

# Bill Of Materials for Bit Station

**Design Title** Bit Station  
**Author** Dustin Stroh (J3RK)  
**Document Number**  
**Revision** 3.0  
**Design Created** Wednesday, June 7, 2023  
**Design Last Modified** Wednesday, June 7, 2023  
**Total Parts In Design** 83

## 0 Modules

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Notes</u>
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Sub-totals:

## 4 Capacitors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Notes</u>
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1	C1	1uF	CAP10	X7R Ceramic is fine here. Just a Delayed 1 Injector for Shift Register
1	C2	22uF	CAP10	X7R or Audio Grade Electrolytic for AC Coupling
1	C3	100nF	CAP10	C0G/NP0 MLCC / Ceramic / Film
1	C4	10uF	CAP10	X7R or Audio Grade Electrolytic for AC Coupling

Sub-totals:

## 32 Resistors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Notes</u>
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3	R1,R19,R21	100R	RES30	1% (100PPM / 50PPM Recommended)
9	R2-R9,R14	3K	RES30	1% (100PPM / 50PPM Recommended)
3	R10,R13,R27	10K	RES30	1% (100PPM / 50PPM Recommended)
1	R11	4.99K	RES30	1% (100PPM / 50PPM Recommended)
5	R12,R16-R18,R31	100K	RES30	1% (100PPM / 50PPM Recommended)
1	R15	130K	RES30	1% (100PPM / 50PPM Recommended)
2	R20,R28	499K	RES30	1% (100PPM / 50PPM Recommended)
3	R22,R24-R25	10k	RES30	1% (100PPM / 50PPM Recommended)
1	R23	6.8K	RES30	1% (100PPM / 50PPM Recommended)
1	R26	47k	RES30	1% (100PPM / 50PPM Recommended)
1	R29	91K	RES30	1% (100PPM / 50PPM Recommended)
1	R30	5.6K	RES30	1% (100PPM / 50PPM Recommended)
1	R32	20K	RES30	1% (100PPM / 50PPM Recommended)

Sub-totals:

## 9 Integrated Circuits

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Notes</u>
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2	U1-U2	4041	DIL14	CD4041 Quad Complement Buffer
1	U3	4094	DIL16	CD4094 Shift Register
1	U4	LM311	DIL08	Comparator
1	U5	OPA2134PA	DIL08	Choose Low Drift / Low Bias / Low Offset / DC Accurate (OPA2132, LF412, etc.)
1	U6	4070	DIL14	CD4070 Quad XOR
1	U7	40106	DIL14	CD40106 Hex Schmitt Inverter
2	U8-U9	TL071	DIL08	Noise Output Buffers. Any single op amp will work here. (TL071, LF356, etc.)

Sub-totals:

## 2 Transistors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Notes</u>
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2	Q1,Q3	2N3904	TO92	Any standard TO-92 NPN Transistor (EBC Pinout on board.)
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Sub-totals:

1 Diodes

Quantity	References	Value	PCB Package	Notes
1	D1	1N4738A	DO41	Zener Diode between 8.2V and 10V.

Sub-totals:

35 Miscellaneous

Quantity	References	Value	PCB Package	Notes
13	BP1-BP13	100nF	0805	Decoupling / Bypass SMT 0805 Capacitors. COG/NP0 Preferred
6	CLOCKIN,COMPIN,CVOUT,DNZ,NZ,SERIAL	CONN-SIL1	CONN-SIL1	On PCB Solder Pads. (no component needed)
2	FB1-FB2	0R	RES30	Ferrite Beads Recommended
1	J1	SIL-156-04	SIL-156-04	MTA-156 Friction Lock Power Header.
8	LED1-LED8	LED-BIRG	CONN-SIL2	2 Lead BiColor LED
1	LFCMP1	SW-SPDT	CONN-SIL3	SPDT Toggle Switch. NKK Recommended.
2	PF1-PF2	100uF	ELEC-RAD13	Power Filtering Electrolytic Capacitors
1	RN1	10k	CONN-SIL10	R/2R Resistor Network (CV Output DAC) Bourns Recommended
1	THRESH1	100K	CONN-SIL3	Panel Pot (Linear)

Sub-totals:

Totals: