

## *USER MANUAL*



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# INTRODUCTION

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## GENERAL

The RITRON JBX JOBCOM two-way radio is designed for business and industry, and features easy-to-use controls. The standard JBX portable operates on one channel in the professional VHF FM communications band.

Each JBX radio is packaged with a flexible antenna, plug-in battery charger, rechargeable battery and a belt clip. Accessories are listed on page 9.

Since the JOBCOM portable transmits on communications frequencies authorized by the Federal Communications Commission (FCC), your radios must be licensed before being used. See "How To Obtain A FCC Radio License" (page 11).

## MODEL AND FREQUENCY IDENTIFICATION

The model number appears on a label attached to the case back. The JBX-151 radios are VHF units.

<u>MODEL</u>	<u>BAND</u>	<u>NO. CHANS.</u>
JBX-151	VHF FM	1

Radios in a system must be programmed to the same frequency to communicate with one another. Identifying the frequency of a RITRON JBX portable is simple. Look at the "color dot" label on the radio case bottom. Use the table below to match the label to a frequency. The only JOBCOM radios you can call or receive from display the same color dot as your own JBX handheld.

<u>COLOR DOT</u>	<u>VHF FREQUENCY</u>
RED DOT	151.625 MHZ
BLUE DOT	154.570 MHZ
GREEN DOT	154.600 MHZ

# OPERATING CONTROLS

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Operating controls are described below. The circled number beginning each section corresponds to the numbers in FIG-1 (page 4).

## ① ANTENNA

The flexible antenna radiates and receives radio signals. Before using the radio, make sure the antenna base is threaded fully into the radio's antenna bushing.

The JBX-151 portable comes with a VHF antenna, shown in FIG-1. VHF and UHF antennas are not interchangeable; use only the antenna type packaged with the radio.

## ② CHARGE JACK

The battery pack may be charged with the RITRON charger cube provided.

To use this cube, plug the charger's cord into the charge jack, which is marked "CHG" on top of the radio. Then plug the charger cube into an 110 VAC outlet. The charger's green lamp lights while the battery is charging, and should go OFF only when the cube is unplugged.

**CAUTION:** Use only RITRON-supplied chargers; other chargers might cause fire, explosion, or other damage to the radio.

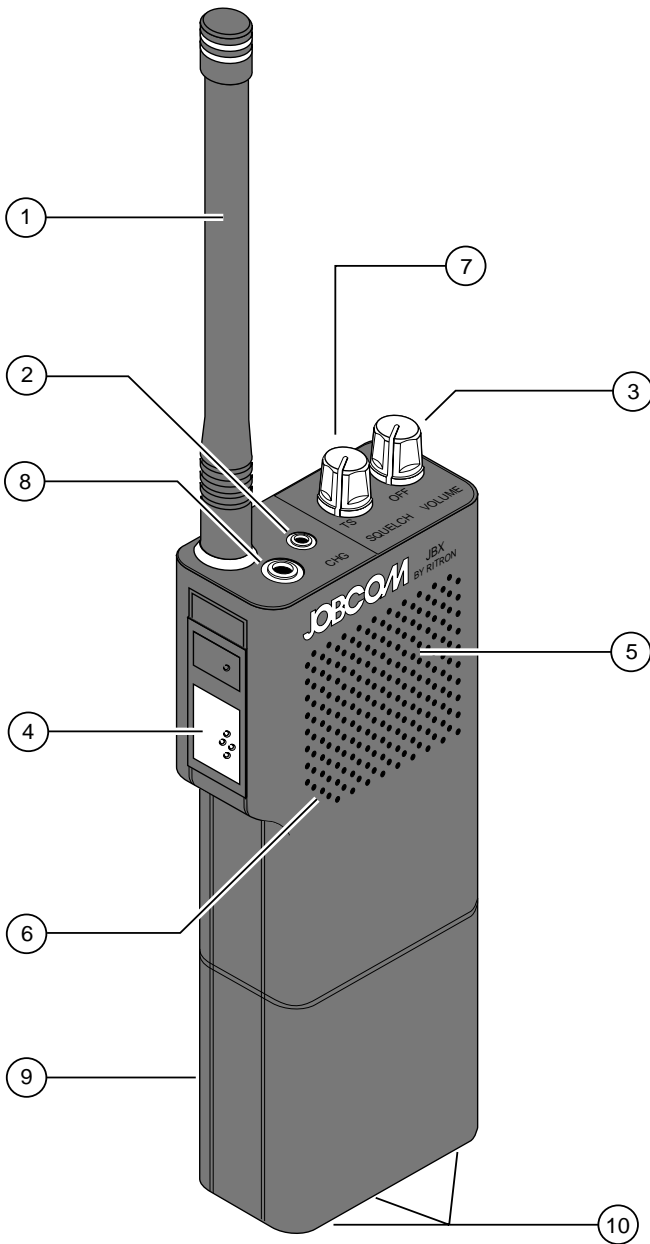
## ③ ON-OFF/VOLUME CONTROL

To switch ON the unit, rotate this knob clockwise out of the "click" position. Further rotation increases the volume.

Rotate this control counterclockwise into the OFF position if the radio is not being used.

## ④ PUSH-TO-TALK BUTTON

This push-button switch activates the transmitter, and must be held down while you talk into the radio. Release the PTT button to receive.



**FIG-1: JBX PORTABLE OPERATING CONTROLS**

# OPERATING CONTROLS

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## 5 SPEAKER

The speaker allows you to hear calls on your channel. Note that the speaker can be muted using the squelch control.

## 6 MICROPHONE

The microphone allows your voice to be heard in other radios. Hold the radio about two inches away while talking into the front grille. Shouting does not improve listener reception.

## 7 SQUELCH CONTROL

### *NOISE*

The squelch control knob can mute noise in the absence of an incoming radio signal. To silence noise, rotate the squelch control knob clockwise until noise first occurs. Then rotate the knob counterclockwise to the point that noise stops.

### *QUIET CALL (QC)*

If the JBX unit is equipped with an RTS-5PA module, you can turn on QC squelch by rotating the squelch control fully counterclockwise until the switch clicks. The radio will then stay quiet until it receives a call from a unit that transmits your QC code.

Wait until the channel is free before transmitting, to avoid interfering with other users. Listen for others talking on the channel by rotating the squelch control clockwise out of the Quiet Call click position.

When the PTT button is pressed, the QC code is automatically transmitted with your broadcast, independent of the squelch control setting.

## 8 AUDIO JACK

The audio jack can be used to connect optional accessories, such as a remote speaker/microphone or an earphone.

**NOTE:** The remote speaker/microphone (RSM-3X) has a two-plug connector. Insert the smaller plug into the charge jack.

## 9 BATTERY DOOR

This door covers the battery compartment, holding the battery pack in place. Refer to FIG-2 (page 6) as you continue reading.

To remove the battery door, unlock the door latch at the bottom of the radio using your thumbnail or a coin. When the latch is unlocked, the color "red" shows. Slide the door away.

To install the door, align it with the battery compartment (the door's top edge faces the antenna). Place the door against the compartment and slide the door up, into the slots shown in FIG-2. Then lock the door latch.

## 10 DROP-IN CHARGER CONTACTS

See FIG-1, left. Three charger contacts, visible through the bottom of the radio case, allow the battery pack to be charged with an optional RITRON drop-in charger. You may charge the battery pack inside or out of the radio case.

Plug the drop-in charger into an 110 VAC outlet. Set the portable or battery into the charger, **three** contacts facing down, with each battery contact resting on a charger contact pin.

An optional "fast rate" drop-in charger unit charges the standard battery in less than two hours. For a list of optional battery chargers, refer to the "Accessories" section (page 9).

# RADIO CARE

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## GENERAL

### *MOISTURE*

The JBX portable is not waterproof—DO NOT immerse it or expose it to excessive moisture.

### *EXTREME HEAT*

Like all electronic equipment, the radio should not be subjected to extreme heat, such as being left in direct sunlight in a closed vehicle.

### *VIBRATIONS/SHOCKS*

Though your RITRON portable is designed to be rugged, it cannot be expected to survive excessive abuse.

### *CHEMICALS*

Detergents, alcohol, aerosol sprays and/or petroleum products can damage the radio case. Clean it with a soft cloth moistened with water.

## BATTERY

The JB portable is powered by a rechargeable battery pack, which fits into the radio case battery compartment (FIG-2). The battery door and latch hold the pack in place.

### *CHARGING*

The battery pack can lose its charge during storage and shipment, and should be fully charged before first use. Thereafter, to ensure peak radio performance, charge the battery overnight after each day of use.

The standard battery pack will charge completely in 12 hours using the cube charger (model BC-A) provided.

Charge the battery pack using either the cube charger (BC-A) or an optional RITRON drop-in charger. For standard cube charger instructions, refer to "Charge Jack" on page 3. For drop-in charger instructions, see "Drop-in Charger Contacts" on page 5.

**NOTE:** Cycle a new battery pack—charge and discharge it—several times so it will take a maximum charge.

Typical battery pack service life is one year. Use the following guidelines to ensure maximum service life:

- Do not discharge a battery that is already "run down." If the battery cannot power your radio, recharge the battery.
- Do not overcharge a battery. The standard battery is not to be charged for more than 16 hours at a time.
- Before storing a battery, charge it for 16 hours. Thereafter, charge it for 16 hours once a month.

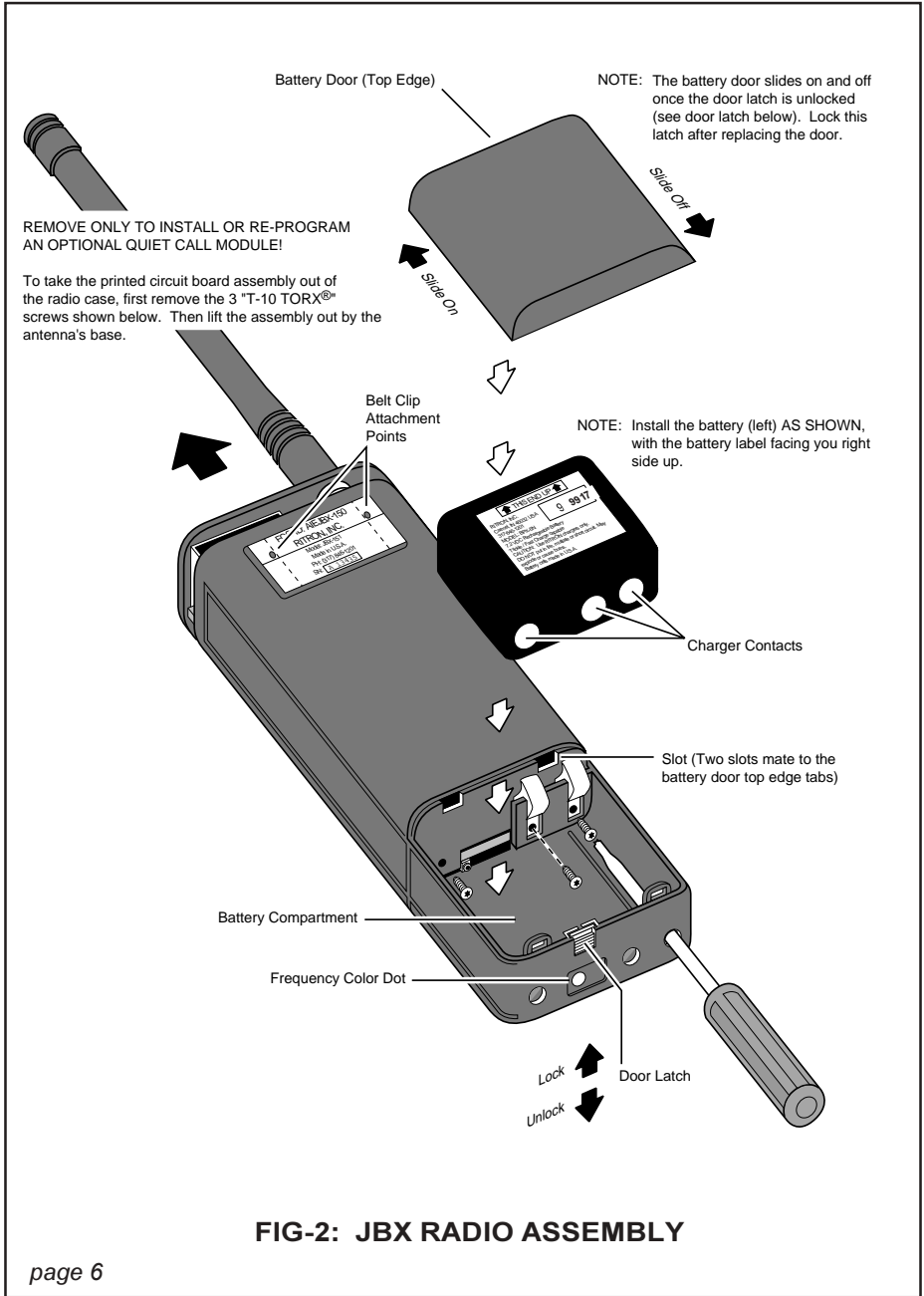
At the end of battery service life, the pack loses its ability to hold a charge, and will not operate the radio for long. Try charging the pack continuously for 16 hours. If the battery still fails, replace it.

## MAINTENANCE

Because JOBCOM battery packs have extended run time, some users may never fully discharge the battery pack during normal use. After exposing the battery pack to many cycles of not fully discharging and then charging, the radio may exhibit reduced battery capacity.

To avoid this effect and achieve maximum life from the battery pack, periodically "condition" it once a month by the follow-ing procedure:

1. Use your radio through a normal work day without charging it.
2. Put the radio in "open squelch" mode by rotating the SQ control fully clockwise. When a loud "rushing" is heard on the radio speaker, adjust the Volume control to maximize the sound.
3. Place the radio out of the way, such as in a desk drawer. Let the radio run until the battery pack is discharged—this may typically require as much as 8 hours.
4. Charge the radio overnight for 12-14 hours. It will be ready for use with renewed capacity.



# TROUBLESHOOTING

If you have trouble operating the JBX handheld, review the "Operating Controls" section. If you think the radio is malfunctioning, check the table below.

PROBLEM	POSSIBLE SOLUTION(S)
<b>GENERAL</b>	
<p><i>The radio does not work at all.</i></p> <p><i>Reception is poor.</i></p> <p><i>Noise or "hiss" sounds in the radio</i></p> <p><i>You cannot hear calls from other radios.</i></p> <p><i>Your calls cannot be heard in other radios.</i></p> <p><i>Radio performance falls off after only a short time each day.</i></p>	<p>Make sure the battery is installed correctly, as shown in FIG-2 (pages 6).</p> <p>Recharge or replace the battery. (See note 1 on the next page.)</p> <p>Move to a different location. (Note 2.)</p> <p>Rotate the squelch control fully CW, then CCW to the point that noise disappears. (Note 3.)</p> <p>Adjust the squelch control as stated above. (Note 3.)</p> <p>Make sure your radio operates on the same frequency as the radio(s) you want to hear. (Note 4.)</p> <p>Recharge or replace the battery. (Note 1.)</p> <p>Make sure your radio operates on the same frequency as the radio(s) you want to call. (Note 4.)</p> <p>Recharge or replace the battery. (Note 1.)</p> <p>See the battery section below. Also, refer to page 6, "Charging."</p>
<b>BATTERY</b>	
<p><i>The batteries lose their charge sooner than expected.</i></p> <p><i>The battery loses its charge sooner than expected.</i></p>	<p>Conserve the battery. (Note 5.)</p> <p>If the radio is used in extreme cold, warm the radio under your coat. (Note 6.)</p> <p>Replace the battery. (Note 1.) Also, refer to page 6, "Charging."</p> <p>Use an optional high capacity battery.</p>
<b>QUIET CALL</b>	
<p><i>You cannot screen out calls from users outside of your Quiet Call group.</i></p> <p><i>You cannot hear Quiet Call calls while your radio is in Quiet Call squelch.</i></p> <p><i>Others in your Quiet Call group cannot hear your Quiet Call messages.</i></p>	<p>Rotate the squelch control CCW into the click position.</p> <p>Confirm that your portable is equipped with a Quiet Call module. (Note 7.)</p> <p>Program your Quiet Call module with the same code as the calling radio(s) use. (Note 7.)</p> <p>Verify that your portable is equipped with a Quiet Call module. (Note 7.)</p> <p>Program your Quiet Call module with the same code as the radios you want to call use. (Note 7.)</p>



# TROUBLESHOOTING

## NOTES:

- 1) Try using a battery pack from a working radio. If the radio in question works with that pack, the original battery is suspect. Charge the suspect battery as recommended on page 7. If the charged original battery cannot power a JBX handheld, charge it again with a different charger. If the battery still does not hold a charge, replace it. If the battery appears to be "good" after using the second charger, the first charger may be faulty.  
**NOTE:** JOBCOM radio accessories come with a 90-day limited warranty. If an accessory does not operate properly, contact your dealer or RITRON.
- 2) Reception can often be improved by moving the unit a short distance. This effect is more noticeable inside buildings. The range of JBX portables equipped with a standard battery pack is about two miles line-of-sight.
- 3) Adjusting the squelch for "threshold" allows the receiver to detect all except very weak incoming radio signals.
- 4) If you want to call or hear someone who is using a "blue dot" JOBCOM handheld, for example, you must use a blue dot radio. A color dot label attached to the case indicates the radio's frequency. Refer to the table on page 3.
- 5) Maximum power drain occurs while the radio transmits, so don't hold down the Push-To-Talk button more than necessary. Battery power is used while the handheld is left ON to receive calls. If practical, switch the unit OFF.
- 6) In extreme cold, a battery's charge capacity is greatly reduced. If you use the radio in very cold weather, periodically warm the JBX portable underneath your coat if possible. Using an optional remote speaker/microphone allows keeping the radio under your coat while transmitting and receiving.
- 7) A supervisor (or the appointed person in your group) will probably know which radios are equipped with Quiet Call, and with which codes. The JBX portable may be opened to check for a QC module, or to program a different code. The QC module is located below the radio speaker, plugged into the 9-pin connector (FIG-3, page 10).

TO PROGRAM THE QUIET CALL MODULE, REFER TO THE GUIDE PACKAGED WITH THE RTS-5PA.

Contact your dealer or the RITRON Repair Department for assistance.

## ACCESSORIES

*The following accessories are available through authorized RITRON dealers:*

### OPTIONAL ITEMS

<u>ITEM</u>	<u>MODEL NO.</u>
Remote Speaker/ Microphone	RSM-3X
Earphone	REP-2
Drop-in Charger Adapter	BCJ-AD
Drop-in Charger (single well, fast/standard rate)	BCJ-FS
Drop-in Charger (dual well, fast/	

standard rate)	BCJ-FD
Mobile Battery Charger	CCL-B
Holster (nylon)	MHX-A
Holster (leather)	LHX-A
Quiet Call Module	RTS-5PA

**Contact your authorized RITRON dealer for other options.**

### REPLACEMENT ITEMS

<u>ITEM</u>	<u>MODEL NO.</u>
Battery Pack	BPX-8N
Battery Charger	BC-A
Belt Clip	CBX-A

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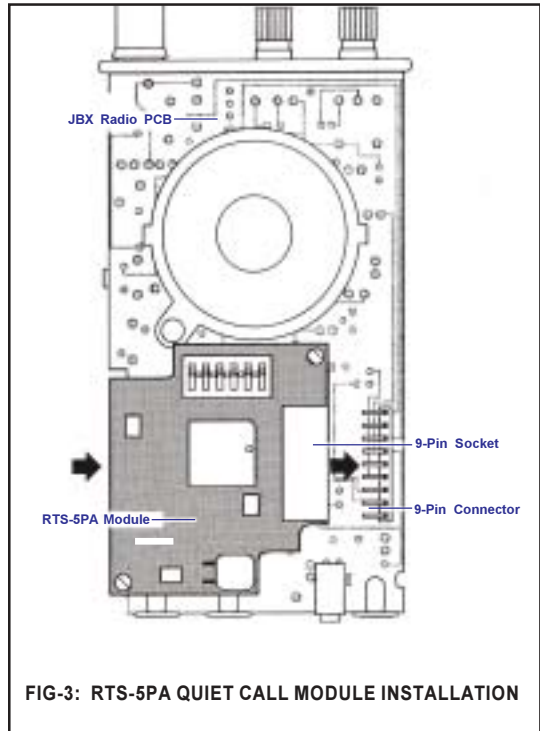
# QUIET CALL PRIVACY MODULE

## GENERAL

An optional Quiet Call module may be plugged into the JBX portable for locations where an operating frequency must be shared by several licensees. Quiet Call allows you to screen out broadcasts from other licensees so you will hear only calls from other users in your group. With Quiet Call squelch turned ON, the radio is quiet unless an incoming message carries the appropriate Quiet Call code.

Radios equipped with Quiet Call transmit a programmable code. To be heard by other users having Quiet Call squelch turned ON, a broadcast must carry the same code programmed for receiving unit(s). Note that any radio user on the channel can listen to a conversation coded with Quiet Call, as long as his radio is not set for coded squelch.

**NOTE:** Quiet Call is RITRON's tradename for what the communications industry calls sub-audible tone, tone squelch or CTCSS.



**FIG-3: RTS-5PA QUIET CALL MODULE INSTALLATION**

## INSTALLATION

**To install an optional RTS-5PA Quiet Call module, remove the PC board assembly from the radio case. Refer to Steps 1-4 below, and to FIG-2, page 6.**

- 1) Remove the battery door by unlocking the door latch and sliding the door away.
- 2) Take out the battery pack. (Turn the radio over and tap the battery compartment against the palm of your free hand until the battery pack drops out.)
- 3) Remove the three T-10 TORX® screws holding the PC board assembly to the radio case. You can insert a screwdriver through the holes in the case, as shown.
- 4) Holding the antenna base between your thumb and forefinger, slide the PC board assembly out of the case top.

**Refer to FIG-3 ABOVE for the remaining steps.**

- 5) Turn the PC board assembly over so the speaker is facing up as shown in FIG-3.
- 6) Align the module as shown in the diagram, with the tape side of the module toward the radio. **NOTE:** Do not remove the backing from the tape insulator.
- 7) Plug the module socket onto the radio's 9-pin connector. **NOTE:** Ensure that all nine pins are fully inserted.
- 8) Program the RTS-5PA Quiet Call module according to the programming instructions guide packaged with the module.
- 9) Reassemble the radio.

**IMPORTANT:** The screws fastening the PC board assembly to the case must be snug against the battery contacts.

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## HOW TO OBTAIN AN FCC RADIO LICENSE

### Federal Communications Commission (FCC) Licensing Information

Because your Ritron radio operates on Private Land Mobile frequencies, it is subject to the Rules and Regulations of the FCC, which requires all operators of these frequencies to obtain a station license before operating their equipment. Make application for your FCC license on FCC Forms 600 and 159.

To have forms and instructions faxed to you by the FCC, call the **FCC Fax-On-Demand** system at **202-418-0177** from your fax machine; request Document 000600 & Form 159.

To have Document 000600 & Form 159 mailed to you, call the **FCC Forms Hotline** at **800-418-FORM** (800-418-3676).

For **help with questions** concerning the license application, contact the FCC at **888-CALL-FCC** (888-225-5322).

You must know which radio frequency(ies) you can operate on before filling out your application. For **help determining your frequencies**, call Ritron at **800-USA-1-USA** (800-872-1872).

## ACCESSORIES

### BELT CLIP INSTALLATION

The JBX portable belt clip is unique because it is designed to bend away rather than damage the radio case or break. The clip may be removed and then bent back into its original shape.

If you are going to attach the belt clip (model CBX-A) to your JBX portable, follow the instructions below.

- 1) See FIG-2 (page 4). The belt clip is fastened to the radio case back with the screws and washers (two of each) provided.

**CAUTION:** Use only the screws included, since longer screws might damage the radio's electronics.

- 2) To reveal the screw holes, carefully remove the peel-off tab from the belt clip attachment points shown in FIG-2.
- 3) Place the belt clip on the radio case back, aligning the two screw holes in the clip with the holes in the radio case.
- 4) Use the included screws and washers to attach the clip to the radio.

**NOTES:** If you remove the belt clip, re-assemble the screws and washers to the case to seal out dirt and moisture.

**DO NOT** use petroleum solvents of any kind on the JBX handheld. These can corrode the radio case.

# RITRON, INC. LIMITED WARRANTY

## WHAT THIS WARRANTY COVERS

RITRON, INC. ("RITRON") provides the following warranty against defects in materials and/or workmanship in **RITRON JOBCOM Radios, Rechargeable Batteries and Accessories** under normal use and service during the applicable warranty period, as stated below. "Accessories" means antennas, chargers, headsets, earphones, speakers, holsters and microphones. Rechargeable batteries will be replaced during the applicable warranty period only if leakage occurs, or the batteries drop below 75% of rated capacity.

<u>WHAT IS COVERED</u>	<u>FOR HOW LONG</u>	<u>WHAT RITRON WILL DO</u>
RITRON JOBCOM Radios	1 year parts* 1 year labor*	During the first year after date of purchase, RITRON will refund your purchase price or repair or replace the defective product, at RITRON's option, parts and labor included at no charge to you.
RITRON JOBCOM Rechargeable Batteries	1 year parts*	RITRON will replace the defective battery.
RITRON JOBCOM RITRON's	90 days *	RITRON will repair or replace the defective accessory, at option, parts and labor included at no charge to you.

\*After date of purchase

## WHAT THIS WARRANTY DOES NOT COVER This warranty statement 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.  
www.TwoWayRadioEquipment.com | (800) 878-7829 | Sales@TwoWayRadioEquipment.com