16 m V TYPE SHORTENED DIPOLE ANTENNA FOR AMATEUR RADIO

HFV16

Operation Instructions

To use this antenna properly, read this instruction thoroughly before using it. Keep this manual carefully at hand for later use.

Usage

HFV16 is for amateur radio transmission. License of amateur radio is required for operation.

——————CAUTION——————

«When installing the antenna»

① Do not install on a rainy or windy day since it is dangerous.

② Do not attempt to install the antenna only by yourself. Installing the antenna alone on the roof may lead yourself into dangerous accident. Always ask for assistance when installing the antenna.

③ Be careful not to drop the antenna, tools and attachments during installing on high location. Assemble the antenna on ground before installing.

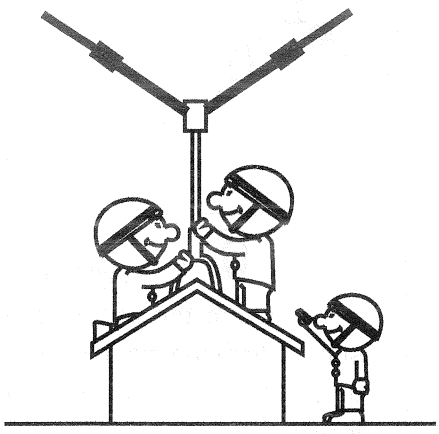
«Where to install the antenna»

① When installing on roof top, to use the antenna in maximum performance, check whether there is any obstacle like electric wire or TV antenna. If the antenna is installed near a building, it may cause bad effect for electrical characteristics of the antenna.

② Do not install the antenna where is easily reachable by people.

③ When rotating the antenna by motor, check if there is any obstacle in the radius. It is very dangerous if it touches electric wire.

④ Install the antenna firmly so it will not fall due to the strong wind. Install the antenna at safe place where people and building are not inflicted injuries even if the antenna falls down.



«Before transmission»

① Check the antenna before transmission using SWR power meter if the VSWR is at normal rate. If VSWR is below 1.5, there is no problem. If the VSWR is too high, stop the operation immediately and check the antenna and wire' s electronically-conductive. VSWR gets high when antenna is installed near obstacle and high building or installed too close to the ground.

※SWR power meter measures the effectiveness of transmitting power between a transmitter and an antenna. If Diamond Antenna brand SWR power meter is installed within a coaxial cable, it can measure the VSWR.

«During transmission»

· Touching the antenna during transmission may cause electrify. Pay special attention people nearby, especially a child, not to touch the antenna if it is installed on balcony rail.

«Rumbling thunder»

· If the thunder seems to rumble in the vicinity, do not touch the antenna and coaxial cable. While the antenna is not operating, pull out the coaxial cable from the radio.

«If there is something wrong, stop transmitting immediately.»

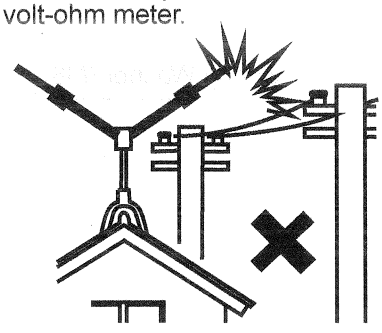
Keep transmitting with high VSWR may cause damage on the radio. Stop transmitting immediately and check the following matters. If it does not solve the problem, please ask the dealer or Diamond Antenna Corporation.

[Condition: If the antenna does not seem to receive well or transmit well]

Check 1) Is not the antenna installed too close to a building wall? VSWR is higher and radiation patter is disturbed when the antenna is installed too close to a building wall. Please install the antenna as far as possible from a building.

Check 2) Is the antenna assembled correctly? Please read the instruction again reconfirm the assembly.

Check 3) Is not there any problem with coaxial cable? Please check if soldering the connector is okay and the wire breaks by the volt-ohm meter.



«How to assemble»

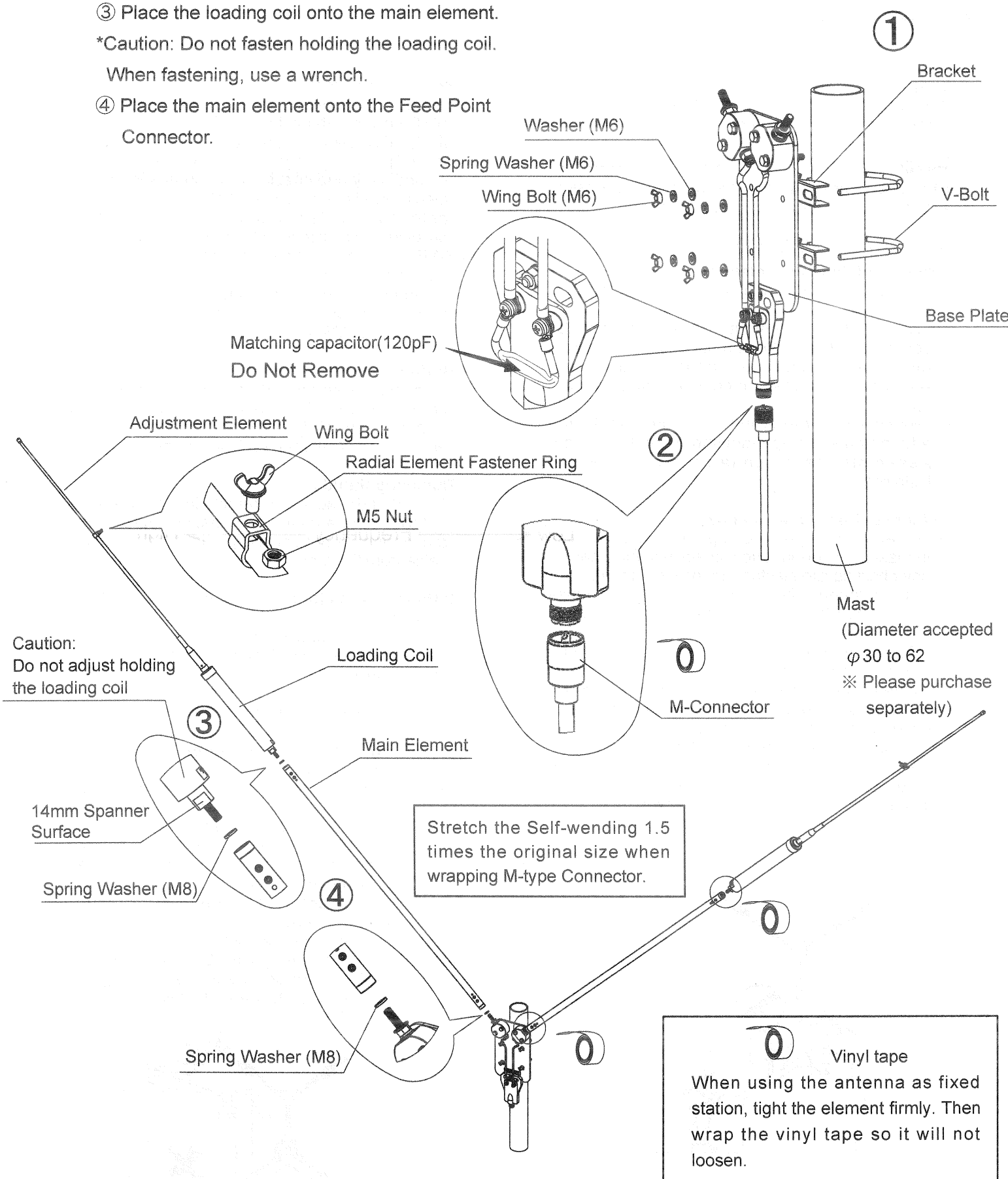
① Attach the Feed Point Connector on the mast.

② Connect the coaxial cable.

③ Place the loading coil onto the main element.

*Caution: Do not fasten holding the loading coil.
When fastening, use a wrench.

④ Place the main element onto the Feed Point Connector.



Stretch the Self-wending 1.5 times the original size when wrapping M-type Connector.

Vinyl tape

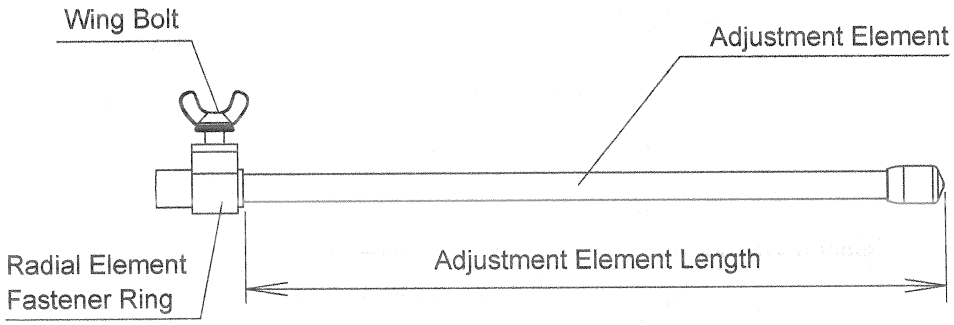
When using the antenna as fixed station, tight the element firmly. Then wrap the vinyl tape so it will not loosen.

«How to adjust»

① Frequency can be adjusted by changing the length of the adjustment element.

*element on both side should be the same length

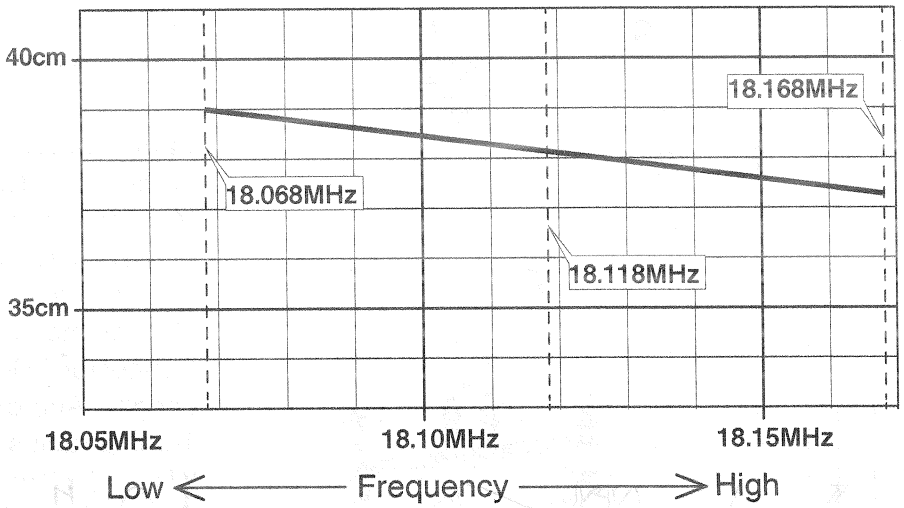
② Fasten the wing Bolt.



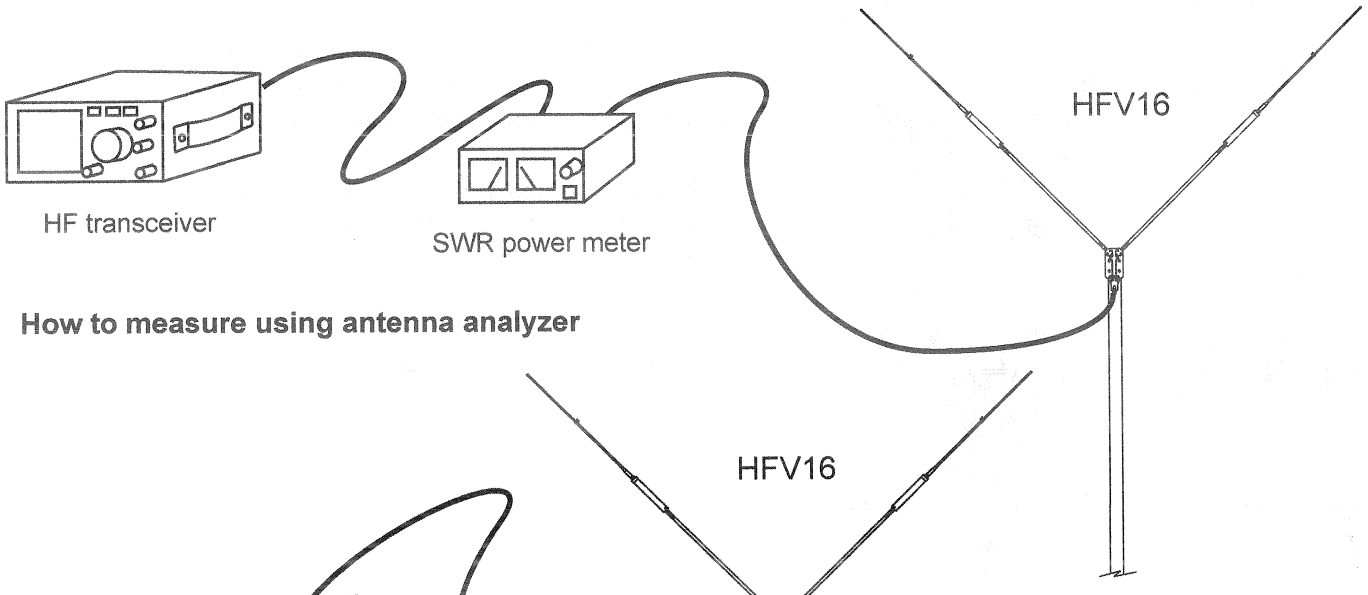
Frequency	Adjustment Element
18.068MHz	39.0cm
18,118MHz	38.2cm
18.168MHz	37.3cm

Caution: frequency could change depending on the surrounding.

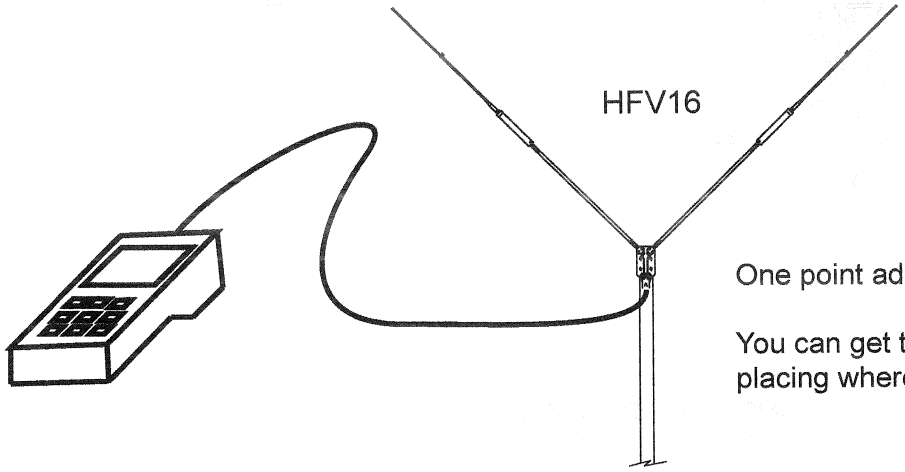
Relationship between length of element and frequency
Longer element: lower frequency
Shorter element: higher frequency



How to measure using SWR power meter



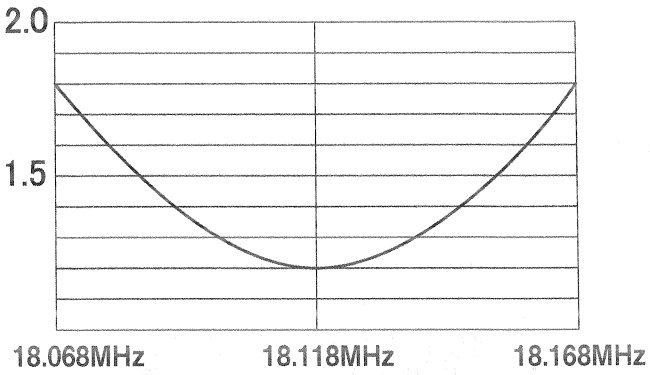
How to measure using antenna analyzer

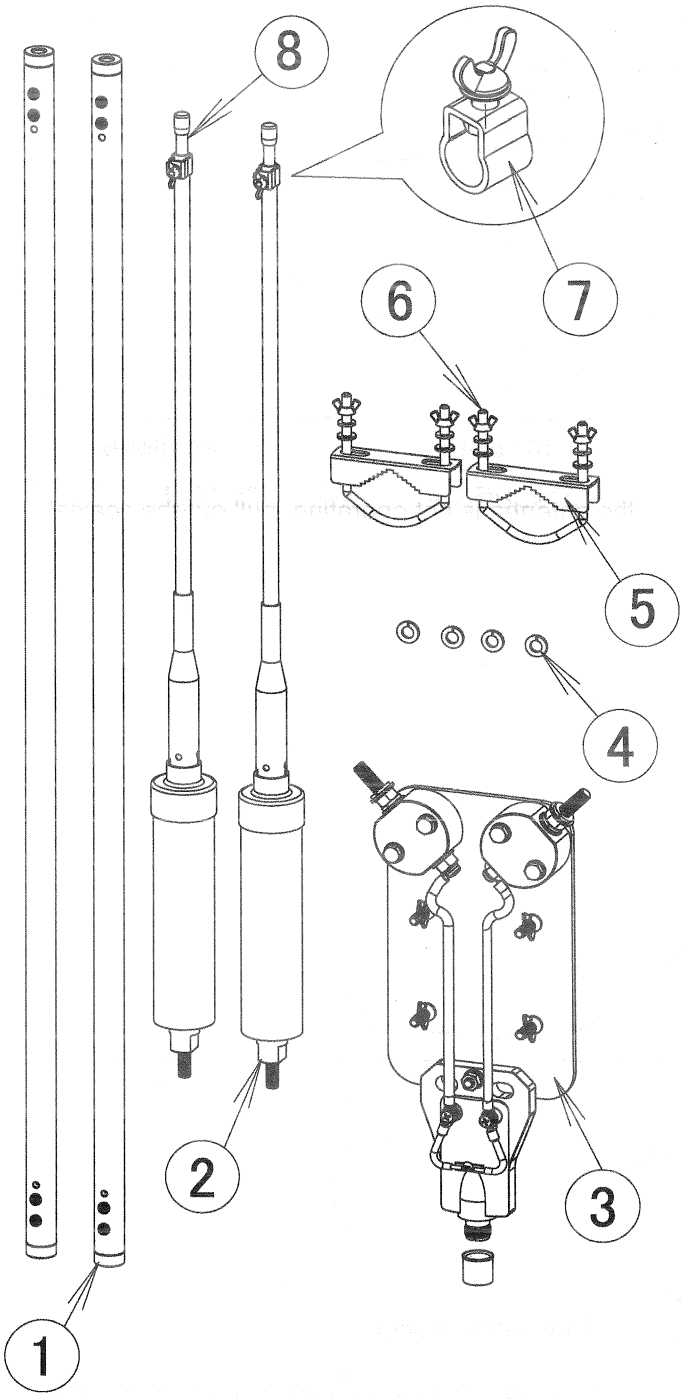


One point advice

You can get the maximum performance by placing where there is less buildings around.

VSWR chart





Parts Description

Number	Parts Name	Parts Number
①	Main Element (x1pc)	K73001
②	Set Coil (x1pc)	K73002
③	Feed Point Connector (x1set)	K73003
④	M8 Washer (x4pcs)	K73004
⑤	Bracket	K73005
⑥	V Volt set	K73006
⑦	Radial Element Fastener Ring	K73007
⑧	Adjustment element (1pc with cap)	K73008

Specifications

Frequency / 18MHz (16m)
Max. power rating / 200W (SSB) 70W (CW)
VSWR / less than 1.5 (at resonant frequency)
Impedance / 50Ω
Mast diameter accepted / φ30 to 62
Connector / M-J
Length / Approx. 4.6m (Max)
Turning-radius / Approx. 1.65m (Max)
Weight / 2.2kg
Rated wind velocity / 35m/sec.
Type / V-type dipole

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

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

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