XTBA DMX8 AMR PCB

XTBA

35 Fernleigh Road London N21 3AN
☎ +44 (0)208 882 0100 +44 (0)208 882 9326
e. mail dmx@xtba.co.uk www.xtba.co.uk.

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XTBA DMX8 ANALOGUE MERGE/REPLACE

The **DMX8 AM/R** will convert eight channels of analogue (0 to +10 volt) to DMX512. The card can also merge the eight analogue channels into an incoming DMX data stream. The card can also be configured to replace up to eight DMX input channel levels with the converted analogue input levels.

The single board provides a simple and low cost solution for analogue to DMX interfacing and only requires an external transformer or PSU and XLRs.

Analogue to DMX + Merge
In this mode the eight analogue channels are converted to DMX512 and can be put anywhere in the transmitted DMX stream via the three address switches. If DMX is present on the input the eight analogue channels will be merged with the received DMX (highest takes precedent) and the result transmitted. Other DMX channels will pass through unaltered. In normal operation if no DMX is being received the unit will still transmit DMX making it a stand alone controler.

Analogue to DMX + Replace
In this mode up to eight analogue channels can replace the incoming DMX level anywhere in the in the DMX stream via the address switches. The number of replaced channels can be set between 1 and 8. Channels not being replaced will pass through unaltered.

Other functions

No transmit on no receive
In either mode the DMX8 AM/R can be set not to transmit if received data is not present. This facility may be useful as when the main DMX desk is turned off any analogue inputs can not be used as the card no longer transmits DMX.

Hold Last frame
The card can also be set up to hold and transmit the last valid received DMX pass on data loss. Analogue channels will still be merged or replaced with the existing held DMX levels.

5 Volt Mode
The card can be set to convert 0 to +5 volts rather than 0 to +10 Volts. Allowing switches or control pots to be directly linked to the 5 volt supply simplifying interfacing.

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Note: the card can be suppplied modified to run on a 5volt supply (rather than the usual 15VDC or transformer) for use in 5 volt mode for switch/relay interfacing.

Setting the card
These settings are only available on power up. Setting the address switches beyond 512 when the unit is powered will have no effect, but the green led will flash to indicate an invalid address.

The factory default is set for merge, always transmit and hold last frame off. The address switches are used to set up the functions in the following way on power up. Each function (if required) needs to be set up separately so if more than one function is required once the function is set turn off the power and set for the next function. Once set the options are held into non volatile memory.

Set for Replace
With the card turned off set the hundreds address switch to 7 and the units address switch between 1 and 8 to set the number of channels to be replaced. The tens address switch is not used. Turn on power to the unit and the green and red leds will alternate to show the state has been stored. If the power led flashes on its own the units setting is out of range e.g. 0 or 9.

Set hold last frame
With the card turned off set the hundreds address switch to 8 and the units to 1 the tens switch is not used. Turn on power to the unit and the green and red leds will alternate to show the state has been stored.
To clear hold last frame (if set) the hundreds to 8 and the units to 2 and then power up the card.
Note: If no transmit on no data is set hold last frame is overridden if set.

Set for no transmit on no data
With the card turned off set the hundreds address switch to 9, the tens and units switches are not used. Turn on power to the unit and the green and red leds will alternate to show the state has been stored.

Set 5 volt mode
With the card turned off set the hundreds address switch to 6, the tens and units switches are not used. Turn on power to the unit and the green and red leds will alternate to show the state has been stored.

Following any set up the green led will flash if the address switches are now out of range (1-512). Set the address switches to the start address required.

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Set back to default
By setting all three address switches to zero and powering up, the card will default back to the factory default e.g. merge, always transmit and hold last frame off.

Technical Specifications

Receive DMX	DMX1990/1986
Transmit Update Rate:	38 updates/s 120us Break,12us mab
Channel Range:	1 to 512
Low voltage AC:	12-0-12V 6VA or Low voltage DC:15V 100 ma
Dimensions	100mm x 75 mm x 35mm clearance height

Analogue Inputs – BCD switches facing away
Left of connector Pin 1 = Channel 1 input through to Pin 8
Pin 9 + 10 Input Common

DMX In
Left of connector Pin1

Pin 1	DMX OUT Common – XLR Pin 1
Pin 2	DMX OUT Minus – XLR Pin 2
Pin 3	DMX OUT Plus – XLR Pin 3
Pin 4	DMX IN Plus
Pin 5	DMX IN Minus
Pin 6	DMX IN Common

Power Input
BCD switches facing you – pin 1 LHS

Pin 1	AC IN
Pin 2	AC IN
Pin 3	0 Volts
Pin 4	0 Volts - loop through
Pin 5	+ Volts - loop through

For DC power Pin 1 or 2 = +15 volts, Pin 3 Common

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