



Professional Two-Way
PR Series Portable Radio

User Manual

Model: VHF MURS PR-10M License-Free Business



- Analog VHF MURS
- 2 Watt VHF
- 32 Channel Capability – 2 Zones of 16
- Loud Audio Output - 1000mW
- Rugged, Compact Design
- Resistant to Water/Dust Intrusion
- FCC Approved
- CTCSS and DCS Tone Codes
- Channel Scan

800-USA-1-USA (872-1-872)

www.ritron.com

Dear Valued Ritron Customer,
Thank you for your purchase of the VHF MURS License-Free PR-10M radio.

Each radio comes pre-programmed with all 7 of the allowed MURS channel frequencies and 1 of the 258 different tone codes.

The table below lists the factory default channel frequencies and CTCSS tones pre-programmed into your radio.

IMPORTANT: To re-program your PR-10M radio from the factory defaults you must first download the FREE PR-10M PC programming software on your Windows computer, and you must purchase the required programming cable (pn 60201138) 15\$ + freight. Call Ritron at 800-872-872.

1. Go to <https://www.ritron.com/tools> to download the FREE “PR-10M VHF MURS radio PC Programming Software”
2. Please call Ritron at **1-800-872-872** to order pn 60201138 programming cable for the PR-10M radio. (\$15+freight. VISA or MasterCard accepted).

NOTE: PR-10M does NOT support selective signaling capability for GateGuard systems (i.e. 2-tone or DTMF).

PR-10M VHF MURS FACTORY DEFAULT SETTINGS

Channel	VHR MURS Freq. MHz	Ritron Table Freq. Code #	Tone Hz	Ritron Tone Code #	TX Pwr	Bandwidth
1	151.8200	19	77	4	2 Watts	Narrow 12.5KHz
2	151.8800	20	77	4	2 Watts	Narrow 12.5KHz
3	151.9400	21	77	4	2 Watts	Narrow 12.5KHz
4	154.5700	23	77	4	2 Watts	Narrow 12.5KHz
5	154.6000	22	77	4	2 Watts	Narrow 12.5KHz
6	154.5700	2	77	4	2 Watts	Wide 25KHz
7	154.6000	14	77	4	2 Watts	Wide 25KHz

FC# = Frequency Code

The standard antenna supplied with the PR Series radio is cut for operation at the following frequency bands:

VHF: MURS only

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Models	Description
PR-10M DMR	VHF, MURS 2 Watt 32 Channel Capacity

Optional PC Programming for Custom Configurations. See Front Cover

*Standard antenna supplied is cut for operation in the following frequency ranges:

VHF: 150-165MHz



PR-10M Radio
Each Radio includes:
Antenna.
Rechargeable Lithium Polymer Battery.
Spring Action Belt Clip.
Drop-In Charger Tray & 110-220V AC Adaptor.



AF-136-PR Standard 6" Flex Antenna

Note: The frequency band is shown on the bottom of antenna.
VHF = 136-174MHz



110-220V AC Adaptor



BC-PR Drop-in Charging Tray

ACCESSORIES	Part No.
Ear Loop with PTT & Microphone, 2 Pin Conn	RHD-16X
Speaker Microphone, 2 Pin	RSM-10X
Replacement, Battery Pack	BP-PR-Li20
Replacement, Belt Clip	CB-PR
6 Unit Charger Kit	BC-6PR-Kit



RHD-16X



CB-PR Spring Action Belt Clip



RSM-10X 2-pin

Standard **PR series** audio accessories e.g. remote speaker mic and earset are not compatible with VOX function. VOX function requires special VOX capable audio accessories. Contact factory for availability.

Installing Audio Accessories

1. Remove the fastener that secures the audio accessory dust cover to the radio.
2. Plug in the Ritron 2-pin audio accessory

Battery Installation/Removal

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

To Remove

- 1 Turn radio OFF.
2. Slide latch at BOTTOM in direction of the OPEN arrow.
3. Gently pivot the BOTTOM of the battery pack away from the radio.



BC-6PR-KIT

6 Unit Charger Kit includes:
Base Mounting Plate.
6 plug pigtail cable, (6) adapters and 110-220V AC Adaptor.

Kit does NOT include 6 individual radio charging stands shown in image. Charging stands come standard with each PR series radio.

Dimensions: 11"wide x 7"L x 4"H.
Assembly Required.

Antenna - Thread the matching antenna until mating connector is fully seated.

Getting To Know Your PR Series Radio

Controls

Your Ritron dealer can program *PFB's to perform specific functions.

1. * Top Button - Orange
2. Push-To-Talk Button (not programmable)
3. * Side Button - Above PTT Button
4. * Side Button - Below PTT Button
5. Lower Side Button – No Function (not programmable)
6. LED Indicators. The indicator can be enabled or disabled via programming.
Red = Transmit
Green = Receiving
Flashing Orange = Scanning
7. On/Off Volume Control
8. Channel Control – 16 position.
32 channels using 2 Zones
9. Built-in Speaker
10. Built-in Microphone
11. Audio Accessory/Dust Cover
12. Spring-action Belt Clip

Use the PC Programmer to add NOAA WX Frequencies.

W1.	162.400	Receive Only
W2.	162.425	Receive Only
W3.	162.450	Receive Only
W4.	162.475	Receive Only
W5.	162.500	Receive Only
W6.	162.525	Receive Only
W7.	162.550	Receive Only

Go to https://www.weather.gov/nwr/station_listing to identify the NOAA WX frequency for your area.

Optional Functions via PC Programming

Functions That Can Be Allocated to a *Programmable Function Button

1. PTT Call: initiates a portable radio call.
2. VOX Control: Enables or disables VOX function.
3. Monitor: Enables or disables the squelch function.
4. Zone Switch: Changes current Zone of the PR radio. Two Zones are available.
5. Scanning On/Off: Enables or disables scanning.

BC-PR Charger Tray and AC Adaptor

Operating instruction:

- Insert AC Adaptor into the Charging Tray.
- Plug the AC power cube into a wall outlet.
- Turn the transceiver off.
- Insert the battery pack into the charger with or without the transceiver attached.



BC-PR

Color Status of Charging Tray LED

Steady RED.....Battery Charging
 Steady GREEN....Battery Charging Complete
 Steady AMBER....Trickle Charge, Replace Battery
 Blinking AMBER...Abnormal Temperature
 Blinking RED.....Replace Battery

Specifications:

- Input voltage: 12VDC, 1A
- Output voltage: 8.4VDC, 850mA
- Charge time: 2 1/2 hours

BP-PR-Li20 Battery Pack

- Fully charge the battery before use for maximum capacity and operation.
- The battery is designed for the PR 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-Polymer, 2000mAH
- **Battery Life:** Duty cycle: 5% transmit, 5% receive, 90% standby = more than 12 hours



BP-PR-Li20

Operating Your PR Series Portable Radio

- A voice announcement will be heard on each channel change depending on channel type. (e.g. "Analog 1")
- To Talk, press and hold the PTT button, speak into the microphone on the radio, and Release to listen.

Note: For maximum clarity hold the radio 2-3 radio 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.

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.

Factory PF Button	Default Function	Description of Function
#1. Orange	None	
#3. Side Button (Upper)	None	
#4. Side Button (Middle)	Monitor	Analog Ch. A momentary press of the Monitor Button will unmute the receiver and you will hear all radio traffic on the channel. If there is no radio traffic on the channel, you will hear continuous squelch noise. A second press of the Monitor Button will mute the radio receiver.
#5. Side Button (Lower)	Not Programmable	



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.,
c/o Repair Department
505 West Carmel Drive,
Carmel, IN 46082-1998
Phone: 317-846-1201

RF ENERGY EXPOSURE AWARENESS AND CONTROL INFORMATION
RF ENERGY EXPOSURE AWARENESS AND CONTROL INFORMATION, AND
OPERATIONAL INSTRUCTIONS FOR FCC OCCUPATIONAL USE REQUIREMENTS

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.

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 UNDESIRABLE OPERATION.

NOTE: THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE, SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE: This equipment has been tested and found to comply with the limits for a Class B 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.

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 users over a distance. It uses radio frequency (RF) energy or radio waves to send and receive calls. RF energy is one 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. Very high levels of x-rays, for example, can damage tissues and genetic material.

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 tested to ensure 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 about RF energy exposure and provide simple procedures on how to control it. Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits.

<http://www.fcc.gov/oet/rfsafety/rf-faqs.html> <http://www.fcc.gov/oet/rfsafety/rf-faqs.html>
<http://www.osha.gov/SLTC/radiofrequencyradiation/index.html>
<http://www.osha.gov/SLTC/radiofrequencyradiation/index.html>

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 awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your Ritron 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 duty factors of up to 50% transmitting and is authorized by the FCC 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 this radio are rated for a 5-5-90 duty factor (5% talk-5% listen -90% standby), even though this radio complies with the FCC occupational RF exposure limits and may operate at duty factors of up to 50% talk.

Have questions? Call 800-USA-I-USA (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:

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR JJ 1.1307, 1.1310, 2.1091 and 2.1093
- American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95.3-2003
- Institute of Electrical and Electronic Engineers (IEEE) C95.3 2003Edition

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 procedures.

GUIDELINES:

- Do not remove the RF Exposure Label from the device.
- This user manual should accompany 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 calls, release the PTT 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 face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.
- When worn on the body, always place the radio in a Ritron approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of other manufacturers' non-approved accessories may result in exposure levels, which exceed the FCC's occupational/controlled environment RF exposure limits.
- If you are not using a body-worn accessory and are not using the radio in the intended use position in front of the face, then ensure the antenna and the radio are kept at least 2.5 cm (one inch) from the body when transmitting. Keeping the radio at the proper distance is important because RF exposures decrease with increasing distance from the antenna.
- Use only Ritron approved supplied or 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 accessories see this user manual, or visit <http://www.ritron.com> <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-I-USA (800-872-1872) or visit our website at <http://www.ritron.com>

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.

WHAT IS COVERED	FOR HOW LONG	WHAT RITRON WILL DO
PR Series Radios	1 year*	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.
Accessories	90 days*	*After date of purchase

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)

