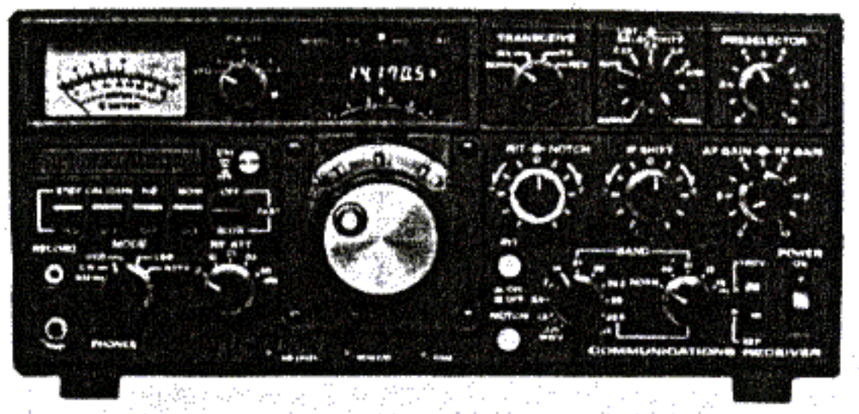


SPECIFICATIONS

Frequency Range

160 meter band	1.8 ~ 2.0 MHz
80 meter band	3.5 ~ 4.0 MHz
40 meter band	7.0 ~ 7.5 MHz
20 meter band	14.0 ~ 14.5 MHz
15 meter band	21.0 ~ 21.5 MHz
10 meter band A	28.0 ~ 28.5 MHz
10 meter band B	28.5 ~ 29.0 MHz
10 meter band C	29.0 ~ 29.5 MHz
10 meter band D	29.5 ~ 30.0 MHz
119 meter band (WWV)/JJY	15.0 ~ 15.5 MHz
Shortwave band:	
49 meter band	5.9 ~ 6.4 MHz
31 meter band	9.4 ~ 9.9 MHz
25 meter band	11.5 ~ 12.0 MHz
16 meter band	17.7 ~ 18.2 MHz

Mode

SSB, CW, AM, RTTY

Receiver Sensitivity

SSB 0.25 μV (SW Band 0.5 μV) S + N/N 10 dB or more
AM 1.5 μV (SW Band 3 μV) S + N/N 10 dB or more

Image Ratio

Better than 80 dB (SW Band better than 50 dB)

IF Rejection

IF Frequency is 90 dB or more down from output signal (SW Band more than 40 dB)

Receiver Selectivity

CW (0.25) more than 250 Hz (−6 dB), less than 500 Hz (−6 dB) (*1)
CW (0.5) more than 500 Hz (−6 dB), less than 850 Hz (−60 dB) (*2)
SSB (2.4) more than 2.4 kHz (−6 dB), less than 3.9 kHz (−60 dB)
AM (6) more than 6 kHz (−6 dB), less than 12 kHz (−60 dB)

Variable Bandwidth

CW (0.5) 150 Hz ~ 500 Hz (−6 dB) fully variable (*3)
SSB (2.4) 600 Hz ~ 2.4 kHz (−6 dB) fully variable
AM (6) 4.3 kHz ~ 6 kHz (−6 dB) fully variable (*4)

*1 Installed optional filter-YG-455CN
*2 Installed optional filter-YG-455C
*3 Installed optional filter-YG-88C and YG-455C
*4 Installed optional filter-YG-88A

Notch Filter Attenuation

More than 50 dB

Frequency Stability

Within 100 Hz during any 30 minute period after warm up within ± 1 kHz during the first hour after 1 minute of warm up.

Antenna Impedance

50 ~ 75Ω (unbalanced)

AF Output

More than 1.5W (8Ω load, 10% distortion)

AF Load Impedance

4 ~ 16Ω for both speaker and headphone

Power Consumption

AC 120V, 30W
DC 13.8V, 1.6A

Power Supply

AC 100, 120, 220, 240V, 50/60 Hz
DC 12 ~ 15V

Semiconductors and Tubes

IC's	40
FET's	34
Transistors	89
Diodes	170
Tube	1

Dimensions

13-1/8" (W) × 6" (H) × 13-3/16" (D)
(Protection not included)

NOTE:

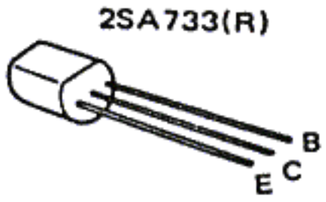
The circuit and ratings may change without notice due to development in technology.

A

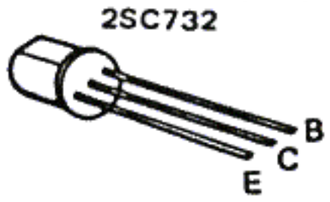
SCHEMA

Signal ——— OSC Control Circuit - - - - - - - Common ———

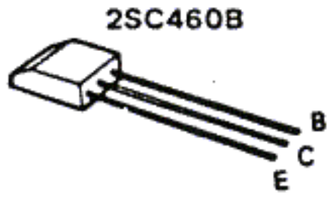
2SC458(B)
2SC945(R)
2SA733(R)



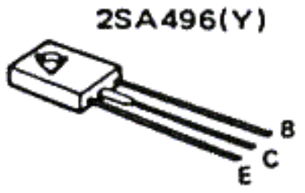
2SC373
2SC735(Y)
2SC1000(GR)
2SC732



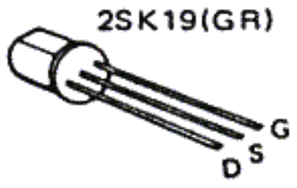
2SC460B



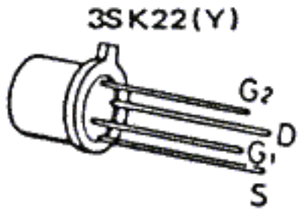
2SA496(Y)



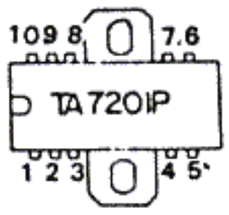
2SK19(GR)



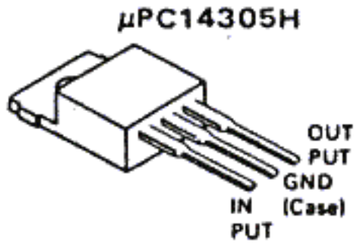
3SK22(Y)

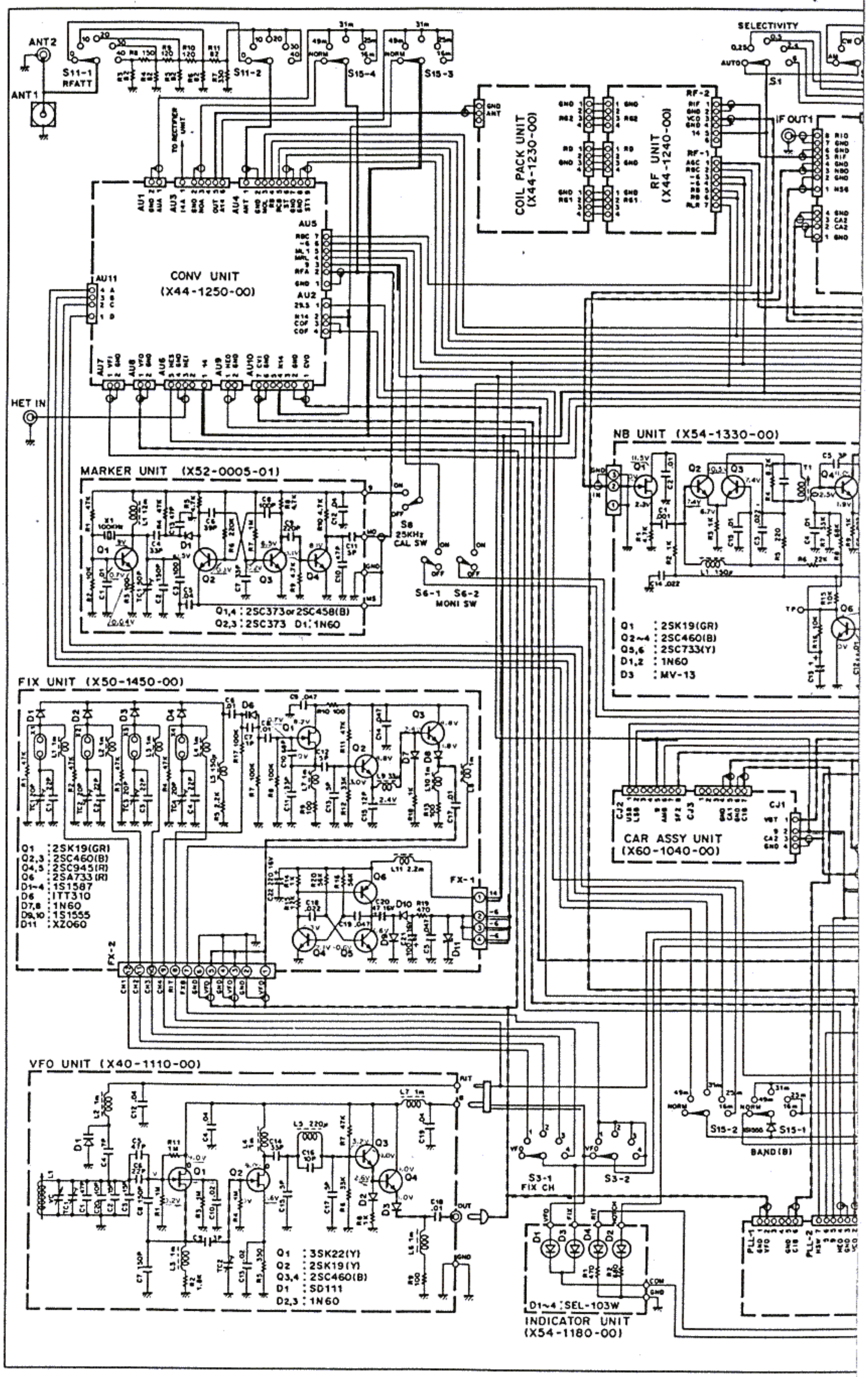


TA7201P



μPC14305H



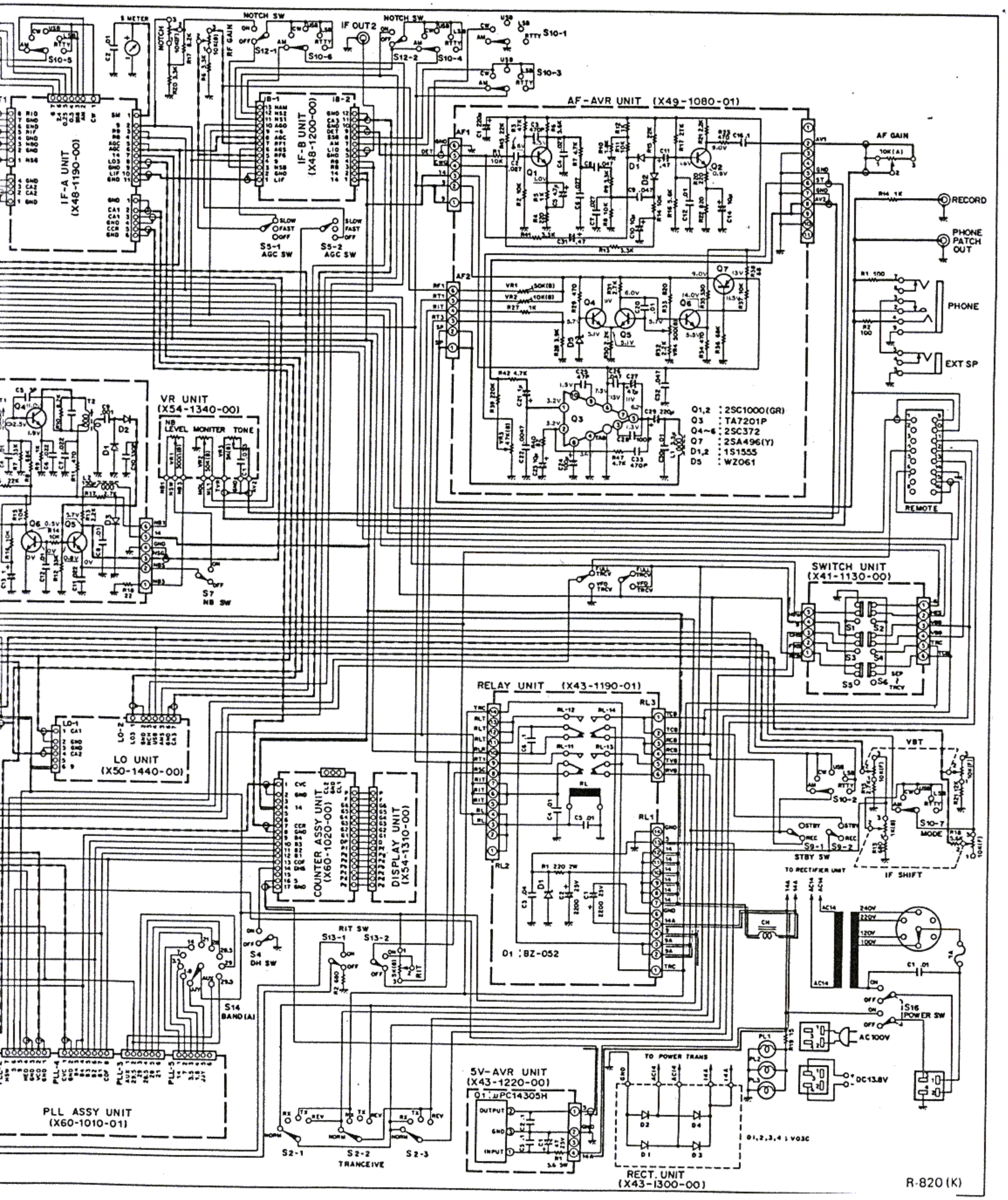


A

EMATIC DIAGRAM

ommon Power Source

■ The circuit and ratings may change without notice due to development in technology.



R-820(K)

■ COUNTER MIXER UNIT (X54-1150-00)

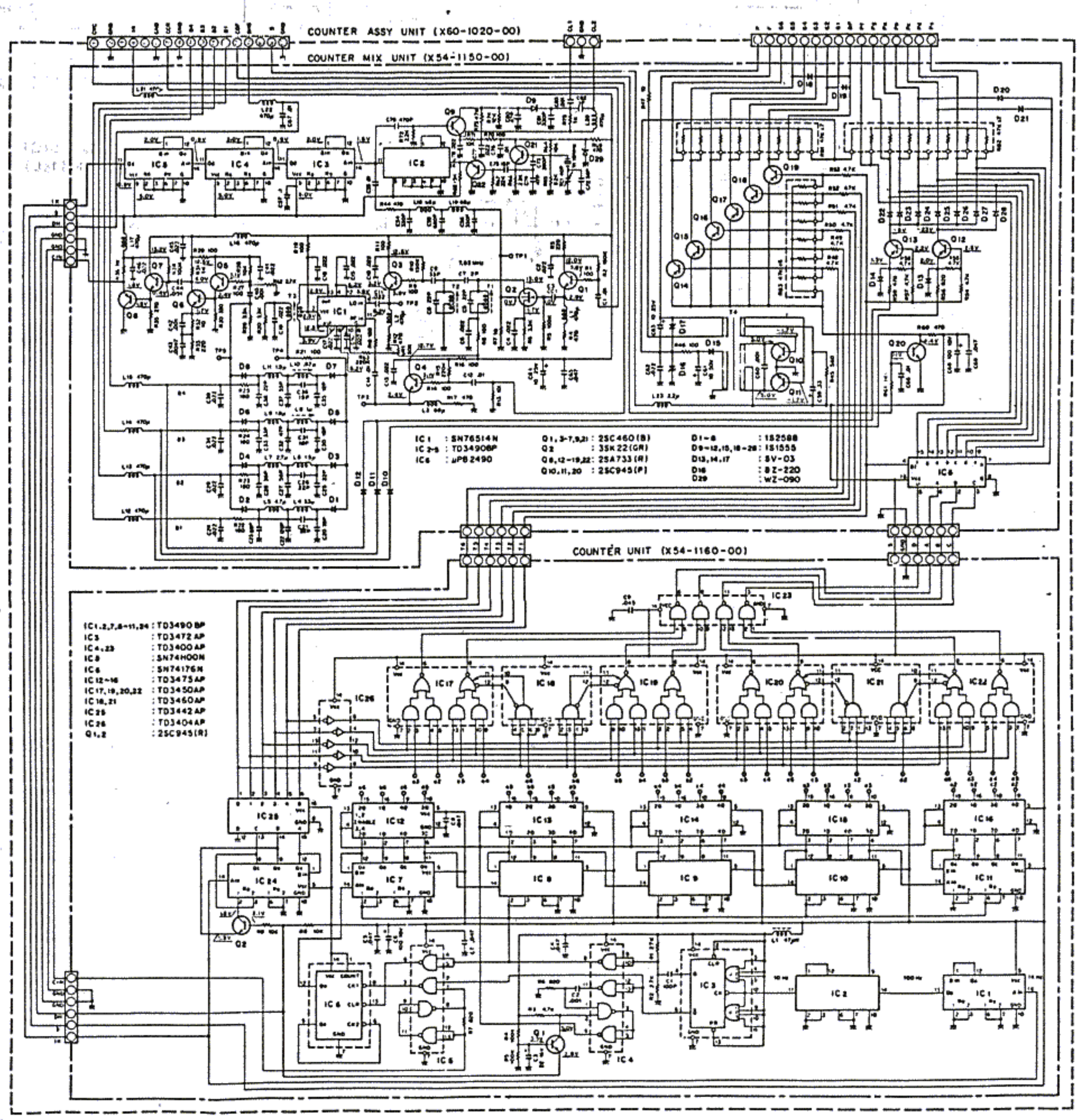
2SC945(P)

TD3475AP

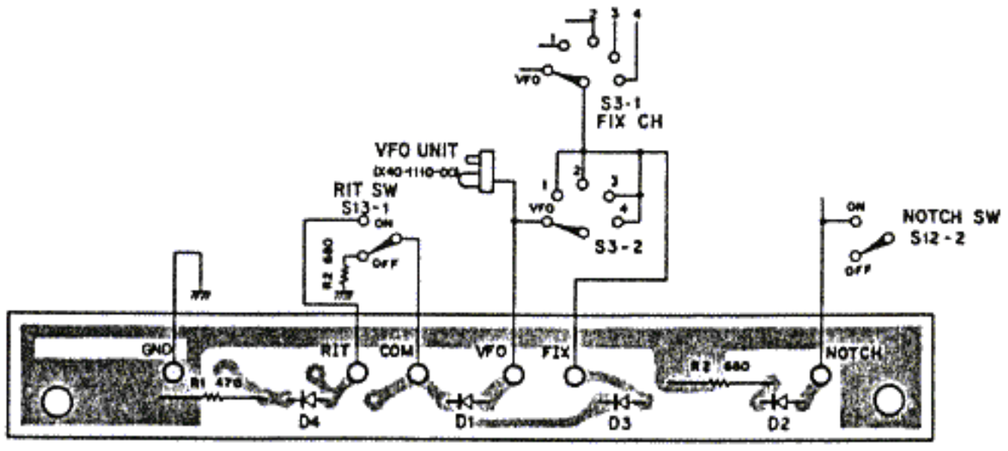
TD3400AP TD3472AP
TD3404AP TD3490BP
TD3450AP SN74176N
TD3460AP

IC1: SN76514N, IC2~5: TD3490BP, IC6: μPB249D, Q1, 3~7, 9, 21: 2SC460(B)
Q2: 3SK22(GR), Q8, 12~19, 22: 2SA733(R), Q10, 11, 20: 2SC945(P), D1~8: 1S2588
D9~12, 15, 18~28: 1S1555, D13, 14, 17: SV-03, D16: BZ-220, D29: WZ-090

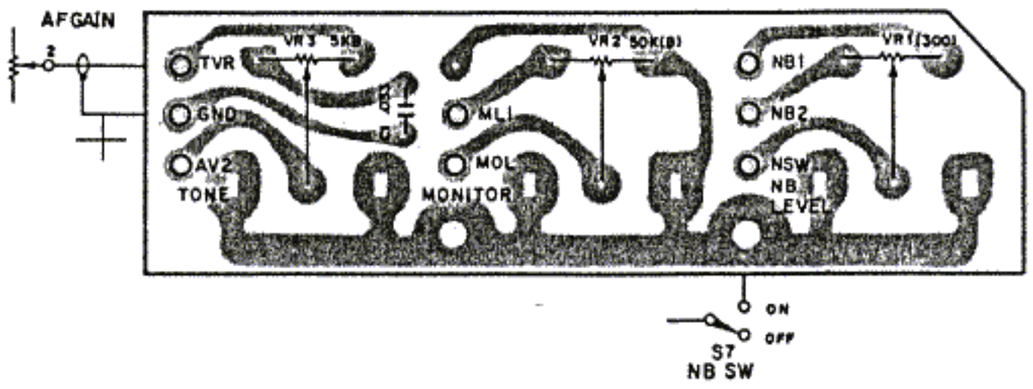
■ COUNTER ASS'Y UNIT (X60-1020-00)



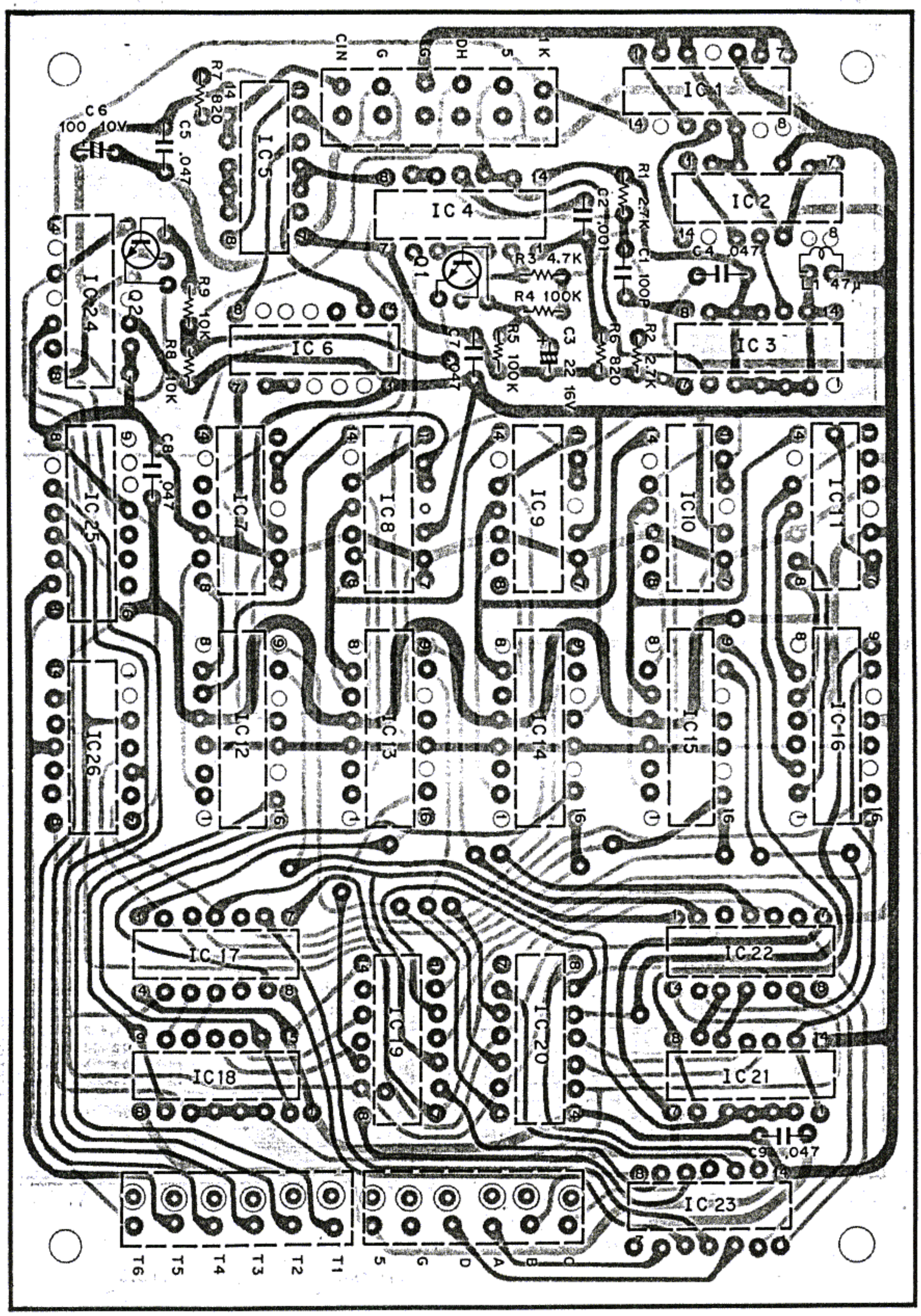
■ INDICATOR UNIT (X54-1180-00)



■ VR UNIT (X54-1340-00)

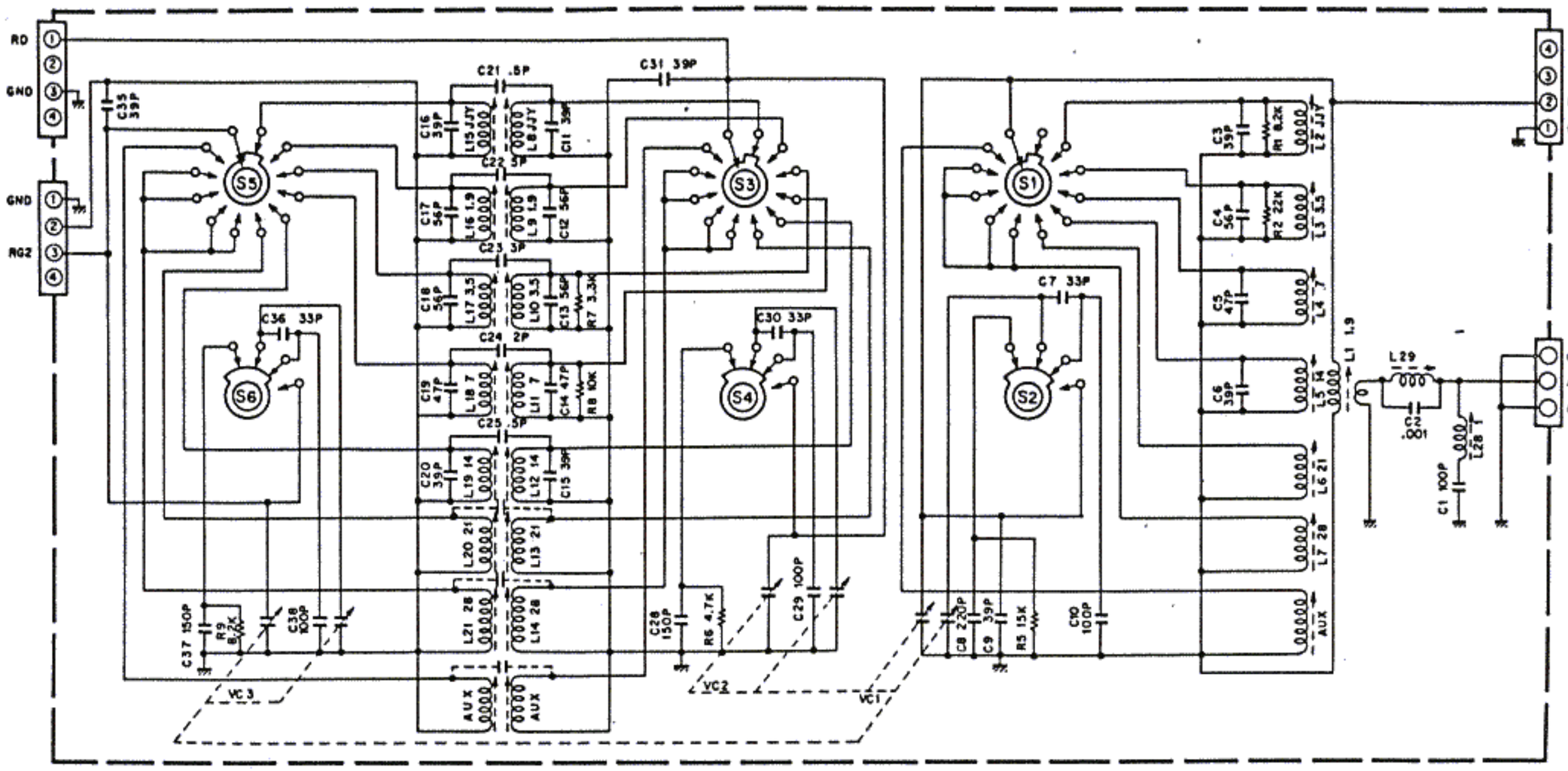


■ COUNTER UNIT (X54-1160-00)

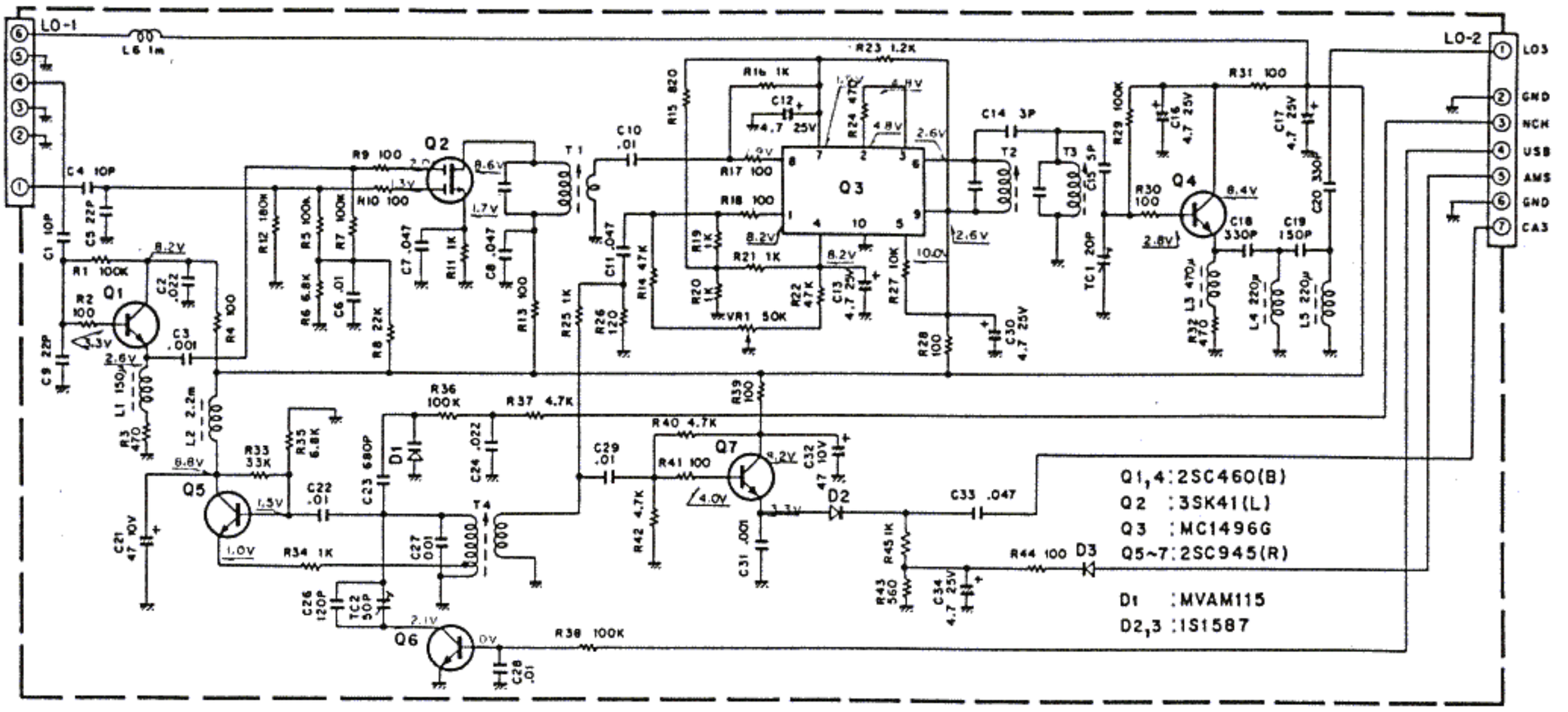


IC1, 2, 7, 8~11, 24: TD3490BP, IC3: TD3472AP, IC4, 23: TD3400AP, IC5: SN74H00N
IC6: SN74176N, IC12~16: TD3475AP, IC17, 19, 20, 22: TD3450AP, IC18, 21: TD3460AP
IC25: TD3442AP, IC26: TD3404AP, Q1, 2: 2SC945(R)

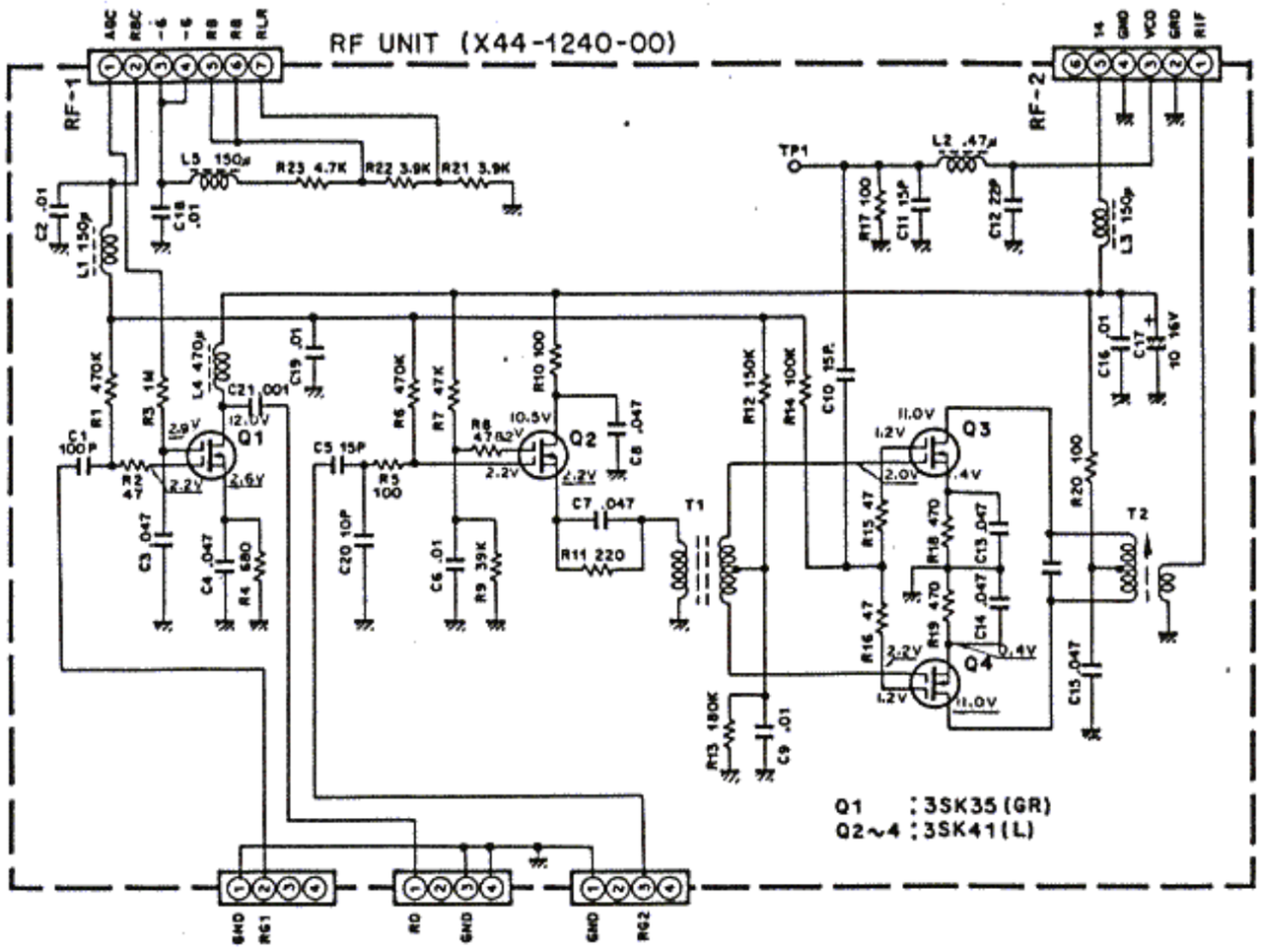
■ COIL PACK UNIT (X44-1230-00)



■ LOCAL OSCILLATOR UNIT (X50-1440-00)

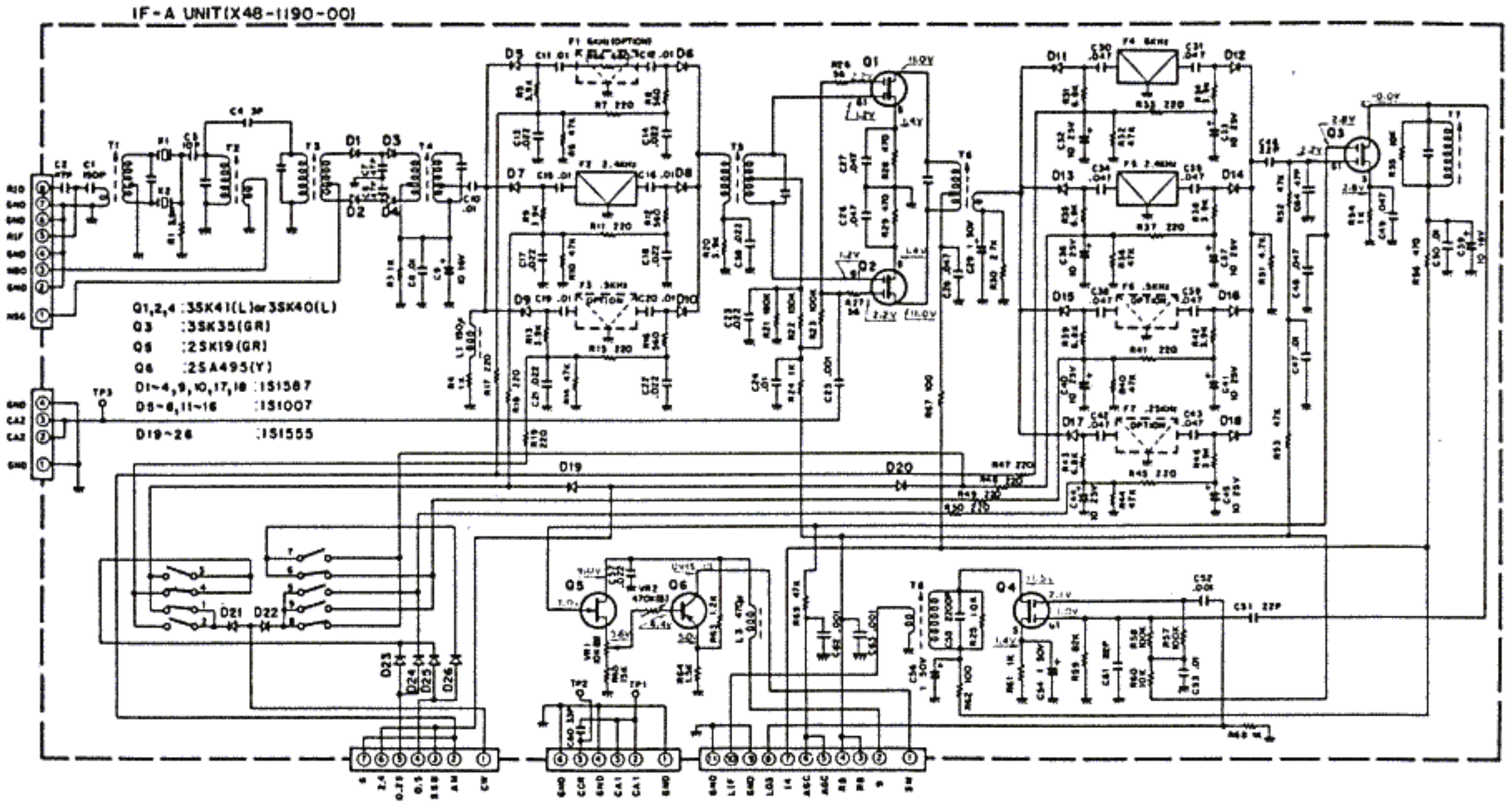


■ RF UNIT (X44-1240-00)

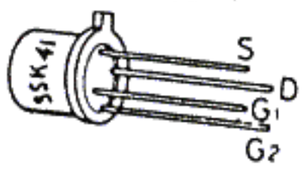


3SK35(GR)
3SK41(L)

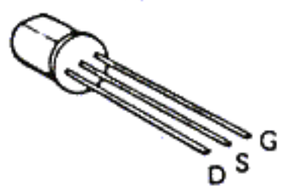
■ IF・A UNIT (X48-1190-00)



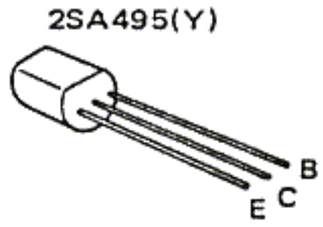
3SK41(L) or
3SK40(L)
3SK35(GR)



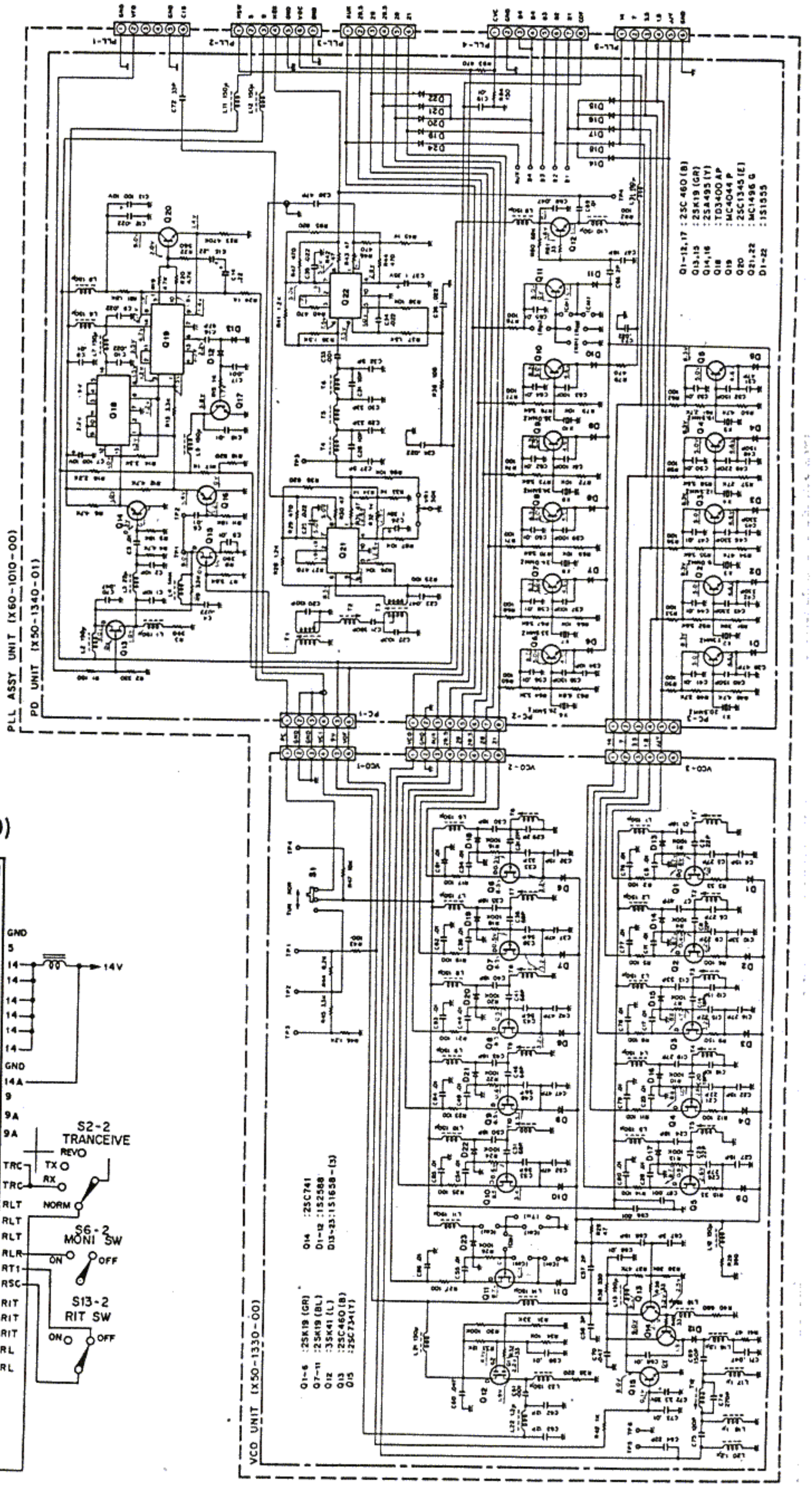
2SK19



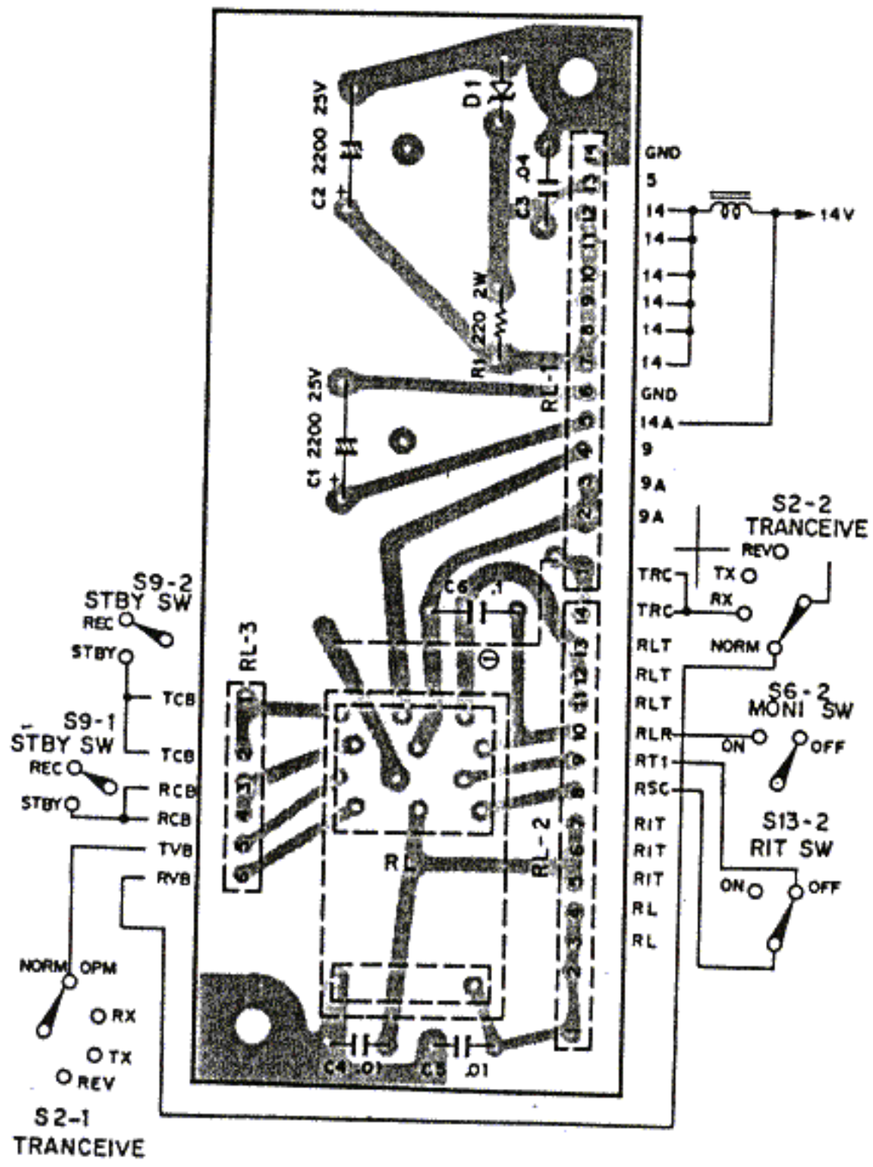
2SA495(Y)



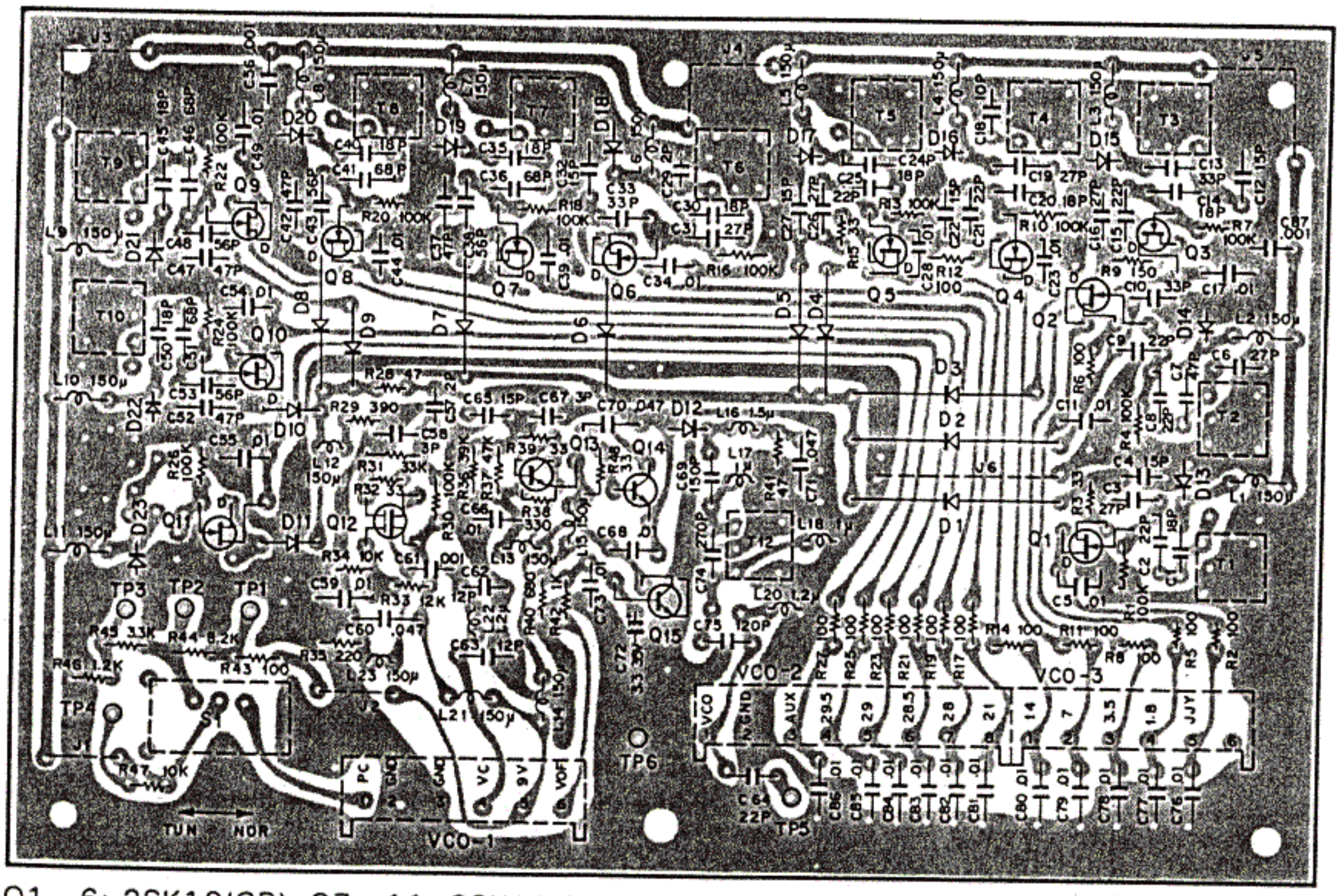
■ PLL ASS'Y UNIT (X60-1010-01)



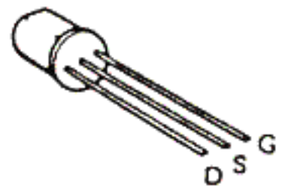
■ RELAY UNIT (X43-1190-00)



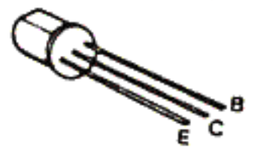
■ VCO UNIT (X50-1330-00)



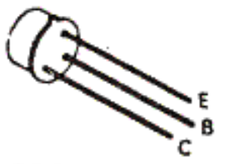
2SK19(GR)
2SK19(BL)



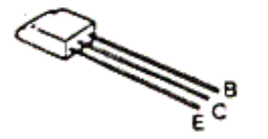
2SC734(Y)



2SC741

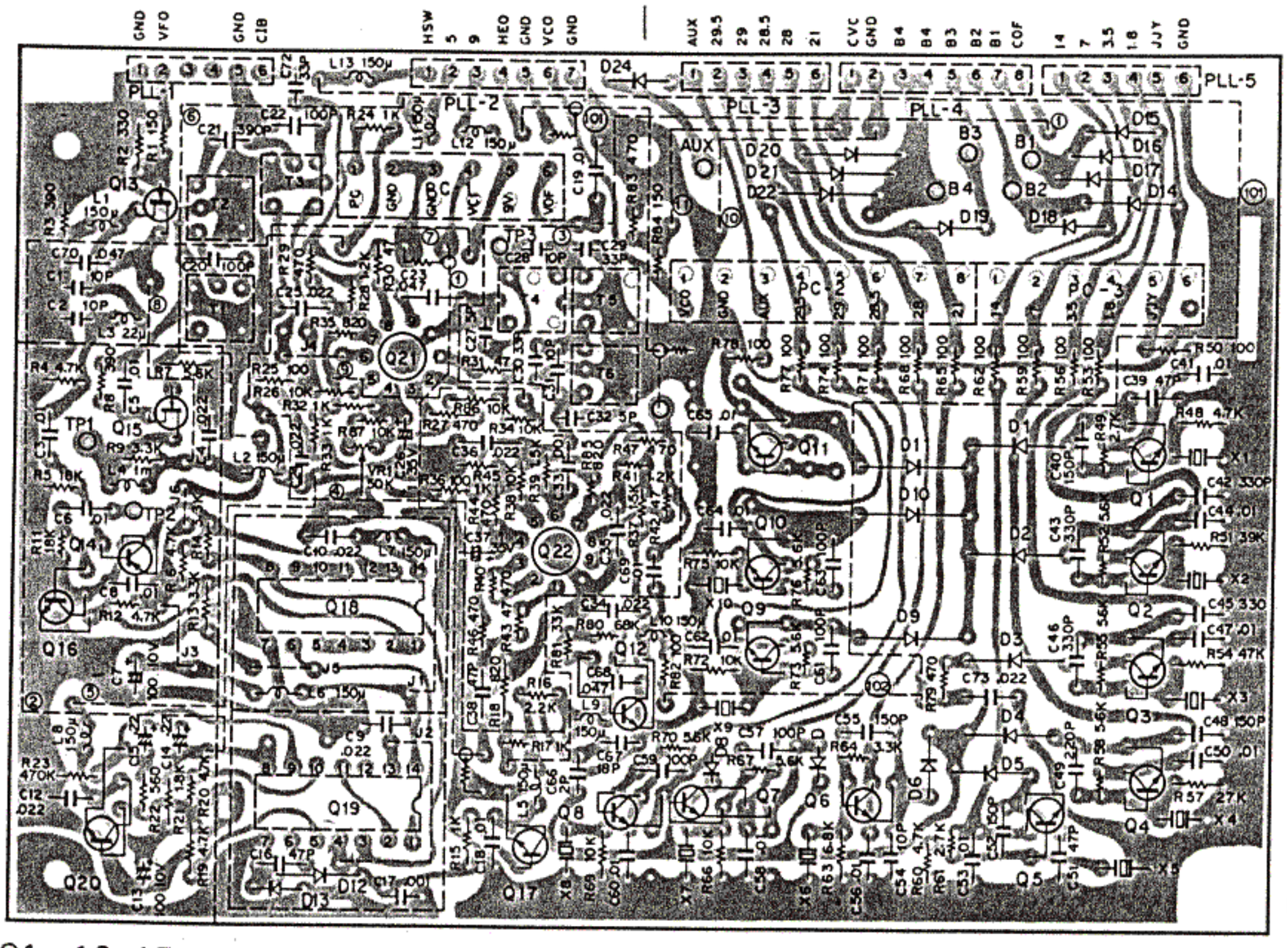


2SC460B

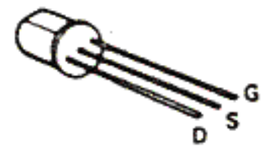


Q1~6: 2SK19(GR), Q7~11: 2SK19(BL), Q12: 3SK41(L), Q13: 2SC460(B), Q15: 2SC734(Y)
Q14: 2SC741, D1~12: 1S2588, D13~23: 1S1658-(3)

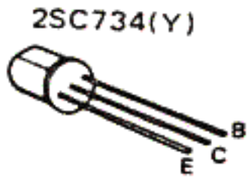
■ PD UNIT (X50-1340-00)



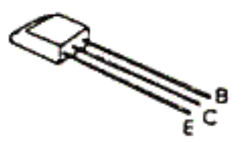
2SK19(GR)



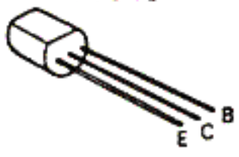
2SC734(Y)



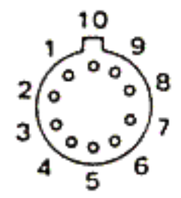
2SC460B



2SC1345

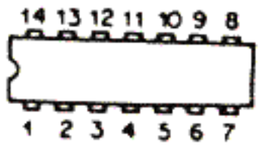


Bottom View



MC1496G

TD3400AP
MC4044P



TOP VIEW

Q1~12, 17: 2SC460(B), Q13, 15: 2SK19(GR), Q14, 16: 2SA495(Y), Q18: TD3400AP
Q19: MC4044P, Q20: 2SC1345(E), Q21, 22: MC1496G, D1~22: 1S1555