



Pico 投影仪

底板：P13A

型号：SP-H03

维 修

手 册

Pico 投影仪

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SP-H03

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如欲了解详细信息，请参照 GSPN（见封底）中的维修手册。

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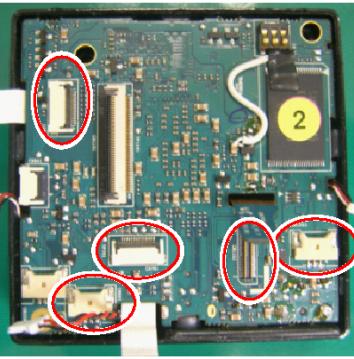
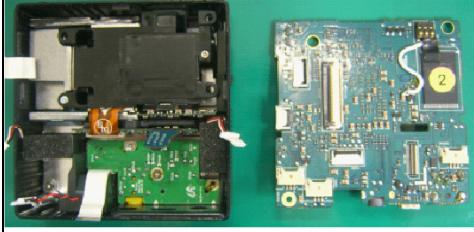
3. 拆卸和组装

本节叙述本投影仪的拆卸和组装步骤。

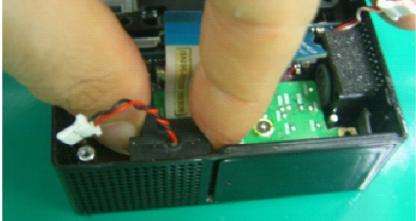
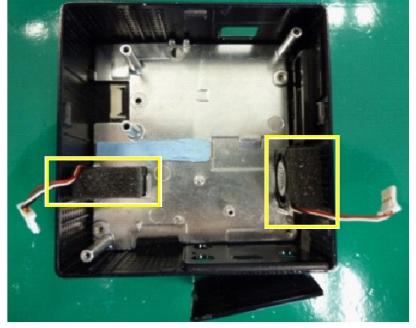
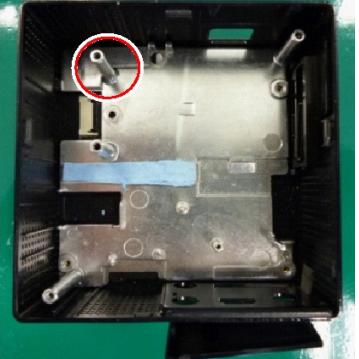
⚠ 警告：因本投影仪含有对静电敏感的零件，当处理这些零件是要小心。

3-1. 拆卸

- ⚠ 小心：**
1. 在开始拆卸前要关闭投影仪。
 2. 按下列步骤所述，小心拆卸投影仪。
 3. 当拆卸投影仪时，不要使用除提供的治具以外的任何金属工具。

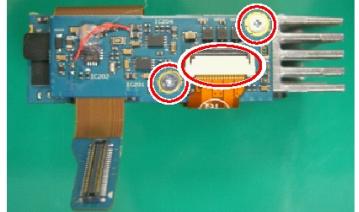
编号	说明	照片	螺钉
1	使用镊子拆卸投影仪底部的 2 处橡胶底脚。		
2	拆卸投影仪底部的 3 处螺钉并卸下底盖。		 机械螺钉 M2x8, 蓝色
3	拆卸 DMD 板的连接器、LED 控制键、AV 板、扬声器和风扇。 ⚠ 注意： 在拉动风扇或扬声器接线时不要将连接器卸下。在向外拉出连接器时要小心。		
4	拆卸主板。		

3. 拆卸和组装

编号	说明	照片	螺钉
5	<p>拆卸扬声器。</p> <p>⚠ 注意：扬声器被双面胶带粘贴在底部。 不要拉接线。</p>		
6	拆卸单一螺钉并卸下引擎。		 机械螺钉 M2x8, 蓝色
7	拆卸单一螺钉并卸下 AB 板。		 机械螺钉 M1.4x3, 白色
8	<p>拆卸 2 个风扇。</p> <p>⚠ 注意：风扇被双面胶粘贴在底部。不要拉动接线。</p>		
9	拆卸垫圈。		

编号	说明	照片	螺钉
10	拆卸单一螺钉并卸下托架轴。	 	 机械螺钉 M1.4x3, 白色

DMD 板

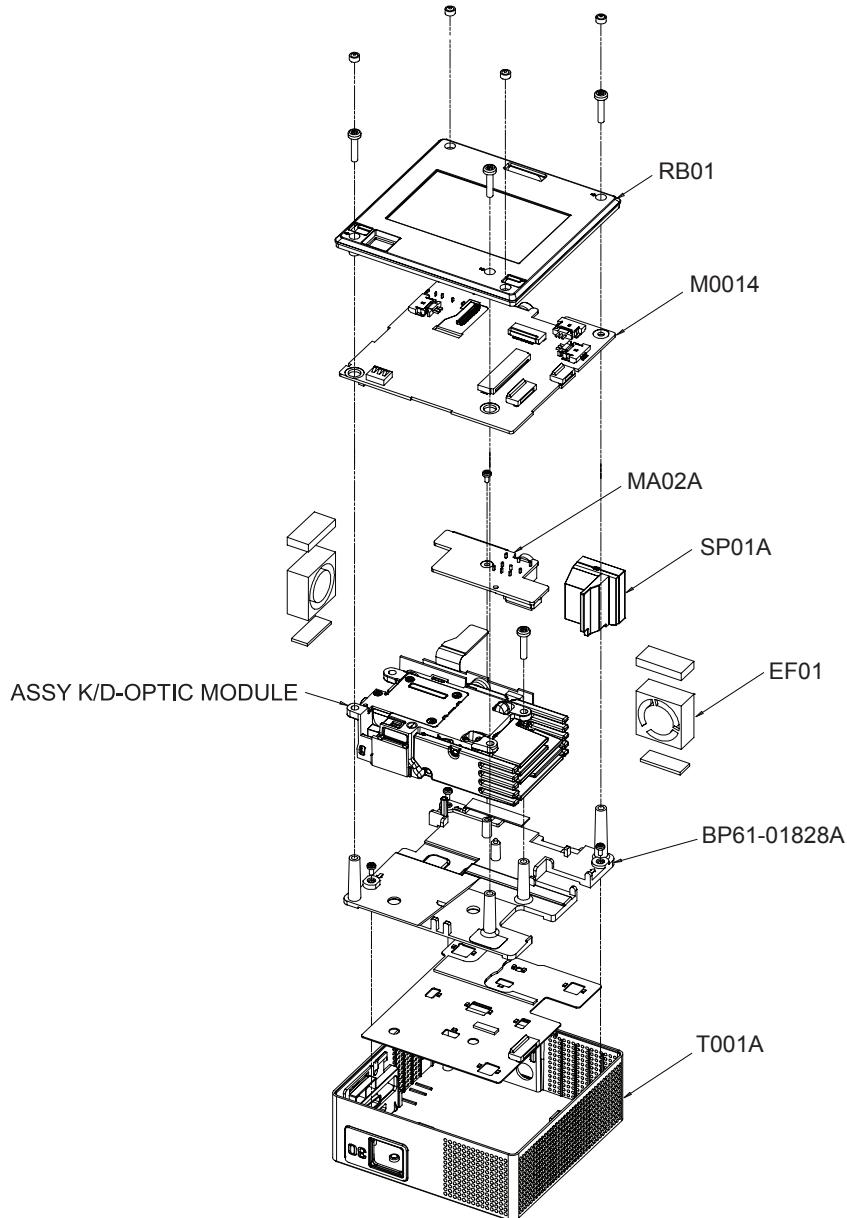
编号	说明	照片	螺钉
1	拆卸 2 个螺钉并卸下连接器。 ⚠ 注意: 小心不要损坏 LED 接线。		 机械螺钉 M1.6x3, 黄色
2	拆卸间隔-垫圈。		
3	拆卸 DMD 板连接器。 ⚠ 注意: 小心不要损坏到管脚。	 	

*安装步骤与拆卸步骤相反。

备忘录

5. Exploded View & Part List

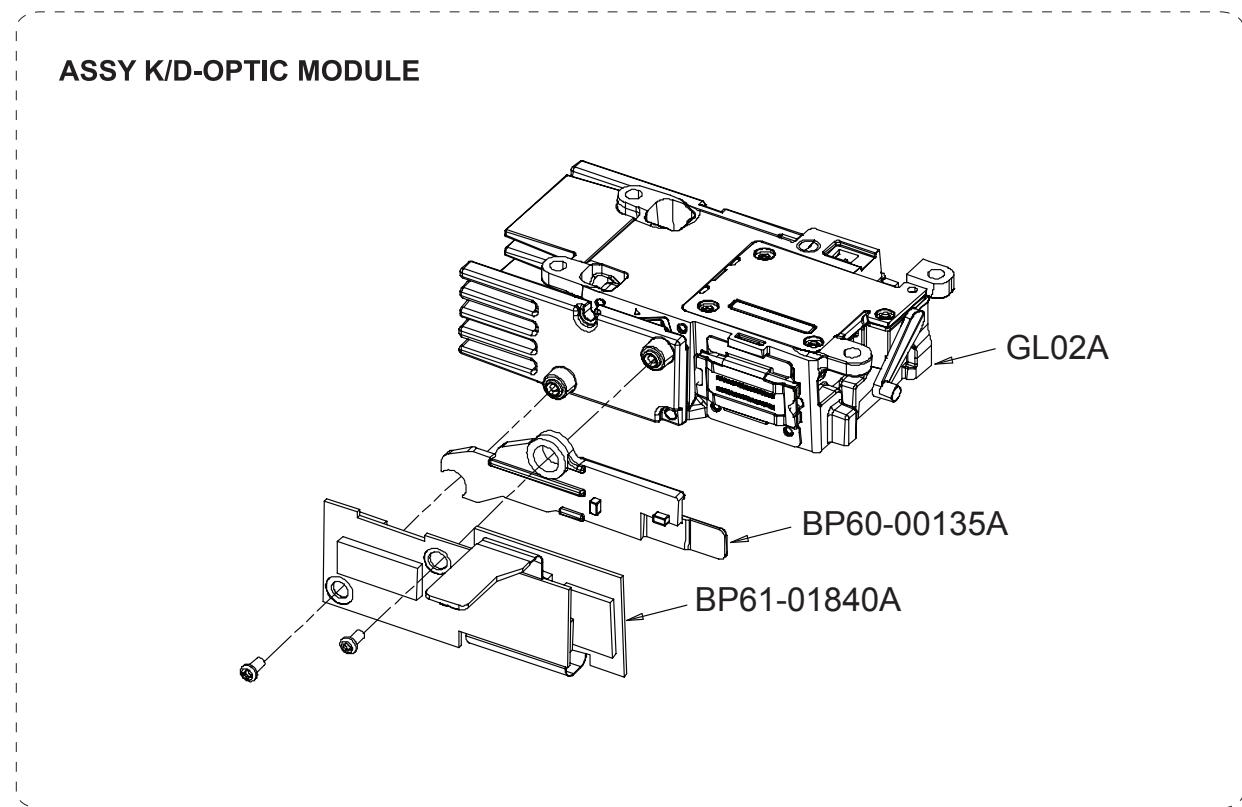
5-1. Exploded View



5-1-1. Parts List

Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
EF01	BP31-00050A	FAN;H03,PLASTIC	2	SA	
M0014	BP94-02396A	ASSY PCB MISC-MAIN;SP0351VBX/EN	1	SA	
MA02A	BP94-02397A	ASSY PCB MISC-AV;SP0351VBX/EN	1	SA	
RB01	BP63-01349A	COVER-BOTTOM;SP-H03,Mg D/C,BLK Splay	1	SA	
SP01A	BN96-15061A	ASSY SPEAKER P;8ohm,2pin,1W,24.5mm	1	SA	
T001A	BP96-02342C	ASSY COVER P-TOP;H03(DLP Logo),ABS,BLK	1	SNA	
	BP61-01828A	HOLDER-BOSS;H03,AL D/C,2	1	SNA	
	BP98-00776A	ASSY K/D-OPTIC MODULE;SP0351VBX/EN	1	SNA	

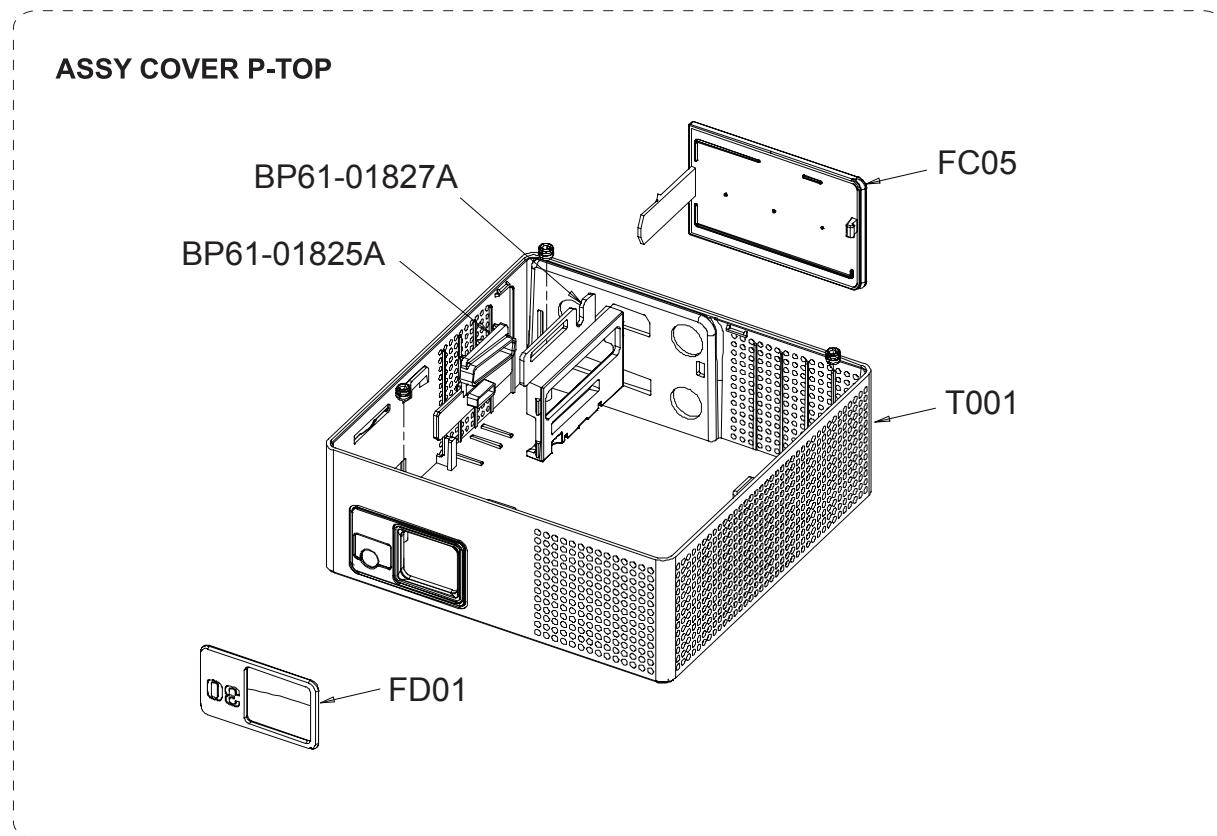
5-2. Assy Exploded View (ASSY K/D-OPTIC MODULE)



5-2-1. Parts List

Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
	BP98-00776A	ASSY K/D-OPTIC MODULE;SP0351VBX/EN	1	SNA	
GL02A	BP96-02295A	ASSY LENS P-OPTIC MODULE;30lumen Pico pr	1	SA	
	BP60-00135A	SPACER-WASHER;H03,PPS,2,V0	1	SNA	
	BP61-01840A	HOLDER-LAMP-SCREW;H03(OBERON),STEEL,M1.6	2	SNA	

5-3. Assy Exploded View (ASSY COVER P-TOP)



5-3-1. Parts List

Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
T001A	BP96-02342C	ASSY COVER P-TOP;H03(DLP Logo),ABS,BLK	1	SNA	
T001	BP63-01348A	COVER-TOP;SP-H03,ABS,Milky,Hotstamping,	1	SNA	
FC05	BP63-01350B	COVER-JACK;H03(DLP Logo),PC,BLK,PC/SILIC	1	SNA	
FD01	BP63-01351A	COVER-DECORATION;SP-H03,Others,0.25T,Ni	1	SNA	
	BP61-01825A	HOLDER-FOCUS;SP-H03,PC,BLK	1	SNA	
	BP61-01827A	HOLDER-PLATE;SP-H03,POM,BLK	1	SNA	

5-4. Service Parts List

Description	Code No.	shape
MAIN BOARD	BP94-02396A	
DMD_LED DRIVER	BP94-02398A	
AV BOARD	BP94-02397A	
FAN	BP31-00050A	
SPEAKER	BN96-15061A	
ASSY LENS P-OPTIC MODULE	BP96-02295A	

5-5. Parts List

Service Bom (SA: SERVICE AVAILABLE, SNA: SERVICE NOT AVAILABLE)

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
0.1	ACCE1	BN92-06806A	ASSY ACCESSORY;SP0351VBX/XF	1	SNA	
.2	ACCE1	BP96-02424A	ASSY ACCESSORY;SP0351VBX/XF	1	SNA	
...3	T0527	AA68-00764A	LABEL-PASSING;SAMSUNG ALL,ART PAPER,CLR,	1	SNA	
...3	T0527	BN68-00513A	LABEL-E,PASS;ALL MODEL,YUPO(110G),50X15,	1	SNA	
...3		BN69-05326A	BOX-IB;PICO(SP-H03),PAPER,NON-STANDARD M	1	SNA	
...3		BP59-00143A	S/W DRIVER-01,IB;SP-H03,24Lang,W/W,Obero	1	SNA	
...3		BP68-00655B	MANUAL FLYER-CAUTION;SP-H03,Samsung,19La	1	SNA	
...3		BP68-00682B	MANUAL FLYER-WARRANTY CARD;comm,Samsung.	1	SNA	
...3		BP68-00697C	MANUAL FLYER-FERRITE CORE;SP-H03,Samsung	1	SNA	
...3		BP68-00697B	MANUAL FLYER-01,QSG;SP-H03,Samsung,7Lang	1	SNA	
.2	ACCE1	BP96-02425A	ASSY ACCESSORY;SP0351VBX/XF	1	SNA	
...3	T0121	3301-001502	CORE-FERRITE;16.5x7x30mm	1	SNA	
...3	T0268	3903-000381	CBF-POWER CORD;DT,CHINA,LSG-21,250/250V,	1	SA	
...3	M0158	BN44-00133C	DC VSS(A);SAD1212,IPANEMA/SWAN,110/230V,	1	SA	
...3		BN69-05325A	BOX-ACCESSORY;PICO(SP-H03),PAPER,NON-STA	1	SNA	
...3	ACCE1	BP96-02388A	ASSY ACCESSORY;PICO EN	1	SNA	
....4		6902-001266	BAG ZIPPER;LDPE,T0.05,W100,L150,TRP,SUF	1	SNA	
....4	M0114	BN39-01154E	CBF SIGNAL;Chelsea Slim, STEREO Plug to	1	SA	
....4		BN39-01154K	CBF SIGNAL-D SUB GENDER;UE40C7700WSXZG,1	1	SA	
....4	T0725	GK39-00013C	CBF INTERFACE-USB;MYGENIE(DMB 10"),4P/5P	1	SA	
0.1		BP90-00485A	ASSY COVER TOP;SP0351VBX/EN	1	SNA	
.2		BP61-01838A	HOLDER-LAMP-SCREW;H03(OBERON),STEEL,M2,L	4	SNA	
.2		BP61-01839A	HOLDER-LAMP-SCREW;H03(OBERON),STEEL,M1.4	1	SNA	
.2		BP63-01353A	SHEET-PAD H/S;H03,GP3000S30,0.5T,5,21.4	1	SNA	
.2		BP98-00776A	ASSY K/D-OPTIC MODULE;SP0351VBX/EN	1	SNA	
...3		BP60-00135A	SPACER-WASHER;H03,PPS,2,V0	1	SNA	
...3		BP61-01840A	HOLDER-LAMP-SCREW;H03(OBERON),STEEL,M1.6	2	SNA	
...3	GL02A	BP96-02295A	ASSY LENS P-OPTIC MODULE;30lumen Pico pr	1	SA	
....4	GD09	4719-002434	DLP;0.3" DMD,S220,DDR,854x480 WVGA	1	SA	
....4	GL09	BP07-00094A	LED DISPLAY;RED,PT16, RED, Type CX, G2.4	1	SA	
....4	GL09	BP07-00095A	LED DISPLAY;GREEN,PT16, GREEN, Type CX,	1	SA	
....4	GL09	BP07-00096A	LED DISPLAY;BLUE,PT16, BLUE, Type CX, G2	1	SA	
...3	GD01A	BP94-02398A	ASSY PCB MISC-DMD;SP0351VBX/EN	1	SA	
....4		0202-001463	SOLDER-WIRE;LFC2-W3.0,-,D3,99.79Sn/0.2Cu		SNA	
....4		0204-002420	SOLVENT;1M-1000,C3H70H,96	0.42	SNA	
....4		0204-002607	FLUX;DF-234U,13%,14KG,Gravity 0.82		SNA	
....4		0202-001608	SOLDER-WIRE FLUX;LFC7-107,D0.8,99.3Sn/0.		SNA	
....4		BP97-01456A	ASSY SMD;SP0351VBX/EN,301	1	SNA	
....5		0202-001477	SOLDER-CREAM;LST309-M,D20~45um,96.5Sn/3A		SNA	
....5	D0254	0404-001373	DIODE-SCHOTTKY;PD3S160,60V,1000mA,PowerD	1	SNA	
.....5		0505-002707	FET-SILICON;ZXMN2F34MATA,N,20V,8.5A,0.12	3	SA	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
.....5	ND51C2	1001-001155	IC-ANALOG MULTIPLEX;NC7SB3157P6X,CMOS,SC	3	SA	
.....5		1105-002105	IC-MOBILE SDRAM;K4X56163PI-FGC6,Mobile D	1	SNA	
.....5		1203-003505	IC-DC/DC CONVERTER;TPS65120,QFN,16P,3x3m	1	SA	
.....5		1203-005673	IC-POSI.ADJUST REG.;TPS71501DCKR,SC-70,5	1	SA	
.....5		1203-006287	IC-POSI.ADJUST REG.;MP2002DD,QFN,8P,3x2m	2	SA	
.....5		1203-006341	IC-DC/DC CONVERTER;TPS63020DSJ,SON-14,14	1	SA	
.....5		1204-003147	IC-VIDEO PROCESS;DPP2605,CTBGA,233P,10x1	1	SA	
.....5	R105	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	4	SA	
.....5	AR49	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	4	SNA	
.....5	R104	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	3	SA	
.....5	MR13	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	SNA	
.....5	DR39	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	4	SNA	
.....5		2007-000167	R-CHIP;390Kohm,5%,1/16W,TP,1005	1	SNA	
.....5	R509	2007-000170	R-CHIP;1Mohm,5%,1/16W,TP,1005	2	SNA	
.....5	R111	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	6	SNA	
.....5	PR4	2007-000265	R-CHIP;1.8Kohm,1%,1/10W,TP,1608	3	SA	
.....5		2007-000336	R-CHIP;120Kohm,1%,1/10W,TP,1608	1	SA	
.....5	R124	2007-000775	R-CHIP;33Kohm,5%,1/16W,TP,1005	1	SNA	
.....5		2007-001113	R-CHIP;680Kohm,5%,1/8W,TP,2012	1	SA	
.....5		2007-001295	R-CHIP;39ohm,5%,1/16W,TP,1005	2	SA	
.....5	R326	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	4	SNA	
.....5		2007-003016	R-CHIP;3Mohm,5%,1/16W,TP,1005	1	SC	
.....5	R365	2007-007107	R-CHIP;100Kohm,1%,1/16W,TP,1005	6	SNA	
.....5		2007-007132	R-CHIP;15Kohm,1%,1/16W,TP,1005	1	SA	
.....5	DR4	2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	2	SNA	
.....5		2007-007306	R-CHIP;100ohm,1%,1/16W,TP,1005	1	SNA	
.....5		2007-007312	R-CHIP;20Kohm,1%,1/16W,TP,1005	1	SA	
.....5		2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005	4	SNA	
.....5		2007-008121	R-CHIP;0.33ohm,5%,1/4W,TP,3216	2	SA	
.....5		2007-008275	R-CHIP;30Kohm,1%,1/16W,TP,1005	3	SNA	
.....5		2007-008294	R-CHIP;33ohm,1%,1/16W,TP,1005	1	SA	
.....5		2007-008502	R-CHIP;499Kohm,1%,1/16W,TP,1005	1	SC	
.....5		2007-010412	R-CHIP;365Kohm,1%,1/16W,TP,1005	1	SA	
.....5		2007-010413	R-CHIP;22.6Kohm,1%,1/16W,TP,1005	3	SA	
.....5	C409	2203-000292	C-CER,CHIP;0.01nF,5%,50V,C0G,1608	2	SA	
.....5	AC139	2203-000491	C-CER,CHIP;2.2nF,10%,50V,X7R,1608	18	SA	
.....5	AD480	2203-000761	C-CER,CHIP;330nF,10%,16V,X7R,TP,2012,-	3	SNA	
.....5	AD480	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,1005	3	SNA	
.....5	AC2	2203-002711	C-CER,CHIP;100nF,10%,25V,X7R,1608	1	SA	
.....5	AD480	2203-005393	C-CER,CHIP;0.005nF,0.1pF,50V,NP0,TP,1005	1	SNA	
.....5	VC37	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	18	SA	
.....5	PC11	2203-006141	C-CER,CHIP;1000nF,10%,16V,X5R,1608	1	SNA	
.....5	JC10	2203-006324	C-CER,CHIP;2200nF,10%,10V,X5R,1608	2	SA	
.....5	C125	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,TP,2012	3	SC	
.....5	AD480	2203-006427	C-CER,CHIP;4700nF,10%,16V,X5R,TP,2012	1	SA	
.....5	AD480	2203-006460	C-CER,CHIP;2200nF,10%,16V,X5R,1608	1	SA	
.....5	HE4	2203-006474	C-CER,CHIP;22000nF,20%,6.3V,X5R,2012	5	SA	
.....5	AD480	2203-006636	C-CER,CHIP;220nF,10%,25V,X7R,1608	3	SA	
.....5	AD480	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	SNA	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....5	AD480	2203-006841	C-CER,CHIP;1000nF,10%,16V,X5R,1005	1	SNA	
....5	AD480	2203-006992	C-CER,CHIP;0.33nF,5%,50V,C0G,TP,1005	8	SNA	
....5	AD480	2203-007270	C-CER,CHIP;10000nF,10%,10V,X5R,TP,1608	9	SNA	
....5	T0052	2703-000125	INDUCTOR-SMD;10uH,10%,2012	1	SA	
....5	T0052	2703-003252	INDUCTOR-SMD;1.2uH,20%,5050	1	SA	
....5		2804-001906	OSCILLATOR-CLOCK;33.333300MHz,50ppm,15pF	1	SA	
....5	T0568	3301-001236	BEAD-SMD;60ohm,1608	1	SNA	
....5	T0568	3301-002039	BEAD-SMD;26ohm,1608,TP	17	SA	
....5		3708-002848	CONNECTOR-FPC/FFC/PIC;18P,0.5mm,SMD-A,AU	1	SA	
....5		BP97-01460A	ASSY MICOM-DMD;SP-H03,PROJECT	1	SNA	
....6		1107-001916	IC-NOR FLASH;W25Q16BVSSIG,16Mbit,2Mbitx8	1	SNA	
....5		3710-002957	SOCKET-BOARD TO BOARD;50P,2R,0.4mm,SMD-S	2	SNA	
....5		BP41-00399B	PCB MAIN;SP-H03,FR-4,8,1.0,0.7,63*43,OBE	1	SNA	
.2		BP98-00789A	ASSY K/D-FAN;SP0351VBX/EN	1	SNA	
.3	EF01	BP31-00050A	FAN;H03,PLASTIC	2	SA	
.3		BP72-00127A	SPONGE;H03,URETHANE,3,FAN	2	SNA	
.3		BP74-01002A	TAPE-ETC;H03,T1.0,V0	2	SNA	
.3		BP74-01005A	TAPE-ETC;H03,T0.08,33x33,BLACK	2	SNA	
.2	T001A	BP96-02342C	ASSY COVER P-TOP;H03(DLP Logo),ABS,BLK	1	SNA	
.3	CCM1	BN63-02183C	COVER-SHEET;Rhcm,PE Vinyl,T0.04,200mm,20	0.2	SNA	
.3		BP61-01825A	HOLDER-FOCUS;SP-H03,PC,BLK	1	SNA	
.3		BP61-01827A	HOLDER-PLATE;SP-H03,POM,BLK	1	SNA	
.3	T001	BP63-01348A	COVER-TOP;SP-H03,ABS,Milky,Hotstamping,	1	SNA	
....4	T0254	BN60-00113A	FASTENER-PEM NUT;PAPYRUS,SUM24L,M1.4,10.	2	SNA	
.3	FC05	BP63-01350B	COVER-JACK;H03(DLP Logo),PC,BLK,PC/SILIC	1	SNA	
.3	FD01	BP63-01351A	COVER-DECORATION;SP-H03,Others,0.25T,Ni	1	SNA	
.3		BP61-01828A	HOLDER-BOSS;H03,AL D/C,2	1	SNA	
.3		BP61-01839A	HOLDER-LAMP-SCREW;H03(OBERON),STEEL,M1.4	1	SNA	
.3		BP63-01382A	GASKET;SP-H03,FOIL,1,11.5,18.8,SILVER	1	SNA	
.3		BP96-02365A	ASSY BOARD P-TOUCH PAD;Oberon,CT5000-806	1	SNA	
.3	FL06	BP96-02376B	ASSY CABLE P-FFC;SP-H03,FFC CABLE,40MM,1	1	SNA	
0.1		BP90-00486A	ASSY COVER BOTTOM;SP0351VBX/EN	1	SNA	
.2	RB01	BP63-01349A	COVER-BOTTOM;SP-H03,Mg D/C,BLK Splay	1	SA	
.2		BP73-00161A	RUBBER-FOOT;SP-H03,SILICON,BLK	4	SNA	
0.1		BP91-02189A	ASSY MISC-CHASSIS;SP0351VBX/EN	1	SNA	
.2	M0014	BP94-02396A	ASSY PCB MISC-MAIN;SP0351VBX/EN	1	SA	
.3		0202-001463	SOLDER-WIRE;LFC2-W3.0,-,D3,99.79Sn/0.2Cu		SNA	
.3		0204-002420	SOLVENT;1M-1000,C3H7OH,96	3.91	SNA	
.3		0204-002607	FLUX;DF-234U,13%,14KG,Gravity 0.82		SNA	
.3		0202-001608	SOLDER-WIRE FLUX;LFC7-107,D0.8,99.3Sn/0.		SNA	
.3		BP97-01454A	ASSY SMD;SP0351VBX/EN,301	1	SNA	
....4		0202-001477	SOLDER-CREAM;LST309-M,D20~45um,96.5Sn/3A		SNA	
....4	MZD1	0403-001411	DIODE-ZENER;5.49-5.73V,200mW,SOD-323,TP	3	SA	
....4	D0254	0404-001404	DIODE-SCHOTTKY;BAT721C,40V,200mA,SOT-23,	1	SA	
....4		0501-000434	TR-SMALL SIGNAL;KTC3875S-GR,NPN,150mW,SO	4	SA	
....4	Q409	0505-001905	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	19	SA	
....4	Q409	0505-002386	FET-SILICON;AO3415AL,P,-20V,-4A,0.045ohm	7	SA	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4		0902-002562	IC-MICROPROCESSOR;TCC9101G-0BX,120Mhz,FP	1	SA	
....4	ND51C2	1001-001155	IC-ANALOG MULTIPLEX;NC7SB3157P6X,CMOS,SC	1	SA	
....4		1002-001556	IC-A/D&D/A CONVERTER;CS42L52CNZR,8,QFN,4	1	SNA	
....4		1105-001859	IC-DDR2 SDRAM;K4T1G164QD-ZCE7,DDR2,1Gbit	1	SA	
....4		1203-004363	IC-VOL. DETECTOR;RT9818C-29PV,SOT-23,3P,	1	SA	
....4	IC150	1203-004618	IC-SWITCH REG.;MP3213DH,MSOP,8P,3x3mm,PL	1	SA	
....4		1203-005923	IC-DC/DC CONVERTER;TPS63031DSKR,QFN,10P,	1	SA	
....4		1203-006127	IC-DC/DC CONVERTER;MP28253EL,QFN,14P,3x4	1	SA	
....4		1203-006196	IC-BATTERY;MAX8903AETI+T,TQFN,28P,4x4mm,	1	SA	
....4		1203-006287	IC-POSI.ADJUST REG.;MP2002DD,QFN,8P,3x2m	1	SA	
....4		1203-006347	IC-DC/DC CONVERTER;MP2125DL,QFN,14P,3x4m	1	SA	
....4		1204-003174	IC-VIDEO PROCESS;TW8816-BB3-GR,TFBGA,144	1	SNA	
....4		1405-001233	VARISTOR;30Vdc,5A,1.6x0.8x0.8mm,TP	11	SA	
....4	ND51C2	2007-000066	R-CHIP;20Kohm,1%,1/10W,TP,1608	1	SNA	
....4	R512	2007-000107	R-CHIP;470Kohm,5%,1/10W,TP,1608	1	SA	
....4	MR604	2007-000137	R-CHIP;2Kohm,5%,1/16W,TP,1005	5	SNA	
....4	R105	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	5	SA	
....4	AR49	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	6	SNA	
....4	R319	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	12	SNA	
....4	RR33	2007-000154	R-CHIP;24Kohm,5%,1/16W,TP,1005	1	SA	
....4	AR43	2007-000155	R-CHIP;27Kohm,5%,1/16W,TP,1005	1	SNA	
....4	MR13	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	5	SNA	
....4	DR39	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	5	SNA	
....4	VR9	2007-000164	R-CHIP;150Kohm,5%,1/16W,TP,1005	1	SA	
....4	R111	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	72	SNA	
....4	UR23	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	SNA	
....4	ER13	2007-000669	R-CHIP;2Kohm,1%,1/10W,TP,1608	6	SNA	
....4	R945	2007-000726	R-CHIP;300ohm,1%,1/10W,TP,1608	1	SA	
....4	V8932	2007-000857	R-CHIP;4.3Kohm,1%,1/10W,TP,1608	1	SNA	
....4	OTR1	2007-001292	R-CHIP;330ohm,5%,1/16W,TP,1005	5	SNA	
....4		2007-001295	R-CHIP;39ohm,5%,1/16W,TP,1005	8	SA	
....4	MR31	2007-001305	R-CHIP;120ohm,5%,1/16W,TP,1005	1	SNA	
....4	CER07	2007-001308	R-CHIP;200ohm,5%,1/16W,TP,1005	2	SNA	
....4		2007-007008	R-CHIP;300ohm,5%,1/16W,TP,1005	2	SNA	
....4	R365	2007-007107	R-CHIP;100Kohm,1%,1/16W,TP,1005	8	SNA	
....4		2007-007132	R-CHIP;15Kohm,1%,1/16W,TP,1005	1	SA	
....4		2007-007134	R-CHIP;39Kohm,1%,1/16W,TP,1005	1	SA	
....4		2007-007136	R-CHIP;4.7Kohm,1%,1/16W,TP,1005	9	SNA	
....4	DR4	2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	40	SNA	
....4	MR601	2007-007307	R-CHIP;150ohm,1%,1/16W,TP,1005	1	SNA	
....4		2007-007309	R-CHIP;12Kohm,1%,1/16W,TP,1005	2	SA	
....4		2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005	7	SNA	
....4		2007-007573	R-CHIP;330Kohm,1%,1/16W,TP,1005	1	SC	
....4	R133	2007-007651	R-CHIP;9.1Kohm,1%,1/10W,TP,1608	1	SA	
....4		2007-007733	R-CHIP;51ohm,1%,1/10W,TP,1608	2	SA	
....4		2007-007797	R-CHIP;44.2ohm,1%,1/10W,TP,1608	1	SA	
....4		2007-007942	R-CHIP;1Mohm,1%,1/16W,TP,1005	2	SA	
....4		2007-008035	R-CHIP;160Kohm,1%,1/10W,TP,1608	1	SA	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4		2007-008263	R-CHIP;3Kohm,1%,1/16W,TP,1005	2	SNA	
....4		2007-008275	R-CHIP;30Kohm,1%,1/16W,TP,1005	1	SNA	
....4		2007-008296	R-CHIP;680Kohm,1%,1/16W,TP,1005	1	SNA	
....4		2007-010406	R-CHIP;412Kohm,1%,1/16W,TP,1005	1	SA	
....4		2007-010412	R-CHIP;365Kohm,1%,1/16W,TP,1005	1	SA	
....4	ZRN10	2011-001261	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,2.	6	SA	
....4		2011-001427	R-NETWORK;0ohm,5%,1/16W,L,CHIP,8P,TP,2.0	7	SA	
....4	MC2	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,TP,1005	2	SA	
....4	C409	2203-000292	C-CER,CHIP;0.01nF,5%,50V,C0G,1608	1	SA	
....4	VC4	2203-000357	C-CER,CHIP;0.15nF,5%,50V,C0G,1608	4	SNA	
....4	DC1	2203-000386	C-CER,CHIP;0.015nF,5%,50V,C0G,TP,1005	2	SA	
....4	C137	2203-000604	C-CER,CHIP;22nF,10%,25V,X7R,TP,1608	2	SNA	
....4	AD480	2203-001391	C-CER,CHIP;150nF,10%,25V,X7R,TP,2012	1	SA	
....4	AC28	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,1608	2	SA	
....4	AD480	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,1005	4	SNA	
....4	AC2	2203-002711	C-CER,CHIP;100nF,10%,25V,X7R,1608	2	SA	
....4	C155	2203-002834	C-CER,CHIP;0.022nF,5%,50V,CH,BK,1005	2	SNA	
....4	AD480	2203-006126	C-CER,CHIP;47nF,10%,16V,X7R,1005	1	SNA	
....4	C102	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	109	SNA	
....4	JC10	2203-006324	C-CER,CHIP;2200nF,10%,10V,X5R,1608	1	SA	
....4	AD480	2203-006336	C-CER,CHIP;10000nF,10%,25V,X5R,3216	2	SA	
....4	C125	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,TP,2012	45	SC	
....4	AD480	2203-006377	C-CER,CHIP;4700nF,10%,25V,X5R,-,2012	1	SNA	
....4	HDC11	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,TP,1005	13	SNA	
....4	AD480	2203-006824	C-CER,CHIP;4700nF,10%,10V,X5R,1608	3	SNA	
....4	AD480	2203-007270	C-CER,CHIP;10000nF,10%,10V,X5R,TP,1608	1	SNA	
....4	S1Q0552	2703-000371	INDUCTOR-SMD;4.7uH,5%,2520	2	SA	
....4	T0052	2703-003150	INDUCTOR-SMD;4.7uH,20%,5050	2	SNA	
....4	T0052	2703-003252	INDUCTOR-SMD;1.2uH,20%,5050	3	SA	
....4	T0052	2703-003718	INDUCTOR-SMD;2.2uH,20%,3.8x3.8x2.0mm	1	SA	
....4	X202	2801-004868	CRYSTAL-SMD;12MHz,50ppm,8pF,100ohm,TP	1	SA	
....4	X202	2801-004885	CRYSTAL-SMD;27MHz,50ppm,BMC-30,18pF,100o	1	SA	
....4	T0568	3301-001594	BEAD-SMD;90ohm,2.0*1.2*1.3mm,TP,-,-	1	SNA	
....4	T0568	3301-002039	BEAD-SMD;26ohm,1608,TP	35	SA	
....4	AC510	3708-002624	CONNECTOR-FPC/FFC/PIC;8P,0.5mm,SMD-A,AU,	1	SA	
....4		3708-002849	CONNECTOR-FPC/FFC/PIC;14P,0.5mm,SMD-A,AU	2	SA	
....4		3709-001527	CONNECTOR-CARD EDGE;10P,8mm,AU,MICRO SD	1	SNA	
....4		3711-005980	HEADER-BATTERY;NOWALL,3P,1R,2mm,BATTERY,	1	SNA	
....4		3711-007476	HEADER-BOARD TO BOARD;BOX,50P,2R,0.4mm,S	1	SA	
....4		3722-002528	JACK-USB;5P,AU30U,BLK,SMD-A,MINI USB B	1	SA	
....4	IS01	1209-001880	IC-SENSOR;BDE0900G,SSOP5,5P,2.9x1.6x1.25	1	SNA	
....4		1405-001232	VARISTOR;5.6Vdc,30A,1.6x0.8x0.8mm,TP	2	SNA	
....4	HR10	2007-001320	R-CHIP;1.8Kohm,5%,1/16W,TP,1005	1	SA	
....4		2007-007315	R-CHIP;3.9Kohm,1%,1/16W,TP,1005	1	SNA	
....4		2007-007791	R-CHIP;9.1Kohm,1%,1/16W,TP,1005	1	SNA	
....4		BP97-01465A	ASSY MICOM-MAIN;H03	1	SNA	
....5	NAND2	1107-001774	IC-NAND FLASH;K9G8G08U0A-PCB0,1GByte,1Gx	1	SNA	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4		BP97-01466A	ASSY MICOM-SUB;H03	1	SNA	
.....5	IC115	1107-001614	IC-FLASH MEMORY;MX25L1005,1Mbit,1Mx1,SOP	1	SNA	
....4	D2507	0402-001075	DIODE-RECTIFIER;MBR0520L,20V,.5A,SOD-123	1	SNA	
....4	EH01	3711-006941	HEADER-BOARD TO CABLE;BOX,3P,1R,1.25mm,S	3	SNA	
....4		3722-003056	JACK-PHONE;1P/6C,AU,BLK,SMD-A	1	SA	
....4		3722-003108	JACK-DC POWER;1P,1.65PI,SN,BLK	1	SA	
....4		0406-001181	DIODE-TVS;NUP4201MR6,6/-/V,500W,TSOP-6	1	SA	
....4		BP41-00398B	PCB MAIN;SP-H03,FR-4,8,MP1.0,1,66x66mm,O	1	SNA	
.2	MA02A	BP94-02397A	ASSY PCB MISC-AV;SP0351VBX/EN	1	SA	
...3		0202-001463	SOLDER-WIRE;LFC2-W3.0,-,D3,99.79Sn/0.2Cu		SNA	
...3		0204-002420	SOLVENT;1M-1000,C3H7OH,96	2.62	SNA	
...3		0204-002607	FLUX;DF-234U,13%,14KG,Gravity 0.82		SNA	
...3		BP97-01455A	ASSY SMD;SP0351VBX/EN,301	1	SNA	
....4		0202-001477	SOLDER-CREAM;LST309-M,D20~45um,96.5Sn/3A		SNA	
....4		0403-001180	DIODE-ZENER;BZX84C6V2,5.8-6.6V,350mW,SOT	2	SA	
....4	D0254	0404-001404	DIODE-SCHOTTKY;BAT721C,40V,200mA,SOT-23,	2	SA	
....4	Q101	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	SA	
....4		1405-001233	VARISTOR;30Vdc,5A,1.6x0.8x0.8mm,TP	12	SA	
....4	R105	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	10	SA	
....4	MR13	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	4	SNA	
....4	R111	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	SNA	
....4	R124	2007-000775	R-CHIP;33Kohm,5%,1/16W,TP,1005	2	SNA	
....4	DR4	2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	3	SNA	
....4	MR11	2007-008015	R-CHIP;75ohm,1%,1/16W,TP,1005	4	SNA	
....4	C258	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	4	SA	
....4	AD480	2203-000550	C-CER,CHIP;0.02nF,5%,50V,C0G,1005	4	SNA	
....4	C125	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,TP,2012	1	SC	
....4	T0052	2703-000125	INDUCTOR-SMD;10uH,10%,2012	2	SA	
....4	BD401	3301-001569	BEAD-SMD;600ohm,2012,1000mA,TP,520ohm/90	1	SNA	
....4		3708-002849	CONNECTOR-FPC/FFC/PIC;14P,0.5mm,SMD-A,AU	1	SA	
....4	CN906	3711-007346	CONNECTOR-HEADER;BOX,18P,1R,0.6mm,SMD-A,	1	SA	
....4		BP97-01459A	ASSY MICOM-AV;SP-H03,PROJECT	1	SNA	
....5	IC112	1103-001310	IC-EEPROM;24LC02B,256X8BIT,SOIC,8P,3.91X	1	SNA	
....4	JA330	3722-002845	JACK-PHONE;1/7P,NI,YELLOW,ANGLE	1	SA	
....4		BP41-00400B	PCB MAIN;SP-H03,FR-4,2,1,23*20,8	1	SNA	
...3		0202-001608	SOLDER-WIRE FLUX;LFC7-107,D0.8,99.3Sn/0.		SNA	
0.1		BP91-02190A	ASSY FIXING;SP0351VBX/EN	1	SNA	
.2	SP01A	BN96-15061A	ASSY SPEAKER P;8ohm,2pin,1W,24.5mm	1	SA	
.2		BP43-01001A	BATTERY;1102-01960D,SP-H03,Li-ion,2,1480	1	SA	
.2		BP63-01380A	GASKET;SP-H03,FOIL,9,5,20,SILVER	1	SNA	
.2		BP63-01381A	GASKET;SP-H03,FOIL,3,5,15,SILVER	1	SNA	
.2	FL06	BP96-02376A	ASSY CABLE P-FFC;SP-H03,FFC CABLE,40MM,1	1	SNA	
0.1		BP92-02202A	ASSY BOX;SP0351VBX/EN	1	SNA	
.2		BN69-05235A	BOX-01,SET;PICO,PAPER,NON-STANDARD MANIL	1	SNA	
.2		BN69-05251A	BOX-01,MASTER;PICO,CB,A-01,SW2, YEL,W477	1	SNA	
.2	T0527	AA68-02789A	LABEL-00,BAR,SERIAL;MOJO,80,50,WHT,BARCO	1	SNA	
.2		BN68-02398A	LABEL-02,SEALING;E5(E-BOOK),art paper,w5	2	SNA	
.2	T0527	BN68-00134L	LABEL-BOX,01;ALL MODEL,MOJO 90G,120X90,W	1	SNA	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
0.1		BP92-02203A	ASSY P/MATERIAL;SP0351VBX/EN	1	SNA	
.2		6902-000061	BAG AIR;LDPE,T0.2,W500,L1000,TRP,370.000	1	SNA	
.2		6902-000379	BAG AIR;LDPE,T0.2,W1000,L1800,TRP,1260.0	1	SNA	
.2		6902-000604	BAG WRAPPING;LDPE,T0.02,W500,L10000,TRP,	0.7	SNA	
.2		6902-000609	BAG ROLL;LDPE,T0.05,W2400,L1000,TRP,30.0	0.02	SNA	
.2		BH69-00457B	PACKING INNER-00,PAD;COMM,OTHER,T3.0,930	1	SNA	
.2		BH69-40383M	PACKING INNER-00,PAD;COMM,CB,1000,800,YE	1	SNA	
.2		BN69-00391Y	PAD-ANGLE;CB,T5,W2100,L50,YEL,403g	1	SNA	
.2		BN69-00617M	PALLET-PACKING;RL17PS,WOOD,1280,970,120	1	SNA	
.2		6902-000457	BAG PE;LDPE,T0.05,W140,L210,CLR	1	SNA	
.2		BP63-01370A	COVER-BAG;SP-H03,Textile,PAUCH	1	SNA	
.2	T0214	0203-001269	TAPE-OPP MASKING;#301,T0.06,W75,L50000,N	0.13	SNA	
.2		6902-001284	BAG PE;HDPE/NITRON,T0.015/T0.5,W120,L140	1	SNA	
0.1		BP92-02243A	ASSY LABEL;OBERON	1	SNA	
.2		BN68-02132A	LABEL-RATING;PET,T0.05,50,32,W/W	1	SNA	

1. Precautions

1-1. Safety Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1-1. Warnings

1. Do not modify the circuits of the product for safety reasons.
2. Do not supply power to your product before a service engineer has serviced it.
3. When the monitor is operating, the product may receive a shock due to the semiconductor heat sink.

1-1-2. Servicing the LCD Monitor

1. When servicing the LCD Monitor, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

1-1-3. Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistorcapacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):

WARNING : Do not use an isolation transformer during this test.

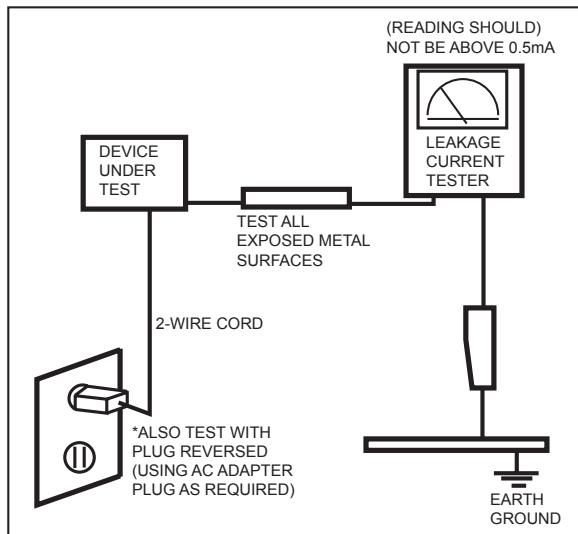


Figure 1-1. Leakage Current Test Circuit

Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4. Product Safety Notices

Some electrical and mechanical parts have special safetyrelated characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by  on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2. Servicing Precautions

- WARNING:** An electrolytic capacitor installed with the wrong polarity might explode.
- Caution:** Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.
- Note:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
 - (a) remove or reinstall any component or assembly,
 - (b) disconnect PCB plugs or connectors,
 - (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug. The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3. Static Electricity Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

1-4. Installation Precautions

1. For safety reasons, more than two people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (10cm) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.

Memo

2. Features and Specifications

2-1. Features and Specifications

Model	SP-H03
Features	
<ul style="list-style-type: none">▶ Max 30 lumen/WVGA-level PICO projector▶ Eco projector, which uses LEDs that do not need to be replaced.▶ Rich colors from red, green and blue LEDs▶ Multimedia and document viewer functions (USBs and MicroSD cards)▶ More convenient to use, stand-alone projector integrated with a document viewer and M/M viewer▶ Equipped with a 1 W mono speaker and a manual focus feature▶ High capacity battery, which should last through a conference or movie after one full charge	

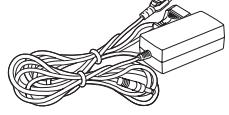
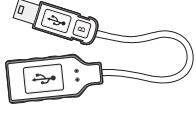
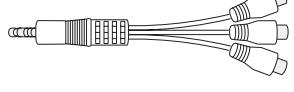
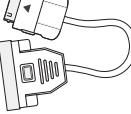
2-2. Major Specifications

Major Specifications		
Model		SP-H03
Panel	Size	0.3inch
	Resolution	WVGA (854 x 480)
Aspect ratio		16 : 9
Power	Power Consumption	Max 12.0W (Operating & Charging at Adapter), TYP. 8.5W (Operating at Battery)
	Voltage	100 ~ 240 V AC, 50/60 Hz
LED Light Source	Power Consumption	4 W
	Life Time	30,000 Hours
Dimension (Width x Length x Height)		70 x 70 x 27.5 mm / 2.76 x 2.76 x 1.08 inches (without the battery) 70 x 70 x 37.5 mm / 2.76 x 2.76 x 1.48 inches (with the battery)
Weight		Projector : 132 g / 0.29 lbs Battery : 80 g / 0.18 lbs
Key Features	Brightness	TYP 27, MAX 30 Lumen
	Contrast	1000:1
	Projection Range	30.5 ~ 299 cm / 12.00 ~ 117.71 inches
	Keystone	<1%
	Focus Adjustment	Manual
	Screen Size (Diagonal)	Diagonal 8.6 inches ~ 85.5 inches
Input signal	D-Sub 15p	Analog RGB, Analog Y PB PR
	Media play	USB, internal memory and MicroSD
	RCA X 1	Composite video
Internal memory capacity		1 GB (System memory: 301 MB / User memory: 699 MB)
Speaker		1 W (Mono)
User Environment	Temperature and Humidity	Operating : Temperature 32 °F ~ 104 °F (0 °C ~ 40 °C), Humidity 10 % ~ 80 % (Non-condensing)
		Storage : Temperature -4 °F ~ 113 °F (-20 °C ~ 45 °C), Humidity 5 % ~ 95 % (Non-condensing)
Noise		23 dB

2-3. Spec Comparison to the Old Models

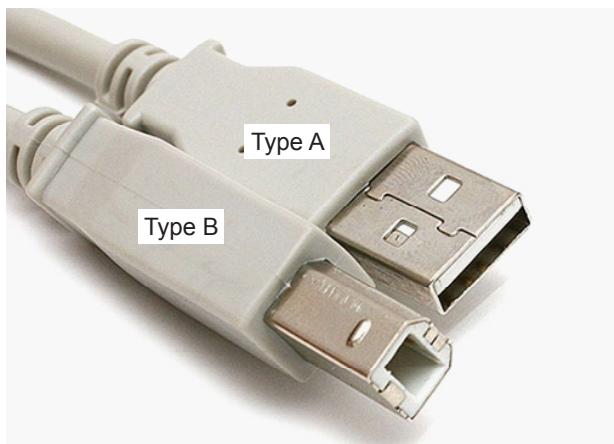
Model	SP-H03	SP-P410M
Design		
Panel	0.3"	0.55" Type-Y
	854 x 480	800 x 600
Brightness	30 ANSI lm	170 ANSI lm
Contrast	1000 : 1	1000 : 1
LED Lifetime	More than 30,000 hours	More than 30,000 hours
Power Consumption	9.1W	49W
Image Size	8.6" to 85.5"	20" to 80"
Input Terminal	PC/VIDEO (using optional Gender cable) USB (using optional Gender cable) SD Micro CARD	PC / Video (using common cable) COMPONENT (using optional Gender cable) USB
Audio Output	1W mono	1W + 1W
Remote Control	X	TM91 (BN59-00900A)
Height Adjustment	X	O
Tripod Installation	O	O

2-4. Accessories

Product	Description	Code. No	Remark
	Quick Setup Guide	BP68-00697A	
	Warranty Card (Not available in all locations)	-	
	User's Guide	BP59-00143A	
	Power Cord / Adaptor	BN44-00133C	
	Battery	BP43-01001A	Samsung Electronics Service center
	USB Gender	GK39-00013C	
	3RCA Gender	BN39-01154E	
	D-Sub Gender	BN39-01154K	

2-5. Precautions for Using a USB Storage Device

- This projector does not support multi-card readers. It only supports USB storage devices.
- Some USB devices may not be supported.
- Some projectors which do not fully comply with the standard USB specifications may not operate normally.
- This projector does not recognize a USB storage device connected via a USB hub.
- A USB storage device integrated with an auto-reading application or internal driver may not be compatible with this projector.
- A USB memory device designed for only a certain driver may not be recognized.
- The recognition speed of the USB storage device may vary.
- While a USB storage device is in use, do not turn the projector off or remove the connected USB device. Forced removal can cause damage to the USB device or files it contains.
- Ensure that you only use a USB storage device that contains uncorrupted files. Otherwise, the projector may malfunction or the files may not be opened.
- Only a USB storage device formatted by the FAT or FAT32 (recommended) file system supported by Windows is applicable. Storage devices formatted with an operating system other than Windows may not be compatible.
- If you are using a device that requires an external power source, be sure to check the power cable is connected. Otherwise, the projector may not recognize the device.
- When connecting to the projector's USB port, use the cable supplied with the USB. (Contact your USB service center for more information on purchasing a cable or external device.)
- We are not responsible for any damage to an external device caused by using a cable that does not comply with the device's designated specifications.
- As data on a USB storage device can be damaged, ensure that you back up important data. We are not responsible for any loss of data.
- There are some limitations when accessing files saved on a USB storage device. Up to a depth of three subfolders can be searched. It may take a long time to display the desired file depending on the total number of files in the folder. A folder that contains more than 2,900 files (including folders) will not be recognized.
- Multi Partition is not supported.
- If an external storage device does not operate when connected to the projector, try to connect it to the PC. If it still does not operate normally, please contact the service centers for the external device and PC.
- USB storage device is not writable
- Only a USB storage device with a type A port is compatible. Insert the USB device into the supplied USB gender. As shown in the picture below, a flat port is type A, compared to a type B port which is rectangular and pole-shaped. (The examples in the picture are of USB cables. Only a USB client can be used for the projector.)



2-6. Supported File Formats

■ Document, Photo

Item	File Format
Document	Adobe PDF 1.2 ~ 1.7 (pdf)
	MS PowerPoint 97 ~ 2007 (ppt, pptx)
	MS Excel (xls, xlsx)
	MS Word (doc, docx)
Text	(txt, asc)
Photo	JPEG, PNG, BMP, GIF. (GIF supports neither Effect nor Rotate.)
Music	MP3, MP2, WAV, WMA, FLAC, APE, HE-AAC, Dolby-AC3

※ BASC does not support audio-only files. Only audio files included in a video file are supported.

■ Movie, Captions

Item	File Format	Codec	Description
Movie	AVI MP4 ASF MPG RM FLV M2TS/TS	MPEG4	1280 x 720 @ 30f
		VC-1(WMV9)	
		H.264	1280 x 720 @ 30f / Level 4.1
		MPEG1/2	
		RV	Content with the GMC option applied is not supported.
		H.263	
		WMV7/8	
Captions	.smi(SAMI)		Microsoft SAMI (Synchronized Accessible Media Interchange)
	.srt(SUBRIP)		SubRip
	.sub(SUBVIEWER)		SubViewer 1.0 & 2.0
	.ssa(SSA)		Sub Station Alpha v4.00 Script Format

4. 故障排除

4-1. LED指示

双色 LED	说明
●	投影仪进行充电。
●	投影仪充电完成。
○	因为温度超过了可控温度，投影仪自动关闭。 (LED 隔秒闪烁) 见下面措施 1。
○	投影仪内侧的冷却系统（包括冷却风扇）不能正常运作。 (LED 每隔一秒闪烁两次然后关闭两秒) 见下面措施 2。
○	投影仪的启动板不能正常运作。见下面措施 3。
●○	电池需要充电。
●-开、 ○-闪烁、 ○-关闭	

4-2. 依据1LED指示采取的措施（用户）

措施	状态	说明
措施 1	投影仪的温度增加异常。	重新启动投影仪，如果故障仍然存在，请与当地的销售商或服务中心联系。
措施 2	投影仪内侧的冷却系统，包括冷却风扇不能正常运作。	移动投影仪，将其充分冷却，并再次开启。如果故障仍然存在，请与当地的销售商或服务中心联系。
措施 3	投影仪内的 DMD 板和主板没有正确固定。	重新启动投影仪。如果故障仍然存在，请与当地的销售商或服务中心联系。

4-3. 安装

在安装投影仪时，要注意使投影柱垂直于屏幕。

- 在屏幕中心设置镜头的焦点。
- 如果投影仪的安装没有与屏幕垂直，显示图片可能不会竖直。
- 不要将投影仪安装在明亮的区域，这样图片将不容易被看清楚。
- 如要将投影仪安装在明亮区域，拉下窗帘。



4-4. 针对因新功能可能出现的问题而采取的措施

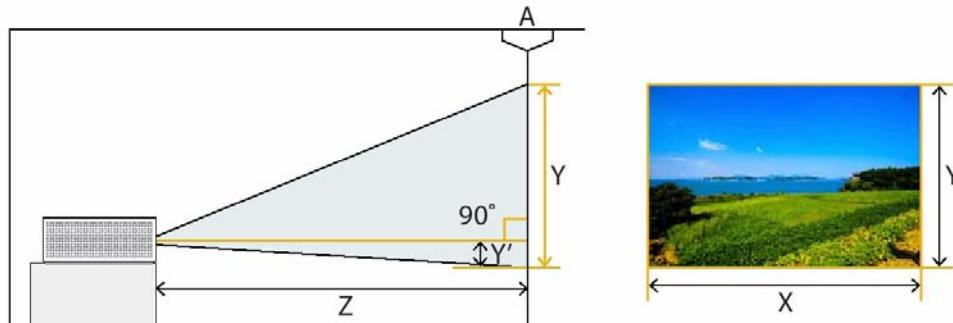
■ 安装

问题	措施
未通电。	检查是否正确连接电源线。
在连接电源线时立即通电。	这属于正常运行。
不能选用外部设备。	检查外部设备的视频线是否连接到正确的信号端子上。 如果设备不能正确连接，不可被选择。

■ 屏幕和外部设备

问题	措施
显示空白屏幕。	检查投影仪电源线是否被连接。 检查输入选择是否正确。 检查是否正确连接投影仪后部的接线。
图像模糊不清。	调焦。 检查投影距离对于调焦是否太靠近或太远。
投影仪中发出奇怪的声音。	如果因故障零件连续出现声音，请与服务中心联系。
屏幕上出现线条。	在使用计算机时可能会产生静电，调节图片频率。
显示蓝屏	检查外部设备的连接是否正确，如果不，重新连接设备。

4-5. 屏幕尺寸和投影距离



A. 屏幕 / Z. 投影距离 / Y'. 镜头中心和图片底部之间的距离

对于最佳的图片质量，要注意调节投影仪腿部的高度。

如果图片不清晰，调节[焦距]或向前或向后移动投影仪。

屏幕尺寸						投影距离		偏移
M(斜线)		X(水平)		Y(竖直)				Y"
INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM	
8.6	21.8	7.5	19.0	4.2	10.7	12.0	30.5	0
10	25.4	8.7	22.1	4.9	12.5	14.0	35.5	0
17.2	43.7	15.0	38.1	8.4	21.4	23.8	60.5	0
34.3	87.1	29.9	75.9	16.8	42.7	47.4	120.5	0
57.2	145.3	49.9	126.6	28.0	71.2	78.8	200.1	0
85.5	217.2	74.5	189.3	41.9	106.5	117.7	299	0

4-6. 因为LED的温度增加，投影仪关闭

征兆	电源线连接后，图片闪现并且投影仪关闭。
主要检查点	<ul style="list-style-type: none"> - 检查适配器和交流线是否连接正确。 - 检查适配器和投影仪上的 DC 插口是否连接正确。 - 检查主板上的 DC 插孔是否太松出现其它问题。 - 检查主板的电源输出。
诊断	<pre> graph TD A[风扇是否正确被连接?] -- 否 --> B[正确连接风扇。] A -- 是 --> C[更换 DMD 板或 LED 模块。] </pre>
电路图	<p>The circuit diagram illustrates the connection of three LED drivers (Q501, Q502, Q503) to a CN501 connector. The diagram shows the following connections:</p> <ul style="list-style-type: none"> Q501: RED_ANODE connected to ZD082F34MATA, RED_CATHODE connected to IC501 pin 1, and GND connected to IC501 pin 6. Q502: RED_ANODE connected to ZD082F34MATA, RED_CATHODE connected to IC503 pin 1, and GND connected to IC503 pin 6. Q503: RED_ANODE connected to ZD082F34MATA, RED_CATHODE connected to IC504 pin 1, and GND connected to IC504 pin 6. Common Ground: GND lines from all three drivers converge at a common ground point. Power Supply: Vcc lines from all three drivers converge at a common power supply point. IC501, IC503, IC504: These integrated circuits are connected to the respective drivers and provide control signals. Resistors: Various resistors are shown throughout the circuit, including R503, R509, R513, R521, R522, R523, R524, R525, R526, R527, and R532. Capacitors: Capacitors C509 and C510 are also present in the circuit. LED_NTC: A blue oval highlights the connection point for the LED_NTC (LED temperature sensor) to the LED drivers.
小心	<p>务必在运作前关闭电源。 小心残余电流。</p>

4-7. 风扇故障

征兆	风扇运行异常或不能正常运作。
主要检查点	<ul style="list-style-type: none"> - 检查适配器和交流线是否连接正确。 - 检查适配器和投影仪上的 DC 插口是否连接正确。 - 检查风扇连接器和主板是否连接正确。
诊断	<pre> graph TD A[风扇是否正确被连接？] -- 否 --> B[正确连接风扇] A -- 是 --> C[Vcc 和主板的 GND 上是否有电压输出？] C -- 否 --> D[更换主板] C -- 是 --> E[风扇是否运转？] E -- 否 --> F[更换风扇] E -- 是 --> G[检查主板电路（警示区域）] </pre>
电路图	<p style="text-align: center;">FAN 1 & 2</p>
小心	<p>务必在运作前关闭电源。 小心残余电流。</p>

4-8.LED启动板上的故障

征兆	投影仪开启，但是图片不能正常显示或屏幕空白。
主要检查点	<ul style="list-style-type: none"> -检查适配器和交流线是否连接正确。 -检查适配器和投影仪上的 DC 插口是否连接正确。 -检查每个模块是否有电源供应。
诊断	<pre> graph TD A["主板和 LED 启动板被连接？"] -- 是 --> B["LED 模块和 LED 启动板（18P）是否被连接？"] A -- 否 --> C["再次将其连接。"] B -- 是 --> D["更换 LED 启动板。"] B -- 否 --> E["再次将其连接。"] </pre>
	<p>MP28253</p> <p>ADAPTER IN : LOW ADAPTER IN : HIGH ADAPTER OUT : HIGH ADAPTER OUT : LOW</p>
电路图	<p>V_BATT_4.2V</p> <p>SYS_PWR_5V</p>
小心	<p>务必在运作前关闭电源。 小心残余电流。</p>

4-9. 调节

4-9-1. 维修模式-启动页面

进入到维修模式：按下菜单→菜单→菜单→返回→电源按钮。

1. 测试
2. 维修
3. 选项
4. 调节

1. 测试：在进行维修时，检查及应用程序菜单。
 2. 维修：OSD菜单，保护设置菜单。
 3. 选项：与维修不相关。
- ※ 一些菜单项缺失，这取决于输入模式。

4-9-2. 测试子菜单

菜单名称	默认结果	说明
内置存储器	正常或失败	如果内存存储器没问题，为正常。
Micro SD	正常或失败	如果Micro SD没问题，为正常。
USB	正常或失败	如果USB没问题，为正常。
AV		选择AV来源
PC		选择PC来源
黑色		黑色图像输出
聚焦		ME图像输出
白色		白色图像输出
复位		
检验和	0XEA07	
信息		
P-OBRNPWWC-0038.0		固件版本
2010年5月7日		固件日期
06:33:04		固件时间

※ 按照型号，初始值会有所不同，对其更改不作另行通知。

4-9-3.维修子菜单

菜单名称	默认结果	说明
用户复位	否	用户菜单已调节的功能设置值返回到工厂模式的初始值。
EEPROM复位	否	设置功能返回到工厂模式的初始值。
白平衡复位选项	关	不需要调节。
比色法		不需要调节。
LED次序	0	DLP制式中选择顺序的功能。
LED时间	00DAYS00HOURS00MIN	LED运作时间的显示功能。
LED时间清除	否	LED运作时间的初始化功能。
投影仪时间	00DAYS00HOURS00MIN	投影仪运作时间的显示功能。
投影仪时间清除	否	投影仪运作时间的初始化功能。
电源保护		风扇保护检查。
DDC保护	开	不需要调节。
电源保护清除	否	电源保护的初始化功能。

※ 按照型号，初始值会有所不同，对其更改不作另行通知。

4-9-4.选项子菜单

菜单名称	默认结果	说明
电源测试		试调菜单（不需要调节）。
TEMP保护	开	温度保护设置菜单（不需要调节）。
语言	英语	初始化语言设置菜单。
试调	开	在试调过程中是否为信息的打印输出设置菜单。

※ 按照型号，初始值会有所不同，对其更改不作另行通知。

4-9-5. 调节子菜单**DDP2605菜单**

菜单名称	默认结果	说明
水平位置	30	控制水平位置
竖直位置	60	控制竖直位置
V-FLIP	正常	控制H-FLIP
H-FLIP	正常	控制V-FLIP
GAMMA1	FILM	选择GAMMA
顺序	2	选择顺序
SLR	开启	控制SLR (DLP制式)
对比度	50	控制对比度
亮度	50	控制亮度
测试模式	0: FULL MAX WHITE	选择测试模式

※ 按照型号，初始值会有所不同，对其更改不作另行通知。

CS42L52菜单

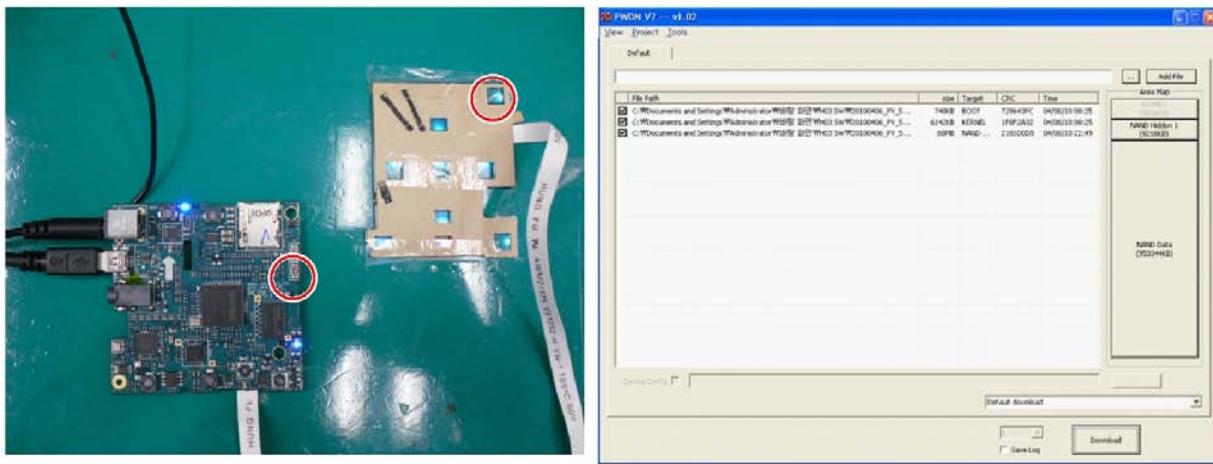
菜单名称	默认结果	说明
SPEAKER EQ	开/关	选择声音EQ功能
TREBLE FREQ	7KHZ	设置TREBLE FREQ
BASS FREQ	100HZ	设置BASS FREQ
TREBEL增益	4	设置TREBEL增益
BASS增益	10	设置BASS增益

※ 按照型号，初始值会有所不同，对其更改不作另行通知。

4-10. 下载软件代码

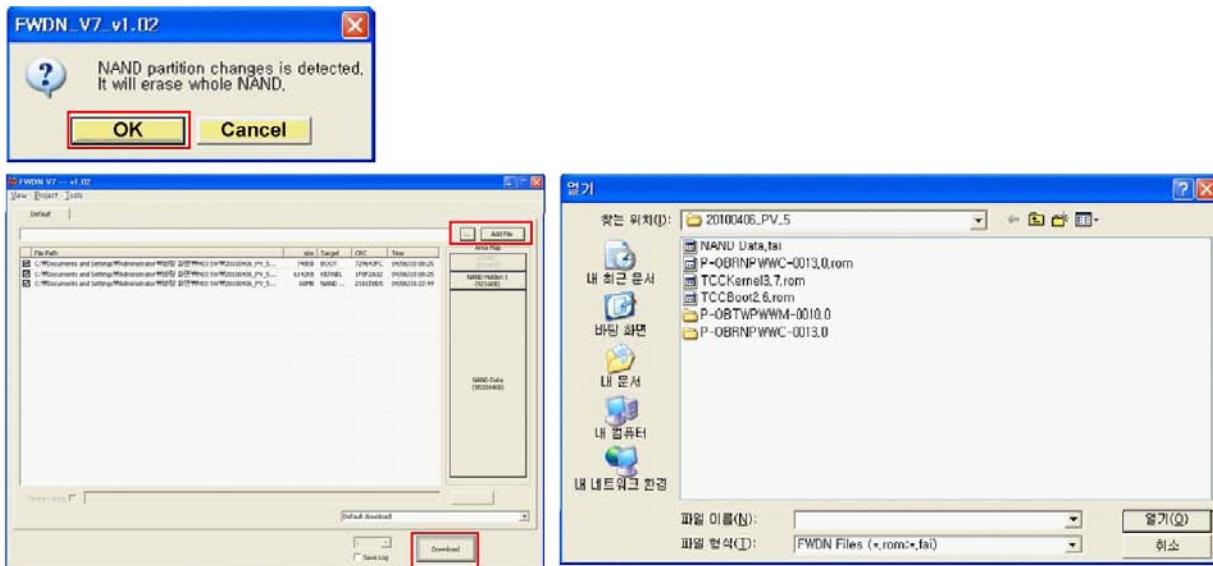
4-10-1. 主芯片代码升级 (TELECHIPS)

1. 在主板上连接 USB 接线到计算机和 USB 插孔。



2. 在计算机上运行 EWDN V7。

3. 同时按下红色圈内（如上图所示）的开关并开启键盘。

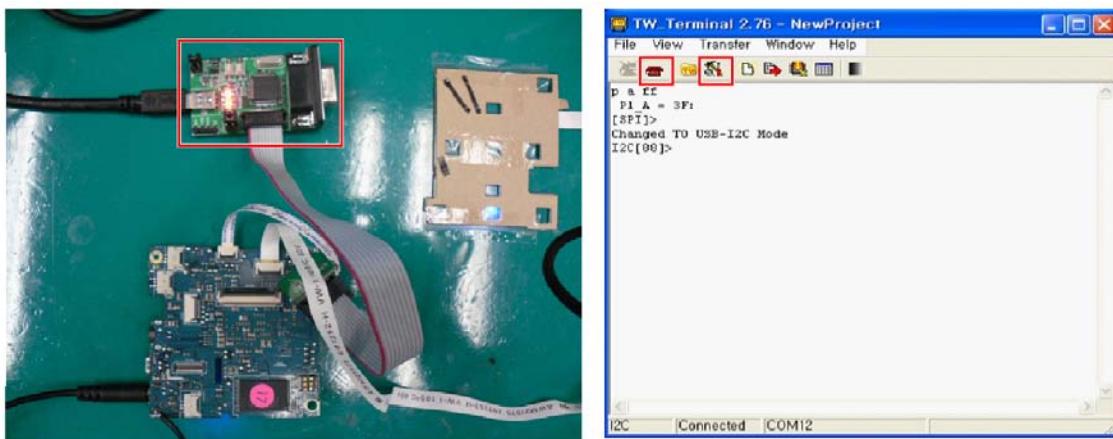


4. 弹出窗口出现后，选择确认。

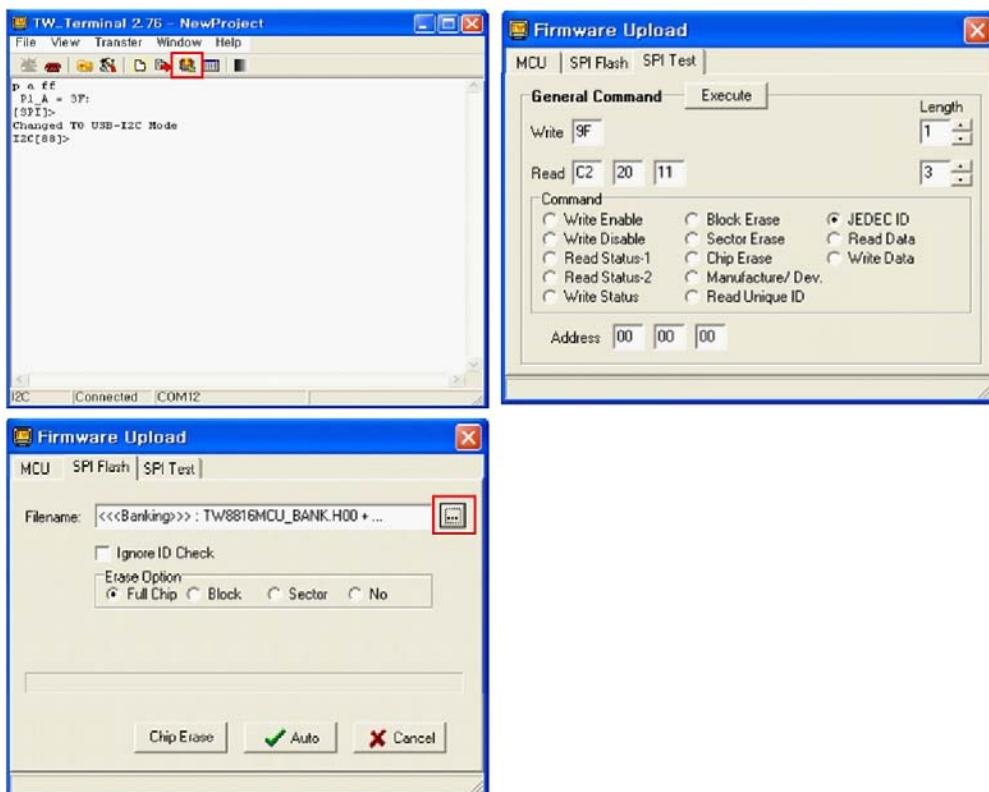
5. 选择 ADD 文件并选择相应的固件程序。

6. 选择下载并开始下载。

4-10-2. 子芯片代码升级 (Techwell)

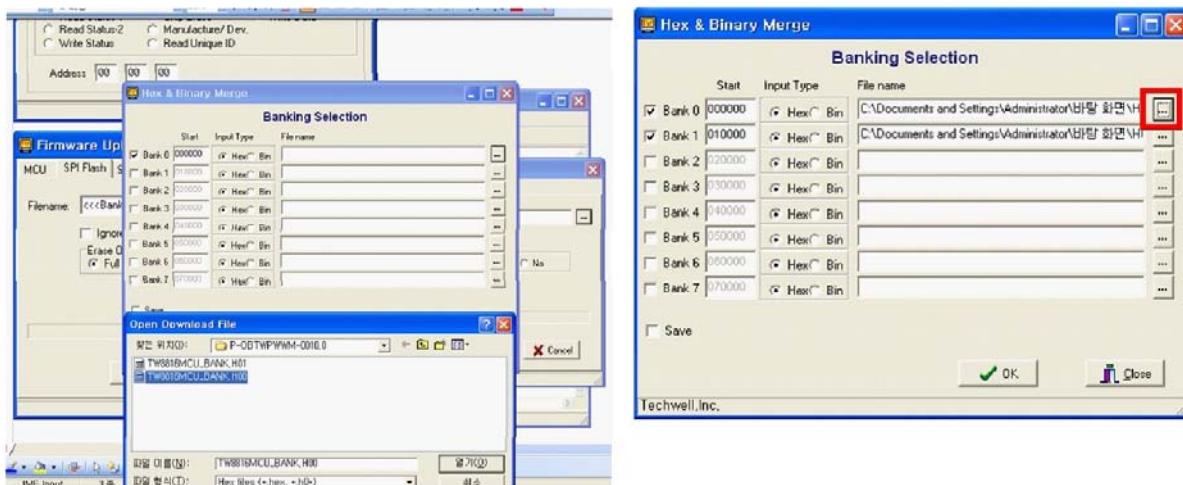


1. 连接USB接线到计算机和子芯片代码的下载装置。如果连接正确的话，红色LED将会亮起，如上图所示。
2. 插入装置FFC到CN801中并连接适配器到主板的DC插孔。
3. 按下开启键盘。
4. 运行固件升级程序(TW)。
5. 在程序中选择设置并设置COM端口。(端口与其它装况中的有所不同，检查制式管理器中的端口。)
6. 点击电话按钮建立连接。



7. 选择MCU 固件升级按钮，弹出窗口将会显示出来。
8. 选择SPI测试项并检查JEDEC ID，如下命令。
9. 选择执行栏，读取值将会在图片中显示出来。
如果出现FF FF FF，键盘的开启按钮将不能被启用。按下开启按钮。
10. 选择SPI Flash栏。
11. 选择“...”按钮。

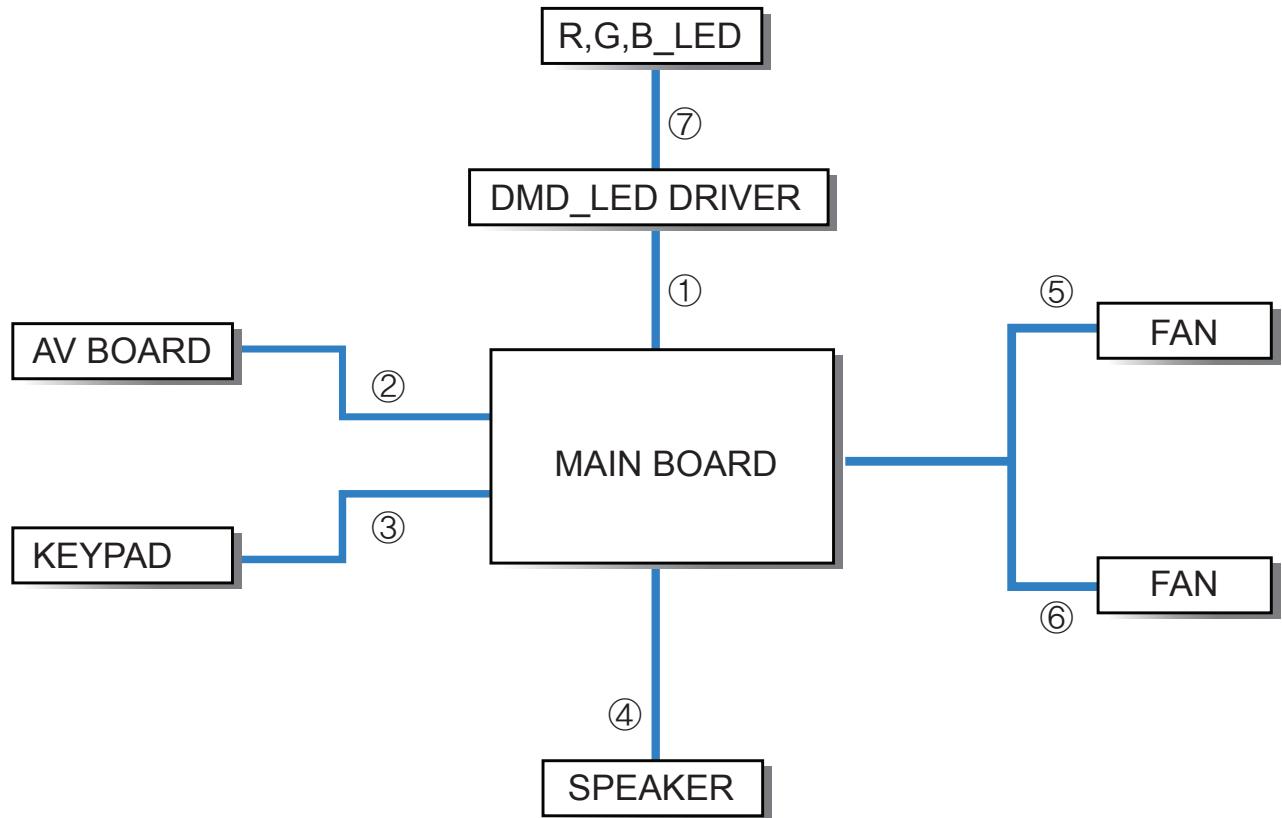
4. 故障排除



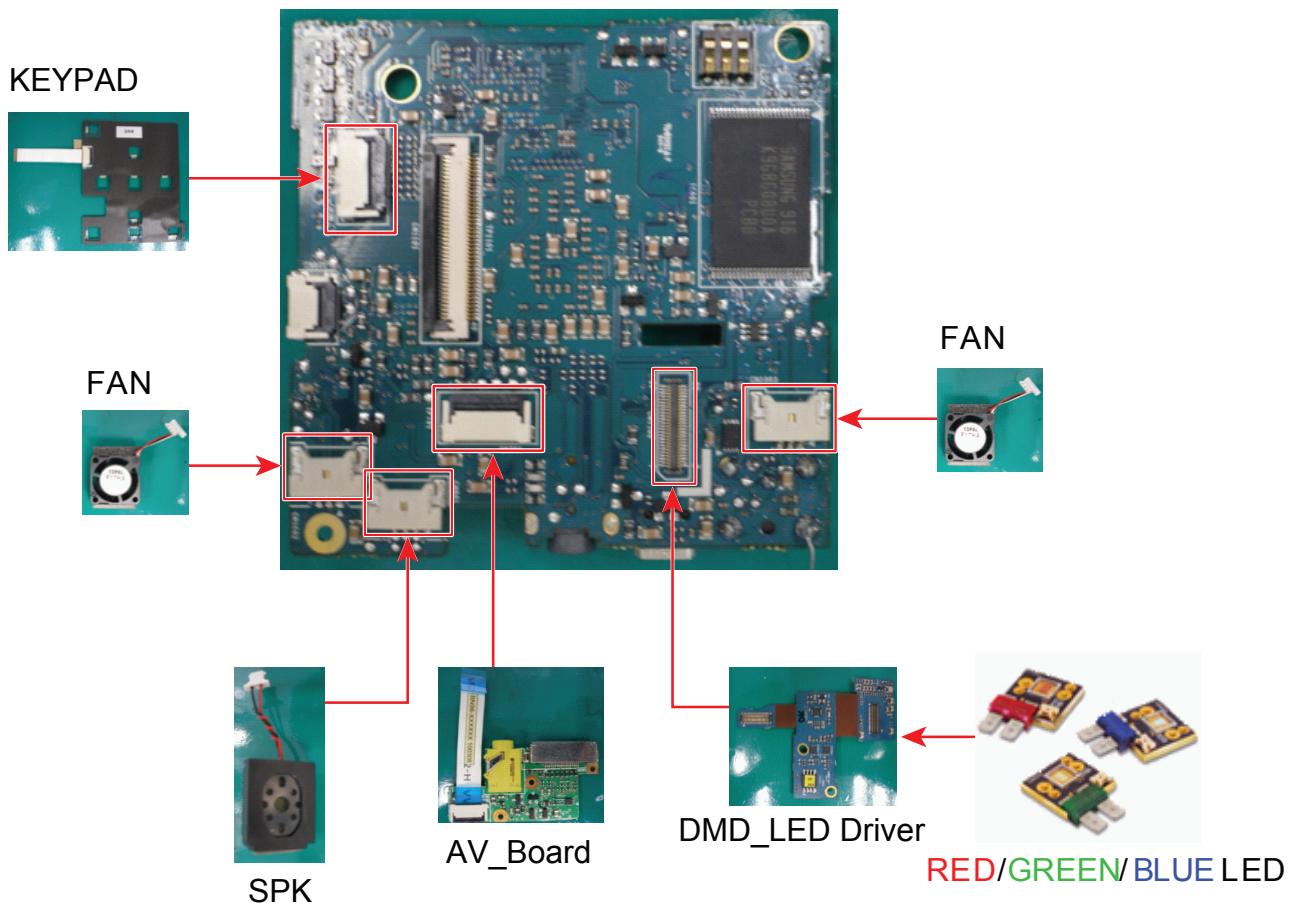
12. 当弹出窗口出现时，再次选择“...”。
13. 选择相应的固件文件并点击开启。
14. 当选择Bank 0和1后，点击确认可完成下载进程。

6. Wiring Diagrams

6-1. Wiring Diagrams



6-2. Board Connection



6-3. Pin Specifications

■ Specification 1

Pin No.	Description	Pin No.	Description
1	GND	26	DMD_G4
2	GND	27	LED_TEMP
3	DMD_B1	28	DMD_PCLK
4	DMD_DE	29	P3P3V
5	DMD_B2	30	DMD_G7
6	DMD_HSYNC	31	EMU_DONE
7	DMD_B5	32	DMD_R0
8	DMD_B0	33	WRGOOD
9	DMD_B7	34	DMD_R1
10	DMD_B3	35	SPI_CS
11	DMD_G0	36	DMD_R2
12	DMD_B4	37	SPI_DIN
13	DMD_G2	38	DMD_R3
14	DMD_B6	39	SPI_DOUT
15	DMD_G5	40	P1P8V
16	DMD_G1	41	SPI_CLK
17	DMD_G6	42	EMURESET_N
18	DMD_VSYNC	43	SPI_ON_OFF
19	DMD_R4	44	SYS_PWR
20	SDA_DMD	45	SYS_PWR
21	DMD_R5	46	SYS_PWR
22	CL_DMD	47	SYS_PWR
23	DMD_R6	48	SYS_PWR
24	DMD_G3	49	GND
25	DMD_R7	50	GND

■ Specification 2

No.	Descriptions	Wafer Name (Code)	Model Name (Code)	Maker	Remarks
(a)	CON-HEADER 14P	Connector-FPC	NEW	-	Yeonho Electronics 05002HR-14N2
(a')	CON-HEADER 14p	Connector-FPC	NEW	-	Yeonho Electronics 05002HR-14N2
(b)	CON-HEADER 50P	Header 50p	NEW	-	Panasonic AXT650224
(b')	CON-HEADER 50p	Header 50p	NEW	-	Panasonic AXT650224
(c)	CON-HEADER 50p	Header 50p	NEW	-	Panasonic AXT650224
(c')	CON-HEADER 50p	DMD Panel	NEW	-	TI DMD Panel
(d)	CON-HEADER 18P	Connector-FPC	NEW	-	Yeonho Electronics 05002HR-18N2
(e)	CON-HEADER 14P	Connector-FPC	NEW	-	Yeonho Electronics 05002HR-14N2

■ Specification 3

Pin No.	Remarks
1	GND
2	P3.3V
3	KEY_PWR
4	KEY_RETURN
5	KEY_RIGHT
6	KEY_LEFT
7	KEY_DOWN
8	KEY_UP
9	KEY_ENTER
10	KEY_TOOLS
11	LED_GREEN(3V) LED_RED(3V) LED_LIGHT(3V)
12	LED_RED
13	LED_LIGHT
14	GND

■ Specification 4, 5, 6

Pin No.	Remarks
1	SPKR_OUT_MONO_P
2	GND
3	SPKR_OUT_MONO_R

Pin No.	Remarks
1	GND
2	ALARM1
3	P5V

Pin No.	Remarks
1	GND
2	ALARM1
3	P5V

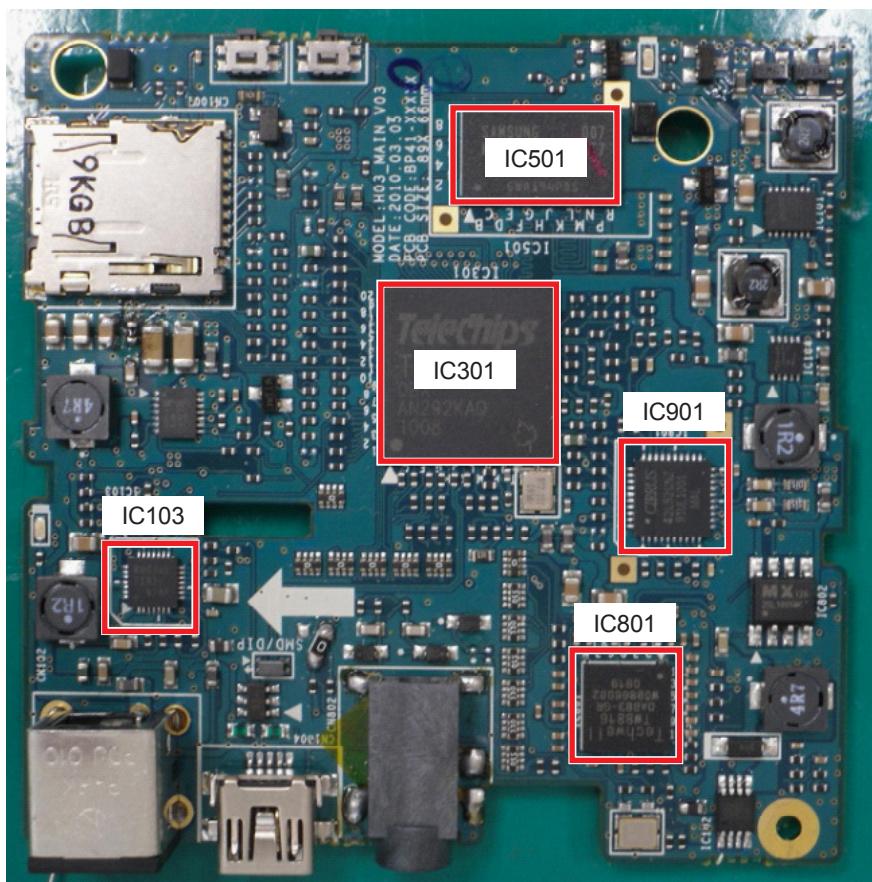
■ Specification 7

Pin No.	Remarks	Pin No.	Remarks
1	BLU_CATHODE	10	RED_CATHODE
2	BLU_CATHODE	11	RED_CATHODE
3	BLU_CATHODE	12	RED_CATHODE
4	BLU_CATHODE	13	LED_ANODE
5	GRN_CATHODE	14	LED_ANODE
6	GRN_CATHODE	15	LED_ANODE
7	GRN_CATHODE	16	LED_ANODE
8	GRN_CATHODE	17	GND
9	RED_CATHODE	18	LED_NTC

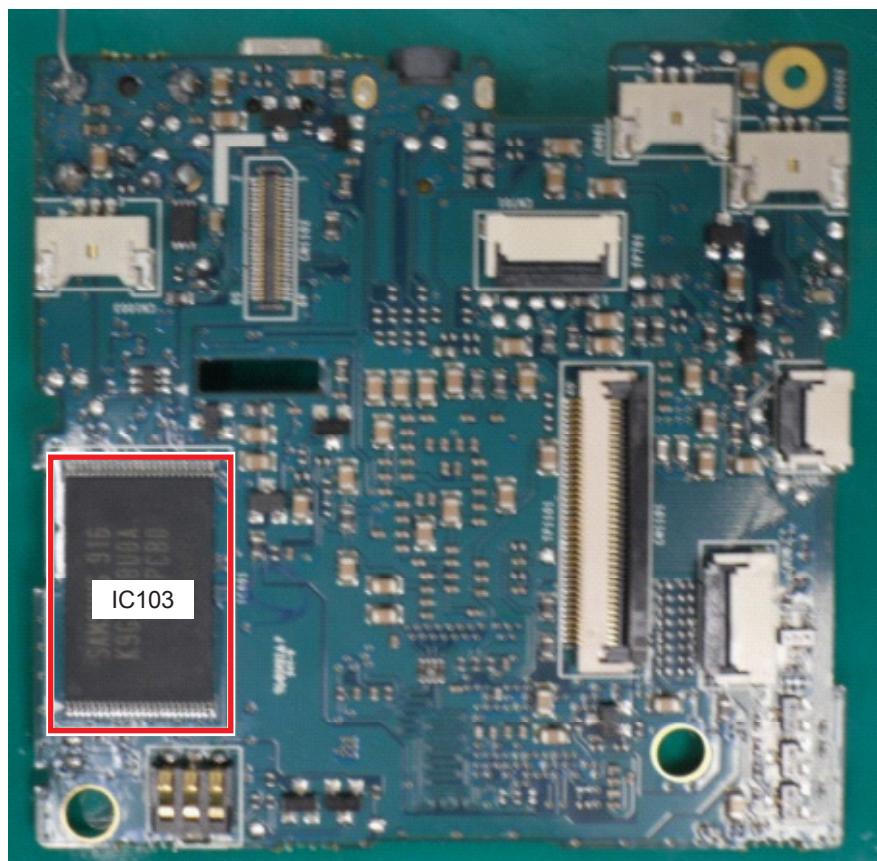
6-4. Connector Functions

Connector	Functions
CN201	Connects to the keypad. A bad connection will disable the keypad.
CN701	Connects to the AV board. A bad connection will disable the PC, AUDIO and VIDEO inputs.
CN801	Downloads the sub-MICOM and is for technical service purpose only.
CN901	Connects to the speaker. A bad connection will disable the audio.
CN1002	Connects to a fan. A bad connection will disable the fan, causing a fan error.
CN1003	Connects to a fan. A bad connection will disable the fan, causing a fan error.
CN1101	Used for debugging, and is for technical service purpose only.
CN1102	Connects to the DMD board and main board. A bad connection will cause a blank screen.

6-5. Main board - TOP



REFERENCE	Parts	Functions
IC103	MAX8903	BATTERY CHARGE IC
IC301	TC9101	Supports the audio signal input/ output, scaler and CPU functions.
IC501	K4T1G164QD	DDR2 SDRAM
IC801	TW8816	ANALOG DECODER
IC901	CS42L52	AUDIO DAC & SPEAKER OUT IC

6-6. Main board - BOTTOM

REFERENCE	Parts	Functions
IC601	K9G8G08U0A	IC-NAND FLASH