



VX – 3200

Operating Manual

2001. 11. 27

Ver 1.0

Congratulations!

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

VERTEX STANDARD Service Representative. Consult your Authorized VERTEX STANDARD Dealer for installation of optional accessories.

Safety / Warning Information

WARNING - DO NOT operate the VX-3200U radio when someone (bystanders) outside the vehicle is within following range.

Safety Training information:

Antennas used for this transmitter must not exceed an antenna gain of 0 dBd. The radio must be used in vehicle-mount configurations with a maximum operating duty factor not exceeding 50%, in typical Push-to-Talk configurations.

This radio is restricted to occupational use, work related operations only where the radio operator must have the knowledge to control the exposure conditions of its passengers and bystanders by maintaining the minimum separation distance of following range.

Failure to observe these restrictions will result in exceeding the FCC RF exposure limits.

Antenna Installation:

For rear deck trunk installation, the antenna must be located at least following range away from rear seat passengers in order to comply with the FCC RF exposure requirements.

For roof top installation, the antenna must be placed in the center of the roof.

Radiated frequency and Distance

VX-3200U (D)

2.53 Feet (0.78m)

VX-3200 Operating Manual

The VX-3200 Series are full-featured FM transceivers designed for flexible mobile and base station business communications in and UHF (45/10 Watts: programmable) Land Mobile Bands. This model is designed for reliable business communications in a wide variety of applications, with a wide range of operating capability provided by its leading-edge design. The 250-channels memories can each be programmed with a 8-character channel name.

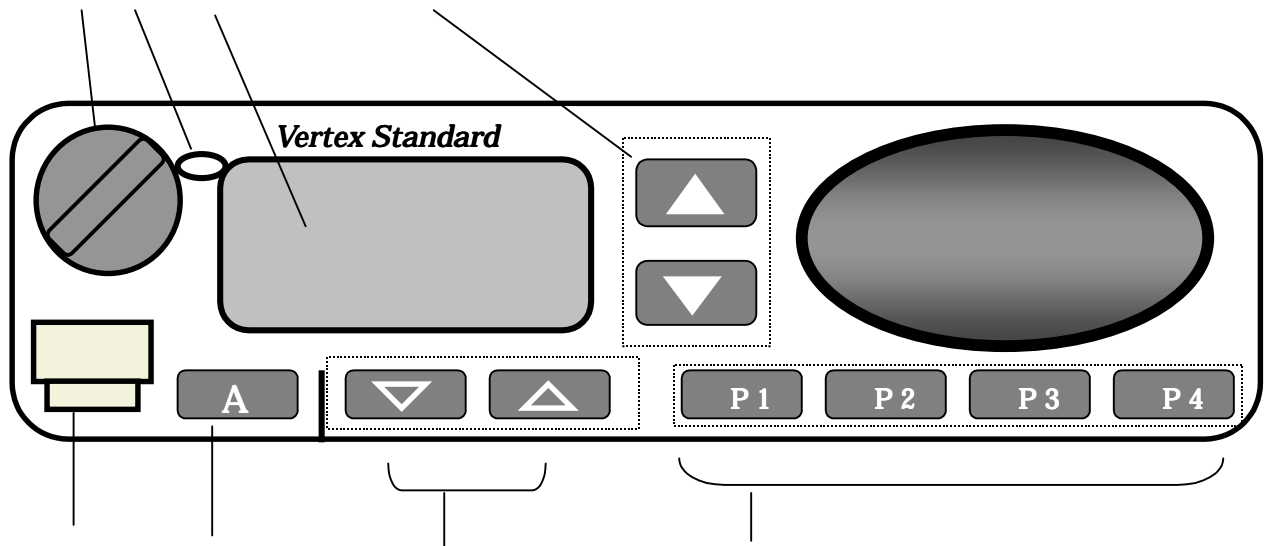
The pages which follow will detail the many advanced features provided on the VX-3200 transceiver. After reading this manual, you may wish to consult with your Network Administrator regarding precise details of the configuration of this equipment for use in your application.

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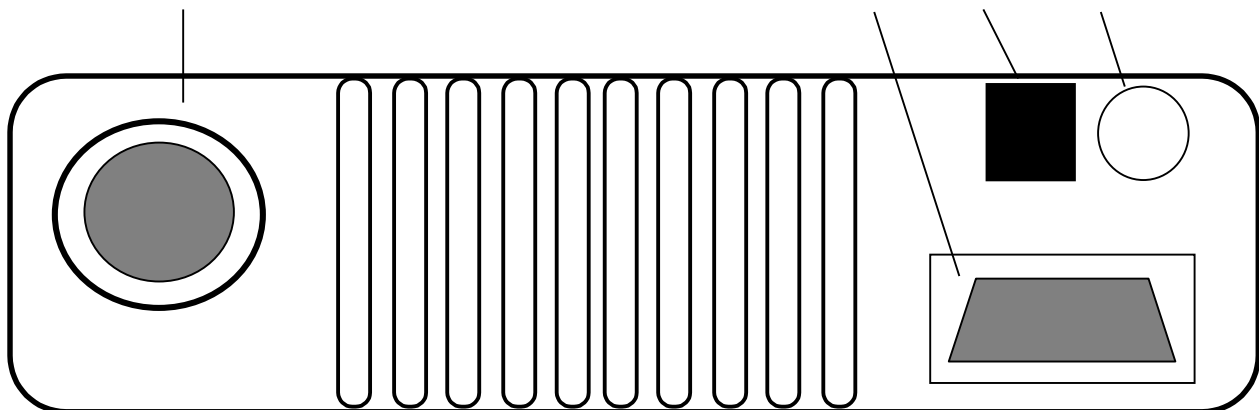
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Controls & Connectors

FRONT



REAR



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Important! – All buttons located on the Front Panel are **Programmable Function Button (PF button)** determined by your network requirements and programmed by your VERTEX STANDARD dealer. Following instruction is along with nominal button programming.

VOL. / PWR Knob

Rotate the knob to turn the transceiver ON and OFF and set the volume of the receiver.

Busy / TX Indicator

This lamp glows red when the radio is transmitting and glows green when the channel is busy.

Steady Green	: Busy Channel
Blinking Green	: Tone Squelch in defeated condition
Steady Red	: Transmission in Progress

LCD (Liquid Crystal Display)

The display include an 8-character alpha-numeric section showing Group and Channel names, status and identity information, and error messages. Additional indicators on the display show priority channel assignments and scan include / exclude selection.

- **Button [Programmable Function Button]**

Pressing these buttons changes the current Channel (and displayed Channel number or name). Holding this button for more than 1/2 second causes the function to repeat.

Microphone Jack

Connect the microphone plug to this jack.

A Button [Programmable Function Button]

This button can be set up for special applications, such as high/low power selection, monitor, Talk-around, etc, as determined by your network requirements and programmed by your VERTEX STANDARD dealer.

- **Button [Programmable Function Button]**

Pressing these buttons changes the current Group (and displayed Channel number or name). Holding this button for more than 1/2 second causes the function to repeat.

P1 to P4 [Programmable Function Button]

This button can be set up for special applications, such as High/Low power selection, Monitor, Talk-around, etc, as determined by your network requirements and programmed by your VERTEX STANDARD dealer.

Antenna Socket

The 50-ohm coaxial feedline to the antenna must be connected here, using a type-M (PL-259) plug.

D-Sub 9Pin Accessory Connector

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External TX audio line input, PTT (Push To Talk), Squelch, and external RX audio line output signal may be obtained from this connector for use with accessories such as data transmission/reception modems, etc.

13.8V DC Cable Pigtail with Connector

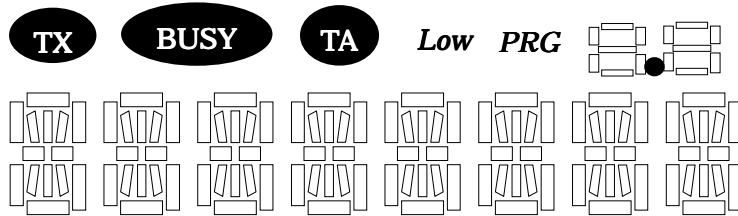
The supplied DC power cable must be connected to this 2-pin connector. Use only the supplied fused cable, extended if necessary, for power connection.

External Speaker Jack

An external loudspeaker may be connected to this 2-contact, 3.5-mm mini-phone jack.

Caution: Do not connect this line to ground, and be certain that the speaker has adequate capability to handle the audio output from the Radio.

LCD Icons & Indicators



TX Transmission in Progress as same as Red lamp.

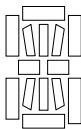
BUSY Busy condition as same as Green lamp.

TA Talk-Around Mode

Low Low Transmit Power Mode On

PRG Current Channel on "Scan" List

 Status of current Group /Channel , such as Home , Priority .

 8 Character Alpha-numeric Display of memorized Group /Channel Tagging

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Basic Operation of the Transceiver

Important! - Before turning on the radio the first time, confirm that the power connections have been made correctly and that a proper antenna is connected to the antenna jack.

Overview - Your Authorized VERTEX STANDARD Dealer can program your Radio for Conventional format.

Switching Power ON/OFF

Rotate the **VOL. / PWR Knob** turn on the radio. The display will become illuminated. Press the

• **Button** to choose the desired operating Channel. A Channel name will appear on the display. If you want to select the operating Channel from a different Group, press the • **Button** to select the Group you want before selecting the operating Channel.

Setting the Volume

Turn the **VOL. / PWR Knob** clockwise to increase the volume, and counterclockwise to decrease it.

If no signal is present, press and hold in the MON button more than 1/2 seconds; background noise will now be heard, and you may use this to set the **VOL. / PWR Knob** for the desired audio level. Press the MON button again to quiet the noise and resume normal (quiet) monitoring.

Transmitting

1. IT IS A FCC REQUIRMENT TO MONITOR A CHANNEL BEFORE TRANSMITTING. Press the button programmed for monitoring. Listen for channel activity.
2. When receiving a call, Transmit only after the incoming call ends. The radio cannot receive a call and transmit simultaneously.
3. Press the PTT key. When a channel is available, the TXLED will glow red. The radio is now transmitting and a voice message can be delivered. For best transmission, speak into the microphone from a distance of 1- 1/2 to 2 inches. Release the PTT key after each transmission.
4. If Busy Channel Lockout has been programmed for a channel, the radio will not transmit when a carrier is present. Instead, the radio will give a Continuous low-pitched tone while the PTT key is pressed. Release the PTT key and wait for channel activity to stop.
5. If CTCSS or Digital-Coded Squelch (DCS) Lockout has been programmed for a channel, the radio can transmit only when there is no carrier being received or when the carrier being received includes the correct CTCSS tone or DCS code.

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Automatic Time-Out Timer

If the selected channel has been programmed for automatic time-out, you must limit the length of each transmission. While transmitting, a beep will sound five seconds before time-out. Another beep will sound just before the deadline; the “TX” indicator will disappear and transmission will cease soon thereafter. To resume transmitting, you must release the PTT and wait for the “penalty timer” to expire (if you press the PTT before this timer expires, the timer restarts, and you will have to wait another “penalty” period)

Advanced Operation

Description of Operating Functions

Channel Scan

The Scanning feature is used to monitor multiple Channels programmed into the transceiver. While scanning, the transceiver will check each Channel for the presence of a signal on a Group, and will stop on a Channel if a signal is present.

To activate scanning:

- Press the assigned PF button of the **Scan** momentarily to activate scanning.
- The scanner will search the Channels of the each Group, looking for active ones; it will pause each time it finds a Channel on which someone is speaking.

To stop scanning:

- Press the assigned PF button of the **Scan**.
- Operation will revert to the programmed **Revert Channel**.

Note: Your dealer may have programmed your radio to stay on one of the following channels if you press the **PTT** switch during scanning pause:

- Current Channel (“Talk Back”)
- “Last Busy” Channel
- “Priority” Channel
- “Home” Channel
- “Scan Start” Channel

Dual Watch

The Dual Watch feature is similar to the **Scan** feature, except that only two channels are monitored:

- The current operating channel; and
- The “Priority” Channel.

To activate Dual Watch:

- Press the assigned **PF** button of the **Dual Watch**.
- The scanner will search the two channels; it will pause each time it finds a channel on which someone is speaking.

To stop Dual Watch:

- Press the assigned **PF** button of the **Dual Watch**.
- Operation will revert to the revert Channel which is programmed.

Low Power

Press the assigned **PF** button of the **Low Power** to set the radio’s transmitter to the “Low Power” mode. Press this button again to the other Position to return to “High Power”

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operation when in difficult terrain.

Talk Around

Press the assigned **PF** button of the **Talk Around** to the assigned position to activate the Talk Around feature when you are operating on duplex channel Groups (separate receive and transmit frequencies, utilizing a “repeater” station). The Talk Around feature allows you to bypass the repeater 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 already the same.

Note that your dealer may have made provision for “Talk Around” channels by programming “repeater” and “Talk Around” frequencies on two adjacent channels. If so, the button may be used for one of the other Pre-Programmed Functions.

Lock

Press and hold the assigned **PF** button of the **Key lock** for 2sec. to lock the Front Panel buttons; this can be enabled to prevent radio settings from being disturbed.

Group Selection

The **VX-3200** is capable of separating its 250 memory Channels into any of 32 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.

To change Group, press the assigned PF button of the GROUP UP/DOWN (Normally **•** **button**) to change the Group. Once the desired Group is reached, press the assigned PF button of the CHANNEL UP/DOWN (Normally **•** **Button**) to select the desired Channel within the selected Group.

You may wish to have the Scanner (described previously) pass through more than one Channel during the scanning process (normally, scanning is performed within the current Channel only). To include the current Channel in the scanning loop, press and hold in the assigned PF button for one second.

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

The **VX-3200** has two scanning “lists:” the “Dealer Scan” list and the “User Scan” list. The “Dealer Scan” list is a fixed Channel 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, press and hold the button (assigned to the Channel Up/Down function) to delete the current Memory Channel from the Scanning. Alternatively, press and hold the assigned of the **Scan A/D** for one second to delete the Current Memory channel from

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the Scanning.

When you delete a Channel or channel, “**PRG**” icon on the LCD will disappear on the LCD for one second after pressing the assigned button. To restore a particular channel to your scanning list, press and hold in the button again for one second; “**PRG**” icon will appear on the LCD for one second after pressing the button.

Call/Reset

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 button, 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 button is pressed (the new code will now be transmitted).

The receiver squelch of the other station will be opened, and you can begin communication.

Speed Dial

Your Dealer may have pre-programmed Auto-Dial telephone number memories into your radio.

Emergency

The **VX-3200** Radio includes an “Emergency” feature which may be useful if you have someone monitoring on the same frequency as your transceiver’s channel. For further details contact your VERTEX STANDARD dealer.

ARTS (Auto Range Transpond Group)

This Group 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 “OUT OF SERVICE” will scroll on the LCD. If you subsequently move back into range, as soon as the other station transmits, your beeper will sound, and “IN SERVICE” will scroll on the LCD.

DTMF Paging Group

This Group 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.

The three-digit code of the station which paged you will be displayed on your radio’s LCD.

Accessories & Options

FVP-25	Encryption/DTMF Pager Unit
F2D-8	2-Tone Decode Unit
FP-712	External 12A Power Supply
MLS-100	Mobile Loud speaker (12 W Peak Power)
LF-1	Line Filter
MH-700D	DTMF Back-lit Microphone
MH-25 A8J	Microphone

Availability of accessories may vary; some accessories are supplied standard per local requirements, others may be unavailable in some regions.

Check with your VERTEX STANDARD Dealer for changes to the this list.

This device complies with Part 15 of the FCC rules.

Operation is subject to the condition that this device does not cause harmful interference.