

**INSTALLATIONS
AND
OPERATING MANUAL**

TRIO

**AM-FM STEREO MULTIPLEX
TUNER**

MODEL KW-100G



**AMERICAN GENERAL SUPPLY
OF CANADA, LTD.**

INTRODUCTION

The TRIO KW-100G is a beautifully engineered, sensitive AM-FM stereo multiplex tuner. The extra wide band of the tuner and the special

circuit incorporated within the multiplex circuitry ensure the finest possible FM stereo multiplex broadcast with optimum separation.

SPECIAL FEATURES

1. The exclusive Stereo Monitor gives instant audible indication that the station is broadcasting in stereo.
2. The 3-gang variable condenser allows highly sensitive AM and FM reception.
3. The dual limiter enables you to enjoy noise-free FM multiplex stereophonic broadcasts.
4. The exclusive multiplex circuit completely eliminates subcarrier leakage, thereby permitting you to make tape recording without the beat noise problems.
5. The built-in stereo noise filter provides noise-free reception even in fringe areas.
6. The unit is equipped with tape recording terminals as well as output terminals.

INSTALLATION

The KW-100G is provided with a metal case so it can be immediately put into operation with safety on table top or shelf. Although there is sufficient self-ventilation, do not place books or other objects on top of the tuner as they will restrict normal ventilation.

The KW-100G can be installed in conventional cabinets or in any custom built installations by cutting an opening as shown on the template. In the installation of this type, the metal case should be removed and sufficient space should be allowed between the bottom plate and the mounting plate to permit normal circulation of air.

ELECTRICAL CONNECTIONS

POWER

Plug the AC line cord into an outlet furnishing 110 to 120 volts AC, 50-60 cps.

AM ANTENNA

The ferrite loopstick built into the KW-100G assures adequate reception of all local AM stations. However, in fringe and high noise areas and where surrounding metal objects interfere with normal reception, a regular antenna lead should be connected to the terminal designated AM.

Note: The ferrite loopstick is mounted on a swivel bracket and to obtain maximum pickup, the loopstick should be swung away from the chassis.

FM ANTENNA

Two terminals are provided for connection to a 300 ohm FM antenna as shown on the diagram on page 3.

For good FM stereo reception, always use the best antenna possible. In areas close to transmitter, a simple indoor dipole antenna may suffice. It should be remembered, however, that the pick-up of reflections (similar to "ghosts" on TV) will result in poor stereo reception. These reflections must therefore be reduced to a mini-

mum, either by careful orientation of the indoor antenna or, if this will not eliminate them, by using a more directional outdoor type antenna.

In areas further from the transmitter, the use of an outdoor antenna is highly recommended. These are available in various type. For reception of stations scattered in many directions, a non-directional type may be required. If the desired stations lie mostly in one direction, a highly directional type of antenna will provide better results. When using a directional antenna, always orient it for best reception of the desired station. The correct position will be indicated by maximum deflection of the tuning meter on the tuner.

OUTPUT

A shielded cable should be used to connect the unit to the TUNER or AUX terminals of an amplifier. It has two output terminals, one for the right (R or B) amplifier input connection and the other for the left (L or A) amplifier input connection.

TAPE REC

The TAPE REC terminals are provided for direct connections to the tape recorder. The connections should be made with a shielded cable.

CONTROLS AND THEIR FUNCTIONS

POWER

Turning the switch to ON will put the unit into operation.

SELECTOR

This switch selects the program source. The following describes each functions:

- a. AM — Selections for AM stations.
- b. FM — Provides monophonic FM broadcast stations at both left and right channel output jacks.
- c. STEREO MONITOR — With the selection at this position, any station becoming audible by turning the tuning knob is FM multiplex stereo broadcast and to listen to the station of your choice in true stereophonic brilliance merely turn the selector switch to FM STEREO position.
- d. FM STEREO — In this position, special multiplex circuitry is in operation to produce stereophonic reception through the left and right channels.

NOISE FILTER

This switch inserts a filter into the circuit and effectively reduces the high frequency noise.

FM AFC

An effective AFC (Automatic Frequency Control) circuit is incorporated in the unit which ensures proper tuning even if the manual tuning has not been accurately carried out. By turning on the AFC switch to ON, it will automatically lock-in the station for best possible reception when the dial setting is close to the desired station. In addition, AFC will counteract any tendency of station drifting away from the frequency you have tuned to, and thus prevent the need of manual re-tuning. To fully understand

the function of the AFC circuit, set the AFC switch to OFF and tune in a strong FM station. The middle clear sounding point is the proper tuning position. Notice the distortion and noise which exists on either side of this point. Tune to one of these points of distorted sound and then set the switch to ON. You will notice the sound clears up and that the tuning meter will automatically by the operation of the AFC circuit, restores the tuning electronically to the center of the station channel. However, AFC should not be used to compensate for inaccurate or hurried tuning. Station selection must be carried out with the AFC switch in its OFF position, carefully tuning for its peak reception by the use of the tuning meter. Thereafter, AFC may be applied to counteract any slight drift that might occur.

Certain conditions may prevail, however, which make the use of AFC undesirable. For example, applying AFC when tuning in a weak station which is adjacent to a strong one may cause the tuning to be pulled toward the stronger station. For optimum reception of a weak station which is adjacent to a strong one, the AFC switch should be left in the OFF position.

TUNING

Tuning for either AM or FM stations is carried out with the single control designated TUNING.

TUNING METER

The tuning meter shows maximum deflection at a tuning point. Station selection must be carried out with the selector switch in the FM position, carefully tuning for maximum deflection of the tuning meter. Thereafter, set the FM AFC switch to ON. Tuning for AM is carried out also by observing maximum deflection of the tuning meter.

OPERATION

AM OPERATION

With the selector switch in AM position, turn the tuning knob to the desired station. Maximum deflection of the tuning meter shows the tuning point for optimum reception.

FM MONAURAL OPERATION

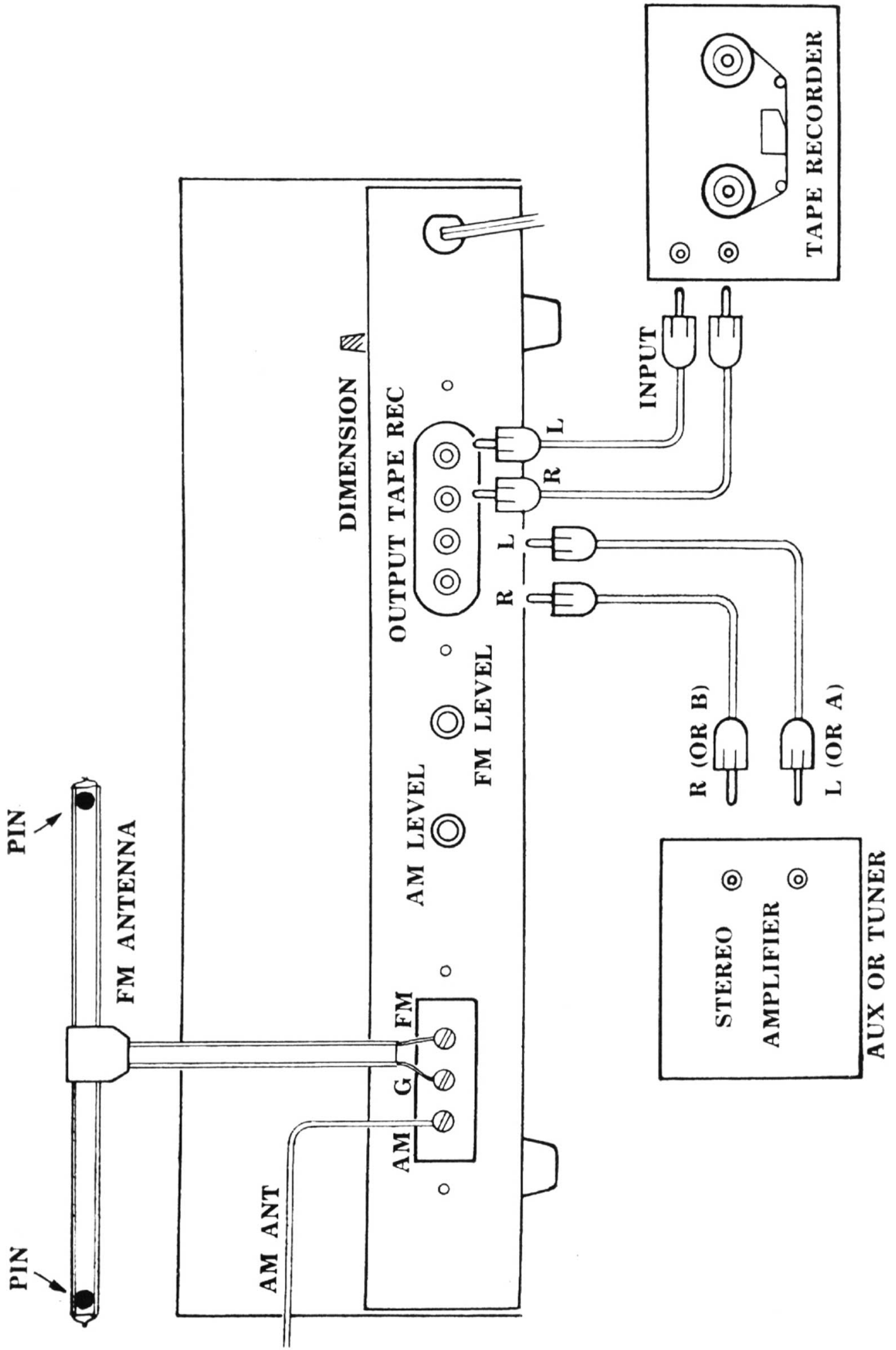
The initial tuning should be carried out with the selector in FM position. Maximum deflec-

tion of the tuning meter shows the tuning point for optimum reception.

FM STEREO OPERATION

Set SELECTOR switch to STEREO MONITOR. While turning the TUNING knob, those stations that become audible while in this position are broadcasting FM stereo. Then turn the SELECTOR switch to FM STEREO.

INTERCONNECTING DIAGRAM



SPECIFICATIONS

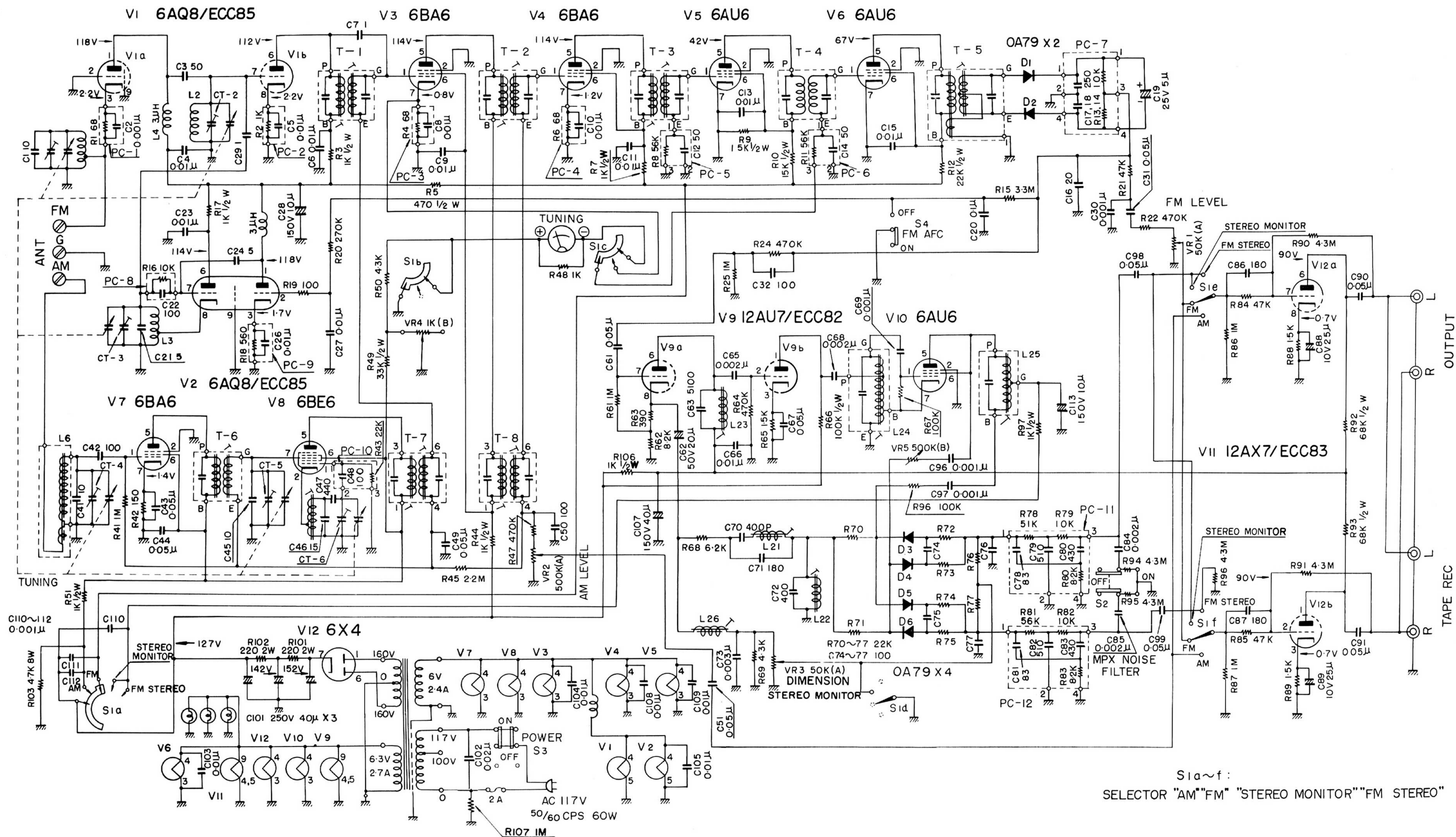
Tubes & Diodes Used:	12 tubes & 6 diodes, 6BA6 x 3, 6BE6 x 1, 6AU6 x 3, 6AQ8 x 2, 12AX7 x 1, 12AU7 x 1, 6X4 x 1 Germanium diodes x 6
Frequency Range:	FM ; 88 — 108 MC AM ; 535 — 1605 KC
Sensitivity:	FM ; 1.9 μ V/98 MC (Input required for S/N 20 dB at 400 cps 22.5 KC deviation) AM ; 2 μ V/1000 KC (Input required for S/N 10 dB 400 cps 30% modulation)
Output Voltage:	FM ; 2V (at 400 cps 75 KC deviation) FM STEREO ; 2V (at 400 cps 67.5 KC deviation) AM ; 3V (at 400 cps 30% modulation)
Frequency Response:	FM ; 20 — 20,000 cps (Less than 1/2 dB) FM STEREO ; 50 — 15000 cps (Less than 1/2 dB)
FM STEREO Separation:	More than 38 dB (400 c/s)
Harmonic Distortion:	FM ; Less than 1% (400 c/s) FM STEREO ; Less than 1% (400 c/s)
MPX Noise Filter:	- 7 dB at 10,000 cps
Special Circuit:	FM AFC, MPX NOISE FILTER, FM SUB
Power Consumption:	60 Watts
Power Requirement:	117V AC 50/60 cps
Dimension:	Width 14 ³ / ₄ " , Height 5" , Depth 9 ⁵ / ₈ "
Weight:	14 Lbs.

M E M O

(A)

SCHEMATIC DIAGRAM

(B)



S1a~f: SELECTOR "AM" "FM" "STEREO MONITOR" "FM STEREO"

TRIO

Manufactured by TRIO CORPORATION, TOKYO, JAPAN.