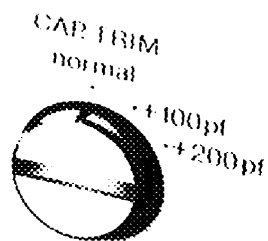
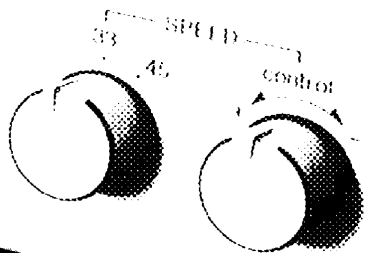


herman/kardon

120

owner's manual



Thanks and congratulations on
your purchase of the T20 Semiautomatic Turntable.
In order to make the best use of its features and performance,
please read the owner's manual before you use the turntable. After
you have used it, keep it in a safe place, for future reference
in case of suspected malfunction or other need.

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WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE
TO RAIN OR MOISTURE.

Features

- **Low-Mass Straight Tonearm**

This highly sensitive tonearm ensures perfect tracking by even the highest of high compliance cartridges.

- **An Offset Angle of 25.5 Degrees**

In order to reduce tracking error to the minimum, we have adopted the Harman Kardon headshell with its uniquely designed offset angle.

- **Capacitance Trim**

A selector has been provided so that the load impedance can be adjusted to ensure the optimum cartridge performance.

- **Uses Miniature DC Servomotor With Frequency-Generator Servocontrol**

Pitch control is available at both 33 and 45 rpm, and the adoption of belt drive ensures high signal-to-noise ratio.

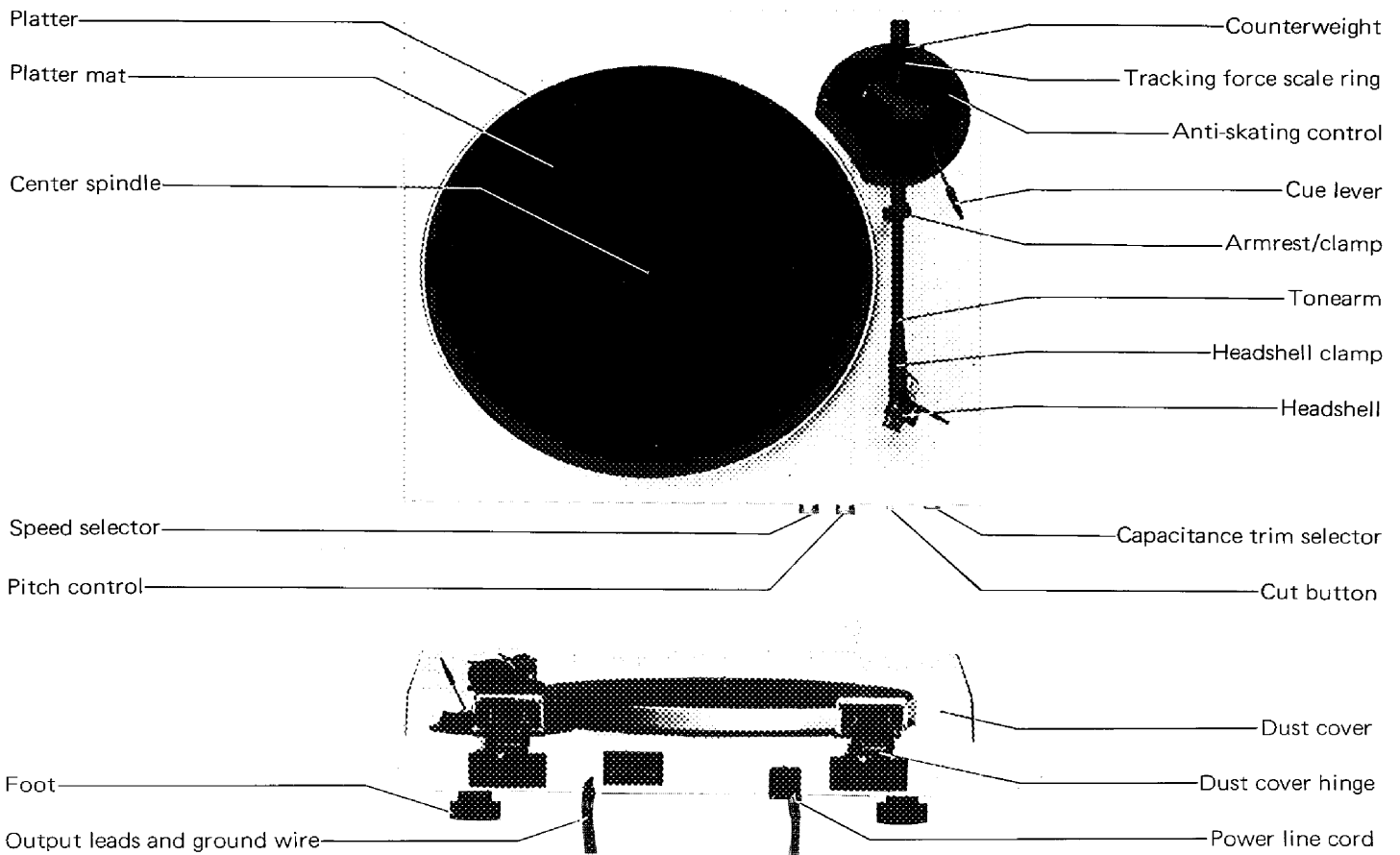
- **Anti-Vibration Cabinet**

High density chipboard with outstanding acoustic properties is used for the cabinet.

- **Platter Mat**

This mat is fully thick enough to absorb vibrations and prevent them reaching the disc.

Components



General Instructions

Use 120V AC

This turntable is designed for operation with 120V AC. Use only domestic AC outlets or the AC convenience outlet of your amplifier or receiver. Do not connect the turntable to an outlet supplying a higher voltage, it can create a fire hazard.

Handle the Power Line Cord Gently

- Do not disconnect the plug from the AC outlet by pulling the cord; always pull the plug itself. Pulling the cord may break the connection.
- If you do not intend to use your turntable for any considerable length of time, disconnect the plug from the AC outlet.
- Do not place furniture or other heavy objects on the cord, and try to avoid dropping heavy objects upon it. Not only may the cord be damaged, it can also cause short circuits with a consequent fire hazard.

*While you are connecting your turntable to the rest of your high fidelity system, please disconnect the power line cord from the AC outlet.

Place of Installation

- Place the turntable on a firm and level surface.
- Avoid installing your turntable under the following conditions:
 - ▶ Moist or humid places (bathroom or kitchen).
 - ▶ Places exposed to direct sunlight or close to heating equipment.
 - ▶ Extremely cold locations such as those in the direct draught from an air conditioner.
 - ▶ Places subject to vibrations from your speakers, the opening and closing of doors, or the passage of people walking by.

Cleaning

Any accumulated dirt on your turntable should be wiped off with a clean, soft dry cloth. Stubborn dirt can be wiped away with a cloth dampened with a mild soap or detergent. Afterwards, wipe with a clean dry cloth. Do not use alcohol, thinners, benzene, insecticides, etc. or other volatile agents as these may cause the paint finish to peel.

Assembling the Turntable

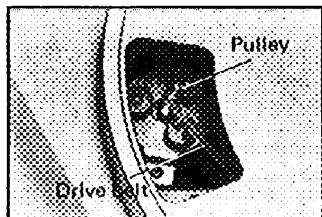
Remove the turntable and the dust cover from their packing. The headshell, counterweight, and other small items will be found within the polystyrene foam cushion packing.

Mounting the Platter

Place the platter gently and carefully over the center spindle. Push down gently and vertically. If you try to mount the platter at an angle or use undue force, this can damage the center spindle or the hole in the platter.

Threading the Belt

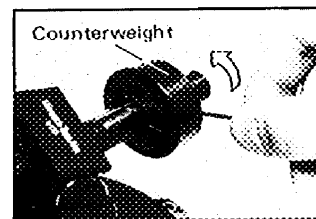
Rotate the platter so that the hole is over the pulley. Extend the drive belt which is in position around the platter, and place it in the groove on the pulley. Then, place the platter mat on the platter.



Counterweight

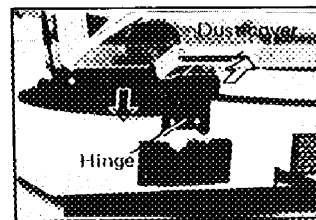
First clamp the tonearm on the armrest and move the cue lever forward.

Thread the counterweight onto the rear of the tonearm by turning it in the direction of arrow as shown. If you find it will not go onto the arm, use a small allen wrench to loosen the screw in the counterweight.



Dust Cover

Insert the two tongues of the hinges attached to the dust cover into the sockets on the turntable.



Note:

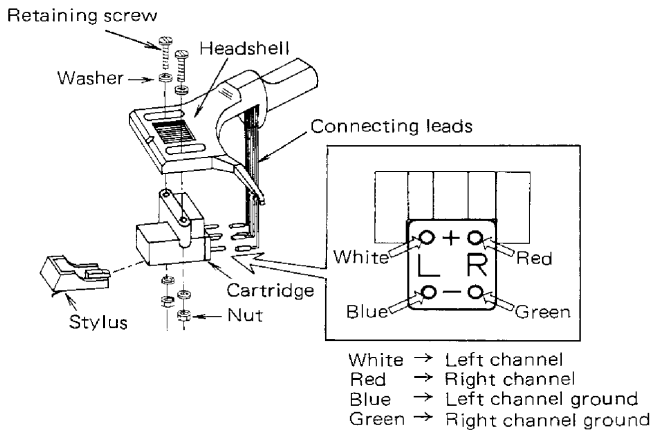
- Do not apply undue force to rotate the platter. This can damage the drive belt. Also, if you do not intend to use the turntable for some time, particularly in winter, remove the drive belt from the pulley.
- If you are moving house, etc., remove the headshell and counterweight and secure the tonearm with the tonearm clamp so that it does not move. Also remove the platter. Again, even if you are only moving the turntable from place to place within your home, do be sure to clamp the tonearm.

Connecting the Headshell and Cartridge

Attaching the Cartridge

Since this turntable is not equipped with a cartridge, use a cartridge which has a weight between 2.5 and 8 g. Only use cartridges in the headshell provided.

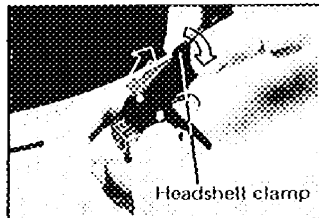
Slightly secure the retaining screws to hold the cartridge and then connect the leads to the cartridge pins.



Above figure shows an example of connection of the leads to the cartridge. Please read the owner's manual of the cartridge and connect the leads accordingly.

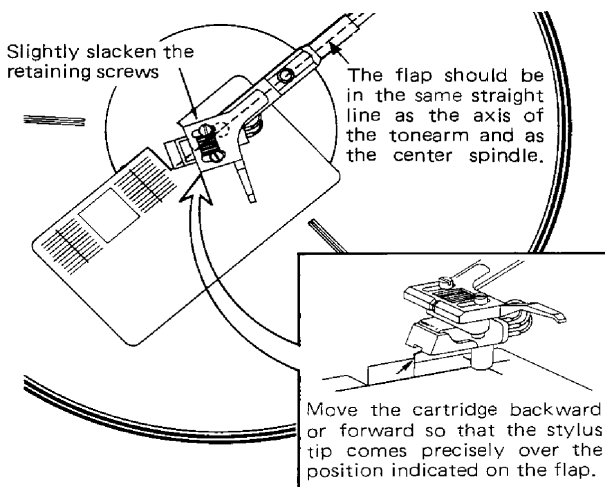
Attaching the Headshell with Cartridge

The headshell with cartridge is attached to the tonearm by first pushing it fully in and then tightening the headshell clamp. Do not remove the stylus guard before you have secured the headshell in position.



Overhang Adjustment

1. Place the accessory tracking angle gauge on the center spindle and raise the flap.
2. Be sure to remove the stylus guard when adjusting the overhang.
3. Move the tonearm directly over the center spindle. Line up the raised flap on the gauge with the center spindle and the tonearm base. Gently move the cartridge backward or forward in the headshell so that the stylus tip lines up with the corner of the flap.



Tracking Angle Adjustment

1. Check to be sure that the overhang adjustment has been completed.
2. Now move the tracking angle gauge until it is in the same position with respect to the tonearm as that shown in Figure A. Place the stylus over the tracking angle setting point with keeping stylus guard attached.
3. Without changing the stylus position, turn the cartridge so that its front edge is parallel with the lines on the gauge.
4. Now move it so that it is in the position shown in Figure B and check that the cartridge is still parallel with the parallel lines as it was in step 3 above. If it is not parallel, then repeat step 3 and 4 alternately until the cartridge is parallel in both cases.
5. When the above adjustment is completed, then tighten the screws that attach the cartridge to the headshell fully.

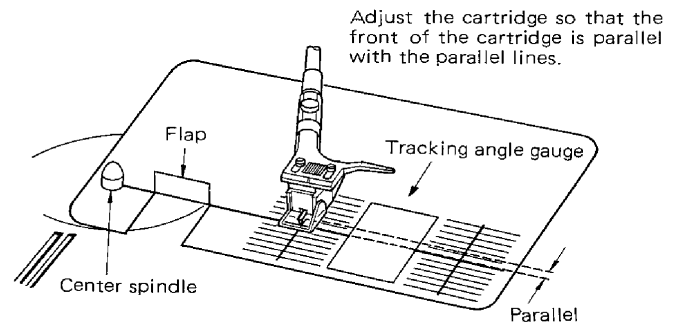


Figure A

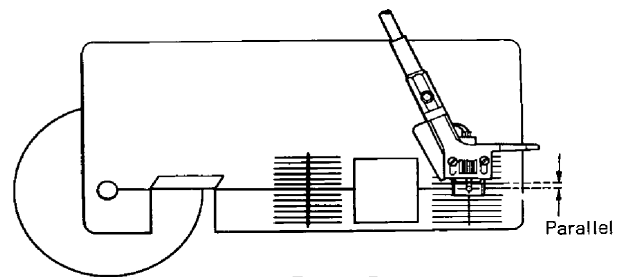


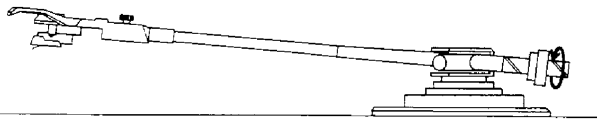
Figure B

Adjusting the Tonearm

Adjusting the Tracking Force and the Anti-skating Device

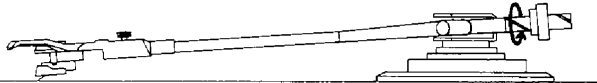
1. Remove the tonearm from the armrest.
2. Adjust the counterweight to balance the tonearm horizontally.

• Rear of Tonearm too Heavy



Turn the counterweight in the direction of the arrow, moving it forward.

• Headshell too Heavy



Turn the counterweight in the direction shown, moving it toward the rear.

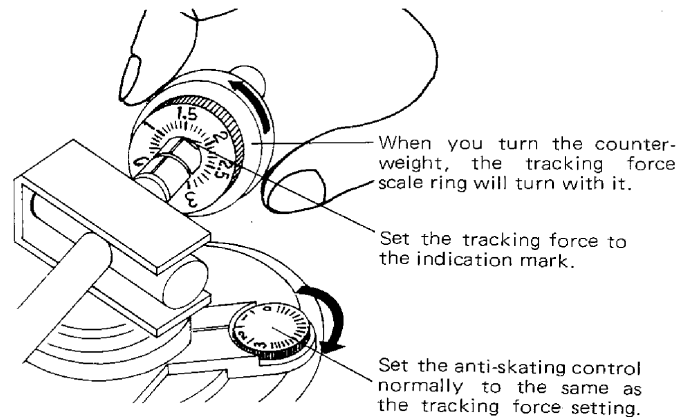
• In Balance



Caution:

While you are adjusting the zero balance, hold the tonearm gently to prevent the stylus from coming into contact with anything.

3. Now turn the tracking force scale ring. The "0" mark should be brought opposite the indication mark. Be very careful not to move the counterweight and thus disturb the zero balance when making this adjustment.
4. Now set the recommended cartridge stylus tracking force by turning the counterweight to the required figure on the scale ring.
5. Finally, set the anti-skating control so that it indicates the same tracking force as selected for the cartridge stylus.



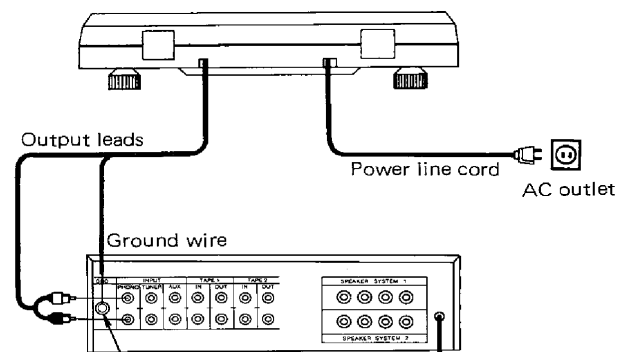
Connections

Only make the connections with your amplifier or receiver unplugged and/or switched off.

1. The plugs on the end of the output lead from this turntable should be plugged into the phono terminals of your amplifier or receiver. They should be pushed firmly and fully in. The white plug is for the left channel and the red plug is for the right channel.
2. Attach the ground wire which comes from the turntable with the output lead to the ground terminal of your amplifier or receiver.
3. Connect the power line cord to an AC convenience outlet of your amplifier or receiver or into an AC outlet in the room.

Note:

- Make sure that the output leads are not trapped underneath the turntable, the amplifier or receiver. This can damage the leads and cause open circuits.
- Be sure to attach the leads to the MM or MC phono input terminals of your amplifier or receiver in accordance with the type of the cartridge (MM or MC).

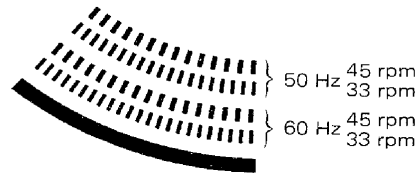


With certain cartridges, it may be better from the point of view of reducing hum not to connect the ground lead to the ground terminal.

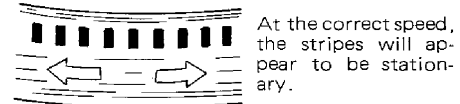
Adjusting the Pitch Control

This unit is provided with a fine control of the platter speed.

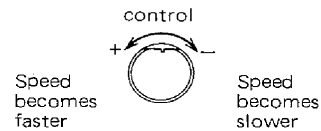
1. Place the stroboscope disc provided with the turntable on the platter mat.
2. Place the speed selector in the 33 or 45 position in accordance with disc speed.
3. Bring the tonearm over the platter mat with the cue lever lifted, and the platter will automatically begin to rotate. Then observe the striped markings on the stroboscope disc under fluorescent light.
4. Adjust the pitch control until there is no apparent movement of the markings. Turn the control to the left and the marks will move to the left, turn it to the right and they will move to the right.



Make the adjustment for the stripes corresponding to the frequency of AC power source in your area (50 or 60 Hz).

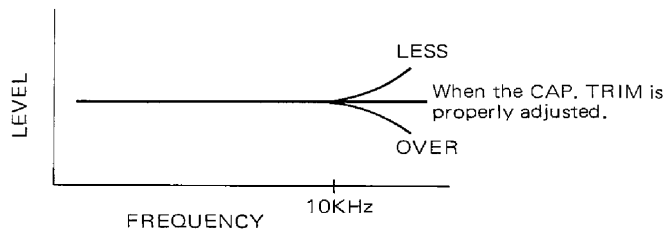


At the correct speed, the stripes will appear to be stationary.

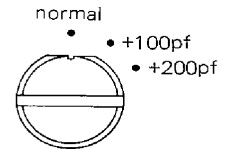


Capacitance Trim

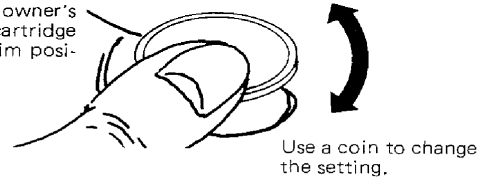
The capacitance trim is a capacitance selector switch that enables your cartridge to deliver its optimum performance. Each cartridge had its own characteristic capacitance, and the output leads used to connect the cartridge to the amplifier or receiver also have their own capacitance. Only when these two capacitances are at their optimum values can the cartridge transfer its output and retain its optimum frequency response to the amplifier.



| Cartridge capacity | Trim position |
|--------------------|---------------|
| Less than 300pF | normal |
| 300 to 400pF | +100pf |
| Over 400pF | +200pf |

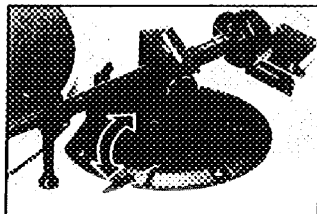


- Please read the owner's manual of the cartridge and adjust the trim position accordingly.



Operating

1. Turn down the volume of amplifier to the minimum position.
2. Turn on your amplifier or receiver and select the phono function according to the owner's manual of the amplifier or receiver.
3. Set the speed selector and pitch control to correct speed.
4. Select the disc and place it on the platter mat. If this is an extended play disc, you will need to use the center hole adaptor provided with the turntable.
5. Bring the tonearm over the disc and the turntable will automatically begin to move.
6. Flip the cue lever forward and down and the tonearm will be gently lowered until the stylus is on the disc surface.



7. Slowly raise the volume of amplifier until you can hear the music from the speakers.
8. Should you wish to terminate audition before the end of the disc, press the cut button. The tonearm will automatically rise and the platter will stop turning.
9. The tonearm will automatically lift and return to the armrest when the disc ends and the platter will stop, and power is also switched off.

