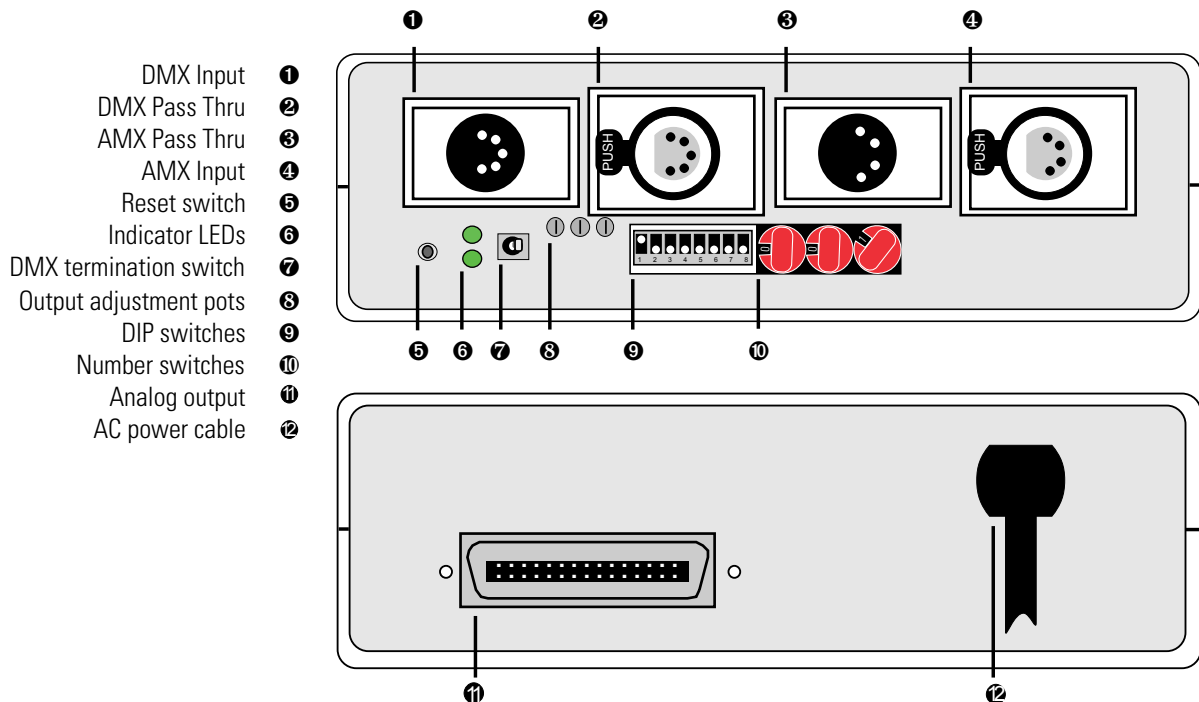


response

A32 OUT

USER MANUAL

The *Response A32 OUT* network interface allows you to convert 32 DMX512 or AMX192 dimmer signals to analog signals. The compact interface box features an optically isolated DMX link and a 200 hertz output update rate. This manual provides information on all *Response A32 OUT* controls, connectors and indicators.



- 1 DMX Input
- 2 DMX Pass Thru
- 3 AMX Pass Thru
- 4 AMX Input
- 5 Reset switch
- 6 Indicator LEDs
- 7 DMX termination switch
- 8 Output adjustment pots
- 9 DIP switches
- 10 Number switches
- 11 Analog output
- 12 AC power cable

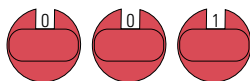
To use *Response A32 OUT*, follow these steps:

1. Plug power cable into a 120 VAC outlet.
2. For DMX operation, set DIP switch 3 down, and if optical isolation is desired, set DIP switch 1 up. For AMX operation, set DIP switch 1 down and DIP switch 3 up.
3. Press Reset.
4. Insert either a DMX or an AMX input cable into appropriate connector. If necessary, insert output cable into Pass Thru connector.
5. Set number switches to starting analog dimmer output number (see page 2).
6. If *Response A32 OUT* is the last device in a DMX data link, set DMX terminator switch **On** (right). In AMX mode, leave terminator switch **Off** (left).
7. Insert 36-pin analog dimmer cable in analog output connector.
8. See following pages for filter and adjustment pot settings and additional information on switch functions and settings.



Note: When data flow is interrupted, all outputs fade to zero percent after three minutes.

Entering starting analog dimmer address



The rotary number switches allow you to set the dimmer number for the first analog output. The remaining 31 analog outputs are consecutively numbered from that number.

Set the rotary number switches to a starting number between 1 and 512. *Response A32 OUT* reads numbers over 512 as a starting address of 1. You do not have to press the reset switch when resetting the starting address (unless you are also ending a diagnostic test).

Performing diagnostic tests

Six diagnostic tests are provided on the *Response A32 OUT*. The first two digits entered on the number switches specify the type of test; the third digit determines the rate at which it runs. To run a test, follow these steps:

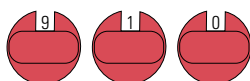
1. Enter the two-digit test number on the left and center rotary number switches. See below for test numbers and descriptions.
2. Enter a rate number on the right number switch.

For each test, the third digit determines the rate at which the test runs. When the third digit is set at 0, the test pauses; when the third digit is set at 1, test runs at its minimum rate; at 9 it runs at its maximum rate.

3. Press Reset to start test.
4. To stop test, enter a valid three-digit starting dimmer number (001- 512) on the number switches, and press Reset.

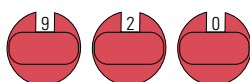
Chase

The **Chase** test flashes each of the 32 analog dimmers to full intensity in a chase sequence. Set first two number switches to 91.



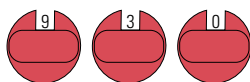
Fade All

The **Fade All** test simultaneously fades all analog dimmers to full intensity, and then back down to zero intensity. Set first two number switches to 92.



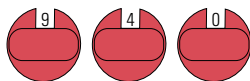
Fade Chase

The **Fade Chase** test fades each of the 32 analog dimmers to full intensity, and then back to zero intensity in a chase sequence. Set first two number switches to 93.



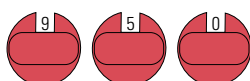
Selected Output to Full

The **Selected Output to Full** test sets a selected analog dimmer output to full intensity and holds it there. Set first two number switches to 94, and press Reset. Then enter analog dimmer number (001- 032).



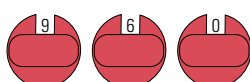
All to Percent

The **All to Percent** test sets all analog dimmer outputs to an intensity percentage you specify and holds them there. Set first two numbers to 95, and press Reset. Then enter any three-digit percentage between 000 and 100 on the number switches.



All to DMX Level

The **All to DMX Level** test sets all analog dimmer outputs to an intensity level you set and holds them there. DMX level changes the output scale from 0- 100 (percent output intensity) to 0-255 (DMX data format). Set the first two numbers to 96, and press Reset. Then enter a DMX intensity level between 000 and 255 on the number switches.

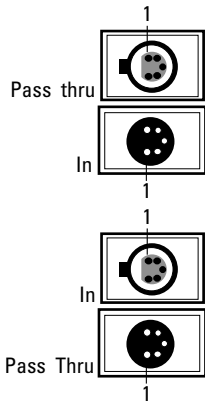


DMX pinout

- 1 - Common
- 2 - Data (-)
- 3 - Data (+)
- 4 - No connection
- 5 - No connection

AMX pinout

- 1 - Common
- 2 - Clock (+)
- 3 - Analog multiplex
- 4 - Clock (-)



DMX connectors

Response A32 OUT has two 5-pin XLR connectors, a male connector for DMX input and a female connector for DMX pass through. The Pass Thru port allows you to pass the DMX signal through the *Response A32 OUT* to other digital interface or dimming equipment.

AMX connectors

Response A32 OUT has two 4-pin XLR connectors, a female connector for input and a male connector for AMX pass through. The Pass Thru port allows you to pass the AMX signal through the *Response A32 OUT* to other AMX interface or dimming equipment.

Reset switch



Pressing the Reset switch forces the microprocessor to reread DIP switch and number switch settings.

You must press Reset to activate DIP switch setting changes and to start and stop diagnostic tests. You do not have to press Reset when you change the starting analog dimmer number (unless you are also ending a diagnostic test).

Indicator LEDs



Top LED continuous	Receiving valid data
Top LED blinking	Receiving invalid or no data
Bottom LED continuous	Receiving power

DMX512 termination switch



Set the termination switch **On** (right) if the *Response A32 OUT* is the last device in a DMX data stream. If you are sending a DMX data stream to another interface or dimming device, set the termination switch **Off** (left). For AMX operation, set terminator switch **Off** (left).

Potentiometers



The *Response A32 OUT* has three potentiometers, two analog output pots, and an AMX input pot.

Minimum analog output level

The left pot adjusts the minimum analog output level from 0 to 3 volts. Voltage meter readings are required to accurately adjust the output levels. When shipped from the factory, minimum analog output level is set at 0 volts.

Turn pot clockwise to increase minimum analog output level or counterclockwise to decrease the minimum analog output level. Twenty full turns are required to cover the full range of minimum output levels.

Maximum analog output level

The center pot adjusts the maximum analog output level from 5 to 12 volts. Voltage meter readings are required to accurately adjust the output levels. When shipped from the factory, maximum analog output level is set at 10 volts.

Turn pot clockwise to increase maximum analog output level or counterclockwise to decrease the maximum analog output level. Twenty full turns are required to cover the full range of maximum output levels.

AMX maximum input level

The right pot adjusts the maximum AMX input level. Turn pot clockwise to increase the maximum AMX input level, or counterclockwise to decrease the maximum AMX input level. When shipped from the factory, maximum AMX input level is set at 5 volts.

DIP switch settings



DIP switch settings determine DMX or AMX operation mode, enable and disable optical isolation and select analog output filters. See below for DIP switch settings; set all unused DIP switches in the down position.

DMX/AMX operation mode

Set DIP switch 3 according to chart below to select DMX or AMX operation.



DMX operation
AMX operation

Switch 3

Down
Up

Enable/disable optical isolation

Optical isolation creates a physical break between the *Response A32 OUT* and a DMX link to help prevent accidental high voltage potentials from damaging other equipment on the DMX link. Optical isolation must be disabled for AMX operation. See chart for DIP switch settings to enable and disable optical isolation.



Optical isolation enabled (DMX)
Optical isolation disabled (AMX)

Switch 1

Up
Down

Analog output filters

Output filters moderate fluctuating input signals. Filters slow lamp response to control adjustments; experiment with filters to determine the minimum filter needed. Set DIP switches five and six as shown below to select filter.



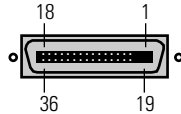
No filter
Small filter
Medium filter
Large filter

Switch 5 Switch 6

Down Down
Down Up
Up Down
Up Up

Analog pinout

Pins 1-32 - Dimmers 1-32
Pins 33-36 - Common



Analog connector

The analog connector is a Centronics-type, 36-pin female connector that outputs 32 analog signals. Each analog output can drive 5ma. The minimum voltage can be adjusted from 0 to 3 volts. The maximum voltage can be adjusted from 5 to 12 volts. See the section on analog output adjustment pots for adjustment information.

AC power



The *Response A32 OUT* has an operating range of 90 to 140 volts with optimal performance at 110 volts. It has an internal type GMA-1/2 fuse. Disconnect power before replacing fuse.

Specifications

Dimensions	2.25"H x 6"W x 7"D
Weight	3 pounds
Processing speed	200 hertz



Americas ■ 3030 Laura Lane, P.O. Box 620979, Middleton, Wisconsin 53562-0979 USA ■ Tel: +608 831 4116 ■ +800 688 4116 ■ Fax: +608 836 1736 ■ +800 555 8912
Europe ■ Unit 5, Victoria Industrial Estate, Victoria Road, London W3 6UU, UK ■ Tel: +44 (0)20 8896 1000 ■ Fax: +44 (0)20 8896 2000
Asia ■ Room 605-606, Tower III Enterprise Square, 9 Sheung Yuet Road, Kowloon Bay, Kowloon, Hong Kong ■ Tel: +852 2799 1220 ■ Fax: +852 2799 9325
Web: www.etcconnect.com ■ Email: (US) mail@etcconnect.com ■ (UK) mail@etc europe.com ■ (Asia) mail@etcasia.com
Service: service@etcconnect.com ■ Toll free: 800 775 4382 ■ Comments about this document: techcomm@etcconnect.com
Copyright © 2003 Electronic Theatre Controls, Inc. All Rights Reserved. Product information and specifications subject to change.
● 1047M1003 ■ Rev B ■ Released 09/1990 ■ Revised 01/2003