

865

LCD Model

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/MAG** branch office if you need help.

A. IMPORTANT SAFETY INSTRUCTION

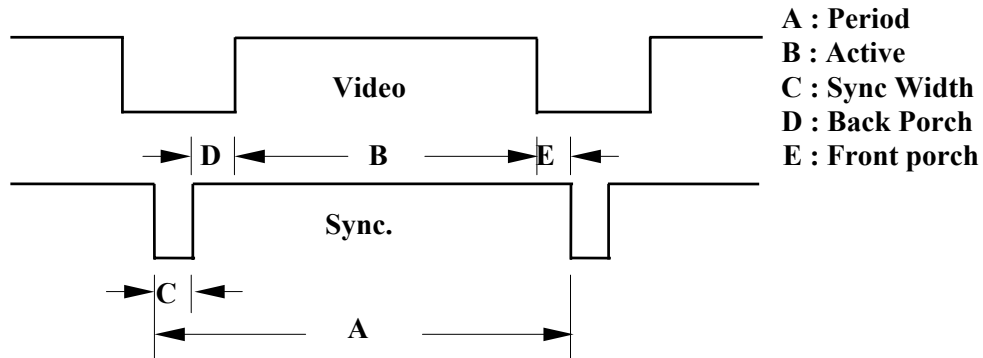
Prior to using this service manual,please ensure that you have carefully followed all the procedures outlined in the user's manual for this product.

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 tablle.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	1280 x 1024 @ 75Hz
2. Recommend Resolution	1280 x 1024 @ 60Hz
3. Synchronization Range	30 – 80 KHz
Horizontal	60 – 75 Hz
Vertical	
4. Active Display Area	361.1mm (H) x 289.7mm (V)
5. Dot Pitch	0.279(H) x 0.279(V) mm
6. Support display colors	16.7M color
7. Contrast Ratio (Typical)	400
8. Luminance of White	250cd/m ²
9. Bandwidth	135MHz
10. User Control	4 Key Switch
11. OSD Function	Exit, OSD Adjust, Language, Reset, Auto, Color Select, H. Size, V-Pos, H-Pos, Contrast, Phase, Brightness
12. View Angle	
Horizontal	80 , 80 Degrees
Vertical	80 , 80 Degrees
13. Power Source	100 – 240 Vac 60 / 50 Hz
14. Power Consumption	60W (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)	459mm x 407mm x 165mm
19. Monitor Weight	8.0 Kg
20. Base Operation	
Tilt	0 / + 15 degree
21. Power Saving	
ON	< 60W
STAND BY	< 5W
OFF	< 5W
22. Signal Connector Pin Assignment	
Pin No.	
	1. Red
	2. Green
	3. Blue
	4. Ground
	5. Self Test
	6. Red Ground
	7. Green Ground
	8. Blue Ground
	9. Not Connected
	10. Sync. Ground
	11. Ground
	12. SDA (For DDC)
	13. Horizontal Sync.
	14. Vertical Sync.
	15. SCL (For DDC)
23. Audio signal	
	3.5Φ stereo phone jack
	Input Sensitivity : 200mV
	2+2 W Power amplifier

C.TIMING CHART

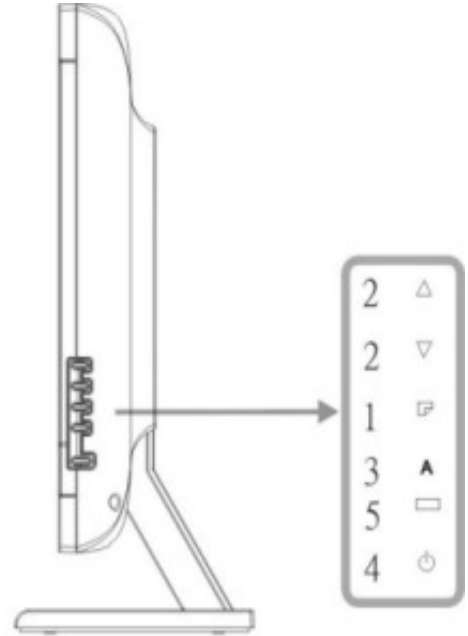
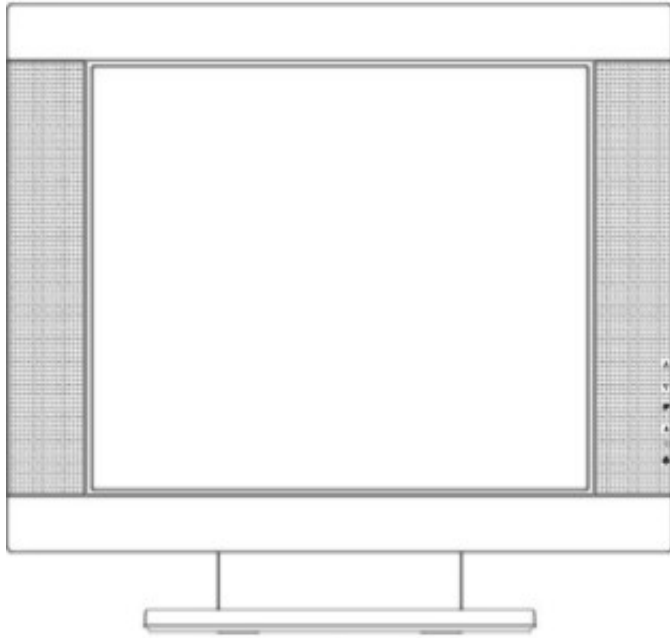


Preset Modes	VGA	VGA	VGA	VGA	VESA	VESA	VGA	VGA	VESA	VESA
	640X350	640X400	640X480	640X480	640X480	640X480	720X350	720X400	800X600	800X600
Dot Rate (MHz)	25.175	25.175	25.175	31.340	31.500	31.500	28.322	28.322	36.000	40.000
F.H (KHz)	31.469	31.469	31.469	34.978	37.861	37.500	31.469	31.469	35.156	37.879
A Period (uS)	31.778	31.778	31.778	28.590	26.413	26.667	31.777	31.777	28.444	26.400
B Active (uS)	25.422	25.422	25.422	20.421	20.317	20.317	25.422	25.422	22.222	20.000
C Sync. (uS)	3.813	3.813	3.813	2.042	1.270	2.032	3.813	3.813	2.000	3.200
D Back Porch (uS)	1.907	1.907	1.589	3.063	3.810	3.810	1.907	1.907	3.556	2.200
E Front Porch (uS)	0.636	0.636	0.954	3.064	1.016	0.508	0.635	0.635	0.666	1
F . V (Hz)	70.087	70.087	59.941	66.625	72.810	75.000	70.087	70.087	56.250	60.317
A Period (ms)	14.268	14.268	16.683	15.009	13.734	13.333	14.268	14.268	17.778	16.579
B Active (mS)	11.122	12.711	15.253	13.723	12.678	12.800	11.122	12.711	17.067	15.840
C Sync. (mS)	0.064	0.064	0.064	0.086	0.079	0.080	0.064	0.064	0.057	0.106
D Back Porch (mS)	1.907	1.112	0.794	1.115	0.528	0.427	1.907	1.112	0.626	0.607
E Front Porch (mS)	1.175	0.381	0.572	0.085	0.449	0.026	1.175	0.381	0.028	0.026
H/V SYNC	+ -	- +	- -	- -	- -	- -	+ -	- +	+ +	+ +
Interlaced	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON

Preset Modes	VESA 800X600	VESA 800X600	MAC 832X624	VESA 1024X768	VESA 1024X768	VESA 1024X768	VESA 1280X1024	VESA 1280X1024		
Dot Rate (MHz)	50.000	49.500	55.000	65.000	75.000	78.750	108.00	135.00		
F.H (KHz)	48.077	46.875	49.107	48.363	56.476	60.023	63.98	79.976		
A Period (uS)	20.800	21.333	20.364	20.677	17.707	16.660	15.630	12.504		
B Active (uS)	16.000	16.162	15.127	15.754	13.563	13.003	11.852	9.481		
C Sync. (uS)	2.400	1.616	2.182	2.092	1.813	1.219	1.037	1.067		
D Back Porch (uS)	1.280	3.232	1.745	2.462	1.920	2.235	2.296	1.837		
E Front Porch (uS)	1.12	0.323	1.31	0.369	0.321	0.203	0.444	0.119		
F . V (Hz)	72.188	75.000	75.087	60.004	70.069	75.029	60.020	75.025		
A Period (ms)	13.853	13.333	13.318	16.666	14.272	13.328	16.661	13.329		
B Active (mS)	12.480	12.800	12.707	15.880	13.599	12.795	16.005	12.804		
C Sync. (mS)	0.125	0.064	0.061	0.124	0.106	0.050	0.047	0.038		
D Back Porch (mS)	0.478	0.448	0.428	0.600	0.513	0.466	0.594	0.475		
E Front Porch (mS)	0.77	0.021	0.122	0.062	0.054	0.017	0.016	0.013		
H/V SYNC	++	++	--	--	--	++	++	++		
Interlaced	NON	NON	NON	NON	NON	NON	NON	NON		

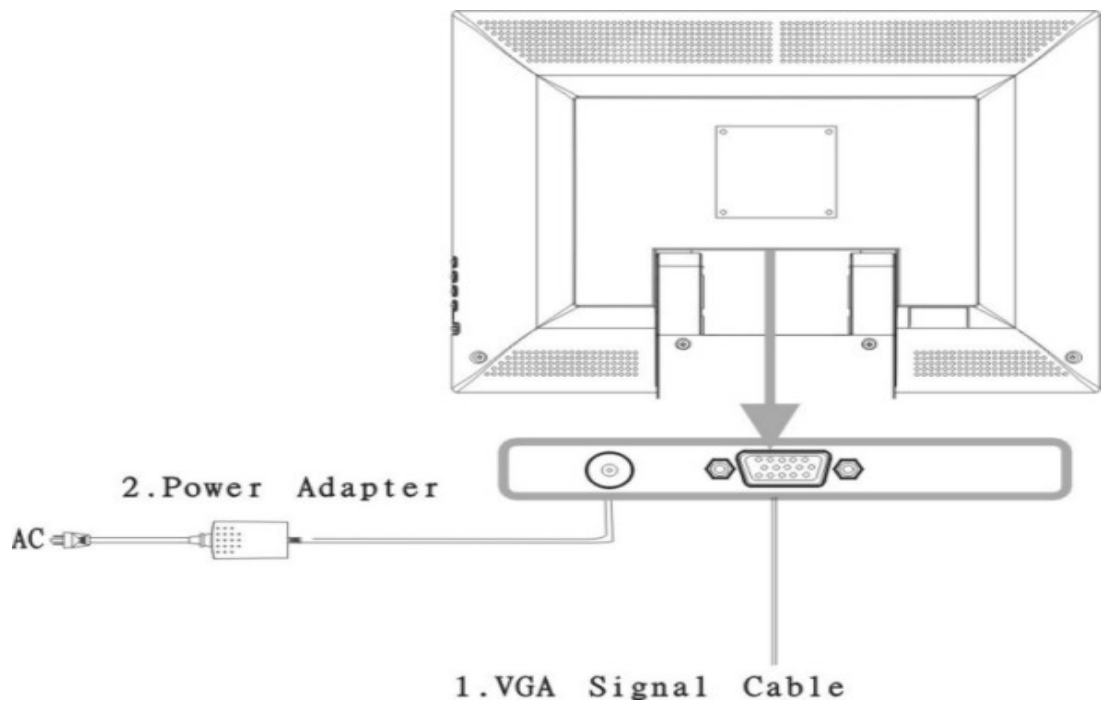
D. CONTROL LOCATION

Font control panel



1. Menu Button
2. Select Button
3. Auto Button
4. Power Button
5. LED (Power Display)

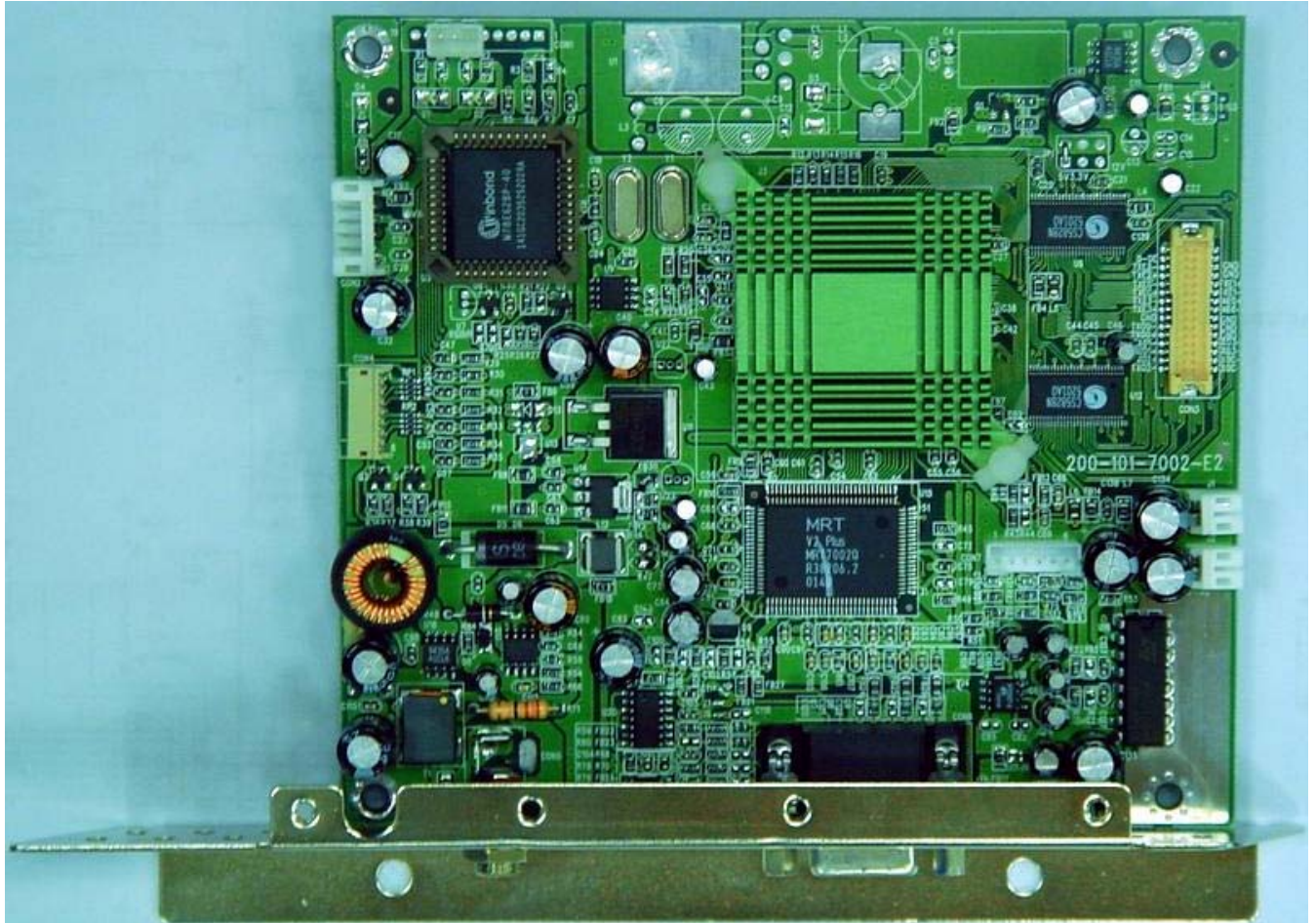
Rear panel



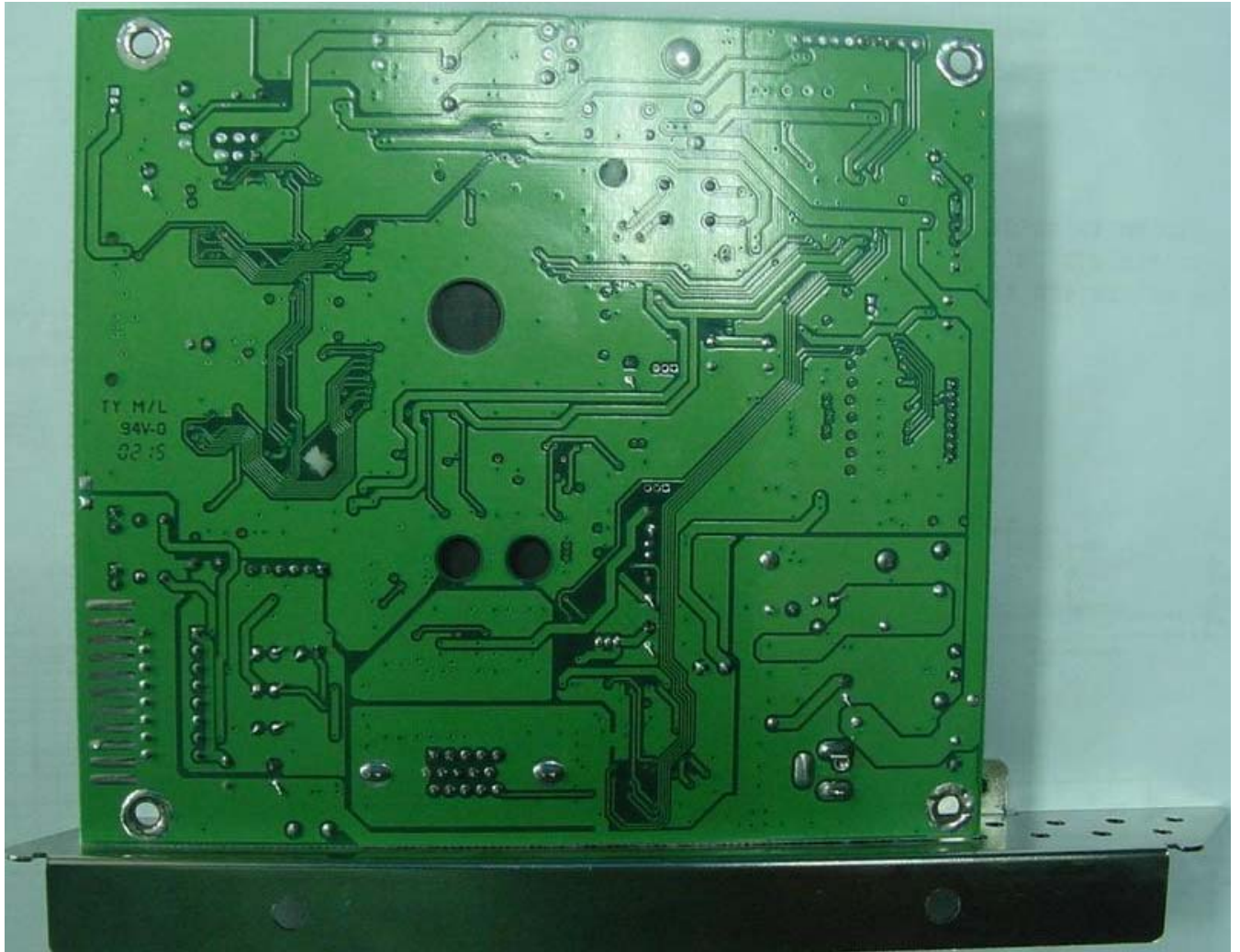
1. Line in jack
2. Power jack

E. CONDUCTION VIEW

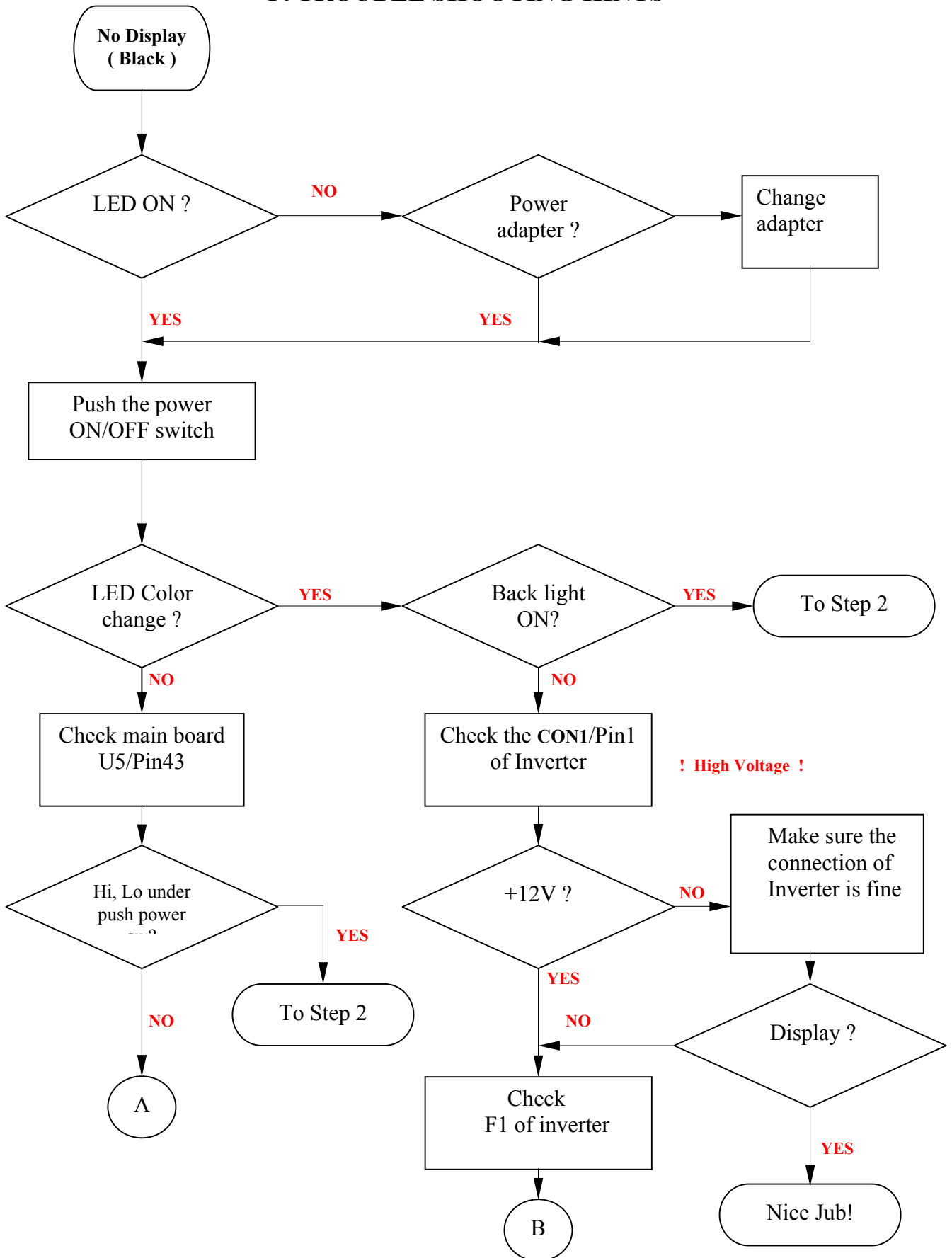
MAIN BOARD (Component Side)

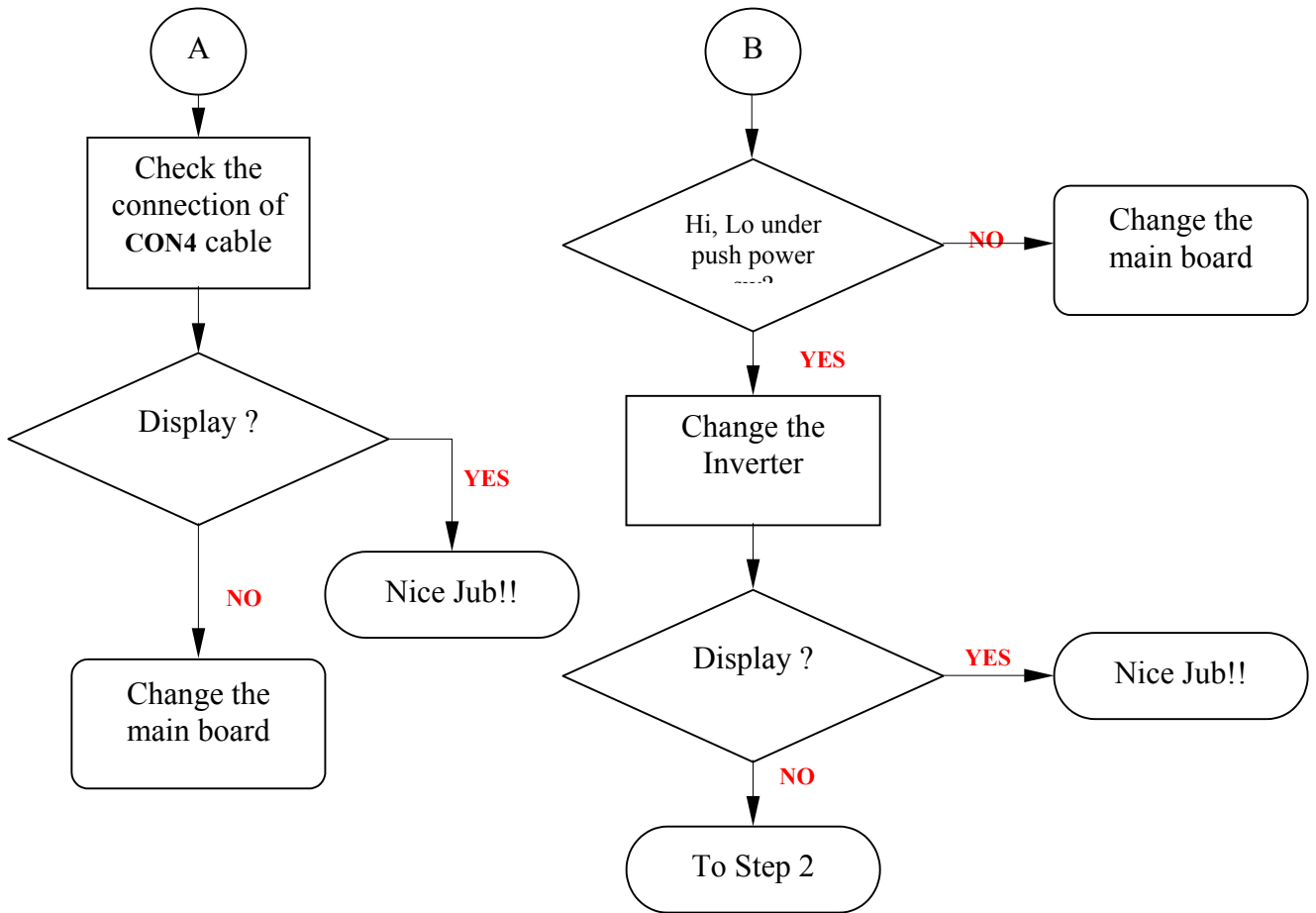


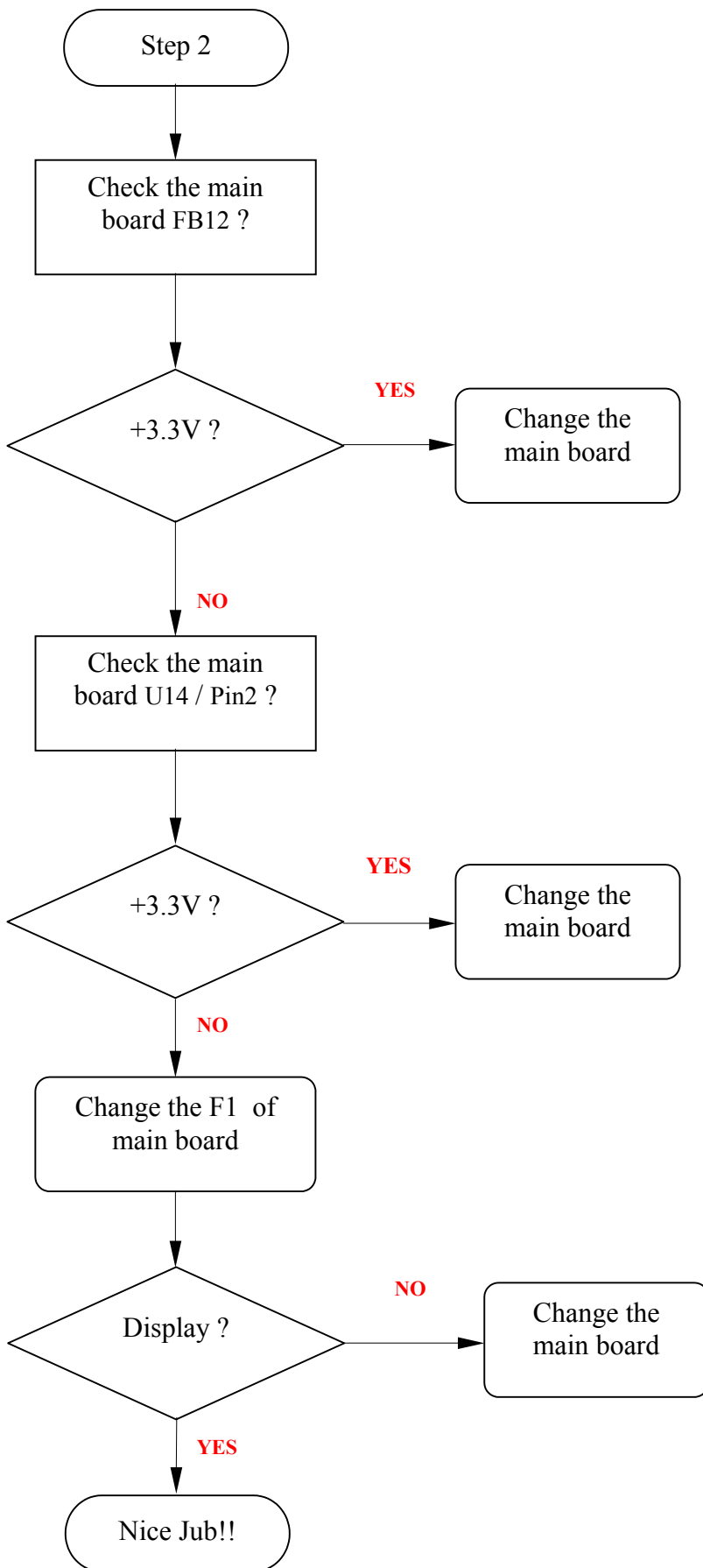
MAIN BOARD (Soild Side)

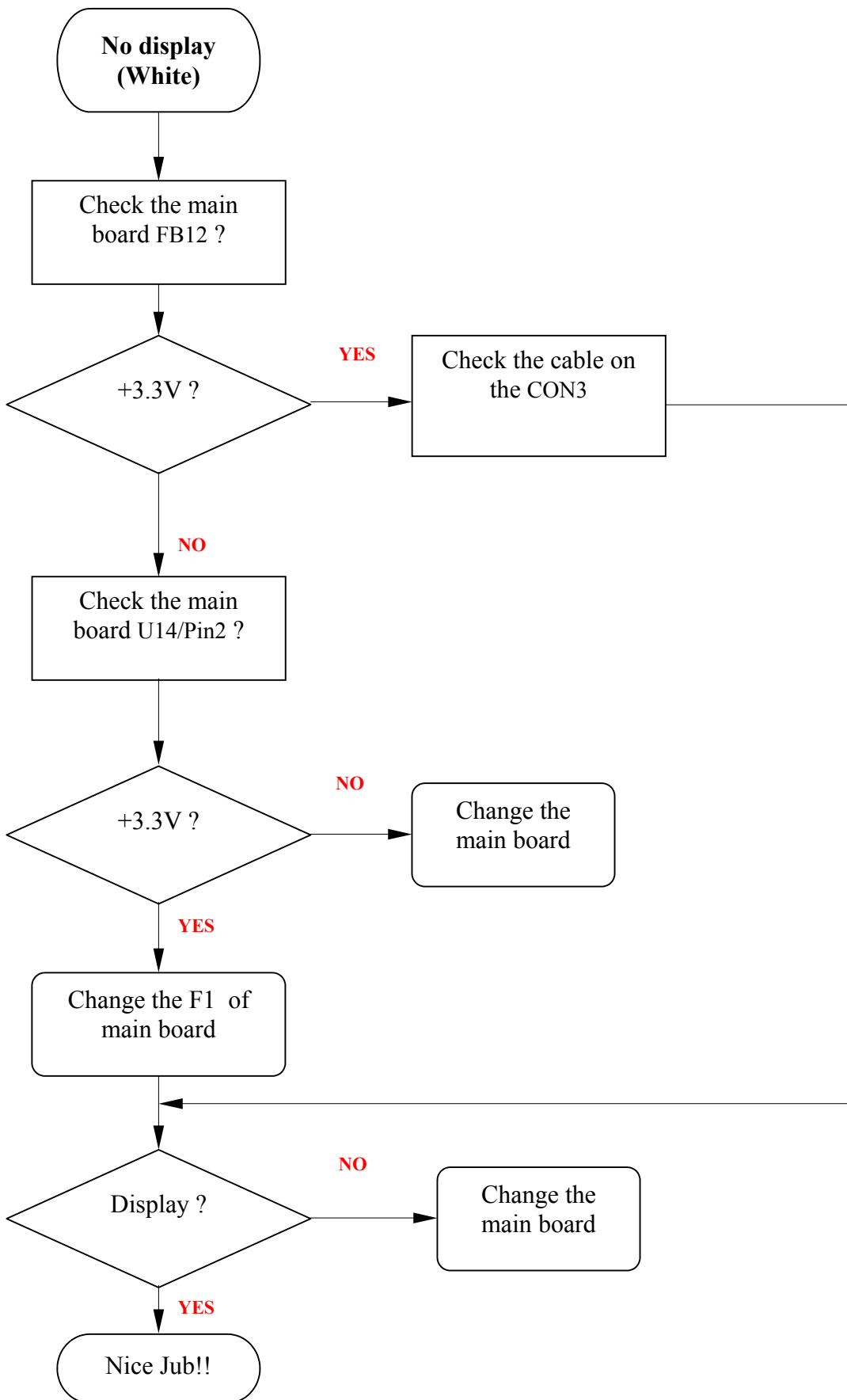


F. TROUBLE SHOOTING HINTS









G. REPLACEMENT PARTS LIST

865

Q'ty	Reference	Part	Part Order Code	Description
1	User's Manual (English)	User's Manual (English)	002-U02-0765-A	
1	Carton	Carton	005-008-0765-A	
1	Back Label		153-005-0765	
1	Poliform	(Top)	160-001-AY765	
1	Poliform	(Bottom)	160-002-AY765	
1	PE Bag	550x800x0.06mm	170-001-LCD5	For Set
1	PE Bag		170-001-AY565	For Signal Cable
1	Power Cable	1.8m	600-181-1500	
1	Stereo Audio Cable	1.8m	631-003-A011	
1	AC-DC Power Adapter	12V / 60W	846-120-E0AL-SA	
1	Polyform	For Panel Right	160-003-AY765	
1	Polyform	For Panel Left	160-004-AY765	
4	Rubber Washer	20x7x2.5mm	111-014-0200	
1	Main PCB		200-101-7002-E2	
50	C7,C10,C19,C20,C21,C23 C27,C28,C29,C33,C36,C37 C38,C41,C42,C44,C45,C47 C48,C49,C50,C51,C53,C54 C55,C56,C57,C58,C60,C61 C62,C63,C67,C68,C70,C71, C75,C77,C81,C89,C91,C94, C96,C98,C114,C123,C127, C129,C138,C139	0.1uF,25V +80-20%	385-104-032584	CHIP-C. CC0603
6	C92,C97,C105,C107,C109 C113	0.01uF,25V +-10%	382-103-032564	CHIP-C. CC0603
1	C78	5600pF,25V +-10%	382-562-032564	CHIP-C. CC0603
3	C90,C93,C95	4700pF,25V +-10%	382-472-032564	CHIP-C. CC0603
1	C115	2200pF,50V +-10%	382-222-035064	CHIP-C. CC0603
1	C88	300pF,25V +-10%	381-301-032554	CHIP-C. CC0603
1	C74	270pF,50V +-5%	381-271-035054	CHIP-C. CC0603
4	C130,C131,C132,C133	220pF,50V +-5%	381-221-035054	CHIP-C. CC0603
2	C103,C104	33pF,25V +- 5%	381-330-032554	CHIP-C. CC0603
8	C18,C24,C25,C26,C69,C106 C108,C110	20pF,25V +- 5%	381-200-032554	CHIP-C. CC0603
2	C66,c128	10pF,50V +-5%	381-100-035054	CHIP-C.
1	C59	5pF,25V +-5%	381-5r0-032554	CHIP-C. CC0603
3	C134,C135,C136	470uF ,16V +-20%	330-471-16205	MINI EC. TPMI 105C
1	C124	470uF ,25V +-20%	330-471-252B	MINI EC. TPMI 105C
2	C32,C87	220uF ,25V +-20%	330-221-252B	MINI EC. TPMI 105C
3	C17,C73.C84	100uF, 16V +-20%	330-101-16275	MINI EC. TPMI 105C
1	C76	47uF, 16V +-20%	330-470-16275	MINI EC. TPMI 105C

12	C11,C22,C43,C46,C64,C86, C99,C111C112,C125,C126, C142	10uF,25V +-20%	330-100-25275	MINI EC. TPMI 105C
1	C137	100uF, 50V +-20%	330-101-5022	MINI EC. TPMI 105C
3	C39,C83,C141	220uF ,16V +-20%	330-221-16275	MINI EC. TPMI 105C
2	C40,C80	1000uF ,6.3V +-20%	330-102-06205	MINI EC. TPMI 105C
14	FB7,FB12,FB16,FB19,FB20 FB21,FB27,FB28,R12,R40, R43,R57,R73,R74	0,+5%	281-035-0R04	SMD-R. RC0603
12	FB10,FB13,FB22,FB23,R19, R20,R23,R24,R45,R49,R68 R70	33,+5%	281-035-3304	SMD-R. RC0603
2	R50,R51	47,+5%	281-035-4704	SMD-R. RC0603
4	R9,R61,R62,R63	75,+5%	281-035-7504	SMD-R. RC0603
1	R84	100,+5%	281-035-1014	SMD-R. RC0603
2	R36,R38	220,+5%	281-035-2214	SMD-R. RC0603
1	R10	330,+5%	281-035-3314	SMD-R. RC0603
3	R3,R15,R16	510,+5%	281-035-5114	SMD-R. RC0603
2	R21,R26	1K,+5%	281-035-1024	SMD-R. RC0603
2	R27,R55	2.2K,+5%	281-035-2224	SMD-R. RC0603
5	R1,R2,R8,R78,R79	4.7K,+5%	281-035-4724	SMD-R. RC0603
2	R37,R39	8.2K,+5%	281-035-8224	SMD-R. RC0603
13	R5,R6,R7,R13,R14,R30,R31 R53,R59,R64,R66,R75,R76	10K,+5%	281-035-1034	SMD-R. RC0603
4	R80,R81,R82,R83	22K,+5%	281-035-2234	SMD-R. RC0603
7	R29,R32,R33,R34,R35,R52, R77	100K,+5%	281-035-1044	SMD-R. RC0603
2	R17,R18	1M,+5%	281-035-1054	SMD-R. RC0603
1	R54	6.8K, 1%	281-031-68014	SMD-R. RC0603
1	R56	2K, 1%	281-031-20014	SMD-R. RC0603
10	FB2,FB4,FB6,FB9,FB14 FB15,FB17,FB18,L4,L7	0,+5%	281-045-0R04	SMD-R. RC0805
1	R85	390,+5%	281-075-3904	SMD-R. RC1206
1	R71	33, 1/2W +-5%	281-3300-0256	DIP-R. (TPAI)
1	R48	WR-C-5W-0.020	232-R02-505T	DIP-R. (TPAI)
2	RP1,RP2	0	282-000-2454	SMD (8P4R)
1	U5	W78E62BP	506-178-E62BP-40	CPU IC.
1	U11	AIC1084-33CM	506-0AI-C1084	3.3V,3A,5A Regulator
1	U14	AIC1117CY-33	506-0AI-CY33	3.3V,900mA Regulator
1	U17	AIC1578	506-2AI-C1578	DC to DC IC.SMD
1	U9	24C16	506-5NM-24C16	Memory IC.SMD
1	U21	24C21	506-524-LC21	Memory IC.SMD
2	U6,U12	THC63LVDM83	506-0TH-63LM83	LVDS
1	U15	VITESSE-2	506-3VI-TE SSE-2	A/D IC
1	U20	74LCX14	506-774-LCX14	Hi Speed TTL IC
2	U2,U18	CEM9435A	518-1CE-9435	Power MOSFET.SMD
1	U10	MASCOT II	506-SMA-SCOT-2	Scaler IC.

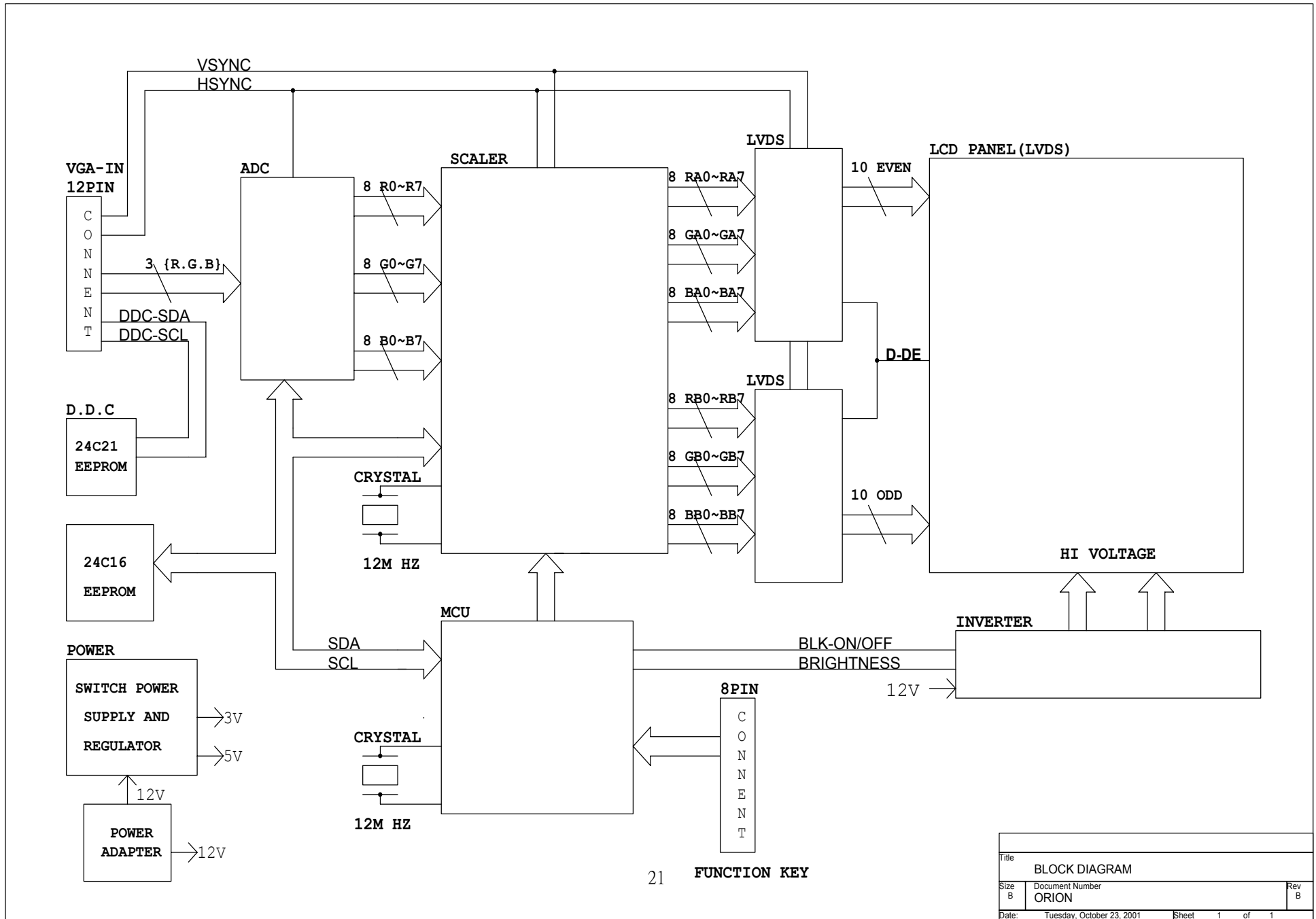
1	U8	MCP810	506-0MC-P810	Reset IC
1	D9	TL431CLP	520-007-L431	
1	D5	SB340	520-010-SB340	Diode 3A (TAPI)
1	P1	PLCC44	481-LCC-0440	IC. Socket SMD
1	U19	PT2257-S	504-A00-2257-S	Audio Vol IC.
1	U16	TDA7268	504-A00-7268	Audio AMP IC.
1	D10,D11	RS1B	528-400-RS1B	Diode 4A(SMD)
1	Q10	BAT54C	528-2BA-T54C	Diode SOT23 (SMD)
1	D12	9.1VZD	528-ASZ-5239B	Zener (SOD123)
1	D8	18VZD	528-ASZ-5248B	Zener (SOD123)
5	Q5,Q6,Q7,Q8,Q9	1608SGX	528-500-1608SGX	SMD ESD
3	Q2,Q3,Q4	2N3904	518-02N-3904	Tr. (SMD)
1	Q1	2N3906	518-02N-3906	Tr. (SMD)
2	Y1,Y2	12MHz	531-120-49US	Crystal
1	F1	24V 5A	558-325-5000	SMD Fuse
1	Signal Cable	180cm	600-181-15GM-1	
1	CON1	JST-B3P-PH-K-S	630-003-1009	JST 2.0mm Header
1	CON2	JST-S6B-PH-K-S	630-006-1008	JST 2.0mm Header
1	CON4	JST-S8B-ZR	630-008-C001	JST 1.5mm Header
1	CON6	D-Sub 15F	630-015-1001	D-Sub Connector 15Pin
1	CON3	FTC-W30P	630-030-B000	1.25mm Header
1	L8	TTC1709330-MB	745-330-2072	Choke 5A 33uH
1	T1	JBT0385-100805-4	745-050-3072	Linearity Coil 5uH
7	FB1,FB3,FB5,FB8,FB11,FB29,FB30	MLB-201209-0080P-N2	780-104-2600	SMD Bead LC0805
2	L5,L6	BK-2125-HS102	780-104-1020	SMD Bead LC0805
3	FB24,FB25,FB26	FCM-2012C-400T07	780-104-4000	SMD Bead LC0805
1	L12	HI-2220P171R-00	780-116-1710	SMD Bead LC2220
1	J7	Heat Sink	120-001-M780	Heat Sink A1100
2	J1,J2	Base 2S Pitch 2.00mm	630-002-1008	JWT A2001
1	CON7	Base 13S Pitch 2.00mm	630-013-1009	JWT A2001
1	CON5	DC Power jack	409-001-0201	
1	Inverter		849-400-0004	
1	TCO99 Decelaration	All SeriesTCO99	002-001-TCO9	
1	Label	Carton Label	003-002-0848	110*50m/m
1	Front Panel	Front Panel	151-101-AT765-A	
1	Base Cover	Base Cover	123-004-AY765	
1	Shield Cover	Shield Cover	123-005-AY765	
1	LCD Frame	LCD Frame	123-008-AY765-B	
1	Base Weight		126-001-AY565-A	
1	LCD Hinge	Left (Down)	126-004-AY765	
1	LCD Hinge	Left (Up)	126-005-AY765	
1	LCD Hinge	Right (Up)	126-006-AY765	
1	LCD Hinge	Left (Down)	126-007-AY765	

+20%

1	D Conner 3x12mm		131-030-212D	
1	Rear Cover	Rear Cover	151-001-AY765-B	
1	Power Lens	Power Lens	154-004-AY765-A	
1	Cover Code	Cover Code	154-004-AY565	
1	Cover OSD	Cover OSD	154-001-AY565-A	
1	Knob OSD	Knob OSD	154-002-AY565-A	
1	Stand Frant Cover	Stand Frant Cover	151-701-AY565	
1	Stand Rear Cover	Stand Rear Cover	151-702-AY565	
1	Stand Base	Stand Base	151-703-AY565	
1	Stand Base Cover	Stand Base Cover	151-704-AY565	
1	Protect Cap	Protect Cap	154-007-AY765	
1	Decoration net L		154-008-AY765L-B	
1	Decoration net R		154-008-AY765R-B	
5	S1,S2,S3,S4,S5	Tact Switch	401-170-0200	
1	D1	LED LT5302-23 DIP	520-005-5302	
1	J1	JST 1.5mm Header S8B-ZR	630-008-C001	
1	Key board PCB		200-701-AY765	
1	J2	Base 6Pin JWT A2001 Pitch :2.0mm	630-006-1009	
1	J1	Phone jack SCJ-374R5x2	409-005-1101	
1	Phone Jack PCB		200-K01-AU01	
1	Bracket Rotate R		121-002-AY565	
1	Rear Bracket		121-002-AY765-B	
1	Bracket Rotate L		121-003-AY565	
1	Bracket	For Audio PCB	121-005-AY765	
1	Screw	R/W 3X6mm ISO	104-006-3032	
4	Screw	M 3x8mm ISO	105-008-3032	Stand Bracket base+ Hing*4 Hing+stand F/C*3
18	Screw	R 3x8mm TP1	100-008-3012	Speaker*4 OSD Knobcover+R/C*2 LCD frame+R/C*12
4	Screw	M 3x8mm ISO	107-008-3033	F/C+R/C*4
2	Screw	L 3x8mm TP4	107-008-3072	Bracket stand base+stand base*2
7	Screw	3x10mm TP4	107-010-3073	Stand base+stand base cover*5 Stand F/C+Stand R/C*2
4	Screw	B/W-S M3x10mm ISO	107-S10-4032	Bracket rotateion R/C+Hing*4
10	Screw	R 3x6mm TP+ISO	100-006-3062	Rear bracket+Frame

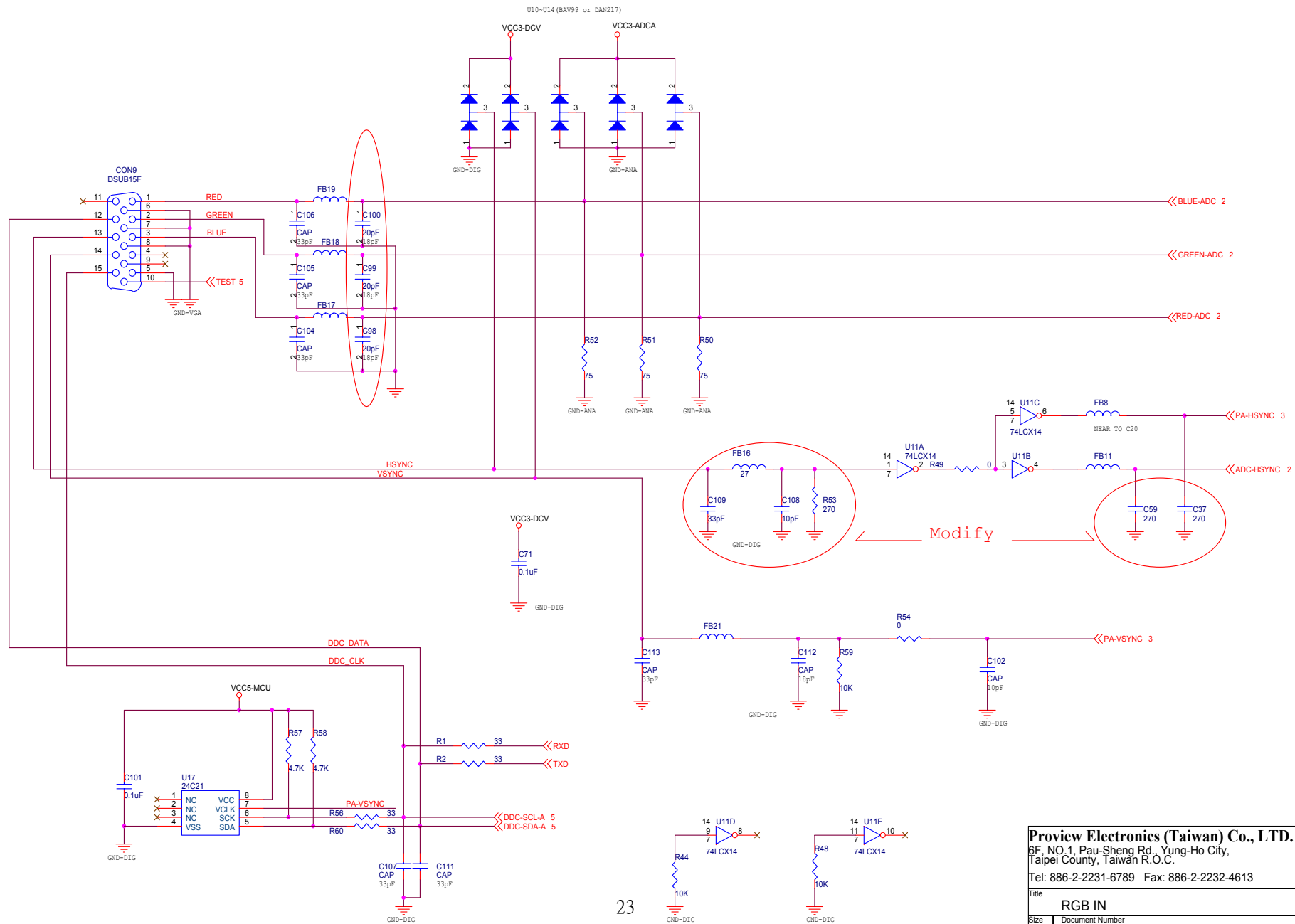
Memu

H. BLOCK DIAGRAM



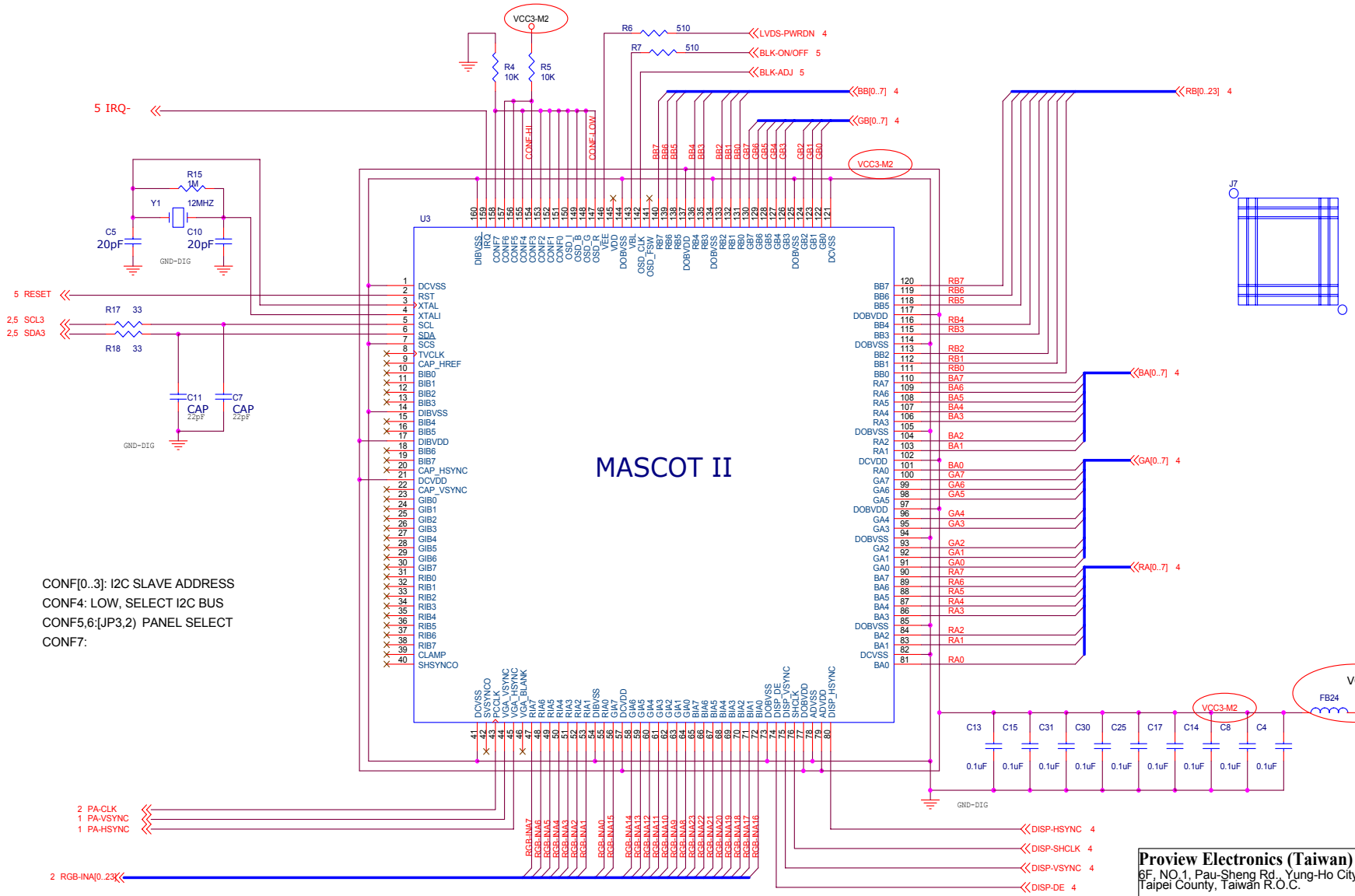
Title		
BLOCK DIAGRAM		
Size	Document Number	Rev
B	ORION	B
Date:	Tuesday, October 23, 2001	Sheet 1 of 1

I. SCHEMATIC DIAGRAM



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RGB IN		
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Custom	Orion_Q_200-101-7002	2.B
Date:	Friday, August 10, 2001	Sheet 1 of 6



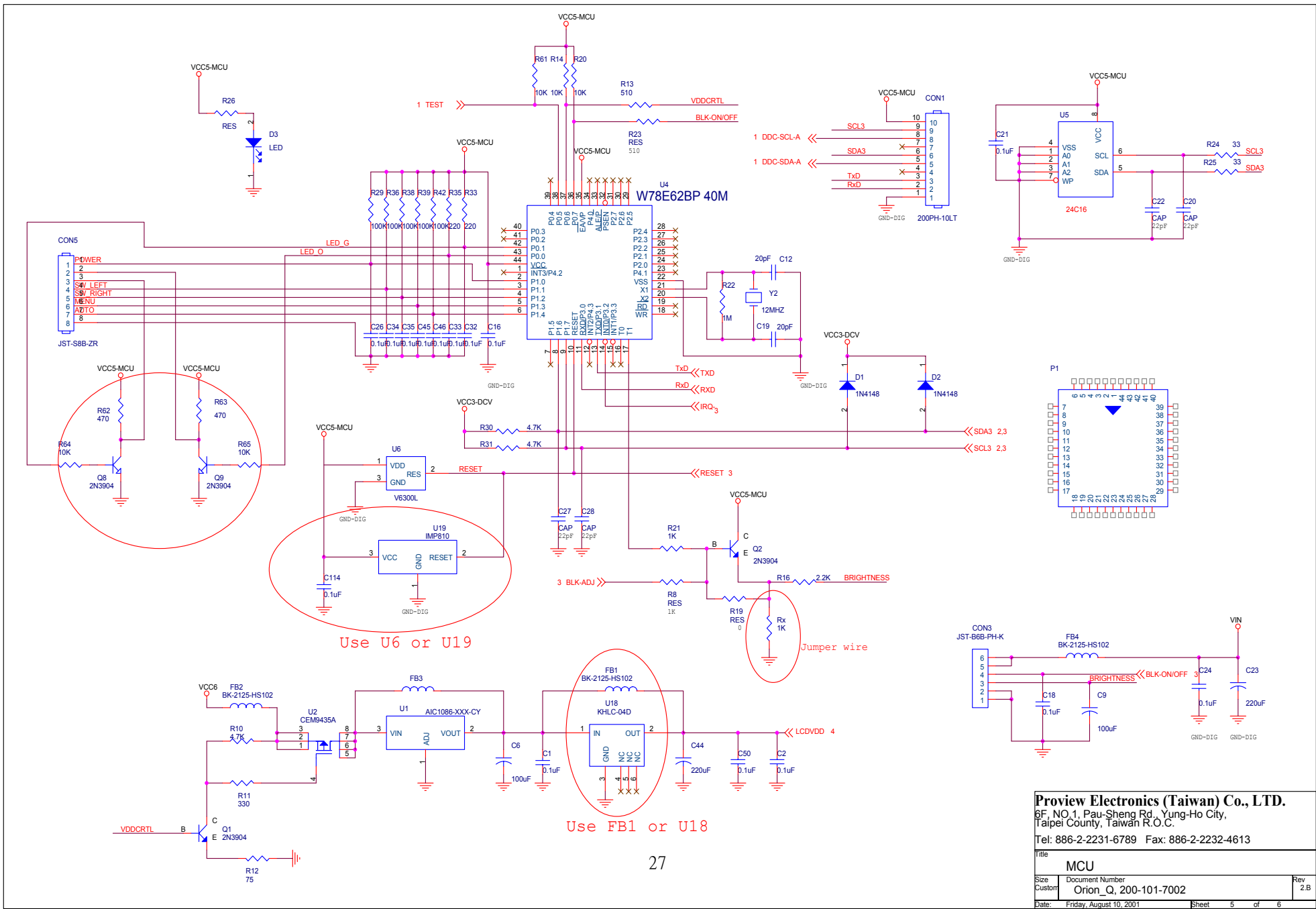
CONF[0..3]: I2C SLAVE ADDRESS
 CONF4: LOW, SELECT I2C BUS
 CONF5,6:[JP3,2] PANEL SELECT
 CONF7:

2 PA-CLOCK
 1 PA-VSYNC
 1 PA-HSYNC
 2 RGB-INA[0..23]

MASCOT II

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