

**Integrated Circuits:**

| <b><u>Qty</u></b> | <b><u>Part #</u></b> | <b><u>Description</u></b>      | <b><u>Component</u></b> | <b><u>Manufacturer</u></b> | <b><u>Manufacturer #</u></b> | <b><u>Vendor</u></b> | <b><u>Vendor #</u></b> |
|-------------------|----------------------|--------------------------------|-------------------------|----------------------------|------------------------------|----------------------|------------------------|
|                   | 1 CDP1805ACE         | CMOS 8-bit Microprocessor      | U1                      | Harris                     | CDP1805ACE                   | Ebay                 | Various                |
|                   | 1 74HC373            | Octal D-Latch                  | U2                      | Toshiba                    | TC74HC373APF                 | Digikey              | TC74HC373APF-ND        |
|                   | 1 DS1233             | IC Supervisor                  | U3                      | Maxim                      | DS1233D-10+                  | Digikey              | DS1233D-10+-ND         |
|                   | 2 62256              | 32KB SRAM                      | U4,U5                   | Alliance                   | AS6C62256-55PCN              | Digikey              | 1450-1033-ND           |
|                   | 1 27C256             | 32KB EPROM                     | U6                      | Microchip                  | AT27C256R-70PU               | Digikey              | AT27C256R-70PU-ND      |
|                   | 1 DS1321             | Non-Volatile Memory Controller | U7                      | Maxim                      | DS1321+                      | Mouser               | 700-DS1321             |
|                   | 1 ATF750C            | CPLD                           | U8                      | Microchip                  | 556-AF750CL15PU              | Mouser               | 556-AF750CL15PU        |
|                   | 2 74HC175            | Quad D Flip-Flops              | U9, U17                 | Texas Ins                  | SN74HC175N                   | Digikey              | 296-8257-5-ND          |
|                   | 2 74HC365            | Hex Bus Drivers                | U10,U13                 | Texas Ins                  | SN74HC365N                   | Digikey              | 296-8304-5-ND          |
|                   | 1 CDP1877            | Prog Interrupt Controller      | U11                     | Harris                     | CDP1877                      | Ebay                 | Various                |
|                   | 1 ATF22V10           | EE PLD                         | U12                     | Microchip                  | ATF22V10C-10PU               | Digikey              | ATF22V10C-10PU-ND      |
|                   | 1 CDP1854            | UART                           | U14                     | Harris                     | CDP1854ACE                   | Ebay                 | Various                |
|                   | 1 MAX232             | RS-232 Transceiver             | U15                     | Texas Ins                  | MAX232N                      | Digikey              | 296-1402-5-ND          |
|                   | 1 COM8136            | Dual Baud Rate Generator       | U16                     | SMCS                       | COM8136                      | Ebay                 | Various                |
|                   | 4 74HC245            | Octal Bus Transceiver          | U18,U19,U20,U23         | Toshiba                    | TC74HC245APF                 | Digikey              | TC74HC245APF-ND        |
|                   | 1 CDP1879            | Real Time Clock                | U21                     | RCA                        | CDP1879CEI                   | Ebay                 | Various                |
|                   | 1 32768Hz            | Crystal Oscillator             | U22                     | Abrakon                    | ACH-32.768MHZ-EK             | Digikey              | 535-9178-5-ND          |
|                   | 2 CD4049             | Hex Inverter                   | U24,U25                 | Texas Ins                  | CD4049UBE                    | Digikey              | 296-2055-5-ND          |
|                   | 1 74HC240            | Octal Buffer Line Driver       | U26                     | Texas Ins                  | SN74HC240N                   | Digikey              | 296-1580-5-ND          |
|                   | 1 74HC04             | Hex Inverter                   | U27                     | Texas Ins                  | SN74HC04N                    | Digikey              | 296-1566-5-ND          |
|                   | 1 74HC32             | Quad OR Gates                  | U28                     | Texas Ins                  | SN74HC32N                    | Digikey              | 296-1589-5-ND          |
|                   | 1 74HC14             | Hex Inverters, Schmitt Trigger | U29                     | Texas Ins                  | SN74HC14N                    | Digikey              | 296-1577-5-ND          |
|                   | 1 74HC74             | Dua D Flip-Flop                | U30                     | Texas Ins                  | SN74HC74N                    | Digikey              | 296-1602-5-ND          |

**Discrete Components:**

| <b><u>Qty</u></b> | <b><u>Part #</u></b> | <b><u>Description</u></b>          | <b><u>Component</u></b> | <b><u>Manufacturer</u></b> | <b><u>Manufacturer #</u></b> | <b><u>Vendor</u></b> | <b><u>Vendor #</u></b> |
|-------------------|----------------------|------------------------------------|-------------------------|----------------------------|------------------------------|----------------------|------------------------|
|                   | 2 10M Ohms           | Resistor, 5%, 1/8 Watt, Axial      | R1,R5                   | Stackpole                  | CF18JT10M0                   | Digikey              | CF18JT10MOCT-ND        |
|                   | 7 10k Ohms           | Resistor, 5%, 1/8 Watt, Axial      | R2,R3,R6,R7,R8,R12      | Stackpole                  | CF18JT10K0                   | Digikey              | CF18JT10KOCT-ND        |
|                   | 1 1k, 1%             | Resistor, 1%, 1/8 Watt, Axial      | R4                      | Stackpole                  | RNF18FTD1K00                 | Digikey              | RNF18FTD1K00CT-ND      |
|                   | 2 560 Ohms           | Resistor, 5%, 1/8 Watt, Axial      | R10,R11                 | Stackpole                  | CF18JT560R                   | Digikey              | CF18JT560RCT-ND        |
|                   | 1 4.7k Ohms          | Resistor, 5%, 1/8 Watt, Axial      | R13                     | Stackpole                  | CF18JT4K70                   | Digikey              | CF18JT4K70CT-ND        |
|                   | 1 82k Ohms           | Resistor, 5%, 1/8 Watt, Axial      | R14                     | Stackpole                  | CF18JT82K0                   | Digikey              | CF18JT82KOCT-ND        |
|                   | 1 18k Ohms           | Resistor, 5%, 1/8 Watt, Axial      | R15                     | Stackpole                  | CF18JT18K0                   | Digikey              | CF18JT18KOCT-ND        |
|                   | 3 10k x 9 RP         | 9 Resistor Array, 10K, SIP         | RP1,RP3,RP6             | Bourns                     | 4610X-AP1-103LF              | Digikey              | 4610X-AP1-103LFCT-ND   |
|                   | 2 10k x 5 RP         | 5 Resistor Array, Bussed, 10K, SIP | RP2,RP7                 | Bourns                     | 4606X-101-103LF              | Digikey              | 4606X-1-103LF-ND       |
|                   | 1 1N5340             | Zener Diode, 6V, 5W                | D1                      | Onsemi                     | 1N5340BRLG                   | Digikey              | 1N5340BRLGOSCT-ND      |
|                   | 3 1N914              | Diode, Small Signal, 100V, 200mA   | D2,D3,D4                | Onsemi                     | 1N914TR                      | Digikey              | 1N914CT-ND             |
|                   | 1 2.5MHz             | Crystal, 2.5000 MHz                | Y1                      | ECS                        | ECS-25-S-1X                  | Digikey              | X1003-ND               |
|                   | 1 4.9152MHz          | Crystal, 4.9152 MHz                | Y2                      | ECS                        | ECS-49-20-1X                 | Digikey              | X1014-ND               |
|                   | 4 22pF               | Capacitor, Ceramic Mono, 0.1"      | C1,C2,C5,C6             | Kemet                      | C315C220K2G5TA               | Digikey              | 399-13931-ND           |
|                   | 4 0.01uF             | Capacitor, Ceramic Mono, 0.1"      | C3,C4,C11,C12           | Kemet                      | C315C103K5R5TA               | Digikey              | 399-4148-ND            |

|    |                    |  |                     |           |                     |         |                |
|----|--------------------|--|---------------------|-----------|---------------------|---------|----------------|
| 5  | 1uF                | Capacitor, Tantalum, 35V, Radial       | C7,C8,C9,C10,C17    | Kyocera   | TAP105K025SRW       | Digikey | 478-12959-1-ND |
| 3  | 1nF                | Capacitor, Ceramic Mono, 0.1"          | C13,C14,C19         | Kemet     | C315C102K1R5TA      | Digikey | 399-4144-ND    |
| 1  | 10uF               | Capacitor, Tantalum, 16V               | C18                 | Kyocera   | TAP106K016SCS       | Digikey | 478-1839-ND    |
| 2  | <del>Deleted</del> | <del>Capacitor, Ceramic Mono</del>     | <del>C15,C16</del>  |           | <del>Not Used</del> |         |                |
| 25 | 0.1uF              | Capacitor, Ceramic Mono, 0.1"          | C20-C44             | Kemet     | C320C104K5R5TA      | Digikey | 399-4264-ND    |
| 1  | LED                | LED, Green 3mm                         | LED2                | Lumex     | SSL-LX3044PGD       | Digikey | 67-1073-ND     |
| 4  | LED                | LED, Red, 3mm                          | LED1,LED3,LED4,LED5 | Everlight | HLMP1301            | Digikey | 1080-1041-ND   |
|    | 7 Segment          | 7 Segment, Green, 0.40", Common Anode, |                     |           |                     |         |                |
| 1  | Display            | 2.06V, 10ma, DIP-14                    | DISP1               | HP        | HDSP-311G           | Jameco  | 2320639        |

#### Sockets, Switches and Connectors

| <u>Qty</u> | <u>Part #</u>  | <u>Description</u>                  | <u>Component</u>                    | <u>Manufacturer</u> | <u>Manufacturer #</u> | <u>Vendor</u> | <u>Vendor #</u> |
|------------|----------------|-------------------------------------|-------------------------------------|---------------------|-----------------------|---------------|-----------------|
| 1          | DIP-14, 0.3"   | DIP socket 14 pin 0.3"              | 7 Seg Display<br>U7,U9,U10,U13,U15, | On Shore            | ED14DT                | Digikey       | ED3045-5-ND     |
| 9          | DIP-16, 0.3"   | DIP socket 16 pin 0.3"              | U17,U24,U25,SW5                     | On Shore            | ED16DT                | Digikey       | ED3046-5-ND     |
| 1          | DIP-18, 0.3"   | DIP socket 18 pin 0.3"              | U16                                 | On Shore            | ED18DT                | Digikey       | ED3047-5-ND     |
|            |                |                                     | U2,U18,U19,U20,U23,                 |                     |                       |               |                 |
| 6          | DIP-20, 0.3"   | DIP socket 20 pin 0.3"              | U26                                 | On Shore            | ED20DT                | Digikey       | ED3054-5-ND     |
| 2          | DIP-24, 0.3"   | DIP socket 24 pin 0.3"              | U8,U12                              | On Shore            | ED241DT               | Digikey       | ED3049-5-ND     |
| 1          | DIP-24, 0.6"   | DIP socket 24 pin 0.6"              | U21                                 | On Shore            | ED24DT                | Digikey       | ED3051-5-ND     |
| 4          | DIP-28, 0.6"   | DIP socket 28 pin 0.6"              | U4,U5,U6,U11                        | On Shore            | ED28DT                | Digikey       | ED3052-5-ND     |
| 2          | DIP-40, 0.6"   | DIP socket 40 pin 0.6"              | U1,U14                              | On Shore            | ED40DT                | Digikey       | ED3048-5-ND     |
|            | Oscillator     |                                     |                                     |                     | 1107741               |               |                 |
| 1          | Socket         | 4 pin socket in 14-DIP frame 0.3"   | U22                                 | Aries               |                       | Digikey       | A462-ND         |
| 2          | Push Button    | Tactile Switch, SPST-NO, 0.24"      | SW1,SW4                             | Jameco              | TL1105F160R-JVP       | Jameco        | 119011          |
| 1          | Power Switch   | Toggle Switch, SPDT, 3A 120V        | SW3                                 | C&K                 | T101MH9AQE            | Digikey       | CKN10963-ND     |
| 1          | Dip Switches   | 8 Position Dip Switch, SPST, DIP-16 | SW5                                 | Jameco              | KAS1108E-JVP          | Jameco        | 38842           |
| 1          | Battery Holder | CR2032 Coin Cell Battery Holder     | B1                                  | MPD                 | BH32T-C               | Digikey       | BH32T-C-ND      |
| 1          | Battery        | CR2032 3V Coin Cell 20mm            | B1                                  | FKD                 | CR2032                | Digikey       | SY189-ND        |
| 1          | Power          | 4 Pin, Male, Right Angle, 5.08mm    | J7                                  | TE                  | 641737-1              | Digikey       | A25430-ND       |
| 2          | SLU0, Panel    | 2x5,10 Pin, Male,Shrouded Header    | J1,J10                              | Sullins             | SBH11-PBPC-D05-ST-BK  | Digikey       | S9169-ND        |
| 2          | IDE Pwr, Bat   | 2 Pin, Male,Vertical Header         | J9, J6                              | TE                  | 640456-2              | Digikey       | A1921-ND        |
| 1          | IDE            | 2x20,40 Pin,Male,Shrouded Header    | J4                                  | Sullins             | SBH11-PBPC-D20-ST-BK  | Digikey       | S9175-ND        |
| 1          | BUS            | 2x25,50 Pin,Female,Shrouded Header  | J8                                  | Sullins             | PPTC252LFBN-RC        | Digikey       | S7093-ND        |
| 2          | Jumper Pins    | 3 Pin Male Header, 0.1"             | JP1,JP2                             | Wurth               | 61300311121           | Digikey       | 732-5316-ND     |
| 2          | Jumpers        | 0.1" Shunt Connector                | JP1,JP2                             | Sullins             | QPC02SXGN-RC          | Digikey       | S9337-ND        |