



bw broadcast

RDS1 RDS Encoder



Technical manual

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RDS1 – Stand-Alone RDS Encoder

Unit Summary

The BW Broadcast RDS1 provides a low cost alternative to encoders costing up to 10 times more. With a liquid crystal display and simple 4-button operation, setup is child's play. No computers are needed and the unit will provide all that is needed for a basic radio data system setup.

FEATURES

- LCD Driven. (No computer needed)
- Memory Backup (EEPROM Storage)
- Crystal Controlled Microprocessor
- Audio Mix Facility.

RDS SPECIFICATIONS

RDS Frequency	57 kHz +/- 4Hz
RDS Level	0-1V Peak-to-Peak (adjustable)
RDS Groups	0B (CENELEC STANDARD)

RDS FACILITIES

PS: Program service name. The eight characters you see on the tuner with the stations name or callsign.

PI: Program Identification. Four character hexadecimal code that identifies the station. This code is usually allocated to you by your local radio authority.

PTY: Program type. Identifies the station format or style. One of 32 Fixed formats are allowed. Examples are Sport, Pop M and News.

M/S. Music/Speech. Indicates if station is primarily music or speech based.

OTHER

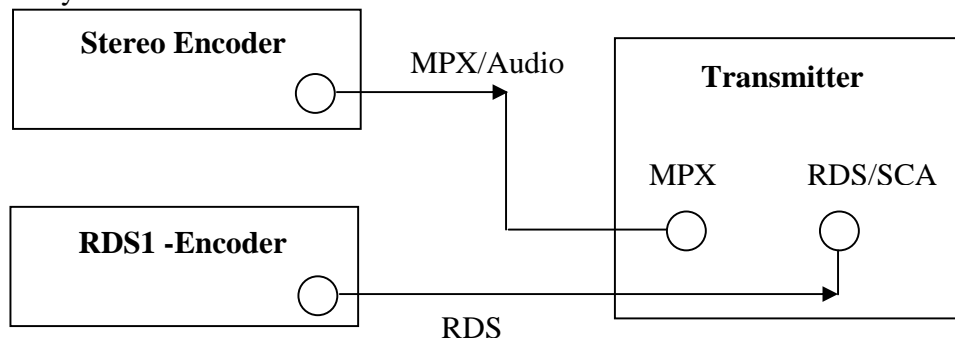
Power Requirements	100-240V AC 50-60Hz
Connectors	MPX Input (BNC), RDS/MPX Output (BNC).

SYSTEM SETUP

The RDS coder is very simple to setup and maybe connected to your broadcast transmitter in one of two ways:

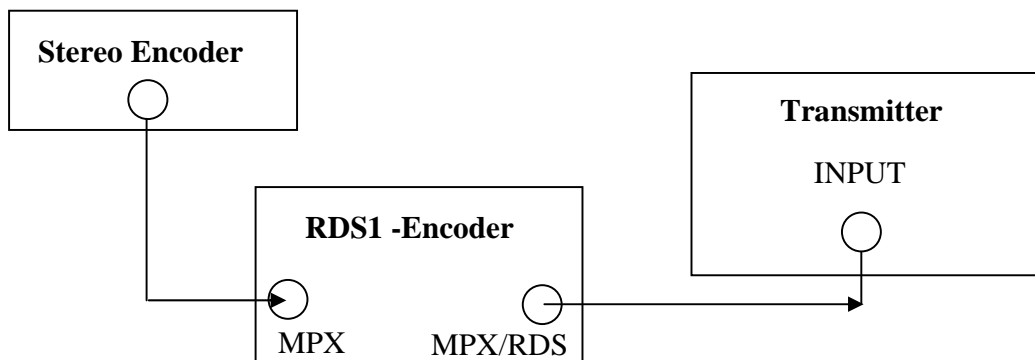
1. RDS-Out to SCA-In

If your transmitter has a dedicated RDS/SCA input then setup is as simple as connecting the output from the RDS1 encoder (RDS/MPX Out) to the RDS/SCA input of your transmitter.



2. MPX In to RDS/MPX-Out

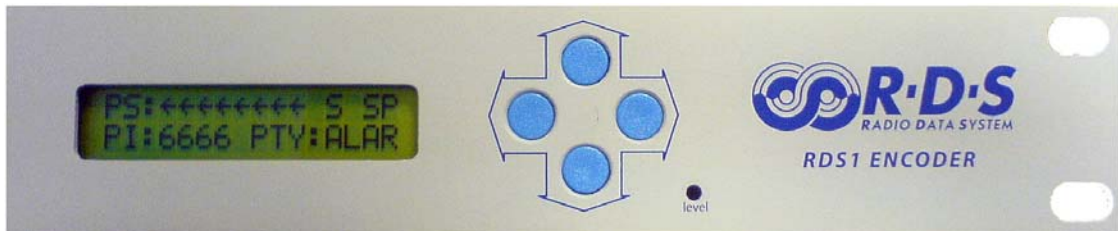
If you do not have a dedicated RDS/SCA input on your transmitter then we recommend you use the virtual earth mixing facility on the RDS coder to combine your audio or multiplex signal with the RDS sub-carrier. Connect your audio input to the MPX input port. This will be combined with the RDS signal in the RDS1 and the resulting MPX/RDS signal will be present at the MPX/RDS output port.



Once you have connected your RDS, without any audio signal, use a small screwdriver to adjust the RDS1 level control on the front of the RDS coder to achieve 2.6 kHz deviation on the FM transmitter. (CCW will increase the signal level). This will set your RDS signal at the correct level.

PROGRAMMING THE RDS1

After powering up the RDS1 you will see on the LCD screen all of the information currently programmed in the unit: PS, Speech/Music, PI, PTY.



By pressing the Left or Right arrow buttons you will place the RDS1 into 'Edit' mode. While in 'Edit' mode there will be no RDS output and a flashing cursor will be seen on the LCD display. Use the Left and Right arrow buttons to select the character or setting that needs to be changed. When the selected character or setting is highlighted by the flashing cursor, use the Up and Down arrow buttons to scroll through available options.

When the correct character or setting has been selected, use the Left and Right arrow buttons to move to the next character or setting. If no more changes need to be made don't touch any buttons for 20 seconds. If no buttons are pressed for 20 seconds the 'Edit' mode will timeout, settings will be saved and the RDS1 will continue to transmit an RDS signal. When the RDS1 has exited 'Edit' mode, the flashing cursor will disappear.