



## Wellbrook ALA1530LNP

US\$360 £340 €324

In the 2015 edition of *WRTH* we reviewed the Wellbrook Imperium wideband loop antenna and pronounced ourselves exceedingly impressed. Wellbrook Communications is owned and run by Andy Ikin and has done much to popularise the concept of the wideband loop. We have assessed several of their products in the past ten years or so and it is always interesting to hear about the latest developments. The original Imperium loop (ALA1530S+) is still available and has now been joined in the range by the ALA1530LN and LNP. A useful comparison chart on the Wellbrook web site suggests that the LN has very low noise and IMD in the MW band and the LNP is similar but with slightly higher gain above 10MHz via an active rather than passive interface and slightly modified gain distribution. We compared a sample of the LNP directly with the original Imperium to see whether the differences were significant.

Retaining the standard Wellbrook physical format of a 1m loop with external power supply, the ALA1530LNP covers 50kHz-30MHz. It comes with a mains-operated DC power supply and an interface box which is sited in the listening room and into which the 12V supply is connected for transmission along the main RF cable to the antenna. The box embodies an integral fuse and a 1m lead terminated in a PL259 connector providing the input to the receiver. All necessary connectors and sundries are supplied. Wellbrook recommends that the antenna is mounted at least 6m from a building to minimize local noise although we have always found the siting of external loop antennas to be fairly non-critical.

We have said on previous occasions that antenna testing is notoriously difficult to carry out in such a way as to produce meaningful and repeatable results. At the level of performance habitually produced by Wellbrook loops, we suspect that even a professional antenna test range

or an exceedingly large anechoic chamber would have some difficulties. The only valid method of testing seems to be protracted direct comparison with a known reference. We mounted the two antennas in the same plane about 10m apart and used a WinRadio Excalibur Pro receiver and an HP8591 spectrum analyser as measuring tools. The primary test receiver was a Racal RA3791. It was quickly established that the LNP had about 10dB more gain in the LF and MF bands than the original and audibly evident that it was a little quieter. Our best assessment is that in real-world conditions the usable improvement in noise floor is somewhere around 4dB but that figure could vary somewhat with local conditions. Establishing the strong-signal performance was considerably more problematic. As with the original Imperium, we have no doubt at all that the claimed improvement in strong-signal handling in the LNP is real but both are so good that it is beyond our capability to establish it quantitatively. In fact it is probably beyond the capabilities of anyone but the original designer. The central point is that the combination of gain, low noise and strong-signal performance is phenomenally well judged. All we can validly say is that the capabilities of both antennas are comfortably in excess of that required for use with any receiver we have ever encountered. Our best guess is that if you cannot hear a station on a Wellbrook loop you almost certainly cannot hear it on any antenna, especially at the lower frequencies.

The ALA1530LNP is not especially cheap in absolute terms but for its performance it represents outstanding value. Wellbrook's reputation for quality of service is second to none and we have no hesitation whatsoever in recommending all their products, but the ALA1530LNP represents yet another step forward. We congratulate the company on a superb achievement.