








1. ORDER OF PRIORITY

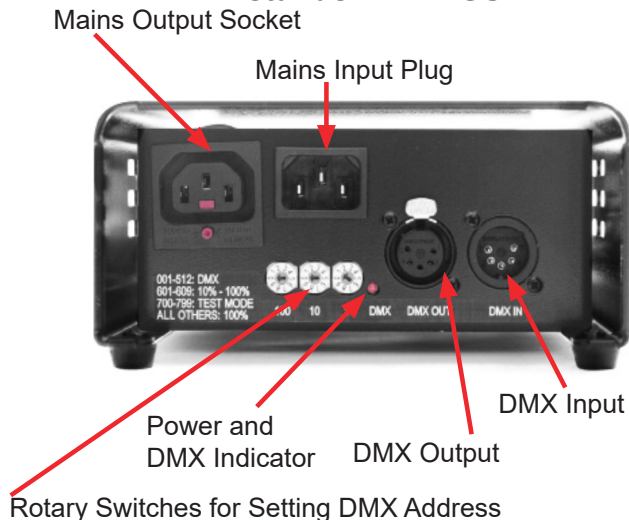
Radio has priority over the thumbwheels, and Powerline has priority over a Radio signal. So the order of seniority is:

1. Powerline
2. Radio
3. Thumbwheels

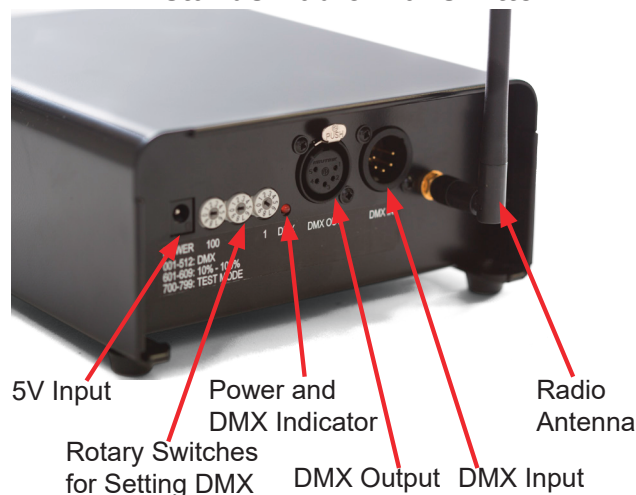
2. OPTIONS TO CONTROL AND POWER THE LIGHTS

Options		Can be controlled by
 	<p>XLR Daisy chain through Powerline PSU (drive a total of up to 17 lights). The PSU has 2 outputs so that up to 10 lights can be chained per output. The XLR junction box clips to the base of the music stand.</p>	<p>Powerline, radio (provided no DMX transmitter is plugged into the powerline) or manual</p>
	 <p>XLR Daisy chain through Powerline dimmer (functions the same as PSU but has an external power supply, drive a total of up to 17 lights). The XLR junction box clips to the base of the music stand.</p>	
	<p>Rechargeable battery that can be clipped to the base of the music stand stem.</p>	<p>Radio or manual</p>
	<p>Plug top PSU that provides 24 volt when directly plugged into the mains.</p>	<p>Radio or manual</p>

RATstands DMX PSU



RATstands Radio Transmitter



Output Sockets to LEDlights

3. POWERLINE AND RADIO TRANSMITTER OPERATING INSTRUCTIONS

Powerline Control	Radio Control
The light has 6 zones which can be operated independently of each other. Set the light to the required zone using the setting button on your Trio ⁴ (see section 4 of Trio ⁴ operating instructions manual).	
All lights attached to a given PSU are controlled equally according to which zone each light is in. But two RATstands DMX PSU's can be given different DMX addresses, so as to create groups of stands which can be controlled independently of each other.	All lights within range of a RATstands Radio Transmitter are controlled equally according to which zone each light is in. The lights cannot be controlled via Radio if Powerline is being used (see section 1). Only one RATstands Radio Transmitter can be used to control a set of lights in one area.
The red indicator light will flash if there is power to the transmitter, and it will illuminate steadily if there is also a DMX feed.	
The maximum number of LEDlights which may be powered by each Power Supply is 17. (Double lights count as 2 LEDlights) It is suggested that you limit each daisychain to not more than 10 LEDlights. 2 output sockets are provided to facilitate this. Please note that 6 metre of additional cable is equivalent to one light. Thus for every 6 metre extra cable the maximum number of lights should be reduced by one	Power the lights using any of the power options shown in section 2. The radio can control lights that are at a maximum unobstructed distance of up to 80 metres. Obstructions can and will reduce the distance that a radio signal can travel, effectively reducing its range. The radio can control as many lights as the user wishes provided they are within this range.

4. DMX channel mapping of both RATstands DMX PSU and RATstands Radio Transmitter

DMX Channel	Controls
1	Brightness zone 1
2	Brightness zone 2
3	Brightness zone 3
4	Brightness zone 4
5	Brightness zone 5
6	Brightness zone 6
7	Colour temperature across all zones
8	Special functions (see table 8th DMX channel)

5. The 8th DMX Channel - Special Functions

When transmitting either a powerline or radio signal the 8th DMX channel is used for special functions. Each function is invoked by setting the DMX level shown in the table below.

Target % [Range]	DMX [Range]	Special Functionality Powerline	Special Functionality Radio
0 [0-10]	0 [0-25]	Light intensity and colour temperature controlled by DMX	
25 [10-40]	60 [26-102]	Light intensity controlled by DMX and colour temperature controlled by the thumbwheels on the light.	
50 [40 - 65]	130 [103-166]	Light intensity and colour temperature controlled by the thumbwheels on the light.	
70 [65-75]	170 [167-192]	TEST MODE: in this mode the light levels will ramp up and down continuously.	
		With the PSU in Test Mode you can see as you add lights to a long daisy-chain whether or not they are all receiving a good enough signal, lights that are not receiving a good signal will change jerkily or stay at the same brightness.	With the Transmitter in Test Mode you can see if all lights are receiving a radio signal. Lights that are not receiving a good signal will change jerkily or stay at the same brightness.
80 [75-85]	200 [193-217]	Light intensity and colour temperature controlled by DMX	Battery remaining charge indicator: lights with batteries below 20% will flash on and off, any other lights will come on but only dimly.
90 [85-95]	230 [218-243]		Battery remaining charge indicator: lights with batteries below 50% will flash on and off, any other lights will come on but only dimly.
100 [95-100]	250 [244-256]		Battery remaining charge indicator: lights with batteries below 80% will flash on and off, any other lights will come on but only dimly.

6. ROTARY SWITCHES

The table below shows the special functionality of the rotary switches of Powerline and Radio Control.

Range	Powerline Control	Radio Control
001-505	If you set the rotary switches to a valid DMX address (i.e. 001 to 505 [the system requires 8 DMX channels]) then the light output will be set accordingly to the DMX levels of channels 1-8.	
601-609	If the rotary switches are set to a value in the range 601-609 then the light output will be fixed respectively where 100% is divided across 9 steps: (601 = 11%, 602 = 22%, 603 = 33% up to 609 = 100% max brightness)	
700-799	If you set the rotary switches to any number beginning with a 7 (i.e. 700-799) then the PSU and Transmitter will operate in "TEST MODE". In this mode the light levels will ramp up and down continuously.	
800-899	Normal remote-controlled operation.	<p>If you set the rotary switches to the numbers shown below, the light will indicate the remaining charge in the battery.</p> <ol style="list-style-type: none"> 1. 800-833: lights whose battery is below 20% will flash; all others come on dimly. 2. 834-866: lights whose battery is below 40% will flash; all others come on dimly. 3. 867-899: lights whose battery is below 80% will flash; all others come on dimly. <p>Any light whose battery is completely flat will not come on at all.</p>
800-999	Both thumbwheels will become operative.	
If the Powerline Signal or the Radio Signal is lost then the lights will stay at the same level as when the signal was lost, until either the signal is regained, or a significant movement is made to the thumbwheels after a period of 5 seconds.		