

Service Manual

MASH*
multi-stage noise shaping

COMPACT
disc
DIGITAL AUDIO

Portable Stereo Component CD System

RX-DT690



Colour

(K) ... Black Type

Area

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

* MASH is a trademark of NTT.

TAPE DECK : AR300 MECHANISM SERIES
TRAVERSE DECK : RAE0113Z MECHANISM SERIES

SPECIFICATIONS \ **ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ**

SELF-DIAGNOSTIC DISPLAY FUNCTION \ **ИСПОЛЬЗОВАНИЕ ИНДИКАЦИИ
САМОДИАГНОСТИКИ**

CD SELF-CHECK FUNCTION \ **ИСПОЛЬЗОВАНИЕ САМОПРОВЕРКИ ПРОИГРЫВАТЕЛЯ
КОМПАКТ-ДИСКОВ**

MEASUREMENTS AND ADJUSTMENTS \ **ИЗМЕРЕНИЯ И РЕГУЛИРОВКИ**

TERMINAL FUNCTION OF ICs \ **ФУНКЦИОНАЛЬНОЕ НАЗНАЧЕНИЕ ВЫВОДОВ МИКРОСХЕМ**

TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES \ **ЦОКОЛЕВКА МИКРОСХЕМ,
ТРАНЗИСТОРОВ И ДИОДОВ**

WIRING CONNECTION DIAGRAM \ **СХЕМА СОЕДИНЕНИЙ**

SCHEMATIC DIAGRAMS \ **ПРИНЦИПИАЛЬНЫЕ СХЕМЫ**

MECHANISM PARTS LOCATION(RAA0370) \ **РАСПОЛОЖЕНИЕ МЕХАНИЧЕСКИХ
ЧАСТЕЙ(RAA0370)**

MECHANISM PARTS LOCATION(RAA0371) \ **РАСПОЛОЖЕНИЕ МЕХАНИЧЕСКИХ
ЧАСТЕЙ(RAA0371)**

MECHANISM PARTS LIST \ **СПИСОК МЕХАНИЧЕСКИХ ЧАСТЕЙ**

CABINET PARTS LOCATION \ **РАСПОЛОЖЕНИЕ ЧАСТЕЙ КОРПУСА**

REPLACEMENT PARTS LIST \ **СПИСОК ЗАПАСНЫХ ЧАСТЕЙ**

RESISTORS & CAPACITORS \ **РЕЗИСТОРЫ И КОНДЕНСАТОРЫ**

Panasonic®

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■ Specifications

■ RADIO

Frequency range	
FM	87.5 – 108.0 Hz (50kHz step)
LW	144 – 288 Hz (9kHz step)
MW	522 – 1611 Hz (9kHz step)
Intermediate Frequency	
FM	10.7 MHz
AM	459 kHz
Sensitivity	
FM	11 dB/50 mW
LW	55 dB/m/50 mW
MW	57 dB/m/50 mW

■ TAPE RECORDER

Track system	4 track, 2 channel, stereo
Recording system	AC bias
Erasing system	AC erase
Monitor system	Variable sound monitor
Frequency range	
Normal	20 – 16000 Hz
CrO ₂	20 – 17000 Hz

■ CD PLAYER

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source	Semiconductor laser (wavelength 780 nm)
No. of channels	2 channels, stereo
Frequency Response	20 Hz – 20 kHz(+1, -2 dB)
S/N ratio	77 dB
Wow and flutter	Less than possible measurement data
D/A converter	MASH (1 bit DAC)

■ GENERAL

Power requirement	
AC	230 - 240V, 50 Hz
	Power consumption: 90 W
Battery	15V (Ten R20/L20 size, "UM-1" batteries)
Memory back-up for computer/clock	6V (Four R6/LR6 size, "UM-3" batteries)
Speakers	2 Woofers; 12cm 2 Squawkers; 8cm 2 Tweeters; 1.5cm
Jacks	
Input	MIX MIC; 2mV/600Ω, Ø3.5 DC IN; 13.2V (15V - 12V)
Output	Speaker; Woofers (6 – 16 Ω) Squawkers (6 – 16 Ω)
Dimensions (W x H x D)	Phones; 32 Ω 642 x 267 x 231 mm
	Main unit; 313 x 267 x 231 mm
	Speaker box; 174 x 254 x 190 mm
Weight	9 kg without batteries

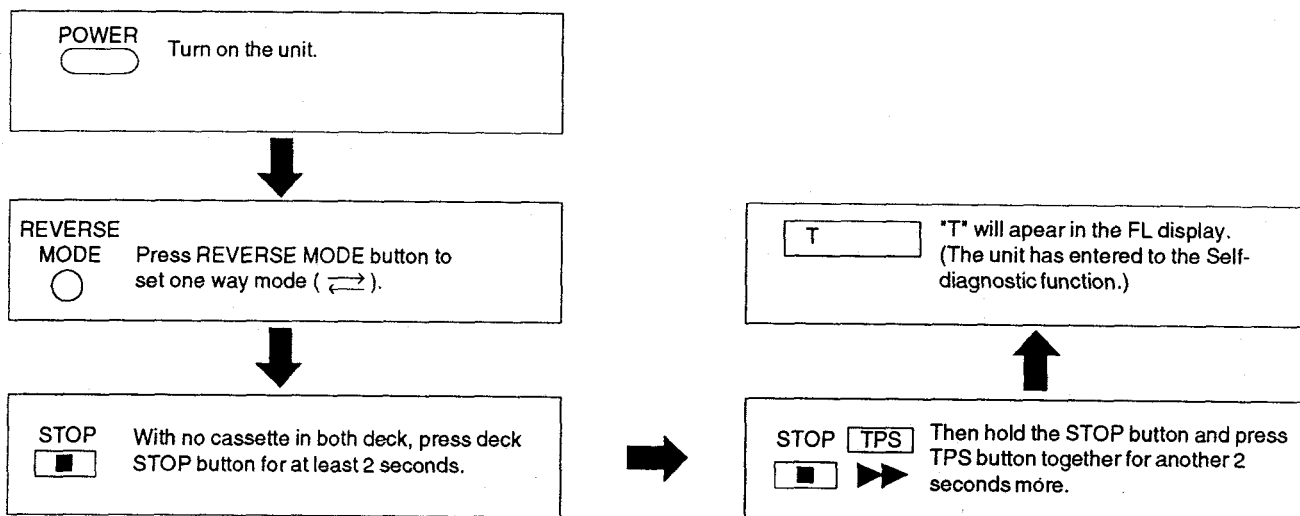
Notes :

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

■ Self-Diagnostic Display Function

This unit has a self-diagnostic function to indicate malfunction. You should take advantage of this function when performing maintenance.

• How to set Self-Diagnostic mode



• Cassette Mechanism Test (For error code H02, H03, F01, F02)

Tape Deck 1, Tape Deck 2 can be tested with the same procedure as following :

(Tape deck 1 will not check H02 because there is no recording function for deck 1.)

1. Load a cassette tape with the erasure prevention tab, removes from one side only and close the cassette holder.
2. Press [TPS] (▶▶) button and STOP (■).
3. Load a pre-recorded music tape with a erasure prevention tab on both side and close the cassette holder.
4. Press FWD play (▶) button, and then press TPS (▶▶) button to operate the TPS function.
 - After TPS function, the test for cassette mechanism is completed. If TPS is not working properly, the test will be completed by Auto-Stop at the end of the tape.
5. Press STOP (■) button to indicate Error Code.
 - If more than one problem has occurred, each error code will change each time the STOP (■) button is pressed. If no problem occurred, "T" indication will remain unchange.
 - Press DECK SELECT (1/2) button to select deck 1 or 2 for checking.

• CD Mechanism Test (H01, F15, F75)

1. Load a CD and close the CD Lid.
2. After the unit is turned on, press the CD play/pause (▶/||) button.
3. Follow the steps on "How to set Self-Diagnostic mode". "T" will appear on the display.
4. Press the cassette deck STOP (■) button to indicate the error code.

Note : • H01 is error code for cassette mechanism. (Press DECK SELECT (1/2) button to select the desired deck.)

- If more than one errors exist, each error code will appear each time the STOP (■) button is pressed. If there is no problem, "T" indication remains unchange.

• Battery and Power Test (U01, U02)

- U01 or U02 will appear on the display automatically after POWER button is pressed. It will disappear after 10 seconds.

• How to clear the error code memory

- Press the STOP (■) button of the cassette deck for 5 seconds (in diagnostic mode).
- Turn off the unit.

NOTE :

- For the cassette deck to perform the TPS (tape program sensor) function, there must be black spaces with no signal recorded between the programs on the tape.

Therefore the following types of recorded tapes cannot be used :

- Tape on which the blank space between programs is less than 4 seconds long.
- Tapes on which there is no unrecorded blank spaces (such as a tape recorded using a microphone).
- When there are very low-level or silent sections within a program (such as some classical music recordings).
- When less than 10 seconds have passed after the start of the program or when there is less than 10 seconds remaining until the start of the next program.
- When the recording has been made using a fade-in (gradually increasing level) or fade-out (gradually decreasing level).

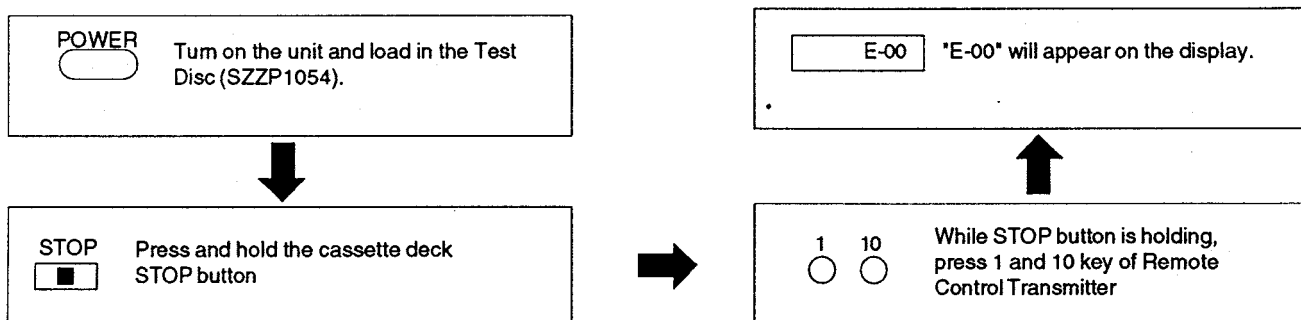
• Description of Error Code

Error code	Problem condition	Correction procedure
H01	Faulty operation of cassette mechanism. Example : Reverse-play operation performance when FWD play button is pressed.	Faulty cassette mechanism mode switch [S951, S971] and plunger. (Check and replace)
H02	Recording not possible, or recording mode entered even though erasure prevention tabs have been removed.	Faulty contact or short-circuit of erasure prevention switches [S973, S974]. (Check and replace)
H03	Playback not performed when FWD play (▶) button is pressed. Motor turns when FWD play (▶) button is pressed even though there is no tape cassette loaded in cassette holder.	Faulty contact or short-circuit of cassette half detect switch. [S972] (Check and replace)
F01	When the FWD play (▶) button is pressed, the tape advances slightly and then stops.	Faulty reel pulse, faulty hole detect IC. [IC951, IC971] (Check and replace)
F02	Cassette deck will not perform TPS function.	Faulty playback EQ/recording amplifier IC. [IC601 of Control unit] (Check and replace)
F15	Relatively long time (about 8 seconds) is required to begin play when the CD play/pause (▶/) 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 of Servo unit]. (Check and replace)
F75	"NO DISC" indication show in the FL display even CD is loaded.	Faulty power supply circuit of CD [IC302 or circuit for power supply]. (Check and replace) Faulty servo processor IC [IC702 of Servo unit]. (Check and replace)
U01	When the unit is operating on batteries, power supply ceases soon after the POWER button is set to ON.	It is due to consumption of batteries. Replace the batteries with new ones.
U02	Settling the POWER button to ON causes no supply of power.	Check the power plug (AC), or insert batteries (DC).

■ CD Self-Check Function

- This unit provide the function to indicate error code of the result of Automatic-Adjustment of CD (Tracking, Focus, Offset, etc). Base on these error codes, you can able to locate the faulty area.
- Please use the ten-keys type of Remote Control Transmitter (part number : EUR642195)
(The Remote Control Transmitter used by this model is unable to perform this function.)

• How to set the CD Self-Check Function

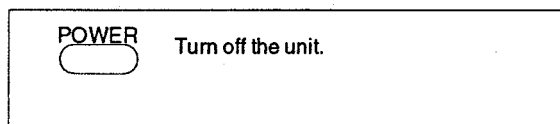


• **Error code based troubleshooting**

- The unit is satisfactory if the error code is **E00**.
- Before testing , make sure that the test disc is free of scratches and dirt and optical pickup is clean.
- All the ICs and test points are from the Servo unit.

FL error code display	Symptom	Probable cause	Signal to check		Normal the values of voltage and waveform	
			Signal name	Location	PLAY	STOP
E01	Focus and tracking offset adjustments did not complete in the specified time period.	① Clocks X1 and X2, power supply VDD, and reset/RST, all on IC702. ② MDATA, MCLK, MLD and SENSE signals to/from the mechanism controller.	MDATA	IC702 ⑧ pin		4.8V
			MCLK	IC702 ⑦ pin		4.8V
			MLD	IC702 ⑨ pin		
			SENSE	IC702 ⑩ pin	0V	0V
			/RST	IC702 ⑱ pin	4.9V	4.9V
			X1	IC702 ⑤⑧ pin		
			X2	IC702 ⑤⑨ pin		
E03 E05 E07 E09 E0B E0D E0F	Disc play unstable	① Scratches or contaminants on disc surface. ② Focus and tracking servo circuits (check waveforms, voltages, and part constants). ③ Spindle driver circuit. ④ Optical pickup.	FE	IC702 ③② pin		2.4V
			TE	IC702 ③③ pin		2.4V
			FOD	IC702 ②⑧ pin	2.4V	2.4V
			TRD	IC702 ②⑦ pin	2.4V	2.4V
			KICK	IC702 ②⑥ pin	2.4V	2.4V
			/FLOCK	IC702 ①① pin	0V	4.9V
			/RF DET	IC702 ③⑨ pin	0V	4.8V
			RF	TJ701		3.4V
			STAT	IC702 ①⑦ pin	3.5V	0V
E04 E06 E0C E0E	Best Eye (PD Balance) adjustment did not complete in specified time period.	① Scratches or contaminants on disc surface. ② Focus and tracking servo circuits (check waveforms, voltages, and part constants). ③ Optical pickup.	FBAL	IC702 ③① pin	2.5 ± 1.25V	2.5 ± 1.25V
			RF	TJ701		3.4V
			FE	IC702 ③② pin		0V
			/TLOCK	IC702 ①② pin	0V	0V
			OFT	IC702 ③⑥ pin	0V	0V
E08 E0A	Focus or tracking gain adjustment did not complete in the specified time period.	① Scratches or contaminants on disc surface. ② Focus and tracking servo circuits (check waveforms, voltages, and part constants). ③ Optical pickup.	FE	IC702 ③② pin		2.4V
			TE	IC702 ③③ pin		2.4V
			/TLOCK	IC702 ①② pin	0V	0V
			OFT	IC702 ③⑥ pin	0V	0V

• **How to cancel CD Self-Check Function**



■ Measurement and Adjustment

< TUNER SECTION >

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT					
1. Set volume control to maximum. 2. Set S-XBS level control to minimum. 3. Set power source voltage to 15V DC.			4. Set GEQ controls to center. 5. Output of signal generator should be no higher than necessary to obtain an output reading.		

■ AM-IF 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.	450 kHz 30% Mod. at 400Hz	Point of non-interference. (on/about 600Hz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	T2 (AM IFT)	Adjust for maximum output.

■ LW-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	144kHz	Tuning capacitor fully closed.	TP3...(+) TP4...(-)	L10 (LW OSC Coil)	Adjust L10, for $1.2 \pm 0.15V$ reading on DC voltmeter across TP3 & TP4.
"	162kHz	Tune to signal	"	(*1) L7-1 (LW ANT Coil)	Adjust for maximum output. Adjust L7-1 by moving coil along the ferrite core.
"	270kHz	"	"	CT4 (LW ANT Trimmer)	Adjust for maximum output.
(*1) Fix antenna coil with wax after completing alignment.					

■ MW-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	520kHz	Tuning capacitor fully closed.	TP3...(+) TP4...(-)	L9 (MW OSC Coil)	Adjust L9, for $1.1 \pm 0.15V$ reading on DC voltmeter across TP3 & TP4.
"	600kHz	Tune to signal	"	(*2) L7-2 (MW ANT Coil)	Adjust for maximum output. Adjust L7-2 by moving coil along the ferrite core.
"	1400kHz	"	"	CT3 (MW ANT Trimmer)	Adjust for maximum output.
(*2) Cement antenna coil with wax after completing alignment.					

■ FM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point TP1 through ceramic capacitor (0.001μF). Negative side to test point TP2.	10.7 MHz (SWEEP)	Point of interference. (on/about 90 MHz)	Connect vert. amp. scope to test point TP3. Negative side to test point TP4.	T1 (FM 1st)	Waveform is shown in Fig. 3.
"	"	"	"	T3 (FM 1st)	Waveform is shown in Fig. 4.

■ FM STEREO ALIGNMENT & "ZERO" VOLTAGE ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Shown in Fig. 1)	SPECIFICATION	REMARKS
98 MHz, 60 dB(CW) Connect to test point TP1 through FM dummy antenna. Negative side to TP2	TP5 ... (+) TP6 ... (-)	VR1	$19.00 \pm 0.05\text{kHz}$	Adjust VR1, for $19\text{kHz} \pm 50\text{Hz}$ reading on frequency counter.
	Connect the DC Voltmeter between TP9 & TP10	T3	$0 \pm 30\text{mV}$	Align coil T3 for "ZERO" voltage to be in the range of $0 \pm 30\text{mV}$

< CASSETTE DECK SECTION >

■ HEAD AZIMUTH ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
QZZCFM (8kHz, -20dB)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth screw (Shown in Fig. 5)	1. Playback the azimuth adjustment portion (8 kHz, -20 dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the outputs of the L-ch and R-ch are maximized and the lisajous waveform, as illustrated, approaches 0 degrees. Notes: When the adjusting positions are different with L-ch and R-ch ,find a position where the outputs of L-ch and R-ch are balanced, and then make the adjustment into the range " 0 ~ -0.5dB " from the peak.

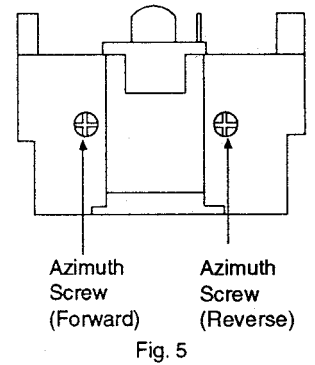
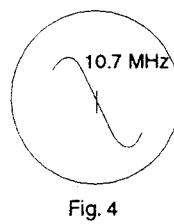
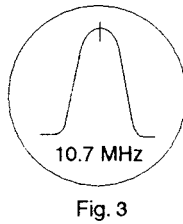
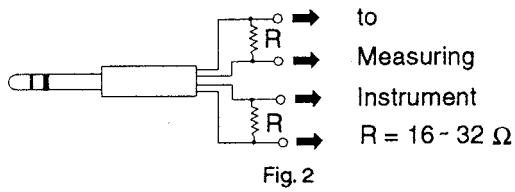
■ TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Shown in Fig. 6)	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Deck 1 Normal Speed VR603 Deck 2 High Speed VR601 Deck 2 Normal Speed VR602	1. Insert test tape (QZZCWAT) in Deck 1 and start playback in forward direction. 2. Adjust VR603 until the frequency is set to $3000 \pm 20\text{Hz}$. 3. Short the test point TP1 and TP2 , TP2 and TP3 to set the high speed mode. 4. Insert test tape (QZZCWAT) in Deck 1 and start playback in forward direction. • This frequency is defined as F. 5. Insert test tape (QZZCWAT) in Deck 2 and start playback in forward direction. 6. Adjust VR601 until the frequency is set to $F \pm 40\text{Hz}$. 7. Open the test point TP1 and TP2 , TP2 and TP3 to set the normal speed mode. 8. Insert test tape (QZZCWAT) in Deck 2 and start playback in forward direction. 9. Adjust VR602 until the frequency is set to $3000 \pm 20\text{Hz}$.

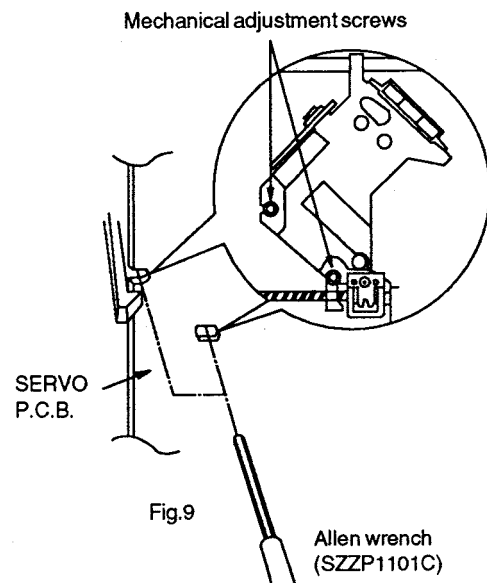
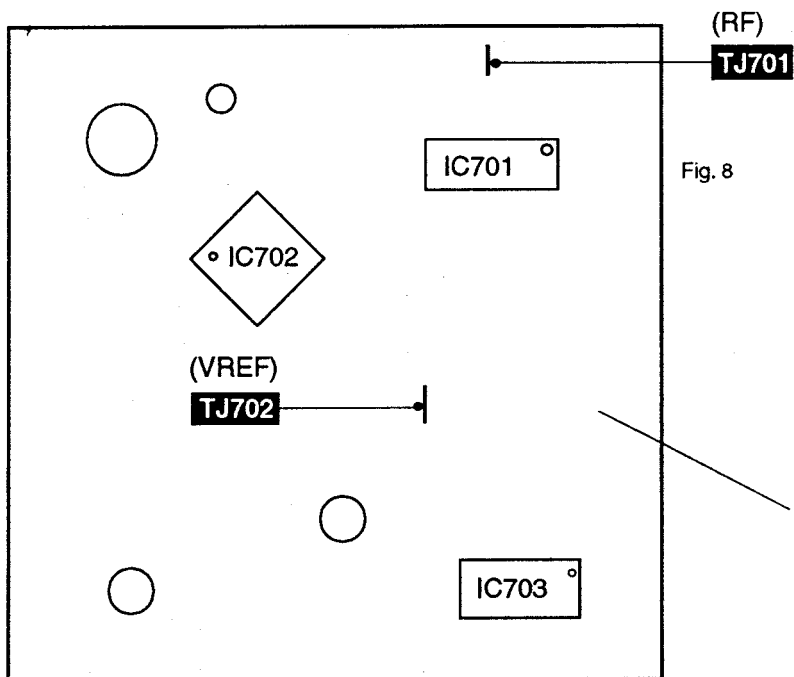
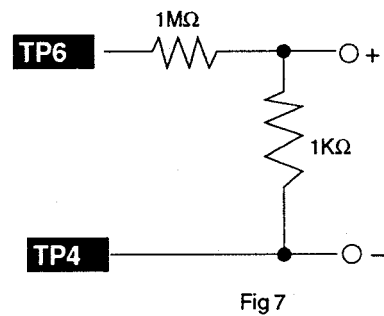
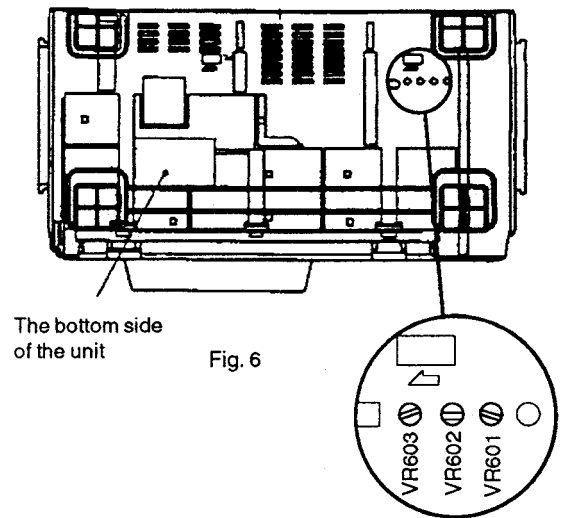
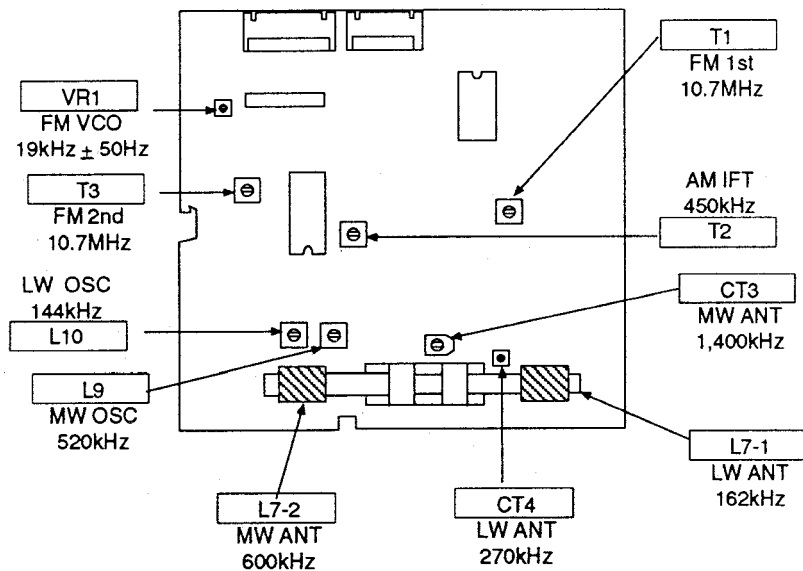
■ RECORD BIAS VOLTAGE

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER (refer to Fig. 7)	ADJUSTMENT	SPECIFICATION	REMARKS
Use CrO ₂ tape and Normal tape	TP6 ... (+) TP4 ... (-)	—	CrO ₂ ... $20.5 \pm 1.0\text{mV}$ Normal ... $15.5 \pm 1.0\text{mV}$	• Record mode

■ ALIGNMENT POINT



• Please refer to Circuit Board and Wiring Connection Diagram for test point locations.



< CD UNIT SECTION >

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

Caution: It is very dangerous to look or touch the laser beam. (laser radiation is invisible)
With the unit turned "on", laser radiation is emitted from the pickup lens.
Avoid exposure to the laser beam, especially when performing adjustments.

Measuring Instruments and Special Tools

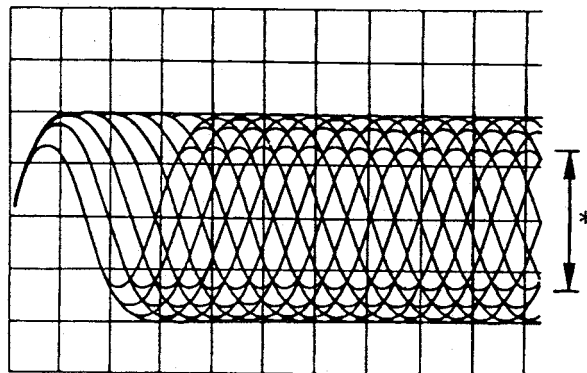
★ Test discs

1. Playability test disc (SZZP1054C).
 2. Uneven test disc (SZZP1056C).
- ★ Musical program disc (ordinary).

- ★ Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT. trigger and 1 : 1 probe).
★ Allen wrench (M2.0) (SZZP1101C).
★ Lock paint (RZZ0L01)

(1) MECHANICAL ADJUSTMENT

- When the traverse deck is replaced, making adjustments is not necessary. (The traverse deck ass'y is already adjusted.)
 - Make adjustments to improve playability if the traverse deck has not been replaced.
1. Connect the oscilloscope's CH. 1 probe across **TJ701** (RF) (+) and **TJ702** (V-Ref.) (–) on the servo P.C.B. (Refer to Fig. 8)
Oscilloscope setting : VOLT200mV.
SWEEP.....0.5μs.
Input couplingAC.
 2. Switch the player power **ON**, and play track 19 on the test disc (SZZ1056C).
(Playing any other track will prevent the HEX screws from being accessed.)
 3. Leave the player in play mode.
 4. Alternately adjust the HEX screws with the 2.0mm allen wrench (SZZP1101C) until the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched. (Refer to Fig. 9)
 5. After completing the adjustment, lock the HEX screws with lock paint (RZZ0L01).



* Most stretched eye pattern

(3) CHECK OF PLAY OPERATION AFTER ADJUSTMENT

★ **Checking skip Search**

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

★ **Checking Manual Search**

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

★ **Checking Playability**

1. Play the 0.7mm black dot and the 0.7mm wedge on the test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

■ Terminal Function of ICs

• IC702 (MN66271RA): Digital Servo processor/digital signal processor/digital filter/D/A converter

Pin No.	Mark	I/O Division	Function
1	BCLK	O	Serial bit clock terminal
2	LRCK	O	L/R discriminating signal
3	SRDATA	O	Serial data (Not used, open)
4	DV _{DD} 1	I	Power supply (digital circuit) terminal
5	DV _{SS} 1	—	GND (digital circuit) terminal
6	TX	O	Digital audio interface signal
7	MCLK	I	Command clock signal
8	MDATA	I	Command data signal
9	MLD	I	Command load signal ("L": LOAD)
10	SENSE	O	Sense signal (OFT, FESL, NACEND, 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	Sub-code Q register clock
15	SUBQ	O	Sub-code Q data
16	DMUTE	I	Muting input ("H": MUTE)
17	STAT	O	Status signal (CRC, CUE, CLVS, TTSTOP, FCLV, SQCK)
18	/RST	I	Reset signal ("L": reset)
19	SMCK	O	System clock (f=4.2336 MHz)
20	PMCK	O	Frequency division clock signal (Not used, open) ($f = \frac{1}{1.92} \times ck = 88.2 \text{ kHz}$)
21	TRV	O	Traverse servo control
22	TVD	O	Traverse drive signal
23	PC	O	Turntable motor drive signal ("L": ON)
24	ECM	O	Turntable motor drive signal (Forced mode)
25	ECS	O	Turntable motor drive signal (Servo error signal)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive signal output
28	FOD	O	Focus drive signal output
29	VREF	I	D/A drive output (TVD, ECS, TRD, FOD, BAL, TBAL) normal voltage input terminal
30	FBAL	O	Focus balance adj. output
31	TBAL	O	Tracking balance adj. output

Pin No.	Mark	I/O Division	Function
32	FE	I	Focus error signal (analog input)
33	TE	I	Tracking error signal (analog input)
34	RFENV	I	RF envelope signal
35	VDET	I	Oscillation det. signal ("H": det.)
36	OFT	I	Off track signal ("H": Off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal ("L": detection)
39	BDO	I	Dropout detection signal ("H": dropout)
40	LDON	O	Laser power control ("H": ON)
41	TES	O	Tracking error shunt output ("H": dropout)
42	PLAY	O	Play signal ("H": play)
43	WVEL	O	Double velocity status signal ("H": double)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal (Not used, open)
47	DSLIF	I/O	DSL loop filter terminal
48	PLLIF	I/O	PLL loop filter terminal
49	VCOF	I/O	VCO loop filter terminal (Not used, open)
50	AV _{DD} 2	I	Power supply (analog circuit) terminal (2)
51	AV _{SS} 2	—	GND (analog circuit) terminal
52	EFM	O	EFM signal (Not used, open)
53	PCK	O	PLL extract clock (f = 4.3218 MHz)
54	PDO	O	Phase compared signal of EFM and PCK (Not used, open)
55	SUBC	O	Sub-code serial output data (Not used, open)
56	SBCK	I	Sub-code serial output clock (Not used, open)
57	V _{SS}	—	GND terminal
58	X1	I	Crystal oscillator terminal (f = 16.9344 MHz)
59	X2	O	Crystal oscillator terminal (f = 16.9344 MHz)
60	VDD	I	Power supply terminal
61	BYTCK	O	Byte clock signal
62	/CLDCK	O	Sub-code frame clock signal (f CLDCK = 7.35 kHz : Normal) (Not used, open)

Pin No.	Mark	I/O Division	Function
63	FCLK	O	Crystal frame clock (Not used, open)
64	IPFLAG	O	Interpolation flag terminal
65	FLAG	O	Flag terminal
66	CLVS	O	Turntable servo phase synchro signal ("H" : CLV, "L" : Rough servo)
67	CRC	O	Sub-code CRC check terminal ("H" : OK, "L" : NG)
68	DEMPH	O	De-emphasis ON signal ("H" : ON)
69	RESY	O	Re-synchronizing signal of frame sync. (Not used, open)
70	/RST2	I	Reset terminal after MASH* circuit
71	/TEST	I	Test terminal (Normal : "H")

Pin No.	Mark	I/O Division	Function
72	AV _{cc} 1	I	Power supply (analog circuit) terminal (1)
73	OUTL	O	Power supply (analog circuit) terminal (1)
74	AV _{ss} 1	—	GND (analog circuit) terminal (1)
75	OUTR	O	Rch audio signal
76	RSEL	I	Frequency control terminal of crystal oscillator
77	CSEL	I	Polarity direction control terminal of RF signal
78	PSEL	I	Test terminal (Normal : "L")
79	MSEL	I	"SUBQ" terminal mode select ("H" : Q code buffer)
80	SSEL	I	"SMCK" terminal frequency select ("L" : SMCK = 4.2336 MHz)

• IC701 (AN8802SCE1V) : Servo amp

Pin No.	Mark	I/O Division	Function
1	PDAD	I	Photo detection Bch input without delay
2	PDA	I	Photo detection Ach input without delay
3	LPD	I	Laser PD signal
4	LD	O	Laser power auto control output
5	AMPI	I	RF amp terminal
6	V _{cc}	I	Power supply terminal
7	AMPO	O	RF amp signal, not used.
8	CAGC	I	AGC detection capacitor input
9	ARF	O	RF signal
10	CENV	I	RF detect capacitor connection terminal
11	CEA	I	HPF-AMP capacitor connection terminal
12	GND	—	GND terminal
13	LDON	I	LD APC ON/OFF ("H" : ON, "L" : OFF)
14	TES	I	Tracking error shunt input ("H" : shunt)
15	PLAY	I	Play signal ("H" : ON, "L" : OFF)
16	WVEL	I	Double velocity ("H" : L double, "L" : single)

Pin No.	Mark	I/O Division	Function
17	BDO	O	Dropout detection control
18	/RFDET	O	RF det. signal ("L" : det.)
19	CROSS	O	Tracking error zero cross output
20	OFTR	O	Off track detection ("H" : det.)
21	VDET	O	Oscillation det. signal ("H" : det.)
22	ENV	O	Envelope output terminal
23	TEBPF	I	Oscillation detect input terminal
24	TE	O	Tracking error signal
25	FE	O	Focusing error signal
26	PTO	O	Potential amp output, not used.
27	PTI	I	Potential amp input, not used.
28	TBAL	I	Tracking balance adj. input
29	FBAL	I	Focus balance adj. input
30	VREF	O	Reference voltage output
31	PDB	I	Photo detection Ach input with delay
32	PDBD	I	Photo detection Bch input with delay

• IC801 (UPD78064G031) : System microprocessor

Pin No.	Mark	I/O Division	Function
1	NC	I	NO CONNECTION
2	SQCK	O	CD CLOCK OUTPUT (SUBCODE Q-REGISTER)
3	STATUS	I	CD STATUS INPUT SIGNAL
4	MBP1	O	MICOM BP CONTROL SIGNAL OUTPUT1
5	MBP2	O	MICOM BP CONTROL SIGNAL OUTPUT2
6	Vss	—	Vss (GND)
7	X OUT	O	MAIN SYSTEM CLOCK OSC (4.19MHz)
8	X IN	I	MAIN SYSTEM CLOCK OSC
9	VDD	—	VDD (+5.0V)
10	XT1 IN	I	SUB SYSTEM CLOCK OSC (32.7kHz)
11	XT2 OUT	O	SUB SYSTEM CLOCK OSC
12	RESET	I	SYSTEM RESET
13	REM IN	I	REMOTE CONTROL SIGNAL INPUT
14	POWER	I	POWER KEY SIGNAL INPUT
15	SLEEP	I	SLEEP KEY SIGNAL INPUT
16	BLKCK	I	CD SUBCODE BLOCK CLOCK SIGNAL INPUT
17	RESET SW	I	CD TRAVERSE LIMIT SWITCH INPUT
18	CD RST	O	CD RESET OUTPUT
19	CLOSE	I	CD LID CLOCK SWITCH INPUT
20	SW2	O	SW2 BAND SELECT DATA
21	PLL DA	O	TUNER PLL DATA CODE OUTPUT
22	PLL CE	O	TUNER PLL CE OUTPUT
23	PLL CL	O	TUNER PLL CLOCK OUTPUT
24	MONO	O	TUNER FM MONO SIGNAL OUTPUT
25	SD	I	TUNER TUNED SIGNAL INPUT
26	STEREO	I	TUNER FM STEREO SIGNAL INPUT
27	AVSS	—	ANALOG GROUND
28	KEY0	I	KEY0 CONTROL SIGNAL A/D INPUT
29	KEY1	I	KEY1 CONTROL SIGNAL A/D INPUT
30	KEY2	I	KEY2 CONTROL SIGNAL A/D INPUT
31	ADIN1	I	DECK CONTROL A/D INPUT 1
32	ADIN2	I	DECK CONTROL A/D INPUT 2
33	ADIN3	I	DECK CONTROL A/D INPUT 3

Pin No.	Mark	I/O Division	Function
34	BATT	I	BATTERY CHECK INPUT
35	REM STB	I	REMOTE CONTROL STANDBY INPUT
36	AVDD	—	ANALOG POWER SUPPLY (+5V)
37	AVREF	—	ANALOG REFERENCE VOLTAGE (+5V)
38	MUTE A	O	AUDIO/CD MUTE SIGNAL OUTPUT
39	FUNC	O/I	FUNCTION CONTROL SIGNAL OUTPUT
40	VSS	—	GND
41	VOLB	I	VOLUME JOG INPUT B
42	VOLA	I	VOLUME JOG INPUT A
43	VOL PWM	O	VOLUME LEVEL CONTROL PWM OUTPUT
44	CDH	O	CD FUNCTION ACTIVE SIGNAL OUTPUT
45	TAPEH	O	TAPE FUNCTION ACTIVE SIGNAL OUTPUT
46	R3	I	REGION SETTING INPUT PORT
47	R2	I	REGION SETTING INPUT PORT
48	R1	I	REGION SETTING INPUT PORT
49	VCC DET	I	VCC DETECTOR
50	PW CNT	O	POWER CONTROL OUTPUT
51	COM0	O	LCD COMMON OUTPUT
52	COM1	O	LCD COMMON OUTPUT
53	COM2	O	LCD COMMON OUTPUT
54	COM3	O	LCD COMMON OUTPUT
55	BIAS	—	LCD BIAS VOLTAGE
56	VLC0	—	LCD BIAS VOLTAGE
57	VLC1	—	LCD BIAS VOLTAGE
58	VLC2	—	LCD BIAS VOLTAGE
59	VSS	—	SEGMENT OUTPUT
60	S0	O	LCD SEGMENT OUTPUT
61	S1	O	LCD SEGMENT OUTPUT
62	S2	O	LCD SEGMENT OUTPUT
63	S3	O	LCD SEGMENT OUTPUT
64	S4	O	LCD SEGMENT OUTPUT
65	S5	O	LCD SEGMENT OUTPUT
66	S6	O	LCD SEGMENT OUTPUT

Pin No.	Mark	I/O Division	Function
67	S7	O	LCD SEGMENT OUTPUT
68	S8	O	LCD SEGMENT OUTPUT
69	S9	O	LCD SEGMENT OUTPUT
70	S10	O	LCD SEGMENT OUTPUT
71	S11	O	LCD SEGMENT OUTPUT
72	S12	O	LCD SEGMENT OUTPUT
73	S13	O	LCD SEGMENT OUTPUT
74	S14	O	LCD SEGMENT OUTPUT
75	S15	O	LCD SEGMENT OUTPUT
76	S16	O	LCD SEGMENT OUTPUT
77	S17	O	LCD SEGMENT OUTPUT
78	S18	O	LCD SEGMENT OUTPUT
79	S19	O	LCD SEGMENT OUTPUT
80	S20	O	LCD SEGMENT OUTPUT
81	S21	O	LCD SEGMENT OUTPUT
82	S22	O	LCD SEGMENT OUTPUT
83	S23	O	LCD SEGMENT OUTPUT

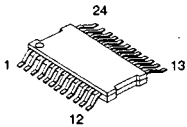
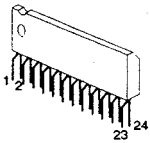
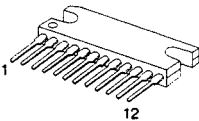
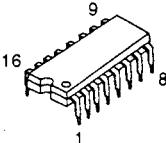
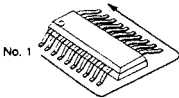
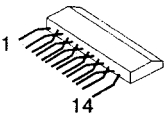
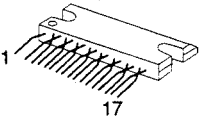
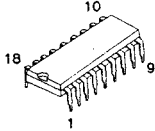
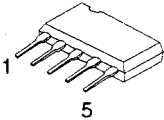
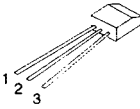
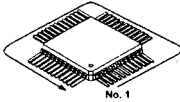
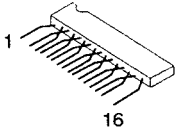
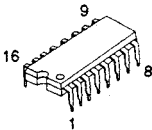
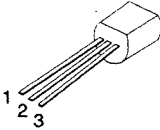
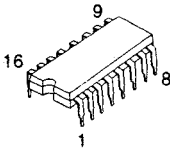
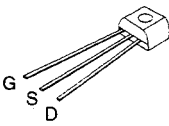
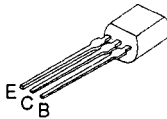
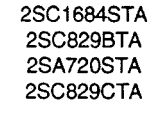
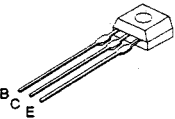
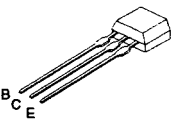
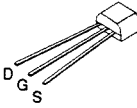
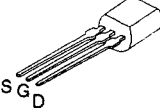
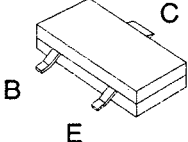
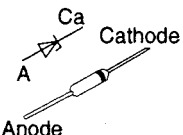
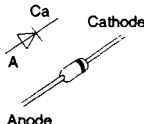
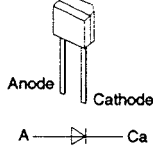
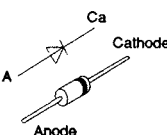
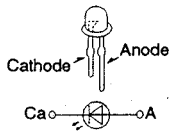
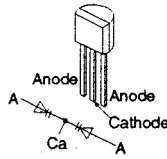
Pin No.	Mark	I/O Division	Function
84	S24	O	LCD SEGMENT OUTPUT
85	S25	O	LCD SEGMENT OUTPUT
86	S26	O	LCD SEGMENT OUTPUT
87	S27	O	LCD SEGMENT OUTPUT
88	P9 3	O	LCD SEGMENT OUTPUT
89	P92	O	LCD SEGMENT OUTPUT
90	LOUD B	O	LOUDNESS CONTROL OUTPUT B
91	LOUD A	O	LOUDNESS CONTROL OUTPUT A
92	MKCLK	O	DECK CONTROL CLOCK OUTPUT
93	MKDATA	O	DECK CONTROL DATA OUTPUT
94	TLOCK	I	CD TRAVERSE SERVO SIGNAL INPUT
95	FLOCK	I	CD FOCUS SERVO SIGNAL INPUT
96	MCLK	O	CD MICOROCOMPUTER COMMAND CLOCK
97	MDATA	O	CD MICOROCOMPUTER COMMAND DATA
98	MLD	O	CD MICOROCOMPUTER COMMAND LOAD
99	SENSE	I	CD SENSE SIGNAL INPUT
100	SUBQ	I	CD SUBDATA Q-CODE INPUT

• IC703 (AN8389SE1) : Focus coil / tracking coil / traverse motor / spindle motor drive

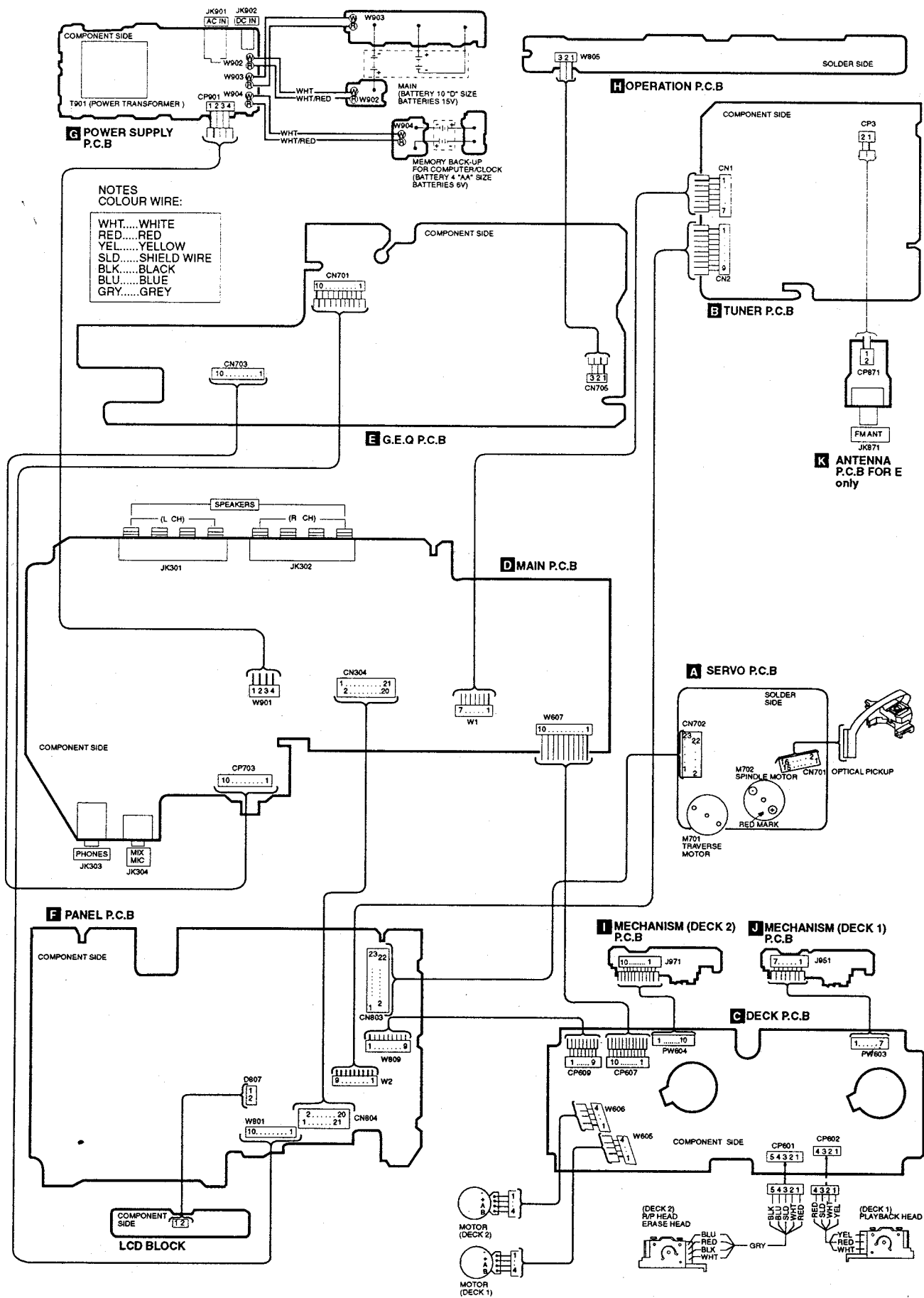
Pin No.	Mark	I/O Division	Function
1	V _{cc}	I	Power supply terminal
2	VREF	I	Reference voltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	GND terminal
6	NC	—	No connection
7	NRESET	I	Reset terminal
8	GND	—	GND terminal
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power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

Pin No.	Mark	I/O Division	Function
13	PV _{cc} 1	I	Driver power supply (1)
14	PGND1	—	Driver GND terminal (1)
15	D1 —	O	Motor driver (1) output terminal (—)
16	D1 +	O	Motor driver (1) output terminal (+)
17	D2 —	O	Motor driver (2) output terminal (—)
18	D2 +	O	Motor driver (2) output terminal (+)
19	D3 —	O	Motor driver (3) output terminal (—)
20	D3 +	O	Motor driver (3) output terminal (+)
21	D4 —	O	Motor driver (4) output terminal (—)
22	D4 +	O	Motor driver (4) output terminal (+)
23	PGND2	—	Driver GND terminal (2)
24	PVCC2	I	Driver power supply (2)

■ Terminal Guide of ICs, Transistors and Diodes

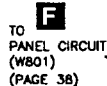
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LM7001 	S8053HNB-T S81250PG-T 	TC4052BP 	2SK544F-AC 	2SB621RTA 2SC2001KTA 	2SD965RTA 2SC1684HRTA 2SA564RTA 2SC1684STA 2SC829BTA 2SA720STA 2SC829CTA 
BA1L4MTA 2SC2785FTA 	2SC2786MTA 2SD1020HTA BN1L3NTA BA1L4ZTA 2SC2784FTA 2SD1302STA BA1A4MTA 2SC1675KTA 	RVTDTA143XST RVTDTC143TST RVTDTC144TST 	2SJ40CDTA 	2SK301QTA 	2SB709S 
RVDMTZ4R7BTA MTZJ5R1BTA 	RVDMTZ11BTA RVDMTZ5R6BTA RVDMTZ6R8BTA 	RVD1SS133TA 	RVDSVC321 	1N5402BM21 	SLR33VC160 
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■ Wiring Connection Diagram



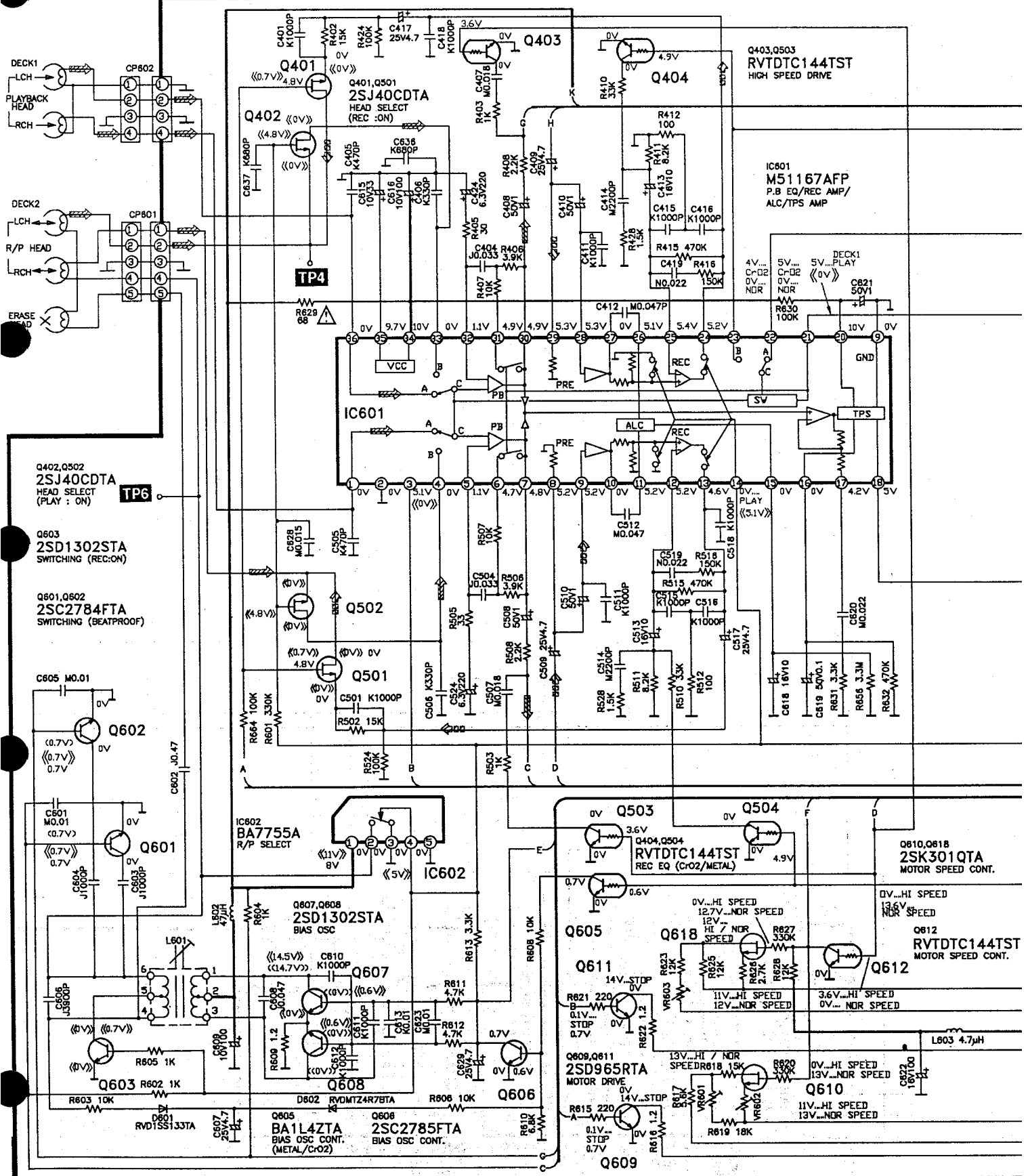
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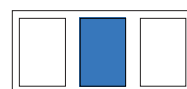
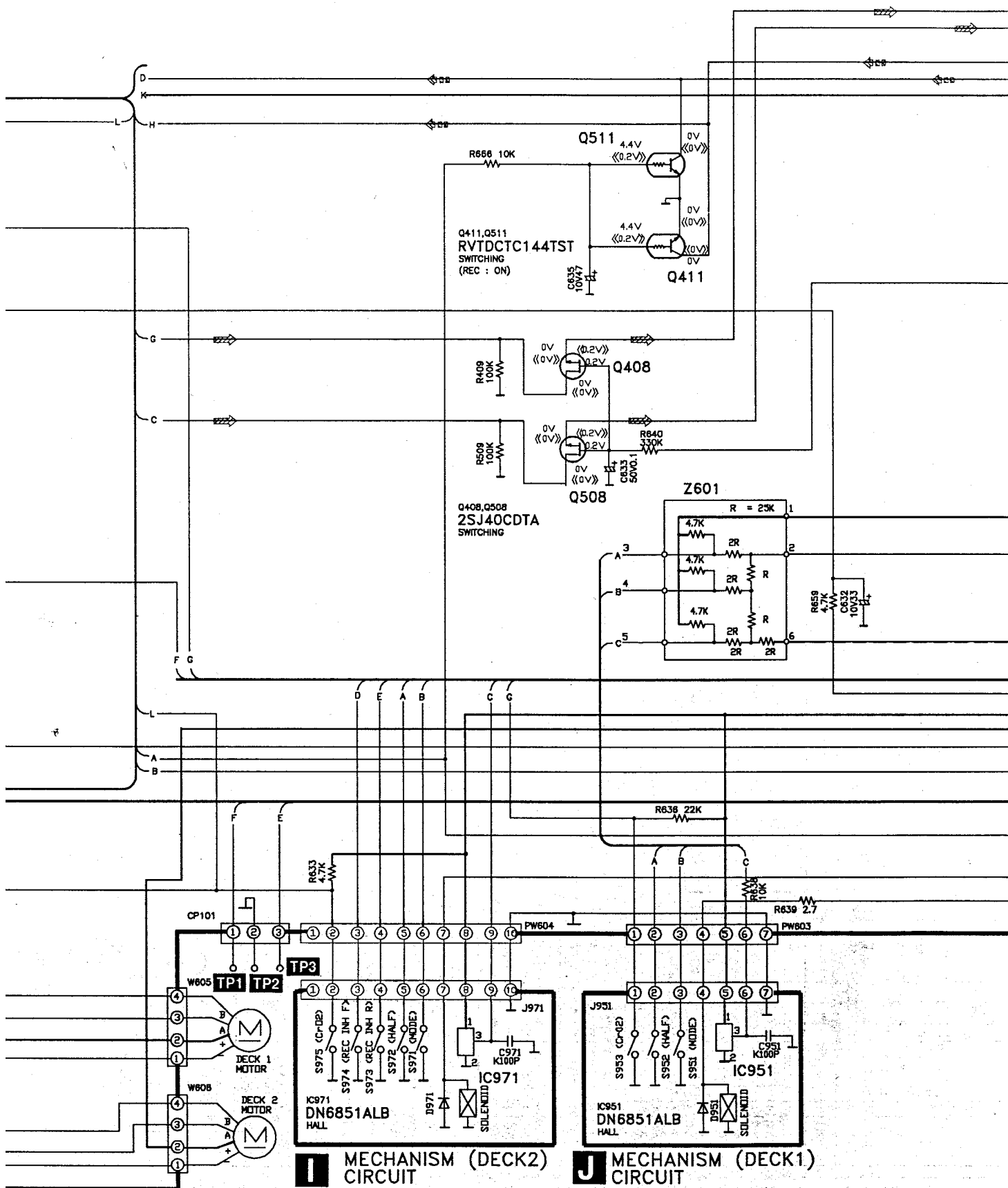
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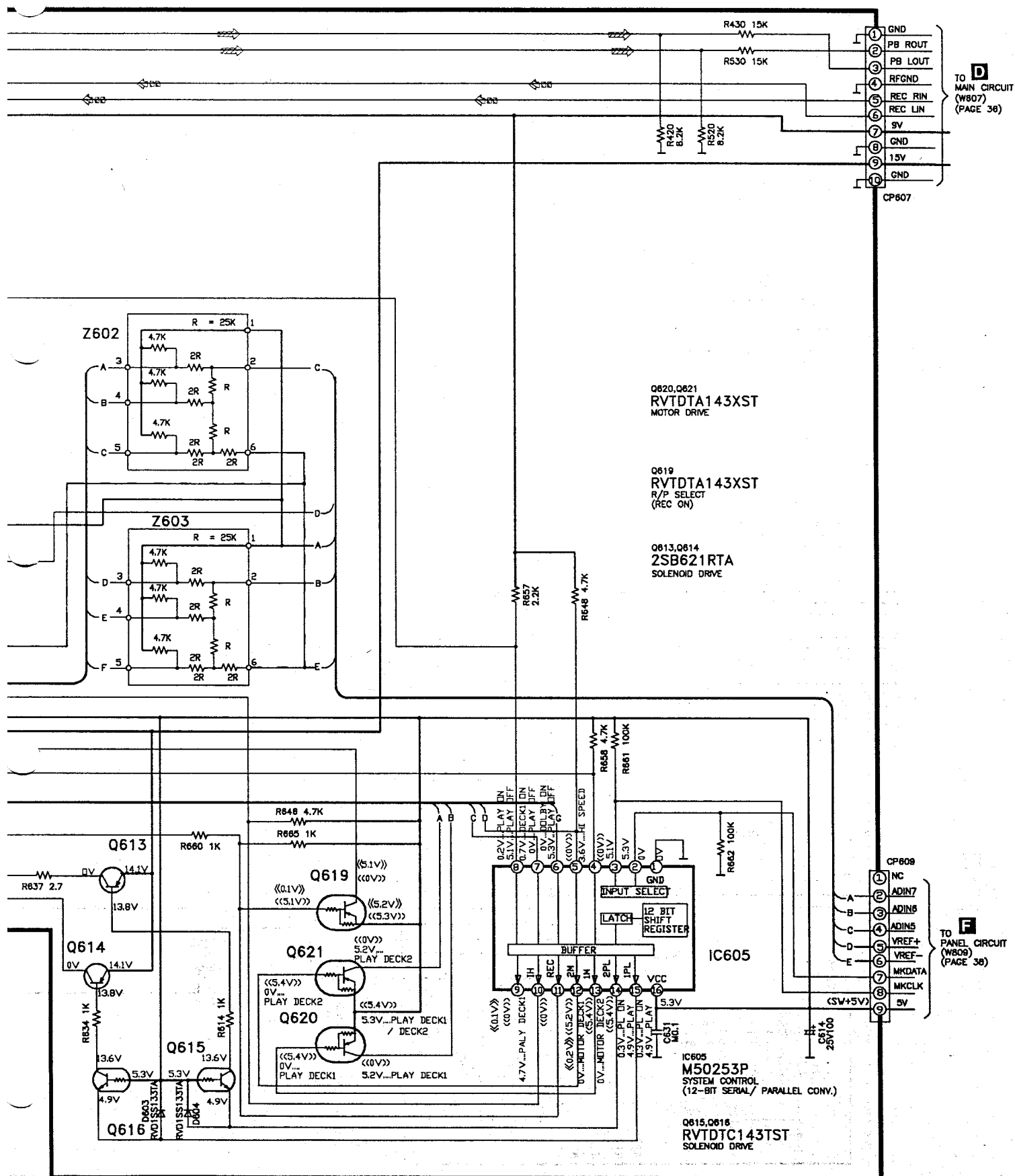


TO **D**
MAIN CIRCUIT
(CP703)
(PAGE 36)

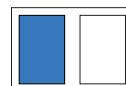
C DECK CIRCUIT

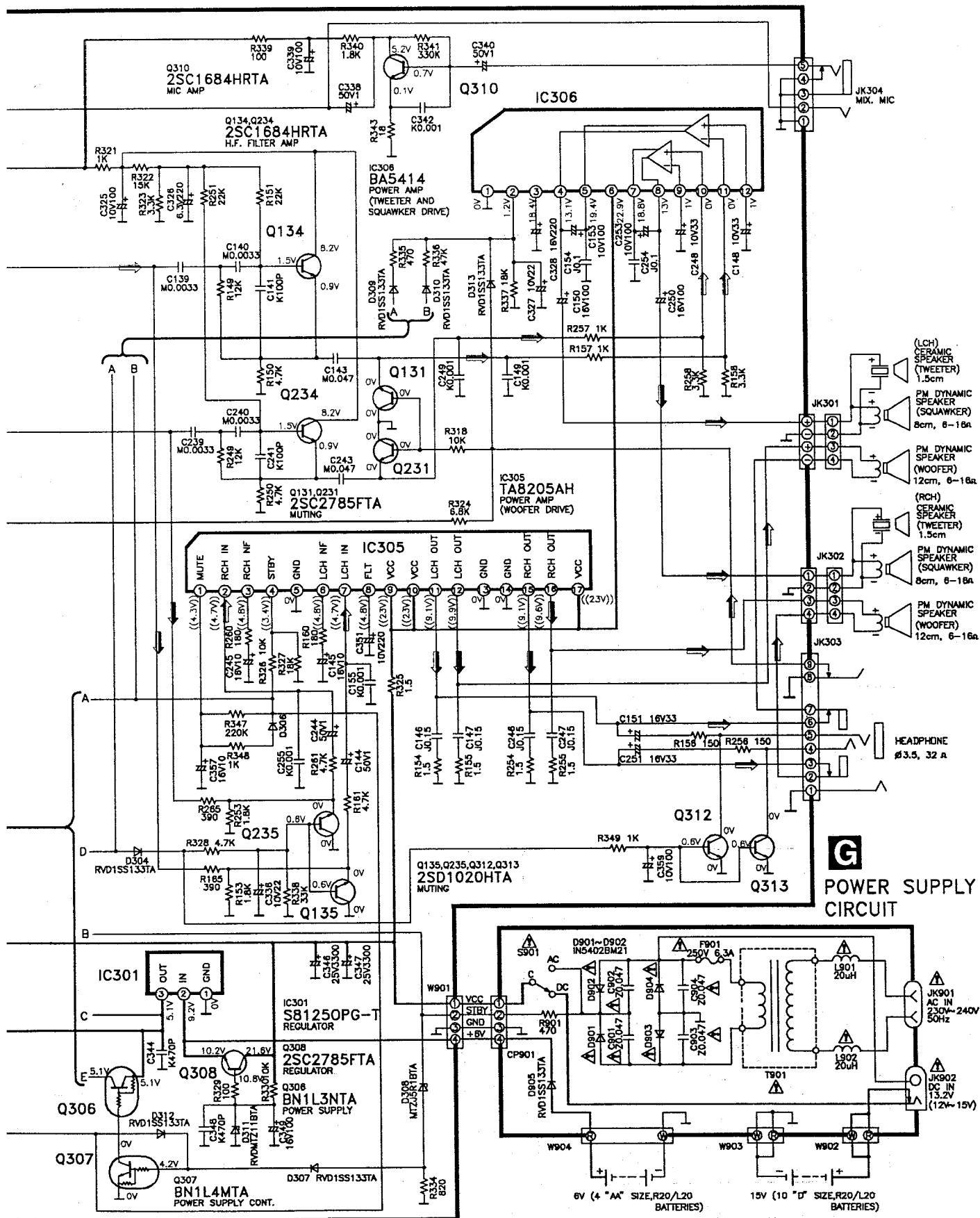




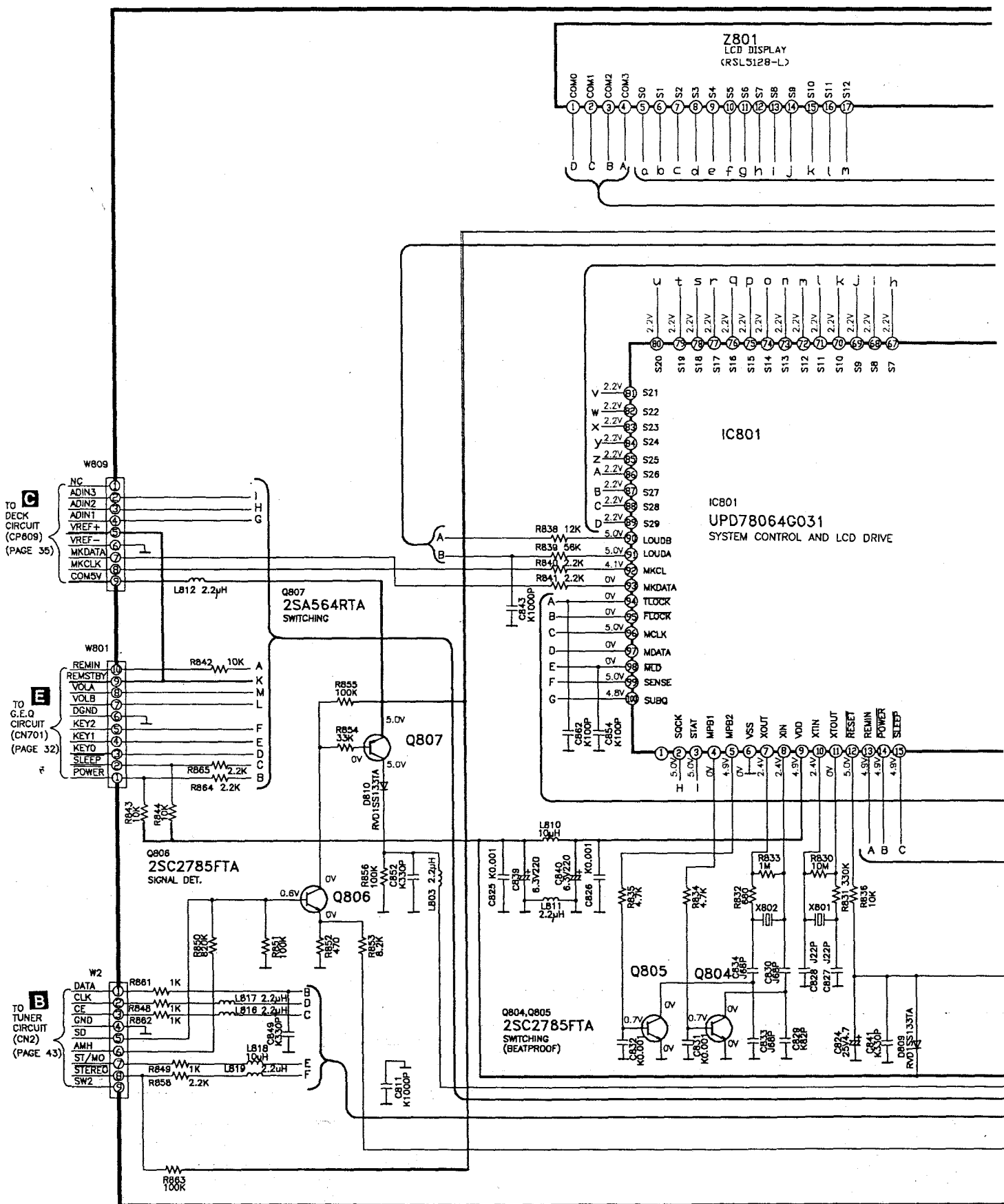


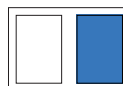
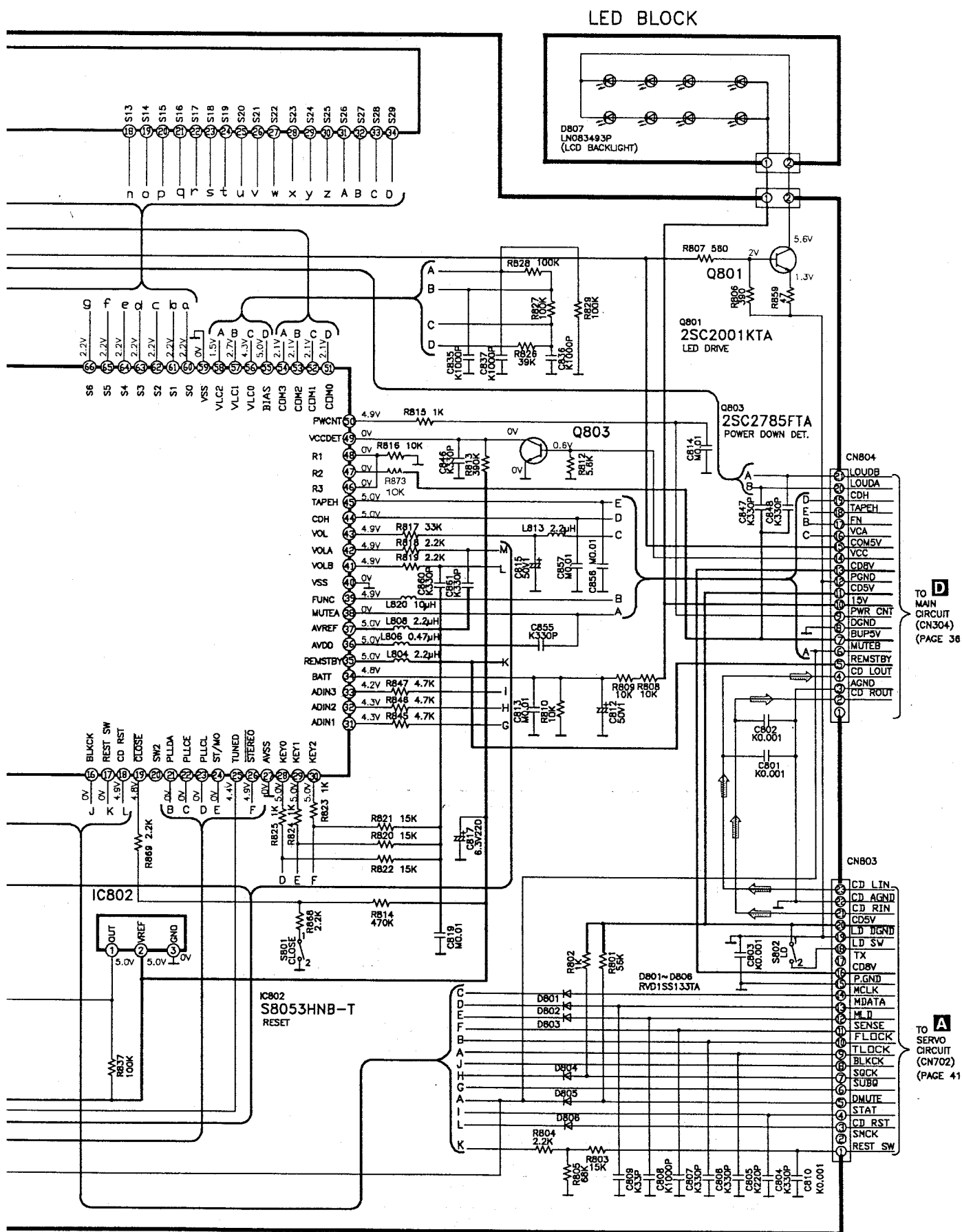
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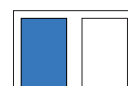
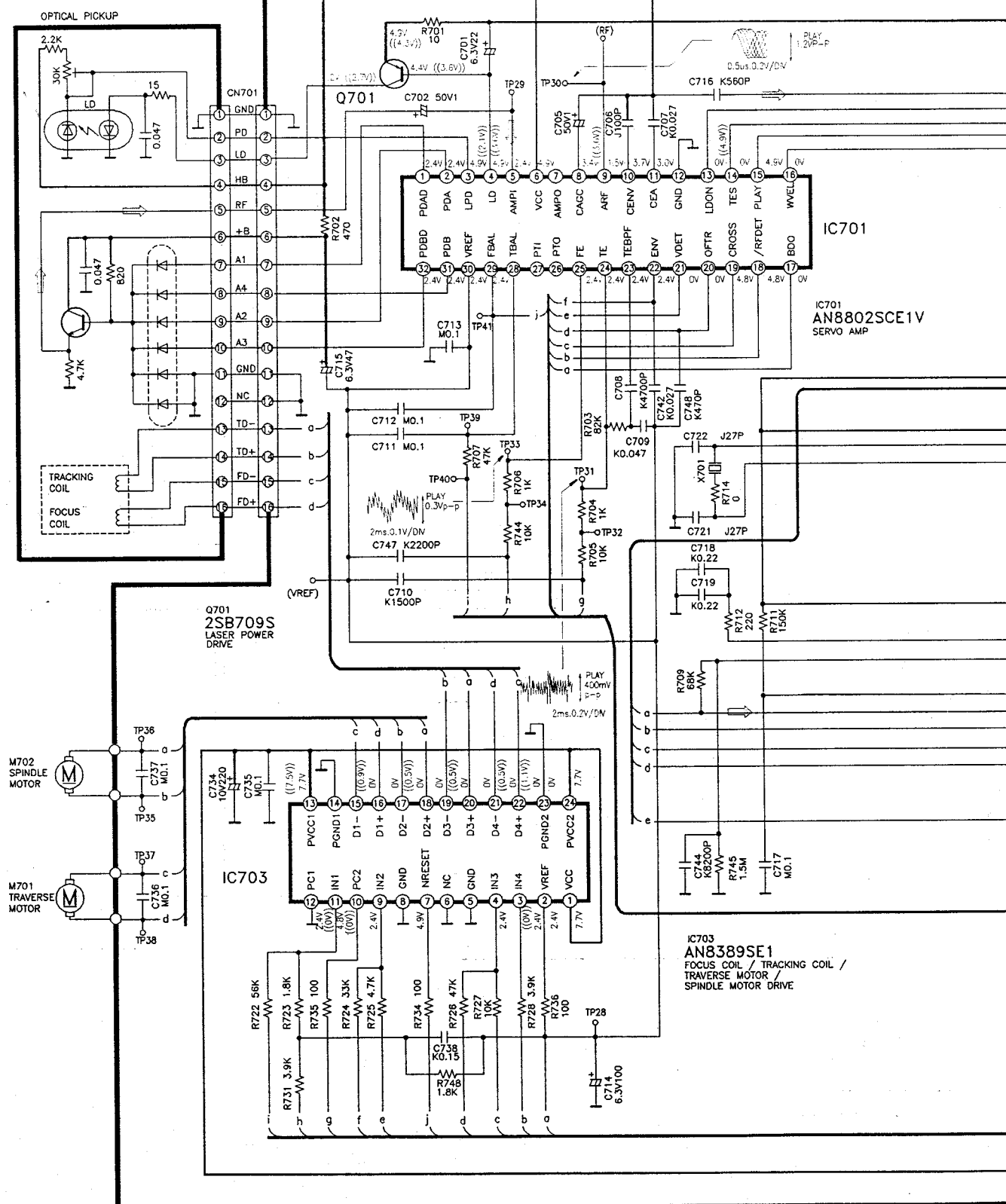


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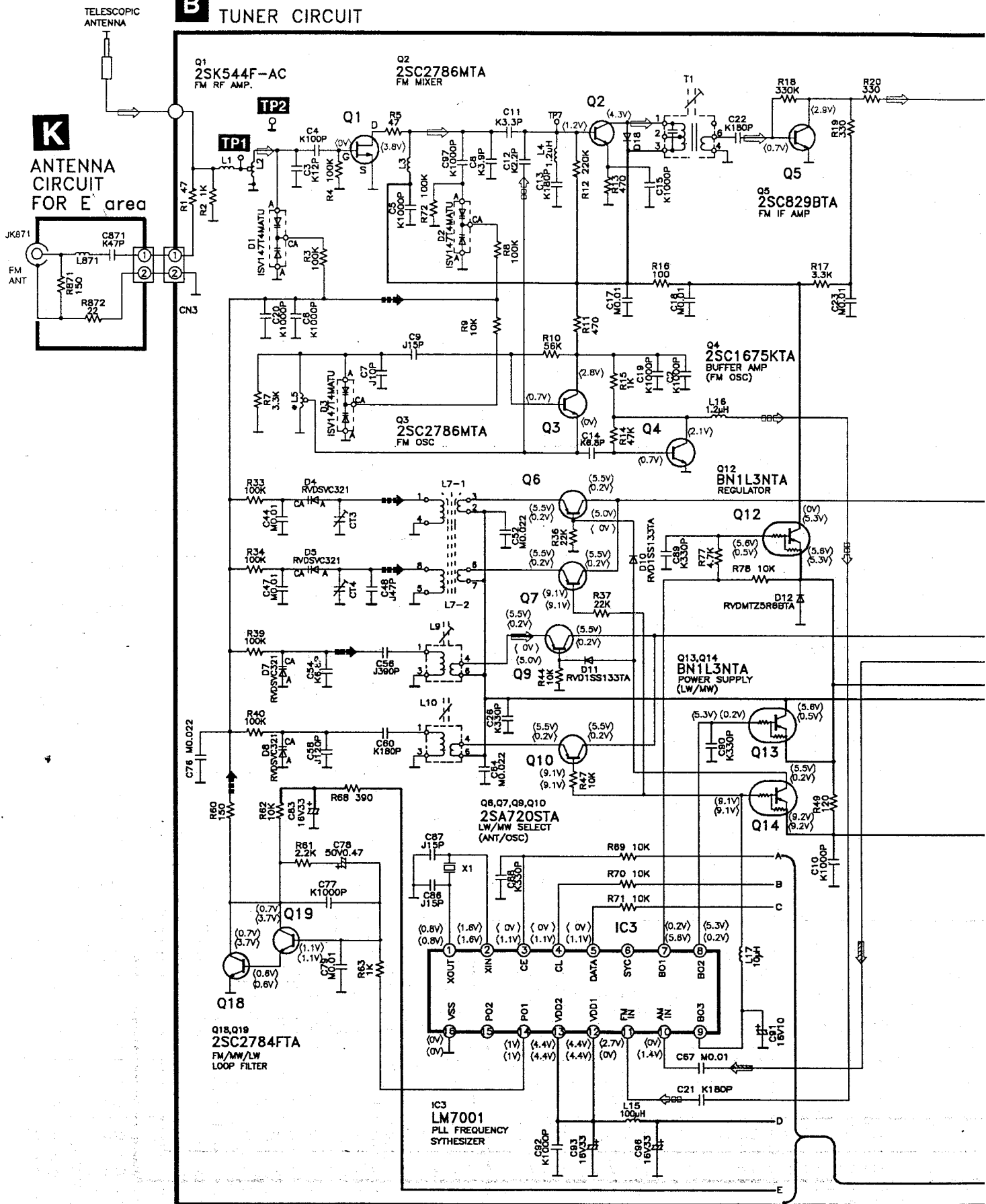


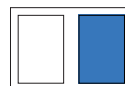
A





B TUNER CIRCUIT





Mechanism Parts Location (RAA0370)

1

2

3

4

5

DECK 1(PLAYBACK)

A

B

C

Note:

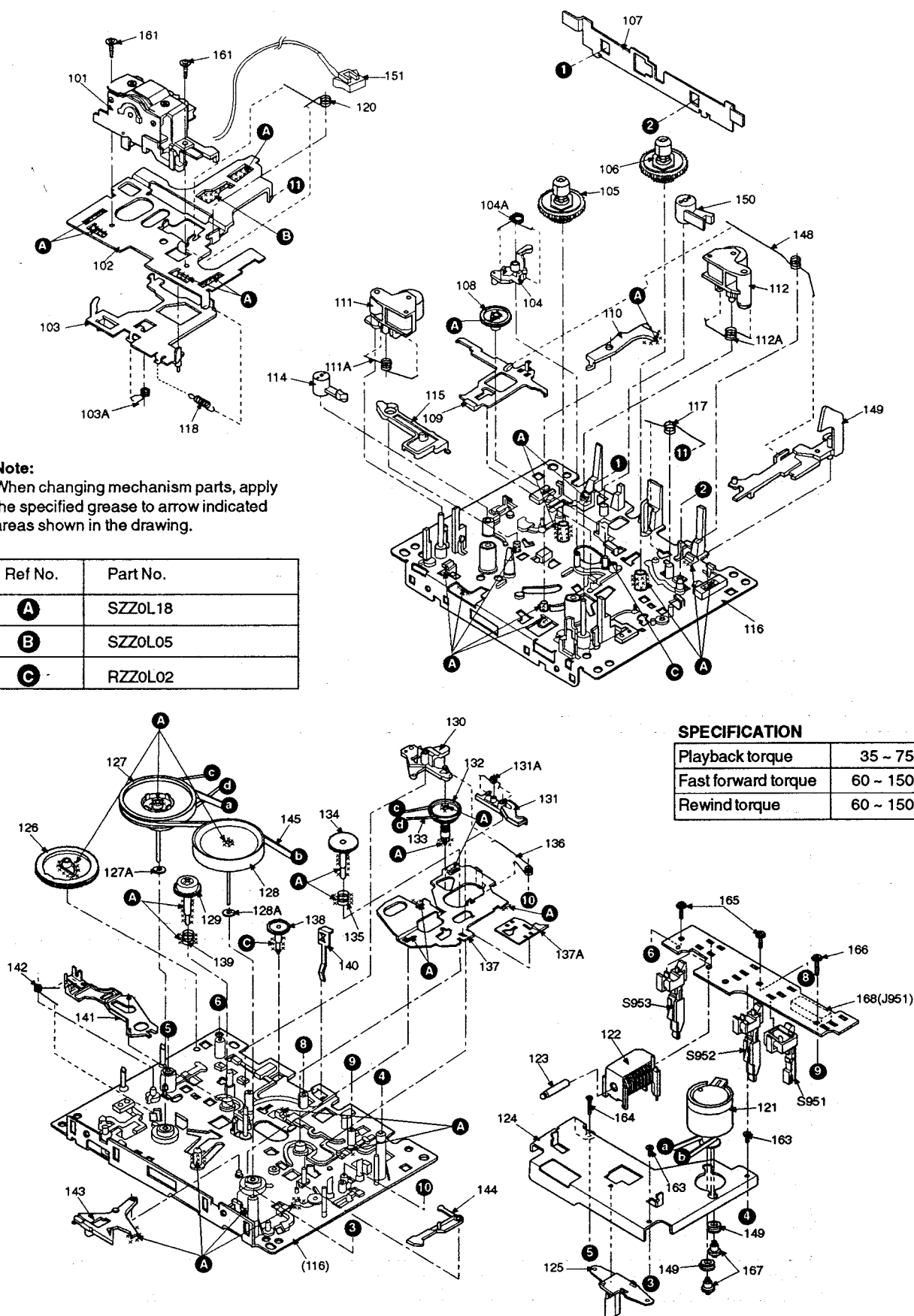
When changing mechanism parts, apply the specified grease to arrow indicated areas shown in the drawing.

Ref No.	Part No.
A	SZZ0L18
B	SZZ0L05
C	RZZ0L02

D

E

F



Mechanism Parts Location (RAA0371)

1

2

3

4

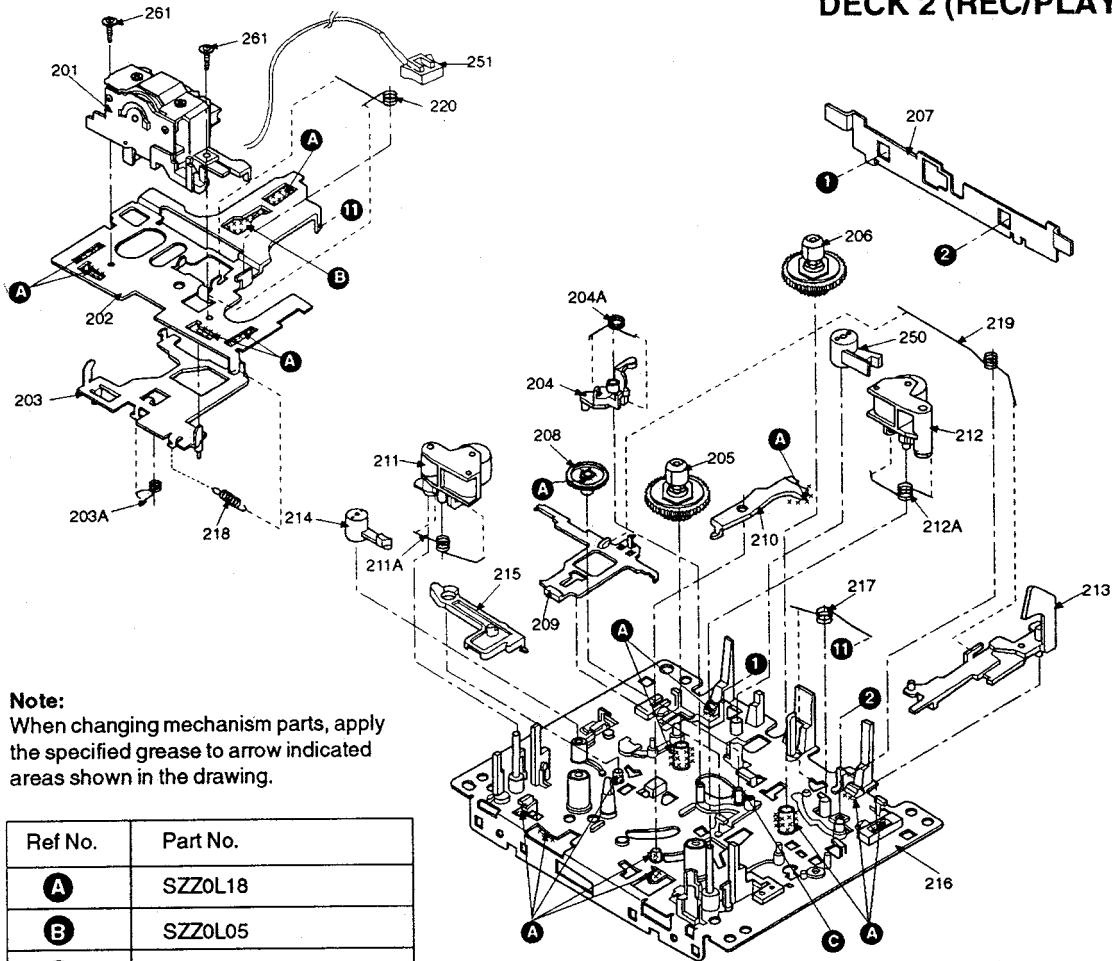
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DECK 2 (REC/PLAYBACK)

A

B

C



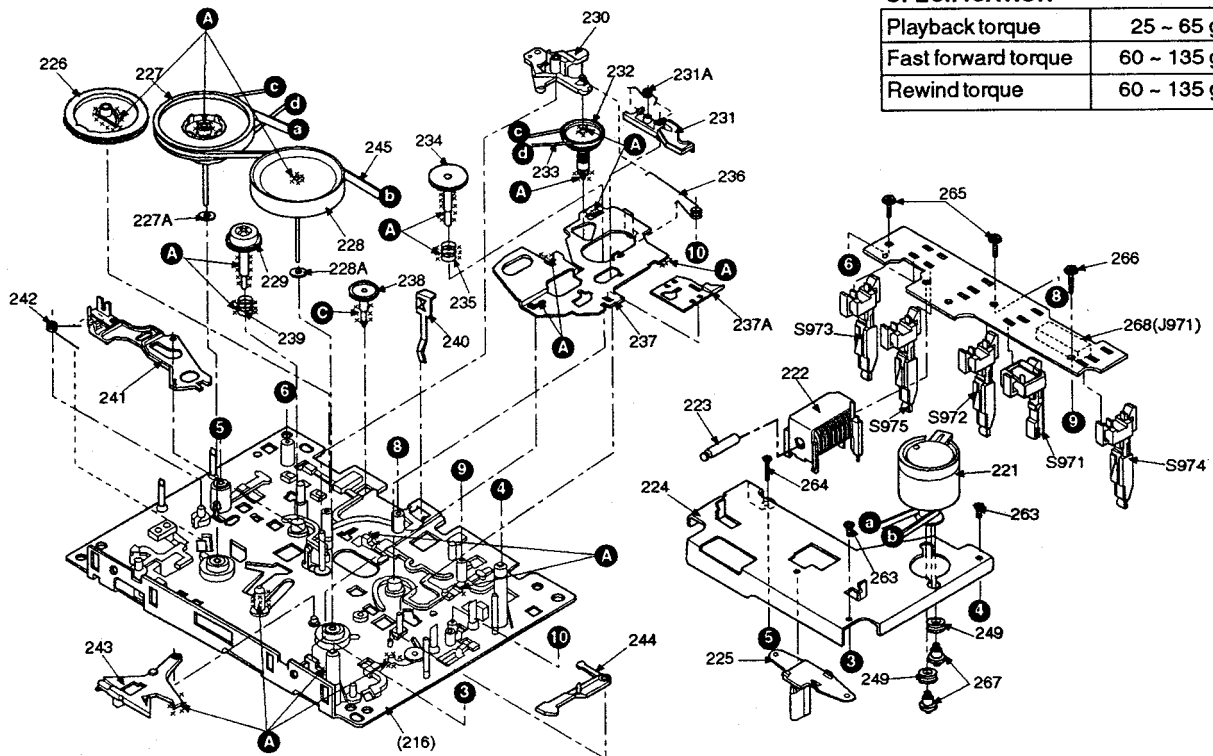
Note:
When changing mechanism parts, apply the specified grease to arrow indicated areas shown in the drawing.

Ref No.	Part No.
A	SZZ0L18
B	SZZ0L05
C	RZZ0L02

D

E

F



SPECIFICATION

Playback torque	25 ~ 65 g•cm
Fast forward torque	60 ~ 135 g•cm
Rewind torque	60 ~ 135 g•cm

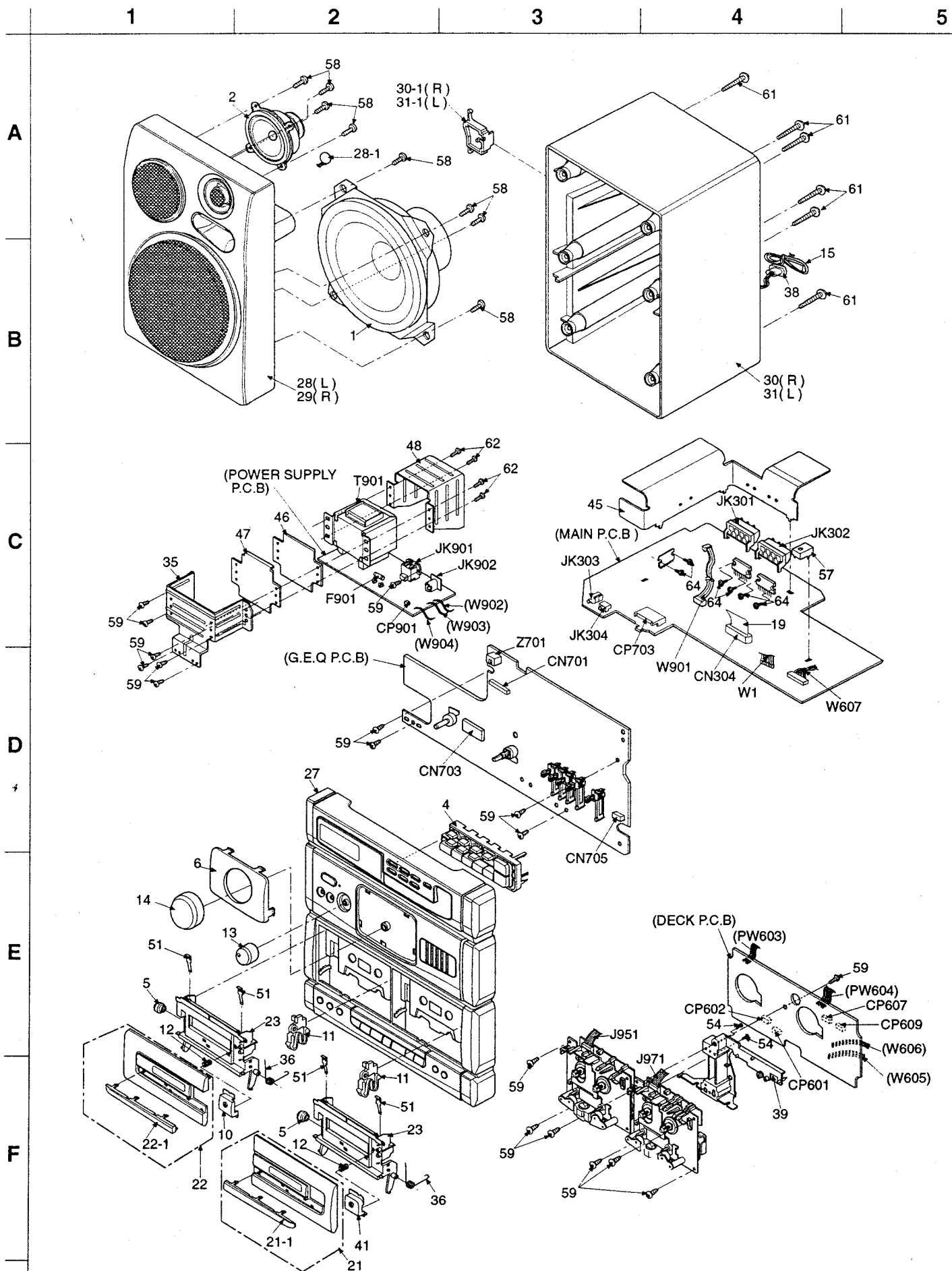
■ Mechanism Parts List

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

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
		CASSETTE DECK 1		137A	RUB512ZB	ROD	
				138	RDG5773ZB	GEAR	
				139	RUQ112ZA	SPRING	
101	RXQ0383	HEAD BLOCK ASS'Y		140	RUS609ZC	SPRING	
102	RUA793ZF	CHASSIS		141	RUB514ZC	LEVER	
103	RZLAR300A	LEVER ASS'Y		142	RUW147ZA	SPRING	
103A	RUW143ZA	SPRING		143	RUB515ZA	LEVER	
104	1UB0089Z	ARM		144	RUB509ZA	LEVER	
104A	RUW148ZA	SPRING		145	RDV108ZA	BELT	
105	1DM0018ZB	REEL TABLE ASS'Y		146	RUB507ZD	LEVER	
106	1DM0017ZB	REEL TABLE ASS'Y		148	RUW144ZA	SPRING	
107	RML0069-1	LEVER		149	RHG3032ZA	RUBBER	
108	RDG5772ZC	GEAR		150	RNL180ZB	LEVER	
109	RUB508ZB	LEVER		151	REX0306	LEAD WIRE BLOCK (4P)	[M]
110	RUB506ZB	LEVER		161	XTW2+6L	SCREW	
111	1UB0088ZB	PINCH ROLLER		163	XTN26+7J	SCREW	
111A	RUW141ZA	SPRING		164	RHE5203ZA	SCREW	
112	1UB0087ZB	PINCH ROLLER		165	XTW2+8S	SCREW	
112A	RUW140ZB	SPRING		166	XYC2+JF16	SCREW	
114	RNL1ZD	ARM		167	RHD26002	SCREW	
115	RUB503ZD	LEVER		168	RJS7T7ZA	CONNECTOR (J951)	
116	RZUAR300A	CHASSIS ASS'Y					
117	RUW142ZA	SPRING					
118	RUD105ZA	SPRING					
120	RUW139ZA	SPRING					
121	RFKPXDT680PK	MOTOR ASS'Y	[M]				
122	1UE0015ZB	PLUNGER					
123	RUB428ZE	SHAFT					
124	RUL1030YA	PLATE					
125	RMD5014ZC	SPACER					
126	RDG5927ZG	GEAR					
127	1DW0037ZB	FLYWHEEL ASS'Y					
127A	RNW139ZA	WASHER					
128	1DW0038ZB	FLYWHEEL ASS'Y					
128A	RNW138ZA	WASHER					
129	1DG0006ZB	GEAR ASS'Y					
130	RUB513ZD	ARM					
131	1UB0091Z	LEVER					
131A	RUW146ZA	SPRING					
132	1DR0011ZB	PULLEY ASS'Y					
133	RDV90ZB	BELT					
134	RDG5769ZA	GEAR					
135	RUQ111ZB	SPRING					
136	RUW145ZA	SPRING					
137	1UB0090ZA	ROD					

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
				238	RDG5773ZA	GEAR	
		CASSETTE DECK 2		239	RUQ112ZA	SPRING	
				240	RUS609ZC	SPRING	
201	RXQ0384	HEAD BLOCK ASS'Y		241	RUB514ZC	LEVER	
202	RUA793ZF	HEAD PANEL		242	RUW147ZA	SPRING	
203	RZLAR300A	LEVER ASS'Y		243	RUB515ZA	LEVER	
203A	RUW143ZA	SPRING		244	RUB509ZA	LEVER	
204	1UB0089Z	ARM		245	RDV108ZA	BELT	
204A	RUW148ZA	SPRING		249	RHG3032ZA	RUBBER	
205	1DM0018ZB	REEL TABLE ASS'Y		250	RNL180ZB	LEVER	
206	1DM0017ZB	REEL TABLE ASS'Y		251	REX0305	LEAD WIRE BLOCK	[M]
207	RML0069-1	LEVER		261	XTW2+6L	SCREW	
208	RDG5772ZC	GEAR		263	XTN26+7J	SCREW	
209	RUB508ZB	LEVER		264	RHE5203ZA	SCREW	
210	RUB506ZB	LEVER		265	XTW2+8S	SCREW	
211	1UB0088ZB	PINCH ROLLER		266	XYC2+JF16	SCREW	
211A	RUW141ZA	SPRING		267	RHD26002	SCREW	
212	1UB0087ZB	PINCH ROLLER		268	RJS10T7ZA	CONNECTOR (J971)	
212A	RUW140ZB	SPRING					
213	RUB507ZD	LEVER					
214	RNL1ZD	ARM					
215	RUB503ZD	LEVER					
216	RZUAR300A	CHASSIS ASS'Y					
217	RUW142ZA	SPRING					
218	RUD105ZA	SPRING					
219	RUW144ZA	SPRING					
220	RUW139ZA	SPRING					
221	RFKPXD680PK	MOTOR ASS'Y	[M]				
222	1UE0015ZB	PLUNGER					
223	RUB428ZE	SHAFT					
224	RUL1030ZE	PLATE	[M]				
225	RMD5014ZC	SPACER					
226	RDG5927ZG	GEAR					
227	1DW0037ZB	FLYWHEEL ASS'Y					
227A	RNW139ZA	WASHER					
228	1DW0038ZB	FLYWHEEL ASS'Y					
228A	RNW138ZA	WASHER					
229	1DG0006ZB	GEAR ASS'Y					
230	RUB513ZD	ARM					
231	1UB0091Z	LEVER					
231A	RUW146ZA	SPRING					
232	1DR0011ZB	PULLEY ASS'Y					
233	RDV90ZB	BELT					
234	RDG5769ZA	GEAR					
235	RUQ111ZB	SPRING					
236	RUW145ZA	SPRING					
237	1UB0090ZA	ROD					
237A	RUB512ZB	ROD					

■ Cabinet Parts Location



1

2

3

4

5

A

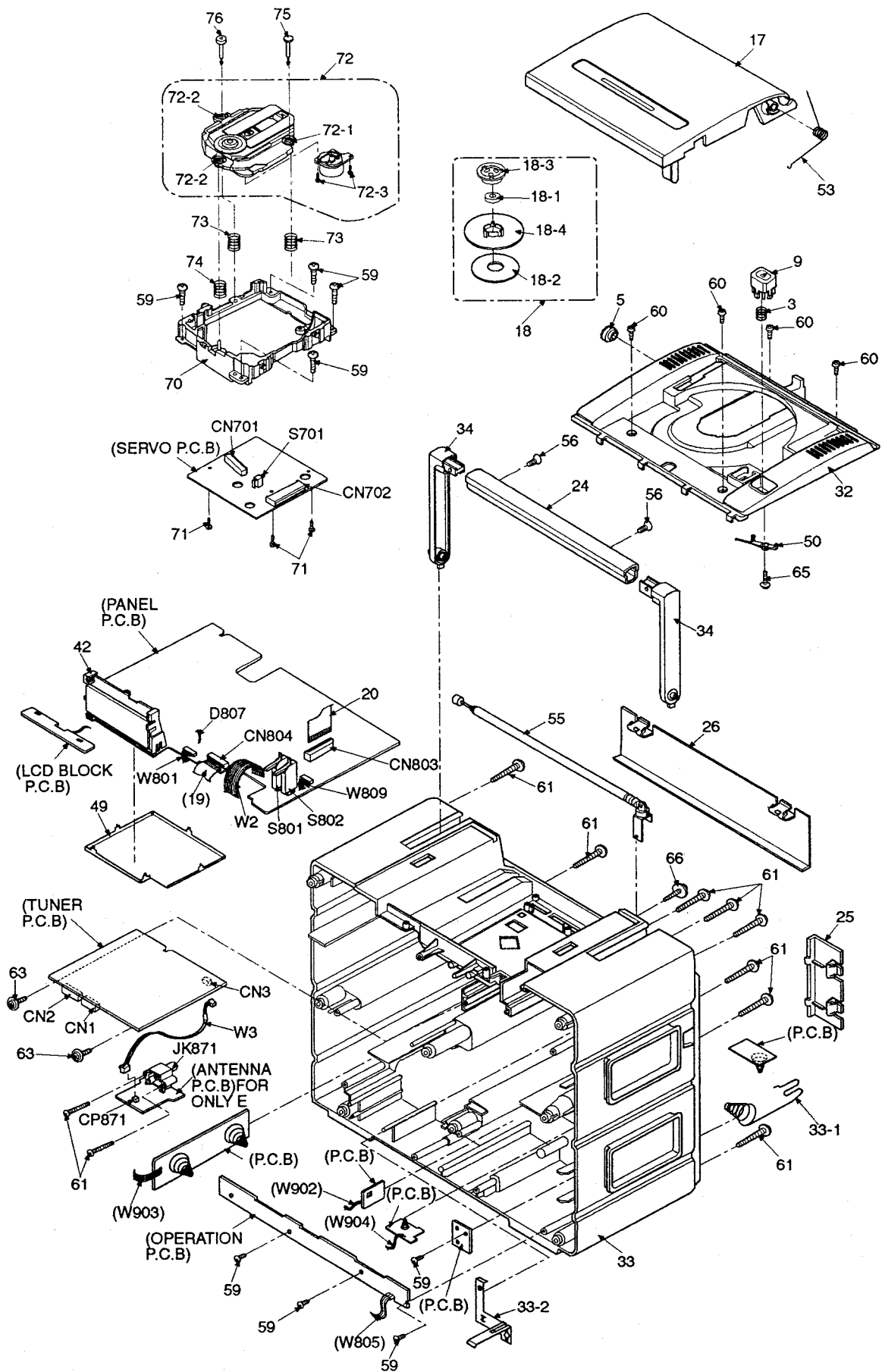
B

C

D

E

F



■ 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.
- * The "(SF)" mark denotes the standard part.
- * 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
		CABINET AND CHASSIS		30-1	RMR0407	LOCK LEVER (R)	[M]
				31	RFKHDT690PK3	SP REAR CB ASS'Y (L)	[M]
				31-1	RMR0408	LOCK LEVER (L)	[M]
1	EASG12P463A2	SPEAKER WOOFER	[M]	32	RKQX0004-K	TOP CABINET	[M]
2	EASG8PH63B2	SPEAKER SQUAWKER	[M]	33	RFKHDT690EK	REAR CABINET ASSS'Y	[M](E)
3	RMB0244	CD EJECT SPRING	[M]	33	RFKHDT690EGK	REAR CABINET ASSS'Y	[M](EG)
4	RGUX0103-H	CD/TUNER BUTTON	[M]	33-1	RJC91003	+BATT TERMINAL	[M]
5	RDG0183-L	DAMPER GEAR	[M]	33-2	RJR0074	ROD ANTENNA TERMINAL	[M]
6	RGKX0007A-K	VOL. KNOB ORNAMENT	[M]	34	RKX0021-K	HANDLE ARM	[M]
9	RGUX0102-K	CD EJECT BUTTON	[M]	35	RMAX0014	TRANS. BRACKET	[M]
10	RGUX0105-K	EJECT BUTTON (L)	[M]	36	RME0081-1	OPEN SPRING	[M]
11	RML0220	CASSETTE EJECT LEVER	[M]	38	RMG0166	CORD BUSHING	[M]
12	RMBX0009	CASS EJECT SPRING	[M]	39	RMK0059-1E	C-MECH DOCKING CHASS	[M]
13	RGWX0018-H	XBS KNOB	[M]	41	RGUX0106-K	EJECT BUTTON (R)	[M]
14	RGWX0019-H	VOLUME KNOB	[M]	42	RMN0118	LCD HOLDER	[M]
15	RJL4W001W22	SPEAKER CORD	[M]	45	RMYX0012	HEAT SINK	[M]
17	RFKKDT690PK	CD LID ASS'Y	[M]	46	RSCX0026	TRANS. SHIELD PLATE	[M]
18	RFKNXTD680PB	CD CLAMPER ASS'Y	[M]	47	RSCX0027	TRANS. SHIELD PLATE	[M]
18-1	RHM245ZA	MAGNET		48	RSCX0028	TRANS. SHIELD PLATE	[M]
18-2	RMG0144	CLAMPER RUBBER		49	RSCX0029	SHIELD PLATE	[M]
18-3	RMQ0152-E	FIXTURE	[M]	50	RUL1136ZA	CD EJECT LEVER	[M]
18-4	RMQ0225-K	CLAMPER	[M]	51	RUS757ZAA	CASSETTE HALF SPRING	[M]
19	REEX0018	FFC WIRE	[M]	53	RUW217ZA	OPEN SPRING	[M]
20	REE0397	FPC WIRE	[M]	54	XTV26+ 6F	SCREW	
21	RFKLDT690P1	CASS LID ASS'Y (R)	[M]	55	XEARR175ED-Y	ROD ANTENNA	
21-1	RGKX0009-H	CASS LID ORNAMENT	[M]	56	XTC3+10CFN	HANDLE SCREW	
22	RFKLDT690P2	CASS LID ASS'Y (L)	[M]	57	RMC1227ZA	DD SHIELD COVER	[M]
22-1	RGKX0008-H	CASS LID ORNAMENT	[M]	58	XTV3+10G	SPEAKER SCREW	
23	RKFX0034-K	CASSETTE HOLDER	[M]	59	XTV3+12G-M	MOUNTING SCREW	[M]
24	RKH0012-K	HANDLE BAR	[M]	60	XTV3+12GFZ	TOP CAB SCREW	
25	RKK0035-K	BATTERY COVER (UM-3)	[M]	61	XTV3+20G	CASING SCREW	
26	RKK347ZB-0	BATTERY COVER (UM-1)	[M]	62	XTV3+8F	TRANS. BRACKET SCREW	
27	RFKGDT690EK1	FRONT CABINET ASS'Y	[M]	63	XTWS3+10Q	TUNER PCB SCREW	
28	RFKGDT690PK2	SP FRONT CB ASS'Y (L)	[M]	64	XTW3+10F	SCREW	
28-1	EFBS10D49A3	SPEAKER TWEETER	[M]	65	XTW3+10Q	LEVER SCREW	
29	RFKGDT690PK3	SP FRONT CB ASS'Y (R)	[M]	66	XYN3+F8FY	ROD ANTENNA SCREW	
30	RFKHDT690PK2	SP REAR CB ASS'Y (R)	[M]	70	RMR0698-K	TRAVERSE CHASSIS	

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
71	XTV2+6G	SCREW		Q16	2SA564RTA	TRANSISTOR	
72	RAE0113Z	TRAVERSE UNIT		Q17	2SC2785FTA	TRANSISTOR	
72-1	SHGD112	FLOATING RUBBER (A)		Q18	2SC2784FTA	TRANSISTOR	[M]
72-2	SHGD113-1	FLOATING RUBBER (B)		Q19	2SC2784FTA	TRANSISTOR	[M]
72-3	XQS2+A35FZ	SCREW		Q101	2SC2785FTA	TRANSISTOR	
73	RME0109	FLOATING SPRING A		Q131	2SC2785FTA	TRANSISTOR	
74	RME0142	FLOATING SPRING B		Q132	2SJ40CDTA	TRANSISTOR	
75	RMS0123-1	FIXED PIN A		Q133	BA1L4MTA	TRANSISTOR	[M]
76	RMS0350	FIXED PIN B		Q134	2SC1684HRTA	TRANSISTOR	
				Q135	2SD1020HTA	TRANSISTOR	[M]
		INTEGRATED CIRCUITS		Q136	2SC1684STA	TRANSISTOR	
IC1	AN7273A	IC,MP		Q201	2SC2785FTA	TRANSISTOR	
IC2	RVIBA1332L	IC,FM MPX		Q231	2SC2785FTA	TRANSISTOR	
IC3	LM7001	IC,PLL		Q232	2SJ40CDTA	TRANSISTOR	
IC301	S81250PG-T	IC,5V REGULATOR	[M]	Q233	BA1L4MTA	TRANSISTOR	[M]
IC302	BA3932	IC,REGULATOR		Q234	2SC1684HRTA	TRANSISTOR	
IC303	M51131L-702	IC,VCA		Q235	2SD1020HTA	TRANSISTOR	[M]
IC304	TC4052BP	IC,ANALOG SW	[M]	Q236	2SC1684STA	TRANSISTOR	
IC305	TA8205AH	IC,POWER AMP. (LOW)		Q303	2SC2785FTA	TRANSISTOR	
IC306	BA5414	IC,POWER AMP (HI)	[M]	Q304	2SC2785FTA	TRANSISTOR	
IC601	M51167AFP	IC,REC-PLAY		Q305	BN1L3NTA	TRANSISTOR	[M]
IC602	BA7755A	IC,ANALOG SW		Q306	BN1L3NTA	TRANSISTOR	[M]
IC605	M50253P	IC,I/O EXPANDER		Q307	BA1L4MTA	TRANSISTOR	[M]
IC701	BA3822LS-M	IC,EQUALIZER	[M]	Q308	2SC2785FTA	TRANSISTOR	
IC801	UPD78064G031	IC,MICON	[M]	Q309	BA1L4MTA	TRANSISTOR	[M]
IC802	S8053HNB-T	IC,RESET		Q310	2SC1684HRTA	TRANSISTOR	
IC951	DN6851ALB	IC, HALL		Q312	2SD1020HTA	TRANSISTOR	[M]
IC971	DN6851ALB	IC, HALL		Q313	2SD1020HTA	TRANSISTOR	[M]
				Q401	2SJ40CDTA	TRANSISTOR	
		IC PROTECTORS		Q402	2SJ40CDTA	TRANSISTOR	
ICP3	SRUN15T	IC PROTECTOR	⚠	Q403	RVTDTTC144TST	TRANSISTOR	
				Q404	RVTDTTC144TST	TRANSISTOR	
				Q408	2SJ40CDTA	TRANSISTOR	
		TRANSISTORS		Q411	RVTDTTC144TST	TRANSISTOR	
				Q501	2SJ40CDTA	TRANSISTOR	
Q1	2SK544F-AC	TRANSISTOR		Q502	2SJ40CDTA	TRANSISTOR	
Q2	2SC2786MTA	TRANSISTOR		Q503	RVTDTTC144TST	TRANSISTOR	
Q3	2SC2786MTA	TRANSISTOR		Q504	RVTDTTC144TST	TRANSISTOR	
Q4	2SC1675KTA	TRANSISTOR	[M]	Q508	2SJ40CDTA	TRANSISTOR	
Q5	2SC829BTA	TRANSISTOR		Q511	RVTDTTC144TST	TRANSISTOR	
Q6	2SA720STA	TRANSISTOR	[M]	Q601	2SC2784FTA	TRANSISTOR	[M]
Q7	2SA720STA	TRANSISTOR	[M]	Q602	2SC2784FTA	TRANSISTOR	[M]
Q9	2SA720STA	TRANSISTOR	[M]	Q603	2SD1302STA	TRANSISTOR	
Q10	2SA720STA	TRANSISTOR	[M]	Q605	BA1L4ZTA	TRANSISTOR	[M]
Q12	2SA564RTA	TRANSISTOR		Q606	2SC2785FTA	TRANSISTOR	
Q13	BN1L3NTA	TRANSISTOR	[M]	Q607	2SD1302STA	TRANSISTOR	
Q14	BN1L3NTA	TRANSISTOR	[M]	Q608	2SD1302STA	TRANSISTOR	
Q15	2SC829CTA	TRANSISTOR		Q609	2SD965RTA	TRANSISTOR	

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
Q610	2SK301QTA	TRANSISTOR	[M]	D602	RVDMTZ4R7BTA	DIODE	
Q611	2SD965RTA	TRANSISTOR		D603	RVD1SS133TA	DIODE	
Q612	RVTDTTC144TST	TRANSISTOR		D604	RVD1SS133TA	DIODE	
Q613	2SB621RTA	TRANSISTOR		D702	SLR33VC160	DIODE	[M]
Q614	2SB621RTA	TRANSISTOR		D801	RVD1SS133TA	DIODE	
Q615	RVTDTTC143TST	TRANSISTOR		D802	RVD1SS133TA	DIODE	
Q616	RVTDTTC143TST	TRANSISTOR		D803	RVD1SS133TA	DIODE	
Q618	2SK301QTA	TRANSISTOR	[M]	D804	RVD1SS133TA	DIODE	
Q619	RVTDTA143XST	TRANSISTOR		D805	RVD1SS133TA	DIODE	
Q620	RVTDTA143XST	TRANSISTOR		D806	RVD1SS133TA	DIODE	
Q621	RVTDTA143XST	TRANSISTOR		D807	LN083493P	DIODE	[M]
Q701	BA1A4MTA	TRANSISTOR	[M]	D809	RVD1SS133TA	DIODE	
Q801	2SC2001KTA	TRANSISTOR		D810	RVD1SS133TA	DIODE	
Q803	2SC2785FTA	TRANSISTOR		D901	1N5402BM21	DIODE	⚠
Q804	2SC2785FTA	TRANSISTOR		D902	1N5402BM21	DIODE	⚠
Q805	2SC2785FTA	TRANSISTOR		D903	1N5402BM21	DIODE	⚠
Q806	2SC2785FTA	TRANSISTOR		D904	1N5402BM21	DIODE	⚠
Q807	2SA564RTA	TRANSISTOR		D905	RVD1SS133TA	DIODE	
				D951	RVD1SS133TA	DIODE	
		DIODES		D971	RVD1SS133TA	DIODE	
D1	1SV147T4MATU	DIODE				VARIABLE RESISTORS	
D2	1SV147T4MATU	DIODE					
D3	1SV147T4MATU	DIODE		VR1	EVNDXAA00B14	VR,TUNER	
D4	RVDSVC321	DIODE		VR601	RVNCC14B1T-A	VR,TAPE SPEED	
D5	RVDSVC321	DIODE		VR602	RVNCC24B1T-A	VR,TAPE SPEED	
D7	RVDSVC321	DIODE		VR603	RVNCC73B1T-A	VR,TAPE SPEED	
D8	RVDSVC321	DIODE		VR701	EW2UAF2054D	VR,XBS	[M]
D10	RVD1SS133TA	DIODE		VR702	EWAJQB05G54	VR,EQ SLIDE	[M]
D11	RVD1SS133TA	DIODE		VR703	EWAJQB05G54	VR,EQ SLIDE	[M]
D12	RVDMTZ5R6BTA	DIODE		VR704	EWAJQB05G54	VR,EQ SLIDE	[M]
D15	RVD1SS133TA	DIODE		VR705	EWAJQB05G54	VR,EQ SLIDE	[M]
D16	RVD1SS133TA	DIODE		VR706	EWAJUB05G15	VR, BALANCE	[M]
D17	RVD1SS133TA	DIODE		VR707	EVQWQAF1524B	VR,VOLUME	[M]
D18	RVD1SS133TA	DIODE					
D301	RVD1SS133TA	DIODE				TRIMMERS	
D302	RVDMTZ11BTA	DIODE					
D304	RVD1SS133TA	DIODE		CT3	RCV10AF1T-S	TRIMMER CAPACITOR	
D305	RVDMTZ6R8BTA	DIODE		CT4	ECRLA030E53R	TRIMMER CAPACITOR	
D306	RVD1SS133TA	DIODE					
D307	RVD1SS133TA	DIODE				SWITCHES	
D308	MTZJ5R1BTA	DIODE					
D309	RVD1SS133TA	DIODE		S701	EVQ21405R	SW,TIMER	
D310	RVD1SS133TA	DIODE		S702	EVQ21405R	SW,TIME CHECK	
D311	RVDMTZ11BTA	DIODE		S703	EVQ21405R	SW,+(TUNING/TIME)	
D312	RVD1SS133TA	DIODE		S704	EVQ21405R	SW,-(TUNING/TIME)	
D313	RVD1SS133TA	DIODE		S705	EVQ21405R	SW,MEMORY/ADJUST	
D601	RVD1SS133TA	DIODE		S706	EVQ21405R	SW,FM MODE/B.P.	

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
S707	EVQ21405R	SW,+(PRESET TUNING)		CP607	RJP10G18ZA	CONNECTOR (10P)	
S708	EVQ21405R	SW,-(PRESET TUNING)		CP609	RJP9G18ZA	CONNECTOR (9P)	
S711	EVQ21405R	SW,CD STOP		CP703	RJU003K010M1	CONNECTOR (10P)	
S712	EVQ21405R	SW,CD PLAY/PAUSE		CP871	RJP2G18ZA	CONNECTOR (2P)	
S713	EVQ21405R	SW,REV SKIP		CP901	RJP4G4YA	CONNECTOR (4P)	
S714	EVQ21405R	SW,FWD SKIP					
S715	EVQ21405R	SW,BAND				COILS & TRANSFORMERS	
S731	EVQ21405R	SW,SLEEP					
S732	EVQ21405R	SW,POWER		L1	RLQY30S4W	FM RF CHOKE COIL	[M]
S801	RSH1A012-U	SW,CD OPEN/CLOSE		L2	RLA4Y001-E	FM ANT COIL	[M]
S802	RSH1A012-U	SW,LD SWITCH		L3	RLA4Y002-E	FM ANT COIL	[M]
S881	EVQ21405R	SW,REC PAUSE		L4	RLQZPIR2JT-Y	COIL	[M]
S882	EVQ21405R	SW,AUTO CD RECORD		L7	RLV6C004-0	F. ANT	[M]
S891	EVQ21405R	SW,CASS STOP		L9	RL02B126-M	AM OSC COIL	[M]
S892	EVQ21405R	SW,CASSFF/TPS		L10	RL01B15-M	LW OSC COIL	[M]
S893	EVQ21405R	SW,CASSFWD PLAY		L15	RLQZP101KT-Y	COIL	
S894	EVQ21405R	SW,CASSREV PLAY		L16	RLQZPIR2JT-Y	COIL	[M]
S895	EVQ21405R	SW,CASSREW/TPS		L17	RLQZP100KT-Y	COIL	
S896	EVQ21405R	SW,DECK 1/2		L301	RLQZP221KT-Y	TUBULAR COIL	
S897	EVQ21405R	SW,COUNTER RESET		L302	RLQZP221KT-Y	TUBULAR COIL	
S898	EVQ21405R	SW,REV MODE		L303	RL09B007-M	D-D COIL	
S899	EVQ21405R	SW,TAPE EDIT		L304	RLQZP221KT-Y	TUBULAR COIL	
S901	RJI1SM02-H	SW,AC IN (JK901)	⚠	L305	RLQZB4R7KT-D	CHOKE COIL	[M]
S951	RSH1A89ZD-U	SW,MODE DETECT (1)		L601	RL08C002M-T	COIL	
S952	RSH1A90YD-U	SW,TAPE DETECT (1)		L602	RLQZB470KT-D	COIL	
S953	RSH1A90YD-U	SW,CrO2 DETECT (1)		L603	RLQZB4R7KT-D	COIL	[M]
S971	RSH1A89ZD-U	SW,MODE DETECT (2)		L731	RLQZP101KT-Y	TUBULAR COIL	
S972	RSH1A90YD-U	SW,TAPE DETECT (2)		L732	RLQZP101KT-Y	TUBULAR COIL	
S973	RSH1A90YD-U	SW,TAP DETECT (2)		L733	RLQZP101KT-Y	TUBULAR COIL	
S974	RSH1A90YD-U	SW,TAP DETECT (2)		L734	RLQZP101KT-Y	TUBULAR COIL	
S975	RSH1A90YD-U	SW,CrO2 DETECT (2)		L735	RLQZP101KT-Y	TUBULAR COIL	
				L803	RLQZP2R2KT-Y	CHOKE COIL	
		CONNECTORS		L804	RLQZP2R2KT-Y	CHOKE COIL	
				L806	RLQZPR47KT-Y	CHOKE COIL	
CN1	SJT3711	CONNECTOR (7P)		L808	RLQZP2R2KT-Y	CHOKE COIL	
CN2	SJT3909	CONNECTOR (9P)		L810	RLQZP100KT-Y	CHOKE COIL	
CN3	RJP2G18ZA	CONNECTOR (2P)		L811	RLQZP2R2KT-Y	CHOKE COIL	
CN304	RJS1A6821	CONNECTOR (21P)		L812	RLQZP2R2KT-Y	CHOKE COIL	
CN701	RJP10G18ZA	CONNECTOR (10P)		L813	RLQZP2R2KT-Y	CHOKE COIL	
CN701	RJU035T016-1	CONNECTOR (16P)		L816	RLQZP2R2KT-Y	CHOKE COIL	
CN702	RJS1A6723-1Q	CONNECTOR (23P)		L817	RLQZP2R2KT-Y	CHOKE COIL	[M]
CN703	RJT003K010M1	CONNECTOR (10P)		L818	RLQZP100KT-Y	CHOKE COIL	
CN705	RJS1A5203	CONNECTOR (3P)		L819	RLQZP2R2KT-Y	CHOKE COIL	
CN803	RJS1A6823	FFC SOCKET (23P)		L820	RLQZP100KT-Y	CHOKE COIL	
CN804	RJS1A6721	CONNECTOR (21P)	[M]	L871	RLQY30S1W	SPRING COIL	
CP101	RJP3G1ZA	PLUG		L901	RLQZB220KT-D	CHOKE COIL	⚠
CP601	RJP5G18ZA	CONNECTOR (5P)		L902	RLQZB220KT-D	CHOKE COIL	⚠
CP602	RJP4G18ZA	CONNECTOR (4P)		T1	RLI4B153-M	FM IFT	

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
T2	RLI2B153-M	AM IFT				WIRES	
T3	SLI4B524-Z	FM DET COIL					
T901	RTP1M1B003-X	POWER TRANSFORMER	[M] ⚠	W1	REXX0058-1	WIRE,MAIN TO TUNER	[M]
				W2	REX0301	WIRE,CNTRL TO TUNER	[M]
		COMPONENT COMBINATIONS		W3	REX0225	WIRE,EXT. ANTENNA	[M]
				W607	REXX0105	WIRE,DECK TO MAIN	[M]
Z601	EXBF6L306SYV	RESISTOR BLOCK		W801	REXX0102	WIRE,CNTRL TO PANEL	[M]
Z602	EXBF6L306SYV	RESISTOR BLOCK		W809	REX0304Y	WIRE,CONTROL TO DECK	[M]
Z603	EXBF6L306SYV	RESISTOR BLOCK		W901	REXX0104	WIRE,MAIN TO POWER	[M]
Z701	RCDGP1U58XD	REMOTE CNTRL SENSOR					
Z801	RSL5128-L	LCD	[M]			ACCESSORIES	
		CERAMIC FILTERS		A1	RQT2846-G	INSTRUCTION MANUAL	[M](EG)
CF1	RLFFETWNA01L	FM CF		A1	RFKSDT690EK	INSTRUCTION MANUAL	[M](E)
CF2	RVFSFZ459HL3	AM CF	[M]	A2	RJA0019-2K	AC CORD	⚠ (SF)
				A3	EUR643820	REMOTE CONTROL UNIT	[M]
		OSCILLATORS					
						<SERVO>	
X1	SVQ49U722T-S	XTAL 7.2MHZ				INTEGRATED CIRCUITS	
X801	RSXD32K7L01	32.768KHZ CRYSTAL	[M]				
X802	RSXZ4M19M01T	4.19MHZ CERALOCK		IC701	AN8802SCE1V	IC, HEAD AMP	
				IC702	MN66271RA	IC, DIGITAL LSI	
		FUSES		IC703	AN8389SE1	IC, 4-CH DRIVER	
F901	XBA2C63TB0	FUSE	⚠			TRANSISTORS	
		FUSE HOLDERS		Q701	2SB709S	TRANSISTOR	
FH901	EYF52BC	FUSE HOLDER				SWITCHES	
FH902	EYF52BC	FUSE HOLDER					
				S701	RSM0006-P	SW, RESET	
		JACKS					
						CONNECTORS	
JK301	RJF1098YA-H	JK,SPEAKER	[M]				
JK302	RJF1098YA-H	JK,SPEAKER	[M]	CN701	RJU035T016-1	FFC CONNECTOR (16 PINS)	
JK303	RJJ39T01	JK,HEAD PHONE		CN702	RJS1A6723-1Q	FFC CONNECTOR (23 PINS)	
JK304	RJJ1D25ZA-C	JK,MIC					
JK871	RJJ92M02-H	JK,EXTERNAL ANTENNA	[M]			OSCILLATORS	
JK901	RJJ1SE01-H	JK,AC IN (S901)	⚠				
JK902	RJJB3ZD-C	JK,DC-IN	⚠	X701	RSXZ16M9M02T	CERAMIC OSC	
		PACKING MATERIALS					
P1	RPGX0194	GIFT BOX	[M]				
P2	RPHX0007-1	MIRAMAT SHEET	[M]				
P3	RPNX0044	POLYFOAM	[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.

* 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)

* The parenthesized indications in the Values & Remarks column specify the areas. (refer to the cover page for area.)

Parts without these indications can be used for all areas.

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
			R44	ERDS2TJ103T	10K 1/4W	R135	ERDS2TJ273T	27K 1/4W
	RESISTORS		R47	ERDS2TJ103T	10K 1/4W	R136	ERDS2TJ392T	3.9K 1/4W
			R49	ERDS2TJ121T	120 1/4W	R137	ERDS2TJ102T	1K 1/4W
R1	ERDS2TJ470T	47 1/4W	R50	ERDS2TJ102T	1K 1/4W	R141	ERDS2TJ683T	68K 1/4W
R2	ERDS2TJ102T	1K 1/4W	R51	ERDS2TJ222T	2.2K 1/4W	R142	ERDS2TJ563T	56K 1/4W
R3	ERDS2TJ104T	100K 1/4W	R52	ERDS2TJ471T	470 1/4W	R143	ERDS2TJ153T	15K 1/4W
R4	ERDS2TJ104T	100K 1/4W	R53	ERDS2TJ683T	68K 1/4W	R144	ERDS2TJ104T	100K 1/4W
R5	ERDS2TJ470T	47 1/4W	R54	ERDS2TJ153T	15K 1/4W	R145	ERDS2TJ183T	18K 1/4W
R7	ERDS2TJ222T	2.2K 1/4W	R55	ERDS2TJ561T	560 1/4W	R146	ERDS2TJ223T	22K 1/4W
R8	ERDS2TJ104T	100K 1/4W	R56	ERDS2TJ272T	2.7K 1/4W	R149	ERDS2TJ123T	12K 1/4W
R9	ERDS2TJ103T	10K 1/4W	R57	ERDS2TJ472T	4.7K 1/4W	R150	ERDS2TJ472T	4.7K 1/4W
R10	ERDS2TJ563T	56K 1/4W	R58	ERDS2TJ103T	10K 1/4W	R151	ERDS2TJ223T	22K 1/4W
R11	ERDS2TJ471T	470 1/4W	R59	ERDS2TJ222T	2.2K 1/4W	R153	ERDS2TJ182T	1.8K 1/4W
R12	ERDS2TJ224T	220K 1/4W	R60	ERDS2TJ151T	150 1/4W	R154	ERDS2TJ1R5T	1.5 1/4W
R13	ERDS2TJ471T	470 1/4W	R61	ERDS2TJ222T	2.2K 1/4W	R155	ERDS2TJ1R5T	1.5 1/4W
R14	ERDS2TJ473T	47K 1/4W	R62	ERDS2TJ103T	10K 1/4W	R156	ERDS2TJ151T	150 1/4W
R15	ERDS2TJ102T	1K 1/4W	R63	ERDS2TJ102T	1K 1/4W	R157	ERDS2TJ102T	1K 1/4W
R16	ERDS2TJ101T	100 1/4W	R68	ERDS2TJ391T	390 1/4W	R158	ERDS2TJ332T	3.3K 1/4W
R17	ERDS2TJ332T	3.3K 1/4W	R69	ERDS2TJ103T	10K 1/4W	R159	ERDS2TJ333T	33K 1/4W
R18	ERDS2TJ334T	330K 1/4W	R70	ERDS2TJ103T	10K 1/4W	R160	ERDS2TJ181T	180 1/4W
R19	ERDS2TJ331T	330 1/4W	R71	ERDS2TJ103T	10K 1/4W	R161	ERDS2TJ472T	4.7K 1/4W
R20	ERDS2TJ331T	330 1/4W	R72	ERDS2TJ104T	100K 1/4W	R163	ERDS2TJ564T	560K 1/4W
R21	ERDS2TJ331T	330 1/4W	R73	ERDS2TJ103T	10K 1/4W	R164	ERDS2TJ151T	150 1/4W
R22	ERDS2TJ103T	10K 1/4W	R74	ERDS2TJ224T	220K 1/4W	R165	ERDS2TJ391T	390 1/4W
R23	ERDS2TJ151T	150 1/4W	R75	ERDS2TJ224T	220K 1/4W	R167	ERDS2TJ101T	100 1/4W
R24	ERDS2TJ562T	5.6K 1/4W	R76	ERDS2TJ224T	220K 1/4W	R168	ERDS2TJ273T	27K 1/4W
R25	ERDS2TJ332T	3.3K 1/4W	R77	ERDS2TJ472T	4.7K 1/4W	R201	ERDS2TJ562T	5.6K 1/4W
R26	ERDS2TJ102T	1K 1/4W	R78	ERDS2TJ103T	10K 1/4W	R202	ERDS2TJ561T	560 1/4W
R27	ERDS2TJ104T	100K 1/4W	R81	ERDS2TJ222T	2.2K 1/4W	R203	ERDS2TJ222T	2.2K 1/4W
R28	ERDS2TJ562T	5.6K 1/4W	R101	ERDS2TJ562T	5.6K 1/4W	R204	ERDS2TJ101T	100 1/4W
R29	ERDS2TJ681T	680 1/4W	R102	ERDS2TJ561T	560 1/4W	R205	ERDS2TJ105T	1M 1/4W
R30	ERDS2TJ683T	68K 1/4W	R103	ERDS2TJ222T	2.2K 1/4W	R206	ERDS2TJ821T	820 1/4W
R31	ERDS2TJ102T	1K 1/4W	R104	ERDS2TJ101T	100 1/4W	R207	ERDS2TJ472T	4.7K 1/4W
R32	ERDS2TJ682T	6.8K 1/4W	R105	ERDS2TJ105T	1M 1/4W	R212	ERDS2TJ332T	3.3K 1/4W
R33	ERDS2TJ104T	100K 1/4W	R106	ERDS2TJ821T	820 1/4W	R232	ERDS2TJ334T	330K 1/4W
R34	ERDS2TJ104T	100K 1/4W	R107	ERDS2TJ472T	4.7K 1/4W	R233	ERDS2TJ123T	12K 1/4W
R36	ERDS2TJ223T	22K 1/4W	R112	ERDS2TJ332T	3.3K 1/4W	R234	ERDS2TJ472T	4.7K 1/4W
R37	ERDS2TJ223T	22K 1/4W	R132	ERDS2TJ334T	330K 1/4W	R235	ERDS2TJ273T	27K 1/4W
R39	ERDS2TJ104T	100K 1/4W	R133	ERDS2TJ123T	12K 1/4W	R236	ERDS2TJ392T	3.9K 1/4W
R40	ERDS2TJ104T	100K 1/4W	R134	ERDS2TJ472T	4.7K 1/4W	R237	ERDS2TJ102T	1K 1/4W

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R241	ERDS2TJ683T	68K 1/4W	R329	ERDS2TJ101T	100 1/4W	R528	ERDS2TJ152T	1.5K 1/4W
R242	ERDS2TJ563T	56K 1/4W	R330	ERDS2TJ103T	10K 1/4W	R530	ERDS2TJ153T	15K 1/4W
R243	ERDS2TJ153T	15K 1/4W	R334	ERDS2TJ821T	820 1/4W	R601	ERDS2TJ334T	330K 1/4W
R244	ERDS2TJ104T	100K 1/4W	R335	ERDS2TJ471T	470 1/4W	R602	ERDS2TJ102T	1K 1/4W
R245	ERDS2TJ183T	18K 1/4W	R336	ERDS2TJ473T	47K 1/4W	R603	ERDS2TJ103T	10K 1/4W
R246	ERDS2TJ223T	22K 1/4W	R337	ERDS2TJ183T	18K 1/4W	R604	ERDS2TJ102T	1K 1/4W
R249	ERDS2TJ123T	12K 1/4W	R338	ERDS2TJ333T	33K 1/4W	R605	ERDS2TJ102T	1K 1/4W
R250	ERDS2TJ472T	4.7K 1/4W	R339	ERDS2TJ101T	100 1/4W	R606	ERDS2TJ103T	10K 1/4W
R251	ERDS2TJ223T	22K 1/4W	R340	ERDS2TJ182T	1.8K 1/4W	R608	ERDS2TJ103T	10K 1/4W
R253	ERDS2TJ182T	1.8K 1/4W	R341	ERDS2TJ334T	330K 1/4W	R609	ERDS2TJ1R2T	1.2 1/4W
R254	ERDS2TJ1R5T	1.5 1/4W	R343	ERDS2TJ180T	18 1/4W	R610	ERDS2TJ682T	6.8K 1/4W
R255	ERDS2TJ1R5T	1.5 1/4W	R345	ERDS2TJ222T	2.2K 1/4W	R611	ERDS2TJ472T	4.7K 1/4W
R256	ERDS2TJ151T	150 1/4W	R346	ERDS2TJ101T	100 1/4W	R612	ERDS2TJ472T	4.7K 1/4W
R257	ERDS2TJ102T	1K 1/4W	R347	ERDS2TJ224T	220K 1/4W	R613	ERDS2TJ332T	3.3K 1/4W
R258	ERDS2TJ332T	3.3K 1/4W	R348	ERDS2TJ102T	1K 1/4W	R614	ERDS2TJ102T	1K 1/4W
R259	ERDS2TJ333T	33K 1/4W	R349	ERDS2TJ102T	1K 1/4W	R615	ERDS2TJ221T	220 1/4W
R260	ERDS2TJ181T	180 1/4W	R350	ERDS2TJ2R7T	2.7 1/4W	R616	ERDS2TJ1R2T	1.2 1/4W
R261	ERDS2TJ472T	4.7K 1/4W	R370	ERDS2TJ102T	1K 1/4W	R617	ERDS2TJ562T	5.6K 1/4W
R263	ERDS2TJ564T	560K 1/4W	R402	ERDS2TJ153T	15K 1/4W	R618	ERDS2TJ153T	15K 1/4W
R264	ERDS2TJ151T	150 1/4W	R403	ERDS2TJ102T	1K 1/4W	R619	ERDS2TJ183T	18K 1/4W
R265	ERDS2TJ391T	390 1/4W	R405	ERDS2TJ300T	30 1/4W	R620	ERDS2TJ334T	330K 1/4W
R267	ERDS2TJ101T	100 1/4W	R406	ERDS2TJ392T	3.9K 1/4W	R621	ERDS2TJ221T	220 1/4W
R268	ERDS2TJ273T	27K 1/4W	R407	ERDS2TJ103T	10K 1/4W	R622	ERDS2TJ1R2T	1.2 1/4W
R303	ERDS2TJ474T	470K 1/4W	R408	ERDS2TJ222T	2.2K 1/4W	R623	ERDS2TJ123T	12K 1/4W
R304	ERDS2TJ474T	470K 1/4W	R409	ERDS2TJ104T	100K 1/4W	R625	ERDS2TJ123T	12K 1/4W
R305	ERDS2TJ2R7T	2.7 1/4W	R410	ERDS2TJ333T	33K 1/4W	R626	ERDS2TJ272T	2.7K 1/4W
R307	ERDS2TJ471T	470 1/4W	R411	ERDS2TJ822T	8.2K 1/4W	R627	ERDS2TJ334T	330K 1/4W
R308	ERDS2TJ472T	4.7K 1/4W	R412	ERDS2TJ101T	100 1/4W	R628	ERDS2TJ123T	12K 1/4W
R309	ERDS2TJ471T	470 1/4W	R415	ERDS2TJ474T	470K 1/4W	R629	ERDS1VJ680T	68 1/2W 
R310	ERDS2TJ104T	100K 1/4W	R416	ERDS2TJ154T	150K 1/4W	R630	ERDS2TJ104T	100K 1/4W
R311	ERDS2TJ473T	47K 1/4W	R420	ERDS2TJ822T	8.2K 1/4W	R631	ERDS2TJ332T	3.3K 1/4W
R312	ERDS2TJ222T	2.2K 1/4W	R424	ERDS2TJ104T	100K 1/4W	R632	ERDS2TJ474T	470K 1/4W
R313	ERDS2TJ223T	22K 1/4W	R428	ERDS2TJ152T	1.5K 1/4W	R633	ERDS2TJ472T	4.7K 1/4W
R314	ERDS2TJ1R5T	1.5 1/4W	R430	ERDS2TJ153T	15K 1/4W	R634	ERDS2TJ102T	1K 1/4W
R315	ERDS2TJ332T	3.3K 1/4W	R502	ERDS2TJ153T	15K 1/4W	R636	ERDS2TJ223T	22K 1/4W
R316	ERDS2TJ221T	220 1/4W	R503	ERDS2TJ102T	1K 1/4W	R637	ERDS2TJ2R7T	2.7 1/4W
R317	ERDS2TJ2R7T	2.7 1/4W	R505	ERDS2TJ330T	33 1/4W	R638	ERDS2TJ103T	10K 1/4W
R318	ERDS2TJ103T	10K 1/4W	R506	ERDS2TJ392T	3.9K 1/4W	R639	ERDS2TJ2R7T	2.7 1/4W
R319	ERDS2TJ183T	18K 1/4W	R507	ERDS2TJ103T	10K 1/4W	R640	ERDS2TJ334T	330K 1/4W
R320	ERDS2TJ273T	27K 1/4W	R508	ERDS2TJ222T	2.2K 1/4W	R646	ERDS2TJ472T	4.7K 1/4W
R321	ERDS2TJ102T	1K 1/4W	R509	ERDS2TJ104T	100K 1/4W	R648	ERDS2TJ472T	4.7K 1/4W
R322	ERDS2TJ153T	15K 1/4W	R510	ERDS2TJ333T	33K 1/4W	R656	ERDS2TJ335T	3.3M 1/4W
R323	ERDS2TJ332T	3.3K 1/4W	R511	ERDS2TJ822T	8.2K 1/4W	R657	ERDS2TJ222T	2.2K 1/4W
R324	ERDS2TJ682T	6.8K 1/4W	R512	ERDS2TJ101T	100 1/4W	R658	ERDS2TJ472T	4.7K 1/4W
R325	ERDS2TJ1R5T	1.5 1/4W	R515	ERDS2TJ474T	470K 1/4W	R659	ERDS2TJ472T	4.7K 1/4W
R326	ERDS2TJ103T	10K 1/4W	R516	ERDS2TJ154T	150K 1/4W	R660	ERDS2TJ102T	1K 1/4W
R327	ERDS2TJ183T	18K 1/4W	R520	ERDS2TJ822T	8.2K 1/4W	R661	ERDS2TJ104T	100K 1/4W
R328	ERDS2TJ472T	4.7K 1/4W	R524	ERDS2TJ104T	100K 1/4W	R662	ERDS2TJ104T	100K 1/4W

Ref. No.	Part No.	Values & Remarks
R664	ERDS2TJ104T	100K 1/4W
R665	ERDS2TJ102T	1K 1/4W
R701	ERDS2TJ152T	1.5K 1/4W
R702	ERDS2TJ222T	2.2K 1/4W
R703	ERDS2TJ272T	2.7K 1/4W
R704	ERDS2TJ392T	3.9K 1/4W
R705	ERDS2TJ562T	5.6K 1/4W
R706	ERDS2TJ822T	8.2K 1/4W
R707	ERDS2TJ153T	15K 1/4W
R711	ERDS2TJ152T	1.5K 1/4W
R712	ERDS2TJ222T	2.2K 1/4W
R713	ERDS2TJ272T	2.7K 1/4W
R714	ERDS2TJ392T	3.9K 1/4W
R721	ERDS2TJ331T	330 1/4W
R722	ERDS2TJ221T	220 1/4W
R723	ERDS2TJ681T	680 1/4W
R724	ERDS2TJ331T	330 1/4W
R725	ERDS2TJ103T	10K 1/4W
R726	ERDS2TJ474T	470K 1/4W
R727	ERDS2TJ474T	470K 1/4W
R801	ERDS2TJ563T	56K 1/4W
R802	ERDS2TJ102T	1K 1/4W
R803	ERDS2TJ153T	15K 1/4W
R804	ERDS2TJ222T	2.2K 1/4W
R805	ERDS2TJ683T	68K 1/4W
R806	ERDS2TJ391T	390 1/4W
R807	ERDS2TJ561T	560 1/4W
R808	ERDS2TJ103T	10K 1/4W
R809	ERDS2TJ103T	10K 1/4W
R810	ERDS2TJ103T	10K 1/4W
R812	ERDS2TG562T	5.6K 1/4W
R813	ERDS2TJ394T	390K 1/4W
R814	ERDS2TJ474T	470K 1/4W
R815	ERDS2TJ102T	1K 1/4W
R816	ERDS2TJ103T	10K 1/4W
R817	ERDS2TJ333T	33K 1/4W
R818	ERDS2TJ222T	2.2K 1/4W
R819	ERDS2TJ222T	2.2K 1/4W
R820	ERDS2TJ153T	15K 1/4W
R821	ERDS2TJ153T	15K 1/4W
R822	ERDS2TJ153T	15K 1/4W
R823	ERDS2TJ102T	1K 1/4W
R824	ERDS2TJ102T	1K 1/4W
R825	ERDS2TJ102T	1K 1/4W
R826	ERDS2TJ393T	39K 1/4W
R827	ERDS2TJ104T	100K 1/4W
R828	ERDS2TJ104T	100K 1/4W
R829	ERDS2TJ104T	100K 1/4W

Ref. No.	Part No.	Values & Remarks
R830	ERDS2TJ106T	10M 1/4W
R831	ERDS2TJ334T	330K 1/4W
R832	ERDS2TJ681T	680 1/4W
R833	ERDS2TJ105T	1M 1/4W
R834	ERDS2TJ472T	4.7K 1/4W
R835	ERDS2TJ472T	4.7K 1/4W
R836	ERDS2TJ103T	10K 1/4W
R837	ERDS2TJ104T	100K 1/4W
R838	ERDS2TJ123T	12K 1/4W
R839	ERDS2TJ563T	56K 1/4W
R840	ERDS2TJ222T	2.2K 1/4W
R841	ERDS2TJ222T	2.2K 1/4W
R842	ERDS2TJ103T	10K 1/4W
R843	ERDS2TJ103T	10K 1/4W
R844	ERDS2TJ103T	10K 1/4W
R845	ERDS2TJ472T	4.7K 1/4W
R846	ERDS2TJ472T	4.7K 1/4W
R847	ERDS2TJ472T	4.7K 1/4W
R848	ERDS2TJ102T	1K 1/4W
R849	ERDS2TJ102T	1K 1/4W
R850	ERDS2TJ824T	820K 1/4W
R851	ERDS2TJ104T	100K 1/4W
R852	ERDS2TJ471T	470 1/4W
R853	ERDS2TJ822T	8.2K 1/4W
R854	ERDS2TJ333T	33K 1/4W
R855	ERDS2TJ104T	100K 1/4W
R856	ERDS2TJ104T	100K 1/4W
R858	ERDS2TJ222T	2.2K 1/4W
R859	ERDS2TJ470T	47 1/4W
R861	ERDS2TJ102T	1K 1/4W
R862	ERDS2TJ102T	1K 1/4W
R863	ERDS2TJ104T	100K 1/4W
R864	ERDS2TJ222T	2.2K 1/4W
R865	ERDS2TJ222T	2.2K 1/4W
R868	ERDS2TJ222T	2.2K 1/4W
R869	ERDS2TJ222T	2.2K 1/4W
R871	ERDS2TJ151T	150 1/4W
R872	ERDS2TJ220T	22 1/4W
R873	ERDS2TJ103T	10K 1/4W
R882	ERDS2TJ562T	5.6K 1/4W
R883	ERDS2TJ822T	8.2K 1/4W
R891	ERDS2TJ152T	1.5K 1/4W
R892	ERDS2TJ222T	2.2K 1/4W
R893	ERDS2TJ272T	2.7K 1/4W
R894	ERDS2TJ392T	3.9K 1/4W
R895	ERDS2TJ562T	5.6K 1/4W
R896	ERDS2TJ822T	8.2K 1/4W
R897	ERDS2TJ153T	15K 1/4W

Ref. No.	Part No.	Values & Remarks
R898	ERDS2TJ333T	33K 1/4W
R901	ERDS2TJ471T	470 1/4W
	CAPACITORS	
C2	ECBT1H102KB5	1000P 50V
C3	ECCR1H120KC5	12P 50V
C4	ECBT1H101KB5	100P 50V
C5	ECBT1H102KB5	1000P 50V
C6	ECBT1H102KB5	1000P 50V
C7	ECBT1H100JC5	10P 50V
C8	ECBT1H3R9KC5	3.9P 50V
C9	ECBT1H150JC5	15P 50V
C10	ECBT1H102KB5	1000P 50V
C11	ECBT1H3R3KC5	3.3P 50V
C12	ECBT1H2R2KC5	2.2P 50V
C13	ECBT1H181KB5	180P 50V
C14	ECBT1H6R8KC5	6.8P 50V
C15	ECBT1H102KB5	1000P 50V
C17	ECBT1C103MS5	0.01 16V
C18	ECBT1C103MS5	0.01 16V
C19	ECBT1H102KB5	1000P 50V
C20	ECBT1H102KB5	1000P 50V
C21	ECBT1H181KB5	180P 50V
C22	ECBT1H181KB5	180P 50V
C23	ECBT1C103MS5	0.01 16V
C24	ECBT1H102KB5	1000P 50V
C25	ECEA1CU100B	10 16V
C26	ECBT1H331KB5	330P 50V
C29	ECEA0JU101B	100 6.3V
C30	ECEA1EU4R7B	4.7 25V
C31	ECFR1C223MR	0.022 16V
C32	ECFR1C223MR	0.022 16V
C33	ECEA1AU101B	100 10V
C34	ECFR1C153MR	0.015 16V
C35	ECBT1C103MS5	0.01 16V
C36	ECEA1HU2R2B	2.2 50V
C37	ECBT1H102KB5	1000P 50V
C38	ECFR1C153MR	0.015 16V
C39	ECEA1HU010B	1 50V
C40	ECEA1HUR47B	0.47 50V
C41	ECEA1HUR47B	0.47 50V
C42	ECQP1102JZT	1000P 100V
C44	ECBT1C103MS5	0.01 16V
C47	ECBT1C103MS5	0.01 16V
C48	ECBT1H470J5	47P 50V
C52	ECFR1C223MR	0.022 16V
C54	ECBT1H6R8KC5	6.8P 50V

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C52	ECFR1C223MR	0.022 16V	C114	ECEA1HKA010B	1 50V	C240	ECBT1C332MR5	3300P 16V
C54	ECBT1H6R8KC5	6.8P 50V	C115	ECBT1H102KB5	1000P 50V	C241	ECBT1H101KB5	100P 50V
C56	ECQP1391JZT	390P 100V [M]	C133	ECBT1C472KR5	4700P 16V	C243	ECFR1C473MR	0.047 16V
C58	ECQP2A121JZT	120P 100V	C134	ECEA1HKAR15B	0.15 50V	C244	ECEA1HU010B	1 50V
C60	ECQP2A181JZT	180P 100V	C135	ECEA1CKA100B	10 16V	C245	ECEA1CU100B	10 16V
C62	ECBT1H101KB5	100P 50V	C136	ECEA1HKA4R7B	4.7 50V	C246	ECQV1H154JZ3	0.15 50V
C64	ECFR1C223MR	0.022 16V	C137	ECBT1H101KB5	100P 50V	C247	ECQV1H154JZ3	0.15 50V
C65	ECBT1H121KB5	120P 50V	C138	ECEA1HKA010B	1 50V	C248	ECEA1AU330B	33 10V
C66	ECBT1C103MS5	0.01 16V	C139	ECBT1C332MR5	3300P 16V	C249	ECBT1H102KB5	1000P 50V
C67	ECBT1C103MS5	0.01 16V	C140	ECBT1C332MR5	3300P 16V	C250	ECEA1CU101B	100 16V
C68	ECEA1HU010B	1 50V	C141	ECBT1H101KB5	100P 50V	C251	ECEA1CU330B	33 16V
C69	ECEA1HUR47B	0.47 50V	C143	ECFR1C473MR	0.047 16V	C253	ECEA1AU101B	100 10V
C70	ECEA0JU101B	100 6.3V	C144	ECEA1HU010B	1 50V	C254	ECQV1H104JZ3	0.1 50V
C71	ECKR1H103MD5	0.01 50V	C145	ECEA1CU100B	10 16V	C255	ECBT1H102KB5	1000P 50V
C72	ECBT1H101KB5	100P 50V	C146	ECQV1H154JZ3	0.15 50V	C256	ECEA1HKA010B	1 50V
C73	ECKR1H103MD5	0.01 50V	C147	ECQV1H154JZ3	0.15 50V	C257	ECBT1H331KB5	330P 50V
C74	ECBT0J153MS5	0.015 6.3V	C148	ECEA1AU330B	33 10V	C264	ECEA1HKA2R2B	2.2 50V
C75	ECEA1HU2R2B	2.2 50V	C149	ECBT1H102KB5	1000P 50V	C301	ECEA1CKA470B	47 16V
C76	ECFR1C223MR	0.022 16V	C150	ECEA1CU101B	100 16V	C302	ECEA1HKA010B	1 50V
C77	ECBT1H102KB5	1000P 50V	C151	ECEA1CU330B	33 16V	C303	ECEA1HKA010B	1 50V
C78	ECEA1HNR47SB	0.47 50V	C153	ECEA1AU101B	100 10V	C304	ECBT1C103MS5	0.01 16V
C79	ECBT1C103MS5	0.01 16V	C154	ECQV1H104JZ3	0.1 50V	C305	ECBT1H220JC5	22P 50V
C83	ECEA1CU330B	33 16V	C155	ECBT1H102KB5	1000P 50V	C307	ECEA1CU470B	47 16V
C86	ECBT1H150JC5	15P 50V	C156	ECEA1HKA010B	1 50V	C308	ECBT1C103MS5	0.01 16V
C87	ECBT1H150JC5	15P 50V	C157	ECBT1H331KB5	330P 50V	C309	ECBT1C103MS5	0.01 16V
C88	ECBT1H331KB5	330P 50V	C164	ECEA1HKA2R2B	2.2 50V	C315	ECEA1HKA4R7B	4.7 50V
C89	ECBT1H331KB5	330P 50V	C201	ECEA1HKA010B	1 50V	C316	ECEA1AU220B	22 10V
C90	ECBT1H331KB5	330P 50V	C202	ECBT1H471KB5	470P 50V	C317	ECEA1HKA4R7B	4.7 50V
C91	ECEA1CU100B	10 16V	C203	ECEA1CKA100B	10 16V	C318	ECEA1AU221B	220 10V
C92	ECBT1H102KB5	1000P 50V	C204	ECBT1H102KB5	1000P 50V	C319	ECEA1AU221B	220 10V
C93	ECEA1CU330B	33 16V	C205	ECFR1C333KR	0.033 16V	C320	ECEA1AU101B	100 10V
C96	ECEA1CU330B	33 16V	C206	ECBT1C332MR5	3300P 16V	C321	ECEA1AU221B	220 10V
C97	ECBT1H102KB5	1000P 50V	C207	ECEA1HKA0R1B	0.1 50V	C322	ECEA1CU100B	10 16V
C98	ECBT1H101KB5	100P 50V	C208	ECBT1C103MS5	0.01 16V	C323	ECEA1CU100B	10 16V
C99	ECBT1H331KB5	330P 50V	C209	ECEA1HKAR33B	0.33 50V	C324	ECEA1CU100B	10 16V
C101	ECEA1HKA010B	1 50V	C210	ECFR1C104MR	0.1 16V	C325	ECEA1AU101B	100 10V
C102	ECBT1H471KB5	470P 50V	C211	ECEA1HKA010B	1 50V	C326	ECEA0JKA221B	220 6.3V
C103	ECEA1CKA100B	10 16V	C212	ECFR1C273MR	0.027 16V	C327	ECEA1AU220B	22 10V
C104	ECBT1H102KB5	1000P 50V	C213	ECEA1HKA010B	1 50V	C328	ECEA1CU221B	220 16V
C105	ECFR1C333KR	0.033 16V	C214	ECEA1HKA010B	1 50V	C336	ECEA1AU220B	22 10V
C106	ECBT1C332MR5	3300P 16V	C215	ECBT1H102KB5	1000P 50V	C338	ECEA1HKA010B	1 50V
C107	ECEA1HKA0R1B	0.1 50V	C233	ECBT1C472KR5	4700P 16V	C339	ECEA1AU101B	100 10V
C108	ECBT1C103MS5	0.01 16V	C234	ECEA1HKAR15B	0.15 50V	C340	ECEA1HKA010B	1 50V
C109	ECEA1HKAR33B	0.33 50V	C235	ECEA1CKA100B	10 16V	C342	ECBT1H102KB5	1000P 50V
C110	ECFR1C104MR	0.1 16V	C236	ECEA1HKA4R7B	4.7 50V	C344	ECBT1H471KB5	470P 50V
C111	ECEA1HKA010B	1 50V	C237	ECBT1H101KB5	100P 50V	C346	ECA1EM332BV	3300 25V [M]
C112	ECFR1C273MR	0.027 16V	C238	ECEA1HKA010B	1 50V	C347	ECA1EM332BV	3300 25V [M]
C113	ECEA1HKA010B	1 50V	C239	ECBT1C332MR5	3300P 16V	C348	ECBT1H471KB5	470P 50V

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C351	ECEA1AU221B	220 10V	C604	ECQP1102JZT	1000P 100V	C819	ECBT1C103MS5	0.01 16V
C352	ECBT1H102KB5	1000P 50V	C605	ECBT1C103MS5	0.01 16V	C824	ECEA1EKA4R7B	4.7 25V
C353	ECEA1HU010B	1 50V	C606	ECQP2A392JZT	3900P 100V	C825	ECBT1H102KB5	1000P 50V
C354	ECEA1CU100B	10 16V	C607	ECEA1EU4R7B	4.7 25V	C826	ECBT1H102KB5	1000P 50V
C356	ECEA1AU221B	220 10V	C608	ECQV1H473JZ3	0.047 50V	C827	ECBT1H220JC5	22P 50V
C357	ECEA1CU100B	10 16V	C609	ECEA1AU101B	100 10V	C828	ECBT1H220JC5	22P 50V
C358	ECEA1AU101B	100 10V	C610	ECBT1H102KB5	1000P 50V	C829	ECBT1H820KB5	82P 50V
C359	ECEA1AU101B	100 10V	C611	ECBT1H102KB5	1000P 50V	C830	ECBT1H680J5	68P 50V
C360	ECBT1H102KB5	1000P 50V	C612	ECFR1C103KR	0.01 16V	C831	ECBT1H102KB5	1000P 50V
C401	ECBT1H102KB5	1000P 50V	C613	ECFR1C103KR	0.01 16V	C832	ECBT1H102KB5	1000P 50V
C404	ECQV1H333JZ3	0.033 50V	C614	ECEA1EU101B	100 25V	C833	ECBT1H680J5	68P 50V
C405	ECBT1H471KB5	470P 50V	C615	ECEA1AU330B	33 10V	C834	ECBT1H680J5	68P 50V
C406	ECBT1H331KB5	330P 50V	C616	ECEA1AU101B	100 10V	C835	ECBT1H102KB5	1000P 50V
C407	ECFR1C183MR	0.018 16V	C618	ECEA1CKA100B	10 16V	C836	ECBT1H102KB5	1000P 50V
C408	ECEA1HKA010B	1 50V	C619	ECEA1HKA0R1B	0.1 50V	C837	ECBT1H102KB5	1000P 50V
C409	ECEA1EKA4R7B	4.7 25V	C620	ECFR1C223MR	0.022 16V	C839	ECEA0JKA221B	220 6.3V
C410	ECEA1HKA010B	1 50V	C621	ECEA1HKA010B	1 50V	C840	ECEA0JKA221B	220 6.3V
C411	ECBT1H102KB5	1000P 50V	C622	ECEA1CU101B	100 16V	C841	ECBT1H331KB5	330P 50V
C412	ECFR1C473MR	0.047 16V	C623	ECBT1C103MS5	0.01 16V	C843	ECBT1H102KB5	1000P 50V
C413	ECEA1CKA100B	10 16V	C628	ECKF1H153MD	0.015 50V	C846	ECBT1H331KB5	330P 50V
C414	ECBT1C222MR5	2200P 16V	C629	ECEA1EU4R7B	4.7 25V	C847	ECBT1H331KB5	330P 50V
C415	ECBT1H102KB5	1000P 50V	C631	ECFR1C104MR	0.1 16V	C848	ECBT1H331KB5	330P 50V
C416	ECBT1H102KB5	1000P 50V	C632	ECEA1AU330B	33 10V	C849	ECBT1H331KB5	330P 50V
C417	ECEA1EKA4R7B	4.7 25V	C633	ECEA1HKA0R1B	0.1 50V	C852	ECBT1H331KB5	330P 50V
C418	ECBT1H102KB5	1000P 50V	C635	ECEA1AU470B	47 10V	C854	ECBT1H101KB5	100P 50V
C419	ECBT0J223NS5	0.022 6.3V	C636	ECBT1H681KB5	680P 50V	C855	ECBT1H331KB5	330P 50V
C424	ECEA0JU221B	220 6.3V	C637	ECBT1H681KB5	680P 50V	C856	ECBT1C103MS5	0.01 16V
C501	ECBT1H102KB5	1000P 50V	C711	ECBT1H102KB5	1000P 50V	C857	ECBT1C103MS5	0.01 16V
C504	ECQV1H333JZ3	0.033 50V	C721	ECEA1CU471B	470 16V	C860	ECBT1H331KB5	330P 50V
C505	ECBT1H471KB5	470P 50V	C722	ECEA1AKA101B	100 10V	C861	ECBT1H331KB5	330P 50V
C506	ECBT1H331KB5	330P 50V	C725	ECBT1H102KB5	1000P 50V	C862	ECBT1H101KB5	100P 50V
C507	ECFR1C183MR	0.018 16V	C727	ECBT1H331KB5	330P 50V	C871	ECBT1H470J5	47P 50V
C508	ECEA1HKA010B	1 50V	C801	ECBT1H102KB5	1000P 50V	C891	ECBT1H561KB5	560P 50V
C509	ECEA1EKA4R7B	4.7 25V	C802	ECBT1H102KB5	1000P 50V	C901	ECQV1H473JZ3	0.047 50V
C510	ECEA1HKA010B	1 50V	C803	ECBT1H102KB5	1000P 50V	C902	ECQV1H473JZ3	0.047 50V
C511	ECBT1H102KB5	1000P 50V	C804	ECBT1H331KB5	330P 50V	C903	ECQV1H473JZ3	0.047 50V
C512	ECFR1C473MR	0.047 16V	C805	ECBT1H221KB5	220P 50V	C904	ECQV1H473JZ3	0.047 50V
C513	ECEA1CKA100B	10 16V	C806	ECBT1H331KB5	330P 50V	C951	ECBT1H101KB5	100P 50V
C514	ECBT1C222MR5	2200P 16V	C807	ECBT1H331KB5	330P 50V	C971	ECBT1H101KB5	100P 50V
C515	ECBT1H102KB5	1000P 50V	C808	ECBT1H102KB5	1000P 50V			
C516	ECBT1H102KB5	1000P 50V	C809	ECBT1H330J5	33P 50V			
C517	ECEA1EKA4R7B	4.7 25V	C810	ECBT1H102KB5	1000P 50V			
C518	ECBT1H102KB5	1000P 50V	C811	ECBT1H102KB5	1000P 50V			
C519	ECBT0J223NS5	0.022 6.3V	C812	ECEA1HKA010B	1 50V			
C524	ECEA0JU221B	220 6.3V	C813	ECBT1C103MS5	0.01 16V			
C601	ECBT1C103MS5	0.01 16V	C814	ECBT1C103MS5	0.01 16V			
C602	ECQV1H474JZ3	0.47 50V	C815	ECEA1HKA010B	1 50V			
C603	ECQP1102JZT	1000P 100V	C817	ECEA0JKA221B	220 6.3V			

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
	< SERVO >		C704	ECUZ1E104MBN	0.1 25V	RJ707	ERJ8GEY0R00A	0 1/10W
	RESISTORS		C705	ECEA1HKA010I	1 50V	RJ708	ERJ8GEY0R00A	0 1/10W
R701	ERJ6GEYJ100V	10 1/10W	C706	ECUV1H101JCN	100P 50V	RJ709	ERJ8GEY0R00A	0 1/10W
R702	ERJ6GEYJ471V	470 1/10W	C707	ECUV1E273KBN	0.027 25V	RJ714	ERJ8GEY0R00A	0 1/10W
R703	ERJ6GEYJ823V	82K 1/10W	C708	ECUV1H472KBN	4700P 50V	RJ715	ERJ8GEY0R00A	0 1/10W
R704	ERJ6GEYJ102V	1K 1/10W	C709	ECUV1C473KBN	0.047 16V	RJ716	ERJ8GEY0R00A	0 1/10W
R705	ERJ6GEYJ103V	10K 1/10W	C710	ECUV1H152KBN	1500P 50V	RJ717	ERJ8GEY0R00A	0 1/10W
R706	ERJ6GEYJ102V	1K 1/10W	C711	ECUZ1E104MBN	0.1 25V	RJ721	ERJ6GEY0R00A	0 1/10W
R707	ERJ6GEYJ473V	47K 1/10W	C712	ECUZ1E104MBN	0.1 25V	RJ724	ERJ6GEY0R00A	0 1/10W
R708	ERJ6GEYJ104V	100K 1/10W	C713	ECUV1C104MBM	0.1 16V	RJ725	ERJ6GEY0R00A	0 1/10W
R709	ERJ6GEYJ683V	68K 1/10W	C714	ECEA0JKA101I	100 6.3V	RJ726	ERJ6GEY0R00A	0 1/10W
R711	ERJ6GEYJ154V	150K 1/10W	C715	ECEA0JKA470I	47 6.3V	RJ799	ERJ6GEY0R00A	0 1/10W
R717	ERJ6GEYJ102V	1K 1/10W	C716	ECUV1H561KBN	560P 50V		TEST JUMPERS	
R718	ERJ6GEYJ102V	1K 1/10W	C717	ECUZ1E104MBN	0.1 25V			
R719	ERJ6GEYJ102V	1K 1/10W	C718	ECUV1C224KBM	0.22 16V	TJ701	EYF8CU	TEST JUMPER
R720	ERJ6GEYJ102V	1K 1/10W	C721	ECUV1H270JCN	27P 50V	TJ702	EYF8CU	TEST JUMPER
R721	ERJ6GEYJ101V	100 1/10W	C722	ECUV1H270JCN	27P 50V			
R722	ERJ6GEYJ563V	56K 1/10W	C723	ECEA1AKA221I	220 10V			
R723	ERJ6GEYJ182V	1.8K 1/10W	C724	ECUV1C104MBM	0.1 16V			
R724	ERJ6GEYJ333V	33K 1/10W	C725	ECUV1H102KBN	1000P 50V			
R725	ERJ6GEYJ472V	4.7K 1/10W	C726	ECUV1H102KBN	1000P 50V			
R726	ERJ6GEYJ473V	47K 1/10W	C727	ECEA1HPK010I	1 50V			
R727	ERJ6GEYJ103V	10K 1/10W	C728	ECEA1HPK010I	1 50V			
R728	ERJ6GEYJ392V	3.9K 1/10W	C730	ECUZ1E104MBN	0.1 25V			
R730	ERJ6GEYJ331V	330 1/10W	C731	ECEA0JKA221I	220 6.3V			
R731	ERJ6GEYJ392V	3.9K 1/10W	C732	ECEA0JKA221I	220 6.3V			
R734	ERJ6GEYJ101V	100 1/10W	C733	ECUZ1E104MBN	0.1 25V			
R735	ERJ6GEYJ101V	100 1/10W	C734	ECEA1AKA221I	220 10V			
R736	ERJ6GEYJ101V	100 1/10W	C735	ECUZ1E104MBN	0.1 25V			
R738	ERJ6GEYJ223V	22K 1/10W	C736	ECUZ1E104MBN	0.1 25V			
R739	ERJ6GEYJ681V	680 1/10W	C737	ECUZ1E104MBN	0.1 25V			
R741	ERJ6GEYJ562V	5.6K 1/10W	C738	ECUV1C154KBN	0.15 16V			
R742	ERJ6GEYJ562V	5.6K 1/10W	C742	ECUV1E273KBN	0.027 25V			
R743	ERJ6GEYJ562V	5.6K 1/10W	C743	ECUZ1E104MBN	0.1 25V			
R744	ERJ6GEYJ103V	10K 1/10W	C744	ECUV1E822KBN	8200P 25V			
R745	ERJ6GEYJ155V	1.5M 1/10W	C745	ECUV1C473MBN	0.047 16V			
R748	ERJ6GEYJ182V	1.8K 1/10W	C746	ECUV1H050DCN	5P 50V			
R749	ERJ8GEYJ103V	10K 1/8W	C747	ECUV1H222KBN	2200P 50V			
			C748	ECUV1H471KBM	470P 50V			
	CAPACITORS			CLIPS JUMPERS				
C701	ECEA0JKA220I	22 6.3V	RJ701	ERJ8GEY0R00A	0 1/10W			
C702	ECEA1HKA010I	1 50V	RJ702	ERJ8GEY0R00A	0 1/10W			
C703	ECEA0JKA101I	100 6.3V	RJ703	ERJ8GEY0R00A	0 1/10W			
			RJ704	ERJ8GEY0R00A	0 1/10W			