

mAT-705 Automatic Antenna Tuner

For ICOM IC-705 Transmitter
Quick Operation Guide

Product Overview

The mAT-705 is a compact automatic antenna tuner designed specifically for the ICOM IC-705 HF/VHF/UHF transmitter. It ensures optimal signal transmission by automatically matching a wide range of antennas from 160 to 6 meters, making field operation simple and reliable.

Key Features

- **Wide Impedance Range:** Matches 5 to 1500 ohms across HF and 50 MHz bands for versatile antenna compatibility.
- **Seamless Transmitter Control:** Connects and is controlled directly by the IC-705 via the included 3.5 mm cable (TUNER to CON port).
- **Portable & Efficient Design:** Powered by built-in lithium batteries, which recharge conveniently via a standard Type-C USB port—allowing you to use a phone charger or any USB power source. Energy-saving magnetic latching relays extend battery life during operation.

Note: RF coaxial cables are not included and must be supplied separately.

Package Includes:

mAT-705 Automatic Antenna Tuner.
3.5mm Adapter Cable.
TYPE-C charging cable.

Front panel

PWR/CHARGE indicator light: Displays power status and charging status.

Green: Tuner powered on

Red: Tuner charging

ONLINE/TUNING indicator light:

Off: Tuner bypassed

Green: Tuner active

Red: Tuner tuning

CHARGE: Standard Type-C USB interface, allowing for convenient charging of the tuner using a mobile phone charger.



Rear panel

CON – Connect to the transmitter's "TUNER" jack using the adapter cable.

ANT – Coaxial connector for the antenna.

RF IN – Connect to the transmitter's "ANT" socket using a coaxial cable.



Charging

- Two built-in 10440 lithium batteries. Each battery is 3.7 V, 350 mAh.
- Use the included Type-C USB cable to charge.
- Charging current is 500 mA. Full charge takes about 2 hours.

- Charging voltage should be 4.5–5.5 V.
- During charging, the "PWR/CHARGE" will illuminate in red. It will turn off once charging is complete.
- If the "PWR/CHARGE" light flashes red during charging, the battery may be faulty. Check or replace the battery.
- If the green PWR/CHARGE light flashes when the tuner starts, the battery needs charging.

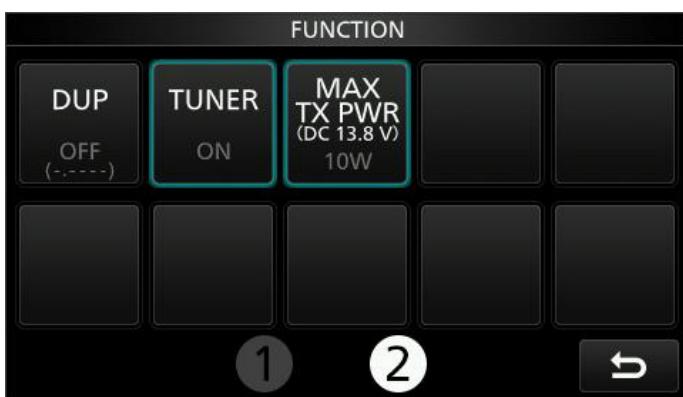
Operation

Before use, please ensure that the adapter cable is fully inserted into the sockets on both the transmitter and tuner.

- The mAT-705 does not have a separate power switch; it is powered on and off along with the IC-705 transmitter.
- After turning on the IC-705 transmitter, the green "PWR/CHARGE" indicator light on the tuner will illuminate.

Start tuning – Method A:

1. Open the function menu on the transmitter. The **[TUNER]** button will be highlighted when it is available. If it is grayed out and unavailable, please check the adapter cable.
2. If **[TUNER]** shows **"OFF"**, press it. The transmitter will start a tuning cycle.



the transmitter's screen.

3. While tuning, the **ONLINE/TUNING** light on the tuner is red. **"TUNE"** will flash on the transmitter screen.
4. When tuning is done, **[TUNER]** will show **"ON"**. The tuner's **ONLINE/TUNING** light turns green. The word **"TUNE"** will be displayed steadily on
5. To bypass the tuner, press the **[TUNER]** button again to switch it to **"OFF"**. This puts the tuner in bypass mode, where the **"RF IN"** and **"ANT"** connectors are directly connected.

Start tuning – Method B:

- If the **PTT TUNE** function is enabled on the transmitter, press PTT on a new frequency. The tuner will start tuning automatically.
- The **PTT TUNE** function is on by default. If you turn it off, this method will not work. See the IC-705 manual for details.

Specifications

Item	Specification
Frequency Range	1.8 - 54 MHz
Maximum Input Power	10W
Impedance Range	5 – 1500 Ω
Tuning Time	5 seconds or less
Charging	Type-C, 4.5--5.5 V, Max. 1A
Operating Temperature	-10°C ~ +60°C (14°F ~ 140°F)
Dimensions (W x H x D)	67 × 29 × 151 mm (2.64 × 1.45 × 5.95 in)
Weight	237 g (8.36 oz)

Support & Resources

For the latest product information, manual downloads, or to find where to buy, please visit our website: <http://www.mat-tuner.com/>.