



# DSP Audio Processor with RDS

## seriesOne DSP



### Features

- Loud, clear FM sound
- Minimal design - maximum performance
- Unique DSP algorithm optimises all formats
- Automatic - no adjustments
- Digital Stereo and RDS encoders

### Applications

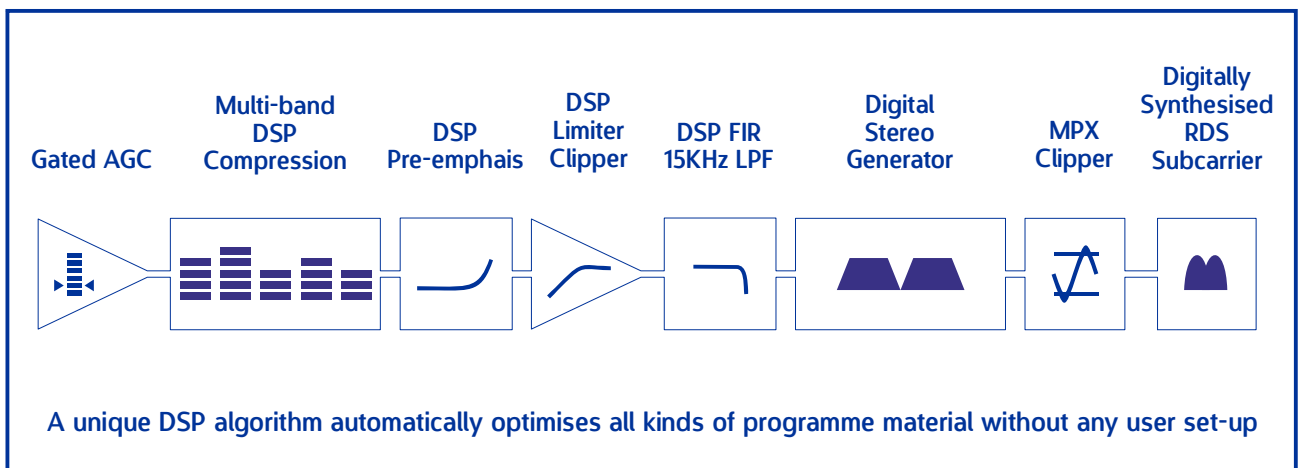
- Main transmission processing and RDS
- Standby chain processing and RDS
- Processing upgrade
- Independent radio services
- Community radio services

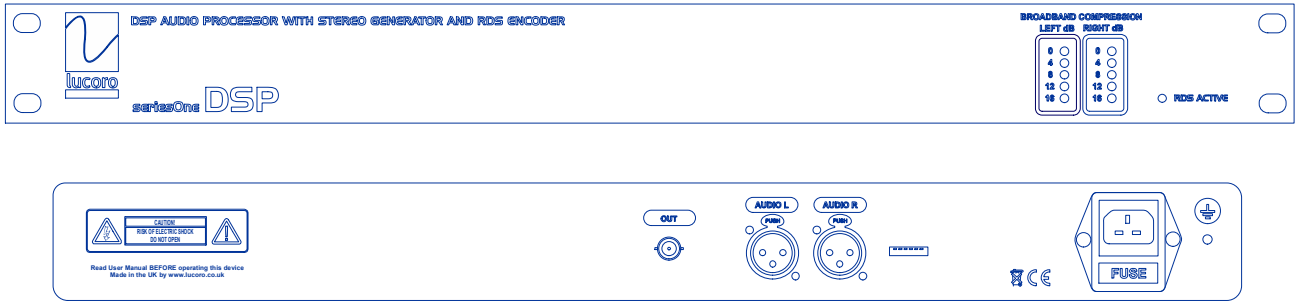
The seriesOne DSP Audio Processor with RDS is for cost conscious radio stations that desire the uncompromised sound. The unique algorithm automatically optimises all formats for loud clear sound with deep bass and crisp treble, eliminating the need for the costly - yet largely unseen and unused - controls and displays associated with traditional processors.

Slow 'gain riding' optimises long-term audio level variations, but prevents undesirable changes during silence. The multi-band limiter perfectly controls the sonic signature of all types of program material, making any format type - from talk shows to hit music formats - as loud and clear as stations using the most expensive processors. A digital 15kHz FIR low pass filter protects subcarrier integrity, without compromising passband audio quality.

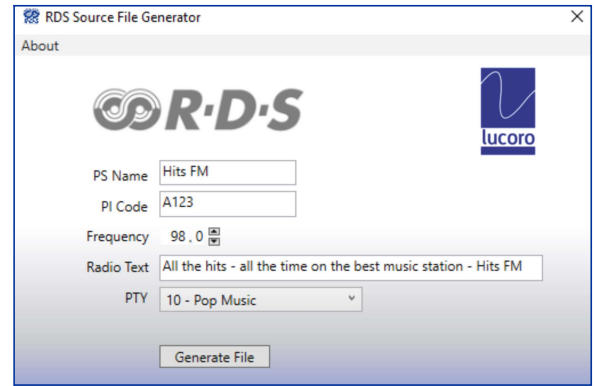
The seriesOne DSP's unique ability to transparently adapt to all audio source material means an end to the expensive frills usually associated with audio processors, and makes lengthy user set-up a thing of the past. The latest DSP algorithms have been created in our Lab using specialist modulation power analysis, by broadcast engineers with over 20 years of FM processing experience. The end result is a 'plug and go' solution which will stand out on every listeners' tuning dial, and extend the useable coverage area.

The integrated, and entirely digital, 16-times oversampled Stereo Encoder provides perfect audio separation and detail.





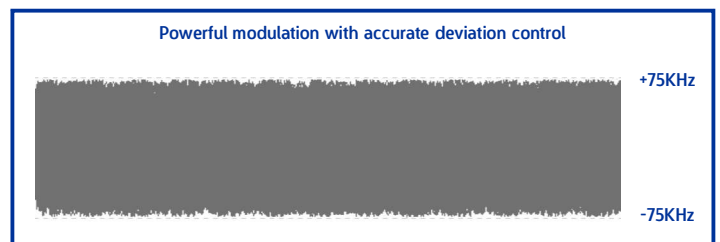
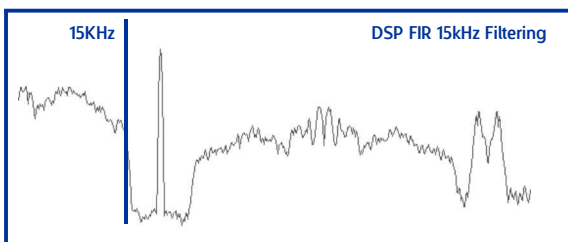
Furthermore, the RDS encoder uses direct digital waveform synthesis for clean, perfect generation of the 57kHz subcarrier. As well as PS (station name) information, extended features - including RadioTEXT, Alternative Frequency and Traffic Announcement content - are also broadcast. Being standalone, the integrated RDS generator doesn't require a dedicated computer or data feed. If desired, the user can change the content at any time, using a programming device and Windows(TM) Laptop or PC, plugged into a port located on the back panel.



Direct digital synthesis modulation of RDS sub-carrier

Integrating RDS Encoders with Stereo Encoders provides perfect phase alignment without the need for pilot synchronisation circuitry.

The direct digital synthesis of the RDS waveform is the purest approach, eliminating traditional suppressed carrier modulation techniques and D-A ladders. Plus, it has the added benefit of lowering component count. Whilst spectrally clean in itself, our Coders include additional active filtering.



## Specifications

Dimensions:	1U 44 H x 482 W x 118 D (mm)	RDS Encoder:	Direct digital synthesis
Weight:	1.1kg	RDS Groups:	0A, 2A (others to order)
Audio input:	XLR 600ohm +8dBu	Temperature:	-20° to +42°C
MPX output:	BNC female 75ohm (nominal +8dBu)	Voltage:	100 - 250Vac 50-60Hz
DSP:	28-bit 48kHz		
Stereo coder:	16x oversampled		
Stereo separation:	70dB typical		

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