Dear Customer,

Thank you for your purchase of the PT Series radio. Each PT-150 and PT-450 radio comes pre-programmed with the *4 factory default channel frequencies listed below. The frequencies cannot be changed via the keypad buttons. Other factory default radio settings i.e. Programmable Function Buttons are listed on Page 6 to 10.

If your company currently has an FCC license on frequencies other than the default settings, the PT radio can be PC programmed to custom frequencies using optional Ritron PC software, other settings can also be re-configured. Please contact Ritron, Inc. toll free at 800-872-1872 for information on “custom” radio programming services.

Please be advised that operation on the factory default frequencies require that you obtain an FCC Operator License BEFORE USE.

VHF PT-150 Default Frequency Settings - Operating band *136-174MHz

<table>
<thead>
<tr>
<th>Ch</th>
<th>FC #</th>
<th>Frequency Code</th>
<th>Narrow Band</th>
<th>Tone Code</th>
<th>Wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ch1</td>
<td>3</td>
<td>151.6250MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2/5 Watts</td>
</tr>
<tr>
<td>Ch2</td>
<td>4</td>
<td>151.9550MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2/5 Watts</td>
</tr>
<tr>
<td>Ch3</td>
<td>7</td>
<td>154.4900MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2/5 Watts</td>
</tr>
<tr>
<td>Ch4</td>
<td>6</td>
<td>154.5150MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2/5 Watts</td>
</tr>
</tbody>
</table>

UHF PT-450 Default Frequency Settings - Operating band *406-470MHz

<table>
<thead>
<tr>
<th>Ch</th>
<th>FC #</th>
<th>Frequency Code</th>
<th>Narrow Band</th>
<th>Tone Code</th>
<th>Wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ch1</td>
<td>5</td>
<td>467.8500MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2 Watts</td>
</tr>
<tr>
<td>Ch2</td>
<td>8</td>
<td>467.9250MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2 Watts</td>
</tr>
<tr>
<td>Ch3</td>
<td>3</td>
<td>464.5500MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2/4 Watts</td>
</tr>
<tr>
<td>Ch4</td>
<td>6</td>
<td>467.8750MHz</td>
<td>Narrow</td>
<td>no tone</td>
<td>2 Watts</td>
</tr>
</tbody>
</table>

FC# = Frequency Code, Narrow Band = 12.5kHz bandwidth
Tone = tone codes can be added via the keypad by the radio user.
See page 10 for details.

The standard antenna supplied is cut for operation in the following frequency bands:

- VHF: 150-165MHz
- UHF: 450-470MHz

Operation on frequencies outside this range will require a custom cut antenna.
ITEMS INCLUDED WITH EACH RADIO

PT Radio

Li-Ion Battery w/ Belt Clip

VHF or UHF Antenna

Accessories

<table>
<thead>
<tr>
<th>ACCESSORIES</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ear Loop with PTT &amp; Microphone</td>
<td>RHD-15X</td>
</tr>
<tr>
<td>Speaker Microphone</td>
<td>RSM-6X</td>
</tr>
<tr>
<td>Replacement, Battery Pack</td>
<td>BP-Li-PT</td>
</tr>
<tr>
<td>Replacement, Belt Clip</td>
<td>CB-PT</td>
</tr>
<tr>
<td>Gang Charger Kit</td>
<td>BC-6PTKIT</td>
</tr>
</tbody>
</table>

Installing Audio Accessories

1. Remove the 1 Torx fastener that secures the audio accessory dust cover to the radio.
2. Attach the Ritron audio accessory connector to the radio using the 2 captive screws in the audio accessory connector.
3. Do NOT over-tighten or use excessive force when securing the mounting screws to the radio.

Battery Installation/Removal

1. Turn the radio OFF.
2. Align tabs at bottom of battery pack with the slots at the bottom of the radio body.
3. Pivot the top of the battery towards the radio body until you hear the spring latches engage with a click.

To Remove

1. Turn radio OFF.
2. Slide both side latches down until they release.
3. Gently rotate the top of the battery pack away from the radio.

Models

<table>
<thead>
<tr>
<th>Models</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT-150 VHF, *136-174MHz</td>
<td></td>
</tr>
</tbody>
</table>
5 Watt or 1 Watt
255 Channel Capacity

<table>
<thead>
<tr>
<th>Models</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT-450 UHF, *406-470MHz</td>
<td></td>
</tr>
</tbody>
</table>
4 Watt or 1 Watt
255 Channel Capacity

*Standard antenna supplied is cut for operation in the following frequency ranges:
VHF: 150-165MHz
UHF: 450-470MHz

Operation on frequencies outside this range will require custom cut antenna.
1. Carefully align threaded end of the antenna with the mating connector located on the radio.
2. Carefully rotate the antenna clockwise until fully threaded into the mating connector.

3. Push and hold to transmit; release to receive signal.

4. Battery Information
   • Fully charge the battery before use to keep the optimum capacity and for safe operation.
   • The battery is designed for the PT Series charger only. Please do not charge the battery with any other brand charger.
   • Turn the radio off before charging.
   • Do not disassemble.
   • If the battery terminal is contacted with any metals or conductive substances, it may do harm to the body or battery.

   • Battery Type: Rechargeable Lithium-ion
   • Battery Life: Duty cycle: 5% transmit, 5% receive, 90% standby = more than 12 hours

5. ON/OFF/Volume knob
   ON/Increase Volume – rotate clockwise
   OFF/Decrease Volume – rotate counter clockwise

6. Orange Button
   Can be programmed for specific functions. (PFB)

7. Speaker

8. Microphone

9. LED Display

10. Menu/Select Button
11. Up Button & Down Button
    Select the desired channel or Scroll Menu function.

PFB denotes Programmable Function Button
P1, P2, P3 are PFB’s
(see page 6.)

Display Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Signal Strength" /></td>
<td>Indicates relative signal strength level.</td>
</tr>
<tr>
<td><img src="image" alt="Power Level" /></td>
<td>Power Level Indicator. “H” is high power. “L” is low power.</td>
</tr>
<tr>
<td><img src="image" alt="Keypad Lock" /></td>
<td>Keypad Lock Indicator. Appears when keypad lock function is ON.</td>
</tr>
<tr>
<td><img src="image" alt="Alert(Beep)" /></td>
<td>Alert(Beep) ON/OFF Indicator. Appears when keypad tones are ON.</td>
</tr>
<tr>
<td><img src="image" alt="Battery Level" /></td>
<td>Battery Level Indicator. Indicates remaining battery power.</td>
</tr>
<tr>
<td><img src="image" alt="Hands-free VOX" /></td>
<td>Hands-free VOX Indicator. Appears when VOX function is turned ON.</td>
</tr>
<tr>
<td><img src="image" alt="Channel Scan" /></td>
<td>Channel Scan Indicator. Appears when Scan function is activated.</td>
</tr>
<tr>
<td><img src="image" alt="Talk-Around" /></td>
<td>Talk-Around Indicator.</td>
</tr>
<tr>
<td><img src="image" alt="TONE" /></td>
<td>TONE Indicator. Appears when the frequency is set with Tone.</td>
</tr>
<tr>
<td><img src="image" alt="Monitor" /></td>
<td>Monitor Indicator. Appears when Monitor Button is pressed.</td>
</tr>
</tbody>
</table>

Color Status of Charger LED
Blinking AMBER...Abnormal Temperature
Blinking RED......Replace Battery

Operating instruction
• Plug the AC power cord of the charger into a wall outlet.
• Turn the transceiver off.
• Insert the battery pack into the charger with or without the transceiver attached.

BC-PT Charger Information
Specification
• Input voltage: 12VDC, 1A
• Output voltage: 8.4VDC, 850mA
• Charge time: 2½ hours

Monitor (PFB)
Turns on backlight for display and buttons. (PFB)

PTT Button
Push and hold to transmit; release to receive signal.

12. Accessory connector

13. Beltclip

14. Accessory connector

4.

5.
Operating Your PT Series Radio

- Select the desired channel by using the Scroll UP/DWN button. When button is held, channels change continuously.
- To Talk, press and hold the PTT button, speak into the microphone on the radio, and release to listen.
- To Monitor traffic on the channel, press the Monitor button.

Note: For maximum clarity hold the radio 2-3 radii inches away from your mouth and speak in a normal tone of voice.

Programmable Function Buttons (PFB’s)

Programmable Function Buttons (PFB) provide easy, one-button access to a specific feature/function. When momentarily pressed, the PFB can be PC programmed to operate as follows:
- No function when pressed
- Turn ON or OFF a specific feature assigned to that PFB,
- Send a Call Tone
- or other functions if noted as Yes under the heading PFB Assignable in the tables starting on page 6.

The table listed below indicates the Factory Default settings for each of the PFB’s on your radio. The default function can be changed via PC programming, contact Ritron for details.

<table>
<thead>
<tr>
<th>PF Button</th>
<th>Factory Default Function</th>
<th>Description of Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2. Side Button (Upper)</td>
<td>Monitor</td>
<td>If radio is programmed with tone code, a momentary press of the Monitor Button (left side), will turn tone code OFF, a second press will “open squelch” and you will hear a continuous squelch noise. Icon will appear on display.</td>
</tr>
<tr>
<td>#3. Side Button (Lower)</td>
<td>Backlight</td>
<td>Momentary press will turn backlight of display and keypad ON. Backlight turns OFF after a few seconds.</td>
</tr>
<tr>
<td>P1 (VHF PT-150)</td>
<td>Transmit PWR Hi/Lo</td>
<td>Transmitter Power will toggle between high and low power. Icon will appear on display.</td>
</tr>
<tr>
<td>P1 (UHF PT-450)</td>
<td>Send CALL TONE</td>
<td>Momentarily press button, [CALL] will appear in display, then press PTT button, CALL Tone will be sent. [CALL] will appear on display of receiving radio.</td>
</tr>
<tr>
<td>P2</td>
<td>Keypad Lock</td>
<td>Press and HOLD until LOCK icon appears in display accompanied by tone. Keypad buttons will not respond when LOCK is ON. Repeat process to UNLOCK</td>
</tr>
<tr>
<td>P3</td>
<td>Scan</td>
<td>Radio will begin to scan designated channels. A channel must be flagged using PC Programmer in order to be included in scan list. Scan symbol will appear in display.</td>
</tr>
<tr>
<td>#11. Scroll DWN</td>
<td>Nuisance Channel Delete while in Scan Mode</td>
<td>Allows user to temporarily delete nuisance channels from the scan list. When radio is in scan mode and stops on the nuisance channel, PRESS and HOLD the Scroll Down Button. Display will flash “DELETED” when complete. Nuisance Channel is now temporarily deleted from scan list. To restore deleted channel, turn the radio OFF then ON again.</td>
</tr>
<tr>
<td>#11. Scroll Up</td>
<td>Scroll Channels or feature sub-list.</td>
<td>Scroll Channels or feature sub-list.</td>
</tr>
<tr>
<td>#11. Scroll Down</td>
<td>Scroll Channels or feature sub-list.</td>
<td>Scroll Channels or feature sub-list.</td>
</tr>
<tr>
<td>#10. MENU/ENTER</td>
<td>Allows access to MENU enabled features and/or ENTER key.</td>
<td></td>
</tr>
</tbody>
</table>

Using The Menu/Enter Button

Listed below are instructions for accessing factory default features/functions from the radio MENU button. The PT radio can be customized using special PC software to enable or disable certain features and functions – see features listed below.

To access feature/functions via the radio MENU: (see instructions in current manual)
- Press if enabled, the first feature/function in the list will appear on the LCD display
- Use to scroll to a specific feature/function or
- Press to ENTER the feature/function appearing on the LCD display
- Use to scroll sub-list option settings for the specific feature/function
- Press to SAVE selection and exit MENU

The last channel of operation will appear on the LCD display

Programmable PT Series Radio Features

Your PT radio has been factory programmed to allow field-programming of certain features. The first 6 features listed below in italics can be accessed by the radio user using the PF buttons. The other features listed can be custom programmed using special PC software. Contact Ritron for details.

Function/Feature | PFB Assignable | Menu Accessible
--- | --- | ---
**Tone Code Select** - Tone codes help to block-out other radio chatter not in your talk group, static and noise.
- Each channel can be assigned separate tone codes, on a channel-by-channel basis.
- All radios in your talk group must be programmed to the same frequency and tone code (transmit and receive).
- See Tone Code Tables & programming instructions on p.11.

**Tone Select (Transmit)** Select CTCSS or DCS Tone Codes to block out unwanted chatter

**Tone Select (Receive)** Select CTCSS or DCS Tone Codes to block out unwanted chatter

*Standard convention requires the same tone code to be programmed in both the transmit and receive frequency of a given channel.

Keypad Lock ON/OFF Prevents accidental activation of the front panel buttons. Icon appears on LCD display is ON.

Squelch Level Will display the current squelch level and allow the user to raise or lower squelch with the Up and Down buttons. Smaller numbers increase squelch sensitivity, allowing the radio to hear weak and distant signals. Larger numbers decrease sensitivity, only strong signals are heard.

Normal Scan ON/OFF Must be programmed by your dealer. Channels must be flagged as eligible scan channels. Normal Scan will periodically check these channels to prevent missed calls. Programmable function button can be set to turn function ON or OFF. Icon will appear on LCD display when scan is ON.

Ear PTT ON/OFF Enables or disables microphone on radio. Allows use of earbud (listen only) device while microphone on radio remains enabled.

continued...
<table>
<thead>
<tr>
<th>Function/Feature</th>
<th>PFB Assignable</th>
<th>Menu Accessible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group Select</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>When programmed to a programmable function button, allows quick access to a group of up to 10 pre-programmed channels.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Go To A Fixed (Pre-Set) Channel #, 1 - 4 “Speed dial”</strong> for quickly accessing pre-programmed channel(s). Eliminates the need to scroll through channels.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>A programmable function button can be assigned to 1 of up to 4 pre-set channels.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Keypad Lock ON/OFF</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Prevents accidental activation of the front panel buttons. Icon appears on LCD display when ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Send A Selective Signaling Call</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Send a 2-tone Page Code (e.g. GateGuard command code, 5 to 7 Tone Page or DTMF ANI Code on a per channel basis).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alerts ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Turn keypad tones OFF for silent operation. Icon will appear on LCD display when ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Send DTMF Digits</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Radio can be programmed by your dealer to transmit unique DTMF digits on a per channel basis and/or via programmable function button.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Talk Around ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Causes the radio to transmit on the receive frequency on channels where the RX and TX are not the same. Icon will appear on the LCD Display when ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TX/Rx Tone Select</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Select CTCSS or DCS encode &amp; decode tone codes on the current operating channel.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TX Power Level</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Set transmit power to high, or low on current operating channel. Icon (H or L) will appear on LCD display.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Battery Saver ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Battery life extended when ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Missed Call</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Displays a list of missed Selcall calls.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Contact List</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Select and send from a list of pre-programmed encode codes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.g. 2-Tone GateGuard Command codes to open different gates, turn on lights, pump control etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Status List</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Select &amp; send from a list of pre-programmed “status” messages. E.g. Text messaging.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Squelch Level</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Will display the current squelch level and allow the user to raise or lower squelch with the Up and Down buttons. Smaller numbers increase squelch sensitivity, allowing the radio to hear weak and distant signals. Larger numbers decrease sensitivity, only strong signals are heard.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Missed Call List Delete</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Clears the Missed Call List.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Missed Call Send</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Will automatically send the Current Status message if a Missed Call is detected.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Radio Reset</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>See your Dealer for details</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*pre-programmed feature

---

<table>
<thead>
<tr>
<th>Function/Feature</th>
<th>PFB Assignable</th>
<th>Menu Accessible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Password</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Prevents unauthorized use of the radio. At radio turn on user must enter 4 character password before radio will operate. Password is entered using the Up/Dwn scroll buttons and MENU button.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Normal Scan ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Must be programmed by your dealer. Channels must be flagged as eligible scan channels. Normal Scan will periodically check these channels to prevent missed calls. Programmable function button can be set to turn function ON or OFF. Icon will appear on LCD display when scan is ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Priority Scan Channel</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Allows the user to set the priority channel from a list of available channels.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Priority Scan ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Must be enabled by your dealer. Designates a priority channel that is checked more frequently than other channels to prevent missed calls.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nuisance Channel Delete</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Allows user to temporarily delete nuisance channels from the scan list. When radio is in scan mode and stops on the nuisance channel, PRESS and HOLD the Scroll Down Button. Display will flash “DELETED” when complete. Nuisance Channel is now temporarily deleted from scan list. To restore deleted channel, turn the radio OFF then ON again.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>“Hands-Free” VOX ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Allows “hands-free” use of the radio, with or without an audio accessory. (i.e. a headset). Icon will appear on LCD display when ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VOX Level</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Radio can be programmed by your dealer to transmit unique DTMF digits on a per channel basis and/or via programmable function button.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Talk Around ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Causes the radio to transmit on the receive frequency on channels where the RX and TX are not the same. Icon will appear on the LCD Display when ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tx/Rx Tone Select</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Select CTCSS or DCS encode &amp; decode tone codes on the current operating channel.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Battery Saver ON/OFF</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Battery life extended when ON.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Missed Call</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Displays a list of missed Selcall calls.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Contact List</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Select and send from a list of pre-programmed encode codes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.g. 2-Tone GateGuard Command codes to open different gates, turn on lights, pump control etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Status List</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Select &amp; send from a list of pre-programmed “status” messages. E.g. Text messaging.</td>
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<td></td>
</tr>
<tr>
<td><strong>Squelch Level</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Will display the current squelch level and allow the user to raise or lower squelch with the Up and Down buttons. Smaller numbers increase squelch sensitivity, allowing the radio to hear weak and distant signals. Larger numbers decrease sensitivity, only strong signals are heard.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Missed Call List Delete</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Clears the Missed Call List.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Missed Call Send</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Will automatically send the Current Status message if a Missed Call is detected.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Radio Reset</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>See your Dealer for details</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*pre-programmed feature
Function/Feature

Caller/Group ID Each transmission (16 possible codes) is uniquely identified. Receiving radios show name of caller/group on LCD display.

Selcall (Selective Calling) 2-Way Paging Selcall is a voice call to a specific radio or group of radios. The caller selects the radio or group of radios from a pre-programmed "contact list."

Status Messaging Send and receive pre-programmed alpha/numeric status messages.

FCC REGULATIONS LICENSING

The FCC requires the owners or PT Series radios to obtain a station license before using them. The station licensee is responsible for ensuring that transmitter power, frequency and deviation are within the limits specified by the station license. The station licensee is also responsible for proper operation and maintenance of the radio equipment. This includes checking the transmitter frequency and deviation periodically, using appropriate methods.To get a FCC license for VHF or UHF frequencies, contact your Ritron dealer for help with this process.

SAFETY STANDARDS

The FCC (with its action in General Docket 79-144, (March 13, 1985) has adopted a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. Ritron observes these guidelines and recommends that you do also:

• DO NOT hold the radio so that the antenna is very close to or touching exposed parts of the body, especially the face or eyes, while transmitting. Keep the radio vertical, four inches away while talking into the front panel.
• DO NOT press the Push-To-Talk except when you intend to transmit.
• DO NOT operate radio equipment near electrical blasting caps or in an explosive atmosphere.
• DO NOT allow children to play with any radio equipment that contains a transmitting device.
• Repair of Ritron products should be performed only by Ritron authorized personnel.

SERVICE

Federal law prohibits you from making any internal adjustments to the transmitter and/or from changing transmit frequencies unless you are specifically designated by the licensee.

If your radio equipment fails to operate properly, or you wish to have the radio programmed, contact your authorized dealer or Ritron.

RITRON, INC., Repair Department
P.O. Box 1998
Carmel, IN 46082-1998 USA
Phone: 317-846-1201
Fax: 317-846-4978

Tone Code Select

• Tone codes help to block-out other radio chatter not in your talk group, static and noise.
• Each channel can be assigned separate tone codes, on a channel-by-channel basis.
• All radios in your talk group must be programmed to the same frequency and tone code (transmit and receive).

How to Program “Tone Codes” To A Channel

• Use the same Tone Code Number for both TRANSMIT and RECEIVE tone select feature.
• In order for radios to talk to each other, tone codes (TX and RX) AND channel frequencies must match exactly.
• Review these Tone Code Tables to select the display number of the Tone Code(s) you will be using.

Selecting The “Transmit” Tone Code For A Channel

1. Turn the radio ON.
2. Scroll to the channel you wish to program
3. Press MENU button, [TX---Tone] will appear on the display
4. Press MENU button again, [CTC...] will appear on the display
5. Press Scroll UP or Down button to select the Display Number of the Transmit Tone code you wish to program into the channel
6. Press MENU button to SAVE this tone code to the channel

Selecting The “Receive” Tone Code For A Channel

7. Press MENU button, [TX---Tone] will appear on the display
8. Press SCROLL UP button, [RX---Tone] will appear on the display
9. Repeat Steps 4-6 to select and Save the Receive Tone Code

Note: You must select the same Tone Code number for both the Transmit and Receive
RF ENERGY EXPOSURE AWARENESS AND CONTROL INFORMATION

BEFORE USING YOUR PORTABLE 2-WAY RADIO, READ THIS IMPORTANT RF ENERGY AWARENESS AND CONTROL INFORMATION AND OPERATIONAL INSTRUCTIONS TO ENSURE COMPLIANCE WITH THE FCC’S RF EXPOSURE GUIDELINES.

NOTICE: This radio is intended for use in occupational/controlled conditions, where users have full knowledge of their exposure and can exercise control over their exposure to meet FCC limits. This radio device is NOT authorized for general population, consumer, or any other use.

This 2-way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more radio transceivers. RF energy (radio frequency energy) is a form of electromagnetic energy. Other forms include, but are not limited to, electric power, sunlight and x-rays. RF energy, however, should not be confused with these other forms of electromagnetic energy, which when used improperly can cause biological damage. RF energy is typically composed of high levels of x-rays, for example, can damage tissues and organs in the body.

Experts in science, engineering, medicine, health and industry work with organizations to develop standards for exposure to RF energy. These standards provide recommended levels of RF exposure for both workers and the general public. These recommended RF exposure levels include substantial margins of protection. All 2-way radios marketed in North America are designed, manufactured and sold under the condition that they meet government established RF exposure levels. In addition, manufacturers also recommend specific operating instructions to users of 2-way radios. These instructions are important because they inform users of potential exposure and procedures on how to control the exposure. For more information on what RF energy is and how to control your exposure to assure compliance with established RF exposure limits.


FEDERAL COMMUNICATIONS COMMISSION REGULATIONS - The FCC rules require manufacturers to comply with the FCC RF energy exposure limits for portable 2-way radios before they can be marketed in the U.S. When 2-way radios are used as a consequence of employment, the FCC requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure levels are limited by the use of a product label warning of the specific user exposure.

Ritron’s Part 2-way radio has an RF exposure product label. Also, this user manual includes information and operating instructions required to control your RF exposure and to satisfy compliance requirements.

COMPLIANCE WITH RF EXPOSURE STANDARDS - Your Ritron 2-way radio is designed and tested to comply with a number of national and international standards and guidelines listed below for human exposure to radio frequency electromagnetic energy. This radio complies with the IEEE and ICNIRP exposure limits for occupational/controlled RF exposure environment at operating frequencies up to 100 MHz, transmitting and is authorized for occupational use only. In terms of measuring RF energy for compliance with the FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

NOTE: The approved batteries supplied with your radio are rated for a 5-5-90 duty factor (5% talk - 5% listen - 90% standby), even though it is rated at 100% (or more) for the occupational/controlled RF exposure limits and may result in a talk-to-listen ratio of 50% talk.

Have questions? Call 800-USA-1USA (800-872-1872) or visit our website at www.ritron.com

Your Ritron 2-way radio complies with the following RF energy exposure standards and guidelines:
- American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95.3-2003
- Institute of Electrical and Electronic Engineers (IEEE) C95.3-2003 Edition

RF EXPOSURE COMPLIANCE AND CONTROL GUIDELINES AND OPERATING INSTRUCTIONS - To control your exposure and ensure compliance with the occupational/controlled environment exposure limits always adhere to the following guidelines:

GUIDELINES:
- Do not remove the RF Exposure Label from the device.
- This user manual should accompany the device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

OPERATING INSTRUCTIONS:
- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive (listen), release the button. Transmitting 50% of the time, or less, is important because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).
- Hold the radio in a vertical position in front of the face when the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the face. Keeping the radio at the proper distance is important because RF exposure decreases with distance from the antenna. Shouldn’t be kept away from eyes.
- When not in use, do not place the radio in a unattended clutch or belt holster.
- When not in use, do not place the radio in a unattended clutch or belt holster.
- Use only Ritron approved replacement antennas, batteries, and accessories. Use of non-Ritron approved antennas, batteries, and accessories may exceed the FCC RF exposure guidelines.
- For a list of Ritron approved antennas, batteries, and accessories see this user manual, or visit http://www.ritron.com or call Ritron at 800-872-1872.

CONTACT INFORMATION

For additional information on exposure requirements or other information, contact Ritron at 800-872-1872.

Have questions? Call 800-USA-1USA (800-872-1872) or visit our website at www.ritron.com

SENSITISATION A L’EXPOSITION ENERGIE RF ET LE CONTROLE DES INFORMATIONS

SENSIBILISATION A L’EXPOSITION DE L’ENERGIE RF ET LA PROTECTION DE L’INFORMATION ET INSTRUCTIONS OPERATIONNELLES POUR LES EXIGENCES D’UTILISATION PROFESSIONNELLES DE FAC

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AVIS: LA SENSIBILISATION A L’EXPOS...
RITRON, INC. LIMITED WARRANTY

WHAT THIS WARRANTY COVERS:
RITRON, INC. ("RITRON") provides the following warranty against defects in materials and/or workmanship in RITRON Radios and Accessories under normal use and service during the applicable warranty period (as stated below). "Accessories" means antennas, holsters, chargers, earphones, speaker/microphones and items contained in the programming and programming/service kits.

<table>
<thead>
<tr>
<th>WHAT IS COVERED</th>
<th>FOR HOW LONG</th>
<th>WHAT RITRON WILL DO</th>
</tr>
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<tbody>
<tr>
<td>PT Series Radios</td>
<td>1 year*</td>
<td>During the first year after date of purchase, RITRON will repair or replace the defective product, at RITRON's option, parts and labor included at no charge.</td>
</tr>
<tr>
<td>Accessories</td>
<td>90 days*</td>
<td>*After date of purchase</td>
</tr>
</tbody>
</table>

WHAT THIS WARRANTY DOES NOT COVER:

- Any technical information provided with the covered product or any other RITRON products;
- Installation, maintenance or service of the product, unless this is covered by a separate written agreement with RITRON;
- Any products not furnished by RITRON which are attached or used with the covered product, or defects or damage from the use of the covered product with equipment that is not covered (such as defects or damage from the charging or use of batteries other than with covered product);
- Defects or damage, including broken antennas, resulting from:
  - misuse, abuse, improper maintenance, alteration, modification, neglect, accident or act of God,
  - the use of covered products other than in normal and customary manner or,
  - improper testing or installation;
- Defects or damages from unauthorized disassembly, repair or modification, or where unauthorized disassembly, repair or modification prevents inspection and testing necessary to validate warranty claims;
- Defects or damages in which the serial number has been removed, altered or defaced.
- Batteries if any of the seals are not intact.

IMPORTANT: This warranty sets forth the full extent of RITRON's express responsibilities regarding the covered products, and is given in lieu of all other express warranties. What RITRON has agreed to do above is your sole and exclusive remedy. No person is authorized to make any other warranty to you on behalf of RITRON. Warranties implied by state law, such as implied warranties of merchantability and fitness for a particular purpose, are limited to the duration of this limited warranty as it applies to the covered product. Incidental and consequential damages are not recoverable under this warranty (this includes loss of use or time, inconvenience, business interruption, commercial loss, lost profits or savings). Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. Because each covered product system is unique, RITRON disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

WHO IS COVERED BY THIS WARRANTY:
This warranty is given only to the purchaser or lessee of covered products when acquired for use, not resale. This warranty is not assignable or transferable.

HOW TO GET WARRANTY SERVICE:
To receive warranty service, you must deliver or send the defective product, delivery costs and insurance prepaid, within the applicable warranty period, to RITRON, INC., 505 West Carmel Drive, Carmel, Indiana 46032, Attention: Warranty Department.

Please point out the nature of the defect in as much detail as you can. You must retain your sales or lease receipt (or other written evidence of the date of purchase) and deliver it along with the product. If RITRON chooses to repair or replace a defective product, RITRON may replace the product or any part or component with reconditioned product, parts or components. Replacements are covered for the balance of the original applicable warranty period. All replaced covered products, parts or components become RITRON's property.

RIGHTS TO SOFTWARE RETAINED:
Title and all rights or licenses to patents, copyrights, trademarks and trade secrets in any RITRON software contained in covered products are and shall remain in RITRON. RITRON nevertheless grants you a limited non-exclusive, transferable right to use the RITRON software only in conjunction with covered products. No other license or right to the RITRON software is granted or permitted.

YOUR RIGHTS UNDER STATE LAW: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WHERE THIS WARRANTY IS VALID: This warranty is valid only within the United States, the District of Columbia and Puerto Rico.

Questions? CALL 800-USA-1-USA (872-1872)