

mAT-705**Automatic Tuner for ICOM IC-705 Transceiver***Instruction Manual Version V1.0***INTRODUCTION**

The mAT-705 is a compact and exquisite tuner designed for ICOM IC-705 transmitter. It is connected to the TUNER socket of the IC-705 transmitter through a dedicated control cable mAT-705-CB (standard accessory of the tuner). User can realize simple and convenient tuning through the function menu of the transmitter.

The tuner uses an aluminum metal shell, and the panel uses aluminum milling technology and laser engraving. It is exquisite, beautiful and firm, and is very suitable for outdoor portable use by users.

The mAT-705 tuner is powered by a disposable 9V alkaline battery, which makes it very convenient for users to replace battery and air transportation. Magnetic latching relays are all used inside the tuner, which saves energy and can be used for a long time with a new battery. When the frequency does not change, the user can directly turn off the power without affecting the use. In order to save power to the greatest extent, the tuner directly uses switching control power. Does not consume any power when shutting down.

The tuner comes with a control cable mAT-705-CB, and the user does not need to purchase it. Both ends of the control cable are standard 3.5 plugs, one plug is connected to the TUNER socket of the transmitter, and the other plug is connected to the CON socket of the tuner. The transmitter can control the tuner through this cable to realize automatic tuning. The RF cable mAT-RC1 that connects the transmitter and the tuner is not a standard accessory, it is an option, which allows users to have more choices. The RF cable mAT-RC1 is a common coaxial cable with BNC plugs at both ends. If the user already owns such a cable, there is no need to spend extra money to purchase it.

The tuner can work within the range of 1.8MHz to 54MHz. It will tune dipoles, verticals, Yagis, or virtually any coax-fed antenna. It will match an amazing range of antennas and impedances, far greater than some other tuners you may have considered, including the built-in tuners on many transceivers.

The mAT-705 has 16,000 frequency memories. When tuning on or near a previously tuned frequency, the mAT-705 uses "Memory Tune" to recall the previous tuning parameters in a fraction of a second. If no memorized settings are available, the tuner runs a full tuning cycle, storing the parameters for memory recall on subsequent tuning cycles on that frequency. In this manner, the mAT-705 "learns" as it is used, adapting to the bands and frequencies as it goes.

In addition to tuners, the package of mAT-705 includes control cable mAT-705-CB, L-shaped wrench (for battery replacement), and user manual. The user manual can also download the latest version directly from our web page. The RF cable mAT-RC1 is not a standard accessory, users can choose to purchase it.

SPECIFICATIONS

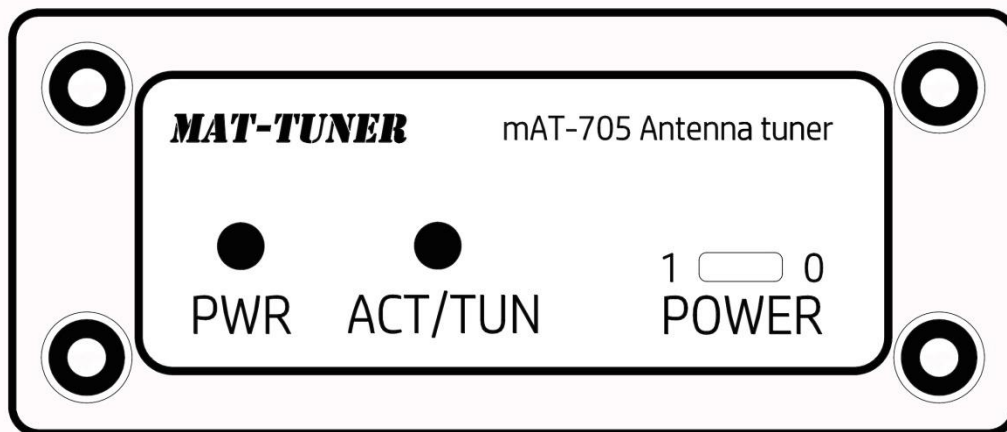
- 1.8 to 54.0 MHz coverage.16,000 memories for instantaneous frequency
- Tuning time: 0.1 to 5 seconds full tune, 0.1 seconds memory tune.
- For dipoles, verticals, Vees, beams, long wire or any coax-fed antenna.
- Powered by 9V alkaline battery
- Dimensions: 14cm x 6.7cm x 2.8cm, max 15.1cm x 6.7cm x 2.8cm (L x W x H).
- Weight: 250g, gross weight 500g.

IMPORTANT INFORMATION

This tuner is specially designed for ICOM IC-705. If used in other transmitters, it may not work, or even damage the tuner or transmitter.

FRONT PANEL

The front panel of mAT-705 tuner is shown in the figure, there are two indicator lights and a power switch. The tuner is powered by an alkaline battery, and the hardware switch can save power.



Function of indicator light:

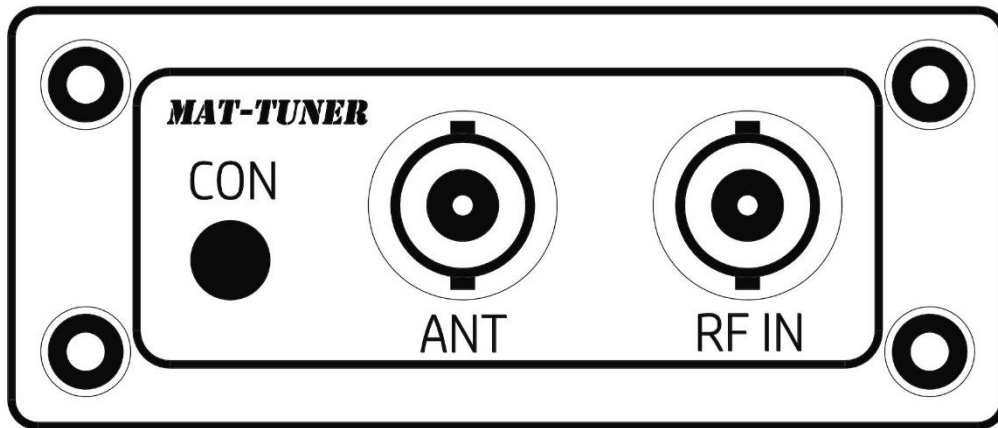
- 1) The left side marked as "PWR" is the power indicator. When the power switch is turned on, this green indicator light is lit. It should be noted that if this indicator flashes when the machine is turned on, it means that the battery is low, the tuner will not be tuned correctly, and the battery needs to be replaced.
- 2) The "ACT/TUN" on the right is the status indicator. When it is off, it means the tuner is in the "Bypass" state; when it is lit in green, it means the tuner is in the "ONLINE" state; when it is lit in red, it means the tuner is in the process of tuning.

REAR PANEL

There are two BNC RF sockets and one control cable socket on the rear panel of the tuner. As shown below.

Control cable socket: The tuner comes with a control cable mAT-705-CB. The ICOM IC-705 transmitter sends control commands to the tuner through this control cable to control the tuner to

complete the tuning operation. One plug of the control cable is plugged into the socket marked "CON" on the rear panel, and the other plug is plugged into the "TUNER" socket of the transmitter. Special reminder, please make sure the transmitter and tuner are turned off when plugging in this cable.



BNC RF socket: There are two BNC RF sockets on the rear panel, they are "ANT" and "RF IN". "ANT" is connected to the antenna. "RF IN" is connected to the ANT socket of the transmitter via a coaxial cable. The coaxial cable mAT-705-RC1 connecting the tuner "RF IN" and the transmitter ANT is not a standard accessory, it is optional.

INSTALLATION

The installation of the tuner is very simple. Please make sure that the transmitter and tuner are turned off before installation.

1. Connect the "CON" of the tuner and the "TUNER" socket of the transmitter with a control cable.
2. Connect the "RF IN" of the tuner and the ANT socket of the transmitter with a radio frequency cable.
3. Connect the coaxial cable connecting the antenna to the socket marked "ANT" on the tuner.

The installation is complete.

TUNING OPERATION (IN TWO WAYS)

Method 1:



Enter the function menu of the transmitter, as shown in the figure, the [TUNER] option turns white to indicate that it is available.



Quickly touch [TUNER] to switch the tuner to "BYPASS" state. Touch for more than 1 second to start tuning and set the tuner to "ONLINE". When the tuner is tuning, in addition to the "ACT/TUN" indicator on the front panel lights up in red, the red text "TUNE" will flash on the

transmitter screen. After the tuner completes the tuning cycle, when it is online, the white text "TUNE" will always be lit on the transmitter screen, except for the "ACT/TUN" indicator on the front panel that lights up green. as the picture shows.

Method 2: There is another easier way to start the tuning cycle. The "PTT TUNE" function of the IC-705 transmitter is turned on by default. When the transmitter is set to a new frequency, the transmitter will automatically start tuning when the user presses PTT for the first time. This method of starting the tuning cycle is more common. When the user wants to start a tuning cycle again on the current frequency, he needs to operate through the function menu.

BATTERY

The tuner uses 9V alkaline Battery, which greatly facilitates the use of users. Usually, the tuner you receive has a battery installed. According to the transportation regulations of different countries and regions, the tuner sold in your local area may not contain batteries. Please consult your seller for accurate information.

The " PWR " indicator of the tuner flashes when the power is turned on, indicating that the battery is low and needs to be replaced. Changing the battery or installing the battery is simple. Use the L-shaped wrench that comes with the tuner to remove the four black screws on the rear panel. Gently pull out the PCB and replace the battery. Insert the PCB back into the shell, and then tighten the screws on the rear panel to complete. Please note that you make sure that the positive and negative terminals of the battery are installed correctly.

TRANSPORT

There is a 9V alkaline battery inside the tuner, please pay attention to local regulations when transporting. Some regions may have relevant requirements for the transportation of items containing batteries.

TECHNICAL SUPPORT

Visit the Support Center at: <http://www.mat-tuner.com/>

The website provides links to product manuals, just in case you lose this one! When you are thinking about the purchase of other **MAT-TUNER** products our website also has complete product specifications and photographs you can use to help make your purchase decision. Don't forget the links to all of the quality **MAT-TUNER** Dealers also ready to help you make that purchasedecision.

PRODUCT FEEDBACK

We encourage product feedback! Tell us what you really think of your **MAT-TUNER** product. In an email tell us how you used the product and how well it worked in your application.

We like to share your comments with our staff, our dealers, and even other customers at the **MAT-TUNER** website.

Welcome to <http://www.mat-tuner.com/> for more information

MAT-TUNER

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