| Bill of Materials | November 5, 2015 | "not free" means you have to |
| EE445L Fall 2015 | EE445L pays for the PCB | "Cabinet means in one of the |
| | | "Valvano" means ask Valvar |

"Box means in box in your E

| Quantity | REF DES | Type | Description | Manufacturer |
|---|---|---|---|---|
| 0 | | ASM | 32-ohm speaker | |
| 0 | | ASM | 9V battery snap, T-type | |
| 0 | | ASM | Black case, 7.5" by 4.3" by 2.2" | Hammond |
| 0 | | ASM | Electret microphone | Panasonic |
| 0 | | CAP | Ceramic, X7R, 20%, 1 uF | |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 0.47 uF | Kemet |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 0.1 uF | |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 0.033 uF | |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 0.027uF | |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 0.01 uF | |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 4.7 nF | |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 2.2 nF | |
| 0 | | CAP | Ceramic, Z5U, -20/+80%, 1 nF | |
| 0 | | CAP | Ceramic Z5U, -20/+80%, 470 pF | |
| 0 | | CAP | Ceramic Z5U, -20/+80%, 330 pF | |
| 0 | | CAP | Ceramic Z5U, -20/+80%, 220 pF | |
| 0 | | CAP | Ceramic Z5U, -20/+80%, 100 pF | |
| 0 | | CAP | Ceramic Z5U, -20/+80%, 22 pF | |
| 0 | | CAP | Ceramic C0G, 10%, 10 pF | Murata 50V 5% |
| 0 | | CAP-Tant | Tantalum, 16V, 20% 2.2 uF | AVX Corporation |
| 0 | | CAP-Tant | Tantalum, 16V, 10% 4.7 uF | |
| 0 | | CAP-Tant | Tantalum, 20V, 10%, 1 uF | |
| 0 | | CAP-Tant | Tantalum, 10UF 20V 10% | |
| 0 | | CAP-Tant | Tantalum, 35V, 10%, 0.47 uF | |
| 0 | | CON | 2 to 40 pin 0.1 in header (price per pin) | |

| | | | |
|---|---|---|---|
| 0 | CON | 2-pin header | |
| 0 | CON | 2-pin jumper | |
| 0 | CON | 2-pin jumper | |
| 0 | CON | Test point, black | Keystone Electronics |
| 0 | CON | Test point, orange | Keystone Electronics |
| 0 | CON | Test point, yellow | Keystone Electronics |
| 0 | CON | Test point, white | Keystone Electronics |
| 0 | CON | Test point, blue | Keystone Electronics |
| 0 | CON | Test point, green | Keystone Electronics |
| 0 | CON | Test point, red | Keystone Electronics |
| 0 | CON | 14-pin LCD connector | SamTec |
| 0 | CON | 16-pin LCD connector | SamTec |
| 0 | CON | 20-pin LCD connector | SamTec |
| 1 | CON | Socket for micro SD card | Molex |
| 0 | CON | USB Mini-B socket, board mount, through hole | Molex |
| 0 | CON | Logic Analyzer connector | FCI |
| 0 | CON | JTAG 1 by 5 male header | |
| 0 | CON | 10 pin 2mm socket for Xbee (need two) | SamTec |
| 0 | CON | DB9 serial connector, female, board mount | |
| | CPU | TM4C123GH6PM 64-pin LQFP | TI |
| | CRYS | NX5032GA-16.000000 | NDK |
| 0 | DIODE | 1N914 diode | Fairchild |
| 0 | IC | ACCELER DUAL-AX 2.0G 8PLCC | Analog Devices |
| 0 | IC | LM2937 3.3 V regulator TO220, 500mA | TI |
| 0 | IC | LP2950 3.3V regulator, 100 mA TO-92 | TI |
| 0 | IC | 78M05 500mA 5V TO-220 regulator | National |
| 0 | IC | OPA4350 quad op amp | TI |
| 0 | IC | TLV5616 12-bit DAC | TI |
| 0 | IC | MAX539 12-bit DAC | Maxim-IC |
| 0 | IC | MAX1247 12-bit ADC | Maxim-IC |

| 0 | IC | INA122P instrumentation amp | TI |
|---|-----|-----------------------------------------|---------------------|
| 0 | IC | OPA2350 dual op amp | TI |
| 0 | IC | TLC2274 quad op amp | TI |
|   | IC | TPA731 audio amp (pin 1 low) 700mW | TI |
|   | IC | TPA751 audio amp (pin 1 high) 700mW | TI |
| 0 | IC | LM4041CILPR shunt diode reference | TI |
| 0 | IC | AD8032 dual op amp | Analog Devices |
| 0 | IC | L293 Motor H bridge | TI |
| 0 | IC | 74HC595 | |
| 0 | IC | 74HC165 | |
| 0 | IC | RS232 driver | STMicroelectronics |
| 0 | JACK | DC Power MALE 2.1mm | |
| 0 | JACK | Stereo Jack, or audio jack | |
| 0 | KEY | 3 by 4 common bus (D), keypad | Grayhill |
|   | LCD | 84 by 48 LCD | Nokia |
|   | LCD | 18-bit color 128*160 1.8" TFT LCD display | Sitronix |
| 0 | LCD | 16 by 2 with back light | Out of stock |
| 0 | LCD | 16 by 1 LCD | Out of stock |
| 0 | LED | Green 2mA 5mm diffused | Avago Technologies |
| 0 | LED | Red 1.6V 1mA 5mm diffused | Avago Technologies |
| 0 | LED | Yellow 2mA 5mm diffused | Avago Technologies |
| 0 | LED | Orange 10mA 5mm diffused | Avago Technologies |
| 0 | LED | Blue 10mA 5mm diffused | |
| 0 | PCB | PCB plus shipping | Advanced Circuits |
| 0 | POT | 20K LINEAR SLIDE POT | |
| 0 | POT | 10 K one-turn potentiometer | |
| 0 | POT | 20 K one-turn potentiometer | |
| 0 | RES | Carbon 1/6W, 5%, 100 | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 220 | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 270 | Yageo |

| | | | |
|---|---|---|---|
| 0 | RES | Carbon 1/6W, 5%, 330 | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 470 | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 510 | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 680 | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 820 | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 1K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 1.2K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 1.5K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 1.8K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 2.0K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 2.2K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 2.7K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 3.3K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 3.9K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 4.7K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 5.1K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 5.6K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 6.8K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 8.2K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 10K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 12K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 15K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 18K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 20K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 22K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 27K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 33K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 39K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 47K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 51K | Yageo |

| | | | |
|---|---|---|---|
| 0 | RES | Carbon 1/6W, 5%, 56K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 68K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 82K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 100K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 120K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 150K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 180K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 200K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 220K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 240K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 270K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 330K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 390K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 470K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 510K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 560K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 680K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 820K | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 1M | Yageo |
| 0 | RES | Carbon 1/6W, 5%, 10M | Yageo |
| 0 | SW | B3F tactile push button switch | Omron Electronics |
| 0 | SW | Black Off board momentary push buttom | |
| 0 | SW | Red Off board momentary push buttom | |
| 0 | SW | On/off power switch | |
| 0 | TRAN | PN2222 NPN transistor | Fairchild Semiconductor |
| 0 | TRAN | TIP120 Darlington NPN, TO220 | Fairchild |
| 0 | TRAN | TIP125 Darlington PNP, TO220 | Fairchild |
| 0 | TRAN | IRF540 MOSFET N-channel, TO220 | |
| | DAC | 8-Bit Micro Power Dual DAC w/ Rail to Rail output | TI |
| 1 | BOX | BOX PLSTC BLACK/CLR 9.5"LX6.34"W | SERPAC |

| 1 | BATTERY | NiCd Battery Pack: 4.8V 3000mAh (14.4Wh, 4S/S, C) with wire | batteryspace |

buy it "free sample" means you have to order it
six black cabinets in professsor's office (bring a print out of your SCH")
no, quantity and style will vary (bring a print out of your SCH circuit)
ard's office (bring a print out of your SCH circuit)

| Mfg. P/N | Distributor | P/N | Unit cost | Cost | PCB Artist |
|---|---|---|---|---|---|
| | AllElectronics | SK-230 | $0.50 | $0.00 | Speaker |
| | AllElectronics | BST-61 | $0.50 | $0.00 | Jumper2 |
| 1591ESBK | Mouser | 546-1591ES-BK | $5.18 | $0.00 | to do |
| | AllElectronics | MIKE-79 | $0.50 | $0.00 | electret |
| | Jameco | 81509 | $0.35 | $0.00 | Ceramic0.2 |
| C320C474M5U5TA | Digikey | 399-4309-ND | $0.40 | $0.00 | Ceramic |
| | Digikey | 399-4151-ND | $0.05 | $0.00 | Ceramic |
| | Digikey | 399-4298-ND | $0.40 | $0.00 | Ceramic |
| | | | $0.40 | $0.00 | Ceramic |
| | Digikey | 399-4188-ND | $0.40 | $0.00 | Ceramic |
| | | | $0.40 | $0.00 | Ceramic |
| | | | $0.40 | $0.00 | Ceramic |
| | | | $0.40 | $0.00 | Ceramic |
| | | | $0.03 | $0.00 | Ceramic |
| | | | $0.03 | $0.00 | Ceramic |
| | | | $0.03 | $0.00 | Ceramic |
| | | | $0.03 | $0.00 | Ceramic |
| | Jameco | 15405 | $0.03 | $0.00 | Ceramic |
| RDE5C1H100J0P1H03B | Digikey | 490-8629-ND | $0.31 | $0.00 | Ceramic |
| TAP225M016CCS | Mouser | 581-TAP225M016CCS | $0.29 | $0.00 | tantalum |
| | Jameco | 94035 | $0.22 | $0.00 | tantalum |
| | Digikey | 478-1833-ND | $0.32 | $0.00 | tantalum |
| | Digikey | 478-1840-ND | $0.56 | $0.00 | tantalum |
| | Jameco | 33531 | $0.19 | $0.00 | tantalum |
| | AllElectronics | SHS-40 | $0.02 | $0.00 | Jumper2 |

| | | | | | |
|---|---|---|---|---|---|
| | AllElectronics | SBH-2 | $0.10 | $0.00 | Jumper2 |
| | AllElectronics | SBC-2 | $0.27 | $0.00 | goes with SBH-2 |
| | AllElectronics | SJ-1 | $0.10 | $0.00 | goes with Jumper2 |
| 5001 | Digikey | 36-5001K-ND | $0.23 | $0.00 | testpoint |
| 5003 | Digikey | 36-5003K-ND | $0.23 | $0.00 | testpoint |
| 5004 | Digikey | 36-5004K-ND | $0.23 | $0.00 | testpoint |
| 5002 | Digikey | 36-5002K-ND | $0.23 | $0.00 | testpoint |
| 5117 | Digikey | 36-5117-ND | $0.23 | $0.00 | testpoint |
| 5116 | Digikey | 36-5116-ND | $0.23 | $0.00 | testpoint |
| 5000 | Digikey | 36-5000K-ND | $0.23 | $0.00 | testpoint |
| BCS-114-L-S-TE | SamTec | | | $0.00 | HD44780 |
| BCS-116-L-S-TE | SamTec | | | $0.00 | HD44780_16pin |
| BCS-120-L-S-TE | SamTec | | | $0.00 | AGM1264 |
| 473340001 | Digikey | WM3288CT-ND | $4.02 | $4.02 | MicroSD Slot |
| 54819-0519 | Digikey | WM17115-ND | $0.65 | $0.00 | USB_Mini-B |
| 68021-208HLF | Digikey | 609-3344-ND | $0.27 | $0.00 | LogicAnalyzer |
| | | | $0.29 | $0.00 | JTAG |
| SQT-110-01-F-S | SamTec | | $1.00 | $0.00 | XbeeModule |
| | Jameco | 15771 | $0.65 | $0.00 | SerialDB9 |
| TM4C123GH6PMI | Mouser | 595-TM4C123GH6PMI | $11.55 | $0.00 | TM4C123GH6PM |
| NX5032GA-16.000000 | Digikey | 644-1037-1-ND | $0.51 | $0.00 | XTAL/NX5032 |
| 1N914 | Digikey | 1N914B-ND | $0.05 | $0.00 | 1N914 |
| ADXL202JQC | Quest Components | ADXL202JQC | $7.50 | $0.00 | ADXL202 |
| LM2937ET-3.3/NOPB | Digikey | LM2937ET-3.3-ND | $1.17 | $0.00 | LM2937-3.3 |
| LP2950-33LPRE3 | Digikey | 296-31455-1-ND | $0.19 | $0.00 | LP2950-CZ-3.3 |
| LM78M05 | Jameco | 192233 | $0.19 | $0.00 | LM7805CT |
| OPA4350 | TI | | | $0.00 | OPA4350 |
| TLV5616 | TI | TLV5616CP | | $0.00 | TLV5616 |
| MAX539 | Maxim | MAX539ACPA | | $0.00 | Max539 |
| MAX1247 | Maxim | MAX1247ACPE+ | | $0.00 | Max1247 |

| Part | Supplier | Supplier PN | Price 1 | Price 2 | Label |
|---|---|---|---|---|---|
| INA122P | TI | INA122P | | $0.00 | INA122 |
| OPA2350PA | TI | OPA2350PA | | $0.00 | OPA2350 |
| TLC2274ACN | TI | TLC2274ACN | $1.17 | $0.00 | TLC2274 |
| TPA731D | TI | TPA731D | $1.84 | $0.00 | TPA731 |
| TPA751D | TI | TPA751D | $1.84 | $0.00 | TPA731 |
| LM4041CILPR | TI | LM4041CILPR | $0.90 | $0.00 | LM4041 |
| AD8032ANZ | Analog Devices | AD8032ANZ | $4.47 | $0.00 | AD8032 |
| L293NE | Digikey | 296-9519-5-ND | $3.50 | $0.00 | L293 |
| | Jameco | 46105 | $0.40 | $0.00 | |
| | Jameco | 45495 | $0.30 | $0.00 | |
| ST232CN | Jameco | 2001171 | $0.58 | $0.00 | ST232 |
| | Jameco | 101179 | $0.55 | $0.00 | PowerJack |
| | AllElectronics | MJW-12 | $0.09 | $0.00 | HeadphoneJack |
| 87YY3212A-506 | BGMicro | SWT1109 | $2.99 | $0.00 | 87YY3212A |
| 5110 | Sparkfun | 10168 | $9.95 | $0.00 | Nokia5110RedSparkFun |
| ST7735R | Adafruit | 358 | $19.96 | $0.00 | ST7735 |
| | BGMicro | 358 | $5.95 | $0.00 | HD44780_16pin |
| | BGMicro | LCD100 | $5.00 | $0.00 | HD44780 |
| HLMP-4740 | Digikey | 516-1327-ND | $0.29 | $0.00 | LEDT1.75 |
| HLMP-D150 | Digikey | 516-1323-ND | $0.29 | $0.00 | LEDT1.75 |
| HLMP-4719 | Digikey | 516-1326-ND | $0.29 | $0.00 | LEDT1.75 |
| HLMP-D401 | Digikey | 516-1330-ND | $0.29 | $0.00 | LEDT1.75 |
| | | | $0.99 | $0.00 | LEDT1.75 |
| | Advanced Circuits | | $53.00 | $0.00 | |
| | AllElectronics | SP-20K | $0.33 | $0.00 | SmallPot |
| | BGMicro | RES1420 | $0.15 | $0.00 | SquarePot |
| | BGMicro | RES1421 | $0.15 | $0.00 | SquarePot |
| CFR-12JB-100R | Digikey | 100EBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-220R | Digikey | 220EBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-270R | Digikey | 270EBK-ND | $0.02 | $0.00 | 0.125Wresistor |

| | | | | | |
|---|---|---|---|---|---|
| CFR-12JB-330R | Digikey | 330EBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-470R | Digikey | 470EBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-510R | Digikey | 510EBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-680R | Digikey | 680EBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-820R | Digikey | 820EBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-1K0 | Digikey | 1.0KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-1K2 | Digikey | 1.2KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-1K5 | Digikey | 1.5KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-1K8 | Digikey | 1.8KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-2K0 | Digikey | 2.0KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-2K2 | Digikey | 2.2KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-2K7 | Digikey | 2.7KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-3K3 | Digikey | 3.3KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-3K9 | Digikey | 3.9KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-4K7 | Digikey | 4.7KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-5K1 | Digikey | 5.1KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-5K6 | Digikey | 5.6KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-6K8 | Digikey | 6.8KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-8K2 | Digikey | 8.2KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-10K | Digikey | 10KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-12K | Digikey | 12KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-15K | Digikey | 15KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-18K | Digikey | 18KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-20K | Digikey | 20KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-22K | Digikey | 22KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-27K | Digikey | 27KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-33K | Digikey | 33KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-39K | Digikey | 39KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-47K | Digikey | 47KEBK-ND | $0.02 | $0.00 | 0.125W resistor |
| CFR-12JB-51K | Digikey | 51KEBK-ND | $0.02 | $0.00 | 0.125W resistor |

| Part | Vendor | Vendor Part # | Price | | Description |
|---|---|---|---|---|---|
| CFR-12JB-56K | Digikey | 56KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-68K | Digikey | 68KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-82K | Digikey | 82KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-100K | Digikey | 100KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-120K | Digikey | 120KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-150K | Digikey | 150KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-180K | Digikey | 180KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-200K | Digikey | 200KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-220K | Digikey | 220KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-240K | Digikey | 240KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-270K | Digikey | 270KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-330K | Digikey | 330KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-390K | Digikey | 390KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-470K | Digikey | 470KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-510K | Digikey | 510KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-560K | Digikey | 560KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-680K | Digikey | 680KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-820K | Digikey | 820KEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-1M0 | Digikey | 1.0MEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| CFR-12JB-10M | Digikey | 10MEBK-ND | $0.02 | $0.00 | 0.125Wresistor |
| B3F-1052 | Digikey | SW405-ND | $0.17 | $0.00 | B3F-1050 |
| | AllElectronics | MPB-5 | $0.35 | $0.00 | OffBoardSwitch |
| | AllElectronics | MPB-1 | $0.35 | $0.00 | OffBoardSwitch |
| | BGMicro | SWT1010 | $0.85 | $0.00 | OffBoardPowerSwitch |
| PN2222 | Digikey | PN2222BU-ND | $0.13 | $0.00 | 2N2222 |
| TIP120 | Digikey | TIP120-ND | $0.68 | $0.00 | TIP120 |
| TIP125 | Digikey | TIP125TU-ND | $0.67 | $0.00 | TIP125 |
| IRF540 | Digikey | IRF540NPBF-ND | $1.95 | $0.00 | IRF540 |
| DAC082S085 | TI | DAC082S085 | $1.96 | $0.00 | DAC082S085 |
| 193RC | Digikey | 193RC, BK | $15.48 | $0.00 | 193RC, BK |

| NCP-4.8V3000-wire | batteryspace | NCP-4.8V3000-wire | $20.95 | $0.00 | NCP-4.8V3000-wire |

| Where to get it? | Inventory |
|---|---|
| Cabinet | |
| Box | |
| Box | http://www.hammondmfg.com/pdf/1591E.pdf |
| Cabinet | |
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Valvano             do not use, rather included on ST7735
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we will solder it down to your PCB
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free sample
free sample
free sample
free sample                                                              1 KD

| Item | Notes | Code |
|---|---|---|
| free sample | | 2 HD |
| free sample | | 3 AD |
| free sample | | 4 JD |
| free sample | | |
| free sample | | |
| free sample | | 5 CD |
| free sample | | 6 BD |
| not free | | 7 MD |
| Cabinet | | |
| Cabinet | | |
| not free | | 8 ED |
| Cabinet | | 9 FD |
| Cabinet | | 87YY3210 ND |
| Box | http://docs.bgmicro.com/pdf/swt1109.pdf | * LD |
| not free | | |
| not free | | |
| not free | only 4 left | # GD |
| can borrow from 2nd floor, must return | | |
| Cabinet | | |
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| Cabinet | warning, the blue LEDs are very bright | |
| http://www.4pcb.com/ | | |
| Valvano | | |
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Cabinet                    http://www.kemet.com/kemet/web/homepage/kechome.nsf/vapubfiles/F3101_GoldMax.pdf/$file/F3101_GoldMax.
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Cabinet                              be careful to get pins 1 and 3 correct, there are two versions of the chip: 2N2222 and PN2222
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Valvano
free sample
not free

not free

pdf

| Quantity | REF DES | Type | Description | Manufacturer | Mfg. P/N | Distributor |
|---|---|---|---|---|---|---|
| 0 | | CAP | 0805 0.22 uF X7R ceramic | | | |
| 0 | | CAP | 0805 220 pF C0G ceramic | | | |
| 0 | | RES | 0805 1.1k 1% | | | |
| 0 | | RES | 0805 10k 1% | | | |
| 0 | | RES | 0805 20k 1% | | | |
| 0 | | RES | 0805 25.5k 1% | | | |
| 0 | | RES | 0805 100k 1% | | | |

| P/N | Unit cost | Cost | PCB Artist | Where to get it? |
|---|---|---|---|---|
| | $0.14 | $0.00 | Ceramic0805 | Little box of surface mount parts |
| | $0.35 | $0.00 | Ceramic0805 | Little box of surface mount parts |
| | $0.04 | $0.00 | 0.1WresistorSM805 | Little box of surface mount parts |
| | $0.04 | $0.00 | 0.1WresistorSM805 | Little box of surface mount parts |
| | $0.04 | $0.00 | 0.1WresistorSM805 | Little box of surface mount parts |
| | $0.04 | $0.00 | 0.1WresistorSM805 | Little box of surface mount parts |
| | $0.04 | $0.00 | 0.1WresistorSM805 | Little box of surface mount parts |