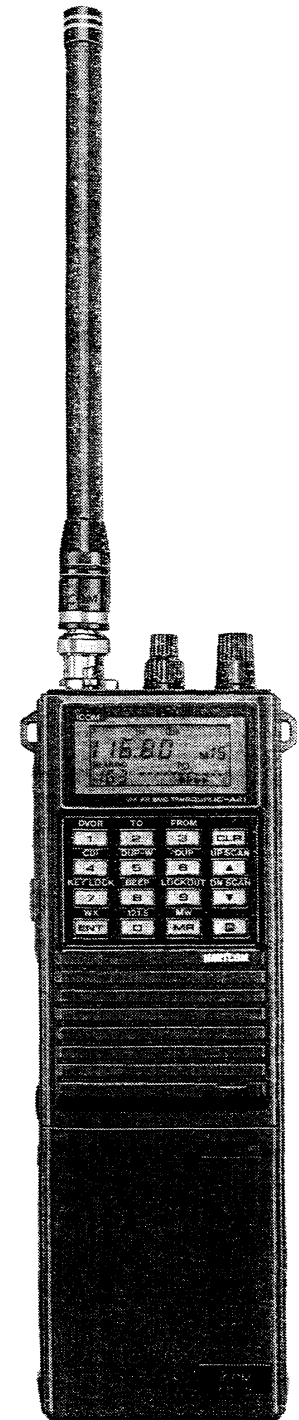


**ICOM**

**INSTRUCTION MANUAL**

VHF AIR BAND TRANSCEIVER

**IC-A21**



**Icom Inc.**

---

## IMPORTANT

---

**READ THIS INSTRUCTION MANUAL CAREFULLY** before attempting to operate the transceiver.

**SAVE THIS INSTRUCTION MANUAL —**  
This instruction manual contains important safety and operation instructions for the IC-A21.

---

## FOREWORD

---

Thank you for purchasing the IC-A21 VHF AIR BAND TRANSCEIVER. The IC-A21 is a compact, easy-to-operate handheld with VOR navigation receive capability designed with Icom's state-of-the-art technology.

To fully appreciate the capabilities of your new IC-A21, please read this instruction manual thoroughly before attempting operation. If you have any questions regarding the operation of the IC-A21, feel free to contact your nearest authorized Icom Dealer or Service Center.

---

## CAUTIONS

---

**NEVER** connect the transceiver via the [13.8 V DC IN] jack to an AC outlet or to a power source of more than 16 V DC. These connections will ruin the transceiver.

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

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

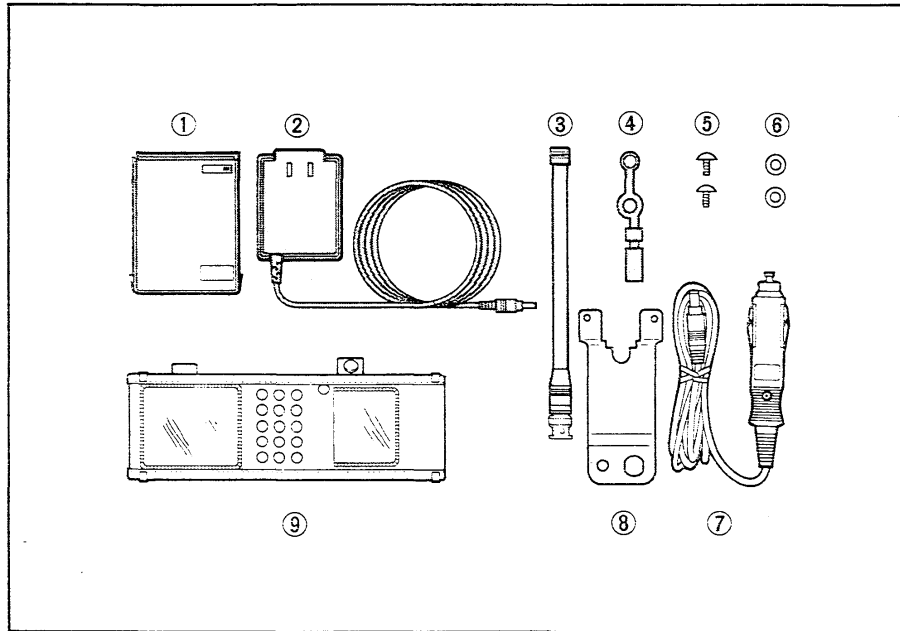
**NEVER** use chargers other than those suggested on p. 3.

**AVOID** using or placing the transceiver in areas with temperatures below  $-10^{\circ}\text{C}$  or over  $+50^{\circ}\text{C}$ .

**AVOID** placing the transceiver for long periods in direct sunlight.

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

# UNPACKING



Accessories included with the IC-A21:	QTY.
① CM-7G BATTERY PACK.....	1
② CM-16U/E or CM-17E WALL CHARGER.....	1
③ Flexible antenna.....	1
④ Rubber cap.....	1
⑤ Belt clip mounting screws.....	2
⑥ Belt clip mounting washers.....	2
⑦ CM-1 CIGARETTE LIGHTER CABLE.....	1
⑧ Belt clip.....	1
⑨ LC-74 CARRYING CASE.....	1

# TABLE OF CONTENTS

IMPORTANT .....	i
FOREWORD .....	i
CAUTIONS.....	i
UNPACKING.....	ii
TABLE OF CONTENTS .....	ii
1 FEATURES .....	1
2 ATTACHING ACCESSORIES .....	2
3 POWER REQUIREMENT .....	3~4
4 PANEL DESCRIPTION.....	5~10
5 BASIC OPERATION .....	11~14
6 MEMORY OPERATION .....	15
7 DUPLEX OPERATION .....	16
8 SCAN OPERATION.....	17~18
9 VOR NAVIGATION.....	19~24
10 TROUBLESHOOTING.....	25
11 SPECIFICATIONS.....	26
12 OPTIONS.....	27~28

## VOR NAVIGATION

The IC-A21 allows you to receive VOR navigation information. In DVOR mode, the IC-A21 displays the bearing to the VOR station. In CDI mode, it shows the deviation from desired course.

## CONVENIENT FREQUENCY SELECTION

With the IC-A21 you can immediately select a desired operating frequency by using keyboard entry or rotating the tuning knob.

## EXTERNAL DC POWER JACK

The IC-A21 is equipped with an external DC power jack. Operate the transceiver with either the battery pack or an external power source such as a power supply, cigarette lighter socket in a vehicle, etc. No optional DC-DC converter is necessary if you use 12~15 V DC power supply; battery charging can also be performed using this jack.

## 5 W OUTPUT POWER

With the supplied CM-7G BATTERY PACK, the IC-A21 provides a full 5 W (PEP) of output power. And 1.6 W (PEP) of low output power is selectable.

## 10 VHF WEATHER CHANNELS

The U.S.A. version has VHF marine weather channel receiving capability for flight planning.

## DUPLEX CAPABILITY

The U.S.A. version has duplex capability and allows transmission of a frequency in COM band when receiving a VOR frequency in NAV band. You can call a flight service station while receiving a VOR signal.

## 20 MEMORY CHANNELS

The transceiver has 20 memory channels with a lock-out function. The U.S.A. version memorizes an independent duplex frequency in each memory channel.

## ADDITIONAL FEATURES

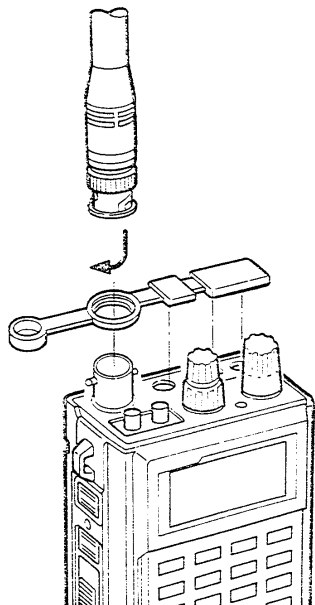
- 3 scanning systems: programmed scan, memory scan and weather channel scan\*
- Keyboard and function display backlights
- One-touch emergency frequency access capability
- ANL (Automatic Noise Limiter) and AGC (Automatic Gain Control) circuits
- Weatherproof and heavy-duty construction
- A variety of options

\*Weather channel: U.S.A. version only

## • Antenna and rubber cap

Attach the rubber cap before connecting the antenna to protect the connectors from dust.

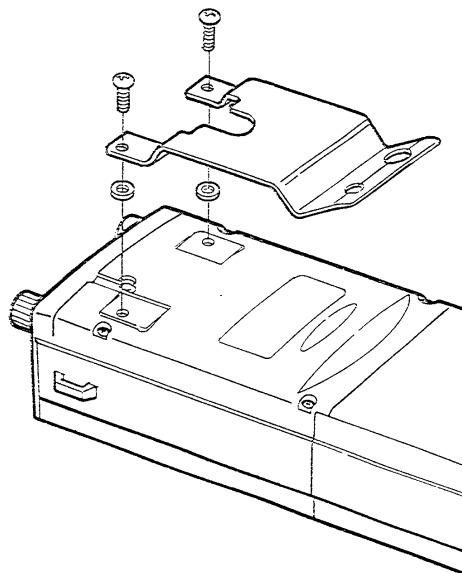
Insert the supplied antenna into the antenna connector and twist the connector on the antenna as shown in the diagram below.



## • Belt clip

The belt clip allows you to attach the transceiver to your belt.

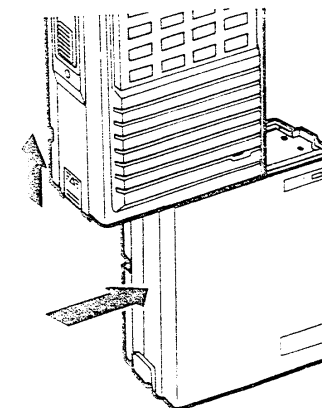
Attach the belt clip to the rear panel using the supplied screws and washers.



## • Battery pack removal

Push the battery pack release button upwards, then slide the battery pack to the right with the transceiver facing you.

To attach the battery pack, mate the notched ends of the transceiver and the battery pack, and slide until a click sound is heard.



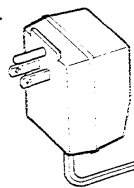
## 3-1 Charging connection

• Using the supplied wall charger

Connect the supplied wall charger to the [WALL CHARGER] jack on the side of the battery pack.

Turn power  
OFF.

to AC outlet  
(Receptacle)



The supplied wall  
charger, CM-16U/E  
or CM-17E

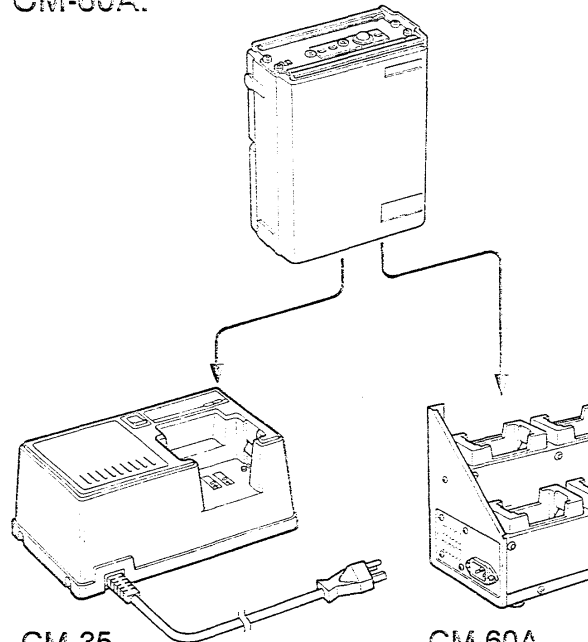
To use the supplied  
CM-1, see Section 3-3.

[CHARGE]  
lights up.

Charging time: 15 hrs. (approx.)

• Using an optional CM-35  
or CM-60A

Install the battery pack into the  
charging slot of the CM-35 or  
CM-60A.



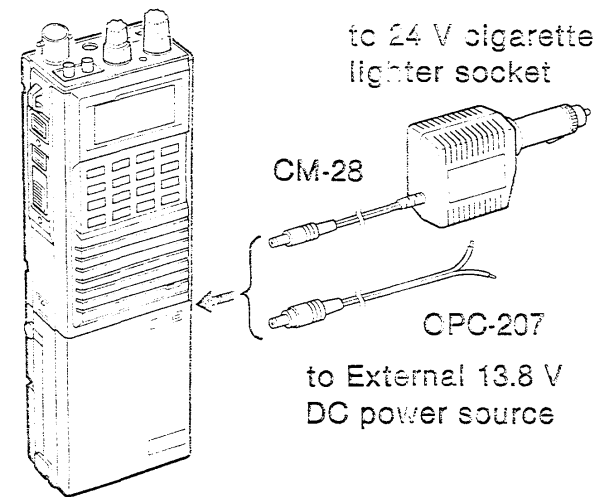
CM-35  
AC BATTERY  
CHARGER

CM-60A  
MULTI-  
CHARGER

Charging time: 1.5 hrs. (CM-35)  
(approx.) 5 hrs. (CM-60A)

• Optional charger and  
cables

Connect to the [DC 13.8 V] jack  
on the side of the battery pack.



to 24 V cigarette  
lighter socket

CM-28

CPC-207

to External 13.8 V  
DC power source

Charging time: 15 hrs. (approx.)

## 3-2 Charging notes

1. **DO NOT** charge a battery pack longer than 30 hours, and **AVOID** completely discharging it. Both of these will shorten the battery's life.
2. **AVOID** charging in extreme cold (under 0°C) or extreme heat (over +40°C).
3. The battery pack to be charged should be nearly fully discharged. Frequent charges of a battery pack that is only partially discharged may not result in a full charge.

### • Backup battery

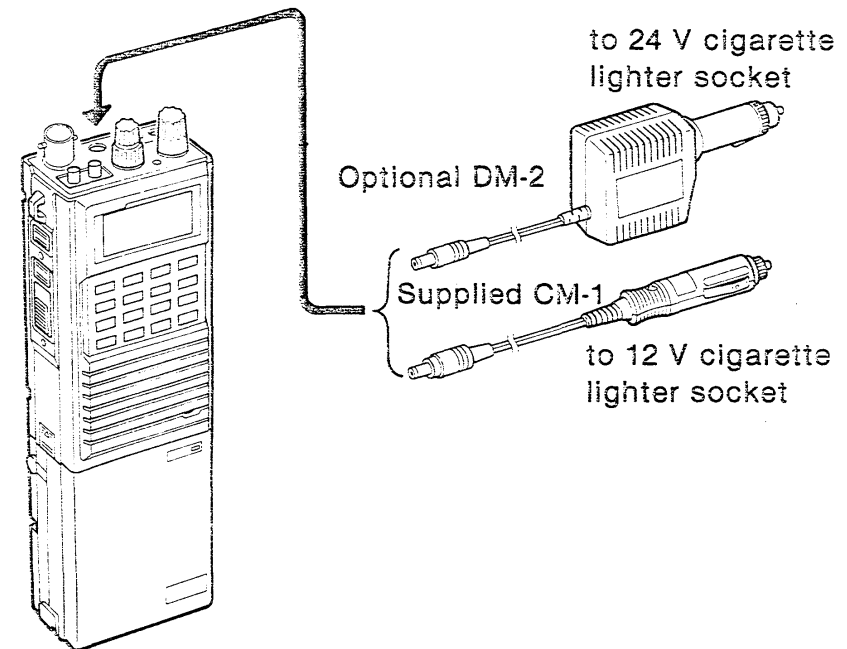
The IC-A21 has a built-in backup battery for retaining memory information. The usual life of the battery is more than 5 years. If the battery is exhausted, the transceiver operates normally but contents in memory channels are not retained when power is turned OFF.

Backup battery replacement **MUST** be done by an authorized Icom Dealer or Service Center.

## 3-3 External DC power source

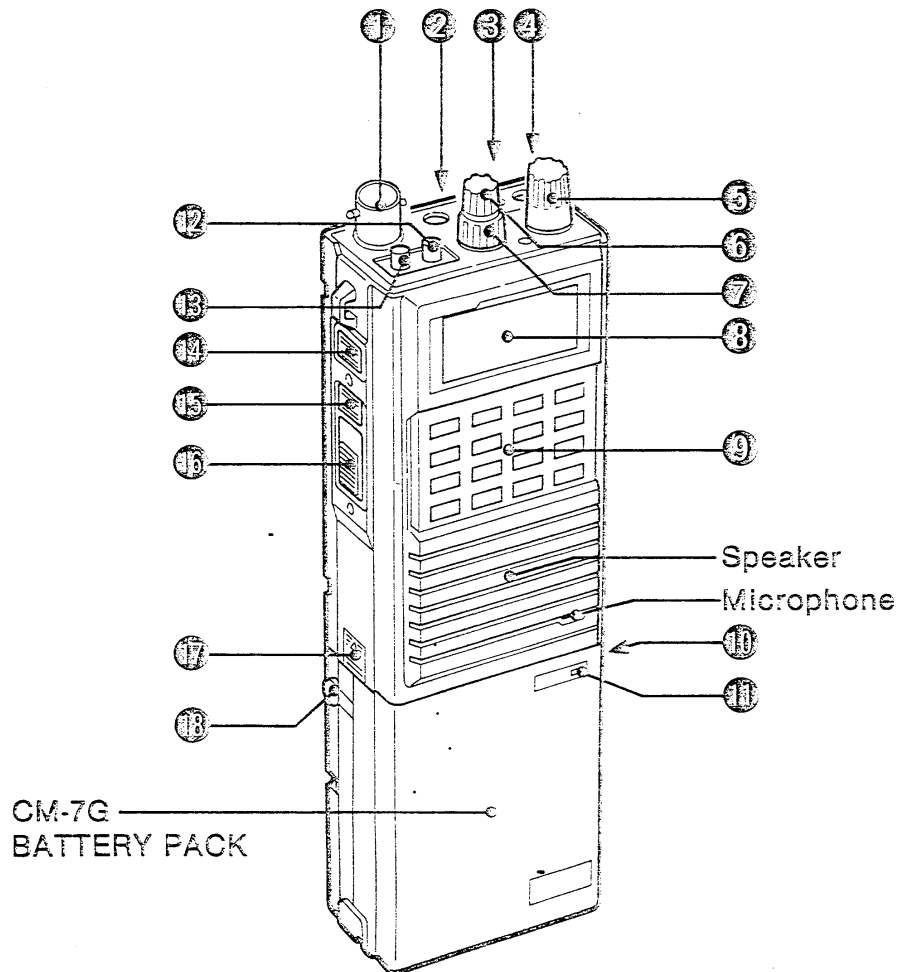
The IC-A21 allows operation with a 13.8 V DC power source using an optional cable. Apply 12~15 V DC to the [13.8 V DC IN] jack.

The attached battery pack will be charged while an external power source is connected.



An optional CM-28 cannot be used to operate the IC-A21. The CM-28 is only for charging.

## 4-1 Switches and controls

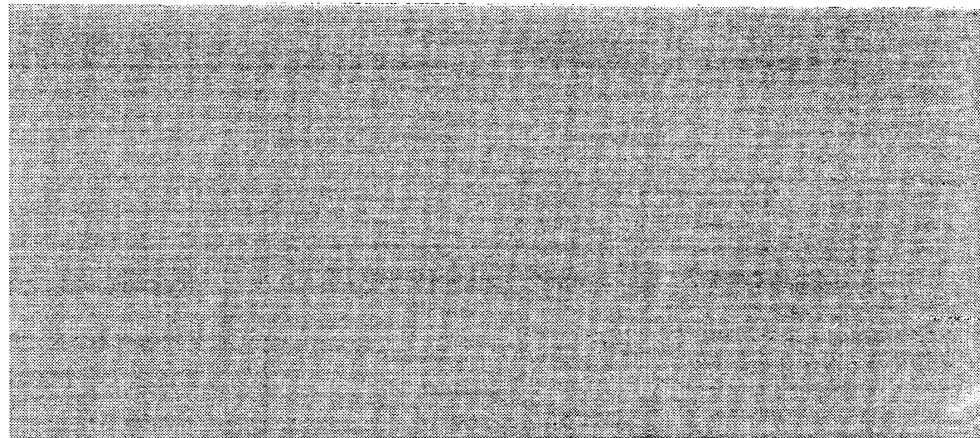


- ① **ANTENNA CONNECTOR** (p. 2)  
Connects the supplied flexible antenna.
- ② **EXTERNAL DC POWER JACK [13.8 V DC IN]** (p. 4)  
Allows operation with a 13.8 V DC power source using the supplied cigarette lighter cable or the DM-2 DC-DC CONVERTER.
  - The attached battery pack will be charged while an external power source is connected.
- ③ **EXTERNAL MIC JACK [MIC]**  
Connects an optional speaker-microphone or headset, if desired.
- ④ **EXTERNAL SPEAKER JACK [SP]**  
Connects an earphone or headset, if desired.
  - The internal speaker will not function when either an earphone or headset is connected.
- ⑤ **TUNING KNOB [DIAL]**  
Sets an operating frequency (pgs. 11, 12), memory channel (p. 15) or weather channel\* (p. 13).
- ⑥ **VOLUME CONTROL [VOL]** (p. 13)  
Turns power ON and adjusts the audio level.

\*Weather channel: U.S.A. version only



**Count on us!**



A-5134H-1US-①  
Printed in Japan  
Copyright © 1990 by Icom Inc.

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