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LCD TV

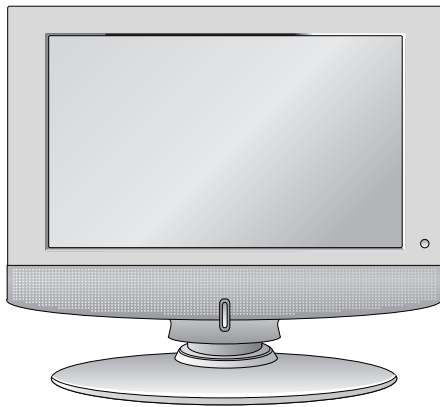
SERVICE MANUAL

CHASSIS : CL-81

MODEL : 20LC1R-ZG

CAUTION

BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



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SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by $\triangle$ in the Schematic Diagram and Replacement Parts List.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer** should always be used during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

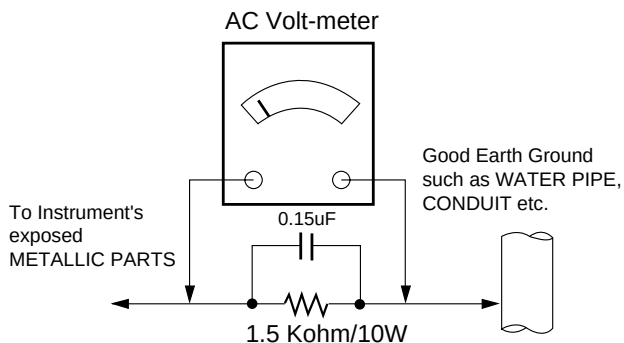
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which corresponds to 0.5mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the **SAFETY PRECAUTIONS** on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
 - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
 - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
 - c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.**CAUTION:** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc".

3. Do not spray chemicals on or near this receiver or any of its assemblies.

4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)

CAUTION: This is a flammable mixture.

Unless specified otherwise in this service manual, lubrication of contacts is not required.

5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead. Always remove the test receiver ground lead last.

8. Use with this receiver only the test fixtures specified in this service manual.

CAUTION: Do not connect the test fixture ground strap to any heat sink in this receiver.

Electrostatically Sensitive (ES) Devices

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

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to

prevent potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, 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 bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range or 500°F to 600°F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a mall wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following unsoldering technique

- a. Allow the soldering iron tip to reach normal temperature. (500°F to 600°F)
- b. Heat the component lead until the solder melts.
- c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
CAUTION: Work quickly to avoid overheating the circuitboard printed foil.

6. Use the following soldering technique.

- a. Allow the soldering iron tip to reach a normal temperature (500°F to 600°F)
- b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
- c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
CAUTION: Work quickly to avoid overheating the circuit board printed foil.
- d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Remove/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush.
(It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor

Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output, Transistor Device

Removal/Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor

Removal/Replacement

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.

3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife.
Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.
Carefully crimp and solder the connections.
CAUTION: Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

DISASSEMBLY



#1



#2 Detached stand assy (Remove the screws)



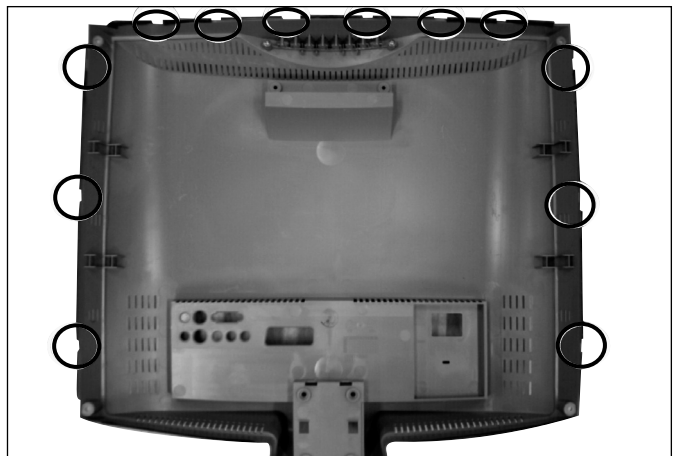
#3 Disassembly stand assy



#4 Detached Backcover (Remove the screw)



#5 Open the Backcover's latch with jig



#6 Unlock latch between Cabinet and Backcover

SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

1. Application range

This specification is applied to CL-81 chassis.

2. Requirement for Test

Testing for standard of each part must be followed in below condition.

- (1) Temperature: 25°C ± 2°C
- (2) Humidity: 65% ± 10%
- (3) Power: Standard input voltage (AC 100-240V, 50/60Hz)
- (4) Measurement must be performed after heat-run more than 30min.
- (5) Adjusting standard for this chassis is followed a special standard.

3.General Specification

No.	Item		Specification	Remark
1	Type		TFT Color LCD Module	LPL
	ActiveDisplay Area		20.1 inches(510.54mm) diagonal	
	Pixel Pitch [mm]		0.2125mm(H)x0.6375mm(V)xRGB	
	Electrical Interface		TTL	
	Color Depth		8BIT, 16,777,216 colors	
	Size [mm]		432(H) x 331.5(V) x 25(D)	
	Surface Treatment		Anti-Glare, Hard Coating(3H)	
	Operating Mode		Normally Black	
	Back light Unit		6 CCFL(6 lamps)	
	R/T	Typ.	25ms(R.T.:12ms + F.T.:13ms)	

4. Mechanical Specification

No.	Item		Content			Remark
1	Product Dimension		Width(W)	Lengh(D)	Height(H)	
		Before Packing	492.4	272.8	483.3	
		After Packing	574.0	225.0	627.0	
2	Product	Only SET	8.7Kg			
	Weight	With BOX	11.1Kg			

5. Reference table-Function

No.	Item	Specification	Remark
1	Teletext	TOP, FLOF	TOP(option)
2	REMOCON	NEC Code	PAL
3	AV Input	1	Rear
4	S-Video Input	1	Rear
5	Component Input	X	
6	PERI TV Connector	Full SCART : 1	Rear
7	Ear-phone output	1	
8	2 Carrier Stereo	BG, DK	
9	NICAM Stereo	BG, I, LL'	
10	2 Carrier Daul	BG, DK	
11	NICAM Daul	BG, I, LL'	
12	DW(Double Window) Mode	X	
13	MW(Multi Window) Mode	X	
14	Film Mode	X	
15	Noise Reduction	X	
16	Progressive Scan	O	
17	Motion Detection	X	
18	SRS WOW	X	
19	Swivel Speaker	X	
20	EZ-pip	X	
21	ARC	X	
22	DRP	X	
23	DCDI	X	
24	HDCP	X	

6.Optical Character

No.	Item	Specification				Remark	
			Min	Typ	Max		
1	Viewing Angle <CR≥10>	R/L, U/D	85/85 85/85	88/88 88/88			
2	Luminance	Luminance(cd/ m ²)	380	450			
		Variation			1.3		
3	Contrast Ratio	CR	280	350		All White/All Black	
4	CIE Color Coordinates	WHITE (Warm)	Wx Wy	0.283 0.299	0.313 0.329	0.343 0.359	In AV Input PSM : Dynamic White (100 IRE)
		WHITE (Normal)	Wx Wy	0.253 0.268	0.283 0.298	0.313 0.328	
		WHITE (Cool)	Wx Wy	0.244 0.256	0.274 0.286	0.304 0.316	

7. Outgoing Condition

No	Item			Condition	Remark
1	Power			Off	
2	Volume Level			30	
3	Main Picture Input			TV	
4	Main Last Channel			Pr 01	
5	Mute			Off	
6	Station	Auto Program			
		Manual Program			
		Program Edit			
		Favorite Program		None	
7	Picture	PSM		Dynamic	
		CSM		Normal	
		Dynamic	Contrast	100	
			Brightness	50	
			Colour	70	
			Sharpness	50	
			Tint	0	NTSC OPTION
8	Sound	SSM		Flat	
		AVL		Off	
		Balance		0	
9	Special	Input		TV	
		Child Lock		Off	
		Power Indicator		On	
		Language		English(Area Management)	
10	Time	Clock		-- : --	
		Off Time		-- : -- Off	
		On Time		-- : -- Pr. 1 Vol. 30 Off	
		Auto Sleep		Off	

8.Engineering Specification

8-1.General Specification

No.	Item	Specification			Remark
1	Power Supply	H/V Sync	Video	Power Consumption	LED Color
	Normal	On/On	Active	≤ 65W	BLUE
	Stand By	Off/Off	Off	≤ 1W(110V) ≤ 1W(220V)	ORANGE
	Cut-off Switch off	-	-	0W	OFF
	ITEM	Specification			Remark
2	D-SUB Pin Configuraion	1: RED 3: Blue 5: S.T(GND) 7: Green GND 9: N.C 11: ID0(GND) 13: H-Sync 15: SCL		2: Green 4: ID2(GND) 6: RED GND 8: Blue GND 10: D-GND 12: SDA 14: V-Sync Shell: GND	For SVC Only
3	Control Function	1) Contrast/Brightness/Colour/Sharpness/(Tint) 2) Power On/Off, Input select, Menu, OK Volume(◀, ▶), PR(▲, ▼)			

9. Preset CH information

		PIF[MHz]	SYSTEM	Video	Sound		TXT	NAME	
					System	Mode			
LGE KUMI	PR 0	45.25	PAL-BG	PHILIPS		MONO		C 01	
	PR 1	575.25	SECAM-DK	DIGITAL		DUAL		C 34	
	PR 2	175.25	PAL-BG	PHILIPS		STEREO	FLOF	C 05	
	PR 3	231.25	PAL-I	FUBK		MONO		S 11	
	PR 4	675.25	NTSC-M	DIGITAL		MONO		C 48	
	PR 5	62.25	SECAM-BG	PHILIPS		DUAL		C 04	
	PR 6	189.25	PAL-BG	Crosshatch	NICAM	DUAL	FLOF	C 07	
	PR 7	703.25	PAL-BG	RGB, WHITE		MONO		C 50	
	PR 8	719.25	PAL-BG	MATRIX C/B	NICAM	STEREO		C 52	
	PR 9	631.25	PAL-I	PHILIPS	NICAM	STEREO		C 41	
	PR 10	807.25	PAL-I	Crosshatch	NICAM	STEREO		C 48	
	PR 11	102.25	PAL-BG	RED		MONO		BLN2	
	PR 12	55.75	PAL-L	Crosshatch		MONO		C 02	
	PR 13	152.75	PAL-L	PHILIPS	NICAM	DUAL		S 07	
	PR 14	591.25	PAL-L	Colorbar	NICAM	STEREO		C 48	
LGEMA	PR 31	175.25	PAL-B	Crosshatch+Circle	NICAM	DUAL	FLOF	C 05	
	PR 32	711.25	PAL-G	DIGITAL	NICAM	STEREO	FLOF	C 51	
	PR 33	631.25	PAL-I	Crosshatch	NICAM	STEREO	FLOF	C 41	
	PR 34	93.25	SECAM-D	DIGITAL		MONO		C 05	
	PR 35	62.25	PAL-B	Crosshatch	A2	STEREO		C 04	
	PR 36	551.25	PAL-G	Colorbar	A2	DUAL	TOP	C 31	
	PR 37	471.25	PAL-I	DIGITAL		STEREO	FLOF	C 21	
	PR 38	855.25	PAL-I	DIGITAL		MONO	FLOF	C 69	
	PR 39	687.25	NTSC-M	Crosshatch+Circle		MONO		C 50	
	PR 40	200.25	SECAM-L	DIGITAL		MONO		C 08	
	PR 41	663.25	SECAM-L	DIGITAL	NICAM	DUAL		C 45	
	PR 42	503.25	PAL-B	Crosshatch(16:9)		MONO	FLOF	C 25	
	PR 43	687.25	NTSC-M	DEM+Circle		MONO		C 50	
	PR 44	189.25	PAL-B			STEREO		C 07	
	PR 45	327.25	PAL-D		A2	STEREO	FLOF	S 24	
	PR 46	615.25	PAL-B		NICAM	STEREO	FLOF	C 39	
	LGEWA	PR 61	45.25	PAL-BG	Monoscope		MONO	FLOF	C 01
		PR 62	575.25	PAL-DK	Monoscope	NICAM	STEREO	FLOF	C 34
PR 63		175.25	PAL-BG	SMPTE		MONO		C 04	
PR 64		231.25	PAL-I	Colorbar	NICAM	DUAL		S 11	
PR 65		62.25	PAL-BG	White Raster		MONO		C 04	
PR 66		189.25	SECAM-DK	Monoscope		MONO	FLOF	C 07	
PR 67		703.25	SECAM-DK	White Raster		MONO		C 50	
PR 68		719.25	PAL-BG	Crosshatch+Circle		MONO		C 52	
PR 69		591.25	SECAM-L	Colorbar	NICAM	STEREO		C 36	
LGENT	PR81	67.25	NTSC	Color Bar	400Hz		TXT, V-CHIP	US-4	
	PR82	211.25		Philips	1Khz			US-13	
	PR83	471.25		Monoscope	Sweep			US-14	
	PR84	175.25	PAL-B/G	Philips	1Khz			E-5	
	PR85	503.25		Color Bar(2)	Ger,Stereo 1K,3Khz		FLOF	E-25	
	PR86	623.25		Monoscope	Sweep			G-40	
	PR87	49.75	SECAM D/K	Color Bar(2)	400Hz			D-1(CIS)	
	PR88	200.25	PAL-D/K	Color Bar	Sweep			D-10(China 10)	
	PR89	695.25		Philips	CHI Dual 1K, 3Khz		FLOF	K-36	

ADJUSTMENT INSTRUCTION

1. Application

This document is applied to 20.1" LCD TV which is manufactured in Monitor Factory or is produced on the basis of this data.

2. Designation

- 2.1 The adjustment is according to the order which is designated and which must be followed, according to the plan which can be changed only on agreeing.
- 2.2. Power Adjustment : Free Voltage
- 2.3. Magnetic Field Condition: Nil.
- 2.4. Input signal Unit : Product Specification Standard
- 2.5. Reserve after operation : Above 30 Minutes
- 2.6. Adjustment equipments : Pattern Generator (MSPG-925L or Equivalent), DDC Adjustment Jig equipment, SVC remote controller

3. Adjustment

In order to enter to **IIC_SW**, press IN-START key by using SVC remote controller and press VOL+ at 'ETC', after then, locate menu bar on '**IIC_SW**' menu and change 0 or 1 by using VOL+ or VOL- Key.

- **IIC_SW** "1" : Factory default (Shipping condition), DDC Communications(DDC2B)
- **IIC_SW** "0" : ADC calibration with auto adjustment equipment.

***Menu(Local Key) + Menu(Remote controller: 6710T00022D) => Enter SVC Mode**

3.1 Board Assembly line process

The machine can be adjusted by itself automatically but even for self -adjustment it needs someone to operate it.

3.1.1 ISP Process ; UOC file (Main board check process)

- At first, APC after manual inserting and inspection. And ISP needs to check main board Ass'y.

3.1.1.1 Required Equipment

- JIG for ISP or (ISP JIG for SVC and LIPS)
- PC that is installed with "WISP" program.
- Control + Power LED PCB Ass'y

3.1.1.2 ISP Sequence

- 1) Connect main board with JIG for ISP
- 2) Execute "WISP" Program.
- 3) Compare UOC version with version of hex file.
- 4) Push "Browse..." button and select hex file.
- 5) Push " Auto Execute" button.
- 6) Occur an Error, try again and again. 2)~5)

3.1.2 ADC Process (Board Adjustment line process)

1) Auto Gain/Offset Adjustment

- Convert to AV in Input-Mode
- Signal equipment displays 0.7V, 16 Step Gray pattern.
(Model:202, Pattern: 29 at MSPG925L)
 - Output Voltage : 700 mVp-p
 - Impress Resolution **576i and gray pattern that left & right is black and center is white signal** which follows in the MSPG925L.
- Adjust by commanding AUTO_COLOR_ADJUST (0xF1) 0x00 0x00 instruction.

2) Confirmation : Adjustment process

- We confirm whether "0x01" address of EEPROM "0xA0" is "0xAA" or not.
- If "0x01" address of EEPROM "0xA0" isn't "0xAA", we adjust once more in adjustment line by adjust method of 1).
- We can confirm the ADC values from "0x0C~0x11" addresses in a page "0xA0"

3.1.3 DCXO Adjustment

3.1.3.1 DCXO Adjustment :

- Convert to AV in Input-Mode
- Signal equipment displays 0.7V, 8 Step color pattern.
(Model:202, Pattern: 38 at MSPG925L)
 - Output Voltage : 700 mVp-p
 - Impress Resolution 576i and Color pattern which follows in the MSPG925L.
- Adjust by commanding AUTO_DCXO (0xFC) 0x00 0x00 instruction.

* Caution*

If DDC CMD do n't work, please check below.

1. Enter SVC menu by SVC Remote controller
2. Enter "ETC" menu

Check please, **IIC_SW** is "0" or "1".

- **IIC_SW** "0" : ADC calibration with auto adjustment equipment..

- **IIC_SW** "1" : Factory default (Shipping condition), DDC Communications(DDC2B).

3.1.4 Function Check

IIC_SW should set to "1"

- Check DDC communications (DDC2B)
- Check display and sound (cf. work instructions)
- Check Input and Signal items.

1. TV
2. AV1 (SCART)
3. AV2 (CVBS/ S-Video)
4. Speaker & H/P Output

****After Fuction Check , IIC_SW should set to "0"**

3.2 Total Assembly line process

3.2.1 Adjustment Preparation

IIC_SW should set to "0"

- Above 30 minutes H/run in RF no signal

3.2.2 Confirmation of Luminance

- Set Statement
Input : AV2
PSM : Dynamic
CSM : Normal
- Signal equipment displays
Output Voltage : 700 mVp-p
Output Mode : Full White pattern
- Confirm whether luminance is over 350 cd/m2 or not

3.2.3 Confirmation of Color Coordinate

- Input Full White Pattern (AV2-CVBS)
- Set CSM : Normal (9300K)
- Confirm whether $x=0.283\pm0.03$, $y=0.298\pm0.03$ or not

*** After Confirming color coordinate and luminance, IIC_SW should set to "1"**

3.2.4 Other quality

- Confirm that each items satisfy under standard condition that was written product spec.
- Confirm Video and Sound at each source

1) AV

- Select input AV1 and whether picture is displayed or not
: SCART output displayed or not
- Select input AV2 (CVBS) and whether picture is displayed or not
- Select input AV2 (S-video) and whether picture is displayed or not

2) TV

- Select input TV and check below item

1) In Gumi Factory

- C05 (E05) - TELETEXT Function Check
;(Applicable to the model that has Teletext code set-up item in Product spec)
- C07 (E07) - Nicam DUAL Check
- C 52 (E52) - Nicam Stereo Check

Preset CH information

3.2.5 Stand by operation confirmation :

- Check if Power LED Color and Power Consumption operates as standard.
- Measurement Condition : 230V@ 50Hz (Analog)

3.3 Option configuration

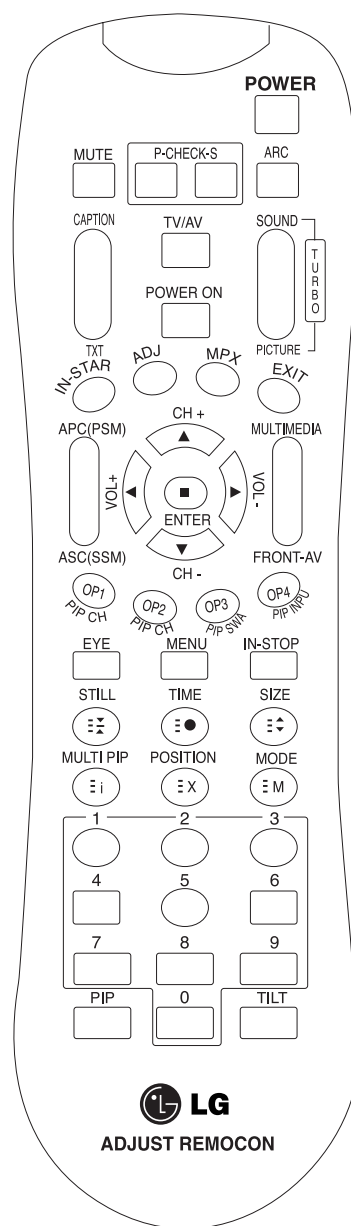
- Press IN-START Key by using the SVC Remote Controller and Press option value, after then, configure the option data that is written in the product spec and press MENU key.
- After option configuration is complete, Press VOL+ at all reset menu
- Amber LED is blink. And then Automatically turn off. . (Must not AC OFF during blink)

3.4 OPTION DATA SETTING(SVC OSD SETTING)

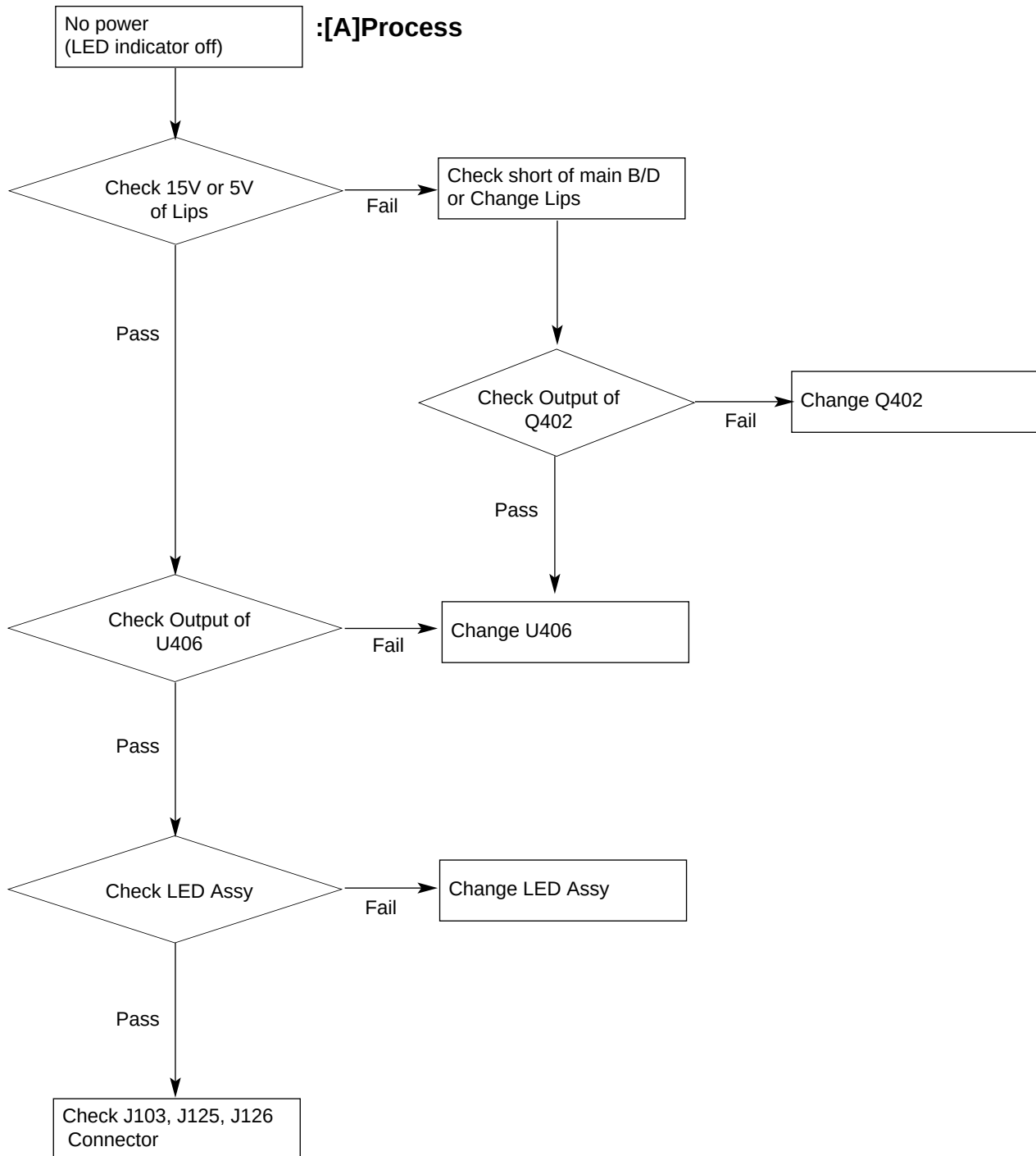
No	Item	Condition	Remark
Option1			
1	ACMS	Yes	
2	TEXT	FLOF	TOP / FLOF
3	CH+AU	NO	NO : Except below area YES : China, Australia
4	AGC-L	NO	
Option2			
1	A2 ST	NO	
2	I II SAVE	NO	
3	V-Curve		
Option3			
1	Default Lang	0	According to Suffix
2	Lang Group	1	1: English /Germany/France/Italy/Spain /Nederland/Sweden/Norway/Denmark /Finland/Portugal/Romania/Poland /Hungary/Czech/Russia 2: English / CHINA 3: English /ARAB 4: English /PARSI
3	TXT Lang	0	0 : West EU (E,GER,SWE,ITA,FRE,SPA,TUR) 1 : East EU (POL,GER,ESTO,SLOV,CHEC,RUMA) 2 : Cyrillic (POL,GER,ESTO,LETT,RUSS,SLOV) 3 : Cyrillic2 (POL,GER,SWE/HUNG,RUSS,CHEC,Slov,ESTo) 4 : Arabic (E,FREN,TURK,ARAB)
Option4			
1	2 hour Off Opt	Yes	
2	Navigation Key	No	
3	Favorite key	No	

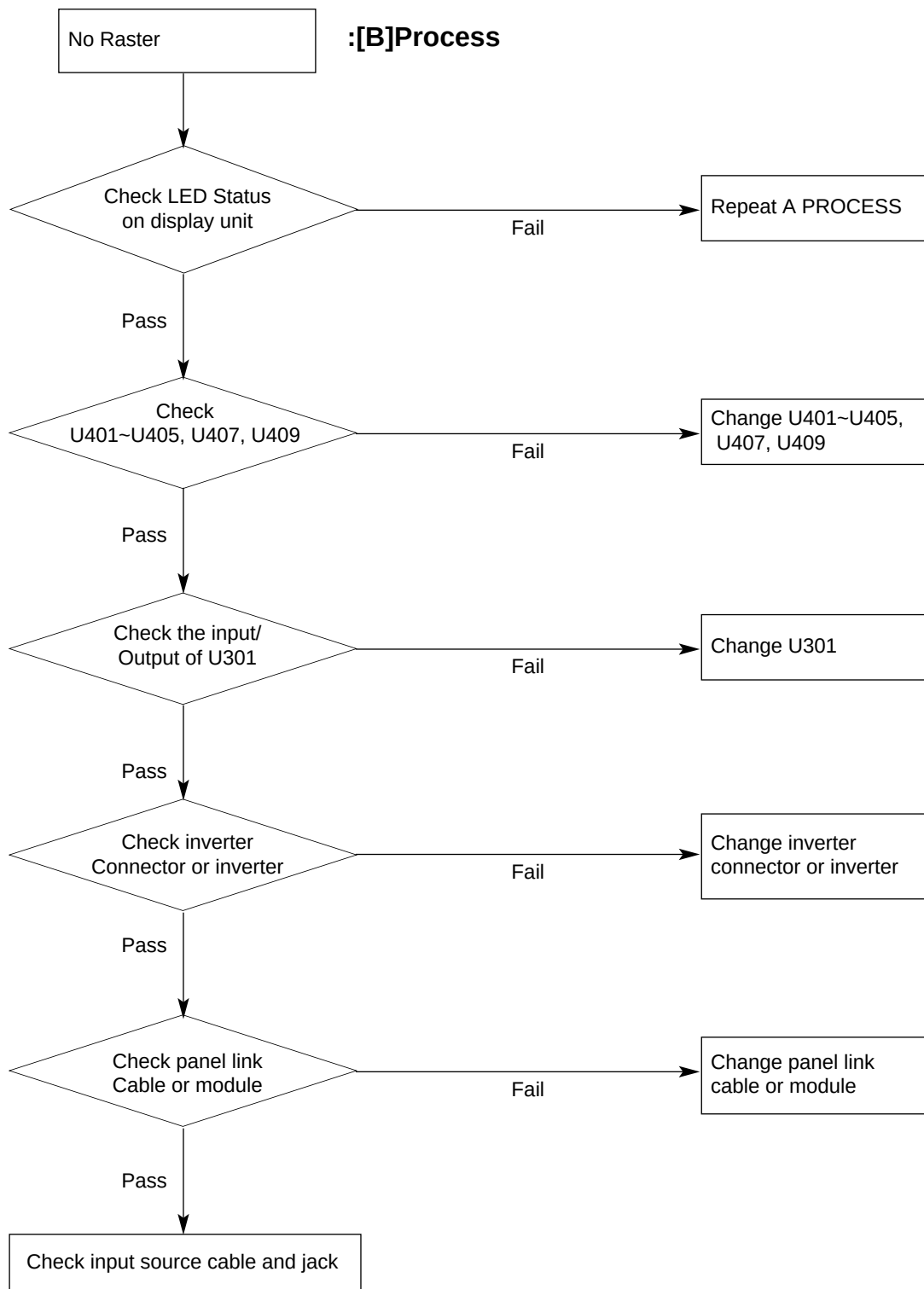
SVC REMOCON

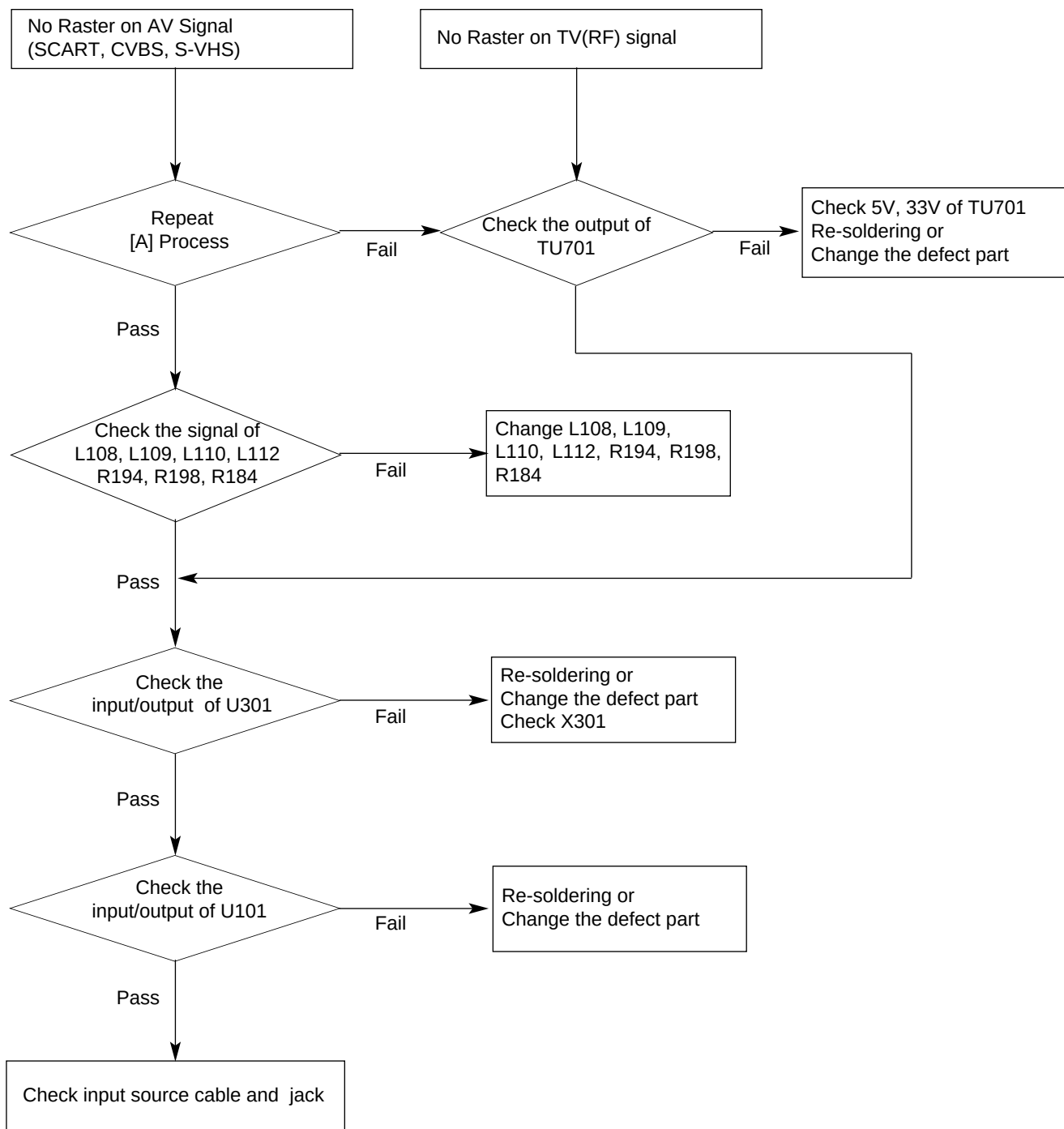
NO.	KEY	FUNTION	REMARK
1	POWER	To turn the TV on or off	
2	MUTE	To activate the mute function.	
3	P-CHECK	To check TV screen image easily.	Shortcut keys
4	S-CHECK	To check TV screen sound easily	Shortcut keys
5	ARC(23inch)	To select size of the main screen (Auto, 4:3, 16:9, 14:3, Zoom, Cinema Zoom)	Shortcut keys
6	CAPTION	Switch to closed caption broadcasting	
7	TXT	To toggle on/off the teletext mode	
8	TV/AV	External input	
9	IN-START	To enter adjustment mode when manufacturing the TV sets. In-Start→Vol±→Auto ADC→Vol±→W/B adjustment→ Exit two times(Adjustment completed)	Use the AV key to enter the screen W/B adjustment mode.
10	MPX	To select the multiple sound mode (Mono, Stereo or MPEG, DOLBY, Digital)	
11	EXIT	To release the adjustment mode	
12	APC(PSM)	To easily adjust the screen according to surrounding brightness	
13	ASC(SSM)	To easily adjust sound according to the program type	
14	MULTIMEDIA	External input	Shortcut keys
15	CH ±	To move channel up/down or to select a function displayed on the screen.	
16	VOL ±	To adjust the volume or accurately control a specific function.	
17	ENTER	To set a specific function or complete setting.	
18	CH-(OP1)	To use as a red key in the teletext mode	
19	CH+(OP2)	To use as a green key in the teletext mode	
20	SWAP(OP3)	To use as a yellow key in the teletext mode	
21	INPUT(OP4)	To use as a blue key in the teletext mode	
22	MENU	To select the functions such as video, voice, function or channel.	
23	IN-STOP	To set the delivery condition status after manufacturing the TV set.	
24	HOLD	Used as a hold key in the teletext mode (Page updating is stopped.)	
25	TIME	Displays the teletext time in the normal mode Enables to select the sub code in the teletext mode	
26	SIZE	Used as the size key in the teletext mode	
27	INDEX	Used as the index key in the teletext mode (Top index will be displayed if it is the top text.)	
28	UPDATE	Used as the update key in the teletext mode (Text will be displayed if the current page is updated.)	
29	MODE	Used as Mode in the teletext mode	
30	TILT	To set IIC SW "0" or "1" in the adjustment mode	
31	0-9	To manually select the channel.	

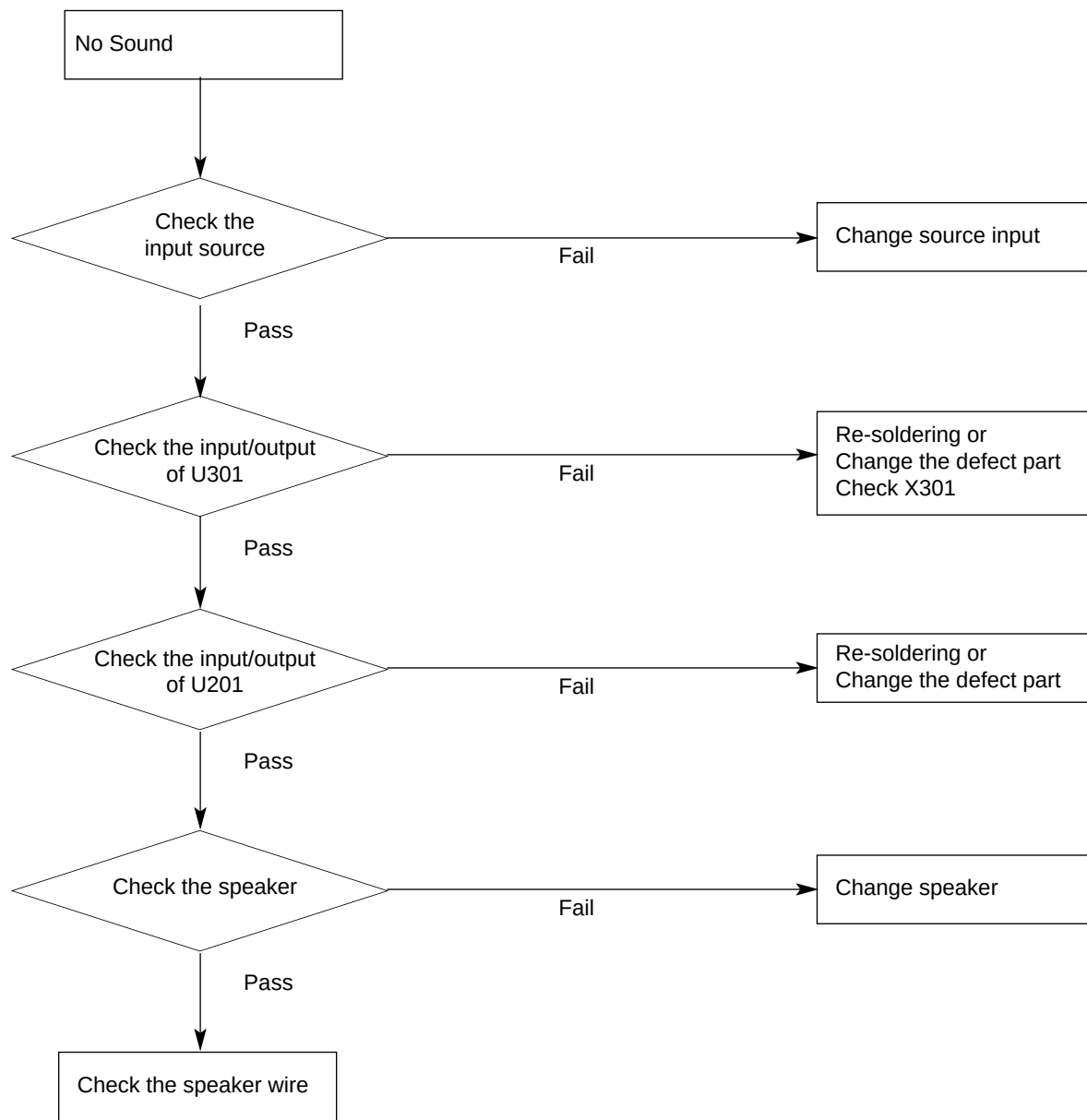


TROUBLESHOOTING

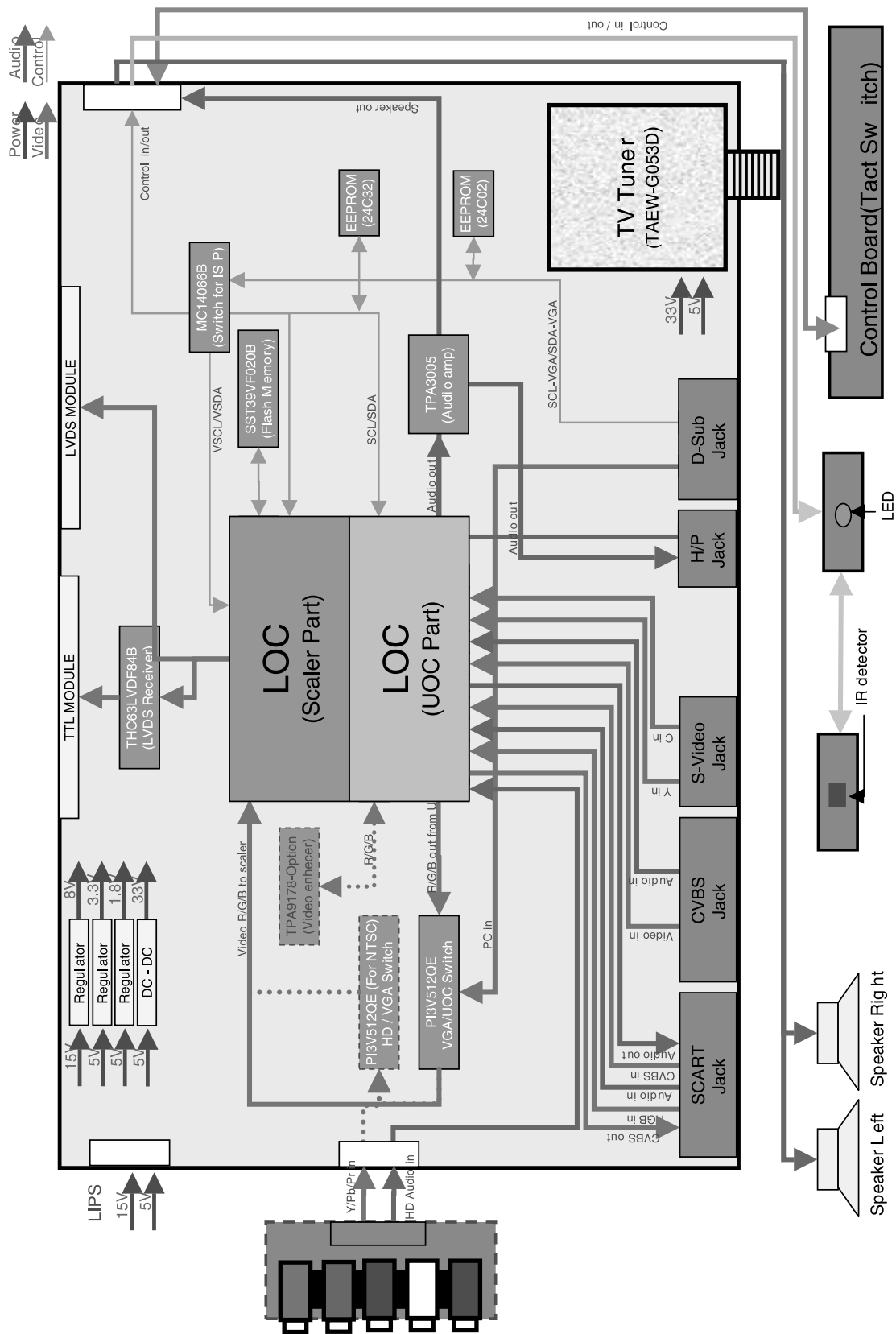








BLOCK DIAGRAM



BLOCK DIAGRAM DESCRIPTION

Power Supply Block (LIPS)

This Block Generates DC Voltage (5V,15V) to Main Control system from AC Power (100-240 V, 50/60 Hz, 1.0A)

Also it has the inverter function that converts input voltage to AC Rms value for the LCD lamp.

DC/DC Converter block

DC/DC Converter convert the input 5V,15V to proper 3.3V, 5V, 8V, 12V for Main control system.

For shooting heat trouble, we use the DC/DC converting IC

Audio Amplifier

This block is composed of TPA3005D2 and peripheral device.

The function of the audio amplifier is that to amplify audio L / R signal transmitted from audio decoder. The audio signal is amplified according to pre-defined DC volume control curve.

Audio / Video / IF Decoder / Scaler

This block is composed of LOC1 and peripheral devices.

1) Video Decoder

This Block Selects input Video signals (like CVBS, Y/C, SCART RGB) and output RGB signal.

On decoding, We can control signal like Contrast, Brightness, Sharpness, Color, tint signals including Adaptive Comb Filter

2) Audio Decoder

This block analyzes audio input signal through A/V Jack and PC audio and Tuner IF.

The analyzed signals transmitted to audio amplifier

On decoding, We can control signal like Bass, treble.

3) IF Decoder

This block can change IF signal to audio and video signal that transmitted to Video/audio decoder.

4) Scaler

This IC includes A/D Converter and LVDS Transmitter

This IC is directly Inputted Analog Signal and transmits it to LCD Module

5) Micom

This block controls each IC through IIC communication line.

LVDS Rx (DTC34LF86L)

It is composed of DTC34LF86L/THC63LVDF84B.

The LVDS Rx converts the LVDS data streams back into 24bits of CMOS/TTL data with

Falling edge or rising edge clock for convenient with variety of LCD panel controllers.

Switch IC (PI3V512QE)

It is composed of PI3V512QE.

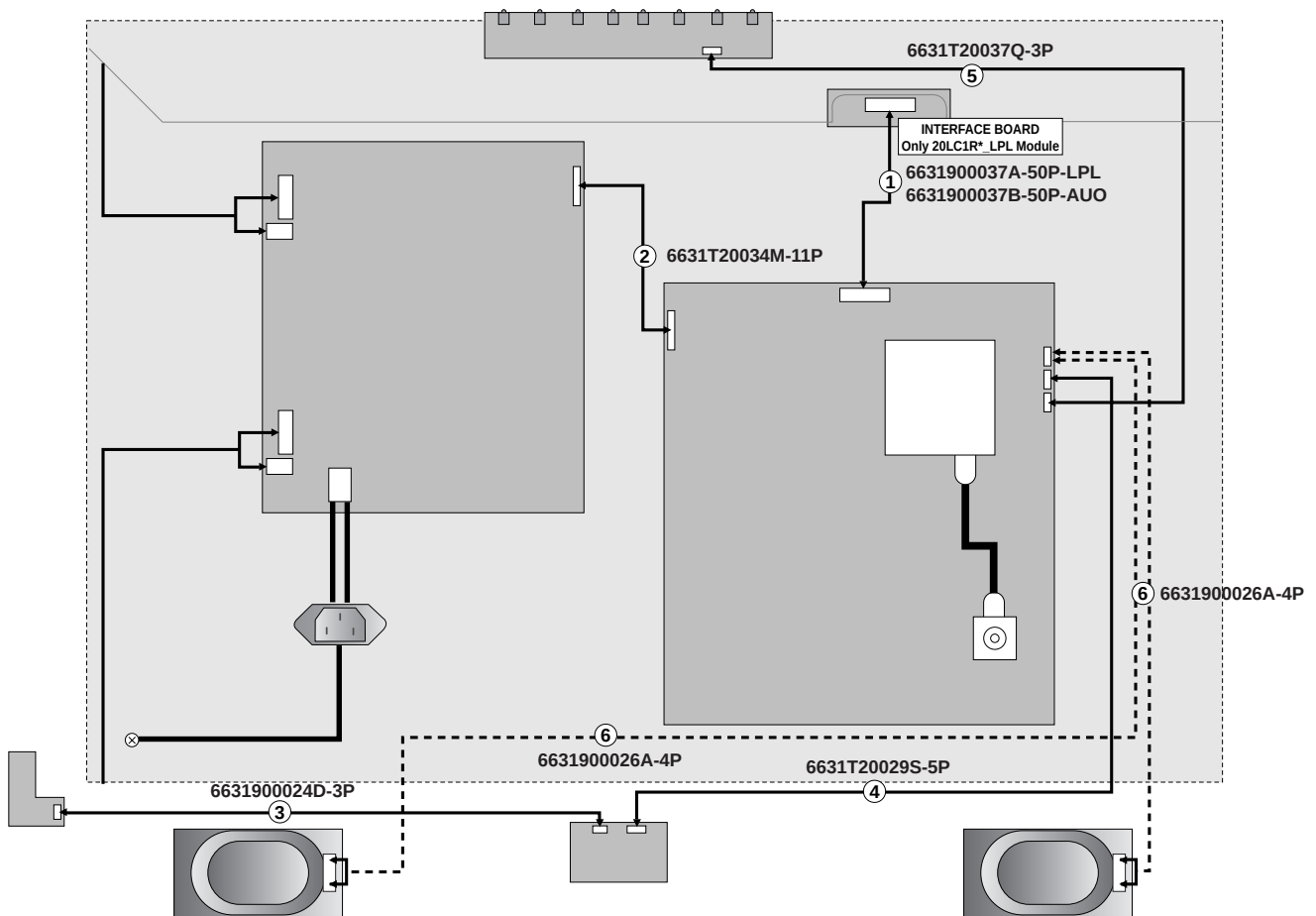
This IC selects between D-sub RGB signal and LOC1 RGB signal, and it transmits the selected signal to video signal processor.

TUNER

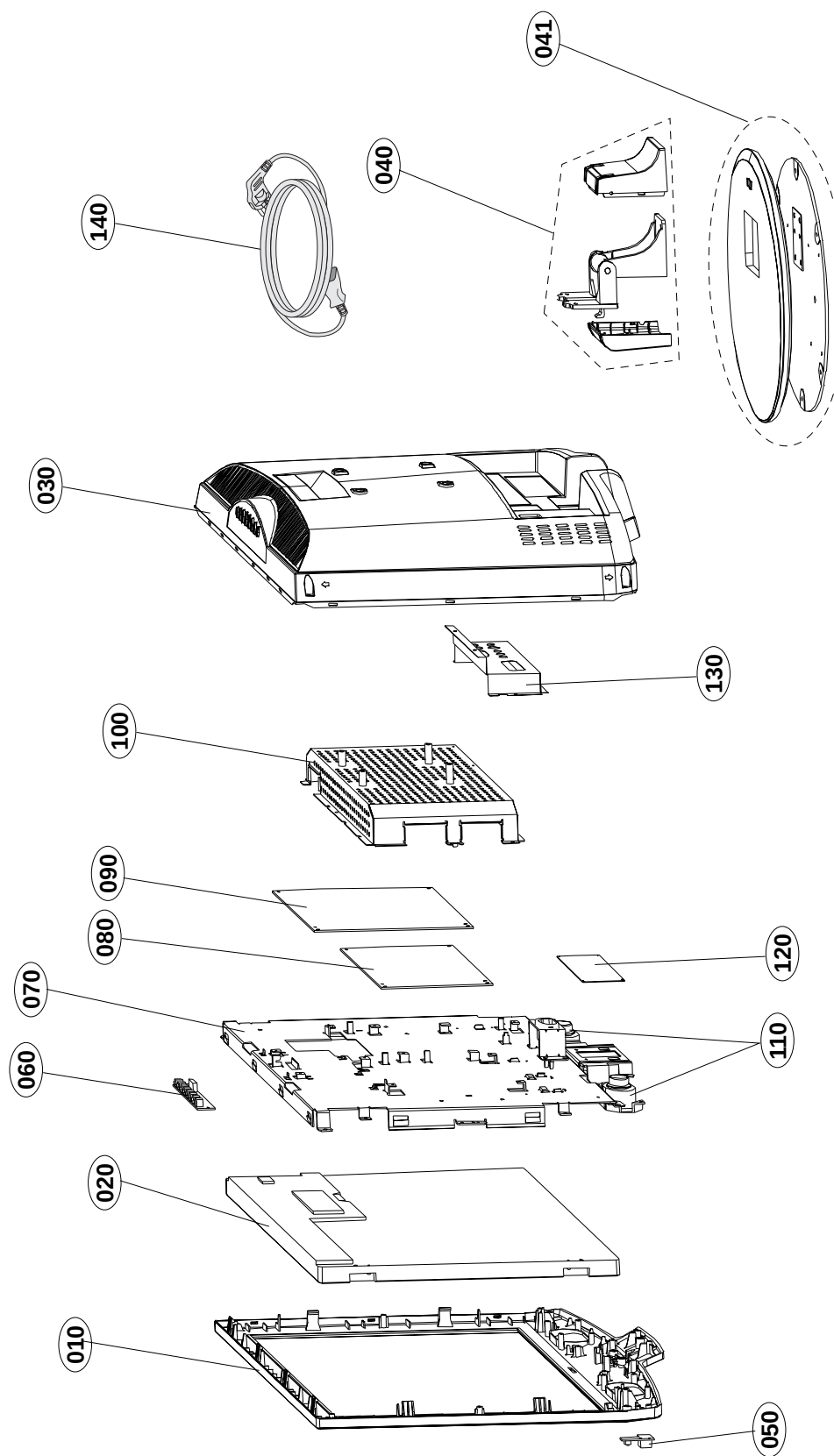
Micom controls this through IIC Line.

TUNER makes IF and transmits IF signal to LOC1.

WIRING DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
010	30919D0001D	CABINET ASSEMBLY, 20LC1R-ZB(TITAN) BRAND 3090TKD006 C/SKD
020	6304FLP188A	LCD(LIQUID CRYSTAL DISPLAY), LC201V02-A3KA LG PHILIPS TFT COLOR PB FREE MODULE , SS D-IC
030	3809900002F	BACK COVER ASSEMBLY, 20LC1R-ZG NON C/SKD
040	3043900010A	TILT SWIVEL ASSEMBLY, 20LC1 NON HINGE ASSY
041	3043900011C	TILT SWIVEL ASSEMBLY, 20LC1R-ZG NON STAND BASE ASSY(TITAN)
050	68719ST799E	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 20LC1R-ZG SLEELFP LED+IR
060	68719ST798B	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 2XLC1 SLEELFP CONTROL
070	49519S0001A	METAL ASSEMBLY, FRAME 20LC1
080	6871TPT319A	PWB(PCB) ASSEMBLY,POWER, 6-LAMP TV/MNT/MFT POWER TOTAL BRAND .
090	33139P2011C	MAIN TOTAL ASSEMBLY, 20LC1R-ZG.SLEELFP BRAND CL-81
100	4950TKA373A	METAL, SHIELD, REAR AV 20LC1
110	6400GTTX02A	SPEAKER,FULLRANGE, EF1527C-6428-6 TOPTONE FULL-RANGE(GENERAL) 16OHM 5/7W 82DB OTHERS 40*70 210HZ
120	68719ST077B	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 20LC1R SLEELFP INTERFACE(HIROSE)
130	4950TKA372A	METAL, SHIELD MAIN 20LC1
140	6410TEW010A	POWER CORD, LP34A+LS60 LONGWELL VDE/SEMKO 1870MM WALL CD/PB FREE BLACK

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;

CC, CX, CK, CN, CH : Ceramic
CQ : Polyester
CE : Electrolytic
CF : Fixed Film

RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RH : CHIP, Metal Glazed(Chip)
RR : Drawing

DATE: 2005. 09. 23.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITOR				
		C301	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C307	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C3092	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C316	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C319	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C322	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C327	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C330	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C367	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C394	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C395	0CH3224K946	0.22UF 50V Z F 2012 R/TP
		C132	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C144	0CK105DH56A	1UF 2012 25V 10% X7R R/TP
		C170	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C171	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C172	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C174	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C176	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C177	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C178	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C180	0CK475DD57A	4.7UF 2012 10V 10% X5R R/TP
		C181	0CK475DD57A	4.7UF 2012 10V 10% X5R R/TP
		C187	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C188	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C190	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C192	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C197	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C205	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C209	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C211	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C212	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C213	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C215	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C216	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C217	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C228	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C236	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C237	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C238	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C239	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C240	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C3001	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3002	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3011	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C3013	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3022	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C3026	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C3047	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C3051	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3061	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3064	0CH3474H946	"0.47UF 25V 80%,-20% F(Y5V)"
		C3082	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3083	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"

				DATE: 2005. 09. 23.
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C3084	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3093	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3102	0CK475DD57A	4.7UF 2012 10V 10% X5R R/TP
		C313	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C317	0CH3682K516	6800PF 2012 50V 10% B(Y5P)
		C331	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C332	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C334	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C335	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C336	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C337	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C338	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C339	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C340	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C341	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C342	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C343	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C347	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C348	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C350	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C358	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C360	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C361	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C362	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C363	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C364	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C365	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C366	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C373	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C374	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C375	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C379	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C386	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C388	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C389	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C390	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C391	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C396	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C403	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C409	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C411	0CK475DD57A	4.7UF 2012 10V 10% X5R R/TP
		C413	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C415	0CK105DH56A	1UF 2012 25V 10% X7R R/TP
		C416	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C421	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C422	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C425	0CH3105H946	"1UF 2012 25V 80%,-20% F(Y5V"
		C704	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C705	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C708	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C715	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C716	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C717	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C718	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP

DATE: 2005. 09. 23.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C719	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C720	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C740	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C744	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C145	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C202	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C203	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C206	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C207	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C208	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C210	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C214	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C218	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C221	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C222	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C223	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C224	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C225	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3015	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3017	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3019	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C302	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C303	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3031	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3032	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3035	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3036	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C304	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C3040	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3042	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3044	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3050	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3066	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3067	0CK223CK51A	223 1608 50V 10% B(Y5P) R/T
		C3068	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3069	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3070	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3085	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3086	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3090	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3091	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C312	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C320	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C345	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C352	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C354	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C355	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C356	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C357	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C369	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C372	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C380	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C381	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C382	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C387	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C392	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C706	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C707	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C709	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C710	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C150	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C191	0CH6331K416	330PF 2012 50V 5% NP0 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C3012	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3014	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3024	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3028	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3033	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3043	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3045	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3048	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C305	0CH6151K416	150PF 2012 50V 5% NP0 -
		C3060	0CH2392K516	3900PF 50V 10% B(Y5P) 2012
		C3062	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C329	0CH2334F566	0.33UF 16V 10% X7R 2012 R/T
		C155	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C157	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C189	0CC271CK41A	270PF 1608 50V 5% R/TP NP0
		C198	0CC271CK41A	270PF 1608 50V 5% R/TP NP0
		C199	0CC271CK41A	270PF 1608 50V 5% R/TP NP0
		C204	0CC221CK41A	220PF 1608 50V 5% R/TP NP0
		C232	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C233	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C3030	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C3037	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C3049	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C3073	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C308	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C3080	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C3081	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C309	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C3100	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C3101	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C376	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C377	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C378	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C393	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C412	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C731	0CC330CK41A	33PF 1608 50V 5% R/TP NP0
		C732	0CC330CK41A	33PF 1608 50V 5% R/TP NP0
		C733	0CC330CK41A	33PF 1608 50V 5% R/TP NP0
		C734	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C134	0CE228ED618	"2200UF KMG,RD 10V 20% FL TA"
		C146	0CE108EH618	1000UF KMG 25V 20% FL TP 5
		C226	0CE477EH618	470UF KMG 25V 20% FL TP 5
		C227	0CE477EH618	470UF KMG 25V 20% FL TP 5
		C405	0CE477ED610	"470UF KMG,RD 10V 20% FL BUL"
		C101	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C109	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C141	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C158	0CE105SK6DC	1UF MVG 50V 20% SMD R/TP
		C175	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C194	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C195	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C196	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C201	0CH8476H691	47UF 25V 20% 105STD (CYL) R
		C220	0CE337SC6D8	"330UF MVG,MC,VC 6.3V 20% SM"
		C3004	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C3046	0CE475WJ6DC	4.7UF MVK 35V 20% R/TP(SMD)
		C3071	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C3094	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C311	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C318	0CE105SK6DC	1UF MVG 50V 20% SMD R/TP
		C321	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C323	0CH8106F691	10UF 16V 20% 105STD (CYL) R

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C359	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C371	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C384	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C385	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C404	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C408	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C410	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C414	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C420	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C423	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C748	0CE226SK6DC	22UF MVG 50V 20% SMD R/TP
		C750	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C751	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
DIODES				
		D701	0DS226009AA	KDS226 TP KEC - 80V - - 4NS
		D703	0DSON00138A	"MMBD301LT1G,LF ON SEMI R/TP"
		D106	0DD184009AA	KDS184 TP KEC - 85V - - - 3
		D702	0DSKE00248A	KDS114 KEC REEL TAPING USC
		ZD201	0DZ120009CF	UDZ 12B TP ROHM-K SOD323 20
		ZD102	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD103	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD118	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD119	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD120	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD121	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD122	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD123	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD124	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD125	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD126	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD127	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD128	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD129	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD130	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD131	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD136	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD137	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD138	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD145	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD150	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD151	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD703	0DZRM00448A	UDZS33B ROHM REEL TAPING UM
		ZD704	0DZRM00448A	UDZS33B ROHM REEL TAPING UM
		ZD101	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD108	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD110	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD116	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD117	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
IC				
		U302	0IMMRSG036D	"M24C32-WMN6T(P),LF SGS-THOM"
		U101	0IPRP00639A	"PI3V512QE PERICOM 24P,QSOP"
		U201	0IPRP00007A	"TPA3005D2PHPRG4,PB FREE TEX"
		U301	0IPRP00641B	"TDA15521E PHILIPS 388PIN,BG"
		U703	0IPRP00667A	DTC34LF86L DOESTEK 56PIN TS
		U401	0IKE780800J	KIA7808API 3 ST REGULATOR .
		U403	0IPMGSG018D	LD1086DT18TR-LF SGS-THOMSON
		U408	0IMCRKE010A	KIA7812AF KEC 2P DPACK R/TP
		U402	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULA

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		U404	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULA
		U409	0ISS780500H	"KA78M05-R 3P,D-PAK TP 5V 0."
		U704	0ISS780500H	"KA78M05-R 3P,D-PAK TP 5V 0."
		U112	0ISTL00031A	"MC74HC4066ADR2G,LF ON SEMI"
COIL & FILTER & INDUCTOR				
		L201	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L202	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L203	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L204	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L712	150-985B	DR8*11 2.4MH 0.16MM 270.5
		L104	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L105	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L106	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L107	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L108	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L109	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L110	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L111	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L112	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L101	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L115	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L301	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L304	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L306	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L310	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L312	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L313	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L314	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L317	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L318	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L321	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L323	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L325	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L327	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L328	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L329	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L334	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L335	6200J00005E	HH-1M2012-601JT CERATEC R/T
		R211	6210TCE0014	HB-1M2012-221 CERATEC R/TP
		R212	6210TCE0014	HB-1M2012-221 CERATEC R/TP
		R213	6210TCE0014	HB-1M2012-221 CERATEC R/TP
		R214	6210TCE0014	HB-1M2012-221 CERATEC R/TP
		L302	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L305	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L307	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L308	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L324	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L330	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L333	6200J00005E	HH-1M2012-601JT CERATEC R/T
		U701	6200QL3003A	K3965D EPCOS BULK PAL VIDEO
		U702	6200QL3003B	K9656D EPCOS BULK PAL SOUND
		L704	0LC0562001A	0.56UH 10% 2012 R/TC FI-A20
		L731	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-
TRANSISTOR				
		Q203	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q107	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q110	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q111	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N

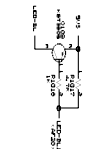
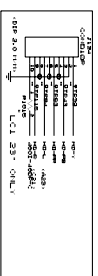
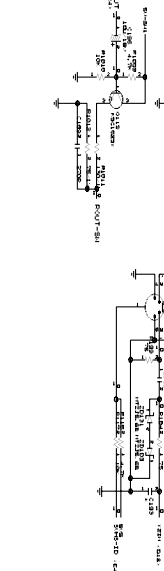
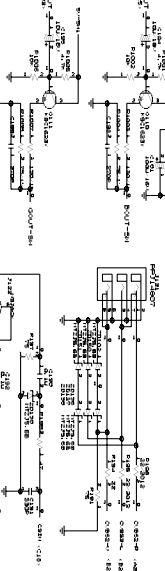
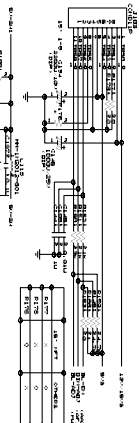
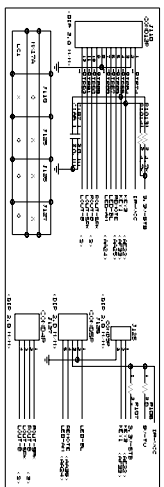
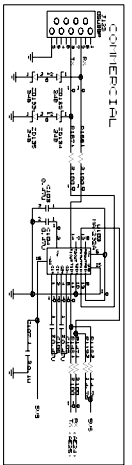
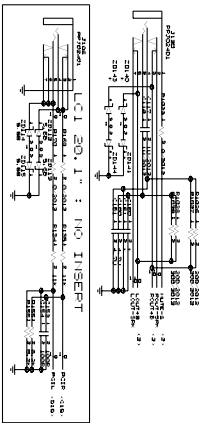
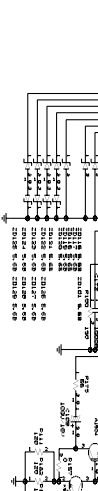
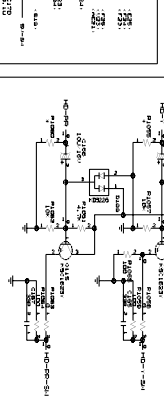
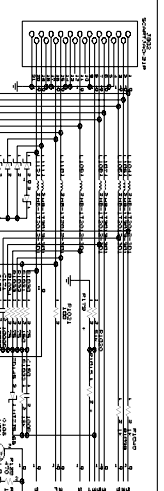
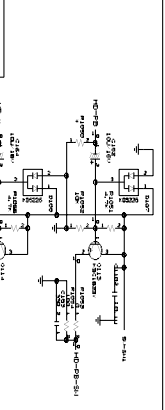
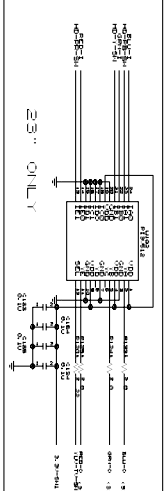
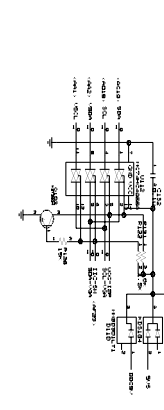
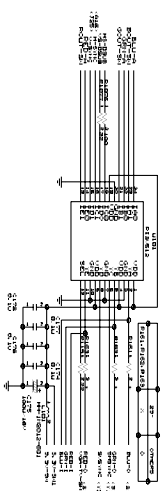
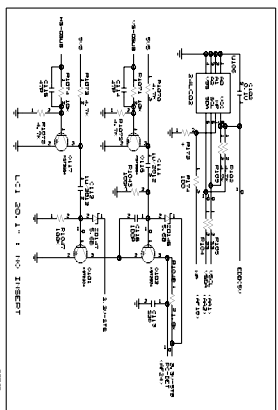
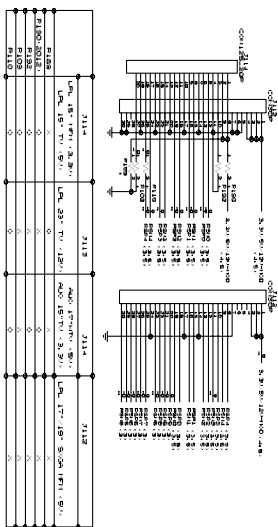
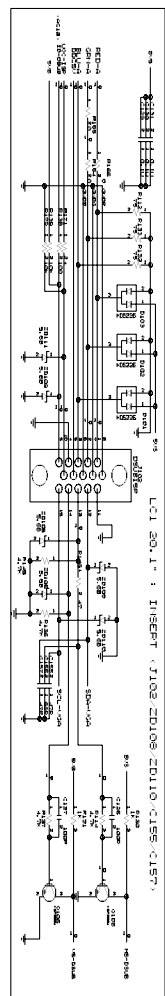
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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		Q112	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q704	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q103	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q109	0TR390609FA	FAIRCHILD KST3906-MTF TP SO
		Q701	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q715	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q301	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC
		Q302	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC
		Q108	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q201	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q304	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q305	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q402	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q702	0TR388109AA	KTC3881 CHIP TP KEC - -
		U405	0TFVI80036A	SI3861DV VISHAY R/TP TSOP-6
		U406	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
RESISTORS				
		R334	0RH1004D422	1M OHM 1 / 10 W 1% D R/TP
		R335	0RH3902D422	39K OHM 1 / 10 W 1% D R/TP
		RA701	0RHZTCZ001D	RCA SMART 22OHM 1/16 W 5% 3
		RA702	0RHZTCZ001D	RCA SMART 22OHM 1/16 W 5% 3
		RA703	0RHZTCZ001D	RCA SMART 22OHM 1/16 W 5% 3
		RA704	0RHZTCZ001D	RCA SMART 22OHM 1/16 W 5% 3
		RA705	0RHZTCZ001D	RCA SMART 22OHM 1/16 W 5% 3
		RA706	0RHZTCZ001D	RCA SMART 22OHM 1/16 W 5% 3
		R776	0RX0202K665	20 OHM 2 W 5% SF15
		R1001	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1002	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1005	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1006	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1009	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1010	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1013	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1014	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1017	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1018	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1020	0RH5102D622	51K OHM 1 / 10 W 2012 5.00%
		R1021	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1022	0RH1802D622	18K OHM 1 / 10 W 2012 5.00%
		R1026	0RH7500D622	750 OHM 1 / 10 W 5% D R/TP
		R1027	0RH7500D622	750 OHM 1 / 10 W 5% D R/TP
		R1028	0RH7500D622	750 OHM 1 / 10 W 5% D R/TP
		R1029	0RH7500D622	750 OHM 1 / 10 W 5% D R/TP
		R1031	0RH1500D622	150 OHM 1 / 10 W 2012 5.00%
		R1032	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1033	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1034	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1039	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1040	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R107	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R111	0RH1200D622	120 OHM 1 / 10 W 2012 5.00%
		R115	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R116	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R117	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R121	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R122	0RH1501D622	1.5K OHM 1 / 10 W 2012 5.00
		R126	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R129	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R149	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R151	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%

DATE: 2005. 09. 23.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R177	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R178	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R182	0RH1200D622	120 OHM 1 / 10 W 2012 5.00%
		R183	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R184	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R191	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R194	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R195	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R196	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R197	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R198	0RH0472D622	47 OHM 1 / 10 W 2012 5.00%
		R199	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R206	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R207	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R217	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R218	0RH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R221	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R222	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R223	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R224	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R225	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R226	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R227	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R248	0RH1201D622	1.2K OHM 1 / 10 W 2012 5.00
		R251	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R3001	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R3002	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R3003	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3006	0RH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3007	0RH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3008	0RH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3009	0RH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3017	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R3018	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R304	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R305	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R306	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R307	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R308	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R309	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R310	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R321	0RH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R322	0RH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R323	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R325	0RH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R327	0RH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R328	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R329	0RH2203D622	220K OHM 1 / 10 W 2012 5.00
		R330	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R333	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R337	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R338	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R339	0RH6800D622	680 OHM 1 / 10 W 5% D R/TP
		R341	0RH1003D622	100K OHM 1 / 10 W 2012 5.00
		R347	0RH8202D622	82K OHM 1 / 10 W 2012 5.00%
		R348	0RH1201D622	1.2K OHM 1 / 10 W 2012 5.00
		R349	0RH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R350	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R352	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R367	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R369	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R382	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%

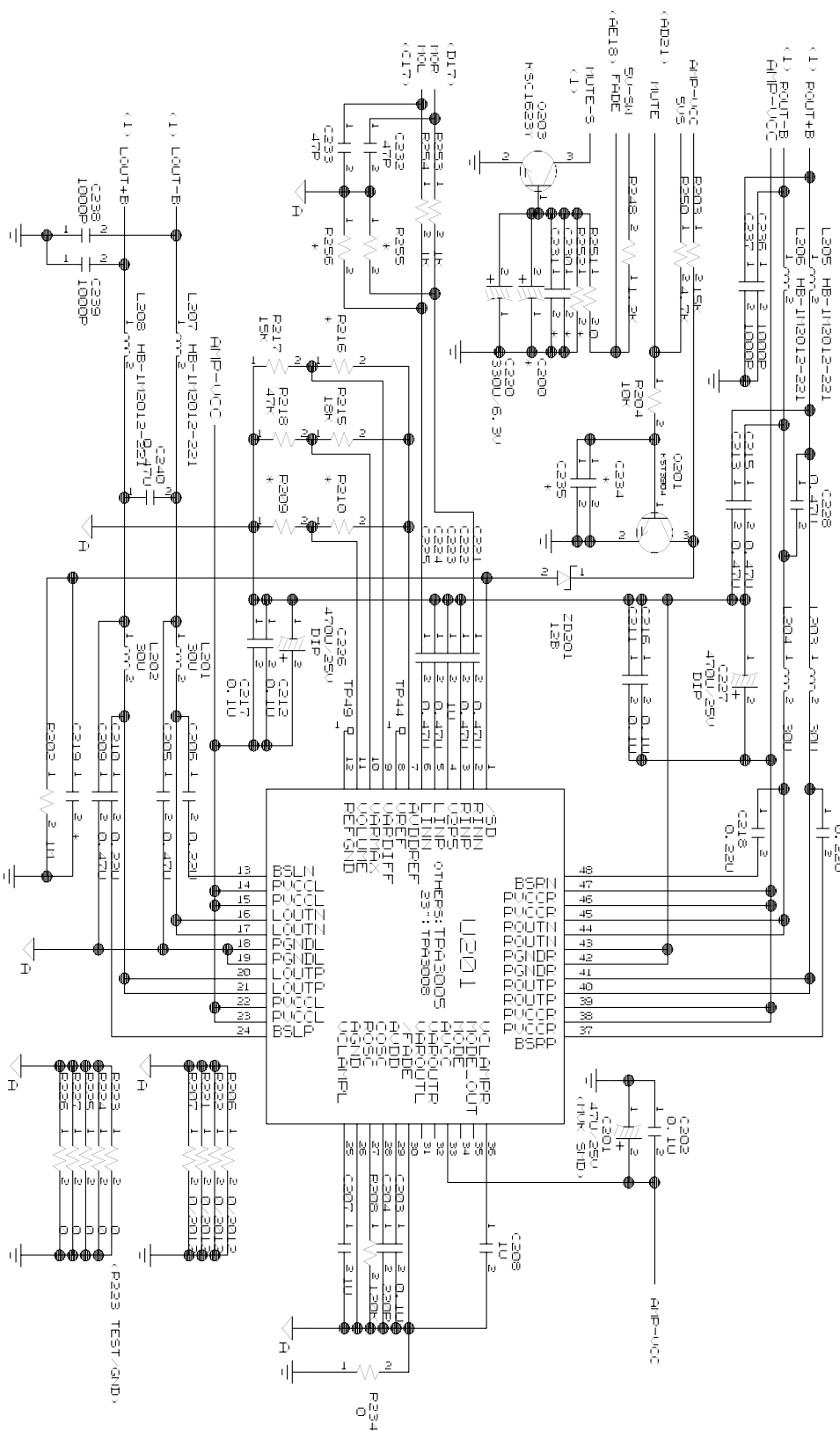
DATE: 2005. 09. 23.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R383	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R385	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R386	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R388	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R391	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R392	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R394	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R395	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R396	ORH2201D622	2.2K OHM 1 / 10 W 2012 5.00
		R397	ORH2201D622	2.2K OHM 1 / 10 W 2012 5.00
		R401	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R409	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R413	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R414	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R425	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R426	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R434	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R702	ORH4700D622	470 OHM 1 / 10 W 2012 5.00%
		R705	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R706	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R711	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R715	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R728	ORH1501D622	1.5K OHM 1 / 10 W 2012 5.00
		R730	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R732	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R740	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R741	ORH4700D622	470 OHM 1 / 10 W 2012 5.00%
		R742	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R750	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R751	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R753	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R760	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R761	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R762	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R772	ORH8200D622	820 OHM 1 / 10 W 2012 5.00%
		R775	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1003	ORJ1300D477	130 OHM 1/10 W 1% 1608 R/TP
		R1004	ORJ0752D477	75 OHM 1/10 W 1% 1608 R/TP
		R1007	ORJ1300D477	130 OHM 1/10 W 1% 1608 R/TP
		R1008	ORJ0752D477	75 OHM 1/10 W 1% 1608 R/TP
		R1011	ORJ1300D477	130 OHM 1/10 W 1% 1608 R/TP
		R1012	ORJ0752D477	75 OHM 1/10 W 1% 1608 R/TP
		R1030	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R1076	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1077	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R128	ORJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R150	ORJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R152	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R153	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R157	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R159	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R161	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R162	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R163	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R167	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R168	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R175	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R202	ORJ1004D677	1000000 OHM 1/10 W 5% 1608
		R203	ORJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R204	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R208	ORJ1203D677	120K OHM 1/10 W 5% 1608 R/T
		R215	ORJ1802D677	18K OHM 1/10 W 5% 1608 R/TP

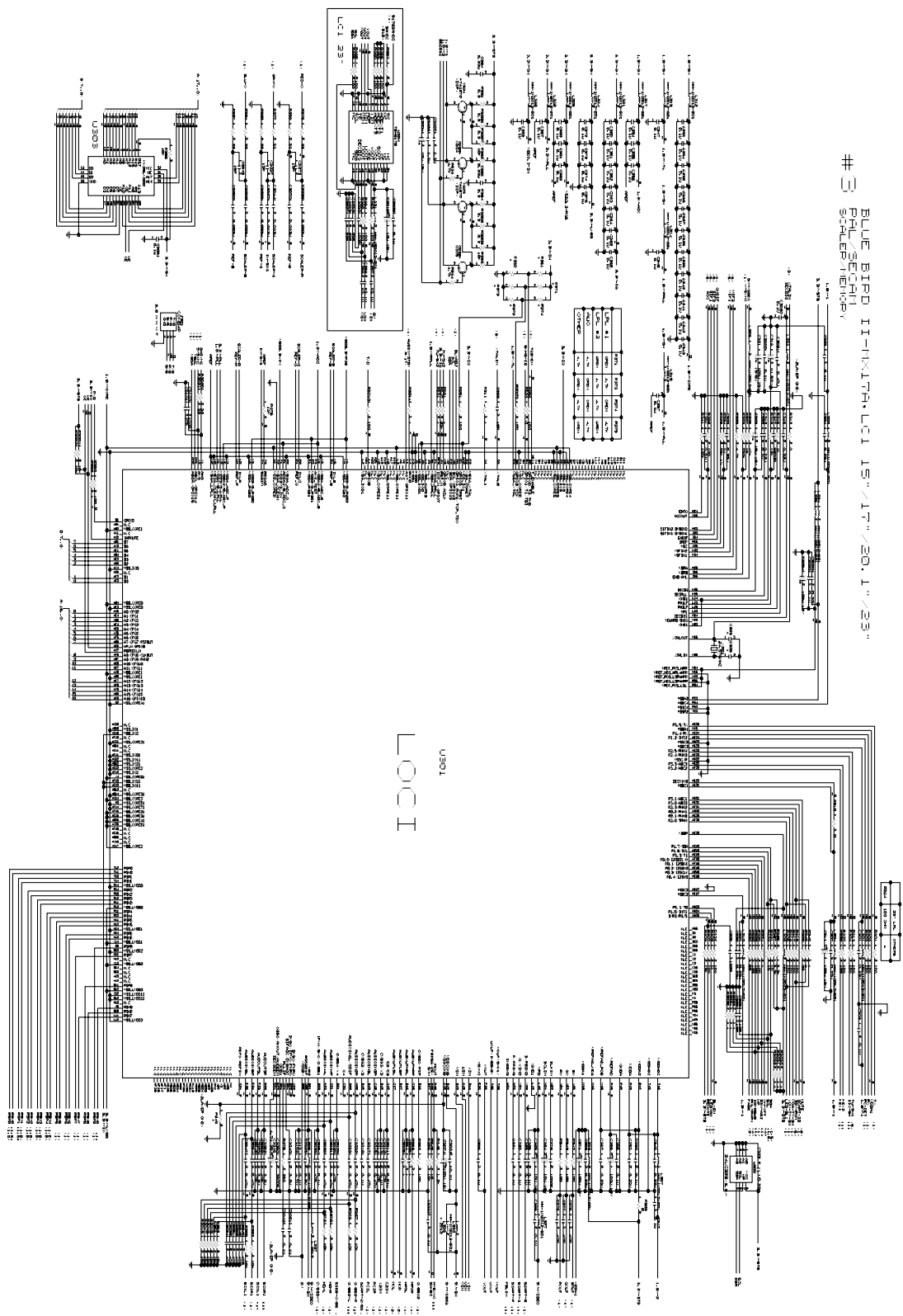
DATE: 2005. 09. 23.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R234	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R250	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R253	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R254	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R301	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R3010	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R3015	ORJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R3016	ORJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R302	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R3020	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R3021	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R303	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R312	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R315	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R316	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R317	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R318	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R319	ORJ1202D677	12K OHM 1/10 W 5% 1608 R/TP
		R320	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R332	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R336	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R342	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R343	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R344	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R351	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R355	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R370	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R372	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R373	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R375	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R376	ORJ3900D677	390 OHM 1/10 W 5% 1608 R/TP
		R377	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R378	ORJ1202D677	12K OHM 1/10 W 5% 1608 R/TP
		R379	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R380	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R384	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R387	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R399	ORJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R410	ORJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R411	ORJ5600D677	560 OHM 1/10 W 5% 1608 R/TP
		R533	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R534	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R714	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R720	ORJ1201D677	1200 OHM 1/10 W 5% 1608 R/T
		R729	ORJ4702D677	47000 OHM 1/10 W 5% 1608 R/
		R731	ORJ9101D677	9.1K OHM 1/10 W 5% 1608 R/T
		R735	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R736	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R737	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R739	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R743	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R744	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R745	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R746	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R747	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R770	ORJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R771	ORJ1501D677	1.5K OHM 1/10 W 5% 1608 R/T
		R773	ORJ3000D677	300 OHM 1/10 W 5% 1608 R/TP
		R774	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP

#1 BLUE BIRD I-HX17A, LCI 15"/17"/20.1"/23" PAL/SECAM JACK CONNECTOR & JACK

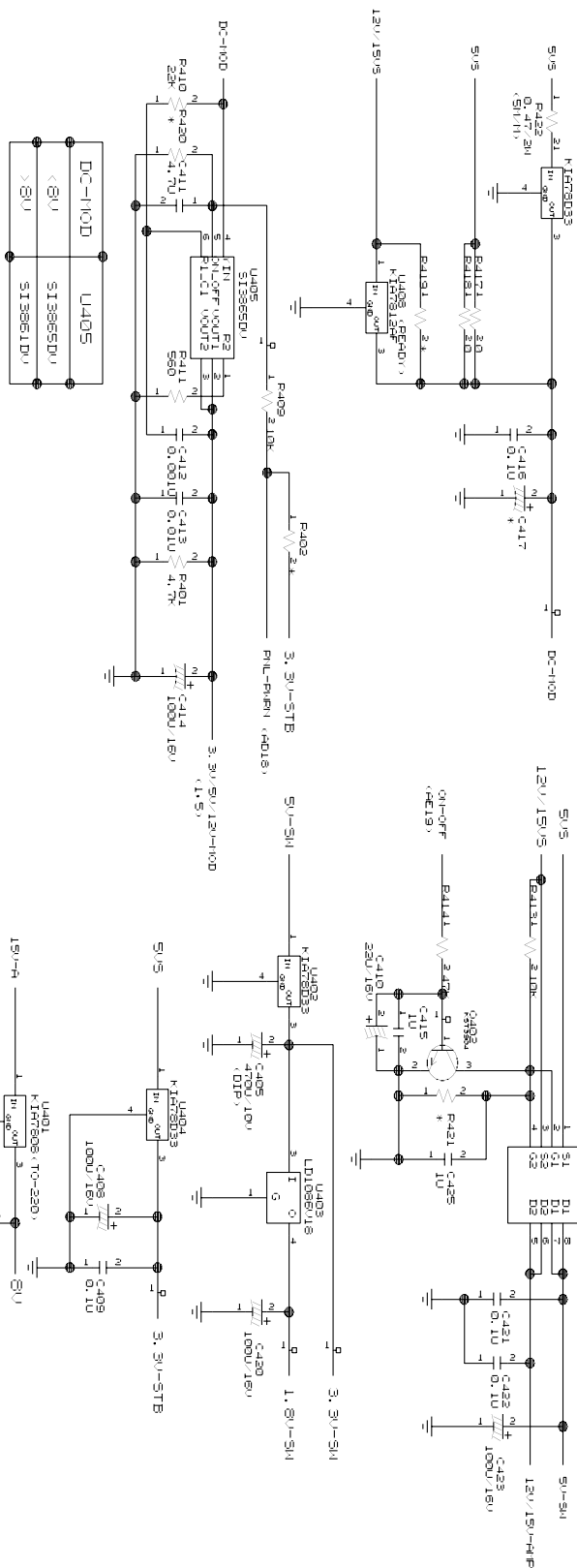


BLUE BIRD II-MX17A, LOC 15"/17"/20.1"/23"
PAL/SECAM
#2 AUDIO AMP

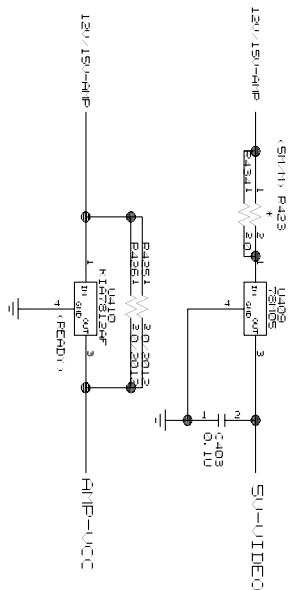




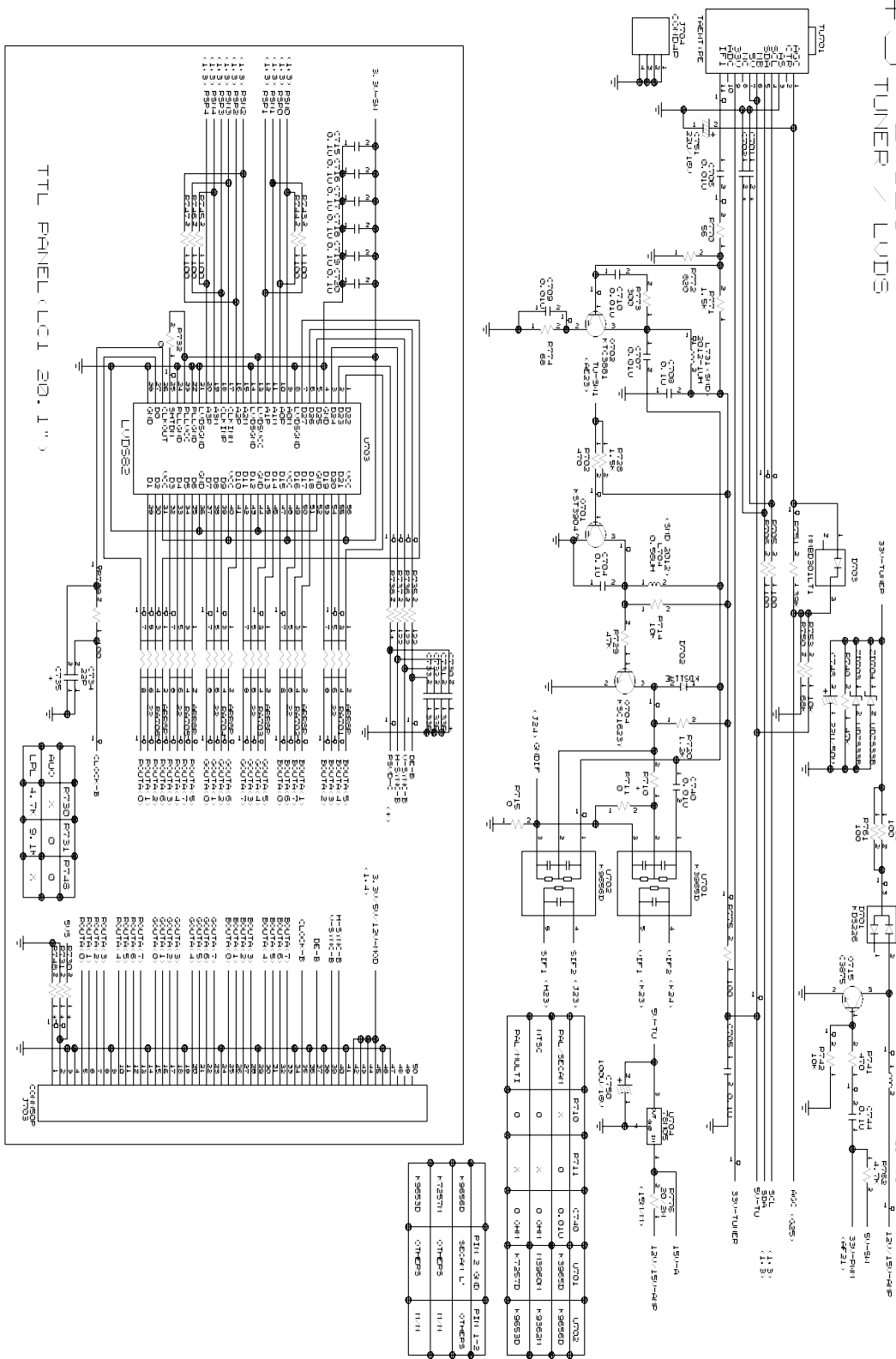
BLUE BIRD II-MX17A, LOT 15"/17"/20.1"/23"
PAL/SECAM
#4 POWER
DATE 5/1/93



	R40 17" TU (50)		R40 15" TU (3.30)
	LPL 17" (FFH (50)		
	LPL 19" (FFH (50)		
	LPL 15" TU (50)	LPL 23" TU (120)	
	R40 20" TU (50)	LPL 20" TU (120)	LPL 15" (FFH (3.30)
U407, R432	X	X	0
R417, R418	0	X	X
R419	X	X	X
U408	X	0	X



BLUE BIRD II-MX17A LCL 15" / 17" / 20.1" / 23" #5 PAL/SECAM TUNER / LUDS





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