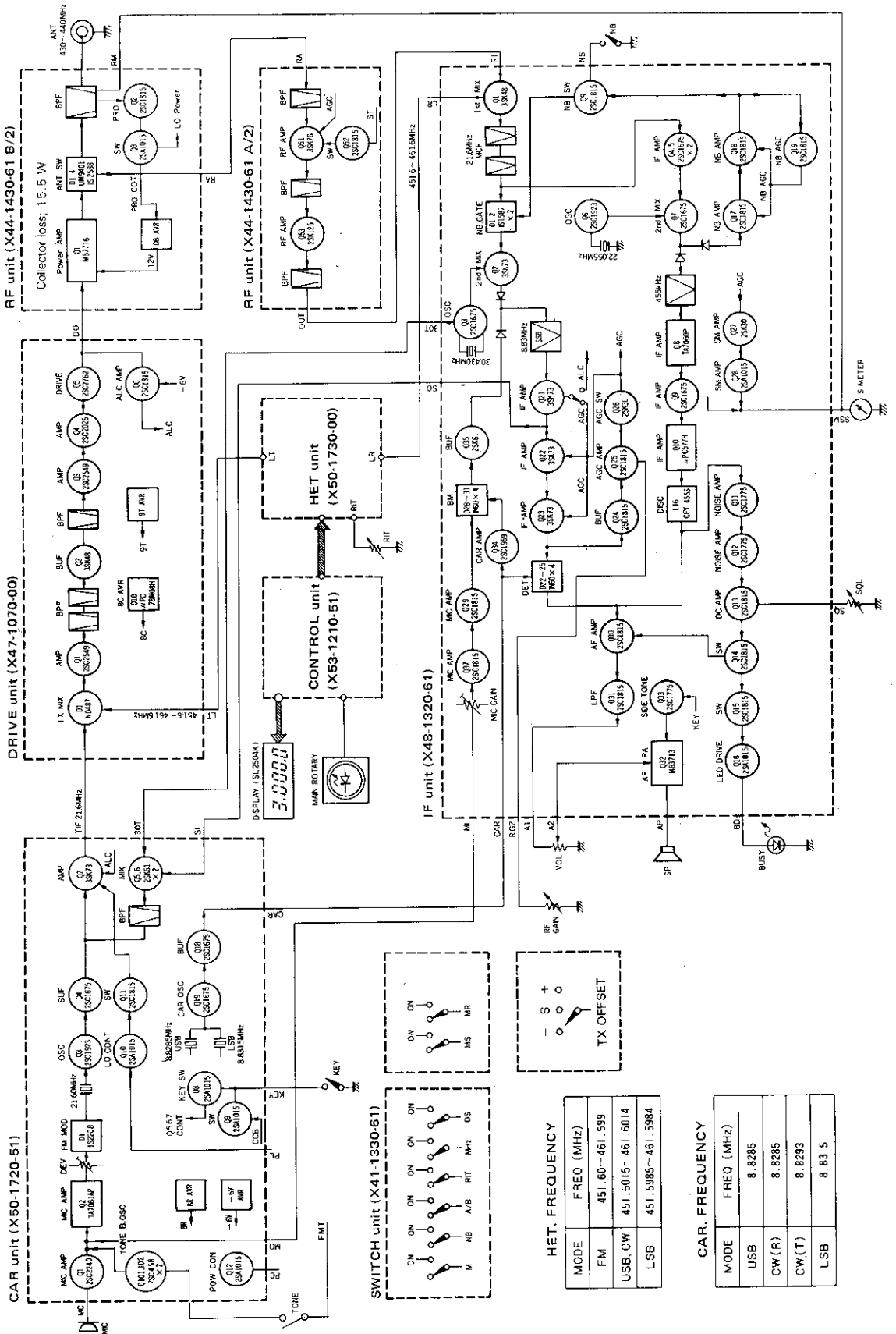


# BLOCK DIAGRAM



**HET. FREQUENCY**

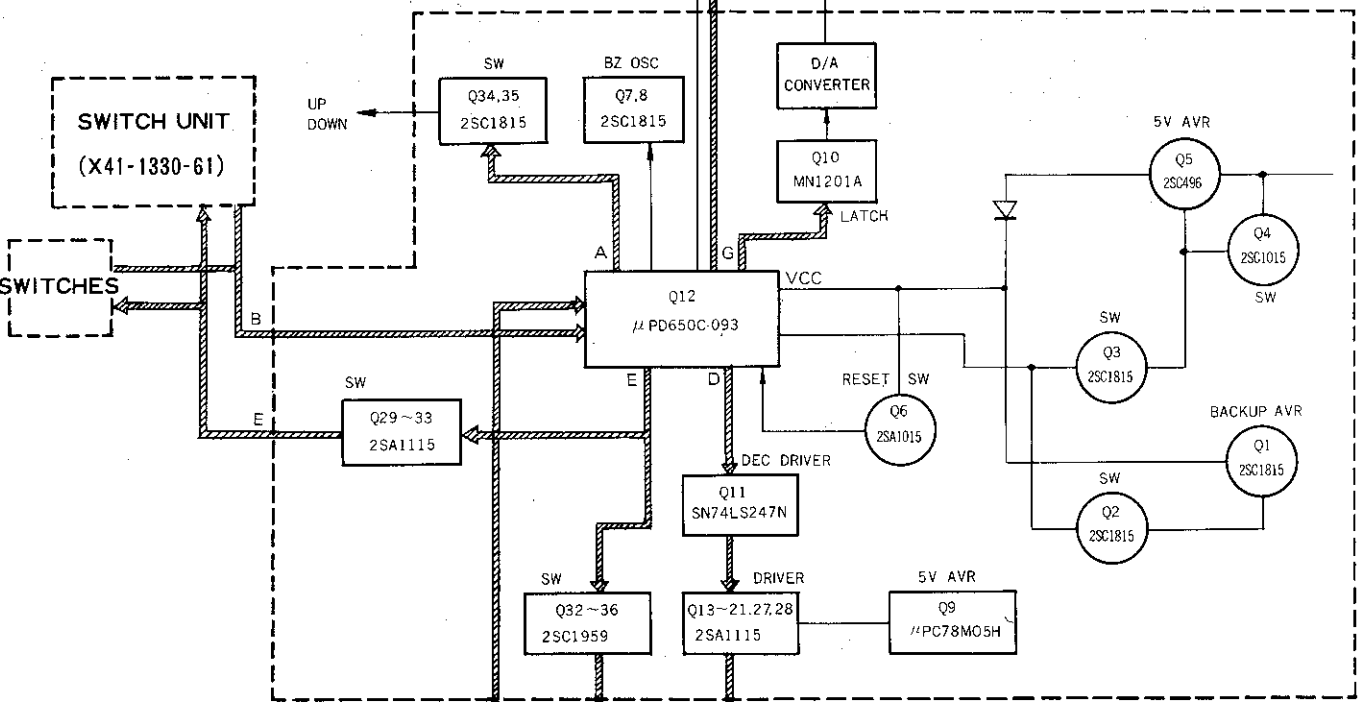
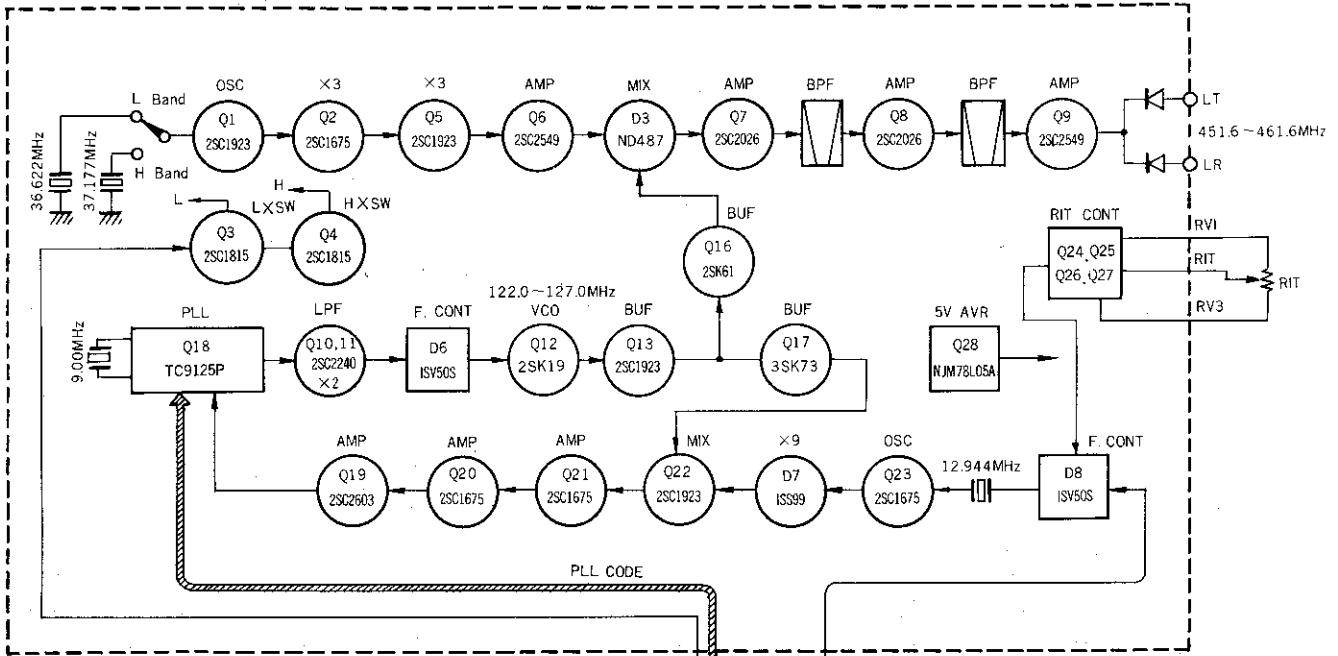
MODE	FREQO (MHZ)
FM	451.60-461.599
USB, CW	451.6015-461.6014
LSB	451.5985-461.5984

**CAR. FREQUENCY**

MODE	FREQO (MHZ)
USB	8.8285
CW (A)	8.8285
CW (T)	8.8293
LSB	8.8315

# BLOCK DIAGRAM

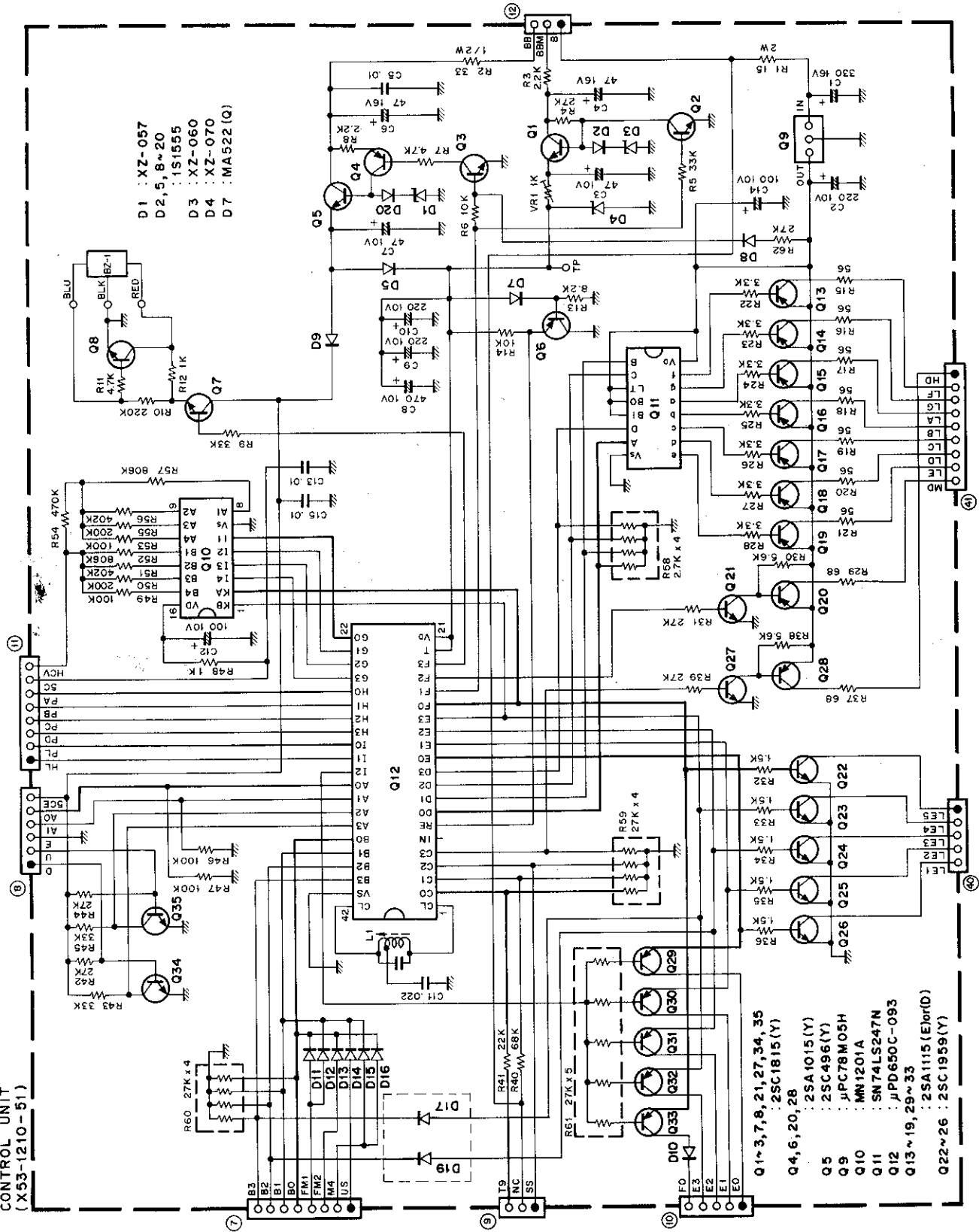
## HET UNIT (X50-1730-00)



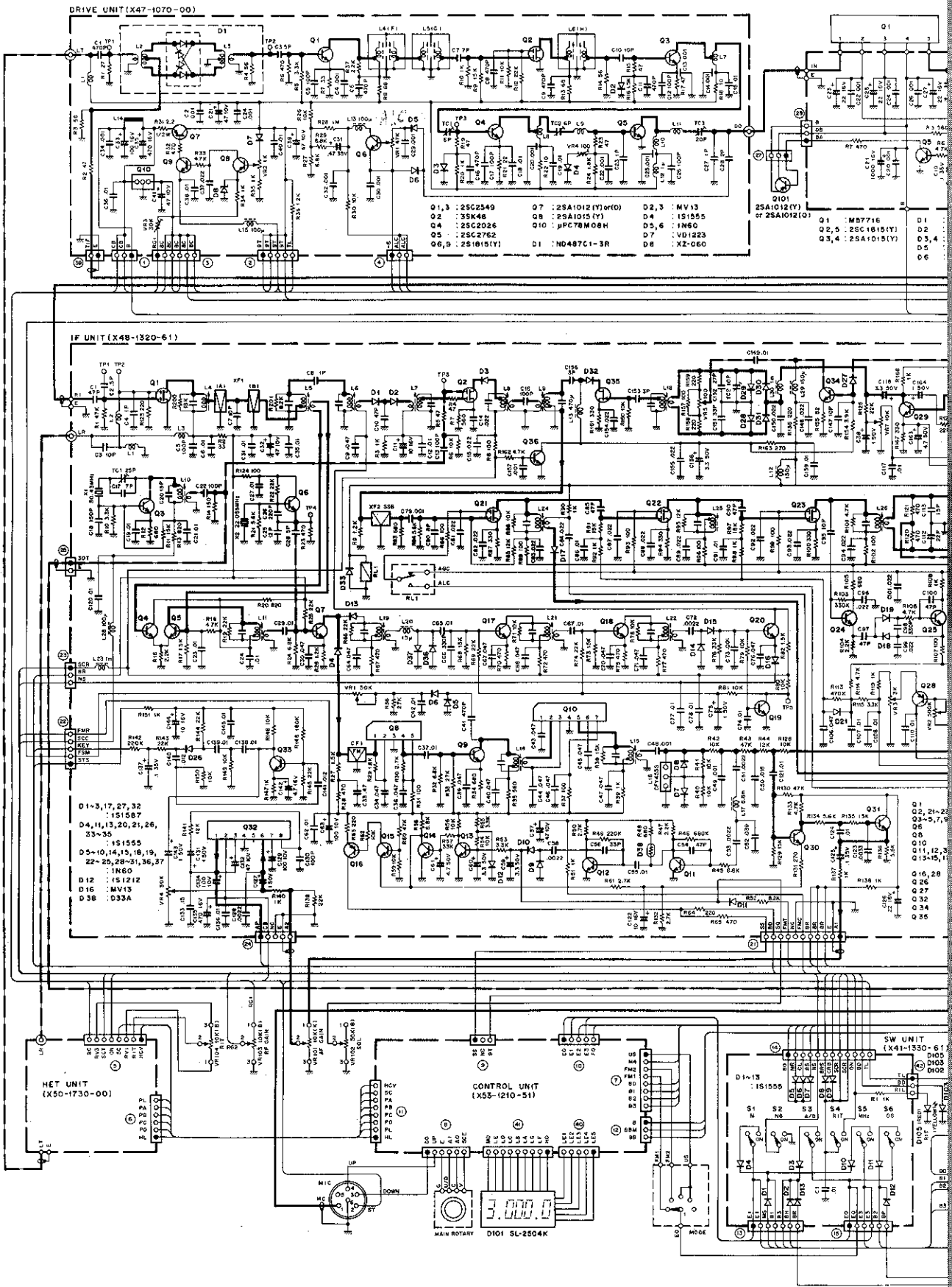
## CONTROL UNIT (X53-1210-51)

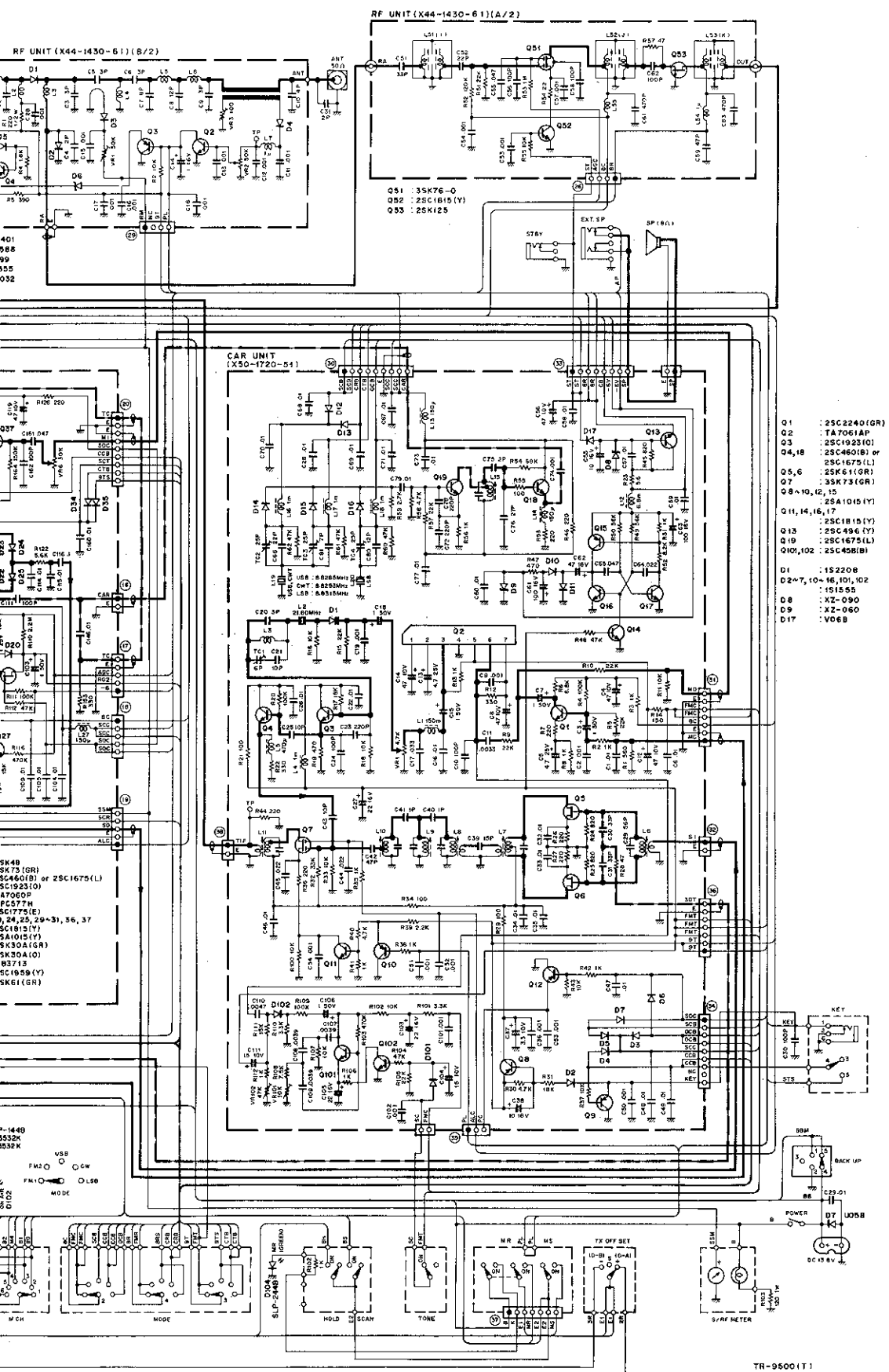


# SCHEMATIC DIAGRAM



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- Q1 : 2SC2240(GR)
- Q2 : TA7061AP
- Q3 : 2SC1923(O)
- Q3,18 : 2SC460(B) or 2SC1675(L)
- Q5,6 : 2SK61(GR)
- Q7 : 3SK73(GR)
- Q8-10,12,15 : 2SA1015(Y)
- Q11,14,16,17 : 2SC1815(Y)
- Q13 : 2SC486(T)
- Q10 : 2SC1675(L)
- Q101,102 : 2SC458(B)
- D1 : 1S220B
- D2-7,10-16,101,102 : 1S1555
- D8 : XZ-090
- D9 : XZ-060
- D17 : V068

TR-95001T1

# SPECIFICATIONS

## [General]

Semiconductors .....	ICs	12
	FETs	17
	Transistors	111
	Diodes	115
Frequency range .....	430.000.0 to 439.999.9 MHz	
Frequency synthesizer .....	Digital control, phase locked VCO	
Mode .....	SSB (A3J), FM (F3), CW (A1)	
Antenna impedance .....	50 ohms	
RPT. Tone burst frequency .....	1,750 Hz	
Power requirement .....	13.8 V DC $\pm$ 15%	
Grounding .....	Negative	
Operating temperature .....	-20°C to +50°C	
Current drain .....	0.7A in receive mode with no input signal 3.8A in transmit mode (Approx.) 2.0 mA for memory back up	
Dimensions .....	170 mm (6-11/16") wide 68 mm (2-11/16") high 241 mm (9-1/2") deep	
Weight .....	2.7 kg (5.94 lbs)	

## [Transmitter Section]

RF output power (at 13.8 V DC, 50 $\Omega$ load) .....	10 W	
Modulation .....	FM	Variable reactance direct shift
	SSB	Balanced modulation
Frequency tolerance .....	Less than $\pm 10 \times 10^{-6}$	
Spurious radiation .....	Less than -60 dB	
Carrier suppression .....	Better than 40 dB	
Unwanted side band suppression .....	Better than 40 dB	
Maximum frequency deviation (FM) .....	$\pm 5$ kHz	
Microphone .....	Dynamic microphone with PTT switch, 500 $\Omega$	

## [Receiver Section]

Circuitry .....	Double conversion superheterodyne	
Intermediate frequency .....	1st IF	21.6 MHz
	2nd IF	(FM) 455 kHz, (SSB/CW) 8.83 MHz
Receiver sensitivity .....	FM	Better than 0.5 $\mu$ V for 35 dB S/N Better than 0.25 $\mu$ V for 12 dB SINAD
	SSB, CW	Better than 0.5 $\mu$ V for 20 dB S/N
Receiver selectivity .....	FM	More than 14 kHz (-6 dB) Less than 20 kHz (-60 dB)
	SSB, CW	More than 2.4 kHz (-6 dB) Less than 4.8 kHz (-60 dB)
Spurious interference .....	Better than 60 dB	
Squelch sensitivity .....	0.2 $\mu$ V (Threshold)	
Auto scan stop level .....	Less than 0.2 $\mu$ V (Threshold)	
Audio output .....	More than 2.0 watts across 8 ohms load (10% dist.)	

Note: Circuit and ratings are subject to change without notice due to developments in technology.

# SV1BSX

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