



**USER'S MANUAL** Rev. A

## ***MK-18***

Mini GPS Antenna for Micro Tracking



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## I. PREFACE

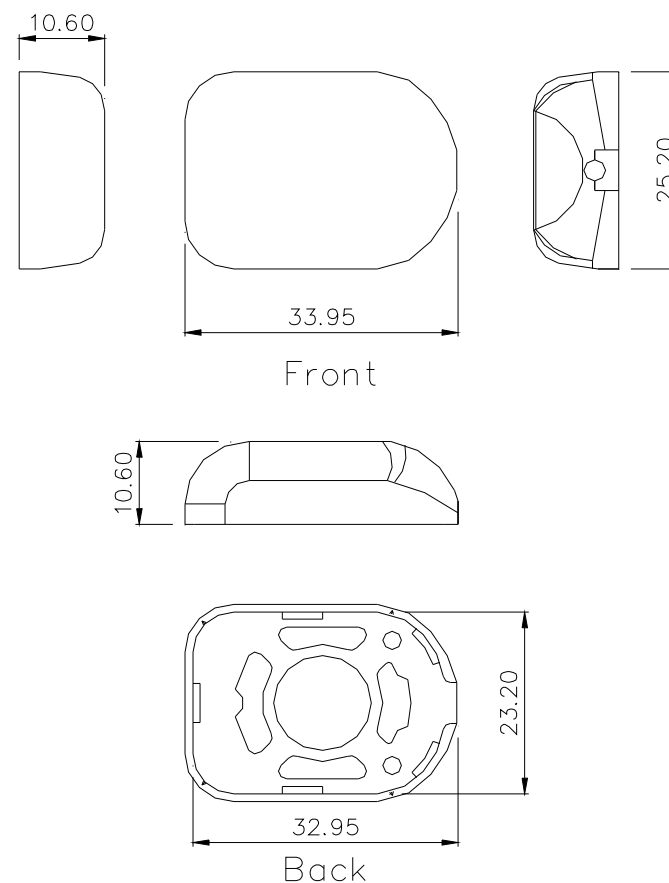
This text specifies the basic operational characteristics of the active GPS antenna **MK-18** under a standard test condition of 1.8V DC & 25°C/ 50% R.H.

## II. INTRODUCTION

**MK-18** is the most compact GPS antenna available with low power consumption on the current market. Its state-of-the-art technology allows for miniature without. With good coverage almost all the way to the horizon, it performs excellently in foliage or urban canyon environment -- even in the presence of electromagnetic interference!

Featuring diminutive and rugged enclosure and unparalleled performance, **MK-18** is compatible with almost every GPS receiver model, especially the GPS PDA on the markets and provides an excellent alternative for a vast range of GPS applications including AVL, Vehicle Navigation, Aviation, and Military.

## V. Technical Drawing





## IV. INSTALLATION

1. Secure your MK-18 antenna to the top of your vehicle and carry its cable into the vehicle.
2. Link the cable connector to your GPS receiver.
3. Start with your navigation.

## III. SPECIFICATIONS

PHYSICAL CONSTRUCTION	
Construction:	Polycarbonate radome on metal base
Dimension:	33.95mm (L) x 25.20mm (W) x 10.60mm (H)
Weight:	30 grams (excluding cable & connector)
Color of Radome:	Standard in dark gray, other colors available upon request
Standard Mounting:	Magnet or screw mount

ANTENNA ELEMENT	
Center Frequency:	1575.42 MHz +/- 1.023 MHz
Polarization:	R.H.C.P. (Right Hand Circular Polarization)
Absolute Gain at Zenith:	+5 dBi typically
Gain at 10° Elevation:	-1 dBi typically
Axial Ratio:	3 dB Max.
Output VSWR:	1.5 Max.
Output Impedance:	50 ohm

LOW NOISE AMPLIFIER	
Center Frequency:	1575.42 MHz +/- 1.023 MHz
Band Width:	2 MHz min.
Noise Figure:	1.5 Max.
Out Band Attenuation:	20dB min. @F0 +/- 50MHz
Supply Voltage:	1.8~3.3 V DC
VSWR:	1.5 Max.
Output Impedance:	50 ohm

CABLE & CONNECTOR	
RF Cable:	3 meter RG174/U (standard), other length available
Pulling Strength:	6 Kg/5 sec. with molded plastics on connector end for strain relief
Connector Available:	BNC, TNC, FME (to be adapted), GT5, MCX (OSX), SMA, SMB or SMC in straight or right angle type
Optional Adapters:	FME~MCX, FME~BNC, FME~SMA, FME~SMB, FME~TNC

<b>OVERALL PERFORMANCE (Antenna Element, LNA &amp; Cable)</b>	
Center Frequency:	1575.42 MHz
Gain:	19 dB typically
Power Supplied	1.8V ~ 3.0V DC
Current Consumption	5.1 mA +/- 1 mA
Noise Figure:	2.0 max.
Band Width:	2 MHz min.
Axial Ratio:	3 dB max.
VSWR:	1.5 max
Output Impedance:	50 ohm

<b>ENVIRONMENTAL CONDITIONS</b>	
Operating Temperature	-30°C~+85°C
Storage Temperature:	-40°C~+90°C
Relative Humidity:	95% non-condensing
Waterproof:	100% waterproof