

LM3915 Builders Notes

Bill of Materials

QTY	REFERENCE	DESCRIPTION	MARKINGS
1	PCB	LM3915 PCB	
3	R1,R5,R8	Resistor 1K Ohm	Brown-Black-Red-Gold Brown-Black-Black-Brown-Brown
1	R2	Resistor 100 Ohm	Brown-Black-Brown-Gold Brown-Black-Black-Black-Brown
1	R3	Resistor 10K Ohm	Brown-Black-Orange-Gold Brown-Black-Black-Red-Brown
1	R6	Resistor 510 or 650 Ohm NOT USED	Green-Brown-Brown-Gold (510) Green-Brown-Black-Black-Brown (510) Green-Blue-Brown-Gold (560) Green-Brown-Black-Black-Brown (560)
1	R7	Resistor 10 Ohm NOT USED	Brown-Black-Black-Gold Brown-Black-Black-Gold-Brown
1	R9	Resistor 20K Ohm NOT USED	Red-Black-Orange-Gold Red-Black-Black-Red-Brown
1	R4	Trimmer 50K	503
2	C1, C2	Capacitor Disc .1uF	104
1	U1s	Socket 18 pin DIP	
1	U1	IC LM3915	
2	J1, J2	Header Male 2 pin	
2	J1w, J2w	Female Header w/ Wires	
8	D1, D2, D3, D4, D5, D6, D7, D8	LED Squire Yellow	
2	D9, D10	LED Square Red	
1		Header 2 pin male	
1		Jumper block	

Tips:

- Use a meter to measure the 1% resistors. Some band colors may look similar and it is easy to mis-read them backwards.
- Watch the polarity when installing the male headers, the notch in the silkscreen should align with the notched area on the header.
- Watch the polarity when installing the LEDs. The LONG lead is positive and indicated by a + sign on the PCB. If you look inside the body of the LED the positive is also the smaller of the 2 metal areas.

Instructions:

- [] Insert and solder the following with the values as shown on the PCB silkscreen:
 - [] All resistors EXCEPT R6, R7, and R9 – These are not needed.
 - [] Using a piece of clipped resistor lead, solder a jumper wire in place of R7
 - [] Both capacitors C1 and C2.
 - [] Trimmer resistor R4, This may be installed either way, however, in one position the trimmer body will interfere with the mounting hole area.
 - [] 2 headers J1 and J2. Note the polarity as shown in the notes above. TIP: Connect the female wire header to the male headers. The Red wires will lead to the Vcc pin and for the audio input the pin going to the 10K resistor.
 - [] IC socket, align the notch on the socket with the notch on the PCB.
 - [] Using a piece of clipped resistor lead, solder a short across pins 6 and 7 of the IC on the

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bottom of the PCB.

[] Place the shorting block over the 2 pin header. The solder the header into the BAR/DOT selection area found to the left of R6.

- [] Insert the IC into the socket. Make sure pin 1 is properly oriented by matching the notch on the IC to the notch on the socket and silkscreen. If the IC does not have a notch pin 1 is marked with a dot. Align the dot on the same end as the socket notch.
- [] Install and solder the yellow LEDs D1 through D8. The LONG lead is positive which aligns with the + sign on the PCB. If you wish the LEDs to be at a 90 degree angle bend at the top of the flattened area on the leads. Using the picture above, align the leads then just push the leads downward. Make sure the positive lead (long) is correctly oriented before bending.
- [] Install and solder the red LEDs D9 and D10. See above for polarity and mounting.

Measured Specifications & Operation

Apply 9-12VDC Vcc input, observe polarity.

Jumper left of R6 selects the mode. Leave open for DOT and short for BAR.

Apply your audio input signal to the audio input. Note the negative lead on the audio input should not be used as a power ground, it is 10 ohms above ground. See schematic.

Adjust trimmer R4 to the desired LED levels.

Voltage: 3-25VDC

Frequency Response: DC to 300KHz

Audio Levels - Minimum sensitivity R4 fully clockwise - Vp-p @ 1KHz – Vcc@12.0V):

R1 lights ~50mV

R10 lights ~1.5V

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