Service Manual

Quartz PLL **DIRECT DRIVE 2-motor**

FULL AUTOMATIC TURNTABLE

PL-560

PIONEER®

For details of operation of the mechanism and electronic circuitry of the PL-560, refer to the manuals listed below.

1. Operation of mechanism PL-520
2. Operating principle of phono-motor PL-630

MODEL PL-560 COMES IN FIVE VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Voltage	Remarks
KCT	120V only	Canada model (without cartridge)
KUT	120V only	U.S.A. model (without cartridge)
HGT	220V and 240V (switchable)	Europe or Oceania model (without cartridge)
ST	110V, 120V, 220V and 240V (switchable)	General export model (without cartridge)
S/G	110V, 120V, 220V and 240V (switchable)	U.S. Military model (within cartridge)

- **This service manual is applicable to the PL-560/KUT, KCT. For servicing of the other types please refer to the additional service manuals.**

CONTENTS

1. SPECIFICATIONS

Motor and Turntable

Drive System . . . . . Direct-drive
Motor . . . . . Quartz PLL Hall motor
Turntable Platter. . . 320mm diam. aluminum alloy die-cast
Moment of Inertia . . . . .280kg·cm^2 (including platter mat)
Speeds . . . . . 33-1/3 and 45rpm
Speed Control Range . . . . . ±6%
Wow and Flutter . . . . . .Less than 0.025% (WRMS)
Signal-to-Noise Ratio . . . . . .More than 73dB (DIN-B)
(with Pioneer cartridge model PC-400)

Rotational Characteristics

Build-up Time . . . . . Within 120° rotation at 33-1/3rpm
Speed Deviation . . . . . .Less than 0.002%
Speed vs. Load Characteristics . . . . Stable up to 200 grams drag load
Speed Drift . . . . . Less than 0.00008%/h at 33-1/3rpm
Less than 0.00003%/degree temp. change at 33-1/3rpm

Tonearm

Type. . . . . .Static-balance type, S-shaped pipe arm
Effective Arm Length 221mm
Overhang 15.5mm
Usable Cartridge Weight . . . . . 4g (min.) to 10g (max.)

Subfunctions

Full auto mechanism
Anti-skating force control
Stylus pressure direct-readout counter weight
Cueing device
Strobe light
Pitch indicator
Free stop hinges

Semiconductors

ICs 4
Transistors 7
Diodes 5
Hall elements 3

Accessories

EP Adaptor 1
Screwdriver 1
Cartridge mounting screws 6
Cartridge mounting nuts 2
Cartridge mounting washers 2
Operating instructions 1

Miscellaneous

Power Requirements . . . . . .AC 120V, 60Hz
Power Consumption 12W
Dimensions . . . . . .440(W) x 145(H) x 365(D)mm
17-15/16(W) x 5-11/16(H) x 14-3/8(D)in.
Weight . . . . . 10.5kg/23lb 2 oz

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

2. FRONT PANEL FACILITIES

① CUT BUTTON

Push this button to stop the record play. When pushed, the tonearm will rise and return to the arm rest. The power to the turntable will then be switched off and a few seconds later, the platter will stop rotating.

NOTE:
If the REPEAT button is pushed, the tonearm will return to the arm rest and then move across again to the record.

② REPEAT BUTTON

Push this button when you want to listen to the same record again. Press the button once more to release.

NOTE:
All you have to do for repeat play is to press the REPEAT button. There is no need to push the START button again.

③ START BUTTON

The power to the turntable is turned on and the platter starts to rotate when this button is depressed.

④ SPEED SELECT SWITCH

45 . . . . When this switch is depressed, the platter will rotate at 45rpm. Depress for playing 45rpm records, singles or EP's.

33 . . . . When this switch is set to the released position, the platter will rotate at 33-1/3rpm. Release for playing 33-1/3rpm records like LP's.

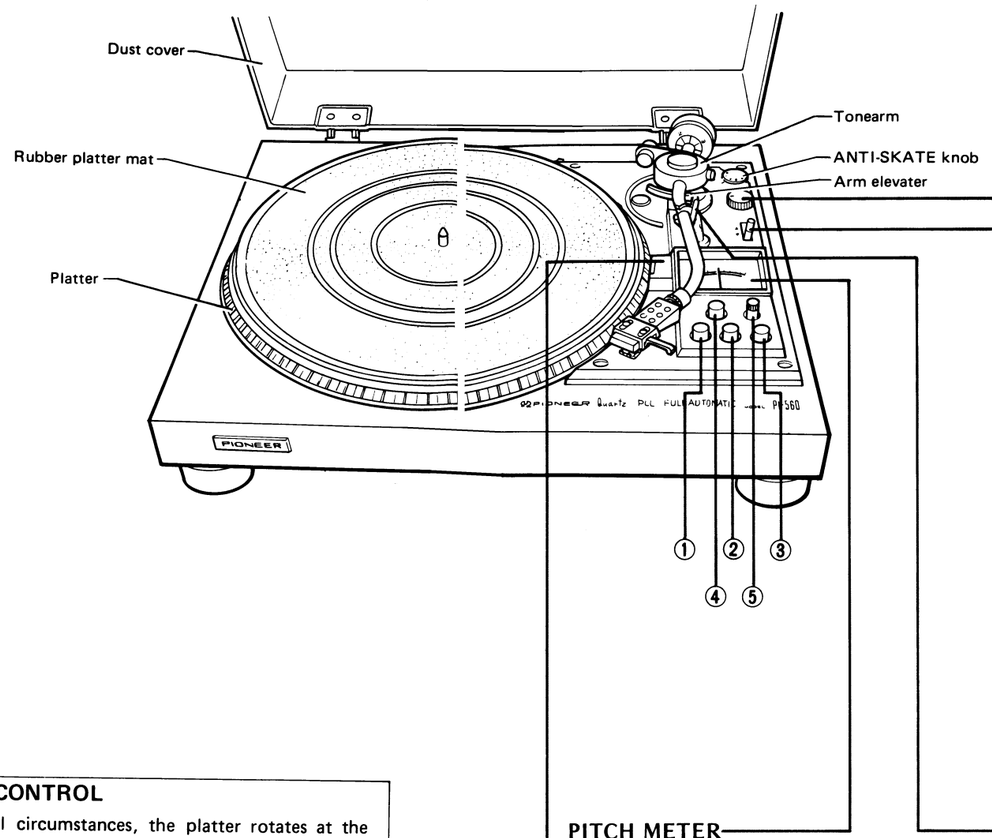
⑤ QUARTZ LOCK SWITCH/PITCH CONTROL KNOB

- When the Quartz LOCK switch is pushed downward, the Quartz PLL will actuate and the strobe light comes on. Normally use it in this position.
  The turntable will rotate at the precisely rated speed according to the SPEED SELECT switch.
- When the Quartz LOCK switch is pulled upward, the Quartz PLL will be released and the strobe light goes off and pitch meter lamp will light up.
  If the PITCH CONTROL knob is turned at this position, the rotating speed of the turntable will be adjusted up to 6% faster or slower than its rated speed. If the knob is turned in the (+) direction, the turntable rotates faster, and if the knob is turned in the (–) direction, the turntable rotates slower than its rated speed. The variation of the rotating speed can be read out on the PITCH METER.
  (Refer to "PITCH CONTROL")

PITCH CONTROL

In normal circumstances, the platter rotates at the rated speed when the Quartz LOCK switch is kept at ON. If you want to vary the speed, set this switch to OFF and turn the PITCH CONTROL knob. If the platter rotates faster than its rated speed, the musical intervals of the reproduced sound will be come higher, and if it rotates slower, they will become lower.

Nowadays, there are slight variations in the orchestra and other tuning sounds recorded on discs. Furthermore, pianos and other musical instruments for the home are tuned to high international standards and so there are slight discrepancies in the musical intervals when practicing on the piano along with a record. This turntable features a pitch control which allows you to compensate for the slight variations in the musical intervals by making the platter rotate up to 6% faster or slower than its rated speed. The compensation can be checked by ear. An adjustment of ±6% is equivalent to about a semitone.



RECORD SIZE SELECTOR

This selector selects the size of the record for automatic play and also selects manual play.

17 7" . . . . For the automatic play of 17cm (7-inch) LP and EP records.

25 10" . . . . . For the automatic play of 25cm (10-inch) LP records.

30 12" . . . . . For the automatic play of 30cm (12-inch) LP records.

MANUAL . . . For the manual play of records.

NOTE:
The tonearm will not be actuated when the RECORD SIZE selector is at the MANUAL position for play, even if the START button and the REPEAT button are pushed.

ARM ELEVATION LEVER

This lever controls the ascent and descent of the tonearm.

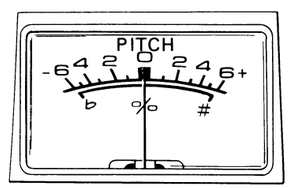
▲(UP) . . . . . The tonearm rises.

▼(DOWN) . . . The tonearm descends gently. Set to this position for auto play, auto repeat and other automatic operations.

NOTE:
When the ARM ELEVATION lever is set to the UP position for automatic play, the tonearm will move over as far as the lead-in groove on the record but it will not descend and the record will therefore not be played.

PITCH METER

When the Quartz LOCK switch is set to OFF, the pitch meter lamp will light up, and the variation in the rotational speed of the platter in respect to its rating (33-1/3 or 45rpm) can be read out on the meter.



STROBE LIGHT

When the Quartz LOCK is set to ON, this light comes on and lights stroboscopically. Then, the turntable rotates at its rated speed and so the strobe dots remain stationary.

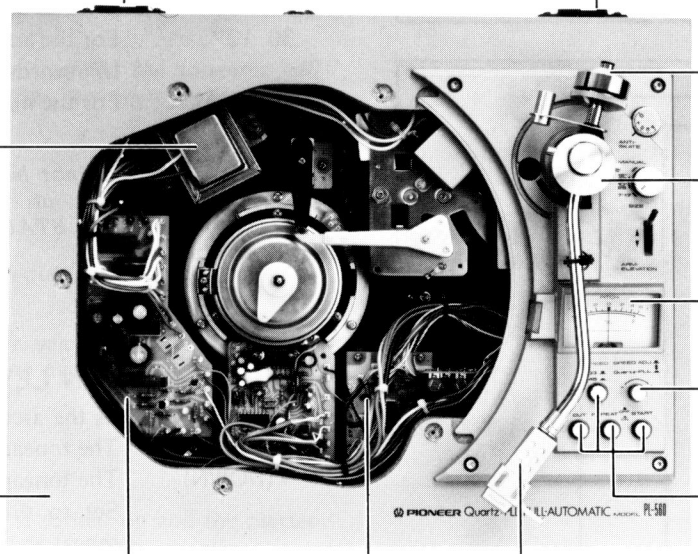
ARM REST

The arm rest supports the tonearm when it is not being used. Set the tonearm on its rest when it is not playing records. Clamp it into position if you don't have any immediate plans to play records (see Figure).

Releasing the arm clamp

Securing the arm clamp

3. PARTS LOCATION



4. DISASSEMBLY

- **Tone arm**

Remove the arm base from the cabinet while refer-ring to the disassembly drawing on Page 11.

1. Unsolder the leads coming out from the tone arm.
2. Remove the P.U. plate by loosening the two mounting screws.
3. Loosen the tone arm fixing screws using a hexagonal wrench, and then remove the tone arm.

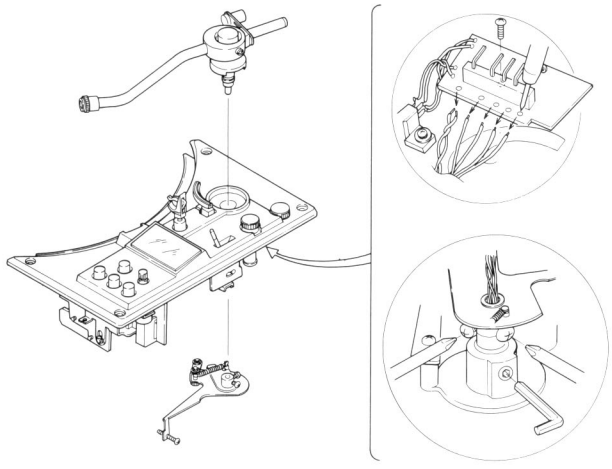


Fig. A

- **Foot spring**

  Remove the spring stopper using a screwdriver, as shown in the diagram.

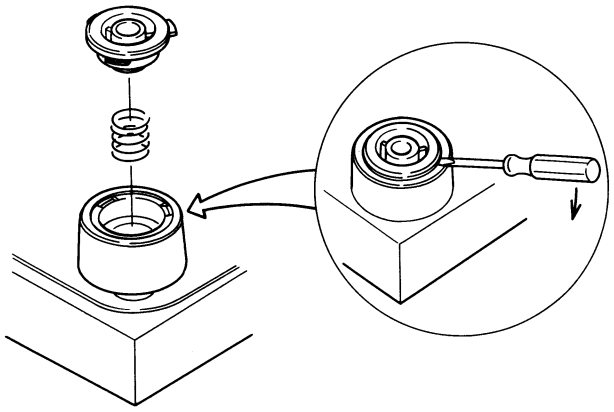


Fig. B

- **Timing motor**

1. Remove the sub-panel.
2. Remove the cam from the shaft of the gear motor.
3. Using cutting pliers, cut off the aluminium rivets securing the gear motor.
4. When reinstalling the gear motor, use two N3 nuts and PSA3x8 screw in place of the rivets cut off in 3. above.

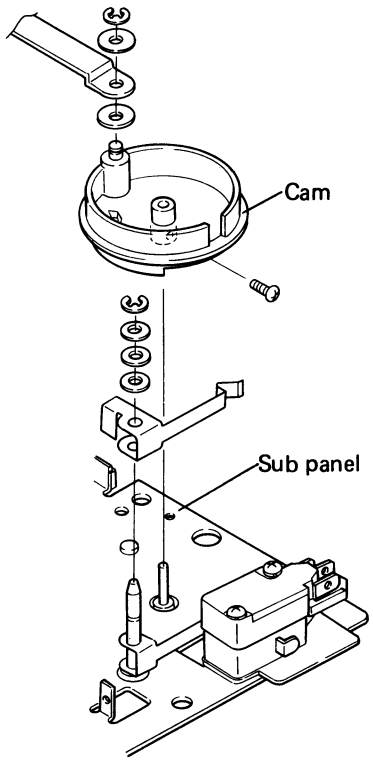


Fig. C

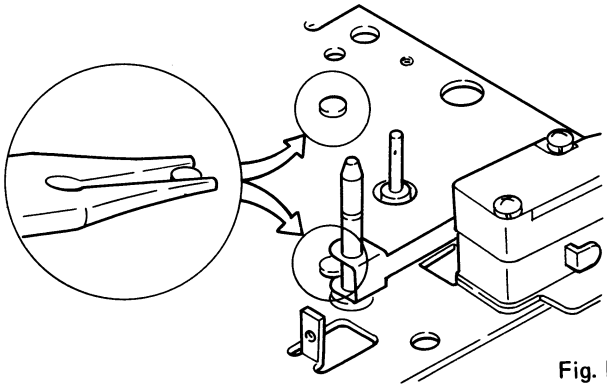


Fig. D

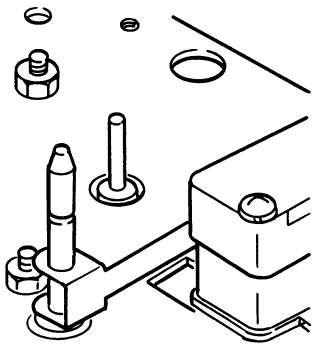


Fig. E

5. MECHANISM ADJUSTMENT

Prior to making any adjustments, check that the PU plate shaft is located in the center of the cut out section of the sub panel (as shown in Fig. 1 below).

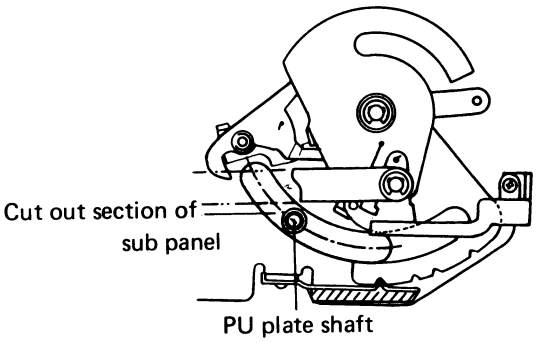


Fig. 1

Tonearm Descent Positions

The tonearm descent positions may be adjusted by turning the adjustment screws located in the panel holes at the base of the tonearm pivot (see Fig. 2).

When turned clockwise . . the descent position is center.

When turned counter clockwise . . . . . the descent position is moved outwards.

This is quite a simple operation when a test record is used.

For 30cm records . . . . . tonearm descent should occur in the 304 to 319 count range.

For 25cm records . . . . . tonearm descent should occur in the 252 to 267 count range.

For 17cm records . . . . . tonearm descent should occur in the 173 to 184 count range.

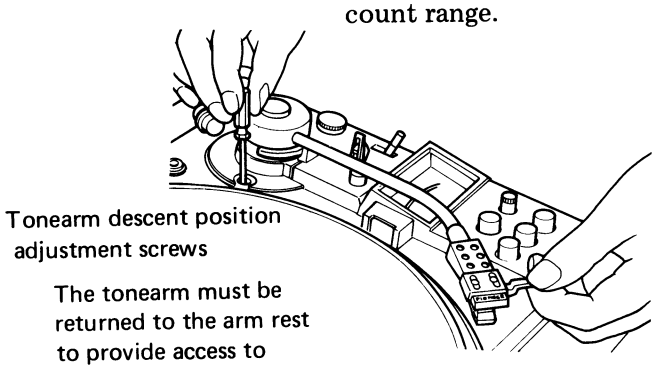


Fig. 2-a

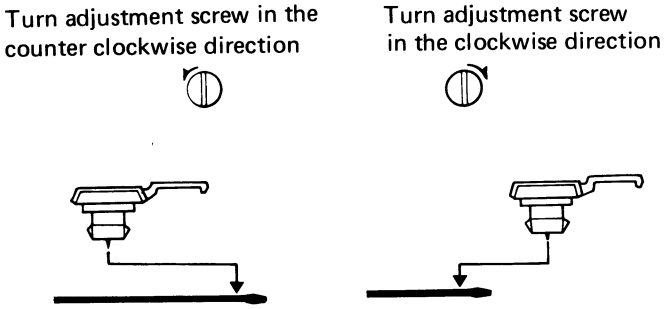


Fig. 2-b

When Tonearm Fails to Return

1. Adjust the stopper angle so that it makes contact with the return lever pin (Fig. 3).

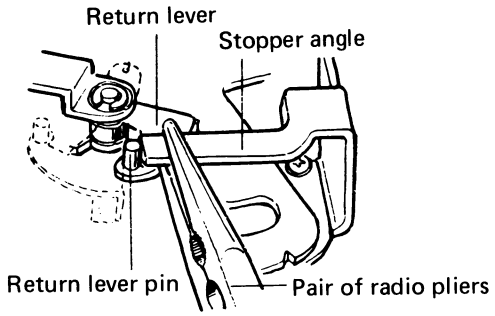


Fig. 3

Arm Elevation Adjustment

1. Leave the tonearm in the up position, and adjust the height of the arm elevation sheet so that the gap between stylus tip and record surface is about 10mm. (Fig. 4).

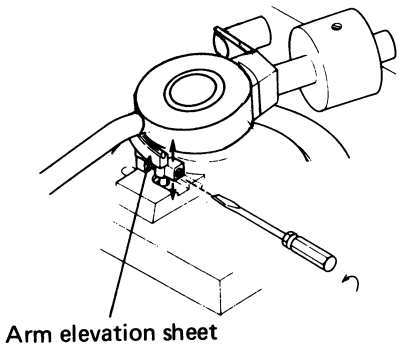


Fig. 4

Auto Return Lift Off Position

First check that the turntable pin (attached to the turntable) has not been bent over. Strighten out if necessary.

1. Tonearm lifts off too soon.
   Unscrew the screw in the tip of the PU plate by a suitable amount (Fig. 5).
2. Tonearm too slow in lifting off
   Screw the PU plate tip screw in further (Fig. 5).

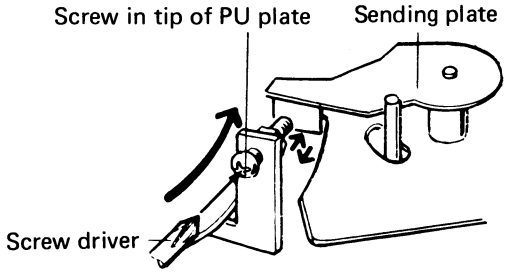


Fig. 5

Faulty Tonearm Movement

If the tonearm is interfered with, or halted altogether during the lead in operation, tighten up the screw shown in Fig. 6.

NOTE:
This adjustment screw should be made neither too tight nor too loose.

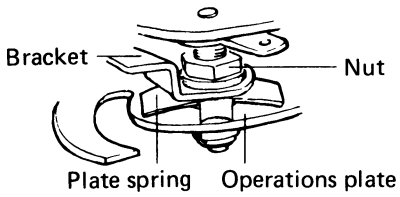


Fig. 6

Shorting Switch

Adjust the switch mounting screw so that the gap between contacts during play is 0.5mm (Fig. 7).

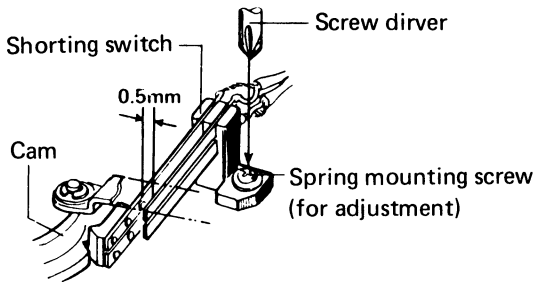


Fig. 7

6. ELECTRIC ADJUSTMENTS

6.1 SPEED ADJUSTMENT WHEN QUARTZ LOCK IS OFF

1. Put the quartz lock off.
2. Turn the ADJUST knob on the control panel to the mechanical center position.
3. Insert a screwdriver through the small hole in the baseplate of the player, and turn the semi-fixed speed adjustment potentiometer VR_1 until the strobe pattern on the turntable becomes stationary.

6.2 ADJUSTMENT OF D.D. MOTOR OPERATING POINT

- **Adjustment Conditions**

Connect the SP and TP23 terminals of PWG-017 to each input of a double image oscilloscope (synchroscope). Put the turntable in the Quartz Lock ON condition, and then start it up.

- **Method of Adjustment**

1. Observe the output waveforms from SP and TP23 (Fig. 8). (Two output pulses from terminal TP23 will correspond with one pulse from terminal SP.
2. Adjust the semi-fixed resistor in the control circuit assembly (PWG-017) so that the rising part of the pulse which comes out of terminal TP23 fits into the middle of the pulse which is generated at terminal SP. For 33-1/3 rpm, adjust VR21. For 45 rpm adjust VR22.

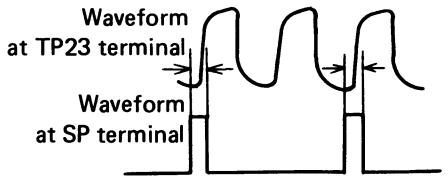


Fig. 8

6.3 METER ADJUSTMENT

- **Adjustment Conditions**

1. Connect a frequency counter between the TP_1 and Gnd terminals of the oscillator assembly (PWX-022).
2. Turn the speed adjust knob to its mechanical center.
3. Put the Quartz Lock off.

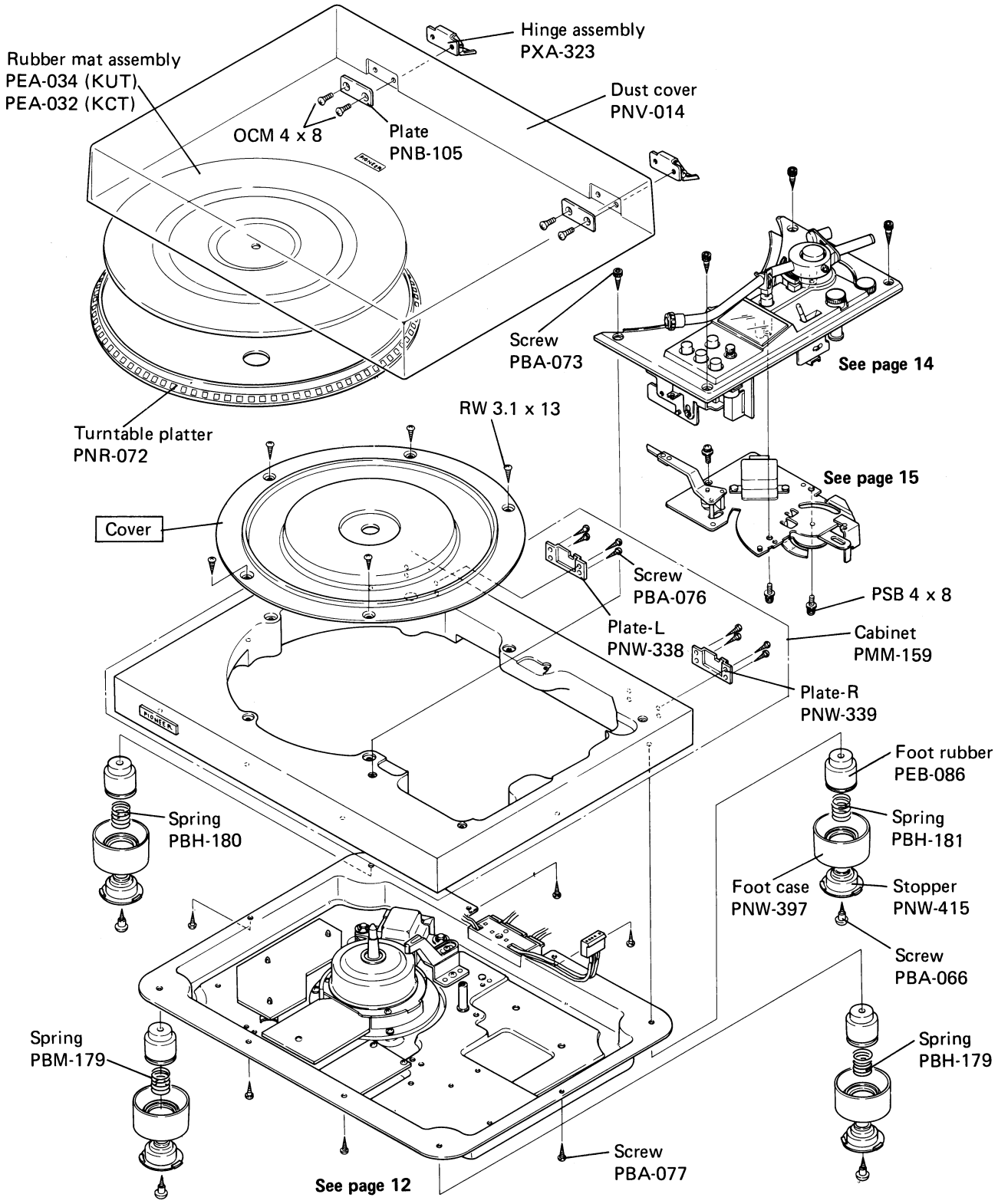
- **Adjustment**

1. Put the speed selector button in the "45" position.
2. Turn VR_1 in the oscillator assembly (PWX-022) until the reading on the frequency counter becomes 750.0Hz.
3. Turn VR_2 in the control assembly (PWX-028) until the meter reading becomes zero.
4. Put the speed selector button in the "33" position, and turn VR_1 until the meter reading becomes zero.
5. Turn the speed adjust knob until the reading on the frequency counter becomes 795Hz (750Hz +6%).
6. Adjust VR_3 so that the meter indication becomes +6%.

7. EXPLODED VIEWS

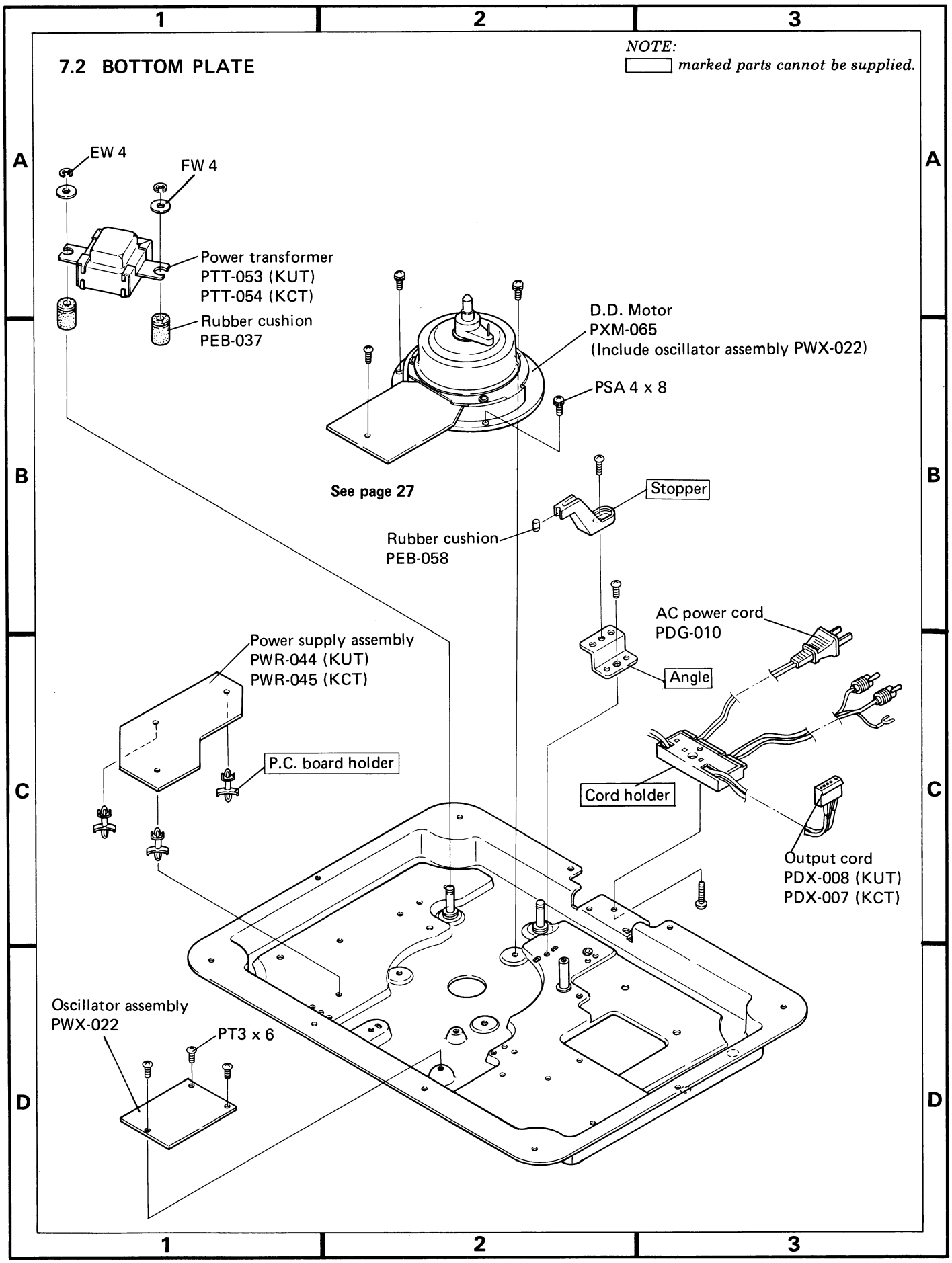
7.1 CABINET

NOTE:
marked parts cannot be supplied.



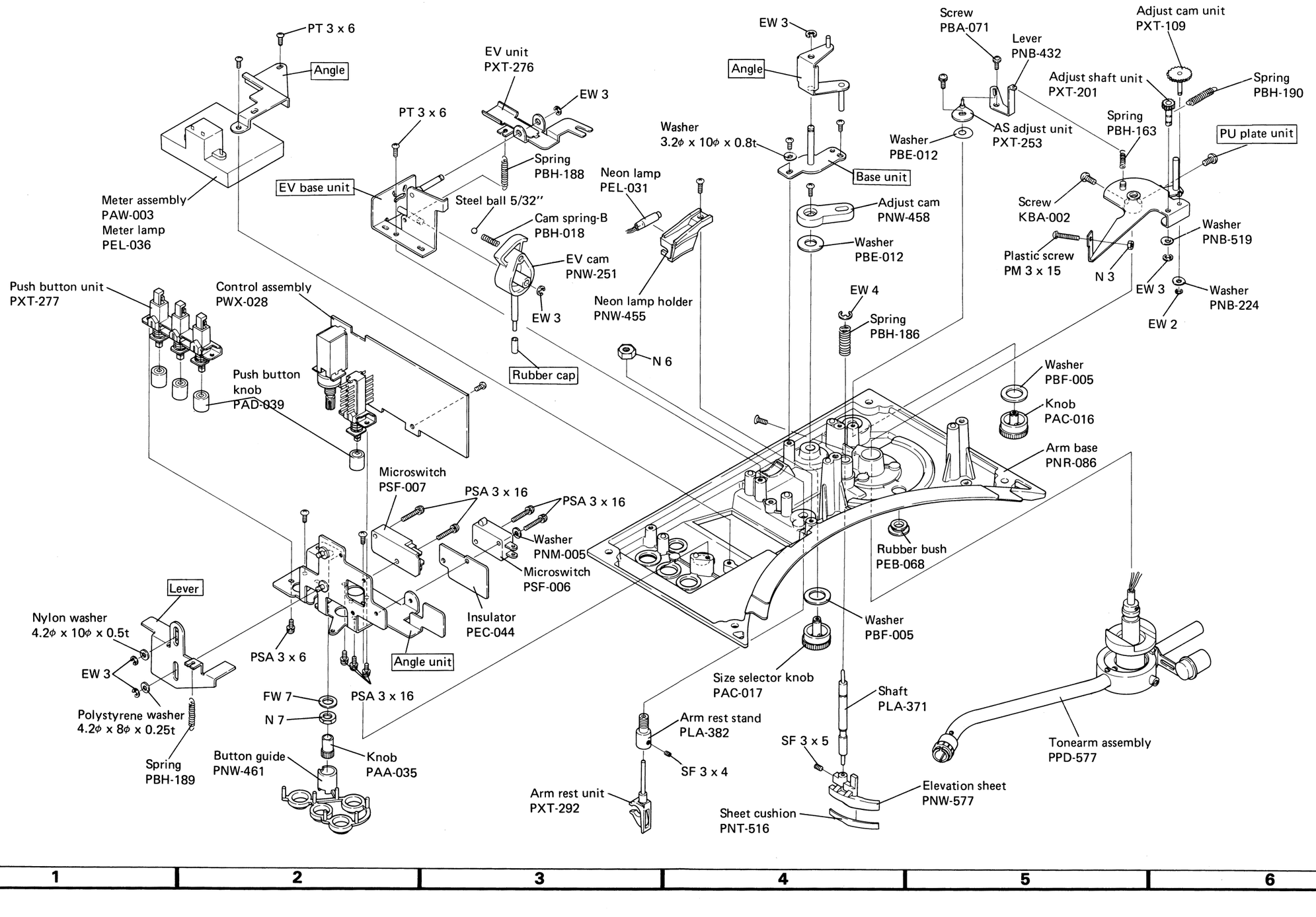
7.2 BOTTOM PLATE

NOTE:
marked parts cannot be supplied.



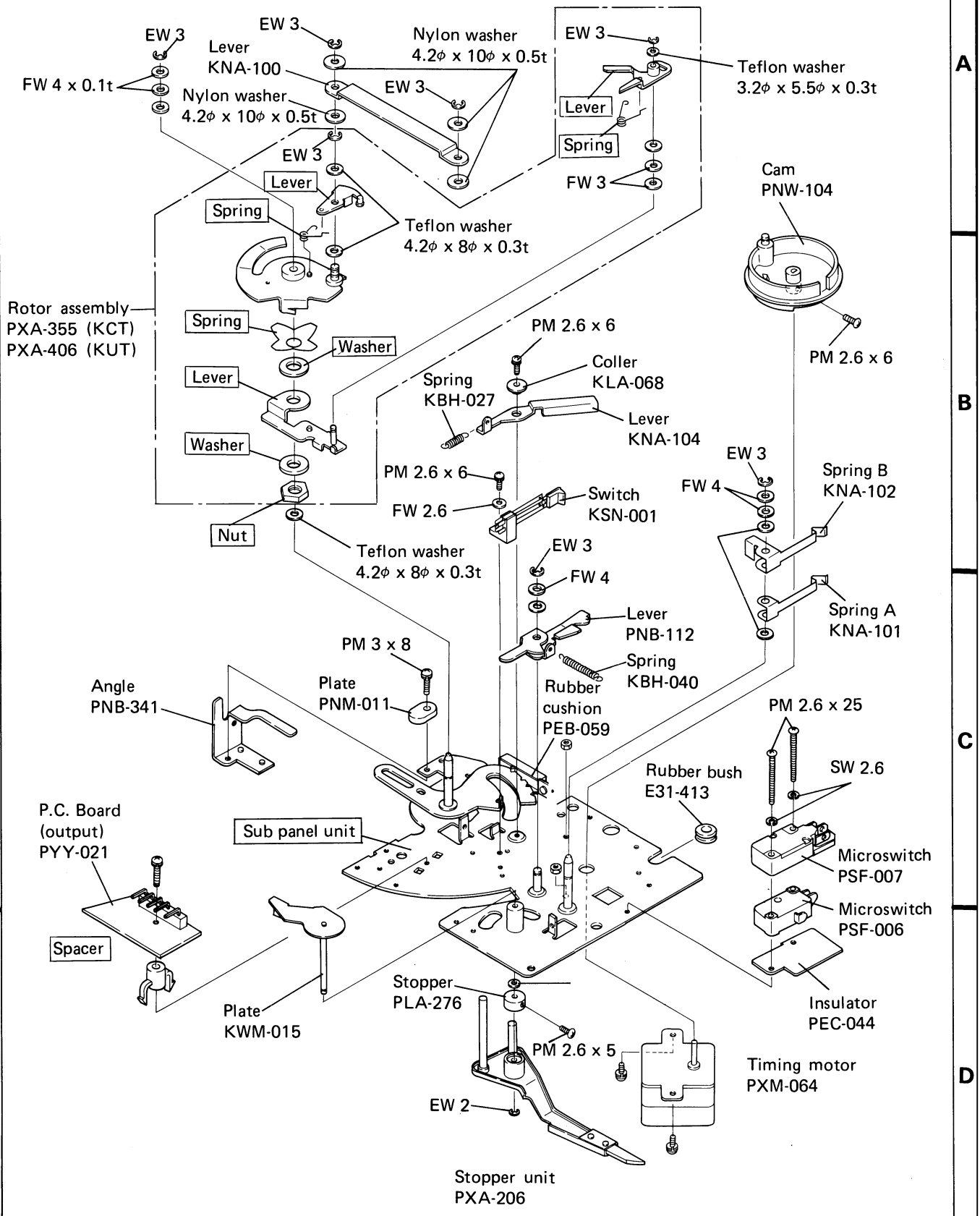
7.3 ARM BASE

NOTE:
marked parts cannot be supplied.

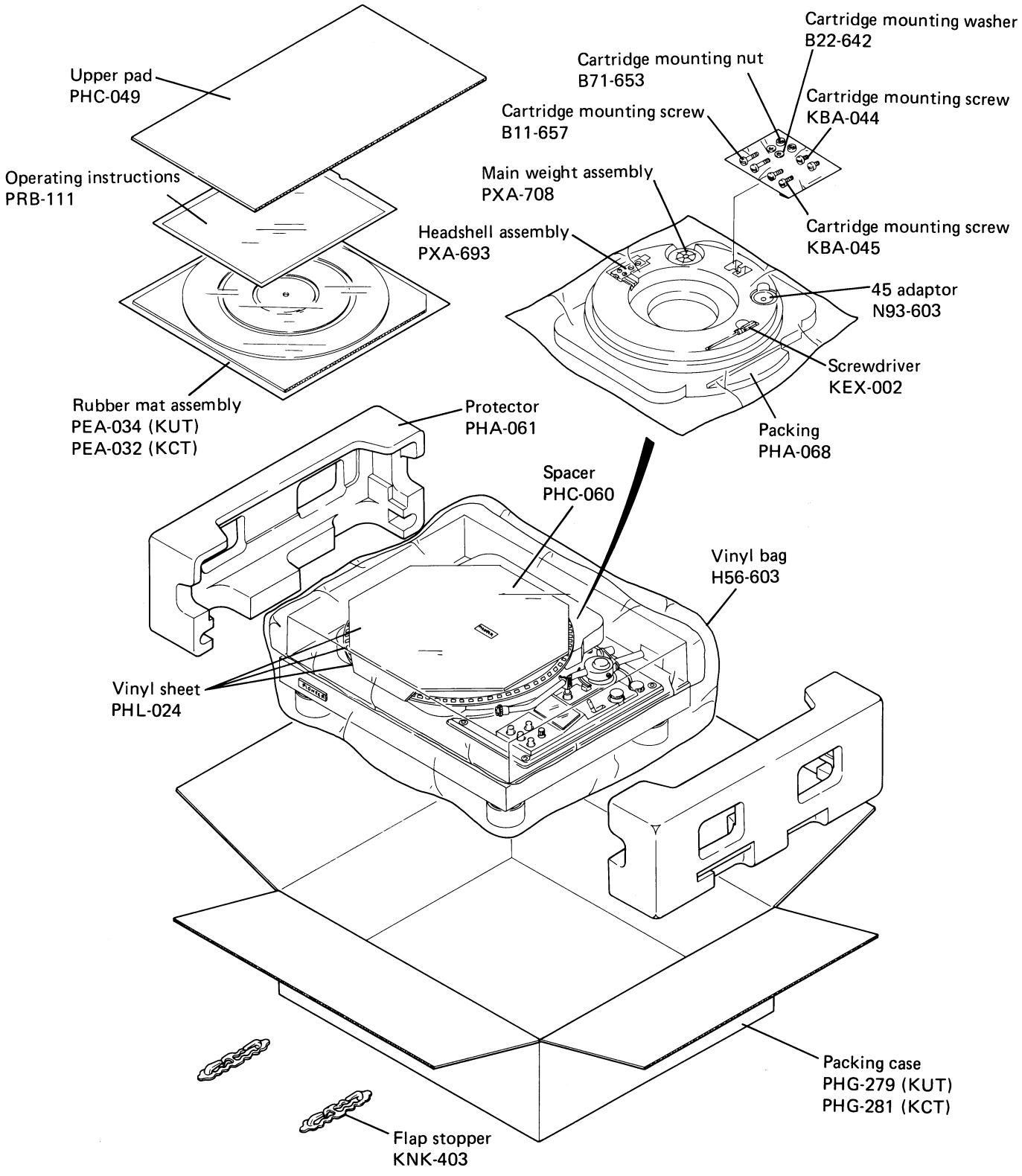


7.4 SUB PANEL

NOTE:
marked parts cannot be supplied.



8. PACKING


Upper pad
PHC-049
Operating instructions
PRB-111
Rubber mat assembly
PEA-034 (KUT)
PEA-032 (KCT)
Cartridge mounting washer
B22-642
Cartridge mounting nut
B71-653
Cartridge mounting screw
KBA-044
Cartridge mounting screw
B11-657
Main weight assembly
PXA-708
Headshell assembly
PXA-693
Cartridge mounting screw
KBA-045
45 adaptor
N93-603
Screwdriver
KEX-002
Packing
PHA-068
Protector
PHA-061
Spacer
PHC-060
Vinyl bag
H56-603
Vinyl sheet
PHL-024
Packing case
PHG-279 (KUT)
PHG-281 (KCT)
Flap stopper
KNK-403

9. SCHEMATIC DIAGRAM, P.C.BOARD PATTERNS AND PARTS LIST

NOTE:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

560Ω——56 ×10¹——561 . . . . . RD¼PS 5 6 1 J
47kΩ——47 ×10³——473 . . . . . RD¼PS 4 7 3 J
0.5Ω——0R5 . . . . . RN2H 0 R 5 K
1Ω——010 . . . . . RS1P 0 1 0 K

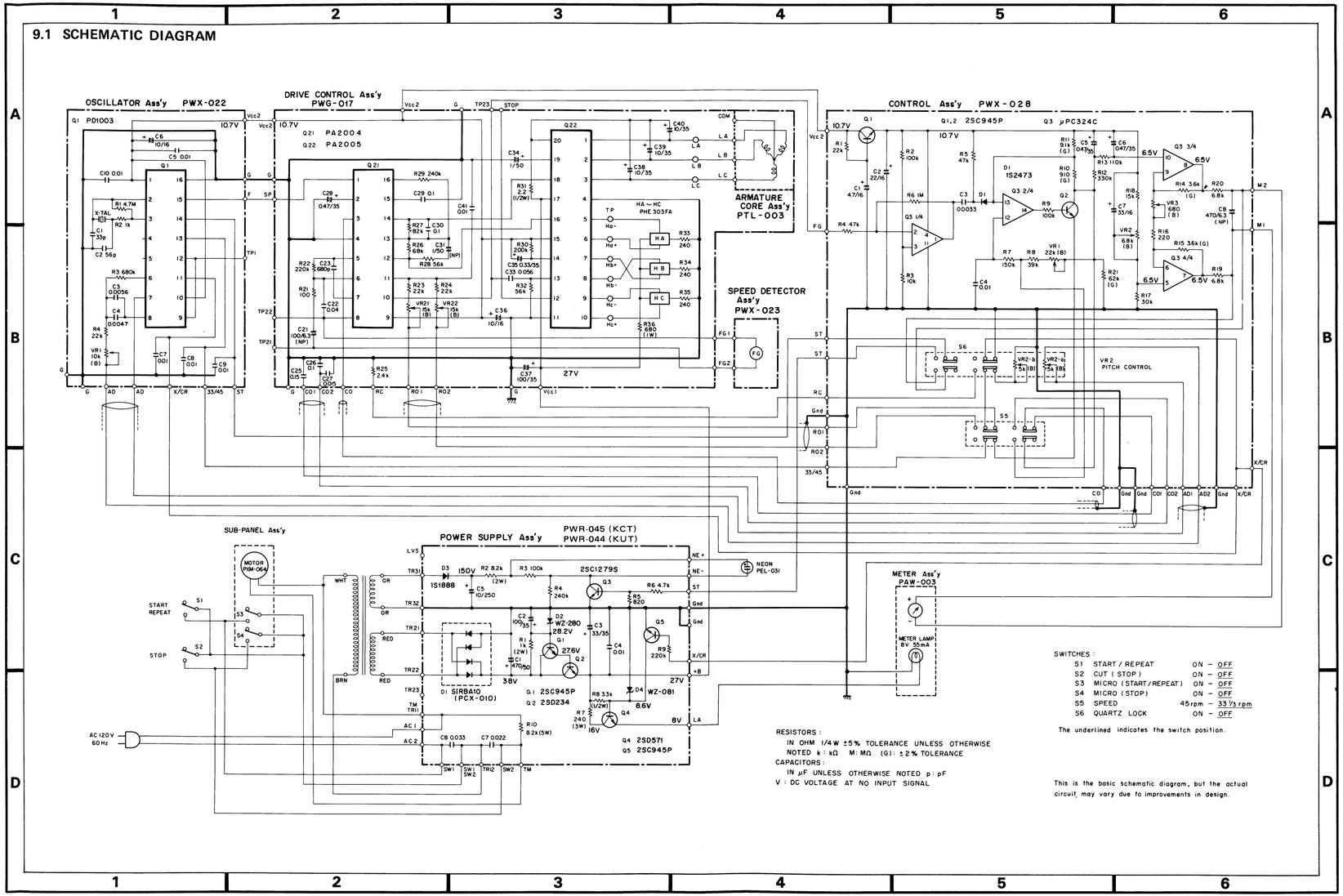
Ex. 2 *When there are 3 effective digits (such as in high precision metal film resistors).*

5.62kΩ 562 × 10¹ 5621 . . . . . RN¼SR 5 6 2 1 F

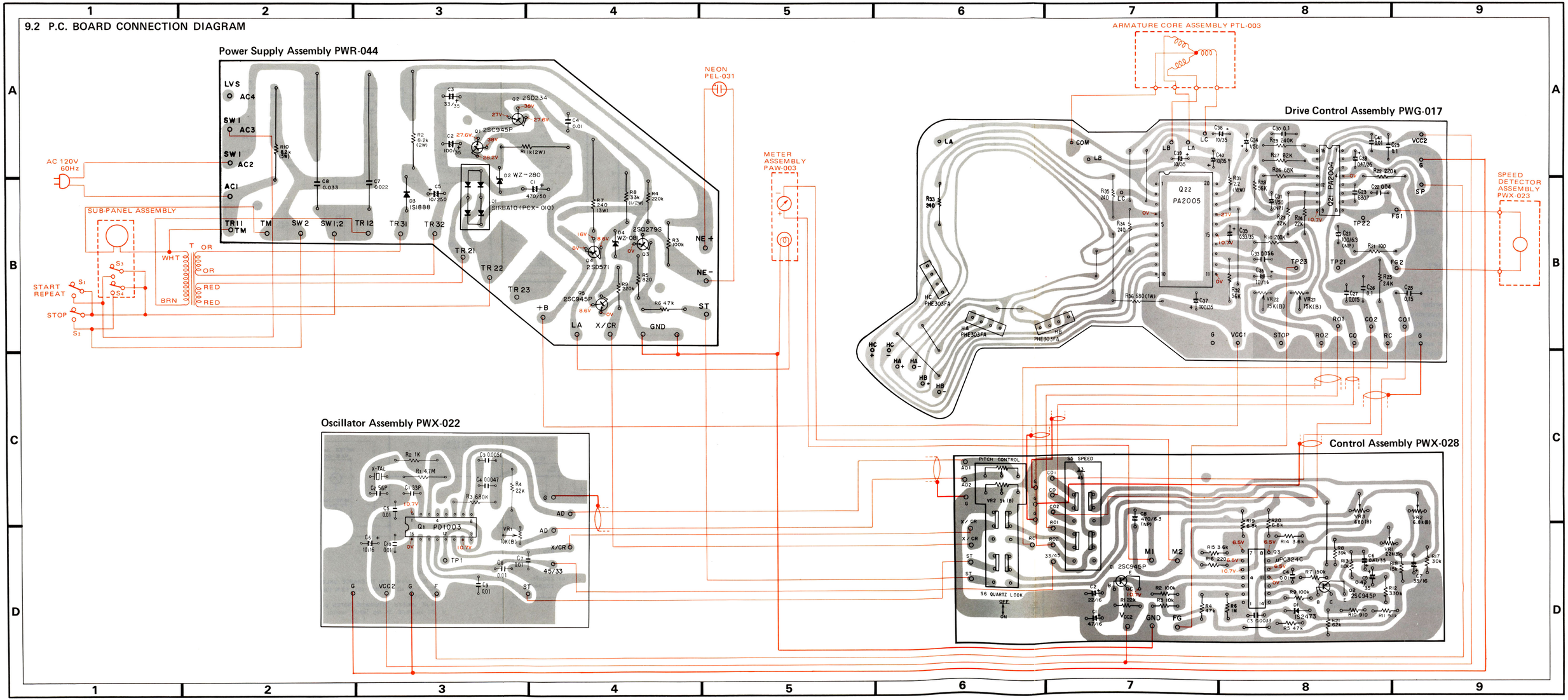
MISCELLANEOUS PARTS LIST

Part No.	Description
PWX-022	Oscillator assembly
PWG-017	Drive control assembly (Include armature core assembly)
PTL-003	Armature core assembly
PWX-023	Speed detector assembly
PWX-028	Control assembly
PWR-044 (KUT)	Power supply assembly
PWR-045 (KCT)	Power supply assembly
PAW-003	Meter assembly
PEL-031	NEON lamp
PEL-036	Meter lamp
PTT-053 (KUT)	Power transformer
PTT-054 (KCT)	Power transformer

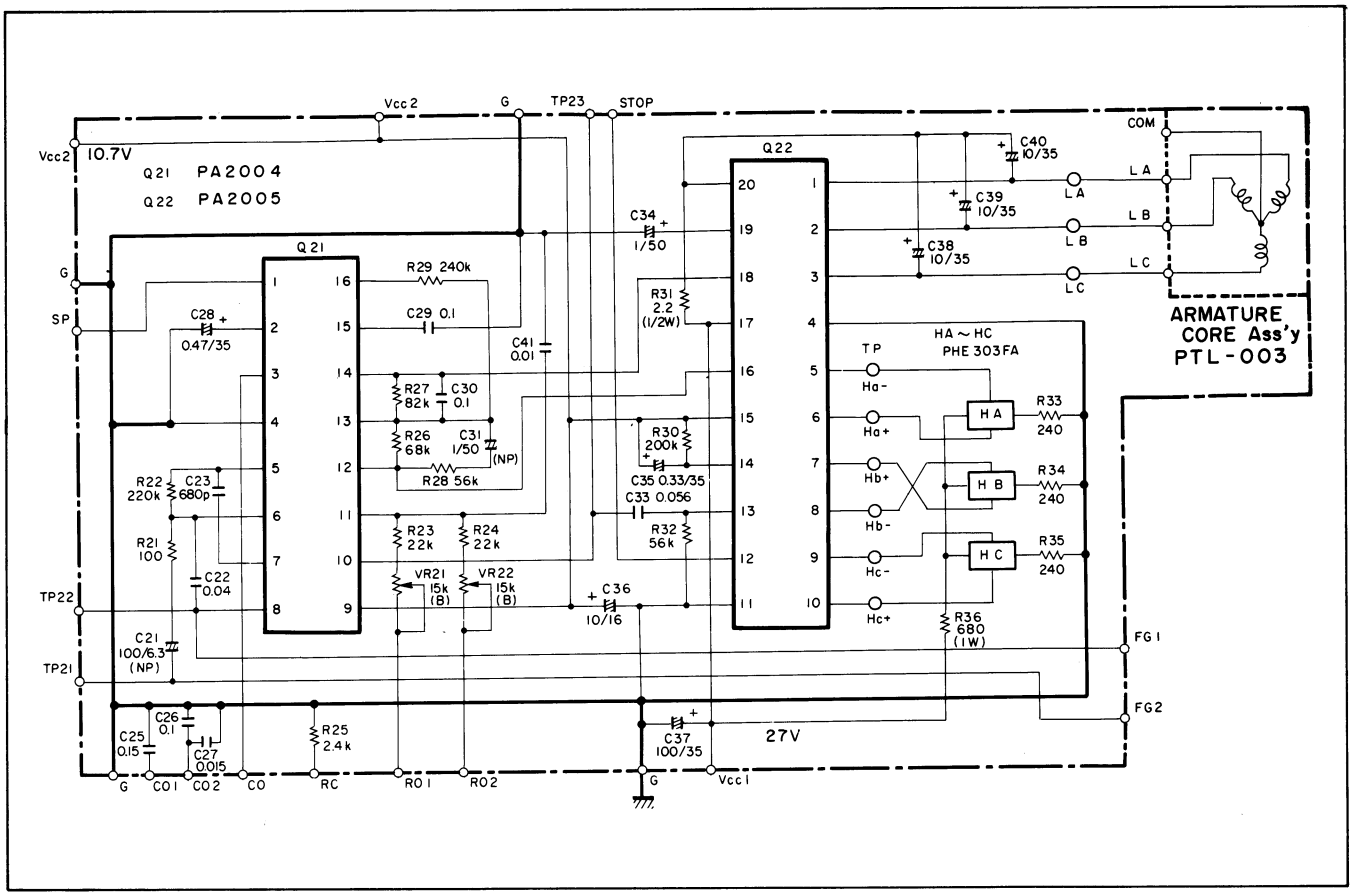
9.1 SCHEMATIC DIAGRAM



9.2 P.C. BOARD CONNECTION DIAGRAM



9.3 DRIVE CONTROL ASSEMBLY (PWG-017)



Part List of Drive Control Assembly (PWG-017)

CAPACITORS

Part No.	Symbol & Description
CEA 101M 6.3NP	C21
CKDYF 403Z 50	C22
CKDYB 681K 50	C23
CQMA 154J 50	C25
CQMA 104J 50	C26, C30
CQMA 153J 50	C27
CSZA R47K 35	C28
CQMA 104K 50	C29
CEA 010M 50NP	C31
CQMA 563K 50	C33
CEA 010P 50	C34
CSZA R33K 35	C35
CSZA 100K 16	C36
CEA 101P 35	C37
CEA 100P 35	C38, C39, C40
CKDYF 103Z 50	C41

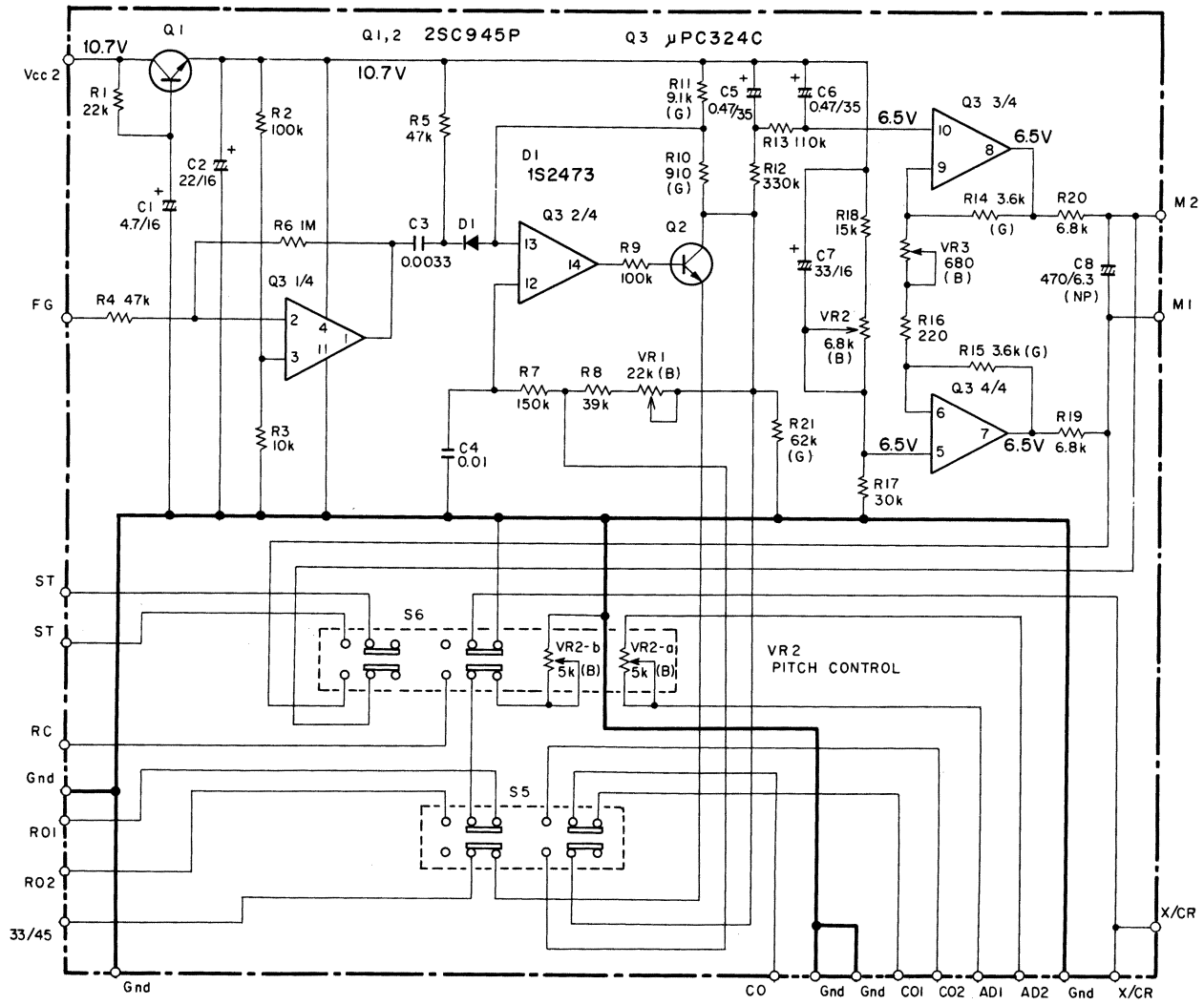
RESISTORS

Part No.	Symbol & Description
PCP-019	VR21, VR22 15kΩ-B
RD¼PS □□□ J	R21–R30, R32–R35
RD½PS □□□ J	R31
RS1P □□□ J	R36

SEMICONDUCTORS, OTHER

Part No.	Symbol & Description
PA2004	Q21
PA2005	Q22
PCX-039	HA, HB, HC Hall element (PHE303FA)
PTL-003	Armature core assembly

9.4 CONTROL ASSEMBLY (PWX-028)



Parts List of Control Assembly (PWX-028)

OTHERS

Part No.	Symbol & Description
PCS-013	Push switch
PSG-012	Push switch

SEMICONDUCTORS

Part No.	Symbol & Description
2SC945P	Q1, Q2
μPC324C	Q3
1S2473	D1

CAPACITORS

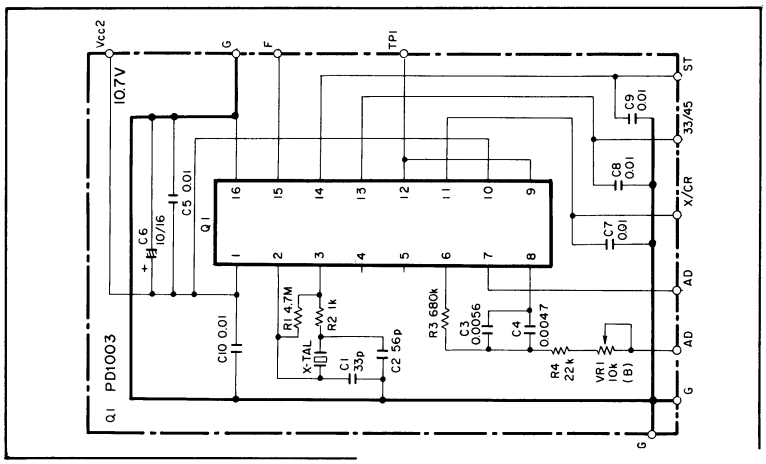
Part No.	Symbol & Description
CEA 4R7P 16	C1
CEA 220P 16	C2
CQMA 332K 50	C3
CQMA 103J 50	C4
CSZA R47M 35V	C5, C6
CSZA 330M 10	C7
CEA 471M 6.3NP	C8

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD¼VS □□□ J	R1–R6, R9–R20
RN¼PS □□□□ G	R7, R8
PCP-026	VR1
PCP-027	VR2
PCP-028	VR3

9.5 OSCILLATOR ASSEMBLY (PWX-022)



Parts List of Oscillator Assembly (PWX-022)

CAPACITORS

Part No.	Symbol & Description
CCDCH 330J 50	C1
CCDCH 560J 50	C2
CQMA 562J 50	C3
CQSH 472J 50	C4
CKDYF 103Z 50	C5, C7–C10
CEA 100P 16	C6

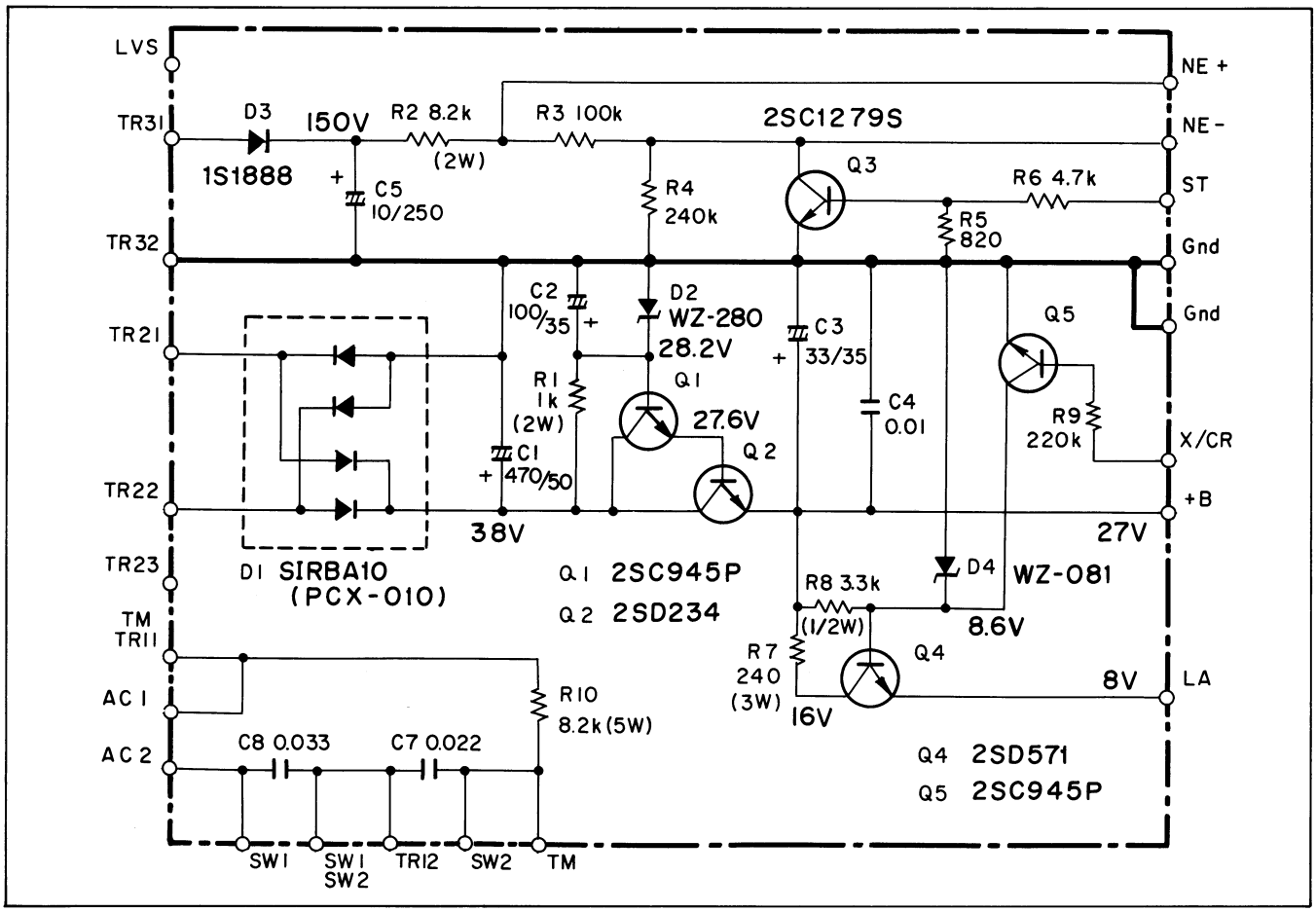
RESISTORS

Part No.	Symbol & Description
RD¼PS □□□ J	R1–R3
RN¼PS □□□ G	R4
PCP-015	VR1 (10kΩ-B)

OTHERS

Part No.	Symbol & Description
PD1003	IC
PSS-003	Crystal

9.6 POWER SUPPLY ASSEMBLY
KUT PWR-044
KCT PWR-045



Parts List of Power Supply Assembly

SEMICONDUCTORS

Part No.	Symbol & Description
2SC945P	Q1, Q5
2SD234-O	Q2
2SC1279S	Q3
2SD571	Q4
SIRBA10	D1
WZ-280	D2
1S1888	D3
WZ-081	D4

CAPACITORS

Part No.	Symbol & Description
CEA 471P 50	C1
CEA 101P 35	C2
CEA 330P 35	C3
CKDYF 103Z 50	C4
CEW 4R7P 250	C5
PCL-031	C7 (KUT)
KCE-009	C8 (KUT)
PCL-030	C7 (KCT)
PCL-018	C8 (KCT)

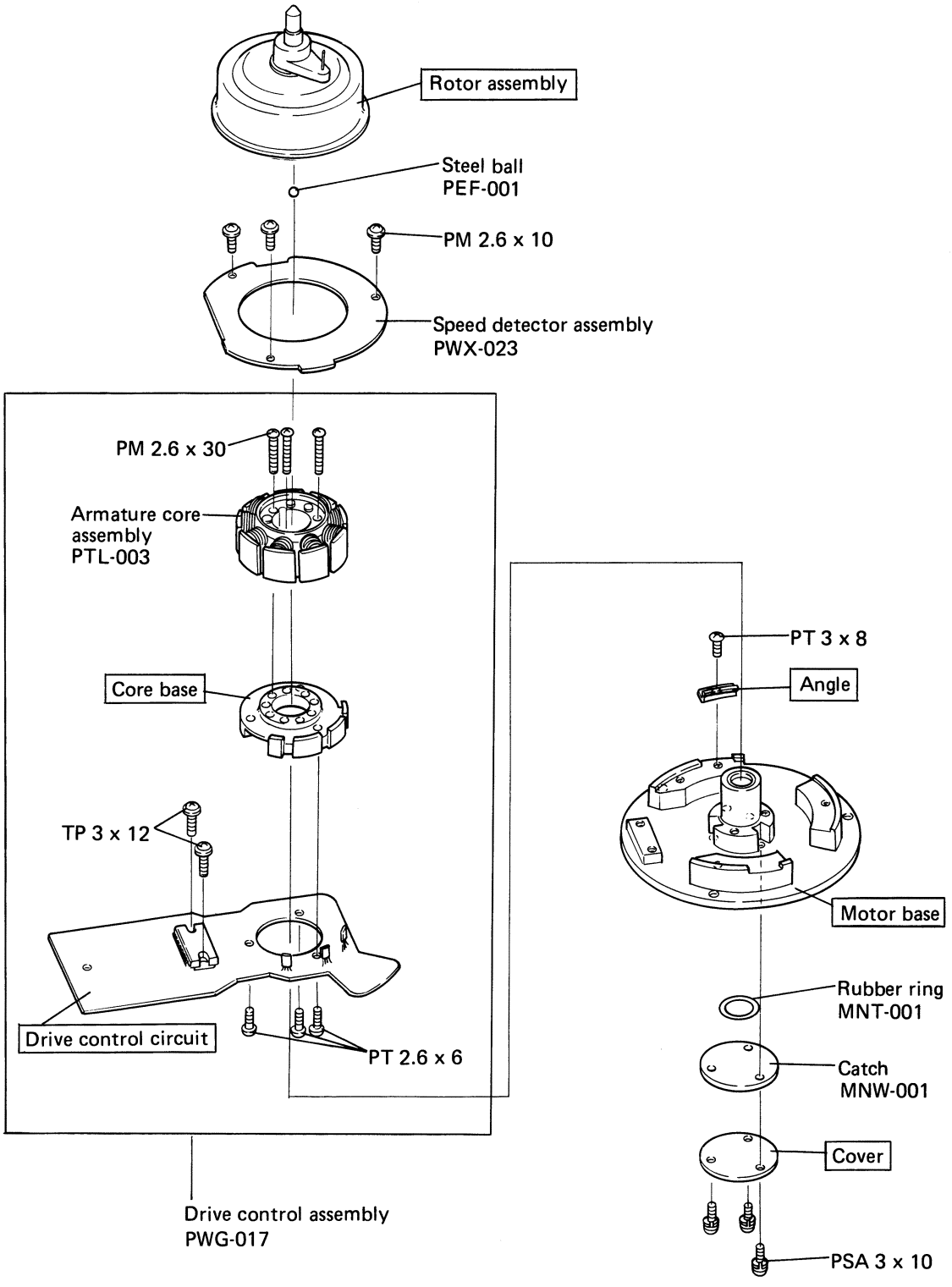
Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RS2P □□□ J	R1, R2
RD¼PS □□□ J	R3–R6, R9
RS3P □□□ J	R7
RD½PS □□□ J	R8
RT5B □□□ J	R10 (KUT)
RS3P □□□ J	R10 (KCT)

10. D.D.MOTOR EXPLODED VIEW

NOTE:
marked parts cannot be supplied.



NOMENCLATURE OF SCREWS, WASHERS AND NUTS

The following symbols stand for screws, washers and nuts as shown in exploded view.

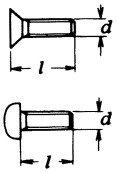
Symbol	Description	Shape
RT	Brazier head tapping screw	
PT	Pan head tapping screw	
BT	Binding head tapping screw	
CT	Countersunk head tapping screw	
TT	Truss head tapping screw	
OCT	Oval countersunk head tapping screw	
PM	Pan head machine screw	
CM	Countersunk head machine screw	
OCM	Oval countersunk head machine screw	
TM	Truss head machine screw	
BM	Binding head machine screw	
PSA	Pan head screw with spring lock washer	
PSB	Pan head screw with spring lock washer and flat washer	
PSF	Pan head screw with flat washer	

Symbol	Description	Shape
EW	E type washer	
FW	Flat washer	
SW	Spring lock washer	
N	Nut	
WN	Washer faced nut	
ITW	Internal toothed lock washer	
OTW	Outernal toothed lock washer	
SC	Slotted set screw (Cone point)	
SF	Slotted set screw (Flat point)	
HS	Hexagon socket headless set screw	
OCW	Oval countersunk head wood screw	
CW	Countersunk head wood screw	
RW	Round head wood screw	

EXAMPLE

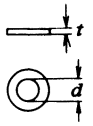
PM・3x8

- 3x8: length in mm (l)
- 3x8: diameter in mm (d)
- PM: Symbol



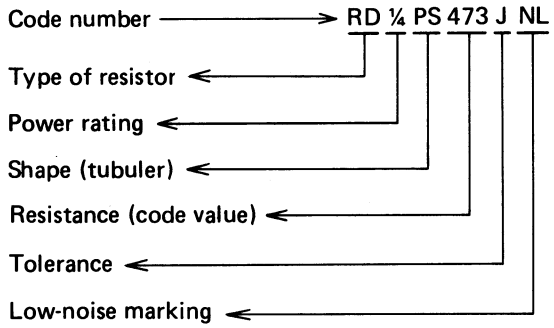
FW・9ϕx1^t

- 1^t: thickness in mm (t)
- 9ϕ: diameter in mm (d)
- FW: Symbol



RESISTANCE VALUE CODES

Code numbers of resistors used in Pioneer equipment are expressed in the following way:—



Furthermore, in the list of parts found in the Service Manual, the resistance (code value) part of the above code number is expressed as □□□ or □□□□.

Resistors included in the Service Manual list of parts

↓

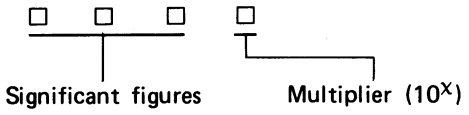
Ex. RD ¼ PS □□□ JNL

When ordering resistor components, first ascertain the actual resistance value from the circuit diagram, and then convert it into code no. form as shown in the following examples.

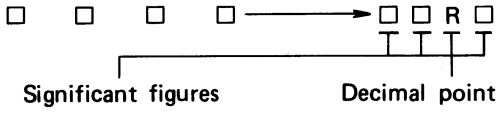
For further details on code numbers, refer to "Tuning Fork" VOL. 1.

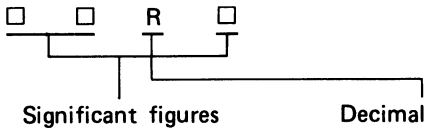
Ex. 1 For □□□□ Codes

* **General resistors**



* **Resistors with fractional values**



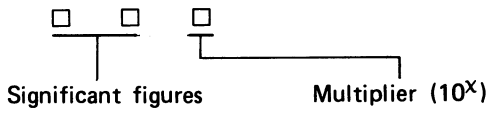


Ex. 1

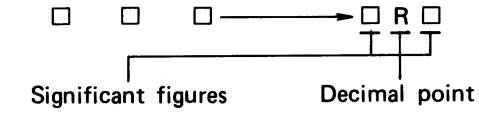
Nominal resistance (Ω)	Significant figure (three figures)	Multiplier (10X)	Resistance value code
5.1	510	.....	5R10
5.62	562	.....	5R62
10	100	.....	10R0
22.5	225	.....	22R5
110	110	$\times 10^0$	1100
1k (1000)	100	$\times 10^1$	1001
1.56k (1560)	156	$\times 10^1$	1561
10k (10000)	100	$\times 10^2$	1002
33.6k (33600)	336	$\times 10^2$	3362
112k (112000)	112	$\times 10^3$	1123
1M (1000000)	100	$\times 10^4$	1004
1.56M (1560000)	156	$\times 10^4$	1564

Ex. 2 For □□□ Codes

* **General resistors**



* **Resistors with fractional values**



Ex. 2

Nominal resistance (Ω)	Significant figure (two figures)	Multiplier (10X)	Resistance value code
0.5	05	.....	0R5
1.5	15	.....	1R5
1	01	$\times 10^0$	010
22	22	$\times 10^0$	220
330	33	$\times 10^1$	331
1k (1000)	10	$\times 10^2$	102
5.6k (5600)	56	$\times 10^3$	562
68k (68000)	68	$\times 10^3$	683
820k (820000)	82	$\times 10^4$	824
1M (1000000)	10	$\times 10^5$	105
2.2M (2200000)	22	$\times 10^5$	225

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U.S. PIONEER ELECTRONICS CORPORATION 85 Oxford Drive, Moonachie, New Jersey 07074, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Luithagen-Haven 9, 2030 Antwerp, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia

〈ART-325-0〉 〈78F02F8K01〉

Printed in Japan

SERVICE INFORMATION

PIONEER

No. SI-039007
Date. Oct. 4, 1985

MODEL NO.	*	SER. NO.	MODEL NO.	*	SER. NO.	MODEL NO.	*	SER. NO.

#	DETAIL OF CHANGE(S)		REASON FOR CHANGE(S)
1	IC, PD1003, has been supplied for servicing the limited models*; for other models, the PD1003 has been superseded by IC, PD1007.	X	Difficulty of procurement of PD1003

Please use PD1007 (No CR OSC) instead of PD1003 when servicing the models except the following:

a) CT-A1/N, M-7000/KU, CT-F1250, PL-630, PL-610, PL-560(Old)
b) PL-300, PL-300X, PL-400, PL-400X, PL-500, PL-500X

Note: a) Models employing pitch control & stroboscopic functions
b) Models employing stroboscopic function

- Please turn over -

SERVICE MANUAL

MODEL:
S/M NO.:
PAGE:

MODEL:
S/M NO.:
PAGE:

MODEL:
S/M NO.:
PAGE:

MODEL:
S/M NO.:
PAGE:

Ref. *	Ref. #	CURRENT PARTS SYMBOL/DESCRIPTION	CURRENT PARTS PART NUMBER	CODE	NEW PARTS PART NUMBER	NEW PARTS SYMBOL/DESCRIPTION
	1	IC	PD1003	2	PD1007	IC

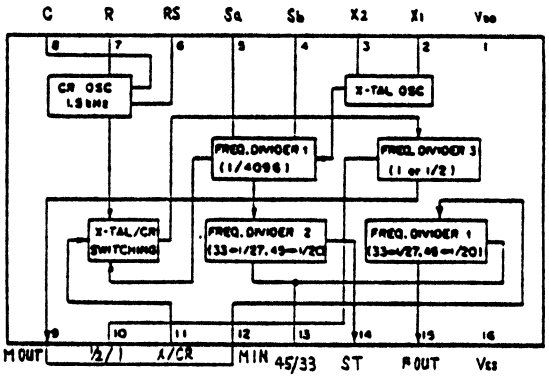
PIONEER ELECTRONIC CORPORATION

(A1263, SPC-KS 410)

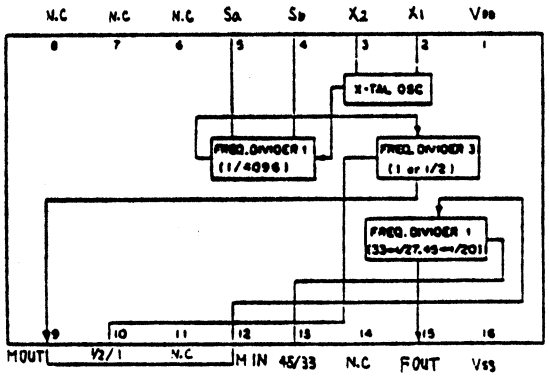
Y. Yamaoka, Manager
Technical Information & Coordination Sec.
Product Reliability & Customers Service Div.

PIONEER ELECTRONICS
SERVICE AND ENGINEERING INC.

PD1003



PD1007



PIONEER®

SERVICE INFORMATION

No. SI-184002
Date: April, 1984

MODEL: TURNTABLE AND TAPE DECK.

SUBJECT: Usability of IC, PD1007 & PD1003.

PD1007 can be used instead of PD1003, for the below-listed models which employ quartz PLL without pitch control function.

APPLICABLE MODEL	PART NO.
PL-300, PL-300X series PL-400, PL-400X series PL-500, PL-500X series PL-600, PL-600X series PL-L1000, L1000A series PL-8 series PL-9 series PL-7, PL-720 series PL-930 series PL-L800, PL-L800S series PL-X9 series PL-707 series PL-505 series PL-S40, PL-640 series PL-88F, PL-88FS series PL-S50, PL-740 series PL-S70, PL-940 series PL-6, PL-620 series PL-70LII series PL-540 series	PD1007 & PD1003

APPLICABLE MODEL	PART NO.
PL-560 series PL-610 series PL-630 series CT-F1250 series CT-A1 series	Only PD1003

POST OFFICE BOX 1760
LONG BEACH, CALIFORNIA 90801
PHONE: 213/420-5700 FAX: (213)420-5902

(J-W-C)

PIONEER ELECTRONICS (USA) INC.
TECHNICAL INFORMATION CENTER

PIONEER®

PIONEER ELECTRONICS (USA) INC.

SERVICE INFORMATION

No. SI-P830210

SUBJECT: Introduction of Main Parts for TURNTABLE.

TURNTABLE MAIN PARTS

*: Discontinued DC: 50/60Hz compatible DD: Direct Drive As of 1 Jan. 1983

	MODEL	STYLUS	CARTRIDGE	DRIVE BELT (IDLER)	ARM BELT	SLIDER BELT	50HZ PULLEY	60HZ
	PL-2	PN-220	PC-220	KEB-004	--	--	DC	
	PL-4	PN-3MC	PC-3MC	—	--	--	DD	
1631	PL-05	"	"	PEB-183	PEB-206	--	DC	
	PL-5	"	"	--	--	--	DD	
					--	--		
	PL-6	PN-3MC	PC-3MC	--	--	--	DD	
					--	--		
	PL-7	PN-3MC	PC-3MC	--	--	--	DD	
	PL-X7	PN-31MC	PC-31MC	PEB-183	PEB-185	--	DC	
	PL-8	PN-3MC	PC-3MC	--	--	--	DD	
	PL-9	"	"	--	--	--	"	
1524	PL-X9	PN-41MC	PC-41MC		PEB-226	--	"	
	PL-10	--	--	KEB-004	--	—	PLA-001	PLA-002
	PL-11(A)	PN-11	PC-11	(N27-609)	—	—	N24-641	N24-640
	PL-11AC	"	"	(")	—	—	"	"
	PL-12(X)	PN-11	PC-11	KEB-004	—	—	PLA-001	PLA-002
	PL-12A	*PN-35	PC-35	"	—	—	"	"
	PL-12AC	--	--	"	—	—	"	"
	PL-12D	--	--	"	—	—	"	"
	PL-12DII	--	--	"	—	—	"	"
	PL-12E	PN-12	PC-12	KEB-004	—	—	PLA-001	PLA-002
	PL-12M	PN-11	PC-11	"	—	—	"	"
	PL-12R	PN-12	PC-12	"	—	—	"	"
	PL-12S(X)	--	--	"	—	—	"	"
	PL-15	PN-11	PC-11	KEB-004	—	—	PLA-001	PLA-002
	PL-15C	--	--	"	—	—	"	"
	PL-15D	PN-30	PC-30	"	—	—	"	"
	PL-15DII	--	--	"	—	—	"	"
	PL-15R	PN-12	PC-12	"	—	—	"	"
	PL-A20	PN(C)-11,15 or 35		KEB-004	—	—	PLA-001	PLA-002
	PL-25	PN-11	PC-11	(N27-609)	—	—	N24-641	N24-640
	PL-25D	*PN-35	PC-35	KEB-004	—	—	N24-627	N24-628
	PL-A25	"	"	"	—	—	"	"
	PL-30	PN-11	PC-11	E31-700	—	—	N51-729	N51-730
	PL-A30	PN(C)-11,15 or 35		KEB-004	—	—	PLA-001	PLA-002
	PL-31	*PL-N9	PL-C9	E31-700	—	—	N51-729	N51-730
	PL-31D	*PN-35	PC-35	KEB-004	—	—	N24-632	N24-631
	PL-A35(D)	PN-50	PC-50	"	—	—	PLA-001	PLA-002
	PL-41	*PL-N9	PL-C9	N28-607	—	—	N24-613	N24-614
	PL-41A	*PN-35	PC-35	"	—	—	"	"
	PL-41D	PN-50	PC-50	KNK-030			KLA-025	KLA-026
	PL-44F	PN-3MC	PC-3MC	PEB-183	PEB-185	PEB-206	DC	
	PL-A45(D)	PN-30	PC-30	KEB-004	—	--	PLA-001	PLA-002

(J-W-C)

1925 EAST DOMINGUEZ STREET
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LONG BEACH, CALIFORNIA 90801
PHONE: 213/639-5050 FAX: (213) 637-1382

MODEL	STYLUS	CARTRIDGE	DRIVE BELT (IDLER)	ARM BELT	SLIDER BELT	50HZ PULLEY	60HZ
PL-50	*PN-35	PC-35	E31-700	—	—	N51-729	N51-730
PL-50A	PN-50	PC-50	"	—	—	"	"
PL-X50	PN-220	PC-220	PEB-183	PEB-185	—	DC	
PL-51(A)	PN-50	PC-50	—	—	—	DD	
PL-55(X)	"	"	—	—	—	"	
PL-55D(DX)	PN-30	PC Q1	—	—	—	"	
PL-61	--	--	KEB-004	--	--	DC	
PL-70LII	--	--	--	--	--	DD	
PL-71	--	--	--	--	--	"	
PL-88F	PN-41MC	PC-41MC	--	PEB-185	PEB-206	"	
PL-100/KU	PN-135	PC-135	KEB-004	--	--	DC	
PL-100(X)R	PN-110/II	PC-110/II	KEB-004	--	--	"	
PL-110	PN-K65	*	PEB-224	--	--	DC	
PL-112D	PN-135	PC-135	KEB-004	--	--	PLA-039	PLA-040
PL-115D	"	"	"	--	--	"	"
PL-117D	"	"	"	--	--	"	"
PL-120	PN-220	PC-220	KWB-004	--	--	DC	
PL-130	PN-K65	*	PEB-183	--	--	"	
PL-155A	PN-110/II	PC-110/II	KEB-004	--	--	PLA-039	PLA-040
PL-155E	PN-110	PC-110	"	--	--	"	"
PL-200(X,S)	PN-110/II	PC-110/II	--	--	--	DD	
PL-220	PN-220	PC-220	KEB-004	--	--	DC	
PL-230	"	"	"	--	--	"	
PL-250	PN-135	PC-135	--	--	--	DD	
PL-255	PN-110/II	PC-110/II	--	--	--	"	
PL-260	PN-145	PC-145	--	--	--	"	
PL-300(X)	PN-150	PC-150	--	--	--	DD	
PL-320	PN-3MC	PC-3MC	--	--	--	"	
PL-330	PN-220	PC-220	--	--	--	"	
PL-400(X,G,S)	PN-150	PC-150	--	--	--	DD	
PL-420	PN-3MC	PC-3MC	--	--	--	"	
PL-430	PN-220	PC-220	--	--	--	"	
PL-455	—	—	--	--	--	"	
PL-500/S	PN-200	PC-200	--	--	--	"	
PL-510(A,S)	PN-135	PC-135	--	--	--	"	
PL-512(XD)	PN-110/II	PC-110/II	KEB-004	--	--	PLA-039	PLA-040
PL-514(A,XD)	"	"	"	--	--	"	"
PL-515	"	"	"	--	--	"	"
PL-516(X)	PN-135	PC-135	KEB-004	--	--	DC	
PL-518(XD)	"	"	"	--	--	"	
PL-520	PN-400	PC-400	--	--	--	DD	
PL-530(X,S)	PN-50	PC-50	--	--	--	"	
PL-540	PN-400	PC-400	--	--	--	"	
PL-550(S)	PN-550E/II	PC-550E/II	--	--	--	DD	
PL-550X	--	--	--	--	--	"	
PL-560	PN-400	PC-400	--	--	--	"	
PL-570	PN-550E/II	PC-550E/II	--	--	--	"	
PL-570X	--	--	--	--	--	"	
PLC-590	--	--	--	--	--	"	
PL-600(X)	PN-200	PC-200	--	--	--	DD	
PL-610	—	—	--	PEB-097	--	"	
PL-620	PN-3MC	PC-3MC	--	--	--	"	
PL-630	PN-600	PC-600	--	PEB-097	--	"	
PL-720	PN-3MC	PC-3MC	--	--	--	DD	
PL-730	"	"	--	--	--	"	

MODEL	STYLUS	CARTRIDGE	DRIVE BELT	ARM BELT	SLIDER BELT	50HZ PULLEY 60HZ
PL-930	PN-3MC	PC-3MC	--	--	--	DD
PL-3000/KU	PN-135	PC-135	--	--	--	DD
" /others	PN-150	PC-150	--	--	--	"
PL-L800	PN-4MC	PC-4MC	--	--	--	Tangential
PL-L1000	—	—	--	PEB-097	--	"
PL-L1000/S/G	PN-600	PC-600	--	"	--	"
PL-L1000A	PN-4MC	PC-4MC	--	"	--	"

Note: Models with suffix number "T" have no cartridge.
* Cartridges of PL-110 and PL-130 are undetachable.

As of 1 Jan. '83

MODEL	STYLUS	CARTRIDGE	DRIVE BELT	ARM BELT	SLIDER BELT	50HZ PULLEY 60HZ
C-3500	PN-11	PC-11	N27-609			N24-641 N24-640
C-4500(A)	PN-30	PC-30	KEB-004			PLA-001 PLA-002
C-4600	PN-30	PC-30	"			" "
C-5600	PN-11	PC-11	KEB-004			N24-627 N24-628
C-5600A(D)	*PN-35	PC-35	"			PLA-001 PLA-002
C-6000	PN-6,10	PC-6,10	E31-700			N51-729 N51-730
C-6000A	*PN-35	PC-35	"			" "
E-1000A	PN-11	PC-11	KEB-004			PLA-001 PLA-002
ES-2000	"	"	"			" "
FD-3	*PN-21	PN-21	KEB-004			PLA-001 PLA-002
KH-3355	PN-K85	HPC-101	KEB-004			DC
KH-3500	PN-135	PC-135	"			PLA-039 PLA-040
KH-4455	PN-K85	HPC-101	HNT-102			HLA-108 HLA-109
KH-5522(A)	PN-135	PC-135	KEB-004			PLA-039 PLA-040
KH-5577/D,YPA	PN-K85	HXA-406	HXA-406			HXA-231 HXA-232
KH-8811/D,YPA	"	HPC-101	HNT-102			HLA-108 HLA-109
KH-8855/KU	"	HPC-104	"			DC
" /D,YPA	"	HXA-157	"			"
M-6000	PN-135	PC-135	KEB-004			PLA-039 PLA-040
M-6500	"	"	"			" "
MS-6500	PN-135	PC-135	KEB-004			PLA-039 PLA-040
MX-40	PN-K65	PC-K65	"			DC
MX-80	PN-110/I	PC-110/I	"			"
PRELUDE 600	PN-12	PC-12	KEB-004			PLA-001 PLA-002
PRELUDE 700	"	"	"			" "
PRELUDE 4000(A)	PN-11	PC-11	"			" "
RONDO 2000	PN-135	PC-135	"			PLA-039 PLA-040
RONDO 3000	PN-11	PC-11	"			PLA-001 PLA-002
RONDO 3000X	PN-135	PC-135	"			PLA-039 PLA-040
S-50	*PN-35	PC-35	KEB-004			PLA-001 PLA-002
S-4600	*PN-10	PC-10	N27-609			N24-641 N24-642
S-550	PN-11	PC-11	KEB-004			PLA-001 PLA-002
S-770	"	"	"			" "