

ACTIVE TUNING ANTENNA SYSTEM

ATAS-100

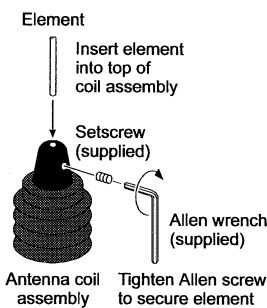
INSTALLATION/OPERATING INSTRUCTIONS

Thank you for choosing Yaesu's exciting new ATAS-100 Active Tuning Antenna System. We hope and trust that you will enjoy many years of enjoyable mobile operation with the ATAS-100!

The ATAS-100 is a unique mobile antenna designed for use with the FT-847 HF/VHF/UHF transceiver. The ATAS-100 utilizes a motorized tuning system which resonates the radiating element for lowest SWR without the need for expensive, inconvenient monoband resonating whip assemblies. The ATAS-100 is designed to mount directly onto a standard mobile antenna mount (not supplied) which is compatible with its Type "M" ("m/m pitch only") base connector. Your Dealer will be pleased to help you select the ideal mobile mounting assembly for your vehicle.

INSTALLATION

- ① Refer to the drawing, and secure the radiating element to the top of the coil assembly, using the supplied Allen wrench.
- ② Refer to the manufacturer's instructions, and install the mounting base assembly in a location where a solid, secure ground connection to the car body can be obtained.



Note: Installation of the ATAS-100 on a hatchback or trunk lid may not permit a low SWR to be obtained. A solid bond to the car body is important so as to establish a counterpoise for the vertical radiating element.

- ③ Connect the coaxial cable from the mounting base to the FT-847's HF antenna jack.

Note: Remember to set the FT-847's Menu #28 (50M-ANT) to "HF" so as to utilize the HF jack for HF and 50 MHz operation, and also set Menu #31 (TUNER) to "ANT" so as to utilize the [TUNER] button for ANT-100 operation.

For operation on the 144 and 430 MHz bands, in addition to HF, you may wish to consider the purchase of a "Triplexer" device to connect to the HF, 144 MHz, and 430 MHz jacks of your FT-847; the Triplexer will then automatically pass RF power from the band in use while isolating the other two antenna jacks. If you do not have a Triplexer, the coaxial cable connector from the ATAS-100 will have to be moved manually to the appropriate antenna jack when you wish to operate on VHF or UHF.

OPERATION

- ① Press and hold in the FT-847's [TUNER] button for ½ second to ready the Auto-Tuning process of the ATAS-100.
- ② Press the [TUNER] button momentarily to begin the resonating process. The DC motor inside the ATAS-100's coil assembly will automatically move itself in the direction required to secure the lowest SWR while the FT-847 transmits a carrier. During this process, the loading coil assembly will move upward or downward slightly. When tuning is successfully completed, the FT-847 will return to the receive mode.

Note: The ATAS-100 does not have a "memory" system, so this procedure must be repeated at the start of each operating session.

- ③ For operation on 144 and 430 MHz, the loading coil assembly must be fully "nested" at its minimum length. If it is not in this position, press and hold in the [TUNER] key, as in step ① above, to activate the ATAS-100, then press the [TUNER] key momentarily, as in step ②, until the antenna reaches its minimum length.
- ④ Press and hold in the [TUNER] button to finish antenna tuning.

CAUTIONS

- For mounting onto a trunk lid or hatchback of a vehicle, utilize a mount which provides secure, strong mechanical contact to the vehicle's frame (to support the antenna's cross-sectional area while driving, as well as for grounding purposes). Suitable mounts include the Diamond models TE5M and K400.
- In the interest of operator safety, always use the minimum transmitter power necessary to establish and maintain communications while operating mobile, and restrict transmitter operation when pedestrians are within one meter (3.3 feet) of the radiating element.
- Do not allow anyone to touch the radiating element during a transmitting session, due to the danger of burning of the skin caused by the high RF voltage present.
- Do not install the ATAS-100 in a position where the radiating element could come in contact with (A) any electrical wiring, which could cause lethal shock, or (B) a grounded metal surface, as this will disrupt communications and may cause arcing.
- Do not touch the bellows of the ATAS-100, so as to avoid undue stress to it or the mechanical components within it.
- Do not attempt to perform the tuning process while driving a vehicle.
- Disconnect the ATAS-100 from the vehicle when washing your vehicle to prevent ingress of water into the ATAS-100.
- Because of the cross-sectional area of the ATAS-100, simple magnetic mounts will not provide sufficient holding power to secure the ATAS-100 reliably, and are not recommended.
- The ATAS-100 is designed specifically for use with the Yaesu model FT-847 transceiver, and is not capable of automatic operation with other transceiver models.
- Note that the bellows may become slightly distorted during the Auto-Tuning process; this does not affect operation of the antenna, however.

SPECIFICATIONS

FREQUENCY RANGE: 7/14/21/28/50/144/430 MHz Amateur Bands
HEIGHT (Approx.): 1.4 ~ 1.6 meters (4.59 ~ 5.24 feet)
WEIGHT (Approx.): 930 g (2.05 lbs.)
INPUT IMPEDANCE: 50Ω
MAX. INPUT POWER: 120 Watts (SSB)
MATCHED SWR: Less than 2.0:1 (with proper counterpoise)
(Specifications subject to change without notice or obligation)

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