FLICKERFREELED

CINE-VALUE 5
USER MANUAL
Version 1.0

Support email:
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IMPORTANT!

User must read and understand all instructions prior to installation.
Important operational and safety information is contained within this manual.

SAFETY AND WARNINGS:

- For professional use only.
- Use 12 – 24Vdc power input **ONLY**.
- Each dimmer may only be connected directly to only one power input source.
- Power input source must be properly protected by fuse or electronic means.
  - Maximum amperage allowed per individual input and output contact is 20a.
- Please ensure you are using the correct wire gauge for the connected loads.
- Do **NOT** install the device when power is applied.
- Do **NOT** expose the device to moisture.
- Only connect the device to one source of input DATA and one source of output DATA.
- This device should be contained within a fire enclosure depending on the installation.
- **Always** check your connections before connecting power.

CAUTION – RISK OF FIRE

As with all high current electrical devices there is a potential risk of fire if this device is misused or driven over its rated capacity.

We recommend monitoring temperature at the DC input and output connectors as well as at the thermocouple location (.tc marking). If the temperature exceeds 75°C in these areas, ensure that these areas are enclosed within a fire enclosure or reduce loads to bring temperatures below 75°C.

DESCRIPTION
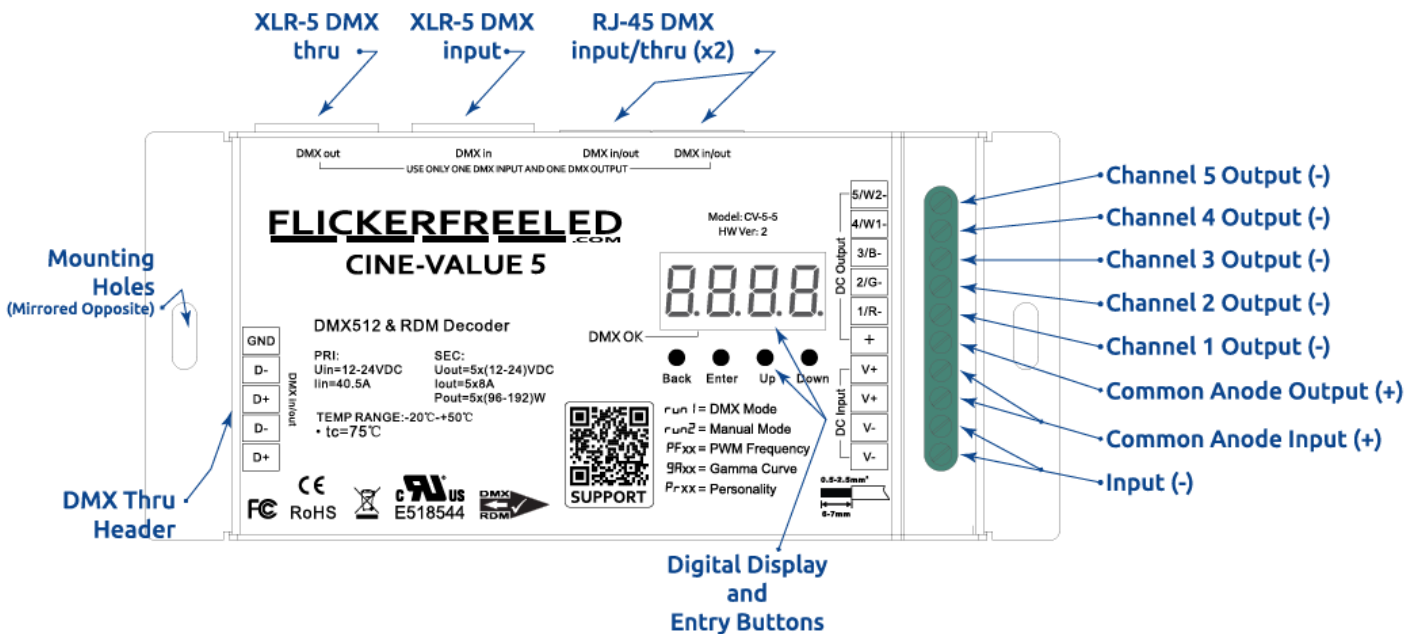
The Cine-Value 5 is budget conscious camera-friendly high-speed LED Dimmer. The software has been optimized to simplify installation and facilitate camera-safe dimming speeds.

The dimmer is controllable via DMX-512A protocol or as a Manually controlled Master.

In DMX-512A mode (run 1) there are user selectable PWM frequencies from 7kHz to 35kHz.

The device can be operated in 8-bit or 16-bit control modes. In 8-bit mode there are selectable gamma curves which can be used to change the dimming curve above, on or below a linear dimming curve. In 16-bit mode the gamma curve defaults to 1.0 (linear) to give you access to the maximum dimming resolution possible for your selected PWM frequency.

In Manual Master Mode (run2) there are user selectable presets or manual control of the individual channels. *Please note that DMX values are output from all the DMX thru/out ports in this mode.*

The Cine-Value 5 also offers Remote Device Management (RDM) when connected to a RDM capable controller using RDM capable infrastructure. More information about the Cine-Value 5's RDM capabilities is available on page 9.

CONNECTIONS

DC Input

The dimmer will safely operate from 12Vdc to 24Vdc. Please ensure that you use a power source with adequate input current protection.

+Vdc terminals are common to both input and output.

Although there are multiple DC Input terminals on the device, ***please connect only one power source at a time.***

The input connectors have a maximum amperage rating of 20A per position. Please account for and spread your input and output loads across the terminals keeping this rating in mind.

-Vdc INPUT   +Vdc INPUT

DC Input Connectors
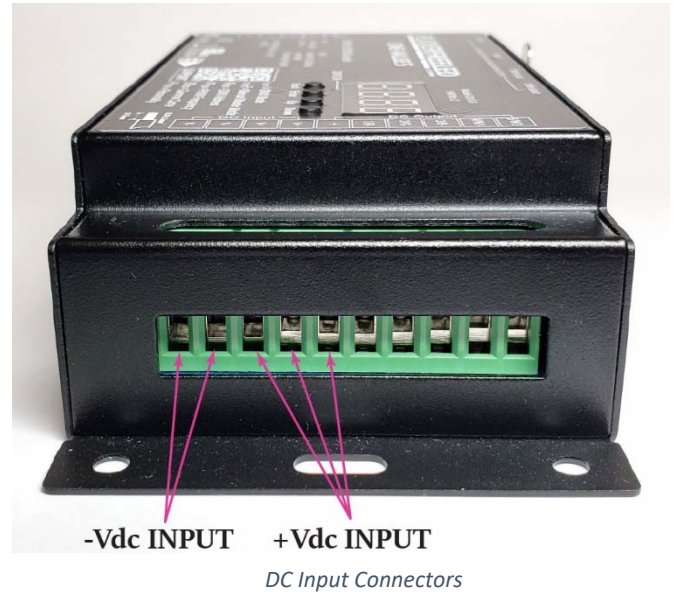
DC Outputs

The dimmer will output a maximum of 8 amps per channel of the same DC voltage input into the dimmer. I.E., 12Vdc in equals 12Vdc out, 24Vdc in equals 24vDC out.

+Vdc terminals are common and each channel is dimmed independently via their -Vdc terminals.

Always test your connected components for shorts before applying power for the first time!

Although the outputs are protected by internal fuses and anti-short software, we recommend you always test any new LED wiring and fixtures for shorts prior to energizing the Cine-Value 5's outputs.

+Vdc OUTPUT   CH1 CH2 CH3 CH4 CH5
⌐— -Vdc OUTPUT —⌐

DC Output Connectors
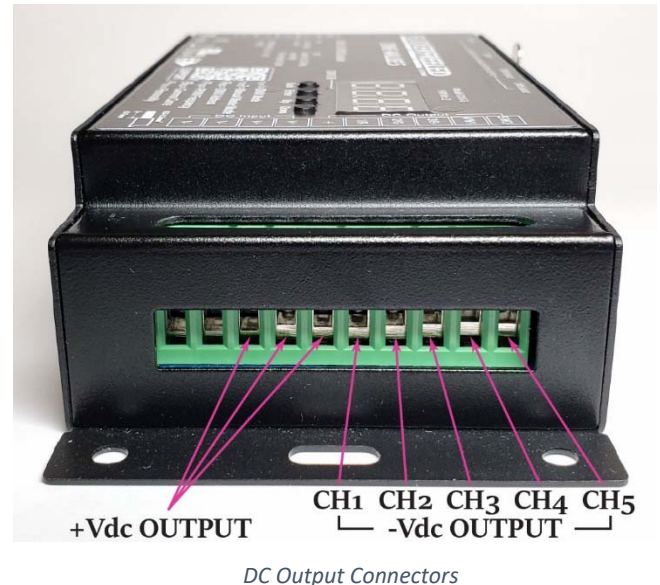
DC Short circuit protection

If a short circuit of a connected load is detected the display will flash continuously, and the outputs will be turned off. Once the source of the fault is corrected, re-powered the device to return to normal operation.

DMX Input and Output

The Cine-Value 5 can be controlled using the DMX512-A protocol. DMX can be input via industry standard XLR-5 input connector, a RJ-45 connector or a 5.08mm pluggable header. DMX can be looped through to other DMX devices following the DMX512-A standards via _one_ of the RJ-45 connectors, the DMX-out XLR-5 connector _or_ the 5.08mm pluggable header.

Note: The inputs and outputs are _not_ isolated from each other and only _one input_ and _one output_ should be connected to each dimmer. Although the DMX specification states a 32-device maximum per run, we suggest using a DMX and RDM capable opto-isolator to isolate a maximum of 15 Cine-Value 5 devices per data chain.

2 XLR -- OK

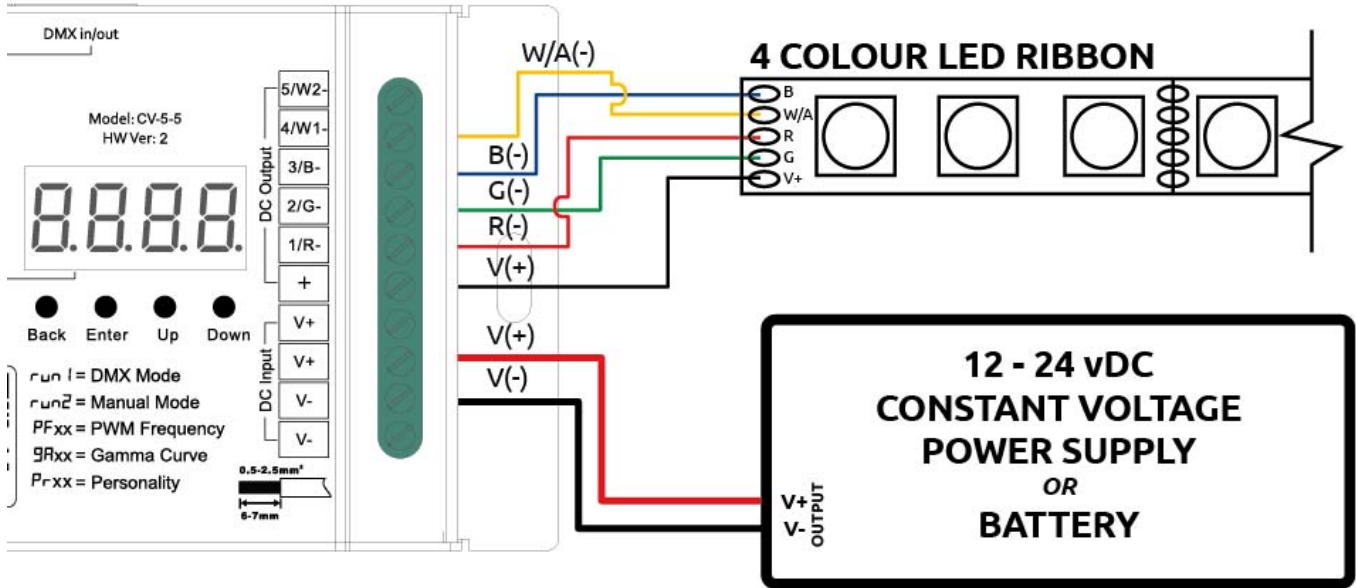**1 XLR & 1 RJ45 -- OK**

2 RJ45 -- OK

2 XLR & 2 RJ45 -- <u>NO!</u>
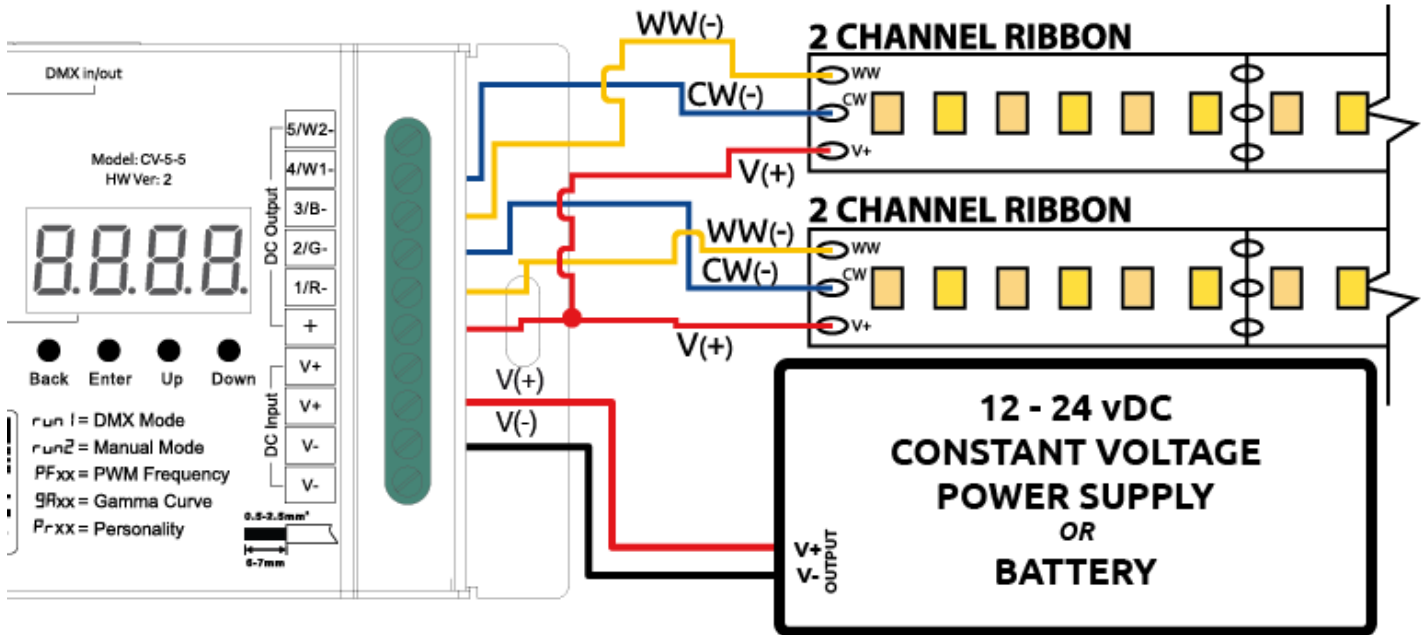

2 XLR & 1 RJ45 -- <u>NO!</u>

1 XLR, 1 RJ45 & 1 5.08mm -- <u>NO!</u>

WIRING DIAGRAMS

Wiring single 4-channel LED ribbon

NOTE: Appropriate input current protection must be in place. See page 3.

Wiring two 2-channel LED ribbons

NOTE: Appropriate input current protection must be in place. See page 3.

DISPLAY AND BUTTONS

The 4-digit readout is used to display the menu items and functionality. The 4 buttons below the screen are used to navigate the menus, select and change items.

DISPLAY DECIMAL POINTS

The display's decimal points are generally as decimal points, however, when the Cine-Value 5 is on its standard screen the first decimal point will light to indicate the presence of a DMX control signal.

DMX Signal Present

UP / DOWN Buttons

Press the **Up** and **Down** buttons to cycle through and change the available menu options.

Buttons

ENTER Button

Press the **Enter** button to select the menu item you would like to change. Once selected the selected menu item will flash on the display showing it is ready to be modified by the **Up** / **Down** buttons

BACK Button

Press the **Back** button to store changed menu items once they have been selected using *Enter*. The *Back* button will also return you to your selected modes home screen while scrolling through the menus.

Holding **Enter** and **Back** for 2s will reset the device to factory defaults.

Menu Functionality

Scroll through the available menu options using the **Up** and **Down** buttons. The following menu items are available, press **ENTER** to select one for modification and Back to store the values.

The following menu items are available in DMX-512A Mode (run1):

"A###" – Set Address (DEFAULT VALUE: 001)

Allows changing of the DMX address. A base address of "A001" through "A512" are available, please note which *Personality* you are using and select a DMX address that is no higher than 512 minus the number of parameters available in that profile.

Select your desired base address with the **Up/Down** buttons and press **Back** to store your address.

"PF##" – PWM Frequency (DEFAULT VALUE: 07kHz)

PWM Frequencies are available from 7kHz to 35kHz. Always test for frequencies that are compatible with your camera setup.

"ꟻ**Ꭺ##**" – Gamma Curve (DEFAULT VALUE: 1.5)

Gamma curves are selectable in 8-bit personalities. The gamma curve modifies the values of the dimming curve above (<1.0) and below (>1.0) the linear dimming line. A range of 0.1 through 9.9 are available.
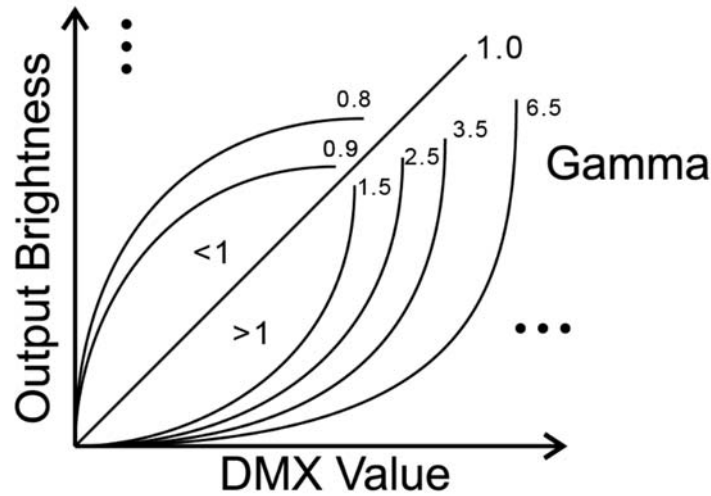
"**Pr##**" – Personality (DEFAULT VALUE: 01)

Personalities change the overall functionality of the dimmer, please use the following chart to select the correct operating mode for your purposes. A complete DMX personality map is available on Page 10.

Personality	Dimming Bits	Dimming Channels	Master Dimmer	Strobe Channel	DMX Channel Total
Pr01	8-bit	5	N	N	5
Pr02	8-bit	5	Y	N	6
Pr03	8-bit	5	Y	Y	7
Pr04	8-bit	5	N	Y	6
Pr05	16-bit	5	N	N	10
Pr06	16-bit	5	Y	N	12
Pr07	16-bit	5	Y	Y	13
Pr08	16-bit	5	N	Y	11
Pr09	8-bit	2	N	N	2
Pr10	8-bit	2	Y	N	3
Pr11	8-bit	2	Y	Y	4
Pr12	8-bit	2	N	Y	3
Pr13	16-bit	2	N	N	4
Pr14	16-bit	2	Y	N	6
Pr15	16-bit	2	Y	Y	7
Pr16	16-bit	2	N	Y	5

8-bit modes use one DMX control channel per output and master.
16-bit modes use two (high/low) DMX control channels per output and master.
5 Channel dimming modes give you individual control of each output.
2 Channel dimming modes control all outputs using 2 DMX channels (Outputs 1 + 3 group together and outputs 2, 4 + 5 group together.)
The *Master Dimmer* channel controls all the output's relative values.
The *Strobe* channel applies strobe effects to all channels at their relative values.

"run#" – Operation Modes (DEFAULT VALUE: run1)

run1 is DMX-512A control mode. All output functions are controlled by a DMX-512A compatible controller.

run2 is Manual Master control mode. **Please note that immediately upon entering run2 Manual Master mode the device will start outputting DMX on all input, thru and output ports.** To avoid conflicts do not use a Cine-Value 5 in run2 Manual Master mode while connected to other DMX sources.

There are several static looks and chases available in Manual Master mode, as well as individual control of each output channel. See below for details.

"P-##" – Pre-programmed looks (DEFAULT VALUE: 00)

Program #	Output	Program #	Output
P-01	OFF	P-19	7 COLOUR STROBE
P-02	STATIC RED	P-20	RED >< WHITE GRADUAL
P-03	STATIC GREEN	P-21	GREEN >< WHITE GRADUAL
P-04	STATIC BLUE	P-22	BLUE >< WHITE GRADUAL
P-05	STATIC YELLOW	P-23	RED >< ORANGE GRADUAL
P-06	STATIC CYAN	P-24	RED >< MAGENTA GRADUAL
P-07	STATIC MAGENTA	P-25	GREEN >< YELLOW GRADUAL
P-08	STATIC WHITE	P-26	GREEN >< CYAN GRADUAL
P-09	TWO COLOUR RGB MIX FADE	P-27	BLUE >< MAGENTA GRADUAL
P-10	RGB FULL MIX FADE	P-28	BLUE >< CYAN GRADUAL
P-11	RGB INDIVIDUAL FADE OUT AND IN	P-29	RED >< YELLOW >< GREEN GRADUAL
P-12	RGB INDIVIDUAL BUMP	P-30	RED >< MAGENTA >< BLUE GRADUAL
P-13	RGB INDIVIDUAL FADE IN BUMP OUT	P-31	GREEN >< CYAN >< BLUE GRADUAL
P-14	RGB INDIVIDUAL BUMP IN FADE OUT		
P-15	RGB 3 COLOUR STROBE		
P-16	WHITE STROBE		
P-17	7 COLOUR FADE OUT AND IN		
P-18	7 COLOUR BUMP		

"b-##" – Brightness (DEFAULT VALUE: 08)

Select the pre-programmed look brightness, values from 1 through 8 available.

"SP-#" – Effect Speed (DEFAULT VALUE: 4)

Select the effect playback speed, values from 1 through 9 available.

"1-##", "2-##", "3-##", "4-##", "5-##" – Manual Control (DEFAULT VALUE: 00)

Allows you to change the output for each channel (1 through 5) in percentage values. Changing the manual setting will override the pre-programmed look output and the pre-programmed output setting will override the manual control setting. Whichever is the last to be changed takes precedence.

RDM FUNCTIONALITY

The Cine-Value 5 offers robust Remote Device Management (RDM) which is compliant with both ANSI E1.20 – 2010 and ANSI E1.37-1 -2012 (R2017) standards.

When connected to a RDM capable controller via RDM capable infrastructure the following RDM functions are available:

- Identify individual devices by flashing the display and outputs using the RDM *Identify* command.
- GET and SET the device's *DMX Address* remotely
- GET and SET the device's *Personality* remotely
- GET and SET the device's *dimming (Gamma) curve* remotely
- GET and SET the device's *PWM frequency* remotely
- GET and SET a unique 32-character *DEVICE_LABEL* for each device

In addition, the Cine-Value 5 will report the following information about the device remotely:

- Unique RDM Unit ID
- Device Manufacturer Name
- Device Model ID and Model Label
- Current DMX512 start address
- Device DMX512 current personality and DMX footprint
- Device Product Category
- Device Software Version
- RDM Protocol Version

5 Channel Modes

8-bit control

Pr01 *(strobe off, master off)*
a (Start Address) output 1
a+1 output 2
a+2 output 3
a+3 output 4
a+4 output 5

Pr02 *(strobe off, master ON)*
a (Start Address) output 1
a+1 output 2
a+2 output 3
a+3 output 4
a+4 output 5
a+5 master

Pr03 *(strobe ON, master ON)*
a (Start Address) output 1
a+1 output 2
a+2 output 3
a+3 output 4
a+4 output 5
a+5 strobe
a+6 master

Pr04 *(strobe ON, master off)*
a (Start Address) output 1
a+1 output 2
a+2 output 3
a+3 output 4
a+4 output 5
a+5 strobe

16-bit (Gamma is Forced to 1.0)

Pr05 *(strobe off, master off)*
a (Start Address) output 1 coarse
a+1 output 1 fine
a+2 output 2 coarse
a+3 output 2 fine
a+4 output 3 coarse
a+5 output 3 fine
a+6 output 4 coarse
a+7 output 4 fine
a+8 output 5 coarse
a+9 output 5 fine

Pr06 *(strobe off, master ON)*
a (Start Address) output 1 coarse
a+1 output 1 fine
a+2 output 2 coarse
a+3 output 2 fine
a+4 output 3 coarse
a+5 output 3 fine
a+6 output 4 coarse
a+7 output 4 fine
a+8 output 5 coarse
a+9 output 5 fine
a+10 master coarse
a+11 master fine

Pr07 *(strobe ON, master ON)*
a (Start Address) output 1 coarse
a+1 output 1 fine
a+2 output 2 coarse
a+3 output 2 fine
a+4 output 3 coarse
a+5 output 3 fine
a+6 output 4 coarse
a+7 output 4 fine
a+8 output 5 coarse
a+9 output 5 fine
a+10 strobe
a+11 master coarse
a+12 master fine

Pr08 *(strobe ON, master off)*
a (Start Address) output 1 coarse
a+1 output 1 fine
a+2 output 2 coarse
a+3 output 2 fine
a+4 output 3 coarse
a+5 output 3 fine
a+6 output 4 coarse
a+7 output 4 fine
a+8 output 5 coarse
a+9 output 5 fine
a+10 strobe

2 Channel Modes

8-bit

Pr09 *(strobe off, master off)*
a (Start Address) output 1+3
a+1 output 2+4+5

Pr10 *(strobe off, master ON)*
a (Start Address) output 1+3
a+1 output 2+4+5
a+2 master

Pr11 *(strobe ON, master ON)*
a (Start Address) output 1+3
a+1 output 2+4+5
a+2 strobe
a+3 master

Pr12 *(strobe ON, master off)*
a (Start Address) output 1+3
a+1 output 2+4+5
a+2 strobe

16-bit (Gamma is Forced to 1.0)

Pr13 *(strobe off, master off)*
a (Start Address) output 1+3 coarse
a+1 output 1+3 fine
a+2 output 2+4+5 coarse
a+3 output 2+4+5 fine

Pr14 *(strobe off, master ON)*
a (Start Address) output 1+3 coarse
a+1 output 1+3 fine
a+2 output 2+4+5 coarse
a+3 output 2+4+5 fine
a+4 master coarse
a+5 master fine

Pr15 *(strobe ON, master ON)*
a (Start Address) output 1+3 coarse
a+1 output 1+3 fine
a+2 output 2+4+5 coarse
a+3 output 2+4+5 fine
a+4 strobe
a+5 master coarse
a+6 master fine

Pr16 *(strobe ON, master off)*
a (Start Address) output 1+3 coarse
a+1 output 1+3 fine
a+2 output 2+4+5 coarse
a+3 output 2+4+5 fine
a+4 strobe

Strobe Channel Control

DMX	Output
0 > 7	OPEN
8 > 65	Slow Strobe > Fast Strobe
66 > 71	OPEN
72 > 127	Snap Out Fade in Slow > Fast
128>133	OPEN
134 > 189	Snap In Fade Out Slow > Fast
190 > 195	OPEN
196 > 250	Random Strobe
251 > 255	OPEN