

Pyroterra Lighttoys
presents

FT Remote PRO

user guide



v1.4
(ENG)

Introduction

Dear customer, thanks for your purchase of the unique, advanced controlling device – FT Remote PRO from Pyroterra Lighttoys!

FT Remote PRO is designed from the ground up to offer a superior control of your Visual, FT and FT2 devices, easy integration with other industry protocols like DMX512 and OSC, music playback, remote control via a web browser or a mobile phone and much more.

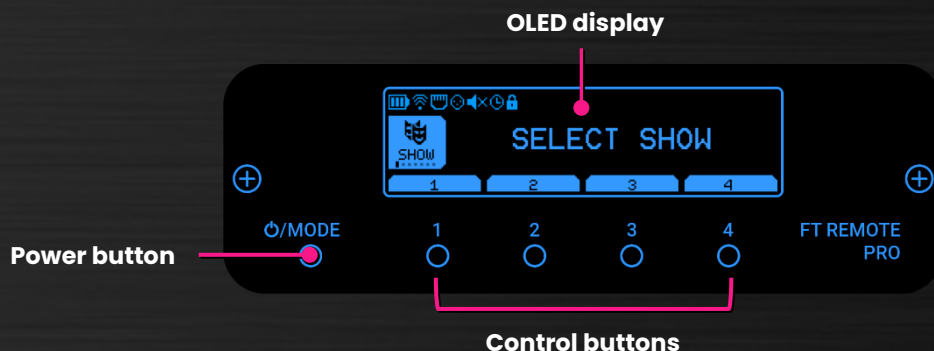
This guide will walk you through the functionality of the FT Remote PRO, so you can start using its advanced features as quickly as possible.

FT Remote PRO highlights

- MP3 audio playback
- Wi-Fi and Ethernet control
- Web server (simple control via a web browser interface)
- DMX512 support
- OSC support
- FT signal range increased up to 300 meters
- OLED display
- Li-ion battery powered
- USB-C fast charging
- PoE (Power over Ethernet)
- LtComposer software full integration

Interface

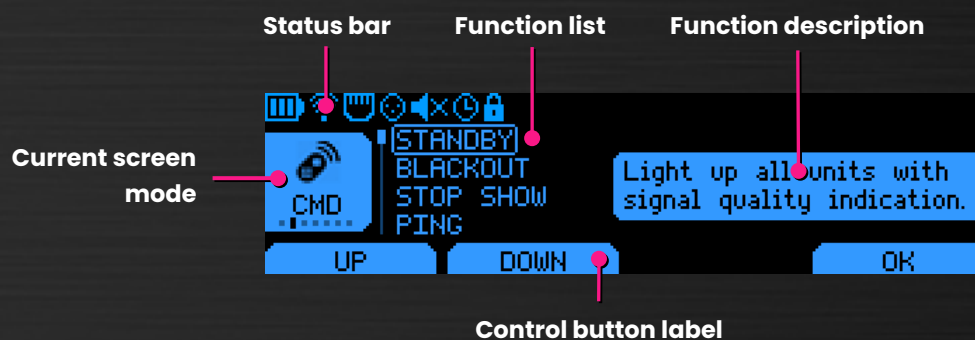
Front side



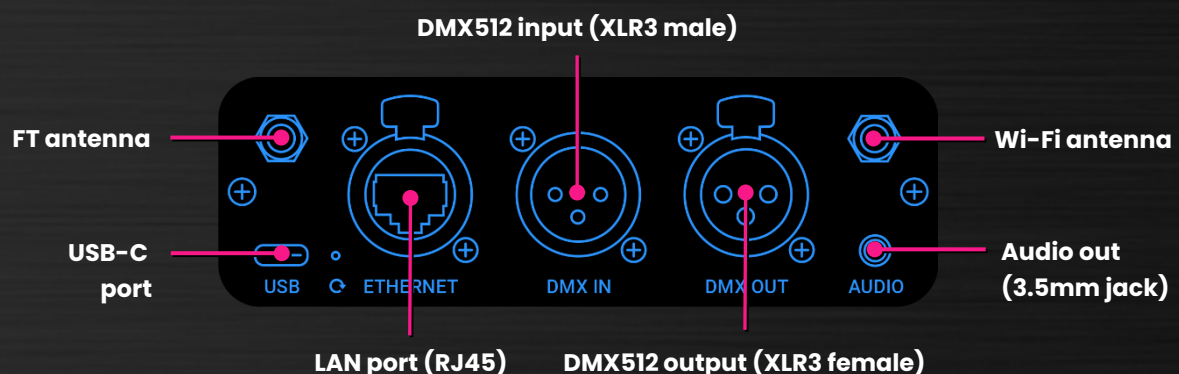
Power button – hold for 1 second to turn on the FT Remote PRO, hold for 1 second to turn off.

Control buttons – used to control the various features of the FT Remote PRO. The current functionality of the buttons is shown at the bottom of the display:

Display

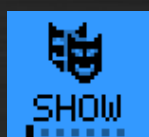


Rear side



Screen modes

The FT Remote PRO offers several different functions, which are logically grouped into 7 “**screen modes**”. Click the Power button to cycle through the available screen modes:



1. Show –used to start your uploaded FT light show sequences in memory banks 1-4, similarly to the standard FT remote controller.



2. Command – offers helpful FT commands: go to standby, blackout, ping, switch off all units.



3. Pairing – used to start a new pairing of units, to add units to an existing group or to switch the pairing mode.



4. WIFI – used to start and setup the Wi-Fi connection.



5. LAN – used to start and setup the ethernet (LAN) connection.



6. Music – useful to play (check) the MP3 audio files linked to the shows 1-4.



7. DMX – used to turn on DMX512 interface and setup the DMX address of the FT Remote PRO.

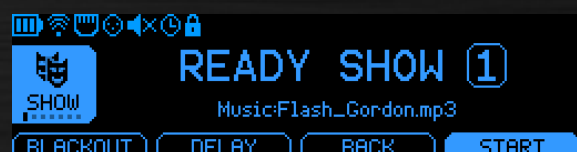
1. Show mode

The default screen of the FT Remote PRO is the **Show mode**, enabling you to start the show 1-4 on all your paired FT devices.



Press the control button **1-4** to select the show you want to start. On the next screen press the **START** button to immediately launch your show.

Alternatively, you can use this screen to send a command for all FT units to turn off their light output (press **BLACKOUT**), or set a delayed start of the show (press **DELAY**).



To return back to the original Show mode screen, press the **BACK** button.

Delayed start

When you press the **DELAY** button, a new screen appears, which enables you to configure a countdown timer that delays the show start, giving you some time for preparation before the show launches.



Use the buttons **+MIN** and **+SEC** to set the minutes and seconds of the countdown timer. Press the **START** button to active the delayed start.



*To increase the values faster, hold the button **+MIN** / **+SEC**. To reset the timer to 00:00, press and hold the **+MIN** and **+SEC** simultaneously.*

Running show

Once you start the selected show, the following screen will appear:



When the show is running, you can control the show brightness level (LED light intensity of units) and the audio volume of the MP3 track being played (if available).

Press the **STOP** button at any time to stop the running show.

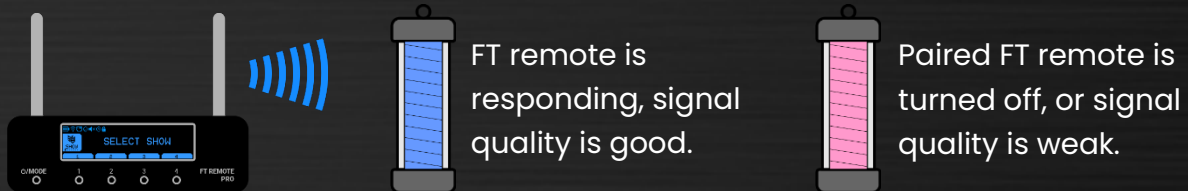
2. Command mode

Command mode screen contains useful functions for checking your FT devices status and preparing the FT devices for the show.



STANDBY

Select the **STANDBY** function to bring all FT paired units into the standby mode. The device LEDs will shine either in blue color, indicating strong signal and trouble-free response; or in pink color, indicating a weak signal or no response at all:



BLACKOUT

Select the **BLACKOUT** function to bring all FT paired units into the silent/blackout mode. In this mode the light output is turned off on all units, enabling you to start your programmed show discretely.

PING

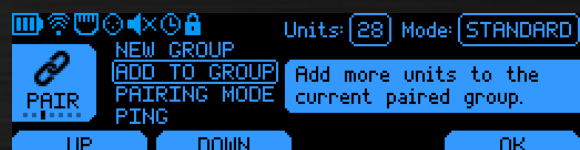
Select the **PING** function to momentarily flash the light output of all FT paired units in white color, checking if they are available and operational.

SWITCH OFF

Select the **SWITCH OFF** function to send a signal to turn off all FT paired units. This function is useful when you have finished the show and are packing the gear.

3. Pairing mode

Pairing mode screen is used to manage the currently controlled FT devices by the FT Remote PRO, a process also known as "pairing".



NEW GROUP

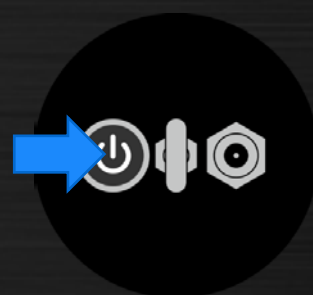
To pair a completely new set of devices, select the **NEW GROUP** option. After confirming with the **OK** button, a new screen will appear:



Prepare all devices you want to pair and make sure they are all turned off.

For each FT device, hold its power button for **3 seconds** to enter the pairing mode. The LEDs will blink twice in white color once successfully paired to the FT remote PRO.

hold for
3 seconds



Zebra Poi FT

After all FT devices are paired, press the **FINISH** button to complete the pairing process.

After a successful pairing, you have created a so-called “paired group” – a group of FT devices that react in unison to the commands from the FT remote PRO:



ADD TO GROUP

If you want to add extra units to an existing paired group (without losing the original pairing), select the **ADD TO GROUP** function instead. The pairing process is then the same as above.

PAIRING MODE

FT Remote PRO offers two distinct pairing modes – standard and broadcast, see the differences below, you can switch between the two:

STANDARD mode:

- maximum 32 paired units
- 2-way communication
- faster reading of unit status data (in LtComposer)
- robust

BROADCAST mode:

- unlimited no. of paired units
- 1-way communication
- slower reading of unit status data (in LtComposer)
- even more robust

Select the **PAIRING MODE** option and click **PAIR** to switch the pairing mode and at the same time to initiate a new group pairing in that mode.

SWITCH TO BROADCAST?

BROADCAST MODE
infinite no. of units | 1-way communication

BACK

PAIR

4. WIFI mode

WIFI mode screen is used for basic setup of the Wi-Fi wireless connection on the FT Remote PRO.



There are 2 ways how the Wi-Fi connection can be configured – Hotspot mode & Client mode.

Hotspot mode

In hotspot mode, the FT Remote PRO acts as a central Wi-Fi access point for other network devices (mobile phone, tablet, PC etc.) that connect to it directly:



This mode is useful for setting up the FT Remote PRO advanced functionality and to control it from your personal devices nearby.

First, make sure this functionality is turned on in the WIFI menu (**HOTSPOT: ON**). Then select the **INFO** from the list, to open the network status information.

The STATUS should be: **RUNNING**. On the right side you have the network name (SSID), default password and IP address of the hotspot:



SSID: **FT-Remote-PRO-XXXX** (where XXXX is a random number)

Password: **pyroterra**

IP address: **192.168.0.1**

On the client device of your choice, connect to this network.



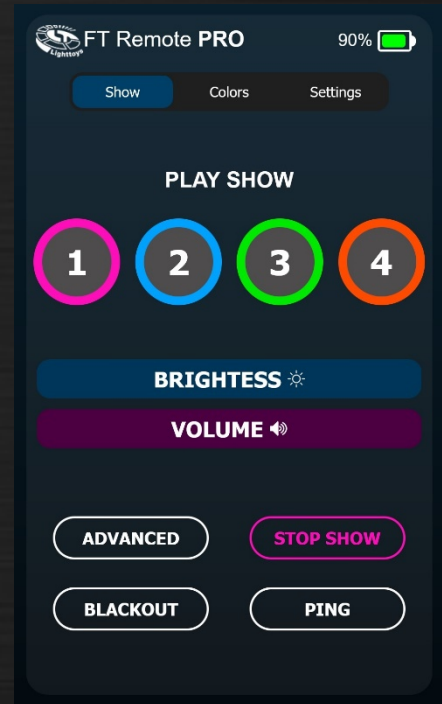
FT Remote PRO in hotspot mode doesn't offer access to the Internet. When connecting to it, some devices might pop up a warning or even prevent the connection. You might need to disable smart network switching or mobile data in your wireless network settings.

After a successful connection to the hotspot, you can start using many exciting features of the built-in web server.

Open the web browser on the connected device and type in the IP address of the hotspot into the URL bar: **192.168.0.1** A new screen will appear

The **Show** tab is used to start your programmed sequences, the **Colors** tab is a virtual keypad and the **Settings** tab enables advanced configuration.

To learn more about the built-in web server, please go the [web browser interface](#) section in this document.



Client mode

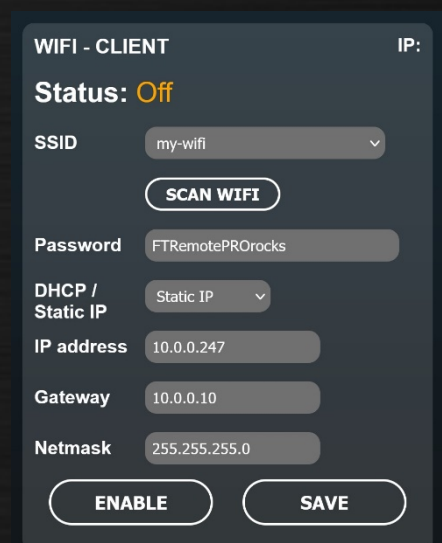
In client mode, the FT Remote PRO is configured as a wireless client that connects to an existing wireless network infrastructure:



This mode is useful for performances in venues with existing Wi-Fi networks, often when the FT Remote PRO is controlled from larger distances. To configure the FT Remote PRO as a client, use the hotspot mode (see above) and in the web browser interface **Settings** tab scroll to the **WIFI - CLIENT** section.

Click the **SCAN WIFI** button and select the network that you want to connect to.

Select between DHCP / Static IP, fill in the fields and click the **SAVE** button to save the values into the FT



Remote PRO memory, so it can be used automatically next time you use the client mode.

Then click the **ENABLE** button to activate the client mode.

Now you can access the FT Remote PRO and its [web browser interface](#) from a different device on the same network.

IP MODE – DHCP vs. Static IP

When configuring the client mode (either using the web server or the FT Remote PRO display), you can select between 2 different connection methods:

- **DHCP client**
- **Static IP**



The **DHCP client** method lets the network assign IP address to the FT Remote PRO automatically. This is useful, when you don't know the network topology and the available IP address space. The downside: the assigned IP address can change from time to time.

Use the **INFO** screen on the FT Remote PRO to check the currently assigned IP address in the **MY IP:** field.



Then use the assigned IP address in your browser URL bar to access the [web browser interface](#).

On the other hand, The **Static IP** method let's you set the IP address manually as you want, without randomly changing. The downside: you need to know the network topology quite well, to prevent possible IP address conflicts.

To configure the FT Remote PRO for static IP use, again use the web server interface, go to the **Settings** tab, scroll to the **WIFI – CLIENT** section, select **Static IP** from the drop-down menu and fill in the needed values there (IP address, Gateway, Netmask).

Then use the same static IP address value in your browser URL bar to access the [web browser interface](#).

5. LAN mode

LAN mode screen is used for basic setup of the ethernet (LAN) connection on the FT Remote PRO.



LAN connection provides lower latency and more robustness over Wi-Fi connection, so it is recommended in all mission critical setups. Disabling the Wi-Fi can further improve the signal integrity.

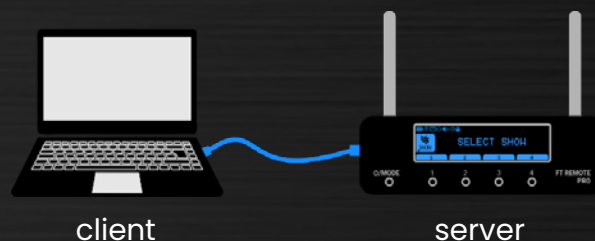
Since the general usage and setup of the ethernet (LAN) connection is very similar to the Wi-Fi connection, only important differences will be described.

IP MODE – Client vs. Server

When using the FT Remote PRO controller as part of an existing local wired network, select the **IP MODE: DHCP CLIENT** (or **Static IP** if you want to manually assign the IP address):



On the other hand, if no existing wired network is readily available, and you still want to use the ethernet connection with your host computer, select the **IP MODE: DHCP SERVER** instead:



In the **DHCP SERVER** mode, the FT Remote PRO acts as a network provider, offering an easy wired connection of other computer(s) directly to it.

In this mode, the FT Remote PRO's IP address (default gateway) is **10.0.0.1**, open the web browser on the client device and type in that IP address to connect to the [web browser interface](#) of the FT Remote PRO.

6. Music mode

The music mode screen provides an overview of all the audio files that are currently mapped to play simultaneously with your programmed shows 1-4.



Use the **UP** and **DOWN** buttons to select the audio file, then click the **PLAY** button to start its playback. If you see **N/A** in the list, it means that no audio file is mapped to this show bank number.

Once the music is playing, you can change the playback volume using the first button. There are 6 volume levels available + mute (no audio output).



When the audio output is muted, a new icon  will appear at the top of the display.

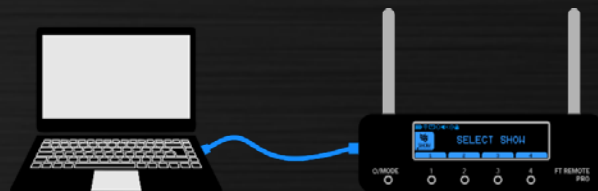


*To play the music, connect your speakers / audio equipment using an audio cable with a 3.5mm stereo jack, attached to the **Audio out** port of the FT Remote PRO.*

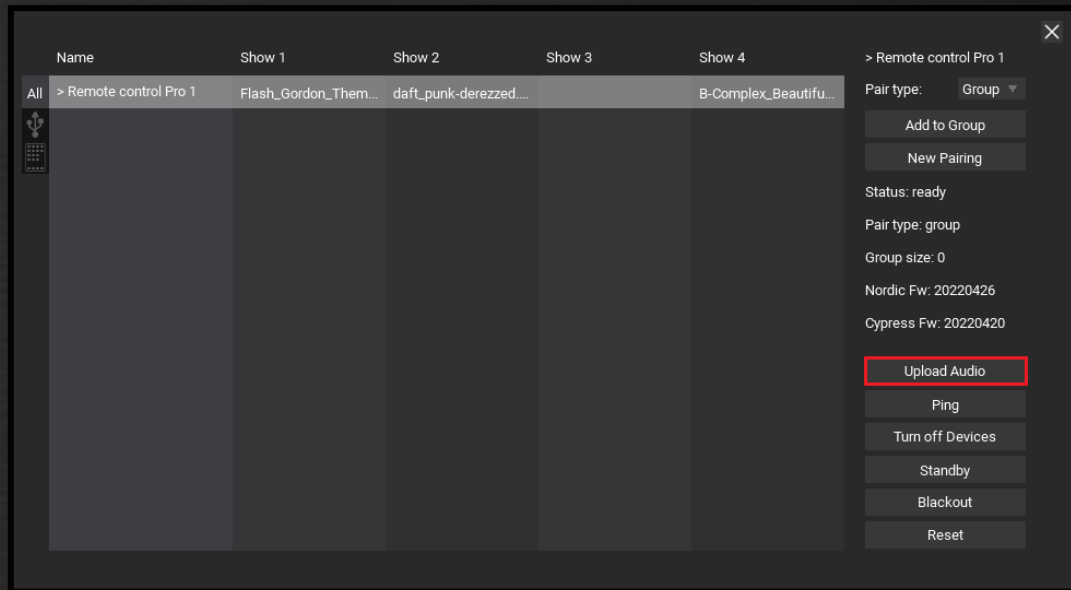
Uploading audio files

For uploading audio files into the FT Remote PRO's internal memory, please download the LtComposer software (version 3.6 or newer), available from the Lighttoys [support page](#).

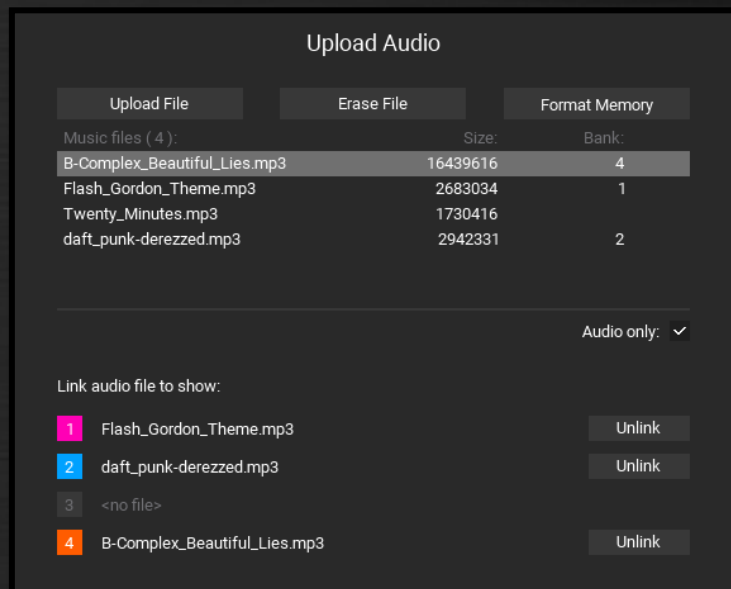
Connect the FT Remote PRO with a USB-C cable to your computer and make sure it is turned on:



Then launch the LtComposer, go to the **Devices** menu, select the FT Remote PRO in the list, and on the right side click the **Upload audio** button:



A new window will appear:



Use the **Upload file** button to upload new audio files from your computer to the FT Remote PRO's internal memory (capacity: 16Gb).

To map the uploaded audio file to the show bank 1-4, first select the audio file in the top list (by clicking on it), then click on the show position 1-4 at the bottom.

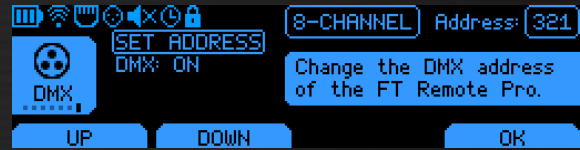
To reset the link, click **Unlink** on the right.



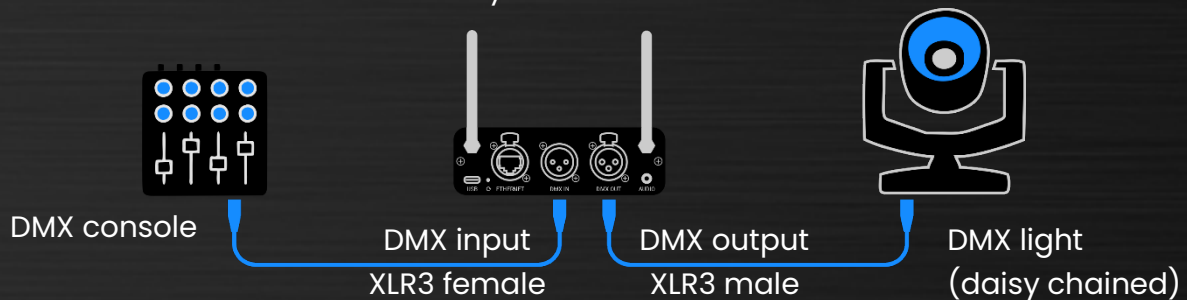
To prevent unnecessary re-uploading of music files, you can use the FT Remote PRO internal memory as a storage for your favorite audio files and just link them to shows 1-4 as needed.

7. DMX mode

The DMX mode screen is used to turn on/off the DMX512 interface and to setup the starting address of the FT Remote PRO in the DMX universe.



DMX512 is an industry standard for controlling stage lighting effects and devices. When connected to a properly configured DMX console with an XLR 3-pin cable, the FT Remote PRO can be remotely controlled also via DMX:



FT Remote PRO is currently configured as an 8-channel fixture in the DMX address space and supports the following FT functionality:

- **show 1-4 start / stop**
- **blackout**
- **ping**
- **standby**

Please consult the table below to properly setup your DMX controller / DMX software for interfacing the FT Remote PRO fixture in the 8-channel mode:

Ch.	Functionality	Channel value	Notes
1	master switch / dimmer	0-247 : all other DMX functionality is off 248-255 : all other DMX functionality is on	Enable this channel first (set value to 248-255), it serves as a protection against accidental inputs.
2	start / stop show 1-4	0-7 : stop show	All channels 2-5 must be off (value 0-7), before a new show can be started.
3		8-247 : no change	
4		248-255 : start show	
5			
6	blackout	0-247 : no change 248-255 : blackout	Sends out the blackout command to all paired units.
7	ping	0-247 : no change 248-255 : ping	Sends out the ping command (1x) to all paired units.

8	standby	0-247 : no change 248-255 : standby	Sends out the standby command to all paired units.
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To setup the DMX address of the FT Remote PRO, first make sure the DMX interface is turned on (**DMX: ON**), then select **SET ADDRESS**.

On the next screen use the **- / +** buttons to set the desired DMX starting address of the FT Remote PRO, the value can be set in the range 001-505.



For setting larger values quickly, you can also use the **+50** button. To reset the address to 001, press and hold the **-** and **+** buttons simultaneously.



When valid DMX data are present on the **DMX IN** port of the FT Remote PRO, the DMX icon  at the top of the display will flash.

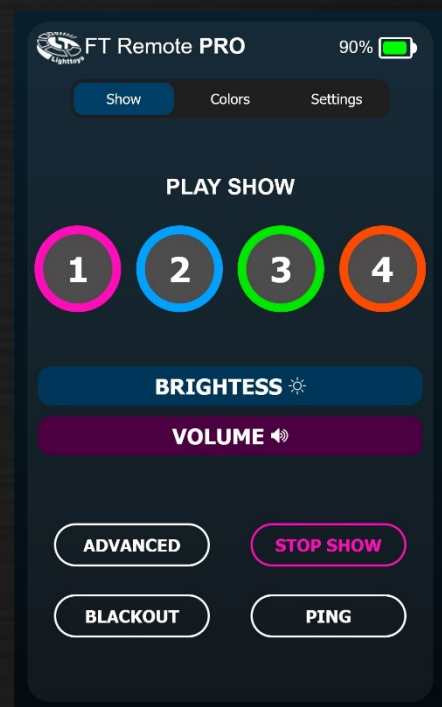
Web browser interface

Web browser interface (a.k.a. Web server) provides a convenient way of controlling FT Remote PRO's functions from any device with a web browser capability on the same network.

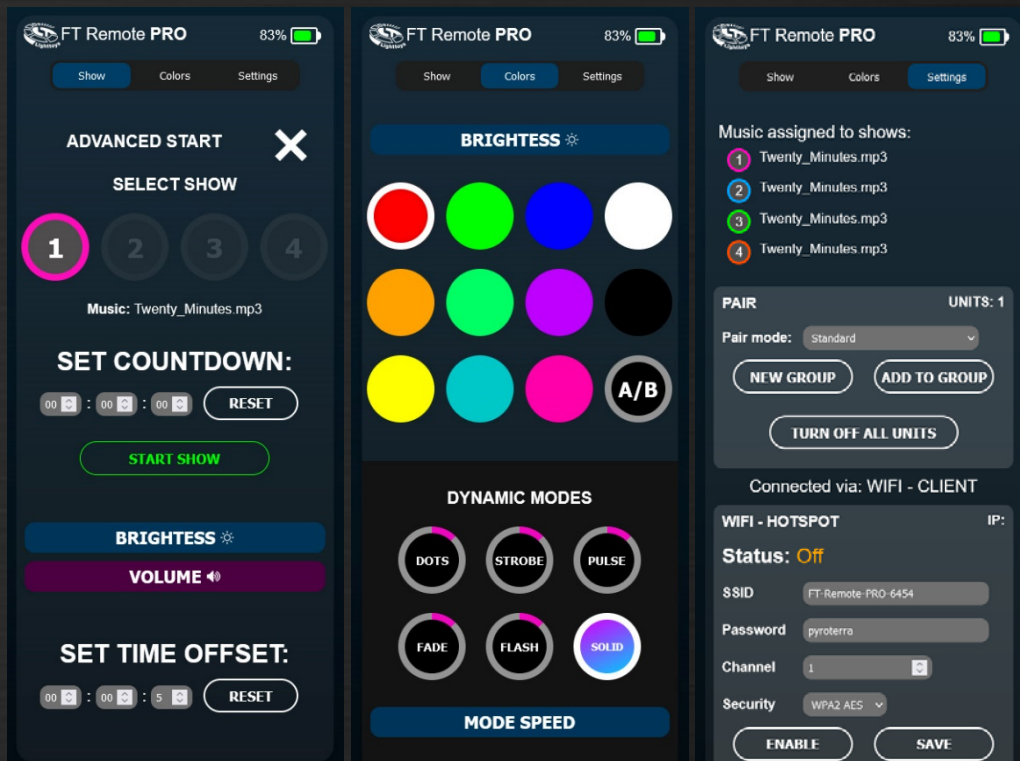
To start using it:

1. First check that both the FT Remote PRO and your device are connected to the same network.
2. Check the assigned IP address of the FT Remote PRO in the **INFO** screen (available in both WIFI and LAN mode).
3. Type in the IP address into the URL bar of your device and hit Enter.

A new screen will appear in the browser window:



The first tab **Show** is used to start your programmed sequences 1-4, similarly to the Show mode screen described earlier. When clicking the **ADVANCED** button, you can also configure a count-down timer and a show offset (start from a point inside the show sequence):



Show tab
(Advanced)

Colors tab

Settings tab

The second tab **Colors** is a virtual keypad with colors & dynamic modes buttons, similar to the classic FT remote controller. You can also define your custom colors here and start random playback of the dynamic modes.

The last tab **Settings** enables you to perform new pairing of FT units, configure advanced network settings & OSC port number.



HTTPS protocol is not supported. When typing in the IP address of the FT Remote PRO into the browser URL bar, make sure it has no prefix, or use just http://

Extra features

Button lock

In cases when the FT Remote PRO is controlled remotely, human input might not be needed and you may want to lock all front panel buttons against accidental presses.

To activate the button lock, press and hold the buttons **MODE + 4** simultaneously for **1 second**:



A padlock icon will show at the top of the screen:



To deactivate the button lock, press and hold the buttons **MODE + 4** simultaneously again, the icon will disappear.

USB-C charging & PoE

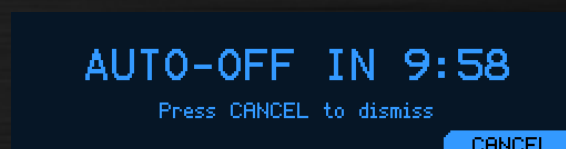
The FT Remote is powered from its built-in 2100mAh Li-ion battery and charges using the USB-C port. Use a dedicated 5V USB charger to enjoy 1.5A fast charging or 0.5A when using standard computer USB port.

In addition to the USB-C, you can charge / power the FT Remote PRO with the built-in 48V Power over Ethernet (PoE) functionality, using the RJ45 port.

Auto power off

Out of the box, the FT Remote PRO has **1 hour** inactivity timer enabled. Once the inactivity time has elapsed, the FT Remote PRO will automatically turn off, to save battery power.

The user is warned about the shutdown **10 minutes** in advance on the display (after 50 minutes of inactivity):

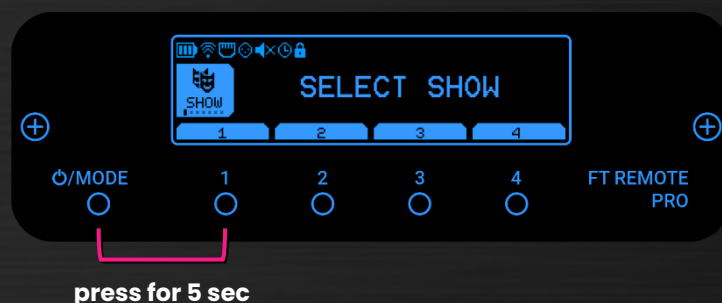


You can override the shutdown and reset the timer by pressing the **Cancel** or any other button.

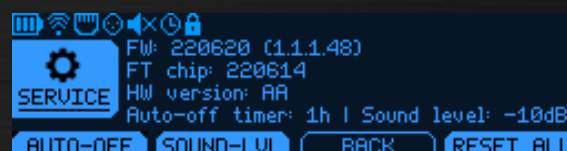
The inactivity timer is reset automatically everytime any of the below events happen:

- user presses any front panel button
- show is running
- any FT command received over I/O ports (example: a running LtComposer software)
- when the web browser interface is running in an active browser tab.

If the auto power off functionality doesn't suit your use, it can be turned off completely in the hidden Service menu screen, by pressing the buttons **MODE + 1** simultaneously for **5 seconds**:



A new screen will appear. Click the **AUTO-OFF** button to toggle between 1 hour timer or never. Then click the **BACK** button to return to the normal operation.



When the timer is disabled, the display will still turn off after 1 hour of inactivity, to save the battery and prevent the OLED display deterioration.

Audio output level

Out of the box, the FT Remote PRO's audio output is set to standard "LINE OUT" volume level of **-10dBV**. If you find this level too quiet, you can switch it to a higher **-2dBV** level by pressing the **SOUND-LVL** toggle button in the Service menu screen.

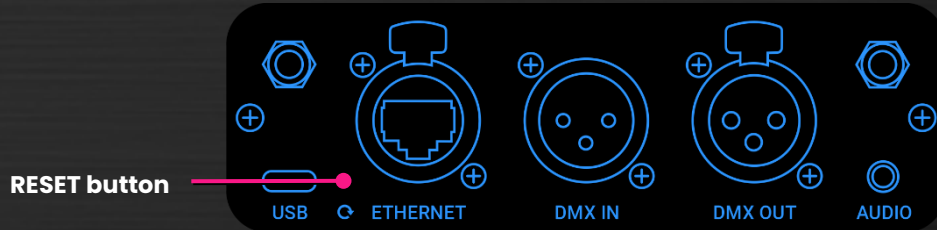


This higher sound level is similar to the "HEADPHONE OUT" on various personal audio players.

Click the **BACK** button to leave the Service menu and apply the new sound level of your choice.

Troubleshooting

In case your FT Remote PRO is not working properly, you can perform a hardware reset of the device.



Use a thin object (for example, straightened paper clip) to press the white button in the hole on the back panel. The Remote PRO will perform a hard reset and reboot.

OSC control (advanced use)

Open Sound Control (OSC) is a modern protocol for interconnecting various multimedia devices using the UDP/TCP data packets. OSC is quickly gaining ground and becoming the successor to the MIDI standard.

FT Remote PRO supports the OSC protocol in the “listen mode”, expecting other devices in the “send mode” to send OSC messages that the FT Remote then interprets.

For maximum compatibility with external devices and applications, FT Remote PRO accepts two methods of OSC message formatting:

1. **OSC address + OSC arguments** – standard method of input, where address and arguments are transferred separately. Arguments are written down in this document as **<data_type:value>**, for example: **<integer32:6>**
<float32:0.6279> **<string:Hello>**
2. **OSC address inlining** – both the address and argument values are chained together using just the address space of the OSC message.

OSC Message examples – method #1:

/lighttoys/ping – sends PING to all FT devices

/lighttoys/brightness <int32:6> – sets brightness to the 6th level (maximum)

/lighttoys/start <int32:1> – starts show #1 from time 0:00

/lighttoys/stop – stops the running show

/lighttoys/start <int32:2><int32:2000><int32:5000><int32:1> – starts show #2 from time 2000 milliseconds with 5 second countdown timer and the lowest brightness.

OSC Message examples – method #2:

/lighttoys/ping – sends PING to all FT devices

/lighttoys/brightness/6 – sets brightness to the 6th level (maximum)

/lighttoys/start/1 – starts show #1 from time 0:00

/lighttoys/stop – stops the running show

/lighttoys/start/2/time/2000/delay/5000/brightness/1 – starts show #2 from time 2000 milliseconds with 5 second countdown timer and the lowest brightness.



The ordering of OSC arguments must be followed for method #1, the optional arguments can be omitted from the right side to the left. When using method #2, the order of optional arguments (e.g. /time/2000, /delay/5000, /brightness/1) is irrelevant and can be swapped.

Currently, FT Remote PRO supports the following OSC commands. The compulsory part of the command is denoted in a **bold** text, the rest is optional. Parentheses e.g. (1-4), denote the accepted range of the value:

OSC command (method #1 – arguments)	OSC command (method #2 – address inline)	Description
/lighttoys/ping	/lighttoys/ping	Sends out the PING command to all paired FT devices.
/lighttoys/blackout	/lighttoys/blackout	Turns off the LED output of all paired FT devices.
/lighttoys/standby	/lighttoys/standby	Brings all paired FT devices to the standby mode.
/lighttoys/start <int32:show(1-4)> <int32:time> <int32:delay> <int32:brightness(1-6)>	/lighttoys/start/(1-4) /time/(int32) /delay/(int32) /brightness/(1-6)	Starts the show on all paired FT devices. 'Time' is a positive offset into the show and 'delay' is a countdown (delayed) start. Both arguments are in milliseconds.
/lighttoys/stop	/lighttoys/stop	Sends out a command to stop any running show.
/lighttoys/brightness <int32:level(1-6)>	/lighttoys/brightness/(1-6)	Sets the brightness level 1-6 on all paired FT devices.
/lighttoys/color <int32:red1(0-255)> <int32:green1(0-255)> <int32:blue1(0-255)> <int32:red2(0-255)> <int32:green2(0-255)> <int32:blue2(0-255)>	/lighttoys/color /r1/(0-255) /g1/(0-255) /b1/(0-255) /r2/(0-255) /g2/(0-255) /b2/(0-255)	Sends out a command to set the A and B segments to a specific color combination on all paired FT devices.

/lighttoys/dynab <int32:selAB(0-2)>	/lighttoys/dynab/(0-2)	Sets the currently controlled segment. 0 = AB, 1 = A, 2 = B.
/lighttoys/dyncolorr <int32:level(0-255)>	/lighttoys/dyncolorr/(0-255)	Sets the red color value of the controlled segment.
/lighttoys/dyncolorg <int32:level(0-255)>	/lighttoys/dyncolorg/(0-255)	Sets the green color value of the controlled segment.
/lighttoys/dyncolorb <int32:level(0-255)>	/lighttoys/dyncolorb/(0-255)	Sets the blue color value of the controlled segment.
/lighttoys/dynmode <int32:mode(1-5)> <int32:position(1-8)>	/lighttoys/dynmode/(1-5) /pos/(1-8)	Sets the currently controlled dynamic effect and optionally also the position in it.
/lighttoys/dynpos <int32:position(1-8)>	/lighttoys/dynpos/(1-8)	Sets the position inside the dynamic effect.
/lighttoys/dynspeed <int32:mode(1-8)>	/lighttoys/dynspeed/(1-8)	Sets the speed 1-8 of the current dynamic effect.
/lighttoys/newpair <string:pair_type(g,b)>	/lighttoys/newpair /pair_type/(g,b)	Starts a new pairing process with an optional change of the pairing type: b = broadcast, g = group (legacy).
/lighttoys/addtogroup	/lighttoys/addtogroup	Starts the "add to group" pairing process.
/lighttoys/stoppair	/lighttoys/stoppair	Stops the ongoing pairing process.
/lighttoys/random <int32:patterns(1-31)> <int32:delay> <int32:speed(1-8)> <int32:brightness(1-6)>	/lighttoys/random /patterns/(1-31) /delay/(int32) /speed/(1-8) /brightness/(1-6)	Starts a random dynamic effect. 'Patterns' is a 5-bit mask to select which of the available banks (DOTS, STROBE, ...) will be used, use value 31 to use all banks. Delay is the duration of each dyn. effect in milliseconds, default is 8 seconds.

Consult your other device or software application (that you want to use to control the FT Remote PRO) how to implement the OSC functionality and configure the OSC commands per the table above.

The default OSC port of the FT Remote PRO is: [65535](#). If needed, you can use the [web browser interface](#) to change it.

External control

FT Remote PRO and its support for industry standard protocols, allows for even more advanced control with other software.

Chataigne software

Chataigne software is an open-source software devised to be the central hub in a project involving multiple interfaces, software, devices and sensors. Specifically, you can use it to sync FT Remote PRO with Linear Timecode (LTC), MIDI Timecode (MTC), live control of FT devices and project automation.

To learn more about the Chataigne software, please visit the official [website](#). To enjoy the above features, you also need to install the **FT module** plugin. Please read our user manual available [here](#).

*We wish you many breathtaking and successful shows with
the Lighttoys FT Remote PRO!*

