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

Technics
by Panasonic

DIRECT DRIVE PLAYER SYSTEM

SL-1100A

OPERATING INSTRUCTIONS

Read these instructions completely, before operating this set.
We want to thank you for selecting the SL-1100 DIRECT DRIVE PLAYER SYSTEM. To receive optimum performance from the SL-1100, we recommend that you read these operating instructions carefully.

PARTS IDENTIFICATION

OPERATION AND FUNCTION OF CONTROLS

(TURNTABLE SECTION)

1. Rotor (See Fig.1-1)
   This unit uses a direct drive motor. Therefore, the rotor, which is the rotating part of the motor, is connected directly to the turntable platter. The spindle of the motor and the shaft of the turntable platter are the same. For this reason, to maintain the high performance described in the specifications, it is not desirable to apply a large amount of external force to the rotor and the spindle of the motor. The rotor is, therefore, clamped securely to protect the delicate and important parts during transportation.
   Be sure to remove these fittings A carefully, and save them for future use, as when, for example, the player must again be transported.

2. Stop Button (See Fig.1-0)
   The rotor of the motor is constructed so that it cannot be removed in order to maintain its high performance for a long time. Do not attempt to remove the removal prevention fitting B for the rotor.

3. Pilot Lamp (See Fig.1-9)
   Set the “speed selector” to the desired position (33 or 45), depending upon the speed of the record to be played. The pilot lamp will be lighted. The turntable platter will not rotate unless you push the “START” button.

4. Start Button (See Fig.1-0)
   Push the “START” button and the turntable platter will rotate.

5. Stop Button (See Fig.1-9)
   Push the “STOP” button when you want to stop the rotation. The turntable platter will continue to rotate for a short time because of its large inertial force.

6. Variable Pitch Controls (See Fig.1-9)
   Adjust the “variable pitch controls” if necessary. These are designed to provide adjustment of the selected speed by 5%. Select the speed of the turntable platter by setting the “speed selector” to the desired position. The rotating turntable platter when illuminated by conventional fluorescent lamp or by neon lamp may show movement of the marks on the stroboscopic disc, if so, adjust the “variable pitch controls” until the stroboscopic marks are stationary.

7. Special Oil (See Fig.1-4J)
   A special oil has been used to maintain the high performance efficiency of this set by forming a uniform film of oil over the parts. For this reason, use only the oil included with this set for its lubrication.

8. Oil Hole (See Fig.1-0)
   This unit uses a direct drive motor. Therefore, the rotor, which is the rotating part of the motor, is connected directly to the turntable platter. The spindle of the motor and the shaft of the turntable platter are the same. For this reason, to maintain the high performance described in the specifications, it is not desirable to apply a large amount of external force to the rotor and the spindle of the motor. The rotor is, therefore, clamped securely to protect the delicate and important parts during transportation.

9. Output Terminals (See Fig.1-0, Fig.3-1)
   Connect the pickup cords provided in this set to the player output terminals.

   RED (R) ———> B Channel
   WHITE (L) ———> L Channel
   BLACK (U shaped) ———> E or GND (Pickup Earth)

10. Screw Holes (For Arm Panel) (See Fig.1-0, Fig.2-1)

11. Turntable Platter (See Fig.1-0)
   The turntable platter is a 35 cm (13-25/32") ultra-large diameter 2kg (4.4 lb) weight and has inertial moment of 320kg·cm² (109.5 lb-in²). Each turntable platter is dynamically balanced.

12. Player Cabinet (See Fig.2-0)

13. Bottom Cover (See Fig.2-0)

14. Audio-Insulated Legs (See Fig.2-0)
   The audio-insulated legs are designed to eliminate vibration entirely by using special materials inside them. Adjust the height and level of the player system by turning the legs.

15. Output Terminals (See Fig.2-0)
   Connect the pickup cords provided in this set to the player output terminals and connect the same channel to the amplifier.

   R (RED) ———> B Channel
   L (WHITE) ———> L Channel
   E (U shaped) ———> E or GND

16. AC Outlet (See Fig.2-0)

17. AC Power Cord (See Fig.1-0)

18. Dust Cover (See Fig.1-0)
FEATURES

(TURNTABLE SECTION)

1. 35 CM (13-25/32") ULTRA-LARGE DIAMETER TURNTABLE PLATTER
35cm (13-25/32") ultra-large diameter, and 2kg (4_4 lb) heavy weight turntable platter has an inertial moment of 320 kg-cm² (109.5 lb-in²) and the turntable platter has been dynamically balanced. Around the turntable platter are stroboscope marks which are used to check its speed.

2. DIRECT DRIVE MOTOR
There is no "wow" or "flutter" caused by transmission mechanism. There is no vibration because this motor has no high-speed rotation mechanism. The rumble is extremely low.

3. ELECTRONIC COMMUTATOR BRUSHLESS DC MOTOR
The DC motor is not affected by fluctuations of the power supply frequency. Starting rotation power is large, with complete stability of speed reached within one-half rotation at 33-1/3 r.p.m. Since there is no electro-magnetic hum, the signal-to-noise ratio (rumble) is excellent. And, because the motor includes an electronic commutator, starting is perfectly accurate. There is, therefore, no speed instability or brush deterioration as is often noted in brush commutators, no pulse noise generated by brush sparking and no sound caused by rubbing of brushes.

4. ROTATION OF THE TURNTABLE PLATTER CAN BE STOPPED AT ANY TIME
This is a feature which is not found in players which have speed reduction and transmission devices such as a belt or idler. If such stopping is attempted on ordinary players, the belt or idler will soon deteriorate and efficiency soon becomes poor. In this player system, such stopping causes no problem other than a slight increase of the motor current, which is not really a problem.

5. ELECTRONIC STABILIZATION CONTROL
Because this set includes special circuitry to stabilize the speed electrically, speed stability is extremely good.

6. ELECTRICAL SPEED CHANGE
There is no mechanism to change the position of the belt or idler. There is, therefore, no "wow" or unwanted speed change.

7. NO EFFECT FROM FLUCTUATIONS OF POWER SUPPLY FREQUENCY OR VOLTAGE
Since the motor is the DC type, the rotation speed does not depend on the power supply frequency. And, because a DC-stabilizer is used, the set is not affected by changes of the power supply voltage, even if the fluctuation is large.

8. SEMI-PERMANENT HIGH PERFORMANCE
Unlike previous players, there is no reduction or transmission mechanism, such as a belt or idler. The motor rotates the turntable platter directly, at an ultra-low speed. Wear of parts is therefore, reduced to the extreme minimum and high-performance efficiency can be maintained semi-permanently.

9. POWER CONSUMPTION IS 1/100TH THAT OF ORDINARY MOTORS
Motor power consumption is only 0.1W, which is less than 1/100th that of a conventional AC motor. (There is a power consumption of about 4W, in addition to the drive, on other electronic circuitry).

(TONEARM SECTION)

1. DETACHABLE ARM PANEL
Arm panel can be detached by unscrewing just in case you might decide to change the tonearm.

2. EASY BALANCING AND STYLUS PRESSURE CONTROL
By a smooth rack-and-pinion type movement, the balance weight can be adjusted easily. After adjusting the balance, pull the outside of the stylus pressure knob outward, and the scale will be reset automatically to the zero position. Now you can adjust the amount of stylus pressure you desire by directly reading the scale.

3. FEATURE-TOUCH CUEING
Feather-touch cueing is viscous-damped in both directions for gentle decent and ascent. The tonearm will be set down exactly on the spot you desire.

PLACEMENT OF PLAYER

1. Use the player system in a stable and horizontal position, where there is little or no vibration.
2. Use the player system as far away from the speakers as possible and isolate the player system from sound radiation from them.
3. Avoid placing the player excessively hot or cold places, particularly near heaters.

AUXILIARY PARTS

- DUST COVER
- SPECIAL OIL
- PICKUP CORDS
- POLISHING CLOTH
- (-) TIP DRIVER
- SCREWS (for cartridge)
- ADAPTOR
- AUXILIARY WEIGHT
High quality universal tonearm is designed especially for direct drive player system. Most remarkable features of this tonearm are easy operation, durable structure and automatic reset mechanism of stylus pressure control. Therefore, adjustment of zero balance and stylus pressure can be easily and rapidly accomplished.

**TONEARM SECTION**

- **HEAd SHELL (See Fig.3- FJ, Fig.4)**
  Insert the head shell in the end of the tonearm, and secure firmly by turning the locking nut of the tonearm in the direction of the arrow, as shown in the picture. Be sure to connect the lead wires to the cartridge terminals according to the instructions included with the cartridge. The cartridge should be inserted in the head shell so that the spacing between the stylus tip and the plug is 52mm (2-1/16") as shown in the picture.

- **LOCKING NUT (See Fig.3- FJ)**

- **ANTI-SKATING FORCE DEVICE (See Fig.3- FJ, Fig.5)**
  Skating force is frictional force caused by contact between the tip of the stylus and the record groove, and is applied to the stylus as a side pressure depending upon the relation of the geometrical position of the tonearm. This force results in an unbalance of the contact pressure between the stylus tip and each groove wall of the record, an increase of distortion, deterioration of the performance, a decrease of separation characteristics and abnormal wear of the stylus tip and the record grooves. For this reason, it is necessary to compensate this skating force.

  The anti-skating force mechanism performs this compensation function. The quantity of anti-skating force is in proportion to the stylus pressure and, therefore, it should be adjusted according to the stylus pressure. Turn the adjustment knob, as shown in the picture, to the same number as stylus pressure scale indicates.

**SPECIFICATIONS**

**TURNTABLE SECTION**

<table>
<thead>
<tr>
<th>Type</th>
<th>Direct drive player system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turntable platter</td>
<td>Aluminium die-cast, 35cm (13-7/8&quot;) diameter</td>
</tr>
<tr>
<td></td>
<td>320 kg-cm² (109.5 lb-in²) inertial moment, 2 kg (4.4 lb) weight</td>
</tr>
<tr>
<td>Turntable speeds</td>
<td>33-1/3 and 45 r.p.m.</td>
</tr>
<tr>
<td>Motor</td>
<td>20 - 15 poles ultra low-speed electronically commutated brushless DC motor</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC 120V 60Hz</td>
</tr>
<tr>
<td>Power change method</td>
<td>4W</td>
</tr>
<tr>
<td>Speed change method</td>
<td>Electronic change</td>
</tr>
<tr>
<td>Variable pitch control</td>
<td>Individual adjustment by variable resistor, ±5% adjustment range</td>
</tr>
<tr>
<td>Wow and flutter</td>
<td>0.03% WRMS</td>
</tr>
<tr>
<td>Rumble</td>
<td>-50 dB (DIN A) -70 dB (DIN B)</td>
</tr>
<tr>
<td>Build-up time</td>
<td>1/2 rotation at 33-1/3 r.p.m.</td>
</tr>
<tr>
<td>Dimensions</td>
<td>510 x 39.0 x 19.5 cm (W x D x H) (20-1/16&quot; x 15-3/8&quot; x 7-11/16&quot;)</td>
</tr>
<tr>
<td>Weight</td>
<td>13.0 kg (28.7 Ib) with dust cover</td>
</tr>
</tbody>
</table>

**TONEARM SECTION**

<table>
<thead>
<tr>
<th>Type</th>
<th>EPA-110 Directly reading stylus pressure adjustment, static-balance type, universal head shell, anti-skating force device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective length</td>
<td>205 mm (9-1/4&quot;)</td>
</tr>
<tr>
<td>Overhang</td>
<td>14mm (9/16&quot;)</td>
</tr>
<tr>
<td>Tracking error angle</td>
<td>Within ± 1.75°</td>
</tr>
<tr>
<td>Stylus pressure</td>
<td>0 – 5 g</td>
</tr>
</tbody>
</table>

Specifications, designs and other details are subject to change, without prior notice.