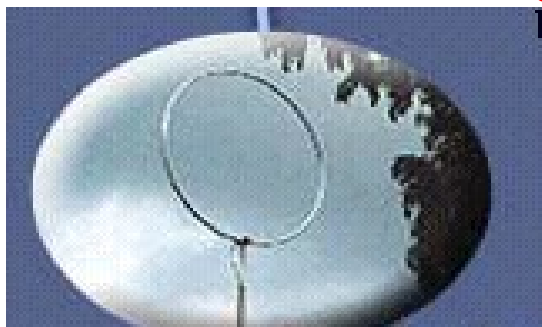


ALA1530S+ HIGH GAIN BROADBAND ACTIVE LOOP ANTENNA

50kHz to 30MHz



LOOP ANTENNA ADVANTAGE

The active antenna solves the problem of impedance matching to the feeder and yet the performance is comparable with larger antennas. However, most active antennas are the whip type and respond mainly to the electric-field. The Broadband Loop responds primarily to the magnetic-field, this ensures high rejection of nearby **electric-fields**. The intensity of the electric-field is usually higher than the magnetic-field when an antenna is close to interference sources such as TVs florescent lamps, mains wiring etc. Therefore, by rejecting the electric-field there will be a reduction in local interference compared to other types of active and passive antennas. Interference reduction is further enhanced by the deep nulls of the 'Figure-of-Eight' directivity pattern.

INTERMODULATION

Some active antennas generate intermodulation products which can appear as spurious signals interfering with reception. This interference or second order intermodulation is caused by non-linearity in the amplifier, producing signals which are the usually the sum and difference of strong Broadcast stations. The ALA1530S+ Broadband Loop has been specifically designed to reduce intermodulation products to a minimum. The second order and the third order intercept points are typically **+80dBm** (IP2) and **+43dBm** (IP3) respectively. Thus the level of the intermodulation products are generally below the atmospheric and man made noise.

ANTENNA DESIGN

The Loop antenna consists of a rigid aluminium loop and a balanced gain optimised broadband amplifier using low noise RF power transistors. The amplifier is encapsulated in resin and housed in a uPVC box, this ensures reliable operation in all weather conditions. The antenna provides low noise performance, large signal handling ability. Rejection of mains borne noise is accomplished by using a balanced amplifier so that the feeder does form part of the antenna return path. The ALA1530S+ is supplied Antenna Interface/amplifier and a power supply (UK, Ireland and North America only). RG58C 50 ohm coaxial feeder cable is recommended for the antenna. The maximum feeder length is 100m. A 1m coax. lead connects the Antenna Interface to the receiver. The ALA1530S+ should be positioned approximately 5m away from any buildings.

TECHNICAL INFORMATION

| | |
|------------------------------|-------------------|
| Power consumption: | |
| ALA1530S+Upgrade Interface: | 12 volts at 170mA |
| Intermodulation typically: | 2nd order -114dBm |
| With two signals of 32mV | 3rd order -141dBm |
| Intercept point typically: | 2nd order +80dBm |
| Test Freq. 8MHz +14MHz | 3rd order +43dBm |
| Output impedance: | 50 ohms, PL259 |
| HF Antenna Factor typically: | 1. K = 0dB |

The **ALA1530S+** is the high gain version of the ALA1530 and the ALA1530+ Loop antennas. This compact Active loop antenna primarily is designed to provide improved performance over conventional passive and active whip antennas.

This Active loop, like its ALA 1530 cousin sets new standards for the listener. For the first time it is possible to reject locally radiated and mains borne/power line noise and still provide improved reception compared to larger antennas. 1m dia. Aluminium loop is designed for outdoors, even close to ground level.

The loop has a frequency range from **50kHz to 30MHz** and matches directly to the receiver. The ALA series are probably the only Commercial Active antennas available to the Radio Enthusiast to provide directional noise reduction in the LW,MW and SW bands.

The Loop can be mounted remotely from the receiver away from local interference. Thus ALA1530S+ generally has lower noise reception compared to manually tuned indoor loop. Furthermore, traditional wire antennas require a lot of space and can pick-up local noise.

ALA 1530S+ LOOP FEATURES

- **Low intermodulation, IP2 +80dBm. IP3 +43dBm**
- **Up to 30dB rejection of local noise compared to active whip antenna**
- **Figure of eight directivity and deep nulls to further reduce interference.**
- **Lower noise than indoor tuned loop**
- **Integral low noise balanced amplifier**
- **Rejects Power-line/mains borne noise**
- **Rugged construction, 1m dia. aluminium loop, supplied with Interface and 12 volt power unit (UK, Europe and N. America) only**
- **Easy installation, works close to ground level**

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Design/specification subject to change

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