

REPLACEMENT PARTS LIST.....Mechanical Parts

- Notes:**
- Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
 - Important safety notice:
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
 - Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

- The "S" mark is service standard parts and may differ from production parts.
- The parenthesized numbers in the columns of description stand for the quantity per set.

Areas

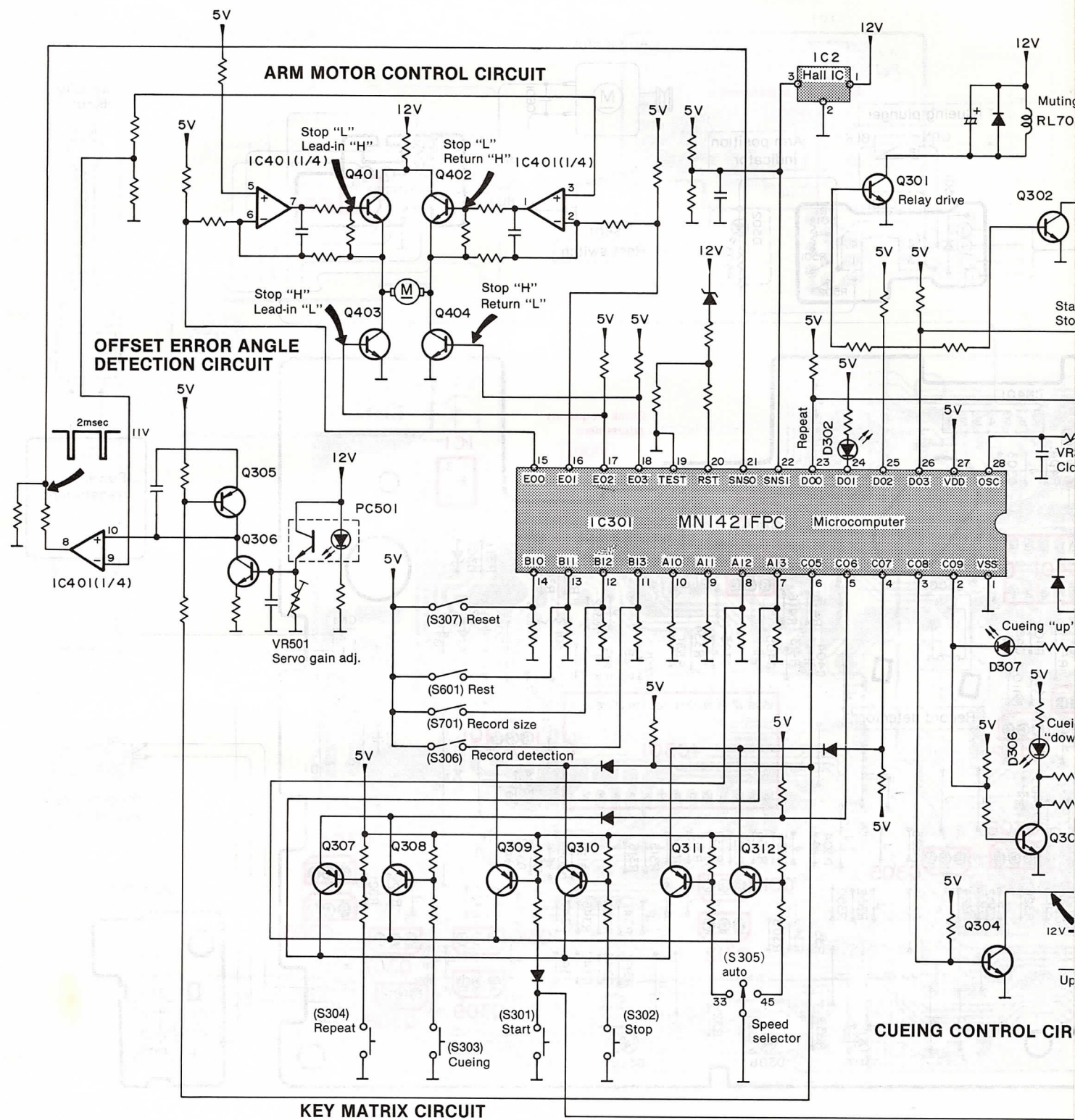
- *[M] is available in U.S.A.
*[MC] is available in Canada.

Ref. No.	Part No.	Description
CABINET AND CHASSIS PARTS		
1	SFKKQ05N03	Record Groove Scale Plate, Dust Cover (1)
2	SFGZQ06N01	Rubber, Lutch (2)
3	SFUMD04N07	Lutch, Dust Cover (2)
4	SFUMQ06N08	Lutch, Dust Cover (2)
5	SFADQ06N01E	Dust Cover (1)
6	SFGZD04N01	Cushion Rubber (2)
7	SFTGQ05N01	Turntable Mat (1)
8	SFWEC06N01	45r.p.m. Adaptor (1)
9	SFQAC06N01	Spring, 45r.p.m. Adaptor (1)
10	SFUMC05N11A	Record Detector Ass'y (1)
11	SFTEQ05N01	Turntable Platter (1)
12	SFTMC07-01E	Rotatory Magnet Ass'y (1)
13	SFQCC05N01	Spring, Insulator (4)
14	SFGAC05N02	Insulator (4)
15	SFAUQ06N01	Bottom Board (1)
16	SFUMQ06N05	Holder, L.E.D. (1)
17	SFUMC05N13E	Lever, Record Detector (1)
18	SFUMQ05N01R	Front Panel (1)
18-1	SFKKQ05N01	Badge, Front Panel (1)
18-2	SFKKQ05N04	Ornament Plate (1)
19	SFKTC06N04	Button, On/Off Switch (1)
20	SFGCC06N02	Cushion Rubber, Power Transformer (2)
21	SFACQ05N01	Cabinet (1)
22	SFDJHSC0491	Socket, A.C. Power (1)
23	SFATQ06N01E	Hinge (2)
24[M]	SFNNQ05M01	Name Plate (1)
24[MC]	SFNNQ05C01	Name Plate (1)
25	SFUML11R03	Wheel, Tonearm Drive (1)
26	SFUZC05N02E	Lope Ass'y, Tonearm Drive (1)
27	SFUMV05N23	Cap, Pulley (1)
28	SFUMC05N22	Pulley (1)
29	SFGB10-01	Belt, Tonearm Drive Motor (1)
30	SFMHC02N02R	Motor Ass'y, Tonearm Drive (1)
31	SFUML11R02A	Worm Gear Ass'y, Tonearm Drive (1)
32	SFUMC05N15	Holder, Reset Switch (1)
34	SFQPC05N01	Spring, Reset Switch (1)
35	SFUMC02N10	Guide, Lope Ass'y (1)
36	SFUPBL3N11E	Base, Tonearm Drive Motor (1)
37	SFQHQ34N22	Spring, Rest Switch Lever (1)

Ref. No.	Part No.	Description
38	SFUMC02N05	Lever, Rest Switch (1)
39	SFUZC02N01	Rod, Rest Switch (1)
40	SFUMC02N13	Base Ass'y, Rest Switch (1)
41	SFUMC02N06	Rest Switch Base (1)
42	SFQA913-01	Spring, Adjustment Screw (1)
43	SFUMC02N12	Holder, Lead Wires (1)
44	SFGCC05N05	Cushion Rubber, Guide Rail (1)
45	SFXJQ06N01	Guide Rail, Tonearm Drive (1)
46	SFGCQ06N01	Cushion Rubber, Guide Rail (2)
47	SFUMQ06N07	Clamper, Guide Rail (1)
48	SFUKQ06N01E	Base Ass'y, Tonearm (1)
49	SFUMQ05N02E	Record Size Detector Ass'y (1)
50	SFDJQ06N02	Jack, Phono Output (1)
51	SFKTQ06N01	Knob, Speed Select Switch (1)
52	SFMGQ34N01	Cover, Stator Coil (1)
53	SFMZC06N01R	Stator Frame Ass'y (1)
54	SFGCQ06N03	Cushion Rubber, Dust Cover (2)
55	SFDJD04N02	Jack, Synchro Recording (1)
57	SFGZBL3N02	Spacer (1)
58[MC]	SJT345	Holder, Fuse (2)
59	SFGZB63M01	Holder, Lead Wires (1)
60	SFEB25RXK12	Tube, Stator Frame (1)
TO NEARM PARTS		
61	SFPAK0Q601	Indicator Plate (1)
62	SFPCS0V501	Cover, Indicator (1)
63	SFPGM0Q601	Rubber, L.E.D. (1)
64	SFPGM00301	Rubber Cap (1)
65	SFSP00302	Spring, Adjustment (2)
66	SFPPK00301R	Tonearm Base Ass'y (1)
67	SFPAM0Q501A	Tonearm Ass'y (1)
68	SFPGML1101	Rubber, Tonearm Guide (2)
71	SFPCS00502	Holder, L.E.D. (1)
72	SFDZC05N01E	Cueing Solenoid Ass'y (1)

Ref. No.	Part No.	Description
N1	XTV3+8BFN	Screw, Φ 3X8 (16)
N2	XTV3+6BFN	Screw, Φ 3X6 (5)
N3	XTV3+6JFZ	Screw, Φ 3X6 (5)
N4	XTWS3+14TFZ	Screw, Φ 3X14 (2)
N5	XTV3+6BFZ	Screw, Φ 3X6 (2)
N6	XTV3+10G	Screw, Φ 3X10 (2)
N7	XSN3+30S	Screw, Φ 3X10 (1)
N8	XTN16+10G	Screw, Φ 1.6X10 (1)
N9	XTN2+10G	Screw, Φ 2X10 (1)
N10	XTW3+14QFYR	Screw, Φ 3X14 (4)
N11	XTW3+5J	Screw, Φ 3X5 (3)
N12	SFXGB33N01	Screw (2)
N13	CSTW3	Washer, Φ 3 (2)
N14	XWE3A8BW	Washer, Φ 3 (2)
N15	SFXWC06N02	Washer, Φ (1)
N16	XWE3E10	Washer, Φ (1)
N17	XTN23+6JFZ	Screw, 2-3X6 (1)
N18	SFPTN00301	Screw (1)
N19	XYN3+F12S	Screw, Φ 3X12 (1)
N20	XSN2+4	Screw, Φ 2X4 (1)
N21	XWA2B	Washer, Φ 2 (1)
N22	SFPEV00502	Screw, Cartridge (1)
N23	XNC3HS	Nut, Φ 3 (1)
N24	XTW3+8Q	Screw, Φ 3X8 (1)
N25	SFXN623-1	Nut, (1)
ACCESSORIES		
A1[M]	SFNUQ05M01	Instruction Book (1)
A1[MC]	SFNUQ05C01E	Instruction Book (1)
A2	SFDHC05N01	Phono Output Cord (1)
A3	SFDLC05N01	Ground Wire (1)
A4	SFDC05M01	A.C. Cord (1)
PACKING PARTS		
P1[M]	SFHPQ05M01	Carton Box (1)
P1[MC]	SFHPQ05M01	Carton Box (1)
P2	SFHHQ05N01	Pad, Front (1)
P3	SFHHQ05N02	Pad, Rear (1)
P4	SFHCQ05N01	Clamper, Turntable Platter (2)
P5	SFHKQ06N01	Spacer, Tonearm (1)
P6	SFHSC06N01	Spacer, Dust Cover (1)
P7	SFYH45X50	Polyethylene Bag, Set (1)
P8	SFYH17X16	Polyethylene Bag, Accessories (1)
P9	SFHPC06S01	Sheet (1)
P10	SFHDC06N01	Pad, Turntable Mat (1)
P11	SFYF33B35	Polyethylene Bag, Turntable Mat (1)

■ BLOCK DIAGRAM

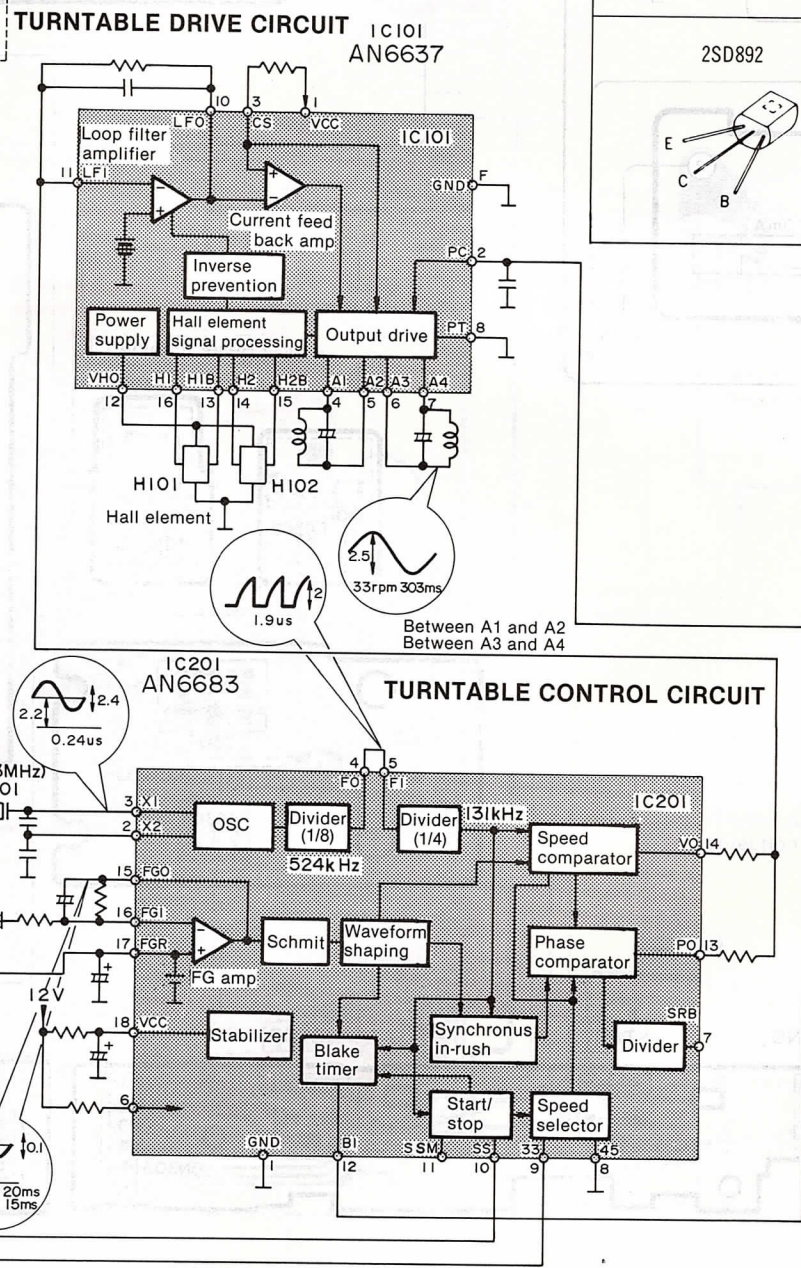
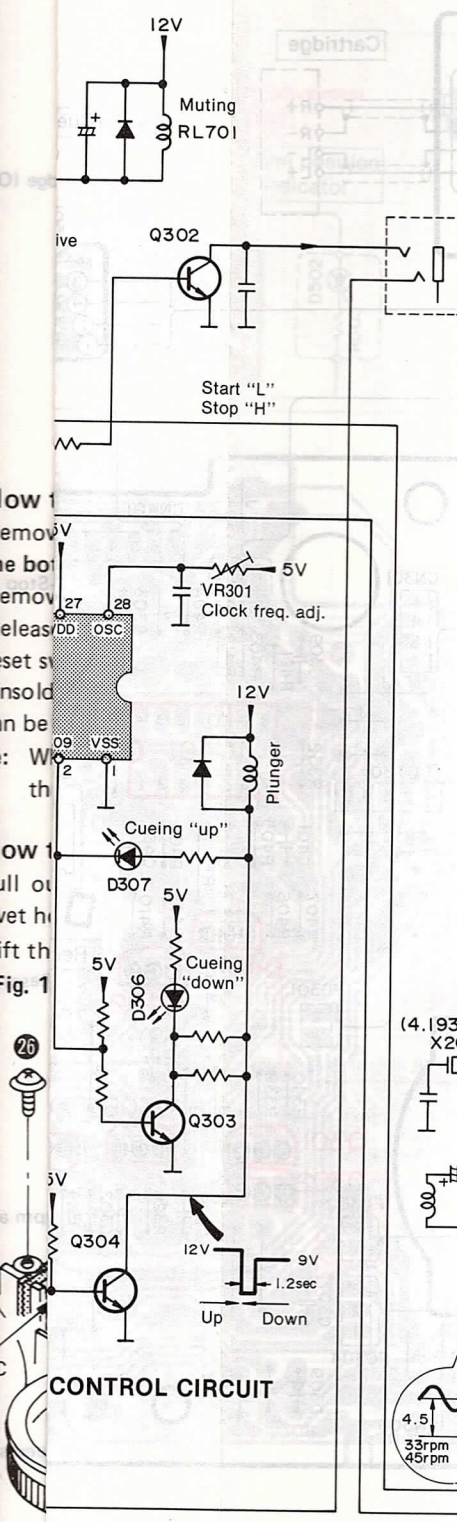


How to
Remove
Remove
Cut of
and drive

WIRING CONNECTION DIAGRAM

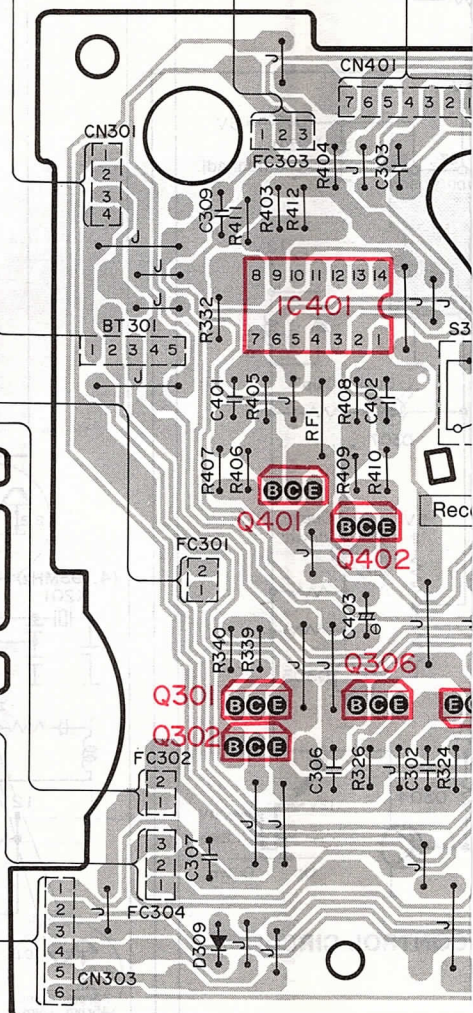
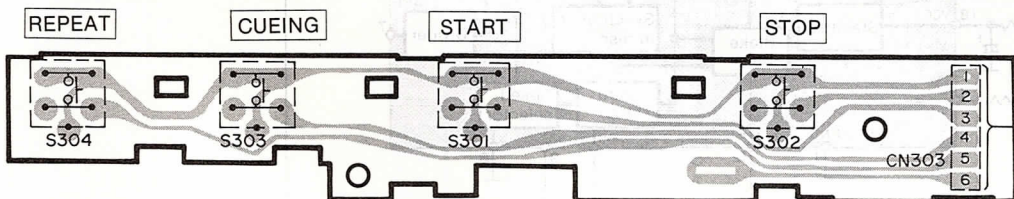
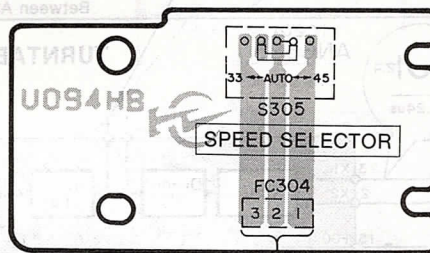
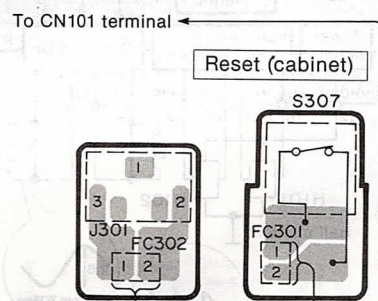
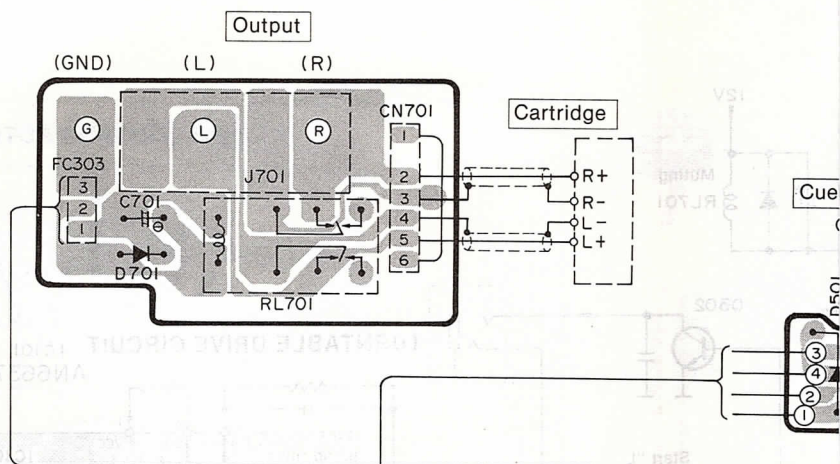
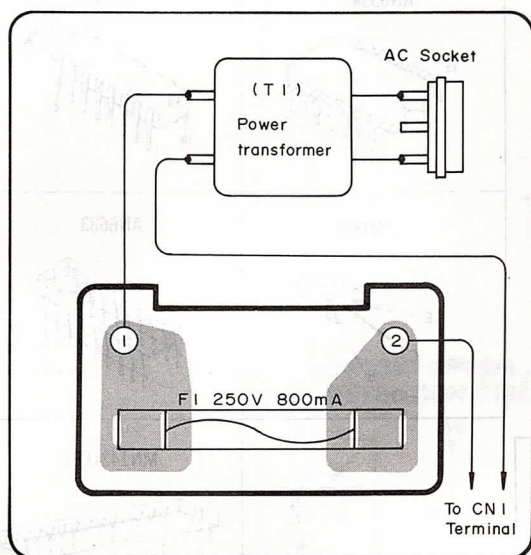
• Terminal guide of IC's and transistors

<p>AN78M12</p>	<p>DN6838</p>
<p>AN6554</p>	<p>AN6637</p>
<p>2SD892</p>	<p>AN6683</p>
<p>MN1421FPC</p>	
<p>2SD638, 2SD636 2SB641, 2SD973</p>	
<p>ON1186</p>	



CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM






- Power source circuit
For [MC] only



SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

1. **S1** : On/off (power) switch.
2. **S301** : Start switch.
3. **S302** : Stop switch.
4. **S303** : Cueing control switch.
5. **S304** : Repeat switch.
6. **S305** : Speed selector switch in "auto" position.
(It detects the record on the turntable.)
7. **S306** : Record detector switch.
8. **S307** : Reset switch in "on" position.
(Upper cabinet is closed.)
9. **S601** : Rest switch in "off" position.
(Presently tonearm is on rest.)
10. **S701** : Record size detection switch.
11. The voltage value and waveform are the standard values of this measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Therefore, the voltage value and waveform may include some errors due to the internal impedance of the tester or the measuring set.
 *  is the voltage when turntable is in stop.
 *  is the voltage when turntable is in rotation.
 *  is the voltage when tonearm is in lead-in mode.
 *  is the voltage when tonearm is in return mode.
12.  Positive voltage lines.


*The part No. of diodes mentioned in the schematic diagram stand for production part No. Regarding the part No. with ★ mark the production part No. are different from the replacement part No. Therefore, when placing an order for replacement part, please use the part No. in the replacement parts list.

IMPORTANT SAFETY NOTICE


The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

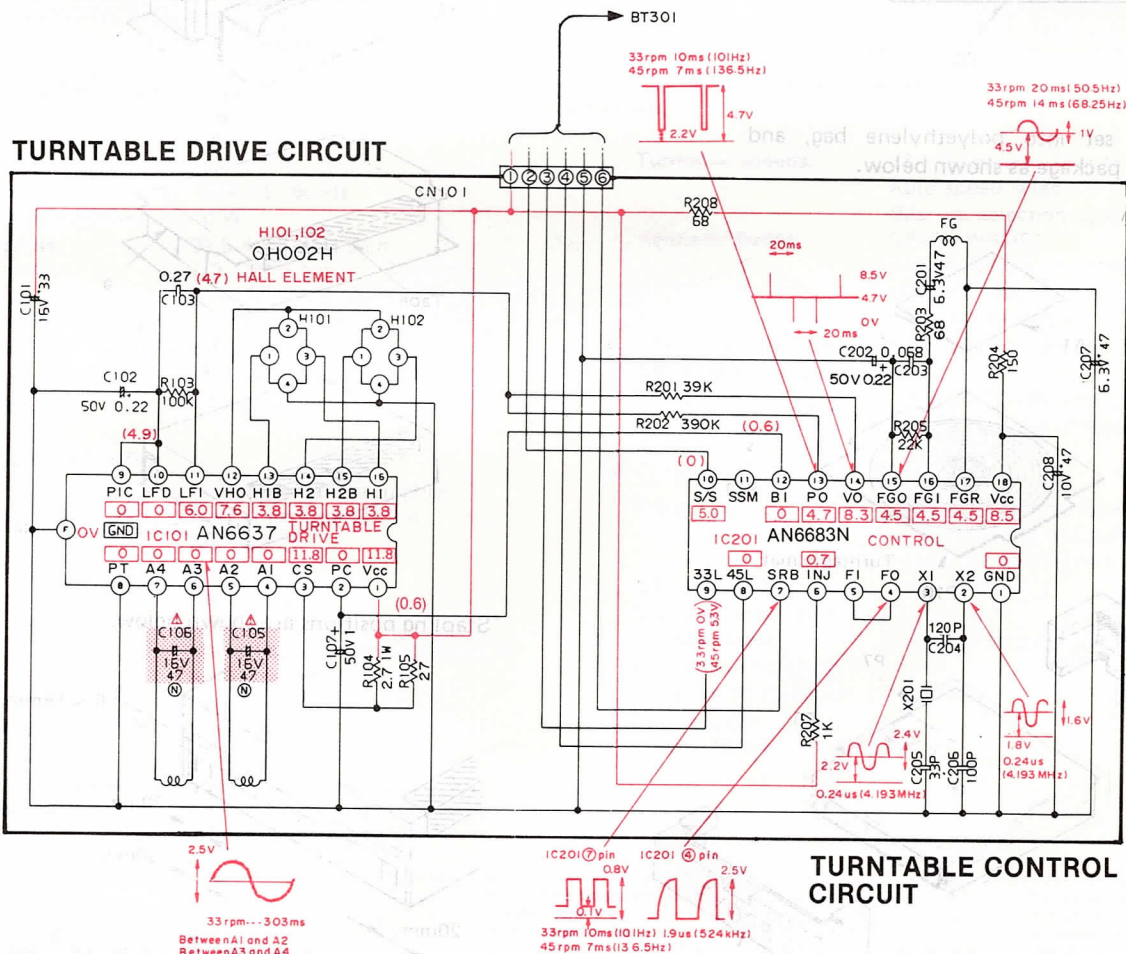
Product for MC only

FUSE REPLACEMENT

 Symbol located near the fuse indicates fast operating type. For continued protection against fire hazard, replace with same type fuse. Refer to the symbol for fuse rating.

FUSIBLE REMPLACEMENT

 Le symbole qui se trouve près du fusible signifie un fusible à action rapide. Pour une protection continue contre les risques d'incendie, n'utiliser que des fusibles du même type. Se rapporter au symbole pour la valeur des fusibles.



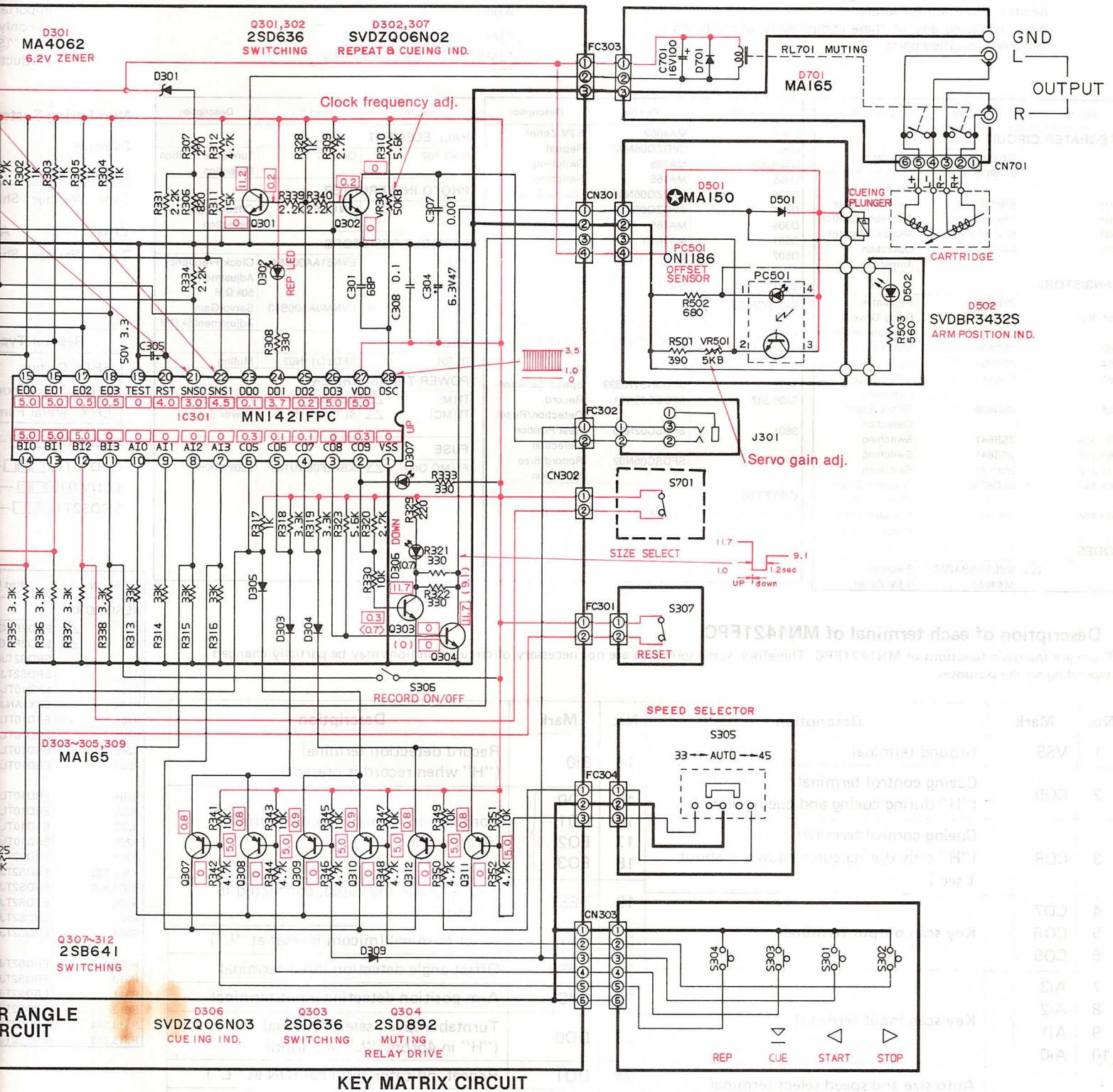
10

11

12

13

14



REPLACEMENT PARTS LIST...Electric Parts

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2. Important safety notice:

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3. Bracketed indications in Ref. No. columns specify the area.

Parts without these indications can be used for all areas.

4. The "S" mark is service standard parts and may differ from production parts.

Areas

*[M] is available in U.S.A.

*[MC] is available in Canada.

Ref. No.	Part No.	Description
INTEGRATED CIRCUIT		
IC1	SVIUCP7812H	Regulator
IC2	DN6838-S	Tonearm Position Detection
IC101	AN6637	Turntable Drive
IC201	AN6683	Turntable Control
IC301	MN1421FPC	Micro Computer
IC401	AN6554	Operation Amplifier
TRANSISTORS		
Q1	2SD638	Regulator
Q301,302	2SD636	Relay Drive/ Synchro-rec Drive
Q303	2SD636	Switching
Q304	2SD892	Cueing Drive
Q305	2SB641	Offset Angle Detection
Q306	2SD636	Offset Angle Detection
Q307,308	2SB641	Switching
Q309,310	2SB641	Switching
Q311,312	2SB641	Switching
Q401,402	⑤ 2SD973S	Tonearm Drive
Q403,404	2SD638	Motor Control
DIODES		
D1	Δ SVDS1RBA20Z	Rectifier
D2	MA4056	5.6V Zener

Ref. No.	Part No.	Description
D301	MA4062	6.2V Zener
D302	SVDZQ06N02	Repeat
D303,304	MA165	Switching
D305	MA165	Switching
D306	SVDZQ06N03	Cueing Down
D307	SVDZQ06N02	Cueing Up
D309	MA165	Switching
D501	⑤ MA162A	Switching
D502	SVDEBR3432S	Tonearm Position Indicator
D701	MA165	Switching
SWITCHES		
S1	Δ SFDS02N02	On/Off(Power)
S301~304	EVQSQ405K	Start, Stop, Cueing and Repeat
S305	SFDSHSW0699	Speed Selector
S306,307	SFDS05N01	Record Detection/Reset
S601	SFDS02N03	Rest Position Detection
S701	SFDS05N02	Record Size Detection
CRYSTAL		
X201	SVQSH41TR	4.193MHz

Ref. No.	Part No.	Description
HALL ELEMENT		
H101,102	OH-002	Turntable Position Detection
PHOTO INTERRUPTER		
PC501	ON1186	Offset Angle Detection
VARIABLE RESISTORS		
VR301	EVN61AA00B54	Clock Frequency Adjustment 50k Ω (B)
VR501	⑤ EVNM0AA00B53	Servo Gain Adjustment 5k Ω (B)
RELAY		
RL701	SFDYQ11N02	Muting
POWER TRANSFORMER		
T1(M)	Δ SLT48DTL3A	Power Source
T1(MC)	Δ SLT48DT11C	Power Source
FUSE		
F1(MC Only)	Δ XBA2F08NU100	250V,800mA

• Description of each terminal of MN1421FPC

*These are the basic functions of MN1421FPC. Therefore, some terminals are not necessary of circuit functions may be partially changed depending on the purposes.

No.	Mark	Description	No.	Mark	Description
1	VSS	Ground terminal	14	Bi0	Record detection terminal ("H" when record is present)
2	CO9	Cueing control terminal ("H" during cueing and cueing down)	15	EO0	Tonearm drive motor control terminal (Arm servo)
3	CO8	Cueing control terminal ("H" only during cueing down – about 1 sec.)	16	EO1	
4	CO7	Key scan output terminal	17	EO2	
5	CO6		18	EO3	
6	CO5		19	TEST	Test terminal (not used, connected to ground)
7	Ai3	Key scan input terminal	20	RST	Reset terminal (micom is reset at "L")
8	Ai2		21	SNS0	Offset angle detection input terminal
9	Ai1		22	SNS1	Arm position detecting input terminal
10	Ai0		23	DO0	Turntable speed select terminal ("H" in 45rpm; "L" in 33rpm)
11	Bi3	Auto size and speed select terminal Terminal ⑪, ⑫ "L" → 30cm record • 33rpm	24	DO1	Repeat indicator terminal (ON at "L")
12	Bi2		25	DO2	Synchro-rec on/off terminal
		⑪ "L" ⑫ "H" pulse → 17cm record • 45rpm	26	DO3	Turntable start/stop select terminal ("L" at start; "H" at stop)
13	Bi1	Rest position detecting terminal ("H" when tonearm is at rest position)	27	VDD	Power supply (+5V)
			28	OSC	Oscillation circuit (Clock frequency is adjusted to 30 μ s \pm 1 μ s)

RESISTORS AND CAPACITORS

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- Unless otherwise specified.
All resistors are in OHMS (Ω) K = 1000 Ω , M = 1000k Ω
All capacitors are in MICROFARADS (μ F) P = 10^{-6} μ F.

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value

ERG	1	AN	J	2R2
Type	Wattage	Shape	Tolerance	Value

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Peculiarity

ECEA	50	M	R47	R
Type	Voltage	Peculiarity use	Value	Special use

Resistor Type	Wattage	Tolerance
ERD: Carbon	25 : 1/4W	F : $\pm 1\%$
ERG: Metal Oxide	1 : 1W	J : $\pm 5\%$
ERX: Metal Film	2 : 2W	G : $\pm 2\%$

ERD2FCG□□□	→ Fuse type carbon (1/4W)
ERD10TLJ□□□	→ Chip type carbon (1/8W)
ECUV1H□□□	→ Chip type ceramic
ERDS2TJ□□□	→ Small type carbon (1/4W)

Capacitor Type	Voltage		Tolerance
	ECEA Type	Others	
ECEA : Electrolytic	1A : 10V	1H : 50V DC	J : $\pm 5\%$
ECKD : Ceramic	1C : 16V	2H : 500V DC	K : $\pm 10\%$
ECQM : Polyester	1E : 25V	1 : 100V	Z : $+80\%$, -20%
ECCD : Ceramic	1V : 35V	AL : 125V AC	P : $+100\%$, -0%
ECKF : Ceramic	1H : 50V	MY : 125V AC	M : $\pm 20\%$
ECEB : Electrolytic	1J : 63V		
	50 : 50V		

Ref. No.	Part No.	Value
RESISTORS		
RF1 Δ	ERD2FCG180	18
RF2 Δ	ERD2FCG330	33
R1	ERDS2TJ681	680
R2	ERDS2TJ221	220
R103	ERD10TLJ104	100K
R104	ERX1ANJ2R7	2.7
R105	ERD10TLJ270	27
R201	ERD10TLJ393	39K
R202	ERD10TLJ394	390K
R203	ERD10TLJ680	68
R204	ERD10TLJ151	150
R205	ERD10TLJ223	22K
R207	ERD10TLJ102	1K
R208	ERD10TLJ680	68
R301	ERDS2TJ272	2.7K
R302,303	ERDS2TJ102	1K
R304,305	ERDS2TJ102	1K
R306	ERDS2TJ821	820
R307	ERDS2TJ271	270
R308	ERDS2TJ331	330
R309	ERDS2TJ272	2.7K
R310	ERDS2TJ562	5.6K
R311	ERDS2TJ153	15K
R312	ERDS2TJ472	4.7K
R313,314	ERDS2TJ333	33K
R315,316	ERDS2TJ333	33K

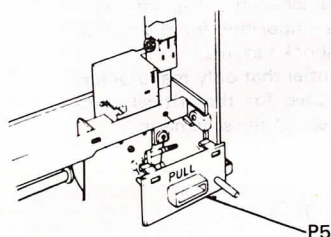
Ref. No.	Part No.	Value
R317	ERDS2TJ102	1K
R318,319	ERDS2TJ332	3.3K
R320	ERDS2TJ272	2.7K
R321,322	ERDS2TJ331	330
R323	ERDS2TJ562	5.6K
R324	ERDS2TJ223	22K
R325	ERDS2TJ103	10K
R326	ERDS2TJ272	2.7K
R328	ERDS2TJ102	1K
R329	ERDS2TJ221	220
R330	ERDS2TJ103	10K
R331	ERDS2TJ222	2.2K
R332	ERDS2TJ562	5.6K
R333	ERDS2TJ331	330
R334	ERDS2TJ222	2.2K
R335,336	ERDS2TJ332	3.3K
R337,338	ERDS2TJ332	3.3K
R339,340	ERDS2TJ222	2.2K
R341	ERDS2TJ103	10K
R342	ERDS2TJ472	4.7K
R343	ERDS2TJ103	10K
R344	ERDS2TJ472	4.7K
R345	ERDS2TJ103	10K
R346	ERDS2TJ472	4.7K
R347	ERDS2TJ103	10K

Ref. No.	Part No.	Value
R348	ERDS2TJ472	4.7K
R349	ERDS2TJ103	10K
R350	ERDS2TJ472	4.7K
R351	ERDS2TJ103	10K
R352	ERDS2TJ472	4.7K
R401,402	ERDS2TJ683	68K
R403	ERDS2TJ472	4.7K
R404	ERDS2TJ122	1.2K
R405	ERDS2TJ222	2.2K
R406	ERDS2TJ102	1K
R407	ERDS2TJ224	220K
R408	ERDS2TJ222	2.2K
R409	ERDS2TJ102	1K
R410	ERDS2TJ224	220K
R411	ERDS2TJ272	2.7K
R412	ERDS2TJ681	680
R413,414	ERDS2TJ101	100
R415,416	ERDS2TJ471	470
R501 S	ERD25FJ391	390
R502 S	ERD25FJ681	680
R503 S	ERD25FJ561	560
CAPACITORS		
C1,2 Δ	ECQM1223KZ	0.022
C3 Δ	ECQM1223KZ	0.022
C4	ECEB1VU102	1000
C5 S	ECEA1CU330	33

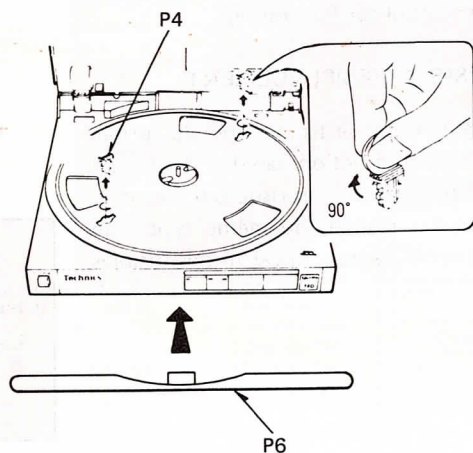
Ref. No.	Part No.	Value
C101 S	ECEA1CU330	33
C102 S	ECEA50ZR22	0.22
C103	ECQV05274JZ	0.27
C105,106 S Δ	ECEA1CN470S	47
C107 S	ECEA50Z1	1
C201 S	ECEA1AU470	47
C202 S	ECEA50ZR22	0.22
C203 S	ECQM1H683JZ	0.068
C204	ECUV1H121JCM	120P
C205	ECUV1H330JCM	33P
C206	ECUV1H101JCM	100P
C207,208 S	ECEA1AU470	47
C301 S	ECCD1H680K	68P
C302 S	ECQM1H104JZ	0.1
C303	ECKD2H102KB	0.001
C304 S	ECEA0JU470	47
C305 S	ECEA1HU3R3	3.3
C306	ECFR1H104ZF	0.1
C307	ECKD2H102KB	0.001
C308,309	ECFR1H104ZF	0.1
C401,402 S	ECQM1H223JZ	0.022
C403 S	ECEA1CU330	33
C404,405 S	ECEA0JU470	47
C601	ECFB1B104ZM	0.1
C701 S	ECEA1CU101	100

PACKING

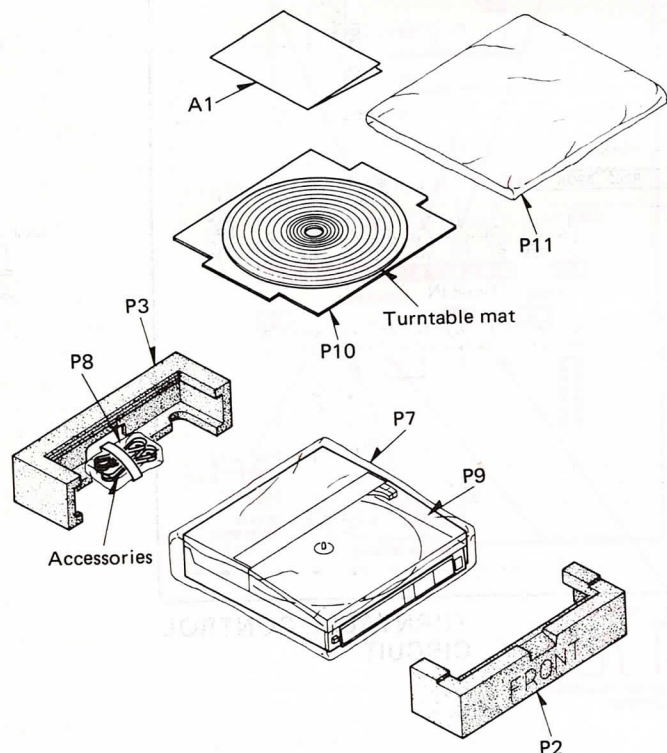
1. Open the upper cabinet and fit the spacer in place.



2. Fit the turntable platter and dust cover spacer in place.



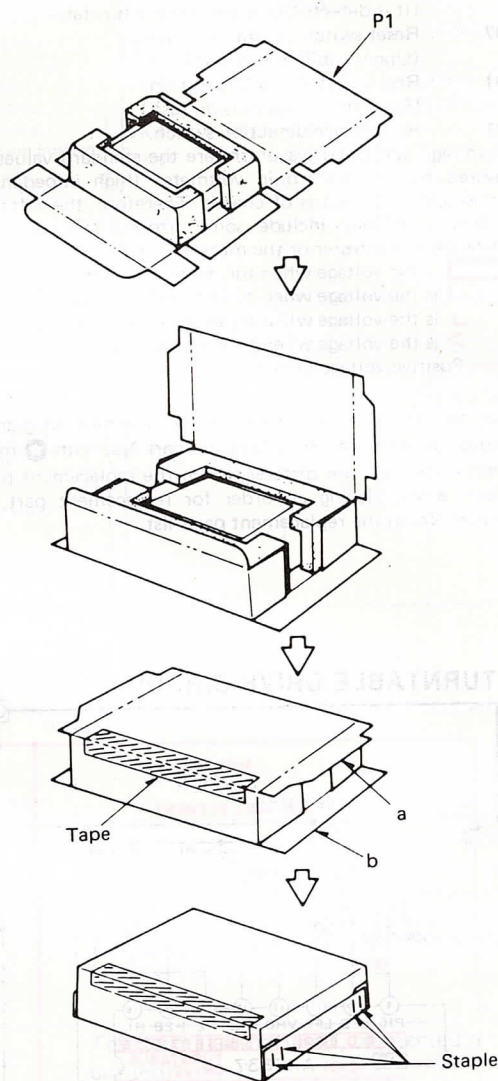
3. Put the set into polyethylene bag, and make the package as shown below.



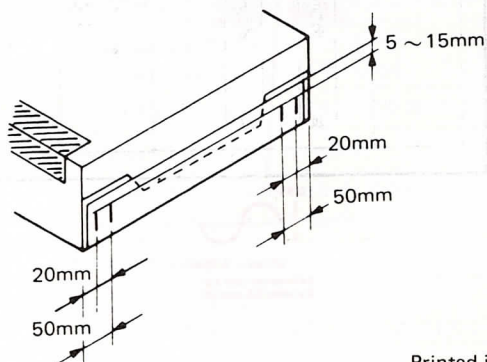
4. Place the unit (with cushions attached) as illustrated.
5. Fold the flaps according to the line marks.
6. Seal the top with adhesive tape.

*Use gum tape or adhesive cloth tape of 50mm wide at least.

7. For the edges, first fold the flap "a" and then flap "b", and staple. Remember to staple only flap "b". (Use 15 or 16mm staple)



*Stapling positions are shown below.



PRINTED CIRCUIT BOARD

- Drive circuit board

