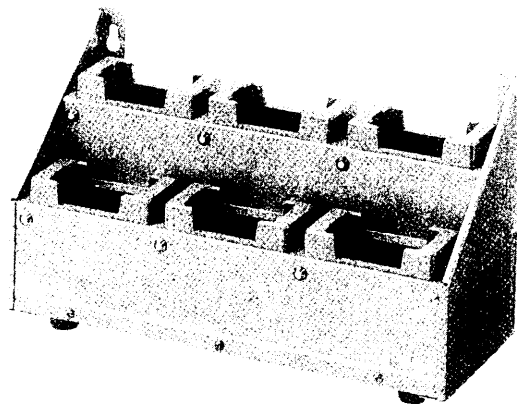


**ICOM**

**INSTRUCTION MANUAL**

MULTI-CHARGER  
**CM-60A**



**Radio Mods Manuals**

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## FOREWORD

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Thank you for purchasing the CM-60A MULTI-CHARGER.

The CM-60A is designed to simultaneously charge up to 6 of Icom's CM-2, CM-3, CM-5, CM-5A, CM-7, CM-8 and CM-96 BATTERY PACKS.

By using the optional AD-10 CHARGER ADAPTER, the CM-60A also charges Icom's CM-21, CM-23, CM-24, CM-79, CM-80, CM-87, CM-88 and CM-92 BATTERY PACKS.

The CM-60A Europe and U.K. versions comply with the European Community Low Voltage Directive, and are type tested according to EN60 950.

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## FEATURES

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- Simultaneously charges up to 6 battery packs.
- Automatically charges without switch settings.
- Full charge detection circuit that prevents overcharging.
- Built-in cooling fan that ensures stable charging.
- Bright, easy-to-see charging indicators.
- Can be placed on a table or mounted on a wall.

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## IMPORTANT SAFETY INSTRUCTIONS

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**READ ALL INSTRUCTIONS** carefully and completely before using the CM-60A.

**SAVE THIS INSTRUCTION MANUAL.** This instruction manual contains important safety and operating instructions.

**⚠ NEVER** charge non-specified battery packs and battery cases, since they may burst, causing damage and personal injury. Charge only specified Icom battery packs.

**⚠ NEVER** expose the CM-60A to rain, snow or any liquids.

**⚠ NEVER** use a damaged AC power cable or AC plug.

**⚠ NEVER** operate the CM-60A if it has been dropped or damaged in any way. In such cases, the CM-60A must be inspected by an authorized Icom Dealer.

**⚠ NEVER** disassemble the CM-60A. Incorrect reassembly may result in a fire hazard or electric shock.

**⚠ NEVER** use the CM-60A to power other applications.

**⚠ NEVER** let metal, wire, etc., touch any internal parts.

**⚠ NEVER** place the CM-60A within the reach of babies or children.

**NEVER** place liquids on or near the CM-60A.

**NEVER** use the CM-60A when it is covered by objects which impede heat dispersion.

**NEVER** mount the CM-60A to a weak wall. Total weight of the CM-60A including transceivers and battery packs may exceed 10 kg; 22 lb.

**NEVER** drill extra holes in the supplied charger hanger.

**NEVER** pull the AC power cable when disconnecting from an AC outlet. Pull the AC plug to reduce the risk of damage to the AC power cable.

Make sure the AC power cable is placed where it cannot be stepped on, tripped over or subjected to damage.

The AC outlet must be near the CM-60A and easily accessible.

Die Steckdose muss nahe bei diesem Gerät angebracht und leicht zugänglich sein.

The supplied AC power cable with type-approved AC plug must be used.

Be sure to unplug the AC power cable from an AC outlet to reduce the risk of electric shock before maintenance or cleaning.

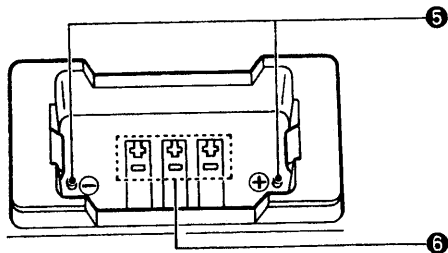
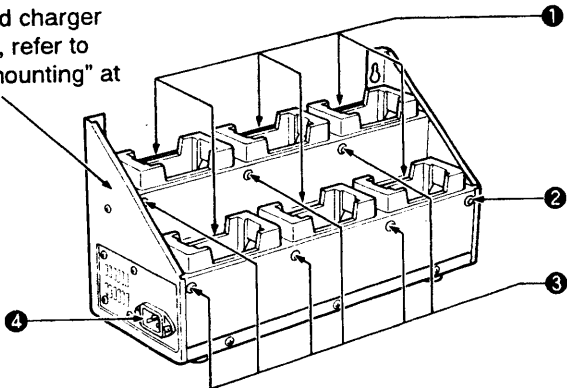
◇ **For U.K. customers only**

**⚠ WARNING!** When replacing the fuse in the AC power cable, use only the BS1362 fuse with 3 A rating. A different fuse may result in a fire hazard.

# 1

## PANEL DESCRIPTION

To attach the supplied charger hanger, refer to "Wall mounting" at right.



### ❶ CHARGING SLOTS

Accept up to 6 specified Icom battery packs.

### ❷ POWER INDICATOR [POWER]

Lights up in green while AC power is applied.

### ❸ CHARGING INDICATORS

- Light up in red during charging.
- Light up in green when charging is completed.

### ❹ AC POWER RECEPTACLE

Connects to a domestic AC outlet using the supplied AC power cable.

### ❺ CHARGING TERMINALS

Connect to terminals on the bottom of a battery pack.

### ❻ MICRO SWITCHES

Automatically select the correct charging current according to holes on the bottom of each battery pack.

### ◆ Wall mounting

Attach the supplied charger hanger to mount the CM-60A on a wall. Use the supplied screws as follows:

- Bottom head screws on both sides.
- Flat head screws on the rear panel.
- Self tapping screws for wall mounting.

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# CHARGING PRECAUTIONS

# 2



**DO NOT** attempt to charge dry cell batteries in the CM-4 BATTERY CASE. Otherwise, battery leakage may occur and the CM-60A may be damaged.

**DO NOT** attempt to charge a fully charged battery pack.

**DO NOT** obstruct holes on the bottom of the battery pack.

**AVOID** charging in extreme cold (under 0°C) or extreme heat (over 40°C).

Unplug the AC power cable from an AC outlet when the CM-60A is not used.

When charging a battery pack with a transceiver, use the supplied insulator strip to protect the top of the battery pack from shorts.

Following battery packs should be charged:

- Newly-purchased battery packs.
- Battery packs that are not-recharged for more than 2 months.

## ◇ Using your battery wisely

**AVOID** over discharging. Use the battery pack until it becomes almost completely exhausted under normal conditions. Charge as soon as transmitting becomes impossible.

**AVOID** over charging. When charging indicator lights in green, remove the battery pack from the charging slot. **DO NOT** leave the battery pack in the charging slot more than 24 hrs.

If a battery pack does not have enough capacity even after charging, leave the transceiver's power ON overnight to discharge. Then, charge the battery pack again. If the capacity is not enough, purchase a new battery pack.

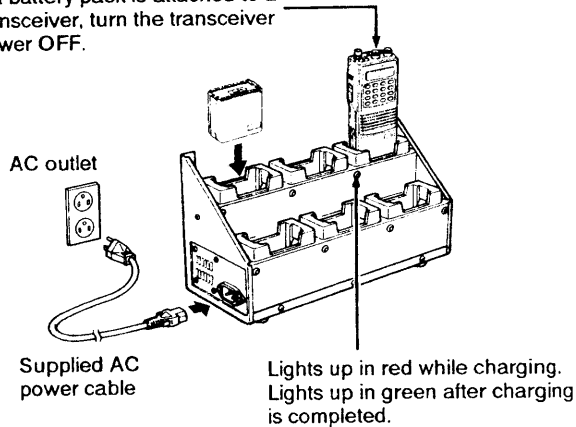
# 3

## OPERATIONS

- ① Connect the CM-60A to an AC outlet with the supplied AC power cable.
  - [POWER] lights up in green.

- ② Insert a battery pack into a charging slot to start charging.

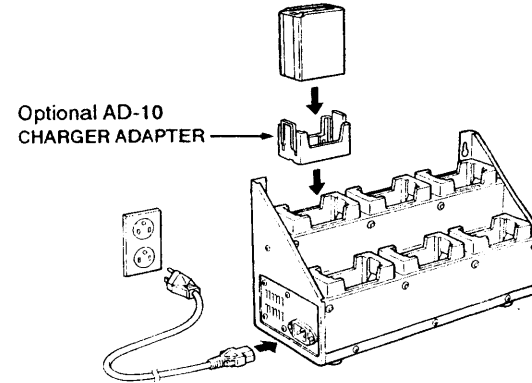
If a battery pack is attached to a transceiver, turn the transceiver power OFF.



- ③ When the charging indicator lights up in green, pull out the charged battery pack within 24 hrs.
  - After charging is completed, the CM-60A automatically selects trickle charging. Refer to "What is trickle charging?" at right.

### ◆ Optional charger adapter

To charge the CM-21, CM-23, CM-24, CM-79, CM-80, CM-87, CM-88 or CM-92 BATTERY PACKS, the optional AD-10 CHARGER ADAPTER is required.



### ◆ What is trickle charging?

If the battery pack is left in the charging slot after charging is completed, the CM-60A automatically selects trickle charging. Trickle charging prevents battery pack voltage drops after charging.

## Battery pack specifications

Battery pack	Voltage	Capacity	Height	Charging period	Transceivers See below
CM-2/G	7.2 V	450 mAh	39 mm; 1.5 in	5 hrs.	A
CM-3/G	8.4 V	270 mAh	39 mm; 1.5 in	3.5 hrs.	A
CM-5/G	10.8 V	450 mAh	56 mm; 2.2 in	5 hrs.	A
CM-5A/AG	10.8 V	450 mAh	80 mm; 3.1 in	5 hrs.	A
CM-7/G/B	13.2 V	450 mAh	80 mm; 3.1 in	5 hrs.	A, B
CM-8/G/B	8.4 V	800 mAh	80 mm; 3.1 in	9.5 hrs.	A
CM-21*	7.2 V	120 mAh	32.5mm; 1.3 in	2 hrs.	C
CM-23*	8.4 V	600 mAh	70.5 mm; 1.5 in	7 hrs.	C
CM-24*	10.8 V	600 mAh	85 mm; 3.3 in	7 hrs.	C
CM-79*	7.2 V	600 mAh	67 mm; 2.6 in	5 hrs.	D, E
CM-80*	7.2 V	600 mAh	67 mm; 2.6 in	5 hrs.	D, E
CM-87*	7.2 V	1100 mAh	100 mm; 3.9 in	9 hrs.	C
CM-88*	12.0 V	600 mAh	80 mm; 3.1 in	4.5 hrs.	C
CM-92*	7.2 V	600 mAh	67 mm; 2.6 in	5 hrs.	E
CM-96/G/B	8.4 V	1200 mAh	80 mm; 3.1 in	11 hrs.	A

A: For the IC-M5, IC-M11, IC-H16, IC-U16 and IC-H21T.

B: For the IC-A20 and IC-A21.

C: For the IC-H10 and IC-U10.

D: For the IC-H8, IC-U8, IC-H11 and IC-U11.

E: For the IC-H28 and IC-U28.

\*The optional AD-10 is required.

## CM-60A specifications

- Number of charging battery : Up to 6 packs
- Usable temperature range : 0°C to +35°C
- Power requirement

U.S.A.	117 V AC 60 Hz
Australia	240 V AC 50 Hz
Europe	230 V AC 50 Hz
U.K.	230 V AC 50 Hz

- Current drain : U.S.A. version 480 mA  
Other versions 245 mA
- Power consumption : 56 W
- Output voltage : 15.5 V
- Charging current : 145 mA
- Dimensions : 310(W) × 148(H) × 120(D) mm  
12.2(W) × 5.8(H) × 4.7(D) in
- Weight : 2.95 kg; 6.5 lb

All stated specifications are subject to change without notice or obligation.

**Count on us!**

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