

Service Guide Specification

1. Model Description

MODEL	T710BHK	BRAND	LG	Part No.	3828TSL099M
SUFFIX	KLEUED	Product Name	FLATRON ez T710BH FLATRON ez T710SH		

답 당
LEE K.M
03.12.8

관 리 자
KIM O.K
03.12.8

2. Printing Specification

1. Trim Size (Format) : 215mm x 280 mm

2. Printing Colors

- Cover : LG COLORS
- Inside : Black

3. Stock (Paper)

- Cover : Snow White 150 g/m²
- Inside : Snow White 100 g/m²

4. Printing Method :

5. Bindery : Saddle stitch

6. Language : English

7. Number of pages : 40 (Including blank 4page)

3. Special Instructions

(1) Origin Notification

- * LGEDI : Printed in Indonesia
- * LGESP : Printed in Brazil
- * LGENT : Printed in China

- * LGEWA : Printed in U.K.
- * LGEMX : Printed in Mexico
- * LGEIL : Printed in India

4. Changes

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△7				
△6				
△5				
△4				
△3				
△2				
△1				
REV. NO.	MM/DD/YY	SIGNATURE	CHANGE NO.	CHANGE CONTENTS

Pagination sheet

P/N0.3828TSL099M

Total pages : 40pages

Cover	Front cover Inside	English	English	English	English	English
	(Blank)	2	3	4
	회로도 2절 2색		PCB 2절			Rear cover Inside
	32	33	34	35	(blank)	(blank)
						(blank)
						Rear Cover



Website: <http://biz.LGservice.com>
E-mail: <http://www.LGService.com/techsup.html>

COLOR MONITOR SERVICE MANUAL

CHASSIS NO. : CA-131

MODEL: FLATRON^{ez} T710BH (T710BHK-ALE)**
FLATRON^{ez} T710SH (T710BHK-ALM)**

() **Same model for Service

CAUTION

BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.



*Same looking with new chassis.

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SPECIFICATIONS

1. PICTURE TUBE

Size	: 17 inch
Deflection Angle	: 90°
Neck Diameter	: 29.1 mm
Stripe Pitch	: 0.25 mm
Face Treatment	: W-ARASC (Anti-Reflection and Anti-Static Coating)
Internal	: Anti-Glare

2. SIGNAL

2-1. Horizontal & Vertical Sync

- 1) Input Voltage Level: Low=0~1.2V, High=2.5~5.5V
- 2) Sync Polarity : Positive or Negative

2-2. Video Input Signal

- 1) Voltage Level : 0 ~ 0.7 Vp-p
 - a) Color 0, 0 : 0 Vp-p
 - b) Color 7, 0 : 0.467 Vp-p
 - c) Color 15, 0 : 0.7 Vp-p
- 2) Input Impedance : 75 Ω
- 3) Video Color : R, G, B Analog
- 4) Signal Format : Refer to the Timing Chart

2-3. Signal Connector

3 row 15-pin Connector (Attached)

2-4. Scanning Frequency

Horizontal	: 30 ~ 71 kHz
Vertical	: 50 ~ 160 Hz

3. POWER SUPPLY

3-1. Power Range

AC 100~240V ~ 50/60Hz, 1.0A

3-2. Power Consumption

MODE	POWER CONSUMPTION	LED COLOR
MAX	85 W	GREEN
NORMAL (ON)	73 W	GREEN
STAND-BY	less than 15 W	AMBER
SUSPEND	less than 15 W	AMBER
DPMS OFF	less than 5 W	AMBER

4. DISPLAY AREA

4-1. Active Video Area :

- Max Image Size - 325.1 x 243.8 mm (12.80" x 9.60")
- Preset Image Size - 310 x 230 mm (12.20" x 9.06")

4-2. Display Color : Full Colors

4-3. Display Resolution : 1280 x 1024 / 60Hz(Max) (Non-Interlace)

4-4. Video Bandwidth : 110 MHz

5. ENVIRONMENT

5-1. Operating Temperature: 0°C ~ 40°C (Ambient)

5-2. Relative Humidity : 10%~ 80% (Non-condensing)

5-3. Altitude : 5,000 m

6. DIMENSIONS (with TILT/SWIVEL)

Width	: 400 mm (15.75 inch)
Depth	: 411 mm (16.18 inch)
Height	: 401 mm (15.79 inch)

7. WEIGHT (with TILT/SWIVEL)

Net Weight	: 15.4 kg (33.96 lbs.)
Gross Weight	: 18.0 kg (39.67 lbs.)

SAFETY PRECAUTIONS

SAFETY-RELATED COMPONENT WARNING!

There are special components used in this color monitor which are important for safety. ***These parts are marked ⚠ on the schematic diagram and the replacement parts list.*** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent X-radiation, shock, fire, or other hazards. Do not modify the original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

CAUTION: No modification of any circuit should be attempted.

Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines.

SAFETY CHECK

Care should be taken while servicing this color monitor because of the high voltage used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

FIRE & SHOCK HAZARD

An isolation transformer must be inserted between the color monitor and AC power line before servicing the chassis.

- In servicing, attention must be paid to the original lead dress specially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.
- All the protective devices must be reinstalled per the original design.
- Soldering must be inspected for the cold solder joints, frayed leads, damaged insulation, solder splashes, or the sharp points. Be sure to remove all foreign materials.

IMPLOSION PROTECTION

All used display tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation. Use only same type display tubes.

X-RADIATION

The only potential source of X-radiation is the picture tube. However, when the high voltage circuitry is operating properly there is no possibility of an X-radiation problem. The basic precaution which must be exercised is keep the high voltage at the factory recommended level; the normal high voltage is about 25.8KV. The following steps describe how to measure the high voltage and how to prevent X-radiation.

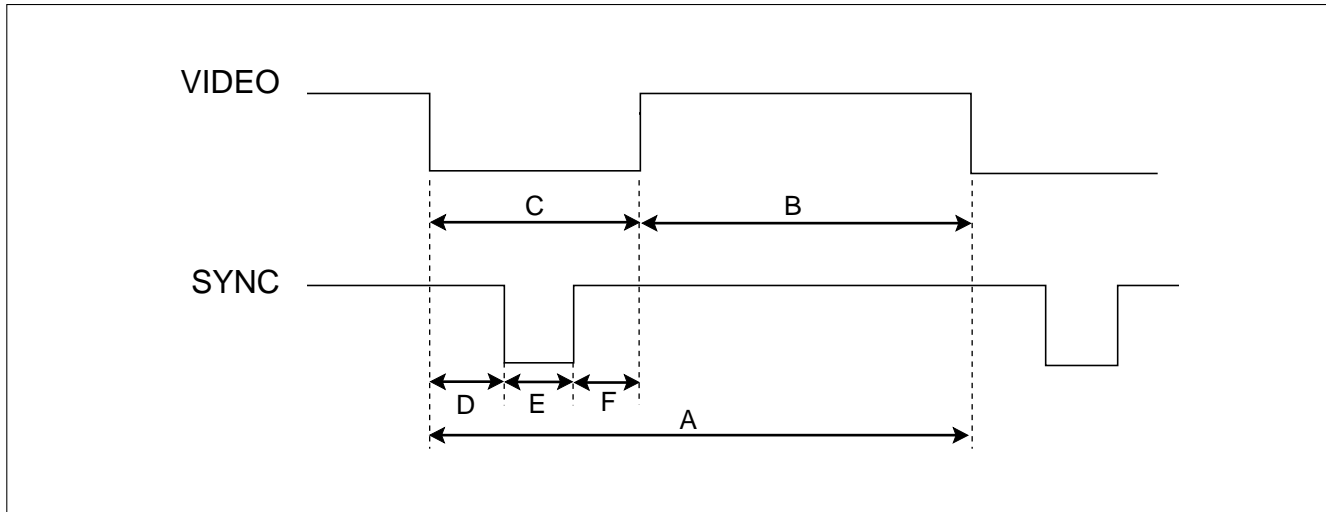
Note : It is important to use an accurate high voltage meter calibrated periodically.

- To measure the high voltage, use a high impedance high voltage meter, connect (–) to chassis and (+) to the CDT anode cap.
- Set the brightness control to maximum point at full white pattern.
- Measure the high voltage. The high voltage meter should be indicated at the factory recommended level.
- If the meter indication exceeds the maximum level, immediate service is required to prevent the possibility of premature component failure.
- To prevent X-radiation possibility, it is essential to use the specified picture tube.

CAUTION:

Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

TIMING CHART

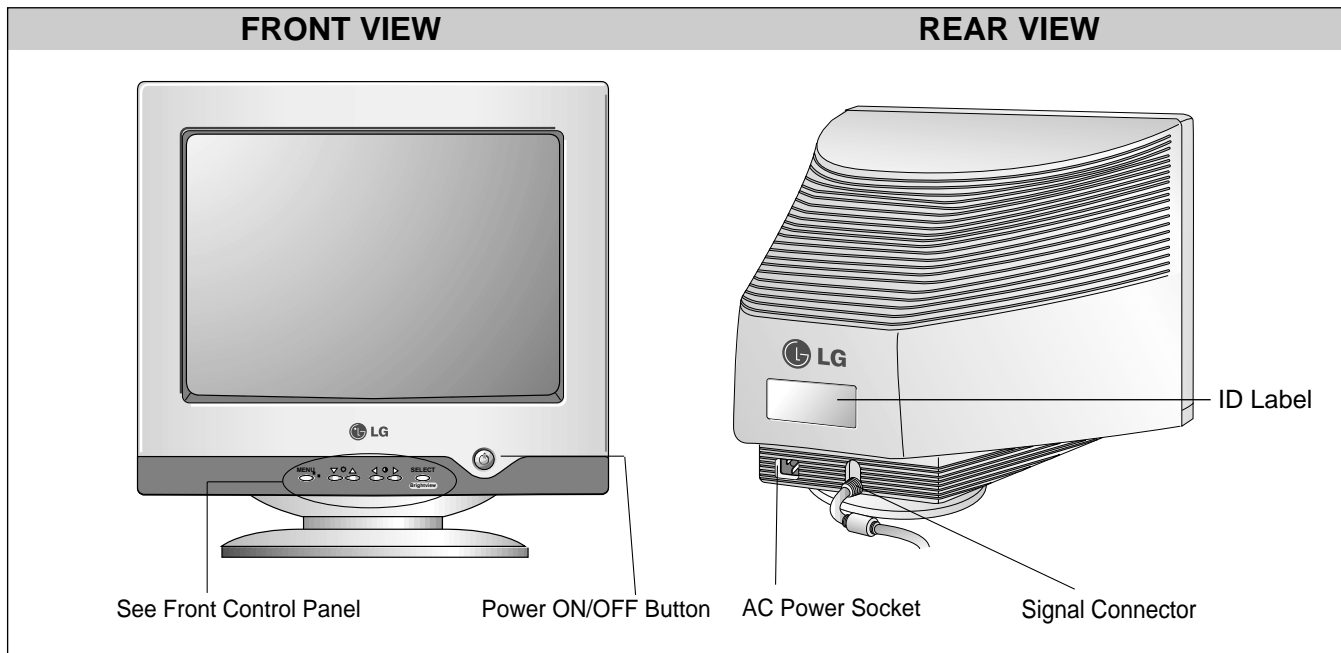


<< Dot Clock (**MHz**), Horizontal Frequency (**kHz**), Vertical Frequency (**Hz**), Horizontal etc... (**μs**), Vertical etc... (**ms**) >>

Mode	H/V Sort	Sync Polarity	Frequency	Total Period (A)	Video Active Time (B)	Blanking Time (C)	Sync Duration (E)	Back Porch (F)	Front Porch (D)	Resolution
1	H	–	37.50	26.67	20.32	6.35	2.03	3.81	0.51	640x480 75Hz
	V	–	74.99	13.335	12.802	0.533	0.080	0.427	0.026	
2	H	+	46.88	21.33	16.16	5.17	1.62	3.23	0.32	800x600 75Hz
	V	+	75.01	13.331	12.798	0.533	0.064	0.448	0.021	
3	H	+	53.68	18.63	14.22	4.41	1.14	2.70	0.57	800x600 85Hz
	V	+	85.07	11.755	11.178	0.577	0.056	0.503	0.018	
4	H	+	68.677	14.561	10.836	3.725	1.016	2.201	0.508	1024x768 85Hz
	V	+	85.00	11.764	11.182	0.582	0.044	0.524	0.014	

* No Composite Mode.

OPERATING INSTRUCTIONS



Front Control Panel

The diagram shows the front control panel with the following labels: 1. Power Button (power icon), 2. Power (DPMS) Indicator, 3. SELECT Button, 4. Buttons (directional arrows and Brightview icon), 5. MENU Button. The LG logo is also visible.

- 1. Power ON/OFF Button**
Use this button to turn the monitor ON or OFF.
- 2. Power Indicator**
This indicator lights up green when the monitor operates normally; in DPMS (Energy Saving) mode, -stand-by, suspend, or power off mode -its color changes to orange, and if abnormal or damaging circuit turns out orange blink.
- 3. Select Button**
Use this button to enter a selection in the on screen display.
- 4. Button**
Use these buttons to choose or adjust items in the on screen display.

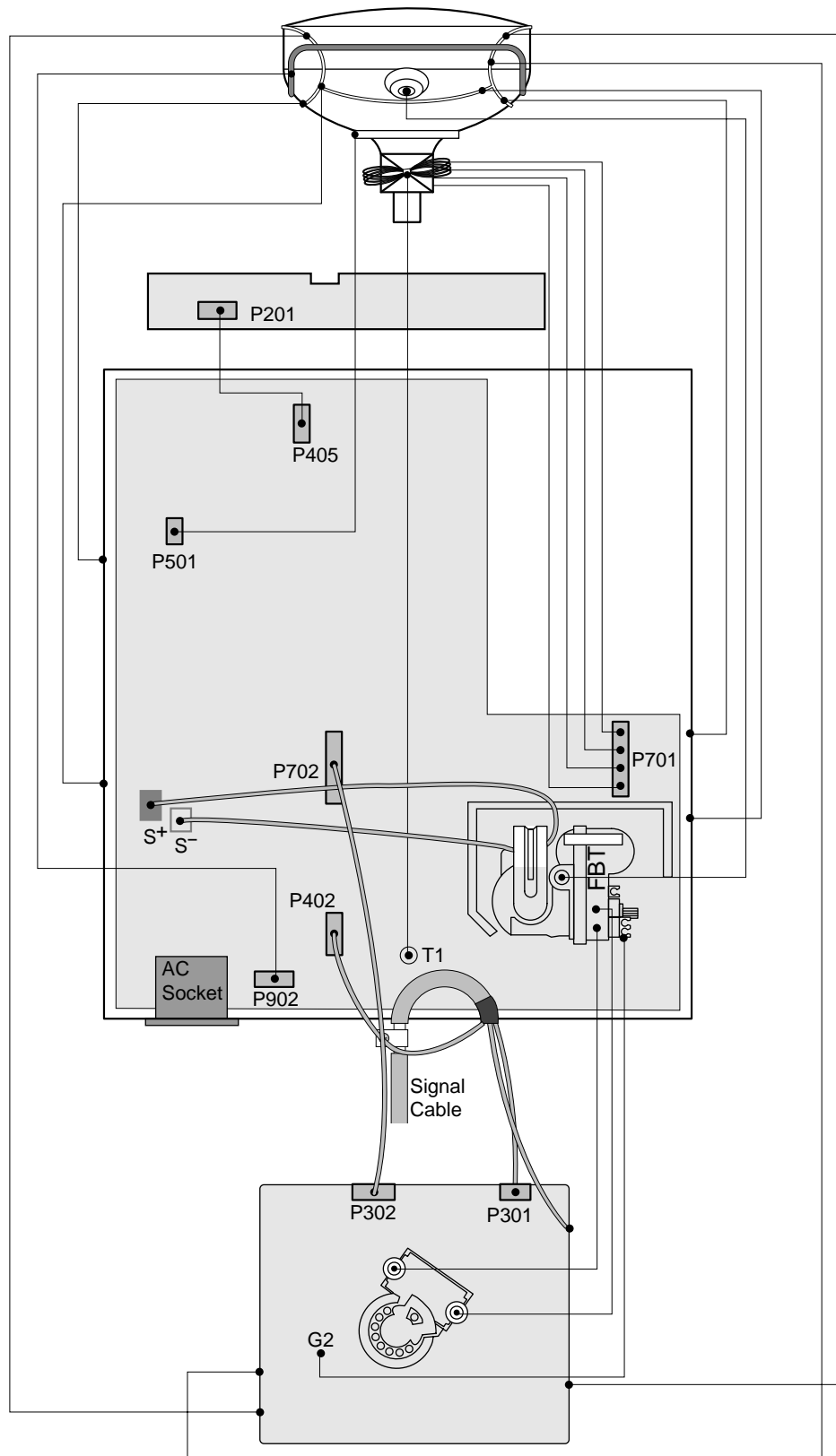
<Shortcut Keys>

- Brightness and Contrast can be adjusted directly without entering the On Screen Display (OSD) system. Press the buttons to adjust the settings and then the **MENU button** to save all changes. The Brightness and Contrast functions are also available in the On Screen Display (OSD) menu.

- 5. MENU Button**
Use this button to enter or exit the on screen display.

- 6. Brightview Button(To apply the High brightness)**
Use this button to select brightview function. (TEXT/PHOTO/MOVIE/NORMAL)

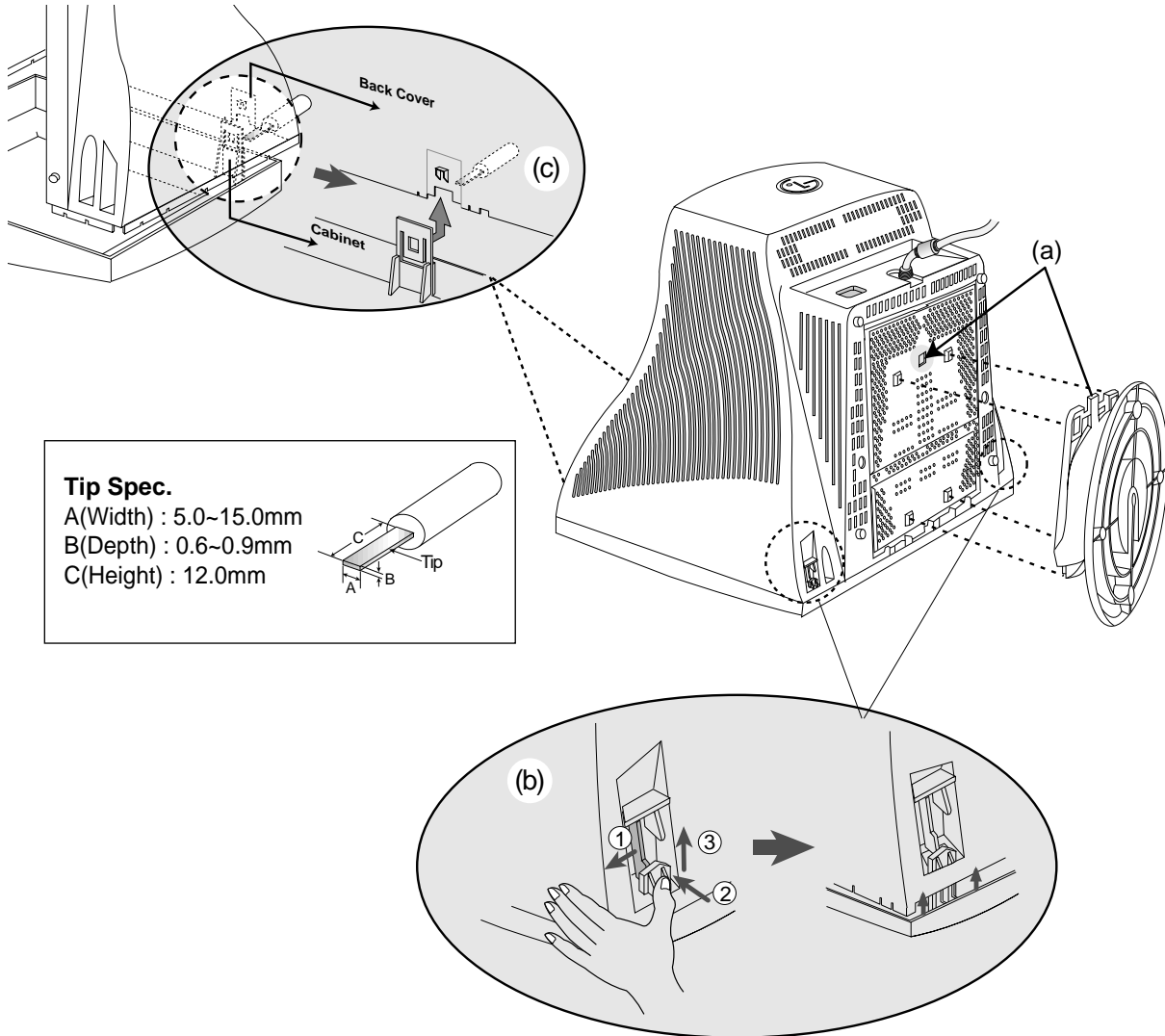
WIRING DIAGRAM



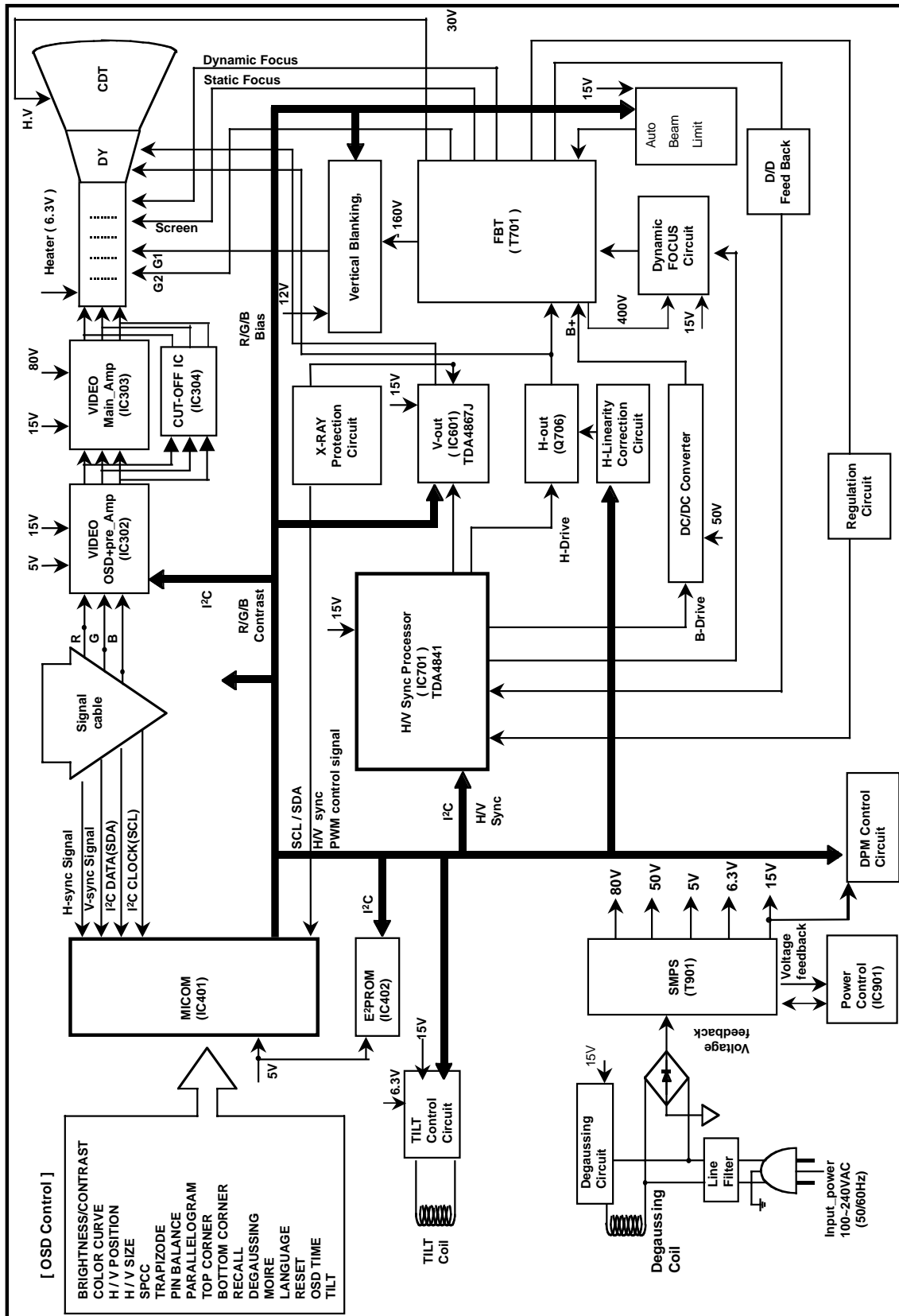
DISASSEMBLY

1. TILT/SWIVEL & BACK COVER REMOVAL

- 1) Set the monitor face downward.
- 2) Carefully remove the Tilt/Swivel by pulling it upward.
- 3) Pressing the latch (b), Back cover by pushing it upward.
- 4) Release the latch (c). (See Tip Spec.)
- 5) Slide the Back Cover away from the Front Cabinet of the monitor.



BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Line Filter & Associated Circuit.

This is used for suppressing noise of power input line flowing into the monitor and/or some noise generated in this monitor flowing out through the power input line.

That is to say, this circuit prevents interference between the monitor and other electric appliances.

2. Degauss Circuit & Coil.

The degauss circuit consists of the degaussing coil, the PTC(Positive Temperature Coefficient) thermistor(TH901), and the relay(RL901). This circuit eliminates abnormal color of the screen automatically by degaussing the shadow mask in the CRT during turning on the power switch. When you need to degauss in using the monitor, select DEGAUSS on the OSD menu.

3. SMPS(Switching Mode Power Supply).

This circuit is working of 90~264V AC(50/60Hz).

The operation procedure is as follows:

- 1) AC input voltage is rectified and smoothed by the bridge diodes (D900) and the capacitor (C908).
- 2) The rectified voltage(DC) is applied to the primary coil of the transformer(T901).
- 3) The control IC(IC901) generates switching pulse to turn on and off the primary coil of the transformer (T901) repeatedly.
- 4) Depending on turn ratio of the transformer, the secondary voltages appear at the secondary coils of the transformer(T901).
- 5) These secondary voltages are rectified by each diode(D941, D942, D951, D961, D971) and operate other circuit. (horizontal and vertical deflection, video amplifier, ...etc.)

4. X-ray Protection.

If the high voltage of the FBT reaches up to 29kV (abnormal state), IC401(MICOM) pin 35 Sensing from FBT directly. Then MICOM control IC701 (Deflection controller) to stop Horizontal drive pulse and stop Horizontal Deflection.

5. Micom(Microprocessor) Circuit.

The operating procedure of Micom(Microprocessor) and its associated circuit is as follows:

- 1) H and V sync signal is supplied from the signal cable.
- 2) The Micom(IC401) distinguishes polarity and frequency of H and V sync.
- 3) The Micom sets operating mode and offers the controlled data. (H-size, H-position, V-size, ... etc.)
- 4) The controlled data of each mode is stored in itself.
- 5) User can adjust screen condition by each OSD function. The data of the adjusted condition is stored in EEPROM(IC402).

6. Horizontal and Vertical Oscillation.

This circuit generates the horizontal pulse and the vertical pulse by taking the H and V sync signal.

This circuit consists of the TDA4867(IC601) and the associated circuit.

7. D/D(DC to DC) Converter.

This circuit supplies DC voltage to the horizontal deflection output circuit by increasing DC 50V which is the secondary voltage of the SMPS in accordance with the input horizontal sync signal.

8. Side-Pincushion & Trapezoid Correction Circuit.

This circuit improves the side-pincushion and the trapezoid distortion of the screen by mixing parabola and saw-tooth wave to output of the horizontal deflection D/D converter which is used for the supply voltage(B +) of the deflection circuit.

9. Horizontal Deflection Output Circuit.

This circuit makes the horizontal deflection by supplying the saw-tooth current to the horizontal deflection yoke.

10. High Voltage Output & FBT(Flyback Transformer).

The high voltage output circuit is used for generating pulse to the primary coil of the FBT(Flyback Transformer) secondary of the FBT and it is supplied to the anode, focus, and screen voltage of the CRT.

11. H-Linearity Correction Circuit.

This circuit corrects the horizontal linearity for each horizontal sync frequency.

12. Vertical Output Circuit.

This circuit takes the vertical ramp wave from the TDA4841(IC701) and performs the vertical deflection by supplying the saw-tooth current to the vertical deflection yoke.

13. Dynamic Focus Output Circuit.

This circuit takes the horizontal and the vertical parabola waves from the TDA4841(IC701) and amplifies it to maintain constant focus on center and corners in the screen.

14. H & V Blanking and Brightness Control.

Blanking circuit eliminates retrace line by supplying negative pulse to the G1 of the CRT. And Brightness control uses the R/G/B cut-off DC level by IIC line.

15. Image Rotation (Tilt) Circuit.

This circuit corrects the tilt of the screen by supplying the image rotation signal to the tilt coil which is attached near the deflection yoke of the CRT.

16. Video Pre-Amp Circuit.

This circuit amplifies the analog video signal from 0-0.7V to 0-4V. It is operated by taking the clamp, R, G, B drive and contrast signal from the Micom(IC401).

17. Video Output Amp Circuit.

This circuit amplifies the video signal which comes from the video pre-amp circuit and amplified it to applied the CRT cathode.

ADJUSTMENT

GENERAL INFORMATION

All adjustment are thoroughly checked and corrected when the monitor leaves the factory, but sometimes several adjustments may be required.

Adjustment should be following procedure and after warming up for a minimum of 30 minutes.

- Alignment appliances and tools.
 - IBM compatible PC.
 - Programmable Signal Generator.
(eg. VG-819 made by Astrodesign Co.)
 - EPROM or EEPROM with saved each mode data.
 - Alignment Adaptor and Software.
 - Digital Voltmeter.
 - White Balance Meter.
 - Luminance Meter.
 - High-voltage Meter.

AUTOMATIC AND MANUAL DEGAUSSING

The degaussing coil is mounted around the CDT so that automatic degaussing when turn on the monitor. But a monitor is moved or faced in a different direction, become poor color purity cause of CDT magnetized, then press DEGAUSS on the OSD menu.

ADJUSTMENT PROCEDURE & METHOD

- Install the cable for adjustment such as Figure 1 and run the alignment program on the DOS for IBM compatible PC.
- Set external Brightness and Contrast volume to max position.

1. Checked for B⁺ Voltage.

- 1) Display cross hatch pattern at Mode 4.
- 2) Check D961 voltage to 50.0V \pm 1V with.

2. Adjustment for High-Voltage.

- 1) Display cross hatch pattern at Mode 4.
- 2) DIST.ADJ.→CTRL PWM → High Voltage Command.
- 3) Adjust High Voltage to 25.8kV \pm 0.1 kVdc.
- 4) Press Enter Key.

3. Adjustment for Factory Mode (Preset Mode).

- 1) Display cross hatch pattern at Mode 1.
- 2) Run alignment program for T710BHK on the IBM compatible PC.
- 3) EEPROM → ALL CLEAR → Y(Yes) command.
<Caution> Do not run this procedure unless the EEPROM is changed. All data in EEPROM (mode data and color data) will be erased.
- 4) Power button of the monitor turn off → turn on.
- 5) COMMAND→PRESET START→Y(Yes) command.
- 6) DIST. ADJ. → CTRL PWM → TILT command.

- 7) Adjust tilt as arrow keys to be the best condition.
- 8) DIST. ADJ. → BALANCE command.
- 9) Adjust parallelogram as arrow keys to be the best condition.
- 10) Adjust balance of pin-balance as arrow keys to be the best condition.
- 11) DIST. ADJ. → FOS. ADJ command.
- 12) Adjust V-SIZE as arrow keys to 230 \pm 2mm.
- 13) Adjust V-POSITION as arrow keys to center of the screen.
- 14) Adjust H-SIZE as arrow keys to 310 \pm 2mm.
- 15) Adjust H-POSITION as arrow keys to center of the screen.
- 16) Adjust S-PCC (Side-Pincushion) as arrow keys to be the best condition.
- 17) Adjust TRAPEZOID as arrow keys to be the best condition.
- 18) Save of the Mode 1~4.
- 19) Display from Mode 2 to 4 and repeat above from number 12) to 19)
- 20) PRESET EXIT → Y (Yes) command.

4. Adjustment for White Balance and Luminance.

- 1) Set the White Balance Meter.
- 2) Press the DEGAUSS on the OSD menu for demagnetization of the CDT.
- 3) COLOR ADJ. → LUMINANCE command of the alignment program.
- 4) Set Brightness and Contrast to Max position.
- 5) Display color 0,0 pattern at Mode 4.
- 6) COLOR ADJ.→ BIAS ADJ.→ COLOR No. → 1 command of the alignment program.
- 7) Check whether green color or not at R-BIAS and G-BIAS to min position and B-BIAS to 127(7F) position and Sub-Brightness to 205(CD) position. Adjust G2 (screen) command to 0.4 \pm 0.05FL of the raster luminance.
- 8) Adjust R-BIAS and G-BIAS command to x=0.283 \pm 0.005 and y=0.298 \pm 0.005 on the White Balance Meter with PC arrow keys.
- 9) Adjust SUB-Brightness command to 0.4 \pm 0.1FL of the raster luminance.
- 10) Adjust repeat number 8).
- 11) After push the "ENTER" key.
- 11-1) COMMAND → PRESET START → Y(Yes) command.
- 12) Display color 15,0 full white pattern at Mode 4.
- 13) DRIVE ADJ.→ No 1. command.

- 14) Set Brightness and Contrast to Max position.
- 15) Set SUB-CONTRAST 127(7F) (decimal) position.
- 16) Set B-DRIVE to 90(5A) at DRIVE of the alignment program.
- 17-1) Adjust R-DRIVE and G-DRIVE command to white balance $x=0.283\pm0.003$ and $y=0.298\pm0.003$ on the White Balance Meter with PC arrow keys.
- 17-2) Display color 15,0 window pattern (70x70mm) at mode 4.
- 18) Adjust SUB-CONTRAST command to $50\pm2FL$.
- 19) After push the "ENTER" key.
- 20) Display color 15,0 full white pattern at Mode 4..
- 21) COLOR ADJ. → LUMINANCE → ABL command.
- 22) Adjust ABL to $32\pm1FL$ of the luminance.
- 23) After push the "ENTER" key, and "COMMAND → PRESET EXIT → Y(Yes)" command.
- 24) Exit from the program.

5. Input EDID Data.

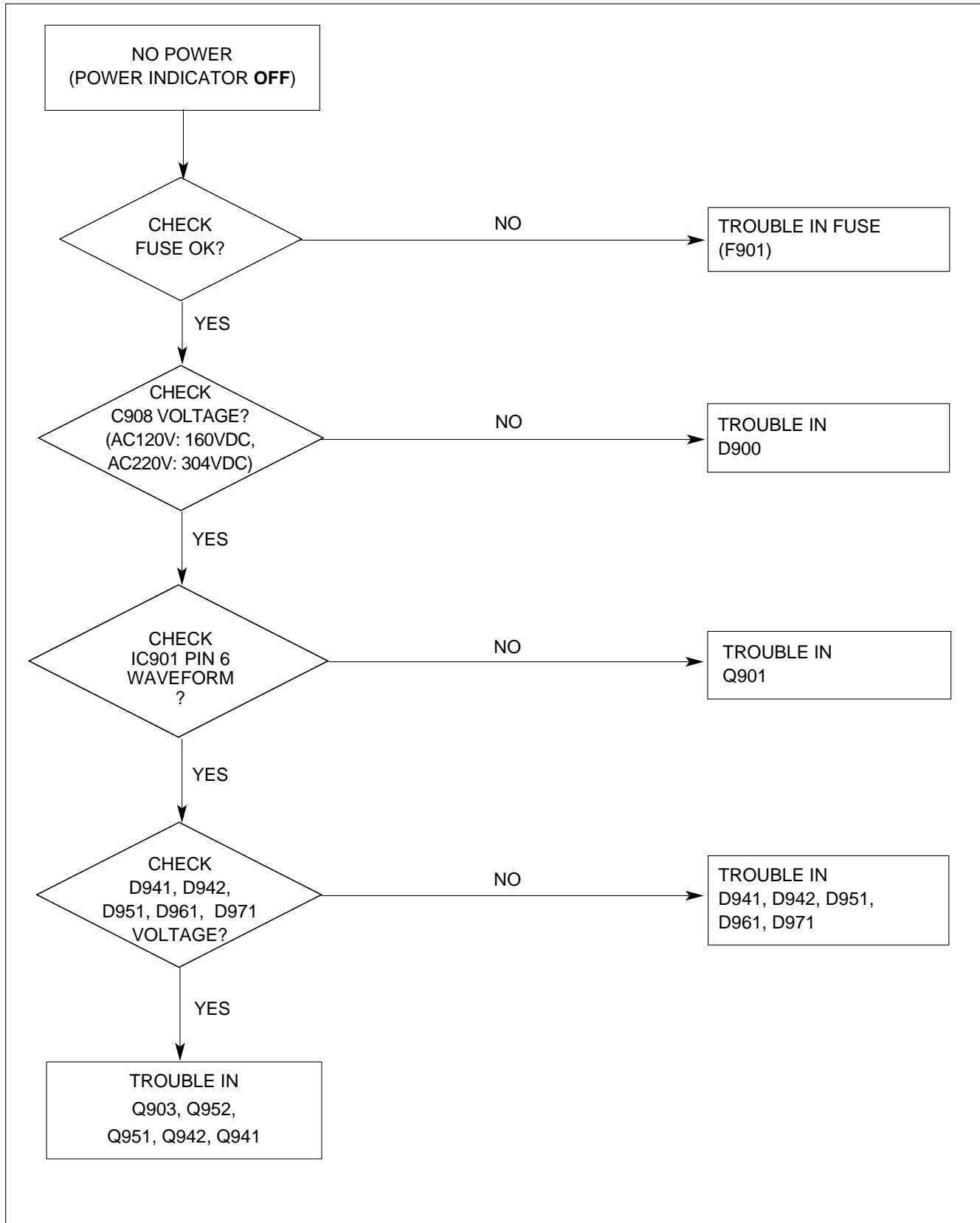
- 1) Display color 15,0 cross hatch pattern at Mode 4.
- 2) EEPROM → Write EDID command and confirm "EDID Write OK!!" message of monitor.
- 3) Exit from the alignment program.
- 4) Power switch OFF/ON for EDID data save.

6. Adjustment for Focus.

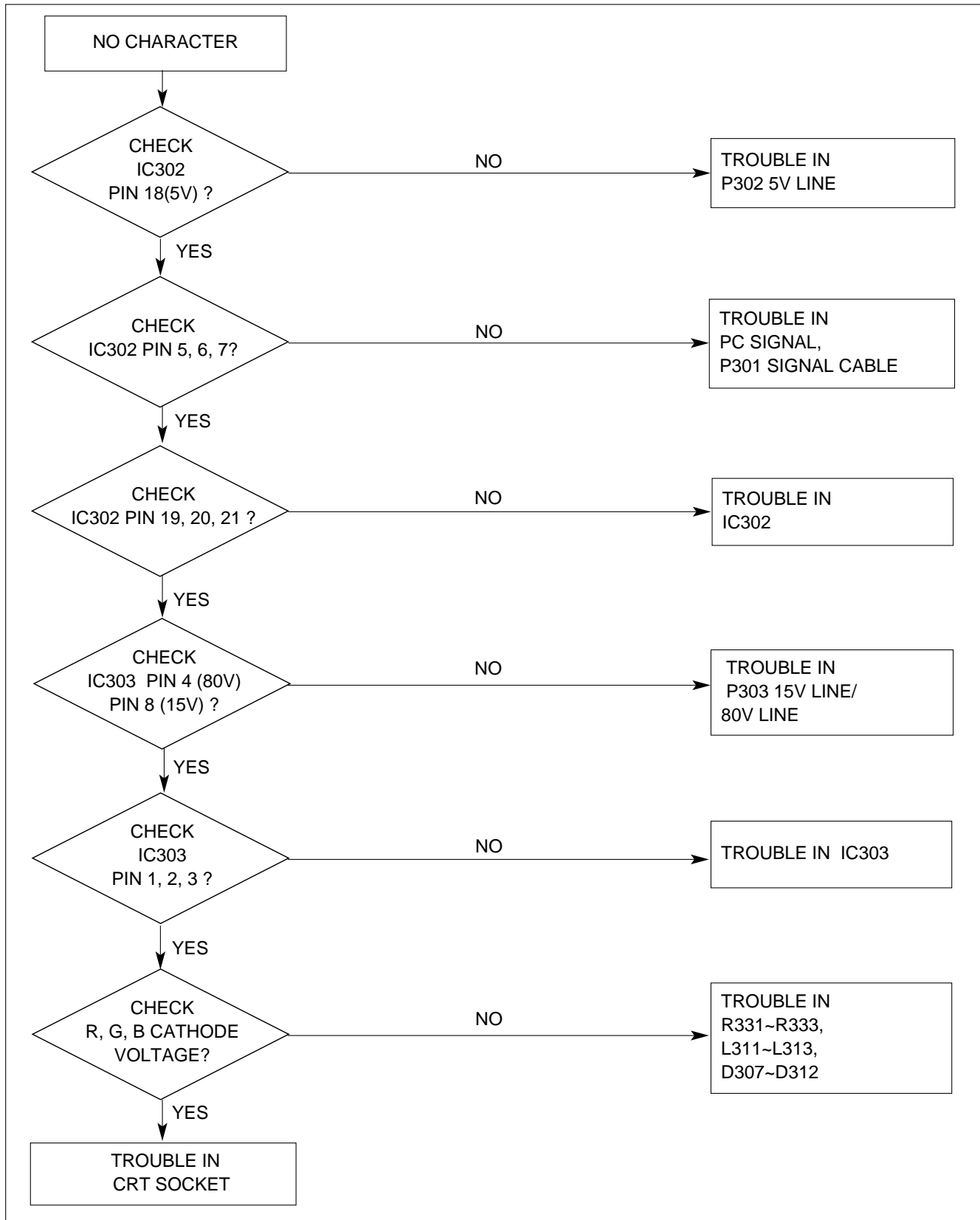
- 1) Set the Brightness and Contrast to max position.
- 2) Display H character in full screen at Mode 4.
- 3) Adjust two Focus control on the FBT that focus should be the best condition.

TROUBLESHOOTING GUIDE

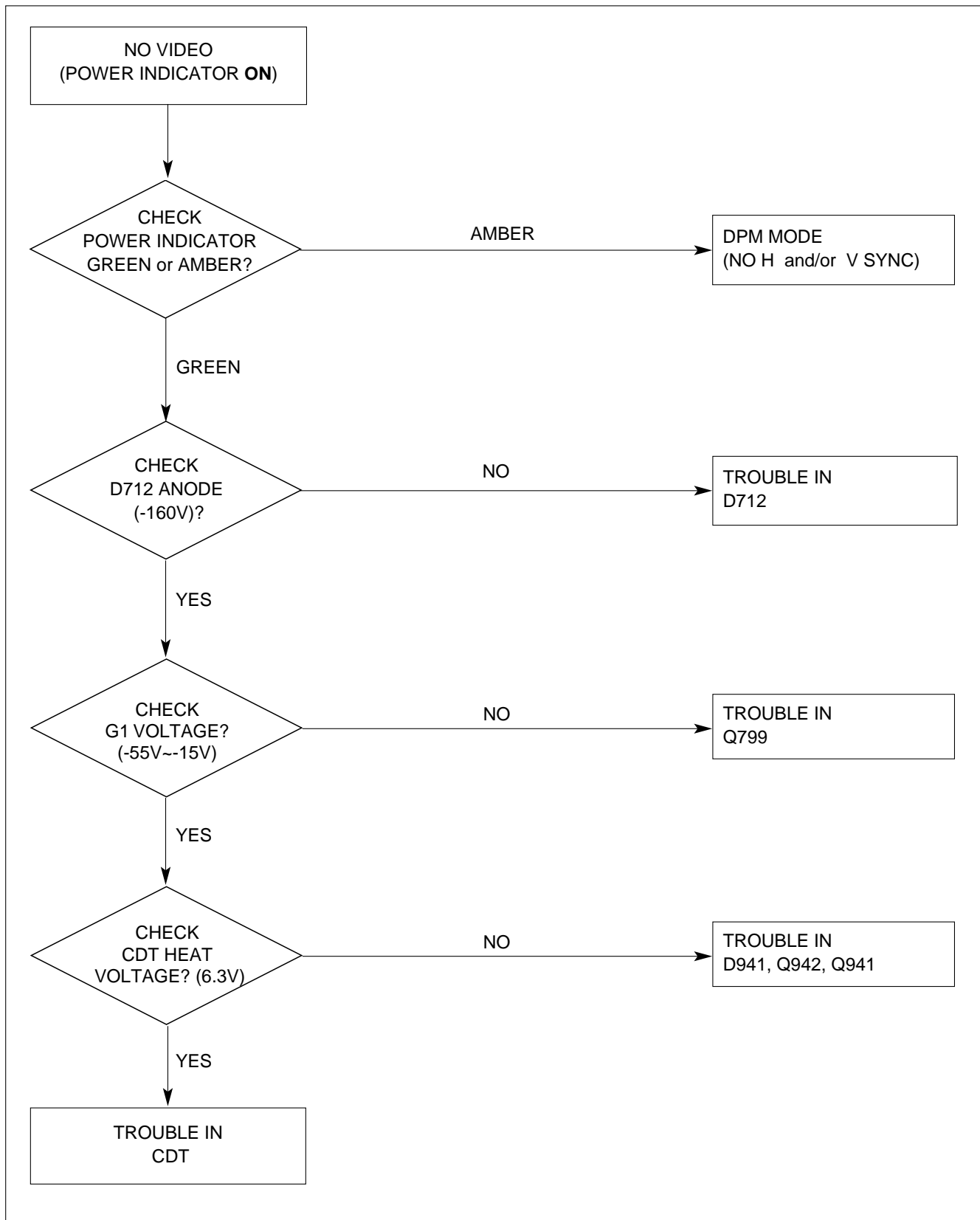
1. NO POWER



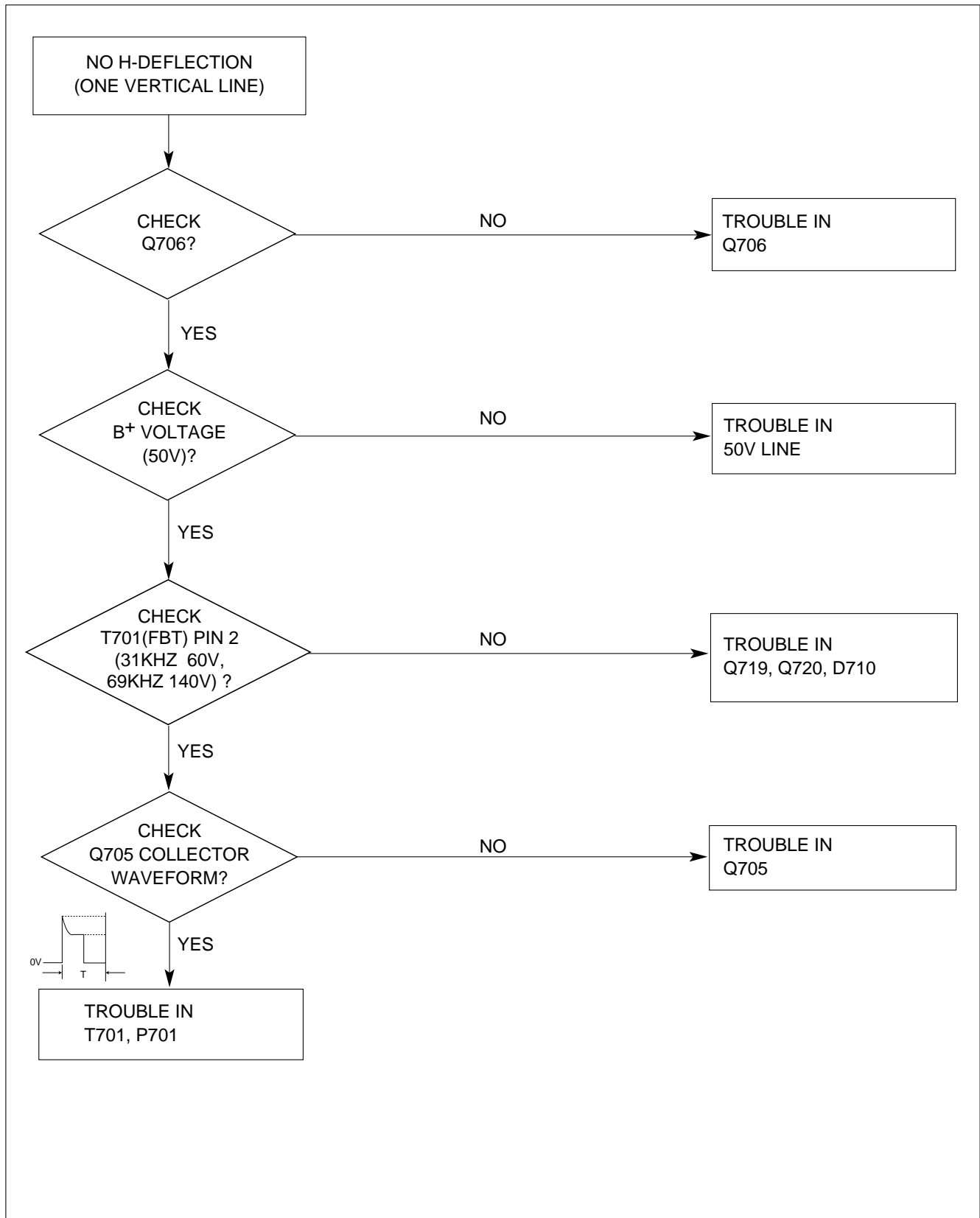
2. NO CHARACTER



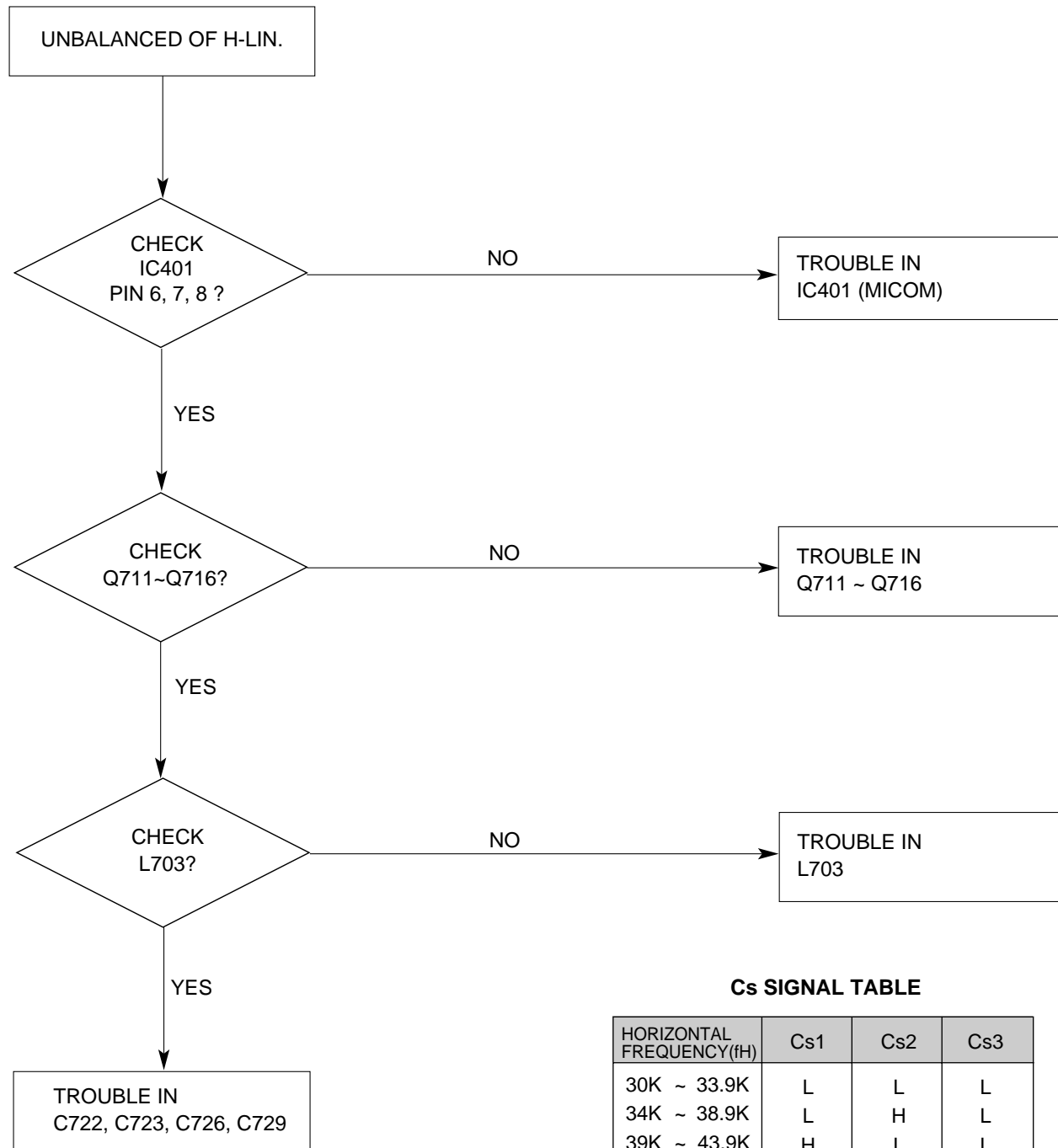
3. NO RASTER



4. NO HORIZONTAL DEFLECTION



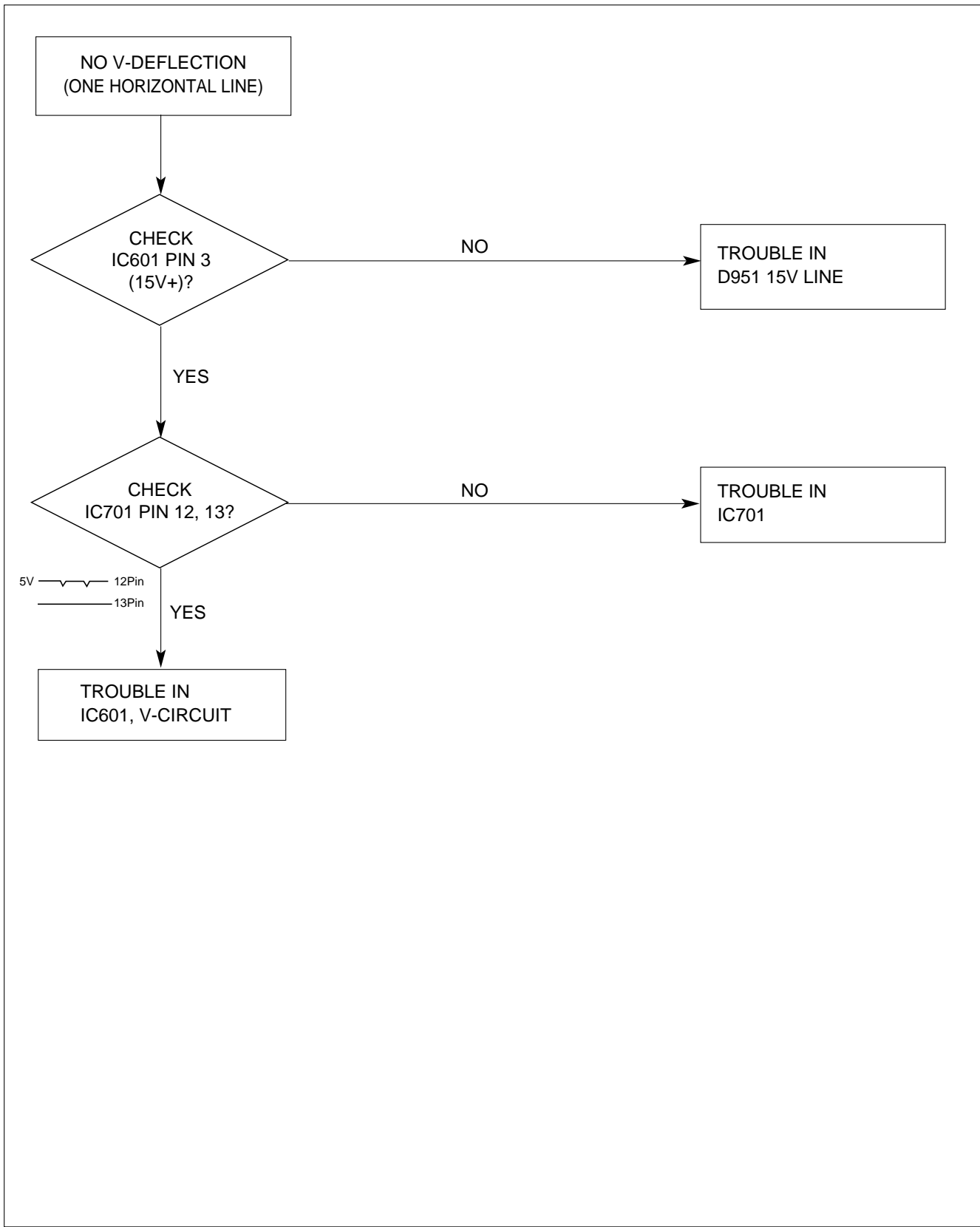
5. TROUBLE IN H-LINEARITY



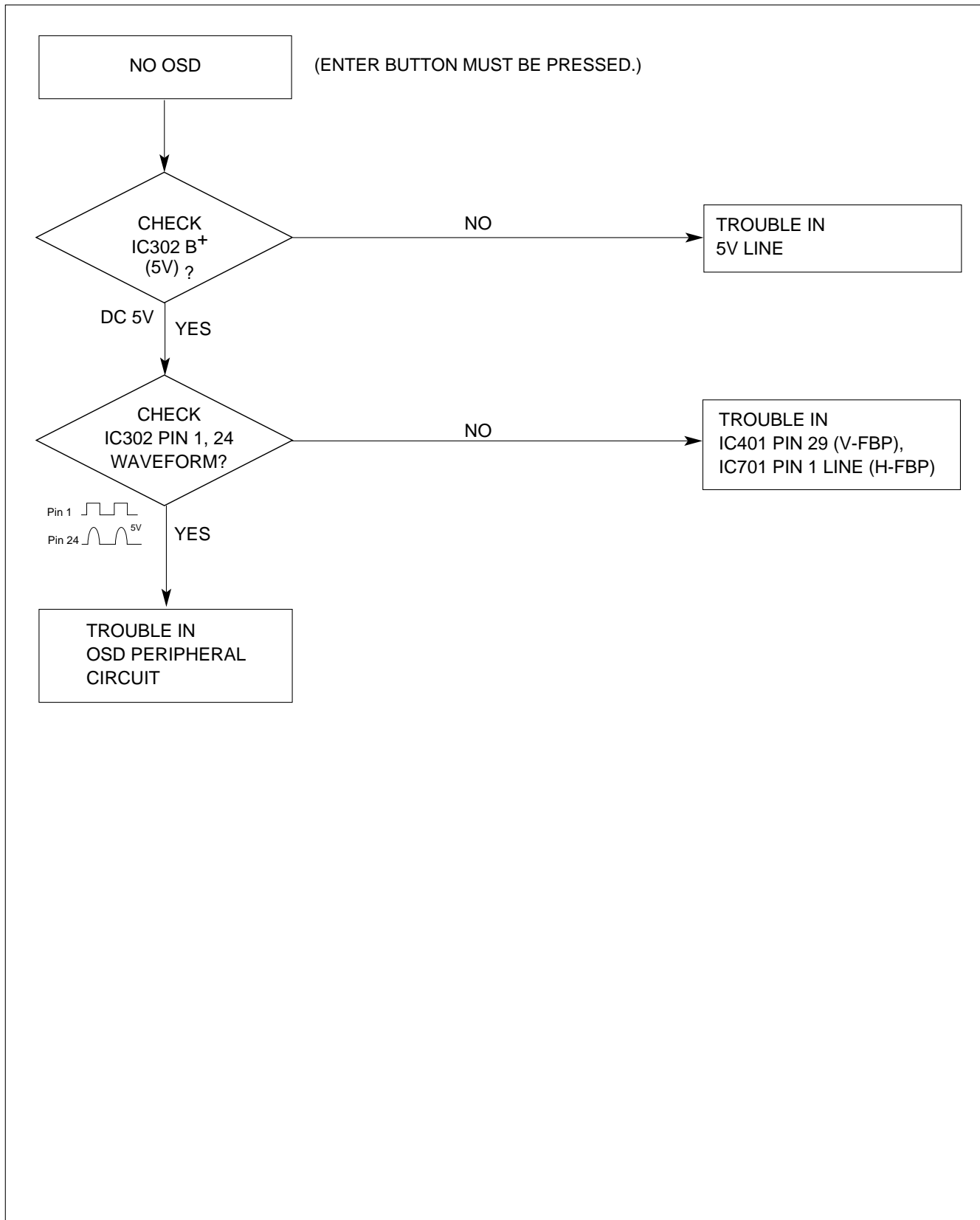
Cs SIGNAL TABLE

HORIZONTAL FREQUENCY(fH)	Cs1	Cs2	Cs3
30K ~ 33.9K	L	L	L
34K ~ 38.9K	L	H	L
39K ~ 43.9K	H	L	L
44K ~ 48.9K	H	L	L
49K ~ 51.9K	H	H	L
52K ~ 57.9K	H	H	L
58K ~ 61.9K	H	H	L
62K ~ 65.9K	H	H	H
66K ~ 71K	H	H	H

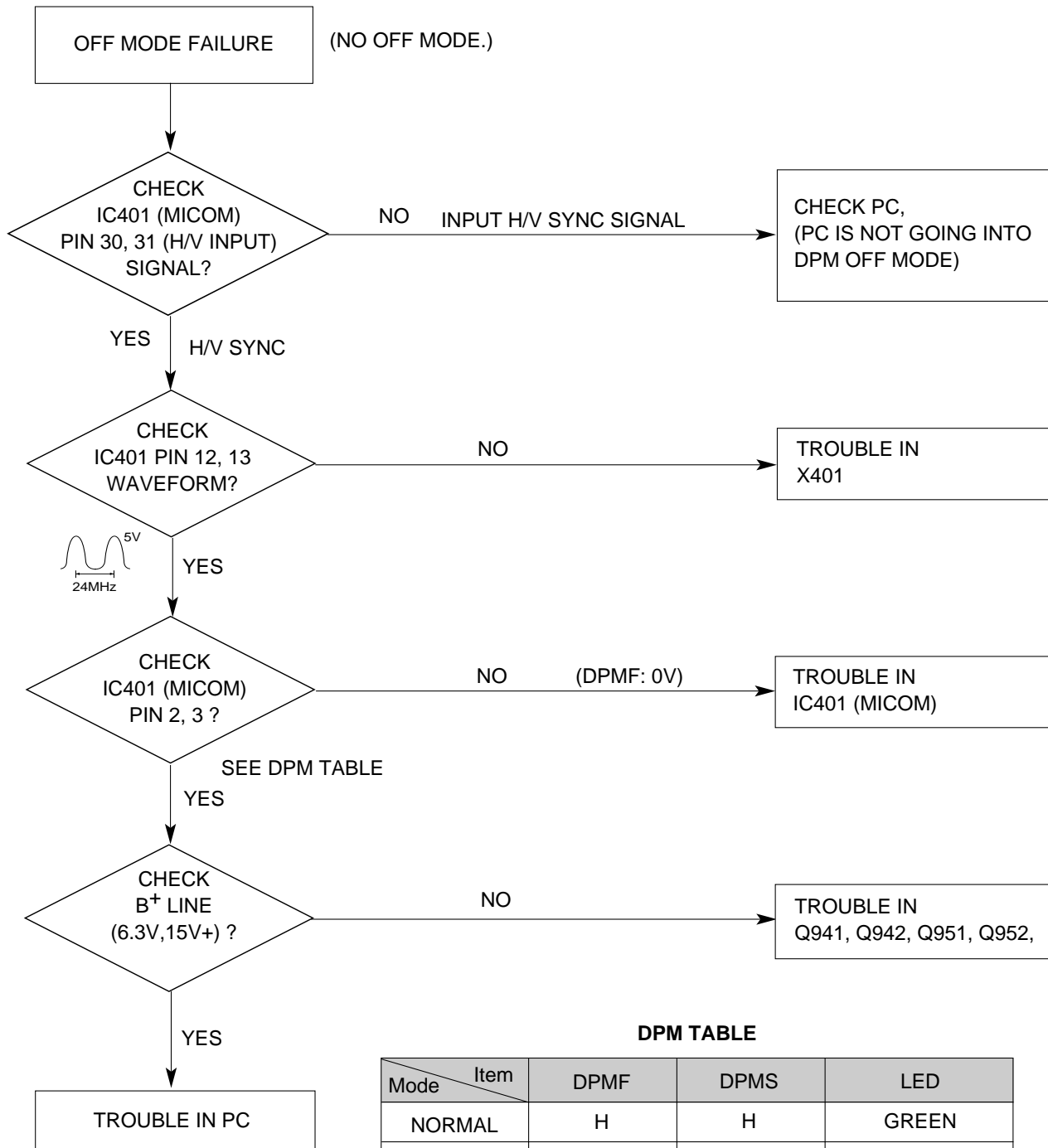
6. NO VERTICAL DEFLECTION



7. TROUBLE IN OSD



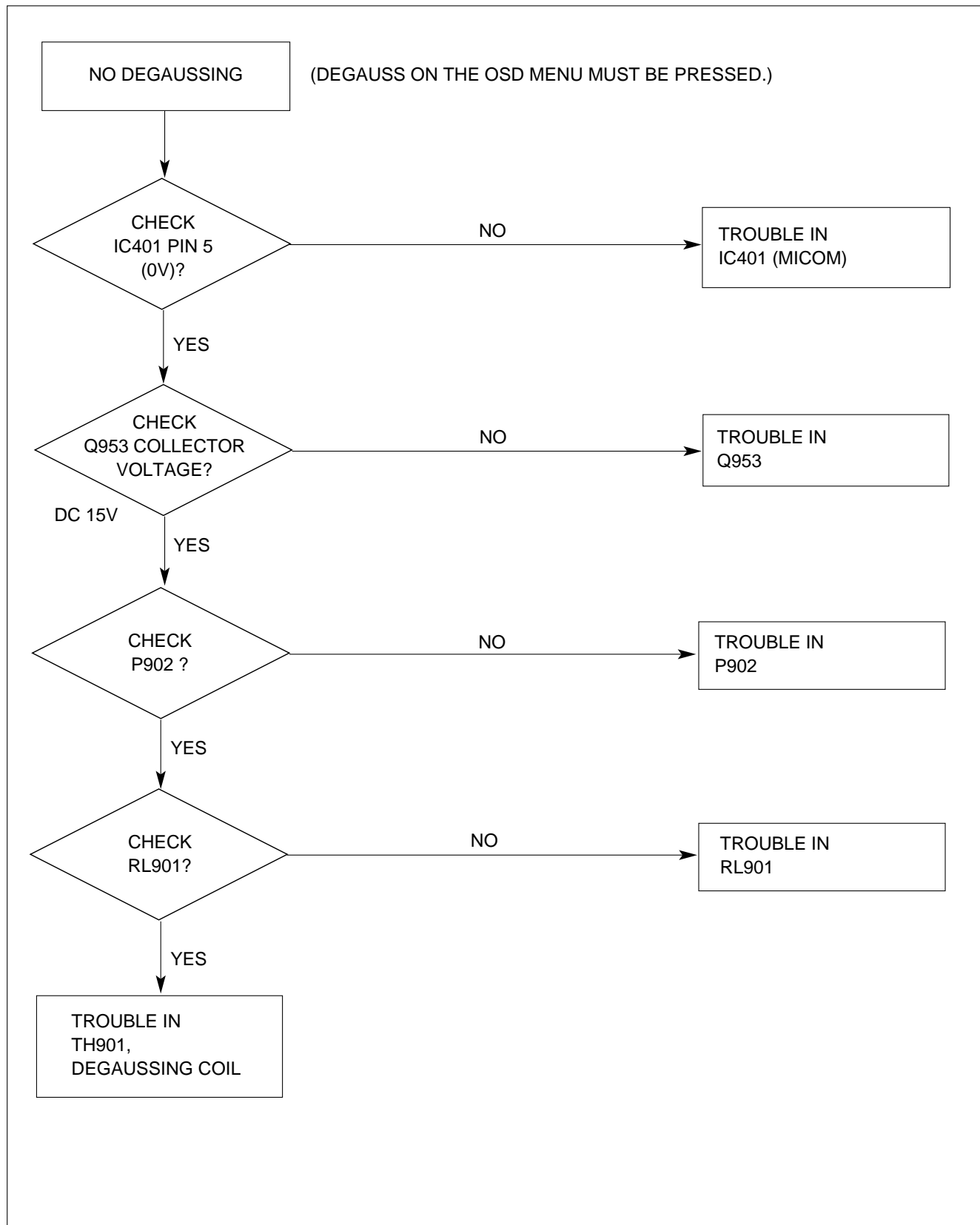
8. TROUBLE IN DPM



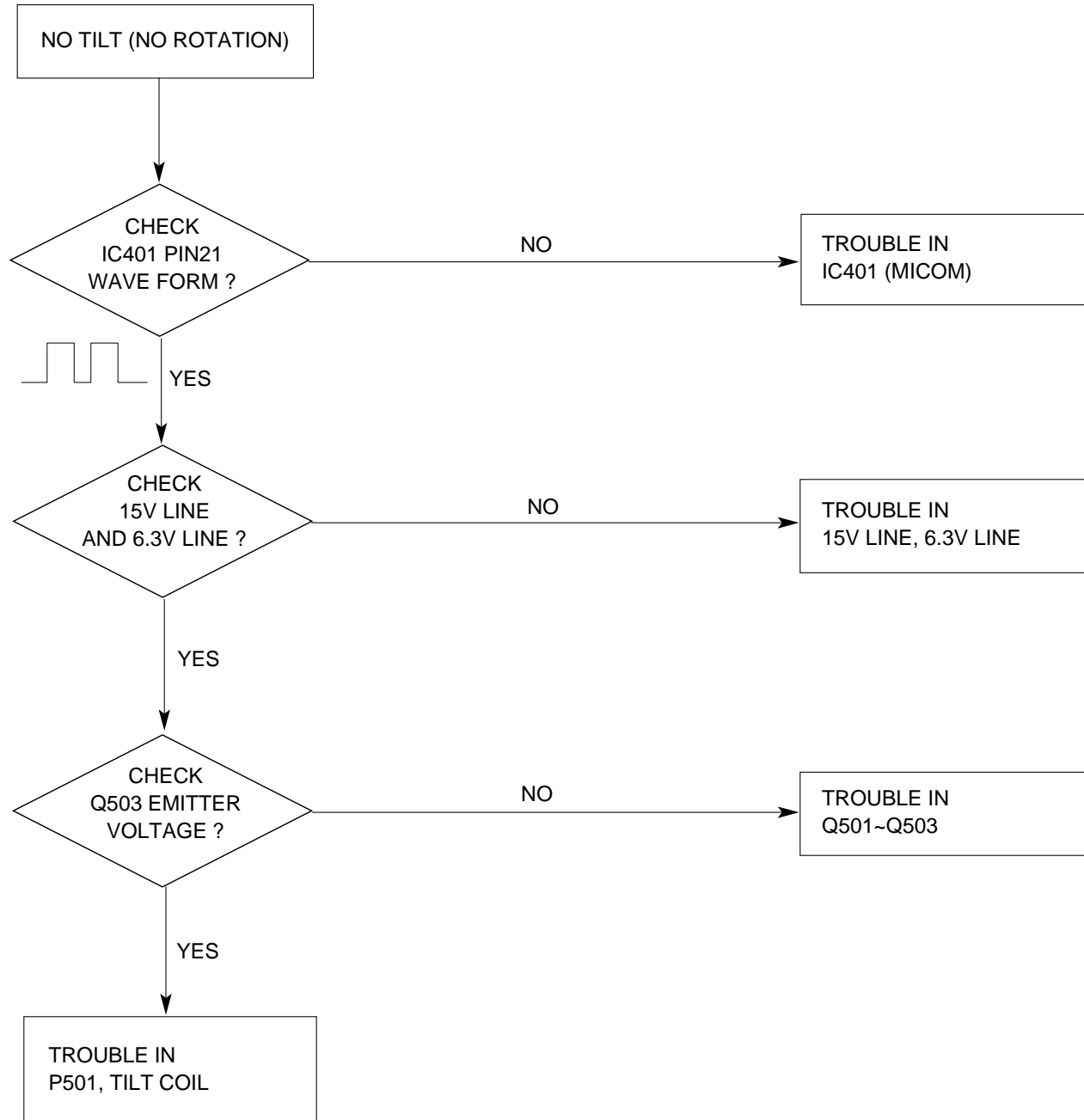
DPM TABLE

Mode \ Item	DPMF	DPMS	LED
NORMAL	H	H	GREEN
STAND-BY	L	H	AMBER
SUSPEND	L	H	AMBER
OFF	L	L	AMBER

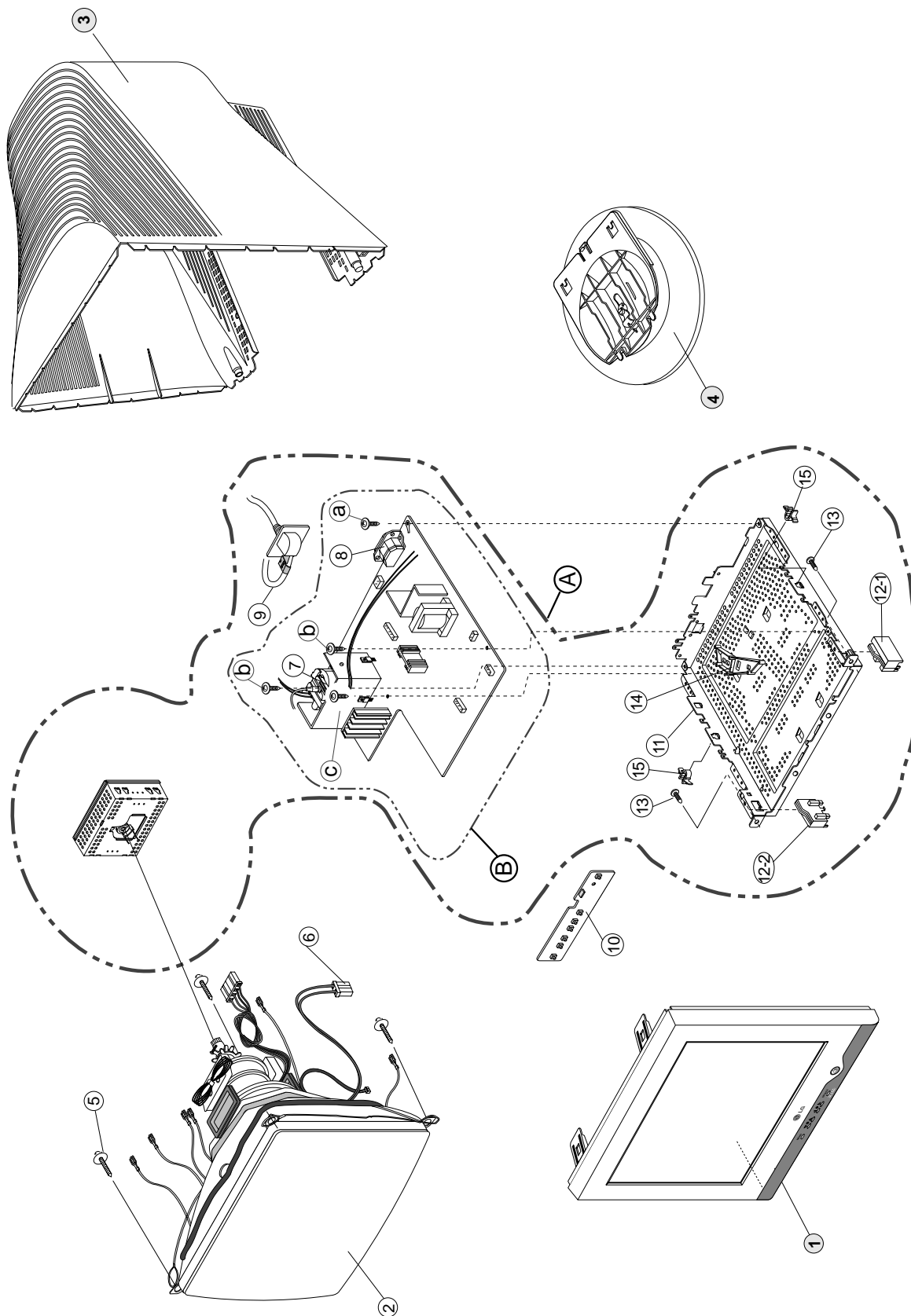
9. NO DEGAUSSING



10. NO TILT (NO ROTATION)



EXPLODED VIEW




EXPLODED VIEW PARTS LIST


Ref. No.	Part No.	Description
1	3091TKC089U	CABINET ASSEMBLY, T710BH BRAND C079 5200HF,TCO99,B/VIEW,ER04,DI - <i>For Europe(T710BH)</i>
	3091TKC106Q	CABINET ASSEMBLY, T710 BRAND C079 5008HF, BLACK (EK00) - <i>For U.S.A(T710BH)</i>
	3091TKC089A	CABINET ASSEMBLY, E710BH BRAND 079 NO SPRAY - <i>For World Wide(T710BH)</i>
	3091TKC106L	CABINET ASSEMBLY, T710BH BRAND C079 TCO99,ER04,LIFE,B/VIEW,DI - <i>For Austrailia(T710BH)</i>
	3091TKC089Q	CABINET ASSEMBLY, T710SH BRAND C079 LG RED,320T,89483,NT - <i>For Brazil(T710SH)</i>
	3091TKC089W	CABINET ASSEMBLY, T710SH BRAND C079 320T,89483,B/VIEW,DI - <i>For Asia, Indonesia(T710SH)</i>
2	6318L17014A	CDT(CIRC), M41QEE903X 01NHU LG-PHILIPS 85KHZ 29.1MM FLAT TCO HB - <i>For Northern Hemisphere</i>
	6318L17014C	CDT(CIRC), M41QEE903X 01SHU LG-PHILIPS 70KHZ 29.1MM FCDT TCO HB - <i>For Southern Hemisphere</i>
	6318L17014B	CDT(CIRC), M41QEE903X 01QHU LG-PHILIPS 70KHZ 29.1MM FCDT TCO HB - <i>For Equatorial</i>
3	3809TKC050B	BACK COVER ASSEMBLY, T710BH/PH C046 GN5008HF,8C358(EQ54) - <i>For Europeal(T710BH)</i>
	3809TKC050J	BACK COVER ASSEMBLY, T710 C046 5008HF, BLACK (EK00)- <i>For U.S.A(T710BH)</i>
	3809TKC050A	BACK COVER ASSEMBLY, E710BH 046 EQ54(8C358) - <i>For World Wide(T710BH)</i>
	3809TKC050K	BACK COVER ASSEMBLY, T710 C046 320T,8C358,CKD - <i>For Brazil(T710SH)</i>
	3809TKC050C	BACK COVER ASSEMBLY, T710 C046 320T,EQ54(8C358) - <i>For Asia, Indonesia(T710SH)</i>
4	3043TKK136A	TILT SWIVEL ASSEMBLY, T710BJ T069/B058 60HR 8C358 BRAND
	3043TKK108J	TILT SWIVEL ASSEMBLY, T710 B060/T066 60HR, BLACK (9930) - <i>For U.S.A</i>
	3043TKK136D	TILT SWIVEL ASSEMBLY, T710BJ T069/B058 60HR 8C358 BRAND CKD - <i>For Brazil</i>
5	339-002K	SCREW ASSEMBLY, TAPTITE P TYPE D5.0 L25.0 MSWR/FZMY .
6	6140TC3004F	COIL, DEGAUSSING, 17.0OHM 0.35MM 80TST 17" T710BJ WITH EARTH
7	6174T11005E	FBT (FLY BACK TRANSFORMER), CF2154/F700BK(17"/71K,FLAT,FCDT,FST) LIEN CHANGE 17"
8	6620TKB002B	SOCKET(CIRC),POWER, SA-4S HUA JIE AC UNIVERSAL 3PIN BLACK
	6620TKB002D	SOCKET(CIRC),POWER, CDJ-3C DUOLING AC UNIVERSAL 3PIN BLACK
9	6850TA9012A	CABLE, D-SUB, UL20276-9C(5.8MM) AT 1500MM GRAY(85964) T710BJ DM
10	6871TST463C	PWB(PCB) ASSEMBLY,SUB, T710BK CONTROL TOTAL BRAND DI
	6871TST463B	PWB(PCB) ASSEMBLY,SUB, T710BK CONTROL TOTAL BRAND T710BK NT CONTROL TOTAL
11	4950TKS155S	METAL, SHIELD BOTTOM,CB553,0.8T,REAR HOLE DELETE
	4950TKS212D	METAL, SHIELD BOTTOM C-CKD - <i>For Brazil</i>
12-1	4810TKK150A	BRACKET, CN771C SUPPORTER BOT.(RIGHT)
12-2	4810TKK151A	BRACKET, CN771C SUPPORTER BOT.(LEFT)
13	332-102F	SCREW, PTP+4*20BP(MSWR/FZMY)
14	4810TKK204J	BRACKET, 700BK HOLDER FBT H-CKD
15	4930TKK031C	HOLDER, PCB FIX , PC+ABS
A	3313T17332C	MAIN TOTAL ASSEMBLY, T710BHK BRAND CA-131 - <i>For Europe</i>
	3313T17332F	MAIN TOTAL ASSEMBLY, T710BHK BRAND CA-131 - <i>For Austrailia</i>
	3313T17332E	MAIN TOTAL ASSEMBLY, T710BHK BRAND CA-131 - <i>For Brazil</i>
	3313T17332G	MAIN TOTAL ASSEMBLY, T710BHK BRAND CA-131 - <i>For Asia, Indonesia</i>
	3313T17332B	MAIN TOTAL ASSEMBLY T710BHK BRAND CA-131 - <i>For World Wide</i>
B	6871TMT496C	PWB(PCB) ASSEMBLY,MAIN, T710BHK KLRDED BRAND CA-131 TOTAL - <i>For Europe</i>
	6871TMT496F	PWB(PCB) ASSEMBLY,MAIN, T710BHK KLAUED BRAND CA-131 TOTAL - <i>For Austrailia</i>
	6871TMT496E	PWB(PCB) ASSEMBLY,MAIN, T710BHK KLBRMS BRAND CA-131 TOTAL - <i>For Brazil</i>
	6871TMT496G	PWB(PCB) ASSEMBLY,MAIN, T710BHK KLDAMD BRAND CA-131 TOTAL - <i>For Asia, Indonesia</i>
	6871TMT496B	PWB(PCB) ASSEMBLY,MAIN, T710BHK KLRDET BRAND CA-131 TOTAL - <i>For World Wide</i>
a	332-112F	SCREW,DRAWING, D3.5 L10.0 MSWR/FZMY +SW3.5+RW3.5
b	4001TKK004E	SCREW ASSEMBLY, TAPTITE P TYPE D3.0 L10.0 MSWR/FZMY SW3+RW10
c	332-095B	SCREW,DRAWING, PZP+3*10(MSWR/FZMY)

REPLACEMENT PARTS LIST

CAUTION: BEFORE REPLACING ANY OF THESE COMPONENTS,
READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.

* NOTE : **S** SAFETY Mark 
AL ALTERNATIVE PARTS

DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
CAPACITORS				
		C301	0CQ1021N419	1000P 100V J POLY NI TP
		C302	0CE106CF638	"10UF SHL,SD 16V M FM5 TP 5"
		C303	0CC5600K415	56P 50V J NP0 TP
		C304	0CC5600K415	56P 50V J NP0 TP
		C305	0CE476CF638	"47UF SHL,SD 16V M FM5 TP 5"
		C306	0CZZTFT001M	ECQB1H103JF3 MATSUSHITA 50V
		C307	0CC5600K415	56P 50V J NP0 TP
		C308	0CK1020K515	1000PF 50V K B TR
		C309	0CK1040K945	0.1UF 50V Z F TR
		C311	0CK1040K945	0.1UF 50V Z F TR
		C312	0CK1040K945	0.1UF 50V Z F TR
		C313	0CK1040K945	0.1UF 50V Z F TR
		C314	0CC4700W405	47PF 500V J SL TP
		C315	0CE476EF638	47UF KMG 16V M FM5 TP 5
		C317	0CK1040K945	0.1UF 50V Z F TR
		C318	0CK1040K945	0.1UF 50V Z F TR
		C319	0CK1040K945	0.1UF 50V Z F TR
		C320	0CK10202515	1000PF D 2KV 10% TR B(Y5P)
		C321	0CE225CK638	"2.2UF SHL,SD 50V M FM5 TP 5"
		C323	0CE476CF638	"47UF SHL,SD 16V M FM5 TP 5"
		C324	0CK1040K945	0.1UF 50V Z F TR
		C325	181-288B	MKT 100V 104JTR PHS26104
		C326	0CC2200W415	22PF 500V J NP0 TR
		C327	181-288B	MKT 100V 104JTR PHS26104
		C328	0CE226CN638	"22UF SHL,SD 100V M FM5 TP 5"
		C329	181-288B	MKT 100V 104JTR PHS26104
		C330	181-288B	MKT 100V 104JTR PHS26104
		C331	181-288G	MKT 100V 334JTR PHS26334
		C332	181-288G	MKT 100V 334JTR PHS26334
		C333	181-288G	MKT 100V 334JTR PHS26334
		C334	181-288B	MKT 100V 104JTR PHS26104
		C335	181-288B	MKT 100V 104JTR PHS26104
		C339	0CK1520W515	1500P 500V K B TS
		C340	181-288B	MKT 100V 104JTR PHS26104
		C341	0CK10202515	1000PF D 2KV 10% TR B(Y5P)
		C344	181-288B	MKT 100V 104JTR PHS26104
		C346	0CK10302940	0.01M 2KV Z F S
		C372	0CK1040K945	0.1UF 50V Z F TR
		C401	0CK1040K945	0.1UF 50V Z F TR
		C402	0CE476CF638	"47UF SHL,SD 16V M FM5 TP 5"
		C403	0CK1040K945	0.1UF 50V Z F TR
		C406	0CK1010K515	100PF 50V K B TR
		C407	0CK1010K515	100PF 50V K B TR
		C408	0CK1040K945	0.1UF 50V Z F TR
		C410	0CK1010K515	100PF 50V K B TR
		C412	0CK1040K945	0.1UF 50V Z F TR
		C414	0CK1010K515	100PF 50V K B TR
		C501	0CE106CF638	"10UF SHL,SD 16V M FM5 TP 5"

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C599	0CE225CK638	"2.2UF SHL,SD 50V M FM5 TP 5"
		C601	0CE227CH638	"220UF SHL,SD 25V M FM5 TP 5"
		C602	181-288K	MKT 100V 683JTR PHS26683
		C603	0CE476EK638	47UF KMG 50V M FM5 TP 5
		C604	0CZZTFT001V	ECQB1H473JM3 473J 50V TP5.0 M
		C605	0CK1020W515	1000P 500V K B TS
		C701	0CQ4721N419	0.0047U 100V J POLY NI TP5
		C702	0CZZTFT001M	ECQB1H103JF3 MATSUSHITA 50V
		C703	0CZZTFT001Z	ECQB1H104JM3 104J 50V TP5.0 M
		C704	0CQ8221N519	0.0082UF D 100V 10% PE NI TP5
		C706	0CZZTFT001Z	ECQB1H104JM3 104J 50V TP5.0 M
		C707	0CZZTFT002B	ECQV1H154JZ3 154J 50V TP5.0 M
		C708	0CE227CH638	"220UF SHL,SD 25V M FM5 TP 5"
		C709	0CZZTFT001Z	ECQB1H104JM3 104J 50V TP5.0 M
		C711	0CQ5621N419	5600PF D 100V 5% PE NI TP5
		C713	0CK2210K515	220P 50V K B TS
		C714	0CE107CH638	"100UF SHL,SD 25V M FM5 TP 5"
		C715	181-288N	MKT 100V 103JTR PHS86103
		C716	0CK2710K515	270P 50V K B TS
		C717	0CZZTFT001R	ECQB1H223JM3 223J 50V TP5.0 M
		C718	0CZZTFT001V	ECQB1H473JM3 473J 50V TP5.0 M
		C719	0CZZTAB001F	SHL-BP SYE / SWE 50V 3.3UF 20
		C720	0CK10201515	1000P 1KV K B TS
		C722	181-303F	274J 30.0*21.0*13.5*20.0 250V
		C723	181-303B	124J 20.5*19.0*11.0*10.0 250V
		C724	0CK1040K945	0.1UF 50V Z F TR
		C726	181-482E	224J 18.0*16.0*9.5*7.5 250V J
		C727	0CK1040K945	0.1UF 50V Z F TR
		C729	181-305K	564J 26.0*18.0*11.0*15.0 250V
		C730	0CK1040K945	0.1UF 50V Z F TR
		C731	0CBZTBU004H	5600PF D 2.5KV H M/PP NI FM20
		C732	181-288N	MKT 100V 103JTR PHS86103
		C733	0CBZTBU003H	362J 20.0*12.0*7.0*10.0 800V
		C734	0CE226CK638	"22UF SHL,SD 50V M FM5 TP 5"
		C735	0CK1030K945	0.01UF 50V Z F TR
		C737	0CK10102515	100PF D 2KV 10% B(Y5P) TR
		C738	181-302P	123J 19.5*12.0*7.0*10.0 250V
		C739	0CE106CK638	"10UF SHL,SD 50V M FM5 TP 5"
		C740	0CE227EL630	220UF KMG 63V M FM5 BULK
		C741	0CZZTFT002B	ECQV1H154JZ3 154J 50V TP5.0 M
		C742	0CE106CK638	"10UF SHL,SD 50V M FM5 TP 5"
		C743	0CZZTFT002B	ECQV1H154JZ3 154J 50V TP5.0 M
		C744	0CZZTAB005A	SMSHR SYE / SWE 160V 47UF 20%
		C745	0CK5610W515	560P 500V K B TS
		C746	0CK3310W515	330P 500V K B TS
		C747	0CK1040K945	0.1UF 50V Z F TR
		C748	0CK1510W515	150PF 500V K B TR
		C749	0CE105CQ638	"1UF SHL,SD 200V M FM5 TP 5"
		C750	0CK1040K945	0.1UF 50V Z F TR

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C751	181-288J	MKT 100V 563JTR PHS26563
		C752	0CQ4721N419	0.0047U 100V J POLY NI TP5
		C753	0CK10301945	10000PF D 1KV Z F(Y5V) TR
		C767	0CK10301945	10000PF D 1KV Z F(Y5V) TR
		C774	0CZZTFT001Z	ECQB1H104JM3 104J 50V TP5.0 M
		C801	0CE105CK638	"1UF SHL,SD 50V 20% FM5 TP 5"
		C805	0CE106CK638	"10UF SHL,SD 50V M FM5 TP 5"
		C810	0CE106CK638	"10UF SHL,SD 50V M FM5 TP 5"
		C901	0CBZTBU002A	BULK PCX2 335 224K
		C902	0CBZTBU002C	BULK PCX2 335 104M
		C903	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK
		C904	0CKZTBU003A	SC E 222M 10.0BW7 250V BK7.5
		C905	0CKZTBU003A	SC E 222M 10.0BW7 250V BK7.5
		C906	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK
		C907	0CKZTBU003A	SC E 222M 10.0BW7 250V BK7.5
		C908	0CEZTBU002D	180UF 25.4*35 SMH/HC 400V M V
		C909	0CK10301945	10000PF D 1KV Z F(Y5V) TR
		C910	0CK22101515	220P 1KV K B TP5
		C911	0CE475CK638	"4.7UF SHL,SD 50V M FM5 TP 5"
		C912	0CK3310K515	330P 50V K B TS
		C913	0CE476CK638	"47UF SHL,SD 50V M FM5 TP 5"
		C914	0CZZTFT001P	ECQB1H153JM3 153J 50V TP5.0 M
		C915	0CK6810K515	680P 50V K B TS
		C917	0CK1020K515	1000PF 50V K B TR
		C918	0CK1040K945	0.1UF 50V Z F TR
		C941	0CE108CD618	1000UF SHL 10V M FL TP5
		C942	0CE107CF638	"100UF SHL,SD 16V M FM5 TP 5"
		C943	0CK56101515	560P 1KV K B TS
		C946	0CK2710W515	270P 500V K B TS
		C951	0CE108CH630	1000UF SHL 25V M FM5 BULK
		C952	0CE107CH638	"100UF SHL,SD 25V M FM5 TP 5"
		C953	0CE107CF638	"100UF SHL,SD 16V M FM5 TP 5"
		C954	0CE108CF630	1000UF SHL 16V M FM5 BULK
		C971	0CE476CN618	47UF SHL 100V M FL TP5
		C999	0CE227CL630	220U SHL 63V M FM5
DIODEs				
		D201	0DL305029BA	LTL-305DJ-0C2 TP LITEON GREEN
		D301	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D302	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D303	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D304	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D305	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D306	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D307	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D308	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D309	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D310	0DS124409AA	1SS244 TP ROHM KOREA
		D311	0DS124409AA	1SS244 TP ROHM KOREA
		D312	0DS124409AA	1SS244 TP ROHM KOREA
		D313	0DS124409AA	1SS244 TP ROHM KOREA
		D314	0DS124409AA	1SS244 TP ROHM KOREA
		D315	0DS124409AA	1SS244 TP ROHM KOREA
		D316	0DRTW00119A	1N4005-1021 TIWAN SEMI TP DO4
		D402	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15

DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		D404	971-0054	TIN 50MM TAPING
		D512	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D702	0DS124409AA	1SS244 TP ROHM KOREA
		D703	0DRGF00120A	MUR460(15MM) GULF BK DO201AD
		D704	0DRFC00010A	FFPF04F150S FAIR CHILD ST TO2
		D705	0DRGF00069A	SB140 GULF TP DO41 40V 1A 40A
		D706	0DRFC00010A	FFPF04F150S FAIR CHILD ST TO2
		D710	0DR400409AC	UF4004 GULF TP DO41 400V 1A 3
		D711	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D712	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO4
		D714	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D715	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D716	0DRTW00119A	1N4005-1021 TIWAN SEMI TP DO4
		D717	0DRTW00119A	1N4005-1021 TIWAN SEMI TP DO4
		D718	0DRTW00119A	1N4005-1021 TIWAN SEMI TP DO4
		D719	0DR100009DC	RGP10J-1021 TIWAN SEMI TP DO4
		D720	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D721	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO4
		D722	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D723	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D724	0RD1800A609	180 OHM 1/2 W (7.0) 5% TA52
		D730	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D731	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D768	0DR100009DC	RGP10J-1021 TIWAN SEMI TP DO4
		D801	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D802	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D900	0DRTW00121A	D2SB60-1121 TIWAN SEMI ST GBL
		D902	0DRGF00139A	GPP20J GULF TP DO15 600V 2.0A
		D904	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO4
		D905	0DD400709CB	UF4007 TP G.I DO204AL 1000V
		D906	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO4
		D908	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D910	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D911	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D941	0DR100009LD	UG1D GULF TP DO41 200V 1A 40A
		D942	0DR400409AC	UF4004 GULF TP DO41 400V 1A 3
		D951	0DRGF00150A	UF5404 GULF BK DO201AD 400V 3
		D952	0DSGF00019A	1N4148 GULF TP DO35 100V 0.15
		D961	0DRGS00090A	31GF6L-5701 GENERAL SEMICONDU
		D971	0DD400709CB	UF4007 TP G.I DO204AL 1000V
		ZD402	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500M
		ZD403	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500M
		ZD404	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500M
		ZD405	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500M
		ZD407	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500M
		ZD410	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500M
		ZD701	0DZ120009BF	GDZJ12B TP GRANDE DO34 0.5W 1
		ZD902	0DZ510009BE	GDZ5.1B TP GRANDE DO34 500MW
ICs				
		IC303	0IPRPNS026A	LM2445TA NATIONAL SEMICONDUCT
		IC304	0IPRPNS005A	LM2480NA NATIONAL SEMICONDUCT
		IC401	0IMCRSS035A	LGM31B-180/AJH SAMSUNG ELECTR
		IC402	0ISG240860A	M24C08-BN6 8DIP BK 8K SERIAL
		IC601	0IPRPPH018A	"TDA4867J PHILIPS 9PIN,ST DIP"

DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		IC701 IC901	OIPRPPH005A OISS384200A	"TDA4841PS PHILIPS 32P,SDIP ST" KA3842B (PWM)
COILs & COREs				
		L301	971-0054	TIN 50MM TAPING
		L302	971-0054	TIN 50MM TAPING
		L303	971-0054	TIN 50MM TAPING
		L311	0LA0680K119	0.68UH K 2.3*3.4 TP
		L312	0LA0680K119	0.68UH K 2.3*3.4 TP
		L313	0LA0680K119	0.68UH K 2.3*3.4 TP
		L702	6140TBZ025D	"- - H-SIZE,DR12*20-C6.0,150UH"
		L703	6140TYZ010G	"LX31 GET DR14*15-C5.2,16.5T,4"
		L705	6140TBZ026C	DR15*18-C9.8 100UH 0.1*30MM 4
		L901	6200TZZ004A	SQE2626 NAMYANG BK L/FILTER 1
		L903	6210TCE003K	BAS3550T BO SUNG 3550MM AXIAL
		FB201	971-0054	TIN 50MM TAPING
		FB301	6210TCZ001J	BAS3550T(125-022J) BO SUNG R
		FB302	6210TCE003L	BAS3580T BO SUNG 3580MM AXIAL
		FB303	6210TCZ001J	BAS3550T(125-022J) BO SUNG R
		FB304	6210TCZ001J	BAS3550T(125-022J) BO SUNG R
		FB305	6210TCE003P	BRS2550B BO SUNG 2550MM RADIA
		FB306	6210TCE003L	BAS3580T BO SUNG 3580MM AXIAL
		FB307	6210TCE003B	BRS3580B BO SUNG 3580MM RADIA
		FB308	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL
		FB309	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL
		FB310	6210TCE003A	BRD3510B BO SUNG 3510MM RADIA
		FB313	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL
		FB402	971-0054	TIN 50MM TAPING
		FB403	971-0054	TIN 50MM TAPING
		FB701	6210TCE003L	BAS3580T BO SUNG 3580MM AXIAL
		FB703	971-0054	TIN 50MM TAPING
		FB705	971-0054	TIN 50MM TAPING
		FB903	6210TCE003P	BRS2550B BO SUNG 2550MM RADIA
		FB904	971-0054	TIN 50MM TAPING
		FB905	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL
		FB906	6210TCE003P	BRS2550B BO SUNG 2550MM RADIA
		FB921	6210TCE003A	BRD3510B BO SUNG 3510MM RADIA
		FB922	6210TCE003A	BRD3510B BO SUNG 3510MM RADIA
TRANSISTORS				
		Q501	0TR320209AA	KTC3202-Y(KTC1959) TP KEC TO9
		Q502	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO
		Q503	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9
		Q705	0TR200009AB	KTC200-Y TP KEC TO92 NPN
		Q706	0TRFC10008A	FJAF5804(TU) FAIRCHILD ST TO3
		Q707	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO
		Q708	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO
		Q709	0TRFC10010A	KSD1589Y FAIRCHILD ST TO220F
		Q710	0TRKE90020A	MPSA44 KEC TP TO92 500V 300MA
		Q711	0TF630001BB	SGS-T(STM) IRF630MFP ST TO220
		Q712	0TF630001BB	SGS-T(STM) IRF630MFP ST TO220
		Q713	0TF630001BB	SGS-T(STM) IRF630MFP ST TO220
		Q714	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9
		Q715	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9

DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		Q716	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9
		Q719	0TFFC10012A	FQPF10N20C FAIRCHILD ST TO220
		Q720	0TR390409CA	FAIRCHILD 2N3904(TA) TP TO-92
		Q722	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9
		Q723	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO
		Q799	0TRKE90019A	MPSA92 KEC TP TO92 -300V -500
		Q901	0TF760000AD	SSS7N60B FAIRCHILD ST TO220F
		Q903	0TR100809AA	KSC1008C-Y TP SAMSUNG TO92 N
		Q941	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9
		Q942	0TR127309AA	KTA1273-Y(KTA966A) TP KEC TO9
		Q951	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9
		Q952	0TR127309AA	KTA1273-Y(KTA966A) TP KEC TO9
		Q953	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO9
RESISTORS				
		R201	0RD1001Q609	1K 1/4W(3 5% TA52
		R202	0RD0912Q609	91 OHM 1/4 W (3.4) 5% TA52
		R203	0RD2200Q609	220 1/4W(3 5% TA52
		R204	0RD4300Q609	430 OHM 1/4 W(3.4) 5.00% TA52
		R205	0RD1001Q609	1K 1/4W(3 5% TA52
		R206	0RD0912Q609	91 OHM 1/4 W (3.4) 5% TA52
		R207	0RD4300Q609	430 OHM 1/4 W(3.4) 5.00% TA52
		R208	0RD2200Q609	220 1/4W(3 5% TA52
		R209	0RD9100Q609	910 1/4W(3 5% TA52
		R210	0RD2200Q609	220 1/4W(3 5% TA52
		R211	0RD2200Q609	220 1/4W(3 5% TA52
		R301	0RD0752Q609	75 1/4W(3 5% TA52
		R302	0RD0752Q609	75 1/4W(3 5% TA52
		R303	0RD0752Q609	75 1/4W(3 5% TA52
		R305	0RN6201F409	6.20K 1/6W 1% TA52
		R314	0RD1000Q609	100 1/4W(3 5% TA52
		R315	0RD1000Q609	100 1/4W(3 5% TA52
		R319	0RD4701Q609	4.70K 1/4W(3 5% TA52
		R320	0RD4701Q609	4.70K 1/4W(3 5% TA52
		R326	0RD2201Q609	2.20K 1/4W(3 5% TA52
		R327	0RD1001Q609	1K 1/4W(3 5% TA52
		R328	0RD1001Q609	1K 1/4W(3 5% TA52
		R329	0RD1001Q609	1K 1/4W(3 5% TA52
		R330	0RD1001Q609	1K 1/4W(3 5% TA52
		R331	0RD1600Q609	160 1/4W(3 5% TA52
		R332	0RD1600Q609	160 1/4W(3 5% TA52
		R333	0RD1600Q609	160 1/4W(3 5% TA52
		R334	0RD3303Q609	330K 1/4W(3 5% TA52
		R335	0RD3303Q609	330K 1/4W(3 5% TA52
		R336	0RD3303Q609	330K 1/4W(3 5% TA52
		R337	0RD1000Q609	100 1/4W(3 5% TA52
		R338	0RD0102Q609	10 1/4W(3 5% TA52
		R340	0RN1002F409	10K 1/6W 1 TA52
		R341	0RD0332A609	33 OHM 1/2 W (7.0) 5% TA52
		R342	0RD0332A609	33 OHM 1/2 W (7.0) 5% TA52
		R343	0RD0332A609	33 OHM 1/2 W (7.0) 5% TA52
		R344	0RD0332Q609	33 1/4W(3 5% TA52
		R345	0RD0332Q609	33 1/4W(3 5% TA52
		R346	0RD0332Q609	33 1/4W(3 5% TA52
		R347	0RD1200Q609	120 1/4W(3 5% TA52

DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R401	ORD1000Q609	100 1/4W(3 5% TA52
		R402	ORD5600Q609	560 1/4W(3 5% TA52
		R403	ORD1002Q609	10K 1/4W(3 5% TA52
		R405	ORD2001Q609	2K 1/4W(3 5% TA52
		R406	ORD2001Q609	2K 1/4W(3 5% TA52
		R407	ORD1300Q609	130 1/4W(3 5% TA52
		R408	ORD1300Q609	130 1/4W(3 5% TA52
		R409	ORD1000Q609	100 1/4W(3 5% TA52
△		R411	ORD3901Q609	3.90K 1/4W(3 5% TA52
		R412	ORD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
△		R415	ORD1301Q609	1.30K 1/4W(3 5% TA52
		R416	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R417	ORD1000Q609	100 1/4W(3 5% TA52
		R418	ORD1002Q609	10K 1/4W(3 5% TA52
		R419	ORD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R420	ORD3001Q609	3K 1/4W(3 5% TA52
		R424	ORD2200Q609	220 1/4W(3 5% TA52
		R425	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R426	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R429	ORD1000Q609	100 1/4W(3 5% TA52
		R430	ORD1000Q609	100 1/4W(3 5% TA52
		R431	ORD1000Q609	100 1/4W(3 5% TA52
		R432	ORD1000Q609	100 1/4W(3 5% TA52
		R433	ORD1000Q609	100 1/4W(3 5% TA52
		R434	ORD1000Q609	100 1/4W(3 5% TA52
		R438	ORD1001Q609	1K 1/4W(3 5% TA52
		R445	ORD2201Q609	2.20K 1/4W(3 5% TA52
		R446	ORD1002Q609	10K 1/4W(3 5% TA52
		R447	ORD1001Q609	1K 1/4W(3 5% TA52
		R501	ORD0102A609	10 OHM 1/2 W (7.0) 5% TA52
		R508	ORD4702Q609	47K 1/4W(3 5% TA52
		R515	ORD1502Q609	15K 1/4W(3 5% TA52
		R597	ORD3902Q609	39K 1/4W(3 5% TA52
		R598	ORD5601Q609	5.60K 1/4W(3 5% TA52
		R599	ORD0202A609	20 OHM 1/2 W (7.0) 5% TA52
		R601	ORD1000Q609	100 1/4W(3 5% TA52
		R602	ORD1000Q609	100 1/4W(3 5% TA52
		R603	ORN0390H609	0.39 1/2W 5 TA52
		R604	ORD0101A609	1 OHM 1/2 W (7.0) 5% TA52
		R605	ORD0102A609	10 OHM 1/2 W (7.0) 5% TA52
		R606	ORD1000A609	100 OHM 1/2 W (7.0) 5% TA52
		R607	ORN4701F409	4.70K 1/6W 1% TA52
		R608	ORD5600A609	560 OHM 1/2 W (7.0) 5% TA52
		R609	ORD1000A609	100 OHM 1/2 W (7.0) 5% TA52
		R700	971-0054	TIN 50MM TAPING
		R701	ORN3301F409	3.30K 1/6W 1% TA52
		R702	ORN6800F409	680 1/6W 1% TA52
		R703	971-0054	TIN 50MM TAPING
△		R704	ORD3601Q509	3.6K OHM 1/4 W(3.4) 2% TA52
		R706	ORN2701F409	2.7K OHM 1/6 W 1.00% TA52
		R709	ORD2202Q609	22K 1/4W(3 5% TA52
		R710	ORD1000Q609	100 1/4W(3 5% TA52
		R711	ORD1000Q609	100 1/4W(3 5% TA52
		R712	ORD1500Q609	150 1/4W(3 5% TA52
		R713	ORD1000Q609	100 1/4W(3 5% TA52
		R714	ORD5601Q609	5.60K 1/4W(3 5% TA52

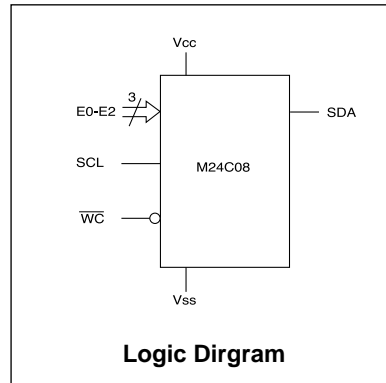
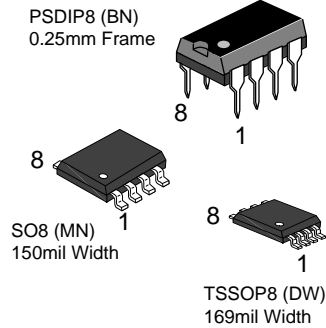
DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
△		R714-1	ORN3001F409	3K 1/6W 1% TA52
△		R714-2	ORN6200F409	620 1/6W 1% TA52
		R715	ORD3602Q609	36K 1/4W(3 5% TA52
		R718	ORD1602Q609	16K 1/4W(3 5% TA52
		R719	ORD1002Q609	10K 1/4W(3 5% TA52
		R721	ORD1001Q609	1K 1/4W(3 5% TA52
		R722	ORD4301Q609	4.30K 1/4W(3 5% TA52
		R723	ORD1001Q609	1K 1/4W(3 5% TA52
		R724	ORD1001Q609	1K 1/4W(3 5% TA52
△		R725	ORN1501F409	1.5K 1/6W 1 TA52
		R726	ORD5102A609	51K OHM 1/2 W (7.0) 5% TA52
		R727	ORX0512K665	51 OHM 2 W 5% SF
		R728	ORD1001Q609	1K 1/4W(3 5% TA52
		R729	ORD1002Q609	10K 1/4W(3 5% TA52
		R731	ORD1002Q609	10K 1/4W(3 5% TA52
		R732	ORD7502Q609	75K 1/4W(3 5% TA52
		R733	ORD1002Q609	10K 1/4W(3 5% TA52
		R735	ORD1001Q609	1K 1/4W(3 5% TA52
		R736	ORX2201J609	2.2KOHM 1 W 5% TA52
		R737	ORN0560H609	0.56 1/2W 5 TA52
		R738	ORN0560H609	0.56 1/2W 5 TA52
		R739	ORD6800Q609	680 1/4W(3 5% TA52
		R740	ORD0271A609	2.7 OHM 1/2 W (7.0) 5% TA52
		R741	ORD1000Q609	100 1/4W(3 5% TA52
		R742	ORD1003Q609	100K 1/4W(3 5% TA52
△		R743	ORD2702Q509	27K OHM 1/4 W(3.4) 2% TA52
		R744	ORD1001A609	1K OHM 1/2 W (7.0) 5% TA52
		R745	ORD4702Q609	47K 1/4W(3 5% TA52
		R746	ORD2201Q609	2.20K 1/4W(3 5% TA52
		R747	ORD3001Q609	3K 1/4W(3 5% TA52
		R748	ORD4702Q609	47K 1/4W(3 5% TA52
		R749	ORD2201Q609	2.20K 1/4W(3 5% TA52
		R750	ORD3001Q609	3K 1/4W(3 5% TA52
		R751	ORD0222A609	22 OHM 1/2 W (7.0) 5% TA52
		R752	ORD2201Q609	2.20K 1/4W(3 5% TA52
		R753	ORD3001Q609	3K 1/4W(3 5% TA52
		R754	ORX4300K607	430 OHM 2 W 5% TA62
		R755	ORD0471Q609	4.70 1/4W(3 5% TA52
		R756	ORD2202A609	22K OHM 1/2 W (7.0) 5% TA52
		R757	971-0054	TIN 50MM TAPING
		R758	ORN1303F409	130K 1/6W 1% TA52
		R759	ORD1002Q509	10K OHM 1/4 W (3.4) 2% TA52
		R761	ORD3001Q609	3K 1/4W(3 5% TA52
		R762	ORD3001Q609	3K 1/4W(3 5% TA52
		R763	ORD3001Q609	3K 1/4W(3 5% TA52
		R764	971-0054	TIN 50MM TAPING
		R765	ORD3000A609	300 OHM 1/2 W (7.0) 5% TA52
		R766	ORD1501Q609	1.50K 1/4W(3 5% TA52
		R768	ORD9103A609	910K OHM 1/2 W (7.0) 5% TA52
		R769	ORN1001F409	1K 1/6W 1% TA52
		R771	ORD1501Q609	1.50K 1/4W(3 5% TA52
		R772	ORD1302Q509	13K OHM 1/4 W (3.4) 2% TA52
		R773	ORD6802A609	68K OHM 1/2 W (7.0) 5% TA52
		R778	ORD2001Q609	2K 1/4W(3 5% TA52
		R779	ORD3001Q509	3000 OHM 1/4 W(3.4) 2% TA52
		R782	ORD3301A609	3.3K OHM 1/2 W(7.0) 5.00% TA5

DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R783	971-0054	TIN 50MM TAPING
		R784	ORD1000Q609	100 1/4W(3 5% TA52
		R793	ORD4702Q609	47K 1/4W(3 5% TA52
		R797	ORD1501Q609	1.50K 1/4W(3 5% TA52
		R798	ORD2001Q609	2K 1/4W(3 5% TA52
		R799	ORD1502Q609	15K 1/4W(3 5% TA52
		R801	ORD1802Q609	18K 1/4W(3 5% TA52
		R802	ORD1502Q609	15K 1/4W(3 5% TA52
		R803	ORD1001Q609	1K 1/4W(3 5% TA52
		R805	ORD2001Q609	2K 1/4W(3 5% TA52
		R806	ORD4702Q609	47K 1/4W(3 5% TA52
		R808	ORD7502Q609	75K 1/4W(3 5% TA52
		R809	ORX0101K665	1 OHM 2 W 5% SF
		R813	ORD4302Q609	43K 1/4W(3 5% TA52
		R814	ORD1002Q609	10K 1/4W(3 5% TA52
△		R816	ORN3301F409	3.30K 1/6W 1% TA52
△		R818	ORN6202F409	62KOHM 1/6 W 1% TA52
△		R819	ORN8202F409	82K 1/6W 1% TA52
		R831	ORD1002Q609	10K 1/4W(3 5% TA52
		R901	ORD4703A609	470K OHM 1/2 W (7.0) 5% TA52
		R902	ORD0332Q609	33 1/4W(3 5% TA52
		R903	ORN1800F409	180 OHM 1/6 W 1.00% TA52
		R904	ORX3902K665	39K OHM 2 W 5% SF
		R906	ORD6200Q609	620 1/4W(3 5% TA52
		R907	ORD3902Q609	39K 1/4W(3 5% TA52
		R908	971-0054	TIN 50MM TAPING
		R910	ORX4702J609	47K OHM 1 W 5% TA52
		R911	ORD0202Q609	20 1/4W(3 5% TA52
△		R912	ORN1802F409	18K 1/6W 1% TA52
△		R913	ORN2701F409	2.7K OHM 1/6 W 1.00% TA52
		R915	ORD0622Q609	62 OHM 1/4 W(3.4) 5.00% TA52
		R916	ORD1002Q609	10K 1/4W(3 5% TA52
		R918	ORD1001Q609	1K 1/4W(3 5% TA52
		R923	ORD1003Q609	100K 1/4W(3 5% TA52
		R924	ORN0390H609	0.39 1/2W 5 TA52
		R925	ORN0390H609	0.39 1/2W 5 TA52
		R926	ORD4301Q609	4.30K 1/4W(3 5% TA52
		R927	ORD2002Q609	20K 1/4W(3 5% TA52
		R928	ORD1800Q609	180 1/4W(3 5% TA52
		R929	ORD0332Q609	33 1/4W(3 5% TA52
		R941	ORN0220H609	0.22 1/2W 5% TA52
		R944	ORD4700A609	470 OHM 1/2 W (7.0) 5% TA52
		R945	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R951	971-0054	TIN 50MM TAPING
		R952	ORD1202A609	12K OHM 1/2 W(7.0) 5.00% TA52
		R953	ORD1001A609	1K OHM 1/2 W (7.0) 5% TA52
		R954	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R955	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R956	ORD6802A609	68K OHM 1/2 W (7.0) 5% TA52
		R957	ORD0472A609	47 OHM 1/2 W (7.0) 5% TA52
		R960	ORD6200A609	620 OHM 1/2 W(7.0) 5.00% TA52
		R962	ORD0332Q609	33 1/4W(3 5% TA52
OTHERs				
		F1	430-858C	AFC-520 BAE EUN TA
		F2	430-858C	AFC-520 BAE EUN TA

DATE: 2003. 12. 5.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		F901	0FZZTTH004B	"TIME LAG HBC TSC 5A/250V,WALT"
		IC302	0IPRPN5025B	LM1246DDB/NA NATIONAL SEMICON
		J57	ORD1001Q609	1K 1/4W(3 5% TA52
		RL901	6920TBB008A	G5PA-2 DC12 OMRON 250VAC 5A 1
		SC301	6620TBD003A	PCS701E PARK ELEC. 10PIN 14/3
		SC901	6620TKB002B	SA-4S HUA JIE AC UNIVERSAL 3P
		SG305	6918TRT005A	"SSG-102-A0,1KV SMART RADIAL T"
		SG701	6918TRT005A	"SSG-102-A0,1KV SMART RADIAL T"
		SW201	6600TR1001A	TSTC-2 HUA JIE NON 12V 0.05A
		SW202	6600TR1001A	TSTC-2 HUA JIE NON 12V 0.05A
		SW203	6600TR1001A	TSTC-2 HUA JIE NON 12V 0.05A
		SW204	6600TR1001A	TSTC-2 HUA JIE NON 12V 0.05A
		SW205	6600TR1001A	TSTC-2 HUA JIE NON 12V 0.05A
		SW206	6600TR1001A	TSTC-2 HUA JIE NON 12V 0.05A
		SW207	6600TR1001A	TSTC-2 HUA JIE NON 12V 0.05A
		T1	6631T11005D	1 W-T 480MM UL 1015 AWG 22 CB
		T701	6174T11005E	"CF2154/F700BK(17"/71K,FLAT,FC"
		T702	6170TCZ012B	"EE1916 1.6MH FOCUS TRANS,700B"
		T703	6170TCZ015A	"EI-19 4.45MH H-DRIVE,700BJ"
		T901	6170TMZ147A	EER3541 300UH V-16PIN J-CHASS
		TH901	163-053E	J502P61D4R5Q270 JA HWA 4.5OHM
		TH902	6322A00005A	SCK-083 THINKING 80OHM 15% 3A
		X401	6212AA2004A	HC-49U TXC 12.0MHZ +/- 30 PPM

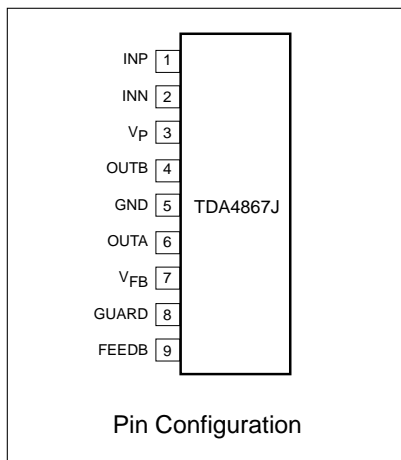
PIN CONFIGURATION

M24C08 Serial I²C BUS EEPROM

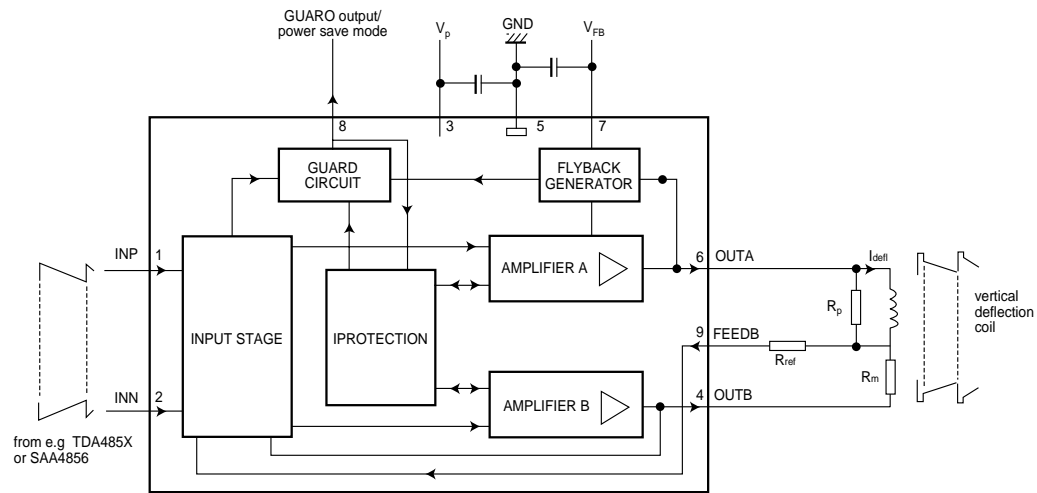


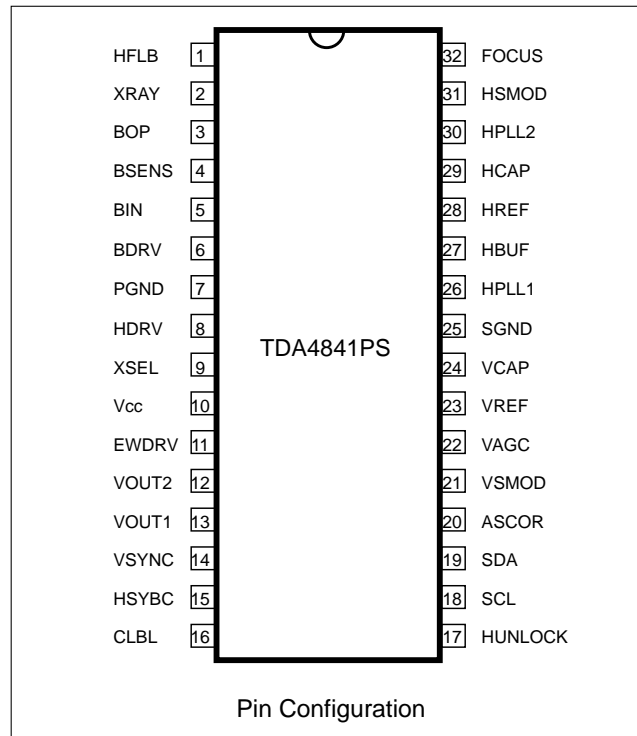
SYMBOL	DESCRIPTION
E0-E2	Chip Enable Input
SDA	Serial Data Address Input/Output
SCL	Serial Clock
WC	Write Control
Vcc	Supply Voltage
Vss	Ground

TDA4867J PHILIPS 32P, SDIP

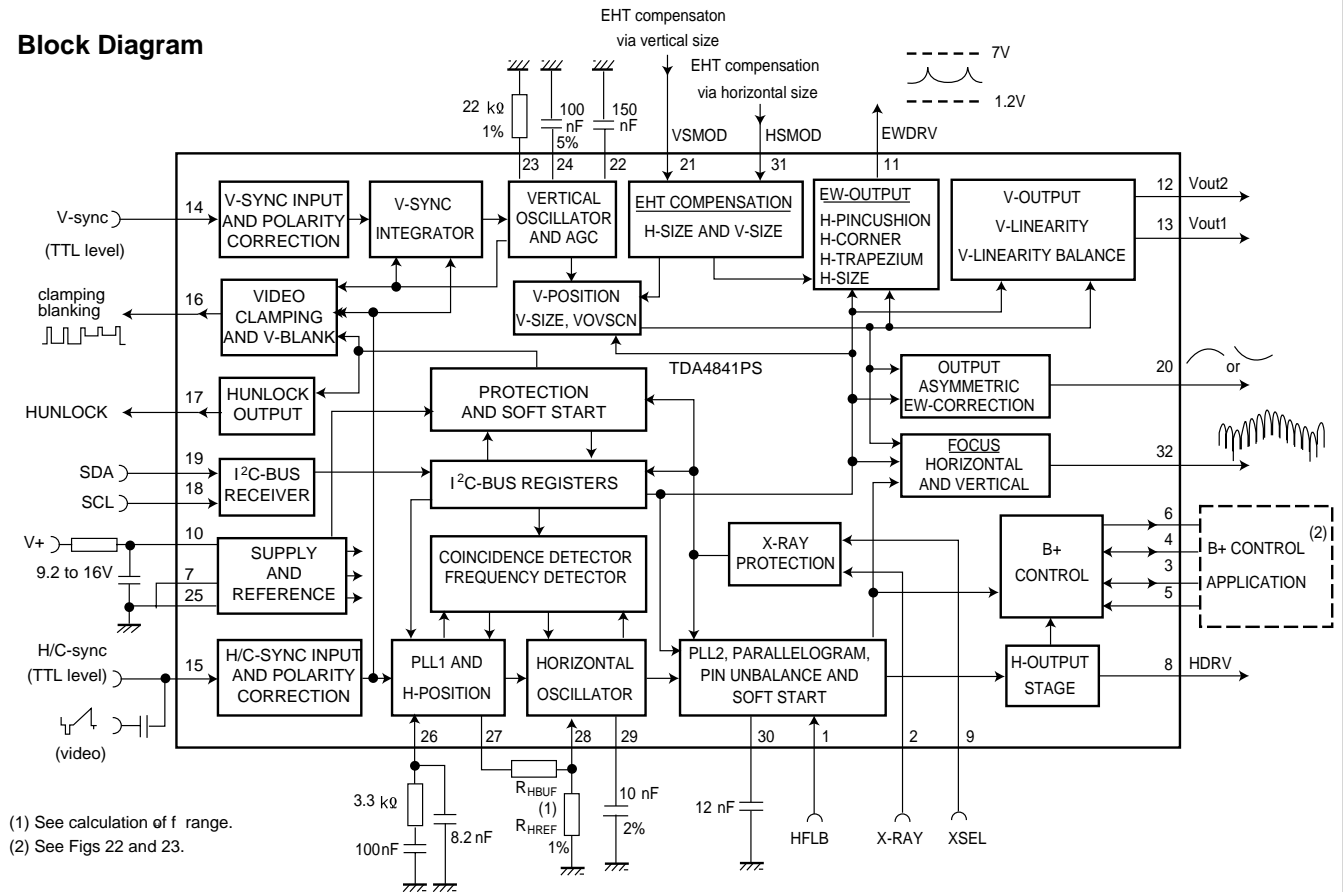


SYMBOL	PIN	DESCRIPTION
INP	1	non-inverted input
INN	2	inverted input
VP	3	supply voltage
OUTB	4	output B
GND	5	ground
OUTA	6	output A
VFB	7	flyback supply voltage
GUARD	8	guard output
FEEDB	9	feedback inprtr

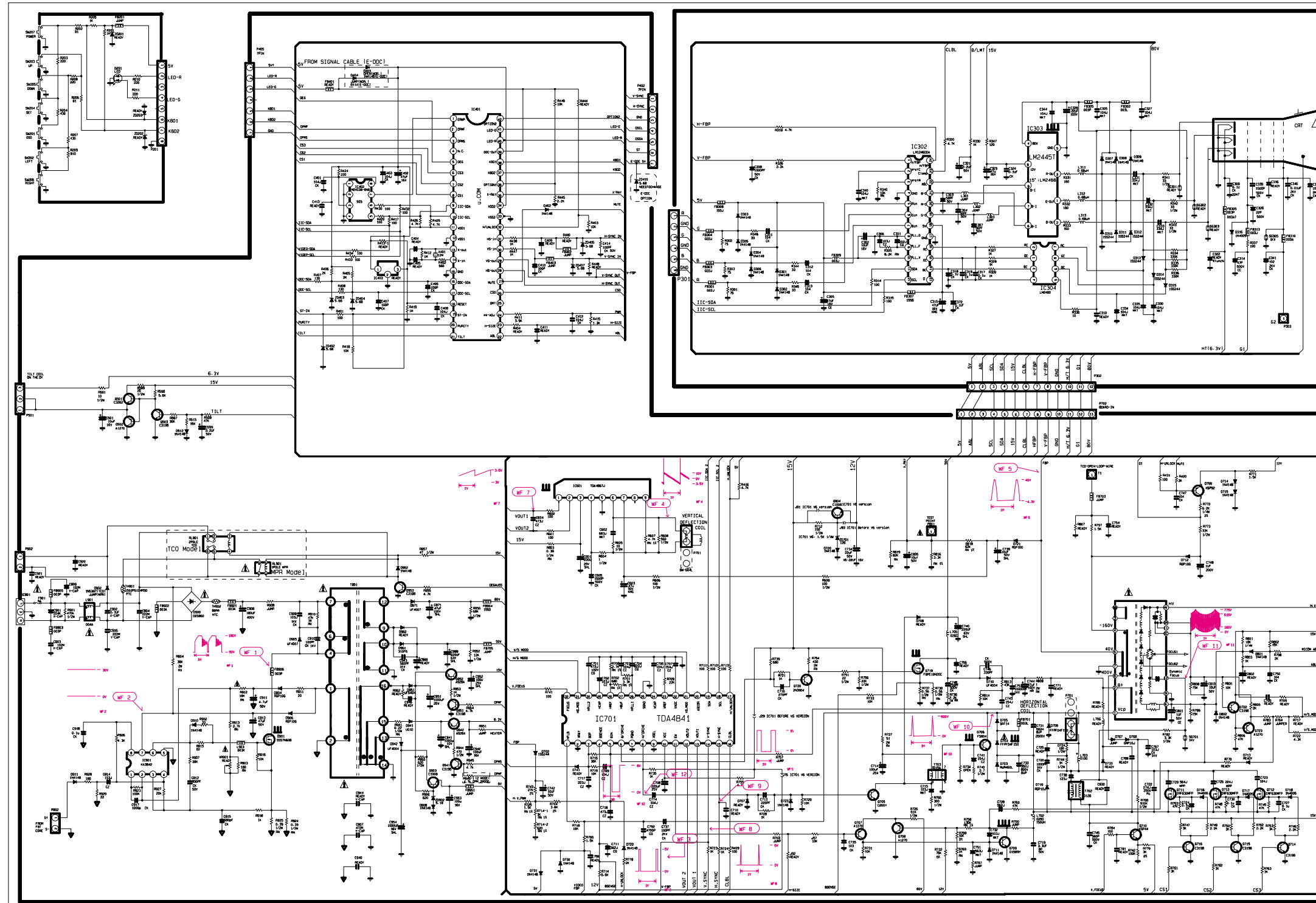






Block Diagram



SCHEMATIC DIAGRAM



THE  SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILM AND ELECTRICAL SHOCK HAZARDS. WHEN SERVING IF IS ESSENTIAL THAT ONLY MANUFACTURERS SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE  SYMBOL MARK OF THE SCHEMATIC.

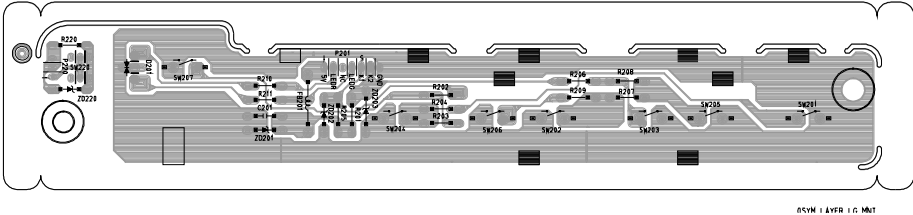
COMPANY CONFIDENTIAL DO NOT COPY!			
DATE	2003-10-27 09:00	REV	01
MODEL	T710BHK	Sheet	1 / 1 Page

NOTICE

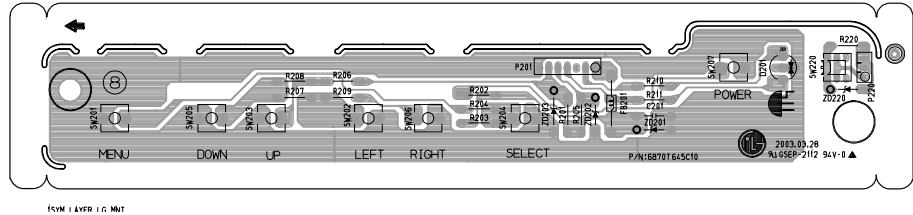
Since this is a basic schematic diagram.
The value of components and some partial connection are
subject to be changed for improvement without notice.

PRINTED CIRCUIT BOARD

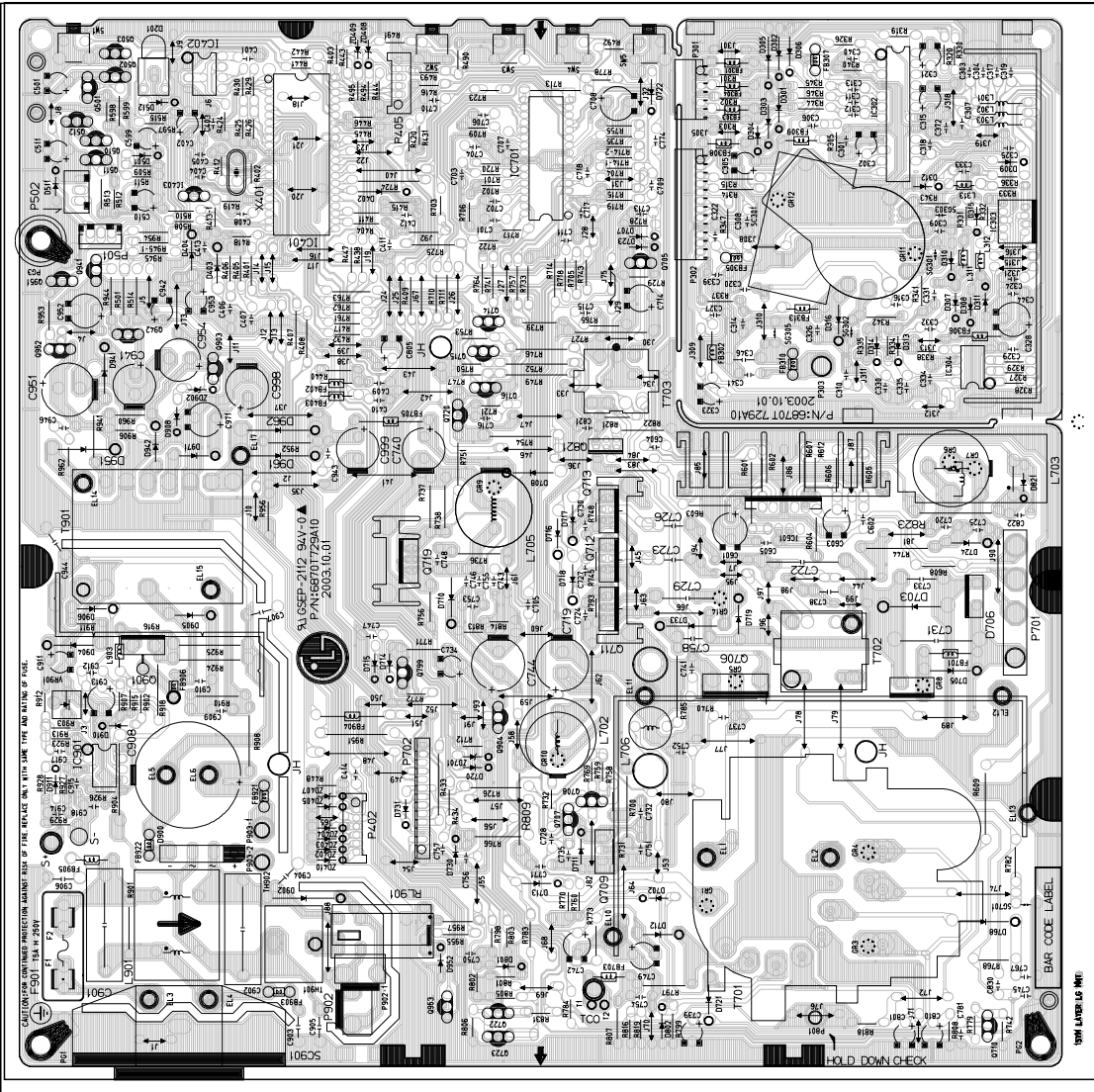
1. CONTROL BOARD (Component Side)



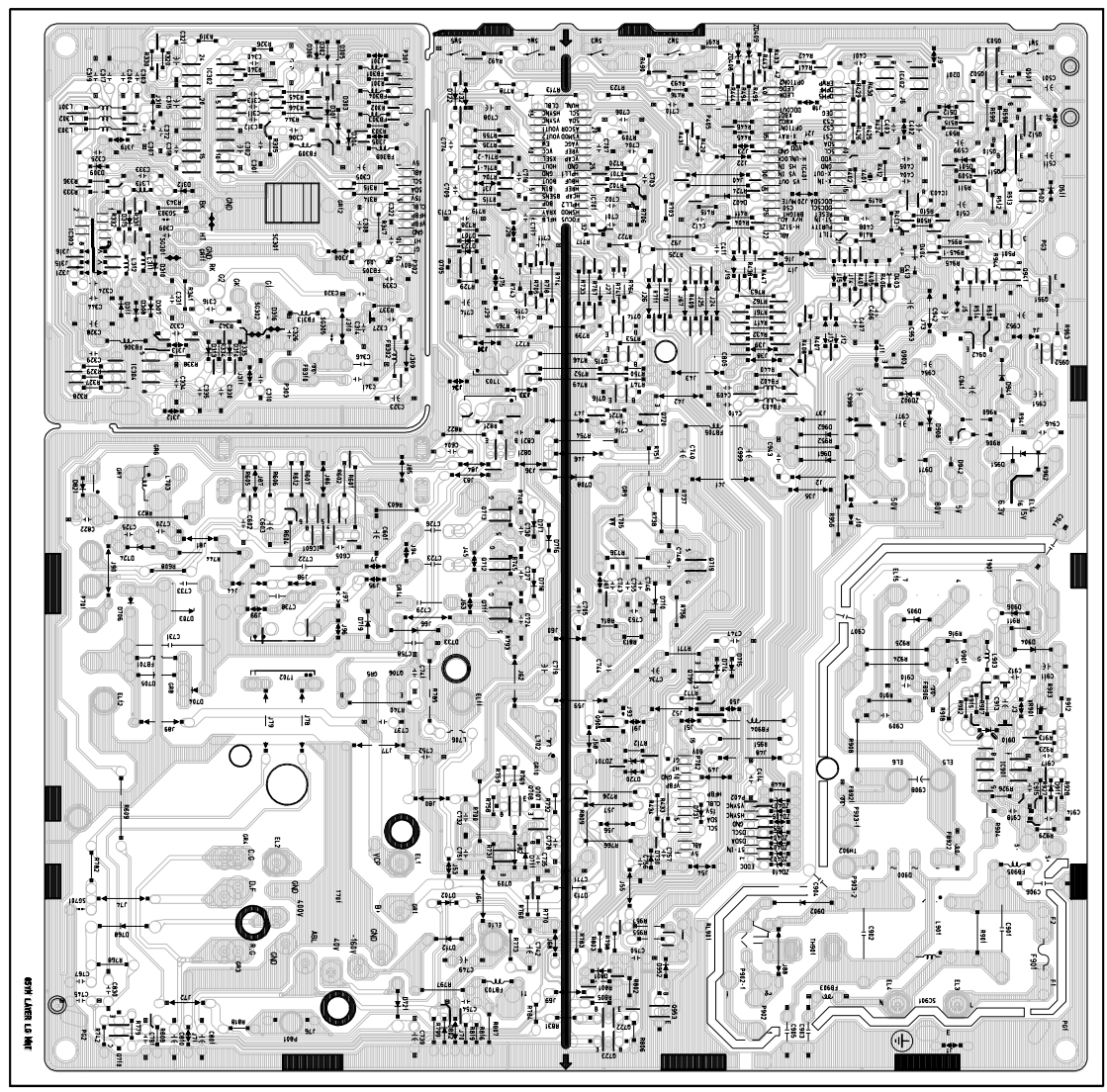
2. CONTROL BOARD (Solder Side)



3. MAIN BOARD (Component Side)



4. MAIN BOARD (Solder Side)





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