| Comment                  | Description                                      | Designator                       | Quantity | Pins | Value           |
|--------------------------|--|----------------------------------|----------|------|-----------------|
| BreadBoard               | SYB - 170 Pins                                   | BB1                              | 1        | 0    | 70,00           |
| BreadBoard               | 4*5 100mil                                       | BB2                              | 1        | 0    |                 |
| Battery TH 2 Holes       | Battery TH 150mil distance Holes                 | BT1                              | 1        | 2    |                 |
| Capacitor 10X10mm        | SMD D10mm H10mm 50V                              | C1                               | 1        | 2    | 220uF           |
| Capacitor 6.3X5.4mm      | SMD Dia6.3mm, 10V                                | C2                               | 1        |      | 220uF           |
| Capacitor 8X10mm         | SMD Dia 8mm Height 10mm, 35V                     | C3                               | 1        |      | 220uF           |
| C0805                    | 35V  | C4                               | 1        |      | 220pF           |
| C0805                    | 10V  | C5, C6, C13, C15, C19            | 5        |      | 10uF            |
| C0805                    | 10V  | C7, C12, C14, C16, C20, C22, C24 | 7        |      | 100nF           |
| C0805                    | 16V  | C8, C9, C10, C11                 | 4        |      | 22uF            |
| C0805                    | 10V  | C17, C18                         | 2        |      | 22pF            |
| C0805                    | 10V  | C21, C23                         | 2        |      | 4u7F            |
| C0805                    | 10V  | C25, C26                         | 2        |      | 33nF            |
| SS34                     |  | D1, D2, D4                       | 3        |      | 3A              |
| SS14                     | ,  | D3, D5, D6                       | 3        |      | 1A              |
| 1N4148                   | ,  | D7, D8, D9, D10, D11, D12        | 6        | 2    |                 |
| Ferrite Bead             |  | FB1, FB2                         | 2        | 2    | 150R            |
| SN754410NE               |  | IC1                              | 1        | 16   | 13010           |
| MCP4725A1T-E/CH          | 12-Bit Digital-to-Analog Converter with EEPROM M |                                  | 1        | 6    |                 |
| 74LVC245                 | OCTAL BUS TRANSCEIVER WITH 3-STATE OUTPUTS       |                                  | 1        | 20   |                 |
| ADE7912ARIZ              | ADC with Isolated Power                          | IC4                              | 1        | 20   |                 |
| PCF8563                  | RTC  | IC5                              | 1        | 8    |                 |
| DC Power Jack 2_1mm PTH  | DC Power Jack 2.1mm PTH                          | J1                               | 1        | 2    |                 |
| Power                    | Header 2H  | J2                               | 1        | 2    |                 |
| VSS                      | Header 2H  | J3                               | 1        | 2    |                 |
| VVR                      |  | J4                               | 1        | 2    |                 |
| V5                       | Header 2H  | J5                               | 1        | 2    |                 |
| 3V3                      | Header 2H  | J6                               | 1        | 2    |                 |
| Motor                    | Header 2X2H                                      | J7                               | 1        | 4    |                 |
| Servo                    | Header 3X2H                                      | J8                               | 1        | 6    |                 |
| Motor Driver             | Header 5X2H                                      |                                  | 1        |      |                 |
| Timer                    |  | J10                              | 1        | 10   |                 |
| DAC                      |  | J11                              | 1        | 2    |                 |
| IO3V3                    | Header 2H  | J12                              | 1        | 2    |                 |
| Graph                    | Header 3H  | J13                              | 1        | 3    |                 |
| MICROSD                  |  | J14                              | 1        | 9    |                 |
| Banana Jack              | 4mm  | J15                              | 1        | 1    |                 |
| Banana Jack              | 4mm  | J16                              | 1        | 1    |                 |
| Banana Jack              |  | J17                              | 1        | 1    |                 |
| LCD                      | Socket 6 2mm                                     | J19                              | 1        | 6    |                 |
| LCD Support              | Socket 4 2mm                                     | J20                              | 1        | 4    |                 |
| LCD support              |  | J21                              | 1        | 6    |                 |
| LCD Support              | Header 4 2mm                                     | J22                              | 1        | 4    |                 |
| Motor Source Jumper      | 3Pin 2.54mm                                      | JP1                              | 1        | 3    |                 |
| I V                      |  | JP2                              | 1        | 3    |                 |
| Power Inductor           | L38 12X12X7mm 3A                                 | L1, L2                           | 2        |      | 47uH            |
| Power Inductor           | L38 CDRH74R 7X7X4mm 1A                           | L3                               | 1        |      | 47uH<br>4u7H    |
| TFT 128X160px            | TFT128X160px SPI communication                   | LCD1                             | 1        | 14   | <del></del> u/∏ |
| LED 3mm                  | 3mm  | LED1, LED2, LED4                 | 3        | 2    |                 |
| LED 3mm Bi Clr 3Pin Comm | 311111   | LLU 1, LLU 4, LLU 4              | 3        |      |                 |
| Anode                    | Common Anode                                     | LED3                             | 1        | 3    |                 |

| LED 3mm Bi Clr 3Pin Common    | T  | <u> </u>                           |    |    |            |
|-------------------------------|--|------------------------------------|----|----|------------|
| Cathod                        | Common Cathod                                  | LED5, LED6                         | 2  | 3  |            |
| Piezo Buzzer                  | Piezo Buzzer 12mm Dia                          | LS1                                | 1  | 2  |            |
| Drill 2mm                     | Hole 2.1mm                                     | MP1, MP2, MP3, MP4, MP5            | 5  | 0  |            |
| Arduino Mega 2560 R3          |  | PCB1                               | 1  | 92 |            |
| ESP8266 ESP-12-E              | ESP-12-E Two Female Sockets 8 Ptich: 2mm       | PCB2                               | 1  | 16 |            |
| XBEE                          | XBee Two Female Sockets 10 Ptich: 2mm          | PCB3                               | 1  | 20 |            |
| HC05                          | Socket 6                                       | PCB4                               | 1  | 6  |            |
| FDS6675BZ PFET                | SOIC-8   | Q1                                 | 1  | 3  |            |
| R0805                         |  | R1, R36                            | 2  | 2  | 15k        |
| R0805                         |  | R3                                 | 1  |    | 3K9        |
| R0805                         |  | R4                                 | 1  |    | 470 1%     |
| R0805                         |  | R5                                 | 1  |    | 51k 1%     |
| R0805                         |  | R6                                 | 1  |    | 10k 1%     |
| R0805                         |  | R7                                 | 1  |    | 0.3        |
| R0805                         |  | R8, R12, R13, R14, R15, R16, R33   | 7  | 1  | 2k2        |
| R0805                         |  | R9, R10, R11                       | 3  | 1  | 2k7        |
|                               |  | R17, R18, R19, R20, R21, R22, R23, |    | _  |            |
| R0805                         |  | R24, R30, R37, R38, R41, R42, R43  | 14 | 2  | 10k        |
| R0805                         |  | R25                                | 1  | 2  | 180k 1%    |
| R0805                         |  | R26, R29                           | 2  | 2  | 1k 1%      |
| R1206                         | Shunt Resistor, R010, 10milliohm               | R27                                | 1  | 2  | 0.01 1%    |
| R0805                         |  | R28                                | 1  | 2  | 68k 1%     |
| R0805                         |  | R31                                | 1  | 2  | 22R        |
| R0805                         |  | R32                                | 1  | 2  | 10R        |
| R0805                         |  | R34, R39                           | 2  | 2  | 6k8        |
| R0805                         |  | R35                                | 1  | 2  | 39k        |
| R0805                         |  | R40                                | 1  | 2  | 1k         |
| R0612                         | Network Resistor 0603 X 4                      | R44                                | 1  | 8  | 10k        |
| PTC 2A RST FUSE               | Resettable Fuse                                | RT1                                | 1  | 2  | 2A         |
| Slide Switch SP3T 3Pos        | 3 Position PCB RT Mount                        | S1                                 | 1  | 3  |            |
| Tactile Switch 4Pin (2Pin NC) | Tactile Switch 13mm 6X6mm                      | S2                                 | 1  | 2  |            |
| Tactile Switch 4Pin (2Pin NC) | 12mm With Cap                                  | S3, S4                             | 2  | 2  |            |
| Slide Switch SP3T 3Pos        | 3 Position PCB Mount                           | S5, S6                             | 2  | 3  |            |
| 5 Way Tactile                 | 7X7X5mm SMT                                    | S7                                 | 1  | 6  |            |
| LM2596 5V                     | Power Converter 150 KHz 3A Step-Down Voltage R | U1                                 | 1  | 6  |            |
| LM2596 ADJ                    | Power Converter 150 KHz 3A Step-Down Voltage R | U2                                 | 1  | 6  |            |
| 1117                          | SOT223   | U3                                 | 1  | 4  |            |
| TP5410                        | TP5410 SOP8-PP Charge+Boost IC Li Cell         | U4                                 | 1  | 8  |            |
| RPot                          | Thumbwheel/Gear Potentiometer                  | VR1                                | 1  | 3  | 10K        |
| RPot                          | RV09 12.5mm Potentiometer                      | VR2, VR3                           | 2  | 3  | 10k        |
| 4.096MHz                      | Crystal, 18.432MHZ, HC49-SMT                   | X1                                 | 1  | 2  | 4.096      |
| 32.768 kHz                    | Crystal, 32.768 kHz, DT-38                     | X2                                 | 1  |    | 32.768 kHz |
| Zener Diode                   | IN4752   | Z1                                 | 1  | 2  | 33V        |
| Zener Diode                   | IN4738   | <b>Z</b> 2                         | 1  |    | 12V        |