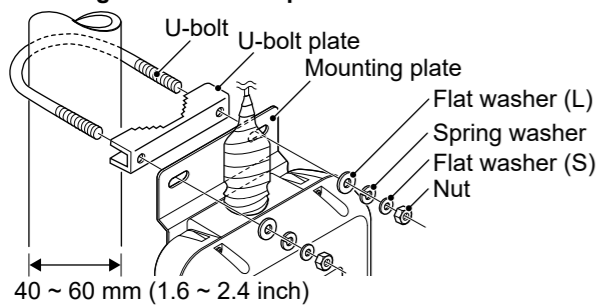


## ■ Mounting the AH-6

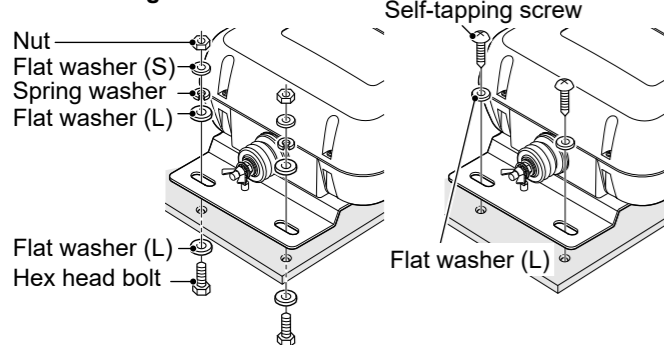
A wire antenna or a 50 Ω antenna can be connected to the AH-6.

**CAUTION:** Mount the AH-6 in a horizontal position or a vertical position with the antenna terminal up.

### ● Mounting on an antenna pole



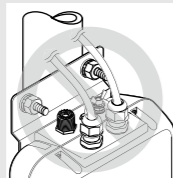
### ● Mounting on a flat location



⚠ **WARNING!** Mount the AH-6 securely with the supplied nuts and bolts. Otherwise, vibrations and shocks could loosen the antenna tuner, making it fall, causing personal injury.

#### CAUTION:

- **DO NOT** mount the antenna tuner upside down.
- **DO NOT** use the mounting plate as a ground terminal.



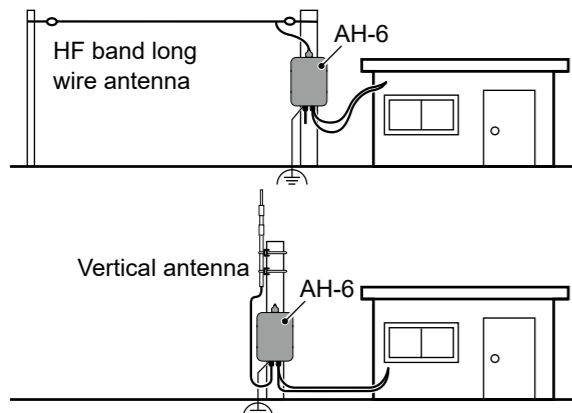
After connecting the cables to the transceiver, wrap each connector with rubber vulcanizing tape.

### ◇ Mounting examples

⚠ **DANGER HIGH RF VOLTAGE! NEVER** touch the antenna while transmitting or tuning. Place the antenna in a position where you are sure it will not be touched.

#### NOTE:

- Keep the antenna tuner as far away from the transceiver as possible.
- Using the tuner with a Loop antenna that is not suitable for the operating frequency cannot be guaranteed.



## ■ Operation

Tuning is required for each frequency. Be sure to retune the antenna before transmitting when you change the frequency.

### Example: IC-7300MK2

1. Turn ON the transceiver.
2. Select an operating frequency.
3. Push **TUNER**.
  - The tuner reduces the SWR to less than 2:1 after 2 ~ 3 seconds.
  - ① While tuning, a side tone is heard and **TUNE** blinks red.
  - ① If the tuner cannot reduce the SWR to less than 2:1 after 15 seconds of tuning, **TUNE** (blinks red) goes out.
4. After matching, **TUNE** is displayed.
  - ① When a long wire antenna cannot be tuned, **TUNE** goes out. In that case, the tuner is bypassed, and the wire is directly connected.
  - ① To manually tune the antenna while **TUNE** is displayed, hold down **TUNER** for 1 second.

⚠ **DANGER HIGH VOLTAGE! NEVER** touch the antenna element while tuning or transmitting. This could cause an electric shock or burn.

**CAUTION: DO NOT** transmit or tune without an antenna connected, with 2 antennas connected, or when the antenna switch is set to the terminal with no antenna connected. This could cause damage to the antenna tuner.

**NOTE:** When the wire antenna cannot be tuned, confirm the wire length and connection, and the antenna switch setting. Note that the AH-6 cannot tune a wire that is a  $\frac{1}{2}\lambda$  long or on a multiple of that frequency.

## ■ Specifications

- Frequency range:
    - With a wire antenna\*
      - Longer than 30 m, 98.4 ft: 1.8 ~ 54 MHz
      - Longer than 7 m, 23 ft: 3.5 ~ 54 MHz
    - With a 50 Ω antenna\*: 1.8 ~ 54 MHz (16.7 ~ 150 Ω load, Unbalanced)
  - \* **DO NOT** connect 2 antennas at the same time. Otherwise, reflected RF power from the antenna not set by the antenna switch may damage the tuner during transmission.
  - Maximum input power: 120 W
  - Input impedance: 50 Ω
  - Tuning power required: 5 ~ 15 W
  - Automatic tuning time: Approximately 2 to 3 seconds (average) Maximum 15 seconds
  - Power supply: 13.8 V DC  $\pm 15\%$
  - Current drain: 0.6 A or less
  - Usable temperature range:  $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$ ,  $+14^{\circ}\text{F} \sim +140^{\circ}\text{F}$
  - VSWR: 1 : 2.0 or less (except for multiples of  $\frac{1}{2}\lambda$ )
  - Number of tuned memories: 200 memories
  - Dimensions: 172 (W) × 230 (H) × 71 (D) mm, (projections not included) 6.8 (W) × 9.1 (H) × 2.8 (D) inches (projections not included)
  - Weight (approximate): 1250 g, 2.8 lb
- ① All stated specifications are typical and subject to change without notice or obligation.

# ICOM

## INSTRUCTIONS

## AUTOMATIC ANTENNA TUNER AH-6

## ■ Important

**SAVE THESE INSTRUCTIONS**— These instructions contain important operating instructions for the AH-6.

## ■ Features

- **Wide tuning range**  
The AH-6 provides reliable matching from 1.8 MHz to 54 MHz when using at least a 30 m (98.4 ft) wire antenna or antenna element, or 3.5 MHz to 54 MHz when using at least a 7 m (23 ft) wire antenna.
- A 50 Ω antenna can be connected and matched in the 16.7 ~ 150 Ω range.
  - ① **DO NOT** connect 2 antennas at the same time. This could cause damage to the antenna tuner during transmission.
- **200 frequency memories for fast tuning**  
The LC combinations of 200 previously-used frequencies are automatically memorized. Once a frequency is memorized, the AH-6 tunes on that frequency in less than 1 second.
- **0.3 W radiated power**  
Radiated power during tuning is less than 0.3 W, minimizing interference to other stations.
- **IP54 dust protection and splash resistance construction**  
The AH-6's tightly sealed plastic case allows convenient mounting virtually anywhere. The AH-6 can be mounted outdoors under your antenna.

## ■ Explicit definitions

WORD	DEFINITION
⚠ <b>DANGER!</b>	Personal death, serious injury or an explosion may occur.
⚠ <b>WARNING!</b>	Personal injury, fire hazard or electric shock may occur.
<b>CAUTION</b>	Equipment damage may occur.
<b>NOTE</b>	Recommended for optimum use. No risk of personal injury, fire or electric shock.

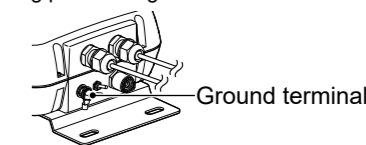
Icom is not responsible for the destruction, damage to, or performance of any Icom or non-Icom equipment, if the malfunction is because of:

- Force majeure, including, but not limited to, fires, earthquakes, storms, floods, lightning, other natural disasters, disturbances, riots, war, or radioactive contamination.
- The use of Icom antenna tuners with any equipment that is not manufactured or approved by Icom.

Thank you for choosing this Icom product.  
**READ ALL INSTRUCTIONS** carefully and completely before using this product.

## ■ Precaution

⚠ **DANGER! NEVER** operate this tuner without a solid ground. Always connect the ground wire to the ground terminal. **DO NOT** use the mounting plate as a ground terminal.



⚠ **DANGER! HIGH VOLTAGE! NEVER** touch the antenna while transmitting or tuning. Place the antenna in a position where you are sure it will not be touched.

**CAUTION: DO NOT** transmit without an antenna connected, with 2 antennas connected, or when the antenna switch is set to the terminal with no antenna connected. This could cause damage to the antenna tuner.

**KEEP** the antenna tuner away from heavy rain, and never immerse it in water. The tuner meets IP54 requirements for dust-protection and splash resistance. However, once the tuner has been dropped, dust-protection and splash resistance cannot be guaranteed due to the fact that the tuner may be cracked, or the waterproof seal damaged, and so on.

## ■ FCC information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

#### Supplier's Declaration of Conformity

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### • Responsible Party

Company Name: Icom America Inc.  
Address: 12421 Willows Road NE, Kirkland, WA 98034

#### • U.S. Contact Information

800-USA-ICOM (800-872-4266)  
Monday – Friday 7 AM to 5 PM PST

## ■ Disposal



The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.

## ■ About CE



Versions of the AH-6, which have the "CE" symbol on the product, comply with the essential requirements of the EMC Directive, 2014/30/EU and RoHS Directive, 2011/65/EU.

### INFORMATION

You can find information regarding product-related legislation in the European region on the Icom portal site.

<https://portal.icomjapan.com/>

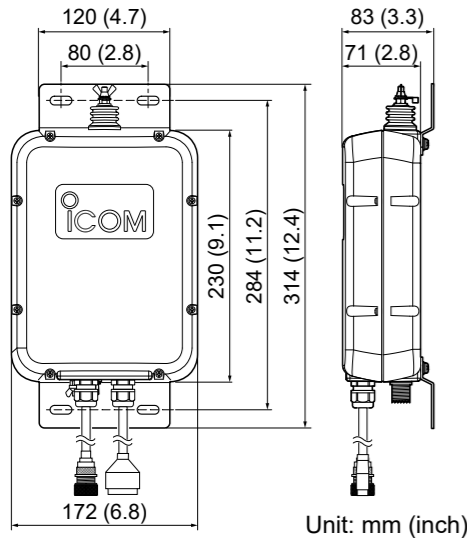


### Below statement is for UKCA purpose only

United Kingdom Authorised Importer: Icom (UK) Ltd.  
Address: Blacksole House, Altira Park, Herne Bay, Kent, CT6 6GZ, U.K.

To obtain the UKCA Declaration of Conformity, please contact Icom UK Limited by email at [info@icomuk.co.uk](mailto:info@icomuk.co.uk) or alternatively call + 44(0) 1227 741741.

## ■ Dimensions



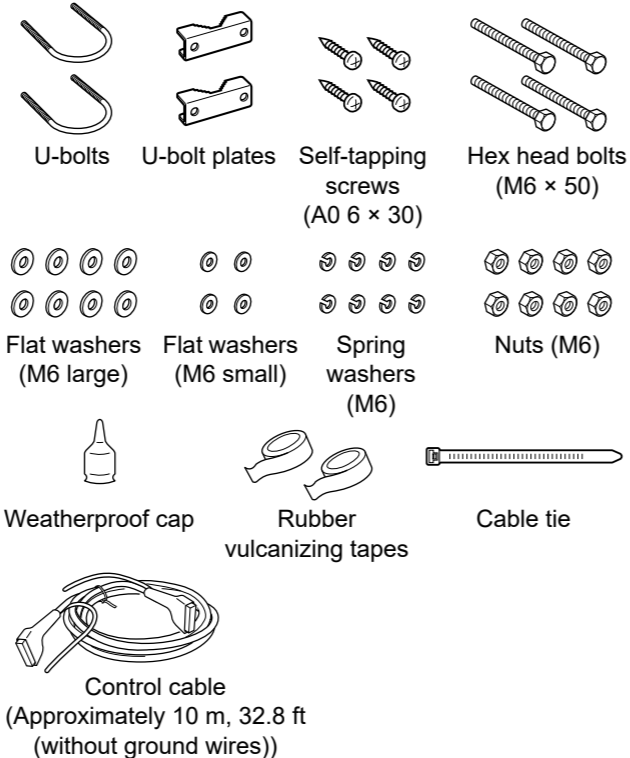
Unit: mm (inch)

## ■ Selecting a location

**NEVER** place the tuner in places such as:

- An unstable place that slopes or vibrates.
- Too close to the transceiver or other devices, such as TV antennas.
- A place where the connected cables are pulled or stretched.
- Near a radio tower emitting strong radio waves.
- Near a metal structure, such as a warehouse.
  - ① If there is a metal wall, handrail, or pillar where the radio wave from the antenna travels, the radio wave may be reflected irregularly.
- A place without direct lightning protection, such as lightning rods.
- A place where the tuner is affected by wind, and interferes with the wall or the other device around the tuner.

## ■ Supplied accessories



## ■ Options

- **OPC-1465 SHIELDED CONTROL CABLE**  
Cable length (approximate): 10 m, 32.8 ft  
The same as supplied.

## ■ Installation

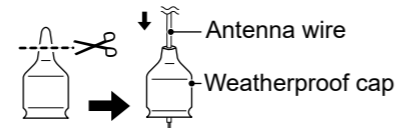
A wire antenna or a 50 Ω antenna can be connected to the AH-6.

### CAUTION:

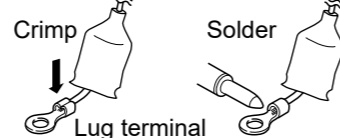
- **DO NOT** connect 2 antennas at the same time. This could cause damage to the antenna tuner during transmission. After an antenna is connected, set the antenna switch to the terminal that the antenna is connected to.
- **NEVER** modify, bend, twist, pull, or heat the control cable or the coaxial cable.
- **NEVER** hang something heavy on the control cable or the coaxial cable.
- **NEVER** mount the AH-6 without securing the control cable and the coaxial cable so that they cannot be pulled or stretched.
- **NEVER** mount the AH-6 without securing the control cable and the coaxial cable so that they cannot be pulled or stretched.
- If you skip the following steps, moisture may get into the connector, and this could damage the antenna tuner.
  - ① Wrap user supplied electrical tape over the rubber vulcanizing tape to secure waterproofing.

### ◇ Connecting a wire antenna

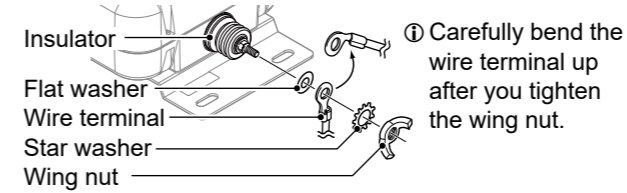
1. Cut off just the top of the weatherproof cap, and pass the antenna wire through the cap.



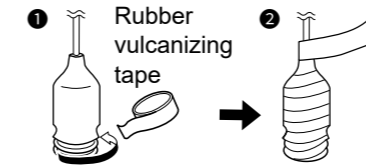
2. Crimp or solder the antenna wire to the lug terminal.



3. Connect the antenna wire.

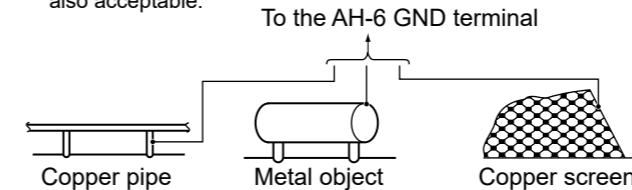


4. Place the weatherproof cap over as much of the insulator as possible. (①)
5. Wrap the rubber vulcanizing tape at the bottom of the insulator, then the weatherproof cap, and finally the antenna wire. (②)



### ◇ Ground connections

The ground wire of the antenna tuner can also be used as part of the antenna element. The transceiver and antenna tuner must have an adequate ground connection. Otherwise, the overall efficiency of the transceiver and antenna tuner installation will be reduced. Interference, RF feedback, and electrical shocks from other equipment could also occur. For best results, use the heaviest gauge wire or strap available, and make the connection as short as possible, as shown below.

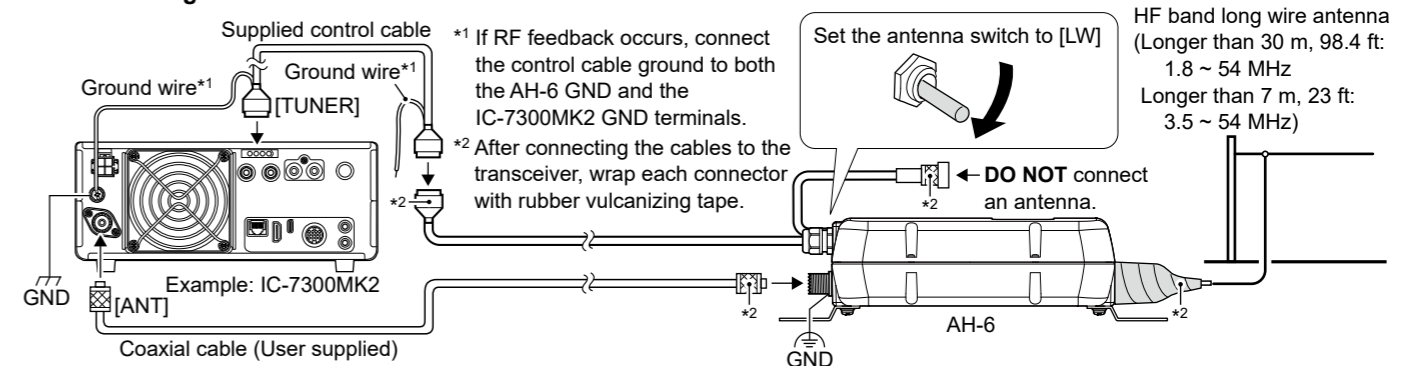


### ◇ Cable connections

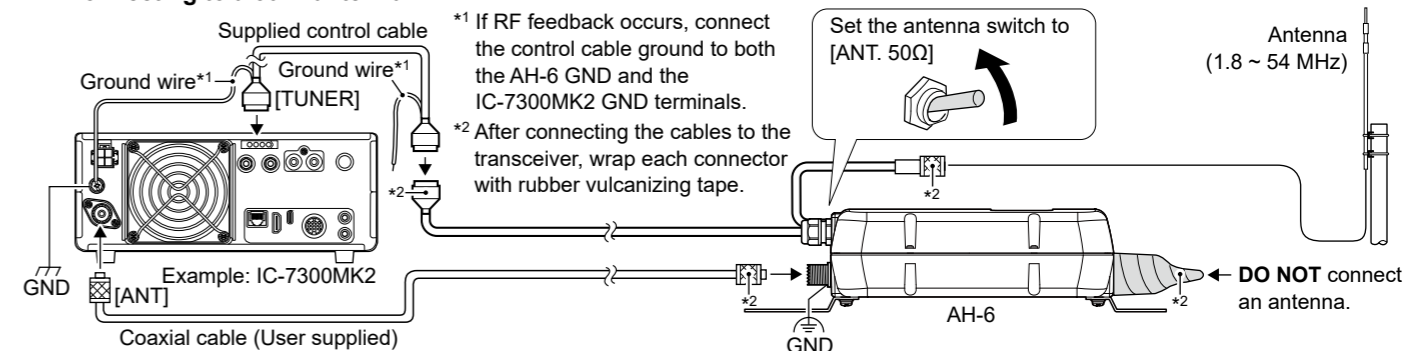
#### NOTE:

- Connect a user supplied coaxial cable to the appropriate antenna connector if the transceiver has more than one. See your transceiver's instruction manual for details.
- **BE SURE** to set the antenna switch to the terminal that the antenna is connected to. Otherwise, the antenna tuner may be damaged during transmission.

#### ● Connecting to a wire antenna

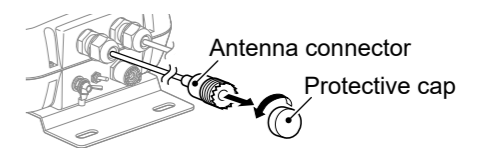


#### ● Connecting to a 50 Ω antenna

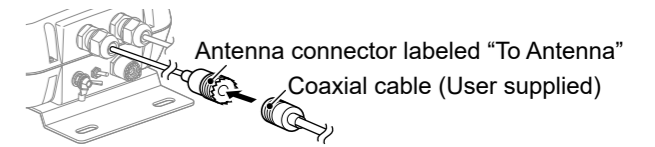


### ◇ Connecting a 50 Ω antenna

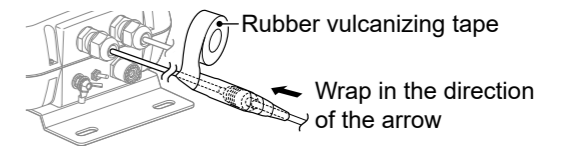
1. Remove the protective cap from the antenna connector.



2. Connect a coaxial cable.



3. Cover the connector with rubber vulcanizing tape.



### When a 50 Ω antenna is not connected

Fix the coaxial cable with the supplied cable tie to prevent the cable connector from accidentally touching the tuner.

- ① **DO NOT** remove the protective cap at the end of the antenna connector. Wrap rubber vulcanizing tape on the cap to prevent water from entering.

