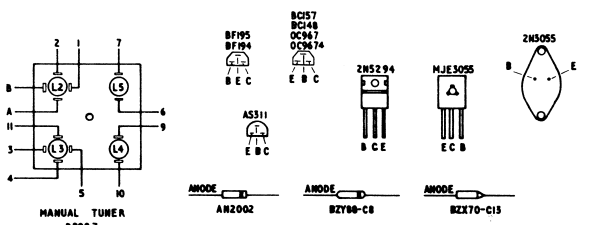
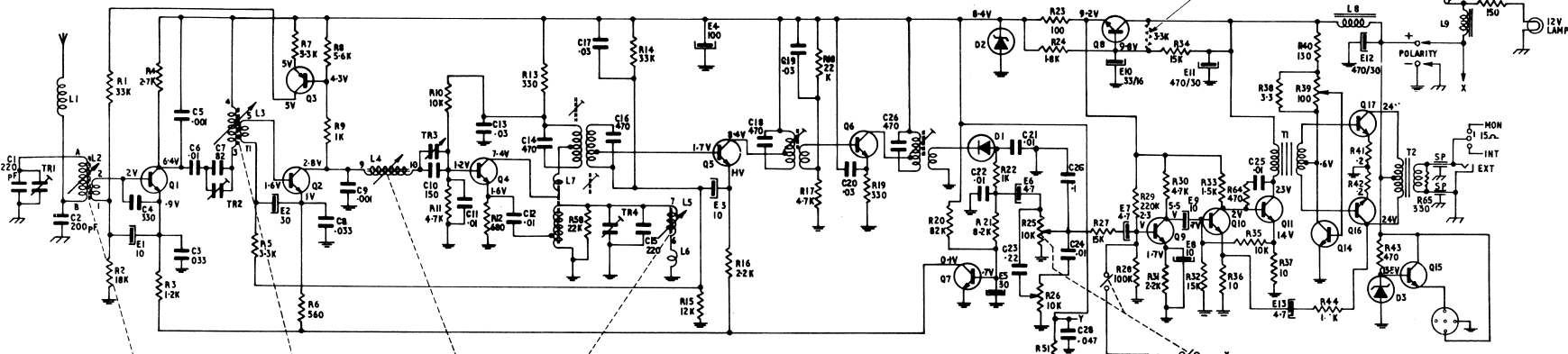


MODEL 180 'COACHLINER' 17 TRANSISTOR RADIO AND P.A. AMPLIFIER

ADD 3.3K 1/2K WATT 10% RESISTORS FOR 12-VOLT OPERATION



**RESISTORS**

|     |      |   |
|-----|------|---|
| R1  | 33K  | Ω |
| R2  | 18K  | Ω |
| R3  | 1.2K | Ω |
| R4  | 2.7K | Ω |
| R5  | 3.3K | Ω |
| R6  | 560  | Ω |
| R7  | 3.3K | Ω |
| R8  | 5.6K | Ω |
| R9  | 1K   | Ω |
| R10 | 18K  | Ω |
| R11 | 4.7K | Ω |
| R12 | 880  | Ω |
| R13 | 330  | Ω |
| R14 | 33K  | Ω |
| R15 | 12K  | Ω |
| R16 | 2.2K | Ω |
| R17 | 4.7K | Ω |
| R18 | 32K  | Ω |
| R19 | 330  | Ω |
| R20 | 82K  | Ω |
| R21 | 8.2K | Ω |
| R22 | 1K   | Ω |
| R23 | 10K  | Ω |
| R24 | 18K  | Ω |
| R25 | 10K  | Ω |
| R26 | 18K  | Ω |
| R27 | 15K  | Ω |
| R28 | 180K | Ω |
| R29 | 220K | Ω |
| R30 | 4.7K | Ω |
| R31 | 2.2K | Ω |
| R32 | 18K  | Ω |

**CAPACITORS**

|     |        |      |                 |
|-----|--------|------|-----------------|
| C1  | 220pf  | 63V  | poly styrene ES |
| C2  | 220pf  | "    | "               |
| C3  | 0.02uf | 50V  | polyester       |
| C4  | 0.02uf | 100V | ceramic         |
| C5  | 0.01uf | 63V  | poly styrene ES |
| C6  | 0.01uf | 50V  | polyester       |
| C7  | 0.02uf | 63V  | poly styrene ES |
| C8  | 0.02uf | 50V  | polyester       |
| C9  | 0.01uf | 63V  | poly styrene ES |
| C10 | 1.0uf  | "    | "               |
| C11 | 0.01uf | 50V  | polyester       |
| C12 | 0.01uf | "    | "               |
| C13 | 0.01uf | "    | "               |
| C14 | 0.01uf | 63V  | poly styrene    |
| C15 | 0.01uf | "    | "               |
| C16 | 0.01uf | "    | "               |
| C17 | 0.01uf | 50V  | polyester       |
| C18 | 0.01uf | 50V  | polyester       |
| C19 | 0.01uf | 50V  | polyester       |
| C20 | 0.01uf | "    | "               |
| C21 | 0.01uf | "    | "               |
| C22 | 0.01uf | 50V  | polyester       |
| C23 | 0.01uf | 50V  | polyester       |
| C24 | 0.01uf | 50V  | polyester       |
| C25 | 0.01uf | 50V  | polyester       |
| C26 | 0.01uf | 50V  | polyester       |
| C27 | 0.01uf | 50V  | polyester       |

**ELECTROLYTICS**

|     |       |     |
|-----|-------|-----|
| E1  | 10uf  | 10V |
| E2  | 30uf  | 10V |
| E3  | 10uf  | 10V |
| E4  | 100uf | 10V |
| E5  | 30uf  | 10V |
| E6  | 4.7uf | 10V |
| E7  | 6.7uf | 10V |
| E8  | 10uf  | 10V |
| E9  | 20uf  | 10V |
| E10 | 50uf  | 10V |
| E11 | 0.7uf | 50V |
| E12 | 0.7uf | 50V |
| E13 | 0.7uf | 50V |
| E14 | 0.7uf | 50V |
| E15 | 0.7uf | 50V |
| E16 | 0.7uf | 50V |
| E17 | 0.7uf | 50V |

**TRIMMERS**

|     |          |            |           |
|-----|----------|------------|-----------|
| TR1 | 25-120pf | 3 plate    | MSP 80800 |
| TR2 | 30-120pf | 3 plate    | MSP 30516 |
| TR3 | 0-45pf   | 2 plate    | CWA       |
| TR4 | 0-45pf   | COIL-0488E |           |

**INDUCTORS**

|    |                 |           |
|----|-----------------|-----------|
| L1 | 0.01uf          | type 6190 |
| L2 | oscillator coil | type T341 |
| L3 | LP choke        | type 8136 |
| L4 | LP choke        | type 8134 |
| L5 | HP choke        | type 820  |

**TRANSFORMERS**

|     |                    |                       |
|-----|--------------------|-----------------------|
| T1  | Driver transformer | type 8126             |
| T2  | Output transformer | type 8136             |
| IF1 | 455KHz             | Transformer type 8129 |
| IF2 | 455KHz             | Transformer type 8131 |
| IF3 | 455KHz             | Transformer type 8132 |

**TRANSISTORS**

|     |        |        |       |
|-----|--------|--------|-------|
| Q1  | BF198  | or     | AS320 |
| Q2  | BF198  | or     | AS130 |
| Q3  | BC148  | or     | AS197 |
| Q4  | BF198  | or     | AS320 |
| Q5  | BF198  | or     | AS192 |
| Q6  | BF198  | or     | AS168 |
| Q7  | BC148  | or     | AS168 |
| Q8  | OC987  | or     | AS211 |
| Q9  | BC148  | or     | AS268 |
| Q10 | OC987  | or     | AS311 |
| Q11 | 2N5294 |        |       |
| Q12 | BC148  | or     | AS168 |
| Q13 | BC148  | or     | AS168 |
| Q14 | BC148  | or     | AS168 |
| Q15 | 2N3698 | R.C.A. |       |
| Q16 | 2N3698 | R.C.A. |       |
| Q17 | 2N3698 | R.C.A. |       |

**Band Coverage:** 550-1620 KHz  
**IF Frequency:** 455 KHz  
**Total battery current at zero signal with P.A. off:** 8.6 amp  
**Collector current of output stage:** 280ma at zero signal  
**Speaker load for 24v operation:** 15 ohms  
**Speaker load for 12v operation:** 8 ohms

**NOTE:**  
 For 12 volt operation, connect a 3.3K 1/2 watt 10% resistor between base and collector of Q5.  
 Bridge out lamp dropping resistors R48, R46, R47 and R53 to restore normal illumination of indicators.  
 No other modifications are required.