

# ***MAT-TUNER***<sup>®</sup>

## **mAT-Y200 INSTRUCTIONS**

Antenna tuner for the YAESU transceiver

Thank you for choosing this ***MAT-TUNER*** product.

Please **READ ALL INSTRUCTIONS** carefully and completely before using this tuner.

### **■ IMPORTANT**

- ◆ **NEVER** touch the antenna or antenna connector with your hand when the transceiver is transmitting, it will cause burns!
- ◆ **NEVER** use the antenna tuner during a lightning storm. It may result in an electric shock, cause a fire or damage the tuner. Always disconnect the antenna before a storm.
- ◆ **NEVER** operate the tuner with its cover removed. Contact with the components inside the tuner while transmitting will result in painful RF burns.
- ◇ Always turn your radio off before plugging or unplugging anything. The radio may be damaged if cables are connected or disconnected while the power is on.
- ◇ The product is designed for indoor operation only, it is not water resistant. If you use it outdoors (Field Day, for example), you must protect it from rain, dew and steam.
- ◇ This tuner is a special model for Yaesu transmitters. We will try to make it match more models of transmitters. We can only guarantee that it can match the existing transmitter well. For the new transmitter to be sold by Yaesu company in the future, we can't guarantee that this tuner can also match well.

### **■ INTRODUCTION**

mAT-Y200 is specially designed for Yaesu brand transmitters with RF power not higher than 200W(SSB), such as FT-891, FT-991A, FTDX10, FTDX101D, FTDX101MP. It should be noted that, it cannot be used for FTDX5000 and FT-2000, because these transmitters do not have a standard 8-pin Yaesu tuner interface. The FT-817/818 transmitter also cannot use this tuner, if you happen to use this transmitter, please choose the mAT-10 tuner, which is specially designed for FT-817/818.

This tuner is also a great choice for users who like to operate the transmitter in digital modes such as FT8, CW and RTTY. For most tuners, it is not possible to withstand 100 watts of digital mode RF signals entering the tuner. The mAT-Y200 allows up to 100 watts of digital mode RF signals to pass through the tuner.

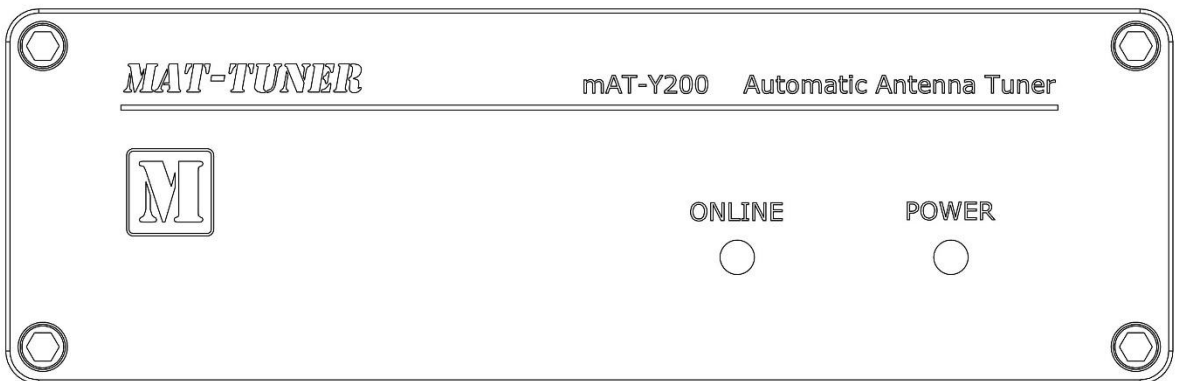
mAT-Y200 has a working frequency range of 1.8-54MHz and a maximum allowable RF power of 200 watts. As an external antenna tuner, it is connected to the transmitter through

a control cable mAT-CY. The transmitter supplies power to the tuner through this cable, communicates with it and controls the operation of the tuner. The tuner does not require additional power supply. The tuner can track and synchronize the frequency data with the transmitter, just like the classic mAT-30 tuner, which makes the operation of the tuner very convenient.

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 radios.

## ■ FRONT PANEL

The front panel of the tuner has 2 indicator lights, as shown in the figure.

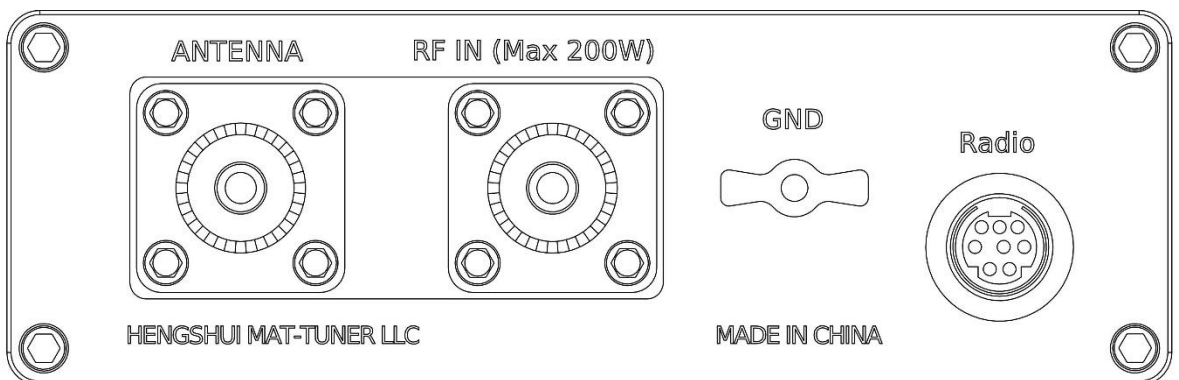


**ONLINE:** Status indication. Lights up to indicate that the tuner is online, off-indicates that the tuner is bypass.

**POWER:** Power light  
When the tuner is working, lit green.

## ■ REAR PANEL

The figure below is the rear panel of the tuner.



**GND:** Connected to antenna system ground. Correct and good ground wire can ensure the safe operation of the tuner.

**ANTENNA:** 50-239 socket, connect antenna with 50 ohm coaxial cable.

**RF IN(Max 200W):** SO-239 socket, connected to the transmitter's "ANT" socket, using 50 ohm coaxial cable.

**Radio:** This socket is connected to the transmitter's "Tuner" socket via a mini DIN 8-pin cable mAT-CY. This cable comes with the tuner.

## ■ INSTALLATION

**Which transceivers can use mAT-Y200?** Modern transmitters of Yaesu brand with RF power not higher than 200W, such FTDX101MP. Of course, it can also be used for transmitters with RF power of 100W, such as FT-450D, FT-857d, FT-891, FT-991A, FTDX10, FTDX101D etc, except ft-817 transmitter.

**Important: before connecting any cables, be sure to turn off the power of the transmitter.**

### Installation

1. Connect the "ANT" jack on the transceiver to the "RF IN" jack on tuner, using a 50 ohm coax cable rated 200 watts or greater.
2. Connect the control cable mAT-CY (Standard accessories, free with tuner) to the mini-DIN 8-pin jack on tuner, marked "Radio".
3. Connect the other end of this mAT-CY cable to the "TUNER" jack on the transceiver.
4. Connect the coaxial cable of the antenna to the "ANTENNA" socket of tuner.
5. Grounding the tuner will enhance its performance and safety. We recommended that you connect tuner to a suitable ground; a common ground rod connected to buried radials is preferred, but a single ground rod, a cold water pipe, or the screw that holds the cover on an AC outlet can provide a serviceable ground. We strongly recommended the use of a properly installed, high quality lightning arrestor on all antenna cables.

## ■ TRANSCEIVERS SETTING

For how to set the external tuner menu of the transmitter, please read the user manual of the transmitter carefully. Different transmitters need different menu settings. The newer the transmitter, the simpler the setup, just set the tuner menu option to "External". For some old models, such as FT-857D, multiple menus need to be set. Please read the user manual of the transmitter. Please note that the communication rate between the transmitter and the tuner is 4800bps, which is a default setting. If you have changed it, please make sure it is 4800bps. When setting up these menus, please treat the mAT-Y200 tuner as Yaesu FC-40,FC-50, which are compatible.

## ■ OPERATION

Like the mAT-30 tuner, the mAT-Y200 tuner also has frequency tracking function. If the current frequency of the transmitter changes, the tuner will automatically follow the change. If you have started a tuning cycle at a new frequency, you will no longer need to start a new tuning.

If you have never started tuning at the current frequency, or are not satisfied with the

current VSWR, you can start a new tuning cycle. Similarly, different transmitters have different operations of starting tuning cycle. Please read the user manual of the transmitter to learn the method of starting tuning cycle.

The latest transmitter only needs to press and hold the **[TUNE]** key on its front panel for more than 1 second to start a new tuning cycle. Quickly press and release the **[TUNE]** key to switch the "ONLINE / BYPASS" status of the tuner and activate or close the tuner.

We will update the operation video of the tuner from time to time on our YouTube channel to help users understand how to operate our tuner. Our channel is "MAT-TUNER TUNER". You can subscribe to our channel to learn more operation information.

## ■ SUPPLIED ACCESSORIES

mAT-CY Control cable	1pc
mAT-Y200 instruction	1pc

## ■ TECHNICAL SUPPORT

- Frequency range: 1.8 ~ 54 MHz
- Maximum input power: 200W(SSB), 100W(DATA mode)
- Tuning time: Maximum 5 seconds ( Full tuning )  
0.1 seconds ( Memory tuning )
- Number of memories: 16000
- Usable temperature: -10°C ~ +60°C, 14°F ~ 140°F
- Dimensions: 180 x 142 x 51 mm, 7.1 x 5.6 x 2.0 inches
- Weight: 830g, 29.3oz

## ■ TECHNICAL SUPPORT

Visit the web: <http://www.mat-tuner.com/> for more information.

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 purchase decision.

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