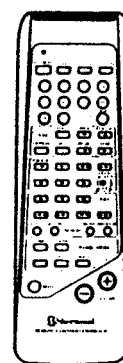
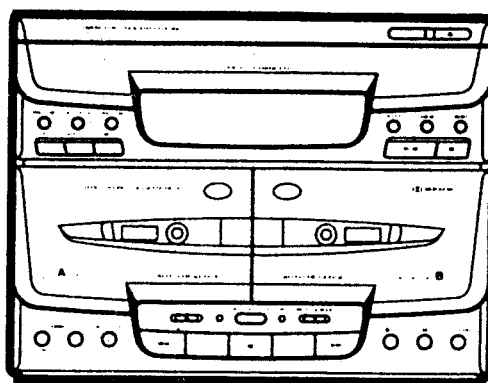
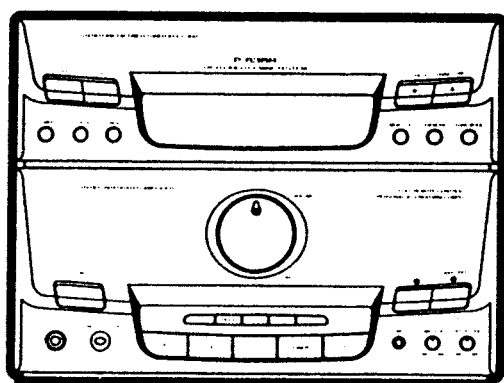


SERVICE MANUAL

P-636R



ATX-636R

- STEREO INTEGRATED AMPLIFIER
- STEREO AM/FM TUNER & TIMER

CCD-636R

- COMPACT DISC PLAYER
(Three CD Changer)
- STEREO DOUBLE CASSETTE DECK

 **Sherwood**

CONTENTS

ATX-636R

Safety Precautions.....	3
Specifications.....	4
Circuit Description.....	7
Block Diagram.....	15
Wiring Diagram.....	17
Alignment Procedures.....	19
Troubleshooting.....	23
Mechanical Parts List.....	26
Exploded View.....	27
Electrical Parts List.....	29
Printed Circuit Boards.....	35
Semiconductor Lead Identification & Internal Diagram.....	39
Schematic Diagram.....	44

CCD-636R

Specifications.....	49
Circuit Description.....	51
Block Diagram.....	55
Wiring Diagram.....	57
Before repairing the compact disc player.....	59
Alignment Procedures(CD Part).....	62
PLL & EF Balance Adjustment.....	63
Alignment Procedures(Deck Part).....	66
Troubleshooting.....	70
Mechanical Parts List.....	79
Exploded View.....	81
Electrical Parts List.....	91
Printed Circuit Boards.....	96
IC's Lead Identification & Internal Diagram.....	99
Transistors Lead Identification.....	106
Schematic Diagram.....	107

SAFETY PRECAUTIONS

WARNING

Before servicing this unit, familiarize yourself with the following precautions:

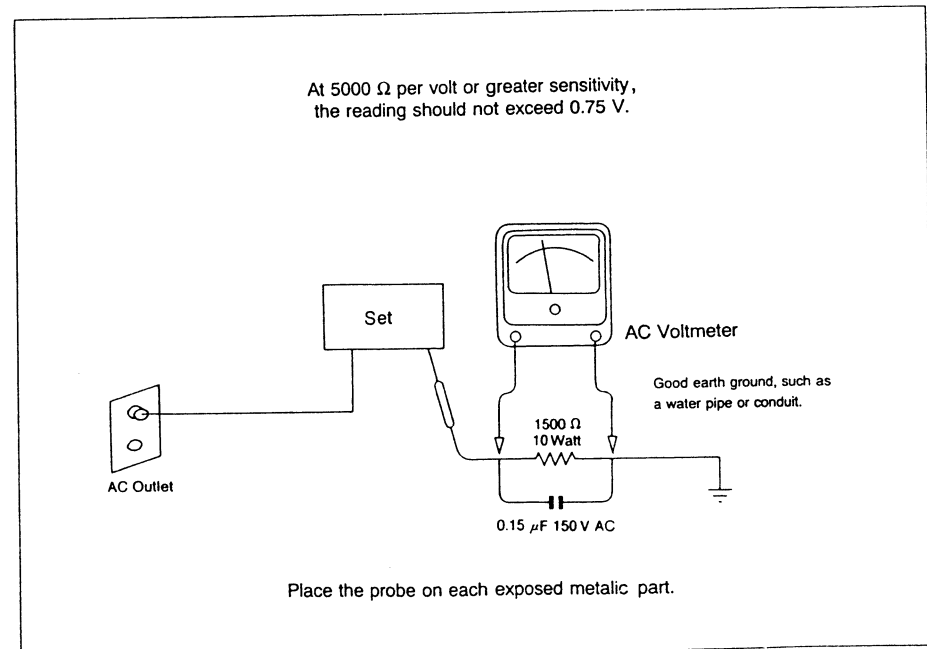
1. Many electrical and mechanical parts in this chassis have special safety characteristics that often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by Δ 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, and metal overlays, 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.) Be sure your AC voltmeter has a sensitivity of 5000 Ω per volt or greater. Then connect a 1500 Ω 10 watt resistor, paralleled by a 0.15 μ F 150 V AC capacitor, between a known good earth ground (such as a water pipe, or conduit) and the exposed metallic 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 metallic 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.



ATX-636R SPECIFICATIONS

Amplifier Section	Unit	Normal	Limit
RMS output power			
at distortion below 0.3% 40 Hz – 20 kHz	W	30	25
both channels driven at 6 Ω			
at distortion below 0.3% 1 kHz	W	35	30
both channels driven at 6 Ω			
Intermodulation distortion			
at 30 W output 60 Hz : 7 kHz = 4:1 SMPTE	%	0.05	0.1
Harmonic distortion at 30 W output 1 kHz	%	0.1	0.2
Frequency response			
at 8 Ω load, 1 W output -3 dB	Hz	35-56 k	40-50 k
Input sensitivity for 30 W output 1 kHz:			
VIDEO	mV	220	± 30
PHONO	mV	2.5	± 0.5
	mV	80	60
Phone amp overload at 0.1% THGD, 1 kHz			
X-Bass compensation at Volume -30 dB:	80 Hz	dB	± 2
Channel separation with 4.7 k Ω shorted:			
1 kHz	dB	64	60
10 kHz	dB	59	55
Signal to noise input 4.7 k Ω shorted with IHF-A:			
PHONO at 10 mV	dB	70	65
VIDEO	dB	82	77

FM Section	Unit	Normal	Limit
Tuning coverage for USA/Canada	MHz	87.5-107.9	
Tuning coverage for Europe	MHz	87.5-108	
Usable sensitivity at noise and distortion			
3% 75 Ω input	μ V	3	3
Image rejection at 106 MHz	dB	42	40
IF rejection at 90 MHz	dB	100	100
Full limiting at -3 dB	μ V	2	2
50 dB quieting sensitivity at 98 MHz:			
STEREO	μ V	34	50
Distortion at 1 mV input:			
MONO	%	0.15	0.4
STEREO	%	0.5	0.8
Signal to noise (S/N) ratio at 1 mV input:			
MONO	dB	70	68
STEREO	dB	68	65
AM rejection ratio at 100 μ V-20 mV input	dB	52	50
Search level at 98 MHz	μ V	10	10
Squirious response at 98 MHz			
(antenna input 3 μ V)	dB	76	70
Capture ratio at 1 mV input	dB	2.5	3

MPX Section	Unit	Normal	Limit
Stereo separation at 100% mod., 1 mV input:			
1 kHz	dB	40	35
10 kHz	dB	33	30
Distortion at 100% mod., 1mV input through IHF filter:			
STEREO	%	0.4	0.8
Automatic stereo threshold	μ V	10	10

AM Section	Unit	Normal	Limit
Tuning coverage for USA/Canada	kHz	522-1611	
Tuning coverage for Europe	kHz	520-1710	
Usable sensitivity 600 kHz, 1010 kHz, 1400 kHz			
(603 kHz, 1008 kHz, 1404 kHz for Europe)			
at 400 Hz, 30% mod., S/N=-20 dB	μ V	700	1000
Image rejection at 1400 kHz(1404 kHz for Europe)	dB	35	30
AGC fige of merit from 100 mV/m at 1010 kHz			
(1008 kHz for Europe)	dB	52	50
Distortion at 400 Hz, 30% mod., 5 mV/m input	%	0.7	2
Selectivity at 10 kHz 350 μ V/m input	mV	150	± 50
Signal to noise(S/N) ratio at 1010 kHz	dB	32	30
(1008 kHz for Europe) with antenna input 5 mV/m			
Search level	dB	40	35

General

Power consumption 180 W
Dimensions(HxWxD) 270 x 203 x 280 mm
Weight(Net) 9 Kg

Power requirements:

- A : 120 V 60 Hz for American/Canadian version
- B : 120/220 V, 60/50 Hz for mult-voltage version(switchable)
- D : 230 V 50 Hz German/General European version
- E : 240 V 50 Hz for UK/Australian version
- G : 220 V 50 Hz for Other Area

Notes:

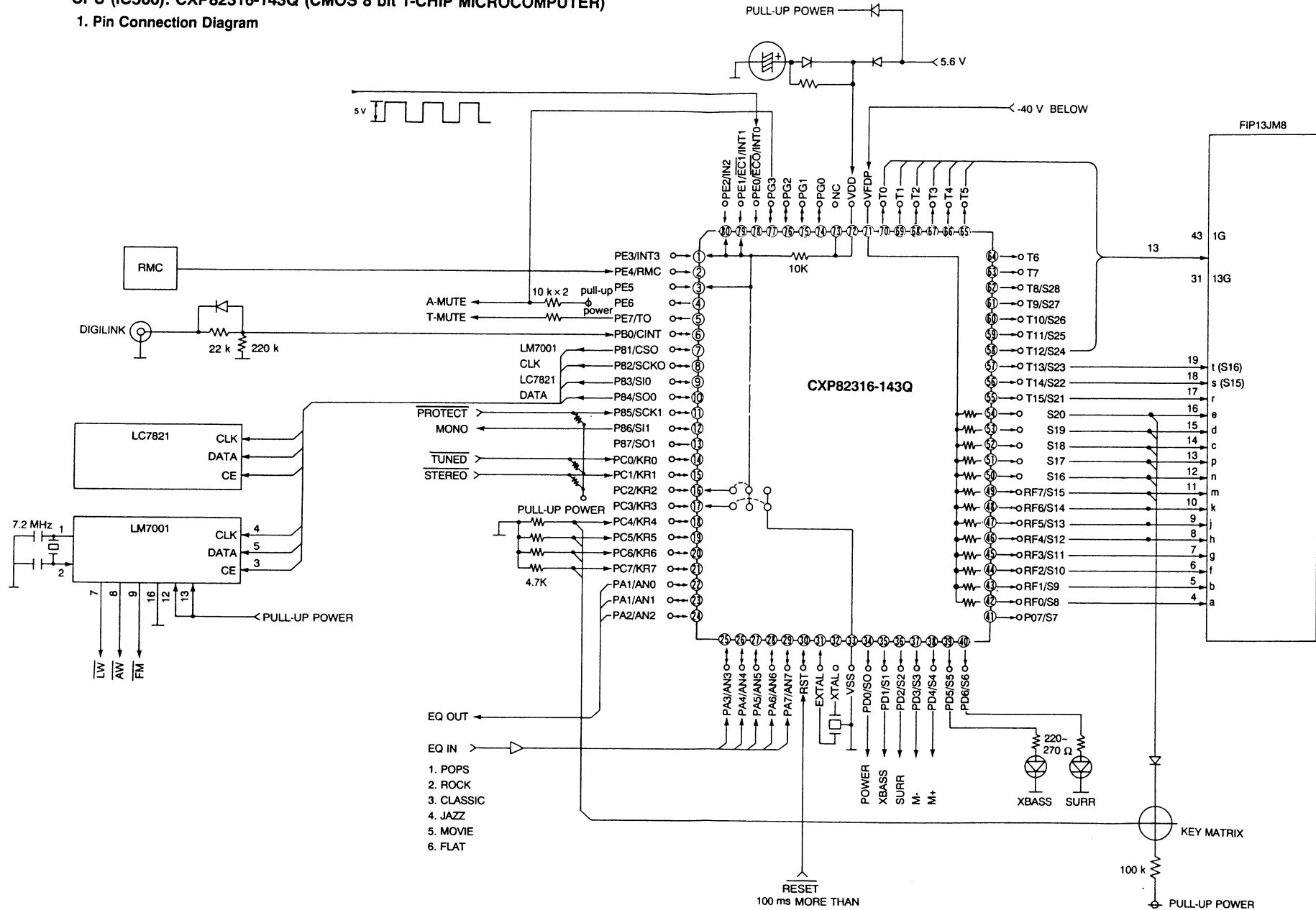
1. Nominal specs represent the design specs. All unit should be able to approximate these-some will exceed and some may drop slight below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable: in no case should a unit fail to meet limit specs.
2. This manual is based on the American (A) standard, and provides information on regional circuit modification through the use of alternate schematic diagrams or wiring diagram, and information on regional component variations through the use of parts lists. Design and specifications subject to change without notice.

Note

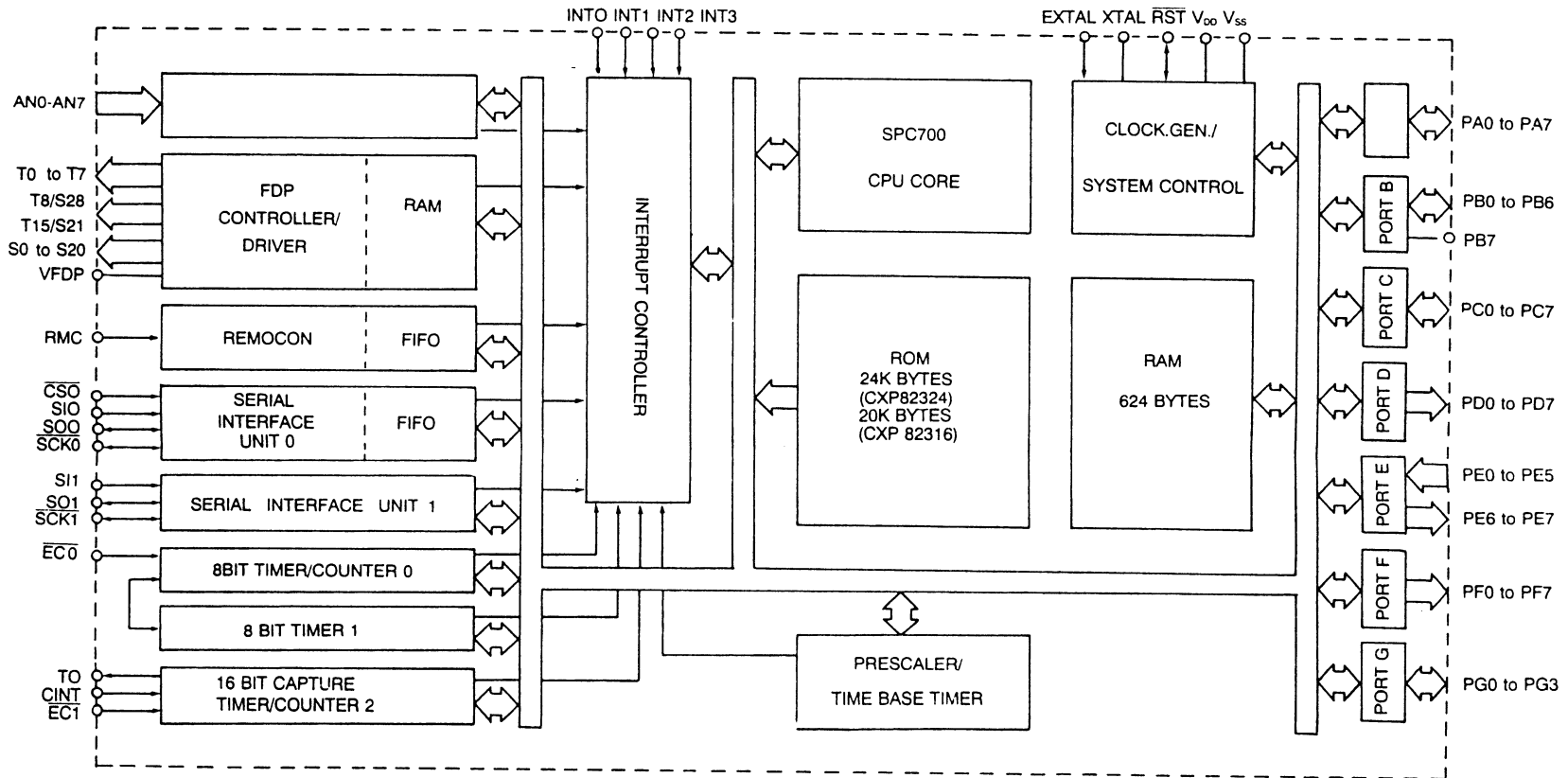
CIRCUIT DESCRIPTION

CPU (IC500): CXP82316-143Q (CMOS 8 bit 1-CHIP MICROCOMPUTER)

1. Pin Connection Diagram



2. Block Diagram

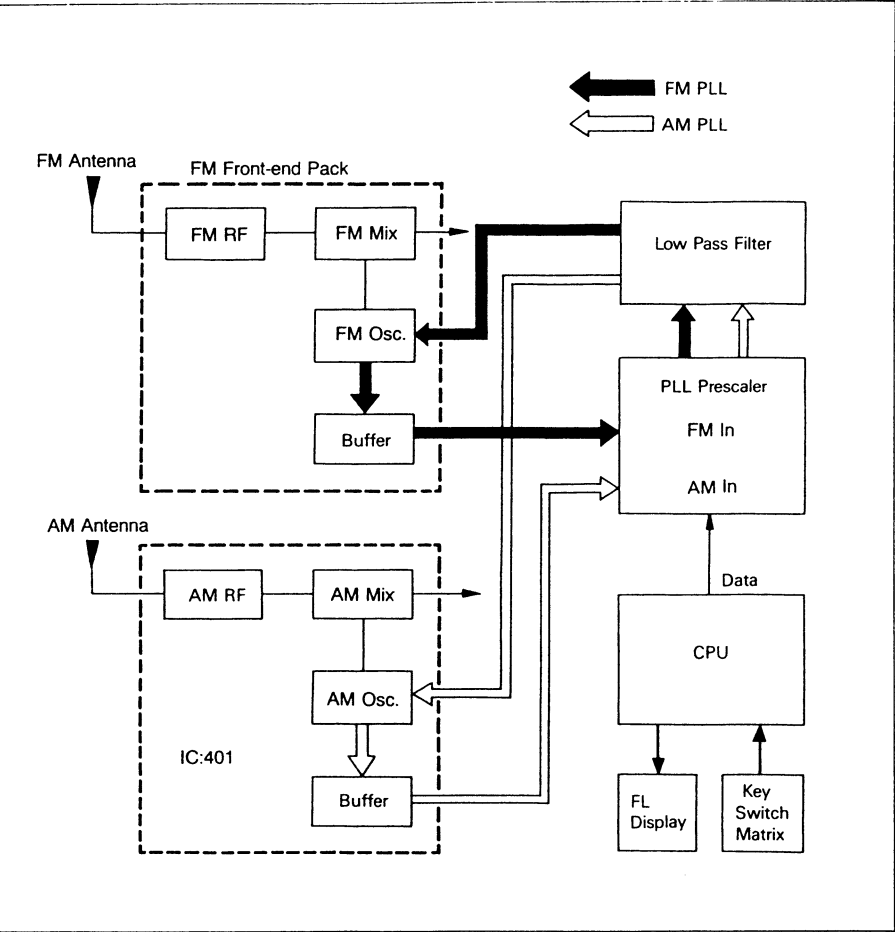


3. Pin Description

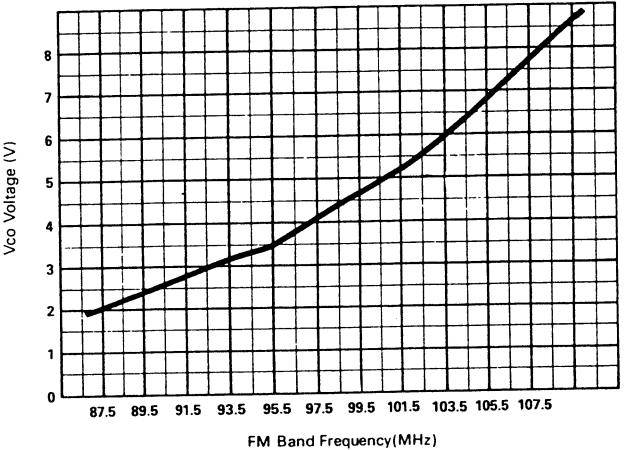
Symbol	I/O	Function			
PA0/AN0 to PA7/AN7	I/O/Analog input	(Port A) 8-bit port; single bit addressable. (8 lines)	Analog input to A/D converter. (8 lines)		
PB0/CINT	I/O/Input	(Port B) Single bit addressable from amongst lower 7 bits; highest bit(PB7) dedicated to output. (8 lines)	External capture input for 16-bit timer/counter.		
PB1/CS0	I/O/Input		Chip select input for serial interface (CH0).		
PB2/SCK0	I/O/I/O		Serial clock (CH0) input/output.		
PB3/SI0	I/O/Input		Serial data (CH0) input.		
PB4/SO0	I/O/Output		Serial data (CH0) output.		
PB5/SCK1	I/O/I/O		Serial clock (CH1) input/output.		
PB6/SI1	I/O/Input		Serial data (CH1) input.		
PB7/SO1	Output/Output		Serial data (CH1) output.		
PC0/KR0 to PC7/KR7	I/O/Input	(Port C) 8-bit port; single bit addressable. Can provide 12mA sink current. (8 lines)	Key return input for FDP segment signal which performs key scanning.		
PE0/INT0/EC0	Input/Input/Input.	(Port E) 8-bit port with lower 6 bits dedicated to input and upper 2 bits dedicated to output. (8 lines)	Input for external interrupt requests. (4 lines)	External event input to timer/counter. (2 lines)	
PE1/INT1/EC1	Input/Input				
PE2/INT2	Input/Input				
PE3/INT3	Input/Input				
PE4/RMC	Input/Input		Input for remote control receiving circuit.		
PE5	Input				
PE6	Output				
PE7/TO	Output/Output		Output pin for 16-bit timer/counter rectangular waveform.		
PG0 to PG3	I/O	(Port G) 4-bit input/output port; single bit addressable. (4 lines)			
PF0/S8 to PF7/S15	Output/Output	(Port F) 8-bit dedicated output port. (8 lines)	Segment signal output for FDP.		
S16 to S20	Output	Segment signal output for FDP.			
T8/S28 to T15/S21	Output/Output	Dual purpose output for FDP timing and segment signals.			
T0 to T7	Output	Timing signal output for FDP.			

Symbol	I/O	Function	
PD0/S0 to PD7/S7	Output/Output	(Port D) 8-bit dedicated output port. (8 lines)	Segment signal output for FDP.
V _{FDP}		Provides voltage for FDP when on-chip resistor is selected under mask option.	
EXTAL	Input	Connection for system clock oscillation crystal. When using an external clock, input normal signal to EXTAL and reverse phase signal to the XTAL pin.	
XTAL	Output		
RST	I/O	System reset, active "L". The RST pin is an input/output pin which outputs a "L" level from the on-chip power on reset circuit when the power is turned on.	
NC		NC pin is always connected to V _{DD} .	
V _{DD}		Positive power supply pin.	
V _{SS}		GND	

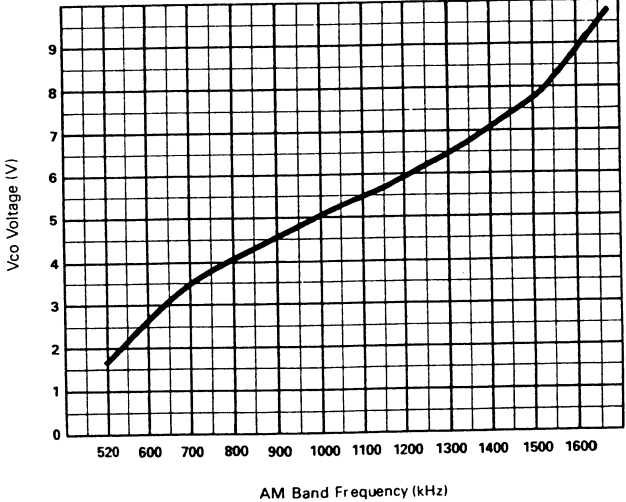
DIGITAL TUNING SYSTEM DESCRIPTION



1. Vco vs. FM Band Frequency Curve



2. Vco vs. AM Band Frequency Curve



CONTROL KEY AND MODE SWITCH MATRIX

Searching for Station

Automatic Tuning

Pressing the TUNE $\triangle$ or TUNE ∇ key causes automatic up or down searching for a station until a station is received.

Manual Tuning

By pressing the TUNE $\triangle$ or TUNE ∇ key, the frequency is changed by a step. If the key is kept pressing scanning is continued until the key is released.

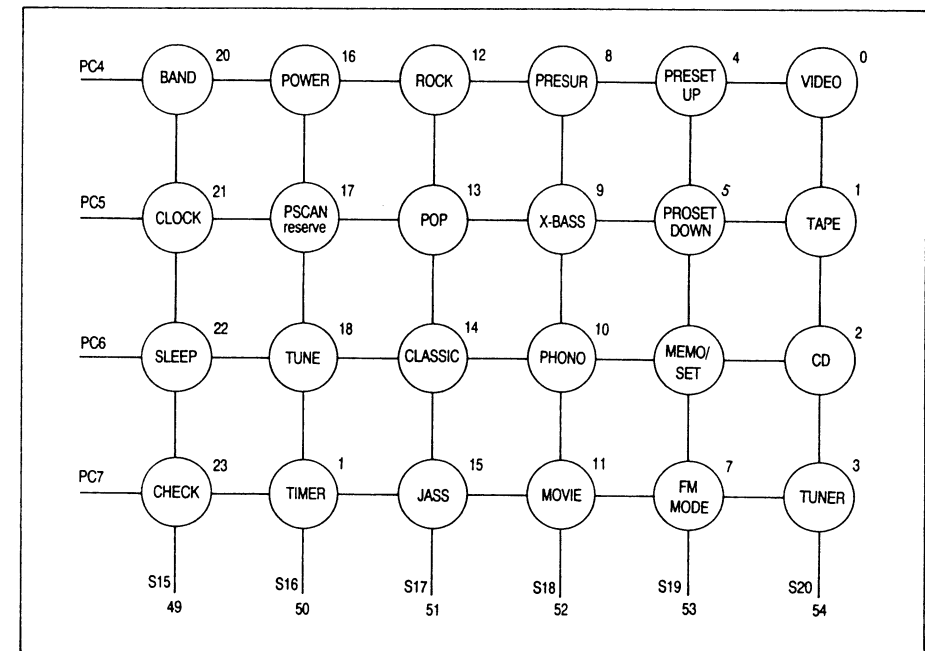
Memory

The tuning information is stored into an internal RAM by pressing the MEMORY key and then pressing one of 30 preset locations while the memory indicator 'MEMORY' blinks.

If no key is pressed while the indicator blinks, the memory function is canceled.

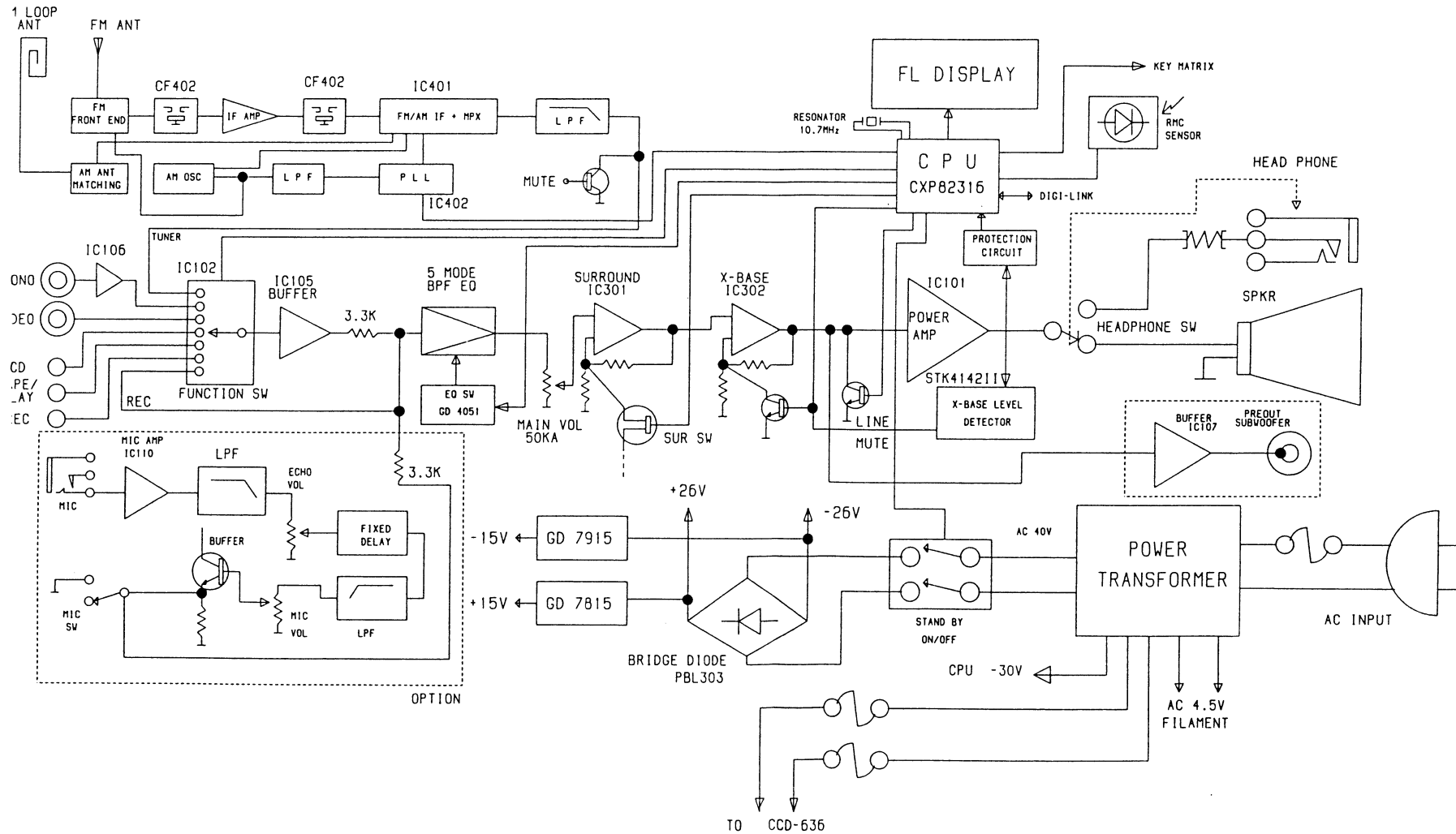
M1 to M10

Thirty AM and FM stations can be recalled from internal RAM. When it is switched from one band to the other band, the tuner tunes to the station last tuned on that band. Each time a station is changed, the controller provides a signal to mute the tuner.



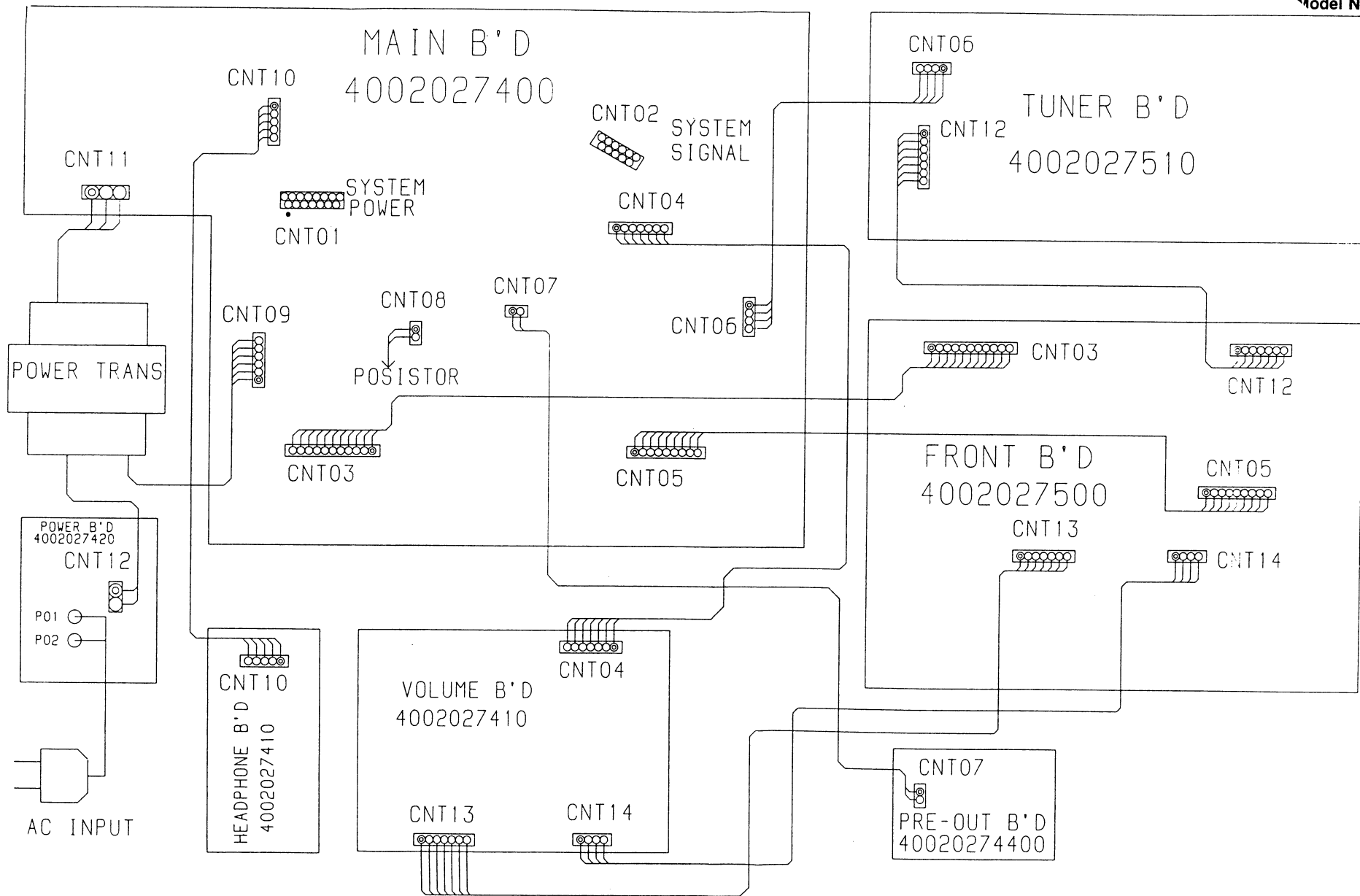
BLOCK DIAGRAM

Model No.: ATX-636R



WIRING DIAGRAM

Model No.: ATX-636R



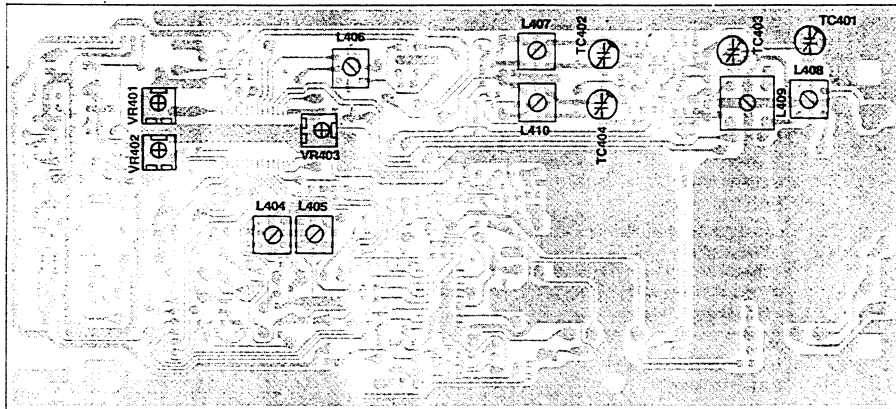
ALIGNMENT PROCEDURES

Equipment Required

- AM signal generator
- Oscilloscope
- AC voltmeter
- Stereo modulator
- Audio generator
- Distortion meter
- DC voltmeter
- Frequency counter

Note: Remove line cord antenna from FM external antenna terminal when aligning.

Test Points (Tuner Board)



1. AM IF and RF Alignment

- Output of signal generator should not be greater than necessary to obtain an optimum output reading.
- Signal generator modulation: 30%.
- Switch: Press to AM.

No	Subject	Feed Signal		Setting	Measurs	Adjust	Adjust	Remark
		From	To					
1.	Tuning Voltage	520 kHz	1710 kHz	*1) 520 kHz	Connect DVM VT	L407	DC 1 ± 0.2 V	
		1619 kHz		*2) 1710 kHz		TC402	DC 8.5 ± 0.3 V	
		● Repeat the step *1) and *2) until DVM reads the tuning voltage mentioned above. ● In case the freq. is 9 kHz, the freq. of AM SG and appliance should be changed to *1) 522 kHz *2) 1611 kHz.						
2.	IF	AM IF genescope	Antenna	1000 kHz	Connect IF genescope	L406	Symmetrical curve on AM IF genescope	
3.	RF Tuning	*1) AM SG 603 kHz, 78 dB 400 Hz (30% Mod.)	Antenna	603 kHz	Output Connect AC Voltmeter & oscilloscope	L408	Maximize audio output	AM SG. Test Loop Antenna. 60cm Appliance
		*2) AM SG 1400 kHz, 74 dB 400 Hz (30% Mod.)	Antenna.	1400 kHz		TC401		
		● Feed signal should be fed to loop antenna through the TEST Loop ant, 60cm distant from the appliance ● Repeat the step *1) & *2) until no further improvement occurs. ● In case the freq. is 9kHz, the freq. of AM SG and appliance should be changed to *1) 603 kHz *2) 1404 kHz.						
4.	Signal Meter	AM SG 1000 kHz, 84 dB 400 Hz (30% Mod.)	Antenna.	1000 kHz		VR401	Tuned light on	
		● In case the frequency. step is 9 kHz, the frequency of AM SG and appliance should be changed to 999 kHz.						

2. LW Alignment

- Selector SW:Tuner, MW/AM
- This adjustment is necessary to 3 band (MW/LW/FM).

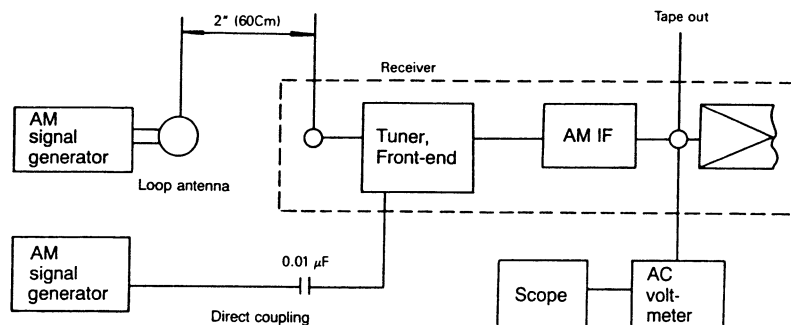
No	Subject	Feed Signal		Setting Appliance	Measure Output	Adjust Point	Adjust For	Remark
		From	To					
1.	Tuning Voltage	279 kHz	279 kHz	*1) 153 kHz	Connect DVM VT	L410 TC404	DC 2 ± 0.2 V	
				*2) 279 kHz			DC 5.5 ± 0.2 V	
		● Repeat the step *1) and *2) until DVM reads the tuning voltage mentioned above						
2.	RF Tuning	*1) AM SG 162 kHz, 84 dB 400 Hz (30% Mod).	Antenna.	162 kHz	Output connect AC voltmeter & oscilloscope	L409 TC 403	Maximize audio output	
		*2) AM SG 252 kHz, 84 dB 400 Hz (30% Mod.)		252 kHz				
		● Feed signal should be fed to loop antenna. through the test loop Antenna 60 cm distant from the appliance. ● Repeat the step *1) and *2) until no further improvement occurs.						

3. FM Alignment

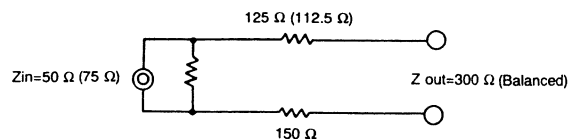
Preparation

- Signal generator output should be no greater than necessary to obtain an optimum output reading.
- Switch: Press to FM.
- Signal generator deviation: 75 kHz.
- Be sure to disconnect FM line cord antenna during alignment.

No	Subject	Feed Signal		Setting Appliance	Measure Output	Adjust Point	Adjust For	Remark
		From	To					
1.	Tuning voltage	87.5 MHz	107.9 MHz	87.5 MHz	Connect DVM VT		DC 2.0±0.2 V	
				107.9 MHz			DC8.0±0.2 V	
2.	THD (Mono)	FM SG 98.1 MHz, 60 dB 1 kHz (75 kHz Dev.)	Antenna	98.1 MHz Mono	*1) Output connect DVM *2) Output connect AC voltmeter & distortion analyzer.	L405 L404	DC 0±0.05 V Minimize distortion	
● Adjust the step *1) 1st and the step *2) next and repeat until to further improvement occurs.								
3.	THD (Stereo)	FM SG 98.1 MHz, 60 dB 1 kHz (75 kHz Dev.) Pilot 19 kHz (9% Mod.)	Antenna	98.1 MHz stereo	Output connect AC voltmetr & distortion.	Front-end.	Minimize distortion	
4.	Mute level	FM SG 98.1 MHz, 15µV 1 kHz (75 kHz Dev.)	Antenna	98.1 MHz mono	Output connect oscilloscope	VR403	Tuned on	
5.	Separation	*1) FM SG 98.1 MHz, 0 dB 1 kHz(75 kHz, Dev.) Pilot 19 kHz (10% Mod.) (L ch. mode)	Antenna	98.1 MHz stereo	R ch. mode connect AC voltmeter & distortion analyzer and oscilloscope.	VR402	Minimize output	L ch. mode
		*2) Same as above (R ch. mode)			L ch. mode connect same as above.			R ch mode
● Repeat the step *1) until no further improvement occurs.								

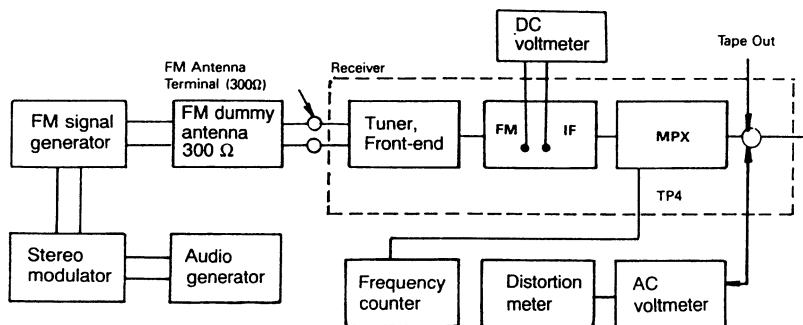


AM Alignment Connection



FM Dummy Antenna to 300Ω Antenna terminal of receiver

FM Dummy Antenna



FM RF/IF and MPX Alignment Connection

TROUBLESHOOTING

Symptom	Cause and Remedy
Tuner and amplifier inoperative (FL indicator does not light).	- Faulty AC power cord. Replace. - Defect in the power switch. Replace. - Broken wire and PCB in the power transformer. Replace the power transformer. - Blown power. Replace the fuse.
Fuse blows when power is turned on.	- Defective power transformer. Replace. - Short in the primary or secondary of the transformer circuitry. - Damaged rectifier PBL303. Replace the defective component. - Short in the rectifier circuit. Repair the short.
Display of the amplifier lights but no sound from both channels.	- H/P board CNT10 does not mate with Main board CNT10 Plug. Replace the CNT10. - Defect in power IC101 on the main amp board. Replace the defective component (s). - Q101 or Relay 01 defective. Replace the defective component (s).
Speaker works normally but headphones inoperative.	Defective resistor R601, R602. Replace.
All the inputs work normally except VIDEO input.	- Poor contact in VIDEO input jack. Repair or replace the jack. - Defective IC102. Replace.
PHONO input inoperative.	- Poor contact in phono input jack. Repair or replace the jack. - Defective IC102. Replace.
TAPE has no effect.	- Defective contact in system CNT3. Repair or replace the connector. - Defective IC102. Replace.
FM inoperative.	- Defective front-end. Replace. - Defective FM switch. Replace the switch. - Defective transistor Q407, Q409, Q410, Q408 or IC401. Replace the defective transistor (s) or IC. - Defective coil L404 or L405. Replace the coil (s). - Defective lead-in. Repair or replace the lead in. - Ceramic filter CF402, CF403 defective. Replace the defective ceramic filter (s).

Symptom	Cause and Remedy
FM inoperative.	Defective controller circuit component. Replace.
Poor multiplex separation.	- Improper adjustment. Readjust VR402. (Refer to MPX alignment.) - IC401 defective. Replace. - Variable resistor VR402 defective. Replace the variable resistor.
STEREO indicator does not light.	- Defective indicator in FL. Replace. - Defective IC401. Replace the defective component.
FM MUTE has no effect.	- Defective FM MONO/FM STEREO off switch. Replace the switch. - Defective IC401. Replace.
AM inoperative.	- Damaged IC401 of tuner board. Replace. - Defective L401–L406 or CF401 of tuner board. Replace. - Defective AM switch. Replace. - Defective varicap diode VD401. Replace varicap diode(s). - Damaged AM loop antenna. Repair or replace. - Defective controller circuit component. Replace.
AUTO tune inoperative (up/down) at AM or FM.	- Poor contact in up/down key. Repair or replace. - Defective IC201. Replace. - Defective FL. Replace. - Defective tuner circuit component. Replace. - In FM only, improper adjustment of FM front-end. Replace.
MAUNAL tune inoperative (up/down) at AM or FM.	- Poor contact in up/down key. Replace. - Defective IC201. Replace.
MEMORY setting inoperative.	Defective IC201. Replace.
FL inoperative.	- FL defective. Replace. - Defective IC500. Replace. - Defective D117, D118. Replace the component(s).

Symptom	Cause and Remedy
Noise volume control.	- Defective Q304, 305, 307, 308. Replace the component (s). - Defective capacitor C321 or C322. Replace the defective capacitor (s).
Remote control unit inoperative.	- Weak Battery. Replace. - Defective RCVR. Replace. - Defective IC500. Replace.

MECHANICAL PARTS LIST

CABINET AND CHASSIS

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
PACKAGE					32	6122419610	Cover Bottom	1	
	9722036810	Cushion, Poly	1		33	6122621610	Frame Right	1	
	9715000120	Film, Soft	1		34	4408107110	Terminal ANT	1	Dom, A/V/S, P/B
ACCESSORIES						4408101610	Terminal ANT	1	RES/PT INDO/Mgrs
	4348000610	ANT Wire (FM)	1		35	4438110010	Jack RCA 1P	1	Dom(Only)
	5418000132	Ass'y Commander	1		36	7503015910	H/Sink Power	1	
	2608207361	ANT AM Loop Stand Strip Wire	1		37	△ 2628000747	Power Transformer, 120 V 60 Hz	1	LCSA
	9007017605	Manual Instruction	1			△ 2628000757	Power Transformer, 220 V 60 Hz	1	Dom
						△ 2628000737	Power Transformer, 230 V 50 Hz	1	D
						△ 2628000817	Power Transformer, 240 V 50 Hz	1	E
						△ 2628000837	Power Transformer, 110/220 V 60 Hz	1	B
1	048501030911	Panel Front	1	Dom	38	6122621510	Frame Left	1	
	048501030921	Panel Front	1	A,D,AVS	39	6505134310	BKT PCB "A"	1	
	048501030922	Panel Front	1	Migros	40	6505134410	BKT PCB "B"	1	
	048501030912	Panel Front	1	G,E,PT INDO	41	046122028121	Cover Top	1	
	048501030913	Panel Front	1	Packard bell	42	4618006510	SW Voltage Sel.	1	PT INDO(Only)
2	048535038311	Badge	1	Dom	43	△ 4448105510	Outlet AC	1	Dom(Only)
	048535040411	Badge	1	△ RES/RES/PT INDO	44	6518002210	Stopper CNT, 15P	1	
	048535042111	Badge	1	Packard bell	45	6518002110	Stopper CNT, 11P	1	
	048535040611	Badge	1	Migros	46	4428515800	CNT System, 15P	1	
3	8553018010	Window Display	1		47	4428511800	CNT System, 11P	1	
4	048543048611	Knob Rotary(Main Vol.)	1						
5	8555042230	Indicator VR	1						
6	6715021230	Foot Cushion	4		P1	4002027400	P.C.B Main	1	
7	048543054311	BTN Tact(5Key), EQ	1	Dom	P1-1	4002027420	P.C.B Volume	1	
	048543054312	BTN Tact(5Key), EQ	1		P1-2	4002027410	P.C.B Power	1	
8	048543054411	BTN Tact(5Key), Function	1	Dom	P1-3	4002027430	P.C.B Headphone	1	
	048543054412	BTN Tact(5Key), Function	1		P1-4	4002027440	P.C.B Presout	1	
9	8555046410	Indicator, X-Bass	2		P2	4002027500	P.C.B Front	1	
10	048545118711	Knob Rotary, Mic/Echo	2	Dom, RES/PT INDO/Mgrs	P2-1	4002027510	P.C.B Tuner	1	
11	048543054212	BTN Tact(2Key), X-Bass	1		P2-2	4002027520	P.C.B Selector	1	
12	8545118610	BTN Tact(3Key), Timer	2						
13	048543054211	BTN Tact(2Key), Tuning	1		S1	8108230083	Screw #2BTC 3x8B	41	
14	6529002810	Locking Tie	1		S2	8129230083	Screw #2FTC 3x8B	4	
15	04854305411	BTN Tact(2Key), Sleep	1		S3	8155001210	Screw Mecha	1	
16	048545118511	BTN Tact(1Key), Power	1		S4	8159230081	Screw #2WPTC 3x8Y	9	
17	4438005520	Jack Mic 9P	2	Dom, RES/PT INDO/Mgrs	S5	8099130121	Screw HEX MSPW 3x12Y	3	
	4438005520	Jack Mic 9P	1	A/V/S,D,Migros	S6	8159550083	Screw WSAM 4x8B	4	
18	6045010110	Guide Sensor	1		S7	8119130103	Screw #1PT 3x10B	11	
19	4658003710	SW Tact	23		S8	8119240081	Screw #2PTC 4x8Y	1	
20	6715019710	Spacer Rubber	2						
21	△ 4308007310	Cord AC Power	1	Dom					
	△ 4308001410	Cord AC Power	1	A,AVS,P/B					
	△ 4308000430	Cord AC Power	1	RES/PT INDO/Mgrs					
	△ 4308007610	Cord AC Power	1	E					
22	3208067410	VR Motor(Main)	1						
23	6513000310	Stopper Cord	1	Dom					
	6518000710	Stopper Cord	1	A,AVS,P/B					
	6518000111	Stopper Cord	1	RES/PT INDO/Mgrs					
24	4408105410	Terminal Speaker 4P	1						
25	6165148010	Shield Fence(MIC Jack)	2	Dom, RES/PT INDO/Mgrs					
26	6165148110	Shield Fence(MIC VR)	1	Dom, RES/PT INDO/Mgrs					
27	4408104910	Terminal Ground	1						
28	3208352210	VR Mic/Echo	2	Dom, RES/PT INDO/Mgrs					
29	7505202420	H/Sink Reg. TR	1						
30	046102037811	Chassis Back	1	Dom					
	046102037821	Chassis Back	1	A					
	046102037822	Chassis Back	1	AVS					
	046102037823	Chassis Back	1	P/B					
	046102037851	Chassis Back	1	D					
	046102037852	Chassis Back	1	Migros					
	046102037853	Chassis Back	1	G					
	046102037854	Chassis Back	1	E					
	046102037881	Chassis Back	1	PT INDO					
31	4438111310	Jack RCA 2P	1						

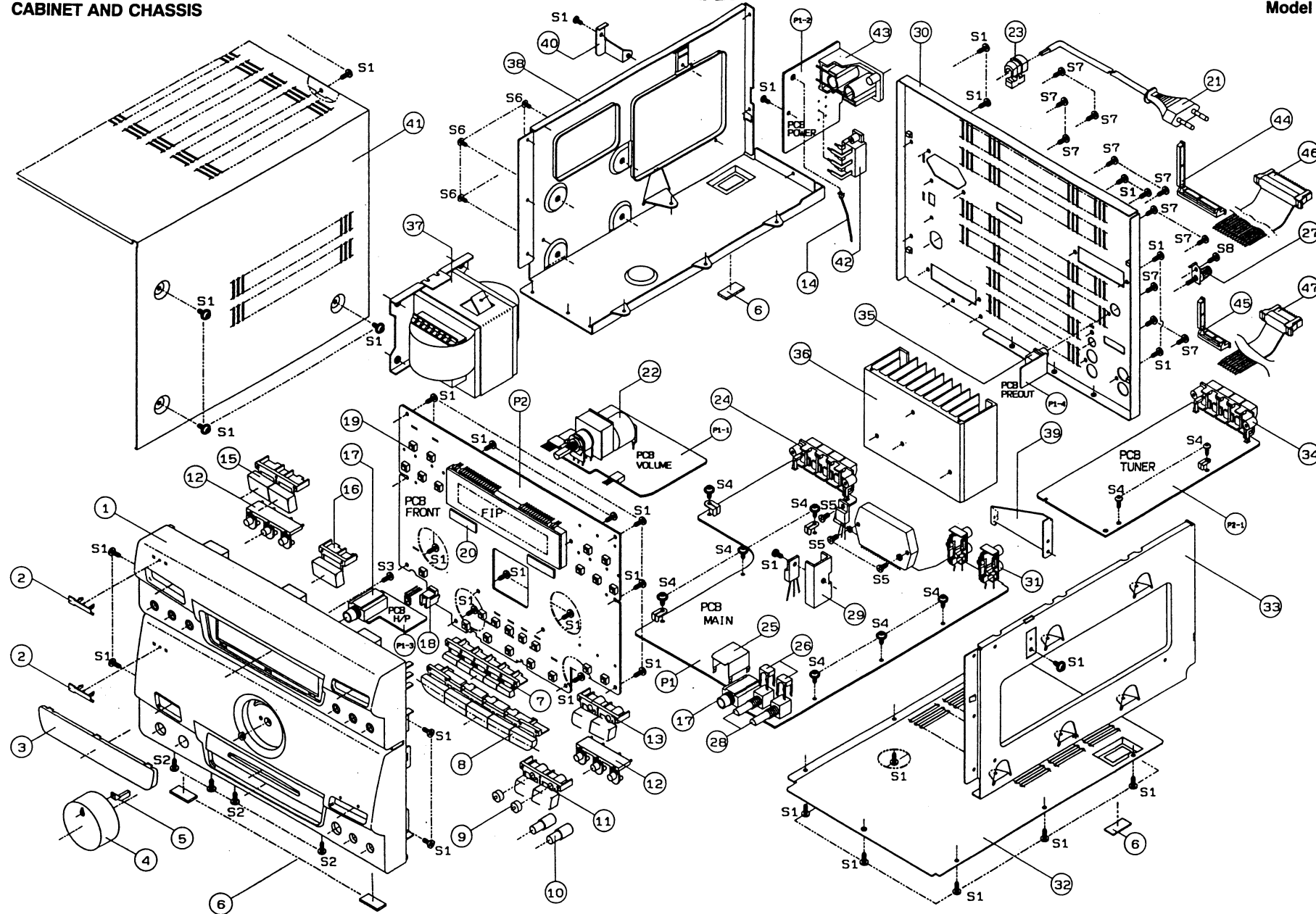
PRODUCT SAFETY NOTICE

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.

CABINET AND CHASSIS

EXPLODED VIEW

Model No.: ATX-636R



ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTICE: Products marked with Δ have special characteristics important to safety. If you replace any of these components, read carefully the product safety notice in this manual. Don't degrade the safety of the product through improper servicing. Resistor/Capacitor tolerance—D: ($\pm 0.5\%$), J: ($\pm 5\%$), K: ($\pm 10\%$), M: ($\pm 20\%$), Z: (+80, -20%)

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
P1	054101010008	ASS'Y P.C.B MAIN			C158	3479210071	Electrolytic SA	1 μ F	50 V M 1
17	4438005520	Jack MIC, 9P	2	ImA5/P100/98	C157	3479322071	Electrolytic SG	22 μ F	50 V M 1
	4438005520	Jack MIC, 9P	1	AJWS,D/Mgms	C158	3479247971	Electrolytic SA	4.7 μ F	50 V M 1
24	4408105410	Terminal Speaker, 4P	1		C159/C160	3679473120	Mylar	0.047 μ F	100 V J 2
25	6165148010	Shield Fence(MIC Jack)	1	ImA5/P100/98	C161	3479322071	Electrolytic SG	22 μ F	50 V M 1
26	6165148110	Shield Fence(MIC VR)	2	ImA5/P100/98	C162/C163	3479247971	Electrolytic SA	4.7 μ F	50 V M 2
28	3208052210	VR MIC/Echo	2	ImA5/P100/98	C164	3519473935	Ceramic Tubelstar	0.047 μ F	50 V Z 1
29	7505202420	H/Sink Reg. TR	1		C165/C166	3519101935	Ceramic Tubelstar	100 pF	50 V J 1
31	4438111310	Jack RCA, 2P	2		C167	3479247111	Electrolytic SA	470 μ F	6.3 V M 1
CNT01	435115600533	Lead Assy 15P 60mm, to CCD636	1		C168	3479347041	Electrolytic SG	47 μ F	25 V M 1
	4428515800	Waler 15P	1		C169-C171	3519101935	Ceramic Tubelstar	100 pF	50 V J 3
CNT02	4328611501	Lead Assy 11P, to CCD636	1		C172	3479347041	Electrolytic SG	47 μ F	25 V M 1
	4428511800	Waler 11P	1		C173/C174	3479247971	Electrolytic SA	4.7 μ F	50 V M 2
CNT03	4428517010	Waler 11P, from Front BD	1		C175	3519473935	Ceramic Tubelstar	0.047 μ F	50 V Z 1
CNT04	4428518610	Waler 7P, from Volume BD	1		C176	3479347041	Electrolytic SG	47 μ F	25 V M 1
CNT05	4428518610	Waler 9P, from Front	1		C177	3519101935	Ceramic Tubelstar	100 pF	50 V J 1
CNT06	436204183332	Lead Assy 4P 180mm, to Tuner BD	1		C178	3479310171	Electrolytic SG	100 μ F	50 V M 1
CNT07	4428518110	Waler 2P, from Preout BD	1		C179	3519473935	Ceramic Tubelstar	0.047 μ F	50 V Z 1
CNT08	4428518110	Waler 2P	1		C180	3479222971	Electrolytic SA	2.2 μ F	50 V M 1
CNT09	4428505810	Waler 6P, from Power Trans	1		C181/C182	3479347041	Electrolytic SG	47 μ F	25 V M 2
CNT10	4428508070	Waler SP, from Headphone BD	1		C183	3479222971	Electrolytic SA	2.2 μ F	50 V M 1
CNT11	4428525970	Waler AC 3P, from Power Trans	1		C184	3519251935	Ceramic Tubelstar	250 pF	50 V J 1
C101	3679473120	Mylar	0.047 μ F	100 V J 1	C185/C186	3519101935	Ceramic Tubelstar	100 pF	50 V J 2
C102/C103	3519222935	Ceramic Tubelstar	22 pF	50 V J 2	C187	3679203120	Mylar	0.02 μ F	100 V J 1
C104/C105	3519101935	Ceramic Tubelstar	100 pF	50 V J 2	C188	3479222971	Electrolytic SA	2.2 μ F	50 V M 1
C106/C107	3519880935	Ceramic Tubelstar	68 pF	50 V J 2	C189	3519222935	Ceramic Tubelstar	2200 pF	50 V J 1
C108/C109	3479247971	Electrolytic SA	4.7 μ F	50 V M 2	C190	3479210071	Electrolytic SA	1 μ F	50 V M 1
C110/C111	3519100935	Ceramic Tubelstar	10 pF	50 V J 2	C191	3519101935	Ceramic Tubelstar	100 pF	50 V J 1
C112/C113	3519101935	Ceramic Tubelstar	100 pF	50 V J 2	C192	3479247971	Electrolytic SA	4.7 μ F	50 V M 1
C114/C115	3479310121	Electrolytic SG	100 μ F	10 V M 2	C193	3519101935	Ceramic Tubelstar	100 pF	50 V J 1
C116	3679182120	Mylar	0.0018 μ F	100 V J 1	C194	3479347041	Electrolytic SG	47 μ F	25 V M 1
C117/C118	3519222935	Ceramic Tubelstar	2200 pF	50 V J 2	C195/C196	3679332120	Mylar	0.0033 μ F	100 V J 2
C119	3679182120	Mylar	0.0018 μ F	100 V J 1	C197	3479222971	Electrolytic SA	2.2 μ F	50 V M 1
C120/C121	3479322071	Electrolytic SG	22 μ F	50 V M 2	C198	3519221935	Ceramic Tubelstar	220 pF	50 V J 1
C122	3679562120	Mylar	0.0056 μ F	100 V J 1	C199	3479347041	Electrolytic SG	47 μ F	25 V M 1
C123	3519221935	Ceramic Tubelstar	220 pF	50 V J 1	C200	3679123120	Mylar	0.012 μ F	100 V J 1
C124	3679103120	Mylar	0.01 μ F	100 V J 1	C201	3679122120	Mylar	0.0012 μ F	100 V J 1
C125	3519221935	Ceramic Tubelstar	220 pF	50 V J 1	C202	3679152120	Mylar	0.0015 μ F	100 V J 1
C126	3519599935	Ceramic Tubelstar	5.6 pF	50 V J 1	C203	3479233071	Electrolytic SA	3.3 μ F	50 V M 1
C127	3519581935	Ceramic Tubelstar	560 pF	50 V J 1	C204	3479210071	Electrolytic SA	1.0 μ F	50 V M 1
C128	3479322071	Electrolytic SG	22 μ F	50 V M 1	C205/C206	3519103935	Ceramic Tubelstar	0.01 μ F	50 V Z 2
C129	3679562120	Mylar	0.0056 μ F	100 V J 1	C207	3479347041	Electrolytic SG	47 μ F	25 V M 1
C130/C131	3479347041	Electrolytic SG	47 μ F	25 V M 2	C208	3479222971	Electrolytic SA	2.2 μ F	50 V M 1
C132	3479247971	Electrolytic SA	4.7 μ F	50 V M 1	C209	3479210071	Electrolytic SA	10 μ F	50 V M 1
C133	3479347041	Electrolytic SG	47 μ F	25 V M 1	C210	3479310121	Electrolytic SG	100 μ F	10 V M 1
C134	3479247971	Electrolytic SA	4.7 μ F	50 V M 1	C211	3679152120	Mylar	0.0015 μ F	100 V J 1
C135	3479347041	Electrolytic SG	47 μ F	25 V M 1	C212	3679562120	Mylar	0.0056 μ F	100 V J 1
C136/C137	3479210071	Electrolytic SA	10 μ F	50 V M 2	C213/C214	3519222935	Ceramic Tubelstar	2200 pF	50 V J 2 D
C138	3479322071	Electrolytic SG	22 μ F	50 V M 1	C215	3479347071	Electrolytic SG	47 μ F	50 V M 1
C139	3479310171	Electrolytic SG	100 μ F	50 V M 1	C216-C218	3679473120	Mylar	0.047 μ F	50 V J 3 D
C140	3519581935	Ceramic Tubelstar	560 pF	50 V J 1	C219/C220	3419633294	Electrolytic SA	3300 μ F	40 V M 2
C141-C144	3479247971	Electrolytic SA	4.7 μ F	50 V M 4	C221	3579473530	Ceramic Tubelstar	0.047 μ F	50 V Z 1
C145/C146	3479210071	Electrolytic SA	10 μ F	50 V M 2	C222	3519599935	Ceramic Tubelstar	5.6 pF	50 V J 1 D
C147	3679203120	Mylar	0.02 μ F	100 V J 1	C223	3519222935	Ceramic Tubelstar	2200 pF	50 V J 1
C148/C149	3679562120	Mylar	0.0056 μ F	100 V J 2	C224	3479347041	Electrolytic SG	47 μ F	25 V M 1
C150	3479347041	Electrolytic SG	47 μ F	25 V M 1	C225	3679473120	Mylar	0.047 μ F	100 V J 1 D
C151	3479310121	Electrolytic SG	100 μ F	10 V M 1	L101	2648001010	Inductor Coil 0.5uH		1
C152	3479233071	Electrolytic SA	3.3 μ F	50 V M 1	L102	2648001010	Inductor Coil 0.5uH		1
C153	3479347041	Electrolytic SG	47 μ F	25 V M 1	D100	2058100148	Diode, PBL303		1
C154/C155	3679473120	Mylar	0.047 μ F	100 V J 2 D	D101-D107	2058322101	1N4148M, Switching		7

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
D108	2258100135	1N4002	1		R142	3058278582	Cement	0.27 ohm	2W J 1
D109	2058322101	1N4148M, Switching	1		R143	3089822970	Carbon Film	6.8 kohm	1/5W J 1
D110	2258599115	Zener, 6.1BZ	1		R144	3089220970	Carbon Film	22 ohm	1/5W J 1
D111	2258100135	1N4002	1		R145	3058278582	Cement	0.27 ohm	2W J 1
D112-D116	2058322101	1N4148M, Switching	5		R146	3089220970	Carbon Film	22 ohm	1/5W J 1
D117	2258599127	Zener, 18BZ	1		R147	3089104970	Carbon Film	100 kohm	1/5W J 1
D118	2258599109	Zener, UZ15.0BSC	1		R148	3089224970	Carbon Film	220 kohm	1/5W J 1
D119	2258599103	Zener, UZ 5.1BSC	1		R149	3089472970	Carbon Film	4.7 kohm	1/5W J 1
D120/D121	2258599121	Zener, UZ 6.8BSC	2		R150	3089822970	Carbon Film	6.8 kohm	1/5W J 1
D122/D123	2258100135	1N4002	2		R151/R152	3089220970	Carbon Film	22 ohm	1/5W J 2
D124/D125	2258599123	Zener, 6.2DZ	2		R153	3089102970	Carbon Film	1 kohm	1/5W J 1
D126/D127	2058322101	1N4148M, Switching	2		R154	3089104970	Carbon Film	100 kohm	1/5W J 1
△ F101/F102	5508202430	Fuse, NB 2A 250V	2	Dom	R155	3089102970	Carbon Film	1 kohm	1/5W J 1
△	5508202421	Fuse, NB 2A 125V	1	A	R156	3089474970	Carbon Film	470 kohm	1/5W J 1
△	5508302335	Fuse T 1.8A 250V	1	D,E	R157	3089182970	Carbon Film	1.8 kohm	1/5W J 1
IC101	2178317124	STK4142, Hybrid Power AMP	1		R158	3089104970	Carbon Film	100 kohm	1/5W J 1
IC102	2168017132	LC7821, Switching	1		R159	3089332970	Carbon Film	3.3 kohm	1/5W J 1
IC103	2168011105	GD7815, Regulator	1		R160	3089101970	Carbon Film	100 ohm	1/5W J 1
IC104	2168011111	GL7815GS, Regulator	1		R161/R162	3089104970	Carbon Film	100 kohm	1/5W J 2
IC105-107	2168206104	KA4556P/QA47556P, OP AMP	3		R163	3089101970	Carbon Film	100 ohm	1/5W J 1
IC108/109	2168011003	MN3007, BBD	2		R164/R165	3089472970	Carbon Film	4.7 kohm	1/5W J 2
IC110-112	2168206104	KA4556P/QA47556P, OP AMP	3		R166/R167	3089332970	Carbon Film	3.3 kohm	1/5W J 2
Q101	2208906114	MPSA06Y, NPN, Silicon	1		R168	3089471970	Carbon Film	470 ohm	1/5W J 1
Q102/Q103	2208906112	KTD1302, NPN, Silicon	2		R169/R170	3089153970	Carbon Film	15 kohm	1/5W J 2
Q104	2208922105	DTA114YS, PNP Silicon	1		R171	3089562970	Carbon Film	5.6 kohm	1/5W J 1
Q105/Q106	2208906112	KTD1302, NPN, Silicon	2		R172/R173	3089332970	Carbon Film	3.3 kohm	1/5W J 2
Q107	2208906104	BKTC3198Y/KTC1815Y, NPN Silicon	1		R174	3089103970	Carbon Film	10 kohm	1/5W J 1
Q108	2208906112	KTD1302, NPN, Silicon	1		R175	3089101970	Carbon Film	100 ohm	1/5W J 1
Q109-Q111	2208906104	BKTC3198Y/KTC1815Y, NPN Silicon	3		R176	3089103970	Carbon Film	10 kohm	1/5W J 1
Q112	2208922105	DTA114YS, PNP Silicon	1		R177	3089123970	Carbon Film	12 kohm	1/5W J 1
Q113-Q115	2208910109	BKTC3198Y	3		R178	3089103970	Carbon Film	10 kohm	1/5W J 1
R100	3089473970	Carbon Film	47 kohm	1/5W J 1	R179	3089101970	Carbon Film	100 ohm	1/5W J 1
R101/R102	3089102970	Carbon Film	1 kohm	1/5W J 2	R180	3089104970	Carbon Film	100 kohm	1/5W J 1
R103/R104	3089104970	Carbon Film	100 kohm	1/5W J 2	R181	3029100470	Metal Film	10 ohm	1W J 1
R105/R106	3089913970	Carbon Film	91 kohm	1/5W J 2	R182/R183	3089102970	Carbon Film	1 kohm	1/5W J 2
R107/R108	3089102970	Carbon Film	1 kohm	1/5W J 2	R184	3089123970	Carbon Film	12 kohm	1/5W J 1
R109/R110	3089104970	Carbon Film	100 kohm	1/5W J 2	R185/R186	3089104970	Carbon Film	100 kohm	1/5W J 2
R111/R112	3089913970	Carbon Film	91 kohm	1/5W J 2	R187	3089123970	Carbon Film	12 kohm	1/5W J 1
R113/R114	3089821970	Carbon Film	620 ohm	1/5W J 2	R188/R189	3089100970	Carbon Film	10 ohm	1/5W J 2
R115/R116	3089433970	Carbon Film	43 kohm	1/5W J 2	R190	3089103970	Carbon Film	10 kohm	1/5W J 1
R117	3089101970	Carbon Film	100 ohm	1/5W J 1	R191	3089101970	Carbon Film	100 ohm	1/5W J 1
R118	3029222472	Metal Film	2.2 kohm	1W J 1	R192	3089471970	Carbon Film	470 ohm	1/5W J 1
R119	3089132970	Carbon Film	1.3 kohm	1/5W J 1	R193/R194	3089472970	Carbon Film	4.7 kohm	1/5W J 2
R120	3089364970	Carbon Film	360 kohm	1/5W J 1	R195	3089153970	Carbon Film	15 kohm	1/5W J 1
R121	3089101970	Carbon Film	100 ohm	1/5W J 1	R196-R199	3089471970	Carbon Film	470 ohm	1/5W J 4
R122	3089132970	Carbon Film	1.3 kohm	1/5W J 1	R200	3029221470	Metal Film	220 ohm	1W J 1
R123	3029222472	Metal Film	2.2 kohm	1W J 1	R201/R203	3089102970	Carbon Film	1 kohm	1/5W J 3
R124	3089564970	Carbon Film	560 kohm	1/5W J 1	R204	3089223970	Carbon Film	22 kohm	1/5W J 1
R125	3089273970	Carbon Film	27 kohm	1/5W J 1	R205/R206	3089229970	Carbon Film	2.2 ohm	1/5W J 2
R126	3089202970	Carbon Film	2 kohm	1/5W J 1	R207	3089101970	Carbon Film	100 ohm	1/5W J 1
R127	3089273970	Carbon Film	27 kohm	1/5W J 1	R208/R209	3089332970	Carbon Film	3.3 kohm	1/5W J 2
R128	3089102970	Carbon Film	1 kohm	1/5W J 1	R210	3089101970	Carbon Film	100 ohm	1/5W J 1
R129	3089564970	Carbon Film	560 kohm	1/5W J 1	R211	3089332970	Carbon Film	3.3 kohm	1/5W J 1
R130/R131	3029102472	Metal Film	1 kohm	1W J 2	R212/R214	3089104970	Carbon Film	100 kohm	1/5W J 3
R132	3089203970	Carbon Film	20 kohm	1/5W J 1	R215	3089472970	Carbon Film	4.7 kohm	1/5W J 1
R133	3089202970	Carbon Film	2 kohm	1/5W J 1	R216	3089104970	Carbon Film	100 kohm	1/5W J 1
R134	3089273970	Carbon Film	27 kohm	1/5W J 1	R217	3089474970	Carbon Film	470 kohm	1/5W J 1
R135	3089561970	Carbon Film	560 ohm	1/5W J 1	R218	3089103970	Carbon Film	10 kohm	1/5W J 1
R136	3089471970	Carbon Film	470 ohm	1/5W J 1	R219	3089101970	Carbon Film	100 ohm	1/5W J 1
R137	3089273970	Carbon Film	27 kohm	1/5W J 1	R220	3089124970	Carbon Film	120 kohm	1/5W J 1
R138	3089471970	Carbon Film	470 ohm	1/5W J 1	R221	3089473970	Carbon Film	47 kohm	1/5W J 1
R139	3089561970	Carbon Film	560 ohm	1/5W J 1	R222	3089332970	Carbon Film	3.3 kohm	1/5W J 1
R140	3089102970	Carbon Film	1 kohm	1/5W J 1	R223	3089432970	Carbon Film	4.3 kohm	1/5W J 1
R141	3089203970	Carbon Film	20 kohm	1/5W J 1	R224	3089124970	Carbon Film	120 kohm	1/5W J 1

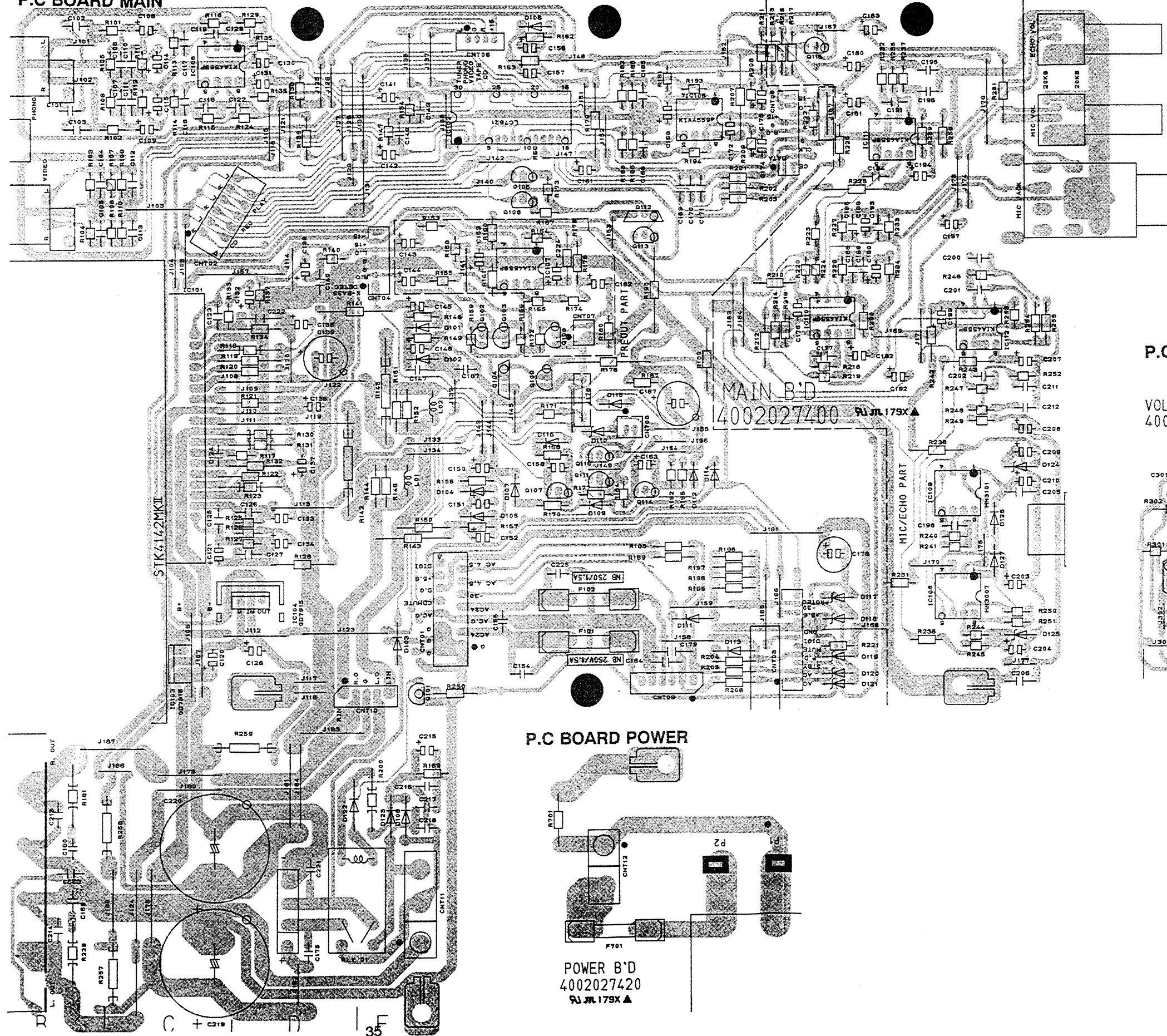
Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
R225/R226	3069101970	Carbon Film	100 ohm	1/5W J 2	Q309	2208608104	BKTC3198Y/KTC1815Y, NPN Silicon	1	
R227	3069103870	Carbon Film	10 kohm	1/5W J 1	Q310	2208622105	DTA114YS, PNP Silicon	1	
R228	3069822970	Carbon Film	8.2 kohm	1/5W J 1	Q311	2208610109	BKTC3199Y	1	
R229	3029100470	Metal Film	10 ohm	1W J 1	R301	3069104970	Carbon Film	100 kohm	1/5W J 1
R230	3069662970	Carbon Film	5.8 kohm	1/5W J 1	R302	3069101970	Carbon Film	100 ohm	1/5W J 1
R231	3069104970	Carbon Film	100 kohm	1/5W J 1	R303	3069102970	Carbon Film	1 kohm	1/5W J 1
R232	3069563970	Carbon Film	56 kohm	1/5W J 1	R304	30693332970	Carbon Film	3.3 kohm	1/5W J 1
R233	3069104970	Carbon Film	100 kohm	1/5W J 1	R305	3069108970	Carbon Film	10M ohm	1/5W J 1
R234	3069181970	Carbon Film	180 ohm	1/5W J 1	R306	30693335970	Carbon Film	3.3M ohm	1/5W J 1
R235	3069124970	Carbon Film	120 kohm	1/5W J 1	R307	3069473970	Carbon Film	47 kohm	1/5W J 1
R236	3069102970	Carbon Film	1 kohm	1/5W J 1	R308	3069104970	Carbon Film	100 kohm	1/5W J 1
R237	3069563970	Carbon Film	56 kohm	1/5W J 1	R309	3069622970	Carbon Film	6.2 kohm	1/5W J 1
R238	3069102970	Carbon Film	1 kohm	1/5W J 1	R310	3069101970	Carbon Film	100 ohm	1/5W J 1
R239	3069563970	Carbon Film	56 kohm	1/5W J 1	R311	3069102970	Carbon Film	1 kohm	1/5W J 1
R240	3069394970	Carbon Film	390 kohm	1/5W J 1	R312	3069222970	Carbon Film	2.2 kohm	1/5W J 1
R241	3069222970	Carbon Film	2.2 kohm	1/5W J 1	R313	30693332970	Carbon Film	3.3 kohm	1/5W J 1
R242/R243	3069101970	Carbon Film	100 ohm	1/5W J 2	R314	3069104970	Carbon Film	100 kohm	1/5W J 1
R244/R245	3069104970	Carbon Film	100 kohm	1/5W J 2	R315	3069101970	Carbon Film	100 ohm	1/5W J 1
R246/R249	3069393970	Carbon Film	39 kohm	1/5W J 4	R316	3069622970	Carbon Film	6.2 kohm	1/5W J 1
R250/R251	3069562970	Carbon Film	5.6 kohm	1/5W J 2	R317	3069222970	Carbon Film	2.2 kohm	1/5W J 1
R252	3069474970	Carbon Film	470 kohm	1/5W J 1	R318/R319	3069101970	Carbon Film	100 ohm	1/5W J 2
R253	3069104970	Carbon Film	100 kohm	1/5W J 1	R320	3069473970	Carbon Film	47 kohm	1/5W J 1
R254	3069393970	Carbon Film	39 kohm	1/5W J 1	R321	3069222970	Carbon Film	2.2 kohm	1/5W J 1
R255	3069104970	Carbon Film	100 kohm	1/5W J 1	R322	3069101970	Carbon Film	100 ohm	1/5W J 1
R256	3069752970	Carbon Film	7.5 kohm	1/5W J 1	R323	3069222970	Carbon Film	2.2 kohm	1/5W J 1
R257/R258	3029150570	Metal Film	15 ohm	2W J 2	R324	3069101970	Carbon Film	100 ohm	1/5W J 1
R259	3029690570	Metal Film	68 ohm	2W J 1	R325	3069102970	Carbon Film	1 kohm	1/5W J 1
R260	3069333970	Carbon Film	3.3 kohm	1/5W J 1	R326	3069101970	Carbon Film	100 ohm	1/5W J 1
R261	3069102970	Carbon Film	1 kohm	1/5W J 1	R327	3069152970	Carbon Film	1.5 kohm	1/5W J 1
R262	3069473970	Carbon Film	47 kohm	1/5W J 1	R328	3069472970	Carbon Film	4.7 kohm	1/5W J 1
RLY101	5528001810	Relay, OSA-SS224D		1	R329	3069102970	Carbon Film	1 kohm	1/5W J 1
P1-1 054101010009 ASS'Y P.C.B VOLUME					R330	3069152970	Carbon Film	1.5 kohm	1/5W J 1
22	3208067410	VR Motor(Main)		1	R331	3069472970	Carbon Film	4.7 kohm	1/5W J 1
CNT04	436207163332	Lead Assy 7P 180mm, to Main B'D		1	R332	3069102970	Carbon Film	1 kohm	1/5W J 1
CNT13	4428507900	Waler BTMK7S-1R		1	R333/R334	3069682970	Carbon Film	6.8 kohm	1/5W J 2
CNT14	4428504900	Waler BTMK4P-IS		1	R335-R337	3069102970	Carbon Film	1 kohm	1/5W J 3
C301/R302	3479210971	Electrolytic SA	1 µF 50V M	2	R338	3069103970	Carbon Film	10 kohm	1/5W J 1
C303	3479347041	Electrolytic SG	47 µF 25V M	1	R339	3069102970	Carbon Film	1 kohm	1/5W J 1
C304	3519330835	Ceramic Tubelair	33 pF 50V J	1	R340	3069562970	Carbon Film	5.6 kohm	1/5W J 1
C305	3679104120	Mylar	0.1 µF 100V J	1	R341	3069102970	Carbon Film	1 kohm	1/5W J 1
C306/R307	3479247971	Electrolytic SA	4.7 µF 50V M	2	P1-3 054101010010 ASS'Y P.C.B HEADPHONE				
C308	3479347041	Electrolytic SG	47 µF 25V M	1	17	4438005520	Jack MIC, 9P	2	Dom,EP,100,78
C309/R310	3479210971	Electrolytic SA	1 µF 50V M	2		4438005520	Jack MIC, 9P	1	AA,YS,D,Mjgo
C311	3519330835	Ceramic Tubelair	33 pF 50V J	1	CNT10	436105303321	Lead Assy 5P 30mm, to Main		1
C312	3479247971	Electrolytic SA	4.7 µF 50V M	1	C601/C602	3519561935	Ceramic Tubelair	560 pF 50V J	2
C313	3479347041	Electrolytic SG	47 µF 25V M	1	R601/R602	3029271470	Metal Film	270 ohm 1W J	2
C314/R315	3479247971	Electrolytic SA	4.7 µF 50V M	2	R603/R604	3069152970	Carbon Film	1.5 kohm	1/5W J 2
C316/R317	3519330835	Ceramic Tubelair	33 pF 50V J	2	P1-4 054100810015 ASS'Y P.C.B PREOUT Dom(Only)				
C318	3479347041	Electrolytic SG	47 µF 25V M	1	35	4438110010	Jack RCA 1P	1	Dom
C319/R320	3479233971	Electrolytic SA	3.3 µF 50V M	2	CNT07	436202183132	Lead Assy 2P 180mm		1
C321/R322	3479347041	Electrolytic SG	47 µF 25V M	2	P1-5 054101010011 ASS'Y P.C.B POWER				
C323	3519103530	Ceramic Tubelair	0.01 µF 50V Z	1	42	4618006510	SW Voltage Sel.	1	PT Indo
D301	2258599121	Zaner, UZ 6.8BSC		2	43	4448105510	Outlet AC	1	Dom
D302/D303	2258599103	Zaner, UZ 5.1BSC		2	CNT12	4428525780	Waler AC 2P	1	Dom,G
IC301/302	2188206107	KIA 8259, OP AMP		2	CNT13	4428525800	Waler AC 4P	1	A
Q301	2208622105	DTA114YS, PNP Silicon		1	F701	5508202230	Fuse, NB 1.5A 250V	1	D,E
Q302	2218207106	FET, 2SK117Y		1		5508202521	Fuse, NB 2.5A 250V	1	
Q303	2208622106	DTIC114YS, NPN, Silicon		1		5508302135	Fuse, TL 1.25A 250V	1	
Q304	2208608114	MPSA06Y, NPN, Silicon		1	F801	5508302535	Fuse, TL 2.5A 250V	1	B
Q305	2208208113	MPSA56Y, NPN, Silicon		1	F802	5508302135	Fuse, TL 1.25A 250V	1	B
Q306	2208608104	BKTC3198Y/KTC1815Y, NPN Silicon		1	R701	3009333573	Carbon Film	3.3M ohm 1/2W J	1 A
Q307	2208608114	MPSA06Y, NPN, Silicon		1					
Q308	2208208113	MPSA56Y, NPN, Silicon		1					

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
TRANS	2828000747	Power Transformer, 120 V 60 Hz	1	A	C412	3679562120	Mylar	0.0056 µF	100 V J 1 D,E,F,G
△	2828000757	Power Transformer, 220V 60 Hz	1	Dom	C413	3479210071	Electrolytic SA	10 µF	50 V M 1
△	2828000737	Power Transformer, 230V 50 Hz	1	D	C413	3479233971	Electrolytic SA	3.3 µF	50 V M 1 D,E,F,G
△	2828000617	Power Transformer, 240V 50 Hz	1	E	C414	3479210971	Electrolytic SA	1 µF	50 V M 1
△	2828000637	Power Transformer, 110/220V 60 Hz	1	B	C415	3479210071	Electrolytic SA	10 µF	50 V M 1
0524380001480		Ass'y Posistor	1		C416	3619471110	Poly	470 pF	50 V 1
4255001010		Clip Fuse	6		C417	3479210071	Electrolytic SA	10 µF	50 V M 1
					C418	3479210971	Electrolytic SA	1 µF	50 V M 1
P2-1	054101010012	ASSY P.C.B TUNER			C419	3479233871	Electrolytic SA	0.33 µF	50 V M 1
34	4408107110	Terminal ANT	1	Dom,AAVS,P/B	C420	3479210071	Electrolytic SA	10 µF	50 V M 1
	4408101610	Terminal ANT	1	EE,PHID,MU,MS	C421	3539223820	Ceramic Chip	0.022 µF	50 V K 1
CNT06	4428525540	Water 4P, to Front B'D	1		C422	3409210131	Electrolytic SA	100 µF	16 V M 1
CNT12	4428516610	Water 7P, to Front B'D	1		C423	3539330210	Ceramic Chip	33 pF	50 V J 1
CNT16		Water 3P, to Switch B'D	1	B	C424	3539223820	Ceramic Chip	0.022 µF	50 V K 1
IC401	2168417119	LA1851NM	1		C425	3479347041	Electrolytic SG	47 µF	25 V M 1
IC402	2138017136	LM7001M	1		C426	3539223820	Ceramic Chip	0.022 µF	50 V K 1
Q401/Q402	2297406100	KTC3911	2		C427/C428	3539330210	Ceramic Chip	33 pF	50 V J 2
Q403-Q405	2297606012	TR Chip, KRC1111S SOT23	3		C429-C431	3539101210	Ceramic Chip	100 pF	50 V J 3
Q406	2207206008	TR Chip, KRA107S SOT23	1		C432	3479233971	Electrolytic SA	3.3 µF	50 V M 1
Q407	2207406100	KTC3911	1		C433	3679392120	Mylar	0.0039 µF	100 V M 1
Q408	2218211100	FET, 2SK168D	1		C434	3679183120	Mylar	0.018 µF	100 V M 1
Q409	2207606002	TR Chip, KTC3880 SOT23	1		C435	3679473120	Mylar	0.047 µF	100 V J 1
Q410-Q412	2207206008	TR Chip, KRA107S SOT23	3		C436	3539103820	Ceramic Chip	0.01 µF	50 V K 1
Q413-Q418	2207606001	TR Chip, KTC387S SOT23	5	LW	C437	3539223820	Ceramic Chip	0.022 µF	50 V K 1
Q420/Q421	2207606003	KTD1304	2		C438	3479347041	Electrolytic SG	47 µF	25 V M 1
LA01/L402	2658031100	Coil MPX 19 kHz FB-7SG	2		C439	3539470210	Ceramic Chip	47 pF	50 V J 1
L403	2648601430	20.8mH	1	D	C440	3479210971	Electrolytic SA	1 µF	50 V M 1
L404	2628000070	Coil, FM-DET-B(292TEA-K5579X)	1		C441	3539223210	Ceramic Chip	0.022 µF	50 V K 1
L405	2628000060	Coil, FM-DET-A(292TEA-K5580A)	1		C442	3539473060	Ceramic Chip	0.047 µF	50 V Z 1
L406	2648001250	Coil, AM-HFT P-7SB	1		C443	3539223210	Ceramic Chip	0.022 µF	50 V K 1
L407	2638201150	Coil, AM-OSC	1		C444	3539103210	Ceramic Chip	0.01 µF	50 V Z 1
L408	2608201120	Coil, AM-ANT	1		C445	3479247871	Electrolytic SA	47 µF	50 V M 1
L409	2608201130	Coil, AM-ANT	1	LW	C446	3479347041	Electrolytic SG	47 µF	25 V M 1
L410	2638401080	AM-OSC	1	LW	C447/C448	3539223210	Ceramic Chip	0.022 µF	50 V K 2
CF401	3908001380	SFZ450F	1		C449	3409210131	Electrolytic SA	100 µF	16 V M 1
CF402	3908011001	SFE10.7MA8	1	A,Dom	C450	3539223210	Ceramic Chip	0.022 µF	50 V K 1
CF402	3908011011	SFE10.7MS3G	1	D,E,F,G	C451	3479347041	Electrolytic SG	47 µF	25 V M 1
CF403	3908011001	SFE10.7MA8	1	A,Dom	C452	3539223210	Ceramic Chip	0.022 µF	50 V K 1
CF403	3908011011	SFE10.7MS3G	1	D,E,F,G	C460	3539103210	Ceramic Chip	0.01 µF	50 V K 1 LW
D401	2258599103	Zener, UZ 5.1BSC	1		C461	3539150210	Ceramic Chip	15 pF	50 V J 1 LW
D402/D403	2058322101	1N4148M, Switching	2		C462	3539181210	Ceramic Chip	180 pF	50 V J 1 LW
D404	2258599100	Zener, DZ3.3V	1		C463	3539270210	Ceramic Chip	27 pF	50 V J 1 LW
VD401	2058819106	KV12362	1		C464	3539223210	Ceramic Chip	0.022 µF	50 V K 1 LW
VD401	2058819105	KV12352	1	LW	C465	3539223210	Ceramic Chip	0.022 µF	50 V K 1 D,E,F,G
FE401	3928801930	FE306-A15	1		C466	3539620210	Ceramic Chip	82 pF	50 V J 1 D
FE401	3928801970	FE407-A15	1	E,F	C467	3539101210	Ceramic Chip	100 pF	50 V J 1 D
FE401	3928818890	FE407-60Hz	1	D	R401/R402	3099332870	RES Chip	3.3 kohm	1/10W J 2
X401	3908101031	X-TAL, 7.2 MHz	1		R403	3099302870	RES Chip	3 kohm	1/10W J 1
X402	3938131600	Resonator, CSB456F15	1		R404	3099512870	RES Chip	5.1 kohm	1/10W J 1 A,Dom
TC401	3838001160	Trimmer, 20pF	1		R405	3099512870	RES Chip	5.1 kohm	1/10W J 1
TC402	3838001150	Trimmer, 10pF	1		R406/R407	3099624670	RES Chip	820 kohm	1/10W J 2
TC403/404	3838001160	Trimmer, 20pF	2	LW	R408	3099302870	RES Chip	3 kohm	1/10W J 1 A,Dom
	2608207361	ANT AM Loop Stand Strip Wire	1	Dom,A	R409	3099221870	RES Chip	220 ohm	1/10W J 1
	2608207360	ANT AM Loop Stand Strip Wire	1	D,E,F,G	R410/R411	3099103870	RES Chip	10 kohm	1/10W J 2
C401/C402	3679392120	Mylar	0.0039 µF	100 V J 2	R412	3099102870	RES Chip	1 kohm	1/10W J 1
C403	3479233971	Electrolytic SA	3.3 µF	50 V M 1	R413	3099332870	RES Chip	3.3 kohm	1/10W J 1
C404/C405	3579222530	Ceramic Disc	0.0022 µF	50 V Z 2	R414	3099512870	RES Chip	5.1 kohm	1/10W J 1
C406	3479233971	Electrolytic SA	3.3 µF	50 V M 1	R415	3099101870	RES Chip	100 ohm	1/10W J 1
C407	3579223530	Ceramic Disc	0.002 µF	50 V Z 1	R416	3099221870	RES Chip	220 ohm	1/10W J 1
C408	3479347041	Electrolytic SG	47 µF	25 V M 1	R417	3099622870	RES Chip	8.2 kohm	1/10W J 1
C409/C410	3479233971	Electrolytic SA	3.3 µF	50 V M 2	R418	3099332870	RES Chip	3.3 kohm	1/10W J 1
C411	3679822120	Mylar	0.0082 µF	100 V J 1 A,Dom	R419	3099393870	RES Chip	39 kohm	1/10W J 1 A,Dom
C411	3679562120	Mylar	0.0056 µF	100 V J 1 D,E,F,G	R420	3099221870	RES Chip	220 ohm	1/10W J 1
C412	3679822120	Mylar	0.0082 µF	100 V J 1 A,Dom	R421	3099223870	RES Chip	22 kohm	1/10W J 1

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No	Description	Q'ty	Version	
R422	3099393870	RES Chip	39 kohm	1/10W J 1	C523/C524	3539473060	Ceramic Chip	0.047 µF	50 V Z 2	
R423	3099103870	RES Chip	10 kohm	1/10W J 1	C525	3539562820	Ceramic Chip	0.0056 µF	50 V K 1	
R424	3099102870	RES Chip	1 kohm	1/10W J 1	C526	3539823060	Ceramic Chip	0.082 µF	50 V Z 1	
R425	3099123870	RES Chip	12 kohm	1/10W J 1	A,Dom	C527	3539681210	Ceramic Chip	680 pF	50 V J 1
R426-R428	3099102870	RES Chip	1 kohm	1/10W J 3	C528	3539222820	Ceramic Chip	2200 pF	50 V K 1	
R429	3099152870	RES Chip	1.5 kohm	1/10W J 1	C529/C530	3539103820	Ceramic Chip	0.01 µF	50 V K 2	
R430	3099621870	RES Chip	820 ohm	1/10W J 1	C531	3539222820	Ceramic Chip	2200 pF	50 V K 1	
R431	3099103870	RES Chip	10 kohm	1/10W J 1	C532	3539151210	Ceramic Chip	150 pF	50 V J 1	
R432-R435	3099101870	RES Chip	100 ohm	1/10W J 4	C533/C534	3539220210	Ceramic Chip	22 pF	50 V J 2	
R436	3099331870	RES Chip	330 ohm	1/10W J 1	C535	3539104080	Ceramic Chip	0.1 µF	50 V Z 1	
R437	3099332870	RES Chip	3.3 kohm	1/10W J 1	A,Dom	C536	3479233971	Electrolytic SA	3.3 µF	50 V M 1
R438/R439	3099331870	RES Chip	330 ohm	1/10W J 2	C537	3479210071	Electrolytic SA	10 µF	50 V M 1	
R440	3099181870	RES Chip	180 ohm	1/10W J 1	A,Dom	C538	3479347041	Electrolytic SG	47 µF	25 V M 1
R441	3099561870	RES Chip	560 ohm	1/10W J 1	A,Dom	C539/C540	3479233871	Electrolytic SA	0.33 µF	50 V M 2
R442	3099104870	RES Chip	100 kohm	1/10W J 1	LW	C541	3479210071	Electrolytic SA	10 µF	50 V M 1
R443	3099104870	RES Chip	100 kohm	1/10W J 1	C542	3479310121	Electrolytic SG	100 µF	10 V M 1	
R444/R445	3099621870	RES Chip	820 ohm	1/10W J 2	C543	3468233661	Electrolytic SA	3.3 µF	50 V M 1	
R450-R453	3099473870	RES Chip	47 kohm	1/10W J 4	LW	C544-C546	3479210071	Electrolytic SA	10 µF	50 V M 3
R454	3099155870	RES Chip	1.5M ohm	1/10W J 1	LW	C547-C548	3479247971	Electrolytic SA	4.7 µF	50 V M 2
R455/R456	3099473870	RES Chip	47 kohm	1/10W J 2	LW	C549	3479347041	Electrolytic SG	47 µF	25 V M 1
R457/R458	3099104870	RES Chip	100 kohm	1/10W J 2	D,E,F,G	C550	3438147312	Electrolytic SA	0.047 µF	5.5 V 1
R459	3099104870	RES Chip	100 kohm	1/10W J 1	LW	C551	3479247971	Electrolytic SA	4.7 µF	50 V M 1
R460	3292331472	Metal Film	330 ohm	1W 1	C552	3479310121	Electrolytic SG	100 µF	100 V M 1	
VR401	3248020343	RES Semi EVN-DJAA03824	1		C553/C554	3479347041	Electrolytic SG	47 µF	25 V M 2	
VR402	3248020243	RES Semi EVN-DJAA03823	1		C555-C559	3479247971	Electrolytic SA	4.7 µF	50 V M 5	
VR403	3248050343	RES Semi EVN-DJAA03854	1		C560-C565	3539104080	Ceramic Chip	0.1 µF	50 V Z 6	
					D501-D511	2058322101	1N4148M, Switching		11	
P2-2	054100210013	ASSY P.C.B SELECTOR	B (Only)		D512/D513	2258599130	Zener, UZ 7.5BSC		2	
CNT15		Water 3P, to Tuner B'D	1	B	D514-D18	2058322101	1N4148M, Switching		5	
CNT16		Lead Assy 2P	1	B	D519/D520	2371124701	LED, SLR-34URCF25		2	
C490/C491	3679333120	Mylar	0.033 µF	100 V J 2	B	D521-D523	2058322101	1N4148M, Switching		3
R499	3099333870	RES Chip	33 kohm	1/10W J 1	B	R501	3099223870	REC Chip	22 kohm	1/10W J 1
					R502	3099474870	REC Chip	470 kohm	1/10W J 1	
P2	054101010014	ASSY P.C.B FRONT			R504	3099472870	REC Chip	4.7 kohm	1/10W J 1	
18	6045010110	Guide Sensor	1		R505-R510	3099473870	REC Chip	47 kohm	1/10W J 6	
19	4658003710	SW Tact	23		R511	3099103870	REC Chip	10 kohm	1/10W J 1	
20	6715019710	Spacer Rubber	2		R512	3099473870	REC Chip	47 kohm	1/10W J 1	
CNT03	436211243332	Lead Assy 11P 240mm, to Main B'D	1		R513	3099333870	REC Chip	33 kohm	1/10W J 1	
CNT05	436209163332	Lead Assy 9P 160mm, to Main B'D	1		R514	3099202870	REC Chip	2 kohm	1/10W J 1	
CNT12	436209163332	Lead Assy 7P 180mm, to Tuner B'D	1		R515	3099102870	REC Chip	1 kohm	1/10W J 1	
CNT13	4428507901	Receptacle BTMK7S-1S	1		R516	3099473870	REC Chip	47 kohm	1/10W J 1	
CNT14	4428504901	Receptacle BTMK4S-1S	1		R517/R518	3099221870	REC Chip	220 ohm	1/10W J 2	
CNT15		Lead Assy 3P	1	B	R519-R524	3099102870	REC Chip	1 kohm	1/10W J 6	
IC500	2138322164	CXP 82316-1430, CPU	1		R525-R530	3099124870	REC Chip	120 kohm	1/10W J 6	
IC501	2168800113	LM324, OP AMP	1		R531-R538	3099102870	REC Chip	1 kohm	1/10W J 8	
IC502	21688000114	KA4558, OP AMP	1		R539/R540	3099101870	REC Chip	100 ohm	1/10W J 2	
IC503	2168206107	KIA 8259, OP AMP	1		R541-R544	3099104870	REC Chip	100 kohm	1/10W J 4	
IC504/S05	2138001130	G4 4051D, Switching	2		R545/R546	3099333870	REC Chip	33 kohm	1/10W J 2	
Q501	2207606001	TR Chip, KTC387S SOT23	1		R547	3099104870	REC Chip	100 kohm	1/10W J 1	
FIP	2328130309	FIRP, 13JM8	1		R548	3099563870	REC Chip	56 kohm	1/10W J 1	
X-501	3938131750	Resonator, CST10.00MTW	1		R549	3099104870	REC Chip	100 kohm	1/10W J 1	
RCVR	2408004005	Sensor, RPM-600CBRL	1		R550	3099683870	REC Chip	68 kohm	1/10W J 1	
C501-C506	3539101210	Ceramic Chip	100 pF	50 V J 6	R551	3099223870	REC Chip	22 kohm	1/10W J 1	
C507/C508	3539122820	Ceramic Chip	0.0012 µF	50 V K 2	R552	3099153870	REC Chip	15 kohm	1/10W J 1	
C509/C510	3539562820	Ceramic Chip	0.0056 µF	50 V K 2	R553	3099563870	REC Chip	56 kohm	1/10W J 1	
C511/C512	3539223820	Ceramic Chip	0.022 µF	50 V K 2	R554/R555	3099333870	REC Chip	33 kohm	1/10W J 2	
C513/C514	3539622060	Ceramic Chip	0.082 µF	50 V K 2	R556	3099243870	REC Chip	24 kohm	1/10W J 1	
C515-C516	3539103820	Ceramic Chip	0.01 µF	50 V K 2	R557	3099103870	REC Chip	10 kohm	1/10W J 1	
C517	3539222820	Ceramic Chip	0.0022 µF	50 V K 1	R558	3099223870	REC Chip	22 kohm	1/10W J 1	
C518	3539151210	Ceramic Chip	150 pF	50 V J 1	R559	3099683870	REC Chip	68 kohm	1/10W J 1	
C519	3539222820	Ceramic Chip	2200 pF	50 V K 1	R560	3099273870	REC Chip	27 kohm	1/10W J 1	
C520	3539681210	Ceramic Chip	680 pF	50 V J 1	R561	3099153870	REC Chip	15 kohm	1/10W J 1	
C521	3539623060	Ceramic Chip	0.082 µF	50 V Z 1	R562	3099333870	REC Chip	33 kohm	1/10W J 1	
C522	3539562820	Ceramic Chip	0.0056 µF	50 V K 1	R563	3099223870	REC Chip	22 kohm	1/10W J 1	

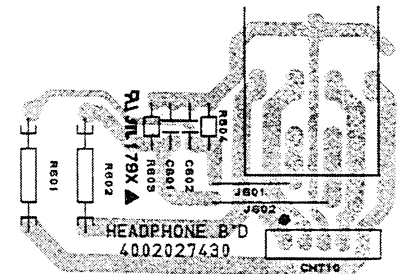
Ref. No.	Part No	Description	Qty	Version
R564	3099683870	REC Chip	68 kohm 1/10W J	1
R565	3099563870	REC Chip	56 kohm 1/10W J	1
R566	3098333870	REC Chip	33 kohm 1/10W J	1
R567	3098243870	REC Chip	24 kohm 1/10W J	1
R568	3098103870	REC Chip	10 kohm 1/10W J	1
R569	3098223870	REC Chip	22 kohm 1/10W J	1
R570	3099683870	REC Chip	68 kohm 1/10W J	1
R571	3099273870	REC Chip	27 kohm 1/10W J	1
R572	3098104870	REC Chip	100 kohm 1/10W J	1
R573	3099563870	REC Chip	56 kohm 1/10W J	1
R574	3098104870	REC Chip	100 kohm 1/10W J	1
R575/R576	3099563870	REC Chip	56 kohm 1/10W J	2
R577	3099474870	REC Chip	470 kohm 1/10W J	1
R578-R581	3099471870	REC Chip	470 kohm 1/10W J	4
R582	3099203870	REC Chip	20 kohm 1/10W J	1
R583/R584	3099183870	REC Chip	18 kohm 1/10W J	2
R585/R586	3099203870	REC Chip	20 kohm 1/10W J	2
R587	3098152870	REC Chip	1.5 kohm 1/10W J	1
R588/R589	3098102870	REC Chip	1 kohm 1/10W J	2
R590	3098122870	REC Chip	1.2 kohm 1/10W J	1
R591	3098102870	REC Chip	1 kohm 1/10W J	1
R592	3099623870	REC Chip	62 kohm 1/10W J	1
R593-R595	3099513870	REC Chip	51 kohm 1/10W J	3
R596	3099563870	REC Chip	56 kohm 1/10W J	1
R597-R600	3099683870	REC Chip	68 kohm 1/10W J	4
R601	3099821870	REC Chip	820 ohm 1/10W J	1
R602	3099223870	REC Chip	22 kohm 1/10W J	1
R603	3099683870	REC Chip	68 kohm 1/10W J	1
R604-R606	3099821870	REC Chip	820 ohm 1/10W J	3
R607	099561870	REC Chip	5560 ohm 1/10W J	1
R608	3099221870	REC Chip	220 ohm 1/10W J	1
R609-R611	3098103870	REC Chip	10 kohm 1/10W J	3
R612	3099223870	REC Chip	22 kohm 1/10W J	1
R613-R615	3099473870	REC Chip	47 kohm 1/10W J	3
R616	3098102870	REC Chip	1 kohm 1/10W J	1

P.C BOARD MAIN

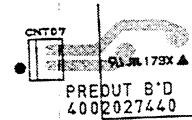


PRINTED CIRCUIT BOARDS

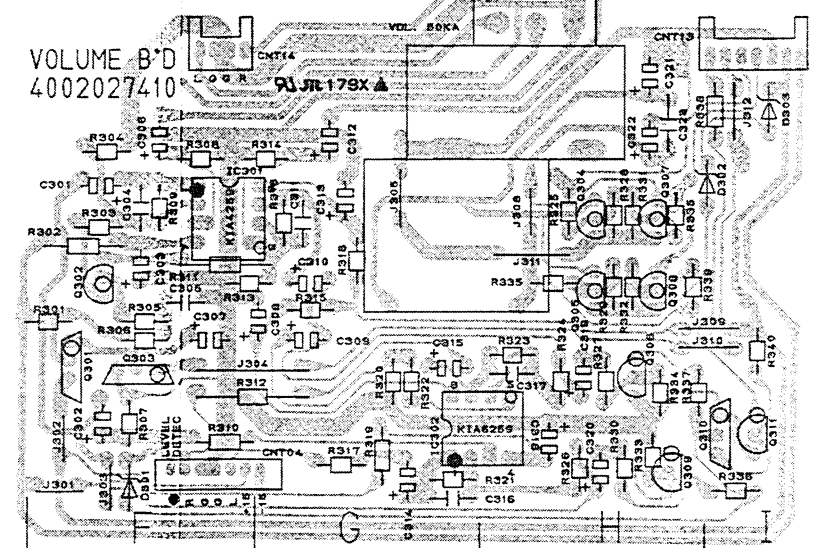
P.C BOARD HEAD PHONE



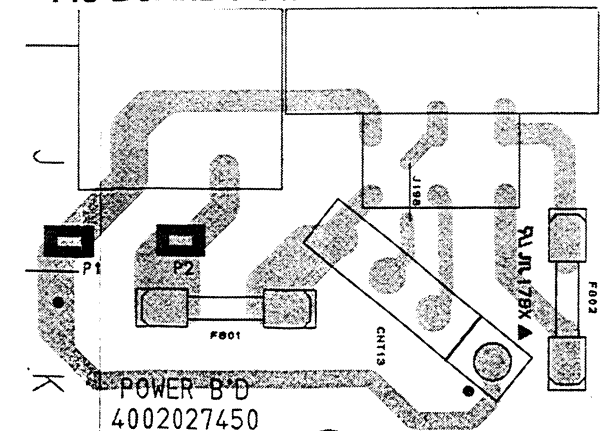
P.C BOARD PREOUT



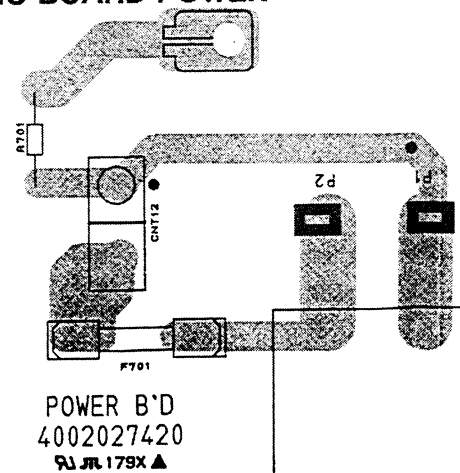
P.C BOARD VOLUME



P.C BOARD POWER



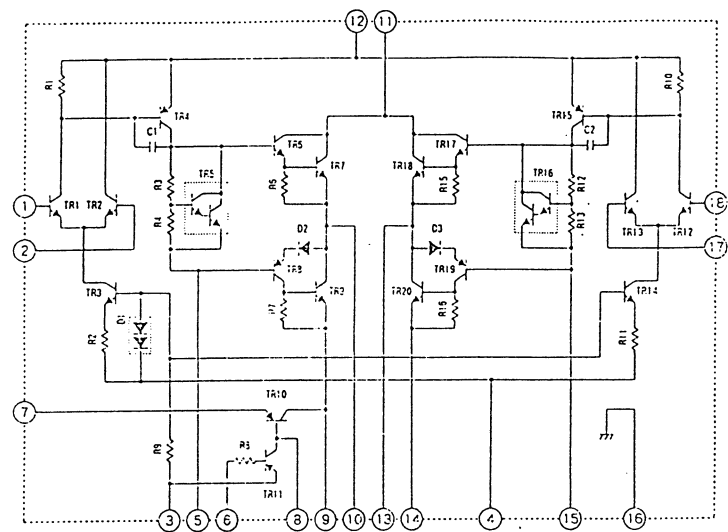
P.C BOARD POWER



SEMICONDUCTOR LEAD IDENTIFICATION & INTERNAL DIAGRAM

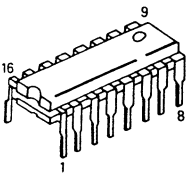
STK4142 II: IC101

Block Diagram

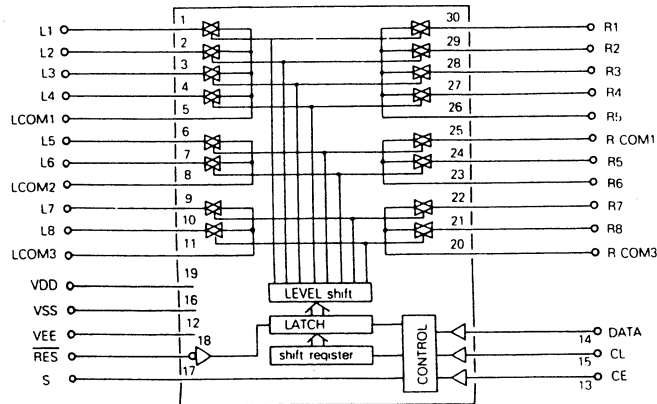


LC7821: IC102

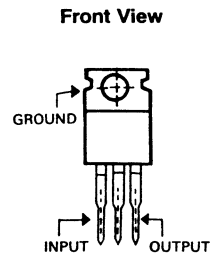
Package Outline



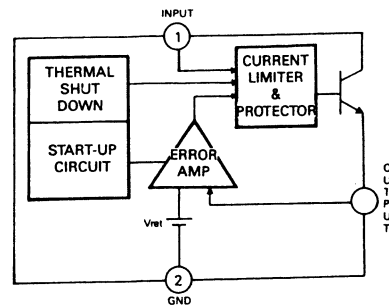
Block Diagram



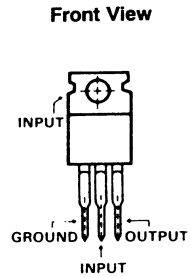
GD7815: IC103



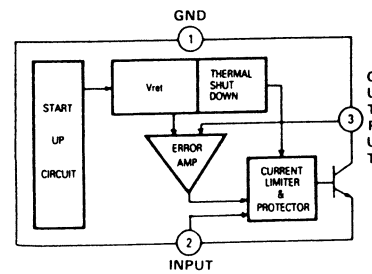
Block Diagram



GD7915: IC104

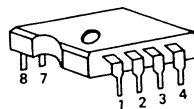


Block Diagram

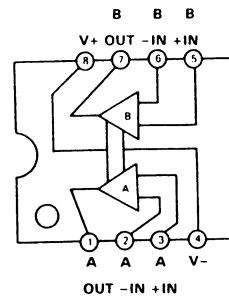


KIA4559P: IC105, IC106, IC107, IC110, IC111, IC112
KIA6259P: IC301, IC302, IC503

Package Outline

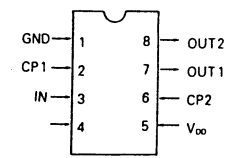


Block Diagram

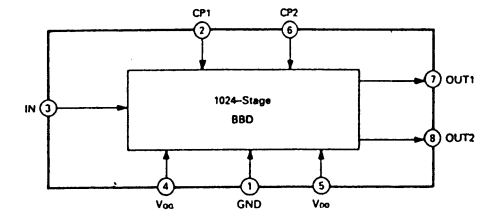


MN300T: IC108

Top View

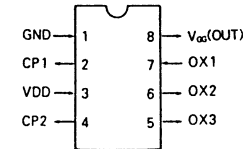


Block Diagram

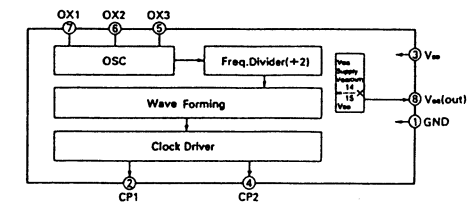


MN3101: IC109

Top View

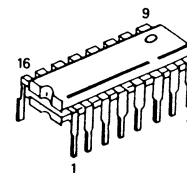


Block Diagram

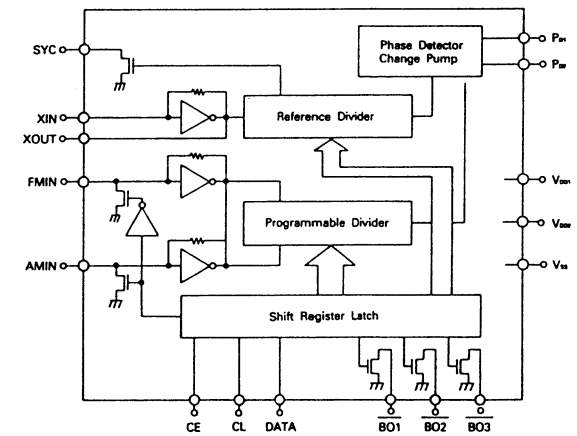


LM7001: IC402

Package Outline

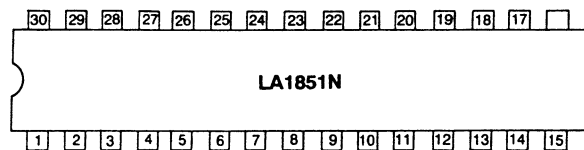


Block Diagram

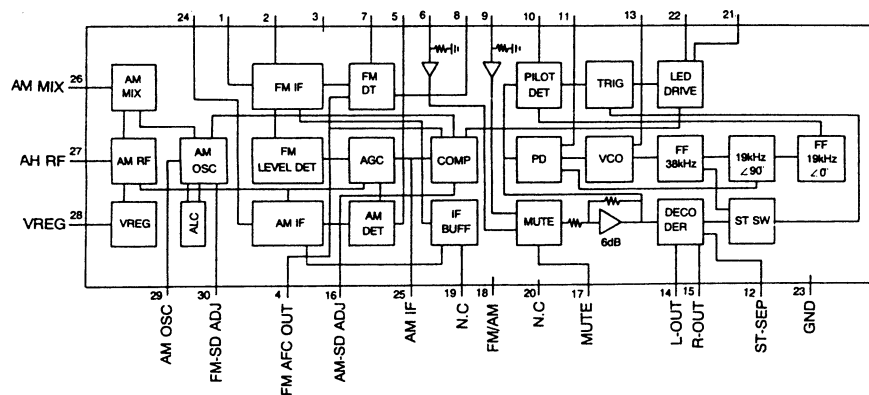


LA1851NM: IC401

Top View

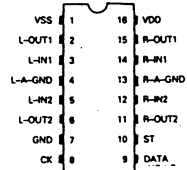


Block Diagram

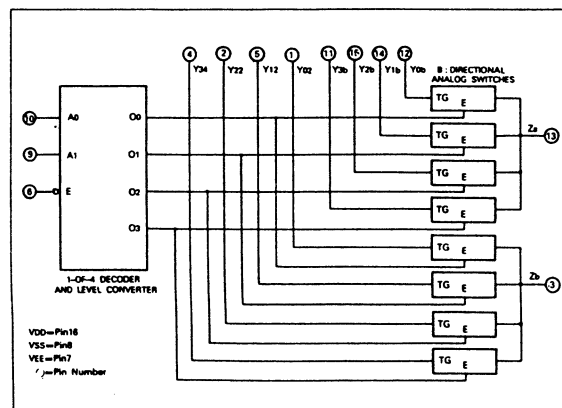


GD4051: IC504, IC505

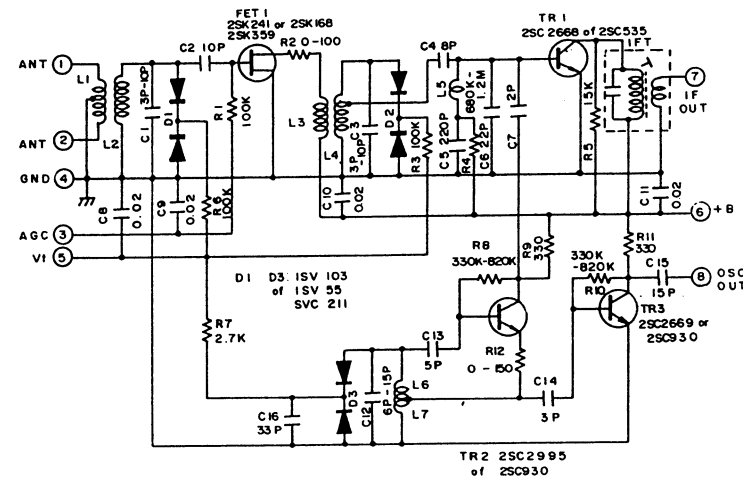
Top View



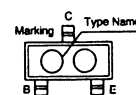
Block Diagram



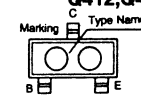
FE306-A15: FM FRONT-END



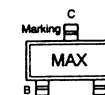
KRC111S: Q403,Q404,Q405



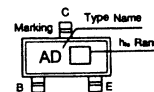
**KRA107S: Q410,Q411,
Q412,Q406**



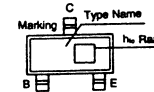
KTD1304: Q420,Q421



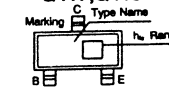
KTC3911: Q401,Q402,Q407



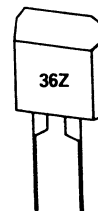
KTC3880: Q409



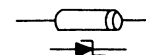
**KTC3875: Q413,Q414,Q415,Q416,
Q417,Q418**



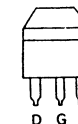
KV1236Z: VD401



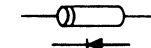
Zener Diode



2SK168: Q408

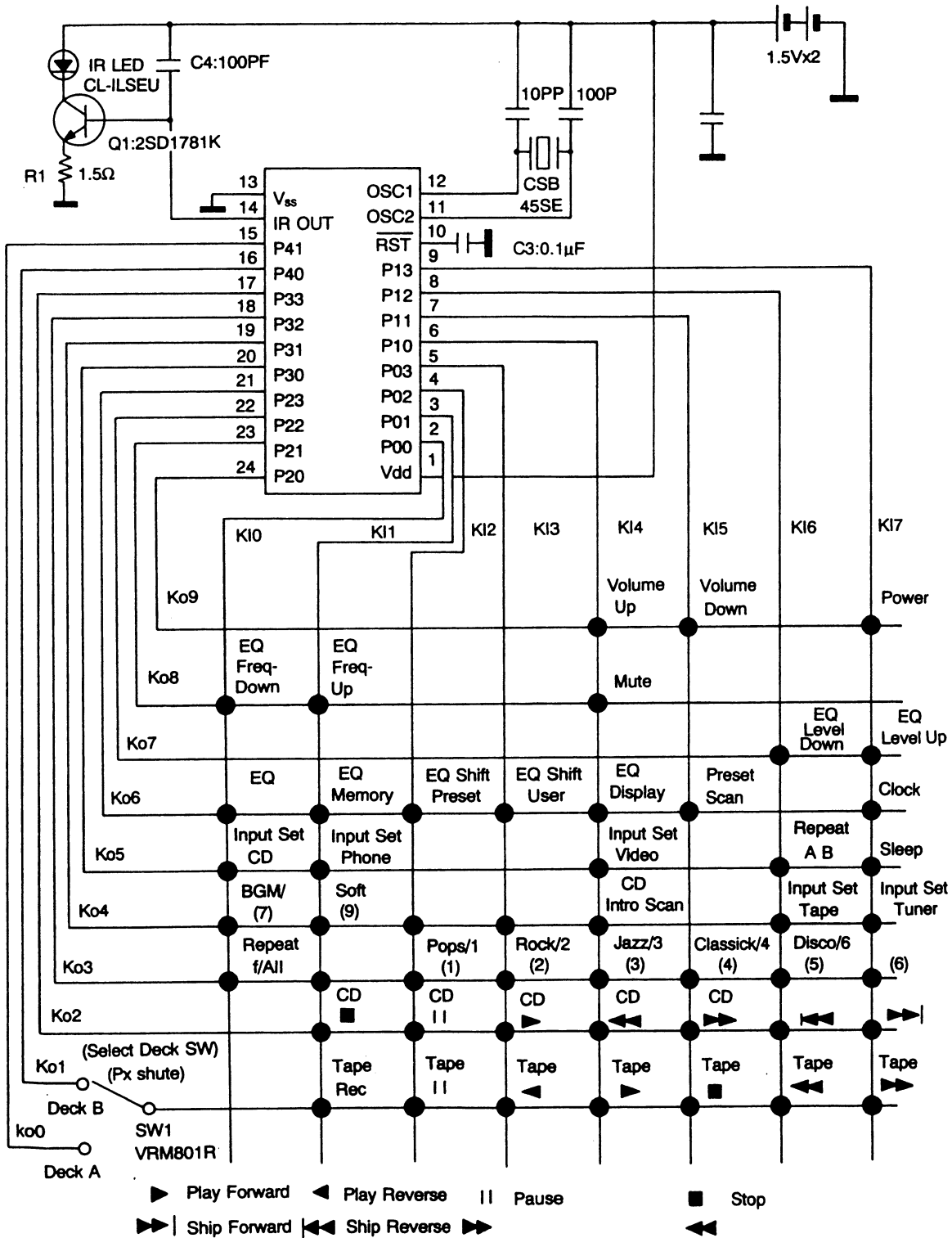


IN4148

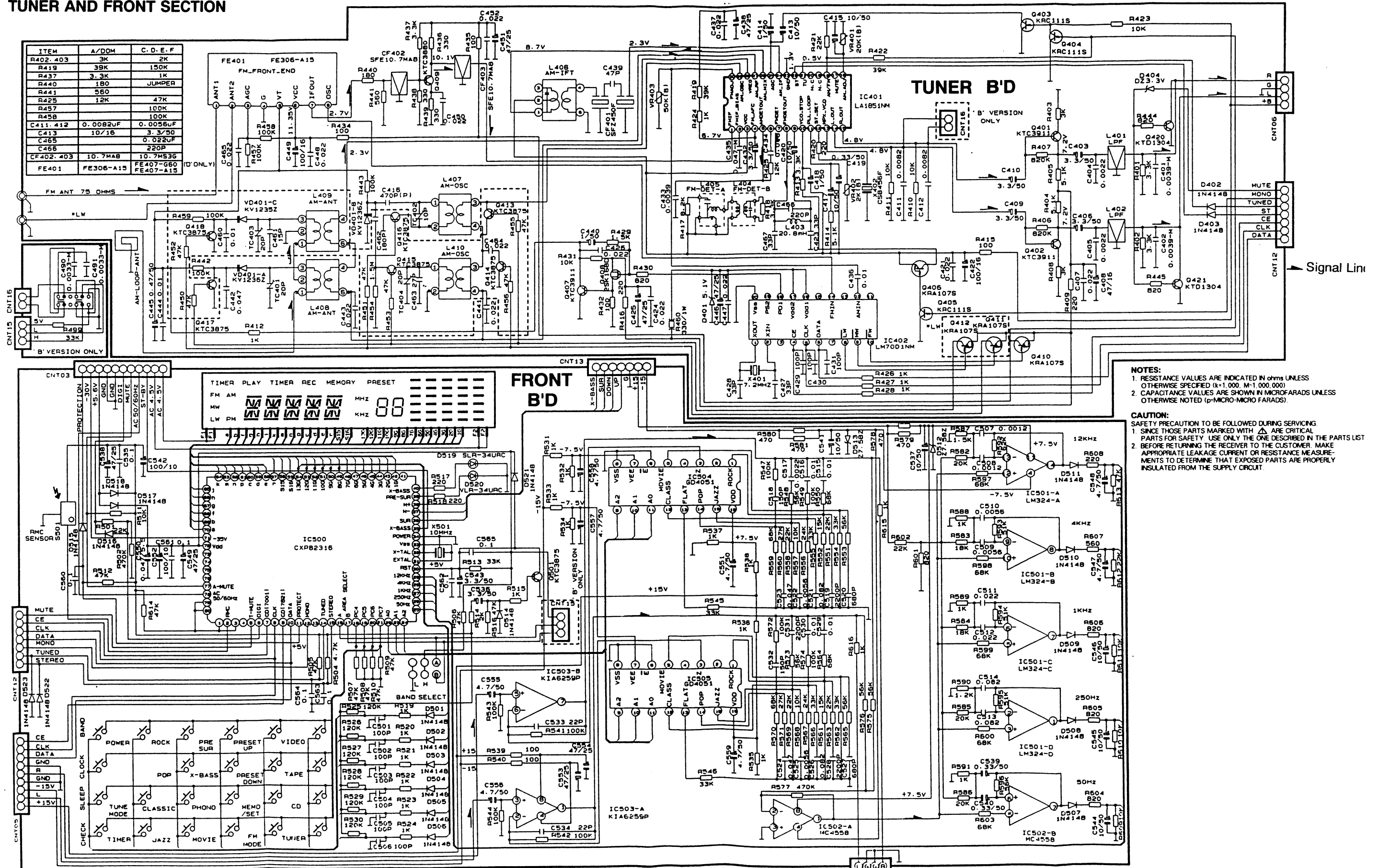


SCHEMATIC DIAGRAMS

REMOTE CONTROL UNIT

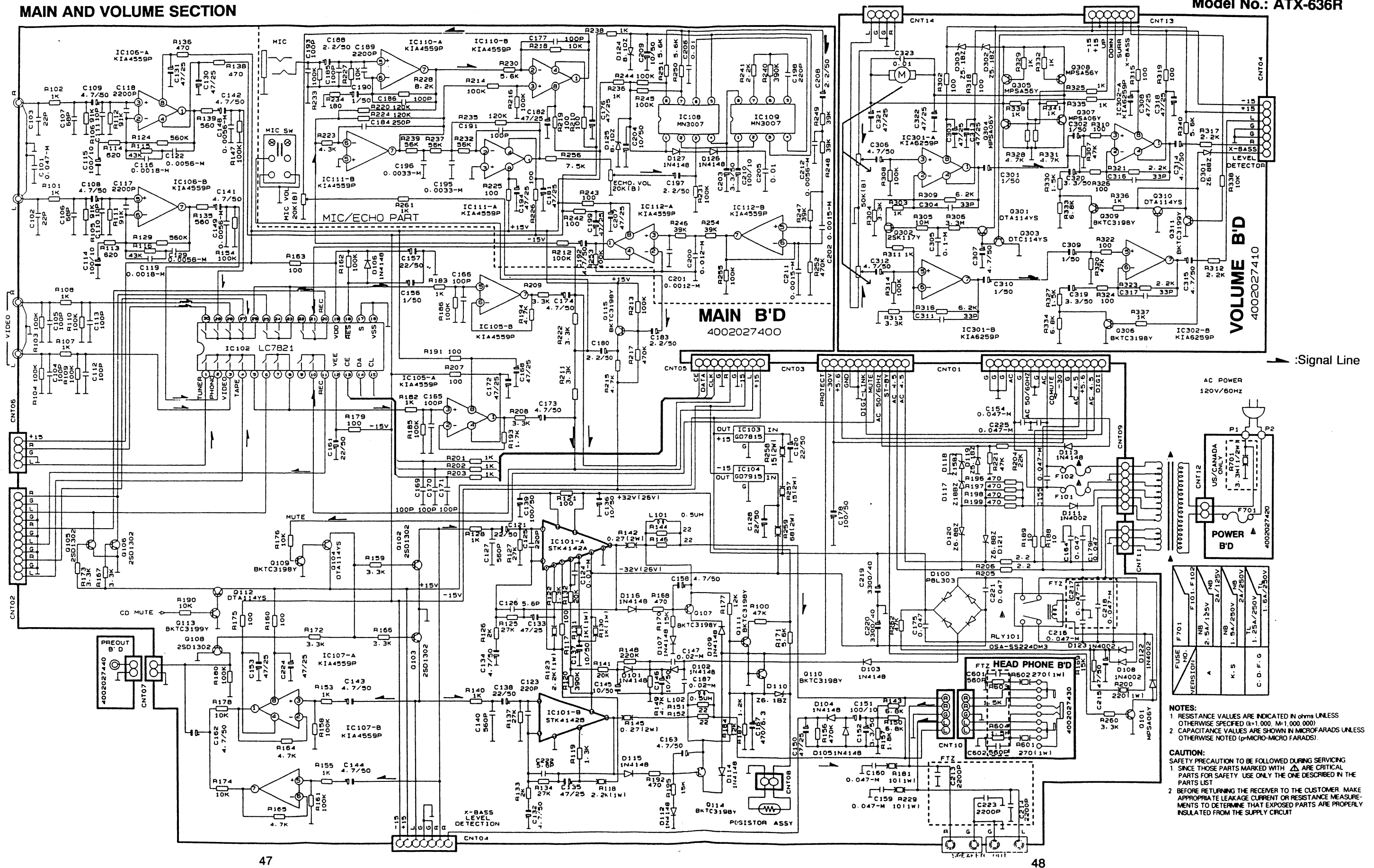


TUNER AND FRONT SECTION



MAIN AND VOLUME SECTION

Model No.: ATX-636R



CCD-636R SPECIFICATIONS

CD PART

General

Transmission bit rate	4.3218 Mbit/sec
Transmission on clock	16.9344 MHz
Error correction	CIRC C1, C2 double correction

Pickup

System	Object lens drive type optical pickup
Object lens drive system	2 Dimensional parallel drive type
Optical source	Semiconductor laser
Wave length	780 nm
Tracking system	3 beam tracking servo type

Others

Digital filter	8 time oversampling type
Analog filter	Analog 2 pole RC type
D/A converter	Σ DECO Type

Electrical

Test Item	Unit	Normal	Limit
Output Voltage at 1 kHz	V	1.6	1.6
Distortion and Noise without Filter:			
20 Hz	%	0.6	0.7
1 kHz	%	0.07	0.1
10 kHz	%	0.3	0.4
16 kHz	%	0.32	0.4
18 kHz	%	0.42	0.5
20 kHz	%	0.45	0.5
Distortion and Noise with Filter 30 kHz:			
1 kHz	%	0.08	0.1
20 kHz	%	0.12	0.15
S/N Ratio without Filter	dB	68	65
S/N Ratio with Filter 30 kHz	dB	75	70
Dynamic Range at 1 kHz	dB	93	90
Frequency Response (0 dB at 1 kHz):			
20 Hz	dB	3	4
100 Hz	dB	1	1.5
10 kHz	dB	1	1.5
20 kHz	dB	1	1.5
De-Emphasis:			
1 kHz	dB	0.5	0.5
5 kHz	dB	0.5	1
16 kHz	dB	0.5	1.5
Channel Separation	dB	65	68
Channel Balance	dB	1	3

* Check Point: ATX636 Speaker output (Voltage: Video 0 dB Input, Output 2 V Point)

Environmental

Test to specification

Temperature between 59°F (15°C) and 95°F (35°C) and relative humidity between 45% and 75%, with power supply voltage of 10% the normal supply voltage.

Test Disc: SONY YEDS-7 Type-3 or A.BEX TCD-781

Unit must work properly and correctly at the temperature range from 32°F (0°C) to 113°F (45°C) and the relative humidity form 40% to 80%, and with the supply voltage.

Temperature test: 48 hours each at -40°F (-40°C) and 149°F (65°C)
Humidity test: 40°C 95% relative humidity.

Type Stereo double full-logic auto-reverse cassette deck with dolby B/C NR system

Recording system	AC bias (bias frequency: 105 kHz)
------------------	-----------------------------------

Tape speed 1-7/8 inch/sec (4.76 cm/sec)
Heads Magnetic recording/playback rotary (reverse head x1)

Motor	Electronic controlled DC motor
Wow and flutter	Less than 0.25% (WRMS)

Frequency response Normal tape 35-14.5 kHz

CrO₂ tape 35-16 kHz

Metal tape 35-16 kHz

Signal to noise ratio

3rd harmonic distortion Dolby B: 62dB C: 72 dB
Less than 3% at 333 Hz 0 dB, rec/playback

Output level 500 mV (Deck line output, 0dB)

Relay playback

Auto tape selector (both deck A, deck B)

Auto music search

CD synchronous dubbing

Dimensions (HxWxD) 270 x 203 x 280 mm

Weight 3 Kg (1.4 lb)

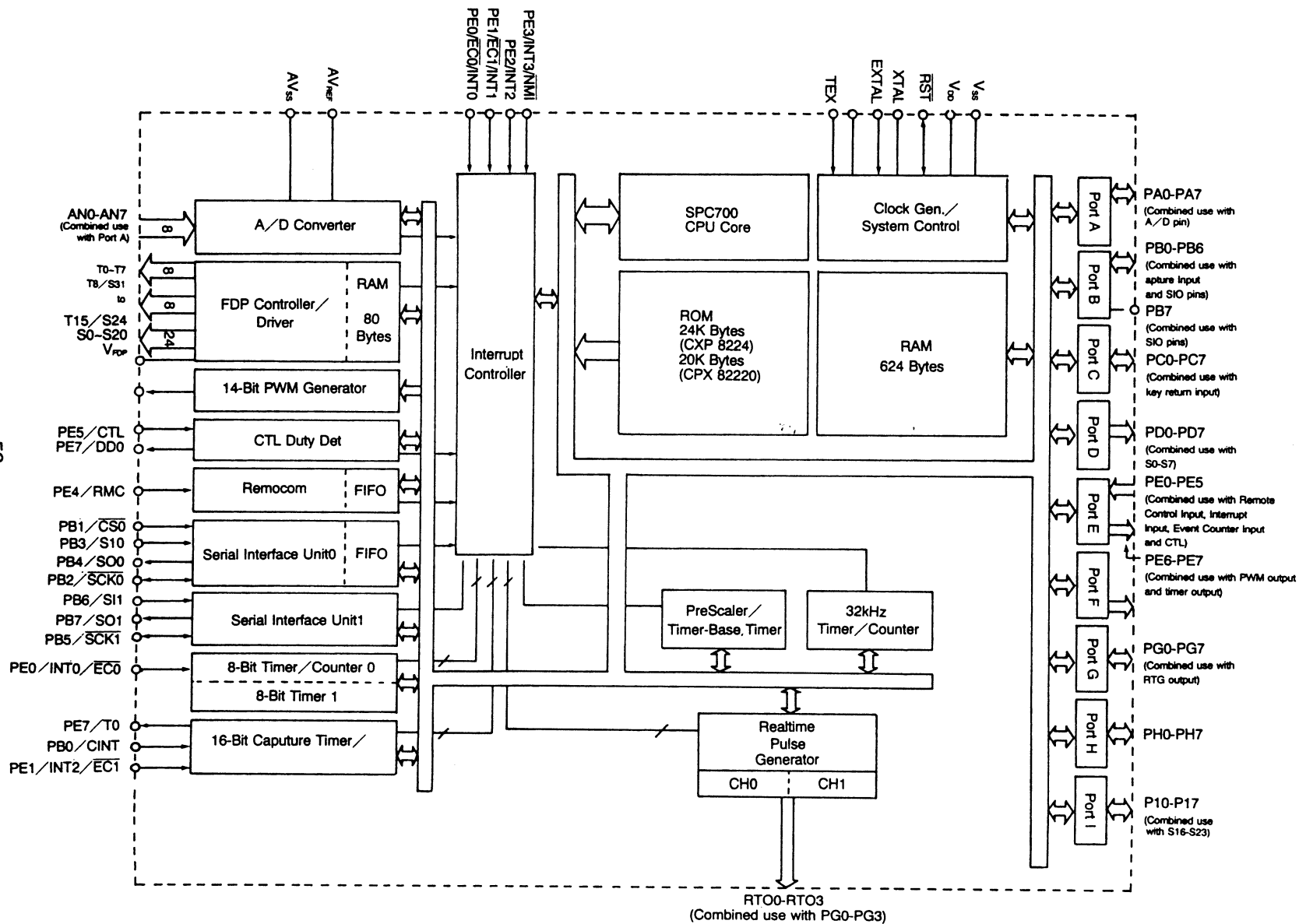
CPU (IC500): CXP82220 (8 bit SINGLE-CHIP MICROCOMPUTER)

CXP82220

Pinout details for CXP82220:

- Left Side (Pins 1-15):** PE1/EC1/INT1, PE2/INT2, PE3/INT3/NM1, PE4/RMC, PE5/CTL, PE6/PWN, PE7/TO/DDO/ADJ, PB0/CINT, PB1/CS0, PB2/SCK0, PB3/SI0, PB4/SO0, PB5/SCK1, PB6/SI1, PB7/SO1, PC0/KR 0, PC1/KR 1, PC2/KR 2, PC3/KR 3, PC4/KR 4, PC5/KR 5, PC6/KR 6, PC7/KR 7, PH 0, PH 1, PH 2, PH 3, PH 4, PH 5, PH 6.
- Bottom Side (Pins 16-30):** SCOR, REEL-RP (I), REEL-PB (I), X, FWD-LD, BWD-LD, DE EMP, A-MUTE, DF-XRST, CLK/SQCK, SUBQ, DATA, TEST, DOWN, UP, LD ON, XLT, XRST, GRST, GMUTE.
- Right Side (Pins 31-45):** ROT SPD-CON1, D-SENSOR, FOK, GFS, SENS, PWMUSEQ, RST, XTAL, XTAL, V_{ss}, TX, TEX, DECK-KEY1, DECK-KEY2, REC-OUT, PB-REC, AB SEL.
- Top Side (Pins 46-81):** PEO/EC0/INT0, PGT R/P CAPS, PG6 R/P SOL, PG5, P18 SOL, PG4, PG3/RT03 DIG-LINK, PG2/RT02 CLOSE, PG1/RT01 OPEN, PG0/RT00, V_{ss}, NC, V_{ss}, V_{ss}, T0, T1, T2, T3, T4, T5, T6, T7, T8/S31, T9/S30, T10/S29, T11/S28, T12/S27, T13/S26, T14/S25, T15/S24, P17/S23, P16/S22, P15/S21, P14/S20, P13/S19, P12/S18, P11/S17, P10/S16, PF7/S15, PF6/S14, PF5/S13, PF4/S12, PF3/S11, PF2/S10, PF1/S9, PF0/S8, PD7/S7, PD6/S6, PD5/S5, PD4/S4, PD3/S3.

2. Block Diagram



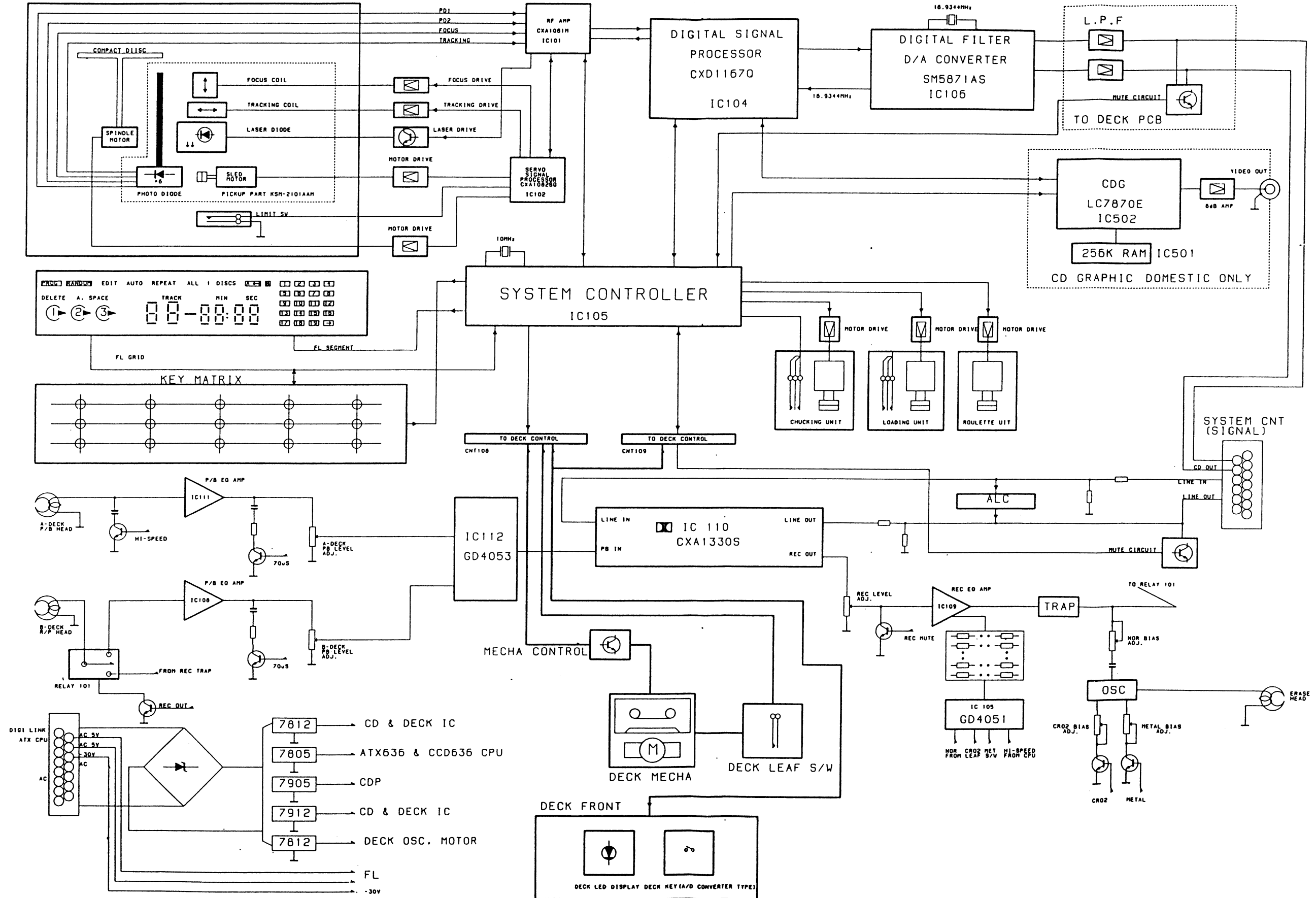
3. Pin Functions

Symbol	Input / Output	Functions	
PA0/AN0 to PA7/AN7	I/O/Analog input	(Port A) 8-bit I/O port. Each bit can be individually specified as input or output. (8 pins)	A/D converter analog input pins.
PB0/CINT	I/O/Input	(Port B) 8-bit I/O port. The low 7 bits can be individually specified as input or output. The most significant bit (PB7) is output only. (8 pins)	16-bit timer/counter external capture input pin.
PB1/CS0	I/O/Input		Serial interface (CH0) chip select input pin.
PB2/SCK0	I/O/I/O		Serial clock (CH0) I/O pin.
PB3/S10	I/O/Input		Serial data (CH0) input pin.
PB4/SO0	I/O/Output		Serial data (CH0) output pin.
PB5/SCK1	I/O/I/O		Serial clock (CH1) I/O pin.
PB6/SI1	I/O/Input		Serial data (CH1) input pin.
PB7/SO1	Output/Output		Serial data (CH1) output pin.
PC0/KR0 to PC7/KR7	I/O/Input	(Port C) 8-bit I/O port. Each bit can be individually specified as input or output. Each can drive a 12 mA sink current. (8 pins)	Key return input pins for performing key scans with the FDP segment signals.
PD0/S0 to PD7/S7	Output/Output	(Port D) 8-bit output port. (8 pins)	FDP segment signal output pins.
PE0/INT0/EC0	Input/Input/Input	(Port E) 8-bit input/output port. The low 6 bits are inputs, and the high 2 bits are outputs. (8 pins)	External interrupt request input pins. (4 pins)
PE1/INT1/EC1	Input/Input/Input		Timer/counter external event input pins. (2 pins)
PE2/INT2	Input/Input		
PE3/INT3/NMI	Input/Input/Input		
PE4/RMC	Input/Input		Non-maskable interrupt request input pin.
PE5/CTL	Input/Input		Remote control unit receive circuit input pin.
PE6/PWM	Output/Output		14-bit PWM output pin.
PE7/TO/DDO/ADJ	Output/Output Output/Output		16-bit timer/counter square wave output pin. CTL duty detection output pin, and pin for frequency division output of 32 kHz oscillator.
PF0/S8 to PF7/S15	Output/Output	(Port F) 8-bit output port. (8 pins)	FDP segment signal output pins.

Symbol	Input / Output	Functions	
PG0/PTO0 to PG3/RT03	I/O/Output	(Port G) 8-bit I/O port. Each bit can be individually specified as input or output. The lower four bits are output logically ORed with the RTO contents. (8 pins)	Realtime pulse generator (RTG) outputs. These function as high-precision realtime pulse output ports. (4 pins)
PG4 to PG7	I/O		
PH0 to PH7	I/O	(Port H) 8-bit I/O port. Each bit can be individually specified as input or output. (8 pins)	
PI0/S16 to PI7/S23	Output/Output	(Port I) 8-bit output port. (8 pins)	FDP segment signal output pins.
T8/S31 to T15/S24	Output/Output	Dual-use output pins for FDP timing signals and FDP segment signals.	
T0 to T7	Output	FDP timing signal output pins	
V _{FDP}		FDP voltage supply pin if an internal resistor was specified with a mask option.	
EXTAL	Input	Crystal interface pins for system clock oscillation. If the clock is supplied externally then it should be input to the XTAL pin. The XTAL pin should then be left open.	
XTAL	Output		
TEX	Input	Crystal interface pins for the 32-kHz timer/counter's oscillator. A 32-kHz liquid crystal oscillator is placed between TEX and TX. When used as an event input, connect the signal source to TEX, and leave TX open.	
TX	Output		
RST	I/O	System reset pin, active when "L"	
NC		This pin should be connected to V _{DD} during operation.	
AV _{REF}	Input	A/D converter reference voltage input pin.	
AVSS		A/D converter ground pin.	
V _{DD}		Positive power supply pin.	
V _{SS}		GND pin	

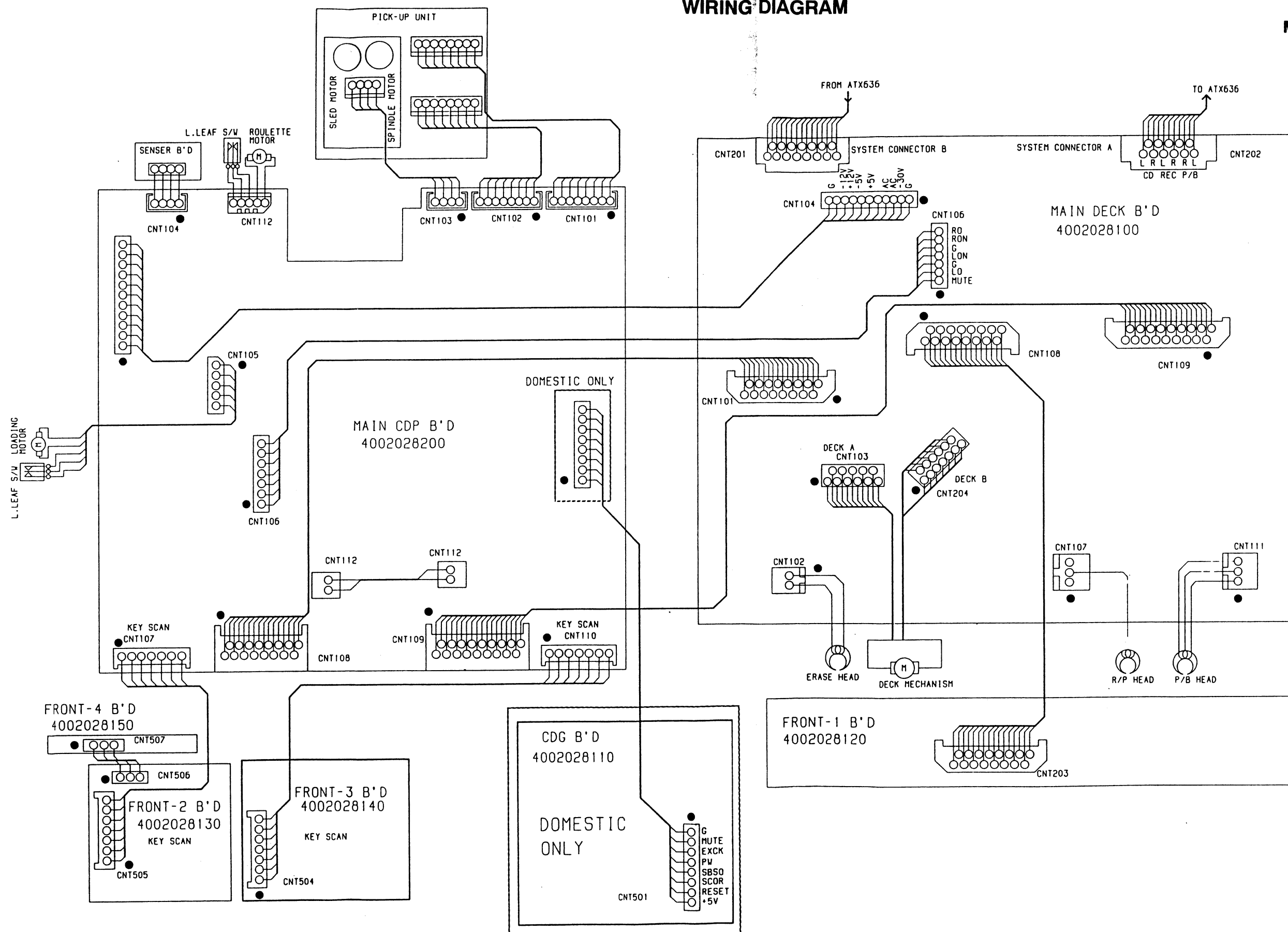
BLOCK DIAGRAM

Model No.: CCD-636R



WIRING DIAGRAM

Model No.: CCD-636R



HANDLING LASER PICKUP

The laser diode in the optical system of this player can be damaged by electrostatic discharge from your clothes or your body. Proper electrostatic grounding for service personal is required during servicing.

BEFORE REPAIRING THE COMPACT DISC PLAYER

Preparation

- Human Body Grounding:

Many of the components used in this compact disc player, including the laser pickup, are sensitive to electrostatic discharge. Service personal should be grounded with an electrostatic armband (1 Mohm).

- Caution:

Static charge on clothing does not escape through a body grounding wrist band. Be careful not to contact the pickup or electrical components with your clothing.

- Workbench and Tool Grounding:

A properly-grounded electroconductive plate (1 Mohm) or metal sheet should be fitted to the workbench surface. Tools and instruments (such as soldering irons and scopes) should be grounded to prevent AC leakage.

Incorrect

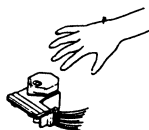


Figure 1

Correct
Grounded Conductive
Wrist for Body

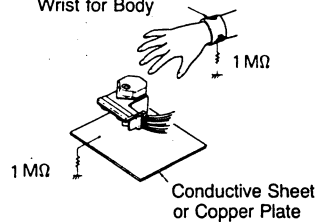


Figure 2

Note: Laser diodes are so susceptible to damage from static electricity that, even if a static discharge does not ruin a diode, it can shorten its life or cause it to work improperly.

PICKUP REPLACEMENT

Caution:

Laser diodes are extremely susceptible to damage from static electricity. Even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly. When replacing the pickup take appropriate measures, such as using a conductive mat and a grounded soldering iron to protect the laser diode from static damage.

1. Remove the CD mechanism assembly by referring to the disassembly instructions (Figure 3).

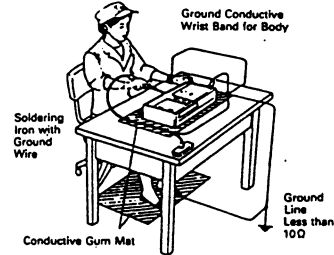


Figure 3

2. 1) Remove the two screws ①, ② and then remove the bracket pickup.
- 2) Remove the two screws ③, ④ (Figure 4).

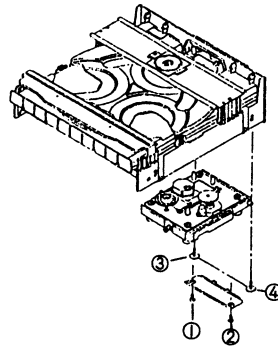


Figure 4

3. Remove the Gear A (Figure 5).
4. Pull out the Slide Shaft.

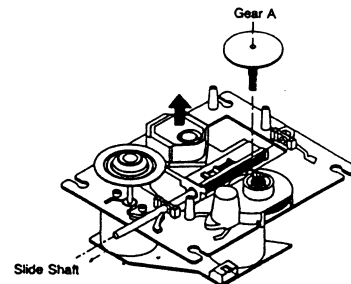


Figure 5

5. Remove the pickup (See Figure 6).

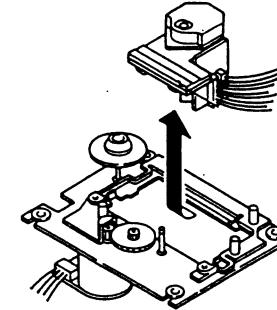


Figure 6

6. After you connect the wire connector, desolder and remove the shorting tab (See Figure 7).

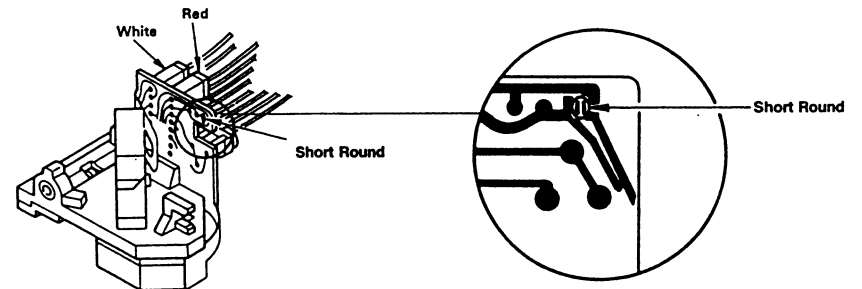


Figure 7

7. Refer to the exploded view of the compact disc mechanism on page 35 for detailed illustrations.

OPERATION CHECK

When the power switch is turned on after the chucking arm is removed, observe the objective lens and check the following. (The optical system block should be at the lead-in position when it is checked.)

- The disc table should be at the innermost position after the chucking arm is removed.
- The diffused light of the laser beam can be seen when the power switch is turned on.
- Vertical (up down) movement of the objective lens take place 2 or 3 times.

ALIGNMENT PROCEDURES(CD PART)

Equipment Required

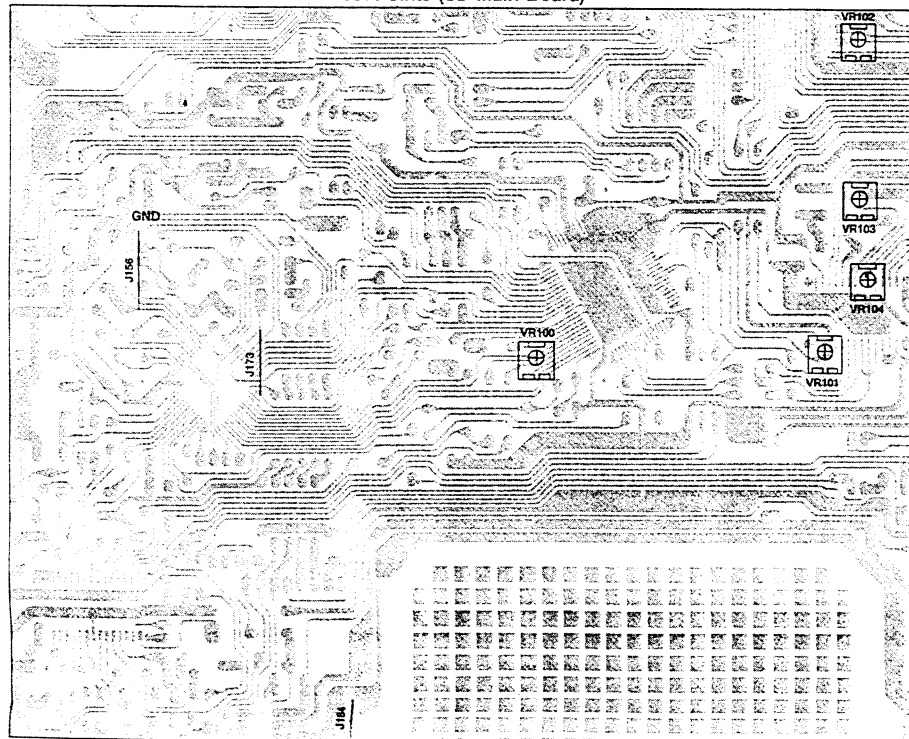
- Oscilloscope(over 50MHz)
- Frequency Counter
- Test Disc PHILIPS 5A
- A Regular Compact Disc

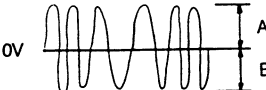
Before Adjustments

- Make the adjustment with a numeric order.
- Use the dualtrace oscilloscope with high impedance(more than 10M ohm)
- How to enter into the TEST MODE
 - 1) Open the disc tray
 - 2) Power off.
 - 3) Power on with ressin "SW101(TEST MODE)."
 - 4) "O" or all segments appears in the display and it means the TEST MODE 0.
 - 5) If you press the PLAY button, the TEST MODE changes to the TEST MODE 1.
 - 6) If you press the PLAY button again, the TEST MODE changes to the TEST MODE 2.
- Tentative steetin of Volume
- Set the semi-fixed resistance tentatively as follows;

VR102 (EF. Balance)	Center Position
VR103 (F. Bias)	Center Position
VR104 (T. Gain)	Turn to the first counterclockwise
VR101 (F. Gain)	Turn to the end counterclockwise
VR100 (PLL)	Center Position

Test Points (CD Main Board)



Step	Connect	Setting	Adjust	Remarks
PLL(Phase Locked Loop) Adjustment				
1	See Figure 10	In the test mode 0	VR100	Counter reading to be 4.3 MHz.
2	Disconnect between J156 (GND) and R138(ASY)			
3	Check the counter reading to be 4.3218 $\pm$ 0.0025 MHz in the test mode 2.			
EF. Balance Adjustment				
1	See Figure 11	In the test mode 1		6  A=B VOLT/DIV: 1V TIME/DIV: 1ms Obtain symmetrical waveform.
2		Turn a disc softly with a finger and adjust VR105 to obtain symmetrical waveform	VR102	
3	The above adjustments must be made very carefully as the misadjustment may cause skipping.			

PLL Adjustment

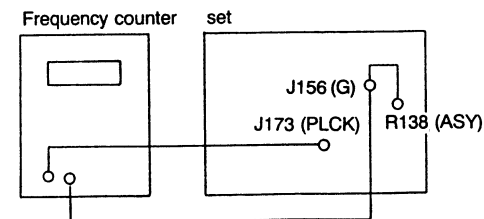


Figure 10

EF. Balance Adjustment

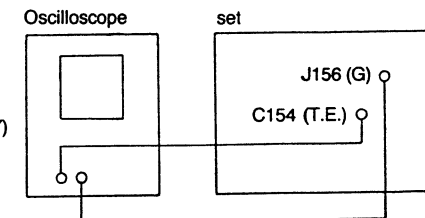
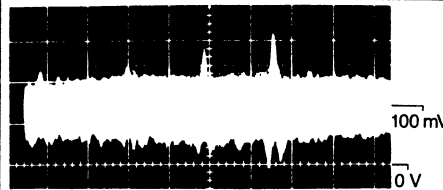


Figure 11

Step	Connect	Setting	Adjust	Remarks
Focus Gain Adjustment				
1	See Figure 12	In the test mode 2	VR101	 Focus error signal of about 100mV.
2	To increase the focus gain, trun VR102 clockwise.			
Tracking Gain Adjustment				
1	See Figure 13	In the test mode 2	VR104	 Obtain the tracking drive signal of about 1 Volt. 100 mV
2	Change the regular disc to PHILIPS test disc 5A and play where the black dot of 800μm is, set confirm no skipping.			
3	If there is any skipping, adjust VR103 to reduce the tracking servo gain till no skipping occurs. To reduce the gain, turn VR103 counterclockwise.			

Focus Gain Adjustment

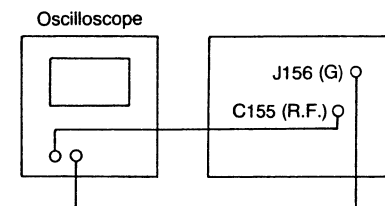


Figure 12

Tracking Gain Adjustment

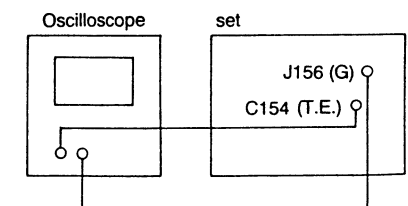
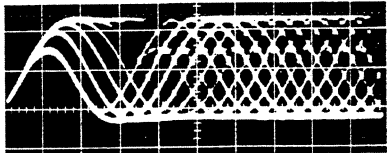


Figure 13

Step	Connect	Setting	Adjust	Remarks
Focus Bias Adjustment				
1	See Figure 14	In the test mode 2	VR103	Obtain the maximum amplitude and the biggest diamond windows of the eye pattern.  The above is an example of good eye pattern. The diamond windows in the center portion are large and clear.

Focus Bias Adjustment

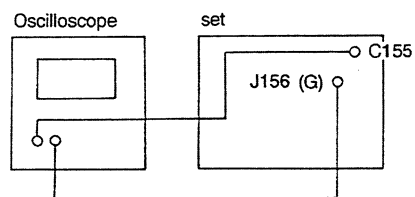


Figure 14

ALIGNMENT PROCEDURES

Before Measurements and Adjustment

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

— Dolby NR switch off.

1. Test tape

- TCC-155 Azimuth (14 kHz, -24 dB)
- TCC-122 Tape speed (3 kHz, -10 dB)
- TCC-130 Playback level(Dolby ref. tape 400 Hz, 0 dB)
- TCC-185C Playback frequency response

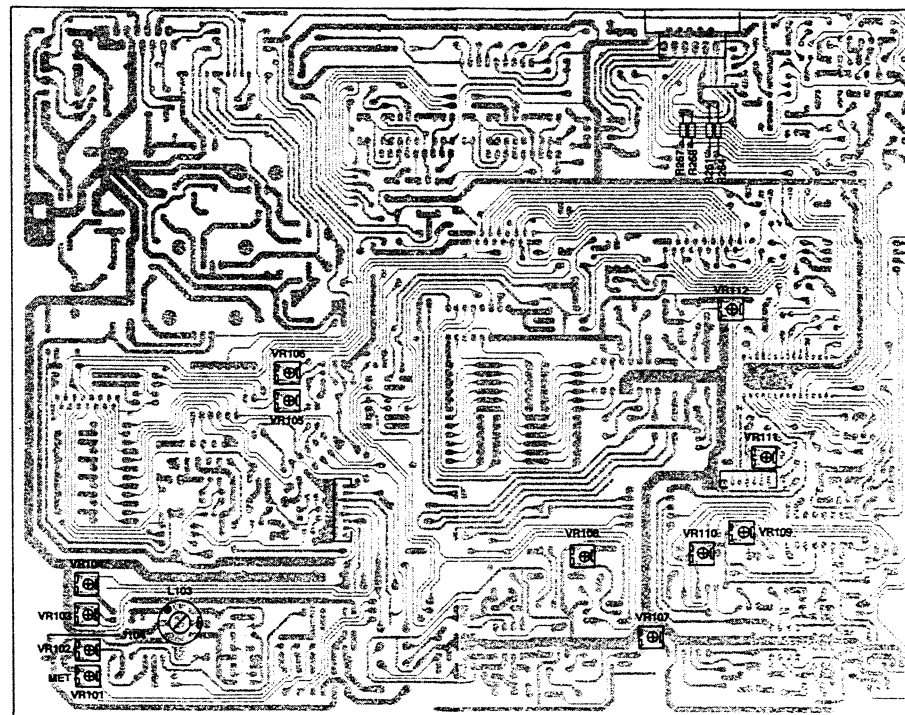
— Reference Tape

- 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

Test Points (Deck Main Board)



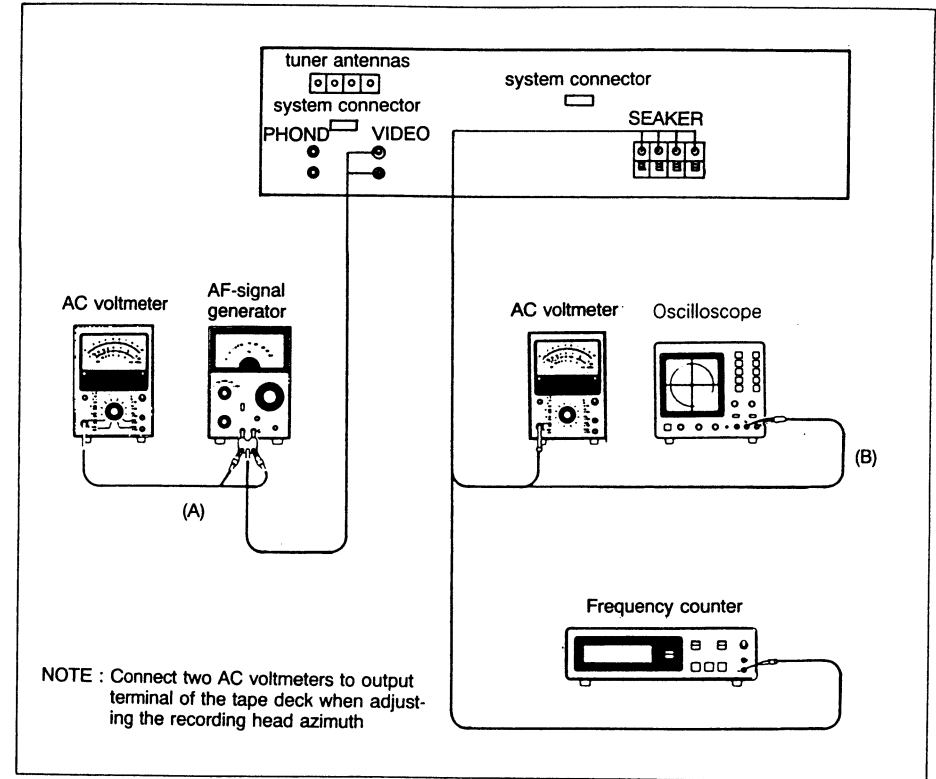
3. Playback section

Adjustments	Test tape	Mode	Apply Signal to	Measure on	Read on	Adjust with	Adjust to
Head Azimuth	TCC-155 14 kHz (A.BEX)	FWD Play (A & B Deck)		R257(L) R261(R)	AC mV-meter Oscilloscope	Adjusting a left screw of head	Max • Lissajous' figure become a straight line with an angle 45 degrees
		REW play (A & B Deck)				Adjusting a right screw of head	
Playback Speed at normal	TCC-112 3 kHz -10 dB(A.Bex)	Play (A & B Deck)			Wow and Flutter Meter	VR105	3000 Hz ± 15 Hz
Playback at high-speed	TCC-112 3 kHz -10 dB(A.Bex)					VR106	4500 Hz ± 30 Hz
Playback Level	TCC-130 400 Hz 0 dB (A.Bex)				AC mV-meter	A Deck VR109, VR110 B Deck VR107, VR108	550 mV
Playback frequency responce	TCC-185C 12.5 kHz, 1 kHz, 60 Hz(A.Bex)				AC mV-meter		See graph Fig.1 freq. response

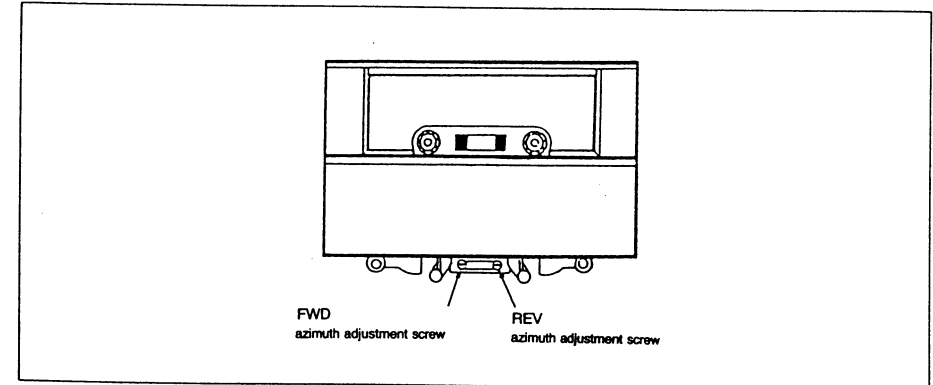
4. Recording section

Adjustments	Test Tape	Mode	Apply Signal to	Measure on	Read on	Adjust with	Adjust to
Bias OSC Frequency	AC-712 (TDK)	Rec/Pause	400 Hz, 400 mV Video	J104	Frequency Counter	L103	105 kHz $\pm$ 400 Hz
Target value Bias	Metal AC-712	Rec/Pause		CNT105 TRAP L TRAP R	AC mV-meter	VR104, VR103	AC 16V
	CrO ₂ , AC-513					VR102	AC 12
	Normal, AC-224					VR101	AC 8
Recording Level	AC-712 (TDK)	Rec/Pause	CNT110 LO, RO	"	VR110, VR111	AC 8 mV	

5. Test Equipment Connection



6. Head Azimuth Adjustment



Notes:

- *a. Prior to any measurement or adjustment, the tape running heads and tape guides should be degaussed and cleaned.
- *b. The maximum permissible speed variation is $\pm 0.5\%$. Moreover, the wow and flutter can be read. This value should not exceed 0.2%.
- *c. The voltage on line out should read 500 mV ± 20 mV. If this is not the case, use VR402 to reduce the LF signal (bias disabled by as many decibels, as the reading was too low or too high).
- *d. When one channel is adjusted, this may slightly affect the adjustment of the other channel. If the adjustment is correct, the frequency response curve will be similar to curve b in Figure 1, with distortion below 3% (-3 dB rec/play).

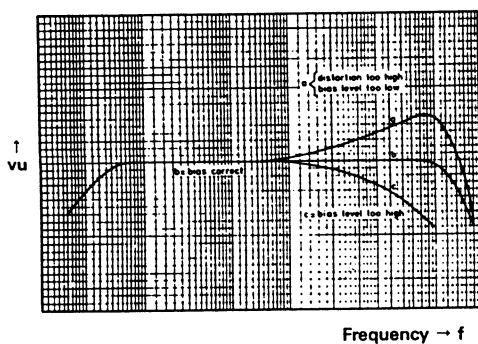


Fig. 1

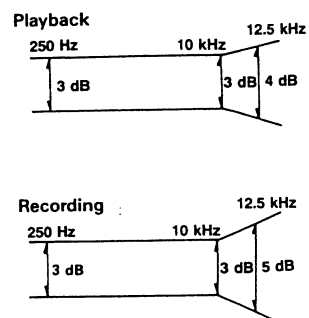
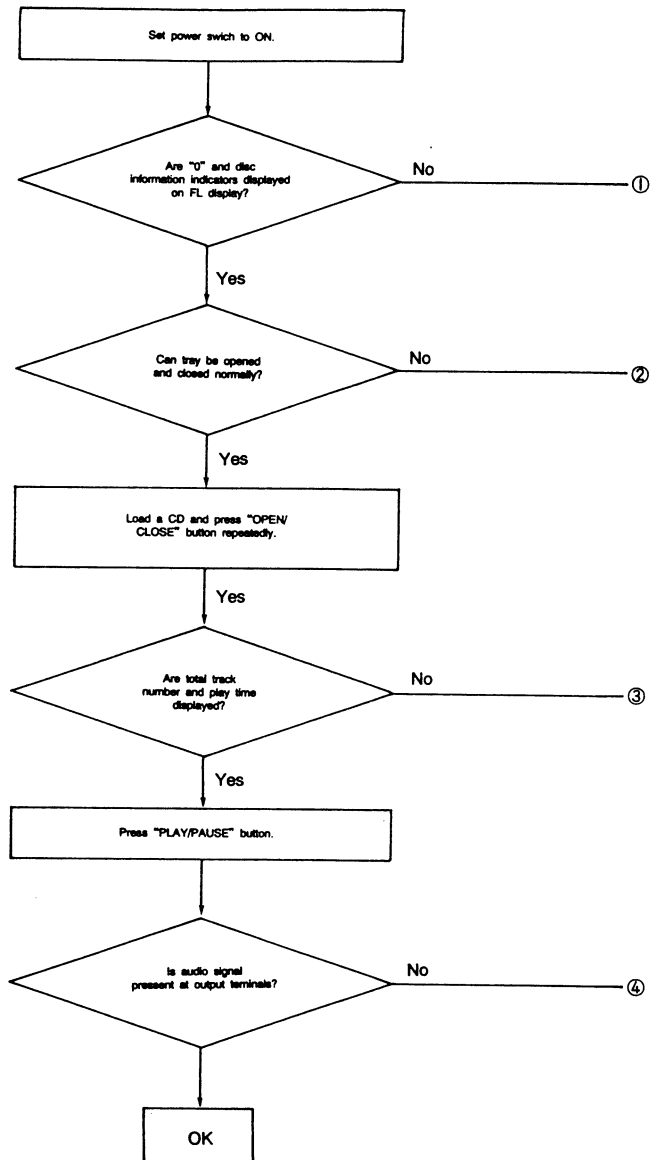


Fig. 2. Allowable Playback/Recording Frequency Response Zone

TROUBLESHOOTING



[Repair item 1] At power on. "0" and some parts are not displayed.

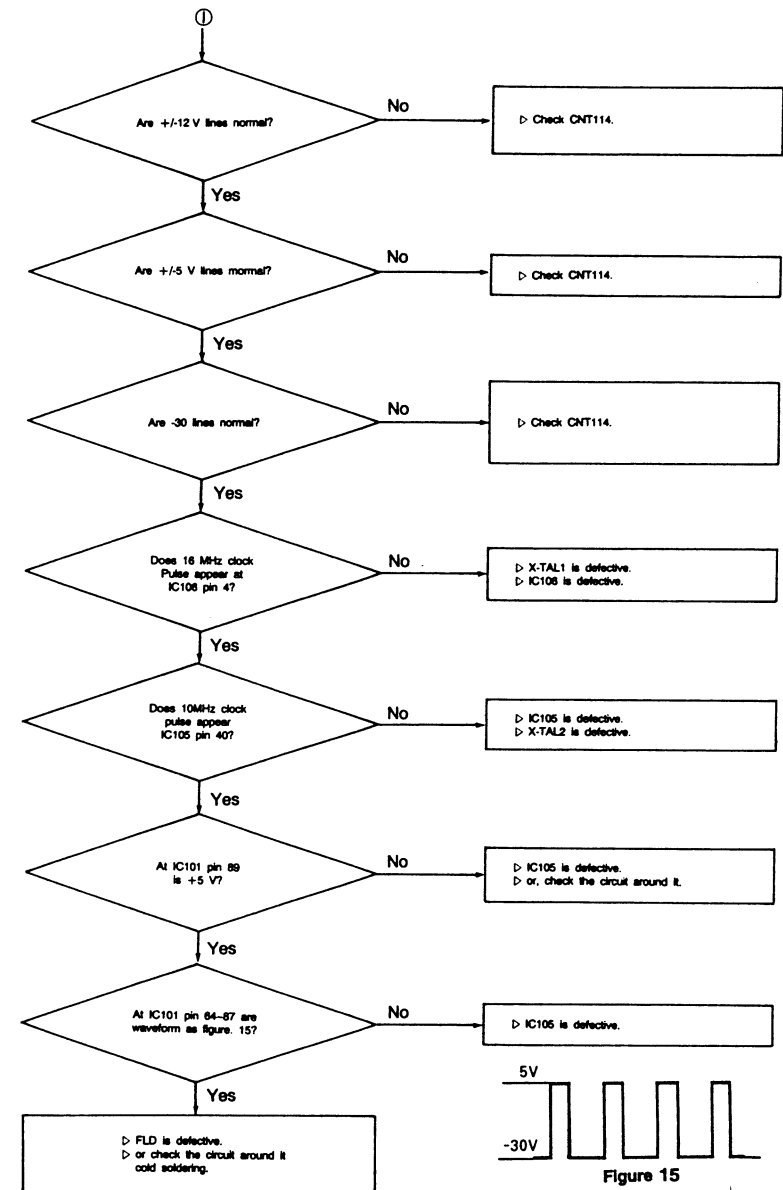
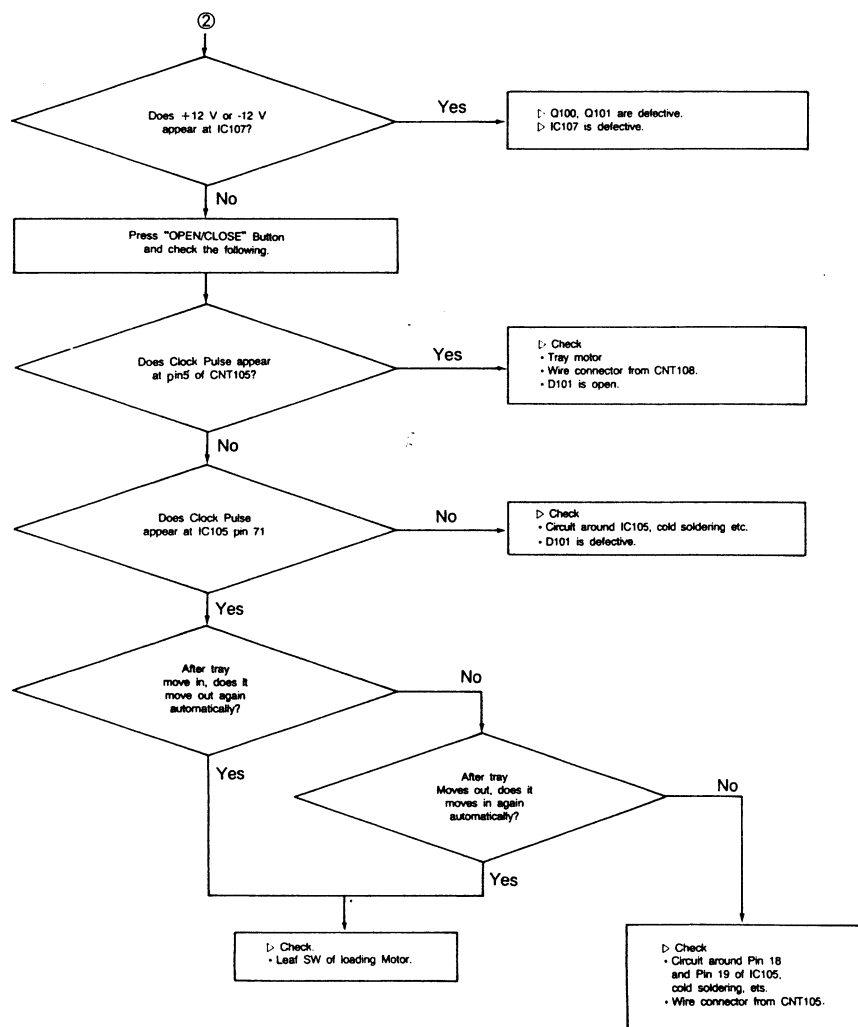
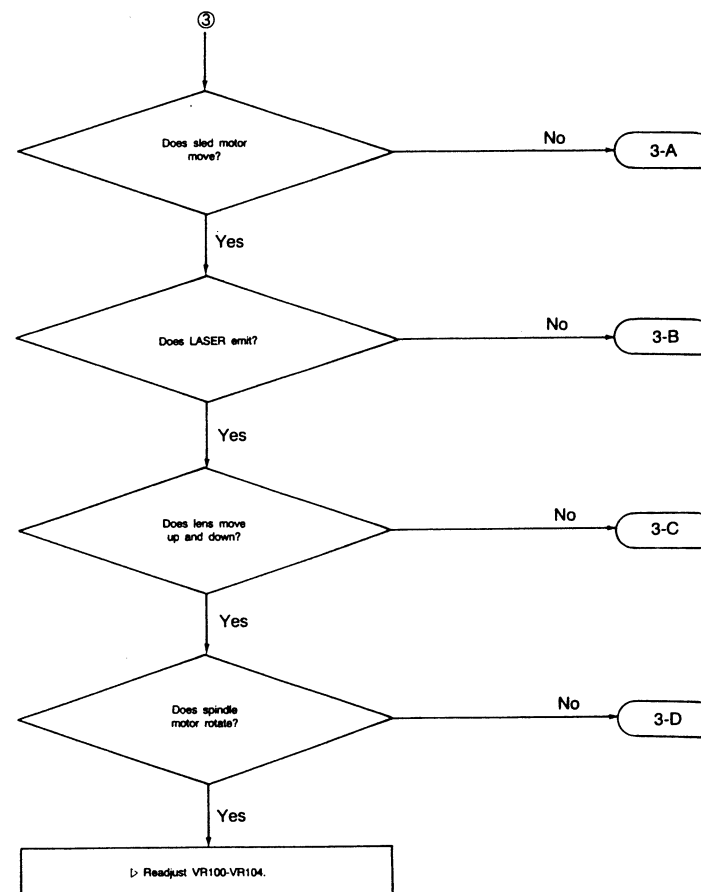


Figure 15

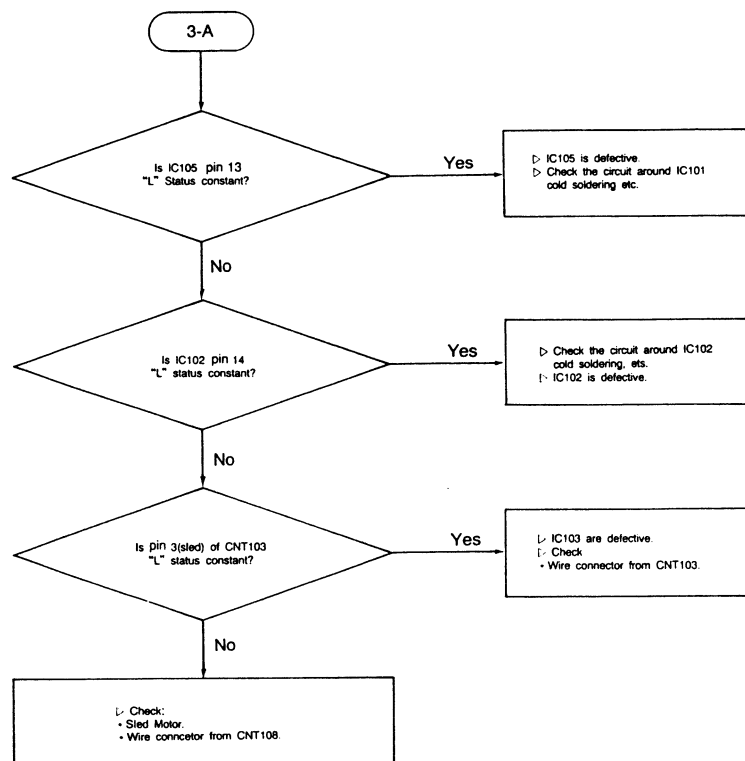
[Repair Item 2] Tray cannot be opened and closed by pressing "Open/Close" Button



[Repair Item 3] "u" is displayed instead of total track number and play time.



[Repair Item 3-A] Sled motor does not move.



[Repair Item 3-B] Laser does not emit.

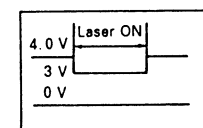
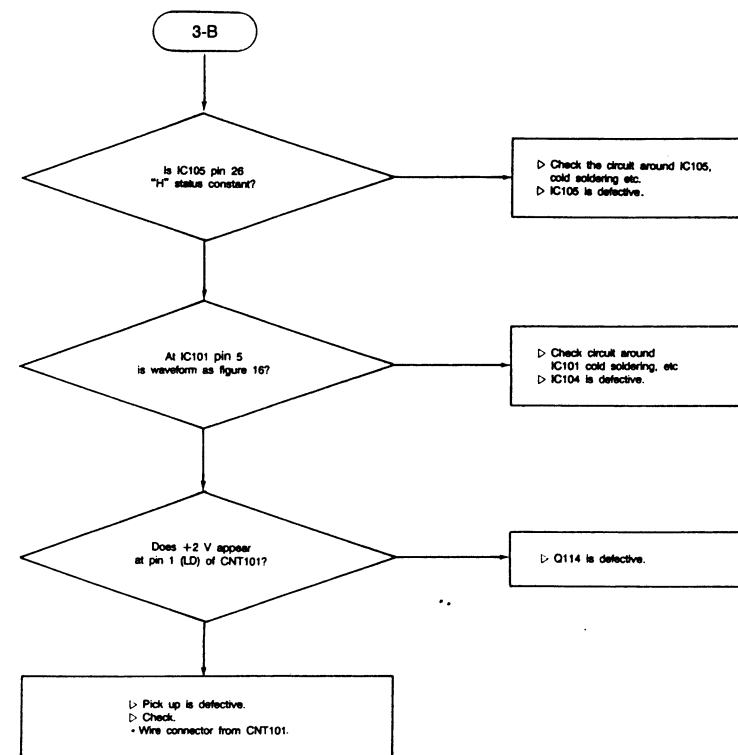
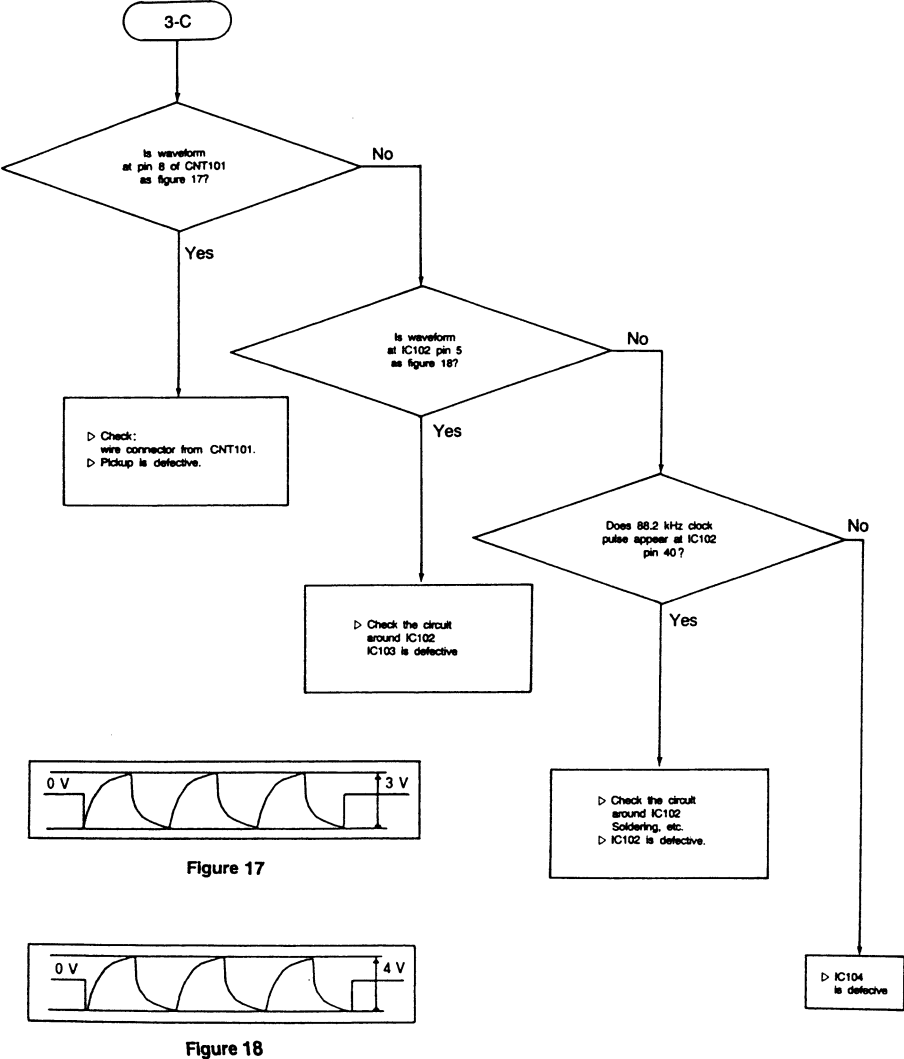
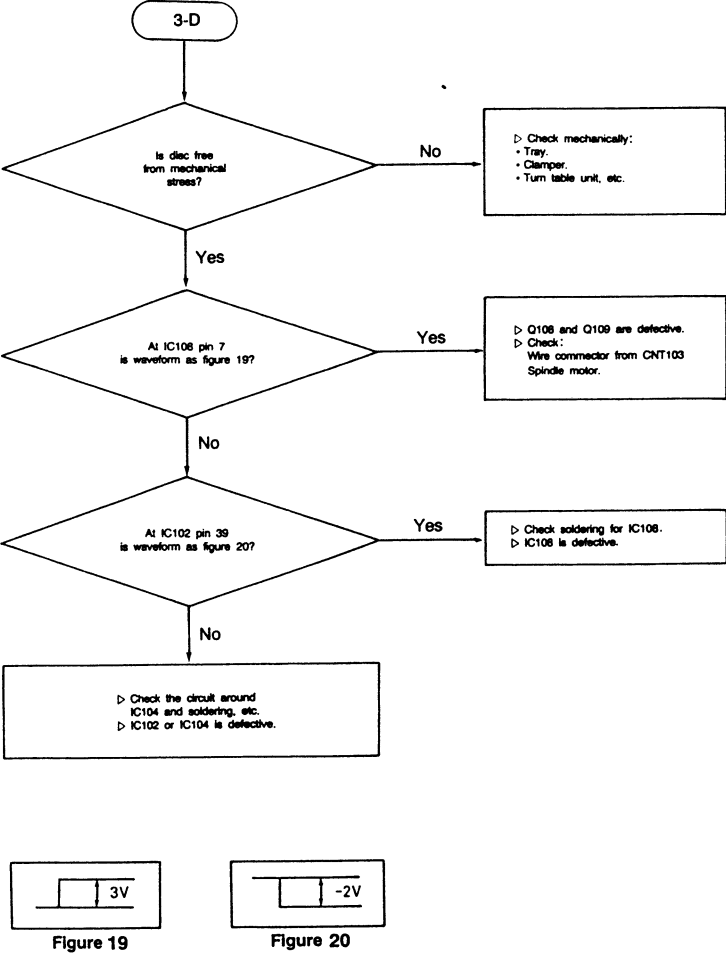


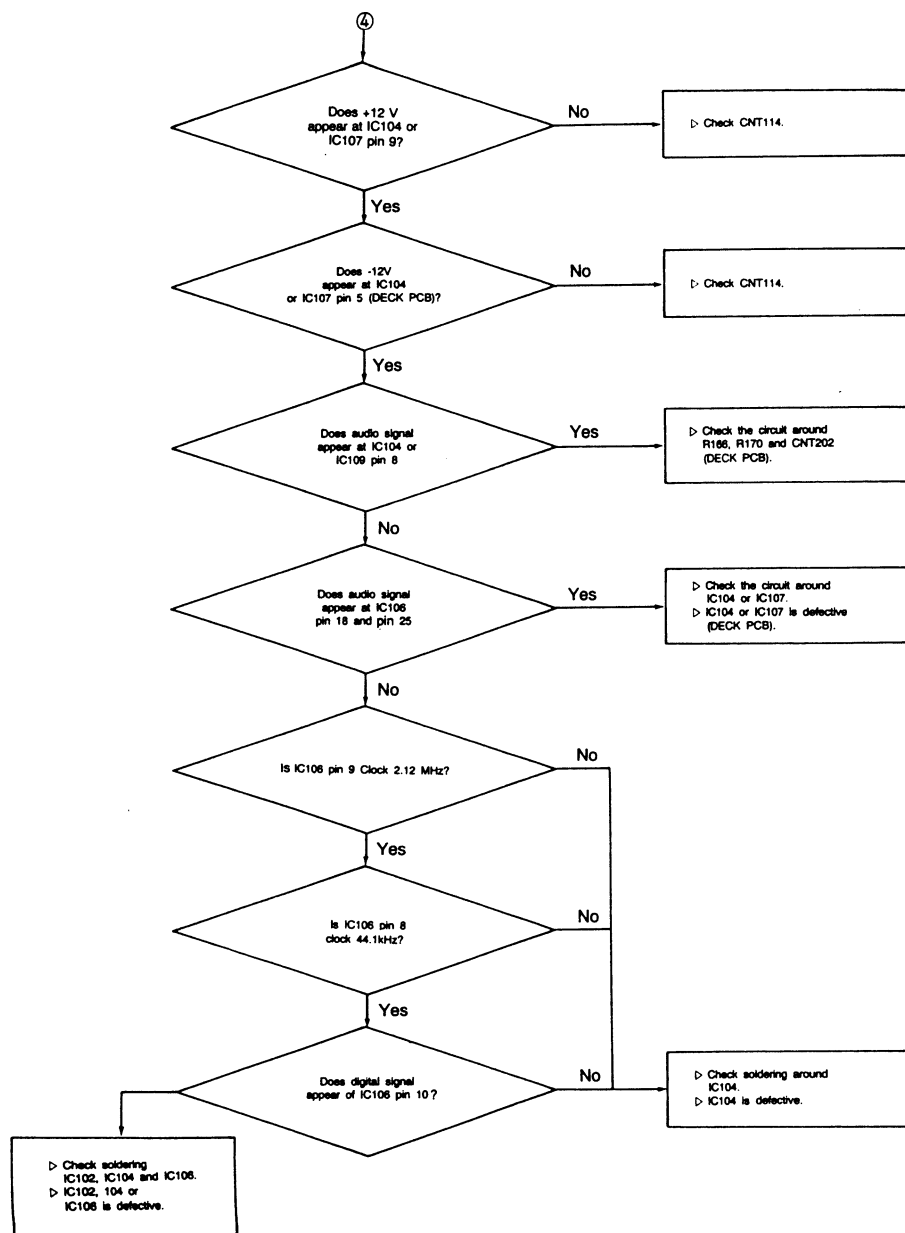
Figure 16

[Repair Item 3-C] Object lens of pickup unit does not move up and down.



[Repair Item 3-D] Spindle motor does not rotate.





MECHANICAL PARTS LIST

CABINET & CHASSIS

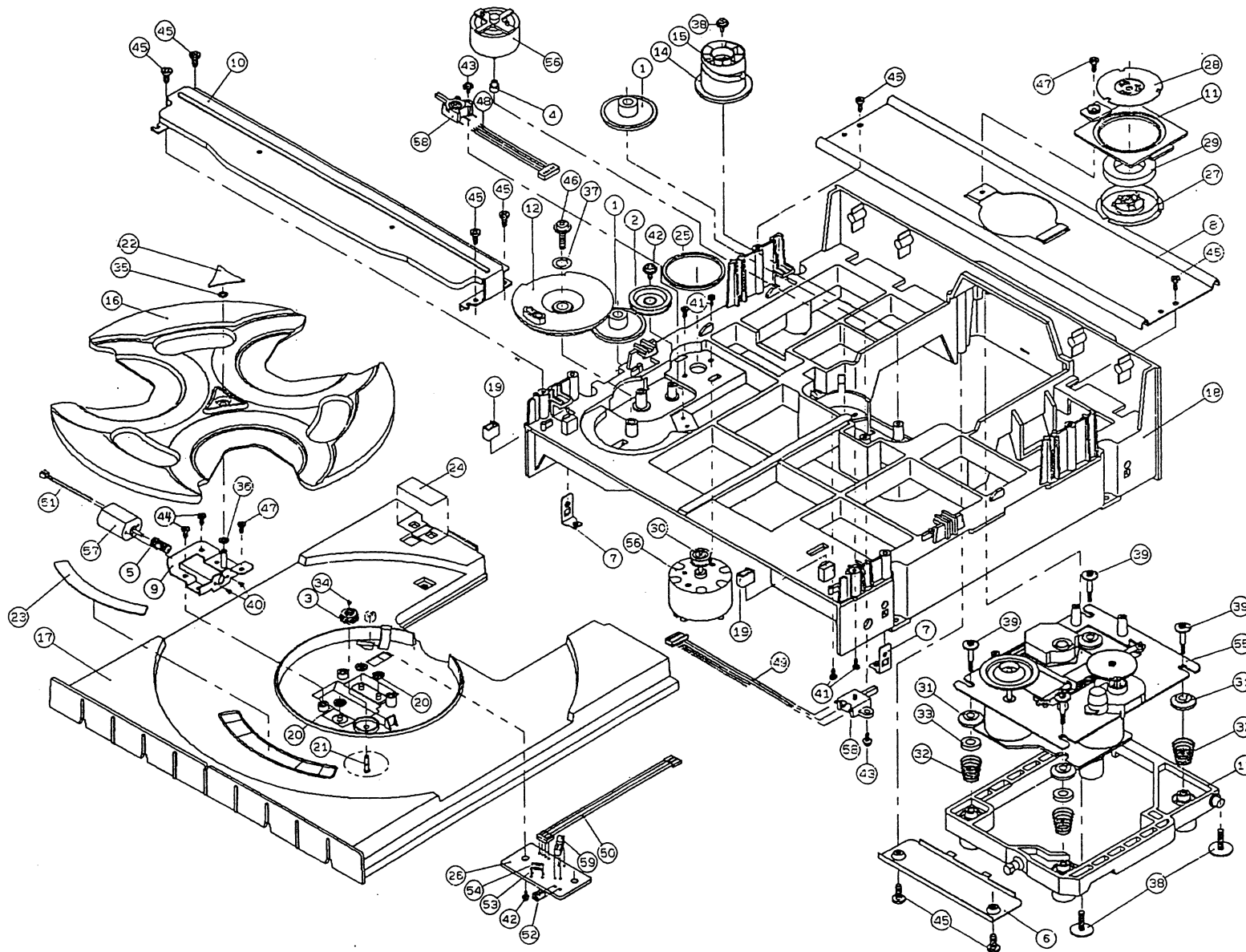
Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
PACKAGE					45	046103002726	Chassis Back	1	PT INDO
	046625132401	Box Out P636R	1	DAVS,GE	46	4658003710	SW Tact	25	
	9722036180	Cushion Poly	1			4618008610	Switch Slide	2	
	9715000120	Film Soft PE	1						
CABINET & CHASSIS					P1	4002028100	PCB Deck Main	1	
1	048122028111	Cover Top	1		P1-1	4002028110	PCB CDG	1	
2	8123016110	Cover Bottom	1		P1-2	4002028120	PCB Front 1	1	
3	6121612310	Chassis Main	1		P1-3	4002028130	PCB Front 2	1	
4	8715021230	Foot Cushion	4		P1-4	4002028140	PCB Front 3	1	
5	8528302210	Fastener	1		P1-5	4002028150	PCB Front 4	1	
6	8123015810	Frame Center	1		P2	4002028200	PCB CD Main	1	
7	048501031011	Panel Front	1	Dom	S1	8109230083	Screw #2B7C 3x8B	47	
	048501031012	Panel Front	1		S2	8109230083	Screw #2B7C 3x8B	5	
8	048535036311	Badge	1	Dom	S3	8128230083	Screw #2FTC 3x8B	10	
	048535040411	Badge	1	AKIA,AF100	S4	8158230081	Screw #2WPTC 3x8Y	10	
	048535042111	Badge	1	Pickard bell	S5	8119130103	Screw #2FT 3x10B	2	
	048535040811	Badge	1	Migros	S6	8158230081	Screw #2WPTC 3x10Y	2	
9	048545118821	Button Dubbing	1						
10	048545118822	Button CD Syncro	1						
11	048543054811	Button Deck 5Key	1						
12	8553018110	Indicator	1						
13	8553018120	Indicator	1						
14	8553018130	Indicator	2						
15	048543054511	Button Skip	1	Dom					
	048543054512	Button Skip	1	A,B,C,D,E,F					
16	048543054521	Knob Slide	2						
17	8545119110	Button Deck Sel.	1						
18	048545118911	Button Edit	1	Dom					
	048545118912	Button Edit	1	A,B,C,D,E,F					
19	048545119011	Button Pause	1						
20	8545118810	Button Repeat	2						
21	8553018010	Window Display	1						
22	048563006411	Door Tray	1	Dom					
	048563006412	Door Tray	1	A,B,C,D,E,F					
23	6122821710	Frame Mecha	1						
24	655606710	Spring Eject L	1						
25	655606720	Spring Eject R	1						
26	8562004310	Lid Cassette	2						
27	048562004411	Door Play Back	1	Dom					
	048562004412	Door Play Back	1	A,B,C,D,E,F					
28	9057079250	Label Silver	2						
29	048555046511	Window Door L	1						
30	048562004511	Door REC/Play	1	Dom					
	048562004512	Door REC/Play	1	A,B,C,D,E,F					
31	048555046521	Window Door R	1						
32	5708013810	Mechanism Deck	1						
33	6303002110	Guide Eject	1						
34	6303002010	Locker Eject L	1						
35	6303002020	Locker Eject R	1						
36	6556068610	Spring Lock L	1						
37	6556068620	Spring Lock R	1						
38	6308001830	Damper Oil	2						
39	5728000610	Assy Mecha CDP	1						
40	6505134810	BKT FIP	1						
41	7505206210	H/Sink	1						
42	7505206130	H/Sink	2						
43	4438113410	Jack RCA	1						
44	046103002711	Chassis Back	1	Dom					
	046103002722	Chassis Back	1	D					
	046103002721	Chassis Back	1	A					
	046103002726	Chassis Back	1	E					
	046103002727	Chassis Back	1	Migros					
	046103002723	Chassis Back	1	Pickard bell					

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the safety can be of special significance. When replacing a component identified with Δ , 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.

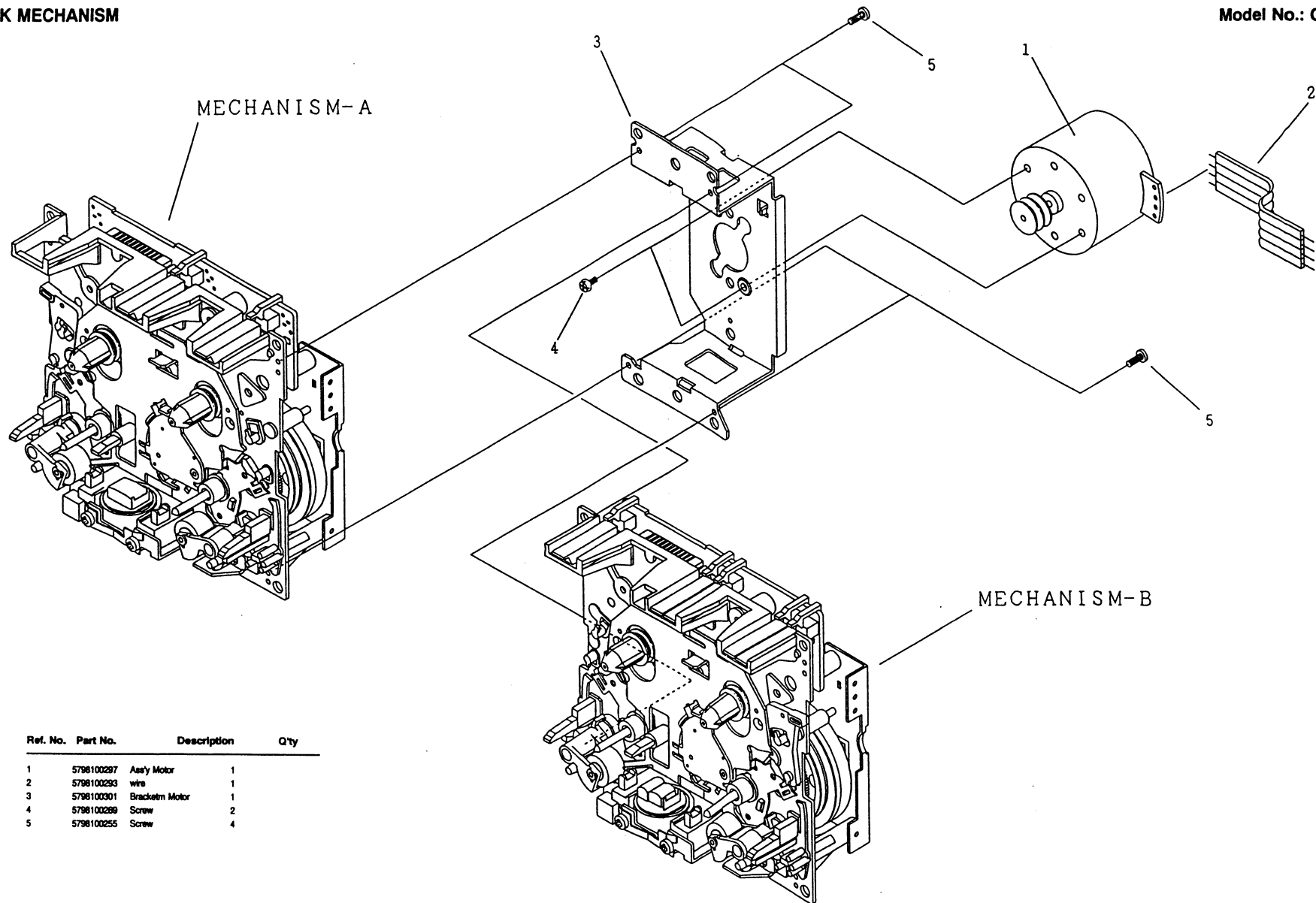
CD MECHA PARTS LIST

Ref. No.	Part No.	Description	Qty	Version
1	7105000410	Gear Center	2	
2	7105000510	Gear Pulley	1	
3	7105000610	Gear Roulette	1	
4	7105000710	Gear Motor	1	
5	7105000810	Gear Worm	1	
6	6125402910	Bracket Pickup	1	
7	6505133510	Bracket Side	2	
8	6023406720	Chuck Chassis	1	
9	6023601010	Bracket Motor	1	
10	6023601310	Frame Front	1	
11	6063103110	Guide Chuck	1	
12	7103001910	Gear Loading	1	
13	6062000410	Base D. U.	1	
14	7142000510	Cam Gear	1	
15	7142000610	Cover Cam	1	
16	7121400310	Roulette	1	
17	6021800410	Tray Roulette	1	
18	6021801310	Body Mecha	1	
19	6715022810	Rubber Limit	2	
20	6715023310	Rubber BKT	3	
21	7005007910	Shift Gear Roulette	1	
22	6735011410	Cover Roulette	1	
23	6705022510	Sheet Tray	1	
24	6725003610	Sheet Tapping	1	
25	7165002510	Belt Loading	1	
26	4003517010	PCB Sensor	1	
27	6063103010	Base Magnet	1	
28	6023406610	Cover Magnet	1	
29	5125000910	Magnet	1	
30	7113001310	Pulley Motor	1	
31	6715018420	Rubber Damping	4	
32	6555006210	Spring Damping	4	
33	6705021910	Sponge Damping	2	
34	6336300710	Poly Washer(2.1)	1	
35	6336300910	Poly Washer(3.2)	1	
36	6336301110	Poly Washer(4.3)	1	
37	6336301210	Poly Washer(3.1)	1	
38	8155001210	Screw Mecha	3	
39	8155001110	Screw Damping	4	
40	8009120031	Screw BM 2x3Y	2	
41	8009126041	Screw BM 2.6x4Y	4	
42	8159126061	Screw #1 WPT 2.6x6Y	2	
43	8109126061	Screw #1 BT 2.6x6Y	2	
44	8109130061	Screw #1 BT 3x6Y	3	
45	8109130101	Screw #1 BT 3x10B	8	
46	8159130151	Screw #1 WPT 3x15Y	1	
47	8109430051	Screw FTTS 3x5Y	1	
48	436105080121	CNT Loading 5P	1	
49	436105180121	CNT Chucking 5P	1	
50	436204262432	CNT Sensor 4P	1	
51	436202070132	CNT Motor 2P	1	
52	436202070132	CNT Header 2P	1	
53	3069151970	Res. CF 150 1/5W	1	
54	3069103670	Res. CF 10k 1/5W	1	
55	5708012910	Drive Unit (KSM-2101AA-A)	1	
56	5558001810	Motor RF-500TB-12580	2	
57	5558200410	Motor RF-130SH-14230	1	
58	4838003410	S/W Lever SSCF-2100AA	2	
59	2408001111	Photo Sensor SG-23F1	1	



DECK MECHANISM

Model No.: CCD-636R

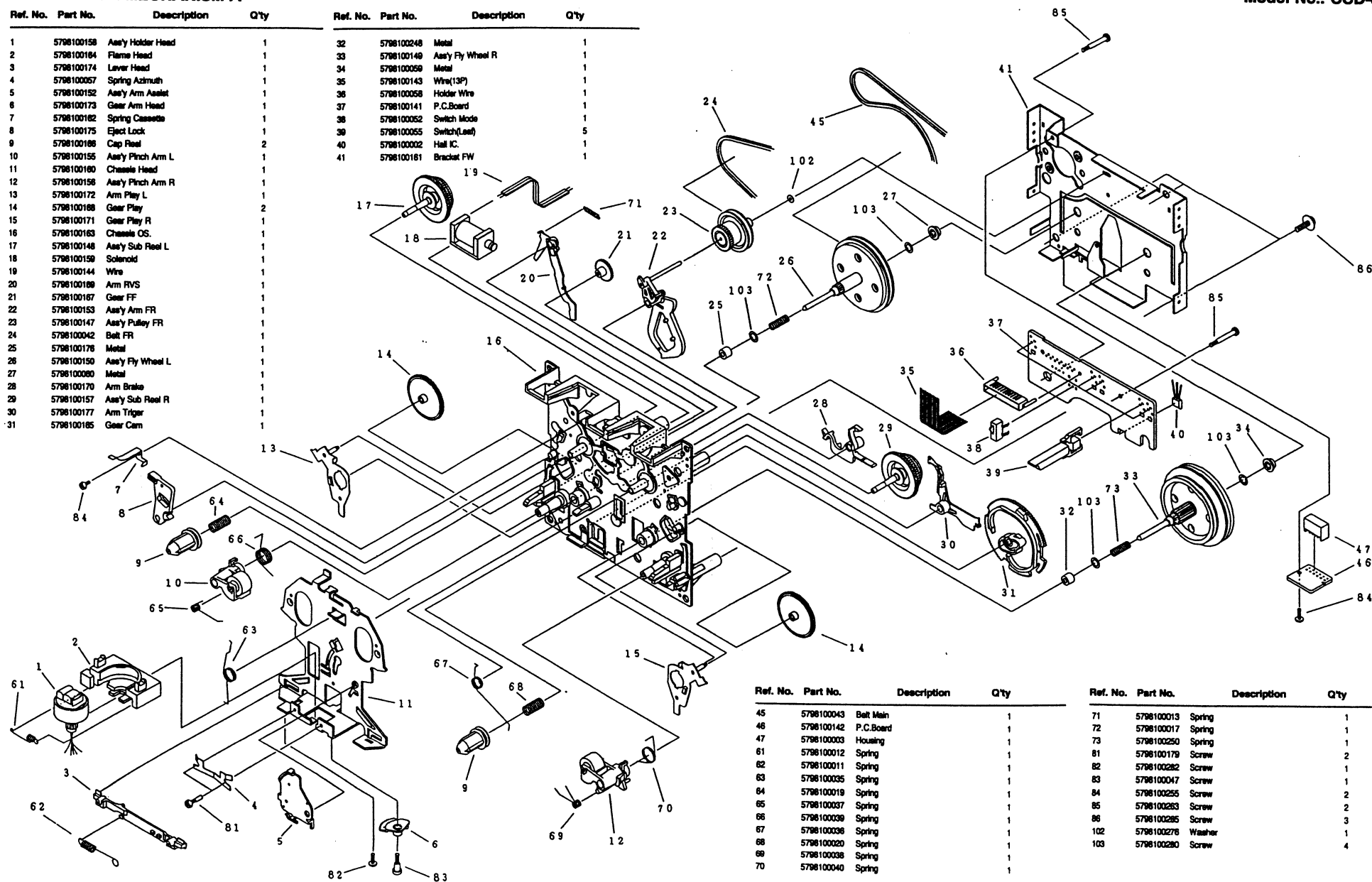


Ref. No.	Part No.	Description	Qty
1	5798100297	Ass'y Motor	1
2	5798100293	wire	1
3	5798100301	Bracket	1
4	5798100299	Screw	2
5	5798100255	Screw	4

DECK MECHANISM-A

Model No.: CCD-636R

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
1	5798100158	Ass'y Holder Head	1	32	5798100248	Metal	1
2	5798100184	Flame Head	1	33	5798100148	Ass'y Fly Wheel R	1
3	5798100174	Lever Head	1	34	5798100059	Metal	1
4	5798100057	Spring Azimuth	1	35	5798100143	Wire(13P)	1
5	5798100152	Ass'y Arm Asalet	1	36	5798100058	Holder Wire	1
6	5798100173	Gear Arm Head	1	37	5798100141	P.C.Board	1
7	5798100162	Spring Cassette	1	38	5798100052	Switch Mode	1
8	5798100175	Eject Lock	1	39	5798100055	Switch(Lead)	5
9	5798100186	Cap Reel	2	40	5798100002	Hall IC	1
10	5798100155	Ass'y Pinch Arm L	1	41	5798100181	Bracket FW	1
11	5798100180	Chassis Head	1				
12	5798100156	Ass'y Pinch Arm R	1				
13	5798100172	Arm Play L	1				
14	5798100188	Gear Play	2				
15	5798100171	Gear Play R	1				
16	5798100163	Chassis OS	1				
17	5798100148	Ass'y Sub Reel L	1				
18	5798100159	Solenoid	1				
19	5798100144	Wire	1				
20	5798100189	Arm RVS	1				
21	5798100167	Gear FF	1				
22	5798100153	Ass'y Arm FR	1				
23	5798100147	Ass'y Pulley FR	1				
24	5798100042	Belt FR	1				
25	5798100176	Metal	1				
26	5798100150	Ass'y Fly Wheel L	1				
27	5798100080	Metal	1				
28	5798100170	Arm Brake	1				
29	5798100157	Ass'y Sub Reel R	1				
30	5798100177	Arm Trigger	1				
31	5798100185	Gear Cam	1				

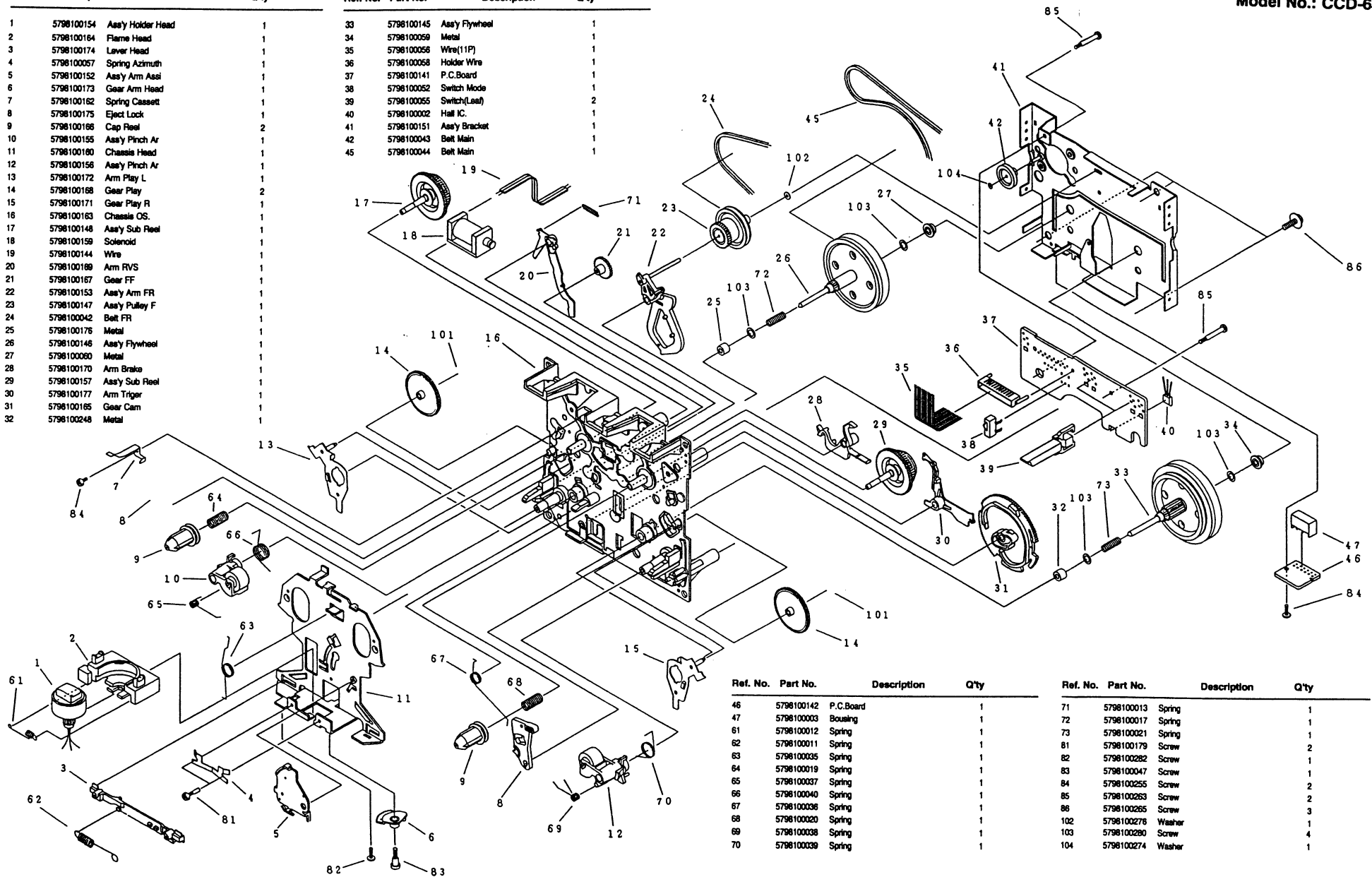


Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
45	5798100043	Belt Main	1	71	5798100013	Spring	1
46	5798100142	P.C.Board	1	72	5798100017	Spring	1
47	5798100003	Housing	1	73	5798100250	Spring	1
61	5798100012	Spring	1	81	5798100179	Screw	2
62	5798100011	Spring	1	82	5798100282	Screw	1
63	5798100035	Spring	1	83	5798100047	Screw	1
64	5798100019	Spring	1	84	5798100255	Screw	2
65	5798100037	Spring	1	85	5798100253	Screw	2
66	5798100038	Spring	1	86	5798100285	Screw	3
67	5798100036	Spring	1	102	5798100276	Washer	1
68	5798100020	Spring	1	103	5798100280	Screw	4
69	5798100038	Spring	1				
70	5798100040	Spring	1				

DECK MECHANISM-B

Model No.: CCD-636R

Ref. No.	Description	Part No.	Q'ty	Ref. No.	Part No.	Description	Q'ty
1	5798100154	Ass'y Holder Head	1	33	5798100145	Ass'y Flywheel	1
2	5798100164	Flame Head	1	34	5798100059	Metal	1
3	5798100174	Laver Head	1	35	5798100056	Wire(11P)	1
4	5798100057	Spring Azimuth	1	36	5798100058	Holder Wire	1
5	5798100152	Ass'y Arm Assi	1	37	5798100141	P.C.Board	1
6	5798100173	Gear Arm Head	1	38	5798100052	Switch Mode	1
7	5798100162	Spring Cassett	1	39	5798100055	Switch(Leaf)	2
8	5798100175	Eject Lock	1	40	5798100002	Hall IC	1
9	5798100166	Cap Reel	2	41	5798100151	Ass'y Bracket	1
10	5798100155	Ass'y Pinch Ar	1	42	5798100043	Belt Main	1
11	5798100180	Chassis Head	1	45	5798100044	Belt Main	1
12	5798100156	Ass'y Pinch Ar	1				
13	5798100172	Arm Play L	1				
14	5798100168	Gear Play	2				
15	5798100171	Gear Play R	1				
16	5798100183	Chassis OS	1				
17	5798100148	Ass'y Sub Reel	1				
18	5798100159	Solenoid	1				
19	5798100144	Wire	1				
20	5798100189	Arm RVS	1				
21	5798100167	Gear FF	1				
22	5798100153	Ass'y Arm FR	1				
23	5798100147	Ass'y Pulley F	1				
24	5798100042	Belt FR	1				
25	5798100176	Metal	1				
26	5798100146	Ass'y Flywheel	1				
27	5798100060	Metal	1				
28	5798100170	Arm Brake	1				
29	5798100157	Ass'y Sub Reel	1				
30	5798100177	Arm Trigger	1				
31	5798100165	Gear Cam	1				
32	5798100248	Metal	1				



Ref. No.	Part No.	Description	Q'ty
46	5798100142	P.C.Board	1
47	5798100003	Bowling	1
61	5798100012	Spring	1
62	5798100011	Spring	1
63	5798100035	Spring	1
64	5798100019	Spring	1
65	5798100037	Spring	1
66	5798100040	Spring	1
67	5798100036	Spring	1
68	5798100020	Spring	1
69	5798100038	Spring	1
70	5798100039	Spring	1

Ref. No.	Part No.	Description	Q'ty
71	5798100013	Spring	1
72	5798100017	Spring	1
73	5798100021	Spring	1
81	5798100179	Screw	2
82	5798100282	Screw	1
83	5798100047	Screw	1
84	5798100255	Screw	2
85	5798100263	Screw	2
86	5798100265	Screw	3
102	5798100278	Washer	1
103	5798100280	Screw	4
104	5798100274	Washer	1

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTICE: Products marked with Δ have special characteristics important to safety. If you replace any of these components, read carefully the product safety notice in this manual. Don't degrade the safety of the product through improper servicing. Resistor/Capacitor tolerance—D:($\pm 0.5\%$), J:($\pm 5\%$), K:($\pm 10\%$), M:($\pm 20\%$), Z:(+80, -20%)

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
P2	054101010007	ASSY P.C.B CD MAIN			CNT110	4428526590	Wafer, 7P	1	
C101/C102	3479347041	Electrolytic SG	47 uF	25 V M 2	CNT111	436208203332	Lead Assy 8P 200mm	1	
C103/C104	3519330835	Ceramic Tubular	33 pF	50 V J 2	CNT112	436103112632	Lead Assy 3P 120mm	1	
C105/C106	3479347041	Electrolytic SG	47 uF	25 V M 2	CNT113	4428513450	Wafer, 5P	1	
C107/C108	3679473120	Mylar	0.047 uF	100 V J 2	CNT114	436211263332	Lead Assy 11P 260mm	1	
C109	3479347041	Electrolytic SG	47 uF	25 V M 1	D100/D101	2258322101	1N4148M, Switching	2	
C111	3479347041	Electrolytic SG	47 uF	25 V M 1	D102	2258599121	Diode Zener, UZ 6.8BSC	1	
C112	3679473120	Mylar	0.047 uF	100 V J 1	D103-D109	2258322101	1N4148M, Switching	7	
C113	3479347041	Electrolytic SG	47 uF	25 V M 1	D110	2258599121	Diode Zener, UZ 6.8BSC	1	
C114	3519104935	Ceramic Tubular	0.1 uF	50 V J 1	D111-D117	2258322101	1N4148M, Switching	7	
C115/C116	3479347041	Electrolytic SG	47 uF	25 V M 2	IC101	2138022105	CXA1081M	1	
C117	3519104935	Ceramic Tubular	0.1 uF	50 V J 1	IC102	2138022103	CXA1082BQ	1	
C118/C119	3479347041	Electrolytic SG	47 uF	25 V M 2	IC103	2168000118	STA341M	1	
C121/C122	3479247871	Electrolytic SA	0.47 uF	50 V M 2	IC104	2138022110	CXD1167Q, DSP	1	
C123	3519102935	Ceramic Tubular	1000 pF	50 V J 1	IC105	2138322165	CXPE2220-104Q	1	
C124	3479347041	Electrolytic SG	47 uF	25 V M 1	IC106	2138000196	SM5871AS	1	
C125	3479247871	Electrolytic SA	0.47 uF	50 V M 1	IC107/IC108/2168206104	KJA4559P/KJA75559P		2	
C129	3679473120	Mylar	0.047 uF	100 V J 1	L101	2648610082	Coil Inductor, 10uH	1	
C130	3479210871	Electrolytic SA	0.1 uF	50 V M 1	Q100	2208206113	MPSA56Y, PNP, Silicon	1	
C131	3519101935	Ceramic Tubular	100 pF	50 V J 1	Q101	2208060114	MPSA05Y, NPN, Silicon	1	
C132	3479247871	Electrolytic SA	4.7 uF	50 V M 1	Q102	2208206113	MPSA56Y, PNP, Silicon	1	
C133	3519472935	Ceramic Tubular	0.0047 uF	50 V J 1	Q103	2208060114	MPSA05Y, NPN, Silicon	1	
C134	3679153120	Mylar	0.015 uF	100 V J 1	Q104/Q105	2208060104	BKTC3198Y/KTC1815Y, NPN Silicon	2	
C135	3519101935	Ceramic Tubular	100 pF	50 V J 1	Q106	2208060114	MPSA05Y, NPN, Silicon	1	
C136	3479222071	Electrolytic SG	22 uF	50 V M 1	Q107/Q108	2208206113	MPSA56Y, PNP, Silicon	2	
C137	3479233971	Electrolytic SA	3.3 uF	50 V M 1	Q109	2208060114	MPSA05Y, NPN, Silicon	1	
C138	3679472120	Mylar	0.0047 uF	100 V J 1	Q111	2208060104	BKTC3198Y/KTC1815Y, NPN Silicon	1	
C139	3479210971	Electrolytic SA	1 uF	50 V M 1	Q112/Q113	2208622109	DTCA44E, NPN, Silicon	2	
C140	3679222120	Mylar	0.0022 uF	100 V J 1	Q114	2208206105	KTA1015Y/BKTA1266, PNP Silicon	1	
C141	3479347041	Electrolytic SG	47 uF	25 V M 1	R100	3069223970	Carbon Film	22 kohm	1/5W J 1
C142	3519103935	Ceramic Tubular	0.01 uF	50 V J 1	R102	3069104970	Carbon Film	100 kohm	1/5W J 1
C143	3679104297	Mylar	0.1 uF	63 V K 1	R103	3069124970	Carbon Film	120 kohm	1/5W J 1
C144	3479347041	Electrolytic SG	47 uF	25 V M 1	R104/R105	3069104970	Carbon Film	100 kohm	1/5W J 2
C145	3679104297	Mylar	0.1 uF	63 V K 1	R106	3069563970	Carbon Film	56 kohm	1/5W J 1
C146	3479347041	Electrolytic SG	47 uF	25 V M 1	R107	3069562970	Carbon Film	5.6 kohm	1/5W J 1
C147	3519103120	Mylar	0.01 uF	100 V J 1	R108	3069104970	Carbon Film	100 kohm	1/5W J 1
C148	3479233971	Electrolytic SA	3.3 uF	50 V M 1	R109	3069562970	Carbon Film	5.6 kohm	1/5W J 1
C149	3479347041	Electrolytic SG	47 uF	25 V M 1	R110	3069104970	Carbon Film	100 kohm	1/5W J 1
C150	3519103120	Mylar	0.01 uF	100 V J 1	R111/R112	3069123970	Carbon Film	12 kohm	1/5W J 2
C151	3679473120	Mylar	0.047 uF	100 V J 1	R113/R114	3069562970	Carbon Film	5.6 kohm	1/5W J 2
C152	3679222120	Mylar	0.0022 uF	100 V J 1	R115/R116	3069104970	Carbon Film	100 kohm	1/5W J 2
C153	3679333120	Mylar	0.033 uF	100 V J 1	R117	3069472970	Carbon Film	4.7 kohm	1/5W J 1
C154	3519561935	Ceramic Tubular	560 pF	50 V J 1	R118	3069104970	Carbon Film	100 kohm	1/5W J 1
C155	3519472935	Ceramic Tubular	4700 pF	50 V J 1	R119	3069103970	Carbon Film	10 kohm	1/5W J 1
C156	3679333120	Mylar	0.033 uF	100 V J 1	R120	3069104970	Carbon Film	100 kohm	1/5W J 1
C157	3519103935	Ceramic Tubular	0.01 uF	50 V J 1	R122/R123	3069563970	Carbon Film	56 kohm	1/5W J 2
C158	3479347041	Electrolytic SG	47 uF	25 V M 1	R124	3069681970	Carbon Film	680 ohm	1/5W J 1
C160	3479210871	Electrolytic SA	0.1 uF	50 V M 1	R125-R128	3069563970	Carbon Film	56 kohm	1/5W J 4
C161	3479347041	Electrolytic SG	47 uF	25 V M 1	R129-R131	3069471970	Carbon Film	470 ohm	1/5W J 3
C162	3479347041	Electrolytic SG	47 uF	25 V M 1	R134	3069105970	Carbon Film	1M ohm	1/5W J 1
C163	3519330835	Ceramic Tubular	33 pF	50 V J 1	R135	3069104970	Carbon Film	100 kohm	1/5W J 1
CNT101	4428525580	Wafer, 8P			R136	3069203970	Carbon Film	20 kohm	1/5W J 1
CNT102	4428525580	Wafer, 8P			R137	3069102970	Carbon Film	1 kohm	1/5W J 1
CNT103	4428525540	Wafer, 4P			R138/R139	3069103970	Carbon Film	10 kohm	1/5W J 2
CNT104	4428525540	Wafer, 4P			R140	3069223970	Carbon Film	22 kohm	1/5W J 1
CNT105	4428513450	Wafer, 5P			R141	3069362970	Carbon Film	3.6 kohm	1/5W J 1
CNT106	436207353332	Lead Assy 7P 350mm			R142	3069124970	Carbon Film	120 kohm	1/5W J 1
CNT107	4428526590	Wafer, 7P			R143	3069102970	Carbon Film	1 kohm	1/5W J 1
CNT108	4428526286	Wafer IL-FPC B 16P			R144	3069223970	Carbon Film	22 kohm	1/5W J 1
CNT109	4428526306	Wafer IL-FPC B 18P			R145	3069273970	Carbon Film	27 kohm	1/5W J 1

Ref. No.	Part No.	Description	Q'ty	Version	Ref. No.	Part No.	Description	Q'ty	Version
R146	3069104970	Carbon Film	100 kohm	1/5W J 1	P1	054101010001	ASSY P.C.B DECK MAIN		
R147	3069222970	Carbon Film	2.2 kohm	1/5W J 1	41	7505208210	H/Sink	1	
R148	3069222970	Carbon Film	2.2 ohm	1/5W J 1	42	7505208130	H/Sink	2	
R149/R150	3069273970	Carbon Film	27 kohm	1/5W J 2	C101	3408322249	Electrolytic SG	2200 uF	25 V M 1
R151	3069103970	Carbon Film	10 kohm	1/5W J 1	C102	3408333249	Electrolytic SG	3300 uF	25 V M 1
R152	3069222970	Carbon Film	2.2 ohm	1/5W J 1	C103/C104	3679473120	Mylar	0.047 uF	100 V J 2
R153	3069474970	Carbon Film	470 kohm	1/5W J 1	C105	3408322249	Electrolytic SG	2200 uF	25 V M 1
R154	3069222970	Carbon Film	8.2 kohm	1/5W J 1	C108/C109	3519561935	Ceramic Tubular	580 pF	50 V J 2
R155-R157	3069104970	Carbon Film	100 kohm	1/5W J 3	C111	3479247971	Electrolytic SA	4.7 uF	50 V M 1
R158	3069243970	Carbon Film	24 kohm	1/5W J 1	C112	3679223120	Mylar	0.022 uF	100 V J 1
R159	3069124970	Carbon Film	120 kohm	1/5W J 1	C113	3479310131	Electrolytic SG	100 uF	16 V M 1
R160	3069101970	Carbon Film	10 ohm	1/5W J 1	C114	3519103120	Mylar	0.01 uF	100 V J 1
R161	3069220970	Carbon Film	22 ohm	1/5W J 1	C115	3519222935	Ceramic Tubular	2200 pF	50 V J 1
R162	3069153970	Carbon Film	15k ohm	1/5W J 1	C116/C117	3679562120	Mylar	0.0056 uF	100 V J 2
R163/R164	3069623970	Carbon Film	82 kohm	1/5W J 2	C121	3479247971	Electrolytic SA	4.7 uF	50 V M 1
R165	3069473970	Carbon Film	47 kohm	1/5W J 1	C124	3479347041	Electrolytic SG	47 uF	25 V M 1
R166	3069101970	Carbon Film	100 ohm	1/5W J 1	C126	3519101935	Ceramic Tubular	100 pF	50 V J 1
R167/R168	3069472970	Carbon Film	47 kohm	1/5W J 2	C127	3519221935	Ceramic Tubular	220 pF	50 V J 1
R169	3069103970	Carbon Film	10 kohm	1/5W J 1	C128	3479347041	Electrolytic SG	47 uF	25 V M 1
R170	3069223970	Carbon Film	22 kohm	1/5W J 1	C129	3519101935	Ceramic Tubular	100 pF	50 V J 1
R171	3069103970	Carbon Film	10 kohm	1/5W J 1	C130	3479347041	Electrolytic SG	47 uF	25 V M 1
R172/R173	3069100970	Carbon Film	10 ohm	1/5W J 2	C131	3679222120	Mylar	0.0022 uF	100 V J 1
R174/R175	3069563970	Carbon Film	56 kohm	1/5W J 2	C132	3479347041	Electrolytic SG	47 uF	25 V M 1
R176	3069222970	Carbon Film	2.2 ohm	1/5W J 1	C133	3519101935	Ceramic Tubular	100 pF	50 V J 1
R177	3069102970	Carbon Film	1 kohm	1/5W J 1	C134	3519821935	Ceramic Tubular	820 pF	50 V J 1
R212	3069105970	Carbon Film	1M ohm	1/5W J 1	C135	3519821935	Ceramic Tubular	820 pF	50 V J 1
VR100	3248010243	RES Semi EVN-DJAA03813		1	C136	3479347041	Electrolytic SG	47 uF	25 V M 1
VR101/VR102	3248020343	RES Semi EVN-DJAA03824		2	C137-C139	3519101935	Ceramic Tubular	100 pF	50 V J 3
VR103	3248050343	RES Semi EVN-DJAA03854		1	C140	3479247971	Electrolytic SA	4.7 uF	50 V M 1
VR104	3248020343	RES Semi EVN-DJAA03824		1	C141	3519221935	Ceramic Tubular	220 pF	50 V J 1
					C142	3519101935	Ceramic Tubular	100 pF	50 V J 1
P1-1	054100810002	ASSY P.C.B CDG Dom(Only)			C143/C144	3679223120	Mylar	0.022 uF	100 V J 2
43	4438113410	Jack RCA		1	C145	3479222971	Electrolytic SA	2.2 uF	50 V M 1
C501/C502	3519330835	Ceramic Tubular	33 pF	50 V J 2	C146/C147	3479247971	Electrolytic SA	4.7 uF	50 V M 2
C504	3479233031	Electrolytic SA	33 uF	16 V M 1	C148	3479210871	Electrolytic SA	1 uF	50 V M 1
C507	3408347139	Electrolytic SG	470 uF	16 V M 1	C149	3679222120	Mylar	0.0022 uF	100 V J 1
C508	3479347041	Electrolytic SG	47 uF	25 V M 1	C150	3479268871	Electrolytic SA	0.68 uF	50 V M 1
C509	3519104935	Ceramic Tubular	0.1 uF	50 V Z 1	C151	3479347041	Electrolytic SG	47 uF	25 V M 1
C510	3479347041	Electrolytic SG	47 uF	25 V M 1	C152	3679183120	Mylar	0.018 uF	100 V J 1
C511	3519104935	Ceramic Tubular	0.1 uF	50 V Z 1	C153	3519101935	Ceramic Tubular	100 pF	50 V J 1
CNT501	4428516710	Wafer 8P		1	C154	3479347041	Electrolytic SG	47 uF	25 V M 1
IC501	2138401180	GM71C454A		1	C155/C156	3479210071	Electrolytic SA	10 uF	50 V M 2
IC502	2138017137	LC7870E, Graphic IC		1	C157	3479233871	Electrolytic SA	0.33 uF	50 V M 1
Q501-Q504	2208060104	BKTC3198Y/KTC1815Y, NPN Silicon		4	C158	3479347041	Electrolytic SG	47 uF	25 V M 1
R502	3069680970	Carbon Film	68 ohm	1/5W J 1	C159	3679183120	Mylar	0.018 uF	100 V J 1
R503	3069202970	Carbon Film	2 kohm	1/5W J 1	C160	3479233971	Electrolytic SA	3.3 uF	50 V M 1
R504	3069302970	Carbon Film	3 kohm	1/5W J 1	C161	3479347041	Electrolytic SG	47 uF	25 V M 1
R505	3069132970	Carbon Film	1.3 kohm	1/5W J 1	C162	3519222935	Ceramic Tubular	2200 pF	50 V J 1
R506	3069302970	Carbon Film	3 kohm	1/5W J 1	C163	3479310141	Electrolytic SG	100 uF	25 V M 1
R507	3069122970	Carbon Film	1.2 kohm	1/5W J 1	C164	3519222935	Ceramic Tubular	2200 pF	50 V J 1
R508	3069132970	Carbon Film	1.3 kohm	1/5W J 1	C165	3479233971	Electrolytic SA	3.3 uF	50 V M 1
R509	3069301970	Carbon Film	300 ohm	1/5W J 1	C166	3479310141	Electrolytic SG	100 uF	25 V M 1
R510	3069221970	Carbon Film	220 ohm	1/5W J 1	C167	3479233971	Electrolytic SA	3.3 uF	50 V M 1
					C168	3519104935	Ceramic Tubular	0.1 uF	50 V K 1
P1-3	054101010004	ASSY P.C.B FRONT			C169	3479233971	Electrolytic SA	3.3 uF	50 V M 1
45	4658003710	SW Tact		6	C170	3519104935	Ceramic Tubular	0.1 uF	50 V K 1
D501-D504	2258322101	1N4148M, Switching		4	C171	3479232131	Electrolytic SG	220 uF	16 V M 1
					C172	3479247871	Electrolytic SA	0.47 uF	50 V M 1
P1-4	054101010005	ASSY P.C.B FRONT			C173	3479210871	Electrolytic SA	1 uF	50 V M 1
45	4658003710	SW Tact		5	C174	3479347041	Electrolytic SG	47 uF	25 V M 1
D505-D508	2258322101	1N4148M, Switching		4	C175/C176	3679183120	Mylar	0.018 uF	100 V J 2
					C177	3479222971	Electrolytic SA	1 uF	50 V M 1
P1-5	054101010006	ASSY P.C.B FRONT			C178	3479347041	Electrolytic SG	47 uF	25 V M 1
45	4658003710	SW Tact		2	C179/C180	3479247971	Electrolytic SA	4.7 uF	50 V M 2

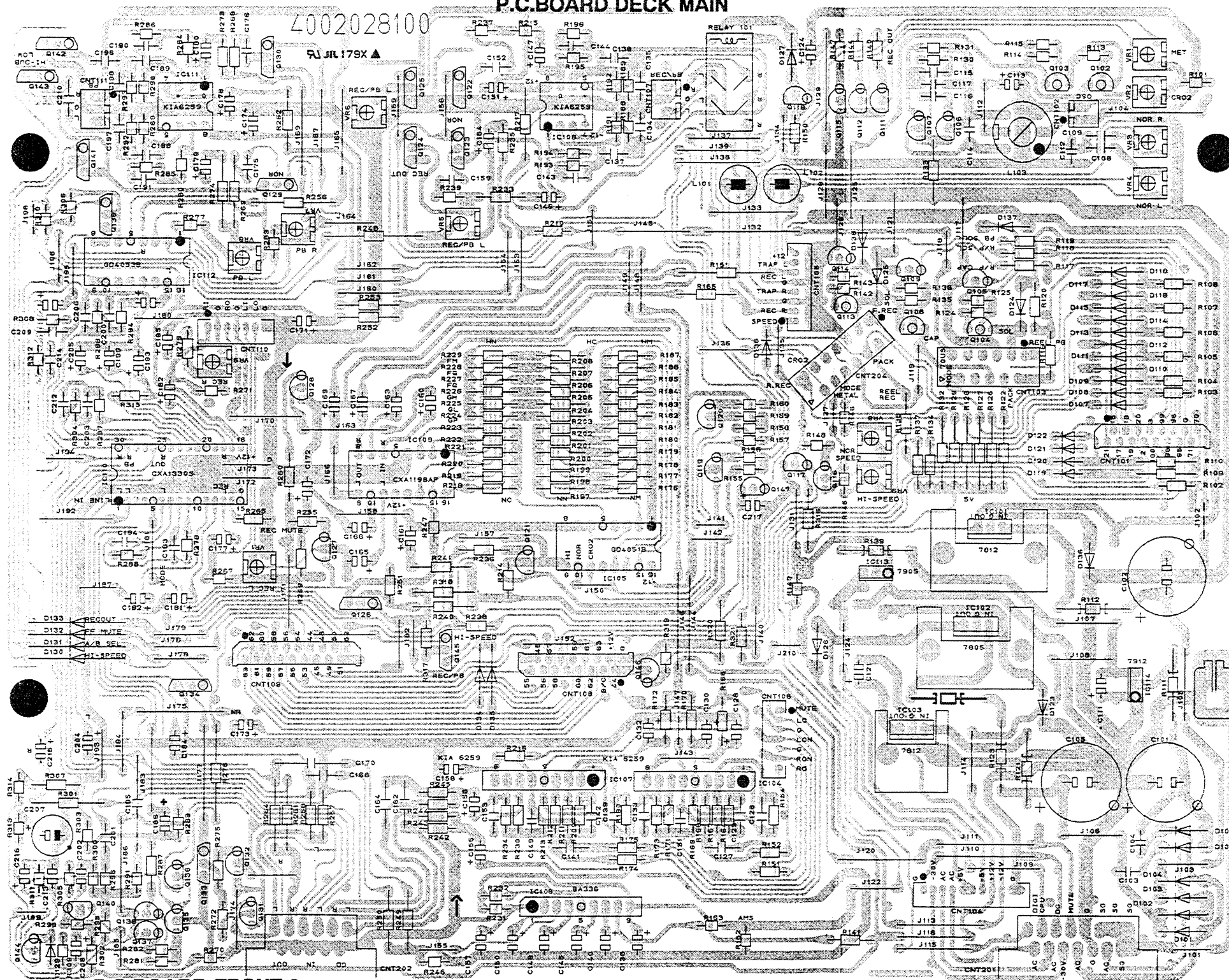
Ref. No.	Part No.	Description	Q'ty	Version
C181	3479233871	Electrolytic SA	0.33 uF	50 V M 1
C182	3479222971	Electrolytic SA	1 uF	50 V M 1
C183	3679222120	Mylar	0.0022 uF	100 V J 1
C184	3479247971	Electrolytic SA	4.7 uF	50 V M 1
C185	3479247871	Electrolytic SA	0.47 uF	50 V M 1
C186/C187	3479247971	Electrolytic SA	4.7 uF	50 V M 2
C188/C189	3519101935	Ceramic Tubular	100 pF	50 V J 2
C190/C191	3679223120	Mylar	0.022 uF	100 V J 2
C192	3479256871	Electrolytic SA	0.56 uF	50 V M 1
C193	3479210071	Electrolytic SA	10 uF	50 V M 1
C194	3679222120	Mylar	0.0022 uF	100 V J 1
C195	3519104935	Ceramic Tubular	0.1 uF	50 V K 1
C196	3519331935	Ceramic Tubular	330 pF	50 V J 1
C197	3519471935	Ceramic Tubular	470 pF	50 V J 1
C198	3519471935	Ceramic Tubular	470 pF	50 V J 1
C199	3479233871	Electrolytic SA	0.33 uF	50 V M 1
CNT101	4428526285	Water IL-FPC A 16P		
CNT102	4428517510	Water 2P		
CNT103	4428511800	Water 11P		
CNT104	4428517010	Water 11P		
CNT105	4428516710	Water 8P		
CNT106	4428516610	Water 7P		
CNT107	4428517610	Water 3P		
CNT108	4428526285	Water IL-FPC A 16P		
CNT109	4428526305	Water IL-FPC A 18P		
CNT110	4428516610	Water 7P		
CNT111	4428517610	Water 3P		
D101-D106	2258100135	Diode, 1N4002		6
D107-D123	2258322101	1N4148M, Switching		7
D124-D127	2258100135	Diode, 1N4002		4
D129-D136	2258322101	1N4148M, Switching		8
D137-D138	2258100135	Diode, 1N4002		2
D150	2258322101	1N4148M, Switching		1
IC101	2168606104	KA7812P, Regulator		1
IC102	2168606103	KA7805P, Regulator		1
IC103	2168606104	KA7812P, Regulator		1
IC104	2168206106	IC, KIA6259S, OP AMP		1
IC105	2138001134	GD4051B, Switching		1
IC106	2168022105	BA336		1
IC107/IC108	2168206106	IC, KIA6259S, OP AMP		2
IC109	2168022124	CXA1198AP		1
IC110	2168022123	IC, CXA1330S		1
IC111	2168206107	IC, KIA6259P, OP AMP		1
IC112	2138001117	GD4053B, Switching		1
IC113	2168600105	GL790S, Regulator		1
IC114	2168609102	KA7912, Regulator		1
L101/L102	2658501150	Coil Trap Bias 389AC-K5049		2
L103	2638601350	Coil OSC Bias CQN-K5174		1
L110-L112	2648610082	Coil Inductor, 10uH		3
Q102	2228407117	KTC2236A/KTC3205, NPN, Silicon		1
Q103/Q104	220860104	MPSA56Y, PNP, Silicon		2
Q105	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		1
Q106/Q107	2228407117	KTC2236A/KTC3205, NPN, Silicon		2
Q108	2208206113	MPSA56Y, PNP, Silicon		1
Q109	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		1
Q110/Q112	2208622106	DTC114YS, NPN, Silicon		2
Q113	2208206113	MPSA56Y, PNP, Silicon		1
Q114	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		1
Q115	2208622106	DTC114YS, NPN, Silicon		1
Q116-Q121	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		6
Q122-Q125	2208622106	DTC114YS, NPN, Silicon		4
Q126	2208622108	DTC114YS, NPN, Silicon		1
Q127/Q128	2208606112	KTD1302B, NPN, Silicon		2
Q129/Q130	2208622106	DTC114YS, NPN, Silicon		2

Ref. No.	Part No.	Description	Q'ty	Version
Q131/Q132	2208606112	KTD1302B, NPN, Silicon		2
Q133	2208222105	DTA114YS		1
Q134	2208622108	DTC114YS, NPN, Silicon		1
Q135-Q138	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		4
Q139	2208622108	DTC114YS, NPN, Silicon		1
Q140	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		1
Q141	2208622108	DTC114YS, NPN, Silicon		1
Q142/Q143	2208622106	DTC114YS, NPN, Silicon		2
Q144	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		1
Q145	2208622108	DTC114YS, NPN, Silicon		1
Q146/Q147	2208606104	BKTC3198Y/KTC1815Y, NPN Silicon		2
R101	3069104970	Carbon Film	100 kohm	1/5W J 1
R102	3069183970	Carbon Film	18 kohm	1/5W J 1
R103-R110	3069472970	Carbon Film	4.7 kohm	1/5W J 8
R111	3029100472	Metal Film	10 ohm	1W 1
R112	3029479470	Metal Film	4.7 ohm	1W 1
R113	3069152970	Carbon Film	1.5 kohm	1/5W J 1
R114	3069104970	Carbon Film	100 kohm	1/5W J 1
R115	3069102970	Carbon Film	1 kohm	1/5W J 1
R116	3069103970	Carbon Film	10 kohm	1/5W J 1
R117-R119	3069472970	Carbon Film	4.7 kohm	1/5W J 3
R120	3069183970	Carbon Film	18 kohm	1/5W J 1
R121	3029479470	Metal Film	4.7 ohm	1W 1
R122	3069473970	Carbon Film	47 kohm	1/5W J 1
R123	3029569470	Metal Film	5.6 ohm	1W 1
R124	3069473970	Carbon Film	47 kohm	1/5W J 1
R125	3069151970	Carbon Film	150 ohm	1/5W J 1
R126-R129	3069473970	Carbon Film	47 kohm	1/5W J 4
R130/R131	3069333970	Carbon Film	33 kohm	1/5W J 2
R132-R135	3069473970	Carbon Film	47 kohm	1/5W J 4
R136	3069151970	Carbon Film	150 ohm	1/5W J 1
R137	3069473970	Carbon Film	47 kohm	1/5W J 1
R138	3069103970	Carbon Film	10 kohm	1/5W J 1
R139	3069479270	Carbon Film	4.7 ohm	1/4W 1
R141	3069470970	Carbon Film	47 ohm	1/5W J 1
R142	3069473970	Carbon Film	47 kohm	1/5W J 1
R143	3069151970	Carbon Film	150 ohm	1/5W J 1
R145	3069432970	Carbon Film	4.3 kohm	1/5W J 1
R146	3069302970	Carbon Film	3 kohm	1/5W J 1
R148	3069103970	Carbon Film	10 kohm	1/5W J 1
R149	3069104970	Carbon Film	100 kohm	1/5W J 1
R150	3069472970	Carbon Film	4.7 kohm	1/5W J 1
R151/R152	3069103970	Carbon Film	10 kohm	1/5W J 2
R154	3069243970	Carbon Film	24 kohm	1/5W J 1
R155	3069102970	Carbon Film	1 kohm	1/5W J 1
R156	3069103970	Carbon Film	10 kohm	1/5W J 1
R157-R159	3069102970	Carbon Film	1 kohm	1/5W J 3
R160	3069103970	Carbon Film	10 kohm	1/5W J 1
R161	3069562970	Carbon Film	5.6 kohm	1/5W J 1
R162	3069183970	Carbon Film	18 kohm	1/5W J 1
R163	3069103970	Carbon Film	10 kohm	1/5W J 1
R164	3069243970	Carbon Film	24 kohm	1/5W J 1
R165	3069562970	Carbon Film	5.6 kohm	1/5W J 1
R166	3069470970	Carbon Film	47 ohm	1/5W J 1
R167/R168	3069752970	Carbon Film	7.5 kohm	1/5W J 2
R169	3069682970	Carbon Film	6.8k ohm	1/5W J 1
R170	3069470970	Carbon Film	47 ohm	1/5W J 1
R171	3069682970	Carbon Film	6.8k ohm	1/5W J 1
R172	3069470970	Carbon Film	47 ohm	1/5W J 1
R173	3069562970	Carbon Film	5.6k ohm	1/5W J 1
R174/R175	3069103970	Carbon Film	10 kohm	1/5W J 2
R176	3069124970	Carbon Film	120 kohm	1/5W J 1
R177	3069183970	Carbon Film	18 kohm	1/5W J 1
R178	3069243970	Carbon Film	24 kohm	1/5W J 1

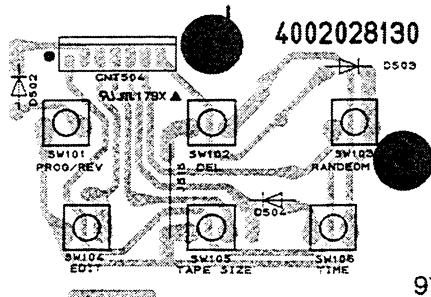
Ref. No.	Part No.	Description	Q'ty	Version
R179	3069154970	Carbon Film	150 kohm	1/5W J 1
R180	3069393970	Carbon Film	39 kohm	1/5W J 1
R181/R182	3069104970	Carbon Film	100 kohm	1/5W J 2
R183/R184	3069203970	Carbon Film	20 kohm	1/5W J 2
R185	3069753970	Carbon Film	75 kohm	1/5W J 1
R186	3069473970	Carbon Film	47 kohm	1/5W J 1
R187	3069682970	Carbon Film	62 kohm	1/5W J 1
R188/R189	3069104970	Carbon Film	100 kohm	1/5W J 2
R190	3069243970	Carbon Film	24 kohm	1/5W J 1
R191/R192	3069390970	Carbon Film	39 ohm	1/5W J 2
R193	3069104970	Carbon Film	100 kohm	1/5W J 1
R194/R195	3069682970	Carbon Film	6.8 kohm	1/5W J 2
R196	3069104970	Carbon Film	100 kohm	1/5W J 1
R197	3069563970	Carbon Film	56 kohm	1/5W J 1
R198	3069103970	Carbon Film	10 kohm	1/5W J 1
R199	3069153970	Carbon Film	15 kohm	1/5W J 1
RLY101	5528001780	Relay, GSV-2 DC12V		1
VR101/102	3248010343	RES Smtl EVN-DJAA03B14		2
VR103/104	3248010443	RES Smtl EVN-DJAA03B15		2
VR105/106	3248020243	RES Smtl EVN-DJAA03B23		2
VR107-112	3248010343	RES Smtl EVN-DJAA03B14		6
C200	35192221935	Ceramic Tubular	220 pF	50 V J 1
C201	3519104935	Ceramic Tubular	0.1 uF	50 V J 1
C202	3479210971	Electrolytic SA	1 uF	50 V M 1
C203	3679222120	Mylar	0.0022 uF	100 V J 1
C204	3479247971	Electrolytic SA	4.7 uF	50 V M 1
C205	3479256871	Electrolytic SA	0.56 uF	50 V 1
C206	3519271935	Ceramic Tubular	270 pF	50 V J 1
C207	3479322131	Electrolytic SG	220 uF	16 V M 1
C208	3479210071	Electrolytic SA	10 uF	50 V M 1
C209	35192221935	Ceramic Tubular	220 pF	50 V J 1
C210	3519331935	Ceramic Tubular	330 pF	50 V J 1
C211	3479247971	Electrolytic SA	4.7 uF	50 V M 1
C212	3679222120	Mylar	0.0022 uF	100 V J 1
C213	3479210871	Electrolytic SA	0.1 uF	50 V M 1
C214	3519271935	Ceramic Tubular	270 pF	50 V J 1
C215	3479247971	Electrolytic SA	4.7 uF	50 V M 1
C216	3479222971	Electrolytic SA	2.2 uF	50 V M 1
C217	3479322071	Electrolytic SG	22 uF	50 V M 1
C220/C221	3519471935	Ceramic Tubular	470 pF	50 V J 2
CNT201	4428515820	Water 15P		1
CNT202	4428511820	Water 11P		1
CNT204	4428513800	Water 13P		1
R200	3069224970	Carbon Film	220 kohm	1/5W J 1
R201	3069513970	Carbon Film	51 kohm	1/5W J 1
R202	3069563970	Carbon Film	56 kohm	1/5W J 1
R203	3069104970	Carbon Film	100 kohm	1/5W J 1
R204/R205	3069153970	Carbon Film	15 kohm	1/5W J 2
R206	3069104970	Carbon Film	100 kohm	1/5W J 1
R207	3069473970	Carbon Film	47 kohm	1/5W J 1
R208	3069682970	Carbon Film	62 kohm	1/5W J 1
R209	3069243970	Carbon Film	24 kohm	1/5W J 1
R210	3069103970	Carbon Film	10 kohm	1/5W J 1
R211/R212	3069752970	Carbon Film	7.5 kohm	1/5W J 2
R213	3069682970	Carbon Film	6.8k ohm	1/5W J 1
R214	3069102970	Carbon Film	1 kohm	1/5W J 1
R215	3069302970	Carbon Film	3 kohm	1/5W J 1
R216/R217	3069470970	Carbon Film	47 ohm	1/5W J 2
R218	3069184970	Carbon Film	180 kohm	1/5W J 1
R219	3069123970	Carbon Film	12 kohm	1/5W J 1
R220	3069333970	Carbon Film	33 kohm	1/5W J 1
R221	3069224970	Carbon Film	220 kohm	1/5W J 1
R222	3069473970	Carbon Film	47 kohm	1/5W J 1
R223	3069433970	Carbon Film	43 kohm	1/5W J 1

Ref. No.	Part No.	Description	Q'ty	Version
R224	3069513970	Carbon Film	51 kohm	1/5W J 1
R225	3069123970	Carbon Film	12 kohm	1/5W J 1
R226	3069103970	Carbon Film	10 kohm	1/5W J 1
R227	3069124970	Carbon Film	120 kohm	1/5W J 1
R228	3069393970	Carbon Film	39 kohm	1/5W J 1
R229	3069682970	Carbon Film	82 kohm	1/5W J 1
R230	3069682970	Carbon Film	6.8k ohm	1/5W J 1
R231	3069394970	Carbon Film	390 kohm	1/5W J 1
R232	3069274970	Carbon Film	270 kohm	1/5W J 1
R233	3069302970	Carbon Film	3 kohm	1/5W J 1
R234	3069562970	Carbon Film	5.6k ohm	1/5W J 1
R235	3069470970	Carbon Film	47 ohm	1/5W J 1
R236	3069103970	Carbon Film	10k ohm	1/5W J 1
R237	3069302970	Carbon Film	3 kohm	1/5W J 1
R238	3069103970	Carbon Film	10 kohm	1/5W J 1
R239	3069302970	Carbon Film	3 kohm	1/5W J 1
R240	3069103970	Carbon Film	10 kohm	1/5W J 1
R241	3069470970	Carbon Film	47 ohm	1/5W J 1
R242	3069681970	Carbon Film	680 ohm	1/5W J 1
R243	3069104970	Carbon Film	100 kohm	1/5W J 1
R244	3069681970	Carbon Film	680 ohm	1/5

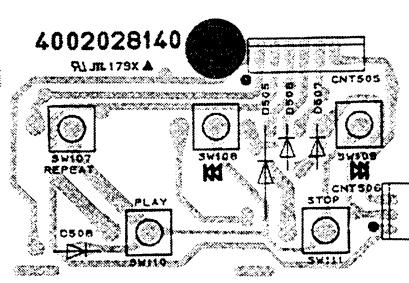
P.C.BOARD DECK MAIN



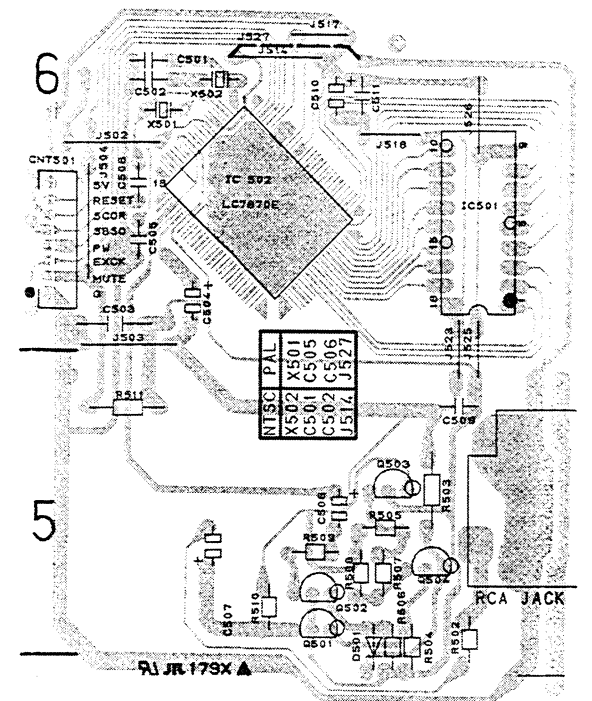
P.C.BOARD FRONT 2



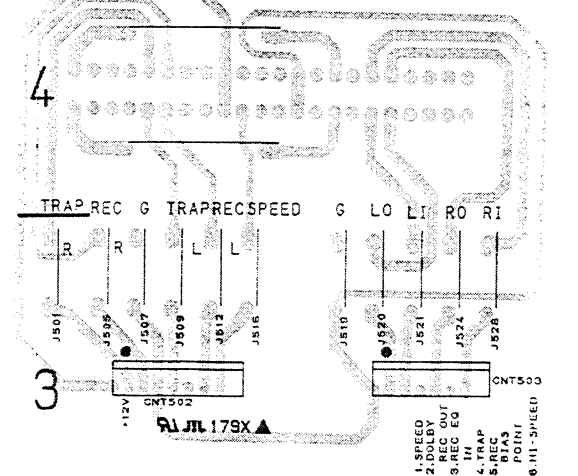
P.C.BOARD FRONT 3



P.C.BOARD CDG



P.C. BOARD FRONT 1

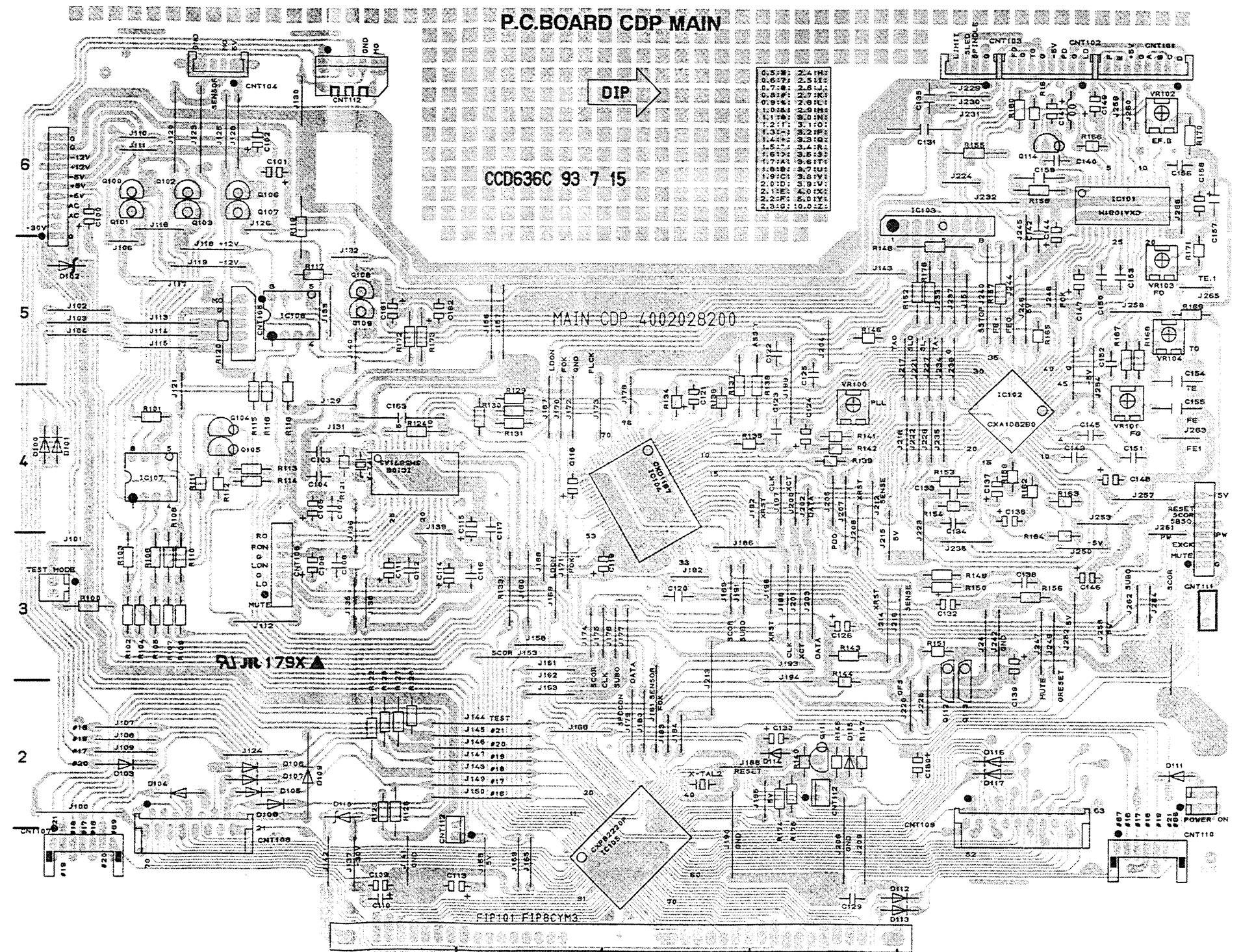


P.C.BOARD FRONT 4



PRINTED CIRCUIT BOARDS

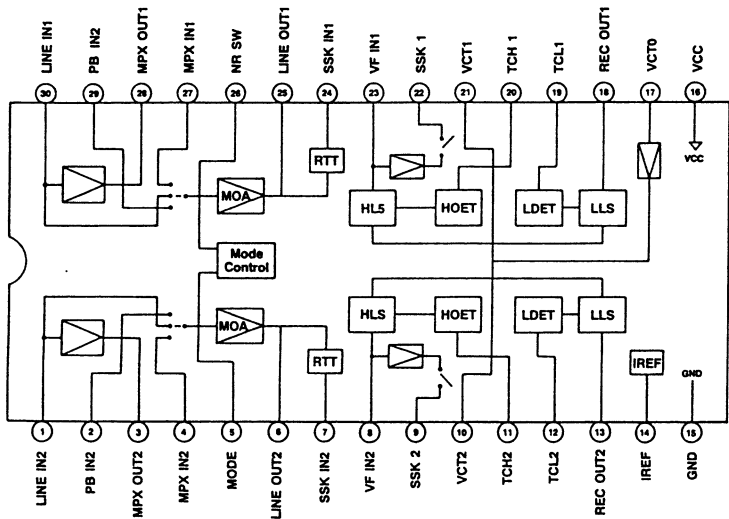
Ref. No.	Part No.	Description	Q'ty	Version
R298	3069562970	Carbon Film	5.6 kohm 1/5W J	1
R299	3069474970	Carbon Film	470 kohm 1/5W J	1
R300	3069100970	Carbon Film	10 ohm 1/5W J	1
R301	3069273970	Carbon Film	27 kohm 1/5W J	1
R302	3069512970	Carbon Film	5.1 kohm 1/5W J	1
R303	3069912970	Carbon Film	9.1 kohm 1/5W J	1
R304	3069243970	Carbon Film	24 kohm 1/5W J	1
R305	3069102970	Carbon Film	1 kohm 1/5W J	1
R306	3069103970	Carbon Film	10 kohm 1/5W J	1
R307	3069912970	Carbon Film	9.1 kohm 1/5W J	1
R308	3069103970	Carbon Film	10 kohm 1/5W J	1
R309	3069563970	Carbon Film	56 kohm 1/5W J	1
R310	3069103970	Carbon Film	10 kohm 1/5W J	1
R311	3069335970	Carbon Film	3.3M ohm 1/5W J	1
R312/R313	3069562970	Carbon Film	5.6 kohm 1/5W J	2
R314/R315	3069102970	Carbon Film	1 kohm 1/5W J	2
R316	3069103970	Carbon Film	10 kohm 1/5W J	1
R317	3069102970	Carbon Film	1 kohm 1/5W J	1
R318	3069473970	Carbon Film	47 kohm 1/5W J	1
R319/R320	3069102970	Carbon Film	1 kohm 1/5W J	2
R321	3069223970	Carbon Film	22 kohm 1/5W J	1
P1-2	054101010003	ASS'Y P.C.B FRONT-I		
45	4658003710	SW Tact		12
46	4618008610	Switch Slide		2
CNT203	4428526285	Wafer IL-FPC A 16P		1
LED201	2381040301	LED, SLR-34GCN49, Green		1
LED202	2381215704	LED, SLR-34URC N49, Red		1
LED203	2381040301	LED, SLR-34GCN49, Green		1
LED204	2381040301	LED, SLR-34GCN49, Green		1
LED205-209	2381040301	LED, SLR-34GCN49, Green		5
Q201-Q209	2208622108	DTC114TS, NPN, Silicon		9
R401	3069104970	Carbon Film	100 kohm 1/5W J	1
R402	3069333970	Carbon Film	33 kohm 1/5W J	1
R403-R405	3069151970	Carbon Film	150 ohm 1/5W J	3
R406	3069223970	Carbon Film	22 kohm 1/5W J	1
R407	3069151970	Carbon Film	150 ohm 1/5W J	1
R408	3069912970	Carbon Film	9.1 kohm 1/5W J	1
R409	3069123970	Carbon Film	12 kohm 1/5W J	1
R410	3069912970	Carbon Film	9.1 kohm 1/5W J	1
R411	3069103970	Carbon Film	10 kohm 1/5W J	1
R412	3069151970	Carbon Film	150 ohm 1/5W J	1
R413/R414	3069103970	Carbon Film	10 kohm 1/5W J	2
R415	3069123970	Carbon Film	12 kohm 1/5W J	1
R416	3069151970	Carbon Film	150 ohm 1/5W J	1
R417	3069223970	Carbon Film	22 kohm 1/5W J	1
R418/R419	3069151970	Carbon Film	150 ohm 1/5W J	2
R420	3069333970	Carbon Film	33 kohm 1/5W J	1
R421	3069104970	Carbon Film	100 kohm 1/5W J	1
R422	3069151970	Carbon Film	150 ohm 1/5W J	1



IC'S KEAD IDENTIFICATION & INTERNAL DIAGRAM

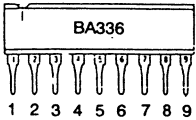
CXA1330S: IC110

Block Diagram

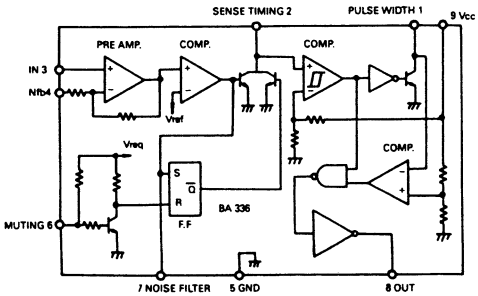


BA336: IC106

Front View



Block Diagram



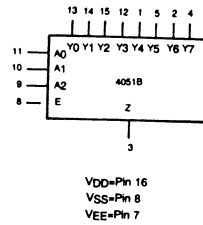
GD4051B: IC105

TRUTH TABLE

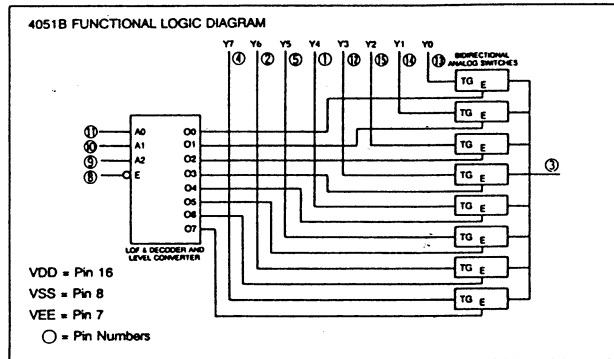
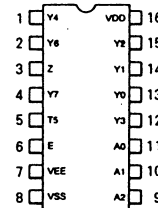
INPUTS				CHANNELS							
E	A ₂	A ₁	A ₀	Y ₀ -Z	Y ₁ -Z	Y ₂ -Z	Y ₃ -Z	Y ₄ -Z	Y ₅ -Z	Y ₆ -Z	Y ₇ -Z
L	L	L	L	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
L	L	L	H	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
L	L	H	L	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
L	L	H	H	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
L	H	L	L	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
L	H	L	H	OFF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

Logic Symbol

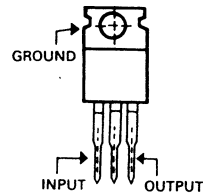


Top View

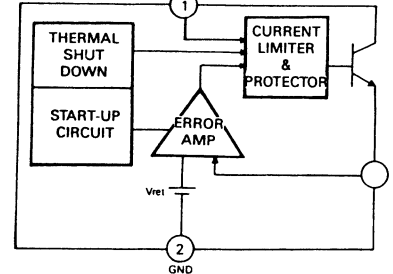


REG78XX: IC101, IC102, IC103

Front View

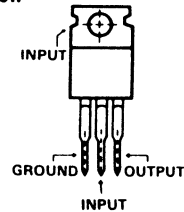


Block Diagram

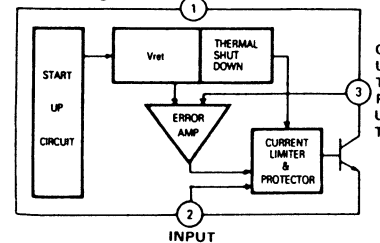


REG79XX: IC113, IC114

Front View

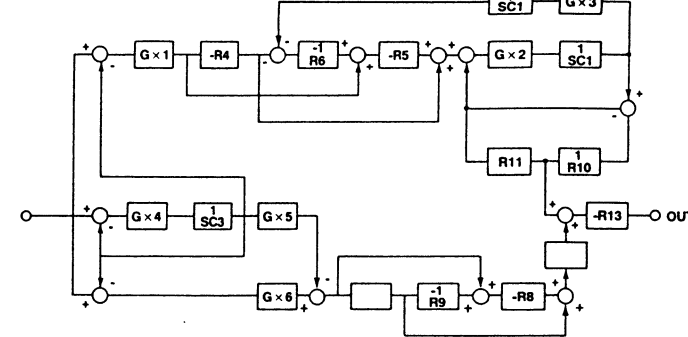


Block Diagram

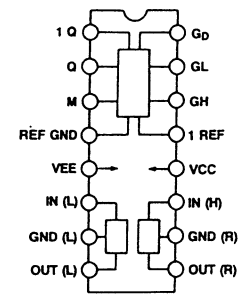


CXA1198AP(REC AMP): IC109

Block Diagram

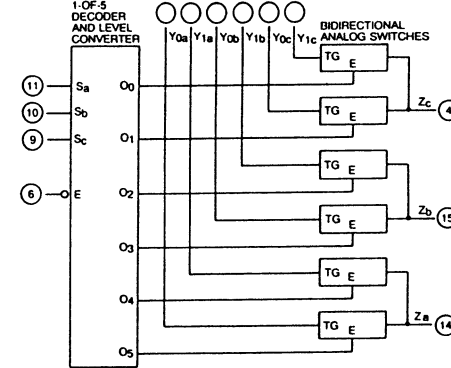


Internal Diagram



GD4053(A & B DECK SW): IC112

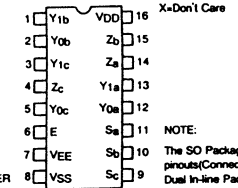
Block Diagram



Internal Diagram

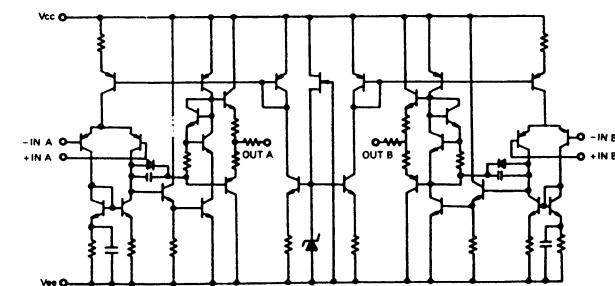
INPUTS		CHANNELS	
E	S	Y ₀ -Z	Y ₁ -Z
L	L	ON	OFF
L	H	OFF	ON
H	X	OFF	OFF

Top View



KIA6259S(4559S): IC107, IC108, IC111

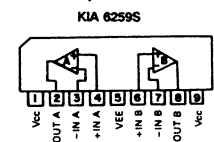
Equivalent Circuit



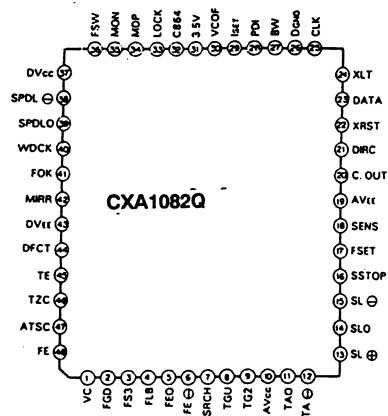
Block Diagram

Internal Diagram

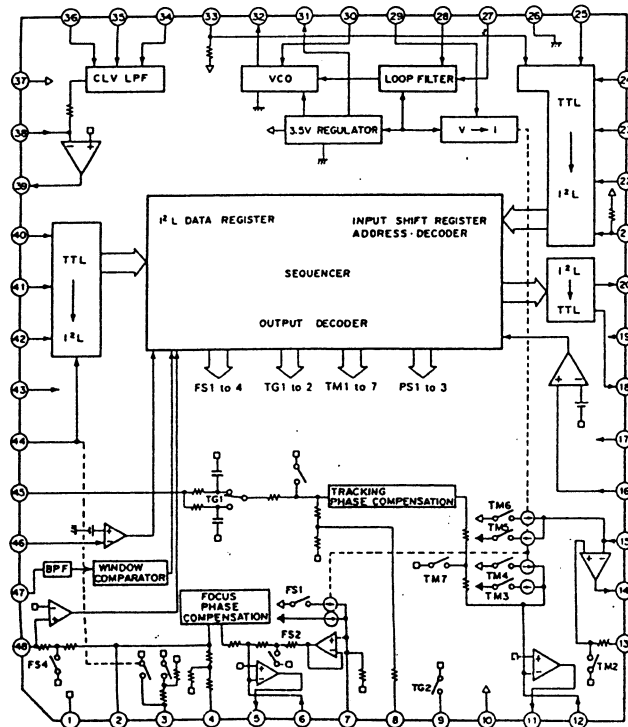
Top View



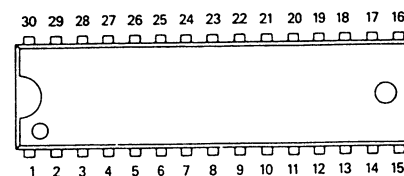
Top View



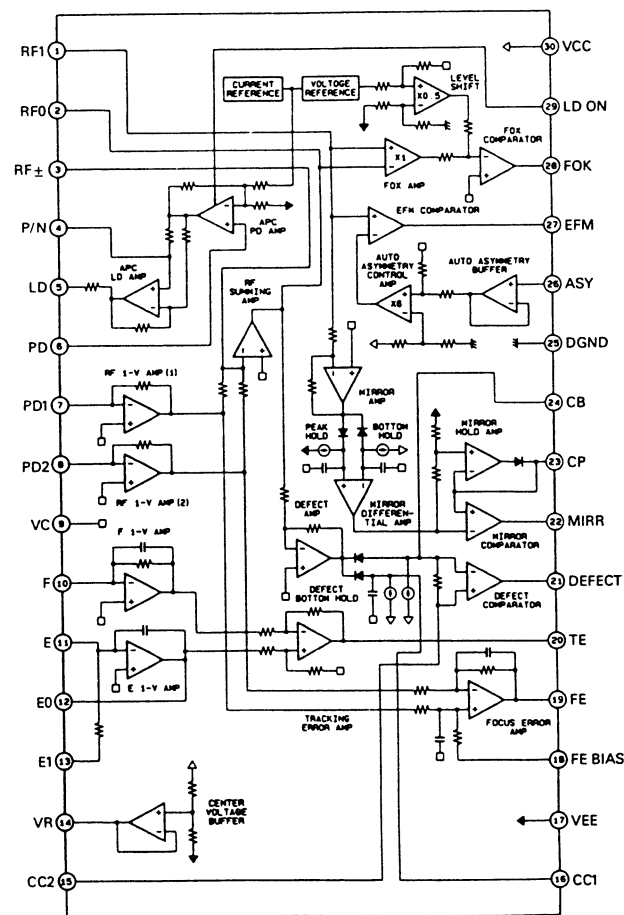
Block Diagram



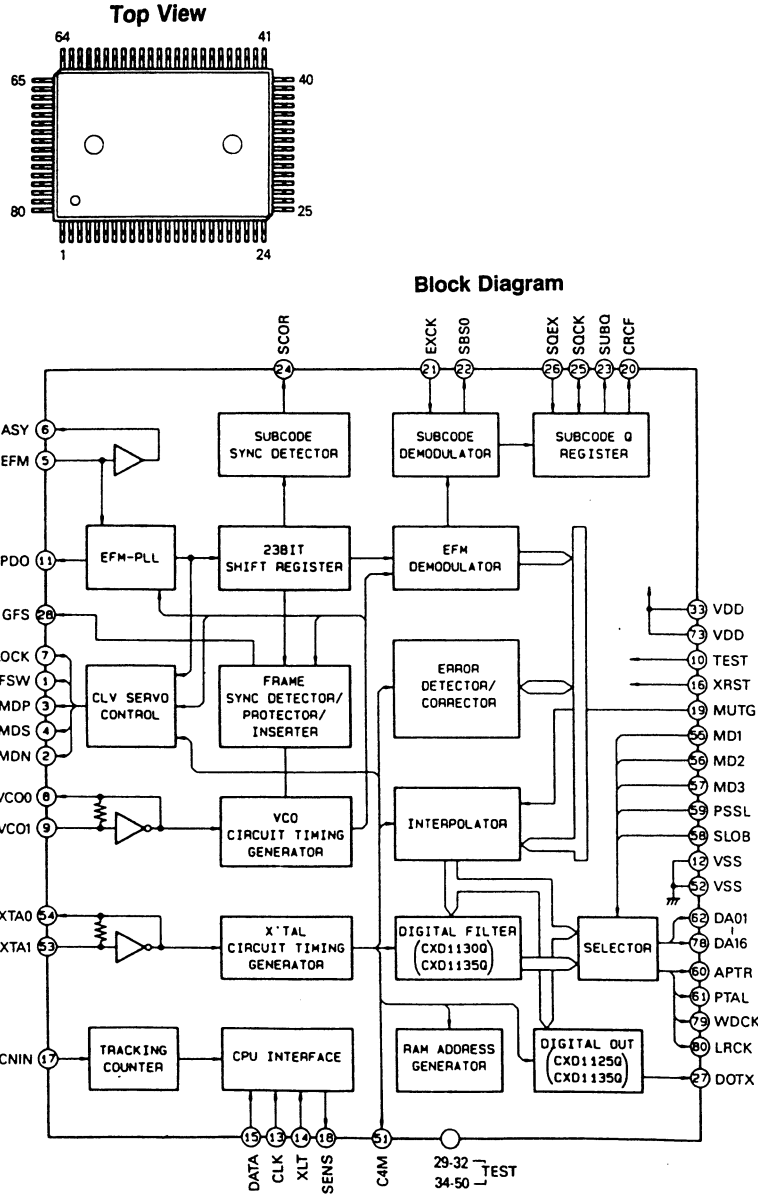
CXA1081M: IC101 **Top View**



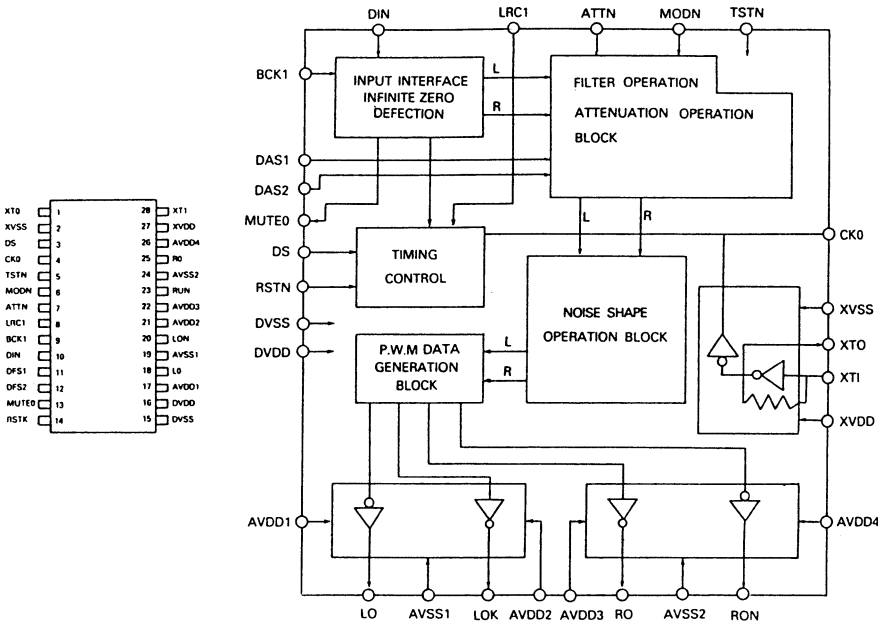
Block Diagram



CXD1167Q: IC104(Digital Signal Processor)

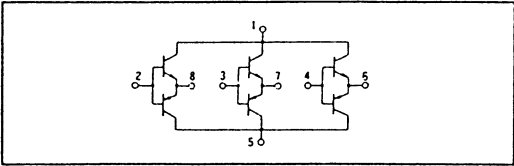


Block Diagram

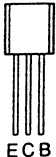
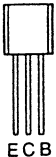
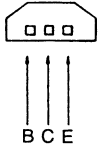


STA341M: IC103

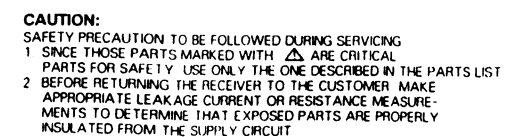
Block Diagram



TRANSISTORS LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
KTC2236AY KTC3198Y KTD1302B KTA1015Y		
DTC114YS DTC114TS		
MPSA56Y MPSA06Y		
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

Model No.: CCD-636R



Model No.: CCD-636R

