

MIDI Controlled Bass Guitar Projected BOM										
Item Number	Quantity	Component Type	Reference	Value	Footprint	Supplier	Part Number	Cost (per 100)	Cost Per 100 Project	Cost/Project
1	3	Capacitor	C1-C3	10uF	0805	Digikey	490-6473-2-ND	\$0.0360	\$10.80	\$0.11
2	2	Capacitor	C5,C7	0.1uF	0805	Digikey	311-1140-2-ND	\$0.0200	\$4.0000	\$0.04
3	2	Capacitor	C4,C6	100uF	6.3x11mm	Digikey	1189-1856-ND	\$0.1137	\$22.74	\$0.23
4	3	Resistor	R1,R15,R19	10	0805	Digikey	RMCF0805JG10R0TR-ND	\$0.0085	2.55	\$0.03
5	9	Resistor	~	330	0402	Digikey	P330LTR-ND	\$0.0125	\$11.25	\$0.1
6	21	Resistor	~	1k	0402	Digikey	P1.00KLTR-ND	\$0.0126	\$26.46	\$0.26
7	52	Power Resistor	~	1K		Digikey	RA73F2A10KBTD	\$1.0600	\$5,512.00	\$55.12
8	2	Resistor	R12,R13	2.2k	0402	Digikey	P2.20KLTR-ND	\$0.0125	\$2.50	\$0.03
9	55	Diode	~	4148	0805	Digikey	1801-TS4148TBGTR-ND	\$0.0458	\$251.90	\$2.52
10	60	LED	~	LED	0805	Digikey	732-4982-2-ND	\$0.1359	\$815.40	\$8.15
11	1	Microcontroller	U1	PIC16F1788	SSOP-28	Digikey	PIC16F1788-I/SS-ND	\$2.1400	\$214.00	\$2.14
12	2	Microcontroller	U2,U3,U8,U9,10	PIC16F1789	TQFP-44	Digikey	PIC16F1789-I/PR-ND	\$2.5000	\$500.00	\$5.00
13	13	Opto-Isolator	U4-U7,U11-U30	LTV-247	SOIC-16	Digikey	160-2255-2-ND	\$0.6456	\$839.28	\$8.39
14	1	Linear Regulator	U31	LM1117MP	SOT-223	Digikey	488-LM1117MPX 33NOPBCT-N	\$0.4478	\$44.78	\$0.45
15	3	Switch	SW2-SW4	Push Switch	6x6x5mm	Digikey	450-1650-ND	\$0.1074	\$32.22	\$0.32
16	1	Switch	SW1	Hex Thumbswitch	2.54mm x 5	Digikey	A7BS-254-1-ND	\$13.1209	\$1,312.09	\$13.12
17	1	Inductor	L93	10uH	3.96mm x 2pin	Digikey	M8278-ND	\$0.8359	\$83.59	\$0.84
18	40	Solenoid	L1-L20 (2x)	25N	2.54mm Pin Header	Digikey	JF-1039B	\$13.9900	\$55,960.00	\$559.60
19	12	Solenoid	L1-L12	4N	3.96mm x 2pin	Amazon	JF-0530B	\$12.9900	\$15,588.00	\$155.88
20	1	Bass	Bass	P-Bass	N/A	Amazon	Squier Precision Bass	\$129.9900	\$12,999.00	\$129.99
21	52	Transistor	Q1-Q20 (3x)	IRF540N	TO-220	Mouser	942-IRF540NPBF	\$0.6380	\$3,317.60	\$33.18
22	52	Header		3.96mm Header	3.96mm x 2pin	Mouser	5716404452	\$0.0950	\$494.00	\$4.94
23	52	Connector	~	3.96mm Con.	~	Mouser	571-3-640429-2	\$0.2540	\$1,320.80	\$13.21
24	2	Header	J2-J13	2.54mm Headers	2.54mm x varies	Amazon	MCIGICM 40pin	\$4.9900	\$998.00	\$9.98
25	1	Connector	J1	DIN-5	~	Mouser	571-5212044-1	\$3.8900	\$389.00	\$3.89
26	1	PETG	~	1Kg	~	Amazon	1.75mm Matte Grey PETG	\$13.9900	\$1,399.00	\$13.99
27	3	Aluminuim	~	3m	~	Amazon	1220mm 2020 Aluminuim Extr	\$35.2500	\$10,575.00	\$105.75
28	1	Weather Stripping	~	2ft	~	Amazon	Weather Strip Silicone D Shap	\$0.9900	\$99.00	\$0.99
29	3	Breakout PCB	~	~	~	PCBWAY	Solenoid-Breakout (1)	\$5.0000	\$500.00	\$15.00
30	1	Motherboard PCB	~	~	~	PCBWAY	Midi_Motherboard_PCB	\$4.6000	\$460.00	\$4.60
31	1	Wire	~	~	~	Amazon	200ft CL3P	\$85.9900	\$8,599.00	\$85.99
									Total Cost Per 100	\$122,383.96
	Labor	Member	Hours	Wage Per Hour	Labor Cost					
		Owen	132.167	\$50.00	\$6,608.35				Total Cost Per Unit	\$1,233.84
		Justin	96	\$50.00	\$4,800.00					
				Labor Total	\$11,408.35				Project Cost	\$12,642.19