YAESU
VX-10
VHF/UHF FM Hand-Held Transceivers
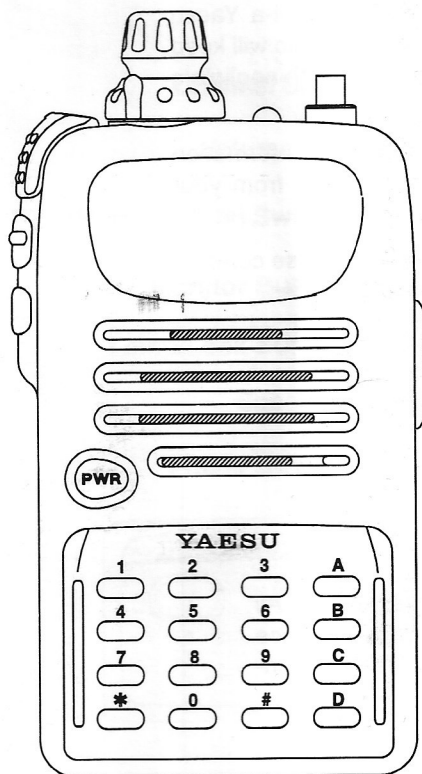
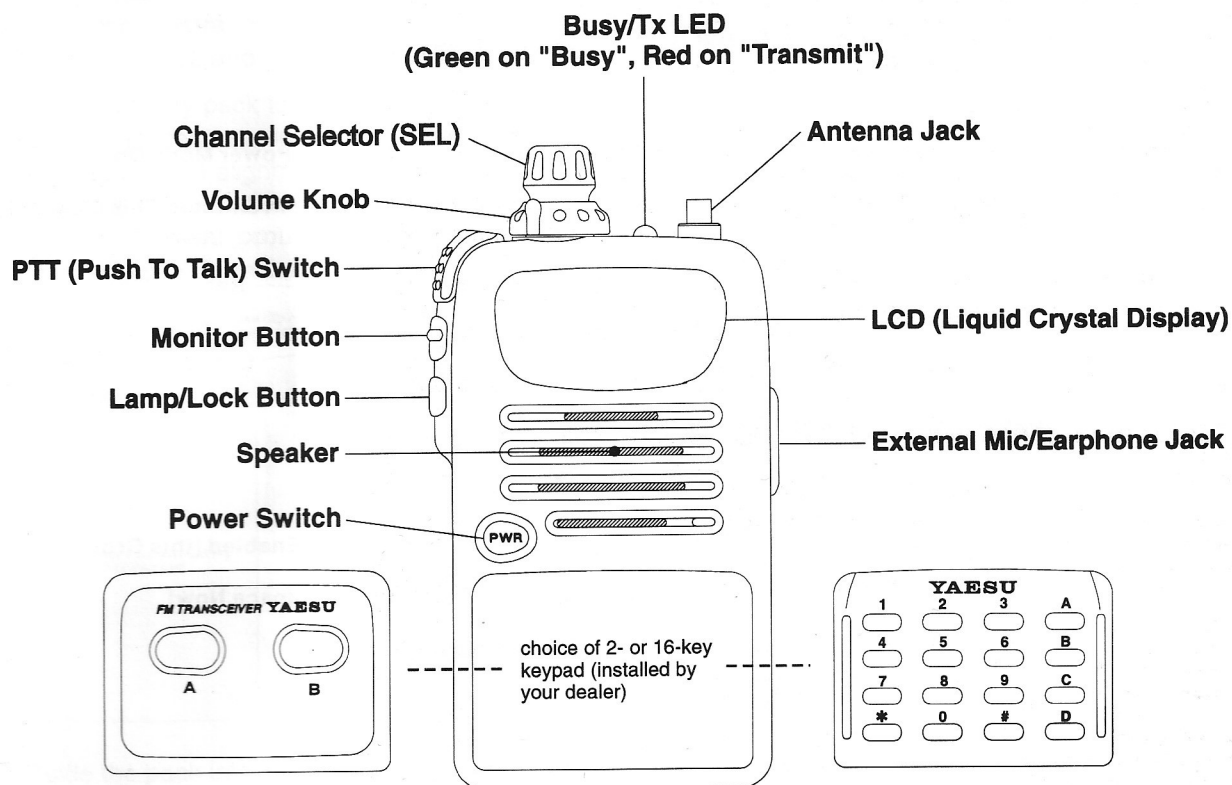Shown with optional FTT-15 installed

Congratulations!

You now have at your fingertips a valuable communications tool-a Yaesu two-way radio ! Rugged, reliable and easy to use, your Yaesu radio will keep you in constant touch with your colleagues for years to come, with negligible maintenance down-time.

Please take a few minutes to read this manual carefully. The information presented here will allow you to derive maximum performance from your radio, in case questions arise later on.
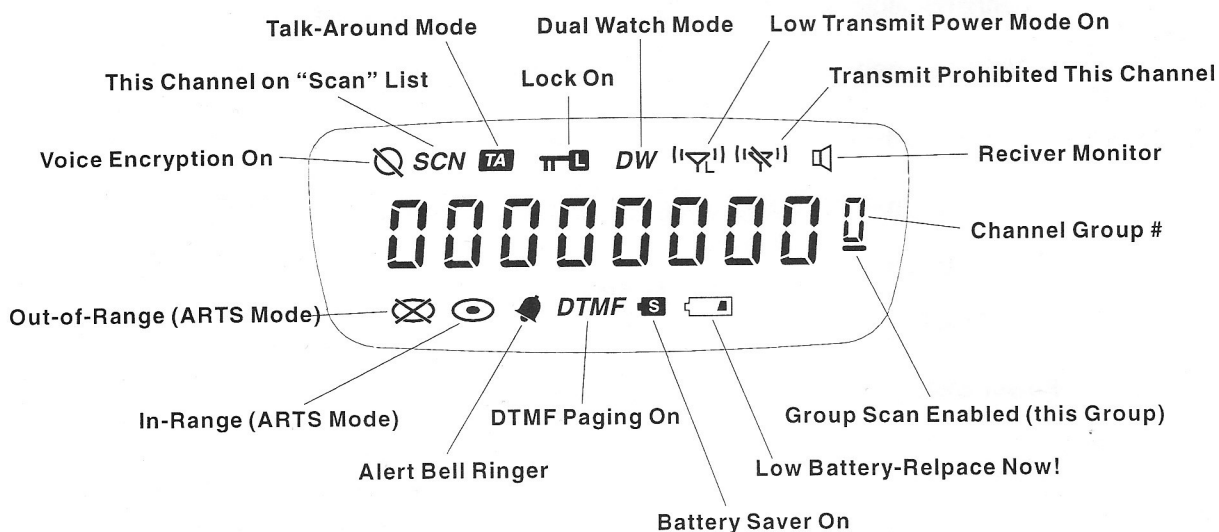
We're glad you joined the Yaesu team. Call on us anytime, because communications is our business. Let us help you get your message across.

Notice !

There are no owner-serviceable parts inside the transceiver. All service jobs must be referred to an authorized Yaesu Service Representative. Consult your Authorized Yaesu Dealer for installation of optional accessories.

Controls & Connectors

Busy/Tx LED
(Green on "Busy", Red on "Transmit")

Channel Selector (SEL)

Antenna Jack

Volume Knob

PTT (Push To Talk) Switch

Monitor Button

LCD (Liquid Crystal Display)

Lamp/Lock Button

Speaker

External Mic/Earphone Jack

Power Switch

PWR

FM TRANSCEIVER YAESU

A   B

choice of 2- or 16-key
keypad (installed by
your dealer)

YAESU

1	2	3	A
4	5	6	B
7	8	9	C
*	0	#	D

LCD Icons & Indocators

Talk-Around Mode

Dual Watch Mode

Low Transmit Power Mode On

This Channel on "Scan" List

Lock On

Transmit Prohibited This Channel

Voice Encryption On

SCN TA ⊓L DW �llʏ⁴ll ll⁴ʏll ◁

Reciver Monitor

0000000 0

Channel Group #

Out-of-Range (ARTS Mode)

⊠ ⊙ 🔔 DTMF S ▭

In-Range (ARTS Mode)

DTMF Paging On

Group Scan Enabled (this Group)

Alert Bell Ringer

Low Battery-Relpace Now!

Battery Saver On
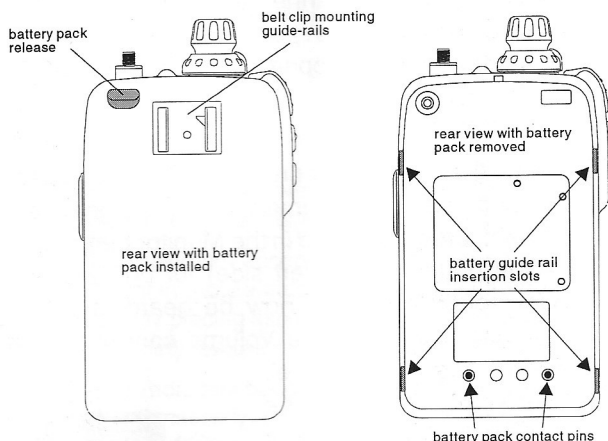
Battery Installation and Removal

Refer to the illustration below showing the rear panel of the VX-10 and its battery pack.

☐ Lay the battery pack loosely onto the rear panel of the transceiver, and carefully mate the battery's four small alignment tabs with their corresponding insertion slots on the transceiver case. Proper alignment occurs with the battery pack offset about ½" from the top edge of the case.

battery pack release

belt clip mounting guide-rails

rear view with battery pack removed

rear view with battery pack installed

battery guide rail insertion slots

battery pack contact pins

☐ Guide the pack into the slots with a slight inward pressure, then slide the battery pack upward, until it locks in place with a "Click."

☐ To remove the battery, turn the radio off and remove any protective cases. Press in the Battery Release button (behind the Antenna jack) while sliding the battery down ½". Then lift the battery away.

⚠ ***Do not attempt to open any of the rechargeable Ni-Cd packs, as they could explode if accidentally short-circuited.***
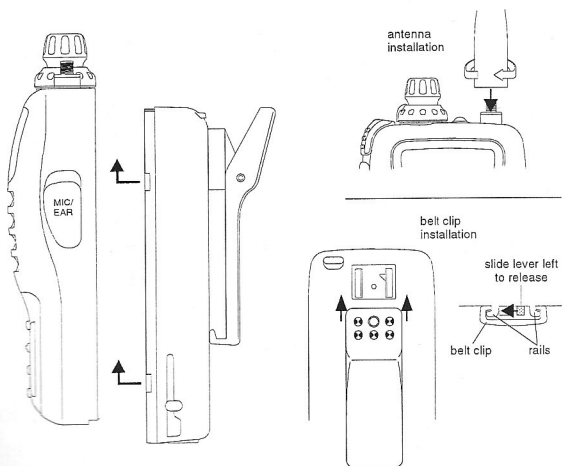
Low Battery Indication

☐ As the battery discharges during use, the voltage gradually becomes lower. when the battery voltage reaches 6.0 Volts, substitute a freshly charged battery and recharge the depleted pack. The " ⬛ " icon will blink in the display when the battery voltage is low.

☐ Avoid recharging Ni-Cd batteries often with little use between charges, as this can degrade the charge capacity. We recommend that you carry an extra, fully-charged pack with you so the operational battery may be used until depletion (this "deep cycling" technique promotes better long-term battery capacity).
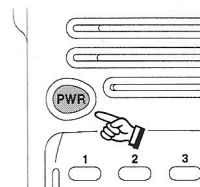
3

Operation

Preliminary Steps

☐ Install a charged battery pack onto the transceiver, as described previously.

☐ Screw the supplied antenna onto the Antenna jack. Never attempt to operate this transceiver without an antenna connected.

☐ If you have a Speaker/Mic, we recommend that it not be connected until you are familiar with the basic operation of the VX-10.
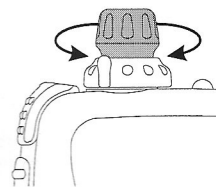

MIC/EAR

antenna installation

belt clip installation

slide lever left to release

belt clip   rails

Operation Quick Start

☐ To turn the radio on, push and hold in the orange [**PWR**] button for ½ second.

☐ Turn the top panel's Channel Selector to choose the desired operating channel. A channel number or channel name will appear on the LCD.


☐ Rotate the lower, outer ring of the Channel Selector knob to set the Volume level. If no signals are present, press *and hold in* the Monitor button (the middle button on the left side) for one second. Background noise will now be heard, and you may use this to set the Volume control for the desired audio output level. Press and hold in the Monitor button again (for one second) to quiet the noise and resume normal (quiet) monitoring.

4
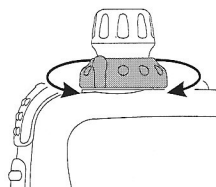
✗ Be careful not to press and hold in the [LAMP] key by mistake; to do so will activate the *LOCK* function on the radio's buttons and/or the Channel Selector Knob. If this happens, you will see the Lock logo in the display; press and hold in the [LAMP] key for two seconds again. Normal operation will resume.

❏ To transmit, press and hold in the [PTT] switch. Speak into the microphone area of the front panel grille (lower right-hand corner) in a normal voice level. To return to the Receive mode, release the [PTT] switch.

TX →
RX ←
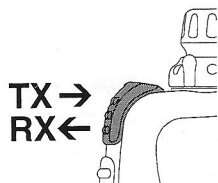
❏ If a Speaker/Mic is available, it may be plugged into its jack on the right side of the transceiver. Hold the speaker grille up next to your ear while receiving. To transmit, press the Speaker/Mic's [PTT] switch, just as you would on the main transceiver's body.

❏ Press one of the "Soft Keys" ([A] or [B] on the Two-key VX-10, or [A] ~ [D] on the 16-key version) to activate one of the "Pre-Programmed Functions" which may have been enabled at the time of programming by the Dealer. See the next section for details regarding the available features.

Important Note !

○ The **PTT** should be pressed inward and in a slightly downward direction for proper operation. Do not press the **PTT** switch in an upward direction, as this cause unreliable closure of the **PTT** switch, and it may damage the rubber boot.

○ If the maximum acceptable temperature specification for the VX-10 is exceeded, due to prolonged exposure to sunlight in a car window, for example, the transceiver will act to prevent itself from further over-heating by automatically placing itself in the "LOW" power mode, even if the "HIGH" power mode has been selected by the user. This safety feature may be engaged at temperatures exceeding 70 °C inside the transceiver's case.

If your radio has become very hot, and suddenly switches to the "LOW" power mode, allow it to cool off. The radio will automatically return to the "HIGH" power mode when the temperature has lowered sufficiently (it is not necessary to reset the power level to "HIGH" manually).

We recommend that transceiver not be allowed to overheat by prolonged direct sunlight exposure in an enclosed area, as the maximum temperature specification may be exceeded; erratic operation and/or damage to components may occur under such conditions.

Advanced Operation

The VX-10 transceiver includes many high-performance operating features which may be enabled by the Dealer and/or the user, depending on one's application. These may include:

① **Pre-Programmed Functions** - activated by one of the "soft keys" ([A] and [B] on the 2-key version, [A] ~ [D] on the 16-key version;

② **"Set Function Mode"** - Menu selections which allow customization of the radio's features;

③ **"ARTS" (Auto Range Transpond System)** - which "shakes hands" with another ARTS-equipped station to confirm that you are within communication range—highly useful in search-and-rescue operations; and

④ **DTMF Paging** - using DTMF tones for paging and selective calling.

A comprehensive discussion of these advanced features follows.

① *Dealer-Programmed Functions*

One or more of the following functions may have been activated by your Dealer at the time of channel programming. These functions will have been assigned to the [A] and [B] keys in the two-channel transceiver version, or the [A], [B], [C], and [D] keys in the sixteen-key version. The Channel Selector Knob (hereafter referred to as "The Knob") may also have been designated for Dealer-Programmed Function use (usually for Set Mode "Menu" use).

● **Channel Group Selection**
The VX-10 is capable of separating its 40 memory channels (102 channels with 16-key pad) into any of nine Groups. There is no limit as to the number of channels which may be assigned to each Group. The Dealer will have made the Group assignment at the time of channel programming. At the same time, one of the "Soft Keys" will be assigned as the "Channel Group Selection" key.

To change Channel Groups, press the assigned button (A, B, C, or D, or the Knob) to toggle between the available Groups (scanning must be off). Once the desired Group is reached, rotate the Knob to select the desired channel *within the*

selected Group (the Group # will be shown as a small digit to the right of the Channel label).

You may wish to have the Scanner (see next section) pass through more than one Group during the scanning process (normally, scanning is performed within the current group only). To include the current Group in the scanning loop, press **and hold in** the Channel Group Selection key for one second; you will observe that the Channel Group number is now underlined. The underline means that this Group will be scanned when the "Group Scan" feature is activated.

To remove a Group from Group Scan, press and hold in the Channel Group Selection key again for one second, until the underline disappears from underneath the Channel Group number at the right hand side of the LCD.

Multi-Group Scanning is only possible if you are using the "User Scan" list.

- **Scanning**
  The Scanning feature rapidly steps through each of your assigned channels, looking for incoming calls. If a call is detected, the Scanner stops on that channel, then resumes a few seconds after the incoming transmission ends.

  To start scanning, press the assigned "Scan" key (A, B, C, D, or the Knob). The "SCAN" display will be observed. When the scanner encounters

an active channel, the scanner will pause, the current channel's # or its Nametag will be displayed, and the Group # digit on the right-hand side of the display will blink. **To stop Scanning**, press the Scan button again while you are "paused" on an active channel (the blinking channel number will stop blinking) or during the scanning process itself.

To start Group Scanning, you must press the Scan key *twice* with *no signal present*. If the radio has already "paused" on a busy channel between the first and second keystrokes, the second press of the Scan key will *turn off* the Scanner. In extremely busy traffic areas, you may actually have to grasp the antenna for a moment (to reduce its effectiveness) while pressing the designated Scan key (quickly) twice in succession. **To stop Group Scanning**, press the Scan button again while you are "paused" on an active channel.

- **Dual Watch**
  Dual Watch automatically checks for activity on a Dealer-assigned Priority Channel while you are operating on another channel. The Priority Channel will *always* be the *first* channel of the currently-selected Group.

  Before initiating Dual Watch operation, be sure to select the channel group within which you want to poll the Priority Channel.

To start Dual Watch, press the Dealer-assigned Dual Watch key (A, B, C, or D, or the Knob) momentarily. The [DW] icon will come on. About every 1 ½ seconds, the receiver will briefly check the Priority Channel, looking for an incoming call. When a signal is received on the Priority Channel, Dual Watch will pause and the channel number or name tag for the Priority Channel will be displayed. Dual Watch will resume after the station(s) using the Priority Channel stop transmitting. **To cancel Dual Watch operation**, press the Dual Watch key again momentarily.

- **LOW Transmit Power**
  Pressing the appropriate Dealer-assigned key (A, B, C, or D, or the Knob) switches the radio's transmitter to the "Low Power" mode, thus extending battery life. The "Low Power" icon on the LCD will be displayed. Press the "Low Power" key again to return to high power operation when in difficult terrain (see "Understanding Radio Waves" later in this manual).

  If the Dealer has pre-programmed certain channels into the "Low Power" mode, the Low Power icon will appear automatically when you select those channels.

- **Talk Around**
  In *duplex* channel systems (separate receive and transmit frequencies, utilizing a "repeater" station), Talk-Around allows you to bypass the re-

peater station and talk *directly* to a station that is nearby. This feature has no effect when you are operating on "simplex" channels, where the receive and transmit frequencies are the same.

To activate Talk-Around, press the Dealer-assigned key (A, B, C, or D, or the Knob). The **TA** icon will come on. **To return to normal repeater operation**, press the Talk-Around key once more.

- **Page Call** (*16-Key Version Only*)
  This feature, if enabled, allows the user to change the 3-digit Page Call code, used to call other similarly-equipped stations.

  Press the Dealer-assigned key (A, B, C, or D, or the Knob), followed by the three digits representing the Page Call code of the station you wish to call. Three tones will be heard after the last key is pressed (the new code will now be transmitted). The receiver squelch of the other station will be opened, and you can begin communication.

- **TX SAVE Off**
  This feature, when activated, disables the Transmit Battery Saver, a default mode for the radio which extends battery life by reducing transmit power when a very strong signal from an apparently nearby station is being received. Under some circumstances, though, your hand-held radio may not be heard well at the other end of the communication path, and high power may be necessary at all times.

Press the Dealer-assigned key (A, B, C, or D, or the Knob) to disable the Transmit Battery Saver, if you are operating in a location where high power is almost always needed.

- **Set Mode (Menu)**
  The Menu mode is normally only made available via a press of the Knob, as Menu selections require *rotation* of the (same) Knob. See the next section for details of the "Set Function" (Menu) mode of operation.

## ② *Set Function (Menu Mode)*

Your Dealer may have enabled the "Set Function" (Menu) mode on your radio. This feature, when activated, allows the user to customize certain performance aspects of the VX-10. Note that some of these items may also appear as available Soft Keys, described previously.

The operating procedure for the Menu mode is quite simple, requiring only a few easily- remembered actions on your part.
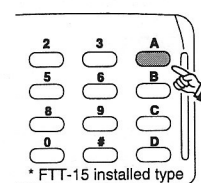
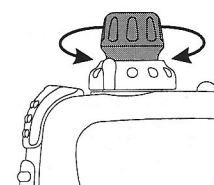1. Activate the SET Mode by momentarily pressing downward on the Knob.
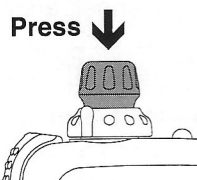
   Press ↓

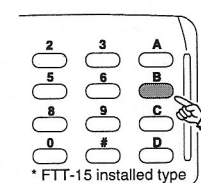2. *Rotate* the Knob to select the feature you wish to view and/or modify.
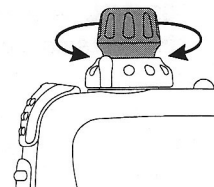
3. Once you have selected the desired Menu item press the [A] key to view the *current* setting for the item.

4. *Rotate* the Knob to change the setting of the item (ON to OFF, etc.).

5. Press the [B] key to save your new setting.

6. *Press* down on the Knob to *exit* the Set Function mode.

A discussion of the various Menu options follows on the next page.

- **S01 SQL** (Squelch Level)
  After pressing the [A] key (see previous page), rotate the Knob to find the point where the background noise is just silenced. This is the point of best receiver sensitivity consistent with quiet monitoring. The scale for the Squelch Level adjustment is 1 ~ 12, and the default value is 5.

- **S02 LIST** (Scanning List)
  Two "Scanning Lists" may have been enabled by your Dealer at the time of programming. The "Dealer" Scan List is a fixed group of stations which will be included when scanning is activated. The "User" Scan List is a different list, initially arranged by the Dealer, which may be modified by the User (if, for example, you want to delete one or more of these channels from the scanning list).

  To edit the User Scan List, manually select the channel you want to delete (for example) from scanning by rotating the Knob; you will notice "SCN" in the upper left-hand corner of the LCD. After selecting Menu item S02 and pressing the [A] key, rotate the Knob to select "LIST USR" on the LCD. Now press the [B] key to save the setting, and press the Knob to exit the Menu mode. Now press *and hold in for 2 seconds* the "SCAN" soft key (A, B, C, or D). You will notice that the "*SCN*" icon has disappeared. Release the SCAN soft key at this point.

Repeat this process for any other channels you wish to edit. To restore a particular channel to your scanning list, press and hold in the SCAN soft key again for 2 seconds; the "*SCN*" icon will re-appear. There must be at least three channels in the Scan List, or the radio will not scan.

- **S03 BEEP** (Keypad Beeper On/Off)
  After selecting Menu Item S03 and pressing the [A] key, rotate the Knob to enable ("ON") or disable ("OFF") the keypad beep tones. Press [B] then the Knob to exit.

- **S04 BELL** (CTCSS/DCS/Paging Alert Bell On/Off)
  After selecting Menu Item S04 and pressing the [A] key, rotate the Knob to enable ("ON") or disable ("OFF") the alert bell which sounds when your radio is called using either CTCSS or DCS calling tones. Press [B] then the Knob to exit.

- **S05 LITE** (TX/BUSY LED On/Off)
  After selecting Menu Item S05 and pressing the [A] key, rotate the Knob to enable ("ON") or disable ("OFF") the LED which serves as the "Busy Channel" and "Transmitter On" indicator. Turning this LED off will extend battery life somewhat. Press [B] then the Knob to exit.

- **S06 LOCK** (Keypad, PTT, or Knob Disabling)
  In some situations, you may wish to disable the keypad's keys, the Knob, and/or the PTT switch (so as to prevent transmission by unauthorized users of the radio). Menu Item S06 determines

which features will be disabled when the LOCK function is engaged (by pressing and holding in the LAMP button for two seconds).

After selecting Menu Item S06 and pressing the [A] key, rotate the Knob to select "P" (PTT Lock), "J" (Dial—Knob—Lock), "K" (Keypad Lock), or various combinations of these. Press [B] then the Knob to exit.

- **S07 TAG (Channel Name Tags On/Off)**
Your Dealer may have programmed Alpha-Numeric designators to each channel, to aid in recognition of each channel by the user of the radio. These Channel Nametags may be turned on or off; when disabled, the display will indicate "CHAN 1," CHAN 2," etc. instead of the Nametag.

After selecting Menu Item S07 and pressing the [A] key, rotate the Knob to enable ("ON") or disable ("OFF") the Channel Nametag feature. Press [B] then the Knob to exit.

- **S08 GRP (Group Select)**
This Menu Item allows you to change Channel Groups, in the event that a Soft Key has not been designated for this purpose. After selecting Menu Item S07 and pressing the [A] key, rotate the Knob to select the Channel Group in which you wish to operate. Press [B] then the Knob to exit.

- **S09 SCAN (Scan Mode On/Off)**
This function generally will be assigned to a Soft Key by the Dealer. To activate scanning, after selecting Menu Item S09 and pressing the [A] key, rotate the Knob to enable ("ON") or disable ("OFF") the scanner. Press [B] then the Knob to exit.

- **S10 DW (Dual Watch On/Off)**
This function generally will be assigned to a Soft Key by the Dealer. We do not recommend activation of Dual Watch via the Menu System.

- **S11 TXPO (Transmitter Power)**
This function allows you to change the preset transmitter power level. To do this, after selecting Menu Item S11 and pressing the [A] key, rotate the Knob to select either high or low power, then press [B] and then the Knob to exit.

If this feature does not work, S11 may have been disabled by the Dealer during the programming process, so as to ensure that you always are set to high power.

- **S12 TA (Talk Around)**
This function will generally be assigned to a Soft Key, as the user will generally want to switch quickly between Repeater and Talk-Around operation. To activate Talk Around from the Set Function mode, after selecting Menu Item S12 and pressing the [A] key, rotate the knob to enable

("ON") or disable ("OFF") Talk Around. Press [B] then the Knob to exit.

- **S13 ENCR (Encryption)**
On channels where scrambling is used, an incorrect setting of (or failure in) the encryption system at one end of the communication path will make it impossible to talk to the other station. To change the current status of encryption on *your* radio, after selecting Menu Item S13 and pressing the [A] key, rotate the Knob to enable ("ON") or disable ("OFF") encryption. Press [B] then the Knob to exit. Or use the Dealer-programmed Soft Key to switch to the non-Encryption mode temporarily.

Remember that disabling encryption will mean that your transmissions are no longer secure. Return to the encrypted mode as soon as possible, and do not discuss any critical or confidential information while in the non- encrypted mode of operation

- **S14 TEL (Telephone Number Autodialer)**
Your Dealer may have programmed auto-dial telephone numbers into your radio at the time of preparation of the transceiver. To engage the autodial feature, push the appropriate Dealer-programmed Soft Key. If no Soft Key has been so designated, after selecting Menu Item S14 and pressing the [A] key, rotate the Knob to select the telephone number memory (1 ~ 10. . .you *must* have a list separately, as there is no "scratchpad"

showing the actual telephone number). Now press [B] to save the telephone memory channel; when you press the Knob to exit, the telephone number will automatically be dialed on the current channel. To re-dial, complete the entire procedure in this section again.

- **S15 TSAV (Transmit Battery Saver)**
To toggle the Transmit Battery Saver on and off from the Set Function Mode, after selecting Menu Item 15 and pressing the [A] key, rotate the Knob to enable ("ON") or disable ("OFF") the Transmit Battery Saver. Press [B] then the Knob to exit.

- **S16 DTMF (DTMF Page Call Memory Select)**
During DTMF Page Call operation, you can change the calling code from the Set Function mode. After selecting Menu Item 16 and pressing the [A] key, rotate the Knob to select Page Code 1 through 10. As usual, press [B] then the Knob to exit.

③ ARTS (Auto Range Transpond System)

This system is designed to inform you when you *and another ARTS-equipped station* are within communication range.

During ARTS operation, your radio automatically transmits for about 1 second every 25 seconds (the interval is programmed by the Dealer) in an attempt to "shake hands" with the other station.

If you move out of range for more than two minutes, your radio senses that no signal has been received, a ringing beeper will sound, and "⊗" will appear on the LCD. If you subsequently move back into range, as soon as the other station transmits, your beeper will sound, and "☉" will appear on the LCD.

④ DTMF Paging System

This system allows paging and selective calling, using DTMF tone sequences.

When your radio is paged by a station bearing a tone sequence which matches yours, your radio's squelch will open and the alert ringer will sound (unless you have disabled it, as described previously).

The three-digit code of the station which paged you will be displayed on your radio's LCD. See the previous section (S16) for operating instructions.

⑤ Nuisance Channel Deletion

Any channel (except the "Priority" Channel) that has become a nuisance due to a hung-up transmitter, noise, or traffic not currently of interest to you may be temporarily deleted from the Scan List.

To make such a deletion, while the radio is in the Scan mode and "Paused" on the "nuisance" channel, press and hold in the "Scan" soft key (A, B, C, or D, or the Knob) for two seconds. The "nuisance" channel will now be temporarily deleted from the Scan List, and the radio will resume scanning.

The deleted channel(s) will be restored ① if the scanner is stopped and then restarted, or ② when the radio is turned off and then back on.

Understanding Radio Waves

Radio waves travel from one point to another by several different means. The general term for these methods of wave travel is "Propagation."

You may know that "short-wave" broadcast signals can be propagated over distances of several thousand miles by reflection off the upper regions of the atmosphere. Your VX-10 transceiver, on the other hand, operates on the VHF (134-174 MHz) or UHF (400-512 MHz) band. On these bands, radio waves generally do not reflect off the ionosphere; instead, the radio waves behave almost like light waves—they travel in a straight line, and when they meet a building or obstruction, they go no further in that direction.

Therefore, when operating a VHF or UHF radio, it is advantageous for you to be as high and free from obstructions as possible, so as to cover the greatest distance. If you operate from inside a car or building, the surrounding metal can be expected to absorb a significant amount of the signals (both transmitted and received). Coverage may therefore be very poor under these conditions. Moving closer to a window will, of course, improve the situation in many cases.

Because radio waves at VHF and UHF are similar (in many ways) to light waves, they will reflect off of hills and buildings to some degree. In a crowded urban area, with many buildings close together, these reflections can cause rapid variations in signal strength as you walk or drive around. Therefore, if a signal is very weak, try walking a few feet in any direction. Reception may suddenly become clear, as a particular reflection path becomes dominant. Such reflections are frequently useful, as they may allow communication between two stations over a highly-obstructed path.

Always hold the radio up high, near your mouth, while transmitting. In this way, the antenna is high and in the clear, and coverage is best.
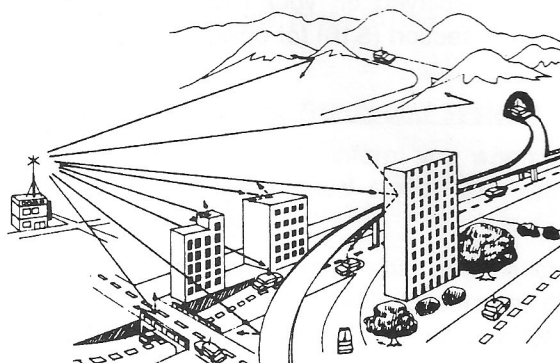
Accessories & Options

Keypads

FTT-15	16-button DTMF Paging Keypad w/Voice Encryption
F2D-6	2-button Two-Tone Decoder Unit
F2D-7	16-button Two-Tone Decoder Unit

Rechargeable Ni-Cd Battery Packs

FNB-V47	7.2V, 1100 mAh
FNB-V49	7.2V, 600 mAh

Ni-Cd Battery Chargers

NC-50	Dual-Slot Rapid Charger
CA-14	Charger Sleeve (required w/NC-50)
NC-60B/C/U	120V (B), 230~240V (C), 230V (U) Wall Charger
CA-15	Charge Stand (required w/NC-60)

Antennas

ATV-6A/B/C	(VHF)
ATV-6XL	(VHF)
ATU-6A/D/F	(UHF)

Other Accessories

MH-34B4B	Speaker/Microphone
PA-17	Remote Extender Kit
VC-25	VOX Headset
MH-37A4B	Earpiece Microphone
CSC-68	Soft Case
RH-1	Rubber Case Protector
CN-3	BNC-to-SMA Adapter
VTP-40	Trunking Logic Board

Availability of accessories may vary; some accessories are supplied as standard per local requirements, others may be unavailable in some regions. Check with your vertex Dealer for changes to the above list.

Specifications

General

	VX-10 (VHF)	VX-10 (UHF)
Frequency Range	134-160MHz (A) 146-174MHz (C)	400-430MHz (AS1) 450-470MHz (D)
Number of Channels	40CH (Optional 120CH)	40CH (Optional 120CH)
Maximum Channel Spread	26MHz (A,C)	30MHz (A) 20MHz (D)
Channel Spacing	12.5kHz or 25kHz/20kHz	12.5kHz or 25kHz
Power Supply Voltage	7.2V DC	7.2V DC
Operating Temperature Range	-25°C ~ +55°C	-25°C ~ +55°C
Frequency Stability	±1.5kHz	±1.5kHz
Antenna Impedance	50Ω	50Ω
Case Size	57 (W) × 46 (D) × 99 (H) mm with FNB-V47	57 (W) × 46 (D) × 99 (H) mm with FNB-V47
Weight	380g with FNB-V47	380g with FNB-V47
Current	Standby (Saver ON:20mA, Saver OFF:50mA) Receive 180mA Transmit (HI:1.6A, L3:1.0A, L2:0.7A, L1:0.3A)	Standby (Saver ON:20mA, Saver OFF:50mA) Receive 180mA Transmit (HI:2.0A, L3:1.5A, L2:1.0A, L1:0.5A)
Battery Life w/FNB-V47 (5-5-90 duty)	Saver ON 9.9Hours Saver OFF 8.2Hours	Saver ON 8.5Hours Saver OFF 7.1Hours

Receiver

	VX-10 (VHF)	VX-10 (UHF)
Circuit Type	Double-Conversion Superheterodyne	Double-Conversion Superheterodyne
IF Frequency	1st:17.7MHz 2nd:450kHz	1st:44.3MHz 2nd:455kHz
20dB SINAD Sensitivity	1μV (emf)	1μV (emf)
Audio Output	0.5W (1kHz into 4Ω for 5% THD)	0.5W (1kHz into 4Ω for 5% THD)
De-emphasis	6dB/oct	6dB/oct
Conducted Spurious Emission	<1GHz < 2.0 μW (-57dBm) >1GHz < 20 μW (-47dBm)	<1GHz < 2.0 μW (-57dBm) >1GHz < 20 μW (-47dBm)
Adjacent Channel Selectivity	70dB (25kHz), 60dB (12.5kHz)	70dB (25kHz), 60dB (12.5kHz)
Intermodulation	65dB	65dB
Spurious and Image Rejection	70dB	70dB
Ham and Noise	40dB (25kHz), 35dB (12.5kHz)	40dB (25kHz), 35dB (12.5kHz)

Transmitter

	VX-10 (VHF)	VX-10 (UHF)
Modulation System	Variable reactance (F3E)	Variable reactance (F3E)
Power Output	HI:5W, L3:2.5W, L2:1W, L1:0.1W	HI 5W, L3:2.5W, L2:1W, L1:0.1W
Spurious Emissions	<1GHz < 0.25 μW (-36dBm) >1GHz < 1.00 μW (-30dBm)	<1GHz < 0.25 μW (-36dBm) >1GHz < 1.00 μW (-30dBm)
Maximum Deviation	± 5kHz (25kHz), ± 2.5kHz (12.5kHz)	± 5kHz (25kHz), ± 2.5kHz (12.5kHz)
Pre-emphasis Characteristic	6dB/oct	6dB/oct
Modulation Distortion	<5% (1kHz)	<5% (1kHz)
Ham and Noise	40dB (25kHz), 35dB (12.5kHz)	40dB (25kHz), 35dB (12.5kHz)

Specifications are subject to change without notice.
Frequency rang and channel spacing vary according to transceiver version; check with your dealer.