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SERVICE
MANUAL

CD-73



marantz®

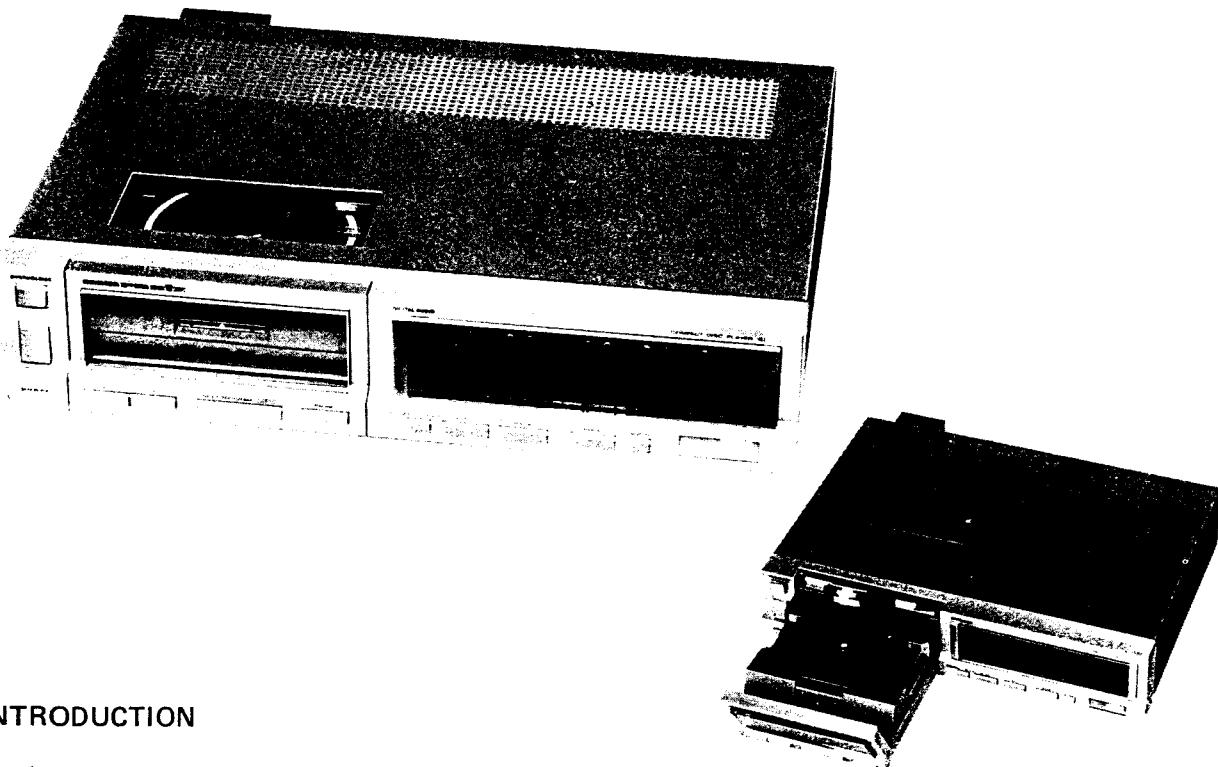
model CD-73

Compact Disc Player

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MODEL CD-73 COMPACT DISC PLAYER



1. INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model CD-73 Compact Disc Player.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the Compact Disc Player.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

2. P. W. BOARDS

1. Power Supplymounted on P.W. Board P100
2. Servomounted on P.W. Board P200
3. Decodermounted on P.W. Board P500
4. Motor/Remoconmounted on P.W. Board P800
5. Main Filtermounted on P.W. Board PH00
6. Power Indicatormounted on P.W. Board PR00
7. Disc Inside Indicatormounted on P.W. Board PR50
8. Program Key Switchmounted on P.W. Board PS00
9. Mode Key Switchmounted on P.W. Board PU00
10. Signal Relay 2mounted on P.W. Board PU50
11. Displaymounted on P.W. Board PY00
12. Mode Indicatormounted on P.W. Board PZ00
13. Signal Relay 1mounted on P.W. Board PZ50
14. Pre Amp. + Lasermounted on P.W. Board AY40

3. DRAWER MOTOR CONTROL P. W. BORAD WORKING PRINCIPLE

Drawer motor control P. W. Borad includes the following.

- (1) Drawer motor drive circuit
- (2) Remote control circuit (Marantz Bus System decoder circuit)

3.1 Drawer Motor Drive Circuit

A. Outline of the system

This circuit revolves and reverses the drawer motor by the OPEN/CLOSE switch of S802 on the front panel to open and close the drawer. It includes a circuit to increase starting torque and a safety circuit which stops automatically when something is caught in the drawer.

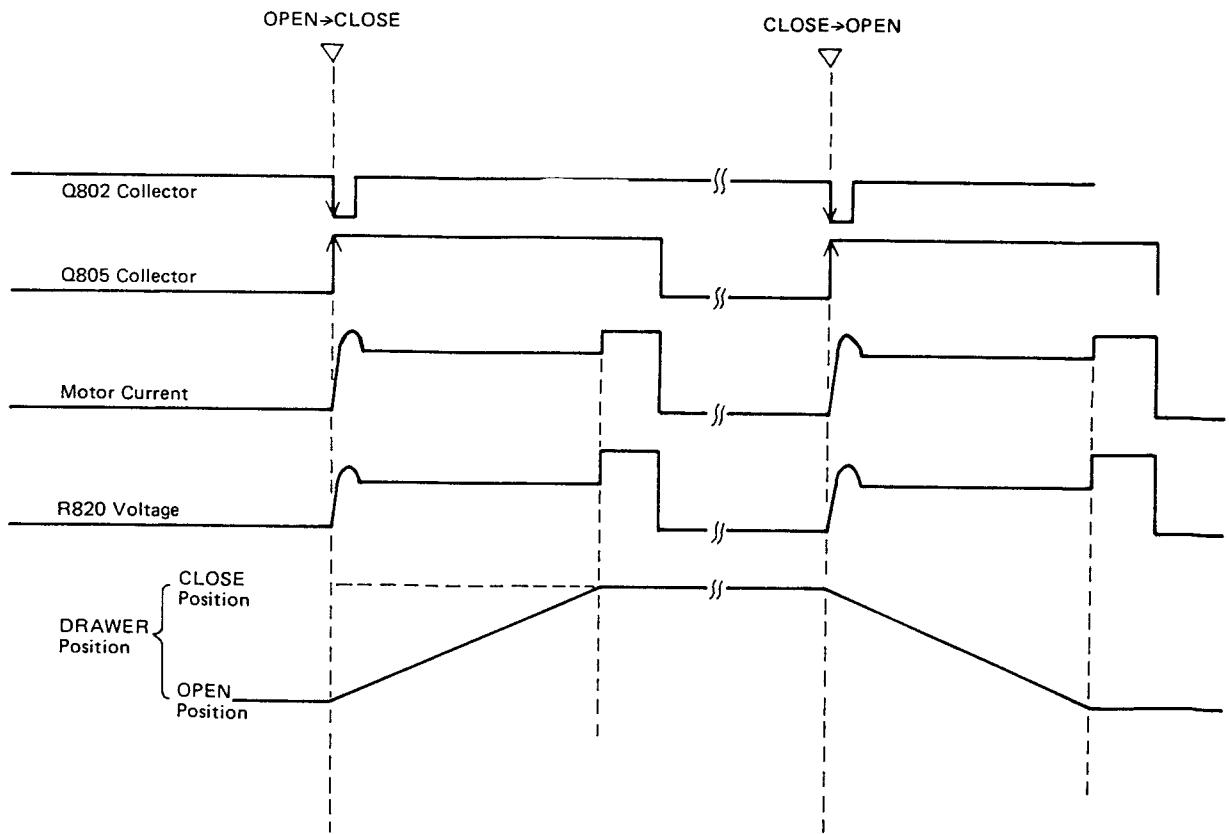
B. Operation of each part

- a) Q809, Q808 and Q807 are motor drive circuits. Especially Q808 increases motor starting torque.
- b) When the voltage of R820 becomes over about 0.6V, the base current begins to flow through Q803. That is, the motor is locked to detect the excessive current.
- c) Q805 and Q806 make up a set/reset flip flop, which is set when positive voltage is put into the base of Q805. And it is reset when the base becomes 0. As long as it is set, D806 is "ON" and motor drive circuit does not operate.
- d) Q802 becomes "ON" just for a few msec when the OPEN/CLOSE switch of S802 is pushed. (S802 is non-shorting type.)

- e) Q801 becomes "ON" just for the time-constant t_1 based on R816/R801/C801 only after S802 is changed from CLOSE to OPEN, and makes the base of Q809 0V to stop the motor drive circuit. Meanwhile, the voltage of C807 is discharged to increase the torque for the time-constant t_2 of C807/R822 just after the end of t_1 .

C. Explanation of overall operation

- a) During the shift of OPEN/CLOSE switch S802, from OPEN to CLOSE, Q802 becomes "ON" in an instant and flip flop which is composed of Q805 and Q806 is reset to cut off D806.
- b) Consequently motor drive circuit which is composed of Q809, Q808 and Q807 begins to operate to switch on the drawer motor.
- c) When the drawer comes to the mechanical end, short-circuit current begins to flow to the motor to generate voltage of R820 about 1V. This voltage reverses Q803 to cut off D804.
- d) After D804 is cut off, C805 is discharged through R807 and Q804, and Q804 becomes OFF after about 2.5 sec.
- e) As a result, the collector voltage of Q804 rises to set the above flip flop through R809/R810. In this way, the motor drive circuit becomes OFF again.
- f) You have the same operation also when S802 is changed from CLOSE to OPEN. But Q801 has been added so that Q808 which increases start up torque can become ON without fail.



3.2 Remote Control Circuit

A. Outline of the system

Marantz Bus System is a general term to this remote control circuit. Remocon transmitter and remocon receiver are necessary to operate it.

The output of the remocon receiver is connected to the remocon "IN" terminal on the rear panel of the CD-73. The remocon transmitter has 4 keys for play/next, pause, repeat and stop.

B. Operation of each part

- a) Q851 is N channel Micro Processor for remocon.
- b) Q857 amplifies a signal from the remocon receiver and transmits it to pin 24 of the Micro Processor.
- c) Q858 is a transistor switch. When a laser signal "S" becomes Low level, it switches "ON" and changes the Micro Processor pin 25 to High level to generate an easy operation signal at pin 19. This easy operation signal is reversed at Q856 and put out from the easy "OUT" terminal of the CD-73. This signal makes easy operation possible.
- d) Q853, Q854 and Q855 are used as analogue switches and controlled by output pin 9, 10 and 15 respectively. Q852 is a transistor switch, which lowers a sense signal to GND level to stop operation.
- e) R852/D851/C856 are used for initial setting of the Micro Processor.

C. Overall operation

When any key of the remocon transmitter is pushed, a pulse signal is transmitted to the CD-73 remote "IN" terminal through the remocon receiver. This signal is put into the Micro Processor pin 24 after being amplified at Q857 and the Micro Processor comes to correspond to the key to generate High signal at the output pin as follows.

play/next	pin 9
pause	pin 10
repeat	pin 15
stop	pin 4

Besides, only when the play/next key is pushed, an easy operation signal occurs at pin 19 for 60 msec to mute the other sources.

4. ADJUSTMENT PROCEDURES FOR DISC CLAMPER

4.1 Adjusting the height of the pressure ring holder

The height of the holder must be adjusted to maintain braking by keeping the appropriate distance between the holder and pressure ring.

With the drawer in the unit, lift the holder manually, and place the positioning tool on the turntable.

If the drawer is in the "out" position, the aluminum cap will come in contact with the front chassis and front panel, and will be scratched when the drawer is pushed into the unit.

With a screwdriver, turn the adjustment screw clockwise 2 or 3 turns. Push down the holder several times to confirm that it sinks a few millimeters until it makes contact with the positioning tool. If there is no play between the holder and tool, turn the adjustment screw further until a few millimeters play is obtained.

Turn the adjustment screw counterclockwise until the play between the holder and tool becomes zero.

For optimum adjustment, do not exert excess pressure on the adjustment screw with the screwdriver.

Apply lock paint to the adjustment screw.

Lift the holder with the drawer in the "in" position, and remove the positioning tool.

5. VOLTAGE CONVERSION

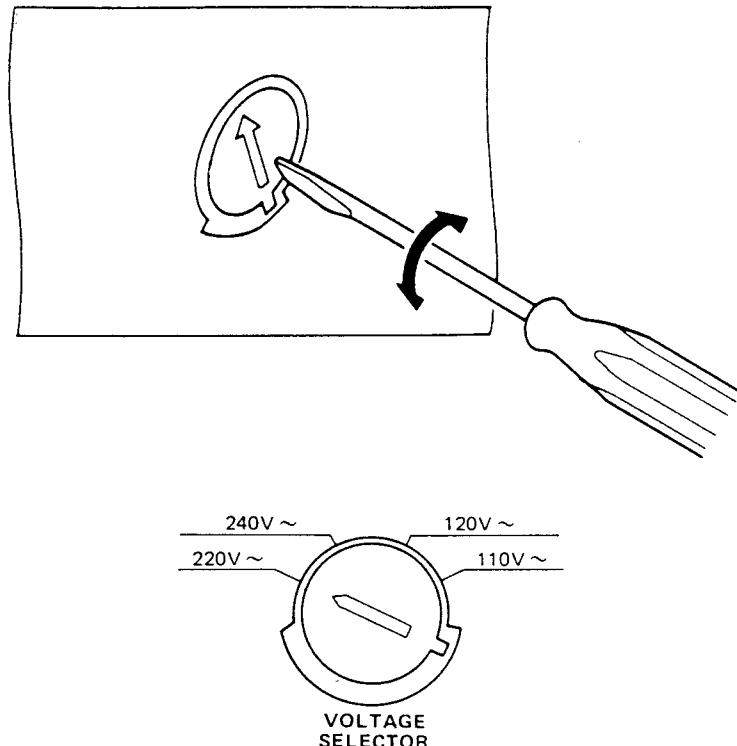
- EUROPEAN MODEL ONLY

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION

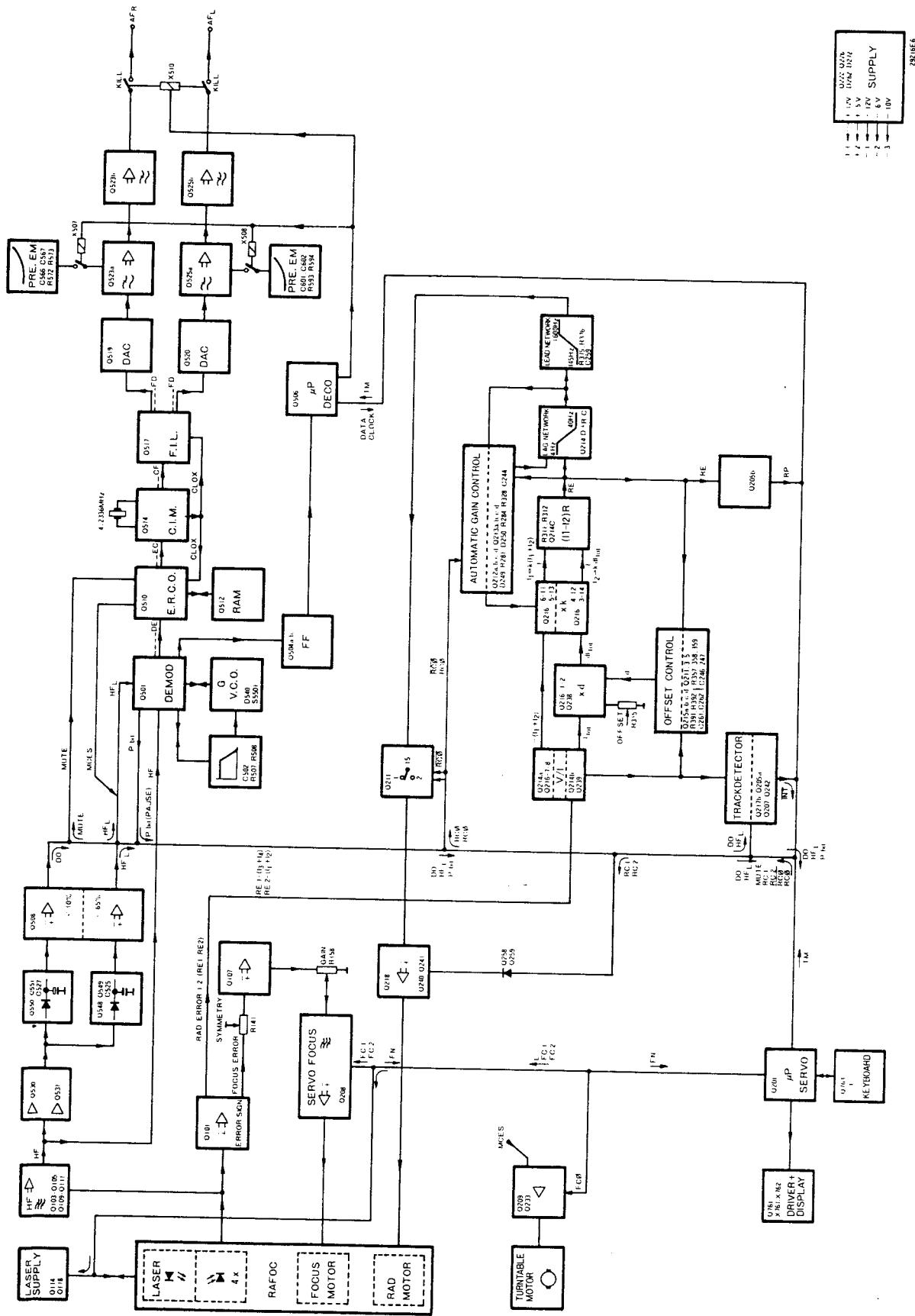
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart

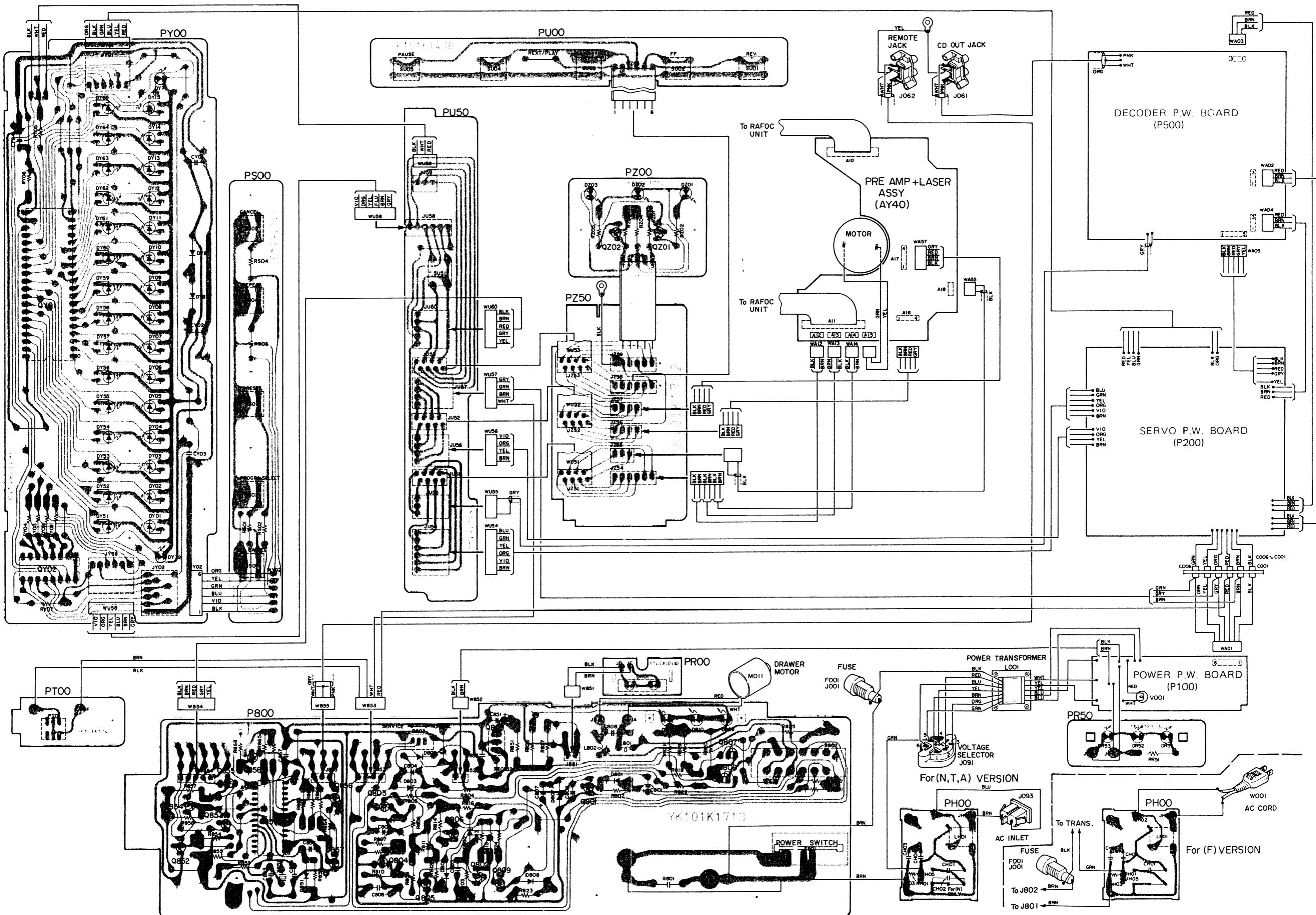


Note on safety: Symbol Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

6. SIGNAL BLOCK DIAGRAM

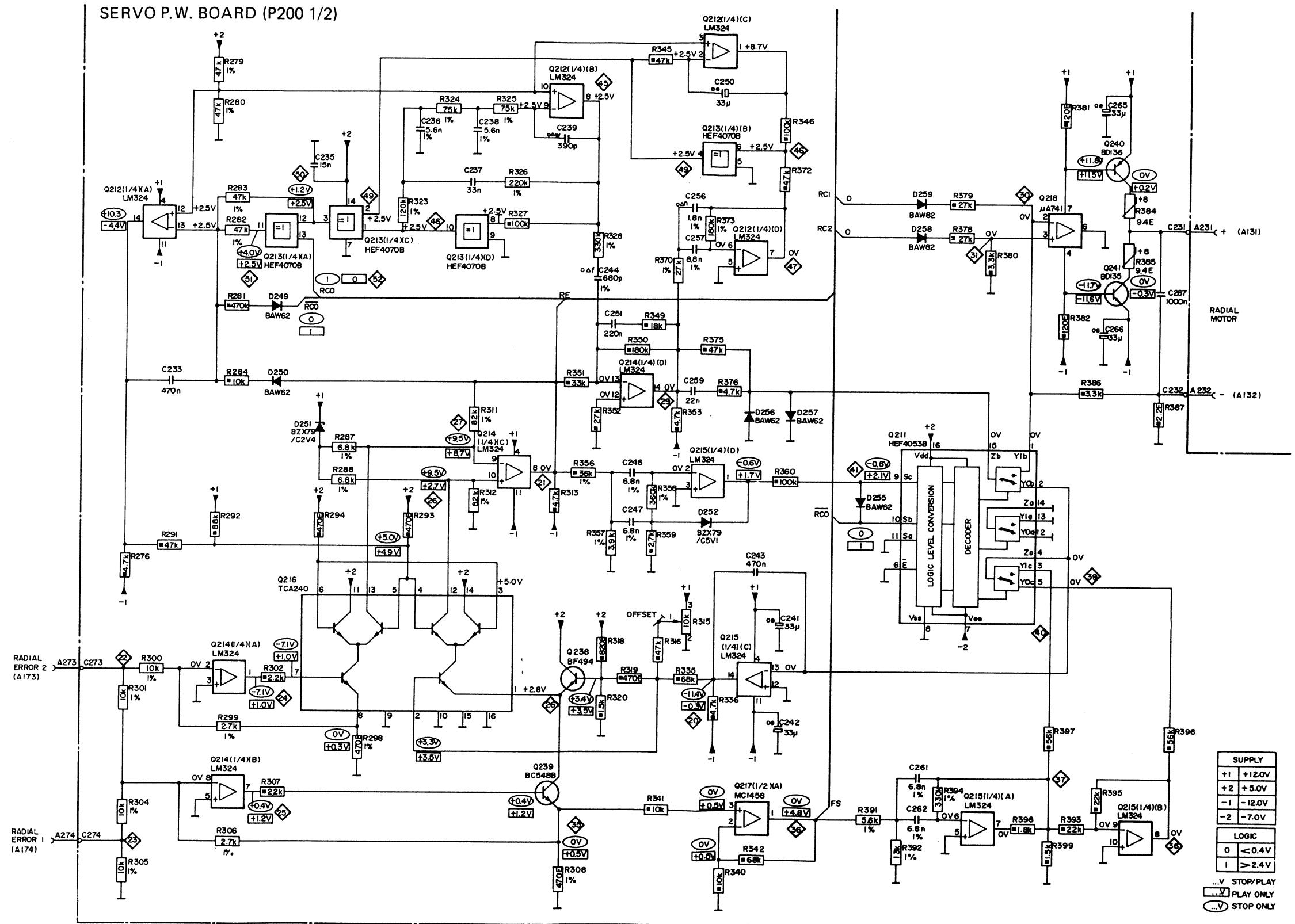


7. COMPONENT LOCATIONS (AND WIRE CONNECTIONS)

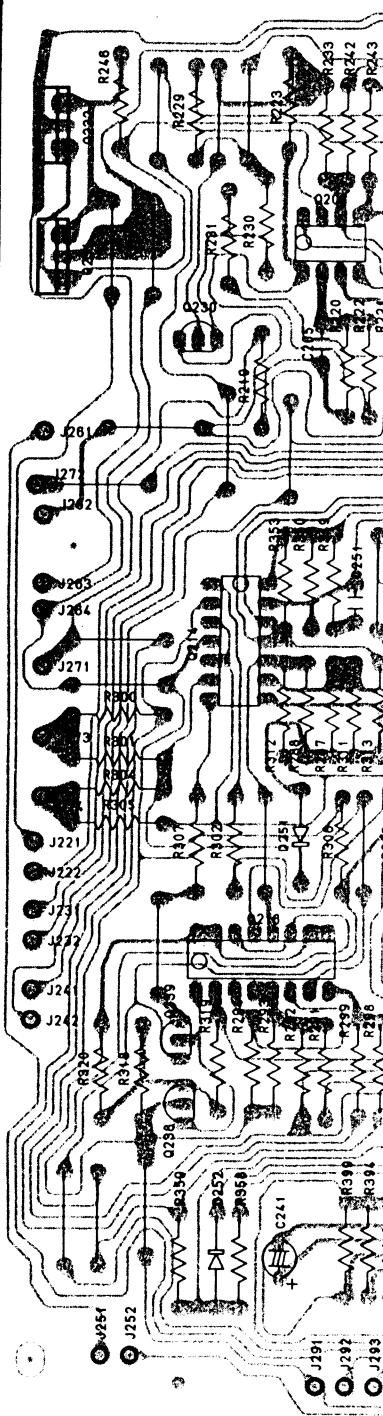
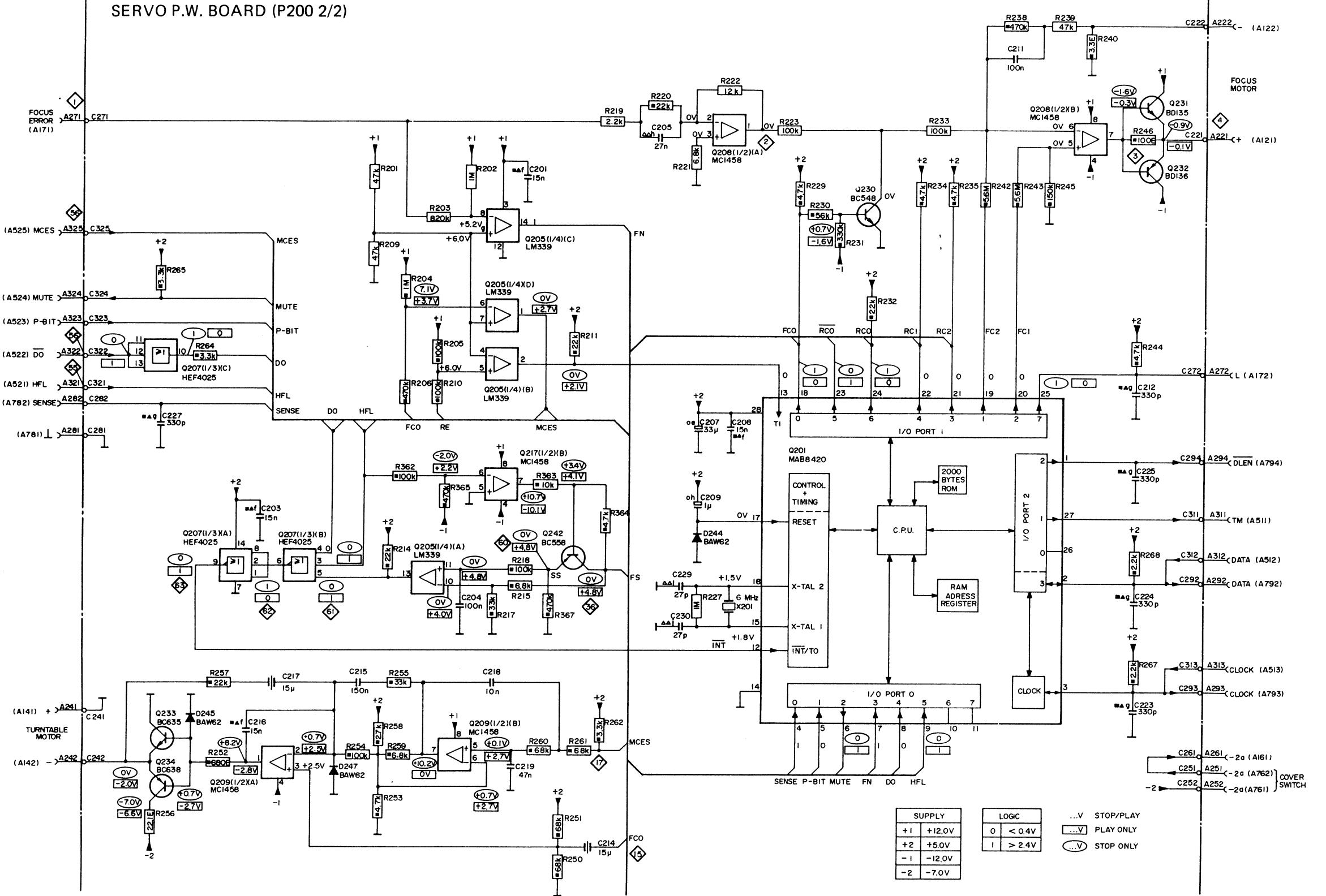


8. DIAGRAM AND COMPONENT LOCATIONS

8.1 Servo (P200) Schematic Diagram and Component Locations



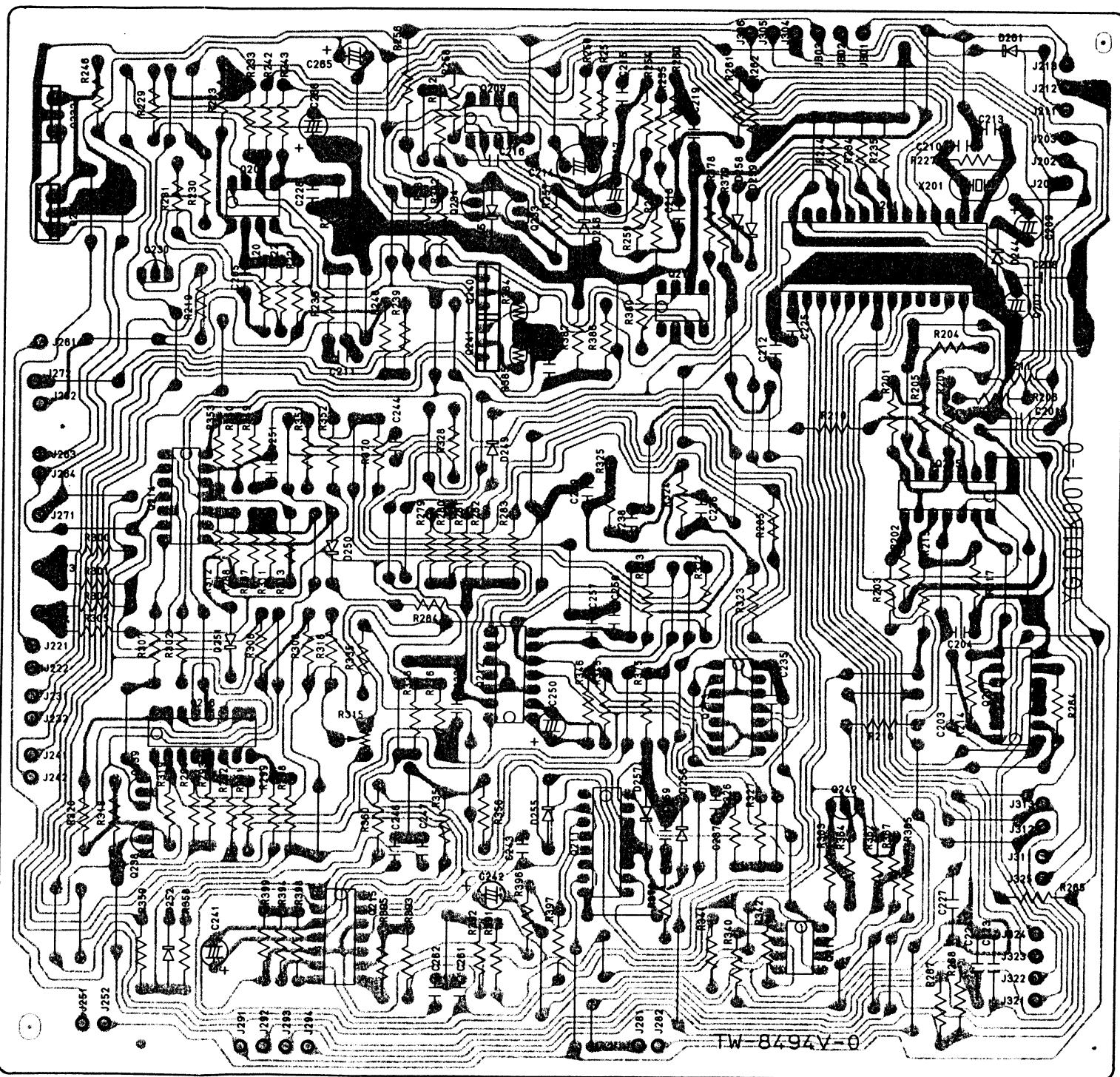
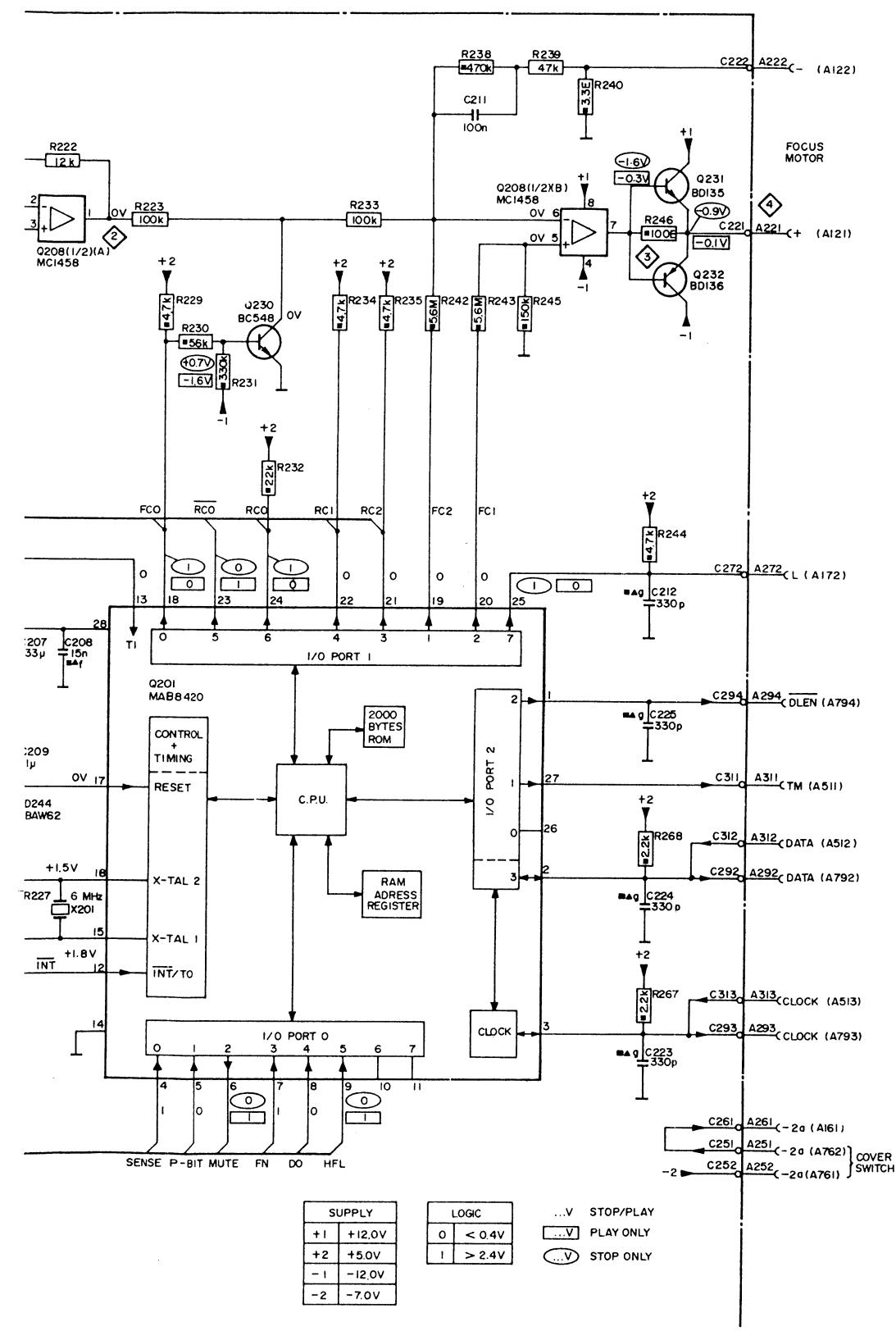
SERVO P.W. BOARD (P200 2/2)



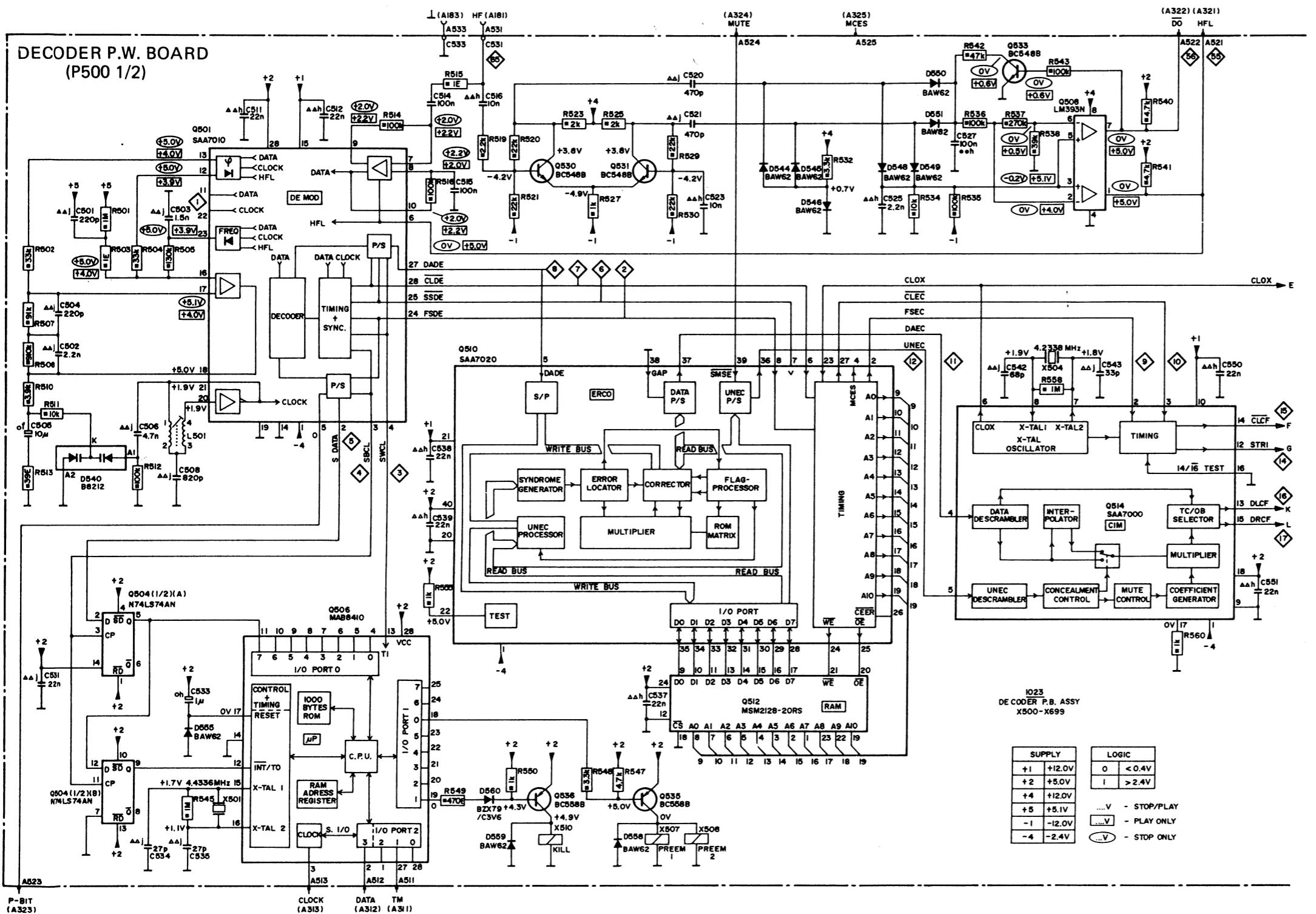
SUPPLY	
+1	+12,0V
+2	+5,0V
-1	-12,0V
-2	-7,0V

LOGIC	
0	< 0,4V
1	> 2,4V

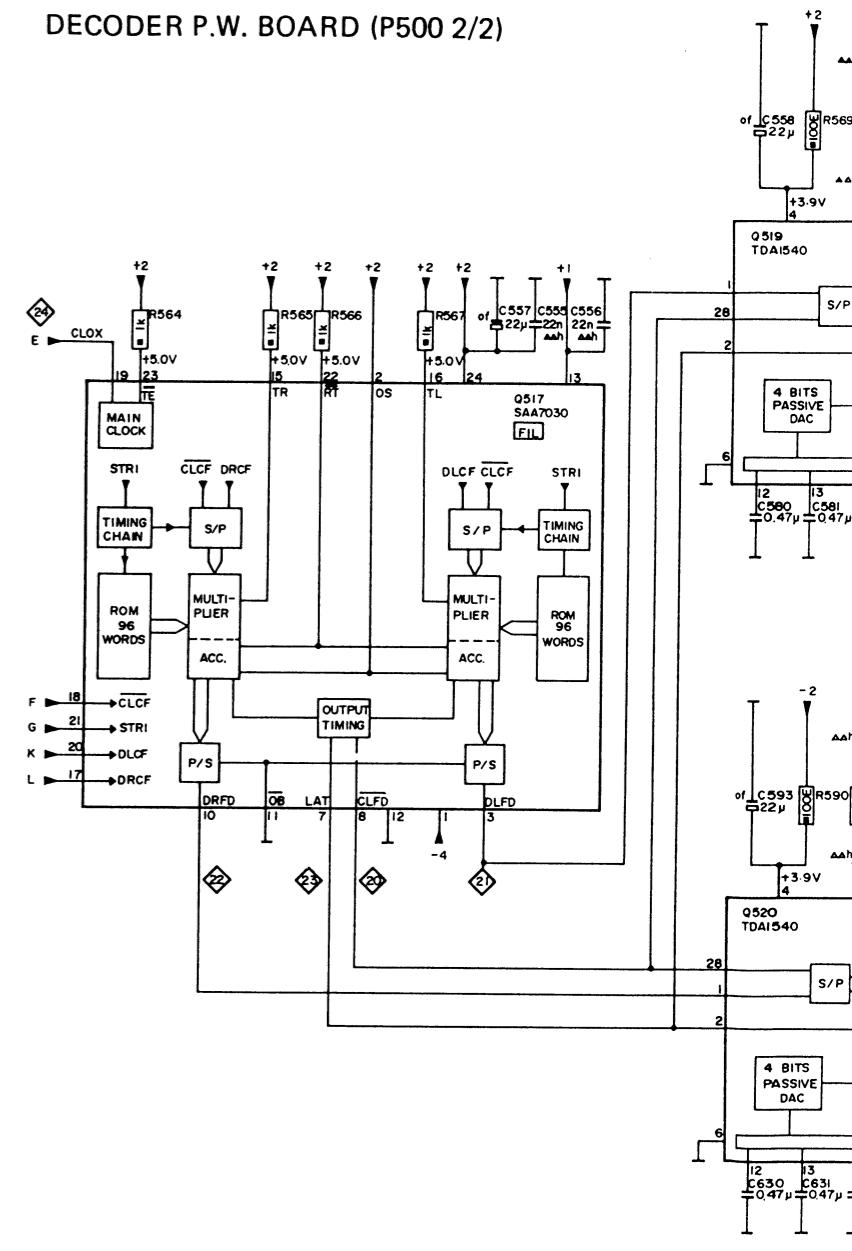
...V STOP/PLAY
...V PLAY ONLY
...V STOP ONLY

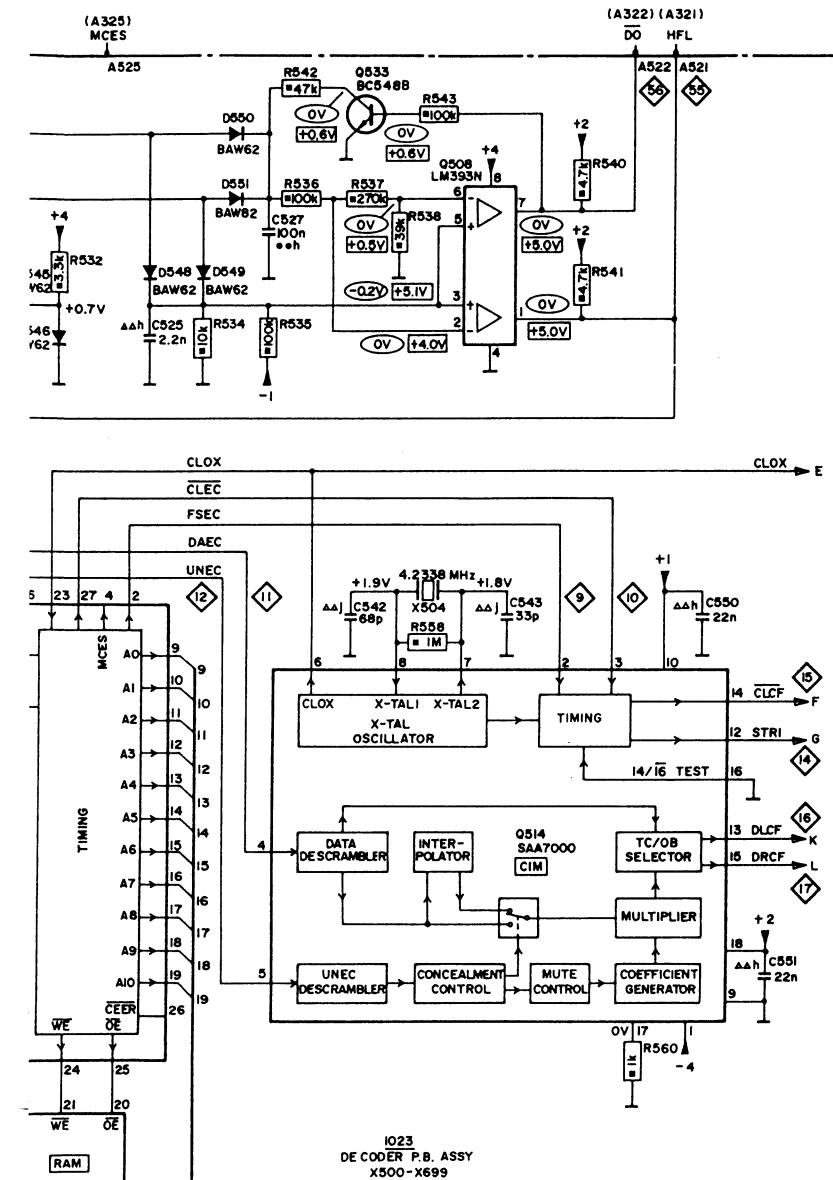


8.2 Decoder (P500) Schematic Diagram and Component Locations

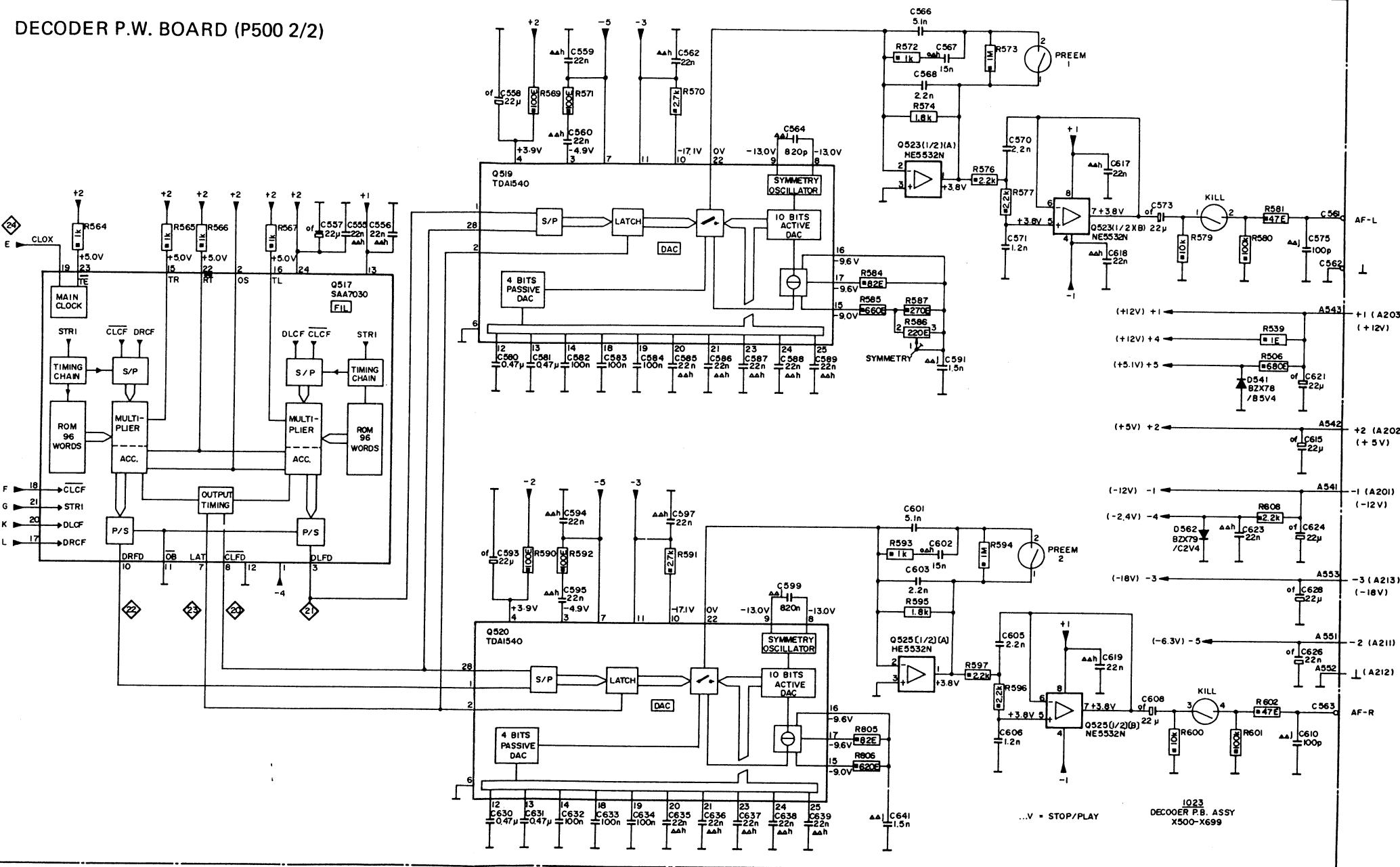


DECODER P.W. BOARD (P500 2/2)

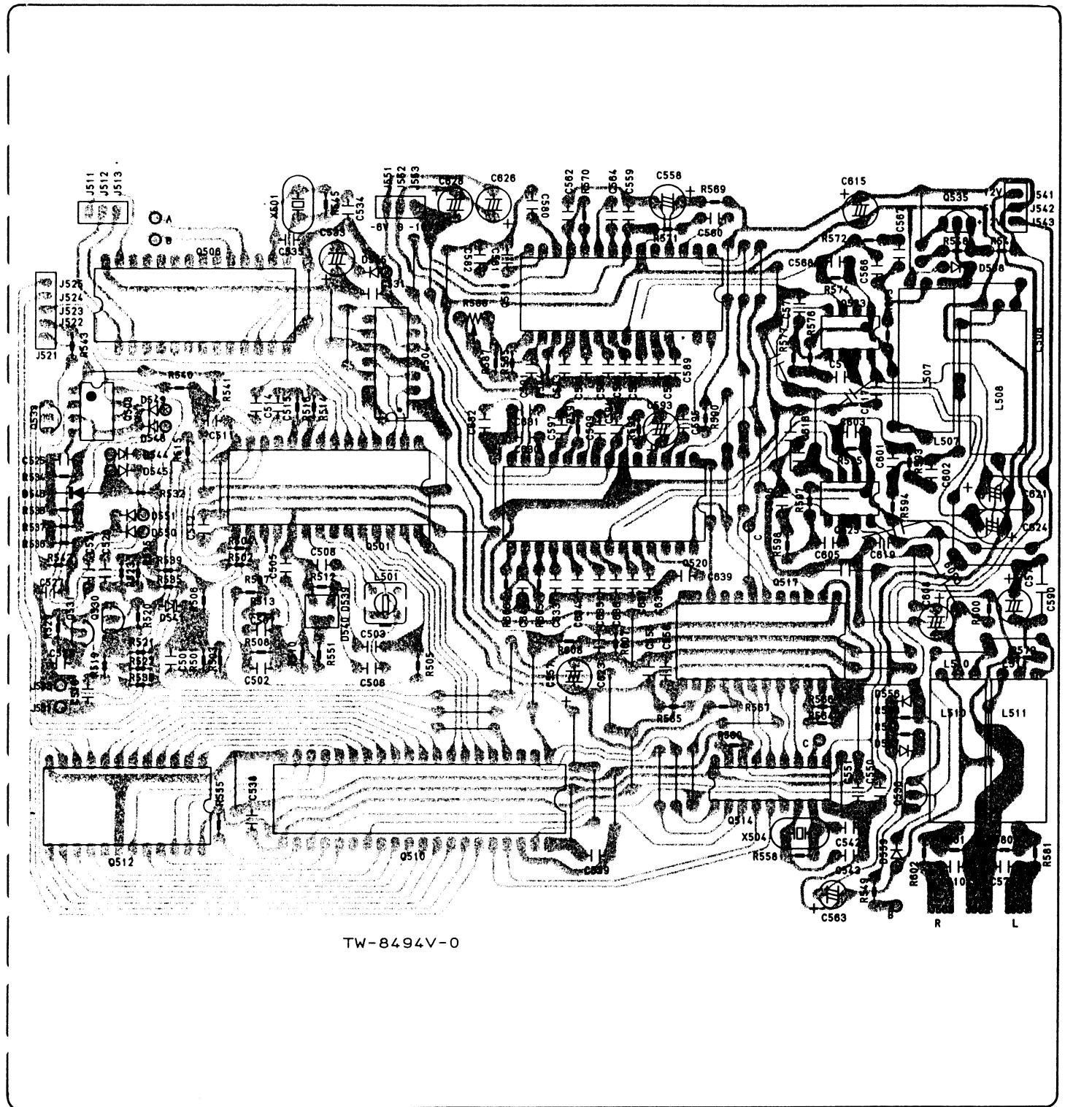




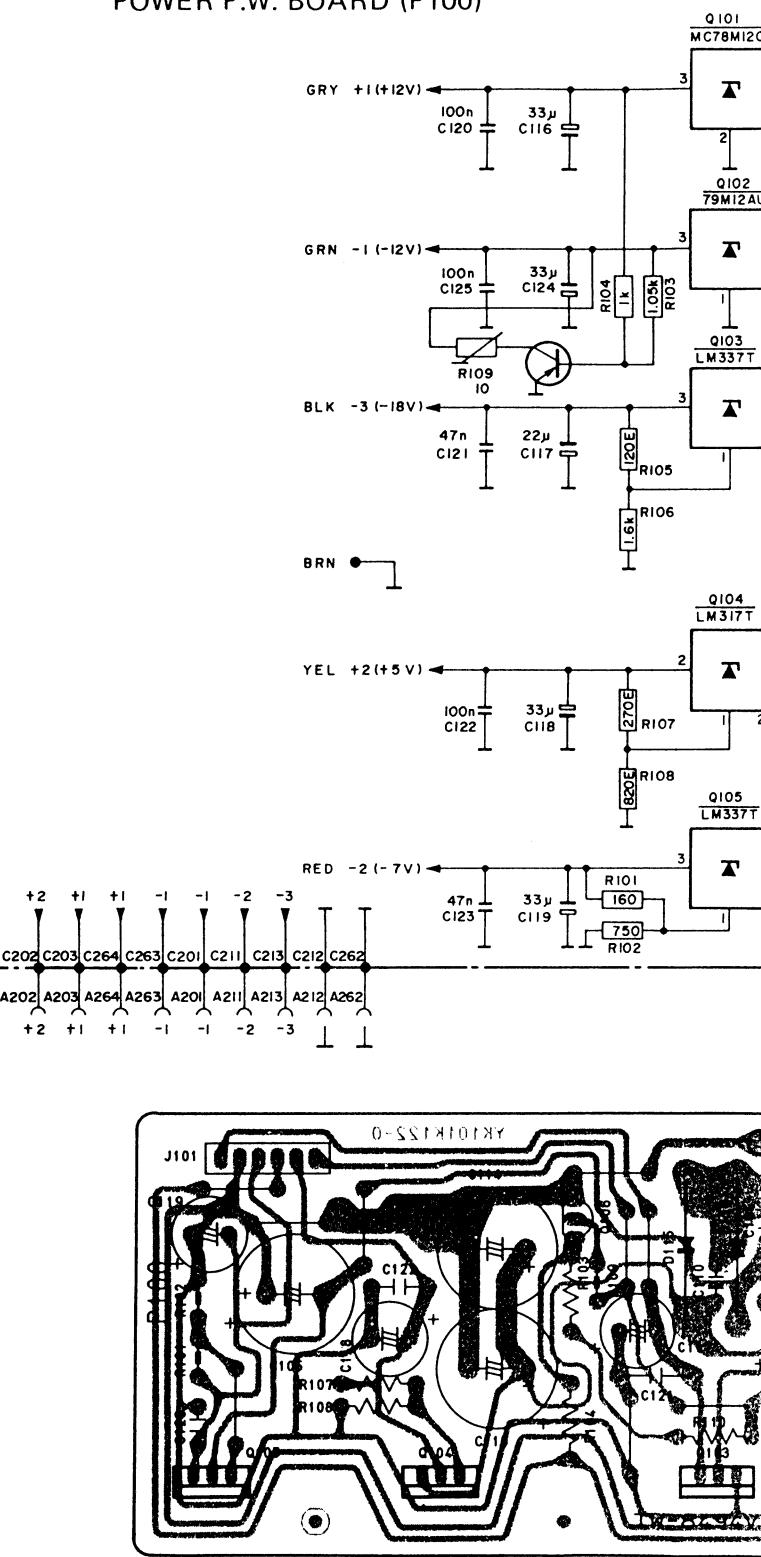
DECODER P.W. BOARD (P500 2/2)



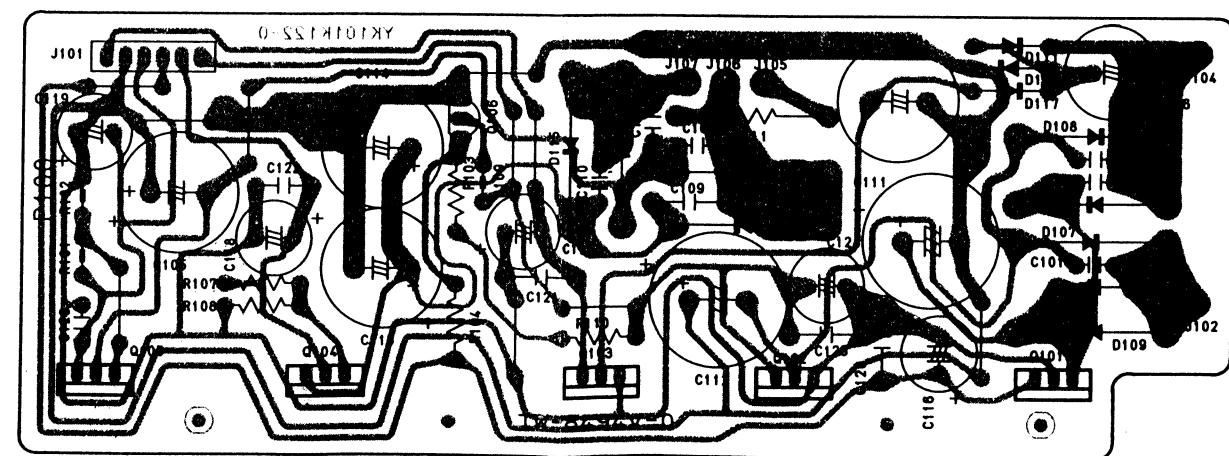
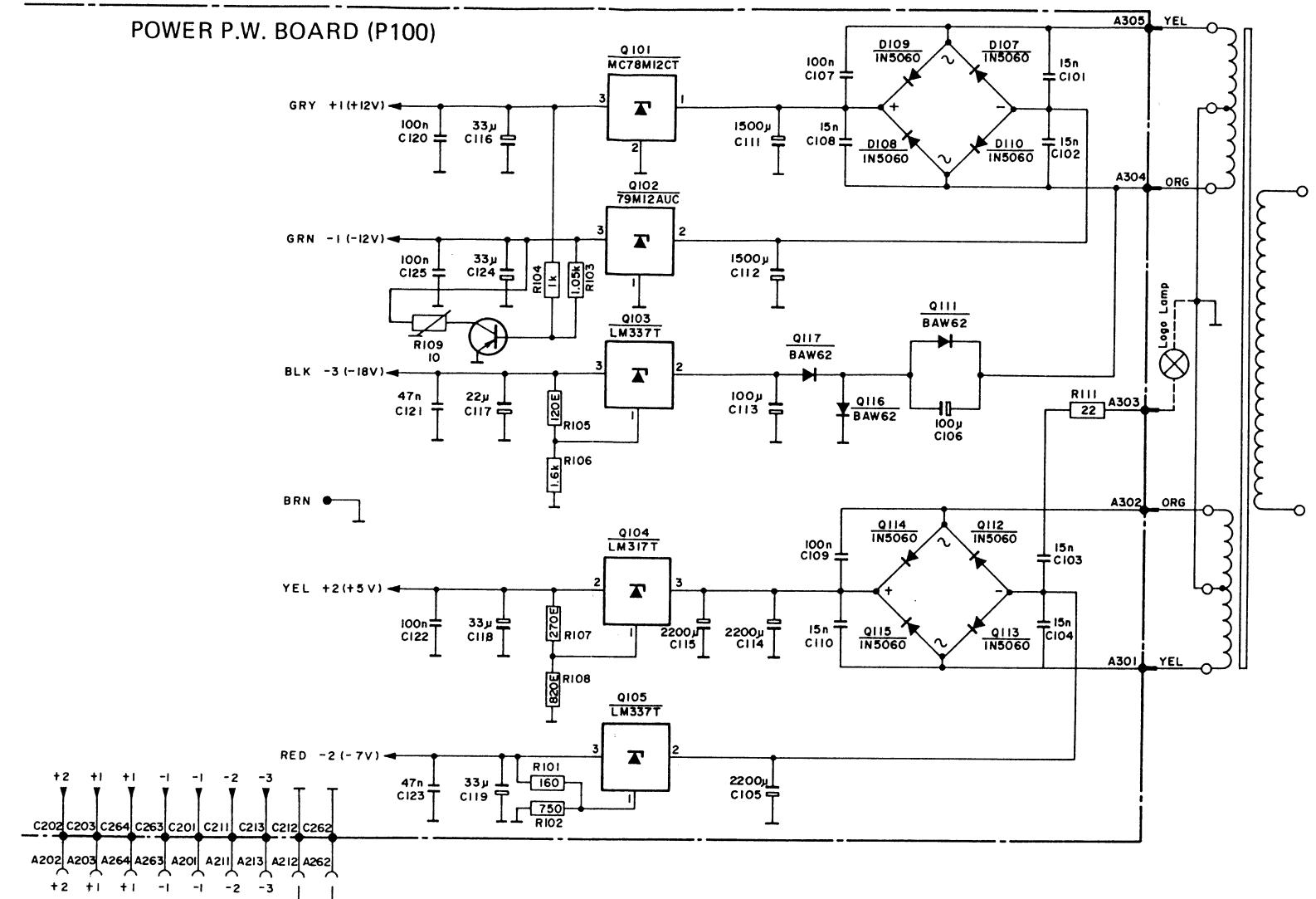
3 Power Supply (P100) Schematic Diagram and Component Locations



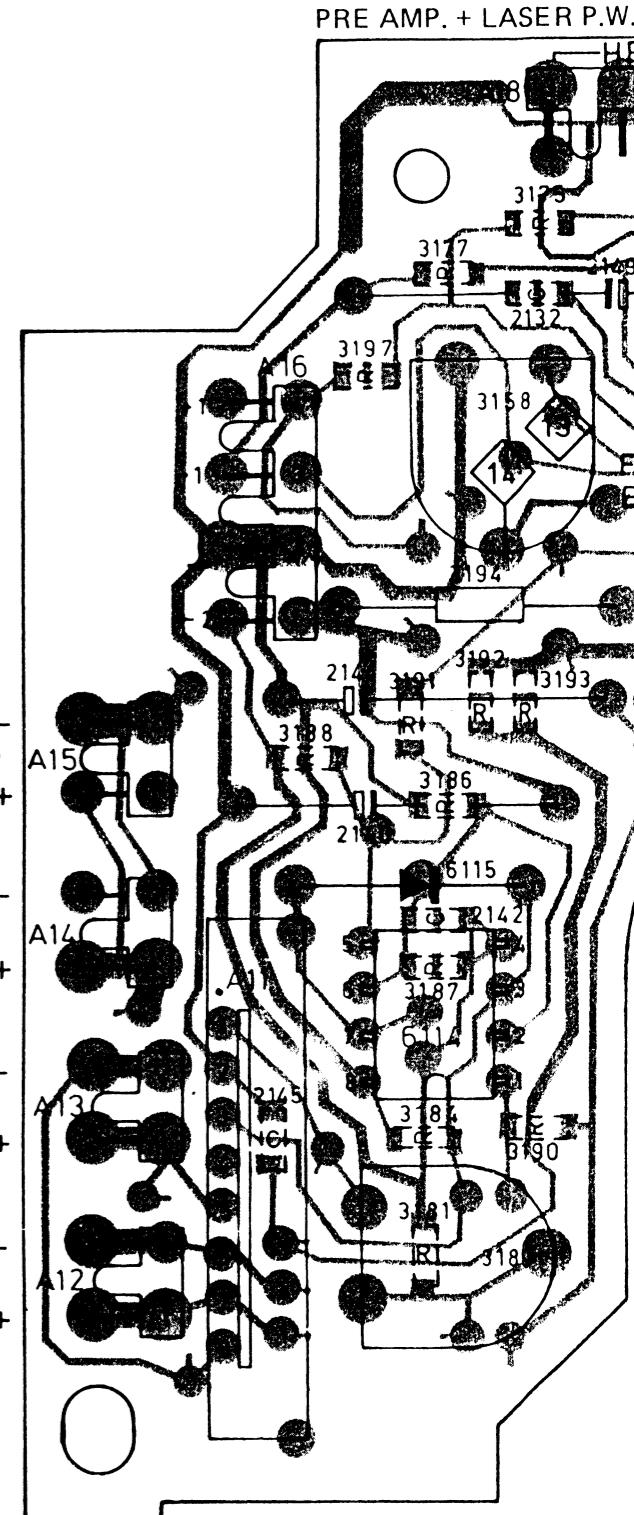
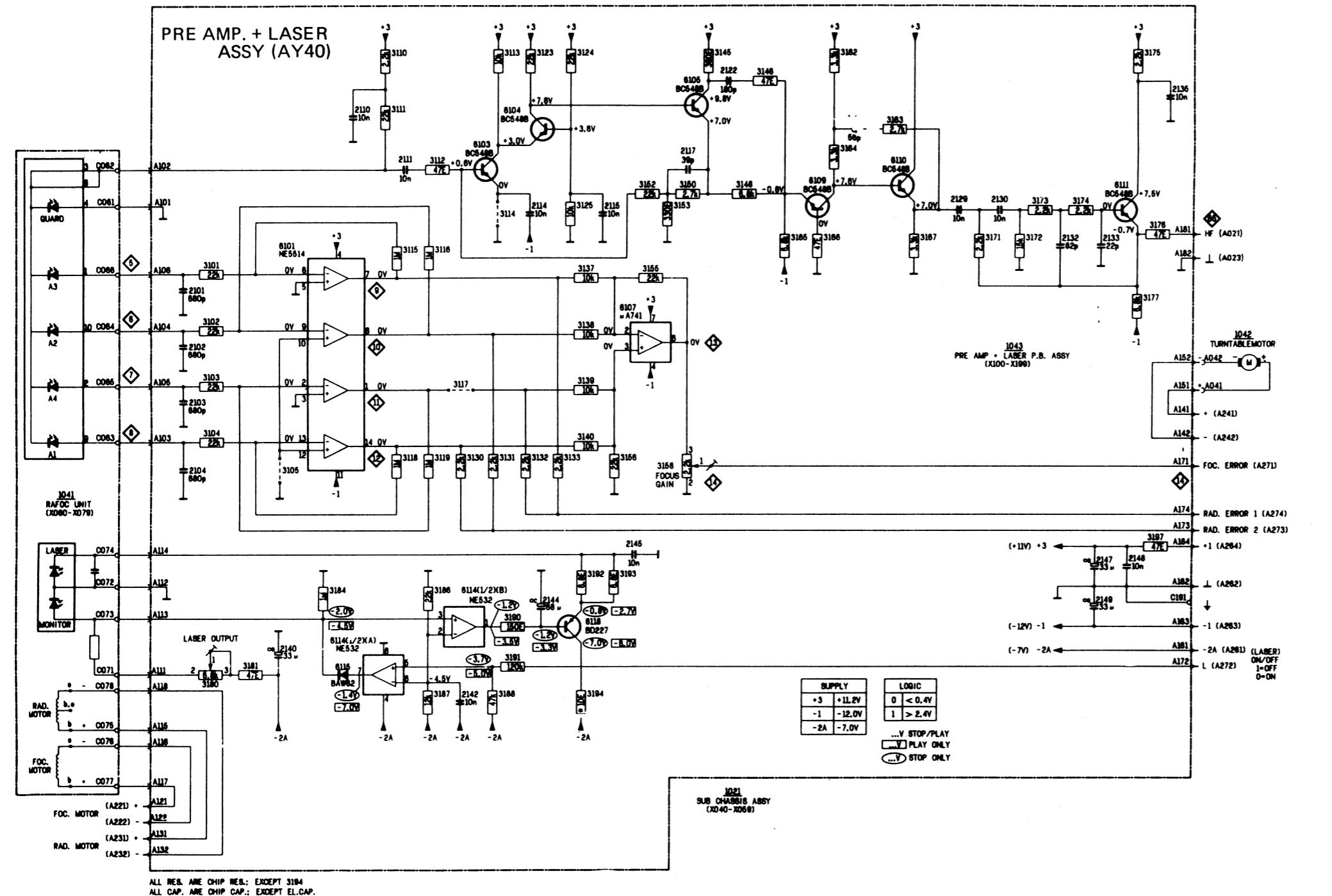
OWER P.W. BOARD (P100)

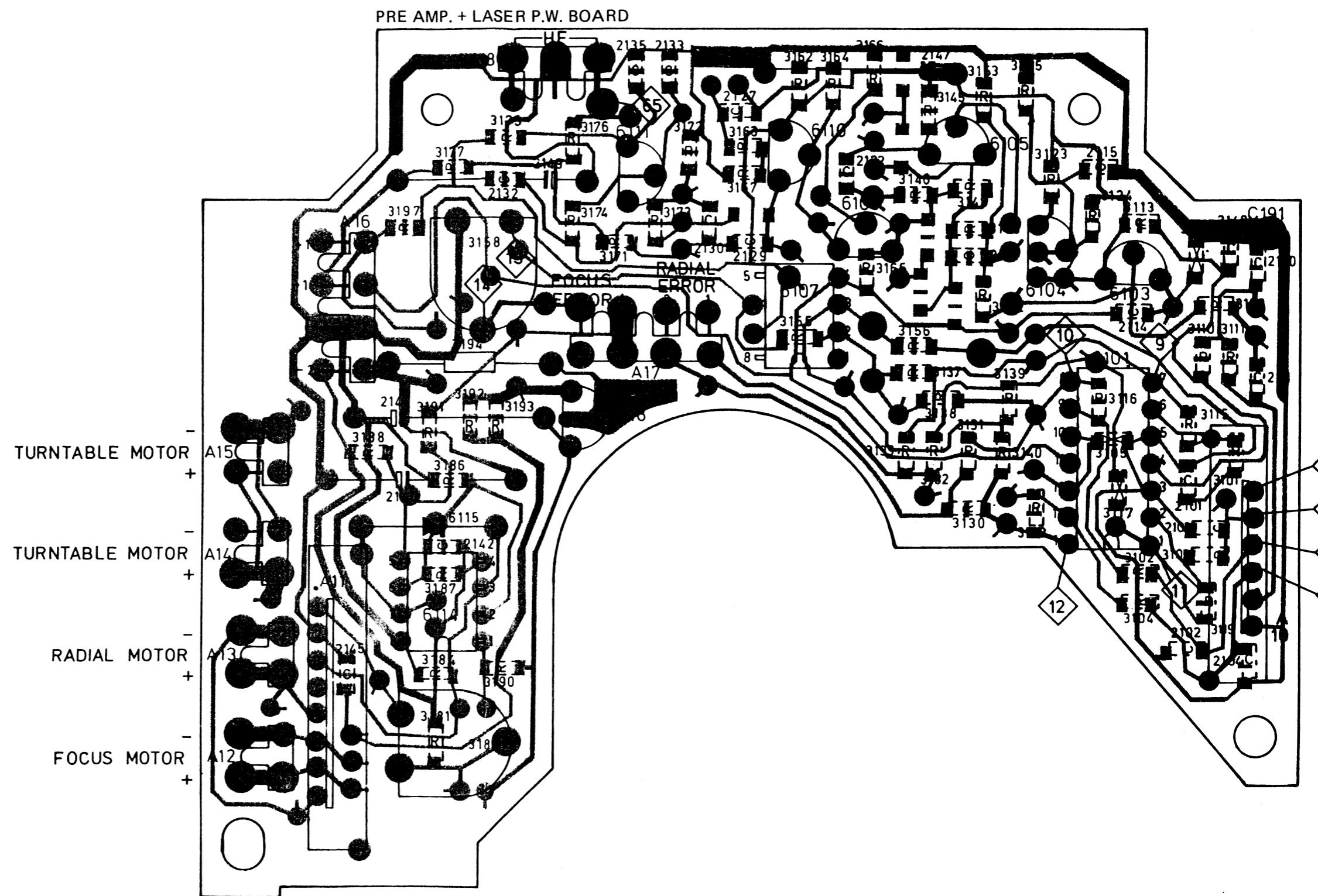
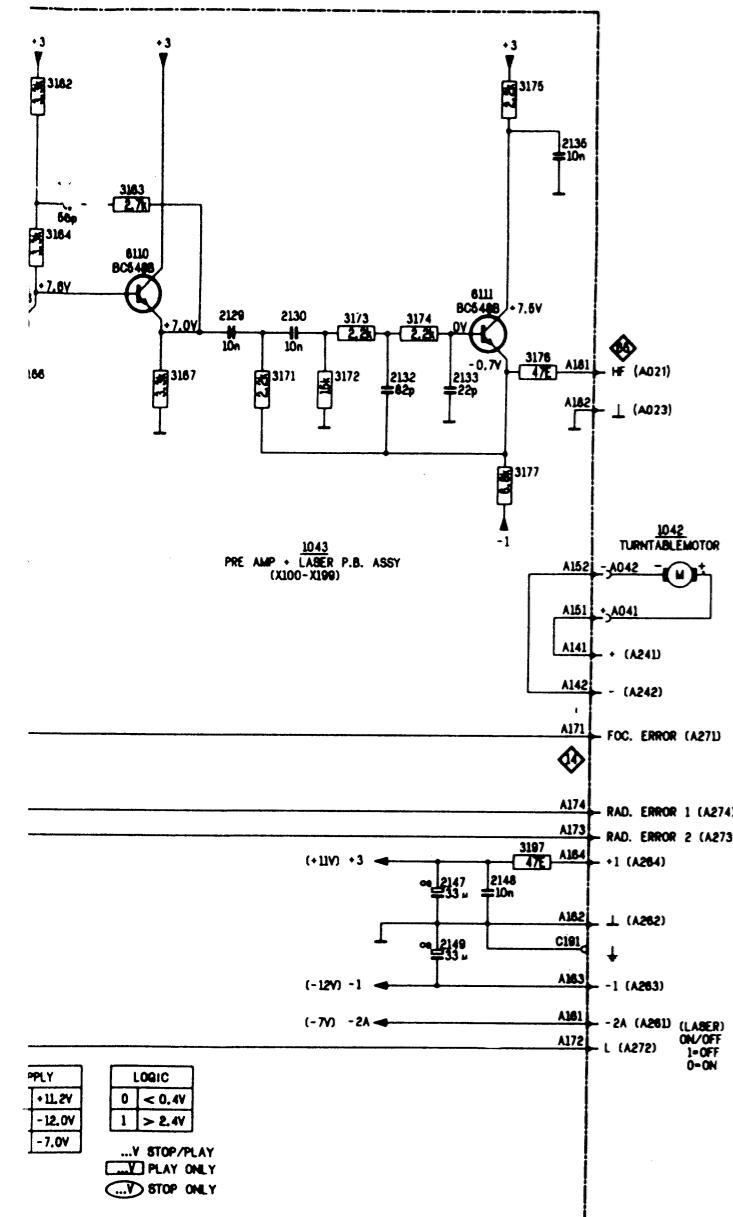


8.3 Power Supply (P100) Schematic Diagram and Component Locations



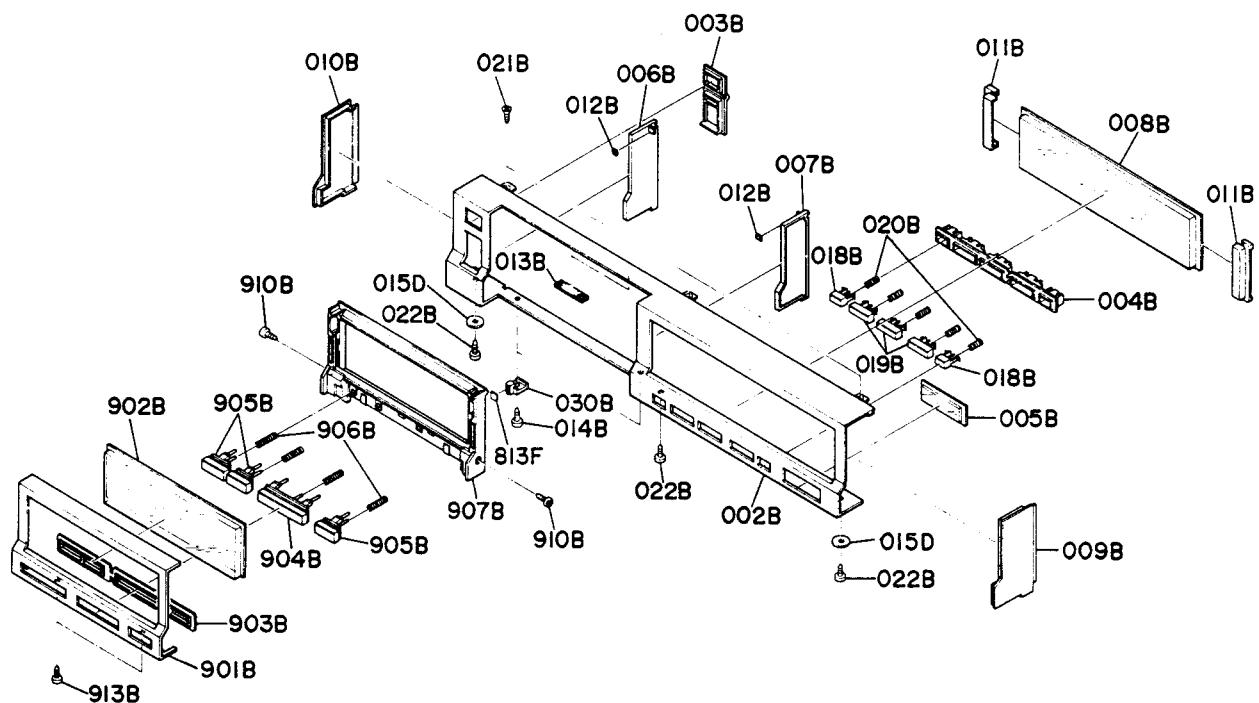
8.4 Pre Amp. + Laser (AY40) Schematic Diagram and Component Locations





9. EXPLODED VIEW AND PARTS LIST

- [C01-99] Front Panel

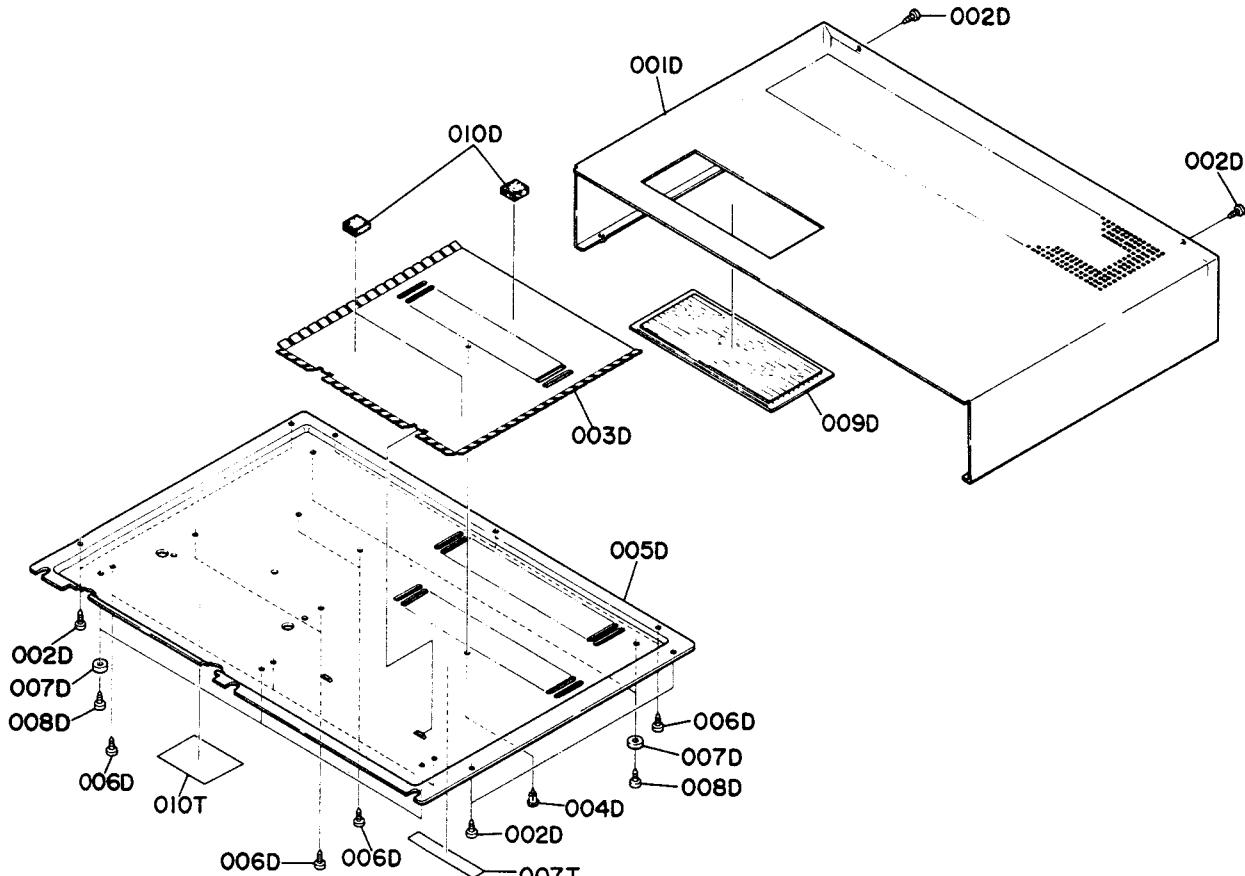


• (N): for Europe
• (F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
A	1	1	101K063400	Front Panel Assembly
002B	1	1	101K063010	Escutcheon, Front Panel
003B	1	1	101K259030	Bushing, Power
004B	1	1	101K259010	Bushing, Function
005B	1	1	101K251010	Badge
006B	1	1	101K201020	Divition, (L)
007B	1	1	101K201010	Divition, (R)
008B	1	1	101K158010	Window
009B	1	1	101K067010	Cap, (R)
010B	1	1	101K067020	Cap, (L)
011B	2	2	101K005010	Clammer
012B	2	2	101K056010	Buffer
013B	2	2	101K056030	Buffer

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
014B	2	2	51280308B0	B.H. Tapped Screw B3 x 8
018B	2	2	101K154010	Knob, Stop/Cancel
019B	3	3	101K154020	Knob
020B	5	5	101K115130	Spring, Knob
021B	2	2	51500306B0	F.H. Taprite Screw F3 x 6
022B	3	3	51280308B0	B.H. Tapped Screw B3 x 8
030B	2	2	101K114020	Stopper
901B	1	1	101K063020	Escutcheon, Door
902B	1	1	101K158030	Window, Door
903B	1	1	101K259060	Bushing
904B	1	1	101K154050	Knob, Play
905B	3	3	101K154060	Knob, FF/REV/Pause
906B	4	4	101K115130	Spring, Knob
907B	1	1	101K271040	Holder, Door
910B	2	2	51060305A9	P.H.M. Screw P3 x 5
913B	2	2	51280308B0	B.H. Tapped Screw B3 x 8
015D	2	2	54110149A0	Flat Washer, L
813F	2	2	101K056060	Buffer

• [C02-99] Lid (Top/Bottom)

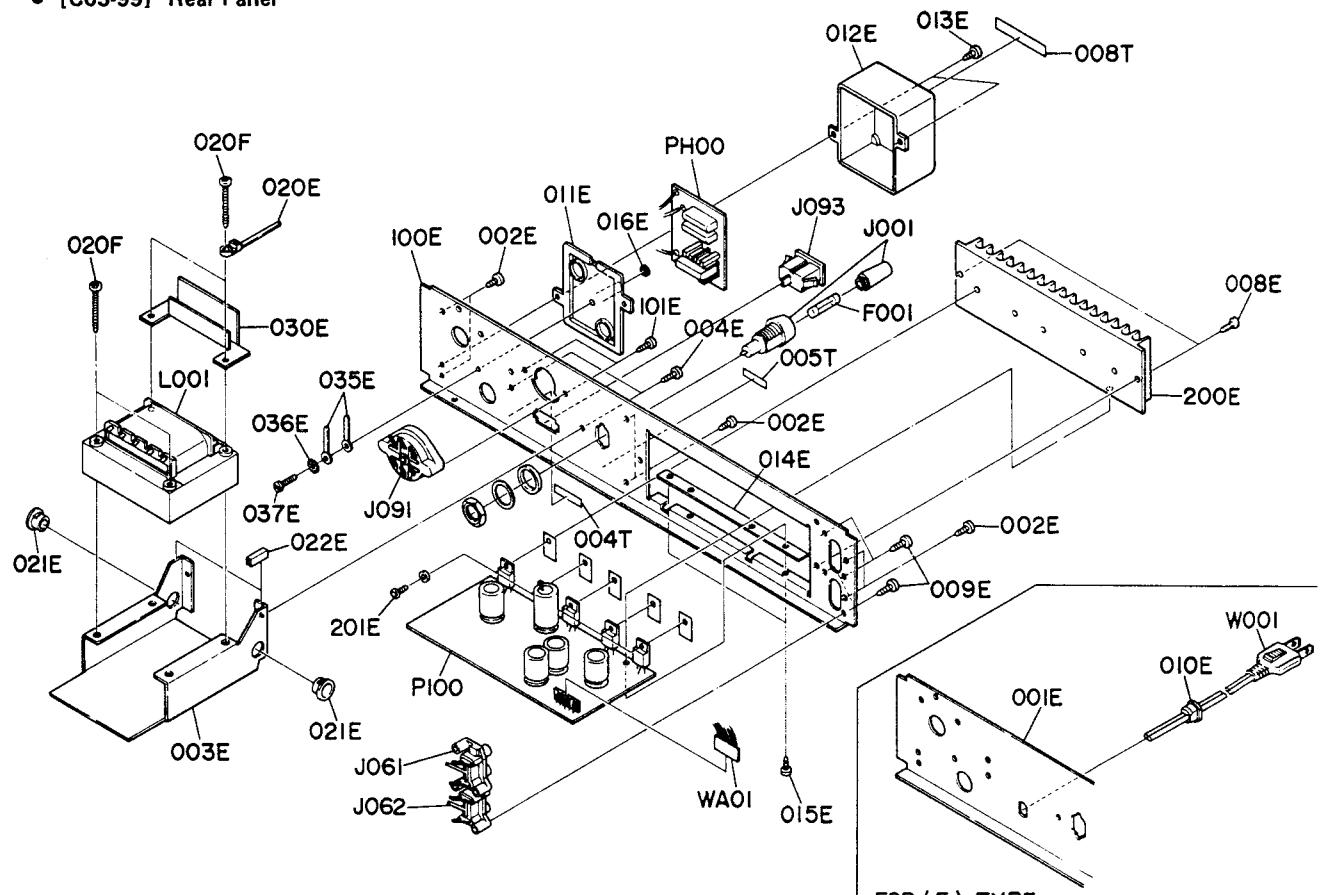


•(N): for Europe
•(F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
001D	1	1	101K257030	Lid, Top Cover
002D	6	6	51280305B0	B.H. Tapped Screw B3 x 5
003D	1	1	101K109030	Shield
004D	1	1	2912259020	Bushing
005D	1	1	101K257010	Lid, Bottom Cover
006D	10	10	51280305B0	B.H. Tapped Screw B3 x 5
007D	5	5	136T057010	Leg
008D	5	5	51280305B0	B.H. Tapped Screw B3 x 5
009D	1	1	101K158020	Window
010D	3	3	228H056010	Buffer

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
007T			2911861110	Label, Caution
010T	1	1	101K861030	Label, Laser Caution

- [C03-99] Rear Panel

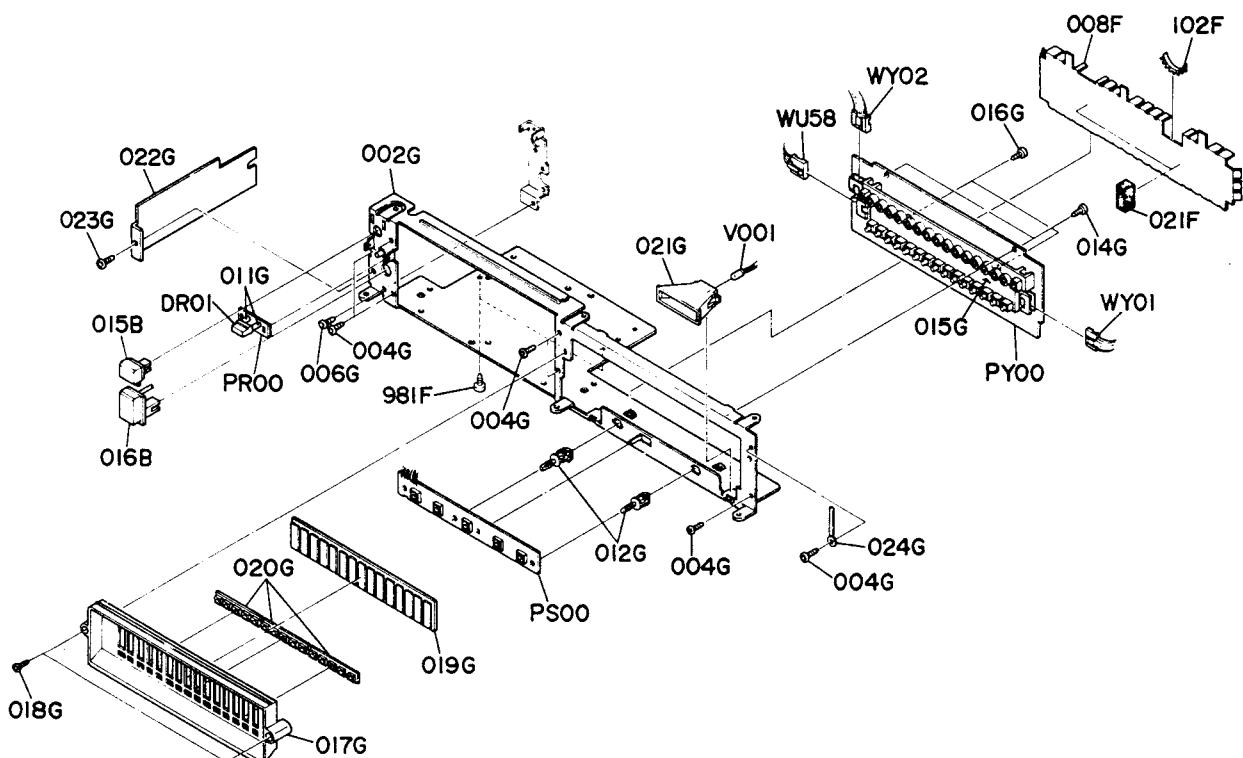


- (N): for Europe
- (F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION	
	N	F			
001E	1		101K053080	Cover, Rear Panel	
002E	6	6	51280305U0	B.H. Tapped Screw	B3 x 5
003E	1	1	101K160030	Bracket, Transformer	
004E	2	2	51280305U0	B.H. Tapped Screw	B3 x 5
008E	2	2	51280308U0	B.H. Tapped Screw	B3 x 8
009E	4	4	51280308U0	B.H. Tapped Screw	B3 x 8
010E		1	1455259030	Bushing, AC Cord	
011E	1	1	101K064020	Case, Filter; Bottom	
012E	1	1	101K064030	Case, Filter; Top	
013E	2	2	51280310U0	B.H. Tapped Screw	B3 x 10
014E	1	1	101K120030	Insulator	
015E	2	2	51280310U0	B.H. Tapped Screw	B3 x 10
016E	1	1	101K056020	Buffer	
020E	2	2	101K005030	Clamper	
021E	2	2	101K259080	Bushing	
022E	2	2	101K259090	Bushing	
030E	1		101K120040	Insulator	
035E	2	2	4220005030	Clamper	
036E	1	1	54050300R0	T.L. Washer, OR	
037E	1	1	51280308B0	B.H. Tapped Screw	B3 x 8
100E	1		101K053050	Cover, Rear Panel	
101E	2		51280308U0	B.H. Tapped Screw	B3 x 8
200E	1	1	101K267020	Heatsink	
201E	5	5	51100308S9	B.H.M. Screw	B3 x 8

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION		
	N	F				
020F	4	4	51280435U0	B.H. Tapped Screw	B4 x 35	
004T	1	1	2112265010	Indicator		
005T	1		4581861010	Label		
008T	1	1	2991861010	Label		
△F001	1		FS10025800	Fuse	250mA	250V
△F001		1	FS10100600	Fuse	1A	250V
±J001	1		YJ08000290	Jack, Fuse Holder		
±J001		1	YT08000300	Jack, Fuse Holder		
J061	1	1	YT02020320	Terminal, RCA Pin (2P)		
J062	1	1	YT02020370	Terminal, RCA Pin (2P)		
△J091	1		BY05080030	Voltage Selector		
△J093	1		YP04000580	Plug, AC Inlet		
△L001	1		TS17627020	Power Transformer		
△L001		1	TS17627010	Power Transformer		
△W001		1	YC01800190	A.C. Power Cord		
WA01	1	1	YB00070040	Connective Cord, (6P)		

• [P01-99] Front Chassis

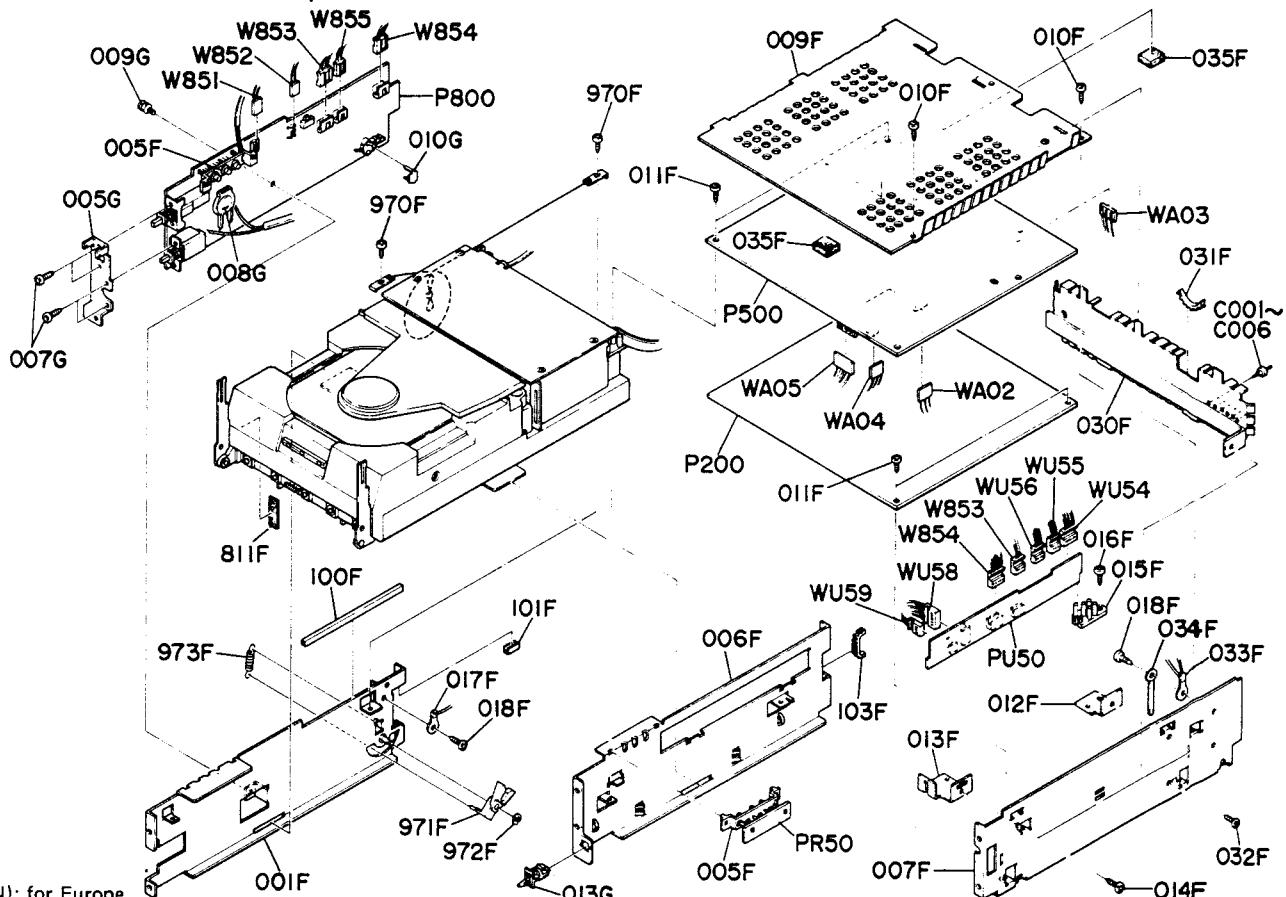


•(N): for Europe
•(F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
015B	1	1	101K154040	Knob, Open/Close
016B	1	1	101K154030	Knob, Power
008F	1	1	101K109040	Shield, Front
021F	2	2	2818056030	Buffer
102F	1	1	101K259110	Bushing
981F	2	2	51280305B0	B.H. Tapped Screw B3 x 5
002G	1	1	101K105010	Chassis, Front
004G	6	6	51280305B0	B.H. Tapped Screw B3 x 5
006G	1	1	51280305B0	B.H. Tapped Screw B3 x 5
011G	1	1	101K118020	Spacer
012G	2	2	3896101010	Support
014G	2	2	51280305B0	B.H. Tapped Screw B3 x 5
015G	1	1	101K271010	Holder, LED
016G	2	2	51500306B0	F.H. Tapped Screw F3 x 6
017G	1	1	101K280010	Housing, Display
018G	2	2	51280308B0	B.H. Tapped Screw B3 x 8

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
019G	1	1	101K265010	Indicator, Display
020G	3	3	101K265020	Indicator, Display
021G	1	1	101K274010	Reflector, Lamp
022G	1	1	101K120020	Insulator
023G	1	1	51280308B0	B.H. Tapped Screw B3 x 8
024G	1	1	4220005030	Clamper
V001	1	1	IN10080500	Lamp 60mA 8V
DR01	1	1	HI10032030	L.E.D. SLP171D
WU58	1	1	YB00250170	Connective Cord, (6P)
WY01	1	1	YB00240050	Connective Cord, (6P)
WY02	1	1	YB00150340	Connective Cord, (6P)

- [P02-99] Chassis Assembly and General Parts

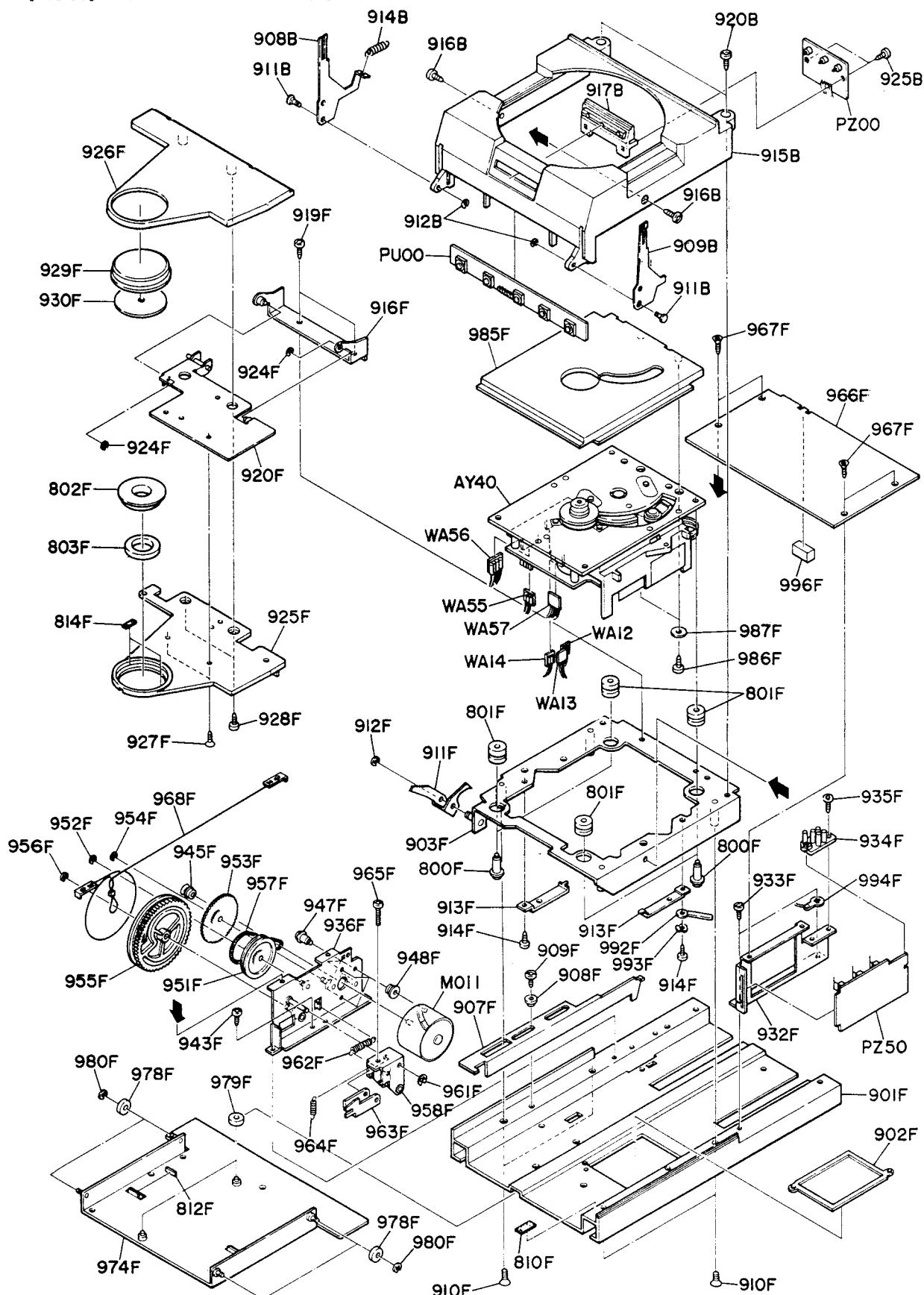


- (N): for Europe
- (F): for Japan

REF. DESIG.	Q'TY N	Q'TY F	PART NO.	DESCRIPTION
001F	1	1	101K105400	Chassis Assembly, (L)
005F	2	2	101K271080	Holder, LED
006F	1	1	101K105020	Chassis, Center
007F	1	1	101K105030	Chassis, (R)
009F	1	1	101K109020	Shield, Top
010F	2	2	5128030580	B.H. Tapped Screw B3 x 5
011F	4	4	5128030580	B.H. Tapped Screw B3 x 5
012F	1	1	101K160150	Bracket
013F	1	1	101K160160	Bracket
014F	2	2	5128030580	B.H. Tapped Screw B3 x 5
015F	1	1	101K271050	Holder
016F	1	1	5128030580	B.H. Tapped Screw B3 x 5
017F	1	1	62030039W0	Lug, Earth
018F	2	2	5128030580	B.H. Tapped Screw B3 x 5
030F	1	1	101K109070	Shield, Rear
031F	1	1	101K259110	Bushing
032F	1	1	5128030580	B.H. Tapped Screw B3 x 5
033F	1	1	62030049W0	Lug, Earth
034F	1	1	4220005030	Clamper
035F	3	3	228H056010	Buffer
100F	1	1	101K259100	Bushing
101F	1	1	101K259090	Bushing
103F	1	1	101K259110	Bushing
811F	1	1	101K056050	Buffer
970F	2	2	5128030580	B.H. Tapped Screw B3 x 5
971F	1	1	101K002050	Arm, Lock
972F	1	1	64000300R0	RG Ring, E Type
973F	1	1	101K115080	Spring, Lock Arm

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
005G	1	1	101K160050	Bracket, Power Switch
007G	4	4	51100305A9	B.H.M. Screw B3 x 5
008G	1	1	403H120010	Insulator
009G	1	1	101K118010	Spacer
010G	1	1	101K271070	Holder
013G	1	1	203H101010	Support
C001 {	6	6	DC18202060	Feedthru Cap. 2000pF
C006				
W851	1	1	YB00150360	Connective Cord, (2P)
W852	1	1	YB00500310	Connective Cord, (2P)
W853	1	1	YB00700180	Connective Cord, (4P)
W854	1	1	YB00650030	Connective Cord, (5P)
W855	1	1	YB00580010	Connective Cord, (3P)
WA02	1	1	YB00180160	Connective Cord
WA03	1	1	YB00170060	Connective Cord
WA04	1	1	YB00170070	Connective Cord
WA05	1	1	YB00170080	Connective Cord
WU51	1	1	YB00380030	Connective Cord, (8P)
WU52	1	1	YB00380030	Connective Cord, (8P)
WU53	1	1	YB00380030	Connective Cord, (8P)
WU54	1	1	YB00380040	Connective Cord, (6P)
WU55	1	1	YB00300640	Connective Cord, (3P)
WU56	1	1	YB00400340	Connective Cord, (4P)
WU58	1	1	YB00250170	Connective Cord, (6P)
WU59	1	1	YB00130080	Connective Cord, (3P)

- [P03-99] Mecha Case and General Parts

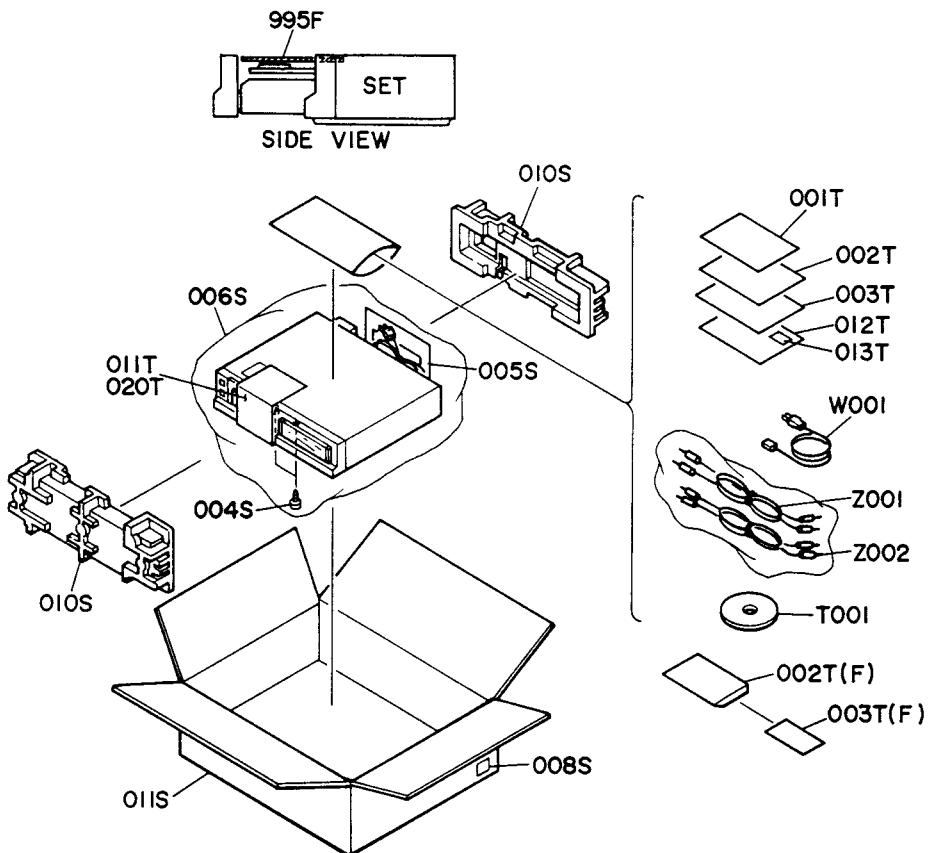


•(N): for Europe
•(F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
908B	1	1	101K160120	Bracket, Door (L)
909B	1	1	101K160130	Bracket, Door (R)
911B	2	2	101K112120	Shaft, Door
912B	2	2	64000300R0	RG Ring, E Type
914B	1	1	101K115120	Spring
915B	1	1	101K064010	Case, Mecha
916B	2	2	51100308A9	B.H.M. Screw B3 x 8
917B	1	1	101K160020	Bracket, LED
920B	2	2	51280308B0	B.H. Tapped Screw B3 x 8
925B	2	2	51280308B0	B.H. Tapped Screw B3 x 8
800F	4	4	101K112170	Shaft
801F	4	4	101K259050	Bushing, Mecha
802F	1	1	101K353010	Ring
803F	1	1	101K252010	Pad
810F	1	1	101K056040	Buffer
812F	1	1	101K056050	Buffer
814F	2	2	101K056070	Buffer
901F	1	1	101K051020	Guide
902F	1	1	101K067040	Cap
903F	1	1	101K160420	Bracket Assembly, Mecha
907F	1	1	101K354020	Lever, Door Open
908F	1	1	101K055010	Collar
909F	1	1	51280308B0	B.H. Tapped Screw B3 x 8
910F	4	4	51040308A9	F.H.M. Screw F3 x 8
911F	1	1	101K002040	Arm, Door Open
912F	1	1	64000300R0	RG Ring, E Type
913F	2	2	101K104020	Retainer
914F	2	2	51280305B0	B.H. Tapped Screw B3 x 5
916F	1	1	101K104400	Retainer Assembly
919F	2	2	51280305B0	B.H. Tapped Screw B3 x 5
920F	1	1	101K160400	Bracket, Assembly
924F	2	2	64000300R0	RG Ring, E Type
925F	1	1	101K271030	Holder, Pressure Ring
926F	1	1	101K053070	Cover, Pressure Ring
927F	2	2	51040305A9	F.H.M. Screw F3 x 5
928F	2	2	51280308B0	B.H. Tapped Screw B3 x 8
929F	1	1	101K067030	Cap, Pressure Ring
930F	1	1	101K263020	Brake
932F	1	1	101K160110	Bracket
933F	2	2	51280308B0	B.H. Tapped Screw B3 x 8
934F	1	1	101K271050	Holder
935F	1	1	51280308B0	B.H. Tapped Screw B3 x 8
936F	1	1	101K160410	Bracket Assembly, Motor
943F	2	2	51280308B0	B.H. Tapped Screw B3 x 8
945F	1	1	101K262020	Pulley, Motor
947F	3	3	4367112150	Shaft, Motor
948F	3	3	313Y259010	Bushing
951F	1	1	101K262010	Pulley, Idler
952F	1	1	64001500R0	RG Ring, E Type
953F	1	1	101K058010	Gear, Idler
954F	1	1	64001500R0	RG Ring, E Type
955F	1	1	101K058030	Gear, Drive
956F	1	1	64000200R0	RG Ring, E Type
957F	1	1	101K264010	Belt, Drive
958F	1	1	101K002400	Arm, Drive Assembly

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
961F	1	1	64000300R0	RG Ring, E Type
962F	1	1	101K115090	Spring
963F	1	1	101K002030	Arm
964F	1	1	101K115070	Spring
965F	1	1	51100315A9	B.H.M. Screw B3 x 15
966F	1	1	101K257020	Lid, Mecha
967F	4	4	51500306B0	F.H. Taprite Screw F3 x 6
968F	1	1	101K125500	Joint, (K)
974F	1	1	101K051400	Guide Assembly, Rai.
978F	4	4	101K358010	Roller, B
979F	2	2	101K358020	Roller, A
980F	4	4	64000200R0	RG Ring, E Type
985F	1	1	101K053060	Cover, Mecha
986F	2	2	51380205A0	P.H. Tapped Screw P2 x 5
987F	2	2	54022601A0	Flat Washer, P.
992F	1	1	4220005020	Clamper
993F	1	1	54050300R0	T.L. Washer, OR
994F	1	1	62030039W0	Lug, Earth
996F	1	1	2818056030	Buffer
AY40	1	1	AY101K0040	Sub Chassis Assembly
M011	1	1	MM01500020	D.C. Motor, Drive
WA12	1	1	YB00209010	Connective Cord, (2P)
WA13	1	1	YB00219010	Connective Cord, (2P)
WA14	1	1	YB00229010	Connective Cord, (2P)
WA55	1	1	YB00279010	Connective Cord, (3P)
WA56	1	1	YB00259010	Connective Cord, (4P)
WA57	1	1	YB00279020	Connective Cord, (4P)
	1	1	QR11718120	Pre-Amp. + Laser P.W. Board Assembly

● [H01-99] Packing Materials



● (N): for Europe
● (F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
004S	2	2	51400350Y0	B.H. Tapped Screw B3 x 50
005S		1	2864804010	Sleeve
006S	1	1	9090808030	Polyethylene Sheet
008S	4		9526019060	Serial No. Card
008S	4		9526019040	Serial No. Card
010S	1	1	101K809030	Cushion, Front/Rear
011S	1	1	101K801030	Packing Case
001T	1		101K851310	Instructions
001T		1	101K851110	Instructions
002T	1		101K851320	Instructions, Spec
002T		1	9631000130	Guarantee Card
003T	1		101K856010	Circuit Diagram
003T		1	128T854010	Guarantee Card
011T	1		101K861040	Label, Transportation
012T		1	9611000050	User's Card
013T	1		9540000010	License
020T		1	101K861050	Label, Transportation

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
T001	1	1	UD01200020	Disc, Demo
W001	1		ZC01805010	A.C. Power Cord
Z001	1	1	ZD01000240	Connective Cord, Audio Out
Z002	1	1	ZD01000220	Connective Cord, Remocon
995F	1	1	101K269010	Protector

10. ELECTRICAL PARTS LIST

•(N): for Europe
•(F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION	REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F				N	F		
P100	1	1	YK101K1220	P100-POWER SUPPLY CIRCUIT BOARD	J101	1	1	YP06002420	P100-MISCELLANEOUS
	1		ZZ101K8220	P.W. Board, Power Supply					Plug, (6P)
				P.W. Board Assembly	WA01	1	1	YB00070040	Connective Cord, (6P)
C101	1	1	DK18153300	P100-CAPACITORS	P200	1	1	YG101K0010	P200-SERVO CIRCUIT BOARD
C102	1	1	DK18153300	Ceramic 0.015μF				ZZ101K8010	P.W. Board, Servo
C103	1	1	DK18153300	Ceramic 0.015μF					P.W. Board Assembly
C104	1	1	DK18153300	Ceramic 0.015μF	C201	1	1	DA17103010	P200-CAPACITORS
C105	1	1	EA22801630	Elect 2200μF 16V	C203	1	1	DA17103010	Ceramic 0.01μF ±20%
C106	1	1	OA47702510	Elect 470μF 25V	C204	1	1	DF15104350	Ceramic 0.01μF ±20%
C107	1	1	DF17104350	Film 0.1μF ±20%	C205	1	1	DF74273010	Film 0.1μF ±5%
C108	1	1	DK18153300	Ceramic 0.015μF	C207	1	1	EA33601630	Film 0.027μF ±2%
C109	1	1	DF17104350	Film 0.1μF ±20%	C208	1	1	DA17103010	Elect 33μF 16V
C110	1	1	DK18153300	Ceramic 0.015μF	C209	1	1	EA10505030	Ceramic 0.01μF ±20%
C111	1	1	OA33802510	Elect 3300μF 25V	C210	1	1	DD15270370	Elect 1μF 50V
C112	1	1	OA33802510	Elect 3300μF 25V	C211	1	1	DF15104350	Ceramic 27pF ±5%
C113	1	1	OA47702510	Elect 470μF 25V	C212	1	1	DK16331300	Film 0.1μF ±5%
C114	1	1	OA33801610	Elect 3300μF 16V	C213	1	1	DD15270370	Ceramic 330pF ±10%
C115	1	1	OA33801610	Elect 3300μF 16V	C214	1	1	EQ22601630	Elect 22μF 16V
C116	1	1	OA47601610	Elect 47μF 16V	C215	1	1	DF15154350	Film 0.15μF ±5%
C117	1	1	EA22602530	Elect 22μF 25V	C216	1	1	DA17103010	Ceramic 0.01μF ±20%
C118	1	1	EA33601630	Elect 33μF 16V	C217	1	1	EQ22601630	Elect 22μF 16V
C119	1	1	EA33601630	Elect 33μF 16V	C218	1	1	DF15103350	Film 0.01μF ±5%
C120	1	1	DF16104510	Film 0.1μF ±10%	C219	1	1	DF15473350	Film 0.047μF ±5%
C121	1	1	DF16104510	Film 0.1μF ±10%	C220	1	1	DA16331010	Ceramic 330pF ±10%
C122	1	1	DF16104510	Film 0.1μF ±10%	C221	1	1	DA16331010	Ceramic 330pF ±10%
C123	1	1	DK18473320	Ceramic 0.047μF	C222	1	1	DK16331300	Ceramic 330pF ±10%
C124	1	1	OA47601610	Elect 47μF 16V	C223	1	1	DF15104350	Film 0.1μF ±5%
C125	1	1	DF16104510	Film 0.1μF ±10%	C224	1	1	DF15104350	Film 0.047μF ±5%
				P100-RESISTORS (All Resistors are ±5% and 1/4W)	C225	1	1	DF15104350	Film 0.047μF ±5%
R101	1	1	GD05121140	120Ω	C226	1	1	DF15474350	Ceramic 330pF ±10%
R102	1	1	GD05561140	560Ω	C227	1	1	DA16331010	Film 0.47μF ±5%
R103	1	1	GD05102140	1KΩ	C228	1	1	DF15104350	Ceramic 0.01μF ±20%
R104	1	1	GD05102140	1KΩ	C229	1	1	DA17103010	Film 5600pF ±2%
R107	1	1	GD05271140	270Ω	C230	1	1	DF15333350	Film 0.033μF ±5%
R108	1	1	GD05821140	820Ω	C231	1	1	DF74562010	Film 5600pF ±2%
R109	1	1	HH00001490	Thermistor	C232	1	1	DF55391090	Film 390pF ±5%
R110	1	1	GD05470140	47Ω	C233	1	1	EA33601630	Elect 33μF 16V
R111	1	1	GA05220020	22Ω 2W	C234	1	1	EA33601630	Elect 33μF 16V
				P100-SEMICONDUCTORS	C235	1	1	DF15104350	Film 0.47μF ±5%
D107	1	1	HD20009290	Diode S2V20	C236	1	1	DF74562010	Ceramic 0.01μF ±20%
D108	1	1	HD20009290	Diode S2V20	C237	1	1	DF15333350	Film 5600pF ±2%
D109	1	1	HD20009290	Diode S2V20	C238	1	1	DF74562010	Film 0.033μF ±5%
D110	1	1	HD20009290	Diode S2V20	C239	1	1	DF55391090	Film 5600pF ±2%
D111	1	1	HD20003210	Diode 1S2471	C240	1	1	EA33601630	Elect 33μF 16V
D112	1	1	HD20009290	Diode S2V20	C241	1	1	EA33601630	Elect 33μF 16V
D113	1	1	HD20009290	Diode S2V20	C242	1	1	DF15474350	Film 0.47μF ±5%
D114	1	1	HD20009290	Diode S2V20	C243	1	1	DF15474350	Film 0.47μF ±5%
D115	1	1	HD20009290	Diode S2V20	C244	1	1	DF55681090	Film 680pF ±5%
D116	1	1	HD20003210	Diode 1S2471	C245	1	1	DF74682010	Film 680pF ±2%
D117	1	1	HD20003210	Diode 1S2471	C246	1	1	DF74682010	Film 680pF ±2%
					C247	1	1	DF74682010	Film 680pF ±2%
					C248	1	1	DF15224350	Film 680pF ±2%
					C249	1	1	DF74182010	Film 1800pF ±2%
					C250	1	1	EA33601630	Film 6800pF ±2%
					C251	1	1	DF15224350	Film 0.22μF ±5%
					C252	1	1	DF74682010	Film 6800pF ±2%
					C253	1	1	DF15223350	Film 0.022μF ±5%
					C254	1	1	DF74682010	Film 6800pF ±2%
					C255	1	1	DF14682010	Film 6800pF ±2%
					C256	1	1	DF14682010	Film 6800pF ±2%
					C257	1	1	DF14682010	Film 6800pF ±2%
					C258	1	1	DF15223350	Film 6800pF ±2%
					C259	1	1	DF15223350	Film 6800pF ±2%
					C260	1	1	DF15223350	Film 6800pF ±2%
					C261	1	1	DF74682010	Film 6800pF ±2%
					C262	1	1	DF14682010	Film 6800pF ±2%
					C263	1	1	DF15105350	Film 6800pF ±2%
					C264	1	1	DF15105350	Film 6800pF ±2%
					C265	1	1	EA33601630	Elect 33μF 16V
					C266	1	1	EA33601630	Elect 33μF 16V
					C267	1	1	DF15105350	Film 1μF ±5%
Q101	1	1	HC10043060	IC μPC7812H					
Q102	1	1	HC10044060	IC μPC7912H					
Q103	1	1	HC10079060	IC μPC7918H					
Q104	1	1	HC10013360	IC LM317T					
Q105	1	1	HC10014360	IC LM337T					
Q106	1	1	HT106831D0	Transistor 2SA683(S)					

• (N): for Europe
• (F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
P200-RESISTORS (All Resistors are ±5% and 1/4W)				
R201	1	1	GM21447520	47.5KΩ
R202	1	1	GM21410040	1MΩ
R203	1	1	GM21482530	825KΩ
R204	1	1	GD05105140	1MΩ
R205	1	1	GD05104140	100KΩ
R206	1	1	GD05474140	470KΩ
R209	1	1	GM21447520	47.5KΩ
R210	1	1	GD05104140	100KΩ
R211	1	1	GD05223140	22KΩ
R214	1	1	GD05223140	22KΩ
R215	1	1	GD05682140	6.8KΩ
R216	1	1	GD05104140	100KΩ
R217	1	1	GD05333140	33KΩ
R219	1	1	GM21422110	2.21KΩ
R220	1	1	GM21422110	2.21KΩ
R221	1	1	GD05682140	6.8KΩ
R222	1	1	GM21412120	12.1KΩ
R223	1	1	GM21410030	100KΩ
R227	1	1	GD05105140	1MΩ
R229	1	1	GD05472140	4.7KΩ
R230	1	1	GD05563140	56KΩ
R231	1	1	GD05334140	330KΩ
R233	1	1	GM21410030	100KΩ
R234	1	1	GD05472140	4.7KΩ
R235	1	1	GD05472140	4.7KΩ
R238	1	1	GD05474140	470KΩ
R239	1	1	GD05473140	47KΩ
R240	1	1	GD05033140	3.3Ω
R242	1	1	GD05565140	5.6MΩ
R243	1	1	GD05565140	5.6MΩ
R244	1	1	GD05472140	4.7KΩ
R245	1	1	GD05154140	150KΩ
R246	1	1	GD05101140	100Ω
R250	1	1	GD05683140	68KΩ
R251	1	1	GD05683140	68KΩ
R252	1	1	GD05681140	680Ω
R253	1	1	GD05472140	4.7KΩ
R254	1	1	GD05104140	100KΩ
R255	1	1	GD05333140	33KΩ
R256	1	1	GA05220020	22Ω
2W				
R257	1	1	GD05223140	22KΩ
R258	1	1	GD05272140	2.7KΩ
R259	1	1	GD05682140	6.8KΩ
R260	1	1	GD05683140	68KΩ
R261	1	1	GD05683140	68KΩ
R262	1	1	GD05332140	3.3KΩ
R264	1	1	GD05332140	3.3KΩ
R265	1	1	GD05332140	3.3KΩ
R267	1	1	GD05222140	2.2KΩ
R268	1	1	GD05222140	2.2KΩ
R276	1	1	GD05472140	4.7KΩ
R279	1	1	GM21447520	47.5KΩ
R280	1	1	GM21447520	47.5KΩ
R281	1	1	GD05474140	470KΩ
R282	1	1	GM21447520	47.5KΩ
R283	1	1	GM21447520	47.5KΩ
R284	1	1	GD05103140	10KΩ
R285	1	1	GD05223140	22KΩ
R287	1	1	GM21468110	6.81KΩ
R288	1	1	GM21468110	6.81KΩ

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
P200-RESISTORS				
R291	1	1	GD05473140	47KΩ
R292	1	1	GD05683140	68KΩ
R293	1	1	GD05471140	470Ω
R294	1	1	GD05471140	470Ω
R298	1	1	GM21447500	475Ω
R299	1	1	GM21426710	2.67KΩ
R300	1	1	GM21410020	10KΩ
R301	1	1	GM21410020	10KΩ
R301	1	1	GD05222140	2.2KΩ
R304	1	1	GM21410020	10KΩ
R305	1	1	GM21410020	10KΩ
R306	1	1	GM21426710	2.67KΩ
R307	1	1	GD05222140	2.2KΩ
R308	1	1	GM21447500	475Ω
R311	1	1	GM21482520	82.5KΩ
R312	1	1	GM21482520	82.5KΩ
R313	1	1	GD05472140	4.7KΩ
R315	1	1	RA01030070	10KΩ, Trimming
R316	1	1	GD05473140	47KΩ
R318	1	1	GD05821140	820Ω
R319	1	1	GD05471140	470Ω
R320	1	1	GD05152140	1.5KΩ
R323	1	1	GM21412130	121KΩ
R324	1	1	GM21475020	75KΩ
R325	1	1	GM21475020	75KΩ
R826	1	1	GM21422130	221KΩ
R327	1	1	GD05104140	100KΩ
R328	1	1	GM21433230	332KΩ
R335	1	1	GD05683140	68KΩ
R336	1	1	GD05472140	4.7KΩ
R340	1	1	GD05103140	10KΩ
R341	1	1	GD05103140	10KΩ
R342	1	1	GD05683140	68KΩ
R345	1	1	GD05473140	47KΩ
R346	1	1	GD05473140	47KΩ
R349	1	1	GD05183140	18KΩ
R350	1	1	GD05184140	180KΩ
R351	1	1	GD05333140	33KΩ
R352	1	1	GD05273140	27KΩ
R353	1	1	GD05472140	4.7KΩ
R356	1	1	GM21435620	35.6KΩ
R357	1	1	GM21439210	3.92KΩ
R358	1	1	GM21435630	356KΩ
R359	1	1	GD05272140	2.7KΩ
R360	1	1	GD05104140	100KΩ
R362	1	1	GD05104140	100KΩ
R363	1	1	GD05103140	10KΩ
R364	1	1	GD05472140	4.7KΩ
R365	1	1	GD05474140	470KΩ
R367	1	1	GD05474140	470KΩ
R370	1	1	GM21426320	26.3KΩ
R372	1	1	GD05473140	47KΩ
R373	1	1	GM21418230	182KΩ
R375	1	1	GD05473140	47KΩ
R376	1	1	GD05472140	4.7KΩ
R378	1	1	GD05273140	27KΩ
R379	1	1	GD05273140	27KΩ
R380	1	1	GD05332140	3.3KΩ
R381	1	1	GD05121140	120Ω
R382	1	1	GD05121140	120Ω

•(N): for Europe
•(F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
R384	1	1	HH00001490	Thermistor
R385	1	1	HH00001490	Thermistor
R386	1	1	GD05332140	3.3KΩ
R387	1	1	GD05022140	2.2Ω
R389	1	1	GM21456210	5.62KΩ
R392	1	1	GM21413020	13KΩ
R393	1	1	GD05223140	22KΩ
R394	1	1	GM21433230	332KΩ
R395	1	1	GD05223140	22KΩ
R396	1	1	GD05563140	56KΩ
R397	1	1	GD05563140	56KΩ
R398	1	1	GD05182140	1.8KΩ
R399	1	1	GD05152140	1.5KΩ
P200-SEMICONDUCTORS				
D244	1	1	HD20001000	Diode 1S2473
D245	1	1	HD20001000	Diode 1S2473
D246	1	1	HD20001000	Diode 1S2473
D249	1	1	HD20001000	Diode 1S2473
D250	1	1	HD20001000	Diode 1S2473
D251	1	1	HD30041010	Zener HZ2C2
D252	1	1	HD30004020	Zener MA1051
D255	1	1	HD20001000	Diode 1S2473
D256	1	1	HD20001000	Diode 1S2473
D257	1	1	HD20001000	Diode 1S2473
D258	1	1	HD20001000	Diode 1S2473
D259	1	1	HD20001000	Diode 1S2473
D261	1	1	HD20001000	Diode 1S2473
Q201	1	1	HC10027270	IC MAB8420
Q205	1	1	HC10081060	IC μPC339C
Q207	1	1	HC10055010	IC HD14025B
Q208	1	1	HC10080060	IC μPC1458C
Q209	1	1	HC10080060	IC μPC1458C
Q211	1	1	HC10056010	IC HD14053B
Q212	1	1	HC10082060	IC μPC324C
Q213	1	1	HC10057010	IC HD14070B
Q214	1	1	HC10082060	IC μPC324C
Q215	1	1	HC10082060	IC μPC324C
Q216	1	1	HC10020270	IC TCA240
Q217	1	1	HC10080060	IC μPC1458C
Q218	1	1	HC10083060	IC μPC741C
Q230	1	1	HT309452B0	Transistor 2SC945(Q)
Q231	1	1	HT328241Y0	Transistor 2SC2824(Y)
Q232	1	1	HT111841Y0	Transistor 2SA1184(Y)
Q233	1	1	HT313841R0	Transistor 2SC1384(R)
Q234	1	1	HT106841R0	Transistor 2SA684(R)
Q238	1	1	HT309452B0	Transistor 2SC945(Q)
Q239	1	1	HT309452B0	Transistor 2SC945(Q)
Q240	1	1	HT111841Y0	Transistor 2SA1184(Y)
Q241	1	1	HT328241Y0	Transistor 2SC2824(Y)
Q242	1	1	HT107332A0	Transistor 2SA733(Q)
P200-MISCELLANEOUS				
WA02	1	1	YB00180160	Connective Cord
WA03	1	1	YB00170060	Connective Cord
WA04	1	1	YB00170070	Connective Cord
WA05	1	1	YB00170080	Connective Cord
X201	1	1	XB108002L3	Crystal, 6MHz
250E	2	2	415H267010	Heatsink
251E	2	2	5128030680	B.H. Tapped Screw B3 × 6

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
P500	1	1	YK101K1210	P500-DECODER CIRCUIT BOARD
	1	1	ZZ101K8210	P.W. Board, Decoder
				P.W. Board Assembly
C501	1	1	DF74223010	P500-CAPACITORS
C502	1	1	DF74223010	Film 0.022μF ±2%
C503	1	1	DK16222300	Ceramic 2200pF ±10%
C505	1	1	DF55272090	Film 2700pF ±5%
C506	1	1	DK16472300	Ceramic 4700pF ±10%
C508	1	1	DK16821300	Ceramic 820pF ±10%
C511	1	1	DK18223310	Ceramic 0.022μF
C512	1	1	DK18223310	Ceramic 0.022μF
C514	1	1	DF15104350	Film 0.1μF ±5%
C515	1	1	DF15104350	Film 0.1μF ±5%
C516	1	1	DK18103310	Ceramic 0.01μF
C520	1	1	DK16471300	Ceramic 470pF ±10%
C521	1	1	DK16471300	Ceramic 470pF ±10%
C523	1	1	DK18103310	Ceramic 0.01μF
C525	1	1	DK16222300	Ceramic 2200pF ±10%
C527	1	1	DF15104350	Film 0.1μF ±5%
C531	1	1	DK18104020	Ceramic 0.1μF
C533	1	1	EA10505030	Elect 1μF 50V
C534	1	1	DD15270370	Ceramic 27pF ±5%
C535	1	1	DD15270370	Ceramic 27pF ±5%
C537	1	1	DK18223310	Ceramic 0.022μF
C538	1	1	DK18223310	Ceramic 0.022μF
C539	1	1	DK18223310	Ceramic 0.022μF
C542	1	1	DD15680370	Ceramic 68pF ±5%
C543	1	1	DD15330370	Ceramic 33pF ±5%
C550	1	1	DK18223310	Ceramic 0.022μF
C551	1	1	DK18223310	Ceramic 0.022μF
C555	1	1	DK18223310	Ceramic 0.022μF
C556	1	1	DK18223310	Ceramic 0.022μF
C557	1	1	EA22602530	Elect 22μF 25V
C558	1	1	EA22602530	Elect 22μF 25V
C559	1	1	DK18223310	Ceramic 0.022μF
C560	1	1	DK18223310	Ceramic 0.022μF
C562	1	1	DK18223310	Ceramic 0.022μF
C563	1	1	EA22700630	Elect 220μF 6.3V
C564	1	1	DK16821300	Ceramic 820pF ±10%
C566	1	1	DF74512010	Film 5100pF ±2%
C567	1	1	DF74153010	Film 0.015μF ±2%
C568	1	1	DF74222010	Film 2200pF ±2%
C570	1	1	DF74222010	Film 2200pF ±2%
C571	1	1	DF74122010	Film 1200pF ±2%
C573	1	1	OA47601610	Elect 47μF 16V
C575	1	1	DD15101370	Ceramic 100pF ±5%
C580	1	1	DF15474350	Film 0.47μF ±5%
C581	1	1	DF15474350	Film 0.47μF ±5%
C582	1	1	DF15104350	Film 0.1μF ±5%
C583	1	1	DF15104350	Film 0.1μF ±5%
C584	1	1	DF15104350	Film 0.1μF ±5%
C585	1	1	DK18223310	Ceramic 0.022μF
C586	1	1	DK18223310	Ceramic 0.022μF

•(N): for Europe
•(F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION			REF. DESIG.	Q'TY		PART NO.	DESCRIPTION		
	N	F						N	F				
C587	1	1	DK18223310	Ceramic	0.022μF		R527	1	1	GD05391140	390Ω		
C588	1	1	DK18223310	Ceramic	0.022μF		R529	1	1	GD05223140	22KΩ		
C589	1	1	DK18223310	Ceramic	0.022μF		R530	1	1	GD05103140	10KΩ		
C590	1	1	DF16104510	Film	0.1μF ±10%		R532	1	1	GD05332140	3.3KΩ		
C591	1	1	DK16152300	Ceramic	1500pF ±10%		R534	1	1	GD05103140	10KΩ		
C593	1	1	EA22602530	Elect	22μF 25V		R535	1	1	GD05104140	100KΩ		
C594	1	1	DK18223310	Ceramic	0.022μF		R536	1	1	GD05104140	100KΩ		
C595	1	1	DK18223310	Ceramic	0.022μF		R537	1	1	GD05274140	270KΩ		
C597	1	1	DK18223310	Ceramic	0.022μF		R538	1	1	GD05393140	39KΩ		
C599	1	1	DK16321300	Ceramic	820pF ±10%		R539	1	1	GD05010140	1Ω		
C601	1	1	DF74512010	Film	5100pF ±2%		R540	1	1	GD05472140	4.7KΩ		
C602	1	1	DF74153010	Film	0.015μF ±2%		R541	1	1	GD05472140	4.7KΩ		
C603	1	1	DF74222010	Film	2200pF ±2%		R542	1	1	GD05473140	47KΩ		
C605	1	1	DF74222010	Film	2200pF ±2%		R543	1	1	GD05104140	100KΩ		
C606	1	1	DF74122010	Film	1200pF ±2%		R544	1	1	GD05472140	4.7KΩ		
C608	1	1	OA47601610	Elect	47μF 16V		R545	1	1	GD05105140	1MΩ		
C609	1	1	DF16104510	Film	0.1μF ±10%		R547	1	1	GD05472140	4.7KΩ		
C610	1	1	DD15101370	Ceramic	100pF ±5%		R548	1	1	GD05332140	3.3KΩ		
C615	1	1	EA22602530	Elect	22μF 25V		R549	1	1	GD05472140	4.7KΩ		
C617	1	1	DF16104510	Film	0.1μF ±10%		R550	1	1	GD05822140	8.2KΩ		
C618	1	1	DF16104510	Film	0.1μF ±10%		R555	1	1	GD05102140	1KΩ		
C619	1	1	DF16104510	Film	0.1μF ±10%		R558	1	1	GD05105140	1MΩ		
C621	1	1	EA22602530	Elect	22μF 25V		R560	1	1	GD05102140	1KΩ		
C623	1	1	DK18223310	Ceramic	0.022μF		R563	1	1	GD05562140	5.6KΩ		
C624	1	1	EA22602530	Elect	22μF 25V		R564	1	1	GD05102140	1KΩ		
C626	1	1	EA22602530	Elect	22μF 25V		R565	1	1	GD05102140	1KΩ		
C628	1	1	EA22602530	Elect	22μF 25V		R566	1	1	GD05102140	1KΩ		
C630	1	1	DF15474350	Film	0.47μF ±5%		R567	1	1	GD05102140	1KΩ		
C631	1	1	DF15474350	Film	0.47μF ±5%		R569	1	1	GM21410000	100Ω		
C632	1	1	DF15104350	Film	0.1μF ±5%		R570	1	1	GM21426710	2.67KΩ		
C633	1	1	DF15104350	Film	0.1μF ±5%		R571	1	1	GM21410000	100Ω		
C634	1	1	DF15104350	Film	0.1μF ±5%		R572	1	1	GM21410010	1KΩ		
C635	1	1	DK18223310	Ceramic	0.022μF		R573	1	1	GD05105140	1MΩ		
C636	1	1	DK18223310	Ceramic	0.022μF		R574	1	1	GM21428210	1.82KΩ		
C637	1	1	DK18223310	Ceramic	0.022μF		R576	1	1	GM21422110	2.21KΩ		
C638	1	1	DK18223310	Ceramic	0.022μF		R577	1	1	GM21422110	2.21KΩ		
C639	1	1	DK18223310	Ceramic	0.022μF		R579	1	1	GM21410020	10KΩ		
C641	1	1	DK16152300	Ceramic	1500pF ±10%		R580	1	1	GM21410030	100KΩ		
P500-RESISTORS (All Resistors are ±5% and 1/4W)													
R501	1	1	GD05825140		8.2MΩ		R581	1	1	GD05470140	47Ω		
R502	1	1	GD05824140		820KΩ		R584	1	1	GM214825G0	82.5Ω		
R503	1	1	GM21417820		17.8KΩ		R585	1	1	GM21456200	562Ω		
R504	1	1	GD05824140		820KΩ		R586	1	1	RA05010050	500Ω, Trimming		
R505	1	1	GM21417830		178KΩ		R587	1	1	GM21426700	267Ω		
R506	1	1	GD05681140		680Ω		R590	1	1	GM21410000	100Ω		
R507	1	1	GM21417820		17.8KΩ		R591	1	1	GM21426710	2.67KΩ		
R508	1	1	GD05825140		8.2MΩ		R592	1	1	GM21410000	100Ω		
R510	1	1	GM21439210		3.92KΩ		R593	1	1	GM21410010	1KΩ		
R511	1	1	GM21410020		10KΩ		R594	1	1	GD05105140	1MΩ		
R512	1	1	GM21410030		100KΩ		R595	1	1	GM21418210	1.82KΩ		
R513	1	1	GM21410030		100KΩ		R597	1	1	GM21422110	2.21KΩ		
R514	1	1	GD05105140		1MΩ		R598	1	1	GM21422110	2.21KΩ		
R515	1	1	GD05010140		1Ω		R600	1	1	GM21410020	10KΩ		
R516	1	1	GD05105140		1MΩ		R601	1	1	GM21410030	100KΩ		
R519	1	1	GD05222140		2.2KΩ		R602	1	1	GD05470140	47Ω		
R520	1	1	GD05223140		22KΩ		R605	1	1	GM214825G0	82.5Ω		
R521	1	1	GD05103140		10KΩ		R606	1	1	GM21461900	619Ω		
R523	1	1	GD05222140		2.2KΩ		R607	1	1	GD05151140	150Ω		
R525	1	1	GD05222140		2.2KΩ		R608	1	1	GD05471140	470Ω		

- (N): for Europe
- (F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION	REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F				N	F		
				P500-SEMICONDUCTOR					P800-MOTOR/REMOCON CIRCUIT BOARD
D539	1	1	HD40004030	Varicap SVC303 -GR	P800	1	1	YK101K1710	P.W. Board, Motor/Remocon
D540	1	1	HD40004030	Varicap SVC303Y-GR		1	1	ZZ101K8710	P.W. Board Assembly
D541	1	1	HD30004020	Zener MA1051					P800-CAPACITORS
D544	1	1	HD20001210	Diode 1S2473C	C801	1	1	EA22601630	Elect 22μF 16V
D545	1	1	HD20001210	Diode 1S2473C	C802	1	1	EA10505030	Elect 1μF 50V
D546	1	1	HD20001210	Diode 1S2473C	C803	1	1	DK18103300	Ceramic 0.01μF
D548	1	1	HD20001210	Diode 1S2473C	C804	1	1	EA10701030	Elect 100μF 10V
D549	1	1	HD20001210	Diode 1S2473C	C805	1	1	EA47601030	Elect 47μF 10V
D550	1	1	HD20001210	Diode 1S2473C	C806	1	1	DK18103300	Ceramic 0.01μF
D551	1	1	HD20001210	Diode 1S2473C	C807	1	1	EA10701030	Elect 100μF 10V
D555	1	1	HD20001210	Diode 1S2473C	C808	1	1	EQ10505030	Elect 1μF 50V
D556	1	1	HD20001210	Diode 1S2473C	C851	1	1	EA22602530	Elect 22μF 25V
D557	1	1	HD20001210	Diode 1S2473C	C852	1	1	EA10701030	Elect 100μF 10V
D558	1	1	HD20001210	Diode 1S2473C	C853	1	1	DK18103300	Ceramic 0.01μF
D559	1	1	HD20001210	Diode 1S2473C	C854	1	1	DK16221300	Ceramic 220pF ±10%
Q501	1	1	HC10022270	IC SAA7010(M4290A)	C855	1	1	DK16221300	Ceramic 220pF ±10%
Q504	1	1	HC10058010	IC HD74LS74	C856	1	1	EA10505030	Elect 1μF 50V
Q506	1	1	HC10026270	IC MAB8410	C857	1	1	DK18103300	Ceramic 0.01μF
Q508	1	1	HC10084060	IC μPC393C	C858	1	1	EA22601630	Elect 22μF 16V
Q510	1	1	HC10023270	IC SAA7020(M4280)	C589	1	1	OA47601610	Elect 47μF 16V
Q512	1	1	HC10059010	IC HM6116P-4	± G801	1	1	DK18103840	Ceramic 0.01μF, Spark Killer
Q514	1	1	HC10021270	IC SAA7000(M4300)	± G801	1	1	DK18103850	Ceramic 0.01μF, Spark Killer
Q517	1	1	HC10024270	IC SAA7030(M4550)					P800-RESISTORS (All Resistors are ±5% and 1/2W)
Q519	1	1	HC10025270	IC TDA1540D	R801	1	1	GD05392140	3.9KΩ
Q520	1	1	HC10025270	IC TDA1540D	R802	1	1	GD05103140	10KΩ
Q523	1	1	HC10023090	IC NJM5532	R803	1	1	GD05103140	10KΩ
Q525	1	1	HC10023090	IC NJM5532	R804	1	1	GA05181010	180Ω 1W
Q530	1	1	HT309452B0	Transistor 2SC945(Q or P)	R805	1	1	GD05562140	5.6KΩ
Q531	1	1	HT309452B0	Transistor 2SC945(Q or P)	R806	1	1	GD05472140	4.7KΩ
Q533	1	1	HT309452B0	Transistor 2SC945(Q or P)	R807	1	1	GD05223140	22KΩ
Q535	1	1	HT107332A0	Transistor 2SA733(Q or P)	R808	1	1	GD05223140	22KΩ
Q536	1	1	HT107332A0	Transistor 2SA733(Q or P)	R809	1	1	GD05103140	10KΩ
J510	1	1	YP10001990	P500-MISCELLANEOUS	R809	1	1	GD05682140	6.8KΩ
J520	1	1	YP10002010	Plug, (3P)	R810	1	1	GD05682140	6.8KΩ
J540	1	1	YP10001990	Plug, (5P)	R811	1	1	GD05682140	6.8KΩ
J550	1	1	YP10001990	Plug, (3P)	R812	1	1	GD05103140	10KΩ
L501	1	1	LO71020020	OSC Coil	R813	1	1	GD05103140	10KΩ
L507	1	1	LY10050040	Relay	R814	1	1	GD05332140	3.3KΩ
L508	1	1	LY10050040	Relay	R815	1	1	GD05333140	33KΩ
L510	1	1	LY10050040	Relay	R816	1	1	GD05472140	4.7KΩ
L511	1	1	LY10050040	Relay	R817	1	1	GD05392140	3.9KΩ
X501	1	1	XB108001L3	Crystal, 4.4336MHz	R818	1	1	GD05332140	3.3KΩ
X504	1	1	XB108002L2	Crystal, 4.2336MHz	R819	1	1	GD05103140	10KΩ
					R820	1	1	GG05082120	8.2Ω 1/2W
					R821	1	1	GD05103140	10KΩ
					R822	1	1	GD05222140	2.2KΩ
					R823	1	1	GD05821140	820Ω
					R824	1	1	GD05472140	4.7KΩ
					R825	1	1	GA05330020	33Ω 2W
					R826	1	1	GG05122120	1.2KΩ 1/2W
					R827	1	1	GG05122120	1.2KΩ 1/2W

•(N): for Europe
•(F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION	
	N	F			
△R851	1	1	GA05820010	82Ω	1W
R852	1	1	GD05473140	47KΩ	
R853	1	1	GD05105140	1MΩ	
R854	1	1	GD05103140	10KΩ	
R855	1	1	GD05103140	10KΩ	
R856	1	1	GD05103140	10KΩ	
R857	1	1	GD05103140	10KΩ	
R862	1	1	GD05473140	47KΩ	
R863	1	1	GD05103140	10KΩ	
R864	1	1	GD05104140	100KΩ	
R865	1	1	GD05473140	47KΩ	
R866	1	1	GD05103140	10KΩ	
R867	1	1	GD05103140	10KΩ	
R868	1	1	GD05153140	15KΩ	
P800-SEMICONDUCTORS					
D801	1	1	HD20011050	Diode	1S1555
D802	1	1	HD30052090	Zener	WZ056
D803	1	1	HD30091090	Zener	BZ081
D804	1	1	HD20011050	Diode	1S1555
D805	1	1	HD20011050	Diode	1S1555
D806	1	1	HD20011050	Diode	1S1555
D807	1	1	HD20011050	Diode	1S1555
D808	1	1	HD20011050	Diode	1S1555
D809	1	1	HI10016050	L.E.D.	TLUG-143
D810	1	1	HI10016050	L.E.D.	TLUG-143
D811	1	1	HI10016050	L.E.D.	TLUG-143
D851	1	1	HD20011050	Diode	1S1555
Q801	1	1	HT805471B0	Transistor	BC547B
Q802	1	1	HT805471B0	Transistor	BC547B
Q803	1	1	HT805471B0	Transistor	BC547B
Q804	1	1	HT805471B0	Transistor	BC547B
Q805	1	1	HT805471B0	Transistor	BC547B
Q806	1	1	HT605571B0	Transistor	BC557B
Q807	1	1	HT313841R0	Transistor	2SC1384(R)
Q808	1	1	HT313841R0	Transistor	2SC1384(R)
Q809	1	1	HT805471B0	Transistor	BC547B
Q851	1	1	HC10102030	IC	LM6416E
Q852	1	1	HT805471B0	Transistor	BC547(B)
Q853	1	1	HT805471B0	Transistor	BC547(B)
Q854	1	1	HT805471B0	Transistor	BC547(B)
Q855	1	1	HT805471B0	Transistor	BC547(B)
Q856	1	1	HT805471B0	Transistor	BC547(B)
Q857	1	1	HT804571B0	Transistor	BC547(B)
Q858	1	1	HT605571B0	Transistor	BC557(B)
Q859	1	1	HC10031060	IC	MPC78L05
P800-MISCELLANEOUS					
J801	1	1	YP10001200	Plug	
J802	1	1	YP10001200	Plug	
J851	1	1	YP06003000	Plug	
J852	1	1	YP06003000	Plug	
J853	1	1	YP06003020	Plug	
J854	1	1	YP06003030	Plug	
J855	1	1	YP06003010	Plug	
L801	1	1	LC14730040	Choke Coil, 47μH	
L802	1	1	LC14730040	Choke Coil, 47μH	

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION	
	N	F			
△S801	1	1	SP01010600	Push Switch, Power	
△S801	1	1	SP01010620	Push Switch, Power	
S802	1	1	SP04010430	Push Switch, ON/OFF	
S803	1	1	SS01020370	Slide Switch, Service	
S804	1	1	SM01010980	Mini Switch, Safety	
W851	1	1	YB00150360	Connective Cord, (2P)	
W852	1	1	YB00500310	Connective Cord, (2P)	
W853	1	1	YB00700180	Connective Cord, (4P)	
W854	1	1	YB00650030	Connective Cord, (5P)	
W855	1	1	YB00580010	Connective Cord, (3P)	
X851	1	1	FQ04003010	Ceramic Vib. 400KHz	
PH00-MAIN FILTER CIRCUIT BOARD					
PH00	1	1	YK101K1770	P.W. Board, Main Filter	
	1		ZZ101K8770	P.W. Board Assembly	
PH00-CAPACITORS					
△CH01	1	1	DF17154810	Film 0.15μF ±20%	
△CH01	1	1	DF17104810	Film 0.1μF ±20%	
△CH02	1	1	DF17154810	Film 0.15μF ±20%	
△CH03	1	1	DK16471800	Ceramic 470pF ±10%	
△CH03	1	1	DK16221800	Ceramic 220pF ±10%	
△CH04	1	1	DK16471800	Ceramic 470pF ±10%	
△CH04	1	1	DK16221800	Ceramic 220pF ±10%	
PH00-MISCELLANEOUS					
JH01	1	4	YP10001130	Plug	
JH04	1	1			
△LH01	1	1	LC11560010	Choke Coil, 15mH x 2	
PR00-POWER IND. CIRCUIT BOARD					
PR00	1	1	YK101K1720	P.W. Board, Power Ind.	
	1		ZZ101K8720	P.W. Board Assembly	
DR01	1	1	HI10032030	L.E.D. SLP171D	
-	-	-			
PR50-DISC INSIDE IND. CIRCUIT BOARD					
PR50	1	1	YK101K1730	P.W. Board, Disc Inside Ind.	
	1		ZZ101K8730	P.W. Board Assembly	
RR51	1	1	GG05122120	Resistor 1.2KΩ ±5% ½W	
DR51	1	1	HI10016050	L.E.D. TLUG-143	
DR52	1	1	HI10016050	L.E.D. TLUG-143	
DR53	1	1	HI10016050	L.E.D. TLUG-143	

• (N): for Europe
• (F): for Japan

REF. DESIG.	Q'TY N F	PART NO.	DESCRIPTION
			PS00-PROGRAM KEY SW. CIRCUIT BOARD P.W. Board, Program Key SW. P.W. Board Assembly
PS00	1 1	YK101K1420 ZZ101K8420	
			PS00-RESISTORS
RS01	1 1	GD05821140	820Ω ±5% 1W
RS02	1 1	GD05821140	820Ω ±5% 1W
RS03	1 1	GD05821140	820Ω ±5% 1W
RS04	1 1	GD05821140	820Ω ±5% 1W
			PS00-SWITCHES
SS01	1 1	SP01010580	Push Switch, All Cancel
SS02	1 1	SP01010580	Push Switch, Program Sel
SS03	1 1	SP01010580	Push Switch, Preset
SS04	1 1	SP01010580	Push Switch, Repeat
SS05	1 1	SP01010580	Push Switch, Cancel
			PU00-MODE KEY SWITCH CIRCUIT BOARD
PU00	1 1	YK101K1430 ZZ101K8430	P.W. Board, Mode Key Switch P.W. Board Assembly
			SU01
SU01	1 1	SP01010580	Push Switch, REV
SU02	1 1	SP01010580	Push Switch, FF
SU03	1 1	SP01010580	Push Switch, PLAY/NEXT
SU04	1 1	SP01010580	Push Switch, PLAY/NEXT
SU05	1 1	SP01010580	Push Switch, PAUSE
			PU50-SIGNAL RELAY 2 CIRCUIT BOARD
PU50	1 1	YK101K1440 ZZ101K8440	P.W. Board, Signal Relay 2 P.W. Board Assembly
			JU51
JU51	1 1	YJ06002680	Jack
JU52	1 1	YJ06002680	Jack
JU53	1 1	YJ06002680	Jack
JU54	1 1	YP06003040	Plug
JU55	1 1	YP06003010	Plug
JU56	1 1	YP06003020	Plug
JU57	1 1	YP06003020	Plug
JU58	1 1	YP10002020	Plug
JU59	1 1	YP10001990	Plug
JU60	1 1	YP06003030	Plug
			SU51
SU51	1 1	SP01010580	Push Switch, Play
			WU51
WU51	1 1	YB00380030	Connective Cord, (8P)
WU52	1 1	YB00380030	Connective Cord, (8P)
WU53	1 1	YB00380030	Connective Cord, (8P)
WU54	1 1	YB00380040	Connective Cord, (6P)
WU55	1 1	YB00300640	Connective Cord, (3P)
WU56	1 1	YB00400340	Connective Cord, (4P)
WU58	1 1	YB00250170	Connective Cord, (6P)
WU59	1 1	YB00130080	Connective Cord, (3P)

REF. DESIG.	Q'TY N F	PART NO.	DESCRIPTION
			PY00-DISPLAY CIRCUIT BOARD P.W. Board, Display P.W. Board Assembly
PY00	1 1	YK101K1410 ZZ101K8410	
			PY00-CAPACITORS
CY01	1 1	EA33601030	Elect 33μF 10V
CY02	1 1	EA33601030	Elect 33μF 10V
CY03	1 1	DK18103300	Ceramic 0.01μF
CY04	1 1	DK18103300	Ceramic 0.01μF
			PY00-RESISTORS (All Resistors are ±5% and 1W)
RY01	1 1	GD05821140	820Ω
RY02	1 1	GD05821140	820Ω
RY03	1 1	GD05821140	820Ω
RY04	1 1	GD05821140	820Ω
RY05	1 1	GD05680140	68Ω
RY06	1 1	GD05332140	3.3KΩ
RY07	1 1	GD05821140	820Ω
			PY00-SEMICONDUCTORS
QY01	1 1	HC10012360	IC MM5450N
QY02	1 1	HC10017270	IC HEF4094
			DY01
DY01	1 1	HI10017050	L.E.D. TLPG-144
DY02	1 1	HI10017050	L.E.D. TLPG-144
DY03	1 1	HI10017050	L.E.D. TLPG-144
DY04	1 1	HI10017050	L.E.D. TLPG-144
DY05	1 1	HI10017050	L.E.D. TLPG-144
DY06	1 1	HI10017050	L.E.D. TLPG-144
DY07	1 1	HI10017050	L.E.D. TLPG-144
DY08	1 1	HI10017050	L.E.D. TLPG-144
DY09	1 1	HI10017050	L.E.D. TLPG-144
DY10	1 1	HI10017050	L.E.D. TLPG-144
			DY11
DY11	1 1	HI10017050	L.E.D. TLPG-144
DY12	1 1	HI10017050	L.E.D. TLPG-144
DY13	1 1	HI10017050	L.E.D. TLPG-144
DY14	1 1	HI10017050	L.E.D. TLPG-144
DY15	1 1	HI10017050	L.E.D. TLPG-144
			DY51
DY51	15 15	HI10040020	L.E.D. LN422YP
			DY65
DY65	1 1	HI10030020	L.E.D. LN224RP
DY71	1 1	HI10030020	L.E.D. LN224RP
DY72	1 1	HI10030020	L.E.D. LN224RP
DY81	1 1	HD20005010	Diode W06B
DY82	1 1	HD20005010	Diode W06B
			JY01
JY01	1 1	YP06003040	Plug
JY02	1 1	YP06003040	Plug
JY58	1 1	YP06003040	Plug
			WY01
WY01	1 1	YB00240050	Connective Cord, (6P)
WY02	1 1	YB00150340	Connective Cord, (6P)
			PY00-MISCELLANEOUS

- (N): for Europe
- (F): for Japan

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
PZ00	1	1	YK101K1750 ZZ101K8750	PZ00-MODE INDICATOR CIRCUIT BOARD P.W. Board, Mode Indicator P.W. Board, Assembly
RZ01	1	1	GD05103140	PZ00-RESISTORS (All Resistors are $\pm 5\%$ and $\frac{1}{4}W$) 10K Ω
RZ02	1	1	GD05152140	1.5K Ω
RZ03	1	1	GD05103140	10K Ω
RZ04	1	1	GD05223140	22K Ω
RZ05	1	1	GD05121140	120 Ω
DZ01	1	1	HI10021300	PZ00-SEMICONDUCTORS L.E.D. PR2533D
DZ02	1	1	HI10022300	L.E.D. BG2533D
DZ03	1	1	HI10023300	L.E.D. AY2533D
QZ01	1	1	HT605571B0	Transistor BC557(B)
QZ02	1	1	HT605571B0	Transistor BC557(B)

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	N	F		
PZ50	1	1	YK101K1760 ZZ101K8760	PZ50-SIGNAL RELAY 1 CIRCUIT BOARD P.W. Board, Signal Relay 1 P.W. Board Assembly
JZ51	1	1	YJ06002680	Jack
JZ52	1	1	YJ06002680	Jack
JZ53	1	1	YJ06002680	Jack
JZ54	1	1	YJ06002450	Jack, (6P)
JZ55	1	1	YJ06002430	Jack, (3P)
JZ56	1	1	YJ06002440	Jack, (4P)
JZ57	1	1	YJ06002440	Jack, (4P)
JZ58	1	1	YJ06002450	Jack, (6P)
JZ59	1	1	YJ06002450	Jack, (6P)
WZ58	1	1	YU06340260	Jumper Lead, (6P)
WZ59	1	1	YU05320260	Jumper Lead, (5P)

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY:

Symbol Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

11. TECHNICAL SPECIFICATIONS

AUDIO PERFORMANCE

Number of Channels	2
Frequency Range	20–20,000 Hz
Dynamic Range	>90 dB
Signal-to-Noise Ratio	>90 dB
Channel Separation	>90 dB
Total Harmonic Distortion (incl. noise)	<0.005%
Wow and Flutter	quartz crystal precision
D/A Conversion	16 bit with digital filtering
Error Correction System	Cross Interleave Reed Solomon Code (CIRC)
Audio Output Level	2 V rms

OPTICAL READOUT SYSTEM

Laser	semi-conductor AlGaAs
Wave length	0.78 μm

SIGNAL FORMAT

Sampling Frequency	44.1 kHz
Quantization	16 bit linear/channel

DISC

Diameter	120 mm
Thickness	1.2 mm
Sense of rotation (seen from reading side)	anti-clockwise
Scanning velocity	1.2–1.4 m/s
Rotation speed	500–200 rpm
Playing time (max)	60 min (stereo)
Track pitch	1.6 μm
Material	plastic

POWER SUPPLY

Mains Voltage	see type plate at the bottom of the player
Mains Frequencies	50 and 60 Hz
Power Consumption	40 W approx
Safety Requirements	IEC

CABINET, GENERAL

Material/finish	polystyrene with extruded aluminium profiles This model is convertible to 110/120/220/240 volts by changing voltage selector on the rear panel.
Dimensions (W x H x D)	416 x 81 x 300 mm
with drawer closed	416 x 130 x 483 mm
with drawer open	
Weight	8 kg approx
Connection Cable	fitted with moulded cinch plugs

Specifications and appearance are subject to change for modification without notice.

12. SCHEMATIC DIAGRAM

