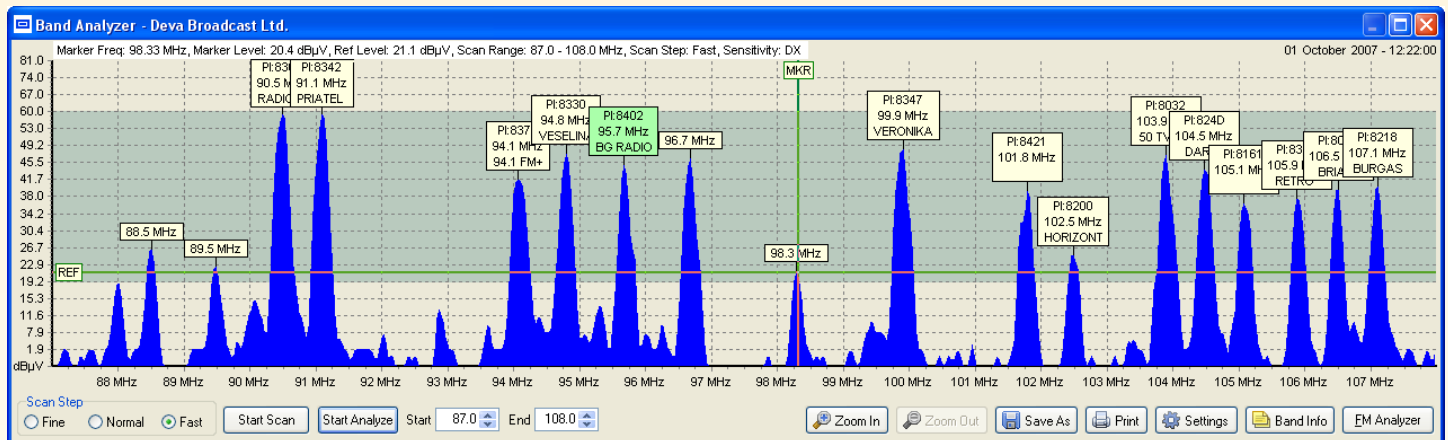


## FM BAND SPECTRUM AND MODULATION ANALYZER RDS/RBDS DECODER-READER



"Band Scanner Pro" is a tool to evaluate FM broadcast band congestion and to log station identification parameters. The "Band Scanner Pro" can measure RF level, MPX deviation, Left & Right Audio levels, RDS and Pilot injection levels. The system is powered by the USB port of any Windows PC. Supplied free of charge Windows software sweeps the receiver across the FM band, logging every carrier and generating a spectrum display of carrier level vs. frequency. It then analyzes each carrier and creates a station list. Stations with an RDS presence are further refined to show all the radio data groups being transmitted. Its interface is like a portable radio: It may be tuned manually through the receiver screen or by double-clicking a point on the spectrum plot or an entry on the station list. Spectrum plots may be saved as jpg or bmp files. The RDS data error level is graphed in a separate

window on the receiver screen. The program can be monitored with headphones plugged into a standard 1/8" jack. Originally, the Radio Data System developed for use in the U.S. was called the Radio Broadcast Data System, or "RBDS," to differentiate it from the European RDS standard. Differences between the two systems were gradually reconciled, and the term "RDS" can be legitimately applied to the system as practiced worldwide.



### FEATURES:

- FM Band Spectrum analyzer
- Built-in Stereo decoder
- MPX, PILOT & RDS deviation meters
- External composite MPX and RDS input
- LEFT and RIGHT level meters
- Auto search tuning
- Headphones audio output
- Full feature RDS and RBDS decoder
- RDS/RBDS Groups Detector & Analyzer
- RDS/RBDS stream BER meter
- RDS/RBDS Data Logger
- Pocket size USB powered box
- View playlists of the competitive stations
- Saving and exporting the playlists to CSV file
- Compare the signal strength to competitors
- Tracking all the histories saved in the RDS Data Log

### SPECIFICATIONS:

#### FM receiver

- FM frequency: 87.0 - 108.0 MHz
- Strong fields: AGC
- RF level evaluation:  $\pm 4\text{dB}$  from 20°C to 30°C; 20-60dB $\mu\text{V}$  without modulation; 0 to 54.6(60 with int. Att)dB $\mu\text{V}$
- Dynamic Attenuator: 6dB built-in, manual operation
- Stereo separation: >20dB
- Typical separation: Approximately 26dB to 35dB
- Measurement validity: RF level preferably > 50dB
- Multiplex level: 1000 samples over 1 second
- Audio level: 1000 samples over 1 second
- Pilot level: 1000 samples over 1 second
- RDS level: 1000 samples over 1 second
- Accuracy of MPX:  $\pm 5\text{KHz}$ ,  $\pm 2\text{KHz}$  typ
- Accuracy of audio:  $\pm 5\%$
- Accuracy of sub-carrier:  $\pm 10\%$  typ. not guaranteed

#### FM Antenna input

- Connector: 'F' on rear panel
- Impedance: 75 $\Omega$

#### FM Multiplex input

- Connector: BNC, Impedance = 50 k $\Omega$
- Max input level: 5000mV p-p

#### User interface

- Indicators: 3 LEDs
- Headphone output: 1/8" (3.5mm) phone jack

#### Operating Conditions

- Temperature: 10° and 40°C
- EMC immunity: 6V/m

#### Power Requirement

- Power supply: USB powered
- Connector: B-type, front panel

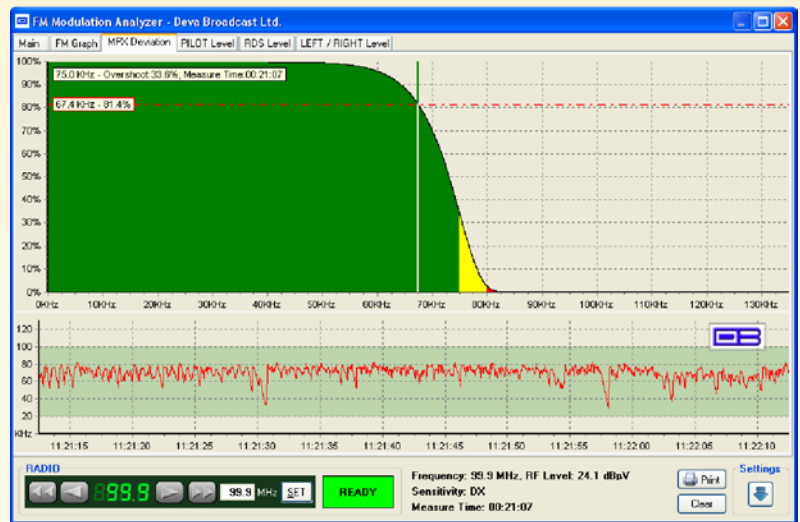
#### Size and Weight

- Dimensions (WxHxD): 2.9" x 1" x 4.3"
- Weight: 2 lbs

### FM Modulation Analyzer



### MPX Deviation Overshoot



Log View - Deva Broadcast Ltd.

EXTENDED Log

Date/Time	P/CALL	RTA
01.10.2007 12:01:44	824D	DARIK - NEWS MUSIC SPORT WwW. DARIK.NET
01.10.2007 12:04:47	824D	STEREOPHONICS - IT MEANS NOTHING
01.10.2007 12:07:45	824D	SUGABABES - ABOUT YOU NOW
01.10.2007 12:10:40	824D	30 SECONDS TO MARS - THE KILL
01.10.2007 12:13:50	824D	FOO FIGHTERS - THE PRETENDER
01.10.2007 12:16:53	824D	ARMAND VAN HELDEN - I WANT YOUR SOUL
01.10.2007 12:19:46	824D	50 CENT FEAT. JUSTIN TIMBERLAKE & TIMBALAND
01.10.2007 12:22:44	824D	THE PIGEON DETECTIVES - TAKE HER BACK
01.10.2007 12:25:43	824D	THE HOOSIERS - GOODBYE MR A
01.10.2007 12:28:39	824D	THE WHITE STRIPES - YOU DONT KNOW WHAT LD

DATA CHANGE Log

Date/Time	What	Changed to
01.10.2007 12:28:39	PS	DARIK
01.10.2007 12:28:39	PS	104.5 FM
01.10.2007 12:28:39	PS	BURGAS
01.10.2007 12:20:18	PS	DARIK
01.10.2007 12:19:07	PTY	News
01.10.2007 12:19:07	PI	824D
01.10.2007 12:19:07	PI	OFF
01.10.2007 12:17:16	PS	104.5 FM
01.10.2007 12:10:05	Freq Change	104.5
01.10.2007 12:01:15	PI	824D
01.10.2007 12:01:15	PTY	OFF
01.10.2007 12:01:37	PS	DARIK
01.10.2007 12:01:33	PS	104.5 FM
01.10.2007 12:01:28	PS	BURGAS
01.10.2007 12:01:18	PS	DARIK
01.10.2007 12:01:18	RTA	DARIK - NEWS MUSIC SPORT WwW. DARIK.NET
01.10.2007 12:01:17	CT	31 Sep 2007, Mon, week. 40, 12:26 + 0.0
01.10.2007 12:01:16	AF	5A 91 0 100.6 105.0 105.4 107.3
01.10.2007 12:01:16	PS	104.5 FM
01.10.2007 12:01:15	PTY	News
01.10.2007 12:01:15	PI	824D
01.10.2007 12:01:15	PI	OFF
01.10.2007 12:01:15	TA	ON
01.10.2007 12:01:15	MS	MUSIC

Band Info - Deva Broadcast Ltd.

No	ID	Freq	Mode	Level	PI	PS	AF List
1	90	90.5 MHz	Stereo	57.0 dB $\mu\text{V}$	8362	NISSAN	1A, 103.9
2	109	91.1 MHz	Stereo	57.0 dB $\mu\text{V}$	8342	BURGAS	5A, 91.1, 105.4, 96.4, 89.3, 1...
3	198	94.1 MHz	Stereo	53.6 dB $\mu\text{V}$	8371	800 42N	7B, 94.1, 94.1, 94.6, 94.1, 94...
4	218	94.9 MHz	Stereo	49.0 dB $\mu\text{V}$	8330	VESELINA	7A, 94.8, 91.2, 97.7, 91.4, 95...
5	253	96.0 MHz	Mono	35.6 dB $\mu\text{V}$			Not Transmitted or Unknown
6	273	96.7 MHz	Stereo	37.5 dB $\mu\text{V}$			Not Transmitted or Unknown
7	366	99.9 MHz	Stereo	43.8 dB $\mu\text{V}$	8347	VERO	Not Transmitted or Unknown
8	421	101.8 MHz	Stereo	40.0 dB $\mu\text{V}$	8421	NJOY	Not Transmitted or Unknown
9	480	103.9 MHz	Stereo	47.1 dB $\mu\text{V}$	8032	0 TV-CHA	1A, 103.9
10	497	104.5 MHz	Stereo	59.2 dB $\mu\text{V}$	824D	DARIK	5A, 91.0, 100.6, 105.0, 105.4...
11	516	105.1 MHz	Stereo	39.9 dB $\mu\text{V}$	8161	Z-RO	Not Transmitted or Unknown
12	557	106.5 MHz	Stereo	37.7 dB $\mu\text{V}$	8041	YUZEN	Not Transmitted or Unknown
13	574	107.1 MHz	Stereo	40.0 dB $\mu\text{V}$	8218	BURGAS	3A, 105.7, 89.7, 105.6



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