

## *Quick User Guide*

# DB94-RX/SFN

## Compact MPX over IP Audio Decoder

### → **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](http://www.devabroadcast.com/downloads) for the most recent software and firmware downloads, prior the installation.

This Quick user guide will make the installation of **DB94-RX/SFN** quick and easy. Applying these principles, you can 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

### Connection

The DB94 series are provided with preliminary settled  $\mu$ PX licenses.

For normal operation it is necessary the device to be connected to a local network or Internet by cable with RJ-45 connector and to the power supply.

#### IMPORTANT:

It is not recommended the DB94-RX/SFN to be directly connected to the Internet. This may lead to unregulated access and/or problematic operation of the device. To ensure secure connection, we recommend the device to be installed behind a router with an active firewall.

## STEP 2

### Configuration

DB94-RX/SFN is controlled through a built-in WEB Server and a standard web browser can be used to monitor its status or to make some adjustments. To operate the device you need to know its IP Address. In case you are not aware of it use the "DEVA Ethernet Setup Tool" (**STEP 3**). Then open a new WEB Browser and enter the device IP address and port in the address field then press [Enter].

## STEP 3

### Network Discovery

#### DEVA ETHERNET SETUP TOOL

The DEVA Ethernet Setup Tool is designed to detect and configure networked DEVA products that lack front-panel IP configuration or UPnP support. It simplifies network setup by identifying the device's current IP address and allowing changes.

Once the device is connected to a local network or to the Internet by the applied LAN cable, download and install the DEVA Ethernet Setup Tool.

#### DOWNLOAD LATEST VERSION

The latest version of DEVA Ethernet Setup Software can be found on our website:

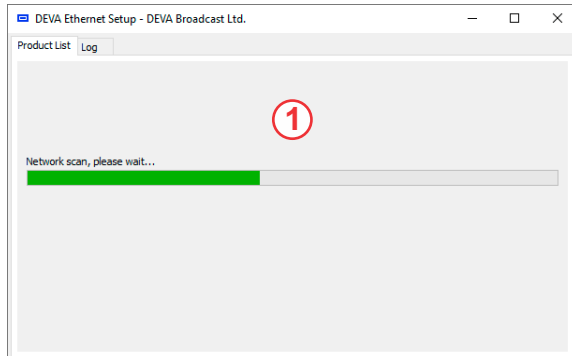
<http://www.devabroadcast.com/downloads>

**IMPORTANT:** This software requires the installation of third-party software called WinPcap (<https://winpcap.org>) if it is not installed already.

#### USING THE TOOL

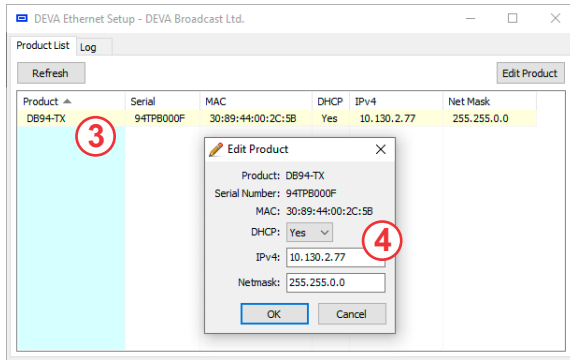
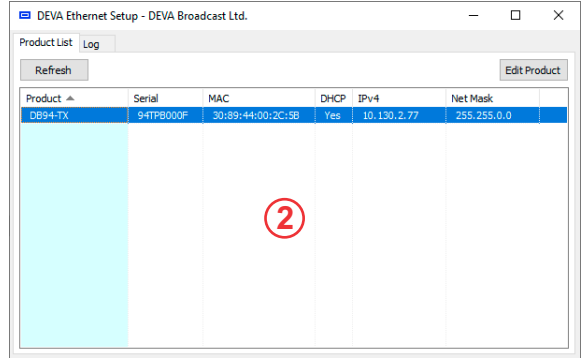
In order for the tool to be able to find the device during the network scan, please make sure that the unit is connected to the power supply chain and Ethernet network. Then, open the DEVA Ethernet Setup Tool and follow the instructions listed below:

1. Once the program window opens, an automatic network scan process will be started.

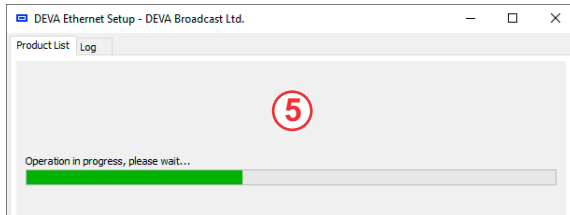


2. Once the network scanning process is completed, the collected data will be depicted in section Product List:

3. To change the parameters, select the product and press [Edit Product]. A new window will appear:



4. Enter the needed changes and press [OK]. Make sure to write down the IP address as it will be needed in order for the device to be accessed via WEB or Software interfaces.



5. A new network scan process will be performed automatically to confirm that the applied settings are accepted.

## STEP 4

## Access

DB94-RX/SFN provides you with a protected access to the device settings. To make the necessary adjustments to the device, please log in as an ADMINISTRATOR. The default values being:

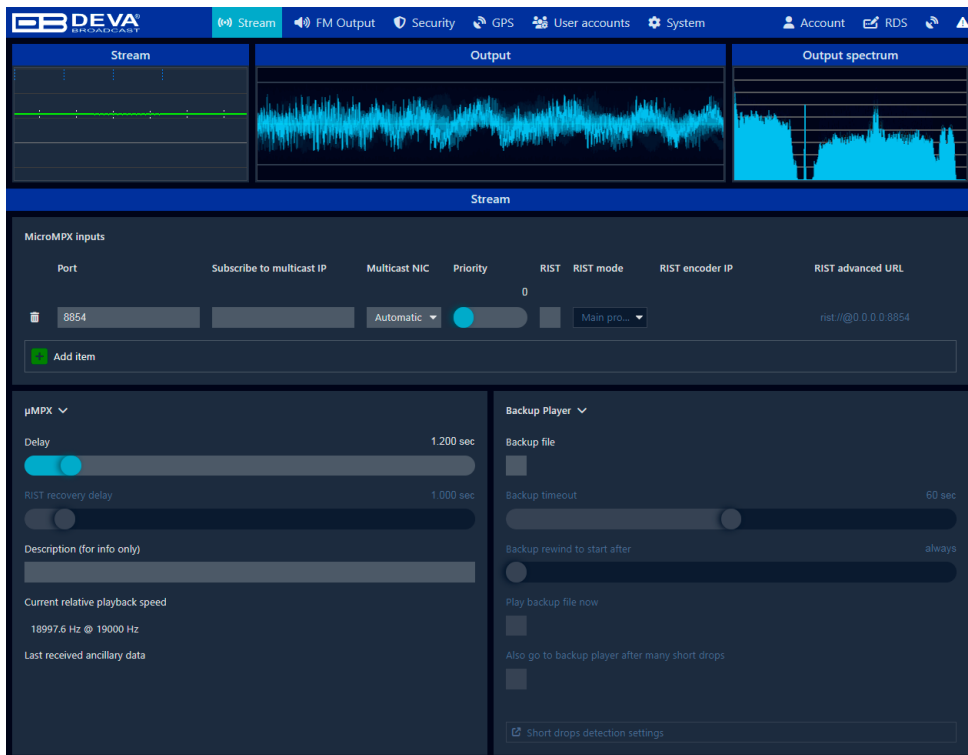
- username: admin
- password: pass.



## STEP 5

## WEB Interface

A successful log-in in the WEB Interface will look like this:



## STEP 6

## Settings

Upon opening the WEB interface, the main Stream window will appear (depicted above). The page contains information on the MicroMPX Inputs as well as visual interpretation of the Stream, Output and Output spectrum.

You can prepare a file with emergency audio to be played in case you have a connection drop out.

The MicroMPX decoder expects a 192 kHz mono file that contains MPX data, normalized to 0 dB, in WAV or FLAC format. The file is transmitted as-is, so it needs to be pre-emphasized and it must contain stereo and RDS signals.

MPX files can be generated by recording the output of an FM processor (or even the received signal from a tuner that doesn't demodulate the MPX signal). Or you can use a program like Thimeo WatchCat (<https://www.thimeo.com/watchcat/>) to generate an MPX file from an audio file.

Backup player - Through this screen are applied all needed settings to the alternative sources.

The backup player will start only after Backup timeout time of no usable MicroMPX data elapses. If a few packets arrive and then the signal disappears again, it will continue the backup file playback where it left off, unless the backup player hasn't been used in Backup rewind to start after time. In that case it will start at the beginning. If you always want it to start at the beginning (for example if you have a loop of jingles as backup file), you can set that time to 0.

The screenshot displays the DEVA WEB Interface for configuring FM Output. The interface is divided into several sections:

- Stream:** A graph showing a steady green line, indicating a constant stream level.
- Output:** A large waveform graph showing the audio signal being transmitted.
- Output spectrum:** A graph showing the frequency spectrum of the output signal.
- FM Output:** A panel with the following settings:
  - Device ID: DB94: Analog IN (hw:0,0) (ALSA)
  - Volume (MPX level): 0.00 dB (100.0%)
  - FM Tilt correction: Correction enabled (checked), RC: +127,246  $\mu$ s
  - High frequency droppoff: High frequency droppoff (checked), RC: 4.817
- Test signals:** A panel with the following settings:
  - Generate test tone: (checkbox)
  - Time: (dropdown menu)
  - Frequency: 400.0 Hz
- Demodulated Output:** A panel with the following settings:
  - Demodulate output: (checkbox)
  - De-emphasis time: 50  $\mu$ s
  - Device ID: DB94: Phones OUT (hw:0,2) (ALSA)
  - Volume: 0.00 dB (100.0%)

FM Output and Demodulated output settings are applied in this section of the WEB Interface.

You can also generate a test tone. To enable the mode: Select the "Test tone Mode" to activate it. Then configure tone settings.

**Thank you for choosing DEVA!**

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