

PRX Series Professional POCSAG Paging Receivers

The PRX Series of receivers have been designed to exceed the base station requirements of ETSI EN300-224 for applications where high performance and error free reception of critical data are required in areas of high interference and low signal level. Particular attention has been given to the sensitivity, selectivity, intermodulation, blocking and spurious response parameters to ensure the product will perform in even the worst areas.

- Exceeds EN300-224 Base Station requirements
- Highly sensitive receiver
- Wide supply voltage range
- VHF / UHF / 900MHz
- 12.5 or 25kHz channel
- Supports 512, 1200 & 2400bps POCSAG
- PC programmable
- Power save option
- RSSI option for setup
- 4 Switched Outputs
- RS232 Serial Interface for internally decoded messages
- Audio Output for optional external decoder



The unit features 4 programmable switched outputs supporting changeover, momentary or timed switching for telemetry applications such as utility, building & lighting control.

In addition, a full RS232 port supports data for LED displays, electronic billboards, logging and general information gathering.

Built into a small, tough aluminium housing the units should provide years of trouble free use in tough industrial applications.

PERFORMANCE

The PRX receivers have high level solid state mixers to give very good intermodulation performance with low current consumption. IF filtering is achieved by a four pole crystal filter at 45MHz and a further 4 pole low group delay ceramic filter at 455kHz. Frequency stability is ± 1.5 ppm over the range -30degC to +60degC.

SERIAL INTERFACE

Full RS232 presentation of received data. There is a programmable option to allow only the message content to appear on the serial port or to prefix this with the address to which the message was sent.

This output can be used for sign control or as an interface to a PC or other display system. It can also be used with a serial printer for message logging.

The data rates and data format on the serial port can be set independently of the over-air POCSAG data rate.

4 PROGRAMMABLE SWITCHED OUTPUTS

The PRX receivers have 4 programmable outputs that can be controlled by unique addressed messages for stand alone remote switch operation within a paging scheme. The switched outputs can be operated in an On/Off, Momentary or Timed mode making it ideal for sign control or remote switch operation.

The outputs can also be configured to pulse on for a configurable time every time a message is received on one of the addresses which pass data to the serial port. This allows the outputs to be used to alert an operator of the receipt of an incoming message.

MONITOR MODE

The PRX can be configured to pass all messages received on the selected frequency to the serial port irrespective of address. This allows the unit to be used as a monitor for checking or logging transmissions from a paging transmitter.

AUDIO OUTPUT

Although the PRX has an internal POCSAG decoder to allow received messages to be passed in ASCII format to the serial port, the PRX also has an audio output which allows audio monitoring of the frequency and which can also be optionally used for connection of an external POCSAG decoder.

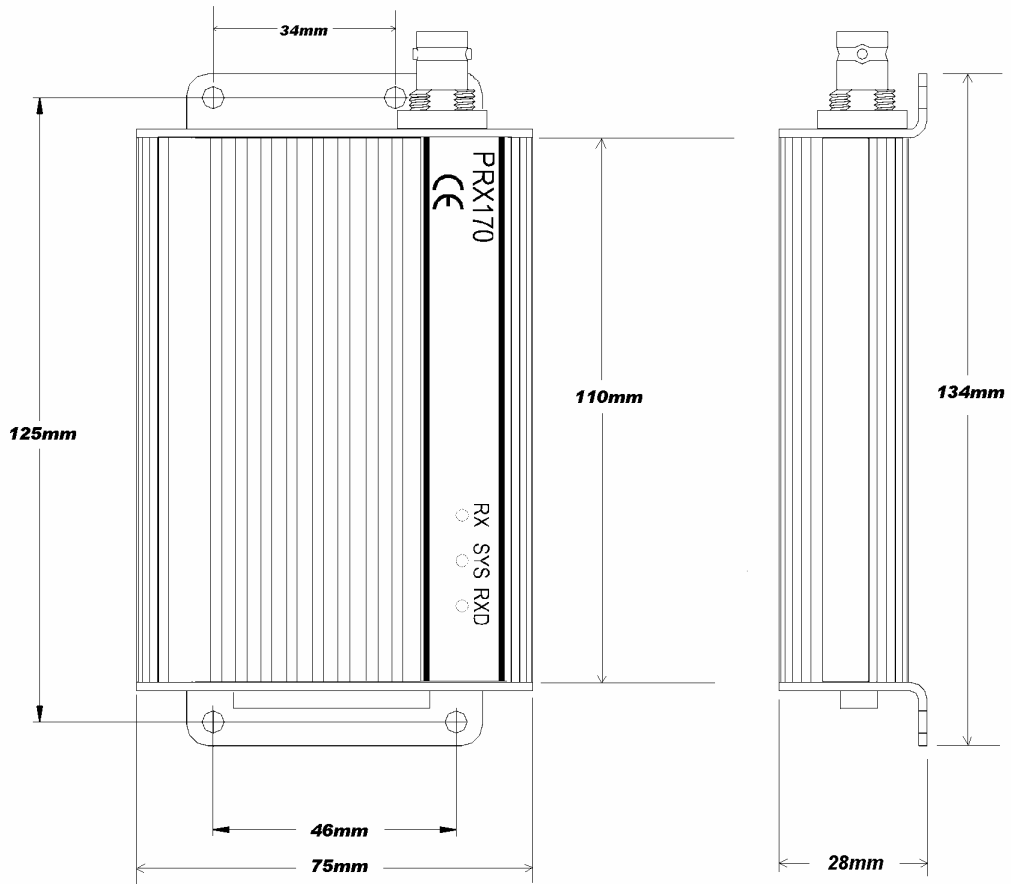
RSSI OUTPUT

A DC voltage in the range 0-5V indicating the received signal level is available on the D-Connector to assist with antenna alignment or to monitor the performance of a remote transmitter.

STATUS LEDs

Three LEDs give a visual indication of receiver operation. There are LED indicators for RF Signal Detected, Rx Data and System. The System LED indicates when the receiver is in programming mode and also flashes an appropriate alarm code in the event of a radio fault.

DIMENSIONS & MOUNTING DETAILS



TECHNICAL SPECIFICATIONS

Frequency Range:	PRX170 138 - 172MHz PRX470 402 - 470MHz PRX900 850 - 950MHz Other bands between 45MHz and 900MHz are available on special order.
Width of RF Sub-bands:	PRX170 6MHz PRX470 20MHz PRX900 20MHz Exact channels user programmable within this range using configuration software.
Power Requirements:	Voltage: 9.5V - 15.5V DC Current: 75mA @12VDC when receiving data with the RS232 port active Current: 5mA when receiver shut down and RS232 port inactive
Min. Channel Step:	6.25 or 5kHz
Channel Spacing:	12.5kHz, 20kHz, 25kHz or 30kHz
Operating Temp.:	-30°C to +60°C
Frequency Stability:	±1.5ppm over -30°C to +60°C
Size:	134mm x 75mm x 28mm including mounting brackets
Weight:	Approximately 250g
Connectors:	Interface: 25-way D-Type Male Antenna: BNC socket
Sensitivity:	Typically -121dBm for 12dB SINAD de-emphasised response Typically -118dBm for 12dB SINAD flat response
Spurious Response:	> 70dB
Blocking:	> 90dB
Intermodulation:	> 70dB
Adjacent Channel:	> 65dB at 12.5kHz
IF Frequencies:	45MHz and 455kHz
Spurious Emissions:	To EN300-086/220/224
Signal Output:	250mV peak to peak
RSSI Output:	0-5VDC for -120dBm to -40dBm
Mute Response Time:	< 3ms
Serial Interface:	Speeds from 150bps to 38400bps 7 or 8 Data bits Odd, Even or No Parity 1 or 2 Stop bits
Over-air Paging Format:	POCSAG @ 512bps, 1200bps or 2400bps
POCSAG Error Rate:	Better than -120dBm for 99% correct decodes.
Paging Addresses	4 addresses which can pass messages to the serial output and optionally trigger pulsed closure of the Switch outputs. A fifth address can be used for special messages to fully control the switched outputs.
Approvals:	The unit is designed to meet the following: European RF: EN 300-086 / EN 300-220 / EN 300-224 European EMC: EN 301-489

In the interest of product improvement the above specifications are subject to change without notice.

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