Quick User Guide

Radio Explorer II

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 II 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 FM and GPS Antennas to the BNC and SMA connectors, placed on the rear panel of the device;
2. Select a suitable location for installation of the GPS Antenna that would allow routing of the antenna cable to the Radio Explorer II and also would provide a clear view of the sky for a good satellite reception;
3. By using the supplied Car Cigarette Lighter adapter, connect Radio Explorer II to the Car Cigarette Lighter;
4. Configure the desired operating mode – Logger, PI/CALL Campaign. (*For more information refer to* **Step 5 and Step 6**).

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

STEP 2 — — — — — — — — — — — — — — — — **Configuration** — — — — — — — — — — —

Radio Explorer II can be configured in three methods, depending on the client's preferences:

1. **Through the very intuitive user interface** with OLED screen, front panel navigational and soft buttons ensures an easy usage of the device's build-in features;
2. **Through the built-in Web server** – you can use a standard web browser to monitor the status or to make some adjustments. iOS and Android devices are also supported;
3. **Through the supplied free of charge DEVA Device Manager Software** – the easy-to-use interface allows quick and easy connection to the device. Aimed at facilitating the use of our products, DEVA Device Manager Software is free of charge.
   For more information about the Front panel navigational menu, please refer to the User Manual which can be found on www.devabroadcast.com/downloads

STEP 3 — — — — — — — — — — — — — — — — **WEB Interface** — — — — — — — — — — —

A standard web browser can be used to monitor Radio Explorer II's status or to make some adjustments. There are two options for access to the WEB Interface of Radio Explorer II: through manual identification of the IP address of the device, and alternatively through the Network discovery option. (*For Windows 7 users only*).

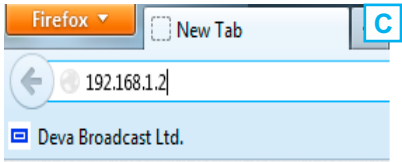**STEP 3.1** — — — — — — — — — — — — — — **Manual IP Address Identification** — — — — — —

Connect the device to a local network or to the Internet by a LAN cable. Through the Front panel navigational menu pressing the "OK" button will enable you to enter the device main menu.

Using the "Right" navigational button find the "Status" section located at the end of the Menu **(A)**.Press the "OK" Button to enter the "Status Section" and then press the "DOWN" button.

B

This operation will visualize the screen **(B)** containing information about the IP Address of the device.

C

Open a new WEB Browser and enter the device IP address in the address field then press "Enter" **(C)**.

A window that requires username and password will appear. (*For more information refer to* **Step 3.3**)

NOTE: Due to the inability of some WEB Browsers to read the IP address format displayed on the screen of the device, the numbers included in the IP Address must be written without the leading zeros. For example: *192.168.020.095* must be written as *192.168.20.95*

STEP 3.2 | **Network discovery for Windows 7**

Network discovery is a network setting that defines whether your computer can see (find) other computers and devices on the network and whether other computers on the network can see your computer. By default, Windows Firewall blocks network discovery but you can enable it.
1. Open Advanced sharing settings by clicking the Start button, and then on "Control Panel". In the search box, type "network", click "Network and Sharing Center", and then, in the left pane click "Change advanced sharing settings";
2. Select your current network profile;
3. Click **Turn on network discovery**, and then click Save changes. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.
4. To access the device open a new Explorer bar and click on **Network**. If you have successfully enabled the network discovery option, the device will be displayed. Double click on **the device's icon** will open a new WEB browser window requiring username and password.
   (*For more information refer to* **Step 3.3**)

NOTE: If you have already enabled this function on your computer just open a new Explorer bar and click on **Network**. The device must be displayed. If not follow the instructions from **Step 3.1** or **Step 3.2**
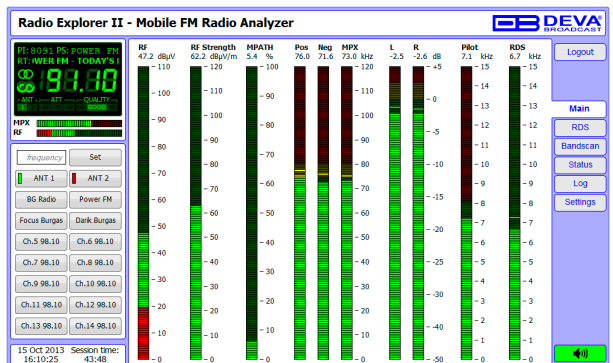

STEP 3.3 | **WEB Access**

Radio Explorer II provides you with a protected access to the device settings. You can choose between two types of log in:

1. As an *ADMINISTRATOR* – which will give you full control over the settings (username: *admin*, password: *pass*);

2. As a *USER* – this type of log-in will allow you to monitor the device and choose different stations without applying settings (username: *user*, password: *pass*).

In order to make the necessary adjustments to the device, please log in as ADMINISTRATOR.

A successful log in the Control Window will look like this:

STEP 4   **DEVA Device Manager Software**

Radio Explorer II is a Google Earth compatible tool for visualization of the collected FM Radio Measurements. Once a campaign is finalized, using the supplied DEVA Device Manager the collected files could be converted into KMZ format automatically and the results visualized in Google Earth.

Aimed at facilitating the use of our products, DEVA Device Manager Software is free of charge. The installation process is fairly simple and identical for all supported by the software devices. Just use the Installation file which can be downloaded from **www.devabroadcast.com/downloads** , launch the Wizard and accept the default recommendations.

In order to avail yourself of all provided by the software advantages, please refer to DEVA Device Manager Software's user manual which could also be found on our website.

STEP 5   **Operating Modes**

The Radio Explorer II is a multi functional, 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 II utilizes two modes of operation. We recommend choosing the proper operating mode before the observation of the signal is commenced.

1. **Logger Mode** - This mode is used for on-field configuration and observation. Radio Explorer II can be set to measure automatically one or multiple preselected frequencies (Up to 50);
2. **PI/CALL Campaign** - Up to 10 stations can be chosen. Radio Explorer II will automatically detect the used frequency. While the campaign is running, the chosen stations will be monitored; Radio Explorer II will automatically switch over between the variable frequencies during movement - just as the car radio of your listeners.

It is necessary that the campaign frequencies/channels and supplemental Radio Explorer II settings be pre configured before starting a campaign. No additional adjustments or settings will be required, except for the occasion when the campaign is to be stopped.

STEP 6   **Operating Modes Settings**

Each of the operating modes could be set through the above explained configuration methods. Below are described the settings that should be applied in order for a PI Campaign and Logger Mode to be realized.

Prior to the set-up procedure, you will have to note that the campaigns (PI and Logger) cannot be performed simultaneously. The PI campaign is with higher priority, thus in order for a Logger mode campaign to be performed you will have to make sure that the PI Campaign is disabled.

NOTE: In order for a Campaign to be commenced the device should be inactive for the specified time. During the campaign the front panel navigational menu, WEB interface or SNMP should not be used.

STEP 6.1   **Set-up via front panel menu**

In order to set up a campaign via the front panel menu, the following steps should be completed:

1. Press the "OK" button to enter the Main menu > section 'Settings' and again press "OK";
2. Then select 'PI Campaign' > 'PI Channel I';
3. Specify name of the PI and for 'Active' - select Antenna 1;
4. Change the Acquisition time as per your preferences. We recommend setting it to 10 seconds;
5. Steps from 2 to 4 should be applied for each of the channels to be monitored. Once all PI Channels are set you can proceed to the last step;

6. Go to Settings > PI Campaign > PI Campaign Mode and as a value set 10 seconds. In order for a Campaign to be commenced the device should be inactive for the specified time.

The settings for Logger mode are identical with the PI Campaign settings, except for the menu path which is Main menu > Settings > Logger > ...

NOTE: The front panel inactivity time should expire prior the PI Campaign countdown to begin.

STEP 6.2 | **Set-up via the WEB Interface**

Prior to applying any settings, a connection to the device via the WEB Interface should be made.

PI/CALL Campaign

1. Open the main application window and go to "Settings" > "PI Camp" tab;
2. Set the Campaign's start time delay from the "Campaign" box placed at the top of the window;
3. Set the following parameters for each of the stations you would like to observe – PI/CALL, Name of the station and Acquisition time (Radio Explorer II will automatically calculate the PI to CALL and vice versa);
4. In order for a station to be included in the campaign, the "Ant1" button should be selected; to exclude a station from the campaign the "Disable" button should be selected;

5. Steps from 2 to 4 should be applied for each of the channels to be monitored. Once all PI Channels are set you can proceed to the last step;
6. Press the "Save" button to save the applied changes;
7. Disconnect the device from the local network connection and wait for the campaign to be commenced

NOTE: Buttons "Ch.1 - Ch,5" and "Ch.6 - Ch.10" are used for easy navigation through the list of all monitored stations.
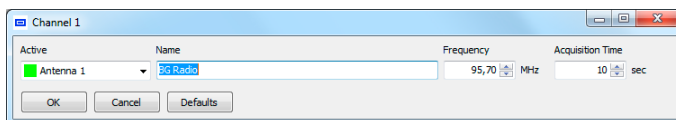
Logger Mode

1. Open the main application window and go to "Settings" > "Logger" tab;
2. Set the Campaign's start time delay from the "Logger" box placed at the top of the window;
3. Set the Name and Frequency parameters for each of the channels;
4. In order for a station to be included in the campaign, the "Ant1" button should be selected; to exclude a station from the campaign the "Disable" button should be selected;

5. Steps from 2 to 4 should be applied for each of the channels to be monitored. Once all channels are set you can proceed to the last step;
6. Press the "Save" button to save the applied changes;
7. Disconnect the device from the local network connection and wait for the campaign to be commenced

Below are the settings that should be applied in order for a PI Campaign or Logger to be realized. Prior to applying any settings, a connection to the device via the DEVA Device Manager Software should be made.
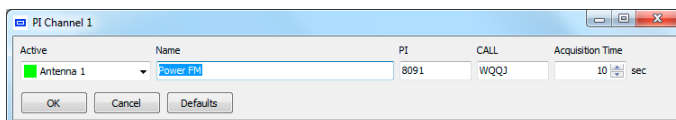
Logger Mode

1. Enter the device window and go to "Logger" tab;
2. Set the Logger mode start time delay via the 'Logger Mode' drop-down menu placed at the top left corner;
3. Click on one of the channels to set Name, Frequency parameters and acquisition time for each of the channels;

4. Change the Acquisition time as per your preferences. We recommend setting it to 10 seconds;
5. In order for a channel to be included in the campaign, "Antenna 1" should be selected from the "Active" drop-down menu. To exclude a station from the campaign select the "Disable" option;
6. Press the "OK" button to save the applied changes;
7. Steps from 2 to 6 should be applied for each of the channels to be monitored. Once all Channels are set you can proceed to the last step;
8. Disconnect the device from the local network connection and wait for the campaign to be commenced.

PI/CALL Campaign

1. Enter the device window and go to "PI Campaign" tab;
2. Set the PI Campaign start time delay via the 'PI Campaign Mode' drop-down menu placed at the top left corner;
3. Click on a PI Channel and set the following parameters for each of the stations you would like to observe – PI/CALL, Name of the station and Acquisition time (we recommend setting it to 10 seconds);

4. In order for a channel to be included in the campaign, "Antenna 1" should be selected from the "Active" drop-down menu. To exclude a station from the campaign select the "Disable" option;
5. Press the "OK" button to save the applied changes;
6. Steps from 2 to 6 should be applied for each of the channels to be monitored. Once all PI Channels are set you can proceed to the last step;
7. Disconnect the device from the local network connection and wait for the campaign to be commenced.

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