fantastic new transceiver. Now, let's get operating!

### **Switching Power On and Off**

1. Be sure the battery pack is installed, and that the battery is fully charged. Connect the

antenna to the top panel ANTENNA jack.

2. Press and hold in the [PWR] switch (on the right side of the front panel) for 2 seconds. Two beeps will be heard when the switch has been held long enough, and the opening message will appear on the display, then frequency display will appear. After another two seconds, the receive-mode Battery Saver function will become active, unless you have disabled it (see page ??).
3. To turn the VX-8R off, press and hold in the [PWR] switch again for 2 seconds.

**Note:** If you don't hear the two "Beep" tones when the radio comes on, the Beeper may have been disabled via the Menu system. See page ??, which tells you how to reactivate the Beeper.

### Adjusting the Volume Level

Rotate the DIAL knob while pressing and holding the [VOL] key to set the desired audio level. Clockwise rotation increases the volume level.

The Volume level may be set on the "Main" and "Sub" bands separately.

### Squelch Adjustment

The VX-8R's Squelch system allows you to mute the background noise when no signal is being received. Not only does the Squelch system make "standby" operation more pleasant, it also significantly reduces battery current consumption.

The Squelch system may be adjusted independently for the FM and Wide-FM (FM Broadcast) modes.

1. Press the [F/W] key, then press the [MONI/T-CALL] key on the left side of the radio. This provides a "Short-cut" to Menu Item 96: SQL LEVEL.
2. Now, rotate the DIAL knob to set the background noise is just silenced (typically at a setting of about "3" or "4" on the scale); this is point of maximum sensitivity to weak signals.
3. When you are satisfied with the Squelch threshold setting, press the PTT key momentarily to save the new setting and exit to normal operation.
4. You may also adjust the Squelch setting by using the "Set" (Menu) mode. See page ?? for details.

**Note 1:** The Squelch level may be set on the "Main" and "Sub" bands separately.

**Note 2:** If you're operating in an area of high RF pollution, you may need to consider "Tone Squelch" operation using the built-in CTCSS Decoder. This feature will keep your radio quiet until a call is received from a station sending a carrier which contains a matching

(subaudible) CTCSS tone. Or if your friends have radios equipped with DCS (Digital Coded Squelch) like your VX-8R has, try using that mode for silent monitoring of busy channels.

### **Selecting the Operating Band**

In the factory default configuration, the VX-8R operates in the “Dual Receive” mode. During Dual Receive operation, the “VFO-A” frequency will be displayed on the upper side of the LCD, and the “VFO-B” frequency will be displayed on the lower side, with the “Operating” band (the band on which transmission and band/frequency change are possible) being indicated in large characters, and “Receive only” band being indicated in small characters.

To switch the “Operating” band: press the [A] key momentarily to engage the “VFO-A” frequency as the “Operating” band. Alternatively, press the [B] key momentarily to engage the “Sub” band frequency as the “Operating” band, described previously.

Press and hold in the [A] or [B] key for 1/2 seconds to switch to Mono Band Operation with a double-size display.

During Mono band operation, you may press the [F/W] key, then press the [A]/[B] key, to change the display to show only large characters.

### **Selecting the Frequency Band**

The VX-8R covers an incredibly wide frequency range, over which a number of different operating modes are used. Therefore, the VX-8R’s frequency coverage has been divided into different operating bands, each of which has its own pre-set channel steps and operating modes. You can change the channel steps and operating modes later, if you like (see page ??).

#### To Change Operating Bands

1. Press the [BAND] key repetitively. You will see the LCD indication move toward a higher frequency band each time you press the [BAND] key. Indicates a Band Number according to the receiving frequency on the display.
2. If you wish to move the operating band selection downward (toward lower frequencies), press the [F/W] key first, then press the [BAND] key.
3. The VX-8R uses a dual VFO system (described previously). To switch TX/RX operation from the “VFO-A” to the “VFO-B” instantly, press the [B] key momentarily. Pressing the [A] key will return the VX-8R to the “VFO-A”. The frequency band bearing the “Large” characters is the band on which transmission is possible; the band designated by

“Small” characters may only be used for reception.

4. Once you have selected the desired band, you may initiate manual tuning (or scanning) per the discussions on the next page.

**Note 1:** The SW Band and Information Band reception is only possible on the “VFO-A”.

**Note 2:** The VX-8R has an AM/FM Broadband radio. You can receive these bands independently. See page ?? for details.

**Note 3:** If desired, you may omit (skip) one or more bands from the band selection loop for faster recall of your favorite operating bands. See page ?? for details.

### Frequency Navigation

The VX-8R will initially be operating in the “VFO” mode, as just described. This is a channelized system which allows free tuning throughout the currently-selected operating band.

Three basic frequency navigation methods are available on the VX-8R:

#### 1) Tuning Dial

Rotation of the DIAL knob allows tuning in the pre-programmed steps established for the current operating band. Clockwise rotation of the DIAL knob causes the VX-8R to be tuned toward a higher frequency, while counter-clockwise rotation will lower the operating frequency.

If you press the [F/W] key momentarily, then rotate the DIAL knob, frequency steps of 1 MHz will be selected. This feature is extremely useful for making rapid frequency excursions over the wide tuning range of the VX-8R.

#### 2) Direct Keypad Frequency Entry

The desired operating frequency may be entered directly from the keypad.

The operating mode will automatically be set once the new frequency is entered via the keypad.

To enter a frequency from the keypad, just press the numbered digits on the keypad in the proper sequence. There is no “Decimal point” key on the VX-8R, so if the frequency is below 100 MHz (e.g. 15.150 MHz), any required leading zeroes must be entered. However, there is a short-cut for frequencies ending in zero - press the [V/M] key after the last non-zero digit.

Examples:

To enter 146.520 MHz, press [1] → [4] → [6] → [5] → [2] → [0]

To enter 15.255 MHz, press [0] → [1] → [5] → [2] → [5] → [5]

To enter 1.250 MHz (1250 kHz), press [0] → [0] → [1] → [2] → [5] → [0]

To enter 0.950 MHz (950 kHz), press [0] → [0] → [0] → [9] → [5] → [0]

To enter 430.000MHz, press [4] → [3] → [V/M]

### 3) Scanning

From the VFO mode, press and hold in either the [UP] or [DOWN] key for one second to initiate upward or downward scanning, respectively, and will stop when it receives a signal strong enough to break through the Squelch threshold. The VX-8R will then hold on that frequency according to the setting of the “RESUME” mode (Menu Item 89: SCAN RESUME). See page ?? for details.

If you wish to reverse the direction of the scan (i.e. toward a lower frequency, instead of a higher frequency), just rotate the DIAL knob one click in the counter-clockwise direction while the VX-8R is scanning. The scanning direction will be reversed. To revert to scanning toward a higher frequency once more, rotate the DIAL knob one click clockwise.

Press the PTT switch momentarily to cancel the scanning.

### **Transmission**

Once you have set up an appropriate frequency inside one of the three (or four) Amateur bands on which the VX-8R can transmit (50 MHz, 144 MHz, or 430 MHz, plus 222 MHz on the USA version), you’re ready to transmit. These are the most basic steps; more advanced aspects of transmitter operation will be discussed later.

1. To transmit, press the PTT switch, and speak into the front panel microphone (located in the upper right-hand corner of the speaker grille) in a normal voice level. The LED of the [A] or [B] which is designated the “Main” band will glow red during transmission.
2. To return to the receive mode, release the PTT switch.
3. During transmission, the relative power level will be indicated on the LCD. Additionally, the “L1”, “L2”, “L3”, or “HI” icon will appear at the left side of the PO meter, corresponding with the “Power” Level setting.

**Note 1:** If you’re just talking to friends in the immediate area, you’ll get much longer battery life by switching to Low Power operation. To do this, press the [F/W] key, then press the [Internet] key so that the “Low Power” icon appears at the bottom of the display. And don’t forget: always have an antenna connected when you transmit.

**Note 2** Transmission is not possible on “Sub” band and any operating bands other than the 50 MHz, 144 MHz, 222 MHz (USA version), and 430 MHz bands on the “Main” band.

### Changing the Transmitter Power Level

You can select between a total of four transmitter power levels on your VX-8R. The exact power output will vary somewhat, depending on the voltage supplied to the transceiver. With the standard FNB-101LI Battery Pack and external DC source, the power output levels available are:

To change the power level:

1. The default setting for the power output is “High;” in this configuration, the display shows “HI” icon. Pressing the [F/W] key, followed by the [Internet] key, causes the power level “L1”, “L2”, or “L3” to appear.
2. Press the [F/W] key, followed by the [Internet] key (repeatedly, if necessary) to make the “HI” icon appear and restore “High Power” operation.

**Note 1:** The VX-8R is smart! You can set up Low power on one band (like UHF), while leaving VHF on High power, and the radio will remember the different settings on each band. And when you store memories, you can store High and Low power settings separately in each memory, so you don’t waste battery power when using very close-in repeaters!

**Note 2:** When you are operating on one of the Low power settings, you can press the key, then press the PTT switch, to cause the VX-8R to transmit (temporarily) on High power. After one transmission, the power level will revert to the previously-selected Low power setting.

### **AM and FM Broadcast Reception**

The VX-8R includes provision for reception of AM and FM broadcasts. FM broadcast reception, utilizes a wide-bandwidth filter and stereo decoder which provides excellent fidelity.

1. Press the [A] key momentarily to engage the “VFO-A” as the “Operating” band.
2. Press the [F/W] key, then press the [0(RADIO)] key to enter the Broadcast Reception mode.
3. Press the [BAND(SC-M BND DW)] key to toggle the receiving band between “AM broadcast” and “FM broadcast”.

The AM broadcast coverage is 510 to 1790 kHz and utilizes AM mode. The Band Number changes to “A” (which means AM) and an Operating Mode icon changes to “AM”.

The FM broadcast coverage is 76.00 to 107.90 MHz and utilizes Wide-FM mode. The Band Number changes to “F” (which means FM) and an Operating Mode icon changes to “WFM”.

4. Rotate the DIAL knob to select the desired station.
5. To exit to normal operation, press the [F/W] key followed by the [0(RADIO)] key.

**Note:** The AM and FM Broadcast reception is only possible on the “VFO-A”.

### Antenna Selection

The VX-8R allows you to select the antenna for the Broadcast Reception.

1. Press and hold the [MENU] key for one second to enter the Menu mode.

2. Rotate the DIAL knob to select Menu Item 4: ANTENNA AM (for the AM Antenna selection) or 6: ANTENNA FM (for the FM Antenna selection).
3. Press the [MENU] key momentarily to enable the antenna selection.
4. Rotate the DIAL knob to select the antenna to be used.  
AM Antenna selection: "BAR ANTENNA" (Uses the internal Bar Antenna) or "BAR & EXT" (Uses both the internal Bar Antenna and the Rubber Flex Antenna).  
FM Antenna selection: "EXT ANTENNA" (Uses the Rubber Flex Antenna) or "EAR PHONE" (Uses the Earphone Antenna).
5. When you finish the selection, press the PTT switch to exit from the Menu mode and return to the Broadcast Reception mode.

If you wish to output the audio of the FM Broadcast station to the VX-8R internal speaker while using the earphone antenna, select Menu Item 95: SPEAKER OUT to "SPEAKER".

#### AF Dual Function

The AF Dual Function allows you to monitor your desired amateur band frequency while receiving AM or FM broadcast stations. Furthermore, you may transmit on the amateur frequency by pressing the PTT switch.

When a signal is received in the amateur band, the audio is output instead of the AM or FM Broadcast station. When the amateur band signal drops, the SUB-RX Operation is resumed as determined by the user settings in the below procedures. If you activates the AF Dual Function while Dual receiving, you may operate the Triple Watch functions (two amateur frequencies plus one broadcast station)!

1. Set the VX-8R to the desired amateur band frequency by the VFO or Memory channel selection.
2. Press the [F/W] key, then press the [7(AF DUAL)] key. This provides a "Short-cut" to Menu Item 1: AF DUAL.
3. Rotate the DIAL knob to select the resume mode of the AF Dual function. Available selections are:

TX 1S - TX 10S: Sets the period of time after you transmit an amateur signal before the AM or FM Broadcast station will be heard from the speaker, and the AF Dual function is resumed.

However, if a signal is received in the amateur band, the AF Dual function will halt on the amateur band frequency and the AF Dual function does not resume.

TRX 1S - TXR 10S: When the selected time passes after the amateur band signal drops or transmission is over, the AM or FM Broadcast station will be heard from the speaker and the AF Dual function is resumed.

**HOLD:** When a signal is received in the amateur band or if you transmit on the amateur band, the AF Dual function will halt on the amateur band frequency (the AF Dual function does not resume.). You must manually re-initiate the AF Dual function, if you wish to resume.

**OFF:** Disable the AF Dual function.

4. Press the PTT switch to exit from the resume mode selection mode of the AF Dual function.
5. Press the [F/W] key, then press the [0(RADIO)] key to enter the Broadcast Reception mode.
6. Press the [BAND(SC-M BND DW)] key to toggle the receiving band between “AM broadcast” and “FM broadcast”.
7. Rotate the DIAL knob to select the desired Broadcast station.
8. When a signal is received in the amateur band, the amateur band audio is output to the speaker. The AM or FM Broadcast station will no longer be heard. When the amateur band signal drops, the AM or FM Broadcast station will be heard from the speaker, and the AF Dual function is resumed (the amateur band frequency is monitored while the AM broadcast station is heard from the speaker) according to the AF Dual function Resume mode selected in step 3 above.
9. You may monitor the amateur band forcibly by holding the [MONI/T-CALL] switch.

To disable the AF Dual function, just repeat the above procedure, rotating the DIAL knob to select “OFF” in step 3 above.

**Note 1:** You may transmit with the VX-8R on the frequency set in step1 above by pressing the PTT switch, even if the AF Dual function is activated.

**Note 2:** You may change the frequency of the amateur band by rotating the DIAL knob while pressing the [MONI/T-CALL] switch.

**Note 3:** When the [V/M] key is pressed, the VX-8R recalls AM and FM Broadcast station only.



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Part 15.21: Changes or modifications to this device not expressly approved by Vertex Standard could void the user's authorization to operate this device.

#### DECLARATION BY MANUFACTURER

The scanner receiver is not a digital scanner and is incapable of being converted or modified to a digital scanner receiver by any user.