

STEREO CONTROL CENTER

Owner's manual

Citation **XXP**

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Note for Unpacking

This unit has been shipped after thorough strict inspection. However, if any damage or defect of the unit is found upon unpacking, please take contact with your dealer immediately.

Thank you very much for purchasing the Citation XXP which has been introduced for the audiophile in search of the ultimate in accurate sound reproduction.

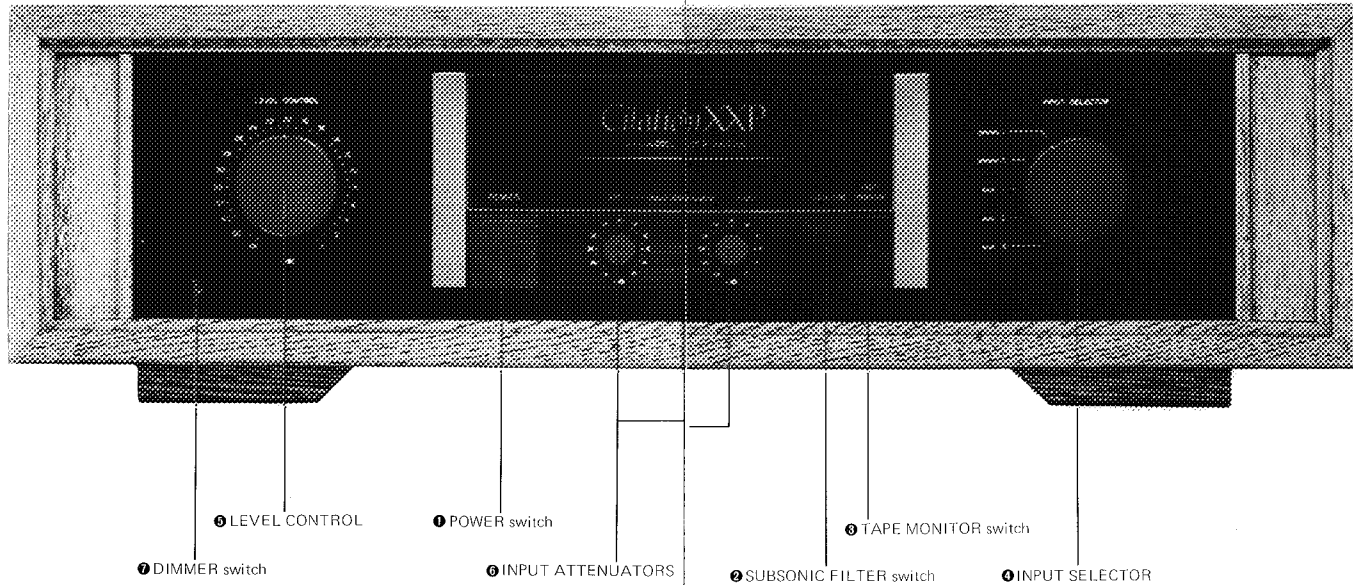
The Citation XXP preamplifier together with Citation XX, the highly reputable amplifier produced by Harman Kardon, has achieved high performance through pursuit of the ultimate dynamic characteristics.

Please read this owner's manual carefully to make the most of many excellent features of the Citation XXP.

General Instructions

- Always use 120 volts AC.
Always connect the AC cord directly to a main outlet. Do not connect the unit to an outlet supplying a higher voltage.
- Install the unit on a firm level base.
Avoid the following locations:
 - ▶ Places exposed to excessive moisture
 - ▶ Places exposed to direct sunlight or near a heat source
 - ▶ Cold places such as near an air conditioning outlet
 - ▶ Dusty places
 - ▶ Places exposed to excessive vibration
- To prevent shock hazard or unexpected trouble, do not tamper with internal components for inspection or maintenance. Citation does not guarantee against performance degradation resulting from any modification.
- Always disconnect the plug from the outlet and turn the power switch off on all of the components in the system before making or changing connections with other components.
- Always turn the level control knob to the minimum level before turning the power on.

Components on Front Panel and Their Functions



❶ POWER switch

When the power is turned on, the mute circuit functions for about 8 seconds. As soon as the mute circuit goes off, the center of the front panel illuminates to indicate that the unit is ready for operation.

❷ SUBSONIC FILTER switch

This switch inserts a low frequency filter into the signal path which protects your speakers from powerful, low-frequency signals created by warped discs or discs whose center-hole is off-center. The cut-off frequency of the filter is 15 Hz (-3 dB).

❸ TAPE MONITOR switch

This switch connects the input at the TAPE (PLAY) jacks on the rear panel directly into the preamplifier circuit, bypassing the INPUT SELECTOR. When a tape deck is connected to the TAPE (REC) and TAPE (PLAY) jacks, the program source to be recorded (record, FM/AM broadcast or tape) is selected by the INPUT SELECTOR. Depress this switch in order to play back a tape on the tape deck.

❹ INPUT SELECTOR

This selector selects the desired input out of the available 5 sources connected to the PHONO 1, PHONO 2, AUX 1, AUX 2 and AUX 3 jacks on the rear panel. PHONO 1 and PHONO 2 are low-level phono inputs while AUX 1, AUX 2 and AUX 3 are high-level inputs.

❺ LEVEL CONTROL

This knob controls the final output level of the preamplifier simultaneously for both channels.

❻ INPUT ATTENUATORS

These knobs independently control the levels of input

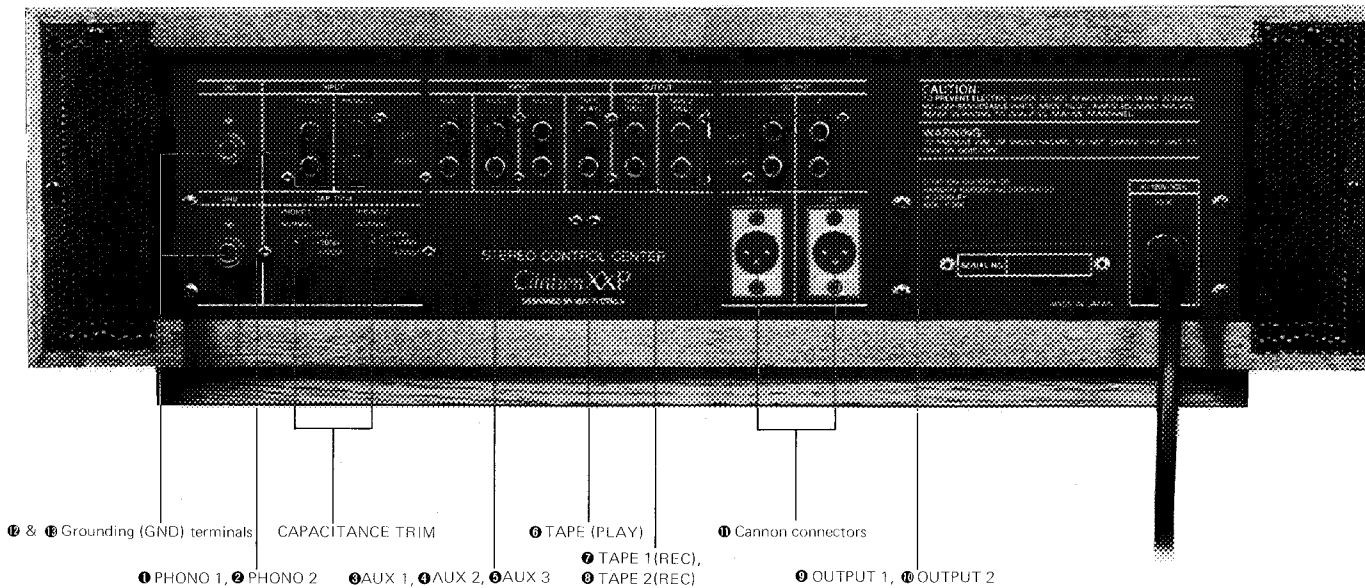
signals to the line (high-level) amplifiers.

They also function as balance controls to properly balance the sound between the left and right channels. (See the General Circuit Configuration and Block Diagram on page 6 and How to use INPUT ATTENUATORS on page 7.)

❼ DIMMER switch

This switch changes the brightness of the illumination at the center of the front panel. Illumination is reduced when this switch is "OUT" and becomes brighter when switched "IN".

Rear Connections



This unit is provided with two pairs of phono input jacks, four pairs of high-level input jacks, two pairs of recording output jacks and three pairs of preamplifier output jacks (2 PIN TYPE, 1 CANNON).

1 PHONO 1

Phono 1 input jacks connect directly to high-sensitivity RIAA equalizer amplifiers. Phono 1 is recommended for use with cartridges that have an output level of 1.6 mV to 3.0 mV (at 5cm./sec., 1KHz, lateral modulation). These figures are typically published in your phono cartridge owner's manual.

2 PHONO 2

Phono 2 input jacks connect directly to medium sensitivity RIAA equalizer amplifiers. Phono 2 is recommended for use with cartridges that have an output level greater than 3.0 mV (at 5cm./sec., 1KHz, lateral modulation). These figures are typically published in your phono cartridge owner's manual. CAPACITANCE TRIM selectors are provided independently for PHONO 1 and PHONO 2

inputs. (For CAPACITANCE TRIM selectors, see "How to use CAPACITANCE TRIM Selectors" on page 8).

3 AUX 1, 4 AUX 2, 5 AUX 3

These are high-level line input jacks for connection to a tuner, tape deck or other components.

6 TAPE (PLAY)

These are line input jacks for tape deck playback (output). Although these are high-level input jacks like the AUX jacks, these jacks are connected to the preamplifier circuit by the TAPE MONITOR switch, while the AUX jacks are connected to the preamplifier circuit by way of the INPUT SELECTOR.

7 TAPE 1 (REC), 8 TAPE 2 (REC)

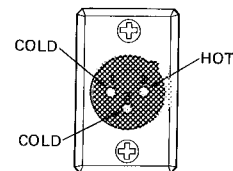
These are line output jacks for tape recording. Two sets of recording outputs are provided, isolated from the inputs by buffer amplifiers. Because the outputs are supplied through buffer amplifiers, they cannot be used when the power is turned off.

9 OUTPUT 1, 10 OUTPUT 2

Preamplifier output jacks to be connected to a power amplifier.

11 Cannon connectors

A pair of cannon connectors are also provided for preamplifier output in addition to the two pairs of RCA type pin jacks (OUTPUT 1 and OUTPUT 2). Since the Citation XX power amplifier also provides cannon connectors in addition to RCA type pin jacks, the preamplifier can be connected to the power amplifier through these connectors.



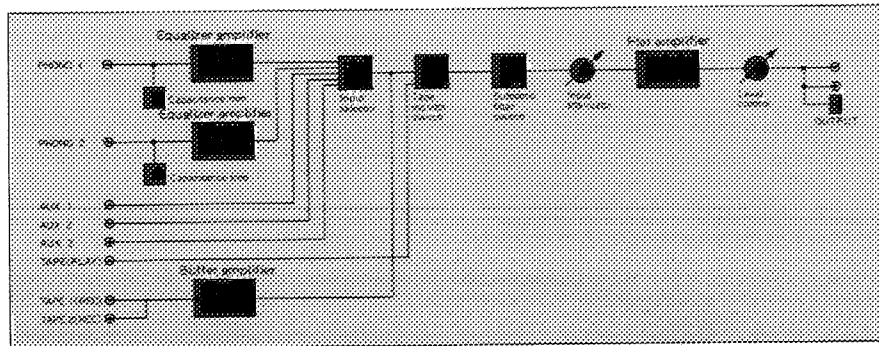
12 & 13 Ground terminals

There are two ground terminals provided along the left side of the rear panel. The upper one 12 (marked \oplus) is for signal ground and the lower one 13 (marked $\opl�$) is for chassis ground. Connect the ground lead from the turntable to the ground terminal that results in the least hum and noise. The terminal that produces the better result depends on the turntable and cartridge used. The entire system must be connected before the better terminal can be determined.

General Circuit Configuration and Block Diagram

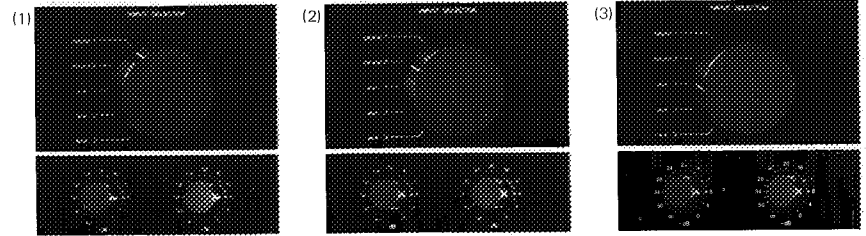
The basic Citation XXP circuitry consists of 6 modules: 4 RIAA equalizer amplifiers (phono input stages) and 2 line amplifiers (output stages). The PHONO 1 and PHONO 2 inputs each have 2 modules (for the left and right channels) that are identical except for their gain and overload levels. The output of the phono modules and the input signals from AUX 1, 2 and 3 are connected to the INPUT SELECTOR. The position of the INPUT SELECTOR determines which of the input signals will be fed to the following stages, including the TAPE RECORD output jacks. Buffer amplifiers isolate the tape recorder from the signal path. The next stage, the TAPE MONITOR SWITCH, either passes the selected input signals, or connects the TAPE PLAY input jacks to the following stages. The output of the TAPE MONITOR SWITCH goes to the SUBSONIC FILTER SWITCH, which, when depressed, provides a low frequency roll-off below 15 Hz at a 6 dB/OCT slope.

The output stage consists of a pair of wideband flat line amplifiers with attenuators at the inputs and outputs. The INPUT ATTENUATORS for each channel are independent and permit channel balance adjustment, although it is not their primary purpose. The output attenuators are mechanically linked together and act as the main LEVEL CONTROL. The output of the LEVEL CONTROL is directly coupled to the RCA and cannon type output jacks.



How to use the INPUT ATTENUATORS

The INPUT ATTENUATORS control the level of the input signals to the line amplifiers. In conventional preamplifiers, they would also function as the main volume control.



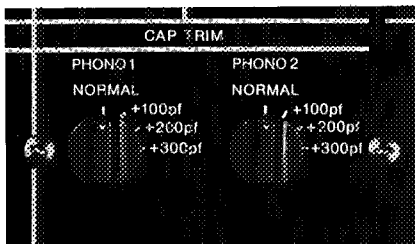
(1) Level setting when a cartridge with the standard output level is connected to PHONO 1: -8 dB (This is the standard setting position.)

(2) When the same cartridge as that in (1) is connected to PHONO 2, the level setting shall be increased by 6 dB to -2 dB.

(3) When an open reel tape deck, etc. having a wide dynamic range is connected to the high-level input, the level setting shall be decreased to about -16 dB.

Many phono cartridges (excluding the moving coil type) will not provide their specified frequency response unless they are connected to their optimum load impedance. In this case, the load impedance has two components: resistance and capacitance. The cartridge manufacturers list these values in their specifications.

Fortunately, the optimum load resistance is the same value for most cartridges – 47 K ohm. The optimum load capacitance, however, varies from approximately 200 pf to 500 pf. The CAPACITANCE TRIM selectors, on the rear panel of the CITATION XXP, allow adjustment of the load capacitance so that specified frequency response can be obtained from any cartridge. The total cartridge load capacitance is the capacitance of the tonearm wiring and phono cables plus the capacitance of the phono input circuitry. In order to choose the correct setting for the CAPACITANCE TRIM selector, subtract the tonearm and phono cable capacitance from the cartridge's required value. Set the selector to the value closest to the difference. The "normal" position is 150 pf.



Specifications

- Input sensitivity and input impedance
 - PHONO 1 : 2.0 mV/47 kΩ
 - PHONO 2 : 3.8 mV/47 kΩ
 - AUX : 100 mV/25 kΩ
- Output level
 - Rated output : 1 V
 - Maximum output : 8 V
- Phono overload levels
 - PHONO 1 : 200 mV
 - PHONO 2 : 440 mV
- Phono input capacitance (Normal position): 150 pf
- Capacitance trim range
 - : +100 pf, +200 pf, +300 pf
- RIAA equalization accuracy
 - : ±0.15 dB, 20Hz – 20 kHz
- Frequency response (AUX IN, Level control max.)
 - : ≤0.5Hz ~ ≥280 kHz
- Signal/Noise
 - PHONO 1 : 83 dB
 - PHONO 2 : 79 dB
 - AUX : ≥100 dB
- THD (AUX IN) : 0.01 %
- Subsonic filter : 15Hz(–3dB), 6 dB/oct.
- Power source : AC 120 V, 60Hz
- Power consumption : 55 W
- Dimensions
 - : 523 mm(W) x 155 mm(H) x 413 mm(D)
- Weight : 15 kg

The design and specifications are subject to change for improvement without notice.

Accessories

- Velvet polishing cloth (1 pc.)
- Cords with cannon plugs (2 pcs.)
- Shorting plugs (2 pcs.)
 - (When using either PHONO 1 or PHONO 2 input jacks, please insert the attached shorting plugs into the phono input jacks not in use.)
- Accessory legs (4 pcs.)
 - (Use the four legs supplied with the unit when you use it with the wooden case removed. Fix them on the unit with the screws securing the wooden case to the unit.)

Warranty and after-sale service

- This unit is attached with a warranty card. Be sure to receive it from your retailer.
- After checking entries, keep the warranty card carefully.
- The warranty period for no charge repair is 2 years after the date of purchase.
- When an abnormality is found, check if it is a unit fault by referring to this manual.
- If the abnormality cannot be remedied, please consult with your retailer or contact:

Citation—Warranty Division
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 Woodbury, N.Y. 11797
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