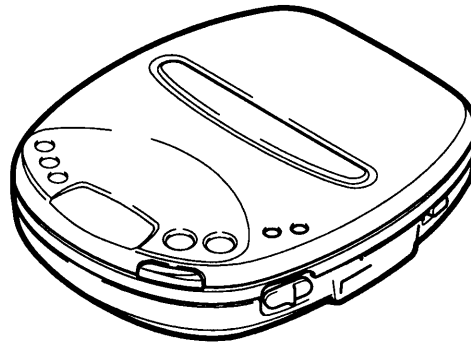


## Service Manual

## Portable Compact Disc Player



**CDP-360(AU)**  
(XE)  
**CDP-360BX(SS)**  
**CDP-360CR(AU)**  
(CA)  
(UK)  
**CDP-360E(CA)**  
**CDP-370(UK)**  
**CDP-400(XE)**  
**CDP-400CR(UK)**  
**CDP-560(UK)**  
**CDP-640CR(CA)**

## Specifications

Channels .....	2 channels
Frequency Response .....	20 ~ 20 kHz
S/N ratio .....	60 dB
Frequency Response .....	20 ~ 20 kHz
Wow / Flutter .....	Below measurable limits
Error Correction Method .....	CIRC
Wow & Flutter .....	undetectable
Sampling frequency .....	44.1kHz
D/A converter .....	1-bit
Pick-up light source .....	Semi-conductor laser
Pick-up wavelength .....	790nm
Laser output .....	Continuous wave max. 0.5mW
Terminal impedance .....	PHONES:16 - 32 ohms Line OUT: 47 kohms
Power source .....	AC : 230V - 240V , 50Hz(AU) AC : 230V , 50Hz(UK , XE) AC : 120V , 60Hz(CA) DC : 3V(Ni-Cd battery NBP-50A or AA x 2)(AU) DC : 3V(Ni-Cd battery NBP-50A or HP7 x 2)(UK) DC : 12V(Cigarette lighter adaptor)(AU)

### Maximum Output

(stereo headphones) .....	10 mW / ch
Dimensions .....	132.5 x 30 x 152.5mm(W x H x D)
Weight(approx.) .....	235g without batteries

### PRODUCT CODE No.

CDP-360(AU)	142 685 01
CDP-360(XE)	142 685 03
CDP-360BX(SS)	164 003 00
CDP-360CR(AU)	142 686 02
CDP-360CR(CA)	142 686 03
CDP-360CR(UK)	142 686 04
CDP-360E(CA)	142 686 01
CDP-370(UK)	142 685 04
CDP-400(XE)	142 687 01
CDP-400CR(UK)	142 688 01
CDP-560(UK)	164 005 00
CDP-640CR(CA)	164 006 00

# Notice



- |  |  |
|--|--|
| <input checked="" type="checkbox"/> CORRECTION | <input type="checkbox"/> PRODUCTION CHANGE |
| <input type="checkbox"/> SERVICE FLASH         | <input type="checkbox"/> ADD INFORMATION   |
| <input type="checkbox"/>                       | <input type="checkbox"/>                   |

FILE NO.

Please add this notice to the Service Manual listed below.

Category : <b><u>Personal Compact Disc Player</u></b>	Date : <b><u>Jul, 1997</u></b>
<b><u>CDP-360 , 370 , 400 , 560 , 640 Series</u></b>	
Model :	
Destination : <b><u>Below</u></b>	Reference No. : <b><u>SM580830</u></b>
	Issue Number : <b><u>1</u></b>

The reason of change.

- |              |                           |                     |
|--------------|---------------------------|---------------------|
| A : Misprint | B : Quality Reliabilities | C : Standardization |
| D : Design   | E :                       | F :                 |
| G :          |                           |                     |

Page & Section	Ref. No.		Part No.	Description	Q'ty	Interchangeability	Reason
PARTS LIST	-	Old	-	-	-		-
P10	110	New	645 025 3089	LASER PICK UP , KSS-542A	1		A

- Prod. cord : 142 685 01 : CDP-360(AU)  
 142 685 03 : CDP-360(XE)  
 164 003 00 : CDP-360BX(SS)  
 142 686 02 : CDP-360CR(AU)  
 142 686 03 : CDP-360CR(CA)  
 142 686 04 : CDP-360CR(UK)  
 142 686 01 : CDP-360E(CA)  
 142 685 04 : CDP-370(UK)  
 142 687 01 : CDP-400(XE)  
 142 688 01 : CDP-400CR(UK)  
 164 005 00 : CDP-560(UK)  
 164 006 00 : CDP-640CR(CA)

**SANYO Technosound Co., Ltd**  
**Osaka , Japan**

# Notice

- |                                     |               |                          |                   |
|-------------------------------------|---------------|--------------------------|-------------------|
| <input type="checkbox"/>            | CORRECTION    | <input type="checkbox"/> | PRODUCTION CHANGE |
| <input checked="" type="checkbox"/> | SERVICE FLASH | <input type="checkbox"/> | ADD INFORMATION   |
| <input type="checkbox"/>            |               | <input type="checkbox"/> |                   |

FILE NO.
----------

Please add this notice to the Service Manual listed below.

<b>Category :</b> <u>Portable Compact Disc Player</u>	<b>Date :</b> <u>Nov. 1997</u>
<b>Model :</b> <u>CDP-360, 370, 400, 560, 640 Series</u>	
<b>Destination :</b> <u>Below</u>	<b>Reference No. :</b> <u>SM580830</u>
	<b>Issue Number :</b> <u>2</u>

The reason of change.

- |              |                           |                     |
|--------------|---------------------------|---------------------|
| A : Misprint | B : Quality Reliabilities | C : Standardization |
| D : Design   | E :                       | F :                 |
| G :          |                           |                     |

Page & Section	Ref. No.		Part No.	Description	Q'ty	Reason
Page 8 PARTS LIST	13	Old	614 290 3827	ASSY, CABINET (360/XE • AU, 360BX/SS, 360CR/UK • AU, 370/UK, 400/XE, 400CR/UK, 560/UK)	1	B
	13	New	614 297 8320	ASSY, CABINET (360/XE • AU, 360BX/SS, 360CR/UK • AU, 370/UK, 400/XE, 400CR/UK, 560/UK)	1	B
	13	Old	614 293 0847	ASSY, CABINET (360CR/CA, 360E/CA, 640CR/CA)	1	B
	13	New	614 297 8337	ASSY, CABINET (360CR/CA, 360E/CA, 640CR/CA)	1	B
	18	Old	614 290 5425	BUTTON, EJECT	1	B
	18	New	614 297 7293	BUTTON, EJECT	1	B

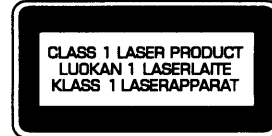
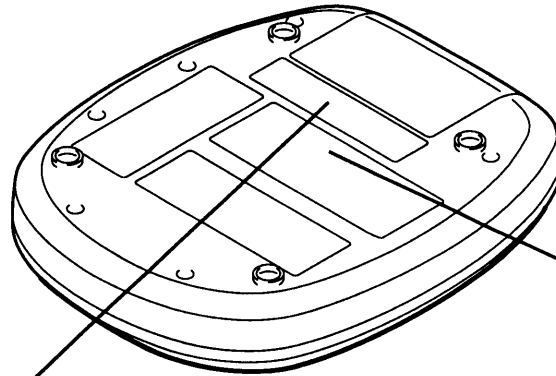
- Prod. cord : 142 685 01 : CDP-360 (AU)  
 142 685 03 : CDP-360 (XE)  
 164 003 00 : CDP-360BX (SS)  
 142 686 02 : CDP-360CR (AU)  
 142 686 03 : CDP-360CR (CA)  
 142 686 04 : CDP-360CR (UK)  
 142 686 01 : CDP-360E (CA)  
 142 685 04 : CDP-370 (UK)  
 142 687 01 : CDP-400 (XE)  
 142 688 01 : CDP-400CR (UK)  
 164 005 00 : CDP-560 (UK)  
 164 006 00 : CDP-640CR (CA)

**SANYO Technosound Co., Ltd**

Osaka, Japan

# LASER BEAM SAFETY PRECAUTIONS

- Pickup that emits a laser beam is used on this CD section.



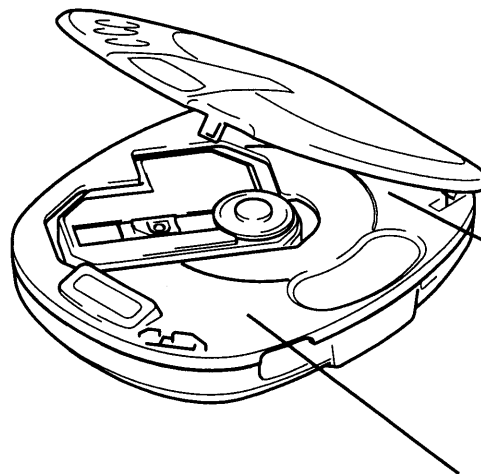
AU , XE & UK

**CAUTION :**  
THIS PRODUCT CONTAINS A LOW POWER LASER DEVICE, TO ENSURE CONTINUES SAFETY DO NOT REMOVE ANY COVERS OR ATTEMPT TO GAIN ACCESS TO THE INSIDE OF PRODUCT. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

**CAUTION :**  
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

AU

UK



XE & AU

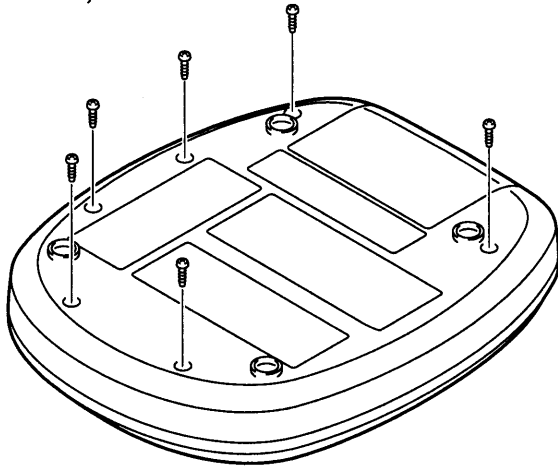
<b>CAUTION - INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.</b>
<b>ADVARSEL - USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.</b>
<b>VARNING - OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.</b>
<b>VORSICHT - UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.</b>
<b>VARO! Avattaessa ja suojalukitus ohitettaessa olet alltiina näkymättömälle lasersäteilylle. Älä katso äteeseen.</b>

XE & AU

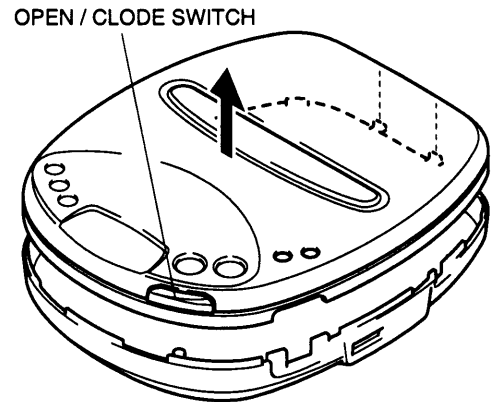
## REMOVAL AND INSTALLATION

- Disconnect the AC adaptor's plug.
- Remove the batteries.
- All wiring should be returned to the original position after work is completed.

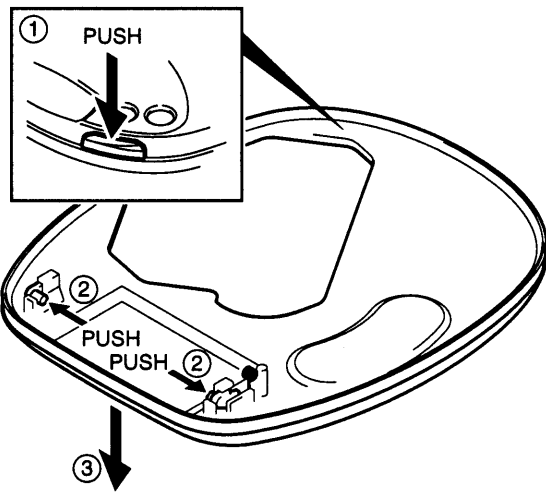
### a. CABINET, BOTTOM



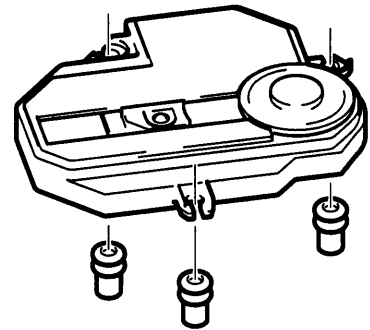
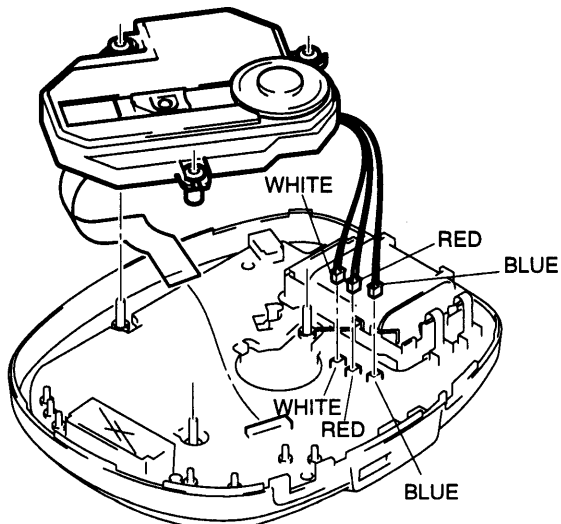
### b. CABINET



### c. CD LID

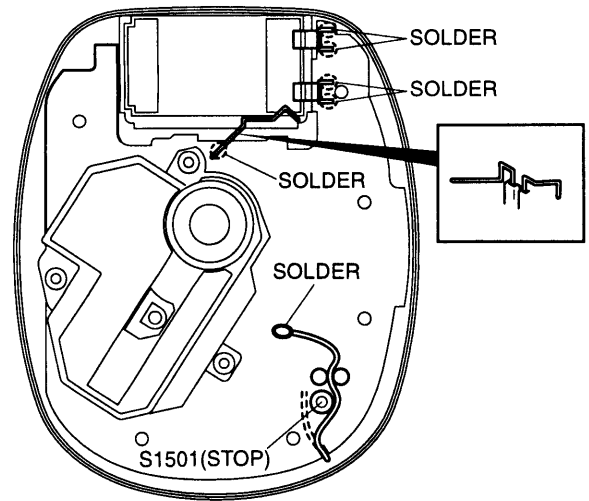
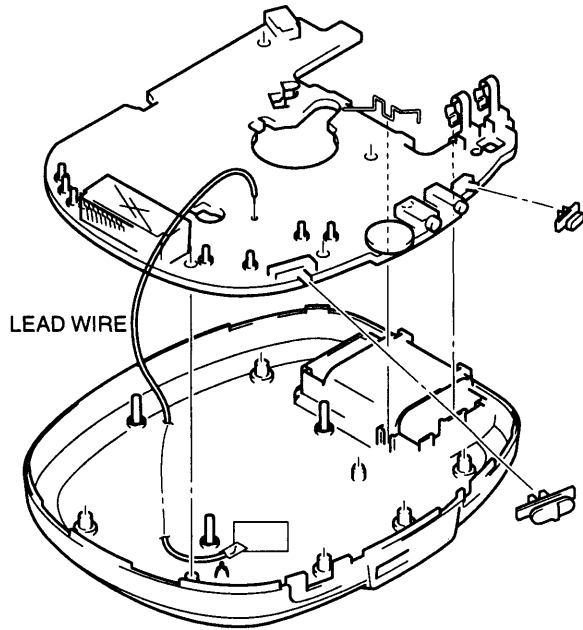


### d. CD MECHANISM

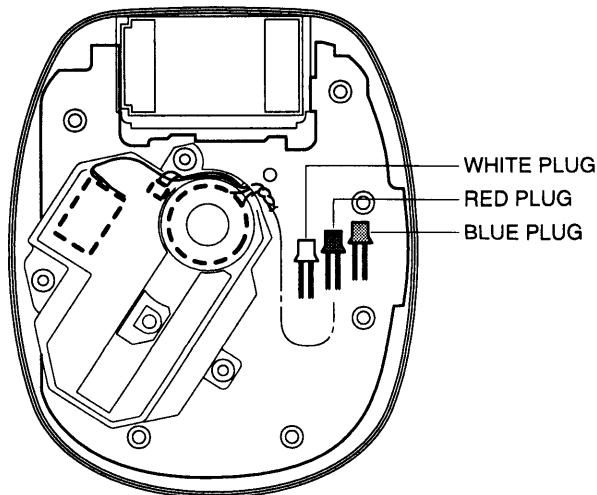
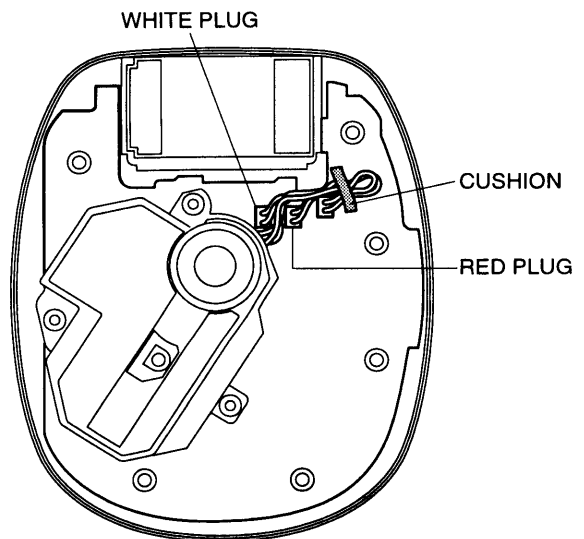
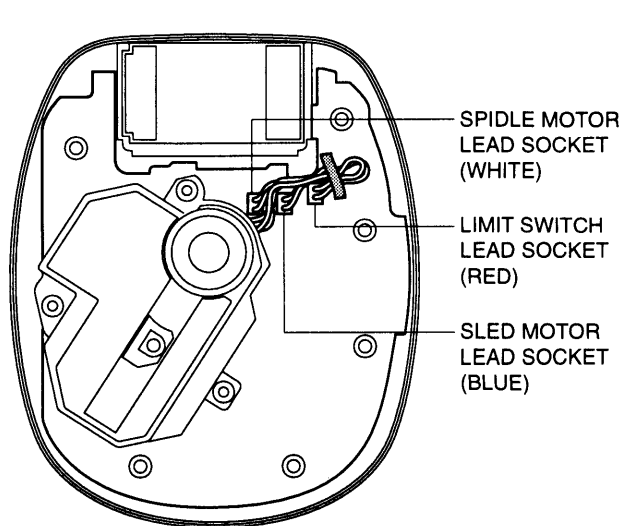


# REMOVAL AND INSTALLATION

## e. CD P.W.BOARD



## f. WIRING LAYOUT



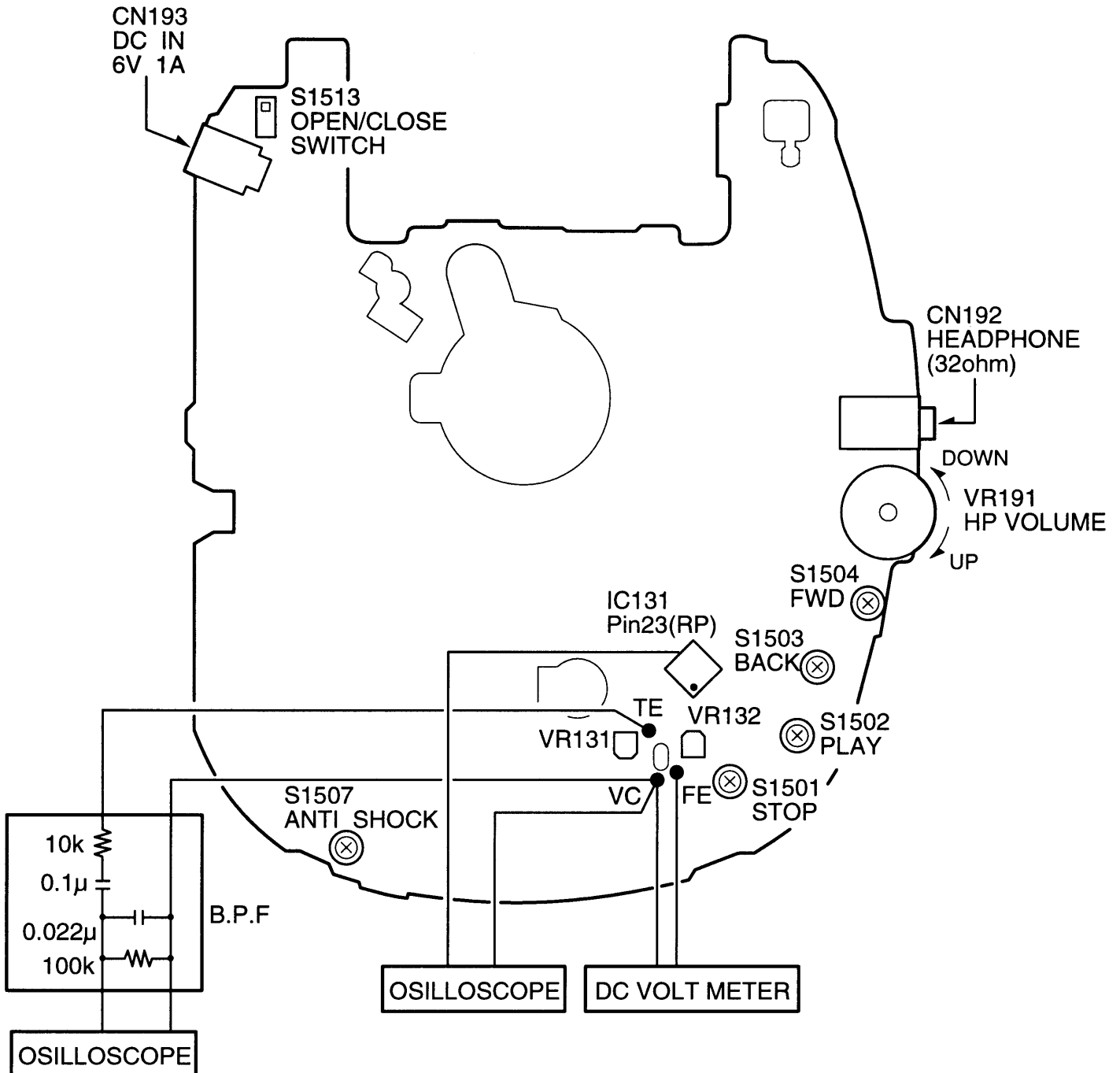
# CD ADJUSTMENTS

## a. PREPARATIONS

### • Measuring instruments, tools and filter

- (1) Test disc : YEDS 18 (SONY) or etc.
- (2) Oscilloscope : SS5711 (10 MHz or dual-trace)  
or Memoryscope : DSS6521 (Storagescope)
- (3) EXT. DC POWER : DC 6V, 1A
- (4) Screwdrivers (non-metallic) for adjustments

## b. PARTS LOCATION



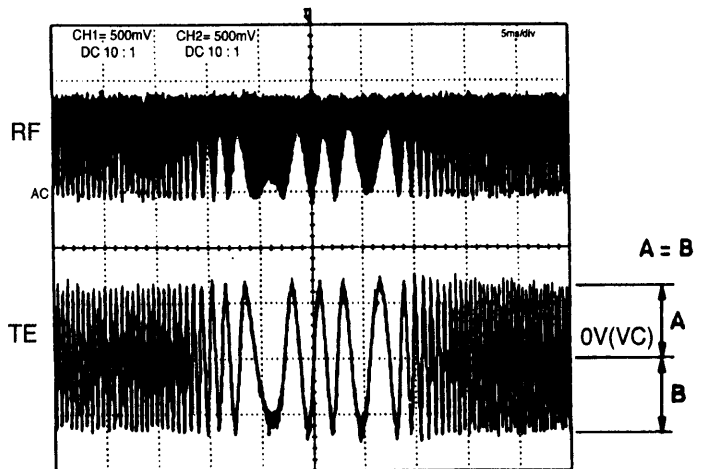
# CD ADJUSTMENTS

## c. ADJUSTMENTS

Adjustment Item	Measuring instrument	Service mode	Output connection	Adjustment location	Adjustment value
(a) Tracking balance	Oscilloscope L.P.F	yes	TE VC	VR131	Waveform symmetry A = B
(b) Checking the "eye" pattern	Oscilloscope	-	IC131(23Pin) : RF VC	-	Check be sure that the "eye" pattern is at the center of the waveform and that the diamond shape is clearly defined

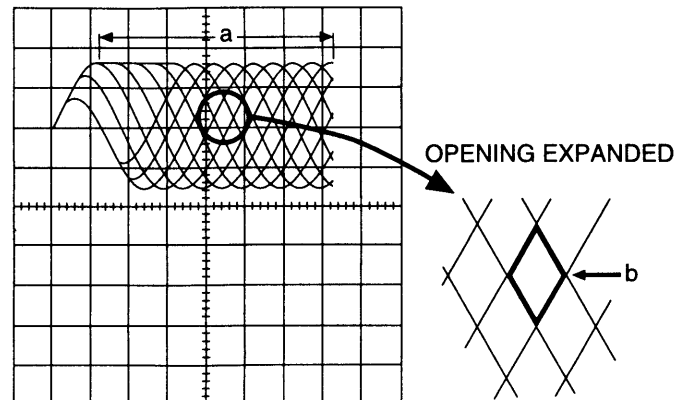
### (a) TRACKING BALANCE ADJUSTMENT

- Connect the oscilloscope to TE and VC.
- Set the test disc.
- Turn open closing switch on PWB ASSY(S1513) into an open state, and does DC power supply in on while pushing STOP Key(S1501) and ANTI-SHOCK Key(S1507) simultaneously, and confirms that all segments of LCD become indication state. (Establishes a microcomputer in movement test mode)
- Pushes the first time and pushes PLAY state and the second time and becomes rough servo state.
- Turn on PWB ASSY VR131 with a driver for adjustment slowly from side to side, and adjusts it as wave pattern of "TE" becomes symmetric top and bottom.



### (b) CHECKING THE "EYE" PATTERN

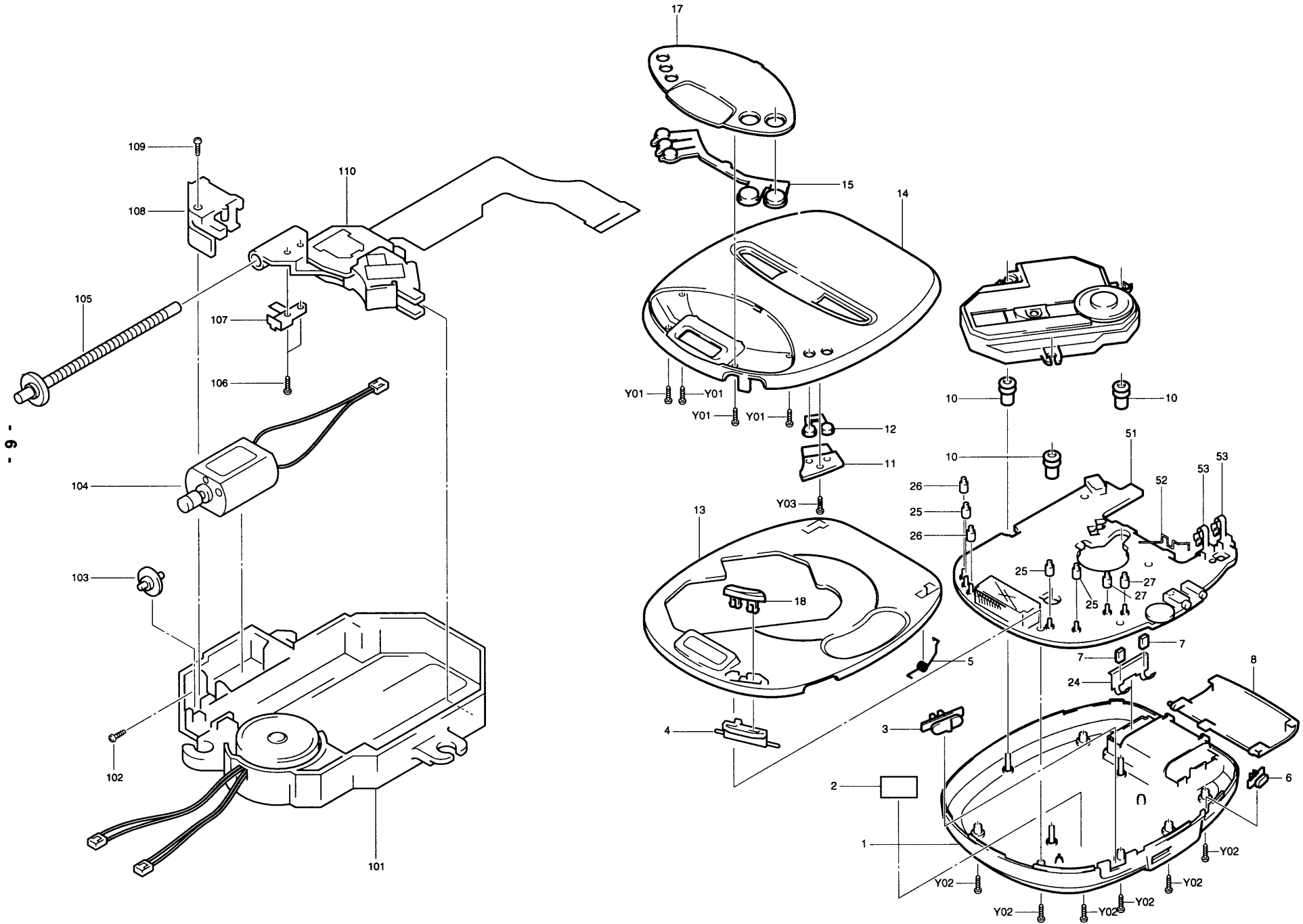
- Connect the oscilloscope to IC131 (pin23) (RF) and (VC).
- Switch "ON" the POWER.
- Load the test disc.
- Press the PLAY button.
- Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
- Press the STOP button.
- Switch "OFF" the DC POWER.



### (d) Focus adjustment

- Pushes PLAY key(S1502) once and play.
- Record an indicator value of voltmeter.(V1)
- Pushes STOP key(S1501) and stop.
- Stops PWB ASSY VR132 by the time while reading an indicator value of a voltmeter(V2) it became it with right and left slow gang bang,  $V1 - V2 < 5mV$  with adjustment driver.
- Switch "OFF" the DC POWER.





# PARTS LIST

## PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL  $\Delta$  IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY  $\Delta$ , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

### PACKING & ACCESSORY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
	614 292 6369	CARTON CASE,INNER(CDP-360/AU)		614 252 7764	HEADPHONE(CDP-360BX/SS)
	614 292 6383	CARTON CASE,INNER (CDP-640CR/CA)			(CDP-360CR/UK)(CDP-360CR/AU)
	614 292 6390	CARTON CASE,INNER (CDP-360CR/AU)			(CDP-370/UK)(CDP-360/XE)
	614 292 6406	CARTON CASE,INNER (CDP-360CR/CA)		645 016 2213	HEADPHONE,32(CDP-360CR/CA)
	614 292 6413	CARTON CASE,INNER (CDP-360CR/UK)			(CDP-360E/CA)(CDP-640CR/CA)
	614 293 1486	CARTON CASE,INNER(CDP-360/XE)		645 017 8771	HEADPHONE,16(CDP-560/UK)
	614 293 1493	CARTON CASE,INNER(CDP-560/UK)	$\Delta$	645 011 8326	PLUG,ADAPTOR AC(CDP-360BX/SS)
	614 293 1509	CARTON CASE,INNER(CDP-400/XE)		645 024 3448	ADAPTOR,DC-DC(CDP-360BX/SS)
	614 293 1523	CARTON CASE,INNER (CDP-400CR/UK)			(CDP-360CR/UK)(CDP-360CR/CA)
	614 293 4982	CARTON CASE,INNER(CDP-370/UK)			(CDP-360CR/AU)(CDP-360E/CA)
	614 293 1608	CARTON CASE,INNER(CDP-360E/CA)	$\Delta$	645 024 7262	ADAPTOR,AC-DC,6CV-120US2
	614 294 6169	CARTON CASE,INNER(CDP-360BX/SS)			(CDP-360CR/CA)(CDP-360E/CA)
	614 292 6451	INSTRUCTION MANUAL(CDP-360/AU)	$\Delta$	645 024 7408	ADAPTOR,AC-DC,6CV-240AU2
	614 292 6475	INSTRUCTION MANUAL (CDP-640CR/CA)			(CDP-360CR/AU)(CDP-640CR/CA)
	614 292 6482	INSTRUCTION MANUAL (CDP-360CR/AU)	$\Delta$	645 024 7415	ADAPTOR,AC-DC,6CV-230XE2
	614 292 6499	INSTRUCTION MANUAL (CDP-360CR/CA)(CDP-360E/CA)	$\Delta$	645 024 7422	ADAPTOR,AC-DC,6CV-230UK2
	614 292 6505	INSTRUCTION MANUAL (CDP-360CR/UK)			(CDP-370/UK)(CDP-560/UK)
	614 293 1653	INSTRUCTION MANUAL(CDP-360/XE)	$\Delta$	645 024 7439	ADAPTOR,AC-DC,6CV230SS2,
	614 295 3914	INSTRUCTION MANUAL (CDP-360BX/SS)			ADAPTOR AC-DC(CDP-360BX/SS)
	614 293 1677	INSTRUCTION MANUAL(CDP-560/UK)		645 017 6104	ADAPTOR,CAR CASSETTE
	614 293 1691	INSTRUCTION MANUAL(CDP-400/XE)			(CDP-360BX/SS)(CDP-360CR/UK)
	614 293 1721	INSTRUCTION MANUAL (CDP-400CR/UK)		645 022 9688	SPEAKER(CDP-360BX/SS)
	614 293 5064	INSTRUCTION MANUAL(CDP-370/UK)		645 025 7179	ADAPTOR,CAR CASSETTE
	614 280 6890	CASE,CARRYING(CDP-400/XE)	or		(CDP-360CR/CA)(CDP-360E/CA)
	614 281 1894	CASE(CDP-360BX/SS)		645 011 9071	CABLE,Y,RCA-2P
	614 283 0963	CAUTION,DISC		645 017 8832	CABLE,Y,RCA-2P
	614 231 6832	LABEL,SAFETY,CABI BOTTOM (CDP-360BX/SS)(CDP-360CR/UK)			
		(CDP-360CR/AU)(CDP-370/UK)			
		(CDP-360/XE)(CDP-360/AU)			
		(CDP-560/UK)(CDP-400CR/UK)			
		(CDP-400/XE)			
	614 283 7733	LABEL,LID-BATTERY(CDP-360BX/SS)	1	614 290 5357	ASSY,CABINET,BOTTOM
	645 011 9880	POLY SHEET-0450X0250*NC,SET			(CDP-360/AU)
	645 017 9136	ASSY,BATTERY,RECHARGE (CDP-560/UK)(CDP-400CR/UK)	1	614 293 0533	ASSY,CABINET,BOTTOM
		(CDP-400/XE)			(CDP-360CR/UK)(CDP-360CR/CA)
	645 017 9143	ASSY,BATTERY,RECHARGE (CDP-360BX/SS)(CDP-360CR/AU)	1	614 293 1233	ASSY,CABINET,BOTTOM
		(CDP-360/AU)			(CDP-360/XE)
	645 024 6807	ASSY,BATTERY,RECHARGE (CDP-560/UK)(CDP-400CR/UK)	1	614 293 1240	ASSY,CABINET,BOTTOM
		(CDP-400/XE)			(CDP-360E/CA)
	645 024 6814	ASSY,BATTERY,RECHARGE (CDP-360BX/SS)(CDP-360CR/AU)	1	614 293 1257	ASSY,CABINET,BOTTOM
		(CDP-360/AU)			(CDP-560/UK)
				614 293 1264	ASSY,CABINET,BOTTOM
					(CDP-400/XE)
				614 293 1288	ASSY,CABINET,BOTTOM
					(CDP-400CR/UK)

### CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
	614 276 2844	LABEL,SAFETY (CDP-360BX/SS)(CDP-360CR/UK)
		(CDP-360CR/AU)(CDP-370/UK)
		(CDP-360/XE)(CDP-360/AU)
		(CDP-380/UK)(CDP-560/UK)
	614 290 5357	ASSY,CABINET,BOTTOM (CDP-360/AU)
	614 293 0533	ASSY,CABINET,BOTTOM (CDP-360CR/UK)(CDP-360CR/CA)
		(CDP-360CR/AU)
	614 293 1233	ASSY,CABINET,BOTTOM (CDP-360/XE)
	614 293 1240	ASSY,CABINET,BOTTOM (CDP-360E/CA)
	614 293 1257	ASSY,CABINET,BOTTOM (CDP-560/UK)
	614 293 1264	ASSY,CABINET,BOTTOM (CDP-400/XE)
	614 293 1288	ASSY,CABINET,BOTTOM (CDP-400CR/UK)



**PARTS LIST**

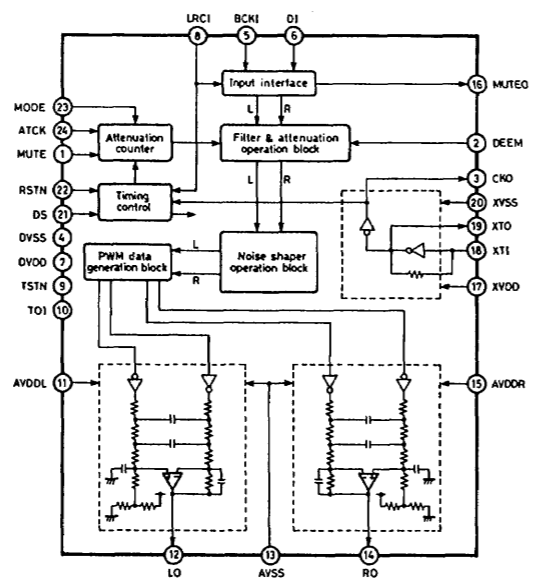
REF.NO.	PART NO.	DESCRIPTION
R1806	401 038 0909	MT-GLAZE 220K JA 1/10W
R1807	401 038 3603	MT-GLAZE 3.3K JA 1/10W
R1808	401 038 5508	MT-GLAZE 4.7 JA 1/10W
R1810	401 037 5400	MT-GLAZE 1K JA 1/10W
R1811	401 037 5400	MT-GLAZE 1K JA 1/10W
R1851	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1852	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1901	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1911	401 038 7601	MT-GLAZE 560 JA 1/10W
R1912	401 038 7601	MT-GLAZE 560 JA 1/10W
R1913	401 038 7601	MT-GLAZE 560 JA 1/10W
R1914	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
R1921	401 037 5707	MT-GLAZE 100K JA 1/10W
R1922	401 037 5608	MT-GLAZE 10K JA 1/10W
R1927	401 038 6604	MT-GLAZE 470K JA 1/10W
R1928	401 037 5707	MT-GLAZE 100K JA 1/10W
R1929	401 037 5707	MT-GLAZE 100K JA 1/10W
R1941	401 038 3405	MT-GLAZE 33 JA 1/10W
R1942	401 038 3405	MT-GLAZE 33 JA 1/10W
R1943	401 038 3405	MT-GLAZE 33 JA 1/10W
R1944	401 038 3405	MT-GLAZE 33 JA 1/10W
R1945	401 038 3405	MT-GLAZE 33 JA 1/10W
R1947	401 038 0503	MT-GLAZE 22 JA 1/10W
R1950	401 037 5608	MT-GLAZE 10K JA 1/10W
R1951	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1952	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1981	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
R1982	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
R1991	401 037 5707	MT-GLAZE 100K JA 1/10W
S1501	645 024 0775	SWITCH,PUSH
S1502	645 024 0775	SWITCH,PUSH
S1503	645 024 0775	SWITCH,PUSH
S1504	645 024 0775	SWITCH,PUSH
S1505	645 024 0775	SWITCH,PUSH
S1506	645 024 0775	SWITCH,PUSH
S1507	645 024 0775	SWITCH,PUSH
S1511	645 008 8728	SWITCH,SLIDE 1P-2T
S1513	614 230 8578	SWITCH,PUSH
S1921	645 009 5795	SWITCH,SLIDE 2P-3T
VR131	645 013 4449	VR,SEMI,22K S
VR132	645 013 4470	VR,SEMI,47K S
VR191	645 024 0782	VR,ROTARY 10KBX2
X1501	614 215 5561	RESONATOR,CERAM
or	645 013 7532	OSC,CERAMIC 4.19MHZ
X1901	645 017 0157	OSC,CERAMIC 16.93MHZ

**M3 MECHANISM (CD542AAA-SN/SH)**

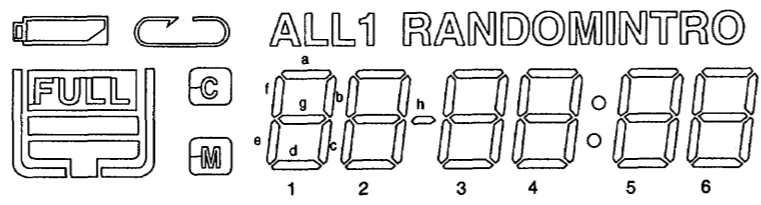
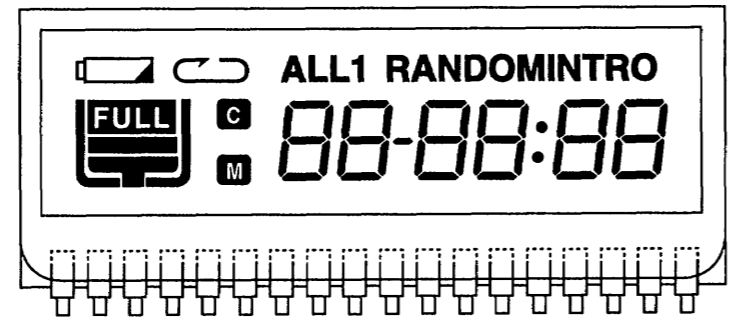
REF.NO.	PART NO.	DESCRIPTION
101	645 025 3034	ASSY,MD,CHASSIS & SPINDLE
102	645 025 6660	SCREW M2X2.5,SLED-M FIX
103	645 025 3058	GEAR BN,SLED GEAR
104	645 025 3027	ASSY,SLED MOTOR,SLED MOTOR
105	645 025 3041	ASSY,SLED SCREW,SLED
106	645 025 6677	SCREW M1.7X2,SPRING FIX
107	645 025 3072	GEAR BN,RACK SPRING
108	645 025 3065	HOLDER,SLED GEAR HOLDER
109	645 025 6684	TAPPING SCREW B2X8,HOLDER FIX

**IC BLOCK DIAGRAM & DESCRIPTION**

**IC191 SM5877AM**

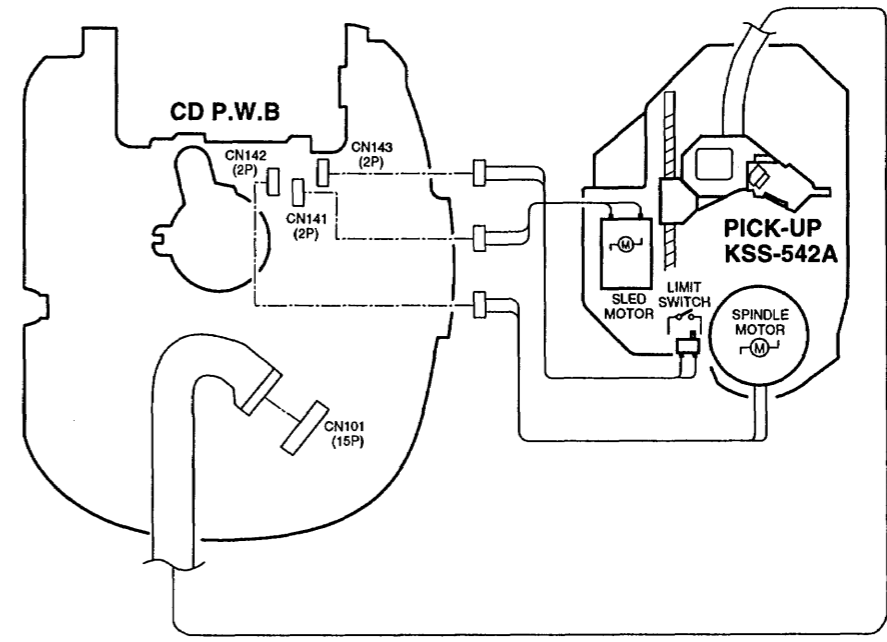


**A1501 LCD Display**



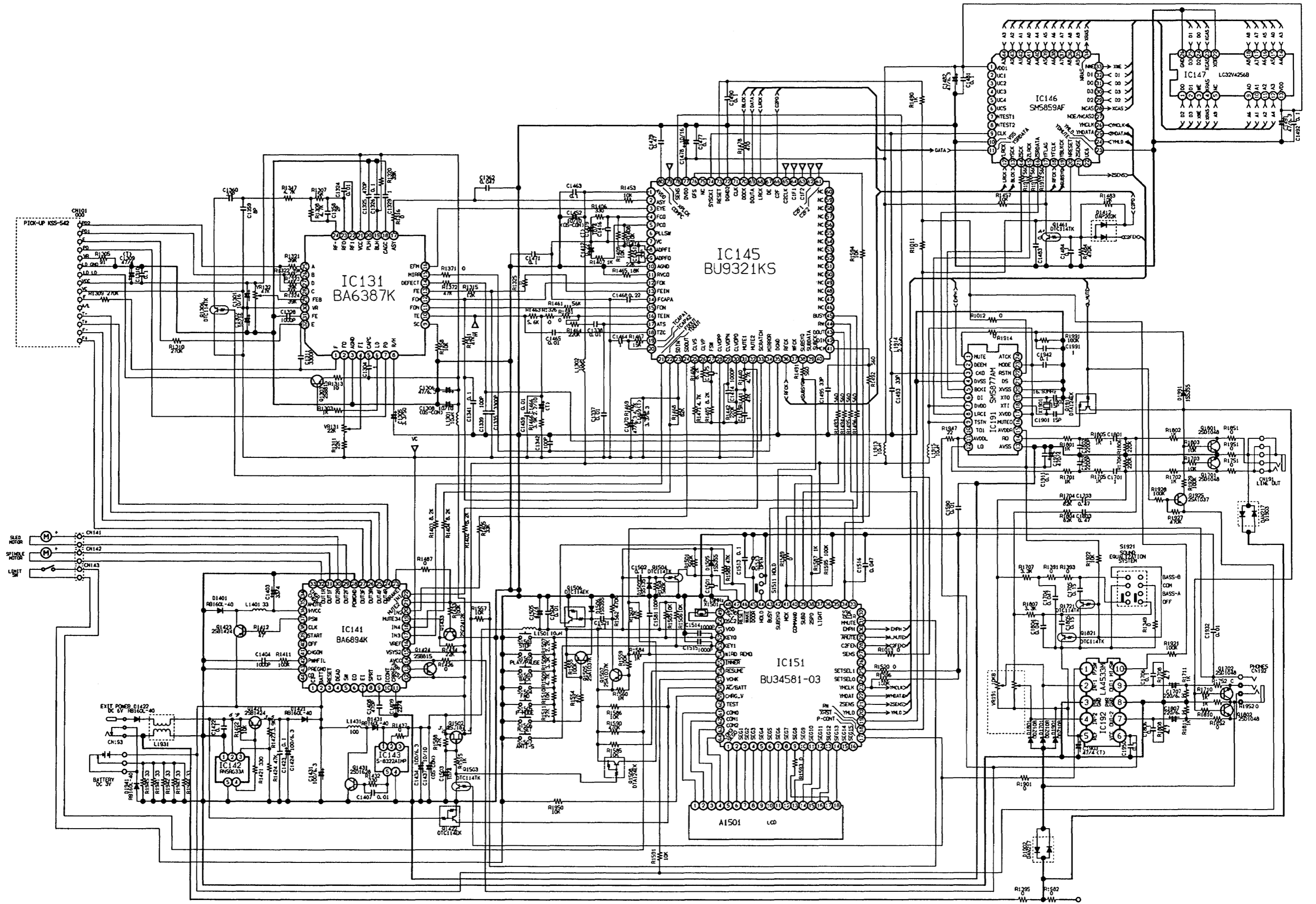
No.	COM.0	COM.1	COM.2	COM.3
1	COM0			
2		COM1		
3			COM2	
4				COM3
5	6a	6b	6c	6d
6	INTRO	6f	6g	6e
7	5a	5b	5c	5d
8	:	5f	5g	5e
9	4a	4b	4c	4d
10	RANDOM	4f	4g	4e
11	3a	3b	3c	3d
12	3h	3f	3g	3e
13	2a	2b	2c	2d
14	C	2f	2g	2e
15	1a	1b	1c	1d
16	FULL	1f	1g	1e
17	1	ALL	↺	M
18	—	—	LJ	↻

**WIRING CONNECTION**



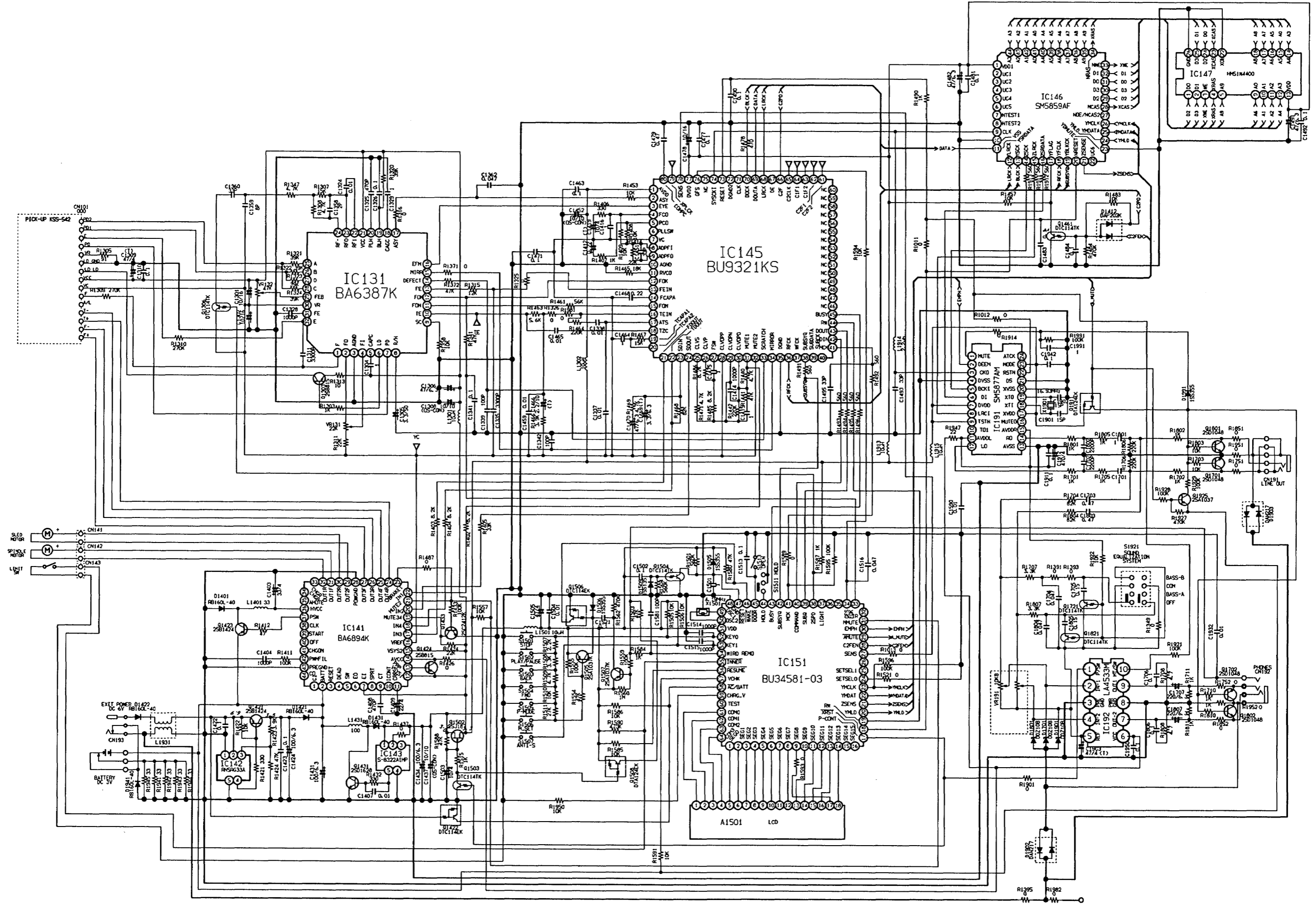
**SCHEMATIC DIAGRAM**

CDP-360BX/SS, CDP-360CR/UK, CDP-360CR/CA, CDP-360CR/AU, CDP-360E/CA, CDP-370/UK, CDP-360/XE, CDP-360/AU

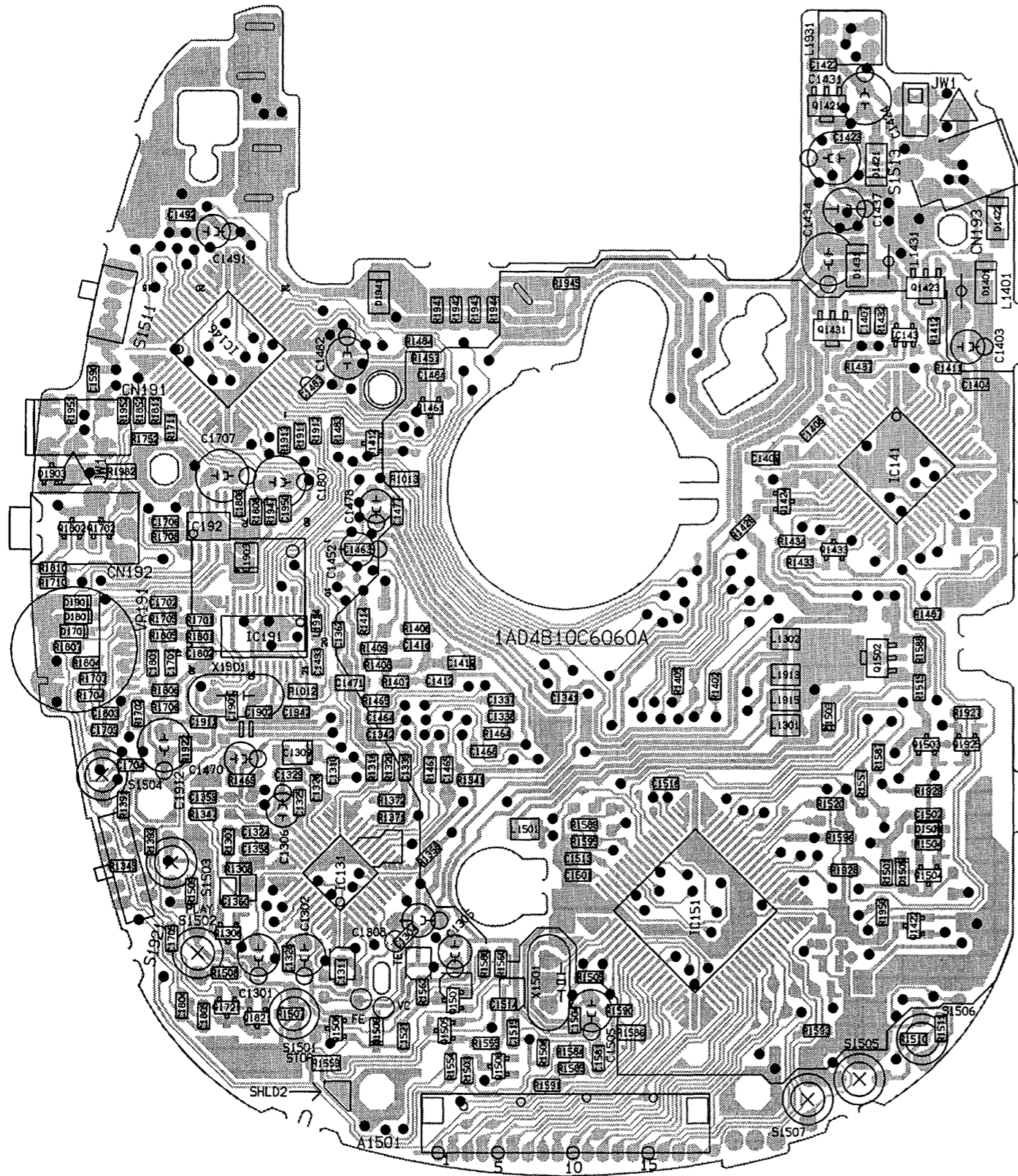


SCHEMATIC DIAGRAM

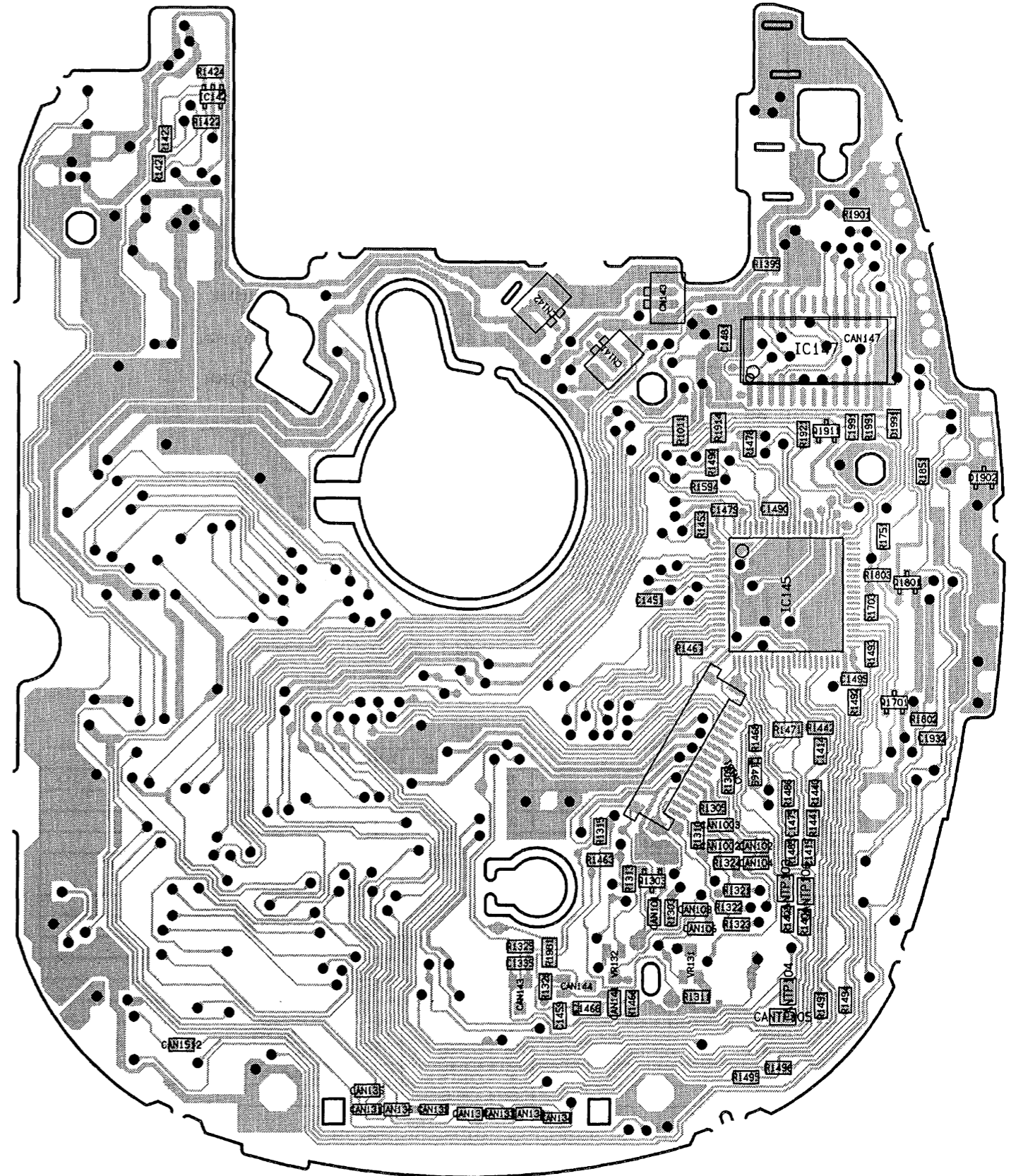
CDP-640CR/CA, CDP-560/UK, CDP-400CR/UK, CDP-400/XE



BOTTOM VIEW

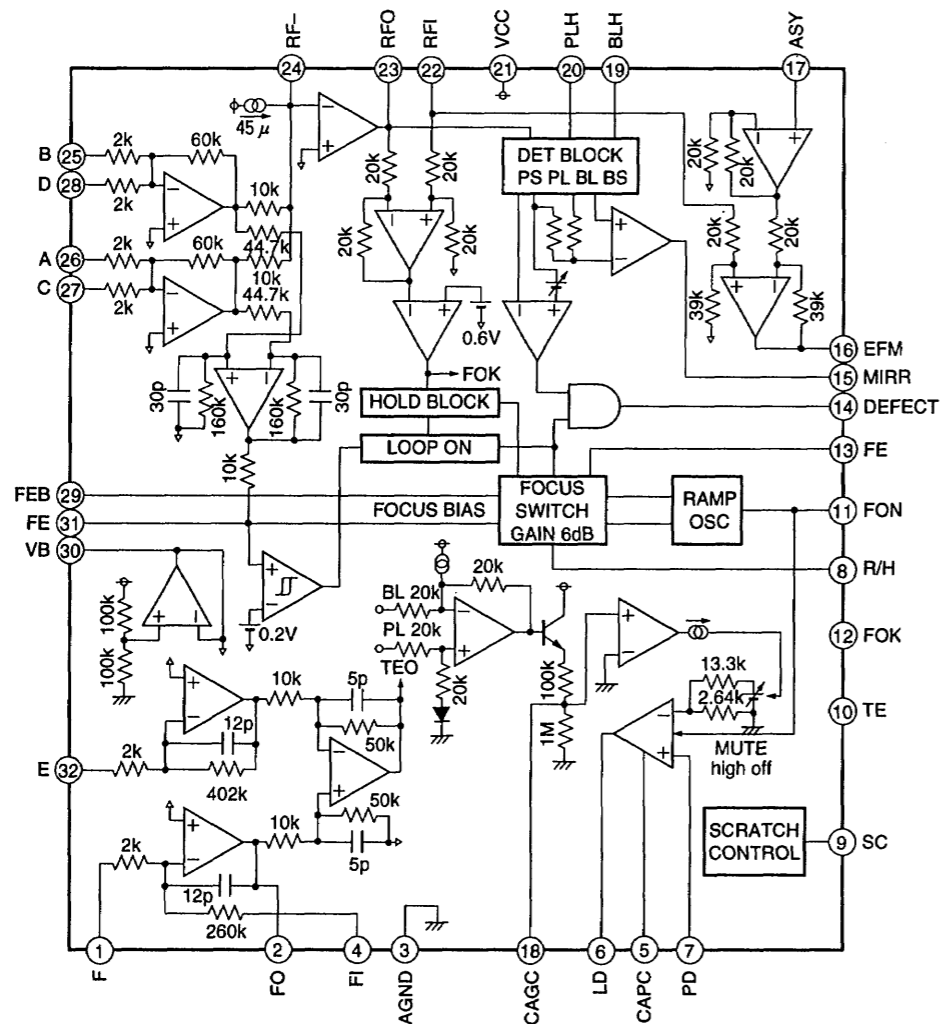


TOP VIEW



# IC BLOCK DIAGRAM & DESCRIPTION

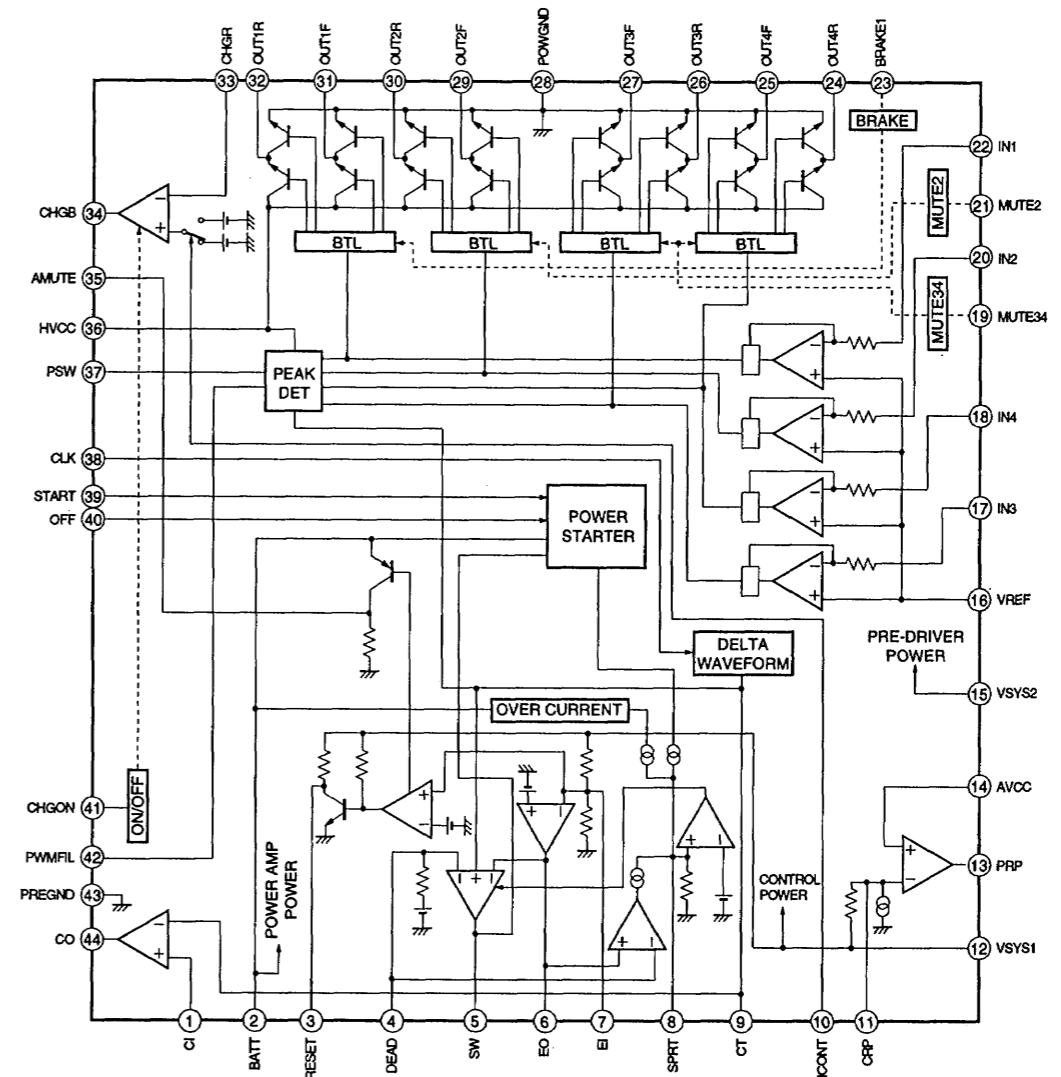
IC131 BA6387K



NO.	NAME	I/O	DESCRIPTION	NO.	NAME	I/O	DESCRIPTION
1	F	I	F input.	18	CAGC	I	Capacitor connection of AGC time constant.
2	FO	O	F output.	19	BLH	I	Capacitor connection of bottom long.
3	AGND	-	Analog GND.	20	PLH	I	Capacitor connection of peak long.
4	FI	I	Focus gain adjustment feedback input.	21	VCC	-	Power supply.
5	CAPC	I	Capacitor connection of APC phase compensation.	22	RFI	I	Input for the RF summing amplifier output with capacitance coupled.
6	LD	O	APC amplifier output.	23	RFO	O	RF summing amplifier output.
7	PD	I	APC amplifier input.	24	RF-	I	RF summing amplifier feedback input.
8	R/H	I	Capacitor connection of lamp waveform/loop off.	25	B	I	B input.
9	SC	I	Resistor connection of scratch depth adjustment.	26	A	I	A input.
10	TE	O	Tracking error output.	27	C	I	C input.
11	FON	I	Focus ON control input.	28	D	I	D input.
12	FOK	O	Focus OK comparator output.	29	FEB	I	Focus error bias input.
13	FE	O	Focus error output1.	30	VB	O	Bias amplifier output.
14	DEFECT	O	Defect signal output.	31	FE'	O	Focus error output2.
15	MIRR	O	Mirror signal output.	32	E	I	E input.
16	EFM	O	EFM signal output.				
17	ASY	I	Auto asymmetry control input.				

# IC BLOCK DIAGRAM & DESCRIPTION

IC141 BA6894K

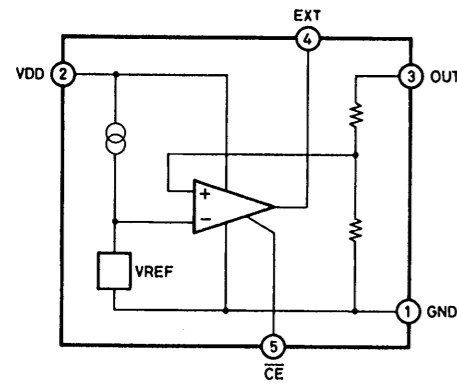


NO.	NAME	I/O	DESCRIPTION	NO.	NAME	I/O	DESCRIPTION
1	CI	I	PWM comparator input.	23	BRAKE1	I	CH1 brake input.
2	BATT	I	Battery detect input.	24	OUT4R	O	CH4 reversed output.
3	RESET	O	Reset detect output.	25	OUT4F	O	CH4 positive output.
4	DEAD	I	Dead time establishment.	26	OUT3R	O	CH3 reversed output.
5	SW	O	Boost transistor drive output.	27	OUT3F	O	CH3 positive output.
6	EO	O	Error amplifier output.	28	POWGND	-	Power GND.
7	EI	I	Error amplifier input.	29	OUT2F	O	CH2 positive output.
8	SPRT	I	Short protect establishment.	30	OUT2R	O	CH2 reversed output.
9	CT	O	Delta waveform output.	31	OUT1F	O	CH1 positive output.
10	ICONT	I	Charge current switching input.	32	OUT1R	O	CH1 reversed output.
11	CRP	I	Ripple filter smoothing input.	33	CHGR	I	Charge current
12	VSYS1	-	Control circuit power supply.	34	CHGB	O	Transistor drive for
13	PRP	O	Transistor drive for ripple filter.	35	AMUTE	O	Reset inversion output.
14	AVCC	O	Ripple filter output.	36	HVCC	-	H brige power supply.
15	VSYS2	-	Pre driver power supply.	37	PSW	O	PWM transistor drive.
16	VREF	I	Reference voltage input.	38	CLK	I	External clock
17	IN3	I	CH3 control signal input.	39	START	I	DC/DC converter boost
18	IN4	I	CH4 control signal input.	40	OFF	I	DC/DC converter boost
19	MUTE34	I	CH3, CH4 mute input.	41	CHGON	I	Charge circuit mute.
20	IN2	I	CH2 control signal input.	42	PWMFIL	O	PWM phase
21	MUTE2	I	CH2 mute input.	43	PREGND	-	PRE GND.
22	IN1	I	CH1 control signal input.	44	CO	O	PWM comparator

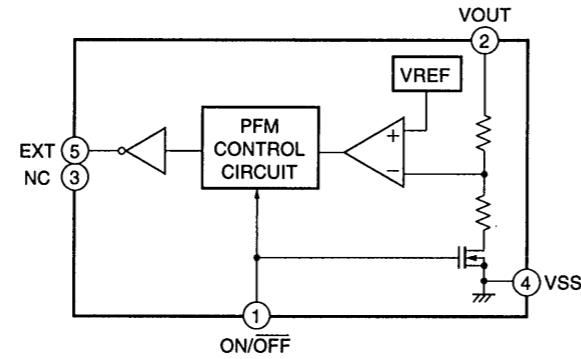


IC BLOCK DIAGRAM & DESCRIPTION

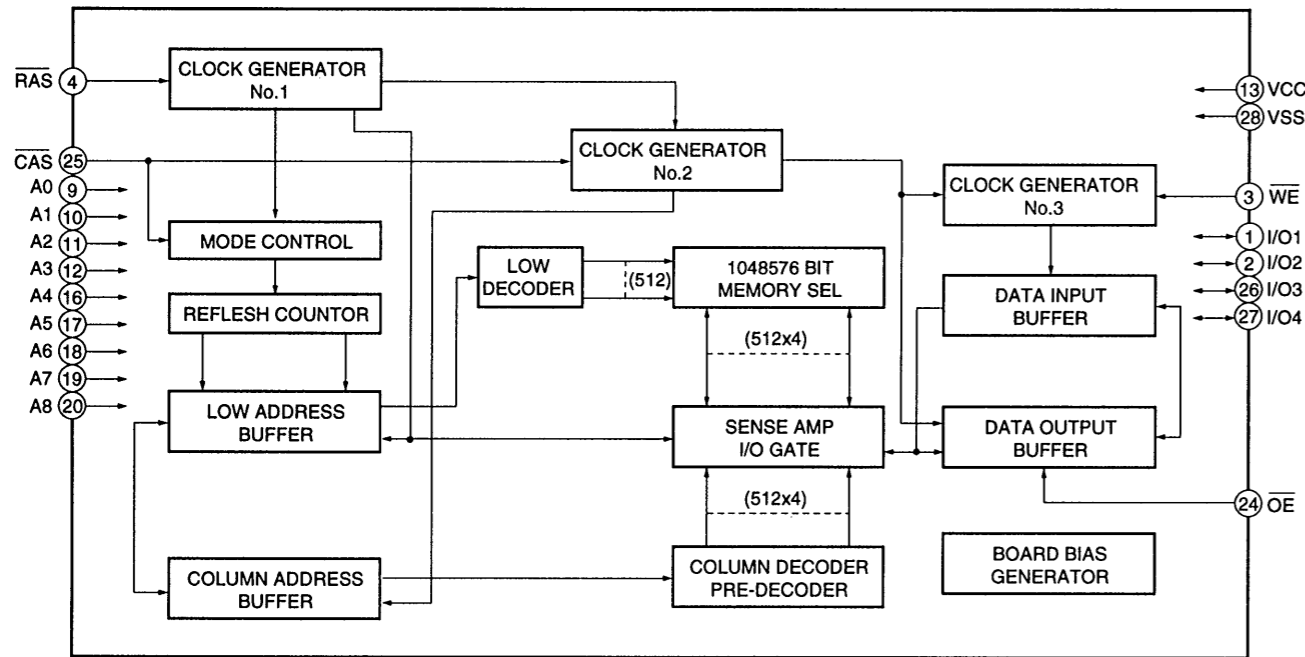
IC142 RN5RG33A (Regulator)



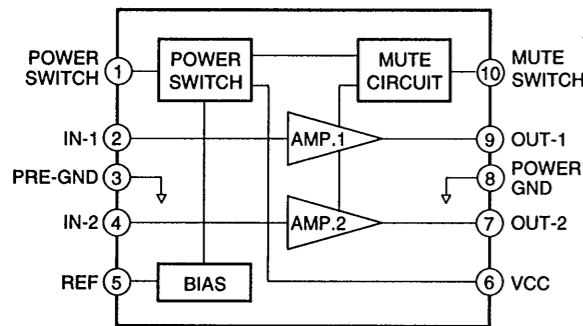
IC143 S-8322AAMP-DOI



IC147 LC32V4256BM

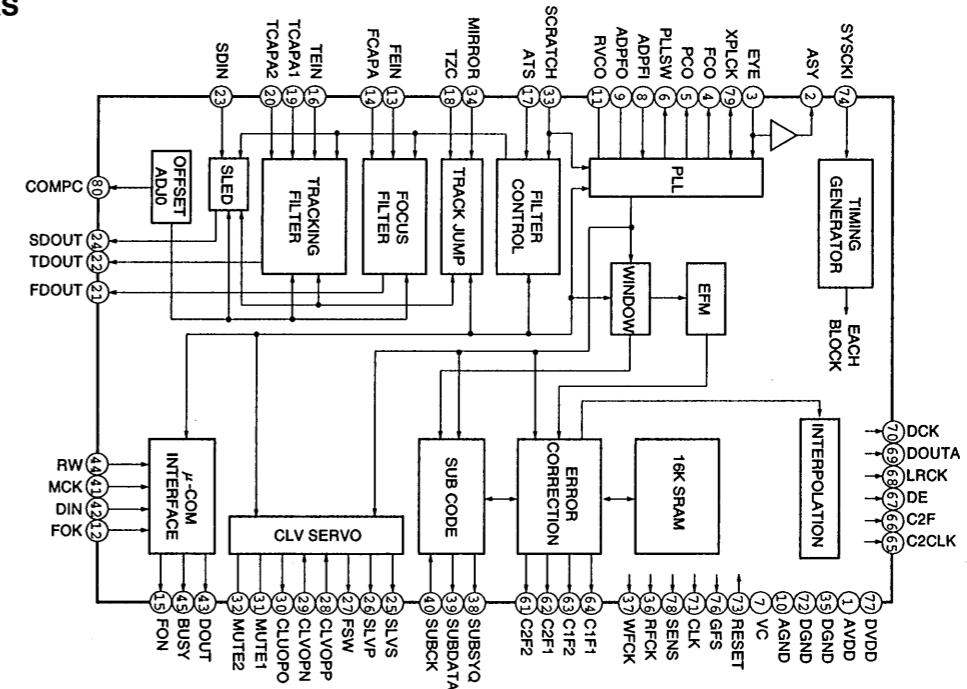


IC192 LA4533M



IC BLOCK DIAGRAM & DESCRIPTION

IC145 BU9321KS



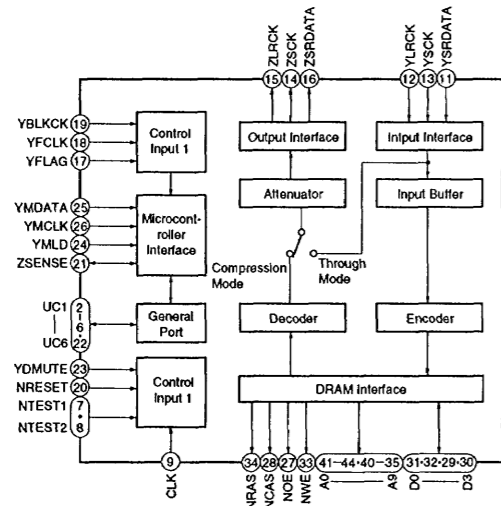
NO.	NAME	I/O	DESCRIPTION	NO.	NAME	I/O	DESCRIPTION
1	AVDD	-	Analog power supply	41	MCK	I	Command reading, sub-code reading clock input
2	ASY	O	EFM signal slice level control output	42	DIN	I	Command serial input from microcomputer
3	EYE	I	EFM signal input from the RF amplifier	43	DOUT	O	Sub Q code serial output
4	FCO	O	PLL frequency comparator output.	44	RW	O	Read/write switching input
5	PCO	O	PLL phase comparison error voltage output.	45	BUSY	O	BUSY output (L : During track jump)
6	PLLSW	O	PLL time constant selection	46	N.C.	-	Not used.
7	VC	I	Bias voltage input	47	N.C.	-	Not used.
8	ADPFI	I	PLL adding amplifier inversion input	48	N.C.	-	Not used.
9	ADPFO	O	PLL adding amplifier output	49	N.C.	-	Not used.
10	AGND	I	Analog GND	50	N.C.	-	Not used.
11	RVCO	I	PLL VCO oscillation frequency adjustment	51	N.C.	-	Not used.
12	FOK	I	Focus OK signal input	52	N.C.	-	Not used.
13	FEIN	I	Focus error signal input	53	N.C.	-	Not used.
14	FCAPA	O	Focus servo filter capacitor connection	54	N.C.	-	Not used.
15	FON	O	Focus ON signal output	55	N.C.	-	Not used.
16	TEIN	I	Tracking error signal input	56	N.C.	-	Not used.
17	ATS	I	Anti-shock detection wind comparator input	57	N.C.	-	Not used.
18	TZC	I	Tracking zero-cross comparator input	58	N.C.	-	Not used.
19	TCAPA1	O	Tracking servo filter switch connection	59	N.C.	-	Not used.
20	TCAPA2	O	Tracking servo filter switch connection	60	N.C.	-	Not used.
21	FDOUT	O	Focus drive output	61	C2F2	O	C22 correction flag output
22	TDOUT	O	Tracking drive output	62	C2F1	O	C21 correction flag output
23	SDIN	I	Sled amplifier input	63	C1F2	O	C12 correction flag output
24	SDOUT	O	Sled drive output	64	C1F1	O	C11 correction flag output
25	CLVS	O	CLV speed control output	65	C2CLK	O	Strobe signal (f=176.4 kHz)
26	CLVP	O	CLV phase control input	66	C2F	O	Corrected condition output
27	FSW	O	CLV filter time constant selection	67	DE	O	Strobe signal (f=88.2 kHz)
28	CLVOPP	I	CLV adding amplifier non-inversion input	68	LRCK	O	Strobe signal (f=44.1 kHz)
29	CLVOPN	I	CLV adding amplifier inversion input	69	DOUTA	O	Audio data output (2's compliment)
30	CLVOPO	O	CLV adding amplifier output	70	DOCK	O	DOUTA bit clock (f=2.1168 MHz)
31	MUTE1	I/O	CLV mute switch 1	71	CLK	O	Clock output (4 types can be selected by &hE4 command.)
32	MUTE2	I/O	CLV mute switch 2	72	DGND	-	Digital GND
33	SCRATCH	I	Scratch signal input	73	RESET	I	Internal circuit reset
34	MIRROR	I	Mirror signal input	74	SYSCKI	I	System clock input (f=16.93 MHz)
35	DGND	-	Digital GND	75	N.C.	-	Not used.
36	RFCK	O	Read frame clock output	76	GFS	O	GFS monitor output (4 types can be selected by &hE4 command.)
37	WFCK	O	Write frame clock output	77	DVDD	-	Digital power supply
38	SUBSYQ	O	Sub-code sync signal S1 output	78	SENS	O	Monitor output (&hE4 command setting or offset comparator output)
39	SUBDATA	O	Sub-code serial output	79	XPLCK	I/O	PLL playback clock output or external PLL playback clock input
40	SUBCK	I	Sub-code reading clock input	80	COMPC	O	Offset adjustment smoothing (Analog offset measurement enable)

# IC BLOCK DIAGRAM & DESCRIPTION

## IC151 BU34581 03

NO.	NAME	I/O	DESCRIPTION	NO.	NAME	I/O	DESCRIPTION
1	SEG0	O	LCD segment output.	33	FOK	I	Connection of DSP, BA6376K.
2	SEG1	O	LCD segment output.	34	GFS	I	Connection of DSP.
3	SEG2	O	LCD segment output.	35	-	-	N.C. (Open)
4	SEG3	O	LCD segment output.	36	-	-	N.C. (Open)
5	SEG4	O	LCD segment output.	37	LIGHT	O	Back light lighting output. (H: lighting)
6	SEG5	O	LCD segment output.	38	2SPD	O	High speed Hi output.
7	SEG6	O	LCD segment output.	39	SUB-Q	I	Connection of DSP (BU9317) DIN.
8	SEG7	O	LCD segment output.	40	COMMAND	O	Connection of DSP (BU9317) DIN.
9	SEG8	O	LCD segment output.	41	MCK	O	Connection of DSP (BU9317) MCK.
10	SEG9	O	LCD segment output.	42	SUBSYQ	I	Connection of DSP (BU9317) .
11	SEG10	O	LCD segment output.	43	BUSY	I	Connection of DSP (BU9317) .
12	SEG11	O	LCD segment output.	44	HOLD	I	HOLD SW input. (H: Hold)
13	SEG12	O	LCD segment output.	45	LID SW	I	Lid sw detect input. (H: Open)
14	SEG13	O	LCD segment output.	46	WAKE-UP	I	Stop mode release detect input. (L: Detect)
15	SEG14	O	LCD segment output.	47	RESET	I	Mi-con reset input.
16	SEG15	O	LCD segment output.	48	GND	-	Mi-con GND.
17	P CON	O	Power control output. (H: ON)	49	OSC1	I	X'tal input.
18	XRESET	O	DSP, ESP reset output. (L: Reset)	50	OSC2	O	X'tal output.
19	RW	O	Connection of DSP.	51	VDD	-	Mi-con power supply.
20	YMLD	O	ESP (SM5856A1F) latch clock output.	52	KEY0	I	Key input.
21	ZSENS	I	ESP (SM5856A1F) status input.	53	KEY1	I	Key input.
22	YMDAT	O	ESP (SM5856A1F) control data output.	54	WREM	I	Wireless remote control key input.
23	YMCLK	O	ESP (SM5856A1F) data clock output.	55	LIMIT	I	LIMIT SW detect input. (L: Detect)
24	SEL 0	I	ESP select input.	56	RESUME	I	RESUME key input. (L: Resume)
25	SEL 1	I	ESP select input.	57	VCHK	I	Power voltage detect input.
26	-	-	N.C. (Open)	58	AC/BATT	I	Power detect input. (L: AC adapter in)
27	SENS	I	DSP SENS signal input.	59	CHRG V	I	Battery charge voltage detect input.
28	C2FEN	O	DSP error detect flag control output.	60	TEST	I	Test input. (For chip test, open)
29	AMUTE	O	Audio mute output. (L: Mute)	61	COM0	O	LCD common output.
30	EMPH	O	Emphasis control. (H: Emphasis on)	62	COM1	O	LCD common output.
31	MMUTE	O	Driver mute output. (H: Mute)	63	COM2	O	LCD common output.
32	IR	I	Wireless remote control input.	64	COM3	O	LCD common output.

## IC146 SM5859AF



NO.	NAME	I/O	DESCRIPTION	NO.	NAME	I/O	DESCRIPTION	NO.	NAME	I/O	DESCRIPTION
1	VDD	-	Power supply.	16	ZSRDATA	O	Audio serial output data.	30	D3	I/O	DRAM data.
2	UC1	I/O	Micro controller interface expansion.	17	YFLAG	I	RAM overflow flag of signal process IC.	31	D0	I/O	DRAM data.
3	UC2	I/O	Micro controller interface expansion.	18	YFCLK	I	Crystal frame clock.	32	D1	I/O	DRAM data.
4	UC3	I/O	Micro controller interface expansion.	19	YBLKCK	I	Sub code block clock signal.	33	NWE	O	DRAM WE control.
5	UC4	I/O	Micro controller interface expansion.	20	NRESET	I	Reset.	34	NRAS	O	DRAM RAS control.
6	UC5	I/O	Micro controller interface expansion.	21	ZSENSE	I	Micro controller interface status output.	35	A9	O	DRAM address.
7	NTEST1	I	Test terminal.	22	UC6	I/O	Micro controller interface expansion.	36	A8	O	DRAM address.
8	NTEST2	I	Test terminal.	23	YDMUTE	I	Forced mute terminal.	37	A7	O	DRAM address.
9	CLK	I	16.9344MHz clock input.	24	YMLD	I	Micro controller interface latch clock.	38	A6	O	DRAM address.
10	VSS	-	Ground.	25	YMDATA	I	Micro controller interface serial data.	39	A5	O	DRAM address.
11	YSRDATA	I	Audio serial input data.	26	YMCLK	I	Micro controller interface shift clock.	40	A4	O	DRAM address.
12	YLCK	I	Audio serial input LR clock.	27	NOE	O	DRAM OE control (DRAM=1)	41	A0	O	DRAM address.
13	YSCK	I	Audio serial input bit clock.		(NCAS2)		DRAM2 CAS control (DRAM=2)	42	A1	O	DRAM address.
14	ZSCK	O	Audio serial output bit clock.	28	NCAS	O	DRAM CAS control.	43	A2	O	DRAM address.
15	ZLCK	O	Audio serial output LR clock.	29	D2	I/O	DRAM data.	44	A3	O	DRAM address.

For Parts or Service Contact  
**SANYO FISHER SERVICE CORPORATION.**  
 50 Beth Neilson Drive, Tronto, Ontario, M4H 1M6.