

SERVICE MANUAL



FISHER[®]

MT-M300

MT-M300C

**DC-Servo Direct Drive
Semi-Automatic Turntable**



The first name in high fidelity

U.S.

SPECIFICATIONS

TURNTABLE	MT-M300C
Motor	DC Servo
Drive	Direct
Wow and Flutter (WRMS)	0.04 %
Rumble (DIN 45539B)	-70 dB
Speed Variation	±0.5 %
Speed Control Range	±3 %
Tracking Force Range	0.6 – 3.5 grams
Tracking Force Adjustment	Calibrated Counter-Weight
Platter Diameter	12-1/8"
Platter Weight	2 lbs.
Strobo Light	Yes
Record Speed Selector	33-1/3/45 rpm
Auto Function	
Stop	Yes
Reject	Yes
Automatic	
Tone Arm Return at End of Record	Yes
Manual Function	
Start	Yes
Stop	Yes
Tonearm Data	
Resonance	< 10 Hz
Balance Adjustment	Counter-Weight
Effective Length	210 mm
Shape	Straight
Bearing-Type	
Horizontal	Thrust
Friction Sensitivity	0.15 gram
Vertical	Pivot
Friction Sensitivity	0.2 gram
Max. Tracking Error	+3°, -1°
Anti Skate Control	Calibrated Adjustable
Cueing	Viscous Damped
Cartridge Supplied	Stereo Magnetic (MG-38)
GENERAL	
Power Requirements	120 V AC ±10% 50/60 Hz
Power Consumption	13 Watts
Dimensions (W x H x D)	13-1/8" x 4-3/8" x 13-1/8"
Weight (approx.)	12 lbs.

SERVICE PROCEDURES

Cabinet Removal

1. Remove the head shell and main weight.
2. Remove the bushing of power cord from the cabinet with a pair of round-nose pliers.
3. Remove the four leg screws (A) as illustrated in Fig. 1.
Note: Remount each leg to its original position because the position of each leg differ according to the spring tension and the use of a spacer.
4. Detach the tonearm from the armrest. Then, remove the cabinet as illustrated in Fig. 2.

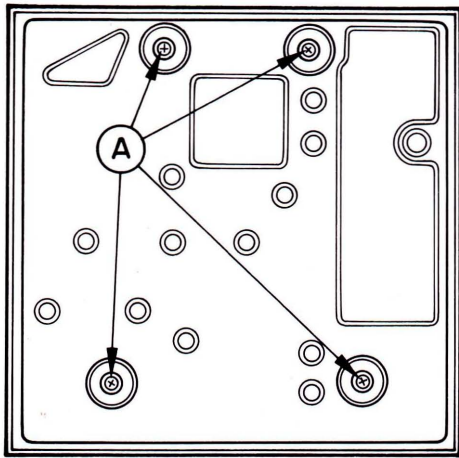


Fig. 1

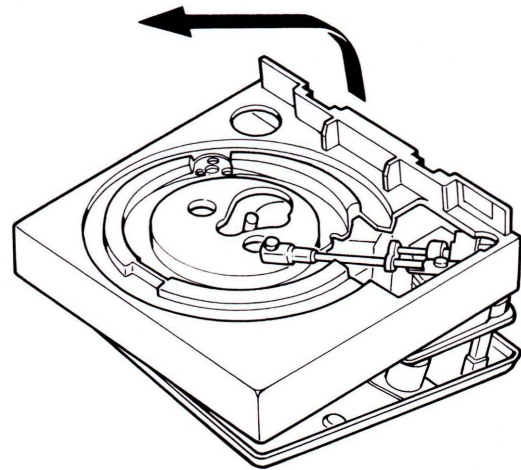


Fig. 2

Notes on Mounting the legs

When mounting the legs on the cabinet, attach the four springs directing the first winding ends towards the tonearm as illustrated in Fig. 3 to keep the turntable stable and in the horizontal position.

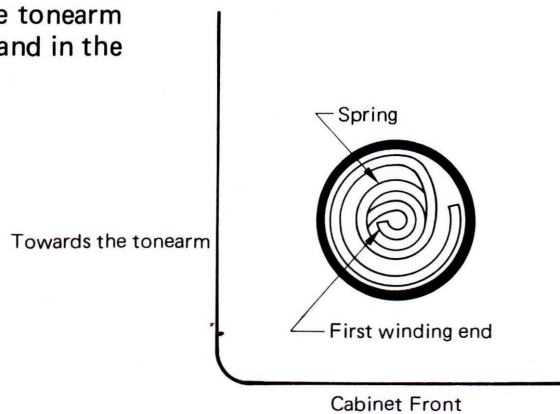


Fig. 3

REPLACING THE CARTRIDGE ON MT-M300C OR INSTALLING A CARTRIDGE IN MT-M300

- Carefully mount the cartridge according to the maker's instructions. DO NOT tighten the mounting screws.
- Connect the 4 colored leads in the cartridge shell to the cartridge terminals.
Connect properly by matching the colors of the leads and cartridge terminals.
White = Left output
Blue = Left ground
Red = Right output
Green = Right ground
- Before plugging the cartridge shell into the tone arm, adjust the stylus point of cartridge.
Move the cartridge back and forth to obtain a space of 1-7/16" (36.5 mm) between cartridge shell and stylus tip as shown in (Fig. 5).
Fix cartridge in this location by TIGHTENING the mounting screws.
Be sure to keep the cartridge straight in the cartridge shell.
- Plug the cartridge shell into the tone arm and tighten the cartridge shell locking screw by turning it clockwise. (Fig. 4).
- The tonearm used in this turntable has a very low effective mass. It will work best with a low weight, high compliance cartridge. The cartridge weight may vary between 4.5 grams and 6.5 grams with a nominal recommended value of 5.5 grams. The static compliance may vary between 30×10^{-6} cm/dyne and 50×10^{-6} cm/dyne with a nominal value of 40×10^{-6} cm/dyne.

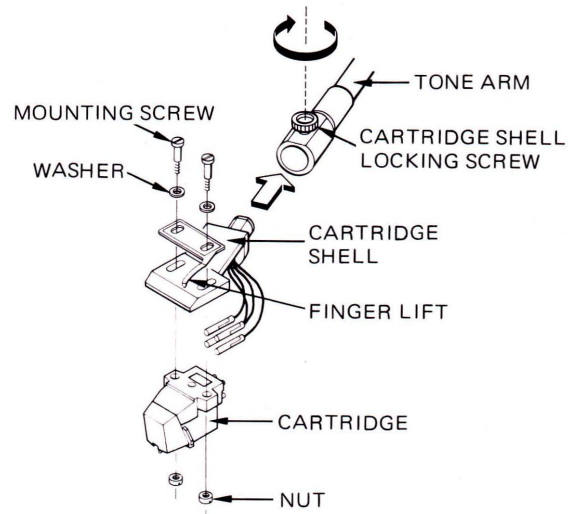


Fig. 4

MT-M300 ... WITHOUT CARTRIDGE
MT-M300C .. WITH MAGNETIC CARTRIDGE

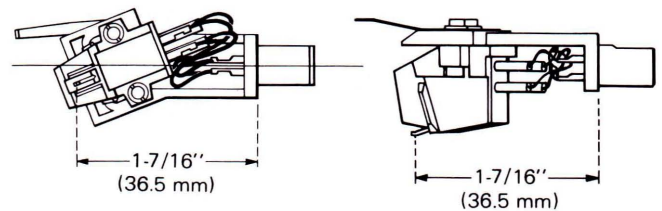


Fig. 5

MECHANICAL ADJUSTMENTS

PICK-UP RETURN POSITION ADJUSTMENT

Insert a minus screwdriver into the cam hole for the return position adjustment as in Fig. 6. Turn the cam clockwise to shift the return position inward and counterclockwise to shift it outward.

Note: When the cam is fully turned, the pick-up arm returns to its original position.

PICK-UP ARM HEIGHT ADJUSTMENT

Adjust the height by turning each adjusting screw as illustrated in Fig. 6, so that the distance of 7 mm (approx.) remains between the pick-up arm and the record when the arm lifts up and returns.

The arm support lifts when the adjusting screw is turned clockwise and lowers when turned counterclockwise.

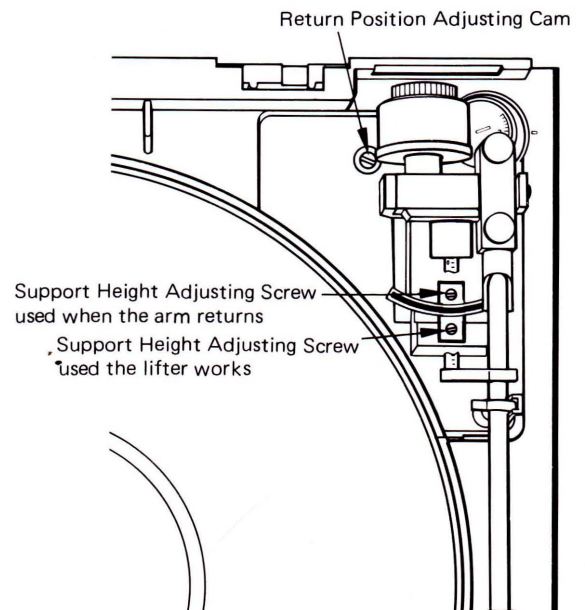
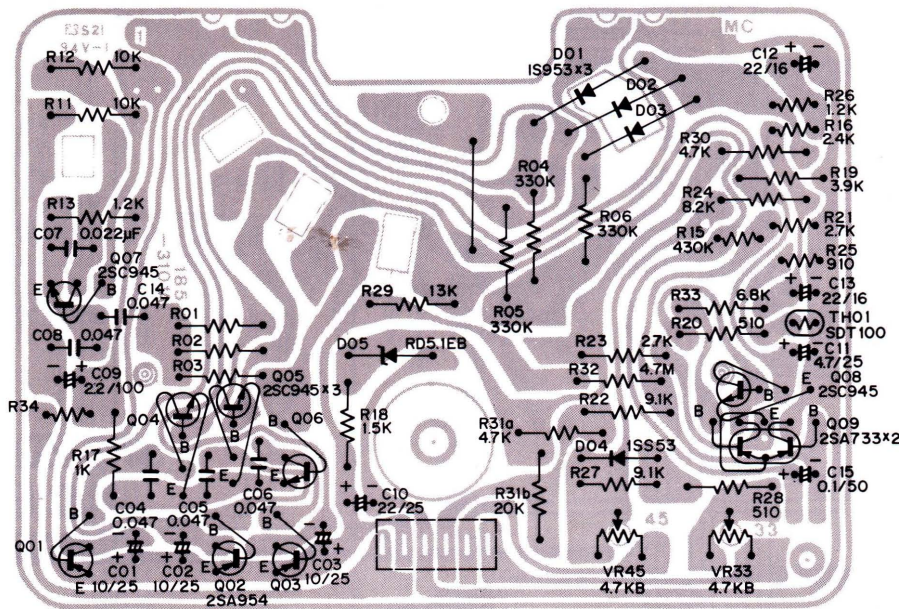


Fig. 6

MOTOR P.C.BOARD (BOTTOM VIEW)

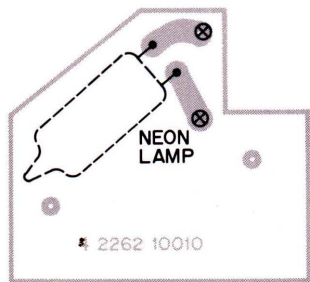


CAUTION

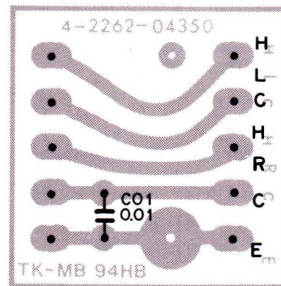
Should the Servo motor, control P.C.B. assembly or any of the transistors, diodes, volume controls, resistors, capacitors, etc. installed on the control P.C.B. assembly develop trouble, do not replace only the faulty parts but the motor and the control P.C.B. assembly as well.

This is necessary because the control P.C.B. assembly is finely adjusted to match the performance characteristics of the motor. If only the faulty parts have been replaced, we shall not be held responsible for deterioration in the performance of the unit.

NEON P.C.BOARD (BOTTOM VIEW)



PHONO P.C.BOARD (BOTTOM VIEW)



PARTS LIST

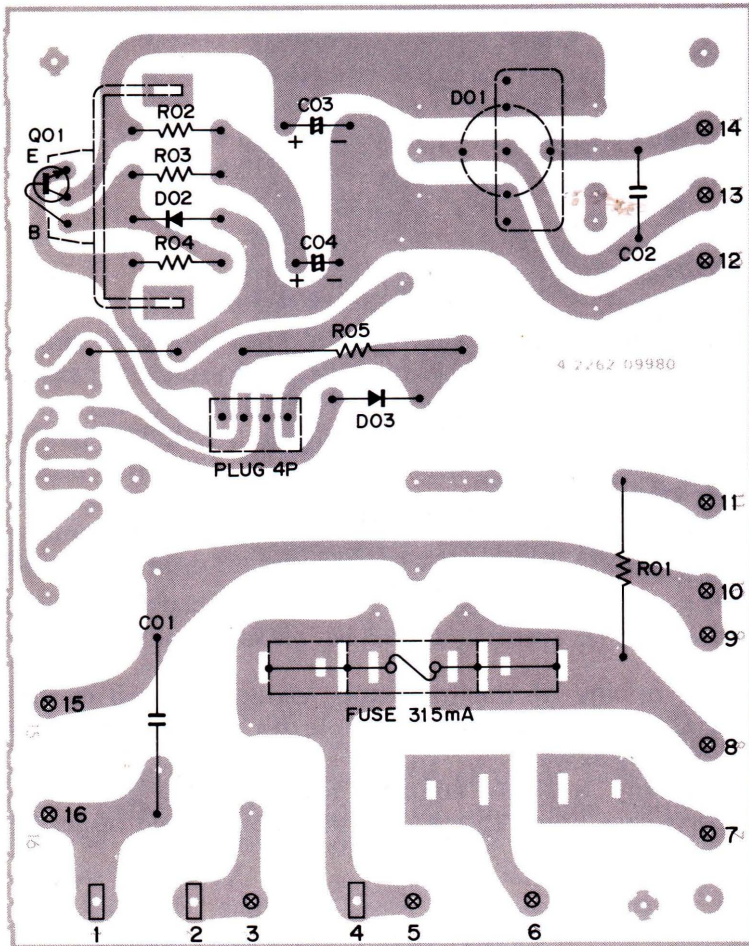
NEON P.C.B. Assy
131 0 4001 08640

Ref. No.	Parts Number	Description
	4 6122 02700	Neon Lamp

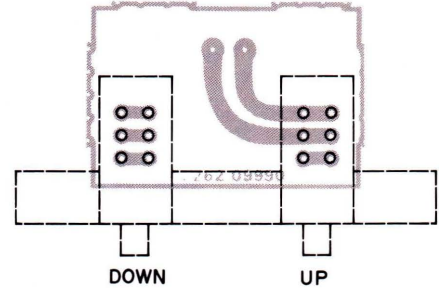
PHONO P.C.B. Assy
131 0 4001 02940

Ref. No.	Parts Number	Description
	CAPACITOR	
C01	C1HYDZ103A	Ceramic 0.01 μ F 50V

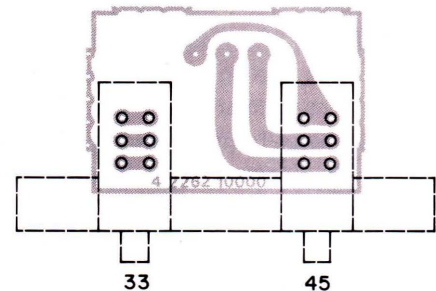
POWER SUPPLY P.C.BOARD (BOTTOM VIEW)



CUEING P.C.BOARD (BOTTOM VIEW)



SPEED SELECT P.C.BOARD (BOTTOM VIEW)



PARTS LIST

POWER SUPPLY P.C.B. Assy 131 0 4001 08611

Ref. No.	Parts Number	Description
	4 2342 00270	Fuse 315 mA
	4 2359 23000	Fuse Holder
	4 2362 00100	Plug 5P

CAPACITORS

C01	C2JNRM473C	Polypropylene 0.047 μ F 630V \pm 20%
C02	C2HYDP103A	Ceramic 0.01 μ F 500V +100,-0%
C03	C1VRE-108A	Electrolytic 1000 μ F 35V
C04	C1VRE-476A	Electrolytic 47 μ F 35V

SEMICONDUCTORS

D01	DGG-W02	Bridge Diode, W02
D02	202 5 3210 20010	Zener Diode, GZA20L
D03	202 5 2470 13540	Diode, DS135D
Q01	203 5 8570 33050	TR 2SD330 E, D

Ref. No. Parts Number Description

RESISTORS

R01	R3AXB123A	Oxide Metal Film 12k 1W \pm 5%
R02	R2EDBJ471A	Carbon 470 1/4W \pm 5%
R03	R2EDPJ471A	Carbon 470 1/4W \pm 5%
R04	R2EDPJ152A	Carbon 1.5k 1/4W \pm 5%
R05	R3DXBJ390A	Oxide Metal Film 39 2W \pm 5%

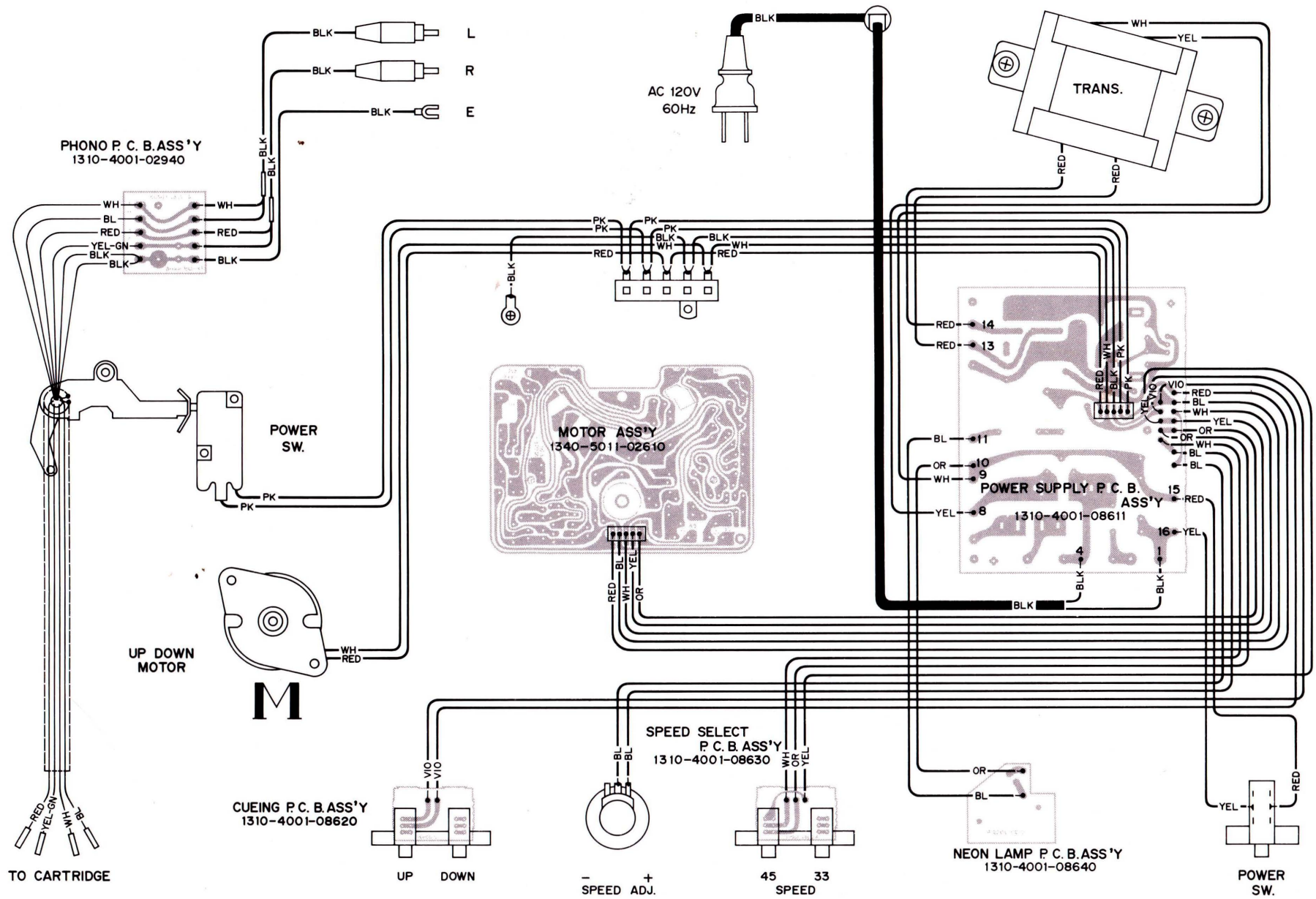
CUEING P.C.B. Assy 131 0 4001 08620

Ref. No.	Parts Number	Description
	4 2312 03170	Switch Push 2Key

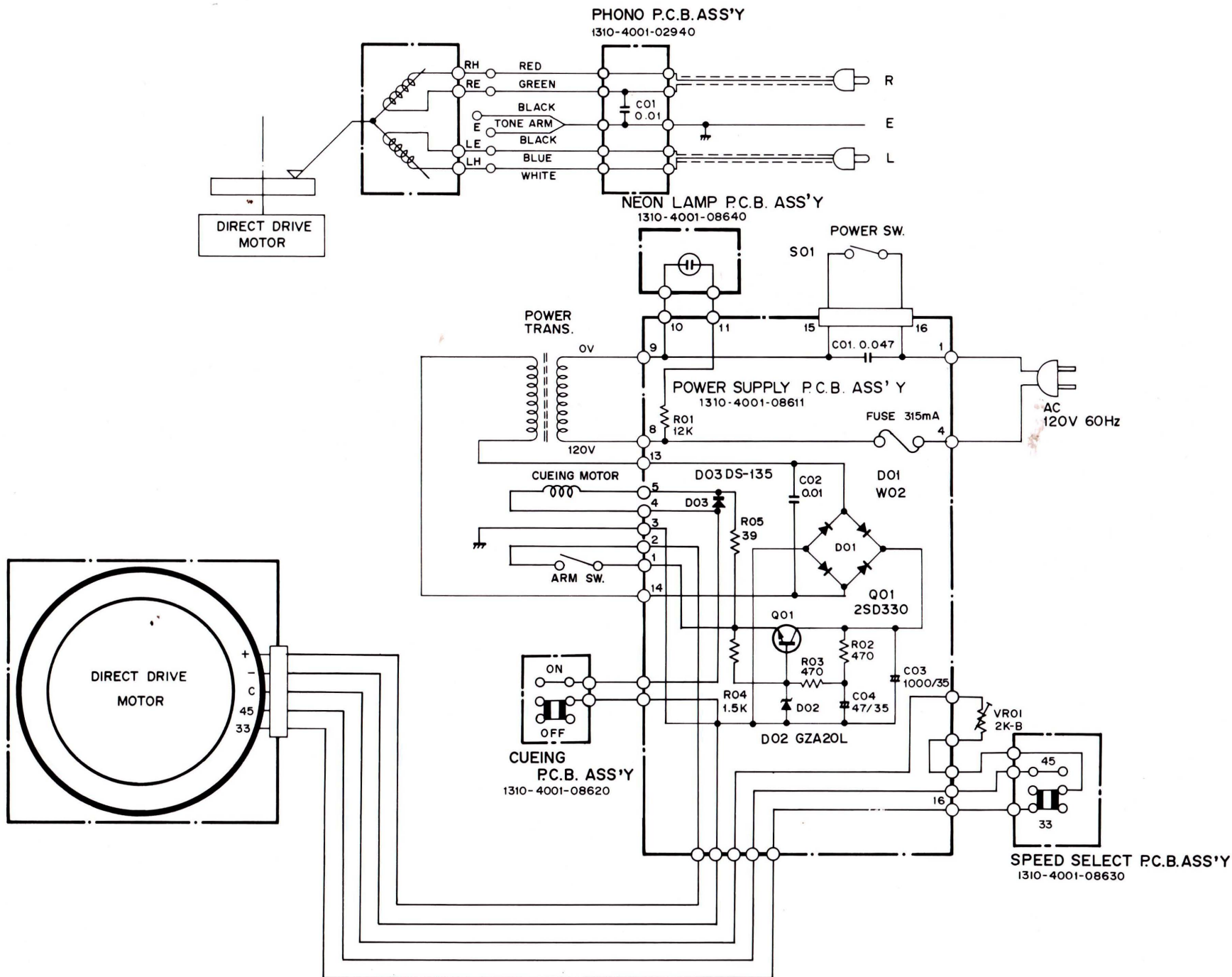
SPEED SELECT P.C.B. Assy 131 0 4001 08630

Ref. No.	Parts Number	Description
	4 2312 03170	Switch Push 2Key

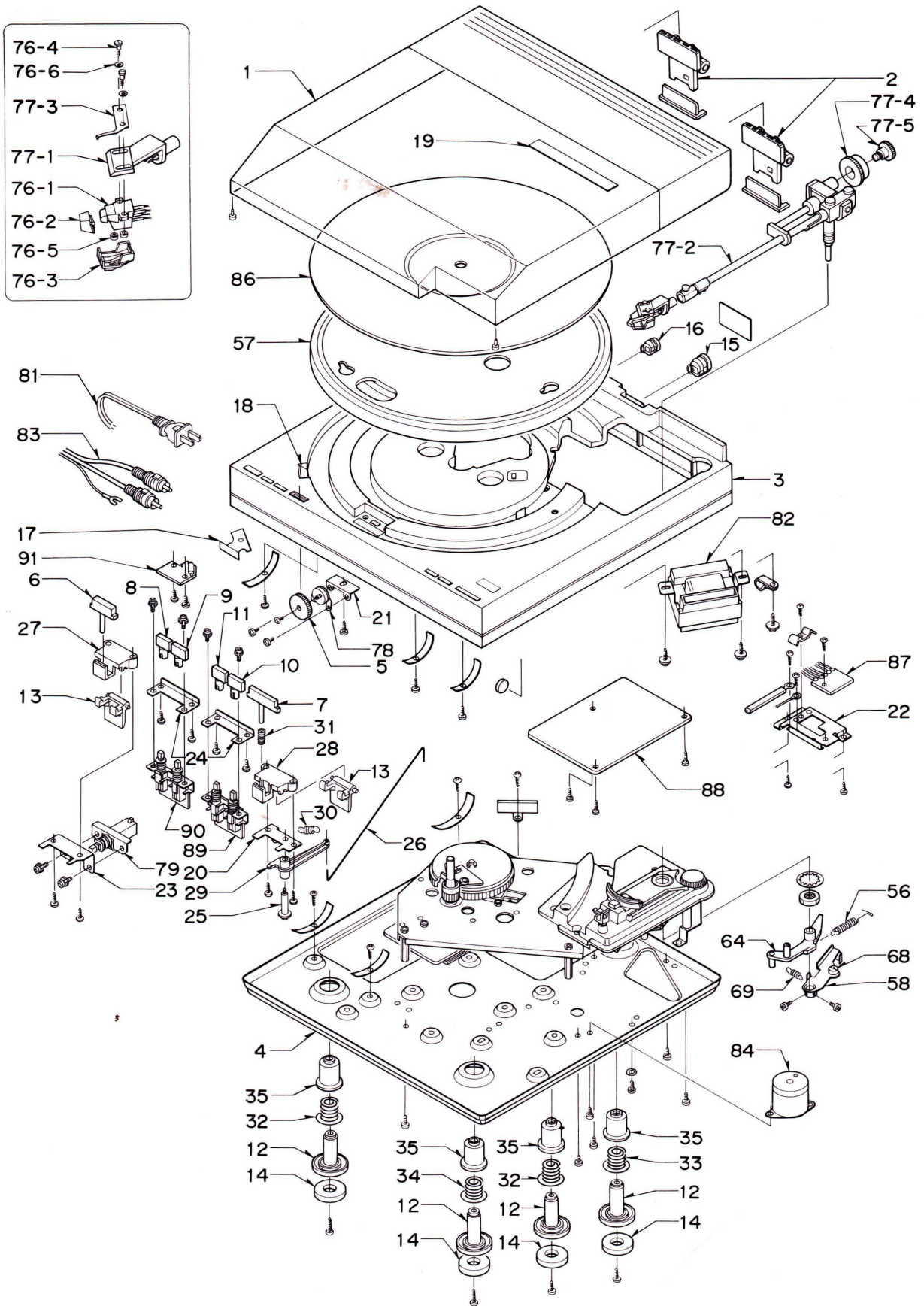
POINT TO POINT WIRING DIAGRAM



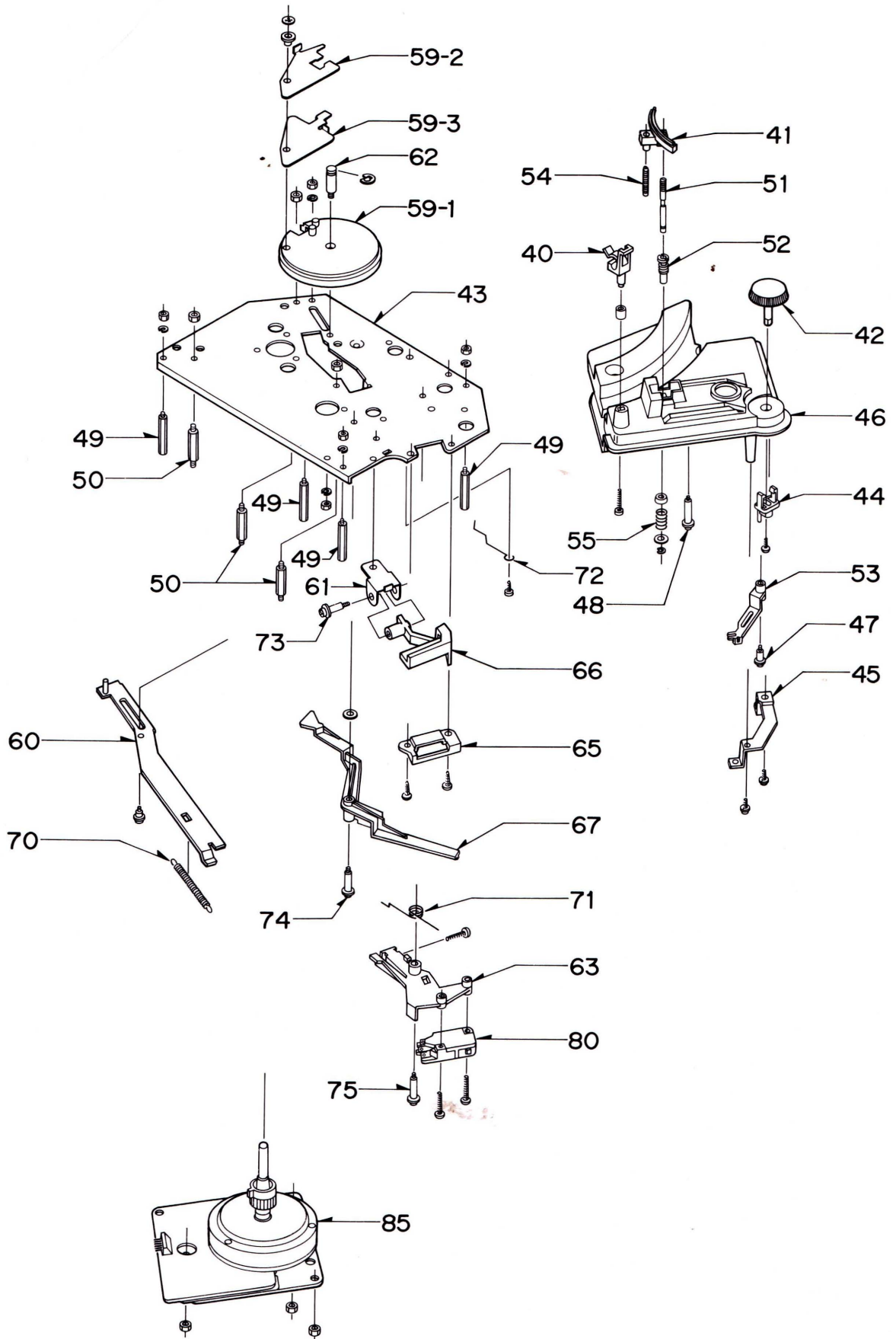
SCHEMATIC DIAGRAM



CABINET & TURNTABLE EXPLODED VIEW(1)



CABINET & TURNTABLE EXPLODED VIEW(2)



PARTS LIST

PACKING PARTS LIST

Ref. No.	Parts Number	Description
	131 6 1169 02900	Box Corrugate-EXP
	131 6 2119 01470	Bag Polyethylene-EXP
	131 6 2119 02081	Bag Polyethylene-EXP
	131 6 3009 32860	Pad (Parts Box)
	131 6 3009 32970	Pad (Right)
	131 6 3009 32980	Pad (Left)
	131 6 3009 32990	Pad (Cabinet Rear-Lid)
	131 6 3009 33000	Pad (Parts Box Cover)
	131 6 3009 33070	Pad (Lid Top)
	131 6 3009 33380	Pad (Sub Weight)

ACCESSORIES PARTS LIST

Ref. No.	Parts Number	Description
	131 2 7103 37373	Label
	131 2 7103 43800	Label
	131 6 2719 10801	Bag Fan
	131 6 4119 89902	Explanatory Booklet
	131 6 4159 34100	Notes
	131 6 4319 10802	Service Station List
	131 6 4519 14400	Guarantee Card
	131 6 4939 00200	Information Card
	134 2 2901 11600	Adaptor EP

CABINET PARTS LIST

Ref. No.	Parts Number	Description
1	131 0 2022 90290	Lid Assy
	131 2 1107 24300	Lid
	131 2 2904 12301	Pad Lid
2	131 0 2002 16900	Hinge Assy
3	131 2 1101 46504	Cabinet
4	131 2 1105 28300	Plate Bottom
5	131 2 1601 67800	Knob (Speed Adjust)
6	131 2 1601 77100	Knob (Power)
7	131 2 1601 77200	Knob (Reject)
8	131 2 1601 77300	Knob (Speed Switch 33)
9	131 2 1601 77400	Knob (Speed Switch 45)
10	131 2 1601 77500	Knob (Cue Switch Up)
11	131 2 1601 77600	Knob (Cue Switch Down)
12	131 2 1801 15000	Leg
13	131 2 2108 02500	Hinge (Power Reject)
14	131 2 5203 23600	Felt
15	131 2 6111 14800	Bushing (Phono Cord)
16	131 2 6111 21300	Bushing (Line Cord)
17	131 2 6113 46900	Shelter
18	134 2 1102 00800	Cover (Strobo)
19	134 2 1102 00900	Cover (Lid)
20	134 2 2403 24400	Angle Mount (Reject)
21	134 2 2403 24500	Angle Mount (Volume)
22	134 2 2403 24600	Angle Mount (Plate Bottom)
23	134 2 2604 10900	Angle Switch (Power Switch)
24	134 2 2604 11000	Angle Switch (Speed, Cue)
25	134 2 4106 22201	Shaft (Reject Arm)
26	134 2 4112 02900	Rod (Reject Arm)
27	134 2 4121 12500	Guide (Power Switch Knob)

CABINET PARTS LIST

Ref. No.	Parts Number	Description
28	134 2 4121 12600	Guide (Reject Knob)
29	134 2 4123 21400	Arm (Reject Arm)
30	134 2 5101 28000	Spring (Reject Arm)
31	134 2 5101 33900	Spring (Reject Knob)
32	134 2 5102 14900	Spring Mounting (Leg)
33	134 2 5102 14901	Spring Mounting (Leg)
34	134 2 5102 14902	Spring Mounting (Leg)
35	134 2 5205 14400	Cushion (Leg)
*	101 3 1602 00401	Screw, Binding Head 2.0x4 21 - 2
*	131 2 4201 19900	Screw SEMS 3x6
*	131 2 4201 16905	Screw
*	102 3 2203 00601	Screw, Button Head Tapping 2 3.0x6
*	102 3 2003 00603	Screw, Binding Head Tapping 2 3.0x6
*	102 3 2003 50601	Screw, Binding Head Tapping 2 3.5x6
*	131 2 4201 19501	Screw (Screw, Button Head Tapping B-TITE 3) 27 - 2, 28 - 2, 23 - 4 21 - 1, 3 - 4
*	131 2 4201 19505	Screw (Screw, Button Head Tapping B-TITE 3) 12 - 4
*	131 2 4201 25201	Screw (B TYTE SEMS) 3 - 2

TURNTABLE PARTS LIST

Ref. No.	Parts Number	Description
40	134 0 6031 12201	Arm Rest Assy
41	134 0 6042 11000	Plate Lifting Assy
42	134 2 1601 19000	Knob
43	134 2 2101 14300	Unit Plate
44	134 2 2106 12400	Holder
45	134 2 2403 24700	Angle Mount
46	134 2 3201 13300	Base Pick-up
47	134 2 4106 21801	Shaft
48	134 2 4106 22201	Shaft (Base Pick-up)
49	134 2 4106 27800	Shaft (Unit Plate)
50	134 2 4106 28000	Shaft (Motor Assy)
51	134 2 4116 13900	Spindle Lifting
52	134 2 4118 19101	Boss
53	134 2 4123 21500	Arm
54	134 2 4201 13800	Screw (Support Arm)
55	134 2 5101 27300	Spring (Spindle Lifting)
56	134 2 5101 29400	Spring
57	134 2 6101 13500	Truntable
*	104 3 1203 00002	Nut, Hex Head 2 3.0 49 - 4
*	104 3 1104 00003	Nut, Hex Head 1 4.0 50 - 6
*	108 3 1102 00003	Ring E 2.0 51 - 1
*	131 2 4201 20800	Screw 2.6x6 44 - 1
*	131 2 4201 19900	Screw (SEMS 3x6) 45 - 2

PARTS LIST (Continued)

TURNTABLE PARTS LIST

Ref. No.	Parts Number	Description
*	101 3 1603 00602	Screw, Binding Head 3.0x6 49 - 4, 45 - 2
*	102 3 2203 00601	Screw, Button Head Tapping 2 3.0x6 43 - 3
*	131 2 4201 20804	Screw 40 - 1
*	131 2 4203 83201	Washer, Plain 3.2x10x0.5 51 - 1
*	105 3 1203 00002	Washer, Spring 3.0 49 - 4
58	134 0 6022 13100	Plate Pick-up Fix Assy
59	134 0 6030 11301	Gear Cycling Assy
59-1	134 2 4110 11100	Gear Cycling
59-2	134 2 4122 11800	Trip
59-3	134 2 4122 12000	Trip
60	134 0 6035 11800	Return Plate Assy
61	134 2 2403 24800	Angle Mount
62	134 2 4106 19901	Shaft
63	134 2 4108 30400	Plate (Switch Plate)
64	134 2 4120 21200	Lever
65	134 2 4121 11800	Guide (Return Plate)
66	134 2 4123 21600	Arm (Lifter Arm)
67	134 2 4123 21700	Arm (Return Arm)
68	134 2 4124 12200	Cam
69	134 2 5101 20500	Spring (Pick-up Fix)
70	134 2 5101 24600	Spring (Return Plate)
71	134 2 5101 26400	Spring (Switch Plate)
72	134 2 5101 34700	Spring (Trip Return)
73	134 2 4106 22201	Shaft (Lifter Arm)
74	134 2 4106 28200	Shaft (Return Arm)
75	134 2 4106 22201	Shaft (Switch Plate)
*	104 3 1203 00002	Nut, Hex Head 2 3.0 62 - 1
*	108 3 1104 00000	Ring E 4.0 62 - 1
*	108 3 1103 00007	Ring E 3.0 63 - 1
*	131 2 4201 21100	Screw 69 - 1
*	101 3 1103 00603	Screw, Pan Head 3.0x6 58 - 2
*	131 2 4201 16905	Screw 64 - 1
*	131 2 4201 19505	Screw (Screw, Button Head Tapping B-TITE 3) 80 - 2
*	102 3 2203 00601	Screw, Button Head Tapping 2 3.0x6 66 - 2, 61 - 1
*	131 2 4201 20301	Screw TP 63 - 1
*	131 2 4203 17501	Wave Washer 69 - 1
*	131 2 4203 84233	Washer, Plain 4.2x10x0.3 63 - 1

TURNTABLE PARTS LIST

Ref. No.	Parts Number	Description
76	134 0 4009 02302	Pick-up Assy
76-1	4 1579 27010	Cartridge
76-2	4 1579 29430	Stylus
76-3	134 2 1402 12600	Retainer Needle
76-4	134 2 4201 11315	Screw (-) 2.6x10
76-5	134 2 4202 11301	Nut
76-6	134 2 4203 01800	Washer
77	134 0 4001 10101	Tone Arm Assy
77-1	134 0 4002 13200	Arm Head Assy
77-2	134 0 4004 04601	Pick-up Arm Assy
77-3	134 2 3109 00301	Finger
77-4	134 2 4119 11600	Weight
77-5	134 2 4119 11700	Weight
78	4 2222 02070	VR 2k-Bx1
79	4 2312 03460	Switch Push Power
80	4 2319 21994	Switch Micro
81	4 2432 00040	Line Cord
82	4 2512 16401	Power Transformer
83	131 0 4004 14402	Wire Shield Assy
84	134 0 5011 01003	Motor Assy (Pick-up/Down)
85	134 0 5011 02610	Motor Assy
86	134 2 6102 15801	Mat Turntable
87	* 131 0 4001 02940	Phono P.C.B. Assy
88	* 131 0 4001 08611	Power Supply P.C.B. Assy
89	* 131 0 4001 08620	Cueing P.C.B. Assy
90	* 131 0 4001 08630	Speed Select P.C.B. Assy
91	* 131 0 4001 08640	Neon P.C.B. Assy

Note: * Asterisk indicates not a service part. The numbers for screws, nuts, and washers, shown in Description, correspond with Ref. Nos. of the parts using these screws, nuts and washers.

Example: 3 - 2

3 means	Ref. No.
2 means	Q'ty.

MEMO



FISHER[®]

THE FIRST NAME IN HIGH FIDELITY

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