

mAT-Y200 INSTRUCTIONS

Antenna Tuner for YAESU Transceivers

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, as it may cause burns!
- ◆ **NEVER** use the antenna tuner during a lightning storm. It may result in 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 any cables. The radio may be damaged if cables are connected or disconnected while the power is on.
- ◇ This product is designed for indoor operation only; it is not water-resistant. If you use it outdoors (on a Field Day, for example), you must protect it from rain, dew, and moisture.
- ◇ This tuner is a special model for YAESU transceivers. We will try to make it compatible with more models. However, we can only guarantee performance with existing supported transceivers. For new transceivers to be released by YAESU in the future, we cannot guarantee compatibility.

INTRODUCTION

The mAT-Y200 is specially designed for YAESU brand transceivers with RF power output not exceeding 200W (SSB), such as the FT-891, FT-991A, FTDX10, FTDX101D, FTDX101MP, and FT-710. Please note that it cannot be used with the FTDX5000 or FT-2000, as these transceivers do not have a standard 8-pin YAESU tuner interface. For 200W transmitters such as FTDX-101MP, when using an external tuner, the transceiver will automatically set the maximum RF power to 100W. Therefore, when using this transceiver, the maximum output power is limited to 100W. The FT-817/818 transceivers also cannot use this tuner. If you use one of these transceivers, please choose the mAT-10 tuner, which is specially designed for the FT-817/818.

This tuner is also an excellent choice for users who operate digital modes such as FT8, CW, and RTTY. The mAT-Y200 allows up to 60 watts of digital mode RF signal to pass through.

The mAT-Y200 has a frequency range of 1.8-54 MHz and a maximum allowable RF power input of 200 watts. As an external antenna tuner, it connects to the transceiver via the mAT-CY control cable. The transceiver supplies power to the tuner through this cable, communicates with it, and controls its operation. No additional power supply is required. The tuner can track and synchronize frequency data with the transceiver, much like the classic mAT-30 tuner, making operation very convenient.

It can tune dipoles, verticals, Yagis, or virtually any coax-fed antenna. It matches an impressive range of antennas and impedances, far exceeding the capabilities of many other tuners you may have considered, including the built-in tuners found in many radios.

FRONT PANEL

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

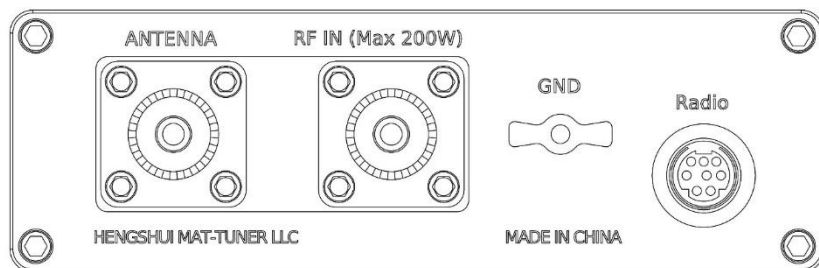


ONLINE: Status indicator. Illuminates when the tuner is online (engaged); off indicates bypass mode.

POWER: Power indicator lights up green when the tuner is powered on and working.

REAR PANEL

The figure below shows the rear panel of the tuner.



GND: Connection point for the antenna system ground. A proper and good ground connection is essential for the safe operation of the tuner.

ANTENNA: SO-239 socket (UHF female). Connect your antenna using a 50-ohm coaxial cable.

RF IN (Max 200W): SO-239 socket (UHF female). Connect to the "ANT" socket on your transceiver using a 50-ohm coaxial cable rated for at least 200W.

Radio: This miniDIN 8-pin socket is connected to the "TUNER" socket on the transceiver using the supplied mAT-CY cable.

INSTALLATION

Compatible Transceivers: The mAT-Y200 is compatible with modern YAESU transceivers with RF power output not exceeding 200W (SSB). It is also compatible with 100W transceivers such as the FT-450D, FT-857D, FT-891, FT-991A, FTDX10, FTDX101, and FT-710, among others. It is not compatible with the FT-817.

Important: Before connecting any cables, ensure the transceiver power is turned off.

Installation Steps:

1. Connect the "ANT" jack on the transceiver to the "RF IN" jack on the tuner using a 50-ohm coaxial cable rated for 200 watts or greater.
2. Connect the supplied mAT-CY control cable to the mini-DIN 8-pin jack on the tuner, marked "Radio".
3. Connect the other end of the mAT-CY cable to the "TUNER" jack on the transceiver.
4. Connect your antenna's coaxial cable to the "ANTENNA" socket on the tuner.

Grounding the tuner will enhance its performance and safety. We recommend connecting the tuner to a suitable ground point. A common ground rod connected to buried radials is preferred, but a single ground rod, a cold-water pipe, or the screw securing the cover plate of an AC outlet can provide a usable ground. We strongly recommend using a properly installed, high-quality lightning arrestor on all antenna cables.

TRANSCIVERS SETTING

To configure the external tuner menu on your transceiver, please read its user manual carefully. Different transceivers require different menu settings. Newer transceivers typically only require setting the tuner menu option to "External". For some older models, such as the FT-857D, multiple menu settings may need adjustment. Please consult your transceiver's manual. Note: The communication rate between

the transceiver and the tuner is default set to 4800 bps. If this has been changed, ensure it is set back to 4800 bps. When configuring these menus, treat the mAT-Y200 tuner as compatible with YAESU's FC-40 or FC-50 tuners.

OPERATION

Like the mAT-30 tuner, the mAT-Y200 features a frequency tracking function. If the transceiver's frequency changes, the tuner will automatically follow. If you have already performed a tuning cycle on a new frequency, you will not need to tune again.

If you have not tuned at the current frequency or are unsatisfied with the current VSWR, you can initiate a new tuning cycle. The method for starting a tuning cycle varies between transceiver models. Please refer to your transceiver's user manual for specific instructions.

On most modern transceivers, holding down the [TUNE] button on the front panel for more than 1 second initiates a new tuning cycle. Quickly pressing and releasing the [TUNE] button typically toggles the tuner's "ONLINE / BYPASS" status, activating or deactivating the tuner.

We periodically update operation videos on our YouTube channel to help users understand how to operate our tuners. Our channel is named "MAT-TUNER TUNER". You can subscribe to our channel to learn more.

SUPPLIED ACCESSORIES

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

TECHNICAL SPECIFICATIONS

Frequency Range: 1.8 ~ 54 MHz

Max Input Power: 200W (SSB, PEP), 60W (Digital mode)

Tuning Time: Max 5 seconds (Full tuning), 0.1 seconds (Memory tuning)

Memories: 16,000

Operating 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: 830 g (29.3 oz)

TECHNICAL SUPPORT

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

Our website provides links to product manuals in case you misplace this one! If you are considering purchasing other MAT-TUNER products, our website also has complete product specifications and photographs to assist in your decision-making. You will also find links to all our quality MAT-TUNER dealers, who are ready to help you with your purchase.

PURCHASE ADVISORY

To ensure access to reliable after-sales service and technical support, we strongly recommend purchasing our products exclusively through our authorized dealers. A detailed list of authorized distributors across major countries and regions is available on our website: <http://www.mat-tuner.com/buy.php>. Please note that products purchased through unauthorized channels may not be eligible for after-sales service or technical support.

MAT-TUNER

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