

SCU-31 External GPS Antenna

The SCU-31 is 66 channel GPS Antenna supplied with 49 feet of cable that plugs into your compatible Standard Horizon VHF radio to enable AIS and DSC. The GPS antenna delivers accuracy better than three meters by decoding the GPS correction signals from the SBAS (Satellite Based Augmentation System). Please refer to the STANDARD HORIZON products catalog or web site for compatibility.

Owner's Manual

The details of the installation and operation of the **SCU-31** are included in the owner's manual of the compatible fixed mount radio, or can be downloaded at www.standardhorizon.com.

Supplied Accessories

GPS Antenna Unit (49 feet cable)	1
Antenna Base (Socket, Part number: RA6054200)	1
Screws (M3X8 SUS, Part number: U20308020)	3

Installing

The SCU-31 is designed to be mounted on a base, installed on an extension pole or flush mounted. Choose a location for the antenna that has a clear view of the sky and is not located within 3 feet of radar or other transmitting antenna. Ensure there are no major obstructions or fixtures in the immediate proximity to the antenna. The antenna relies on direct "line of sight" satellite reception. If you are unsure of the location, temporarily mount the antenna to verify correct operation. If mounted close to a radar, turn on the radar and check the GPS signal strength using the GPS Status Page on the VHF.

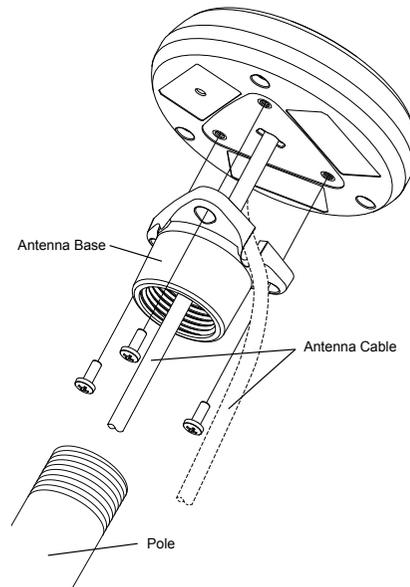
Base Mounting the antenna

The thread used on the base of antenna (1 inch, 14 TPI) is an industry standard used on a wide range of commercially available mounting brackets or extension poles. Due to the manufacturing process of the mounting brackets, the antenna may not tighten all the way down onto all the threads. This is of no concern however as the antenna must be tightened until the antenna stops rotating.

1. When passing the antenna cable through a mounting bracket or extension pole, make sure to pass the cable through the antenna base.

NOTE:

- When routing the antenna cable along the outside of the extension pole, pass the cable through the groove as shown by the dotted lines in the figure on the right. (Please cut the blank panel with a long-nose pliers.)
- The antenna cable can be cut and spliced to ease installation. Care must be taken when reconnecting the antenna cable to protect from water and corrosion.

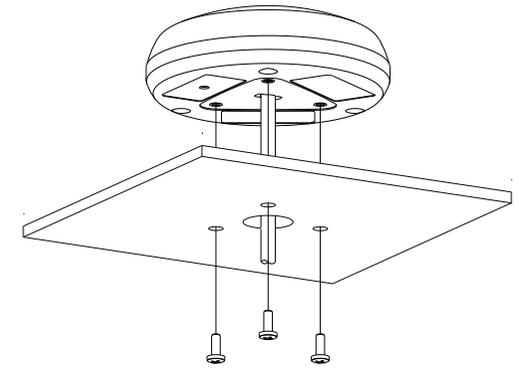


2. Mount the antenna base to the antenna using the supplied three screws.
3. Screw the antenna base to the mounting bracket or extension pole.
4. Install the mounting bracket or extension pole in a location that has a clear view of the sky.

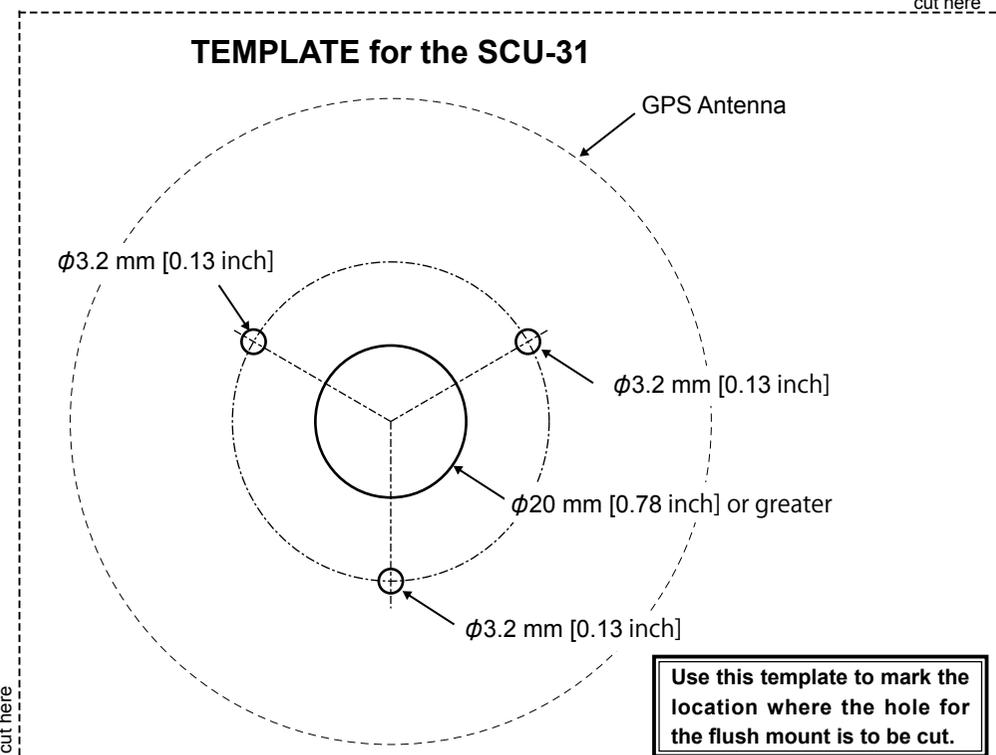
Flush Mounting the antenna

NOTE: Before drilling the mounting holes, it is recommended to test the GPS antenna satellite signal strength in the desired location.

1. To ease installation use the supplied flush mount template.
2. Apply the flush mounting template sticker.
3. Drill the 0.78" (20 mm) and 0.13" (3.2 mm) holes, and remove the template.
4. Insert the cable into the 0.78" (20 mm) hole and route to the transceiver.
5. Apply a small amount of RTV to the underside of the antenna.
6. Place the antenna and screw into place using the supplied screws.

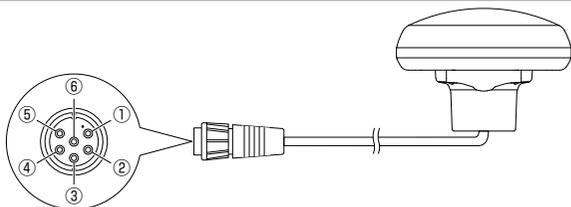


Template

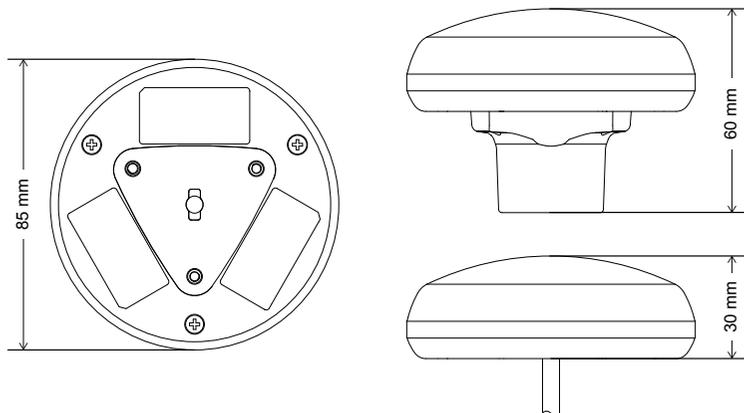


Pin Assignment

- ① DC INPUT (+10 to 35 VDC)
- ② GPS DATA OUTPUT (+)
- ③ GND
- ④
- ⑤
- ⑥



Dimensions



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.

Changes or modifications to this device not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.

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.

Disposal of your Electronic and Electric Equipment

Products with the symbol (crossed-out wheeled bin) cannot be disposed as household waste. Electronic and Electric Equipment should be recycled at a facility capable of handling these items and their waste byproducts. In EU countries, please contact your local equipment supplier representative or service center for information about the waste collection system in your country.



Declaration of Conformity

We, Yaesu UK Ltd. certify and declare under our sole responsibility that the following equipment complies with the essential requirements of the Directive 1999/5/EC and 2011/65/EU.

Type of Equipment	External GPS Antenna
Brand Name	STANDARD HORIZON
Model Number	SCU-31
Manufacturer	YAESU MUSEN CO. LTD.
Address of Manufacturer	Tennozu Parkside Building, 2-5-8 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002 Japan

Applicable Standards:

This equipment is tested to and conforms to the essential requirements of directive, as included in following standards:

EMC 1999/5/EC Art. 3 (1) (b)	EN 301 489-1 V1.9.2 EN 301 489-3 V1.6.1
Radio spectrum 1999/5/EC Art. 3 (2)	EN 300 440-2
ROHS2 2011/65/EU Art. 7 (b)	EN 50581:2012

The technical documentation as required by the Conformity Assessment procedures is kept at the following address:

Company	Yaesu UK Ltd
Address	Unit 12, Sun Valley Business Park, Winnall Close Winchester, Hampshire UK SO23 0LB
Technical Construction file	Issued by: Yaesu Musen Co., Ltd.



Specifications

Supply voltage	Normal: 13.8 VDC (Supplied from the transceiver) Operating: 10 - 35 VDC
Power consumption	0.3 W (Max.)
Operating Temperature	-4 °F to +140 °F (-20 °C to +60 °C)
Storage Temperature	-22 °F to +185 °F (-30 °C to +85 °C)
Receiving Frequency	1575.42 MHz
Receiving Code	GPS: L1 C/A code SBAS: WAAS, EGNOS, MSAS, GAGAN QZSS
Receiver Channels	66 channels
Sensitivity	Less than -147 dBm
Time to First Fix	Hot start (Open Sky): 1 sec (approx.) Cold start (Open Sky): 33 sec (typical)
Geodetic Datum	WGS84
Position Accuracy	2.5 m (typical)
NMEA 0183 Output	4800 bps, 8 bits, no parity, 1stop bit GGA, GLL, RMC, GSA and GSV
Dimensions	85 x 30 mm in height (flush mounted) or 60 mm on base mount
Weight (approx., without cable)	3.2 oz (90 g)
Cable (approx.)	49 feet (15 m)

YAESU MUSEN CO., LTD.

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