

# XTBA DMX RELAY

## 4 – D

DMX RDM Compatible see RDM section

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Software V21 or later

# XTBA

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# XTBA DMX RELAY 4 – D

V21 or later. DMX RDM Compatible see RDM section

## Overview

The XTBA DMX Relay 4 - D provides a simple and inexpensive method of interfacing DMX512 to four 'open input' change over relays . The relay switch level can be set by the user between 10% to 90% in 10% steps. The 4-D can be configured either as four single relays, two groups of two relays or a single group of four relays. The 4D can be configured in 'one shot' mode where the relay will close for up to 0.25 to 2.25 seconds (user settable) and then open until reset.

The unit can also be set for 'emergency mode' to close relays in the event of DMX loss.

By using two groups or a single group mode combinations of relays can be configured. Each relay can either be normally open or normally closed. So you might need one relay to close and one to open on a single channel. Or you can use the pair of relays in two group mode to control a second DMX line or other switched outputs as a pair.

## 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.

DMX in and DMX through on the Relay 4D are the same connections, so simply parallel wire the in and through cables.

**600 Test Mode** - with the hundreds address switch set to six the unit will enter the test mode. The green data led will flash to indicate the unit is off line. The setting of the units address switch will then switch the appropriate numbered relay if in single mode. If in two group mode setting address units switch to 1 will set relays 1 + 2. Setting address units switch to 2 will set relays 3 + 4. If in a single group setting the address units switch to 1 will turn on all four relays.

## 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.

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.

#### **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 relays configured in 'emergency mode' see 999 Mode below.

#### **891 Mode – set for two groups**

Setting the address switches to 891 and then powering up, the unit will enter two group mode. In this mode each DMX channel controls two relays, 1+2 and 3+4 for each DMX channel.

#### **892 Mode – set for single group**

Setting the address switches to 892 and then powering up, the unit will enter a single group mode. In this mode a single DMX channel controls all four relays. As with the example above you can then use the normally open or normally closed relays to select how the relay connections operate.

#### **900 to 909 – set for one shot mode**

On power up with the hundreds set for 9 and the tens address set for 0 the 4D will enter one shot mode. The time of the relay closure is set with the units address switch in 0.25 second increments where 1 = 0.25, 5 = 1.25 and 0 = 2.25 seconds. When the individual relay's on level is reached the relay will switch over for the time selected. The relay is only rearmed when the incoming DMX level falls below the set off level.

This slightly strange feature allows DMX to control button pushes on external equipment by wiring the switches to be controlled through the 4D's relays. The switch can then be controlled via DMX, as once switched the 4D will disconnect so continuous switch closure is avoided.

Note – in this mode all other modes are deselected so group, single and emergency modes and hold last frame are no longer available.

### **999 Mode – Switch on DMX loss**

Setting the address switches to 999 and then powering up, the unit will enter 'emergency mode' In the event of DMX loss relays will close dependant on the group settings.

If in single mode the relay 1 will close on data loss.

If in 891 two group mode relays 1 + 2 will close on data loss.

If in 892 single group mode all relays will close on data loss

**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:	24V DC 0.5A
Hold last frame:	User selectable
Power :	200/230VAC or 15 to 36V DC – see front label 1A

### **DMX/RDM**

DMX/RDM (Remote Data Management) allows a suitably equipped DMX controller to find, set and monitor functions of the Relay 4 – 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 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 address switches are changed. Once changed this new start address will now be used by the unit

SET DMX Personality – The Relay 4 – 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 address switches. Other settings are be controlled from the address 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 4 - 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



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