

7.0 inch Digital Photo Frame
DA-7010

Service Manual

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1. Service Warning

To prevent from fire or shock hazard, do not expose monitor to any rain or any form of water. High voltage is inside the monitor so please do not remove the back cover of the cabinet if you are not a qualified monitor engineer. Contact us if you need help.

2. Important Safety Instruction

Prior to using this service manual, please ensure that you have carefully followed all the procedures outlined in the user's manual for this product.

1. Read all of these instructions.
2. Save these instructions.
3. Follow all warnings and instructions marked on the product.
4. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners, use a damp cloth for cleaning.
5. Do not use this product near water.
6. Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.
7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to ensure reliable operation of the product and to protect it from overheating, those openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation less proper ventilation is provided.
8. This product should be operated from the type of power source indicated on the mark label. If you are not sure of the type of power available, consult us if you need help.
9. This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature, if you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
10. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
11. If an extension cord is used with this product, make sure that the total of the ampere ratings on the product plugged into the extension cord to the plugged into outlet does not exceed 15 ampere.
12. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
13. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
14. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally, when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extension work by a qualified technician to restore the product to normal operation.
 - e. If the product has been dropped or the cabinet has been damaged.
 - f. If the product exhibits a distinct change in performance, indicating a need for service.

3. Electrostatically Sensitive Devices 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 devices 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 wriststrap 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. 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.

4. Specification:

Screen size:	7.0inch
Screen:	Color TFT-LCD
Aspect:	ratio: 16:9
Dot pitch:	0.1070mm(W) $\times$ 0.370mm(H)
Resolution:	480(H) $\times$ 234(V)RGB
Contrast ratio:	400:1
Brightness :	220cd/m ²
View angle:	U:45° / D:50° / L/R:65°
Response time:	25ms
Menu display:	OSD display
Analogue adjust item:	brightness, contrast ratio, volume, OSD language
Backlight life:	$\geq$ 10,000 hours
Backlight type:	LED
Audio output:	1 W $\times$ 2(speaker) Headphone $\times$ 1
Power:	DC 12V 2A
Power consumption:	About 8W
Dimension:	L243mm x W175mm x H 30mm
Net weight:	580g (with adaptor)

5. Pin Assignments

5.1 Power

Tip	+
Shield	Gnd

5.2 Headphone

Tip	pin 1	L
1st	2	R
Shield	Gnd	

5.3 Mini USB

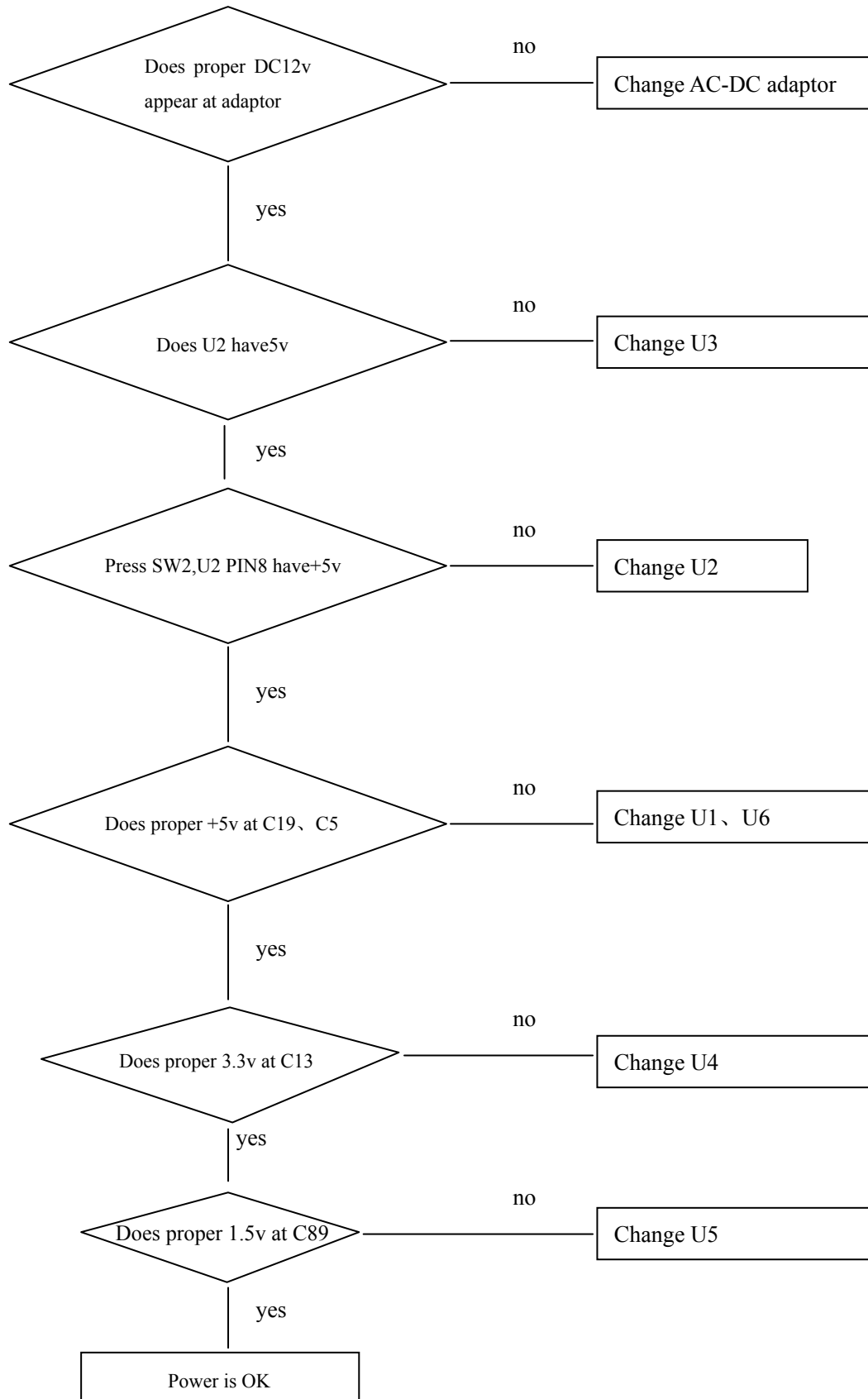
1	PC 5V
2	-DM
3	+DP
4	ID
5	Gnd

5.4 USB

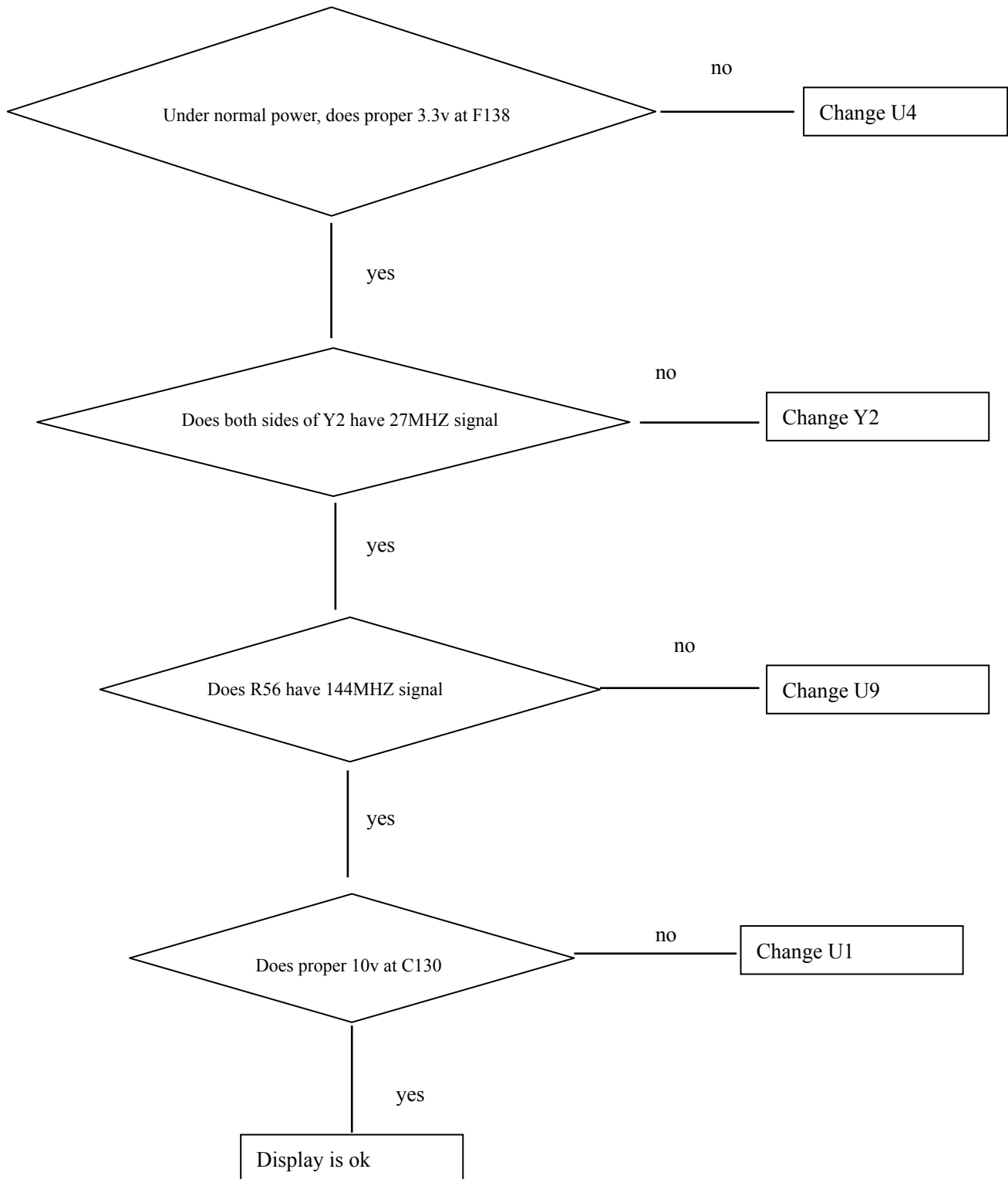
1	VCC
2	-DM
3	+DP
4	Gnd

6. Troubleshooting

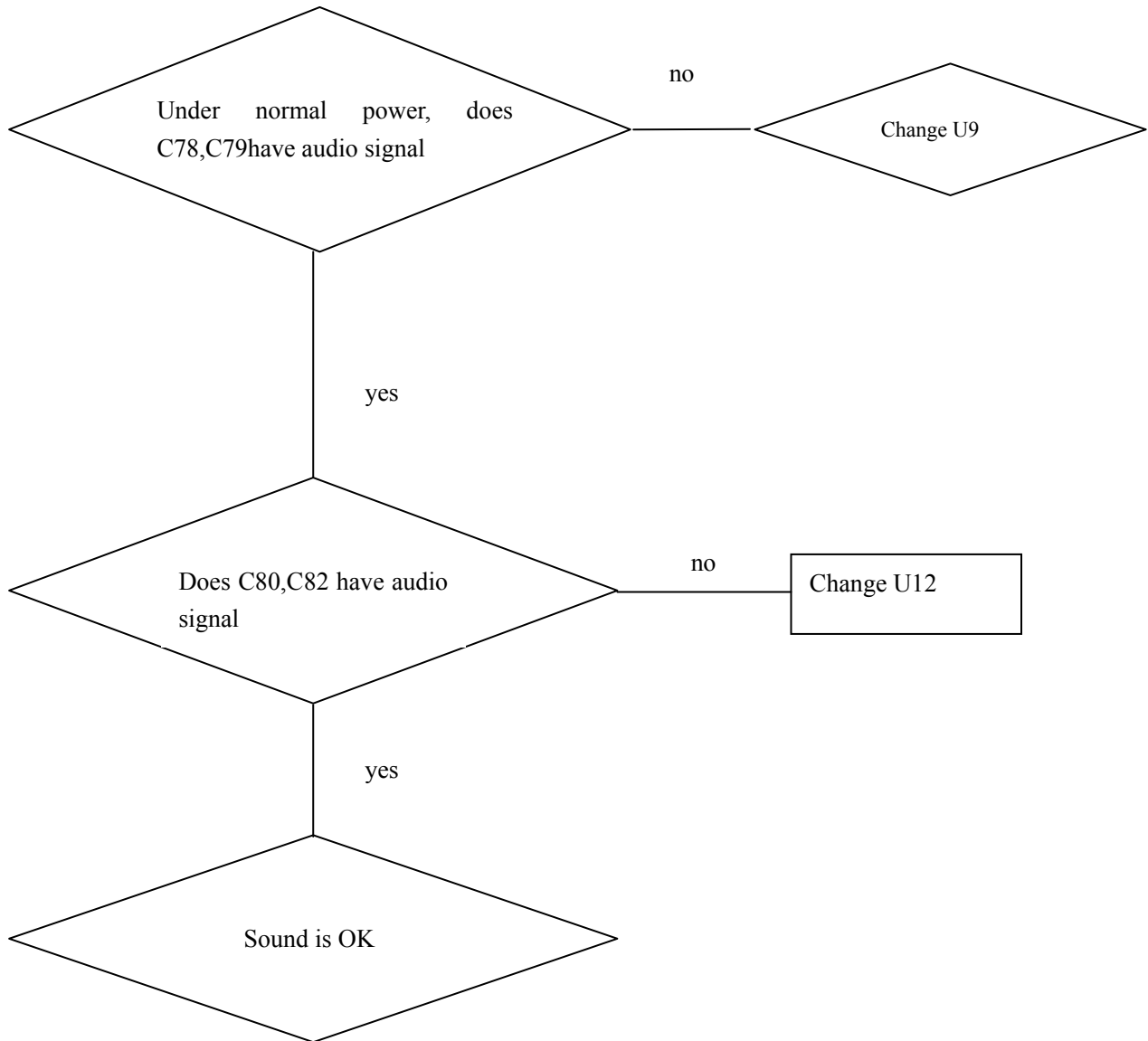
6.1 No power

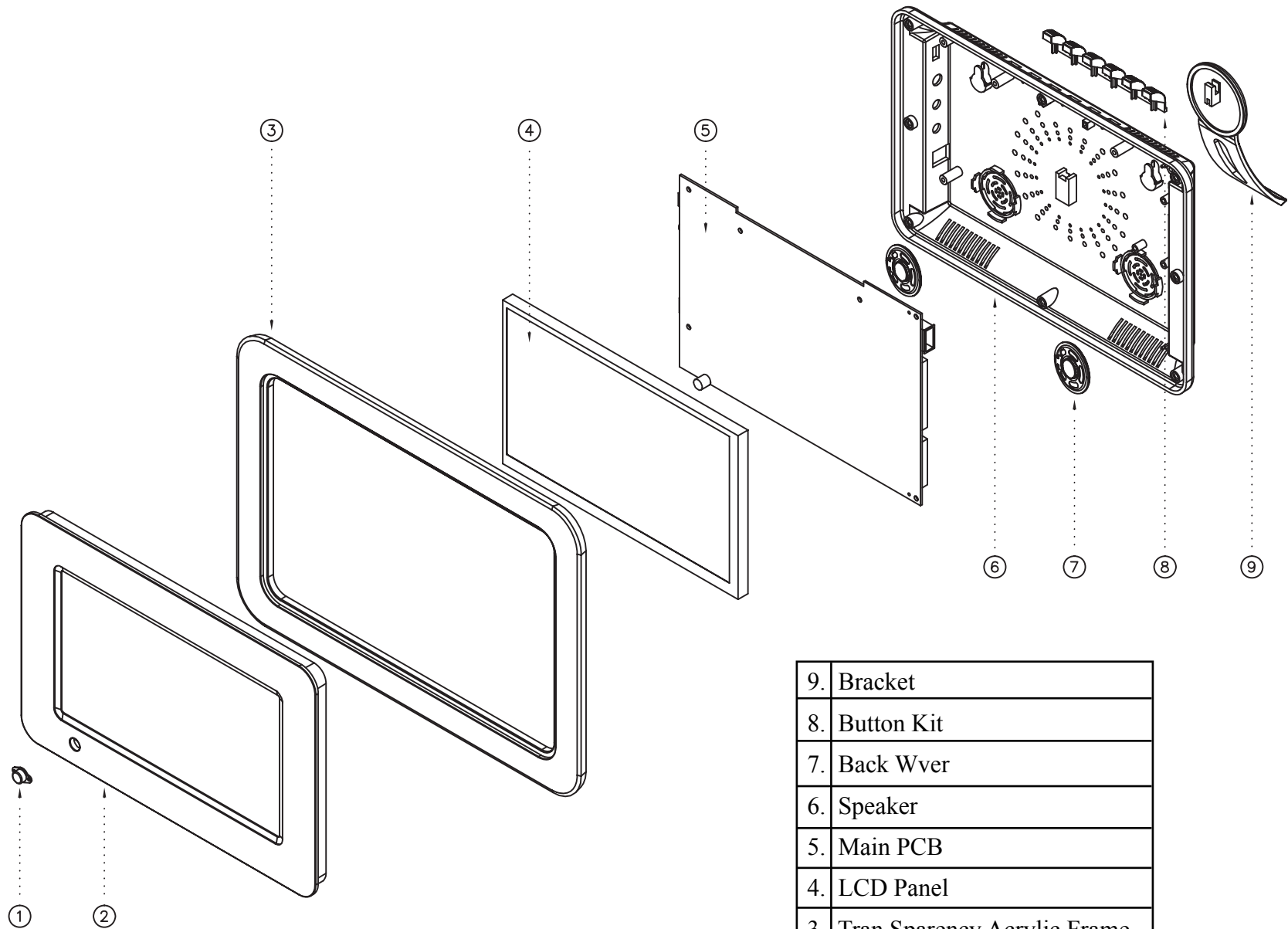


6.2 No BACKLIGHT



6.3 No sound





9.	Bracket
8.	Button Kit
7.	Back Wver
6.	Speaker
5.	Main PCB
4.	LCD Panel
3.	Tran Sparency Acrylic Frame
2.	Front Panel
1.	IR Releiver Windows

8. ELECTRICAL PARTS LIST

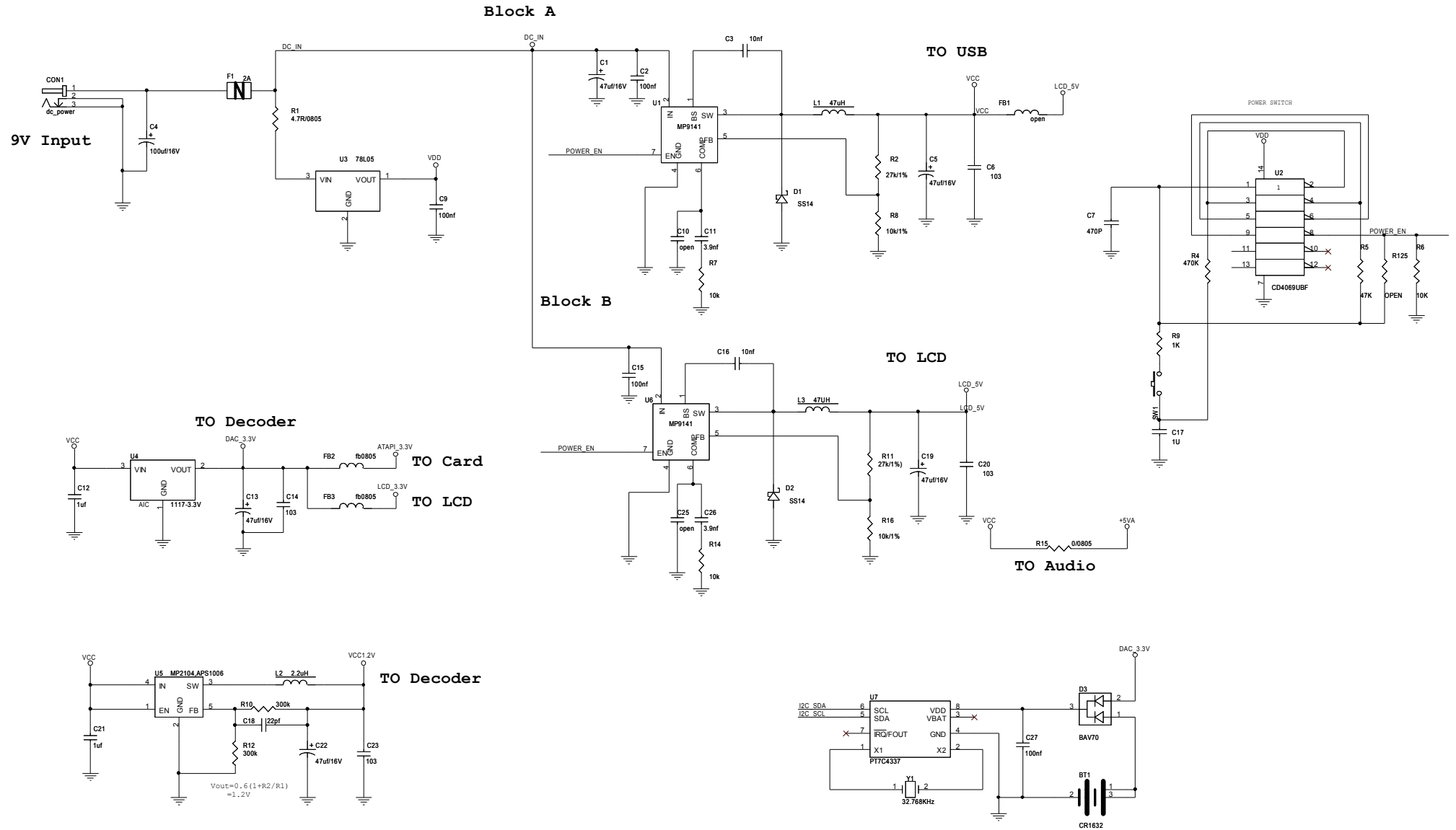
Part Code	Part name	Location no.	Specification
JAK7104-BBK	Remote control		twenty-one keys MDK021-HX-AIDA701
JFXU0001-R0	USB cable		L=1100mm
JTA7104D-BBK	Adaptor		
JQL7104DY-BBK			AK-007
LED070LG-26P-R0	7inch TFT-LCD		LG 7" 26P screen LED backlight
PA2.5x6-R0	screw	fix up screen	PA2.5x6 nickel-palated
JGU7100A-R0	six connected buttons		ABS plastic, silver
JGE2804-2W-R0	speaker		round Φ 28mm, thickness is 6.2mm 4R 2W
ECEA1CKA101H-R0	C-organic chip	C4 C48 C59 C80 C82 C114 C121 C129	100UF 16V EC6x7 $\pm$ 20% DIP
ECEA1EKA470E-R0	C-organic chip	C1 C5 C13 C19 C22 C28 C40 C41 C51 C55 C75 C93 C107 C108 C110 C116 C119	47UF 25V EC5x7 $\pm$ 20% DIP
ECEA1CKA100A-R0	C-organic chip	C8 C78 C79 C91 C123 C124	10UF 16V EC4x5 $\pm$ 20% DIP
ECEA1CKA010A-R0	C-organic chip	C81	1UF 16V EC4x5 $\pm$ 20% DIP
78L05-R0	IC	U3	78L05 TO-92 3PIN DIP
HC49S27M22-R0	crystal	Y2	27MHz S type load capacity 22PF tolerance 20PPM DIP
PJ-307P-R0	headphone socket	CON7	PJ-307P
USB-007A-R0	USB socket	CON9	Normal USB JACK 4PIN
KFC-822A-R0	switch	SW1 SW2 SW3 SW4 SW5 SW6	KFC-822A
JL-IRM38-410-C-R0	IR receiver	CON4	REMOTE 3pin metal shielding center earth VCC3.3V
JSL304LG-R0	LED	D4	GREEN LED Φ 3MM round
JJU4P1.25A-R0	4P socket	CON6	4P 1.25MM vertical white
JJU2P1.25B-R0	2P socket	CON12	2P 1.25MM horizontal white
DC-005-R0	Dc socket	JR1	DC-005
JJB7104M-1-R0	PCB board		L170mmxW117mmx1.2mm DPF7104-AMALG6213 PCB 2.1 2008-4-08
ECJ1VB1E101K-R0	C-organic chip	C23 C83 C128	101 25V 0603 $\pm$ 10%
ECJ1VB1E103K-R0	C-organic chip	C3 C6 C14 C16 C20 C44 C92	103 25V 0603 $\pm$ 10%
ECJ1VB1E104K-R0	C-organic chip	C2 C9 C15 C24 C29 C30 C31 C32 C33 C34 C35 C36 C37 C38 C39 C42 C43 C49 C50 C54 C56 C58 C60 C61 C62 C63 C64 C66 C67 C68 C70 C71 C72 C73 C74 C76 C77 C84 C85 C86 C88 C89 C90 C94 C96 C97 C98 C99 C100 C101 C115 C117 C118 C120 C122	104 25V 0603 $\pm$ 10%

ECJ1VB1E105K-R0	C-organic chip	C17 C113 C126 R90 R92 R96 C12 C21	105 25V 0603 $\pm 10\%$
ECJ1VB1E220K-R0	C-organic chip	C18, C46, C47	22PF 25V 0603 $\pm 10\%$
ECJ1VB1E392K-R0	C-organic chip	C11 C26	392 25V 0603 $\pm 10\%$
ECJ1VB1E471K-R0	C-organic chip	C7	471 25V 0603 $\pm 10\%$
ECJ3VB1E105K-R0	C-organic chip	C130	105 25V 1206 $\pm 10\%$
ERJ3EKF3481V-R0	R-chip, SMD	R39	3.48K 0603 $\pm 1\%$
ERJ3GEY0R00V-R0	R-chip, SMD	R65 R74 R75 R87 R103 R130 R131 R137	0R 0603 $\pm 5\%$
ERJ3GEYJ100V-R0	R-chip, SMD	R117	10R 0603 $\pm 5\%$
ERJ3GEYJ101V-R0	R-chip, SMD	R20 R38 R104	100R 0603 $\pm 5\%$
ERJ3GEYJ102V-R0	R-chip, SMD	R9 R66 R67 R83 R84 R85 R86 R139 R140	1K 0603 $\pm 5\%$
ERJ3GEYJ103V-R0	R-chip, SMD	R6 R7 R8 R14 R16 R70 R79 R82 R93 R94 R112 R113 R120 R122	10K 0603 $\pm 5\%$
ERJ3GEYJ104V-R0	R-chip, SMD	R35 R63 R64 R119 R123	100K 0603 $\pm 5\%$
ERJ3GEYJ153V-R0	R-chip, SMD	R115	15K 0603 $\pm 5\%$
ERJ3GEYJ201V-R0	R-chip, SMD	R17	200R 0603 $\pm 5\%$
ERJ3EKF1001V-R0	R-chip, SMD	R106	1K 0603 $\pm 1\%$
ERJ3GEYJ203V-R0	R-chip, SMD	R57 R58 R59 R60	20K 0603 $\pm 5\%$
ERJ3GEYJ220V-R0	R-chip, SMD	R3 R25 R29 R30 R31 R32 R33 R47 R48 R49 R51 R52 R53 R54 R55 R56 R133 R134	22R 0603 $\pm 5\%$
ERJ3GEYJ271V-R0	R-chip, SMD	R116	270R 0603 $\pm 5\%$
ERJ3GEYJ273V-R0	R-chip, SMD	R11	27K 0603 $\pm 5\%$
ERJ3EKF3002V-R0	R-chip, SMD	R2	30K 0603 $\pm 1\%$
ERJ3GEYJ304V-R0	R-chip, SMD	R10 R12	300K 0603 $\pm 5\%$
ERJ3GEYJ330V-R0	R-chip, SMD	R101 R142 R143 R144 R146 R147 R148	33R 0603 $\pm 5\%$
ERJ3GEYJ331V-R0	R-chip, SMD	R61, R62	330R 0603 $\pm 5\%$
ERJ3GEYJ433V-R0	R-chip, SMD	R69 R76	43K 0603 $\pm 5\%$
ERJ3GEYJ471V-R0	R-chip, SMD	R141	470R 0603 $\pm 5\%$
ERJ3GEYJ472V-R0	R-chip, SMD	R21 R23 R26 R27 R34 R37 R71 R72 R73 R77 R80 R81 R98 R99 R135 R136	4.7K 0603 $\pm 5\%$
ERJ3GEYJ473V-R0	R-chip, SMD	R5 R88 R91 R95 R108	47K 0603 $\pm 5\%$
ERJ3GEYJ474V-R0	R-chip, SMD	R4	470K 0603 $\pm 5\%$
ERJ3GEYJ100V-R0	R-chip, SMD	FB15	10R 0603 $\pm 5\%$
ERJ3EKF3601V-R0	R-chip, SMD	R105	3.6K 0603 $\pm 15\%$
ERJ6EKF0R47V-R0	R-chip, SMD	R124	0.47 0805 $\pm 1\%$
ERJ6EKF4R70V-R0	R-chip, SMD	R1	4.7R 0805 $\pm 1\%$
JLD222-SMD-R0	Potentiometer, SMD	RV1	2.2K ADJ 3*3 $\pm 5\%$ SMD
EXB38V220JV-R0	R-chip, SMD	RP4 RP5 RP6 RP7 RP8 RP9 RP10 RP11 RP16 RP18 RP20 RP21 RP23 RP24	22R 0603 $\pm 5\%$ 8pin, dual line
EXB38V181JV-R0	R-chip, SMD	RP17 RP19 RP22	180R 0603 $\pm 5\%$ 8pin, dual line

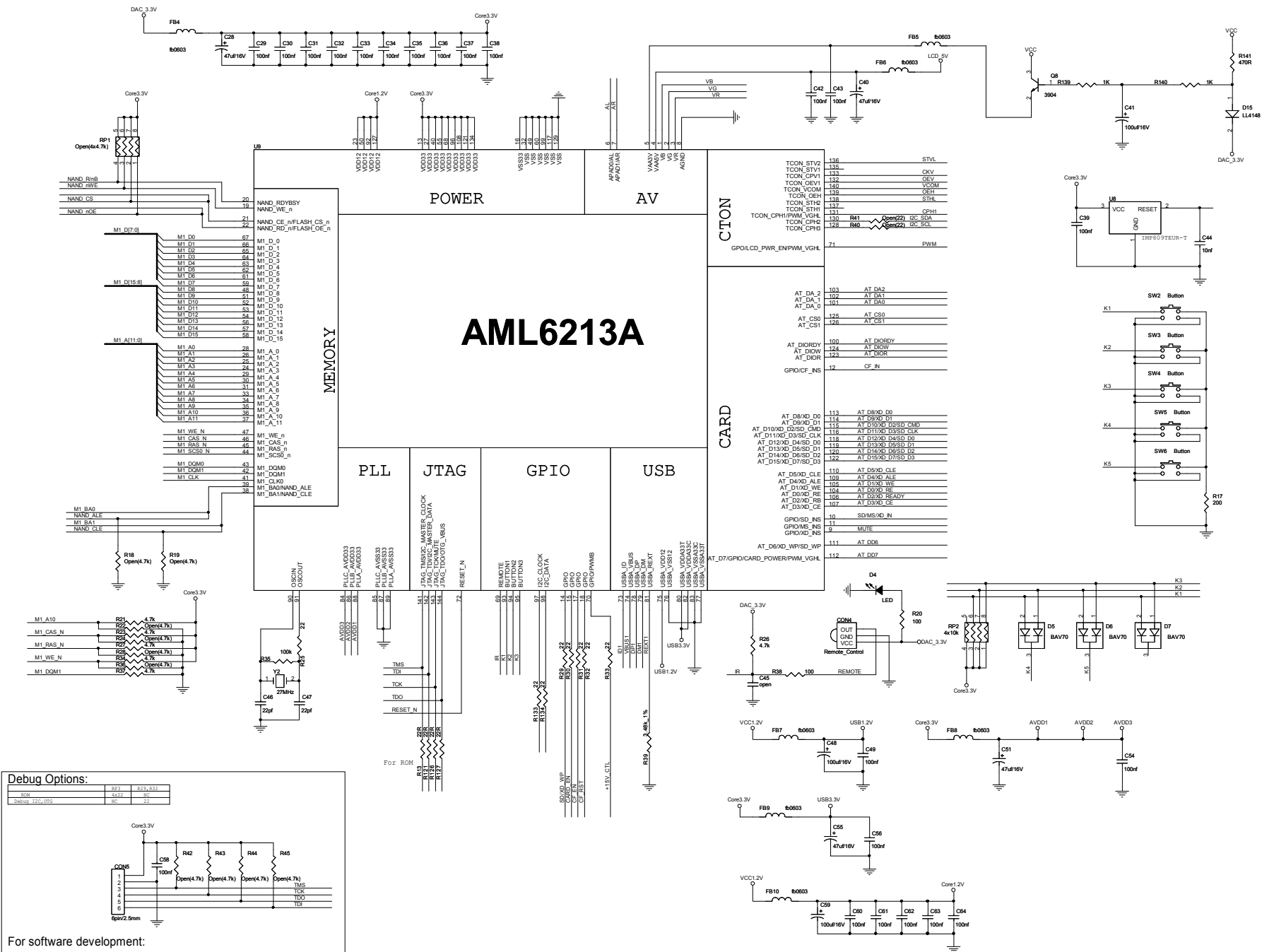
EXB38V472JV-R0	R-chip, SMD	RP1, RP2, RP12, RP13, RP14, RP15	4.7K 0603 $\pm 5\%$ 8pin, dual line
GZ1608D0R00T-R0	Magnet, SMD	FB4 FB6 FB7 FB8 FB9 FB10 FB11 FB13 FB14 FB17 FB16	0R 0603 FBI-310
GZ2012D0R00T-R0	Magnet, SMD	FB2 FB3 FB12	0R 0805 FBI-310
1N4148-SMD-R0	Diode, SMD	D15	1N4148 1206 SMD
SS14-SMD-R0	Diode, SMD	D1, D2 D14 D8	SS14 SMD
CD75-47UH-R0		L1 L3	47UH/1.5A CD75 L7.8mmxW7mmx5mm CD75
CD75-2.2UH-R0	Inductor-coil, SMD	L2	2.2UH/0.5A CD 75 L7.8mmxW7mmx5mm CD75
CD75-10UH-R0	Inductor-coil, SMD	L5 L6	10UH/0.5A CD75 L7.8mmxW7mmx5mm CD75
BZX55C10V-SMD-R0	Diode rectifier, SMD	D11, D13	ZD10V LL-34
BZX55C15V-SMD-R0	Diode rectifier, SMD	D10	ZD15V LL-34
BAV70-SMD-R0	Diode, SMD	D5, D6, D7	BAV70 SOT-23
BAV99-SMD-R0	Diode, SMD	D9, D12	BAV99 SOT-23
SMD-2N3904-R0	Triode, SMD	Q3, Q4, Q6, Q7 Q8	2N3904 NPN SOT-23 SMD
A03401-SMD-R0	FET, SMD	Q1, Q2, Q5	A03401 P channel SOT-23 SMD
FU1206-9V1.5A-R0	Fuse, SMD	F1	DC9V 1.5A 1206 SMD
EUP3406-SMD-R0	IC, SMD	U5	EUP3406 SOT-23-5 5PIN
CD4069UBF-SMD-R0	IC, SMD	U2	HCF4069UBT SOP-14 14PIN
EM6353BX2SP3B-2.9G	IC, SMD	U8	EM6353BX2SP3B-2.9+ SOTR-23L
AMS1117-3.3-R0	IC, SMD	U4	AMC1117-3.3V SOT-223
AML6213A-SMD-R0	IC, SMD	U9	AML6213A LQFP144 144PIN
HWD4863-SMD-R0	IC, SMD	U12	HWD4863 TSSOP-20 20PIN
ACT4060-SMD-R0	IC, SMD	U1 U6	ACT4060 SOP-8 8PIN
MP3202-R0	IC, SMD	U15	MP3202 SOT-23-6 SMD
K9F1G08U0B-R0	IC, SMD	U11	128M x8bit nand flash SAMSUNG K9F1G08U0BTSOP-48
UTC3414L-R0	IC, SMD	U14	UTC3414L SOP-8 8PIN
RT9701-R0	IC, SMD	U13	RT9701L SOT-23-5
K4S641632K-UC60G	IC, SMD	U10	SDRM SAMSUNG K4S641632K-UC60 TSOP-54
JJS26P0.5WU-SMD-R0	FFCsocket, SMD	CON10	26P 0.5MM white up type PC-0.5MM-TOP-26PIN
MNB-5P-R0	MINI USBsocket	CON8	Mini USB JACK 5PIN
JJZ7101-YK-R0	4IN1 card socket	CN1	FCC0-39M1-K02A-00-5
JJZ7104-CFC2-R0	CF card socket	CN2	CFC2-50M1-W050-1X-5
JJU2P3.5B-R0	HV socket	CON12	2P 3.5mm HV socket SMD
JWT4P1.25A-130-R0	4Pflex-cable	main board to speaker	4P 1.25MM plug, 3mm tin head , 4P/1.25MM end, L130MM
PA2.5x8-R0	screw	back panel	PA2.5x8 nickel-plate

9.Schematics Diagrams

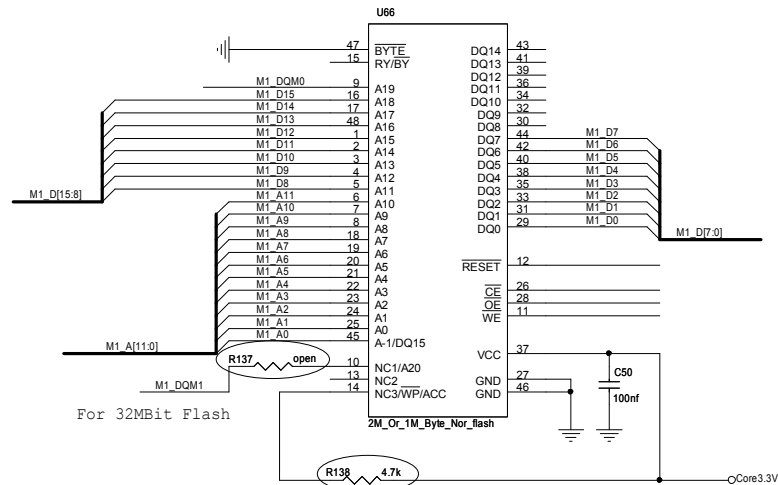
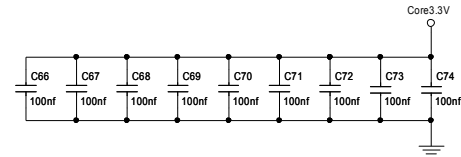
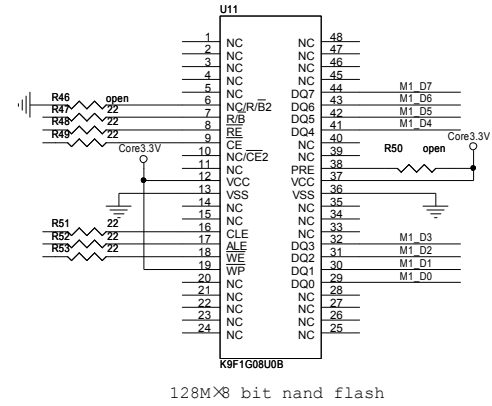
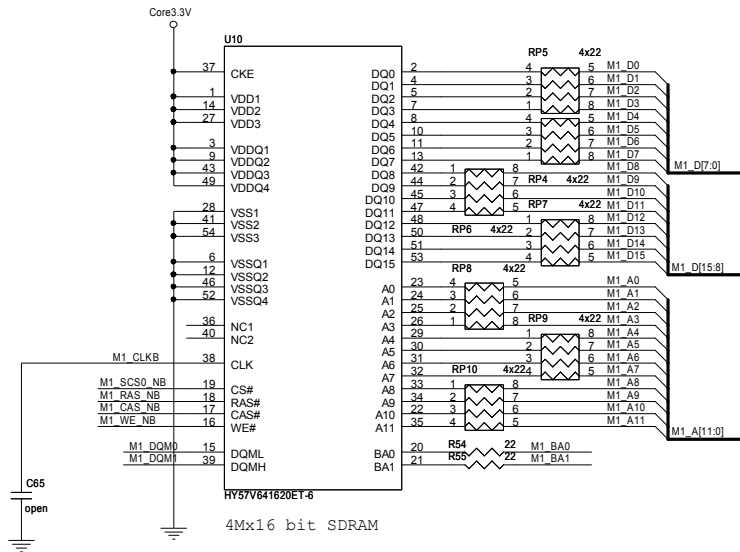
9.1 POWER



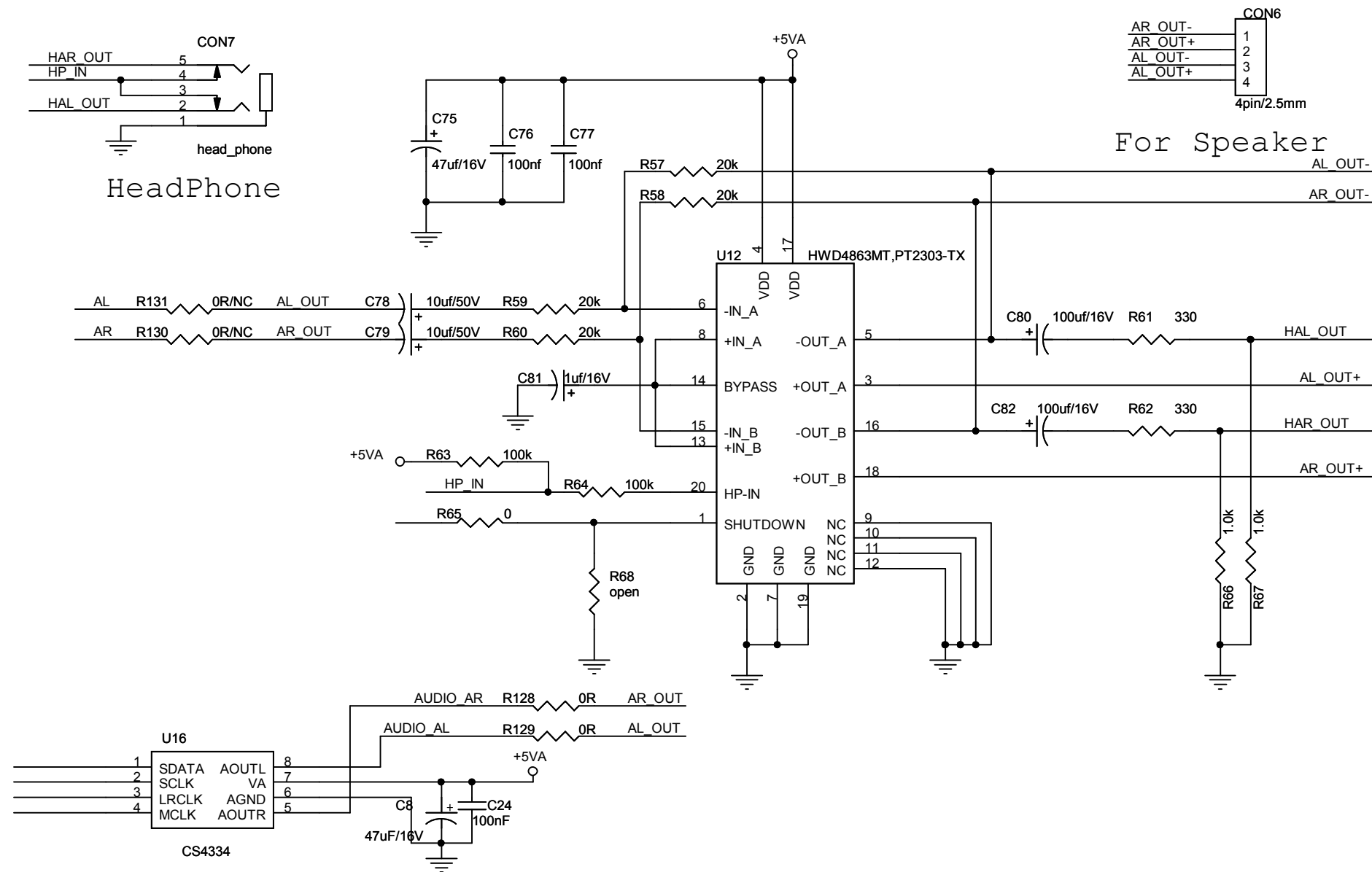
9.2 Decoder



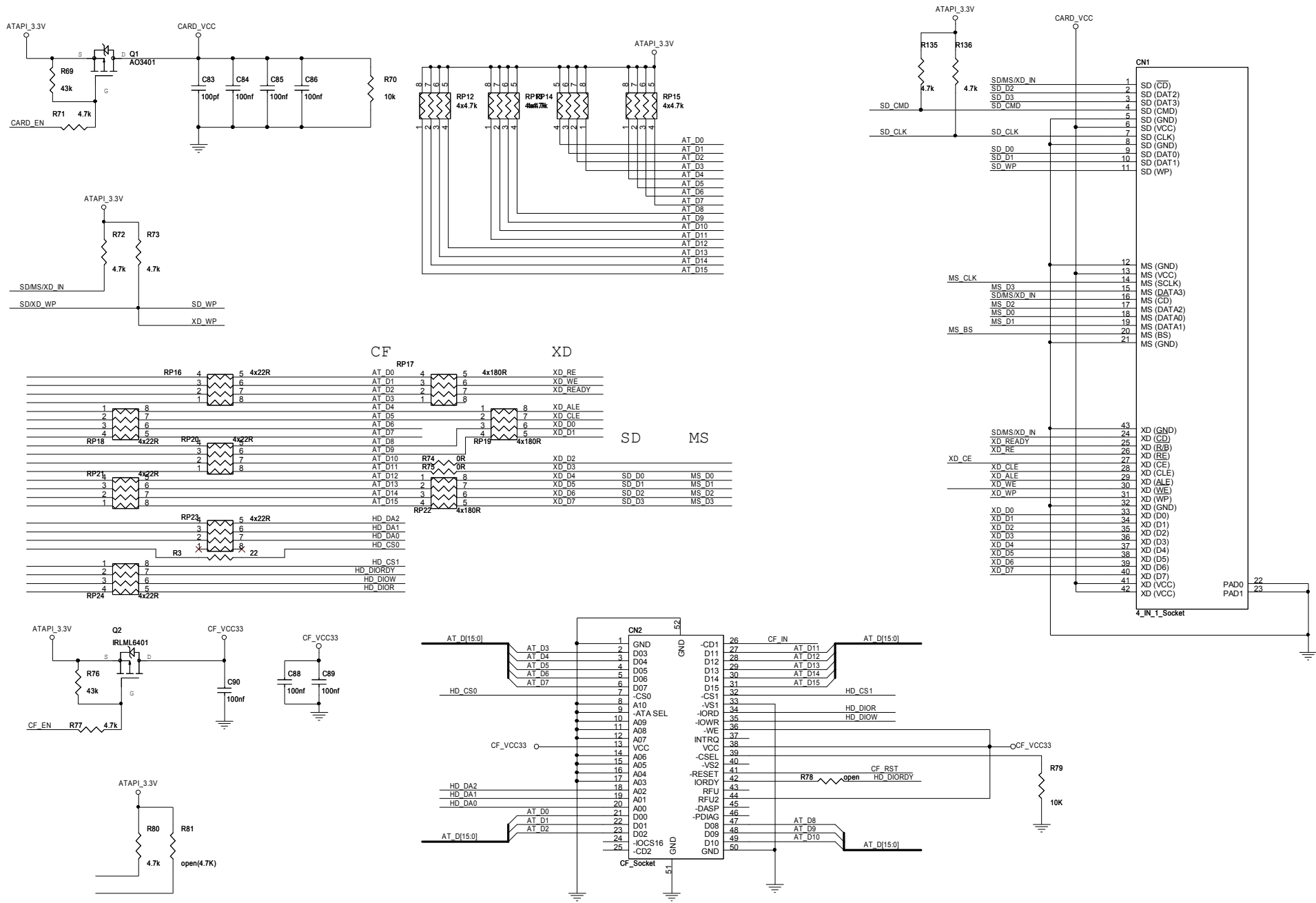
9.3 Memory



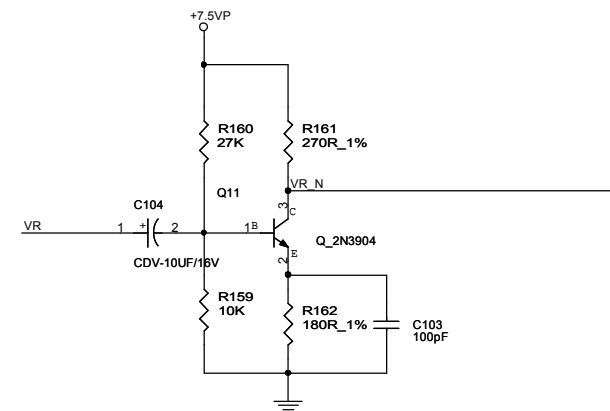
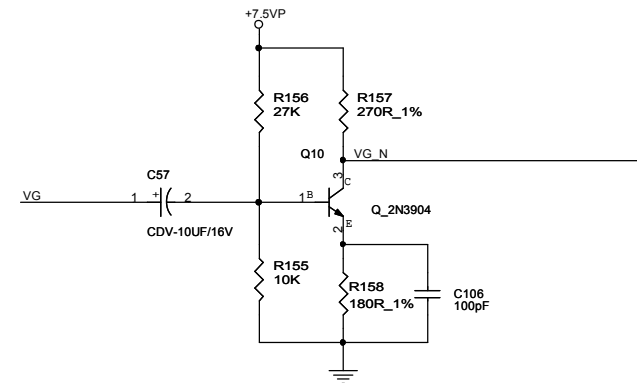
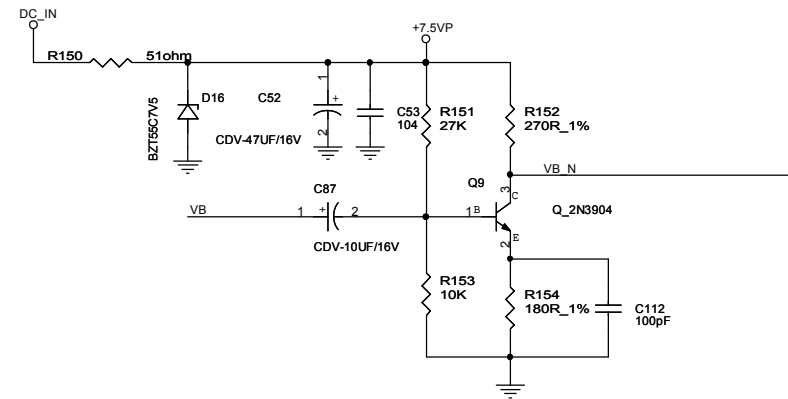
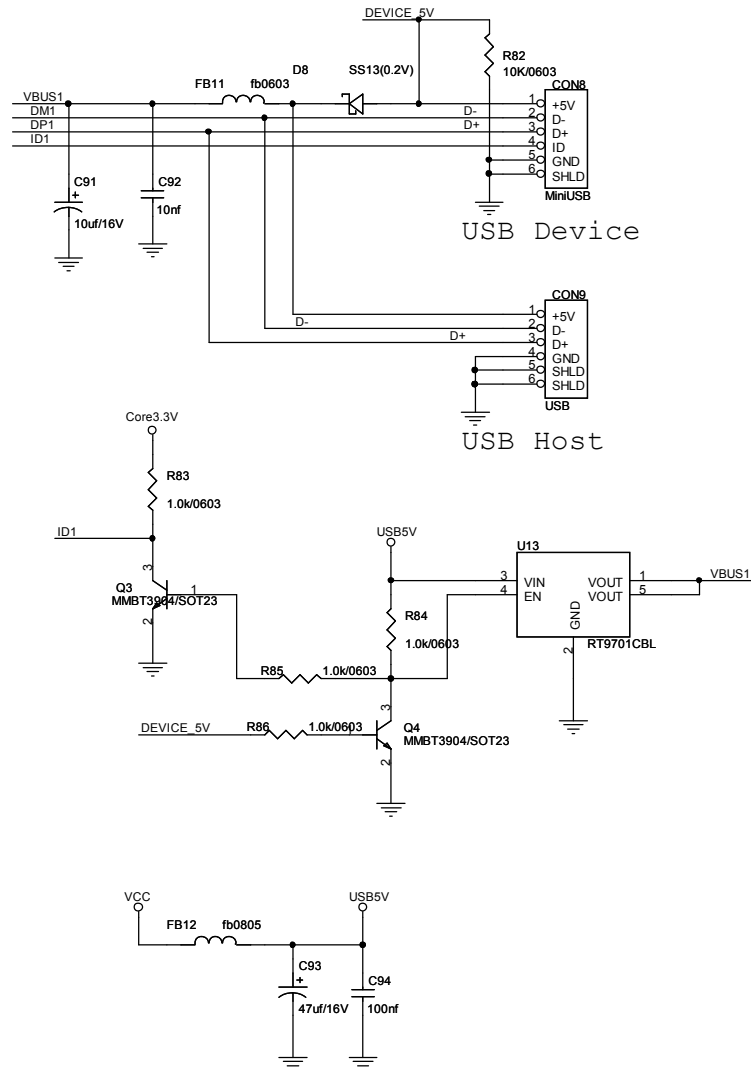
9.4 Audio



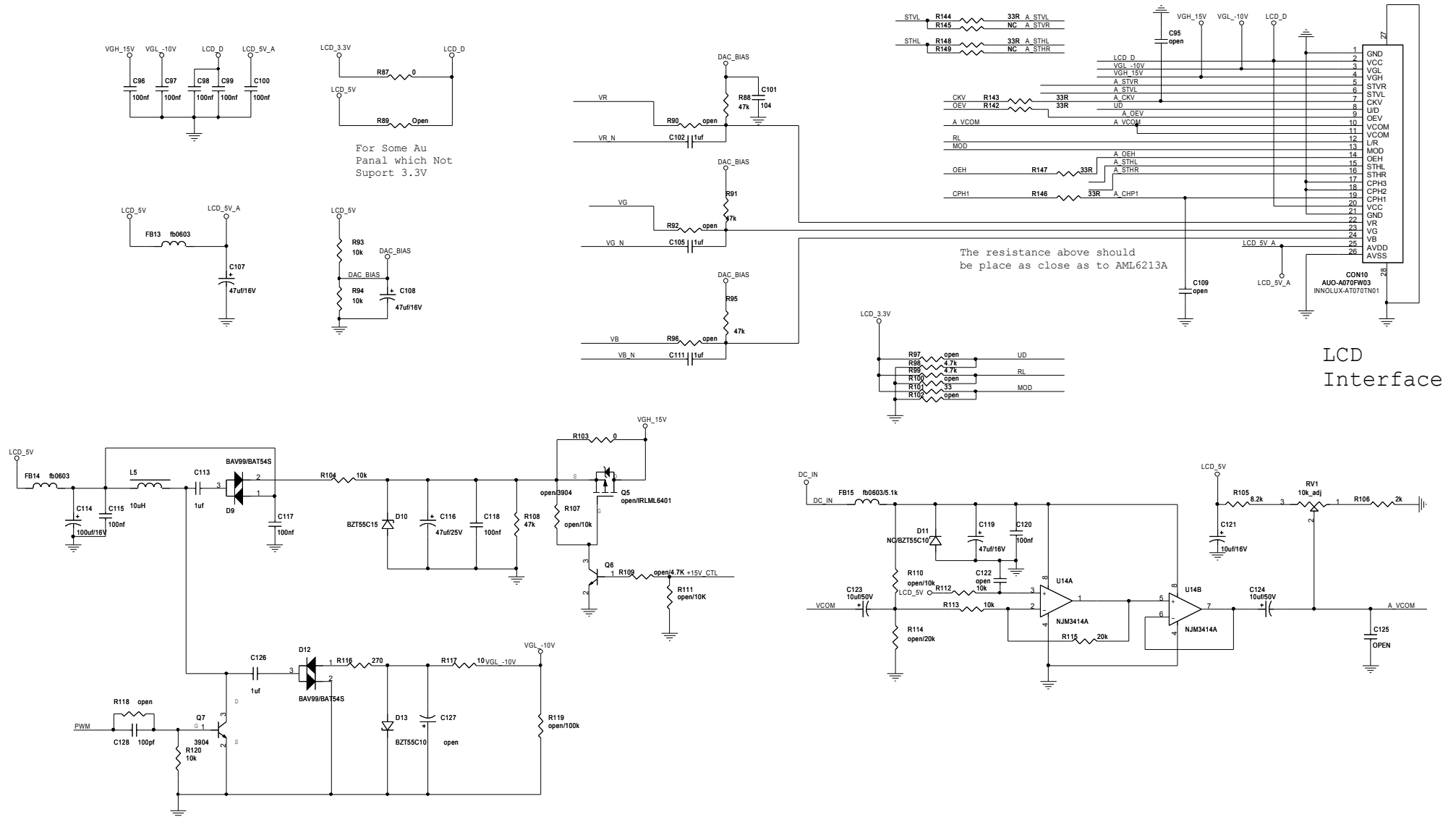
9.5 Card



9.6 USB and CVBS



9.7 LCD TCON and LCD POWER



Never let GPIO output high for long time. Always test the chip use narrow pulses first.

9.8 LCD Backlight control

