

PRX-PRO

OVERVIEW

The PRX-PRO is the ideal solution for portable, mobile, or airborne applications. The PRX-PRO is a versatile portable receiver featuring user selectable choices of FM and COFDM Demodulation with MPEG Decoding. Built in universal AC and DC power supplies provide full flexibility in choosing power sources. The PRX-PRO is offered in 2, 7, 2/7 Switchable, and 13 GHz versions.

The PRX-PRO outputs NTSC or PAL formats with up to four audio channels. The integrated MPEG-2 Decoder can support both SD and HD.

The PRX-PRO is controlled via user friendly front panel combination push button rotary switches. Operating parameters can be easily read from the front panel display.

From a PC or laptop, use the PRX-PRO Configurator Software to create, modify, and store configuration “presets” to be instantaneously recalled using the receiver’s front panel switch. The PRX-PRO Configurator stores up to nine presets.

The PRX-PRO uses a standard Type “N” RF connector providing for cabled or direct mounted antennas. The optional Twist Lock Adapter mounts over the RF connector to let you easily install or remove a variety of Parabolic or MegaHorn antennas, eliminating the need for coaxial interconnecting cables. BNC connectors are supplied for video, IF, and ASI, with XLR connectors for audio.



SD/HD Receiver – 2, 7, 2/7, & 13 GHz
FM Video & Audio - MPEG & COFDM

BENEFITS

- Frequency bands:
 - 1.9 to 2.5 GHz
 - 6.4 to 7.1 GHz
 - 6.9 to 7.5 GHz
 - 12.7 to 13.2 GHz
- *Consult factory for different frequency options
- Simplified Controls using Front Panel Display with Single Rotary/Push Button Switch
- Front Panel Channel Selector
- 9 Programmable Configuration Presets store multiple programmed preset configurations
- Color Bar with Service Name ID Generator (digital only)

Key Features

- Fully Integrated “Single Box” Receiver
- Digital, or Analog/Digital Switchable
- Built-in AC and DC Power Supplies
- Compact and Lightweight
- Tripod or Rack Mountable

Typical Applications

- Portable and Fixed Point to Point Microwave
- Quick Deploy, Medium Range Transmissions

GENERAL

Band Operation:

- 2, 7, Dual 2/7, & 13 GHz

Frequency Bands:

- 1.99 to 2.5 GHz / 2.3 to 2.7 GHz
- 6.4 to 7.1 GHz
- 6.9 to 7.5 GHz
- 12.7 to 13.2 GHz

RF Input Range:

- -25 dBm to -95 dBm

IF Output:

- 70 MHz

IF/AGC Level Output:

- +0 dBm (±1 dB) – Analog
- -10 dBm (±1 dB) – Digital

Stability (RF-IF):

- ± 2.5 ppm

Dual IF Filter Bandwidths:

- 1) 8 MHz SAW/10 MHz
- 2) 8 MHz SAW/15 MHz
- 3) 8 MHz SAW/20 MHz
- 4) 18 MHz SAW/30 MHz

IF Linearity (IMR):

- >40 dB @ 70 MHz

Squelch Adjust:

- ON/OFF

Level

- (25 dB from threshold)

ANALOG AUDIO & VIDEO DEMODULATOR

Level Input:

- (0 dBm to -2 dBm) 0 dBm nominal

Impedance:

- 75 ohms

Composite Outputs:

- Switched / Baseband/video

Video Output:

- 1 Vpp (75 ohms) 525 /625 line

Return Loss:

- >26 dB

Plug In Video Low Pass Filters:

- 4.2, 5.0, & 5.5 MHz

Video Response:

- ±0.25 dB @ within video filter bandwidth

VIDEO PERFORMANCE

(15 MHz L/C IF Filter):

Signal/Noise:

- >68 dB (weighted per RS-250C)

Signal/Hum:

- >63 dB (weighted per RS-250C)

Differential Phase:

- 1 degree

Differential Gain:

- 1%

Chroma/Luminance Gain:

- 4%

Chroma/Luminance Delay:

- ±20 nS

Threshold (2 GHz):

- -87 dBm @ 37 dB video S/N

Threshold (7 GHz):

- -86 dBm @ 37 dB video S/N

Field Tilt:

- 1%

Output Level Adjust:

- +3dB to -6dB, squelch
- 1 Vpp @ 4 MHz peak deviation - nominal
- 1 Vpp @ MHz peak deviation

Baseband Response:

- 10 KHz to 8 MHz +0.5 dB
- 8 MHz to 12 MHz < 2dB

Audio Channels:

- 4 Independent subcarriers

Subcarrier input tune range:

- 4.5 MHz to 8.59 MHz (tunable in 5 KHz steps)

VIDEO

- SDI SMPTE 259M @270 Mbps, 75 ohm
- HD-SDI, SMPTE 292M @1.485 Gbps, 75 ohms

AUDIO PERFORMANCE:

Frequency Response:

- (40 Hz to 15 KHz): ±1.0 d
- (40 Hz to 10 KHz): ± 0.5 d.

Threshold:

- 0.5 % @ 1 KHz (75 KHz deviation)
- 2.0 % @ 1 KHz (200KHz deviation)

Signal/Noise:

- 68 dB (min)

Output Impedance:

- 600 ohms balanced/10 K ohms (selectable)

Output Level (adjust):

- +8 dBm – line level – nominal
- (0 dBm to +18 dBm) – local/serial

Audio Channel Crosstalk:

- 60 dB

De-emphasis:

- 50 uS/75 uS (set at factory)

COFDM DEMODULATION

(DVB-T Compliant)

Bandwidth (Selectable):

- 6 MHz, 7 MHz, 8 MHz

Threshold:

C/N-within 2 dB of ET51 300 744 Standard

COFDM Acquisition Speed:

- 100 Msec (typical)

Modulation Type:

- QPSK, 16QAM, 64QAM

Output:

- DVB-ASI, SDI, MPEG Composite

Packet Length:

- 188 bytes

FEC – Auto Detect:

- 1/2, 2/3, 3/4, 5/6, 7/8

Guard Intervals-Auto Detect:

- 1/32, 1/16, 1/8, 1/4 (selectable using presets)

MPEG DECODER

Delay Mode: 40 ms

Chroma Profile: 4:2:2 / 4:2:0

Audio Channels: 4 Analog

AES/EBU Digital Audio Option

- SDI with Embedded Audio

Line Standard: 526/625

GOP Structures: Variable GOP

SD DECODER (HD OPTIONAL)

	Standard
SD	4:2:0 MP@ML 4:2:2 P@ML
HD	4:2:0 MP@HL 4:2:2 MP@HL

Resolution (HxVx frame rate)

Resolution	Resolution	Frame Rate
SD	720 x 480	29.97
	720 x 576	25
HD (Optional)	1280 x 720p	50/59.94/60
	1920 x 1080i	25/29.97/30
	1920 x 1080p	25/30

ISO/MPEG 11172.3 LAYER II (MUSICAM)

Bit Rates:

- 32 to 448 Kbits/s

Sampling:

- 32 KHz and 48 KHz

Composite Video Output:

- NTSC (w/wo pedestal) /PAL

WAYSIDE CHANNEL

- Embedded data channel on MPEG Module (uses connections via RS-232 port for DCE Data Path)

DATA RATES:

- 1200, 2400, 4800, 9600, 19200, 38400

POWER REQUIREMENTS

DC Input:

- +11 to +36 VDC

AC Input:

- 84 to 264 VAC @ 50/60 Hz

Power consumption:

- 35 watts (typical)

PHYSICAL

Dimensions:

- 9.25" W, 4.0" H, 12.0" D

Weight:

- 2 & 7 GHz, 15.2 lbs [6.9 kg]
- 2/7 GHz, 15.6 lbs [7.1 kg]

Operating Temperature Range

- -20° C to +60° C

Operating Relative Humidity

- 95% @+10° C to +40° C

Operating Altitude

- 20,000 ft. above sea level

Front Panel Controls & Displays

CONTROLS

Analog: Preset, Set Channel/Offset, Set RF Band, Set IF Filter, Set Monitor, Adjust Squelch

Digital: Preset, Set Channel/Offset, Set RF Band, Set IF Filter, Set Monitor, Set OFDM Bandwidth

DISPLAYS

Analog FMR: Preset, Band, Frequency, Channel, IF Filter, Operating Mode, Audio Channel Frequency, Video Deviation, Video Mute, Audio De-emphasis (On/Off), Error Screen

Digital: Preset, Band, Frequency, Link Quality, Channel, Modulation, Bandwidth, FEC, Guard Interval, Pre/Post Vertibi, COFDM Lock/Unlock, Video Output, Audio Lock/Unlock, Audio Type, Color Bar Generator, Transport Stream Lock/Unlock, Error Screen

REAR PANEL CONNECTIONS

RF Input:

- N type

GENLOCK:

- BNC

RS-232 Communication Port:

- 9-Pin "D" Connector

Audio Output 3 & 4:

- 10-pin Circular

FRONT PANEL CONNECTIONS

Signal Output, Monitor, ASI/SDI

Output:

- BNC

AC/DC Power Output:

- 12-Pin Circular

Audio Output 1 & 2:

- XLR (Qty 2)

CONTROLS & INDICATORS

Rotary Channel Select Switch:

- 1-14

Rotary Channel Offset Switch:

- +, -, 0

Rotary Band Select:

- 2 or 7 GHz
- Push Button/Rotary Switch Receiver settings

Display:

- 2 Rows, Alpha Numeric Characters

LED Indicators:

- Power ON/OFF

ANTENNA

- Omni, Horn, Parabolic;
- 2' (.6m), 3' (.9m), 4' (1.2m)
- Twist lock adapter

OPTIONS

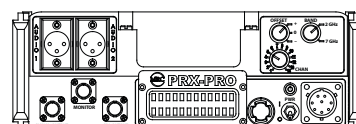
- BISS-1 or BISS-E Encryption
- Antenna Twist Lock Adapter

Prx-Pro Configurator Software Menus

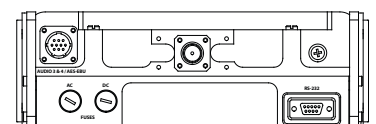
(RS-232 connection to PC or laptop)
Main: Connect to Radio, Load Presets, Save Presets, Select Module Options, Program Radio, Upload Radio Settings

Radio: Preset, Operation Mode, Select Filter (Analog/Digital), Squelch Level, Monitor Select (IF/ASI), COFDM Bandwidth (6.7, 8 MHz) or Auto
MPEG: Gen Lock (On/Off (if equipped), NTSC Pedestal (On/Off), Color Bars (On/Off) Audio Output (Analog/AES-EBU), BISS-1 or BISS-E keys

FMR: Preset, Video Deviation (3/4 MHz), Low Pass Filter (On/Off), Audio Channel Frequency (4 channels), Select Deemphasis/filtered
Channel Plan: Center Frequency, Offset (+/0/-), Select Band (2/7 GHz), Clear Channel Plan, Load Channel Plan, Default FCC Plan, Save Channel Plan



Front View



Rear View

