

# **XTBA DMX RELAY 2 – DIN Rail SSR**

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# **XTBA**

Unit 2 The Old Curatage  
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## Introduction:

# XTBA DMX RELAY 2 – DIN Rail SSR

DMX RDM Compatible - see RDM section

## Overview

The XTBA DMX Relay 2 - D provides a simple and inexpensive method of interfacing DMX512 to two zero cross solid state relays (SSR) rated at 2A @ 230V each. The SSRs provide acoustic and electrical noise free mains switching allowing high speed mains control from the DMX source.

The relay switch level can be set by the user between 10% to 90% in 10% steps. The Relay 2 –D can also be set for dual or single channel operation and 'emergency mode' to turn on the outputs in the event of DMX loss.

On power up the unit will display which mode it is set to as follows:  
Normal operation – The red power led will light as will the output 1 led. Output one led will go off and output 2 led will be lit and then go off

Single channel operation – The red power led will light as will the output 1 and 2 leds and flash twice.

Emergency Mode – Red power led will flash twice followed by the either of the settings above dependant on the mode selected.

## **Mains connections**

Live in	Terminals marked L. They are looped together.
Neutral	Terminals marked N. They are looped together.
Earth	Terminals marked E. Not used by the unit but looped together.
OP1	Relay out live 1
OP2	Relay out live 2

Both the unit's power supply and the two outputs are internally fused at 2A a/s.

## Operation

In use the red led will be lit when power is supplied to the unit. The green data led will light if valid data is being received and will blink if the address switches are out of range or if the unit is in 600 test mode. If data is lost the green led will turn off after 1 second and the relay output will be maintained, or lost dependant on the hold last frame setting – see 881 mode.

**600 Test Mode** - with the hundreds address switch set to six the unit will enter the test mode. The green data led will flash slowly to indicate the unit is off line. In dual mode units address switch one will set output 1 on, and two output 2. If in single mode setting bcd units switch to 1 will set both outputs on.

### **Emergency Mode**

If the unit is set to Emergency Mode (see settings below) in the event of DMX loss relays will be set to on. If in dual channel mode relay one will turn on. If in single mode both relays will turn on. The red power led will flash to indicate that data has been lost and emergency mode is running.

### **USER SETTINGS IN POWER UP**

These settings are only available on power up. Setting when the unit is powered will have no effect, but the green led will flash to indicate an invalid address. Default is set for 50% relay closed, 48% relay open, single mode, hold last frame off, emergency mode off.

Following the power up the level or setting will be stored in non volatile memory and the data and power leds will flash. The green data led will now flash to indicate an invalid address, so now change the address to the first DMX address required or power down reset the switches to the next option required and power up again.

**77? 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 relay close level between 1 to 9. 1 being 10% and 9 being 90% relay close level.

The relay open level is 2% lower than the relay close setting (e.g. 50% close 48% open) This gives a 1% window and allows the relay to operate with 'noisy' analogue faders or sub masters.

### **880 Mode – clear hold last frame if set**

Setting the address switches to 880 and then powering up, the unit will clear 'hold last frame' on DMX loss if set.

### **881 Mode – hold last frame set**

Setting the address switches to 881 and then powering up, the unit will then be set to 'hold last frame' on DMX loss. So in the event of DMX loss the relays will hold their last position - except in 'emergency mode' see 999 Mode below.

### **890 Mode – set for dual channel mode**

Setting the address switches to 891 and then powering up, the unit will enter a dual channel mode if set for single channel mode.

### **891 Mode – set for single channel mode**

Setting the address switches to 891 and then powering up, the unit will enter a single channel mode. In this mode a single DMX channel controls both relays.

### **999 Mode – Switch on DMX loss**

Setting the address switches to 999 and then powering up, the unit will enter 'emergency mode'.

**000 Mode** – On power up if the address switches are set to 000 the unit will default back to the factory settings. e.g. 50% trigger level, hold last frame off, single relay mode and emergency mode set off.

### **Technical Specifications**

Protocol	DMX512 1990 / DMX512 1986
Maximum Update Rate:	44 updates/s
Switch Point	DMX 50% On, DMX 48% Off or user settable
Relay Outputs:	2A 230V
Hold last frame:	User selectable
Power :	200/230VAC 0.25A

### **DMX/RDM**

DMX/RDM (Remote Data Management) allows a suitably equipped DMX controller to find, set and monitor functions of the Relay 2 – D unit. By using RDM the address and personality can be remotely changed, product information, software version and system status found.

#### **RDM Commands supported:**

SET Device Label - Label the unit  
SET Display Level – turn on/off the ident display on selection  
SET Factory Defaults – reset the unit back

SET DMX Address – The front panel bcd address switches can be overridden by a SET Address RDM command. This value will be used as the DMX start address unless the front panel bcd switches are changed. Once changed this new start address will now be used by the unit

SET DMX Personality – The Relay 2 – D has nine RDM personalities to control the relay on trigger level and can be altered via RDM or by using 77? Mode with the bcd switches. Other settings are be controlled from the bcd switches.

#### GET Commands Supported:

GET Device Model Description, Device Label, Manufacturer Label, Software Version, DMX Address/Slot Footprint, Personality.

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

If the control desk is not RDM it will not send a RDM request so the Relay 2 - D can't respond.

#### 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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