

PZ456

Service Manual

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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 the local dealer or the nearest **Proview** branch office if you need help.

A. 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 a 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 products should be operated from the type of power source indicated on the marketin label. If you are not sure of the type of power available, consult your dealer or local power company
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 waplugged 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.

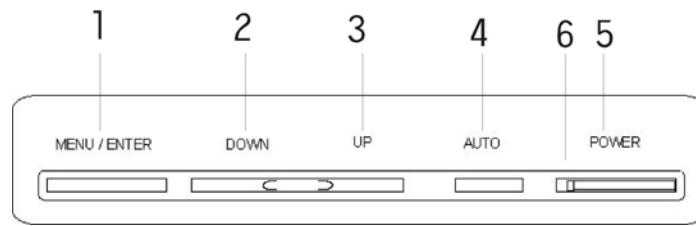
B. SPECIFICATIONS

1. Maximum Resolution		1024 x 768 @ 75Hz	
2. Recommend Resolution		1024 x 768 @ 60Hz	
3. Synchronization Range			
Horizontal		31 – 60 KHz	
Vertical		60– 75 Hz	
4. Active Display Area		285.7mm (H) x 214.3mm (V)	
5. Dot Pitch		0.279(H) x 0.279(V) mm	
6. Support display colors		262K color	
7. Contrast Ratio (Typical)		300:1	
8. Luminance of White		150cd/m ²	
9. Bandwidth		80MHz	
10. User Control		4 Key Switch	
11. OSD Function		Brightness, Contrast, H-Position, V-Position, H-Size, Phase, Color Select, Auto adjustment, Reset, Language, OSD Position, Exit	
12. View Angle			
Horizontal		45 / 45 Degrees	
Vertical		10 / 30 Degrees	
13. Power Source		100 – 240 Vac 60 / 50 Hz	
14. Power Consumption		36W (max.)	
15. Connection Type		15 Pin D Type	
16. Input Signal			
Video		Analog R.G.B. , 0.7Vp-p / 75 Ohms	
Sync.		TTL level, positive or negative polarity	
17. Color Temperature		Cool / Warm	
18. Dimension (WxHxD)			
	Packing	370 x 340 x 90 mm	
	Physical	317 x 302.8 x 112.7 mm	
	Gross/Net	2.6 Kg / 2.1 Kg	
19. Monitor Weight			
20. Base Operation			
Tilt		-5 / + 20 degree	
21. Power Saving			
ON		< 36W	
STAND BY		< 5W	
OFF		< 5W	
22. Signal Connector Pin Assignment			
Pin No.		1. Red	9. 5V _{DC}
		2. Green	10. Sync. Ground
		3. Blue	11. Ground
		4. Ground	12. SDA (For DDC)
		5. Self Test	13. Horizontal Sync.
		6. Red Ground	14. Vertical Sync.
		7. Green Ground	15. SCL (For DDC)
		8. Blue Ground	

Modes	Preset	VESA	VESA	VESA	VESA	VESA
		800X600	800X600	1024X768	1024X768	1024X768
Pixel clock	(MHz)	50.000	49.500	65.000	75.000	78.750
H-Frequency	(KHz)	48.077	46.875	48.363	56.476	60.023
H-Total	(μs)	20.800	21.333	20.677	17.707	16.660
H-Active Display	(μs)	16.000	16.162	15.754	13.563	13.003
H-Blanking	(μs)	4.800	5.172	4.923	4.053	3.657
Front Porch	(μs)	1.120	0.323	0.369	0.320	0.203
H-Sync-width	(μs)	2.400	1.616	2.092	1.813	1.219
H-Back Porch	(μs)	1.280	3.232	2.462	1.920	2.235
V-Frequency	(Hz)	72.2	75.0	60.0	70.1	75.0
V-Total	(ms)	13.853	13.333	16.666	14.272	13.328
V-Active Display	(ms)	12.480	12.800	15.880	13.599	12.795
V-Blanking	(ms)	1.373	0.533	0.786	0.673	0.533
V-Front Porch	(ms)	0.770	0.021	0.062	0.053	0.017
V-Sync-width	(ms)	0.125	0.064	0.124	0.106	0.050
V-Back Porch	(ms)	0.478	0.448	0.600	0.513	0.466
H/V Sync. Polarity		+ +	+ +	- -	- -	+ +
Interlace		NONE	NONE	NONE	NONE	NONE

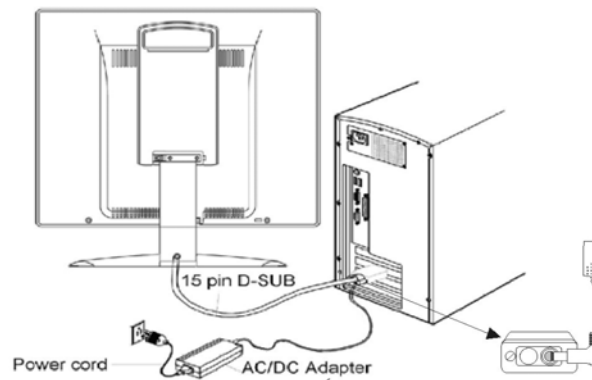
D. CONTROL LOCATION

Font control panel



- | | |
|--------------------------|-------------------------|
| 1. Menu Button (MENU) | 4. Auto Button (AUTO) |
| 2. Select Button (DOWN) | 5. Power Button |
| 3. Select Button (UP) | 6. Power indicator |

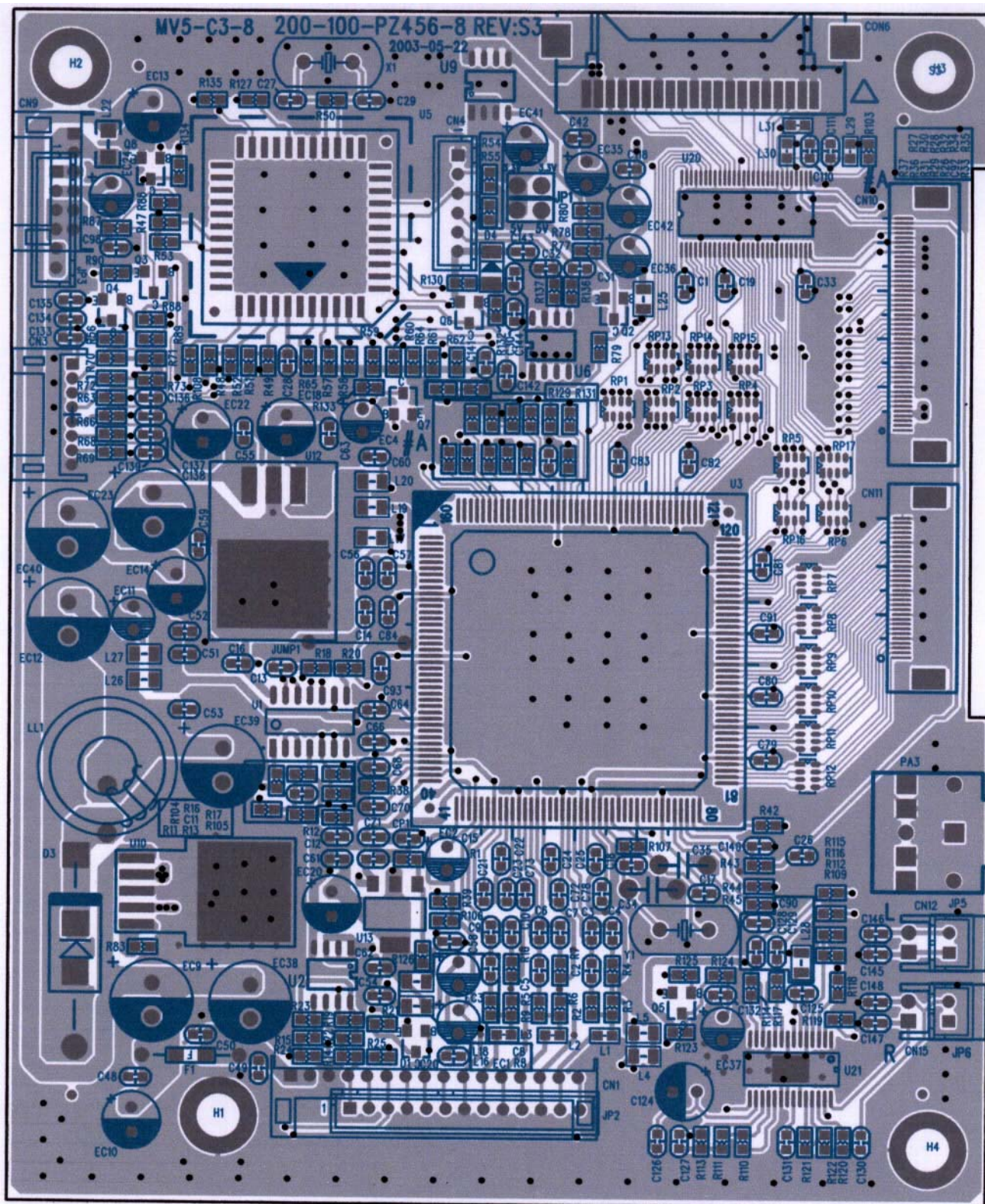
Rear panel



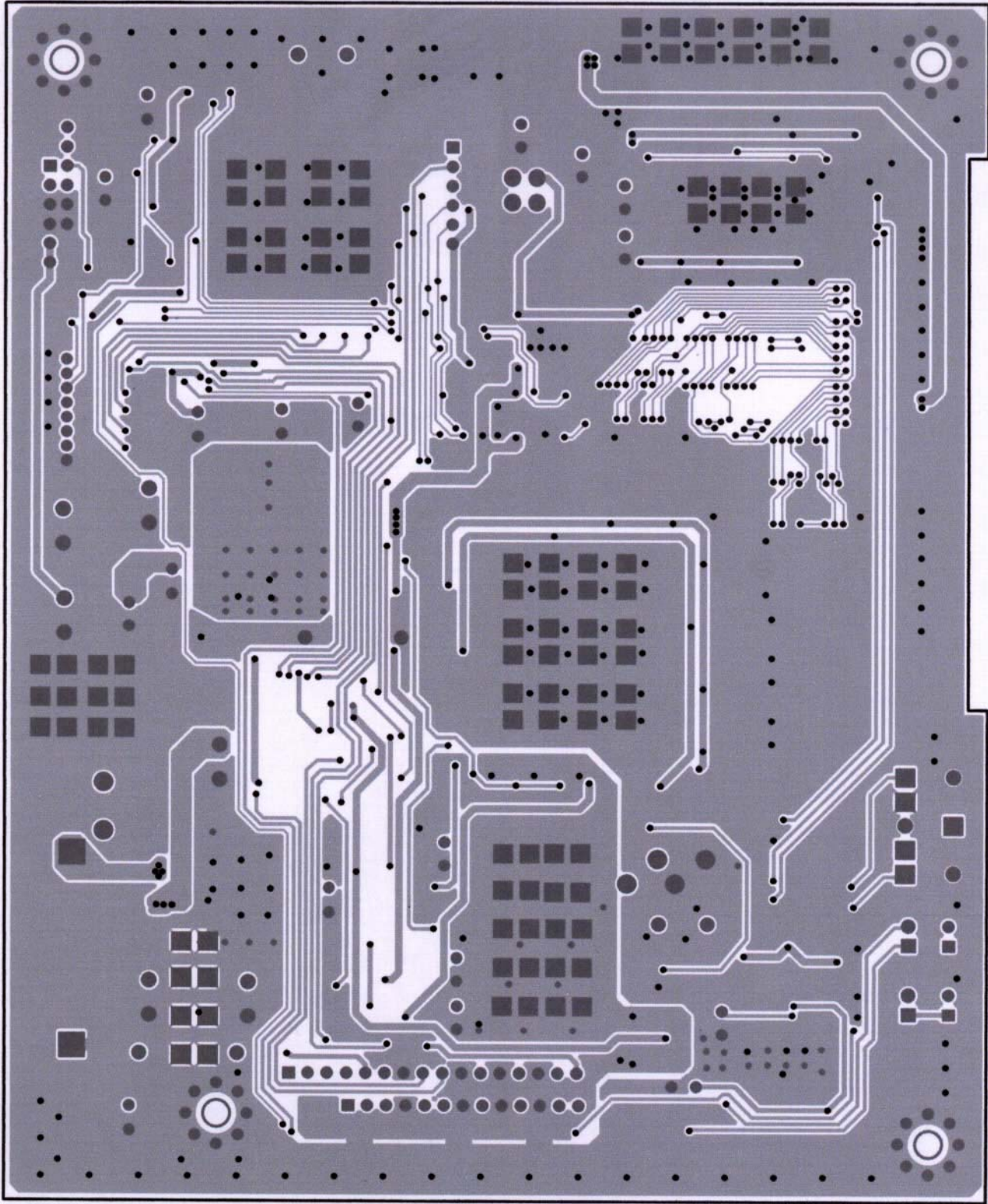
1. VGA Signal Cable
2. Power jack

E. CONDUCTION VIEW

MAIN BOARD (Component Side)



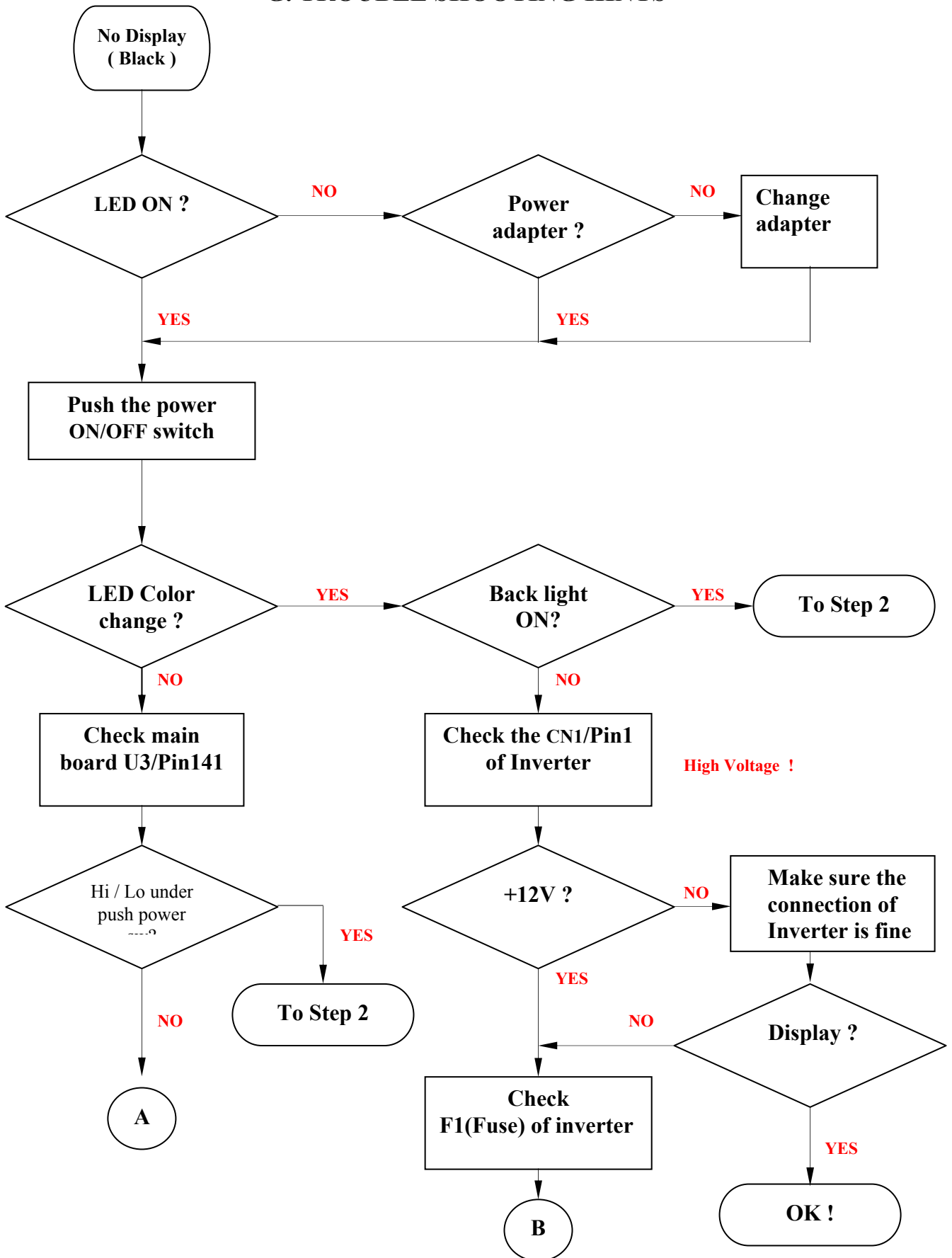
MAIN BOARD (Solid Side)

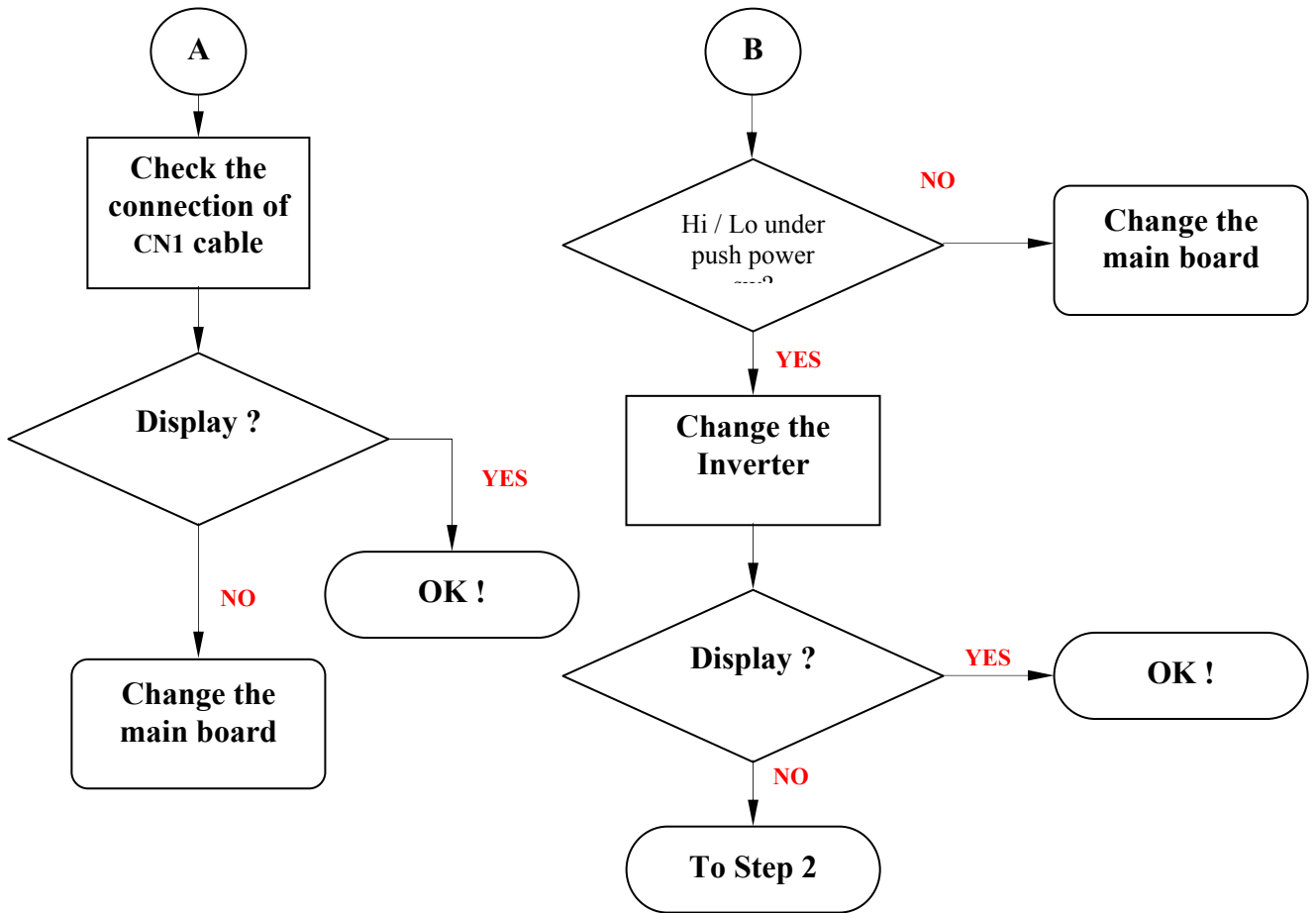


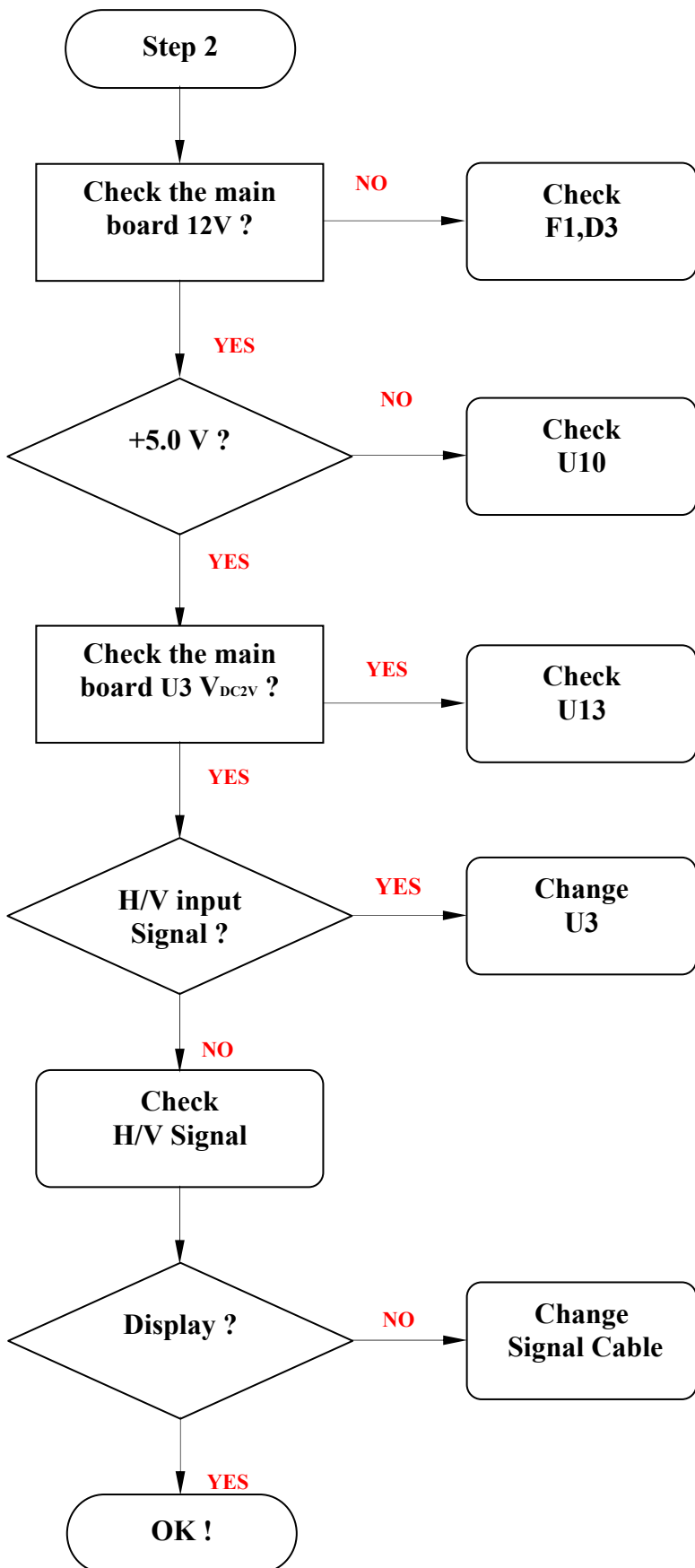
F. ADJUSTMENT PROCEDURE

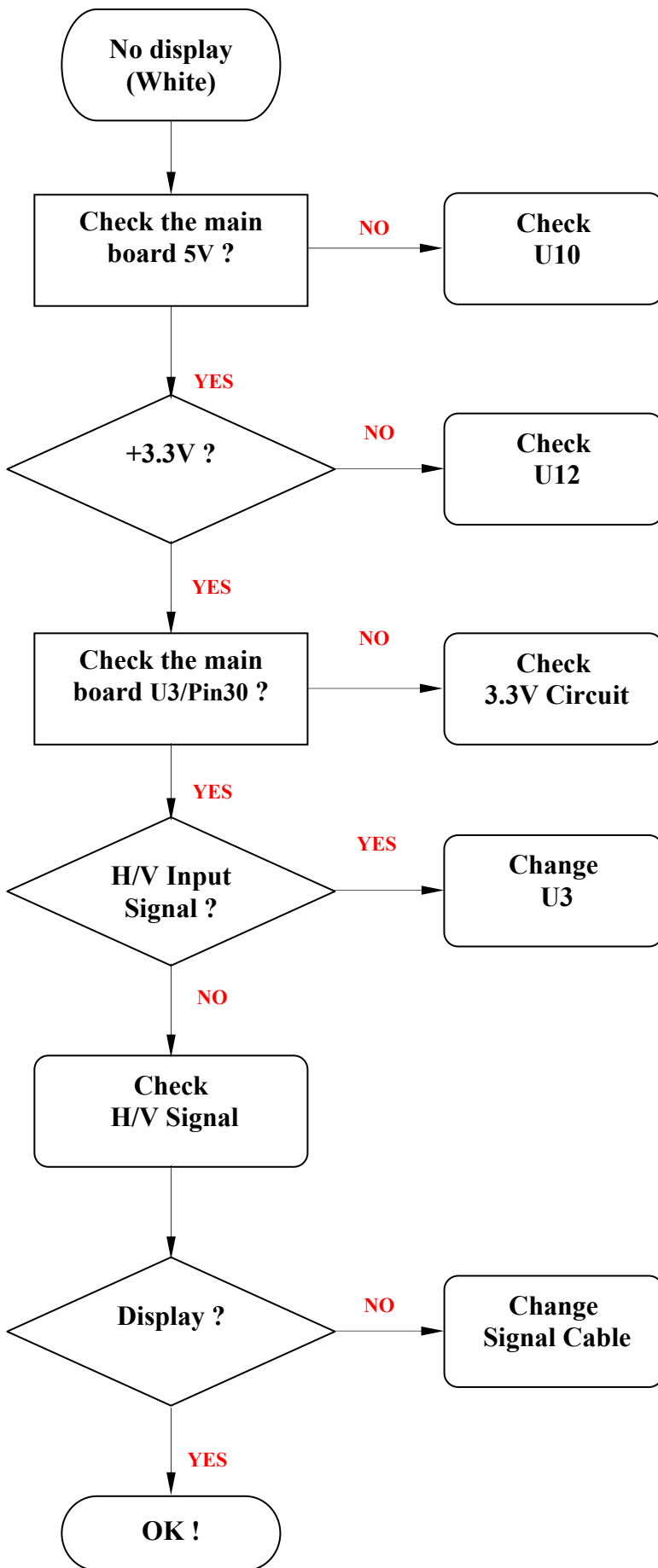
ITEM Program Menu.		# Test Meter * Test Point @ Pattern	Operation	Check Value
A	B+ Check	# Digital Voltmeter * CN7 @ Crosshatch Pattern (31.5KHz,640x480)	1. Plug power cable into the adapter, check adapter power indicator light up green. 2. Make sure the voltage of the power plug (CN1) on the main PCB to the value shown at right.	12.0V ±0.2V
B	Power Saving Check	# Wattmeter # PC or Pattern generator @ Crosshatch Pattern (31.5KHz,640x480)	1. Unplug the signal cable into the monitor. 2. Turn the power switch of the monitor ON . 3. Check monitor power indicator to dark. 4. Make sure the wattmeter value shown at right. 5. OSD will be display “ NO SIGNAL ” Picture.	< 5W
C	Into Factory mode	# PC or Pattern generator @ Crosshatch Pattern (31.5KHz,640x480)	1. Hold DOWN key,then turn the power switch of the monitor OFF . 2. Hold UP key,then turn the power switch of the monitor ON . 3. You can into factory adjustment mode.	
D	Auto mode Check	# PC or Pattern generator @ Crosshatch Pattern (1024x768/60Hz)	1. Press and release the AUTO knob auto adjust display mode to its utmost performance according to VGA setting. 2. In the event of the display image needs further adjustment	
E	White Balance Adjust	# PC or Pattern generator @ White Pattern (1024x768/60Hz)	1. Move the OSD to the COLOR CONTROL mode . 2. set color is 9300°K using the OSD,Check the value shown at below. Y = 150 x = 0.283 y = 0.297 3. set color is 6500°K using the OSD,Check the value shown at right. Y = 150 x = 0.311 y = 0.329	Y = 150 ±0.1FL x = 0.283 ±0.01 y = 0.297 ±0.01
F	OSD Language Setting	# PC or Pattern generator	1. Move the OSD to the LANGUAGE mode . 2. You can choose one of the five language you need.	

G. TROUBLE SHOOTING HINTS









H. REPLACEMENT PARTS LIST

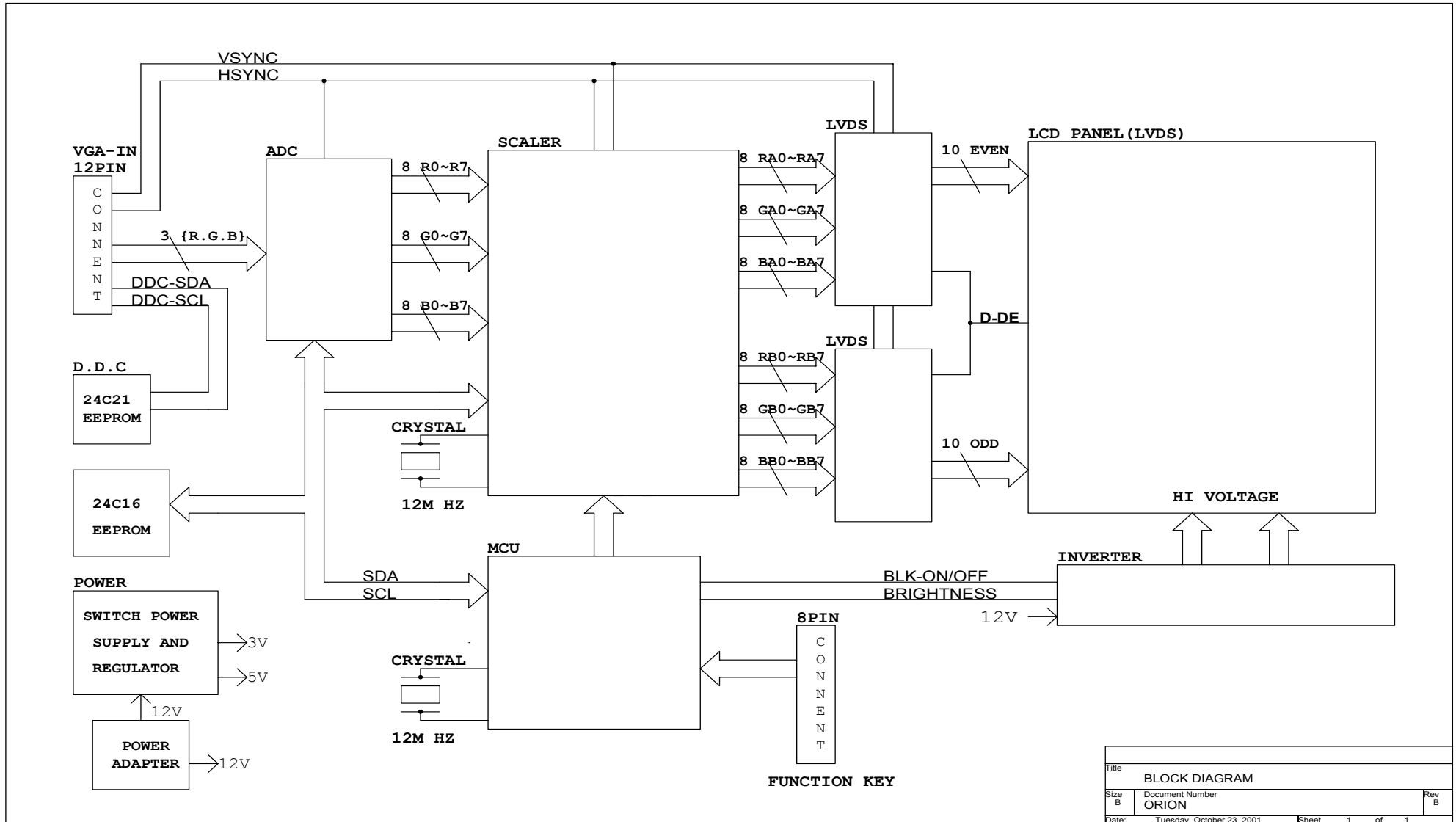
PZ456

NO	Parts No.	Description	Part Location	Q'ty
1	002-U00-PZ456	User Manual		1
2	003-H03-ALL9	ALL ICT OK LBL 8*8MM(white)		1
3	003-H03-LCD	LBL 13.5*8MM		1
4	005-000-45PR	PZ456 PROVIEW CTN		1
5	123-004-PZ456	PZ456 FRAME TOSHIBA-LTM14C500Z-11 PANEL) T=0.8mm		1
6	123-002-PZ456-B	PZ456 METAL COVER SEPT T=0.3		1
7	153-000-PZ456-A	PZ456 BACK LBL		1
8	170-000-0848C	PE BAG 0.07mm 14*30.5cm		3
9	170-001-GW520	PE BAG(A11)		1
10	170-001-PZ456	PZ-456 protect film 1mm		1
11	170-005-VM541	LT-541 PE BAG 300*200mm		1
12	003-002-0848-AM	CARTON LABEL 70*40mm		1
13	160-00L-PZ456	PZ456 POLYFOAM EPS (L)		1
14	160-00R-PZ456	PZ456 POLYFOAM EPS (R)		1
15	846-120-B5AS-G2	ADAPTER 12V 2.5A(2PIN)		1
16	705-541-850B	TOSHIBA 14" LTM14C500Z 460g		1
17	200-100-PZ456-8	PZ456 MAIN BOARD REV:S2		1
18	281-031-12104	RES 121 1% 1/10W 0603 SMD	R1,R126	2
19	281-035-0R04	RES 0ohm 5% 1/10W 0603 SMD	R83	1
20	281-035-1024	RES 1K 5% 1/10W 0603 SMD	R29,R51,R52,R89, R108	5
21	281-035-1034	RES 10K 5% 1/10W 0603 SMD	R19,R22,R23,R27,R30,R31,R32,R38,R47,R48,R49, R53,R57,R58,R59,R60,R64,R65,R71,R73,R104, R132,R135	23
22	281-035-1044	RES 100K 5% 1/10W 0603 SMD	R80,R130	2
23	281-035-1054	RES 100K 5% 1/10W 0603 SMD	R50,R107	2
24	281-035-1514	RES 150ohm +-5% 1/10W 0603 SMD	R2,R4,R5,R7,R8,R10	6
25	281-035-2204	RES 22ohm 5% 1/10W 0603 SMD	R11,R12,R17,R20,R34,R35,R42,R43,R44,R45,	10
26	281-035-3304	RES 33ohm 5% 1/10W 0603 SMD	R14,R15,R24,R25,R36,R37,R56,R63,R66,R68,R69, R127	12
27	281-035-3314	RES 330 5% 1/10W 0603 SMD	R133,R134	2
28	281-035-4724	RES 4.7K 5% 1/10W 0603 SMD	R61,R62,R77,R86,R87,R88,R90,R103	8
29	281-035-4734	RES 47K 5% 1/10W 0603 SMD	R13,R74,R75,R105	4
30	281-035-5114	RES 510 5% 1/10W 0603 SMD	R78,R79,R106	3
31	281-035-5124	RES 5.1K 5% 1/10W 0603 SMD	R131	1
32	281-035-7504	SMD R 75 ohm 0603	R3,R6,R9	3
33	282-330-2454	RES-NET 33ohm 5% SMD 8P4R	RP13,RP14,RP15,RP16,RP17	5
34	381-151-032554	SMD CC 150PF 25V NPO 0603 +-5%	CP1	1
35	381-220-032554	SMD CC 22pF 25V NPO 0603	C11,C12,C13,C14,C17,C18,C27,C29,C31,C32	10
36	381-330-032554	NPO 33PF/25V +-5% 0603 SMD	C140	1
37	382-102-035064	X7R 1000pF/50V +-10% 0603 SMD	C64,C66,C68,C70,C78,C80,C82,C84,C90,C92	10
38	382-103-032564	SMD CC 0.01uF/25V X7R 0603 +- 10%	C2,C4,C5,C7,C8,C10,C22,C23	8
39	382-393-032564	SMD CC 0.039uF/25V X7R 0603	CZ1	1

40	382-472-035064	X7R 4700pF/50V +-10% 0603 SMD	C21,C24,C25	3
41	385-104-032584	Y5V 0.1u/25V +80%-20% 0603	C15,C16,C20,C28,C30,C42,C48,C49,C50,C51,C52,C53,C54,C55,C56,C57,C58,C59,C60,C61,C62,C63,C79,C81,C83,C91,C93,C98,C110,C118,C133,C134,C135,C136,C137,C138,C139,C111,C1,C19,C33,C142,C143,	43
42	385-105-031684	Y5V 1uF/16V +80-20% 0603	C141,C144	2
43	481-LCC-0440	SOCKET 44PIN PLCC	U5	1
44	506-0AI-C1084	SMD REG.AIC1084CM 3.3V 5A	U12	1
45	506-0TH-63LM83	THC63LVDM83 TQFP56 LVDS IC SMD	U20	1
46	506-524-LC21	MEMORY IC 24LC21 SMD	U2	1
47	506-5NM-24C16	24C16 SO8 MEMORY IC SMD	U6	1
48	506-774-LCX14	74LCX SOIC14 HI SPEED TTL SMD	U1	1
49	506-RAM-2576-5	REGULATOR AMC2576-5.0DD/ADD	U10	1
50	506-RLD-1117-A	LD1117-ADJ-A UTC SOT223	U13	1
51	506-SXX-MV3	SMD IC SCALER CHIP MASCOT MV3	U3	1
52	518-02N-3904	NPN 2N3904S(SMD)	Q2,Q3,Q4,Q7,Q8	5
53	518-02N-3906	SMD TR 2N3906	Q6	1
54	518-1CE-9435	MOSFET CE9435A S08	U9	1
55	528-2BA-T54C	SMD DIODE BAT54C SOT23	D1	1
56	528-R1N-4148	DIODE 1N4148 SOT-34 SMD	D4	1
57	558-352-5000	SMD FUSE 1206 24V 5A	F1	1
58	622-106-0201	JUMPER 2.54MM 0.6D	JP1-->3.3V	1
59	630-020-8001	HEADER 20(SMD BASE 1.25 20P)	CON6	1
60	780-103-3000	SMDBEAD SBK160808300Y0603 30Ω	L1,L2,L3,L29,L30, L31	6
61	780-104-6010	FB 0805/600ohm 100mHZ	L4,L5,L16,L17,L18,L19,L20,L25,L26,L27	10
62	780-107-121K50	BEAD 120ohm 1206 5A FBM-11	L22	1
63	851-0NM-PZ456-A	PZ456 M/B DIP ASS'Y LVDS no AUDI		1
64	330-100-16255	5mm EC 10uF 16V 105C M TP MI 4*5	EC1,EC4,EC11,EC24,EC35,EC41	6
65	630-006-1008	JWT A2001 PITCH 2.00mm	CN9	1
66	630-008-C001	JST 1.5mm HEADER ZR S8B-ZR	CN3	1
67	745-330-2062-3	33uH C4426-060128YB-UL	LL1	1
68	630-016-1008	BASE 16p JWT A2001	CN1	1
69	151-A00-Z45S4	PZ456 FRONT BEZEL		1
70	151-001-Z45NV	PZ456 REAR CABINET 424C		1
71	154-001-Z45S4	PZ456 HANDLE 877C		1
72	154-001-PZ456	PZ456 KEY TOP		1
73	154-002-PZ456	PZ456 LED LENS		1
74	154-003-PZ456	PZ456 MYLAR SHEET PVC		1
75	506-1SM-89516	SYNCMOS SM89516C25J 44Pin PLCC		1
76	610-151-15CDC	PZ456 Signal cable DC JACK 424C		1
77	121-001-PZ456	PZ-456 HANDLE PLATE SPCC T=1.6		1
78	121-002-PZ456	PZ-456 CLAMP SPCC T=1.0		1
79	101-003-2033	EZPC SCREW P2*3		8
80	100-006-3032	SCREW R3*6mm ISO		7
81	109-S06-3033	SCREW AU (M3*6.0*HEX1.5)		6

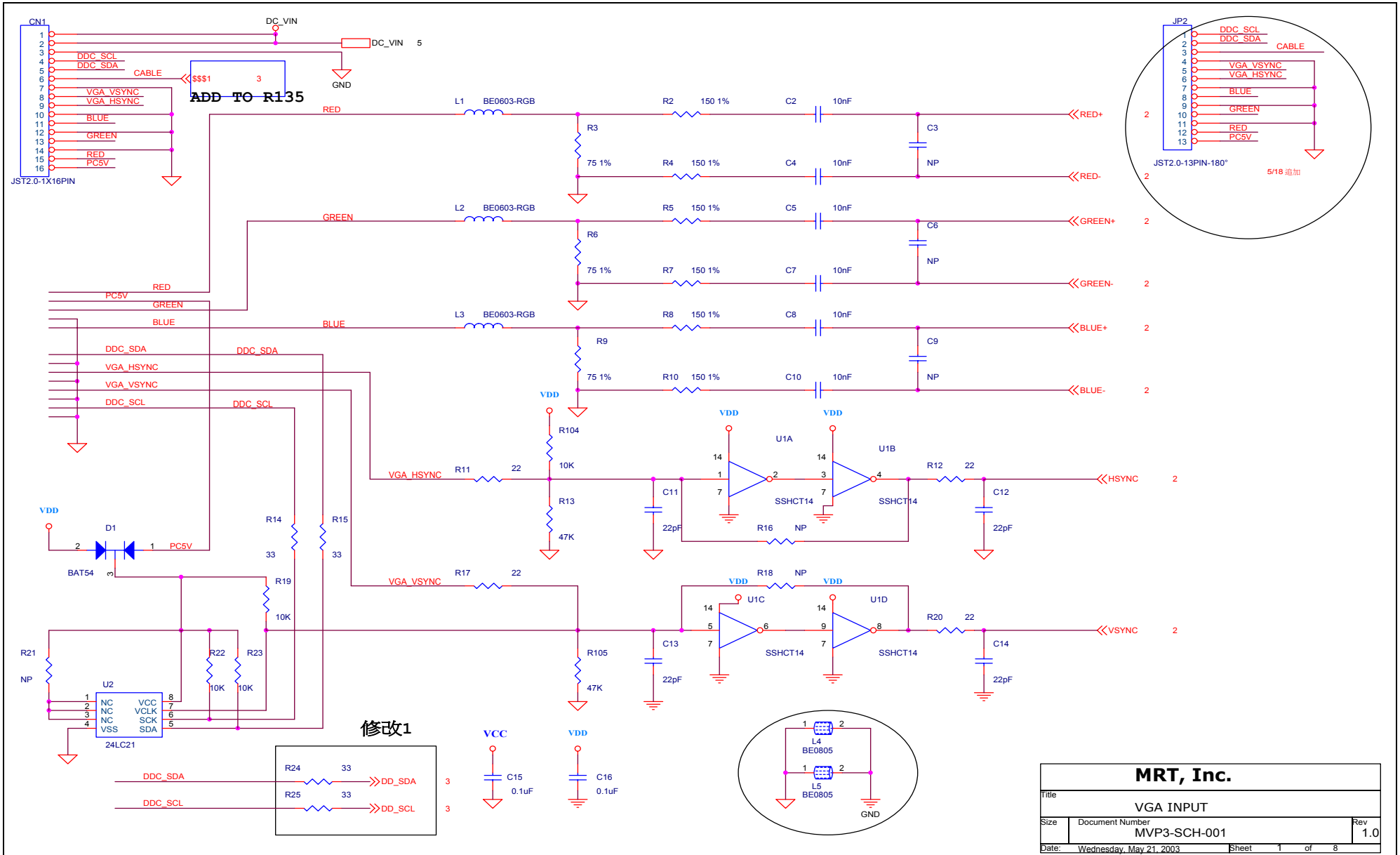
82	103-005-3033	SCREW F3*5mm ISO ZI3C		1
83	100-008-3033	R 3*8 ISO		2
84	126-045-ALP1	Aluminum foil L75*W45mm		1
85	121-003-PZ456	PZ-456 BASE LOCK(T=0.5mm)SUS301		1
86	100-004-2032	SCREW R2.0*L4.0mm ISO		1
87	003-H01-LCD	LCD CPU LBL 15mmx15mm		1
88	154-005-PZ456	PZ456 MYLAR SHEET PVC T=0.2mm58*28		1
89	107-008-3073	B 3*8 TP4		2
90	111-148-0800	FLAT WASHER 1 SPCC T=1.0		1
91	111-014-0800	FLAT WASHER 2 PVC T=0.5mm		2
92	111-148-0801	FLAT WASHER 3 SUS304 T=0.3		2
93	111-046-0020	RUBBER WASHER 20*4*2		1
94	100-006-4033	SCREW P4*6 ISO		1
95	132-001-PZ456	SPRING WASHER SUS301 T=0.5		1
96	123-003-PZ456	PZ456 BASE ARM DIE CASTING AL		1
97	123-00L-PZ456-A	BASE LEG LEFT DIE CASTING AL		1
98	123-00R-PZ456-A	BASE LEG RIGHT DIE CASTING AL		1
99	155-001-PS576	RUBBER FOOT(NR)		3
100	105-006-4033-1	SCREW T4*6mm ISO		
101	631-006-J456	WIRE 6P 2.0-1.25 100mm PZ456		1
102	631-008-G020-B	PZ4561.5mmPITCH->1.5 dual CORE 135mm		1
103	631-020-7010-B	LVDS CABLE 20P TO 20P L=80mm		1
104	100-003-3032	SCREW R3.0*L3.0mm ISO		8
105	154-004-PZ456	PZ456 MYLAR SHEET PVC T=0.2mm		1
106	401-270-0205	ACT SW 2P 6*3.5 H 5.0 180g	S1,S2,S3,S4,S5,	5
107	200-701-PZ456-A	PZ456 CONTROL PCB		1
108	330-220-16255	MINI CE 22uF/16V +-20% TP105°C 4*5	EC36,EC42	2
109	330-221-16255	EC H:5mm 220uF16V +-20% 105C 8*5	EC9,EC12,EC23,EC38,EC39,EC40	6
110	330-470-16275	EC 47uF 16V 5*5 105C +-20%	EC10,EC13,EC14,EC18,EC20,EC22,	6
111	630-008-C001	JST 1.5mm HEADER ZR S8B-ZR	J1	1
112	531-110-49US	1.0592MHZ HC 49US CRYSTAL	X1	1
113	531-120-49US	12MHZ HC 49US CRYSTAL 30PPM	Y1	1
114	522-030-B340-T	SCHTTKY SB340 TP	D3	1

I. BLOCK DIAGRAM

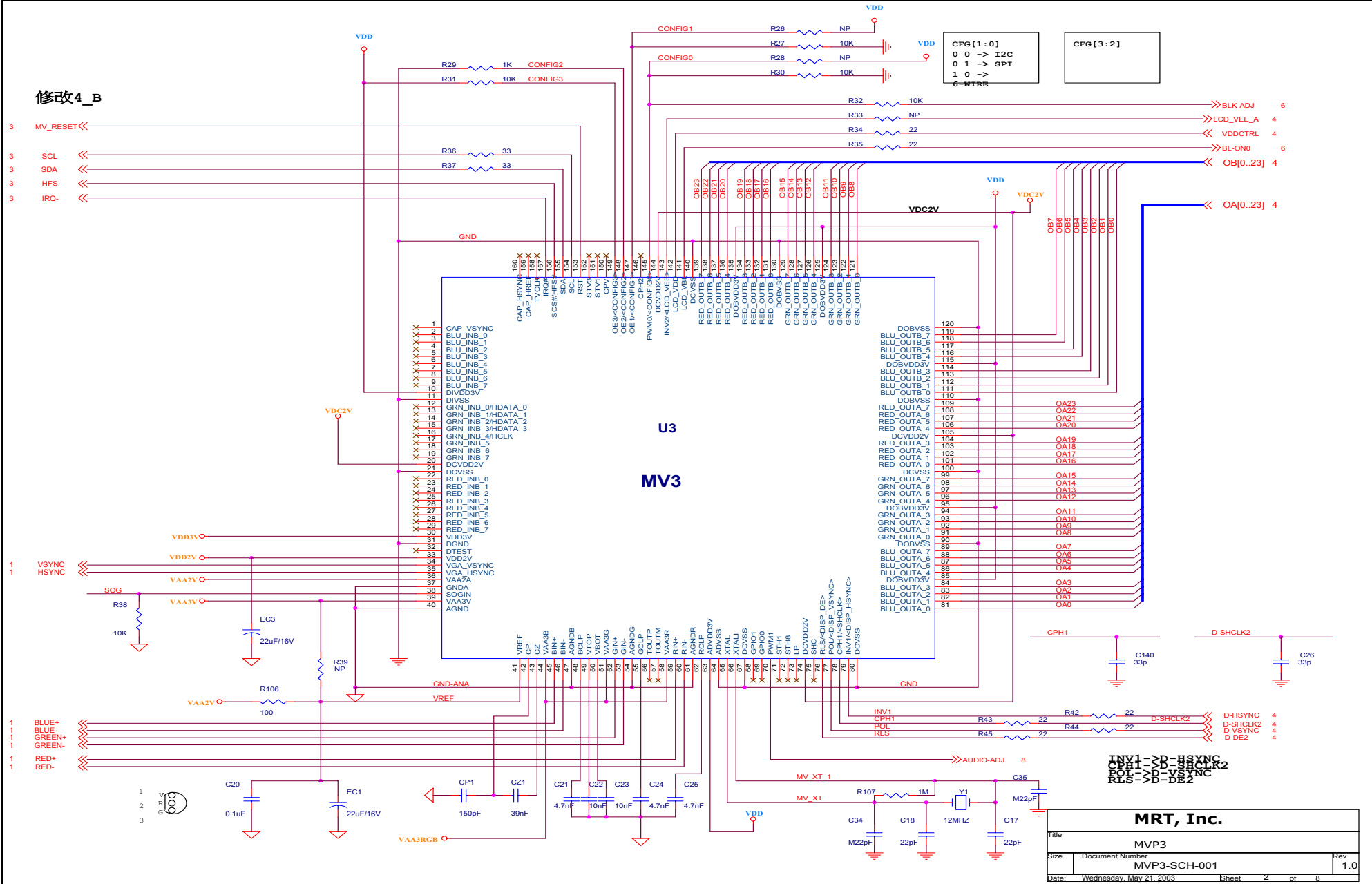


Title		
BLOCK DIAGRAM		
Size	Document Number	Rev
B	ORION	B
Date:	Tuesday, October 23, 2001	Sheet 1 of 1

J. SCHEMATIC DIAGRAM

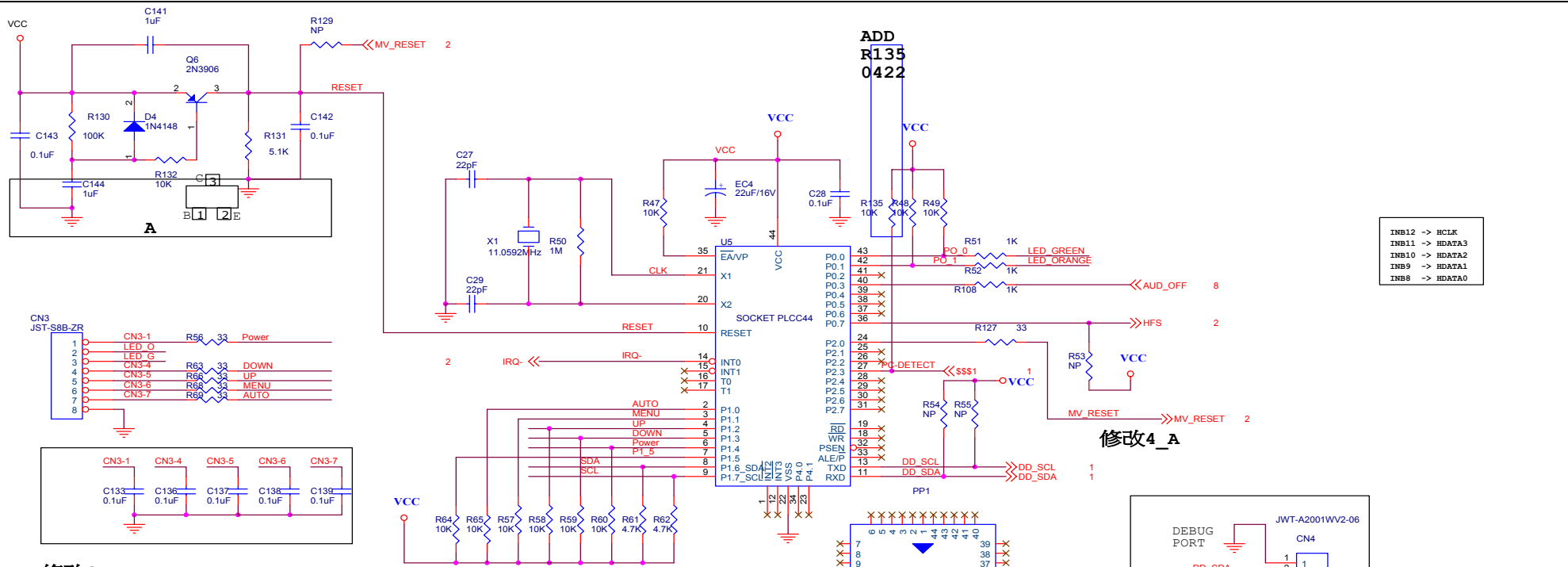


修改4_B



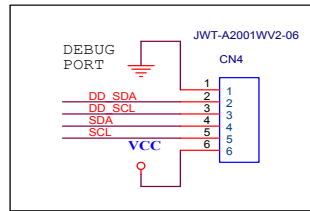
INV1->D-HSYNC
CPH1->D-SHCLK2
RIS->D-VSYNC

MRT, Inc.		
File: MVP3		
Size:	Document Number:	Rev:
	MVP3-SCH-001	1.0
Date:	Wednesday, May 21, 2003	Sheet 2 of 8

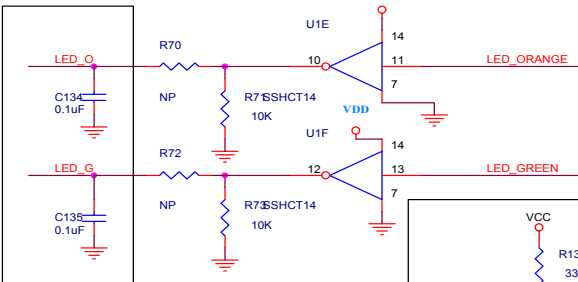


INB12 -> HCLK
 INB11 -> HDATA3
 INB10 -> HDATA2
 INB9 -> HDATA1
 INB8 -> HDATA0

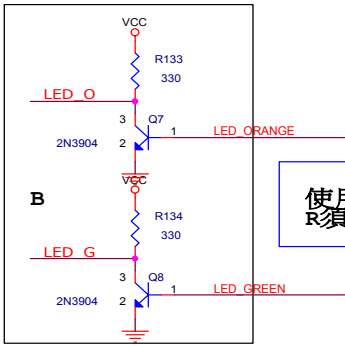
修改4_A



修改3

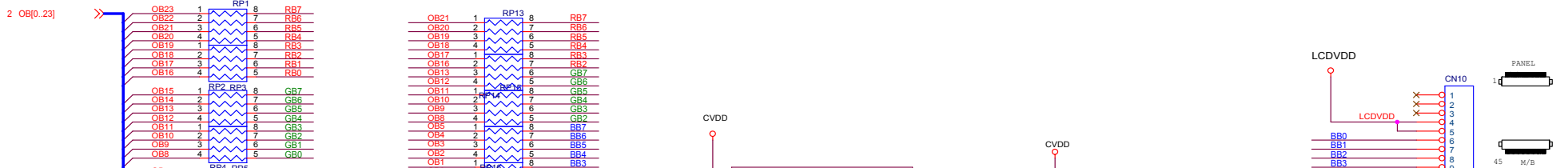


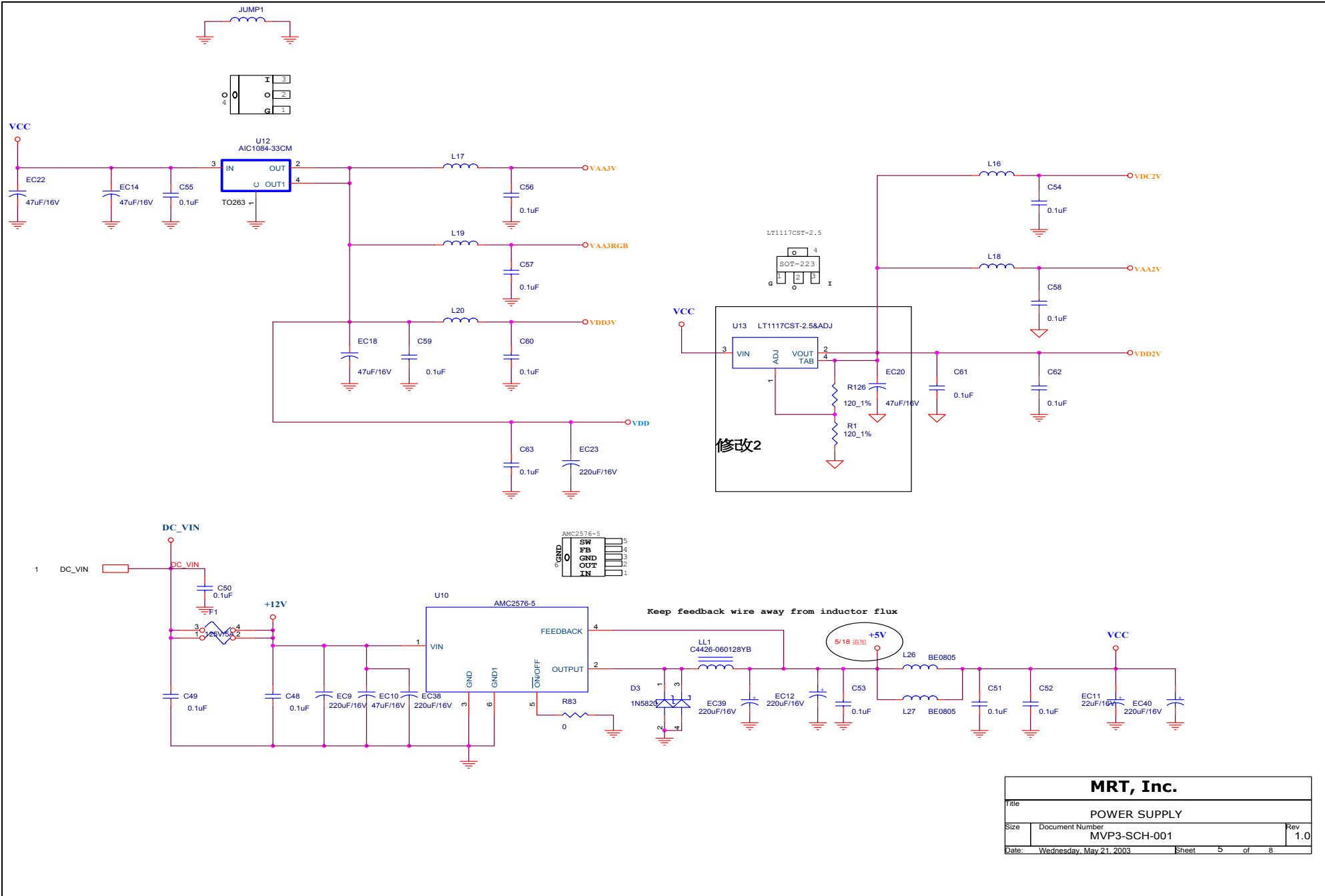
1. POWER
 2. LED O (570LEDON G)
 3. LED G (568C2ON) ET502 LED/ON
 4. DOWN-
 5. UP-
 6. MENU
 7. AUTO
 8. GND
- PROVIEW KEY PAD --OK



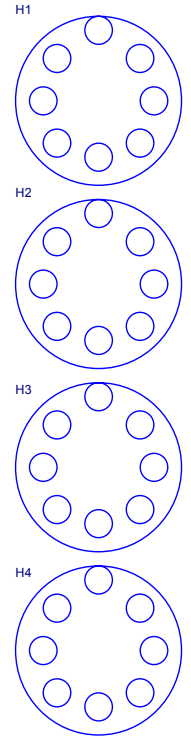
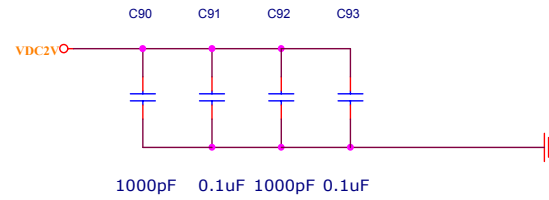
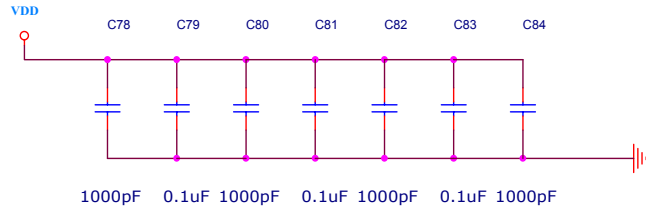
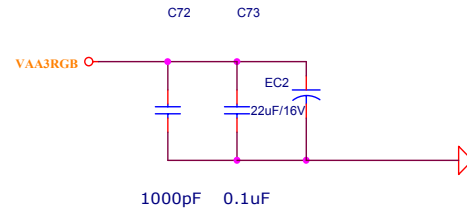
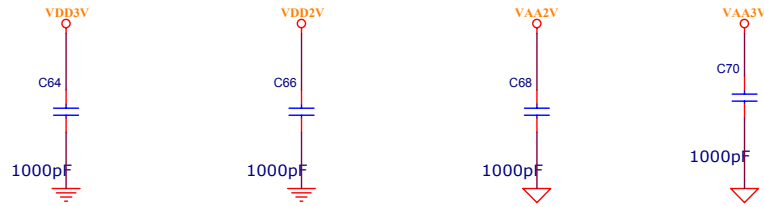
使用藍光LED
 必須改為150歐姆須再測試

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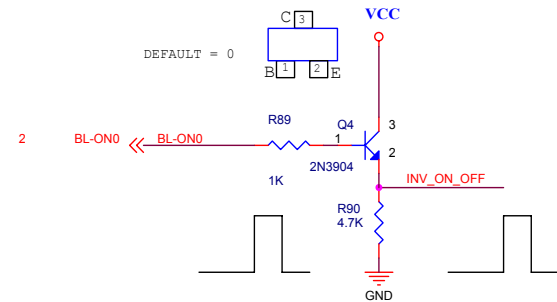
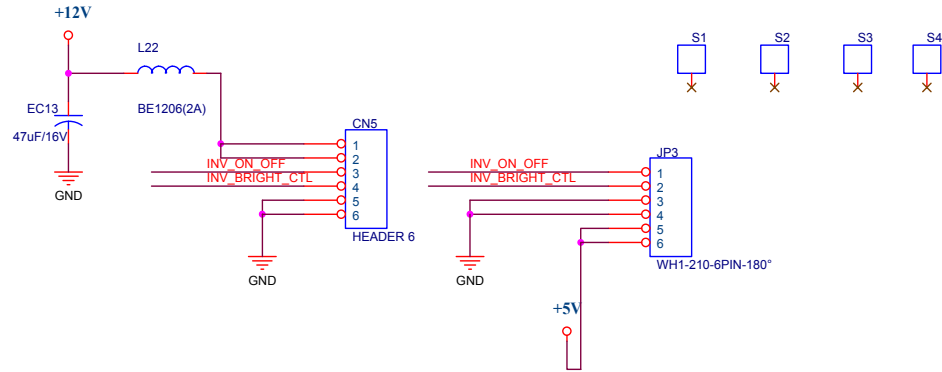
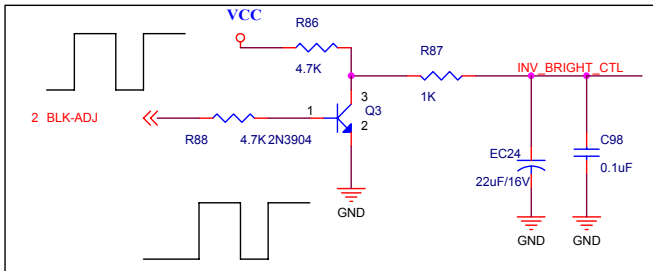




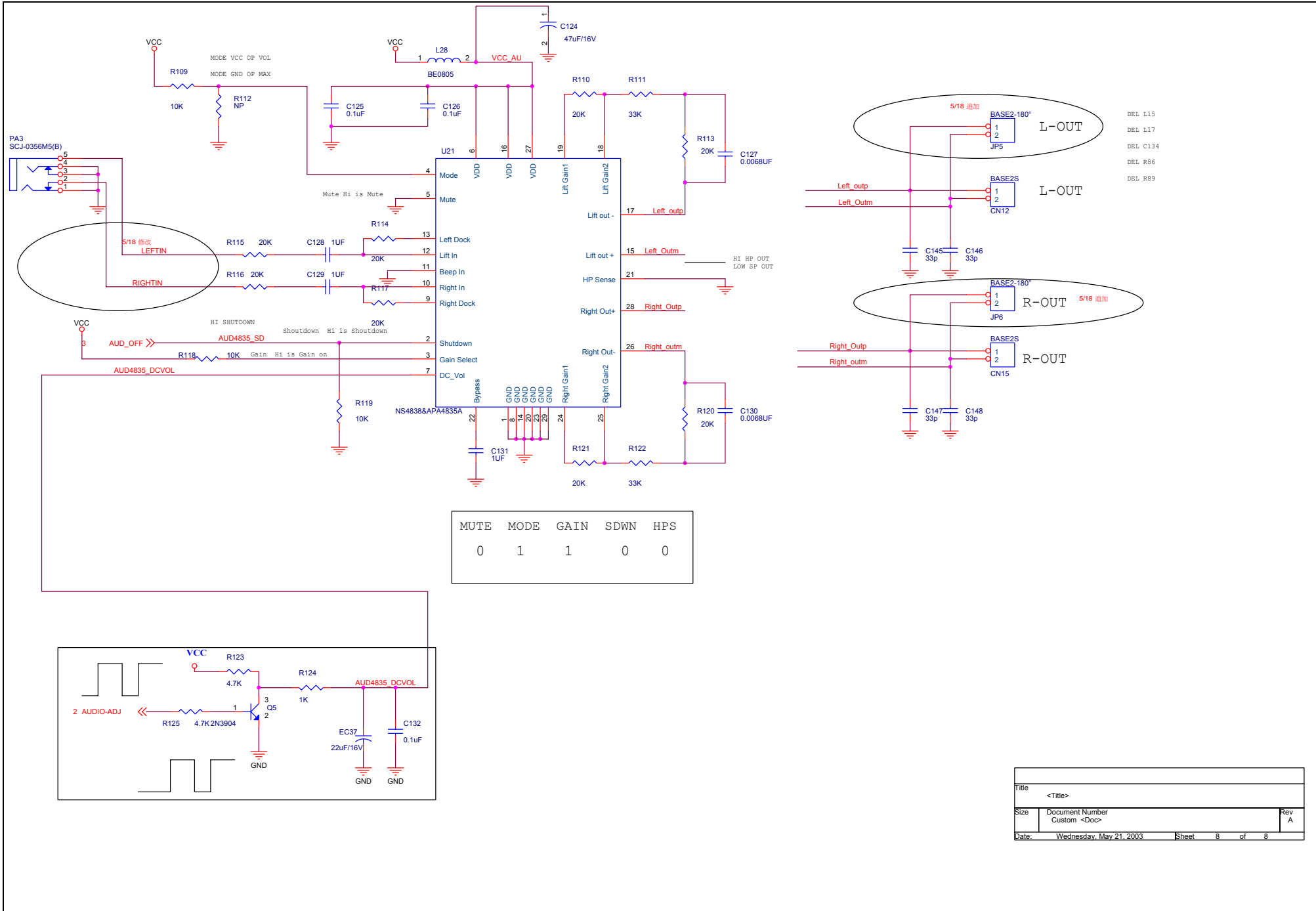
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POWER SUPPLY		
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**EVERY POWER PIN OF MASCOT
NEEDS A PAIR OF
CAPACITORS**



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MUTE	MODE	GAIN	SDWN	HPS
0	1	1	0	0

DEL L15
DEL L17
DEL C134
DEL R86
DEL R89

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Memu