

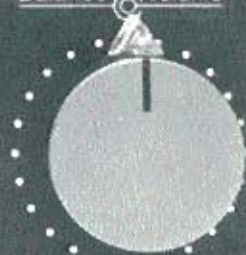
TANDBERG® TCA 3018A

Operating Instructions



Sub Sonic Filter

Balance Volume



For your safety!

To prevent electrical shock or fire, do not expose electronic products to rain or moisture and do not remove covers (or back). If anything fails, leave the repairs to a qualified technician.

Pull out the power plug during thunderstorms and when you are away for a long time (e.g. holidays, etc.).

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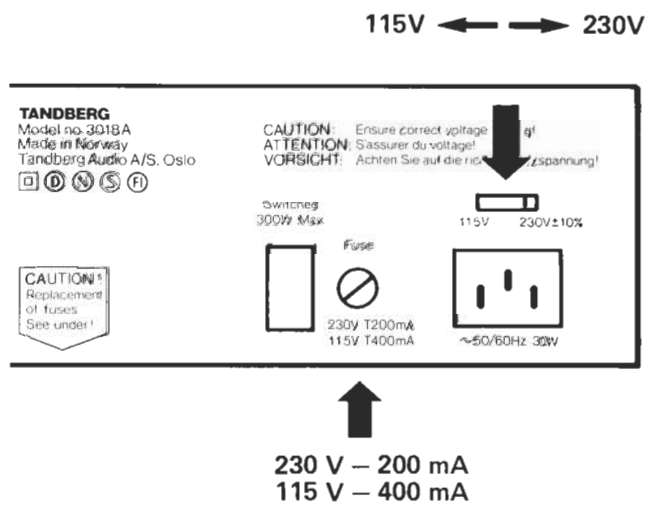
Mains voltage – fuses

Check that the voltage selector is set to the correct position. (For USA and Canada the equipment is set to 115 V).

230 V, 50 Hz:
When the deck is set to 230 V position it should be fitted with a 200 mA fuse. On this setting any mains voltage between 207 V and 253 V can be used.

115 V, 60 Hz:
In 115 V position the equipment should be fitted with a 400 mA fuse. On the 115 V setting any mains voltage between 103 V and 127 V can be used.

Fuses:
230 V, 50 Hz: 200 mA, slow blow, 5 x 20 mm.
115 V, 60 Hz: 400 mA, slow blow, 5 x 20 mm.

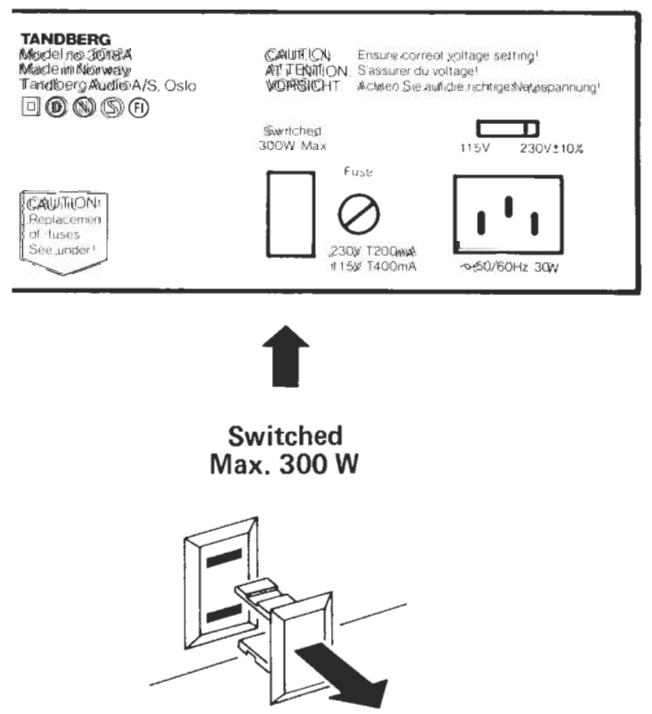


Mains socket for extra equipment

The socket for extra equipment is only permitted in the USA.

The socket marked Switched 300 W Max. is controlled by the mains switch on the equipment, and is designed for connecting other extra equipment, with a maximum total consumption of 300 watt.

– Remove the blind plug with a screwdriver.

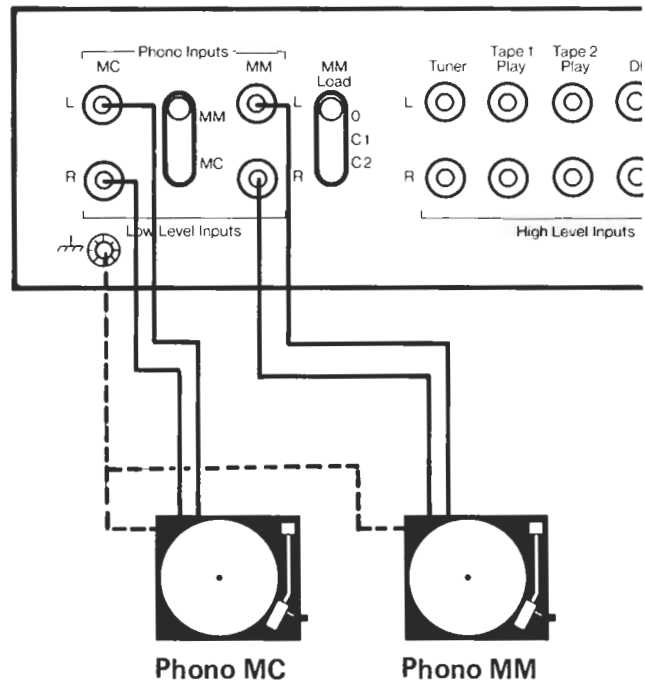


Connecting external equipment

For best performance use Tandberg Audio's High Resolution phono cables for interconnection (in- and outputs) between the TCA 3018A and the external equipment.

Record player

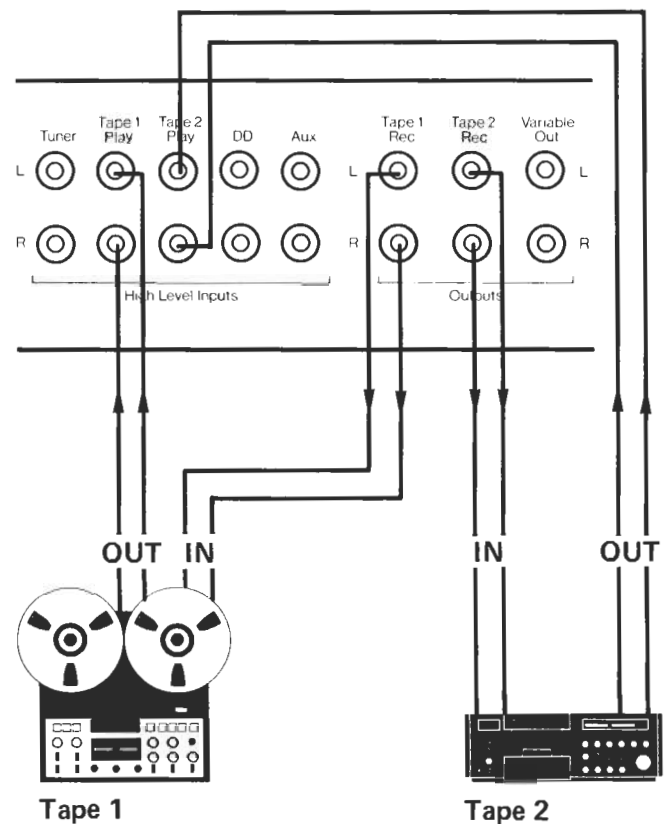
- Connect the record player as shown.
- Phono MC: Record player with moving-coil pick-up.
- Phono MM: Record player with moving-magnet pick-up. The input can be corrected with the selector MM loads to match different types of moving magnet pick-ups. If it is not possible to match your cartridge with C1 or C2 (MM Load selector) further adjustments can be performed by an authorized Tandberg Service Station.
- Set the Phono Inputs switch to the correct position when the mains switch is in off position (MM or MC).
- The ground lead (static) from the record player shall be connected to the ground screw under the sockets. Try different arrangements to obtain the best hum-free result.



Connecting a tape/cassette deck

For best performance use Tandberg Audio's High Resolution phono cables for interconnection (in- and outputs) between the TCA 3018A and the external equipment.

- Connect the tape/cassette deck to the Tape 1 or Tape 2 connections as shown.



FM/AM tuner

For best performance use Tandberg Audio's High Resolution phono cables for interconnection (in- and outputs) between the TCA 3018A and the external equipment.

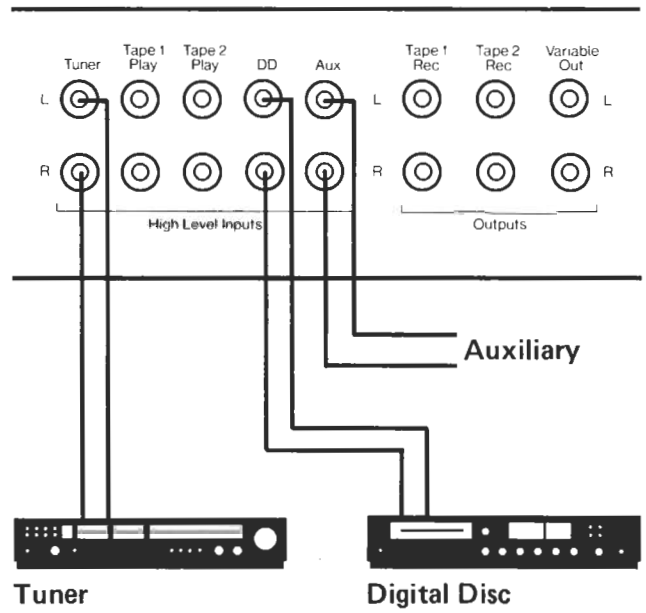
- Connect the tuner as shown in the figure.

AUX

Inputs for an extra tuner, cassette, tape or video recorder.

Digital Disc

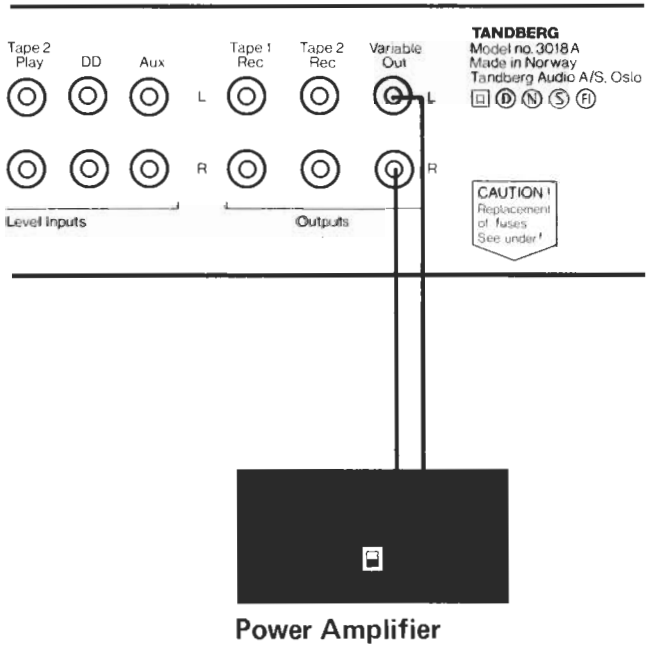
- Connect the Digital Disc as shown in the figure.



Variable Out

For best performance use Tandberg Audio's High Resolution phono cables for interconnection (in- and outputs) between the TCA 3018A and the external equipment.

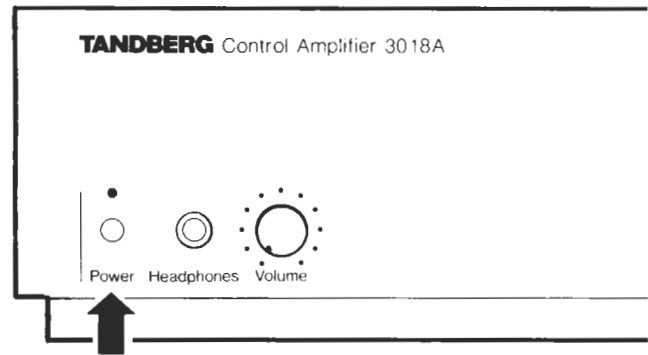
- Connect the variable output to a power amplifier.



Mains switch

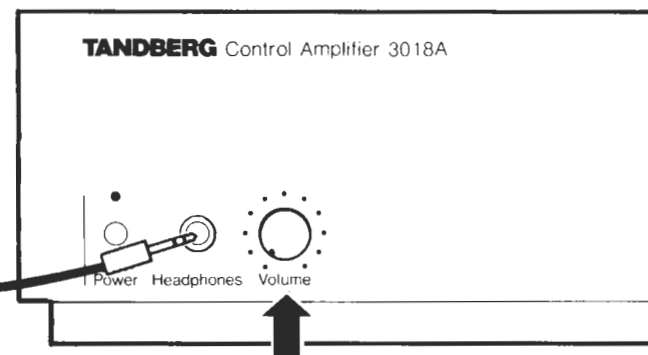
- Check that the equipment is connected to the correct mains voltage (voltage notice on back).
- Check that the correct fuse is fitted.
- Plug in the mains lead.
- Press in the mains switch (marked Power).

NOTE! A protection circuit at the variable output will cause a few seconds delay.



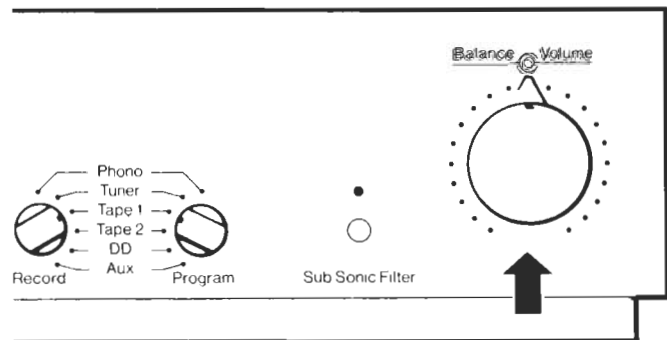
Headphones

- Connect stereo headphones with a 1/4" stereo jack to the socket marked Headphones.
- Adjust the volume in the headphones with the small knob marked Volume.



Volume – Balance

- Control the volume on the variable output to the power amplifier with the large knob marked Volume.
- Control the volume balance between the right and left channels with the knob marked Balance.

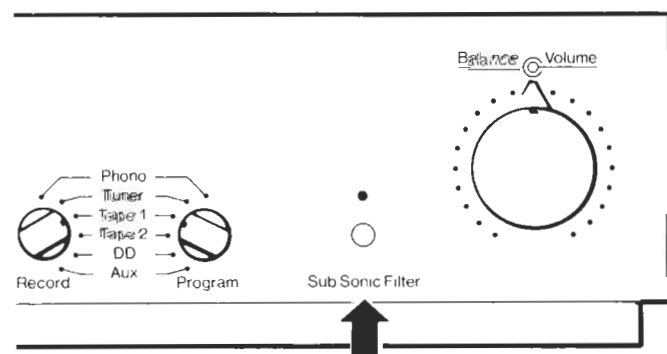


Sub-Sonic Filter (Rumble Filter)

- Press in this button to reduce noise in the low-frequency region e.g. rumble from a record player of poor quality.

This filter will also reduce acoustic feedback from the loudspeakers to the pick-up.

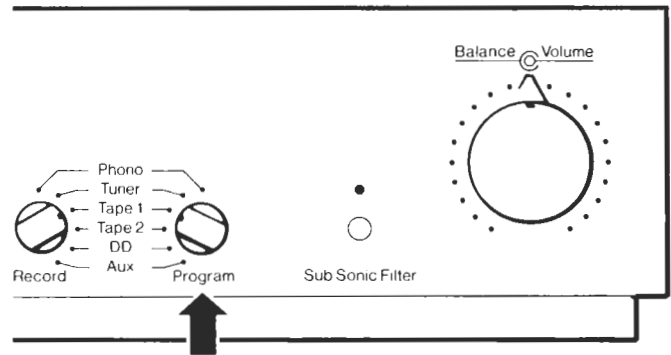
The attenuation is – 12 dB per octave, and – 3 dB at 15 Hz.



Program selector

The Program selector provides opportunities to choose between 6 program sources. You will listen to the program in the speakers depending on the position of the program selector.

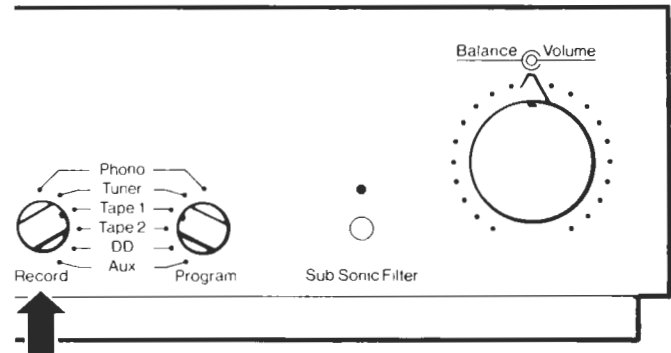
- Phono: Record player
- Tuner: FM/AM tuner
- Tape 1: Open-reel/cassette recorder
- Tape 2: Open-reel/cassette recorder
- DD: Digital Disc
- Aux: Extra tuner, tape/cassette recorder or video recorder



Record selector

The Record selector provides opportunities to record from 6 different program sources, regardless of which program you are listening to in the speakers. In all other positions, except Tape 1 and Tape 2 the source program is connected to both Tape 1 and Tape 2 output for recording.

- Phono: Record player
- Tuner: FM/AM tuner
- Tape 1: Playback from Tape 1, recording on Tape 2 (copying)
- Tape 2: Playback from Tape 2, recording on Tape 1 (copying)
- DD: Digital Disc
- Aux: Extra tuner, tape/cassette recorder or video recorder



Performance optimizing

The TCA 3018A MC input resistance and MM input resistance/capacitance may be modified to match any cartridge. Please contact an authorized Tandberg service station to modify your model if necessary.

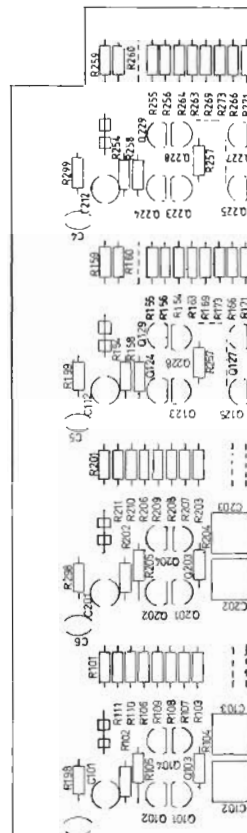
MM and MC input resistance

The preset phono input resistances are 150 ohm and 47 kohm on MC and MM respectively. To change the input resistance please follow the description below.

- Remove the top and bottom covers.
- Modify the MC input by cutting off resistors R154/254 and the MM input by cutting off resistors R102/202. If these resistors are removed by unsoldering you will loose the ground connection.
- Install and solder new high quality metal film resistors in these new positions to match your cartridge:

MC input: R199 and R299
MM input: R198 and R298

- Replace the top and bottom covers.



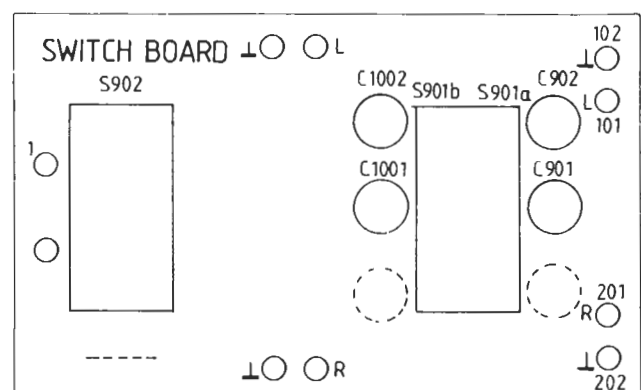
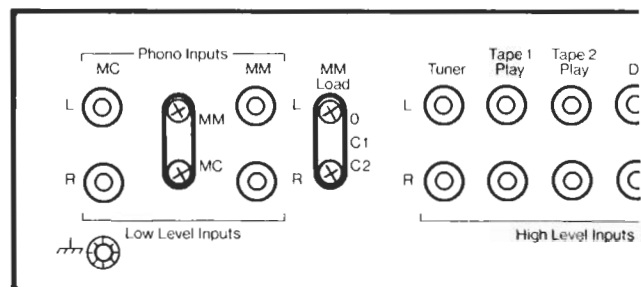
Component location, main board

MM input capacitance

The TCA 3018A MM input additional capacitance is selectable between 150 pF (C1), 330 pF (C2) and 0 pF (0).

Your MM cartridge may require a capacitive load different from one of these values for optimal performance. Replacement of the capacitors is performed as described below.

- Remove the top cover.
- Unscrew the four screws in the holes for the MM/MC and MM Load switches, see figure.
- Remove the Switch board.
- Unsolder C901/1001 (C1 position) or C902/1002 (C2 position).
- Install and solder new high quality polypropylene capacitors matching your cartridge and cables in the same holes.
- Replace the Switch board and top cover.

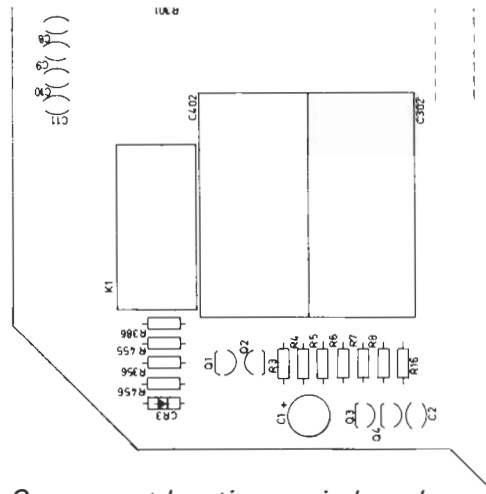


Switch board

Variable Out

Variable out is equipped with serial capacitors. If your power amplifier (or other connected equipment) has serial input capacitors, the serial output capacitors in TCA 3018A may be short circuited for even better sound quality. This modification is carried out as described below.

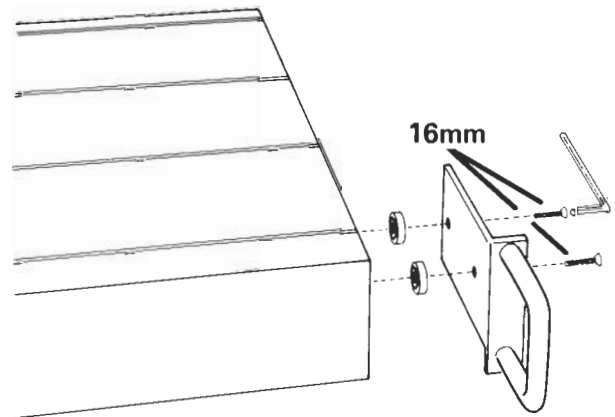
- Remove the bottom cover.
- Shortcircuit C302/402 with an insulated strap.
- Replace the bottom cover.



Component location, main board

Accessories (extras)

19"-rack mount kit

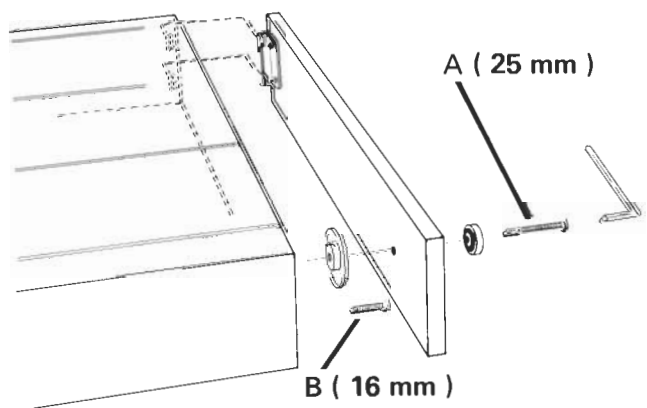


Side panels

NOTE!

When fitting extra side panels you must use the long screws (A) which are supplied.

Take care of the short screws (B) originally used to hold the side panels because you will need them if you remove the extra side panels. The long screws must not be used **without** the extra side panels because they **will cause damage inside the control amplifier.**



Technical data

Tandberg Control Amplifier
3018A

Power requirements:
Power consumption:
Ac.-outlets:
Dimensions:

115/230 V \pm 10%, 50/60 Hz
40 W max.
Switched 1
Width 17 1/8" (43.5 cm)
Depth 13 3/4" (35.0 cm)
Height 3 1/2" (8.9 cm)
Weight 12.5 lbs (5.7 kg)

Technical Data according to
IHF-A-202, 1978

Frequency range:
Phono MM: 20 – 20,000 Hz \pm 0.2 dB
Phono MC: 20 – 20,000 Hz \pm 0.2 dB
Tape 1, Tape 2: 20 – 20,000 Hz + 0/– 0.1 dB
Tuner, Digital Disc, AUX: 20 – 20,000 Hz + 0/– 0.1 dB
Maximum Voltage Output:
Variable output: 5 V at THD = 0.006%
Variable output: 10 V at clipping level
Tape 1, Tape 2: 7.5 V
Headphone output: 20 V unloaded
Total Harmonic Distortion (20 Hz – 20,000 Hz):
Phono MM: < 0.009%
Phono MC: < 0.009%
Tape 1, Tape 2: < 0.005%
Tuner, Digital Disc, AUX: < 0.005%
Input Sensitivity – Ref. 0.5 V output voltage:
Phono MM: 1 mV
Phono MC: 60 μ V
Tape 1, Tape 2: 80 mV
Tuner, DD, AUX: 80 mV
A-weighted Signal-to-Noise ratio:
Phono MM: 78 dB
Phono MC: 74 dB
Tape 1, Tape 2: 90 dB
Tuner, DD, AUX: 90 dB
Maximum Input Voltage (1 kHz):
Phono MM: 290 mV
Phono MC: 14 mV
Tape 1, Tape 2: 20 V
Tuner, DD, AUX: 20 V
Input impedance:
Phono MM: 47 kohm
Phono MC: 150 ohm
Tape 1, Tape 2: 10 kohm
Tuner, DD, AUX: 10 kohm

Secondary Disclosures

Output impedance:
Variable: 47 ohm + 10 μ F in series
Headphones: 150 ohm
Headphones (min. load): 4 ohm
Filter:
Sub Sonic: – 12 dB/oct., – 3 dB at 15 Hz
Crosstalk (100 Hz – 10 kHz):
Phono MM: To any of the other sources > 70 dB
Phono MC: To any of the other sources > 70 dB
Tape 1, Tape 2: To any of the other sources > 70 dB
Tuner, Digital Disc, AUX: To any of the other sources > 70 dB
Separation (100 Hz – 10 kHz):
Phono MM: > 53 dB
Phono MC: > 53 dB
Tape 1, Tape 2: > 58 dB
Tuner, Digital Disc: > 58 dB
Transient intermodulation:
All inputs: Immeasurable

Other Technical Data

Frequency range:
Tape 1, Tape 2: 1.6 – 1,500,000 Hz + 0/– 3 dB
Tuner, Digital Disc: 1.6 – 1,500,000 Hz + 0/– 3 dB
Phase shift (20 Hz – 20,000 Hz):
Tape 1, Tape 2: + 0.5°/– 0.5°
Tuner, Digital Disc, AUX: + 0.5°/– 0.5°

Specifications are subject to change for further improvement without notice.

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