

# SERVICE MANUAL



## SERVICE SAFETY PRECAUTIONS (UL)

1. Use exact replacement parts for critical locations marked "⚠"
2. Return lead dress to original position and re-install protective covers.
3. Before returning to customer, test for shock hazard; use either method A or B:
  - A. Leakage test "cold":
    1. Unplug the AC cord; turn power switch ON.
    2. Connect one lead of High Voltage Insulation Tester to both prongs of the AC plug.
    3. Touch other lead to all exposed metal parts.
    4. Impedance measurement must be 0.3-5.0 Megohms.
  - B. Leakage test, "live" :
    1. Plug unit directly into the AC outlet; do not use isolation transformer.
    2. Connect one lead of the Leakage Current Tester to earth ground.
    3. Touch other lead to all exposed metal parts.
    4. Leakage measurement must be less than 0.5 milliamps.

616

CASSETTE TAPE DECK

616

CASSETTE TAPE DECK

# CONTENTS

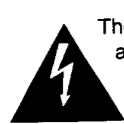
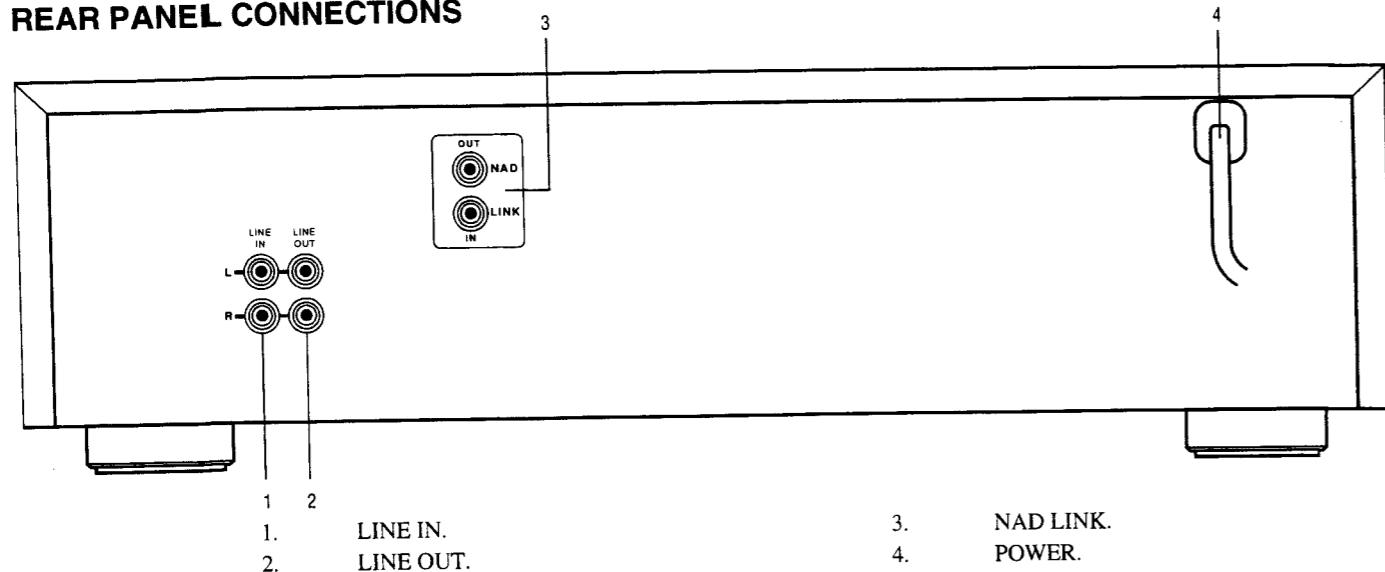
Page	
3	REAR/FRONT PANEL
4	SPECIFICATION
5-6	WIRING DIAGRAM
7	BLOCK DIAGRAM
8	CHASSIS-EXPLODED VIEW
9	CHASSIS-EXPLODED VIEW PARTS LIST
10	ADJUSTMENT PROCEDURE
11	ADJUSTMENT POINT
12	MICROPROCESSOR CONNECTION DIAGRAM
13-14	MICROPROCESSOR TERMINAL DESCRIPTION
15-16	PRINTED CIRCUIT BOARD
17-18	SCHEMATIC DIAGRAM
19-20	SCHEMATIC DIAGRAM
21-22	PRINTED CIRCUIT BOARD-PARTS LIST
23-24	TAPE MECHANISM-EXPLODED VIEW
25	IC BLOCK DIAGRAM
26	PRINTED CIRCUIT BOARD
27	PACKING VIEW

## SERVICE SAFETY PRECAUTIONS

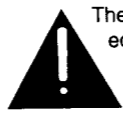
1. Use exact replacement parts for critical locations, marked "⚠" on parts list.
2. Return lead dress to original position, and re-install protective covers.
3. Before returning to customer, test for shock hazard; use either method A or B:
  - A. Leakage test, "cold":**
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    3. Touch other lead to all exposed metal parts.
    4. Leakage measurement must be less than 0.5 milliamps.

**WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE**

### REAR PANEL CONNECTIONS

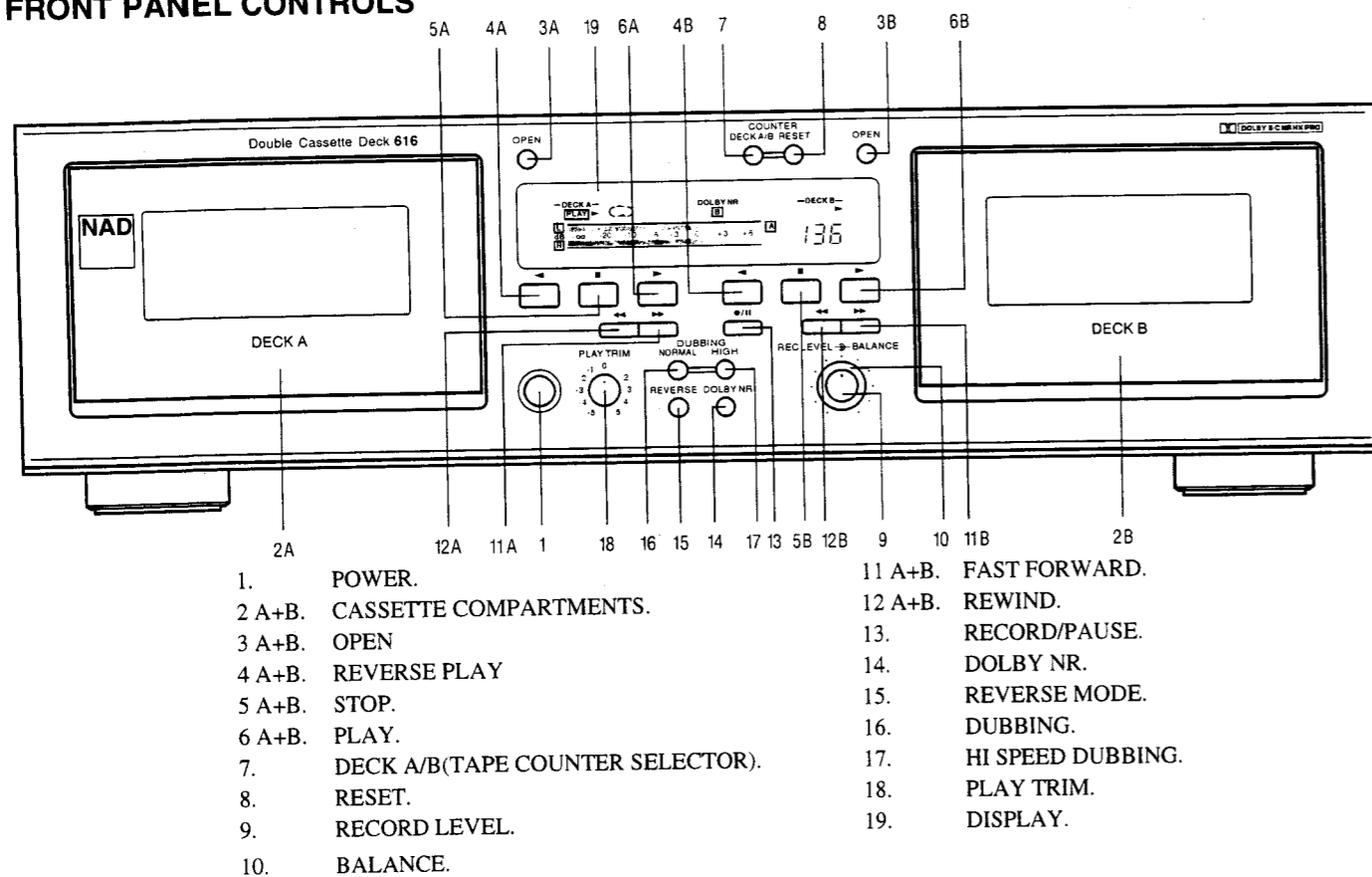


The lightning flash with arrowhead, within an equilateral triangle is intended to alert the user of the presence of un-insulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance

### FRONT PANEL CONTROLS

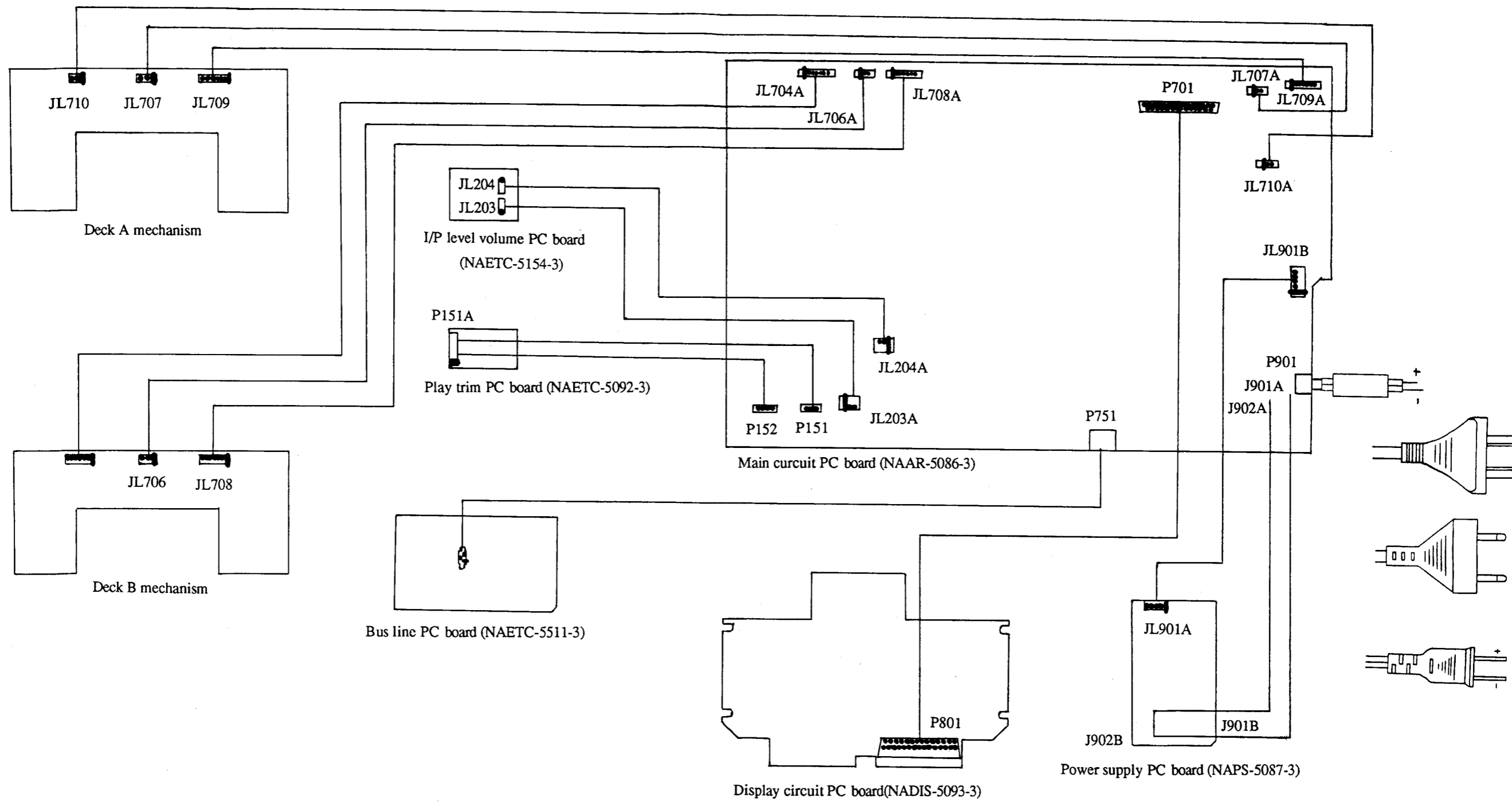


## SPECIFICATIONS

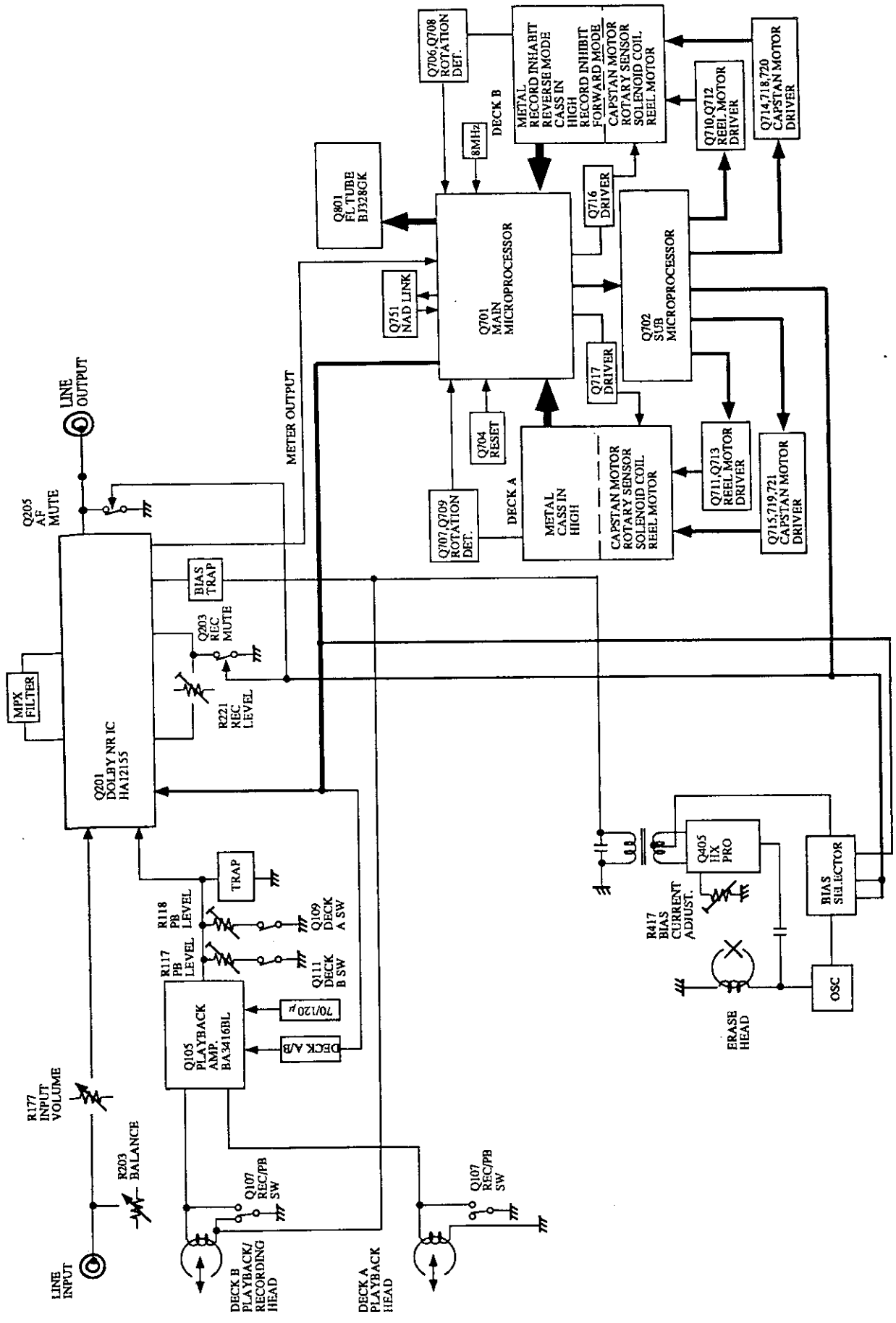
Track Format:	4-track, 2-channels
Erase System:	AC erase
Tape Speed:	4.8 cm/sec. (1-7/8 i.p.s.) 9.6 cm/sec. (3-3/4 i.p.s.) (high-speed dubbing)
Wow and Flutter:	0.07 % (WRMS)
Frequency Response:	20 — 15,000 Hz (Normal) (30 — 14,000 Hz ± 3 dB) 20 — 16,000 Hz (High) (30 — 15,000 Hz ± 3 dB) 20 — 17,000 Hz (Metal) (30 — 16,000 Hz ± 3 dB)
S/N Ratio:	Dolby NR off: 58 dB (metal position tape) A noise reduction of 10 dB above 5 kHz and 5 dB at 1 kHz is possible with Dolby B NR. A noise reduction of 20 dB at 5 kHz is possible with Dolby C NR.
Input Jacks:	Line IN: 2 Input sensitivity: 80 mV Input impedance: 50 kohms
Outputs:	Line OUT: 2 Standard output level: 500 mV (0 dB) Optimum load impedance: over 50 kohms
Motors:	DC servo motor × 2. DC motor × 2
Heads:	REC/PB: 1 PB: 1 ERASE: 1
Power Supply:	European and Australian models: AC 230V, 50 Hz U.S.A. and Canadian models: AC 120V, 60 Hz
Power Consumption:	230V/0.16A 120V/0.32A
Dimensions:	435(W) × 125(H) × 310(D) mm
Weight:	5.8kg. (12.8 lbs.)

Specifications and external appearance are subject to change without notice because of product improvements.

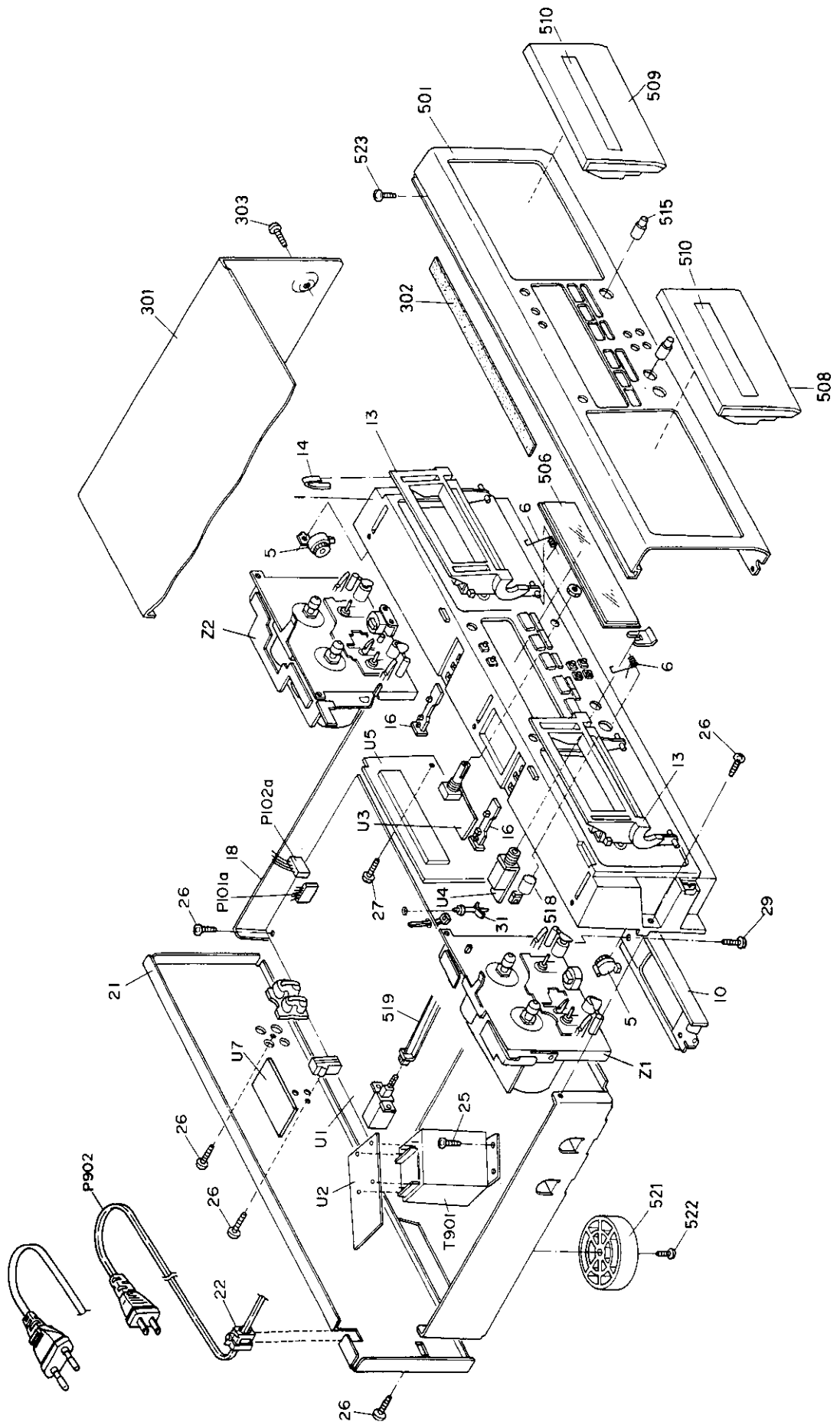
# WIRING DIAGRAM



# IBLOCK DIAGRAM



# CHASSIS-EXPLODED VIEW



# PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	27110884Y	Front bracket ass'y	P101a	2009990350ULY	NSAS-6P0487,Socket for deck A
5	28400282	Damper	P102a	2009990315ULY	NSAS-14P0449,Socket for deck B
6	27180477A	Spring A	P902	253192HIT	AS-UC-6#18,Power supply cord <AH>
10	27130741Y	Bracket F		253198HIT	AS-BS, Power supply cord <B>
13	27301792AY	Cassette frame		253197HIT	AS-SAA, Power supply cord <B1>
14	27180435	Spring	T901	253193HIT	AS-CEE, Power supply cord <C>
16	28325120Y	Knob,eject		2301049Y	NPT-1223D,Power transformer <AH>
18	27100295Y	Chassis		2301050Y	NPT-1223P,Power transformer <B,B1,C>
19	27130747Y	Bracket PC board	U1	1N219586-3Y	NAAR-5086-3, Main circuit pc board ass'y
21	27122072AY	Rear panel <AH>	U2	1N219587-3Y	NAPS-5087-3, Power supply pc board ass'y
22	27122073Y	"Rear panel <B,B1,C>	U3	1N219592-3Y	NAETC-5092-3, Play trim pc board ass'y
25	830440069	Cord bushing	U4	1N219554-3Y	NAETC-5154-3, I/P level volume pc board ass'y
26	838130088	4TTC+6C(BC), Self-tapping screw	U5	1N219593-3Y	NADIS-5093-3, Display circuit pc board ass'y
27	833430080	3TTB+8B, Self-tapping screw	U7	1N219511-3Y	NAETC-5511-3, Bus line pc board ass'y
28	838130088	3TTP+8P(BC), Self-tapping screw	W701	2047291512Y	NCFC-291512,Flat cable
29	835430068	3TTB+8B, Self-tapping screw	Z1	244196Y	NDM-187,Deck mechanism ass'y
31	27190480-1Y	3TTF+6B(BC), Self-tapping screw	Z2	244197Y	NDM-188,Deck mechanism ass'y
301	28184587AY	PCB-8L,Holder			
302	28140837	Top cover			
303	838430088	Cushion			
501	27211709AY	3TTB+8B(BC),Self-tapping screw			
506	28191710Y	Front panel			
508	27301864Y	Clear plate			
509	27301865Y	Cassette lid A			
510	28191715Y	Cassette lid B			
515	28325121Y	Window			
516	28325122Y	Knob(Rec)			
517	28324986	Knob(Bal)			
518	28325124Y	Knob(Bal)			
519	27273135BY	Knob(Pow)			
521	27175292Y	Joint			
522	838130088	Leg ass'y			
523	833430080	3TTB+8B, Self-tapping screw			
524	833430088	3TTP+8P(BC), Self-tapping screw			
		3TTP+8B(BC), Self-tapping screw			

NOTE: <AH> : U.S.A., Canadian model only  
 <B> : U.K. model only  
 <B1> : Australian model only  
 <C> : European model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK  $\Delta$  ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

# ADJUSTMENT PROCEDURES

## PRECAUTIONS

1. Before adjustment, clean the following parts with an alcohol moistend swab.
  - \* record/playback head
  - \* erase head
  - \* pinch roller
  - \* capstan
2. Do not use magnetized screwdriver for adjustments.
3. Demagnetize record/playback head with a head demagnetizer.

## TEST EQUIPMENT/TOOLS REQUIRED:

- Audio oscillator
- Digital frequency counter
- Oscilloscope
- Attenuator
- AC voltmeter
- Non-magnetic screwdriver
- Test tapes
  - TCC-153 :10kHz, -15dB
  - MTT-111 :3kHz, -10dB
  - MTT-150 :Dolby level calibration  
400Hz, tone 200nWb/m

### Tape speed adjustment

Connect the digital frequency counter to the line output terminal.

Load the test tape MTT-111 into the cassette holder.

Connect the test point J285 to the ground to put the unit into test mode.

Press the forward play button twice to put the unit into high speed mode.

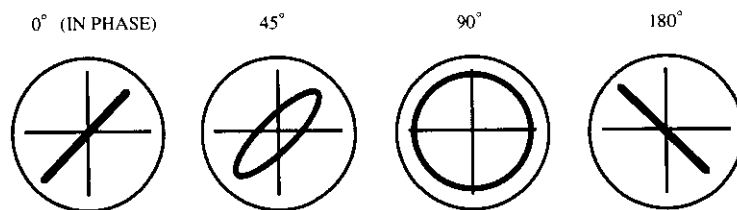
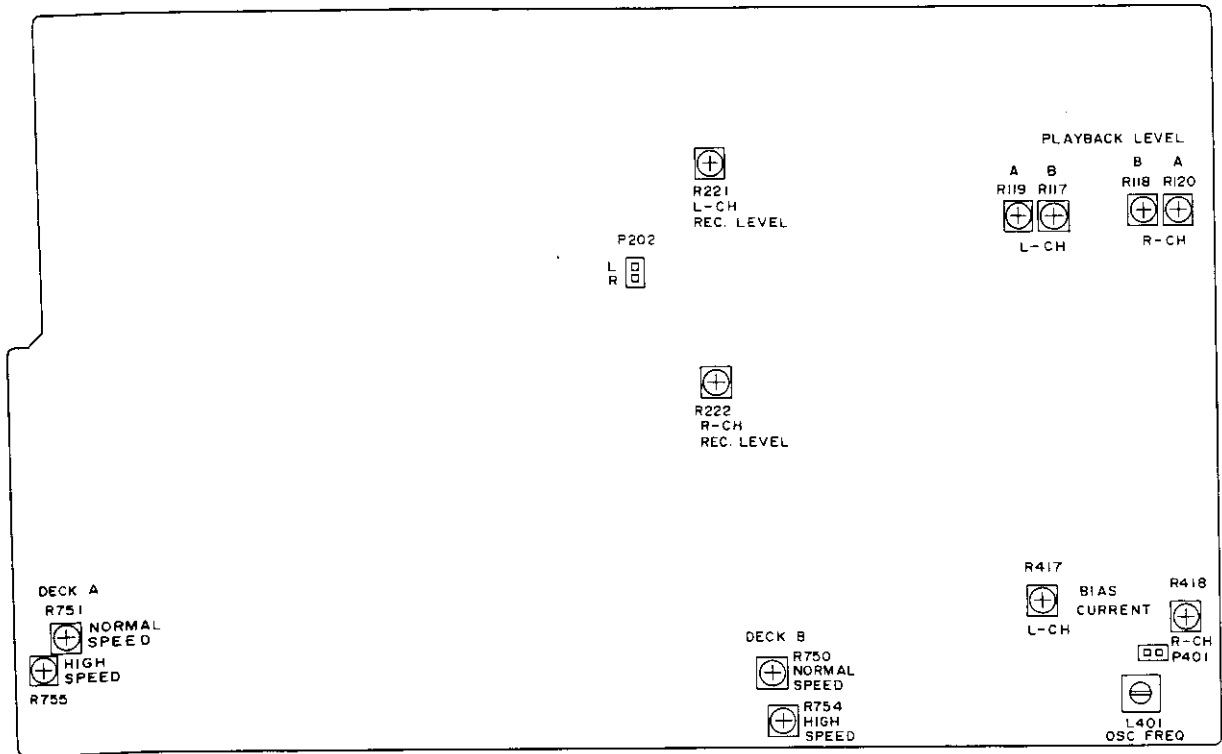
Adjust the trim resistors R755(Deck A) and R754(Deck B) so that the frequency counter reading becomes 6000Hz to 6020Hz.

Press the forward play button to put the unit into normal speed mode.

Adjust the trim resistors R751(Deck A) and R750(Deck B) so that the frequency counter reading becomes 3000Hz to 3010Hz.

Item	Connection of instrument	Line input	Test tape	Mode	Output indicator	Adjustment point	Adjust for	Remarks
Head azimuth	AC voltmeter and oscilloscope to output terminal		TCC-153	Playback	AC voltmeter and Oscilloscope Fig.3	Head azimuth screw Forward:Left side Reverse:Right side	Maximum output with minimum phase error	Figure 1
Playback level	AC voltmeter to test point P202		MTT-150	Playback	AC voltmeter	Deck A R119(Left channel) R120(Right channel) Deck B R117(Left channel) R118(Right channel)	300mV	
Oscillator block	Frequency counter to test point P401		Metal tape XS-C90	Stop	Frequency counter	L401	107 ± 2kHz	Test mode When you press the stop key the deck goes into metal position recording mode.
Bias current	Figure 2	1kHz, -23dB and 12kHz, -23dB	UD-1 C-90	Record				Record 5s at 1kHz then 5s at 12kHz.
				playback	AC voltmeter	R417(Left channel) R418(Right channel)	O/P level of both tones within 1dB	Repeat RECORD/PLAY procedure until correctly adjusted.
Recording level	Figure 2	1kHz 350mV	UD-1 C-90	Recording	AC voltmeter	Attenuator	350mV	Repeat RECORD/PLAY procedure until correctly adjusted.
				Recording/playback	AC voltmeter	R221(Left channel) R222(Right channel)	Signals of recording and playback become same level.	





Confirming phase relationship  
Fig.1

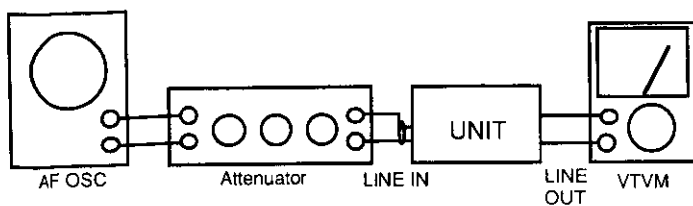


Fig. 2

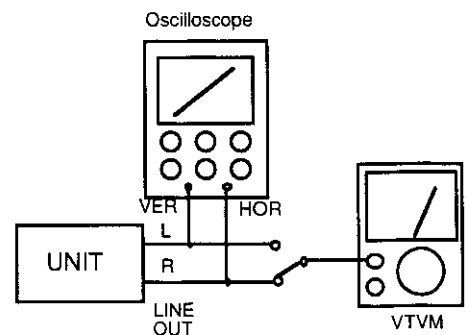


Fig.3



# MICROPROCESSOR-TERMINAL DESCRIPTIONS

## MAIN MICROPROCESSOR

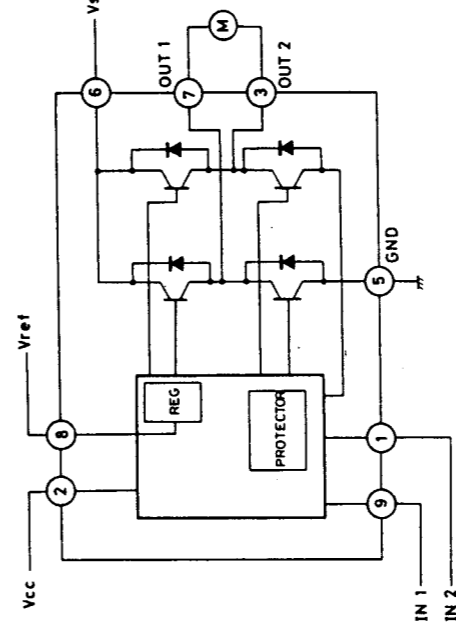
Pin No.	Terminal	Description
1	A B.C.	Bias current change-over control output pin for Deck A
2	B B.C.	Bias current change-over control output pin for Deck B
3	A R/P	Recording/playback head change-over output pin for Deck A
4	B R/P	Recording/playback head change-over output pin for Deck B
5	G1	Grid output pin
6	G2	Grid output pin
7	G3	Grid output pin
8	G4	Grid output pin
9	P16	Segment output pin
10	P15	Segment output pin
11	P14	Segment output pin
12	P13	Segment output pin
13	P12	Segment output pin
14	P11	Segment output pin
15	P10	Segment output pin
16	P9	Segment output pin
17	P8	Segment output pin
18	P7	Segment output pin
19	P6	Segment output pin
20	P5	Segment output pin
21	P4	Segment output pin
22	P3	Segment output pin
23	P2	Segment output pin
24	P1	Segment output pin
25	Vdisp	
26	CLK	Clock output pin
27	STB1	Strobe output pin
28	DATA	Data output pin
29	STB2	Strobe output pin.
30	P-OFF	Detection input pin for stoppage of electric current
31	TEST	Test pin
32	Vss	Power supply terminal

Pin No.	Terminal	Description
33	XIN	Ceramic resonator connection pin
34	XOUT	Ceramic resonator connection pin
35	RST	Reset input
36	DOL B/C	Dolby B/C change-over output pin
37	DOL ON/OFF	Dolby change-over output pin
38	R.REC INH	Recording inhibiting detection input pin for reverse side of Deck B.
39	CrO2	High position detection input pin for reverse side of Deck B.
40	CASS IN	Cassette tape detection input pin for reverse side of Deck B.
41	F.REC INH	Recording inhibiting detection input pin for forward side of Deck B.
42	MTL	Metal position detection input pin for reverse side of Deck B.
43	B R.S.	Rotation detection input pin for reel stand of Deck B.
44	FT	Adjustment mode input pin
47	CrO2	High position detection input pin for reverse side of Deck A.
48	CASS IN	Cassette tape detection input pin for reverse side of Deck A.
49	F.REC INH	Recording inhibiting detection input pin for forward side of Deck A.
50	MTL	Metal position detection input pin for reverse side of Deck A.
51	A.R.S.	Rotation detection input pin for reel stand of Deck A.
52	B/SOL.	Solenoid coil drive output pin of Deck B
53	A/SOL.	Solenoid coil drive output pin of Deck A
54	Lch mot	Input pin for level meter of left channel
55	Rch mot	Input pin for level meter of right channel
56	KEY1	Operation key connection pin
57	KEY2	Operation key connection pin
58	KEY3	Operation key connection pin
59	KEY4	Operation key connection pin
60	RI IN	Bus signal input pin
61	RI OUT	Bus signal output pin
62	GND	Ground terminal
63	Vass	Power supply pin
64	Vref	Power supply pin

## SUB-MICROPROCESSOR

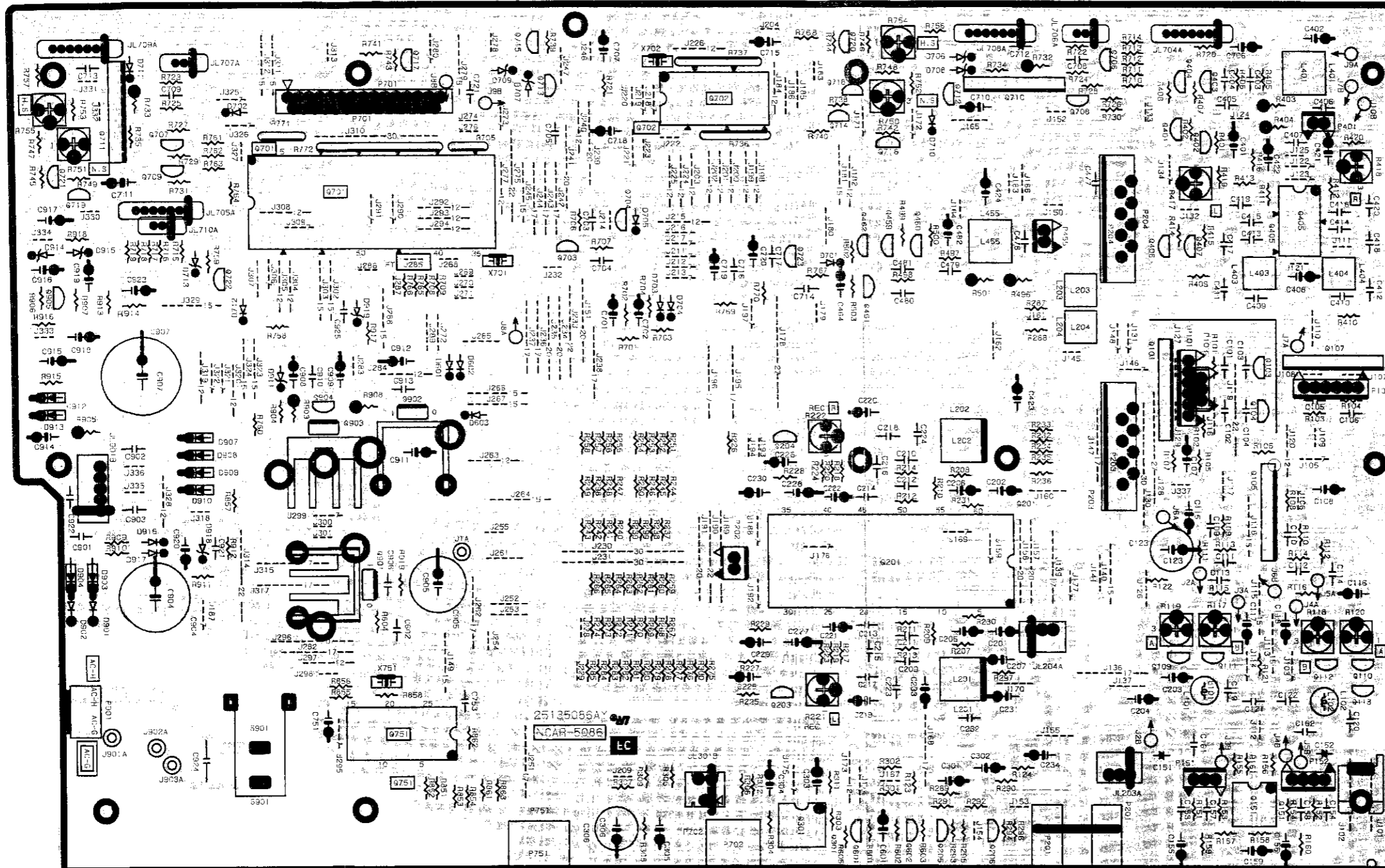
Pin No.	Function	Description
1	XOUT	Ceramic resonator connection pins
2	XIN	Connect the 6.0MHz ceramic resonator.
3	RST	System reset input pin
4	A OPLY	Reel motor control output pin for Deck A
5	A REW	Rewind control output pin for Deck A
6	A FF	Fast forward control output pin for Deck A
7	A CAP	Capstan motor control output pin for Deck A
8	A X1/X2	Capstan motor rotation speed control output for deck A
9	A NORM	Recording equalizer and bias current selector output pin for deck A
10	A HIGH	Recording equalizer and bias current selector output pin for deck A
11	B OPLY	Reel motor control output pin for Deck B
12	B REW	Rewind control output pin for Deck B
13	B FF	Fast forward control output pin for Deck B
14	GND	Ground pin
15	PB A/B	Playback amplifier selector pin
16	B CAP	Capstan motor control output pin for Deck B
17	B X1/X2	Capstan motor rotation speed control output for deck B
18	B NORM	Recording equalizer and bias current selector output pin for deck B
19	B HIGH	Recording equalizer and bias current selector output pin for deck B
20	L.MUTE	Audio muting control output pin
21	A/R.M.A.	Recording muting control pin for deck A
22	B/R.M.	Recording muting control pin for deck B
23	STB2	Strobe input pin
24	DATA	Data input pin
25		
26	CLK	Clock input pin
27	Vcc	Power supply pin
28	Vcc	Power supply pin

## TA-7291S (MOTOR DRIVE)

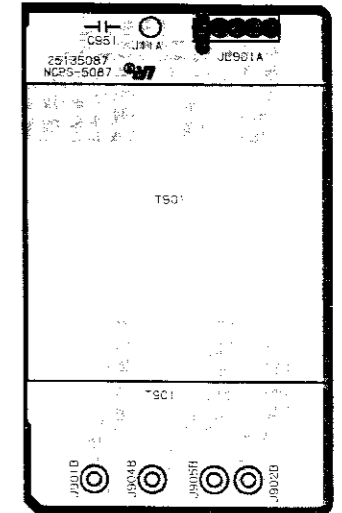


INPUT	OUTPUT		MODE	
	IN 1	OUT 1		OUT 2
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

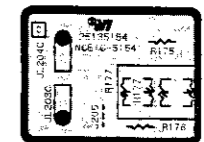
PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



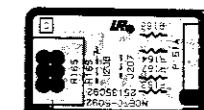
MAIN CIRCUIT PC BOARD



POWER SUPPLY  
PC BOARD

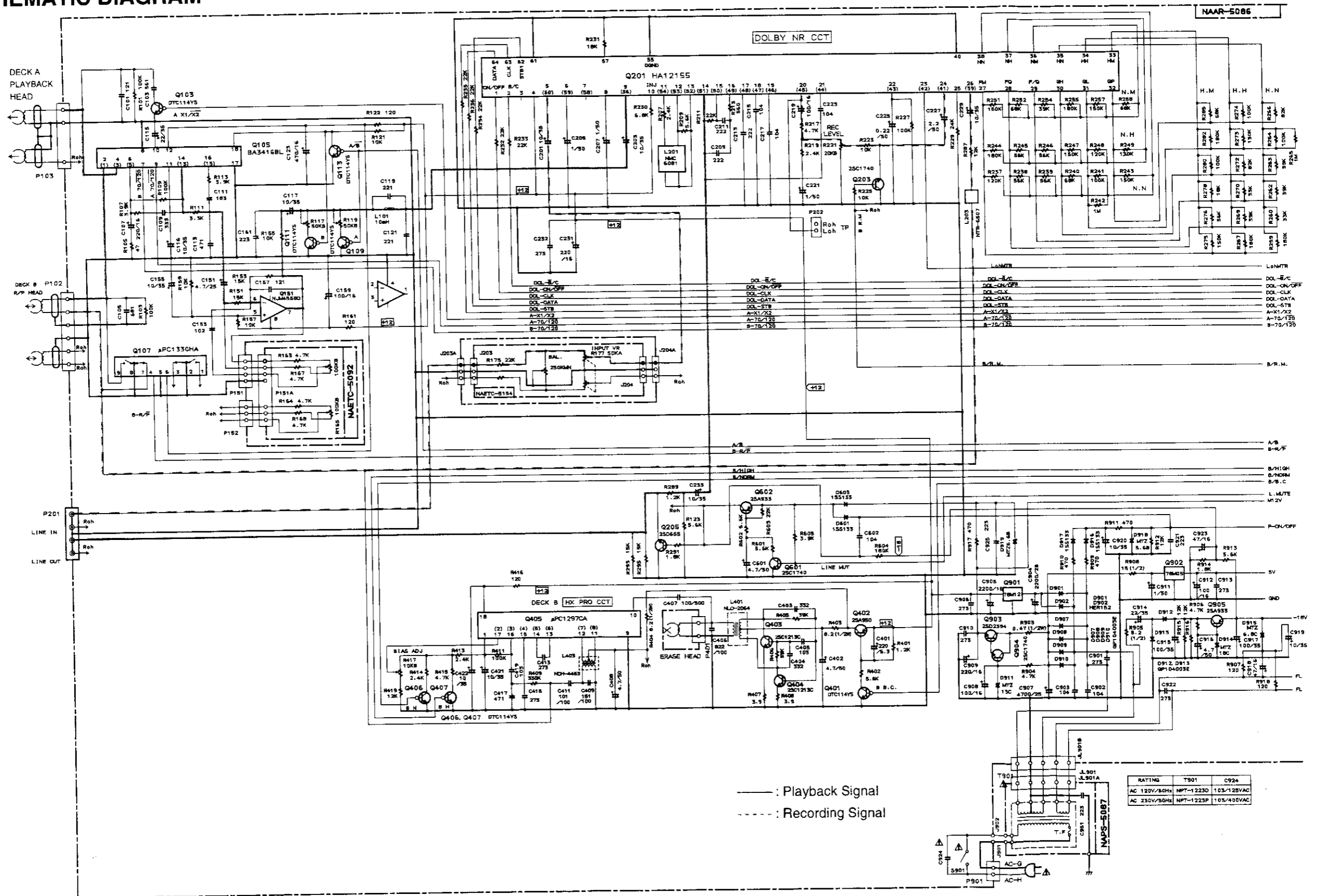


I/P LEVEL VOLUME  
PC BOARD



PLAY TRIM PC BOARD

# SCHEMATIC DIAGRAM





# PRINTED CIRCUIT BOARD-PARTS LIST

## MAIN CIRCUIT PC BOARD (NAAR-5086-3)

CIRCUIT NO.	PART NO.	DESCRIPTION
		ICs
Q105	22240767	BA3416BL
Q107	22240147	μPC1330HA
Q151	2228 11	NJM4558D-D
Q201	22240544	HA12155NT
Q405	222959	μPC1297CA
Q701	22240822	TMP87CH14N-1139
Q702	22240823	TMP47C103N-J794
Q710,Q711	22240239	TA7291S
Q751	22240844	HD404222C81S
Q901	222780125MIT	78M12
Q902	222780055NEC	78M05HF
		Transistors
Q103,Q104	221281	DTC114YS
Q109-Q113	221281	DTC114YS
Q203,Q204	2213284 or 2213285	2SC1740S-R or 2SC1740S-S
Q205,Q206	2211705 or 2211706	2SD655-E or 2SD655-F
Q401	221281	DTC114YS
Q402	2211504	2SA950-Y
Q403,Q404	2201883	2SC1213-C
Q406,Q407	221281	DTC114YS
Q601	2213284 or	2SC1740S-R or
Q706,Q707	2213285	2SC1740S-S
Q602,Q905	2213354 or 2213355	2SA933S-R or 2SA933S-S
Q703,Q722	2213090	DTA114YS
Q704	221281	DTC114YS
Q708,Q709	221281	DTC114YS
Q712,Q713	221281	DTC114YS
Q714-Q717	2211705 or 2211706	2SD655-E or 2SD655-F
Q718,Q719	221281	DTC114YS
Q720,Q721	2211945 or 2212304	2SK246-GR or 2SK381-D
Q723	221281	DTC114YS
Q903	2202705 or 2202706	2SD2394-E 2SD2394-F
Q904	2213285 or 2213284	2SC1740S-S or 2SC1740S-R
		Diodes
D601,D603	223163	1SS133
D702	223163	1SS133
D704,D705	223163	1SS133
D706,D707	224450752	MTZ7.5B, Zener
D708,D709	224450472	MTZ4.7B, Zener
D710-D711	223163	1SS133
D901,D902	22380031	HER152
D907-D910	22380035	GP104003E
D911	224451303	MTZ13C, Zener
D912,D913	22380035	GP104003E
D914	224451803	MTZ18C, Zener
D915	224470683	MTZ16.8C, Zener
D916,D917	223163	1SS133
D918,D919	224450562	MTZ5.6B, Zener

CIRCUIT NO.	PART NO.	DESCRIPTION
		Coils
L101,L102	231089	NCH-2137, CHOKE
L201,L202	233436	NMC-6081, MPX
L203,L204	231221	NTR-6507, TRAP
L401	231223	NLO-2064, OSC
L403,L404	231218	NCH-4453, CHOKE
		Resonators
X701	3010190	CST8.00MTW, Ceramic
X702	3010149	CST6.00MGW, Ceramic
X751	3010163	CST4.19MGW
		Capacitors
C103,C104	374725614	560pF±5%,50V,Plastic
C105,C106	374726814	680pF±5%,50V,Plastic
C107,C108	354742219	220μ F,16V,Elect.
C109,C110	374723334	0.033μ F±5%,50V,Plastic
C111,C112	374721834	0.018μ F±5%,50V,Plastic
C115	354762209	22μ F,3.5V,Elect.
C116-C118	354761009	10μ F,3.5V,Elect.
C123	354744719	470μ F,16V,Elect.
C151,C152	352950476	4.7± F,25V,Non Pola Elect
C153,154	374721024	0.01μ F±5%,50V,Plastic
C155,C156	354761009	10μ F,3.5V,Elect.
C159	354741019	100μ F,16V,Elect.
C201-C204	354761009	10μ F,3.5V,Elect.
C205-C207	354780109	1μ F,50V,Elect.
C209-C214	374722224	2200pF±5%,50V,Plastic
C215-C218	374721044	0.1μ F±5%,50V,Plastic
C219,C220	354741019	100μ F,16V,Elect.
C221,C222	354780109	1μ F,50V,Elect.
C223,C224	374721044	0.1μ F±5%,50V,Plastic
C225,C226	354782299	0.22μ F,50V,Elect.
C227,C228	354780229	2.2μ F,50V,Elect.
C229,C230	354761009	10μ F,3.5V,Elect.
C231	354742219	220μ F,16V,Elect.
C232	374722734	0.027μ F±5%,50V,Plastic
C233,C234	354761009	10μ F,3.5V,Elect.
C401	354722219	220μ F,6.3V,Elect.
C402	354780479	4.7μ F,50V,Elect.
C403,C404	374723324	3300pF±5%,50V,Plastic
C405	374721034	0.01μ F±5%,50V,Plastic
C406	370138224	8200pF±5%,100V,Plastic
C408	354780479	4.7μ F,50V,Elect.
C409,C410	370131514	150pF±5%,100V,Plastic
C411,C412	370131014	100pF±5%,100V,Plastic
C413-C416	374722734	0.027μ F±5%,50V,Plastic
C417,C418	374724714	470pF±5%,50V,Plastic
C419,C420	374721034	0.01μ F±5%,50V,Plastic
C421,C422	354761009	10μ F,3.5V,Elect.
C601	354780479	4.7μ F,50V,Elect.
C602	37421044	0.1μ F±5%,50V,Plastic
C702	354761009	10μ F,3.5V,Elect.
C704	374721044	0.1μ F±5%,50V,Plastic
C706,C707	354721019	1μ F,50V,Elect.
C710,C711	354741019	100μ F,16V,Elect.
C715,C720	354780109	1μ F,50V,Elect.
C901,C906	374722734	0.027μ F±5%,50V,Plastic

CIRCUIT NO.	PART NO.	DESCRIPTION
C902,C903	374721044	0.1μ F±5%,50V,Plastic
C904	393352227	2200μ F,25V,Elect.
C905	393342227	2200μ F,16V,Elect.
C907	393354727	4700μ F,25V,Elect.
C908,C912	354741019	100μ F,16V,Elect.
C909	354742219	220μ F,16V,Elect.
C910,C913	374722734	0.027μ F±5%,50V,Plastic
C911	354780109	1μ F,50V,Elect.
C914	354762209	22μ F,3.5V,Elect.
C915,C917	354761019	100μ F,3.5V,Elect.
C916	354780479	4.7μ F,50V,Elect.
C918,C923	354744709	47μ F,16V,Elect.
C919,C920	354761009	10μ F,3.5V,Elect.
C922	374722734	0.027μ F±5%,50V,Plastic
C924	3500191	DE7150FZ103P, AC400V/125V, IS
		Resistors
R117-R120	5210265	N06HR50KBC, Trimming
R221,R222	5210263	N06HR20KBC, Trimming
R403,R404	453530824	8.2Ω±5%,1/2W,Metal
R417,R418	5210262	N06HR10KBC, Trimming
R705	49163392404	RM1/10IJ, 3.9K, Array
R732,R733	443524704	47Ω±5%,1/2W,Metal oxide
R736	49163392408	RM1/10IJ, 3.9K × 8, Array
R737	49163392410	RM1/10IJ, 3.9K × 10, Array
R750,R751	5210263	N06HR20KBC, Trimming
R754,R755	5210262	N06HR10KBC, Trimming
R903	453534794	0.47Ω±5%,1/2W,Metal
R905	453530824	8.2Ω±5%,1/2W,Metal
R908	443521504	15Ω±5%,1/2W,Metal oxide
		Plugs
P102	25055136	NPLG-6P120
P103	25055133	NPLG-3P117
P151	25055133	NPLG-3P117
P152	25055134	NPLG-4P118
P202	25055038	NPLG-2P29
P401	25055132	NPLG-2P116
P901	25055675	NPLG-2P63I
		Socket
P701	25050861	NSCT-29P656
		Wire traps
JL203a,JL204a	25050267	NSCT-3P95
JL901b	25050269	NSCT-5P97
P651B	25055624	NPLG-3P586
		Wire holders
JL704a	25051101	NSCT-7P888
JL706a,JL707a	25051097	NSCT-3P884
JL708a,JL709a	25051101	NSCT-7P888
JL710a	25051097	NSCT-3P884
		Terminal
P201	25045329	NPJ-4PDBL183
		Switch
S901	△ 25035636	NPS-111-L590P

## POWER SUPPLY PC BOARD (NAPS-5087-3)

CIRCUIT NO.	PART NO.	DESCRIPTION
JL901a	25051109	Wire holder NSCT-5P896, Wire holder

## PLAY TRIM PC BOARD (NAETC-5092-3)

CIRCUIT NO.	PART NO.	DESCRIPTION
R165	5104350	Resistor N09RGLC100KB15M, Variable
P151A	2009990355UL	Socket NSAS-14P0492

## DISPLAY PC BOARD (NADIS-5093-3)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q801	212130	FL tube BJ328GK
S801-S803	25035652	Switches NPS-111-S604, P SW
S806,S807	25035652	NPS-111-S604, P SW
S810-S821	25035652	NPS-111-S604, P SW

P801	25050893	Socket NSCT-29P688
	27190939Y	Holder FL

## I/P LEVEL VOLUME PC BOARD (NAETC-5154-3)

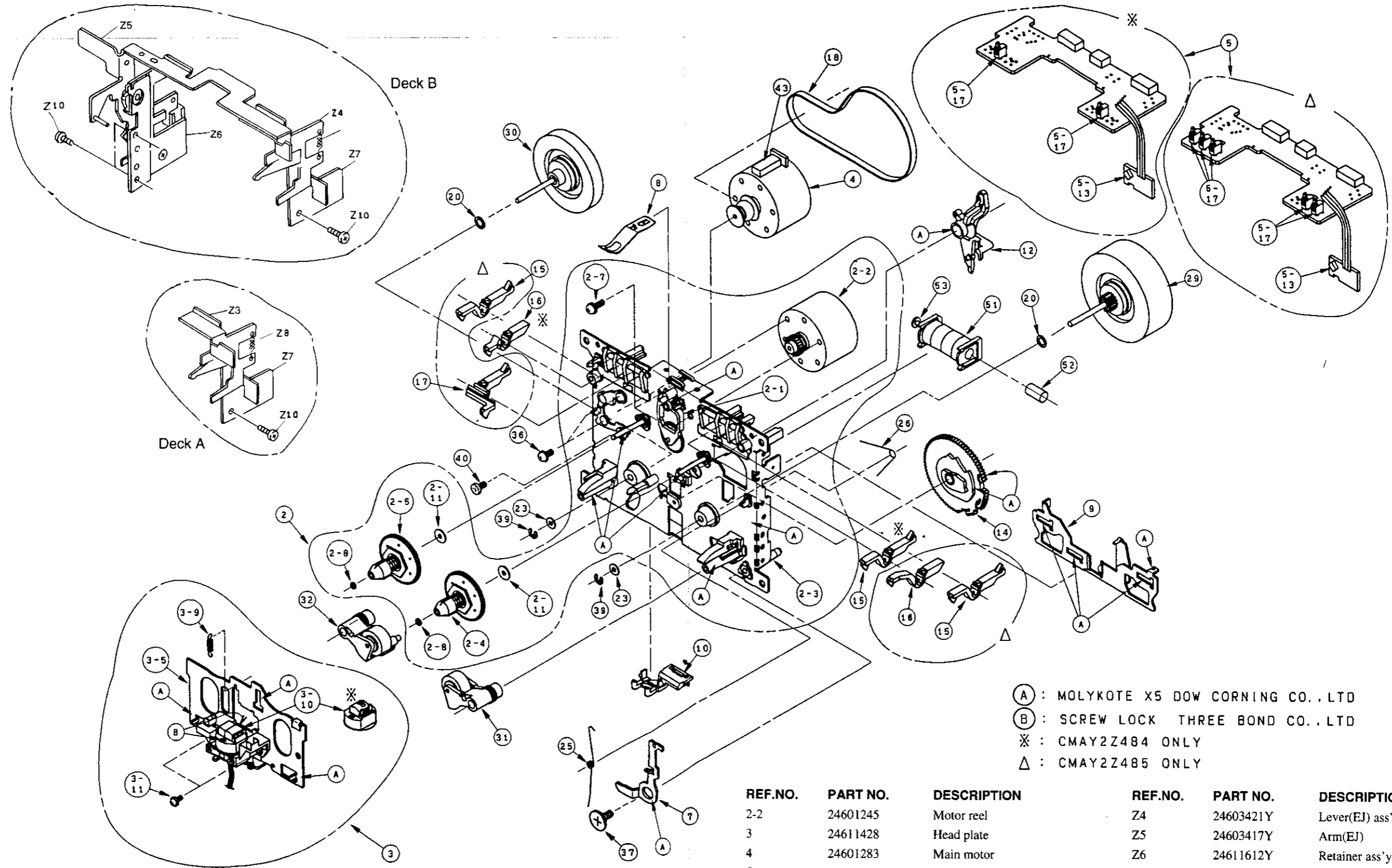
CIRCUIT NO.	PART NO.	DESCRIPTION
R177	5104351	Resistor N09RDQLC250KMN25M, Variable

## BUS LINE PC BOARD (NAETC-5511-3)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q651	22240936	IC Z86C0812PSC
Q652,Q654	2213355 or 2213354	Transistors 2SA933S-S or 2SA933S-R
Q653	2213285 or 2213284	2SA1740S-S or 2SA1740S-R
D651,D652	223163	Diodes 1SS133
X651	3010252	Coil CST12.0MTW, Ceramic
C651	354761009	Capacitor 10μ F,3.5V,Elect.
P651A	25051087	Wire holder NSCT-3P874
P652	25045395	Terminal NPJ-2PDYE221

NOTE: THE COMPONENTS IDENTIFIED BY MARK △ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

# MECHANISM-EXPLODED VIEW

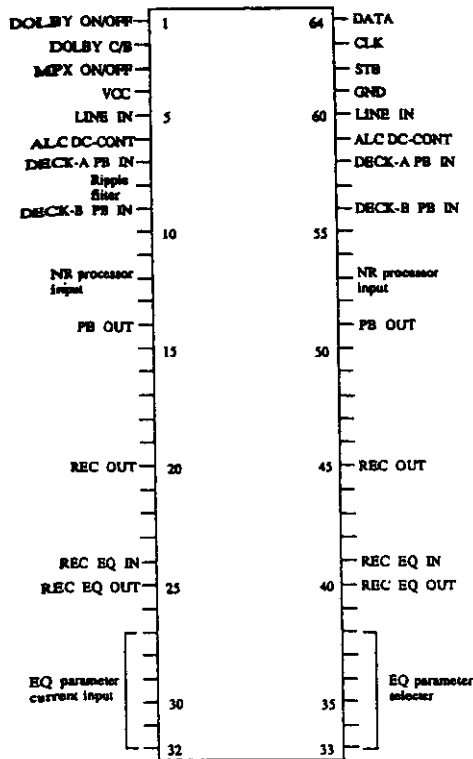


(A) : MOLYKOTE X5 DOW CORNING CO., LTD  
 (B) : SCREW LOCK THREE BOND CO., LTD  
 \* : CMAY2Z484 ONLY  
 Δ : CMAY2Z485 ONLY

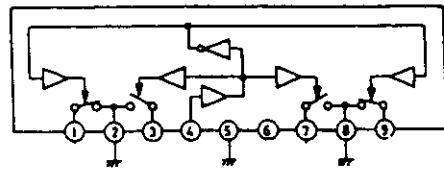
REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
2-2	24601245	Motor reel	Z4	24603421Y	Lever(EJ) ass'y, Deck B
3	24611428	Head plate	Z5	24603417Y	Arm(EJ)
4	24601283	Main motor	Z6	24611612Y	Retainer ass'y (L)
5	24606536	PCB control	Z7	24611614Y	Retainer ass'y (R)
18	24602551	Main belt	Z8	24605803Y	Spring
31	24602541	Pinch roller	Z9	8930301Y	Ring(E)
32	24602589	Pinch roller	Z10	833126047Y	2.6TTP+4S, Screw
Z3	24603415Y	Lever(EJ) ass'y, Deck A	Z11	82212005Y	2S+5F, Screw



# IC BLOCK DIAGRAM HA12155NT (DOLBY NR)



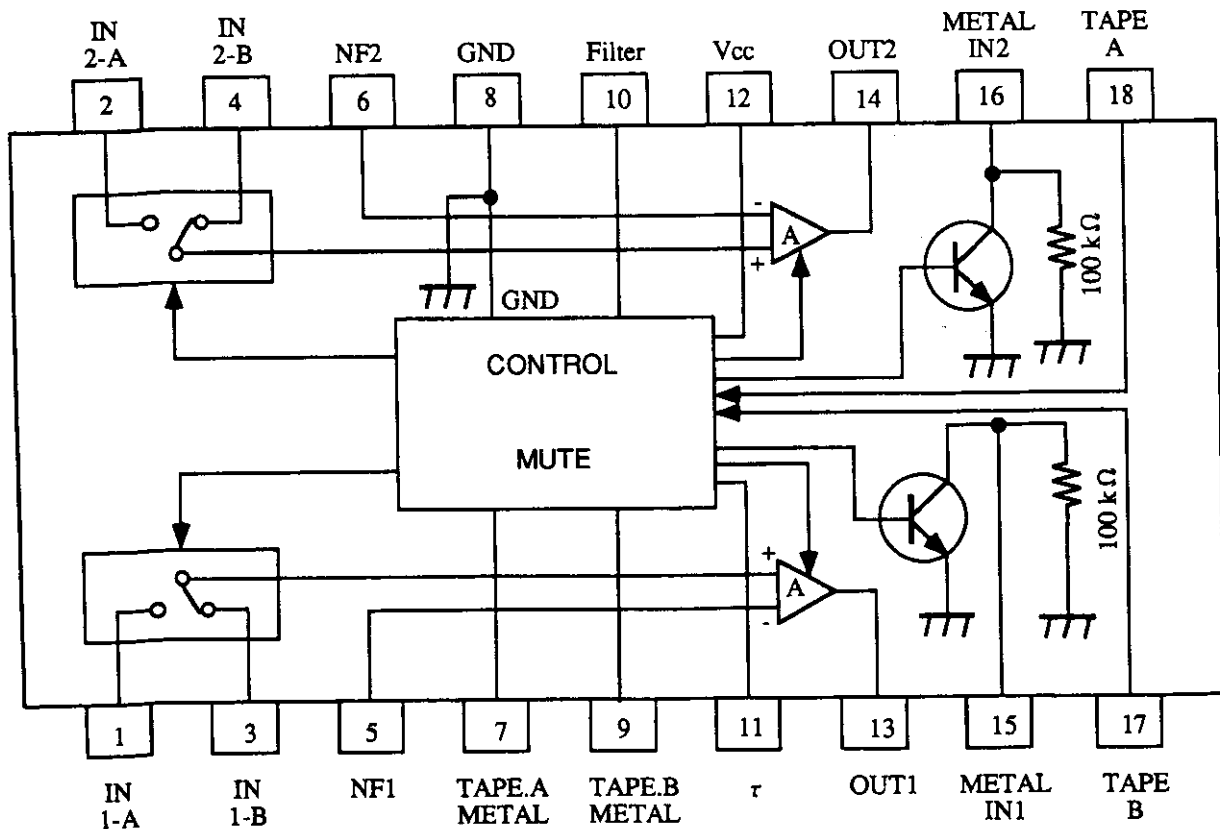
# μPC1330HA (REC/PB SW)



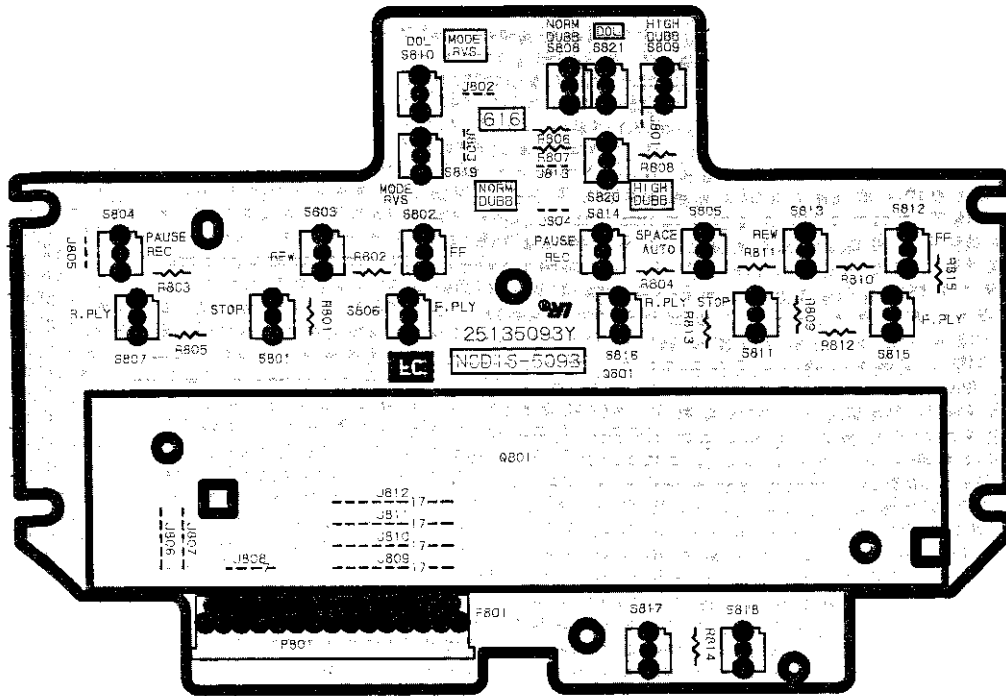
# μPC1330HA

Pin No.	Function
1, 9	PB. signal
2	GND
3, 7	REC signal
4	REC/PB SW control
5	GND
6	+B
8	GND

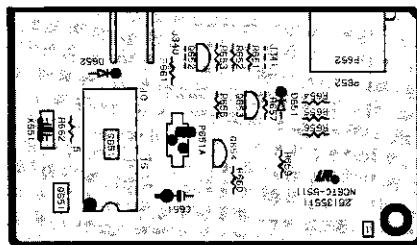
# BA3416BL (Dual Playback Preamplifier)



# PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE

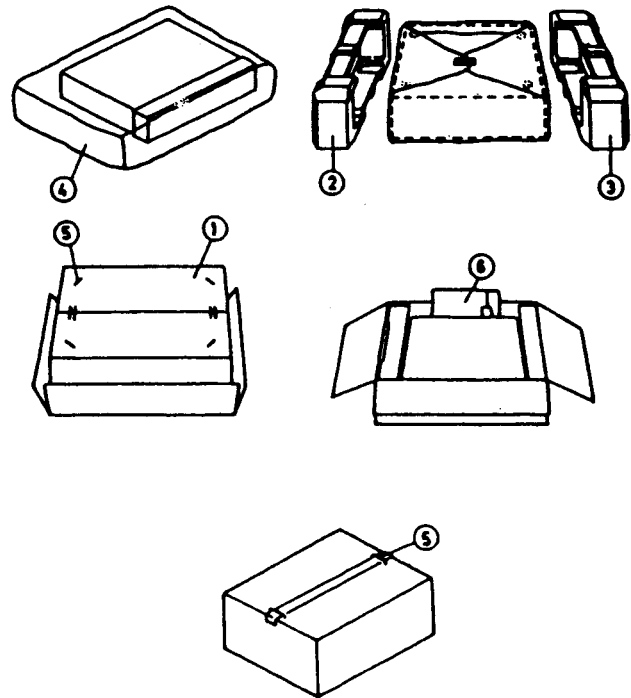


DISPLAY CIRCUIT PC BOARD



BUS LINE PC BOARD

# PACKING VIEW



REF.NO.	PART NO.	DESCRIPTION
1	29052882Y	Carton box
2	29091636-1BY	Pad L
3	29091637-1BY	Pad R
4	29100034-1Y	650 × 850mm, Styren bag
5	282301	Staple
6	Accessory bag ass'y	
	29342116Y	Instruction manual U7
	2010244Y	Connection cord
	29100097-1Y	350 × 250mm, Styren bag
	29365034Y	Warranty card <B1>
	29361759Y	Label CUL <AH>

NOTE: <AH> : U.S.A., Canadian model only  
 <B> : U.K. model only  
 <B1> : Australian model only  
 <C> : European model only