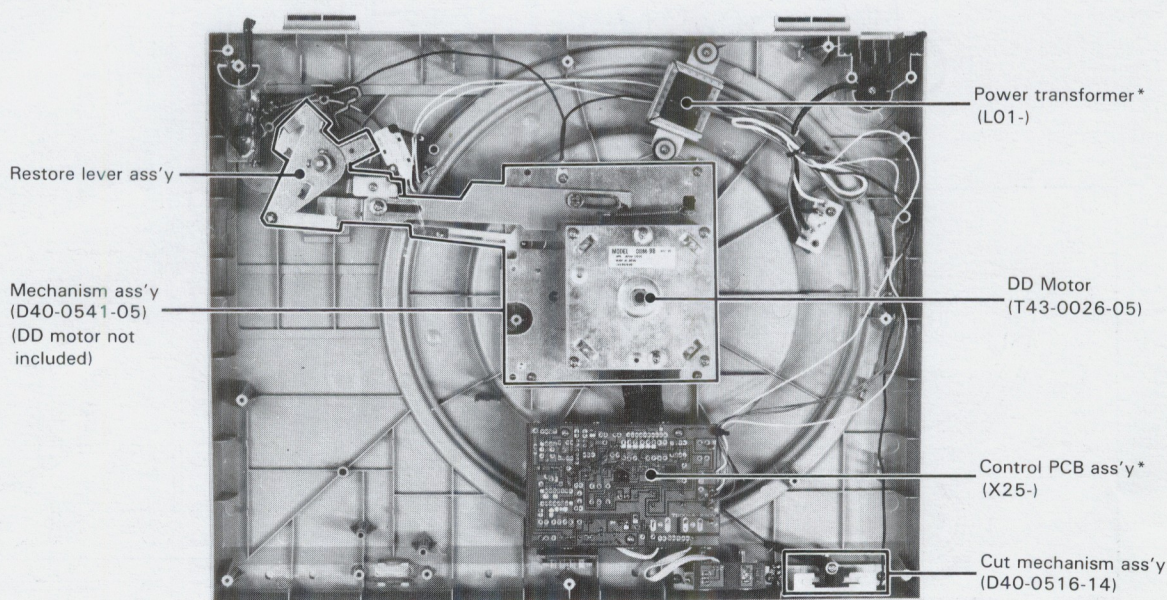
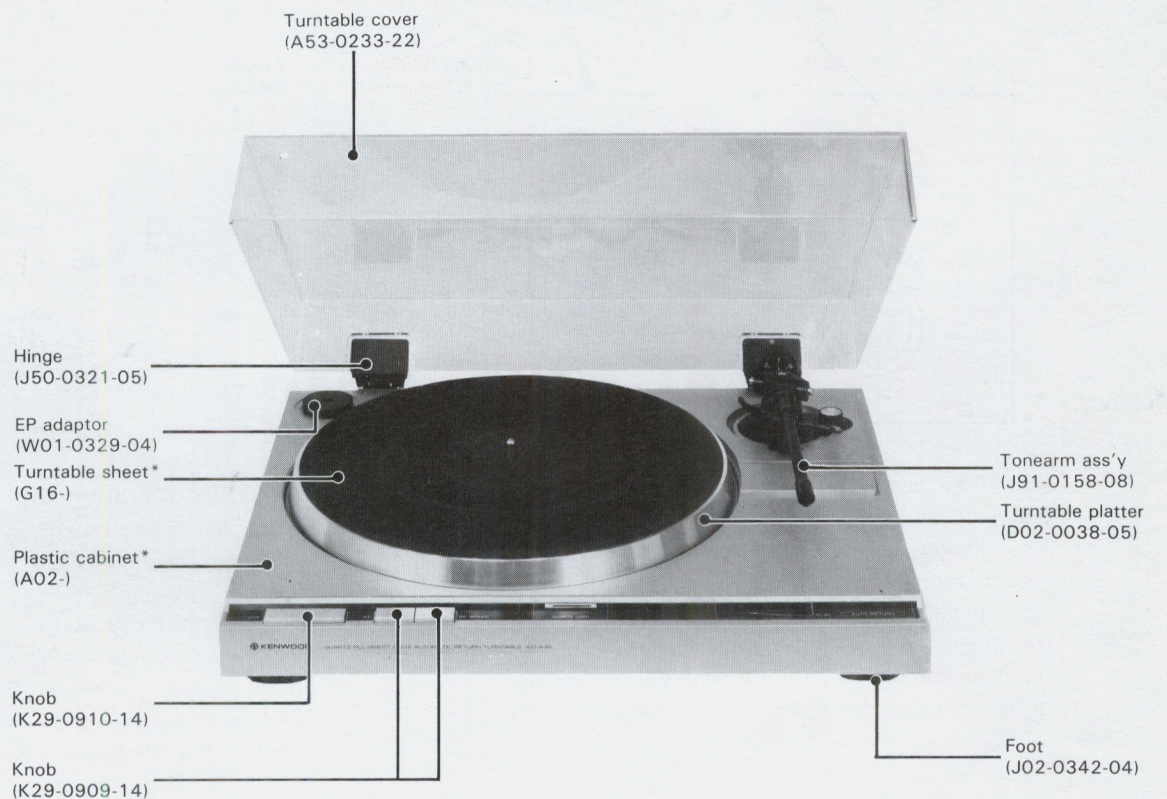


## QUARTZ PLL DIRECT DRIVE AUTOMATIC RETURN TURNTABLE



\* Refer to Parts list on page 6.

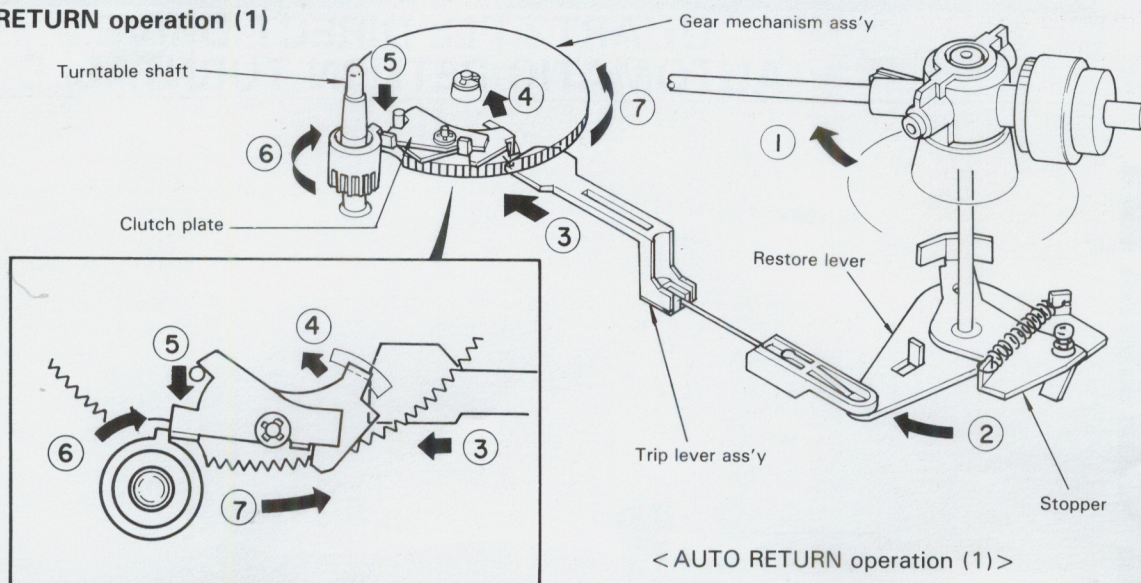
**MANUAL**

**SERVICE**



## MECHANISM OPERATION

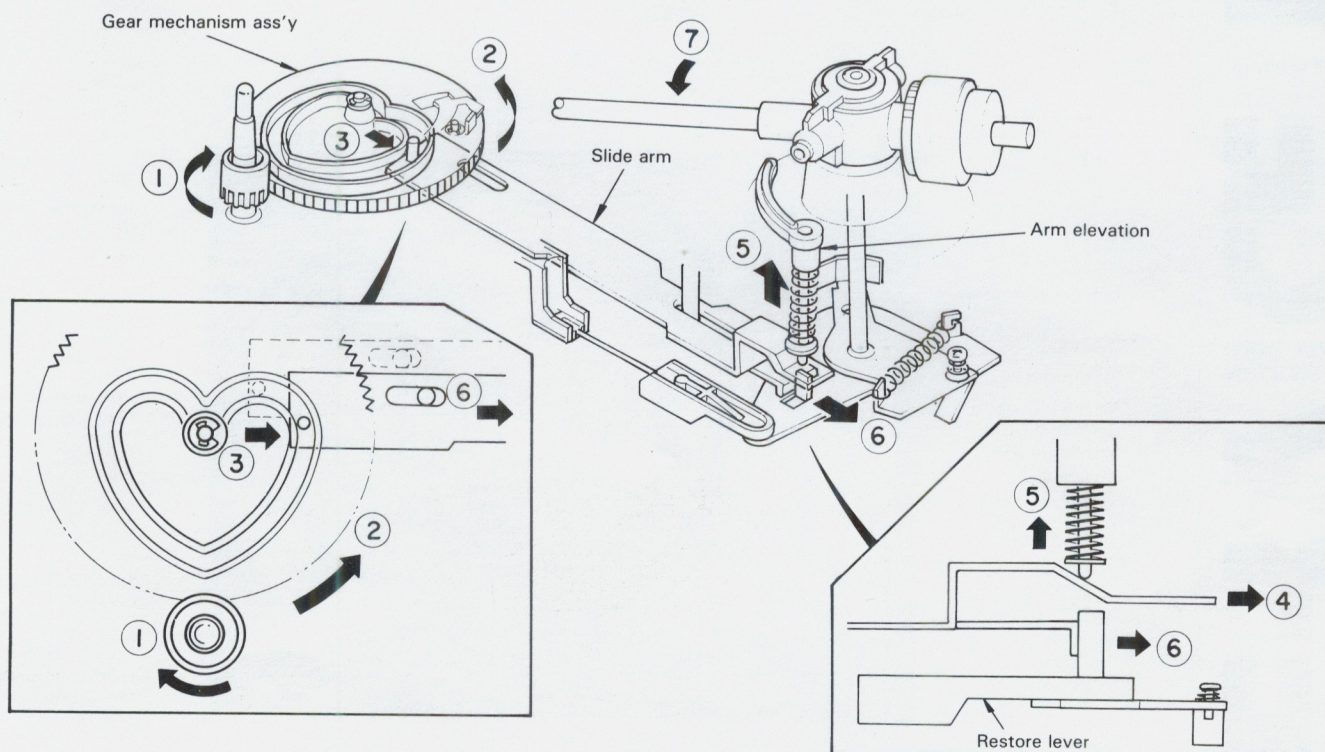
### 1. AUTO RETURN operation (1)



- ①~③: The trip lever assembly moves in the direction indicated by arrow ③ as the tonearm traces the groove on the disk.
- ④: When the tonearm reaches the end groove, the trip lever assembly pushes the lower projection of the clutch plate.
- ⑤~⑦: The upper projection of the clutch plate is pushed by the projection on the turntable shaft gear. The gear mechanism assembly is turned in the direction of arrow ⑦.

### 2. AUTO RETURN operation (2)

- ①~③: As the gear mechanism assembly turns, the projection on the slide arm moves along the heart shaped groove.
- ④~⑥: The slide arm moves in the direction of arrow ⑥ to push the arm elevator up and push the projection of the restore lever forward.
- ⑦: The tonearm assembly moves in the direction of arrow ⑦ as the restore lever moves.

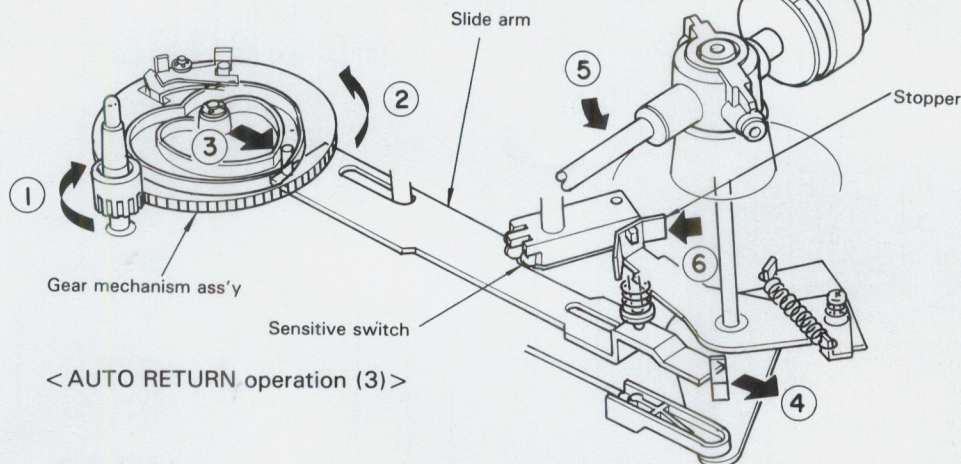




## MECHANISM OPERATION/CIRCUIT DESCRIPTION

### 3. AUTO RETURN operation (3)

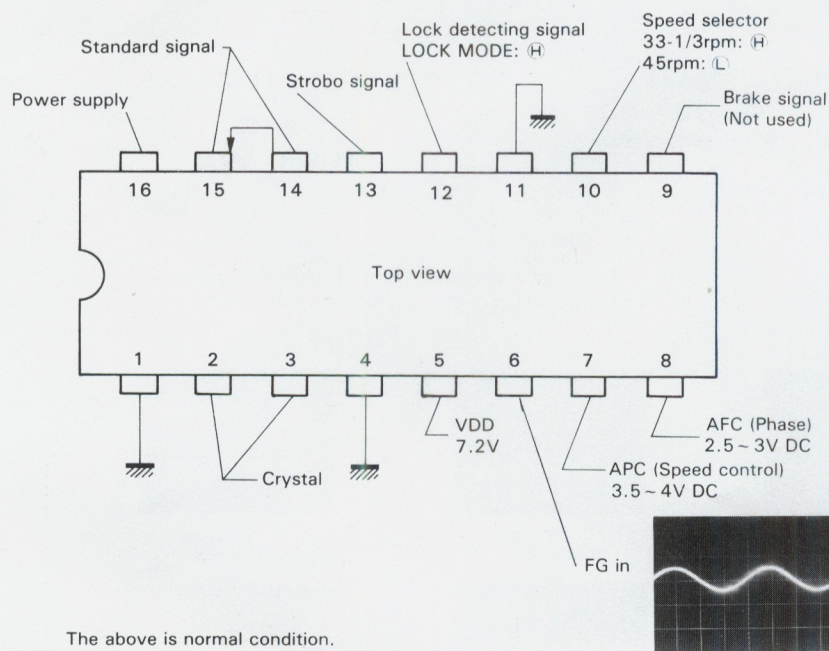
①~⑥: When the projection on the slide arm reaches the position shown below, the tonearm assembly is returned to the arm rest and the sensitive switch is pressed to turn the power OFF. When the gear mechanism assembly returns to the original position, it is disengaged from the turntable shaft gear and stops.



### 4. CUT operation

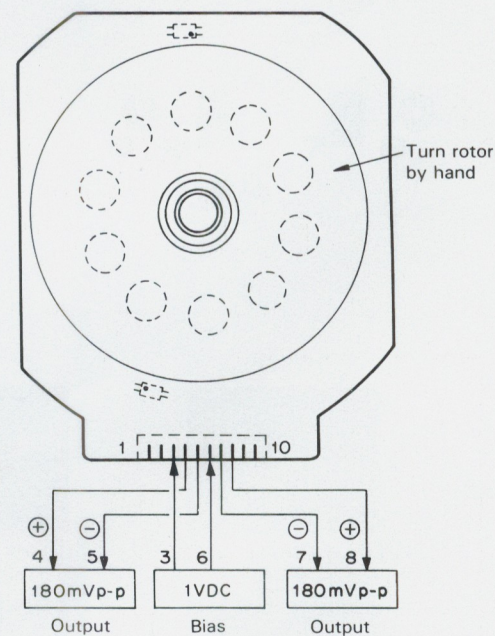
The cut bar pushes the clutch plate so that the same operation as in AUTO RETURN is carried out.

### How to check TC-9142P



The above is normal condition.

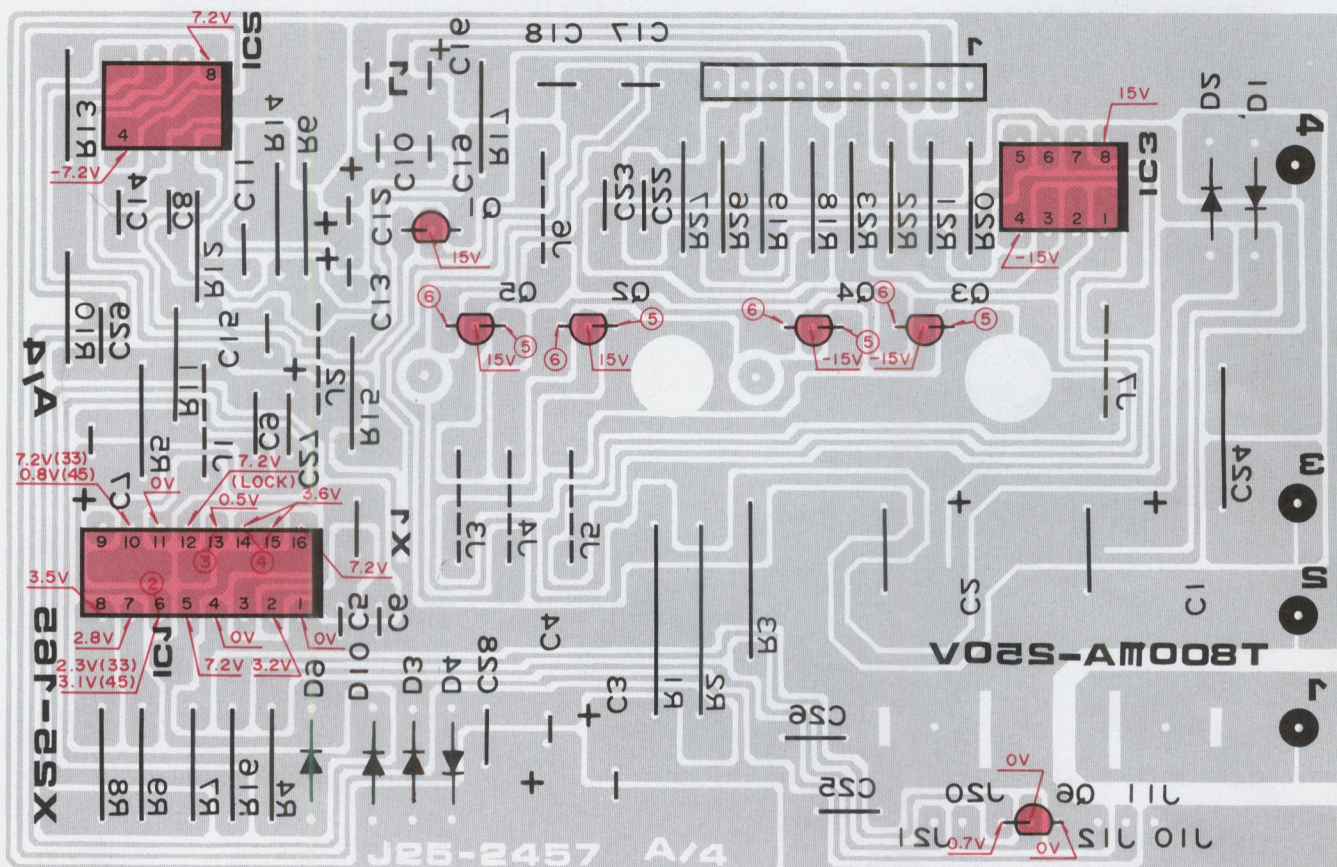
### How to check hall element



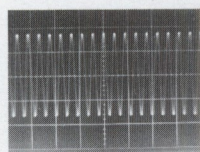


## PC BOARD

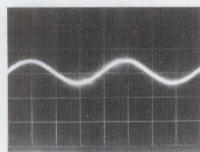
Control (X25-1650-10) Foil side view



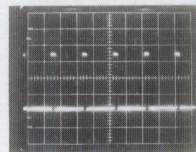
Refer to the schematic diagram for the value of resistors and capacitors.  
The PC board drawing is viewed from the side easy to check.



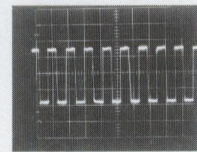
① H: 2μs/div  
V: 0.1V/div



② H: 10 ms/div  
V: 0.5V/div

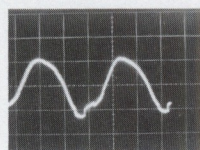


③ H: 5ms/div  
V: 2V/div

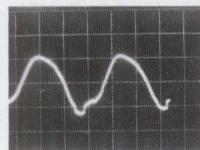


④ H: 10μs/div  
V: 2V/div

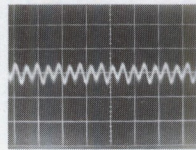
< Note: Use the 10:1 probe >



⑤ H: 0.1s/div AC coupled  
V: 0.1V/div



⑥ H: 0.1s/div AC coupled  
V: 0.1V/div



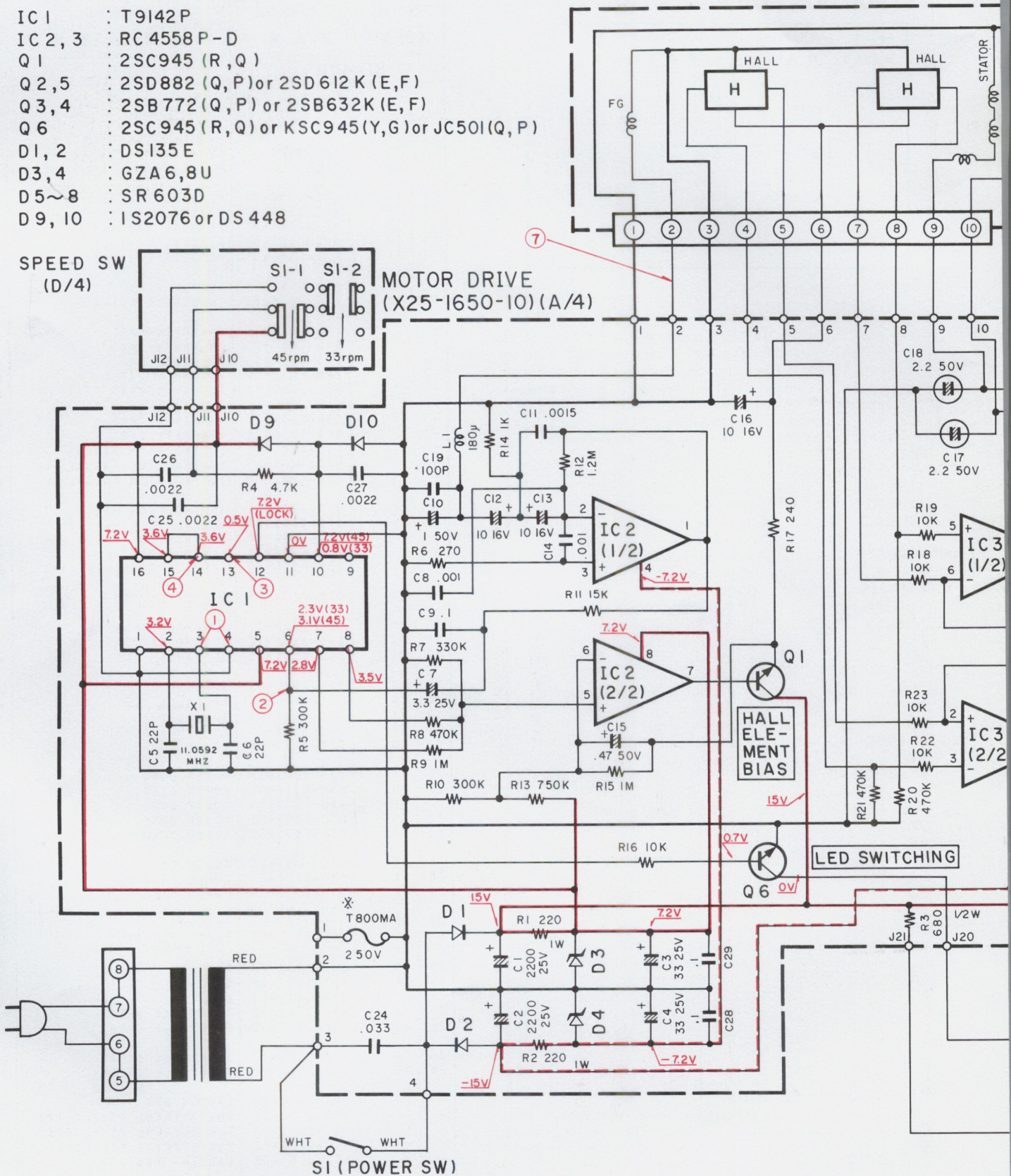
⑦ H: 0.1μs/div  
V: 10mV/div



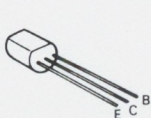
- IC 1 : TC9142P  
 IC 2, 3 : RC4558P-D  
 Q 1 : 2SC945 (R, Q)  
 Q 2, 5 : 2SD882 (Q, P) or 2SD612K (E, F)  
 Q 3, 4 : 2SB772 (Q, P) or 2SB632K (E, F)  
 Q 6 : 2SC945 (R, Q) or KSC945 (Y, G) or JC501 (Q, P)  
 D1, 2 : DS135E  
 D3, 4 : GZA6, 8U  
 D5~8 : SR603D  
 D9, 10 : 1S2076 or DS448

SPEED SW  
 (D/4)

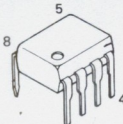
MOTOR DRIVE  
 (X25-1650-10) (A/4)



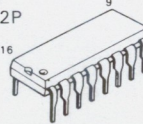
2SC945  
 JC501  
 KSC945



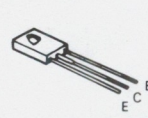
RC4558P



TC9142P



2SB632  
 2SB772  
 2SD612  
 2SD882





# DRIVE AUTOMATIC RETURN TURNTABLE

# KD-44R



## SPECIFICATIONS

### MOTOR AND TURNTABLE

Drive System	Direct-drive system
Motor	Quartz PLL coreless & slotless DC servo motor
Turntable Platter	31 cm (12-3/16") diameter Aluminum alloy, die-cast
Speeds	2 speeds, 33-1/3 and 45 rpm
Wow & Flutter	Less than 0.03% (WRMS)
Rumble	DIN weighted better than -75 dB

### TONEARM

Type	Static-balance type, straight tubular arm
Effective Arm Length	225 mm (8-7/8")
Overhang	15 mm (9/16")
Tracking Error	+3°24' to -1°
Tracking Force Variable Range	0 to 3 grams
Usable Cartridge Weight	4 to 10 grams (with supplied head-shell)

### CARTRIDGE (U.S.A. and U.K. models are not equipped with the V-50)

Furnished Cartridge	V-50 (Moving Magnet type)
Frequency Response	20 ~ 20,000 Hz
Output Voltage	2.5 mV (1,000 Hz, 5 cm/sec.)
Load Impedance	47 k ohms
Stylus	0.7 mil diamond
Optimum Tracking Force	1.5 ± 0.3, -0 grams
Replacement Stylus	N-50

### MISCELLANEOUS

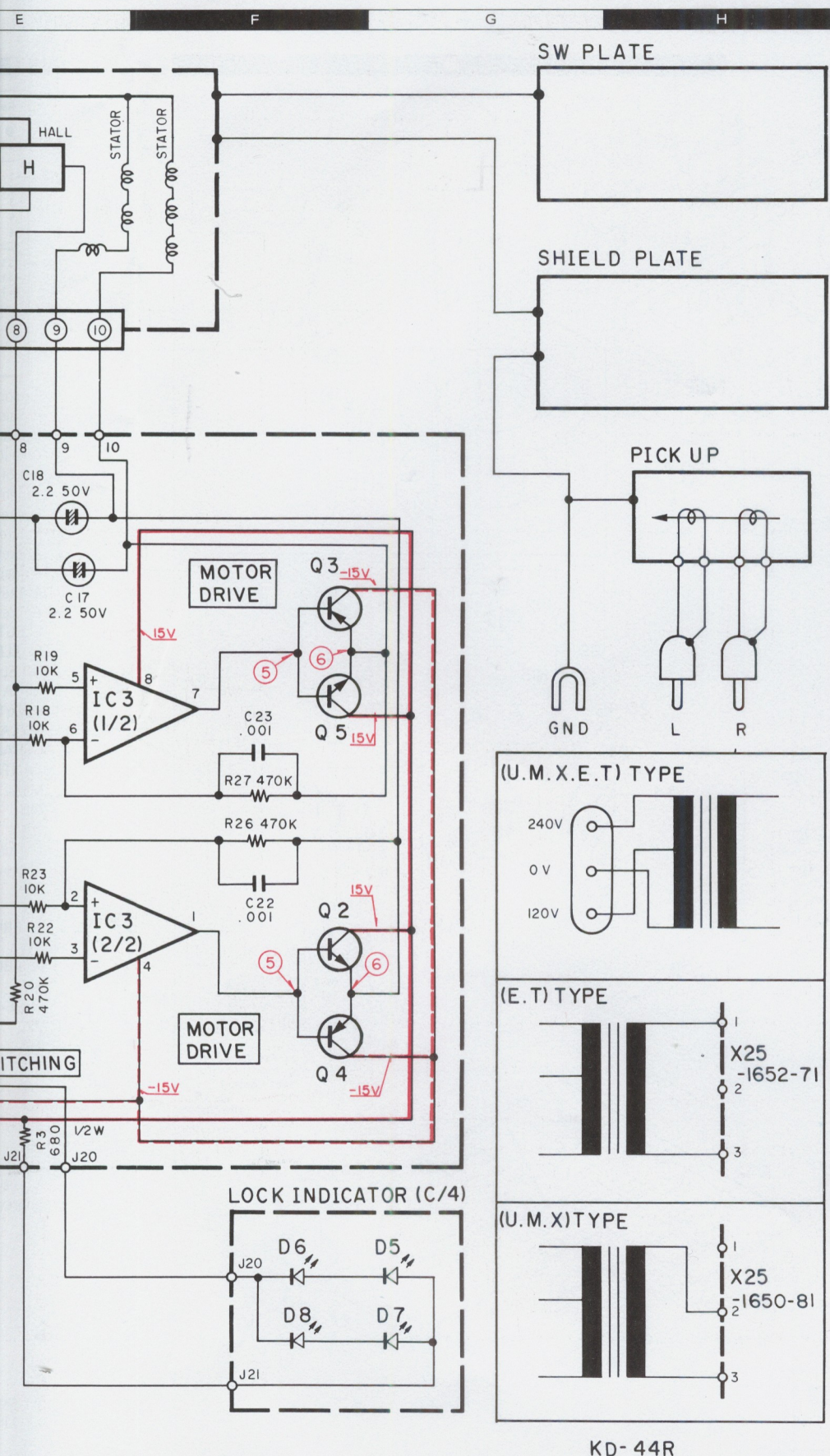
Power Requirements	AC 120 V, 60 Hz: U.S.A. and Canada Models AC 120 V/220-240V (Switchable), 50/60 Hz: Other countries
Power Consumption	10 watts
Dimensions	W 440 mm (17-5/16") H 130 mm (5-1/8") D 373 mm (14-11/16")
Weight	4.6 kg (10.1 lbs.)
Built-in Features	Auto-return/cut tonearm system Anti-skating device Oil-damped cueing device 45 rpm adaptor stand Quartz-lock indicator Tracking force direct readout counter Built-in insulators
Supplied Accessory	45 rpm adaptor

Note: Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.



- DC voltages are measured by a VOM of 20 kΩ/V input impedance
- Les tensions de courant continu sont mesurées par un multimètre d'une impédance d'entrée de 20 kΩ/V.
- Die Gleichstrom-Spannungen werden durch ein Vielfachmeßgerät von 20 kΩ/V Eingangs-Impedanz gemessen.



## 3





## PARTS LIST

## INSTRUCTION FOR PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
② ①	1 3A 2 2A 3 2A 4 1A, 1B 5 1A	MAIN CHASSIS ASS'Y FRONT CHASSIS FLUOR DISPLAY HOLDER FRONT PANEL FRONT PANEL ASS'Y	③ ④ ⑤ ⑥
	A20-1666-08		
⑤	PS3 RS1 RL1	PUSH SW. (SELECTOR) ROTARY SW. (FUNC.) RELAY	111 105 FIG. 104
	S42-3201-08 S01-1204-08 S51-2204-08		* * * M

① Exploded view drawing No.

② Position in exploded view.

③ Symbol of new parts

④ Area to which parts are shipped. Example: A20-1666-08 is the part No. of FRONT PANEL ASS'Y for the "K" type products (for U.S.A.). When this column is blank, it means that the same type of parts (same parts No.) are used for the products shipped to all areas.

⑤ Reference No. in schematic diagram.

⑥ Abbreviation of "ceramic capacitor"

All capacitors and resistors are listed using abbreviations. Abbreviations

\* Abbreviations of capacitors (Parts No. with initial letter "C").

ELECTRO ..... Electrolytic capacitor  
LL-ELEC ..... Low leak electrolytic capacitor  
NP-ELEC ..... Non-pole electrolytic capacitor  
MICA ..... Mica capacitor  
POLYSTY ..... Polystyrene capacitor  
MYLAR ..... Mylar capacitor  
CERAMIC ..... Ceramic capacitor  
TANTAL ..... Tantalum capacitor  
MF ..... Metallized film capacitor  
MP ..... Metallized paper capacitor  
OIL ..... Oil capacitor

The unit "UF" is used in lieu of "μF"

\* Abbreviations of resistors (Parts No. with initial letters "R").

RC ..... Carbon composition resistor  
RD ..... Carbon film resistor  
FL-PROOF RD ..... Flame-proof carbon film resistor  
RW ..... Wire wound power resistor  
FL-PROOF RS ..... Flame-proof metal oxide film resistor  
RN ..... Metal film resistor  
FUSE-RESIST ..... Resistor with fuse function  
2B ..... Rated wattage 1/8W  
2E ..... Rated wattage 1/4W  
2H ..... Rated wattage 1/2W  
3A ..... Rated wattage 1W  
3D ..... Rated wattage 2W  
3F ..... Rated wattage 3W  
3G ..... Rated wattage 4W  
3H ..... Rated wattage 5W

All resistor values are indicated with the unit (Ω) omitted.

\* Abbreviations common to capacitors and resistors.

C ..... ± 0.25pF (Used for capacitors only)  
D ..... ± 0.5pF (Used for capacitors only)  
F ..... ± 1%  
G ..... ± 2%  
J ..... ± 5%  
K ..... ± 10%  
M ..... ± 20%  
Z ..... + 80%, - 20% (Used for capacitors only)  
P ..... + 100%, - 0% (Used for capacitors only)  
Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
KD-44R			
1 2A	NO STOCK	CUT BAR	
2 1B	NO STOCK	CUSHION	
3 3B	NO STOCK	RESTORE LEVER ASSY	
4 3A	NO STOCK	GEAR MECHANISM ASSY	
5 2A	NO STOCK	REJECT ARM	
11 1A	A02-0364-01	PLASTIC CABINET	*T
11 1A	A02-0365-01	PLASTIC CABINET	*K
11 1A	A02-0365-01	PLASTIC CABINET	PU
11 1A	A02-0365-01	PLASTIC CABINET	MX
11 1A	A02-0365-01	PLASTIC CABINET	E
12 3B	A40-0553-11	BOTTOM PLATE	
13 1B	A53-0233-22	TURNTABLE COVER	
-	B46-0055-30	WARRANTY CARD	P
-	B46-0060-00	WARRANTY CARD	T
-	B46-0061-30	WARRANTY CARD	K
-	B46-0062-30	WARRANTY CARD	U
-	B46-0063-13	WARRANTY CARD	U
-	B46-0064-20	WARRANTY CARD	X
-	B46-0078-03	WARRANTY CARD	E
-	B50-4201-00	INSTRUCTION MANUAL	*K
-	B50-4201-00	INSTRUCTION MANUAL	U
-	B50-4202-00	INSTRUCTION MANUAL	PM
-	B50-4202-00	INSTRUCTION MANUAL	X
-	B50-4203-00	INSTRUCTION MANUAL	E
-	B50-4204-00	INSTRUCTION MANUAL	T
-	B50-4205-00	INSTRUCTION MANUAL	M
-	B59-0018-00	SERVICE STATIONS LIST	U
14 1A	B08-2204-04	INDICATOR CAP	
15 1B	D02-0038-05	TURNTABLE PLATTER	
16 2A	D40-0516-14	CUT MECHANISM ASSY	
17 2A	D40-0541-05	MECHANISM ASSY	*
18 1A	E03-0105-05	3P INLET	UM
18 1A	E03-0105-05	3P INLET	XE
18 1A	E03-0105-05	3P INLET	T
19 1A	E22-0416-05	TERMINAL BOARD	
20 1B	E30-0181-05	POWER CORD	KP
20 1B	E30-1305-15	POWER CORD	UM
20 1B	E30-1328-15	POWER CORD	T
20 1B	E30-1329-05	POWER CORD	E
20 1B	E30-1342-05	POWER CORD	X
21 1B	E30-1351-25	AUDIO CORD	UM
21 1B	E30-1351-25	AUDIO CORD	XE
21 1B	E30-1351-25	AUDIO CORD	T
21 1B	E30-1352-25	AUDIO CORD	KP
22 2B	F19-0504-04	HOLE CAP	KP
F	F05-8013-05	FUSE (800MA)	ET
23 3A	G01-1101-08	SPRING	
24 3A	G01-1102-08	SPRING	
25 2B	G13-0414-04	CUSHION	
26 1B	G16-0343-12	TURNTABLE SHEET	PU
26 1B	G16-0343-12	TURNTABLE SHEET	MX
26 1B	G16-0343-12	TURNTABLE SHEET	ET
26 1B	G16-0344-02	TURNTABLE SHEET	K
-	H01-2486-04	CARTON BOX	*
-	H10-2290-02	POLYSTYRENE FIXTURE(A)	
-	H10-2291-03	POLYSTYRENE FIXTURE(B)	
-	H10-2292-13	POLYSTYRENE FIXTURE(C)	
-	H12-0384-02	PACKING FIXTURE	

K: U.S.A

P: Canada

[UE]: AAFES

U: PX

H: Audio club

E: Europe

X: Australia

M: Other area



## PARTS LIST

\* : New parts.

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
-	H12-1102-04	PACKING FIXTURE	*
-	H20-1106-04	COVER	
-	H25-0029-04	BAG	
-	H25-0078-04	BAG (235x315)	
27 3B	J02-0342-04	FOOT	
28 1B	J50-0321-05	HINGE	
29 2B	J91-0158-08	TONEARM ASSY	
30A 2B	J92-0066-15	HEAD SHALL ASSY	
30B 2B	J92-0067-15	HEAD SHALL	
32 2A	K29-0909-14	KNOB	
33 1A	K29-0910-14	KNOB	
34 2B	L01-6381-05	POWER TRANSFORMER	KP
34 2B	L01-6384-05	POWER TRANSFORMER	UM
34 2B	L01-6384-05	POWER TRANSFORMER	XE
34 2B	L01-6384-05	POWER TRANSFORMER	T
35 2B	N09-0523-08	SCREW	
36 2B	N09-0850-04	SCREW M2.6X10	
37 2B	N09-0851-04	SCREW M2.6X15	
38 2A	N09-0953-05	SCREW	
39 2B	N14-0070-09	NUT M2.6	
40 2B	N14-0412-04	NUT M2.6	
41 2B	N19-0267-05	WASHER M2.6	
45 1A	S49-2003-05	SENSITIVE SWITCH	
46 2B	T21-0071-05	MAGNETIC CARTRIDGE(V-50	
47 3A	T43-0026-05	DIRECT DRIVE MOTOR	*
48 1A	W01-0329-04	EP ADAPTER	
49 2A,2B	X25-1650-10	CONTROL PCB ASSY	KP
49 2A,2B	X25-1650-81	CONTROL PCB ASSY	UM
49 2A,2B	X25-1650-81	CONTROL PCB ASSY	X
49 2A,2B	X25-1652-71	CONTROL PDB ASSY	ET
CONTROL (X25-1650-10)			
C1 2	C24-1422-89	ELECTRO 2200UF 25WV	
C3 4	C24-1433-61	ELECTRO 33UF 25WV	
C5 6	C71-1722-05	CERAMIC 22PF J	
C7	C24-1433-51	ELECTRO 3.3UF 25WV	
C8	C52-1710-26	CERAMIC 0.001UF K	
C9	C91-0121-05	CERAMIC 0.1UF M	
C10	C24-1710-51	ELECTRO 1UF 50WV	
C11	C45-1715-25	MYLAR 0.0015UF J	
C12 13	C24-1210-61	ELECTRO 10UF 16WV	
C14	C52-1710-26	CERAMIC 0.001UF K	
C15	C24-1747-41	ELECTRO 0.47UF 50WV	
C16	C24-1210-61	ELECTRO 10UF 16WV	
C17 18	C26-1722-51	ELECTRO 2.2UF 50WV	
C19	C71-1710-15	CERAMIC 100PF J	
C22 23	C45-1710-25	MYLAR 0.001UF J	
C24	C46-2333-37	MYLAR 0.033UF M	
C25 27	C52-1722-26	CERAMIC 0.0022UF K	
C28 29	C91-0121-05	CERAMIC 0.1UF M	
-	J13-0055-05	FUSE HOLDER	E
L1	L40-1811-03	INDUCTOR	
X1	L77-1102-05	CRYSTAL RESONATOR	
R1 2	R47-5422-15	FL-PROOF RS220 J 3A	
R3	R43-1368-15	FL-PROOF RD680 J 2H	
S1	S42-2303-05	PUSH SWITCH	
D1 2	V11-6101-40	DS135E	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
D3 4	V11-6101-50	GZA6.8U	
D5 8	V11-1202-41	SR603D	
D9 10	V11-0271-05	1S2076	
D9 10	V11-6101-80	DS448	
IC1	V30-0596-10	TC9142P	
IC2 3	V30-0426-10	RC4558P	
Q1	V03-0945-81	2SC945(A)(R,Q)	
Q2	V04-0612-10	2SD612K(E,F)	*
Q2	V04-0882-10	2SD882(Q,P)	
Q3 4	V02-0632-10	2SB632K(E,F)	*
Q3 4	V02-0772-10	2SB772(Q,P)	
Q5	V04-0612-10	2SD612K(E,F)	*
Q5	V04-0882-10	2SD882(Q,P)	
Q6	V03-0945-12	KSC945C(Y,G)	
Q6	V03-0945-81	2SC945(A)(R,Q)	
Q6	V08-0280-10	JC501(O,P)	
TONEARM ASS'Y (J91-0158-08)			
101 2B	D91-0134-08	WEIGHT ASSY	
102 2B	D39-0159-08	ARM REST ASSY	
29 2B	J91-0158-08	TONEARM ASSY	*
103 2B	N73-2604-46	SET SCREW	
104 2B	N19-2007-08	WASHER	
105 2B	N08-0416-08	DRESSED SCREW	

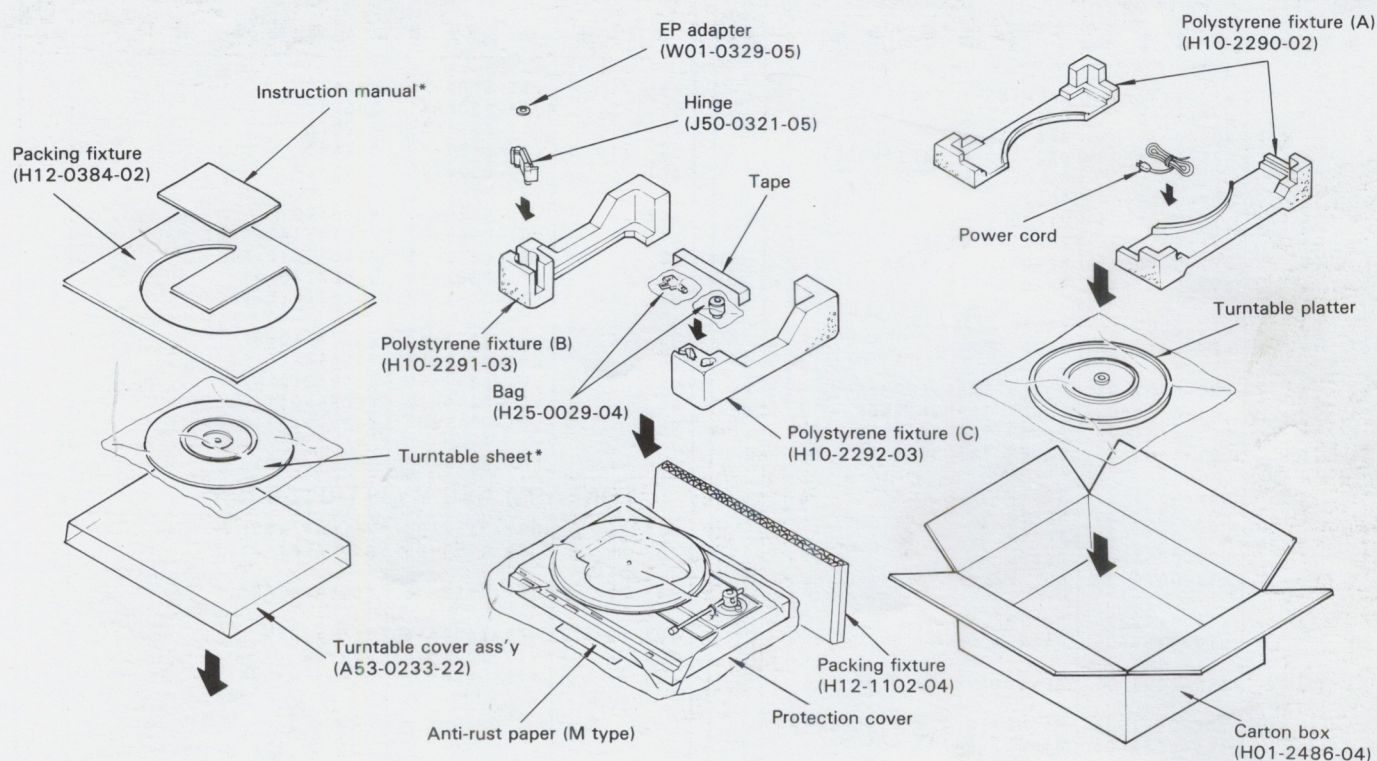
K: U.S.A U: PX E: Europe M: Other area

P: Canada H: Audio club X: Australia

[UE]: AAFES



## PACKING



\*Refer to Parts List.

A product of

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