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Tel: (60) 4-6439-106, Fax: (60) 4-6439-108**Clarion Co. Ltd.**

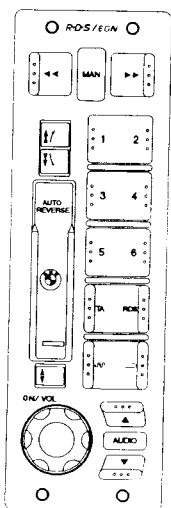
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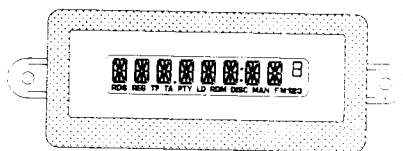
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# Service Manual



(Model: PU-1680A/PU1681A)



(Model: EU-1151A)

## LW/MW/FM Cassette

Model **PU-1680A****PU-1681A**Model **EU-1151A**

## ■ SPECIFICATIONS

### Radio section

**Model: PU-1680A**

Tuning system: PLL frequency synthesizer system  
 Receiving range: FM 87.7 to 107.9MHz (0.2 MHz steps)  
 AM 530 to 1710kHz (10 kHz steps)

**Model: PU-1681A**

Tuning system: PLL synthesizer tuner  
 Receiving range: FM 87.5 to 108MHz (0.1 MHz steps for seek)  
 (0.05 MHz steps for manual tuning)  
 LW 153 to 279 kHz (3 kHz steps)  
 MW 531 to 1,602 kHz (9kHz steps)

### Tape section

Reproducing system: 4 track, 2 channel stereo cassette  
 Wow and flutter: Less than 0.25% (W.R.M.S)  
 Separation: More than 35dB  
 Crosstalk: More than 40dB  
 S/N ratio: More than 45dB  
 FF/REW time: Less than 120sec. (c-60)

### General

Power supply voltage: DC 13.5V (10.8 to 15.6V allowable)  
 Negative ground  
 Current consumption: Less than 10A  
 Speaker impedance: 4Ω  
 Dimensions (mm): 178 (W) x 100 (H) x 152 (M)mm  
 Weight: 1.5kg

## ■ NOTE

1. We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.

## ■ COMPONENTS

**PU1680A/PU1681A/EU1181A**

Main unit	_____	1
Mounting bracket	300-7742-20	1
Part's bag	_____	
Removal key	331-2479-20	2
Poly Bag	253-0380-50	1

※ Specification and design are subject to change without notice for further improvement.

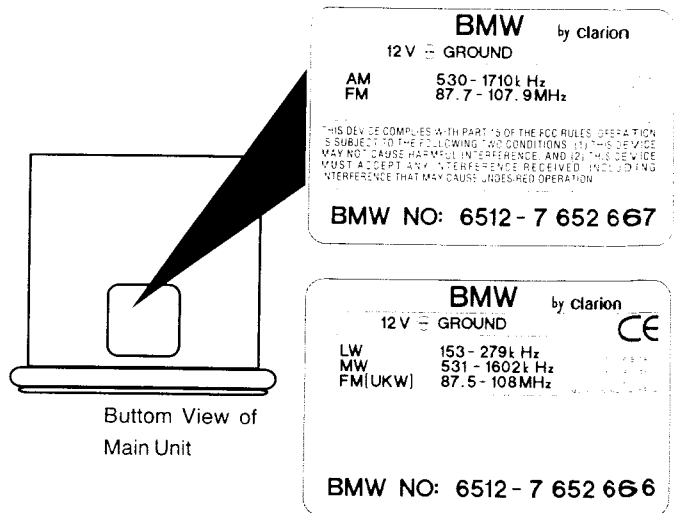
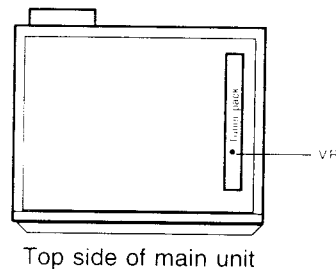
## ■ To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.  
The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.  
The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.  
For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.  
If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
3. Check for safety after repair.  
Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.  
If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.  
Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
5. Cautions regarding chips.  
Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.
6. Cautions in handling flexible PWB.  
Before working with a soldering iron, make sure that the iron tip temperature is around 270°C. Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

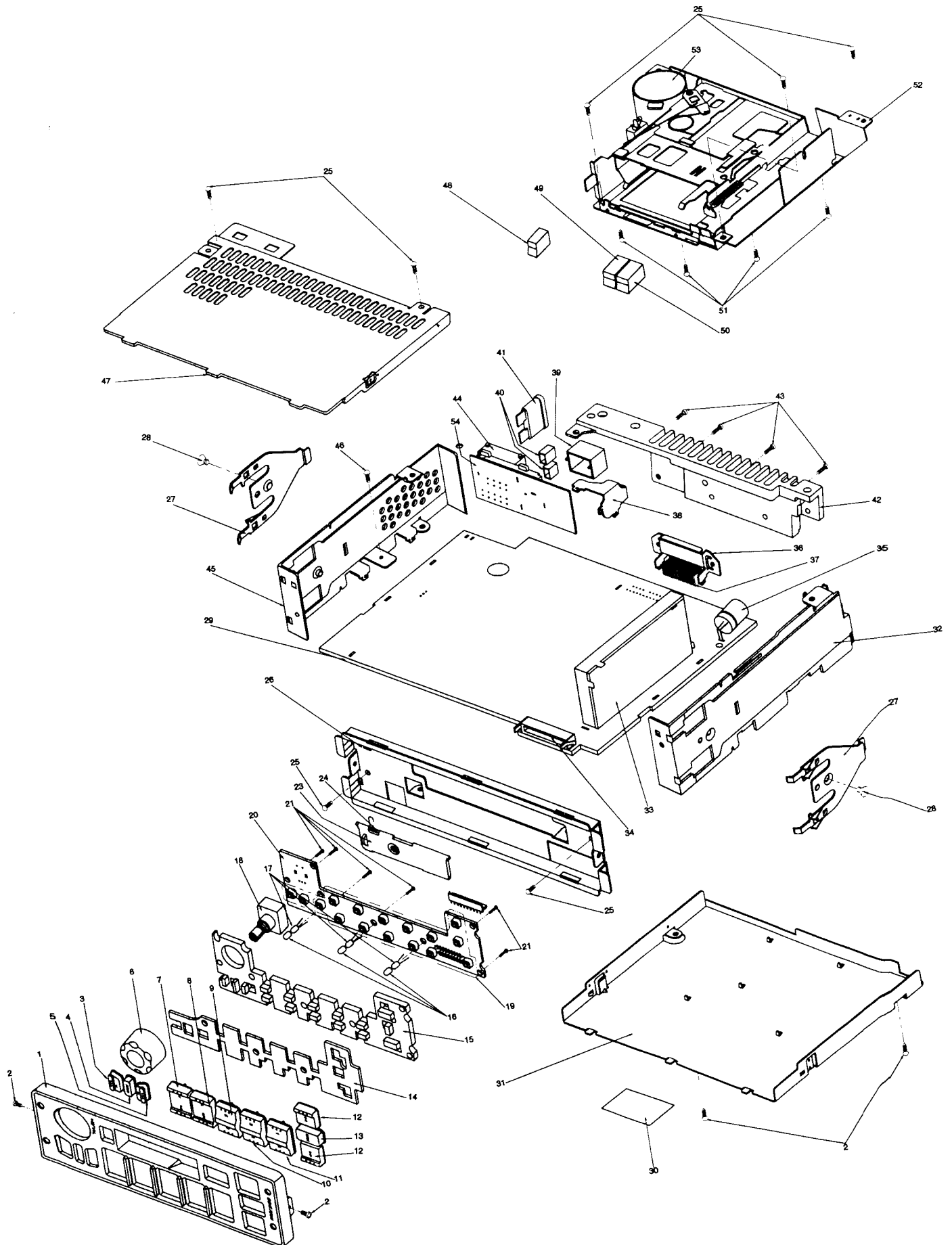
## ■ ADJUSTMENT

Item	Procedure	Instrument
FM-S-meter	1. Press the RDS button and M6 button to RDS test mode. 2. Input at 98.1MHz/30dBμ (1KHz,30% Mod.) signal. 3. Adjust VR on top of tuner pack so that an output level at the TP (S-Meter) on main PWB is 3.0±0.1V.	SSG Millivoltmeter



# EXPLODED VIEW • PART LIST

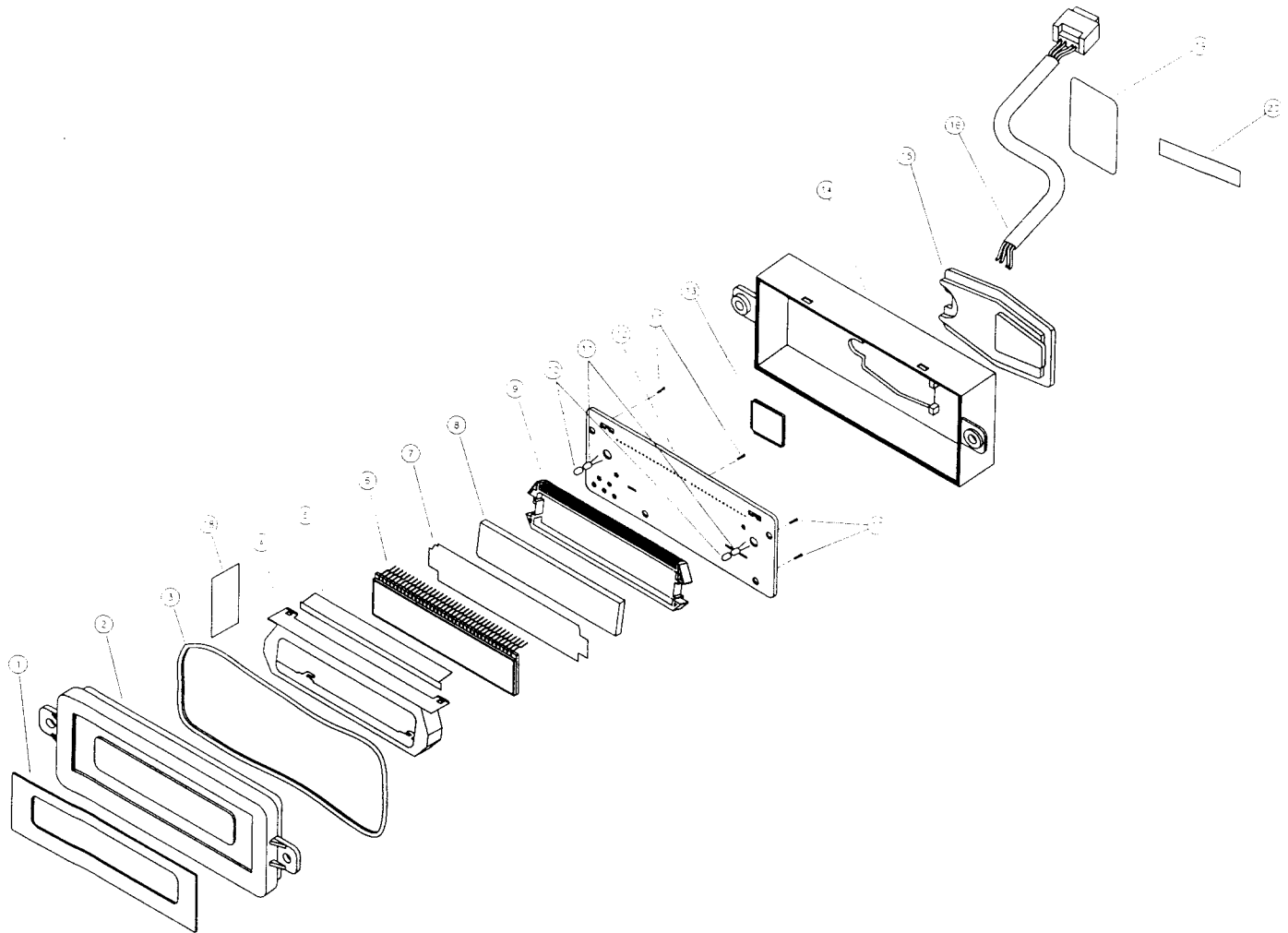
Main Section



NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	370-5863-00	ESCUTCHEON	1	29	039-1628-00	MAIN PWB	1
2	716-1494-00	MACHINE SCREW	4	30	286-9477-01	SETPLATE	1
3	382-5696-00	BUTTON (AUDIO DOWN)	1	30A	286-9478-00	SETPLATE	1
4	382-5692-00	BUTTON (AUDIO)	1	31	305-0289-00	LOWER CASE	1
5	382-5695-00	BUTTON (AUDIO UP)	1	32	305-0291-00	SIDE PLATE (RIGHT)	1
6	380-5469-00	KNOB	1	33	80-2080-C1	TUNER	1
7	382-5694-00	BUTTON (RADIO/TAPE)	1	34	076-0540-18	PLUG	1
8	382-5693-00	BUTTON (TA/RDS)	1	35	092-0612-11	ANTENNA	1
9	382-5689-00	BUTTON (5/6)	1	36	331-2574-00	IC HOLDER	1
10	382-5688-00	BUTTON (3/4)	1	37	051-2014-00	POWERIC	1
11	382-5687-00	BUTTON (1/2)	1	38	331-2577-00	ISO HOLDER	1
12	382-5690-00	BUTTON (MAN-SEEK)	2	39	331-2009-00	SHIELD CASE	1
13	382-5691-00	BUTTON (MAN)	1	40	074-1265-00	OUTLET SOCKET	2
14	345-8397-00	SPONGE	1	41	060-0057-56	AUTO FUSE	1
15	335-6235-00	ILLUMI PLATE	1	42	313-1791-00	HEAT SINK	1
16	345-3814-85	LAMP CAP	3	43	714-2610-81	MACHINE SCREW	4
17	017-0410-00	PILOT LAMP	3	44	074-1264-00	OUTLET SOCKET	1
18	016-0010-12	VARIABLE-R	1	45	305-0290-00	SIDE PLATE (LEFT)	1
19	013-6002-50	SWITCH	16	46	714-2606-81	MACHINE SCREW	1
20	039-1629-00	SW PWB	1	47	304-0464-00	UPPER CASE	1
21	716-0778-00	WAVE SCREW	6	48	382-1082-02	BUTTON (PRO)	1
22	074-1151-18	OUTLET SOCKET (PWB)	1	49	382-1292-00	BUTTON (REW)	1
23	320-0526-73	DUSTPROOF COVER	1	50	382-1291-00	BUTTON (FF)	1
24	750-2626-01	SPRING	1	51	714-3004-81	MACHINE SCREW	4
25	731-3006-80	TAP TIGHT	7	52	331-2813-00	MECH. -HOLDER	1
26	309-0744-00	FRONT PLATE	1	53	930-0650-81	TAPE MECH.	1
27	750-2512-01	SPRING	2	54	039-1630-00	ISO PWB	1
28	714-3006-41	MACHINE SCREW	2				

# EXPLODED VIEW • PARTS LIST

Display Box EU-1151A

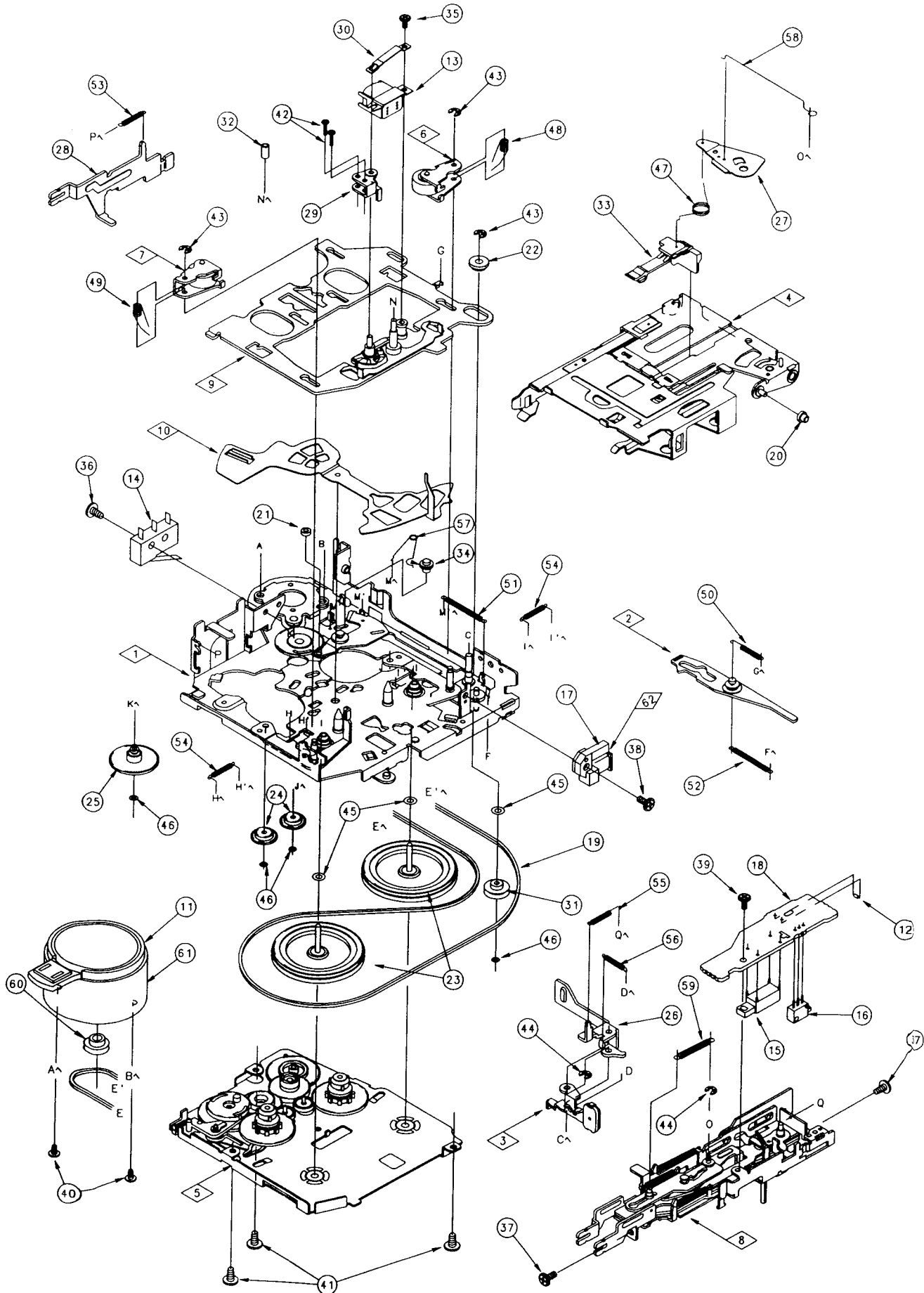


NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	353-0518-00	SHADE	1	11	017-0410-00	PILOT LAMP	2
2	335-6232-00	UPPER COVER	1	12	039-1631-00	PWB	1
3	345-8396-00	RUBBER PART	1	13	051-6022-00	LCD DRIVER	1
4	331-2593-00	LCD HOLDER	1	14	335-6233-00	REAR CASE	1
5	335-5994-00	SHEILD SHEET	1	15	335-6234-00	LEAD CLAMP	1
6	379-1155-40	LCD	1	16	854-8616-60	EXT. LEAD	1
7	335-5912-01	FILTER	1	17	716-0778-00	SPECIAL SCREW	4
8	335-5910-00	ILLUMI PLATE	1	18	346-0131-00	LEATHER SHEET	1
9	335-5909-01	LCD HOLDER	1	19	286-9479-00	SETPLATE	1
10	345-3814-85	LAMP CAP	2	20	291-0091-00	STICKER	1

# EXPLODED VIEW • PARTS LIST

Tape mechanism section 930-0650-81

Drive unit section



NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	960-3834-04	DECK-P-ASSY R	1	33	631-0552-03	PACK STOPPER	1
2	960-3837-04	SHIFT-P-ASSY	1	34	632-1886-02	LOCK PIN	1
3	960-3839-03	PLUNGER-L-ASSY	1	35	716-0816-00	STEEL SCREW	1
4	960-3950-02	PACK GUIDE-ASSY	1	36	714-2308-81	MACHINE SCREW	1
5	960-4205-04	BOTTOM SUB-A-C	1	37	714-2604-81	MACHINE SCREW	2
6	960-4230-00	ROLLER-ASSY-F	1	38	714-2606-11	MACHINE SCREW	1
7	960-4231-00	ROLLER-ASSY-R	1	39	716-0790-02	PWB SCREW	1
8	960-3924-13	FRAME SUB-A-RS	1	40	716-0715-15	STEEL SCREW	2
9	960-4222-00	HEAD-P-ASSY R	1	41	716-0717-10	SPECIAL SCREW	3
10	960-3881-05	CH PLATE-ASSY	1	42	716-0718-21	SPECIAL SCREW	2
11	020-0383-00	DC-MOTOR	1	43	743-1500-10	E-LING	3
12	001-0330-00	D I ODE	1	44	743-2000-10	E-LING	2
13	011-0307-50	HEAD	1	45	746-0624-00	SPECIAL WASHER	3
14	013-2690-02	SWITCH	1	46	746-0761-00	SPECIAL WASHER	4
15	013-3807-00	SWITCH	1	47	750-2361-01	SPRING	1
16	013-3808-00	SWITCH	1	48	750-2929-00	ROLLER SPEING F	1
17	630-1479-02	CORE	1	49	750-2928-00	ROLLER SPEING R	1
18	099-8019-01	PWB	1	50	750-2537-02	OVER-P-SPRING	1
19	602-0103-10	BELT	1	51	750-2538-01	POWER-P-SPRING	1
20	610-0226-01	ROLLER	1	52	750-2539-01	SHIFT-P-SPRING	1
21	610-0293-01	POWER ROLLER	1	53	750-2541-02	PROGRAM SPRING	1
22	610-0294-01	HEAD-P-G-ROLLER	1	54	750-2545-00	FF GEAR SPRING	2
23	611-0077-01	FLYWHEEL	2	55	750-2650-00	OFF ARM SP B	1
24	613-0095-01	FF IDLER GEAR	2	56	750-2555-02	OFF ARM SPRING	1
25	613-0314-00	GEAR A	1	57	750-2568-00	LOCK SPRING	1
26	630-1930-02	OFF ARM	1	58	750-2569-03	EJECT ROD RS	1
27	630-1932-02	SWING ARM	1	59	750-2554-03	CLICK-P-SPRING	1
28	630-1934-02	PROGRAM LEVER	1	60	603-0114-00	MOTOR PULLEY	1
29	630-1956-02	ADJUST LINK	1	61	630-2028-00	SHIELD CASE	1
30	630-1962-02	HEAD SPRING	1	62	960-3392-02	COIL-ASSY	1
31	604-0035-01	TENTION PULLEY	1				
32	631-0545-01	EJECT ROLLER	1				

## EXPLANATION OF IC

■  $\mu$ PD784215

052-3917-00

Radio, Tape Controller

### Outward Form

100 pins, plastic QFP

### Terminal Description

Pin No	Symbol	I/O	Function
1	LCD-DO	O	Serial data output Display IC
2	LCD-CLK	O	Clock pulse output to Display IC
3	LCD-CE	O	Chip enable signal output to Display IC
4	RDS DATA	I	RDS serial data input
5	NOISE CLEAR	O	Noise clear signal output
6	RDS MUTE	O	"H" RDS mute ON
7	FM-SD	I	"H"=FM station detected
8	AM-SD	I	"H"=AM station detected
9	VDD	—	Positive supply voltage
10	X2	—	Crystal connection (12MHz)
11	X1	I	Crystal connection (12MHz)
12	VSS	—	Ground
13	XT 2	—	Not in use
14	XT 1	I	Not in use
15	RESET	I	Reset signal input. "L"=Reset
16	N.C	I	Not in use
17	N.C	I	Not in use
18	RDS-CLK	I	RDS clock pulse input
19	KI-0	I	Key scan signal input. Ref. Table 1
20	B/U-DET	I	Backup interrupt signal input. "H"=Backup ON
21	ACC-DET	I	ACC power supply ON signal input. "L"=ACC ON
22	PACK-IN	I	Cassette pack insertion detection terminal. "L"=Tape in
23	AVDD	—	Positive supply voltage
24	AVREF0	—	Reference voltage input for A/D converter
25	NOISE-IN1	I	Input terminal of A/D converter to detect the noise of FM
26	NOISE-IN2	I	Not in use
27	S-M	I	Input terminal of internal A/D converter to detect the voltage of FM S meter
28	N.C	I	Not in use
29	PLL-DI	I	PLL serial data input
30	REMCON-1	I	Input terminal of internal A/D converter to detect the remote control switch
31	REMCON-2	I	Input terminal of internal A/D converter to detect the remote control switch
32	MUTE-DET	I	Input terminal of A/D converter to detect the voltage of Backup line
33	AVSS	—	Ground
34	INTERCOMINT	I	Input terminal for Intercom interruption. "H"=Interrupt ON
35	N.C	I	Not in use

Pin No	Symbol	I/O	Function
36	AVREF	—	Connect to VDD
37	PLL-DO	O	Serial data output to PLL IC
38	PLL-CLK	O	Clock pulse output to PLL IC
39	N.C	O	Not in use
40	PLL-CE	O	Chip enable signal output to PLL IC
41	SOFT-MUTE	O	Output terminal for swithing FM SOFT MUTE constant
42	A-MUTE	O	Mute signal output to Audio power amplifier IC. "L"=Mute ON
43	L-MUTE	O	Mute signal output to line-out. "L"=mute ON
44	N.C	I	Not in use
45	V-CL	O	Clock pulse output to electrical volume IC
46	V-DO	O	Serial data output to electrical volume IC
47	V-CE	O	Chip enable output to electrical volume IC
48	VOL-MUTE	O	Mute signal output to electrical volume IC
49	5V-REM	O	5V power supply circuit control signal output. "L"=ON
50	14V-REM	O	14V power supply control signal output. "H"=ON
51	FWD/REV	I	"H"=Reverse. "L"=Forward
52	N.C	I	Not in use
53	N.C	I	Not in use
54	MOTOR-ON	O	"H"=Main motor ON
55	N.C	I	Not in use
56	N.C	I	Not in use
57	N.C	I	Not in use
58	N.C	I	Not in use
59	N.C	I	Not in use
60	N.C	I	Not in use
61	N.C	I	Not in use
62	N.C	I	Not in use
63	N.C	I	Not in use
64	AREA-B	I	Area setting input. Ref. Table 2
65	AREA-A	I	Area setting input. Ref. Table 2
66	N.C	I	Not in use
67	N.C	I	Not in use
68	N.C	I	Not in use
69	N.C	I	Not in use
70	N.C	I	Not in use
71	N.C	I	Not in use
72	VSS	—	Ground
73	N.C	I	Not in use
74	N.C	I	Not in use
75	ST	I	Not in use
76	N.C	I	Not in use
77	N.C	I	Not in use
78	N.C	I	Not in use



Pin No	Symbol	I/O	Function
79	N.C	I	Not in use
80	N.C	I	Not in use
81	VDD	—	Positive supply voltage
82	N.C	I	Not in use
83	N.C	I	Not in use
84	N.C	I	Not in use
85	N.C	I	Not in use
86	N.C	I	Not in use
87	N.C	I	Not in use
88	KI-1	I	Key scan signal input. Ref. Table 1
89	KI-2	I	Key scan signal input. Ref. Table 1
90	KI-3	I	Key scan signal input. Ref. Table 1

Pin No	Symbol	I/O	Function
91	KI-4	I	Key scan signal input. Ref. Table 1
92	VOL-A	I	Volume control pulse input from Volume switch
93	VOL-B	I	Volume control pulse input from Volume switch
94	TEST/VPP	—	Connect to Ground
95	KO-1	O	Key scan signal output. Ref. Table 1
96	KO-2	O	Key scan signal output. Ref. Table 1
97	KO-3	O	Key scan signal output. Ref. Table 1
98	KO-4	O	Key scan signal output. Ref. Table 1
99	KO-5	O	Key scan signal output. Ref. Table 1
100	KO-6	O	Key scan signal output. Ref. Table 1

**Table 1. Key Matrix Table**

PIN NO	KO 1 (PIN95)	KO 2 (PIN96)	KO 3 (PIN97)	KO 4 (PIN98)	KO 5 (PIN99)	KO 6 (PIN100)
KI 0 (PIN19)	-	-	-	-	-	Power
KI 1 (PIN88)	AUDIO	RADIO	M1	M2	MAN	-
KI 2 (PIN89)	A-DOWN	CASSETTE	M3	M4	T-DOWN	-
KI 3 (PIN90)	A-UP	RDS	M5	M6	T-UP	-
KI 4 (PIN91)	TA	-	-	-	-	-

**Table 2. Area setting Table**

AREA	AREA A (PIN65)	AREA B (PIN64)
US	H	L
EU	H	H

# ■ ELECTRICAL PARTS LIST

## Main PWB Section (B1)

Note: Several different parts of the same reference number are alternative parts.  
One of those parts is used in the set.

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C 1	166-1801-00	18pF	C 217	166-6811-00	680pF	C 705	183-1073-13	6.3V100μF
C 2	166-1011-00	100pF	C 218	183-1063-33	16V10μF	C 706	183-4743-63	50V0.47μF
C 3	168-1032-05	0.011μF	C 219	183-1063-33	16V10μF	C 707	183-4743-63	50V0.47μF
C 4	168-4732-78	0.047μF	C 220	183-1063-33	16V10μF	C 708	168-1022-05	1000pF
C 5	168-4732-78	0.047μF	C 221	183-1063-33	16V10μF	C 709	168-1022-05	1000pF
C 6	183-1053-63	50V1μF	C 222	183-1056-63	50V1μF	C 801	168-6832-78	0.068μF
C 7	168-1042-05	0.1μF	C 223	183-1056-33	50V1μF	C 802	183-2263-13	6.3V22μF
C 8	168-1022-05	1000pF	C 224	168-3332-78	0.033μF	C 803	168-6832-78	0.068μF
C 9	168-6822-05	6800pF	C 225	168-3332-78	0.033μF	C 804	183-1073-13	6.3V100μF
C 10	168-1832-05	0.018μF	C 226	168-3312-05	330pF	C 805	166-1501-00	15pF
C 11	168-1832-05	0.018μF	C 227	168-1032-05	0.01μF	C 806	166-1501-00	15pF
C 12	168-1522-05	1500pF	C 228	168-1032-05	0.01μF	C 807	178-2242-78	0.22μF
C 13	168-3332-78	0.033μF	C 229	168-3312-05	330pF	C 808	168-1032-05	0.01μF
C 14	168-2232-05	0.022μF	C 230	183-1063-33	16V10μF	C 810	166-1011-00	100pF
C 15	168-1032-05	0.01μF	C 231	183-1063-33	16V10μF	C 811	168-1532-05	0.015μF
C 80	168-1032-05	0.01μF	C 232	168-1042-05	0.1μF	C 812	168-1042-05	0.1μF
C 101	168-2232-05	0.022μF	C 233	183-1043-63	50V0.1μF	C 813	178-2242-78	0.22μF
C 102	168-2232-05	0.022μF	C 234	183-1043-63	50V0.1μF	C 820	168-1022-05	1000pF
C 103	168-3322-05	3300pF	C 235	183-1043-63	50V0.1μF	C 821	168-2212-05	220pF
C 105	183-2253-63	50V2.2μF	C 236	183-1043-63	50V0.1μF	C 822	168-1022-05	1000pF
C 106	168-3312-05	330pF	C 237	183-1053-63	50V1μF	CCT 801	050-0140-54	1KΩx4
C 107	168-5612-05	560pF	C 238	183-1053-63	50V1μF	CCT 802	050-0140-54	1KΩx4
C 108	166-4701-00	47pF	C 239	168-1032-05	0.01μF	CCT 803	050-0140-54	1KΩx4
C 109	166-8201-00	82pF	C 250	183-2253-63	50V2.2μF	CCT 804	050-0140-54	1KΩx4
C 111	168-1041-05	0.1μF	C 251	183-2253-63	50V2.2μF	CCT 805	050-0140-54	1KΩx4
C 113	183-4763-13	6.3V47μF	C 302	183-4763-33	16V47μF	CCT 806	050-0140-54	1KΩx4
C 116	168-1032-05	0.01μF	C 303	168-1022-05	1000pF	CCT 807	050-0140-54	1KΩx4
C 123	168-8222-05	8200pF	C 304	168-1022-05	1000pF	CCT 808	050-0140-54	1KΩx4
C 124	168-1222-05	1200pF	C 305	168-1022-05	1000pF	CCT 809	050-0140-54	1KΩx4
C 125	168-1042-05	0.1μF	C 306	168-1022-05	1000pF	CCT 810	050-0140-54	1KΩx4
C 129	183-1053-63	50V1μF	C 307	178-4742-78	0.47μF	CCT 811	050-0140-54	1KΩx4
C 131	166-1011-00	100pF	C 308	172-1041-11	0.1μF	CCT 812	050-0140-54	1KΩx4
C 133	166-1011-00	100pF	C 309	184-3383-32	16V3300μF	CCT 813	050-0140-54	1KΩx4
C 134	166-1011-00	100pF	C 310	183-2263-13	6.3V22μF	CCT 814	050-0140-54	1KΩx4
C 135	166-1011-00	100pF	C 501	168-1042-05	0.1μF	CCT 815	050-0140-54	1KΩx4
C 136	183-4763-13	6.3V47μF	C 502	178-2242-78	0.22μF	CCT 816	050-0140-54	1KΩx4
C 137	166-1501-00	15pF	C 505	168-1032-05	0.01μF	CCT 817	050-0140-54	1KΩx4
C 140	166-1801-00	18pF	C 507	183-1073-13	6.3V100μF	CCT 818	050-0140-54	1KΩx4
C 141	168-5632-78	0.056μF	C 510	168-1032-05	0.01μF	CCT 819	050-0140-54	1KΩx4
C 142	168-8232-78	0.082μF	C 511	168-3922-05	3900pF	D 101	001-0330-00	1SS119
C 143	168-5632-78	0.056μF	C 513	183-1073-23	10V100μF	D 102	001-0330-00	1SS119
C 144	168-4732-78	0.047μF	C 514	183-2273-23	10V220μF	D 301	001-0330-00	1SS119
C 145	168-1032-05	0.01μF	C 517	168-1032-05	0.01μF	D 501	001-0330-00	1SS119
C 146	168-1032-05	0.01μF	C 518	042-0171-00	16V-47μF-TAN	D 502	001-0330-00	1SS119
C 180	166-1011-00	100pF	C 519	172-1031-11	0.01μF	D 503	001-0376-46	MTZJ9.1A
C 181	168-1022-05	1000pF	C 520	183-4753-53	35V4.7μF	D 506	001-0421-31	MTZJ18
C 191	168-1022-05	1000pF	C 521	184-4763-53	35V47μF	D 508	001-0330-00	1SS119
C 192	168-1022-05	1000pF	C 530	168-1032-05	0.01μF	D 509	001-0376-47	MTZJ9.1B
C 211	183-3363-23	10V33μF	C 550	168-1042-05	0.1μF	D 512	001-0330-00	1SS119
C 212	168-4732-78	0.047μF	C 551	168-1042-05	0.1μF	D 513	001-0466-00	S5688B
C 213	168-4732-78	0.047μF	C 701	183-1073-13	6.3V100μF	D 514	001-0466-00	S5688B
C 214	166-6811-00	680pF	C 702	168-2732-05	0.027μF	D 550	001-0516-00	MA111
C 215	183-1053-63	50V1μF	C 703	168-2732-05	0.027μF	D 551	001-0516-00	MA111
C 216	183-1053-63	50V1μF	C 704	183-4763-33	16V47μF	D 552	001-0516-00	MA111

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
D 553	001-0516-00	MA111	R 11	119-1021-10	1/16W 1KΩ	R 518	111-1521-91	1/4WS 1.5KΩ
D 801	001-0330-00	1SS119	R 14	119-1031-10	1/16W 10KΩ	R 519	119-1031-10	1/16W 10KΩ
D 901	001-0330-00	1SS119	R 15	119-1231-10	1/16W 12KΩ	R 520	111-1091-91	1/4WS 1Ω
D 902	001-0330-00	1SS119	R 102	119-1231-10	1/16W 12KΩ	R 521	111-1091-91	1/4WS 1Ω
C 101	051-0350-55	NJM4558M	R 103	119-1031-10	1/16W 10KΩ	R 522	111-1091-91	1/4WS 1Ω
C 102	051-1819-00	SAA6579T/VI	R 104	119-1821-10	1/16W 1.8KΩ	R 523	111-2211-81	1/2WS 220Ω
C 103	051-6201-00	LC72146M-TLM	R 105	119-3331-10	1/16W 33KΩ	R 526	111-1521-91	1/4WS 1.5KΩ
C 201	051-5012-00	LC75386NE-R	R 106	119-1521-10	1/16W 1.5KΩ	R 528	119-1031-10	1/16W 10KΩ
C 301	051-2014-00	TDA7384A	R 107	119-1521-10	1/16W 1.5KΩ	R 530	119-2231-10	1/16W 22KΩ
C 501	051-1556-08	S-80740AN-D4-X	R 108	119-2221-10	1/16W 2.2KΩ	R 531	119-2231-10	1/16W 22KΩ
C 701	051-0301-01	UPC1228HA	R 111	119-1041-10	1/16W 100KΩ	R 541	111-1001-81	1/2WS 10Ω
C 801	052-3917-00	μPD784215AGF-115-7EU	R 113	119-2211-10	1/16W 220Ω	R 543	111-4701-91	1/4WS 47Ω
C 802	051-5413-08	S-8052HNM-CR-T1	R 117	119-1031-10	1/16W 10KΩ	R 551	119-2221-10	1/16W 2.2KΩ
J 1	076-0540-18	18P	R 118	119-2221-10	1/16W 2.2KΩ	R 552	119-1221-10	1/16W 1.2KΩ
L 1	010-2330-67	5.6μH	R 120	119-1031-10	1/16W 10KΩ	R 553	119-8211-10	1/16W 820Ω
L 102	010-2046-44	1mH	R 121	119-2221-10	1/16W 2.2KΩ	R 554	119-3311-10	1/16W 330Ω
L 104	010-2330-86	220μH	R 122	119-1231-10	1/16W 12KΩ	R 556	119-3311-10	1/16W 330Ω
Q 101	125-0003-02	RN2202	R 124	119-2221-10	1/16W 2.2KΩ	R 557	119-3321-10	1/16W 3.3KΩ
Q 102	103-1504-00	2SD1504	R 125	119-2711-10	1/16W 270Ω	R 558	119-3321-10	1/16W 3.3KΩ
Q 104	125-2003-02	RN1202	R 126	119-1021-10	1/16W 1KΩ	R 559	119-3311-10	1/16W 330Ω
Q 105	100-1150-00	2SA1150	R 129	119-1031-10	1/16W 10KΩ	R 560	119-3311-10	1/16W 330Ω
Q 106	100-1048-00	2SA1048	R 130	119-2231-10	1/16W 22KΩ	R 701	119-6801-10	1/16W 68Ω
Q 107	108-0669-00	2SK669	R 131	119-2231-10	1/16W 22KΩ	R 702	119-4721-10	1/16W 4.7KΩ
Q 301	102-2712-00	2SC2712	R 132	119-4731-10	1/16W 47KΩ	R 703	119-1241-10	1/16W 120KΩ
Q 302	125-2004-02	RN1402	R 133	119-4731-10	1/16W 47KΩ	R 704	119-4721-10	1/16W 4.7KΩ
Q 303	103-1306-00	2SD1306	R 207	119-4721-10	1/16W 4.7KΩ	R 705	119-1241-10	1/16W 120KΩ
Q 304	103-1306-00	2SD1306	R 208	119-3331-10	1/16W 33KΩ	R 706	119-6801-10	1/16W 68Ω
Q 501	102-2712-00	2SC2712	R 209	119-3331-10	1/16W 33KΩ	R 707	119-2231-10	1/16W 22Ω
Q 507	100-1150-00	2SA1150	R 210	119-4721-10	1/16W 4.7KΩ	R 708	119-2231-10	1/16W 22KΩ
Q 511	100-1297-00	2SA1297	R 211	119-1541-10	1/16W 150KΩ	R 709	111-1031-91	1/4WS 10KΩ
Q 513	103-1858-00	2SD1858	R 212	119-1021-10	1/16W 1KΩ	R 710	111-8211-81	1/2WS 820Ω
Q 514	103-1858-00	2SD1858	R 213	119-1021-10	1/16W 1KΩ	R 711	119-2201-10	1/16W 22Ω
Q 515	103-1858-00	2SD1858	R 214	119-1021-10	1/16W 1KΩ	R 801	119-1031-10	1/16W 10KΩ
Q 516	100-1297-00	2SA1297	R 215	119-1021-10	1/16W 1KΩ	R 802	119-1031-10	1/16W 10KΩ
Q 517	125-2003-02	RN1202	R 216	119-1031-10	1/16W 10KΩ	R 803	119-1031-10	1/16W 10KΩ
Q 527	100-0885-00	2SA885	R 217	119-3311-10	1/16W 330Ω	R 804	119-1031-10	1/16W 10KΩ
Q 530	102-2458-00	2SC2458	R 218	119-3311-10	1/16W 330Ω	R 805	119-4721-10	1/16W 4.7KΩ
Q 590	051-1834-00	LM2936Z	R 219	119-1031-10	1/16W 10KΩ	R 806	119-4721-10	1/16W 4.7KΩ
Q 700	101-1240-00	2SB1240	R 220	119-4721-10	1/16W 4.7KΩ	R 815	119-1031-10	1/16W 10KΩ
Q 701	125-2003-03	RN1203	R 221	119-4721-10	1/16W 4.7KΩ	R 819	119-4721-10	1/16W 4.7KΩ
Q 801	102-2712-00	2SC2712	R 301	119-1031-10	1/16W 10KΩ	R 820	119-1031-10	1/16W 10KΩ
Q 901	125-2003-06	N1206	R 302	119-1051-10	1/16W 1MΩ	R 823	119-0000-00	1/16W 0Ω
Q 903	100-1162-00	2SA1162	R 303	119-1031-10	1/16W 10KΩ	R 824	119-0000-00	1/16W 0Ω
R 1	111-3311-91	1/4WS 330Ω	R 501	119-5631-10	1/16W 56KΩ			(PU-1680-Y-A ONL ✓)
R 2	119-8221-10	1/16W 8.2KΩ	R 503	032-0092-92	1/16W 220KΩ±1%	R 825	119-0000-00	1/16W 0Ω
R 3	119-1231-10	1/16W 12KΩ	R 504	119-1831-10	1/16W 18KΩ			(PU-1681Y-A ONLY ✓)
R 4	119-1021-10	1/16W 1KΩ	R 505	119-2731-10	1/16W 27KΩ	R 826	119-2241-10	1/16W 220KΩ
R 5	119-1031-10	1/16W 10KΩ	R 506	032-0092-36	1/16W 470KΩ±1%	R 827	119-1031-10	1/16W 10KΩ
R 6	119-2241-10	1/16W 220KΩ	R 507	111-1021-91	1/4WS 1KΩ	R 828	119-1031-10	1/16W 10KΩ
R 7	119-1031-10	1/16W 10KΩ	R 510	119-2231-10	1/16W 22KΩ	R 841	119-4721-10	1/16W 4.7KΩ
R 8	119-6821-10	1/16W 6.8KΩ	R 513	119-4741-10	1/16W 470KΩ	R 842	119-2241-10	1/16W 220KΩ
R 9	119-5631-10	1/16W 56KΩ	R 515	119-1031-10	1/16W 10KΩ	R 850	119-2231-10	1/16W 22KΩ
			R 516	119-2741-10	1/16W 270KΩ	R 851	119-2231-10	1/16W 22KΩ

REF No.	PART No.	DESCRIPTION
R 860	119-1031-10	1/16W 10KΩ
R 861	119-5631-10	1/16W 56KΩ
R 881	119-0000-00	1/16W 0Ω
R 882	119-0000-00	1/16W 0Ω
R 883	119-0000-00	1/16W 0Ω

REF No.	PART No.	DESCRIPTION
R 901	111-8211-91	1/4WS 820Ω
R 902	119-3321-10	1/16W 3.3KΩ
R 903	119-1031-10	1/16W 10KΩ
R 904	119-1031-10	1/16W 10KΩ
SUP	060-0122-10	DSP-201M

REF No.	PART No.	DESCRIPTION
X 100	061-3013-00	4.332MHZ
X 101	061-1066-00	7.2MHZ
X 801	061-1081-50	12MHZ

## Connector PWB Section (B2)

REF No.	PART No.	DESCRIPTION
C 2	183-1063-33	16V10μF
B 101	076-0324-10	10P
B 102	076-0324-04	4P

REF No.	PART No.	DESCRIPTION
B 103	076-0324-14	14P
D 1	001-0334-30	RL202
T 1	009-9006-60	CHOKE

REF No.	PART No.	DESCRIPTION
J 101	074-1155-00	OUTLET SOCKET

## Switch PWB Section (B3)

REF No.	PART No.	DESCRIPTION
C 101	160-1012-05	100pF
C 102	160-1012-05	100pF
CN 101	074-1151-18	18P
PL 101	017-0410-00	14V 40mA
PL 102	017-0410-00	14V 40mA
PL 103	017-0410-00	14V 40mA
S 101	013-6002-50	SKHVBC
S 102	013-6002-50	SKHVBC

REF No.	PART No.	DESCRIPTION
S 103	013-6002-50	SKHVBC
S 104	013-6002-50	SKHVBC
S 105	013-6002-50	SKHVBC
S 106	013-6002-50	SKHVBC
S 107	013-6002-50	SKHVBC
S 108	013-6002-50	SKHVBC
S 110	013-6002-50	SKHVBC
S 111	013-6002-50	SKHVBC

REF No.	PART No.	DESCRIPTION
S 112	013-6002-50	SKHVBC
S 113	013-6002-50	SKHVBC
S 114	013-6002-50	SKHVBC
S 115	013-6002-50	SKHVBC
S 116	013-6002-50	SKHVBC
S 118	013-6002-50	SKHVBC
VR 101	016-0010-12	VR W/SHAFT

## Display PWB Section (B4)

REF No.	PART No.	DESCRIPTION
C 2	183-1063-33	16V10μF
C 3	178-4732-05	0.047μF
C 4	178-4732-05	0.047μF
C 5	178-1022-05	1000pF
C 6	183-1073-23	10V100μF
D 1	001-0376-48	MTZJ9.1C
D 4	001-0376-33	MTZJ5.6C
D 5	001-0330-00	1SS119

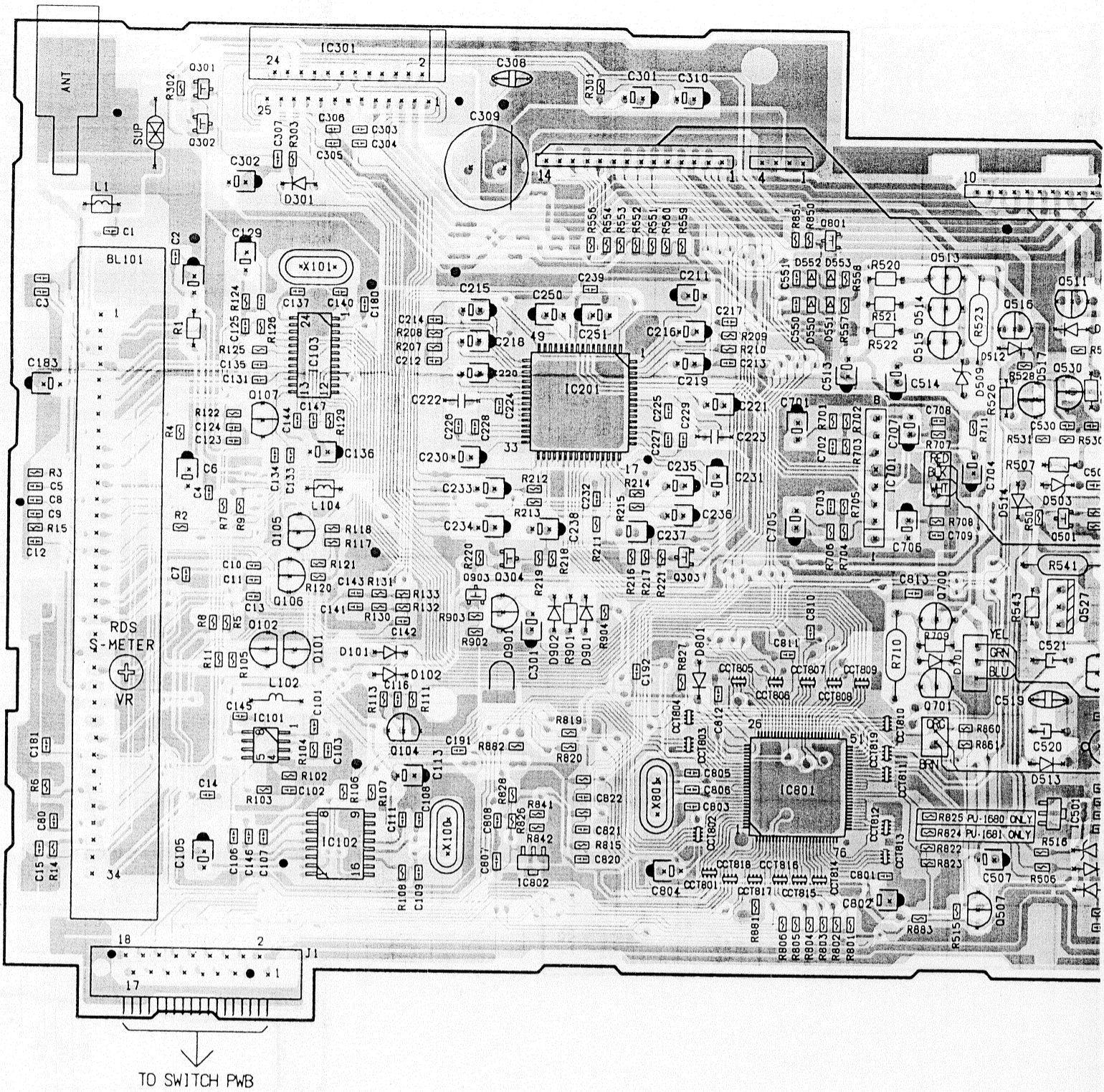
REF No.	PART No.	DESCRIPTION
IC 1	051-6022-00	LC75824W
LCD 1	379-1155-40	
PL 1	017-0410-00	14V 40mA
PL 2	017-0410-00	14V 40mA
Q 1	103-1858-00	2SD1858
Q 2	103-1858-00	2SD1858
Q 3	103-1858-00	2SD1858
R 1	111-4711-91	1/4WS 470Ω

REF No.	PART No.	DESCRIPTION
R 2	111-4711-91	1/4WS 2.2Ω
R 3	111-4711-91	1/4WS 2.2Ω
R 4	111-4711-91	1/4WS 220Ω
R 6	119-1031-10	1/16W 10KΩ
R 7	119-1031-10	1/16W 10KΩ
R 8	119-1021-10	1/16W 1KΩ
R 9	119-1021-10	1/16W 1KΩ
R 10	119-1021-10	1/16W 1KΩ

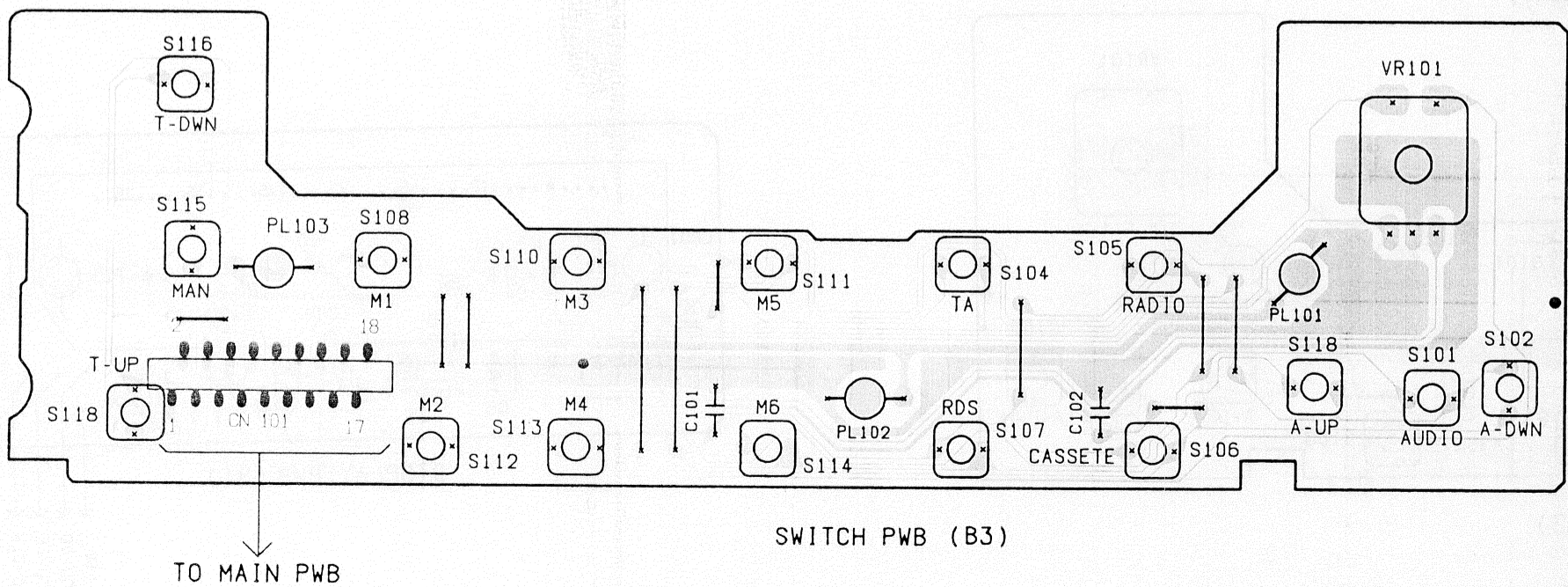
# PRINTED WIRING BOARD

Main PWB (B1) / Connector PWB (B2) / Mecha PWB (B5) / Switch PWB (B3) / Display PWB (B4) Section

MAIN PWB (B1)

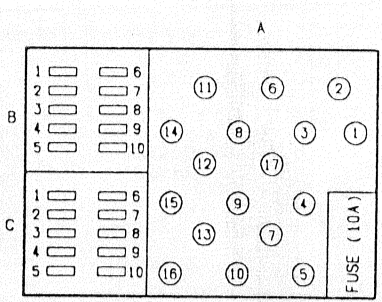
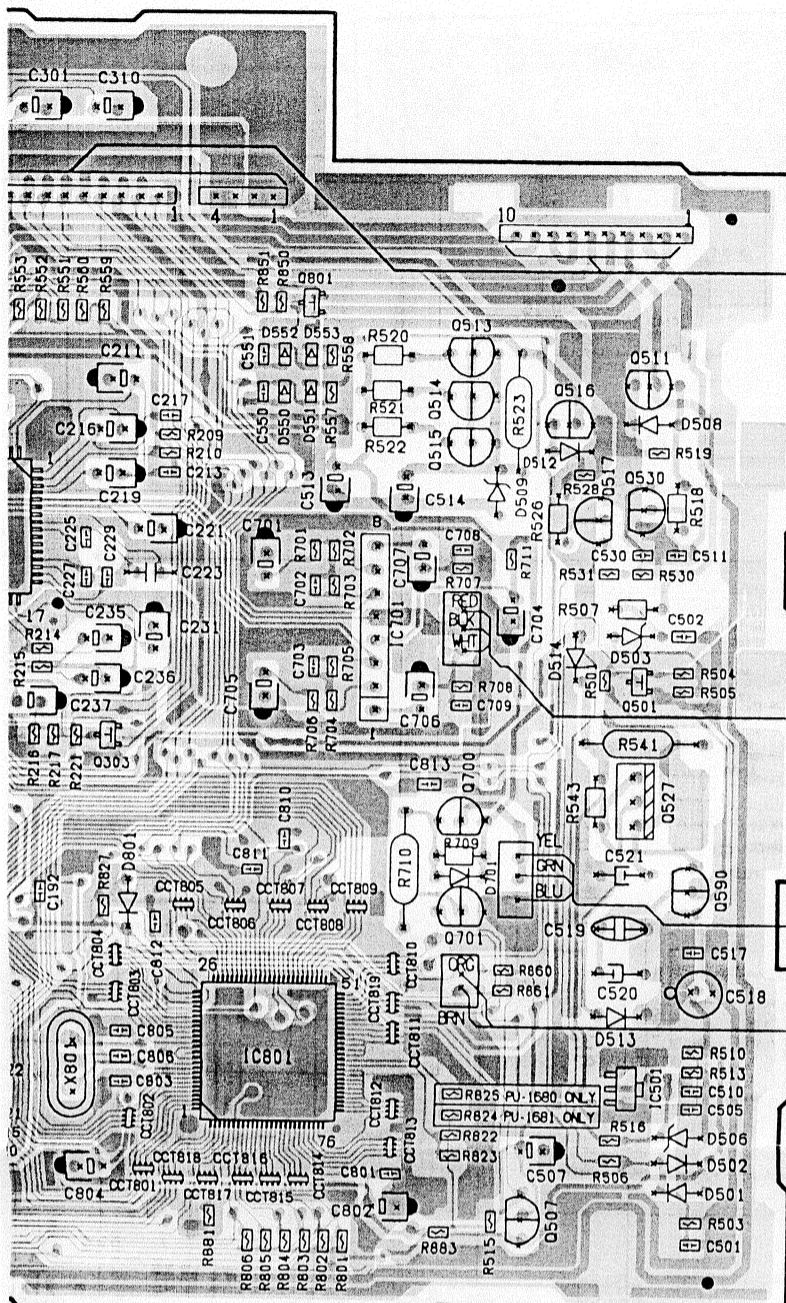


IC	301	101	103	102		802	201		801		501		
0	302	102	101		104	903	304		801	700	701	507	517
		107	106			901		303		513	515	511	516
		105								514			518
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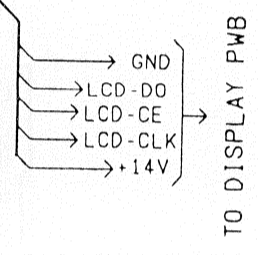
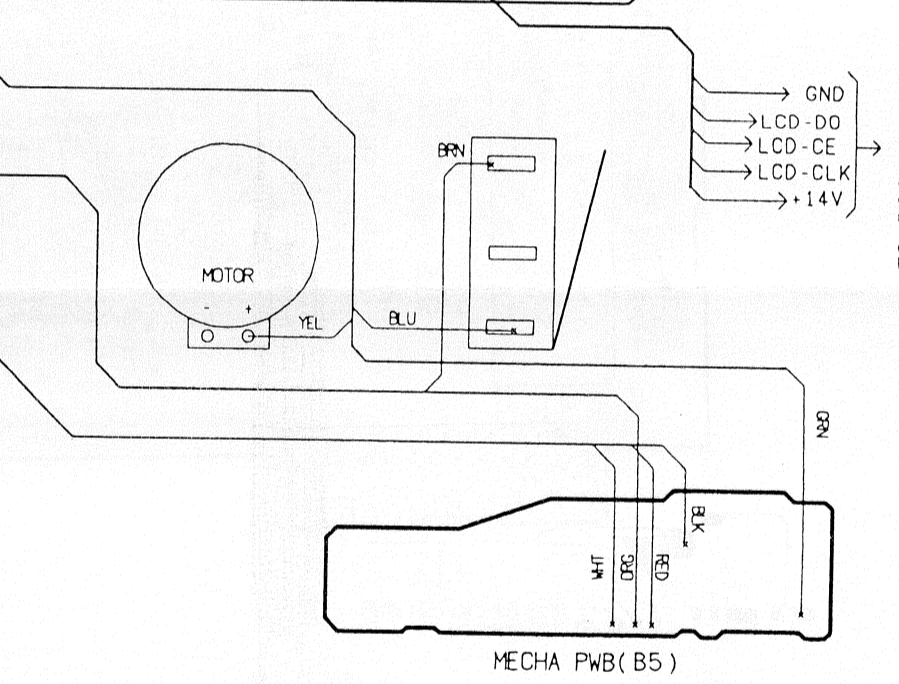
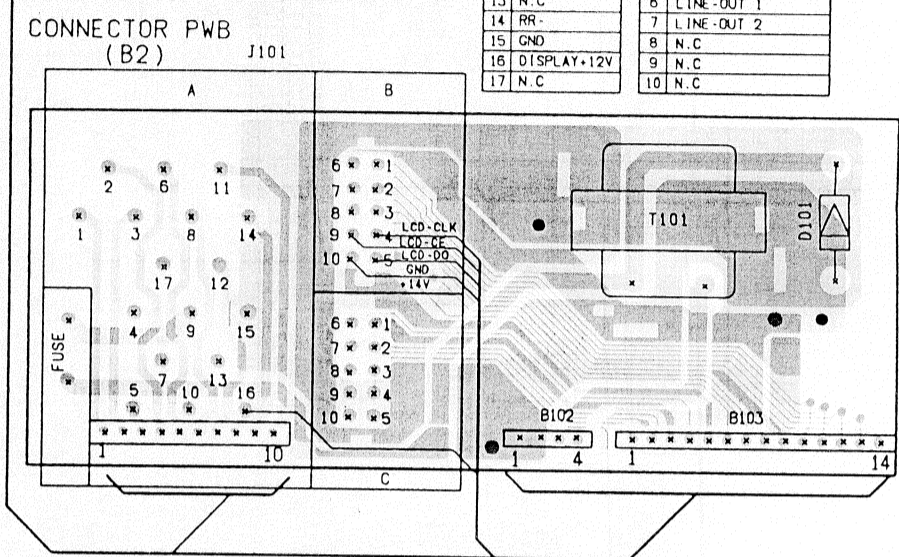


TO MAIN PWB

SWITCH PWB (B3)

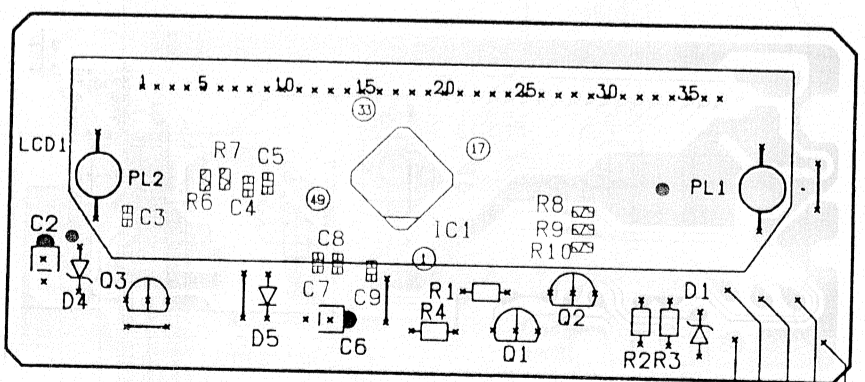
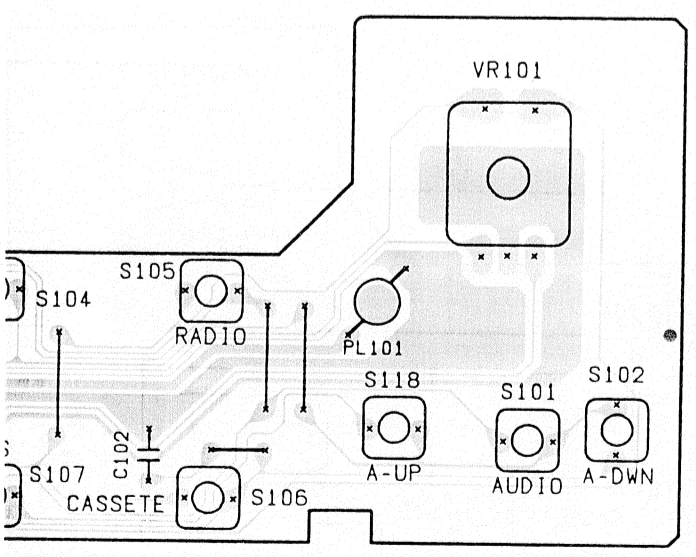


A		B	
NO.	DESCRIPTION	NO.	DESCRIPTION
1	FL+	1	REMOTE -5(MUTE)
2	FR+	2	REMOTE -3(SEEK-UP)
3	RL+	3	REMOTE -2(VOL-DN)
4	N.C	4	CLOCK
5	ACC	5	DATA
6	RR+	6	REMOTE -6(GND)
7	N.C	7	REMOTE -4(SEEK-DN)
8	FL-	8	REMOTE -1(VOL-UP)
9	BACK-UP	9	CHIP-SELECT
10	N.C	10	GND
11	FR-		
12	RL-		
13	N.C		
14	RR-		
15	GND		
16	DISPLAY+12V		
17	N.C		

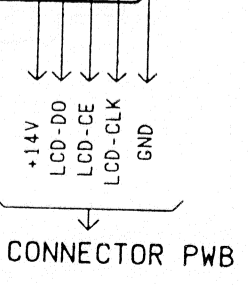


303	801	501
801	700 701 507	517 590
	513 515 511	516 530
	514	501
		527

•• THIS MARK MEANS EARTH PATTERN



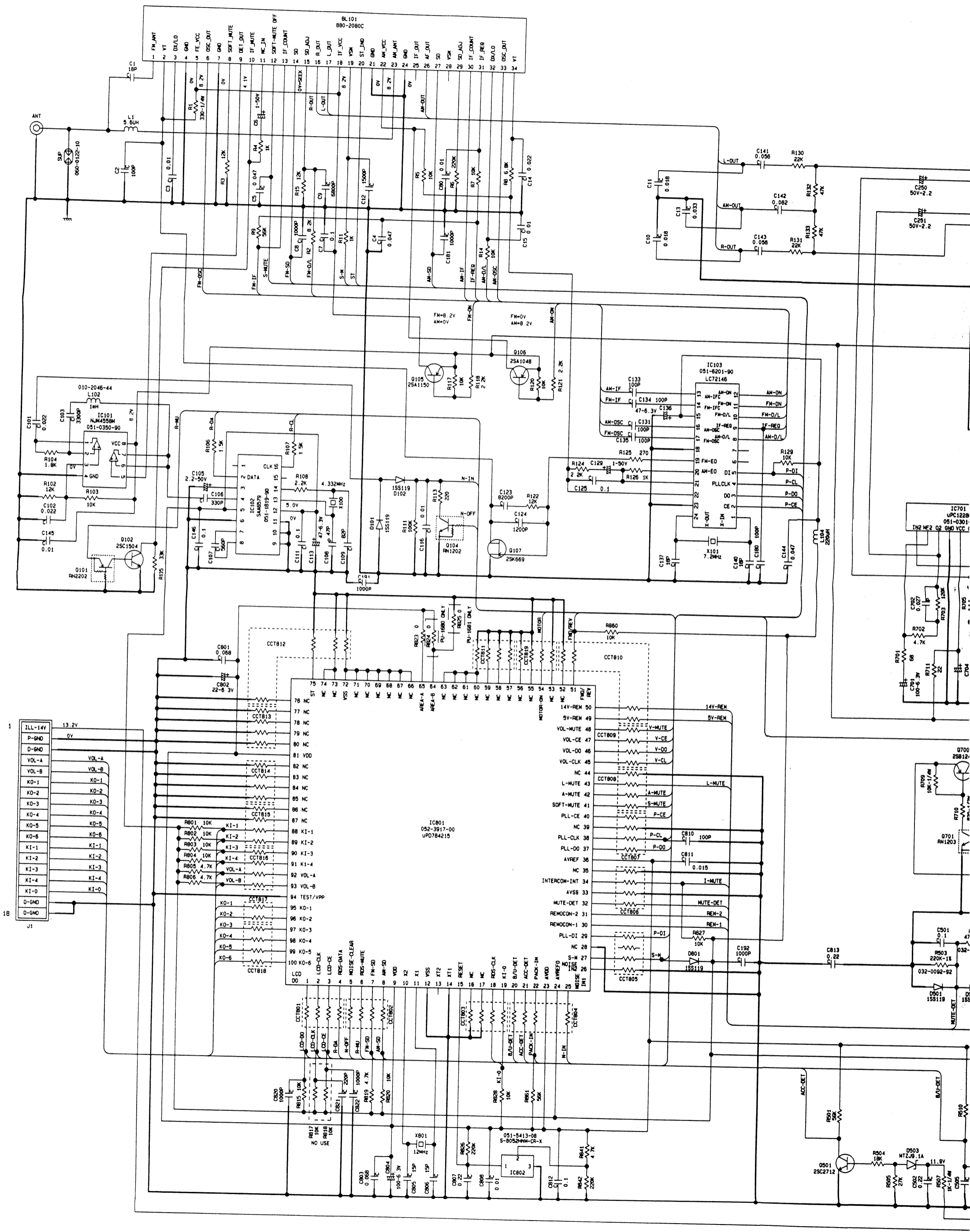
DISPLAY PWB (B4)

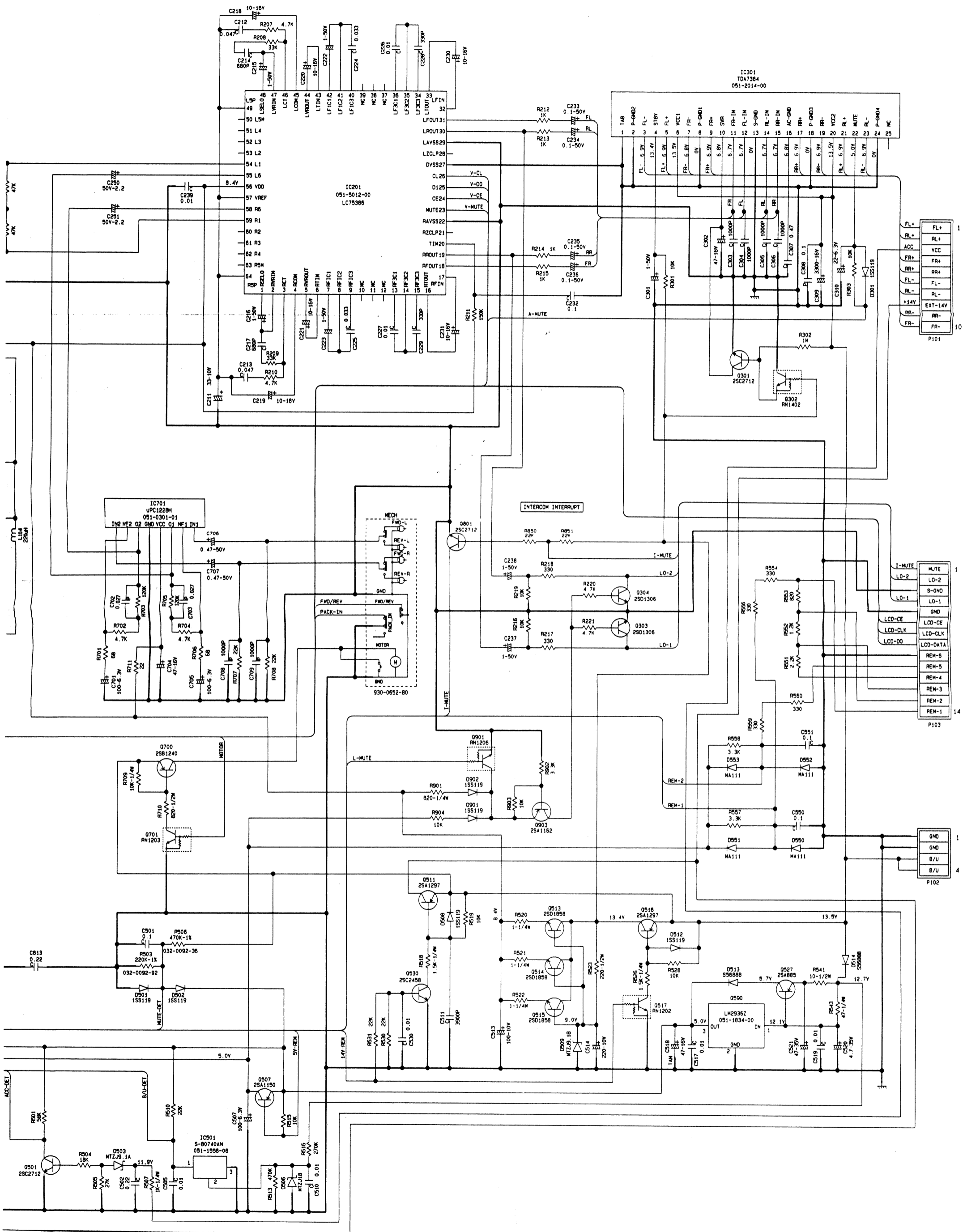


TO CONNECTOR PWB

# CIRCUIT DIAGRAM

## Main PWB (B1) Section

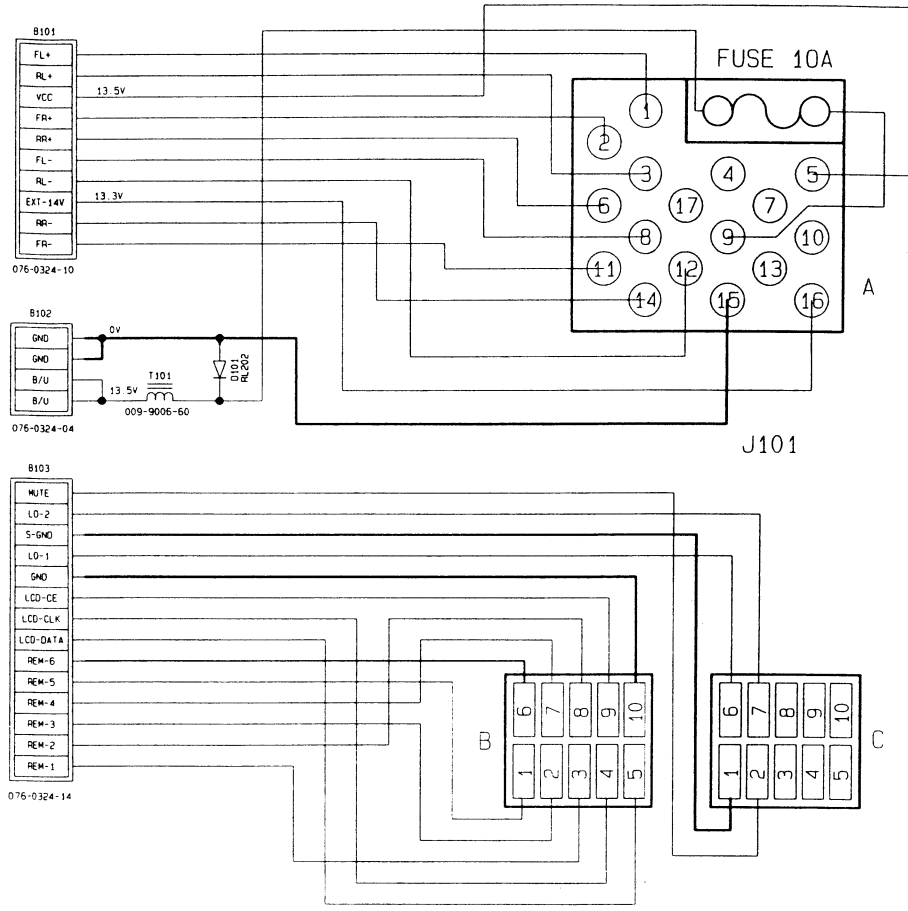




PU1680/PU1681/ EU1151



### Connector PWB (B2)Section



17 PIN CONFIGURATION (A)

PIN NO.	DESCRIPTION
1	FL +
2	FR +
3	RL +
4	N.C
5	POWER SWITCHED. ACC
6	RR +
7	N.C
8	FL -
9	POWER, B/U
10	N.C
11	FR -
12	RL -
13	N.C
14	RR -
15	GND
16	EXTERNAL DISPLAY POWER
17	N.C

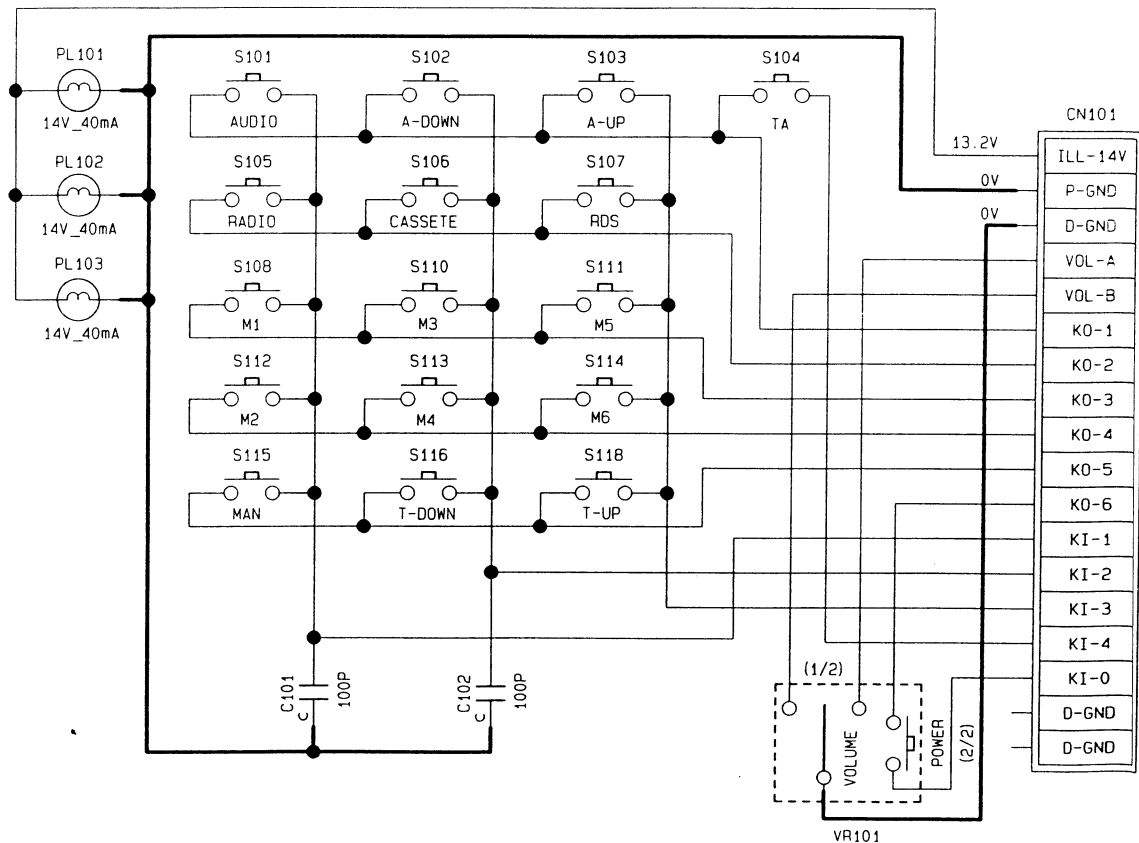
10 PIN CONFIGURATION (B)

PIN NO.	DESCRIPTION
1	REMOTE CONTROL 5 (MUTE)
2	REMOTE CONTROL 3 (SEEK UP)
3	REMOTE CONTROL 2 (VOLUME DOWN)
4	EXTERNAL DISPLAY DATA-CLK
5	EXTERNAL DISPLAY DATA
6	REMOTE CONTROL 6 (GND)
7	REMOTE CONTROL 4 (SEEK DOWN)
8	REMOTE CONTROL 1 (VOLUME UP)
9	EXTERNAL DISPLAY CHIP SELECT
10	GROUND

10 PIN CONFIGURATION (C)

PIN NO.	DESCRIPTION
1	SIGNAL GROUND
2	MUTE (INTERCOM)
3	N.C
4	N.C
5	N.C
6	LINE OUT 1
7	LINE OUT 2
8	N.C
9	N.C
10	N.C

### Switch PWB (B3)Section



# Display PWB (B4)Section

