

Pixi-Power SB12 User Guide

[Version 2]

Pixi-Power SB12 is an integrated power controller for the Pixi-Flex, Pixi-Web and Pixi-Cloth range. It will find primary application with Pixi-Cloth and Pixi-Web, due to the robust design and truss mounting capability.

All parameters including start address are set using RDM. This can be done using any of the following products: Net-Lynx O/P, Ether-Lynx or Jump-Start. Four personalities are implemented for added flexibility. Five outputs are provided, each output can drive a total of 32 pixels.

Key Features include:

- 9 VDC Power supply for Pixi range
- Wall, ceiling or truss mount
- RDM (Remote Device Management Draft V1.0)
- Integrated cable support
- Truss-Mount G-Clamp available
(Doughty Engineering: SP2703)
- Pixi-Power SB12 spider assembly available



Specification:

- Listing: CE FCC
- IP Rating: Indoor use
- Net Weight: 1.05Kg
- Power: 100W
- Mains Connection: IEC
- Input Voltage: 90-264VAC
- Input Frequency: 47-440Hz
- Current - Inrush: 20A-115V / 40A-230V
- Output Voltage: 9VDC
- Output Current: 10A
- Duty Cycle: 80%
- Width: 100 mm
- Height: 218 mm (inc flange)
- Height: 303 mm (inc flange & G-Clamp)
- Depth: 110 mm
- Control Connection: 5 pin Male XLR
- Loop Connection: 5 pin Female XLR
- Total Flex's / Webs: 10
- Total Flex's / Webs per output: 2
- Mating Multi-way Connector: Trident Ringlock Plug TR1823PMS1NB
- Connector pins (16 – 18 awg): Trident Contacts T2P16MC1LZ
- Connector pins (20 – 22 awg): Trident Contacts T2P20MC1LZ

Pixi-Power SB12 Wiring Diagram:

Opposite is the wiring diagram for a Pixi-Power SB12.

DMX512 & Output Wiring:

XLR Pin	Function	Colour
1	Ground	Black
2	Data -	Blue
3	Data +	Red
4	No Connection	
5	No Connection	

Connector Pin	Function
A, E, J, N, T	+V (Red)
B, F, K, P, U	Data (Green)
C, G, L, R, V	Clock (Yellow)
D, H, M, S, W	GND (Black)

Input:

The DMX512 input uses a standard XLR5 pin connector.

Loop Through:

A passive Loop Through connection allows onward connection to other DMX512 devices. If this feature is not required the unit must be terminated as specified by DMX512-A.

Output:

A Pixi-Power SB12 is capable of powering/controlling 32 Pixels or two Pixi-Flex's Please see the specifications for more detail.

Indicators:

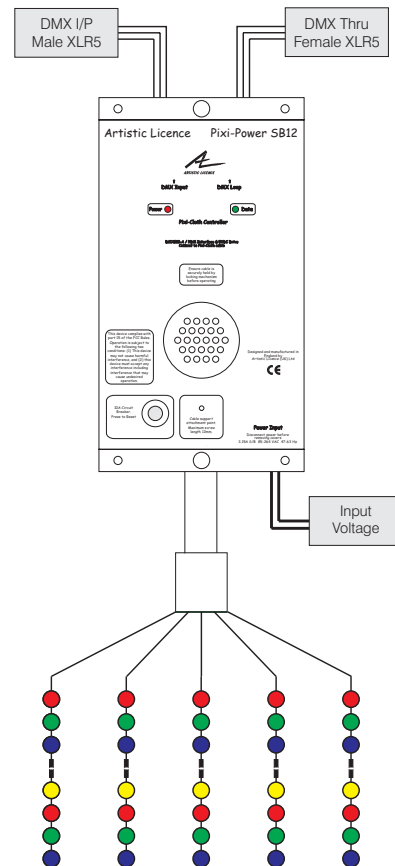
Data (Green): Indicates that DMX512 is being received.

Power (Red): Indicates good power and normal operation.

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.



Health & Safety for flying equipment

- ❑ Flying or overhead mounting of equipment **shall** be undertaken by **qualified** staff. The staff shall be capable of undertaking a risk assessment.
- ❑ Each Pixi-Power SB12 provides safety wire points that **must** be used. Artistic Licence recommends the use of load arrestors in all overhead applications.
- ❑ **Safety should be your prime concern.** If in any doubt seek professional advice.

Circuit	Description	
Chassis	Bonded to Earth-Ground.	
DMX512 Input (including Loop Through)	Type:	Isolated.
	Pin 1:	Connects to internal isolated circuit. No connection to Earth-Ground.
	Shell:	The connector shell is connected to chassis.
DMX512 Output	Type:	Grounded.
	DMX GND:	Connected to Earth-Ground.
Internal Logic Ground	Connects to Earth-Ground.	

Personality 0:

Overview: The outputs are controlled by a dynamic program. All outputs behave identically. This is the factory default.

RDM Implementation: Single Root Device with footprint of 10. No Sub-Devices.

- Start Colours** provide the starting colour for dynamic effects.
- End Colours** provide the ending colour for dynamic effects.
- Intensity** sets the overall intensity for all outputs.
- Mode** sets the dynamic effect.
- Speed** sets the playback rate of the dynamic effects.
- Density** sets the ratio of background to foreground effects.

Start Addr	Use
+0	Start Red
+1	Start Green
+2	Start Blue
+3	End Red
+4	End Green
+5	End Blue
+6	Intensity
+7	Mode
+8	Speed
+9	Density
Speed Value	Dynamic Effect
0	Max reverse speed
128	Stop
255	Max forward speed

Personality 1:

Overview: Each output is controlled as an RGBI entity. All Pixi-Bulbs on a given output will respond as identical colours.

RDM Implementation: Single Root Device with footprint of 20. No Sub-Devices.

Personality 2:

Overview: All outputs are controlled as a single RGB entity. All Pixi-Bulbs will respond as identical colours.

RDM Implementation: Single Root Device with footprint of 3. No Sub-Devices.

Personality 3:

Overview: All Pixi-Bulbs are controlled as individual RGB entities.

RDM Implementation: Single Root Device with footprint of 160 Sub-Devices. Set Root Device Start Address to auto-program all Sub-Devices

Personality 0		
Mode Value	Name	Dynamic Effect
0 – 15	0	Static. All Pixi's controlled by Start Red, Green, Blue.
16 – 31	1	Rotate All. Start Red, Green, Blue set the colour of Pixi 1 at the beginning of the sequence. End Red, Green, Blue set the colour of Pixi 150 at the beginning of the sequence. Colours fade from each Pixi to the next forming a coloured comet trail. All 150 Pixi's are at different colours. Density not used.
32 - 47	2	Rotate Group. Start Red, Green, Blue set the colour of Pixi 1 on each output, at the beginning of the sequence. End Red, Green, Blue set the colour of Pixi 30 on each output, at the beginning of the sequence. Colours fade from each Pixi to the next forming a coloured comet trail. Each of the five outputs is identical. Density not used.
48 – 63	3	Running Dots All. Start Red, Green, Blue set the background colour of all Pixi's. End Red, Green, Blue set the colour of the line of running dots. The line of dots run over the background colour and include all 150 Pixi's. Density sets the number of dots.
64 – 79	4	Running Dots Group. Start Red, Green, Blue set the background colour of all Pixi's. End Red, Green, Blue set the colour of the line of running dots. The line of dots run over the background colour. Each output is identical. Density sets the number of dots.
80 – 95	5	Wipe All. Start Red, Green, Blue sets the Pixi 1 to Pixi n colour. End Red, Green, Blue sets the Pixi n+1 to Pixi 150 colour. The number 'n' varies at a rate set by the speed fader. Density is not used.
96 – 111	6	Wipe Group. Start Red, Green, Blue sets the Pixi 1 to Pixi n colour. End Red, Green, Blue sets the Pixi n+1 to Pixi 30 colour. The number 'n' varies at a rate set by the speed fader. Density is not used. All outputs identical.
112 – 127	7	Colour-Roll All. Start Red, Green, Blue sets the Pixi 1 colour. End Red, Green, Blue sets the Pixi 150 colour. All intervening pixi's take on the relevant spectral colour. The colours roll at a rate set by the speed fader. Density is not used.
128 – 143	8	Colour-Roll Group. Start Red, Green, Blue sets the Pixi 1 colour. End Red, Green, Blue sets the Pixi 30 colour. All intervening pixi's take on the relevant spectral colour. The colours roll at a rate set by the speed fader. Density is not used. All outputs identical.
144 – 159	9	Not implemented.
160 – 175	A	Not implemented.
176 – 191	B	Not implemented.
192 – 207	C	Pixi-Cloth Black All. Dark Background colour. Start Red, Green, Blue primary star colour. End Red, Green, Blue set the secondary star colour. Each pixi is controlled separately. Density sets the density of primary stars. Ratio of primary to secondary stars is 10:1. Full crossfade.
208 – 223	D	Pixi-Cloth Black Group. Dark Background colour. Start Red, Green, Blue primary star colour. End Red, Green, Blue set the secondary star colour. Each output is identical. Density sets the density of primary stars. Ratio of primary to secondary stars is 10:1. Full crossfade.
224 – 239	E	Pixi-Cloth All. Start Red, Green, Blue set the static background colour of all Pixi's. End Red, Green, Blue set the 'Star Cloth' colour. Each pixi is controlled separately. Density sets the density of stars. Full crossfade.
240 - 255	F	Pixi-Cloth Group. Start Red, Green, Blue set the static background colour of all Pixi's. End Red, Green, Blue set the 'Star Cloth' colour. Each output is identical. Density sets the density of stars. Full crossfade.

