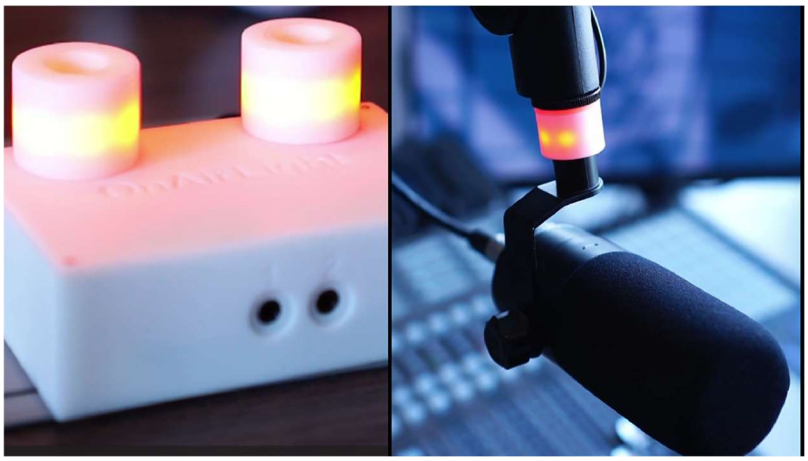
OnAirLight V4.2.2 – User Manual

Introduction

The OnAirLight Ethernet is a network-connected on-air light controller.

It can be used stand-alone with GPIO, Midi over USB or integrated with broadcast systems over Livewire+ and SmartControl, while being fully configured via a built-in web interface.

This manual explains all available functions and configuration options, as seen in the web interface.



Device Overview

Multi-color LED “on-air” lights indicating microphone or studio state.

Four primary light channels (Light 1–4) and one Telco channel.

Multiple control modes:

Standalone GPIO mode. (Hardwired to outputs of the broadcast system)

MIDI mode. (Midi via USB, use of Midi hub recommended)

Livewire+ mode. (Tellos Alliance, Axia systems)

Ember+ mode (Lawo, DHD, Riedel, D&R)

SmartControl mode. (Triple audio, RTPMidi)

Configuration:

Built-in web server for configuration and monitoring.

Power-Up & First Use

Connect to Ethernet

There are 2 ways to connect with the Controlbox.

1. Direct ethernet cable to your computer.
   In this case you set up your ethernet settings:
   IP Address: 192.168.1.xxx (recommended between 1 and 50)
   Subnet: 255.255.255.0
   You should be able to reach the Controlbox at 192.168.1.100:8080

2. Plug the Ethernet cable from your switch/router into the device's Ethernet port.
   Plug in the USB cable using a certified adapter (5 volts, 2 Ampére) Or use the optional PoE splitter from OnAirLight.
   If your network supports DHCP, the device will automatically obtain an IP address. If not, follow step 1, and set up your device with fixed network settings.

   Wait for the Network Link.

   The device attempts to obtain an IP address via DHCP by default.
   Also, the device will try to broadcast its name on the network (Router needs to support mDNS)
   Once up, it will start the internal web server on its configured web port (default: 8080).

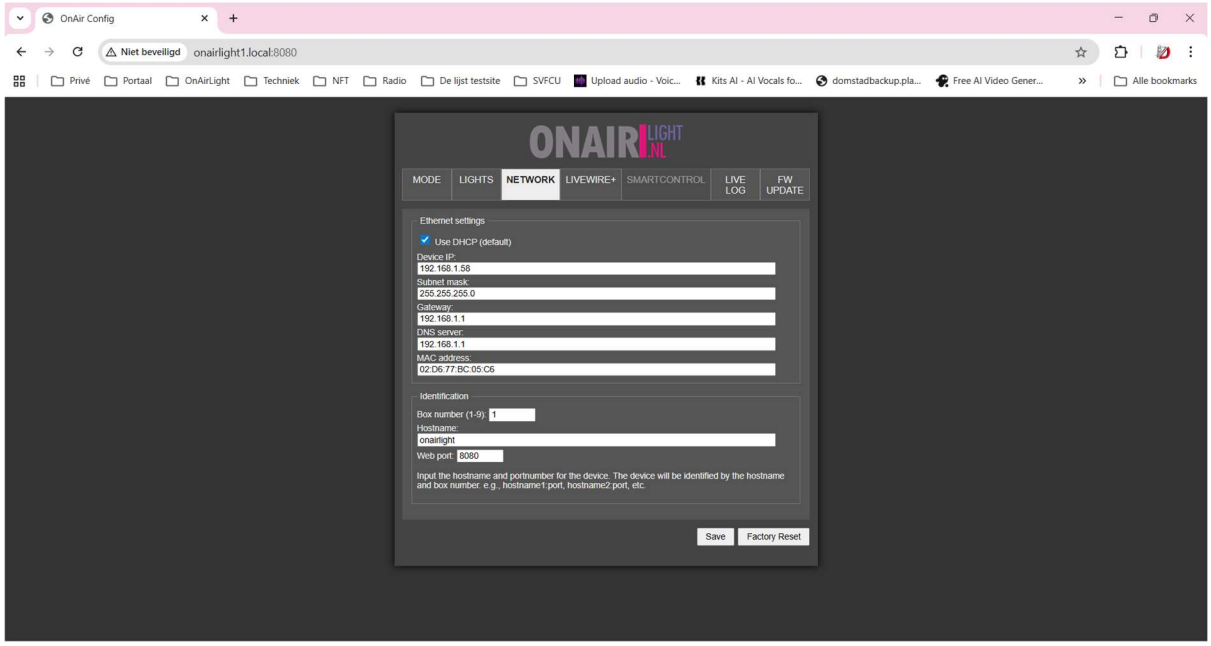
   Locate the Device on the Network

   On first boot:
   Web URL: http://onairlight1.local:8080/
   Alternative:
   Open a CMD window on your computer type: ping onairlight1.local to obtain its IPv4 address
   Then browse to http://<DEVICE_IP>:8080/.

   In case the device cannot be found on the network, follow step 1 and set up a fixed IP address.

   In case you're using the device in a digital studio environment, it is recommended that you set up a fixed IP address.

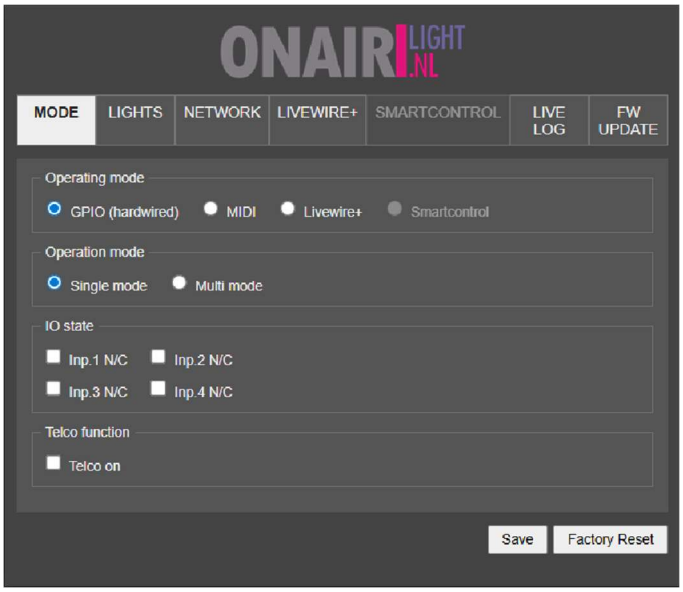
The Web Interface



The web interface is divided into several tabs:

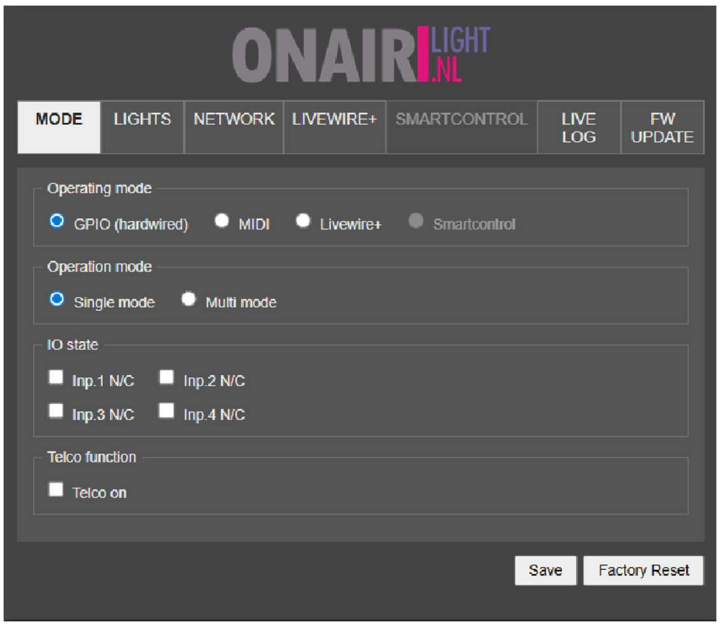
MODE | LIGHTS | NETWORK | LIVEWIRE | SMARTCONTROL | LIVE LOG | FW UPDATE

You navigate between them by clicking the tab headers at the top of the page.



MODE Tab – Operating Mode and I/O

In this tab, the operation mode is set.



Operating Mode

GPIO = Hard wired IO

Lights are driven by local GPIO contacts on the device (controlling inputs/relays on the broadcast system).

MIDI mode

Lights follow MIDI messages received over USB (e.g. from a DAW or mixer interface or playout software; Virtual midi ports can be needed).

Livewire+ mode (connect the device via TCP/IP to a Livewire+ server or node)

Lights follow GPO state from a Livewire+ system via network.

SmartControl mode (or any other RTP-MIDI/Apple MIDI system)

Lights follow predefined events from a SmartControl or RTP-MIDI server.

Single vs Multi mode

Single mode

All the lights are following the first input, in any mode.

Multi-mode

All lights can be controlled independently (e.g. multiple microphones).

Telco option

Enables or disables special telco behavior (phone line indicator).

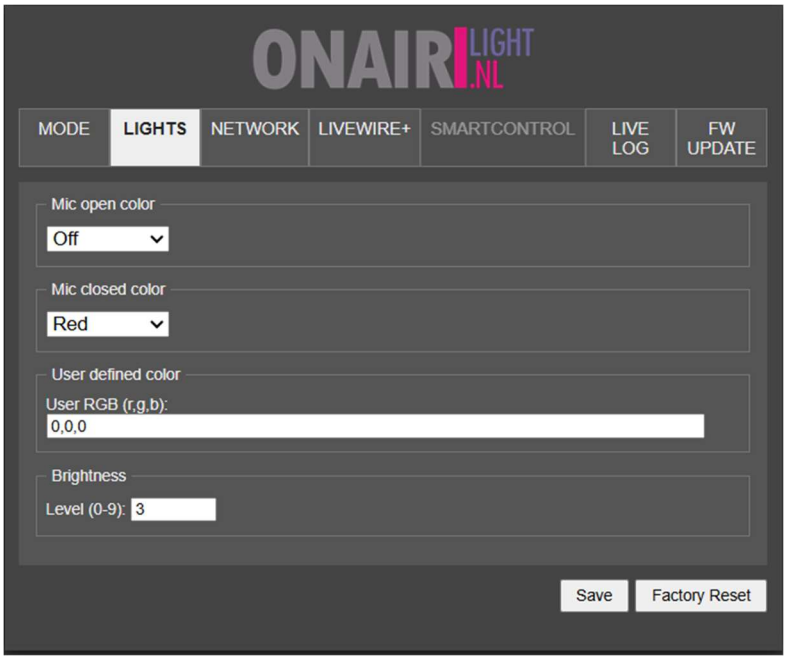
When enabled, the Telco light channel is available in the LIGHTS and LIVEWIRE tabs.

Contact polarity / NC options

Several checkboxes to control input polarity (standard expected normally open contacts or input high messages).

Adjust these to match your studio's wiring, so the on-air state matches your console behavior.

LIGHTS Tab – Colors and Brightness



This tab defines how the LEDs look in different microphone states.

Mic open color

The color used when a microphone or channel is active ON/AIR.

Mic closed color

The color used when a microphone or channel is inactive OFF/AIR.

User defined color

Enter custom RGB values, for example: 128,0,255.

This is used when “User Color” is selected in the open/closed color options.

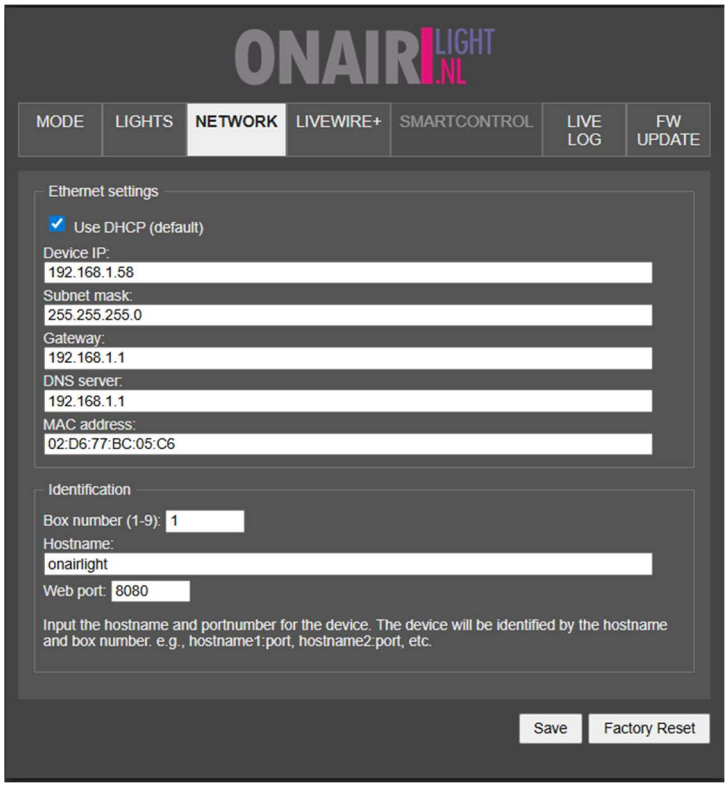
Brightness

Level (0–9)

Sets overall LED brightness. 0 = dimmest, 9 = brightest.

Useful to match the brightness to your studio environment (default = 3)

NETWORK Tab – Ethernet & Identification



This tab controls how the device appears on the network and how you access the web interface.

Ethernet settings:

Use DHCP (default)

When checked:

The device requests IP, subnet, gateway, and DNS from your DHCP server.

The IP fields below are read-only and show the obtained actual values granted.

When unchecked:

You can manually enter all network details.

MAC address

Read only hardware MAC address of the device’s Ethernet interface.

Useful for DHCP reservations or network inventory.

Identification



Box number

Multiple OnAirLight devices can be used in one network; this number identifies which device it is and can be set.

It is combined with the hostname, so identification can be simple.

Hostname

Base hostname for your device.

Combined with the box number to form the actual network name.

Avoid spaces or special characters (letters and digits are safest).

Example:

Hostname: onairlight

Box number: 3

Effective name: onairlight3

DNS name: onairlight3.local

Web port

TCP port used by the built-in webserver.

The default is 8080.

If you change this, remember to include it in the URL:

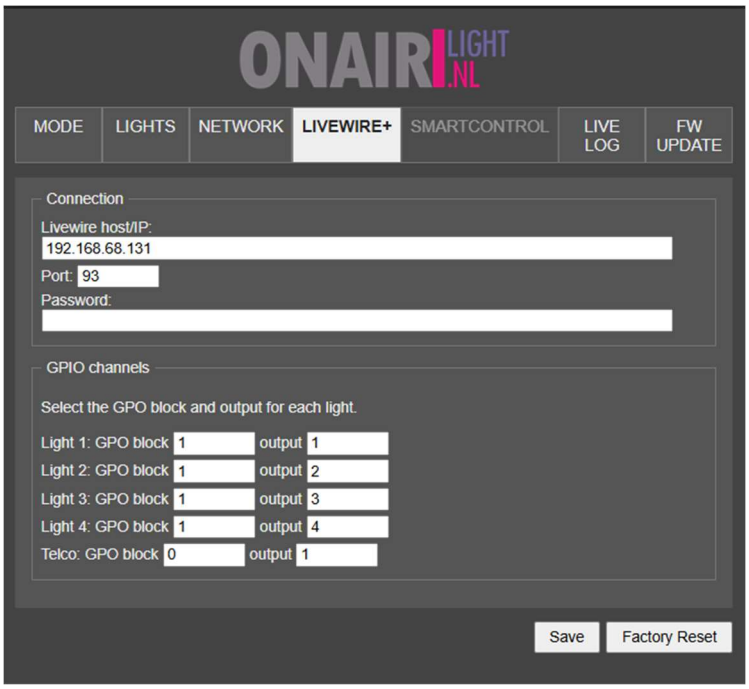
Example: http://onairlight3.local:8080/

Effective network name (concept)

You can use the Network tab to change the hostname, box number, or web port at any time. After saving, refresh using the new URL.

Livewire+ Integration

Use this tab if you want the device to follow GPO from a Livewire+ system.



Connection

A green dot will appear on connection

Livewire host/IP

IP address or hostname of your Livewire+ node (e.g. your console or GPIO node).

Port

TCP/IP port used to talk to the Livewire+ system.

Default is 93 but follow your system documentation.

Password (optional)

Password for the Livewire+ node, if required.

Leave empty if your node does not require authentication.

GPIO channels

These map individual lights on the device to Livewire+ GPO blocks and outputs.

For each light:

Light 1: GPO block / output (in single mode only this GPO is used)

Light 2: GPO block / output

Light 3: GPO block / output

Light 4: GPO block / output

Telco: GPO block / output

For each you configure:

GPO block

The Livewire+ GPO block number you want to subscribe to.

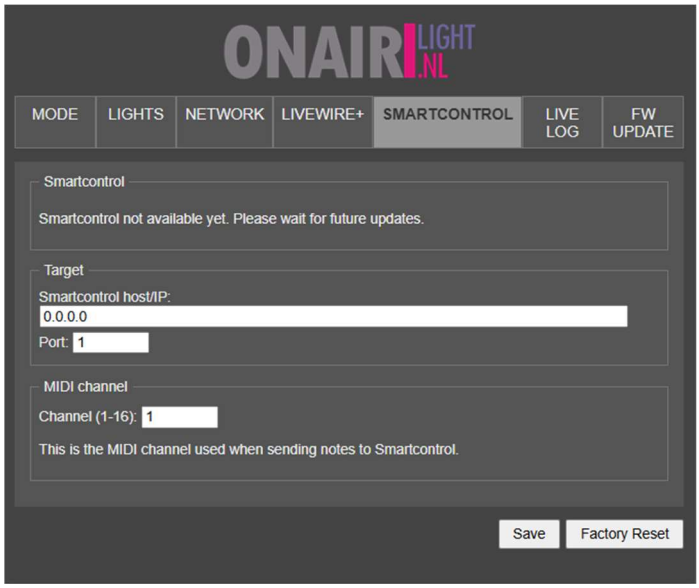
Output

The specific output (1–5) within that GPO block.

When a configured GPO output is active, the corresponding light will switch to the “mic open” color; when inactive, it will show the “mic closed” color.

RTPMidi / SmartControl Integration

Use this tab to integrate with a SmartControl system (for example, for more advanced or centralised tally control).



Smartcontrol host/IP

IP address or hostname of the SmartControl server.

Port

Network port used by SmartControl for control messages (default: 5004, unless your system specifies otherwise).

MIDI Channel (1–16)

The MIDI channel that this device should follow (default is 1)

The HEX MIDI messages the device listens to are:

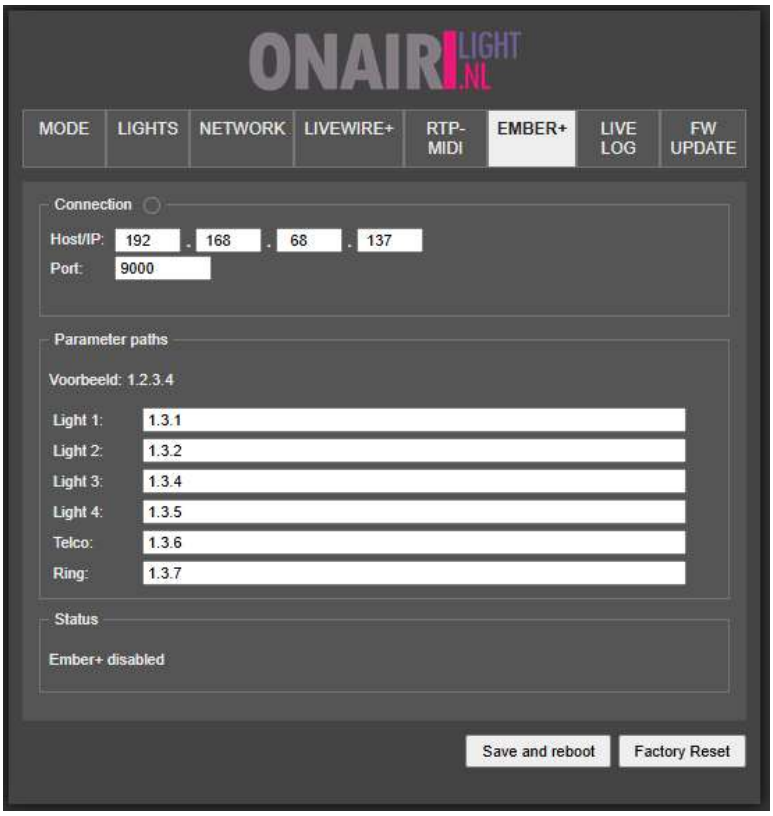
90 01 46 – Light 1 on, 90 01 00 – Light 1 Off

90 02 46 – Light 1 on, 90 02 00 – Light 2 Off

90 03 46 – Light 1 on, 90 03 00 – Light 3 Off

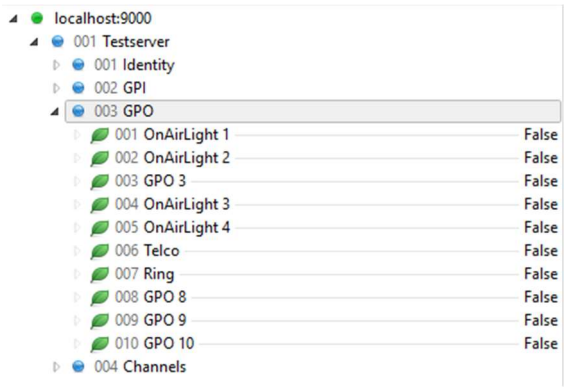
90 04 46 – Light 1 on, 90 04 00 – Light 4 Off

Ember+ configuration



Ember+ functionality

As the protocol works with Provider / Consumer basics, OnAirLight is the consumer acting on specified nodes in the system, once a node is entered, OnAirLight subscribes to that node.



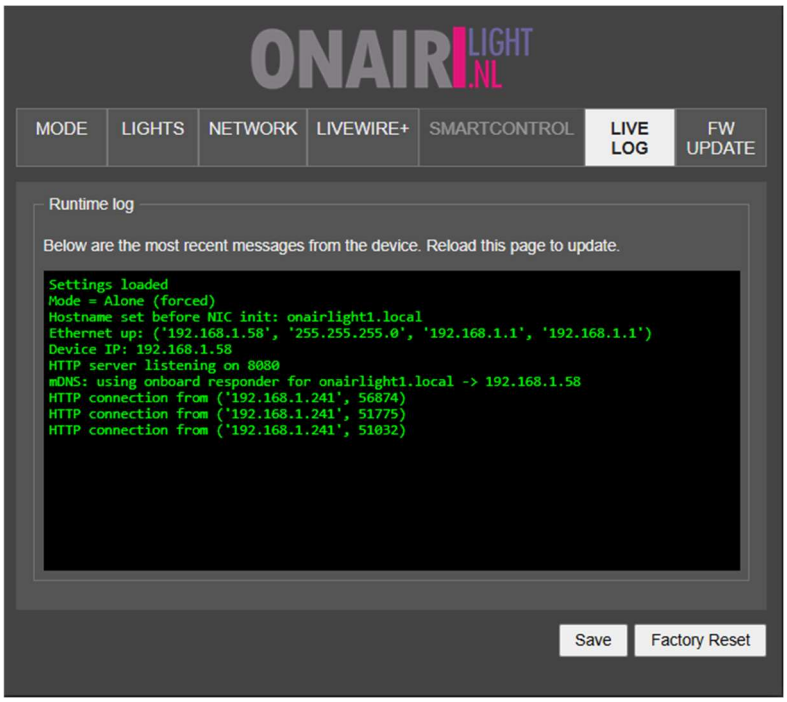
In the example Server is node 1, GPO is subnode 3 and Light 1 is subnode 1 (1.3.1)

Input the server address and port number (default 9000) Save the parameters, and the connection led will become green

The GPO is read Boolean (true or false).

LIVE LOG Tab – Diagnostics

The Live Log tab shows a rolling log of recent events, useful for diagnostics.

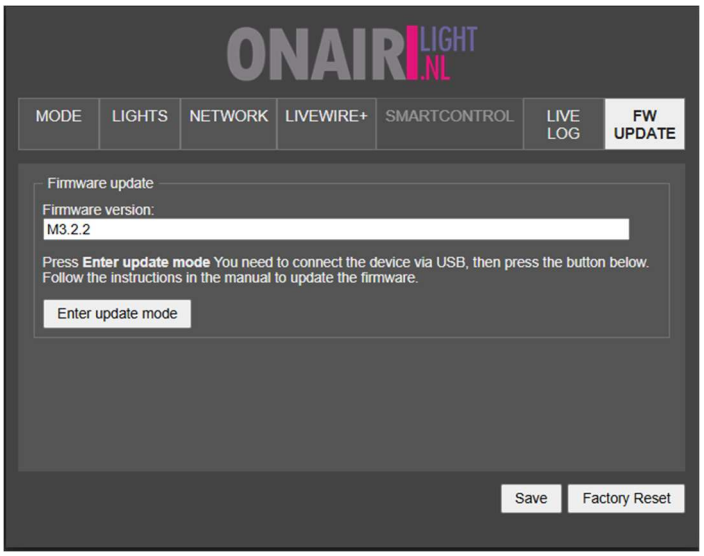


Examples of log messages

These messages can be important when troubleshooting and/or with any service request.

FW UPDATE Tab – Firmware Update & Maintenance

This tab is used for firmware maintenance tasks.



Typical function:

Update the firmware.

Only if you have received a firmware update file from your vendor or directly from OnAirLight after sales services, can you use the update function.

The update file comes with explicit instructions which need to be followed step by step. Each update will have its own version number and will be visible after a successful update.

Saving Changes & Applying Configuration

Across all tabs:

After modifying your desired settings, click the Save button.

The device:

Validates entries and saves them to its internal configuration.

The device will prompt you to reboot the device, so all new settings can be loaded.

(Some settings will work on the fly, but be sure to reboot by powering off and on)

Factory Default

If you need to return the device to its default configuration:

Use the Factory Defaults option in the interface.

This restores all settings (mode, lights, network, Livewire, RTPMidi, Ember+) back to their shipped values.

After restoring defaults:

The device needs a reboot after you load default settings (power off and on).

Troubleshooting

I can't reach the web interface

Check that the device has a link on the Ethernet port (link LED on switch).

Confirm the URL:

Correct hostname + box number + port, e.g. http://onair3.local:8080/.

Try using the raw IP: check your router/DHCP client list and locate onairlight and identify its IP then browse to http://<IP>:8080/.

Ensure your computer is on the same subnet, and no firewall is blocking the ports.

Hostname or box number changed and I lost access

Use the Live Log tab (if still reachable) to see the new hostname.

Otherwise, check the DHCP client list on your router for the new name.

If needed, restore factory defaults and use the default hostname/box number.

Fallback (if not set an fixed IP) start the OnAirLight disconnected from the network, it will now load 192.168.1.100 as its IP. Use a direct cable connection between your computer and the OnAirLight.

Livewire+ / SmartControl status doesn't change the lights

Verify the MODE tab:

Ensure that the correct mode is selected.

Check host/IP and port on the relevant tab.

Confirm that GPO blocks/outputs (Livewire+) or channel (SmartControl) or Nodes (Ember+) are correct and connected.

Look at the LIVE LOG tab for any connection or error messages.

Lights are inverted (ON when they should be OFF)

Adjust the NC/NO or polarity options on the MODE tab.

OnAirLight controller

The Smart, Multi-Protocol Network Interface OnAir Signaling.

SPECSHEET (V1.0)

Core features

1. **4-Port Control**: Independent control over up to 4 OnAir LED rings.
2. **Power over Ethernet (PoE):** Fully powered via the network cable. No need for extra sockets or wall warts under the table.
3. **Broadcast Native**: Direct communication with Axia Livewire+ (GPIO-mapping) en Ember+ (Lawo/DHD/Riedel).
4. **DAW & Studio Integration**: Supports RTP-MIDI (MIDI over Ethernet) and USB-MIDI for seamless pairing with Pro Tools, Reaper, vMix or Stream Deck.
5. **Easy Installation**: Plug and play, pluggable light fixtures.
6. **Endlessly Scalable**: Effortlessly place multiple Nodes in the same network for larger multi-host studios.

Technical Specifications

Categories	Specification
Network & Protocols	Livewire+, Ember+, RTP-MIDI, USB-MIDI, IPv4
Nutrition	PoE (802.3af) óf external 12V DC via Phoenix block
Outputs	4x Phoenix terminal block (two-color polarity change)
Configuration	Built-in Web GUI (reachable via IP in any browser)
Housing	Black, UV-resistant matt coating with integrated mounting lips
Dimensions	*[100x70x40mm]*

Installation Benefits (Why Integrators Want This)

1. **Time saving**: No soldering or crimping of wires on tight RJ45/XLR-5 connectors on site. Just plugin the lights, connect to the network.
2. **Overview**: The distinctive black enclosure easily fits cable ducts or under studio desks, making service and inspection easy afterwards.
3. **Clean Desk**: One network cable to the central switch under the table is sufficient to control the signaling of a complete 4-person table.

Distribution & Sales & Support: Triple Audio (Bilthoven)