

| SCA C84 Bill of Material |     |                                              |              |                                 |                               |            |                     |          | Rev 2.2             |
|--------------------------|-----|----------------------------------------------|--------------|---------------------------------|-------------------------------|------------|---------------------|----------|---------------------|
| Item                     | Qty | Ref                                          | Value        | Marking                         | Description                   | Mfg        | Mfg Part Number     | Source   | Cat Number          |
| 1                        | 2   | C8, C9                                       | 22pF         | 220J                            | C0G Ceramic                   | Kemet      | C315C220J2G5TA      | Digi-Key | C315C220J2G5TA      |
| 2                        | 4   | C1, C14, C17, C25                            | 100pF        | 101J                            | C0G Ceramic                   | Kemet      | C315C101J2G5TA      | Digi-Key | C315C101J2G5TA      |
| 3                        | 13  | C12, C19, C21, C26, C28, C32, C36, C41 - C46 | 0.1uF        | 104K                            | X7R Ceramic                   | Kemet      | C320C104K5R5TA      | Mouser   | C320C104K5R5TA      |
| 4                        | 2   | C10, C11                                     | 1uF/50V      | 105                             | Polyester Film                | Panasonic  | ECQ-V1H105JL        | Digi-Key | ECQ-V1H105JL        |
| 5                        | 2   | C5, C6                                       | 1uF/63V      | 1uF 63V                         | Polypropylene                 | BC         | 222.241.671.005     | Digi-Key | BC2076-ND           |
| 6                        | 2   | C33, C37                                     | 22uF/35V     | 22uF 35V                        | Aluminum Electrolytic         | Panasonic  | EEU-FC1V220         | Digi-Key | P11230-ND           |
| 7                        | 2   | C34, C38                                     | 22uF/35V     | 22.635                          | Tantalum                      | Kemet      | T356K226K035AT      | Digi-Key | 399-3670-ND         |
| 8                        | 2   | C23, C30                                     | 47uF/25V NP  | 47uF 25V                        | Non-Polarized Electrolytic    | Nichicon   | UVP1E470MED         | Mouser   | 647-UVP1E470MED     |
| 9                        | 4   | C20, C22, C27, C29                           | 100uF/35V    | 100uF 35V                       | Aluminum Electrolytic         | Panasonic  | EEU-FC1V101         | Digi-Key | P10294-ND           |
| 10                       | 4   | C4, C7, C39, C40                             | 100uF/63V    | 100uF 63V                       | Aluminum Electrolytic         | Panasonic  | EEU-FC1J101L        | Digi-Key | P10342-ND           |
| 11                       | 2   | C31, C35                                     | 1000uF/ 50V  | 1000uF 50V                      | Aluminum Electrolytic         | Panasonic  | EEU-FM1H102         | Digi-Key |                     |
| 12                       | 1   | CONN1                                        |              |                                 | XLR-Female                    | Neutrik    | NC3FBHR2            | Brill    | NC3FBHR2            |
| 13                       | 1   | CONN2                                        |              |                                 | XLR-Male                      | Neutrik    | NC3MBHR             | Brill    | NC3MBHR             |
| 14                       | 19  | D1 - D19                                     | 1N4002       | 1N4002                          | Rectifier Diode               | Fairchild  | 1N4002              | Mouser   | 512-1N4002          |
| 15                       | 0   | CONN4 (OPTIONAL)                             |              |                                 |                               |            |                     |          |                     |
| 16                       | 0   | CONN5 (OPTIONAL)                             |              |                                 |                               |            |                     |          |                     |
| 17                       | 1   | J3                                           |              |                                 | 6 Pin Header                  | Molex      | 26-60-4060          | Digi-Key | WM4624-ND           |
| 18                       | 6   | L1 - L6                                      | 1000pF       | C102                            | Filter                        | Bourns     | EMI102T-RC          | Mouser   | EMI102T-RC          |
| 19                       | 2   | Q1, Q2                                       | 300B         | 300B                            | NPN Matched Quad              | THAT       | THAT 300B           | Mouser   | THAT 300B           |
| 20                       | 2   | Q3, Q7                                       | BC560        | BC560                           | PNP Bipolar                   | Fairchild  | BC560               | Mouser   | 512-BC560           |
| 21                       | 2   | Q4, Q8                                       | BC550        | BC550                           | NPN Bipolar                   | Fairchild  | BC550               | Mouser   | 512-BC550           |
| 22                       | 2   | Q5, Q9                                       | MJE182       | MJE182                          | NPN Power                     | Fairchild  | MJE182              | Mouser   | 511-MJE182          |
| 23                       | 2   | Q6, Q10                                      | MJE172       | MJE172                          | PNP Power                     | Fairchild  | MJE172              | Mouser   | 511-MJE172          |
| 24                       | 1   | Q11                                          | MPSA06       | MPSA06                          | NPN Bipolar                   | Fairchild  | MPSA06              | Mouser   | 512-MPSA06          |
| 25                       | 1   | Q12                                          | MPSA56       | MPSA56                          | PNP Bipolar                   | Fairchild  | MPSA56              | Mouser   | 512-MPSA56          |
| 26                       | 1   | R19                                          | 1R0          | Brown-Black-Gold-Gold           | Carbon Film Resistor 1/4W     | Yageo      | CFR-25JB-1R0        | Digi-Key | 1.0QBK-ND           |
| 27                       | 5   | R20, R46, R47, R58, R59                      | 1R8          | Brown-Gray-Gold-Gold            | Carbon Film Resistor 1/4W     | Yageo      | CFR-25JB-1R8        | Digi-Key | 1.8QBK-ND           |
| 28                       | 1   | R21                                          | 3R3          | Orange-Orange-Gold-Gold         | Carbon Film Resistor 1/4W     | Yageo      | CFR-25JB-3R3        | Digi-Key | 3.3QBK-ND           |
| 29                       | 2   | R5, R6                                       | 4R7          | Yellow-Violet-Gold-Gold         | Carbon Film Resistor 1/4W     | Yageo      | CFR-25JB-4R7        | Digi-Key | 4.7QBK-ND           |
| 30                       | 1   | R10                                          | 5R6          | Green-Blue-Gold-Gold            | Carbon Film Resistor 1/4W     | Yageo      | CFR-25JB-5R6        | Digi-Key | 5.6QBK-ND           |
| 31                       | 1   | R11                                          | 10R0         | Brown-Black-Black-Gold-Brown    | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-10R0      | Digi-Key | 10.0XBK             |
| 32                       | 1   | R12                                          | 17R8         | Brown-Violet-Gray-Gold-Brown    | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-17R8      | Digi-Key | 17.8XBK             |
| 33                       | 2   | R48, R60                                     | 24R9         | Red-Yellow-W hite-Gold-Brown    | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-24R9      | Digi-Key | 24.9XBK             |
| 34                       | 1   | R13                                          | 32R4         | Orange-Red-Yellow-Gold-Brown    | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-32R4      | Digi-Key | 32.4XBK             |
| 35                       | 1   | R14                                          | 57R6         | Green-Violet-Blue-Gold-Brown    | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-57R6      | Digi-Key | 57.6XBK             |
| 36                       | 2   | R43, R55                                     | 100          | Brown-Black-Black-Black-Brown   | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-100R      | Digi-Key | 100XBK              |
| 37                       | 1   | R15                                          | 105          | Brown-Black-Green-Black-Brown   | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-105R      | Digi-Key | 105XBK              |
| 38                       | 2   | R65, R69                                     | 118          | Brown-Brown-Gray-Black-Brown    | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-118R      | Digi-Key | 118XBK              |
| 39                       | 1   | R71                                          | 150          | Brown-Green-Black-Black-Brown   | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-150R      | Digi-Key | 150XBK-ND           |
| 40                       | 1   | R16                                          | 187          | Brown-Gray-Violet-Black-Brown   | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-187R      | Digi-Key | 187XBK              |
| 41                       | 1   | R17                                          | 348          | Orange-Yellow-Gray-Black-Brown  | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-348R      | Digi-Key | 348XBK              |
| 42                       | 1   | R18                                          | 680          | Blue-Gray-Black-Black-Brown     | Metal Film Resistor 1/4W      | Yageo      | CFR-25JB-680        | Digi-Key | 680QBK-ND           |
| 43                       | 2   | R8, R9                                       | 750          | 55D 750 B                       | Metal Film Resistor 1/4W 0.1% | IRC        | RC55LF-D-750-B-B    | Mouser   | 66-RC55LF-D-750     |
| 57                       | 2   | R22, R23                                     | 1K00         | 55D 1K B                        | Metal Film Resistor 1/4W 0.1% | IRC        | RC55LF-D-1K-B-B     | Mouser   | 66-RC55LF-D-1.0K    |
| 44                       | 2   | R66, R70                                     | 1K24         | Brown-Red-Yellow-Brown-Brown    | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-1K24      | Digi-Key | 1.24KXBK            |
| 58                       | 2   | R25, R28                                     | 1K58         | 55D 1K58 B                      | Metal Film Resistor 1/4W 0.1% | IRC        | RC55LF-D-1K58-B-B   | Mouser   | 66-RC55LF-D-1.58K   |
| 45                       | 2   | R31, R32                                     | 2K00         | Red-Black-Black-Brown-Brown     | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-2K00      | Digi-Key | 2.00KXBK            |
| 46                       | 1   | R24                                          | 2K20         | Red-Red-Black-Brown-Brown       | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-2K20      | Digi-Key | 2.20KXBK            |
| 47                       | 1   | R26                                          | 2K43         | Red-Yellow-Orange-Brown-Brown   | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-2K43      | Digi-Key | 2.43KXBK            |
| 48                       | 3   | R35, R36, R38                                | 2K49         | Red-Yellow-W hite-Brown-Brown   | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-2K49      | Digi-Key | 2.49KXBK            |
| 49                       | 4   | R44, R45, R56, R57                           | 4K75         | Yellow-Violet-Green-Brown-Brown | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-4K75      | Digi-Key | 4.75KXBK            |
| 59                       | 2   | R3, R4                                       | 6K65         | 55D 6K65 B                      | Metal Film Resistor 1/4W 0.1% | IRC        | RC55LF-D-6K65-B-B   | Mouser   | 66-RC55LF-D-6.65K   |
| 50                       | 1   | R78                                          | 7K50         | Violet-Green-Black-Brown-Brown  | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-7K50      | Digi-Key | 7.50KXBK            |
| 51                       | 4   | R27, R50, R62, R72                           | 10K0         | Brown-Black-Black-Red-Brown     | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-10K0      | Digi-Key | 10.0KXBK            |
| 52                       | 4   | R40, R41, R52, R53                           | 10K0         | 55D 10K0 B                      | Metal Film Resistor 1/4W 0.1% | IRC        | RC55LF-D-10K-B-B    | Mouser   | 66-RC55LF-D-10K     |
| 53                       | 2   | R63, R67                                     | 15K          | Brown-Green-Orange-Gold         | Metal Film Resistor 1/4W      | Yageo      | CFR-25JB-15K        | Digi-Key | 15KQBK-ND           |
| 54                       | 4   | R39, R49, R54, R61                           | 20K0         | 55D 20K0 B                      | Metal Film Resistor 1/4W 0.1% | IRC        | RC55LF-D-20K-B-B    | Mouser   | 66-RC55LF-D-20K     |
| 55                       | 5   | R29, R30, R33, R73, R74                      | 100K         | Brown-Black-Black-Orange-Brown  | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-100K      | Digi-Key | 100KXBK             |
| 56                       | 2   | R75, R76                                     | 2M20         | Red-Red-Black-Yellow-Brown      | Metal Film Resistor 1/4W      | Yageo      | MFR-25FBF-2M20      | Digi-Key | 2.20MXBK            |
| 60                       | 2   | R64, R68                                     | 1K           | 3296Y-1-102LF                   | Trimmer Potentiometer         | Bourns     | 3296Y-1-102LF       | Digi-Key | 3296Y-102LF-ND      |
| 61                       | 1   | R37                                          | 10K          | 91A1A-B24-D15L                  | Panel Mount Potentiometer     | Bourns     | 91A1A-B24-D15L      | Digi-Key | 91A1A-B24-D15L-ND   |
| 62                       | 1   | SW1                                          |              | 71BDF30-02-1-AJS                | Rotary Switch                 | Grayhill   | 71BDF30-02-1-AJS    | Grayhill | 71BDF30-02-1-AJS    |
| 63                       | 1   | SW2                                          |              | 100A W SP1                      | SPDT Switch                   | E-Switch   | 100AW SP1T2B4M7RE   | Digi-Key | EG2435-ND           |
| 64                       | 1   | SW3                                          |              | 100A WDP1                       | DPDT Switch                   | E-Switch   | 100AW DP1T2B4M7RE   | Digi-Key | EG2444-ND           |
| 65                       | 3   | U1, U2, U3                                   |              | OPA2604AP                       | Dual CMOS Op Amp              | Burr-Brown | OPA2604AP           | Digi-Key | OPA2604AP-ND        |
| 66                       | 1   | U6                                           |              | LM317T                          | Voltage Regulator, Pos        | National   | LM317T              | Digi-Key | LM317TNS-ND         |
| 67                       | 1   | U5                                           |              | LM337T                          | Voltage Regulator, Neg        | National   | LM337T              | Digi-Key | LM337TNS-ND         |
| 68                       | 2   |                                              |              |                                 | Heatsink                      | Aavid      | 577202B00000        | Digi-Key | HS107-ND            |
| 69                       | 2   |                                              |              |                                 | Fluted Knob                   | Cosmo      | 39-7747-001-00-3-10 | Cosmo    | 39-7747-001-00-3-10 |
| 70                       | 4   |                                              | M2.5 x 6     |                                 | Pan head machine screw, black |            |                     | Olander  | 25S6PPMZB           |
| 71                       | 2   |                                              | #4-40 x 1/4" |                                 | Pan head machine screw        |            |                     | Olander  | 4C25PPMZR           |
| 72                       | 2   |                                              | #4-40        |                                 | Kepps nut                     |            | 4CKNTZR             | Olander  | 4CKNTZR             |
| 73                       | 1   |                                              |              |                                 | PCB                           | SCA        |                     | SCA      |                     |