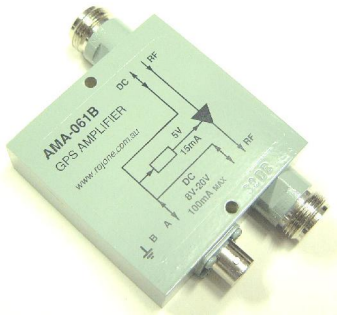
GPS (L1) Repeater Kit



FEATURES

- **Easy, Low Cost Installation**
- **Suits (L1) 1575MHz GPS Receivers**

The GPS-Repeater System is essentially a repeater kit to provide wireless indoor GPS Signal to allow the use of a GPS Receiver indoors, without the necessity for connection to an external antenna. This system is ideal for testing or timing applications. The kit consists of three main components; two antennas and a repeater block. The active antenna is mounted outside the building or lab with a clear view of the sky. The passive antenna is mounted indoors (to the ceiling in a central position in the room) to allow for even coverage.

DC power is fed to both active antenna and the repeater block using a DC 5 Volt Plug pack (not supplied) or batteries. The DC source is connected to the Repeater Block and the active antenna is powered via the coaxial cable from the Repeater Block.

Specifications

Part Number: GPS-REPEAT-XXX
XXX Suffix = Modification's or specials were applicable

The **GPS-REPEAT L1 (1575MHz) kit** consists of the following items:

1. Active – Standard MaxiNav Antenna. Supplied with a pole mount, Bottom exit RG58, cable tail 600mm (2 feet) long, N Female (Jack) connectorized (GPSA53NS6).
2. Passive – Standard MaxiNav Antenna. Supplied with side exit RG58 cable tail one (1) Metre (3.28') long, BNC Female (jack) connectorized. Magnetic, for ceiling installation (Part No # GPSP59BS1).
3. Repeater Block (AMA-061F). Provides filtering and amplification at 1575MHz. Also used to supply power to the active antenna. A power cable is supplied, but a power source is not. We suggest the use of a 9volt DC plug pack or battery supply.
4. 3 Metre (9.8') power supply cable terminated at one end with a 3 pin Tajimi (R05-PB3F) power plug for connection to Repeater Block (Part No # CA-GPS-PWR). 12 Metre (40') low loss cable assembly CA-04913A24A1200-08 is supplied for connection between the Active antenna and the repeater block. N Male to TNC connectorized.
5. 5 Metre (16.4') low loss cable assembly CA-04902A24A500-08 is supplied for connection between the passive antenna and the repeater block. Assembly BNC Male to TNC Male.
6. Optional Marine Knuckle can be supplied to allow 'aiming' of the roof top antenna. The knuckle screws directly into the pole mount on the active antenna - P/N: A-762.

Standard kit weight 2Kg (4.4 pounds)

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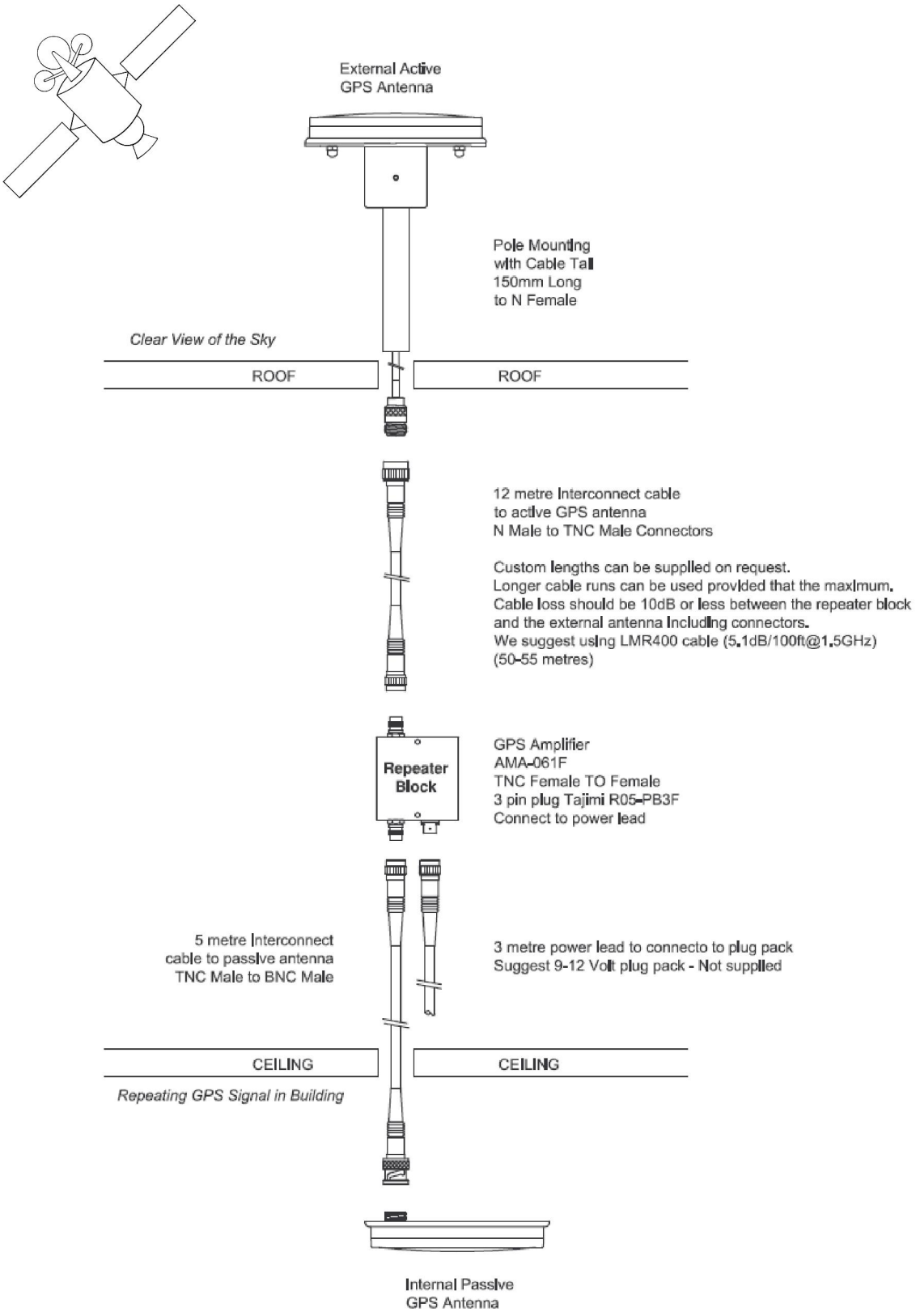

WARNING: The system may cause interference. Variable or inline attenuator should be used to back the signal off to an acceptable level.

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Coverage / Installation

Our GPS repeater system was typically designed for indoor use, such as laboratories, offices, production facilities, car parks, or anywhere a GPS signal is required to be available without the need to head outdoors.

The repeater kit is designed to cover an area of approximately 10m x 10m (100 square metres, 30ft x 30ft = 300 square feet) conservatively. This repeater kit has been installed in a number of applications with much larger areas with a great deal of success. Additional passive indoor antennas can easily be added to your system should extra coverage be required.

It should also be noted that signal strength and coverage is highly dependant on the quality of your GPS receiver. A poor GPS receiver will have less range than a good quality, high sensitivity GPS receiver. The area coverage will certainly increase with a good quality GPS receiver.

Ideally, the internal passive Antenna should be mounted in a central position within the room, at a height of approx 6 to 8 metres (20-26ft) above the ground to provide optimum system performance.

Installation and performance is highly dependant on the installation environment. The building's construction (metal, brick, reinforced concrete), installation or situation to other interfering sources will have an impact on the repeater's performance. Installation consideration should also be given to ensure structures within a room (metal partitioning, shelving, etc) are not obstructions, which may cause GPS signal black spots.

Our GPS repeater kit simply passes the GPS signal received outside, to you inside a building. The position co-ordinates provided will be the position of the externally mounted active antenna GPS antenna.

Antenna Installation

The standard kit provides interconnection cables totaling 17 metres (55ft) for connection of the external antenna to the internal antenna. Should the standard interconnect cables be too short for your application, Rojone is able to supply a Low loss Interconnect cable up to 55 metres (180ft) at an additional cost to suit your installation.

Should you wish to source a suitable cable locally, we would recommend the use of Times Microwave LMR400 cable (5.1dB/100ft@1.5GHz). Total cable assembly loss should be 10dB or better to connect between the repeater block and external active antenna. The assembly requires an N male connector at one end and TNC Male connector at the other.

Power Installation / Requirement

The GPS repeater system requires a 5 Volt DC (100mA) plug pack supply or battery source. This power supply is used to power the amplified repeater block and the active GPS antenna. A 3 metre (9.6ft) power lead is supplied to connect to the repeater block although the power supply is not included in the kit. Should you require assistance in relation to sourcing a suitable power supply, please contact Rojone.

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Accessories

Should additional indoor coverage be required, simply add up to 3 more passive GPS antennas.

To have two indoor antennas, you will need to purchase an additional passive antenna (Part Number: GPSP51BS1) and two way splitter
(Part Number: AMA-2301-2N) + suitable interconnect cables.

To have up to 4 indoor antennas, you will need to purchase an additional 3 passive antennas (Part Number: GPSP51BS1) and a four way splitter (Part Number: AMA-2301-4N) + suitable interconnect cables.

NOTE – GPSP51BS1 is a screw mount antenna. For magnetic screw, order A-GSP59BS1

New Product Release

GPS (L1/L2) Repeater Kit

The most recent edition to our repeater kit range is our New L1/L2 Dual Band series. Unlike the requirements of commercial GPS users, both the antennas and repeater module have been created for high performance Military & Commercial applications.

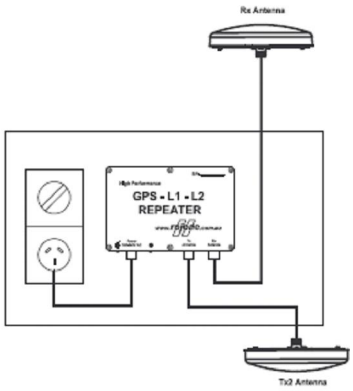
The L1/L2 (L1 CF 1575MHz, L2 CF 1227MHz) Repeater kit contains the antennas, repeater module, and a suitable power supply. In addition, a quantity of RF Coaxial interconnect cables will be required for installation.

The Dual Band **GPS-REPEAT L1/L2 kit** consists of the following items:

1. Active – L1/L2 Antenna. Supplied with a pole mount installation option, bottom exit N Female (Jack) connector (Part No: GPSA5F2DR513GA)

2. Passive – L1/L2 Antenna. Supplied with bottom exit N Female (Jack) connectors (Part No: GPSP2DR813G)

3. L1/L2 Repeater Block – (Part No: AMA-161). Provides filtering & amplification at both 1530-1580MHz & 1220-1230MHz. It is also used to supply power to the active antenna.



Note: RF coaxial interconnecting cables are NOT supplied as part of this kit. Products of this nature are specialized; as such, we recommend custom cable to suit your specific application. Please consult with your Rojone technical sales representative.

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