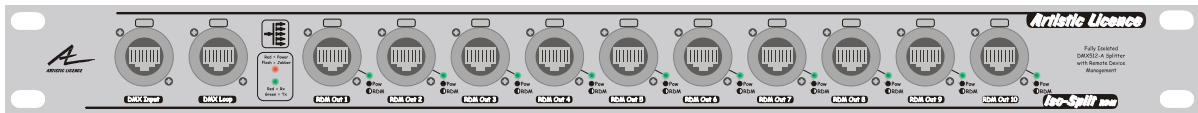


Iso-Split RDM User's Guide



Artistic Licence



Manual Revision V1.3

Iso-Split RDM

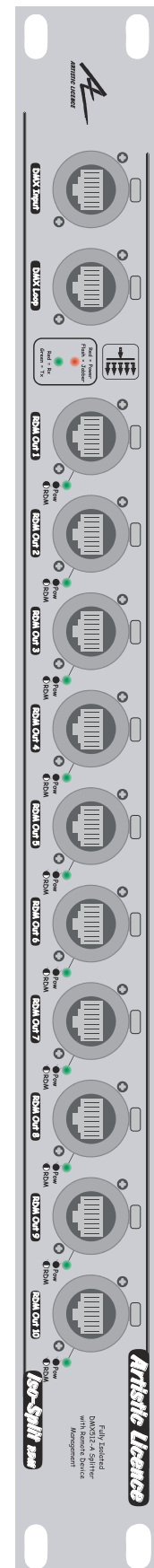
Iso-Split RDM is a fully bi-directional DMX512 splitter or Distribution Amplifier. All primary data connections are mounted on the front panel of a 1RU 19 inch case.

The product supports both Remote Device Management (RDM) V1.0 and the High End Systems Talkback Protocol.

All inputs and outputs are fully optically isolated.

Major features include:

- All front panel data ports are Neutrik Ethercon
- All outputs are optically isolated.
- The DMX512 input is optically isolated.
- Each output provides a power / data indicator.
- The input provides indication of good data and bus direction for bi-directional operation.
- The product is compatible with all three versions of DMX512.
- Input loop through facility for either termination or connection to further DMX512 products.
- 10 independent totally isolated bi-directional DMX512 output ports connected via screened EtherCon RJ45 connectors.
- Power indicator.
- Jabber detection circuitry.
- Automatic disconnection of output in fault condition.
- Universal Input Mains Power Supply.
- Rear panel provides additional DMX512 input and Loop connections Via standard 5 pin XLR connections.



Front Panel Indicators

Two dual colour indicators are provided:

Data:

- Green: Indicates that DMX512 data is flowing from input to all outputs (normal operation).
- Red: Indicates that RDM data received by the outputs is being returned to the controller.

Power:

- Red: Indicates good power and normal operation.
- Flashing: Indicates that a connected RDM device is jabbering (returning unwanted data continuously). Return data from this output will be disconnected. Please note that this condition will occur during discovery and is not an error.

DMX512 Input

The DMX512 input is connected to the RJ45 Ethercon connector on the left of the front panel. The RJ45 Ethercon connector adjacent to this provides a passive loop through such that multiple DMX512 receivers can be connected to the same signal. When the Iso-Split RDM is to be used at the end of a DMX512 cable, a termination connector should be fitted to the loop through.

The DMX512 input is optically isolated from the outputs and mains earth.

DMX512 Output

The DMX512 outputs are provided on ten Ethercon connectors. Each output is independently buffered and isolated.

Cable connection for both input and output is as follows:

Ethercon	Function	Connection	5 Pin XLR
Pin 1	Data True	Connect to twisted pair wire	Pin 3
Pin 2	Data complement	Connect to twisted pair wire	Pin 2
Pin 7	Signal Common	Connect to wire	Pin 1
Chassis	Chassis	Connect to shield of STP cable	No Connect

Each output is capable of driving 32 DMX512 devices. It is not necessary to terminate unused outputs.

DMX512

Iso-Split RDM is compatible with all versions of DMX512 including:

1. DMX512
2. DMX512 (1990)
3. DMX512A
4. BSR E1.11

Iso-Split RDM will automatically select uni-directional or bi-directional operation as directed by the DMX512 controller.

No user selection is required.

RDM

Iso-Split RDM supports the Remote Device Management protocol V1.0.

Power Supply

The internal power supply provides a universal input in the range 85 to 264 VAC via a 3 pin IEC connector.

The mains fuse should only be replaced with a 3.15A Slow Blow.

Earthing

The following table summarises the internal earth interconnection and isolation:

Please note that we use the term Earth-Ground to avoid international confusion. In Europe Earth-Ground is called Earth, in the USA Earth-Ground is called Ground.

Pin Numbers are for Ethercon.

Circuit	Description	
Chassis	Bonded to Earth-Ground.	
DMX512 Input (including Loop Through)	Type:	Isolated.
	Pin 7:	Connects to internal isolated circuit. No connection to Earth-Ground.
	Shell:	The RJ45 shell connects between Input and Loop Through only.
DMX512 Outputs	Type:	Isolated.
	Pin 7:	Connects to internal isolated circuit. No connection to Earth-Ground.
	Shell:	The RJ45 shell connects to Earth-Ground via an RF bypass circuit consisting of 100R and 100nF in parallel.
Internal Logic Ground	Floating.	

Termination

The input is not terminated. Connect a terminator to the loop through connector.

The outputs are terminated with a 680R/130R/680R resistive network.

Artistic Licence

© Artistic Licence Engineering Ltd. 2002
Studio 1 Spectrum House
32-34 Gordon House Road
London
NW5 1LP
Tel: +44 (0)20 88 63 45 15
Fax: +44 (0)20 84 26 05 51
Email: Sales@ArtisticLicence.com



The information contained in this document is subject to change without notice. Artistic Licence Engineering Ltd. makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of fitness for a particular purpose.

Artistic Licence Engineering Ltd. shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.