

SERVICE  
MANUAL

TT873

4822 725 50845

**marantz®**

model **TT873**

*Turntable*



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Chatsworth, CA 91311  
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In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

### TECHNICAL ASSISTANCE

Should you require any other technical support, do not hesitate to contact the Technical Department of MARANTZ INTERNATIONAL

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80, Rue des Deux Gares,

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Belgium

Phone: 02/525.70.22 or 525.70.23

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FEATURES

Fully Automatic Linear-tracking Turntable

SPECIFICATIONS(Limit)

<b>TURNTABLE</b>		<b>Frequency response</b>	20-20000Hz
<b>Motor</b>	DC servo motor	<b>Output voltage</b>	2.5mV ± 3dB at 1kHz 3.54cm/sec.
<b>Speed</b>	33-1/3 and 45 rpm	<b>Channel balance</b>	Within 3dB at 1kHz
<b>Wow &amp; Flutter</b>	0.15% (WRMS)	<b>Channel separation</b>	More than 16dB at 1kHz
<b>Rumble</b>	57dB DIN45539B (weighted)	<b>Load resistance</b>	47 Kohm
<b>Turntable platter</b>	296mm aluminum alloy die-cast	<b>FUNCTIONS</b>	
<b>TONEARM</b>		Automatic start/stop	
<b>Type</b>	Linear tracking type	Automatic size/speed selection	
<b>Effective length</b>	146mm	<b>GENERAL</b>	
<b>CARTRIDGE</b>		<b>Pomer consumption</b>	10.5w
<b>Type</b>	Dual Magnet type with light sensor	<b>Dimensions</b>	360(w)X103(h)X349(d)mm
		<b>Weight</b>	3.1Kg(net)

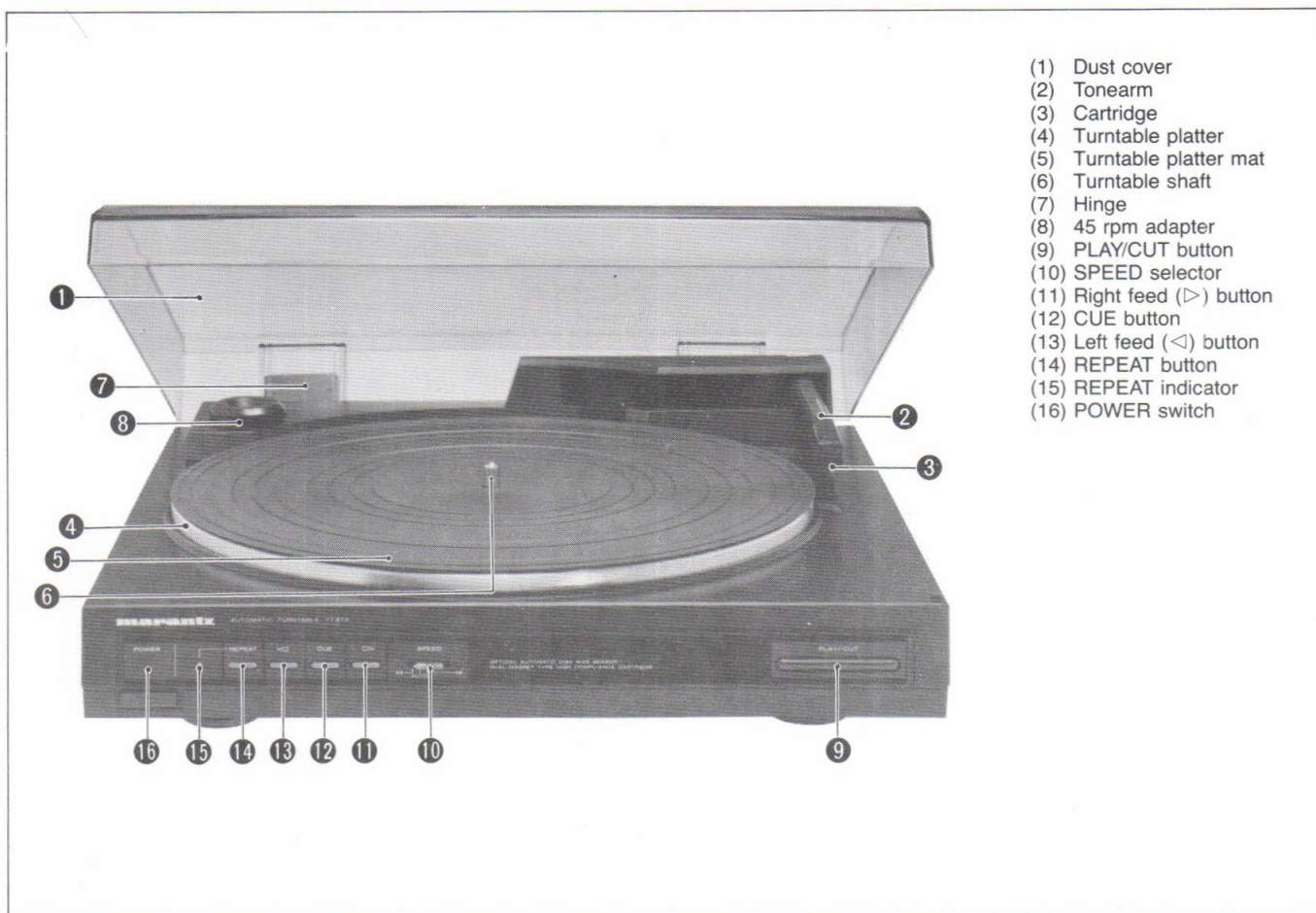
**NOTE:** Nominal Specs represent the design specs; all units should be able to approximate these — some will exceed and some may drop slightly below these specs. Limit Specs represent the absolute worst condition which still might be considered acceptable; in no case should a unit perform to less than within any Limit Spec.

Lubrication of the mechanism is not required. However, whenever a unit is brought in for adjustment or repair, always use good common sense...clean any dust or dirt from mechanical parts and if moving parts do seem to bind, check for dirt. If necessary, add a very fine film of light-weight specially formulated lubricant.

Specifications and appearance are subject to change for modification without notice.



## DESIGNATION OF PARTS



## 1. MECHANISM OPERATING PRINCIPLES

### (A) Automatic Record Detection

This turntable includes an optical sensor on the Tonearm (22) which automatically detects the size and presence of a record. The optical sensor consists of an infrared light-emitting diode and a phototransistor. While the Tonearm (22) is moving, if the infrared rays from the LED are reflected back from the record and are detected by the phototransistor, this signal is sent to the micro-processor and judged that a record is set. This signal is also the command signal for the record size and rotation speed.

\*30cm record: 33 1/3 rpm \*17cm record: 45 rpm

\*No record: after searching with 33 1/3rpm and 45rpm, the Turntable rotation stops

### (B) Tracking Error Correction

The Tonearm (22) tracking error is detected by the Sensor PWB Ass'y (39) sensor Photo Unit (39-2) and a shutter plate located on the Tonearm (22), and the sensitivity of this sensor (Photo Unit) is adjusted by Trimming (VR1).

Directly after the Tonearm (22) lowers, adjusting is performed with no tracking error, but if an error occurs while the Stylus (22-1) is moving along the grooves, correction is performed as follows:

When a tracking error occurs, the strength of the light received by the sensor changes, and a current proportional to the strength of the light flows in the sensor. When correctly adjusted, the current value and angle are roughly directly proportional when the tracking error angle is near 0.

The current in the sensor is converted into voltage then amplified, and the amplified signal rotates the Servo Control Motor (48). This rotation is transmitted to the Worm Gear Ass'y (31) by the Belt (33), and the Worm Wheel Gear (27) engages with the worm gear winds the String (29), moving the Bracket Ass'y (17) which supports the Tonearm (22). When the Tonearm (22) moves to the point where there is no more tracking error, the shutter plate interrupts the light to the sensor, the current and voltage drop, and the Servo Control Motor (48) stops.

This operation is repeated so that the Tonearm (22) traces the grooves in the record with no tracking error.



## 2. DISASSEMBLY PROCEDURES

### (A) Tools Needed for Disassembly

1. Philips screwdriver: M3
2. Soldering iron: Approx. 20W

### (B) Removal of Bottom (14)

1. Turn the power off, disconnect the AC Power Cord from the plug, and remove the Turntable (35). (Figure 1)

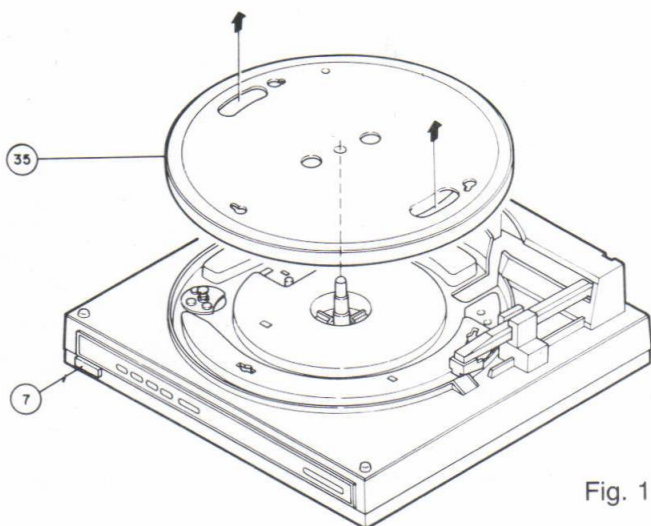


Fig. 1

2. Turn the unit over so that the bottom is facing up.  
NOTE: When turning the unit over, either use a work table or install the Dust Cover (13) and place the unit on a soft sheet to avoid damaging the Tonearm. (Figure 2)

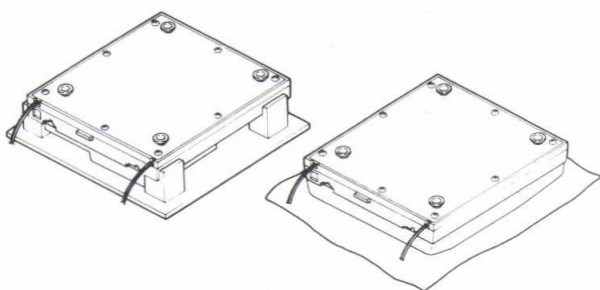


Fig. 2

3. Remove the eight Screws (204) securing the Bottom (14), then remove the Bottom (14). (Figure 3)

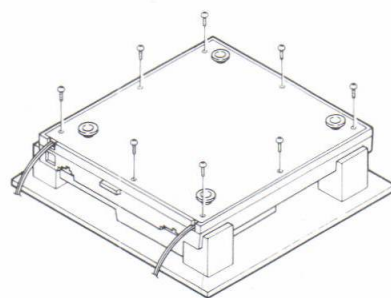


Fig. 3

### (C) Removal of Bracket Ass'y (17)

1. Remove the Belt (33), remove the two Screws (203) securing the Sustainer Ass'y (30), then remove the Sustainer Ass'y. (Figure 4)

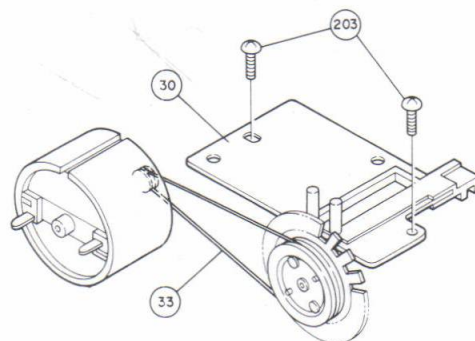


Fig. 4

2. Detach the String (29) from the Pulley (25), then detach it from the Worm Wheel Gear (27). (Figure 5)  
NOTE: Be careful not to let the grease from the wheel gear onto the wire.

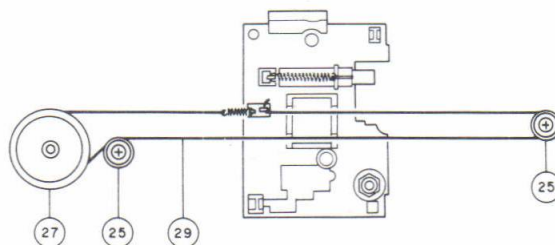


Fig. 5



3. Remove the three Screws (201) securing the Rail (24), remove the rail, then move the Bracket Ass'y (17) until the Tonearm (22) is lined up with the cut-off section of the opening in the Cabinet (1) and lift it. (Figure 6)

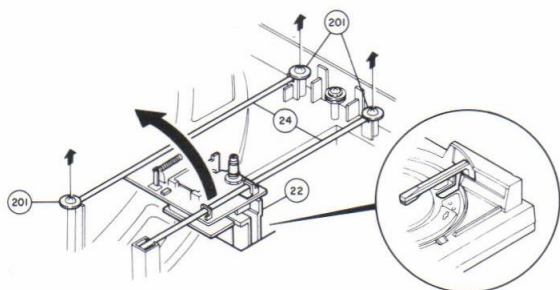


Fig. 6

#### (D) Removal of Tonearm (22) (Figure 7)

1. Remove the Sheet (23) on the Sensor PWB Ass'y (39) secured to the Bracket Ass'y (17).
2. Use a soldering iron to detach the lead wire coming from the Tonearm (22).
3. Remove the two Screws (200) securing the Sensor PWB Ass'y (39).
4. Remove the solder from the Solenoid Coil (47) terminal.
5. Remove the Sensor PWB Ass'y (39).
6. Remove the Hexagonal Nut (208) and Washer (209), then remove the Tonearm (22).

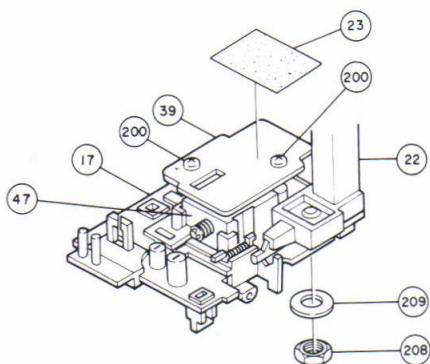


Fig. 7

#### (E) Removal of Solenoid Coil (47)

After removing the Sensor PWB Ass'y, widen the projection securing the Bracket Ass'y (17) Solenoid Coil (47), and push out the Solenoid Coil (47). (Figure 8)

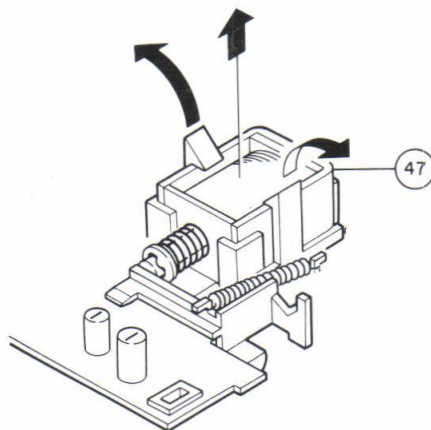


Fig. 8

#### (F) Removal of Lifter Arm (18)

1. Remove Spring A (21). (Figure 9)
2. Remove Spring B (20), and gently remove the Lifter Arm (18). (Figure 10)

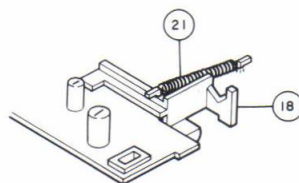


Fig. 9

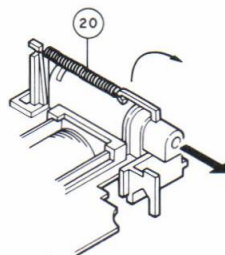


Fig. 10

NOTE: When removing the Lifter Arm, lift the hook part attaching Spring B.



### (G) Removal of Worm Gear Ass'y (31)

Lift the Worm Gear Ass'y (31) up and off. (Figure 11)

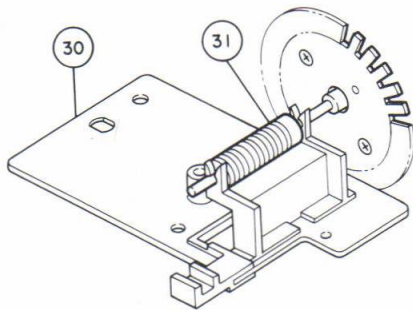


Fig. 11

**NOTE:** The Worm Gear Ass'y attached to the Sustainer Ass'y (30) is secured by pressing it in from the top, so when removing it, be careful to apply force equally to the secured parts.

### (H) Removal of Phono Motor (42)

Rotate the Phono Motor (42) 45° to the left. (Figure 12)

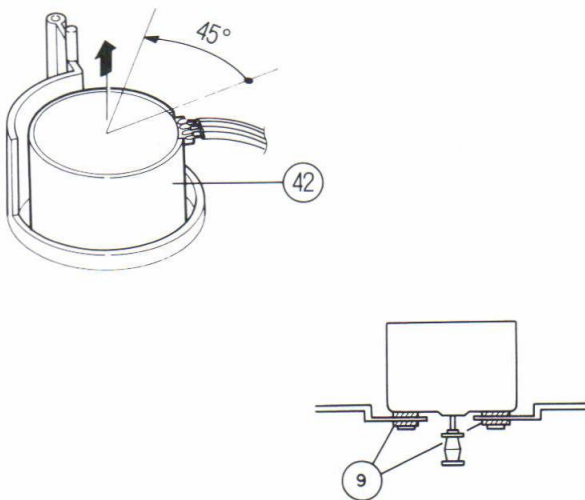


Fig. 12

NOTE: When installing the Motor, do so in such a way that the cabinet is between the Phono Motor Cushions (9) as shown in the diagram.

### 3. ASSEMBLY PROCEDURES

**(A) Assembly of Bracket Ass'y (17) (Figure 13)**

1. Apply silicon grease (10<sup>5</sup> CS) to the Lifter Arm (18) and attach it to the Bracket Ass'y (17).
2. Attach Spring A (21) and Spring B (20) to the Bracket Ass'y (17) and Lifter Arm (18).
3. Install the Solenoid Coil (47). (Spring (19) is in the solenoid coil shaft.)

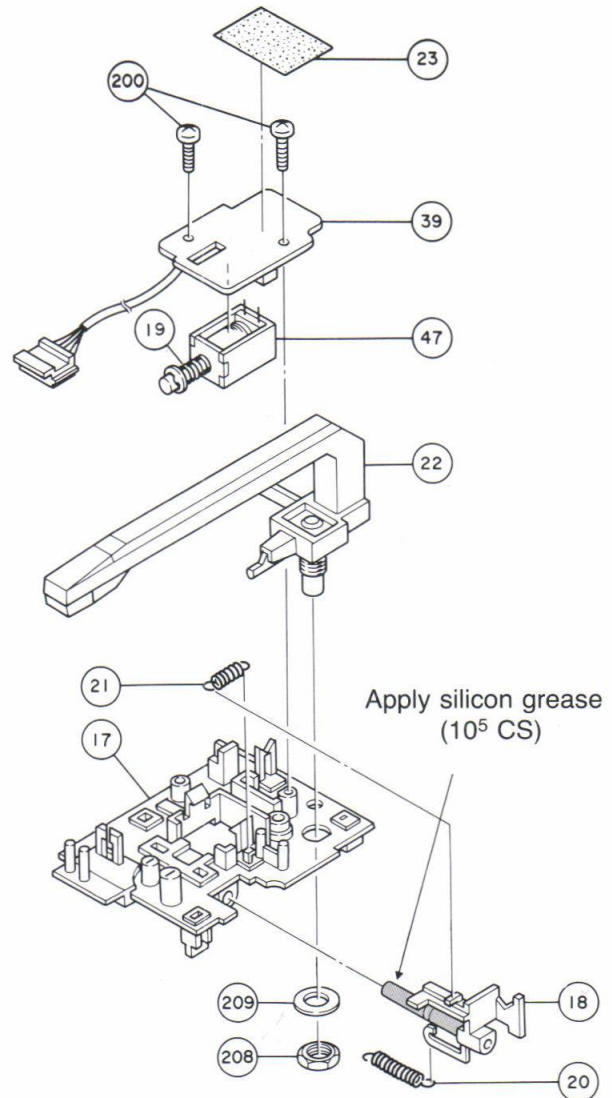


Fig. 13

**NOTE:** When installing the Solenoid Coil, press the shaft into the Solenoid Coil and attach it to the Bracket Ass'y  
If it is not pressed in, the tip of the shaft will come into contact with the Lifter Arm and the Solenoid Coil cannot be installed.



4. Install the Tonearm (22), place on the Washer (209), and secure it with the Hexagonal Nut (208). Place the Tonearm's lead wire through the guide. (Figure 14)

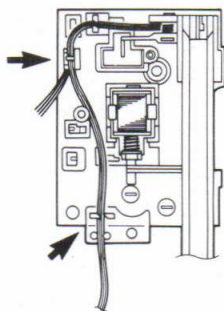


Fig. 14

5. Install the Sensor PWB Ass'y (39) and secure it with the two Screws (200). Place the lead wire through the guide pin and secure it with glue. (Figure 15)

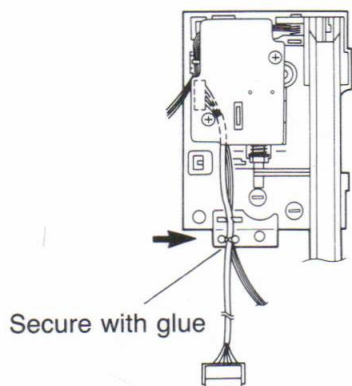


Fig. 15

6. Solder the Solenoid Coil terminal to the Sensor PWB Ass'y (39).
7. Solder the three short Tonearm lead wires to the Sensor PWB Ass'y (39).  
Sensor PWB marks: Y: Attach the yellow lead wire.  
V: Attach the violet lead wire.  
G: Attach the gray lead wire.
8. Stick the Sheet (23) on the Sensor PWB Ass'y (39).
9. Connect the long Tonearm lead wires (red and gray) and the Sensor PWB Ass'y lead wires to the Control PWB Ass'y (37).

## (B) Installation of Bracket Ass'y (17) (Figure 16)

1. Insert the Tonearm (22) into the cut out portion of the Cabinet (1), then place the two Rails (24) through the Bracket Ass'y (17) and secure them with three Screws (201).
2. Insert the Shaft (26) into the Cabinet (1) and install the Worm Wheel Gear (27).

NOTE: Apply a little silicon grease (G501) to the shaft and gear portion of the Worm Wheel Gear.

3. Install the Strings (29) as shown in figures 17 and 18.

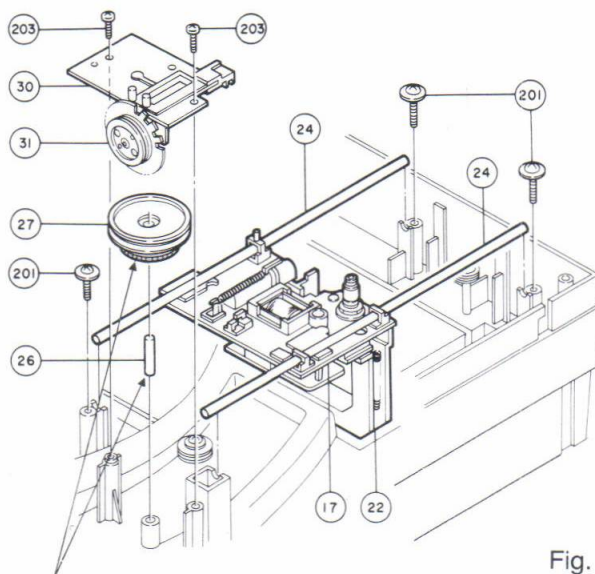


Fig. 16

Apply silicon grease (G501)

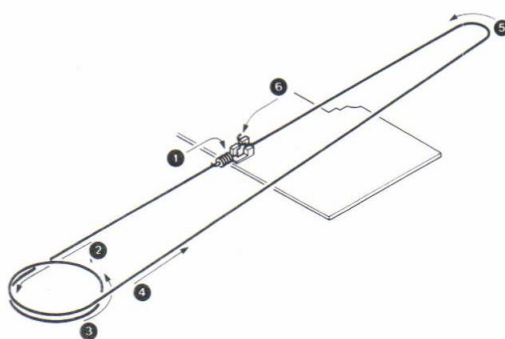


Fig. 17

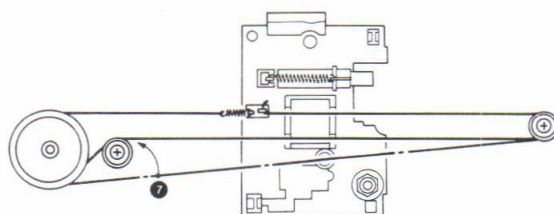


Fig. 18



4. Install the Worm Gear Ass'y (31) on the Sustainer Ass'y (30), set so that the gear portion of the Worm Wheel Gear (27) and worm gear are engaged, then secure to the Cabinet (1) with two Screws (203).

NOTE: When installing the Worm Gear Ass'y on the Sustainer Ass'y, be careful to set the washer between the worm gear and the shaft holder part on the Sustainer Ass'y. (Figure 19)  
Apply a little silicon grease (G501) to the worm gear.

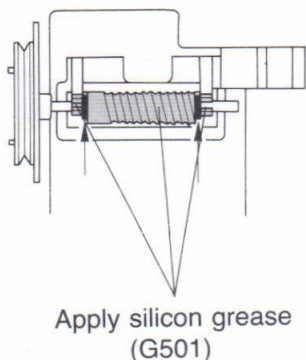


Fig. 19

## 4. ALIGNMENT PROCEDURES

### (A) Alignment of Stylus Height

1. Turn on the power, operate manually, feed the Tonearm (22) until it is over the record, and with the Tonearm (22) up check the height between the surface of the record and the tip of the Stylus (22-1). (Keep the turntable belt off.) Rated value:  $4 \pm 0.5\text{mm}$  above surface of record  
If adjustment is necessary, do so as follows:
2. Press the PLAY/CUT button (5) so that the Tonearm (22) returns to the rest.
3. Remove the record and Turntable Sheet (56), and set the hole in the Turntable (35) so that the alignment hole in the Cabinet (1) can be seen. (Figure 20)
4. Operating manually, feed the Tonearm (22) so that the Bracket Ass'y's eccentric alignment pin is lined up with the alignment hole in the Cabinet (1).
5. Turn eccentric pin (A) on the left side from the alignment hole in the Cabinet (1) to adjust.

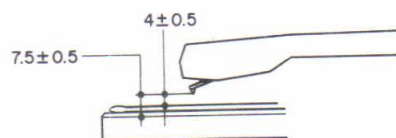
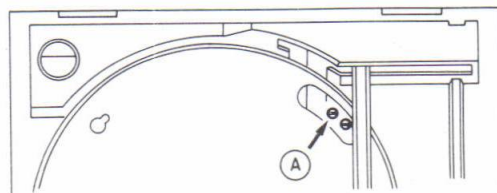


Fig. 20

### (B) Alignment of Tracking Error

1. Follow disassembly procedure (B) to remove the Bottom (14).
2. Insert the test connector into the 5P Plug (CN4) of the Control PWB Ass'y (37), and connect a voltmeter (DC) between TP1 and TP5 on the test connector. (Figure 21)

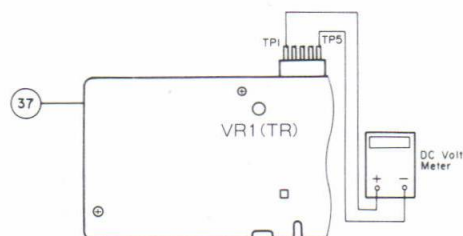


Fig. 21

3. Play the record, then press the CUE button (6) while the record is playing to lift the Tonearm (22).
4. Using a screwdriver, adjust Trimmer VRI (TR indication) so that the voltmeter reads between 0.55 and 0.5V.
5. Playback the lead-in scanning record (RG325) and check the amount of cueing error.

#### Checking Procedure

Play the part with the counts from the beginning, then press the CUE button (6) after about 10 counts to lift the Tonearm (22).

Press the CUE button (6) again and check the count value directly after the Tonearm (22) is lowered. The difference between the values directly before the Tonearm (22) is lifted and directly after it is lowered is the cueing error. Rated value:  $+2 \sim -7$  counts

\*Example: Count value directly before lifted: 10  
 Count value directly after lowered: 8  
 Cueing error:  $8 - 10 = -2$

If alignment is necessary, adjust with VR1 to reduce the cueing error.

(The cueing error changes by approximately 3 counts for a change in voltage of 0.1V.)

#### (C) Alignment of Record Sensor Sensitivity

\* Before this alignment, check the height of the Stylus (22-1) and adjust to within ratings.

1. Follow disassembly procedure (B) to remove the Bottom (14).
2. Insert the test connector into the 5P Plug (CN4) of the Control PWB Ass'y (37), and connect a DC voltmeter between TP3 and TP5 on the test connector. (Figure 22)

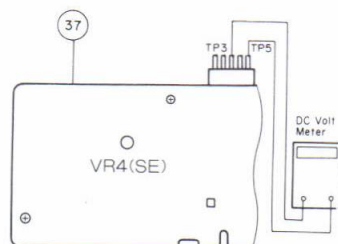


Fig. 22

3. Set the Turntable (35) and Turntable sheet (56), place test record RG325 on the Turntable (35) (detach the Belt (36) from the pulley), then press the left feed button (6) and move the Tonearm (22) so that the Stylus (22-1) is positioned between the grooves in the test record with the large pitch (5mm pitch). (Figure 23)

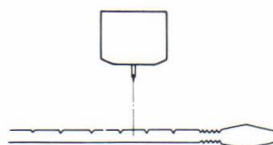


Fig. 23

4. Using a screwdriver, adjust Trimmer VR4 (SE indication) so that the voltmeter reading is  $5 \pm 0.4V$ .



#### (D) Alignment of Lead-in Position

1. Turn the Power Button off.
2. Insert the test connector into the 5P Plug (CN4) of the Control PWB Ass'y (37) and short circuit TP4 and TP5 on the test connector. (Figure 24)

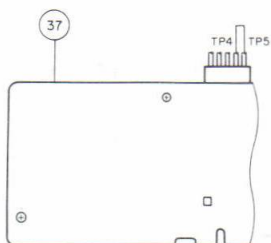


Fig. 24

- \* TP4 and TP5 are short circuited in order to set the microprocessor to the test mode. In the test mode, only a lead-in of 30cm and the cut operation are possible.
3. Turn the power on, place test record RG325 on the Turntable (35), and check the lead-in count value.  
\*Rated value:  $20 \pm 5$  counts  
If the lead-in is off, turn the unit plate's eccentric alignment pin (B) to adjust. (Figure 25)  
Use alignment procedure (A), steps 2 through 5.
  4. After adjusting, turn the Power Button off then disconnect the test connector.

NOTE: The test mode will not be cancelled if the test connector is disconnected with the Power Button on, so to conduct normal playback, be sure to turn the power off once then turn it back on.

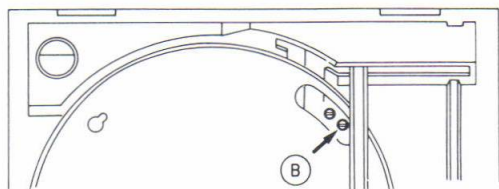


Fig. 25

#### (E) Alignment of Rotation Speed (Figure 26)

Align using Trimmer VR2 and VR3 with a screwdriver placed through the hole in the Bottom (14).

Use the following procedure:

Set the Speed Button (8) to the "45" position and adjust for 45rpm first, then switch to "33" and adjust for 33rpm.

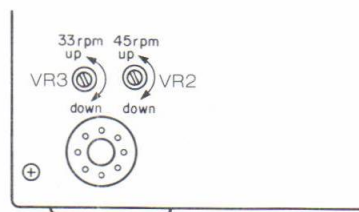


Fig. 26

## 5. TROUBLESHOOTING

### 1. Tonearm (22) returns with no lead-in.

Check the lead-in count using alignment procedure (D).

- \* Count is off: Readjust using alignment procedure (D).
- \* Count is proper: Check the voltage of IC3 pin 12. Set the record on the Turntable (35), feed the Tonearm (22) to the left, and check whether the voltage of IC3 pin 12 changes when the Tonearm (22) is over the record.
- \* Does not change: The Tonearm's record sensor is defective. Replace the Tonearm (22).
- \* Changes: Check the sensitivity of the record sensor using alignment procedure (C).

#### Checking the record sensor sensitivity

- \* Sensitivity voltage value is off: Either there is dust on the filter of the record sensor at the cartridge tip, or the alignment is off. Remove the Stylus (22-1) from the cartridge and wipe off the sensor. If the voltage is still off, readjust using alignment procedure (C).
- \* Sensitivity voltage value is correct: IC3 is defective.

NOTE: For records with low reflection because the lead-in portion is dirty or scratched, the auto return function will not work, so lead in manually.

### 2. No lead-in and no return

Operate the unit and watch the voltage of Control PWB Ass'y (37) JP1 pin 3 on an oscilloscope.

- \* Pulses (0V – 12V) are generated: Q17 or IC2 is defective, or the Mini Switch (44) is shorted.
- \* No pulses are generated: The Photo Unit (40-2) is defective or the Jumper (JP1) is damaged.
- \* Pulse voltage is low: Check the power source voltage.

### 3. Lead-in is performed but Tonearm (22) lowers

Lead in the Tonearm (22) onto the record and check the voltage of 7P Plug (CN1) pin 1 after the Tonearm (22) stops above the record.

- \* 0V: Q5, Q4, or the Solenoid Coil (47) is defective.
- \* 7V: The Spring (21) is detached or the Lifter Arm (18) rotation is defective.

### 4. Tonearm (22) drops off record during lead-in

Check the sensitivity of the record sensor and the lead-in position using alignment procedures (C) and (D).

- \* Alignment is off: Readjust using alignment procedures (C) and (D).
- \* Alignment is correct: Either the external light is too strong or IC3 is defective.

### 5. Stylus drops too far to one side

Readjust the lead-in position using alignment procedure (D).

### 6. Stylus (22-1) catches sound grooves in record and rises

Check and readjust the tracking error using alignment procedure (B).

### 7. Stylus (22-1) drops at an inclination when Tonearm (22) lowers

Check for deformation of the Lifter Arm (18).

- \* Deformed: Replace the Lifter Arm (18).
- \* Not deformed: The Tonearm (22) lead wire is too taut. Loosen it.

### 8. No sound produced from speakers

Measure the resistance on the Connective cord (45) plug signal side and ground side.

- \* 0Ω: Either there is a short in the Control PWB Ass'y (37) circuit or Connective Cord (45), or Q11 or Q12 is defective.
- \* No current: Either there is a broken wire in the audio output circuit or shield wire, or the cartridge is defective.

### 9. Muting does not work when Stylus (22-1) is up

Check whether the voltage of IC1 pin 10 changes between 5V when the Stylus (22-1) is up and 0V when the Stylus (22-1) is down.

- \* Changes: Either Q11 or Q12 is defective, or ground wire is not connected to the amplifier.
- \* Does not change: IC1 is defective.

### 10. Tonearm (22) does not move in after Stylus (22-1) lowers

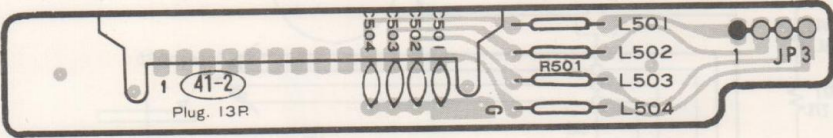
Check whether the voltage of IC3 pin 3 changes when the record is played.

- \* Changes: Either IC3 or Q10 is defective.
- \* Does not change: Either the Photo Unit (39-2) is defective, or there is a broken wire in the 7P Connective Cord (CN301).

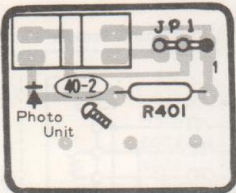


# 6. PRINTED WIRING BOARD

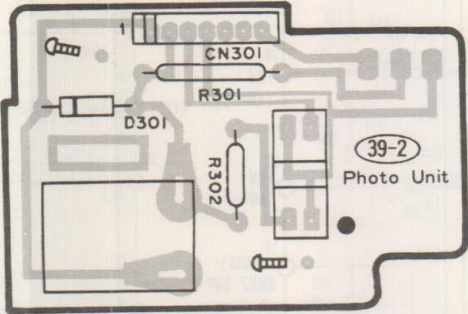
Remote P.W.Board  
(41-1)



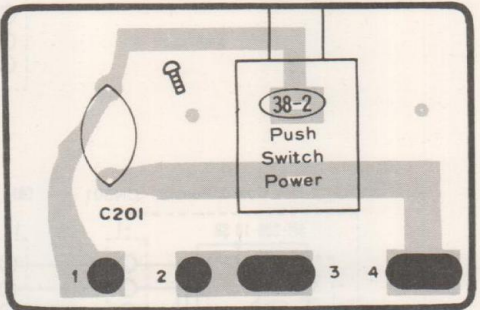
Pulse P.W.Board  
(40-1)



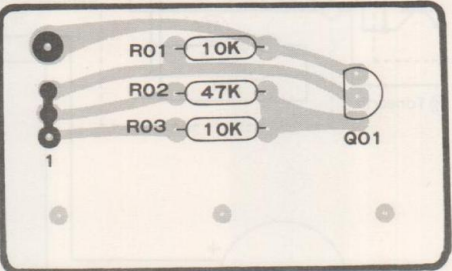
Sensor P.W.Board  
(39-1)



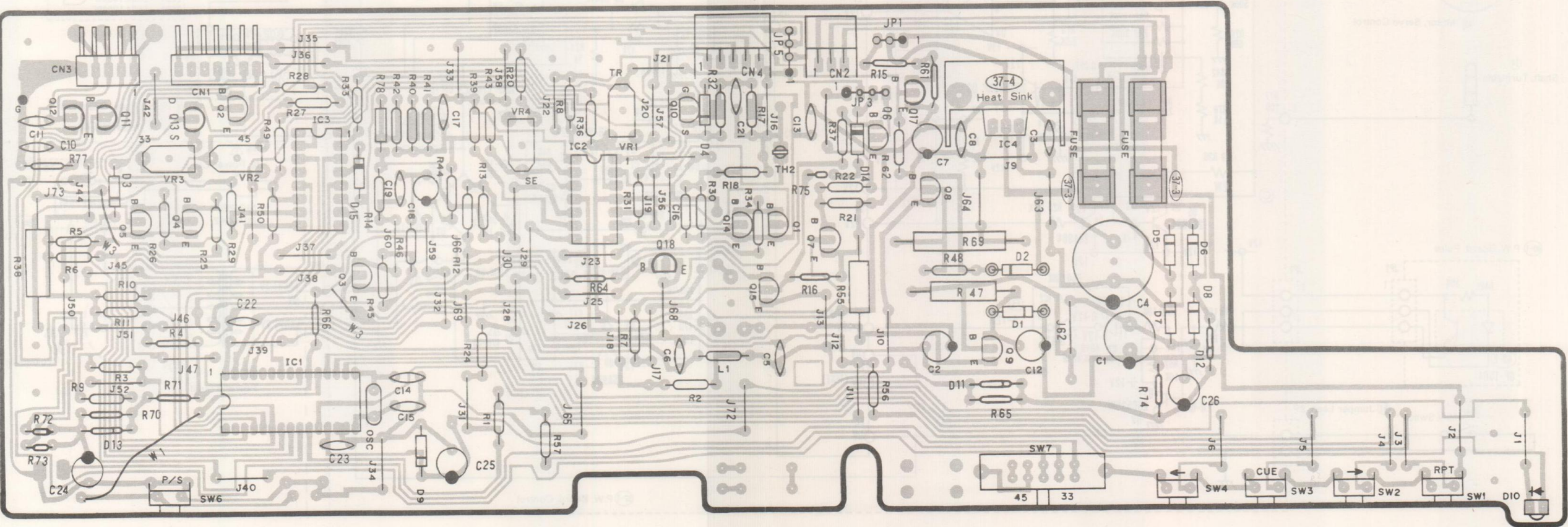
Primary P.W.Board  
(38-1)



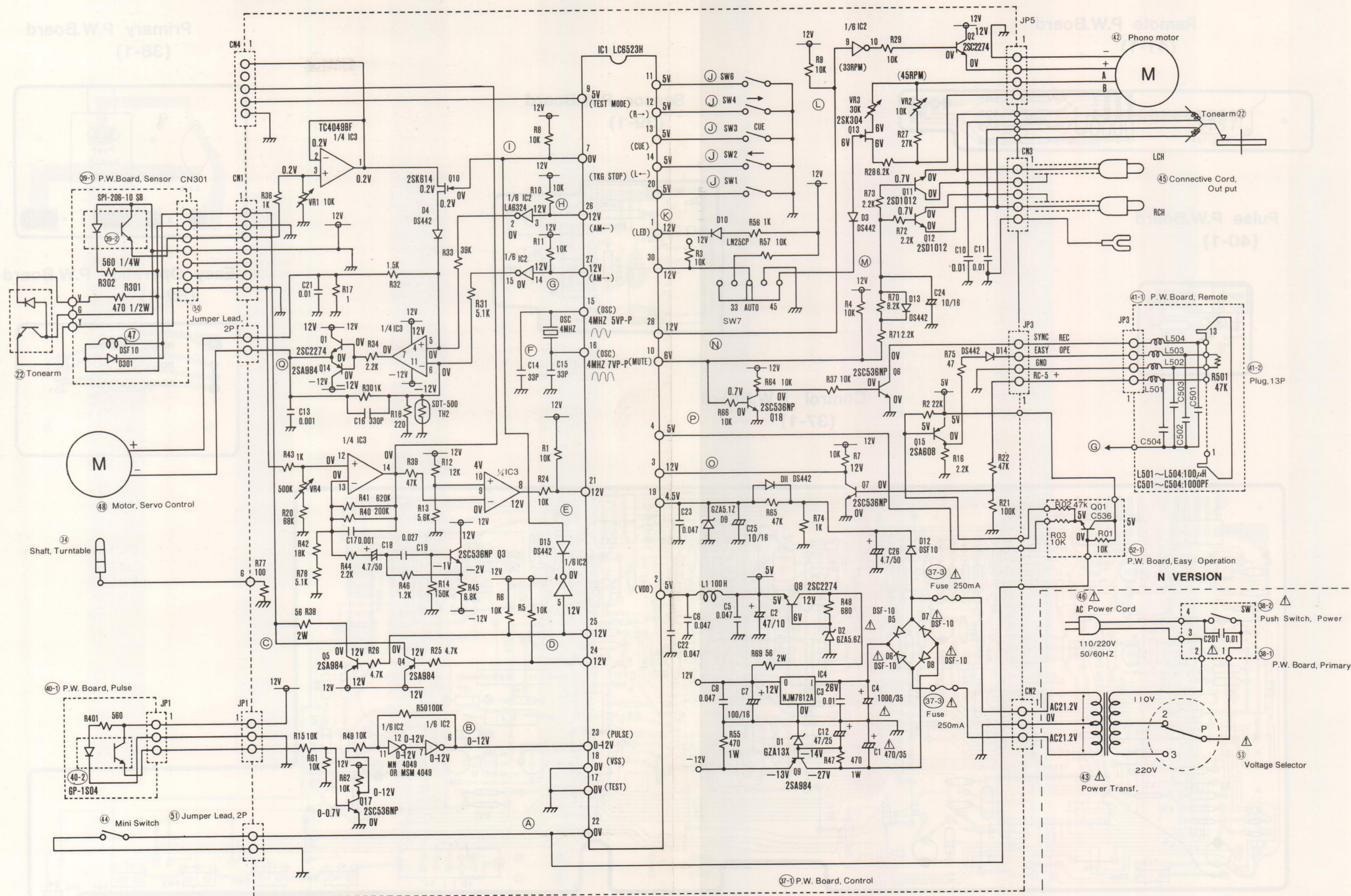
Easy Operation P.W.Board  
(52-1)



Control P.W.Board  
(37-1)



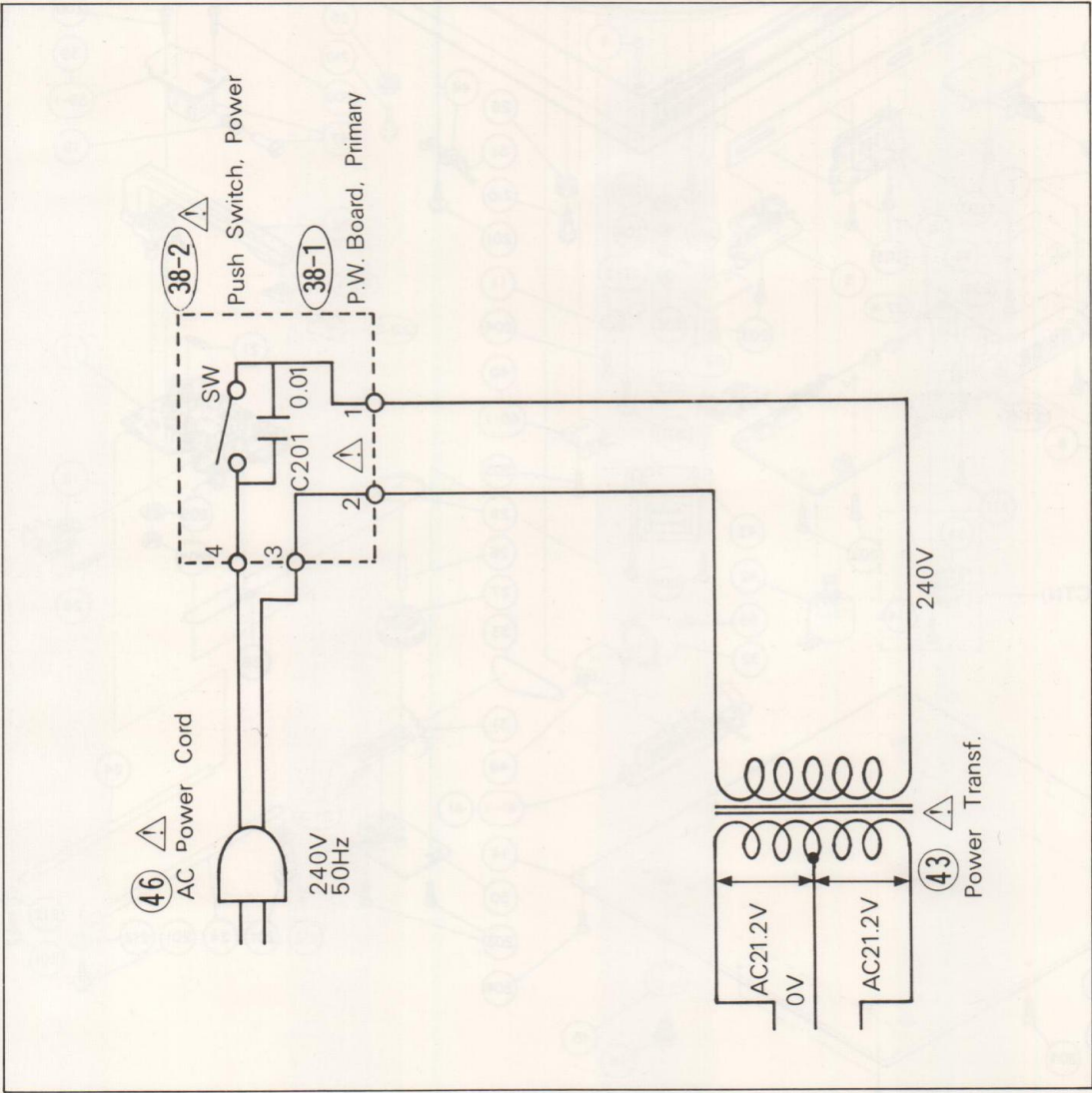






To service personnel  
Make sure that only replacement parts recommended by the manufacturer should be used when the parts marked "!" in schematic diagram are exchanged.  
Never fail to make leakage-current or resistance measurements before returning the appliance to the customer so as to make sure that exposed parts are acceptably insulated from the supply circuit.

Components and wiring are subject to change for modification without notice.

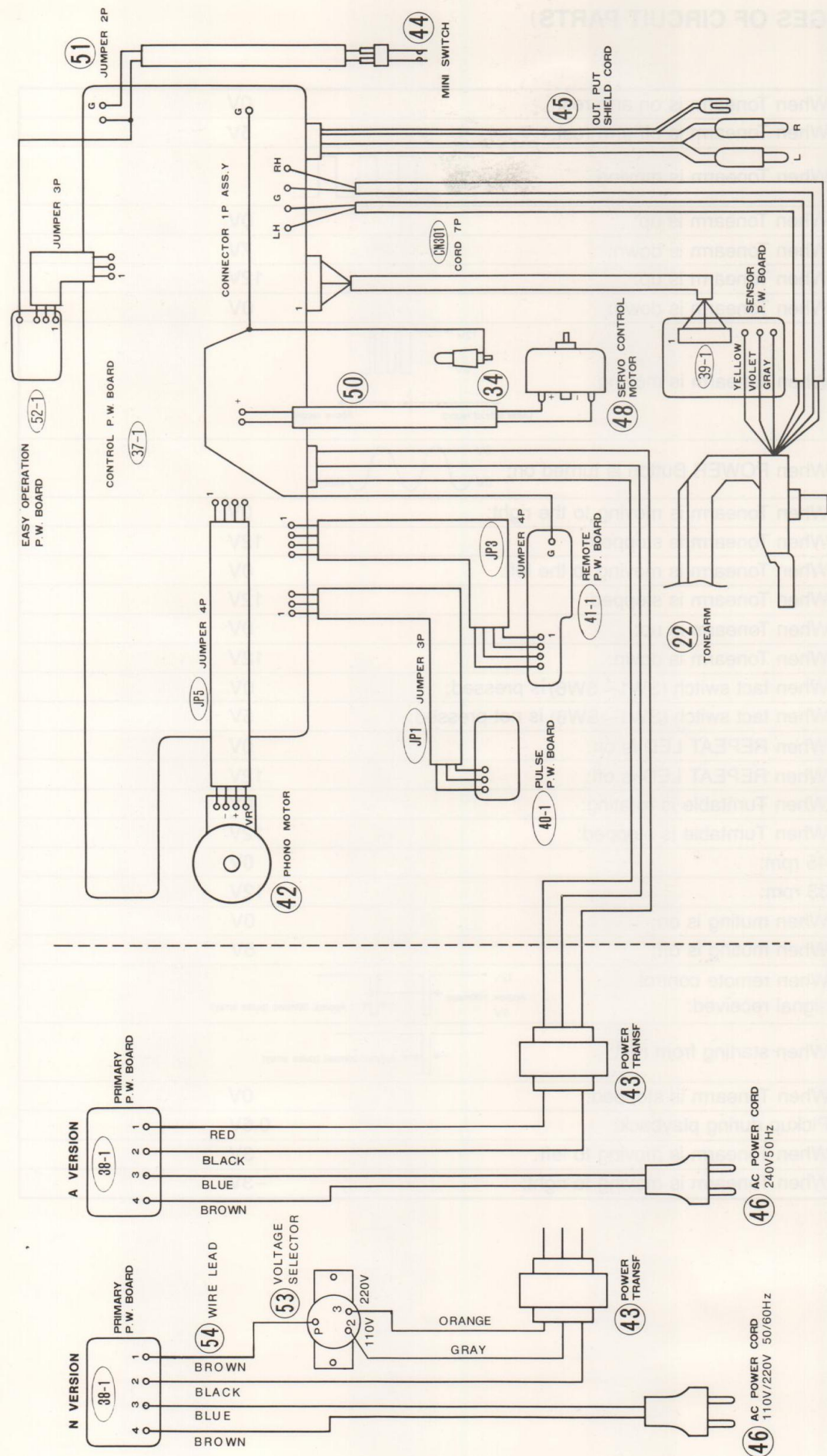


(VOLTAGES OF CIRCUIT PARTS)

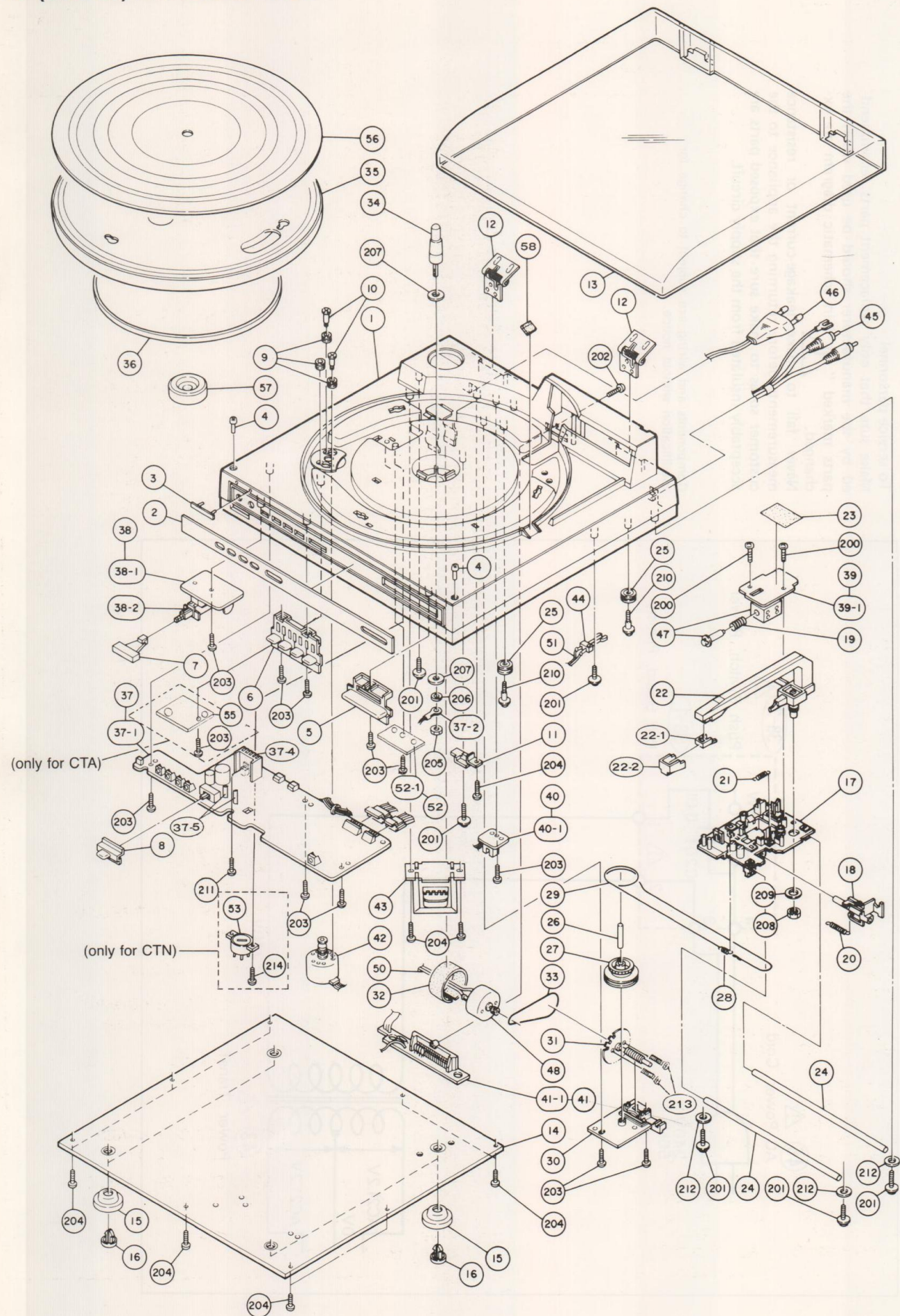
A	When Tonearm is on arm rest:	0V
	When Tonearm is off arm rest:	5V
B	When Tonearm is moving	
C	When Tonearm is up:	0V
	When Tonearm is down:	7V
D	When Tonearm is up:	12V
	When Tonearm is down:	0V
E	When Tonearm is moving:	
F	When POWER Button is turned on:	
G	When Tonearm is moving to the right:	0V
	When Tonearm is stopped:	12V
H	When Tonearm is moving to the left:	0V
	When Tonearm is stopped:	12V
I	When Tonearm is up:	0V
	When Tonearm is down:	12V
J	When tact switch (SW1~SW6) is pressed:	0V
	When tact switch (SW1~SW6) is not pressed:	5V
K	When REPEAT LED is on:	0V
	When REPEAT LED is off:	12V
L	When Turntable is rotating:	0V
	When Turntable is stopped:	12V
M	45 rpm:	0V
	33 rpm:	12V
N	When muting is on:	0V
	When muting is off:	5V
O	When remote control signal received:	
P	When starting from rest:	
Q	When Tonearm is stopped:	0V
	Pickup during playback:	0.6V
	When Tonearm is moving to left:	3V
	When Tonearm is moving to right:	-3V



## 8. WIRING DIAGRAM



## 9. (CO1-99) EXPLODED VIEW





## 10. PARTS LIST

N: for Europe  
A: for Australia

REF. DESIG.	PART NO.	DESCRIPTION
1	4822 444 30407	Cabinet
2	4822 450 61176	Window
3	4822 459 10805	Badge
4	4822 462 71515	Buffer
5	4822 410 26311	Button, Play/Cut
6	4822 410 26312	Button, Function
7	4822 410 26313	Button, Power
8	4822 413 90078	Button, Speed
9	4822 466 61313	Cushion, Motor
10	4822 502 12876	Screw, Motor
12	4822 417 11007	Hinge Ass'y
13	4822 444 60555	Cover, Dust Cover
14	4822 444 50601	Lid, Bottom
15	4822 462 71516	Leg
16	4822 462 71517	Stopper
17	4822 402 61167	Bracket Ass'y
18	4822 402 61165	Arm, Lifter
19	4822 492 32828	Spring
20	4822 492 32829	Spring
21	4822 492 32831	Spring
22	4822 251 70302	Tonearm
22-1	4822 251 30134	Stylus, CTS873
22-2	4822 462 71522	Retainer, Stylus
24	4822 462 30383	Rail
25	4822 528 50294	Pulley
27	4822 522 32423	Gear, Worm wheel
28	4822 492 32832	Spring
29	4822 492 32827	String
30	4822 402 61166	Sustainer Ass'y
31	4822 522 32424	Gear Ass'y, Worm
33	4822 358 30817	Belt, Servo motor
34	4822 535 92445	Shaft, Turntable
35	4822 528 10697	Turntable
36	4822 358 30758	Belt, Turntable
<b>CONTROL CIRCUIT BOARD</b>		
37-3	4822 253 30127	Fuse 250mA
OSC	4822 242 72075	Ceramic Vib. 4MHz
SW1	4822 276 12355	Push Switch
SW2	4822 276 12355	Push Switch
SW3	4822 276 12355	Push Switch, CUE
SW4	4822 276 12355	Push Switch
SW6	4822 276 12355	Push Switch
SW7	4822 277 30753	Slide Switch, SPEED
△C1	4822 124 41234	Elect, 470μF 35V
C16	4822 122 33275	Ceramic, 330PF 50V
D1	4822 130 31534	Zener, GZA13X
D2	4822 130 80639	Zener, GZA5.6Z
D3	4822 130 31371	Diode, DS442
D4	4822 130 31371	Diode, DS442
△D5	4822 130 32508	Diode, DSF10C
△D6	4822 130 32508	Diode, DSF10C
△D7	4822 130 32508	Diode, DSF10C
△D8	4822 130 32508	Diode, DSF10C
D9	4822 130 80632	Zener, GZA5.1Z
D10	4822 130 33659	LED, LN25CP

REF. DESIG.	PART NO.	DESCRIPTION
D11	4822 130 31371	Diode, DS442
D12	4822 130 32508	Diode, DSF10C
D13	4822 130 31371	Diode, DS442
D14	4822 130 31371	Diode, DS442
D15	4822 130 31371	Diode, DS442
IC1	4822 209 72584	IC, LC6523H
IC2	4822 209 81372	IC, LA6324
IC3	4822 209 72585	IC, TC4049BF
IC4	4822 209 70084	IC, NJM7812A
TH2	4822 116 30334	Thermistor, SDT-500
L1	4822 156 11072	Choke Coil, 100μH
Q1	4822 130 43238	Transistor, 2SC2274 E,F
Q2	4822 130 43238	Transistor, 2SC2274 E,F
Q3	4822 130 43088	Transistor, 2SC536NP F
Q4	4822 130 60947	Transistor, 2SA984 E
Q5	4822 130 60947	Transistor, 2SA984 E
Q6	4822 130 43088	Transistor, 2SC536NP F
Q7	4822 130 43088	Transistor, 2SC536NP F
Q8	4822 130 43238	Transistor, 2SC2274 E,F
Q9	4822 130 60947	Transistor, 2SA984 E
Q10	4822 130 60946	FET, 2SK614
Q11	4822 130 60948	Transistor, 2SD1012 G,H
Q12	4822 130 60948	Transistor, 2SD1012 G,H
Q13	4822 130 42837	FET, 2SK304 F
Q14	4822 130 60947	Transistor, 2SA984 E
Q15	4822 130 42872	Transistor, 2SA608 E,F
Q17	4822 130 43088	Transistor, 2SC536NP F
Q18	4822 130 43088	Transistor, 2SC536NP F
R38	4822 116 60463	56Ω 2W
R47	4822 116 60267	470Ω 1W
R55	4822 116 60267	470Ω 1W
R69	4822 116 60463	56Ω 2W
VR1	4822 100 10472	10KΩ Trimming
VR2	4822 100 10472	10KΩ Trimming
VR3	4822 100 20198	30KΩ Trimming
VR4	4822 100 10628	500KΩ Trimming
△38-2	4822 276 11645	<b>PRIMARY CIRCUIT BOARD</b> Push Switch, Power
△C201	4822 122 33276	Ceramic 0.01μF 400V
39-2	4822 130 80633	<b>SENSOR CIRCUIT BOARD</b> Photo Unit, SPI206-10-SB
D301	4822 130 32508	Diode, DSF10C
R301	4822 116 60521	470Ω 1/2W
40-2	4822 130 80634	<b>PULSE CIRCUIT BOARD</b> Photo Unit, GP-1S04
L501	4822 156 11073	<b>REMOTE CIRCUIT BOARD</b> Choke Coil, 100μH
L502	4822 156 11073	Choke Coil, 100μH
L503	4822 156 11073	Choke Coil, 100μH
L504	4822 156 11073	Choke Coil, 100μH

N: for Europe  
A: for Australia

REF. DESIG.	PART NO.	DESCRIPTION
42	4822 361 21082	Phono Motor
△43	4822 146 21303	Power Transf. N
△43	4822 146 21304	Power Transf. A
44	4822 271 30612	Mini Switch
45	4822 321 22642	Connective Cord, Output
△46	4822 321 10435	AC Power Cord N
△46	4822 321 10555	AC Power Cord A
47	4822 157 53328	Solenoid Coil
48	4822 361 21081	Motor, Servo Control
<b>EASY OPERATION CIRCUIT BOARD</b>		
Q01	4822 130 43088	Transistor, 2SC536NP F
53	4822 266 30212	Voltage Selector N
56	4822 466 50205	Sheet, Turntable
57	4822 528 10549	Rec. Adaptor
164	4822 736 13772	User's Manual
200	4822 502 13013	Screw, 3×8
201	4822 502 12875	Screw, 3×10
203	4822 502 12229	Screw, 3×8
204	4822 502 12232	Screw, 3×12
205	4822 505 10904	Hexagon Nut, M4
206	4822 530 80492	Spring Washer, ø4
207	4822 532 11574	Washer, ø4
208	4822 505 10925	Hexagon Nut
209	4822 532 51971	Washer
210	4822 502 12877	Screw
211	4822 502 13014	Screw, 3×6
212	4822 532 51972	Washer, 16×4.5×1
213	4822 502 13015	Screw, 2×4
214	4822 502 12231	Screw, 3×10 N

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

#### To service personnel

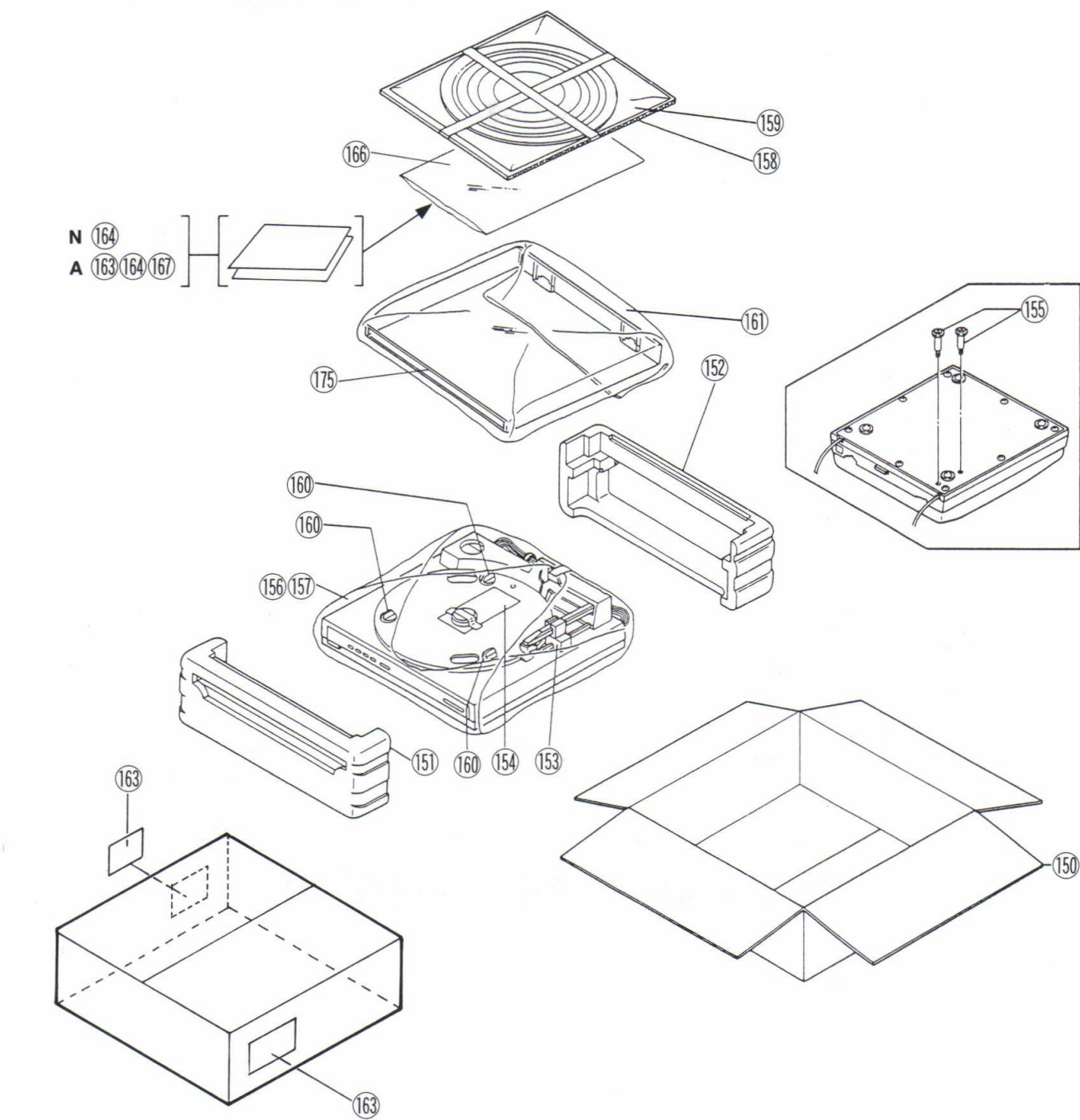
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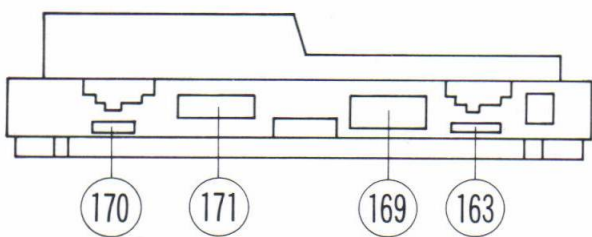
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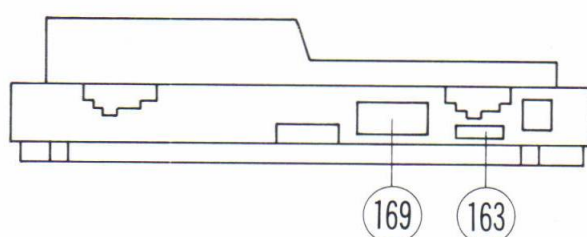
11. (HO1-99) PACKING MATERIALS



(N)



(A)





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