

mAT-1F Dedicated QRP Antenna Tuner

Owner Manual

⚠ Safety & Operational Precautions

- **Do not touch the antenna or connectors while transmitting** — risk of RF burns.
 - **Do not use the tuner during thunderstorms.** Always disconnect the antenna before a storm approaches.
 - **Do not operate with the tuner case open** — touching internal components during transmission may cause serious burns.
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⚠ Operational Precautions

- Always turn off the transceiver before connecting or disconnecting any cables.
 - This product is not waterproof. Provide adequate rain and moisture protection when used outdoors.
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Product Overview

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

- **It is only compatible with the FTX-1 Field and cannot be used with other models, including the FTX-1 Optima.**
 - For other YAESU transceivers, use mAT-30 or mAT-Y200 tuners.
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Compatibility

- The mAT-1F is fully compatible with the YAESU FC-90.
- Its operation and menu settings are identical to those of the FC-90.

- For detailed instructions on using an external tuner, refer to the transceiver's official manual.



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°C ~ +60°C
Dimensions / Weight	142 × 67 × 28 mm, 200 g



Interface Description

Top Interfaces

Label	Type	Function
COAX	BNC coaxial	Antenna feedline
WIRE	Red banana	Wire antenna
GND	Black banana	Connect ground

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

Bottom Interfaces & Indicators

Label	Type	Function
RF IN	BNC	Connects to transceiver “ ANT (HF/50MHz) ” socket via mAT-CBB1M cable
RADIO	DIN8P	Connects to transceiver’s “ TUNER/LINEAR ” via mAT-CF cable (for communication & power)
ON/TUN	LED	Red: Tuning in progress Green: Online Off: Offline

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

Installation Steps

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

- 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
 - Coaxial feedline → **COAX** socket, **OR**
 - Wire antenna → **WIRE** socket,
Ground → **GND** socket.

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

- 3** Connect RF cable
RF IN → transceiver's **ANT (HF/50 MHz)**.
- 4** Connect Adapter Cable
RADIO → transceiver's **TUNER/LINEAR**.



Tips:

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

Transceiver Settings

(Excerpted from transceiver manual; refer to official manual for details)

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]** → select **[ANT TUNE]**
- Turn On/Off:
Press and hold **[FUNC]** → select **[TUNER ON/OFF]**



Tips: If SWR is not optimal, restart tuning.



Accessories

Standard accessories:

- mAT-1F User Manual
- mAT-CF Adapter 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)
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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.