DOUG FLEENOR DESIGN

DMX512 Isolated Splitter / Amplifier

model: 121, 121D, 121Q, 123, 125, 1211
technical data sheet

The DMX splitter is available in three standard configurations: three, five, or eleven outputs from a single DMX input. An enhanced five output splitter with miswiring and lightning protection, and a universal power supply is also available (see the model 125EE data sheet). Units with any number of inputs and outputs may be manufactured on a custom basis.

Each output is electrically isolated from the input, and from every other output, by 2500 volt optical couplers. Each output has its own line driver and associated power supply.

The DMX splitter allows connection of DMX receivers (dimmers, color changers, moving lights, etc.) in a star configuration as opposed to a *daisy chain* configuration. In a star configuration, each control cable is run to a central point, in this case the splitter. In a daisy chain configuration all the devices are connected on one control cable, the output of one feeding the input of the next. It is not good practice to simply split a DMX control cable using a "wye" cable as this can cause signal corruption due to reflections. Typical uses of the splitter include splitting the control signal between stage right and stage left dimmers, running an isolated split to a string of color changers, splitting and isolating a feed to a wall outlet for temporary or rented dimmers, isolating a stack of dimmer packs from each other, etc.

SPECIFICATIONS: All specifications meet or exceed DMX512 requirements

Input circuit:	EIA-485 receiver with 120 ohm termination resistor between +Data and -Data (Units with feed through connectors do not have internal termination)
Input signal:	0.2 volts minimum, 12 volts maximum
Output circuit:	EIA-485 driver
Connectors:	Gold plated 5 pin Neutrik D-1 Series (3 pin connectors, terminal blocks, or RJ45 optional)
Feed through:	A non-isolated feed through connector is standard on the eleven output model and is optional on the one, three, and five output models.
Isolation:	2500 volt optical coupler, 1500 volt split bobbin transformer
Power input:	100 - 120 volts, 50/60 hertz, 12 watts (208 - 240 volt optional)
Color:	Top, bottom and sides: Silver hammer tone Front and back: Black

Model #	Function	Inputs	Outputs	Size	Weight
121	Isolator	1	1	1.7"H × 6.5"D × 6.5"W	2.1 pounds
121D	Isolator	2	2	1.7"H × 6.5"D × 8.25"W	3.3 pounds
121Q	Isolator	4	4	1.7"H × 6.5"D × 16.5"W	6.5 pounds
123	Splitter	1	3	1.7"H × 6.5"D × 6.5"W	2.6 pounds
125	Splitter	1	5	1.7"H × 6.5"D × 8.25"W	3.3 pounds
1211	Splitter	1	11	1.7"H × 6.5"D × 16.5"W	6.5 pounds

(19" rack mount kits are available for all above models)

Notes: A pair of one, three, or five output units may be mounted in a single rack space. Call us for part numbers.
Rack ears with front mounted connectors (to move the input and outputs to the front of the rack) are also available.

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DMX512 Isolated Splitter - Selected Features

The following information is provided to assist you in determining if the DMX512 Isolated Splitter would be of benefit in your installation. If you have any questions, please feel free to call, write, or FAX us.

FEATURE	BENEFIT
Input is electrically isolated from output.	Console is protected from failed dimmers, lightning damage, and any other cause of high voltage on the control cable.
Outputs are isolated from each other.	Color changers, moving lights, other dimmers are protected from each other.
Outputs are separately buffered.	Reflections, short circuits, etc. on one output cannot affect another output.
No user adjustments.	Easy "fool proof" installation.
DMX pinouts are printed on the splitter.	Assists in proper control wiring.
Powder coated 1/10" aluminum chassis.	Rugged and attractive for years of service.
Gold plated Neutrik 5 pin connectors.	Assures reliable connections.
All integrated circuits are socketed.	Eases field service.
Uses 2500 Volt optical couplers.	Easily isolates line voltage failures. Usually withstands electrical storm damage.
Forty times faster than DMX data rate.	Reliable, high speed data throughput. Units can be cascaded.
"Air gap" circuit board under isolator.	Prevents arcing across circuit board.
60 mA drive current.	Reliably drives long control cables.
Power and input signal indicators.	Simplifies system trouble shooting.
In the lighting industry since 1979.	We'll be here if you need us.

Isolation of the console from the dimmers is desirable because device failure in one of the dimmers can place damaging voltages on the control cable. Without an isolator between the dimmers and the console, this voltage can cause extensive damage to the console's microprocessor circuits. With an isolator in place, damage, if any, is restricted to the isolator. Electrical storms can also induce damaging voltages on control cables. Barring a direct strike to the system, Doug Fleenor Design Isolators effectively protect against storm damage.

Limited Manufacturer's Warranty

Products manufactured by Doug Fleenor Design (DFD) carry a five-year parts and labor warranty against manufacturing defects. It is the customer's responsibility to return the product to DFD at the customer's expense. If covered under warranty, DFD will repair the unit and pay for return ground shipping. If a trip is necessary to the customer's site to solve a problem, the expenses of the trip must be paid by the customer.

This warranty covers manufacturing defects. It does not cover damage due to abuse, misuse, negligence, accident, alteration, or repair by other than by Doug Fleenor Design.

Most non-warranty repairs are made for a fixed $50.00 fee, plus shipping

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