

Rail-Flip

User Guide



Please read these instructions before using the product.

This product has been designed & manufactured for professional use only. It should only be installed by a suitably qualified technician and in accordance with electrical regulations in the country of use.

Unless directed in the instructions there are no user serviceable parts inside the outer case of this product.

Always disconnect from the power supply when not in use.

Any specific IP rating, where appropriate, is given in the instructions. Unless otherwise stated this product is designed for indoor use only. If used outdoors it **MUST** be installed in an appropriate IP rated cabinet. Do not allow this product to be exposed to rain or moisture. Do not allow liquid to penetrate the product.

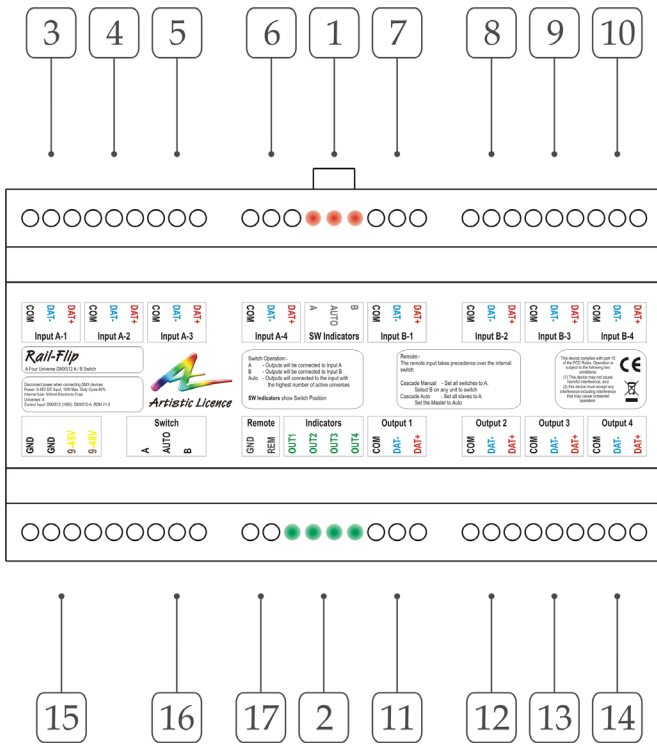
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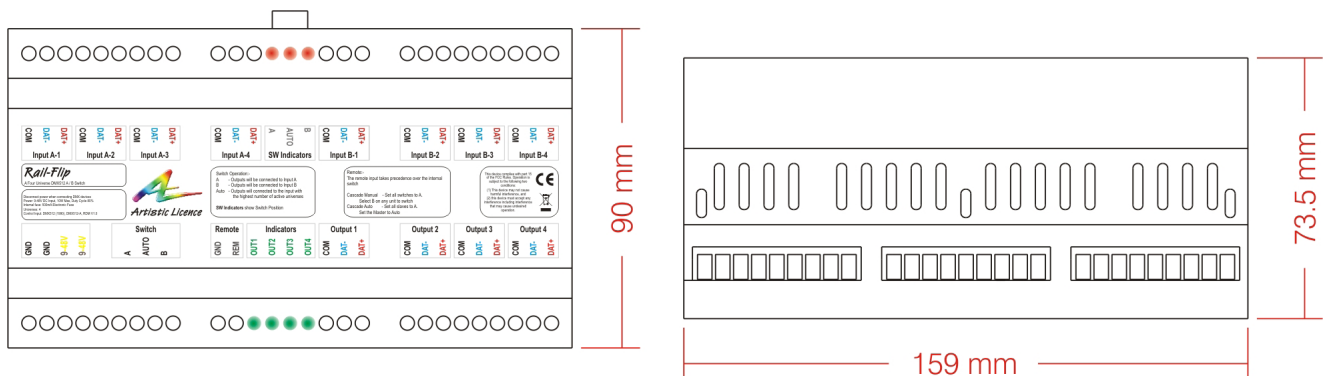


Connections



Reference	Type	Description
1	LED indicator	Switch position
2	LED indicator	Output activity
3	Data connection	Input A1
4	Data connection	Input A2
5	Data connection	Input A3
6	Data connection	Input A4
7	Data connection	Input B1
8	Data connection	Input B2
9	Data connection	Input B3
10	Data connection	Input B4
11	Data connection	Output 1
12	Data connection	Output 2
13	Data connection	Output 3
14	Data connection	Output 4
15	Power Connection	9 - 48 VDC
16	Configuration	Switch selector
17	Configuration	Remote switch

Mounting Diagram



Overview

Rail-Flip™ is a DIN rail device that allows the user to switch between two lighting controllers. It supports 4 universes and is powered via an external 9 - 48 VDC PSU.

Its primary purpose is automatic switching between a primary and backup lighting controller. It can also be used to switch between different lighting control positions.

Switching can be manual or automatic. Manual switching is selected using either the on-board switch or a remote switch.

Multiple products can be cascaded to increase the universe count.

Summary of Key Features

- 4 universe A-B switch
- Automatic switch on fail
- Manual & remote switching
- LED indicators for switch position & active outputs
- Cascade multiple products for more universes
- Fails safe when unpowered
- DIN rail or surface mount
- Compatible with DMX512, DMX512 (1990), DMX512-A, RDM V1.0 (E1.20 - 2006 ESTA Standard)

Power

Rail-Flip is powered from an external PSU rated at 9 - 48 VDC (not included).

It is recommended that a ferrite core be fitted onto the DC power lines as close as possible to the Rail-Flip. This protects the unit from any electrical spikes that appear on the DC line.

Operation

A single Rail-Flip device supports 4 universes. For more universes, multiple Rail-Flip units can be cascaded together by connecting the remote inputs together (see Figure 2 in 'Wiring Diagrams').

Stand-alone mode

See Figure 1 in 'Wiring Diagrams' for an illustration of stand-alone operation.

Rail-Flip can be used in manual, remote or automatic modes.

Manual mode

Set the switch selector to A or B to connect the outputs to lighting controller A or B respectively.

Remote mode

First, set the switch selector to position A. Leaving the remote switch open will ensure the outputs remain connected to lighting controller A. Conversely, closing the remote switch will connect the outputs to lighting controller B.

Automatic mode

Set the switch selector to the Automatic position and ensure the remote switch is open. In automatic mode, the outputs follow A or B according to which has the highest number of active inputs. If the numbers are equal, priority is given to the A inputs.

Cascade mode

To achieve cascaded control, connect the remote inputs together. See Figure 2 in 'Wiring Diagrams' for an illustration.

In manual mode, setting all switches to A connects the outputs to lighting controller A.

To select lighting controller B:

- Set the switch on unit 1 to B **OR**
- Set the switch on unit 2 to B **OR**
- Close the remote switch

For automatic switching, set the master unit to Auto and all others to A. The master unit will then control all the others.

Table 1 in the Appendix defines the detailed operation in cascade mode.

Fail-safe mode

In the event of power loss, the Rail-Flip will continue to operate with the outputs connected to the A inputs.

Wiring Diagrams

Figure 1: Stand-alone mode

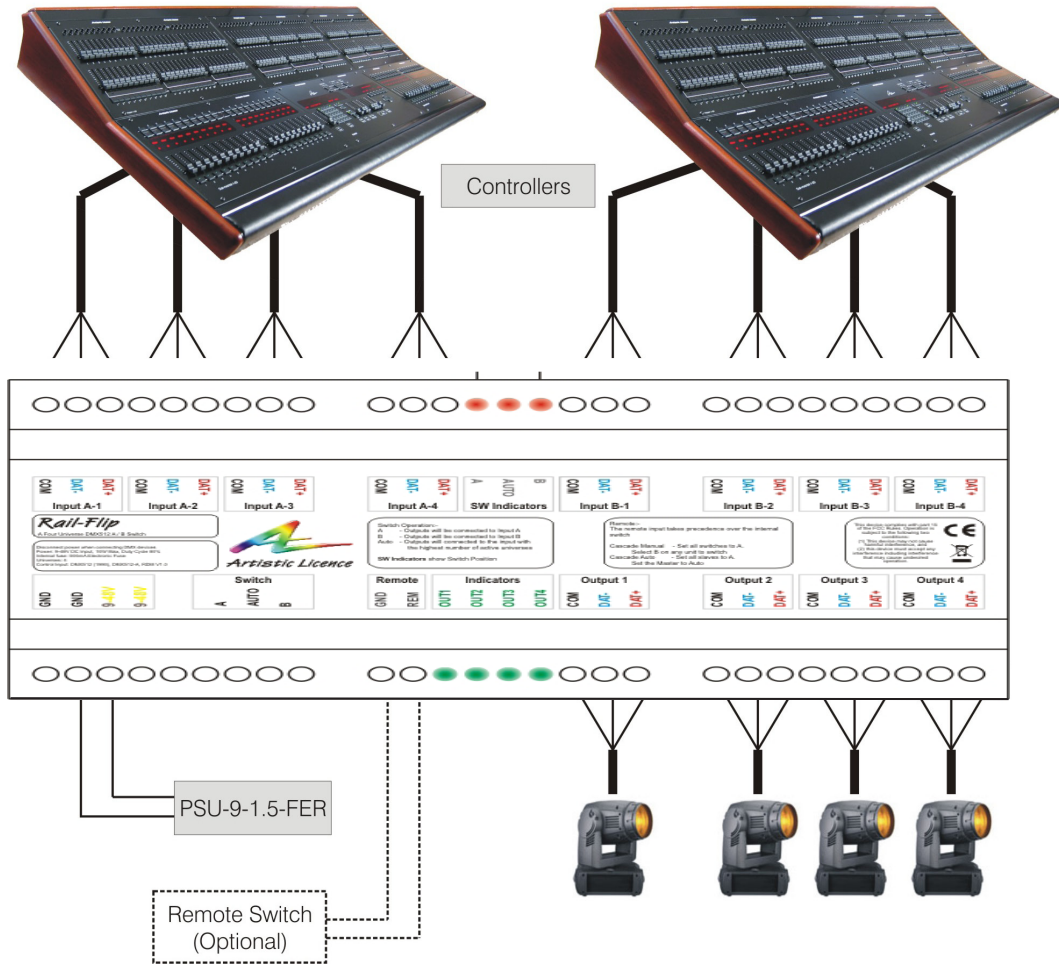
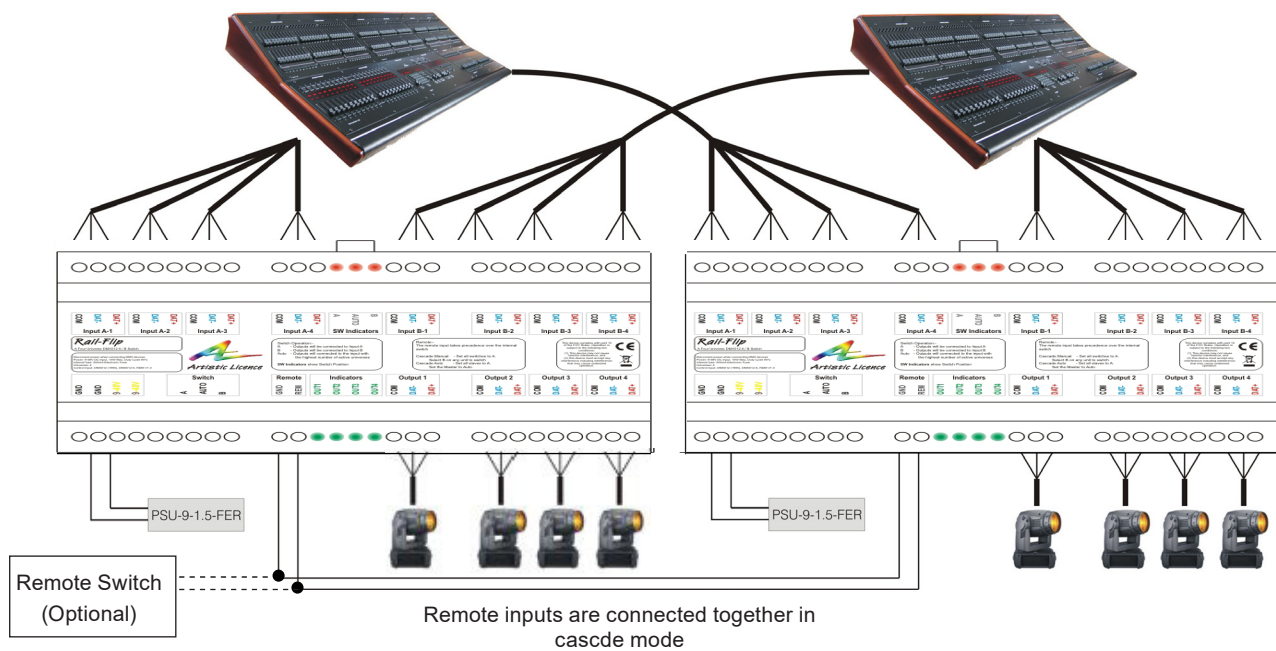


Figure 2: Cascade mode



Appendix

LED indication

Rail-Flip has red LED indicators to show which input (A or B) is active, or alternatively whether the unit is in automatic mode.

Activity on each output is indicated by a green LED.

Table 1 - Cascade mode

Unit 1	Unit 2	Remote	Result	Operating mode
A	A	Open	All A	Manual / Remote
B	A	Open	All B	Manual
A	B	Open	All B	Manual
A	A	Closed	All B	Remote
AUTO	A	Open	Unit 1 is master	AUTO
A	AUTO	Open	Unit 2 is master	AUTO
A	AUTO	Closed	All B	Remote

Rail-Flip Specification

Mechanical

- Housing: DIN Rail Case
- Material: Lexan plastic, UL94-V0 rated
- Overall dimensions: 90 mm (H) x 159 mm (W) x 73.5 mm (D)
- Weight: 0.45 kg
- Mounting: 35 mm DIN Rail or Surface Mount
- Country of manufacture: UK

Environmental

- Operating temperature: 0°C to 40°C
- Storage temperature: -10°C to +50°C
- Operating relative humidity (max): 80% non-condensing
- IP rating: IP20 indoor use only
- Certification: CE, FCC, WEEE, RoHS
- Warranty: 2-year (return to base)

Power & Electrical

- Input voltage: 9 -48 VDC
- Input connector: 4-pin screw terminal (1 no.)
- Input power (max): 8 W
- Duty cycle: 80% @ 25°C
- DC fuse: internal resettable fuse for control electronics

Connections

- Input DMX connectors: 3-pin Screw Terminal (8 no.)
- Output DMX connectors: 3-pin Screw Terminal (4 no.)
- Remote switch: 2-pin Screw Terminal (1 no.)

Control

- Universes: 4
- Protocols: DMX512, DMX512 (1990), DMX512-A, RDM V1.0 (E1.20 - 2006 ESTA Standard)

Configuration & Indication

- Switch selector (A / B / Auto)
- Remote switch
- LED: Switch setting & output activity

Package Contents

- Rail-Flip
- User guide

Ordering Info

- Product code: Rail-Flip

Accessories (not included)

- PSU-9-1.5-FER
- PSU-24-2.5-DR

Compliance

All Products manufactured or sold by Artistic Licence Engineering Ltd are fully compliant with the appropriate CE, FCC, and RoHS regulations. Product specific information is available on request.

Waste Electrical & Electronic Equipment (WEEE)

Artistic Licence is a member of a WEEE compliance scheme and will happily recycle any of our products that you, at your expense, return to us.

Warranty

All products are covered from date of purchase by a two-year return to base warranty.

By return to base, we mean that the customer is responsible for all costs of transport to and from Artistic Licence.

Returns will not be accepted without prior authorisation. In order to discuss a request to return goods, please email:

Sales@ArtisticLicence.com

CE Compliance



Rail-Flip is CE compliant when installed in a shielded and earthed metal case



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Due to our policy of continuing product improvement specifications are subject to change without notice

