



## INSTRUCTION MANUAL

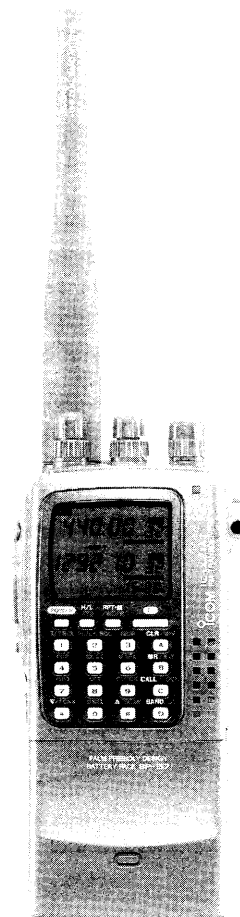
DUAL BAND FM TRANSCEIVER

# IC-X21AT IC-X21ET

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.

Icom Inc.

The photo shows IC-X21AT with BP-157. The battery pack differs according to versions.



## IMPORTANT

**READ ALL INSTRUCTIONS** carefully and completely before using the transceiver.

**SAVE THIS INSTRUCTION MANUAL** – This instruction manual contains important safety and operating instructions for the IC-X21AT and IC-X21ET.

## EXPLICIT DEFINITIONS

**CAUTION** : Equipment damage may occur.

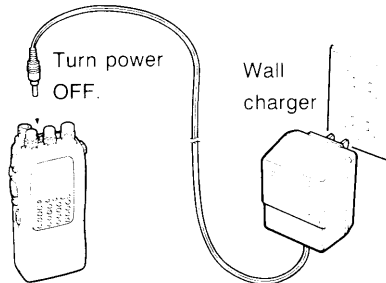
**NOTE** : If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

## WHEN FIRST APPLYING POWER

### ◆ Battery pack charging

- ① Attach the battery pack to the transceiver.
- ② Connect the wall charger to the [DC12.5V] jack to charge the battery pack.
  - Charging period of the BP-157 and BP-131 is approx. 15 hrs.

To  
[DC12.5V]

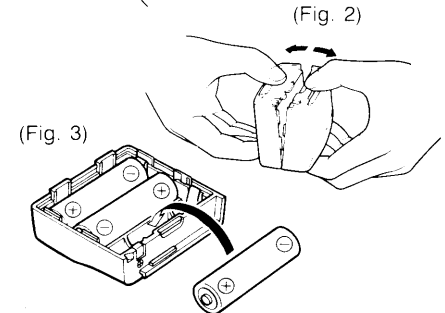
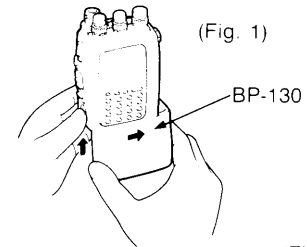


BP-157 or  
BP-131

### ◆ Installing batteries into the battery case

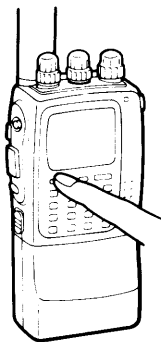
Install six dry cell batteries as shown in the figures below.

- Pay attention to the polarities.



### ◇ Power ON

Push and hold [POWER] for 1 sec. to turn power ON.



Push and hold [POWER] for 1 sec. again to turn power OFF.

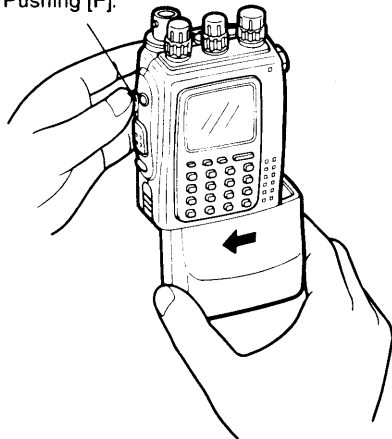
The power key may not function when the transceiver has not been operated for 2 months or more as the internal memory backup battery (rechargeable) may have become depleted. In this case, activate the CPU as described in the box at right.

### • Activating the CPU

(when the power does not come on)

While pushing the [F] key, attach the charged battery pack. Then, turn power ON.

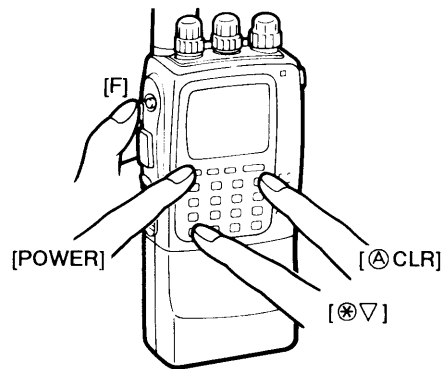
Pushing [F].



### ◇ Resetting the transceiver

Reset the transceiver before operating for the first time, or when the internal CPU malfunctions.

- ① Turn power OFF.
- ② While pushing [F], [Ⓐ CLR] and [⊕▽], push and hold [POWER] for 1 sec. to reset the CPU.



Partial resetting is alternatively available. See p. 48 for details.

## CAUTIONS

**NEVER** connect the transceiver to an AC outlet or to a power source of more than 16 V DC.

**NEVER** connect the transceiver to a power source using reverse polarity. This connection will ruin the transceiver.

**NEVER** allow children to touch the transceiver.

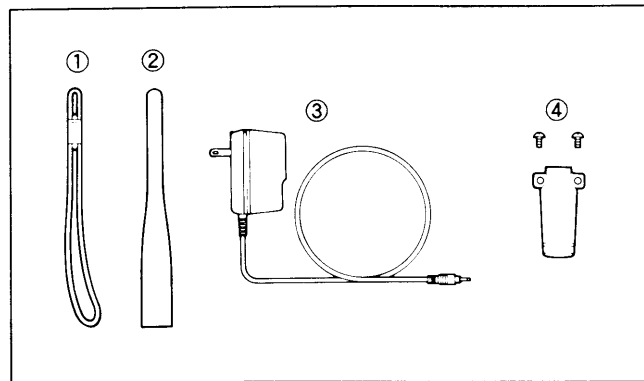
**AVOID** using or placing the transceiver in direct sunlight or in areas with temperatures below  $-10^{\circ}\text{C}$  ( $+14^{\circ}\text{F}$ ) or above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ).

**BE CAREFUL!** When transmitting for a long time with high output power, the rear panel will become hot.

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 or case from the transceiver when not using the transceiver for a long time. Otherwise, the battery pack or installed dry cell batteries in the battery case will become exhausted.

## UNPACKING



Accessories included with the transceiver:	Qty.
① Handstrap .....	1
② Antenna (FA-B7023A) .....	1
③ Wall charger* .....	1
④ Belt clip and screws .....	1 set
Battery pack (BP-157) or battery case (BP-130) (attached with the transceiver) .....	1

\* Not included with versions which include a battery case.

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## Front and side panels

### MONITOR SWITCH [MONI] (p. 14)

Manually opens the main band's squelch and monitors the transmit frequency.

### FUNCTION SWITCH [F] (pgs. 3, 4)

While pushing this switch, other switches and the tuning dial perform secondary functions.

- "Push [F] + a switch" means "while pushing the [F] switch, push the switch."

### PTT SWITCH [PTT] (p. 15)

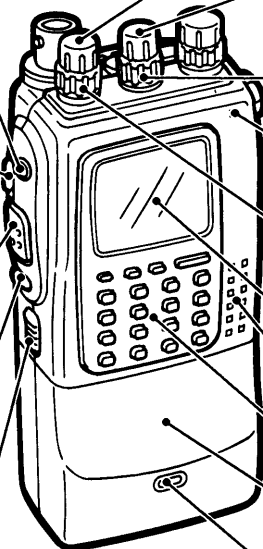
Push and hold to transmit; release to receive.

### LIGHT SWITCH [LIGHT] (p. 13)

- Lights the display and keyboard back-lighting for 5 sec.
- [F] + [LIGHT] manually turns the back-lighting ON and OFF.

### BATTERY PACK RELEASE BUTTON

Opens the latch for battery pack removal when pushed upwards.



**400 VOLUME CONTROL [VOL]** (p. 14)  
Adjusts the 430(440) MHz band audio level.

**1200 VOLUME CONTROL [VOL]** (p. 14)  
Adjusts the 1200 MHz band audio level.

**1200 SQUELCH CONTROL [SQL]** (p. 14)  
Varies the 1200 MHz band squelch threshold point for noise mute.

**TX/RX INDICATOR** (pgs. 14, 15)

**400 SQUELCH CONTROL [SQL]** (p. 14)  
Varies the 430(440) MHz band squelch threshold point for noise mute.

**FUNCTION DISPLAY** (pgs. 5, 6)

**SPEAKER/MICROPHONE**

**KEYBOARD** (pgs. 3, 4)

**BATTERY PACK/CASE** (pgs. i, 7, 8)

**OPTIONAL SUB MICROPHONE** (p. 32)  
Used for the optional whisper function. (The BP-131 or BP-132 is required.)

## ■ Top panel

### ANTENNA CONNECTOR

(p. 9)

Connects the supplied antenna.

### EXTERNAL DC POWER JACK [DC12.5V]

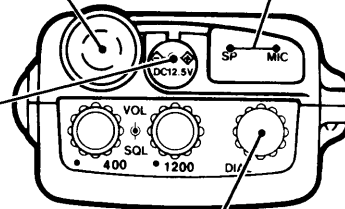
(p. 53)

Allows operation with a 12.5 V DC power source using the optional cables, CP-13 or OPC-288.

**CAUTION:** Operation with an external DC power source simultaneously charges batteries inside the battery case or the battery pack. This may cause battery leakage and damage the transceiver or cause battery overcharging and shorten the life of the battery pack, respectively.

### TUNING DIAL [DIAL]

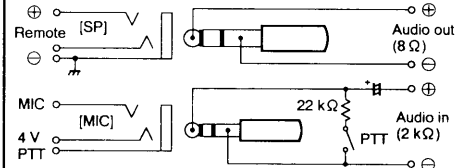
Sets operating frequency, memory channel and set mode contents.



### EXTERNAL SPEAKER AND MICROPHONE JACKS [SP]/[MIC]

Connect an optional speaker-microphone or headset, if desired. The internal microphone will not function when either is connected. (See pgs. 53, 54 for options.)

#### ◇ External connection



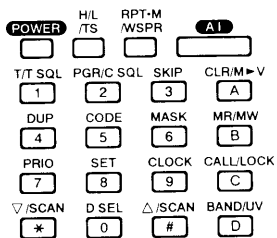
The above diagram does not apply when a condenser microphone is connected.

#### ◇ External audio output

Audio output from the [SP] jack can be selected for the 430(440) MHz band and/or the 1200 MHz band using set mode. When connecting a TNC, etc., set the undesired band audio to the internal speaker. (p. 48)

# 1 PANEL DESCRIPTION

## Keyboard



KEY	FUNCTION	SECONDARY FUNCTION (+ [F])
T/T SQL 1		Activates the following optional* functions in this sequence: subaudible tone encoder → pocket beep → tone squelch → non-tone operation. (pgs. 17, 45)
PGR/C SQL 2		Activates the following functions in this sequence: pager → code squelch → non-selective calling. (pgs. 41–43)
SKIP 3		Sets the selected memory channel as a skip memory channel in memory mode. (p. 29)
DUP 4	<ul style="list-style-type: none"> <li>• Input the appropriate digit while in VFO mode. (p. 11)</li> </ul>	Selects the duplex direction in this sequence: – duplex → + duplex → simplex. (p. 17)
CODE 5	<ul style="list-style-type: none"> <li>• Input the first digit while in memory mode. (p. 20)</li> </ul>	Programs the code channel for pager and code squelch operation. (p. 41)
MASK 6	<ul style="list-style-type: none"> <li>• Transmit the appropriate DTMF code while transmitting.</li> </ul>	Hides and displays the selected memory channel in memory mode. Memory channel 1 cannot be hidden. (p. 22)
PRIO 7		Starts the priority watch. (p. 30)
SET 8		Enters set mode. (Various pages)
CLOCK 9		<ul style="list-style-type: none"> <li>• Indicates the clock display. (p. 35)</li> <li>• Sets clock time when pushed 2 times. (p. 35)</li> </ul>
D SEL 0		Selects the dial select step. (p. 12)

\* Built-in to the U.S.A. version.



**Count on us!**

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