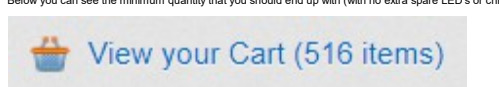


QUANTITY	PCB DESIGNATOR	TYPE	VALUE	NOTE	LINK
7x	C2, C3, C6, C8, C9, C11, C14	capacitor, filmbox	100nF (0.1uF)	5mm lead spacing	https://www.taydaelectronics.com/0-1uf-100v-5-polyester-film-box-type-capacitor.html
1x	C1	capacitor, electrolytic (radial)	1uF	50V, 2.5mm lead spacing	https://www.taydaelectronics.com/1-uf-50v-105c-radial-electrolytic-capacitor-5x11mm.html
15x	C15-C29	capacitor, multilayer ceramic	100nF (0.1uF)	5mm lead spacing	https://www.taydaelectronics.com/1-uf-50v-m-l-multilayer-ceramic-capacitor.html
1x	C4	capacitor, filmbox	2.2nF	5mm lead spacing	https://www.taydaelectronics.com/2-2nf-0-0022uf-100v-5-polyester-film-box-type-capacitor.html
1x	C5	capacitor, filmbox	4.7nF	5mm lead spacing	https://www.taydaelectronics.com/4-7nf-0-0047uf-100v-5-polyester-film-box-type-capacitor.html
1x	C7	capacitor, filmbox	1nF	5mm lead spacing	https://www.taydaelectronics.com/1nf-0-001uf-100v-5-polyester-film-box-type-capacitor.html
1x	C10	capacitor, ceramic	100pF	2.5mm lead spacing	https://www.taydaelectronics.com/100pf-50v-101mc0510115-ceramic-disco-capacitor-multicomp.html
1x (10)	C13	capacitor, ceramic	470pF	2.5mm lead spacing	https://www.taydaelectronics.com/470pf-50v-10-ceramic-disco-capacitor.html
1x	C12	capacitor, electrolytic (radial)	22uF	50V, 2.5mm lead spacing	https://www.taydaelectronics.com/22uf-50v-105c-jrb-radial-electrolytic-capacitor-5x11mm.html
Total 29 capacitors (38 with minimum limits of 10 on C13)					
5x (10)	R1, R2, R3, R4, R9	resistor, through hole	1M	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-1m-ohm-1-4w-1-metal-film-pkg-of-10.html
25x (30)	R5, R6, R15, R24, R28, R31-R38, R56-R67	resistor, through hole	10K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-10k-ohm-1-4w-1-metal-film-pkg-of-10.html
7x (10)	R7, R16, R17, R18, R19, R23, R30	resistor, through hole	100K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-100k-ohm-1-4w-1-metal-film-pkg-of-10.html
19x (20)	R8, R11, R39-R55	resistor, through hole	22K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-22k-ohm-1-4w-1-metal-film-pkg-of-10.html
3x (10)	R10, R21, R22	resistor, through hole	4.7K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-4-7k-ohm-1-4w-1-metal-film-pkg-of-10.html
3x (10)	R12, R13, R14	resistor, through hole	47K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-47k-ohm-1-4w-1-metal-film-pkg-of-10.html
1x (10)	R20	resistor, through hole	100R (100 ohm)	1/4 watt, metal film resistor	https://www.taydaelectronics.com/resistor-100ohm-1-4w-1-metal-film-pkg-of-10.html
1x (10)	R25	resistor, through hole	1.2K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/resistor-1-2k-ohm-1-4w-1-metal-film-pkg-of-10.html
1x (10)	R26	resistor, through hole	2.2K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/resistor-2-2k-ohm-1-4w-1-metal-film-pkg-of-10.html
1x (10)	R27	resistor, through hole	1K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-1k-ohm-1-4w-1-metal-film-pkg-of-10.html
1x (10)	R29	resistor, through hole	470K	1/4 watt, metal film resistor	https://www.taydaelectronics.com/10-x-resistor-470k-ohm-1-4w-1-metal-film-pkg-of-10.html
Total 67 resistors - However, Tayda only sells resistors in packs of 10 minimum, so the total is 140 resistors with the minimum limits					
2x	D1, D2	diode, through hole	1N4148		https://www.taydaelectronics.com/1n4148-switching-signal-diode.html
1x	D3	diode, through hole	1N4001	Can be any 1N4001* variant	https://www.taydaelectronics.com/1n4001-diode-1a-50v.html
264x (+10x*)	LED matrix and binary counter	3mm LED	red	diffused	https://www.taydaelectronics.com/leds/round-leds/3mm-leds/red/led-3mm-red.html
	LED for bypass indication	3mm LED	green	diffused	https://www.taydaelectronics.com/leds/round-leds/3mm-leds/green/led-3mm-green.html
Total 3 diodes and 265 Light Emitting Diodes - the default color is red, but you can choose any colour (but some resistor values may have to be adjusted, especially for blue led's - read the build document for more info) * I recommend buying at least 10x spare led's for the led matrix, since not all led's sit flush against the PCB. Don't use clear LED's, it makes the waveforms much harder to see.					
5x	U1, U4, U11, U12, U15	IC chip	CD4040 (BE)	16-pin DIP package	https://www.taydaelectronics.com/cd4040be-cd4040-4040-ripple-carry-binary-counter-divisor-ic.html
1x	U2	IC chip	CD4069 (UBE)	14-pin DIP package	https://www.taydaelectronics.com/cd4069be-cd4069-4069-hex-inverter-ic.html
1x	U3	IC chip	CD4046 (BE)	16-pin DIP package	https://www.taydaelectronics.com/cd4046be-cd4046-4046-ic-phase-locked-loop.html
2x	U5, U6	IC chip	CD4013 (BE)	14-pin DIP package	https://www.taydaelectronics.com/cd4013-4013-ic-cmos-dual-d-flip-flop.html
2x	U7, U8	IC chip	CD4011 (BE)	14-pin DIP package	https://www.taydaelectronics.com/cd4011-4011-1ba-4011-quad-2-input-nand-gate-ic.html
1x	U9	IC chip	CD4077 (BE)	14-pin DIP package	https://www.taydaelectronics.com/cd4077be-cd4077-cmos-exclusive-nor-gate-ic.html
1x	U10	IC chip	CD4012 (BE)	14-pin DIP package	https://www.taydaelectronics.com/cd4012be-cd4012-4012-dual-4-input-nand-gate-ic.html
1x	U11	IC chip	CD4093 (BE)	14-pin DIP package	https://www.taydaelectronics.com/cd4093-4093-ic-cmos-nand-schmitt-trigger.html
1x	U14	IC chip	CD4066 (BE)	14-pin DIP package	https://www.taydaelectronics.com/cd4066-4066-ic-cmos-quad-bistable-switch.html
2x	U16, U17	IC chip	CD4051 (BE)	16-pin DIP package	https://www.taydaelectronics.com/cd4051-4051-ic-cmos-multiplex-demultiplexer.html
2x	U18, U19	IC chip	LM3914	18-pin DIP package	https://www.taydaelectronics.com/lm3914-lm3914-led-bar-dot-display-driver-ic.html
Total 19 chips (and 19 sockets) - I recommend buying one extra spare chip of each CD4000-series type, since CMOS chips are easily damaged by static.					
9x	socket for all 14-pin chips	chip socket		14-pin socket	https://www.taydaelectronics.com/14-pin-machine-tooled-ic-socket.html
8x	socket for all 16-pin chips	chip socket		16-pin socket	https://www.taydaelectronics.com/16-pin-machine-tooled-ic-socket.html
2x	socket for all 18-pin chips	chip socket		18-pin socket	https://www.taydaelectronics.com/18-pin-dip-ic-socket-adaptor-solder-type.html
Make sure to use sockets for all the chips!					
2x	Q1, Q2	mosfet transistors	2N7000	through hole	https://www.taydaelectronics.com/2n7000-mosfet-n-channel-60v-0-2a.html
These do not need to be socketed, but if you want to socket them, buy one of these SIP sockets and break off 3-pins for each https://www.taydaelectronics.com/30-pin-dip-sip-ic-sockets-adaptor-solder-type.html					
1x	bypass switching relay	Mini relay DPDT	NA-12W-K	12vdc 8pin 2poles 1A	https://www.taydaelectronics.com/electromechanical/relays/na-12w-k-mini-relay-dpdt-12vdc-1a.html
1x	wave/slope switch	Mini toggle switch	DPDT	on/on	https://www.taydaelectronics.com/mini-toggle-switch-1m-4013-dpdt-on-on.html
4x	octave down & up, phaser, vibrato switches	Mini toggle switch	SPDT	on/on	https://www.taydaelectronics.com/mini-toggle-switch-apd8-on-none-on.html
2x	bypass and vibrato buttons	push button	SPST (NO)	momentary	https://www.taydaelectronics.com/electromechanical/switches-key-pad/push-button/pb-11d02-push-button-panel-mount-spst-no-pb-11d02-4hr00.html
Total 5 switches, two buttons and one relay					
1x	level trimmer (for LED matrix)	trimpot	100K		https://www.taydaelectronics.com/100k-ohm-trimmer-potentiometer-cermet-1-urn-3362p.html
1x	offset trimmer (for LED matrix)	trimpot	10K		https://www.taydaelectronics.com/10k-ohm-trimmer-potentiometer-cermet-1-urn-3362p.html
1x	Level	potentiometer	B100K	PCB mount, angled	https://www.taydaelectronics.com/b100k-ohm-linear-taper-potentiometer-round-shaft-pc-mount-l.html
1x	Gate	potentiometer	B250K	PCB mount, angled	https://www.taydaelectronics.com/250k-ohm-linear-taper-potentiometer-round-shaft-pc-mount-l.html
1x	Blend	potentiometer	B50K	PCB mount, angled	https://www.taydaelectronics.com/b50k-ohm-linear-taper-potentiometer-round-shaft-pc-mount-l.html
1x	Phasor rate	potentiometer	C250K	PCB mount, angled	https://www.taydaelectronics.com/c-250k-ohm-anti-log-taper-potentiometer-round-shaft-pc-mount-l.html
1x	Vibe rate	potentiometer	C500K	PCB mount, angled	https://www.taydaelectronics.com/c-500k-ohm-anti-log-taper-potentiometer-round-shaft-pc-mount-l.html
Total 5 potentiometers and two trimpots - these potentiometers are suitable for 6.35mm screw on knobs (not push on knobs) Also buy 5x knobs of your choice for the potentiometers!					
2x	Input / output jacks	Instrument cable jack	Mono jack (TR)	6.3mm / 1/4"	https://www.taydaelectronics.com/hardware/6-35mm-1-4-plugs-jacks/neutral-6-35mm-1-4-mono-chassis-socket-jack.html
1x	DC jack	power connector jack			https://www.taydaelectronics.com/hardware/power/dc-power-jack-2-1mm-enclosed-frame-with-switch.html
4x	PCB mounting standoff	standoff		10mm	https://www.taydaelectronics.com/brass-standoff-spacer-screw-hex-female-m3x10mm-silver.html
4x	PCB mounting screw	screw		M3, 18mm	https://www.taydaelectronics.com/m3-steel-screw-cross-round-head-m3x18mm.html
4x	PCB mounting nut	nut		M3 nut	https://www.taydaelectronics.com/uf-3mm-stainless-steel-for-screw-m3.html
<i>Not included in this list is an enclosure. The PCB is not designed for any standard size enclosure in mind, so be prepared to make your own enclosure with a transparent top.</i>					

Below you can see the minimum quantity that you should end up with (with no extra spare LED's or chips).



Below you can see the price I ended up with (this is with 10x extra spare LED's and one extra chip of each CMOS type) at the time this document was made (august 2020).

	Edit	<input type="checkbox"/>	\$0.01	x	\$0.24	<input type="text"/>
	Edit	<input type="checkbox"/>	\$0.02	x	\$0.08	<input type="text"/>
	Edit	<input type="checkbox"/>	\$0.05	x	\$0.24	<input type="text"/>

Empty cart Continue Shopping [Update Shipping Call](#)

Calculate Shipping Costs **Discount Codes**

Enter your destination to get a shipping price:

Country:

State/Province:

Please select region, state or province

Zip/Postal Code:

Grand Total \$35.49

