# *Quick User Guide*

# Radio Explorer

## Mobile FM Radio Analyzer

---

### → BEFORE YOU USE THIS PRODUCT ←

In order to be able to enjoy all the benefits of owning your new DEVA product, please verify first that the latest software and firmware release were installed.

Visit **www.devabroadcast.com/downloads** for the most recent software and firmware downloads, prior the installation.

---

DEVA Broadcast Limited is an ISO 9001:2015 / ISO 14001 / ISO 45001 certified company.

This Quick user guide will make the installation of the Radio Explorer quick and easy. Follow these steps to simplify the process and save yourself extra time and effort. **For more information about the Safety precautions and the Operating environment recommendations please refer to the User Manual.**

**STEP 1**     **Device Connection**

1. Connect the supplied combined FM and GPS Antenna to the BNC and SMA connector, placed on the rear panel of the device;
2. For observation of the MPX signal connect the Composite Input to the BNC connector placed on the rear panel of the device;
3. By using the supplied Power adapter or the Car Cigarette Lighter adapter, connect Radio Explorer to the AC Power;
4. Configure the desired operating mode - Stand-Alone, Stand-Alone -Campaign Survey, Mass-Storage - Campaign Download/Evaluation, PC Controlled Mode (*For more information refer to* **Step 5**).

**STEP 2**     **GPS Antenna Installation**

Select a suitable location for installation that allows routing of the antenna cable to the Radio Explorer and also provides a clear view of the sky for a good satellite reception.

**NOTE:** Make sure that you have routed the cable in such a manner that would prevent pinching the cable by doors, windows or trunk lids when opened or closed.

**STEP 3**     **Device Manager Installation**

In order to establish communication with Radio Explorer, you have to install **"Radio Explorer Software"**. We recommend you to install the software before connecting the device to the computer.
1. Use the Installation file which can be found on the supplied CD or downloaded from www.devabroadcast.com/downloads;
2. Find **"Radio Explorer"** folder and double click on the installation file to launch the *Wizard*;
3. Accept the default recommendations and click **"Next>"** in the end of each step;
4. When asked to place an icon on the computer's *Desktop*, click on the check boxes;
5. Finally, select NOT to launch the program;
6. Close the software installation utility;
7. A shortcut to the Software will appear on the desktop of your computer.

**STEP 4**     **USB Port Installation**

Once the software is installed on the computer, a special USB port driver must also be installed in order for the Radio Explorer to be accessible through the front-panel USB port.

Unless you have deselected the *"Install drivers automatically"* option from the installation wizard, or something has gone wrong during the installation process, the USB port drivers should be installed automatically on your computer.

If the USB drivers are not installed or a problem has occurred, the led light labeled *"ACTIVE"*, placed on the front panel of the device, will start to blink. In that case, we recommend you to deinstall the software and repeat **Step 3**.

**NOTE:** If the USB driver is not installed already on your computer, please, refer to the complete **User Manual, page 32.** Administrator rights might be needed in order for the USB drivers to be installed.

**STEP 5** | **Operating Modes**

The FM Explorer is a multifunctional, easy to use tool, designed to evaluate FM broadcast band congestion and to measure and store all important radio broadcast parameters in a Log file. This is a stand-alone solution for running surveys - no additional tools are needed. You can setup for observation up to 50 preselected channels.

The Radio Explorer utilizes four modes of operation. We recommend choosing the proper operating mode before the observation of the signal is commenced.

**STEP 5.1** | **Stand-Alone**

This mode is used for on-field configuration and observation. Use the front panel Navigational Menu and LCD display to configure the Radio Explorer or to observe a specific station and GPS information.

**STEP 5.2** | **Stand-Alone Campaign Survey**

This mode is used for running Campaign Surveys. It is necessary that the Campaign Channels and supplemental Radio Explorer settings to be pre-configured before starting a campaign. No additional adjustments or settings will be required except in the occasion when the Stand-Alone Campaign Survey should be stopped.

**STEP 5.3** | **Mass-Storage Mode**

When the campaign is over the supplied free of charge Windows software can be used to convert the log files into KMZ format and visualize the stored data on Google Earth. Thus, you can "get the picture" of what really happens in the field and to outline the coverage of every station, compared to competitors'.

Such functionality is irreplaceable when you need to analyze and tune your broadcast equipment and antenna. The Log file can be also exported as a transitional format for future analysis or could be kept in record.

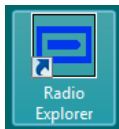In order to download the log files for all or specific Campaign, follow the steps listed below:

1.  Turn off the Radio Explorer;
2.  By using the supplied cable, connect the front panel USB to the PC;
3.  The unit will be recognized as a mass-storage device/removable disk (usually 'RAD_EXP (D:)');
4.  Copy the log files or use them directly from the device storage (For further information refer to the complete *User manual, page 95 - "Measurements Visualization in Google Earth"*).

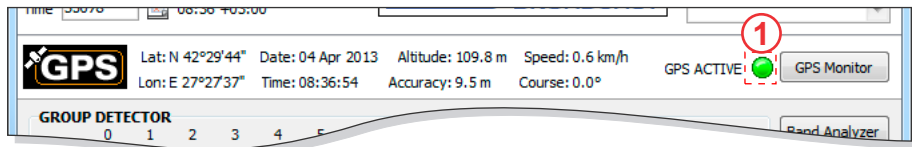**STEP 5.4** | **PC-Controlled Mode**

This mode allows access to Radio Explorer via PC-driven software. Turn on the device and connect the front panel USB connector to the PC using the supplied cable. It is necessary to install the "Radio Explorer Software" and the USB Port drivers before connecting the unit to the computer (For further information refer to **Step 3** & **Step 4**).

This is the recommended operating mode for stationary FM observation. The usage of the software guarantees you numerous visual tools available. This mode also allows the user to perform a campaign evaluation.

**NOTE:** When a Campaign Survey is in progress, the PC-Controlled mode will not be initiated until the Campaign ends.

After connecting Radio Explorer to the USB port of any Windows based PC, where the software is already installed, the product is ready to be used and does not require any additional adjustments or settings.
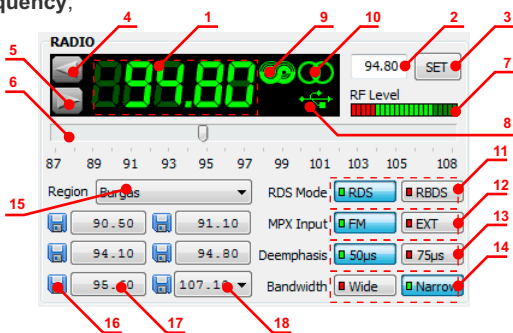
**STEP 7** — GPS Monitor



Here are visualized all mandatory GPS parameters - Latitude, Longitude, Date, Time, Altitude, Accuracy, Speed and Course. The green indicator (1) will blink constantly while the GPS Receiver is activated. The GPS Receiver is turned ON by default.

Upon switching on the Radio Explorer, *Brief View* will indicate that the GPS Receiver is "*Acquiring satellites*". This process will take about 5 minutes. Bad weather or/and improper GPS antenna position may extend the Acquiring time.

**STEP 8** — FM Tuner, Modes and Presets

1. **Frequency Indicator** – Shows the working frequency of the unit;
2. **Working frequency entering cell**;
3. **The set button** will adjust the unit to the frequency defined in cell [2];
4./5. **UP** and **DOWN** buttons for a**djusting the tuner's frequency**;
6. **Slider for manual adjustment of the frequency**;
7. **Field Strength Indicator**;
8. **USB connection indicator**;
9. **RDS Signal Presence**;
10. **Stereo Signal Presence**;
11. **RDS/RBDS Mode Selector**;
12. **MPX INPUT Signal Selector** – FM (Antenna In) or EXT (MPX/RDS In);
13. **Deemphasis Selector** for the Demodulator - 50µs or 75µs;
14. **Bandwidth** – Wide or Narrow;
15. **Region Selector**;
16. **Quick Preset Save** buttons – By applying this option you can assign easy for access memory presets;



17. **Quick Preset Recall** buttons – Intended to serve as a quick access to favorite stations, preset button needs no more than a click;
18. **Quick Preset Recall List** – The first 5 frequencies are arranged under the fast recall buttons.

*Please refer to the User manual for detailed information on how to configure and explore your device.*