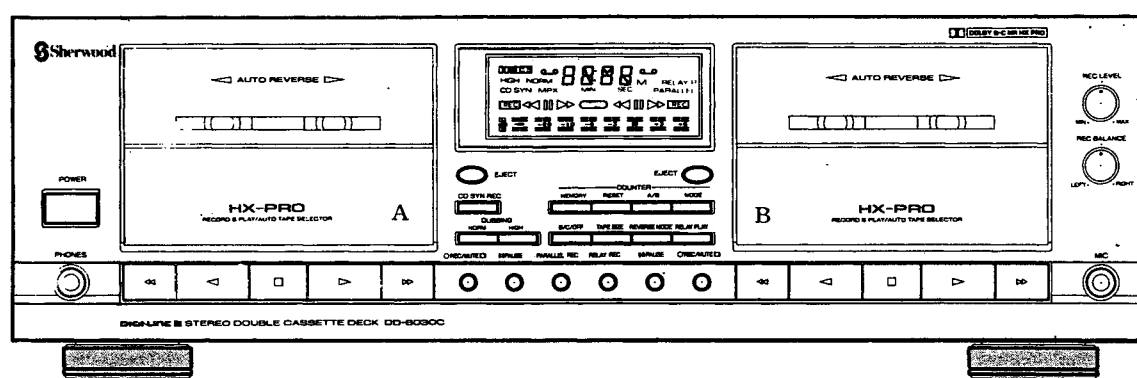


SERVICE MANUAL

DD-6030C

STEREO DOUBLE RECORDING CASSETTE DECK



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SAFETY PRECAUTION

WARNING

Service Should not be attempted by anyone unfamiliar with the necessary precautions on this player. The following precautions are necessary during servicing.

1. Many electrical and mechanical parts in this player have special safety characteristics that often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements: electrical components having such features are identified by $\triangle$ in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

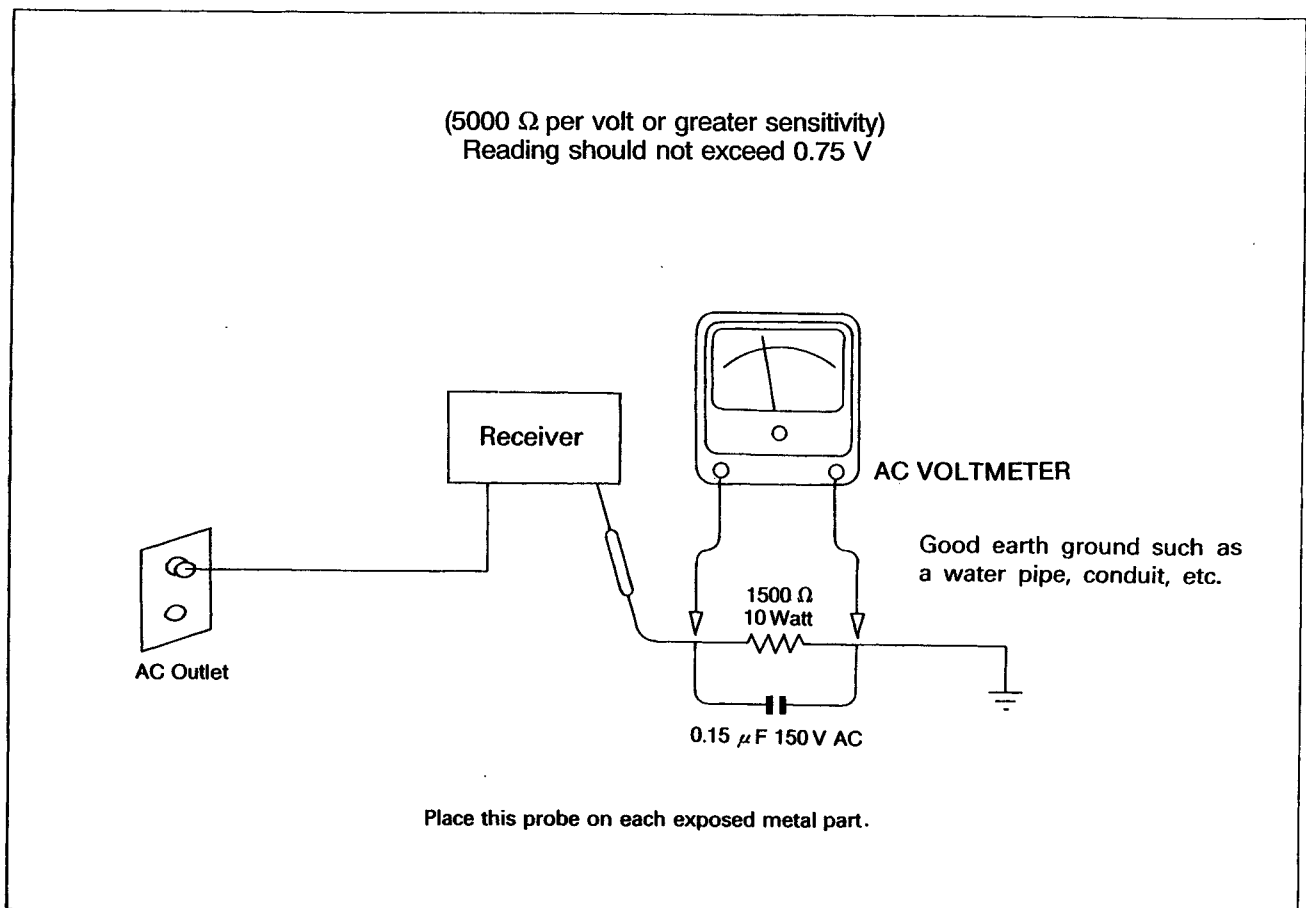
2. Before returning the set to the customer, always do an AC leakage current check on the exposed metal parts of the cabinet, such

as terminals, screw heads, metal overlays, etc., to be sure the set is safe to operate without danger of electrical shock.

Plug the AC line cord directly into a 120 V AC outlet(120 V AC version only). (Do not use a line isolation transformer during this check.)

Use an AC voltmeter, having 5000 Ω per volt or greater sensitivity, in the following manner: Connect a 1500 Ω 10 watt resistor paralleled by a 0.15 μ F 150 V AC capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metal parts, one at a time. Measure the AC voltage across the combination of a 1500 Ω resistor and a 0.15 μ F capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metal part. Voltage measured must not exceed 0.75 V RMS. This corresponds to 0.2 mA AC.

Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



SPECIFICATIONS

Track Configuration

The 4-track, 2-channel and rotary reverse stereo heads.

Recording System..... AC bias system (bias frequency: 105 kHz)

Mechanism

1-Motor, 1-Solenoid Mechanism

Heads

Rec/Playback Head.....Hard Permalloy

Erase Head.....Double Gap Ferrite

Tape Speed.....1 and 7/8 IPS (4.76 cm/s)

Wow Flutter (WRMS).....No More than 0.12%

Fast Winding Time (C-60).....About 120sec

Input Sensitivity Impedance

MIC..... 0.5 mV/4.7 k ohms

LINE 100 mV/47 k ohms

Output Level/Impedance

LINE 500 mV/1.2 k ohms

Signal to Noise Ratio (W.CCIR/ARM)

CrO₂ Tape with Dolby B/C NR.....More than 65/75 dB

CrO₂ Tape without Dolby NR.....More than 55 dB

Frequency Response (-20 dB REC Dolby NR off)

Normal Tape..... 30 Hz-17.5 kHz, ± 3 dB

CrO₂ Tape..... 30 Hz-17.5 kHz, ± 3 dB

Metal Tape..... 30 Hz-18.0 kHz, ± 3 dB

THD(1 kHz, 0 dB REC CrO₂ Tape D3).....No More than 1.5%

Channel Separation.....More than 40 dB

Power Consumption.....122 W

Power Requirements;

A : 120 V 60 Hz for American/Canadian Version

B : 120/220 V, 60/50Hz for Multi-voltage Version(switchable)

C : 230 V 50 Hz for General European Version

D : 230 V 50 Hz for German/Italian Version

E : 240 V 50 Hz for U.K/Australian Version

F : 230 V 50 Hz for Swiss/Scandinavian Version

Dimensions.....440(W) $\times$ 125(H) $\times$ 280(D)mm

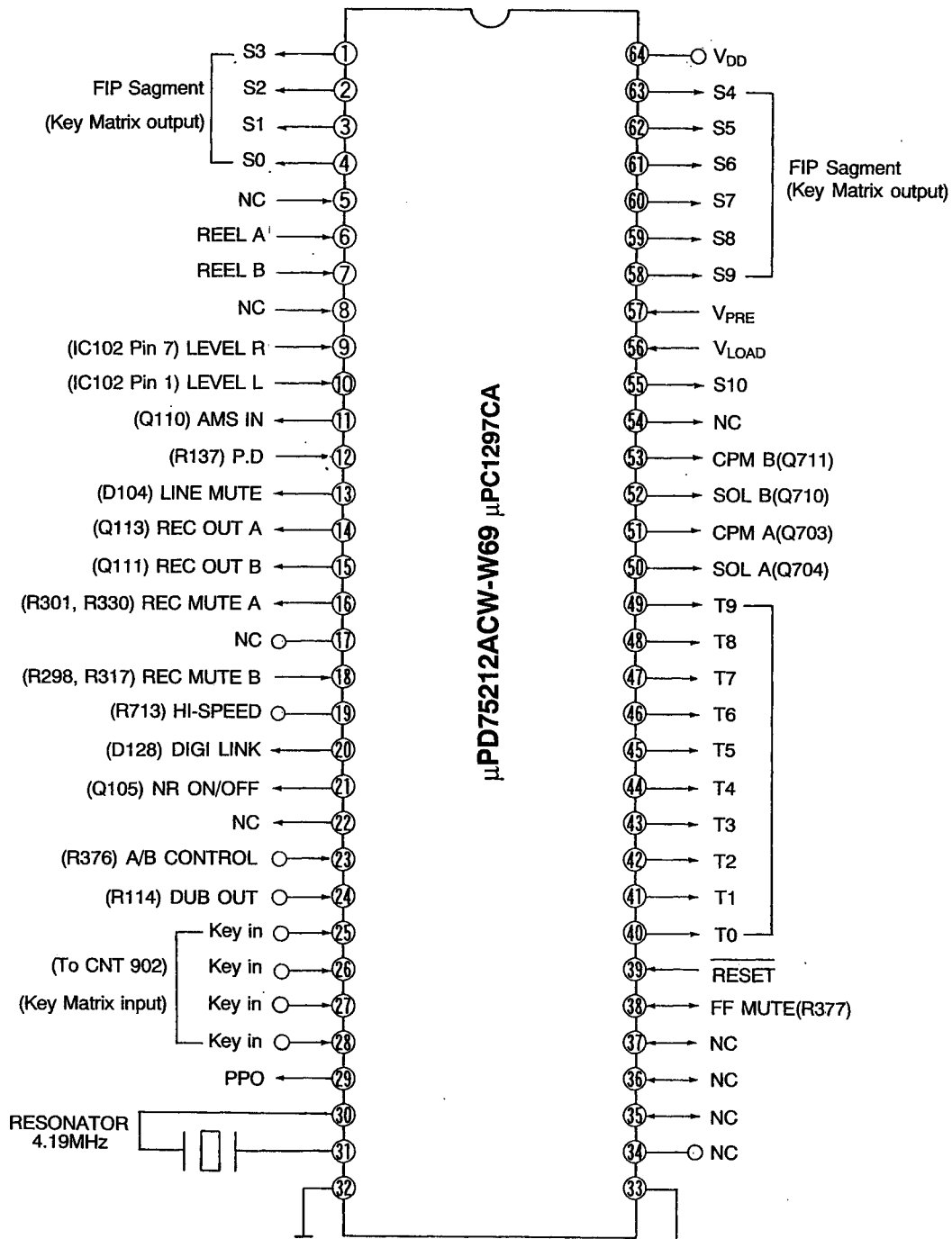
17.3(W) $\times$ 4.9(H) $\times$ 11(D)inch

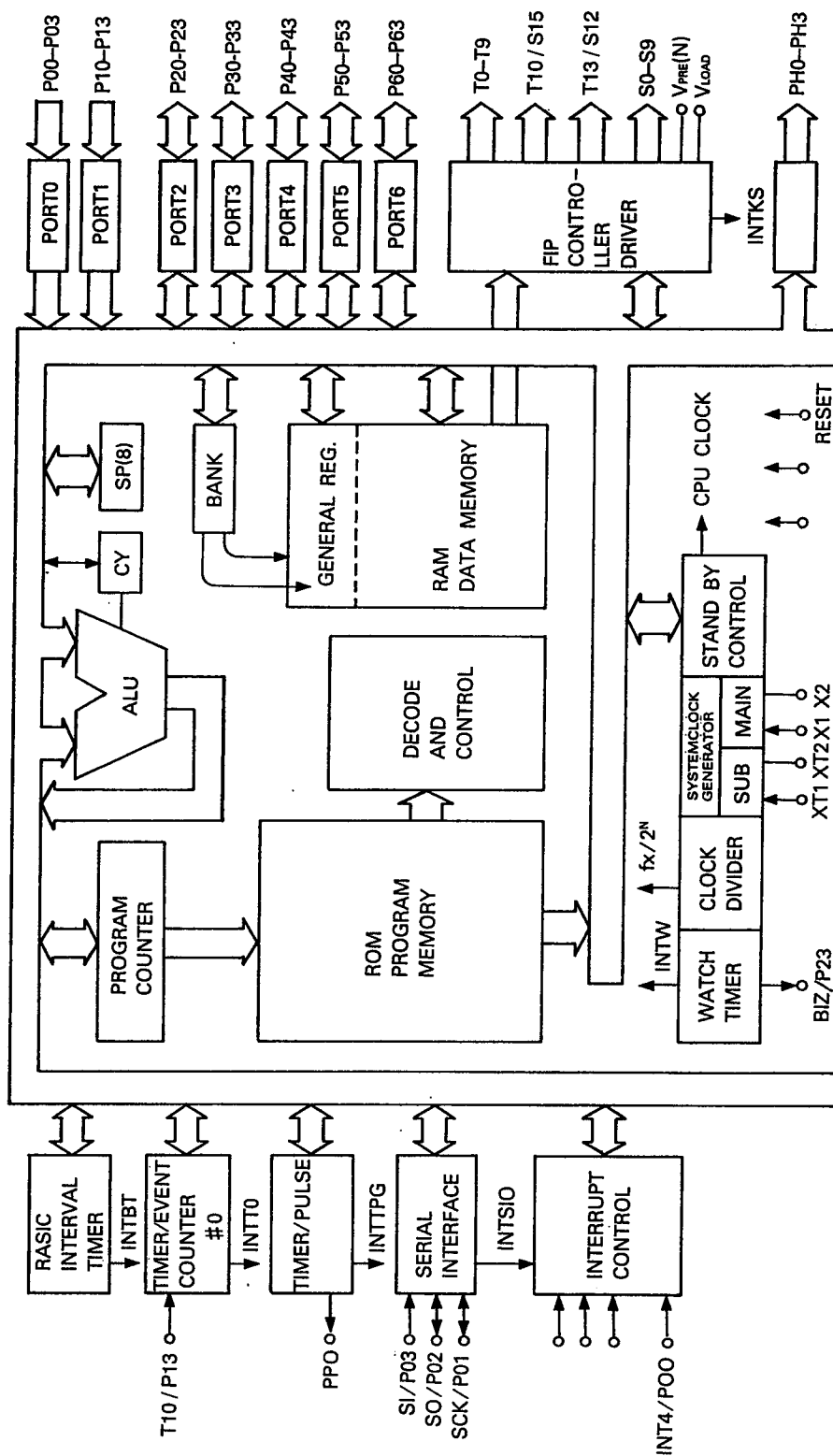
Weight(Net).....5.2 kg(11.5lbs)

Note : Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the American(A) standard, and provides information on regional circuit modification through use of alternate schematic diagrams or wiring diagram, and information on regional component variations through use of parts list. Design and specifications subject to change without notice for improvement.

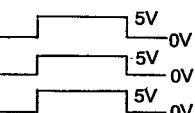
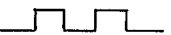
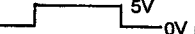
CIRCUIT DESCRIPTION

- Pin Assignment(IC 701 : μ PD 75212)





Functions Assigned : IC701 μ PD75212

No.	Terminal	Operating chart	Remarks
1~4	KEY MATRIX		
5	REMOTE CONTROL DATA IN		
6	CLOCK		
7	DATA		
8	GND		
9	IRQ		
10	POWER		
11	GND		
12	GND		
13	CENTER MUTE		
14	REAR MUTE		
15	FRONT MUTE		
16	SWITCH IC STROBE		TC9162
17	SWITCH IC STROBE		TC9163
18	DSP CD DATA CONTROL		YM7306C
19	DSP CD DATA CONTROL		YM7306C
20	DSP BK DATA CONTROL		YM7306C
21~24	KEY MATRIX		
25	VOLUME IND		
26	ELECTRIC V.R STROBE		TC9176
27	STAND BY		TA7291S
28	MOTOR VOLUME DRIVER DOWN		
29	NC		
30	OSC0		
31	OSC1		TA72913
32	GND		MC14094
33	GND		
34	NC		
35	MOTOR VOLUME DRIVER UP		
36	VIDEO/DSP FUNCTIONS LED DRIVER		
37	REAR SPKR CONTROL		
38	CENTER SPKR CONTROL		
39	RESET		
40~47	LCD DRIVER		
48	N.C		
49	N.C		
50~55	LCD DRIVER		
56	V _{LOAD}		
57	V _{PRE}		
58~63	KEY MATRIX		
64	VDD(+5V)		

Input and Output Terminal Functions

Pin	I/O	Description
P5(P00/INT4)	Input	These pins Can be used as 4-bit input port
P6(P01/SCK)	Input/Output	
P7(P02/S0)	Input/Output	
P8(P03/S1)	Input	
P9(P10/INT0)	Input	These pins Can be used as 4-bit input port
P10(P11/INT1)	Input	
P11(P12/INT2)	Input	
P12(P13/T10)	Input	
P13~P16 (P20~P22, P23/Buz)	Input/ Output	These pins can be used as 4-bit I/O port 2. When used as an output the data is latched. When used as an input port the port outputs are three-state. P2 ₃ can also be used to output square waves for a buzzer. Reset causes these pins to default to the port 2 input
P17~P20 (P30~P33)	Input/ Output	These pins are used for input/output port 3. Each bit in this port can be independently programmed to be either an input or output. This port has latched output
P21~P24 (P40~P43)	Input/ Output	These pins are used for input/output port 4 : this port has latched outputs. Port 4 outputs can directly drive an LED. Ports 4 and 5 can be paired together to function as one 8-bit port. A reset causes this port to be in the input mode.
P25~P28 (P40~P43)	Input/ Output	These pins are used for input/output port 4 : this port has latched outputs. Port 4 outputs can directly drive and LED, Ports 4 and 5 can be paired together to function as one 8-bit port. A reset causes this port be in the input mode.
P29(PP0)	Output	This is an output signal from the timer/pulse generator, and can be either PWM(Pulse-Width Modulated) or a square wave. This pin can also be used as a 1-bit output port. Pin assumes a high impedance state upon reset.
P30~P31 (X1, X2)	Input	These pins are the main system clock inputs. The clock can be either a ceramic or crystal resonator, and external logic signal may also be used as a clock source.
P32(V _{SS})		System ground
P33~P34 (XT ₁ ~XT ₂)	Input	These pins are the subsystem clock inputs. The clock can be either a ceramic or crystal resonator, an external logic signal may also be used as a clock source.
P35~P38 (P50~P53)	Input/ Output	These pin are used for input/output port 5 : this port has latched outputs and its outputs can directly drive an LED. Ports 4 and 5 can be paired together to function as one 8-bit port. A reset causes this port to be in the input mode.
P39(RESET)	Input	This is the reset input, and it is active low
P40~P49 (T0~T9)	Output	These are high-voltage outputs used as FIP controller digit select timing signals. A reset signal sets these pins to the high-impedance state : if mask-option resistors are present the outputs go low.

Pin	I/O	Description
P50~P53 (T10~T13/ S15~S12/ PH3~PH0)	Output	Port H is a 4-bit output-only port, with P-channel opendrain outputs capable of directly driving LEDs. Alternatively, these pins can be used as high voltage digit/segment outputs. A reset signal causes this port to default to the high-impedance state : if mask-option resistors are present the output goes low.
P54~P55 (T14~T15/ S11~S10)	Output	These two pins provide additional digit select or segment lines. When not used for the display they can be used as static outputs.
P56(V _{LOAD})	Input	This pin is used to supply power to the output drivers for the segment lines and digit select, pins of the FIP Controller/driver
P57(V _{RPE})	Input	This is the power supply for the predrivers of the FIP Controller/driver
P1~P4 P58~P63 (S0~S9)	Output	These are high-voltage outputs used as FIP controller segment lines. Pull-down resistors can be selected as a mask-option. A reset signal sets these pins to the high impedance state :
P64(V _{DD})		The system positive power supply pin

ALIGNMENT PROCEDURES

1. Before Measurements and Adjustment

The following general conditions apply to the electrical measurements adjustments unless especially stated otherwise.

- Dolby NR switch off.
- REC volume control : Max.
- Use 500mV(200 nWb/m) for 0dB as the standard level of the unit.
- Test Tape
 - TCC-154.....Azimuth (12.4 kHz, -24 dB)
 - TCC-112.....Tape speed (3 kHz, -10 dB)
 - TCC-130.....Playback level(Dolby Ref. tape 400 Hz, 0 dB)
 - TCC-184N.....Frequency (12.5 k/10 k/6.3 k/1 k/250 Hz, -24 dB)
- Alignment Tape
 - Normal.....TDK, AC-224
 - CrO2.....TDK, AC-513
 - Metal.....TDK, AC-712

2. Instrument required

- Audio frequency oscillator
- ACVM or Dual channel, mV-meter
- Wow/flutter meter
- Oscilloscope

Playback Section

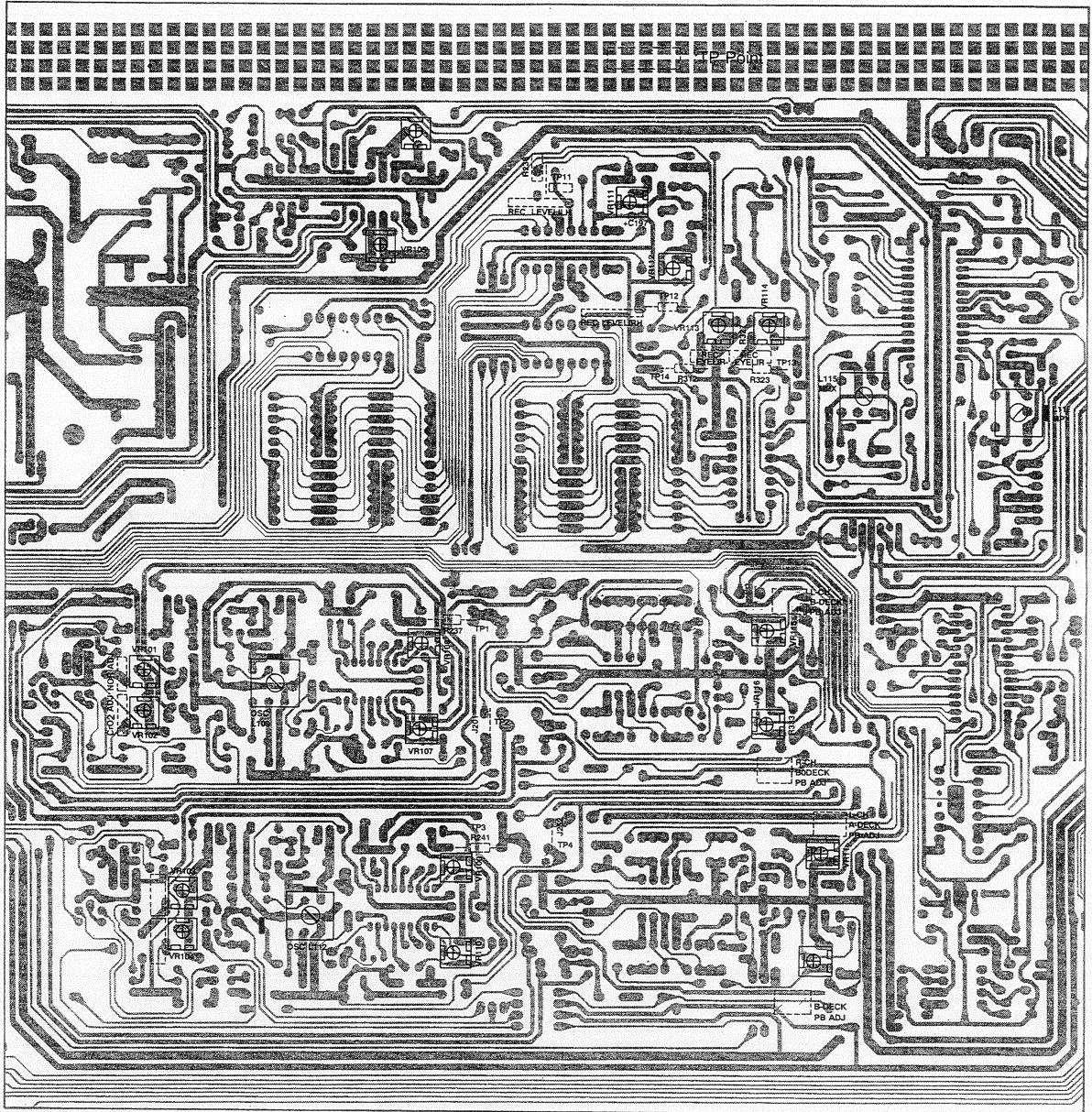
Adjustments	Test Tape	Mode	Apply Signal to	Measure on	Read on	Adjust with	Adjust to
Head Aximuth	TCC-154 12.5 kHz, -24 dB (A.BEX)	FWD Play (A&B Deck)		Line output	AC mV-meter Oscilloscope	Head adjusting screw (left side)	Max. * a Lissajous figure become a straight line with an angle 45 degrees
		REV Play (A&B Deck)				Head adjusting screw (left side)	
Playback speed on Nor-speed	TCC-112 3 kHz, -10 dB (A.BEX)	FWD & REV PLAY (A & B Deck)			Wow & Flutter meter	A-Deck VR701 & B-Deck VR703	* b 3000 Hz ± 15 Hz
Playback speed on Hi-speed						A-Deck VR702 & B-Deck VR704	6000 Hz ± 30 Hz * After GND (TP15)
Playback level	TCC-130 400 Hz, 0 dB (A.BEX)				AC mV-meter	A-Deck : VR117/VR118	500 mV
						B-Deck : VR115/VR116	
Playback frequency response	TCC-184N					AC mV-meter	

Recording Section

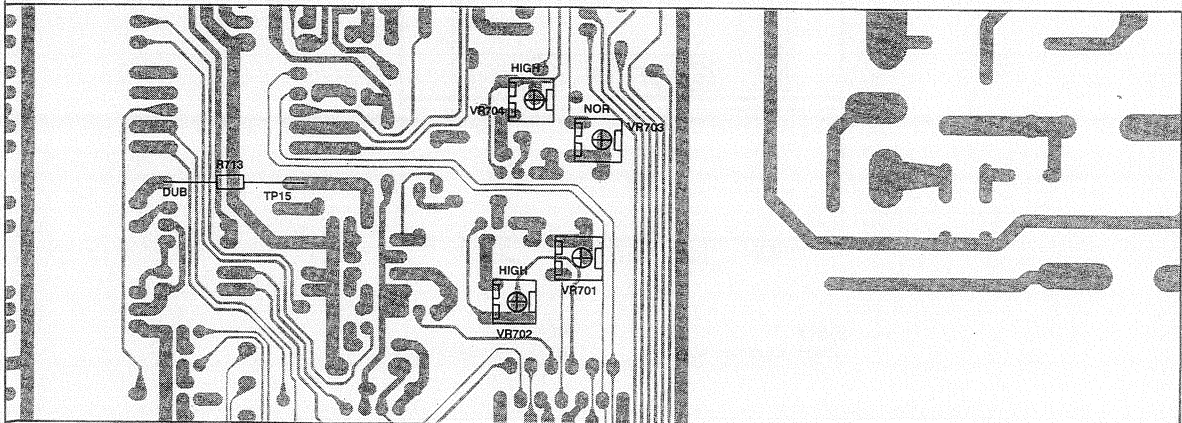
Adjustments	Test Tape	Mode	Apply Signal to	Measure on	Read on	Adjust with	Adjust to		
Bias OSC frequency	AC-712 , TDK	Rec/Pause (A & B Deck)		White color lead wire of CNT102 & CNT202	Frequency Counter	A-Deck:L112 B-Deck:L109	105 kHz $\pm$ 400 Hz		
Target Value Bias	Metal AC-712			TP4(L-CH) TP2(L-CH)	ACmV-meter	A-Deck:VR110(L) B-Deck:VR107(L)	About 42 V		
				TP3(R-CH) TP1(R-CH)		A-Deck:VR109(R) B-Deck:VR108(R)			
	CrO2 AC-513					A-Deck:VR104 B-Deck:VR102	About 28 V		
	Normal AC-224					A-Deck:VR103 B-Deck:VR101	About 18 V		
Recording level	AC-712		400 Hz to Line in	TP14(L-CH) TP13(R-CH)		A-Deck : VR113/ VR114	About 12 mV* c		
				TP11(L-CH) TP12(R-CH)		B-Deck : VR111/ VR112			
Bias	AC-712 AC-513 AC-224		400 Hz to Line in	Line out			See Target value bias	If it necessary repeat bias adjustment * d	
				4 kHz-6.3 kHz Recoding number of frequen 10 kHz-12 kHz -cy with the same input 14 kHz-16 kHz voltage and play them back					
FL level meter				400 Hz, 100mV to Line in		FL Display	VR105(L) & VR106(R)	Dolby point on FL Display	
19 k ^{Hz} : suppression	Arbitrary Tape		19 kHz to Line in	Line in	AC mV-meter	IF Gnerator	100 mV on FL Display		
				Line out	AC mV-meter Oscilloscope	L115/L116	Minimize the reaing on ACVM		

3. Adjustment Point

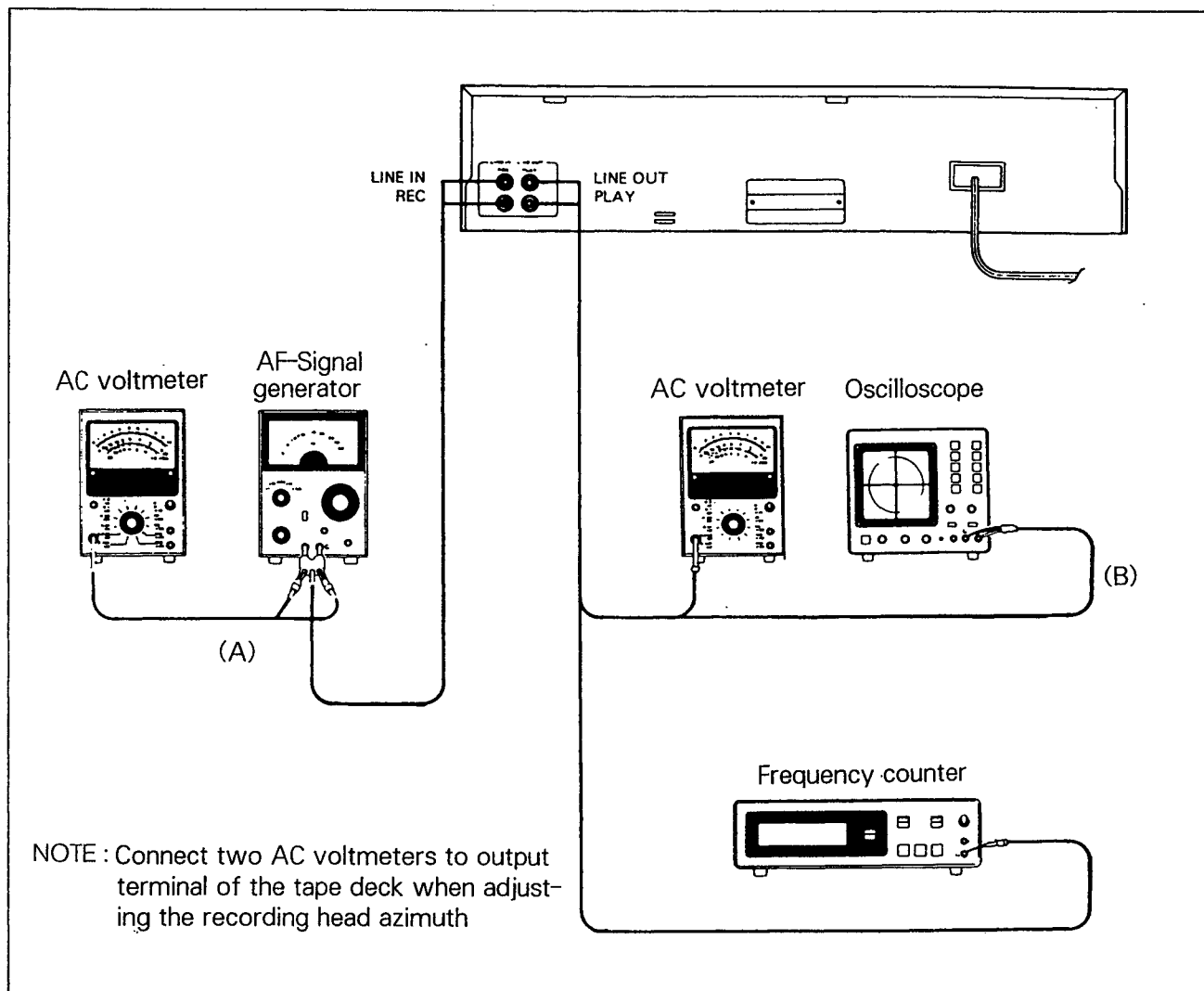
Main B'D 4002321801



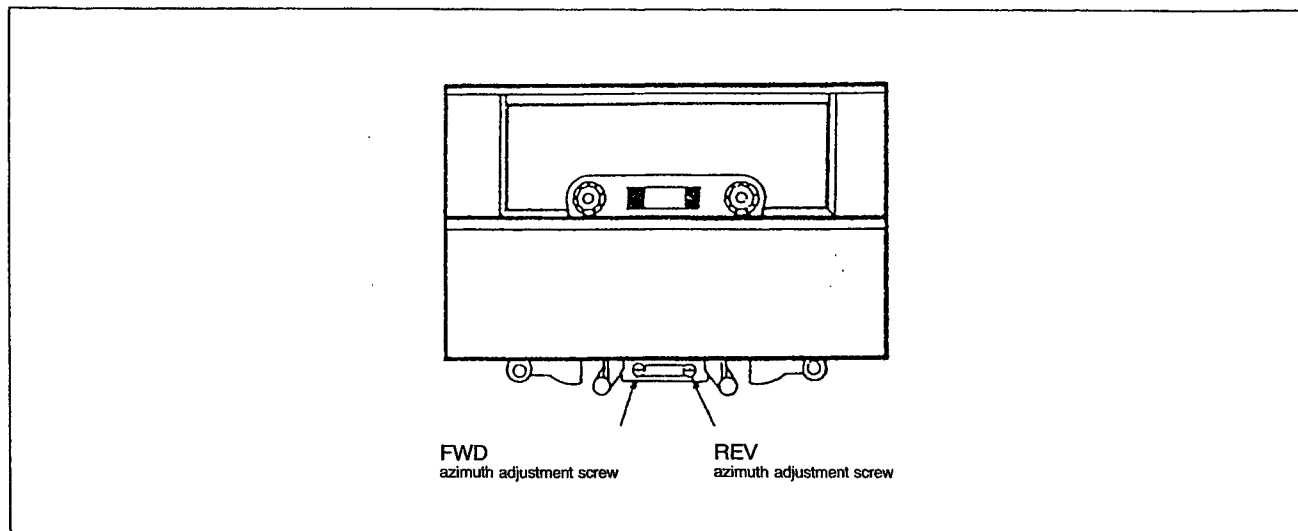
Front B'D 4002321901



4. Test Equipment Connections



5. Head Azimuth Adjustment



Note :

- *a. Prior to any measurement or adjustment with the tape running, heads and tape guides should be de-gaussed and cleand. Referenc below the figure.
- *b. The maximum permissibie speed variation $\pm 0.5\%$. Moreover the Wow and Flutter can be read. This value should not be exceed 0.2%.
- *c. The voltage on Line out should be $500\text{mV} \pm 20\text{mV}$. If not it reduce the LF signal(bias disabled) as many as the reading was too low or too high by VR117 / VR118, VR115 / VR116.
- *d. When the channel is adjusted, this may slightly affect the adjustment of the other channel. If the adjust-ment is correct, the frequency response curve will be similar to curve b in figure 2, distortion below 3%.

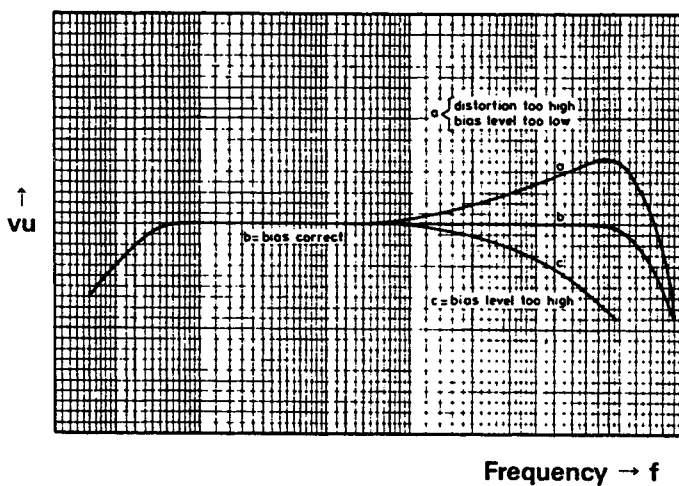


Fig. 2

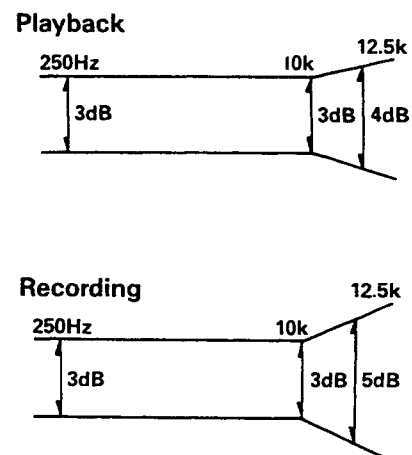
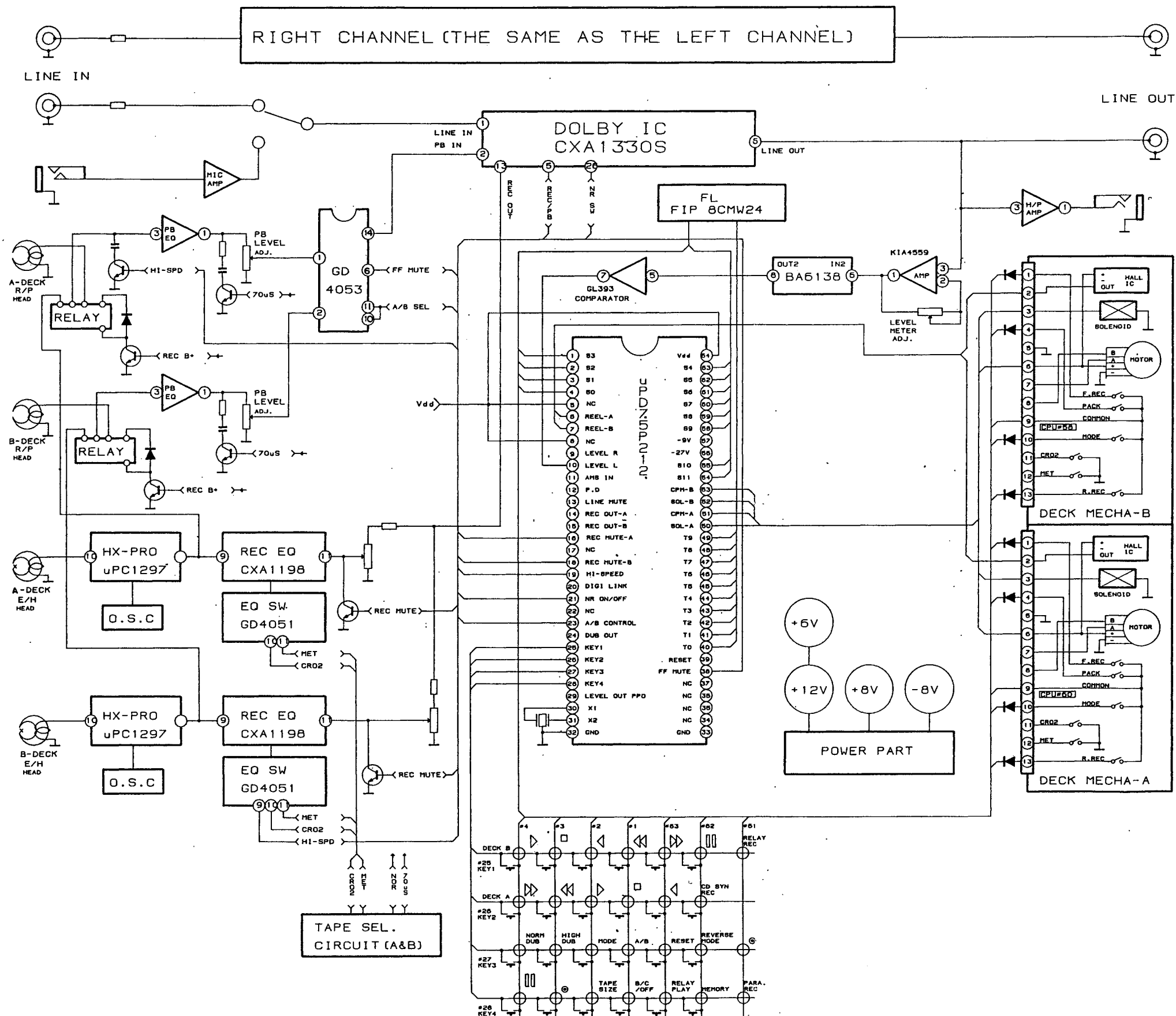


Fig. 1 Allowable Playback/Recording Frequency Response Zone

NOTES

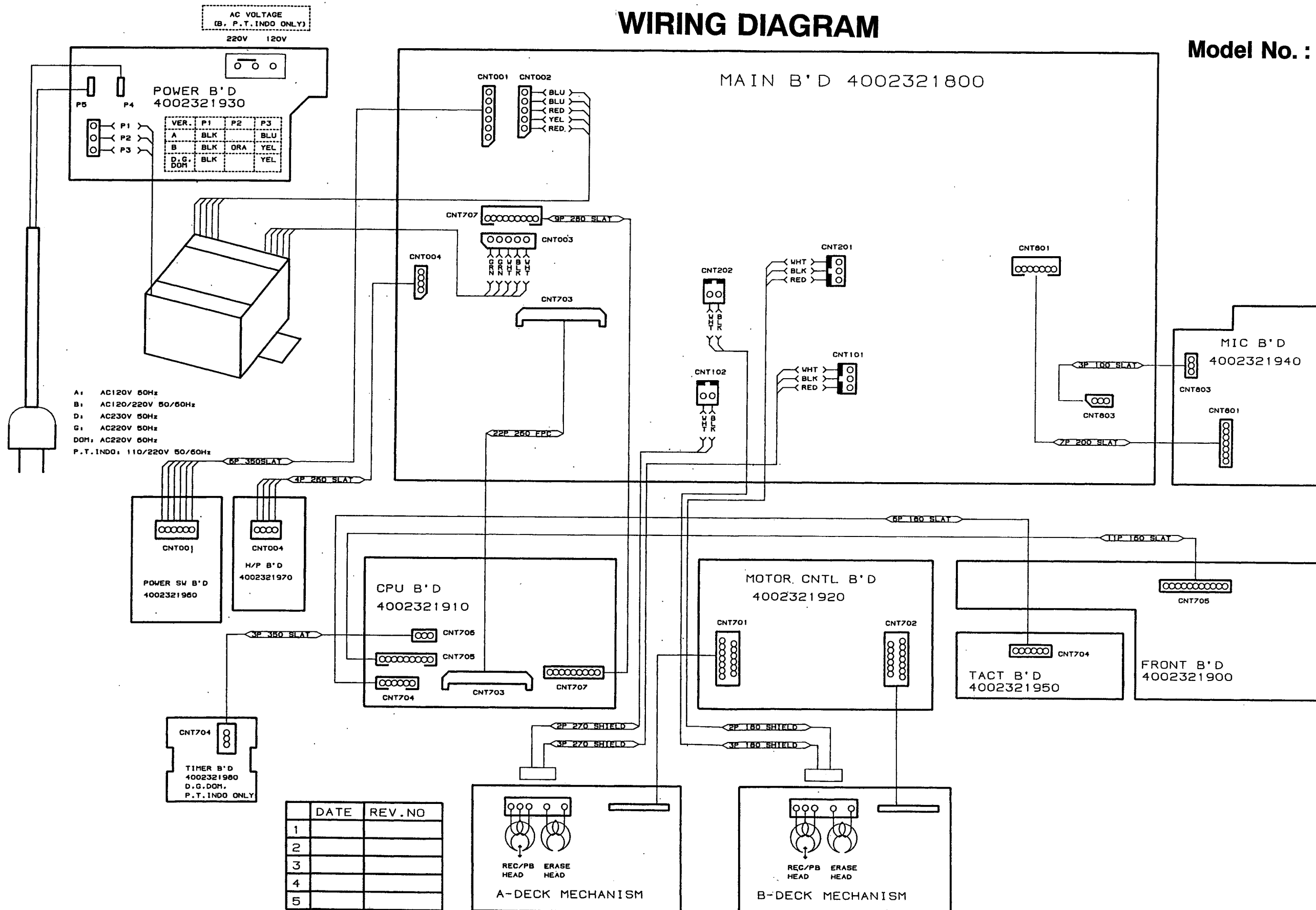
BLOCK DIAGRAM

Model No. : DD-6030C



WIRING DIAGRAM

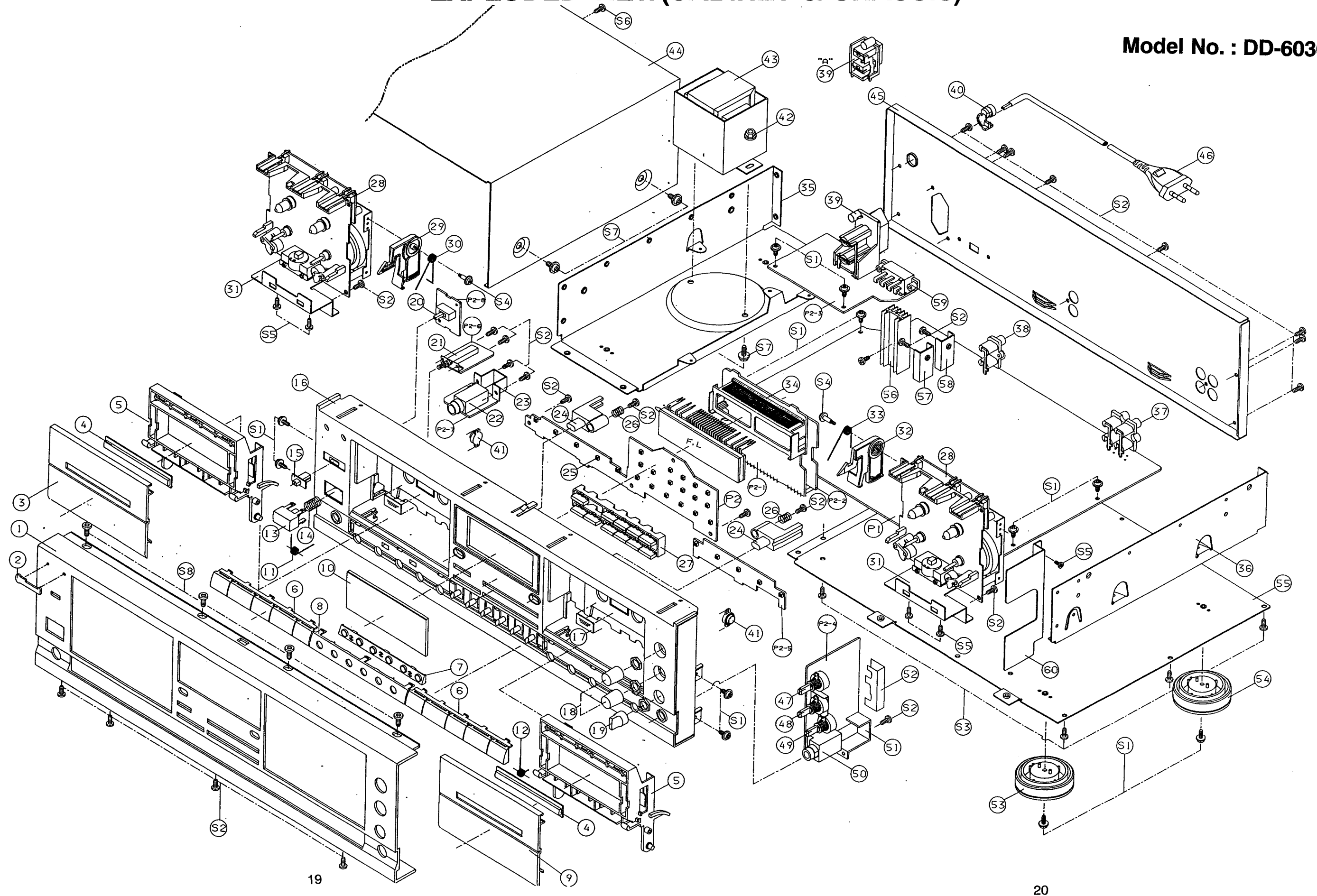
Model No. : DD-6030C



	DATE	REV. NO
1		
2		
3		
4		
5		

EXPLODED VIEW(CABINET & CHASSIS)

Model No. : DD-6030C



CABINET & CHASSIS PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
PACKAGE									
	9715000120	Film Sofet PE	1			04855045821	Chassis, Black	1	A
	049604124134	Box Carton	1			04855045831	Chassis, Black	1	B
ACCESSORIES						04855045841	Chassis, Black	1	C
	4328200510	Cord RCA 2P	2			04855045851	Chassis, Black	1	D
	4328204510	Cord RCA 1P	1			04855045852	Chassis, Black	1	G
CABINET						04855045861	Chassis, Black	1	E
						04855045871	Chassis, Black	1	F
					46	△ 4308007310	Cord AC Power	1	Dom
						△ 4308001410	Cord AC Power	1	A
						△ 4308000430	Cord AC Power	1	C,D
1	048602018911	Panel Front, AL	1	Dom,G	47	3208065310	VR REC Level, 100KAX2	1	
	048602018921	Panel Front, AL	1	A	48	3208065410	VR REC Balance, 100KSWX1	1	
	048602018931	Panel Front, AL	1	D	49	3208065210	VR Mic, 20KWX2	1	
2	048535034011	Badge (INKE)	1		50	4438005620	Jack Mic, Gold	1	
	048535033911	Badge (SHERWOOD)	1		51	6505129110	Blacket Micphone	1	
3	048603001311	Door Deck "A", AL, Black	1		52	6165145910	Shield Plate	1	
4	8555045910	Window Door	2		53	046033102611	Foot, AL, Gold	2	Dom
5	8562003810	LID Cassette, ABS, Black	2			046033102511	Foot Hotstamping,	2	A,Dom
6	048543053111	Button Tact 5Key, ABS, Black	2			046033102511	Foot Hotstamping,	4	D
7	048523012211	Bezel, ABS, Gold	1			6033102510	Foot, Black	2	A
8	8543053210	Knob Dummy, ABS, Black	1		54	6122419110	Cover Bottom	1	
9	048603001312	Door Deck "B", AL, Black	1		55	7505206120	REG TR H/Sink	1	
10	048555045811	Window Display	1		56	7505202410	REG TR H/Sink	1	
11	6555013420	Spring Door, L	1			7505202420	REG TR H/Sink	1	
12	6555013410	Spring Door, R	1		58	7505202410	REG TR H/Sink	1	
13	8545074330	Button Power, ABS, Black	1		59	4618006610	Voltage Selector	1	B,Dom
14	6555004380	Spring Button	1		60	6163113810	Shield Fence	1	
15	8545084520	Knob Slide, Black	1	Dom,D,G	S1	8159230083	Screw #2 WPTC 3X8B	14	
16	8521008310	Body Front, ABS, Black	1		S2	8109230083	Screw #2 BTC 3X8B	28	
17	9057079250	Label Silver	2		S3	8109230063	Screw #2 BTC 3X6B	7	
18	048545076011	Knob Phone, ABS, Black	2		S4	8095004210	Screw Shoulder	2	
19	048545117511	Knob VR Mic, Black	1	Dom,G	S5	8109420051	BTTS 2X5Y	4	
20	4618006710	Switch Slide	1	B,D,G,Dom	S6	8119230083	Screw #2 PTC 3X8B	2	
21	4628035210	Switch Power	1		S7	8159440083	Screw SAM 4X8B	6	
22	4438005010	Jack Phone	1		S8	8129230083	Screw #2 FTC 3X8B	4	
23	6505082310	Bracket Headphone	1		P1	4002321800	PCB Main	1	
24	8545111510	Button Eject, ABS, Black	2		P2	4002321900	PCB Front	1	
25	4658003710	Switch Tact	22		P2-1	40023221910	PCB CPU	1	
26	6555607310	Spring Eject	2		P2-2	4002321920	PCB Motor CNTL	1	
27	8543053310	Button Tact, Black	1		P2-3	4002321930	PCB Power	1	
28	5708013510	Mecha REC/Play	2		P2-4	4002321940	PCB Mic	1	
29	7143104120	Locker Eject, L	1		P2-5	4002321950	PCB Tact	1	
30	6555802310	Spring Locker, L	1		P2-6	4002321960	PCB Power SW	1	
31	6503029610	Bracket Mecha	2		P2-7	4002321970	PCB H/Pone	1	
32	7143104110	Locker Eject, R	1		P2-8	4002321980	PCB Timer	1	
33	6555802320	Spring Locker, R	1			4235007310	Terminal GND	1	
34	8543048710	Holder Fl, ABS, Black	1			435305188631	Assembly Shield 5P 180mm, HEAD(B)	1	
35	6122621410	Frame Left	1			435305278631	Assembly Shield 5P 270mm, HEAD(A)	1	
36	6123205420	Frame Right	1			4118622269	FPC Card Cable 22P 260mm	1	
37	4438103110	Jack RCA, 4P	1		PRODUCT SAFETY NOTICE Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol △ in the parts list and the safety can be of special significance. When replacing a component identified with △, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.				
38	4438105010	Jack RCA, 2P	1						
39	4448103910	Outlet	1	Dom					
	4448103210	Outlet	1	A					
	4448103610	Outlet	1	D					
40	6513000310	Stopper Cord, Black	1	Dom					
	6518000710	Stopper Cord, Black	1	A					
	6518000111	Stopper Cord, Black	1	D					
41	6308001630	Oil Damper	2						
42	8209540011	Nut Flange M4Y	2						
43	△ 2828000377	Power Transformer 120V 60Hz	1	A					
	△ 2828000567	Power Transformer 230V 50Hz	1	D					
	△ 2828000577	Power Transformer 220V 60Hz	1	G,Dom					
	△ 2828000897	Power Transformer 110/220V 50/60Hz	1	P.T.INDO					
44	046122021531	Cover Top, Black	1						
45	048555045811	Chassis, Black	1	Dom					

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
P1	054051010001	PCB ASSEMBLY-MAIN			C179/180	5319103935	Ceramic Tubular	0.01 uF	50V Z 2
37	4438103110	Jack RCA, 4P	1		C181	3479247971	Electric SA	4.7 uF	50V M 1
38	4438105010	Jack RCA, 2P	1		C182/183	5319331935	Ceramic Tubular	330 pF	50V Z 2
56	7505206120	REG TR H/Sink	1		C184	3479247971	Electric SA	4.7 uF	50V M 1
57	7505202410	REG TR H/Sink	1		C185/196	3479347041	Electric SA	47 uF	25V M 2
or	7505202420	REG TR H/Sink			C187/189	3479310121	Electric SG	100 uF	10V M 3
58	7505202410	REG TR H/Sink	1		C190	3479210971	Electric SA	1 uF	50V M 1
C102	3479247971	Electric SA	4.7 uF	50V M 1	C191	3479210071	Electric SA	10 uF	50V M 1
C103	3479210971	Electric SA	1 uF	50V M 1	C192	3479310121	Electric SG	100 uF	10V M 1
C104	3479247971	Electric SA	4.7 uF	50V M 1	C193/194	3479210971	Electric SA	1 uF	50V M 2
C105	3679473120	Mylar	0.047 uF	100V J 1	C195	3479210071	Electric SA	10 uF	50V M 1
C106	3479210971	Electric SA	1 uF	50V M 1	C196	3679223120	Mylar	0.022 uF	100V J 1
C107	3479322121	Electric SG	220 uF	10V M 1	C197/198	3479222041	Electric SA	22 uF	25V M 2
C108	3479347041	Electric SG	47 uF	25V M 1	C199	3679223120	Mylar	0.022 uF	100V J 1
C109	3479247971	Electric SA	4.7 uF	50V M 1	C200	3479210971	Electric SA	1 uF	50V M 1
C110	3479683120	Mylar	0.068 uF	100V J 1	C201	5319101935	Ceramic Tubular	100 pF	50V Z 1
C111	3479210871	Electric SA	0.1 uF	50V M 1	C202	3679223120	Mylar	0.022 uF	100V J 1
C112	3479347071	Electric SG	47 uF	50V M 1	C203	5319101935	Ceramic Tubular	100 pF	50V Z 1
C113	3479683120	Mylar	0.068 uF	100V J 1	C204	3479310121	Electric SG	100 uF	10V M 1
C114	3479210971	Electric SA	1 uF	50V M 1	C205	3679223120	Mylar	0.022 uF	100V J 1
C115	3479222971	Electric SA	2.2 uF	50V M 1	C206	5319101935	Ceramic Tubular	100 pF	50V Z 1
C116	3479210871	Electric SA	0.1 uF	50V M 1	C207/C208	5319821935	Ceramic Tubular	820 pF	50V Z 2
C117	3479210071	Electric SA	10 uF	50V M 1	C209	3479210971	Electric SA	1 uF	50V M 1
C118/119	3479210971	Electric SA	1 uF	50V M 2	C210	5319101935	Ceramic Tubular	100 pF	50V Z 1
C120	3409333249	Electric SG	3300 uF	25V M 1	C211	3479310121	Electric SG	100 uF	10V M 1
C122	3479347139	Electric SG	470 uF	16V M 1	C214	3479210071	Electric SA	10 uF	50V M 1
C123/24	3479322249	Electric SG	2200 uF	25V M 2	C215/216	5319471935	Ceramic Tubular	470 pF	50V Z 2
C125/126	3479322121	Electric SG	220 uF	10V M 2	C217	3479310121	Electric SG	100 uF	10V M 1
C127	5319103935	Ceramic Tubular	0.01 uF	50V Z 1	C218	5319331935	Ceramic Tubular	330 pF	50V Z 1
C130/131	3479222041	Electric SA	22 uF	25V M 2	C220	3479222041	Electric SA	22 uF	25V M 1
C132	5319104935	Ceramic Tubular	0.1 uF	50V Z 1	C221/222	3679183120	Mylar	0.018 uF	100V J 2
C133	3479347041	Electric SG	47 uF	25V M 1	C223	3479222044	Electric SA	22 uF	25M M 1
C135	5319104935	Ceramic Tubular	0.1 uF	50V Z 1	C224/225	3679183120	Mylar	0.018 uF	100V J 2
C136	3679103120	Mylar	0.01 uF	100V J 1	C226	3479210071	Electric SA	10 uF	50V M 1
C137	3479347041	Electric SG	47 uF	25V M 1	C227	3479310121	Electric SG	100 uF	10V M 1
C138	3679223120	Mylar	0.022 uF	100V J 1	C228/229	3479210071	Electric SA	10 uF	50V M 2
C140	5319100935	Ceramic Tubular	10 pF	50V Z 1	C230	3679102120	Mylar	0.001 uF	100V J 1
C141	3679182120	Mylar	0.0018 uF	100V J 1	C231/232	3679222120	Mylar	0.0022 uF	100V J 2
C142/143	3679103120	Mylar	0.01 uF	100V J 2	C233	3679472120	Mylar	0.0047 uF	100V J 1
C144	3679123120	Mylar	0.012 uF	100V J 1	C234	3679102120	Mylar	0.001 uF	100V J 1
C145	3679223120	Mylar	0.022 uF	100V J 1	C235	3479256871	Electric SA	0.56 uF	50V M 1
C146	5319100935	Ceramic Tubular	10 pF	50V Z 1	C236	3479233871	Electric SA	0.33 uF	50V M 1
C147	3679182120	Mylar	0.0018 uF	100V J 1	C237	5319221935	Ceramic Tubular	220 pF	50V Z 1
C148	3679103120	Mylar	0.01 uF	100V J 1	C239/240	3479247971	Electric SA	4.7 uF	50V M 2
C149	3679123120	Mylar	0.012 uF	100V J 1	C241	3479310121	Electric SG	100 uF	10V M 1
C150	3479247971	Electric SA	4.7 uF	50V M 1	C243	5319221935	Ceramic Tubular	220 pF	50V Z 1
C151	5319331935	Ceramic Tubular	330 pF	50V Z 1	C245	3479247971	Electric SA	4.7 uF	50V M 1
C152/153	3679473120	Mylar	0.047 uF	100V J 2	C246	5319221935	Ceramic Tubular	220 pF	50V Z 1
C154	3479247971	Electric SA	4.7 uF	50V M 1	C247	3679472120	Mylar	0.0047 uF	100V J 1
C155/156	5319331935	Ceramic Tubular	330 pF	50V Z 2	C249	3479247971	Electric SA	4.7 uF	50V M 1
C157	3479247971	Electric SA	4.7 uF	50V M 1	C250	3679222120	Mylar	0.0022 uF	100V J 1
C158/159	3679473120	Mylar	0.047 uF	100V J 2	C252	3679102120	Mylar	0.001 uF	100V J 1
C160	5319821935	Ceramic Tubular	820 pF	50V Z 1	C253	5319221935	Ceramic Tubular	220 pF	50V Z 1
C161	5319331935	Ceramic Tubular	330 pF	50V Z 1	C256	3479210071	Electric SA	10 uF	50V M 1
C162/164	5319821935	Ceramic Tubular	820 pF	50V Z 3	C257	3679222120	Mylar	0.0022 uF	100V J 1
C165	3479247971	Electric SA	4.7 uF	50V M 1	C258	3679102120	Mylar	0.001 uF	100V J 1
C166/167	3679393120	Mylar	0.039 uF	100V J 2	C259	3479256871	Electric SA	0.56 uF	50V M 1
C168	5319821935	Ceramic Tubular	820 pF	50V Z 1	C260	3479310121	Electric SG	100 uF	10V M 1
C169/170	3679223120	Mylar	0.022 uF	100V J 2	C261	3479233871	Electric SA	0.33 uF	50V M 1
C171	5319821935	Ceramic Tubular	820 pF	50V Z 1	C262	3479210071	Electric SA	10 uF	50V M 1
C172/173	5319103935	Ceramic Tubular	0.01 uF	50V Z 2	C263	3479247971	Electric SA	4.7 uF	50V M 1
C174/175	3679393120	Mylar	0.039 uF	100V J 2	C264/267	3479310121	Electric SG	100 uF	10V M 1
C176/177	3679223120	Mylar	0.022 uF	100V J 2	C268/270	3479210971	Electric SA	1 uF	50V M 4
C178	5319331935	Ceramic Tubular	330 pF	50V Z 1	C271/272	5319271935	Ceramic Tubular	270 pF	50V Z 2

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
CNT001	4428505810	Wafer 6P	1		R116	3069102970	Carbon Film	1K ohm	1/5W J 1
CNT002	4428506910	Wafer 5P	1		R117	3069104970	Carbon Film	100K ohm	1/5W J 1
CNT003	4428506910	Wafer 5P	1		R118	3069822970	Carbon Film	8.2K ohm	1/5W J 1
CNT004	4428505610	Wafer 4P	1		R119	3069472970	Carbon Film	4.7K ohm	1/5W J 1
CNT005	435203220232	Lead Assy 3P 220mm	1		R120	3069433970	Carbon Film	43K ohm	1/5W J 1
CNT101	4428517610	Wafer 3P	1		R121/122	3069102970	Carbon Film	1K ohm	1/5W J 2
CNT102	4428517510	Wafer 2P	1		R123	3069202970	Carbon Film	2K ohm	1/5W J 1
CNT201	4428517610	Wafer 3P	1		R124	3069104970	Carbon Film	100K ohm	1/5W J 1
CNT202	4428517510	Wafer 2P	1		R125	3069822970	Carbon Film	8.2K ohm	1/5W J 1
CNT703	4428526340	Wafer 22P, FPC Elco	1		R126	3069202970	Carbon Film	2K ohm	1/5W J 1
CNT707	4428516810	Wafer 9P	1		R127	3069473970	Carbon Film	47K ohm	1/5W J 1
CNT801	4428516610	Wafer 7P	1		R128	3069102970	Carbon Film	1K ohm	1/5W J 1
CNT803	4428505710	Wafer 3P	1		R129	3069302970	Carbon Film	3K ohm	1/5W J 1
L100/111	2648610284	Inductor 1mH	4		R130	3069822970	Carbon Film	8.2K ohm	1/5W J 1
L105/108	2658501150	Rec Trap, 389AC-K5049	4		R131	3069473970	Carbon Film	47K ohm	1/5W J 1
L109	2638601350	Bias O.S.C 105KHz	1		R132	3069102970	Carbon Film	1K ohm	1/5W J 1
L101/104	2638601240	HX-PRO Coil	2		R133	3069822970	Carbon Film	8.2K ohm	1/5W J 1
L112	2638601350	Bias O.S.C 105KHz	1		R134	3069223970	Carbon Film	22K ohm	1/5W J 1
L113/114	2638601240	HX-PRO Coil	2		R135/136	3069104970	Carbon Film	100K ohm	1/5W J 2
L115/116	2658301120	Filter MPX	2		R137	3069103970	Carbon Film	10K ohm	1/5W J 1
D101/102	2058322101	1N 4148M, Switching	2		R138	3069473970	Carbon Film	47K ohm	1/5W J 1
D103	2258100135	1N4002, Rectifier	1		R139	3069103970	Carbon Film	10K ohm	1/5W J 1
D104	2058322101	1N 4148M, Switching	1		R143	3069473970	Carbon Film	47K ohm	1/5W J 1
D105	2258599103	Zener DZ 5.1B	1		R144	3069302970	Carbon Film	3K ohm	1/5W J 1
D106/107	2058322101	1N 4148M, Switching	2		R146	3069222970	Carbon Film	2.2K ohm	1/5W J 1
D108	2258599105	Zener DZ 6.2B	1		R147	3069103970	Carbon Film	10K ohm	1/5W J 1
D109/110	2058322101	1N 4148M, Switching	2		R148	3069223970	Carbon Film	22K ohm	1/5W J 1
D111	2258599123	Zener DZ 8.2B	1		R149	3069102970	Carbon Film	1K ohm	1/5W J 1
D112	2258599115	Zener DZ 27B	1		R150	3069222970	Carbon Film	2.2K ohm	1/5W J 1
D113/116	2058322101	1N 4148M, Switching	4		R151	3069224970	Carbon Film	220K ohm	1/5W J 1
△ D117/120	2258100135	1N4002, Rectifier	4		R152	3069103970	Carbon Film	10K ohm	1/5W J 1
△ D121/122	2058322101	1N 4148M, Switching	2		R153	3069362970	Carbon Film	3.6K ohm	1/5W J 1
△ D124/127	2258100135	1N4002, Rectifier	4		R155	3069102970	Carbon Film	1K ohm	1/5W J 1
D128/130	2058322101	1N 4148M, Switching	3		R156	3069223970	Carbon Film	22K ohm	1/5W J 1
D131/132	2258100135	1N4002, Rectifier	2		R157	3069822970	Carbon Film	8.2K ohm	1/5W J 1
D133/138	2058322101	1N 4148M, Switching	6		R158	3069473970	Carbon Film	47K ohm	1/5W J 1
IC101	2168027102	BA 6138, FL Meter	1		R159	3069103970	Carbon Film	10K ohm	1/5W J 1
IC102	2168801100	GL 393, Comparator	1		R160	3069102970	Carbon Film	1K ohm	1/5W J 1
IC103	2168606110	KIA 7806, Regulator	1		R161	3069362970	Carbon Film	3.6K ohm	1/5W J 1
IC104	2168606104	KIA 7812, Regulator	1		R162	3069562970	Carbon Film	5.6K ohm	1/5W J 1
IC105	2168602101	MC 7808, Regulator	1		R163	3069302970	Carbon Film	3K ohm	1/5W J 1
IC106	2168602102	MC 7908, Regulator	1		R164	3069223970	Carbon Film	22K ohm	1/5W J 1
IC107	2168206104	KIA 4559P, H/P Amp	1		R165	3069822970	Carbon Film	8.2K ohm	1/5W J 1
IC108	2138009134	MC 14051, Switching	1		R166	3069103970	Carbon Film	10K ohm	1/5W J 1
IC109/110	2168013111	UPC 1297CA, HX-PRO	2		R167	3069473970	Carbon Film	47K ohm	1/5W J 1
IC111	2168206104	KIA 4559P, FL Level ADJ.	1		R168	3069562970	Carbon Film	5.6K ohm	1/5W J 1
IC112	2138009134	MC 14051, Switching	1		R169	3069103970	Carbon Film	10K ohm	1/5W J 1
IC113/116	2168022124	CXA 1198AP, Rec Amp	2		R170	3069121970	Carbon Film	120 ohm	1/5W J 1
IC114/115	2168020106	NJM 2068DD, PB Amp	2		R171	3069100970	Carbon Film	10 ohm	1/5W J 1
IC117	2168022123	CXA 1330S, Dolby	1		R172	3069333970	Carbon Film	33K ohm	1/5W J 1
IC118	2138011117	GD 4053, Switching	1		R173	3069121970	Carbon Film	120 ohm	1/5W J 1
R101/102	3069104970	Carbon Film	100K ohm	1/5W J 2	R174	3069103970	Carbon Film	10K ohm	1/5W J 1
R103	3069333970	Carbon Film	33K ohm	1/5W J 1	R175	3069100970	Carbon Film	10 ohm	1/5W J 1
R104	3069104970	Carbon Film	100K ohm	1/5W J 1	R176	3069103970	Carbon Film	10K ohm	1/5W J 1
R105	3069472970	Carbon Film	4.7K ohm	1/5W J 1	R177	3069302970	Carbon Film	3K ohm	1/5W J 1
R106	3069101970	Carbon Film	100 ohm	1/5W J 1	R178	3069154970	Carbon Film	150K ohm	1/5W J 1
R107/108	3069220970	Carbon Film	22 ohm	1/5W J 2	R179	3069203970	Carbon Film	20K ohm	1/5W J 1
R109	3069333970	Carbon Film	33K ohm	1/5W J 1	R180	3069100970	Carbon Film	10 ohm	1/5W J 1
R110	3069104970	Carbon Film	100K ohm	1/5W J 1	R181/182	3069333970	Carbon Film	33K ohm	1/5W J 2
R111	3069472970	Carbon Film	4.7K ohm	1/5W J 1	R183	3069203970	Carbon Film	20K ohm	1/5W J 1
R112	3069104970	Carbon Film	100K ohm	1/5W J 1	R184	3069123970	Carbon Film	12K ohm	1/5W J 1
R113	3069242970	Carbon Film	2.4K ohm	1/5W J 1	R185	3069103970	Carbon Film	10K ohm	1/5W J 1
R114	3069102970	Carbon Film	1K ohm	1/5W J 1	R186	3069223970	Carbon Film	22K ohm	1/5W J 1
R115	3069562970	Carbon Film	5.6K ohm	1/5W J 1	R187	3069823970	Carbon Film	82K ohm	1/5W J 1

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
R188	3069823970	Carbon Film	82K ohm	1/5W J 1	R265	3069243970	Carbon Film	24K ohm	1/5W J 1
R189	3069104970	Carbon Film	100K ohm	1/5W J 1	R266	3069682970	Carbon Film	6.8K ohm	1/5W J 1
R190	3069622970	Carbon Film	6.2K ohm	1/5W J 1	R267	3069513970	Carbon Film	51K ohm	1/5W J 1
R191	3069622970	Carbon Film	6.2K ohm	1/5W J 1	R268	3069104970	Carbon Film	100K ohm	1/5W J 1
R192	3069223970	Carbon Film	22K ohm	1/5W J 1	R269	3069683970	Carbon Film	68K ohm	1/5W J 1
R193	3069124970	Carbon Film	120K ohm	1/5W J 1	R270	3069243970	Carbon Film	24K ohm	1/5W J 1
R194	3069683970	Carbon Film	68K ohm	1/5W J 1	R277	3069202970	Carbon Film	2K ohm	1/5W J 1
R195	3069913970	Carbon Film	91K ohm	1/5W J 1	R278	3069184970	Carbon Film	180K ohm	1/5W J 1
R196	3069100970	Carbon Film	10 ohm	1/5W J 1	R279	3069101970	Carbon Film	100 ohm	1/5W J 1
R197	3069103970	Carbon Film	10K ohm	1/5W J 1	R280	3069184970	Carbon Film	180K ohm	1/5W J 1
R198	3069333970	Carbon Film	33K ohm	1/5W J 1	R281	3069752970	Carbon Film	7.5K ohm	1/5W J 1
R199	3069154970	Carbon Film	150K ohm	1/5W J 1	R282	3069103970	Carbon Film	10K ohm	1/5W J 1
R200/201	3069100970	Carbon Film	10 ohm	1/5W J 2	R283	3069184970	Carbon Film	180K ohm	1/5W J 1
R202	3069333970	Carbon Film	33K ohm	1/5W J 1	R284	3069752970	Carbon Film	7.5K ohm	1/5W J 1
R203	3069332970	Carbon Film	3.3K ohm	1/5W J 1	R285	3069622970	Carbon Film	6.2K ohm	1/5W J 1
R204	3069243970	Carbon Film	24K ohm	1/5W J 1	R286	3069512970	Carbon Film	5.1K ohm	1/5W J 1
R205	3069682970	Carbon Film	6.8K ohm	1/5W J 1	R287	3069223970	Carbon Film	22K ohm	1/5W J 1
R206	3069513970	Carbon Film	51K ohm	1/5W J 1	R288	3069184970	Carbon Film	180K ohm	1/5W J 1
R207	3069104970	Carbon Film	100K ohm	1/5W J 1	R289	3069473970	Carbon Film	47K ohm	1/5W J 1
R208	3069683970	Carbon Film	68K ohm	1/5W J 1	R290	3069473970	Carbon Film	47K ohm	1/5W J 1
R209	3069243970	Carbon Film	24K ohm	1/5W J 1	R296	3069332970	Carbon Film	3.3K ohm	1/5W J 1
R210	3069332970	Carbon Film	3.3K ohm	1/5W J 1	R297	3069184970	Carbon Film	180K ohm	1/5W J 1
R211	3069472970	Carbon Film	4.7K ohm	1/5W J 1	R298	3069332970	Carbon Film	3.3K ohm	1/5W J 1
R212	3069223970	Carbon Film	22K ohm	1/5W J 1	R299	3069101970	Carbon Film	100 ohm	1/5W J 1
R213	3069104970	Carbon Film	100K ohm	1/5W J 1	R300	3069103970	Carbon Film	10K ohm	1/5W J 1
R214	3069433970	Carbon Film	43K ohm	1/5W J 1	R301	3069332970	Carbon Film	3.3K ohm	1/5W J 1
R215	3069753970	Carbon Film	75K ohm	1/5W J 1	R302	3069752970	Carbon Film	7.5K ohm	1/5W J 1
R216	3069333970	Carbon Film	33K ohm	1/5W J 1	R303/304	3069330970	Carbon Film	33 ohm	1/5W J 2
R217/218	3069100970	Carbon Film	10 ohm	1/5W J 2	R305	3069122970	Carbon Film	1.2K ohm	1/5W J 1
R219	3069332970	Carbon Film	3.3K ohm	1/5W J 1	R306	3069752970	Carbon Film	7.5K ohm	1/5W J 1
R220	3069622970	Carbon Film	6.2K ohm	1/5W J 1	R308	3069332970	Carbon Film	3.3K ohm	1/5W J 1
R221	3069512970	Carbon Film	5.1K ohm	1/5W J 1	R308	3069101970	Carbon Film	100 ohm	1/5W J 1
R222	3069223970	Carbon Film	22K ohm	1/5W J 1	R309/310	3069104970	Carbon Film	100K ohm	1/5W J 2
R223	3069184970	Carbon Film	180K ohm	1/5W J 1	R311	3069332970	Carbon Film	3.3K ohm	1/5W J 1
R224	3069473970	Carbon Film	47K ohm	1/5W J 1	R312	3069103970	Carbon Film	10K ohm	1/5W J 1
R225	3069473970	Carbon Film	47K ohm	1/5W J 1	R313	3069122970	Carbon Film	1.2K ohm	1/5W J 1
R226	3069912970	Carbon Film	9.1K ohm	1/5W J 1	R314/315	3069330970	Carbon Film	33 ohm	1/5W J 2
R227	3069103970	Carbon Film	10K ohm	1/5W J 1	R316	3069122970	Carbon Film	1.2K ohm	1/5W J 1
R228	3069223970	Carbon Film	22K ohm	1/5W J 1	R317/318	3069332970	Carbon Film	3.3K ohm	1/5W J 2
R229	3069104970	Carbon Film	100K ohm	1/5W J 1	R319/320	3069104970	Carbon Film	100K ohm	1/5W J 2
R230	3069753970	Carbon Film	75K ohm	1/5W J 1	R321	3069243970	Carbon Film	24K ohm	1/5W J 1
R231	3069154970	Carbon Film	150K ohm	1/5W J 1	R322	3069122970	Carbon Film	1.2K ohm	1/5W J 1
R232/233	3069223970	Carbon Film	22K ohm	1/5W J 2	R323	3069103970	Carbon Film	10K ohm	1/5W J 1
R234/R235	3069182970	Carbon Film	1.8K ohm	1/5W J 2	R324	3069332970	Carbon Film	3.3K ohm	1/5W J 1
R236/237	3069184970	Carbon Film	180K ohm	1/5W J 2	R325/326	3069302970	Carbon Film	3K ohm	1/5W J 2
R238	3069333970	Carbon Film	39K ohm	1/5W J 1	R327	3069122970	Carbon Film	1.2K ohm	1/5W J 1
R239/240	3069223970	Carbon Film	22K ohm	1/5W J 2	R328/329	3069302970	Carbon Film	3K ohm	1/5W J 2
R241/242	3069184970	Carbon Film	180K ohm	1/5W J 2	R330	3069332970	Carbon Film	3.3K ohm	1/5W J 1
R243	3069150970	Carbon Film	150K ohm	1/5W J 1	R331	3069272970	Carbon Film	2.7K ohm	1/5W J 1
R244	3069562970	Carbon Film	5.6K ohm	1/5W J 1	R332/333	3069332970	Carbon Film	3.3K ohm	1/5W J 2
R245	3069333970	Carbon Film	39K ohm	1/5W J 1	R334	3069562970	Carbon Film	5.6K ohm	1/5W J 1
R246	3069154970	Carbon Film	150K ohm	1/5W J 1	R335/336	3069333970	Carbon Film	33K ohm	1/5W J 2
R247	3069223970	Carbon Film	22K ohm	1/5W J 1	R337	3069102970	Carbon Film	1K ohm	1/5W J 1
R248	3069562970	Carbon Film	5.6K ohm	1/5W J 1	R338	3069561970	Carbon Film	560 ohm	1/5W J 1
R249	3069123970	Carbon Film	12K ohm	1/5W J 1	R339	3069562970	Carbon Film	5.6K ohm	1/5W J 1
R250	3069103970	Carbon Film	10K ohm	1/5W J 1	R340	3069622970	Carbon Film	6.2K ohm	1/5W J 1
R251	3069223970	Carbon Film	22K ohm	1/5W J 1	R341/342	3069332970	Carbon Film	3.3K ohm	1/5W J 2
R252	3069823970	Carbon Film	82K ohm	1/5W J 1	R343	3069243970	Carbon Film	24K ohm	1/5W J 1
R253	3069823970	Carbon Film	82K ohm	1/5W J 1	R344	3069562970	Carbon Film	5.6K ohm	1/5W J 1
R254	3069104970	Carbon Film	100K ohm	1/5W J 1	R345	3069333970	Carbon Film	33K ohm	1/5W J 1
R261	3069223970	Carbon Film	22K ohm	1/5W J 1	R348	3069333970	Carbon Film	33K ohm	1/5W J 1
R262	3069243970	Carbon Film	24K ohm	1/5W J 1	R349	3069101970	Carbon Film	100 ohm	1/5W J 1
R263	3069202970	Carbon Film	2K ohm	1/5W J 1	R350	3069222970	Carbon Film	2.2K ohm	1/5W J 1
R264	3069101970	Carbon Film	100 ohm	1/5W J 1	R356	3069562970	Carbon Film	5.6K ohm	1/5W J 1

Ref. No.	Part No.	Description	Q'ty	Version
R357	3069103970	Carbon Film 10K ohm 1/5W J	1	
R358	3069101970	Carbon Film 100 ohm 1/5W J	1	
R359	3069272970	Carbon Film 2.7K ohm 1/5W J	1	
R360	3069562970	Carbon Film 5.6K ohm 1/5W J	1	
R361	3069222970	Carbon Film 2.2K ohm 1/5W J	1	
R362	3069562970	Carbon Film 5.6K ohm 1/5W J	1	
R363	3069243970	Carbon Film 24K ohm 1/5W J	1	
R364	3069622970	Carbon Film 6.2K ohm 1/5W J	1	
R366	3069273970	Carbon Film 27K ohm 1/5W J	1	
R367/368	3069103970	Carbon Film 10K ohm 1/5W J	2	
R369	3069561970	Carbon Film 560 ohm 1/5W J	1	
R370	3069101970	Carbon Film 100 ohm 1/5W J	1	
R371/372	3069103970	Carbon Film 10K ohm 1/5W J	2	
R373	3069473970	Carbon Film 47K ohm 1/5W J	1	
R376	3069272970	Carbon Film 2.7K ohm 1/5W J	1	
R377	3069103970	Carbon Film 10K ohm 1/5W J	1	
R378	3069473970	Carbon Film 47K ohm 1/5W J	1	
R380	3069103970	Carbon Film 10K ohm 1/5W J	1	
R381	3069102970	Carbon Film 1K ohm 1/5W J	1	
R382/383	3069332970	Carbon Film 3.3K ohm 1/5W J	2	
R384/385	3069333970	Carbon Film 33K ohm 1/5W J	2	
R386	3069102970	Carbon Film 1K ohm 1/5W J	1	
R387-R390	3069330970	Carbon Film 33 ohm 1/5W J	4	
R400-R402	3069122970	Carbon Film 1.2K ohm 1/5W J	3	
RLY101	5528001720	Relay, OVR-SH-212L	1	
RLY201	5528001720	Relay, OVR-SH-212L	1	
Q101	2208222105	DTA 114YS, Silicon, PNP	1	
Q102	2208622108	DTC 114TS, Silicon, NPN	1	
Q103	2208206105	KTA 1266Y/A1015Y, Silicon, PNP	1	
Q104/105	2208622108	DTC 114TS, Silicon, NPN	2	
Q106/107	2208206113	KMPS A56, Silicon, PNP	2	
Q108/109	2208222105	DTA 114YS, Silicon, PNP	2	
Q110	2208606112	KTD 1302, Silicon, NPN	1	
Q111	2208622108	DTC 114TS, Silicon, NPN	1	
Q112	2208606112	KTD 1302, Silicon, NPN	1	
Q113	2208622108	DTC 114TS, Silicon, NPN	1	
Q114	2208222105	DTA 114YS, Silicon, PNP	1	
Q115	2208206105	KTA 1266Y(A1015Y) Silicon, PNP	1	
Q116-119	2208222105	DTA 114YS, Silicon, PNP	4	
Q120	2208622108	DTC 114TS, Silicon, NPN	1	
Q121	2208222105	DTA 114YS, Silicon, PNP	1	
Q122-124	2208622108	DTC 114TS, Silicon, NPN	3	
Q125	2208222105	DTA 114YS, Silicon, PNP	1	
Q126-128	2208622108	DTC 114TS, Silicon, NPN	3	
Q129	2208606112	KTD 1302, Silicon, NPN	1	
Q130	2208606114	MPS A 06, Silicon, NPN	1	
Q131	2208206113	KMPS A56, Silicon, PNP	1	
Q132/133	2208622108	DTC 114TS, Silicon, NPN	2	
Q134	2208606112	KTD 1302, Silicon, NPN	1	
Q135	2208606114	MPS A 06, Silicon, NPN	1	
Q136	2208206113	KMPS A56, Silicon, PNP	1	
Q137	2208622108	DTC 114TS, Silicon, NPN	1	
Q138	2208406117	KTC 2236Y, Silicon, NPN	1	
Q139/140	2208622108	DTC 114TS, Silicon, NPN	2	
Q141-Q143	2208406117	KTC 2236Y, Silicon, NPN	3	
Q144/145	2208606114	MPS A 06, Silicon, NPN	2	
Q146-Q148	2208606112	KTD 1302, Silicon, NPN	3	
Q151-Q156	2208622108	DTC 114TS, Silicon, NPN	6	
Q157-Q161	2208606112	KTD 1302, Silicon, NPN	5	
Q162-Q165	2208622108	DTC 114TS, Silicon, NPN	4	
Q166/167	2208606112	KTD 1302, Silicon, NPN	2	
Q168-Q171	2208622108	DTC 114TS, Silicon, NPN	4	
VR101-VR103	2480502434	Res Semi 5K(B), Bias ADJ	4	
VR105-VR106	3248010343	Res Semi 10K(B), FL Level, ADJ.	2	

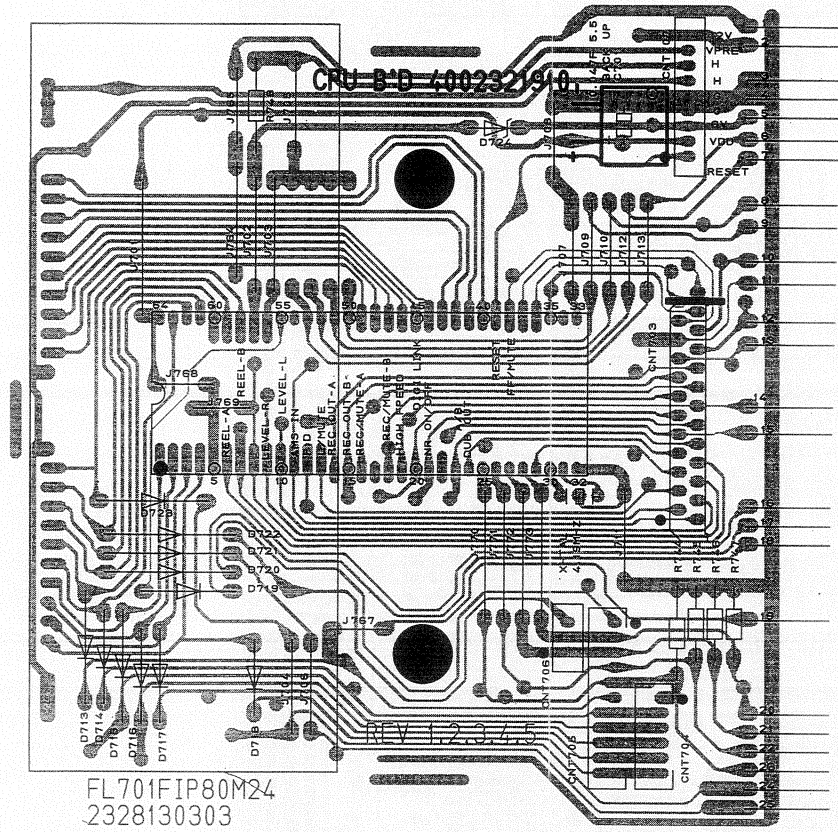
Ref. No.	Part No.	Description	Q'ty	Version
VR107-VR110	3248010343	Res Semi 10K(B), Bias ADJ	4	
VR111-VR114	3248010343	Res Semi 10K(B), Rec Level, ADJ.	4	
VR115-VR118	3248010343	Res Semi 10K(B), PB Level, ADJ.	4	
P2	054051010002	PCB ASSEMBLY-FRONT		
25	4658003710	Switch Tact	22	
CNT705	435111162432	Lead Ass'y 11P 160mm	1	
P2-1	054051010003	PCB ASSEMBLY-CPU		
C701	3439247312	Backup CAP 0.047 uF 5.5V	1	
or	3449347314	Backup CAP 0.047 uF 5.5V		
CNT703	4428526340	Wafer 22P, FPC Elco	1	
CNT704	4428516510	Wafer 6P	1	
CNT705	4428517010	Wafer 11P	1	
CNT707	436209283332	Lead Ass'y 9P 280mm	1	
D713-D723	2058322101	1N 4148M	11	
D724	2258599107	Zener 9.1V(B)	1	
FL701	2328130303	FL Tube (FIP 8CMW24	1	
IC701	2138313205	uPD 75P 212 ACW- W69 (CPU)	1	
R744-R747	3069223970	Carbon Film 22K ohm 1/5W J	4	
R748	3069683970	Carbon Film 68K ohm 1/5W J	1	
X701	3938101880	Resonator CST 4.19MHz	1	
P2-2	054051010004	PCB ASSEMBLY-MOTOR CNTL		
C702	3479210071	Electric SA 10 uF 50V M	1	
CNT701	4428513800	Wafer 13P, SBRA 13S-1 From A-Deck Mecha	1	
CNT702	4428513800	Wafer 13P, SBRA 13S-1 From B-Deck Mecha	1	
D701-D704	2058322101	1N 4148M, Key Scan	4	
D705	2258100135	1N 4002	1	
D706	2058322101	1N 4148M, Switching	1	
D707-D710	2058322101	1N 4148M, Key Scan	4	
D711	2258100135	1N 4002	1	
D712	2058322101	1N 4148M, Switching	1	
D729-D732	2058322101	1N 4148M, Switching	4	
R705	3069621970	Carbon Film 820 ohm 1/5W J	1	
R706/707	3069473970	Carbon Film 47K ohm 1/5W J	2	
R708	3069621970	Carbon Film 820 ohm 1/5W J	1	
R709	3069432970	Carbon Film 4.3K ohm 1/5W J	1	
R710	3069302970	Carbon Film 3K ohm 1/5W J	1	
R711	3069473970	Carbon Film 47K ohm 1/5W J	1	
R712	3069103970	Carbon Film 10K ohm 1/5W J	1	
R713	3069102970	Carbon Film 1K ohm 1/5W J	1	
R714	3069103970	Carbon Film 10K ohm 1/5W J	1	
R715	3069473970	Carbon Film 47K ohm 1/5W J	1	
R716/717	3069183970	Carbon Film 18K ohm 1/5W J	2	
R718	3069103970	Carbon Film 10K ohm 1/5W J	1	
R719	3069821970	Carbon Film 820 ohm 1/5W J	1	
R720/721	3069473970	Carbon Film 47K ohm 1/5W J	2	
R722	3069821970	Carbon Film 820 ohm 1/5W J	1	
R723	3069432970	Carbon Film 4.3K ohm 1/5W J	1	
R724	3069302970	Carbon Film 3K ohm 1/5W J	1	
R751	3069103970	Carbon Film 10K ohm 1/5W J	1	
R752	3069154970	Carbon Film 150K ohm 1/5W J	1	
Q701/702	2208722100	2SA 1515, Silicon, PNP	2	
Q703/704	2208622106	DTC 114YS, Silicon, NPN	2	
Q705	2208206113	KMPS A56, Silicon, PNP	1	
Q706	2208622106	DTC 114YS, Silicon, NPN	1	
Q707/708	2208722100	2SA 1515, Silicon, PNP	2	
Q709	2208206113	KMPS A56, Silicon, PNP	1	
Q710/711	2208622106	DTC 114YS, Silicon, NPN	2	
Q712-Q715	2208222104	DTA 114TS, Silicon, PNP	4	
Q716/717	2208606112	KTD 1302, Silicon, NPN	2	
Q718	2208622106	DTC 114YS, Silicon, NPN	1	
Q719	2208606104	KTC 3198Y/KTC1815, Silicon, NPN	1	

Ref. No.	Part No.	Description	Q'ty	Version
VR701-704	3248020253	Res Semi 2K(B) Speed ADJ.	4	
P2-3	054051010005	PCB ASSEMBLY-POWER		
34	8543048710	Holder FI, ABS, Black	1	
39	4448103910	Outlet	1	Dom
	4448103210	Outlet	1	A
	4448103610	Outlet	1	D
59	4618006610	Voltage Selector	1	B,Dom
	4255001010	Fuse Clip	2	B,D,G,Dom
	4255001010	Fuse Clip	2	B,P.T.Indo
	4428525790	Wafer AC 3P	1	
F101	△ 5508302035	T. 1A/250V	1	D, G
	△ 5508201730	NB 0.315A/250V	1	B, D
	△ 5508301434	T. 0.315A/250V	1	P.T.Indo
F102	△ 5508301734	NB 0.63A/250V	1	B
	△ 5508301734	T0.63A/250V	1	P.T.Indo
P4-P5	4228001410	Pin Solder	2	
P2-4	054051010006	PCB ASSEMBLY-MIC		
47	3208065310	VR REC Level, 100KAX2	1	
48	3208065410	VR REC Balance, 100KSWX1	1	
49	3208065210	VR Mic, 20KWX2	1	
50	4438005620	Jack Mic, Gold	1	
51	6505129110	Blacket Microphone	1	
52	6165145910	Shield Plate	1	
C801L/R	3479247971	Electric SA 4.7 uF 50V M	2	
C802L/R	35192221935	Ceramic Tubular 220 pF 50V Z	2	
C803L/R	3479247971	Electric SA 4.7 uF 50V M	2	
C804/805	3479310121	Electric SG 100 uF 10V M	2	
CNT801	436207203332	Lead Ass'y 7P 200mm	1	
CNT803	436103103331	Lead Ass'y 3P 100mm	1	
IC801	2168206103	KIA 4559S, Mic Amp	1	
IC801/802	3069221970	Carbon Film 220 ohm 1/5W J	1	
R802L/R	3069563970	Carbon Film 56K ohm 1/5W J	2	
R803L/R	3069132970	Carbon Film 1.3K ohm 1/5W J	2	
R804L/R	3069104970	Carbon Film 100K ohm 1/5W J	2	
R805L/R	3069104970	Carbon Film 100K ohm 1/5W J	2	
R806L/R	3069102970	Carbon Film 1K ohm 1/5W J	2	
R807	3069682970	Carbon Film 6.8K ohm 1/5W J	1	
R811/812	3069330970	Carbon Film 33 ohm 1/5W J	2	
R813/806	3069203970	Carbon Film 20K ohm 1/5W J	4	
P2-5	054051010007	PCB ASSEMBLY-TACT		
25	4658003710	Switch Tact	5	
CNT704	436206203332	Lead Ass'y 6P 200mm	1	
P2-6	054051010008	PCB ASSEMBLY-POWER SW		
21	4628035210	Switch Power	1	
CNT001	436106353331	Lead Ass'y 6P 350mm	1	
R001/002	3069222970	Carbon Film 2.2 ohm 1/4W J	2	
P2-7	054051010009	PCB ASSEMBLY-H/P		
22	4438005010	Jack Phone	1	
23	6505092310	Bracket Headphone	1	
CNT004	436104263331	Lead Ass'y 4P 260mm	1	
R749/750	3069332970	Carbon Film 3.3K ohm 1/5W J	2	
Q716/717	2208606112	KTD 1302, Silicon, NPN	2	
P2-8	054050410010	PCB ASSEMBLY-TIMER		B,D,G,Dom
20	4618006710	Switch Slide	1	
CNT706	436403353232	Lead Ass'y 3P 350mm	1	
D733	2058322101	1N 4148M, Switching	1	

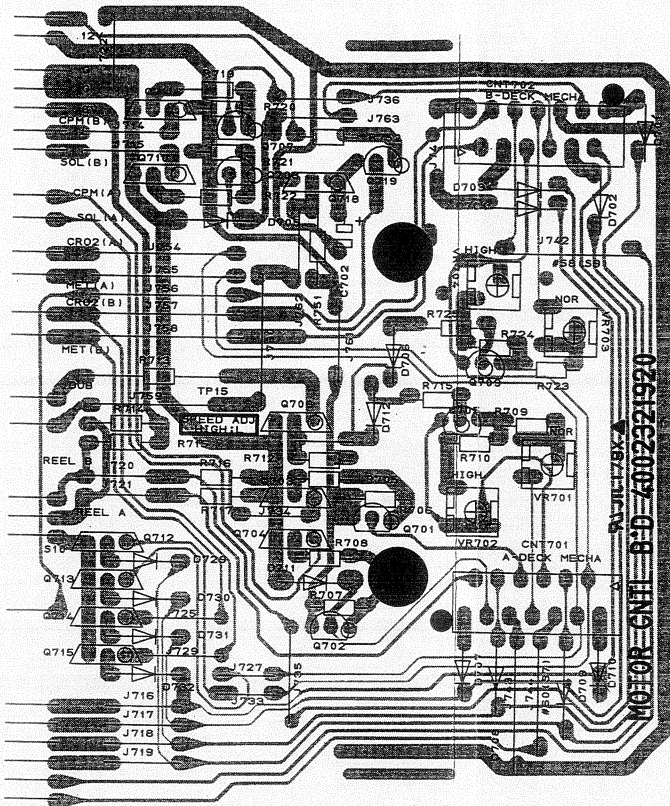
PRINTED CIRCUIT BOARDS



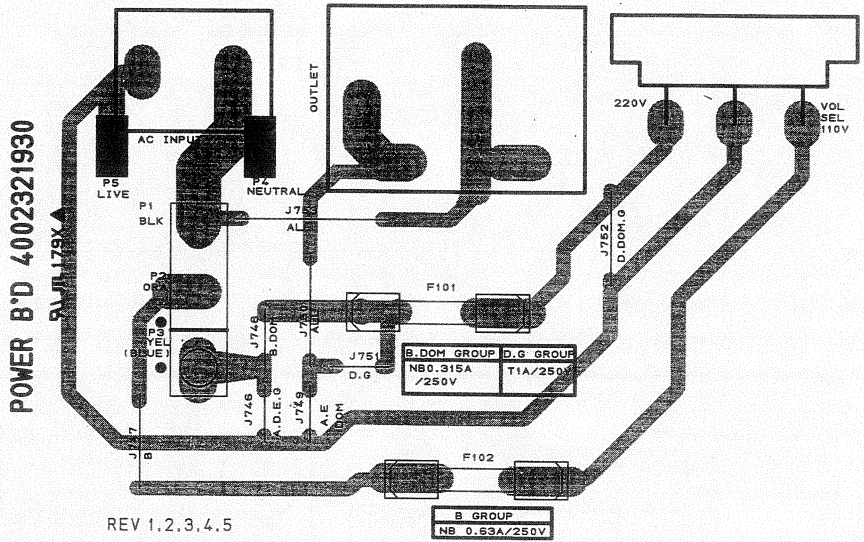
CPU P.C.BOARD



MOTOR CNTL P.C.BOARD

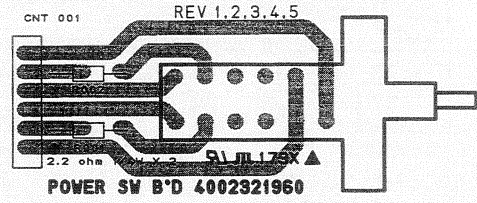


POWER P.C.BOARD

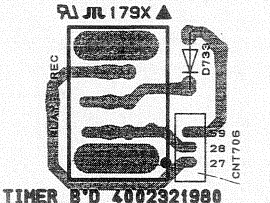


BAR CODE

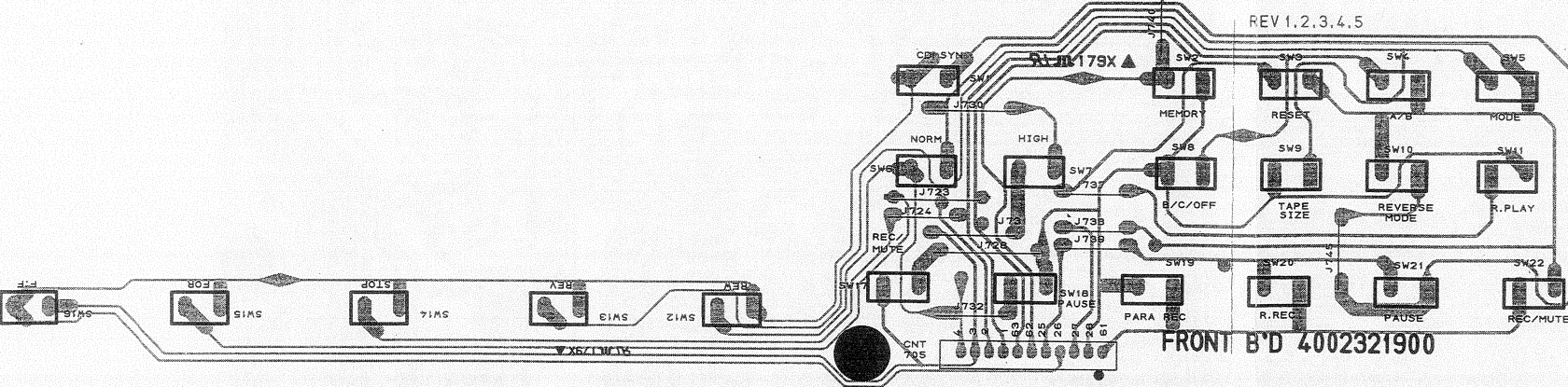
POWER SW P.C.BOARD



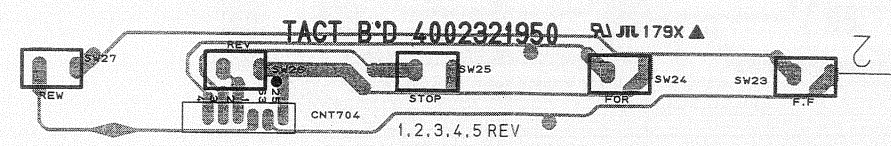
TIMER P.C.BOARD



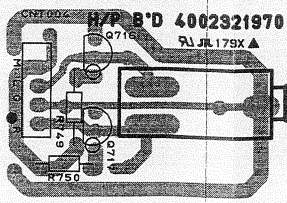
FRONT P.C.BOARD



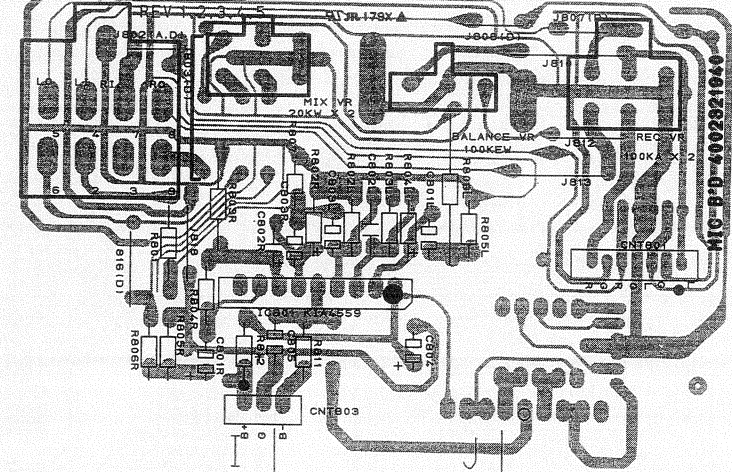
TACT P.C.BOARD



H/P P.C.BOARD



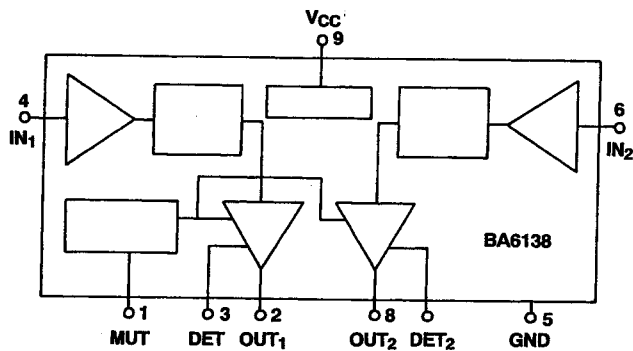
MIC P.C.BOARD



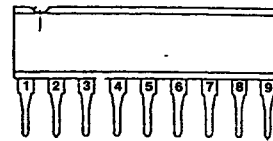
μPC 1297 CA : IC109 / IC110 Block Diagram



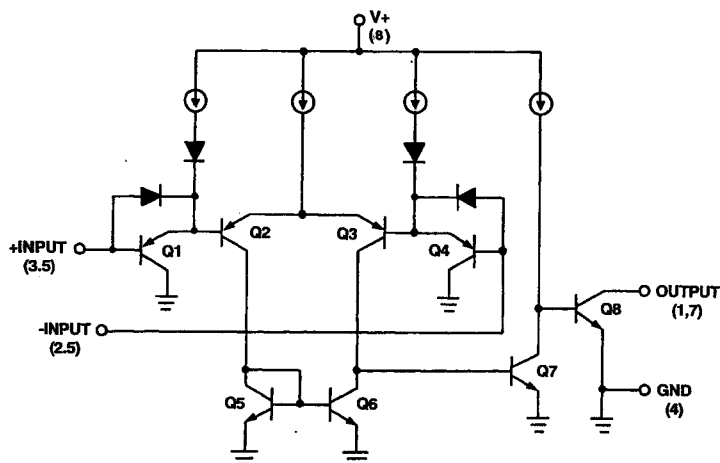
BA6138(FL DRIVER) : IC101 Block Diagram



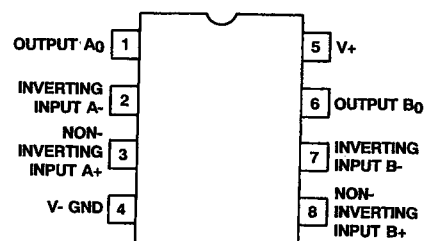
Front View



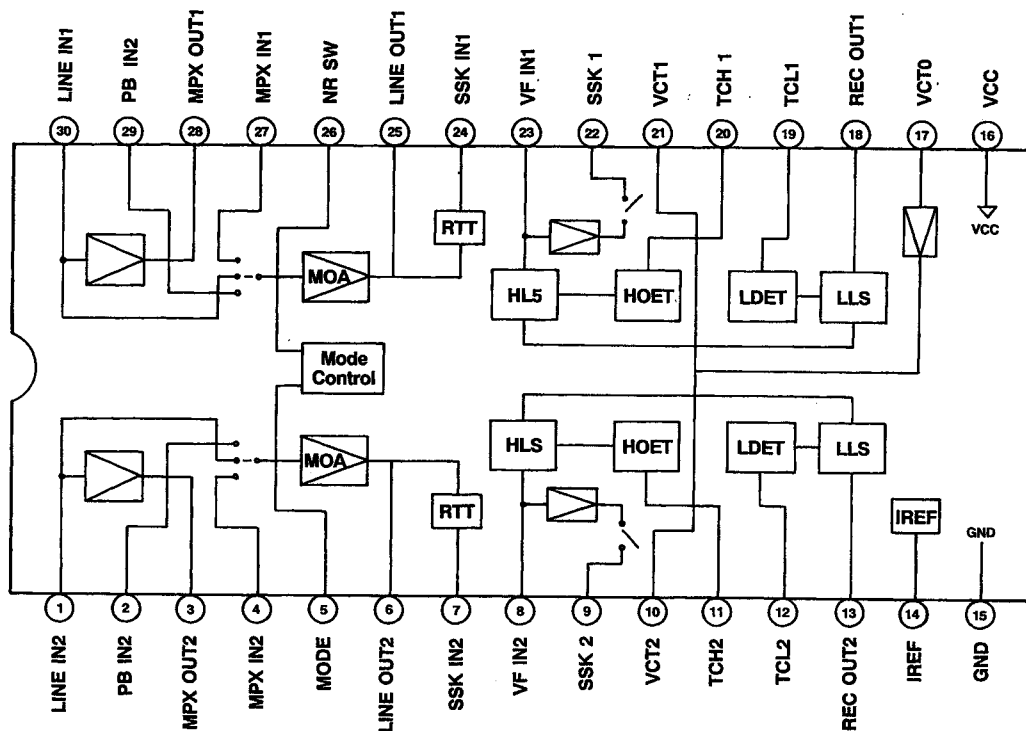
GL393(COMPARATOR) : IC102 Block Diagram



(Top View)



CXA1330S(DOLBY NR) : IC117 Block Diagram

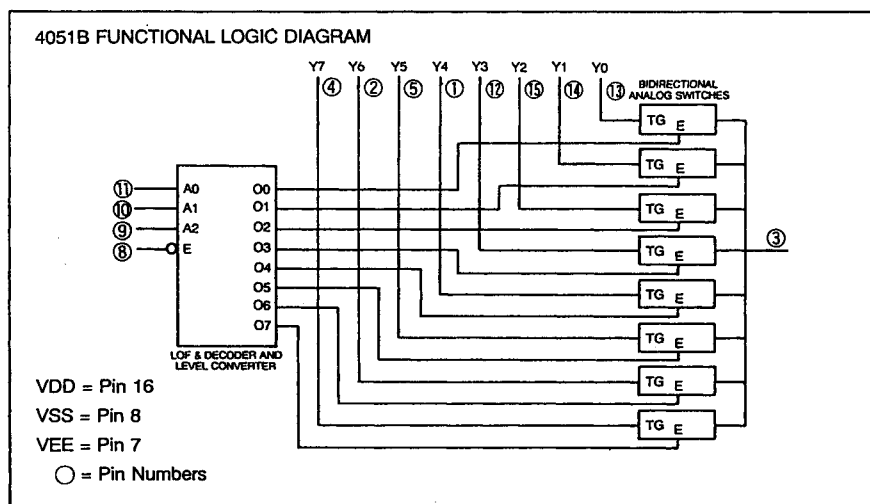


MC14051 or GD4051 : IC108 / IC112

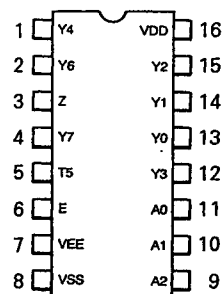
TRUTH TABLE

INPUTS				CHANNELS							
E	A ₂	A ₁	A ₀	Y ₀ -Z	Y ₁ -Z	Y ₂ -Z	Y ₃ -Z	Y ₄ -Z	Y ₅ -Z	Y ₆ -Z	Y ₇ -Z
L	L	L	L	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
L	L	L	H	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
L	L	H	L	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
L	L	H	H	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
L	H	L	L	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
L	H	L	H	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
L	H	H	L	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
L	H	H	H	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
H	X	X	X	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

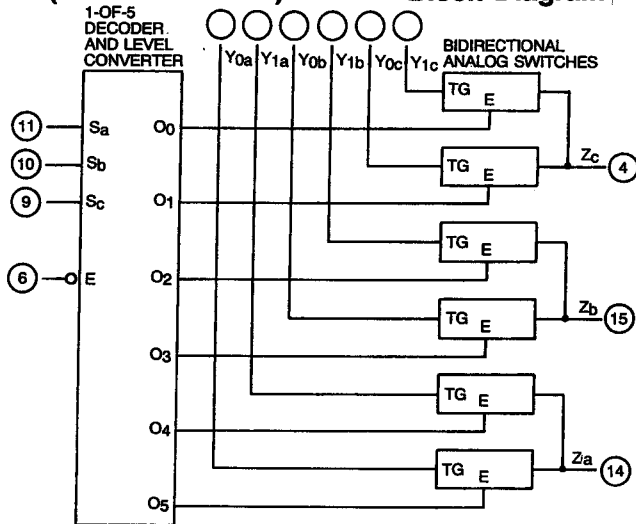
L = LOW Level
H = HIGH Level
X = Don't Care



TOP VIEW



GD4053(A & B DECK SW) : IC118 Block Diagram

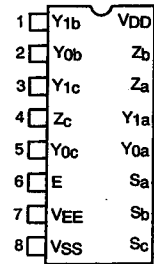


Internal Diagram

TRUTH TABLE

INPUTS		CHANNELS	
E	S	Y ₀ -Z	Y ₁ -Z
L	L	ON	OFF
L	H	OFF	ON
H	X	OFF	OFF

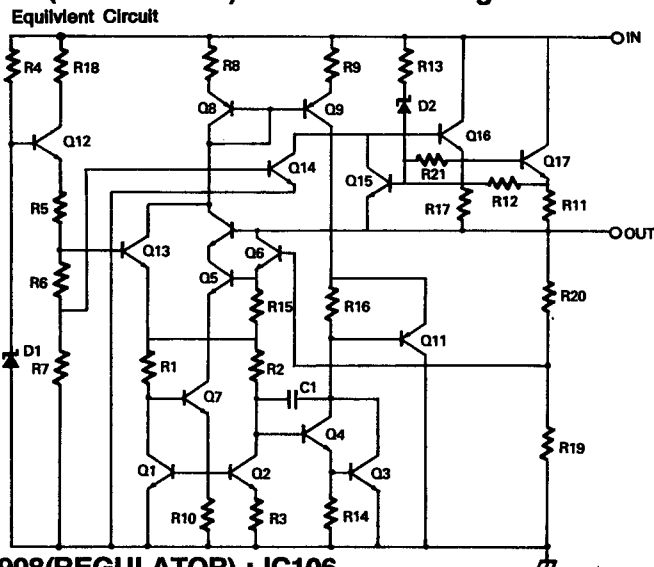
H=HIGH Level
L=LOW Level
X=Don't Care



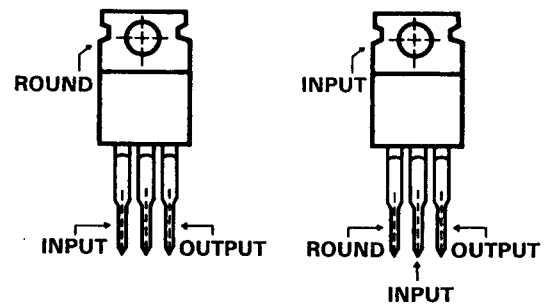
VDD=PIN16
VSS=PIN8
VEE=PIN7
O=PIN NUMBER

NOTE:
The SO Package has the same pinouts(Connction Diagram) as the Dual In-line Package.

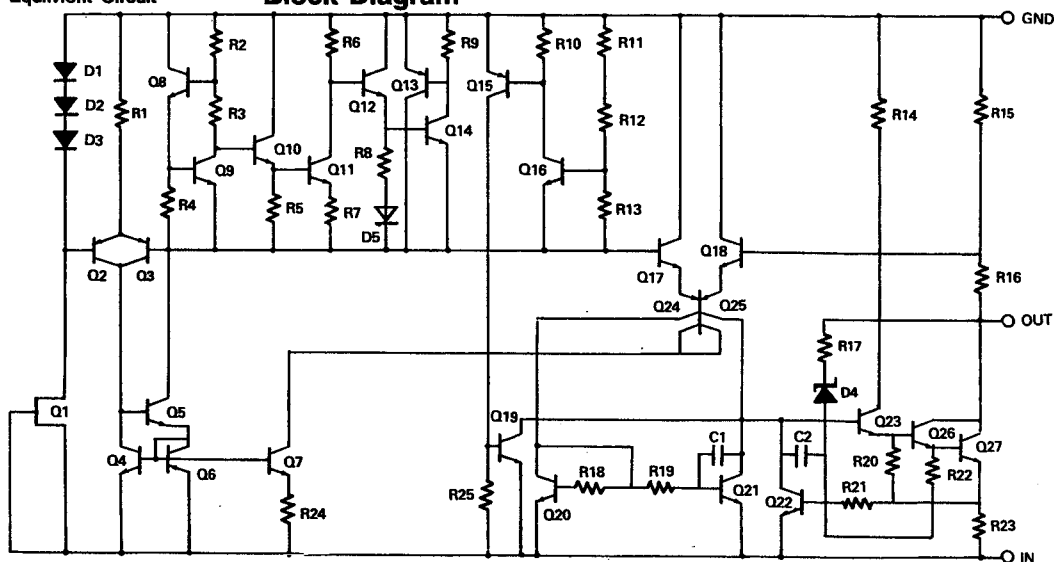
MC7808(REGULATOR) : IC105, KIA7806 : IC103 KIA7812(REGULATOR) : IC104 Block Diagram



Front View



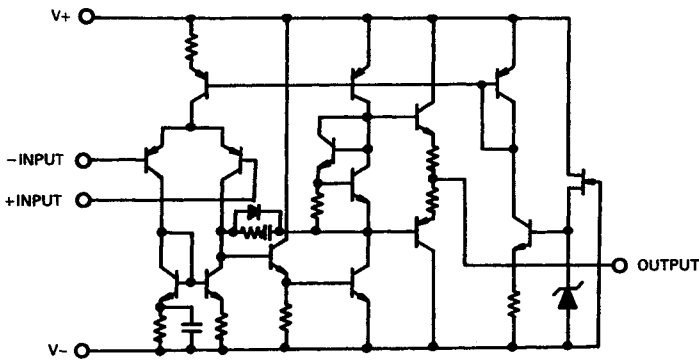
MC7908(REGULATOR) : IC106 Block Diagram



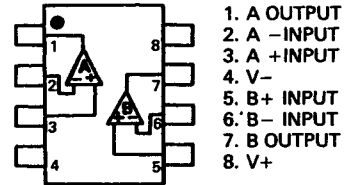
NJM2068-(PB AMP) : IC114 / IC115

Equivalent Circuit

Block Diagram



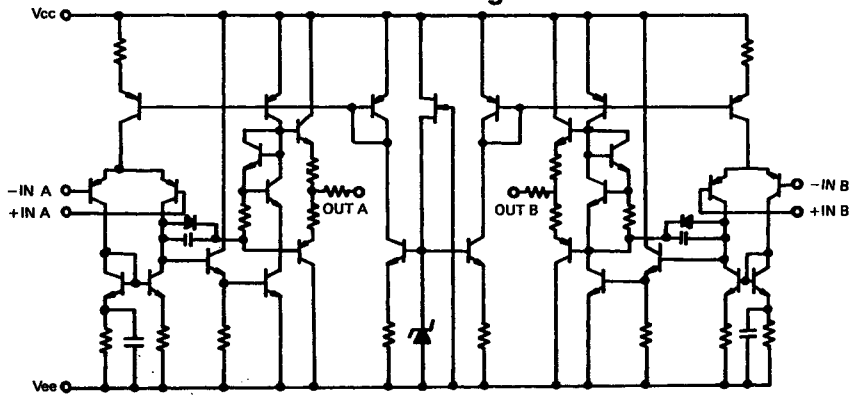
(TOP VIEW) Internal Diagram



KIA4559S(6559)-HEAD PHONE AMP : IC107, FL LEVEL ADJ. AMP : IC111 MIC AMP : IC801

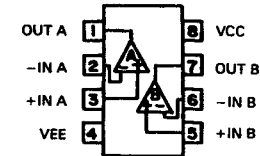
Equivalent Circuit

Block Diagram

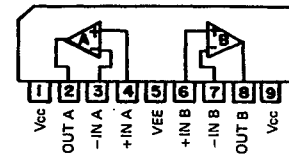


Internal Diagram

KIA 4559P, KIA 4559F

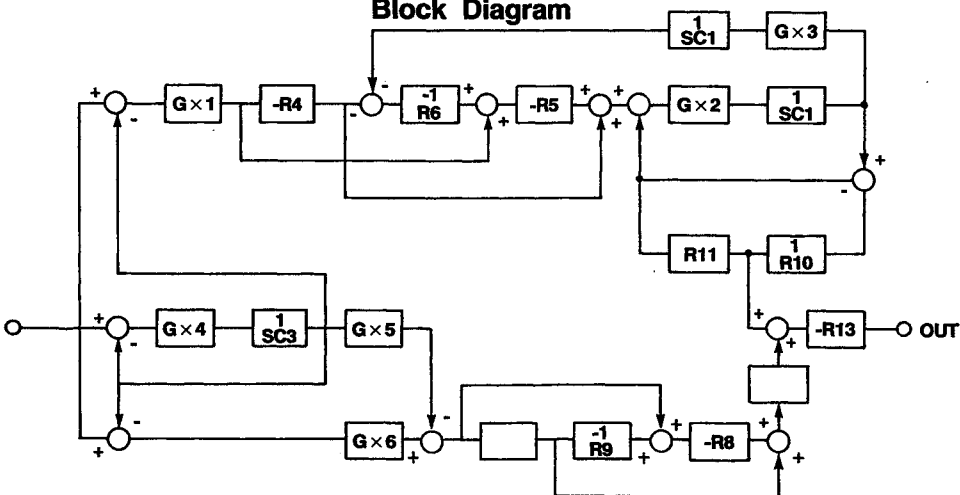


KIA 4559S

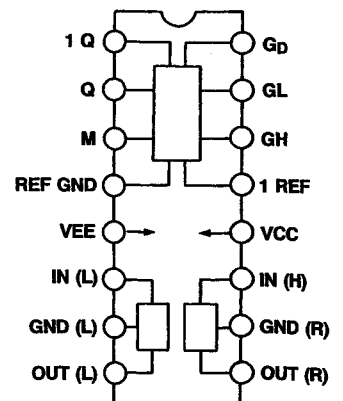


CXA1198AP(REC AMP) : IC113 / IC116

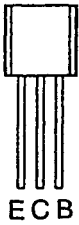
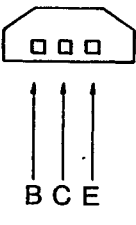
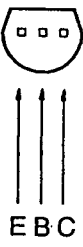
Block Diagram



Internal Diagram

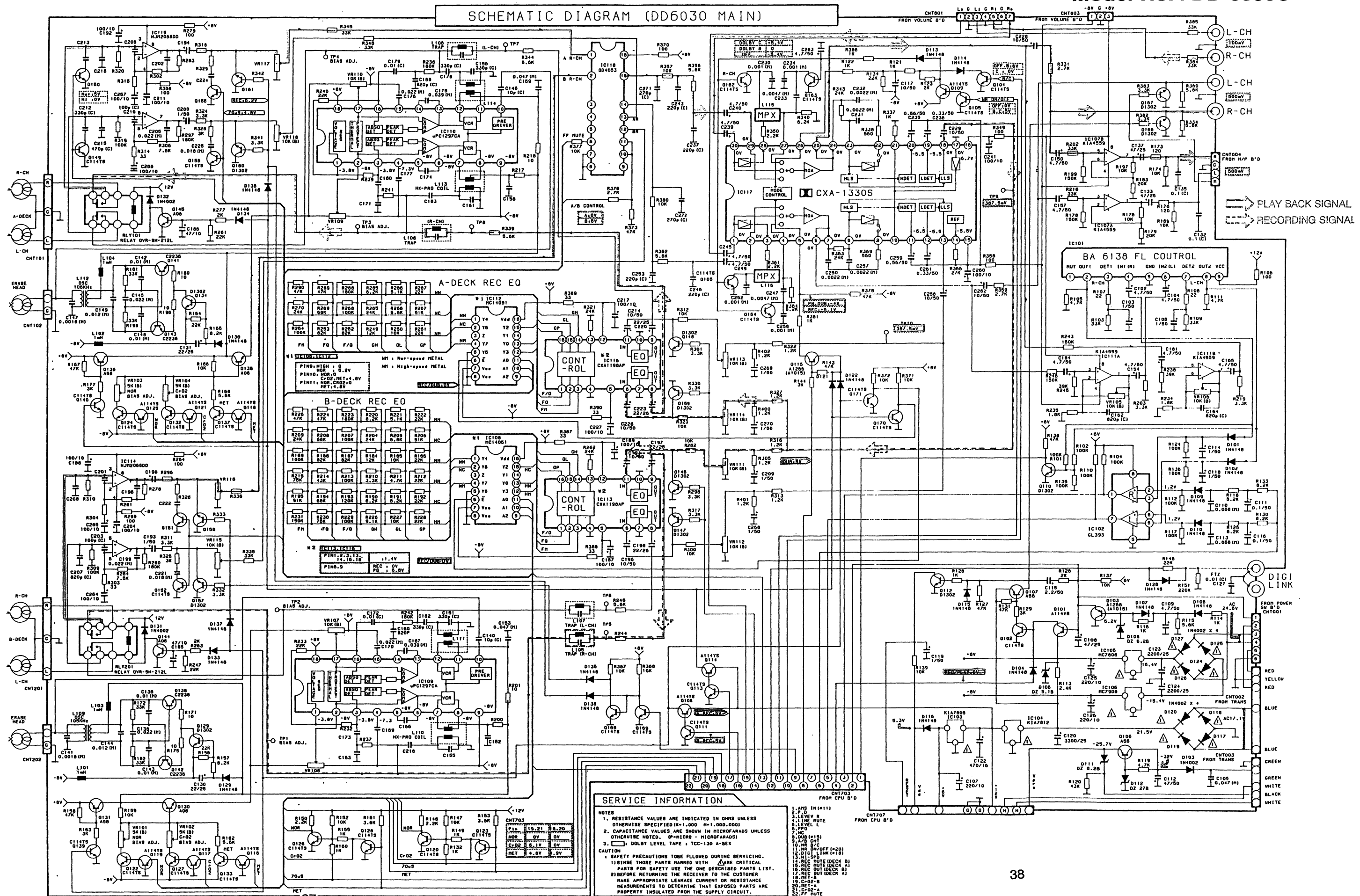


TRANSISTORS LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
KTC1266(1015) KTC3198(1815) KTC2236AY 2SC1515 KTD1302S	 ECB	 EC/B
DTC114YS DTC114TS DTA114YS DTA114TS	 ECB	 BCE
MPSA06 MPSA56	 EBC	 EBC
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

SCHEMATIC DIAGRAM I

Model No. : DD-6030C



SCHEMATIC DIAGRAM II

Model No. : DD-6030C

