

GPS Inline Amplifier

Raven offers it's LA series of Inline Amplifiers
These units are compatible with both L1 & L1/L2 receivers.



Did you know the size (amplitude) of the radio signal transmitted from the GPS satellite is actually smaller than the electrical noise found everyday in our atmosphere? So how do GPS receivers separate the desired signal from all the other unwanted signals? They do it by matching their self-generated signal code with that of the satellite's code. Easier said than done. In order for a GPS receiver to continually track satellites and operate at peak performance it must be able to receive the GPS signal clearly. Two of the most common sources of signal degradation that impedes receiver performance are (1) excessively long antenna cables and (2) electromagnetic interference (EMI). Raven GPS inline amplifiers can help.

As with any electromagnetic radiowave, GPS signals become attenuated as they are passed through electrical cable. The amount of signal loss depends on the type and length of the cable used. Typically, when antenna cable runs exceed 50 feet, signal loss can become excessive. Raven inline amplifiers eliminate this problem by amplifying the GPS signal. With the proper amplifier, you can extend your antenna cable runs to hundreds of feet. GPS receivers also suffer from the effects of EMI. Electromagnetic interference can originate from an external source or even from within the receiver itself. Raven inline amplifiers filter and reject unwanted interference and pass GPS signals through. By amplifying and filtering the GPS signal before it gets to the receiver, the effect of internally generated electrical noise is reduced.

Raven inline amplifiers are capable of amplifying both L1 and L2 frequencies and will improve performance on receivers with cable lengths of over 50 ft. They're available with SMA, TNC, BNC, or N connectors and no special wiring is required, making installation a breeze. The amplifier is compatible with all dual frequency GPS receivers due to its wide operating voltage range, 3 to 28 VDC, and low power consumption, 8mA. Raven amplifiers are made with gold plated brass with rugged and watertight packaging. Just plug the amplifier directly in line with your antenna cable. Power to the inline amplifier is already available from your GPS receiver, the inline amplifier uses the same power as the antenna so no extra wiring is required. As with all Raven products, our inline amplifiers come with a full one-year parts and labor warranty.

RAVEN



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GENERAL INFORMATION

Inline Amplifiers with TNC connectors are 3.770" in length. Length will vary slightly with "N" and "SMA" connectors installed. Power consumption 8mA.

Typical Noise figure for L1 Inline Amplifiers is < 3 dB.

Typical Noise figure for L1/L2 Inline Amplifiers is < 4 dB.

Input voltage for all models is from 3 to 28 VDC. Current draw is < 10 ma or 4-28VDC.

Operating temperature is -55°C (-67°F) to 45°C (113°F)

| MODEL | GAIN |
|-------|------------|
| LA-12 | 12 +/- 1dB |
| LA-21 | 20 +/- 2dB |

| MODEL | CABLE DISTANCE |
|-------|-----------------|
| LA-12 | 50 ft (15.26m) |
| LA-21 | 100 ft (30.48m) |

MODEL (L1 FREQ.)

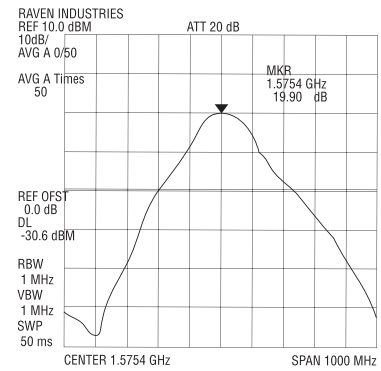
LA-12-1575-100N
 LA-12-1575-100S
 LA-12-1575-100T
 LA-12-1575-100NS
 LA-12-1575-100NT
 LA-12-1575-100ST
 LA-21-1575-100N

LA-21-1575-100S
 LA-21-1575-100T
 LA-21-1575-100NS
 LA-21-1575-100NT
 LA-21-1575-100ST

CONNECTORS

N type female both ends
 SMA type female both ends
 TNC type female both ends
 N one side, SMA the other
 N one side, TNC the other
 SMA one side, TNC the other
 N type female both ends

SMA type female both ends
 TNC type female both ends
 N one side, SMA the other
 N one side, TNC the other
 SMA one side, TNC the other



Typical Filtered Line Amp
 Freq vs. Gain Plot

MODEL (L1/L2 FREQ.)

LA-12-L1/L2N
 LA-12-L1/L2S
 LA-12-L1/L2B
 LA-12-L1/L2T
 LA-12-L1/L2TMF

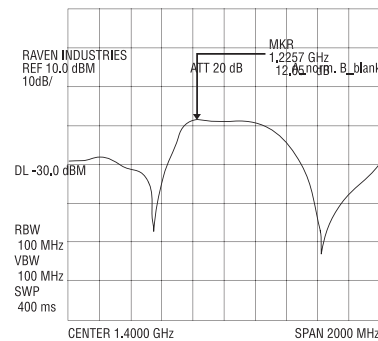
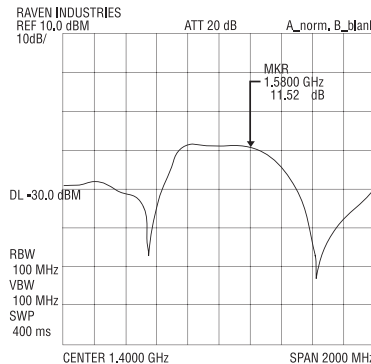
LA-21-L1/L2N
 LA-21-L1/L2S
 LA-21-L1/L2B
 LA-21-L1/L2T

CONNECTORS

N type, female
 SMA type, female
 BNC type, female
 TNC type, female

N type, female
 SMA type, female
 BNC type, female
 TNC type, female

Note: LA-12-L1/L2 12dB shown.
 LA-21-L1/L2 is the same except for gain.



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