

Step	Qty	Reference(s)	Value	LibPart	Footprint	Note
0			test the jacks take a cable nicely, 4 audio + USB			
0		test the LEDs for polarity and resistance preference at your maximum voltage				
1	1	J2	USB_B_Micro	FCI_10118193-0001LF		careful with those tiny pins to avoid solder bridge. Affix the shield legs for structural integrity, test a solid fit
2	2	R1, R5	2K4	Device:R	Resistor_THT:R	1/4 W size
3	2	R2, R6	10K	Device:R	Resistor_THT:R	Axial_1/4W size
4	2	R3, R4	10K or 1K	Device:R	Resistor_THT:R	sets the voltage range, if 10K you'll see +/-1V. If 1K it makes a +/-3V reference
5	4	R7, R9, R11, R13	1K	Device:R	Resistor_THT:R	Axial_1/4W size
6	4	R8, R10, R12, R14	470R	Device:R	Resistor for LED	may vary in value to 100R to 1K
7	6	C1, C3, C8, C10, C14, C15	100nF	Device:C "104"	Capacitor_THT:C	Disc_D5.0mm_W2.5mm_P5.00mm
8	6	C2, C4, C5, C7, C11, C13	1uF	Device:C "105"		non-polarized ceramic, lowpass filter value not critical
9	3	C6, C9, C12	10uF	Capacitor_THT:CP	Radial_D6.3mm	fold over before soldering
10		check the electrolytic capacitors' polarity again, negative towards the lower voltage				
11	1	U1	LM358	Amplifier_Oper	Package_DIP:DIP-8	W7.62mm_Socket
12	2	U2, U3	LM324	Amplifier_Oper	Package_DIP:DIP-14	W7.62mm_Socket
13	2	RV1, RV2	B1K	Potentiometer_Bourns	3296W	lay flat, bend pins to solderpoints
14		fit plastic frame to base PCB, to help fit edge connectors, no screws yet				
15	4	J1, J3, J4, J5	AudioJack2_Switch	MJ-3536N:MJ-3	sna:CUI_MJ-3536	fit wall before soldering to ensure they're straight
16	1	Q1	Power Unit	XP IA0505-SIP		pre-bend pins down to lay module on its side
17		clip slider slot plastic fittings into faceplate, tape down tightly.				
18		plastic frame screwed into bottom to ensure height of front panel components before soldering				
19	12		screws	M3 x 4mm		don't overtighten, the plastic is soft
20	2	RV3, RV4	B10K	Bournes PTA6043-2015DPB103		make sure they're level, "DPB"
21	2	RV5, RV6	B10K potentiometer	Alpha_RD901F-40-00D_Single_V		tighten to front panel before soldering
22	4	SW1, SW2, SW3, SW4	SW_SPDT	Switch:SW_SPD	sna:SPDT_Tayda	press back uniform
23	4	D1, D2, D3, D4	LED_THT:LED_D5.0mm		bipolar two pin	ensure flat face, long pin is matched in all LEDs. Test one to see preferred color direction.
24		test functionality, switches, and leds				
25	2		big round knobs			rotate align how you like
26	2		slider knobs		press on	
27	1		USB Power Cable	Male-Micro-B to Male-A		longer for convenience