BALDRICK BOARDS · MANUAL & DOCS

BaldrickDMX Pro Manual

Everything you need to wire, network and run your BaldrickDMX Pro — from first power-up to your first show.

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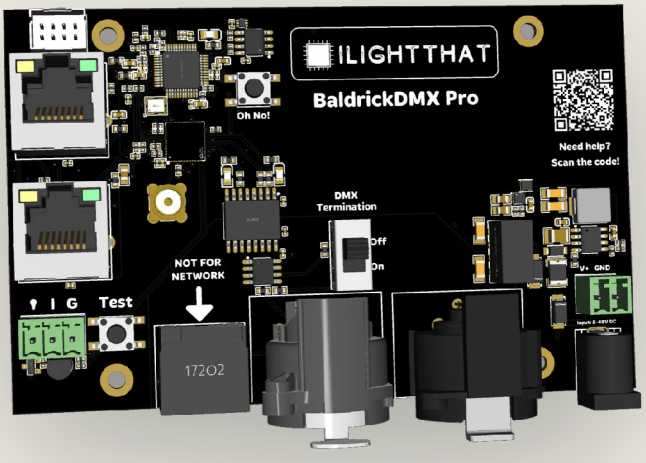

Getting started

You've just got your board through the post and you are really excited about getting started! WE KNOW, We've been there. These easy to follow steps will get you started in minutes!

Prefer watching? The `BaldrickDMX - Baldrick Basics` video was made for the original BaldrickDMX, but setting up the Pro works the same way.

BaldrickDMX - Baldrick Basics
ILightThat

Watch on

Safety First

Always ensure your power supply is disconnected before making any connections. Double-check all wiring before powering on.

Step 1: Plugging in Your Controller

Always Use a Power Supply

WARNING

Never, ever EVER EVER plug your controller directly into the wall outlet, it will go bang and you'll have to buy another one and explain to your partner what that burn mark on the kitchen table is. The BaldrickDMX Pro has a barrel jack connection and a 2 port phoenix connector **(DO NOT USE BOTH)**, these can handle voltage from 5v to 48v, which should make it easier to match whatever you are plugging in. For technical users - barrel connector (centre positive) and we use 5.5x2.1mm barrel jacks. Please remember you are just powering the board not the devices so we don't need a tonne of amps. You'll notice that a British plug has three wires and our power jacks inputs only have two - that's because you need to put a power supply in between them. We recommend the use of `Meanwell Power Supplies`.

Step 2: Installing the Firmware

Initial Firmware Setup

When your controller arrives it will be in a 'sleeping state' - you just need to plug it into your network and head to `http://baldrickboard.local` (if your DNS doesn't accept that then just

look for it on your network).

How to Install

To put it simply, press the button that says *Lets Go* then go and have a brew, the controller will connect to our server, download the latest firmware and automatically install it, once it's done the page will refresh and you can start connecting fixtures.

> **Tip**
>
> You must plug the board into your network with an Ethernet cable for the initial firmware download. Use one of the two Ethernet ports on the left, not the DMX port marked NOT FOR NETWORK (or make sure your computer can give it an IP address and internet access).

How Do I Update After That?

When you go to the Web interface and look at the stats section, you'll see the version number, if there is a new version, you can click that and it will automatically update in a similar interface to how this initial install works.

Step 3: Connecting Fixtures

It's Time to Connect the Fixtures

It's time to connect the fixture, choose a port:

- RJ45
- 3 PIN XLR
- 5 PIN XLR

Then take your cable and plug it in. *Please don't make me have to record a video on how to do this.*

They all do the same thing so don't get too excited.

The RJ45 DMX port is the one marked **NOT FOR NETWORK**. It looks like an Ethernet port but carries DMX, so keep it away from your network switch.

Step 4: xLights Connection

Connecting with xLights

You can connect directly with xLights, look for BaldrickDMX Pro under ilightthat.

From here you can push your model settings directly to the controller and output to lights nice and easily!

You can either:

- Click **Discover** and xLights will automagically find the BaldrickDMX Pro.
- Add the board manually by selecting *ILightThat* as a vendor and *BaldrickDMX Pro* as the Model. You will then need to put the IP Address in manually.

Step 5: Adding More Boards

The two Ethernet ports are joined by a built-in switch. Plug your show network into one and run a cable from the other to your next board, instead of running a cable back to your network switch for each one.

Technical specifications

At a glance

Specification	Value
DMX-uitgang	Eén universe op RJ45, 3-pins & 5-pins XLR
DMX-terminatie	Aan/uit-schakelaar op het board
RDM	Ondersteund
Ethernet	2 x 100Mb-poorten met switch op het board om door te lussen
WiFi	Op het board met aansluiting voor externe antenne, voor Busk Board, CunningFX en bediening van het board
Inputs	1 Turniput-poort en testknop op het board
Protocollen	DDP, Art-Net, E1.31, sACN
Voedingsingang	`5–48V DC` barrel jack of 2-pins connector
Montage	Medium formaat, past op Baldrick8-bases
Integratie	Volledige xLights-ondersteuning

Board components

1. **QR Code** — An easy to scan QR code which will take you to these docs for easy troubleshooting.
2. **DMX OUTPUT RJ45** — With a helpful reminder **NOT TO PLUG THIS PORT ON YOUR NETWORK**.

3. **DMX OUTPUT 3 PIN** — A fancy schmancy Neutrik XLR.
4. **DMX OUTPUT 5 PIN** — A fancy schmancy Neutrik XLR.
5. **Power input** — You've got the choice of a Phoenix connector or barrel jack **(DO NOT USE BOTH)**, these can take 5v to 48v and will automatically step down to power the components, no jumpers needed.
6. **Ethernet ports** — Two 100Mb ports joined by a built-in switch. Plug one into your show network and use the other to daisy-chain to your next board.
7. **DMX Termination switch** — DMX cables need to have their ends properly terminated to prevent any issues with the signal. Sometimes, the cable plugs have this built-in, but if they don't, this switch lets you do it right there.
8. **Oh No! button** — For factory reset, in case you break the board and need to reset it to factory settings. When held for 10 seconds **during the board boot process**, the controller will reset to factory settings, everything will be removed including the latest firmware and it will be in the 'shipping state' where you click to update to the latest firmware.
9. Turniput **port** — Connect a button, motion sensor, reed switch, beam break or other input device and use it with The Turnip Network.
0. **WiFi antenna connector** — Screw on an external WiFi antenna for Busk Board, CunningFX and board control over WiFi.
1. **Test button** — Pressing it acts as if the device on the Turniput port had been triggered, so you can test your actions without wiring anything up.

> ⚠ **Mounting holes**
>
> The BaldrickDMX Pro has the same medium footprint as the Baldrick8, so you can reuse your Baldrick8 bases and mounts. **DO NOT DRILL out** these holes to make them fit the screws you've got already, doing this will void any warranty.

Web interface

The BaldrickDMX Pro includes a powerful web-based configuration interface that allows you to set up and control your board from any web

browser. This comprehensive guide covers every aspect of the web interface.

Stats Dashboard

System Information

The Stats board gives you a heads up as to what's going on with your controller.

Uptime

Tells you how long your controller has been powered on *(this is useful in June to remind you that you forgot to turn it off over christmas)*

Frame Rate

This lets you know what the FPS (Frames Per Second) the controller is currently outputting.

Network Throughput

Like the FPS, this gives you an indication of the volume of network traffic passing through the controller, this should help with debugging.

Temperature

With a sensor next to the Ethernet connector, this gives you an indication of the board temperature *(in Celsius because water freezes at 0, not 32.. how does that make sense?)*

Generally, PCBs and components are good for -40 to +85°C. Anything below 60°C on this board is fine and nothing to worry about. If the temp is above that, try blowing on it like you would a hot chip out of the oven.

Firmware Version

The BaldrickDMX Pro is pretty new in the world of controllers and we've got a LOT of features left to add, this will let you know your current version and if there is a version to upgrade to.

(clicking the new version will upgrade it in place then restart the controller)

IP Address

It would be pretty silly to have a controller information box without showing you the IP Address of the controller wouldn't it? That would be like launching a controller without being able to manage the networking.

Test Mode

Quick Testing & Troubleshooting

Test Mode allows you to, well, test the board.

Test Patterns

Alternate Channels

Alternates between channels for testing individual DMX outputs.

Slow Sine Wave

All channels start at zero, go to 255, and back to zero in a slow sine wave pattern.

Fast Sine Wave

Same as slow sine wave but at a faster speed for more dynamic testing.

Sine Ripple

Creates a sine wave that moves across channels over time, each channel moving between 0 and 255.

DMX Preset

Allows you to select a DMX preset that you've created as a test mode.

Networking Configuration

Good Defaults, Easy Config

Hostname

The default hostname is baldrickboard (hence baldrickboard.local). If you have one BaldrickDMX Pro then it's completely fine to keep this as it is, however if like us you want to collect a few of them, then we'd recommend you change this to something like *frontgarden* or *upstairsroof*

(Just a reminder that hostnames should be lowercase without spaces)

DHCP / STATIC

The default option is DHCP (which is Dynamic Host Configuration Protocol but you don't need to know that) which basically means your router or computer gives the board an I.P. address. This is great for initial setup but when you want to run a show it's best to switch it to STATIC, that's where your controller tells the router / computer "This is my IP".

IP Address

Set this to the IP address that you want the controller to be fixed to.

Subnet Mask & Gateway

It is more than likely that you can copy the Subnet Mask (the size of your network) and the Default Gateway (the exit point of your network) from the output of an IPconfig check.

DNS Server

DNS wise, typically, your default gateway is your router IP, and that more often than not, can provide your network with DNS. However, some people like to use "outside 3rd parties" DNS like google or cloudflares DNS. If you don't know about this, its probably best just to stick to DHCP.

DMX Presets

Preset Management

The BaldrickDMX Pro lets you define Presets of set channels and values that can be used either in a test mode or via an action over the Turnip Network.

Adding a Preset

When you add a preset, you are asked for the channels and a value, you can add as many channels and values as you like.

The channels input takes comma separated values such as *11,16,19,21* but also can take ranges such as *100-150* this will include all the numbers between 100 and 150 (including 100 and 150).

Mark Mode

Coming soon...

The Turnip Network

Network Discovery

The BaldrickDMX Pro will keep an eye out on the network for other Baldricks and let you know how they are doing (this is helpful as we don't put an LCD screen on the board).

Test Sync

Ticking this box will sync the test mode between all compatible boards, meaning if you are doing something on the house and want all your baldricks in Test Mode, it's very easy to do!

Data Settings

Protocol Configuration

DDP Start Channel

Configure the starting channel for DDP (Distributed Display Protocol) communication.

sACN/ArtNet Start Universe

Set the starting universe for sACN (Streaming ACN) and ArtNet protocols.

sACN/ArtNet Channels Per Universe

Configure how many channels are used per universe for sACN and ArtNet protocols.

Advanced Settings

Advanced Configuration Options

We avoided it for so long but it's finally time to have a "box to stick stuff that doesn't fit in the other categories" and here it is, Advanced Settings.

Launch Preset at Boot

This allows you to select a preset to be loaded by default when the board is loaded, if a signal is detected from the network then this preset is overridden.