EMTx Config Android Application Manual

The EMTx Config Android application is used to configure the EMTx series of EM transmitters.

CHALLENGE ACCEPTED

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EMTx_CONFIG_5002			
Rev	**Date**	**By**	**Summary of change**
A00	09/08/22	EI	CR01104 Initial release.

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1. GENERAL DESCRIPTION

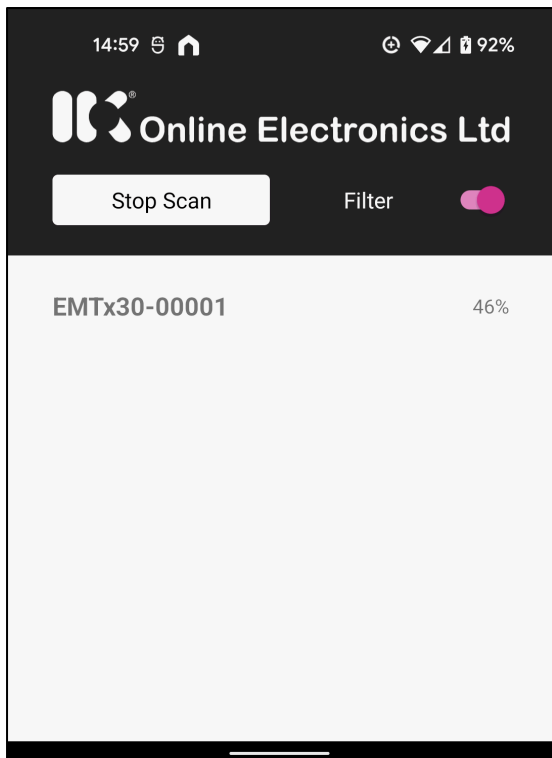The EMTx Config Android application is used to configure the EMTx series of EM transmitters.

1.1. INSTALLATION

The installation file for the application has typical filename EMTx_CONFIG_3002_C06 EMTx CONFIG ANDROID INSTALL.apk where "EMTx_CONFIG_3002_C06" represents the full application name and version and ".apk" is the standard Android Package Kit file format used by the Android operating system for distribution and installation of applications.

The typical size of the installation file is 5MB.

Simply save this file into any location on the host device and then using the host device find the file, tap on it and follow the instructions when prompted.

1.2. ESTABLISHING BLUETOOTH CONNECTION

Upon starting the application the screen shown will appear.

Start/Stop Scan – Starts or Stops a scan for nearby Bluetooth devices. A scan will remain active for approximately 60 seconds before being automatically stopped.

Filter – If enabled (as shown) will filter scan results to only show valid EMTx devices.

EMTx30-00001 46% - Example EMTx device showing model number (EMTx30), Serial Number (00001) and indicative Bluetooth signal strength (46%).
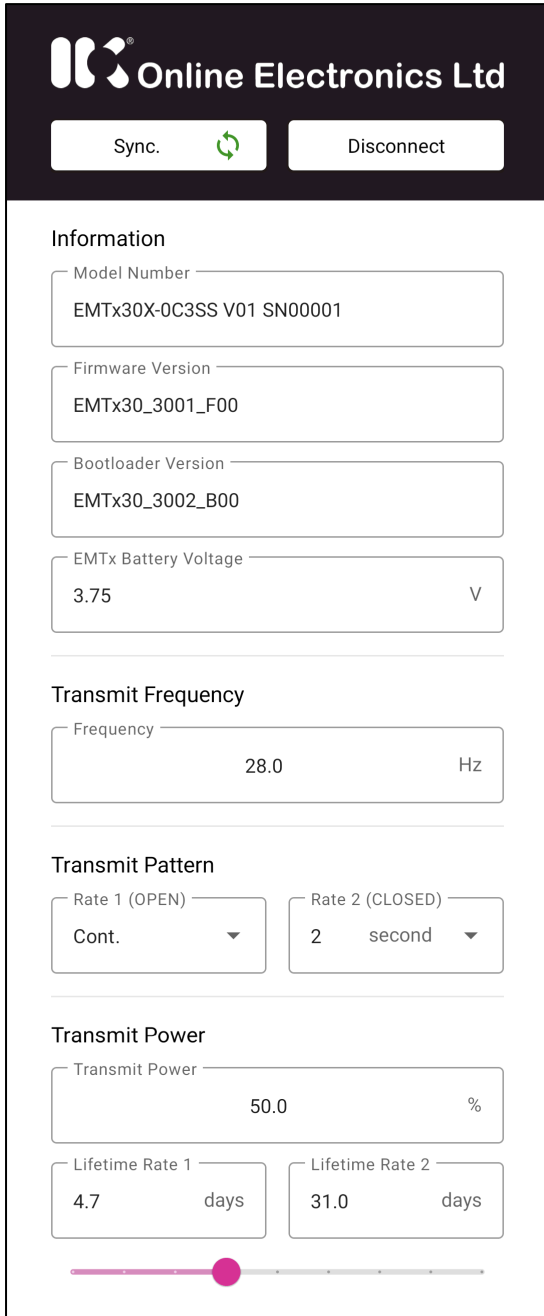
A connection between the EMTx unit and the EMTx application can be established by following the procedure below.

Note that the name and location of settings may vary by Android device. For more information contact your device manufacturer.

1. In the case of an EMTx30 or EMTx40 completely remove the PCB endcap to expose the Bluetooth antenna and maximise Bluetooth signal strength.

2. Keep the application host device and EMTx within 1m of each other throughout to maximise Bluetooth signal strength.

3. Turn off the EMTx as per the appropriate operating manual (typically achieved by loosening the bleedscrew or battery endcap).

4. Ensure Bluetooth is enabled on the host device. This setting can be found in the Quick Settings panel which is revealed by swiping down from the top of the device screen.

5. The Android operating system requires Location permissions in order to scan for and connect to Bluetooth devices. Ensure that the application has been allowed Location permissions (normally found under Settings> Apps> EMTx Config> Permissions> Location). In addition, some devices will also need Location services to be enabled (normally found under Settings> Location). The EMTx Config application does not use, record or report Location information.

6. Open the EMTx Config application.

7. Press Start Scan to start a scan for nearby Bluetooth devices. This scan will last approximately 60 seconds before being automatically stopped (indicated by "Stop Scan" resetting to "Start Scan").

8. Before the Bluetooth scan finishes turn on the EMTx as per the appropriate operating manual (typically achieved by tightening the bleedscrew or battery endcap). The EMTx device name should appear in the list of available devices on the application.

9. Within 10 seconds of turning on the EMTx select the desired device from the list.

10. It may take up to 10 seconds for the application to establish a connection with the EMTx. See 1.3 EMTx CONFIGURATION.

1.3. EMTx CONFIGURATION

Once a connection has been established as per 1.2 ESTABLISHING BLUETOOTH CONNECTION the screen shown will appear. All settings are shown as a scrollable list on the same screen. The black header is always visible at the top of the screen. Any settings not applicable to the connected EMTx will appear greyed out and not editable.

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Sync. ⟳   Disconnect

Information

Model Number
EMTx30X-0C3SS V01 SN00001

Firmware Version
EMTx30_3001_F00

Bootloader Version
EMTx30_3002_B00

EMTx Battery Voltage
3.75   V

Transmit Frequency

Frequency
28.0   Hz

Transmit Pattern

Rate 1 (OPEN)   Rate 2 (CLOSED)
Cont.   ▼   2   second   ▼

Transmit Power

Transmit Power
50.0   %

Lifetime Rate 1   Lifetime Rate 2
4.7   days   31.0   days

Sync. – Synchronises what is shown on the screen with the connected EMTx. If settings are synchronised then a ⟳ symbol will be shown otherwise a ⟳ symbol will be shown. To save settings to an EMTx always press Sync. before Disconnect. After pressing Sync. always confirm the settings are reported as expected.

Disconnect – Disconnects from the connected EMTx. To save settings to an EMTx always press Sync. before Disconnect.

Model Number – Full model number and serial number of connected EMTx. Not editable.

Firmware Version – Full firmware version and revision of connected EMTx. Not editable.

Bootloader Version – Full bootloader version and revision of connected EMTx. Not editable.

EMTx Battery Voltage – Current battery voltage reported by EMTx. Not editable.

Transmit Frequency – Transmission frequency. Tap to edit.

Rate 1 (OPEN) – Transmission rate if Dual Rate contacts open (default). Tap to edit.

Rate 2 (CLOSED) – Transmission rate if Dual Rate contacts closed. Tap to edit.

Transmit Power – Transmission power level. Use slider to edit.

Lifetime – Predicted lifetime at +5°C ambient for each transmit pattern. Note that these values will change depending on Frequency, Transmit Pattern and Transmit Power.

Activation Methods

Activation Delay
```
0                                          days
```

Mechanical Pressure Switch

Magnetic Activation

Saltwater Activation

Digital Pressure Switch (DPS)

DPS Type
```
Type
```

DPS Threshold
```
2.5                                         bar
```

Options

BWGP

ARGF

Log

10:48:11: Tx: 0x01 04 00 00 00 08 F1 CC

Activation Delay – Delays activation of the transmitter (from e.g. bleedscrew insertion) by the configured number of days. Configure as "0" to activate EMTx with no delay.

Mechanical Pressure Switch – Enables mechanical pressure switch activation (if available).

Magnetic Activation – Enables magnetic activation (if available).

Saltwater Activation – Enabled saltwater activation (if available).

Digital Pressure Switch – Enabled DPS (if available).

DPS Type – Defines DPS type (if available).

DPS Threshold – Defines DPS Threshold (if available).

BWGP – Enables Break Wire Gauge Plate functionality (if available).

ARGF – Enables Auto Resetting Gauging Finger functionality (if available).

Log – Displays log and debug information.