BROADCAST TOOL

Model DB44

FM Radio Monitoring Receiver and Basic Modulation Analyzer

Compact, Robust, Reliable and Clever - This is just a small part of all the benefits of our DB44 FM Radio Monitoring Receiver and Basic Modulation Analyzer. Based on the latest technology, the DB44 core is DSP based digital design for 24/7/365 operation.

After demodulating the FM signal, the MPX signal is digitalized and all signal processing is then made through calculations. Digitizing in this way, at the input gives the equipment measurement reproducibility over time. Digital filters' accuracy, used in this equipment, enables the FM multiplex signal's components to be accurately and repeatedly reproduced from one device to another, i.e. same signal applied to two devices will give the same result. The processing power in this equipment enables all measurements to be refreshed simultaneously and synchronously, thereby allowing for detailed readings of all the Multiplex FM signal components.

DB44 allows you through its TCP/IP and GSM Connectivity to monitor all the RDS and some other signal parameters from anywhere. You can easily receive the channel status or listen to the audio from anywhere, using your mobile phone. With the built-in Audio Streamer you can even listen to, skim and record the audio from any station. DB44 is our most cost effective unit for permanent monitoring of the quality and continuity FM Radio Stations or Radio Networks.

FEATURES

- **RF Spectrum analyzer allowing to check the RF Carrier parameters**
- **Very Intuitive Embedded WEB server for interactive supervision**
- **MPX Spectrum analyzer for Left, Right and MPX measurements**
- **Compact and Robust Aluminum Case for high RF immunity**
- **Built-in Oscilloscope allowing Left, Right and MPX display**
- **Adjustable alarms for RF, Deviation, Pilot and RDS signal**
- **SNTP for automatic synchronization of the built-in clock**
- **LAN port for full TCP/IP remote control and monitoring**
- **Attractive price and very good price-performance ratio**
- **Proved and reliable hardware for 24/7/365 operating**
- **Built-in Stereo Decoder; Stereo Presence Detection**
- **LEFT and RIGHT demodulated audio level meters**
- **FM Band 87 - 108 MHz Basic Spectrum Analyzer**
- **Remote Listening via optional GSM modem**
- **MPX Power measurement with data history**
- **Fully DSP based core**
- **Headphones audio output**
- **Easy Installation and Setup**
- **RF and RDS Measurements**
- **Intuitive Application Interface**
- **Channel status reporting via SMS**
- **Parameters Factory Restore Option**
- **MPX, PILOT & RDS deviation meters**
- **Real Time Audio Program Streaming**
- **Alarm dispatch via E-mail, SMS, SNMP**
- **Up to 90dBµV direct RF Antenna Input**
- **RDS and RBDS decoder with BER meter**
- **Selectable De-emphasis – 50µs and 75µs**
- **Date & Time Settings with various formats**
- **Firmware update for future-proof operation**

DEVA BROADCAST

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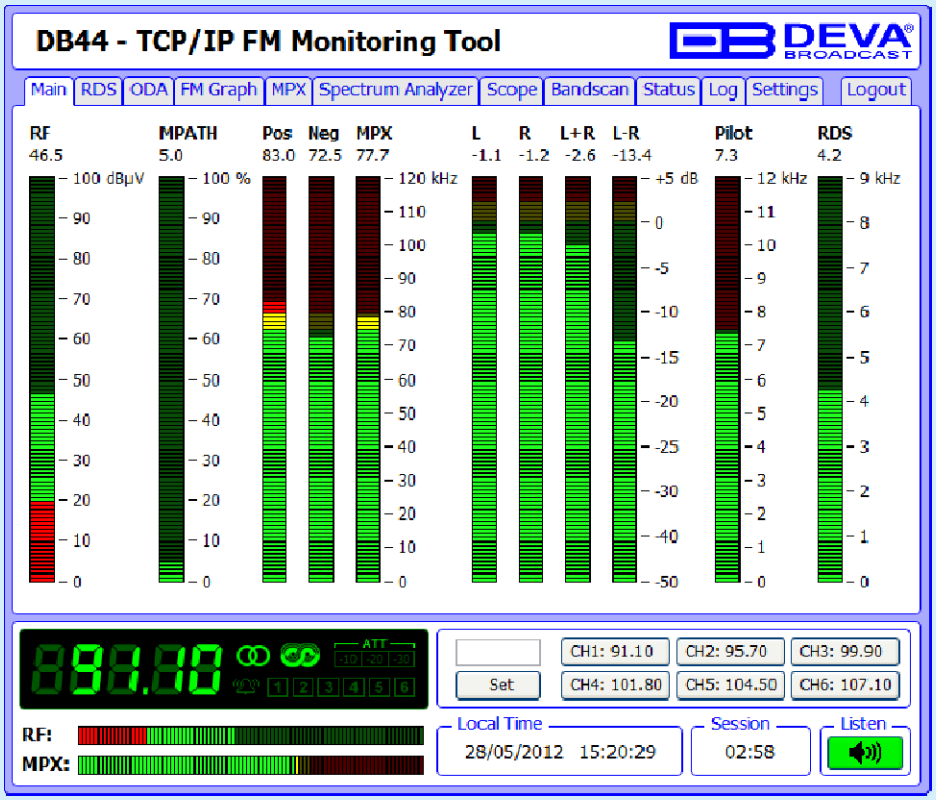
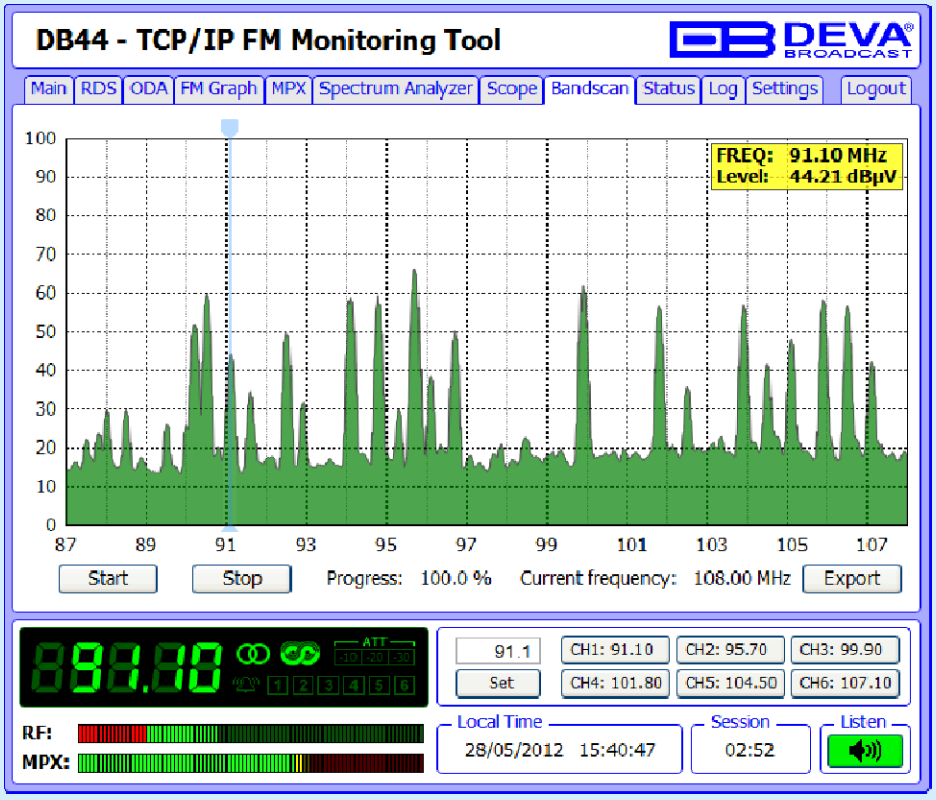
REMOTE INTERFACE



DB44 Main Screen shows the most important FM Radio parameters. This section is designed as group of easy to read, high-resolution bargraph displays. Displaying the results by this way allows a quick overview and reading of the main signal parameters at a glance. The available parameters at this screen: RF level, Multipath and all the MPX parameters as Pilot and RDS Injection Levels, Total Modulation, Pos and Neg MPX deviation, Left & Right Audio levels. All the indicators have an accurate digital readout with the last value captured for better and precise measurement.

Supplied with the Deva Broadcast's standard BandScan function, the DB44 sweeps the receiver across the whole FM Broadcast (87MHz – 108MHz) band, logging every carrier and generating a spectrum display of carrier level vs. frequency. Moving the marker, the digital readout at the top right side of the screen gives the frequency and signal strength of the frequency under the marker. The channel presets allows fast switching between six predefined frequencies.



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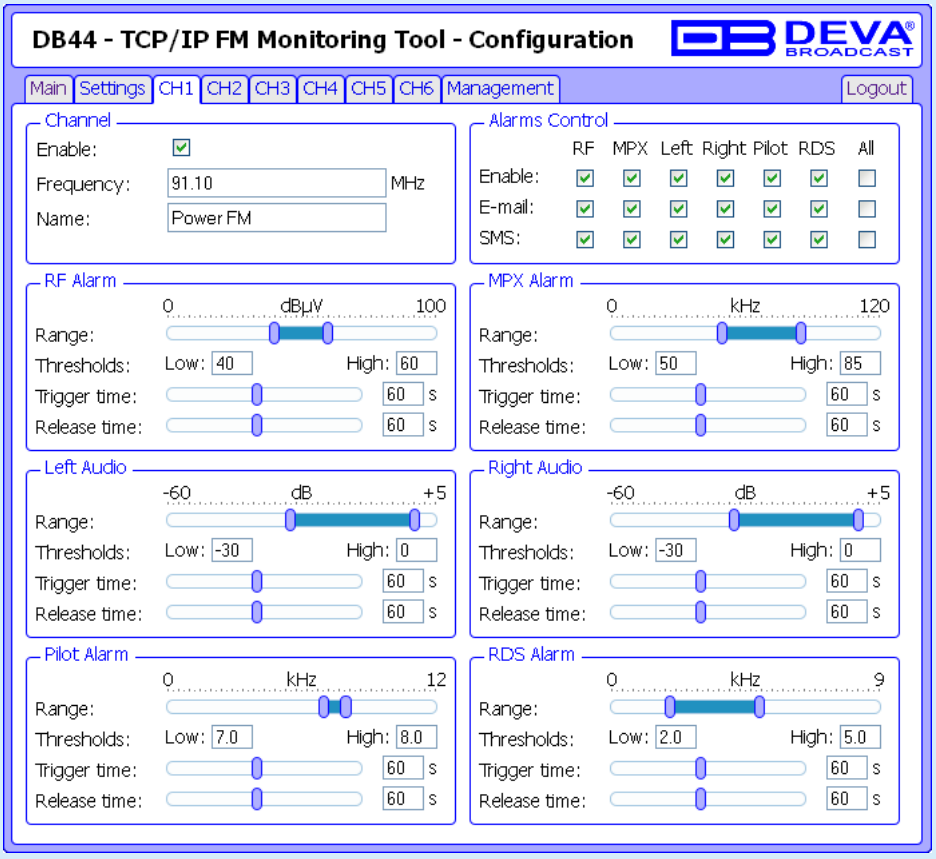
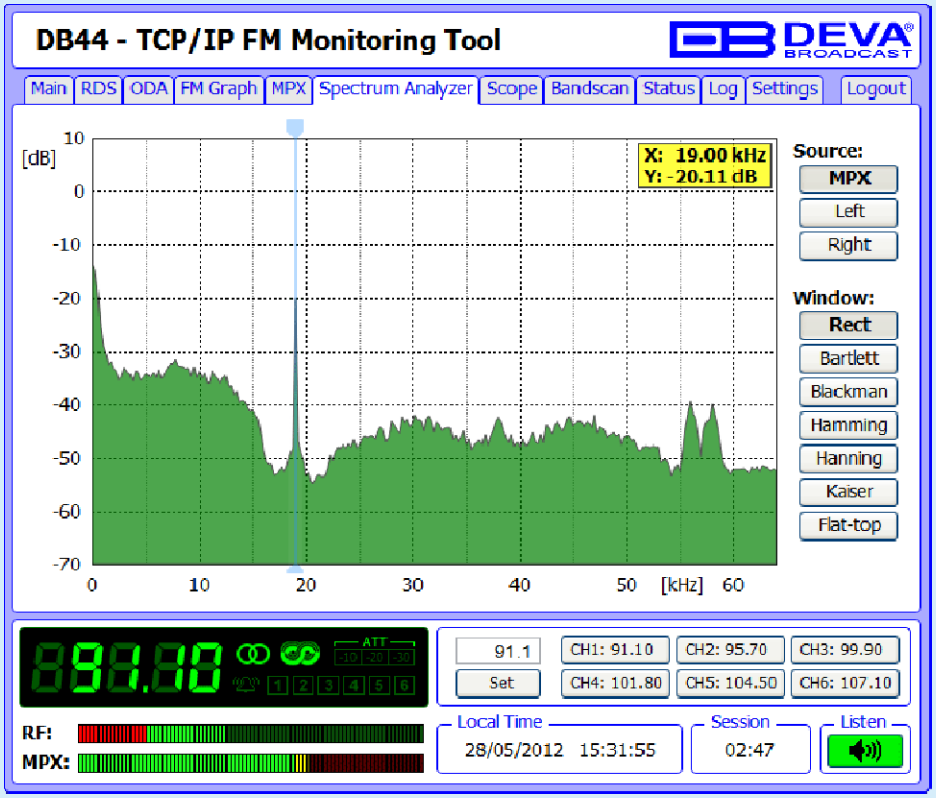
DB44 is loaded with a wide number of useful features such as TCP/IP connectivity, Interactive WEB server, audio streaming and automatic alerts on out of predefined ranges in regards with the ITU-R. All the monitoring parameters can be easily customized via the visual control interface in regards with a specific costumer's need. In case of any faults in the transmission the maintenance staff will be immediately alerted via E-mail or SMS. Adjustable triggers watch to avoid sending of fake alarm messages. This tool enhances the radio stations' quality control management.





The built-in DB44 Oscilloscope represents the observed signal change over time, enables you to visualize the most important signals participating in the process of demodulating and stereo decoding. Similarly to the Oscilloscope mode, Spectrum analyzer is a mode for spectral analysis of the input signal and is a part of the DB44 features. Spectral components of the selected signal are determined on the base of Fast Fourier Transform. The MPX Power measurement, which supports measurement data history is yet another DB44 great feature.

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SPECIFICATIONS

RF INPUT	
Frequency Range	87.5 to 108 MHz, Frequency Agile
Step Increment	50 kHz
Antenna Input	50 Ω, BNC Connector, 10 dBµV sensitivity
Internal Attenuator	0, 10, 20 and 30dB, auto
Dynamic Range	0 dBµV to 100 dBµV
S/N	57dB, RF > 60dBµV, 30dB, RF > 10dBµV
METERING RESOLUTION & ACCURACY	
RF Level	0 to 95 dBµV; resolution - 0.1 dBµV accuracy - ±1 dB (10 to 85 dBµV)
Multipath	0 to 100%; accuracy - ±1%
MPX Deviation	±120 kHz; resolution - 0.1kHz accuracy - ±10%, ±5% typically
MPX Power	±12 dBr; resolution - 0.1dBr, 10 sec. integration; accuracy - ±0.2 dBr
Audio Level	-50 to +5dB; resolution - 0.1dB; accuracy - ±5%
Pilot Level	0 to 12 kHz; resolution - 0.1 kHz; accuracy - ±0.5 kHz, 1 to 12 kHz
RDS Level	0 to 9 kHz; resolution - 0.1 kHz; accuracy - ±10% typ. and not guaranteed
AUDIO, MPX, PILOT, RDS LEVELS	
Validity	RF level preferably > 50dBµV
Multiplex Level	Peak level, 256 ksamples over 1 sec.
Audio Level	Peak level, 64 ksamples over 1 sec.
Pilot Level	Mean peak level, 256 ksamples over 1 sec.
RDS Level	Mean peak level, 256 ksamples over 1 sec.
STEREO DECODER	
Stereo Separation	>25dB, typical >30dB
De-emphasis	50 or 75µs, Selectable
THD	0.5%
OUTPUTS	
Audio stream	Icecast/Shoutcast compatible audio stream
Alarms	SMS, E-mail, SNMP
Headphone	1/8" (3.5mm) Phone Jack
GSM Modem	15-pin Male D-Sub Connector

RDS DATA DECODING	
Standards	European RDS CENELEC; United States RBDS NRSC
Error Correction & Counting	Yes
AF Decoding	Yes
CT (Time/Date)	Yes
PI, PTY, DI, MS	Yes
TA/TP	Yes
RT, PS	Yes
PIN, RT+, TMC	Yes
FFT SPECTRUM ANALYSIS	
Input	Composite MPX, Audio
Dynamic Range	80 dB
FFT Length	1024
Sampling Rate	256 kHz - Composite, 64 kHz - Audio
SCOPE ANALYSIS	
Input	Composite MPX, Audio
Trigger Mode	Auto, Fall
Dynamic Range	±120 kHz
Sampling Rate	256 kHz - Composite, 64 kHz - Audio
USER INTERFACE	
Web interface	Full monitoring and control; Interactive and easy to use
Indicators	3 LEDs (on front panel)
Headphone Output	1/8" (3.5mm) phone jack (on front panel)
TCP/IP COMMUNICATION	
Type	Ethernet 10/100M Base-T Port
Connector	RJ45 (on rear panel)
OPERATING CONDITIONS	
Temperature	10° to 60°C
EMC Immunity	6V/m
POWER REQUIREMENTS	
Power Supply	External, 12V/1A
SIZE AND WEIGHT	
Dimensions (W;H;D)	(125;31;160mm), (5";1.2";6.3")
Shipping Weight	1,5 kg

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

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