

ICOM

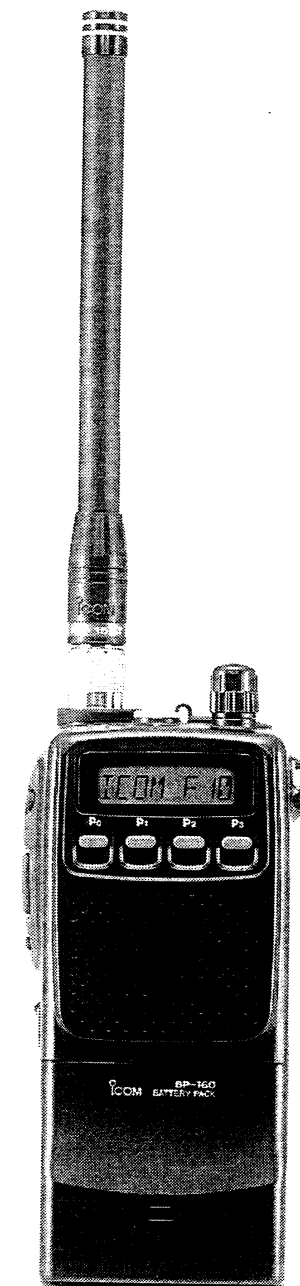
INSTRUCTION MANUAL

VHF TRANSCEIVER
IC-F10

UHF TRANSCEIVER
IC-F20

This device complies with Part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference.

Icom Inc.



IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and operating instructions for the **IC-F10** and **IC-F20**.

CAUTIONS

NEVER allow the antenna to come close to, or touch, exposed body parts, especially the face or eyes while transmitting.

NEVER allow children to operate the transceiver.

NEVER operate the transceiver near unshielded electrical blasting caps or in an explosive area.

NEVER disassemble the transceiver. Incorrect reassembly may result in a fire hazard or electric shock.

AVOID the use of chemical agents such as benzene or alcohol when cleaning – use a water-dampened cloth only.

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◇ UNPACKING

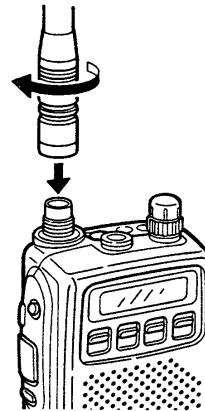
The transceiver comes supplied with the following accessories*:

- ① Flexible antenna..... 1
- ② Belt clip and screws..... 1 set
- ③ Handstrap..... 1

*The BP-160 BATTERY PACK comes attached to the transceiver.

◇ ANTENNA

The antenna screws onto the transceiver as illustrated below.



◇ TURNING POWER ON

Rotate the volume control to the 12 o'clock position.

- A power-up alert tone sounds for about 2 sec. and an opening message may appear.



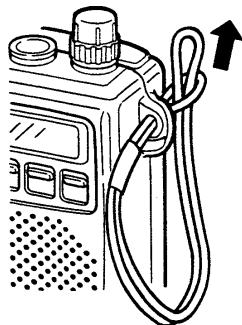
Message is dealer-programmable.

NOTE: If the power-up alert tone does not sound or if a second low alert tone sounds, turn the transceiver OFF, check the battery, then turn the transceiver back ON. If the power-up alert tone still does not sound, charge the battery or replace it.

NOTE: To increment or decrement the displayed channel, push one of the dealer-programmable keys.

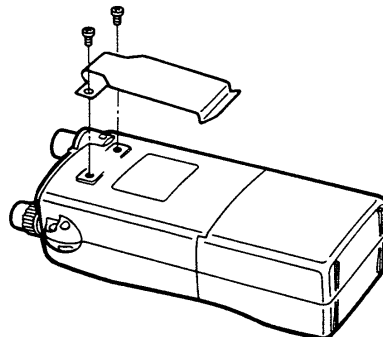
◇ HANDSTRAP

Attach the handstrap to the transceiver as illustrated below.



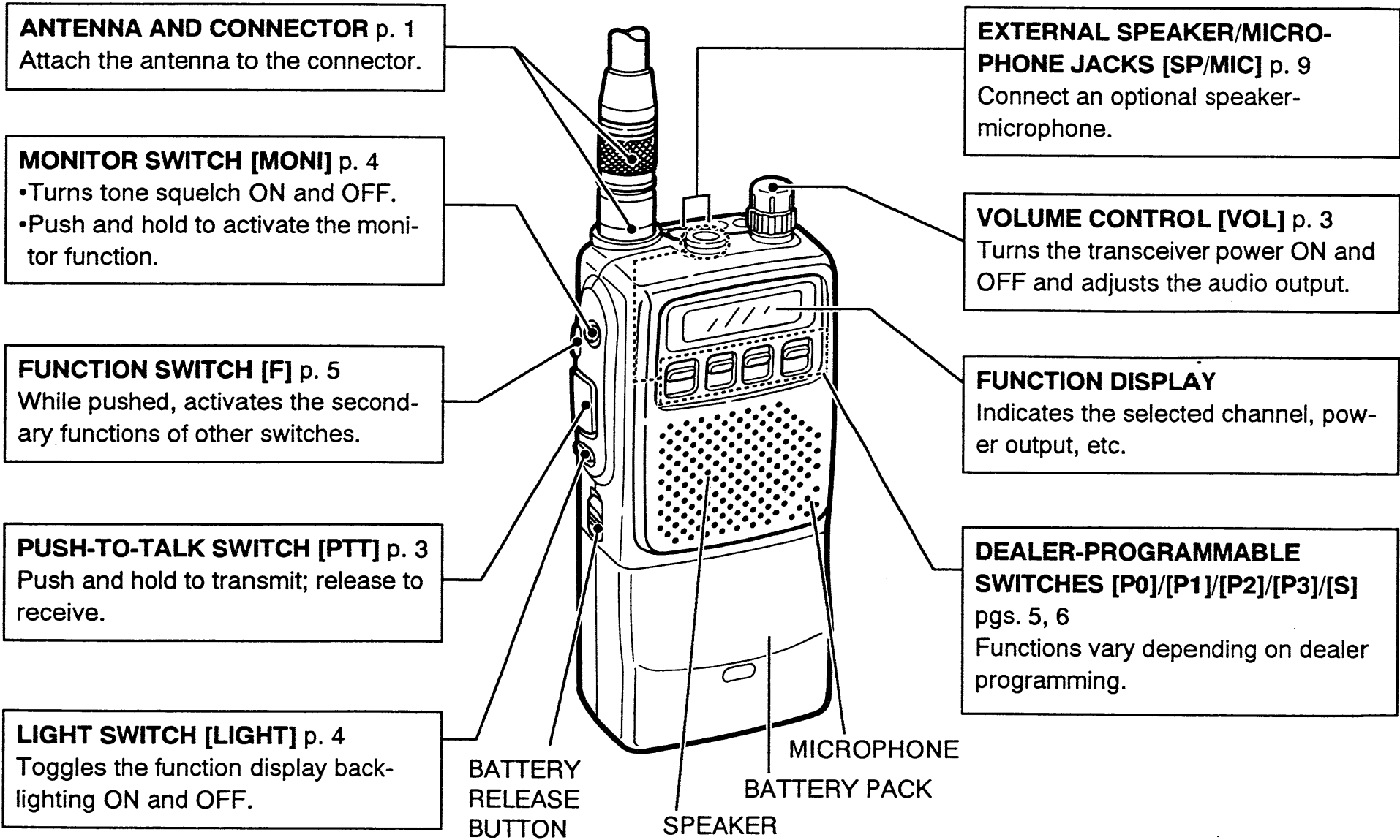
◇ BELT CLIP

Attach the belt clip to the transceiver using the supplied metal screws.



2

PANEL DESCRIPTION



Receiving and transmitting

NOTE: Transmitting without an antenna may damage the transceiver. See p. 1 for antenna attachment.

Turn power ON as described on p. 1.

Receiving:

- ① Push [CH UP]/[CH DOWN] to select a channel.
 - Ask your Icom Dealer or System Operator for switch assignments.
- ② Listen for a transmission and adjust [VOL] to a comfortable listening level.
 - When no transmission is heard, push and hold [MONI] while adjusting [VOL].

The transceiver is now set to receive desired calls on the selected channel.

Transmitting:

Wait for the channel to become clear to avoid interference.

- ③ While pushing and holding [PTT], speak into the microphone at a normal voice level.
 - When a tone signalling system is adopted, the call procedure described at right may be necessary.
- ④ Release [PTT] to return to receive.

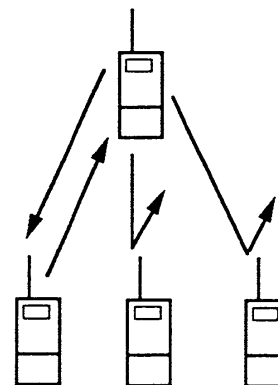
IMPORTANT: To maximize the readability of your transmitted signal, pause a few secs. after pushing [PTT], hold the microphone 10 to 15 cm from your mouth and speak at a normal voice level.

Call procedure

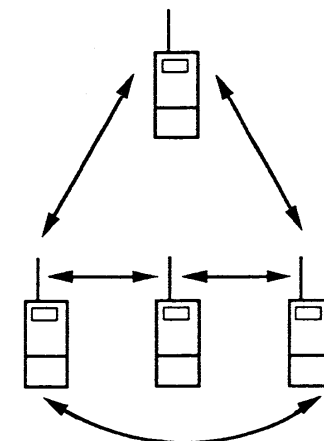
When your operation employs a tone signalling system (excluding CTCSS and DTCS), the call procedure may be necessary prior to voice transmission. The tone signalling system employed may be a selective calling system which allows you to call specific station(s) only and prevent unwanted stations from contacting you.

- ① Push [CALL] (one of the dealer-programmable switches).
- ② After transmitting a code, the remainder of your communication can be carried out in the normal fashion. Proceed from step ③ opposite.

Selective calling
(call procedure necessary)



Non-selective calling
(call procedure not necessary)

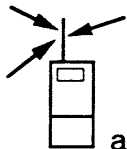


3 BASIC OPERATION

■ Monitor function

The monitor function allows you to open the transceiver's squelch manually to check whether a channel is busy or not. The transceiver has 2 conditions for receive standby:

Audible condition:

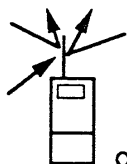


all signals
are received

This condition mutes audio ONLY when no carrier is present. You can receive (or monitor) any signals on a channel.

- Push and hold [MONI] to select the audible condition.
- Any audio mute functions are cancelled while pushing [MONI].

Inaudible condition:



only signals
containing
the proper
tone or code
are received

This condition mutes ALL signals except those directed to you. Therefore, you should check a channel's condition (busy or not) with the monitor function before transmitting.

- Push [MONI] momentarily to select the inaudible condition.

■ Transmitting notes

◇ TIME-OUT TIMER

After continuous transmission for a pre-programmed period, the time-out timer is activated, causing the transceiver to stop transmitting and automatically select receive.

◇ PENALTY TIMER

Once the time-out timer is activated, transmission is further inhibited for a period determined by the penalty timer.

■ Display lighting

The function display has a backlight for operation at night.

Push [LIGHT] to toggle the function display backlighting ON and OFF.

- To conserve battery power, use the backlighting only when necessary.

■ General

Consult your Icom Dealer or System Operator for details concerning your transceiver's programming. When available, programmed functions are assigned to [P0], [P1], [P2], [P3] and [S] and [F] + [programmable switch].

/// In the following explanations, programmable function names are bracketed, the specific switch used to activate the function depends on programming.

■ Functions

◇ LOCK FUNCTION

This function locks access to all programmable switches (except the switch assigned the lock function).

To toggle the lock function ON and OFF:

Push and hold [LOCK] for 1 sec.

- "LO" appears while the lock function is ON.

◇ HIGH/LOW POWER OUTPUT

This function selects high or low power for a channel.

To toggle between high and low power:

Push [HIGH/LOW].

- "LOW" appears when low output power is selected.
- This function may be inhibited on some channels.

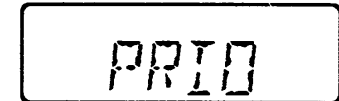
◇ PRIORITY CHANNEL

This function is used to select a pre-programmed channel at the push of a switch.

To select the priority channel:

Push [PRIORITY].

- "PRIO" appears briefly, then the priority channel is automatically selected.

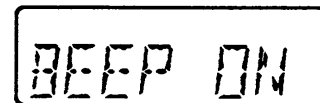


◇ BEEP FUNCTION

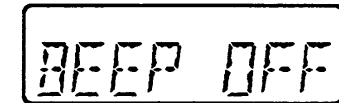
This function provides confirmation beep tones when pushing switches.

To toggle the function ON and OFF:

Push [BEEP].



Beep tones ON



Beep tones OFF

4 DEALER-PROGRAMMABLE FUNCTIONS

◇ TALK AROUND

The talk around function changes duplex channels to simplex channels. *Duplex* allows you to contact your Base Station, repeaters, etc.; *Simplex* allows you to contact other portable transceivers directly (portable-to-portable contact).

To activate the talk around function:

Push [TALK AROUND].

Simplex operation

Duplex operation

◇ SCAN FUNCTION

The scan function allows you to search a pre-programmed group of channels for signals. Depending on programming, there may be 2 scan switches to search separate groups.

To start/stop a scan:

Push [SCAN].

- Scan pauses on a channel when receiving a signal.
- Depending on programming, a message may appear while scanning as indicated below.

◇ SCAN LIST MODIFICATION (scan lockout)

A selected channel can be subtracted from or added to 1 of 2 pre-programmed scan lists.

- ① Select the desired channel to be added/subtracted.
- ② Push [SCAN SELECT] to add/subtract the channel from the scan list.
 - Some channels cannot be modified depending on programming.

Channel is scanned.

Channel is locked out.

◇ SWITCH ASSIGNMENT

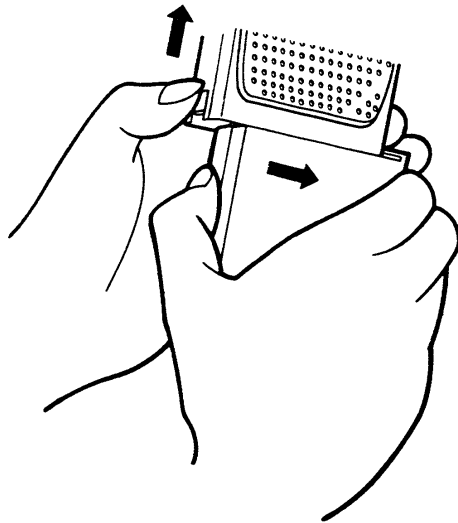
Consult your Icom Dealer or System Operator and write down the functions for the programmable switches for your reference.

[P0]		[F]+[P0]	
[P1]		[F]+[P1]	
[P2]	-	[F]+[P2]	
[P3]		[F]+[P3]	
[S]		[F]+[S]	

■ Battery pack replacement

Before replacing the battery pack, the volume control **MUST** be rotated fully counterclockwise, until a click is heard, to turn the power OFF.

- **TO REMOVE** the battery pack from the transceiver:
Push and hold the battery release button upwards, then slide the battery pack to the right with the transceiver facing you.
- **TO ATTACH** the battery pack to the transceiver:
Mate the notched ends of the transceiver and the battery pack, and slide the battery pack until it clicks into place.



■ Cautions

NEVER use an unauthorized battery pack or charger. This may damage the transceiver and/or invalidate the warranty.

NEVER discard a used battery pack into a fire. Internal battery gas may cause an explosion.

NEVER immerse the battery pack in water. If the battery pack becomes wet, be sure to wipe it dry.

NEVER short terminals of the battery pack. Internal components may become damaged. Current may flow into nearby metal objects, so be careful when placing battery packs in handbags, etc.

AVOID charging battery packs at temperatures below 0°C or above +40°C. The battery pack may not fully charge under these conditions.

RECYCLING INFORMATION (U.S.A. only)

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your dealer or local waste officials for details in your area for recycling options or disposal.



5 BATTERY PACKS

■ Charging

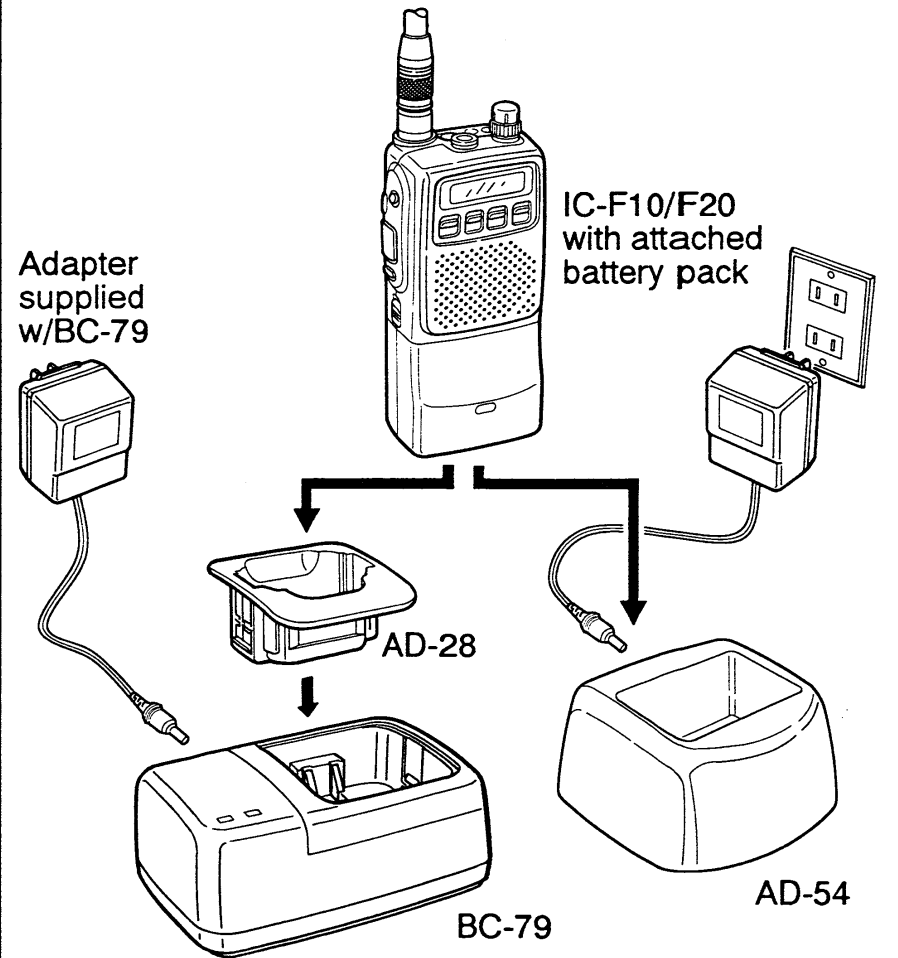
Prior to using the transceiver for the first time, the battery pack must be fully charged for optimum life and operation.*

CAUTION: To avoid damage to the transceiver, turn it OFF while charging.

- ① Connect the AC adapter (supplied with the charger) between a domestic AC power outlet and the charger (BC-79 + AD-28 or AD-54).
- ② Insert the transceiver with attached battery pack (or the battery pack only) into the charger.
 - The charge indicator lights.
- ③ When charging is complete, the charge indicator automatically turns OFF. (BC-79 + AD-28 only.)

***NOTE:** Be sure to read the instructions supplied with the optional BC-79 DESKTOP CHARGER or AD-54 BATTERY CHARGER.

◇ Charging with the optional BC-79 + AD-28 or AD-54



Charging time: approx. 11 to 17 hours (AD-54)
approx. 1 to 3 hours (BC-79 + AD-28)

■ Specifications

GENERAL

- Frequency coverage* : IC-F10 136–150 MHz
146–174 MHz
IC-F20 400–430 MHz
440–470 MHz
470–490 MHz
490–520 MHz
- *Varies according to version.
- Mode : 16K0F3E (wide type)
14K0F3E (20 kHz type)
8K50F3E (narrow type)
- Useable temp. range : –22°F to +140°F (U.S.A.)
–25°C to +55°C (Europe)
- Dimensions : 57(W) × 125(H) × 35(D) mm
(projections not included) 2¹/₄(W) × 4¹⁵/₁₆(H) × 1³/₈(D) in
- Weight : 365 g/12.9 oz

TRANSMITTER

- Output power : High 4 W Low 1 W

RECEIVER

- Sensitivity : 0.35 μV (for 12 dB SINAD)
- Audio output power : 350 mW (at 10% distortion with an 8 Ω load)

All specifications are subject to change without notice or obligation.

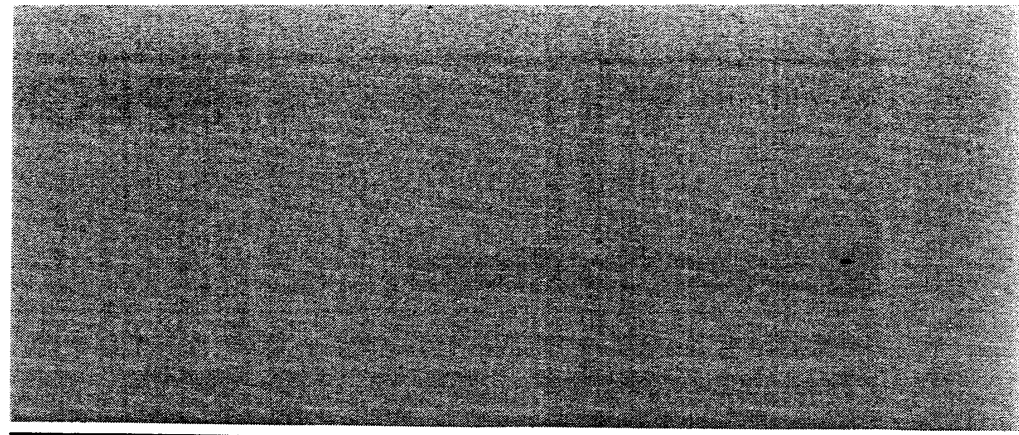
■ Options

BATTERY PACKS AND CHARGERS

BATTERY PACK		CHARGING PERIOD	
MODEL	VOL./CAP.	BC-79 + AD-28	AD-54
BP-157A	7.2 V 900 mA	1 hour	17 hours
BP-160	7.2 V 700 mA	1 hour	13 hours
BP-174	12 V 600 mA	1.5 hours	11 hours

- **HM-46 SPEAKER-MICROPHONE**
Compact and lightweight. Includes an earphone jack and transmit indicator.
- **HM-54 SPEAKER-MICROPHONE**
Combination speaker-microphone that provides convenient operation while hanging the transceiver from your belt clip.
- **HM-55/A DTMF SPEAKER-MICROPHONE**
Provides manual DTMF encoding capabilities.
- **OPC-534 MULTI-CHARGE CABLE**
Connects between AD-54's enabling multiple charging from a single power source.
- **UT-80 2-TONE UNIT**
Provides 2-tone capabilities.
- **UT-96 5-TONE UNIT**
Provides 5-tone capabilities.
- **UT-97 DTCS UNIT**
Provides DTCS tone squelch capabilities.

Count on us!



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