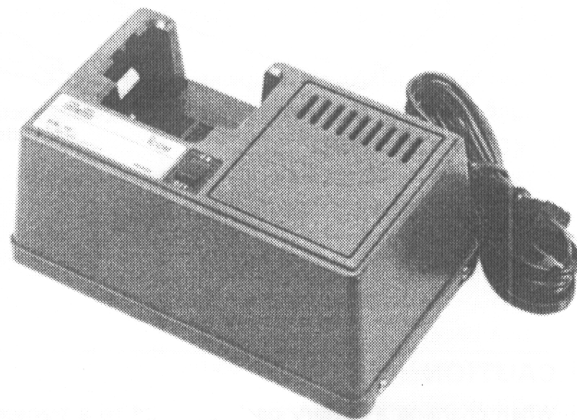


ICOM

INSTRUCTION MANUAL

AC BATTERY CHARGER
CM-35



Icom Inc.

FOREWORD

Thank you for purchasing the Icom **CM-35** AC BATTERY CHARGER. Please read this instruction manual carefully before using the **CM-35**.

The **CM-35** charges the **CM-2/G**, **CM-3/G**, **CM-5/G**, **CM-5A/AG**, **CM-7/G**, **CM-8/G** and **CM-96** battery packs. The **CM-4/G** battery case with NiCd batteries may also be charged by the **CM-35**. These slide-on battery packs may be charged alone or when attached to a handheld transceiver.

FEATURES

- The built-in full-charge detector circuit prevents over-charging. Charging stops when a battery pack reaches full charge.
- The red [PWR] indicator is lighted when the power is ON.
- The red [CHG] indicator is lighted during charging and automatically turns OFF when charging is completed.

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS!**
This manual contains important safety and operating instructions for the **CM-35** AC BATTERY CHARGER.
2. Read all instructions thoroughly and carefully before using this battery charger.
3. **CAUTION!** To reduce the risk of injury, charge only specified Icom NiCd rechargeable batteries. Other types of batteries may burst, causing damage and personal injury.
4. **DO NOT** expose the battery charger to rain, snow or liquids.
5. Using an accessory which Icom does not sell or recommend may result in a fire hazard or electric shock.
6. When disconnecting the charger, pull the plug (not the cord) from the outlet to reduce the risk of damage to the plug and cord.
7. Make sure the cord is placed where it can not be stepped on, tripped over or otherwise subject to damage.

8. An extension cord should not be used unless absolutely necessary. Using unsuitable extension cords may result in a fire hazard or electric shock. If an extension cord must be used, make sure that:

- the pins of the extension cord plug are identical in number, size, and shape to those of the charger plug.
- the extension cord is properly wired and in good electrical condition.
- the gauge of a cord up to 100 feet long is larger than 18AWG; up to 150 feet long, larger than 16AWG.

9. **DO NOT** operate the battery charger with a damaged cord or plug. Replace immediately.

10. **DO NOT** operate the battery charger if it has been dropped or damaged in any way. The battery charger must be inspected by an authorized service center.

11. **DO NOT** disassemble the battery charger. Incorrect reassembly may result in a fire hazard or electric shock.

12. To reduce the risk of electrical shock, unplug the charger from the outlet before maintenance or cleaning.

13. **DO NOT** use this battery charger to power appliances.

14. **DO NOT** let metal, wire, etc., touch any internal part of the battery charger.

15. **DO NOT** place liquids on or near the battery charger.

16. **DO NOT** use the battery charger when it is covered by objects which impede heat dispersal.

17. **DO NOT** place the battery charger within the reach of babies or children at any time.

1 PANEL DESCRIPTION

① CHARGING TERMINAL (NEGATIVE)

② MICROSWITCHES

These switches select the correct current for each battery pack.

③ CHARGING TERMINAL (POSITIVE)

④ BATTERY PACK CHARGING SLOT

⑤ AC POWER CORD

Plug the cord into a domestic AC outlet. The diagram may differ depending on the versions.

If the cord is damaged, the charger must be sent to an authorized service center for repair.

⑥ POWER INDICATOR [PWR]

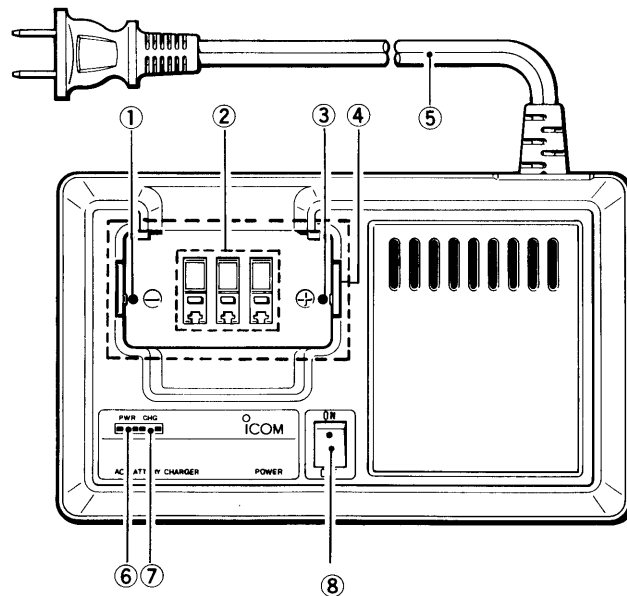
Lighted when the power is ON.

⑦ CHARGING INDICATOR

Lighted during charging. Automatically turns OFF when charging is completed.

⑧ POWER SWITCH [ON/OFF]

Turns the power ON and OFF.



- **NEVER** throw batteries into fire. Internal battery gas can cause an explosion.
- **NEVER** put the charger or battery pack in water. Wipe the battery pack dry before charging.
- **NEVER** disassemble the battery pack.
- **AVOID** charging in extreme cold (under 0°C, 32°F) and extreme heat (over 40°C, 104°F).
- **DO NOT** charge a fully charged battery pack.
- **AVOID** poor AC power sources, e.g., poorly regulated voltage.
- NiCd battery packs can be charged about 300 times. After 300 charges, a new battery pack should be purchased. The internal batteries are not replaceable.
- **DO NOT** short the positive and negative contacts on the battery pack. Cover them with the plastic insulator strip (supplied).
- **DO NOT** obstruct the three small square holes on the bottom of the battery pack.

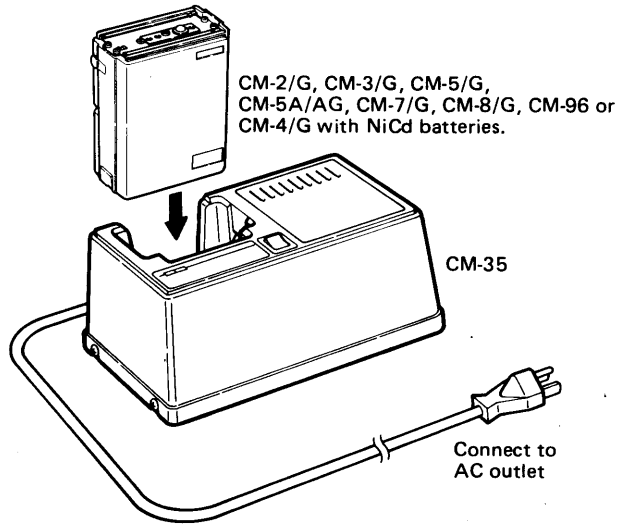
- To prevent interference, keep the battery charger away from TV sets and radios.
- **DO NOT** carry the charger by the AC power cord.
- Unplug the AC power cord from the AC outlet when the charger is not in use.
- To clean the cabinet, wipe gently with a moist soft cloth, and then pat dry. **DO NOT** use alcohol, thinner or benzene or any other liquid which may damage the finish.

BATTERY MEMORY EFFECT

The full charge capacity of NiCd rechargeable batteries may be reduced if repeatedly charged with only partial discharge periods. This is called the battery memory effect. If the battery capacity seems lower than new, discharge the battery pack through normal use, then charge fully using the proper charger.

3

CHARGING OPERATIONS



CAUTION:

When charging a battery pack attached to a transceiver, the power switch of the transceiver must be turned OFF. Failing to do so may damage the transceiver.

- 1) Plug the AC power cord into a domestic AC power outlet.
- 2) Turn ON the [ON/OFF] switch.
 - The red [PWR] indicator lights.
- 3) Put the battery pack in the charging slot as shown in the diagram at left.
 - The red [CHG] indicator lights when the battery pack is correctly inserted.
 - The battery charger normally gets a little warm during charging.
 - While the battery pack together with the transceiver is inserted in the charger, the transceiver can receive. However, **DO NOT** attempt to transmit.
- 4) When charging is finished, the red [CHG] indicator on the charger automatically turns OFF.

MALFUNCTIONS:

If the [CHG] indicator does not turn OFF after 2 hours of charging, the battery pack may need checking.

The battery pack should be checked by an authorized Icom Dealer or Service Center. We recommend that you have the charger checked, too.

- Power requirement : CM-35 (U.S.A.) 117 V AC 50/60 Hz
CM-35 (Europe) 240 V ~ 50/60 Hz
- Output voltage : 16 V DC (16 V $\overline{\text{---}}$)/1.3 A
- Dimensions : 172 (W) x 72 (H) x 104 (D) mm
6.8 (W) x 2.8 (H) x 4.1 (D) in
(Rubber feet and AC power cord not included)
- Weight : 1.6 kg (3.5 lbs)
- Usable temperature range : 0°C ~ 40°C (32°F ~ 104°F)
- Power consumption : 32 W

■ BATTERY PACK SPECIFICATIONS

BATTERY PACK	CAPACITY	OUTPUT VOLTAGE	CHARGING CURRENT	CHARGING PERIOD (APPROX.)	HEIGHT
CM-2 CM-2G	450 mAh	7.2 V	600 mA	1.5 hrs.	39 mm 1.5 in
CM-3 CM-3G	270 mAh	8.4 V	25 mA	15 hrs.	39 mm 1.5 in
CM-5 CM-5G	450 mAh	10.8 V	600 mA	1.5 hrs.	56 mm 2.2 in
CM-5A CM-5AG	450 mAh	10.8 V	600 mA	1.5 hrs.	80 mm 3.1 in
CM-7 CM-7G	450 mAh	13.2 V	600 mA	1.5 hrs.	80 mm 3.1 in
CM-8 CM-8G	800 mAh	8.4 V	600 mA	3 hrs.	80 mm 3.1 in
CM-96	1200 mAh	8.4 V	600 mA	3 hrs.	80 mm 3.1 in
CM-4 CM-4G	AA size NiCd x 6 (Alkaline x 6)	7.2 V (9.0 V)	45 mA ($\overline{\text{---}}$)	15 hrs. ($\overline{\text{---}}$)	49 mm 1.9 in

WARNING FOR CUSTOMERS IN THE UNITED KINGDOM

WARNING: THIS APPARATUS MUST BE EARTHED.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

GREEN AND YELLOW — EARTH
BLUE — NEUTRAL
BROWN — LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, **PROCEED AS FOLLOWS:**

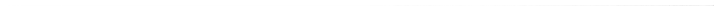
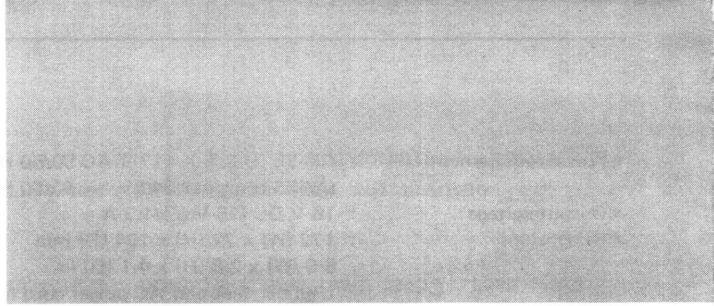
The wire coloured **GREEN AND YELLOW** must be connected to the terminal on the plug marked with the letter E or the safety earth symbol $\overline{\text{---}}$ or coloured **GREEN** or **GREEN AND YELLOW**.

The wire coloured **BROWN** must be connected to the terminal marked with the letter L or coloured **RED**.

The wire coloured **BLUE** must be connected to the terminal marked with the letter N or coloured **BLACK**.

Ensure that your equipment is connected correctly. If you are in any doubt consult a qualified electrician.

Count on us!



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