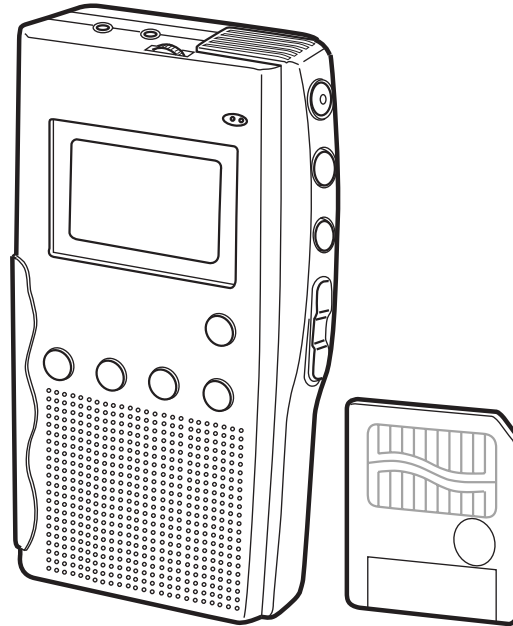


Service Manual

Digital Voice Recorder

ICR-B100 (XE)



Specifications

Frequency response	200 Hz - 3,900 Hz (Standard mode) 200 Hz - 1,900 Hz (Long mode)
Output power	100 mW (DC max.)
Power source	DC: DC 3V ("AAA" x 2)
Loudspeaker	8 ohms (1.4" Dia.)
Output terminal	EAR: 8 ohms (1/8" Dia.)
Dimensions	Approx. 2.3" (W) x 4.4" (H) x 0.8" (D)
Weight	Approx. 4 oz (104 g) (without batteries)

PRODUCT CODE No.

164 024 01

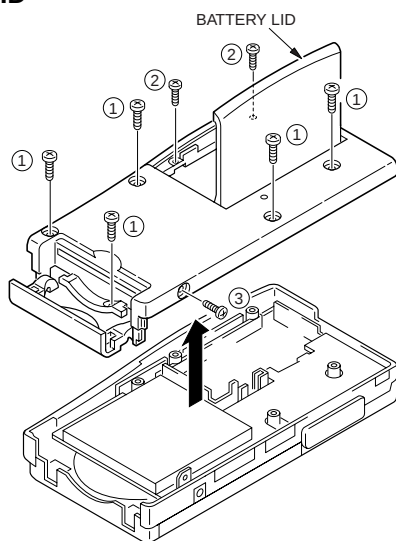
IMPORTANT INFORMATION

Because its products are subject to continuous improvement, SANYO reserves the rights to modify product designs and specifications without notice and without incurring any obligation.

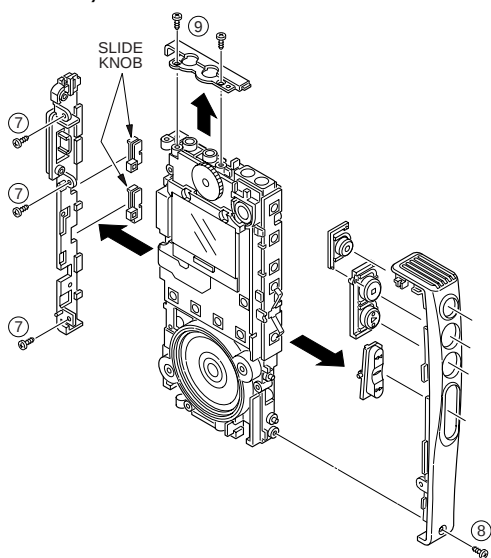
REMOVAL & INSTALLATION

- Remove the SmartMedia from the SmartMedia card compartment.
- Remove the 2 batteries and Lithium battery.
- Remove the screw or other in due order number.
- All wiring should be returned to the original position after work is completed.

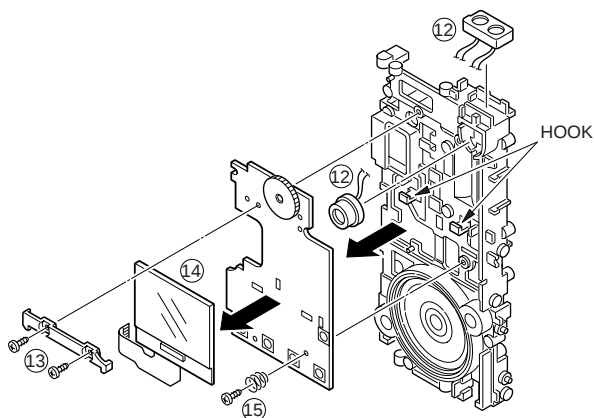
1. BACK LID



3. TOP PANEL, TOP & LEFT DEC

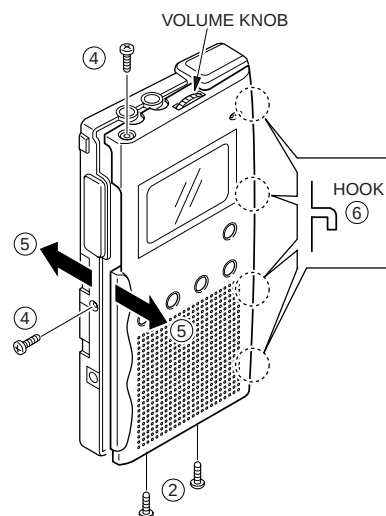


5. MAIN OPERATION P.W.B



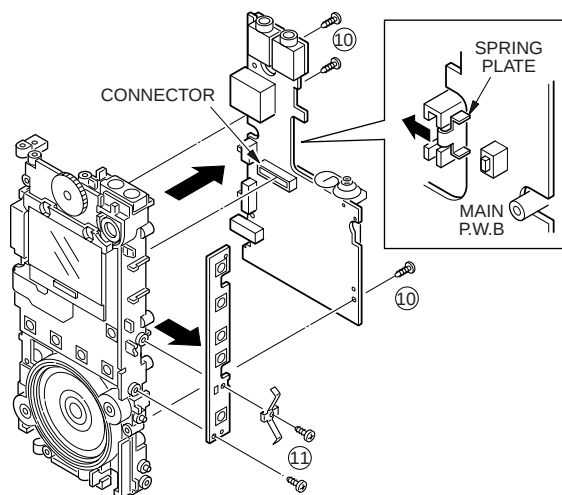
2. FRONT CABINET & LEFT DEC

1. Lose the left part side of a set this side.
2. Open a set from side to side
3. Because upper part volume knob hits it, do cabinet in increase emotion a little, and open it.

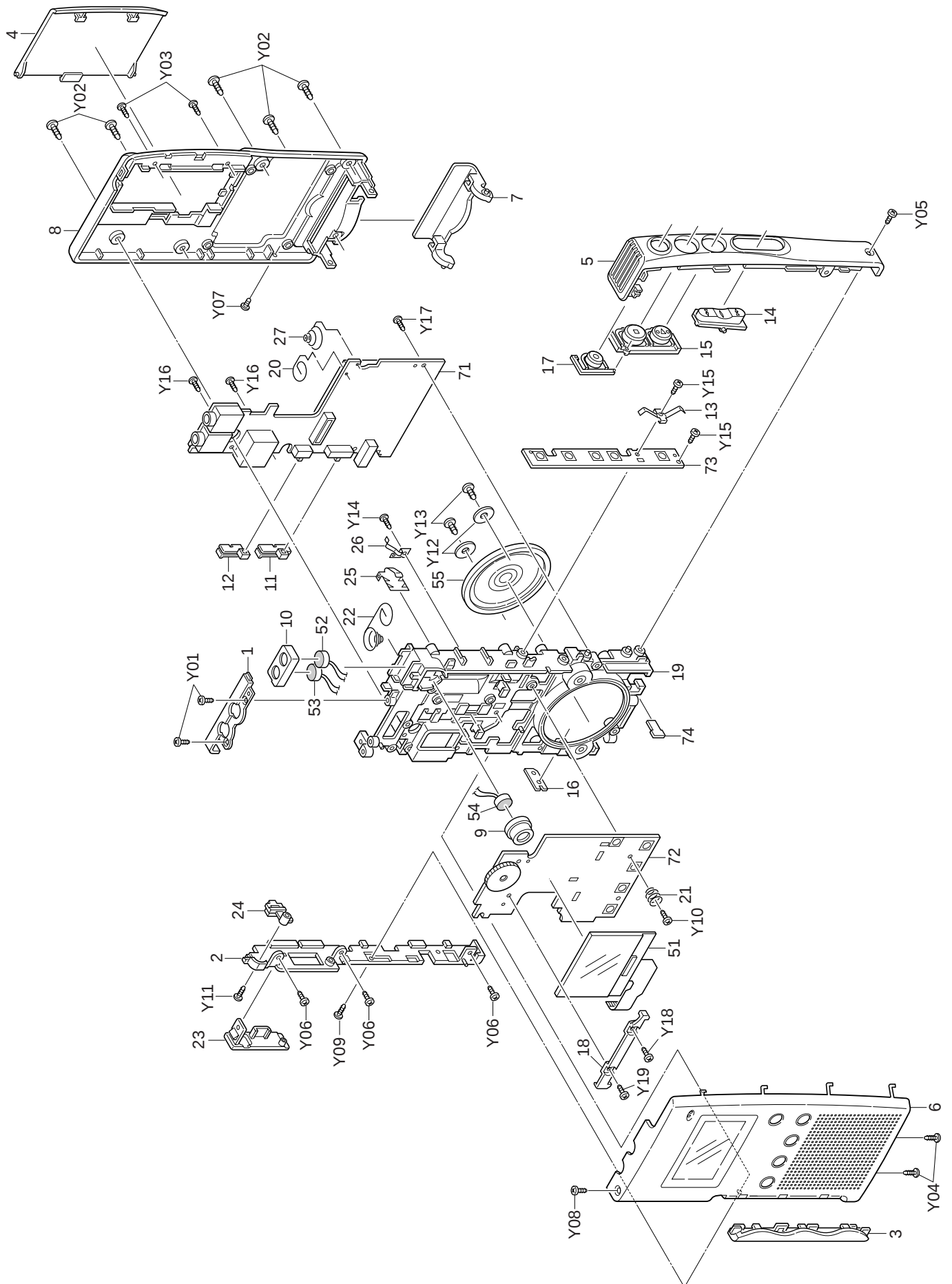


4. MAIN P.W.B

1. Hold base retainer while pushing back a spring plate holding a base in check, and take it off.
2. Cross it while pushing a plate in assembly, and is crowded.



EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL Δ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY Δ , 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.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μ F type of Ceramic type and Electrical type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 176 1190	INNER POLYE COVER,SET
	614 301 8360	CASE,CARRY
	614 301 8780	CARTON CASE,INNER
	614 301 8797	INSTRUCTION MANUAL,SET
	614 176 1039	INNER POLYE COVER,ACCESSORIES
	645 004 4809	POLY SHEET,SET
	645 034 6422	CABLE,USB
	645 034 6354	BATTERY,LITHIUM 3V CR1220
	645 034 7924	CARD,SSFDC 4MB
or	645 037 0724	CARD,SSFDC 4MB
or	645 026 5297	UNIT,SSFDC
	645 036 5331	CABLE,AUDIO
	645 038 3960	DISC,CD-ROM
	614 176 2241	INNER POLY COVER, CABLE USB
	645 019 1596	POLY BAG 100X300,CABLE AUDIO

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 301 8407	DEC,TOP
2	614 301 8414	DEC,LEFT
3	614 302 2480	DEC,GRIP
4	614 301 8452	LID,BATTERY
5	614 301 8483	PANEL,TOP
6	614 301 8254	ASSY,CABINET,FRONT
7	614 301 8469	LID,SMART,SMART,MEDIA
8	614 301 8261	ASSY,CABINET,REAR
9	614 294 4066	SPACER,MIC,FRONT,MIC
10	614 301 8490	SPACER,MIC,TOP,TOPSIDE,MIC
11	614 301 8445	KNOB,SLIDE,PLAY SP,PLAY SP
12	614 301 8438	KNOB,SLIDE,HOLD,HOLD
13	614 301 5956	SPRING,PLATE,BUTTON(BUM0800—)
14	614 301 8315	BUTTON,SKIP
15	614 301 8308	BUTTON,STOP
16	614 294 5452	MOUNTING,CB REAR
17	614 301 8292	BUTTON,REC
18	614 301 8476	MOUNTING,LCD
19	614 301 8377	CHASSIS
20	614 301 8537	TERMINAL,BATTERY,SUM-4(+)
21	614 249 0297	SPRING,COMP,SHIELD EARTH
22	614 280 0096	TERMINAL,BATTERY,SUM-4(+/-)
23	614 301 8384	COVER,CONECTER,USB
24	614 301 8322	BUTTON,CUE,CUE-INDEX
25	614 301 8568	TERMINAL,LITHIUM,CR1220(-)
26	614 301 8551	TERMINAL,LITHIUM,CR1220(+)
27	614 301 8544	TERMINAL,BATTERY,SUM-4(-)

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 030 0500	SCR TPG PAN PCS 1.7X4,DEC,TOP
Y02	411 174 8905	SCR S-TPG PAN 2X6, CB REAR/CHASSIS
Y03	411 178 7102	SCR TPG PAN PCS 1.7X4, CB. REAR/CHASSIS
Y04	411 178 7102	SCR TPG PAN PCS 1.7X4, CB. FRONT/CHASSIS
Y05	411 099 0206	SCR TPG PAN PCS 1.7X5,PANEL,TOP
Y06	411 030 0500	SCR TPG PAN PCS 1.7X4,DEC,LEFT
Y07	411 175 9307	SCR PAN 1.7X2.5, MOUNT/CB REAR/CHASSIS
Y08	411 178 7102	SCR TPG PAN PCS 1.7X4, CB FRONT/CHASSIS
Y09	411 099 0206	SCR TPG PAN PCS 1.7X5, CB FRONT/CHASSIS
Y11	411 030 0500	SCR TPG PAN PCS 1.7X4,CUE
Y12	411 091 9702	WASHER Z 2X8X0.5,SPEAKER
Y13	411 022 7500	SCR S-TPG PAN 2X4,SPEAKER
Y14	411 030 0500	SCR TPG PAN PCS 1.7X4,TERMINAL,LITHIUM
Y15	411 030 0500	SCR TPG PAN PCS 1.7X4,SIDE,PWB
Y16	411 030 0500	SCR TPG PAN PCS 1.7X4, USB CONNECTOR
Y17	411 030 0500	SCR TPG PAN PCS 1.7X4,MAIN PWB
Y18	411 099 0206	SCR TPG PAN PCS 1.7X5,MOUNTIN,LCD
Y19	411 099 0206	SCR TPG PAN PCS 1.7X5,FRONT,PWB

ELECTRICAL PART

REF.NO.	PART NO.	DESCRIPTION
51	645 034 6415	LCD
52	645 030 0820	MICROPHONE
53	645 030 0820	MICROPHONE
54	645 030 0820	MICROPHONE
55	645 037 6061	SPEAKER,8

MAIN P.W.B ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 301 9459	ASSY,PWB (Only Initial)
B4401	645 034 7887	INDUCTOR,1000 OHM
B4402	645 034 7887	INDUCTOR,1000 OHM
B4403	645 034 7887	INDUCTOR,1000 OHM
B4801	645 019 1039	INDUCTOR,1000 OHM
B4802	645 019 1039	INDUCTOR,1000 OHM
B4803	645 019 1039	INDUCTOR,1000 OHM
C4002	403 296 8109	TA-SOLID 10U M 10V
C4005	403 306 6705	TA-SOLID 100U M 4V

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
C4008	403 312 5303	TA-SOLID 47U M 6.3V	Q4014	405 129 8409	TR UMC2N
C4010	403 306 6705	TA-SOLID 100U M 4V	Q4015	405 133 3803	TR DTC124EUA
C4013	403 312 5303	TA-SOLID 47U M 6.3V	Q4071	405 131 2501	TR DTC114TUA
C4021	403 279 9109	TA-SOLID 4.7U M 10V	Q4401	405 137 2000	TR 2SA1576A-R
C4025	403 312 5303	TA-SOLID 47U M 6.3V	R4001	401 105 0603	MT-GLAZE 10K JA 1/16W
C4411	403 296 8109	TA-SOLID 10U M 10V	R4002	401 105 5509	MT-GLAZE 470K JA 1/16W
C4412	403 296 8109	TA-SOLID 10U M 10V	R4003	401 114 0502	MT-GLAZE 2.2M JA 1/16W
C4802	403 311 1603	TA-SOLID 22U M 4V	R4004	401 177 2406	MT-GLAZE 10M JA 1/16W
C4921	403 296 8109	TA-SOLID 10U M 10V	R4005	401 177 2406	MT-GLAZE 10M JA 1/16W
C4924	403 312 5303	TA-SOLID 47U M 6.3V	R4006	401 114 0502	MT-GLAZE 2.2M JA 1/16W
CN401	645 034 1588	SOCKET,DC	R4007	401 105 5509	MT-GLAZE 470K JA 1/16W
CN402	645 034 7610	PLUG,40P	R4008	401 105 0702	MT-GLAZE 100K JA 1/16W
CN403	645 033 2326	SOCKET,CARD 22P	R4009	401 105 0504	MT-GLAZE 1K JA 1/16W
CN404	645 034 6361	SOCKET,USB 4P	R4010	401 105 5509	MT-GLAZE 470K JA 1/16W
CN441	645 034 4978	JACK,PHONE D3.6	R4011	401 105 5400	MT-GLAZE 47K JA 1/16W
CN481	645 034 4916	JACK,PHONE D3.6	R4012	401 105 0603	MT-GLAZE 10K JA 1/16W
D4001	407 164 4002	DIODE RB160L-40	R4013	401 105 2904	MT-GLAZE 22K JA 1/16W
D4002	407 164 4002	DIODE RB160L-40	R4014	401 105 0504	MT-GLAZE 1K JA 1/16W
D4003	407 210 1900	DIODE 1SS400	R4015	401 105 0504	MT-GLAZE 1K JA 1/16W
D4004	407 130 4401	DIODE DAN202U	R4016	401 105 0504	MT-GLAZE 1K JA 1/16W
D4005	407 210 1900	DIODE 1SS400	R4017	401 105 2607	MT-GLAZE 22 JA 1/16W
D4006	407 210 1900	DIODE 1SS400	R4018	401 105 5301	MT-GLAZE 4.7K JA 1/16W
D4007	407 164 4002	DIODE RB160L-40	R4019	401 105 5301	MT-GLAZE 4.7K JA 1/16W
D4008	407 210 1900	DIODE 1SS400	R4020	401 105 5905	MT-GLAZE 560 JA 1/16W
D4009	407 210 1900	DIODE 1SS400	R4021	401 105 5905	MT-GLAZE 560 JA 1/16W
D4010	407 210 1900	DIODE 1SS400	R4022	401 105 5905	MT-GLAZE 560 JA 1/16W
D4011	407 210 1900	DIODE 1SS400	R4023	401 105 5509	MT-GLAZE 470K JA 1/16W
D4071	407 210 1900	DIODE 1SS400	R4024	401 105 0603	MT-GLAZE 10K JA 1/16W
D4401	407 210 1900	DIODE 1SS400	R4025	401 105 0702	MT-GLAZE 100K JA 1/16W
D4913	407 149 0807	DIODE 1SS355	R4026	401 105 0702	MT-GLAZE 100K JA 1/16W
D4914	407 149 0807	DIODE 1SS355	R4027	401 105 0603	MT-GLAZE 10K JA 1/16W
IC401	410 370 0805	IC UPD703017AYGC-M03-8EU	R4028	401 105 0702	MT-GLAZE 100K JA 1/16W
IC402	410 357 7605	IC MB89585PFV-G104-BND	R4029	401 105 5301	MT-GLAZE 4.7K JA 1/16W
IC404	409 419 8100	IC RS5C372A	R4030	401 105 0702	MT-GLAZE 100K JA 1/16W
IC405	410 346 5605	IC SB2020P-33372AR	R4031	401 105 0702	MT-GLAZE 100K JA 1/16W
IC406	409 431 3008	IC NJM2140R	R4032	401 105 0603	MT-GLAZE 10K JA 1/16W
IC413	409 363 5309	IC S-81233SG-QF	R4033	401 105 0702	MT-GLAZE 100K JA 1/16W
IC414	409 305 3103	IC TC7W74FU	R4034	401 105 0603	MT-GLAZE 10K JA 1/16W
L4001	645 023 2978	INDUCTOR,800 OHM	R4035	401 105 0702	MT-GLAZE 100K JA 1/16W
L4002	645 032 9104	INDUCTOR,22U M	R4036	401 105 0603	MT-GLAZE 10K JA 1/16W
L4003	645 034 8600	INDUCTOR,10U K	R4037	401 105 0702	MT-GLAZE 100K JA 1/16W
L4401	645 023 5818	INDUCTOR,1000 OHM	R4038	401 105 8005	MT-GLAZE 1M JA 1/16W
L4402	645 038 1522	INDUCTOR,10U K	R4039	401 105 0702	MT-GLAZE 100K JA 1/16W
L4403	645 029 7267	INDUCTOR,10U K	R4040	401 105 0702	MT-GLAZE 100K JA 1/16W
L4404	645 029 7267	INDUCTOR,10U K	R4041	401 105 0702	MT-GLAZE 100K JA 1/16W
L4405	645 029 7267	INDUCTOR,10U K	R4042	401 105 0702	MT-GLAZE 100K JA 1/16W
L4406	645 038 1522	INDUCTOR,10U K	R4043	401 105 0504	MT-GLAZE 1K JA 1/16W
L4801	645 023 2978	INDUCTOR,800 OHM	R4044	401 105 0702	MT-GLAZE 100K JA 1/16W
L4901	645 026 0964	INDUCTOR,10U K	R4045	401 105 0504	MT-GLAZE 1K JA 1/16W
L4906	645 034 8600	INDUCTOR,10U K	R4046	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4001	405 147 7705	TR 2SK3019	R4047	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4002	405 147 7705	TR 2SK3019	R4048	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4003	405 147 7705	TR 2SK3019	R4049	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4004	405 138 5703	TR DTA124EUA	R4050	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4005	405 124 2303	TR 2SB1424-Q	R4051	401 105 0504	MT-GLAZE 1K JA 1/16W
or	405 124 2402	TR 2SB1424-R	R4052	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4006	405 064 6300	TR 2SB1295-6	R4053	401 105 0504	MT-GLAZE 1K JA 1/16W
or	405 064 6409	TR 2SB1295-7	R4054	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4007	405 092 4101	TR 2SC4081-R	R4055	401 105 0504	MT-GLAZE 1K JA 1/16W
Q4008	405 115 8703	TR DTC114TE	R4056	401 105 0702	MT-GLAZE 100K JA 1/16W
Q4009	405 147 7705	TR 2SK3019	R4057	401 105 0702	MT-GLAZE 100K JA 1/16W
Q4010	405 147 7705	TR 2SK3019	R4058	401 105 5905	MT-GLAZE 560 JA 1/16W
Q4011	405 137 2000	TR 2SA1576A-R	R4060	401 105 5301	MT-GLAZE 4.7K JA 1/16W
Q4012	405 133 3803	TR DTC124EUA	R4061	401 105 5905	MT-GLAZE 560 JA 1/16W
Q4013	405 133 3803	TR DTC124EUA	R4071	401 105 5400	MT-GLAZE 47K JA 1/16W

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
R4072	401 105 5509	MT-GLAZE 470K JA 1/16W
R4073	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R4074	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R4075	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R4076	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R4077	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4078	401 105 0702	MT-GLAZE 100K JA 1/16W
R4079	401 105 0504	MT-GLAZE 1K JA 1/16W
R4301	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R4401	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R4403	401 105 0603	MT-GLAZE 10K JA 1/16W
R4404	401 105 8203	MT-GLAZE 68K JA 1/16W
R4405	401 105 0603	MT-GLAZE 10K JA 1/16W
R4411	401 105 5400	MT-GLAZE 47K JA 1/16W
R4412	401 105 5400	MT-GLAZE 47K JA 1/16W
R4413	401 105 0504	MT-GLAZE 1K JA 1/16W
R4421	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R4422	401 105 5509	MT-GLAZE 470K JA 1/16W
R4802	401 037 6506	MT-GLAZE 12 JA 1/10W
S4006	645 034 1557	SWITCH,PUSH 1P-1T
S4013	645 029 5812	SWITCH,SLIDE 1P-3T
S4014	645 018 1825	SWITCH,SLIDE 1P-2T
S4016	645 034 1564	SWITCH,PUSH 1P-1T
X4001	645 019 5082	OSC,CRYSTAL 32.768KHZ
X4002	645 034 7658	OSC,CRYSTAL 16.3840MHZ
X4071	645 026 5303	OSC,CERAMIC 6.0MHZ

FRONT CONTROL P.W.B ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 302 8383	ASSY,PWB,DISPLAY (Only Initial)
C5202	403 311 1603	TA-SOLID 22U M 4V
C5652	403 276 7900	TA-SOLID 2.2U M 16V
C5653	403 279 9109	TA-SOLID 4.7U M 10V
C5655	403 276 7900	TA-SOLID 2.2U M 16V
C5657	403 311 1603	TA-SOLID 22U M 4V
C5709	403 296 8109	TA-SOLID 10U M 10V
C5904	403 311 1603	TA-SOLID 22U M 4V
C5907	403 279 9109	TA-SOLID 4.7U M 10V
C5909	403 296 8109	TA-SOLID 10U M 10V
C5912	403 279 9109	TA-SOLID 4.7U M 10V
C5913	403 279 9109	TA-SOLID 4.7U M 10V
C5916	403 296 8109	TA-SOLID 10U M 10V
C5917	403 296 8109	TA-SOLID 10U M 10V
C5920	403 306 6705	TA-SOLID 100U M 4V
CN501	645 034 7634	SOCKET,40P
CN502	645 014 3472	SOCKET,FPC 12P
D5651	407 130 4500	DIODE DAP202U
D5652	407 210 1900	DIODE 1SS400
D5654	407 205 5203	DIODE RB521S-30
D5655	407 205 5203	DIODE RB521S-30
D5911	407 120 4503	DIODE DA204U
IC503	409 443 5106	IC AK4518VF
IC506	409 431 3008	IC NJM2140R
IC507	409 431 3008	IC NJM2140R
IC508	409 431 3008	IC NJM2140R
IC509	409 439 9309	IC BU4052BCFV
IC510	409 431 3008	IC NJM2140R
IC511	409 431 3008	IC NJM2140R
IC512	409 184 9609	IC NJM2073M
L5901	645 034 8600	INDUCTOR,10U K
L5902	645 026 0964	INDUCTOR,10U K
L5903	645 026 0964	INDUCTOR,10U K

REF.NO.	PART NO.	DESCRIPTION
L5904	645 026 0964	INDUCTOR,10U K
L5905	645 026 0964	INDUCTOR,10U K
Q5001	405 092 4101	TR 2SC4081-R
Q5301	405 131 2501	TR DTC114TUA
Q5302	405 131 2501	TR DTC114TUA
Q5501	405 131 2501	TR DTC114TUA
Q5502	405 143 9406	TR DTC323TU
Q5601	405 131 2501	TR DTC114TUA
Q5651	405 092 4101	TR 2SC4081-R
Q5652	405 092 4101	TR 2SC4081-R
Q5701	405 131 2501	TR DTC114TUA
Q5901	405 137 2000	TR 2SA1576A-R
Q5902	405 133 3803	TR DTC124EUA
Q5903	405 137 2000	TR 2SA1576A-R
Q5904	405 133 3803	TR DTC124EUA
Q5905	405 092 4101	TR 2SC4081-R
Q5906	405 064 6300	TR 2SB1295-6
or	405 064 6409	TR 2SB1295-7
R5001	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R5002	401 105 0603	MT-GLAZE 10K JA 1/16W
R5017	401 105 0603	MT-GLAZE 10K JA 1/16W
R5018	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R5019	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R5020	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5021	401 105 0603	MT-GLAZE 10K JA 1/16W
R5022	401 105 3406	MT-GLAZE 27K JA 1/16W
R5052	401 105 0504	MT-GLAZE 1K JA 1/16W
R5059	401 105 0504	MT-GLAZE 1K JA 1/16W
R5201	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R5202	401 105 0504	MT-GLAZE 1K JA 1/16W
R5203	401 105 0702	MT-GLAZE 100K JA 1/16W
R5204	401 105 0603	MT-GLAZE 10K JA 1/16W
R5205	401 105 8203	MT-GLAZE 68K JA 1/16W
R5301	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R5302	401 105 1105	MT-GLAZE 12K JA 1/16W
R5303	401 105 2102	MT-GLAZE 18K JA 1/16W
R5304	401 105 0603	MT-GLAZE 10K JA 1/16W
R5305	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R5306	401 105 0504	MT-GLAZE 1K JA 1/16W
R5307	401 105 2904	MT-GLAZE 22K JA 1/16W
R5308	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R5309	401 105 2904	MT-GLAZE 22K JA 1/16W
R5501	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R5502	401 105 1600	MT-GLAZE 15K JA 1/16W
R5503	401 105 0702	MT-GLAZE 100K JA 1/16W
R5504	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5505	401 105 1105	MT-GLAZE 12K JA 1/16W
R5506	401 105 0504	MT-GLAZE 1K JA 1/16W
R5601	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5602	401 105 0603	MT-GLAZE 10K JA 1/16W
R5603	401 105 0504	MT-GLAZE 1K JA 1/16W
R5604	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R5605	401 105 2102	MT-GLAZE 18K JA 1/16W
R5606	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R5607	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5608	401 105 2904	MT-GLAZE 22K JA 1/16W
R5609	401 105 4700	MT-GLAZE 39K JA 1/16W
R5610	401 105 5202	MT-GLAZE 470 JA 1/16W
R5611	401 105 0504	MT-GLAZE 1K JA 1/16W
R5612	401 105 0504	MT-GLAZE 1K JA 1/16W
R5613	401 105 5905	MT-GLAZE 560 JA 1/16W
R5614	401 105 5905	MT-GLAZE 560 JA 1/16W
R5615	401 105 5905	MT-GLAZE 560 JA 1/16W
R5616	401 105 5905	MT-GLAZE 560 JA 1/16W
R5617	401 105 5905	MT-GLAZE 560 JA 1/16W
R5618	401 105 2904	MT-GLAZE 22K JA 1/16W

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
R5651	401 105 0603	MT-GLAZE 10K JA 1/16W
R5652	401 105 2201	MT-GLAZE 180K JA 1/16W
R5653	401 105 0504	MT-GLAZE 1K JA 1/16W
R5654	401 105 0603	MT-GLAZE 10K JA 1/16W
R5655	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R5656	401 105 0702	MT-GLAZE 100K JA 1/16W
R5657	401 105 0702	MT-GLAZE 100K JA 1/16W
R5658	401 105 0504	MT-GLAZE 1K JA 1/16W
R5701	401 105 5509	MT-GLAZE 470K JA 1/16W
R5702	401 105 8203	MT-GLAZE 68K JA 1/16W
R5703	401 105 4700	MT-GLAZE 39K JA 1/16W
R5704	401 105 4205	MT-GLAZE 33K JA 1/16W
R5705	401 105 2904	MT-GLAZE 22K JA 1/16W
R5706	401 105 0603	MT-GLAZE 10K JA 1/16W
R5707	401 105 0603	MT-GLAZE 10K JA 1/16W
R5708	401 105 0702	MT-GLAZE 100K JA 1/16W
R5709	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R5710	401 105 0702	MT-GLAZE 100K JA 1/16W
R5711	401 105 1204	MT-GLAZE 120K JA 1/16W
R5712	401 105 8203	MT-GLAZE 68K JA 1/16W
R5713	401 105 4205	MT-GLAZE 33K JA 1/16W
R5801	401 099 9606	MT-GLAZE 8.2 JA 1/10W
R5901	401 105 5400	MT-GLAZE 47K JA 1/16W
R5902	401 105 5400	MT-GLAZE 47K JA 1/16W
R5903	401 105 0702	MT-GLAZE 100K JA 1/16W
R5904	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5905	401 105 0702	MT-GLAZE 100K JA 1/16W
R5906	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5907	401 105 5400	MT-GLAZE 47K JA 1/16W
R5908	401 105 5400	MT-GLAZE 47K JA 1/16W
R5909	401 105 0702	MT-GLAZE 100K JA 1/16W
R5910	401 105 5509	MT-GLAZE 470K JA 1/16W
R5911	401 105 0504	MT-GLAZE 1K JA 1/16W
R5912	401 105 0702	MT-GLAZE 100K JA 1/16W
R5913	401 098 7603	MT-GLAZE 2.2 JA 1/10W
S5001	645 018 0361	SWITCH,PUSH 1P-1T
S5002	645 018 0361	SWITCH,PUSH 1P-1T
S5003	645 018 0361	SWITCH,PUSH 1P-1T
S5004	645 018 0361	SWITCH,PUSH 1P-1T
S5005	645 018 0361	SWITCH,PUSH 1P-1T
VR501	645 034 6392	VR,ROTARY 10KBX2

CARD CONTROL P.W.B ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 302 8390	ASSY,PWB,SW (Only Initial)
R6001	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R6002	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R6003	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R6004	401 105 0603	MT-GLAZE 10K JA 1/16W
S6001	645 018 0361	SWITCH,PUSH 1P-1T
S6002	645 018 0361	SWITCH,PUSH 1P-1T
S6003	645 018 0361	SWITCH,PUSH 1P-1T
S6004	645 018 0361	SWITCH,PUSH 1P-1T
S6005	645 018 0361	SWITCH,PUSH 1P-1T

LID SWITCH P.W.B ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 303 9419	ASSY,PWB,SW2 (Only Initial)
S7001	645 035 5912	SWITCH,PUSH 1P-1T

IC BLOCK DIAGRAM

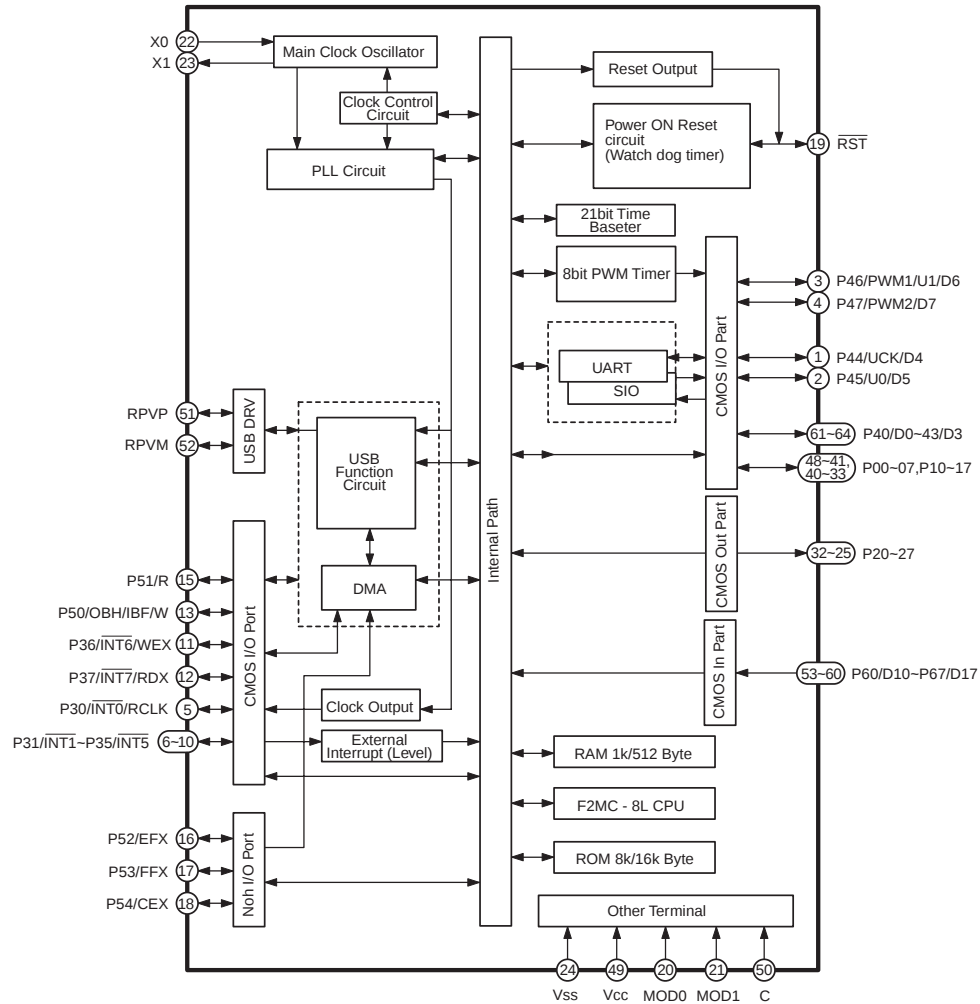
The figure which isn't mentioned please watch a schematic diagram.

IC401 UPD703017 (MICRO COMPUTER)

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	LCD DATA	I/O	LCD Driver IC data output	51	I O4	I/O	Smart media (input/output data)
2	LCD CLK	I/O	LCD Driver IC clock output	52	I O5	I/O	Smart media (input/output data)
3	P CON	O	Power control (Power ON=high)	53	I O6	I/O	Smart media (input/output data)
4	A MUTE1	O	Audio mute (Mute=high)	54	I O7	I/O	Smart media (input/output data)
5	A MUTE2	O	Audio mute (Mute=high)	55	BVDD		
6	VDD	O	Power supply	56	BVSS		
7	VSS	O	GND	57	USB ON	I	USB ON/OFF check (ON=High)
8	DAC PWR	O	DAC Power control (Power OFF=LOW)	58	AC IN	I	AC Adapter detect (AC have=LOW)
9	DD PWR	O	DD Converter power control (Power ON=high)	59	MIC IN	I	Detect the external mic presence (There is a Mic=LOW)
10	PULL UP	O	PULL UP Resister power control (Power ON=high)	60	SSFDC SW	I	SmartMedia insert switch
11	AMP PWR	O	AMP Circuit power control (Power ON=high)	61	SSFDC IN	I	Detect the SmartMedia presence (Yes=LOW)
12	MCLK IN	I	MCLK Count input	62	SSFDC 3V	I	Detect the 3.3V SmartMedia (3.3V=High)
13	ADC POW	O	ADC Power control (Power OFF=LOW)	63	SSFDC REC	I	Check write on a SmartMedia (Ability=High)
14	ADC CLK	O	A/D,D/A Converter master lock output	64	R/B	I/O	
15	DAC LRCK	I/O	ADC/DAC LRCK output	65	MIC SEL1	O	Mic change control
16	BEEP	O	Beap signal output	66	MIC SEL 2	O	Mic change control
17	LCD RESET	I/O	LCD Controller Reset output	67	MIC SEL 3	O	Mic change control
18	IC/VPP		General action =LOW/FLASH time = high	68	MIC SENS1	O	Mic sensitivity control (1)
19	USB 0	I/O	Data input/output	69	MIC SENS2	O	Mic sensitivity control (2)
20	USB 1	I/O	Data input/output	70	SEL 24H	I	Select the 12H/24H change (12H=LOW)
21	USB 2	I/O	Data input/output	71	AVDD		
22	USB 3	I/O	Data input/output	72	AVSS		
23	USB 4	I/O	Data input/output	73	AVREF		
24	USB 5	I/O	Data input/output	74	KEY0	I	Key input
25	USB 6	I/O	Data input/output	75	KEY1	I	Key input
26	USB 7	I/O	Data input/output	76	FOOT IN	I	FOOT SW input
27	USB WR	O	Data lead select (Lead=LOW)	77	BATT IN	I	Battery residual quantity check
28	USB RD	O	Data lead select (Lead=LOW)	78	HOLD SW	I	Hold SW input
29	USB STP	I	Device detector (Permission=HIGH)	79	FAST SW	I	High speed listening (ON=LOW)
30	USB CE	O	Chip enable (Enable=LOW)	80	SLOW SW	I	Low speed listening (ON=LOW)
31	RESET	I	Reset signal	81	VAS IN	I	Sound signal level detect
32	XT1	I		82	LEVEL IN	I	Volume/VAS sensitivity level input
33	XT2			83		I	
34	VDD			84	CASE SW	I	Battery lid detect switch
35	X2		Main oscillation (Ceramic 16.384 MHz)	85		I	
36	X1	I	Main oscillation (Ceramic 16.384 MHz)	86		O	
37	VSS		GND	87		O	
38	CLKOUT			88	USB STOP	O	
39		I/O		89		O	
40	WPB	O	Write protect	90	ENROL	I	Enrol output permission (Permission=LOW)
41	R/B	I	Ready/Busy check (Busy=low)	91		O	
42	WEB	O	Write enable	92		O	
43	REB	O	Lead enable	93	LCD CS	I/O	LCD Driver IC chip select output
44	CEB	O	Chip enable	94	RTC DATA	I/O	Real time clock IC data output
45	ALE	O	Address ratch	95	LCD RS	I/O	LCD Driver IC resister select output
46	CLE	O	Command ratch	96	RTC CLK	I/O	Real time clock IC clock output
47	I O0	I/O	Smart media (input/output data)	97	DAC IN	I	ADC serial data input
48	I O1	I/O	Smart media (input/output data)	98	DAC OUT	O	DAC serial data output
49	I O2	I/O	Smart media (input/output data)	99	DAC CLK	O	ADC/DAC clock output
50	I O3	I/O	Smart media (input/output data)	100		O	

IC BLOCK DIAGRAM

IC402 MB89585 (MICRO CONTROLLERS)

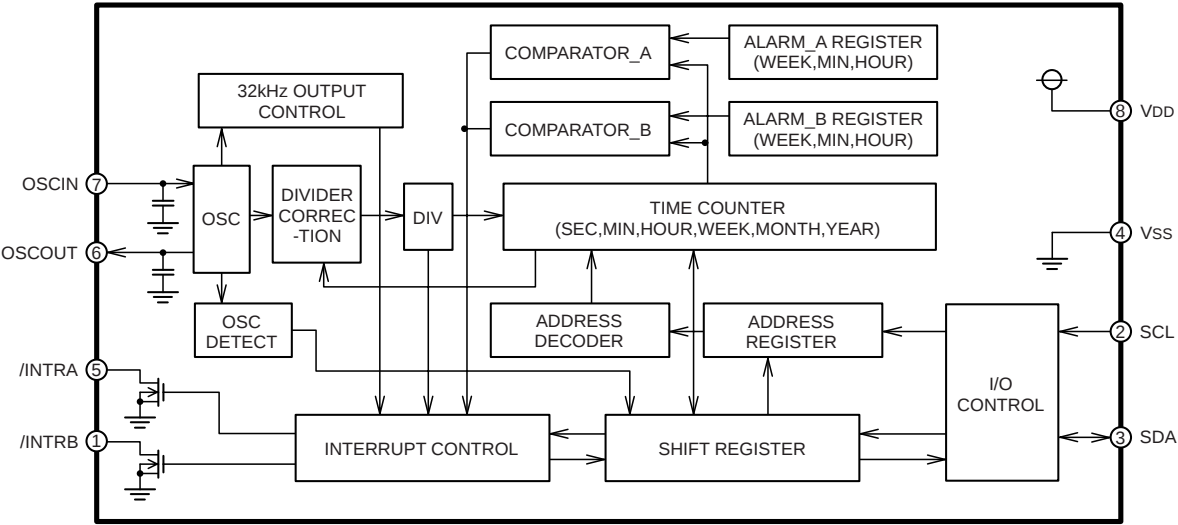


No.	Pin name	I/O	Funtion
1	USB4	I/O	Data (to main cpu)
2	USB5	I/O	Data (to main cpu)
3	USB6	I/O	Data (to main cpu)
4	USB6	I/O	Data (to main cpu)
5		O	Open (low output)
6		O	Open (low output)
7		O	Open (low output)
8		O	Open (low output)
9	USB ON	O	USB connection state output (connection=High)
10		O	Open (low output)
11	USB WR	I	Data write signal input
12	USB RD	I	Data read signal input
13	USB STP	O	State output
14	VSS		GND.
15	P CON	O	Power control (ON=High)
16	MANUAL	I	Suspected data transmission mode (Suspected=Low)
17		O	Open (low output)
18	USB CE	O	Chip enable input
19	RESET	I	Reset signal
20	MOD0	I	GND (Memory access setting terminal)
21	MOD1	I	GND (Memory access setting terminal)
22	X0		Main oscillation (6MHz)
23	X1		Main oscillation (6MHz)
24	VSS		GND
25	OUT7	O	Open (low output)
26	OUT6	O	Open (low output)
27	OUT5	O	Open (low output)
28	OUT4	O	Open (low output)
29	OUT3	O	Open (low output)
30	OUT2	O	Open (low output)
31	OUT1	O	Open (low output)
32	OUT0	O	Open (low output)

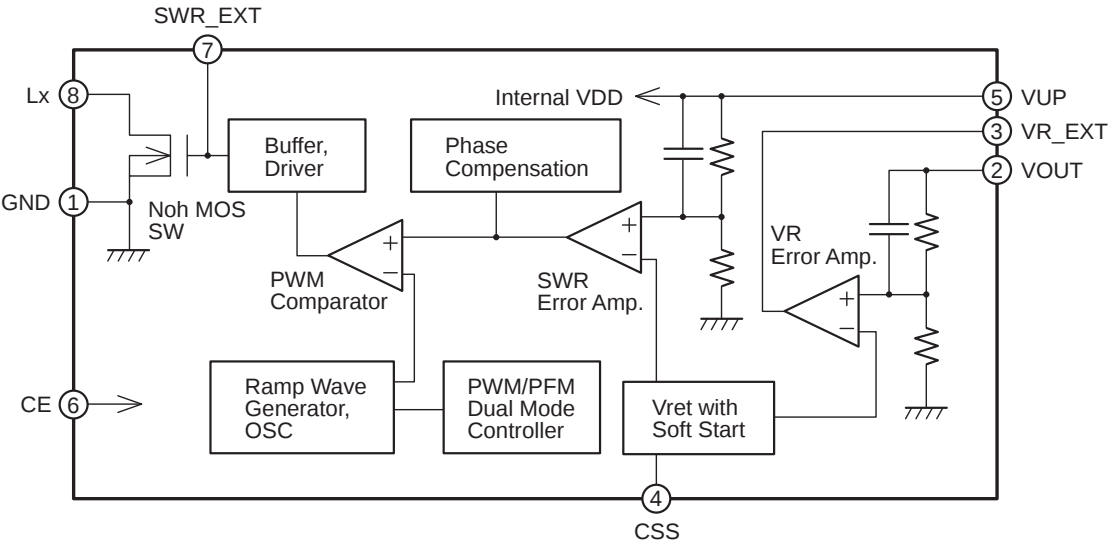
No.	Pin name	I/O	Funtion
33		O	
34		O	
35		O	
36		O	
37		O	
38		O	
39		O	
40		O	
41		O	
42		O	
43		O	
44		O	
45		O	
46		O	
47		O	
48		O	
49	VCC		Power supply (3.3V)
50	C		Connect 0.1uF
51	USB+	I/O	USB Connect port
52	USB-	I/O	USB Connect port
53		I	GND Connect
54		I	GND Connect
55		I	GND Connect
56		I	GND Connect
57		I	GND Connect
58		I	GND Connect
59		I	GND Connect
60		I	GND Connect
61	USB0	I/O	Data (to main cpu)
62	USB1	I/O	Data (to main cpu)
63	USB2	I/O	Data (to main cpu)
64	USB3	I/O	Data (to main cpu)

IC BLOCK DIAGRAM

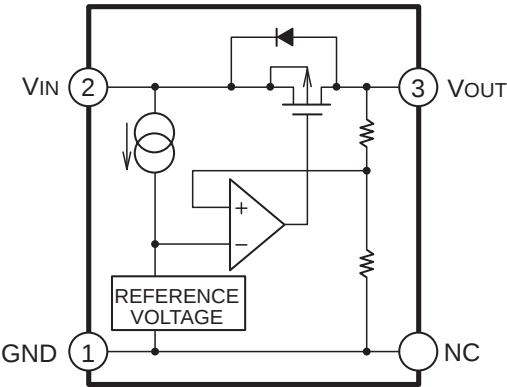
IC404 RS5C372A (CMOS Real Time Clock)



IC405 SB2020P (Ascent and Descent type DC-DC Convertor)

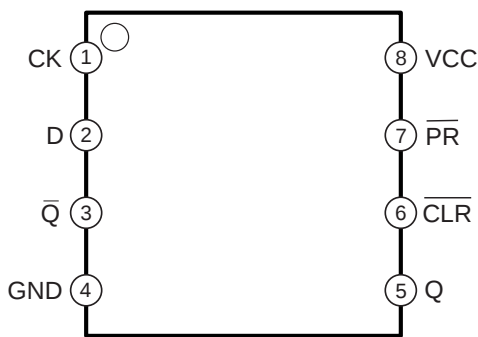


IC413 S-81233GS (Voltage Regulator)



IC BLOCK DIAGRAM

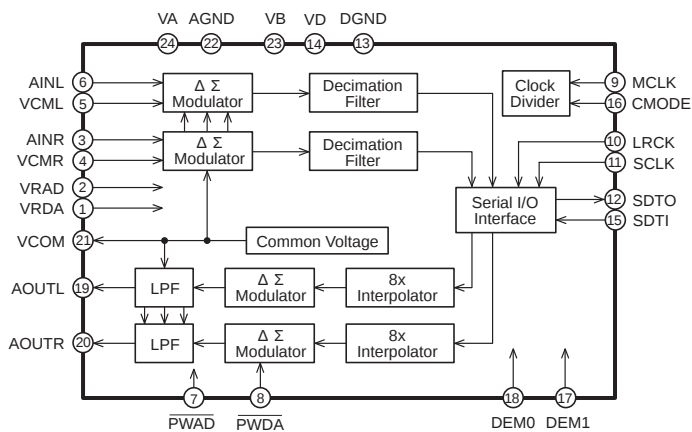
IC414 TC7W74FU (D-type Flip Flop with Preset and Clear)



Truth Value

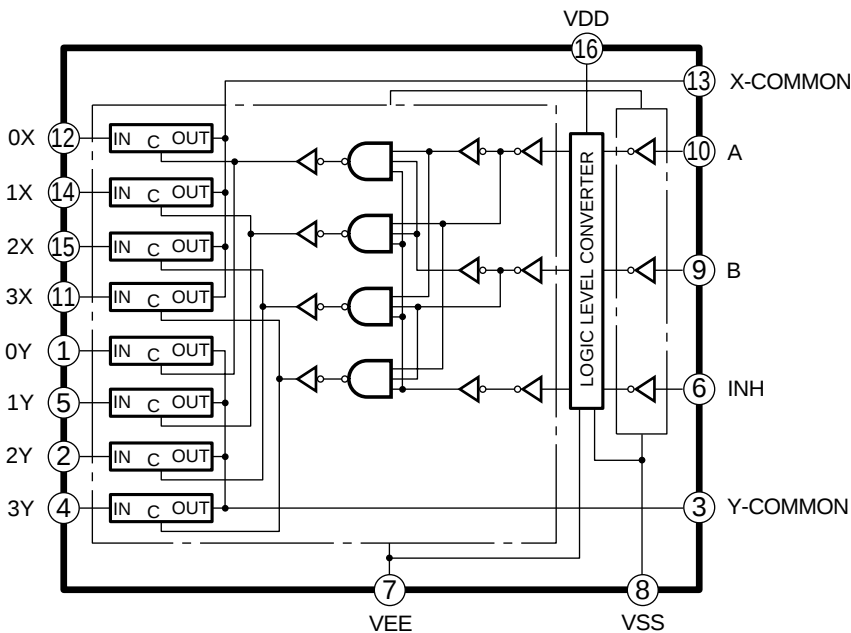
INPUTS				OUTPUTS		FUNCTION
CLR	PR	D	CK	Q	Q	
L	H	X	X	L	H	CLEAR
H	L	X	X	H	L	PRESET
L	L	X	X	H	H	----
H	H	L		L	H	----
H	H	H		H	L	----
H	H	X		Qn	Qn	NO CHANGE

IC503 AK4518VF (Regulator 16bit A/D, D/A Converter)



No.	Pin name	I/O	Function
1	VRDA	I	Voltage Reference Input Pin for DAC,VA
2	VRAD	I	Voltage Reference Input Pin for ADC,VA
3	AINR	I	R-ch Analog Input Pin
4	VCMR	O	R-ch Common Voltage Output Pin 0.45 x VA
5	VCML	O	L-ch Common Voltage Output Pin 0.45 x VA
6	AINL	I	L-ch Analog Input Pin
7	PWAD	I	ADC Power Down Mode Pin "L" : Power down
8	PWDA	I	DAC Power Down Mode Pin "L" : Power down
9	MCLK	I	Master Clock Input Pin
10	LRCK	I	Input/Output Channel Clock Pin
11	SCLK	I	Audio Serial Data Clock Pin
12	SDTO	O	Audio Serial Data Output Pin
13	DGND	---	Digital Ground Pin
14	VD	---	Digital Power Supply Pin
15	SDTI	I	Audio Serial Data Input Pin
16	CMODE	I	Master Clock Select Pin "H" :384fs or 512fs, "L" : 256fs
17	DEM1	I	De-emphasis Frequency Select Pin
18	DEM0	I	De-emphasis Frequency Select Pin
19	AOUTL	O	L-ch Analog Output Pin
20	AOUTR	O	R-ch Analog Output Pin
21	VCOM	O	Common Voltage Output Pin, 0.45 x VA
22	AGND	---	Analog Ground Pin
23	VB	---	Substrate Pin
24	VA	---	Analog Power Supply Pin

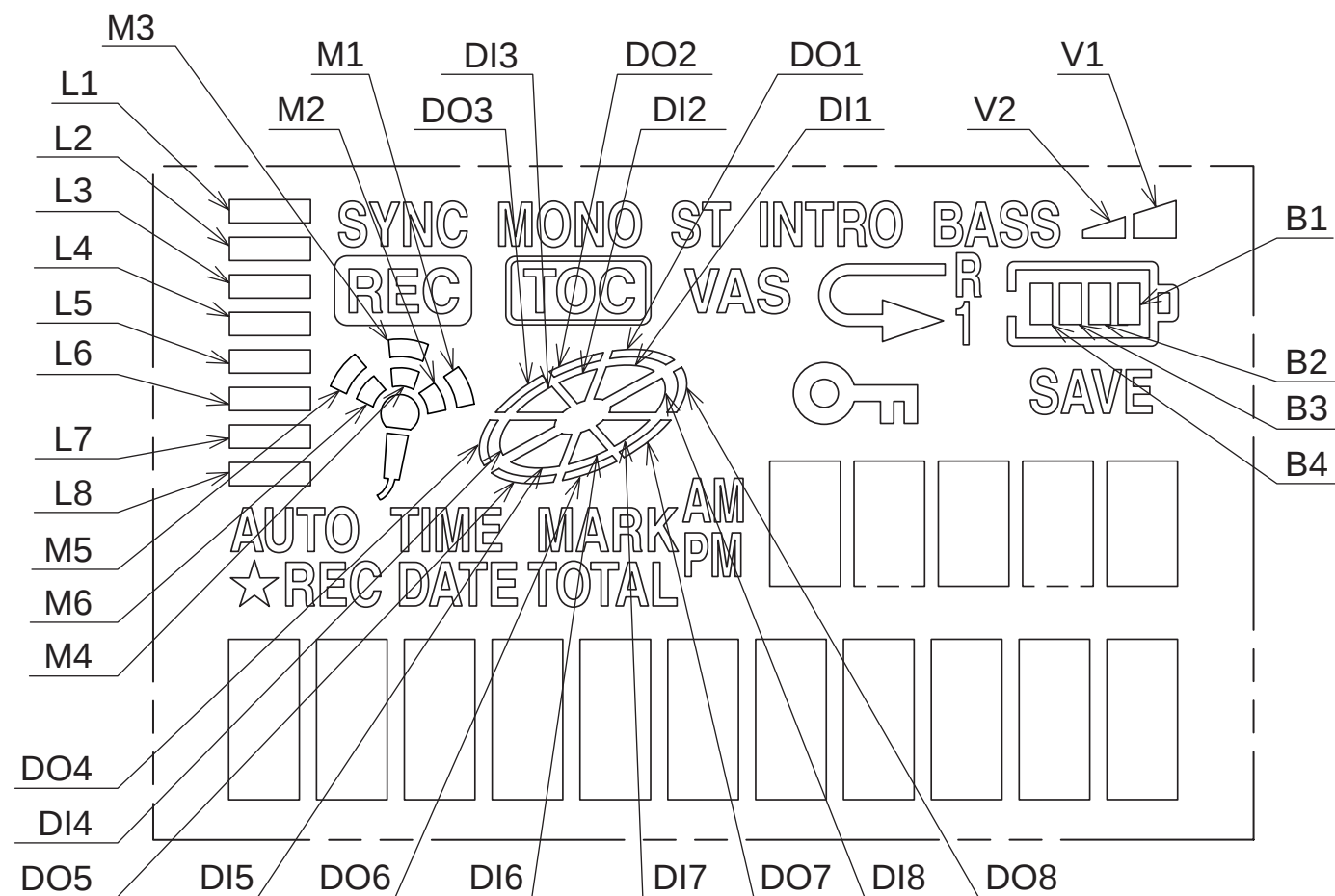
IC509 BU4052 (Analog Multiplexers/Demultiplexers)



Truth Value

INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE

LCD DISPLAY



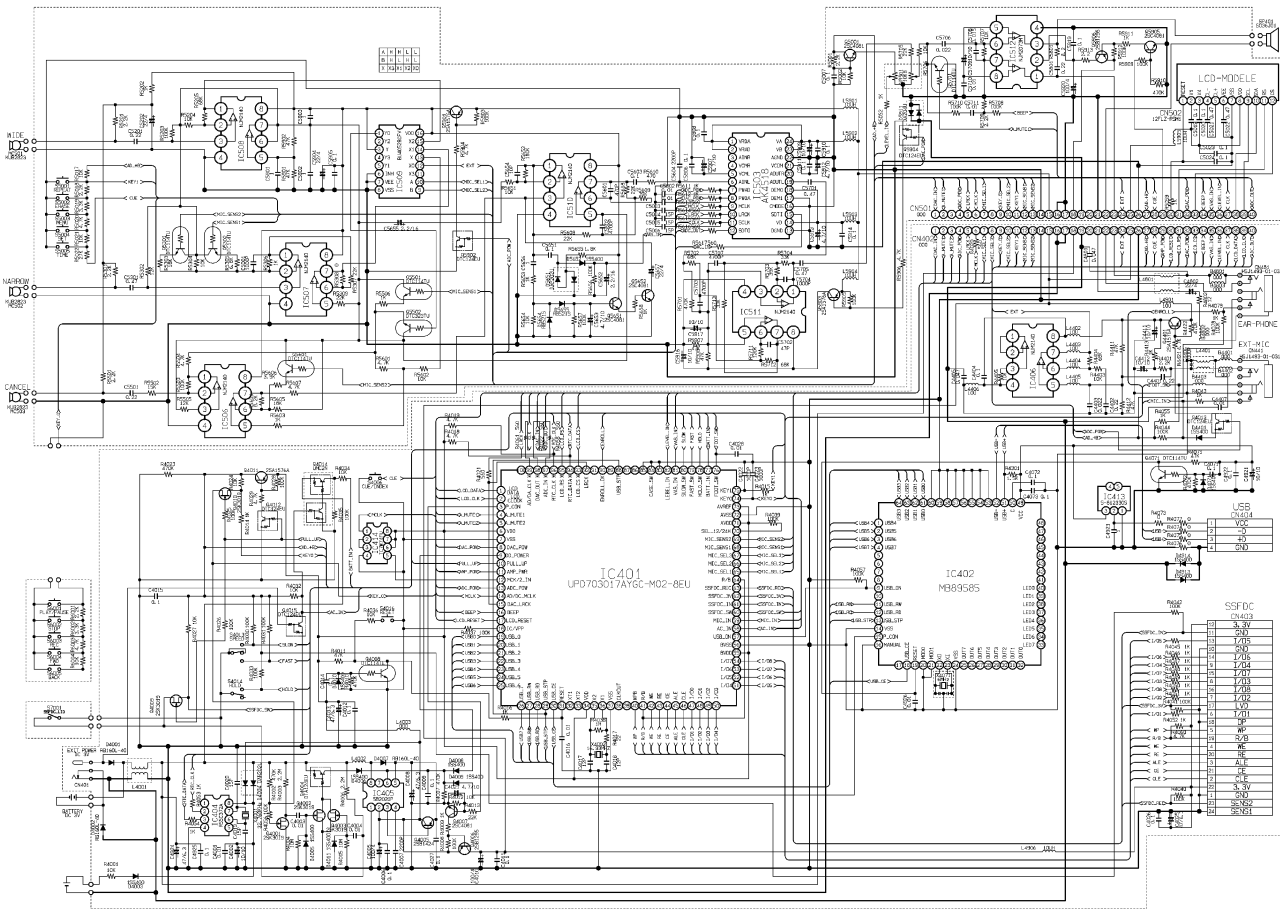
No.	Symbol
1	Reset
2	V1
3	V2
4	CI-
5	CI+
6	VEE
7	VSS
8	VDD
9	SCL
10	SDA
11	RS
12	CS

INPUT TERMINAL

	P COMO	P COM17		P COMO	P COM17		P COMO	P COM17
SEG3	V1	—	SEG23	TOC	SYNC	SEG44	TIME	DATE
SEG4		V2	SEG24	DO4	DI4	SEG45	—	REC
SEG5	SAVE	—	SEG25	DO3	DI3	SEG48	AUTO	☆
SEG8	B3	—	SEG28	DO2	DI2	SEG49		L8
SEG9	B4	—	SEG29	DO1	DI1	SEG50	M6	L7
SEG10	B2	—	SEG30	DO8	DI8	SEG53	M5	L6
SEG13	B1	—	SEG33	DO7	DI7	SEG54	M4	L5
SEG14	1	—	SEG34	DO6	DI6	SEG55	M3	L4
SEG15	R	BASS	SEG35	DO5	DI5	SEG58	M2	L3
SEG18		INTRO	SEG39	AM	PM	SEG59	M1	L2
SEG19		ST	SEG40	MARK	TOTAL	SEG60	REC	L1
SEG20	VAS	MONO						

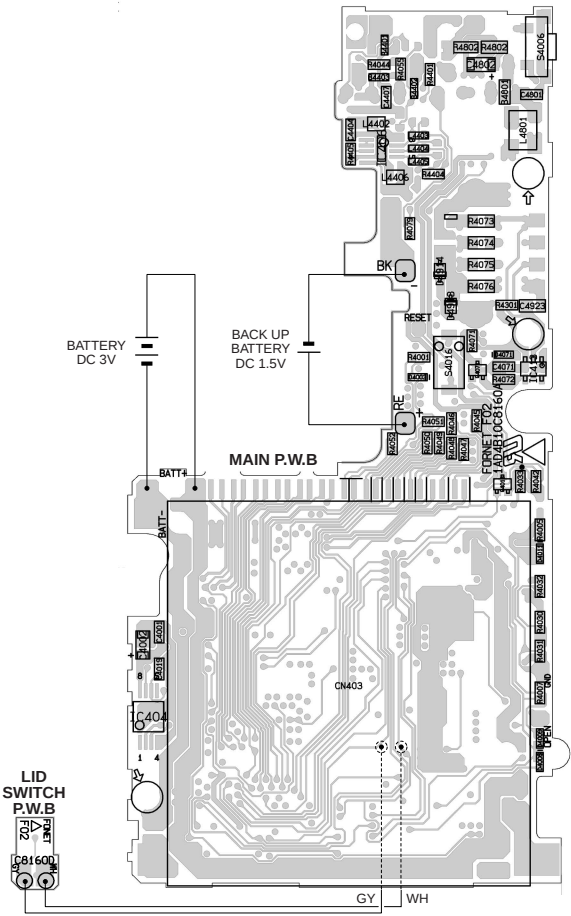
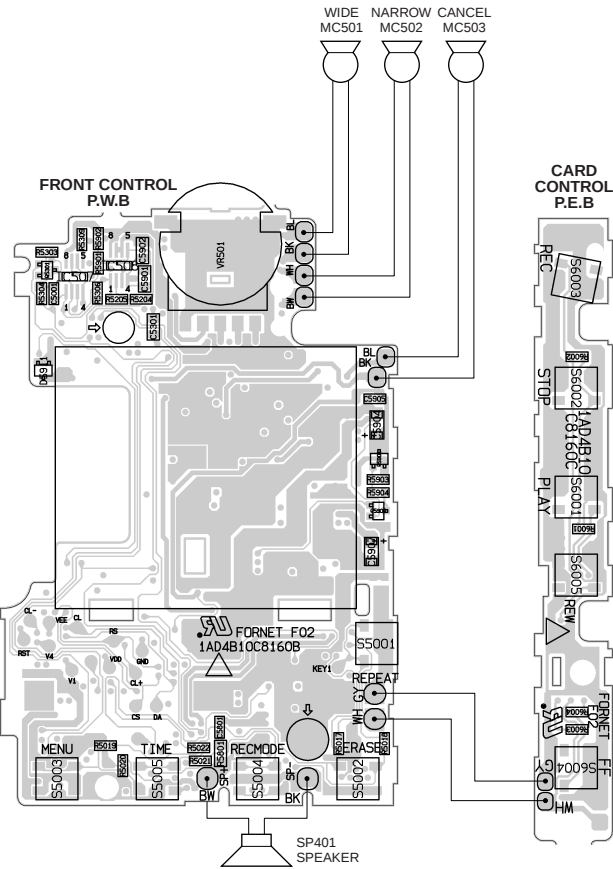
ANODE & GRID ASSIGNMENT

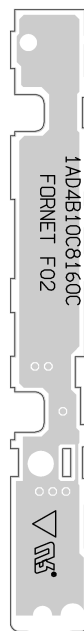
SCHEMATIC DIAGRAM



PRODUCT SAFETY
NOTICE
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by Δ , 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.

WIRING DIAGRAM (PARTS SIDE VIEW)





SANYO Technosound Co., Ltd.
Osaka, Japan