

SUPER GAINER

mini

6m/2m/70cm Three Band Mobile Whip Antenna for Amateur Radio

Fold over Whip Element Structure

SG-M911

DIAMOND
ANTENNA

OPERATING INSTRUCTIONS

Thank you for purchasing the Diamond SG-M Antenna. Before using the antenna, please read carefully these OPERATING INSTRUCTIONS to operate properly. SAVE THESE INSTRUCTIONS.

This antenna is for use in amateur radio. Do not transmit on incorrect frequency bands.



Important Safety Instructions;

To prevent any accident, pay attention to the following instructions.

- 1) Vibration during driving may cause looseness of bolts and screws on the antenna and antenna bracket. Check on them before use and fasten if they are loose.
- 2) If the antenna receives a sharp impact, it may be broken and fall off, causing personal injury and damage. Drive carefully and avoid hazardous branches of trees.
- 3) If the antenna receives constantly strong vibration caused by for example diesel engine vehicles, it may be broken. Install the antenna far away from the source of vibration.
- 4) If somebody touches the antenna during transmitting, She/he may receive electric shock. When you operate the antenna during parking, be sure nobody is around the antenna.
- 5) Do not drive a car with the antenna folded. It may cause serious accident.
- 6) An installation of the antenna should not exceed the width and length of the car, and the antenna should be kept away from humans.
- 7) Before operating, be sure the antenna works properly. If not, it may cause a radio equipment trouble.
- 8) When it thunders, do not touch the antenna or coaxial cable, otherwise you may receive electric shock.
- 9) Wire safely the coaxial cable to prevent your driving from any trouble.
- 10) Do not install the antenna, antenna bracket and wire coaxial cable close to the other electric circuit wiring and switch boxes.

Their contact may result in a risk of fire or electric shock.



Warning; IF SOMETHING WRONG, STOP TRANSMITTING PROMPTLY.

Keeping on transmitting high VSWR may damage your radio equipment. If something is wrong, stop transmitting promptly and ask your dealer or DIAMOND Antenna Corp. for assistance.

Features

- 1) The new design emphasizes the curve to match the flashing surface car design.
- 2) By using a duplexer, it is possible to transmit/receive both bands simultaneously, or it is possible to transmit one band and to receive another band.
- 3) The 24K-gold-plated center pin in a connector section of the antenna has least transmission loss.
- 4) The antenna has the omni-directional rotation whip structure. When you put your car into the garage, you do not have to detach the antenna. Pull up the rotation whip and fold over the whip element to omni-direction (Fold over whip structure).

How to adjust frequencies

This antenna does not require any adjustment. When frequencies are required to be adjusted exceptionally, slide the element of the fold over Whip up and down. Be sure to fasten the set screws firmly after the adjustment.

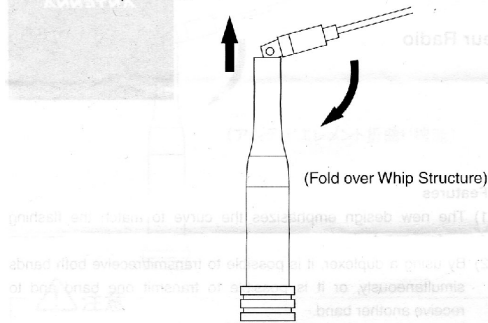


Important;

- 1) Do not touch the antenna during transmitting, otherwise you may receive electric shock.
- 2) Operate the antenna at the place where obstacles, electric wire, cars, or pedestrians are not around the antenna.
- 3) Be sure to operate 'with smaller power at shorter time' not to interfere the other radio stations.
- 4) Since the antenna is arrester type, the lower Whip element and the earth section (the outer-shell of the impedance matching section) are conducted. The center pin of the connector section and lower whip element are isolated.
- 5) A car body is used as the earth for the antenna. If the car body and the antenna base are not conducted, VSWR may not decrease. Install the antenna after confirming the conduction between the car body and the antenna base. Also, VSWR may not decrease, depending on the installation, when the antenna element is close to the car body or another antenna.
- 6) The antenna is used for from 51 to 52 MHz FM. However the antenna can be used for other than from 51 to 52 MHz FM when SWR meter goes down with our antenna tuner, TU60.
- 7) When the antenna is fitted to hatch back, sometimes, you may not obtain sufficient value of VSWR at 50 MHz due to insufficient earth area because of style of rear gate and its structure. In this case, VSWR can be decreased if you use our antenna tuner TU60.

How to fold over the Whip element

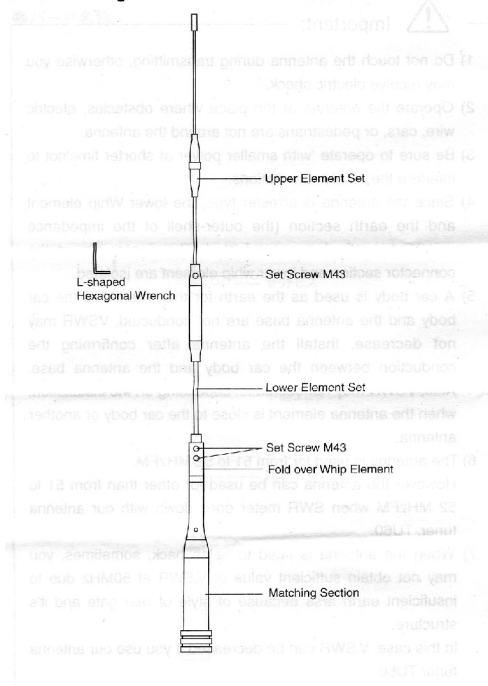
To fold the antenna, Pull up and fold over the whip element.



Caution;

- 1) Do not drive when the antenna is folded, since the folded antenna may rotate in the omni-direction. It may cause an accident.
- 2) If the folded antenna exceed the car body, detach the antenna instead of folding. It may cause an accident.
- 3) Be careful for your fingers not to be caught in the fold over whip during using.

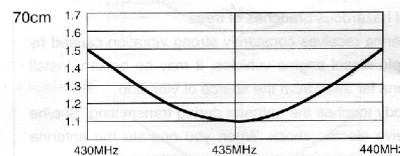
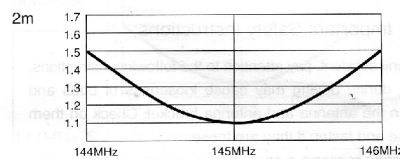
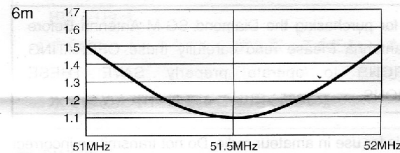
Schematic Diagram



Maintenance

- 1) The installed place of the bracket may rust. Coat the spot(where the paint is removed) with rust resisting paint.
- 2) Water may enter inside the car if the coaxial cable wiring is pulled into the car.
- 3) When the fold over section or plastic part of the fold over whip element is contaminated with antifreezing agents including salt, do not transmit. It may reduce antenna performance and damage the radio equipment.
- 4) Clean the antenna periodically. Do not use benzine or thinner. If it is dirty, clean with a cloth moistened with diluted neutral detergent.

VSWR chart



Specifications

Gain : 2.15dBi(6m), 3.0dBi(2m), 5.8dBi(70cm)

Max. Power Rating : 60W

Impedance : 50ohms

VSWR : less than 1.5

Length : 1.07m

Weight : 160g

Connector : M type

Type : 1/4 wave mobile whip antenna (6m),

1/2 wave C-Load radial less mobile whip antenna (2m),

5/8 wave 2-element C-Load radial less mobile

whip antenna (70cm)

■ Though the product being purchased is manufactured under strict quality control, if a damage is caused by transporting, ask your dealer promptly.

■ Design and specification of the antenna will be changed for further improvement without advance notice.

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