



Armature Radio Communication Antenna

7/21/50/144/430MHz High Performance Mobile Whip Antenna

HV5S

Fold-whip Element Structure

Note

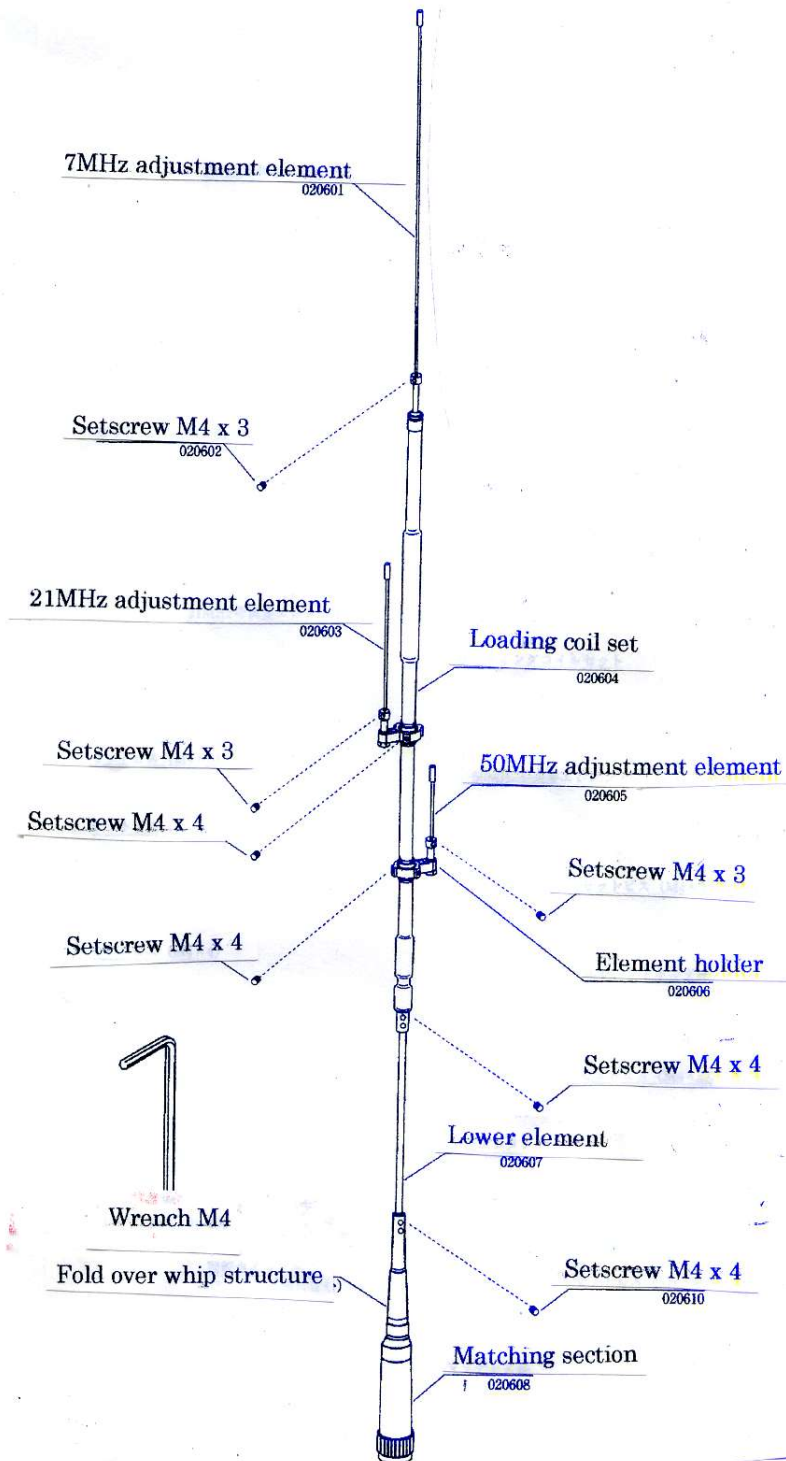
To avoid inviting accidents, follow notices.

- ① Nuts and screws can be loosened by vibration during driving. Be sure to check those fastening devices from time to time and refasten if necessary.
- ② Strong impact can cause the antenna to break and may invite accidents by falling the element. It is recommended to drive away from those obstacles such as branches.
- ③ Strong vibrations caused by diesel engines may damage the antenna. It is recommended to install the antenna at the location where has least vibration as possible.
- ④ Do not touch the antenna during the transmission. Touching the antenna during transmission may cause to electrify.
- ⑤ Do not drive a car with the antenna tilted. Driving the car with the antenna titled may cause serious accrediting.
- ⑥ When the antenna is installed, be sure to take into account those things such as local traffic regulations and physical length of the car, and especially the antenna has to be installed at the location where is not easily reachable by other people.
- ⑦ Adjust the antenna thoroughly on operating frequencies before operation. Using uneducable antenna may cause to damage transceiver.
- ⑧ If thunder seems to rumble in the vicinity, do not touch the antenna and coaxial cable to avoid electrocuting by lightning.

Description

- ① HF/VHF/UHF (7/21/50/144/430MHz) can be operated with HV5S.
- ② HV5S is factory adjusted and don't require any adjustment on 144/430MHz. Check the VSWR at HF/50MHz. The VSWR can be adjusted by changing the length of the element.

Parts number

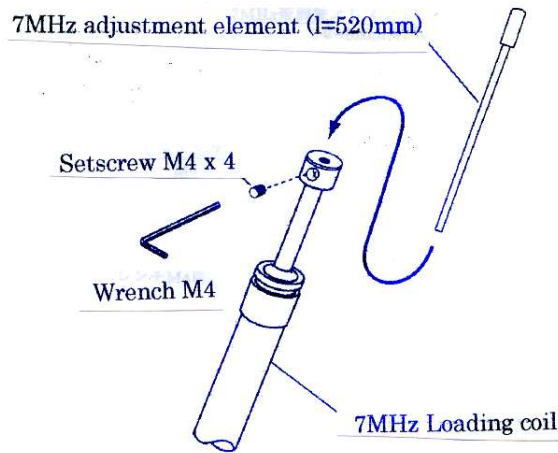


Installation location

Since this antenna is designed to install on car body only, VSWR of the antenna may not be lowered when it is installed on the place where has different grounding condition such as on balcony railings.

Assembly

- ① Set 7MHz adjustment element to 7MHz loading coil with set screw. Check if all set screws are fixed firmly before operation the antenna.

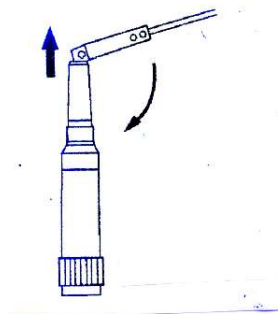


Note

- ① Setscrew for the bracket must be connected to car body directly to have electrical interconnection. VSWR cannot be lowered if the bracket and car body are insulated.
- ② The place mounted with antenna bracket may get the rusty and make the rust-proof on it.
- ③ Be careful not to have the waters into the car from the entrance of coaxial cable to the car.
- ④ Don't install antenna, bracket and coaxial cable at the place where is close to other wire, terminal box of the car; otherwise, fatal accident should happen.

Fold over whip element structure

To fold the antenna,
pull whip element and incline for desired direction.



Attention

- ① Don't drive with the antenna turned down; otherwise, fatal accident should happen.
- ② In case of the antenna stretches out from the car body when turned down, detach the antenna; otherwise, fatal accident should happen.
- ③ Please pay attention not to clip your finger when using fold over whip element structure.

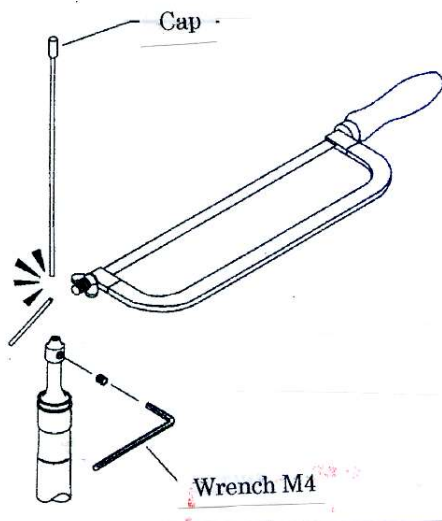
Adjustment

- ① 144/430MHz can be used without any adjustment
- ② Adjust VSWR at 7/21/50MHz.
 - Adjust VSWR with adjustment element of each loading coil.

*The element of HV5S is adjusted to lower frequency than amateur bands.

POINT

- * Loosen the setscrew and pull adjustment element.
- * Before cutting the adjustment element, the VSWR can be checked with copper wire (1mm-1.5mm) by cutting.
- * Before cutting the element, attach the cap, otherwise problems like TYI should happen when transmitted.



Adjustment Chart

Frequency	How the frequency change
7MHz	1cm = approx. 45MHz
21MHz	1cm = approx. 300KHz
50MHz	1cm = approx. 800KHz

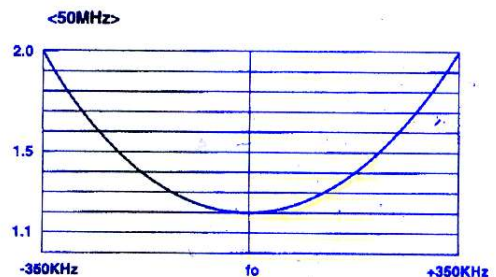
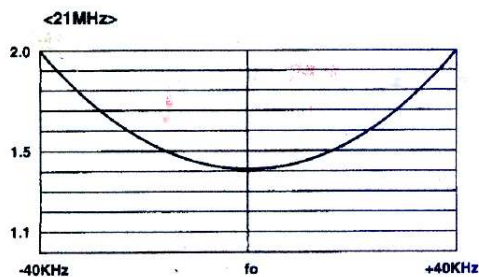
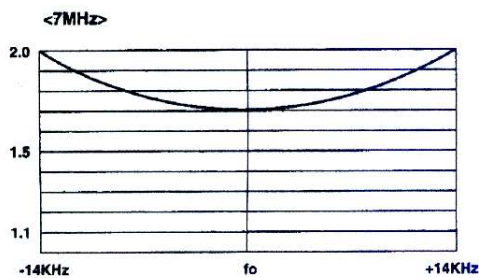
Attention

- ① Do not touch the antenna during transmission to avoid electrocuting.
- ② Since VSWR of an HF antenna varies depending on installation locations, be sure to adjust at the place where the antenna is operated in practice.
- ③ Adjustment has to be take place at the place where is no obstacles or power line, and where does not hinder other cars and pedestrians.
- ④ Due to insufficient earth capacity correct adjustment can not be performed at the place where has vast space under the car such as on a bridge or in the multi-level parking lot.
- ⑤ To avoid interfering other stations, adjustment has to be performed with least RF power and shortest time as possible.

Note

- ① Since HV5S is designed to be installed on car body only, the antenna can not be used on different grounding condition such as balcony railings.
- ② Don not detach or damage the rubber tube covering loading coil; otherwise the antenna show poor performance, and the transceiver should have troubles.
- ③ Wipe the antenna with a piece of clothe from time to time.
- ④ Do not use thinner or benzene to clean the antenna. Use water thinned neutral detergent.

●VSWR表



Specification

Frequency: 7.0-7.1MHz/21.00-21.45MHz/50-52MHz/144-146MHz/430-440MHz

Impedance: 50Ω

VSWR: Less than 1.5 (50/144/430MHz) Less than 2.0 (7/21MHz)

Max. power rating: 120W SSB (7/21/50MHz) 200W SSB (144/430MHz)

Gain: 3.2dBi (430MHz)

Length: 1.42m

Weight: 470g

Connector: M

Type: 1/4 wave (7/21/50/144MHz) 5/8wave (430MHz)

Though these products purchased are manufactured under strict quality control, if damage is caused by transporting, ask your dealer promptly.

Design and specifications of these products will be changed for future improvement without advance notice.