

Service Manual

Portable Stereo Component CD System

Radio Cassette

COMPACT
disc
DIGITAL AUDIO

* **DOLBY B NR**

MASH*
multi-stage noise shaping

RX-E300

Colour

(K) ... Black Type



Area

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

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

SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

MEASUREMENTS AND ADJUSTMENTS\ИЗМЕРЕНИЯ И РЕГУЛИРОВКИ

DIGITAL SERVO SYSTEM\СИСТЕМА ЦИФРОВОГО СЕРВОПРИВОДА

SCHEMATIC DIAGRAMS\ПРИНЦИПИАЛЬНЫЕ СХЕМЫ

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

WIRING CONNECTION DIAGRAM\СХЕМА СОЕДИНЕНИЙ

MECHANISM PARTS LOCATION\РАСПОЛОЖЕНИЕ МЕХАНИЧЕСКИХ ЧАСТЕЙ

REPLACEMENT PARTS LIST\СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

RESISTORS & CAPACITORS\РЕЗИСТОРЫ И КОНДЕНСАТОРЫ

Panasonic

■ SPECIFICATIONS

■ RADIO

Frequency range	
FM	87.5 – 108 MHz
LW	144 – 288 kHz
MW	522 – 1611 kHz

■ 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	30 – 16000 Hz
CrO ₂	30 – 17000 Hz
Metal	30 – 17000 Hz

■ 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(+1, -2 dB)
Wow and flutter	Less than possible measurement data
D/A converter	MASH (1 bit DAC)

Notes :

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

■ GENERAL

Power requirement

AC 230 – 240 V, 50 Hz

Power consumption: 42 W

Battery 12 V (Eight R20/LR20, UM-1 batteries)

Memory back-up for computer/clock 6 V (Four "R6/LR6" size, UM-3 batteries)

Speakers

2 Woofer 8 cm

2 Tweeter 6 x 7 cm

Jacks

Input MIX MIC; 5 mV (200 – 600 Ω)

Output SPEAKERS; LOW 2.7 – 8 Ω

HIGH 6 – 16 Ω

PHONES; 32 Ω

Dimensions (W x H x D) 586 x 153 x 249 mm

Main unit; 297 x 153 x 249 mm

Speaker box; 150 x 152 x 233 mm

6.3 kg without batteries

Weight

* MASH is a trademark of NTT.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

MEASUREMENTS AND ADJUSTMENTS

ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 12 V DC.
 - Set power switch to ON.
 - Set band switch to AM.
 - Set volume control to maximum.
 - Output of signal generator should be no higher than necessary to obtain an output reading.
- The parts other than the one listed below are aligned at the factory before they are supplied. Therefore, alignment of those parts is unnecessary when used for replacement.

LW-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 signal into loop ant. of receiver.	144 kHz	Tuning capacitor fully closed.	"	—	Adjust to the range of 1.1 ~ 2.0 V
"	288 kHz	Tuning capacitor fully open.	"	—	Adjust to the range of 4.4 ~ 5.2 V
"	162 kHz	Tune to signal	"	[*1] L2 (LW ANT Coil)	Adjust for maximum output. Adjust L2 by moving coil along the ferrite core.
"	270 kHz	"	"	CT2 (LW ANT Trimmer)	Adjust for maximum output.

[*1] Fix antenna coil with wax after completing alignment.

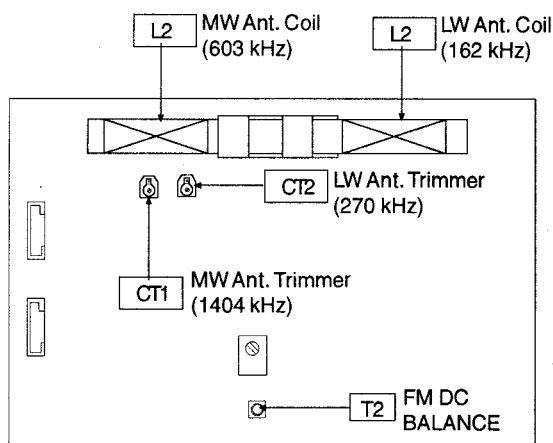
MW-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate signal into loop ant. of receiver.	522 kHz	Tuning capacitor fully closed.	"	—	Adjust to the range of 1.0 ~ 1.5 V
"	1611 kHz	Tuning capacitor fully open.	"	—	Adjust to the range of 5.4 ~ 6.3 V
"	603 kHz	Tune to signal	"	[*2] L2 (MW ANT Coil)	Adjust for maximum output. Adjust L2 by moving coil along the ferrite core.
"	1404 kHz	"	"	CT1 (MW ANT Trimmer)	Adjust for maximum output.

[*2] Fix antenna coil with wax after completing alignment.

FM DC BALANCE ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTIONS 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 .	TP6 ... (+) TP7 ... (-)	T2	0 ± 50 mV	Adjust T2, for 0 ± 50 mV reading on frequency counter



< CASSETTE DECK SECTION >

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

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

• HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR (ELECTRONIC VOLTMETER or OSCILLATOR)	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM (8 kHz, -20 dB)	Headphones Jack (32 Ω)	Azimuth Screw (Refer to Fig. 4)	Maximum output	1. Playback mode. 2. Adjust for maximum output.

Caution :

- Please replace both azimuth adjustment screws (RHE5152ZB) and springs (RMB0331) simultaneously when readjusting the head azimuth. (shown in Fig. 2)
- Even if you wish to readjust the head azimuth without replacing the screws and springs, a fine adjustment cannot be done because of the screw-locking bond adhered to the azimuth screw and spring.
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (shown in Fig. 3)

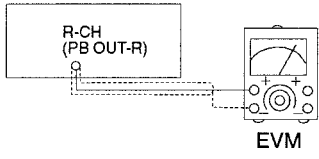


Fig. 1

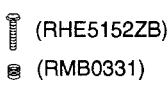
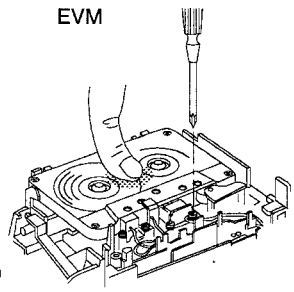
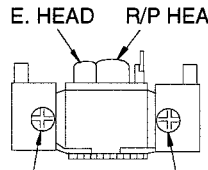



Fig. 2



E. HEAD R/P HEAD

Azimuth Screw (Forward) Azimuth Screw (Reverse)

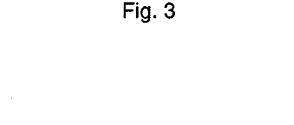


Fig. 3

Fig. 4

• TAPE SPEED ALIGNMENT

TEST TAPE	INDICATOR (FREQUENCY COUNTER)	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz, -10 dB)	Headphones Jack (32 Ω)	VR301 (Fig. 5)	3000 $\pm$ 30 Hz	1. Playback mode. 2. Adjust VR301, for 3000 $\pm$ 30 Hz reading on frequency counter.

• PLAYBACK GAIN ADJUSTMENT

TEST TAPE	INDICATOR (FREQUENCY COUNTER)	ADJUSTMENT (Fig. 5)	SPECIFICATION	REMARKS
QZZCFM (315 kHz, 0 dB)	LOUT & AGND	VR101	388 $\pm$ 10 mV	• Left channel.
	ROUT & AGND	VR201		• Right channel.

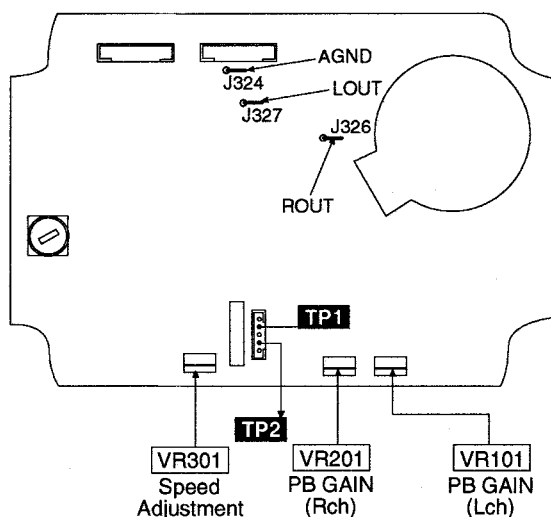


Fig. 5

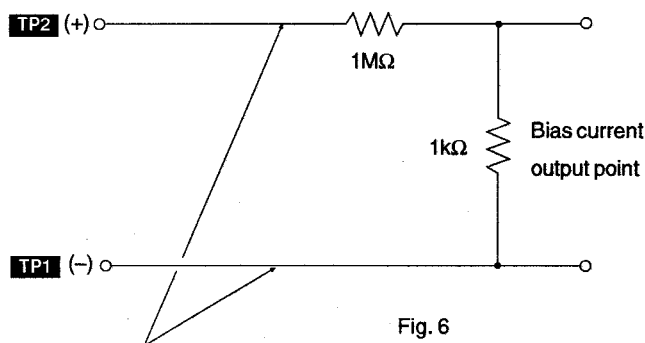


Fig. 6

Keep these cords short. (Line capacitance: 3 pF or less)

- In order not to influence the bias oscillation, divide the voltage with 1 MΩ and 1 kΩ resistors, and measure the voltage across the 1 kΩ resistor.

< CD PLAYER SECTION >

Warning: This product uses a laser diode. Refer to caution statements on page 3.

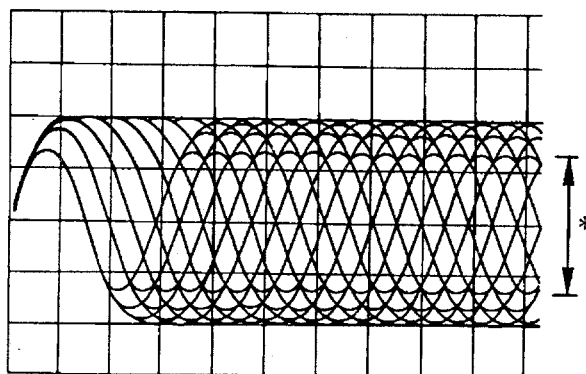
Caution: It is very dangerous to look or touch the laser beam. (laser radiation is invisible)
With the unit turned "on", laser radiation is emitted from the pickup lens.
Avoid exposure to the laser beam, especially when performing adjustments.

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.
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. 2 on page 14)
 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.

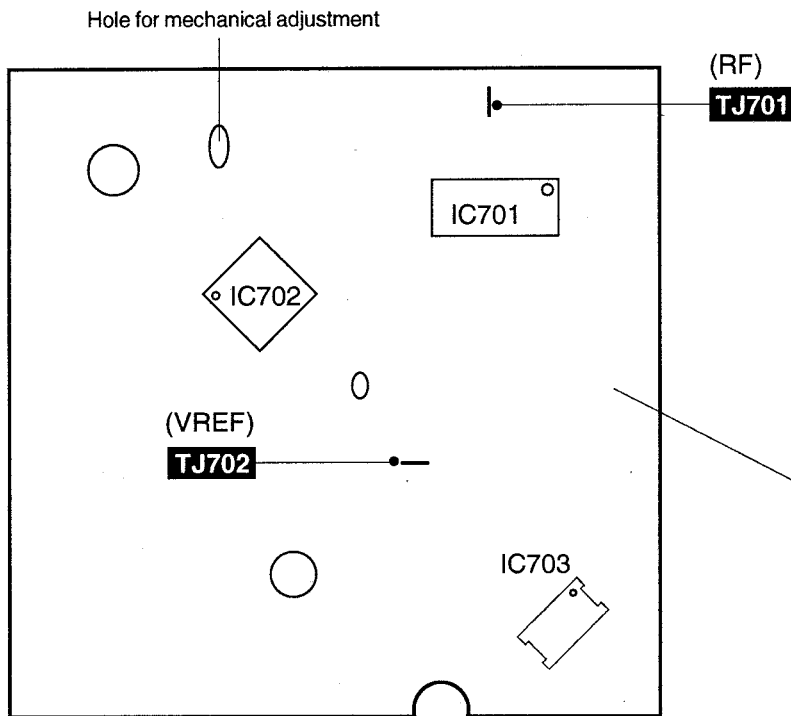
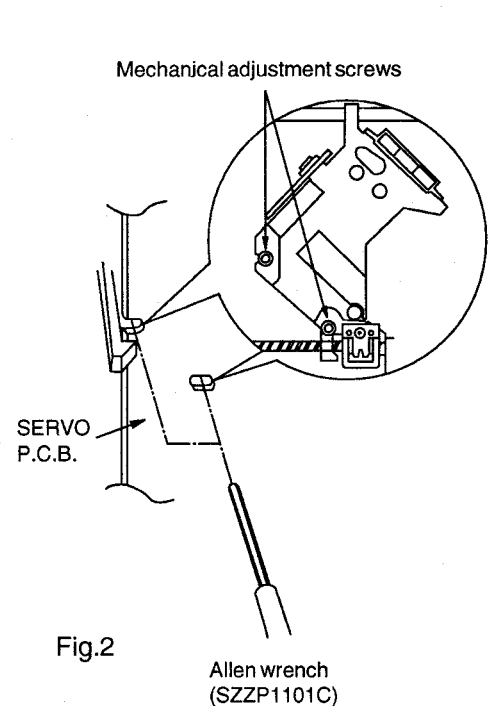


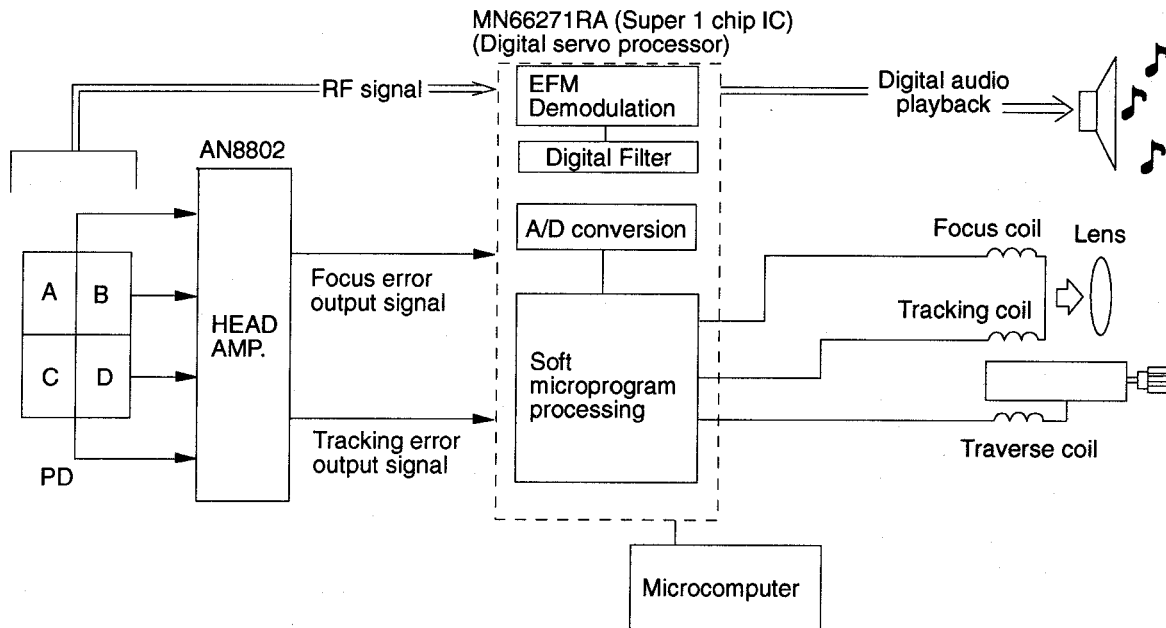
Fig.1



DIGITAL SERVO SYSTEM

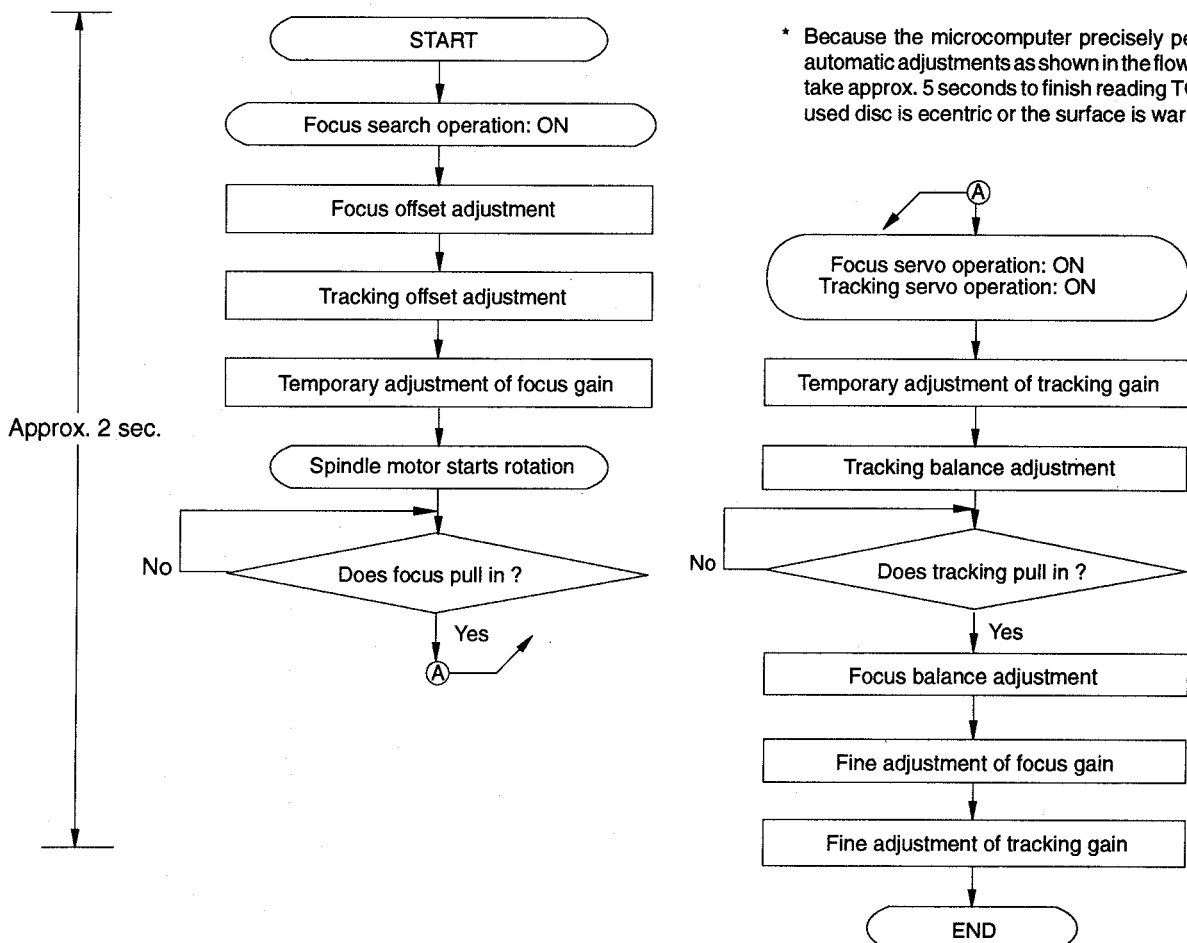
DIGITAL SERVO SYSTEM

This servo system has no adjustment VRs.



The following flow chart shows the sequence of automatic adjustments.

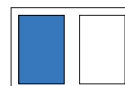
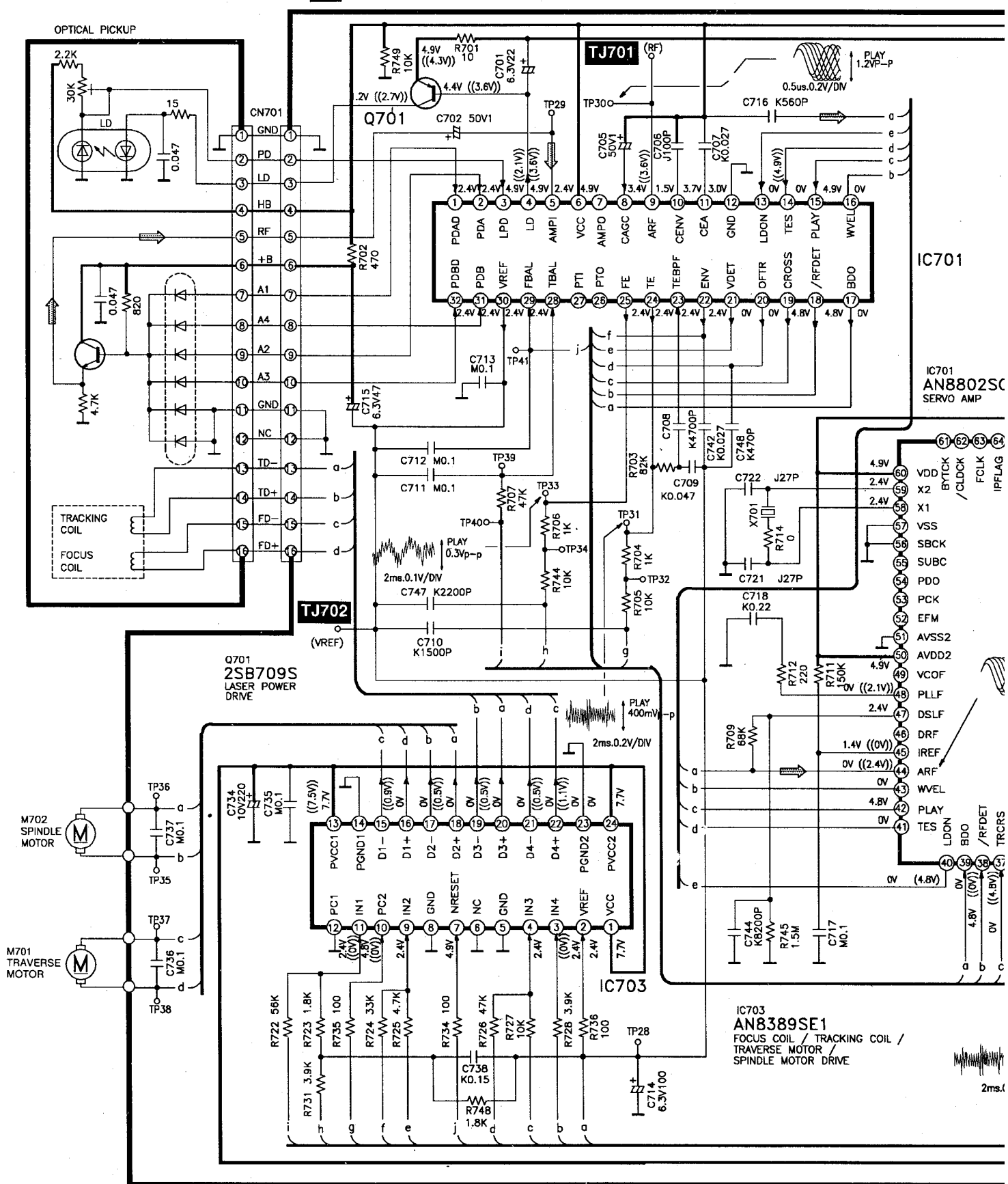
Flow chart on automatic adjustment sequence



■ SCHEMATIC DIAGRAM

	1	2	3	4	5
A	Notes:				
	• S501	:	CD Loading switch.		
	• S502	:	CD Leaf switch.		
	• S701	:	CD Reset switch.		
	• S801	:	Dolby switch.		
	• S802	:	Tape Counter Reset switch.		
	• S803	:	Tape Record Pause switch.		
	• S804	:	CD-To-Tape Record switch.		
	• S805	:	Tape FF switch.		
	• S806	:	Tape REW switch.		
B	• S807	:	Tape Play/DIR switch.		
	• S808	:	Tape Stop switch.		
	• S809	:	Timer Set switch.		
	• S810	:	Memory Adjustment switch.		
	• S811	:	Timer Check switch.		
	• S812	:	Tuning/Timer Set/CD skip (-) switch.		
	• S813	:	Tuning/Timer Set/CD skip (+) switch.		
	• S814	:	Volume (-) switch.		
	• S815	:	Volume (+) switch.		
	• S816	:	Preset Equalizer switch.		
C	• S817	:	CD Stop/Clear switch.		
	• S818	:	CD Play/Pause switch.		
	• S819	:	Tuner Band switch.		
	• S820	:	Preset Tuning switch.		
	• S821	:	Sleep switch.		
	• S822	:	Power ON/OFF switch.		
	• S901	:	AC/DC switch.		
	• S971	:	Mode Detect switch.		
	• S972	:	Tape Detect switch.		
	• S973	:	TAB Detect switch.		
D	• S974	:	TAB Detect switch.		
	• S975	:	CrO ₂ Detect switch.		
	• VR101	:	PB Gain Adjustment (Lch).		
	• VR201	:	PB Gain Adjustment (Rch).		
	• VR301	:	Tape Speed Adjustment.		
	Battery Current : Vol. max 1400mA (FM) 1300 mA (TAPE) 2100 mA (Recording; CD to tape) 1700 mA (Recording; Tuner to tape) 1700 mA (CD)				
	Measurement instructions FM : 74 dB/m, 30% Mod. TAPE : 315 dB, 0 dB CD : 1 kHz, 0 dB				
	• DC voltage measurements are taken with electronic voltmeter from negative terminal of battery.				
	• *L1 and *L4 are printed coils formed on the P.C.B and thus not found in the Replacement Parts List.				
E	• No mark ... Playback < > ... FM () ... MW/LW << >> ... REC { } ... TUNER (()) ... CD				
	• Important Safety Notice: Component identified by ⚠ have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.				
	• This schematic diagram may be modified at anytime with the development of new technology.				
F		... FM SIGNAL LINE			
		... MW/LW SIGNAL LINE			
		... FM OSC SIGNAL LINE			
		... +B LINE			
		... FM/MW/LW SIGNAL LINE			
		... MW/LW OSC SIGNAL LINE			
		... CD SIGNAL LINE			
		... PLAYBACK SIGNAL LINE			
		... RECORD SIGNAL LINE			
		... MAIN SIGNAL LINE			
		... MIC SIGNAL LINE			

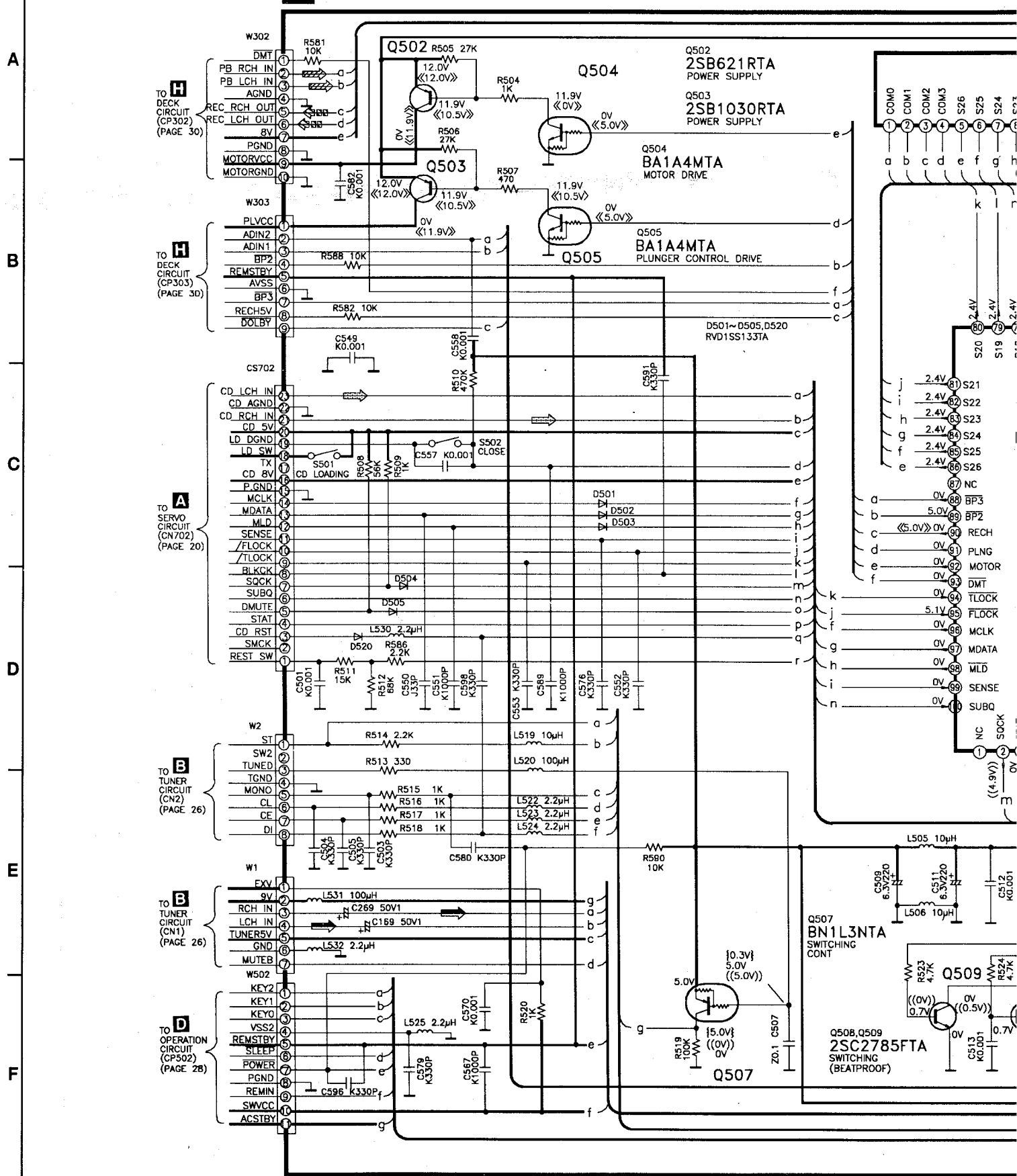
A SERVO CIRCUIT



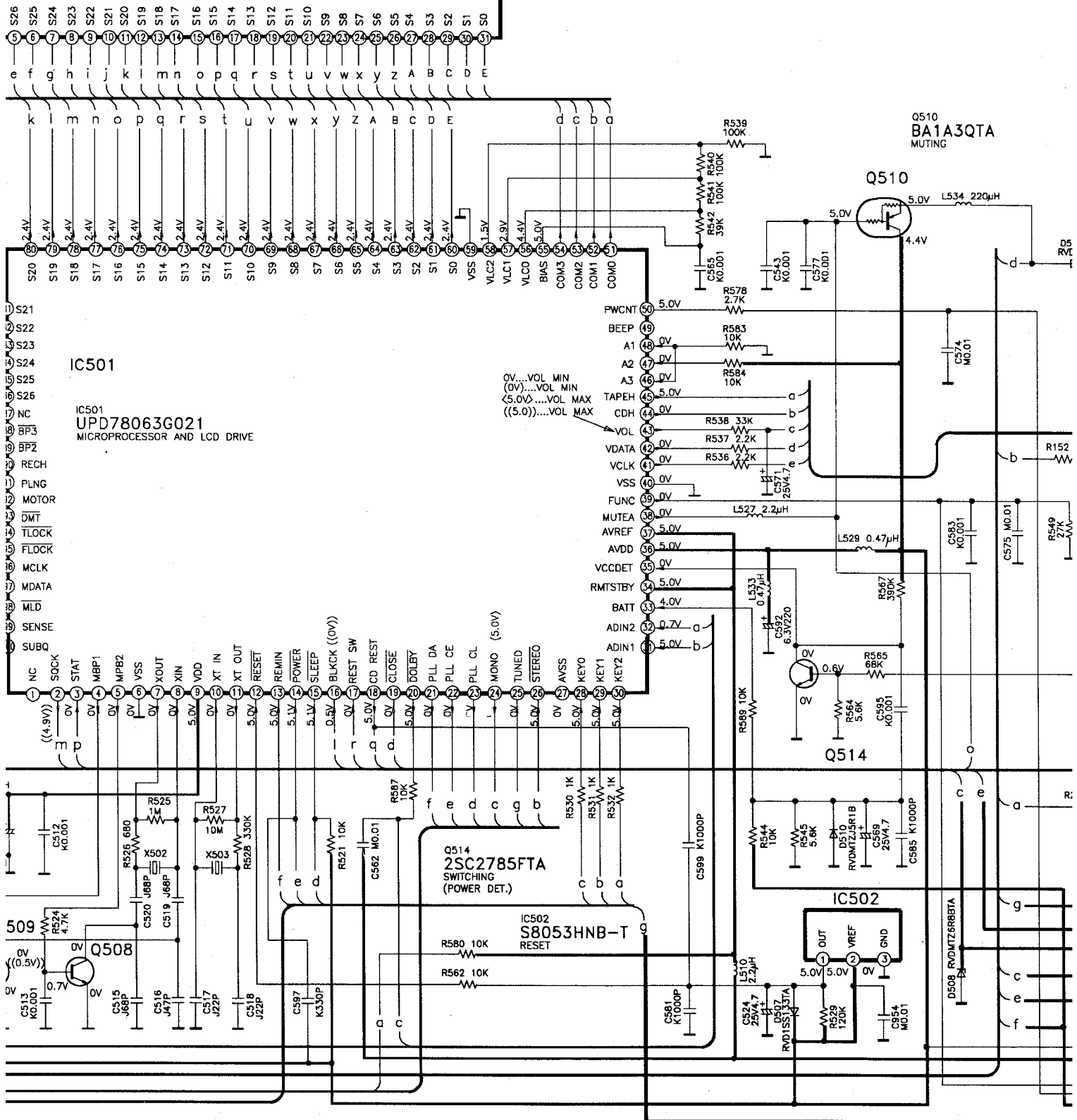


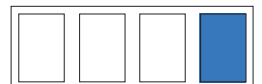
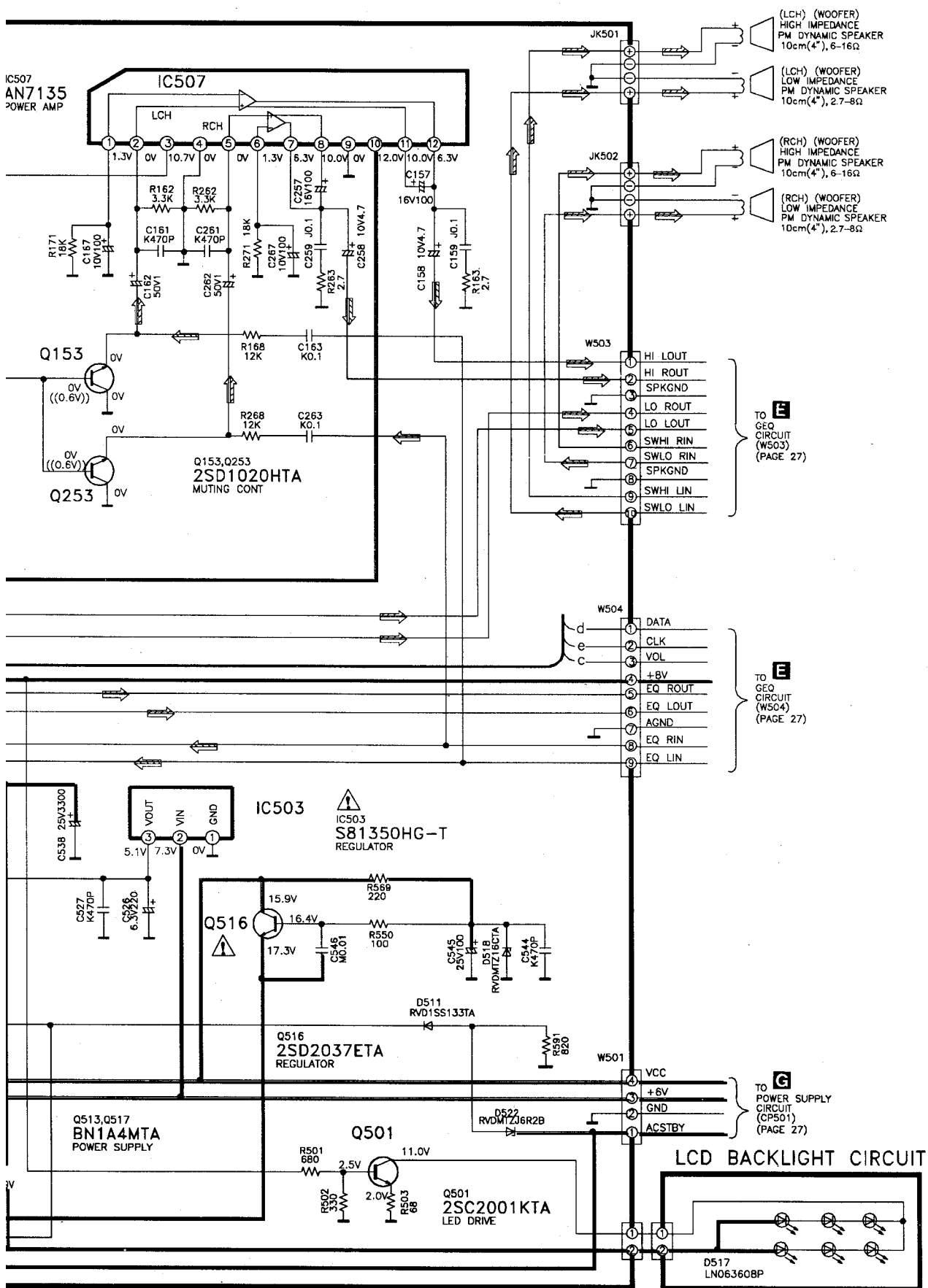
SCHEMATIC DIAGRAM

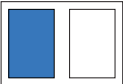
C MAIN CIRCUIT

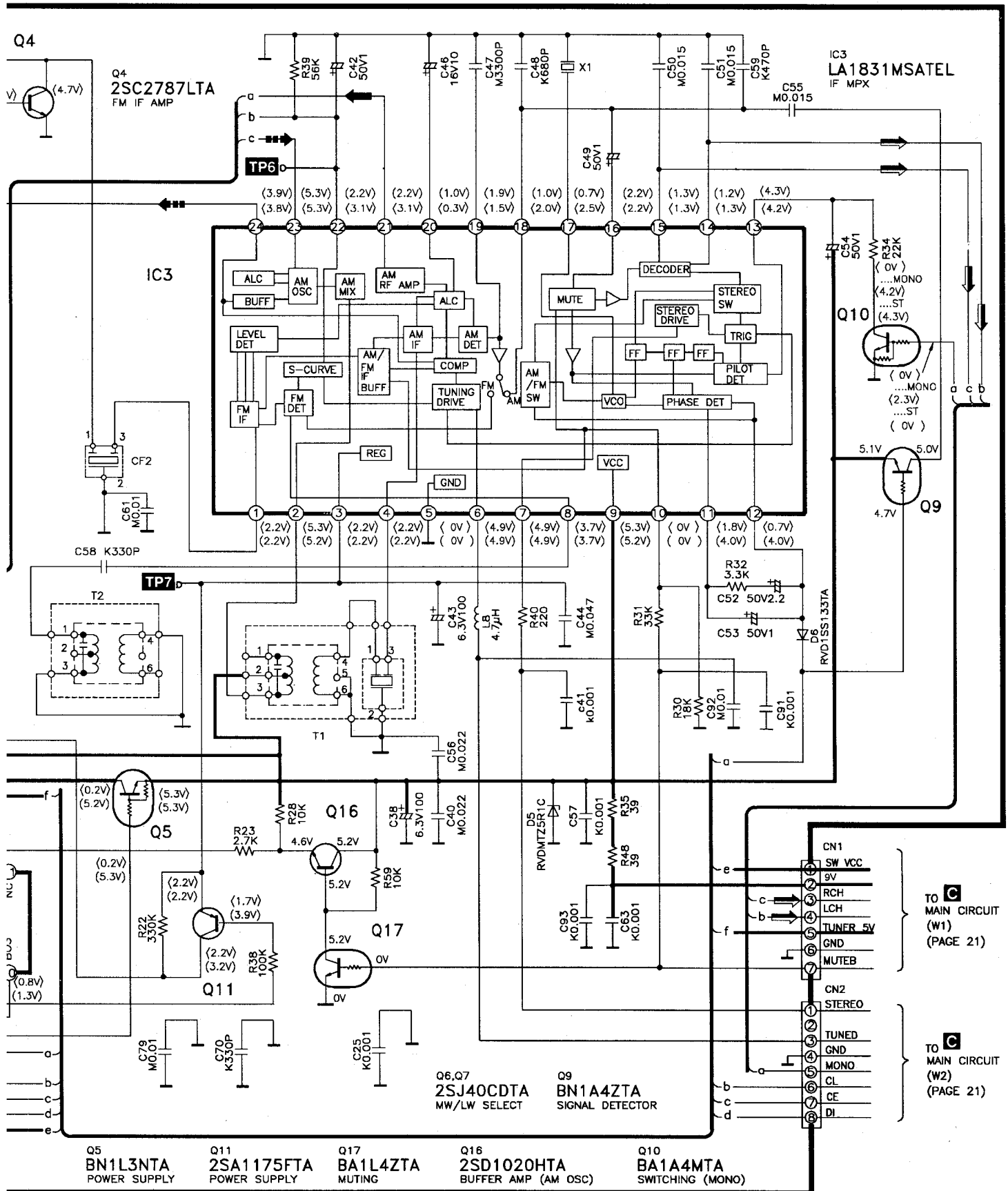


Z501 LCD DISPLAY
(RSL5108-L)

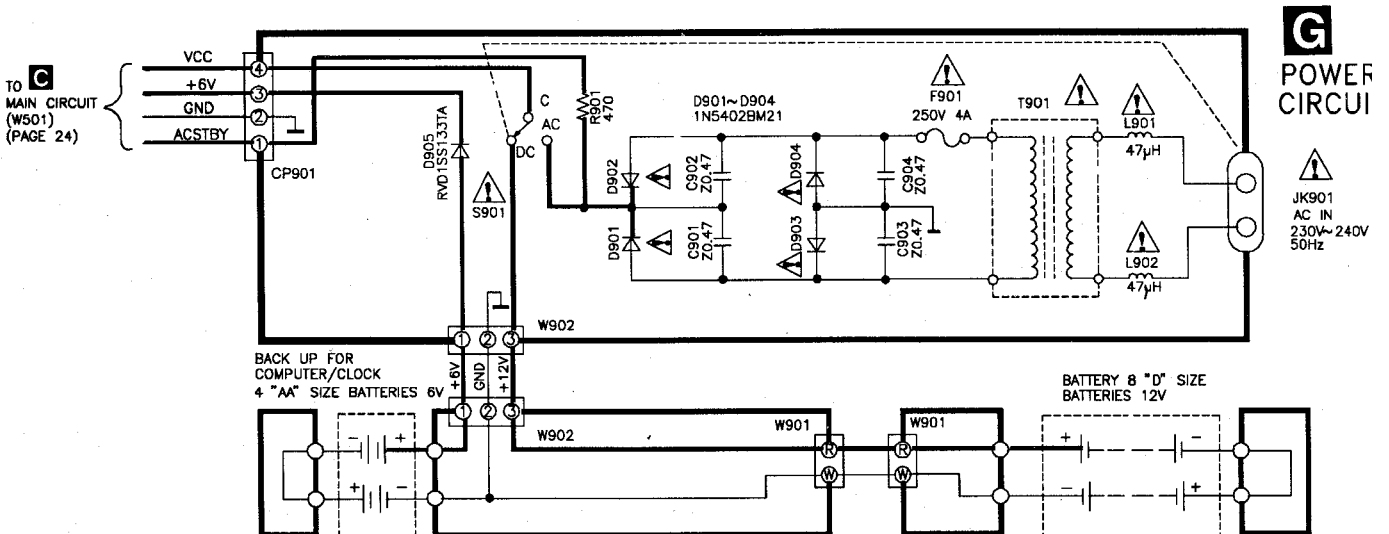
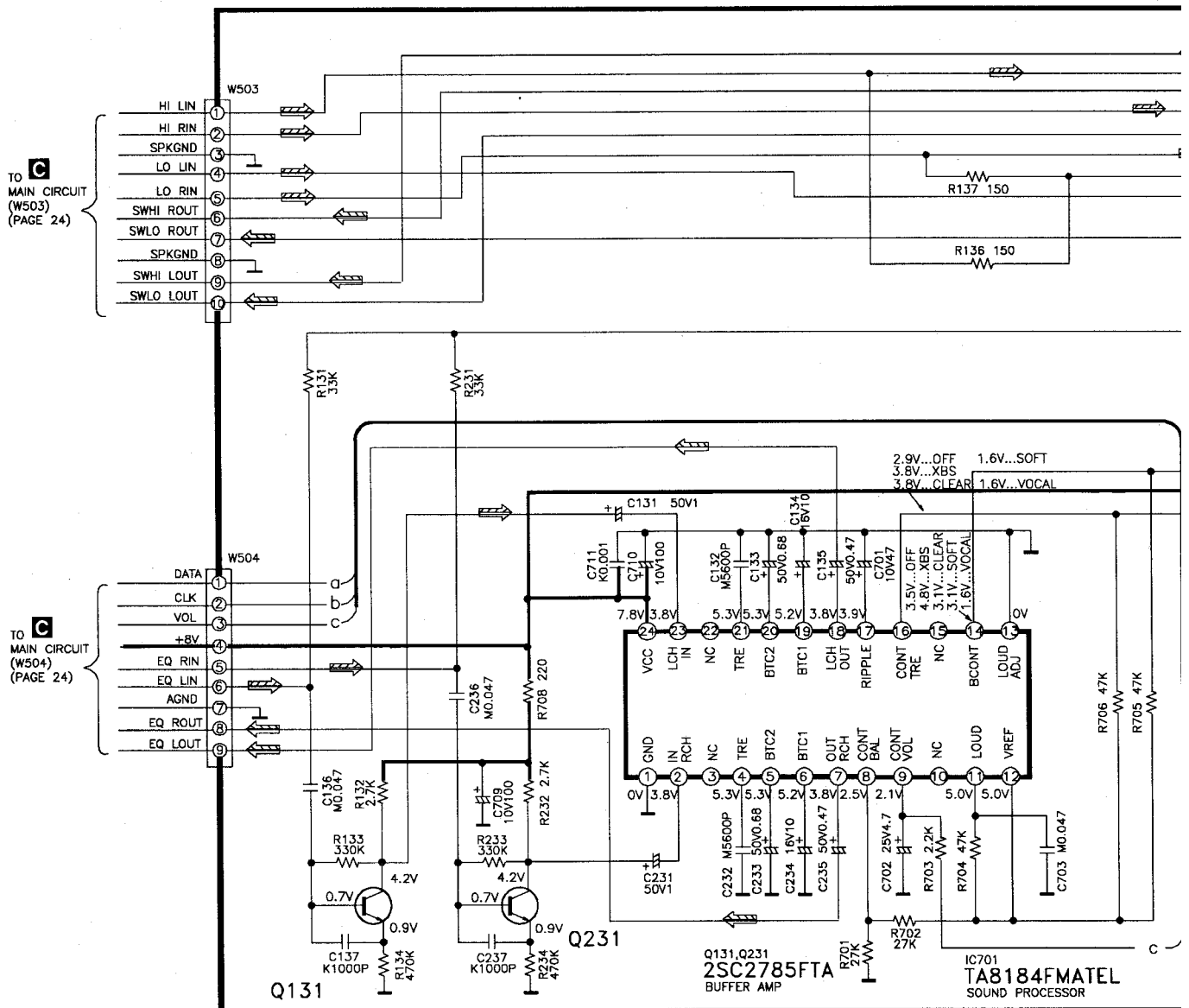






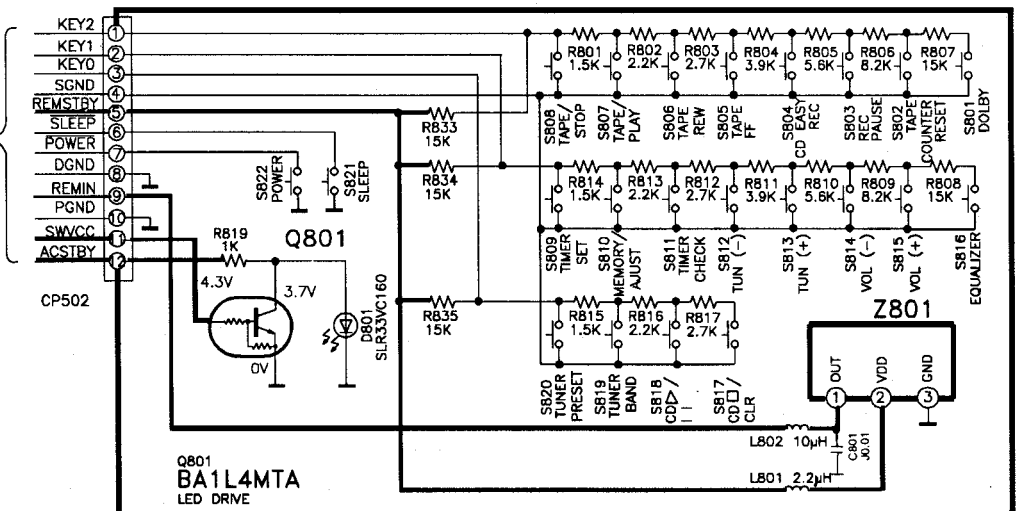


E G.E.Q. CIRCUIT

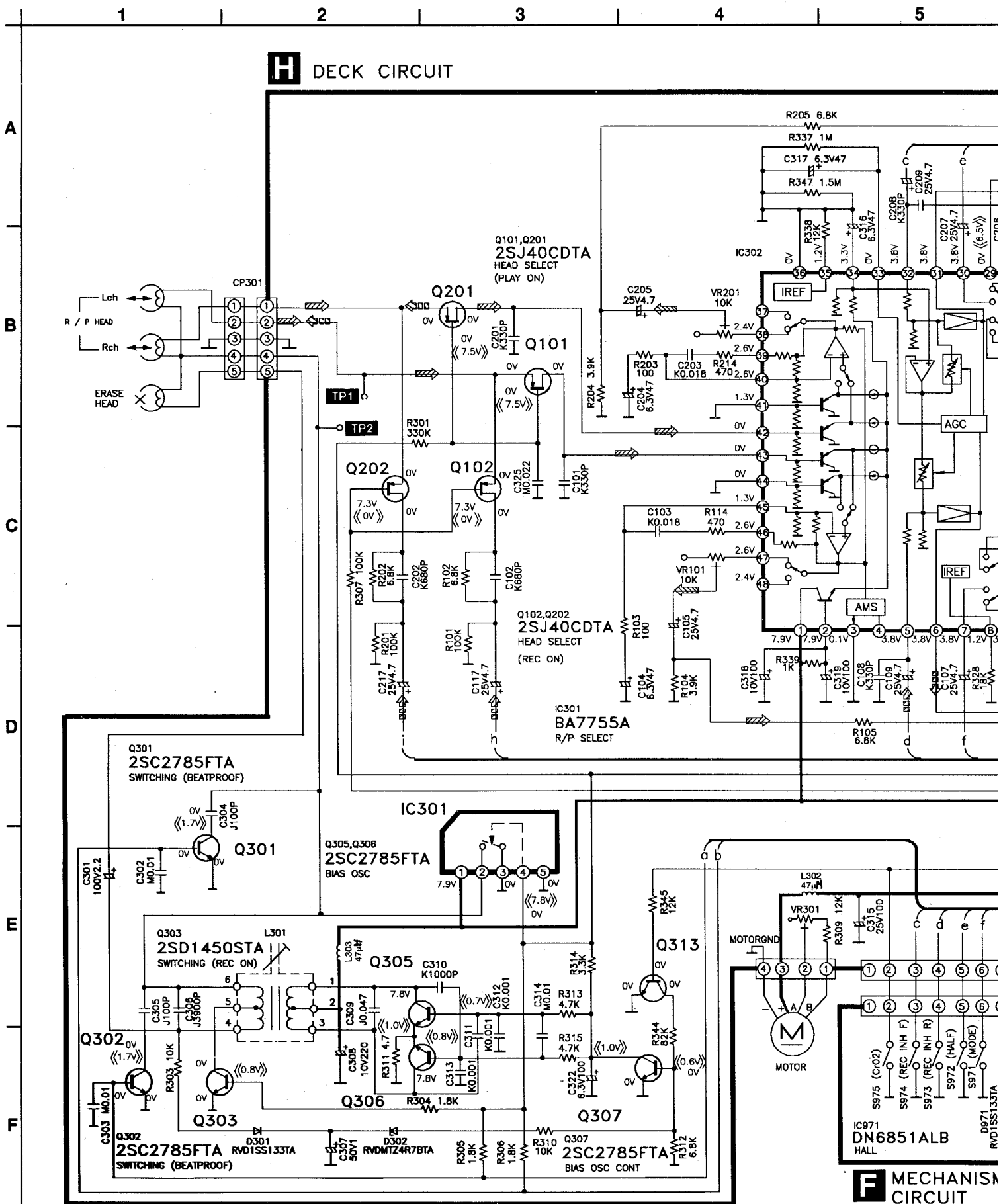




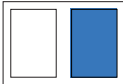
TO **C**
MAIN CIRCUIT
(W502)
(PAGE 21) <



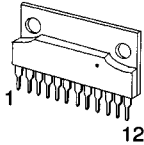
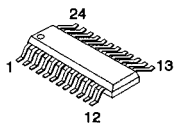
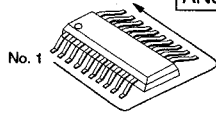
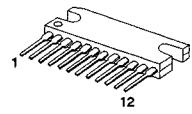
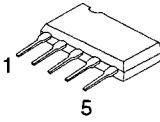
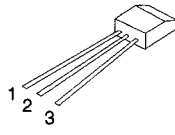
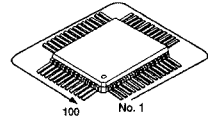
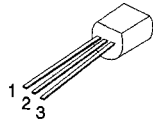
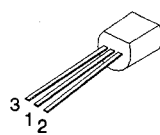
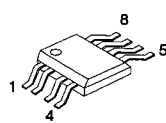
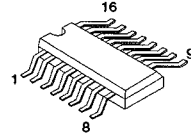
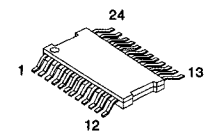
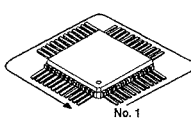
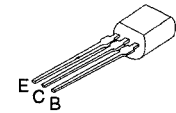
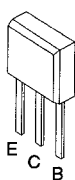
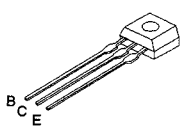
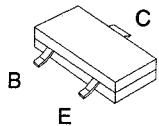
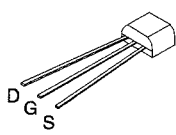
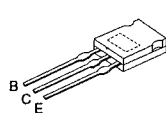
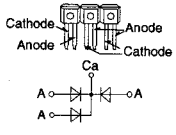
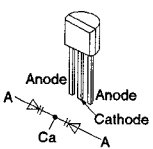
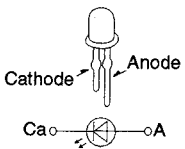
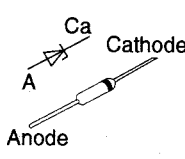
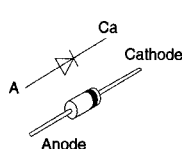
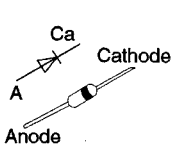
■ SCHEMATIC DIAGRAM



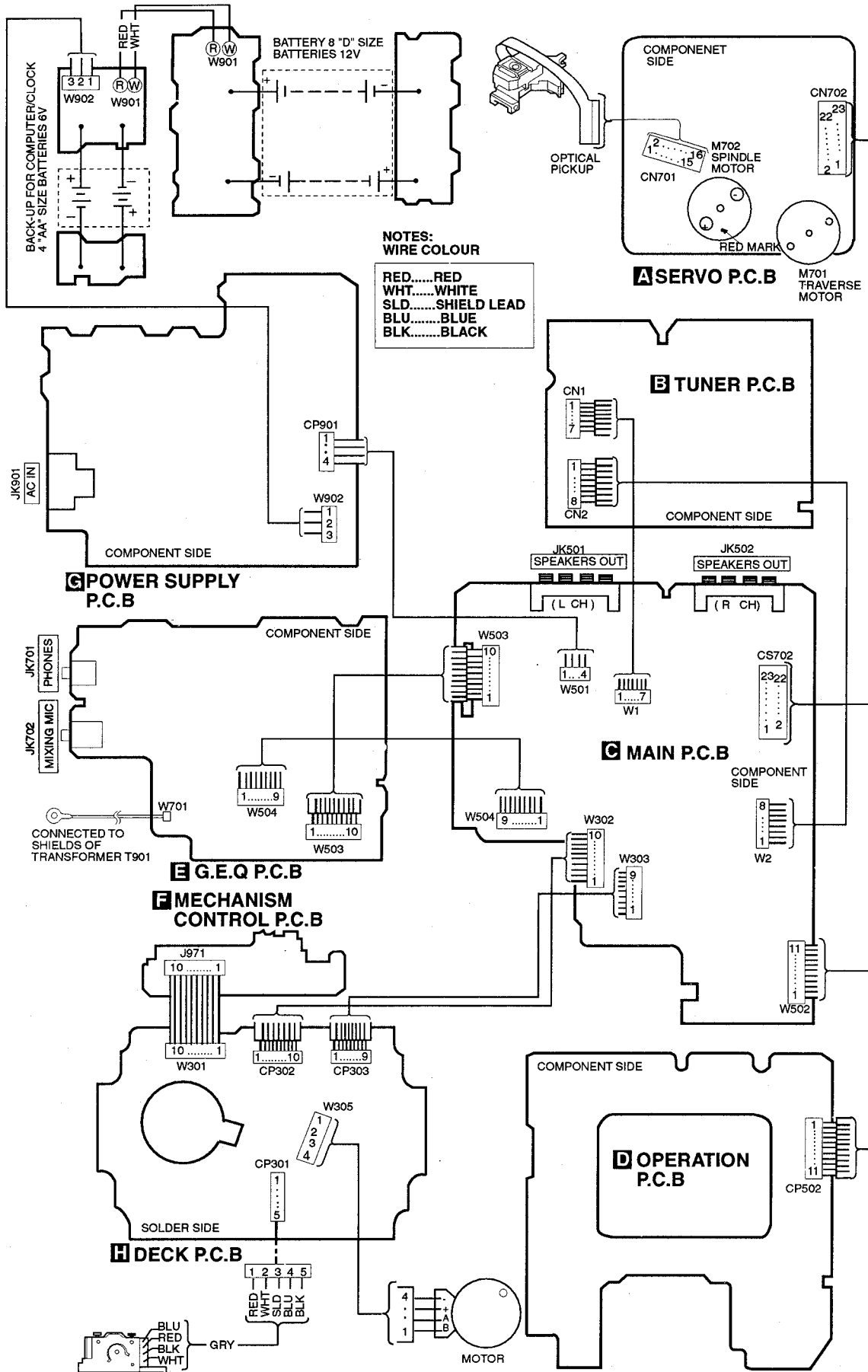
F MECHANISM CIRCUIT



■ TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES

AN7135 	TA8184FMATEL 	<table border="1"><tr><td>BU2040F-E2</td><td>16 pin</td></tr><tr><td>LA1831MSATEL</td><td>24 pin</td></tr><tr><td>LM7001M-TE-L</td><td>20 pin</td></tr><tr><td>AN8802SCE1V</td><td>32 pin</td></tr></table> 	BU2040F-E2	16 pin	LA1831MSATEL	24 pin	LM7001M-TE-L	20 pin	AN8802SCE1V	32 pin	BA3936 
BU2040F-E2	16 pin										
LA1831MSATEL	24 pin										
LM7001M-TE-L	20 pin										
AN8802SCE1V	32 pin										
BA7755A 	DN6851ALB 	UPD78063G021 	S8053HNB-T 	S81350HG-T 							
TA7358FMATEL 	UPD4052BG-E2 	AN8389SE1 	<table border="1"><tr><td>MN66271RA</td><td>80 pin</td></tr><tr><td>CXA1697QT6</td><td>48 pin</td></tr></table> 	MN66271RA	80 pin	CXA1697QT6	48 pin	2SB621RTA 2SC1684HRTA 2SC2001KTA 			
MN66271RA	80 pin										
CXA1697QT6	48 pin										
	2SA1175FTA 2SB1030RTA 2SD1450STA BA1A3QTA BA1A4MTA BA1L4MTA BA1L4ZTA BN1A4MTA BN1A4ZTA		2SC2785FTA 2SC2787FL1TA 2SC2787LTA 2SD1020HTA BN1L3NTA	2SB709S 							
2SJ40CDTA 	2SD2037ETA 	KV1581A3 	KV1360NT 	SLR33VC160 							
	RVDMTZ16CTA RVDMTZ4R7BTA RVDMTZ5R6BTA RVDMTZ6R8BTA RVDMTZ7R5BTA RVDMTZJ5R1B RVDMTZJ5R1C RVDMTZJ6R2B	1N5402BM21 	RVD1SS133TA 								

■ WIRING CONNECTION DIAGRAM



■ TERMINAL FUNCTION OF IC'S

• IC701 (AN8802SCE1V)

Pin No.	Mark	I/O	Function	Pin No.	Mark	I/O	Function
1	PDAD	I	PDA channel signal input with delay	17	BDO	O	Dropout detection control
2	PDA	I	PDA channel signal input without delay	18	/RFDET	O	RF detection signal ("L" : detection)
3	LPD	I	Laser PD connection	19	CROSS	O	Tracking error zero cross output
4	LD	O	Power supply for LD driving	20	OFTR	O	Off-track detection ("H" : detection)
5	AMPI	I	RF amplifier input	21	VDET	O	Vibration detection signal output("H" : detection)
6	VCC	I	Power supply connection	22	ENV	O	Envelope output terminal
7	AMPO	O	RF amplifier output (Not used, open)	23	TEBPF	I	Vibration detection signal input
8	CAGC	I	AGC loop filter connection	24	TE	O	Tracking error signal output
9	ARF	O	RF AGC output	25	FE	O	Focus error signal output
10	CENV	I	Capacitor connection for RF detection	26	PTO	O	Potential amplifier inversion input (Not used, open)
11	CEA	I	Capacitor connection for HPF amplifier	27	PTI	I	Potential amplifier inversion output (Not used, open)
12	GND	—	Ground connection	28	TBAL	I	Tracking balance signal input
13	LDON	I	ON/OFF input of LD APC("H" : ON, "L" : OFF)	29	FBAL	I	Focus balance signal input
14	TES	I	Tracking error shunt signal input	30	VREF	O	Reference voltage output
15	PLAY	I	Play signal input ("H" : PLAY)	31	PDB	I	Photo detection Bch input without delay
16	WVEL	I	Double speed ("H" : double, "L" : single)	32	PDBD	I	Photo detection Bch input with delay

• IC703 (AN8389SE1)

Pin No.	Mark	I/O	Function	Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal	17	PVCC1	I	Power supply (1) for driver
2	VREF	I	Reference voltage input	18	PGND1	—	Ground connection (1) for driver
3	IN4	I	Motor driver (4) input	19	D1—	O	Motor driver (1) reverse-action output
4	IN3	I	Motor driver (3) input	20	D1+	O	Motor driver (1) forward-action output
5	GND	—	Ground connection	21	D2—	O	Motor driver (2) reverse-action output
6	NC	—	Ground connection	22	D2+	O	Motor driver (2) forward-action output
7	NRESET	I	Reset input	23	D3—	O	Motor driver (3) reverse-action output
8	GND	—	Ground connection	24	D3+	O	Motor driver (3) forward-action output
9	IN2	I	Motor driver (2) input	25	D4—	O	Motor driver (4) reverse-action output
10	PC2	I	PC2 (power cut) input	26	D4+	O	Motor driver (4) forward-action output
11	IN1	I	Motor driver (1) input	27	PGND2	—	Ground connection (2) for driver
12	PC1	I	PC1 (power cut) input (Not used, open)	28	PVCC2	I	Power supply (2) for driver

• IC702 (MN66271RA)

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)

Pin No.	Mark	I/O	Function
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)
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	PLLF	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	Clock input for sub-code serial data (Not used, open)
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	Sub-code frame clock signal output (fCLDCK=7.35kHz during normal playback)

Pin No.	Mark	I/O	Function
63	FCLK	O	Crystal frame clock signal output (fCLK=7.35kHz, double=14.7kHz)
64	IPFLAG	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
72	AVDD1	I	Power supply input (for analog circuit)

Pin No.	Mark	I/O	Function
73	OUTL	O	Left channel audio signal output
74	AVSS1	—	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input (at "H" level, RSEL="H", at "L" level, RSEL="L")
77	CSEL	I	Crystal oscillating frequency designation input "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" : SMCK=4.2336MHz (Not used, open)

• IC501 (UPD78063D021)

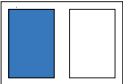
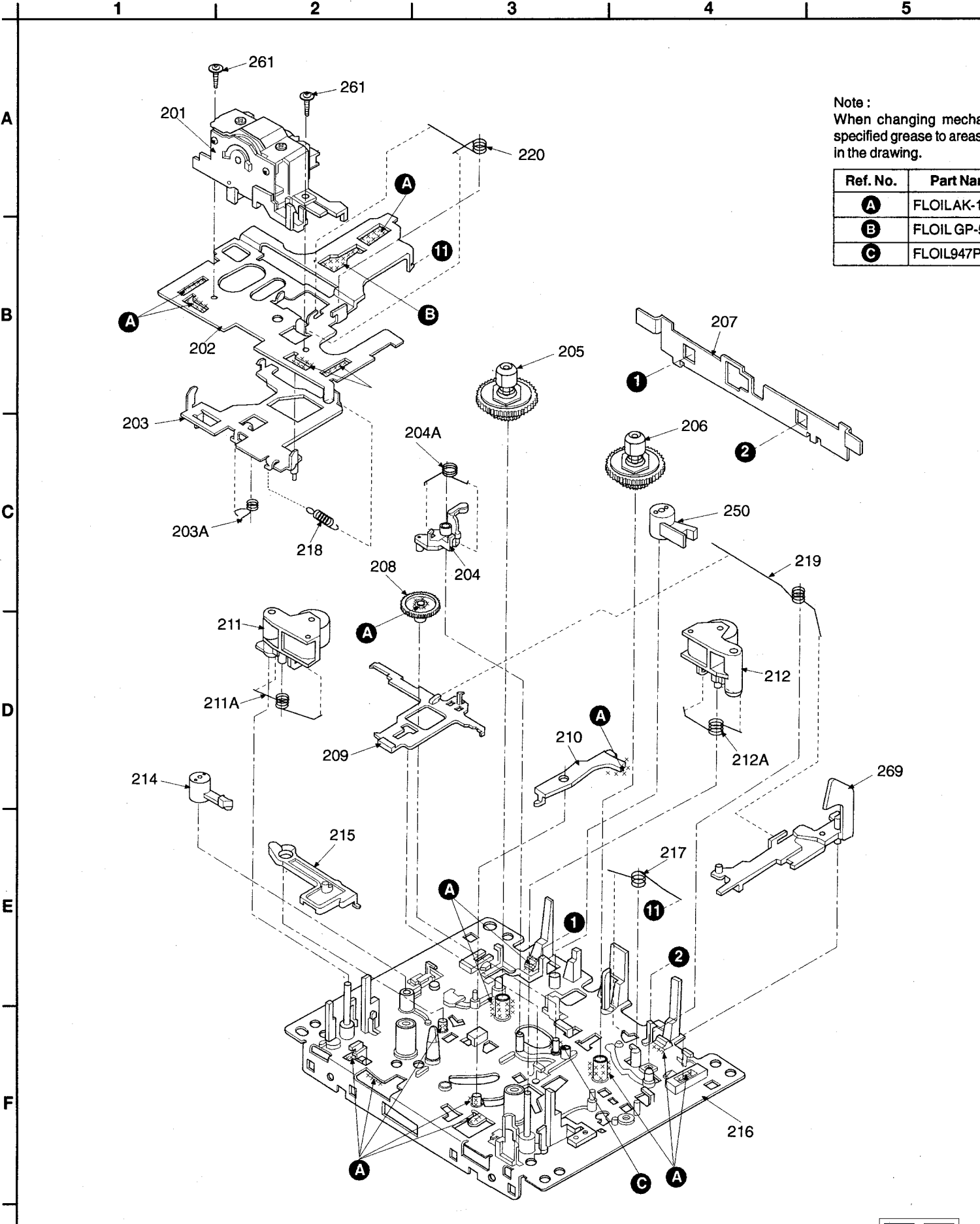
Pin No.	Mark	I/O	Function
1	NC	—	No connection
2	SQCK	I	CD subcode clock input.
3	STAT	I	CD status signal input.
4	MBP1	O	Beat proof control signal output.
5	MBP2	O	Beatproof control signal output.
6	VSS	—	GND
7	XOUT	O	clock input (4.19 MHz)
8	XIN	I	Clock input (4.19 MHz)
9	VDD	I	Power supply (+5 V)
10	XT IN	I	Crystal oscillator input (32.768 kHz)
11	XT OUT	O	Crystal oscillator output (32.768 kHz)
12	RESET	I	System reset signal input.
13	REMIN	I	Remote control signal input.
14	POWER	I	Main power signal input.
15	SLEEP	I	Sleep switch.
16	BLKCK	I	CD subcode block clock signal input.
17	REST SW	I	Reset switch (S701) signal input.
18	CD REST	I	CD reset signal input.
19	CLOSE	I	CD cover close detectionswitch signal input.
20	DOLBY	O	Dolby control signal output.

Pin No.	Mark	I/O	Function
21	PLL DA	O	PLL tuner data signal output.
22	PLL CE	O	PLL tuner strove signal output.
23	PLL CL	O	PLL tuner clock signal output.
24	MONO	O	PLL mono signal output.
25	TUNED	I	PLL tuner signal input.
26	STEREO	I	PLL stereo signal input.
27	AVSS	—	GND
28	KEY0	I	Key source input.
29	KEY1	I	Key source input.
30	KEY2	I	Key source input.
31	ADIN1	I	AD converter input (Deck operation switch)
32	ADIN2	I	AD converter input (Deck operation switch)
33	BATT	O	Battery state signal output.
34	RMTSTBY	I	Remote control sensor power control signal input.
35	VCCDET	I	Power supply detection signal input.
36	AVDD	I	+5 V
37	AVREF	I	AD converter reference voltage (+5 V).
38	MUTEA	O	AF muting control signal output.
39	FUNC	O	Power supply control signal output.
40	VSS	—	GND

Pin No.	Mark	I/O	Function
41	VCLK	O	PWM clock signal output for I/O expander circuit (IC702).
42	VDATA	O	PWM data signal output for I/O expander circuit (IC702).
43	VOL	O	Motor (for volume) control signal output
44	CDH	O	Input selector control signal (CD)
45	TAPEH	O	Input selector control signal output (TAPE)
46	A3	—	GND
47	A2	I	Region signal input.
48	A1	—	GND
49	BEEP	—	Not used, open
50	PWCNT	O	Power Amp control signal output
51	COM0	O	LCD common signal output.
52	COM1	O	LCD common signal output.
53	COM2	O	LCD common signal output.
54	COM3	O	LCD common signal output.
55	BIAS	I	Bias reference signal input.
56	VLC0	I	LCD bias reference voltage input.
57	VLC1	I	LCD bias reference voltage input.
58	VLC2	I	LCD bias reference voltage input.
59	VSS	—	GND
60	S0	O	LCD segment signal output.
61	S1	O	LCD segment signal output.
62	S2	O	LCD segment signal output.
63	S3	O	LCD segment signal output.
64	S4	O	LCD segment signal output.
65	S5	O	LCD segment signal output.
66	S6	O	LCD segment signal output.
67	S7	O	LCD segment signal output.
68	S8	O	LCD segment signal output.
69	S9	O	LCD segment signal output.
70	S10	O	LCD segment signal output.

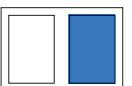
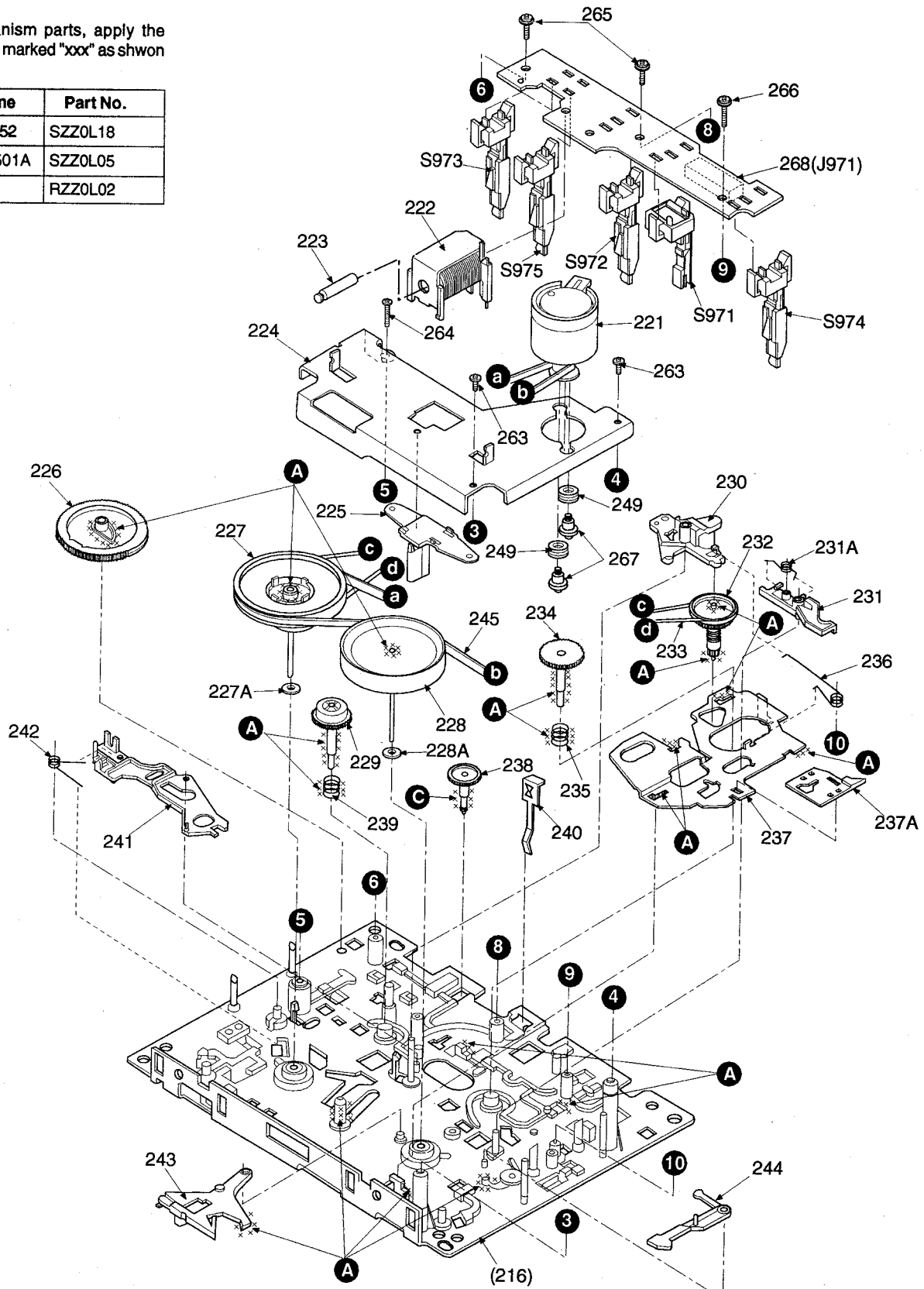
Pin No.	Mark	I/O	Function
71	S11	O	LCD segment signal output.
72	S12	O	LCD segment signal output.
73	S13	O	LCD segment signal output.
74	S14	O	LCD segment signal output.
75	S15	O	LCD segment signal output.
76	S16	O	LCD segment signal output.
77	S17	O	LCD segment signal output.
78	S18	O	LCD segment signal output.
79	S19	O	LCD segment signal output.
80	S20	O	LCD segment signal output.
81	S21	O	LCD segment signal output.
82	S22	O	LCD segment signal output.
83	S23	O	LCD segment signal output.
84	S24	O	LCD segment signal output.
85	S25	O	LCD segment signal output.
86	S26	O	LCD segment signal output.
87	NC	—	Not used
88	$\overline{\text{BP3}}$	O	Beat proof control (Bit 3)
89	$\overline{\text{BP2}}$	O	Beat proof control (Bit 2)
90	RECH	O	Record detecting signal output.
91	PLNG	O	Deck plunger control signal output.
92	MOTOR	O	Motor control signal output.
93	$\overline{\text{DMT}}$	O	Deck muting control signal output.
94	$\overline{\text{TLOCK}}$	I	Tracking servo clock signal input.
95	$\overline{\text{FLOCK}}$	I	Focus servo clock signal input.
96	MCLK	O	Microprocessor command clock signal output.
97	MDATA	O	Microprocessor command data signal output.
98	MLD	O	Microprocessor command signal output.
99	SENSE	I	CD sense signal input.
100	SUBQ	I	CD subcode Q data input.

MECHANISM PARTS LOCATION



changing mechanism parts, apply the
grease to areas marked "xxx" as shown
drawing.

No.	Part Name	Part No.
1	FLOILAK-152	SZZ0L18
2	FLOIL GP-501A	SZZ0L05
3	FLOIL947P	RZZ0L02



MECHANISM PARTS LIST

Notes : [M] in Remarks column indicates parts supplied by MESA

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK		237A	RUB512ZB	ROD	
				238	RDG5773ZA	GEAR	
				239	RUQ112ZA	SPRING	
201	RXQ0291	HEAD BLOCK ASS'Y		240	RUS609ZC	SPRING	
202	RUA793ZF	CHASSIS		241	RUB514ZC	LEVER	
203	RZLAR300	LEVER ASS'Y		242	RUW147ZA	SPRING	
203A	RUW143ZA	SPRING		243	RUB515ZA	LEVER	
204	1UB0089Z	ARM		244	RUB509ZA	LEVER	
204A	RUW148ZA	SPRING		245	RDV108ZA	BELT	
205	1DM0018ZB	REEL TABLE ASS'Y		249	RHG3032ZA	RUBBER	
206	1DM0017ZB	REEL TABLE ASS'Y		250	RNL180ZB	LEVER	
207	RML0069-1	LEVER		251	REX0305	LEAD WIRE BLOCK (5P)	[M]
208	RDG5772ZC	GEAR		261	XTW2+6L	SCREW	
209	RUB508ZB	LEVER		263	XTN26+7J	SCREW	
210	RUB506ZB	LEVER		264	RHE5203ZA	SCREW	
211	1UB0088ZB	PINCH ROLLER		265	XTW2+8S	SCREW	
211A	RUW141ZA	SPRING		266	XYC2+JF16	SCREW	
212	1UB0087ZB	PINCH ROLLER		267	RHD26002	SCREW	
212A	RUW140ZB	SPRING		268	RJS10T7ZA	SOCKET (J971)	
214	RNL1ZD	ARM		269	RUB507ZD	EJECT ROD R	
215	RUB503ZD	LEVER					
216	RZUAR300A	CHASSIS ASS'Y					
217	RUW142ZA	SPRING					
218	RUD105ZA	SPRING					
219	RUW144ZA	SPRING					
220	RUW139ZA	SPRING					
221	RFM133ZA	MOTOR ASS'Y					
222	1UE0015ZB	PLUNGER					
223	RUB428ZE	SHAFT					
224	RUL1030YA	PLATE					
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	LEVER					
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					

REPLACEMENT PARTS LIST

Notes: *Important safety notice:

Components identified by Δ 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 these components, be sure to use only manufacturer's specified parts shown in the parts list.

*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

*[M] Indicates in the Remarks columns indicates parts supplied by MESA.

*The "(SF)" mark denotes the standard part.

*Remote Control Units:

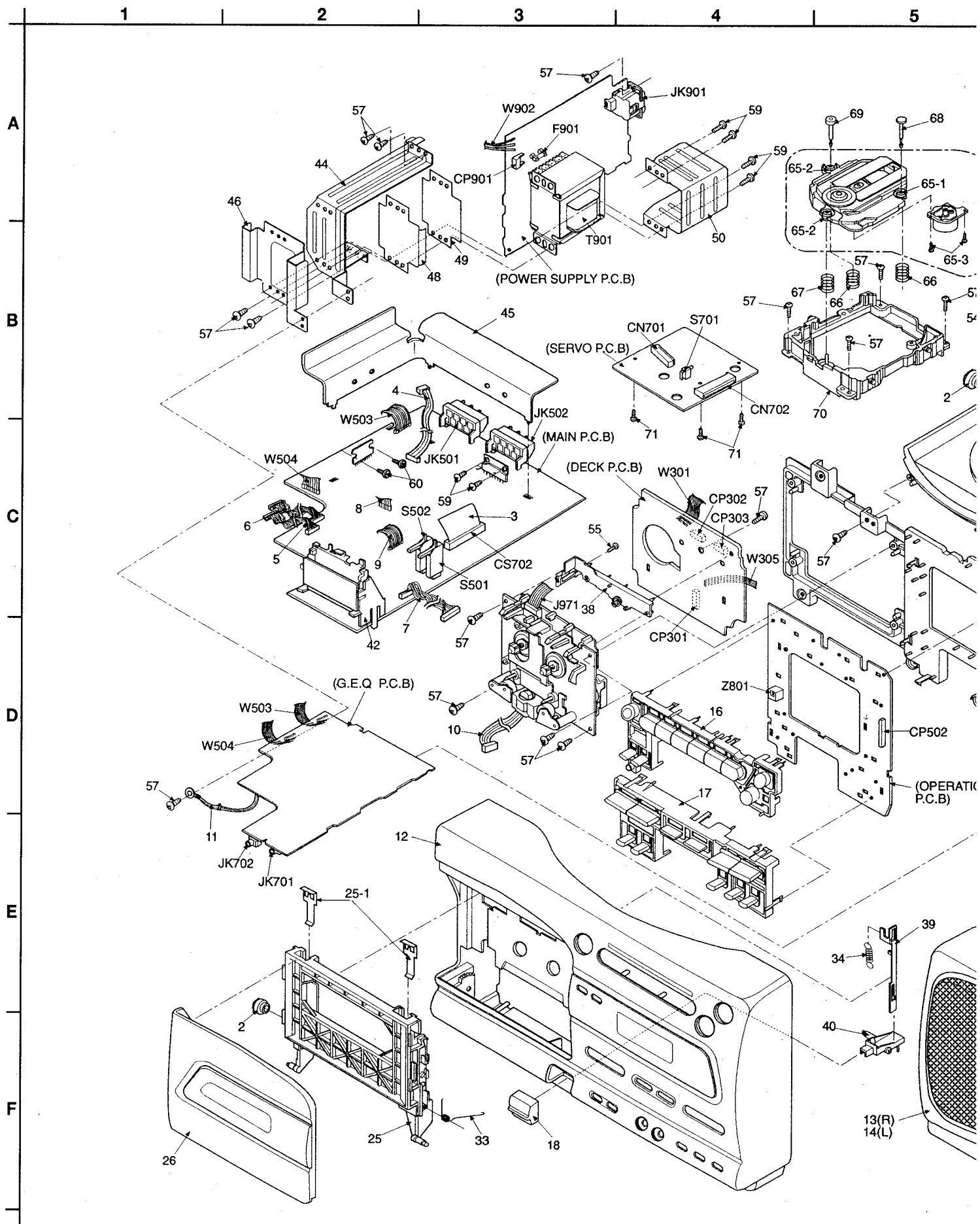
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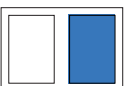
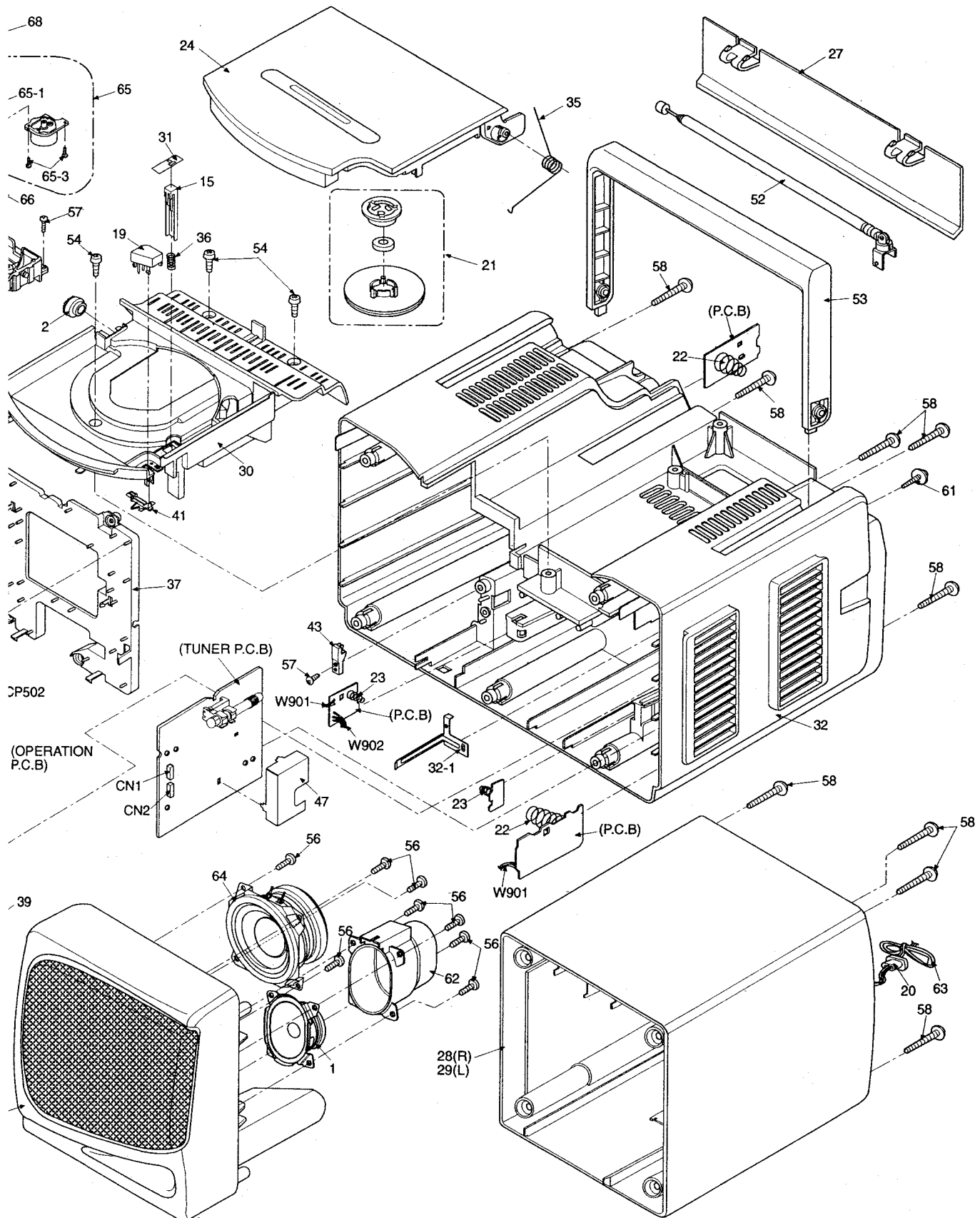
*ACHTUNG: Die Lasereinheit nicht zerlegen.

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		35	RMBX0006	CD LID OPEN SPRING	[M]
				36	RMBX0007	CD LEAF SWITCH LEVER	[M]
1	EASG7DH10A2	WOOFER (TWEETER)	[M]	37	RMKX0005	CHASSIS	[M]
2	RDG0183-L	DAMPER GEAR	[M]	38	RMKX0006	MECHA CHASSIS	[M]
3	REEX0015-1	FFC WIRE	[M]	39	RMLX0007	CASS. EJECT LEVER	[M]
4	REXX0078	MAIN TO POWER 4P	[M]	40	RMLX0008	CASS. EJECT HOLDER	[M]
5	REXX0079	MAIN TO DECK 9P	[M]	41	RMLX0009-KJ	CD EJECT LEVER	[M]
6	REXX0080	MAIN TO DECK 10P	[M]	42	RMNX0005-W	LCD HOLDER	[M]
7	REXX0081	MAIN TO PANEL 12P	[M]	43	RMR0631-K	PCB HOLDER	[M]
8	REXX0082	MAIN TO TUNER 7P	[M]	44	RMVX0008	TRANSFORMER BRACKET	[M]
9	REXX0083	MAIN TO TUNER 8P	[M]	45	RMVX0009	HEAT SINK	[M]
10	REXX0086	MECHA HEAD WIRE	[M]	46	RMVX0010	TRANSFORMER SUPPORT	[M]
11	REXX0090	EARTH WIRE	[M]	47	RSC0314	TUNER SHIELD PLATE	[M]
12	RFKGXE300EGK	FRONT CABINET ASS'Y	[M]	48	RSCX0022	TRANSF. SHIELD PLATE	[M]
13	RFKGXE300EGA	SP. FRONT CAB. ASS'Y (R)	[M]	49	RSCX0023	TRANSF. SHIELD PLATE	[M]
14	RFKGXE300EGB	SP. FRONT CAB. ASS'Y (L)	[M]	50	RSCX0024	TRANSF. SHIELD PLATE	[M]
15	RGQX0005-K	CD LEAF SWITCH LEVER	[M]	52	XEARR175ED-Y	ROD ANTENNA	
16	RGUX0052A-K	TUNING/CASS. BUTTON	[M]	53	RFKNXE300EGK	HANDLE ASS'Y	[M]
17	RGUX0053-H	CD FUNCTION BUTTON	[M]	54	XTN3+10CFZ	TOP CAB. SCREW	
18	RGUX0054-K	CASS. EJECT BUTTON	[M]	55	XTV26+6F	MECHA CHASSIS SCREW	
19	RGUX0055-K	CD EJECT BUTTON	[M]	56	XTV3+10G	SPEAKER SCREW	
20	RMG0166	CORD BUSHING	[M]	57	XTV3+12G	MOUNTING SCREW	
21	RFKNXDT680PB	CD CLAMPER ASS'Y	[M]	58	XTV3+20G	CASING SCREW	
22	RJC511ZBS	MAIN BATT SPRING	[M]	59	XTV3+8F	SCREW FOR AN7135	
23	RJC70031YB	BACKUP BATT SPRING	[M]	60	XTW3+10F	SCREW FOR BA3936	
24	RFKKXE300EGK	CD LID ASS'Y	[M]	61	XYN3+F8FY	ROD ANTENNA SCREW	
25	RFKLXE250PAK	CASS. HOLDER ASS'Y	[M]	62	RMVX0012	SPEAKER COVER	[M]
25-1	RUS757ZAA	CASS. HALF SPRING	[M]	63	RJL4W001W22	SPEAKER CORD	
26	RFKLXE300EGK	CASS. LID ASS'Y	[M]	64	EASG8P517A2	WOOFER	[M]
27	RKK347ZB-0	BATTERY COVER	[M]	65	RAE0113Z	TRAVERSE UNIT	
28	RFKHXE300EGA	SP. BOX ASS'Y (R)	[M]	65-1	SHGD112	FLOATING RUBBER (A)	
29	RFKHXE300EGB	SP. BOX ASS'Y (L)	[M]	65-2	SHGD113-1	FLOATING RUBBER (B)	
30	RKQX0003-K	TOP CABINET	[M]	65-3	XQS2+A35FZ	SCREW	
31	RKWX0043-K	CD LEAF SWITCH PANEL	[M]	66	RME0109	FLOATING SPRING A	
32	RFKHXE300EGK	BACK CABINET ASS'Y	[M] (EG)	67	RME0142	FLOATING SPRING B	
32	RFKHXE300EBK	BACK CABINET ASS'Y	[M] (EB)	68	RMS0123-1	FIXED PIN A	
32-1	RMAX0012	ROD ANTENNA PLATE	[M]	69	RMS0350	FIXED PIN B	
33	RMB0293	CASS. HOLDER OPEN	[M]	70	RMR0698-K	TRAVERSE CHASSIS	
34	RMB0295	CASS. EJECT LEVER	[M]	71	XTV2+6G	SCREW	

■ CABINET PARTS LOCATION





Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
				Q202	2SJ40CDTA	TRANSISTOR	
		INTEGRATED CIRCUITS		Q205	2SJ40CDTA	TRANSISTOR	
				Q231	2SC2785FTA	TRANSISTOR	
IC1	TA7358FMATEL	IC, FM RF		Q252	2SD1020HTA	TRANSISTOR	
IC2	LM7001M-TE-L	IC, PLL		Q253	2SD1020HTA	TRANSISTOR	
IC3	LA1831MSATEL	IC, IF MPX		Q301	2SC2785FTA	TRANSISTOR	
IC301	BA7755A	IC, SWITCH		Q302	2SC2785FTA	TRANSISTOR	
IC302	CXA1697QT6	IC, DOLBY/PB/REC EQ/AGC		Q303	2SD1450STA	TRANSISTOR	
IC501	UPD78063G021	IC, MICROPROCESSOR	[M]	Q304	BA1A3QTA	TRANSISTOR	[M]
IC502	S8053HNB-T	IC, RESET		Q305	2SC2785FTA	TRANSISTOR	
IC503	S81350HG-T	IC, 5V REGULATOR	[M]	Q306	2SC2785FTA	TRANSISTOR	
IC504	BA3936	IC, REGULATOR	△	Q307	2SC285FTA	TRANSISTOR	
IC505	UPD4052BG-E2	IC, SELECTOR	[M]	Q309	BA1A4MTA	TRANSISTOR	
IC506	AN7135	IC, POWER AMP		Q310	BA1A3QTA	TRANSISTOR	
IC507	AN7135	IC, POWER AMP		Q311	BA1A3QTA	TRANSISTOR	
IC701	TA8184FMATEL	IC, SOUND PROCESSOR		Q312	BA1L4MTA	TRANSISTOR	[M]
IC702	BU2040F-E2	IC, I/O EXPANDER	[M]	Q313	2SC2785FTA	TRANSISTOR	
IC971	DN6851ALB	IC, HALL	(DECK)	Q317	BN1L3NTA	TRANSISTOR	
				Q501	2SC2001KTA	TRANSISTOR	
		IC PROTECTORS		Q502	2SB621RTA	TRANSISTOR	
				Q503	2SB1030RTA	TRANSISTOR	
ICP501	SRUN5T	IC PROTECTOR	△	Q504	BA1A4MTA	TRANSISTOR	
ICP502	SRUN15T	IC PROTECTOR	△	Q505	BA1A4MTA	TRANSISTOR	
				Q507	BN1L3NTA	TRANSISTOR	
		TRANSISTORS		Q508	2SC2785FTA	TRANSISTOR	
				Q509	2SC2785FTA	TRANSISTOR	
Q1	2SC2785FTA	TRANSISTOR		Q510	BA1A3QTA	TRANSISTOR	
Q2	2SC2785FTA	TRANSISTOR		Q511	BN1L3NTA	TRANSISTOR	
Q3	2SC2787FL1TA	TRANSISTOR		Q512	BA1L4MTA	TRANSISTOR	[M]
Q4	2SC2787LTA	TRANSISTOR		Q513	BN1A4MTA	TRANSISTOR	
Q5	BN1L3NTA	TRANSISTOR	[M]	Q514	2SC2785FTA	TRANSISTOR	
Q6	2SJ40CDTA	TRANSISTOR		Q516	2SD2037ETA	TRANSISTOR	[M] △
Q7	2SJ40CDTA	TRANSISTOR		Q517	BN1A4MTA	TRANSISTOR	
Q8	2SD1020HTA	TRANSISTOR	[M]	Q701	2SC1684HRTA	TRANSISTOR	
Q9	BN1A4ZTA	TRANSISTOR	[M]	Q702	2SC2785FTA	TRANSISTOR	
Q10	BA1A4MTA	TRANSISTOR	[M]	Q801	BA1L4MTA	TRANSISTOR	
Q11	2SA1175FTA	TRANSISTOR	[M]				
Q13	2SC2785FTA	TRANSISTOR				DIODES	
Q14	BN1L3NTA	TRANSISTOR					
Q16	2SD1020HTA	TRANSISTOR		D1	KV1360NT	DIODE	
Q17	BA1L4ZTA	TRANSISTOR	[M]	D2	RVDMTZ7R5BTA	DIODE	
Q101	2SJ40CDTA	TRANSISTOR		D3	KV1581A3	DIODE	
Q102	2SJ40CDTA	TRANSISTOR		D4	KV1360NT	DIODE	
Q105	2SJ40CDTA	TRANSISTOR		D5	RVDMTZJ5R1C	DIODE	[M]
Q131	2SC2785FTA	TRANSISTOR		D6	RVD1SS133TA	DIODE	
Q152	2SD1020HTA	TRANSISTOR		D301	RVD1SS133TA	DIODE	
Q153	2SD1020HTA	TRANSISTOR		D302	RVDMTZ4R7BTA	DIODE	
Q201	2SJ40CDTA	TRANSISTOR		D303	RVD1SS133TA	DIODE	

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
D501	RVD1SS133TA	DIODE		S807	EVQ21405R	SW, PLAY	
D502	RVD1SS133TA	DIODE		S808	EVQ21405R	SW, STOP	
D503	RVD1SS133TA	DIODE		S809	EVQ21405R	SW, SET	
D504	RVD1SS133TA	DIODE		S810	EVQ21405R	SW, MEM/ADJ	
D505	RVD1SS133TA	DIODE		S811	EVQ21405R	SW, CHECK	
D507	RVD1SS133TA	DIODE		S812	EVQ21405R	SW, SKIP/TUNING/TIME (-)	
D508	RVDMTZ6R8BTA	DIODE		S813	EVQ21405R	SW, SKIP/TUNING/TIME (+)	
D509	RVDMTZ6R8BTA	DIODE		S814	EVQ21405R	SW, VOL (-)	
D510	RVDMTZJ5R1B	DIODE	[M]	S815	EVQ21405R	SW, VOL (+)	
D511	RVD1SS133TA	DIODE		S816	EVQ21405R	SW, EQUALIZER	
D512	RVD1SS133TA	DIODE		S817	EVQ21405R	SW, STOP / CLEAR	
D514	RVD1SS133TA	DIODE		S818	EVQ21405R	SW, PLAY / PAUSE	
D516	RVD1SS133TA	DIODE		S819	EVQ21405R	SW, BAND	
D517	LN063608P	DIODE	[M]	S820	EVQ21405R	SW, PRESET TUNING	
D518	RVDMTZ16CTA	DIODE	[M]	S821	EVQ21405R	SW, SLEEP	
D520	RVD1SS133TA	DIODE		S822	EVQ21405R	SW, POWER	
D521	RVDMTZ5R6BTA	DIODE		S901	RJJ1SE01-H	SW, AC IN (JACK SW)	⚠
D522	RVDMTZJ6R2B	DIODE	[M]	S971	RSH1A89ZD-U	SW, MODE DETECT	
D523	RVD1SS133TA	DIODE		S972	RSH1A90YD-U	SW, TAPE DETECT	
D801	SLR33VC160	DIODE	[M]	S973	RSH1A90YD-U	SW, TAB DETECT	
D901	1N5402BM21	DIODE	⚠	S974	RSH1A90YD-U	SW, TAB DETECT	
D902	1N5402BM21	DIODE	⚠	S975	RSH1A90YD-U	SW, CrO ₂ DETECT	
D903	1N5402BM21	DIODE	⚠				
D904	1N5402BM21	DIODE	⚠			FUSE HOLDERS	
D905	RVD1SS133TA	DIODE					
D971	RVD1SS133TA	DIODE	(DECK)	FH901	EYF52BC	FUSE HOLDER	
				FH902	EYF52BC	FUSE HOLDER	
		VARIABLE RESISTORS					
						CONNECTORS	
VR101	RVNCC14B1T-A	VR, PB GAIN (L)		CN504	RJS1A5209	CONNECTOR (9P)	[M]
VR201	RVNCC14B1T-A	VR, PB GAIN (R)		CP1	RJP7G18ZA	CONNECTOR (7P)	
VR301	RVNCC73B1T-A	VR, TAPE SPEED		CP2	RJP8G18ZA	CONNECTOR (8P)	
				CP301	RJP5G18ZA	CONNECTOR (5P)	
		VARIABLE CAPACITORS		CP302	RJP10G18ZA	CONNECTOR (10P)	
				CP303	RJP9G18ZA	CONNECTOR (9P)	
CT1	RCV10AF1T-S	TRIMMER CAPACITOR		CP901	RJP4G9YA	CONNECTOR (4P)	
CT2	ECRLA020E53R	TRIMMER CAPACITOR		CP502	RJP11G18ZA	CONNECTOR (11P)	
				CS702	RJS1A6823	FFC CONNECTOR	
		SWITCHES					
						JACKS	
S501	RSH1A012-U	SW, CD LOADING					
S502	RSH1A012-U	SW, CD CLOSE		JK501	RJF1098YA-H	JACK, SPEAKER	[M]
S801	EVQ21405R	SW, DOLBY		JK502	RJF1098YA-H	JACK, SPEAKER	[M]
S802	EVQ21405R	SW, COUNTER RESET		JK701	RJJ3BT01-1H	JACK, HP	[M]
S803	EVQ21405R	SW, REC PAUSE		JK702	RJJ37TK01-C	JACK, MIC	[M]
S804	EVQ21405R	SW, CD REC		JK901	RJJ1SE01-H	JACK, AC IN	⚠
S805	EVQ21405R	SW, TAPE FF					
S806	EVQ21405R	SW, TAPE REW					

Ref No.	Part No.	Part Name & Description	Remarks
		COILS & TRANSFORMERS	
L2	RLV6C006-0Z	AM FANT	[M]
L3	R02B007-T	MW OSC COIL	
L5	RLQZP8R2JT-Y	AXIAL COIL	
L6	RLQA101JT-D	AXIAL COIL	[M]
L8	RLQZP4R7KT-Y	AXIAL COIL	
L9	RLQZPR47KT-Y	AXIAL COIL	
L10	RLQZP4R7KT-Y	AXIAL COIL	
L11	RL01B003-T	LW OSC COIL	
L101	RLM2B005-1M	COIL	
L201	RLM2B005-1M	COIL	
L301	RL08C002M-T	BIAS OSC COIL	
L302	RLQZB470KT-D	COIL	
L303	RLQZB470KT-D	COIL	
L505	RLQZP100KT-Y	COIL	
L506	RLQZP100KT-Y	COIL	
L510	RLQA2R2JT-D	COIL	[M]
L519	RLQZP100KT-Y	COIL	
L520	RLQA101JT-D	COIL	
L522	RLQA2R2JT-D	COIL	
L523	RLQA2R2JT-D	COIL	
L524	RLQA2R2JT-D	COIL	
L525	RLQA2R2JT-D	COIL	
L527	RLQA2R2JT-D	COIL	
L529	RLQZPR47KT-Y	COIL	
L530	RLQA2R2JT-D	COIL	
L531	RLQA101JT-D	COIL	
L532	RLQA2R2JT-D	COIL	
L533	RLQZPR47KT-Y	COIL	
L534	RLQZP221KT-Y	COIL	
L801	RLQA2R2JT-D	COIL	
L802	RLQA101JT-D	COIL	
L901	RLQZB470KT-D	COIL	⚠
L902	RLQZB470KT-D	COIL	⚠
T1	RLI2Z012-T	AM IFT	
T2	RLI4B018-T	FM DET COIL	
T901	RTPIL1B006-X	POWER TRANSFORMER	[M] ⚠
		COMPONENT COMBINATIONS	
Z1	RCRBMT002-H	BPF	
Z501	RSL5108-L	LCD	[M]
Z801	RCDGP1U58XD	REMO-CON SENSOR	

Ref No.	Part No.	Part Name & Description	Remarks
		CERAMIC FILTERS	
CF1	RLFFETWLA02D	FM IF CF	
CF2	RLFFETWLA02D	FM IF CF	
		OSCILLATORS	
X1	RSXZ456KM01	CERAROCK	
X2	RSXC7M20S04T	XTAL 7.2MHZ	
X502	RSXZ4M19M01T	4.19MHZ CERALOCK	
X503	RSXD32K7S02	32.7KHZ CRYSTAL	[M]
		FUSES	
F901	XBA2C40TB0	FUSE	⚠
		PACKING MATERIALS	
P1	RPGX0145	GIFT BOX	[M]/(EB)
P1	RPGX0146	GIFT BOX	[M]/(EG)
P2	RPNX0042	POLYFOAM	[M]
P3	RPH3SZA	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	RQT2497-B	INSTRUCTION MANUAL	[M]/(EB)
A1	RFKSXE300EGK	INST. MANUAL ASS'Y	[M]/(EG)
A2	RJA0019-2K	AC CORD	(EG)/(SF) ⚠
A2	VJA0733	AC CORD	⚠ (SF)/(VRD)/(EB)
A3	EUR642195	REMO-CON UNIT	[M]

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		< SERVO P.C.B. >				SWITCH	
		INTEGRATED CIRCUITS		S701	RSM0006-P	SW, RESET	
IC701	AN8802SCE1V	IC, HEADAMP				CONNECTORS	
IC702	MN66271RA	IC, DIGITAL LSI		CN701	RJU035T016-1	16 PIN FFC CONNECTOR	
IC703	AN8389SE1	IC, 4-CH DRIVER		CN702	RJS1A6723-1Q	23 PIN FFC CONNCETOR	
		TRANSISTOR				TEST JUMPERS	
Q701	2SB709S	TRANSISTOR		TJ701	EYF8CU	TEST JUMPER	
		OSCILLATOR		TJ702	EYF8CU	TEST JUMPER	
X701	RSXZ16M9M02T	CERAMIC OSC					

RESISTORS & CAPACITORS

Notes : * Capacitor values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF) F=Farads
 * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
	RESISTORS		R28	ERDS2TJ103T	10K 1/4W	R109	ERDS2TJ122T	1.2K 1/4W
			R29	ERDS2TJ331T	330 1/4W	R110	ERDS2TJ682T	6.8K 1/4W
			R30	ERDS2TJ183T	18K 1/4W	R111	ERDS2TJ222T	2.2K 1/4W
R1	ERDS2TJ104T	100K 1/4W	R31	ERDS2TJ333T	33K 1/4W	R112	ERDS2TJ393T	39K 1/4W
R2	ERDS2TJ152T	1.5K 1/4W	R32	ERDS2TJ332T	3.3K 1/4W	R113	ERDS2TJ104T	100K 1/4W
R3	ERDS2TJ104T	100K 1/4W	R34	ERDS2TJ223T	22K 1/4W	R114	ERDS2TJ471T	470 1/4W
R4	ERDS2TJ103T	10K 1/4W	R35	ERDS2TJ390T	39 1/4W	R131	ERDS2TJ333T	33K 1/4W
R5	ERDS2TJ104T	100K 1/4W	R36	ERDS2TJ104T	100K 1/4W	R132	ERDS2TJ152T	1.5K 1/4W
R6	ERDS2TJ102T	1K 1/4W	R37	ERDS2TJ153T	15K 1/4W	R132	ERDS2TJ272T	2.7K 1/4W
R7	ERDS2TJ330T	33 1/4W	R38	ERDS2TJ104T	100K 1/4W	R133	ERDS2TJ334T	330K 1/4W
R8	ERDS2TJ332T	3.3K 1/4W	R39	ERDS2TJ563T	56K 1/4W	R134	ERDS2TJ471T	470 1/4W
R9	ERDS2TJ102T	1K 1/4W	R40	ERDS2TJ221T	220 1/4W	R136	ERDS2TJ151T	150 1/4W
R10	ERDS2TJ101T	100 1/4W	R41	ERDS2TJ561T	560 1/4W	R137	ERDS2TJ151T	150 1/4W
R11	ERDS2TJ151T	150 1/4W	R42	ERDS2TJ222T	2.2K 1/4W	R151	ERDS2TJ333T	33K 1/4W
R12	ERDS2TJ103T	10K 1/4W	R43	ERDS2TJ222T	2.2K 1/4W	R152	ERDS2TJ333T	33K 1/4W
R13	ERDS2TJ104T	100K 1/4W	R44	ERDS2TJ222T	2.2K 1/4W	R153	ERDS2TJ103T	10K 1/4W
R14	ERDS2TJ471T	470 1/4W	R45	ERDS2TJ105T	1M 1/4W	R154	ERDS2TJ823T	82K 1/4W
R15	ERDS2TJ102T	1K 1/4W	R48	ERDS2TJ390T	39 1/4W	R155	ERDS2TJ183T	18K 1/4W
R16	ERDS2TJ102T	1K 1/4W	R51	ERDS2TJ104T	100K 1/4W	R156	ERDS2TJ103T	10K 1/4W
R17	ERDS2TJ334T	330K 1/4W	R52	ERDS2TJ103T	10K 1/4W	R157	ERDS2TJ153T	15K 1/4W
R18	ERDS2TJ331T	330 1/4W	R53	ERDS2TJ104T	100K 1/4W	R158	ERDS2TJ393T	39K 1/4W
R20	ERDS2TJ103T	10K 1/4W	R59	ERDS2TJ103T	10K 1/4W	R160	ERDS2TJ183T	18K 1/4W
R21	ERDS2TJ103T	10K 1/4W	R101	ERDS2TJ104T	100K 1/4W	R161	ERDS2TJ4R7T	4.7 1/4W
R22	ERDS2TJ334T	330K 1/4W	R102	ERDS2TJ682T	6.8K 1/4W	R162	ERDS2TJ332T	3.3K 1/4W
R23	ERDS2TJ272T	2.7K 1/4W	R103	ERDS2TJ101T	100 1/4W	R163	ERDS2TJ2R7T	2.7 1/4W
R24	ERDS2TJ103T	10K 1/4W	R104	ERDS2TJ392T	3.9K 1/4W	R164	ERDS2TJ682T	6.8K 1/4W
R25	ERDS2TJ103T	10K 1/4W	R105	ERDS2TJ682T	6.8K 1/4W	R168	ERDS2TJ123T	12K 1/4W
R26	ERDS2TJ103T	10K 1/4W	R107	ERDS2TJ272T	2.7K 1/4W	R169	ERDS2TJ563T	56K 1/4W
R27	ERDS2TJ103T	10K 1/4W	R108	ERDS2TJ103T	10K 1/4W	R171	ERDS2TJ183T	18K 1/4W

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R201	ERDS2TJ104T	100K 1/4W	R318	ERDS2TJ103T	10K 1/4W	R529	ERDS2TJ124T	120K 1/4W
R202	ERDS2TJ682T	6.8K 1/4W	R319	ERDS2TJ472T	4.7K 1/4W	R530	ERDS2TJ102T	1K 1/4W
R203	ERDS2TJ101T	100 1/4W	R320	ERDS2TJ103T	10K 1/4W	R531	ERDS2TJ102T	1K 1/4W
R204	ERDS2TJ392T	3.9K 1/4W	R321	ERDS2TJ103T	10K 1/4W	R532	ERDS2TJ102T	1K 1/4W
R205	ERDS2TJ682T	6.8K 1/4W	R322	ERDS2TJ222T	2.2K 1/4W	R536	ERDS2TJ222T	2.2K 1/4W
R207	ERDS2TJ272T	2.7K 1/4W	R324	ERDS2TJ102T	1K 1/4W	R537	ERDS2TJ222T	2.2K 1/4W
R208	ERDS2TJ103T	10K 1/4W	R325	ERS2TJ103T	10K 1/4W	R538	ERDS2TJ333T	33K 1/4W
R209	ERDS2TJ122T	1.2K 1/4W	R327	ERDS2TJ182T	1.8K 1/4W	R539	ERDS2TJ104T	100K 1/4W
R210	ERDS2TJ682T	6.8K 1/4W	R328	ERDS2TJ183T	18K 1/4W	R540	ERDS2TJ104T	100K 1/4W
R211	ERDS2TJ222T	2.2K 1/4W	R329	ERDS2TJ103T	10K 1/4W	R541	ERDS2TJ104T	100K 1/4W
R212	ERDS2TJ393T	39K 1/4W	R330	ERDS2TJ123T	12K 1/4W	R542	ERDS2TJ393T	39K 1/4W
R213	ERDS2TJ104T	100K 1/4W	R331	ERDS2TJ563T	56K 1/4W	R544	ERDS2TJ103T	10K 1/4W
R214	ERDS2TJ471T	470 1/4W	R333	ERDS2TJ472T	4.7K 1/4W	R545	ERDS2TJ562T	5.6K 1/4W
R231	ERDS2TJ333T	33K 1/4W	R334	ERDS2TJ273T	27K 1/4W	R546	ERDS2TJ1R5T	1.5 1/4W
R232	ERDS2TJ152T	1.5K 1/4W	R335	ERDS2TJ273T	27K 1/4W	R547	ERDS2TJ183T	18K 1/4W
R232	ERDS2TJ272T	2.7K 1/4W	R336	ERDS2TJ103T	10K 1/4W	R548	ERDS2TJ332T	3.3K 1/4W
R233	ERDS2TJ334T	330K 1/4W	R337	ERDS2TJ105T	1M 1/4W	R549	ERDS2TJ273T	27K 1/4W
R234	ERDS2TJ471T	470 1/4W	R338	ERDS2TJ123T	12K 1/4W	R550	ERDS2TJ101T	100 1/4W
R236	ERDS2TJ151T	150 1/4W	R339	ERDS2TJ102T	1K 1/4W	R554	ERDS2TJ221T	220 1/4W
R237	ERDS2TJ151T	150 1/4W	R340	ERDS2TJ103T	10K 1/4W	R555	ERDS2TJ560T	56 1/4W
R251	ERDS2TJ333T	33K 1/4W	R341	ERDS2TJ103T	10K 1/4W	R556	ERDS2TJ122T	1.2K 1/4W
R252	ERDS2TJ333T	33K 1/4W	R344	ERDS2TJ822T	8.2K 1/4W	R562	ERDS2TJ103T	10K 1/4W
R253	ERDS2TJ103T	10K 1/4W	R345	ERDS2TJ123T	12K 1/4W	R564	ERDS2TG562T	5.6K 1/4W
R254	ERDS2TJ823T	82K 1/4W	R346	ERDS2TJ684T	680K 1/4W	R565	ERDS2TG683T	68K 1/4W
R255	ERDS2TJ183T	18K 1/4W	R347	ERDS2TJ155T	1.5M 1/4W	R567	ERDS2TJ394T	390K 1/4W
R256	ERDS2TJ103T	10K 1/4W	R348	ERDS2TJ474T	470K 1/4W	R569	ERDS2TJ221T	220 1/4W
R257	ERDS2TJ153T	15K 1/4W	R501	ERDS2TJ681T	680 1/4W	R573	ERDS2TJ472T	4.7K 1/4W
R258	ERDS2TJ393T	39K 1/4W	R502	ERDS2TJ331T	330 1/4W	R574	ERDS2TJ333T	33K 1/4W
R260	ERDS2TJ183T	18K 1/4W	R503	ERDS2TJ680T	68 1/4W	R575	ERDS2TJ222T	2.2K 1/4W
R261	ERDS2TJ4R7T	4.7 1/4W	R504	ERDS2TJ102T	1K 1/4W	R577	ERDS2TJ123T	12K 1/4W
R262	ERDS2TJ332T	3.3K 1/4W	R505	ERDS2TJ273T	27K 1/4W	R578	RDS2TJ272T	2.7K 1/4W
R263	ERDS2TJ2R7T	2.7 1/4W	R506	ERDS2TJ273T	27K 1/4W	R580	ERDS2TJ103T	10K 1/4W
R264	ERDS2TJ682T	6.8K 1/4W	R507	ERDS2TJ471T	470 1/4W	R581	ERDS2TJ102T	1K 1/4W
R268	ERDS2TJ123T	12K 1/4W	R508	ERDS2TJ563T	56K 1/4W	R581	ERDS2TJ103T	10K 1/4W
R269	ERDS2TJ563T	56K 1/4W	R509	ERDS2TJ102T	1K 1/4W	R582	ERDS2TJ103T	10K 1/4W
R271	ERDS2TJ183T	18K 1/4W	R510	ERDS2TJ474T	470K 1/4W	R583	ERDS2TJ103T	10K 1/4W
R301	ERDS2TJ334T	330K 1/4W	R511	ERDS2TJ153T	15K 1/4W	R584	ERDS2TJ103T	10K 1/4W
R302	ERDS2TJ222T	2.2K 1/4W	R512	ERDS2TJ683T	68K 1/4W	R586	ERDS2TJ222T	2.2K 1/4W
R303	ERDS2TJ103T	10K 1/4W	R513	ERDS2TJ331T	330 1/4W	R587	ERDS2TJ103T	10K 1/4W
R304	ERDS2TJ182T	1.8K 1/4W	R514	ERDS2TJ222T	2.2K 1/4W	R588	ERDS2TJ103T	10K 1/4W
R305	ERDS2TJ182T	1.8K 1/4W	R515	ERDS2TJ102T	1K 1/4W	R589	ERDS2TJ103T	10K 1/4W
R306	ERDS2TJ182T	1.8K 1/4W	R516	ERDS2TJ102T	1K 1/4W	R590	ERDS2TJ103T	10K 1/4W
R307	ERDS2TJ104T	100K 1/4W	R517	ERDS2TJ102T	1K 1/4W	R591	ERDS2TJ821T	820 1/4W
R308	ERDS2TJ2R7T	2.7 1/4W	R518	ERDS2TJ102T	1K 1/4W	R701	ERDS2TJ273T	27K 1/4W
R309	ERDS2TJ123T	12K 1/4W	R519	ERDS2TJ104T	100K 1/4W	R702	ERDS2TJ273T	27K 1/4W
R310	ERDS2TJ103T	10K 1/4W	R520	ERDS2TJ102T	1K 1/4W	R703	ERDS2TJ222T	2.2K 1/4W
R311	ERDS2TJ4R7T	4.7 1/4W	R521	ERDS2TJ103T	10K 1/4W	R704	ERDS2TJ473T	47K 1/4W
R312	ERDS2TJ682T	6.8K 1/4W	R523	ERDS2TJ472T	4.7K 1/4W	R705	ERDS2TJ473T	47K 1/4W
R313	ERDS2TJ472T	4.7K 1/4W	R524	ERDS2TJ472T	4.7K 1/4W	R706	ERDS2TJ473T	47K 1/4W
R314	ERDS2TJ332T	3.3K 1/4W	R525	ERDS2TJ105T	1M 1/4W	R708	ERDS2TJ221T	220 1/4W
R315	ERDS2TJ472T	4.7K 1/4W	R526	ERDS2TJ681T	680 1/4W	R710	ERDS2TJ124T	120K 1/4W
R316	ERDS2TJ222T	2.2K 1/4W	R527	ERDS2TJ106T	10M 1/4W	R711	ERDS2TJ333T	33K 1/4W
R317	ERDS2TJ272T	2.7K 1/4W	R528	ERDS2TJ334T	330K 1/4W	R713	ERDS2TJ154T	150K 1/4W

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R714	ERDS2TJ155T	1.5M 1/4W	C16	ECBT1H6R8KC5	6.8P 50V	C105	ECEA1EKA4R7B	4.7 25V
R715	ERDS2TJ224T	220K 1/4W	C17	ECBT1H2R2KC5	2.2P 50V	C106	ECEA1EKA4R7B	4.7 25V
R716	RDS2TJ394T	390K 1/4W	C18	ECFR1C473MR	0.047 16V	C107	ECEA1EKA4R7B	4.7 25V
R717	ERDS2TJ124T	120K 1/4W	C19	ECBT1H680J5	68P 50V	C108	ECBT1H331KB5	330P 50V
R718	ERDS2TJ223T	22K 1/4W	C20	ECBT1H1R5MC5	1.5P 50V	C109	ECEA1EKA4R7B	4.7 25V
R719	ERDS2TJ823T	82K 1/4W	C21	ECBT1H102KB5	1000P 50V	C110	ECEA1EKA4R7B	4.7 25V
R720	ERDS2TJ823T	82K 1/4W	C22	ECBT1H102KB5	1000P 50V	C111	ECFR1C104KR	0.1 16V
R721	ERDS2TJ153T	15K 1/4W	C23	ECBT1H331KB5	330P 50V	C112	ECEA1EKA4R7B	4.7 25V
R722	ERDS2TJ822T	8.2K 1/4W	C24	ECBT1C103MS5	0.01 16V	C113	ECEA1HKA010B	1 50V
R723	ERDS2TJ180T	18 1/4W	C25	ECBT1H102KB5	1000P 50V	C114	ECEA1EKA4R7B	4.7 25V
R724	ERDS2TJ334T	330K 1/4W	C26	ECBT1H270J5	27P 50V	C115	ECEA1EKA4R7B	4.7 25V
R725	ERDS2TJ182T	1.8K 1/4W	C27	ECBT1H300J5	30P 50V	C116	CBT1C682MR5	6800P 16V
R726	ERDS2TJ101T	100 1/4W	C28	ECEA1AU101B	100 10V	C117	ECEA1EKA4R7B	4.7 25V
R727	ERDS2TJ103T	10K 1/4W	C29	ECBT1H102KB5	1000P 50V	C119	ECBT1H681KB5	680P 50V
R728	ERDS2TJ124T	120K 1/4W	C31	ECBT1H471KB5	470P 50V	C121	ECBT1H102KB5	1000P 50V
R801	ERDS2TJ152T	1.5K 1/4W	C32	ECBT1H180JC5	18P 50V	C131	ECEA1HKA010B	1 50V
R802	ERDS2TJ222T	2.2K 1/4W	C35	ECBT1H101KB5	100P 50V	C132	ECBT1C562MR5	5600P 16V
R803	ERDS2TJ272T	2.7K 1/4W	C36	ECBT1H102KB5	1000P 50V	C133	ECEA1HKAR68B	0.68 50V
R804	ERDS2TJ392T	3.9K 1/4W	C38	ECEA0JU101B	100 6.3V	C134	ECEA1CKA100B	10 16V
R805	ERDS2TJ562T	5.6K 1/4W	C39	ECBT1H101KB5	100P 50V	C135	ECEA1HKAR47B	0.47 50V
R806	ERDS2TJ822T	8.2K 1/4W	C40	ECFR1C223MR	0.022 16V	C136	ECFR1C473MR	0.047 16V
R807	ERDS2TJ153T	15K 1/4W	C41	ECBT1H102KB5	1000P 50V	C137	ECBT1H102KB5	1000P 50V
R808	ERDS2TJ153T	15K 1/4W	C42	ECEA1HKA010B	1 50V	C151	ECBT1H102KB5	1000P 50V
R809	ERDS2TJ822T	8.2K 1/4W	C43	ECEA0JU101B	100 6.3V	C152	ECEA1CKA101B	100 16V
R810	ERDS2TJ562T	5.6K 1/4W	C44	ECFR1C473MR	0.047 16V	C153	ECEA1AKA101B	100 10V
R811	ERDS2TJ392T	3.9K 1/4W	C45	ECFR1C103MR	0.01 16V	C154	ECEA1AU222B	2200 10V
R812	ERDS2TJ272T	2.7K 1/4W	C46	ECEA1CKA100B	10 16V	C155	ECQV1H224JZ3	0.22 50V
R813	ERDS2TJ222T	2.2K 1/4W	C47	ECBT1C332MR5	3300P 16V	C156	ECEA1HKAR33B	0.33 50V
R814	ERDS2TJ152T	1.5K 1/4W	C48	ECBT1H681KB5	680P 50V	C157	ECEA1CKA101B	100 16V
R815	ERDS2TJ152T	1.5K 1/4W	C49	ECEA1HKA010B	1 50V	C158	ECEA1AKA470B	47 10V
R816	ERDS2TJ222T	2.2K 1/4W	C50	ECFR1C153MR	0.015 16V	C159	ECQV1H104JZ3	0.1 50V
R817	ERDS2TJ272T	2.7K 1/4W	C51	ECFR1C153MR	0.015 16V	C161	ECBT1H471KB5	470P 50V
R819	ERDS2TJ102T	1K 1/4W	C52	ECEA1HKA2R2B	2.2 50V	C162	ECEA1HKA010B	1 50V
R833	ERDS2TJ153T	15K 1/4W	C53	ECEA1HKA010B	1 50V	C163	ECFR1C104KR	0.1 16V
R834	ERDS2TJ153T	15K 1/4W	C54	ECEA1HKA010B	1 50V	C166	ECQV1H154JZ3	0.15 50V
R835	ERDS2TJ153T	15K 1/4W	C55	ECBT0J153MS5	0.015 6.3V	C167	ECEA1AKA101B	100 10V
R901	ERDS2TJ471T	470 1/4W	C56	ECFR1C223MR	0.022 16V	C169	ECEA1HKA010B	1 50V
			C57	ECBT1H102KB5	1000P 50V	C201	ECBT1H331KB5	330P 50V
	CAPACITORS		C58	ECBT1H331KB5	330P 50V	C202	ECBT1H681KB5	680P 50V
			C59	ECBT1H471KB5	470P 50V	C203	ECFR1C183KR	0.018 16V
C1	ECBT1H4R7KC5	4.7P 50V	C61	ECBT1C103MS5	0.01 16V	C204	ECEA0JKA470B	47 6.3V
C2	ECBT1H102KB5	1000P 50V	C63	ECBT1H102KB5	1000P 50V	C205	ECEA1EKA4R7B	4.7 25V
C3	ECBT1C332MR5	3300P 16V	C65	ECBT1H120JC5	12P 50V	C206	ECEA1EKA4R7B	4.7 25V
C4	ECEA1HN010SB	1 50V	C67	ECBT1H102KB5	1000P 50V	C207	ECEA1EKA4R7B	4.7 25V
C5	ECBT1C103MS5	0.01 16V	C70	ECBT1H331KB5	330P 50V	C208	ECBT1H331KB5	330P 50V
C6	ECBT1H102KB5	1000P 50V	C79	ECBT1C103MS5	0.01 16V	C209	ECEA1EKA4R7B	4.7 25V
C8	ECBT1H102KB5	1000P 50V	C91	ECBT1H102KB5	1000P 50V	C210	ECEA1EKA4R7B	4.7 25V
C9	ECEA1AU101B	100 10V	C92	ECBT1C103MS5	0.01 16V	C211	ECFR1C104KR	0.1 16V
C10	ECBT1H6R8KC5	6.8P 50V	C93	ECBT1H102KB5	1000P 50V	C212	ECEA1EKA4R7B	4.7 25V
C12	ECBT1H102KB5	1000P 50V	C101	ECBT1H331KB5	330P 50V	C213	ECEA1HKA010B	1 50V
C13	ECBT1H102KB5	1000P 50V	C102	ECBT1H681KB5	680P 50V	C214	ECEA1EKA4R7B	4.7 25V
C14	ECBT1H180JC5	18P 50V	C103	ECFR1C183KR	0.018 16V	C215	ECEA1EKA4R7B	4.7 25V
C15	ECBT1H4R7KC5	4.7P 50V	C104	ECEA0JKA470B	47 6.3V	C216	ECBT1C682MR5	6800P 16V

Ref. No.	Part No.	Values & Remarks
C217	ECEA1EKA4R7B	4.7 25V
C219	ECBT1H681KB5	680P 50V
C221	CBT1H102KB5	1000P 50V
C231	ECEA1HKA010B	1 50V
C232	ECBT1C562MR5	5600P 16V
C233	ECEA1HKAR68B	0.68 50V
C234	ECEA1CKA100B	10 16V
C235	ECEA1HKAR47B	0.47 50V
C236	ECFR1C473MR	0.047 16V
C237	ECBT1H102KB5	1000P 50V
C251	ECBT1H102KB5	1000P 50V
C252	ECEA1CKA101B	100 16V
C253	ECEA1AKA101B	100 10V
C254	ECEA1AU222B	2200 10V
C255	ECQV1H224JZ3	0.22 50V
C256	ECEA1HKAR33B	0.33 50V
C257	ECEA1CKA101B	100 16V
C258	ECEA1AKA470B	47 10V
C259	ECQV1H104JZ3	0.1 50V
C261	ECBT1H471KB5	470P 50V
C262	ECEA1HKA010B	1 50V
C263	ECFR1C104KR	0.1 16V
C266	ECQV1H154JZ3	0.15 50V
C267	ECEA1AKA101B	100 10V
C269	ECEA1HKA010B	1 50V
C301	ECEA2AN2R2SB	2.2 100V
C302	ECBT1C103MS5	0.01 16V
C303	ECBT1C103MS5	0.01 16V
C304	ECQP1102JZT	1000P 100V
C305	ECQP1102JZT	1000P 100V
C306	ECQP1392JZ3	3900P 100V
C307	ECEA1HKA010B	1 50V
C308	ECEA1AKA101B	100 10V
C309	ECQV1H473JZ3	0.047 50V
C310	ECBT1H102KB5	1000P 50V
C311	ECBT1H102KB5	1000P 50V
C312	ECBT1H102KB5	1000P 50V
C313	ECBT1H102KB5	1000P 50V
C314	ECBT1C103MS5	0.01 16V
C315	ECEA1EU101B	100 25V
C316	ECEA0JKA470B	47 6.3V
C317	ECEA0JKA470B	47 6.3V
C318	ECEA1AKA101B	100 10V
C319	ECEA1AKA101B	100 10V
C322	ECEA0JKA101B	100 6.3V
C323	ECEA1EKA4R7B	4.7 25V
C324	ECBT1H104ZF5	0.1 50V
C325	ECBT0J223MS5	0.022 6.3V
C326	ECBT1H104ZF5	0.1 50V
C501	ECBT1H102KB5	1000P 50V
C503	ECBT1H331KB5	330P 50V
C504	ECBT1H331KB5	330P 50V
C505	ECBT1H331KB5	330P 50V

Ref. No.	Part No.	Values & Remarks
C507	ECBT1H104ZF5	0.1 50V
C509	ECEA0JKA221B	220 6.3V
C511	ECEA0JKA221B	220 6.3V
C512	ECBT1H102KB5	1000P 50V
C513	ECBT1H102KB5	1000P 50V
C515	ECBT1H680J5	68P 50V
C516	ECBT1H470J5	47P 50V
C517	ECBT1H220JC5	22P 50V
C518	ECBT1H220JC5	22P 50V
C519	ECBT1H680J5	68P 50V
C520	ECBT1H680J5	68P 50V
C524	ECEA1EKA4R7B	4.7 25V
C525	ECBT1C103MS5	0.01 16V
C526	ECEA0JKA221B	220 6.3V
C527	ECBT1H471KB5	470P 50V
C529	ECEA1CU100B	10 16V
C530	ECEA1EU101B	100 25V
C531	CEA0JU221B	220 6.3V
C532	ECEA1EU470B	47 25V
C533	ECEA1EU470B	47 25V
C534	ECEA1AU101B	100 10V
C536	ECBT1H102KB5	1000P 50V
C538	ECA1EM472B	4700 25V
C540	ECEA1AKA220B	22 10V
C541	ECEA1CKA100B	10 16V
C543	ECBT1H102KB5	1000P 50V
C544	ECBT1H471KB5	470P 50V
C545	ECEA1EU101B	100 25V
C546	ECBT1C103MS5	0.01 16V
C548	ECEA1EU221B	220 25V
C549	ECBT1H102KB5	1000P 50V
C550	ECBT1H330J5	33P 50V
C551	ECBT1H102KB5	1000P 50V
C552	ECBT1H331KB5	330P 50V
C553	ECBT1H331KB5	330P 50V
C557	ECBT1H102KB5	1000P 50V
C558	ECBT1H102KB5	1000P 50V
C562	ECBT1C103MS5	0.01 16V
C565	ECBT1H102KB5	1000P 50V
C567	ECBT1H102KB5	1000P 50V
C569	ECEA1EKA4R7B	4.7 25V
C570	ECBT1H102KB5	1000P 50V
C571	ECEA1EKA4R7B	4.7 25V
C573	ECBT1H331KB5	330P 50V
C574	ECBT1C103MS5	0.01 16V
C575	ECBT1C103MS5	0.01 16V
C576	ECBT1H331KB5	330P 50V
C577	ECBT1H102KB5	1000P 50V
C579	ECBT1H331KB5	330P 50V
C580	ECBT1H331KB5	330P 50V
C581	ECBT1H102KB5	1000P 50V
C582	ECBT1H102KB5	1000P 50V
C583	ECBT1H102KB5	1000P 50V

Ref. No.	Part No.	Values & Remarks
C584	ECBT1H102KB5	1000P 50V
C585	ECBT1H102KB5	1000P 50V
C589	ECBT1H102KB5	1000P 50V
C591	ECBT1H331KB5	330P 50V
C592	ECEA0JKA221B	220 6.3V
C594	ECBT1C103MS5	0.01 16V
C595	ECBT1H102KB5	1000P 50V
C596	ECBT1H331KB5	330P 50V
C597	ECBT1H331KB5	330P 50V
C598	ECBT1H331KB5	330P 50V
C599	ECBT1H102KB5	1000P 50V
C701	ECEA1AKA470B	47 10V
C702	ECEA1EKA4R7B	4.7 25V
C703	ECFR1C473MR	0.047 16V
C704	ECBT1H102KB5	1000P 50V
C705	ECEA1AKA101B	100 10V
C706	ECEA1HKA010B	1 50V
C707	ECBT1H102KB5	1000P 50V
C708	ECEA1HKA010B	1 50V
C709	ECEA1AKA101B	100 10V
C710	ECEA1AKA101B	100 10V
C711	ECBT1H102KB5	1000P 50V
C712	ECEA1HKA010B	1 50V
C713	ECEA1EKA4R7B	4.7 25V
C801	ECQP1103JZT	0.01 100V
C901	ECQV1H474JZ3	0.47 50V
C902	ECQV1H474JZ3	0.47 50V
C903	ECQV1H474JZ3	0.47 50V
C904	ECQV1H474JZ3	0.47 50V
	< SERVO P.C.B. >	
	RESISTORS	
R701	ERJ6GEYJ100V	10 1/10W
R702	ERJ6GEYJ471V	470 1/10W
R703	ERJ6GEYJ823V	82K 1/10W
R704	ERJ6GEYJ102V	1K 1/10W
R705	ERJ6GEYJ103V	10K 1/10W
R706	ERJ6GEYJ102V	1K 1/10W
R707	ERJ6GEYJ473V	47K 1/10W
R708	ERJ6GEYJ104V	100K 1/10W
R709	ERJ6GEYJ683V	68K 1/10W
R711	ERJ6GEYJ154V	150K 1/10W
R712	ERJ6GEYJ221V	220 1/10W
R717	ERJ6GEYJ102V	1K 1/10W
R718	ERJ6GEYJ102V	1K 1/10W
R719	ERJ6GEYJ102V	1K 1/10W
R720	ERJ6GEYJ102V	1K 1/10W
R721	ERJ6GEYJ101V	100 1/10W
R722	ERJ6GEYJ563V	56K 1/10W
R723	ERJ6GEYJ182V	1.8K 1/10W
R724	ERJ6GEYJ333V	33K 1/10W

Ref. No.	Part No.	Values & Remarks		Ref. No.	Part No.	Values & Remarks		Ref. No.	Part No.	Values & Remarks	
R725	ERJ6GEYJ472V	4.7K	1/10W	C736	ECUZ1E104MBN	0.1	25V				
R726	ERJ6GEYJ473V	47K	1/10W	C737	ECUZ1E104MBN	0.1	25V				
R727	ERJ6GEYJ103V	10K	1/10W	C738	ECUV1C154KBN	0.15	16V				
R728	ERJ6GEYJ392V	3.9K	1/10W	C742	ECUV1E273KBN	0.027	25V				
R730	ERJ6GEYJ331V	330	1/10W	C743	ECUZ1E104MBN	0.1	25V				
R731	ERJ6GEYJ392V	3.9K	1/10W	C744	ECUV1E822KBN	8200P	25V				
R734	ERJ6GEYJ101V	100	1/10W	C745	ECUV1C473MBN	0.047	16V				
R735	ERJ6GEYJ101V	100	1/10W	C746	ECUV1H050DCN	5P	50V				
R736	ERJ6GEYJ101V	100	1/10W	C747	ECUV1H222KBN	2200P	50V				
R738	ERJ6GEYJ223V	22K	1/10W	C748	ECUV1H471KBM	470P	50V				
R739	ERJ6GEYJ681V	680	1/10W								
R741	ERJ6GEYJ562V	5.6K	1/10W		CHIP JUMPERS						
R742	ERJ6GEYJ562V	5.6K	1/10W								
R743	ERJ6GEYJ562V	5.6K	1/10W	RJ701	ERJ8GEY0R00A	0	1/10W				
R744	ERJ6GEYJ103V	10K	1/10W	RJ702	ERJ8GEY0R00A	0	1/10W				
R745	ERJ6GEYJ155V	1.5M	1/10W	RJ703	ERJ8GEY0R00A	0	1/10W				
R748	ERJ6GEYJ182V	1.8K	1/10W	RJ704	ERJ8GEY0R00A	0	1/10W				
R749	ERJ8GEYJ103V	10K	1/8W	RJ707	ERJ8GEY0R00A	0	1/10W				
				RJ708	ERJ8GEY0R00A	0	1/10W				
	CAPACITORS			RJ709	ERJ8GEY0R00A	0	1/10W				
				RJ714	ERJ8GEY0R00A	0	1/10W				
C701	ECEA0JKA220I	22	6.3V	RJ715	ERJ8GEY0R00A	0	1/10W				
C702	ECEA1HKA010I	1	50V	RJ716	ERJ8GEY0R00A	0	1/10W				
C703	ECEA0JKA101I	100	6.3V	RJ717	ERJ8GEY0R00A	0	1/10W				
C704	ECUZ1E104MBN	0.1	25V	RJ721	ERJ6GEY0R00A	0	1/10W				
C705	ECEA1HKA010I	1	50V	RJ724	ERJ6GEY0R00A	0	1/10W				
C706	ECUV1H101JCN	100P	50V	RJ725	ERJ6GEY0R00A	0	1/10W				
C707	ECUV1E273KBN	0.027	25V	RJ726	ERJ6GEY0R00A	0	1/10W				
C708	ECUV1H472KBN	4700P	50V	RJ799	ERJ6GEY0R00A	0	1/10W				
C709	ECUV1C473KBN	0.047	16V								
C710	ECUV1H152KBN	1500P	50V								
C711	ECUZ1E104MBN	0.1	25V								
C712	ECUZ1E104MBN	0.1	25V								
C713	ECUV1C104MBM	0.1	16V								
C714	ECEA0JKA101I	100	6.3V								
C715	ECEA0JKA470I	47	6.3V								
C716	ECUV1H561KBN	560P	50V								
C717	ECUZ1E104MBN	0.1	25V								
C718	ECUV1C224KBM	0.22	16V								
C721	ECUV1H270JCN	27P	50V								
C722	ECUV1H270JCN	27P	50V								
C723	ECEA1AKA221I	220	10V								
C724	ECUV1C104MBM	0.1	16V								
C725	ECUV1H102KBN	1000P	50V								
C726	ECUV1H102KBN	1000P	50V								
C727	ECEA1HPK010I	1	50V								
C728	ECEA1HPK010I	1	50V								
C730	ECUZ1E104MBN	0.1	25V								
C731	ECEA0JKA221I	220	6.3V								
C732	ECEA0JKA221I	220	6.3V								
C733	ECUZ1E104MBN	0.1	25V								
C734	ECEA1AKA221I	220	10V								
C735	ECUZ1E104MBN	0.1	25V								