

# XTBA DMX8 DECODER PCB

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# XTBA

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# XTBA DMX8 DECODER PCB

V28 or later - RDM compatible – see RDM Section

The XTBA **DMX8 Decoder D** is a eight channel DMX512 decoder to 0 to +10 volts. The PCB provides a simple and low cost solution to DMX interfacing. Mains powered and mounted in a DIN Rail case for easy installation.

In addition to the analogue decode functions the DMX8 Decoder can also be user set as a non dim controller on any or all of the eight outputs. The outputs can also be configured as all eight outputs from a single DMX channel or two groups of four from two DMX channels.

The unit can also be set for 'emergency mode' to fade to a pre-set level in the event of DMX loss.

## **Connections DMX and Power**

Pin1 – next to capacitor	PSU in Common / AC Centre Tap
Pin 2 -	AC In
Pin 3 -	AC In
Pin 4 -	DMX – In – XLR pin 2
Pin 5 -	DMX RDM Flag – not implemented, do not connect
Pin 6 -	DMX + In – XLR pin 3
Pin 7 -	DMX Common – XLR pin 1
Pin 8 - next to board edge	Spare PSU common

For DC power input connect to Pin 1 (common) and Pin 2 (+ volts)

## **Connections Analogue Out - marked underside of PCB**

Pin 1 – Channel 1 Analogue Out
Following in channel order
Pin 8 – Channel 8 Analogue Out
Pin 9 – Analogue Common
Pin 10 – Analogue Common

## **Operation**

In use the red led will be lit to show correct operation and the green data led will light if valid DMX is being received. If the address switches are set beyond 512 the green data led will flash on and off. If data is lost the green led will turn off after 1 second and the analogue output will be maintained, or the set to zero dependant on the setting of the hold last frame option.

## **Output Test**

At any time setting the hundreds address switch to 8 the decoder will enter test mode. The units switch can then be used to set the output to full, 1 through 8. If the units switch is set to 9 all outputs will go to full. The green data led will flash slowly to show you are in test mode. The tens switch is ignored in test mode.

## **Power Up User Set-up Options**

The factory default is set as an eight channel decoder. The unit can also be set for single channel operation 1/8 mode or two channel operation 2/4 mode. The unit can also set any of the outputs to non dim mode. Outputs set in this way will switch to full +10 volts if the received DMX is greater than 50%.

## **Power up options**

The following options are only available when the address switches are set before the unit is powered up. This prevents the options being accidentally entered during normal operation. Setting the address switches beyond 512 (except in 8\*\* mode) when the unit is powered will have no effect, but the green led will flash to indicate an invalid address. Power up options once set are retained by the converter. Multiple options can be set one at a time powering down between each option.

### Hold Last Frame

**611** - Setting the address switches to 611 and powering up will set the unit to hold last DMX frame in the event of data loss.

**612** - Setting the address switches to 612 and powering up will clear the hold last frame setting – if set.

**651 - 1/8 Mode** – On power up if the address switches are set to 651 all eight outputs will be controlled from a single DMX channel.

**652- 2/4 Mode** – On power up if the address switches are set to 652 the first four outputs are controlled by the first DMX channel, the second four outputs from the next channel.

**770 Mode** – On power up if the address switches are set to 770 all eight outputs will become 'non dims' with the on set at 50%.

**771- 8 Mode** – On power up the unit will check if the hundreds and tens address switches are set for 77, the units address switch will then set the channel selected by the units BCD switch to be a non dim channel with the on set to 50%. Selecting the same channel again on power up will toggle the channel back to analogue.

So if you need to make channel seven and eight non dims set the BCD switches to 777 and power up, this will make channel seven a non dim. Power down select 778 on the BCD switches and power up again. this will select channel

eight to be a non dim. Then set the BCD switches to the DMX address required and the unit is ready to go.

### **99(0 to 9) Emergency Mode – Fade to level on DMX loss**

This mode setting allows the converter to send out a predetermined level to all outputs in the event of DMX loss. So in circumstances where a DMX control failure might be a problem (e.g. people are going to start bumping into things and falling over) setting the unit to Emergency Mode will help.

With the power to the unit set off, setting the hundreds address switch to 9 and the tens address switch to 9. The level to be faded to on DMX loss is then set by the units address switch. 1 being 10%, 2 = 20% etc. to 9 being 90%.

Setting 0 in the units address switch sets the emergency level to 100%. Once set power the unit up and the power and data leds will alternate to show the level setting is stored and emergency mode is set. 98\* on power up will clear the emergency mode if set.

If the unit is running in emergency mode the green data led will flash quickly.

**000 Mode** – On power up if the address switches are set to 000 the unit will default back to the factory settings. e.g. all eight analogue out, channels 1 through 8. Hold Last Frame off, emergency mode off.

### **Technical Specifications**

Maximum Update Rate:	44 updates/s
Channels Range:	1 to 512
Output voltage:	0V to +10V DC
Maximum current:	1ma per output
Low voltage AC:	9-0-9V 6VA or Low voltage DC:15V 200 ma
Dimensions	100mm x 90 mm x 20mm clearance height

### **DMX/RDM**

DMX/RDM (Remote Data Management) allows a suitably equipped DMX controller to find, set and monitor functions of the DMX to DALI converter.

By using RDM the address can be remotely changed, the units personality changed, product information, software version and system status found.

### **RDM Commands supported:**

GET/SET Device ID, Reset Device, Device Label, Factory Defaults, DMX Personality, Personality Description, DMX Start Address, Display Level.

GET Support Parameters, Parameter Description, Device Info, Product Detail ID, Device Model Description, Manufacturer Label, Software Version.

### **RDM Personalities**

Personality 1 – Normal 8 channel operation

Personality 2 – 1/8 mode, all eight channels controlled from a single channel

Personality 3 – 2/4 mode, first 4 channels DMX1, second 4 channels DMX2

### **DMX/RDM is fully compatible with standard DMX512.**

If the control desk is not RDM it will not send a RDM request so the DMX to DALI converter can't respond.

### General Information

**This product may only be used for controlling dimmers and moving lights. It must not be used in DMX512 applications for stage machinery or pyrotechnics. Using the product out of these specifications will remove all responsibility from the supplier.**

CE Declaration of conformity

XTBA declares that the following equipment meets the requirements of the EMC Directive 89/366/EEC. WEE/FC2753ZS

CE



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