

## Radio Data System encoder

### CR 102

The CR 102 is a friendly use dynamic RDS encoder which supports all the most popular services and features used by Broadcasters. The equipment provides:

- Full-Digital RDS coder total software remote control
- Advanced dynamic PS management (i-PS technology)
- Easy interface to hard disk automation systems

RDS characters customizable for different Countries  
- Dedicated SW interface for DJ and announcers.  
The CR 102 specifications and benefits have been accurately designed to satisfy the most demanding requirements concerning the RDS generation in the broadcasting field.



Using state-of-art, high-speed DSP technology, CR 102 ensures the purest modulation quality (the whole processing is performed by phase linear filters).

Its digital architecture also guarantees long term reliability and easy firmware updates.

A powerful PC control software is integrated in the equipment.

The CR 102 allows the control and setting in an easy and intuitive way of all RDS data and of signal generation parameters (level and phase, synchronism source, etc).

The basic software screen, always displays in real time PS and RT content currently on air, allowing a full and immediate monitoring of RDS broadcasting, even when an FM tuner is not available.

A software module available as an option (i-PS technology), further boosts the new PS management features: it eliminates every PS programming constraint leaving maximum freedom in terms of message length, save / recalling facilities and message editing masks.

Any text can be entered and broadcasted 'on-the-fly', both as a full PS sequence or in a scrolling mode.

Furthermore, featuring a true ASCII communication protocol, i-PS software module enables the CR 102 coder to be easily and quickly interfaced to any hard disk automation system, for song and artist identification on PS fields and much more...!

CODE	MODEL	DESCRIPTION
F827	CR 102	Digital Radio Data System (RDS) Coder
F827.01	CR 102-IPS	Digital Radio Data System (RDS) Coder with Instant PS
<b>AVAILABLE OPTIONS</b>	Instants PS software - USB Communication interface 1 USB + 1 RS-232 port	

## Technical data

RDS MODULATIONS	
Signal generation	Meets or exceeds all CENELEC EN 50067 (1998) requirements
Sub-carrier freq.	57 kHz $\pm$ 3 Hz
Bandwidth	$\pm$ 2.5 kHz (-60dB) / $\pm$ 3.0 kHz (-80dB)
Synchronization	to ext. pilot tone or MPX signal Automatic switchover to int. osc. in case of absence or low quality of the ext ref. signal
RDS output level	0 $\div$ 1200 mVpp (5 mVpp steps)
Linear Distortion	0.01 dB
RDS phase	$\pm$ 120 deg (ref to MPX pilot). 1 deg step
Ext MPX summation	Ref to AUX IN 1&2 specifications
AUX INPUT (1 and 2)	
Connector	Type floating BNC, EMI suppressed
Pass-through Level	-40dB $\div$ +20dB trim adj. max 24 Vpp inp
Distortion	< 0.03 %
Frequency response	30 Hz $\div$ 80 KHz +/- 0.1dB
Input Impedance	> 10 Kohm
Purpose	wide band MPX, SCA, RDS inputs
SYNC-IN & SYNC-OUT	
Connector	Type floating BNC, EMI suppressed
Sync-In	TTL for RDS synch. (ETS compliant)
Sync-Out	Not Used

RDS PROGRAMMING	
Command formats	compliant to UECP Forum document SPB 490 (Version 5.1 - 22.08.97) + extended manufacturer's commands list ASCII interface for dynamic mode only
Static services	DI, PI, TP, TA, M/S, RT, AF, PS, PTY
Dynamic services	PS SEQUENCE, PS SCROLLING
RDS groups	0A (75%), 2A (25%) – FIXED SEQUENCE (0A, 0A, 0A, 2A)
Character tables	ISO 8859-1 (Latin 1), 8859-2 (Latin 2), 8859-5 (Cyrillic), 8859-7 (Greek), 8859-9 (Turkish), 8859-10 (Nordic)
AF lists	24, containing up to 25 freq each one
PS (basic version)	8 pages containing 20 PS each one + 1 Scrolling message - 24 hours / day scheduling capabilities
RT	8, with 24 Hours Day scheduling capabilities
PS (i-PS option)	8 pages containing 48 PS each one + 32 scrolling messages – instant broadcasting capabilities (up to 384 dynamic PS includes software dedicated interface for DJ and ASCII programming support)
REMOTE CONTROL	
Output Connector	2 x RS-232
Connection Rate	19200 Baud
Communication	Dedicated Remote Control software (supplied) for Win 95, 98, XP, NT, 2000 accordingly to UECP. SPB 490 (5.1) ASCII Interface (with i-PS option installed)
Input Connector	3, optoinsulated
Connector	SubD 15 pin, female
Purpose	TP, TA, M/S flag switching
TEMPERATURE	
Nominal range	0° to 45° C (Meets ETS 300 019 requirements)



SPECIFICATIONS	
	<b>CR102</b>
Output Connector	type floating BNC, EMI suppr. (50 Ohm)
Dimensions (W x H x D) mm	482 x 44 x 352 (570 x 130 x 420 Package)
Weight	10 Kg (12.6Kg. Package)
Power consumption	Approx. < 10 VA
Number of power supplies	From 220/230 V ( 110/115 V internal setting); 50-60Hz, single phase.
DC Power Supply	24 V
Number of fans	1 blower 220 V ac