

Service Manual

Portable Stereo CD System


MASH*
 multi-stage noise shaping

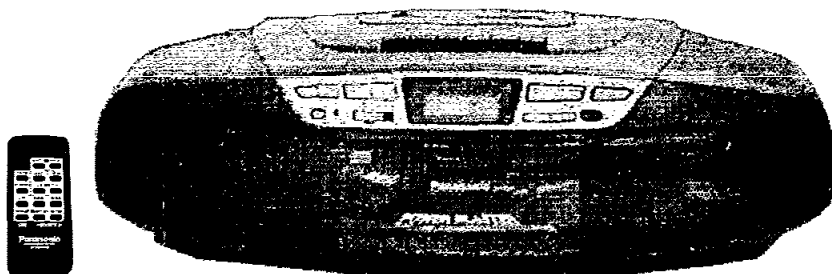
 Radio Cassette
RX-DS27

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	



* MASH is a trademark of NTT.

TAPE SECTION : SG20 MECHANISM SERIES
CD SECTION : RAE0150Z TRAVERSE DECK SERIES

Specifications

RADIO

Frequency range	
FM	87.5 - 108 MHz (50 kHz steps)
AM	522 - 1611 kHz (9 kHz steps)
Intermediate Frequency	
FM	10.7 MHz
AM	459 kHz
Sensitivity	
FM	16 dB/50 mW
AM	49 dB/50 mW

TAPE RECORDER

Track system	4 track, 2 channel, stereo
Recording system	AC bias
Tape speed	4.8cm/s
Erasing system	Magnet (Multi pole)
Monitor system	Variable sound monitor
Frequency range (Normal position)	50 - 12,000 Hz

Notes :

Specifications are subject to change without notice.
 Weight and dimensions are approximate.

CD PLAYER

Sampling frequency	44.1 kHz
Decoding	16-bit linear
Beam source	Semiconductor laser (wavelength; 780 nm)
No. of channels	2 channel, stereo
Frequency Response	20 Hz - 20 kHz (+0, -2 dB)
S/N ratio	62 dB
Wow and flutter	Less than possible measurement data
D/A converter	MASH (1 bit DAC)

GENERAL

Power requirement	
AC	230-240V, 50 Hz
Battery	12V (Eight "D" size, R20/LR20 batteries)
Memory back-up for computer	6V (Four "AA" size, R6/LR6 batteries)
Speakers	10 cm x 2
Jacks	
Output	Headphones; 32 Ω
Dimensions (W x H x D)	480 x 156 x 248 mm
Weight	3.9 kg without batteries

WARNING

This service information is designed for experience repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Panasonic®

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■ Precaution of Laser Diode

CAUTION : This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.
Wavelength : 780 nm
Maximum output radiation power from pick up : 100 μW/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

- 1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
- 2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
- 3. Do not look at the focus lens using optical instruments.
- 4. Recommend not to look at pick up lens for a long time.

ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge : 780nm
Maximale strahlungsleistung der lasereinheit :100μW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

- 1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährlich ist.
- 2. Den werkseitig justierten einstellregler der lasereinhit nicht verstellen.
- 3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
- 4. Nicht über längere zeit in die fokussierlinse blicken.

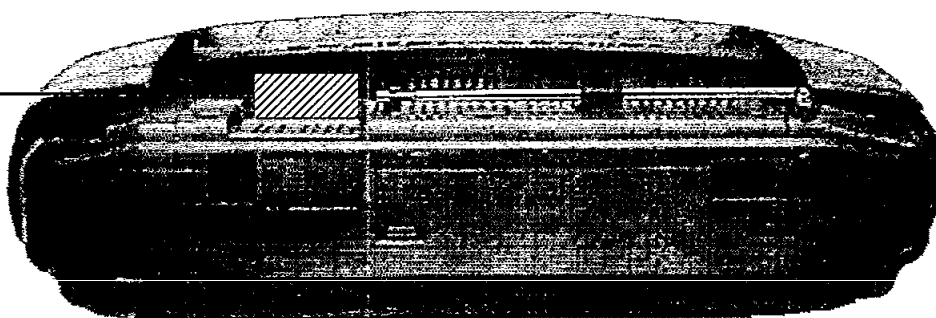
ADVASEL: I dette a apparat anvendes laser.

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED
HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



DANGER	LASERSTRALUNG VERBODEN. BLINDENGEFÄHRDUNG. AUGENSCHUTZ VERWENDEN.
ADVARSEL	USNUGLASERSTRÅLING. VIKRIGT EKSPOSISJONER KAN FØRSTØRRE ØYNE OG SKADE SEEN.
VARO!	ÄNTÄSSÄ LASERIN VIKRIGT EKSPOSISJON LASERIN VIKRIGT EKSPOSISJON.
WARNING	OSUNUGLASERSTRÅLING. VIKRIGT EKSPOSISJON KAN FØRSTØRRE ØYNE OG SKADE SEEN.
ADVARSEL	USNUGLASERSTRÅLING. VIKRIGT EKSPOSISJON KAN FØRSTØRRE ØYNE OG SKADE SEEN.
VORSICHT	LASERSTRALUNG. KEIN ANBESCHAUEN GEORDET UND SCHUTZGLASER VERWENDEN. NUR FÜR DEN STRALUNGSSCHUTZ. POL80119



■ Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FFC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

• Grounding for electrostatic breakdown prevention

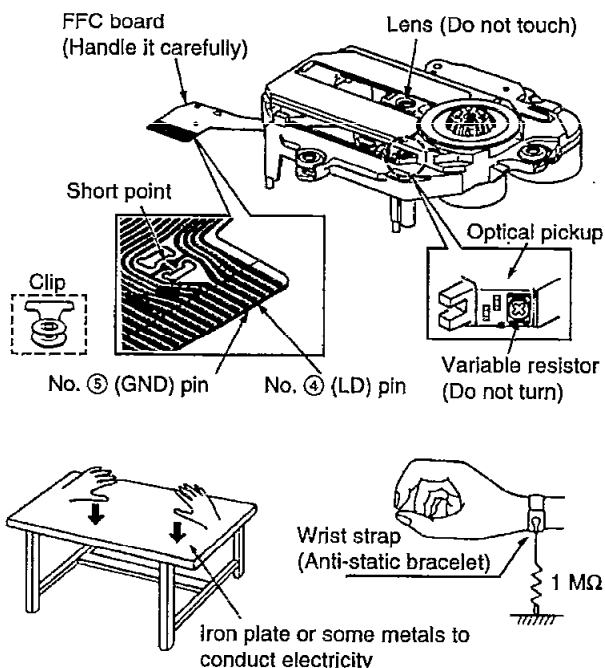
1. Human body grounding
Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

Caution when Replacing the Traverse Deck:

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.



■ Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION !

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL $\perp$ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

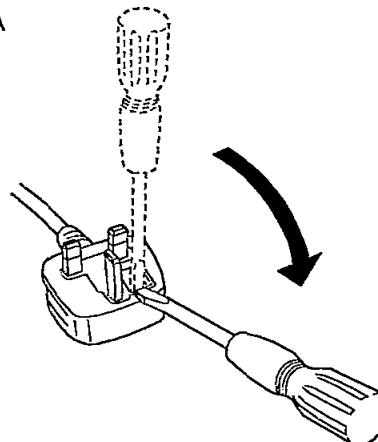
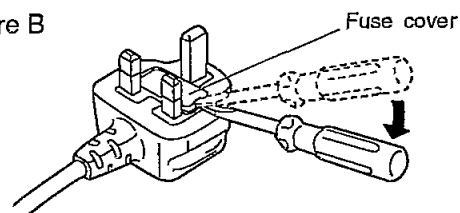


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

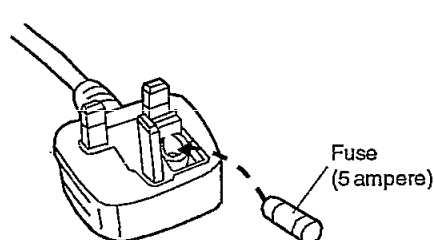
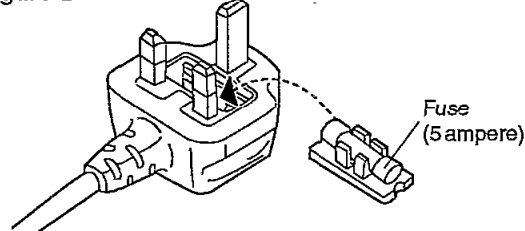


Figure B



■ Operation Checks and Main Component Replacement Procedures

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.

• Contents

	page
• Checking Procedure for each major P.C.B.	
1. Checking of the Tuner P.C.B.	5
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3. Checking of the Mechanism P.C.B. and Main P.C.B.	6 & 7
• Main Component Replacement Procedures	
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Warning : This product uses a laser diode. Refer to caution statements on page 2.

ACHTUNG : • Die lasereinheit nicht zerlegen.

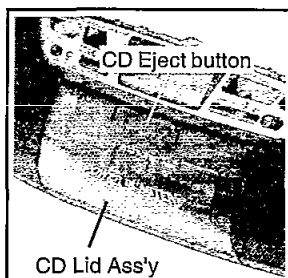
• Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

■ Checking Procedure for each major P.C.B.

1. Checking of the Tuner P.C.B.

Step 3

Press the CD Eject button and open the CD Lid.

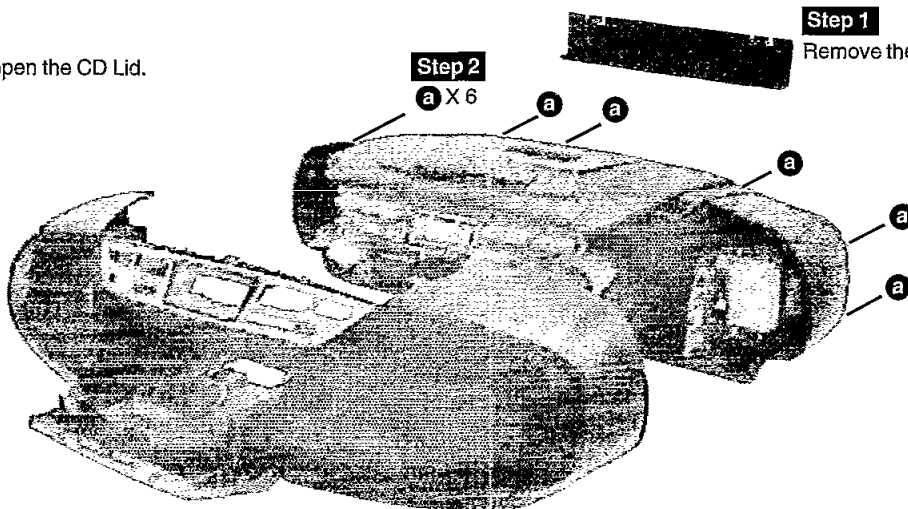


Step 2

a X 6

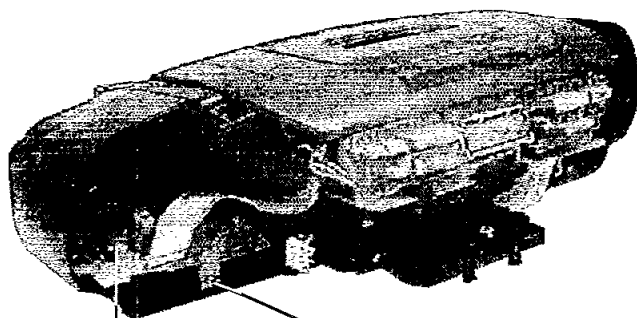
Step 1

Remove the battery cover.



Step 4

Remove the front cabinet in the direction of arrow.

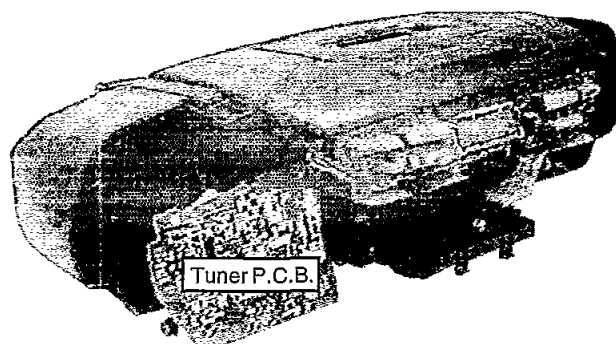


Step 7

Pull out the Tuner P.C.B.

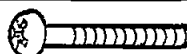
Step 6

b X 1

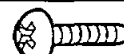


Step 8

Check the Tuner P.C.B. as shown above.



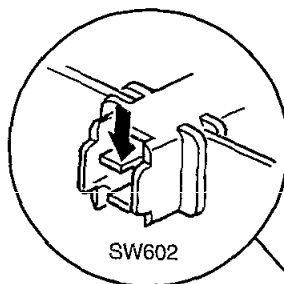
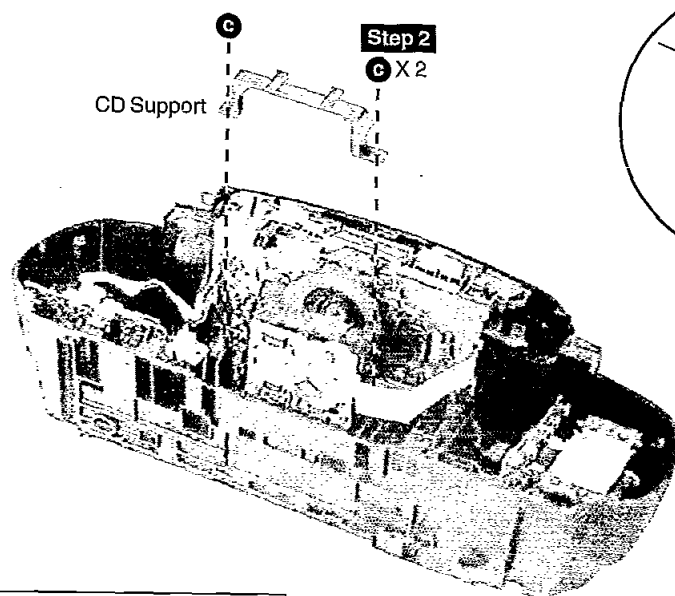
a XTV3 + 20G



b XTV3 + 12G

2. Checking of the Servo P.C.B.

Step 1 Follow the procedures in 'Checking of the Tuner P.C.B.' (Step 1 ~ Step 5).

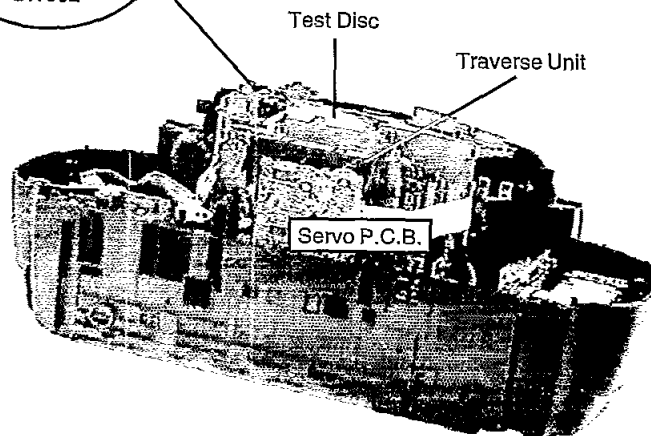


Step 3

Place the set and attach the test disc to the traverse unit as shown below, then check the Servo P.C.B.

Note :

Before perform checking, make sure the CD Lid detection switch SW602 is switched on.



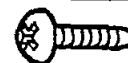
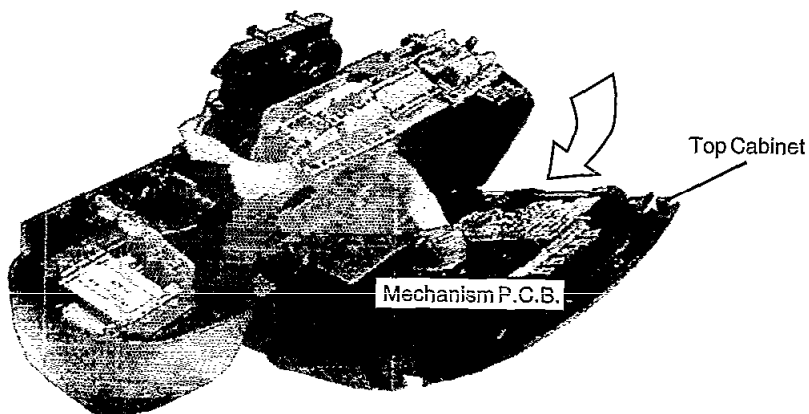
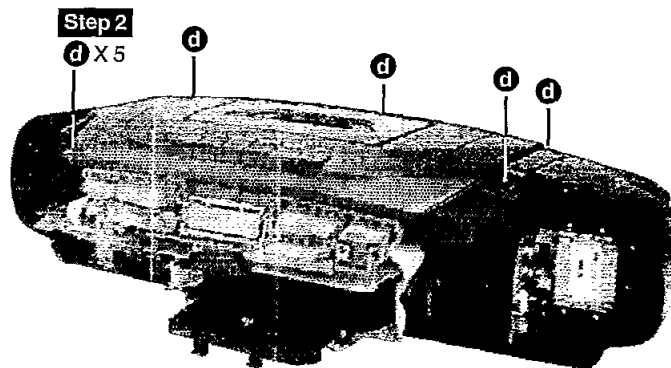
C XTV3 + 12G

3. Checking of the Mechanism P.C.B. and Main P.C.B.

Step 1 Follow the procedures in 'Checking of the Tuner P.C.B.' (Step 1 ~ Step 5).

Step 3

Place the set as shown below and open up the Top Cabinet in the direction of arrow. Then check the Mechanism P.C.B.



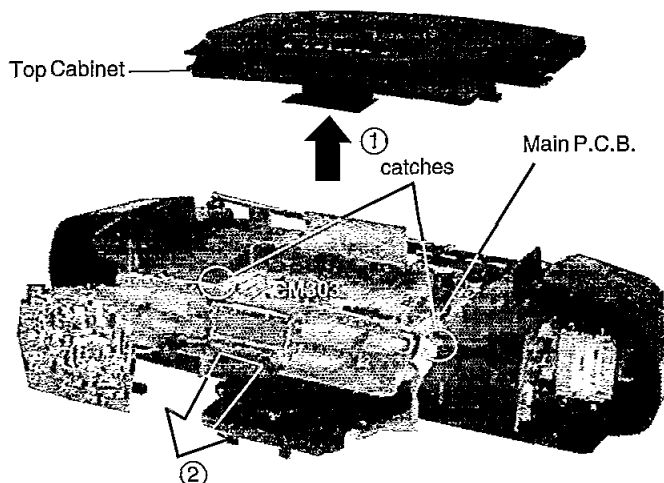
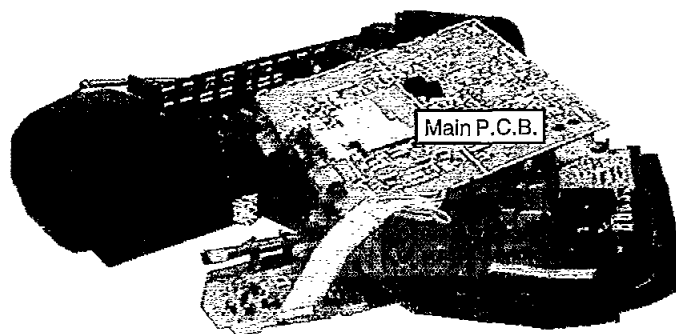
d XTN3 + 10CFZ

Step 4

Disconnect the Top Cabinet from connector CM303 on the Main P.C.B. in the direction of arrow ①.

Step 5

Release the catches at both sides. Pull out the Main P.C.B. in the direction of arrow ②.

**Step 6**

Connect the Top Cabinet back to the connector CM303.

Place the Main P.C.B. as shown on the left and then check the Main P.C.B.

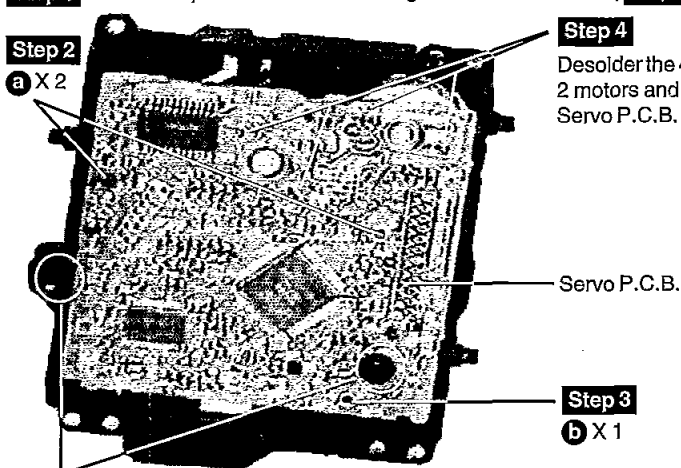
■ Main Component Replacement Procedures

1. Replacement of the Traverse Deck

Step 1 Follow the procedures in 'Checking of the Servo P.C.B.' (**Step 1** ~ **Step 2**).

Step 2

a X 2

**Step 4**

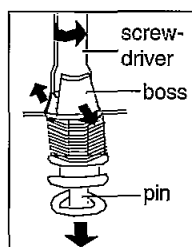
Desolder the 4 legs of the 2 motors and pull out the Servo P.C.B.

Step 3

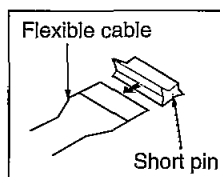
b X 1

Step 5

Widen the 2 bosses with a flat screwdriver and pull out the 2 pins. Then remove the Traverse Deck.

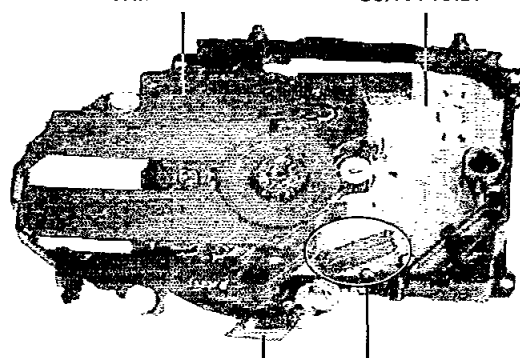


Note:
Insert a short pin into the flexible cable for traverse unit.



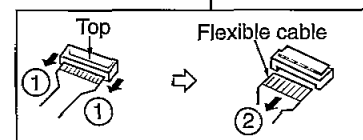
Traverse Deck

Servo P.C.B.

**Step 6**

Remove the flexible cable CN701.

- Removal of the flexible cable
Push the top of the connector in the direction of the arrow ①, and then pull out the flexible cable in the direction of the arrow ②.



a

[XTV2+6G] (Brass)

b

[XTN2+6G] (Brass)

■ Self-Diagnostic Display Function

■ Self-diagnostic display

This unit is equipped with a self-diagnostic display function which, if a problem occurs, will display an error code corresponding to the problem. Use this function when performing maintenance on the unit.

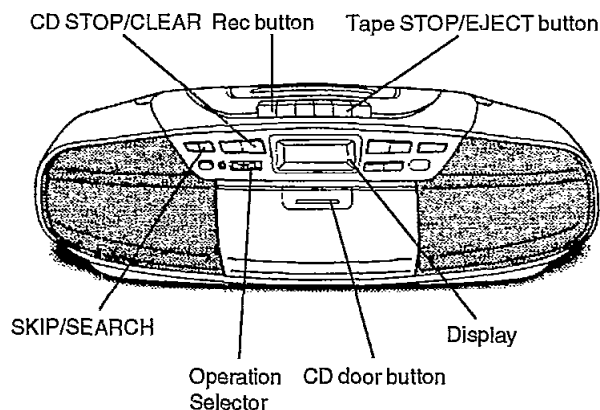
■ Preparation

Normal blank tape with recording prevention tab on one side.

■ How to enter the Self-Diagnostic Display Function mode

1. Turn the power on.
2. Set the Operation Selector to CD. (with no CD loading condition)
3. Press and hold the "STOP/CLEAR" button for at least 2 seconds. While pressing the "STOP/CLEAR" button, press the "SKIP/SEARCH" button for 2 seconds. "T" will appear on the FL display. (The set is in the Self-Diagnostic Function Mode)
4. Open the CD door.
5. Close the CD door.
6. Load the normal blank tape to DECK.
7. Press the "REC" button.
8. Press the "TAPE STOP/EJECT" button.

Press the "CD STOP/CLEAR (■)" to check the result. If there is problem, the error code shall be displayed. (If no problem, display shows "T" indication). In case several problems exist, error code will change each time you press the "CD STOP/CLEAR" button.



This means that the set is in the Self-Diagnostic Display Function mode

T

(Example of Error Code)

H09

■ How to get out from the Self-Diagnostic Display Function

Select Operation Selector to other mode except CD.

■ Interpretation of Error Codes

(Note : * means error code will be displayed automatically)

Error Code	Problem condition	Correction procedure
*U01	When the unit is operating on batteries, power supply ceases soon after the power is turn on.	It is due to consumption of batteries. Replace the batteries with new ones.
*U02	Turn the power on causes no supply of power.	Check the power plug (AC) or insert batteries (DC).
H09	Tape does not play even pressing PLAY button.	Faulty Leaf switch (SW302). Faulty operation Q616.
H16	CD does not operate and indicate 「 NO DISC 」.	Faulty contact or short circuit of CD tray close switch. (SW602)
F15	Relatively long time (about 5 sec) is required to begin play when the CD play button is pressed from the power-off state or from a function other than CD player.	Faulty contact on CD mechanism optical pick-up rest switch (S701).
F26	CD does not operate and LCD shows 「 F26 」.	Faulty data communication of servo processor IC and microprocessor.
F69	CD does not start to play at syncro-recording function mode.	Faulty contact or short circuit of recording switch (SW301).
*F75	「 NO DISC 」 indication show in the FL display even CD is loaded.	Faulty power circuit of CD. Faulty servo processor IC.

■ Measurements and Adjustments

< TUNER SECTION >

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Measuring Condition

1. Set volume control to maximum.
2. Set power source voltage to 12V DC.
3. Output of signal generator should be no higher than necessary to obtain an output reading.

Note : No AM IF and FM STEREO alignment are required.

■ AM-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	594 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	(*1) L3 (AM ANT Coil)	Adjust for maximum output. Adjust L3 by moving coil along the ferrite core.
"	1,503 kHz	"	"	CT1 (AM ANT Trimmer)	Adjust for maximum output.

(*1) Fix antenna coil with wax after completing alignment.

< CASSETTE DECK SECTION >

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Measuring Instruments

- Digital frequency counter

Test tape

- Tape speed adjustment (3kHz, -10 dB) : QZZCWAT

Measuring condition

- Make sure the heads are clean.
- Make sure the capstan and pressure roller are clean.
- Tape-to-tape recording speed selector : NORMAL

Note : No Azimuth Head Alignment is required due to Aztec Head is used in the cassette mechanism.

■ TAPE SPEED ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz, -10dB)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	_____	3000 ± 30 Hz	Playback mode

■ RECORD BIAS VOLTAGE & FREQUENCY CHECK

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Use Normal tape	TPA ... (+) Refer to Fig.3,4 TPB ... (-)	_____	14 ± 1 mV	Record mode
Use Normal tape	TPA ... (+) Refer to Fig.3,4 TPB ... (-)	_____	90 ± 10 kHz	1. Set to Record mode 2. Confirm sine-wave appears without distortion /abnormal oscillation.

■ BEATPROOF CHECK

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Use Normal tape	TPA ... (+) Refer to Fig.3,4 TPB ... (-)	_____	5 ± 1 kHz	1. Set the Selector to Tuner position. 2. Confirm sine-wave appears without distortion /abnormal oscillation.

■ ALIGNMENT POINTS

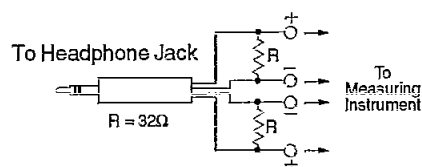
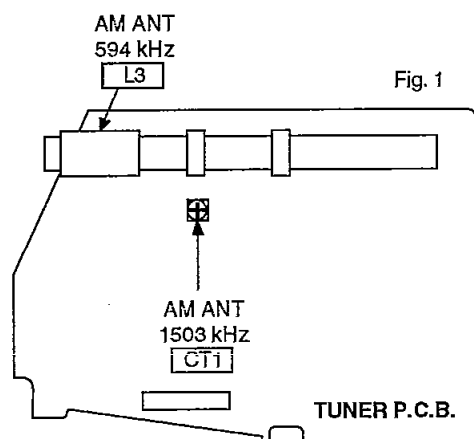


Fig. 2

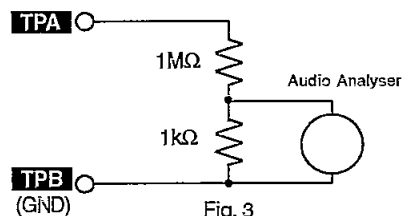


Fig. 3

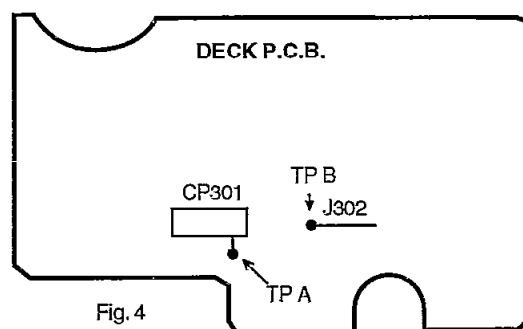


Fig. 4

■ Terminal Function of IC's

• IC2 (BU2616F-E2)

Pin No.	Mark	I/O	Function
1	XOUT	O	X'tal oscillator connection (7.2 MHz)
2	XIN	I	
3	CE	I	Tuner PLL strobe input (H=ENABLE)
4	DA	I	Tuner PLL data input
5	CL	I	Tuner PLL clock input
6	TUN	O	Tuner receiving condition detection output
7	SD	I	SD signal input
8	IFIN	I	IF detection signal input
9	P3	O	Pilot signal detection output

Pin No.	Mark	I/O	Function
10	P0	O	Phase detection signal output
11	P1	O	Tuner power supply control output
12	P2	I	AM OSC signal input
13	AMIN	I	AM OSC signal input
14	FMIN	I	FM OSC signal input
15	VDD	I	Power supply
16	PD1	O	FM/AM/Vcap control signal output
17	PD2	—	Open
18	GND	—	GND

• IC703 (AN8389SE1) Focus coil / Tracking coil / Traverse motor / Spindle motor driver

Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Reference voltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	Ground connection
6	NC	—	Ground connection
7	NRESET	I	Reset input
8	GND	—	Ground connection
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power cut) input
11	IN1	I	Motor driver (1) input
12	PC1	I	PC1 (power cut) input (Not used, open)

Pin No.	Mark	I/O	Function
13	PVCC1	I	Power supply (1) for driver
14	PGND1	—	Ground connection (1) for driver
15	D1—	O	Motor driver (1) reverse-action output
16	D1+	O	Motor driver (1) forward-action output
17	D2—	O	Motor driver (2) reverse-action output
18	D2+	O	Motor driver (2) forward-action output
19	D3—	O	Motor driver (3) reverse-action output
20	D3+	O	Motor driver (3) forward-action output
21	D4—	O	Motor driver (4) reverse-action output
22	D4+	O	Motor driver (4) forward-action output
23	PGND2	—	Ground connection (2) for driver
24	PVCC2	I	Power supply (2) for driver

• IC702 (MN662741RPA) Servo processor / Digital signal processor / Digital filter / D/A converter

Pin No.	Mark	I/O	Function
1	BCLK	O	Serial bit clock terminal (Not used, open)
2	LRCK	O	L/R discriminating signal (Not used, open)
3	SRDATA	O	Serial data (Not used, open)
4	DVDD1	I	Power supply (digital circuit) terminal
5	DVSS1	—	GND (digital circuit) terminal
6	TX	O	Digital audio interface signal
7	MCLK	I	Microprocessor command clock signal
8	MDATA	I	Microprocessor command data signal
9	MLD	I	Microprocessor command load signal
10	SENSE	O	Sense signal output (OFT,FESL,MAGEND,NAJEND,POSAD,SFG)
11	/FLOCK	O	Optical servo condition(focus)("L" : lead-in)
12	/TLOCK	O	Optical servo condition(tracking)("L" : lead-in)
13	BLKCK	O	Sub-code block clock (f=75Hz)
14	SQCK	I	External clock signal input for sub-code Q register.
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H" : mute)
17	STAT	O	Status signal output (CRC,CUE,CLVS,TTSTVP,FCLV,SQCK)
18	/RST	I	Reset input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at MSEL="H" (fSMCK=8.4672MHz) 1/4-divided clock signal of crystal oscillating at MSEL="L" (fSMCK=4.2336MHz)
20	PMCK	O	1/192-divided clock signal of crystal oscillating (fPMCK=88.2kHz) (Not used, open)
21	TRV	O	Traverse servo control output
22	TVD	O	Traverse drive signal output
23	PC	O	Spindle motor ON signal output ("L" : ON)
24	ECM	O	Spindle motor drive signal output (forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD,ECS,TRD,FOD, FBAL,TBAL) Reference voltage input.
30	FBAL	O	Focus balance adjustment output (Not used,open)
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H" : detection)

Pin No.	Mark	I/O	Function
36	OFT	I	Off-track signal input ("H" : off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L" : detection)
39	BDO	I	Dropout signal input ("H" : Dropout)
40	LDON	O	Laser on signal output ("H" : ON)
41	TES	O	Tracking error shunt signal output ("H" : shunt)
42	PLAY	O	Play signal out ("H" : PLAY)
43	WVEL	O	Double speed status signal output ("H" : DS)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias (Not used, open)
47	DSLIF	I/O	DSL loop filter
48	PLLIF	I/O	PLL loop filter
49	VCOF	I/O	VCO loop filter (Not used, open)
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	—	GND (for analog circuit)
52	EFM	O	EFM signal output (Not used, open)
53	PCK	O	PLL extraction clock output (Not used, open) (fPCK=4.321 MHz during normal playback)
54	PDO	O	Phase comparison signal of EFM and PCK signals (Not used, open)
55	SUBC	O	Sub-code serial data output (Not used, open)
56	SBCK	I	Sub-code frame clock signal output (fCLDCK=7.35kHz during normal playback)
57	VSS	—	GND
58	X1	I	Crystal oscillating circuit input (f=16.9344MHz)
59	X2	O	Crystal oscillating circuit output (f=16.9344MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	O	Byte clock output (Not used, open)
62	/CLDCK	O	Clock input for sub-code serial data (Not used, open)
63	FCLK	O	Crystal frame clock signal output (fCLK=7.35kHz, double=14.7kHz)
64	PFLAG	O	Interpolation flag output ("H" : interpolation) (Not used, open)
65	FLAG	O	Flag output (Not used, open)
66	CLVS	O	Spindle servo phase synchronizing signal output ("H" : CLV, "L" : rough servo) (Not used, open)
67	CRC	O	Sub-code CRC checked output ("H" : OK, "L" : NG) (Not used, open)
68	DEMPH	O	De-emphasis ON signal output ("H" : ON) (Not used, open)
69	RESY	O	Frame resynchronizing signal output (Not used, open)
70	/RST2	I	Reset input through MASH circuit ("L" : Reset)
71	/TEST	I	Test input

Pin No.	Mark	I/O	Function
			"L" : 16.9344MHz "H" : 33.8688MHz
78	PSEL	I	Test input (normally "L") (Not used, open)
79	MSEL	I	Output mode switching of SUBQ terminal ("H" : Q code buffer mode)
80	SSEL	I	Output frequency switching for SMCK terminal "H" : SMCK=8.4672MHz "L" : MCK=4.2336MHz (Not used, open)

- **IC601 (SC440422CFU) System Microprocessor**

[illegible]

• IC701 (AN8835SBE1) Servo Amplifier

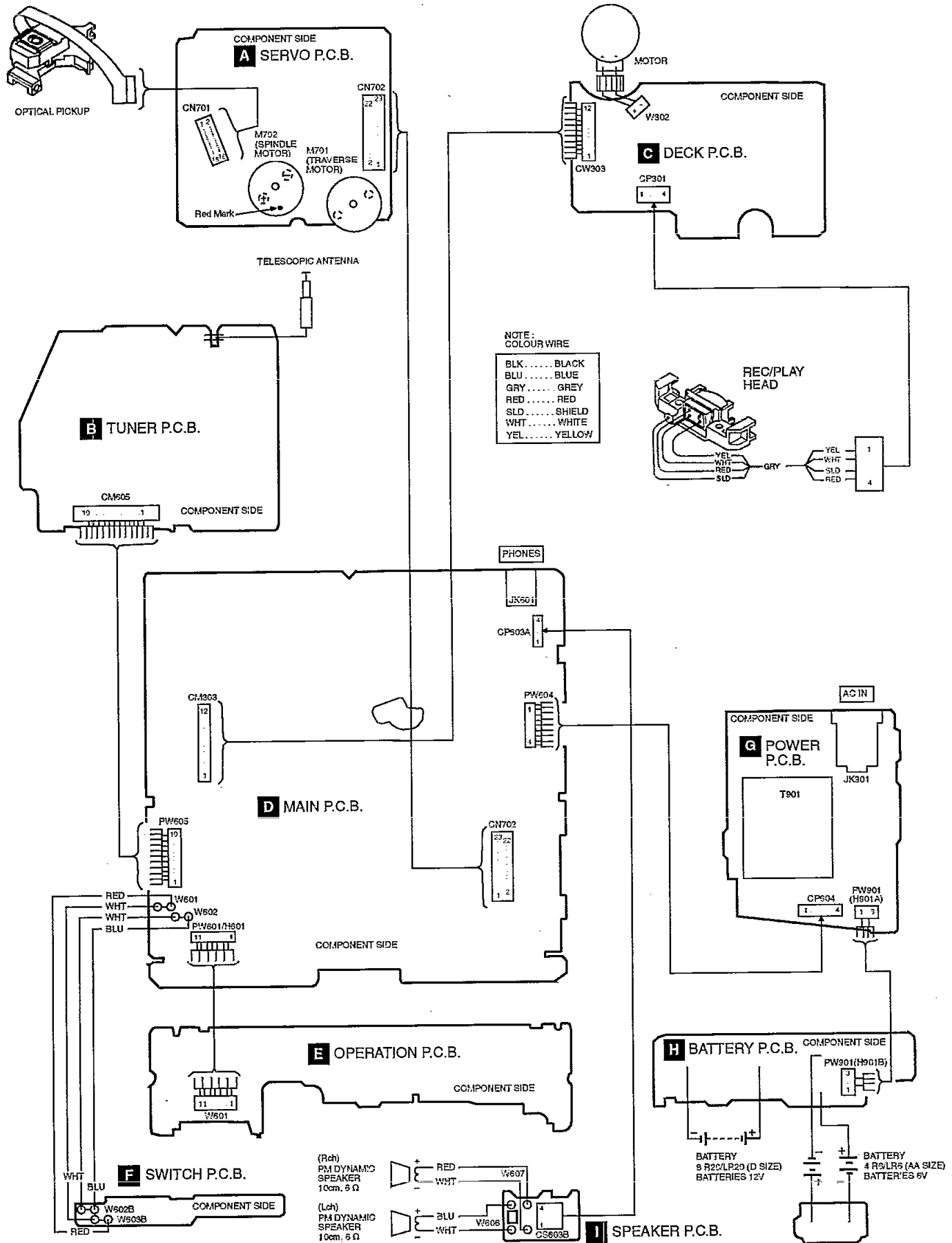
Pin No.	Mark	I/O	Function
1	PDA	I	PD signal input
2	PDB	I	PD signal input
3	VCC	I	Power supply connection
4	LPD	I	Laser PD connection
5	LD	O	Power out for LD driving
6	RF	O	RF signal output
7	RFIN	I	RF signal input
8	CAGC	I	AGC loop filter connection
9	ARF	O	RF-AGC output
10	CSBRT	I	Capacitor for detection connection
11	CEA	I	Capacitor connection for HPF amplifier
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	LD APC input ("H" : ON, "L" : OFF)
14	GND	—	Ground connection

Pin No.	Mark	I/O	Function
15	/RFDET	O	NRFDDET output ("L" : detection)
16	CROSS	O	CROSS output (Track cross signal output)
17	OFTR	O	Off-track output ("L" : ON track, "H" : OFF track)
18	VDET	O	VDET output ("H" : Vibration detected)
19	ENV	O	RF envelope detection
20	TEBPF	I	Vibration detection signal input
21	CCRS	I	Capacitor for LPF connection
22	TE	O	Tracking error signal output
23	FE	O	Focus error signal output
24	TBAL	I	Tracking balance signal input
25	FBAL	I	Focus balance signal input
26	VREF	O	Reference voltage output
27	PDE	I	PD signal input
28	PDF	I	PD signal input

■ Terminal Guide of IC's, Transistors and Diodes

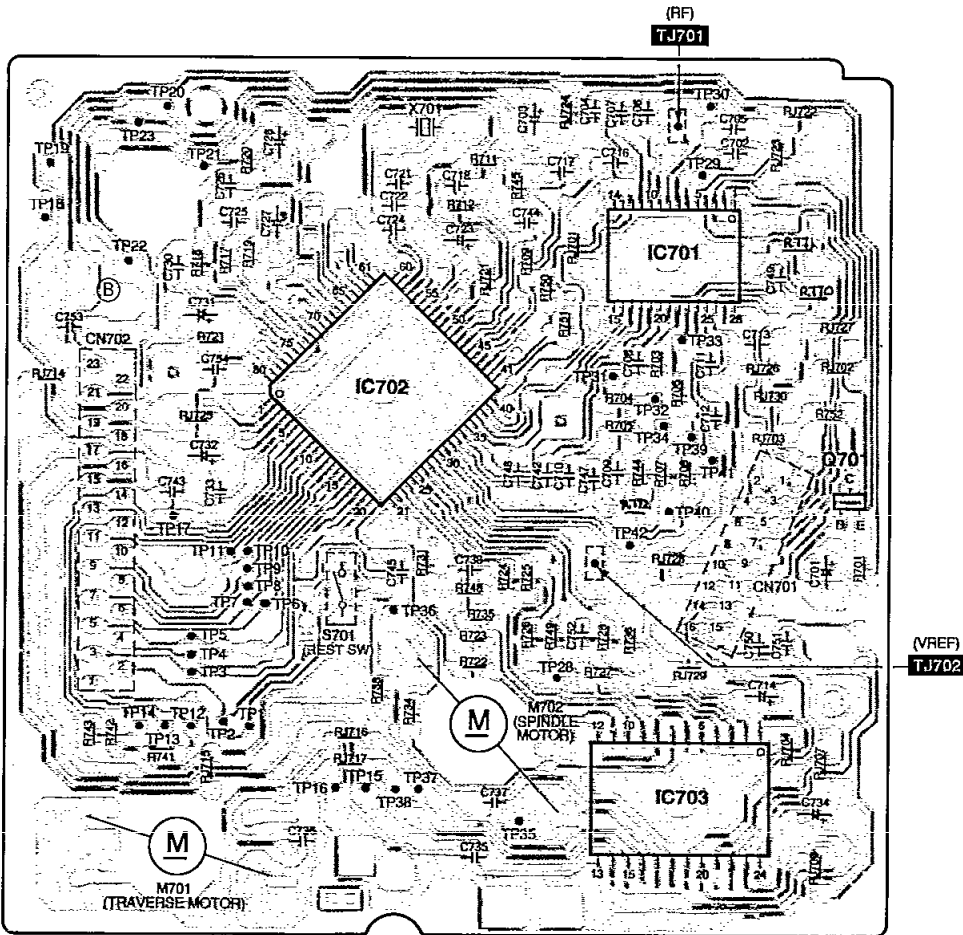
AN7317 	BH3854AFS-E2 	S-806G-Z 	TA7358FMATEL KV1583BMTL 	AN8389SE1 	AN8835SBE1(28P) BU2616F-E2(18P) LA1832MLSTEL(24P)
MN662741RPA(80P) 	SC440422CFU(80P) 	S81350HG-T 	AN7194K-LD 	2SB709S 	2SB1566E
2SA952LTA 2SC1684STA 	BA1L4MTA 	2SC2785FTA 2SC2786LTA 2SC3313BTA BA1A4PTA BA1L3NTA BN1A4PTA BN1L3NTA 		2SC1740SRTA RVTDTA143XST 	1N5402BM21
KV1360NT 	SLA362MTTJ7 	1SS254TA MA700TA RVD1SS135TA 	MTZJ15BTA MTZJ5R6CTA MTZJ7R5CTA 	SLR342DC 	SPR54MVWF

Wiring Connection Diagram

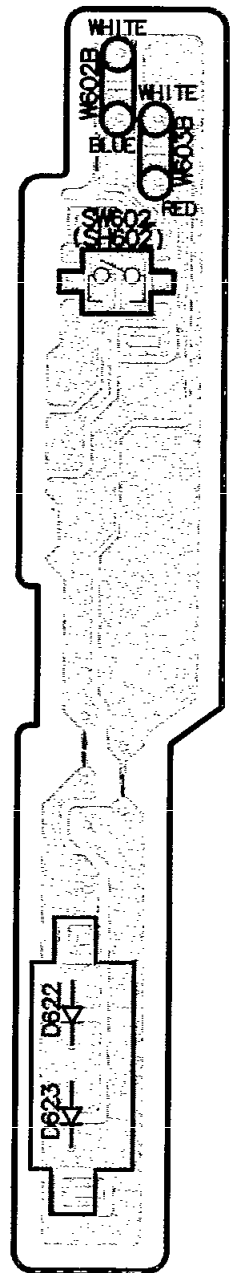


Printed Circuit Board

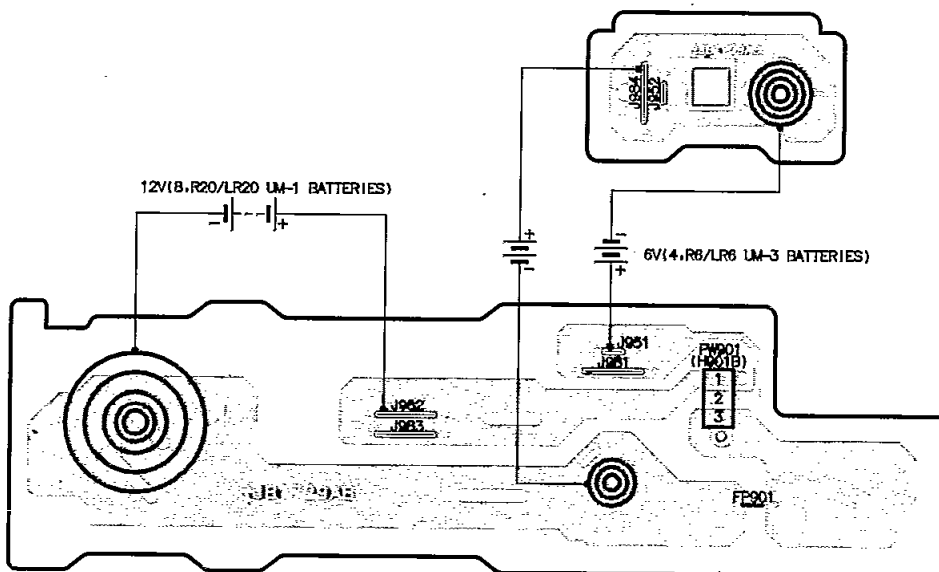
A SERVO P.C.B. (REPX0109)



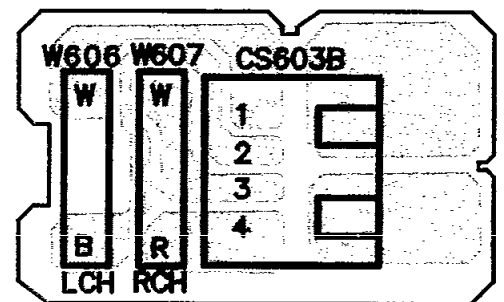
F SWITCH P.C.B. (REPX0121)



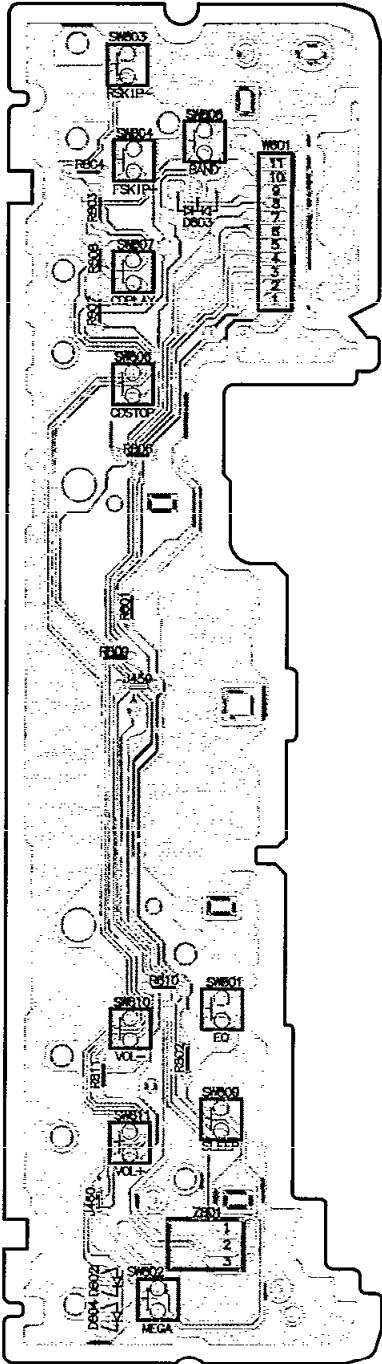
H BATTERY P.C.B. (REPX0122)



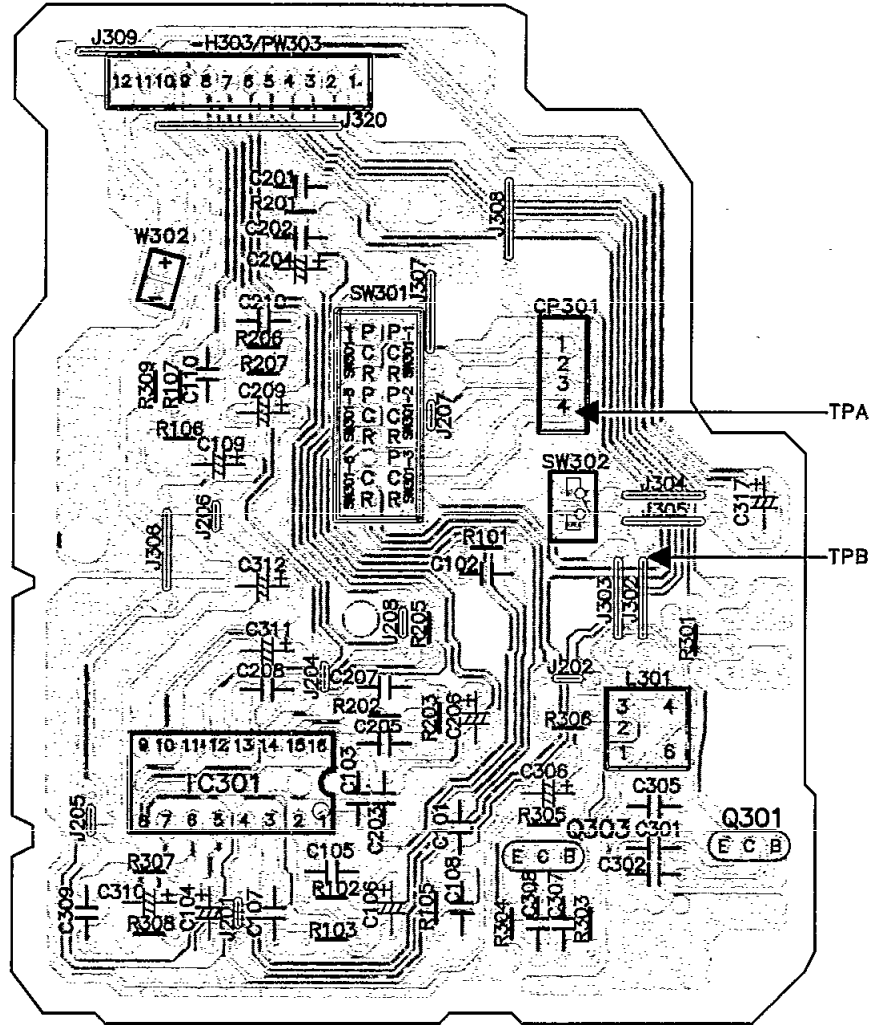
I SPEAKER P.C.B. (REPX0121)

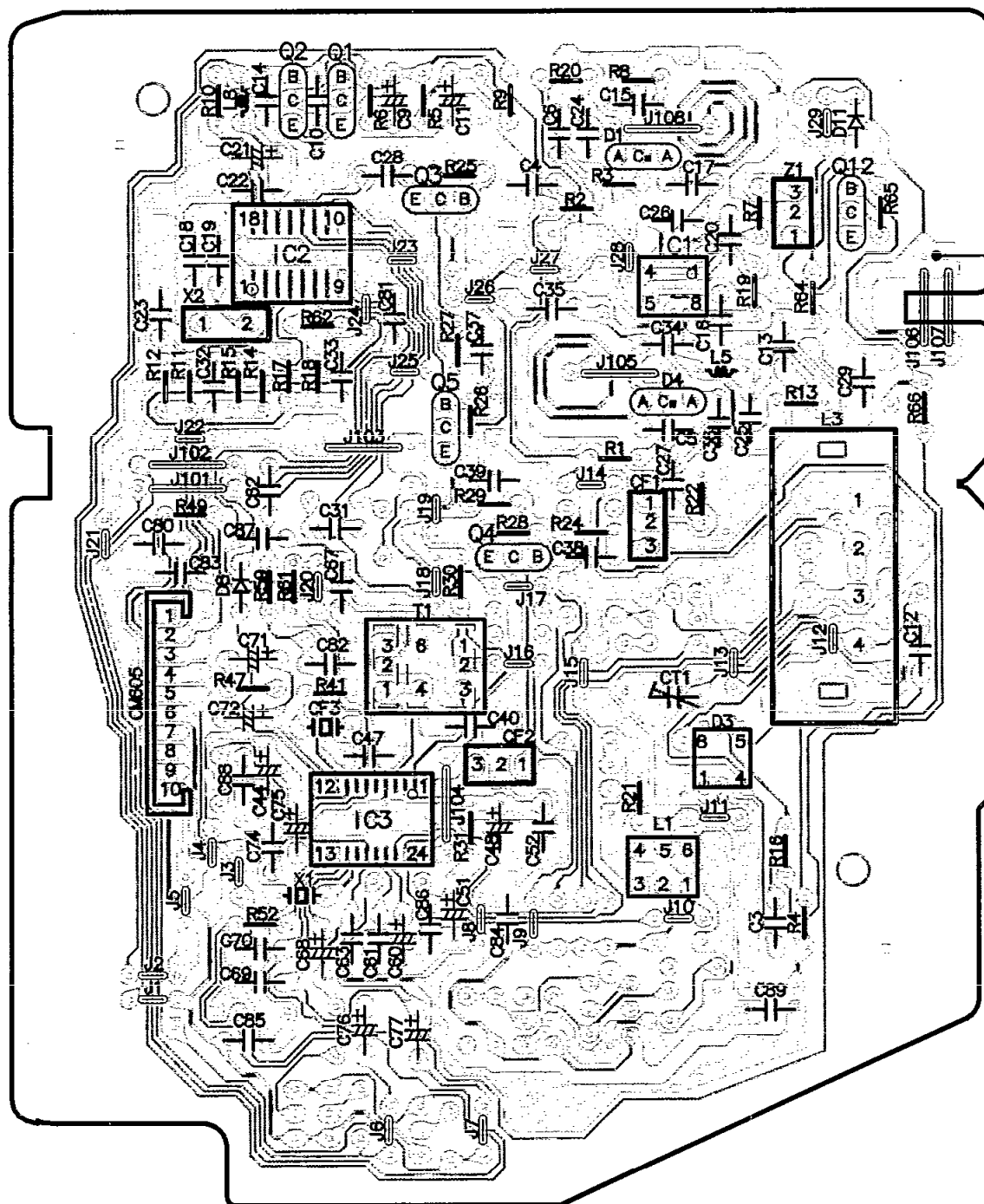


E OPERATION P.C.B.
(REPX0121)



C DECK P.C.B. (REPX0116A)

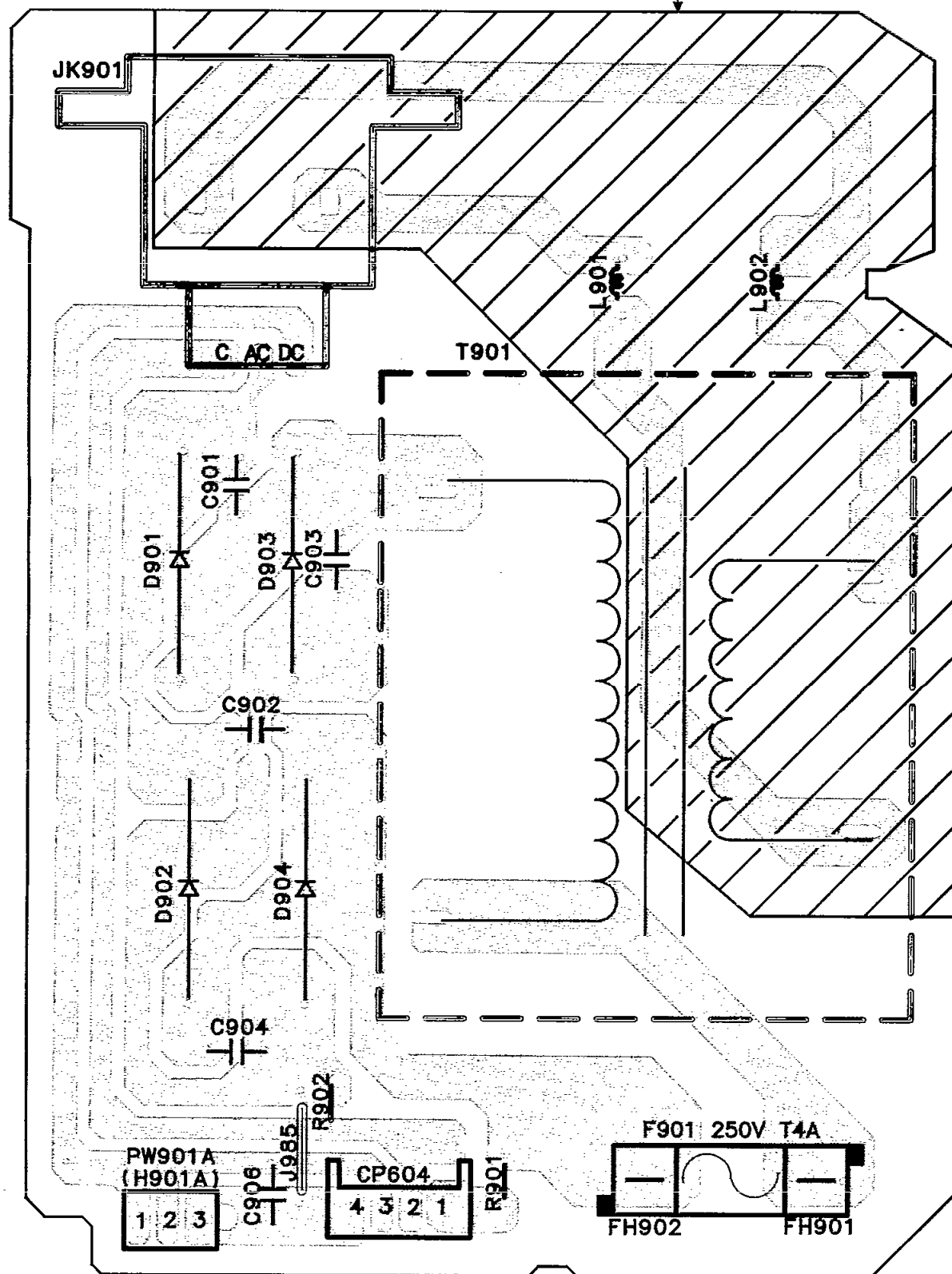


B TUNER P.C.B. (REP2470C)TELESCOPIC
ANTENNA

G POWER P.C.B. (REPX0122)

AC IN 
230V-240V
50Hz

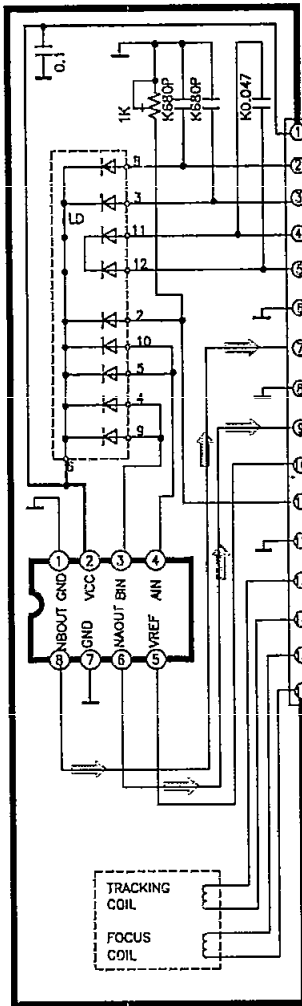
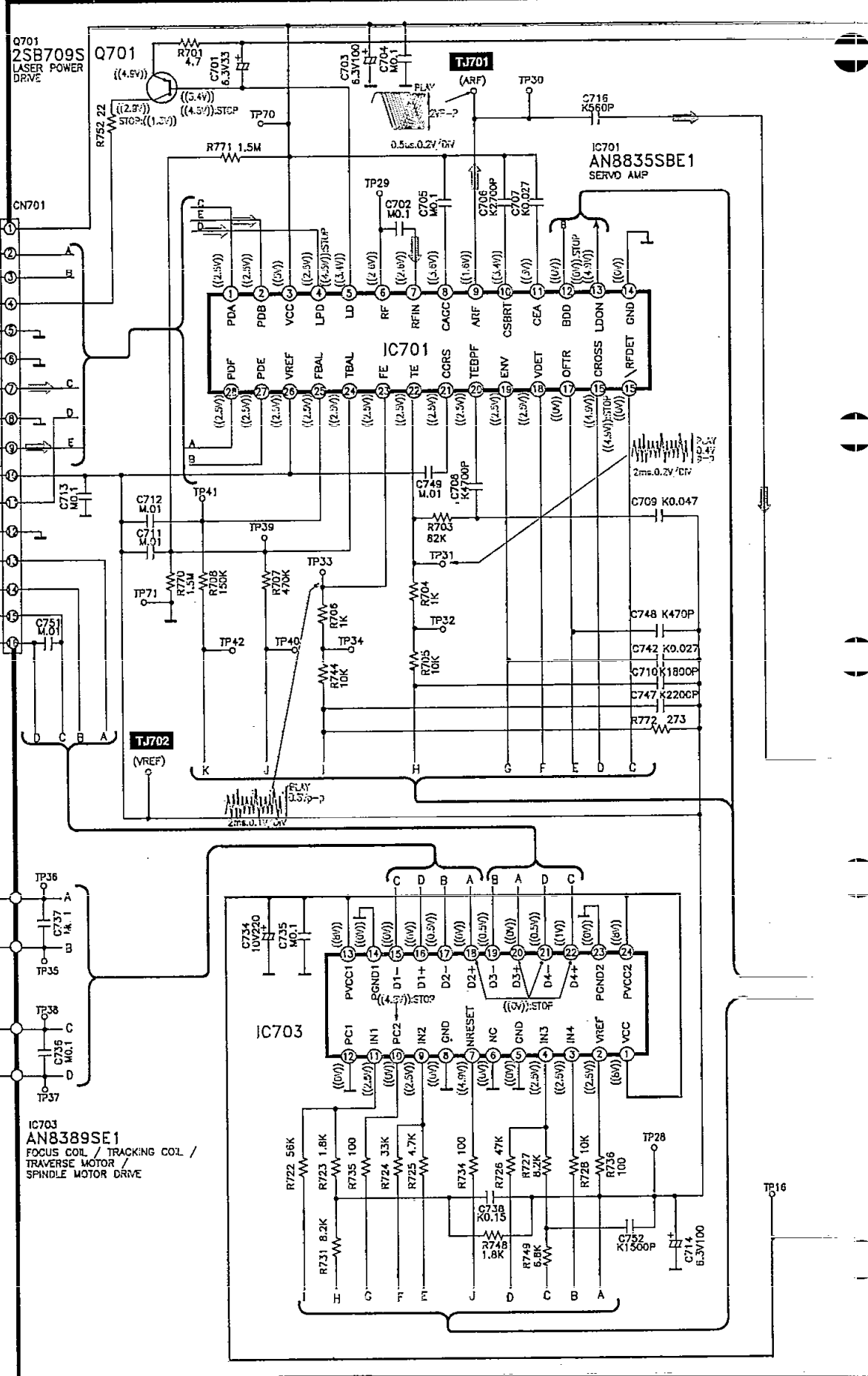
CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not
touch this portion.

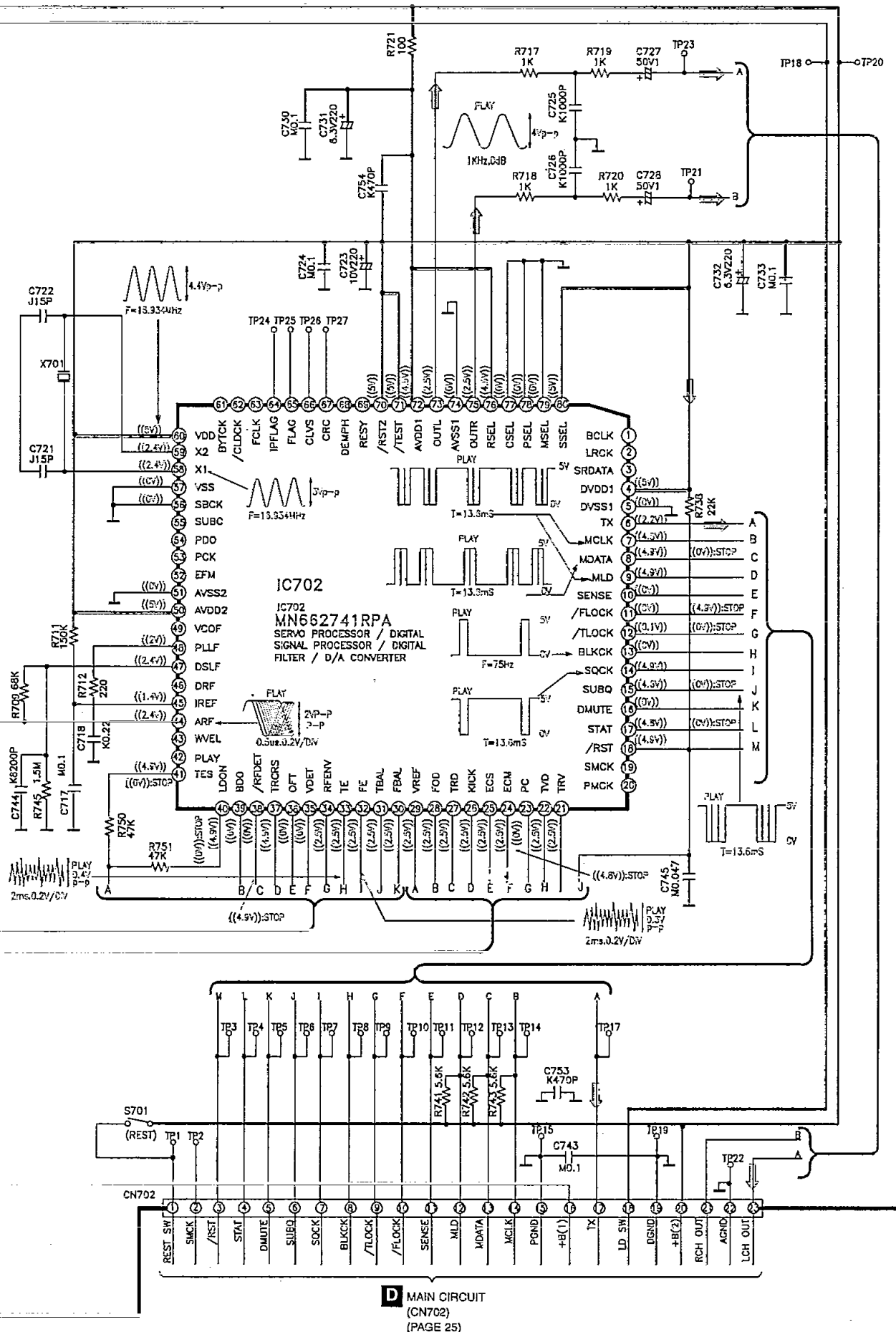


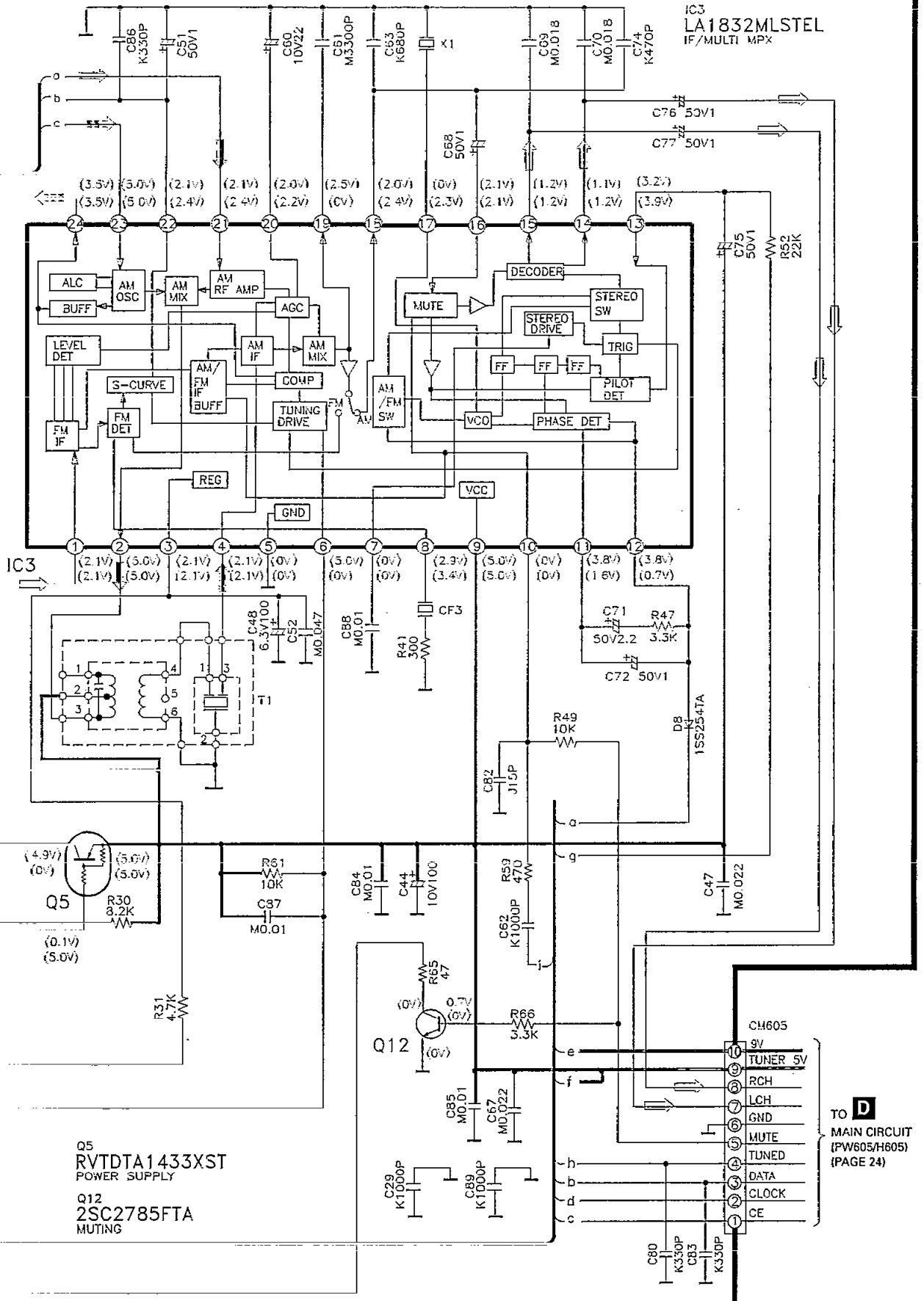
Schematic Diagram

A SERVO CIRCUIT

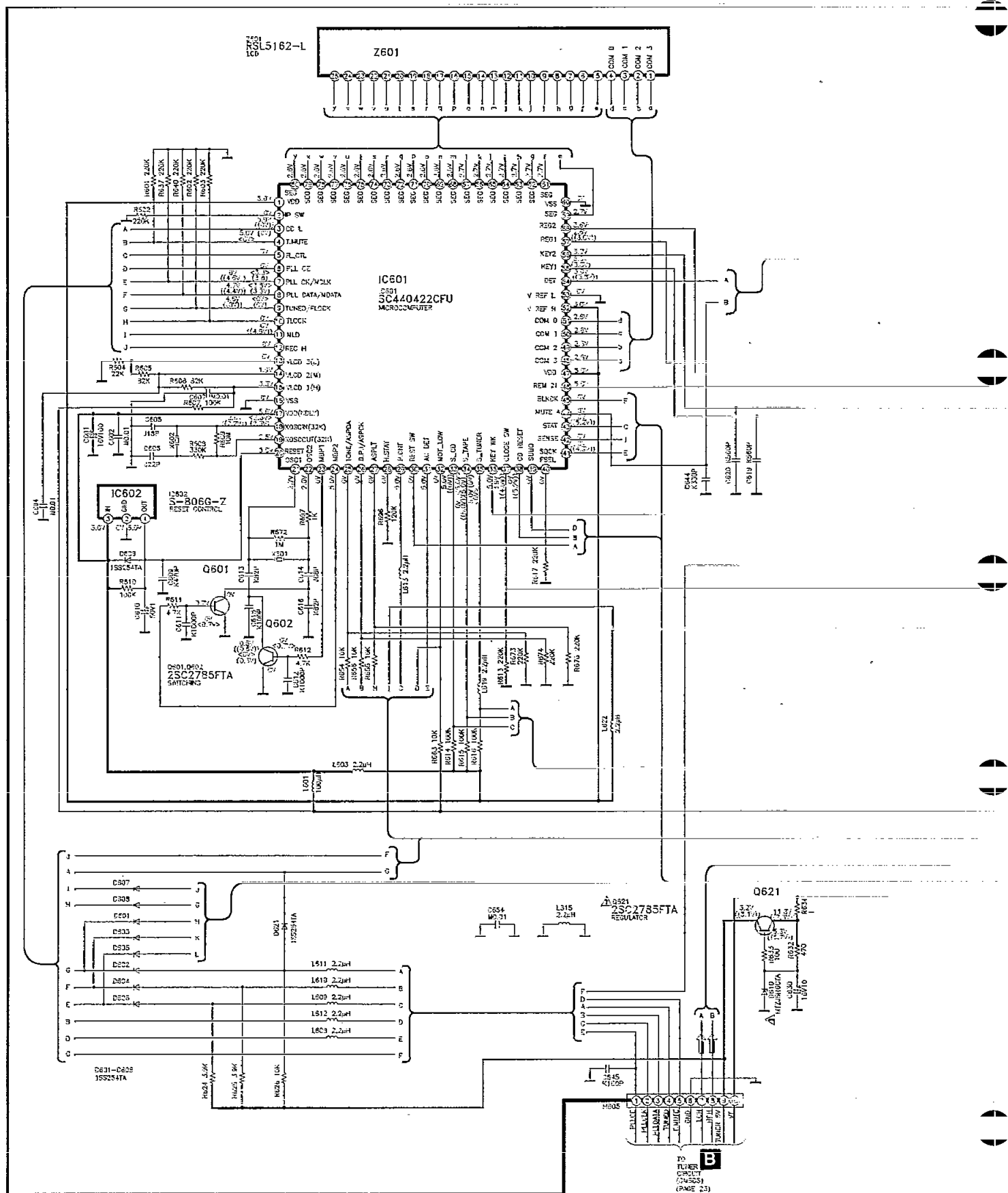
OPTICAL PICKUP

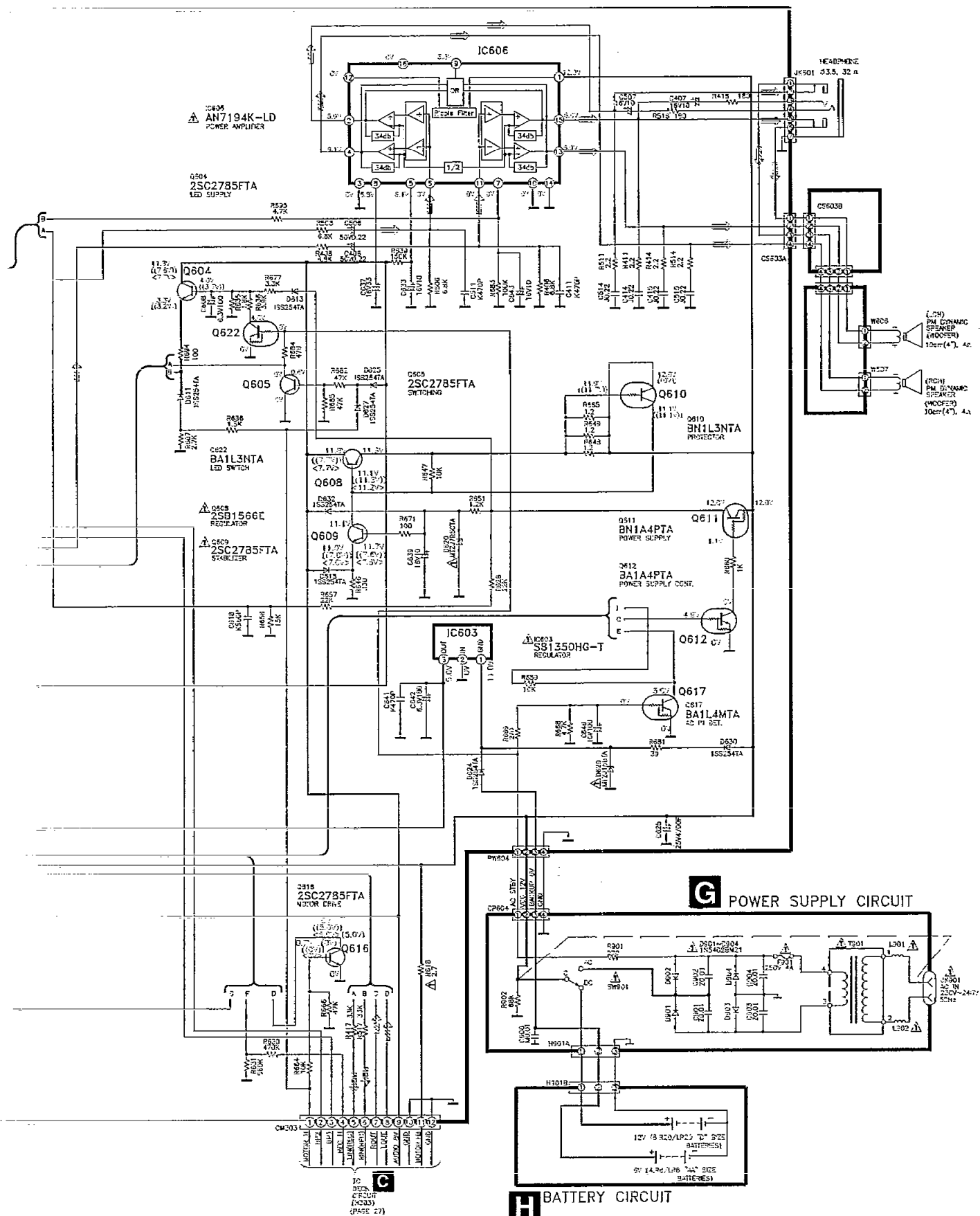
M702
SPINDLE
MOTORM701
TRAVERSE
MOTOR





D MAIN CIRCUIT





■ Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

< for Servo circuit > (Page 20 ~ 21)

- S701 : Rest switch

< for Main circuit, Switch circuit and Operation circuit > (Page 24 ~ 26)

- SW601-1 ~ SW601-3 : Function switch
- SW602 : Leaf switch
- SW801 : PRESET EQ switch
- SW802 : Power Blaster switch
- SW803 : SKIP/SEARCH (–) switch
- SW804 : SKIP/SEARCH (+) switch
- SW806 : CD Stop/Clear switch
- SW807 : CD Play/Pause switch
- SW808 : Band switch
- SW809 : Sleep (TUNER/CD) switch
- SW810 : Volume (–) switch
- SW811 : Volume (+) switch

< for Power Supply circuit > (Page 26)

- SW901 : AC/DC switch (JK901)

< for Deck circuit > (Page 27)

- SW301-1 ~ SW301-6 : REC. switch
- SW302 : Leaf switch

< General >

• Battery Current

Vol. min	330 mA (FM)	Vol. max	1.31 A (FM)
	310 mA (AM)		620 mA (AM)
	390 mA (TAPE)		1.49 A (TAPE)
	490 mA (CD)		1.53 A (CD)

Measurement condition:	
Radio	: FM 60 dB, 30%mod
	AM 74 dB/m, 30%mod
Tape	: 315 Hz, 0dB
CD	: 1kHz, 0dB

•Signal line

	: +B line		: Record signal line		: AM OSC signal line
	: FM/AM signal line		: CD signal line		: FM OSC signal line
	: Main signal line		: FM signal line		
	: Playback signal line		: AM signal line		

•The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.

Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark : Playback << >>.....Rec { } : Tuner (()) : CD () AM < > FM

•Importance safety notice:

Components identified by  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

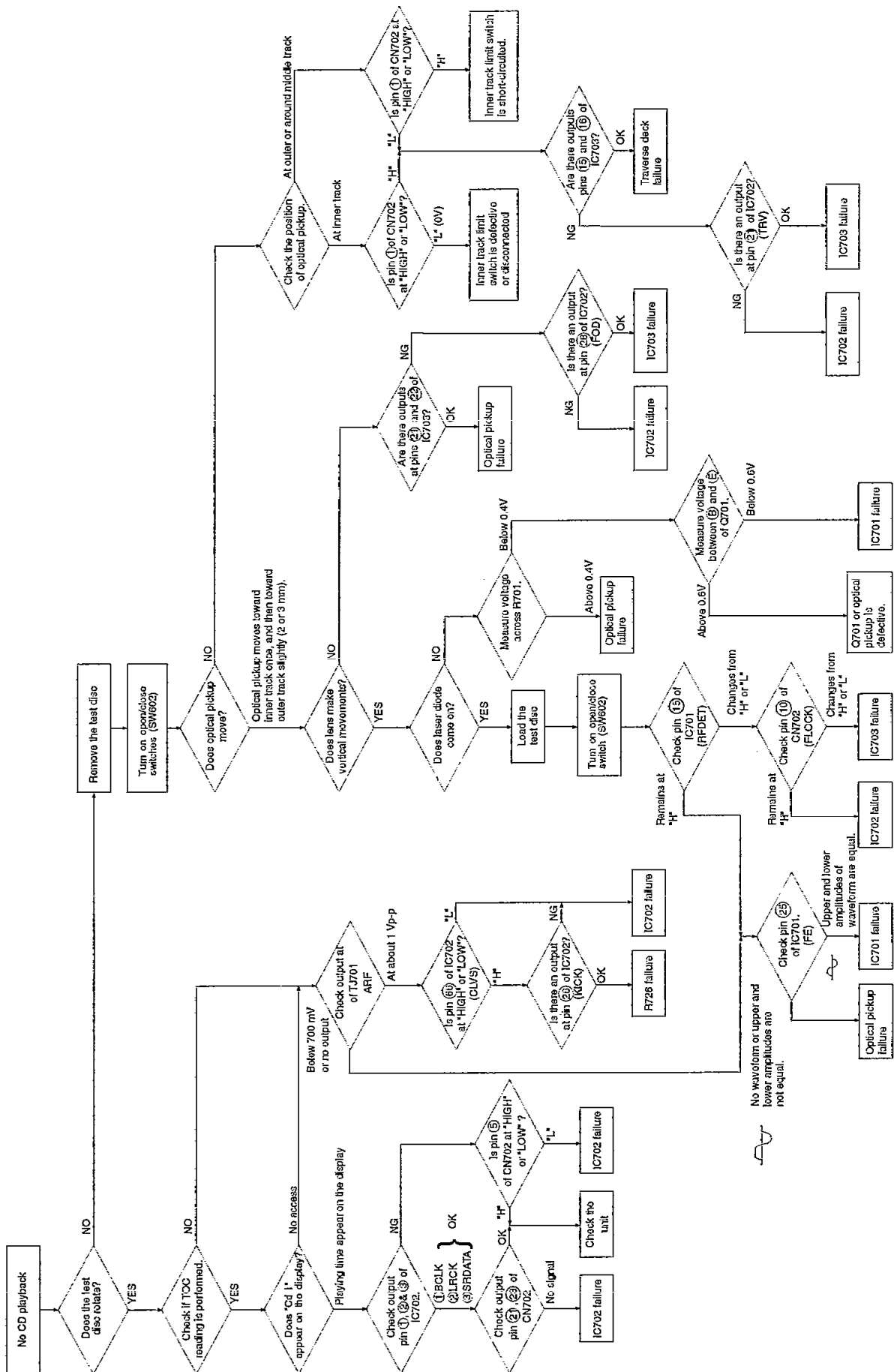
•Cover the parts boxes made of plastics with aluminium foil.

•Ground the soldering iron.

•Put a conductive mat on the work table.

•Do not touch the pins of IC, LSI or VLSI with fingers directly.

Troubleshooting Guide

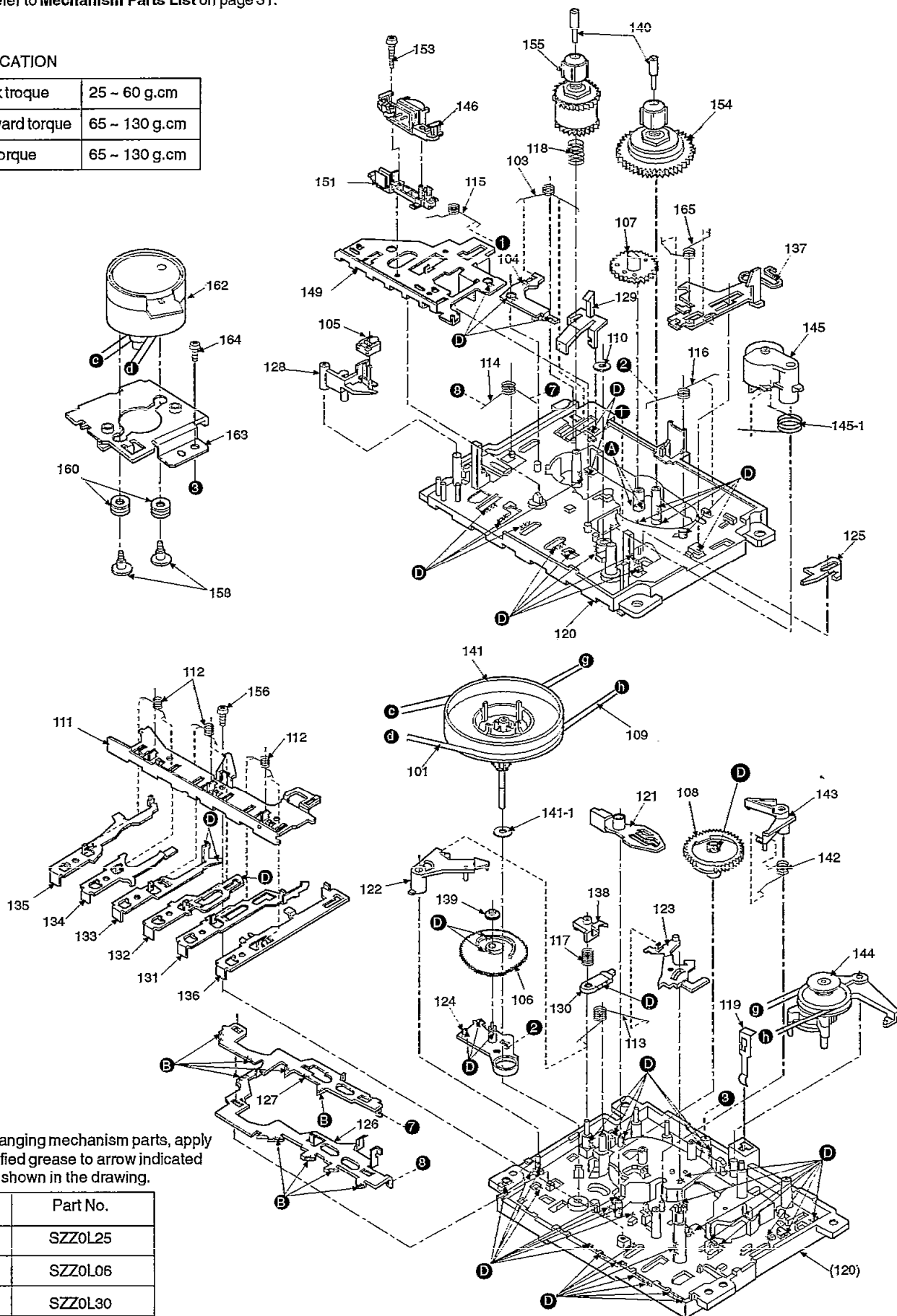


Mechanism Parts Location (RAA0935)

Note : Refer to Mechanism Parts List on page 31.

SPECIFICATION

Playback torque	25 ~ 60 g.cm
Fast forward torque	65 ~ 130 g.cm
Rewind torque	65 ~ 130 g.cm



Note:

When changing mechanism parts, apply the specified grease to arrow indicated areas as shown in the drawing.

Ref No.	Part No.
A	SZZ0L25
B	SZZ0L06
D	SZZ0L30

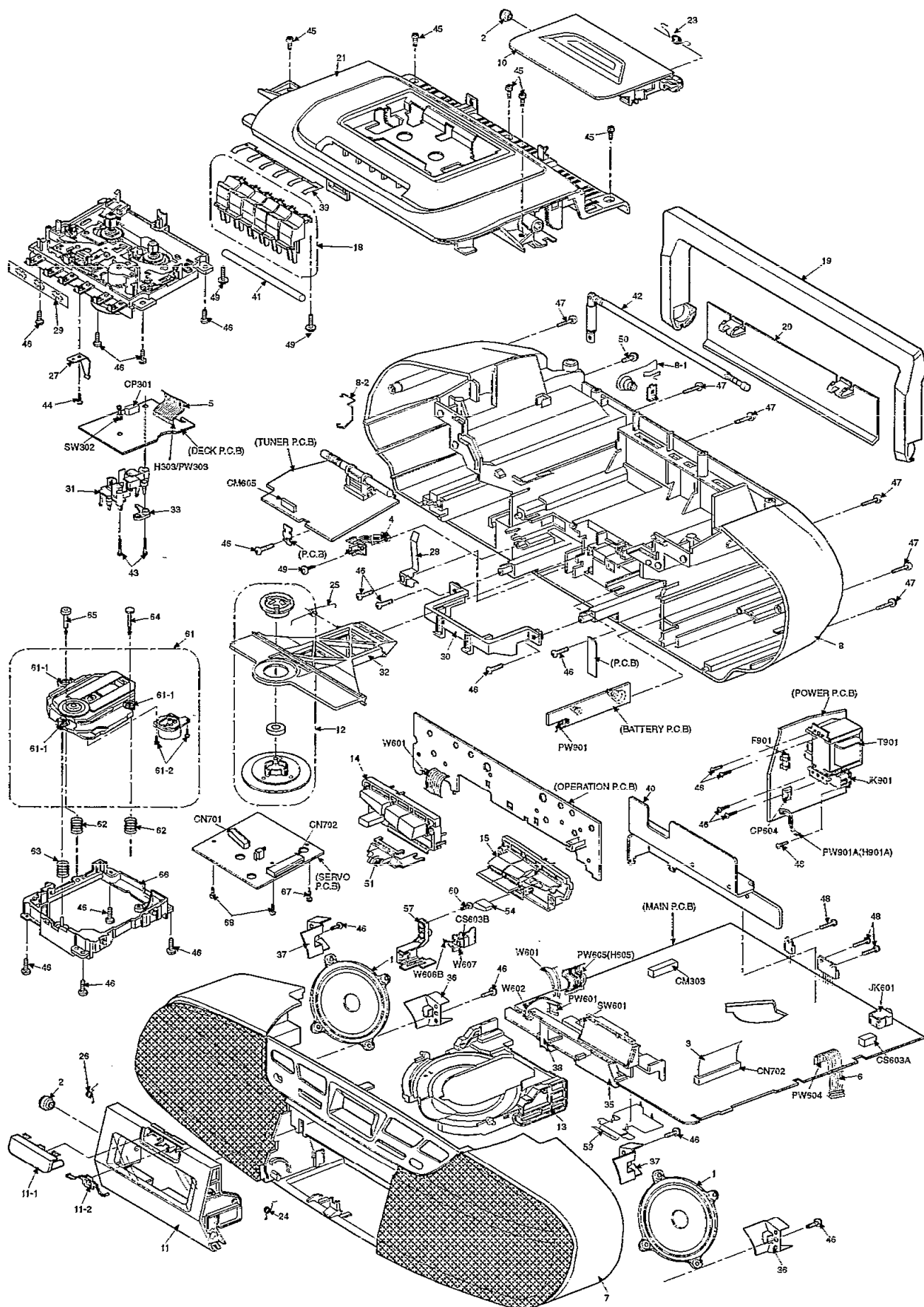
Mechanism Parts List

Note : • [M] mark in Remarks column indicates parts that are supplied by MESA.

• Refer to Mechanism Parts Location on pages 30.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK		144	RXP0014	RF CLUTCH ASS'Y	[M]				
				145	RXP0015	PINCH ROLLER ASS'Y	[M]				
101	RDV0007	MAIN BELT	[M]	145-1	RMB0049	SPRING	[M]				
103	RMB0109-1	BRAKE SPRING	[M]	146	RBR4CY016-M	R/P HEAD	[M]				
104	RML0116	BRAKE	[M]	149	RMA0636	HEAD BASE	[M]				
105	RBR2CY009	ERASE HEAD	[M]	151	RMQ0384	HEAD BASE	[M]				
106	RDG0057	IDLER GEAR	[M]	153	XTN2+12F	SCREW	[M]				
107	RDG0059	FF RELAY GEAR	[M]	154	RXR0004	TAKE-UP REEL ASS'Y	[M]				
108	RDK0005	CAM GEAR	[M]	155	RXR0005	SUPPLY REEL ASS'Y	[M]				
109	RDV0006-1	RF BELT	[M]	156	XTN2+6J	BACK PLATE SCREW	[M]				
110	RHW16009	CAPSTAN WASHER	[M]	158	RHD28002	MOTOR SCREW	[M]				
111	RMA0109	BACK PLATE	[M]	160	RMG0102	RUBBER SPACER	[M]				
112	RMB0043-1	ROD OPERATION SPRING	[M]	162	RFKPXDS101PK	DC MOTOR ASS'Y	[M]				
113	RMB0045	AS SPRING	[M]	163	RMA0108	MOTOR ANGLE	[M]				
114	RMB0046-1	LOCK PLATE SPRING	[M]	164	XTN26+8J	MOTOR BK SCREW	[M]				
115	RMB0047	HEAD PANEL SPRING	[M]	165	RME0038-2	SPRING	[M]				
116	RMB0048	IDLER LEVER SPRING	[M]								
117	RMB0053	PAUSE LEVER SPRING	[M]								
118	RMB0125	BACK TENSION SPRING	[M]								
119	RMC0061	PACK SPRING	[M]								
120	RFKRCOT090P-K	CHASSIS ASS'Y	[M]								
121	RML0071	SWAY LEVER	[M]								
122	RML0072	AS RELEASE LEVER	[M]								
123	RML0073-1	AS PROTECT LEVER	[M]								
124	RML0074	IDLER LEVER	[M]								
125	RML0076	EJECT SELECT LEVER	[M]								
126	RML0077	LOCK PLATE	[M]								
127	RML0078	FUNCTION PLATE	[M]								
128	RML0080-1	ERASE HEAD ARM	[M]								
129	RML0081-1	REC. SAFETY LEVER	[M]								
130	RMLC082	PAUSE LEVER	[M]								
131	RMM0023	PLAY ROD	[M]								
132	RMM0024	REW ROD	[M]								
133	RMM0025	FF ROD	[M]								
134	RMM0026	STOP ROD	[M]								
135	RMM0027	PAUSE ROD	[M]								
136	RMM0028	REC ROD	[M]								
137	RMM0029	EJECT SLIDE LEVER	[M]								
138	RMR0211	PAUSE BUSH	[M]								
139	RMR0227	IDLER GEAR BUSH	[M]								
140	RMS0055	REEL SHAFT	[M]								
141	RXF0012	FLYWHEEL ASS'Y	[M]								
141-1	RHW21008	WASHER	[M]								
142	RMB0044	TRIGGER SPRING	[M]								
143	RML0075	TRIGGER LEVER	[M]								

■ Cabinet Parts Location



■ Replacement Parts List

Notes: • Important safety notice :

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks column specify the areas. (refer to the cover page for area.)
- Parts without these indications can be used for all areas.

- [M] indicates in Remarks column parts that are supplied by MESA.

- Remote Control Unit :

Supply period for three years from terminal of production.

- Warning : This product uses a laser diode. Refer to caution statements on page 2.

ACHTUNG : • Die Lasereinheit nicht zerlegen.

- Die Lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		35	RMN0394	LED HOLDER	[M]	IC301	AN7317	IC, PB/REC AMP	[M]
				36	RMN0397	SPK. SUPPORT PLAT	[M]	IC601	SC440422CFU	IC, MICCN	[M]
1	EAST10P02A6	SPEAKER	[M]	37	RMN0398	SPK. SUPPORT PLAT	[M]	IC602	S-806G-Z	IC, RESET	[M]
2	RDG0183-L	DAMPER GEAR	[M]	38	RMN0400	LEAF SW. COVER	[M]	IC603	S91350HG-T	IC, 5V REGULATOR	[M]
3	REE0763	CD FFC	[M]	39	RMQ0649	MECHA BUTTON SUPPORT	[M]	IC604	BH3854AFS-E2	IC, SOUND PROCESSOR	[M]
4	REX0860	SPKR CONNECTING WIRE	[M]	40	RMYX0027	HEATSINK	[M]	IC606	AN7194K-LD	IC, BTL POWER	[M]
5	REXX0141	TAPE HEAD WIRE	[M]	41	SUX102	MECHA ROD	[M]				
6	REX0829	MAINTO PWR PCB WIRE	[M]	42	XEARR175EA-Y	ROD ANTENNA	[M](EB)			TRANSISTORS	
7	RFKGXDS27EBK	FRONT CABINET ASS'Y	[M]	43	XTN2+14GF	SCREW	[M]				
8	RFKHXS27EBK	BACK CABINET ASS'Y	[M](EB)	44	XTN2+3F	SCREW	[M]	Q1	2SC2785FTA	TRANSISTOR	[M]
8	RFKHXS27EGK	BACK CABINET ASS'Y	[M](EG)	45	XTN3+10CFZ	TOP CAB. SCREW	[M]	Q2	2SC2785FTA	TRANSISTOR	[M]
8	RFKHXS27E-K	BACK CABINET ASS'Y	[M](E)	46	XTV3+12G	SCREW	[M]	Q3	2SC2786LTA	TRANSISTOR	[M]
8-1	RJC91008	+BATT. TERMINAL	[M]	47	XTV3+20G	REAR CAB. SCREW	[M]	Q4	2SC3313BTA	TRANSISTOR	[M]
8-2	RJR0172	ANT. TERMINAL	[M]	48	XTV3+8F	POWER AMP IC SCREW	[M]	Q5	RVTDTA149XST	TRANSISTOR	[M]
10	RFKLXS27EBK	CASS. LID ASS'Y	[M]	49	XTW3+12T	SCREW	[M]	Q12	2SC2785FTA	TRANSISTOR	[M]
11	RFKLXS27ECK	CD LID ASS'Y	[M]	50	XYN3+F12FY	ROD. ANT SCREW	[M]	Q301	2SC1740SRTA	TRANSISTOR	[M]
11-1	RGU1464-K	CD EJECT BUTTON	[M]	51	RGV0186-S	SELECTOR KBOB	[M]	Q303	2SC1684STA	TRANSISTOR	[M]
11-2	RML0456	CD LOCK LEVER	[M]	54	RKW0499-Q	MEGA LED WINDOW	[M]	Q601	2SC2785FTA	TRANSISTOR	[M]
12	RFKNRXDS17PA	DISC HOLDER ASS'Y	[M]	57	RMR1061-X	CONNECTOR HOLDER	[M]	Q502	2SC2785FTA	TRANSISTOR	[M]
13	RGQ0195-K	CD TRAY	[M]	59	RSC0470	MICRON SHIELD PLATE	[M]	Q603	BN1L3NTA	TRANSISTOR	[M]
14	RGU1504-H	OPERATION BUTTON(L)	[M]	60	XTWS3+8T	CONNECTOR SCREW	[M]	Q604	2SC2785FTA	TRANSISTOR	[M]
15	RGU1505-H	OPERATION BUTTON(R)	[M]	61	RAE0150Z	TRAVERSE UNIT	[M]	Q605	2SC2785FTA	TRANSISTOR	[M]
18	RGZX0025-K	MECHA BUTTON	[M]	61-1	SHGD113-1	FLOATING RUBBER	[M]	Q606	2SA952LTA	TRANSISTOR	[M]
19	RKH0038-K	HANDLE	[M]	61-2	XQS17+A35FZ	SCREW	[M]	Q607	2SC2785FTA	TRANSISTOR	[M]
20	RKK347ZB-K	BATTERY COVER	[M]	62	RME0109	FLOATING SPRING A	[M]	Q608	2SB1586E	TRANSISTOR	[M]
21	RKQX0007A-K	TOP CABINET	[M]	63	RME0142	FLOATING SPRING B	[M]	Q609	2SC2785FTA	TRANSISTOR	[M]
23	RMB0490	CASS. OPEN SPRING	[M]	64	RMS0123-1	FIXED PIN A	[M]	Q610	BN1L3NTA	TRANSISTOR	[M]
24	RMB0491	CD OPEN SPRING (R)	[M]	65	RMS0350	FIXED PIN B	[M]	Q611	BN1A4PTA	TRANSISTOR	[M]
25	RMB0492	CD CLAMPER SPRING	[M]	66	RMR0698-K	TRAVERSE CHASSIS	[M]	Q612	BA1A4PTA	TRANSISTOR	[M]
26	RMB0496	CD OPEN SPRING (L)	[M]	67	XTN2+6G	SCREW	[M]	Q613	BN1L3NTA	TRANSISTOR	[M]
27	RMC0312	R/P PLATE	[M]	68	XTV2+6G	SCREW	[M]	Q614	BA1A4ZTA	TRANSISTOR	[M]
28	RMC0325	CD TRAY OPEN SPRING	[M]					Q615	2SC2785FTA	TRANSISTOR	[M]
29	RMXX0004	SPACER	[M]			INTEGRATED CIRCUITS		Q616	2SC2785FTA	TRANSISTOR	[M]
30	RMK0337	CD SUPPORT	[M]					Q617	BA1L4MTA	TRANSISTOR	[M]
31	RMK0338	PCB CHASSIS	[M]	IC1	TA7358FMATEL	IC, FM RF	[M]	Q618	BN1L3NTA	TRANSISTOR	[M]
32	RML0455	CD CLAMPER HOLDER	[M]	IC2	BU2616F-E2	IC, PLL	[M]	Q619	BN1L3NTA	TRANSISTOR	[M]
33	RML0462	R/P LEVER	[M]	IC3	LA1832MLSTEL	IC, IF/MULTI	[M]	Q621	2SC2785FTA	TRANSISTOR	[M]

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
Q622	BA1L3NTA	TRANSISTOR	[M]					L622	RLQZP2R2KT-Y	INDUCTOR	[M]
				SW301	RSP2F001-A	SW, REC	[M]	L901	RL500050T-Y	RF CHOKE COIL	[M]
		DIODES		SW302	RSH1A013-2I	SW, LEAF	[M]	L902	RL500050T-Y	RF CHOKE COIL	[M]
				SW601	RSS3D002-B	SW, FUNCTION	[M]	T1	RLI2Z019-T	IFT (459KHZ)	[M]
D1	KV1360NT	DIODE	[M]	SW602	RSH1A037-U	SW, LEAF	[M]	T901	RTP1L1B010-X	POWER TRANSFORMER	[M]
D3	KV1583BMTL	DIODE	[M]	SW801	EVQ21405R	SW, EQ	[M]				
D4	KV1360NT	DIODE	[M]	SW802	EVQ21405R	SW, MEGA	[M]			COMPONENT COMBINATION	
D8	1SS254TA	DIODE	[M]	SW803	EVQ21405R	SW, RSKIP(-)	[M]				
D11	RVD1SS135TA	DIODE	[M]	SW804	EVQ21405R	SW, FSKIP(+)	[M]	Z1	FXABPWB6AT	BAND PASS FILT	[M]
D601	1SS254TA	DIODE	[M]	SW806	EVQ21405R	SW, CD STOP	[M]	Z601	RSL5162-L	LCD	[M]
D602	1SS254TA	DIODE	[M]	SW807	EVQ21405R	SW, CD PLAY	[M]	Z801	RCD12042TE	REMOTE CTRL SENSOR	[M]
D603	1SS254TA	DIODE	[M]	SW808	EVQ21405R	SW, BAND	[M]				
D604	1SS254TA	DIODE	[M]	SW809	EVQ21405R	SW, SLEEP	[M]			CERAMIC FILTERS	
D605	1SS254TA	DIODE	[M]	SW810	EVQ21405R	SW, VOL(-)	[M]				
D606	1SS254TA	DIODE	[M]	SW811	EVQ21405R	SW, VOL(+)	[M]	CF1	RLFFETMLA02D	RESONATOR	[M]
D607	1SS254TA	DIODE	[M]	SW901	RJ11SE01-1H	SW, AC IN (JK901)	[M]	CF2	RLFFETMLA02D	RESONATOR	[M]
D608	1SS254TA	DIODE	[M]					CF3	RLDFT14AD	FM RESONATOR	[M]
D609	1SS254TA	DIODE	[M]			CONNECTORS					
D610	MTZJ5R6CTA	DIODE	[M]							OSCILLATORS	
D611	1SS254TA	DIODE	[M]	CN702	RJS1A6823-J	FFC CONNECTOR(VERT	[M]				
D613	1SS254TA	DIODE	[M]	CP301	RJP4G17ZA	TAPE HEAD CONNECTOR	[M]	X1	RSXZ456KM01	19KHZ OSC	[M]
D614	1SS254TA	DIODE	[M]	CP604	RJP4G39YA	4P CONNECTOR	[M]	X2	RSXC7M20S04T	XTAL 7.2MHZ	[M]
D615	1SS254TA	DIODE	[M]	CS603A	RJP4G4YA	4P CONNECTOR	[M]	X601	EF0EN4194T4	CERALOCK	[M]
D618	1SS254TA	DIODE	[M]	CS603B	RJT060B04	4P CONNECTOR	[M]	X602	RSXD32K7S02	XTAL 32.768HKZ	[M]
D620	MTZJ7R5CTA	DIODE	[M]	CM303	RJS1A5212	12P CONNECTOR	[M]				
D621	1SS254TA	DIODE	[M]	CM605	RJS1A5210	10P WIRE HOLDER	[M]			FUSES	
D622	SLA362MTTJ7	DIODE	[M]								
D623	SLA362MTTJ7	DIODE	[M]			COILS & TRANSFORMERS		F901	XBA2C40TB0	FUSE	[M]
D624	1SS254TA	DIODE	[M]								
D625	1SS254TA	DIODE	[M]	L1	RL02B012-T	COIL	[M]			FUSE HOLDERS	
D626	1SS254TA	DIODE	[M]	L3	RLV2C032-0	F. ANT	[M]				
D627	1SS254TA	DIODE	[M]	L5	RLQZP8R2JT-Y	COIL	[M]	FH901	RJR0169T	FUSE HOLDER	[M]
D629	MTZJ15BTA	DIODE	[M]	L8	ELEXT101KA9	AXIAL COIL	[M]	FH902	RJR0169T	FUSE HOLDER	[M]
D630	1SS254TA	DIODE	[M]	L301	RL09B17-T	COIL	[M]				
D632	1SS254TA	DIODE	[M]	L601	RLQZP100KT-Y	AXIAL COIL	[M]			FUSE PROTECTORS	
D802	SLR342DC	DIODE	[M]	L603	RLQZP2R2KT-Y	INDUCTOR	[M]				
D803	SPR54MVWF	DIODE	[M]	L604	RLQZP2R2KT-Y	INDUCTOR	[M]	FP901	RSFMB50KT-L	FUSE PROTECTOR	[M]
D804	SLR342DC	DIODE	[M]	L605	RLQZP2R2KT-Y	INDUCTOR	[M]				
D901	1N5402BM21	DIODE	[M]	L608	RLQZP2R2KT-Y	INDUCTOR	[M]			LCD HOLDER	
D902	1N5402BM21	DIODE	[M]	L609	RLQZP2R2KT-Y	INDUCTOR	[M]				
D903	1N5402BM21	DIODE	[M]	L610	RLQZP2R2KT-Y	INDUCTOR	[M]	LH601	RMN0393	LCD HOLDER	[M]
D904	1N5402BM21	DIODE	[M]	L611	RLQZP2R2KT-Y	INDUCTOR	[M]				
				L612	RLQZP2R2KT-Y	INDUCTOR	[M]			JACKS	
		TRIMMER		L613	RLQZP2R2KT-Y	INDUCTOR	[M]				
				L615	RLQZP2R2KT-Y	INDUCTOR	[M]	JK601	RJ37TK01-1C	JK, HEADPHONE	[M]
CT1	RCV10AF1T-S	TRIMMER	[M]	L616	RLQZP2R2KT-Y	INDUCTOR	[M]	JK901	RJ11SE01-1H	JK, AC IN	[M]
				L617	RLQZP2R2KT-Y	INDUCTOR	[M]				
		SWITCHES		L619	RLQZP2R2KT-Y	INDUCTOR	[M]			PACKING MATERIALS	

Ref No.	Part No.	Part Name & Description	Remarks
P1	RPGX0398	GIFT BOX	[M](EB,EG)
P1	RPGX0429	GIFT BOX	[M](E)
P2	RPH0131	MIRAMAT SHEET	[M]
P3	RPN1032	POLYFOAM	[M]
P4	RPN1057	POLYFOAM (CENTRE)	[M]
		ACCESSORIES	
A1	RAK-RX926WK	REMOTE CONTROL UNIT	[M]
A1-1	HTR0212-72FW	RC BATTERY COVER	[M]
A2	RFKSXDS27EGK	O/I BOOK ASS'Y	[M](EG)
A2	RFKSXDS27E-K	O/I BOOK ASS'Y	[M](E)
A2	RQT3729-B	O/I BOOK	[M](EB)
A3	RJA0019-2K	AC CORD	[M](EG,E)
A3	VJA0733	AC CORD	[M](EB)
		<SERVO P.C.B>	
		INTEGRATED CIRCUITS	
IC701	AN8835SBE1	IC, SERVO AMP.	[M]
IC702	MN662741RPA	IC, DIGITAL LSI	[M]
IC703	AN8389SE1	IC, COIL/MOTOR DRIVE	[M]
		TRANSISTOR	
Q701	2SB709S	TRANSISTOR	[M]
		SWITCH	
S701	RSM0006-P	SW, RESET	[M]
		CONNECTORS	
CN701	RJU035T016-1	16P FFC CONNECTOR	[M]
CN702	RJS1A6723-1Q	23P FFC CONNECTOR	[M]
		OSCILLATOR	
X701	RSXZ16M9M01T	CERAMIC OSC	[M]

■ Resistors & Capacitors

Notes : • Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks column specify the areas. (refer to the cover page for area.)
- Parts without these indications can be used for all areas.
- [M] indicates in Remarks column parts that are supplied by MESA.
- Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
- Resistors values are in ohms, unless specified otherwise, 1k=1,000(OHM), 1M=1,000k(OHM)

Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks
	RESISTORS										
R1	ERDS2TJ104T	100K 1/4W [M]	R65	ERDS2TJ470T	47 1/4W [M]	R507	ERDS2TJ682T	6.8K 1/4W [M]	R636	ERDS2TJ392T	3.9K 1/4W [M]
R2	ERDS2TJ332T	3.3K 1/4W [M]	R66	ERDS2TJ332T	3.3K 1/4W [M]	R508	ERDS2TJ682T	6.8K 1/4W [M]	R637	ERDS2TJ224T	220K 1/4W [M]
R3	ERDS2TJ104T	100K 1/4W [M]	R101	ERDS2TJ183T	18K 1/4W [M]	R511	ERDS2TJ2R2T	2.2 1/4W [M]	R638	ERDS2TJ102T	1K 1/4W [M]
R4	ERDS2TJ103T	10K 1/4W [M]	R102	ERDS2TJ330T	33 1/4W [M]	R514	ERDS2TJ2R2T	2.2 1/4W [M]	R639	ERDS2TJ154T	150K 1/4W [M]
R5	ERDS2TJ103T	10K 1/4W [M]	R103	ERDS2TJ472T	4.7K 1/4W [M]	R516	ERDS2TJ181T	180 1/4W [M]	R640	ERDS2TJ224T	220K 1/4W [M]
R6	ERDS2TJ152T	1.5K 1/4W [M]	R105	ERDS2TJ123T	12K 1/4W [M]	R517	ERDS2TJ333T	33K 1/4W [M]	R641	ERDS2TJ153T	15K 1/4W [M]
R7	ERDS2TJ330T	33 1/4W [M]	R106	ERDS2TJ103T	10K 1/4W [M]	R601	ERDS2TJ224T	220K 1/4W [M]	R642	ERDS2TJ153T	15K 1/4W [M]
R8	ERDS2TJ104T	100K 1/4W [M]	R107	ERDS2TJ332T	3.3K 1/4W [M]	R602	ERDS2TJ224T	220K 1/4W [M]	R643	ERDS2TJ103T	10K 1/4W [M]
R9	ERDS2TJ471T	470 1/4W [M]	R201	ERDS2TJ183T	18K 1/4W [M]	R603	ERDS2TJ224T	220K 1/4W [M]	R644	ERDS2TJ331T	330 1/4W [M]
R10	ERDS2TJ102T	1K 1/4W [M]	R202	ERDS2TJ330T	33 1/4W [M]	R604	ERDS2TJ223T	22K 1/4W [M]	R645	ERDS2TJ122T	1.2K 1/4W [M]
R11	ERDS2TJ103T	10K 1/4W [M]	R203	ERDS2TJ472T	4.7K 1/4W [M]	R605	ERDS2TJ823T	82K 1/4W [M]	R646	ERDS2TJ331T	330 1/4W [M]
R12	ERDS2TJ223T	22K 1/4W [M]	R205	ERDS2TJ123T	12K 1/4W [M]	R606	ERDS2TJ823T	82K 1/4W [M]	R647	ERDS2TJ103T	10K 1/4W [M]
R13	ERDS2TJ153T	15K 1/4W [M]	R206	ERDS2TJ103T	10K 1/4W [M]	R607	ERDS2TJ104T	100K 1/4W [M]	R648	ERDS2TJ1R2T	1.2 1/4W [M]
R14	ERDS2TJ103T	10K 1/4W [M]	R207	ERDS2TJ332T	3.3K 1/4W [M]	R608	ERDS2TJ334T	330K 1/4W [M]	R649	ERDS2TJ1R2T	1.2 1/4W [M]
R15	ERDS2TJ223T	22K 1/4W [M]	R301	ERDS2TJ272T	2.7K 1/4W [M]	R609	ERDS2TJ105T	10M 1/4W [M]	R650	ERDS2TJ471T	470 1/4W [M]
R16	ERDS2TJ105T	1M 1/4W [M]	R303	ERDS2TJ221T	220 1/4W [M]	R610	ERDS2TJ104T	100K 1/4W [M]	R651	ERDS2TJ122T	1.2K 1/4W [M]
R17	ERDS2TJ103T	10K 1/4W [M]	R304	ERDS2TJ100T	10 1/4W [M]	R611	ERDS2TJ472T	4.7K 1/4W [M]	R652	ERDS2TJ471T	470 1/4W [M]
R18	ERDS2TJ223T	22K 1/4W [M]	R305	ERDS2TJ563T	56K 1/4W [M]	R612	ERDS2TJ472T	4.7K 1/4W [M]	R653	ERDS2TJ271T	270 1/4W [M]
R19	ERDS2TJ101T	100 1/4W [M]	R306	ERDS2TJ681T	680 1/4W [M]	R613	ERDS2TJ224T	220K 1/4W [M]	R654	ERDS2TJ103T	10K 1/4W [M]
R20	ERDS2TJ151T	150 1/4W [M]	R307	ERDS2TJ222T	2.2K 1/4W [M]	R614	ERDS2TJ104T	100K 1/4W [M]	R655	ERDS2TJ103T	10K 1/4W [M]
R21	ERDS2TJ104T	100K 1/4W [M]	R308	ERDS2TJ475T	4.7M 1/4W [M]	R615	ERDS2TJ104T	100K 1/4W [M]	R656	ERDS2TJ103T	10K 1/4W [M]
R22	ERDS2TJ331T	330 1/4W [M]	R309	ERDS2TJ101T	100 1/4W [M]	R616	ERDS2TJ104T	100K 1/4W [M]	R657	ERDS2TJ223T	22K 1/4W [M]
R24	ERDS2TJ471T	470 1/4W [M]	R401	ERDS2TJ152T	1.5K 1/4W [M]	R617	ERDS2TJ224T	220K 1/4W [M]	R658	ERDS2TJ153T	15K 1/4W [M]
R25	ERDS2TJ104T	100K 1/4W [M]	R402	ERDS2TJ332T	3.3K 1/4W [M]	R618	ERDS1FVJ2R7T	2.7 1/2W  [M]	R659	ERDS2TJ103T	10K 1/4W [M]
R26	ERDS2TJ102T	1K 1/4W [M]	R403	ERDS2TJ682T	6.8K 1/4W [M]	R619	ERDS2TJ153T	15K 1/4W [M]	R660	ERDS2TJ102T	1K 1/4W [M]
R27	ERDS2TJ102T	1K 1/4W [M]	R404	ERDS2TJ152T	1.5K 1/4W [M]	R620	ERDS2TJ153T	15K 1/4W [M]	R661	ERDS2TJ124T	120K 1/4W [M]
R28	ERDS2TJ334T	330K 1/4W [M]	R405	ERDS2TJ472T	4.7K 1/4W [M]	R621	ERDS2TJ153T	15K 1/4W [M]	R662	ERDS2TJ123T	12K 1/4W [M]
R29	ERDS2TJ331T	330 1/4W [M]	R406	ERDS2TJ682T	6.8K 1/4W [M]	R622	ERDS2TJ224T	220K 1/4W [M]	R663	ERDS2TJ103T	10K 1/4W [M]
R30	ERDS2TJ822T	8.2K 1/4W [M]	R407	ERDS2TJ682T	6.8K 1/4W [M]	R623	ERDS2TJ152T	1.5K 1/4W [M]	R664	ERDS2TJ103T	10K 1/4W [M]
R31	ERDS2TJ472T	4.7K 1/4W [M]	R408	ERDS2TJ682T	6.8K 1/4W [M]	R624	ERDS2TJ392T	3.9K 1/4W [M]	R665	ERDS2TJ1R2T	1.2 1/4W [M]
R41	ERDS2TJ301T	300 1/4W [M]	R411	ERDS2TJ2R2T	2.2 1/4W [M]	R625	ERDS2TJ392T	3.9K 1/4W [M]	R666	ERDS2TJ473T	47K 1/4W [M]
R47	ERDS2TJ332T	3.3K 1/4W [M]	R414	ERDS2TJ2R2T	2.2 1/4W [M]	R626	ERDS2TJ103T	10K 1/4W [M]	R667	ERDS2TJ563T	56K 1/4W [M]
R49	ERDS2TJ103T	10K 1/4W [M]	R416	ERDS2TJ181T	180 1/4W [M]	R627	ERDS2TJ563T	56K 1/4W [M]	R668	ERDS2TJ472T	4.7K 1/4W [M]
R52	ERDS2TJ223T	22K 1/4W [M]	R417	ERDS2TJ333T	33K 1/4W [M]	R628	ERDS2TJ223T	22K 1/4W [M]	R669	ERDS2TJ271T	270 1/4W [M]
R59	ERDS2TJ471T	470 1/4W [M]	R501	ERDS2TJ152T	1.5K 1/4W [M]	R630	ERDS2TJ474T	470K 1/4W [M]	R670	ERDS2TJ472T	4.7K 1/4W [M]
R61	ERDS2TJ103T	10K 1/4W [M]	R502	ERDS2TJ392T	3.9K 1/4W [M]	R631	ERDS2TJ564T	560K 1/4W [M]	R671	ERDS2TJ101T	100 1/4W [M]
R62	ERDS2TJ471T	470 1/4W [M]	R503	ERDS2TJ682T	6.8K 1/4W [M]	R632	ERDS2TJ471T	470 1/4W [M]	R672	ERDS2TJ105T	1M 1/4W [M]
R64	ERDS2TJ332T	3.3K 1/4W [M]	R504	ERDS2TJ152T	1.5K 1/4W [M]	R633	ERDS2TJ101T	100 1/4W [M]	R673	ERDS2TJ224T	220K 1/4W [M]
			R505	ERDS2TJ472T	4.7K 1/4W [M]	R634	ERDS2TJ1R0T	1 1/4W [M]	R674	ERDS2TJ224T	220K 1/4W [M]
			R506	ERDS2TJ682T	6.8K 1/4W [M]	R635	ERDS2TJ182T	1.8K 1/4W [M]	R675	ERDS2TJ393T	39K 1/4W [M]

Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks
R676	ERDS2TJ224T	220K 1/4W [M]	C20	RCBS1H102KBY	1000P 50V [M]	C89	ECBT1H101KB5	100P 50V [M]	C505	ECBT0J223MS5	0.022 6.3V [M]
R677	ERDS2TJ332T	3.3K 1/4W [M]	C21	ECEA1AKA101B	100 10V [M]	C101	ECBT1H102KB5	1000P 50V [M]	C506	ECEA1HKAR22B	0.22 50V [M]
R678	ERDS2TJ563T	56K 1/4W [M]	C22	RCBS1H102KBY	1000P 50V [M]	C102	ECBT1C122MR5	1200P 16V [M]	C507	ECEA1CU100B	10 16V [M]
R681	ERD2FCVVG390T	39 1/4W [M]	C23	RCBS1H102KBY	1000P 50V [M]	C103	ECBT1H102KB5	1000P 50V [M]	C508	ECBT1H221KB5	220P 50V [M]
R682	ERDS2TJ473T	47K 1/4W [M]	C24	RCBS1H102KBY	1000P 50V [M]	C104	ECEA1CKA100B	10 16V [M]	C511	ECBT1H471KB5	470P 50V [M]
R683	ERDS2TJ104T	100K 1/4W [M]	C25	ECBT1H150JC5	15P 50V [M]	C105	ECBT1H102KB5	1000P 50V [M]	C513	ECBT1H102KB5	1000P 50V [M]
R684	ERDS2TJ471T	470 1/4W [M]	C26	ECBT1H6R8KC5	6.8P 50V [M]	C106	ECEA0JKA101B	100 6.3V [M]	C514	ECQV1H224JZ3	0.22 50V [M]
R685	ERDS2TJ473T	47K 1/4W [M]	C27	ECBT1H4R7KC5	4.7P 50V [M]	C107	ECFR1C333MR	0.033 16V [M]	C515	ECQV1H224JZ3	0.22 50V [M]
R686	ERDS2TJ152T	1.5K 1/4W [M]	C28	RCBS1H102KBY	1000P 50V [M]	C108	ECBT1H471KB5	470P 50V [M]	C601	ECEA1CKA101B	100 16V [M]
R687	ERDS2TJ272T	2.7K 1/4W [M]	C29	RCBS1H102KBY	1000P 50V [M]	C109	ECEA1HKA010B	1 50V [M]	C602	ECBT1C103MS5	0.01 16V [M]
R688	ERDS2TJ221T	220 1/4W [M]	C31	RCBS1H102KBY	1000P 50V [M]	C110	ECBT1C332MR5	3300P 16V [M]	C603	ECBT1H561KB5	560P 50V [M]
R690	ERDS2TJ560T	56 1/4W [M]	C32	ECBT1H101KB5	100P 50V [M]	C201	ECBT1H102KB5	1000P 50V [M]	C604	ECBT1C103MS5	0.01 16V [M]
R691	ERDS2TJ103T	10K 1/4W [M]	C33	ECBT1H101KB5	100P 50V [M]	C202	ECBT1C122MR5	1200P 16V [M]	C605	ECBT1H180JC5	18P 50V [M]
R692	ERDS2TJ103T	10K 1/4W [M]	C34	ECBT1H680J5	68P 50V [M]	C203	ECBT1H102KB5	1000P 50V [M]	C606	ECBT1H220JC5	22P 50V [M]
R694	ERDS2TJ101T	100 1/4W [M]	C35	ECBT1H1R5MC5	1.5P 50V [M]	C204	ECEA1CKA100B	10 16V [M]	C607	ECBT1C103MS5	0.01 16V [M]
R695	ERDS2TJ472T	4.7K 1/4W [M]	C36	RCBS1H102KBY	1000P 50V [M]	C205	ECBT1H102KB5	1000P 50V [M]	C608	ECEA0JU101B	100 6.3V [M]
R696	ERDS2TJ124T	120K 1/4W [M]	C37	RCBS1H102KBY	1000P 50V [M]	C206	ECEA0JKA101B	100 6.3V [M]	C609	ECBT1H471KB5	470P 50V [M]
R697	ERDS2TJ102T	1K 1/4W [M]	C38	ECBT1H331KB5	330P 50V [M]	C207	ECFR1C333MR	0.033 16V [M]	C610	ECEA1HKA010B	1 50V [M]
R801	ERDS2TJ153T	15K 1/4W [M]	C39	ECBT1C103MS5	0.01 16V [M]	C208	ECBT1H471KB5	470P 50V [M]	C611	ECBT1H102KB5	1000P 50V [M]
R802	ERDS2TJ103T	10K 1/4W [M]	C40	ECBT1C103MS5	0.01 16V [M]	C209	ECEA1HKA010B	1 50V [M]	C612	ECBT1H102KB5	1000P 50V [M]
R803	ERDS2TJ153T	15K 1/4W [M]	C44	ECEA1AU101B	100 10V [M]	C210	ECBT1C332MR5	3300P 16V [M]	C613	ECBT1H820KB5	82P 50V [M]
R804	ERDS2TJ333T	33K 1/4W [M]	C47	ECFR1C223MR	0.022 16V [M]	C301	ECQP2A151JZT	150P 100V [M]	C614	ECBT1H680J5	68P 50V [M]
R806	ERDS2TJ152T	1.5K 1/4W [M]	C48	ECEA0JU101B	100 6.3V [M]	C302	ECBT1C103MS5	0.01 16V [M]	C615	ECBT1H101KB5	100P 50V [M]
R807	ERDS2TJ222T	2.2K 1/4W [M]	C51	ECEA1HKA010B	1 50V [M]	C305	ECQP1102JZT	1000P 100V [M]	C616	ECBT1H820KB5	82P 50V [M]
R808	ERDS2TJ682T	6.8K 1/4W [M]	C52	ECFR1C473MR	0.047 16V [M]	C306	ECEA1AU101B	100 10V [M]	C618	ECBT1H561KB5	560P 50V [M]
R809	ERDS2TJ562T	5.6K 1/4W [M]	C60	ECEA1AKA220B	22 10V [M]	C307	ECBT1C822MS5	8200P 16V [M]	C619	ECBT1H561KB5	560P 50V [M]
R810	ERDS2TJ622T	6.2K 1/4W [M]	C61	ECBT1C332MR5	3300P 16V [M]	C308	ECBT1C103MS5	0.01 16V [M]	C620	ECBT1H561KB5	560P 50V [M]
R811	ERDS2TJ153T	15K 1/4W [M]	C62	RCBS1H102KBY	1000P 50V [M]	C309	ECFR1C473MR	0.047 16V [M]	C621	ECBT1H561KB5	560P 50V [M]
R901	ERDS2TJ271T	270 1/4W [M]	C63	ECBT1H681KB5	680P 50V [M]	C310	ECEA1CKA100B	10 16V [M]	C622	ECBT1H221KB5	220P 50V [M]
R902	ERDS2TJ683T	68K 1/4W [M]	C67	ECFR1C223MR	0.022 16V [M]	C311	ECEA1AKA220B	22 10V [M]	C623	ECBT1H221KB5	220P 50V [M]
			C68	ECEA1HKA010B	1 50V [M]	C312	ECEA1AKA101B	100 10V [M]	C625	RCA1EM472BT	4700P 25V [M]
			C69	ECFR1C183MR	0.018 16V [M]	C317	ECEA1HV470B	47 50V [M]	C626	ECEA1CKA100B	10 16V [M]
			C70	ECFR1C183MR	0.018 16V [M]	C401	ECEA1HKA3R3B	3.3 50V [M]	C628	ECEA1CKA100B	10 16V [M]
			C71	ECEA1HKA2R2B	2.2 50V [M]	C402	ECEA1CKA100B	10 16V [M]	C630	ECEA1CU100B	10 16V [M]
			C72	ECEA1HKA010B	1 50V [M]	C403	ECFR1C104MR	0.1 16V [M]	C631	ECEA1CKA100B	10 16V [M]
C3	ECFR1C473MR	0.047 16V [M]	C74	ECBT1H471KB5	470P 50V [M]	C404	ECFR1C473MR	0.047 16V [M]	C633	ECEA1CU100B	10 16V [M]
C4	RCBS1H102KBY	1000P 50V [M]	C75	ECEA1HKA010B	1 50V [M]	C405	ECBT0J223MS5	0.022 6.3V [M]	C636	ECEA1CKA101B	100 16V [M]
C5	ECBT1H2R2KC5	2.2P 50V [M]	C76	ECEA1HKA010B	1 50V [M]	C406	ECEA1HKAR22B	0.22 50V [M]	C637	ECEA1CU330B	33 16V [M]
C6	RCBS1H102KBY	1000P 50V [M]	C77	ECEA1HKA010B	1 50V [M]	C407	ECEA1CU100B	10 16V [M]	C638	ECEA1CU100B	10 16V [M]
C9	ECEA1HKN010B	1 50V [M]	C80	ECBT1H331KB5	330P 50V [M]	C408	ECBT1H221KB5	220P 50V [M]	C639	ECEA1CU100B	10 16V [M]
C10	ECBT1C332MR5	3300P 16V [M]	C81	ECBT1H331KB5	330P 50V [M]	C411	ECBT1H471KB5	470P 50V [M]	C640	ECEA1AKA101B	100 10V [M]
C11	ECEA1AKA101B	100 10V [M]	C82	ECBT1H150JC5	15P 50V [M]	C413	ECBT1H102KB5	1000P 50V [M]	C641	ECBT1H471KB5	470P 50V [M]
C12	ECFR1C223MR	0.022 16V [M]	C83	ECBT1H331KB5	330P 50V [M]	C414	ECQV1H224JZ3	0.22 50V [M]	C642	ECEA0JU101B	100 6.3V [M]
C13	ECFR1C103MR	0.01 16V [M]	C84	ECBT1C103MS5	0.01 16V [M]	C415	ECQV1H224JZ3	0.22 50V [M]	C643	ECEA1CU100B	10 16V [M]
C14	ECBT1C103MS5	0.01 16V [M]	C85	ECBT1C103MS5	0.01 16V [M]	C501	ECEA1HKA3R3B	3.3 50V [M]	C644	ECBT1H331KB5	330P 50V [M]
C15	ECBT1H3R9KC5	3.9P 50V [M]	C86	ECBT1H331KB5	330P 50V [M]	C502	ECEA1CKA100B	10 16V [M]	C645	ECBT1H101KB5	100P 50V [M]
C16	RCBS1H102KBY	1000P 50V [M]	C87	ECBT1C103MS5	0.01 16V [M]	C503	ECFR1C104MR	0.1 16V [M]	C646	ECEA1AU101B	100 10V [M]
C17	RCBS1H102KBY	1000P 50V [M]	C88	ECBT1C103MS5	0.01 16V [M]	C504	ECFR1C473MR	0.047 16V [M]	C648	ECEA1CKA100B	10 16V [M]
C18	ECBT1H200JC5	20P 50V [M]									
C19	ECBT1H220JC5	22P 50V [M]									

Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks
C649	ECBT1H102KB5	1000P 50V [M]	R749	ERJ6GEYJ682V	6.8K 1/10W [M]	C747	ECUV1H222KBN	2200P 50V [M]			
C651	ECBT1H330J5	33P 50V [M]	R750	ERJ6GEYJ473V	47K 1/10W [M]	C748	ECUV1H471KBM	470P 50V [M]			
C652	ECBT1H330J5	33P 50V [M]	R751	ERJ6GEYJ473V	47K 1/10W [M]	C749	ECUZNE104MBN	0.1 25V [M]			
C653	ECBT1H330J5	33P 50V [M]	R752	ERJ6GEYJ220V	22 1/8W [M]	C751	ECUZNE104MBN	0.1 25V [M]			
C654	ECBT1C103MS5	0.01 16V [M]	R770	ERJ6GEYJ155V	1.5M 1/10W [M]	C752	ECUV1H152KBN	1500P 50V [M]			
C658	ECBT1H101KB5	100P 50V [M]	R771	ERJ6GEYJ155V	1.5M 1/10W [M]	C753	ECUV1H471KBM	470P 50V [M]			
C901	ECKR1H103ZF5	0.01 50V [M]	R772	ERJ6GEYJ273V	27K 1/10W [M]	C754	ECUV1H471KBN	470P 50V [M]			
C902	ECKR1H103ZF5	0.01 50V [M]									
C903	ECKR1H103ZF5	0.01 50V [M]		CAPACITORS			CHIP JUMPERS				
C904	ECKR1H103ZF5	0.01 50V [M]									
C906	ECBT1C103MS5	0.01 16V [M]	C701	ECEA0JKA330I	33 6.3V [M]	RJ701	ERJ8GEY0R00A	0 1/8W [M]			
			C702	ECUZNE104MBN	0.1 25V [M]	RJ702	ERJ8GEY0R00A	0 1/8W [M]			
			C703	ECEA0JKA101I	100 6.3V [M]	RJ703	ERJ8GEY0R00A	0 1/8W [M]			
	<SERVO P.C.B>		C704	ECUZNE104MBN	0.1 25V [M]	RJ704	ERJ8GEY0R00A	0 1/8W [M]			
	RESISTORS		C705	ECUZNE104MBN	0.1 25V [M]	RJ707	ERJ8GEY0R00A	0 1/8W [M]			
			C706	ECUV1H272KBN	2700P 50V [M]	RJ709	ERJ8GEY0R00A	0 1/8W [M]			
R701	ERJ6GEYJ4R7V	4.7 1/10W [M]	C707	ECUV1E273KBN	0.027 25V [M]	RJ714	ERJ8GEY0R00A	0 1/8W [M]			
R703	ERJ6GEYJ823	82K 1/10W [M]	C708	ECUV1H472KBN	4700P 50V [M]	RJ715	ERJ8GEY0R00A	0 1/8W [M]			
R704	ERJ6GEYJ102V	1K 1/10W [M]	C709	ECUV1C473KBN	0.047 16V [M]	RJ716	ERJ8GEY0R00A	0 1/8W [M]			
R705	ERJ6GEYJ103V	10K 1/10W [M]	C710	ECUV1H182KBN	1800P 50V [M]	RJ717	ERJ8GEY0R00A	0 1/8W [M]			
R706	ERJ6GEYJ102V	1K 1/10W [M]	C711	ECUZNE104MBN	0.1 25V [M]	RJ721	ERJ8GEY0R00A	0 1/8W [M]			
R707	ERJ6GEYJ474V	470K 1/10W [M]	C712	ECUZNE104MBN	0.1 25V [M]	RJ722	ERJ8GEY0R00A	0 1/8W [M]			
R708	ERJ6GEYJ154V	150K 1/10W [M]	C713	ECUV1C104MBM	0.1 16V [M]	RJ723	ERJ8GEY0R00A	0 1/8W [M]			
R709	ERJ6GEYJ683V	68K 1/10W [M]	C714	ECEA0JKA101I	100 6.3V [M]	RJ724	ERJ8GEY0R00A	0 1/8W [M]			
R711	ERJ6GEYJ154V	150K 1/10W [M]	C716	ECUV1H561KBN	560P 50V [M]	RJ725	ERJ8GEY0R00A	0 1/8W [M]			
R712	ERJ6GEYJ221V	220 1/10W [M]	C717	ECUZNE104MBN	0.1 25V [M]	RJ726	ERJ8GEY0R00A	0 1/8W [M]			
R717	ERJ6GEYJ102V	1K 1/10W [M]	C718	ECUV1C224KBN	0.22 16V [M]	RJ727	ERJ8GEY0R00A	0 1/8W [M]			
R718	ERJ6GEYJ102V	1K 1/10W [M]	C721	ECUV1H150JCN	15P 50V [M]	RJ728	ERJ8GEY0R00A	0 1/8W [M]			
R719	ERJ6GEYJ102V	1K 1/10W [M]	C722	ECUV1H150JCN	15P 50V [M]	RJ729	ERJ8GEY0R00A	0 1/8W [M]			
R720	ERJ6GEYJ102V	1K 1/10W [M]	C723	ECEA1AKA221I	220 10V [M]	RJ730	ERJ8GEY0R00A	0 1/8W [M]			
R721	ERJ6GEYJ101V	100 1/10W [M]	C724	ECUV1C104MBM	0.1 16V [M]						
R722	ERJ6GEYJ563V	56K 1/10W [M]	C725	ECUV1H102KBN	1000P 50V [M]		TEST JUMPERS				
R723	ERJ6GEYJ182V	1.8K 1/10W [M]	C726	ECUV1H102KBN	1000P 50V [M]						
R724	ERJ6GEYJ333V	33K 1/10W [M]	C727	ECEA1HPK010I	1 50V [M]	TJ701	EYF8CU	TESTJUMPER [M]			
R725	ERJ6GEYJ472V	4.7K 1/10W [M]	C728	ECEA1HPK010I	1 50V [M]	TJ702	EYF8CU	TESTJUMPER [M]			
R726	ERJ6GEYJ473V	47K 1/10W [M]	C730	ECUZNE104MBN	0.1 25V [M]						
R727	ERJ6GEYJ822V	8.2K 1/10W [M]	C731	ECEA0JKA221I	220 6.3V [M]						
R728	ERJ6GEYJ103V	10K 1/10W [M]	C732	ECEA0JKA221I	220 6.3V [M]						
R731	ERJ6GEYJ822V	8.2K 1/10W [M]	C733	ECUZNE104MBN	0.1 25V [M]						
R734	ERJ6GEYJ101V	100 1/10W [M]	C734	ECEA1AKA221I	220 10V [M]						
R735	ERJ6GEYJ101V	100 1/10W [M]	C735	ECUZNE104MBN	0.1 25V [M]						
R736	ERJ6GEYJ101V	100 1/10W [M]	C736	ECUZNE104MBN	0.1 25V [M]						
R738	ERJ6GEYJ223V	22K 1/10W [M]	C737	ECUZNE104MBN	0.1 25V [M]						
R741	ERJ6GEYJ562V	5.6K 1/10W [M]	C738	ECUV1C154KBN	0.15 16V [M]						
R742	ERJ6GEYJ562V	5.6K 1/10W [M]	C742	ECUV1E273KBN	0.027 25V [M]						
R743	ERJ6GEYJ562V	5.6K 1/10W [M]	C743	ECUZNE104MBN	0.1 25V [M]						
R744	ERJ6GEYJ103V	10K 1/10W [M]	C744	ECUV1E822KBN	8200P 25V [M]						
R745	ERJ6GEYJ155V	1.5M 1/10W [M]	C745	ECUV1C473MBN	0.047 16V [M]						
R748	ERJ6GEYJ182V	1.8K 1/10W [M]									

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