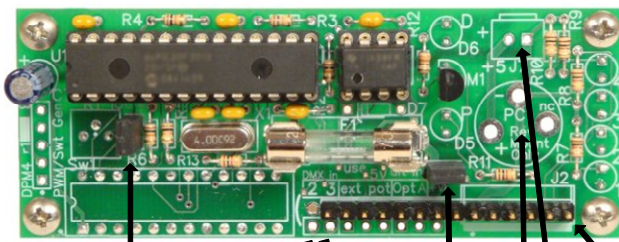


DPM4 PCB Connections

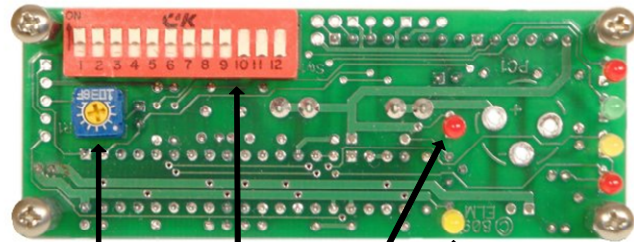
ELM Video Technology, Inc.

Top View



Onboard Pot Enable (optional)
DMX512 Input
External potentiometer (optional)
+5VDC Inputs (Optional)
+5VDC Alternate Source Enable (+5VDC input from mating connector)

Back View



Potentiometer (optional)
Dip Switches
Power LED
Data LED
14 pin mating connector (shown) or a 6 pin PWM or Switch output connector

1 PWM or Switch Output Indicators
2
3
4



+5VDC Power Harness (optional)

The DPM4 is a DMX512 +5VDC PWM (Pulse Width Modulation) Generator PCB.

Independently the DPM4 will generate 4 separate PWM or Switch outputs at 50mA each, and also mates with the DPM-RD, DPM-RL/Coil and DPM-RL/SSR PCB's for more functionality. The PWM, when used with LED's for example will create a dimming function to vary the brightness. The Switch output function has a threshold that will cause the outputs to either be fully on or off. Software V 1.06 threshold changed. To eliminate unwanted changes around the threshold value, a padded value has been added. To turn on, from an OFF status, the dmx value must reach 131 or above to turn ON, once ON the value must drop to 125 or below to turn OFF. *In the stand alone switch mode insure the potentiometer is either fully clockwise or fully counterclockwise to prevent intermittent or unwanted changes. (Software version 1.05 threshold settings were 0~127 = off / 128~255 = on)*

The **Onboard Potentiometer** jumper installed enables the onboard potentiometer as shown. By removing the jumper, an external 10K ohm potentiometer can be installed on the enclosure and connected to the PCB as shown above. The left most pin of the 3 should be the counter clockwise side of the pot, the center pin is the 'wiper' (adjustable output) and the 3rd pin should be the clockwise side of the pot

DMX512 Input connects to the pins shown above from the DMX512 input XLR connector pins 2 and 3 respectively.

There are three **+5VDC Input Options**. The +5VDC 'Alternate Source Enable' Jumper indicates the power input – NO JUMPER a power connector can be installed in either of the locations shown above (*part specific*) and/or the optional power harness shown above. With a JUMPER installed indicates that the +5VDC is sourced from a mating PCB (DPM-RD e.g.).

Mating Connector - A 14 pin connector installed is a mating connector to mate two boards together (see mating PCB descriptions), a 6 pin connector installed allows connections to custom circuits if the DPM4 is used independently.

Potentiometer – Is used to set the level or threshold while operated in 'Stand Alone' operation

[Software Version 1.04]

Dip Switches 1~9 sets the DMX512 Channels Assignments (*see the DMX512 Channel Assignment Document*).

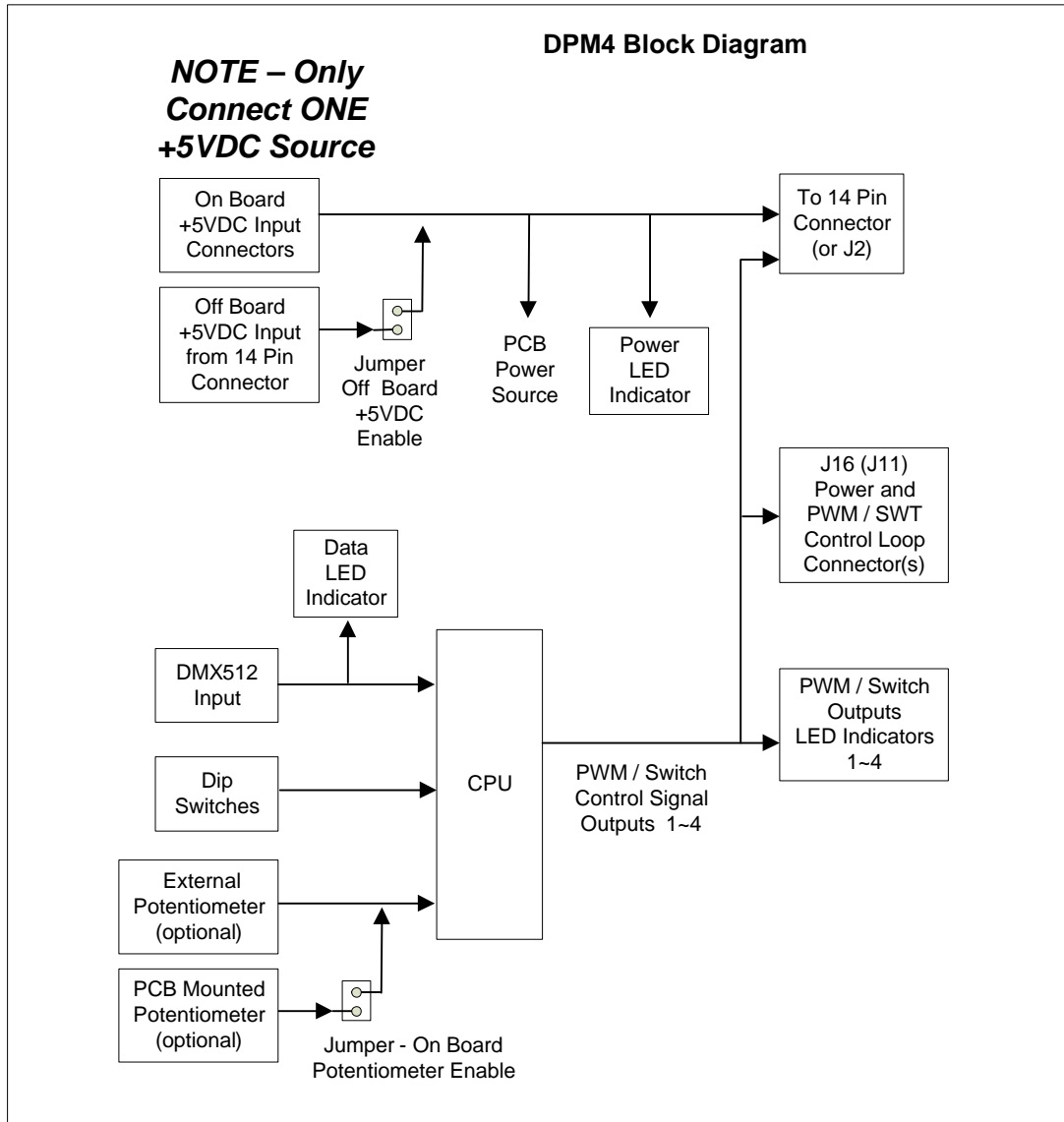
Dip Switch 10 sets the output Mode for all 4 outputs - OFF (down position) = PWM, ON (up position) = Switch (threshold). *With either Mode the potentiometer will either vary the PWM or On/Off of the 4 outputs.*

DIP Switches 11~12 sets the Stand Alone Output Channel.

LED Indicators - LED's to indicate the status of the DPM4. The power LED will illuminate indicating power is applied, the DATA LED On indicates DMX512 data is being received, Off the DPM4 is in Stand Alone Operation, and the four output LED's 1~4 (color variable) indicates the output level of each respectively.

DPM4 PCB Block Diagram

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DPM4 Operation

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[Software Version DPM-01.06]

The DPM4 can operate with DMX512 control responding to 4 of 512 DMX consecutive channels. If a DMX512 signal is connected (indicated by the yellow data LED) the DPM4 will respond to the channels assigned by the dip switches 1~9. The channel assignment of the dip switches is assigned to output #1 and outputs #2, #3, and #4 are automatically assigned to the following DMX512 channels respectively. (*Assigned channels 509, 510, 511, and 512 are forced to 509, using the last four DMX512 channels.*)

NOTE - A reset is required for changes to dip switches 1 ~ 10

If there is not a DMX512 signal input the DPM4 will operate in 'Stand Alone' operation. In Stand Alone, the DPM4 will turn on one of the four outputs (assigned by dip switches 11~12) with a brightness level determined by the potentiometer position.

For example, if the DPM4 is in Stand Alone operation and the desired operation is to have no output, turn the potentiometer full counter clock wise.

Or if the desired operation is to have output #3 at 50%, set dip switches 11 and 12 to output #3 (*for output #1 dip switch 11 and 12 off/down, output #2 – 11 on/up and 12 off/down, output #3 – 11 off/down and 12 on/off, output #4 – 11 on/up and 12 on/up*) and adjust the potentiometer to the 12 o'clock position.

Dip switch 10 is the PWM or Threshold mode setting. If #10 is off/down the DPM4 is in the PWM mode and the brightness is variable / dimmable. If #10 is on/up the output(s) are either fully off or fully on. If in the DMX512 operation the level on the respective channel will activate the output at a threshold - To turn on, from an OFF status, the dmx value must reach 131 or above to turn ON, once ON the value must drop to 125 or below to turn OFF. If in the Stand Alone mode the potentiometer level is the threshold, full counter clock wise is off, full clock wise is on. *To prevent intermittent or unwanted changes insure the potentiometer is either fully clockwise or fully counterclockwise.*

