

## GPS L1 Signal Re-radiating for Indoor Reception

### Model: RK-304

**Indoor GPS Coverage Solutions up to 30m Re-radiating Range!**



**RK-304** is a complete GPS L1 band signal re-radiating system with dual antennas to re-transmit real-time GPS satellite outdoor reception to an indoor environment. The system kits include a high gain external GPS antenna, a precisely calibrated amplifier circuit with Helix type re-radiator, and a built-in power supply regulator. The Helix type re-radiator allows multiple GPS receivers perform on-the-fly receiver performance within a closed environment, while the main GPS antenna is located on an unmanned outdoor location. The whole system is designed as PNP (Plug-and-Play) hardware and it can be installed either temporarily or permanently to a secured location by using whether dashboard suction cup or screws.

Wherever in lab/building/underground garage, RK-304 guarantees to bring and re-radiate GPS signal that meets your requirement.

## Features

- Compact size/low cost/high performance
- Polycarbonate radome with fully waterproof at IP66 rating
- Permanently screw mount/dashboard suction cups
- One external re-radiator for multiple, different GPS receivers
- Real-time GPS satellites outdoor reception to an indoor environment
- Cable length as long as 40m RF cable, extendable to 100m
- Re-radiating range as long as 30m

## Applications

**RK-304** is ideal indoor GPS coverage solutions for

- Hangars
- Fire Stations
- Police Stations
- GPS Labs
- GPS Workshops
- GPS Retail Stores
- GPS Production Line
- GPS Repair Service
- GPS Signal Reception in Underground Garage such as Tunnels and Mines etc.

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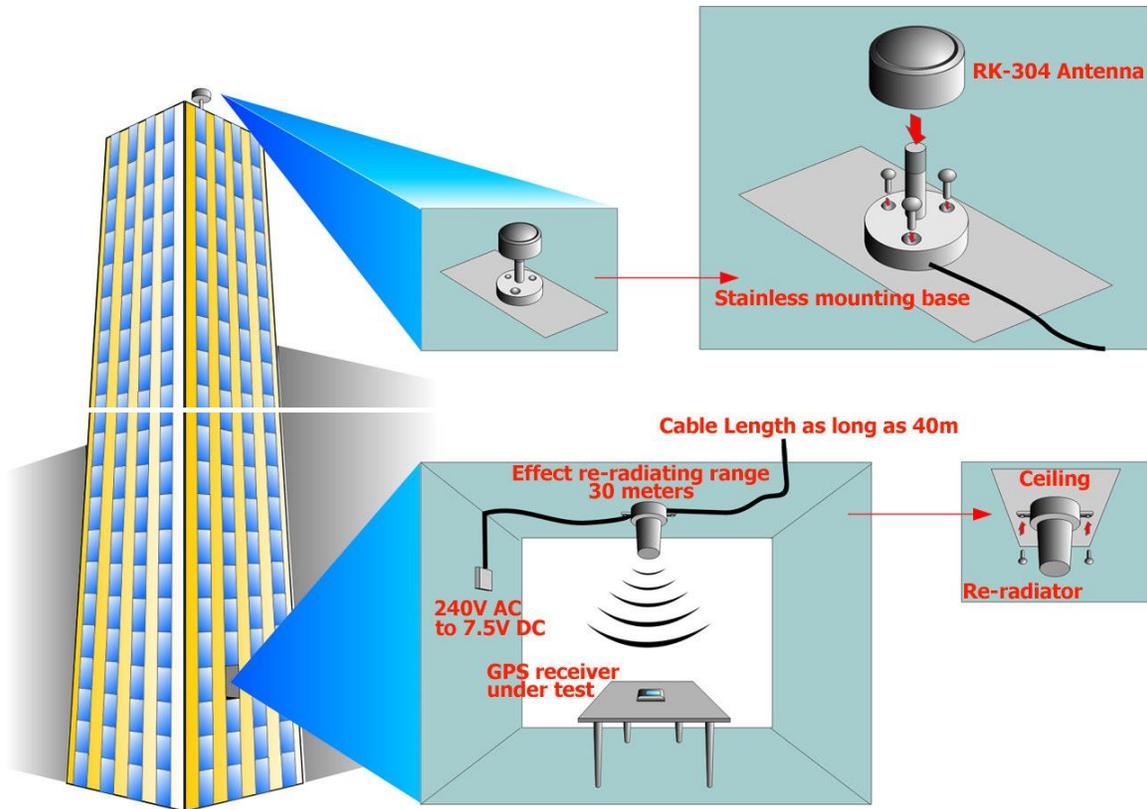
### Geoidsoft Inc. - Mobile GPS Online

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## Installation



## Installation Steps

1. Locate and mount the RK-304 external antenna on the center roof of building horizontally with the best visibility of the sky
2. Locate and mount the RK-304 helix type re-radiator to the ceiling with its cylinder facing and against the center of the testing bench.
3. Connect the RK-304 external antenna to the helix type re-radiator with 40m RG58 A/U RF cable.
4. Power up the system by plugging the AC 115V (240V) to DC 9V adapter

**Note:** The helix type re-radiator has to be located/mounted inside the building with adequate isolation from the RK-304 external antenna to avoid interference.

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**Specifications**

General Description	Professional GPS re-radiating system	
Physical Construction	Construction: Polycarbonate radome enclosure, cast die at the bottom, sealed with weatherproof rubber.	
	Dimensions: Antenna: 4.5" in diameter & 2.9" in height	
	Helix type re-radiator: 37mm (L) x 35mm (W) x 71mm (H)	
	Regulator: 65mm (L) x 32mm (W) x 43mm (H)	
	Cable Length: 40m RG-58 A/U	
	Standard Connector: Antenna: TNC Jack, re-radiator: SMA Jack	
	Weight: Antenna: 237g	
	Helix type re-radiator: 48g	
	Regulator: 85g	
	Standard Mounting: Stainless bracket mount	
Performance Specification	External Antenna	Polarization: R.H.C.P.
		Absolute Gain @ Zenith: +5 dBi typically
		Gain @ 10° Elevation: -5 dBi typically
		General: L1 frequency, 1575.42 MHz +/-1.023 MHz
		Gain: 27 dB typically
		Bandwidth: 2 MHz min.
		Noise Figure: 2.0 max.
		Axial Ratio: 3dB max.
		Out of Band Attenuation: 20 dB min. @ Fo +/- 50Mhz
	VSWR: 2.0 max.	
Output Impedance: 50 ohm		
Helix Type Re-radiator	Re-radiating Range: 30m	
Electrical Specification	Supply Voltage: 100~240V AC to 7.5V DC Regulator	
	Power Consumption: 48mA (+/- 5%) @ 7.5V DC	
Environmental Specification	Operating Temperature: -30° to +85° C	
	Storage Temperature: -40° to +90° C	
	Operating Humidity: 95% RH, non-condensing	

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