MAT-TUNER®

mAT-1F Dedicated QRP Antenna Tuner

Owner Manual

Product Overview

The mAT-1F is a QRP automatic antenna tuner designed exclusively for the YAESU FTX-1 Field transceiver.

- Only compatible with the FTX-1 Field. It will not work with other models, especially the FTX-1 Optima.

- For other transmitters, the mAT-30 and mAT-Y200 are recommended.

Compatibility

mAT-1F is compatible with the YAESU FC-90. The operation is exactly the same. For details on using an external tuner, read the transceiver manual carefully.

Technical Specifications

Specification	Details
Frequency Range	1.8 – 54 MHz
RF Power Handling	10 W
Antenna Type	BNC / banana plug
Tuning Time	< 10 seconds (full tune)
Temperature	-10℃ ~ +60℃
Dimensions / Weight	142 × 67 × 28 mm, 200 g

Interface Description

Top Interfaces
COAX: BNC jack. Connect a coaxial cable antenna.

WIRE: Red banana jack. Connect a wire antenna.
GND: Black banana jack. Connect the ground wire.

Important: Do not connect antennas to both WIRE and COAX at the same time.

Bottom Interfaces & Indicators

RF IN: BNC. Connect to the transceiver **ANT HF/50 MHz** jack using the mAT-CBBM coaxial cable.

RADIO: BNC. Connect to the transceiver **TUNER/LINEAR** jack using the mAT-CF control cable.

ON/TUN: LED indicator.
Red during tuning.
Green when online.
Off in bypass mode.

Note: The mAT-CF control cable and mAT-CBB1M coaxial cable is included with the tuner.

Installation Steps

Important 1: Turn off the transceiver before installation to avoid damage.

Important 2: Not waterproof. Protect from rain and moisture outdoors.

Important 3: The tuner uses multiple magnetic latching relays. Keep it away from strong magnets, and especially do not use magnetic mounts.

1. **Mount the tuner**
Secure it to the antenna mast using a nylon cable tie or an adhesive-backed cable strap.

2. **Connect the antenna**
- If you use a coaxial cable antenna, connect it to the **COAX** jack.
- If you use a wire antenna, connect the antenna to **WIRE** jack and connect the ground wire to **GND** jack.

3. **Connect RF cable**
Connect **RF IN** to the transceiver **ANT (HF/50MHz)** jack using a coaxial cable.

4. **Connect Control Cable**
Use the supplied mAT-CF control cable to connect **RADIO** to the transceiver **TUNER/LINEAR** jack.

Important: COAX and **WIRE** cannot be connected at the same time.

Important: No Amplifiers. Using an external power amplifier will damage the tuner.

Transceiver Settings

(Excerpted from transceiver manual)

1. Press and hold **[FUNC]**, select **[OPERATION SETTING]** → **[GENERAL]** → **[TUNER SELECT]**, and set it to **OPTION.**

2. Press **[FUNC]** to save the settings, then press **[BACK]** to exit.

Tip: If the transceiver firmware is outdated, update it to ensure compatibility with the FC-90 and mAT-1F.

Tuner Operation
- Start tuning
Press and hold **[FUNC]** → Touch **[ANT TUNE].**

- Turn On/Off

Press and hold **[FUNC]** → Touch **[TUNER ON/OFF]**

Tips: If SWR is not optimal, restart tuning.

Accessories
Standard accessories
- mAT-1F User Manual
- mAT-CF Control Cable (1m)
- mAT-CBB1M BNC Coaxial Cable (1 m)

Optional accessories
- mAT-CBB5M BNC Coaxial Cable (5 m)
- mAT-CMB1M UHF-BNC Coaxial Cable (1 m)
- mAT-CMB5M UHF-BNC Coaxial Cable (5 m)

Technical Support
Visit http://www.mat-tuner.com for product info, manuals, images, and demonstration videos.

Purchase Notice
- Buy through authorized dealers and retain your proof of purchase for warranty and technical support.

- Products purchased from unauthorized sources may not be eligible for after-sales service.

- Authorized dealer lists are available on our website by country/region.