



# 16-WATT SOLID STATE STEREO Hi-Fi AMPLIFIER

MODEL SAQ-307

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INSTALLATION AND OPERATING MANUAL

## FEATURES

1. All silicon-transistorized quasi-complementary symmetry output circuit assures high output with low distortion.
2. Specifications to meet the standard of DIN Hi-Fi 45500 TECHNIQUE FOR AMPLIFIER.
3. Easy-to-operate slide tone control (BASS, TREBLE), flip lever scratch filter, loudness and Mono-Stereo switch.
4. Deluxe and elegant design with rosewood-grain thin profile cabinet plus well contrasted black and silver brushed panel.

\* **Improved!!**

With upgraded data     2×8W rms

Surpassing GERMAN DIN Hi-Fi 45500

# COMPONENTS AND OPERATION

## FRONT PANEL CONTROLS and SWITCHES

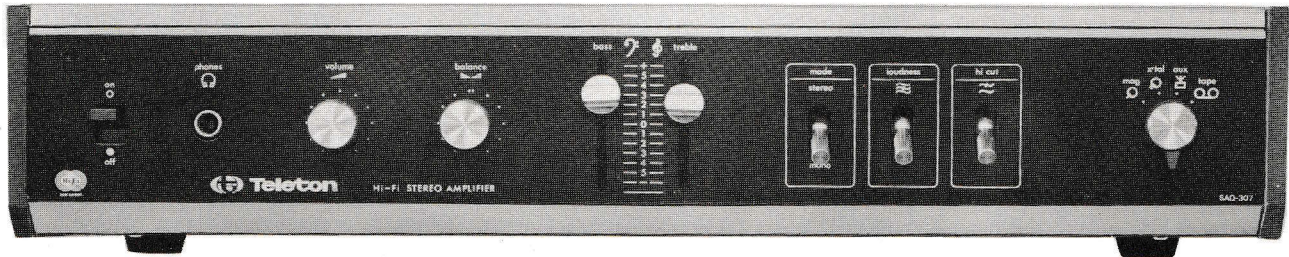


FIGURE 1

1. POWER SWITCH:

Turn the lever upwards, and the amplifier SAQ-307 is energized and the red pilot lamp lights.

2. HEADPHONE JACK:

Insert the stereo-headphone plug into this jack, and stereo-sound can be enjoyed through the headphone only with the speaker sound switched off.

3. VOLUME CONTROL:

Controls right and left volume simultaneously.

4. BALANCE CONTROL:

Turn this control counter-clockwise, and the left volume increases. Turn it clockwise, and the right volume increases. Turn this control to the right and left until the volume is balanced. (Normally though, this control should be at the middle position).

5. BASS CONTROL:

Controls the low frequencies. Slide this control upwards, and bass is emphasized. Slide it downwards; bass is deemphasized.

6. TREBLE CONTROL:

Controls the high frequencies. Slide this control upwards, and treble is emphasized. Slide it downwards; treble is deemphasized.

7. SELECTOR:

Selects each source;

- MAG ..... Magnetic cartridge (50 K $\Omega$  imped.)
- X'tal ..... X'tal or ceramic cartridge (600 K $\Omega$  imped.)
- AUX ..... Tuner, etc. (100 K $\Omega$  imped.)
- TAPE ..... Tape recorder (100 K $\Omega$  imped.)

8. MODE SWITCH:

This switch enables you to select STEREO or MONO mode. Turn this switch to STEREO position when the sound source is stereo and turn it to MONO position when the source is monaural.

9. LOUDNESS SWITCH:

At low volume levels, the response of the ear to both bass and treble is reduced according to the human's auditory characteristics and it becomes pretty difficult to hear both bass and treble. Turning this switch on makes that both bass and trebles are raised to compensate this particular effect. However, if the volume control is turned clockwise over its mid-point, the tone is "balanced" without this compensation, and the loudness switch will become ineffective.

10. SCRATCH FILTER SWITCH:

Turning this switch on eliminates the annoying hiss and noise and assures a "soft" tone when listening to old discs or tapes with low S/N ratios.

# REAR PANEL CONNECTIONS

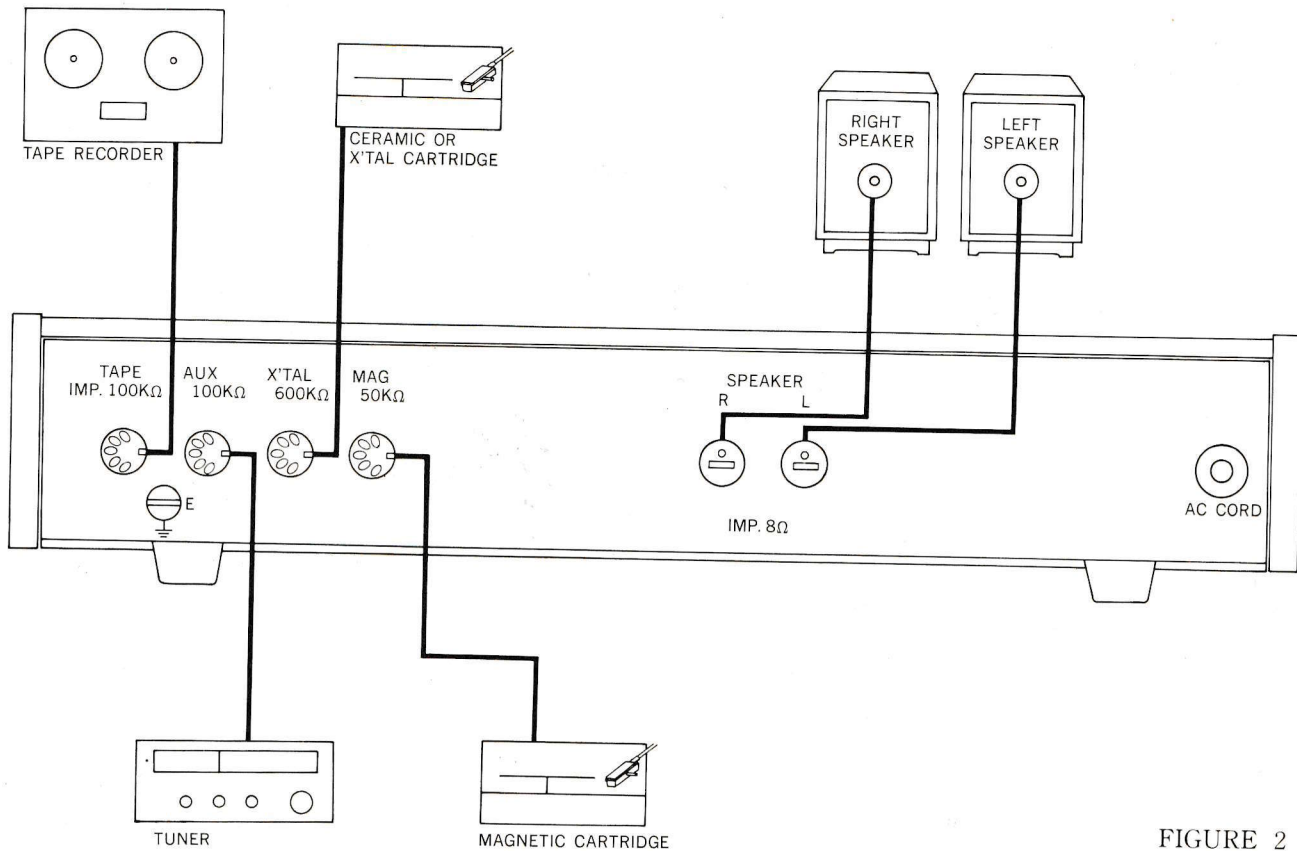


FIGURE 2

1. MAG:      Magnetic cartridge input jack  
              RIAA curve compensation  
              Input impedance:        50 k $\Omega$   
              Input sensitivity:       3 mV (to reach full output power)
  
2. X'tal:     X'tal or Ceramic cartridge input jack  
              Input impedance:       600 k $\Omega$   
              Input sensitivity:      130 mV
  
3. AUX:      Tuner and other external input jack  
              Input impedance:       100 k $\Omega$   
              Input sensitivity:      200 mV
  
4. TAPE:     Input/output jack for recording and play back of tape recordings.
  
5. SPEAKER L, R:   Jacks for connecting speakers      8  $\Omega$   
              L:    Left channel  
              R:    Right channel

## **VOLTAGE SWITCHING**

The power voltages are switchable for 115V ~ or 230V ~ 50Hz. The voltage can be switched by the internal selector switch. Contact a representative nearby. Have a serviceman do this adjustment for your voltage.

## **PROTECTIVE FUSE**

### **AC INPUT FUSE**

A fuse is provided in the AC primary of the power transformer to prevent damage to the components due to excessive current drain that would result from a serious malfunction in the unit. This fuse, which has a value of 700 mA, is located inside the amplifier. Blowing of this fuse will also cause the dial lights to go out.

### **POWER TRANSISTOR FUSE (1.5 A)**

Fuses are mounted for protecting the output transistors of each channel. In case the speaker output terminals are shorted, the fuses will blow. Contact a serviceman nearby if the fuses are blown, as there may be other damages.

## **SIMPLE TROUBLE-SHOOTING**

If any trouble is encountered with your Amplifier, we recommend that you do the following simple checking yourselves:

1. Make sure the Amplifier is plugged into the correct power source (105 – 125 or 210 – 250 volts, 50/60Hz AC). Check the power indicator lamp of the amplifier. If this is not on, the main AC fuse may have failed. When replacing this fuse with one of the same correct rating, be sure to see that the voltage selector is set to the correct power voltage position.

2. Check for possible error in control or switch settings (See "QUICK GUIDE TO OPERATING YOUR AMPLIFIER"). Make sure the SELECTOR switch is correctly set to provide the type of operation you wish.
3. If the trouble was experienced during the initial operation of the Amplifier, check that all speaker plugs are properly inserted, and not internally shorted.
4. Check to make sure that your program source is not at fault if you are using a record player (CERAMIC or CRYSTAL). Make sure that the speakers are not faulty either.
5. Check the connecting cables themselves for any intermittent "open" or "shorts" condition.

IMPORTANT: When checking the cables, make sure that the Volume control is at minimum or that the Amplifier is switched off.

## PERFORMANCE SPECIFICATIONS

○ Power output total	16W RMS 1% distortion (8Ω) 2×8W rms
○ Damping Factor	Approximately 25 (8Ω)
○ Frequency response	20 ~ 20,000 Hz
○ Intermodulation Distortion	≪1% (250 Hz: 8,000 Hz 4 : 1) <0.8%
○ Sensitivity & Input impedance	Phono MAG 3mV 50kΩ Phono X'Tal 130mV 600kΩ AUX 200mV 100kΩ TAPE 235mV 100kΩ



- Hum & Noise at Max. Vol, B/T       $\ll 20$  mV (-52 db)
- Tone control action
  - 100Hz Boost      :      +13db
  - Cut        :      -10db
  - 10kHz Boost     :      +10db
  - Cut        :      -10db
- Recording output
  - Output             45mV
  - Output impedance 47k $\Omega$
- Transistor
  - 18 silicon transistors
  - 2 silicon diodes
- Controls
  - Volume
  - Balance (slide type)
  - Bass (slide type)
  - Treble (slide type)
  - Mode switch (MONO-STEREO)
  - Loudness switch
  - Scratch filter switch
  - Function selector
- Power requirements
  - or 105 - 125 V  $\sim$  50/60 Hz
  - 210 - 250 V  $\sim$  50/60 Hz
  - 50 W Max.
- Dimensions
  - W 390mm  $\times$  D 230mm  $\times$  H 81mm
- Net weight
  - 3.4 kg



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