



## SDR-BASED FM RADIO MODULATION ANALYZER AND MONITORING RECEIVER

DB4005 is DEVA Broadcast's third-generation digital FM Radio modulation analyzer and receiver, the result of long years of experience and a desire to always provide intelligent near-perfect solutions, while keeping pace with the very latest technological developments and trends.

With this product, upon demodulation of the FM signal, the RF signal is digitalized by the SDR FM tuner and all signal processing is achieved through sophisticated DSP algorithms. The high precision of the powerful digital filters used in this equipment enables the FM signal to be accurately and repeatedly analyzed with each device. An important asset to the DB4005 is the MPX input, which allows you to monitor external composite signals, regardless of whether they are from a composite STL receiver/stereo FM encoder, or from an off-air source. As this is a tool of great processing power, it provides detailed readings of all the multiplex FM signal components, while all measurements are refreshed simultaneously and synchronously.

Another useful feature of the DB4005 is the Loudness Meter, which allows for measurements to be shown as defined by ITU BS.1770-4 and EBU R128 recommendations, as the product supports both standards.

The DB4005 has an easy to read, high-resolution OLED graphical display and ultra-bright bargraph LED 60 segment indicators that allow reading the main signal parameters at a glance. The built-in oscilloscope represents the observed signal change over time and helps you visualize the most important signals participating in the process of demodulating and stereo decoding. Complementing the Oscilloscope mode, the Spectrum analyzer mode allows for spectral analysis of the input signal. Spectral components of the selected signal are determined on the basis of Fast Fourier Transform. MPX Power and all other level measurements are supported by measurement history data. Additionally, RDS information contained in the processed MPX signal is easily visualized and represented as RDS/RBDS Data and detailed RDS/RBDS Statistics.

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73 Hit (0)
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## **FEATURES**

- Bright, accurate bar graph LED metering of the Modulation and Pilot Levels
- Level Adjustable, Balanced Analog Audio Outputs on XLR Connectors
- Adjustable MIN/MAX alarms for RF, Pilot Left & Right Audio Levels
- Total and independent Positive and Negative deviation bar graph
- Built-in Oscilloscope for IF, MPX, Pilot, RDS, Left & Right display
- Spectrum analyzer allowing checking of the RF Carrier and MPX
- Professional AES/EBU, SPDIF and Optical Digital audio outputs
- Complete status reporting with SMS via optional GSM modem
- Adjustable MIN/MAX alarms for MPX, MPX Power & RDS
- SNTP for automatic synchronization of the built-in clock
- LAN port for full TCP/IP remote control and monitoring
- Left, Right, L+R, L-R bar graph LED audio level meters
- USB communication interface for local connectivity
- Firmware updates will ensure improved operation
- Headphone output with front panel level control
- FM Band 65 ÷ 108 MHz Basic Spectrum Analyzer
- Alarm dispatch via E-mail, SMS, SNMP and GPO
- Dual antenna ports with built-in RF attenuator
- Selectable De-emphasis Off, 50µs and 75µs
- Accurate front-panel metering for local use

 Fully DSP-based core Built-in Stereo Decoder Easy to use WEB interface Built-in Loudness Analyzer Easy Installation and Setup Built-in WEB and FTP server Built-in 50 channel Data logger Very Intuitive Navigational Menu Quick Station access via 4 Presets Restore Factory Parameters option Apple and Android devices support Real Time Audio Program Streaming Levels measurement with data history Wide angle, easy to read OLED display Built-in input for external MPX analysis Protected access to the device settings Up to 100 dBµV direct RF Antenna Input RDS and RBDS decoder with BER meter Selectable wide range IF filter bandwidth Remote Listening via optional GSM modem

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## SPECIFICATIONS

RF Input				
Tuning Range 87.1-108 MHz, 65-74 MHz, 76-95 MHz				
Tuning Step	10, 20, 50, 100 kHz			
Tuner Sensitivity	30 dBµV			
Antenna Ports	Dual, 2 x BNC Connectors, 50Ω			
Antenna Ports Isolation >40 dB				
Internal Attenuator	0, 10, 20 and 30 dB			
Dynamic range	100 dB			
FM Demod				
IF Filter Bandwindth	15 Increments (25kHz - 157kHz, Auto)			
Frequency Response	±0.1 dB, 10 Hz to 86 kHz			
MPX Power	±12 dBr, 20 sec. integration			
Dynamic range	90 dB			
MPX (Composite) Input				
Connector I	BNC on rear panel			
Impedance	10 kΩ			
Frequency Range	10 - 70 kHz; ±0.01 dB, 100 - 60 kHz;			
Sensitivity	3.5 Vp-p @ 100%			
Stereo Decoder				
Frequency Response (L&R) ±0.1 dB, 10 Hz to 15 kHz				
SNR (Stereo) 60 dB, 50 µs de-emphasis				
THD 0.15%@1kHz, 0.4%@10Hz-15kHz, 50µs dmph				
Separation 50 dB, 50 Hz to 10 kHz, 50µs de-emphasis				

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Crosstalk

52 dB

Outputs			
Audio (L, R)	+12 dBm, $600\Omega$ balanced XLR Connector		
AES3 (L, R)	5.0 Vp-p, 110 $\Omega$ , balanced XLR Connector		
SPDIF (L, R)	3.0 Vp-p, 110 $\Omega$ , unbalanced BNC Connector		
Optical (L, R)	Transmitter, TOSLINK		
Alarms	Programmable terminals on rear panel, optoisolated		
Headphone	6,3mm (1/4") Phone Jack, +12dBm maximum		

Size and Weight			
Dimensions (W;H;D)	485 x 44 x 180 mm		
Shipping Weight	540 x 115 x 300 mm / 2.700 kg		

	RDS D	ecoder		
Standards		European RDS CENELEC		
		United States RBDS NRSC		
Error Correction &	& Counting	Yes		
AF, CT		Yes		
TA/TP		Yes		
PI, PTY, DI, MS		Yes		
PS, RT, RT+		Yes		
TMC, ODA		Yes		
Group Analyzer		Yes		
BER Analyzer		Yes		
Group Sequence	Display	Yes		
RDS RAW Data [	Display	Yes		
Scope	Analysis (RF	, Composite, Audio)		
Signal Sources	RF (IF), MP	X, Pilot, RDS, Main, Sub, L, R		
Record length	4096 points	;		
Dynamic range	90 dB			
Metering Accuracy				
RF Level	±1 dB, 0 to 1	100 dBµV		
MPX Power	±0.2 dBr, -12	2 to 12 dBr, 0.1 dBr 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	0 to -55.0 dB, 0.1 dB resolution		
FFT Spect	rum Analysis	s (RF, Composite, Audio)		
Signal Sources	RF (IF), MP	PX, Left, Right		
FFT length	2048 points	5		
Dynamic range	90 dB			
Communication Interfaces				
USB	B-ty	pe Connector		
Ethernet 10/100 Base-T RJ45 C		5 Connector		
GSM Modem	15 p	in Male D-Sub Connector		
Power				
Voltage	100-240	)V / 50-60 Hz / 25W		
Power Consumption 20VA				
Connector	Connector IEC320, Fused and EMI-suppressed			



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

