

MODEL: MA-680

Tapered size and ruggedness design, demand of vehicle locating and marine navigation GPS antenna that will sustain harsh environment.



- Low noise figure
- Fully weather proof.
- Ultra-high Sensitivity
- Compact construction
- Excellent temperature stability

The antenna system **MA-680** is the integration of the high performance GPS patch antenna and a low noise amplifier into state-of-the-art low a very low profile/extremely compact/fully waterproof antenna signal enclosure. When connected to a GPS receiver with +3~5V DC antenna power it provide excellent signal amplification and out-band-rejection for that receiver.

Features:

GPS antenna with double threaded bolts and through holes for cable routing with course & fine treaded pitch locking for wing-nut fastener and lock-nut to prevent vibrations and un-authorize removal.

Specifications:

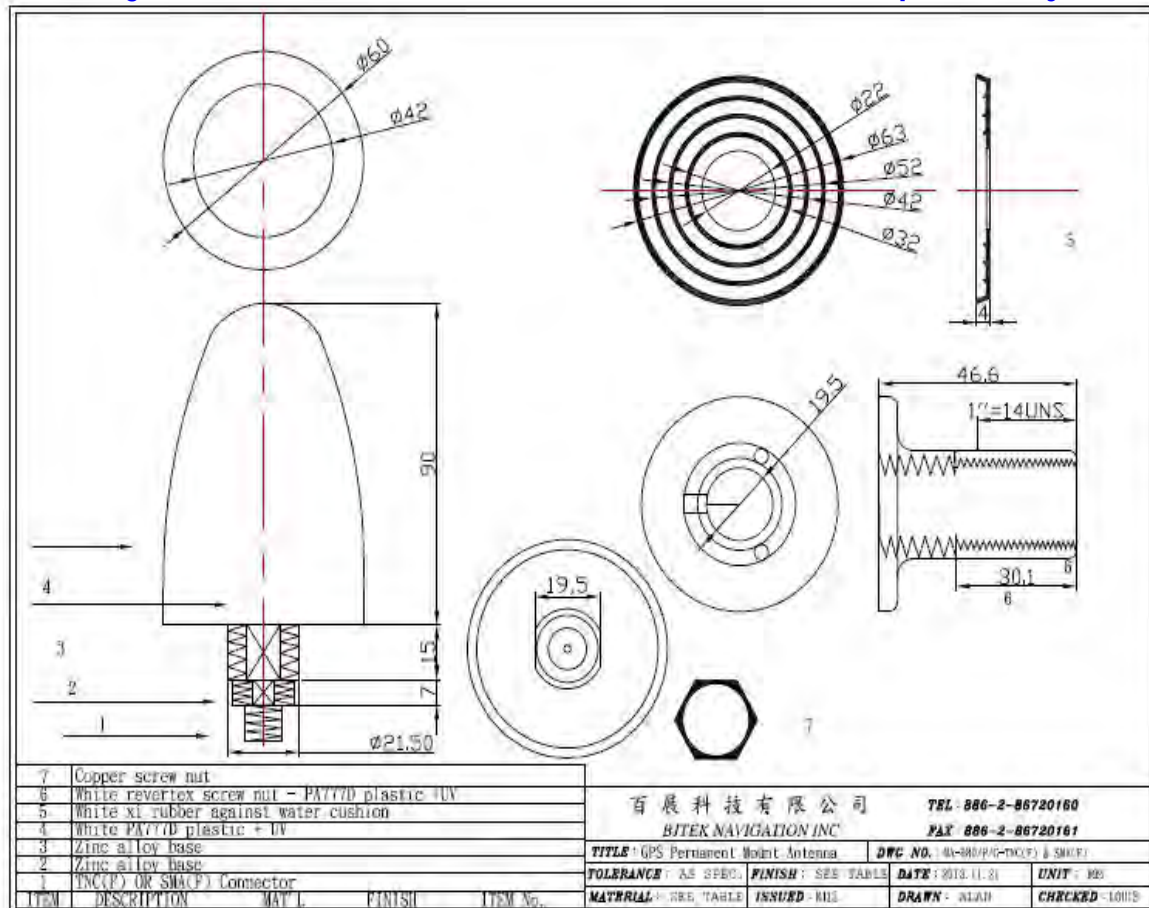
PHYSICAL CONDITION	
Constructions:	Polycarbonate radome, detachable cable/connector for easy mount, rubber-O-ring between top radome and screw base for waterproof
Dimensions:	60mm(Dia.) x 140mm(H)
Weight:	200grams (w/o cable & connector).
Color:	Standard in ivory white, other colours available upon request.
Mounting:	Bulkhead mount with 0.8 inch threaded wing nut (standard accessory).
Mounting Adapters	Pole mount to 1"-14 UNS threaded mast
Base mounting	FB1 1"-14 UNS
Cable & Connector	
RF cable:	SMA(M) +10 meter RG58 +TNC(M) (standard) other length (optional)
Pulling strength:	6 Kg @ 5sec. molded plastic on connector end for strain relief.
Connector	SMA(F) or TNC(F)
Antenna Element	
Center Frequency:	1575.42 MHz +/-1.023 MHz
Polarization:	R.H.C.P. (Right Handed Circular Polarization).
Absolute Gain @ Zenith:	+5 dBi typical.

BJTEK Navigation Inc.	-1 dBi typical.	https://www.bjnav.com/
Axial Ratio:	3 dB max.	
Output VSWR:	1.5 max	
Output Impedance:	50 ohm	
Low Noise Amplifier		
Center Frequency:	1575.42 MHz	
Power Gain:	28db +/-4.5db	
Bandwidth:	2 MHz min.	
Noise Figure:	1.5 min.	
Outer Band Attenuation:	20 dB min. @ Fo +/-50 Mhz.	
Supply Voltages:	2.5~5.5V DC.	
Current Consumption:	2.5V : 6.6mA Typ. 3V: 8.6mA Typ. 4V: 12.6mA Typ. 5V: 16.6mA Typ.	
Output Impedance:	50W ohm	
Overall Performance: (antenna element, LNA & coax cable)		
Center Frequency:	1575.42 Mhz.	
Gain:	At 90° vertical to sky 30 ± 4.5dBi (cable loss) Note:1 Mounted on the 60mm x 60mm square ground plane	
Noise Figure:	2.0 max.	
Axial Ratio:	3 dB max.	
Bandwidth:	2MHz min.	
VSWR:	2.0 max.	
Output Impedance:	50W ohm	
Environmental		
Operating Temperature:	-40°C~ +85°C.	
Storage Temperature:	-50°C~ +90°C.	
Relative Humidity:	95% non-condensing.	
Water Resistance:	100% waterproof.	

* This specification is subject to change without prior notice

Data Updated: NOV.22, 2013





FB1 Base mounting

