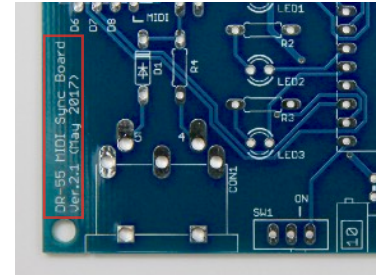


DR-55 MIDI Sync Board Ver 2.1 Build Guide

Issued Sep. 18, 2017

Notice: **The first thing to do is read through this entire guide**, make sure you have all the correct parts, and understand all the instruction.

This build guide is compatible with "**DR-55 MIDI Sync Board Ver.2.1 (May 2017)**". Make sure the version of your board. If you have different version, download the correct document from the support page shown below.



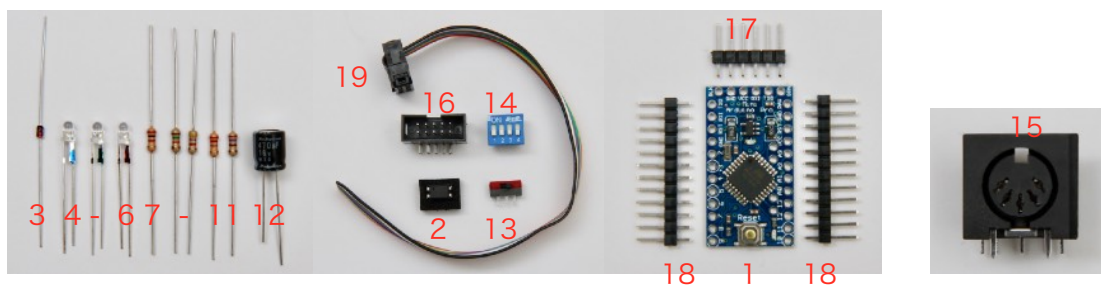
Contents

1. Parts List
2. Construction
3. Schematic

1. Parts List

#	Symbol	Item	Description / Color Code	Qty.	Notes
1	X1	Controller	Arduino Pro Mini 5V 16MHz compatible	1	Pre-programmed
2	IC1	Opt-coupler	TPL785	1	
3	D1	Diode	1N4148	1	
4	LED1	LED	3mm red (red marking on lead wire)	1	power indicator
5	LED2	LED	3mm blue (blue marking on lead wire)	1	MIDI indicator
6	LED3	LED	3mm green (green marking on lead wire)	1	PLAY indicator
7	R1	Resister	4.7k Ω (red, purple, red, gold)	1	All resistor 1/4W Carbon
8	R2	Resister	2k Ω (red, black, red, gold)	1	

#	Symbol	Item	Description / Color Code	Qty.	Notes
9	R3	Resister	15k Ω (brown, green, orange, gold)	1	
10	R4	Resister	220 Ω (red, red, brown, gold)	1	
11	R5	Resister	270 (reg, purple, brown, gold)	1	
12	C1	Electrolytic capacitor	470uF 16V	1	
13	SW1	Switch		1	
14	SW2	DIP Switch		1	
15	CON1	MIDI connector	5P	1	
16	CON2	Box header	10P Angle type	1	
17		Pin header	6P	1	
18		Pin header	12P	2	
19		Socket cable	10P 20cm	1	
		PCB		1	



2. Construction

I recommend to install parts with the following order.

R1, R2, R3, R4, R5 :
Check color code.

D1, IC1, SW1, SW2

These parts need to be correctly oriented as shown in the photo.

Arduino Pro Mini : X1

Install the 6P programing pin header on the upper side of Arduino Pro Mini.

Next, install two 12P pin header on the PCB. Then put the Arduino board on the headers and solder it.

LED1,2,3

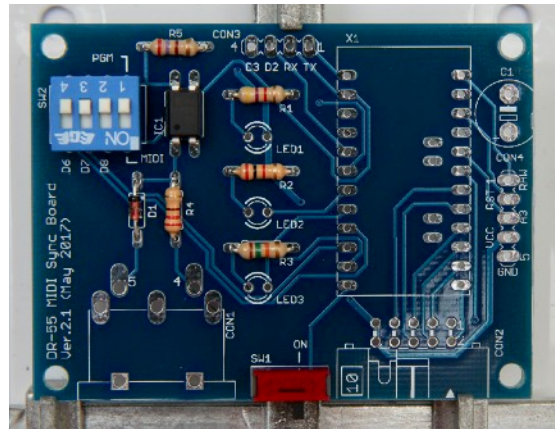
Sorry for this version of PCB has no marking of LED polarity. The side symbol "LED1/2/3" shown is positive. Regarding LED, long lead wire is positive.

C1

The side symbol "C1" shown is negative.

CON1, CON2

At last, Install a MIDI connector and a box header.



Soldering wire to DR-55

See another document “DR-55 soldering points.pdf”.

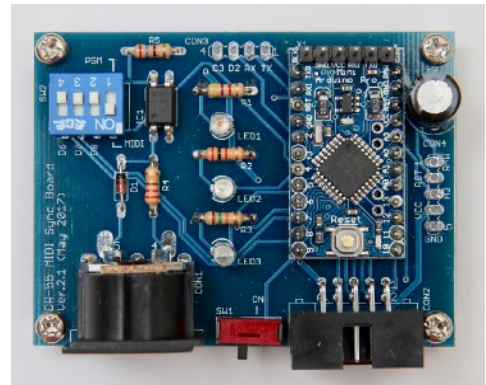
Troubleshooting

If you are having problems, please check the following:

- Are all parts installed?
- Have you soldered all legs?
- Check all soldering points again. Are any legs making short? Are there any cracking solder?
- Check orientation of D1, C1 and IC1.
- Check voltage of the battery.
- Measure voltage between GND and VCC. If it was quite smaller than 5V, any short must be occurred.

Instruction

1. Make sure the power DR-55 turned off. Connect socket wire from DR-55 to the sync board.
2. Connect MIDI cable to the sync board.
3. Set switch 1 of the DIP switch to MIDI.
4. SW1 is the setting of OMNI mode. Sync board recognizes all midi channel when the omni mode is ON. When the mode is off, the board recognizes only channel 10.
5. Turn the power of DR-55 on.



Support Page

Check the latest information at
<https://dwt98.github.io/DRS/>

3. Schematics

