

## FM/HD RADIO & IP AUDIO CONFIDENCE MONITORING RECEIVER

The transition from the traditional analog transmission service to the new digital standards has put many stations on the road to HD Radio broadcasting. The new digital services are already proven as ensuring exceptionally high quality sound and enhancing the listening experience. Pacing in line with the latest technologies, DEVA has designed a device to receive and monitor FM/HD Radio and Internet radio stream.

The unmatched in performance audio system of DB3011 is equipped with two speakers to reproduce mid- and high-range audio frequencies, and one high-efficiency bass reflex speaker for high-quality sound. The DB3011 offers brilliant acoustic characteristics with extensive feature set. The tool supports MP3, RTP and PCM IP audio codecs. In addition, DB3011 allows users to toggle through the FM, HD Radio and online stream of the radio station to confirm audio presence and quality in live broadcast environments. The device is compatible with the most popular streaming media platforms, Icecast and Shoutcast included.

The DB3011 FM/HD Radio monitor provides full fidelity off-air monitoring and online stream simultaneously. Radio gear of premium class, DB3011 is DEVA competitive response to the requirements set by the transitional environment of coexistence of HD Radio with the traditional broadcasting. The DB3011 could be set to work in two modes: FM and Internet radio stream monitoring mode and HD Radio and Internet radio stream monitoring mode.

The high-selective DSP-based tuner of the device allows the HD Radio, FM and Internet stream of the station to be selected, monitored and listened to through the top-quality speakers or headphones. This dedicated hardware will not only allow you to constantly monitor the sound of your station, but will also measure and store for future analysis the RF level, MPX deviation, Left & Right Audio levels values. The rear-panel alarm GPOs, E-mail and SNMP ver.2C provides local alarm options, and online notifications in case of audio loss or change in the RF, Left and Right Audio Levels. To enhance your performance even more, the DB3011 has a built-in FM RDS/RBDS Decoder and HD Radio PAD Decoder.

The display of the DB3011 is easy to read, high-resolution OLED graphical one and its ultra-bright LED bargraph indicators allow reading the main signal parameters at a glance. The received FM RDS/RBDS and HD Radio PAD are indicated on the front-panel display, along with the readouts of the signal quality information. The intuitive front panel navigation menu and set of four soft buttons enable the easy navigation through the menus and quick access to DB3011's various functions.

The tool provides fast remote monitoring and setup. Its WEB interface is accessible with no more than a click and you will be able to listen to the FM Station, FM/HD Radio and Internet radio stream. The setup and control of the unit could be done through your PC, tablet or smartphone, via a standard web browser. All operating systems are supported without a compromise.

With its extensive set of features to match the latest trends, user-friendly control options and guaranteed 24/7 operation, DB3011 is the perfect asset for any station with HD Radio transmission.



**FEATURES**

- FM/HD Radio DSP-based Tuner 87.1 - 107.9MHz
- Up to 100 dB $\mu$ V direct RF Antenna Input
- Selectable wide range IF filter bandwidth
- HD Radio PAD (Program-Associated Data) Information
- Provision for PAD data analysis and Logging
- Selectable De-emphasis - 50 $\mu$ s and 75 $\mu$ s
- RDS and RBDS decoder with BER meter
- Wide angle, easy to read OLED display
- Very Intuitive Navigational Menu
- Quick Station access via 4 Presets
- Real Time Audio Program Streaming
- Full fidelity radio program monitoring in only 1RU
- Built-in WEB and FTP server
- Easy to use WEB interface
- Apple and Android devices support
- Protected access to the device settings
- Wide operating voltage range: 100-240V AC
- Bright bar graph LED metering of the RF and Audio Levels
- Headphone output with front panel level control
- Advanced Internet Radio Monitoring Capabilities
- Automatically decodes MP3, RTP and PCM IP Audio
- Support of all standard bitrates and VBR as well
- SHOUTcast / ICEcast compatible
- Automatically displays live metadata for all standards
- Adjustable alarms for Stream Loss and Internet Loss
- DSP controlled, high efficient class-D switching amplifier
- Accurate 3-way speaker system
- Two mid/high frequency speakers for excellent stereo imaging.
- Active crossover for perfect separation between mid-range and bass bands
- Magnetically shielded drivers that allows placement next to video monitors
- SNTP for automatic synchronization of the built-in clock
- Level Adjustable, Balanced Analog Audio Outputs on XLR Connectors
- Professional AES/EBU Digital audio output
- 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
- Multi-point screw fixings ensured 19" aluminum case

## SPECIFICATIONS

IP Audio Player	
Formats	MPEG-1 Layer 3 and raw PCM
Sample rates	32, 44.1 and 48 kHz
Bit rates	All standard bit rates, including VBR
Metadata	Station/Streamer's ID, Song/Title
Stream client	Shoutcast/Icecast compatible TCP/IP client

FM/HD Radio™ Tuner	
Tuning Range	87.1 to 107.9 MHz, Frequency Agile
Tuning Step	10, 20, 50, 100 kHz
Tuner Sensitivity	≤ 10µV for 50dB monaural FM S/N
Antenna Port	BNC Connectors, 50Ω
Dynamic range	100 dB

FM Demod	
IF Filter Bandwidth	Adjustable from 10kHz to 150kHz
Frequency Response	±0.1 dB, 10 Hz to 86 kHz
Dynamic range	90 dB

Metering Accuracy	
RF Level	1%, 0 to 100 dBµV, 1dB resolution
Audio	1%, +5.0 to -50.0 dB, 0.1 dB resolution

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

Network	
Connector	RJ-45, Ethernet
Device discovery	UPnP support

Power Supply	
Voltage	100-240V / 50-60 Hz / 25W
Connector	IEC320

Size and Weight	
Dimensions (W;H;D)	485 x 44 x 300 mm
Shipping Weight	540 x 115 x 300 mm / 4.5kg

RDS Decoder	
Standards	EU RDS CENELEC; US RBDS NRSC
Decoder	PI, PS, PTY, AF, RT, RT+, DI, MS, TA, TP, CT, ODA
Group Analyzer	Yes
BER Analyzer	Yes
Group Sequence Display	Yes
RDS RAW Data Display	Yes

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

Amplifier & Loudspeakers	
Configuration	Three-way with stereo mid/ high-frequency drivers & mono low-frequency driver
Power Output	2 x 6W (HF) + 12W (LF) with protective limiter
Crossover	250Hz, 24dB/octave, Linkwitz-Riley
Distortion, HF Outputs	< 0.1% - 1kHz, 3W output (below limit threshold)
Distortion, LF Output	< 0.05% - 100Hz, 6W output (below limit threshold)
Noise	Better than -72 dB below full output
Volume Control	Mute to Full, Front panel, Rotary type
Balance Trim	±32dB, Front panel, Rotary type
Peak Acoustic Level	98dB SPL @ 2ft

Outputs	
Analog Audio Outputs (L, R)	+10 dBu, balanced XLR
AES/EBU Output (L,R)	5.0 Vp-p, 110Ω, balanced XLR
Alarms	Programmable terminals on rear panel, Optoisolated
Headphone	6,3mm (1/4") Phone Jack

Measurements and Log Storage	
Storage	2GB Build-in Memory Card
Data format	Text, CSV



WE NEVER SPARE EFFORTS AND RESOURCES TO TURN OUR IDEAS INTO SUCCESSFUL PRODUCTS