

ICOM

INSTRUCTION MANUAL

VHF TRUNKED RADIO

IC-F35

UHF TRUNKED RADIO

IC-F45



Icom Inc.



IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL — This instruction manual contains important operating instructions for the **IC-F35 VHF TRUNKED RADIO** and **IC-F45 UHF TRUNKED RADIO**.

FOREWORD

This manual explains the basic operation of the transceiver. Some systems cannot support all of the facilities available on the transceiver. Please ask your system operator or supplier for further information.

EXPLICIT DEFINITIONS

The following explicit definitions apply to this manual.

WORD	DEFINITION
⚠ WARNING	Persons injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

CAUTIONS

⚠ WARNING ! NEVER connect the transceiver to an AC outlet. This may cause a fire hazard or result in an electric shock.

⚠ WARNING ! NEVER hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The transceiver will perform best if the microphone is 5 to 10 cm away from the lips and the transceiver is vertical.

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

NEVER expose the transceiver to rain, snow or any liquids.

NEVER place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury.

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

2

AVOID placing the transceiver in excessively dusty environments.

AVOID the use of chemical agents such as benzine or alcohol when cleaning, as they may damage the transceiver surface.

DO NOT allow children to play with any radio equipment containing a transmitter.

DO NOT use or place the transceiver in areas with temperatures below -25°C or above $+55^{\circ}\text{C}$ or in areas subject to direct sunlight such as the dashboard.



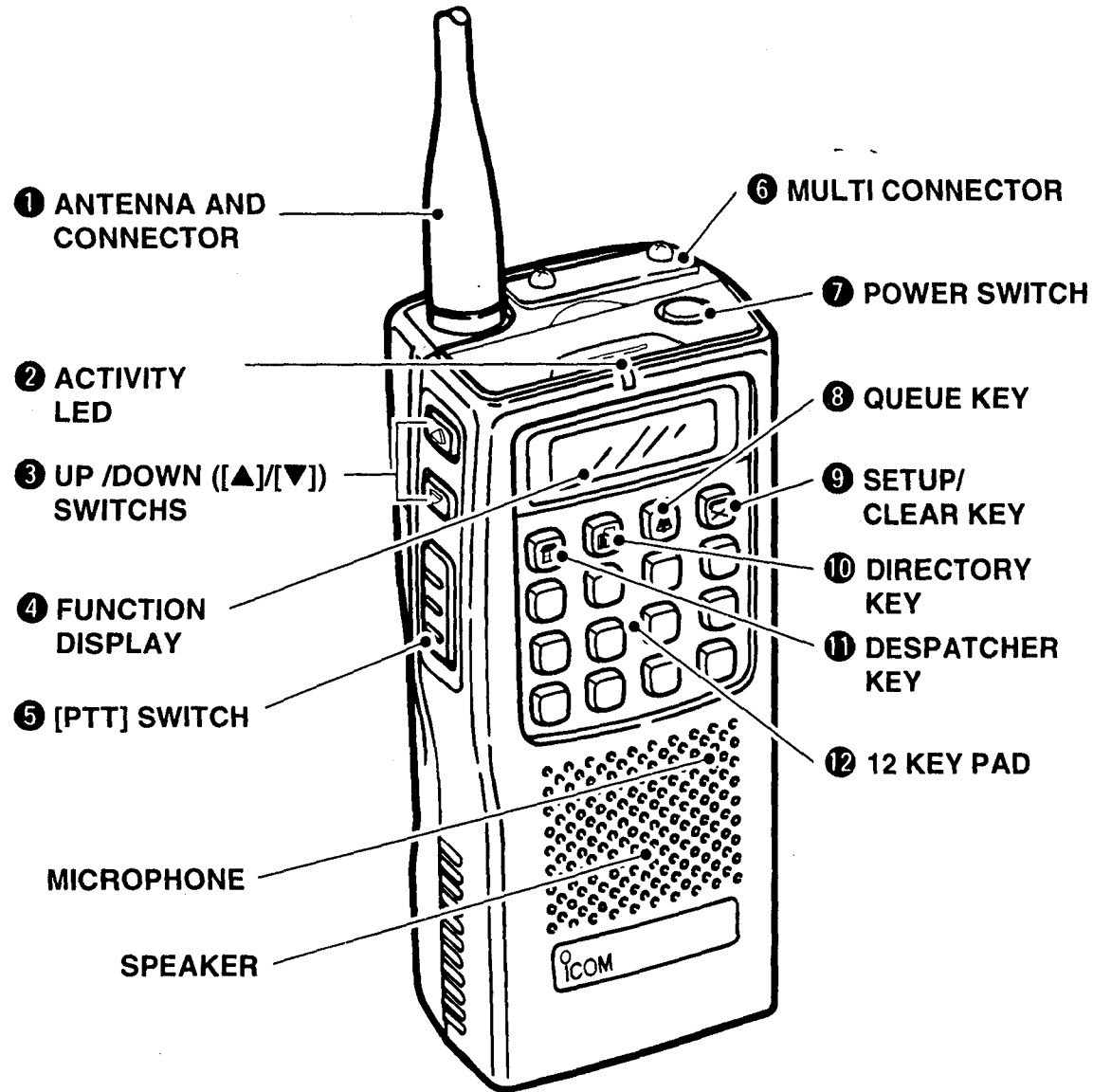
NOTE:

- The use of non-Icom battery packs/chargers may impair transceiver performance and invalidate the warranty.
- Even when the transceiver power is OFF, a slight current still flows in the circuits. **Remove the battery pack from the transceiver when not using it for a long time.** Otherwise, the battery pack will become exhausted.

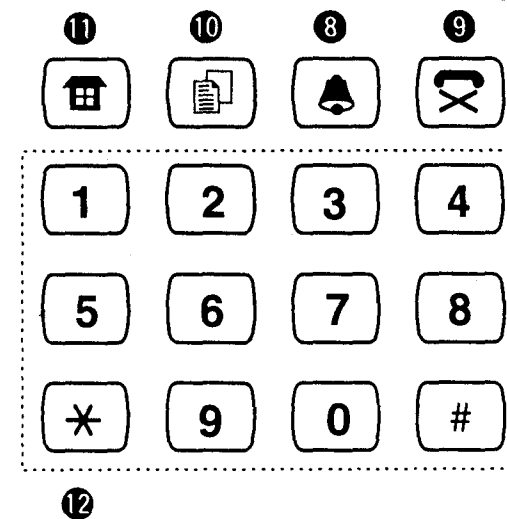
TABLE OF CONTENTS

IMPORTANT	i
EXPLICIT DEFINITIONS	i
CAUTIONS	i
TABLE OF CONTENTS	ii
1 PANEL DESCRIPTION	1-4
■ Front panel	1
■ Function displays	4
2 OPERATION	5-13
■ Turning Power ON	5
■ Making a call	5
◇ <i>DESPATCH CALL</i>	5
◇ <i>DESPATCH CALL (Send a status call)</i>	6
◇ <i>DIRECTORY CALL</i>	7
◇ <i>DIRECTORY CALL (Send a status call)</i>	8
◇ <i>QUEUE CALL</i>	8
◇ <i>DELETE QUEUE MEMORY CALL</i>	9
◇ <i>PROGRESS MESSAGES</i>	9
■ Receiving a call	10
■ Other functions	13
3 SET UP MENU	14
4 BATTERY CHARGING	15-18
■ Battery Pack replacement	15
■ Battery charging	16
◇ Installing the AD-67 to the BC-119	16
◇ Charging with the optional BC-119 + AD-67	17
◇ Charging with the optional BC-121 + AD-67	18
5 OPTIONS	19
■ Unpacking	19

PANEL DESCRIPTION



KEYPAD LAYOUT



① ANTENNA AND CONNECTOR

Connects supplied antenna.

② ACTIVITY LED

Lights red while transmitting.

③ UP/DOWN ([▲]/[▼]) SWITCHES

- Push to increase or decrease the audio volume.
While pushing the key, volume level indicator appears on the display and a beep tone will be heard.
- Push to select a status message or a directory memory when appropriate mode is selected. (page3)
- Push to set the backlight brightness, alert tone level or beep tone level when set up menu is selected. (page14)

④ FUNCTION DISPLAY

Indicates the prefix number, fleet individual number, unit number, link condition, selected call, directory memory, status message, audio level, progress message, signal strength, queue memory information, battery condition, set up menu, alert tone level, beep tone level, LCD backlight setting, etc.

⑤ PUSH-TO-TALK SWITCH [PTT]

Push and hold to transmit; release to receive.

⑥ MULTI-CONNECTOR

Attach here for connection to the EM-81 SPEAKER-MICROPHONE, etc.

BE CAREFUL! DO NOT leave the cover OFF the multi-connector when not in use. Accumulated dust and dirt will impede radio performance and could result in permanent damage.

⑦ POWER SWITCH

Turns power ON and OFF.




- Push and hold for 2 sec. to toggle the transceiver power ON and OFF.

⑧ QUEUE KEY

- Push once to select a queue memory.
- Push once again to delete all or a selected unanswered queue call.
- Push and hold to turn the 'Call back function' ON/OFF.

1 PANEL DESCRIPTION

9 SETUP/CLEAR KEY

- Push to send the selected call.
Push ,  or  in advance.
- When 'PTT calls despatcher function' is pre-programmed, no pushing is required for the despatcher call.
- Push to send an 'End call' code when the call is completed.
- Push and hold to enter 'SET UP MENU'.
(See SET UP MENU, page14)

10 DIRECTORY KEY


- Push once to select a directory memory.
The following individual calls may be memorised in the directory memory and can be selected with the [▲]/[▼] switches.
 - public telephone number calls (PABX or PSTN).
 - In fleet call and Inter fleet calls.
 - group calls.
 - emergency or priority calls.
- Push once again to select a status message.
Use [▲]/[▼] switches to select a status message.

11 DESPATCHER KEY


- Push once to select a despatch call.
- Push once again to select a status code.
Use [▲]/[▼] switches to select a status code.

When 'PTT calls despatcher function' is pre-programmed, no pushing is required.

12 12-KEYPAD

 Some versions are not equipped with a 12-keypad. Availability of the following functions depends on pre-setting. Please consult your supplier or system operator.

• Direct select mode



Push to select a directory memory number (number 0 to 9) instead of pushing  and [▲]/[▼] switches.

• Direct dialing mode

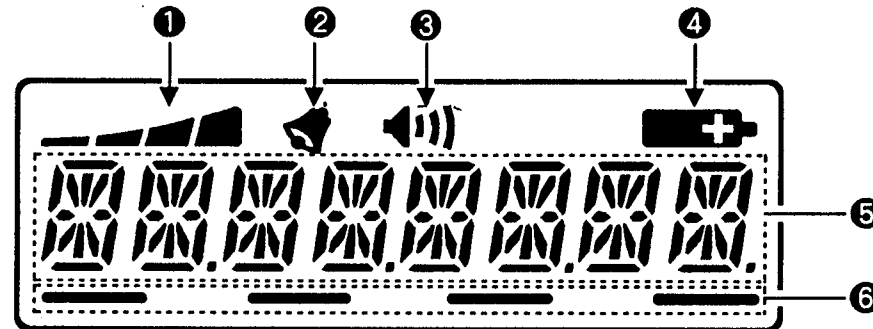
Push to enter full or abbreviated dial numbers. The following numbers may be entered directly from the keypad.

- PABX or PSTN numbers.
- In fleet calls or Inter fleet calls.
- group calls.
- emergency or priority calls.

- Push [▼] to re-input the last entered number.

While the desired directory number or dial number appears on the display, push  or  to call the destination.

■ Function display



❶ RECEIVING SIGNAL INDICATOR

- Shows a communication link condition.
- To maintain a connection, at least the first two segments of the indicator must be displayed.

❷ CALL ABSENCE INDICATOR

Blinks when any entries in your call queue memory have not been answered yet.

❸ TRAFFIC MODE INDICATOR

Indicates that the call has been set up and the radio is in conversation mode. The [PTT] can be used for voice transmission.

❹ LOW BATTERY INDICATOR

- Appears when the battery voltage becomes low. You may still be able to call other stations, however you should replace/recharge the battery as soon as possible before it completely drains.
- Blinks when the battery becomes empty. You cannot call other stations. You must charge or replace the battery. (See pages 14 and 15.)

❺ ALPHANUMERIC READOUT

Shows directory memories, status messages, progress messages or telephone numbers.

❻ ACTIVATED KEY INDICATOR

Appears when the key under this indicator is activated.

Turning power ON

- ① Push [①] to turn power ON.
- Power-up alert tone sounds and the following displays appear in sequence.

Opening message may differ depending on the pre-setting.

Prefix number / Fleet individual
(123) / number (4567)

Unit number (890)
• A three-digit number is for a large fleet and two-digit number is for a small fleet.

- The following indications appear after the above.

Your location is within the trunked system area.
You can use the system.

You are out of the service area or the system is down. You cannot use the system.

NOTE: Even if "NO SRVCE" (no service is available) appears on the display, the transceiver keeps searching for the system control signal. Please wait until "READY" appears on the display.




Making a call

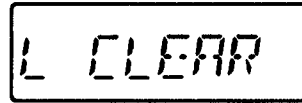
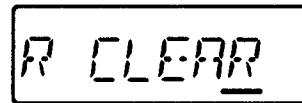
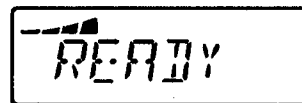
◇ DESPATCH CALL

- ① Push [PTT] while "READY" appears on the display.
- "DESPATCH" appears on the display and a beep will be heard.
- ② Push [X] to call the dispatcher while "DESPATCH" appears on the display.
- 'PTT calls dispatcher function' is available depending on the pre-setting. (See page 13)
- ③ Wait until "CONNECTED" and ⁽¹⁾ appears on the display.
- 'Direct dispatcher call function' is available depending on the pre-setting.
- ④ You can start a conversation. A call limit timer starts counting down to the permitted time limit.






Transceiver is calling the dispatcher

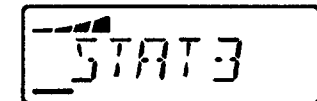
- 'ACTIVITY LED' lights red while pushing [PTT].
- A warning beep sounds 10 sec. before the limit is reached and the call is disconnected automatically.
- When other progress messages appear on the display, please wait or follow the instructions. (Page 9)

- ⑤ Push  to end the conversation when the call is completed.
- “L CLEAR” appears when you push  to end the conversation;
 - “R CLEAR” appears when the despatcher pushes  to end the conversation.
- ⑥ “READY” appears on the display again.

◇ **DESPATCHER CALL (Send a status message)**

- ① Push  while “READY” appears on the display.
 - “DESPATCH” appears and a beep sounds.
- ② Push  once again to select a status menu.
- ③ Push [] / [] to select a status message.
- ④ Push  to send the desired status message to the despatcher while it is selected on the display.
- ⑤ “CALLING” appears on the display, then “OK” appears for a moment.
- ⑥ “READY” appears again.



Some status messages may differ depending on pre-setting.

- The transceiver has 32 status messages.
- The following messages are commonly used in any network:
 - “CALL REQ” (call request - please call me back)
 - “CALL CAN” (call cancell - cancell call me back)
- Messages may differ depending on pre-setting.
- If you want to cancell the status “CALL REQ” which you sent to the despatcher, you should send the status “CALL CAN” to the despatcher again.







2 OPERATION

◇ DIRECTORY CALL

Some systems cannot support all of the facilities available on the transceiver.
Please ask your system operator or supplier for further information.

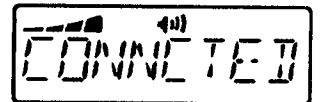
- The transceiver has up to 41 directory memories.
- Directory memories have the following call capabilities.
 - PABX (private address branch exchange) numbers.
 - PSTN (public switched telephone network) numbers.
 - In-Fleet call : calling a unit number in your fleet.
 - Inter-Fleet call : calling a unit number out of your fleet.
 - Emergency call : calling a specified emergency station.
 - Priority call : having a higher priority than other calls.
 - Group call : two types of group calls are available.
 - Conference call : allows a group discussion. All the involved parties can transmit.
 - Broadcast call : allows a message to be sent without interruption. Only the originator can transmit and disconnect.

SETTING PROCEDURES

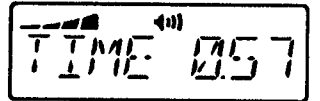
- ① Push  while "READY" appears on the display.
- ② Push []/[] to select a directory memory.
- ③ Push  while desired directory appears.
- ④ "CALLING" appears and interval beep sounds.
- ⑤ "CONNECTED" and  appear on the display. You can start a conversation. The call limit timer starts counting down to the permitted limit.
 - When other progress messages appear on the display, please wait or follow the indications.
(See progress messages, page 9)
 - A warning beep sounds 10 sec. before the limit is reached and the call is automatically disconnected.
- ⑥ Push  to end the conversation (or wait for the "R-CLEAR" or "READY" prompt).










Some directory numbers may differ depending on pre-setting.

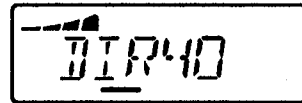


Immediate call can start.

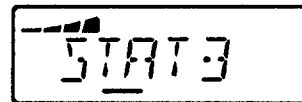


◇ **DIRECTORY CALLING (Send a status message)**

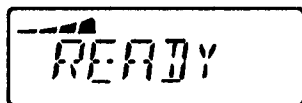
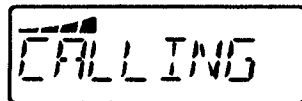
- ① Push  while "READY" appears on the display.
 - A directory memory appears and a beep sounds.
 - Some directory memories may differ depending on pre-setting.
- ② Push []/[] to select a directory memory.
- ③ Push  when the desired directory appears on the display.
- ④ Push []/[] to select a status message.
- ⑤ Push  when the desired status message appears on the display.
- ⑥ "CALLING" appears on the display, then "OK" appears for a moment.
- ⑦ "READY" appears again.




Select a directory memory.

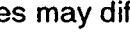






Some directory memories or status messages may differ depending on pre-setting.



◇ **QUEUE MEMORY CALLING**

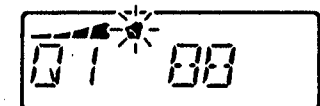
- The transceiver can memorise up to 15 logs of incoming calls when you do not answer.
- "CALLS" plus the number of calls appears on the display in such cases.
- The call absence indicator () blinks until you answer all calls or delete all memories.

 **NOTE:** Be aware that queue memories are erased when the transceiver is turned OFF.

- ① Push  to select a queue memory.
 - "Q" numbers and the called station's identity appears.
- ② Push []/[] to select queue memories when two or more calls have been received.
- ③ Push  to answer the selected queue.
- ④ After "CALLING" appears you can start a conversation in the same manner as dispatcher calling.
 - The number of memorised calls decrements when you answer a call.



One call is memorised in the queue memory.




Unit number 88 is queued in memory number 1.



2 OPERATION

◇ DELETING QUEUE MEMORY CALLS

- You can delete all queue memories at once or one-by-one without answering.
- All delete or partial delete depends on the pre-setting.

① Push  when "CALLS" plus number of calls appears on the display.




② Push []/[] to select a queue memory to be deleted.



Selected Q1 to delete.


③ Push and hold  for more than 2 sec. to delete.

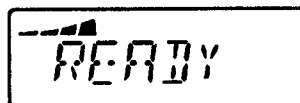
- When the all delete function is pre-set, all queue memories are deleted at once.

④ Push  to return to the "CALLS" prompt.



- When no calls are in the queue memory, the display returns to the "READY" prompt again.

⑤ Push  once again to return to the "READY" prompt.



◇ PROGRESS MESSAGES

The display can show a number of messages including progress conditions during call.

When the following progress messages appear on the display, please wait for a while or follow the instructions.

List-1

DISPLAY	DESCRIPTION
ABORTING	Your call is aborted. Please try again.
CALLING	The transceiver is calling the destination.
CALLBACK	Your call is memorised in the destination's queue. Please wait for reply.
CALLFAIL	Your call has failed. Please try again.
DIVERTED	Your call has been diverted to another address.
	The called station is busy. Please call later.

■ Receiving a call

When an incoming call is received, the transceiver may emit a beep or make a ringing sound like a telephone (this function depends on the system) and the called station's identity will be displayed.

List-2

DISPLAY	DESCRIPTION
INVALID	The number you called is wrong. You cannot use this number any more.
NO REPLY	The called station has not replied to your call. Please try later.
QUEUED	Your call has been received by the system. Please wait until the system calls the destination.
RINGING	The called station is ringing.
SYSTEM BUSY OUT	The system cannot accept your call at the moment.
TIMEOUT CALL FAIL	Your call has timed out. Please try again.

• Display example

In fleet call

Group call


Inter fleet call

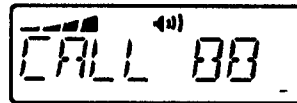
Call from PSTN

Call from PABX

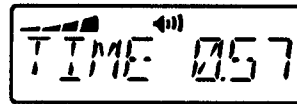
2 OPERATION

◆ RECEIVING AN IN FLEET CALL

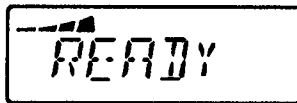
- ① When an in fleet call is received, the transceiver may emit a beep tone and connect immediately.
- ② The called station's identity appears on the display.
- ③ When pushing and holding [PTT], you can start a conversation.
- ④ [TX indicator] turns red while pushing [PTT].
- ⑤ A call limit timer starts counting down to a pre-set time limit.
- ⑥ Push  to end the conversation (or wait "R-CLEAR" appears).
 - The display changes from "L-CLEAR" to "READY" prompt.






Fleet number "88" calls you.



Call limit timer starts counting down.



• When a call is not answered.

- ① When a call is not answered, the incoming call is memorised in the queue memory.
 - "CALLS" and call number appears and the call absence indicator () blinks.
- ② Push  to return to the "READY" prompt.
- ③ The call absence indicator () blinks until you answer or delete the queue memories.


(See *QUEUE MEMORY CALLING*, page 7)

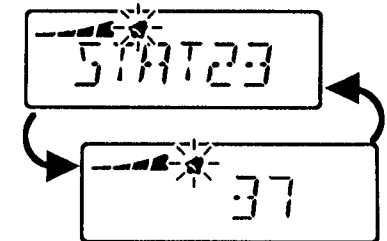


One call is memorised in the queue memory.




◆ RECEIVING A STATUS CALL FROM WITHIN YOUR FLEET

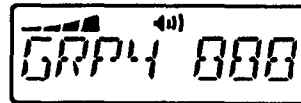
- ① When an incoming status call is received, the transceiver may emit a beep.
- ② The display then shows the called station's identity and the status message alternately.
- ③ Push  to return to the "READY" prompt.



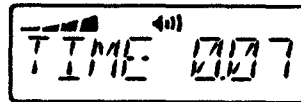
e.g. Called station's identity is 37 and the incoming status message 23 appears alternately.

◇ **RECEIVING A GROUP CALL**

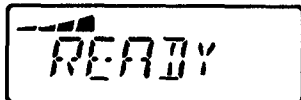
- ① When a group call is received, the transceiver emits a beep and connects immediately.
- ② The calling fleet number and "GRP" appears on the display.
- ③ When the call is a 'conference call', you can start a group discussion.
 - [TX indicator] turns red while you push [PTT] on your transceiver.
 - When the call is a broadcast call, you cannot transmit. Only the originator can transmit.
- ④ The call limit timer starts counting up to the called station's pre-set time limit.
- ⑤ Push  to end the call and return to the "READY" prompt.





Fleet number "888" is calling group number 4.

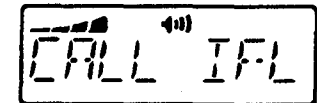


The call limit timer counting up to the called station's pre-set time limit.

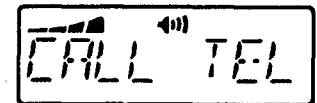


◇ **RECEIVING AN INTER FLEET OR A TELEPHONE CALL**

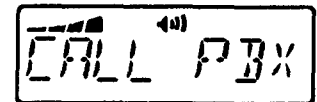
- ① When an inter fleet call, PABX call or PSTN call is received, the transceiver may make a ringing sound like a telephone.
- ② "CALL IFL", "CALL PBX" or "CALL TEL" appears on the display instead of identity numbers.
- ③ Push  or push and release [PTT] to connect the call.
- ④ You can start a conversation.
 - [TX indicator] turns red while your transceiver transmits.
- ⑤ The call limit timer starts counting down to a pre-set time.
- ⑥ Push  to end the conversation (or wait "R-CLEAR" appears).
 - The display returns to the "READY" prompt.



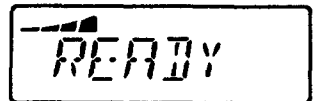
Inter fleet call



Call from PABX



Call from PSTN



2 OPERATION


Others functions

Some systems cannot support all of the facilities available on the transceiver.


Please ask your system operator or supplier for further information.


◆ **CALLBACK FUNCTION**

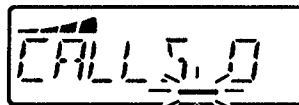
- Automatically stores incoming calls when you are not in your vehicle or you cannot answer immediately.
- Automatically sends a "CALL BACK" message to the called station.
- This function depending on pre-setting.
- Other functions work the same as "READY" prompt.

- ① When "READY" appears, push and hold  until "CALLS 0" appears.

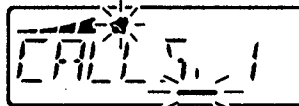
- The activated key indicator  starts to blink.

- ② When an incoming call is memorised, call absence indicator  starts to blink and call number is incremented.

- ③ Push and hold  until "READY" appears to exit a call back function.



CALL BACK FUNCTION activated.



One call is stored in the queue memory.

◆ **QUERY STATUS**

- A special status message to remotely obtain a destination's status message left in the transceiver.

◆ **PTT CALLS DESPATCHER FUNCTION**

- The [DESPATCHER] and [SET UP] key operation sequence can be performed via the [PTT] switch.
First push of [PTT] : Selects despatcher stand-by.
Second push of [PTT] : Transmits the despatcher call.

◆ **DIVERT CALL**


- A special directory call to your system when you want to change your operating transceiver to another.






◆ **DIVERT 3rd PARTY CALL**

- This is the same as above, except the directory call request is made by someone other than yourself (a 3rd party).

SET UP MEMU/LOW BATTERY INDICATOR

■ Set up menu

 Some systems cannot support all of the facilities available on the transceiver. Please ask your system operator or supplier for further information.

- ① Push and hold  while "READY" or "NO SRVCE" appears until the set up menu appears on the display.
- ② Push  several times to select the desired set up menu.
- ③ Push [] / [] to set ON, OFF, etc. in the menu.
- ④ Push and hold  until "READY" or "NO SRVCE" appears on the display to exit the set up menu.

Menu list	
LAMP 20	The backlight turns ON for 20 sec. when any switch is pushed.
LAMP 5	The backlight turns ON for 5 sec. when any switch is pushed.
LAMP ON	Turns the backlight ON.
LAMP OFF	Turns the backlight OFF.
ALT 00000	Alert tone level (max).
ALT _____	Alert tone level (min).
BEP 00000	Beep tone level (max).
BEP _____	Beep tone level (min).


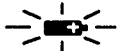
■ Low battery indicator

The "Low battery indicator" appears when the battery voltage drops to approx. 6 V or below. And, at the same time an alert tone starts to beep slowly (this function depends on pre-setting).

The attached battery pack requires charging in this case. If you continue to use the transceiver while the "Low battery indicator" appears, the indicator starts to blink and the alert tone increases in frequency.

In the above case the transceiver stops calling or answering calls. Then, the transceiver automatically turns the power OFF to protect the battery 10 sec. after the indicator starts blinking.

The meaning of indication and alert tones are as follows:

INDICATOR	BEEP*	TRANSMIT	Note
	slow	OK	You should charge the battery.
	fast	NG	You cannot call any more. You must charge the battery.

* Low battery alert tone depending on pre-setting.

4

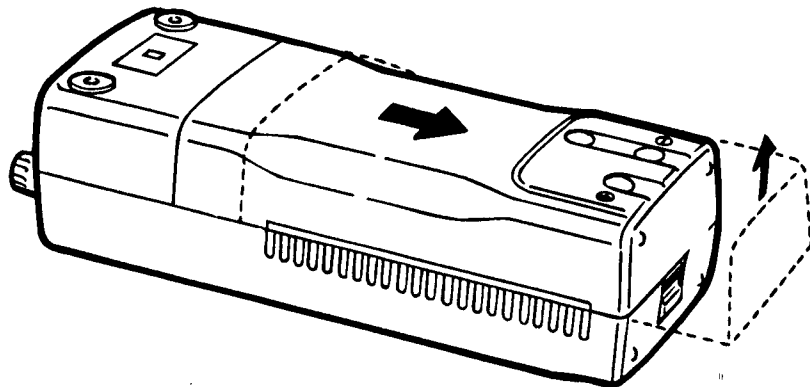
BATTERY CHARGING

■ Battery pack replacement

Before replacing the battery pack, push and hold the power switch to turn the power OFF.

- To *REMOVE* the battery pack from the transceiver:
Push and hold the battery pack release button forward (in the direction of the transceiver's front panel) then slide the battery off the transceiver.
- To *ATTACH* the battery pack to the transceiver:
Align the 4 holes in the battery pack with the 4 prongs on the exposed transceiver chassis, then slide the battery pack until it snaps into place.

See diagram below.



■ Battery cautions

NEVER incinerate used battery packs. 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 **BEFORE** attaching it to the transceiver.

NEVER short terminals of the battery pack. Also, current may flow into nearby metal objects so be careful when placing battery packs in handbags, etc.

If your battery pack seems to have no capacity even after being charged, completely discharge it by leaving the power ON overnight. Then, fully charge the battery pack again. If the battery pack still does not retain a charge (or very little), a new battery pack must be purchased.

◇ *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. Call 1-800-8-BATTERY for battery recycling options in your area or contact your dealer.

■ Battery charging

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

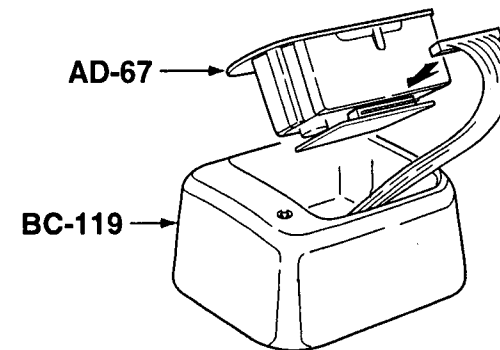
CAUTION: To avoid damage to the transceiver, turn it OFF while charging.

- Recommended temperature range for charging:
+10°C to +40°C
- Use the supplied charger or optional charger (BC-119/BC-121 for rapid charging) only. **NEVER** use other manufacturers' chargers.
- An optional cable OPC-515L (for 13.8 V power source) or CP-17L (for 12 V cigarette lighter socket) can be used instead of the AC adapters supplied with the above chargers.

/// **When using BC-119:** If the charge indicator flashes orange, the vehicle battery voltage is low and charging may not be performed. Check the vehicle battery voltage in this case. If the charge indicator flashes red, there may be a problem with the battery pack (or charger). Re-insert the battery pack or contact your dealer.

◇ Installing the AD-67 to the BC-119.

- ① Connect the cable as shown below.
- ② Attach the AD-67 with the 2 supplied screws.



/// **NOTE:** The AD-67 has a temperature detection circuit for the Ni-MH battery (CM-142 battery pack). When the battery's temperature is outside the charging range, the charging indicator flashes and charging stops until the temperature returns within the range.

4 BATTERY CHARGING

■ Optional battery pack

The optional CM-140 or CM-142 battery pack include rechargeable Ni-Cd or Ni-HM batteries and can be charged approx. 300 times. Charge the battery pack before first operating the transceiver or when the battery pack becomes exhausted.

If you want to be able to charge the battery pack longer than 300 times, the following points should be observed;

1. Avoid overcharging. The charging period should be less than 48 hours.
2. Use the battery until it becomes almost completely exhausted under normal conditions. We recommend battery charging just after transmitting becomes impossible.

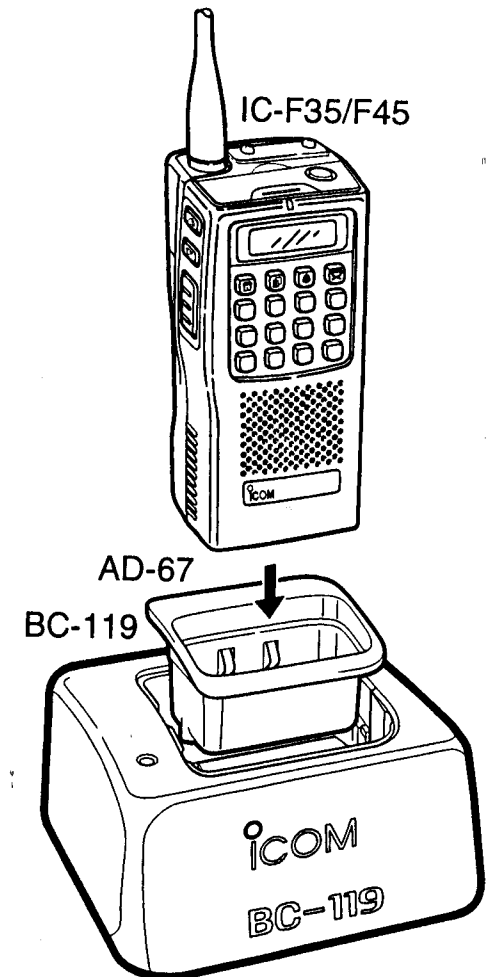
Battery pack	Voltage/capacity	Output power	Approx. operating time*
CM-140	7.2 V/ 1400 mAh	5.0 W	8 h
CM-142	7.2 V/ 1600 mAh	5.0 W	9 h

*Condition: Tx : Rx : Standby = 5 : 5 : 90

◇ Rapid charging with the BC-119

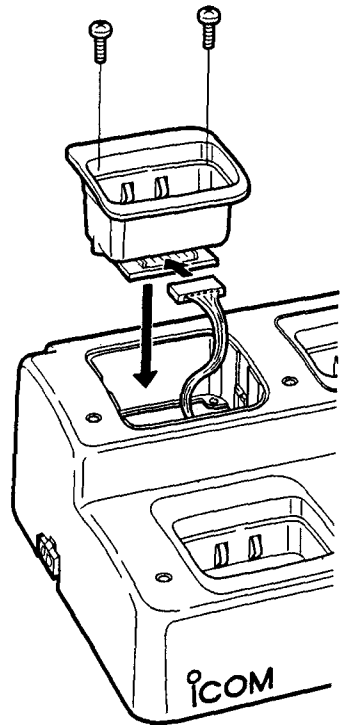
The optional BC-119 provides rapid charging of Ni-Cd or Ni-HM battery packs. The following are additionally required.

- One AD-67
- An AC adapter (may be supplied with the BC-119 depending on version).



◇ Charging with the optional BC-121 + AD-67

Install charger adapters (AD-67) into the spaces of the BC-121.

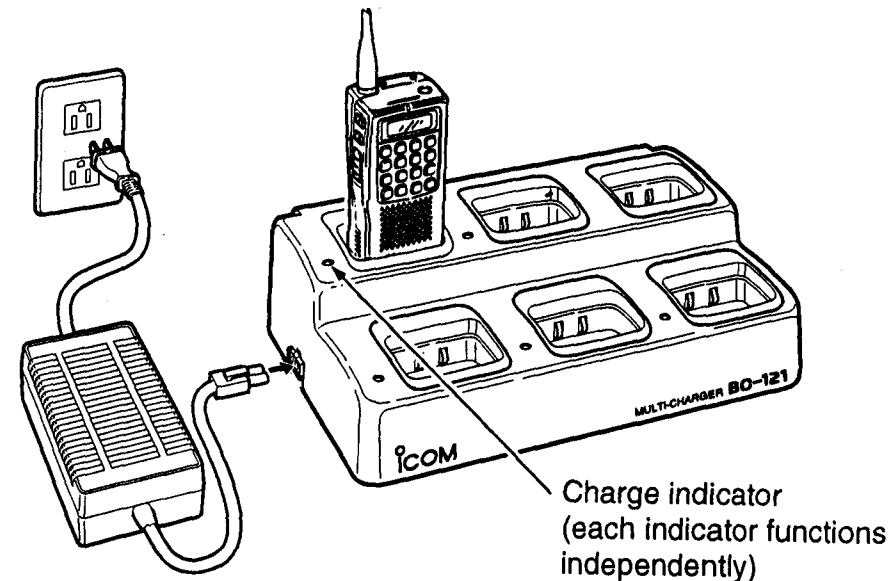


- ① Connect a cable to each charger adapter.
 - The connector may differ depending on the charger adapter.
- ② Install the charger adapter into the charging slot of the BC-121.
- ③ Attach the charger adapter using the supplied screws.

◆ Charging operations

- ① Connect an AC adaptor between an AC outlet and the BC-121.
- ② Install a battery pack with (or without) the transceiver into a charging slot.

Please read the BC-121 Instruction sheet for further information.



AC adapter
(not supplied with some versions)

Charge indicator
(each indicator functions independently)

■ Unpacking

The following accessories are included with the transceiver:

	Qty.
① Battery pack (CM-140)	1
② Flexible antenna	1

■ Options

◇ Battery packs

- **CM-140** Ni-Cd battery pack: 7.2V/1400mA
- **CM-142** Ni-MH battery pack: 7.2V/1600mA

◇ Chargers

- **BC-119** DESKTOP CHARGER+**AD-67** CHARGER ADAPTER
Rapidly charge battery packs in 1 to 1.5 hours depending on the battery pack. The AD-67 must be used with the BC-119 for charging the battery pack. The CP-17L or OPC-515L can be used instead AC adapter.
- **BC-121** MULTI CHARGER
Rapidly charge up to six battery packs simultaneously with a charging time of 1 to 2 hours. The AD-67 CHARGER ADAPTERS MUST be purchased separately to charge your Icom battery packs.

- **BM-96** DESKTOP CHARGER

Rapidly charge battery packs in 110 to 120 min. depending on the battery pack.

- **BM-97** DESKTOP CHARGER

Normally charge battery packs in 15 hours.

- **BM-54** CHARGER MOUNT BRACKET

Allows you to secure the BM-96/BM-97 DESKTOP CHARGER inside a vehicle. A strap is supplied to support the transceiver during charging.

◇ Speaker microphone

- **EM-81** SPEAKER-MICROPHONE

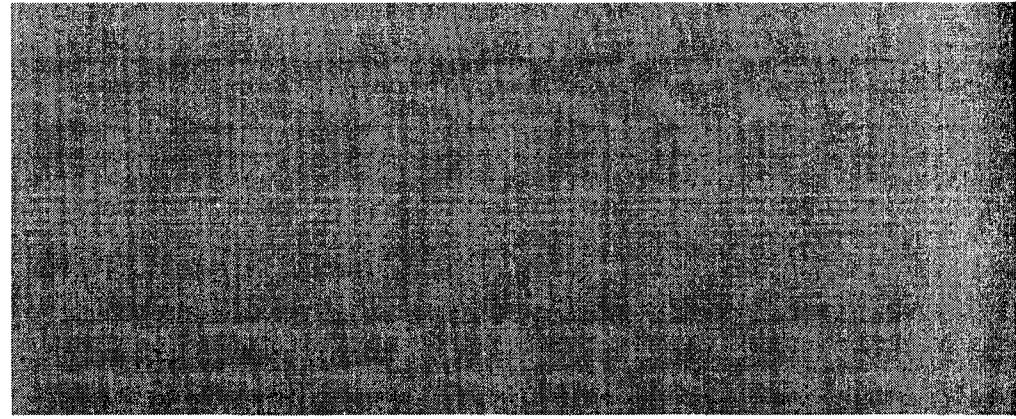
Provides convenient, lightweight operation while hanging the transceiver on your belt, etc.

◇ Others

- **MB-56** BELT CLIP

Allows you to attach the transceiver to your belt for convenient portability.

Count on us!



A-5405S-1EX
Printed in Japan
Copyright © 1996 by Icom Inc.

Icom Inc.
6-9-16 Kamihigashi, Hirano-ku, Osaka 547 Japan
