



# BILLS OF MATERIAL FOR COBRA 19M

| CIRCUIT SYMBOL                    | DESCRIPTION                       | PARTS NO      |
|-----------------------------------|-----------------------------------|---------------|
| <b>TRANSISTORS &amp; DIODES</b>   |                                   |               |
| TR-1, 2                           | Trnsistor 2SC394 (Y)              | 176-042-9-001 |
| TR-3, 4, 5, 7, 8, 9<br>14, 15, 16 | Trnsistor 2SC839 (F)              | 176-042-9-002 |
| TR-6                              | Trnsistor 2SC373                  | 176-025-9-001 |
| TR-10, 17                         | Trnsistor 2SC945(R)               | 176-042-9-003 |
| TR-11                             | Trnsistor 2SC1364-6               | 176-054-9-001 |
| TR-12, 13                         | Trnsistor 2SC1096(M) w/Z type fin | 172-024-9-004 |
| TR-18                             | Trnsistor 2SC1678                 | 172-028-9-001 |
| TR-19                             | Trnsistor 2SC1760-3               | 172-028-9-002 |
| TR-20, 21                         | Trnsistor 2SC735(O)               | 176-042-9-006 |
| D-1                               | Diode CD37A                       | 151-040-9-001 |
| D-2, 7                            | Diode WG-713                      | 151-059-9-001 |
| D-4, 5, 6, 11                     | Diode IN60                        | 150-001-9-005 |
| D-8                               | Varistor MV-1                     | 151-049-9-002 |
| D-9, 10                           | Diode SR1K-1                      | 151-040-9-003 |
| D-13                              | Zenor Diode CZ-092                | 152-051-9-001 |
| D-14                              | LED TLR-104                       | 158-008-9-001 |
| TH                                | Thermistor DF-002(001)            | 013-006-9-001 |

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|---------------------------------|---------------------------------|---------------|
| <b>COILS &amp; TRANSFORMERS</b> |                                 |               |
| T-1                             | Coil LA-029                     | 066-020-9-001 |
| T-2                             | Coil LA-041                     | 066-020-9-002 |
| T-3                             | Coil LA-043                     | 066-020-9-003 |
| T-4                             | Coil LA-073                     | 060-019-9-001 |
| T-5                             | Coil LA-106                     | 060-019-9-002 |
| T-6                             | Coil LA-107                     | 060-019-9-003 |
| T-7                             | Coil LA-046                     | 066-020-9-004 |
| T-8, 9                          | Coil LA-047                     | 066-020-9-005 |
| T-10                            | Coil LA-042                     | 066-020-9-006 |
| T-11                            | Transformer TF-011 or TF-069    | 061-026-9-001 |
| T-12                            | Transformer TF-080 or TF-082    | 061-026-9-002 |
| T-13, 14                        | Coil LA-009                     | 066-020-9-007 |
| T-15                            | Coil LA-008                     | 066-020-9-008 |
| L-1                             | Coil LD-018 or LD-032           | 041-069-9-001 |
| L-2                             | Micro Inductor 7BA-144LY-2R2K   | 041-069-9-002 |
| L-3                             | Coil LC-018 or LC-072           | 044-033-9-001 |
| L-4                             | Coil LE-006 or LE-031           | 041-069-9-003 |
| L-5, 9                          | Coil LC-020 or LC-074           | 044-033-9-002 |
| L-6                             | Coil LD-012 or LD-033           | 041-069-9-004 |
| L-8                             | Coil LC-017 or LC-071           | 044-033-9-003 |
| L-10                            | Transformer TF-017 or TF-083    | 042-014-9-001 |
| L-11                            | Coil LD-027or LD-031            | 041-069-9-005 |
| CF                              | Ceramic Filter FL-009 or FL-019 | 140-009-9-001 |

| CIRCUIT SYMBOL                         | DESCRIPTION                       | PARTS NO      |
|--|-----------------------------------|---------------|
| <b>RESISTORS</b>                       |                                   |               |
| R-87                                   | Resistor Solid 68 ohm 1W K        | 001-001-6-680 |
| R-77                                   | Resistor Solid 1K ohm 1/2W K      | 013-006-9-003 |
| R-9                                    | Resistor P Carbon 150 ohm 1/4W J  |               |
| R-4, 44                                | Resistor P Carbon 22K ohm 1/4W J  |               |
| R-94                                   | Resistor P Carbon 2.2 ohm 1/4W J  |               |
| R-82                                   | Resistor P Carbon 68 ohm 1/4W J   |               |
| R-54                                   | Resistor Metal 0.5 ohm 1/2W K     | 013-006-9-002 |
| R-88                                   | Resistor Metal 12 ohm 2W K        | 013-006-9-005 |
| R-66                                   | Resistor U Carbon 47 ohm 1/4W J   |               |
| R-14, 80, 85                           | Resistor U Carbon 56 ohm 1/4W J   |               |
| R-33, 35, 38, 42, 51<br>53, 63, 67, 59 | Resistor U Carbon 100 ohm 1/4W J  |               |
| R-6, 15, 19, 39                        | Resistor U Carbon 150 ohm 1/4W J  |               |
| R-55                                   | Resistor U Carbon 180 ohm 1/4W J  |               |
| R-58, 62, 73                           | Resistor U Carbon 220 ohm 1/4W J  |               |
| R-2, 13                                | Resistor U Carbon 330 ohm 1/4W J  |               |
| R-18, 81, 93                           | Resistor U Carbon 470 ohm 1/4W J  |               |
| R-79                                   | Resistor U Carbon 560 ohm 1/4W J  |               |
| R-5, 76                                | Resistor U Carbon 820 ohm 1/4W J  |               |
| R-3, 34, 45, 47, 52<br>70, 78, 86      | Resistor U Carbon 1K ohm 1/4W J   |               |
| R-71                                   | Resistor U Carbon 1.5K ohm 1/4W J |               |
| R-30                                   | Resistor U Carbon 1.8K ohm 1/4W J |               |
| R-10, 11, 69                           | Resistor U Carbon 2.2K ohm 1/4W J |               |
| R-8                                    | Resistor U Carbon 2.7K ohm 1/4W J |               |
| R-16                                   | Resistor U Carbon 3.3K ohm 1/4W J |               |
| R-7, 28, 46, 68, 72                    | Resistor U Carbon 4.7K ohm 1/4W J |               |
| R-32, 40, 43, 49, 56<br>60, 74, 95     | Resistor U Carbon 5.6K ohm 1/4W J |               |
| R-21                                   | Resistor U Carbon 6.8K ohm 1/4W J |               |
| R-36, 64, 83                           | Resistor U Carbon 10K ohm 1/4W J  |               |
| R-1, 12, 17, 22, 41<br>28, 57, 61      | Resistor U Carbon 15K ohm 1/4W J  |               |
| R-20, 48, 75                           | Resistor U Carbon 22K ohm 1/4W J  |               |
| R-31                                   | Resistor U Carbon 33K ohm 1/4W J  |               |
| R-23, 84                               | Resistor U Carbon 39K ohm 1/4W J  |               |
| R-37, 65                               | Resistor U Carbon 47K ohm 1/4W J  |               |
| R-24, 25, 27                           | Resistor U Carbon 100K ohm 1/4W J |               |
| R-50                                   | Resistor U Carbon 220K ohm 1/4W J |               |
| R-26                                   | Resistor U Carbon 470K ohm 1/4W J |               |

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|---------------------------|------------------------------------|---------------|
| <b>VARIABLE RESISTORS</b> |                                    |               |
| VR-1                      | Semi-fixed Resistor RV-103 30K ohm | 008-227-9-001 |
| VR-4                      | Semi-fixed Resistor RV-103 50K ohm | 008-227-9-004 |
| VR-2, S-1                 | Variable Resistor RV-027           | 008-227-9-002 |
| VR-3                      | Variable Resistor VR-071           | 008-227-9-003 |
| S-2                       | Rotary Switch SR-078               | 083-182-9-001 |

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|--|-------------------------------------|---------------|
| <b>CAPACITORS</b>  |                                     |               |
| C-18   | Capacitor Ceramic 0.5pF 50V CH      | 020-143-9-005 |
| C-12, 39, 40   | Capacitor Ceramic 2pF 50V SL        | 020-143-9-003 |
| C-5, 70  | Capacitor Ceramic 3pF 50V SL        | 020-143-9-002 |
| C-90   | Capacitor Ceramic 4pF 50V SL        | 020-143-9-008 |
| C 33, 71   | Capacitor Ceramic 5pF 50V SL        |               |
| C-59   | Capacitor Ceramic 7pF 50V SL        | 020-143-9-007 |
| C-44   | Capacitor Ceramic 10pF 50V K SL     |               |
| C-41   | Capacitor Ceramic 15pF 50V K SL     |               |
| C-95   | Capacitor Ceramic 22pF 50V K SL     |               |
| C-42   | Capacitor Ceramic 25pF 50V K SL     |               |
| C-1  | Capacitor Ceramic 33pF 50V K SL     | 020-143-9-001 |
| C-13, 37, 65, 88, 102<br>108, 121                                  | Capacitor Ceramic 47pF 50V K SL     |               |
| C-32, 36, 67, 72, 85<br>87, 98, 104, 118                           | Capacitor Ceramic 100pF 50V K SL    |               |
| C-9, 68, 105   | Capacitor Ceramic 150pF 50V K SL    |               |
| C-43, 60, 63, 91   | Capacitor Ceramic 220pF 50V K SL    |               |
| C-99   | Capacitor Ceramic 300pF 50V K SL    | 020-085-9-008 |
| C-45, 58, 62   | Capacitor Ceramic 470pF 50V K SL    |               |
| C-15   | Capacitor Ceramic 500pF 50V K N1200 | 020-127-9-003 |
| C-27   | Capacitor Electrolytic 0.47µF 16V P | 022-122-9-002 |
| C-28, 30, 47, 92   | Capacitor Electrolytic 1µF 16V P    | 022-127-9-003 |
| C-73   | Capacitor Electrolytic 1µF 50V P    | 022-127-9-006 |
| C-2, 23, 25, 31, 50<br>74, 80, 120                                 | Capacitor Electrolytic 10µF 16V P   | 022-127-9-001 |
| C-109  | Capacitor Electrolytic 47µF 10V P   | 022-127-9-008 |
| C-77   | Capacitor Electrolytic 47µF 16V P   | 022-127-9-007 |
| C-52, 49   | Capacitor Electrolytic 100µF 10V P  | 022-127-9-004 |
| C-53   | Capacitor Electrolytic 100µF 16V P  | 022-127-9-005 |
| C-110  | Capacitor Electrolytic 470µF 16V P  | 022-127-9-009 |
| C-26, 51   | Capacitor Ceramic 0.002µF 25V Z     |               |
| C-48, 84   | Capacitor Ceramic 0.0047µF 25V Z    | 020-143-9-006 |
| C-3, 4, 6, 7, 10, 11, 24<br>29, 34, 35, 38, 46                     | Capacitor Ceramic 0.01µF 25V Z      |               |
| C-16, 19, 22, 86, 89<br>93, 96, 97, 101, 103<br>106, 111, 112, 100 | Capacitor Ceramic 0.039µF 25V Z     | 020-143-9-005 |
| C-79   | Capacitor Mylar 0.0047µF 50V K      | 025-099-9-002 |
| C-8, 14, 20  | Capacitor Mylar 0.01µF 50V K        |               |
| C-56, 57   | Capacitor Mylar 0.033µF 50V K       |               |
| C-17, 21   | Capacitor Mylar 0.039µF 50V K       | 025-099-9-001 |
| C-76, 81   | Capacitor Mylar 0.1µF 50V K         |               |
| C-119  | Capacitor Mylar 0.02µF 50V K        | 025-099-9-003 |

| CIRCUIT SYMBOL  | DESCRIPTION               | PARTS NO      |
|-----------------|---------------------------|---------------|
| <b>CRYSTALS</b> |                           |               |
| X-1             | Crystal 11.275 MHz QX-014 | 133-010-9-001 |
| X-2             | Crystal 11.730 MHz QX-014 | 133-010-9-002 |
| X-3             | Crystal 14.950 MHz QX-015 | 133-010-9-003 |
| X-4             | Crystal 14.960 MHz QX-015 | 133-010-9-004 |
| X-5             | Crystal 14.970 MHz QX-015 | 133-010-9-005 |
| X-6             | Crystal 14.980 MHz QX-015 | 133-010-9-006 |
| X-7             | Crystal 23.280 MHz QX-016 | 133-010-9-007 |
| X-8             | Crystal 23.340 MHz QX-016 | 133-010-9-008 |
| X-9             | Crystal 23.390 MHz QX-016 | 133-010-9-009 |
| X-10            | Crystal 23.440 MHz QX-016 | 133-010-9-010 |
| X-11            | Crystal 23.490 MHz QX-016 | 133-010-9-011 |
| X-12            | Crystal 23.540 MHz QX-016 | 133-010-9-012 |

| CIRCUIT SYMBOL       | DESCRIPTION                    | PARTS NO      |
|----------------------|--------------------------------|---------------|
| <b>MISCELLANEOUS</b> |                                |               |
| MIKE                 | Microphone MK-025              | 562-008-9-001 |
| J-1                  | Ext Speaker Jack JK-010        | 773-081-9-001 |
| J-2                  | Microphone Connector JK-004    | 770-016-9-001 |
| J-3                  | Ext Antenna Connector JK-035   | 772-027-9-001 |
| P                    | Microphone Plug PG-002         | 775-031-9-001 |
| SP                   | Speaker SP-022                 | 580-016-9-001 |
| SK                   | Crystal Socket SK-010          | 749-089-9-001 |
| TP-135               | Terminal TP-011                | 345-041-9-001 |
| TP-246               | Terminal TP-001                | 345-041-9-002 |
| PL-1                 | Pilot Lamp 14V 50mA Clear      | 400-038-9-001 |
| FS                   | Fuse FS-001 1.5 Amp            | 191-002-9-001 |
| Z-1                  | Wire Wrapping Band YY-001      |               |
|                      | Printed Circuit Board PC-055AA |               |
|                      | Metal Chassis                  | 257-063-9-001 |
|                      | Metal Cabinet (upper)          | 272-103-9-001 |
|                      | Metal Cabinet (bottom)         | 272-104-9-001 |
|                      | Heat-sink                      | 747-032-9-001 |
|                      | Heat-sink                      | 747-032-9-002 |
|                      | Mounting Bracket               | 250-049-9-001 |
|                      | Microphone Hanger              | 741-080-9-001 |
|                      | Front Panel                    | 255-122-9-001 |
|                      | Channel Disc                   | 380-235-9-001 |
|                      | Channel Knob                   | 751-121-9-001 |
|                      | Volume/Squelch Knob            | 751-121-9-002 |
|                      | Lamp Holder (rubber)           | 381-065-9-001 |
|                      | Front Plate                    | 600-025-9-001 |
|                      | Microphone Plate               | 600-025-9-002 |
|                      | FCC Label                      | 483-195-9-001 |
|                      | Serial No. Seal                |               |
|                      | Warning Label                  |               |
|                      | FCC I.D. Card                  |               |
|                      | Instruction Manual             | 480-162-9-001 |
|                      | FCC Application Form           |               |
|                      | Warranty Card                  |               |
|                      | Service Station Card           |               |
|                      | Schematic Diagram/Parts List   | 499-075-9-001 |
|                      | Styrofoam Box (front)          | 563-087-9-001 |
|                      | Styrofoam Box (back)           | 503-087-9-002 |
|                      | Display Box                    | 500-254-9-001 |
|                      | Meter, MT-019                  | 320-079-9-001 |