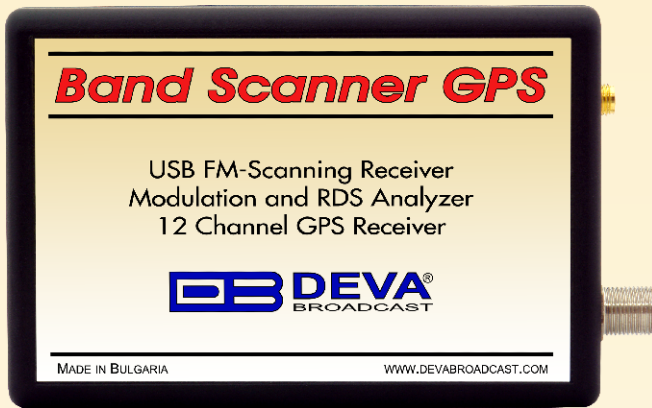
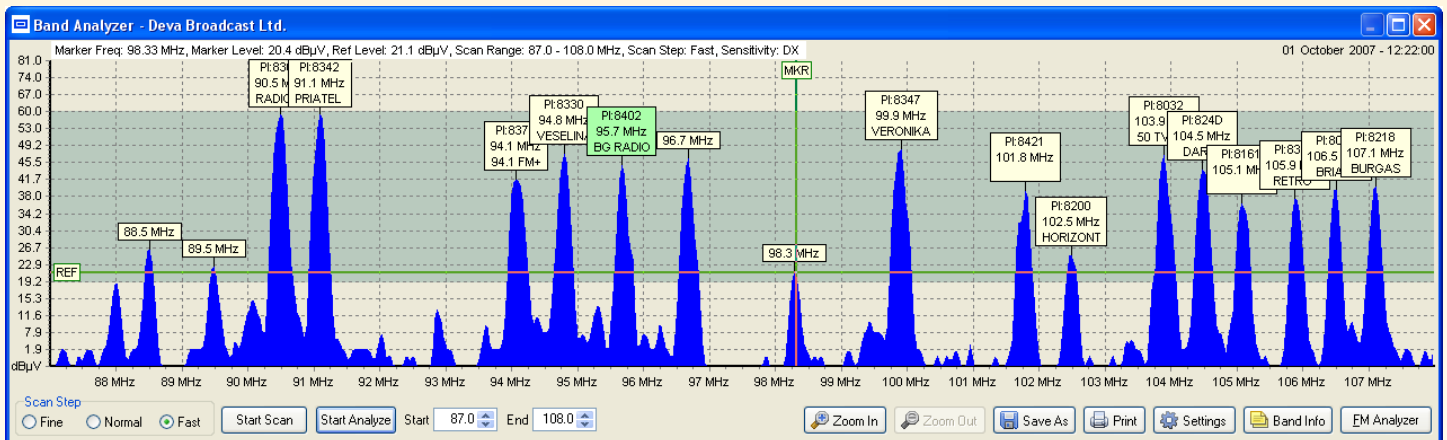


FM BAND SPECTRUM AND MODULATION ANALYZER RDS/RBDS DECODER-READER WITH BUILT-IN GPS RECEIVER



"Band Scanner GPS" is a tool to evaluate FM broadcast band congestion and to log station identification parameters. "Band Scanner GPS" is a Google Earth compatible tool for visualization of collected FM Radio measurements. When running any campaign with the "Band Scanner GPS", results will be saved in a Log file. "Band Scanner GPS" can then convert this file into KMZ format and view the results in Google Earth. The Log file can be exported also as transitional format for future analyze or to keep it in record. The "Band Scanner GPS" 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

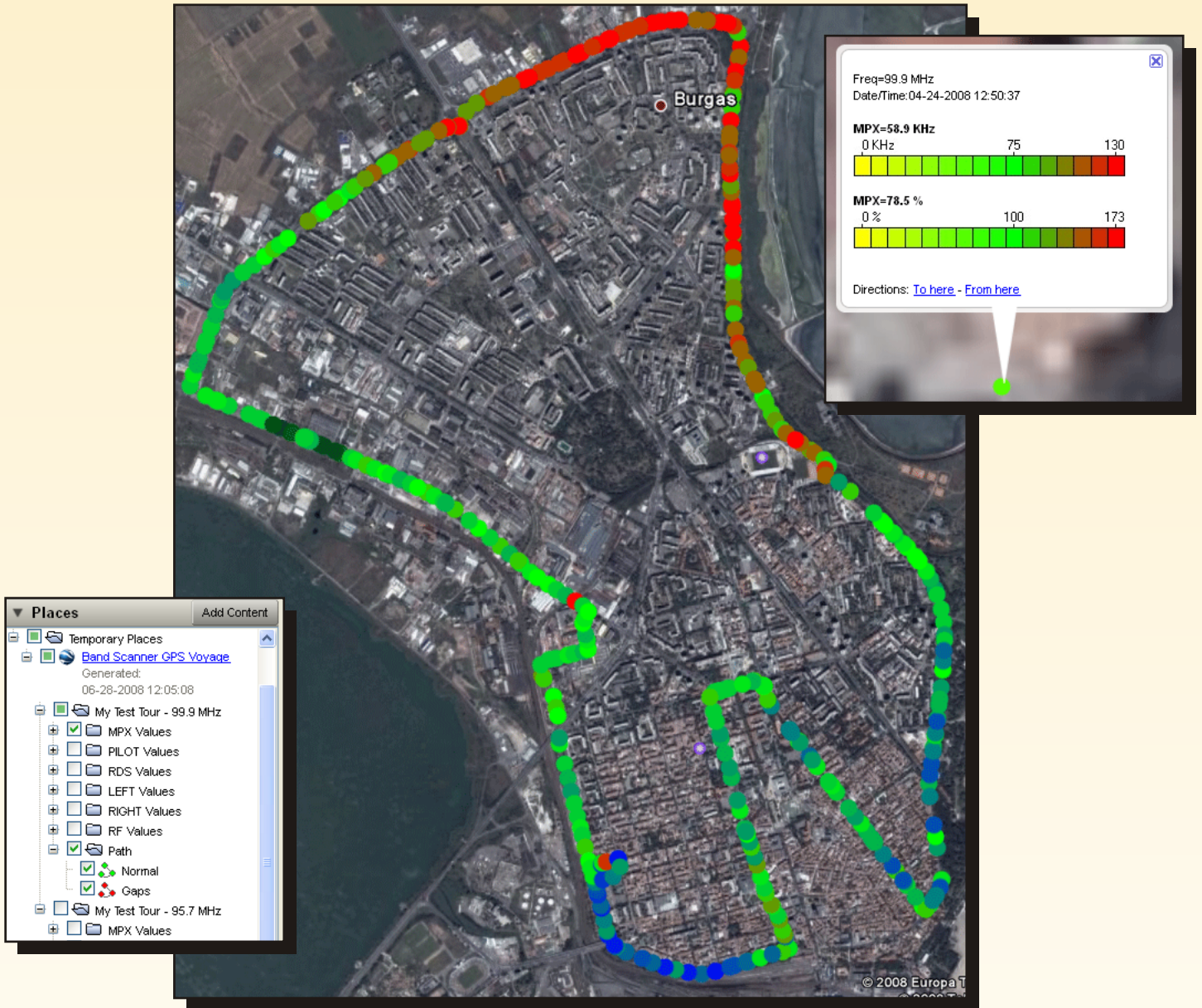
FM band, logging every carrier and generating a spectrum display of carrier level vs. frequency. It then analyzes each carrier and creates a station list. Stations with an RDS presence are further refined to show all the radio data groups being transmitted. Its interface is like a portable radio: It 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.



FEATURES:

- FM Band Spectrum analyzer
- Built-in Stereo decoder
- MPX, PILOT & RDS deviation meters
- LEFT and RIGHT level meters
- Built-in 12-channels GPS Receiver
- Visualisation in Google Earth
- Auto search tuning
- Headphones audio output
- FM / RDS / RBDS Data Logger

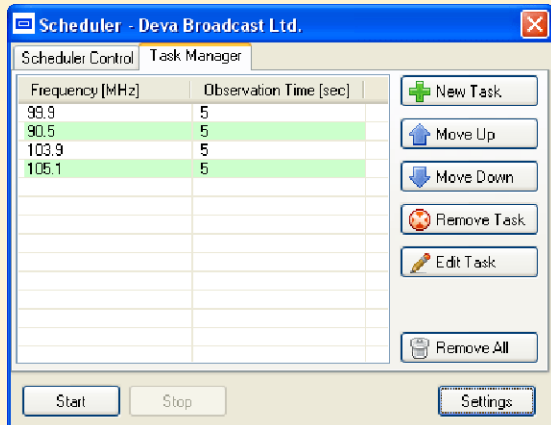
- RDS/RBDS Groups Detector & Analyzer
- RDS/RBDS stream BER meter
- Pocket size USB powered box
- Full feature RDS and RBDS decoder
- View playlists of the competitive stations
- Saving and exporting the playlists to CSV file
- Compare the signal strength to competitors
- Tracking all the histories saved in the RDS Data Log
- TCP/IP Remote management and control via Internet
- Remote audio listening and logging via Internet



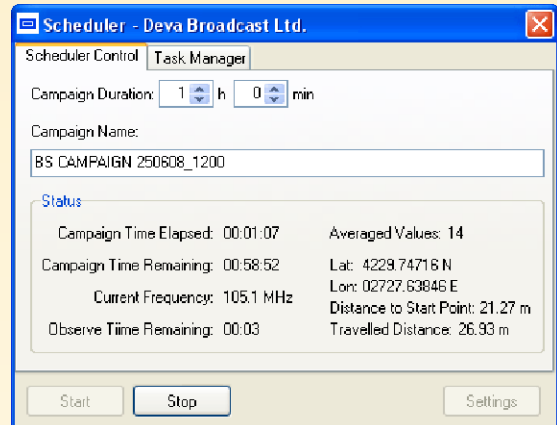
Google Earth is a geographic browser - a powerful tool for viewing, creating and sharing interactive files containing highly visual location-specific information. You can open KMZ files, generated by "Band Scanner GPS" in Google Earth. My Places folder contains a number of points of interest already marked on the earth for you to explore. To view them, expand the folder and go through the entries. You can view tracks that occurred within a specific time period and visually follow these tracks. As with other documents, you can create links or references to KMZ files for easy access. If your KMZ file is stored on a network or the Web, you can access it from any computer anywhere in the same way you would open a saved KMZ file on your local computer.

Collecting FM Data Has Never Been Easier!

1 Add the Stations



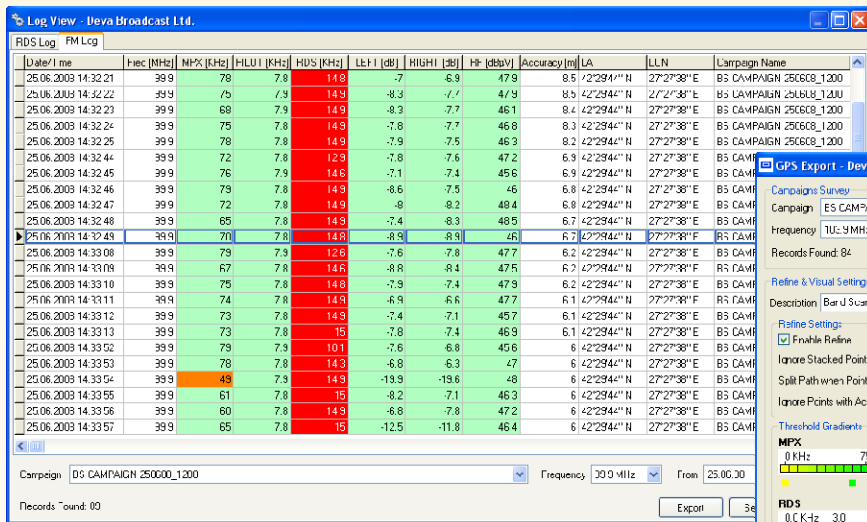
2 Start Schedule



3 Go Driving Around

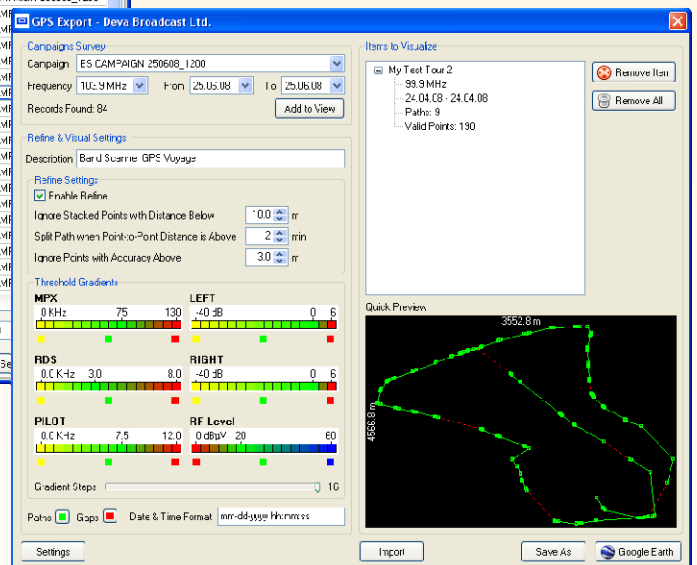


4 View the Data Collected



Date/Time	Freq [MHz]	MPX [kHz]	HLUT [kHz]	RDS [kHz]	LEFT [dB]	RIGHT [dB]	HP [dB]	Accuracy [m]	LA	LLN	Campaign Name
25.06.2008 14:32:21	39.9	78	7.8	14.9	-7	-8.9	47.9	8.5	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:22	39.9	75	7.9	14.9	-8.3	-7.7	47.9	8.5	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:23	39.9	68	7.9	14.9	-8.3	-7.7	46.1	8.4	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:24	39.9	75	7.8	14.9	-7.8	-7.7	46.8	8.3	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:25	39.9	78	7.8	14.9	-7.9	-7.5	45.3	8.2	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:44	39.9	72	7.8	14.9	-7.8	-7.6	47.2	6.9	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:45	39.9	76	7.9	14.6	-7.1	-7.4	45.6	6.9	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:46	39.9	79	7.8	14.9	-8.6	-7.5	46	6.8	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:47	39.9	72	7.8	14.9	-9	-8.2	49.4	6.8	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:48	39.9	65	7.8	14.9	-7.4	-8.3	48.5	6.7	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:32:49	39.9	70	7.8	14.8	-8.9	-8.9	46	6.2	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:08	39.9	79	7.9	12.6	-7.6	-7.8	47.7	6.2	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:09	39.9	67	7.8	14.6	-8.8	-8.4	47.5	6.2	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:10	39.9	75	7.8	14.8	-7.9	-7.4	47.9	6.2	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:11	39.9	74	7.8	14.9	-6.9	4.6	47.7	6.1	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:12	39.9	73	7.8	14.9	-7.4	-7.1	45.7	6.1	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:13	39.9	73	7.8	15	-7.8	-7.4	46.9	6.1	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:52	39.9	78	7.8	14.3	-6.8	6.3	47	6	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:53	39.9	78	7.8	14.3	-6.8	6.3	47	6	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:54	39.9	48	7.9	14.9	-13.9	-13.6	48	6	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:55	39.9	61	7.8	15	-8.2	-7.1	46.3	6	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:56	39.9	60	7.8	14.9	-6.8	-7.8	47.2	6	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200
25.06.2008 14:33:57	39.9	65	7.8	15	-12.5	-11.8	46.4	6	42.2944°N	27.2738°E	BS CAMPAIGN 250608_1200

5 Show or Share the Results



SPECIFICATIONS:

FM receiver
 FM frequency 87.0 - 108.0 MHz
 Strong fields AGC
 RF level evaluation +/- 4dB from 20°C to 30°C
 Dynamic 0 to 84dBµV
 Attenuator 6dB built-in
 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 +/- 5KHz, +/- 2KHz typ
 Accuracy of audio +/- 5%
 Accuracy of sub-carrier +/-10% typ. not guaranteed

FM Antenna input
 Connector 'F' on rear panel
 Impedance 75Ω

GPS receiver
 Number of channels 12
 Antenna Pre-amplified, magnetic
 Connector SMA, rear panel

User interface
 Indicators 4 LEDs
 Headphone output 1/8" (3.5mm) phone jack

Operating Conditions
 Temperature 10° and 40°C
 EMC immunity 6V/m

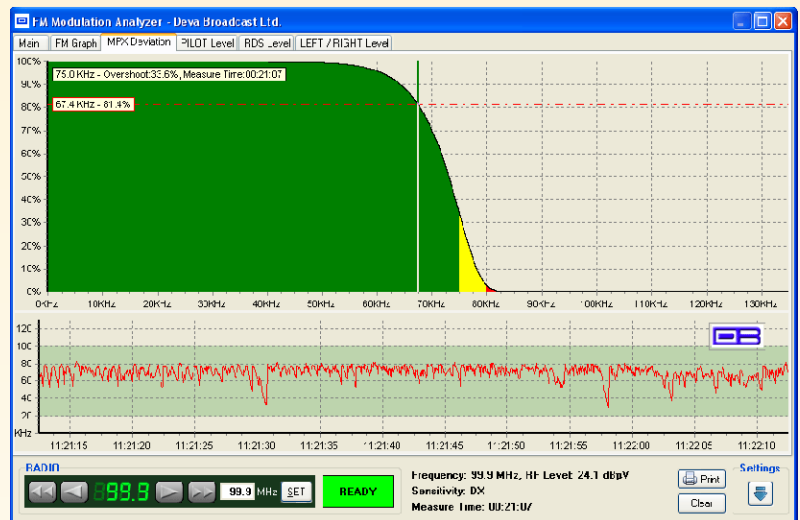
Power Requirement
 Power supply USB powered
 Connector B-type, front panel

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				RAW Log					
Date/Time	PV/CALL	RTA	Show/Hide	GRP	FREQ	BL0	BL1	BL2	BL3
01.10.2007 12:01:44	824D	DARIK	NEWS MUSIC SPORT WwW. DARIK.NET	2A	104.5	824D	202B	2020	2020
01.10.2007 12:04:47	824D		STEREOPHONICS - IT MEANS NOTHING	2A	104.5	824D	202C	2020	2020
01.10.2007 12:07:45	824D		SUGABABES - ABOUT YOU NOW	2A	104.5	824D	202D	2020	2020
01.10.2007 12:10:40	824D		30 SECONDS TO MARS - THE KILL	2A	104.5	824D	202A	5420	2020
01.10.2007 12:13:50	824D		FOO FIGHTERS - THE PRETENDER	0A	104.5	824D	0038	5523	2042
01.10.2007 12:16:53	824D		ARMAND VAN HELDEN - I WANT YOUR SOUL	2A	104.5	824D	2023	5753	204D
01.10.2007 12:19:46	824D		50 CENT FEAT. JUSTIN TIMBERLAKE & TIMBALAND	2A	104.5	824D	2026	5254	2057
01.10.2007 12:22:44	824D		THE PIGEON DETECTIVES - TAKE HER BACK	2A	104.5	824D	2027	5757	2K2D
01.10.2007 12:25:43	824D		THE HOOSIERS - GOODBYE MR A	0A	104.5	824D	003A	B306	4741
01.10.2007 12:28:39	824D		THE WHITE STRIPES - YOU DON'T KNOW WHAT LD	2A	104.5	824D	2024	5553	4943
01.10.2007 12:28:39	824D			2A	104.5	824D	2029	4B2E	4845
01.10.2007 12:28:39	824D			2A	104.5	824D	2025	2053	504F
01.10.2007 12:28:39	824D			2A	104.5	824D	2028	4441	5249
01.10.2007 12:28:39	824D			0A	104.5	824D	003F	CD0C	5320
01.10.2007 12:28:39	824D			0A	104.5	824D	0039	83AF	5552
01.10.2007 12:28:39	824D			2A	104.5	824D	202B	2020	2020
01.10.2007 12:28:39	824D			2A	104.5	824D	2021	494B	2020
01.10.2007 12:28:39	824D			0A	104.5	824D	003F	CD0C	2020
01.10.2007 12:28:39	824D			0A	104.5	824D	0038	5523	2042
01.10.2007 12:28:39	824D			2A	104.5	824D	2020	2044	4152
01.10.2007 12:28:39	824D			0A	104.5	824D	003A	B306	4741
01.10.2007 12:28:39	824D			2A	104.5	824D	2022	2020	4845
01.10.2007 12:28:39	824D			0A	104.5	824D	0039	83AF	5552
01.10.2007 12:28:39	824D			2A	104.5	824D	202A	5420	2020
01.10.2007 12:28:39	824D			0A	104.5	824D	003F	CD0C	2020
01.10.2007 12:28:39	824D			0A	104.5	824D	0038	5523	2044
01.10.2007 12:28:39	824D			2A	104.5	824D	2026	5254	2057
01.10.2007 12:28:39	824D			2A	104.5	824D	2027	5757	2K2D
01.10.2007 12:28:39	824D			0A	104.5	824D	0039	83AF	4152
01.10.2007 12:28:39	824D			0A	104.5	824D	003A	B306	494B
01.10.2007 12:28:39	824D			2A	104.5	824D	2029	2053	504F
01.10.2007 12:28:39	824D			2A	104.5	824D	2025	2053	504F
01.10.2007 12:28:39	824D			2A	104.5	824D	2028	4441	5249
01.10.2007 12:28:39	824D			2A	104.5	824D	202D	2020	2020

Band Info - Deva Broadcast Ltd.

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



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