

In case of problem, contact RJ distributor with the following information:

- Model, version and serial number of the product.
- From the menu status:
 - Software version
 - LED board IDs
 - Device hours
 - Picture of the Selftest Report (see 6.6 Selftest)
- Description of the problem.



6.3 Electronic thermal management system

In case of overheating, light intensity will be reduced by the system.

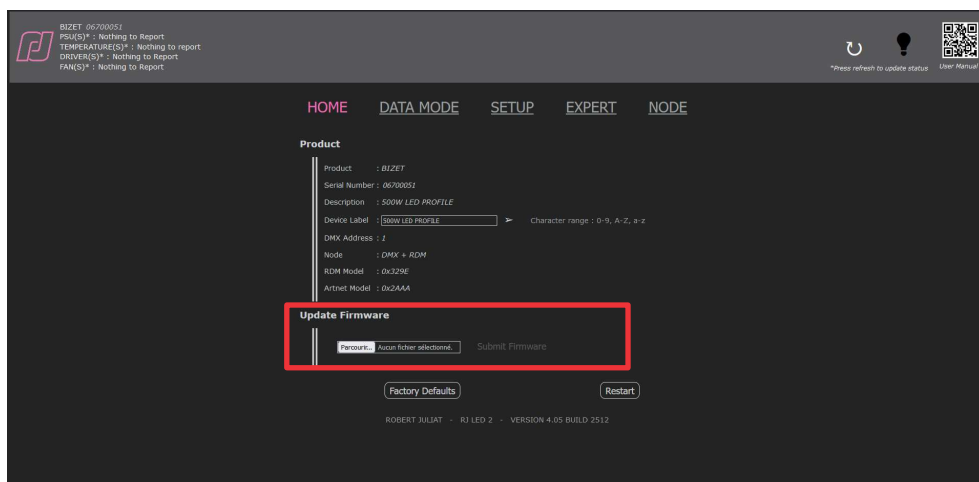
"Power reduction X%" will be shown on the display with the reducing percentage.

6.4 Firmware update

1. Download the firmware from one of the following links :
 - www.robertjuliat.com/LED/PDF_PAGE
 - www.robertjuliat.com/followspots/Tristan
 - www.robertjuliat.com/followspots/Morgane
2. Unzip the file. There are 4 files:
 - Firmware (.upd2 format)
 - Firmware history
 - Update procedure
 - User manual from firmware version V4.0x onwards
3. Switch on the lighting fixture.
4. Connect the fixture to the network using an RJ45 Ethernet cable from your computer.

You can either connect it to your lighting network (RJ45) or directly to your computer (RJ45).
5. Open a Web browser (Microsoft Edge, Firefox, Apple Safari, etc.).
6. Enter the fixture's IP address in the browser's address bar
 - "00X" is read as "X".
 - Never type a zero (0) before the numbers XX or X (see 5.4.4 web Interface).
7. Upload your firmware file (.upd2).

Moving to 5.X from 4.X or 3.X is considered as major and a reset (Factory Defaults) is mandatory.



5.3 Home values

“Home values” represent a selection of values manually entered into the device via the keypad to produce a defined state.

These Home values can be set in the following modes:

Cool White version (CW)

Parameters / control modes	DMX - Dimmer mode Mode 1	DMX - Profile mode Mode 2	Followspot 16B Mode 3	Followspot 16B Iris Mode 4	Standalone*
Dimmer	DMX	DMX	DMX	DMX	HOME VALUE
Response time	HOME VALUE	DMX	DMX	DMX	HOME VALUE
Iris	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Iris Mode	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Dimmer Master	HOME VALUE	HOME VALUE	DMX	DMX	HOME VALUE

Variable White version (VW)

Parameters / control modes	DMX - Dimmer mode Mode 1	DMX - Profile mode Mode 2	Followspot 16B Mode 3	Followspot 16B CCT Iris Mode 4	Standalone*
Dimmer	DMX	DMX	DMX	DMX	HOME VALUE
Response time	HOME VALUE	DMX	DMX	DMX	HOME VALUE
CCT	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Iris	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Iris Mode	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Dimmer Master	HOME VALUE	HOME VALUE	DMX	DMX	HOME VALUE

If the function is not controlled by DMX, the Home value is automatically activated.



HTP mode between DMX, local and HOME VALUES

(*) Defines a standalone operating mode in the following cases:

- As default values when used without data Data mode → Protocol → Standalone
- As reference values following a data signal loss. Set up → Data set up → DMX hold → Standalone

5.4 Network

Our network stack can handle several flows of protocol at the same time.

Protocol always available:

- Web page to set up parameters - *See section 5.4.4*
- LLRP (Low Level Recovery Protocol) for IP network configuration - *See section 5.4.5*

A selection of Protocols dedicated to lighting:

- Art-Net V4 - *See section 5.4.1*
- sACN - *See section 5.4.2*
- Dual: Sacn + Art-RDM (DMX512 data signal + RDM) - *See section 5.4.3*

From July 2024 the Robert Juliat equipment based on RJ LED2 platform is configured as follows:

- DHCP (**D**ynamic **H**ost **C**onfiguration **P**rotocol - **RFC1531**) ON
→ <https://www.rfc-editor.org/rfc/rfc1531>
- Zeroconf (**Z**ero-configuration **n**etworking – **IPv4LL/APIPA – RFC3927**) ON
→ <https://www.rfc-editor.org/rfc/rfc3927>

IP Addressing of Parameters - *See section 5.1.2*

Default:

- At startup, the device's IP address is set to 000.000.000.000 with a subnet mask of 000.000.000.000
- After connecting to the network, the device awaits the assignment of an IP address and subnet mask by the DHCP server.
- If there is no DHCP server, a unique IP address and subnet mask are automatically assigned.
IP : 169.254.XXX.XXX Mask : 255.255.0.0

Most personal computers are configured with DHCP and Zeroconf enabled, so the IP address defaults to 169.254.X.X with a subnet mask of 255.255.0.0.

When connected to a Robert Juliat device, since the IP address/mask range are in the same class, network communication works seamlessly.

This configuration was chosen to make it easier for non-IT technicians.

Static IP;

It's possible to configure a static IP address, but be sure to select a unique IP address with the correct subnet mask.

Configuration can be done via the Web Page, RDM, LLRP, Art-Net, or locally.

Default IP Address:

When DHCP mode is OFF and no static IP address has been selected, the device will default to a Class A IP address of 2.XXX.XXX.XXX with a subnet mask of 255.0.0.0.

This address can be found on a label near the ID plate or by pressing the right arrow on the local control.



Changing the Controlling Computer's IP Address:

- The IP address and subnet mask of both the fixture and the computer must be on the same network class.
- The computer's IP address must be different.
- Refer to your operating system's support to modify IPv4 settings:

Change your IP address on Windows

➔ <https://support.microsoft.com/en-us/windows/change-tcp-ip-settings-bd0a07af-15f5-cd6a-363f-ca2b6f391ace>

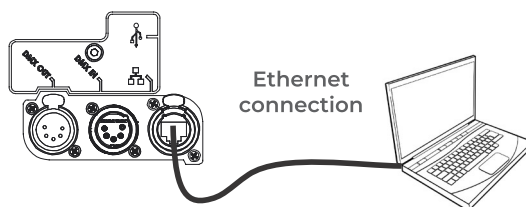
Change your IP address on Mac

➔ <https://support.apple.com/en-ae/guide/mac-help/mh14129/mac>

Example: Using the fixture's default IP address

- 1 - Computer IP address: 2.2.2.2
- 2 - Computer subnet mask: 255.0.0.0

5.4.4.1 Control



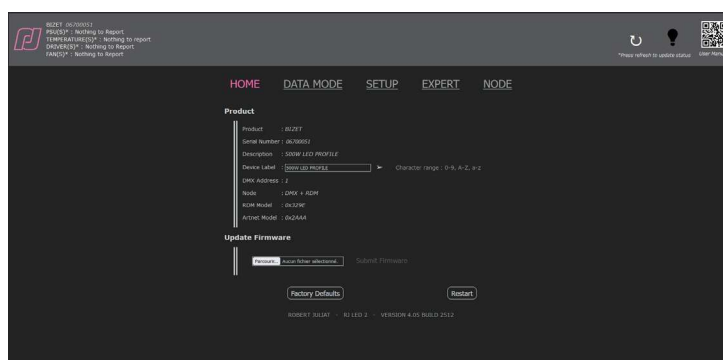
The fixture must be connected to a compatible network or directly linked to a computer with an RJ45 Ethernet cable.

The fixture's IP address: *see section 5.4. Network*

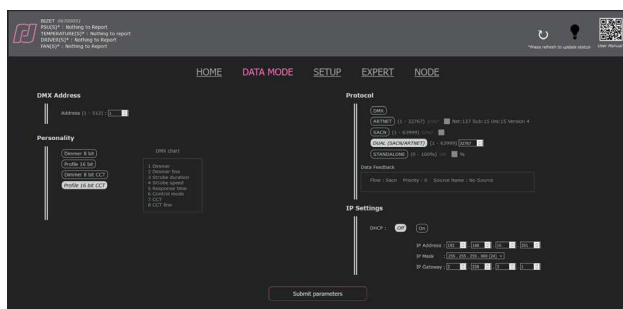
5.4.4.2 Connection to the Web interface



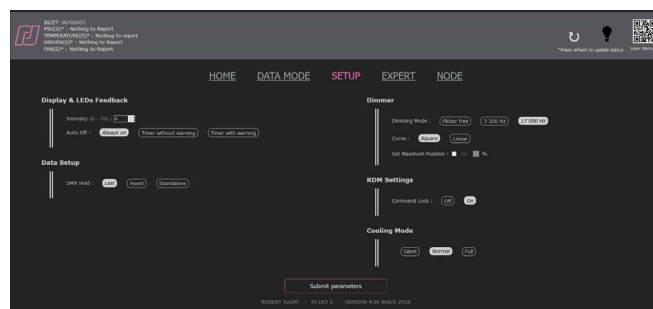
- 1 - Open a web browser (Microsoft Edge, Firefox, Apple Safari...)
- 2 - Enter the fixture's IP address in the browser's address bar
 - "00X" is read as "X".
 - Never type a zero (0) before the numbers XX or X (*see 5.4.4*)
- 3 - The HOME page will appear, and all settings can now be viewed and modified.



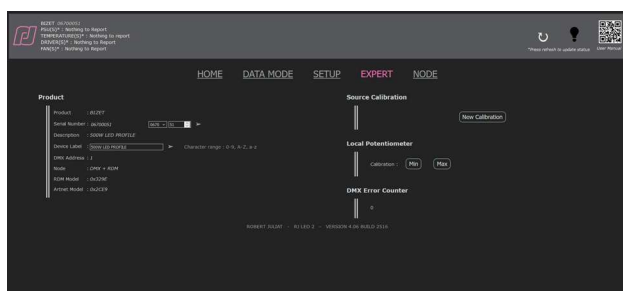
HOME Page



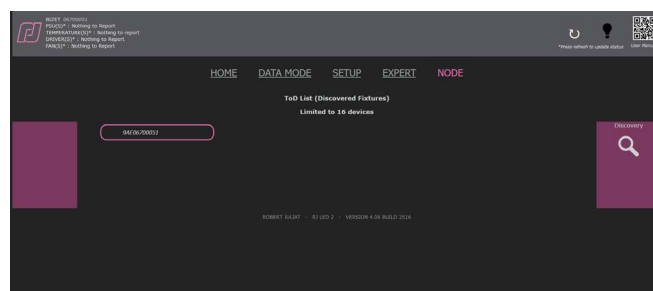
DATA MODE Page



SETUP Page



EXPERT Page, password-protected (1280).



NODE Page

UID* list of devices detected by RDM on the DMX OUT link;
the first UID is the fixture.

(*) UID : RDM Unique Identifier

5.4.5 LLRP (Low-Level Reader Protocol)

LLRP is a multicast protocol that facilitates basic IP configuration. It is part of the ESTA E1.33 RDMnet standard.

LLRP can be used for the initial configuration of networked equipment. It provides a low-level mechanism for discovering and configuring the network parameters of devices, including IP settings and basic RDMnet configuration settings.

LLRP Targets expose these parameters for configuration and respond to discovery requests from LLRP Managers. Once an LLRP Manager discovers one or more LLRP Targets, it can use LLRP to send RDM commands to retrieve or modify these parameters.

A SOLUTION FOR INCORRECT OR UNKNOWN IP CONFIGURATION

Network connectivity issues are often caused by misconfigured network addresses, with improperly configured subnet masks being the most common problem.

LLRP uses two multicast IP addresses, enabling communication even when all other network communication has failed.

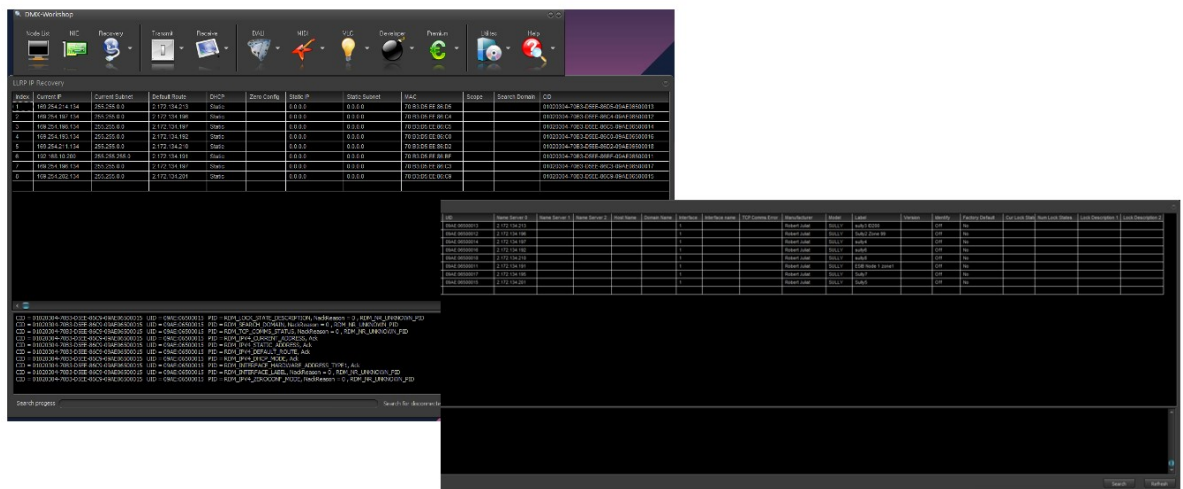
Since multicast addresses are unaffected by a misconfigured subnet mask, LLRP provides an efficient and reliable solution to recover from network misconfiguration.

In summary, LLRP simplifies the process of identifying and configuring the IP addressing of LLRP-compatible devices on your network.

All Robert Juliat equipment based on the RJ LED2 platform includes LLRP functionality.

Two LLRP Manager software tools are available for free:

- DMXworkshop by Wayne Howell from Singularity (UK): <https://singularity-uk.com/product/dmx-workshop/>



- CLU/Netron from Obsidian : <https://obsidiancontrol.com/netron-clu>

