# XTBA NETWORK OUTPUT MODULE

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XTBA DMX Network modules provide a simple and reliable method of multipoint DMX512. They are simple to install and use. The modules output is fully isolated and rebuffered from the input. In addition the output is also line protected to prevent scroller power supplies etc. from getting back into the Output Module should they find their way onto the data line.

Mounting into the back box:
When mounting the Network Modules into the MK back box ensure that the earth screw terminal does not interfere with the modules mounting. The room inside the back box is tight, sorry about this as it might make wiring up the system tricky, but hopefully once installed you should not need to open the box again. When screwing the module plate onto the back box ensure there are no trapped cables as a shorted cable to case work will keep you 'amused' for hours tracking down the fault.

**Power supply requirements**
Each Network Module requires a DC voltage supply between 9 to 15 volts. Each module is locally regulated via the plastic tab voltage regulator - mounted off board to the metal work. Provision is also made for input reverse voltage protection by the use of a diode in the power supply feed to the 7805. The red power LED is fed from the output of the voltage regulator.

**Power consumption @ 15V**
No connection on output or output unterminated = 40ma.
Connection on output and output terminated with 110 R across pins 2+3 = 70ma.
Module shorted pins 2 and 3 = 110ma.

**DMX Data Input**
Each Network Module has a receive value of 1 so a total of 32 units may be placed on any DMX branch. Further units may be added by using a network module as the last in line to re transmit data.

**DMX Output**
The DMX output is a isolated and buffered copy of the input. Up to 32 DMX receivers can be looped onto the output. The output is short circuit and over voltage protected. The last fixture in the line should be terminated.

**Earth and Earth Reference**
Neither the data input or the data output are referenced to the case metal work. The input data Pin 1 (Screen/Common) is referenced to the PSU common. The output data Pin 1 is floating with reference to the input as it is isolated. The back box should be earthed as this supplies RF suppression to the unit and RF suppression for the DMX data.

**Power and data connections**

Connections: 5 Way Orange Klippon Connector

| | |
|---|---|
| PIN 1(next to pillar / RHS) | DATA INPUT SCREEN LOOP |
| PIN 2 | DMX DATA IN MINUS LOOP |
| PIN 3 | DMX DATA IN PLUS LOOP |
| PIN 4 | PSU COMMON LOOP |
| PIN 5(next to PCB edge) | PSU PLUS 9-15 VOLTS IN LOOP |

**Displays**

The leds on the Network Output Module display in the following way.

| | |
|---|---|
| RED | INPUT POWER - following on-board 5V regulator |
| GREEN | OUTPUT DATA - Data output active via the green LED. |

In normal operation the data led may flash as it detects the data breaks. Slow data or long breaks will also make the data led flash. The data led tells you their is something happening on the line output. It will not tell you if the data is good or indeed DMX512. The data led is driven from the isolated output power supply.

**Termination**

The last output module in and branch should be terminated at the input connector with 100/120R resistor across data plus and data minus. This termination should prevent ringing on the line and prevent data loss or data clashes.

Technical Specifications - fitted into MK back box

| | |
|---|---|
| Dimensions | 85 x 85 x 45mm |
| Power | 9 to 15V DC |
| Data | DMX512 1986/1990 |
| Pin Configuration | Pin 1 Common, Pin 2 minus data, Pin 3 plus data.<br>Pins 4 and 5 are not connected |

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.**