

# PCBA BILL OF MATERIALS

NAME: No Frezee Control Board

BOM: 083-1000

REVISION 3.0

DATE: MARCH 28 2018

								Per Assy Component Cost:	
Item	Qty per Asy	Reference	Description	Manufacturer	ManPartNum	Supplier Part Number Digikey.com	Cost unit	Extended	
1	1	Q1	MOSFET N-CH 60V 310MA SOT323	NXP Semiconductors	2N7002BKW,115	1727-4788-1-ND	\$0.43	\$0.43	
2	1	U2	IC MCU 8BIT 1KB FLASH 8SOIC 8-bit AVR Microcontroller, 1.8-5.5V, 1KB Flash, 64 Bytes EEPROM, 64 Bytes SRAM, 8-pin SOIC, Industrial Grade (-40°C to 85°C), Pb-Free	Microchip	ATTINY13A-SSUR	ATTINY13A-SSURCT-ND	\$0.60	\$0.60	
3	3	C11, C14, C13	CAP CER 0.1UF 25V X7R 0603	TDK Corporation	CGA3E2X7R1E104K080AA	445-5667-1-ND	\$0.10	\$0.30	
4	1	C3	CAP CER 1UF 25V X7R 0603	Yaego	CC0603KRX7R8BB105	311-1802-1-ND	\$0.10	\$0.10	
5	1	C2	CAP ALUM 470UF 20% 63V RADIAL	Panasonic	ECA-1JHG471	P5585-ND	\$0.88	\$0.88	
6	4	D1, D2, D3, D4	DIODE GEN PURP 1KV 1A DO41	ON Semiconductor	1N4007	1N4007FSCT-ND	\$0.16	\$0.64	
7	1	D5	DIODE ZENER 12V 3W AXIAL	ON Semiconductor	1N5927BRLG	1N5927BRLGOSCT-ND	\$0.39	\$0.39	
8	1	F1	FUSE BOARD MNT 500MA 63VDC 1206	Littelfuse Inc.	SF-1206S050	SF-1206S050-2CT-ND	\$0.66	\$0.66	
9	1	P1	CONN HEADER VERT 2POS .100 TIN	TE Connectivity AMP	640456-2	A1921-ND	\$0.12	\$0.12	
10	1	P2	DNI (Programming Port)					\$0.00	
11	1	D6	LED BLUE DIFF 4.9MM ROUND T/H	Würth Electronics Inc.	151051BS04000	732-5015-ND	\$0.24	\$0.24	
12	1	D9	LED GREEN CLEAR 0603 SMD	Lite-On Inc.	LTST-C191KGKT	160-1446-1-ND	\$0.29	\$0.29	
13	1	U3	IC OPAMP GP 1.3MHZ RRO SC70-5	STMicroelectronics	LMV321LICT	497-13050-1-ND	\$0.50	\$0.50	
14	1	U1	IC REG LINEAR 5V 150MA SOT23-5	Texas Instruments	TPS70950DBVR	296-35484-1-ND	\$1.17	\$1.17	
15	1	K1	RELAY GEN PURPOSE SPST 30A 12V	TE Connectivity Potter & Brumfield Relays	T9AS5D12-12	PB306-ND	\$3.29	\$3.29	
16	1	R3	RES 200 OHM 5W 5% AXIAL	Yaego	SQP500JB-200R	200W-5-ND	\$0.56	\$0.56	
17	1	R2	RES SMD 1K OHM 5% 1/10W 0603	Yaego	RC0603JR-071KL	311-1.0KGRCT-ND	\$0.10	\$0.10	
18	3	R6, R8, R10	RES SMD 10K OHM 5% 1/10W 0603	Yaego	RC0603JR-0710KL	311-10KGRTR-ND	\$0.10	\$0.30	
19	2	R5, R9	RES SMD 33K OHM 1% 1/10W 0603	Yaego	RC0603FR-0733KL	311-33.0KHRCT-ND	\$0.10	\$0.20	
20	1	R4	RES SMD 330 OHM 5% 1/10W 0603	Yaego	RC0603JR-0733RL	311-33GRCT-ND	\$0.10	\$0.10	
21	0	R12	DNI					\$0.00	
22	4	J1, J2, J3, J4	CONN QC TAB 0.250 SOLDER SPADE-TERM	TE Connectivity AMP Connectors	1217861-1	A100452CT-ND	\$0.11	\$0.44	
23	1	D8	DIODE GEN PURP 100V 150MA SOD123	Micro Commercial Co	1N4148W-TP	1N4148WTPMSCT-ND	\$0.14	\$0.14	
24	1	SW1	SWITCH TACTILE SPST-NO 0.05A 12V	C&K	PTS645SM43SMTR92 LFS	CKN9112CT-ND	\$0.15	\$0.15	
25	1	D7	TVS DIODE 5VWM 9.2VC SOD123W	Nexperia USA Inc.	PTVS5V0S1UR,115	1727-5229-1-ND	\$0.44	\$0.44	
26	1	VR1	VARISTOR 220V 1.2KA DISC 7MM	EPCOS (TDK)	B72207S0141K101	495-4439-ND	\$0.53	\$0.53	
27	0	TP1, TP2	DNI						
28	4	MTH1, MTH2, MTH3, MTH4	PLASTIC STAND-OFF; BRD SPT SNAP LOCK NYLON 1/2"	KEYSTONE ELECTRONICS	9022	36-9022-ND	\$0.11	\$0.44	
29	1	PCB	PCB Two layer, Thck 1.6mm, Dimensions 2.25" X 4"	TBD	083-1002 Rev 3.0	083-1002 Rev 3.0	\$1.50	\$1.50	

DNI: DO NOT INSTALL

Total \$14.51

Other items

Mating P1	CONN RECEPT 2POS 24AWG MTA100	TE Connectivity AMP Connectors	3-640441-2	A30978-ND	\$0.18
Mating J1, J2, J3, J4	CONN QC RCPT 14-16AWG 0.250	TE Connectivity AMP Connectors	3-350819-2	A27824CT-ND	\$0.27
CHIP PROGRAMMER	POCKET AVR PROGRAMMER	SparkFun Electronics	PGM-09825	1568-1080-ND	\$14.95