

Radio Explorer III HD Radio



ADVANCED MOBILE HD RADIO ANALYZER

Radio Explorer III HD Radio is an impressive addition to DEVA Broadcast's line of products dedicated to HD Radio® monitoring. Fully compliant with the Digital HD Radio® Broadcasting standard, this is a powerful tool, which comes with an FM tuner and an FM/HD Radio® tuner for an even higher quality of operation.

It is the go-to product for reliable coverage survey and measures the selected HD Radio® frequency with precision and effectiveness, while in FM mode it can measure up to 10 channels. The built-in FM RDS/RBDS Decoder and the HD Radio® PAD Decoder further contribute to the top performance of the Radio Explorer III HD Radio. As is the case with all of our products, this one combines superb features with user-friendly operation. Its high-resolution graphical OLED display with front panel navigational buttons and soft buttons ensures effortless usage of the unit, with easy navigation through the menus and quick access to the device's various functions.



The Radio Explorer III HD Radio measures all important signal parameters, including the RF level, MPX deviation, Left & Right Audio levels values, as well as HD Radio® parameters such as DAAI and CDNR. Additionally, it boasts a Loudness meter, which can be shown as defined by ITU BS.1770-4 and EBU R128 recommendations, as the product supports both.

This tool can also be controlled through the built-in Web server - a standard web browser can be used to monitor its status or to make some adjustments. iOS and Android devices are also supported. The Main Screen of the WEB Interface shows all mandatory parameters represented as LED bar graph readings.

The DEVA Device Manager Software, supplied free of charge, also allows for quick and easy connection to the device.

With its array of smart features, Radio Explorer III HD Radio is sure to be the product of choice for dependable HD Radio® monitoring.

FEATURES

- FM/HD Radio DSP-based Tuner 87.1 - 107.9MHz
- Up to 100 dBµV direct RF Antenna Input
- Selectable wide range IF filter bandwidth
- Built-in 50-channels GPS Receiver
- Front panel OLED Graphical Display
- Easy to use WEB Interface
- Apple and Android devices support
- Very Intuitive Application Interface
- SNMP for adjustments and control
- Provision for PAD data analysis and Logging
- Selectable De-emphasis - 50µs and 75µs
- RDS and RBDS decoder with BER meter
- Very Intuitive Navigational Menu
- Protected access to the device settings
- SNTP for automatic synchronization of the built-in clock
- LAN port for full TCP/IP remote control and monitoring
- Adjustable MIN/MAX alarms for RF, Left & Right Audio Levels
- Alarm dispatch via E-mail, SNMP ver.2C and GPO
- Firmware updates will ensure improved operation
- Antenna port supporting up to 110 dBµV direct RF Antenna Input
- Maintenance via DEVA Device Manager Software
- Measurement results visualization in Google Earth
- Accurate front-panel metering for local use
- Headphone output with front panel level control
- 3 General purpose outputs
- HD Radio PAD (Program-Associated Data) Information
- Built-in FTP Server for easy download of the Log files
- Robust, custom made Metal Case for high RF immunity

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SPECIFICATIONS

RF Input	
Tuning Range	User selectable, 87.1-107.9 MHz
Tuning Step	10, 20, 50, 100 kHz
Tuner Sensitivity	≤ 10μV for 50dB monaural FM S/N
Antenna Ports	BNC Connector, 50Ω
Internal Attenuator	0, 10, 20 and 30 dB
Dynamic range	100 dB

FM Demod	
IF Filter Bandwidth	Selectable 15 Incr. (27 - 157kHz) or Auto
Frequency Response	±0.1 dB, 10 Hz to 86 kHz
Dynamic range	90 dB

Stereo Decoder	
Frequency Response (L&R)	±0.1 dB, 10 Hz to 15 kHz
SNR (Stereo)	60 dB, 50 μs de-emphasis
THD	0.1%, 10Hz to 15kHz, 50 μs de-emphasis
Stereo Separation	50dB, 50Hz to 10kHz, 50μs de-emphasis

HD Radio	
Audio Programs	MPS, SPS1 to SPS7
Quality Indicators	DAAI, CDNR, HD Radio lock
SIS Data	Station Slogan, Station Message, Station Long Name, Station Universal Short Name, FCCID
PAD Data	Artist, Title, Album, Genre

Metering Accuracy	
RF Level	±1 dB, 0 to 100 dBμV
MPX Power	±0.2 dB, -12 to 12 dB, 0.1 dB resolution
Total, Pos, Neg	±2 kHz, 10 to 100 kHz, 1 kHz resolution
Pilot, RDS	±0.5 kHz, 1 to 12 kHz, 0.2 kHz resolution
Audio	±1 dB, +10.0 to -55.0 dB, 0.1 dB res.

Outputs	
Audio (L, R)	+6 dBu, 600Ω, balanced XLR Connector
GPO	Terminals on rear panel, optoisolated
Headphone	6,3mm (1/4") Phone Jack

Communication Interfaces	
USB	B-type Connector
Ethernet 10/100 Base-T	RJ45 Connector

RDS Decoder	
Standards	European RDS CENELEC; United States RBDS NRSC
Error Correction & Counting	Yes
AF Decoding	Yes
CT (Time/Date)	Yes
PI, PTY, DI, MS	Yes
T/ATP	Yes
RT (Radio Text), RT+	Yes
PS (Program Service name)	Yes
TMC, ODA	Yes
Group Analyzer	Yes
BER Analyzer	Yes
Group Sequence Display	Yes
RDS RAW Data Display	Yes

GPS Receiver	
Number of channels	50
Antenna	Pre-amplified, 5m of cable, magnetic
Connector	SMA, rear panel

Measurement Storage	
Storage	16GB Build-in Memory Card
Data format	Text, CSV

Operating conditions	
Temperature	-15°C to 55°C
Humidity	< 95%, non-condensing
Altitude	0 to 5000m above sea level

Power Requirement	
Voltage	12 DC (11-15V) / 2A max at 12V
Connector	XLR (on rear panel)

Size and Weight	
Dimensions (W;H;D)	210 x 76 x 215 mm
Shipping Weight	470 x 180 x 310 mm / 4.031 kg

