## **SDRPlay RSPDuo**

## REVIEWS



## SDRPlay RSPDuo

We reviewed the original SDRplay receiver and its later incarnation as the 'RSP' some time ago and also looked at the 'RSP2' in last years' edition with a view to evaluating its new software called 'SDRuno'. We were consequently very interested in examining a variation on the theme in the shape of the 'RSPduo'. Externally this unit resembles other receivers in the RSP product line but internally there are some salient differences. In effect it is a dual-tuner 14-bit SDR covering 1kHz-2GHz and allowing two separate 2MHz segments anywhere within that range to be monitored. The manufacturer indicates a number of scenarios in which this function might be useful including simultaneous operation with two antennas to enable direction-finding, diversity, and noisereduction applications. Others might well be of great interest to transmitting amateurs and those interested in aircraft tracking and ATC reception.

The RSPduo is housed in a metal box measuring 95 x 90 x 30mm rather than the plastic enclosures used by other RSP receivers and is beautifully made and finished. There are three antenna inputs overall. 'Tuner 1' has a highimpedance input presumably intended for nonresonant wire antennas and a 50ohm SMA input. 'Tuner 2' has a single SMA input which also provides a 4.7V Bias-T feed for a masthead preamplifier or other external device. On the other side of the box are MCX input and output sockets for an external 24MHz reference (in our opinion the ability to use a 10MHz reference would be more useful) and a USB Type B port. Internally the RSPduo embodies no less than ten selectable low-pass filters, a 1GHz high-pass filter and eight selectable notch filters including - very unusually - two for the DAB frequency range.

Presumably continuing to use the Mirics chipset from the RSP2, the rearranged front-end

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of the RSPduo appears to have improved the already impressive dynamic range of the former although unfortunately we were not in a position to make a direct comparison. A newer version of the SDRuno software can be downloaded from the SDRplay web site and this seems to us to be a little easier to use than the first version. In fact it could almost be described as plug-and-play although there remains a mildly daunting number of options and settings available; indeed the software almost deserves a review of its own. There is currently no facility in SDRuno to enable diversity reception although we understand that a version which will offer this facility is under development. Our view is that diversity reception can be a very effective way of addressing persistent problems of local noise via cancellation and it was (and is) much used professionally for this and other purposes. If SDRuno could be made to provide such a facility in the context of a highgrade software-defined receiver, the result could be a step change in the quality of MF and HF reception for enthusiasts and listeners.

Our listening tests in conjunction with a variety of antennas suggested that the RSPduo has few peers in its price class. Despite our best efforts we found very few problems of overloading. The 'Hi-Z' input seemed to be slightly noisier than the SMA in the HF region when used with long wires, which was to be expected, but gave noticeably better reception results on weak medium-wave broadcast outlets and NDBs. A look at VHF and UHF performance showed that the RSPduo was performed well in this portion of the spectrum.

We very much like the RSPduo and we find it remarkable that so much functionality can be made available for what is in effect an astonishingly low price. For those wanting a wideband SDR, it would represent an excellent choice.