ICOM®

INSTRUCTION MANUAL

COMMUNICATIONS RECEIVER

IC-R20

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 undesired operation.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIO TELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Icom Inc.

FOREWORD

Thank you for purchasing this Icom product. The IC-R20 COMMUNICATIONS RECEIVER is designed and built with Icom's superior technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

We want to take a couple of moments of your time to thank you for making your IC-R20 your radio of choice, and hope you agree with Icom's philosophy of "technology first." Many hours of research and development went into the design of your IC-R20.

◇ *FEATURES*

- ❍ *Covers 0.150–3304.999 MHz* wide frequency range*
  *Some frequency bands are inhibited according to version
- ❍ *External power supply operation*
- ❍ *1250 memory channels* with 26 banks available*
  *200 auto write and 50 scan edge channels are included.
- ❍ *Built-in bar-antenna*
- ❍ *Dualwatch operation*

IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the receiver.

SAVE THIS INSTRUCTION MANUAL— This instruction manual contains important operating instructions for the IC-R20.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ **WARNING!**	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	Recommended for optimum use. No risk of personal injury, fire or electric shock.

CE Versions of the IC-R20 which display the "CE" symbol on the serial number seal, comply with the essential requirements of the European Radio and Telecommunication Terminal Directive 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed.

PRECAUTION

⚠**WARNING! NEVER** operate the receiver with an earphone, headphones or other audio accessories at high volume levels. Hearing experts advise against continuous high volume operation. If you experience a ringing in your ears, reduce the volume level or discontinue use.

⚠**WARNING! NEVER** connect the receiver directly to an AC outlet. This may pose a fire hazard or result in an electric shock.

⚠**WARNING! NEVER** operate the receiver while driving a vehicle. Safety driving requires your full attention—anything less may result in an accident.

⚠**WARNING! NEVER** throw a battery cell or battery pack into a fire since as internal battery gas can cause an explosion.

⚠**WARNING! NEVER** disassemble the battery pack. If the battery cell's internal material (electrolyte liquid) gets into your eyes, wash your eyes with water and obtain treatment from an eye doctor immediately.

NEVER connect the receiver directly to a power source of more than 6 V DC. This will damage the receiver.

NEVER connect the receiver to a power source using reverse polarity. This will damage the receiver.

NEVER expose the receiver to rain, snow or any liquids. The receiver may be damaged.

NEVER operate or touch the receiver with wet hands. This may result in an electric shock or damage the receiver.

NEVER solder the battery cell. This may damage the battery.

AVOID using or placing the receiver in direct sunlight or in areas with temperatures below –10°C (+14˚F) or above +60°C (+140˚F).

AVOID the use of chemical agents such as benzine or alcohol in cleaning, as they can damage the receiver's surfaces.

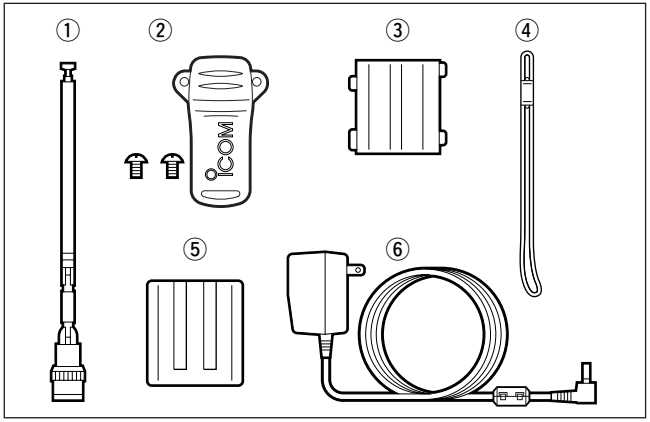
Even when the receiver power is OFF, a slight current still flows in the circuits. Remove the battery pack or batteries from the receiver while not using it for a long time. Otherwise, the installed battery pack or batteries will become exhausted, and will need to be recharged.

RESPECT other people's privacy. Information overheard but not intended for you cannot lawfully be used in any way.

For U.S.A. only

CAUTION: Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

SUPPLIED ACCESSORIES



①Antenna 1
②Belt clip (MB-98).....1 set
③Battery spacer 1
④Hand strap 1
⑤Battery pack* (BP-206) 1
⑥AC adaptor*(BC-149A/D) 1
(The shape of the BC-149A and BC-149D are different.)
*Not supplied with some versions.

OPERATING THEORY

Electromagnetic radiation which has frequencies of 20,000 Hz (20 kHz*) and above is called radio frequency (RF) energy because it is useful in radio transmissions. The IC-R20 receives RF energy from 0.150 MHz* to 3304.999 MHz and converts it into audio frequency (AF) energy which in turn actuates a loudspeaker to create sound waves. AF energy is in the range of 20 to 20,000 Hz.

*kHz is an abbreviation of kilohertz or 1000 hertz, MHz is abbreviation of megahertz or 1,000,000 hertz, where hertz is a unit of frequency.

OPERATING NOTES

The IC-R20 may receive its own oscillated frequency, resulting in no reception or only noise reception, on some frequencies.

The IC-R20 may receive interference from extremely strong signals on different frequencies or when using an external high-gain antenna.

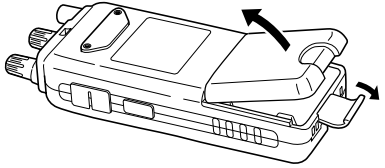
TABLE OF CONTENTS

QUICK REFERENCE GUIDE

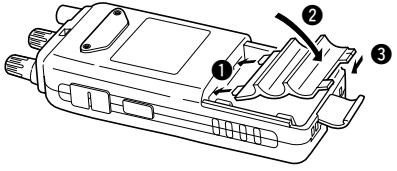
■ Preparations

◇ Batteries installation

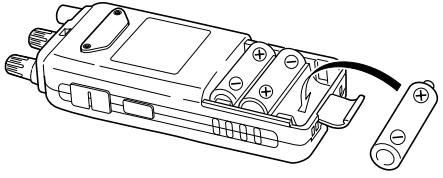
①Remove the battery cover from the receiver.



②For alkaline battery use, attach the supplied battery spacer.



③Install 3 R6 (AA) size alkaline batteries.
• Be sure to observe the correct polarity.

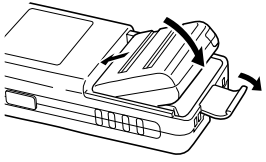


Keep the battery contacts clean to avoid rust or poor contact.
It's a good idea to clean the battery terminals once a week.

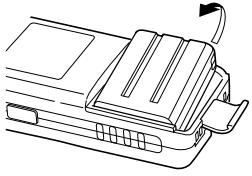
◇ Battery pack installation

① Remove the battery cover from the receiver.
② Remove the supplied battery spacer for R6 (AA) size battery use.
③ Install the Li-Ion battery pack (BP-206).
• Be sure to observe the correct direction.
• Charge Li-Ion battery pack (BP-206) before use. (Refer to p. IV for charging instructions.)

•Battery pack installation

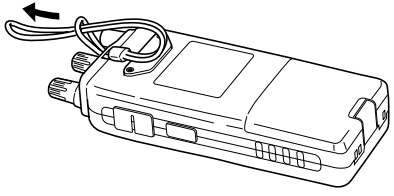


•Battery pack removal



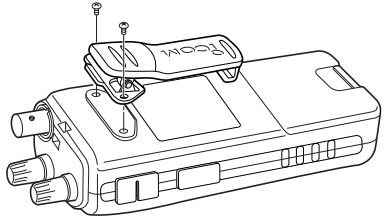
◇ Handstrap

Slide the handstrap through the loop on the top of the rear panel as illustrated at below. Facilitates carrying.



◇ Belt clip

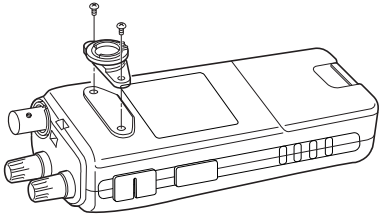
Conveniently attaches to your belt.
Attach the belt clip with the supplied screws using a phillips screwdriver.



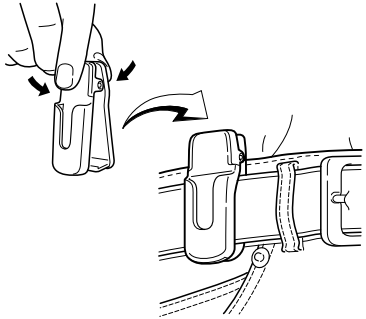
◇ Swivel belt clip (Option)

The optional swivel belt clip (MB-86) is useful for easy attaching/detaching the receiver to/from the belt.

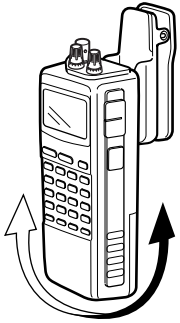
① Attach the stopper with the supplied screws using a phillips screwdriver.

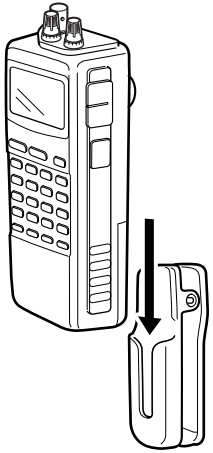


② Clip the belt clip to your belt.



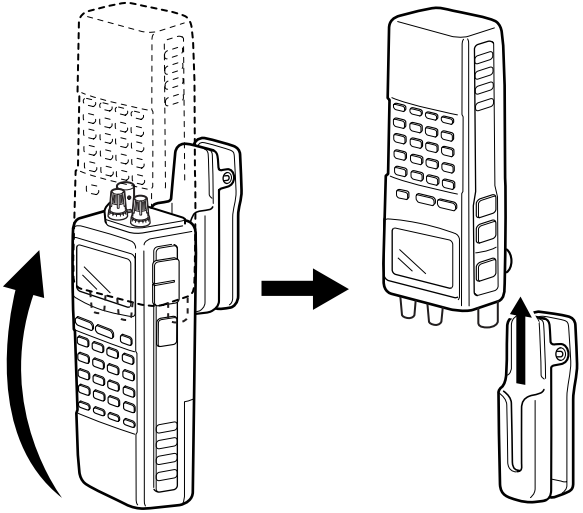
③ Insert the receiver into the end of the clip as shown at right.
- Once the receiver is locked in place, it will swivel 360 degrees.





To remove:

④ Turn the receiver upside down, and then lift to release the receiver from the belt clip as shown at upper right.

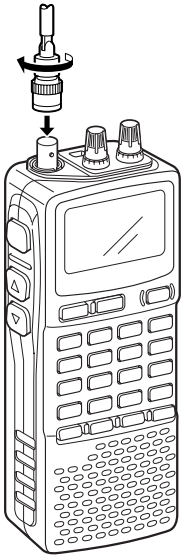


◇ Antenna

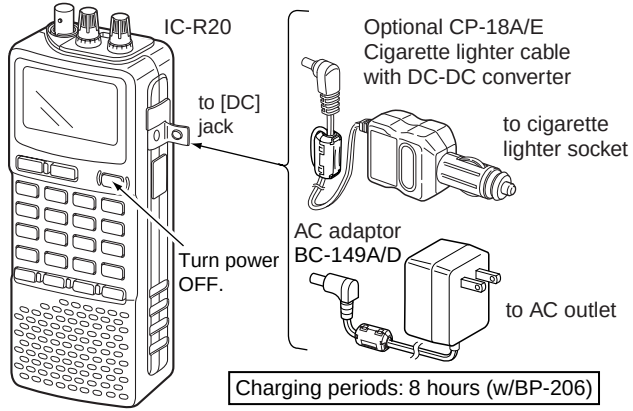
Insert the supplied antenna into the antenna connector and screw down the antenna as shown at right.

NEVER hold the antenna when carrying the receiver.

✔For your information
Third-party antennas may increase receiver performance.



◇ Charging the battery



① Install the battery pack (BP-206).
② Plug the AC adaptor into an AC outlet.
③ Turn OFF the receiver, then insert the adaptor plug into the [DC] jack of the receiver.

⚠WARNING!:
NEVER attempt to charge any other batteries. Because the IC-R20 can charge the BP-206 only.

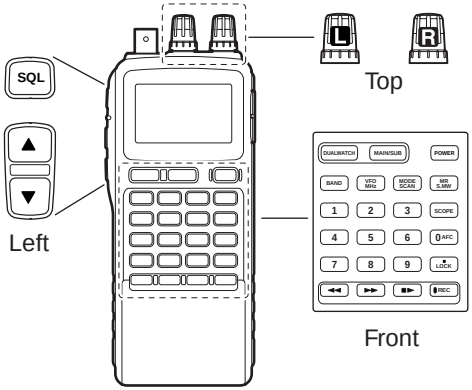
Keep the jack cover attached when jack is not in use to protect the connectors from dust and moisture.

■ Your first scanning experience

Now that you have your IC-R20 ready, you are probably excited to start listening. We would like to take you through a few basic operation steps to make your first “Scanning Experience” enjoyable.

◇ About default setting

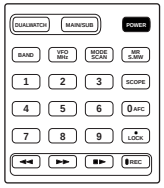
The frequency control (**[R-DIAL]**) function can be traded with volume control (**[L-DIAL]** and **[▲]/[▼]** keys) function by pushing for 1 sec. **[1 DIAL.SEL]**. However, in this QUICK REFERENCE GUIDE, the factory default setting (**[R-DIAL]** sets operating frequency) is used for simple instruction.



◇ Basic operation

1. Turning ON the receiver

➥ Push **[POWER]** for 1 sec. to turn the power ON.



POWER

Front

2. Adjusting audio level

➥ Rotate **[L-DIAL]** (or push **[▲]**/**[▼]**) to set the desired audio level.

Left

Top

3. Adjusting squelch level

➥ While pushing **[SQL]**, rotate **[R-DIAL]** to set the squelch level.

Left

Top

4. Tune the desired frequency

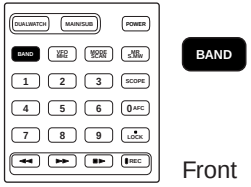
The tuning dial will allow you to dial in the frequency you want to operate. Pages 9 and 15 will instruct you on how to set the tuning speed.

[Using the tuning dial]

①Push **[BAND]** several times to select the desired frequency band.

- While pushing **[BAND]**, rotate **[R-DIAL]** also select frequency band.

Top



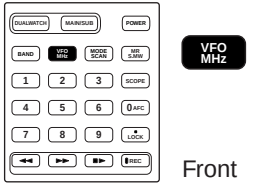
BAND

Front

②Rotate **[R-DIAL]** to set the desired receive frequency.

- Push **[VFO MHz]** for 1 sec. then rotate **[R-DIAL]** to change the frequency in 1 MHz steps, or push for 1 sec. again then rotate **[R-DIAL]** to change the frequency in 10 MHz steps. (Each push for 1 sec. toggles 1 MHz or 10 MHz tuning steps.)

Top



VFO MHz

Front

Count on us!

#02 Europe
#03 U.K.

<Intended Country of Use>			
■ GER	□ FRA	■ ESP	■ SWE
■ AUT	■ NED	■ POR	■ DEN
■ GBR	■ BEL	■ ITA	■ FIN
■ IRL	■ LUX	■ GRE	□ SUI
□ NOR			

#07 France

<Intended Country of Use>			
□ GER	■ FRA	□ ESP	□ SWE
□ AUT	□ NED	□ POR	□ DEN
□ GBR	□ BEL	□ ITA	□ FIN
□ IRL	□ LUX	□ GRE	□ SUI
□ NOR			

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