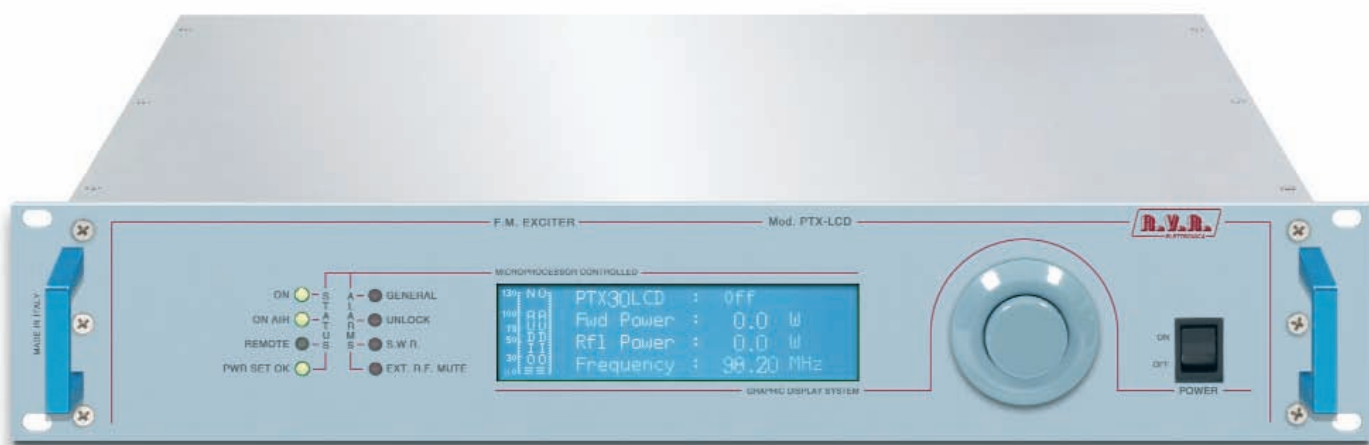


exciters/transmitters

> professional series

PTX30 LCD/S
PTX50 LCD/S
PTX60 LCD/S
PTX100LCD/S
PTX150LCD/S



PTX-LCD front view

Features

- RVR's PTXLCD is the most sold FM transmitter world-wide!** Building on RVR's long-standing expertise in the broadcasting equipment industry, PTX exciters are designed to meet the needs of the most demanding professional radiobroadcasting operators.
- > **AUDIO PERFORMANCE:** PTXLCD's clear and transparent sound quality is comparable to CD sound quality!. PTXLCD has been designed using the latest state-of-the-art technology to achieve superior sound quality thanks to a noise/signal ratio as low as 90dB!, low distortion and stereo separation as high as 60dB!.
 - > **PRIMARY APPLICATION:** RVR's PTXLCD series includes an exhaustive power range for use as an independent exciter with stepless power output adjustment from 0 Watt to maximum output power.
 - > **INTERFACE CONTROL:** totally microprocessor-controlled, easily programmed from menu or via RS232, RS485 and I2C interface with all key parameters displayed on LCD.
 - > **SW APPLICATION:** it incorporates an analogue and digital source acquisition board with stereo encoder and integrated digital/analogue audio exchange. S/PDIF, TOSLINK, AES/EBU digital audio inputs are available as an option on all PTXLCD.
 - > **INPUT/OUTPUT INTERFACE:** built-in high-performance stereo coder, L&R analogue audio inputs, Mono inputs, MPX composite signal and auxiliary inputs for SCA / RDS signals.
 - > **REMOTE CONTROL:** advanced built-in telemetry system enables alarm transmission and SMS command reception through external or integrated GSM modem. The GSM modem is available as an option.
 - > **RELIABILITY/CONTINUITY:** business continuity is guaranteed by an incredible range and variety of controls, such as Fold-Back control for effective VSRW (Voltage Standing Wave Ratio) protection and IAMLC (Intelligent Automatic Modulation Level Control) to keep modulation level steady.
 - > **EASE OF MAINTENANCE:** advanced module engineering ensures extreme ease of access and simple maintenance.
 - > **RELIABILITY/CONTINUITY:** a 24V DC connector connected to a battery or other power source enables full-power transmission in the event of mains failure (option).

mono/stereo/MPX Professional FM exciters 87,5 - 108 MHz

*(Oirt and
JPN Band
upon
request)*

exciters/transmitters



ANALOGICAL PTX-LCD rear view

Caratteristiche

IL PTXLCD RVR è il 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 **PTXLCD** ha una chiarezza ed una limpidezza del suono paragonabile alla qualità CD! Il **PTXLCD** è stato progettato allo Stato dell'Arte per ottenere una superba qualità del suono, resa possibile da un basso rapporto segnale/rumore 90dB, da una bassa distorsione e ad un'alta separazione stereo 60dB!
- > **PRIMARY APPLICATION:** la serie **PTXLCD** 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 di acquisizione di fonti audio analogici e digitali con encoder stereo e scambio audio digitale/analogico integrato. Gli ingressi audio digitali S/PDIF, TOSLINK, AES/EBU sono disponibili opzionalmente su tutti i **PTXLCD**.

- > **INPUT/OUTPUT INTERFACE:** stereo coder integrato ad elevate prestazioni, ingressi audio analogici L&R, mono e segnale composito MPX ed ausiliari per segnali SCA / RDS.
- > **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 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 all'apparato 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 PTX-LCD 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

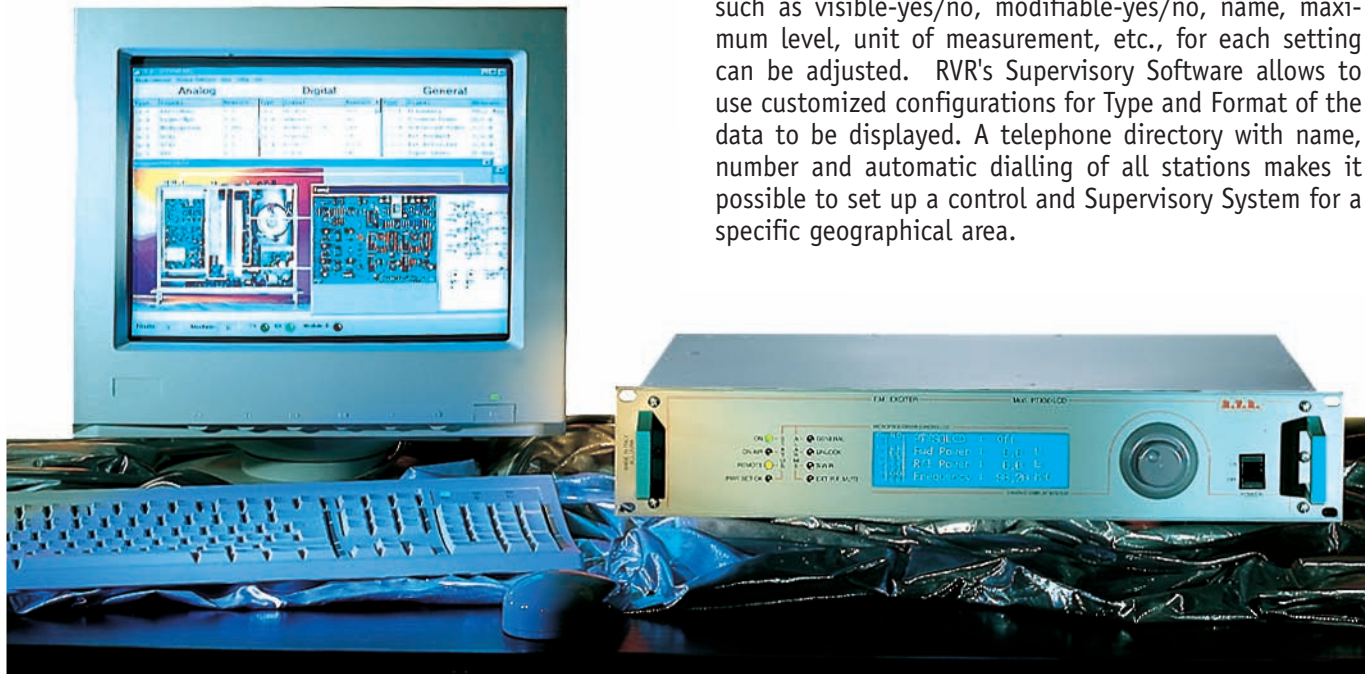
level. In this way, the transmission signal continues to be present, albeit more weakly, even in the event of very high VSWR levels (a typical example is the presence of ice on the antenna).

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

exciters/transmitters

exciters/transmitters



ANALOGICAL PTX-LCD internal view

Hardware Highlights

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.

DIGITAL-IN Features

- > Input card for the acquisition of Analogue and Digital Audio Signals with automatic changeover.
- > A simple way to use digital audio signals on PTXLCD exciters.
- > Support of S/PDIF, AES/EBU (32 to 96 kHz sampling frequency) and EIAJ CP340/1201 data format.

Technical specifications

Parameters	PTX30LCD/S	PTX50LCD/S	PTX60LCD/S	PTX100LCD/S	PTX150LCD/S
Parameters	Values	Values	Values	Values	Values
GENERALS					
Rated output power	30W	50W	100W	150W	300W
Frequency range	FCC -CCIR - OIRT - JPN				
Operational Mode	Mono, Stereo, Multiplex				
Modulation type	F3E				
Primary Power	115 - 125 - 230 - 250 VAC or 24VDC				
AC Power Consumption	135 VA / 95 W	220 VA / 150W		350 VA / 205 W	458 VA / 330W
Physical Dimensions (W x H x D)	483 x 88 x 395 mm				
Weigh	10 kg	15 kg			16 kg
Environmental Working Conditions	-10 ÷ +50 °C / 95% relative Humidity non condensing				
Cooling	Forced, with internal fan				
Frequency programmability	From software, with 10 kHz steps				
Frequency stability	±1 ppm				
Pre-emphasis mode	0/25/50 (CCIR) µS, 75 (FCC) µS				
Spurious & harmonic suppression	<75 dBc (80 typical)				
Asynchronous AM S/N ratio	≥ 70 dB				≥ 65 dB
Synchronous AM S/N ratio	≥ 55 dB				≥ 50 dB
MONO OPERATION					
S/N FM Ratio	> 87 dB RMS (typical 90 dB)				
Frequency Response	< ± 0.5 dB 30Hz ÷ 15kHz (typical ± 0.2 dB)				
Total Harmonic Distortion	< 0.05 % 30 Hz ÷ 15 kHz (typical 0.03 %)				
Intermodulation distortion	< 0.02 % with 1 kHz and 1,3 kHz tones				
MPX OPERATION					
Composite S/N FM Ratio	> 87 dB RMS (typical 90 dB)				
Frequency Response	± 0.2 dB 30Hz ÷ 53kHz / ± 0.5 dB 53kHz ÷ 100 kHz				
Total Harmonic Distortion	< 0.05% 30Hz ÷ 53kHz				
Intermodulation distortion	< 0.03% with 1 kHz and 1,3 kHz tones				
INTERNAL STEREO CODER OPERATION					
Stereo S/N FM Ratio	> 81 dB RMS (typical 84dB)				
Frequency Response	± 0.5 dB 30 Hz ÷ 15 kHz				
Total Harmonic Distortion	< 0.05% 30 Hz ÷ 15 kHz				
Intermodulation distortion	≤ 0.03% with 1 kHz and 1,3 kHz tones				
Stereo separation	> 55 dB 30 Hz ÷ 15 kHz (typical 60 dB)				
AUDIO INPUT CONNECTORS					
Mono / Left	XLR balanced; Impedance: 10 k or 600 ohm; Level: -13 to +14 dBu				
MPX Balanced / Right	XLR balanced; Impedance: 10 k or 600 ohm; Level: -13 to +14 dBu				
MPX unbalanced	BNC unbalanced; Impedance: 10 k or 50 ohm; Level: -13 to +14 dBu				
SCA/RDS	3 x BNC unbalanced; Impedance: 10 k; Level: -3 to +15 dBu				
OTHER CONNECTORS					
RF Output	N (50 ohm)				
RF Monitor	BNC (- 30dB referred to RF output)				
Pilot output	BNC; Impedance: >4,7k; Level: 1Vpp)				
MPX Monitor output	BNC; Impedance: >4,7k; Level: 2,2Vpp)				
Interlock Input	BNC				
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

exciters/transmitters

Ordering information

Options for PTX-LCD - Opzioni per PTX-LCD

Code	Description
/AUDIGIN-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>



RVR Elettronica S.p.A.
Via del Fonditore, 2/2c
Zona Industriale Roveri • 40138 Bologna • Italy
Phone: +39 051 6010506 • Fax: +39 051 6011104
e-mail: info@rvr.it • web: <http://www.rvr.it>

