



PNRRKIT

Portable Networked Re-Radiating Kit Technical Product Data



Features

- **Utilizes Existing Roof Antenna**
- **Re-Radiating Amplifier with Power Supply**
Typical Gain 30dB
- **Optional Mounting Kit Hardware**
Adjustable Re-Radiating Mount
- **Variable Gain Option**
Re-Radiating Amp Gain Varies from approx 0-23 dB gain
- **Variable Gain Option with LCD Display**
Push Button Control in 1dB Increments 0-30dB gain

Description

The GPS Portable Networked Re-Radiating Kit (PNRRKIT) is a re-radiating system that allows re-radiation of the GPS L1 signal indoors. The PNRRKIT consists of a re-radiating amplifier with a wall mount plug-in transformer that powers the entire system, and a passive re-radiating antenna. The GPS L1 signal from the roof antenna (not included) is amplified and radiated indoors. Thus, if a receiver has line of sight with the re-radiating antenna, it can receive the GPS signal indoors up to 100 feet. A cable from the roof antenna to the re-radiating kit is required and can be purchased separately.

Re-Radiating Amplifier Electrical Specifications, $T_A = 25^{\circ}\text{C}$

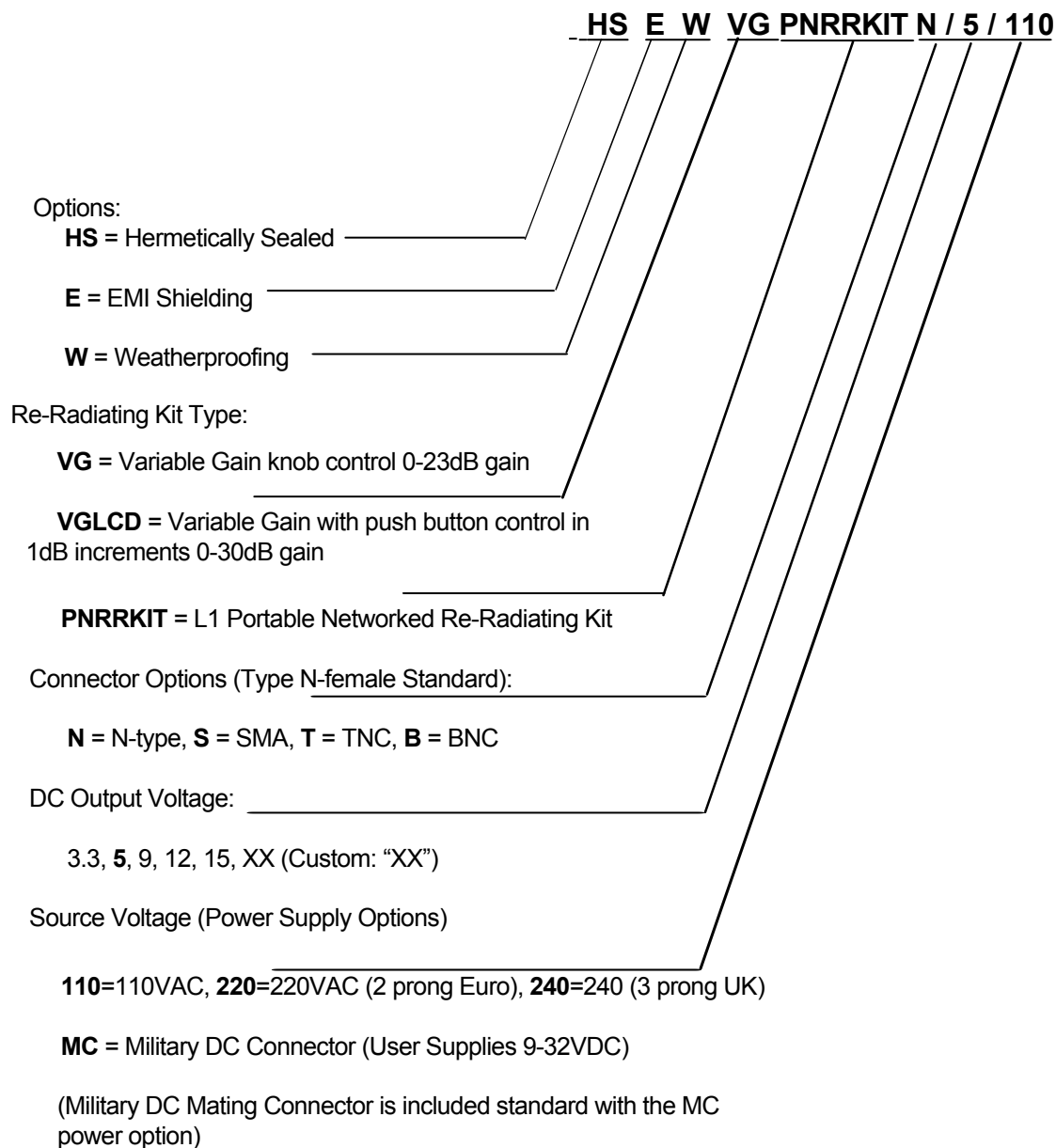
Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – J1	1.1		1.7	GHz
In/Out Imped.	Ant, J1		50		Ω
Gain ⁽¹⁾					dB
		29	30	31	dB
Input SWR ⁽²⁾	J1 - 50 Ω			1.8:1	-
Output SWR	Ant - 50 Ω			1.8:1	-
Noise Figure	Ant – J1		3.3	3.5	dB
Current			20	30	mA
Gain Flatness	L1 – L2 ; Ant – J1		0.5	1	dB
Reverse Isolation	J1 – Ant	35			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J1			1	ns

Re-Radiating Amp System Power Supply Options		
Source Voltage Options	VOLTAGE INPUT	STYLE
	110VAC	Transformer (Wall Mount)
	220 VAC	Transformer (Wall Mount)
	240 VAC (United Kingdom)	Transformer (Wall Mount)
	Customer Supplied DC 9-32 VDC	Military Style Connector
Re-Radiating Amp Gain Control Options		
Standard Gain	30 dB (Custom Gain between 0-30dB available upon request)	
Variable Gain	-3 ≤ Gain ≤ 25 dB	
Variable Gain with LCD Display	0-30dB gain range with push button control in 1dB increments	
RF Connector Options		
Connector Options	CONNECTOR STYLE	CHARGE
	Type N-female	NC
	Type SMA-female	NC
	Type TNC-female	NC
	Type BNC-female	NC
	Other	Contact GPS Networking

Re-Radiating **Antenna** Electrical Specifications, $T_A = 25^{\circ}\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Frequency	See Passive Antenna Specifications page 6				GHz
Bandwidth					MHz
Impedance			50		Ω
Peak Gain			3		dBic
Output SWR				1.5:1	-
Polarization			RHCP		-

Part Number Configuration

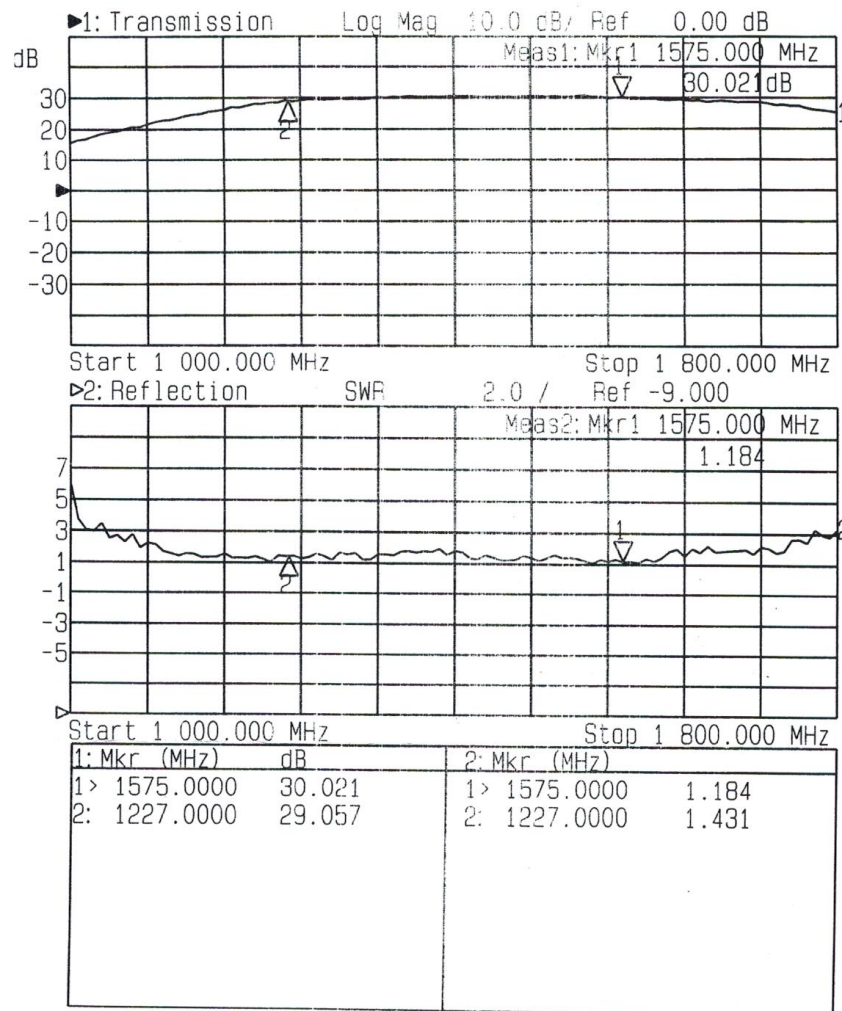


Contact GPS Networking Technical Support at 719-595-9880 or salestech@gpsnetworking.com for any questions regarding non-standard configurations and corresponding part numbers)

Performance:

NRRKAMP (Re-Radiating Kit Amp Standard Gain)

Input SWR (Ant. Port) and Frequency Response: Ant. To J1) (Typical, type N connectors):



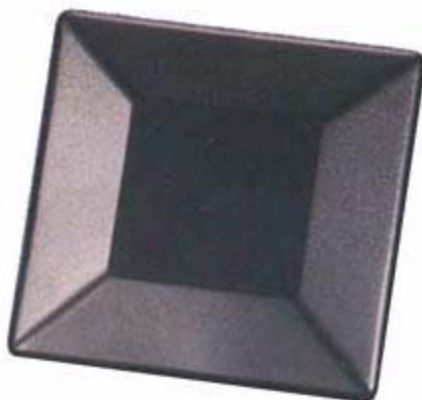
RoHS Compliant

GPS ANTENNA SPECIFICATIONS

Model No.: PA175S

Antenna:	
Center Frequency	1575 ± 3 MHz
VSWR	1.5:1 max.
Bandwidth	20MHz min. at -10dB
Impedance	50Ω
Axial Ratio	3dB max. $\theta=0^\circ$
Peak Gain	4dBic min.
Ground Plane	70 mm x 70mm
Gain Coverage	$\geq -4\text{dBic}$ at $-90^\circ \leq \theta \leq 90^\circ$ (over 75% volume)
Power Handling	1 watt
Polarization	RHCP
Mechanical:	
Weight	48g max.
Size	66 x 66 x 18 mm
Connector	SMA jack
Environmental:	
Working Temperature	$-40^\circ\text{C} < T < +85^\circ\text{C}$
Storage Temperature	$-50^\circ\text{C} < T < +95^\circ\text{C}$
Vibration	Sine Sweep,1G(0-P),10-150-10Hz each axis
Humidity	95%~100% RH

Note: Specifications subject to change without notice.



Re-Radiating Kit Amplifier

Finish Housing and Base Plate: ELECTROLESS NICKEL PLATED
MIL-C-26074C CLASS 1, .0001-.0003 MAX
Finish Lid: ANODIZE, TYPE II, CLASS 2, BLACK, per MIL-A-8625

GPS NETWORKING		ASSY, 1X1 STANDARD		Do Not Scale Draw Remove All Burrs And Sharp Edges to 0.005 Root Radius	
Issued By	Date	Design By	Issued By		
BPC	09/04/15				
Drawn By	Date	Proj Eng	Material		
Quantity / Used Qty		Atch / Reattach	See Note		
File / Aug Projection	Isolate	Unit / Assy			
370 E Industrial Blvd Fountain Valley CA 92708		Dwg Number		ISO File	SHEET
		ASSY, 1X1 STANDARD		1	1 OF 1
				Inch Dimensions	