



SUPER BRIGHT LEDS DS-DMX23 DMX512 to SPI Decoder/Controller User Manual

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User Manual
DS-DMX23

Important: Read all instructions prior to installation.
DMX512 to SPI Decoder/Controller



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Safety and Notes

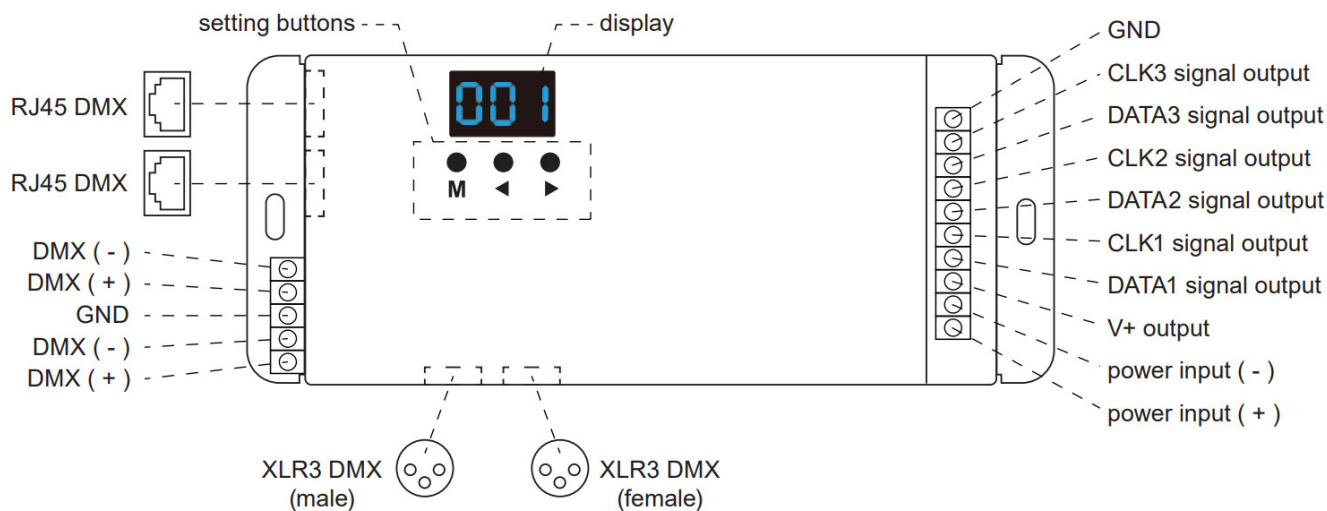
- The product should be installed and serviced in accordance with applicable national, state, and local building and electrical codes.
- To reduce the risk of electric shock, ensure that the power source and circuit breakers are switched off before performing any installation or wiring procedures.
- Strips controlled by data input only (same DATA and CLK output) can connect up to six strips.
- Strips controlled by data and clock input (separate DATA and CLK output) can connect up to three strips.

Check the product label for specific electrical specifications related to installation. Improper installation will void the warranty.

Compatible IC Settings

• D705	• LPD8806	• TLS3001	• TM1812	• UCS1909	• UCS6909	• WS2801
• GW6205	• MBI6120	• TLS3002	• TM1814B	• UCS1912	• UCS6912	• WS2803
• LPD1101	• P9813	• TM1803	• TM1829	• UCS2903	• UCS8904B	
• LPD6803	• SK6812	• TM1804	• TM1914A	• UCS2909	• WS2811	
• LPD8803	• SK9822	• TM1809	• UCS1903	• UCS2912	• WS2812	

Controller Layout



Restore Factory Default Parameters

- Hold ◀ and ▶ button simultaneously for 2 seconds to display “RES”.

IC Type, RGB Order, and Pixel Length Settings

Note: IC type, RGB order, and pixel length of the intended LED strip(s) are required to complete this process.

1. Hold M and ◀ buttons to enter programming mode. IC type, RGB order, pixel length, and automatic blank screen settings can be cycled through using the M button.
2. Press ◀ or ▶ button to change the value of each setting.
3. Once settings are set, hold the M key for 2 seconds or allow the controller to timeout after 10 seconds to exit programming mode.



No.	IC Type	Output Signal
C11	TM1803	DATA
C12	TM1809, TM1804, TM1812, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2811, WS2812	DATA
C13	TM1829	DATA
C14	TLS3001, TLS3002	DATA
C15	GW6205	DATA
C16M	B16120	DATA
C17	TM1814(RGBW)	DATA
C18	SK6812(RGBW)	DATA
C19U	CS8904B	DATA
C21	LPD6803, LPD1101, D705, UCS6909, UCS6912	DATA, CLK
C22	LPD8803, LPD8806	DATA, CLK
C23	WS2801, WS2803	DATA, CLK
C24	P9813	DATA, CLK
C25S	K9822D	DATA, CLK
C31	TM1914A	DATA



RGB Order Setting	RGB Order
0-1	RGB
0-2	RBG
0-3	GRB
0-4	GBR
0-5	BRG
0-6	BGR



Pixel length value range is 008–900.



disable automatic blank

Automatic blank screen settings can be toggled between enabling “bon” or disabling “boF”.

DMX Decode Mode

1. Press the M button to cycle through settings and enter DMX decode settings. When on the correct setting, the display will show 001–999 displaying the current DMX decode setting.
2. Press ◀ or ▶ button to change DMX decode start address.
3. Hold M button for 2 seconds to enter setup for decode number and number of pixels. Once in this menu, press the M button to switch between the two settings. Press ◀ or ▶ button to change value.
 - decode number (displays “dno”): DMX decode channel number, the range is 003–600.
 - a number of pixels (displays “Pno”): Each 3 DMX channel adjustment sets control length.
4. Once settings are set, hold the M key for 2 seconds or allow the controller to timeout after 10 seconds to exit programming mode.

Standalone Mode

Standalone modes can only be used when the DMX signal is disconnected or lost.

1. Press the M button to cycle through settings and enter standalone RGB mode. When on the correct setting, the display will show P01–P32, indicating the current setting.
2. Press ◀ or ▶ button to change dynamic mode number (P01–P32).
3. Each mode can adjust speed and brightness. Once the desired mode is selected, hold the M button for 2 seconds to enter speed and brightness settings.
4. Press the M button to switch between speed and brightness. Press ◀ or ▶ button to select a setting value.
 - Speed: 1–10 level speed (S-1–S-9, S-F for speed 10).
 - Brightness: 1–10 level brightness (b-1, b-9, b-F).
5. Once settings are set, hold the M key for 2 seconds or allow the controller to timeout after 10 seconds to exit programming mode.

Standalone Modes

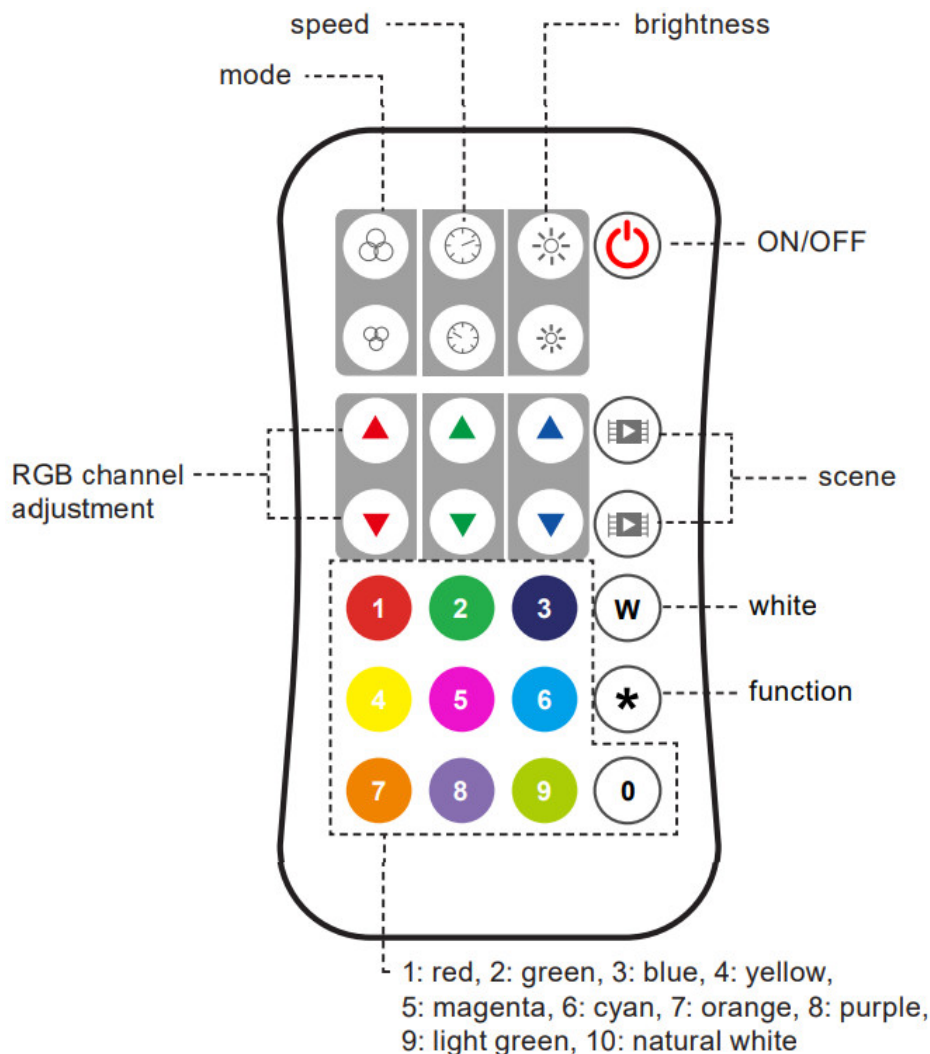
No.	Name	No.	Name	No.	Name
P01	Red Race White Ground	P12	Blue White Chase	P23	Purple Float
P02	Green Race White Ground	P13	Green Cyan Chase	P24	RGBW Float
P03	Blue Race White Ground	P14	RGB Chase	P25	Red Yellow Float
P04	Yellow Race Blue Ground	P15	7-color Chase	P26	Green Cyan Float
P05	Cyan Race Blue Ground	P16	Blue Meteor	P27	Blue Purple Float
P06	Purple Race Blue Ground	P17	Purple Meteor	P28	Blue White Float
P07	7 Color Multi-Race	P18	White Meteor	P29	6 Color Float
P08	7 Color Race Close + Open	P19	7 Color Meteor	P30	6 Color Smooth Sectionally
P09	7 Color Multi-Race Close + Open	P20	Red Float	P31	7 Color Jump Sectionally
P10	7 Color Scan Close + Open	P21	Green Float	P32	7 Color Strobe Sectionally
P11	7 Color Multi Scan Close + Open	P22	Blue Float		

Pairing Optional RF Remote

In addition to using the built-in controls, this controller can be paired with a remote (DS-RT09).

To pair the remote, hold M and ► buttons for 2 seconds at which point the display will show “RLS”. Within 5 seconds, press the ON/OFF button on the remote, at which point the display will show “RLO” meaning the remote has been successfully paired. Hold the M key for 2 seconds or allow the system to timeout in 10 seconds to exit pairing. The maximum communication range is 98.4 ft (30 m) from the controller. Hold M and ► buttons for 5 seconds to unpair all remotes from the controller. Once the remote is paired, you can hold the upper mode (mode plus) button for two seconds to unlock preprogrammed standalone modes.

Remote Layout and Functions



Mode

Once setup is complete (see page 3) press to cycle between preprogrammed modes.

Hold the upper mode (mode plus) button for two seconds to run the mode cycle demo setting. Hold the lower mode (mode minus) button for two seconds to return to and run mode 1.

Speed

Press to adjust the speed of the selected preprogrammed mode. Hold the upper speed (speed plus) button for two seconds to select the fastest speed. Hold the lower speed (speed minus) button for two seconds to select the slowest speed.

Brightness

Press to adjust brightness in ten percent increments. Hold for continuous 256 level adjustment.

RGB

Press to adjust in ten percent increments. Hold for continuous 256 level adjustment.

White

Press to turn white (RGB mix) on/off. Hold for continuous 256 level adjustment.

Scene

Each scene button can save one setting. The setting is saved by holding the scene button for two seconds. Press the scene button after saving settings to recall those settings.

Setting Adjustment

Strip Length (Pixel Number) Setting

Strip length, or pixel number, can be set up to 900 pixels. Begin by pressing the function button (*), then entering the number of pixels with the number buttons, then pressing the function (*) button again.

IC Type Setting

IC type can be set by pressing the function button (*), then entering the two-digit code corresponding with the correct IC type using the number pad, then pressing the function (*) button again. Consult the list below for the code for each IC type.

Code	IC Type
11	TM1803
12	TM1809, TM1804, TM1812, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2811, WS2812
13	TM1829
14	TLS3001, TLS3002
15	GW6205
16	MBI6120
17	TM1814B(RGBW)
18	SK6812(RGBW)
19	UCS8904B(RGBW)
21	LPD6803, LPD1101, D705, UCS6909, UCS6912
22	LPD8803, LPD8806
23	WS2801, WS2803
24	P9813
25	SK9822
31	TM1914A

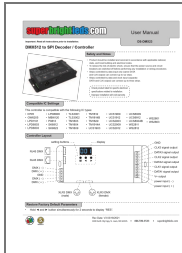
RGB Order

RGB order can be set by pressing the function button (*), then entering the one-digit code corresponding with the correct RGB order using with the number pad, then pressing the function (*) button again.

Code	RGB Order
1	RGB
2	RBG
3	GRB
4	GBR
5	BRG
6	BGR



Documents / Resources



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DS-DMX23, DMX512 to SPI Decoder, DMX512 to SPI Controller

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