

# PREAMPLIFIER

## MODEL NO. SA-C22K

- OPERATING INSTRUCTIONS

---

# AIWA<sup>®</sup>

## FEATURES

- **RIAA deviation of only  $\pm 0.2$  dB (20 Hz to 20 kHz) and a phono S/N of 80 dB**

Low-noise transistors are featured in the first stage and these are combined with high gain ICs to reduce the noise and improve the stability of the preamplifier. Carefully selected polypropylene capacitors and high-precision metal-film resistors are used as the RIAA elements for an RIAA deviation of less than  $\pm 0.2$  dB over a frequency range of 20 Hz to 20 kHz, thereby yielding an extremely accurate frequency response. The maximum rated input is 200 mV (at 1 kHz) assuring ample margin for the input signals.

- **Two power supplies (plus and minus) with high-performance differential amplifier ICs**  
A plus/minus dual power supply design is used for the high-performance differential amplifier ICs in the amplifier circuit. This allows a faithful amplification of the signals with a minimum of distortion.

- **No switch contacts in the input selector circuit**

The signals supplied from the input pin jacks do not pass through mechanical switches but instead are selected by analog switches which are rationally positioned. This configuration helps obviate the need for shield wires required by the switch positions and also safeguards against the generation of noise from the switch contacts. The function selectors are operated by soft fingertip control for easy selection of the input and reliable operation.

- **Muting relay to suppress the "pop" noise accompanying on/off power switching operations**

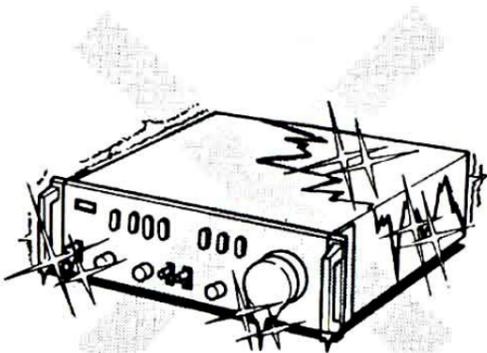
A muting circuit which is a combination of a time constant circuit and a reed relay is used to safeguard against the transient noise generated when the power switch is turned on and off. When this switch is turned on, the actuation of the relay is delayed and the output signal is supplied only after its operation has stabilized. When the switch is turned off, the relay is immediately set to off and noise is suppressed.

## OPERATION PRECAUTIONS

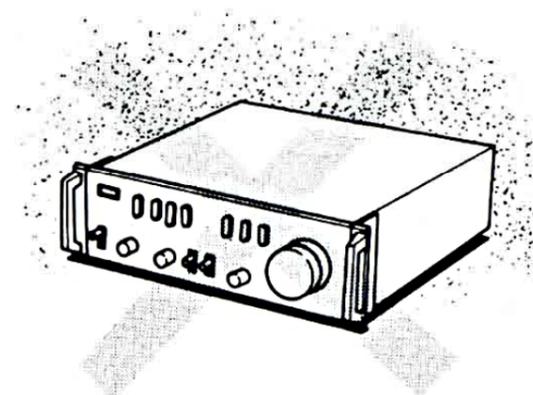
Following the instructions will allow the preamplifier to make the most of its performance and ensure many long years of use.

Bear in mind the following suggestions:

1. Use or storage in extremely cold locations may impair its performance.

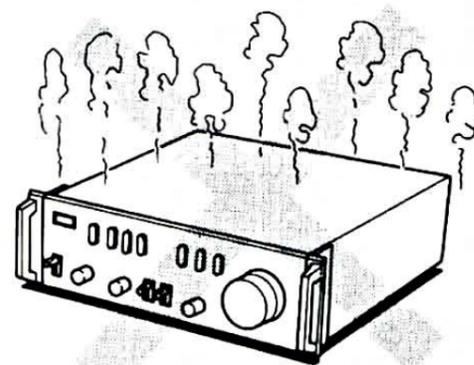


2. Use or storage in a dusty or sandy place will cause deterioration of performance.



preamplifier to make the most of its perfor-

3. Avoid placing the preamplifier near a stove or similar appliance or in a location where the temperature is high.



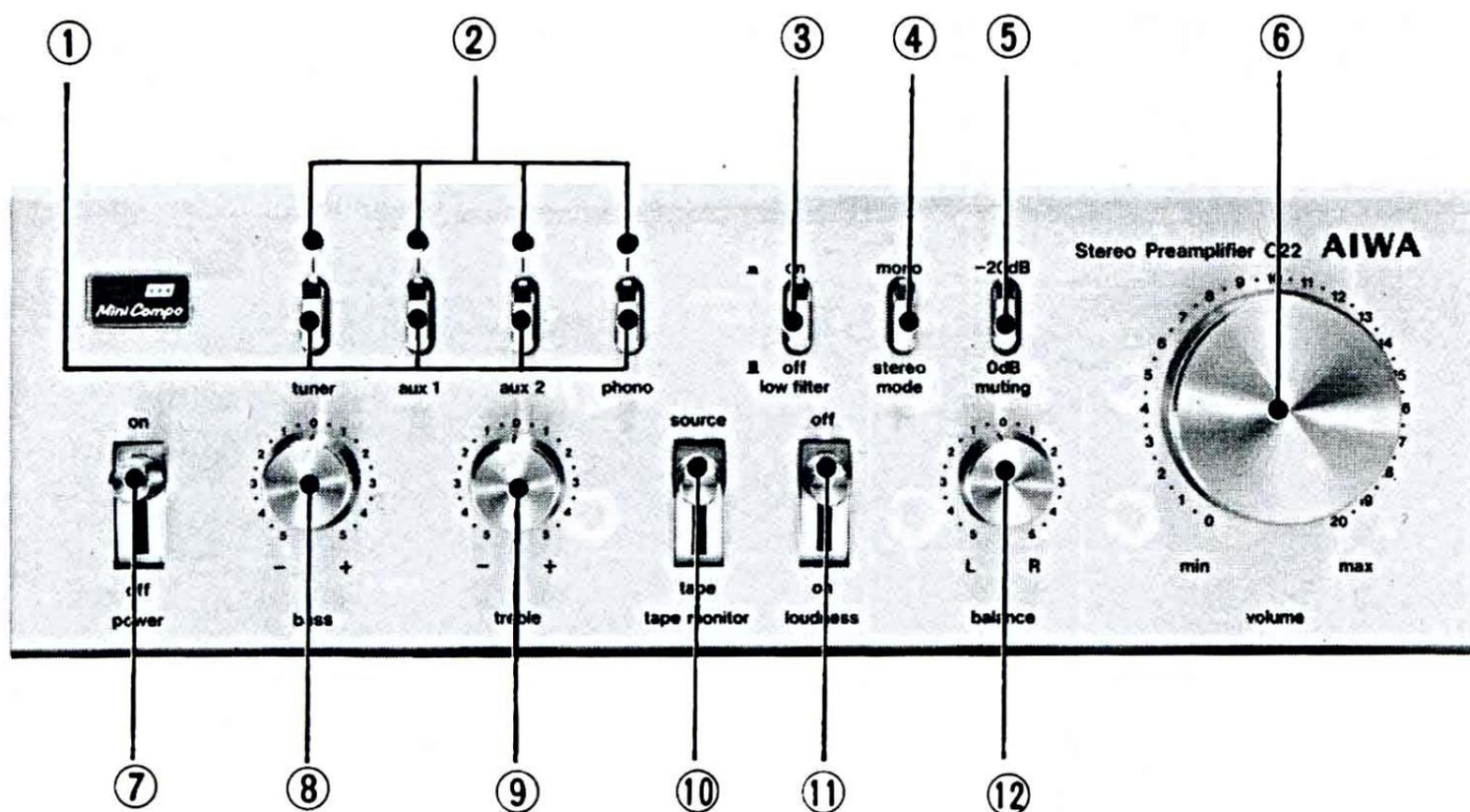
- **Handling the AC cord**

When connecting and disconnecting the AC cord, take hold of the plug section and not the cord. Pulling the cord may cause damage to the cord and create hazards.

- **Preventing electric shocks and fire hazards**

If the AC cord is broken or damaged, or if the wires are exposed, contact your dealer or an AIWA service station and have it replaced or repaired.

## NAMES OF PARTS AND THEIR FUNCTIONS



### ① Selector Switches

Depress the switch that corresponds to the music source you plan to listen to.

### ② Function Indicators

These light up according to the positions of the selector switches.

### ③ "Low filter" Switch

Use this switch to cancel out ultra-low-range noise such as that generated by record warp.

### ④ "Mode" Switch

Use this switch to select between the stereo mode and monaural mode.

### ⑤ "Muting" Switch

This reduces the volume level to one-tenth without impairing the sound quality.

### ⑥ "Volume" Control

This adjusts the volume.

### ⑦ "Power" Switch

### ⑧ "Bass" Control

This is used to adjust the bass sound.

### ⑨ "Treble" Control

This is used to adjust the treble sound.

### ⑩ "Tape monitor" Switch

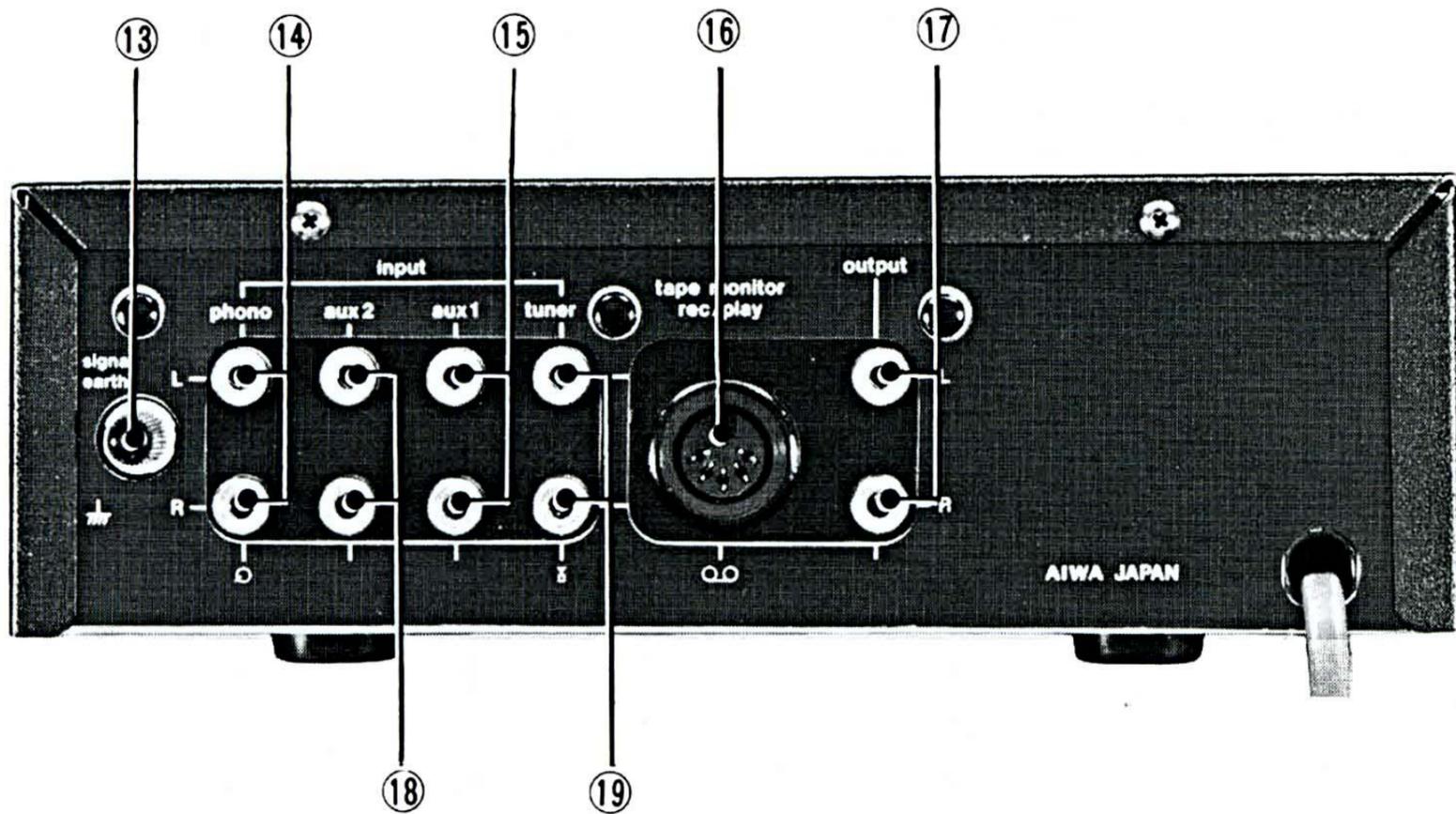
Set this switch to "tape" when listening to a tape or monitoring a recording.

### ⑪ "Loudness" Switch

This emphasizes the bass and treble and makes up for the deficiency of the ear under low-volume listening conditions.

### ⑫ "Balance" Control

This adjusts the balance of the sound between the left and right channels.



**⑬ "Signal earth" Terminal**

Connect the ground wire of the turntable to this terminal.

**⑭ "Phono" Jacks**

Connect the output signals of your turntable to these jacks.

**⑮ "Aux 1" Jacks**

Connect a second tuner or playback-only tape deck to these jacks.

**⑯ DIN-rec/play Jack**

Connect a DIN cord-equipped tape deck to one of these jacks.

**⑰ "Output" Jacks**

Connect these to the input jacks of the power amplifier.

**⑱ "Aux 2" Jacks**

Connect a second tuner or playback-only tape deck to these jacks.

**⑲ "Tuner" Jacks**

Connect these to the output jacks on your tuner.

## CONNECTIONS

### Tuner

Connect the "tuner" jacks to the output jacks on the tuner using the stereo pin cord. Connect the left and right channels properly.

### Power amplifier

Connect the "output" jacks to the "input" jacks of the power amplifier using the stereo pin cord.

### Tape deck

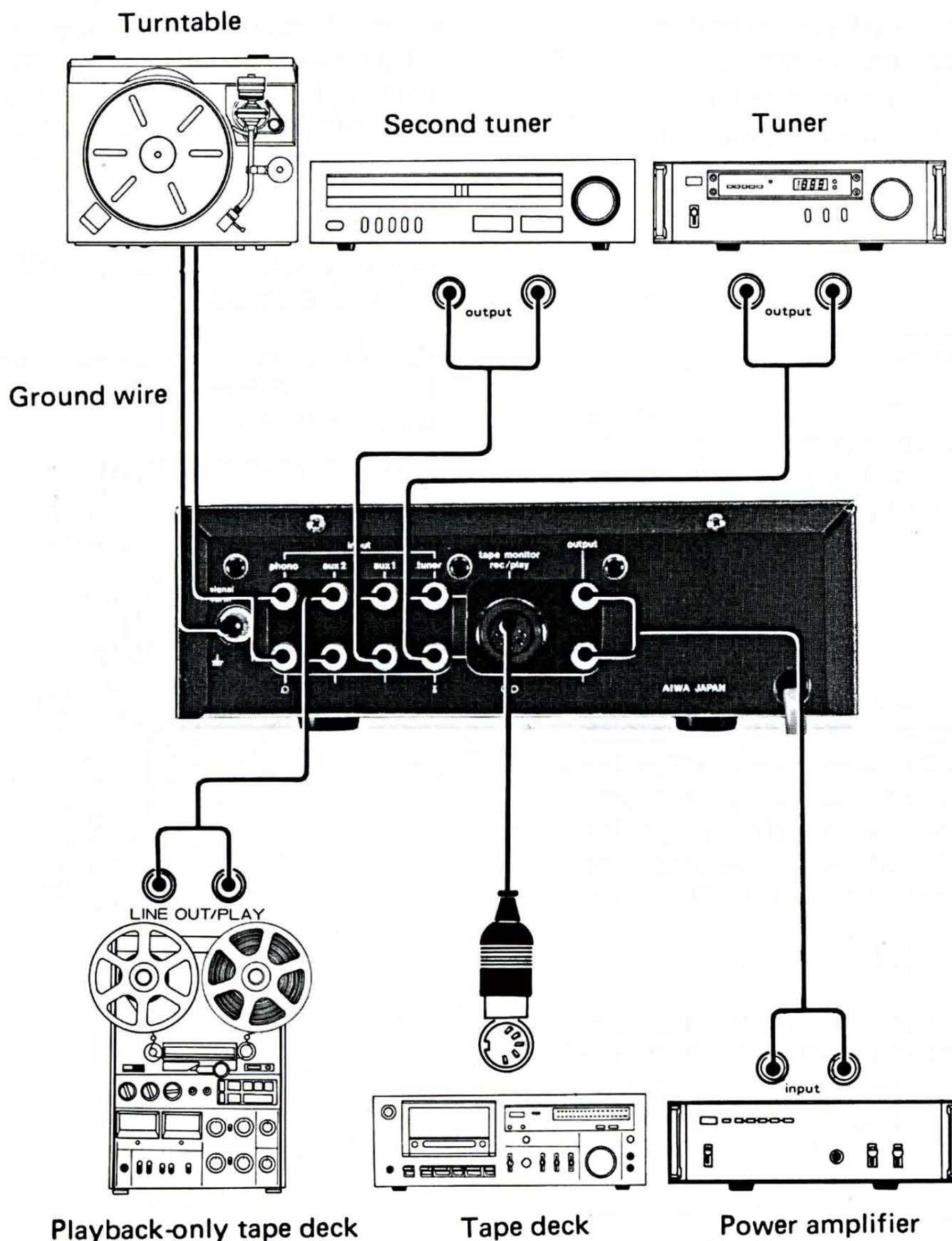
Connect a DIN cord-equipped tape deck to one of these jacks. This allows both recording and playback connections to be performed with a single cord.

### Turntable

Connect a turntable with a moving magnet (MM) type of cartridge to this preamplifier. Connect the "phono" jacks to the output jacks on the turntable, taking care to align the left and right channels properly. Connect the turntable's ground wire to the "signal earth" terminal.

### Aux 1, 2 jacks

Use these jacks for connecting a second tuner or a playback-only tape deck.



## OPERATION

- \* Set the volume control to "0" before switching on the power.
1. Set the power switch to "on"
  2. Set the "muting" switch to 0 dB (■).
  3. Set the "tape monitor" switch to "source".
    - \* Set the switch to "tape" when listening to tape playback and then proceed according to step 5.
  4. Depress the selector switch corresponding to the source you want to listen to.
    - tuner: for listening to the tuner connected to the "tuner" jacks.
    - aux 1, 2: for listening to the component connected to the "aux" jacks.
    - phono: for listening to the turntable connected to the "phono" jacks.
  5. Select the position of the "mode" switch.
    - mono (■): for mono listening
    - stereo (■): for stereo listening
  6. Set the "volume" control, "bass", "treble" and "balance" controls to the desired positions.

## TAPE MONITORING

When the "tape monitor" switch is set to "source", the source corresponding to the selector button which has been depressed is heard. When it is set to "tape", tape playback can be heard.

## LOW FILTER

This filter is designed to suppress noise components in the ultra-low-frequency range such as those generated by record warp. When the "low filter" switch is set to "on", the 12 dB/oct filter is actuated with signals having a frequency of 30 Hz or more, and noise below the audible frequency range is cut out effectively.

## LOUDNESS SWITCH

When listening at low volumes, the bass and treble appear to be deficient because of the tendency of the human ear to focus on mid-range frequencies. The loudness circuit is designed to compensate for this by emphasizing the bass and treble to give a more dynamic effect. Set this switch to "on" when listening to a program at low volume levels.

## MUTING SWITCH

If there is a telephone call, for instance, when you are listening to a program or if you want to turn the volume down temporarily, simply push in the muting switch. Without changing the position of the volume control the volume will be reduced to one-tenth of the set level. Keep this switch at "off" for normal listening.

## tone circuit

The bass and treble can be adjusted independently with this preamplifier. When the two tone controls are set to "0", the signals do not pass through the tone circuit and a flat frequency response is yielded.

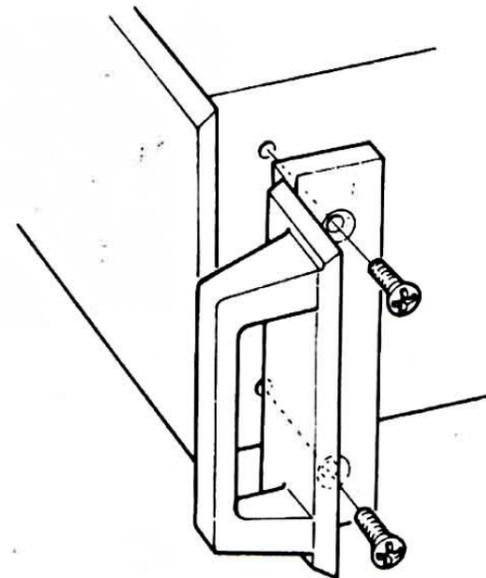
## CLEANING THE PREAMPLIFIER

When the cabinet has become dirty or stained, dip a piece of gauze or soft cloth into a diluted solution of neutral cleanser and wipe clean. Never use thinners or benzine since they will damage the surface of the cabinet.

## MOUNTING THE HANDLES (OPTION, AH-22Y)

Handles (option) can be mounted on this preamplifier. Attach at the sides of the model as shown in the figure.

\* Handles are provided with model K 1



## SPECIFICATIONS

<b>Phono SN ratio</b>	80 dB
<b>RIAA deviation</b>	±0.2 dB (20 Hz to 20 kHz)
<b>Inputs</b>	phono 2.5 mV (200 mV max input)
	tuner 150 mV/47 kohms
	aux 1 150 mV/47 kohms
	aux 2 150 mV/47 kohms
<b>Tape monitor</b>	play 150 mV/47 kohms
	rec out 30 mV/ 80 kohms
<b>Output</b>	0.6V/1 kohms
<b>Tone controls</b>	100 Hz ± 8 dB (400 Hz)
	10 kHz ± 8 dB (2.5 kHz)
<b>Low filter</b>	30 Hz/12 dB/oct
<b>Muting</b>	-20 dB
<b>Loudness</b>	100 Hz + 6 dB
	10 kHz + 4 dB (with -40 dB)
<b>Semiconductors used</b>	7 ICs, 4 transistors, 17 diodes, 4 LEDs
<b>Power requirements</b>	240 V 50/60 Hz
<b>Power consumption</b>	3 W
<b>Dimensions</b>	210 (W) x 71 (H) x 197 (D) mm
<b>Weight</b>	1.7 kg
<b>Accessories</b>	Stereo pin cords Handles (K1 model only)

\* Specifications and external appearance are subject to change without notice due to product improvement.

## **IMPORTANT**

The wires in this mains lead are coloured  
in accordance with the following code:

Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

---

# **AIWACO.,LTD.**

---