

DENON

Hi-Fi Personal Component System

Europe Model

SERVICE MANUAL

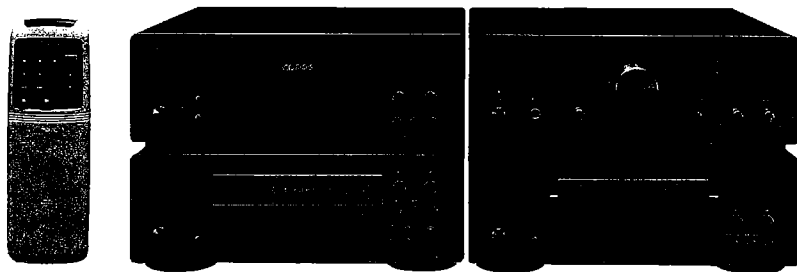
PERSONAL COMPONENT SYSTEM D-F10

UNIT No. UTU-F10 (AM, FM Stereo Tuner)

UNIT No. UPA-F10 (Pre-Main Amplifier)

UNIT No. UCD-F10 (Compact Disc Player)

UNIT No. UDR-F10 (Cassette Tape Deck)



• The D-F10 Personal Component System consists of the following:

AM, FM Stereo Tuner Unit	UTU-F10
Remote Control Unit	RC-172
Pre-Main Amplifier Unit	UPA-F10
CD player Unit	UCD-F10
Cassette Deck Unit	UDR-F10

MAIN FEATURES

- **RDS compatible**
Compatible with various RDS services, including program service name (PS), program type identification (PTY), traffic program identification (TP) and clock time (CT).
- **Quality power for high quality sound**
55W + 55W (4 ohm DIN) high quality amplifier and terminals for large speakers.
- **High sound quality, multi-function CD player**
Edit function for automatically dividing the tracks on a CD for recording onto sides A and B of a tape. S.L.C for playback with high quality sound.
- **Cassette deck with Dolby B, C and HX-Pro circuits**
For playback and recording of high quality sound.
- **Two types of timers**
Two timer settings can be made – everyday and sleep.
- **Easy-to-use remote control unit**
The most frequently used keys are located on the front, with the remaining keys enclosed under a sliding cover.
- **Auto on function**
The power turns on automatically and playback begins when the play button on the CD player or the cassette deck or the tuner preset up/down buttons on the remote control unit are pressed.

BEFORE USING

- **Moving the system**
To prevent short-circuiting or damage of connection cords, be sure to unplug the power cord and disconnect all connection cords before moving the system.
In addition, always remove CDs before moving the system. If not, the CD may be scratched.
- **Before turning the power on**
Check again that all connections are proper and that the connection cords are not damaged. Always set the power switch to the STANDBY position before disconnecting connection cords.
- Humming may be produced if the system is set near a TV set or other audio component or its connection cords. If this happens, try changing the position of the equipment and connection cords.
- Do not move the system abruptly from a cold place to a warm place, as this may cause dew (water droplets) to form in the set, preventing proper operation. If this happens, wait one hour before using the system.
- **Be sure to keep this manual**
The illustrations used in this manual may differ from the actual system.

Check that the following parts are included in the package aside from the main unit:

- **UPA-F10 (pre-main amplifier unit)**
 - Remote control unit (RC-172) 1
 - R6P/AA batteries 2
 - Operating instructions 1
- **UTU-F10 (AM/FM stereo tuner)**
 - FM antenna 1
 - AM loop antenna 1
 - System connector cable 1
 - RCA pin-plug cord 1
 - AC cord 1
 - Inst. Sheet 1
- **UCD-F10 (compact disc player)**
 - System connector cable 1
 - RCA pin-plug cord 1
 - AC cord 1
 - Inst. Sheet 1
- **UDR-F10 (cassette tape deck)**
 - System connector cable 1
 - RCA pin-plug cord 2
 - Inst. Sheet 1

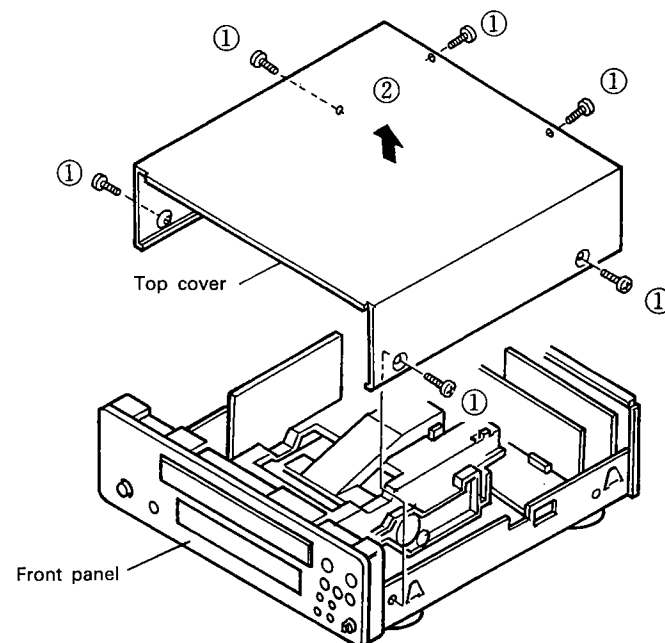
NIPPON COLUMBIA CO., LTD.

DISASSEMBLY PROCEDURES

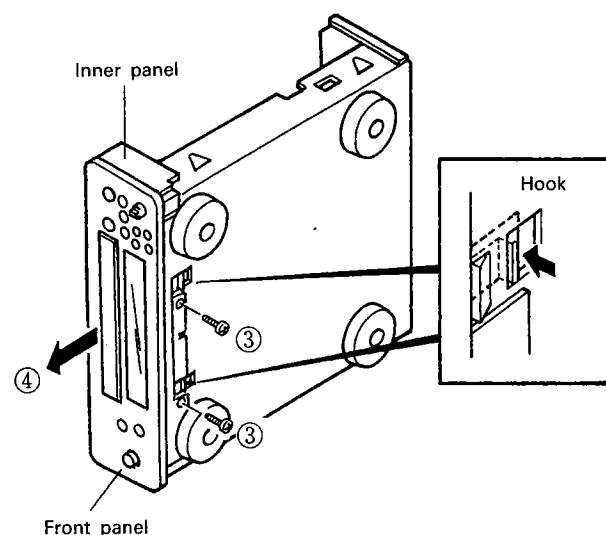
(Assembly is performed in the reverse order.)

1. Removing the Top Cover and the Front Panel

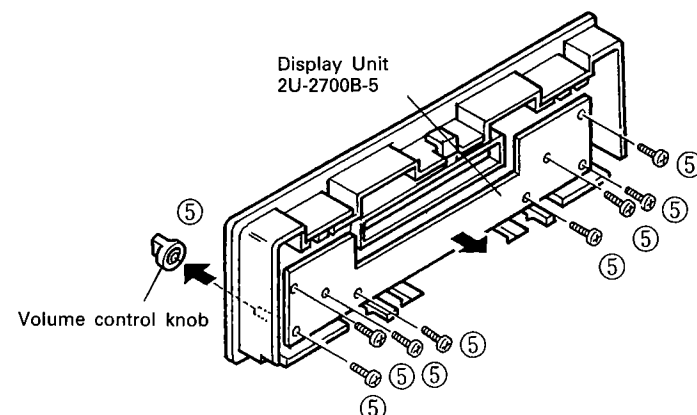
- ① Remove the six screws which fasten the top cover.
- ② Remove the top cover (upward) in the direction of the arrow.



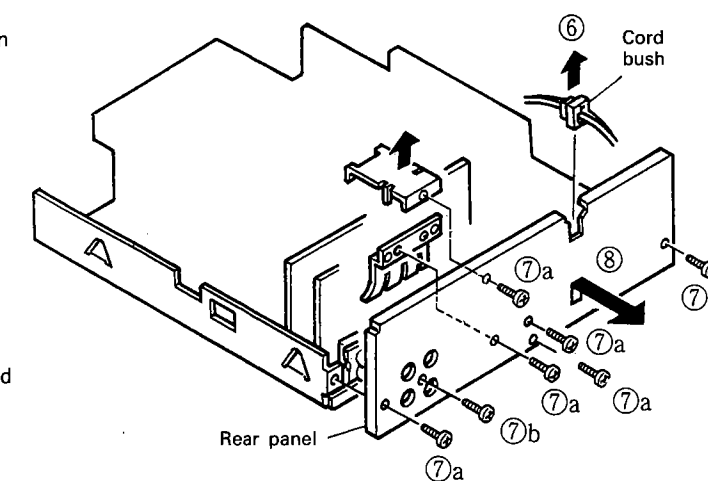
- ③ Remove the two screws which fasten front panel.
- ④ Release the inner panel hooks from the chassis while pulling the panels in the direction of the arrow to remove the inner panel and the front panel as one unit.

**2. Removing the Units****Display Unit (2U-2700B-5)**

- ⑤ Remove the volume control knob in the direction of the arrow, then remove the eight screws which fasten the display unit.

**3. Removing the Rear Panel**

- ⑥ Remove the cord bush from the rear panel.
- ⑦ Remove the six "a" screws and one "b" screw which fasten the rear panel.
- ⑧ Remove the rear panel in the direction of the arrow.

**Microprocessor Unit (2U-2700B-4)**

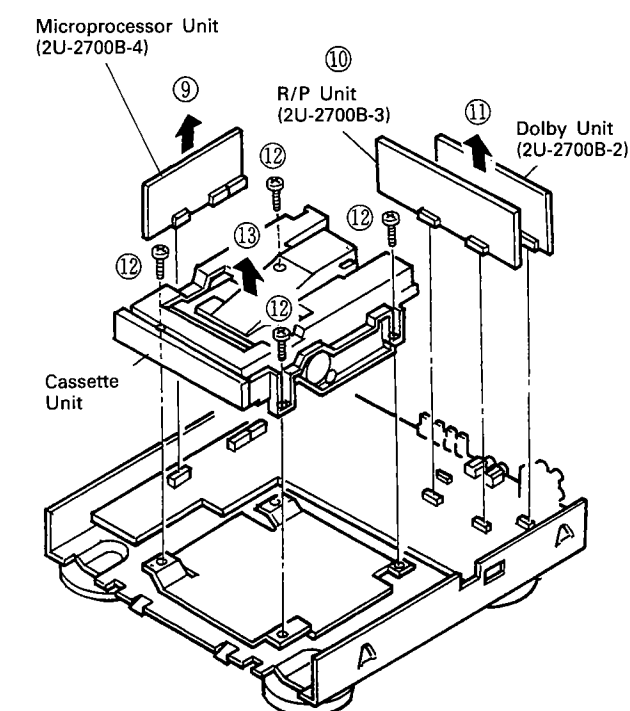
- ⑨ Disconnect the microprocessor unit from the connector and remove in the direction of the arrow.

R/P Unit (2U-2700B-3)

- ⑩ Disconnect the R/P unit from the connector and remove in the direction of the arrow.

Dolby Unit (2U-2700B-2)

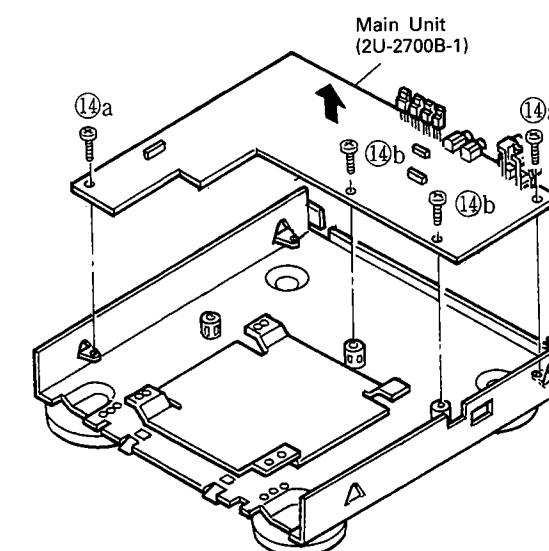
- ⑪ Disconnect the Dolby unit from the connector and remove in the direction of the arrow.

**4. Removing the Cassette Unit**

- ⑫ Remove the five screws which fasten the cassette unit.
- ⑬ Remove the cassette unit in the direction of the arrow.

Main Unit (2U-2700B-1)

- ⑭ Remove the two "a" screws and 2 "b" screws which fasten the main unit.



CASSETTE DECK SECTION

ADJUSTMENTS

ADJUSTING AND CHECKING THE MECHANISM SECTION

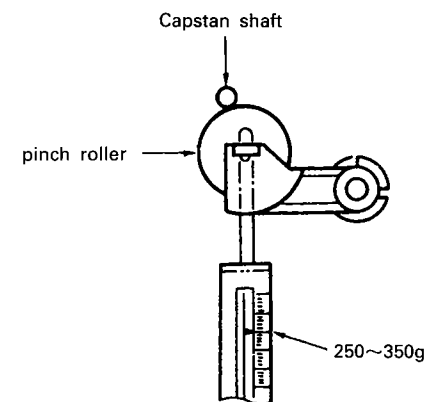
1. Replacement of the pinch roller

Before replacing the pinch roller, clean the tape contact surface of the pinch roller and the tape contact surface of the capstan shaft. After replacement, run a C-90 tape without a pad and check for the presence of tape curl at the tape guide portion of the head.

2. Checking the pinch roller pressure

Set to the playback condition and hook a bar-type spring scale to the bracket above the center line of the pinch roller. Pull the pinch roller away from the capstan shaft, then allow the pinch roller to come into contact with the capstan shaft and check that the reading of the bar-type spring scale is between 250 g and 350 g when the pinch roller starts to rotate.

Replace the pinch roller when the value falls outside of the specified range.



3. Replacement of the recording/playback head assembly

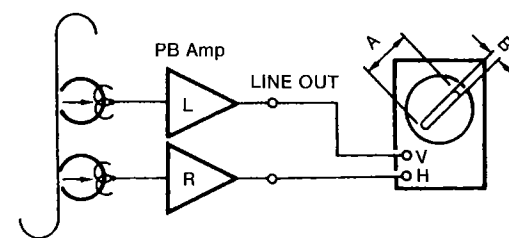
Perform this procedure after removing the front panel.

3-1 Removal of the head assembly

- (1) Remove the 2 head base fastening screws
- (2) Remove the head base from the reed holder and the wire connector.

3-2 Mounting the recording/playback head assembly

Perform by following the steps of Section 3-1 Removal of the head assembly in reverse.



A-BEX TCC-153

4. Adjustment of the recording/playback head

Azimuth adjustment

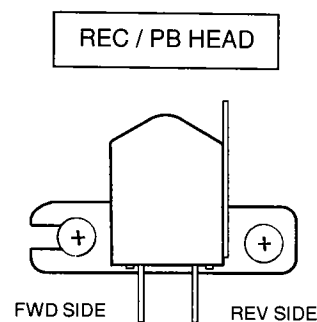
Load side A of the A-BEX TCC-153 test tape facing forward, and adjust.

- (1) Play in the FWD direction and turn the azimuth adjustment nut for the FWD side so that the Lissajous's figure becomes maximum at (A) and minimum at (B).
- (2) Apply screw lock to the adjustment locations.

5. Checking the winding torque

Load a cassette type torque meter (Sony TW2111A at the FWD side) and check that the reading of the torque meter during playback is 30 to 70 g-cm at the center value.

When outside of the specified value range, check the voltage of the reel motor (approx. 4 V). When the voltage value is low, the torque is weak, and when high, the torque is strong.



6. Checking the back tension torque at the time of recording and playback

Load a cassette type torque meter (Sony TW2111A at the FWD side) and check that the reading of the torque meter during playback is 2 to 6 g-cm and that there is no unevenness.

7. Checking the FF and REW torque

Load a cassette type torque meter (Sony TW2231) and check that the value indicated by the torque meter for winding and rewinding is between 90 and 180 g-cm.

8. Checking the FF and REW time

Load a DENON HD-X/60 cassette tape, and check that the time for FF and REW is between 80 and 110 seconds. When outside of the specified range, check Steps 5 and 6.

9. Checking the erroneous erasure prevention, and the metal and chrome switch operations

Check that the detection lever is operating the switch properly depending upon the presence or absence of a hole.

ADJUSTING AND CHECKING THE ELECTRICAL SECTION

● Measuring instruments needed for the adjustments

- (1) Low frequency oscillator
- (2) Variable resistance attenuator
- (3) Electronic voltmeter
- (4) Oscilloscope
- (5) Frequency counter
- (6) Adjustment screwdriver
- (7) 4-sided adjustment rod for trap coil adjustments
- (8) Test tapes
(Sony TY224)
(A-BEX TCC-153, TCC-130, TCC-262B/162B)
(DENON HDX-60)
- (9) Mirror cassette for the transport (A-BEX TCC-902)

● Adjustment precaution

- (1) Before adjustments, use gauze or a swab moistened with alcohol to wipe the surface of the heads, the capstan shaft, and the pinch roller.
- (2) Demagnetize the record/playback head and the erase head with a head eraser.
- (3) Completely demagnetize the driver to be used for the adjustments.
- (4) Unless otherwise specified, set the various operation controls as indicated below.
Input/output controls: Center
Dolby NR switch: Off

1. Tape transport check

Load the mirror cassette for the transport, and illuminate the area around the fixed guide of the record/playback head with a lamp and observe.

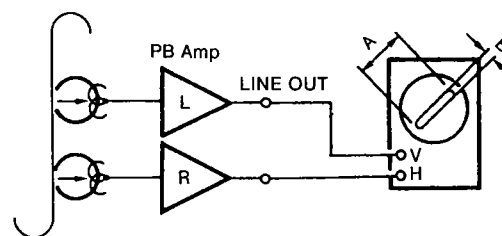
Check that the tape edge is not hitting the tape guide portion. Note that the tape transport is the greatest factor affecting the performance of the cassette deck. Never move the inspection locations without good reason.

For information about replacement and adjustment of the record/playback head, see the section "Adjustment and checking of the mechanism."

CASSETTE DECK SECTION

2. Azimuth adjustment

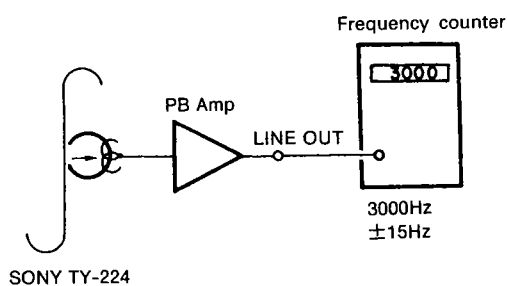
- 2-1 After making the tape transport check, load the test tape (A-BEX TCC-153).
- 2-2 Play back the test tape and turn the azimuth adjustment nut so that the Lissajous's figure becomes maximum at (A) and minimum at (B).



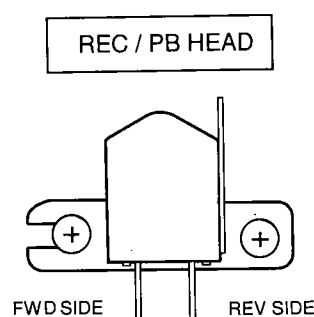
A-BEX TCC-153

3. Tape speed check and adjustment

- 3-1 Connect the frequency counter to the LINE OUT pin and load the test tape (Sony TY-224).
- 3-2 Playback a test tape. At about halfway through the tape, where the tape transport is stable, adjust RT-501 so that the frequency counter will have a reading within the range of 3,000 Hz \pm 15 Hz

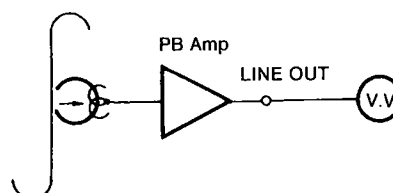


SONY TY-224



4. Adjustment of the playback system

- 4-1 Playback level
Play back the test tape for the Dolby standard level (A-BEX TCC-130), and adjust RT101 (Left channel) and RT201 (right channel) so that the level of the LINE OUT pin becomes -5.7 dB (400 mV). (Load resistance of 47 kohm)
- 4-2 Checking the playback frequency responses
Play back the test tape (A-BEX TCC-262B/162B), and check that the frequency response satisfies the standard.

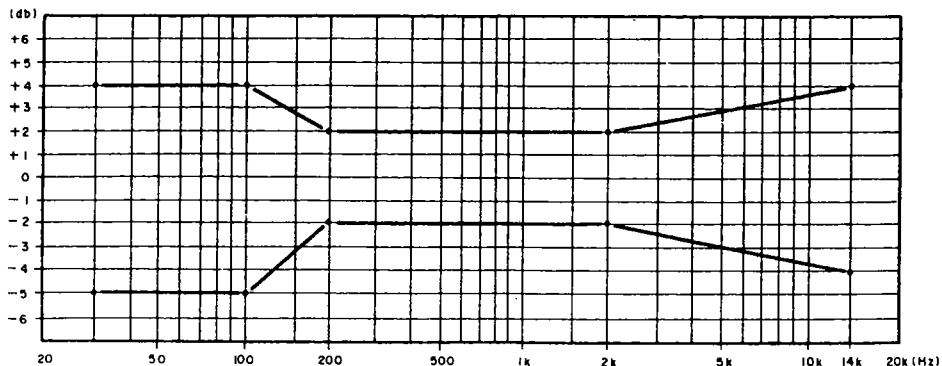


NOTE

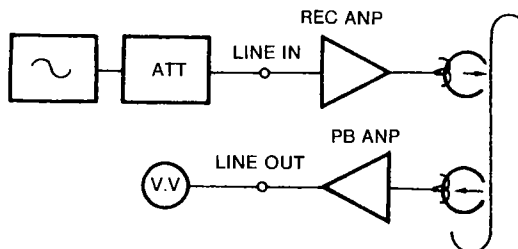
After making the azimuth adjustment with the 8 kHz at the start of the A-BEX TCC-262B test tape, perform check of the frequency responses.
Also, after the check make an azimuth adjustment again with A-BEX TCC-153, then apply screw lock.

CASSETTE DECK SECTION

Playback Frequency Response



TAPE: A-BEX TCC-262B/162B

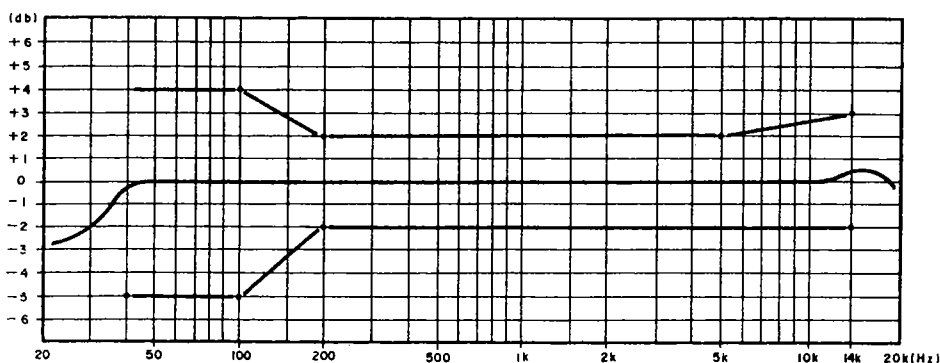


5. Adjustment of the recording system

5-1 Adjustment of the recording and playback overall frequency responses

- (1) Load the DENON HD/60 test tape, record a signal of -20 dB 1 kHz input level, and play back.
- (2) Set the input signal to 10 kHz, record, and play back. Adjust RT103 (left channel) and RT203 (right channel) so that the response specifications of the diagram below are satisfied with respect to the 1 kHz output level.

Recording / Playback Overall Frequency Response



Tape : HD-X/60
 Dolby NR : Off
 Level : -20 dB From Dolby Level

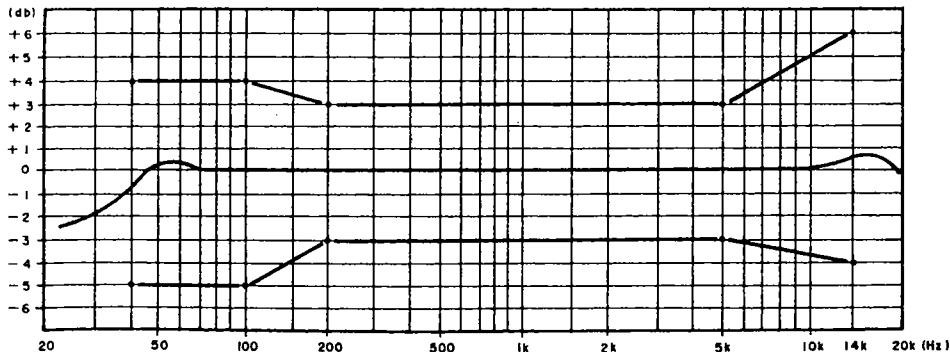
5-2 Adjustment of the recording/playback level

- (1) Load the DENON HDX/60 test tape, record a signal of 1 kHz (-20 dB), and play back.
- (2) Adjust RT-102 (left channel) and RT-202 (right channel) so that the output of the LINE OUT pin becomes the same as the output at the time of the recording monitor.

5-3 Checking the Dolby C recording and playback overall frequency response.

- (1) set the Dolby NR switch to the "C" positions.
- (2) Use the DENON HDX/60 test tape to record and play back according to the outline of Section 5-1, then check that the response specifications have been satisfied.

Recording / Playback Overall Frequency Response

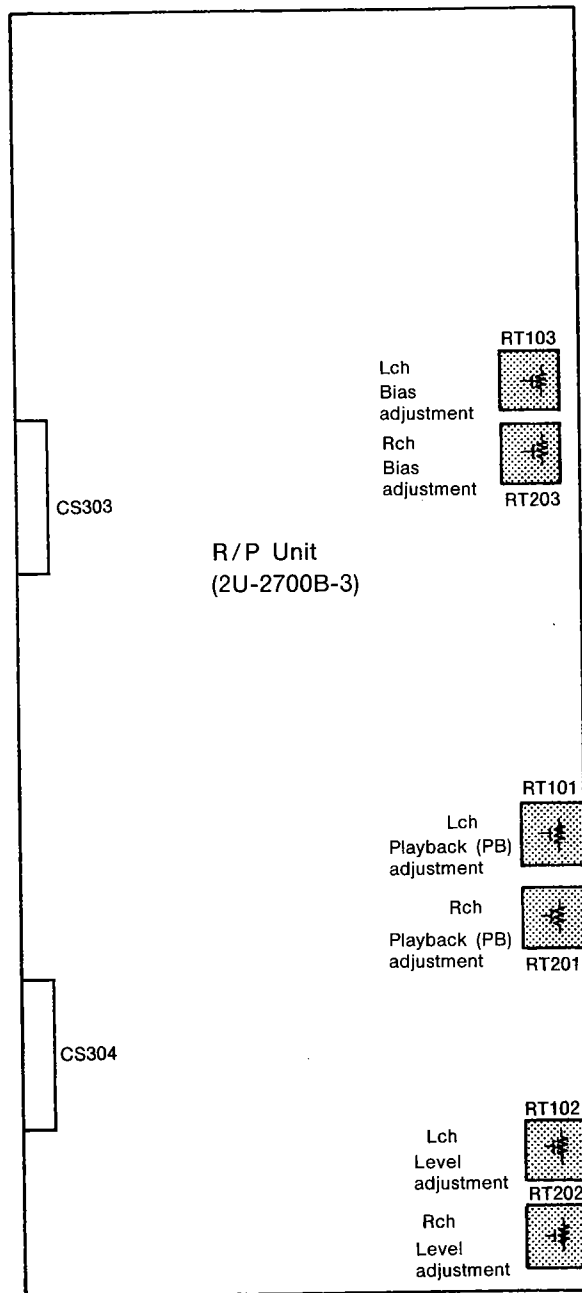


Tape : HD-X/60
 Dolby NR : On C
 Level : -20 dB From Dolby Level

CASSETTE DECK SECTION

OUTLINE DIAGRAM OF ADJUSTMENT LOCATIONS

2U-2700B-3 PB, REC/PB UNIT ASS'Y (Component Side)

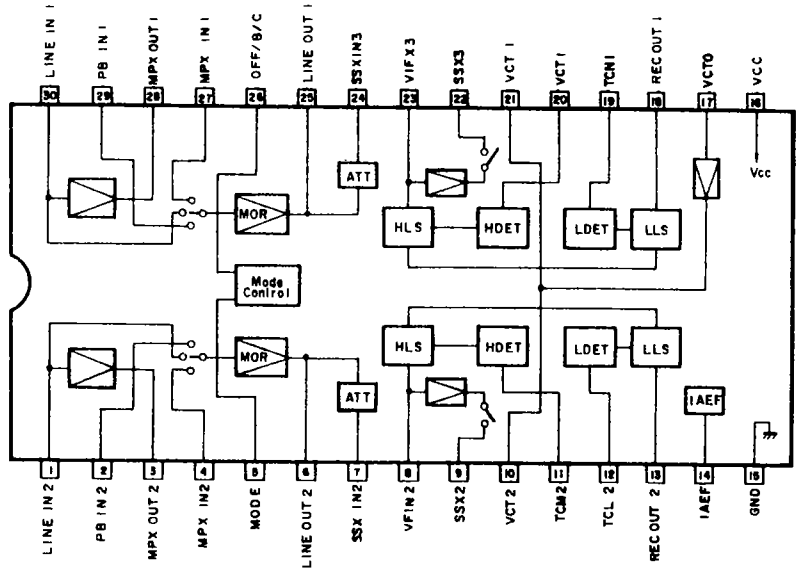
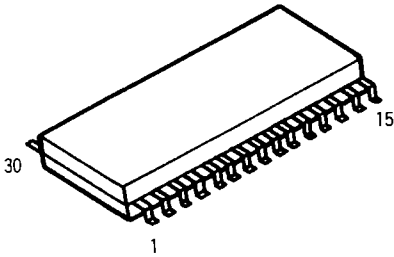


CASSETTE DECK SECTION

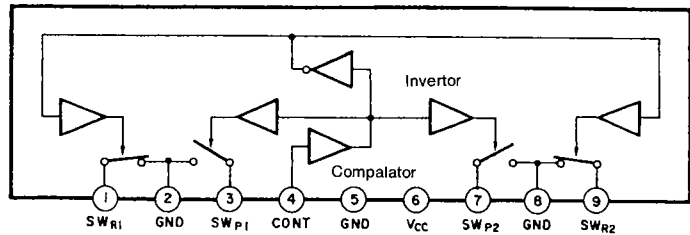
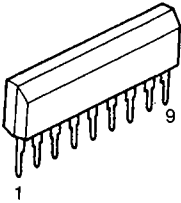
SEMICONDUCTORS

● IC's

CXA1331M (IC305)

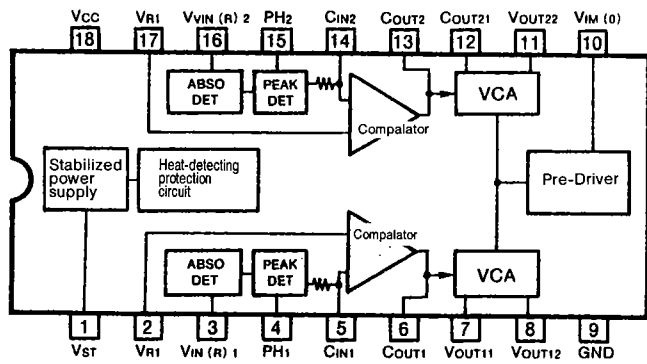
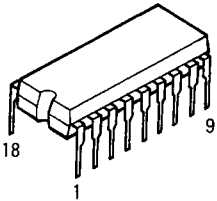


μPC1330HA (IC301)



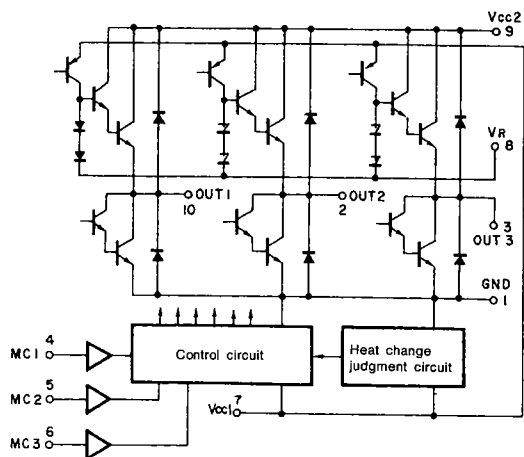
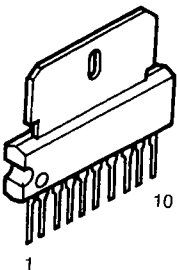
μPC1297CA (IC304)

Dolby HX Pro.



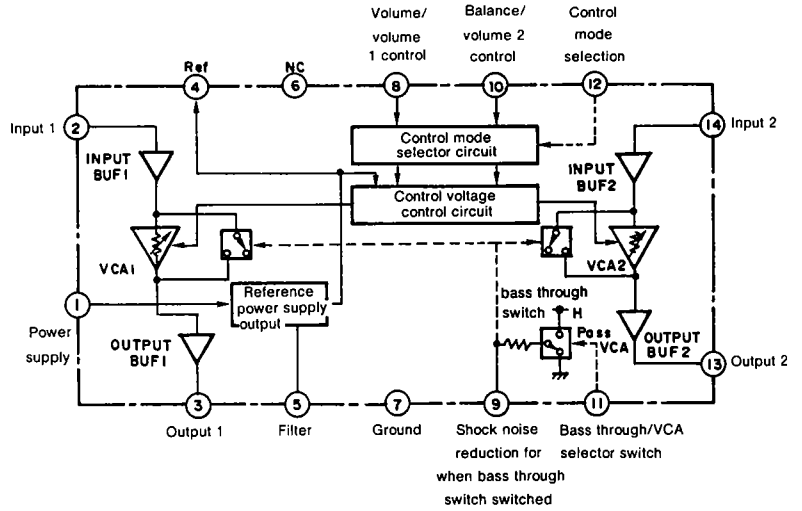
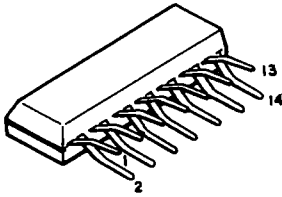
BA6238A (IC501)

Reversible motor driver
(2 circuits built in)

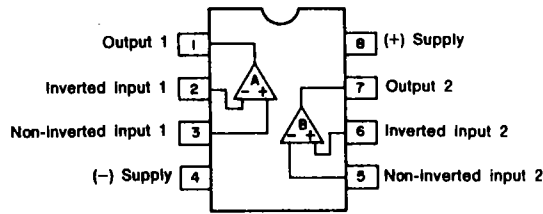
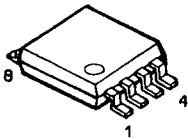


CASSETTE DECK SECTION

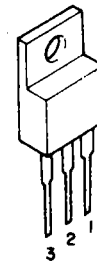
M51131L
(IC307)



BA15218F
(IC303, 306)

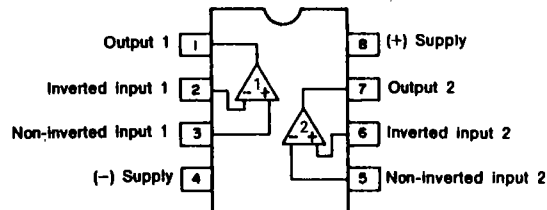
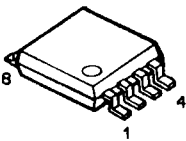


NJM7806FA(S) (IC904)
NJM7808FA(S) (IC902)
(Three-terminal positive
constant voltage power supply)

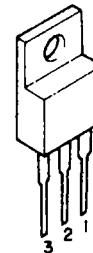


1: Output
2: GND
3: Input

M5220FP
(IC302)



NJM7908FA (IC903)
(Three-terminal negative
constant voltage power supply)



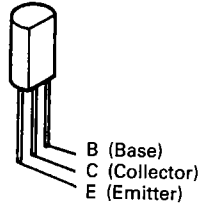
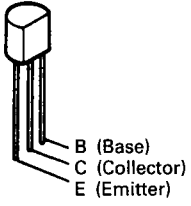
1: Output
2: Input
3: GND

CASSETTE DECK SECTION

• **Transistors**

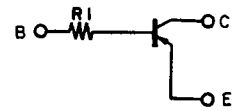
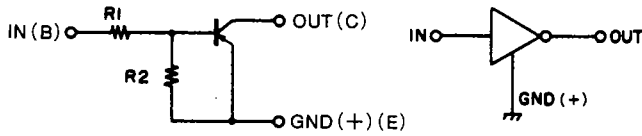
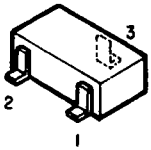
2SC2603 (E/F)
2SD1111

2SB562 (C)
2SD468 (C)



DTA EK series

DTC TK series



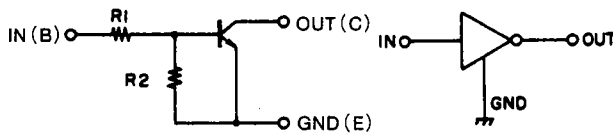
- 1. : GND/Emitter
- 2. : In/Base
- 3. : Out/Collector

	R1	R2
DTA144EK	47 kohm	47 kohm

	R1
DTC114TK	10 kohm
DTC314TK	10 kohm

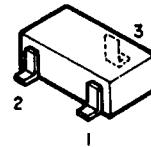
DTC EK series

- DTA144EK PNP type
- DTC114EK } NPN type
- DTC124EK }
- DTC144EK }
- DTC114TK }
- DTC314TK }



	R1	R2
DTA114EK	10 kohm	10 kohm
DTA124EK	22 kohm	22 kohm
DTA144EK	47 kohm	47 kohm

2SA1037K (S/R)
2SC2412K (S)



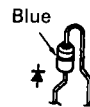
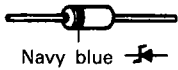
- 1. : Emitter
- 2. : Base
- 3. : Collector

• **Diodes**

- HZS2C-1
- HZS3C-1
- HZS4C-1
- HZS5C-1
- HZS6A-1
- HZS6C-1
- HZS7B-1
- HZS9B-1
- HZS20-1

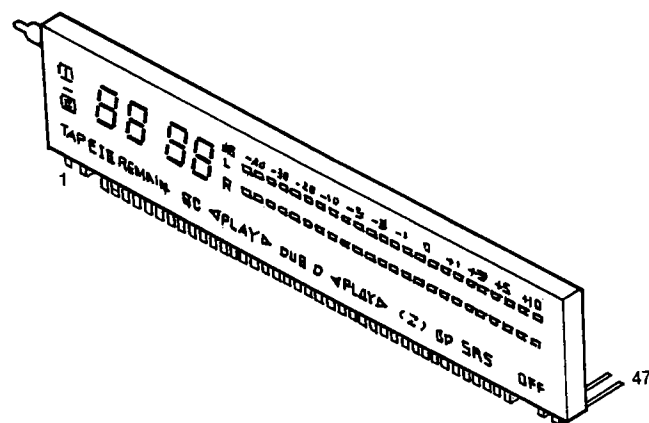
1SS252

1SR35-200A



CASSETTE DECK SECTION

● Fluorescent Display Tube BJ239GK
(Part No.: 393 8014 000)



Pin Connections

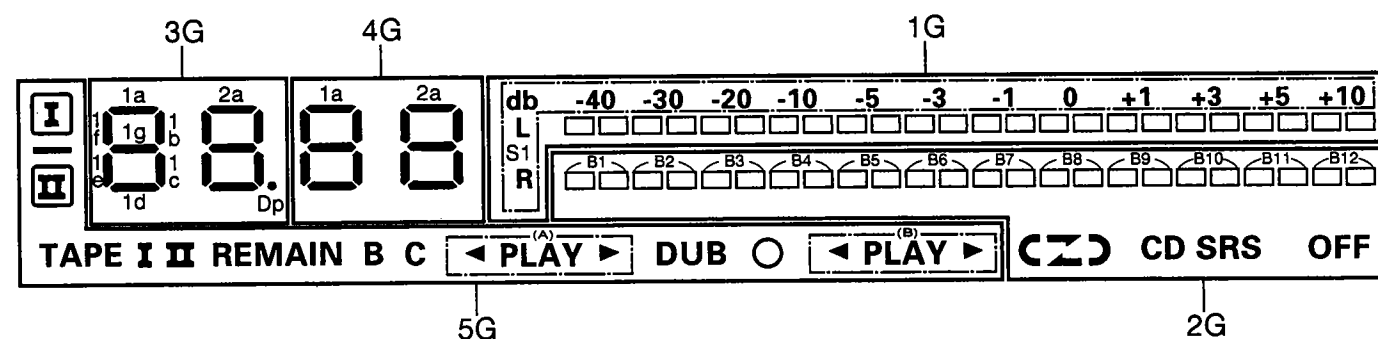
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Connection	F1	F1	NP	NP	1G	2G	3G	4G	5G	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Pin No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
Connection	NC	NC	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	NP	F2	F2	

- NOTE
- 1) F1 and F2: Filaments
 - 2) NP: No pin
 - 3) NC: No connection
 - 4) 1 G through 5 G: Grid

Anode Connection

	5G	4G	3G	2G	1G
P1	TAPE	1a	1a	B1	B1
P2	I	1b	1b	B2	B2
P3	II	1c	1c	B3	B3
P4	REMAIN	1d	1d	B4	B4
P5	B	1e	1e	B5	B5
P6	C	1f	1f	B6	B6
P7	◀ (A)	1g	1g	B7	B7
P8	PLAY (A)	2a	2a	B8	B8
P9	▶ (A)	2b	2b	B9	B9
P10	DUB	2c	2c	B10	B10
P11	○	2d	2d	B11	B11
P12	◀ (B)	2e	2e	B12	B12
P13	PLAY (B)	2f	2f	Ⓢ	S1
P14	▶ (B)	2g	2g	Ⓢ	—
P15	I	—	Dp	Ⓢ	—
P16	—	—	—	CD SRS	—
P17	II	—	—	OFF	—

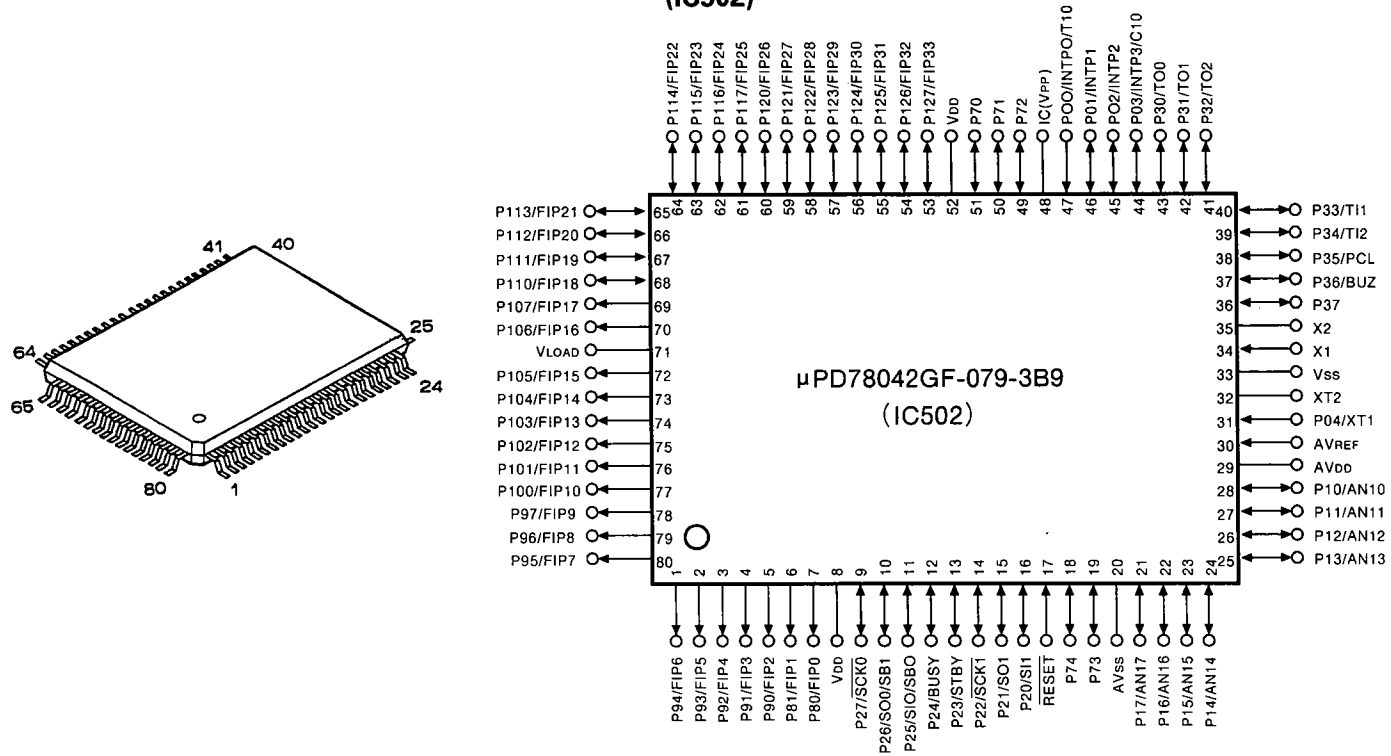
Grid Assignment



CASSETTE DECK SECTION

MICROPROCESSOR DOCUMENTATION

μPD78042GF-079-3B9 : 262 1938 106 (IC502)



Output logic: H = positive logic, L = negative logic
 Initial condition: H = positive potential, L = ground
 Output type: P = PMOS, N = NMOS, C = CMOS
 Load resistor: None, (PULL) UP, (PULL) DOWN

• Pin Description

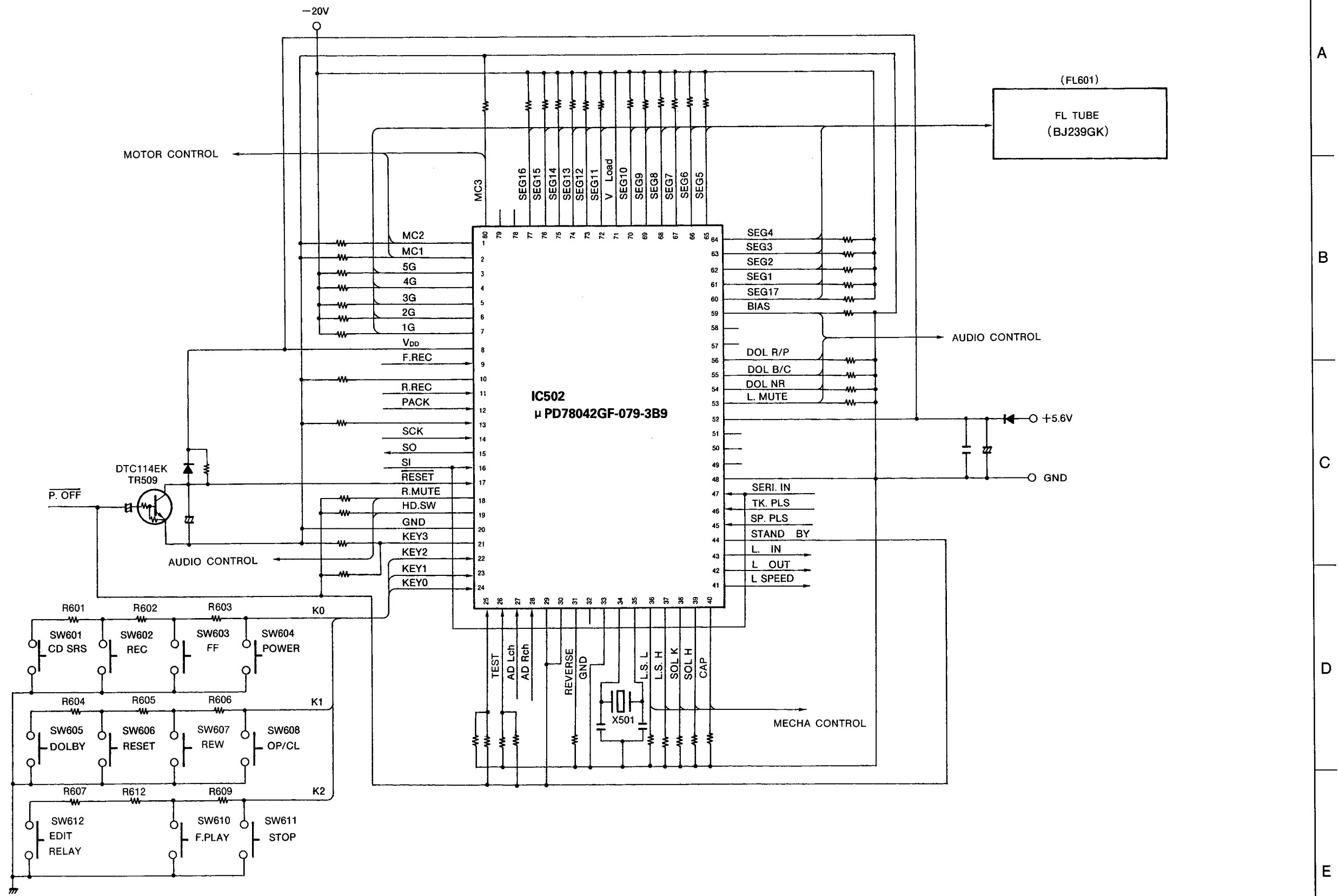
Pin	Pin Name	Function Name	I/O	Output Logic	Initial Condition	Output Type	Load Resistor	Details
1	P94	MTCONT2	O	H	Hi-Z	P	External DOWN	PULL-DOWN one time: built in. Mask: optional. Reel, loader motor control
2	P93	MTCONT1	O	H	Hi-Z	P	External DOWN	PULL-DOWN one time: built in. Mask: optional. Reel, loader motor control
3	P92	GRID-5	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: built in. Mask: optional. Display tube grid control signal
4	P91	GRID-4	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: built in. Mask: optional. Display tube grid control signal
5	P90	GRID-3	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: built in. Mask: optional. Display tube grid control signal
6	P81	GRID-2	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: built in. Mask: optional. Display tube grid control signal
7	P80	GRID-1	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: built in. Mask: optional. Display tube grid control signal
8	VDD	5[V]						
9	P27	REC-FWD	I	H	Hi-Z	—	External DOWN	Mechanism switch input signal
10	P26	METAL	I	H	Hi-Z	—	External DOWN	Mechanism switch input signal
11	P25	REC-REV	I	H	Hi-Z	—	External DOWN	Mechanism switch input signal
12	P24	PACK	I	H	Hi-Z	—	External DOWN	Mechanism switch input signal
13	P23	CHROME	I	H	Hi-Z	—	External DOWN	Mechanism switch input signal
14	P22	SERCLK	I	EDGE	Hi-Z	—	External UP	Serial communications clock signal
15	P21	SEROUT	O	H	Hi-Z	C	External UP	Serial communications output signal
16	P20	SER-IN	I	H	Hi-Z	—	External UP	Serial communications output signal
17	RESET	RESET	I	L	Hi-Z	—	External UP	Reset input signal
18	P74	R-MUTE	O	H	Hi-Z	N	External UP	Recording mute control signal
19	P73	HEADSW	O	H/L	Hi-Z	N	External UP	Head switching control signal: record at high level and play back at low level
20	AVSS	GND						
21	AN17	KEYIN-3	I	A/D	Hi-Z	—	External UP	Operation button input signal (Not used)
22	AN16	KEYIN-2	I	A/D	Hi-Z	—	External UP	Operation button input signal No. 2
23	AN15	KEYIN-1	I	A/D	Hi-Z	—	External UP	Operation button input signal No. 1
24	AN14	KEYIN-0	I	A/D	Hi-Z	—	External UP	Operation button input signal No. 0
25	AN13	MSREF	I	A/D	Hi-Z	—		Between-track detection reference voltage

Pin	Pin Name	Function Name	I/O	Output Logic	Initial Condition	Output Type	Load Resistor	Details
26	AN12	TEST	I	A/D	Hi-Z	—		
27	AN13	A/D-L	I	A/D	Hi-Z	—	External DOWN	Left channel audio signal
28	AN10	A/D-L	I	A/D	Hi-Z	—	External DOWN	Right channel audio signal
29	AVDD	+5[V]						
30	AVREF	+5[V]						
31	P04	RVS/ONE	I	H/L	Hi-Z	—		Reverse/one-way switching: one-way at low level, reverse at high level
32	XT2	OPEN						
33	VSS	GND						
34	X1	CLOCK						System clock input pin
35	X2	CLOCK						System clock input pin
36	P37	SPD/L	O	H	Hi-Z	C	External DOWN	Loader speed control signal
37	P36	SPD/H	O	H	Hi-Z	C	External DOWN	Loader speed control signal
38	P35	SOL/K	O	H	Hi-Z	C	External DOWN	Solenoid kick control signal
39	P34	SOL/H	O	H	Hi-Z	C	External DOWN	Solenoid kick control signal
40	P33	CAPSTAN	O	H	Hi-Z	C	External DOWN	Capstan control signal
41	P32	LOADSPD	I	H	Hi-Z	—	External DOWN	Loader speed switching input signal
42	P31	LOADOUT	I	H	Hi-Z	—	External DOWN	Loader open input signal
43	P30	LOADIN	I	H	Hi-Z	—	External DOWN	Loader close input signal
44	P03	STANBY	I	H	Hi-Z	—	External UP	Power loss detection signal
45	INTP2	SERINT	I	EDGE	Hi-Z	—	External UP	Serial communications interrupt signal
46	INTP1	TK-PLS	I	EDGE	Hi-Z	—	External UP	Take-up reel pulse input signal
47	INTP0	SP-PLS	I	EDGE	Hi-Z	—	External UP	Supply-reel pulse input signal
48	IC	D-GND						
49	P72	NORMAL	O	H	Hi-Z	N	External DOWN	Tape select switching signal
50	P71	CHROME	O	H	Hi-Z	N	External DOWN	Tape select switching signal
51	P70	METAL	O	H	Hi-Z	N	External DOWN	Tape select switching signal
52	VDD	5[V] HOLD						
53	P127	L-MUTE	O	L	Hi-Z	P	External DOWN	Line mute control signal
54	P126	DOLON/OFF	O	H/L	Hi-Z	P	External DOWN	Dolby on/off switching signal: Off at high level, On at low level
55	P125	DOLB/C	O	H/L	Hi-Z	P	External DOWN	Dolby B/C switching signal: Type-B at high, Type-C at low
56	P124	DOLR/P	O	H/L	Hi-Z	P	External DOWN	Dolby recording/playback switching signal: PB at high, REC at low
57	P123	MPXFIL	O	H	Hi-Z	P	External DOWN	MPX filter control signal
58	P122	70/120	O	H/L	Hi-Z	P	External DOWN	Playback equalizer control signal: 70 μs at high, and 120 μs at low
59	P121	BIAS	O	H	Hi-Z	P	External DOWN	Bias control signal
60	P120	SEG-17	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
61	P117	SEG-01	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
62	P116	SEG-02	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
63	P115	SEG-03	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
64	P114	SEG-04	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
65	P113	SEG-05	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
66	P112	SEG-06	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
67	P111	SEG-07	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
68	P110	SEG-08	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
69	P107	SEG-09	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
70	P106	SEG-10	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
71	VLOAD	-2[V]						
72	P105	SEG-11	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
73	P104	SEG-12	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
74	P103	SEG-13	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
75	P102	SEG-14	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
76	P101	SEG-15	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
77	P100	SEG-16	O	H	Hi-Z	P	Built-in DOWN	PULL-DOWN one time: None. Mask: optional. Display tube segment control signal
78	P97	OPEN						PULL-DOWN one time: Built in. Mask: optional.
79	P96	OPEN						PULL-DOWN one time: Built in. Mask: optional.
80	P95	MTCONT3	O	H	Hi-Z	P	External DOWN	PULL-DOWN one time: Built in. Mask: optional.

CASSETTE DECK SECTION

MICROPROCESSOR PERIPHERAL WIRING DIAGRAM

1 2 3 4 5 6 7 8



A
B
C
D
E

CASSETTE DECK SECTION

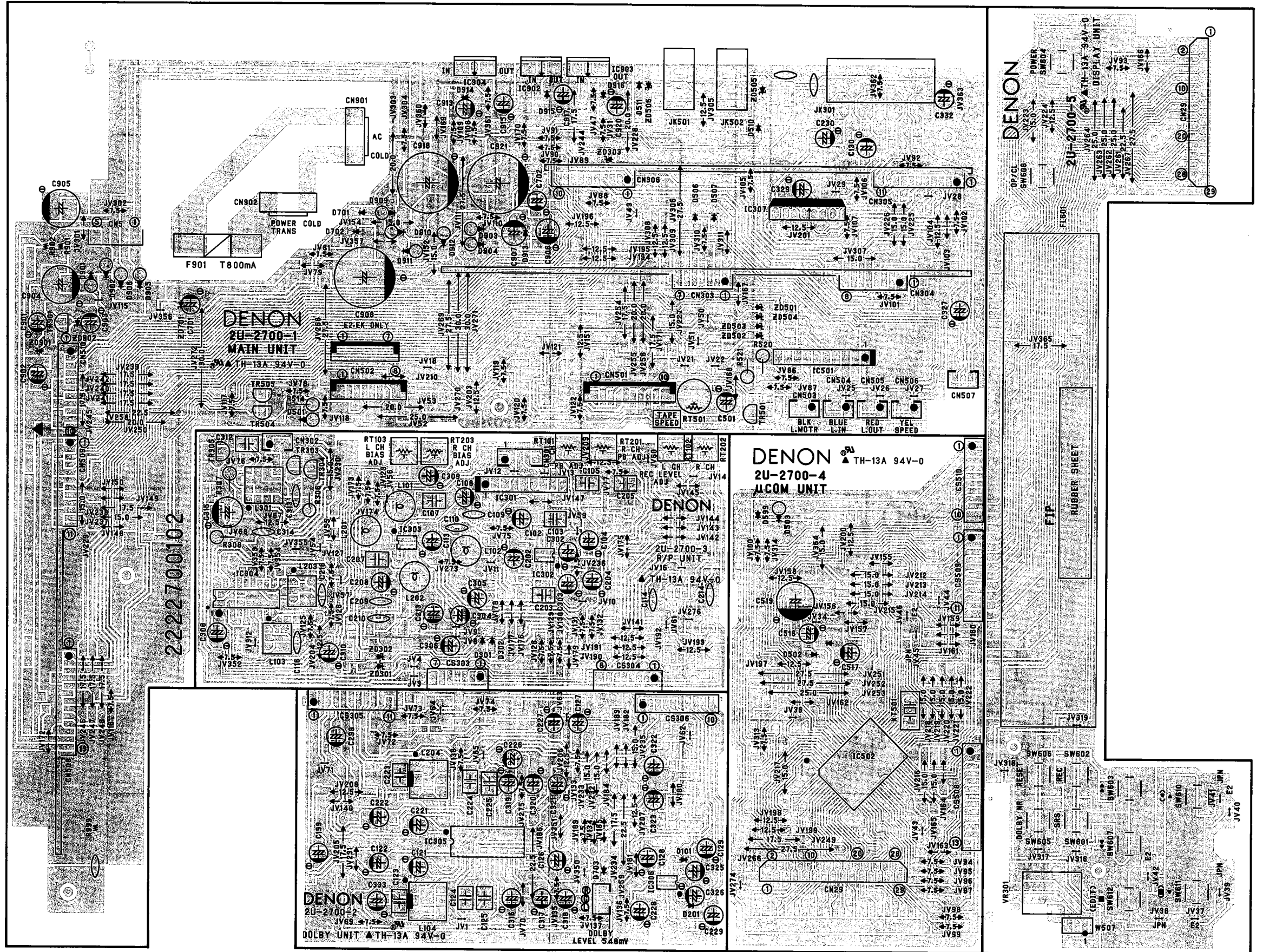
PRINTED WIRING BOARD

1 2 3 4 5 6 7 8

UDR-F10 2U-2700B DECK UNIT ASS'Y

Component Side

2U-2700B	
-1	Main Unit
-2	Dolby Unit
-3	Rec/PB Unit
-4	Microprocessor Unit
-5	Display Unit



A

B

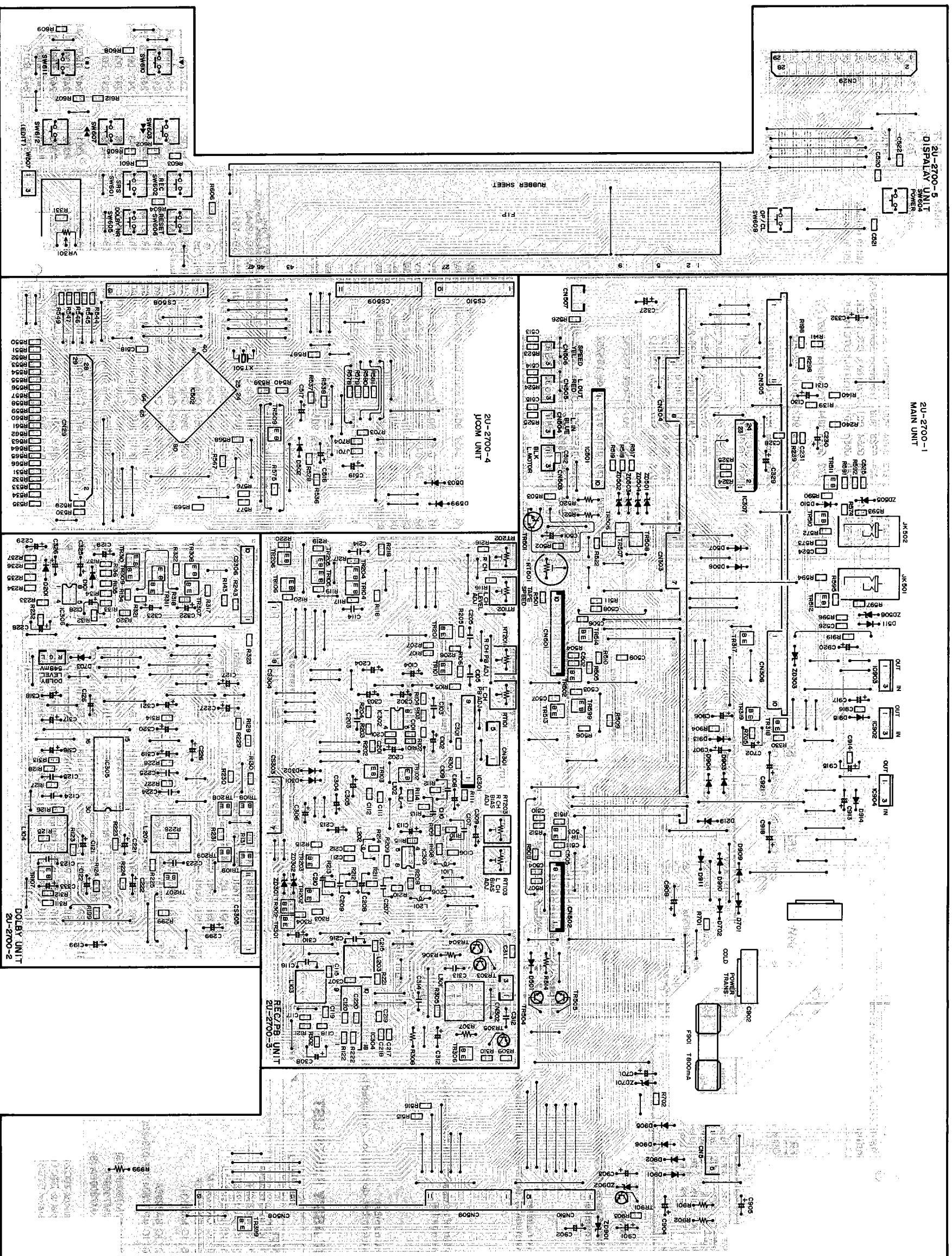
C

D

E

1 2 3 4 5 6 7 8

Pattern Side



CASSETTE DECK SECTION

NOTE ON PARTS LIST

- Part indicated with the mark "●" are not always in stock...
When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
Ordering part without stating its part number can not be supplied.
Part indicated with the mark "★" is not illustrated in the exploded view.
Not including Carbon Film ±5%, 1/4W Type in the P.W. Board parts list.

WARNING:

Parts marked with this symbol △ have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

Resistors

Ex.: RN 14K 2E 182 G FR
Type Shape and performance Power Resistance Allowable error Others

Table with columns for RD, RC, RS, RW, RN, RK, RM and their corresponding descriptions like Carbon Film, Composition, Metallic oxide Film, etc.

Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number
2-digit effective number

Units: ohm

1 R 2 ⇒ 1.2 ohm
1-digit effective number.
2-digit effective number, decimal point indicated by R.
Units: ohm

Capacity (electrolyte only)

2 2 2 ⇒ 2200 µF
Indicates number of zeros after effective number.
2-digit effective number.
Units: µF

2 R 2 ⇒ 2.2 µF
1-digit effective number.
2-digit effective number, decimal point indicated by R.
Units: µF

Capacitors

Ex.: CE 04W 1H 2R2 M BP
Type Shape and performance Dielectric strength Capacity Allowable error Others

Table with columns for CE, CA, CS, CQ, CK, CC, CP, CM, CF, CH and their corresponding descriptions like Aluminum foil electrolyte, Aluminum solid electrolyte, etc.

Capacity (except electrolyte)

2 2 2 ⇒ 2200pF = 2200 µµF = 0.0022 µF
(More than 2) Indicates number of zeros after effective number.
2-digit effective number.
Units: µF

2 2 1 ⇒ 220pF
(0 or 1) Indicates number of zeros after effective number.
2-digit effective number.
Units: pF

When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

2U-2700B DECK UNIT ASS'Y PARTS LIST

Main parts list table with columns: Ref. No., Part No., Part Name, Remarks. Includes SEMICONDUCTORS GROUP and RESISTORS GROUP.

Main parts list table with columns: Ref. No., Part No., Part Name, Remarks. Includes RESISTORS GROUP and RESISTORS GROUP (Not included Carbon Film ±5%, 1/4W Type).

CASSETTE DECK SECTION

Table with columns: Ref. No., Part No., Part Name, Remarks. Rows include components like Chip Carbon 10k ohm 1/10W, Chip Carbon 4.7k ohm 1/10W, etc.

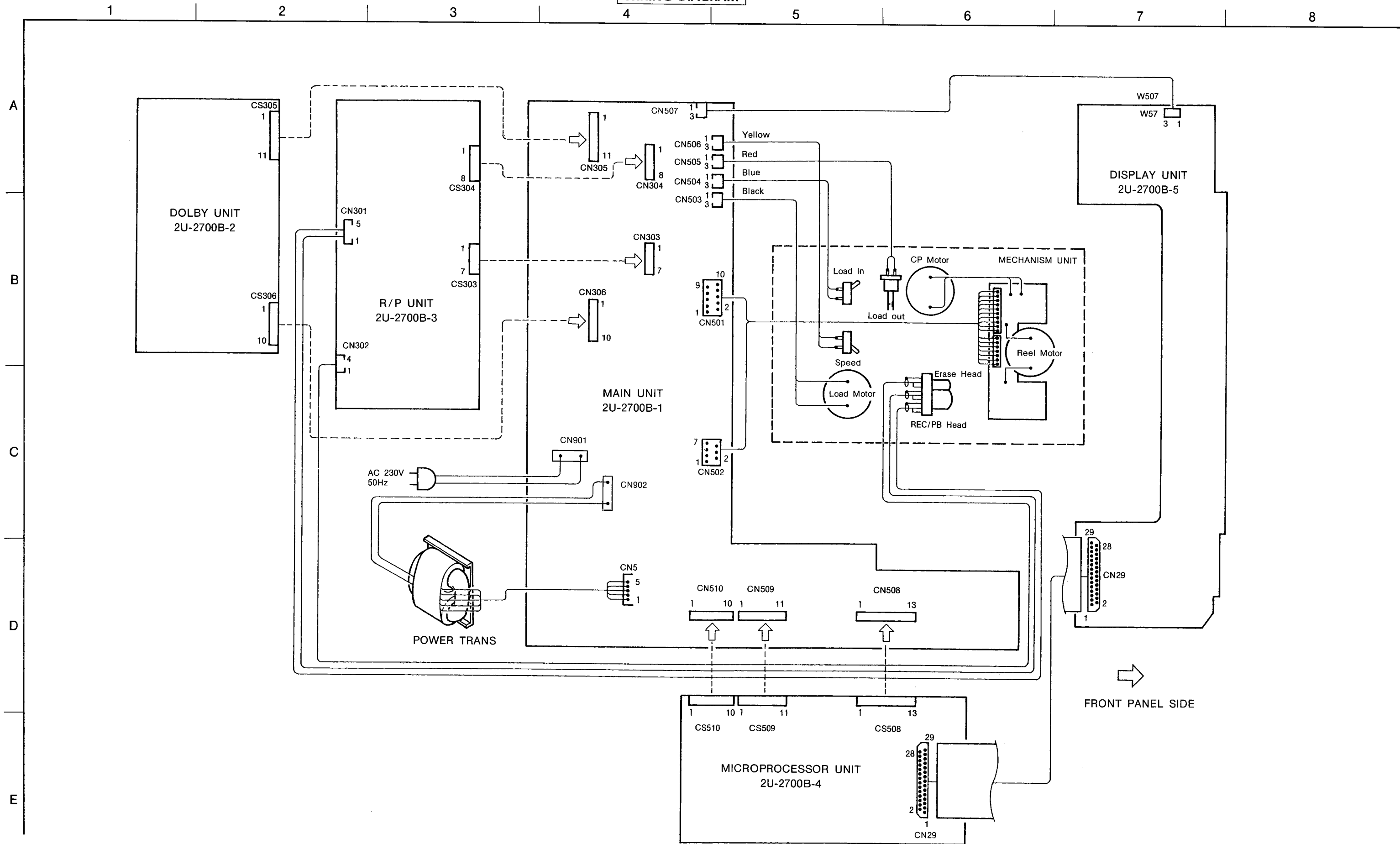
Table with columns: Ref. No., Part No., Part Name, Remarks. Includes a section for CAPACITORS GROUP and various resistor and capacitor parts.

Table with columns: Ref. No., Part No., Part Name, Remarks. Lists various electrolytic capacitors, ceramic capacitors, and other electronic components.

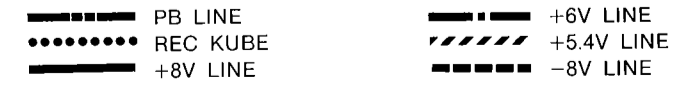
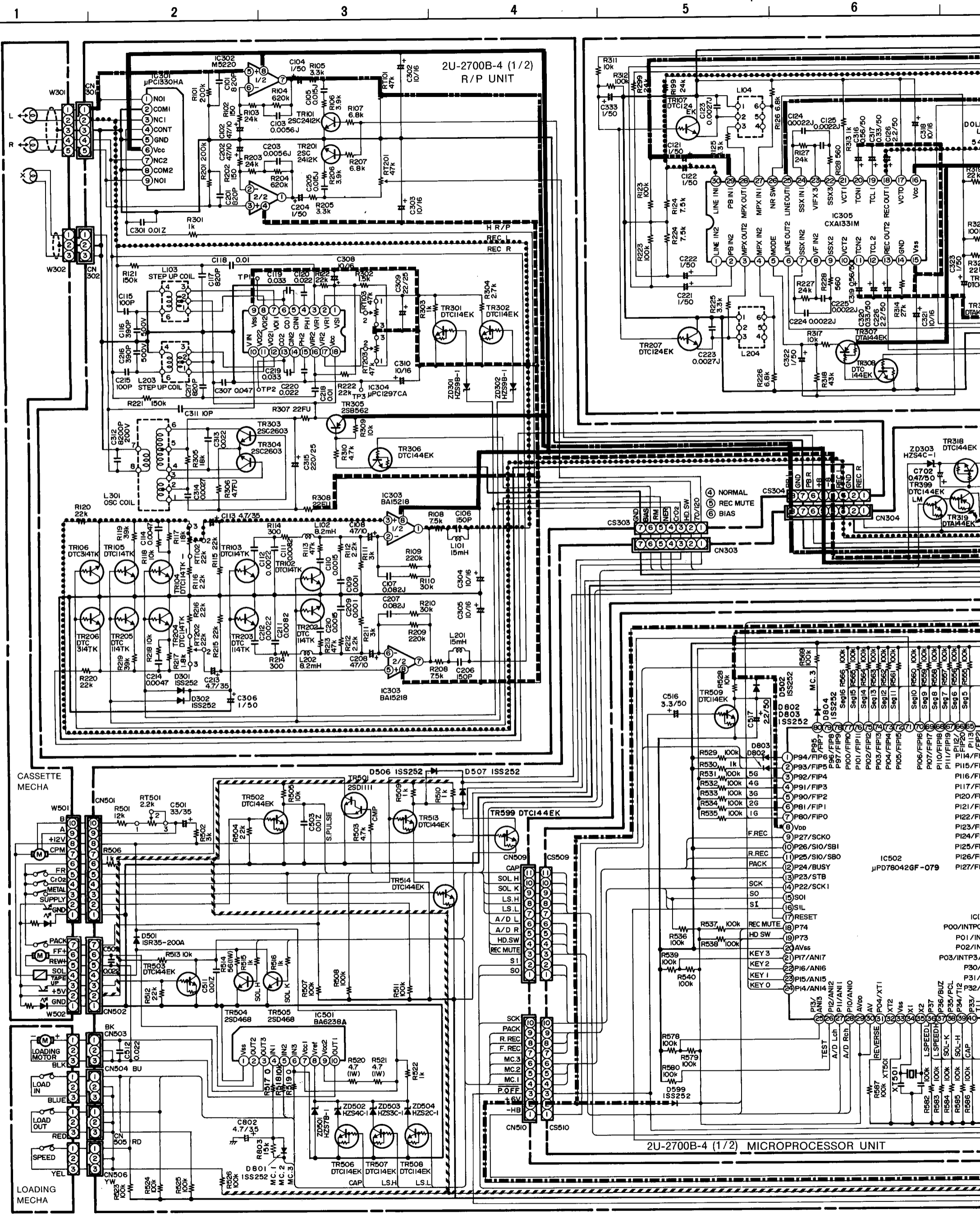
Table with columns: Ref. No., Part No., Part Name, Remarks, Qty. Lists inductor, MPX filter, oscillator coil, tact switch, ceramic resonator, pin jack, mini jack, fuse, and various connectors.

CASSETTE DECK SECTION

WIRING DIAGRAM



SCHEMATIC DIAGRAM



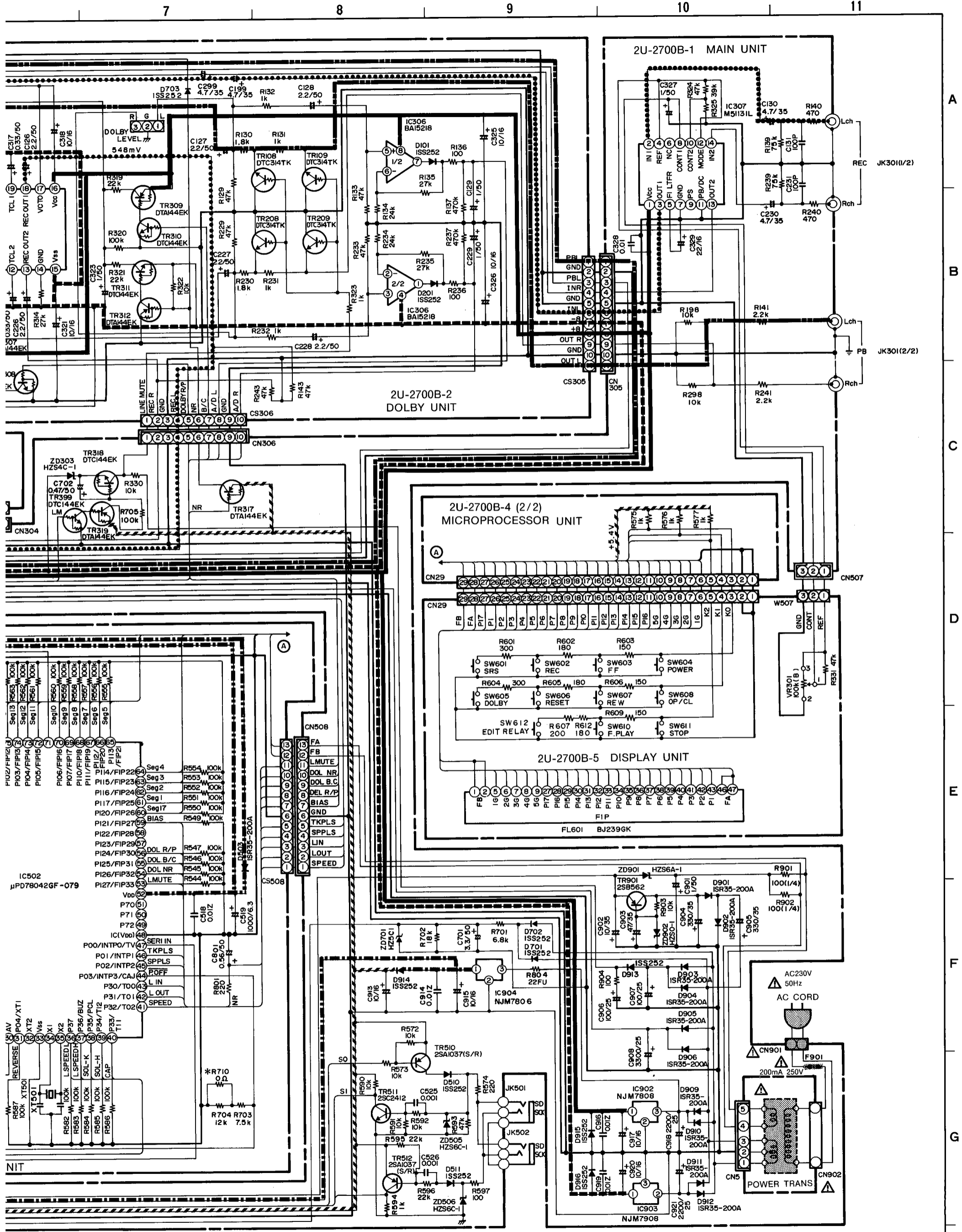
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis leakage current exceeds 0.5 milliamperes, or if the resistance from chassis to either side of the power cord is less than defective.

WARNING
DO NOT return the unit to the customer until the problem is located and corrected.

* 0Ω is erased only when using the R710 WAITAIMU microcomputer. (μPD78P044)

CASSETTE DECK SECTION

C DIAGRAM



WARNING:
 Parts marked with this symbol Δ have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

NOTES
 ALL RESISTANCE VALUES IN OHM K=1,000 OHM M=1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD P=MICRO-MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

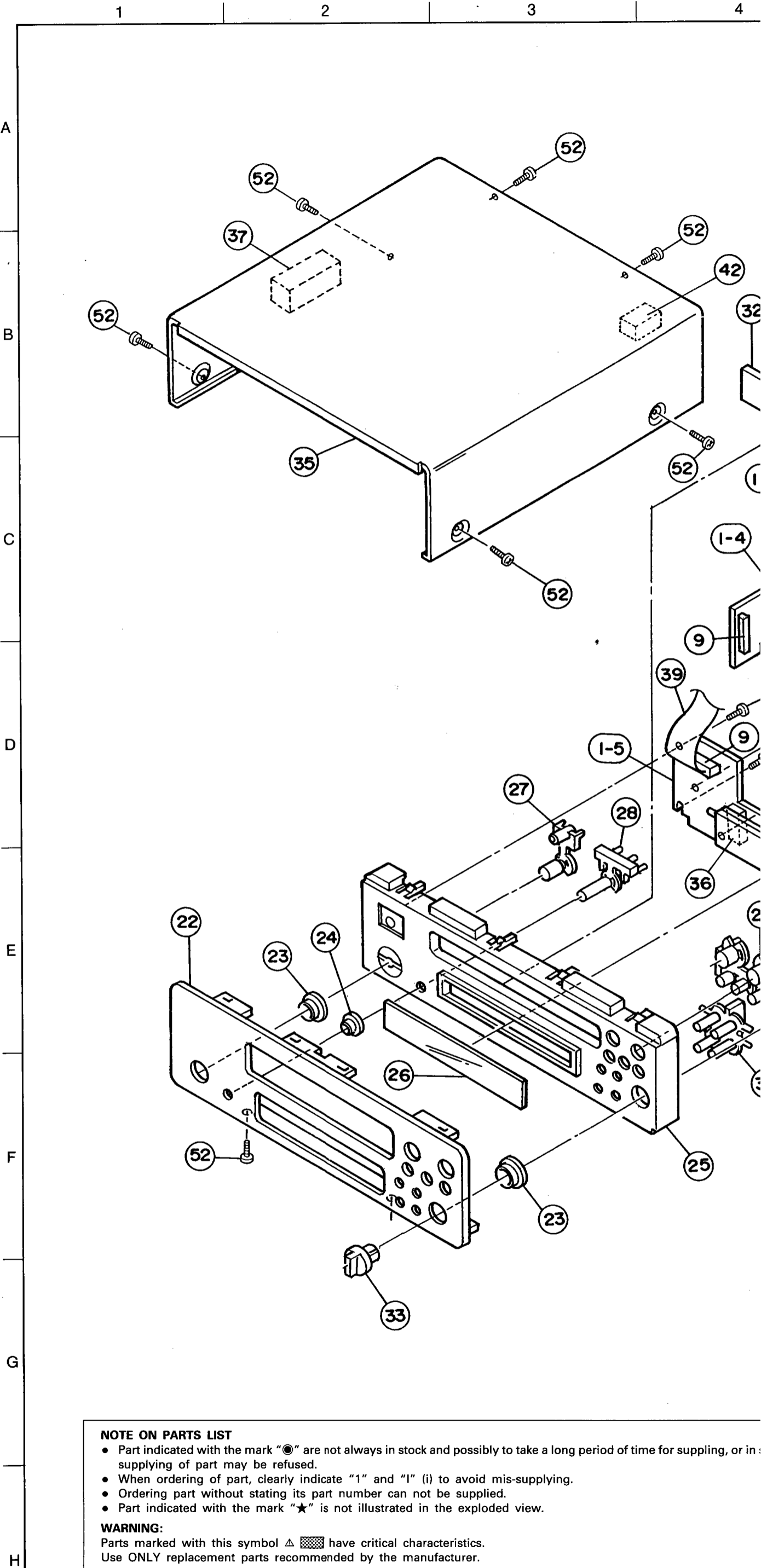
urrent check or (2) a line to chassis resistance check. If the
 s of the power cord is less than 240 Kohms, the unit is

CASSETTE DECK SECTION

EXPLO

PARTS LIST OF UDR-F10 EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty
● 1	2U- 2700 B	Deck Unit Ass'y		1 ^S
1-1	—	Main Unit		(1)
1-2	—	Dolby Unit		(1)
1-3	—	Rec/PB Unit		(1)
1-4	—	Microprocessor Unit		(1)
1-5	—	Display Unit		(1)
2	211 0824 006	Variable Resistor 100k ohm	VR301	1
3	204 8421 005	Mini Jack	JK501,502	2
4	204 8266 008	4P Pin Jack (S-GND)	JK301	1
5	254 4256 091	Chemicon 2200μF/25V	C918,921	2
6	254 4257 003	Chemicon 3300μF/25V	C908	1
7	254 4250 068	Chemicon 1000μF/6.3V	C519	1
8	393 8014 000	F.L. Tube BJ239GK	FL601	1
9	205 0736 034	29P FFC Conn. Base	CN029,029	2
10	411 1224 328	Main Chassis		1
11	412 9373 009	Mech. Holder (Deck)		1
12	GEN2798	Foot Ass'y		4
● 13	105 9237 124	Rear Panel (Deck)		1
△ 14	206 2063 009	AC Cord with Plug		1
△ 15	445 0056 003	Cord Bush		1
△ 16	203 6995 004	Power Trans (Deck)		1
● 17	412 3548 005	P.W.B. Catcher		3
18	—	—		—
19	412 9371 001	Spring Plate		1
● 20	412 9372 000	P.W.B. Bracket (A)		1
● 21	GEN2862	Cassette Mech. Unit Ass'y		1 ^S
● 22	144 9188 016	Front Panel (Deck)		1
● 23	146 9294 100	Knob Ring (A)		2
● 24	146 9295 109	Knob Ring (B)		1
● 25	146 9286 309	Inner Panel (Deck)		1
● 26	143 0872 001	Window		1
27	113 1654 104	Power Button Ass'y		1
● 28	113 1656 005	Tact Button (1 Key)		1
● 29	113 9276 102	Button (5 Key)		1
● 30	113 9277 101	Button (4 Key)		1
31	—	—		—
32	146 9288 006	Loader Panel (Deck)		1
33	112 9100 000	Knob (Fuji)		1
★ 34	445 0033 005	Wire Clamp Band		3
● 35	102 0545 117	Top Cover		1
36	461 0866 009	Rubber Sheet	Put on Display Unit	2
37	461 0665 035	Rubber Sheet	Put on Top Cover	1
38	513 2243 002	Rating Sheet		1
39	009 0101 003	29P FF Cable		1
★ 40	462 0136 004	Washer	Put on Inner Panel	2
★ 41	415 0730 006	UL T. Sheet (9.9) Black		1
42	461 0861 004	Rubber Sheet	Put on T. cover	1
43	461 0860 005	Spacer	for AC 1	1
★ 44	206 1029 002	Fuse		1
45				
46				
SCREWS				
51	473 7002 018	Tapping Screw (S) 3×8		11
52	473 7015 018	Tapping Screw (S) 3×8	Black	18
53	473 7508 046	Tapping Screw (P) 3×16	Black	2
54	477 0064 107	Fixing Screw	Black	1
55	473 7505 007	Tapping Screw (P) 2.6×8		8
56	473 7500 015	Tapping Screw (P) 3×8		2
57	473 7007 000	Tapping Screw (S) 4×8	Black	4
58				
59				
PACKING & ACCESSORIES (Not included EXPLODED VIEW)				
101	505 0102 089	Stylen Paper	700×700	1
● 102	503 1077 104	Cushion		1
● 103	GEN2744	Envelope Sub. Ass'y		1 ^S
103-1	505 8006 019	Envelope		(1)
103-2	203 2223 002	2P Pin Cord	L=1000	(2)
103-3	203 2315 004	Stereo Miniplug Cord	L=500	(1)
103-4	511 2651 009	Inst. Sheet		(1)
104	503 1075 203	Top Cushion		1
105	501 1780 013	Carton Case		1



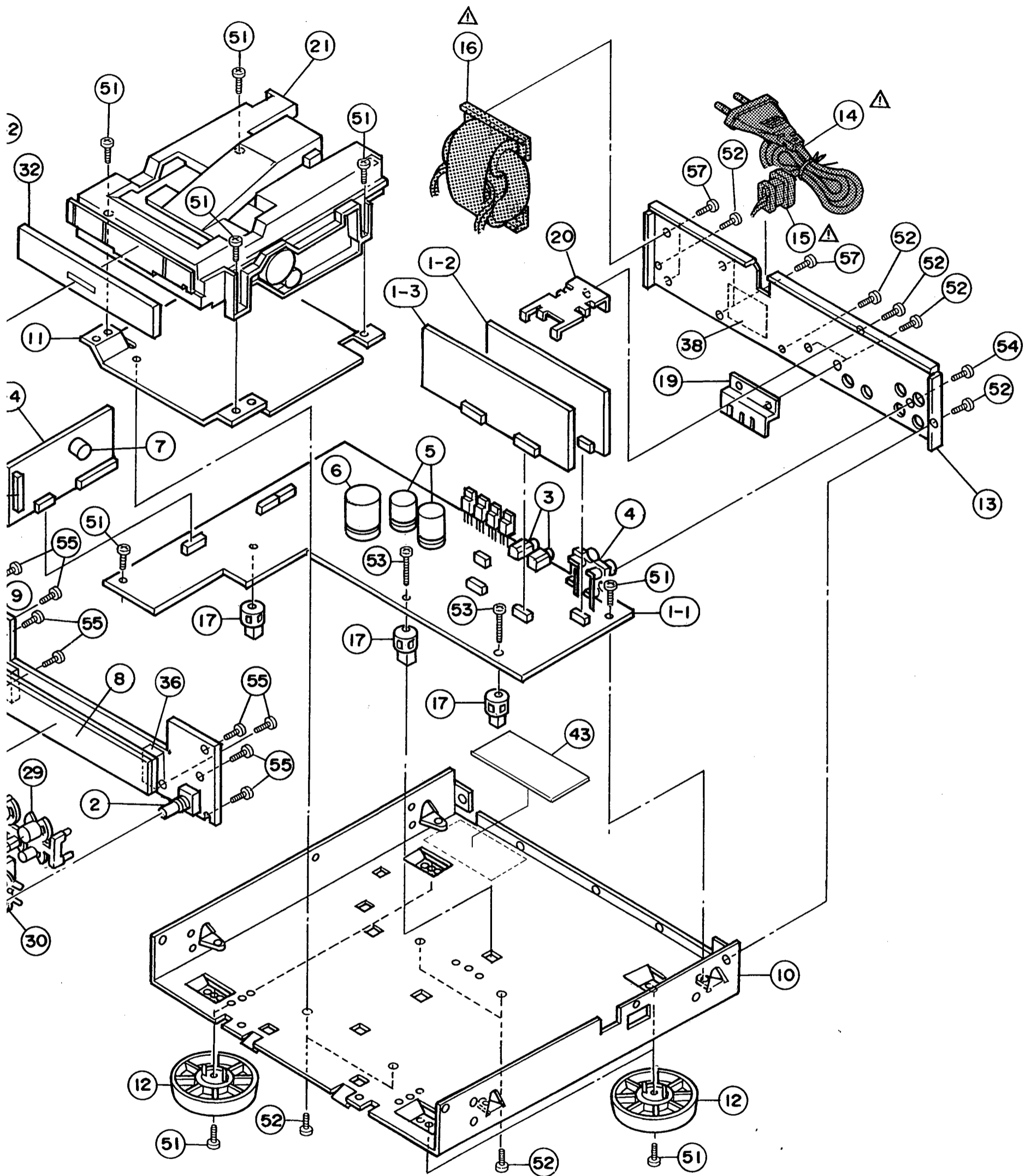
NOTE ON PARTS LIST

- Part indicated with the mark "●" are not always in stock and possibly to take a long period of time for supplying, or in supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "1" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.

WARNING:

Parts marked with this symbol △ [hatched box] have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

EXPLODED VIEW



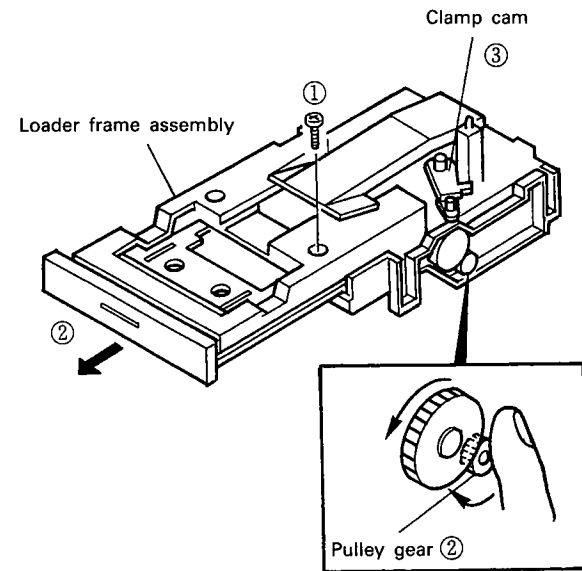
in some case

CASSETTE DECK SECTION**DISASSEMBLY PROCEDURE**

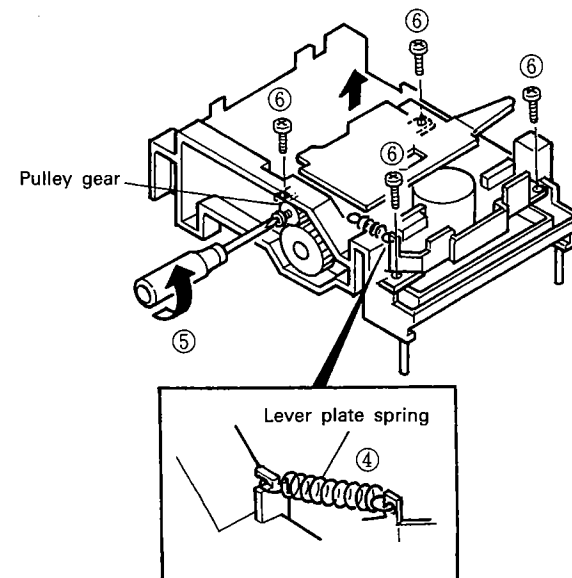
(Assembly is performed in the reverse order.)

1. Removing the loader frame assembly

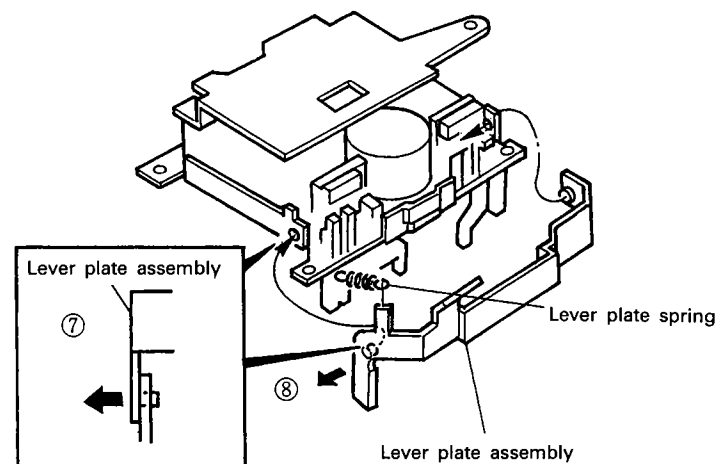
- ① Remove the screws attached to the loader frame assembly.
- ② Turn the pulley gear in the direction of the arrow, then pull the loader frame assembly toward you.
- ③ To install the loader frame assembly, the clamp cam must be in the position shown on the diagram.

**2. Removing the cassette mechanism**

- ④ Remove the lever plate spring.
- ⑤ Loosen the pulley gear's screw to the position shown in the diagram.
- ⑥ Remove the four screws attaching the cassette mechanism, then remove the mechanism in the direction of the arrow.

**3. Removing the lever plate assembly**

- ⑦ Remove the lever plate spring.
- ⑧ Remove the lever plate assembly in the direction of the arrow.


**CASSETTE MECHANISM PARTS LIST**
(Parts No.: 338 0175 005)

Ref. No.	Part No.	Part Name	Remarks	Qty
● 2	9DF 5115 99	Chassis Ass'y		1 ^S
2- 1	9DF 5170 49	Gear Ass'y		(1)
2- 4	9DF 6230 37	Reel Base (F) Ass'y		(1)
2- 5	9DF 6231 27	Reel Base (R) Ass'y		(1)
2- 8	9DF J111 17	Washer 1.7×0.25		(2)
2-11	9DU J12V 11	W. Poly Washer 2.1×0.25		(2)
● 3	9DF 5137 22	Plate HD Ass'y		1 ^S
3- 4	9DF D45T 17	Head Base		(1)
3- 5	9DF G137 18	Screw		(1)
3- 7	9DF K21U 11	HB Spring		(1)
3- 8	9DF K26N 14	Spring		(1)
3- 9	9DF U15R 11	Rec/PB Head		(1)
3-10	9DF U192 11	Erase Head		(1)
3-11	9DWH55L 04A	RE/Head Wire Ass'y		(1)
3-12	9DWH63P 04	E/Head Wire Ass'y		(1)
4	9DF 5253 00	MTR Main Ass'y		1 ^S
● 5	9DF 5675 52	Control Unit Ass'y		1 ^S
5-13	9DA W13G00	Reel Sensor	SG-107F3	(1)
5-17	9DU E16E 11	Push Switch		(5)
8	9DF C52H 61	Cassette Spring		1
12	9DF D45G 21	Play Arm		1
14	9DF D45B 16	Cam Gear (3R)		1
15	9DF D44T 14	REC Sensor Lever		3
16	9DF D46L 11	PACK Sensor Lever		1
17	9DF D44V 12	METAL Sensor Lever		1
18	9DF F17W 31	Main Belt		1
20	9DF J111 30	Poly Washer 2.6×0.25		2
23	9DF J111 14	Poly Washer 2.6×0.5		2
26	9DF K28R 12	Slide Spring		1
29	9DF R23S 12	Fly Wheel Ass'y		1
30	—	—		
31	9DF R20L 22	Pinch Roller Ass'y (R)		1
32	—	—		
36	9DU G12H 14	Screw 2.6×8		1
39	9DU G13U 15	E Ring		2
40	9DU G20B 11	Screw		1
41	9DF 5642 80	MTR Reel Ass'y		1
42	9DF G156 11A	Screw 2.6×6.4		2
51	9DF 7652 63	Solenoid Ass'y		1
52	9DF L39H 12A	Iron Core		1
53	9DF L39K 12	Plunger		1

NOTE ON PARTS LIST

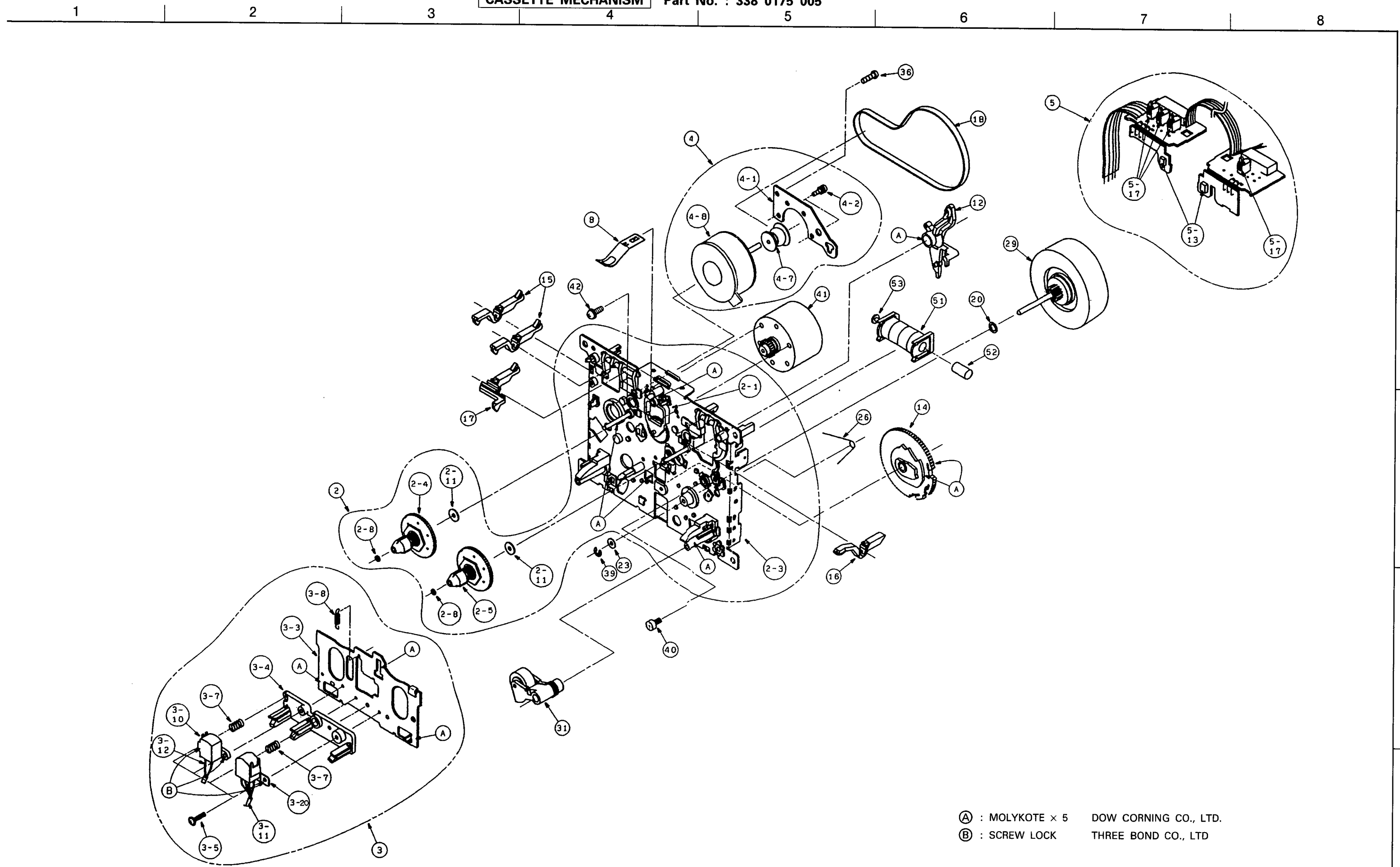
- Part indicated with the mark "●" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "1" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.

WARNING:

Parts marked with this symbol  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

CASSETTE DECK SECTION

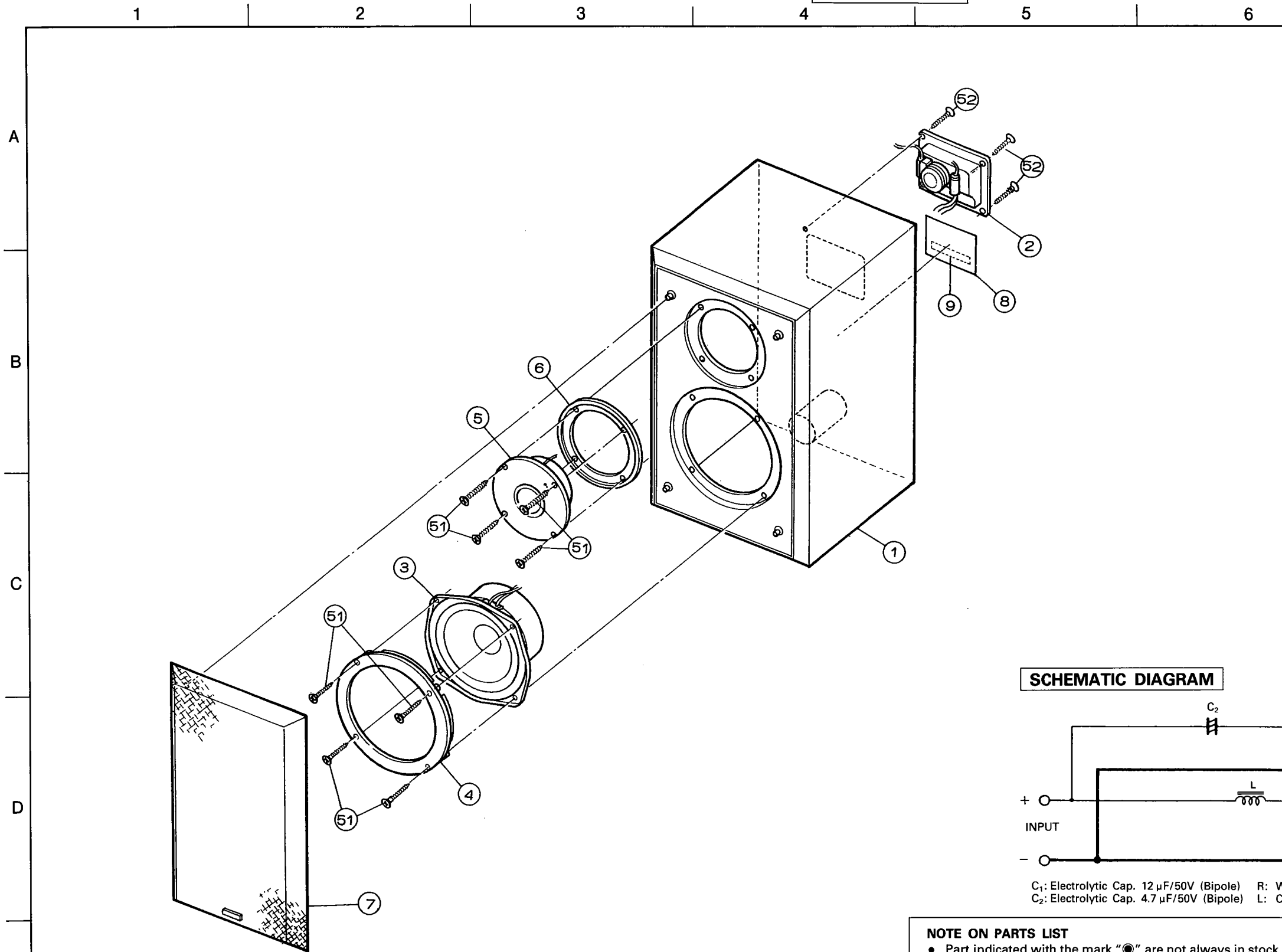
CASSETTE MECHANISM Part No. : 338 0175 005



- (A) : MOLYKOTE x 5 DOW CORNING CO., LTD.
- (B) : SCREW LOCK THREE BOND CO., LTD

SPEAKER SYSTEM

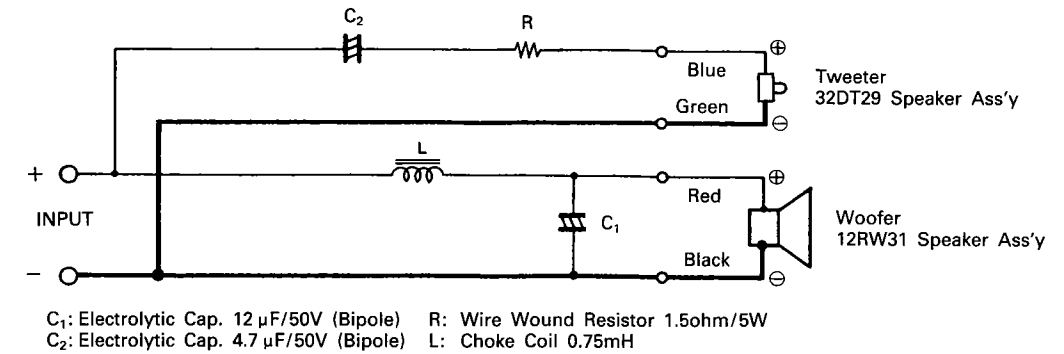
EXPLODED VIEW



PARTS LIST OF SC-F10 EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty
● 1	SCF 1000 101	Cabinet Sub. Ass'y		2 ^S
● 2	SCF 1000 110	:Network Ass'y		2
● 3	SCF 1000 109	:12RW31 Speaker Ass'y	Woofers	2
● 4	SCF 1000 103	:Woofers Ring		2
● 5	SCF 1000 108	:32DT29 Speaker Ass'y	Tweeter	2
● 6	SCF 1000 104	:Tweeter Ring		8
● 7	SCF 1000 102	:Grille Board Ass'y		2
8	SCF 1000 118	:Rating Sheet		2
9	SCF 1000 116	:Serial No. Sheet		2
10				
11				
12				
SCREWS				
51	SCF 1000 121	F.H. Tapping Screw		16
52	SCF 1000 122	F.H. Tapping Screw		8
53				
54				
PACKING & ACCESSORIES				
101	SCF 1000 119	Envelope Sub. Ass'y	Included S.P. Cord	1 ^S
101-1	SCF 1000 111	:Envelope		(1)
102	SCF 1000 113	:Cabinet Cover		2
● 103	SCF 1000 114	:Cushion		2
● 104	SCF 1000 112	:Carton Case		1
105	SCF 1000 116	:Serial No. Sheet		1
106				
NETWORK Ass'y (Parts No.: SCF 1000 110)				
71	—	2P Terminal Ass'y		2
72	—	1C Wire Ass'y (Red)	L=270	2
73	—	1C Wire Ass'y (Black)	L=270	2
74	—	1C Wire Ass'y (Blue)	L=270	2
75	—	1C Wire Ass'y (Green)	L=270	2
76	—	Chemicon 12μF/50V	C1 (Bipole)	2
77	—	Choke Coil 0.75mH	L	2
78	—	Resistor 1.5 ohm/5W	R	2
79	—	Chemicon 4.7μF/50V	C2 (Bipole)	2
80				2

SCHEMATIC DIAGRAM



NOTE ON PARTS LIST

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WARNING:

Parts marked with this symbol have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.