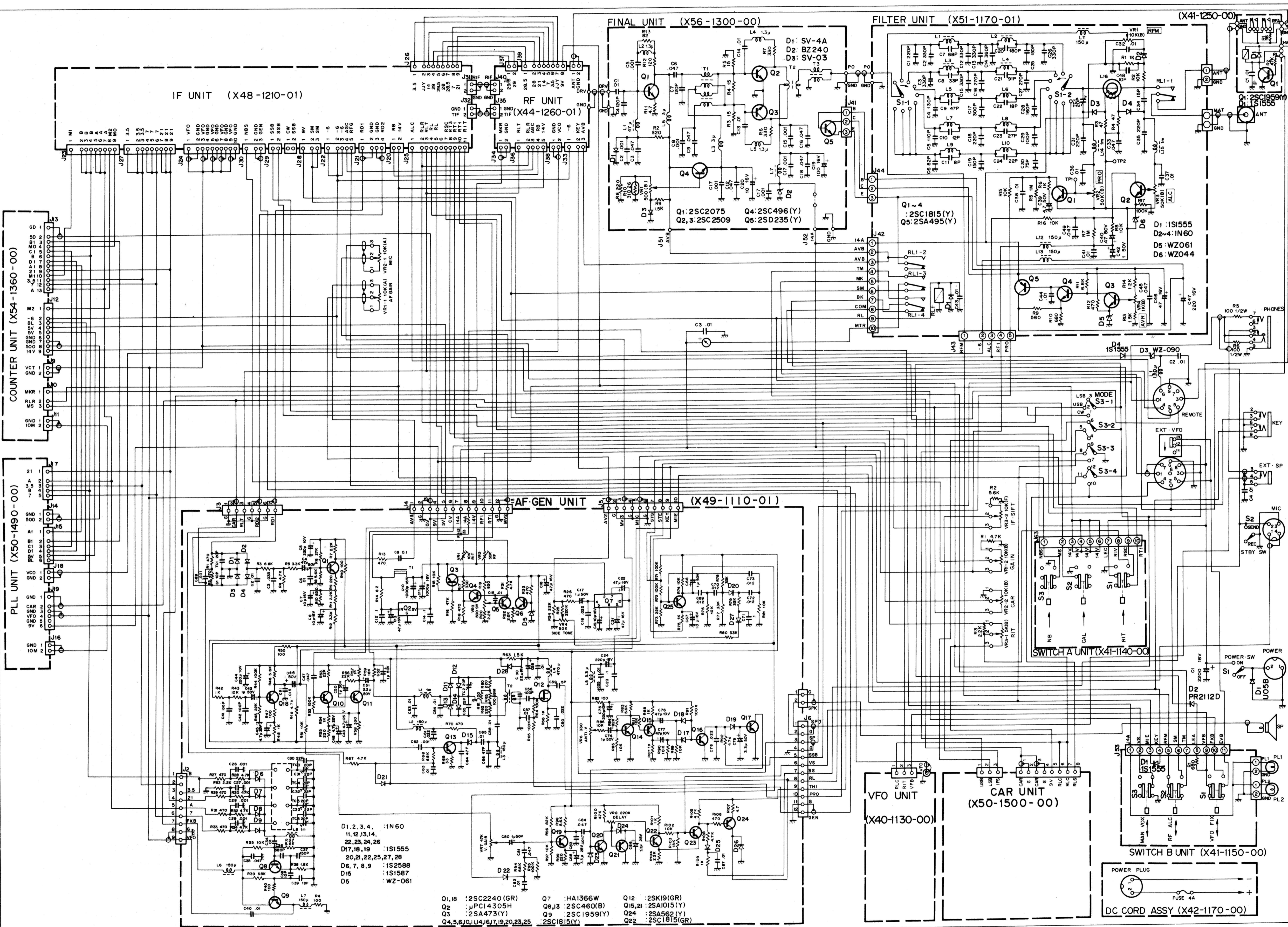


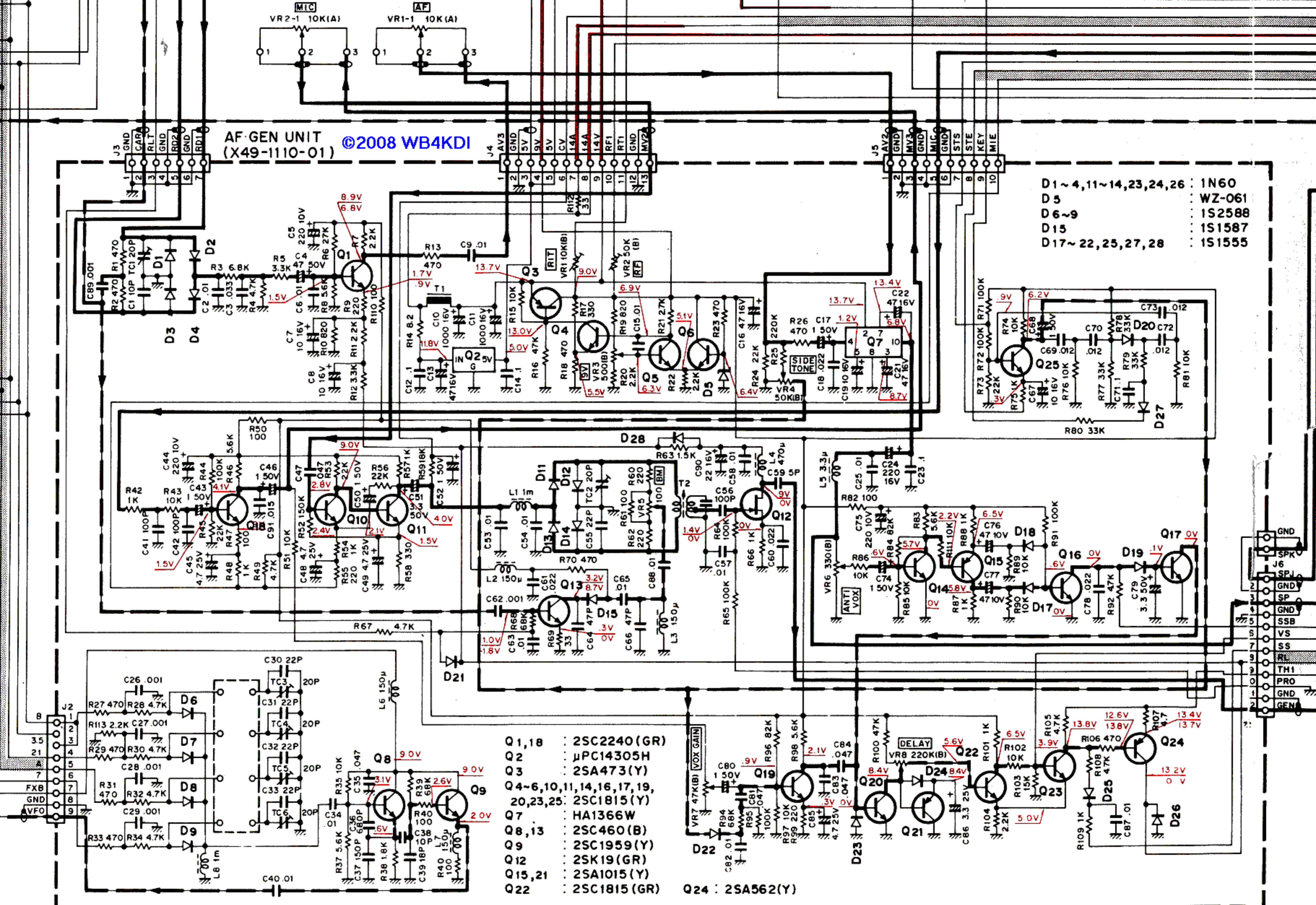
TS-120V SCHEMATIC DIAGRAM



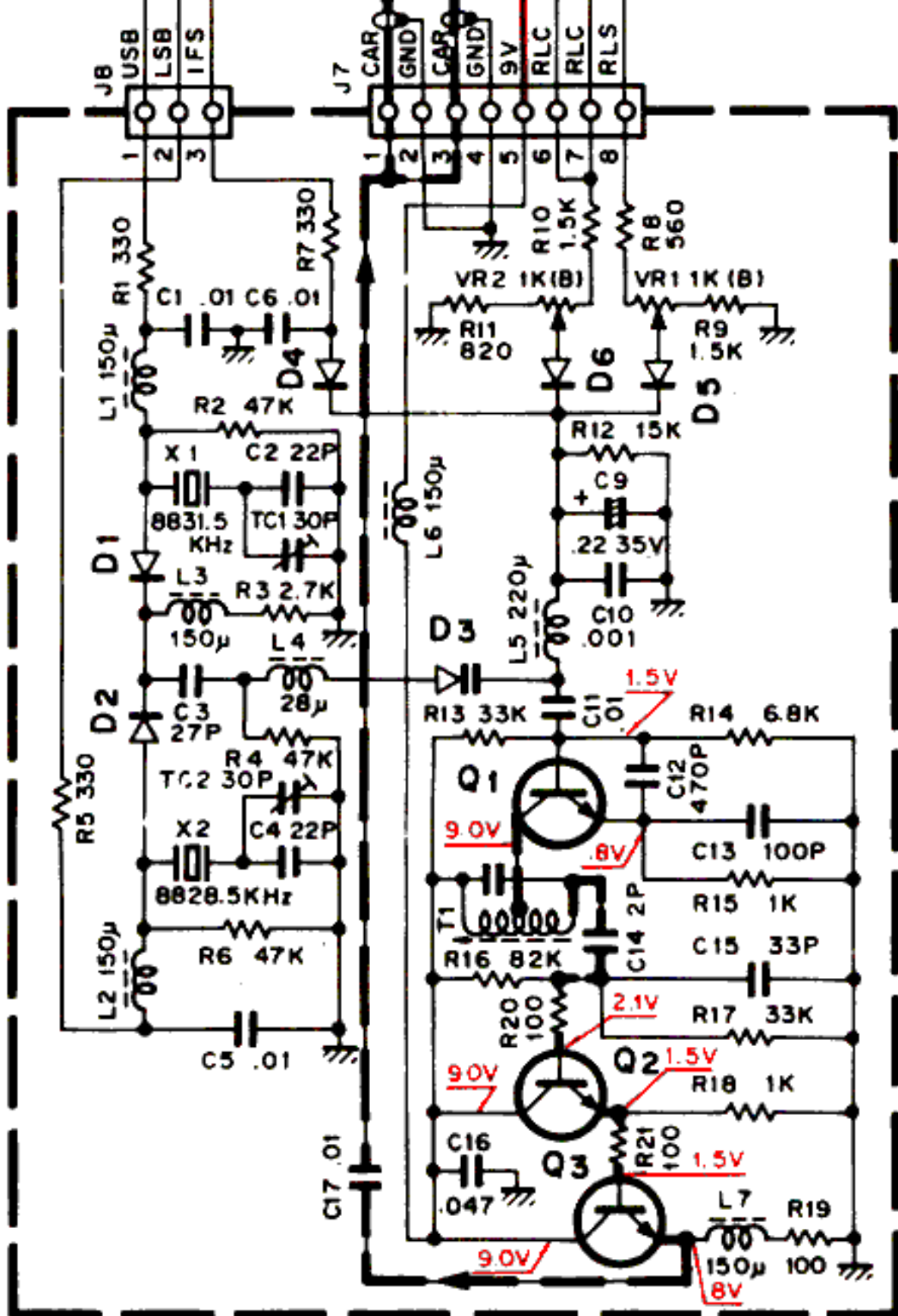
- D1, 2, 3, 4, :1N60
 11, 12, 13, 14, :1S1555
 22, 23, 24, 26 :1S1555
 D17, 18, 19 :1S1555
 20, 21, 22, 25, 27, 28 :1S1587
 D6, 7, 8, 9 :1S2588
 D15 :1S1587
 D5 :WZ-061

- Q1, 18 :2SC2240 (GR) Q7 :HA1366W Q12 :2SK19 (GR)
 Q2 :PC14305H Q8, 13 :2SC460 (B) Q15, 21 :2SA1015 (Y)
 Q3 :2SA473 (Y) Q9 :2SC1959 (Y) Q24 :2SA562 (Y)
 Q4, 5, 6, 10, 11, 4, 14, 16, 17, 19, 20, 23, 25 :2SC1815 (Y) Q22 :2SC1815 (GR)

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(X49-1110-01)



- Q1, 18 : 2SC2240 (GR)
- Q2 : MPC14305H
- Q3 : 2SA473 (Y)
- Q4-6, 10, 11, 14, 16, 17, 19, 20, 23, 25 : 2SC1815 (Y)
- Q7 : HA1366W
- Q8, 13 : 2SC460 (B)
- Q9 : 2SC1959 (Y)
- Q12 : 2SK19 (GR)
- Q15, 21 : 2SA1015 (Y)
- Q22 : 2SC1815 (GR)
- Q24 : 2SA562 (Y)



CAR UNIT (X50-1500-00)

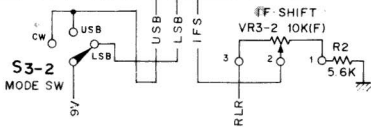
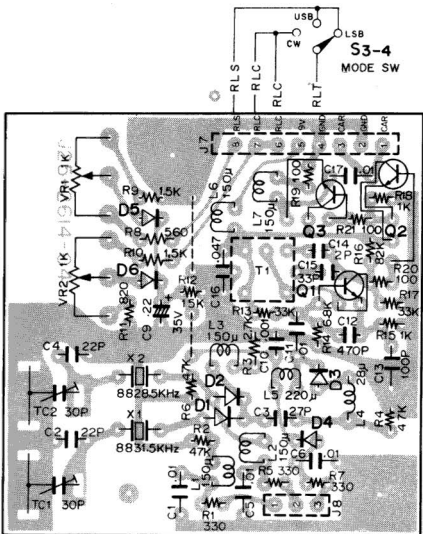
©2008 WB4KDI

- Q 1,2 : 2SC460(B)
 Q 3 : 2SC1959(Y)
 D 1,2,4~6
 : 1S1555
 D 3 : 1SV53A

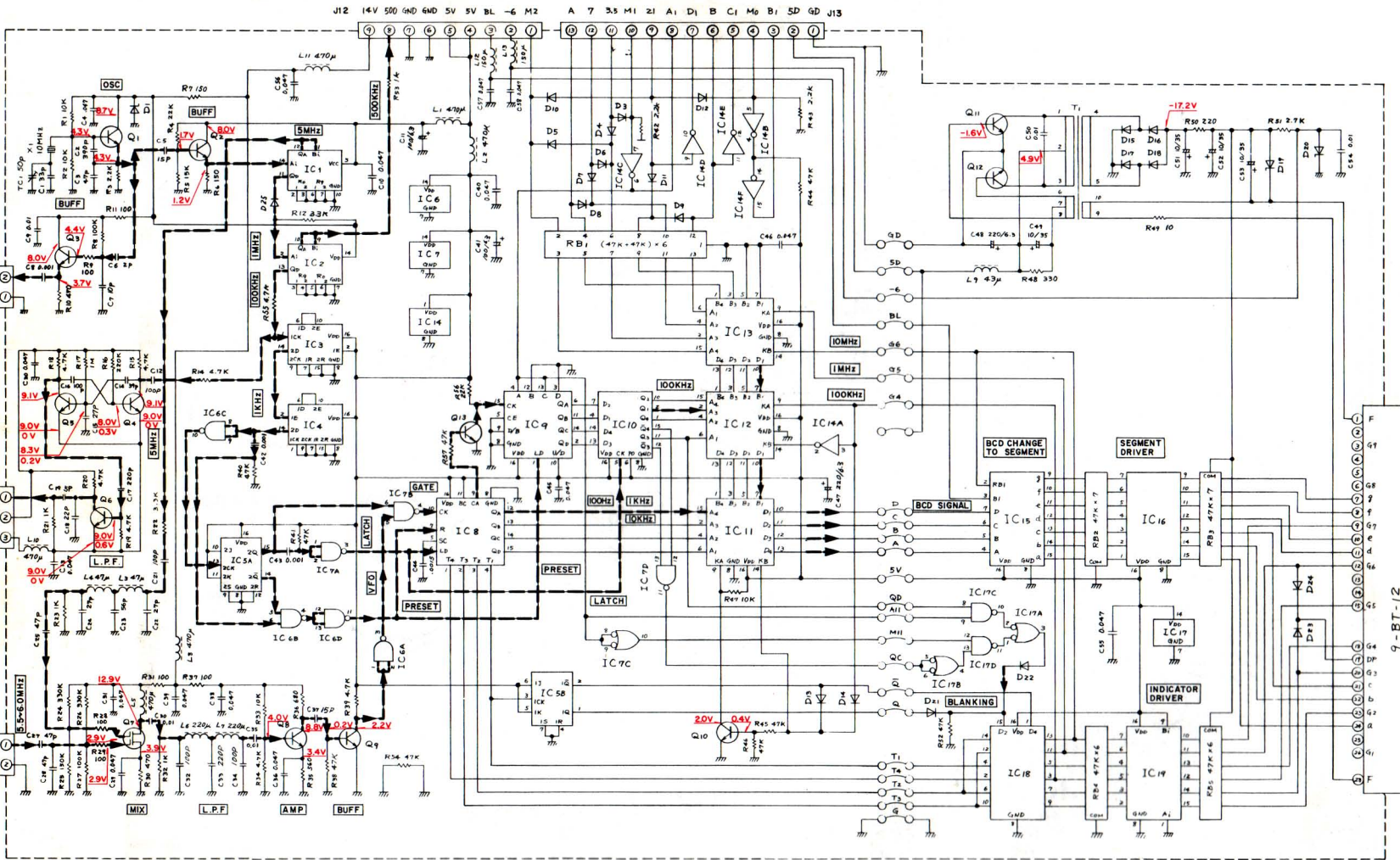
▼ CARRIER UNIT (X50-1500-00)

Q1,2: 2SC460(B), Q3: 2SC1959(Y)

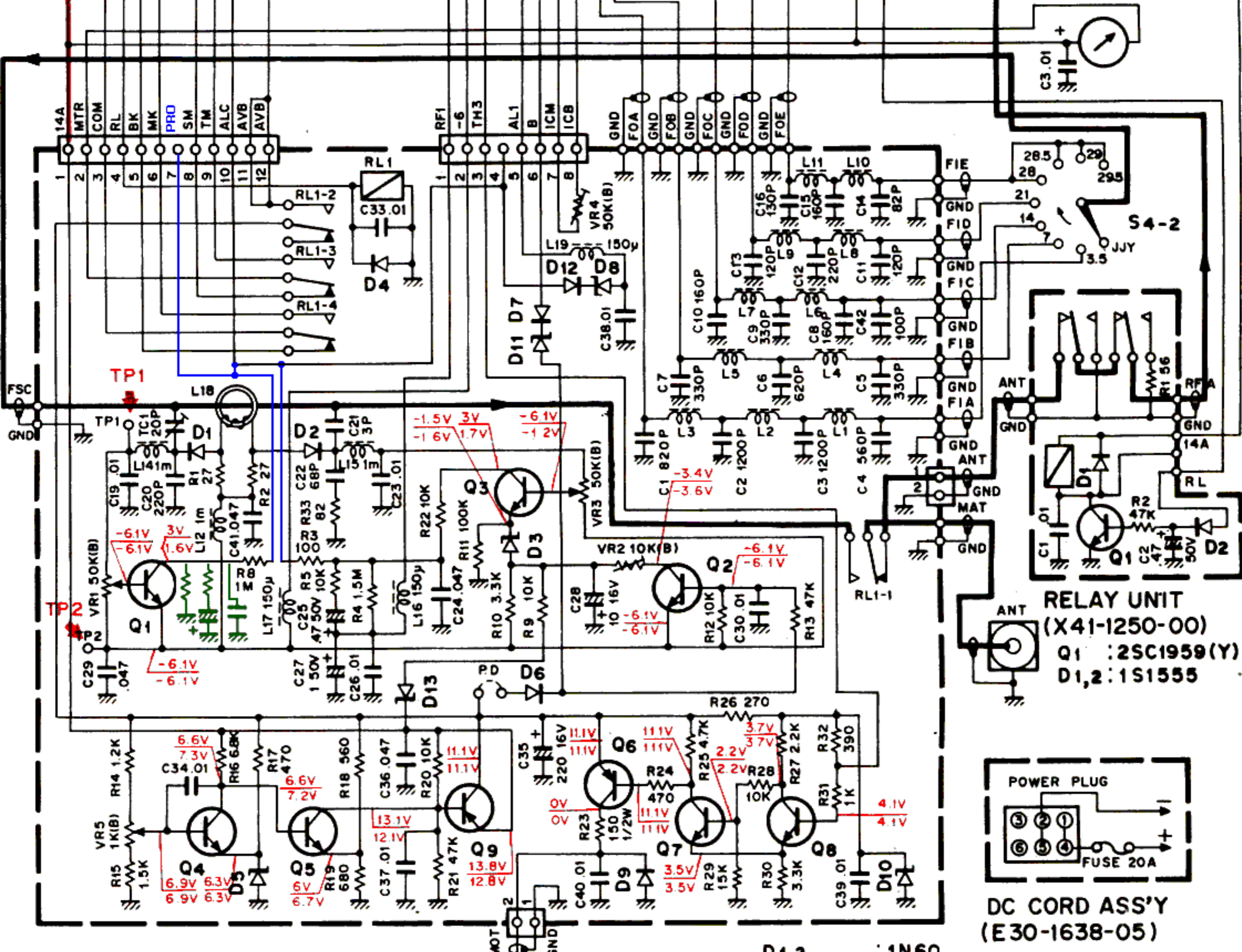
D1,2,4~6: 1S1555, D3: 1SV53A



▼ COUNTER UNIT (X54-1300-00)



Q1, 2, 3, 4, 8, 9, 10, 13	: 2SC1815(Y)	D3, 4, 5, 6, 7, 8, 9, 10	: 1S1555	IC1	: SN74LS90N	IC10	: TC4042BP
Q7	: 3SK73(GR)	11, 12, 13, 14, 15		IC2	: TC5026BP	IC11, 12, 13	: TC4019BP
Q11, 12	: 2SC1959(Y)	16, 17, 18, 21, 22		IC3, 4	: TC4518BP	IC14	: TC4049BP
O6	: 2SC785(O)	23, 24		IC5	: TC4027BP	IC15	: TC5022BP
Q5	: 2SC1815(GR)			IC6, 7, 17	: TC4011BP	IC16	: TC5066BP
D1, 19	: WZ-090	D20	: XZ-060	IC8	: TC5051BP	IC18	: TC5012BP
		D25	: MV-13	IC9	: TC4029BP	IC19	: TC5064BP



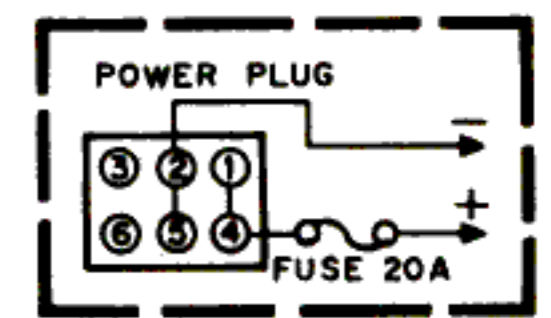
FILTER UNIT (X51-1200-00)

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Q 1~5,7,8 : 2SC1815(Y)
 Q 6 : 2SA562(Y)
 Q 9 : 2SA473(Y)

D 1,2 : 1N60
 D 3 : WZ-044
 D 4,6,7,9,12 : 1S1555
 D 5,10 : WZ-061
 D 8,11,13 : WZ-090

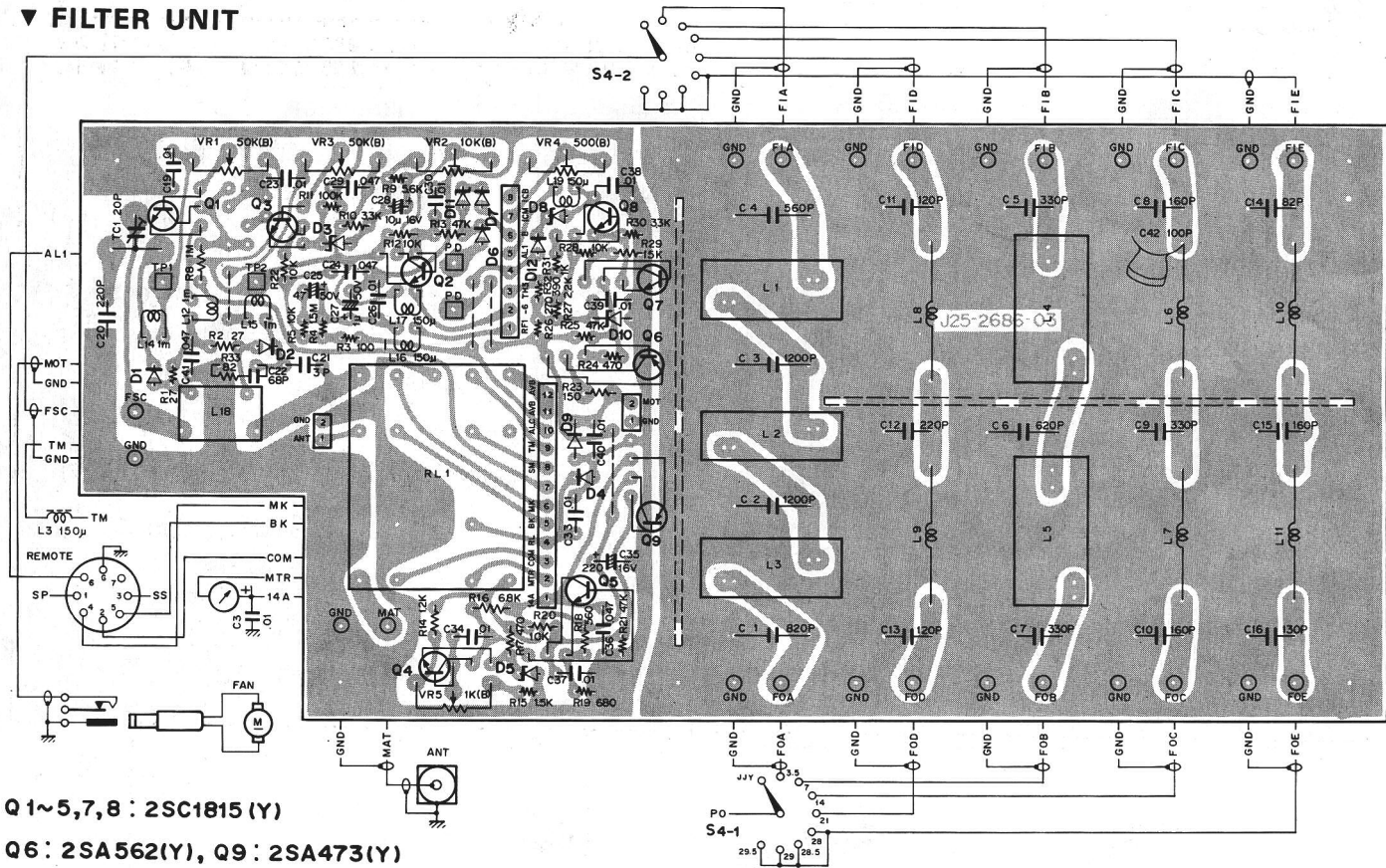
RELAY UNIT
 (X41-1250-00)
 Q 1 : 2SC1959(Y)
 D 1,2 : 1S1555



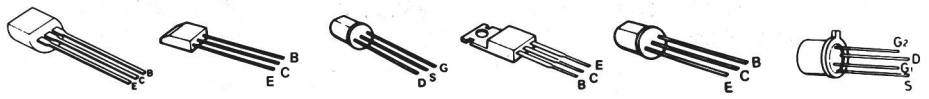
DC CORD ASS'Y
 (E30-1638-05)

TS-120S

▼ FILTER UNIT

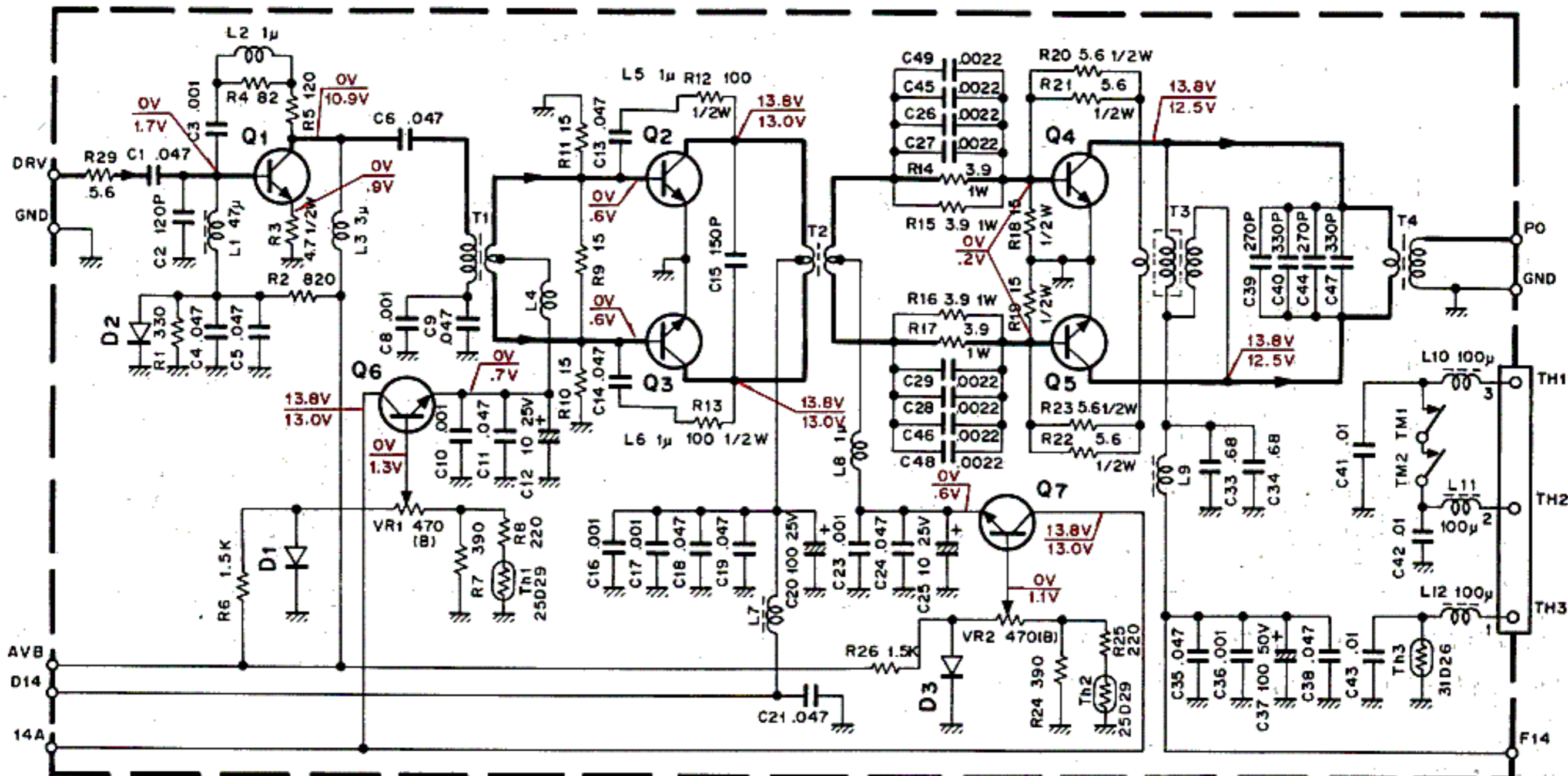


- Q1~5,7,8 : 2SC1815 (Y)
- Q6 : 2SA562(Y), Q9 : 2SA473(Y)
- D1,2 : 1N60, D3 : WZ-044
- D4,6,7,9,12 : 1S1555
- D5,10 : WZ-061, D8,11,13 : WZ-090



2SC1815(Y) 2SC460(B) 2SK19(Y) 2SA473(Y) 2SA562(Y) 3SK22(Y)
 2SC1959(Y)

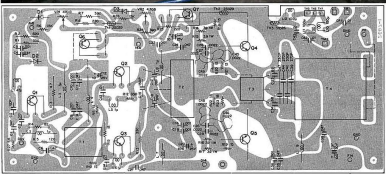
▼ FINAL UNIT (X56-1350-00) ©2009 WB4KDI



Q1 : 2SC2075
Q2,3 : 2SC2509

Q4,5 : 2SC2290
Q6,7 : 2SD235(Y)

D1,3 : SV-03
D2 : SV-4A



25C2075 25D235(Y)



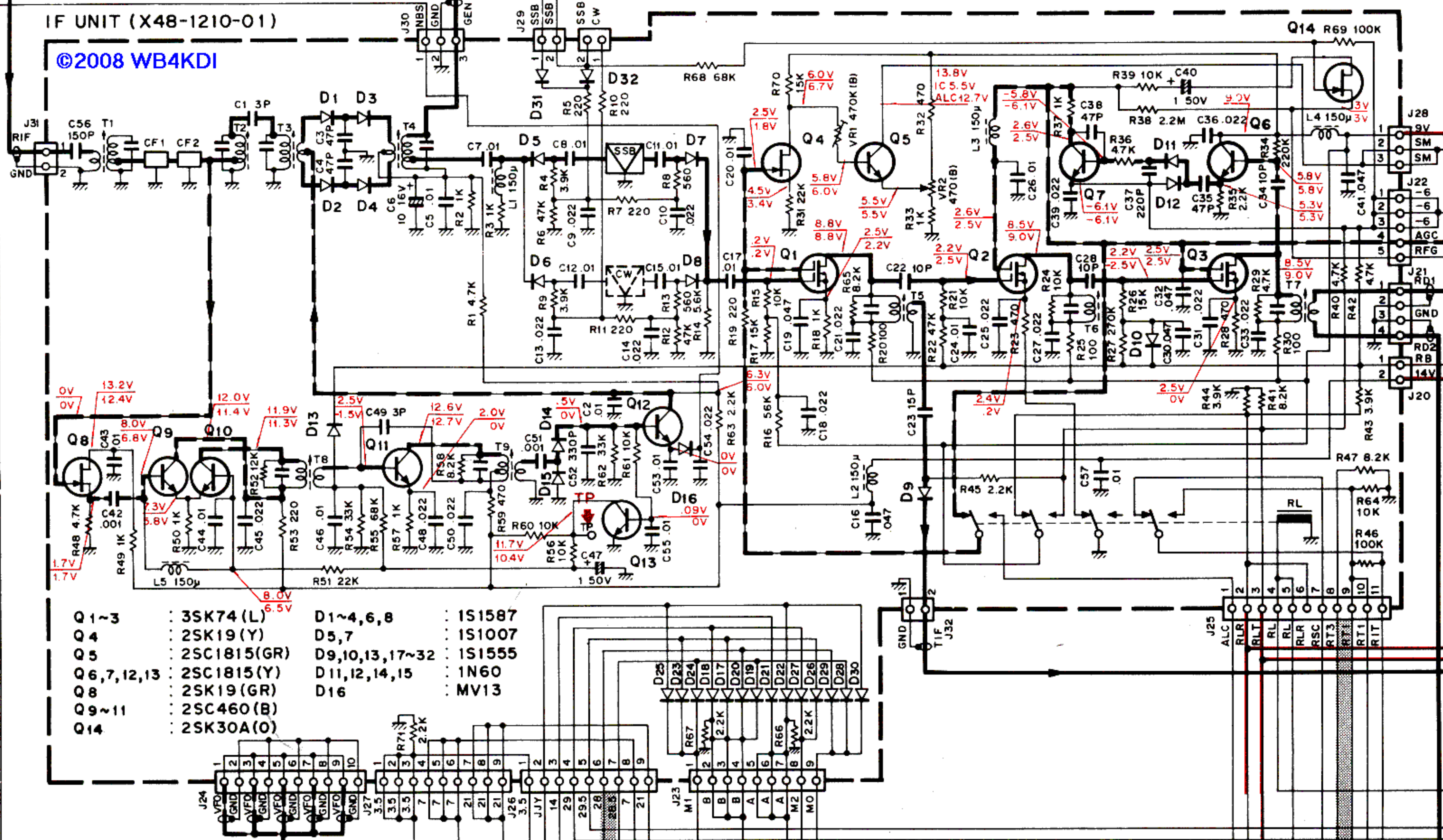
25C2509



25C2290

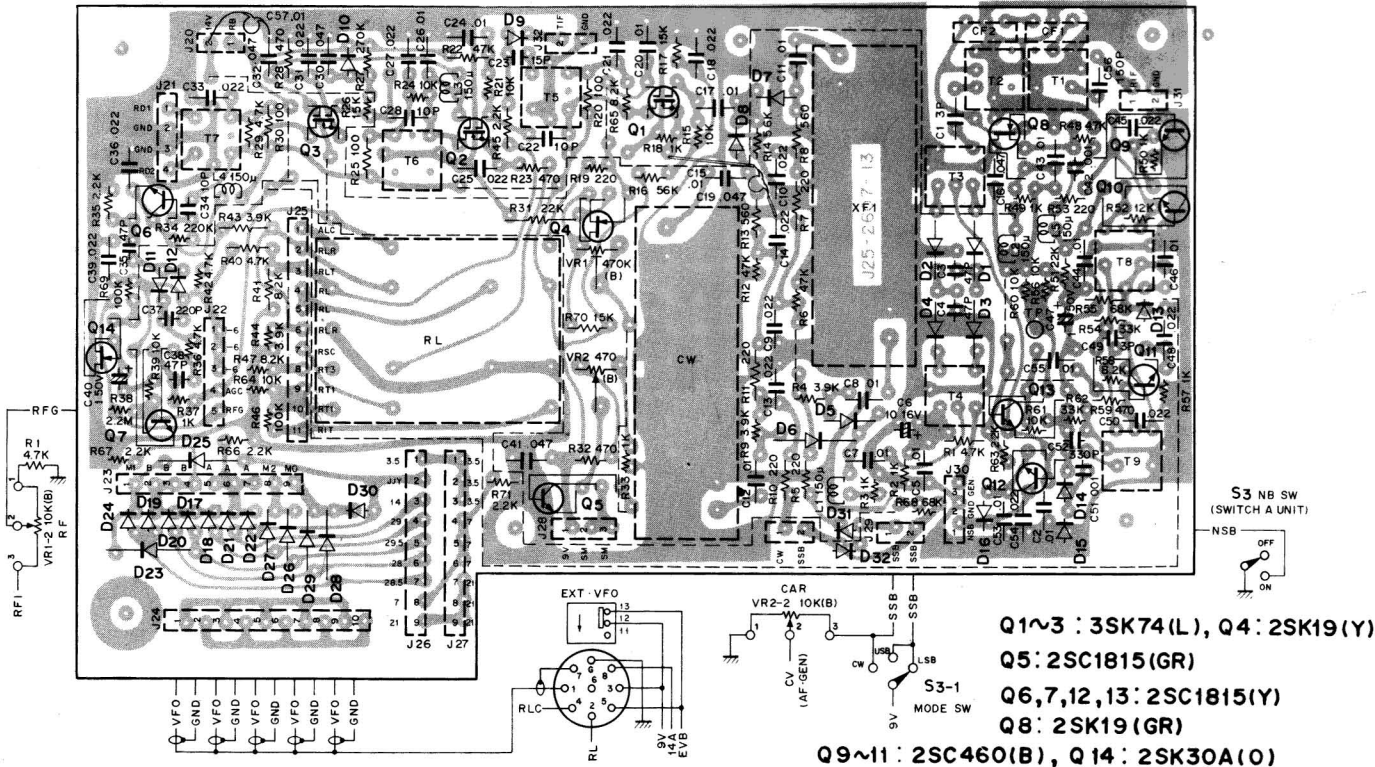


1.5V



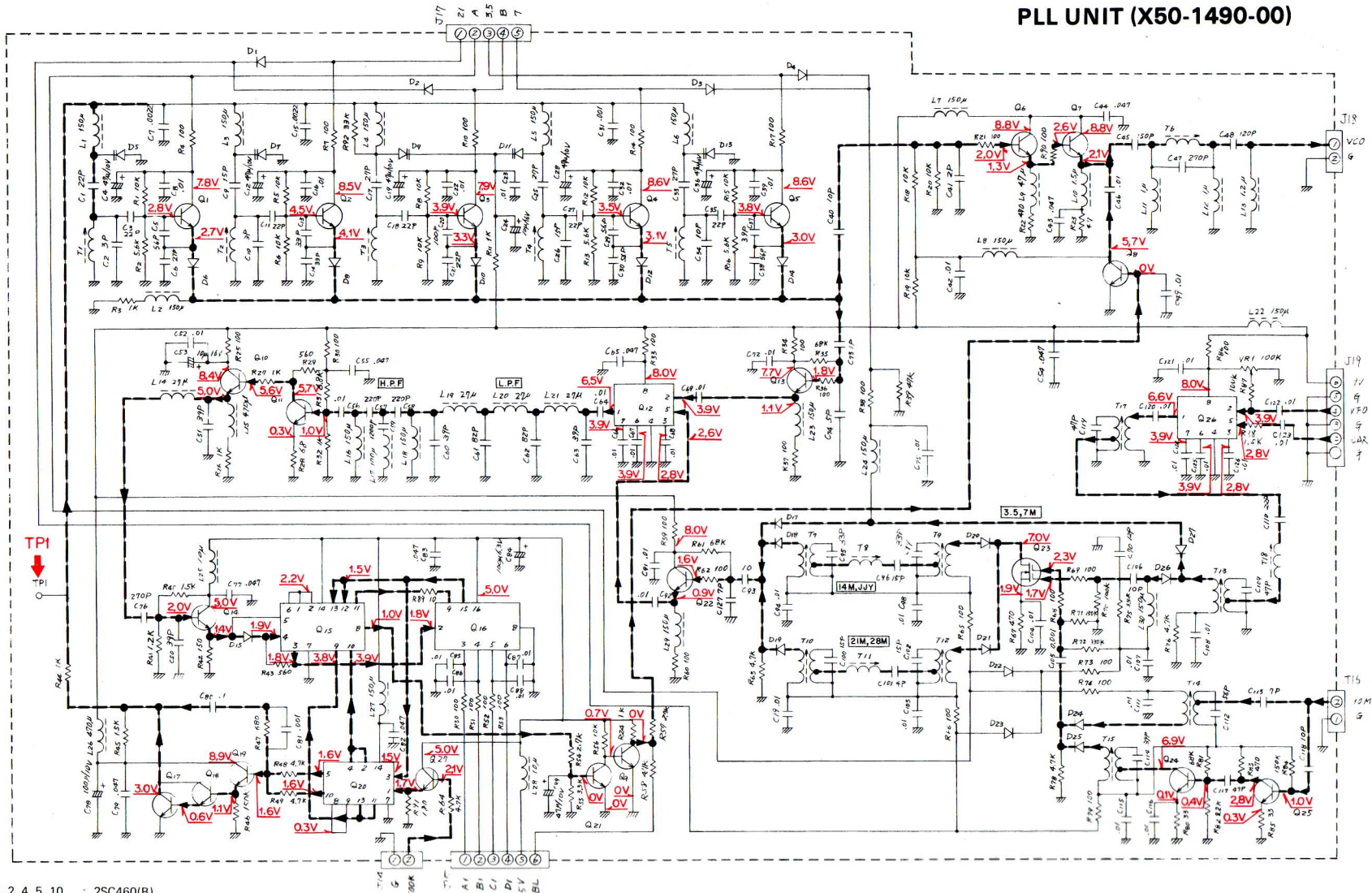
- | | | | |
|-------------|----------------|----------------|----------|
| Q 1-3 | : 3SK74 (L) | D1-4,6,8 | : 1S1587 |
| Q 4 | : 2SK19 (Y) | D5,7 | : 1S1007 |
| Q 5 | : 2SC1815 (GR) | D9,10,13,17-32 | : 1S1555 |
| Q 6,7,12,13 | : 2SC1815 (Y) | D11,12,14,15 | : 1N60 |
| Q 8 | : 2SK19 (GR) | D16 | : MV13 |
| Q 9-11 | : 2SC460 (B) | | |
| Q 14 | : 2SK30A (O) | | |

▼ IF UNIT (X48-1210-01)



- Q1~3 : 3SK74(L), Q4 : 2SK19(Y)
- Q5 : 2SC1815(GR)
- Q6,7,12,13 : 2SC1815(Y)
- Q8 : 2SK19(GR)
- Q9~11 : 2SC460(B), Q14 : 2SK30A(O)

PLL UNIT (X50-1490-00)



Q1, 2, 4, 5, 10, : 2SC460(B)
 11, 13, 14, 22,
 24, 25.

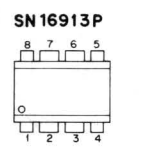
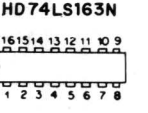
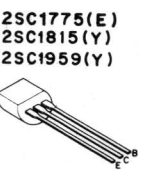
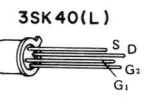
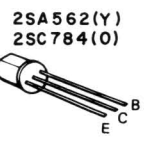
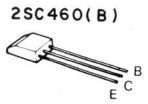
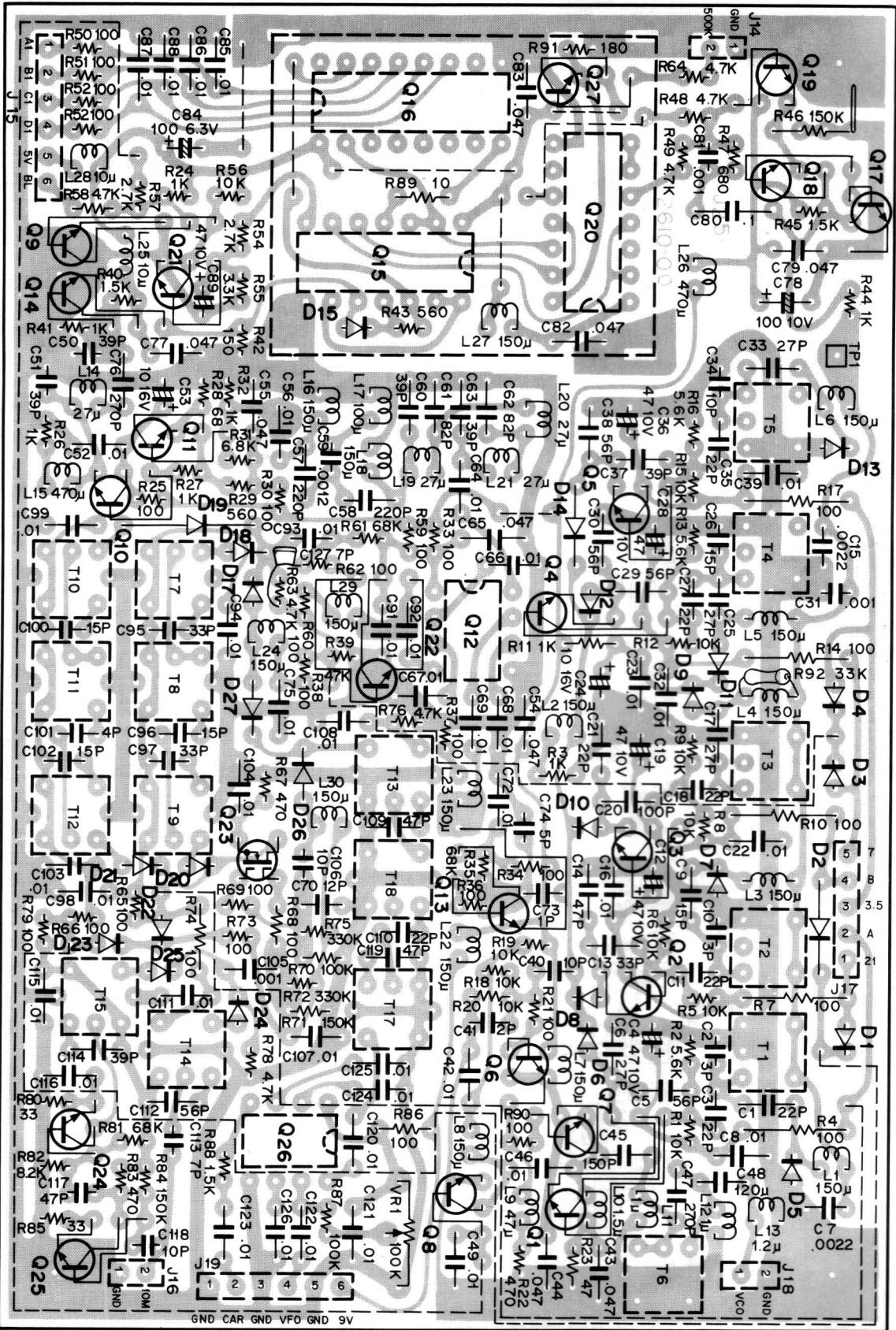
Q7, 8 : 2SC1959(Y)
 Q9, 21, 27 : 2SC1815(Y)
 Q17, 18, 19 : 2SC1775(E)
 Q23 : 3SK40(L)
 Q3, 6 : 2SC784(O)

Q12, 26 : SN16913P
 Q15 : HD74LS00P
 Q16 : 74LS163N
 Q20 : MC4044P

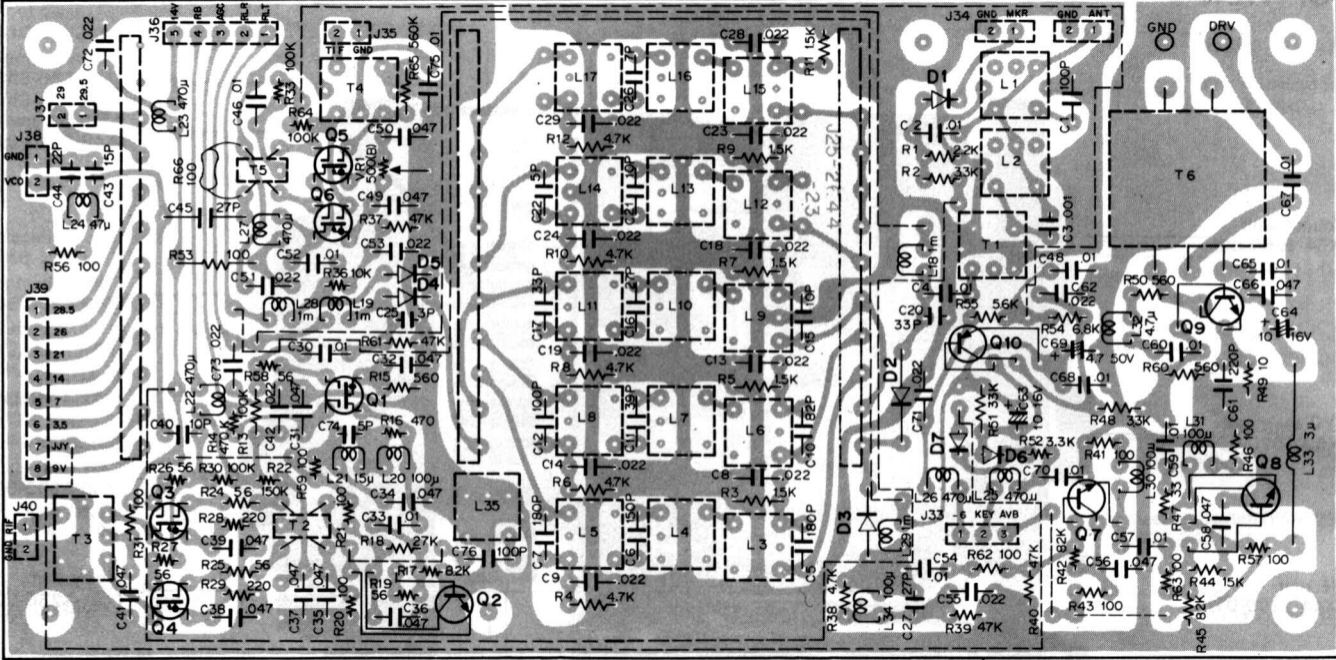
D1, 2, 3, 4, : 1S1555
 22, 23
 D5, 7, 9, 11, 13 : 1S1553A
 D10 : 1S2588

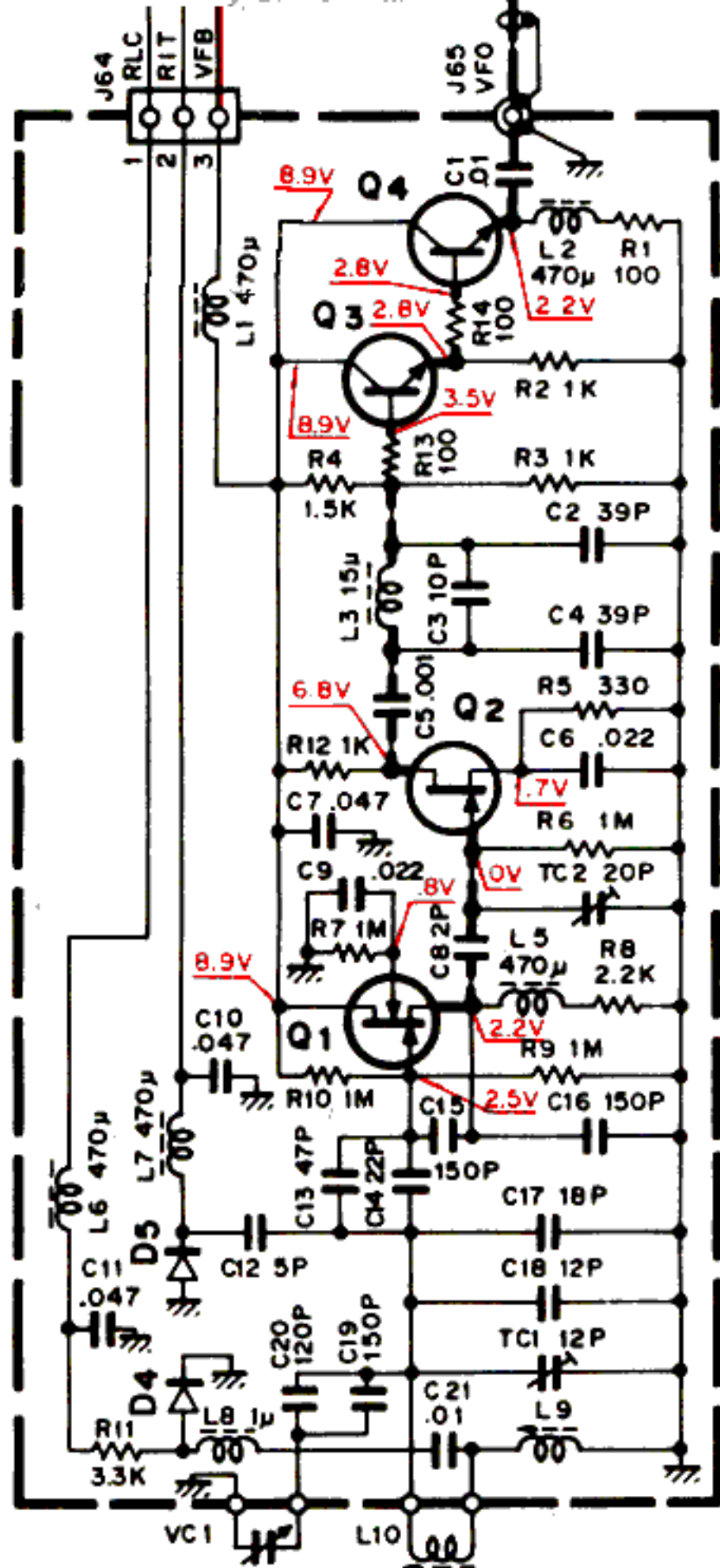
D6, 8, 12, 14, 17, : 1S1587
 18, 19, 20, 21,
 24, 25, 26, 27, 15

▼ PLL UNIT (X50-1490-00)



GND CAR GND VFO GND 9V

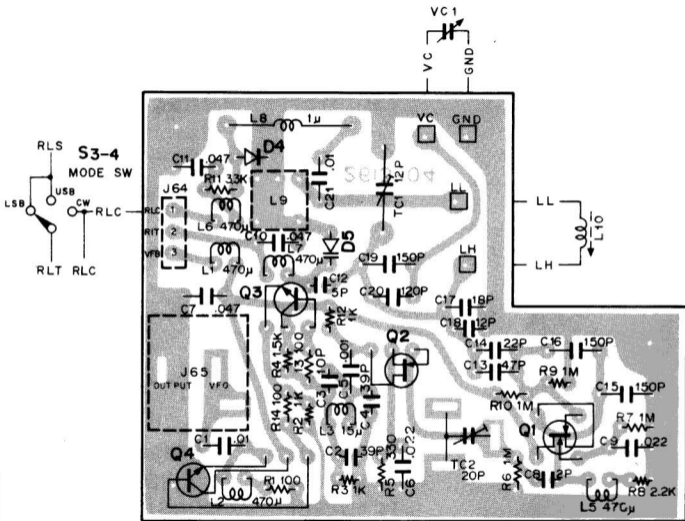




VFO UNIT (X40-1130-00)

- | | |
|------------------|-------------------|
| Q 1 : 3SK22 (Y) | Q 4 : 2SC1959 (Y) |
| Q 2 : 2SK19 (Y) | D 4 : 1S2588 |
| Q 3 : 2SC460 (B) | D 5 : 1SV53A |

▼ VFO UNIT (X40-1130-00)



Q1: 3SK22(Y), Q2: 2SK19(Y), Q3: 2SC460(B)

Q4: 2SC1959(Y), D4: 1S2588, D5: 1SV53A