

# ACTIVE TUNING ANTENNA SYSTEM

## ATAS-120

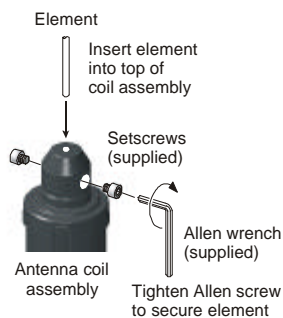
### INSTALLATION/OPERATING INSTRUCTIONS

Thank you for choosing Yaesu's exciting new **ATAS-120** Active Tuning Antenna System. We hope and trust that you will enjoy many years of enjoyable mobile operation with the **ATAS-120**!

The **ATAS-120** is a unique mobile antenna designed for use with Yaesu the transceivers equipped for the ATAS system, such as the FT-897, FT-847 and FT-100/-100D. The **ATAS-120** 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-120** 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-120 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 transceiver's HF antenna jack.
- ④ Refer to the transceiver's operating manual, and set the transceiver's Menu selections associated with the ATAS system.

For operation on the 144 and 430 MHz bands, in addition to HF/50 MHz, you may wish to consider the purchase of a "Diplexer" (for the FT-897 and FT-100/-100D) or "Triplexer" (for the FT-847) device to connect to the appropriate transceiver's antenna jacks; the Diplexer or 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 Diplexer or Triplexer, the coaxial cable connector from the **ATAS-120** will have to be moved manually to the appropriate antenna jack when you wish to operate on VHF or UHF.

#### OPERATION

See the "Operation" section of the transceiver's operating manual for details of **ATAS-120** tuning and operation.



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#### 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-120** 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-120**, 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-120** from the vehicle when washing your vehicle to prevent ingress of water into the **ATAS-120**.
- Because of the cross-sectional area of the **ATAS-120**, simple magnetic mounts will not provide sufficient holding power to secure the **ATAS-120** reliably, and are not recommended.
- The **ATAS-120** is designed specifically for use with Yaesu transceivers equipped for the "ATAS" system, 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.
- For base station operation, if you do not have a good counterpoise system such as a townhouse balcony, VHF/UHF performance can be enhanced by the installation of the optional Yaesu **ATBK-100** Antenna Base Kit.
- There are no user-serviceable parts inside this antenna. Reckless turning of the top of the antenna coil may result in breakage of the antenna coil wire and/or other internal damage.

#### 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.):** 900 g (1.98 lbs.)

**INPUT IMPEDANCE:** 50Ω

**MAX. INPUT POWER:** 120 Watts (A3J)

**MATCHED SWR:** Less than 2.0:1  
(with proper counterpoise)

(Specifications subject to change without notice or obligation)

