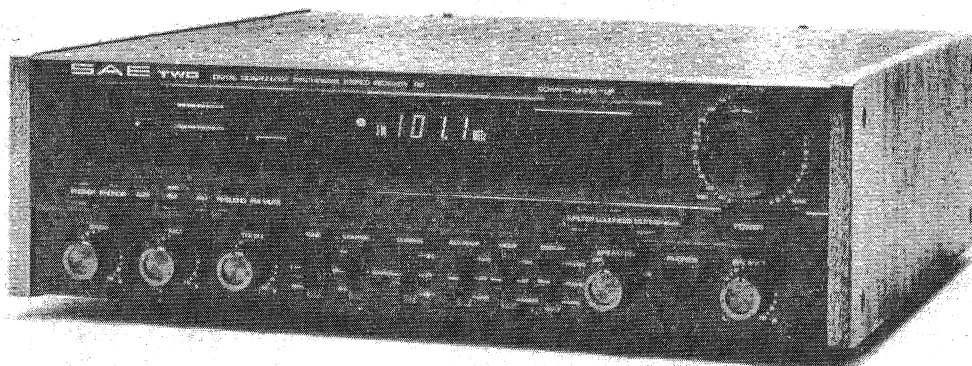


# SERVICE MANUAL

## R9, R9E

### Stereo Receiver

SAE TWO R9, R9E



**SAE**  
Scientific Audio Electronics, Inc.

MAIN OFFICE  
P.O. Box 60271, Terminal Annex, Los Angeles, Calif. 90060, TWX: SAE/LSA

## SPECIFICATIONS

### PRE/POWER AMP SECTION

Power — Minimum continuous RMS power per channel, both channels driven into 8 ohms from 20Hz to 20kHz and at rated distortion (WATTS) —	90
Total Harmonic Distortion — From 250mW to full rated power is less than (%) —	0.05
Intermodulation Distortion (SMPTE STD, 250mW to rated output) less than (%) —	0.05
Power Bandwidth (1kHz, 0.1% THD, 8 ohms)	10Hz—60kHz
Damping Factor (1kHz, 8 ohms)	40
Frequency Response (dB) Phono MM (RIAA STD)	±0.5
AUX, Tape, Ext Pros (20Hz—20kHz)	±0.5
(5Hz—100kHz)	±0.5/—3
Signal to Noise Ratio (IHF-A, d3) Phono MM (5mV, IHF Load)	74
(10mV, Shorted)	86
Aux, Tun, Tape (1 watt output)	78
(Rated Output)	95
Residual Noise (IHF-A, mV)	1.5
Input Sensitivity (1W/Rated Output/Impedance) Phono MM (mV/mV/ohms)	0.13/2.5/47K
Aux, Tape, Ext Pros, Tuner (mV/mV/ohms)	7.7/150/50K
Output Level — Tape Out, Ext. Pros. (mV)	150
Maximum Input Level Phono MM (mV)	200
Aux, Tape, Ext Pros, Tuner (V)	4
Tone Control (dB/Hz) — Bass	±10/100
Mid	±10/1K
Treble	±10/10K
Filter	6dB/octave
@ 30Hz	—3dB
Loudness Compensation (Level — 30dB)	+6dB @ 10kHz
	+8dB @ 100Hz
Audio Muting	—20dB
Volume Tracking Error (0—70dB)	±1.5dB

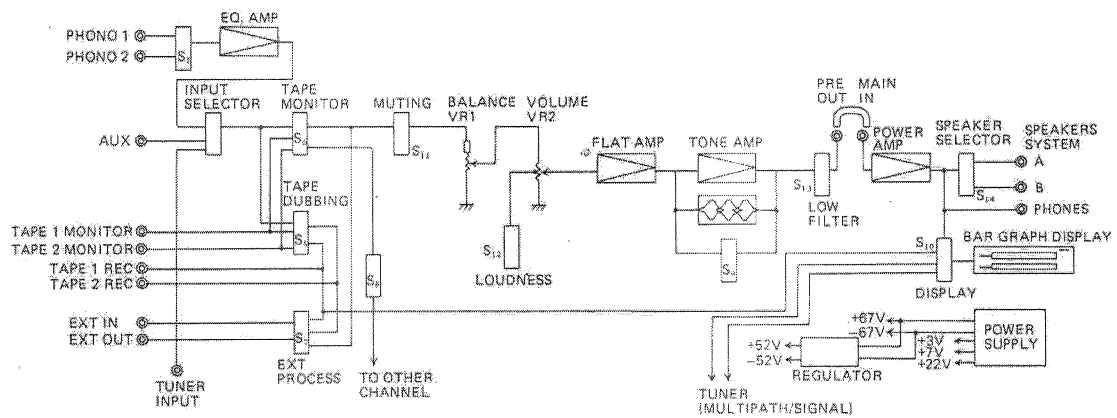
### TUNER SECTION

Usable IHF Sensitivity Mono (μV/dBf)	1.8/10.3
Stereo (μV/dBf)	4/17.3
50dB Quieting Sensitivity Mono (μV/dBf)	4/17.3
Stereo (μV/dBf)	35/36.1
Signal to Noise Ratio (IHF) Mono (dB)	74
Stereo (dB)	65
Image Rejection Ratio (dB)	78
Spurious Response Ratio (dB)	85
IF Rejection Ratio (dB)	85
AM Suppression (dB)	55
Capture Ratio (dB)	1.5
Alternate Channel Selectivity (dB)	65
Harmonic Distortion Mono 100Hz (%)	0.1
1kHz (%)	0.1
7.5kHz (%)	0.3
Stereo 100Hz (%)	0.22
1kHz (%)	0.22
7.5kHz (%)	0.35
Stereo Separation 50Hz	42
1kHz	45
10kHz	40
Frequency Response 30—15kHz	+1dB — 2dB
Muting Sensitivity (μV)	15
Subcarrier Suppression	65
Output Level (mV)	150
AM Section Usable Sensitivity (μV)	20
Selectivity (dB)	30
Signal to Noise Ratio (dB)	42
Harmonic Distortion (%)	0.5
Image Rejection Ratio (dB)	45
IF Rejection Ratio (dB)	40
Output Level (mV)	150
H (in/mm)	5.25/147
W (in/mm)	18.25/464
D (in/mm)	17.6/448
W (lbs/kg)	35/16

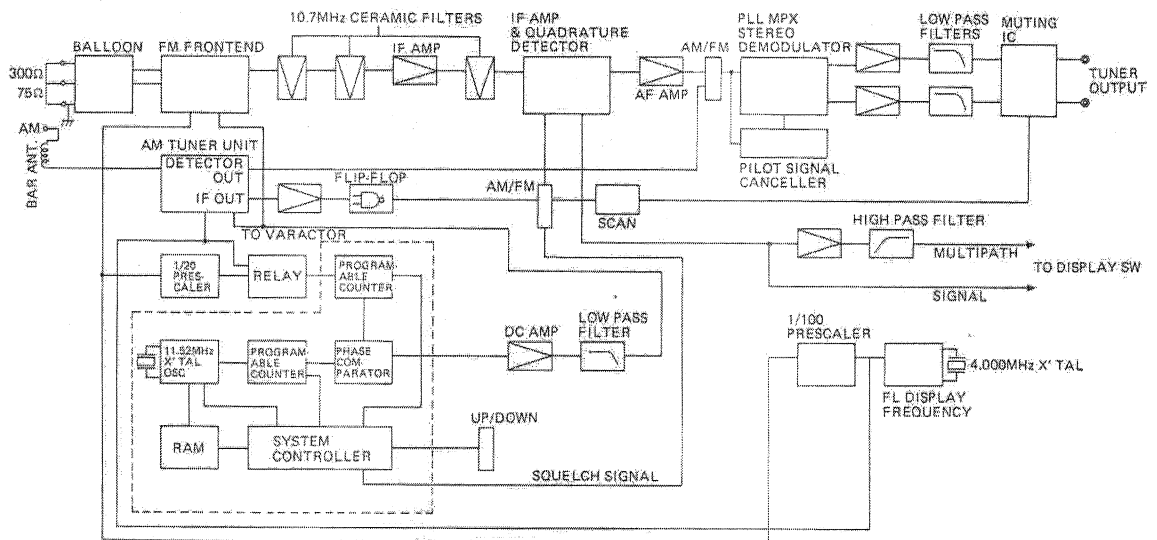
Product specifications are subject to change without notice. SAE TWO carries a three-year limited warranty, one-year limited warranty on cassette deck transport (U.S.A. only). All receivers and integrated amps include relay speaker and thermal protection.

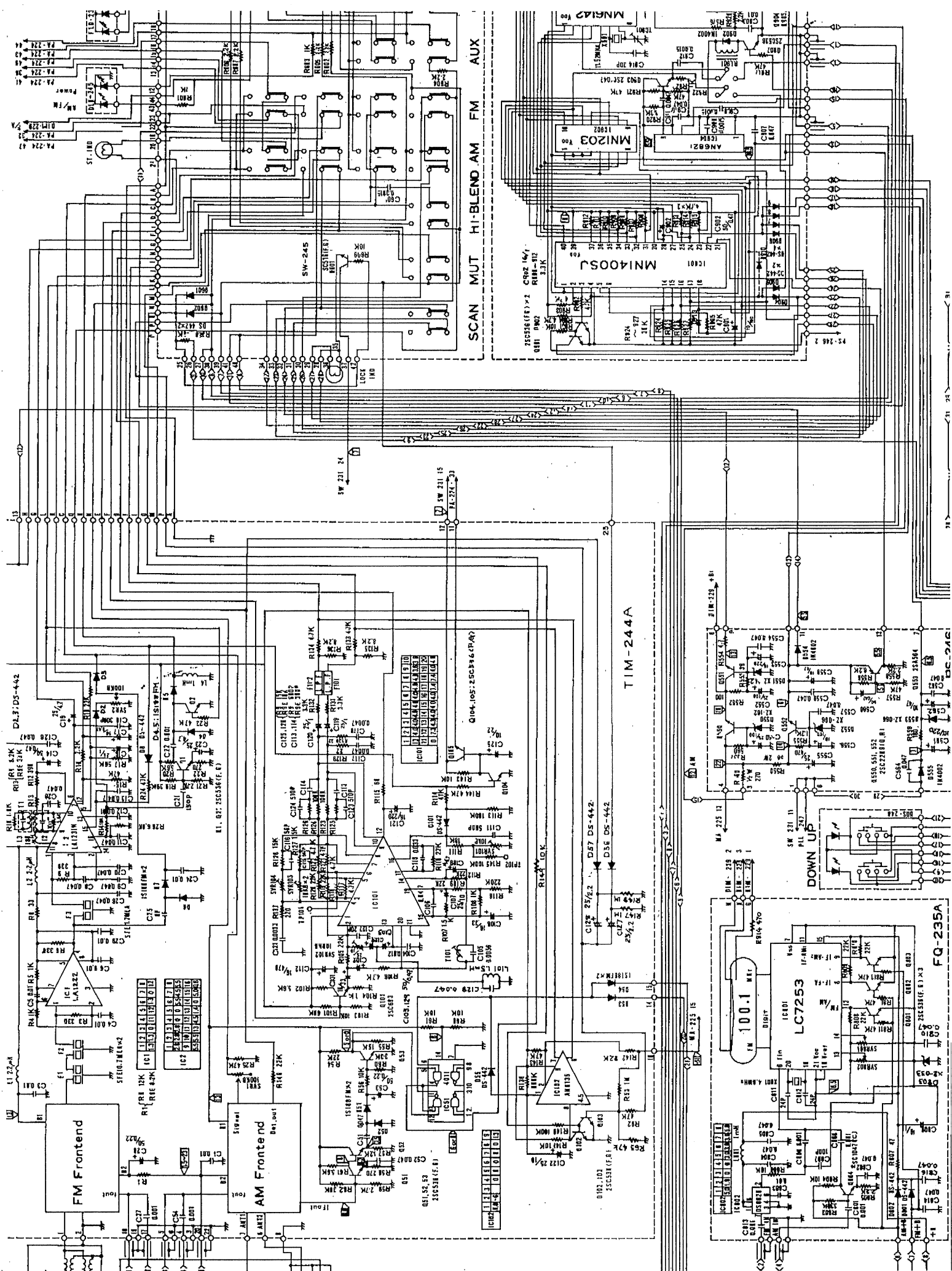
## BLOCK DIAGRAM

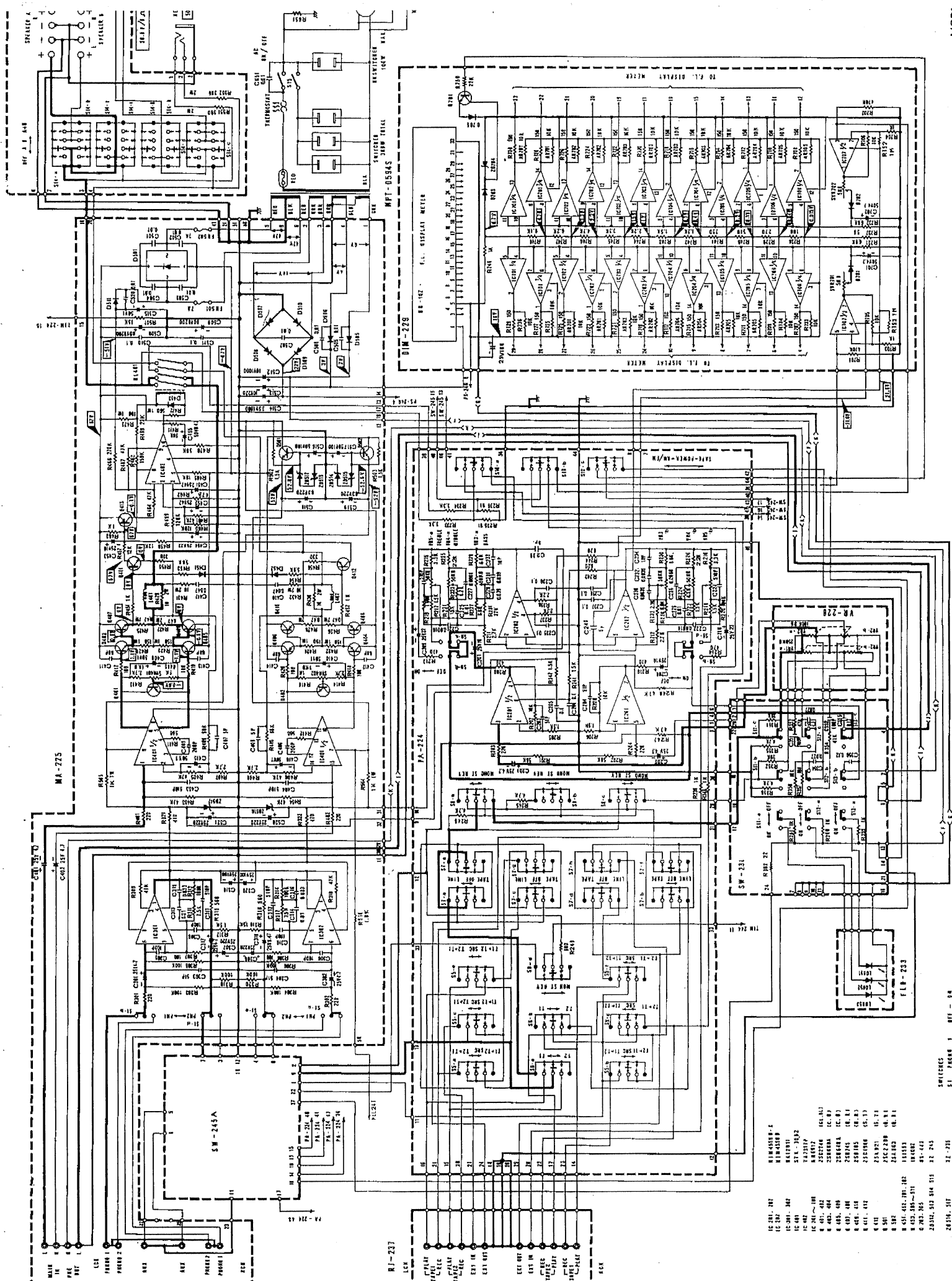
### AMP SECTION



### TUNER SECTION







SW-245A  
MA-225  
TA-224  
DM-228  
SW-231  
SW-233

1000

