

REVANT

2m/70cm Dual Band High Performance
Glass Mount Mobile Whip Antenna

TG509 / TG506

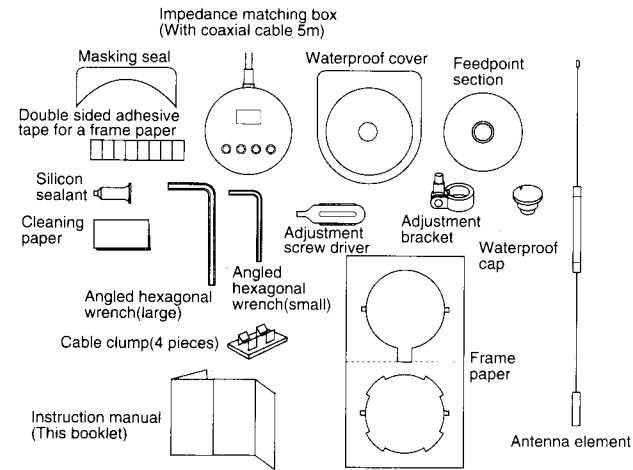
Patent pending

Instruction Manual



These antennas are operated by mounting on a windshield glass surface. Be sure to read this manual thoroughly to install the antennas properly. Keep this instructions carefully after reading.

Assembling parts



I. Preparation for installation.

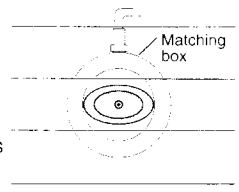
- If the antenna is installed too closely to a metallic object such as car roof, VSWR may not be able to be adjusted. Then, more the element away from the object by tilting it or look for better installation location.
 - Do not install the antenna under high humidity (rainy or foggy day).
 - The antenna can not be installed on such things as a sticker, since it decrease adhesive strength.
 - Some cars have radio antenna being embedded in rear windshield glass. In those cars, if the antenna is being installed close to the antenna, noise may be heard upon transmission.
- To use cleaning paper and silicon sealant.**
- Do not store them within reach of the children.
 - If they are eaten by a child by chance, apply water and let them throw out and then, consult your doctor.
 - If they get into your eyes, wash by water and then consult your doctor.
 - Do not store them close to fire.



(1) Find out installation location.

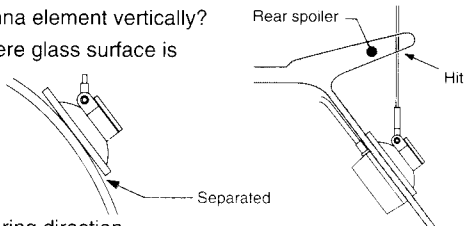
1) To find out installation location, while placing matching box from inside of a car, taking following things into account.

- Is it interfere your sight during driving?
- Is oval transmission element placed on windshield glass heater or embedded radio antenna? It, however, can be installed between the heater lines.
- Is it possible to wire coaxial cable or to practice antenna adjustment?
- Is it a location where glass surface is curved sharply?



2) Then, place the antenna from outside of the car. See if installation location being find out from inside is adequate by taking the following points into account.

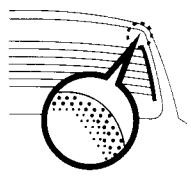
- Is rear windshield glass wiper functioning properly if it is equipped in your car?
- Are there any obstacles such as rear spoiler for installing antenna element vertically?
- Is it a location where glass surface is curved sharply?



3) Coaxial cable wiring direction.

If there are heating lines, coaxial cable has to be wired for lower or upper direction. If no heating lines, coaxial cable can be wired for any direction.

*In some cars, there is dotted paint area on a windshield glass surface. Since this area does not affect electrically, the antenna can be installed on it.

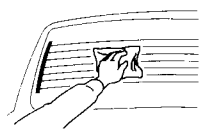


*Though a type of adhesive color film being attached on inside of the windshield does not affect electrically, to maintain adhesive strength, it is recommended to remove it.

*Do not install the antenna on front windshield glass or driver's side windshield glass.

(2) Clean windshield glass surface to be installed.

Clean dirt such as oil and wax on a windshield glass surface to be installed thoroughly with a cleaning paper included. If there are strong adhesive chemicals such as liquid wiper, being applied on the windshield glass, remove it around location to be installed the antenna with cleaning compound, then clean inside and outside with the paper.



II. Installation

- Normally, do not have enough time after installation.
- Adhesive strength is attached to the glass. If removed, since it is difficult to be attached again, use it again.
- Since it is difficult to be sure to practice antenna adjustment.

(1) Install in

1) Attach impedance matching box. There are front and rear side. They are separated from the antenna element. The double sided adhesive papers included in the manual place alignment marks (offsets) at the center of the glass.

2) Heat windshield glass. If the glass is heated more than 20°C/40°F, the adhesive strength. The antenna heater for about 10 minutes of the glass. The adhesive of the glass.

3) Install impedance matching box. Remove protection paper from matching box. Cut off the adhesive cut-offs of the matching box to fix. Locate outside of the car.

Remove protection paper



4) Place coaxial cable. In wiring coaxial cable, use the appropriate paper.

*For single band operation, if VSWR of the antenna can not be lowered by adjusting trimmer capacitors on a band to be operated, try to adjust trimmer capacitors for the other band at the same time it helps to widen VSWR adjustment coverage.

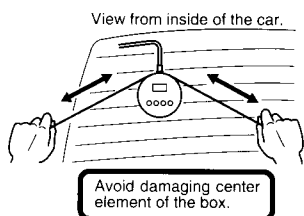
*Air trimmer capacitors being used in impedance matching section are built to turn endlessly.

*If RF power being applied is less than 1W, Indicator in SWR monitor may not move and therefore it is impossible to adjust the antenna. In this case, raise the power to more than 5W and adjust the antenna to operate.

IV To remove the antenna.

If it is necessary to remove the antenna, insert a thin wire between windshield glass and feedpoint section and move it back and forth.

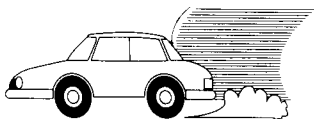
In removing impedance matching box on inside of the car, utmost care has to be taken to avoid breaking embedded glass heater line and radio antenna. Be careful that force to remove the antenna too strongly may cause to break windshield glass. To install the antenna again, be sure to use DIAMOND's genuine repair kit.



V Notes for operation.

1) Double sided adhesive tape being used in the TG series antennas can not be detached in normal operation. Once strong impact is applied to the antenna, however, it becomes less strong and detachable. Therefore, do not drive too fast and be careful when you drive in a forest or woody place. It is recommended to inspect the antenna periodically.

2) If the antenna is installed close to embedded radio antenna, noise may be heard in car radio upon transmission.



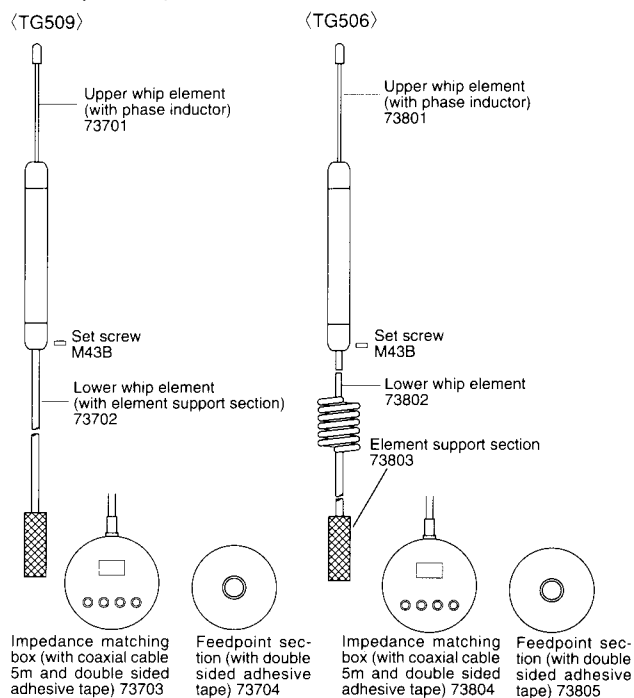
3) Since those set screws used to fix antenna element may be loosened during driving, it is recommended to refasten them firmly from time to time, especially the antenna is being installed recently. Use angled hexagonal wrench (small) to fasten the screws.

4) Built-in SWR monitor shows reflected wave from the antenna element. External SWR meter may show different value since it includes coaxial cable section.

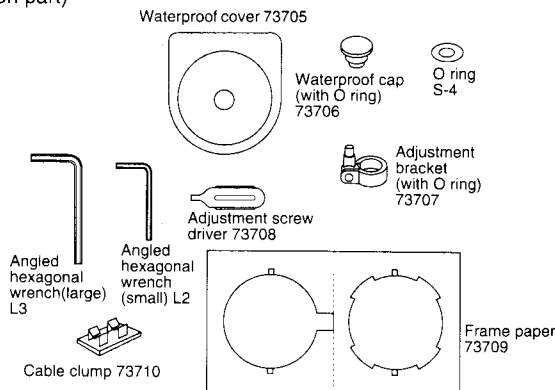
5) If high RF power (50W) is being applied to the antenna, impedance matching box becomes a bit warmer.

6) VSWR may be worsened by water under rainy weather.

Part name(number)



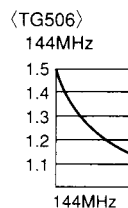
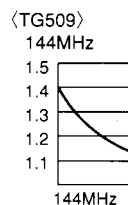
(Common part)



Repair kit

To install the TG series antenna after it is removed, use DIAMOND's genuine repair kit. The TGRK1 repair kit is sold separately. Ask your dealer for it. The TGRK1 repair kit contains masking seal, double sided adhesive tape for waterproof cover, double sided adhesive tape for impedance matching box, double adhesive tape for feedpoint section, frame paper, double sided adhesive tape for a frame paper, silicon sealant, cleaning paper and operating instruction.

VSWR chart



Specification

(TG509)
Frequency
Gain
Max. power ra
Impedance
VSWR
Length
Weight

Connector
Type

Coaxial cable

(TG506)
Frequency
Gain

Max. power ra

Impedance

VSWR

Length

Weight

Connector
Type

Coaxial cable

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