

# TR-7625



## Service Manual



### SPECIFICATIONS [K, W type]

#### GENERAL

Semiconductors:	Transistors: 48 (K), 47 (W) FETs: 9 ICs: 17 Diodes: 88 (K), 77 (W)
Frequency Range:	144.00 to 147.995 MHz (K), 144.00 to 145.995 MHz (W)
Frequency Synthesizer:	Digital control of phase locked VCO
Synthesizer Stability:	Better than $\pm 750$ Hz at 25°C
Mode:	FM
No. of Channels:	800 (K), 400 (W)
Operating Temperature:	-20 to +50°C
Power Voltage:	11.5V DC to 16.0V DC (13.8V DC standard)
Grounding:	Negative grounding
Antenna Impedance:	50 $\Omega$
DC Current:	Less than 0.5A in receive with no input signal Less than 6A in HI transmit (at 13.8V DC)
Dimensions:	161 mm (6-5/16") wide 61 mm (2-3/8") high 230 mm (9-1/16") deep
Weight:	1.75 kg (3.85 lbs) Approx.

#### TRANSMITTER SECTION

RF Output Power:	High: 25 watts (min.) Low: 5 watts approx. (adjustable to 25 watts)
Modulation:	Variable reactance direct shift
Max. Frequency Deviation:	$\pm 5$ kHz
Spurious Radiation:	Less than -60 dB
Touch Tone Input Impedance:	600 $\Omega$
Microphone:	Dynamic microphone with PTT switch, 500 $\Omega$

#### RECEIVER SECTION

Circuitry:	Double superheterodyne
Intermediate Frequency:	1st: IF 10.7 MHz 2nd: IF 455 kHz
Sensitivity:	Less than 0.4 $\mu$ V for 20 dB quieting (Less than 1 $\mu$ V for 30 dB S/N) Less than 0.25 $\mu$ V
Squelch Sensitivity:	Better than 12 kHz at 6 dB down
Pass Band Width:	Better than 76 dB at 30 kHz (K), 70 dB at 25 kHz (W) of adjacent channel
Selectivity (2 Signal):	Better than 70 dB
Image Rejection:	Better than 60 dB
Spurious Interference:	Better than 66 dB (K), 60 dB (W)
Intermodulation:	Better than 66 dB (K), 60 dB (W)
Audio Output:	More than 1.5 watts across 8 $\Omega$ load (10% distortion)

NOTE: The circuit and ratings may change without notice due to developments in technology.

TR-7625

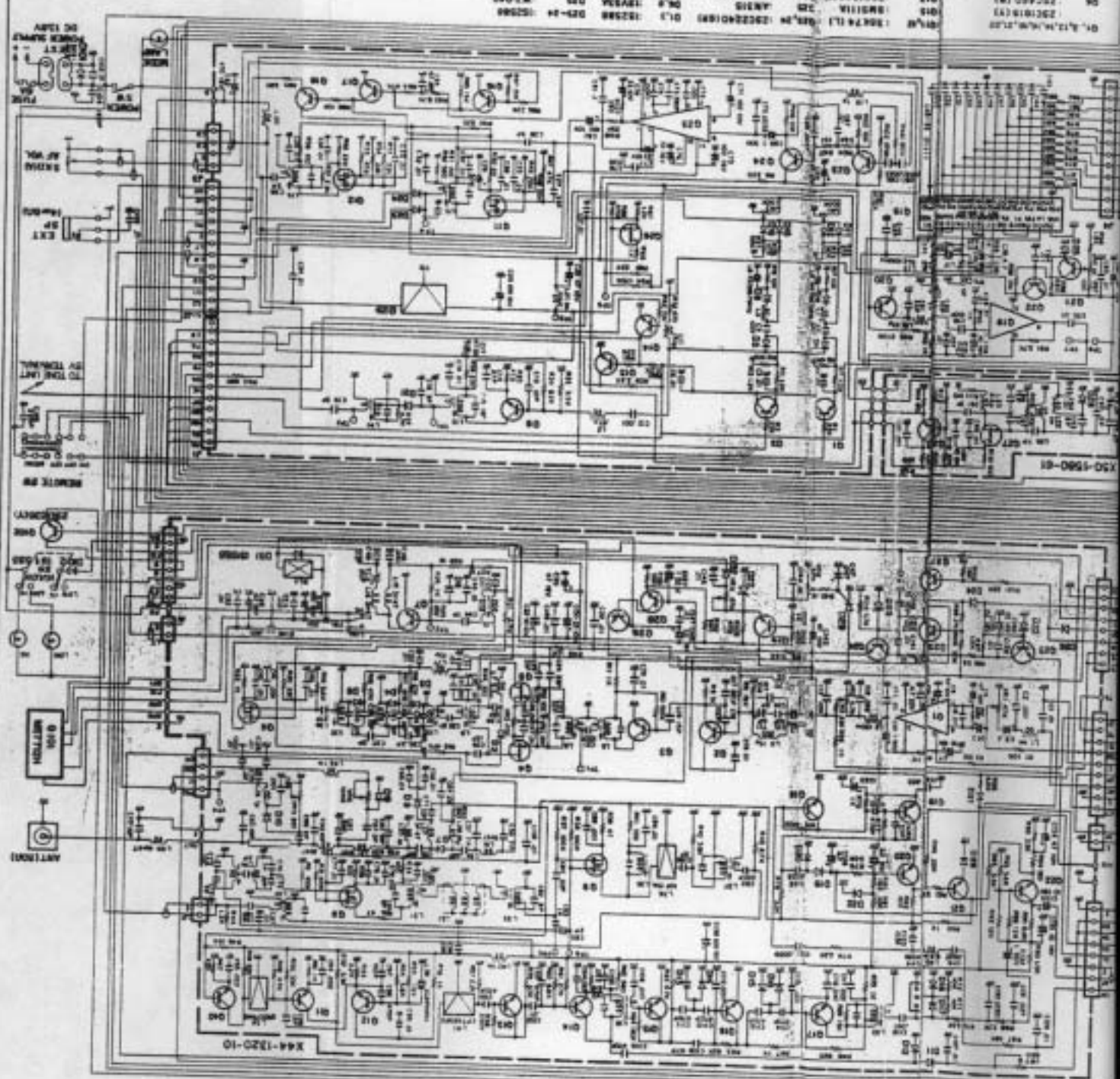
**KENWOOD**

# TR-7625 SCHEMATIC DIAGRAM

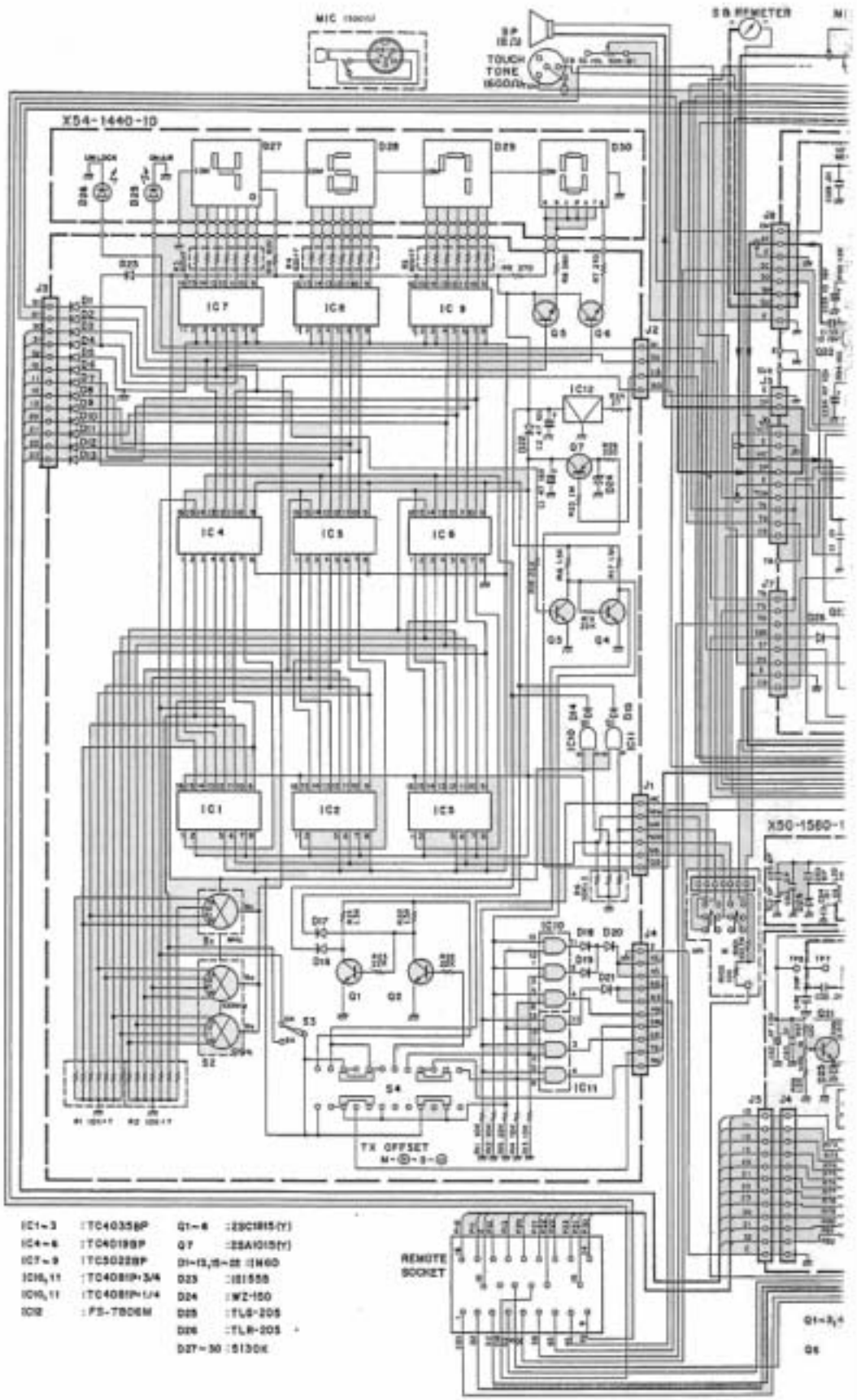
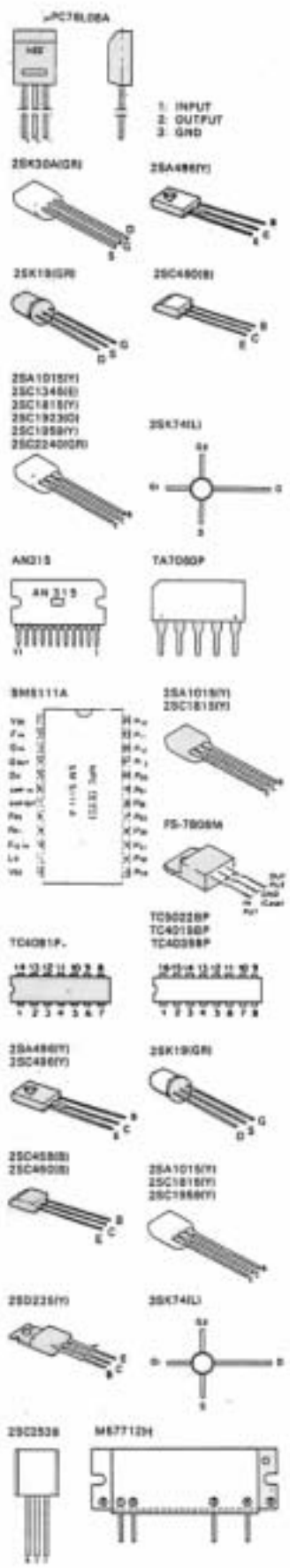
Handwritten: *Handwritten:*

Circuits and specifications are subject to change for improvement.

- Q1-KZ-248
- Q2-KZ-248
- Q3-WJ-100
- Q4-KZ-044
- Q5-CROAM-2
- Q6-18B18
- Q7-18B18
- Q8-18B18
- Q9-18B18
- Q10-18B18
- Q11-18B18
- Q12-18B18
- Q13-18B18
- Q14-18B18
- Q15-18B18
- Q16-18B18
- Q17-18B18
- Q18-18B18
- Q19-18B18
- Q20-18B18
- Q21-18B18
- Q22-18B18
- Q23-18B18
- Q24-18B18
- Q25-18B18
- Q26-18B18
- Q27-18B18
- Q28-18B18
- Q29-18B18
- Q30-18B18
- Q31-18B18
- Q32-18B18
- Q33-18B18
- Q34-18B18
- Q35-18B18
- Q36-18B18
- Q37-18B18
- Q38-18B18
- Q39-18B18
- Q40-18B18
- Q41-18B18
- Q42-18B18
- Q43-18B18
- Q44-18B18
- Q45-18B18
- Q46-18B18
- Q47-18B18
- Q48-18B18
- Q49-18B18
- Q50-18B18
- Q51-18B18
- Q52-18B18
- Q53-18B18
- Q54-18B18
- Q55-18B18
- Q56-18B18
- Q57-18B18
- Q58-18B18
- Q59-18B18
- Q60-18B18
- Q61-18B18
- Q62-18B18
- Q63-18B18
- Q64-18B18
- Q65-18B18
- Q66-18B18
- Q67-18B18
- Q68-18B18
- Q69-18B18
- Q70-18B18
- Q71-18B18
- Q72-18B18
- Q73-18B18
- Q74-18B18
- Q75-18B18
- Q76-18B18
- Q77-18B18
- Q78-18B18
- Q79-18B18
- Q80-18B18
- Q81-18B18
- Q82-18B18
- Q83-18B18
- Q84-18B18
- Q85-18B18
- Q86-18B18
- Q87-18B18
- Q88-18B18
- Q89-18B18
- Q90-18B18
- Q91-18B18
- Q92-18B18
- Q93-18B18
- Q94-18B18
- Q95-18B18
- Q96-18B18
- Q97-18B18
- Q98-18B18
- Q99-18B18
- Q100-18B18

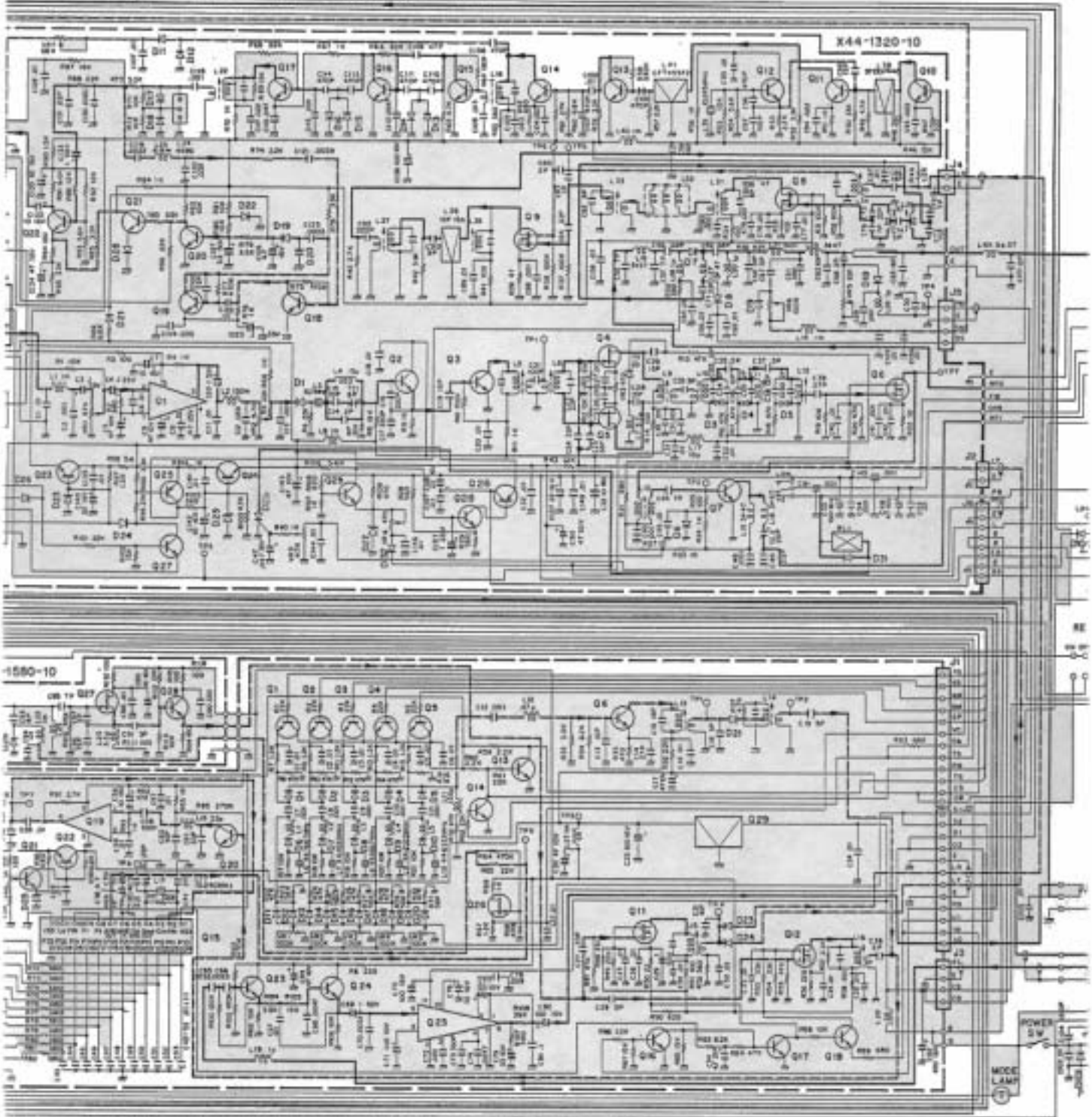


- Q1-18B18
- Q2-18B18
- Q3-18B18
- Q4-18B18
- Q5-18B18
- Q6-18B18
- Q7-18B18
- Q8-18B18
- Q9-18B18
- Q10-18B18
- Q11-18B18
- Q12-18B18
- Q13-18B18
- Q14-18B18
- Q15-18B18
- Q16-18B18
- Q17-18B18
- Q18-18B18
- Q19-18B18
- Q20-18B18
- Q21-18B18
- Q22-18B18
- Q23-18B18
- Q24-18B18
- Q25-18B18
- Q26-18B18
- Q27-18B18
- Q28-18B18
- Q29-18B18
- Q30-18B18
- Q31-18B18
- Q32-18B18
- Q33-18B18
- Q34-18B18
- Q35-18B18
- Q36-18B18
- Q37-18B18
- Q38-18B18
- Q39-18B18
- Q40-18B18
- Q41-18B18
- Q42-18B18
- Q43-18B18
- Q44-18B18
- Q45-18B18
- Q46-18B18
- Q47-18B18
- Q48-18B18
- Q49-18B18
- Q50-18B18
- Q51-18B18
- Q52-18B18
- Q53-18B18
- Q54-18B18
- Q55-18B18
- Q56-18B18
- Q57-18B18
- Q58-18B18
- Q59-18B18
- Q60-18B18
- Q61-18B18
- Q62-18B18
- Q63-18B18
- Q64-18B18
- Q65-18B18
- Q66-18B18
- Q67-18B18
- Q68-18B18
- Q69-18B18
- Q70-18B18
- Q71-18B18
- Q72-18B18
- Q73-18B18
- Q74-18B18
- Q75-18B18
- Q76-18B18
- Q77-18B18
- Q78-18B18
- Q79-18B18
- Q80-18B18
- Q81-18B18
- Q82-18B18
- Q83-18B18
- Q84-18B18
- Q85-18B18
- Q86-18B18
- Q87-18B18
- Q88-18B18
- Q89-18B18
- Q90-18B18
- Q91-18B18
- Q92-18B18
- Q93-18B18
- Q94-18B18
- Q95-18B18
- Q96-18B18
- Q97-18B18
- Q98-18B18
- Q99-18B18
- Q100-18B18



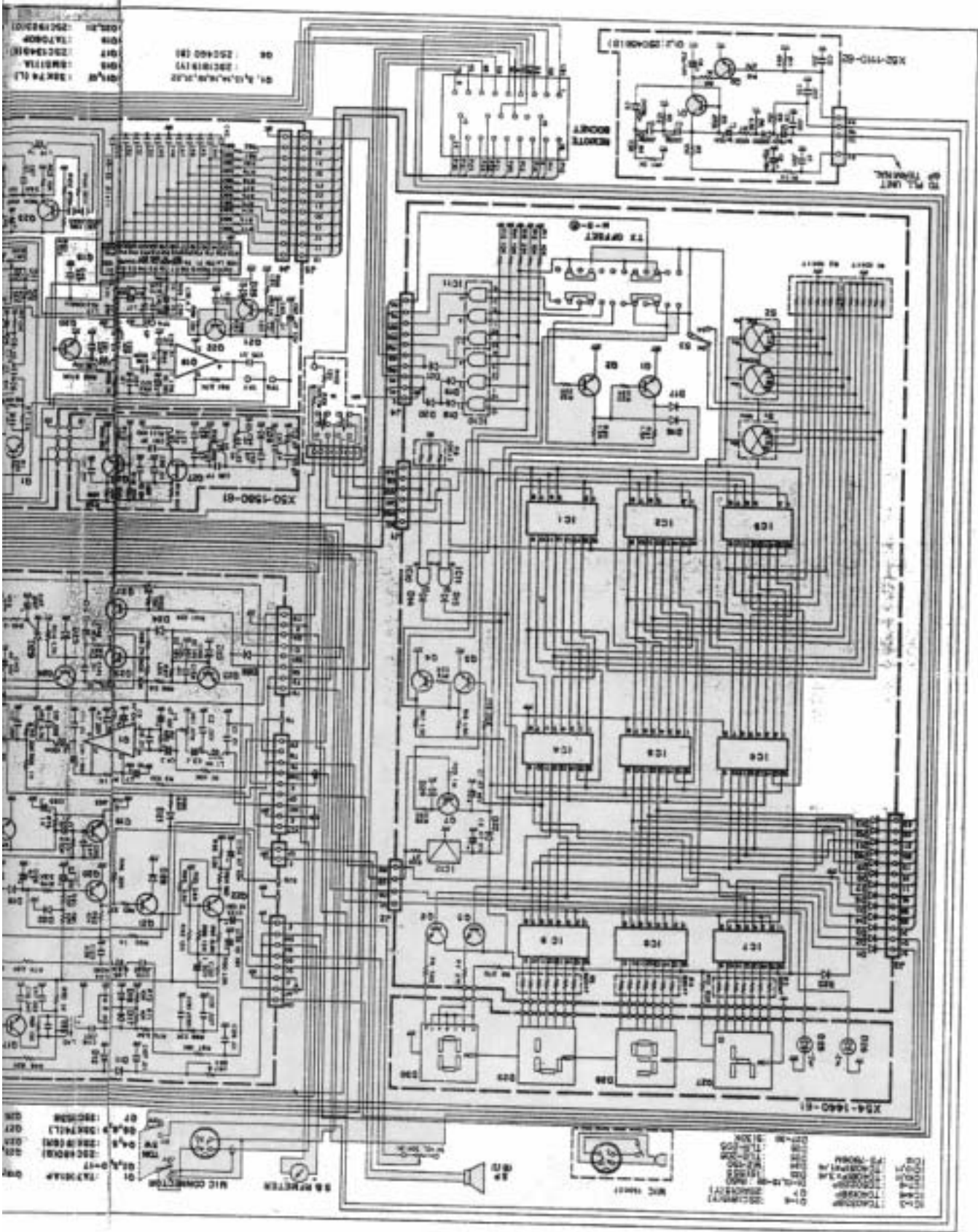
# K TYPE

MIC CONNECTOR	D1 :TAT961A	Q19-22, 24, 25	D1-5 : 1S2208	Q23 : KZ-086
SW	Q2, 3, 10-17 : 25C1815(Y)	Q23, 24 : 25C494(Y)	D6, 13-16, 21, 24, 25, 26, 31, 32 : 1S1555	Q24 : W2-100
	Q4, 5 : 25K460(B)	Q25 : 25A1015(Y)	D7 : 1M1402	Q27 : KZ-064
	Q6, 8, 9 : 25K74(L)	Q27 : 25C1959(Y)	D8 : 1S2588	Q29 : CROCAM-D1
	Q7 : 25C2530	Q28 : 25A494(Y)	D9, 11, 12, 17, 18, 19, 20 : 1N60	D10 : 1S916
		Q22 : 1S1210		



Q1-3, 4, 5 : 25C1815(Y)	Q18 : 5M511A	Q25 : 1N515	D1-5 : 1S2588	D23-24 : 1S2588
Q6 : 25C460(B)	Q17 : 25C1345(E)	Q26 : 25K30A1GR1	D6-10 : 1S1555	D25 : W2-040
	Q19 : TAT961A	Q27 : 25K19(GR)	D11-20 : 1S1555	D26 : 1S2208
	Q20, 28 : 25C192310	Q29 : 1PC76L08A	D21 : 1S216	





2-METER FM-Transceiver "Kenwood" TR-7625 SCHEMATIC