

| I have? | I Need? | Ref | Value | BOM_Qty | OrderQty | Part_No | Each | Src | Footprint | Info |
|---------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------|----------|--------------------------|---------|--------|-----------|---------------------|
| | | C16, C55 | 22pF, Capacitor Monolithic, 100 Volt, ±5% NPO | 2 | 10 | 332541 | \$ 0.19 | Jameco | C2 | multiples of 10 |
| | | C32 | 47 pF, Capacitor Monolithic, 100 Volt, ±5% NPO | 1 | 10 | 332567 | \$ 0.19 | Jameco | C2 | multiples of 10 |
| | | C7, C8 | 68pF, Capacitor Monolithic, 100 Volt, ±5%, COG | 2 | 2 | 81-RDE5C2A680 J0S1H3A | \$ 0.33 | Mouser | C2 | |
| | | C3, C9, C10, C11, C12, C13, C14, C15, C17, C18, C19, C20, C21, C22, C23, C24, C25, C28, C29, C30, C31, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C56, C57, C58 | 0.1 uF, 50 Volt, Monolithic X7R, Radial | 46 | 50 | 544921 | \$ 0.15 | Jameco | C2 | multiples of 10 |
| | | C1, C2, C5, C6 | 1 uF, 25 Volt, ±10%, Radial Tantalum | 4 | 4 | 545588 | \$ 0.35 | Jameco | C1V5 | |
| | | C27 | 10 uF, 25 Volt, ±10%, Radial Tantalum | 1 | 1 | 545641 | \$ 0.59 | Jameco | C1V5 | |
| | | C4 | 22 uF, 16 Volt, ±10%, Radial Tantalum | 1 | 1 | 545852 | \$ 0.69 | Jameco | C1V5 | |
| | | C26 | 33 uF, 25 Volt, ±10%, Radial Tantalum | 1 | 1 | 33785 | \$ 1.75 | Jameco | C1V5 | |
| | | D3 | LED, Blue Diffused, T1-3/4, 5MM, 470nm, 350mcd | 1 | 1 | 2234071 | \$ 0.69 | Jameco | LEDV | |
| | | D1, D2, D4, D5, D6, D7 | LED, Red Diffused, T1 63mcd 660nm | 6 | 10 | 333851 | \$ 0.12 | Jameco | LEDV | multiples of 10 |
| | | D9, D10 | LED, Yellow Diffused, T1 14mcd 590nm | 2 | 2 | 2155241 | \$ 0.25 | Jameco | LEDV | |
| | | D8 | LED, Green Diffused, T1 30mcd 567nm | 1 | 10 | 156930 | \$ 0.15 | Jameco | LEDV | multiples of 10 |
| | | P14, P26, P31 | Test_Pin, 1 Position, Unshrouded Header, Solder Straight | 3 | | 2168211 | \$ 0.59 | Jameco | SIL-1 | order 40 Pin strips |
| | | JP1, JP2, JP3, JP4, JP5, JP6, JP7, JP8, JP9, JP10, JP11, JP12, JP13, JP14, JP15, JP16, JP18, JP19, JP20, JP21, P22, P25 | Jumper, 2 Position, Unshrouded Header 2.54mm Solder Straight | 22 | | 2168211 | \$ 0.59 | Jameco | SIL-2 | order 40 Pin strips |
| | | K1, K2, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14 | Jumper, 3 Position, Unshrouded Header 2.54mm Solder Straight | 13 | | 2168211 | \$ 0.59 | Jameco | SIL-3 | order 40 Pin strips |
| | | P8, P12, P19 | Jumper, 4 Position, Unshrouded Header 2.54mm Solder Straight | 3 | | 2168211 | \$ 0.59 | Jameco | SIL-4 | order 40 Pin strips |
| | | P7 | Jumper, 5 Position, Unshrouded Header 2.54mm Solder Straight | 1 | | 2168211 | \$ 0.59 | Jameco | SIL-5 | order 40 Pin strips |
| | | P3 | Jumper, 8 Position, Unshrouded Header 2.54mm Solder Straight | 1 | | 2168211 | \$ 0.59 | Jameco | SIL-8 | order 40 Pin strips |

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|--|-------------------|---------------------------------------------------------------------------|---|----|-----------------------|---------|--------------------|---------------|---------------------------|
| | P11 | Jumper, 2x2 Position, Unshrouded Header, 2.54mm, Solder Straight | 1 | | 53532 | \$ 0.85 | Jameco | pin_array_2X2 | Buy 20x2pins and cut down |
| | P9, P13, P16, P27 | Jumper, 3x2 Position, Unshrouded Header, 2.54mm, Solder Straight | 4 | | 53532 | \$ 0.85 | Jameco | pin_array_3X2 | Buy 20x2pins and cut down |
| | P20 | Jumper, 4x2 Position, Unshrouded Header, 2.54mm, Solder Straight | 1 | | 53532 | \$ 0.85 | Jameco | pin_array_4X2 | Buy 20x2pins and cut down |
| | P2, P10, P17, P28 | Jumper, 5x2 Position, Unshrouded Header, 2.54mm, Solder Straight | 4 | | 53532 | \$ 0.85 | Jameco | pin_array_5X2 | Buy 20x2pins and cut down |
| | P4, P15 | Jumper, 8x2 Position, Unshrouded Header, 2.54mm, Solder Straight | 2 | | 53532 | \$ 0.85 | Jameco | pin_array_8X2 | Buy 20x2pins and cut down |
| | Socket (U4) | Socket, SIPP, 30 Pin, Machine Tooled Pins, Solder Tail | 2 | 2 | 78642 | \$ 1.49 | Jameco | pin_array_30 | |
| | J1 | Connector, DB9, 9 Position Female D-Sub, Right Angle, Through Hole | 1 | 1 | 104952 | \$ 0.89 | Jameco | DB9-F | |
| | R2, R10, R11, R12 | 10 Ohm 5% 1/4W | 4 | 10 | 690380 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R6, R9 | 47 Ohm 5% 1/4W | 2 | 10 | 690540 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R15 | 150 Ohm 5% 1/4W | 1 | 10 | 690662 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R7, R16, R20, RR2 | 470 Ohm 5% 1/4W | 4 | 10 | 690785 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R4 | 1K Ohm 5% 1/4W | 1 | 10 | 690865 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R13 | 4.7K Ohm 5% 1/4W | 1 | 10 | 691024 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R1, R5 | 10K Ohm 5% 1/4W | 2 | 10 | 691104 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R14 | 220K Ohm 5% 1/4W | 1 | 10 | 691420 | \$ 0.10 | Jameco | R3 | multiples of 10 |
| | R3 | 2 Meg Ohm 1% 1/4W, Metal Film | 1 | 1 | 2M | \$ 0.10 | Anchor Electronics | R3 | |
| | RR1, RR4 | 1K Ohm SIP 6 pin, 5 Resistors | 2 | 2 | 652-4606X-1LF-1K | \$ 0.44 | Mouser | r_pack5 | |
| | RR3, RR5 | 1K Ohm SIP 10 pin, 9 Resistors | 2 | 2 | 652-4610X-1LF-1K | \$ 0.64 | Mouser | r_pack9 | |
| | RP1, RP2 | 2.2K Ohm, 16 pin DIP, 125 mW, 2%, 8 Resistor, Isolated Resistor Network | 2 | 2 | 652-4116R-1LF-2.2K | \$ 0.84 | Mouser | 16dip300 | |
| | SW1 | Switch, Subminiature Toggle, SPDT (On-On), Right Angle, PCB Mount, 3 Pins | 1 | 1 | 106067 | \$ 1.95 | Jameco | SWSPDT | |
| | Q1 | 2N3904 NPN General Purpose | 1 | 10 | 38359 | \$ 0.09 | Jameco | TO92-INVERT | multiples of 10 |
| | P1 | Clock Oscillator, DIP-14, 5V, 2.00 MHz, soldered (No socket needed) | 1 | 1 | 27924 | \$ 1.49 | Jameco | 14dip300 | |
| | P18 | Clock Oscillator, DIP-14, 5V, 20.00 MHz | 1 | 1 | 27932 | \$ 0.75 | Jameco | 14dip300 | |
| | X1 | CRYSTAL, 3.58 MHz, 30pF, HC49-2 | 1 | 1 | 449-LFXTAL0138 67BULK | \$ 0.65 | Mouser | HC49 | |
| | X2 | CRYSTAL, 12.0 MHz, HC49/U, 20pF, Low Profile | 1 | 1 | 2159630 | \$ 0.25 | Jameco | HC49 | |

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| | U6 | HD6402-9 UART, DIP40, 200kB, 5V ONLY (also COM1863, TR1863, CDP6402, IM6402IDL, HD3-6402R-9Z and compatibles) | 1 | 1 | HD6402-9 | \$ 4.95 | Anchor Electronics | 40dip600 | |
| | U12, U13 | (CY, HT, HM, or MCM)6264LP-10, 8KX8 SRAM, 100nS | 2 | 2 | 42884 | \$ 2.95 | Jameco | 28dip600 | |
| | U32 | 74F367 | 1 | 1 | 74F367 | \$ 1.42 | Anchor Electronics | 16dip300 | |
| | U9, U34 | 74LS00 | 2 | 2 | 46252 | \$ 0.79 | Jameco | 14dip300 | |
| | U11 | 74LS02 | 1 | 1 | 283741 | \$ 0.59 | Jameco | 14dip300 | |
| | U3, U24 | 74LS04 | 2 | 2 | 283792 | \$ 0.65 | Jameco | 14dip300 | |
| | U19 | 74LS05 | 1 | 1 | 46341 | \$ 0.79 | Jameco | 14dip300 | |
| | IC11, U21 | 74LS07 | 2 | 2 | 46367 | \$ 0.89 | Jameco | 14dip300 | |
| | U36 | 74LS11 | 1 | 1 | 46439 | \$ 0.69 | Jameco | 14dip300 | |
| | U33 | 74LS32 | 1 | 1 | 295515 | \$ 0.55 | Jameco | 14dip300 | |
| | U41 | 74LS125 | 1 | 1 | 46501 | \$ 0.69 | Jameco | 14dip300 | |
| | U5 | 74LS126 | 1 | 1 | 46527 | \$ 0.69 | Jameco | 14dip300 | |
| | U10 | 74LS139 | 1 | 1 | 46623 | \$ 0.69 | Jameco | 16dip300 | |
| | U29 | 74LS157 | 1 | 1 | 301612 | \$ 0.55 | Jameco | 16dip300 | |
| | U16, U27, U30, U31, U35, U37 | 74LS244 | 6 | 6 | 47183 | \$ 0.79 | Jameco | 20dip300 | |
| | U17, U20, U22, U23 | 74LS245 | 4 | 4 | 47212 | \$ 0.79 | Jameco | 20dip300 | |
| | U18 | 74LS367 | 1 | 1 | 47562 | \$ 0.99 | Jameco | 16dip300 | |
| | U39, U40 | 74LS373 | 2 | 2 | 47600 | \$ 0.69 | Jameco | 20dip300 | |
| | U1, U7, U8, U26 | 74LS374 | 4 | 4 | 47634 | \$ 0.79 | Jameco | 20dip300 | |
| | U28 | ELM440P, 60Hz Generator, 8-Pin 300mil PDIP | 1 | 1 | ELM440P | \$ 8.00 | elmelectronics.com | 8dip300 | |
| | U2 | MAX232CPE | 1 | 1 | 24811 | \$ 2.95 | Jameco | 16dip300 | |
| | U15, U25 | ATF1508AS-10JU84, IC CPLD, 128MHz 10NS, 84-PLCC, Atmel | 2 | 2 | 556-ATF-1508AS-10JU84 | \$ 10.05 | Mouser | 84-PLCC (J-Lead) | |
| | U4 | DCJ11-AE, PDP-J11 CPU | 1 | 1 | | | eBay.com | x2 30 Pin SIP | |
| | U14 | L7805CV, 5 Volt, 1.5 Amp, TO-220 | 1 | 1 | 924633 | \$ 0.45 | Jameco | TO-220 | |
| | U14 | Heat Sink, TO-220, 1.2"L x 1"W x 0.5"H (for L7805CV) | 1 | 1 | 129242 | \$ 0.75 | Jameco | | |
| | U14 | Screw, 6-32, 3/8" Phillips | 1 | | | | | | |
| | U14 | NUT, HEX, 6-32 | 1 | | | | | | |
| | U14 (Alternate for L7805CV at U14) | PSU5a 5V 3A Regulator, TO-220 form Factor | 1 | 1 | PSU5a | \$ 7.95 | ezsbc.com | TO-220 | |
| | P7 (Alternate for L7805CV at U14) | D24V25F5 Pololu 5V 2.5A Step-Down Voltage Regulator | 1 | 1 | D24V25F5 | \$ 10.95 | Pololu.com | SIL-5 | |
| | DIP14S (P18) | DIP Socket, Osc, 4-Pins | 1 | 1 | 133006 | \$ 0.65 | Jameco | 14dip300 | |
| | DIP14 | DIP socket 14 | 12 | 20 | 112214 | \$ 0.14 | Jameco | 14dip300 | multiples of 10 |
| | DIP16 | DIP socket 16 | 5 | 10 | 112222 | \$ 0.20 | Jameco | 16dip300 | multiples of 10 |
| | DIP20 | DIP socket 20 | 16 | 20 | 112248 | \$ 0.17 | Jameco | 20dip300 | multiples of 10 |
| | DIP28 (0.600) | DIP socket 28 (0.600" W) | 2 | 10 | 112272 | \$ 0.24 | Jameco | 28dip600 | multiples of 10 |

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|--|-----------------------|---------------------------------------------------------------------------------------|---|----|------------------|---------|--------|----------|-----------------|
| | DIP40 (0.600) | DIP socket 40 (0.600" W) | 1 | 10 | 41111 | \$ 0.33 | Jameco | 40dip600 | multiples of 10 |
| | PLCC84 (U15) | Socket, PLCC-84 Pin, Tin Plated, through-hole | 2 | 2 | 575-948424 | \$ 1.38 | Mouser | 84-PLCC | |
| | P5, P6 (Card Ejector) | Circuit Board Card Ejector and Pin, 0.062 inch, White Nylon, BIVAR PN# CP-06 WE | 2 | 2 | 749-CP-06- WE | \$ 0.49 | Mouser | | |