

SERVICE MANUAL



marantz

model 6200

Turntable

MARANTZ MODEL 6200 TURNTABLE

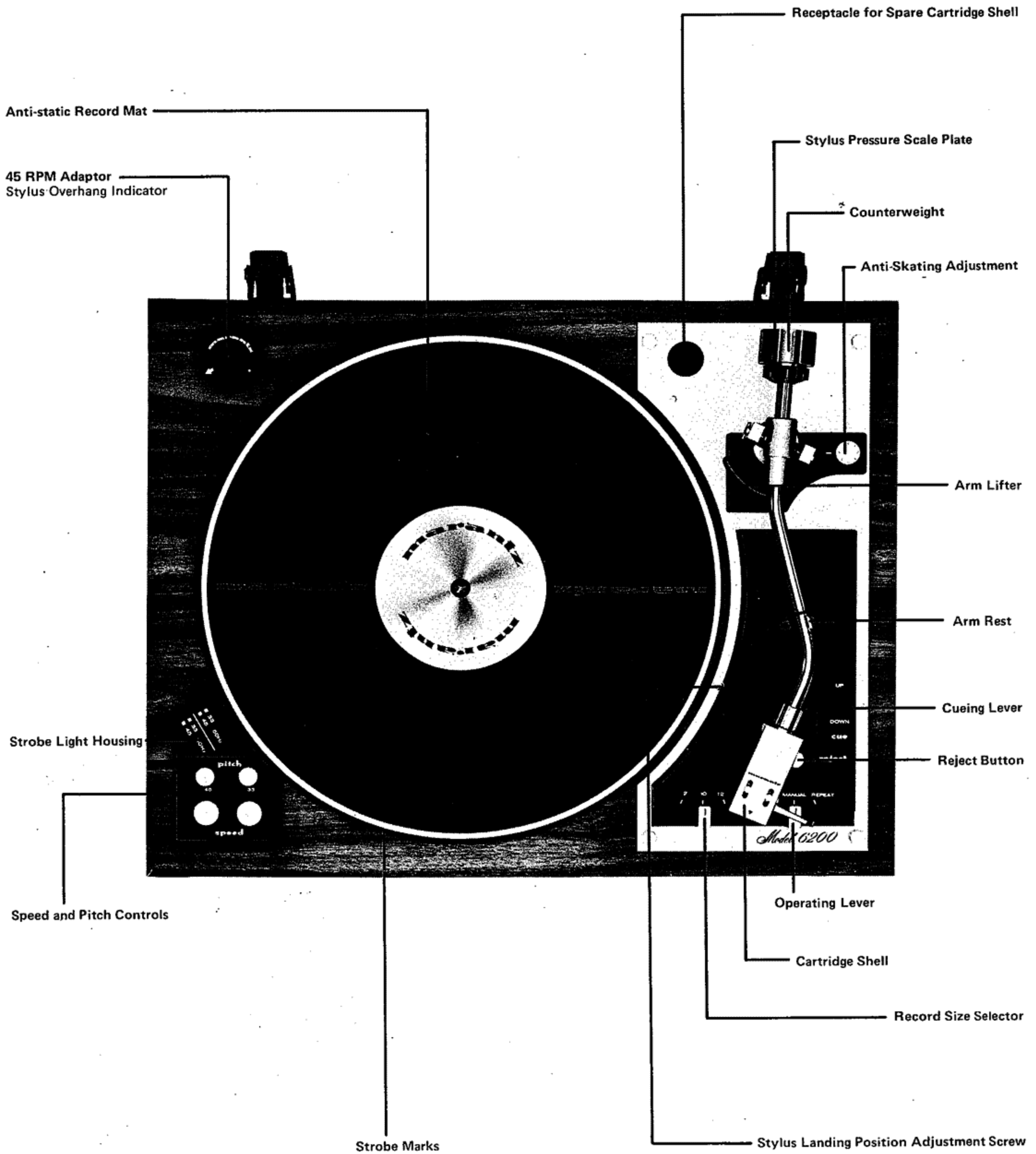


Figure 1. Main Controls and Adjustments

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1. PERFORMANCE SPECIFICATIONS

GENERAL

Speeds: 33, 45 rpm
Speed Control (PITCH) range: 8% ($\pm 4\%$)
Drive System: Belt Drive
Drive Motor: AC Servo-Controlled
Platter Weight: 1.8 lbs. (800g)
Platter Diameter: 11-13/16 in. (300 mm)
Rumble (DIN): -60 dB
Wow and Flutter: 0.06% (WRMS)
Power Requirements: 120 VAC, 60 Hz (USA and
Canda Model)
110-120/220-240 VAC
50 Hz (European Model)
Power Consumption: 8.5 Watts
Dimensions: 17-5/16 in. Wide x 6-1/2 in.
High x 13-3/4 in. Deep.
(440mmx165mmx350mm)
Weigth: 18.7 lbs. (8.5 kg) Unpacked
23 lbs. (10.4 kg) Packed for
Shipment

TONE ARM

Length: 8-25/64 in. (213 mm)
Overhang: 14 mm
Tracking Force
Adjustment Range: 0 – 4.0 g
Anti-Skating Force
Compensation Range: 0.5–3.0 g (0.5 g Click Type)
downloaded from www.vinylengine.com

2. TONE ARM ADJUSTMENTS

2-1. STYLUS TRACKING ANGLE

When setting up the arm for playing, it is important to check the tracking angle, because improper tracking angle will cause distortion and premature record wear. Most phono cartridges are designed so that when the cartridge is mounted on a surface parallel with the record surface, the stylus will track at the proper angle (see Figure 2). The surface inside of the cartridge shell (against which the cartridge is mounted) is parallel to the record surface when the stylus is touching the record surface. Visually check the angle of the tone arm in actual playing position. If it is not level and parallel with the record surface, then it is necessary to change the height of the tone arm by using the spacers supplied with the phono cartridge. This, of course, requires removing and remounting the cartridge, and some trial and error technique. With most cartridges, no spacers will be necessary.

NOTE: Some cartridges are built so that their bodies are at an angle with respect to their own mounting tabs. No attempt should be made to change this angle. Simply make sure that the cartridge mounting tab surfaces are parallel to the tone arm shell mounting surface before proceeding with the arm height adjustment.

2-2. STYLUS OVERHANG

The Model 6200 Turntable is designed to operate with the least distortion when the tip of the stylus is at a particular distance from tone arm pivot. For this reason, the cartridge shell is slotted, allowing the cartridge with its mounting screws to be slid toward or away from the pivot point. This, in effect, changes the radius of the arc described by the stylus.

Supplied in the accessory kit is a 45 RPM spindle adaptor. The adaptor has been specially marked with an arrow and a cross to aid you in setting the proper stylus overhang. Proceed as follows:

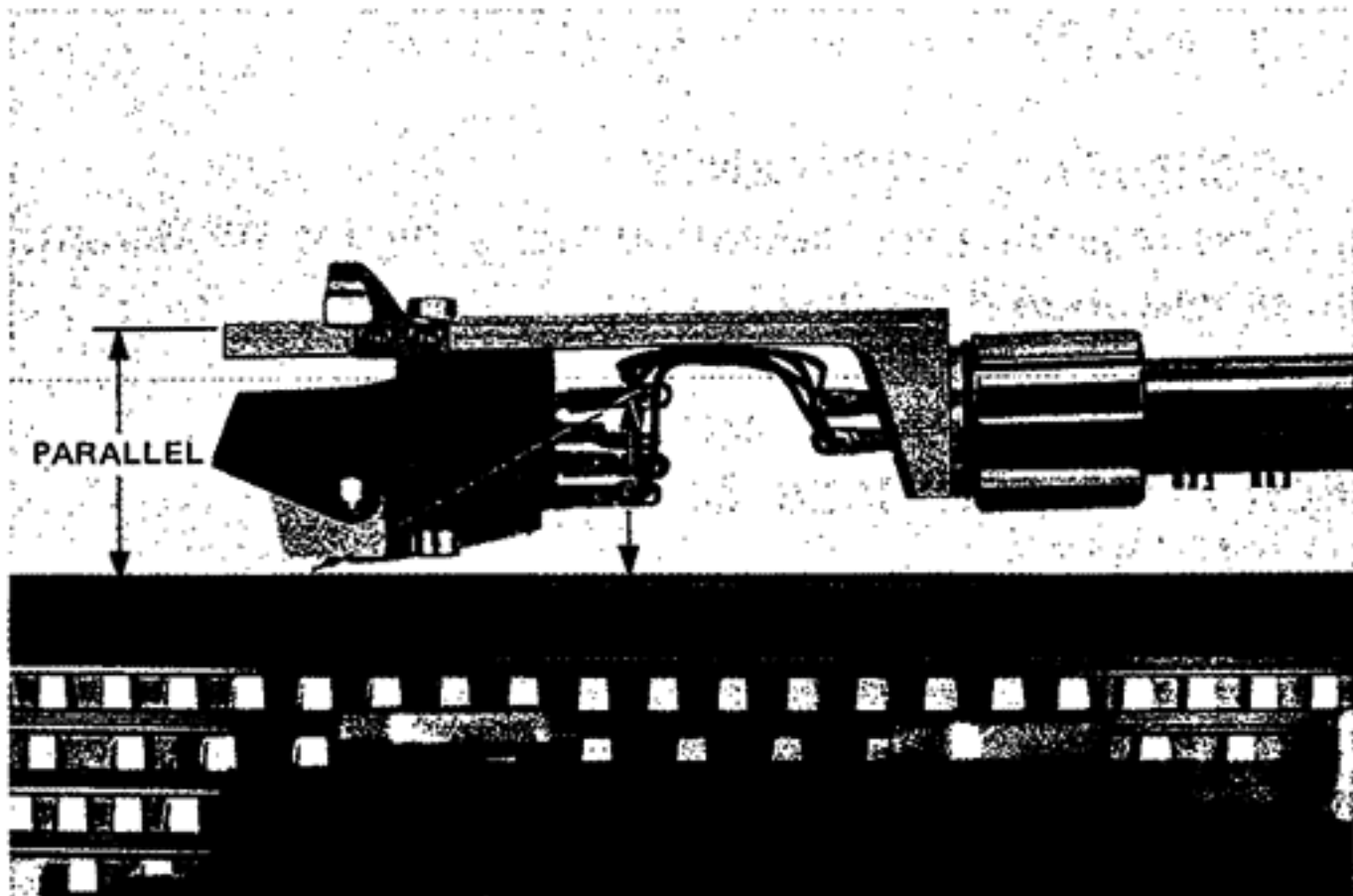


Figure 2. Tracking Angle

1. With the turntable unplugged, place the 45 RPM adaptor on the center spindle with the arrow pointing to the rear of the turntable.
2. Temporarily remove the counterweight from the tone arm.
3. Remove the arm from its arm rest and remove the protective cover (if any) from the stylus.
4. Place the stylus tip over the cross mark on the 45 RPM adaptor. It is all right for the stylus to gently touch the adaptor for checking purposes, but do not exert any downward pressure on it, or the stylus may be damaged.
5. If the stylus does not align with the cross mark, then adjustment is necessary. Place the arm in the arm rest, loosen the cartridge mounting screws, adjust, and measure again.
6. Make sure that the cartridge is installed straight, the sides of the cartridge must remain parallel to the side of the shell.
7. When you are sure the cartridge is in the correct position, place the arm in the arm rest and snug up the mounting screws.
8. Replace the counterweight on the tone arm.

2-3. VERTICAL TONE ARM BALANCE

The adjustable counterweight at the end of the tone arm establishes tone arm balance and stylus tracking force. Since no two types of cartridges weigh the same, the balance and tracking force must be adjusted for each cartridge being used.

First, to establish a point of reference, the entire arm assembly (with cartridge installed) must be balanced. If the cartridge has a removable stylus protector, remove it, (as you would to play a record). Release the tone arm from the arm rest.

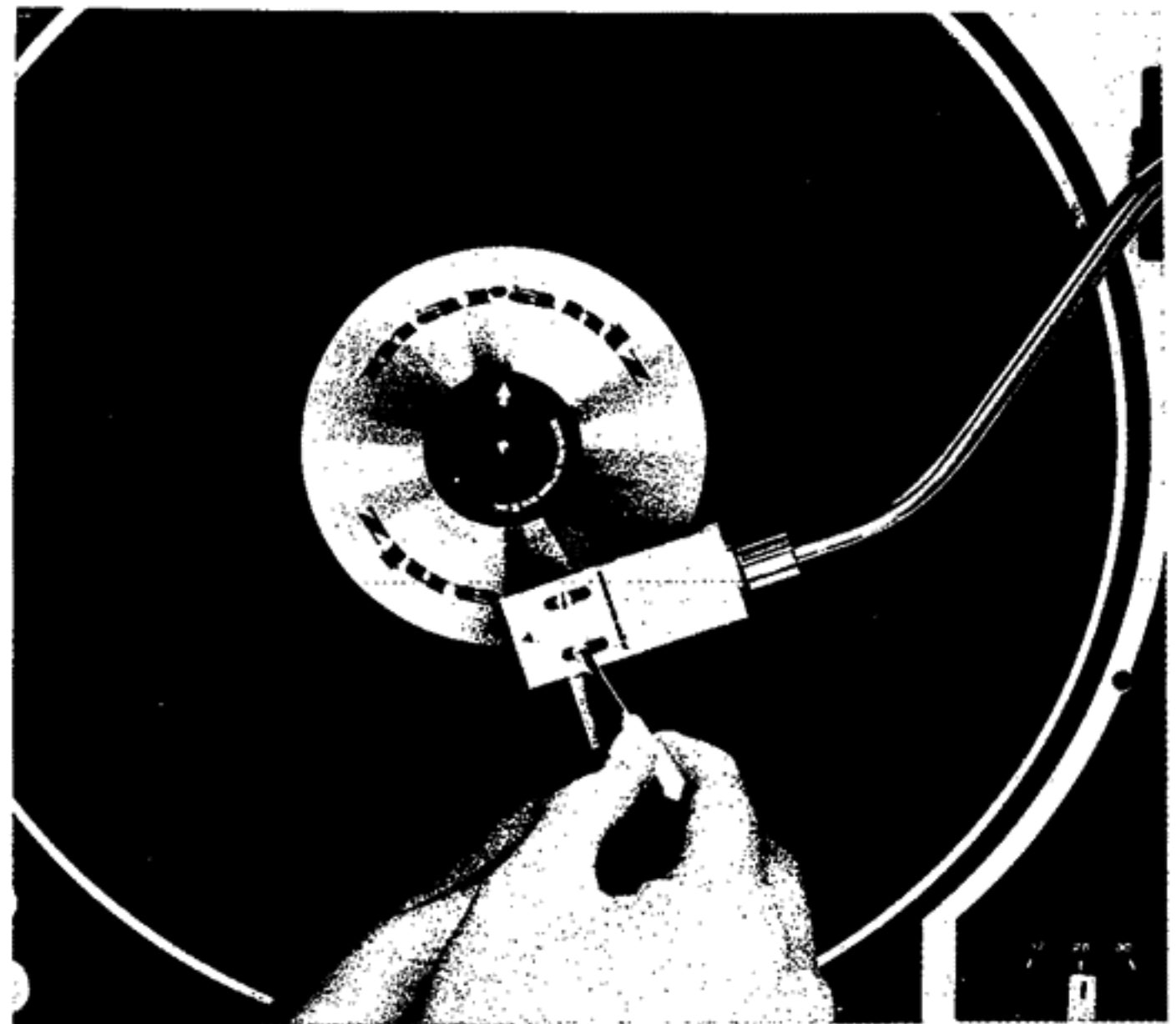


Figure 3. Stylus Overhang Adjustment

To balance the arm, adjust the position of the counterweight by rotating it. A numbered stylus pressure scale plate is located immediately in front of the counterweight. Rotating the scale plate alone does not change the counterweight's position. To change the balance, grasp and turn the counterweight itself.

Adjust the weight so that the arm is level (parallel to the turntable surface) with the cartridge suspended in mid air. Then, without moving the counterweight, set the stylus pressure scale plate to indicate zero. This establishes a reference point for setting the tracking force, which is the next adjustment.

2-4. TRACKING FORCE

For the recommended tracking force, refer to the instructions that accompany the cartridge.

Tracking force, the downward pressure of the stylus against the record, is produced by simply setting the arm off balance in the appropriate direction. That is, the counterweight is screwed inward (toward the arm pivot) until the desired downward pressure is achieved.

The stylus pressure scale plate is in frictional contact with the counterweight, so that they rotate together when the counterweight is turned. The numbers on the scale plate correspond to the tracking force measured in grams. So, if the desired tracking force is two grams, turn the counterweight inward until the stylus pressure scale plate registers 2.

2-5. ANTI-SKATING ADJUSTMENT

The anti-skating mechanism is provided to counteract the natural tendency of the arm to "skate" toward the center of the record as it is being played. The more tracking force used, the more anti-skating force required.

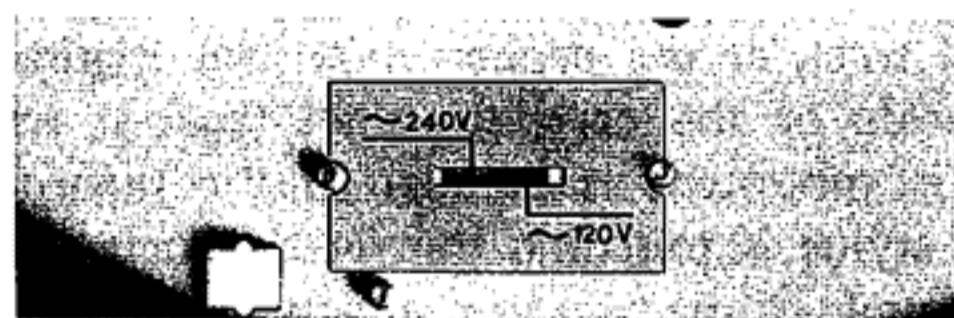
The anti-skating force is adjustable with detented graduations that correspond with the tracking force markings on the stylus pressure scale plate. Set the anti-skating force to the same value as the tracking force.

Place the arm in the arm rest, and secure it with the safety lock.

3. SERVICE NOTES

3-1. HOW TO CHANGE THE LINE INPUT VOLTAGE

Lift the turntable up for removal. Turn the input voltage selector switch to the position of a specified voltage using the supplied screwdriver. Replace the turntable.



3-2. CARTRIDGE WIRE COLOR CODE

Before a cartridge is screwed into the shell, the small clips at the ends of the wires in the tone arm cartridge shell should be pushed onto their corresponding cartridge connection pins.

— TONE ARM CARTRIDGES SHELL —	
— WIRE COLOR CODE —	
RIGHT CHANNEL HOT	RED
RIGHT CHANNEL GROUND	GREEN
LEFT CHANNEL HOT	WHITE
LEFT CHANNEL GROUND	BLUE

The cartridge or its accompanying technical sheet will identify the cartridge connection pins. It may be necessary to slightly compress the terminal clips with your fingers to make them fit snugly on the prongs of some cartridges.

3-3. REPLACEMENT PARTS/TECHNICAL ASSISTANCE

1. REPLACEMENT PARTS

Turntable replacement parts may be ordered by writing to;

MARANTZ COMPANY, INC.
PARTS DEPARTMENT
P.O. BOX 577
CHATSWORTH, CALIFORNIA 91311 USA

2. TECHNICAL ASSISTANCE

Inquires regarding the operation and servicing of Marantz equipment should be directed to;

MARANTZ COMPANY, INC.
TECHNICAL SERVICES DEPARTMENT
P.O. BOX 577
CHATSWORTH, CALIFORNIA 91311 USA

4. ADJUSTING THE PULLEY HEIGHT AFTER REPLACEMENT

If the pulley is replaced, the pulley should be attached at a height by which the upper surfaces of the pulley and the belt are on a same height when the guide is positioned at 33 RPM. Further, you should also try to operate and assure that the belt does not contact with the belt guide.

5. TURNTABLE ADJUSTMENTS

5-1. ADJUSTMENT OF STYLUS LANDING POSITION

A) The arm of the Model 6200 Turntable has been adjusted at the factory so that the stylus will land in the first groove of the record when the turntable is placed in the PLAY mode. If for some reason the stylus does not land in the proper place, it can be adjusted as follows:

- (1) Refer to Figure 1 for the location of the stylus landing position adjustment screw.
- (2) Place a 12-inch record on the turntable and place the record size selector to "12". Put the turntable in the PLAY mode of operation.
- (3) To make the stylus land closer to the center of the record, turn the screw clockwise.
- (4) To make the stylus land further from the center, turn the screw counterclockwise.

It is only necessary to adjust the landing position for the 12 inch setting. The correct positions for the 10 and 7-inch settings are automatically determined when the 12 inch position is adjusted.

B) For a large dislocation

- (1) Place the eccentric shaft ① (5-24) in the horizontal position.
- (2) Loosen two screws at the slide arm assembly (0036) holding the feed base and temporarily tighten.
- (3) Set the record size selector lever to the "12" position.
- (4) Set the operating lever to the PLAY mode, turn the turntable by hand so that the auto-in operation is made, and set the stylus at the 12 inch position to the prescribed position.
- (5) Firmly tighten two screws holding the feed base. When doing so, fix the moving plate (0039-2) and the friction rubber (0036-6) in such a way that the distance between them shall be 1 to 1.2mm when the equipment is stopped.
- (6) Assure that the warping of the moving plate (0039-2) is 1.5mm or so when the equipment is operating (when the arm is at the uppermost position).
- (7) Set the power supply to "on" and assure that the ascending position of the needle is suitable.
- (8) Next, apply fine adjustment according to the description in A).

5-2. ADJUSTING THE AUTOMATIC RETURN POSITION

The adjustment of the automatic position return shall be made by means of the fine adjustment screw in Figure 4. After completing adjustment, apply paint to the screw lock.

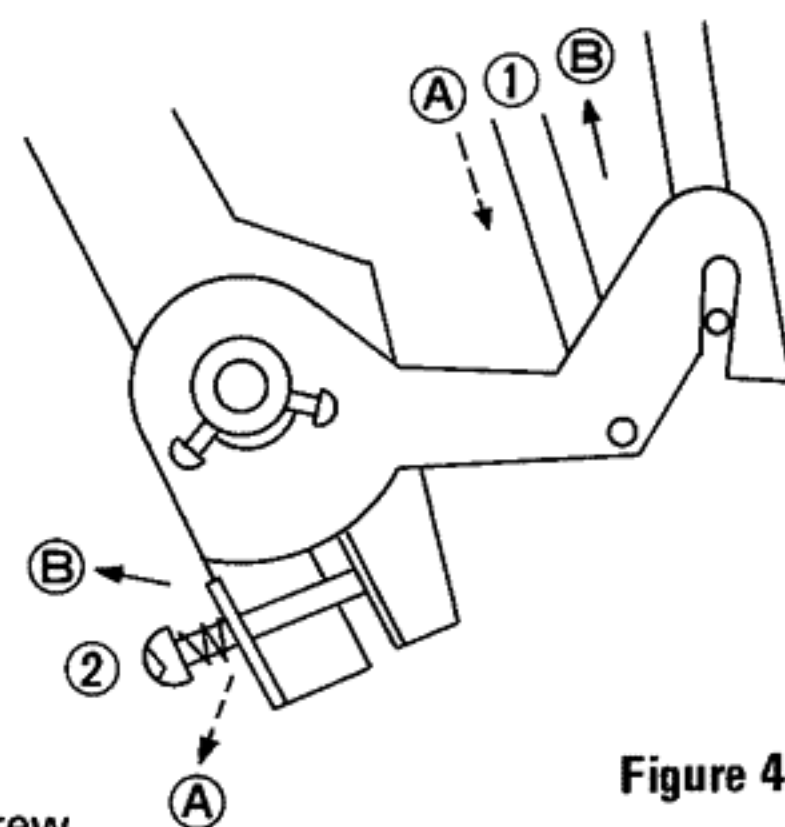


Figure 4.

- ① Operating arm
- ② Fine adjustment screw

Rotation in the clockwise direction (A) delays the return. Rotation in the counterclockwise direction (B) hastens return.

5-3. ADJUSTMENT OF THE ARM HEIGHT

A) For full automatic operation

The height adjustment is effected by means of the eccentric pin ② in Figure 5. The arm is raised by turning ② clockwise and lowered by turning it counterclockwise. However, the position of the arm will lower suddenly at a certain position since the height is adjusted by means of the eccentric pin. (For clockwise revolution)

B) For manual operation

The height adjustment is effected by means of the adjusting screw ① in Figure 5. The arm is lowered by turning ② clockwise and heightened by turning it counterclockwise. The adjusting screw ① has no relation to the height of the arm during full automatic operation. Therefore, note that when the adjusting screw is turned counterclockwise (when the height of the arm has been increased), the return time of the cue rod assembly (lifter bar) from the "UP" position to the "DOWN" position may be shortened. After completing the adjustment, apply paint to the adjusting screw and the eccentric pin.

- ① Adjusting screw
- ② Eccentric pin
- ③ Elevation receiver assembly
- ④ Cam holder assembly
- ⑤ Que rod assembly

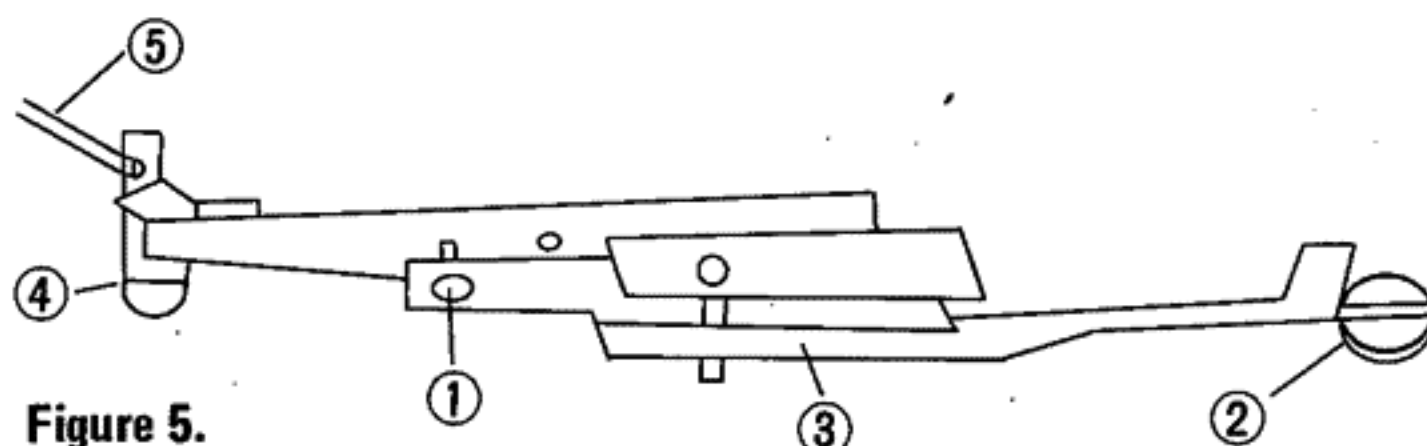


Figure 5.

5-4. ADJUSTMENT OF THE DESCENDING SPEED OF THE ARM

Disengage the "E" washer in Figure 6 and disengage the spring. Do not damage the shaft when disengaging the washer and the spring. Fully press the arm toward the central side of the turntable and pull up the elevation plate.

A) To increase the descending speed

Wipe away the silicon oil from the part (a) and from the spring. Reduce the amount of oil in the oil receiver.

B) To decrease the descending speed

Reverse the preceding operation. Add silicon oil to the oil receiver. Apply a small amount of silicon oil to the part (a) and the spring. (An oil with a high viscosity should be added. If the viscosity is low or the amount excessive, the oil may flow into the revolving table and cause slipping. Accordingly, exercise care when adding the oil.)

Either in the case of A) or B), confirm the ascending speed after raising and lowering elevation shaft several times by hand in order to make certain the oil penetrates the operating parts.

- ① Elevation plate
- ② Elevation shaft
- ③ Oil receiver
- ④ Spring
- ⑤ E washer

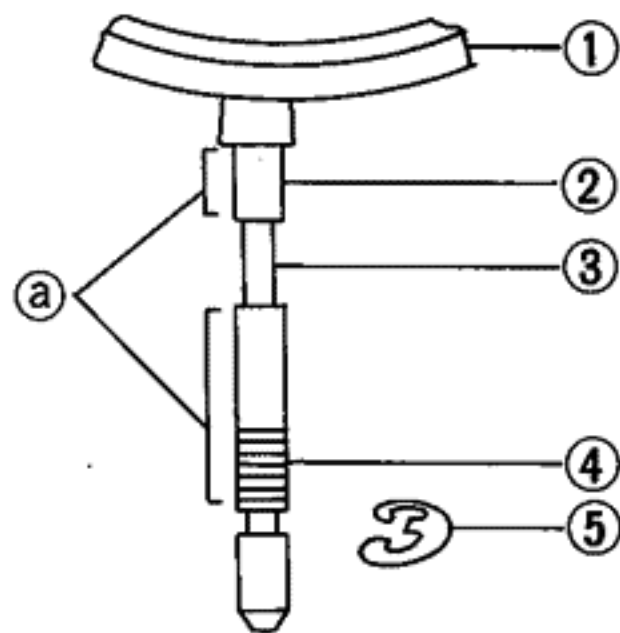


Figure 6.

- (4) Detach 3 screws fixing motor on sub-chassis for transportation purpose. Dismount the motor by following procedure (1)-(2)-(3)-(4), and mount the motor by vice versa.

5-5. HOW TO REPLACE THE DUST COVER

- (1) Take off the dust cover assembly.

Hold the dust cover at nearest portion to the hinge, and pull out the dust cover to bearing upper direction so that the dust cover is unlocked.

- (2) Disassemble the lock plate on dust cover.

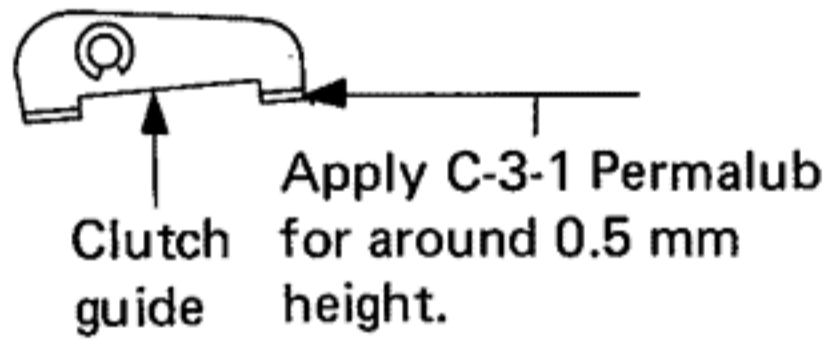
Unscrew to disassemble the lock plate, and fit them on the new dust cover to be replaced.

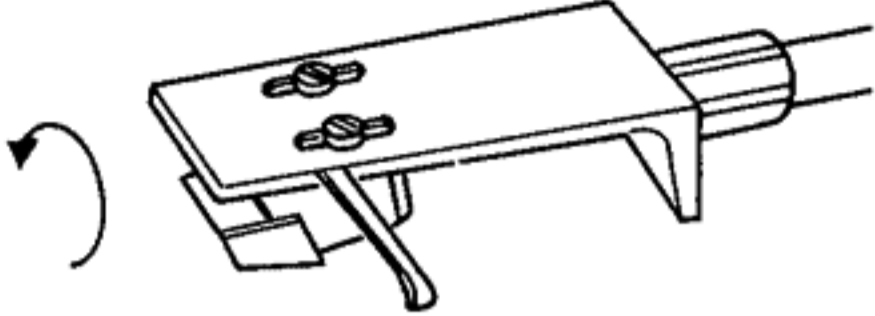
- (3) To fit dust cover assembly to hinge on wooden base. Follow the procedure (1) to fit the dust cover assembly.

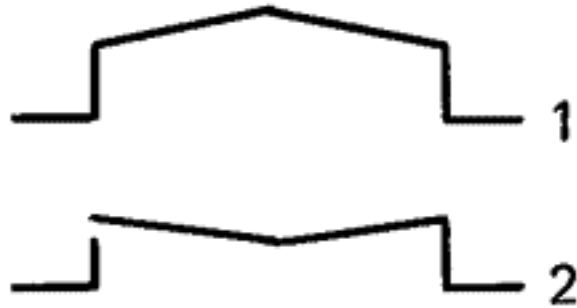
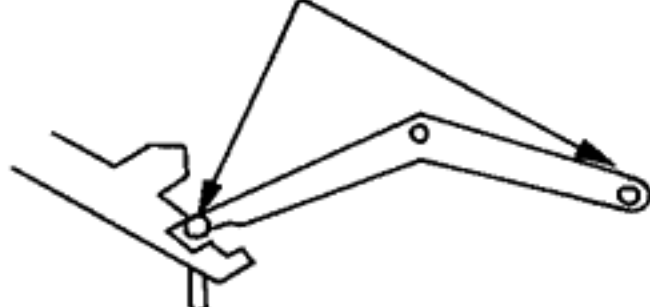
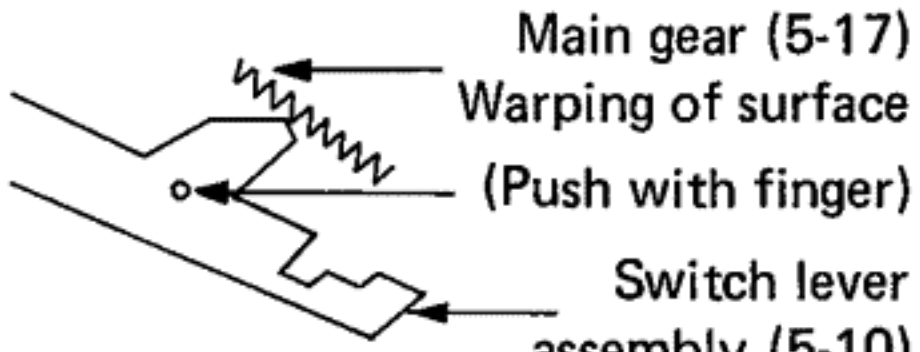
5-6. HOW TO REPLACE THE MOTOR

- (1) Turn over the Turntable, and disassemble the bottom lid.
- (2) Disconnect 3 lead wires connected 7 pins terminal strip from the motor, including a black grounding wire.
- (3) Detach "E" washer fitted on the speed change lever joint.

6. TROUBLESHOOTING

ITEM	TROUBLE	PROBABLE CAUSE	REMEDY
1	Turntable will not rotate when operating lever is set to PLAY position.	(1) Switch lever ② assembly does not push micro switch operating rod. (2) Wiring Disconnection. (3) Motor coil Disconnection.	(1) Check switch lever ② assembly and interlocked parts for operation. (2) Check wiring for continuity. (3) Replace motor.
2	Playing operation is not available in spite of revolution of turntable when operating lever is set to PLAY position.	(1) Clutch lever does not push clutch plate. (2) Clutch guide is deformed so that it does not mesh with T.T. gear. (3) Friction rubber slips because oil is adhered to it. (4) Point lever assembly attached to main gear does not operate.	(1) Check that clutch lever is actuated in accompaniment with the interlocked part. (2) Replace clutch plate and clutch guide. Check T.T. gear for convex shape. (3) Wipe oil off with carbon tetroxide, thinner or similar liquid. (4) Check point lever assembly for operation.
3	Returning is too rapid or slow.	(1) Operating arm deformation. (2) Clutch plate and clutch guide do not operate normally.	(1) Correct bending. (2) Check that there is no foreign matters adhered to functional parts.
4	Impact sound or noise is generated at time of automatic returning and auto-in modes of operation.	(1) Defective meshing of T.T. gear and main gear assembly. (2) Gear and cam shaft do not properly follow arm movement. (3) Dust has collected on friction rubber or moving plate ②.	(1) Check both gears. Replace T.T. shaft assembly. (2) Check gear and cam shaft for deformation or supporting stem for inclination. (3) Wipe dust off and replace friction rubber.
5	Turntable is not actuated by pushing REJECT button.	(1) Start lever does not come into cam surface.	(1) Check start lever for deformation and revolving operation.
6	Repeat operation is not done, when the operating lever is set to REPEAT position.	(1) Repeat lever does not push point lever assembly attached to main gear. (2) Insufficient adjustment of point lever assembly.	(1) Check repeat lever for motion and bending. (2) Change direction of click spring. Cut point lever assembly stopper until stroke is increased.
7	Return operation is not done. 	(1) Clutch plate and clutch guide do not operate in normal manner.	(1) Wipe clutch plate and clutch guide clean. After application of oil, fit clutch plate in place and make certain of motion by moving clutch plate several times.

ITEM	TROUBLE	PROBABLE CAUSE	REMEDY
8	Auto-in dislocation.	(1) Neck cylinder is loosened. (2) Loosend Cart and Head shell are loosened. (3) Head shell is replaced.	(1) Tighten neck cylinder by holding and lightly turning head shell. (See following drawing.) (2) Adjust count by tightening screw. 
9	Continuous operation.	(1) Operating lever will not restore from "PLAY" position to "MANUAL" position. (2) Clutch lever pushes clutch plate without returning to its original position.	(1) Check sub-chassis, "E" washer of supporting start lever and CS-type retaining ring on reject shaft. (2) Check that spring is not disengaged.
10	Operating lever does not catch.	(1) Screw of start cam assembly (0023-1) is loosened.	(1) Tighten screw (0023) by pushing reject shaft (0023) and start cam assembly (0023-1) by gripping them in by hand.
11	Two-step dropping of stylus tip.	(1) Weak safety spring (5-22).	(1) Replace safety spring or bend safety spring for around 5 mm.
12	Reject operation is not done.	Start lever (5-32) does not come between start cam assembly (0023-2) and start cam (0024-2). (1) Start lever plate (5-32) is bent. (2) Screw of start cam ① is loosened.	(1) Adjust bending of start lever plate in such a way that start lever will be inserted between two cams (0023) and (0024) when pressing REJECT button in. (A clearance of 0.5 mm or larger is required.) (2) Tighten screw pushing start cam ①.

ITEM	TROUBLE	PROBABLE CAUSE	REMEDY
13	Tone arm does not go forward.	<p>(1) Steel ball of 4 mm diameter dropped off operating arm (0073).</p> <p>(2) Operating arm (0073) contacts with chassis surface because of bending as shown in line drawings (1) and (2) on right column.</p> <p>(3) Clutch guide plate is too tight in movement.</p>	<p>(1) Disengage snap pin (0074), pull out operating arm (0073) toward center of T.T. shaft, and insert steel ball.</p> <p>(2) Adjustment</p>  <p>(3) Check operation of clutch guide (5-14) by reciprocating right and left several times with use of a watch screw driver or similar rod. Replace main gear (1).</p>
14	Manual play is ineffective, or Turntable is not switched on.	<p>(1) Defective groove of slide arm assembly (5-36).</p> <p>(2) Defective slide parts of switch lever ② (5-10) and switch lever ① (5-21).</p>	<p>Apply grease to slide parts.</p> 
15	Gear is out of mesh. (T.T. stop)	(1) Defective T.T. gear.	(1) Replace T.T. bearing assembly. Take out assembly by disengaging stopper (5-3).
16	Irregular motion of tone arm in descending operation.	(1) Oil is exhausted on elevation shaft.	(1) Apply silicon oil (50,000 units or higher) on elevation shaft. (Oil application should be made after disengaging revolving plate.)
17	Improper adjustment of speed selection.	(1) Reversing spring disengagement.	(1) Properly adjust installation of reversing spring.
18	Shut-off position of switch is not available.	(1) Warping of switch lever ② assembly (5-10) and gear surface.	<p>(1) Adjust by pushing with finger. Keep a clearance of 0.5mm from gear surface.</p> 
19	Belt is out of fitting.	(1) Improper pulley height.	(1) Adjust pulley height until is positioned at center of guide while motor runs.
20	Belt is twisted.		(1) Replace belt. If change-over operation is not normal, silicon grease should be applied.

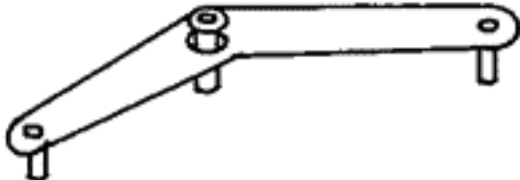
7. DESCRIPTION OF MAJOR FUNCTIONAL PARTS OF TURNTABLE

Operations of the major mechanical parts of the Turntable will be described in detail in the charts below. Also refer to the Mechanical Exploded View.

PART NO.	PART NAME	FUNCTION
0073	Operating arm	The movement of the tone arm is transmitted from the slide arm assembly and the return operation is actuated by pushing the clutch plate guide.
0034	Selector	Sets the auto-in position according to the record size. The selector makes the stopper pin position at the tip of the select arm.
0036	Slide arm assembly	(1) The surface of the friction rubber is pressed by the moving plate ② and locks to the cross direction. These movement actuate the moving body of the tone arm from the surface to the cross direction. (2) In manual mode of operation, the movement of the tone arm is transmitted to the switch levers ① and ② to start the turntable. (3) The clutch guide is pushed through the operating arm attached to the assembly to prompt the return operation.
0036-6	Friction rubber	Silicon rubber is used. This friction rubber is provided for the purpose of movement of the tone arm friction.

Also refer to the Sub-Chassis Exploded View.

PART NO.	PART NAME	FUNCTION
5-8	Clutch lever	To extrude one end of the clutch plate (5-13) to the notched part of the main gear by pushing the other end of the clutch plate. The pushing operation is made by the start lever (5-32) and the returning operation is made by the clutch lever spring (5-9).
5-3	Stopper	Prevents the T.T. shaft assembly from dropping out.
5-10	Switch lever ② assembly	This plate directly pushes the switch in the three cases, which are detected and transmitted, that: (1) The tone arm is positioned above the turn table. (2) The main gear is in revolution. (3) The switch is pushed by the start lever.
5-13	Clutch plate	(1) Pushed out by the clutch lever (5-8) → Start, Reject (2) Pushed out by the operating arm (0073) → Return When pushed out, the clutch plate is hooked by the protrusion on the outer circumference of the T.T. gear so that the main gear is meshed with the T.T. gear and the revolution is started.
5-8	Clutch guide	The clutch guide plays the role of extruding the clutch plate (5-13) by the friction force of the operating arm (0073).
5-16	Click spring	The click spring assures the change-over operation by application of regulated change-over operation of the point lever (5-18).
5-18	Point lever	Change-over operation of the cam groove includes: (1) Inside : Start, Repeat (2) Outside: Return, Reject

PART NO.	PART NAME	FUNCTION						
5-21	Switch lever ① assembly	<p>This assembly transmits the on-off operation of the switch to the switch lever ② by the operation of tone arm.</p> <div style="display: flex; align-items: center;">  <table border="1" style="margin-left: 20px;"> <tr> <td>Motion of tone arm</td> <td>Line</td> </tr> <tr> <td>From arm rest to T.T. center</td> <td>On</td> </tr> <tr> <td>Restoration to arm rest</td> <td>Off</td> </tr> </table> </div>	Motion of tone arm	Line	From arm rest to T.T. center	On	Restoration to arm rest	Off
Motion of tone arm	Line							
From arm rest to T.T. center	On							
Restoration to arm rest	Off							
5-22	Safety spring	<p>Two safety springs are used.</p> <p>(1) This spring is installed in such a way that the moving plate base (5-36) is pressed against the sub-chassis (1). In case the tone arm is fixed on the arm rest or similar parts, the load applied on the mechanism escapes through the warping of the spring.</p> <p>(2) This spring plays the role of eliminating the vertical play of the select arm (5-27).</p>						
5-24	Eccentric shaft ①	<p>The auto-in position of the tone arm is adjusted by shifting the fulcrum of the select arm by the eccentric shape.</p>						
5-26	Selector guide	<p>The select arm is locked to the cross direction by the movement of the outside circumference of the main gear from the cam surface. Further, the part contacting with the cam surface comes into the concave of the cam surface so that the gear is held to a prescribed position.</p>						
5-27	Selector arm assembly	<p>The selector arm assembly is locked by the selector guide and pressed against the selector so that the positioning stopper can function in the auto-in mode of operation of the tone arm.</p>						
5-30	Repeat lever	<p>The repeat lever pushes the point lever and opens the inside groove of the cam groove on the main gear.</p> <p>→ For play and repeat operations.</p>						
5-32	Start lever	<p>The start lever turn the power supply on through the switch lever ② and starts the revolution of the main gear through the point lever.</p>						
5-44	Que plate	<p>The reciprocating motion upward and downward of the moving plate ① is transmitted to the elevation shaft so that the tone arm can move upward and downward.</p>						
5-38	Moving plate ①	<p>Of all the movements of the cam groove on the main gear, the upward and downward motion is transmitted to the elevation shaft through the cue plate so that the tone arm can move upward and downward. To prevent the fluctuation to the cross direction, the motion is transmitted to the slide arm assembly through the friction rubber so that the tone arm is moved to the cross direction.</p>						
5-39	Moving plate ②	<p>The plate spring locks the tone arm to the cross direction by pressing against the friction rubber. The surface shall not be contaminated with oil as a surplus motion is slipped away.</p>						

8. DESCRIPTION OF FULL-AUTOMATIC OPERATION

PLAY operation (Also refer to the Mechanical and Sub-Chassis Exploded Views.)

1	The selection assembly button is set according to the record size to position the selector (0034).
2	The operating lever is set to PLAY, to turn the start cam (0023-1) and the start cam (0024-2) 25°.
3	One end of the repeat lever (5-30) contacting with the cam (0023-1) is pushed up, while the other end is tilted toward the central part of the main gear (5-17). At the same time, the start lever (5-32) comes into the notched part of the cam (0024-2), while the other end pushes the clutch lever (5-8) and the switch lever ② (5-10).
4	The clutch plate (5-13) is pushed by the clutch lever (5-8) so that the other end is pushed out to the notched part of the main gear (5-17). The micro switch (0046-4) is pushed to "on" by the switch lever ② (5-10) so that the motor starts its revolution, and the turntable starts revolution through the belt.
5	The protrusion on the outer circumference of the T.T. gear attached to the T.T. shaft (5-2) kicks the clutch plate extruding outside.
6	The main gear (5-17) meshes with the T.T. gear so that the revolution is started.
7	The end of the selector guide (5-26) contacting with the cam surface located on the outside circumference of the main gear (5-17) is disengaged from the stop position of the gear.
8	First, the caulked side of the pin of the moving plate (5-38) is pushed down by the groove cam installed on one end of the main gear (5-17), while the other end is pushed upward by the seasaw mechanism.
9	The elevation shaft goes up through the cue plate (5-44) installed on the moving plate so that the tone arm is pushed up. At the same time, the plate spring attached to the moving plate and the moving plate ② (5-39) are pressed against the friction rubber attached to the slide arm assembly. The slide arm assembly is rigidly fixed to the revolving shaft of the tone arm.
10	The moving plate is vibrated clockwise by the groove cam of the gear and the friction rubber and is rubbed by the fluctuation of the moving plate, attempting to turn outward. Such a motion however is stopped by the restriction of the arm rest so that slipping is generated between the friction rubber and the plate spring.
11	The point lever (5-18) is kicked by the repeat lever (5-30) and a clearance is made inside the cam shaft separated in two parts. The lock of the start lever (5-32) is released by the main gear.
12	The selector guide comes into the concave part of the cam surface and the select arm (5-27) supported by the selector guide is caulked on the arm tip by the force of the spring and the pin is pressed against the stepped part of the selector (0034) set previously.
13	When the tip pin is made to come into the cam groove on the inner side by the point lever (5-18) which guides the moving plate (5-38), the revolving plate is shifted counterclockwise.
14	The friction rubber (0036-6) receives the friction from the moving plate so that the tone arm starts movement in the direction of the inner side.
15	The point lever (5-18), finishing its function, is changed over by the pin of the moving plate.
16	The tone arm stops by contacting with the pin at the tip of the select arm (5-27) pressed against the selector with the stepped part of the slide arm (0036) attached to the revolving shaft. Afterwards, the fluctuation of the moving plate (5-38) slips between the friction rubber (0036-6) and the moving plate ② (5-39).
17	The groove increases in the depth gradually until the pin side of the moving plate (5-38) is taken upward, while the other side goes downward so that the tone arm comes down on the record plate through the elevation shaft.

18	The moving plate (5-38) is detached from the elevation shaft and the friction rubber (0036-6).
19	The end of the selector guide which contacts with the surface of the outside circumference cam is hooked on the convex part of the cam so that the selector arm is detached from the selector.
20	The tone arm starts its motion along the sound groove of the record.
21	The end of the clutch plate (5-13) remaining as protruded is restored by the notched part of the sub-chassis.
22	The meshing of the T.T. gear with the main gear is disengaged by being hooked by the notched part of the main gear.
23	The part of the selector guide (5-26) which contacts with the cam drops into the convex of the gear and stops after completing its function of positioning the gear.

9. CIRCUIT CONFIGURATION

Also refer to the Block and Schematic Diagrams.

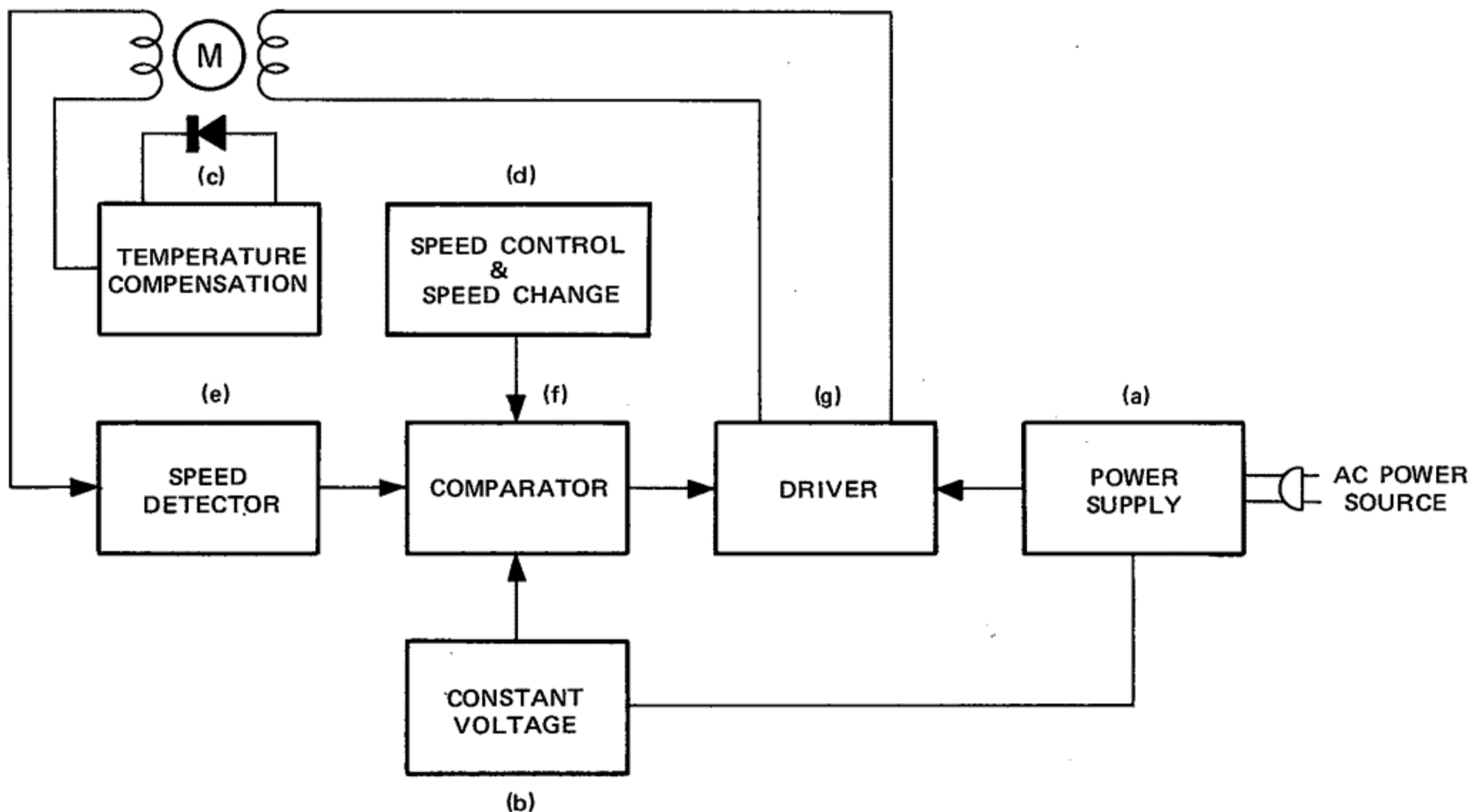
- (a) Power supply circuit: DC voltage rectified by D1 and C1 is fed to the constant voltage circuit (b).
- (b) Constant voltage circuit: From the standard voltage of Zener diode D6 at 7V, a constant voltage of 15V is produced by transistors X2 and X3.
- (c) Temperature compensating circuit: Temperature variation of the motor is detected by a varistor D10 and is compensated by D8 and D9.
- (d) Speed control and speed change circuit: VR1 is semifixed to a setting of 45 rpm, and VR2 to a setting of 33 rpm. VR2 represents a pitch VR for 45 rpm, and VR4 for 33 rpm. (46-5) is a speed control switch.
- (e) Speed detection circuit: AC voltage produced from the motor winding is rectified by D12 through D15, smoothed by R15, R16, C5 and C6 and fed to the base of X4.
- (f) Comparison circuit: Base voltage of X4 is compared with that of X5, and any differential in the voltage is taken as a displacement of the collector voltage of X5 and fed to the base of X7.
- (g) Driver circuit: By the displacement of the collector voltage of X7 is driven the base voltage of X1 to control the motor current.

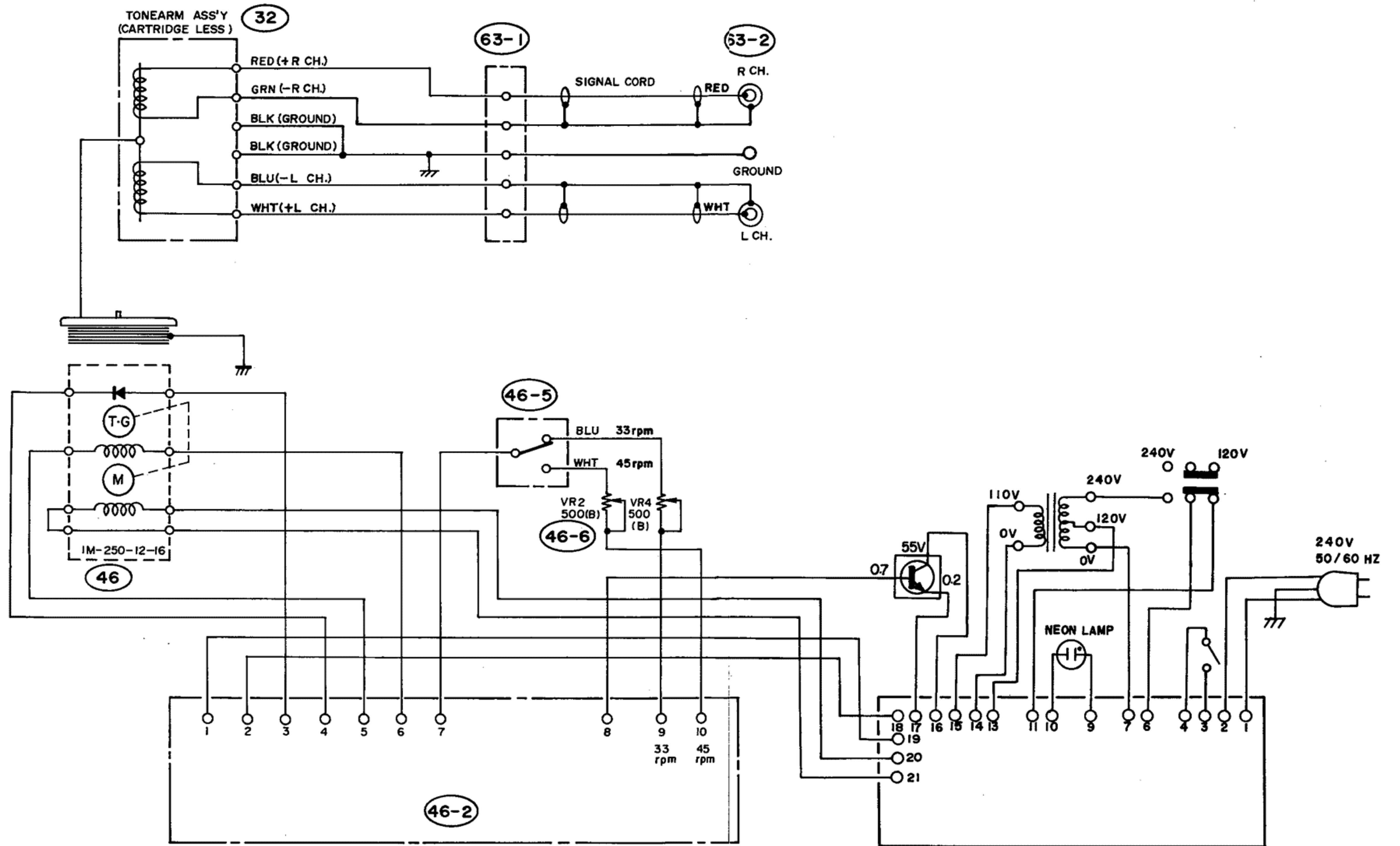
10. DIFFICULTY IN MOTOR ROTATION AND REPAIRS

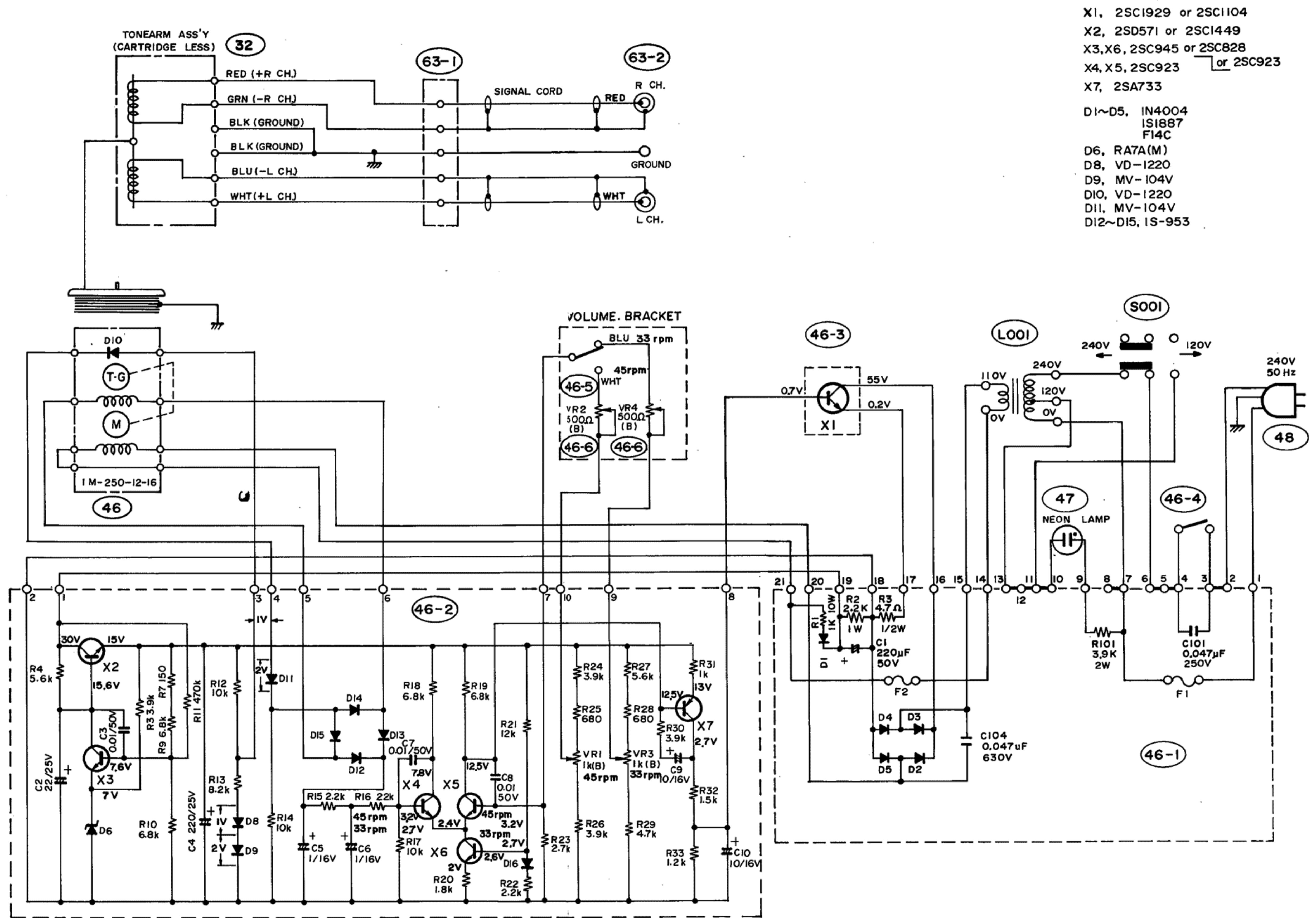
Test the constant voltage circuit to confirm the X2 collector voltage at 30V and emitter voltage at 15V.

- (a) No rotation: Failure of X1, X7, D3 and/or R33.
- (b) Instable rotation: Failure of D16 and/or R33.
- (c) Smaller speed: Failure of X2 and/or C1.
- (d) Greater speed: Failure of X2.

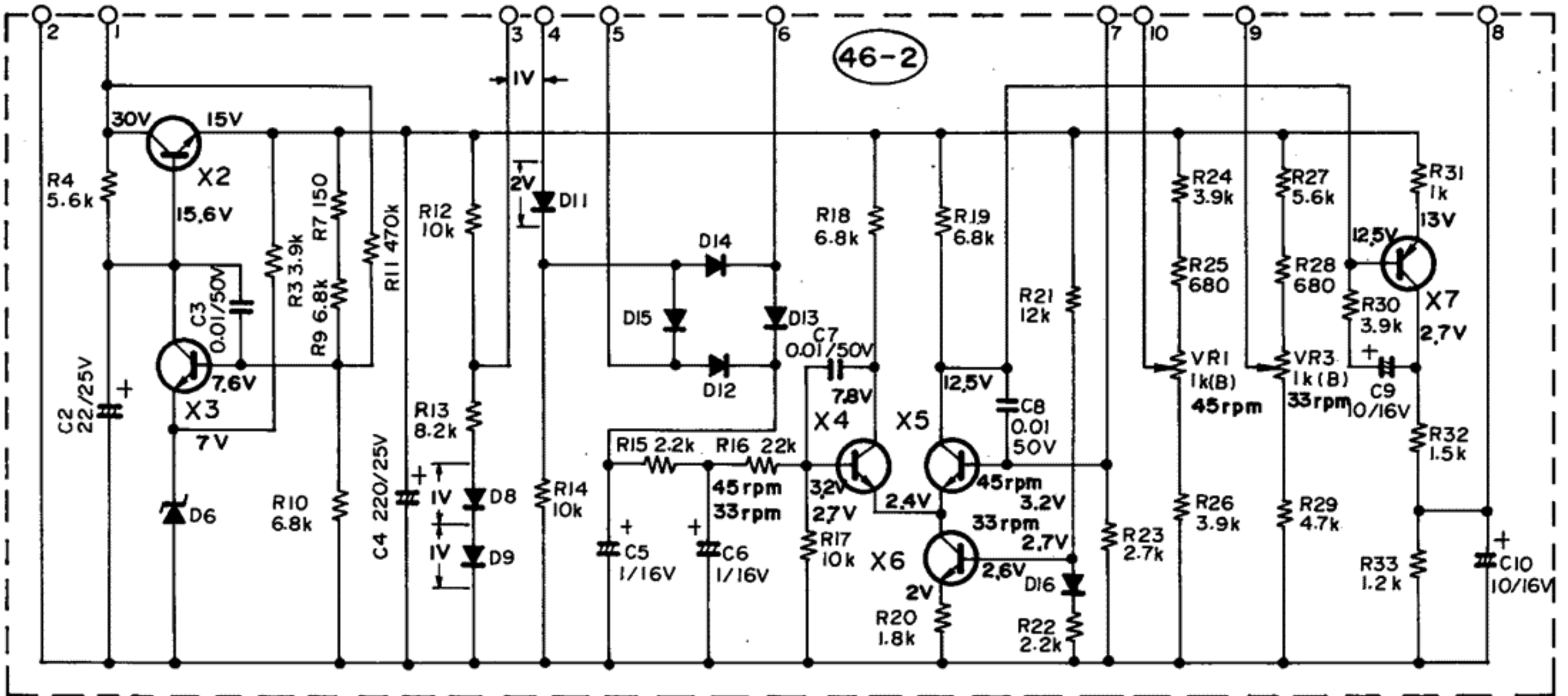
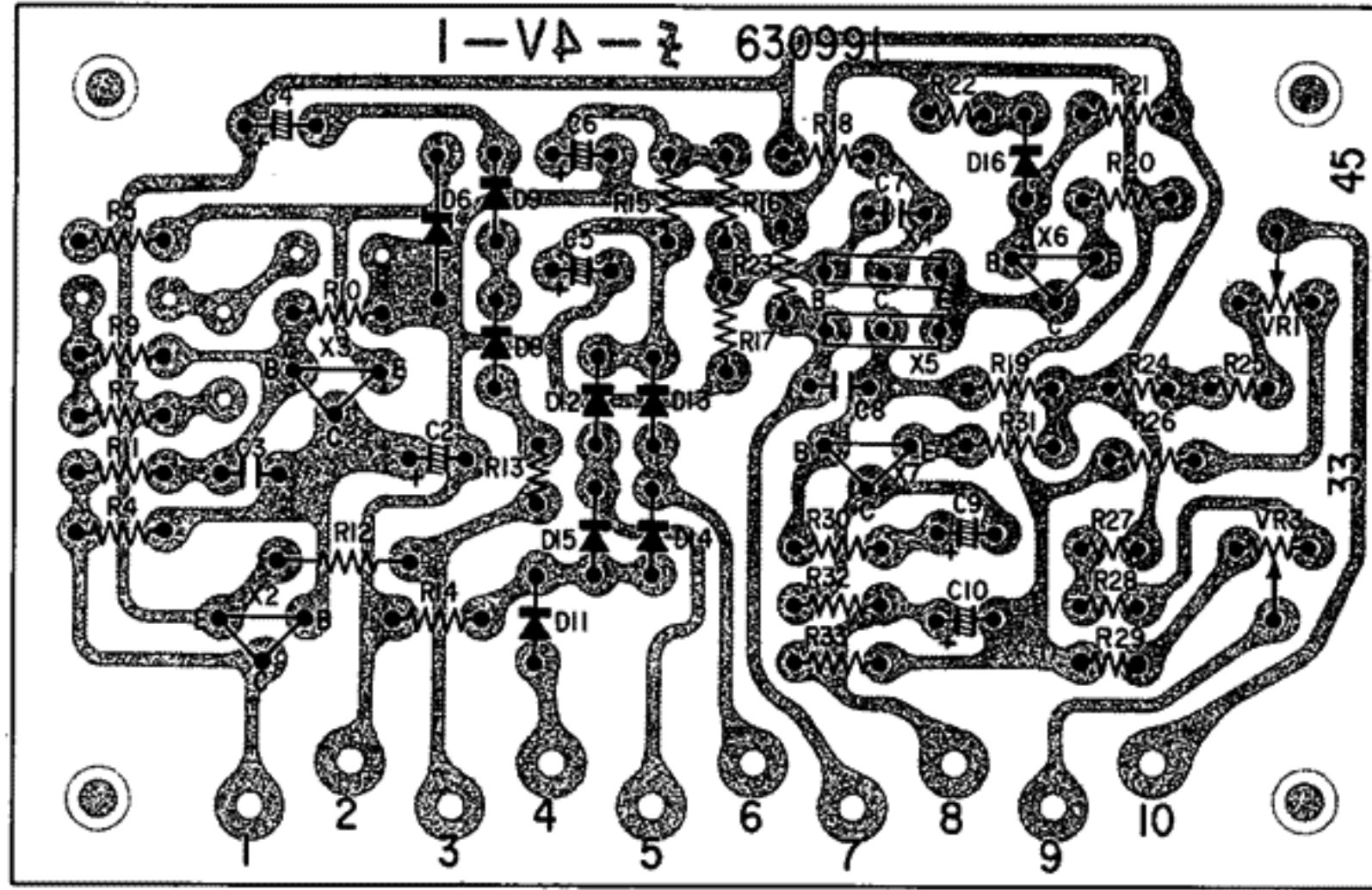
NOTE: Off the power for change of any part of the circuits.



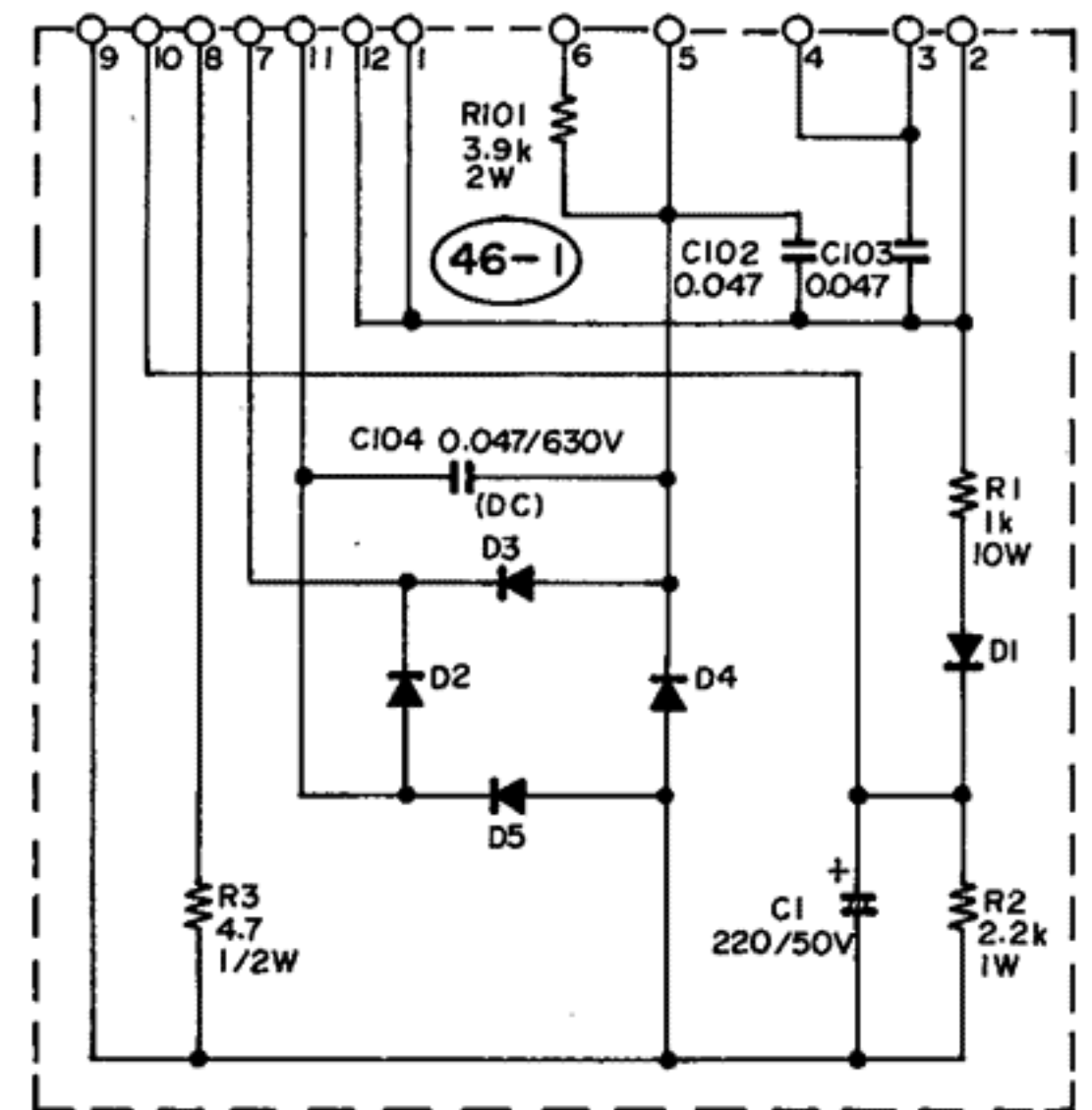
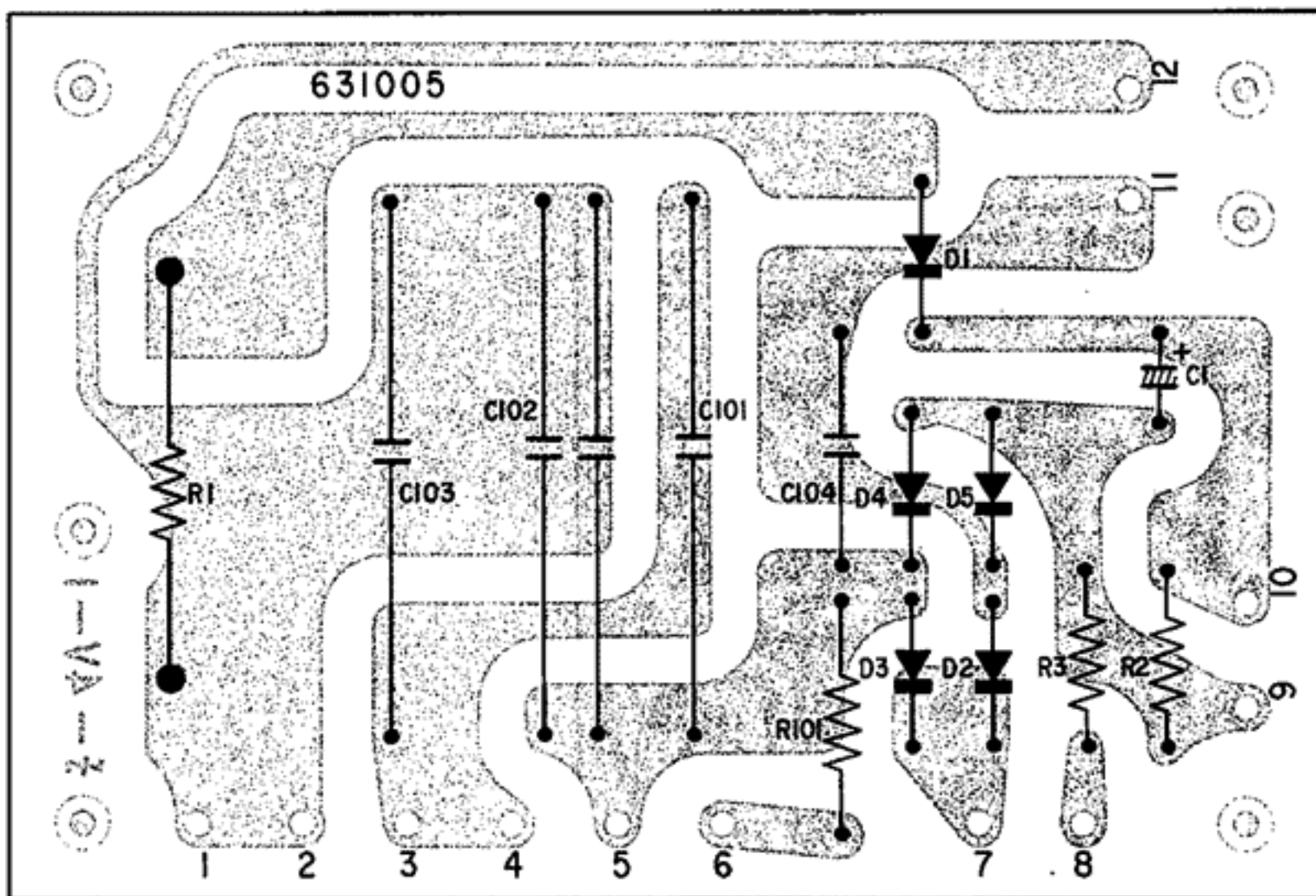




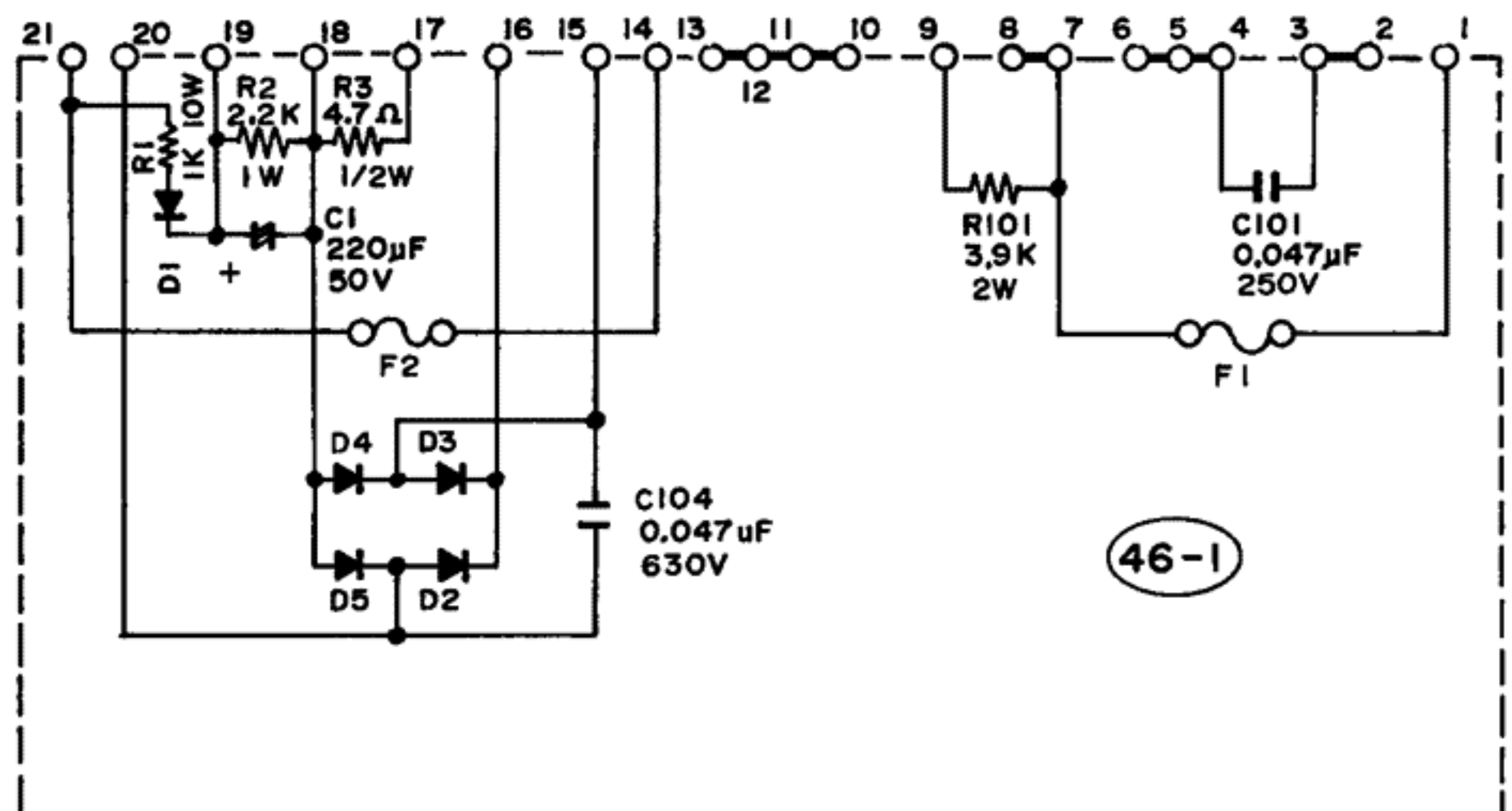
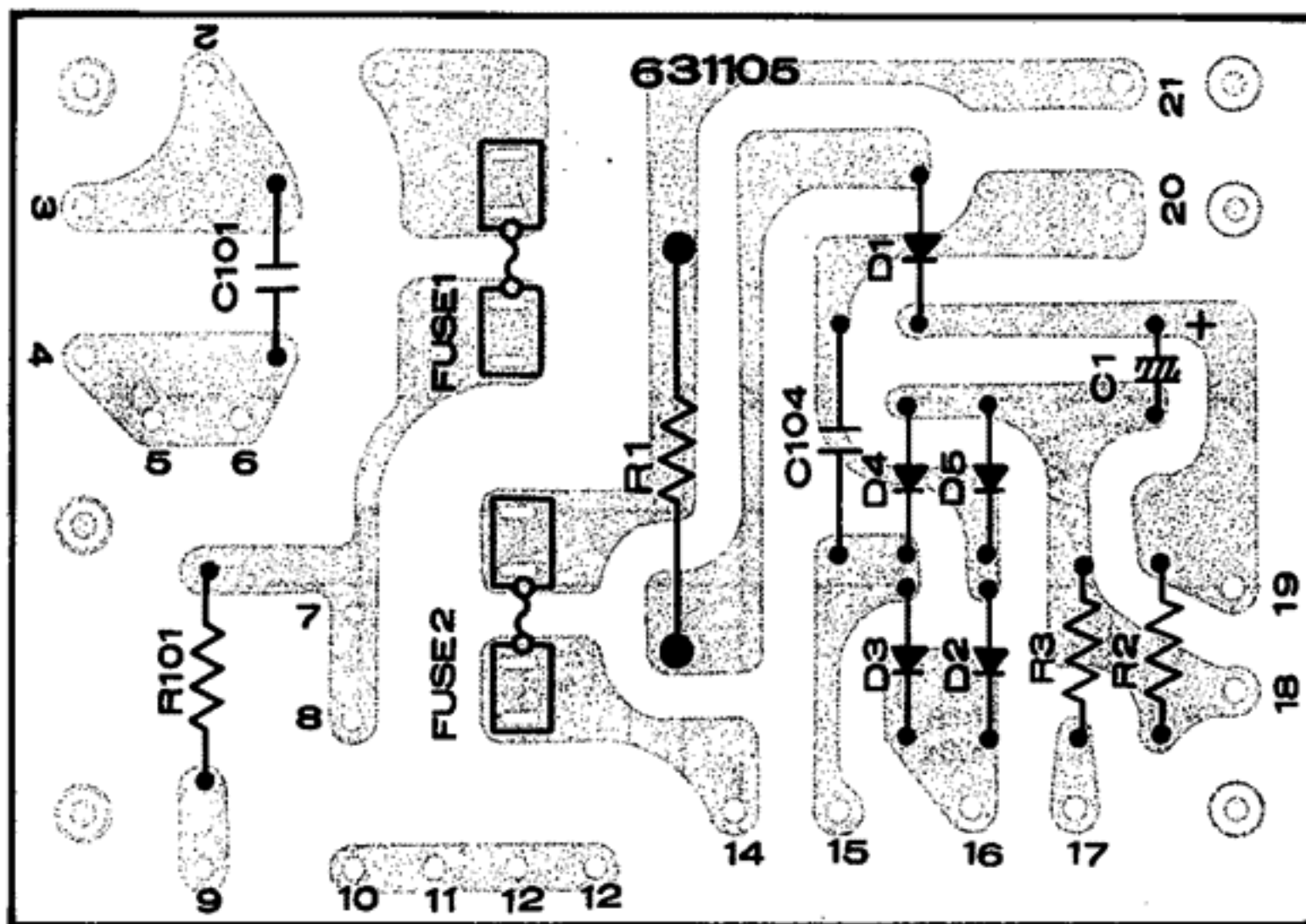
11-5. SERVO CONTROL BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS



11-6. POWER SUPPLY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

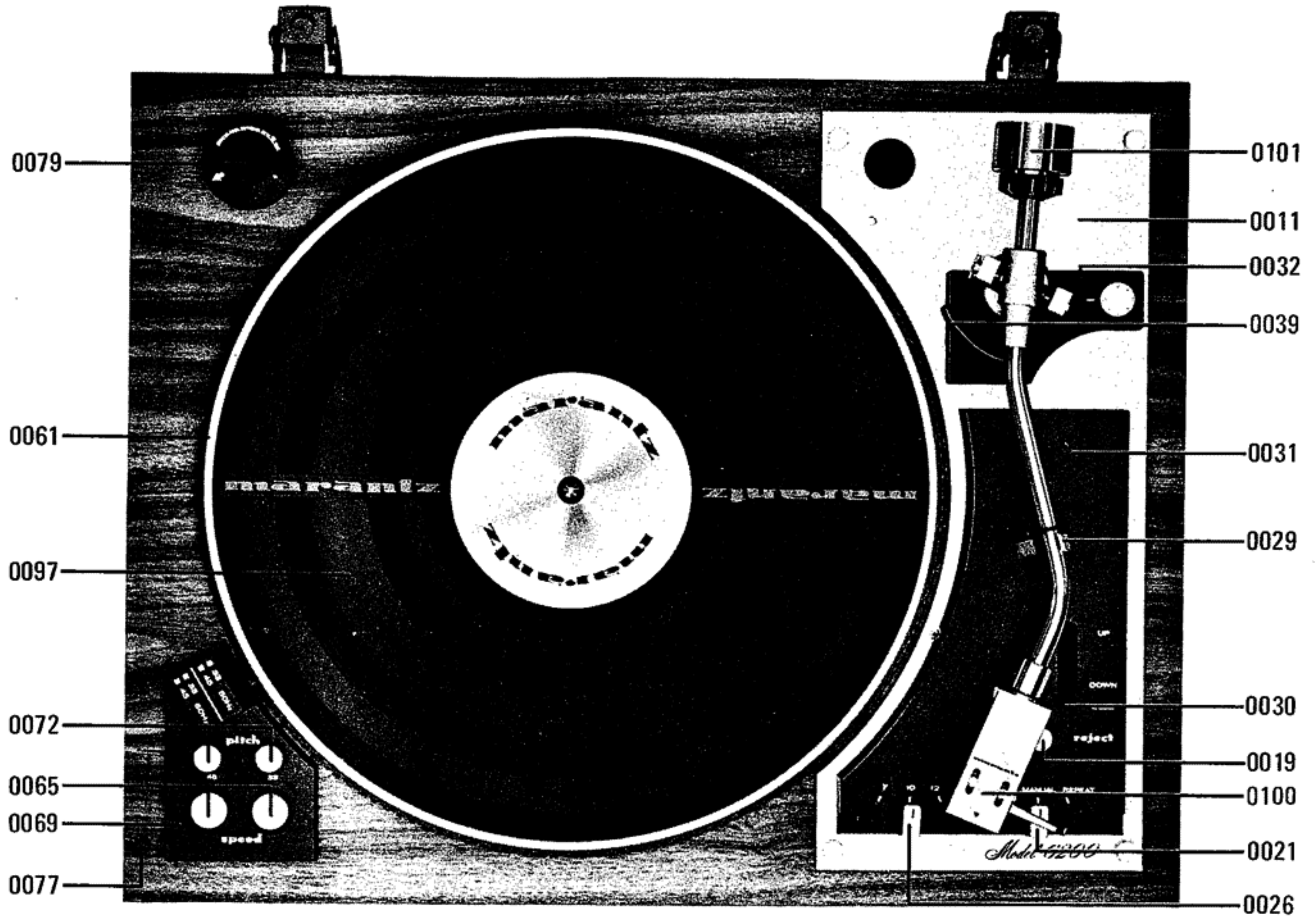


11-7. POWER SUPPLY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS-EUROPE

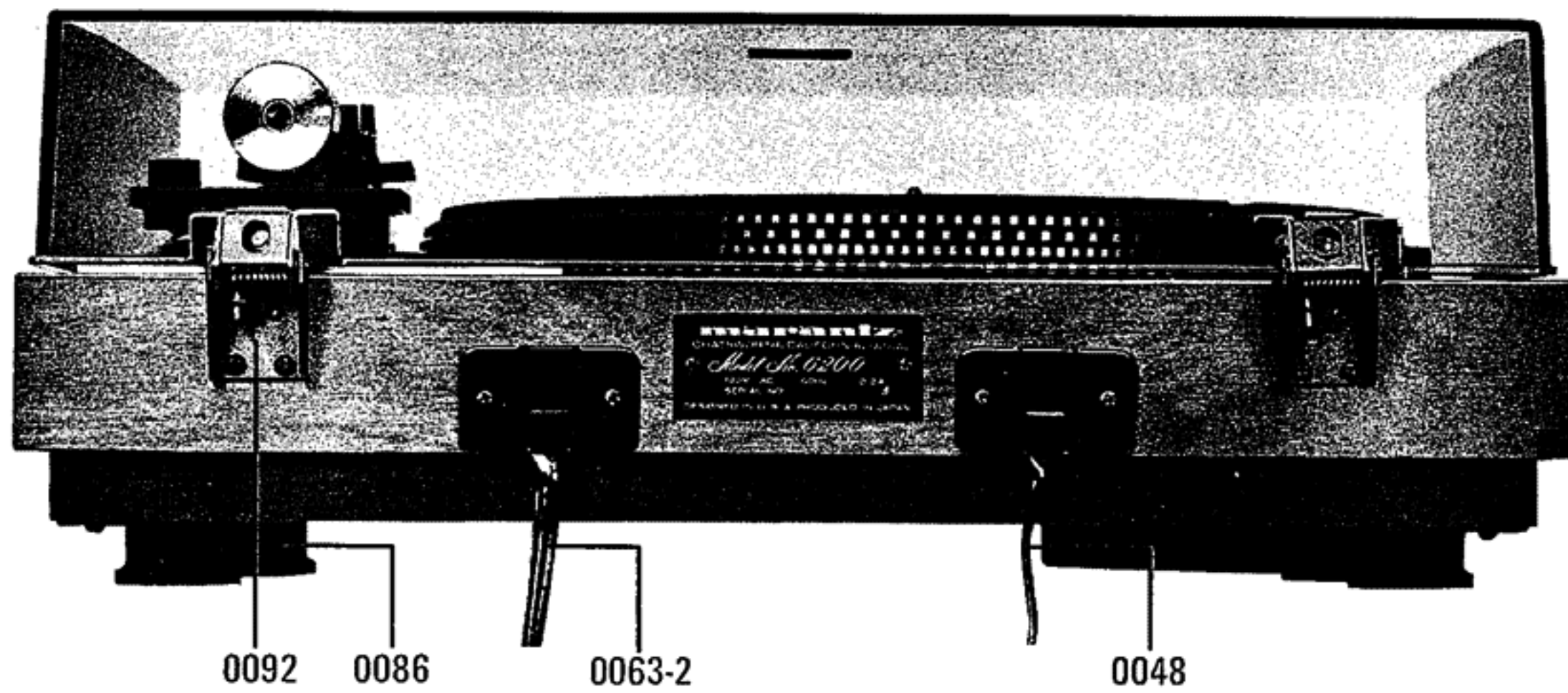


12. MAJOR COMPONENT LOCATIONS

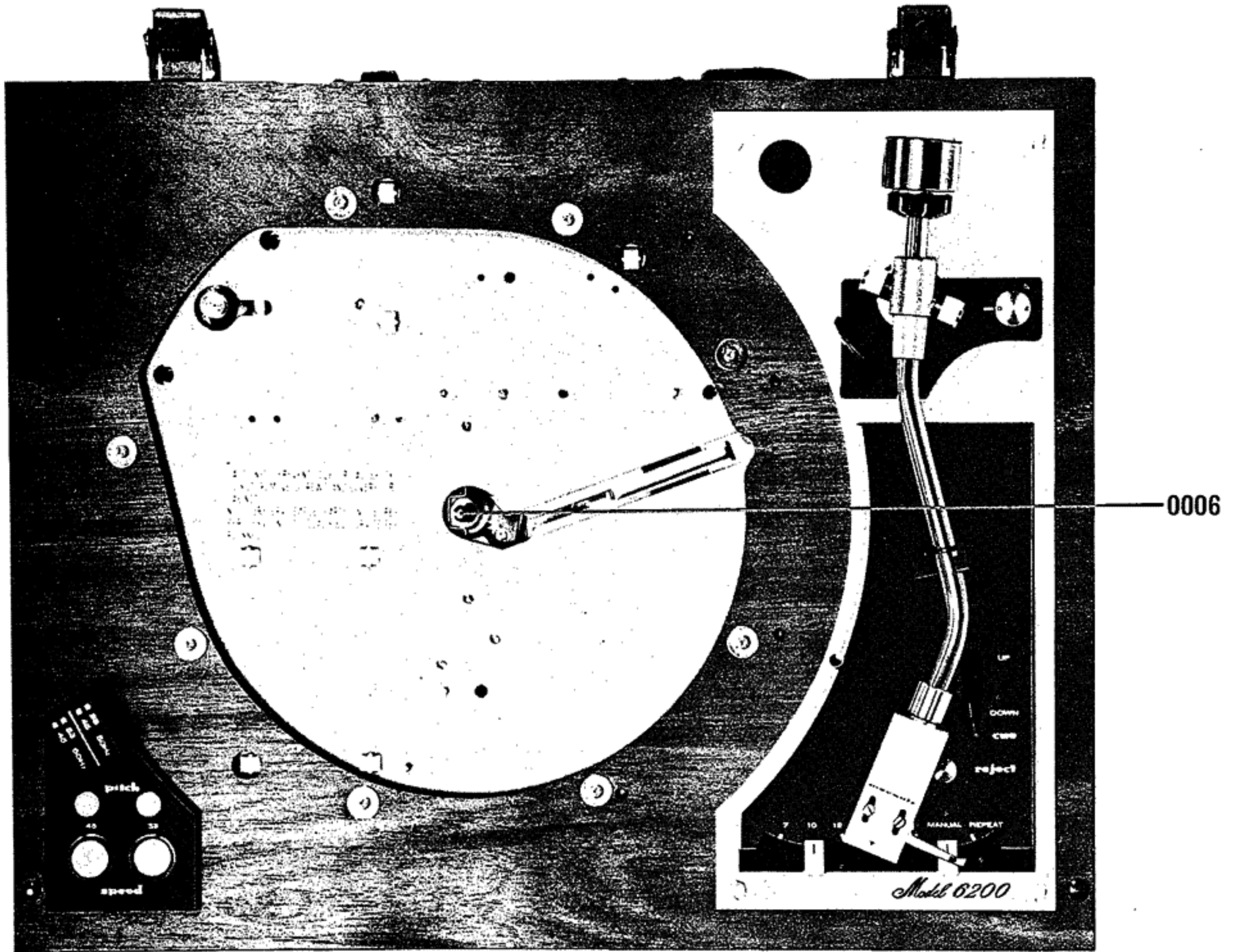
12-1. CABINET – TOP VIEW



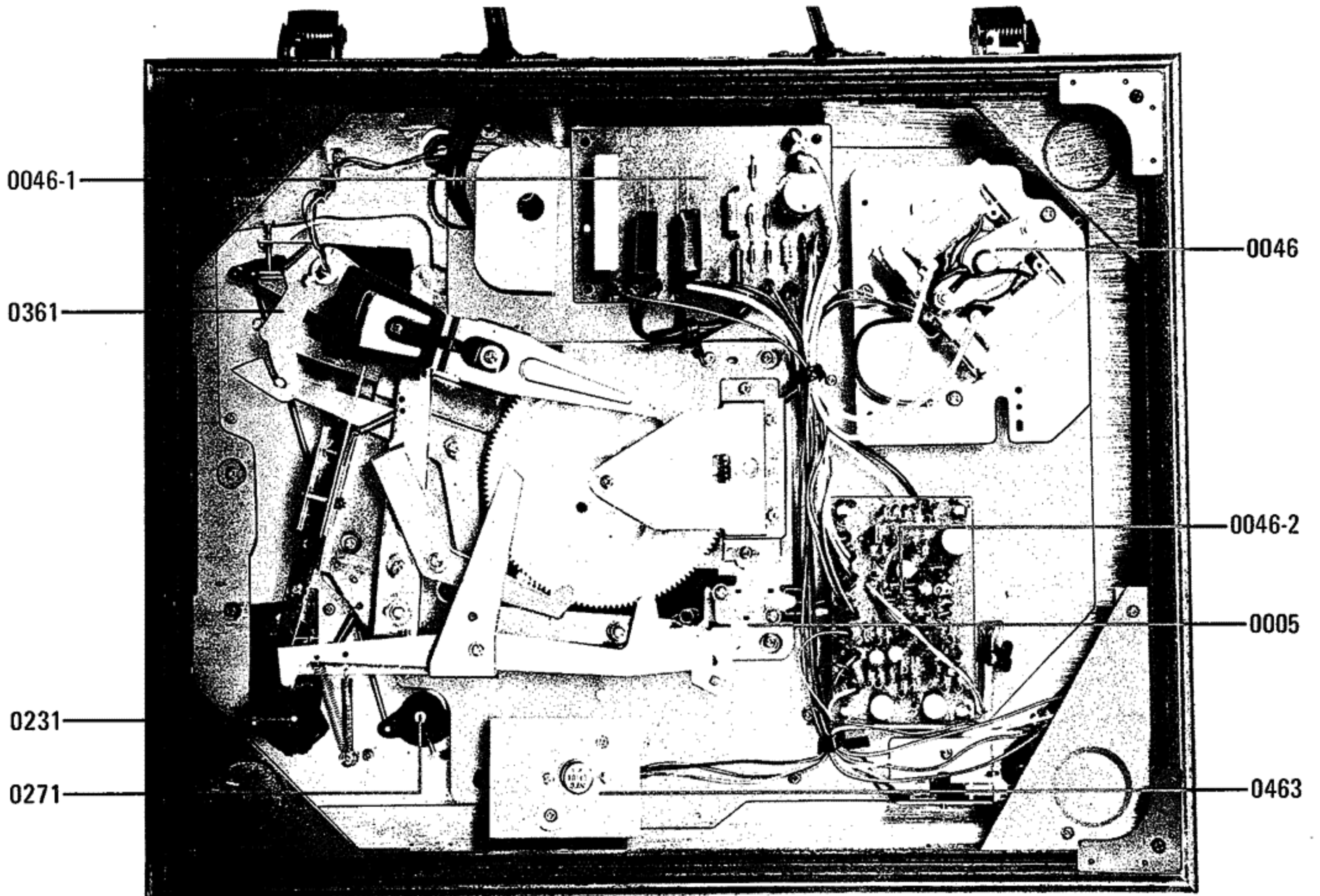
12-2. CABINET – REAR VIEW



12-3. CHASSIS – TOP VIEW

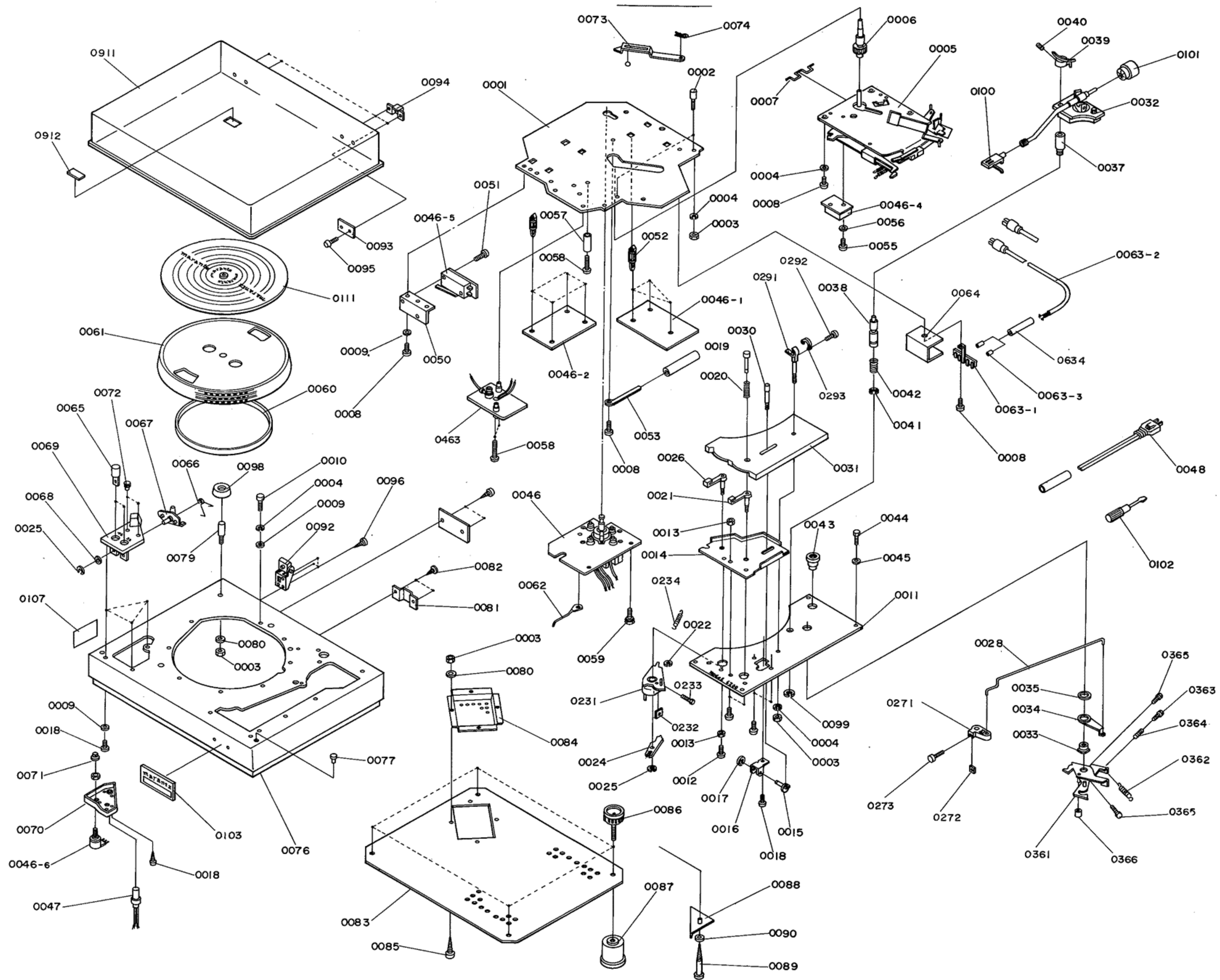


12-4. CHASSIS – BOTTOM VIEW

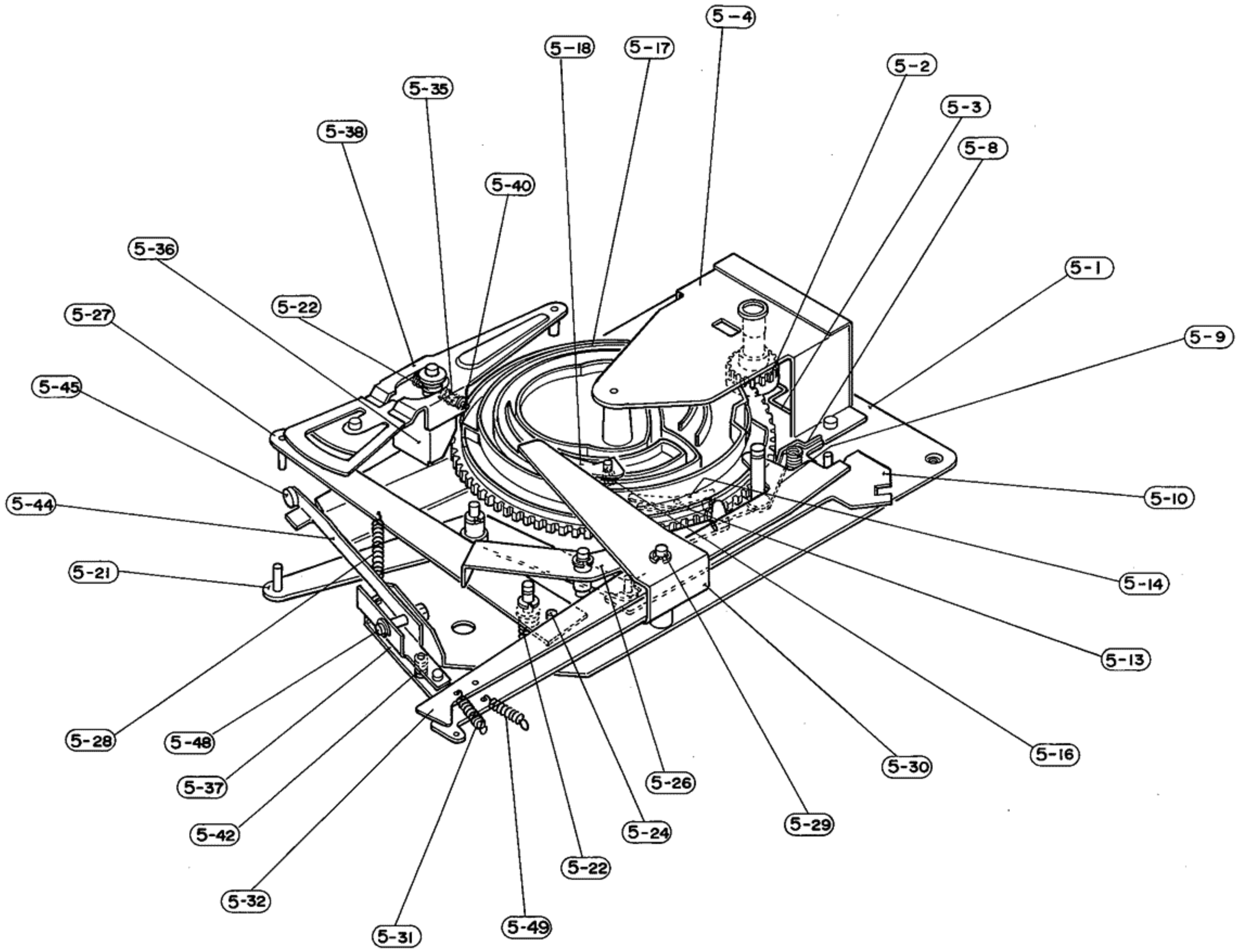


13. EXPLODED VIEW

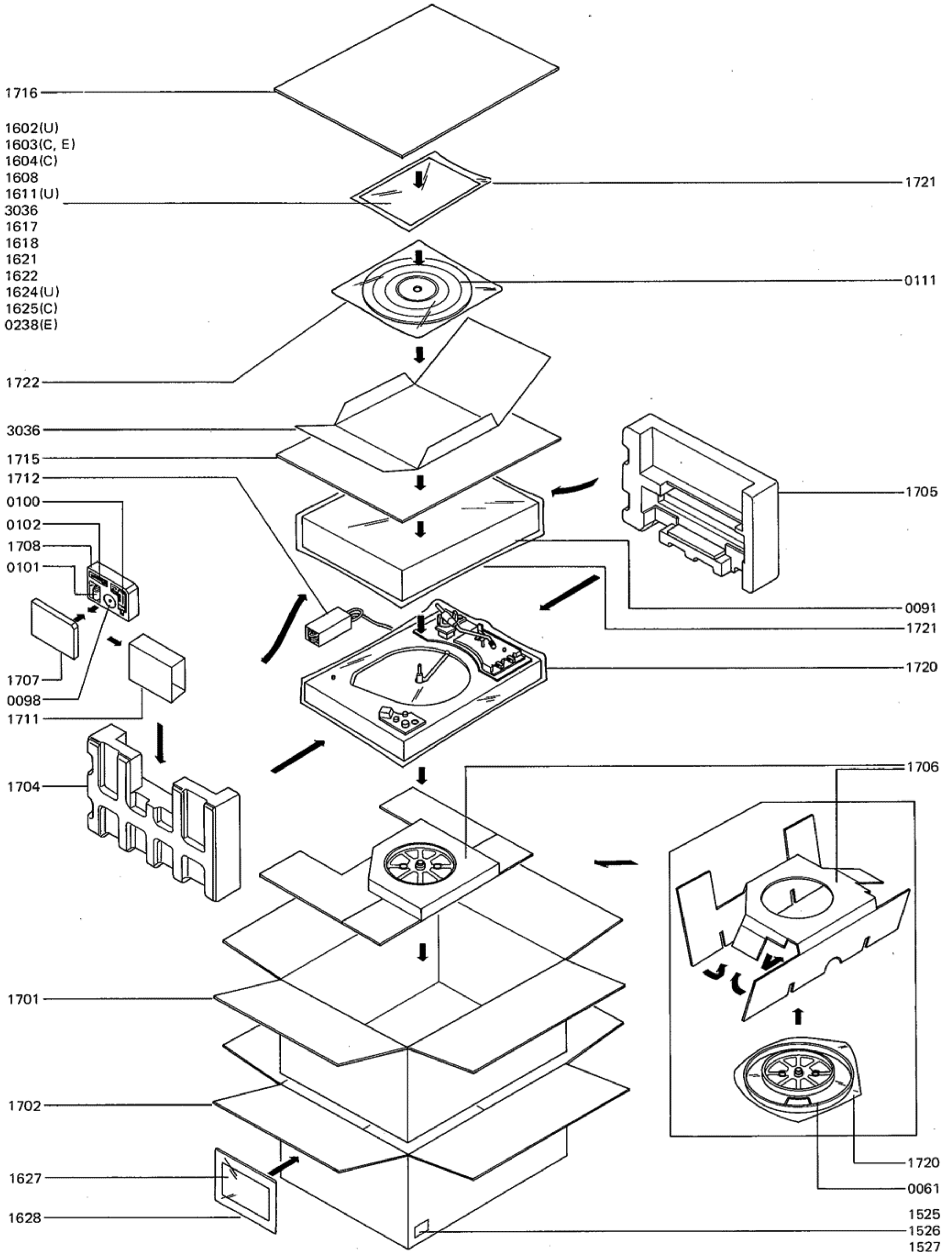
13-1. MECHANICAL EXPLODED VIEW



13-2. SUB-CHASSIS EXPLODED VIEW



13-3. PACKING MATERIAL EXPLODED VIEW



14. PARTS LIST

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
A	1	1	1	296206440	Case Assembly
0003	4	4	4	53110303E	Hexagon Nut
0011	1	1	1	296206301	Escutcheon
0043	1	1	1	294912801	Stand
0044	4	4	4	52016999J	H. Head Bolt
0076	1	1	1	296206401	Case
0077	2	2	2	294905601	Buffer
0103	1	1	1	296225101	Badge
0079	1	1	1	294911204	Shaft
0080	5	5	5	54020301A	F. Washer
0092	2	2	2	294915301	Hinge
0096	6	6	6	51523116A	R.H. Wood Screw
B	1	1	1	294905340	Dust Cover Assembly
0911	1	1	1	294905301	Dust Cover
0093	2	2	2	294916003	Bracket
0094	2	2	2	294916007	Bracket
0095	4	4	4	51060308A	P.H.M. Screw, P3x8
SERVO CONT. CIRCUIT BOARD-0046-2					
0046-2	1	1	1	YD2962001	P.W. Board, print only.
	1	1	1	ZZ2962001	P.W. Board Assembly
0046-2-RESISTORS					
R4	1	1	1	RT0556214	Fixed, 5.6KΩ ±5%, ¼W
R5	1	1	1	RT0539214	Fixed, 3.9KΩ ±5%, ¼W
R7	1	1	1	RT0515114	Fixed, 150Ω ±5%, ¼W
R9	1	1	1	RT0568214	Fixed, 6.8KΩ ±5%, ¼W
R10	1	1	1	RT0568214	Fixed, 6.8KΩ ±5%, ¼W
R11	1	1	1	RT0547114	Fixed, 470KΩ ±5%, ¼W
R12	1	1	1	RT0510314	Fixed, 10KΩ ±5%, ¼W
R14	1	1	1	RT0510314	Fixed, 10KΩ ±5%, ¼W
R15	1	1	1	RT0522214	Fixed, 2.2KΩ ±5%, ¼W
R16	1	1	1	RT0522214	Fixed, 2.2KΩ ±5%, ¼W
R17	1	1	1	RT0510314	Fixed, 10KΩ ±5%, ¼W
R18	1	1	1	RT0568214	Fixed, 6.8KΩ ±5%, ¼W
R19	1	1	1	RT0568214	Fixed, 6.8KΩ ±5%, ¼W
R20	1	1	1	RT0518214	Fixed, 1.8KΩ ±5%, ¼W
R21	1	1	1	RT0512314	Fixed, 12KΩ ±5%, ¼W
R22	1	1	1	RT0522214	Fixed, 2.2KΩ ±5%, ¼W
R23	1	1	1	RT0527214	Fixed, 2.7KΩ ±5%, ¼W
R24	1	1	1	RT0539214	Fixed, 3.9KΩ ±5%, ¼W
R25	1	1	1	RT0568114	Fixed, 680Ω ±5%, ¼W
R26	1	1	1	RT0539214	Fixed, 3.9KΩ ±5%, ¼W
R27	1	1	1	RT0556214	Fixed, 5.6KΩ ±5%, ¼W
R28	1	1	1	RT0568114	Fixed, 680Ω ±5%, ¼W
R29	1	1	1	RT0547214	Fixed, 4.7KΩ ±5%, ¼W
R30	1	1	1	RT0539214	Fixed, 3.9KΩ ±5%, ¼W
R31	1	1	1	RT0510214	Fixed, 1KΩ ±5%, ¼W
R32	1	1	1	RT0515214	Fixed, 1.5KΩ ±5%, ¼W
R33	1	1	1	RT0512214	Fixed, 1.2KΩ ±5%, ¼W
VR1	1	1	1	RA0102015	Variable, 1KΩ(B), 45rpm
VR3	1	1	1	RA0102015	Variable, 1KΩ(B), 33rpm

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
C2	1	1	1	EA2260259	0046-2-CAPACITORS Electrolytic, 22μF +100%, -10%, 25V
C3	1	1	1	DF1610301	Film, 0.01μF ±10%, 50V
C4	1	1	1	EA2270259	Electrolytic, 220μF +100%, -10%, 25V
C5	1	1	1	EA1050169	Electrolytic, 1μF +100%, -10%, 16V
C6	1	1	1	EA1050169	Electrolytic, 1μF +100%, -10%, 16V
C7	1	1	1	DF1610301	Film, 0.01μF ±10%, 50V
C8	1	1	1	DF1610301	Film, 0.01μF ±10%, 50V
C9	1	1	1	EA1060169	Electrolytic, 10μF +100%, -10%, 16V
C10	1	1	1	EA1060169	Electrolytic 10μF +100%, -10%, 16V
0046-2-SEMICONDUCTORS					
X2	1	1	1	HT402612A	Transistor, 2SD261(V or W)
X3	1	1	1	HT309451P	Transistor, 2SC945(K or P)
X4	1	1	1	HT309232A	Transistor, 2SC923(E or F)
X5	1	1	1	HT309232A	Transistor, 2SC923(E or F)
X6	1	1	1	HT309451P	Transistor, 2SC945(K or P)
X7	1	1	1	HT107331P	Transistor, 2SA733(K or P)
D6	1	1	1	HD3000306	Diode, RA7A(M)
D8	1	1	1	HV0000706	Varistor, VD-1220
D9	1	1	1	HD2000112	Diode, VD-104V
D11	1	1	1	HD2000112	Diode, VD-104V
D12	1	1	1	HD2000606	Diode, 1S-953
D13	1	1	1	HD2000606	Diode, 1S-953
D14	1	1	1	HD2000606	Diode, 1S-953
D15	1	1	1	HD2000606	Diode, 1S-953
D16	1	1	1	HD2000706	Diode, VD-1122
POWER SUPPLY CIRCUIT BOARD-0046-1					
0046-1	1	1		YD2962002	P.W. Board, Print only.
	1	1		ZZ2962002	P.W. Board Assembly
			1	YD2962003	P.W. Board, Print only.
			1	ZZ2962803	P.W. Board Assembly
0046-1-MISCELLANEOUS					
R1	1	1	1	GS1010210	Fixed, Resistor, 1KΩ ±10%, 10W
R2	1	1	1	RJ0522201	Fixed, Resistor, 2.2KΩ ±5%, 1W
R3	1	1	1	GU0547012	Fixed, Resistor, 4.7Ω ±5%, ½W
R101	1	1	1	RJ0539202	Fixed, Resistor, 3.9KΩ ±5%, 2W
C1	1	1	1	EA2270509	Electrolytic, Capacitor, 220μF, 50V
C101			1	DF1747358	Film Capacitor 0.047μF ±20%, 250V
C102	1	1		DF1747356	Film, Capacitor, 0.047μF ±20%, 200V
C103	1	1		DF1747356	Film, Capacitor, 0.047μF ±20%, 200V
C104	1	1		DF1747357	Film, Capacitor, 0.047μF ±20%, 125V
C104			1	DF1747359	Film, Capacitor 0.047μF ±20%, 630V
D1	1	1	1	HD2000806	Diode, F14C, 1N4004 or 1S1887
D2	1	1	1	HD2000806	Diode, F14C, 1N4004 or 1S1887
D3	1	1	1	HD2000806	Diode, F14C, 1N4004 or 1S1887

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
D4	1	1	1	HD2000806	Diode, F14C, 1N4004 or 1S1887
D5	1	1	1	HD2000806	Diode, F14C, 1N4004 or 1S1887
F1			1	FS1005080	Fuse 500mAT
F2			1	FS1005080	Fuse 500mAT
					GENERAL MISCELLANEOUS
0048			1	YC0190003	AC Cord
0048	1	1		YC0240022	AC Cord
0063-2	1	1	1	YB0150001	Connective Cord
VR2	1	1	1	RK0501001	Resistor, Variable, 500Ω(B), 45rpm
VR4	1	1	1	RK0501001	Resistor, Variable, 500Ω(B), 33rpm
0046-4	1	1	1	SM0102010	Switch, Power
0046-5	1	1	1	SM0102012	Switch, Speed
0047	1	1	1	IN2120002	Lamp, Neon
X1	1	1	1	HT311041L	Transistor, 2SC1104
D10	1	1	1	HD2000706	Diode, VD-1220
0046	1	1	1	MI0120002	AC Motor
0032	1	1	1	PA1121301	Tone Arm
0063-1	1	1	1	YL0105014	Terminal, 5P Lug
0100	1	1	1	YS0204002	Head Shell
0001	1	1	1	296210501	Chassis
0002	2	2	2	296205101	Guide Pin
0004	15	15	15	54040302A	Spring Washer
0005	1	1	1	296210502	Chassis
0006	1	1	1	296210601	Sustainer
0007	1	1	1	296211401	Stopper
0008	11	11	11	51360308P	P.H.T. Screw
0009	11	11	11	54020301A	F. Washer
0010	8	8	8	51060316A	P.H.M. Screw
0012	1	1	1	51060445A	P.H.M. Screw
0013	1	1	1	53110403A	Nut
0014	1	1	1	296205301	Cover
0015	1	1	1	294905401	Cam
0016	1	1	1	296227101	Holder
0017	1	1	1	64000200R	RG Ring E Type
0018	13	13	13	51360308A	P.H.T. Screw
0019	1	1	1	296227001	Button
0020	1	1	1	296211501	Spring
0021	1	1	1	296235401	Lever
0022	1	1	1	296211402	Stopper
0101	1	1	1	294900801	Weight
0231	1	1	1	296205402	Cam
0232	1	1	1	53110303E	Nut
0233	1	1	1	52010315A	Bolt
0234	1	1	1	296211502	Spring
0024	1	1	1	296205404	Cam
0025	2	2	2	64020300R	RG Ring E Type
0026	1	1	1	296235402	Lever
0271	1	1	1	296205405	Cam
0272	1	1	1	53110303E	Nut
0273	1	1	1	52010315A	Bolt
0028	1	1	1	296235701	Rod
0291	1	1	1	296227102	Holder
0292	1	1	1	296235403	Lever
0293	1	1	1	51362606P	P.H.T. Screw P2.6 x 6
0030	1	1	1	294935402	Lever
0031	1	1	1	296205302	Cover
0033	1	1	1	296216002	Bracket
0034	1	1	1	296235405	Lever
0361	1	1	1	296235406	Lever

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
0362	1	1	1	296211503	Spring
0363	1	1	1	52010320A	Bolt
0364	1	1	1	296211504	Spring
0365	2	2	2	52010306A	Bolt
0366	1	1	1	296205601	Buffer
0037	1	1	1	296200401	Table
0038	1	1	1	296200402	Table
0041	1	1	1	64000300R	RG Ring E Type
0039	1	1	1	296200403	Table
0040	1	1	1	51062604A	P.H.M. Screw P2.6 x 4
0042	1	1	1	296211505	Spring
0463	1	1	1	296226701	Heatsink
0050	1	1	1	296216004	Bracket
0051	2	2	2	51060314A	P.H.M. Screw P3 x 14
0052	2	2	2	296210101	Support
0053	1	1	1	294912301	Contacto
0055	2	2	2	51060314A	P.H.M. Screw P3 x 14
0056	2	2	2	59030805P	Fiber Washer
0045	4	4	4	59041005G	Nylon Washer
0057	1	1	1	296227201	Pole
0058	3	3	3	51060330A	P.H.M. Screw P3 x 30
0059	3	3	3	51060412A	P.H.M. Screw P4 x 12
0060	1	1	1	296226401	Belt
0061	1	1	1	296216501	Turntable
0062	1	1	1	296212302	Contacto
0634	1	1	1	294915201	Tube
0064	1	1	1	294910901	Shield
0065	2	2	2	294927001	Button
0633	2	2	2	294915211	Tube
0066	1	1	1	294911507	Spring
0067	1	1	1	296205407	Cam
0068	1	1	1	54020301A	F. Washer
0069	1	1	1	296205303	Cover
0070	1	1	1	296216005	Bracket
0071	2	2	2	296205304	Cover
0072	2	2	2	296215401	Knob
0073	1	1	1	296200201	Arm
0074	1	1	1	296225401	Pin
0080	5	5	5	54020301A	F. Washer
0081	2	2	2	294900504	Clamper
0082	4	4	4	51523113A	R.H. Wood Screw
0083	1	1	1	294905304	Cover
0084	1	1	1	296205305	Cover
0085	4	4	4	51360312P	P.H.T. Screw P3 x 12
0086	4	4	4	294905701	Leg
0087	4	4	4	294905702	Leg
0088	4	4	4	294911402	Stopper
0089	4	4	4	51523130A	R.H. Wood Screw
0090	4	4	4	54020301A	F. Washer
0095	4	4	4	51060308A	P.H.M. Screw P3 x 8
0096	6	6	6	51523116A	R.H. Wood Screw
0098	1	1	1	294910401	Rec. Adaptor
0099	1	1	1	64000500R	RG Ring E Type
1701	1	1	1	296280101	Packing Case
1704	1	1	1	294980301	Partitioner
1705	1	1	1	294980302	Partitioner
1706	1	1	1	294980303	Partitioner
1707	1	1	1	294980305	Partitioner
1702	1	1	1	294980111	Packing Case

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
1708	1	1	1	294980304	Partitioner
1711	1	1	1	294980401	Sleeve
1712	2	2	2	102980401	Sleeve
1715	1	1	1	294980701	Reinforcing
1716	1	1	1	294980702	Reinforcing
1720	1	1	1	294981101	Polyethylene Bag
1721	1	1	1	294981102	Polyethylene Bag
1722	1	1	1	294981103	Polyethylene Bag
1725	1	1	1	294926211	Pulley, 50 Hz
1726	1	1	1	294926212	Pulley, 60 Hz
1525	4			952281501	Serial No. Card
1526		4		952301512	Serial No. Card
1527			4	952301511	Serial No. Card
1602	1			296285101	Instructions, Set
1603		1	1	296285131	Instructions, Set
1604		1		288685110	Instructions, Leaflet
1608	1	1	1	296285601	Schematic Diagram
1611	1			281885402	Guarantee Card
3036	1	1	1	293905311	Cover
1617	1	1	1	294985102	Instructions
1618	1	1	1	281885104	Instructions, Packing
1621	1	1	1	257785401	Guarantee Card
1622	1	1	1	257785102	Instructions, Red Tag
1624	1			257781301	Envelope
1625		1		291881301	Envelope
0238			1	281881301	Envelope
1628	1			281881101	Polyethylene Bag
L001			1	TS1600413	Power Transformer
S001			1	SS0202046	Voltage Selector

NOTES

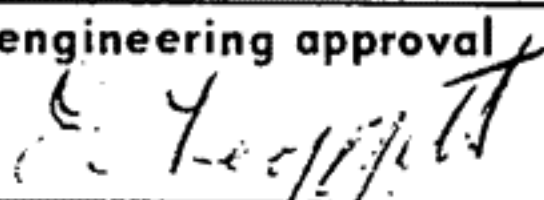


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marantz® SERVICE BULLETIN <small>SS-MAR0234</small>	model number 6200	bulletin number M-6200-1
	for serial numbers ALL	
	subject ADDITION TO PARTS LIST	
	engineering approval 	date 9-20-76

Make the indicated changes to the Model 6200 Service Manual:

- A. On page 33, add the following information directly below Reference Designation 0096;

Ref. Desig.	QTY.			Part Number	Description
	U	C	E		
0097	1	1	1	294-9107-500	Mat, Anti-Static Record

- B. On page 28, strike out Reference Designation 0111 (anti-static record mat) and in it's place insert 0097.



Albert Almeida, Manager
 Technical Services