

# AP-005

AUTOMATIC TURNTABLE

## OPERATOR'S MANUAL



CEE and CSA Standard models are not equipped with a Voltage Selector or alternate capstan for cycle change. Therefore voltage and cycle change is not necessary. If your machine corresponds to any of these standards, please disregard all references to voltage and cycle adjustment throughout this manual.

CEE Models: 220 V, 50 Hz.

CSA Models: 120 V, 60 Hz.

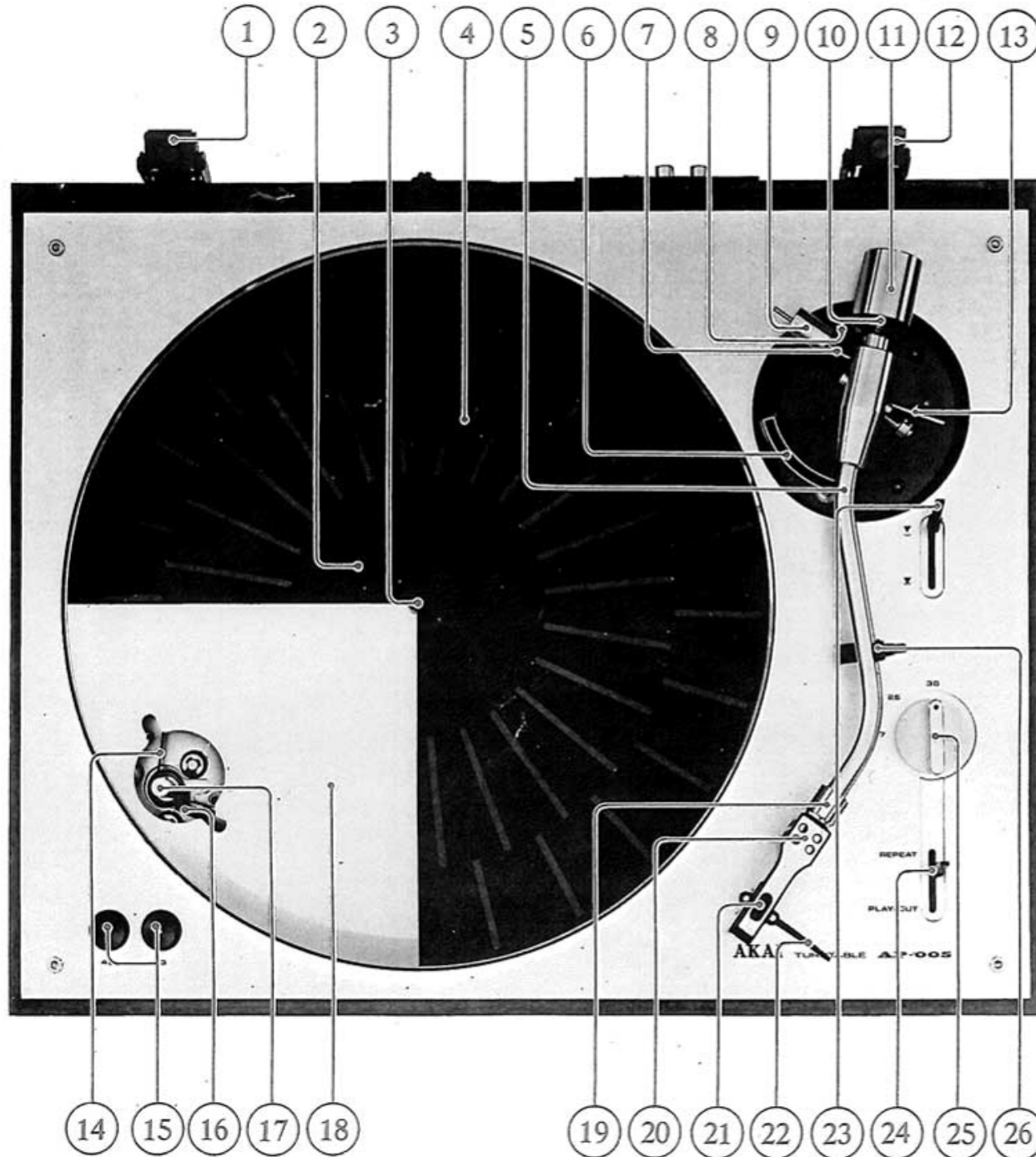
### WARNING:

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

# AKAI

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# CONTROLS



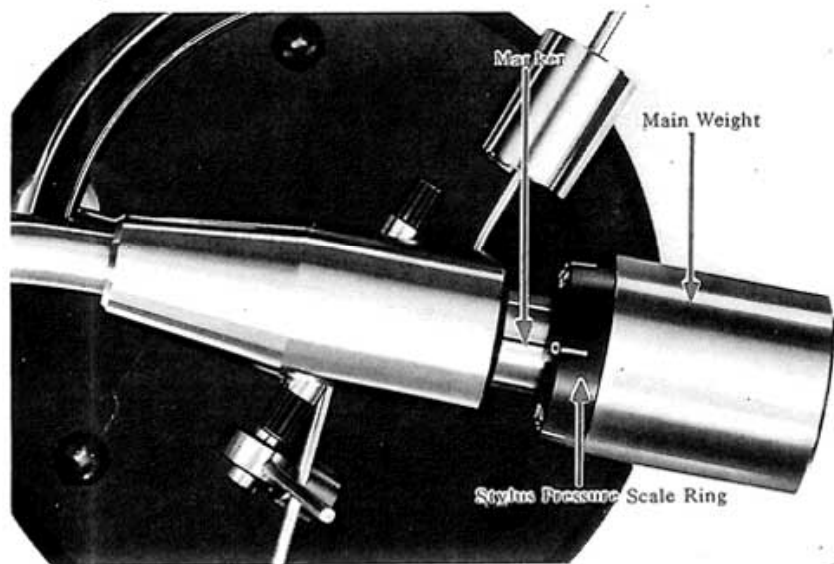
1. Hinge
2. Voltage Selector
3. Spindle
4. Rubber Mat
5. Tone Arm
6. Tone Arm Lifter
7. Lateral Weight Shaft
8. Stylus position Adjustment Screws
9. Lateral Weight
10. Stylus Pressure Scale Ring
11. Main Weight
12. Hinge
13. Inside Force Cancellor
14. Drive Belt
15. Speed Selectors
16. Drive Belt Guide
17. Capstan
18. Turntable
19. Locking Nut
20. Cartridge Shell
21. Cartridge
22. Cartridge Shell Finger Lever
23. Tone Arm Lifter Lever
24. Control Lever
25. Disc Size Selector
26. Arm Rest

When the supplied cartridge is used, correct lateral balance can be obtained by setting the Lateral Weight to the marker on the lateral weight shaft. If other than the supplied cartridge is used, please adjust as follows:

1. Disconnect power cord.
2. Remove stylus guard.
3. Remove Tone Arm from arm rest.
4. Bring Tone Arm Lifter Lever to forward position to lower tone arm lifter.
5. With right hand, rotate Main Weight backwards and forwards until the Tone Arm is in perfect horizontal balance.
6. Then with tone arm about 7 cm to left of arm rest, place an object under rear of the cabinet so that it slants forward about 30°.
7. While holding Inside Force Canceller with left hand (this prevents pressure from being applied to the Tone Arm), adjust Lateral Weight so that the Tone Arm swings neither to the right nor left, but is perfectly stable.

\* Be careful not to damage the stylus.

### STYLUS PRESSURE ADJUSTMENT



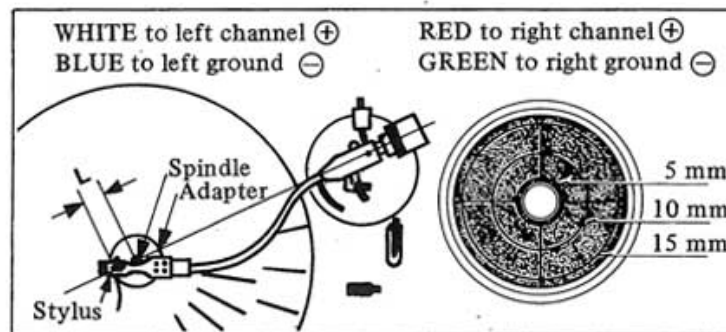
If other than the supplied cartridge is employed, follow "Lateral Balance Adjustment" procedure substituting the following steps for steps 6 and 7.

6. With right hand, turn Stylus Pressure Scale Ring so that the "O" mark corresponds with the marker on the weight shaft (zero balance is attained).
7. Turn Main Weight counter-clockwise (as viewed from front) until the numeral of the corresponding stylus pressure is even with the marker on the main weight shaft (the range of adjustment is from 0 to 3 grams).

\* The correct stylus pressure for the supplied stylus is 2 grams. However, in the case of outside interference, more pressure may be needed for stability. In this case, adjust to about 2.5 grams.

\* Be careful not to damage the stylus.

### USE OF THE 45 rpm ADAPTER

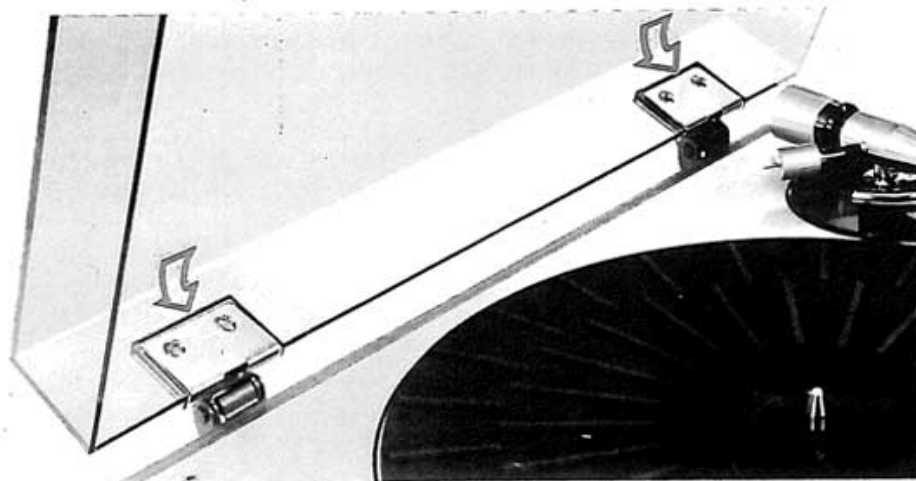


Your AP-005 is supplied with a 45 r.p.m. Adapter for use when playing 45 r.p.m. speed discs with a large center hole. Place the adapter on the turntable spindle.

This adapter is also used for obtaining proper overhang when a new cartridge is replaced. The overhang is determined by the distance between the stylus and turntable spindle when the Tone Arm is moved to the center of the turntable. The correct overhang for the AP-005 Tone Arm is 15 mm. Adjust cartridge position in the shell so that the stylus position is even with the 15 mm groove.

Fit the pin jacks to the cartridge terminals as indicated in the figure.

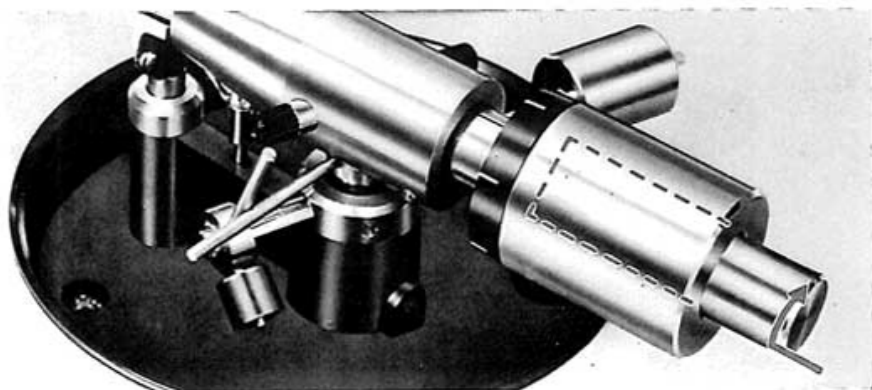
### HOW TO ATTACH THE DUST COVER



Insert buttons located on top of hinges in the slots provided on Dust Cover brackets.

- \* Dust Cover is detachable only when at full open (90° angle) position.
- \* For dust cover cleaning, use a soft dry cleaning cloth.

## USE OF THE SUB-WEIGHT



When using an exceptionally heavy optional cartridge (from 8 to 12.5 grams), to obtain perfect tone arm balance and stylus pressure, it may also be necessary to use the standard accessory Sub Weight. In this case, screw the Sub Weight into the opening at rear of the Main Weight and follow the above Tone Arm and Stylus Pressure Adjustment as well as Lateral Balance Adjustment procedures. Tighten to position at which tone arm balance is attained.

## STYLUS LOWERING & LIFTING POSITION ADJUSTMENT

The lowering and lifting positions of the stylus is precision adjusted at the factory prior to shipment, and normally needs no further adjustment. If by some remote chance, however, adjustment becomes necessary, remove rubber plug from well on turntable mount and proceed as follows:

### Lowering position adjustment

Position Tone Arm so that the cartridge is about 10 cm away from the turntable spindle (until the lowering position adjustment screw is even with the opening in the turntable mount). Then, with a screw driver, adjust screw.



Adjusts lowering position further outward.



Adjusts lowering position further inward.

### Lifting position adjustment

Place Tone Arm in arm rest. At this position, the lifting position adjustment screw is accessible. Then, with a screw driver, adjust as follows:

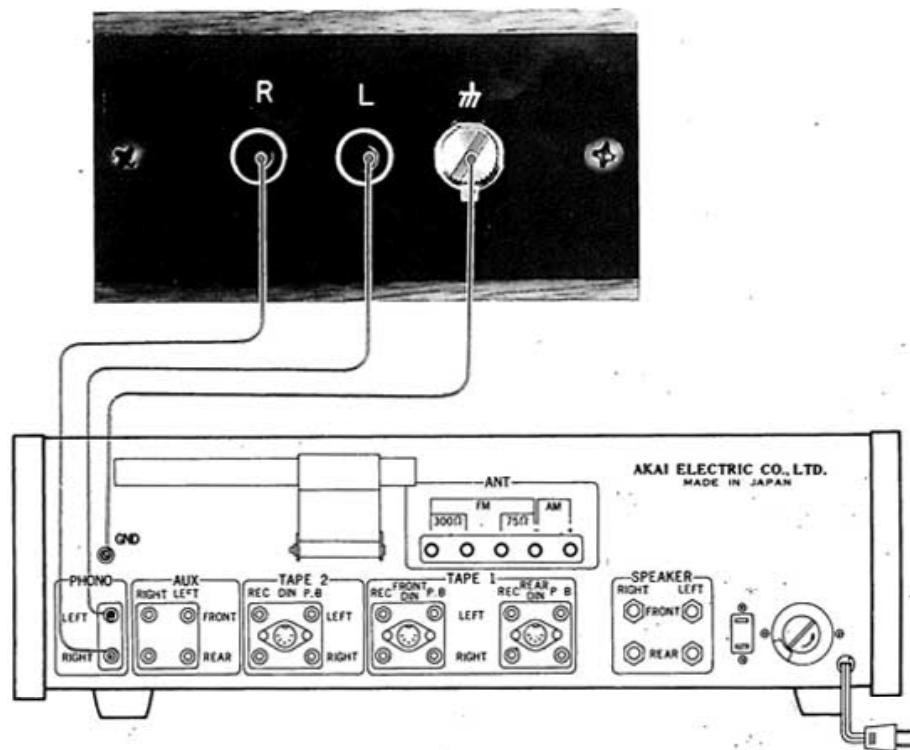


If lifting takes place too soon.



If lifting takes place too late.

## CONNECTIONS



With standard accessory connection cord, connect the left (white) plug into the left output and the right (red) plug into the right output jack at rear of the AP-005, and connect the ground line to the  $\text{⏏}$  (ground) connection. Connect the other end of the cord to the external amplifier phono inputs, matching left and right, and connect the ground wire to the ground terminal of the amplifier.

### 4-channel stereo

Your AP-005 can also be used for 4-channel stereo operation. For SQ or regular matrix 4-channel, the unit can be used with the supplied cartridge and stylus. For CD-4 system 4-channel, replace cartridge with a stylus for CD-4 use and use a low capacitance type connection cord. This is all that is necessary for CD-4 system 4-channel operation. After this change is accomplished, connect cable to the AP-005 as outlined above, and connect other end of cable to a 4-channel adapter.

## SPEED SELECTION

The AP-005 operates on 33-1/3 and 45 r.p.m. speeds. When speed change is desired, proceed as follows:

1. Confirm that the Tone Arm is locked with arm rest holder.
  2. Set Control Lever to PLAY/CUT position to rotate the turntable.
  3. With the turntable rotating, depress 45 or 33 Speed Selector according to disc speed.
  4. Set Control Lever to PLAY/CUT position to stop turntable movement.
- \* The turntable must be rotating while speed change is being effected.

## AUTOMATIC OPERATION

For automatic operation, connect power cord and proceed as follows:

1. Place a disc on the turntable and set Disc Size Selector to 30, 25, or 17 position to correspond with disc size.
2. Select speed.
3. Remove cartridge stylus guard and unlock Tone Arm.
4. Set Tone Arm Lifter Lever to forward (automatic) position.
5. Bring Control Lever to PLAY/CUT position for about 0.5 seconds, then release. This sets the stylus for play start.
6. At the end of the disc, the Tone Arm will automatically return to arm rest and the power of the unit will be turned off.

## MANUAL OPERATION

Either of the following A or B procedures can be selected for manual operation.

1. Follow "Automatic Operation" procedure substituting the following steps for steps 3, 5, 6, and 7.
  2. Remove cartridge stylus guard and keep the Tone Arm locked.
  3. Bring Control Lever to PLAY/CUT position for about 0.5 seconds, then release.  
Keep the turntable rotating for about 8 seconds.
  4. Unlock Tone Arm and place the needle to desired disc position.
  5. At the end of the disc, the Tone Arm will automatically return to arm rest and the power of the unit will be turned off.
1. Follow "Automatic Operation" procedure substituting the following step for step 5.
  2. Set Tone Arm to desired play position and bring the Control Lever to PLAY/CUT position for about 0.5 seconds, then release. The Tone Arm will be gently lowered to the disc to begin play.

## AUTOMATIC REPEAT OPERATION

For automatic repeat operation, follow "Automatic Operation" procedure substituting the following steps for steps 5 and 6.

1. Set Control Lever to REPEAT position. This sets the stylus for play start.
2. At the end of the disc, the Tone Arm will return to arm rest and again be set to continue operation over and over until the Control Lever is brought to PLAY/CUT position manually to cut power of the unit.  
To manually lift Tone Arm, set Tone Arm Lifter Lever toward rear of player (manual) position. This will raise the stylus. For re-setting, move stylus by hand to desired play position and again set Tone Arm Lifter Lever to forward (automatic) position. The stylus will then be lowered and play will continue.
3. To cut power of the unit during play, bring Control Lever to PLAY/CUT position for about 0.5 seconds, then release. The Tone Arm will return to arm rest and the power of the unit will be cut.

## MAINTENANCE

**VOLTAGE & CYCLE CONVERSION (CEE and CSA Models not equipped with this facility)**

### Voltage

The AP-005 is equipped with a Voltage Selector located on the turntable mount. Voltage is pre-set at the factory according to destination, but the operator is requested to confirm setting prior to turntable installation. If necessary, unscrew bracket holding screw, remove bracket and set to correspond with area voltage.

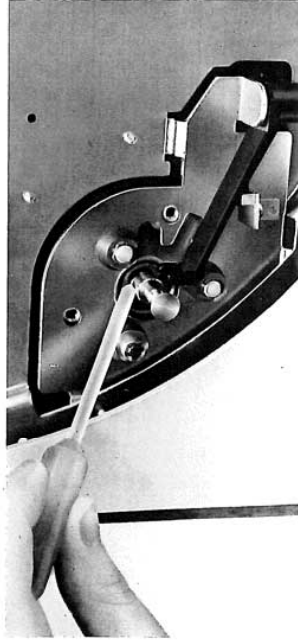
- \* A sticker on the turntable mount will indicate the delivered voltage setting.

### Cycles

50 or 60 Hz setting is determined by the size of the capstan. The capstan is installed at the factory to correspond with area cycles. When cycle change is required, unscrew capstan holding screw with the small standard accessory screw driver and replace capstan with alternate standard accessory capstan.

- \* A sticker on the turntable mount will indicate the delivered cycle setting.
- \* Disconnect power cord prior to Voltage and Cycle Conversion.

## LUBRICATION



Your AP-005 is oiled prior to delivery, but lubrication about once per year (every 1,000 performance hours) is recommended.

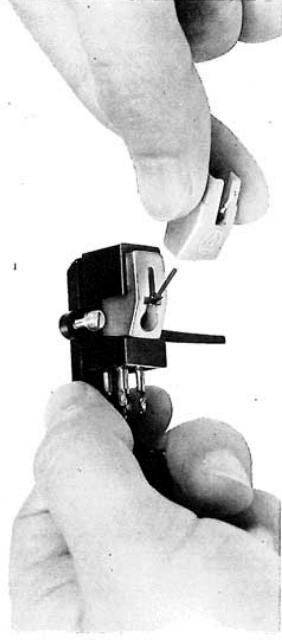
1. Remove turntable from turntable mount.
2. Apply 2 or 3 drops of oil between the base of capstan and motor metal as shown in the figure. Should oil get on the mount, wipe off immediately with a clean cloth.

## STYLUS MUST BE KEPT CLEAN

As dust or other foreign matter adhering to the stylus or cartridge causes stylus and disc damage as well as deterioration of tone quality, the stylus must be kept clean. Clean gently with a very soft brush. Care must be taken not to touch or jar the stylus as it may be irreparably damaged.

- \* Place guard over stylus when not in use.

## WORN STYLUS



If the stylus is worn or the disc damaged, distorted or uneven sound will prevail during playback. If the stylus appears to be worn, replace with an ATS-11 or a channel stereo stylus for CD-4 use.

## DRIVE BELT

Because the belt is loosely fitted for precision speed and may slip off if the turntable is held while it is rotating, this should definitely be avoided. Should the belt slip off of the turntable, it may be damaged, causing inaccurate speed.

## HOWLING

Howling during playback is most often caused by improper speaker placement. If the speakers are too close to the AP-005, the stylus will pick up their vibration. Also avoid placing the turntable on top of the speakers.

## INDUCED HUMMING

The cartridge employed in the AP-005 is highly sensitive and is susceptible to the influence of the surrounding magnetic field. Thus, care must be taken not to place the unit within the pick-up range of motor driven appliances such as an electric fan, household appliances, etc. When connecting the turntable and amplifier, place the turntable in the opposite direction of the amplifier's transformer to avoid pick up of noise generated by the amplifier.

## STANDARD ACCESSORIES

45 r.p.m. Adapter	(1)
Oil	(1)
Screw Driver	(1)
Sub-Weight	(1)
Connection Cord	(1)
Alternate Capstan	(1)
Operator's Manual	(1)



## Specifications for Turntable

### Model AP-005

Turntable .....	300 mm aluminium alloy die-cast turntable
Drive System .....	Belt drive
Motors .....	(2) One 4-pole hysteresis synchronous motor for turntable drive and a geared motor for tone arm drive
Speed .....	33-1/3 and 45 rpm
Wow & Flutter .....	0.05% WRMS
Signal to Noise Ratio .....	Better than 52 dB
Weight .....	1.1 Kgrams
Tone Arm .....	Static balanced type stainless steel tubular arm with inside force canceler & lateral balance weight
Arm Length .....	220 mm
Stylus Pressure Adjustment Range ...	0 to 3 grams
Applicable Cartridge Weight .....	4 to 8 grams (8 to 12.5 grams using sub-weight)
Arm Lifter .....	Oil damped
Overhang .....	15 mm
Shell Weight .....	13.5 grams
Cartridge .....	VM (dual magnet type) Audio Technica model AT-11 with 0.7 mil spherical diamond stylus
Frequency Response .....	15 to 25,000 Hz
Output Voltage .....	4 mV (1 KHz, 50 mm/sec)
Channel Separation .....	20 dB (1 KHz)
Optimal Stylus Pressure .....	2 grams
Required Load Impedance .....	47 to 100 K ohms
Weight .....	5.5 grams
<b>General Specifications</b>	
Power Requirements .....	CSA models: 120 V, 60 Hz CEE models: 220 V, 50 Hz Other models: 110 to 120 V/220 to 240 V, 50/60 Hz (Switchable)
Dimensions .....	440(W) x 128(H) x 358(D) mm (17.4" x 5.0" x 14.1")
Weight .....	7.6 Kg. (16.7 lbs)

\* For improvement purposes, specifications and design are subject to change without notice.

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