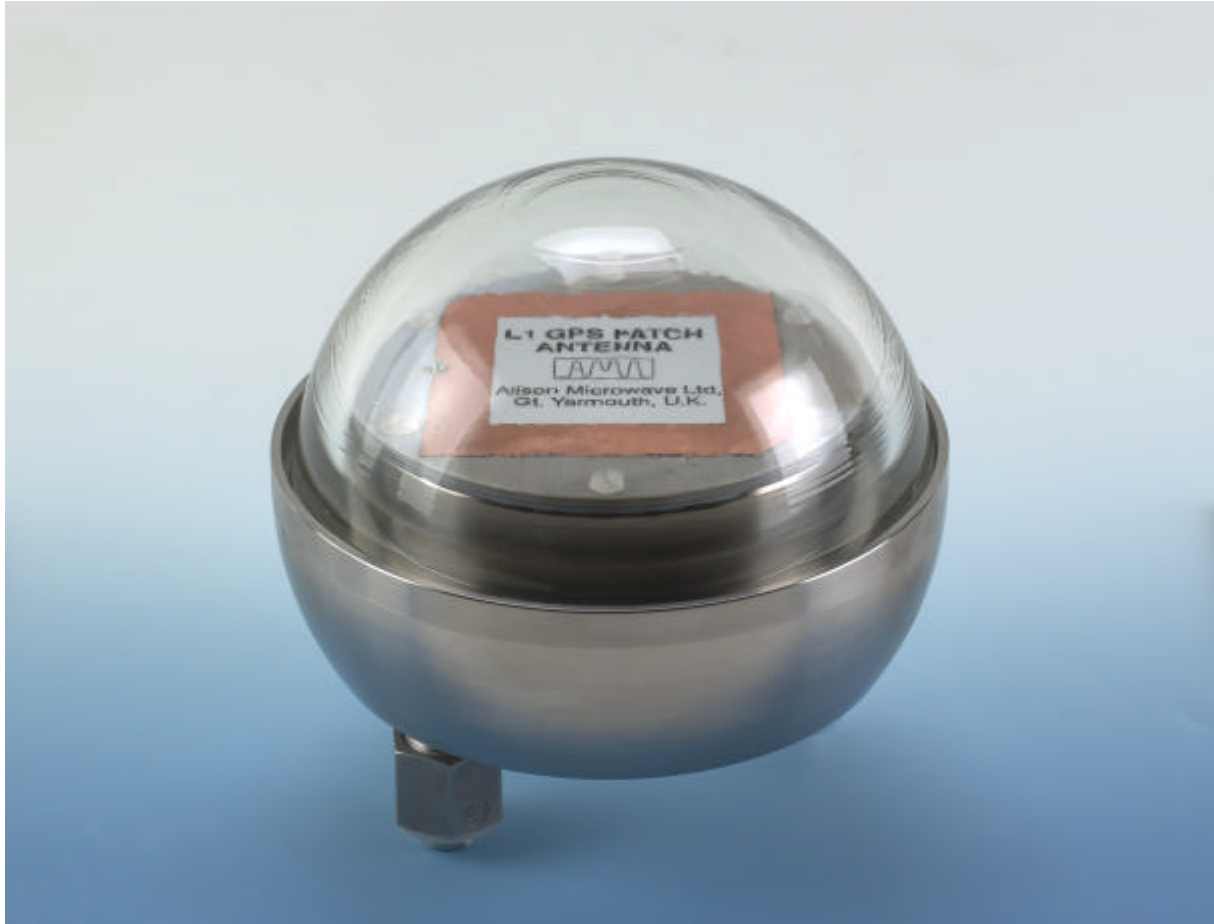


## Submersible GPS Antenna AD 450

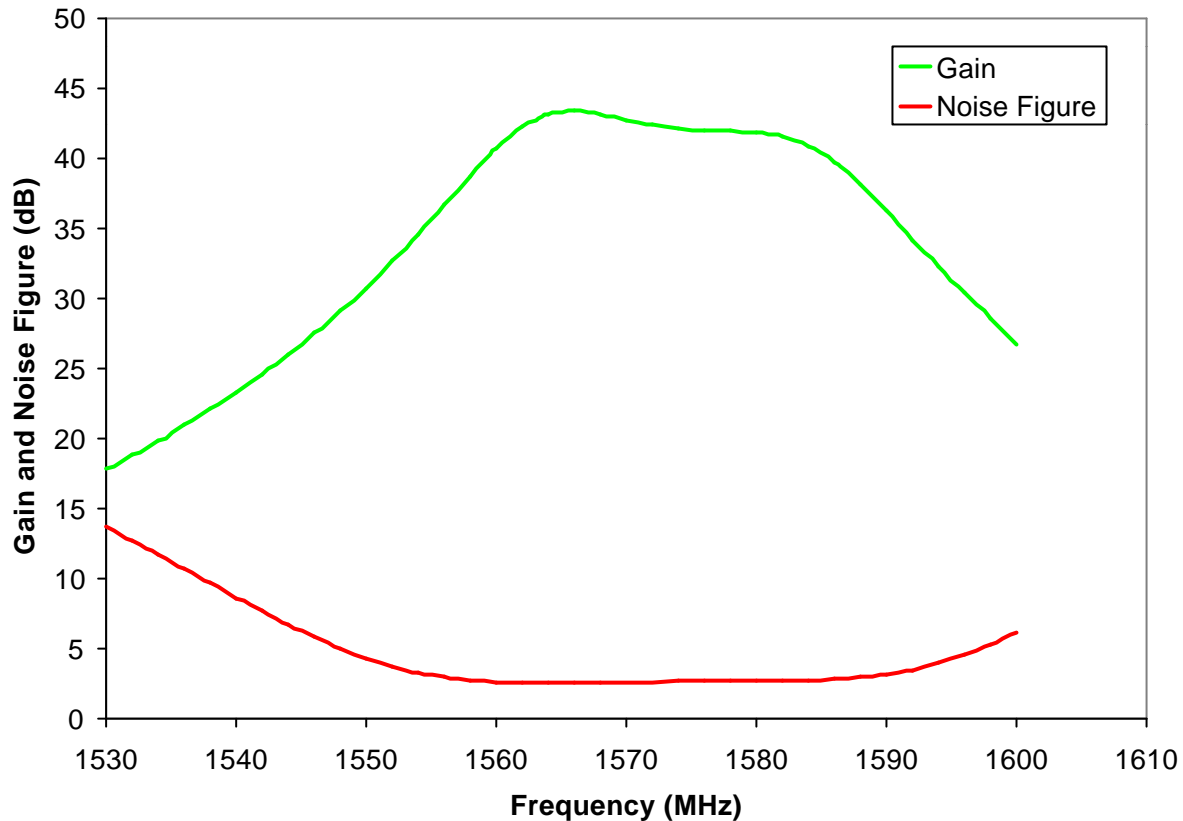


### General Specification

The AD450 is a L1 patch antenna, designed to be housed within a borosilicate glass radome and titanium body. The antenna is capable of reception of low power satellite transmissions down to -130 dBm.

The antenna element has RH circular polarisation ( $\pm 0.5$  dB at zenith) and is tuned for L1 GPS reception (1.5754 GHz) with an omnidirectional radiation pattern in azimuth and good reception down to 5 degrees in elevation.

A low noise GasFET amplifier with ceramic filters are fed by the antenna element. Gain is factory preset in the range 30 to 48dB to suit the GPS receiver with which it is to be used. Supply voltage range is 4.85 to 20 volts. The in-band noise figure of the amplifier/filter combination is  $< 3$ dB (figure 1).



**Figure 1.** Gain and noise figure over the frequency range 1530 to 1600 MHz for the amplifier with ceramic filters used in the AD450 submersible antenna.

**Dimensions:**

Diameter: 120mm  
Height: 93mm, plus 18mm bulkhead  
Weight (air/water): 3000m: 1,5kg/0,7kg ; (6000m:1,6kg/0,8kg)  
Fixture pattern: 6 x M3 tapped holes on diam. 80mm, spaced equally

**Operating Depth:**

3.000 m (optional: 6.000m)

**Connector:**

D.G. O'Brien	Bulkhead receptacle	P/N 1150488-101 RG 58
	Pressure Proof Cap	P/N 1104001-101

**Ordering Information:**

Submersible GPS Antenna AD 450	P/N 790716
GPS receiver , manufacturer/type/model <i>(to be indicated by customer)</i>	



Figure 2: M600 AUV, surfaced



Figure 3 : GPS antenna mounted on MARIDAN AUV M600

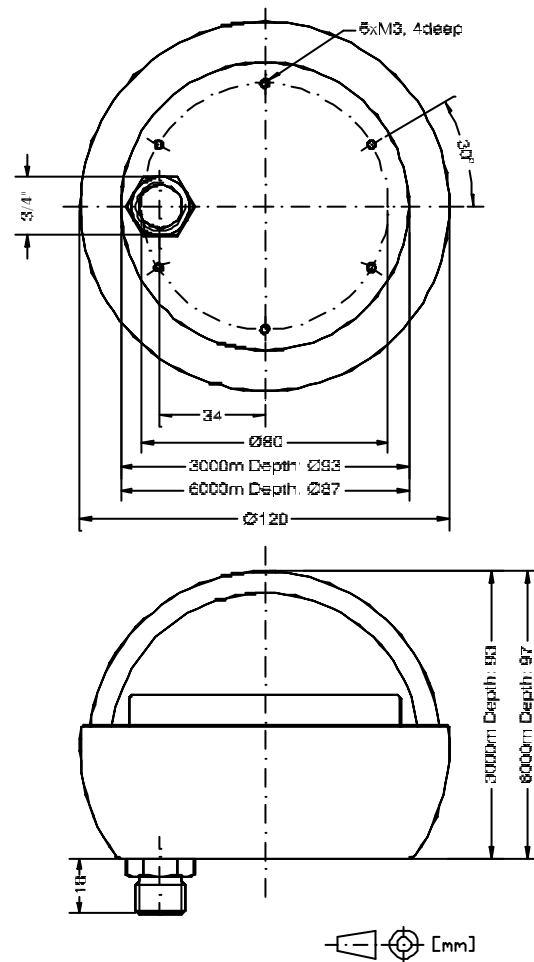


Figure 4. Drawing of GPS antenna in 2 aspects