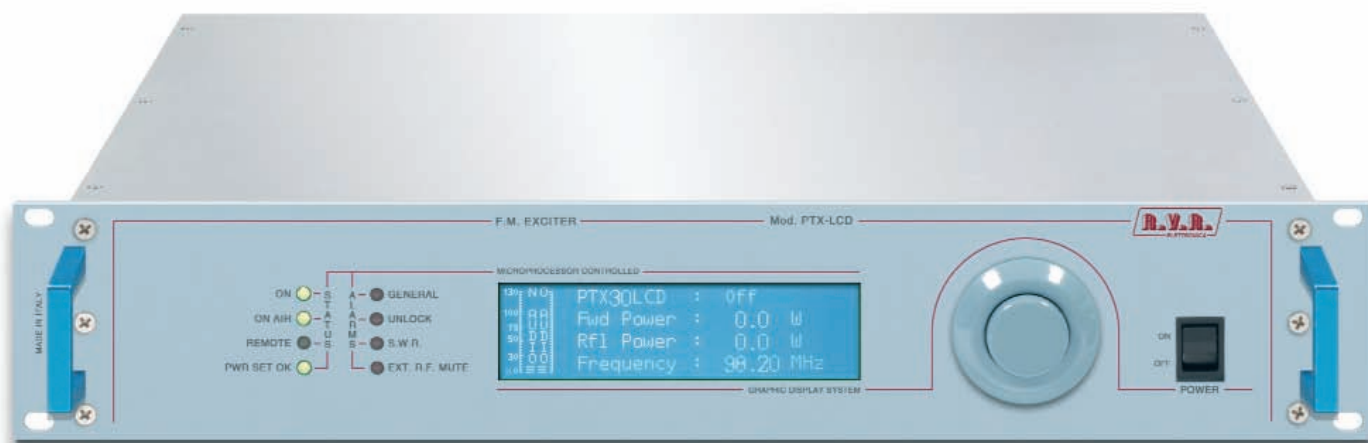


exciters/transmitters

> professional series

PTX30 LCDDSP
PTX50 LCDDSP
PTX60 LCDDSP
PTX100LCDDSP
PTX150LCDDSP



PTX-LCDDSP front view

機能

RVR社のPTXLCDDSPは、世界中でもっとも人気のあるFMトランスミッターの中でも最高の製品です。放送機材業界での長年にわたるRVRの専門知識を活かし、PTXエキサイターは多くのラジオ放送に携わるユーザーの専門的なニーズに対応するよう設計されています。

>オーディオ性能：PTXLCDDSPのクリアで透明性のある音質は、CDの音質に匹敵！PTXLCDDSPは90dBもの低さのS/N比、低歪みおよび60dBもの高さのステレオ分離の結果、最先端かつ最新のテクノロジーを駆使し最高の音質を手に入れることができるよう設計。

>主要アプリケーション：RVRのPTXLCDDSPシリーズには、0W～最大アウトプットパワーまでの無段パワーアウトプット調節を備えた独立エキサイターとして使用するための完全な出力領域が搭載。

>インターフェースコントロール：完全マイクロプロセッサ制御、LCDに表示されたキーパラメーターを伴うI2CインターフェースやRS485、RS232、もしくはメニューから容易にプログラムが可能。

>SWアプリケーション：同等周波数(SFN)およびFSKアプリケーション用の内蔵ボードが利用可能(オプション)。

>インプット/アウトプットインターフェース：デジタルRDSコーダーおよび高性能ステレオコーダー、アナログオーディオL&Rインプット、Monoインプット、SCA/RDSシグナル用補助インプットおよびMPXコンポジットシグナル。PTXLCDDSPバージョンには、S/PDIF、TOSLINK、AES/EBUデジタルオーディオインプット搭載。

>リモートコントロール：高度な内蔵テレメトリーシステムにより、外部もしくは集積GSMモデムを使用しSMSコマンド受信およびアラーム送信が可能。GSMモデムはオプションにて利用可能。

>信頼性および継続性：コントロールの多様性や驚くべき範囲、変調レベルコントロール用の専門リミッターであるITU、変調レベルを安定に保つためのIAMLC(インテリジェント自動変調レベル制御)および効果的なVSRW(電圧定在波比)保護用のフォールドバック制御により継続性を保証。

>メンテナンスの容易さ
高度なモジュール・エンジニアリングにより、非常に簡単なアクセスとシンプルなメンテナンスが可能。

>信頼性および継続性
配電線の不具合が発生した場合、バッテリーもしくは他の電源に接続されている24V DCコネクタにより全出力送信が可能(オプション)。

mono/stereo/MPX Professional FM exciters 76.0 – 90.0 MHz

(*Airt and
JPN Band
upon
request*)



PTX-LCDDSP rear view

Caratteristiche

IL PTXLCDDSP RVR è la perfezione del trasmettitore FM più venduto al mondo! Gli eccitatori della famiglia PTX sono il frutto dell'esperienza pluriennale RVR nel settore Broadcast, concepiti per soddisfare gli operatori professionali più esigenti del mondo della radiodiffusione.

- > **AUDIO PERFORMANCE:** il PTXLCDDSP ha una chiarezza e una limpidezza del suono paragonabile alla qualità CD! Il PTXLCDDSP è stato progettato allo Stato dell'Arte per ottenere una superba qualità del suono, resa possibile da un basso rapporto segnale/rumore 90dB!, una bassa distorsione e un'alta separazione stereo 60dB!.
- > **PRIMARY APPLICATION:** la serie PTXLCDDSP della RVR offre una gamma completa di potenze per l'applicazione come eccitatore indipendente con potenza di uscita regolabile con continuità da 0 Watt alla potenza massima erogabile.
- > **INTERFACE CONTROL:** completamente controllati da microprocessore, facilmente programmabile da menu o via RS232, RS485 e Interfaccia I2C, lettura su display LCD di tutti i parametri principali.
- > **SW APPLICATION:** integra una scheda per applicazioni di isofrequenza (SFN) e FSK disponibile opzionalmente.
- > **INPUT/OUTPUT INTERFACE:** RDS coder digitale e stereo coder integrato ad elevate prestazioni, ingressi audio analogici L&R,

mono e segnale composito MPX ed ausiliari per segnali SCA / RDS. Gli ingressi audio digitali S/PDIF, TOSLINK, AES/EBU sono nativamente presenti nella versione PTXLCDDSP.

- > **REMOTE CONTROL:** tramite un sofisticato sistema di telemetria integrato è possibile l'invio di allarmi e ricezioni di comandi SMS con modem GSM esterno o integrato. Il modem GSM è venduto opzionalmente.
- > **RELIABILITY/CONTINUITY:** la continuità di servizio è garantita da un'incredibile gamma e varietà di controlli come il limitatore professionale ITU per un controllo del livello di modulazione, il controllo del Fold-Back per una effettiva protezione del VSRW (Voltage Standing Wave Ratio) e IAMLC (Intelligent Automatic Modulation Level Control) per un costante livello di modulazione.
- > **EASE OF MAINTENANCE:** estrema accessibilità e semplicità di manutenzione grazie ad una avanzata ingegnerizzazione modulare dell'apparato.
- > **RELIABILITY/CONTINUITY:** la presenza del connettore 24V CC collegato a una batteria o fonte di alimentazione alternativa, permette la trasmissione in piena potenza anche in caso di interruzione dell'alimentazione di rete (versione vendibile opzionalmente).

exciters/transmitters

> professional series

RS232 connector

Serial RS232 interface can be used to connect the PTXL-CD exciter to the service PC of the local maintenance operator or, via modem, to the remote Technical Assistance Centre. Different configurations can be made for Telecontrol and Telemetry purpose.

Telemetry connector

8 analog input sockets, 2 relays output terminals and a I2C bus interface are the telemetry connectors available which data are displayed either on the LCD or on the PC monitor.

Remote connector

Two signal input sockets for the control of "foldback" output power are present on this connector: Direct and Reflected Power Signal.

By adjusting the RFL trimmer, the Reflected Power Threshold level (Reflected Fold-Back) can be regulated: the exciter supplies the maximum possible Direct Power so that the Reflected Power never exceeds the pre-set

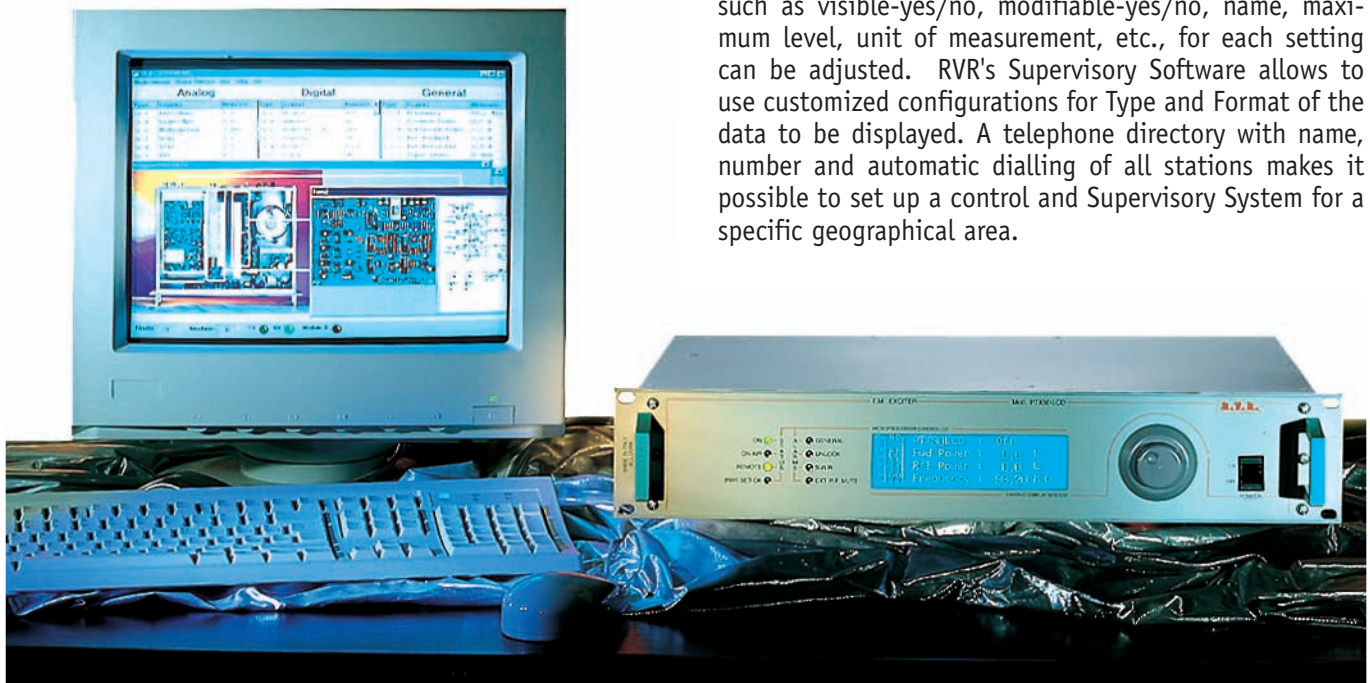
level. In this way, the transmission signal continues to be present, albeit more weakly, even in the event of very high VSWR levels (a typical example is the presence of ice on the antenna).

By adjusting the FWD trimmer, the Direct Power Threshold level (Forward Fold-Back) can be regulated: the modulator stabilises the Forward Output Power within 1dB in AGC.

This function is especially useful when the system includes tube amplifiers which are subject to output power variations in the event of fluctuations of the main voltage. The remote connector has 6 analogue input sockets and 2 relay output terminals. These signals are used to read measurements and to perform the on/off functions of the RF Power Amplifier. There is also a I2C line for data transfer with other equipment (RVR's TLC300, SCM4, TLC2000, etc.).

Personal computer link-up

It is possible to read and adjust through RVR's Supervisory Software all the exciter's settings by linking the exciter to a PC (either directly or by means of a telephone/radio modem). The System Manager can select the settings to be accessed by the user. Different properties, such as visible-yes/no, modifiable-yes/no, name, maximum level, unit of measurement, etc., for each setting can be adjusted. RVR's Supervisory Software allows to use customized configurations for Type and Format of the data to be displayed. A telephone directory with name, number and automatic dialling of all stations makes it possible to set up a control and Supervisory System for a specific geographical area.



ANALOGICAL PTX-LCD link to PC

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Hardware Highlights



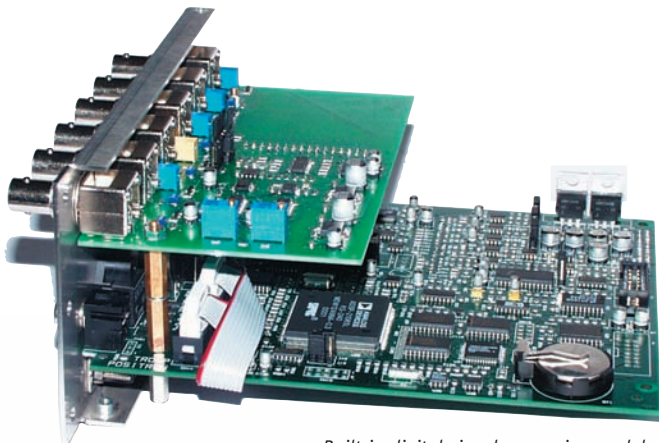
ANALOGICAL PTX-LCD internal view

RVR's PTXLCD exciter was carefully designed to have superior parameters and operating stability. Several details permit to reach the state of the art. The audio inputs are equipped with RF filters and protection circuits all housed in a metal box. The connections between the box and the audio input board are by means of through-pass capacitors, ensuring that RF or any other kind of interference on the cables are discharged onto the Exciter casing. The total shielding of audio signal and RF circuits guarantee the quality of the radio-electric characteristics S/N, Spurious, etc. as well as full electromagnetic compatibility with other equipment.

exciters/transmitters

DIGITAL-IN/ DSP Features

- > Input card for the acquisition of analogue and digital audio signals with built-in digital stereo encoder and digital RDS encoder.
- > All in one! The professional integration of digital MPX and digital RDS.
- > Generates the stereo composite MPX signal directly generated in digital form.
- > Support of S/PDIF, AES/EBU (32 to 96 kHz sampling frequency) and EIAJ CP340/1201 data format.
- > High performance DSP digital stereo coder, high fidelity stereo signal, stereo separation > 65dB S/N ratio > 80dB.
- > DSP based integrated RDS coder fully compliant with CENELEC 500067 and many other features.



Built-in digital signal processing module

DIGITAL-IN/ DSP/ SFN Features

- > Input card for the acquisition of analogue and digital audio signals with built-in digital stereo encoder, digital RDS encoder and SFN capability.
- > Advanced digital features: fully integrated SFN capability.
- > Stereo composite MPX signal directly generated in digital form.
- > Support of S/PDIF, AES/EBU (32 to 96 kHz sampling frequency) and EIAJ CP340/1201 data format.
- > High performance DSP digital stereo coder high fidelity stereo signal, stereo separation > 65dB S/N ratio > 80dB.
- > DSP based integrated RDS coder fully compliant with CENELEC 500067 and many other features.
- > Supports all the functions needed for SFN applications: stereocoder synchronisation and delay setting for MPX and AF Inputs.

Technical specifications

Parameters	PTX30LCDDSP	PTX50LCDDSP	PTX60LCDDSP	PTX100LCDDSP	PTX150LCDDSP
Parameters	Values	Values	Values	Values	Values
GENERALS					
Rated output power	30W	50W	60W	150W	300W
Frequency range	FCC -CCIR - OIRT - JPN				
Operational Mode	Mono, Stereo, Multiplex				
Input signals	Analog, AES/EBU, TOSLINK, SPDIF				
Modulation type	F3E				
Primary Power	115 / 230 VAC \pm 15%				
AC Power Consumption	220 VA / 160 W	220 VA / 150W		410 VA / 250 W	520 VA / 310W
Physical Dimensions (W x H x D)	483 x 88 x 395 mm				
Weigh	10 kg	15 kg			16 kg
Environmental Working Conditions	-10 \div +50 °C / 95% relative Humidity non condensing				
Cooling	Forced, with internal fan				
Frequency programmability	By software, with 1, 10, 100 or 1000 kHz steps				
Frequency stability	\pm 1 ppm				
Pre-emphasis mode	0/50 (CCIR) μ S, 75 (FCC) μ S				
Asynchronous AM S/N ratio	\geq 70 dB	\geq 65 dB			
Synchronous AM S/N ratio	\geq 55 dB	\geq 50 dB		\geq 55 dB	
MONO OPERATION					
S/N FM Ratio	> 90 (typical 92)				
Frequency Response	\pm 0.2 dB				
Total Harmonic Distortion	< 0.02 %				
Intermodulation distortion	< 0.02 %				
MPX OPERATION					
Composite S/N FM Ratio	> 90 (typical 92)				
Frequency Response	30Hz - 53 kHz \pm 0.2				
	53 kHz - 100 kHz \pm 0.3				
Total Harmonic Distortion	< 0.02 %				
Intermodulation distortion	< 0.02 %				
STEREO OPERATION					
Stereo S/N FM Ratio	> 84 (Typical 86)				
Frequency Response	\pm 0.2 dB				
Total Harmonic Distortion	< 0.03 (Typical 0.02%)				
Intermodulation distortion	< 0.02				
Stereo separation	> 60 (Typical 65)				
AUDIO INPUT CONNECTORS					
Analog Left	XLR balanced; Impedance: 10 k or 600 ohm; Level: -12,5 to +12,5 dBu				
Analog Right	XLR balanced; Impedance: 10 k or 600 ohm; Level: -12,5 to +12,5 dBu				
Analog MPX unbalanced	BNC unbalanced; Impedance: 10 k or 50 ohm; Level: -12,5 to +12,5 dBu				
Digital AES/EBU	AES/EBU: 24 - 96 kHz XLR balanced; Impedance: 75 or 110 ohm; Level: +3 to +10Vpp				
Digital SPDIF Optical	TosLink F05 - EIAJ				
Digital SPDIF Electrical	Cinch-RCA coaxial; Impedance 75 ohm; Level 0,5 \div 1V pp				
SCA/RDS	2 x BNC unbalanced; Impedance: 10 k; Level: -30 to +13 dBu				
OTHER CONNECTORS					
RF Output	N (50 ohm)				
RF Monitor	BNC (- 30dB referred to RF output)				
Pilot output	BNC; Impedance: <600 ohm; Level: -12,5 \div +5 dBu				
Monitor output	BNC; Impedance: <600 ohm; Level: -12,5 \div +5 dBu				
Interlock Output	BNC				
1PPS	BNC				
Input 10 MHz	BNC				

exciters/transmitters

Parameters	PTX30LCDDSP Values	PTX50LCDDSP Values	PTX60LCDDSP Values	PTX100LCDDSP Values	PTX150LCDDSP Values
STANDARD COMPLIANCE					
Safety			EN 60215:1989 EN60215/A1:1992-07 EN60215/A2:1994-09		
EMC			EN 301 489-1 V1.4.1 (2002-08) EN 301 489-11 V1.2.1 (2002-11)		
Radio			EN 302 018-2 V1.2.1 (2005-06)		

All pictures are RVR's property and they are only indicative and not binding. The pictures can be modified without notice.
These are general specifications. They show typical values and are subject to change without notice.

CE 99/5/CE Revision: 03/09

Ordering information

Options for PTX-LCDDSP - Opzioni per PTX-LCDDSP

Code	Description
/SFN-PTX	Supports SFN applications <i>Supporta applicazioni SFN</i>
/MODGSM	Telemetry system via internal GSM modem <i>Sistema di telemetria attraverso modem GSM interno</i>
/MODPSTN	Telemetry system via internal PSTN modem <i>Sistema di telemetria attraverso modem PSTN interno</i>
/08DIG-PTX	Telemetry system via parallel interface <i>Sistema di Telemetria attraverso interfaccia parallela</i>
/EXT24V-PTX	Provision for external 24V battery <i>Predisposizione per Batteria 24V esterna</i>
TCPIPINT-PTX-16	Telemetry system via the Internet <i>Sistema di telemetria attraverso internet</i>
/10MHZ-PTX	External 10 MHz cable <i>Cavo riferimento 10 MHZ esterna</i>
RDMODGSM-24V	Telemetry system via internal GSM modem with 24 V dc power <i>Sistema di telemetria attraverso modem GSM interno con alimentazione 24 V dc</i>
TELINK-C1	Telemetry interface ANTLAN/BURK protocol <i>Interfaccia di telemetria protocollo ANTLAN/BURK</i>
TELINK-SNMP2	Telemetry interface RVR/SNMP 1 HE <i>Interfaccia di telemetria RVR/SNMP</i>