

SPECIFICATIONS

- Picture Tube
14" 0.28mm Pitch Dot Screen. 90 Degree Deflection.
Semi-tint, anti-glare. Medium Short Persistence
Phosphor.
High Contrast Type Black Matrix.
- Input Signal
Video : Analog 0.7vp-p or 1.0vp-p Positive.
at 75 ohm Terminated.
Sync : Separate Sync. TTL Level.
Horizontal Sync. Positive / Negative.
Vertical Sync. Positive / Negative.
Composite Sync : TTL Level.
Positive / Negative.
Sync. on Green : Composite Sync. 0.3 Vp-p Negative.
Video 0.7vp-p Positive.
- Display Colors
Analog Input : Unlimited Colors.
- Synchronization
Horizontal : 30KHz to 58KHz (Automatically).
Vertical : 50Hz to 90Hz (Automatically).
- Resolution
Horizontal : 1024 Dots.
Vertical : 768 Lines.
- Video Band Width : 75 MHz Max.
- Active Display
Horizontal : 240mm \pm 5mm.
Vertical : 180mm \pm 5mm.
* Active Display Area is Changed by Signals
Timing.
- Power Supply (Manual Selectable S/W)
AC 120V, 60Hz (U.S.A Version).
AC 220/240V, 50Hz (European Version).
- Power Consumption : 90Watt. Max.
- Environmental Consideration.
Operating Temperature 0°C to +40°C.
Humidity 30% to 80%.
Storage Temperature -20°C to +60°C.
Humidity 10% to 90%.
- Dimension
Unit(mm) : 357(W) x 367(H) x 401(D)mm.
Carton(mm) : 457(W) x 461(H) x 419(D)mm.
- Weight
NET : 14.5kg.
GROSS : 16.8kg.

**DESIGNS and SPECIFICATIONS are subjected to
change without NOTICE.**

SERVICE MANUAL

SYNC MASTER 3^{NI} COLOR MONITOR

MODEL NO.: CSJ4927



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IMPORTANT SERVICE SAFETY PRECAUTIONS

Service work should be performed only by qualified service technicians who are thoroughly familiar with all of the following safety checks and servicing guidelines:

WARNING

1. For continued safety, do not attempt to modify the circuit.
2. Disconnect the AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.

SERVICING THE HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10kohm resistor in series with an insulated wire(such as a test probe) between the chassis and the anode lead. (The AC line cord should be disconnected from the AC outlet.)

1. The picture tube in this display monitor employs integral implosion protection.
2. Replace with a tube of the same type and number for continued safety.
3. Do not lift the picture tube by the neck.
4. Handle the picture tube only when wearing shatter proof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in a current solidstate display monitor is the tube. However, the picture tube does not emit measurable X-ray radiation if the high voltage is as specified in the "high voltage check" instruction.

It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube, including the lead in glass material.

The important precaution is to keep the high voltage below the maximum level specified.

2. It is essential that serviceman have available at all times an accurate high voltage meter. The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value - no higher. Operation at high voltages may cause a failure of the picture tube or high voltage circuitry and, also under certain conditions, may produce radiation in excess of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem.
Everytime a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified, value and that it is regulating correctly.
5. Do not use a picture tube other than that specified, or make unrecommended circuit modifications to the high voltage circuitry.
6. When troubleshooting taking test measurements on a display monitor with excessively high voltage, avoid being unnecessarily close to the display monitor. Do not operate the display monitor longer than is necessary to locate the cause of excessive voltage.

BEFORE RETURNING THE DISPLAY MONITOR

FIRE AND SHOCK HAZARD

Before returning the display monitor to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the display monitor.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment

cover or shields, isolation resistor-capacitor networks, mechanical insulators, etc.

3. To be sure that no shock hazard exists, checks for leakage current in the following manner:

- Plug the AC line cord directly into a 120volt AC outlet. (Do not use an isolation transformer for this test)
- Using two clips leads, connect 1.5 kohm, 10 watt resistor paralleled by a 0.15uF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduct or electrical ground connected to earth ground.
- Use a SSVM or VOM with 1000 ohms per-volt or higher sensitivity to measure the AC voltage drop across the resistor. (See Figure 1.)
- Connect the resistor to all exposed metal parts having a return path to the chassis (metal cabinet, screw heads, knobs and shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
- Any reading of 5.25volt RMS (this corresponds to 3.5milliamp.AC) or more is excessive and indicates a potential shock hazard which must be corrected before returning the display monitor to the user.

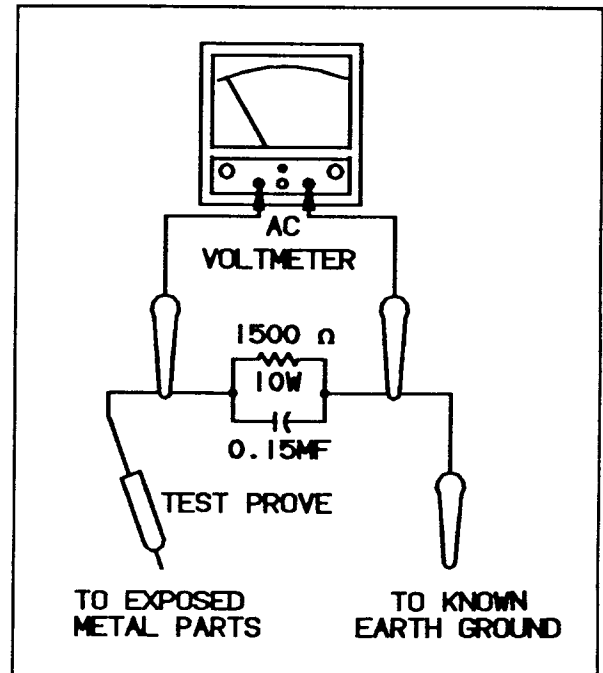


Figure 1. Leakage Current Test Circuit

SAFETY NOTICE

Many electrical and mechanical parts which have special characteristics in this chassis often pass unnoticed and the protection afforded by them can not necessarily be obtained by using replacement components rated for higher voltage, wattage, etc.

Replacement parts that have these special safety characteristics are identified in this manual, and its supplement electrical components having such features are identified by a in the Parts List and Schematic Diagrams.

Before replacing any of these components, read the Parts List in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the Parts List may create shock, fire, or other hazards.

GENERAL DESCRIPTION

1. GENERAL INFORMATION

- Automatically scans all frequencies between 30.0KHz - 58.0KHz.
- Compatible with the IBM PC, PC/XT, PC/AT, PS/2-50 and others
- Compatible with the IBM video graphics adapter (VGA, 8514/A, SVGA)
- Maximum resolution of 1024 x 768 (Dots, lines)
- Unlimited color Analog input
- High performance 14" anti glare CRT.

2. OPERATING GUIDE

This monitor is designed for all kind of personal computer and PC/CAD, CAM with R.G.B. Analog output. Setting up and connecting your syncmaster color monitor.

3. VIDEO INPUT CONNECTION

- **Caution:** Be sure to switch off the power to all equipments connected to the color monitor before connecting.
- Cabling your syncmaster color monitor to personal computer video output jack with suitable video cable.
- This monitor may not be perfectly compatible, if you don't use IBM standard board.

Signal in plug	Signal out plug	Computer
15 Pin D-sub	9 Pin D-sub	IBM PS/2-50

3-1. CONNECTING VIEW

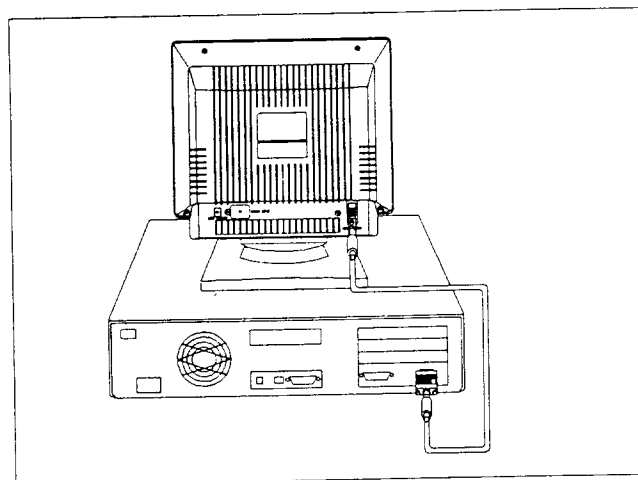
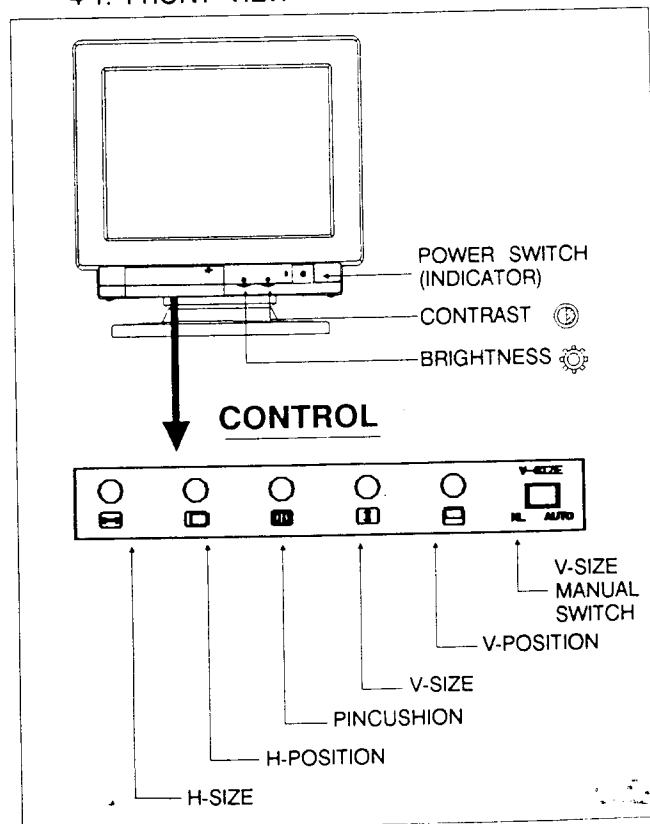










Table-1. Computer interface signal cable or adapter

4. LOCATION OF CONTROLS CONTROLLING AND ADJUSTING YOUR SYNCMASTER COLOR MONITOR.

4-1. FRONT VIEW




4-2. FRONT CONTROL

- Power switch (ON / OFF)
To turn the monitor on. Push the power (ON/OFF) switch once. The power indicated (GREEN) light will go on, and stay lit until the monitor is turned off. To turn monitor off, push the power (ON/OFF) switch once again.
- Contrast control 
The contrast control is labeled . Clockwise rotation increases, while counterclockwise rotation decrease, the degree of difference between the lightest and darkest sections on the screen.
- Brightness control 
The brightness control is labeled . Clockwise rotation increases, while counterclockwise rotation decreases, the total amount of illumination given off by the screen.
- H-position 
Adjust this knob for the proper horizontal position of the display. Turn the knob clockwise to reposition display to right. Turn it counterclockwise to reposition to the left.
- V-position 
Adjust this knob for the proper vertical position on the display. Turn the knob clockwise for higher display position. Turn it counterclockwise for a lower display.
- H-size 
Adjust this knob for the proper horizontal size of the display. Turn the knob clockwise for a larger display, counterclockwise for a smaller display.
- V-size 
Adjust this knob the proper vertical size of the display. Turn the knob clockwise for larger display.
Turn it counterclockwise for the a smaller display.

● PINCUSHION

Adjust this pincushion control to conect the vertical sides of the display from bowing out (Barrel) or, bowing in (Pincushion).

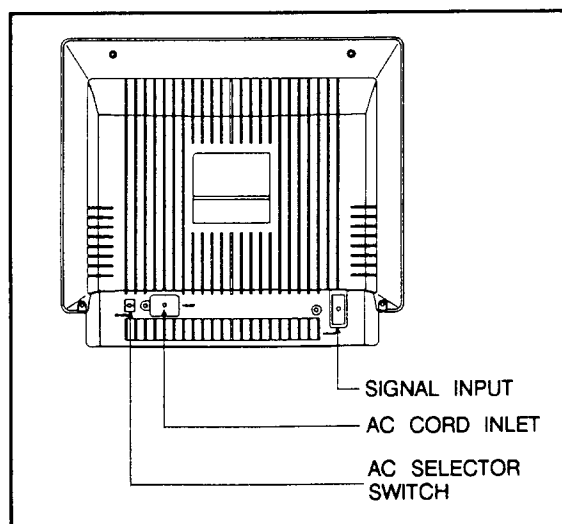
If you want to adjust pincushion, you have to use Small  SCREW DRIVER and adjust best condition display that you want. Slowly rotate for adjusting abrupt change of the pincushion.

● V-SIZE MANUAL SWITCH

If your video card is operating in a video mode that is not IBM or IBM compatible, set switch to manual, for IBM standard video mode set switch to auto.

FUNCTION	MODE
AUTO	VGA, 8514/A, 48K, 56K(1024X768)
MANUAL	800X600, OTHERS

4-3. REAR VIEW



4-4. REAR CONTROLS

- AC Cord Inlet

The monitor is normally shipped with a us standard 120VAC power plug. For operation at 220VAC the following changes are required.

1. Turn off the monitor
2. Change the cord set to "Harmonized Cordage" rated 6A, 250V min.

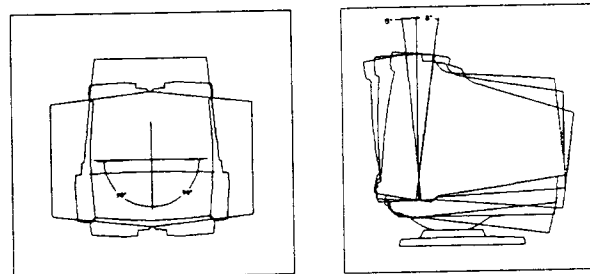
- AC Selector Switch

Used to select AC line voltage-either 120V or 220/240V. Set to the 120V side (Select switch marked 115V) in case of 120V line, and to the 220V side (Select switch marked 230V) in case of 220/240V line. Don't turn on the power switch, before setting proper side of line selector.

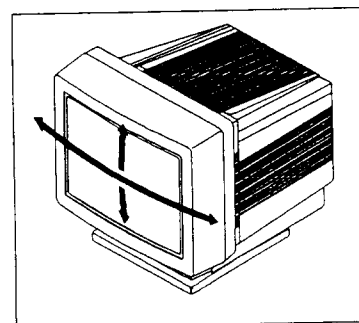
- D-Sub Input Connector (9 Pin Female) : Figure (TABLE 1)

5. USE OF THE TILT-SWIVEL

With the tilt-swivel, this unit can be adjusted to be viewed at your desired angle within 90° horizontally and 13° vertically.

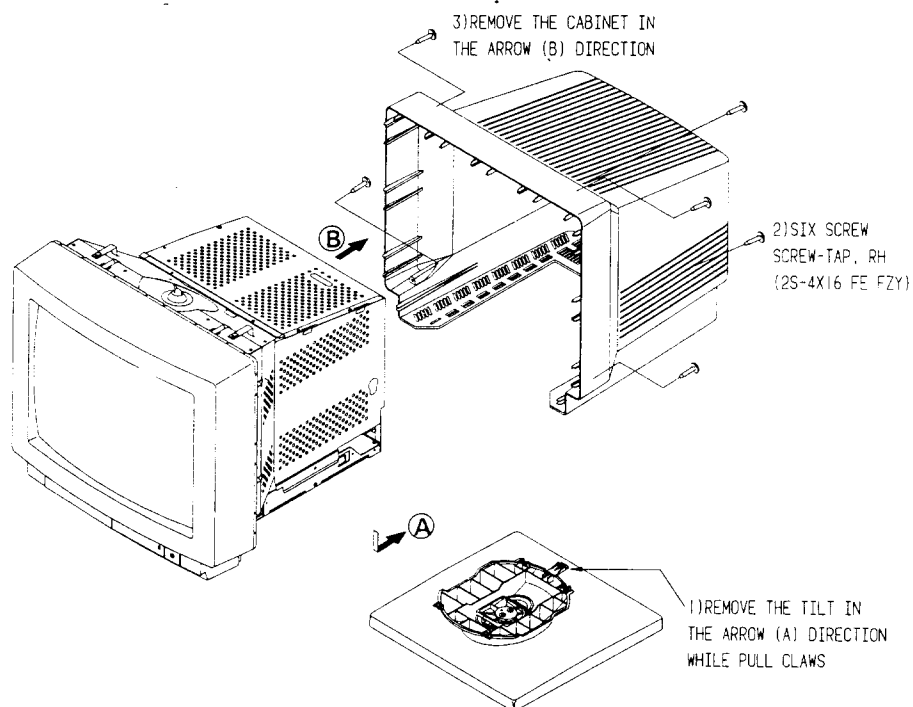


To turn the unit horizontally, hold it at its bottom with you both hands as illustrated below.

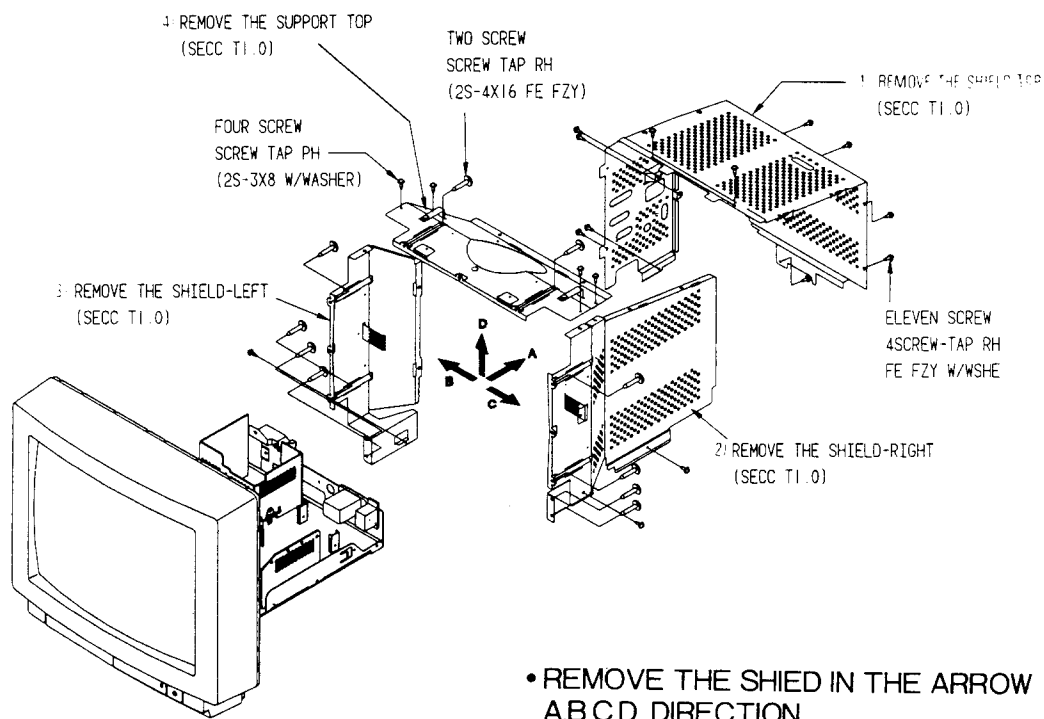


DISASSEMBLY

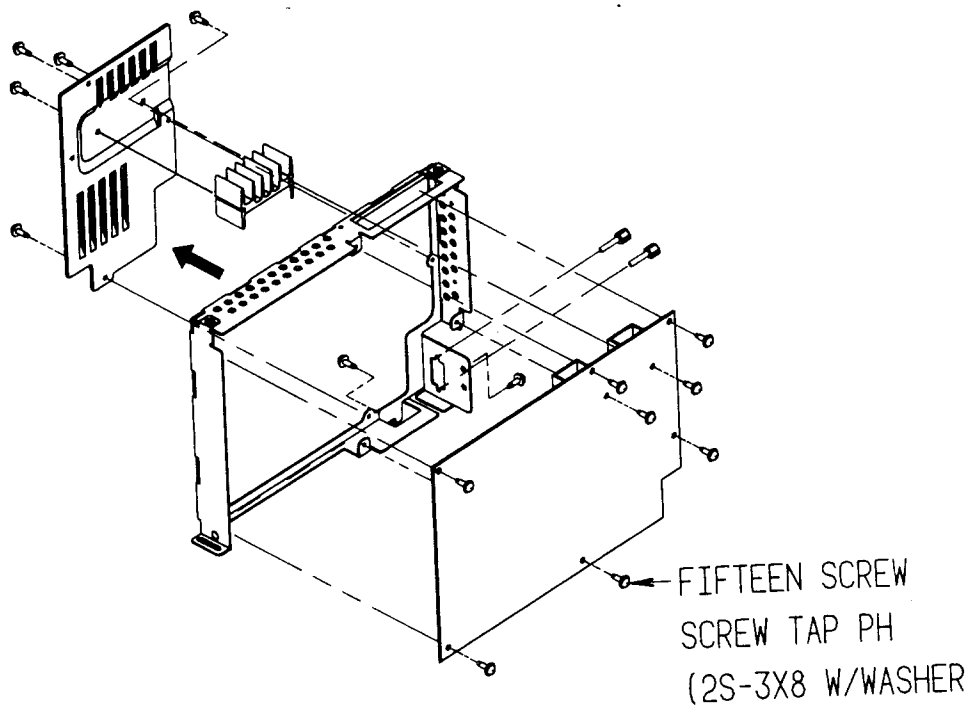
1-1. TILT AND CABINET REMOVAL



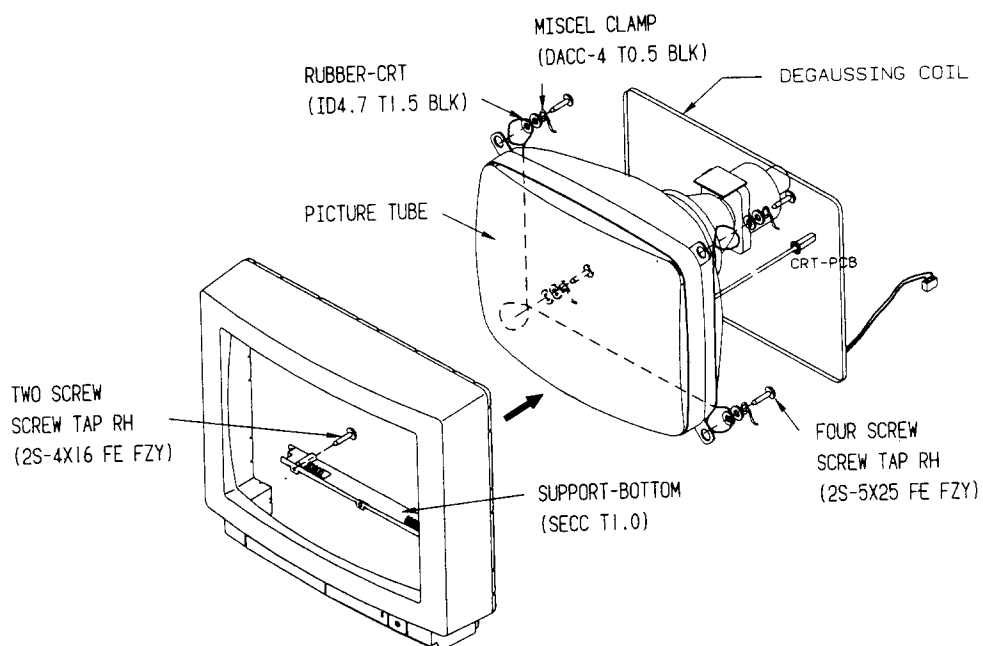
1-2. SHIELD-L, R AND OUT REMOVAL



1-3. SUB(VIDEO) BOARD REMOVAL



1-4. PICTURE TUBE REMOVAL



WARNING DIAGRAM AND ADJUST PARTS LOCATION

ALIGNMENT PROCEDURE

ADJUSTMENT CONDITIONS AND PRECAUTIONS

- POWER SUPPLY VOLTAGE : AC 120V or AC 220/240V (60Hz/50Hz).
- WARM UP TIME : The display must be on for 20 minutes before starting alignment. This is especially critical in color temperature and white balance adjustments.
- SIGNAL VIDEO : Analog 0.7Vp-p Positive at 75 ohm Terminated.
- SYNC ON GREEN : Video : 0.7Vp-p Positive.
Sync. : 0.3Vp-p Negative.
- SYNC : TTL level negative / positive, separate/composite.
- SCANNING FREQUENCY : (H) 30KHz - 58KHz (Automatically)
(V) 50Hz - 90Hz (Automatically).

* Unless otherwise specified, adjust at VGA(480 Line) signals.

1. MAIN PWB PREPARE ADJUSTMENT

- 1-1. +B (VR501) + 130V Line
Adjust VR501 to be 130 \pm 0.5V DC at TP-B + and GND.
- 1-2 +BH (VR301) High voltage control
Adjust VR301 to be 23.0KV. (No Beam: Cont Min, Brit Min)

2. VIDEO PWB PREPARE ADJUSTMENT

- 2-1. Adjust VR608 so that 16V \pm 0.05V DC is at TP-16 and GND.
- 2-2 Horizontal F/V convert control, receive VGA(480 LINE) and adjust so that the voltage between TP-F/V and GND is 6.5 \pm 0.05V DC.
- 2-3 H.HOLD ADJUSTMENT.
 - a) Short TP401.
 - b) Apply VGA(40KHz) and adjust H.HOLD(HIGH) VR401 so that the entire picture appears.
 - c) Apply VGA (480LINE) and adjust H.HOLD (LOW) VR402 so that the entire picture appears.
 - d) Open the TP401.

3. MAIN PWB ADJUSTMENT

Unless otherwise specified, adjust the EXT-VR or S/W as show below.

VR503 (contrast): MAX(fully clockwise).

VR504 (brightness) : so that no background raster appers.

- 3-1. FRONT
 - VR505 (H.position) : CENTER VR505 (V.position) : CENTER
 - VR505 (H.size) : CENTER VR505 (V.size) : CENTER
 - VR505 (Side pincushion) : CENTER SW503 (V-size manual s/w) : AUTO

3-2. REAR

INPUT signal : D-SUB 9 pin ANALOG level (0.7Vp-p).

Focus VR (FBT) : Adjust for the optimum picture. VGA (480 LINE), Pattern "H" or textual)

3-3.H.RASTER CENTER

1. Input a cross-hatch signal of 56kHz.
2. Display a back-raster on the screen with SCREEN VR (FBT)
3. Adjust VR303 (H.POSI) so that the back-raster position to come center.
4. In case of the back-raster is not move till center, using SW401 (H.RASTER SW).

3-4. V.LINEARITY

Adjust VR201 so that vertical linearity is optimum when signal of 56KHz is applied.

3-5. H.LINEARITY

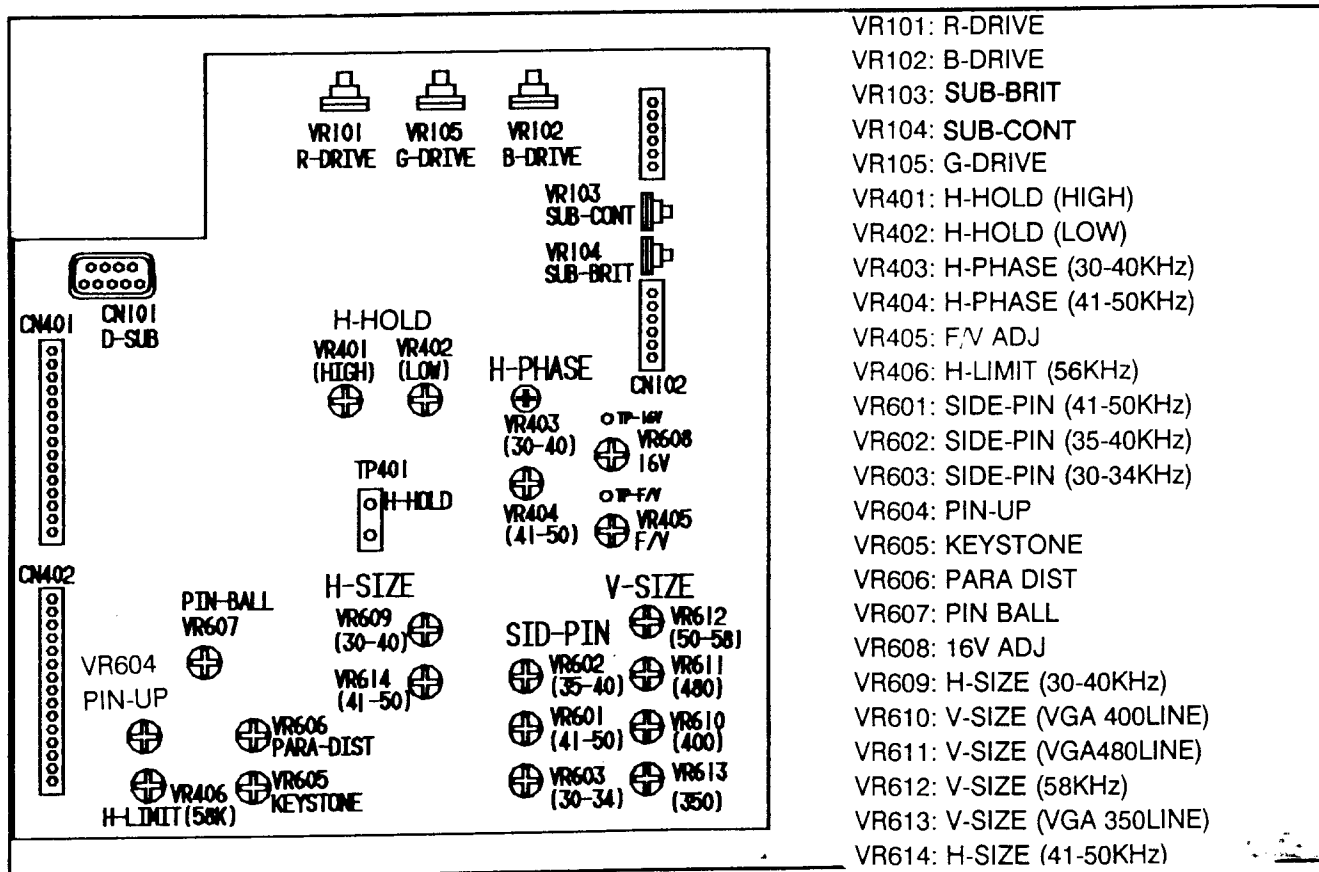
Apply signal VGA (480 LINE) and adjust L306 for the optimum H.LINEARITY.

4. ADJUSTMENT OF VIDEO PWB

Note: Before performing this adjustment, check that the video signals are as follows.

Video : ANALOG 0.7Vp-p (at 75 ohm Terminated).

Synchronizing : Separate TTL level. Unless otherwise specified, use signal VGA(480 LINE) for the adjustments.



4-1. H.POSITION (Adjust to the center of the picture)

- Adjust EXT H Center VR to locate the picture to the raster center when signal 56KHz is applied.
- Adjust sub H.center VR403 to locate the picture to the raster center when signal 31KHz is applied.
- Adjust sub H.center VR404 to locate the picture to the raster center when signal 48KHz is applied.
- Check that the picture is centered when the signal a) ,b), and c) above are applied.

4-2. H-SIZE

- Adjust EXT H.SIZE VR to center-click position when 56KHz is applied.
- Adjust sub H-LIMIT VR406 so that horizontal size is $240 \pm 5\text{mm}$ when 56KHz is applied.
- Adjust sub H-SIZE VR609 so that horizontal size is $240 \pm 5\text{mm}$ when 31KHz is applied.
- Adjust sub H-SIZE VR614 so that horizontal size is $240 \pm 5\text{mm}$ when 48KHz is applied.
- Check that the picture is size when the signal a) ,b), c) and d) above are applied.

4-3. V-SIZE (SWITCH OVER AUTO SIZE SW TO AUTO POSITION))

- Adjust EXT V-POSITION to the V-POSITION center also adjust EXT V-SIZE so that vertical size is $180 \pm 5\text{mm}$ when 48KHz is applied.
- Adjust sub V-SIZE VR610 so that V-SIZE is $180\text{mm} \pm 5\text{mm}$ when 31KHz(400 Line) is applied.
- Adjust sub V-SIZE VR611 so that V-SIZE is $180\text{mm} \pm 5\text{mm}$ when 31KHz (480 Line) is applied.
- Adjust sub V-SIZE VR613 so that V-SIZE is $180\text{mm} \pm 5\text{mm}$ 31KHz (350Line) is applied.
- Adjust sub V-SIZE VR612 so that V-SIZE is $180\text{mm} \pm 5\text{mm}$ when 56KHz is applied.
- Check that the picture is size when the signal a) ,b), c), d) and e) above are applied.
(NO TOUCH EXT V-SIZE VR)

ATTENTION: DO NOT TOUCH EXT V-SIZE VR AND SWITCH OVER AUTO SIZE S/W TO ADJ. POSITION)

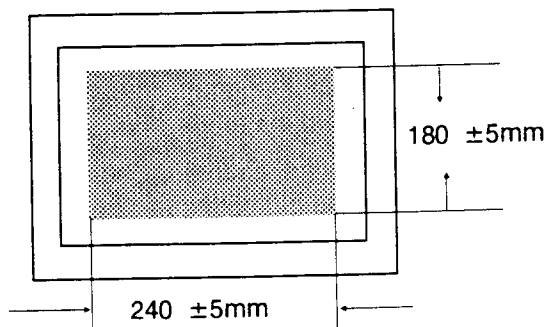
4-4. ADJUST EAST/WEST CORRECTION AND SIDE-PINCUSHION

Adjust VR606 (PARALLELOGRAM (PARA DIST)), VR605(KEYSTONE), VR607(PIN BAL) VR604(pin-up) and EXT SIDE-PIN VR to become best condition about 56KHz mode SIDE-PINCUSHION

- Adjust sub SID-PIN VR601 so that pincushion strain about right and left when 48KHz is applied.
- Adjust sub SID-PIN VR603 so that pincushion strain about right and left when 31K(480Line) is applied.
- Adjust sub SID-PIN VR602 so that pincushion strain about right and left when 35K(8514/A) is applied.

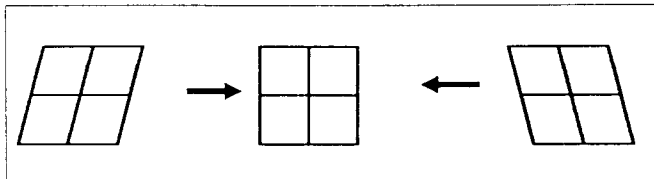
● H.SIZE (VR406)

Adjust VR406 (H.LIMIT) on video board so that the horizontal size to become $240 \pm 5\text{mm}$.
(CENTER POSITION EXT VR(H-SIZE))



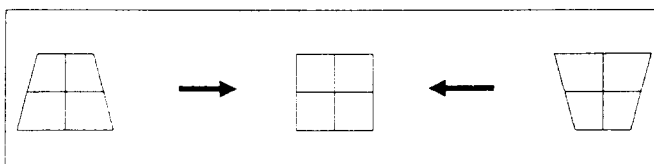
- **PARA DIST (VR606)**

Adjust parallelogram strain with VR606(PARA DIST) on VIDEO board.



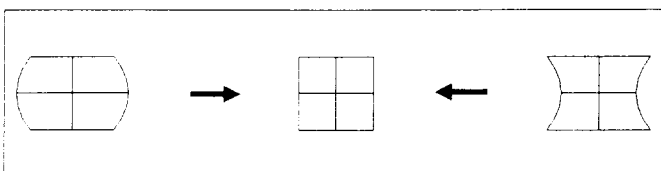
- **KEYSTONE(VR605)**

Adjust trapezoidal strain with VR605(KEY-STONE)



- **SIDE PIN (VR601)**

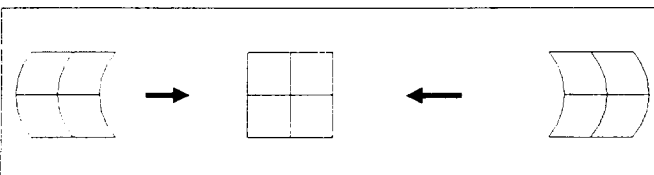
Adjust pincushion strain about right and left with VR601 (SIDE PIN) on VIDEO board.



NOTE: In case of pincushion strain of right and left rate is differ, correct them with VR607 (PIN BAL) too.

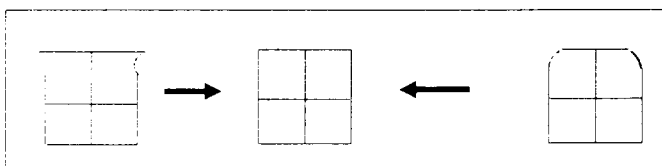
- **PIN BAL (VR607)**

Adjust PIN balance strain with VR607 (PIN BAL) on VIDEO board.



- **PIN UP (VR604)**

Adjust pin up strain with VR607 (PIN UP) on VIDEO board.



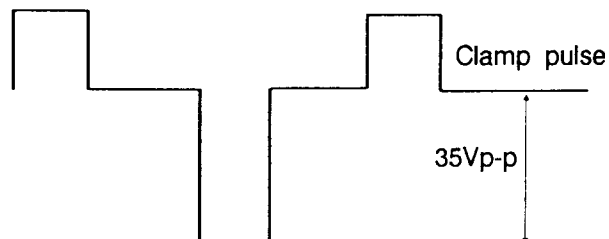
4-5. ADJUSTMENT OF VIDEO AMPLITUDE AND WHITE BALACE

- 1) Locate VR103 SUB CONT fully countclockwise, VR104 SUB BRIT controls to center position.
- 2) Locate VR101, 102, 105, GAIN controls to center position.
- 3) VR701, 702, 703 CUTOFF controls to center position.

- **Video contrast adjustment**

- a) Adjust of gain control (31KHz)
(Window pattern full white)

- 1) Receive a window parrern (within a range for which VGA does not active even though maximum contrast state, and preferably with a video range of 1/3 to 1/2H x 1/2V).
- 2) Turn the contrast control (VR503) fully clockwise and the brightness control (VR504) fully counterclockwise.
- 3) Adjust VR101, VR102, and VR105 so that R,G and B OUT respectively on the video PWB become 35 Vp-p. After adjusting, check each Vp-p, and if not proper, readjust VR101, VR102 and VR105.



- **Fine adjustment of white balance ($X=0.281 \pm 0.03$, $Y=0.311 \pm 0.03$)**

- a) Receive the white window parrern. (Window pattern Within a range for which ABL does not function).

- b) Turn the contrast control (VR503) fully clockwise. (at 20 ft) Adjust the brightness control (VR504) so that no background raster appears and check that the white balance is proper for each grade. If the white balance is off for the upper grades, fine adjust the gain control, VR101 and VR103 to match the white.

ATTENTION: DO NOT TOUCH VR105-G GAIN.

- c) Turn the control (VR503) fully counterclockwise and the brightness control (VR504) clockwise. (At 5 ft) Check that the white balance proper for each grade. (X=0.281, Y=0.311) Adjustment VR701, VR703.

ATTENTION: DO NOT TOUCH VR702-G SUB CONT.

If the background raster and the white for the different grades are off, fine adjust sub bright VR104, VR106 and VR108 (X or Y, ± 0.03)

5. FOCUS ADJUSTMENT

Turn the contrast control (EXT VR503) fully clockwise and set the brightness control (EXT VR504) to a suitable (20ft) position. SVGA (56KHz) Pattern "H") Adjust the focus control to the optimum position using character pattern.

6. PURITY ADJUSTMENT

- 6-1. Be sure that the display is not be exposed to any external magnetic fields.
- 6-2. Ensure that the spacing between the Purity Convergence Magnet (PCM), assembly and the CRT stem is 29mm ± 1 mm.
- 6-3. Produce a complete, red pattern on display. Adjust the purity magnet rings on the PCM assembly to obtain a complete field of the color red. This is done by moving the two tabs in such a manner that they advance in an opposite direction but at the same time to obtain the

same angle between the two tabs, which should be approximately 180°.

- 6-4. Check the complete blue and complete green patterns to observe their respective color purity.

Make minor adjustments if needed.

7. CONVERGENCE ADJUSTMENT

- 7-1. Produce a magenta (Red + Blue) crosshatch on the display.
- 7-2. Adjust the focus for the best overall focus on the display. Also adjust the brightness to the desired condition.
- 7-3) Vertical red and blue lines are converged by varying the angle between the two tab of the 4-Pole magnets on the PCM assembly.
- 7-4. Horizontal red and blue lines are converged by varying the two tabs together, keeping the angle between them constant.
- 7-5. Produce a white crosshatch pattern on the display.
- 7-6. Vertical green and magenta lines are converged by varying the angle between the two tabs of the 6-Pole magnets.
- 7-7. Horizontal green and magenta lines are converged by varying the two tabs together, keeping the angle between them constant.

NOTE : Refer to the pictures of next page for detailed adjustment method.

CONVERGENCE ADJUSTMENT

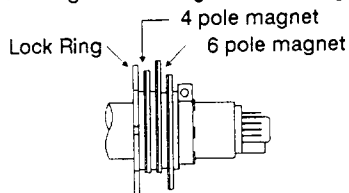
CORRECTION METHODS

A. STATIC CONVERGENCE CORRECTION

static convergence can be corrected by the convergence magnet equipped on the neck of tube as following.

4 pole magnet : converge red to blue

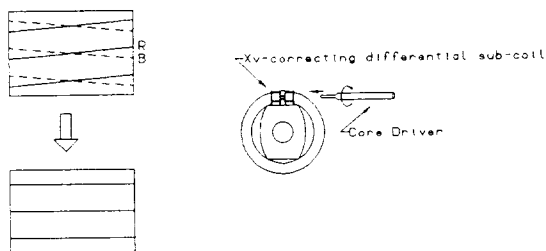
6 pole magnet : converge red/blue to green



B. DYNAMIC CONVERGENCE CORRECTION

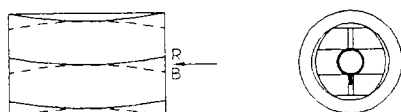
1) PATTERN-1...Xv-correcting differential sub-coil

in case of following pattern, Xv-correcting differential sub-coil is suitable for the precise correction.



2) PATTERN-2.. 'BOW PATTERN' correction magnets (A pair of 4-pole magnet ring equipped just behind the back mold of the deflection yoke) is suitable for the precise correction.

BOW PATTERN



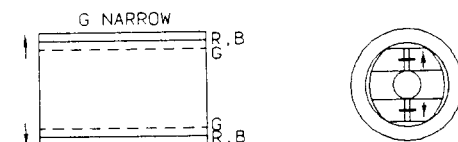
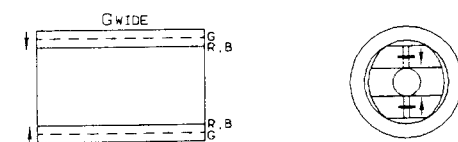
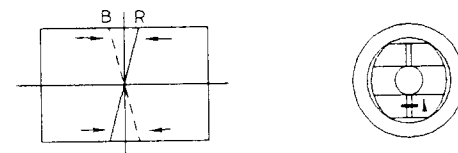
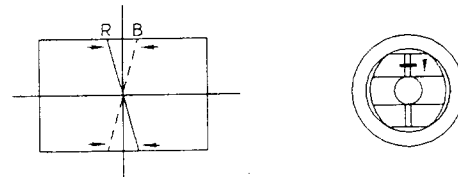
Adjust static convergence as usual

3) PATTERN-3...iron piece (C, D, E)

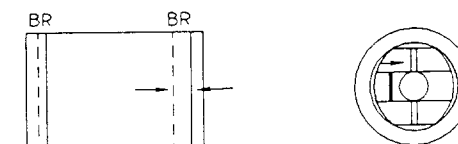
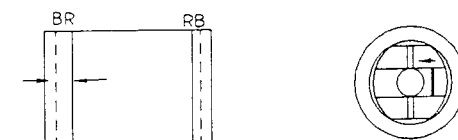
In case of following patterns, iron piece should be applied as shown below.

Suitable size of iron piece might be selected in accordance with the correcting level required.

Bigger one is stronger.



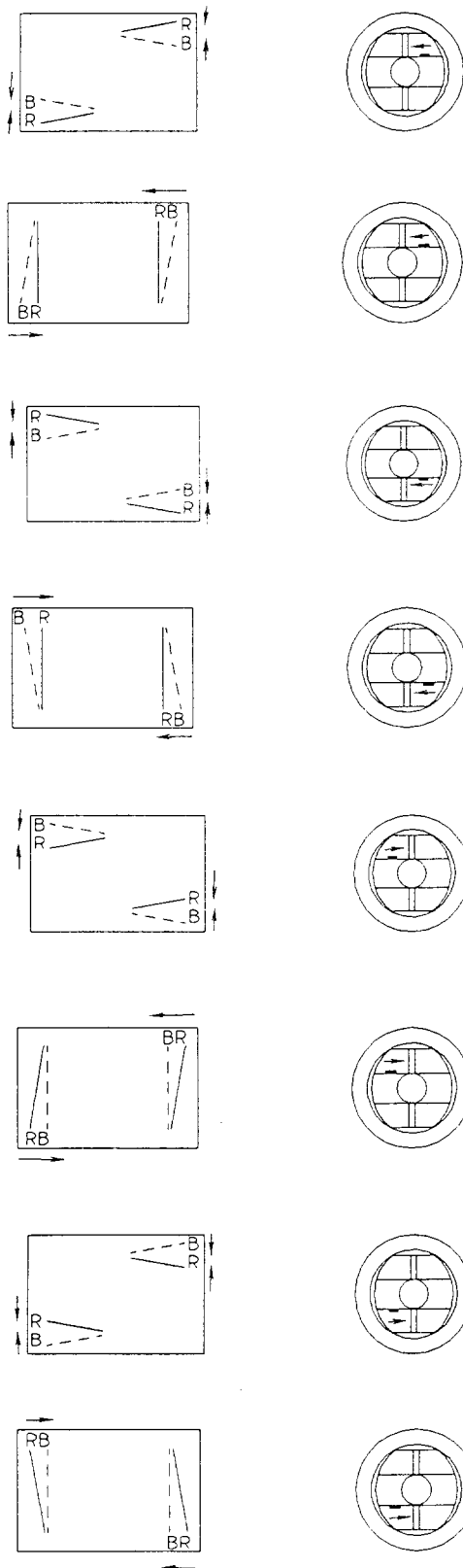
4) PATTERN-4...Coil rolled steel plate (F)



Note : It is recommended horizontal component of static convergence is kept to "ZERO".

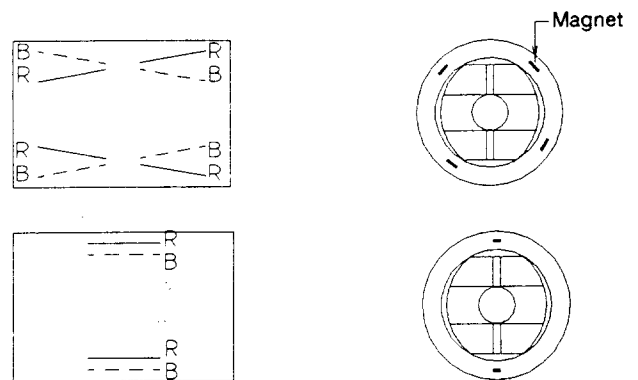
5) PATTERN-5...Iron piece (D , E)

Suitable size of iron piece might be selected.
Bigger one (D) is stronger.



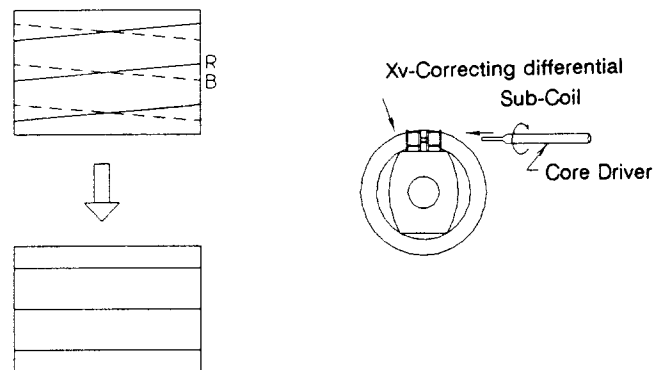
6) PATTERN-6...Magnet (A , B)

If these patterns appear at the screen edge part, magnet is suitable for the correction (partial correction).
These correction should be made before purity adjustment or inspection

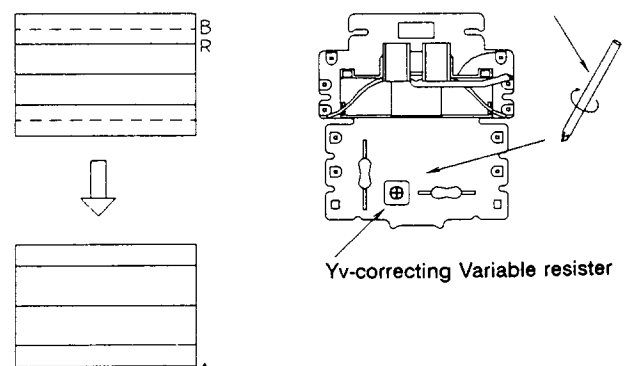


DYNAMIC CONVERGENCE CORRECTION METHODE

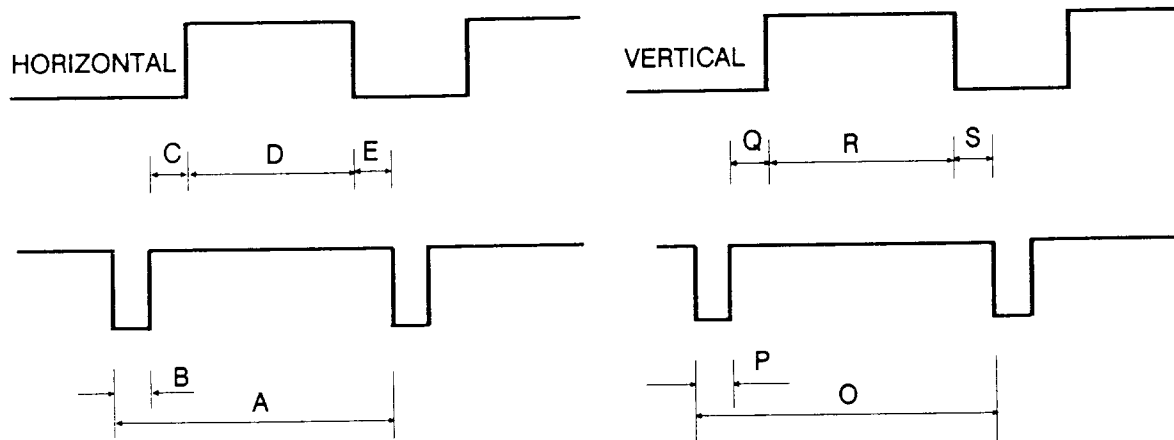
1) PATTERN-1...Xv-correcting differential sub-coil in case of following pattern. Xv-correcting differential sub-coil is suitable for the precise correction.



2) PATTERN-2...Yv-correcting variable resister in case of following pattern. Yv-correcting variable resister is suitable for the precise correction.



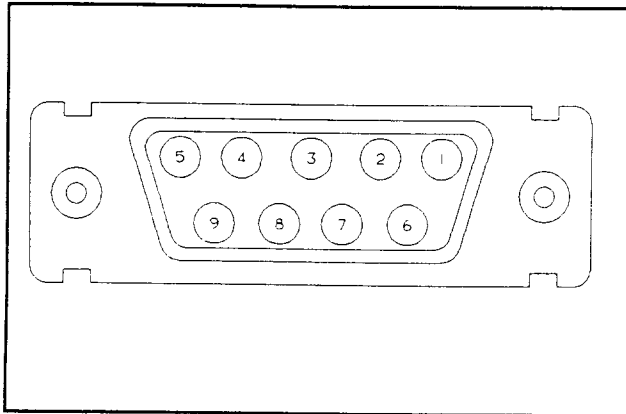
8. TIMING CHARTS



MODE TIMING	XGA				VESA			
	VGA1	VGA2	VGA3	8514/A	SVGA 60Hz	SVGA/56Hz	48KHz/60Hz	56KHz/70Hz
	640x350	640x400	640x480	1024x768	800x600	800x600	1024x768	1024x768
Fh	31.5KHZ	31.5KHZ	31.5KHZ	35.52KHZ	37.879KHz	35.156KHZ	48.363KHZ	56.476KHZ
Aus	31.77	31.77	31.77	28.15	26.4	28.444	20.677	17.707
Bus	3.77	3.77	3.77	3.92	3.2	2.0	2.092	1.813
Cus	1.89	1.89	1.89	1.25	2.2	3.556	2.462	1.92
Dus	25.17	25.17	25.17	22.8	20.0	22.222	15.754	13.653
Eus	0.94	0.94	0.94	0.18	1.0	0.667	0.369	0.32
Fv	70HZ	70HZ	60HZ	87HZ	60.3165Hz	56.25HZ	60.000HZ	70.069HZ
Oms	14.27	14.27	16.68	11.5	16.579	17.778	16.667	14.272
Pms	0.064	0.064	0.064	0.113	0.106	0.057	0.124	0.106
Qms	1.88	1.08	1.02	0.563	0.607	0.626	0.6	0.513
Rms	11.126	12.716	15.246	10.81	15.84	17.067	15.88	13.599
Sms	1.2	0.41	0.35	0.014	0.026	0.028	0.062	0.053
CLOCK FREQ. (MHZ)	25.175	25.175	25.175	44.9	40.0	36.0	65.0	75.0
REMARK	SEPARATE SYNC	SEPARATE SYNC	SEPARATE SYNC	INTERLACED SEPARATE SYNC	SEPARATE SYNC	SEPARATE SYNC	SEPARATE SYNC	SEPARATE SYNC
	H.SYNC POSITIVE	H.SYNC NEGATIVE	H.SYNC NEGATIVE	H.SYNC POSITIVE	H.SYNC POSITIVE	H.SYNC POSITIVE	H.SYNC NEGATIVE	H.SYNC NEGA/POSI
	V.SYNC NEGATIVE	V.SYNC POSITIVE	V.SYNC NEGATIVE	V.SYNC POSITIVE	V.SYNC POSITIVE	V.SYNC POSITIVE	V.SYNC NEGATIVE	V.SYNC NEGA/POSI

PIN ASSIGNMENTS AND SIGNAL LEVELS

1. PIN ASSIGNMENT OF GRAPHICS ADAPTER



PIN ASSIGNMENT	PROFESS GRAPHICS ANALOG
1	*RED
2	*GREEN
3	*BLUE
4	COMPOSITE SYNC
5	MODE CONTRL
6	RED GROUND
7	GREEN GROUND
8	BLUE GROUND
9	GROUND

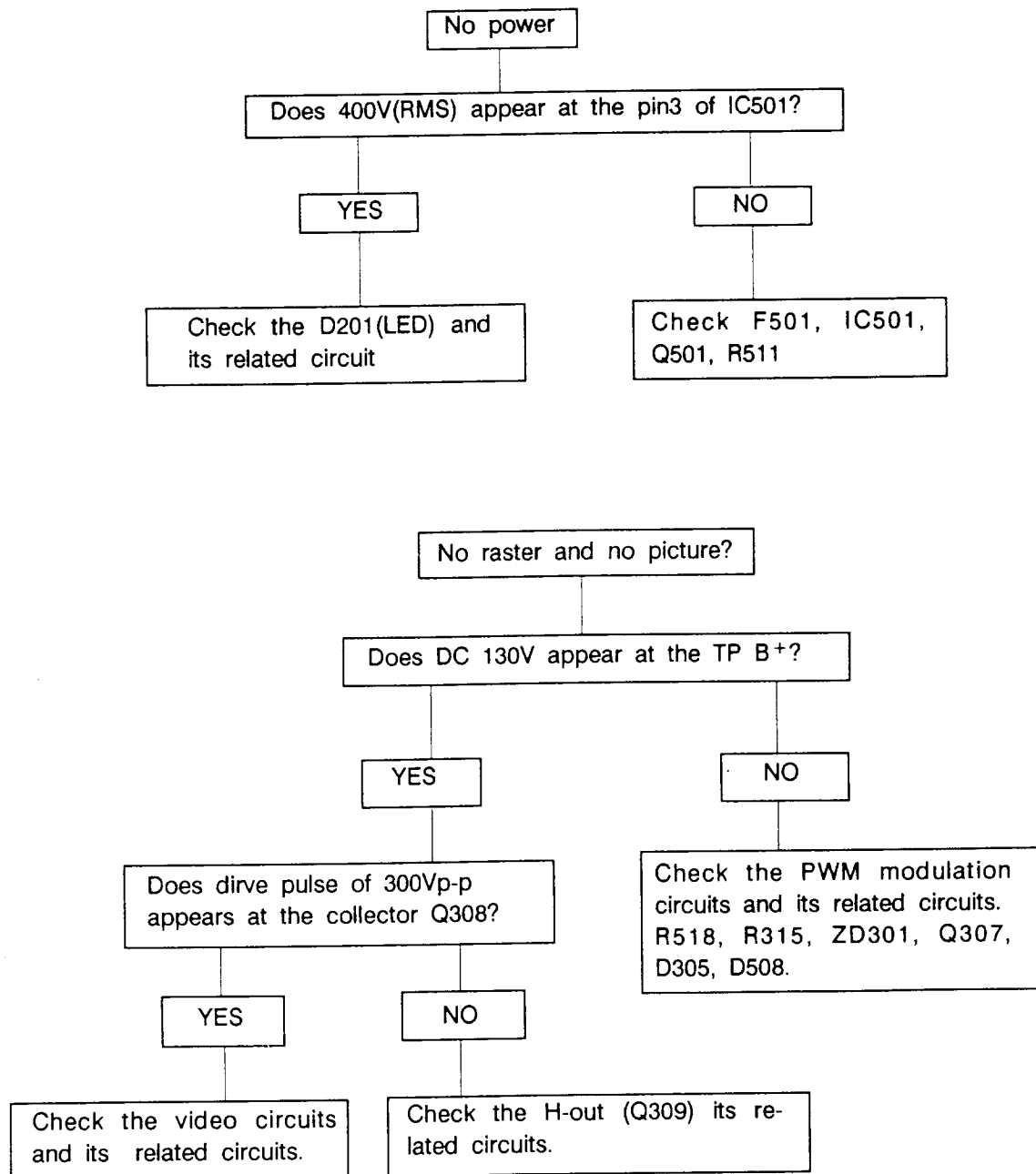
2. PIN ASSIGNMENT OF OTHER COMPUTERS(SAMSUNG)

PIN ASSIGNMENT	ANALOG		
	SEPARATE SYNC.	COMPOSITE SYNC	SYNC. ON GREEN
1	*RED	*RED	*RED
2	*GREEN	*GREEN	** H/V SYNC.
3	*BLUE	*BLUE	*BLUE
4	H.SYNC	H/V SYNC	-
5	V.SYNC	LOW MODE	-
6	GND-R	GND-R	GND-R
7	GND-G	GND-G	GND-G
8	GND-B	GND-B	GND-B
9	GND-SYNC	GND-SYNC	GND-SYNC

3. SIGNAL LEVEL

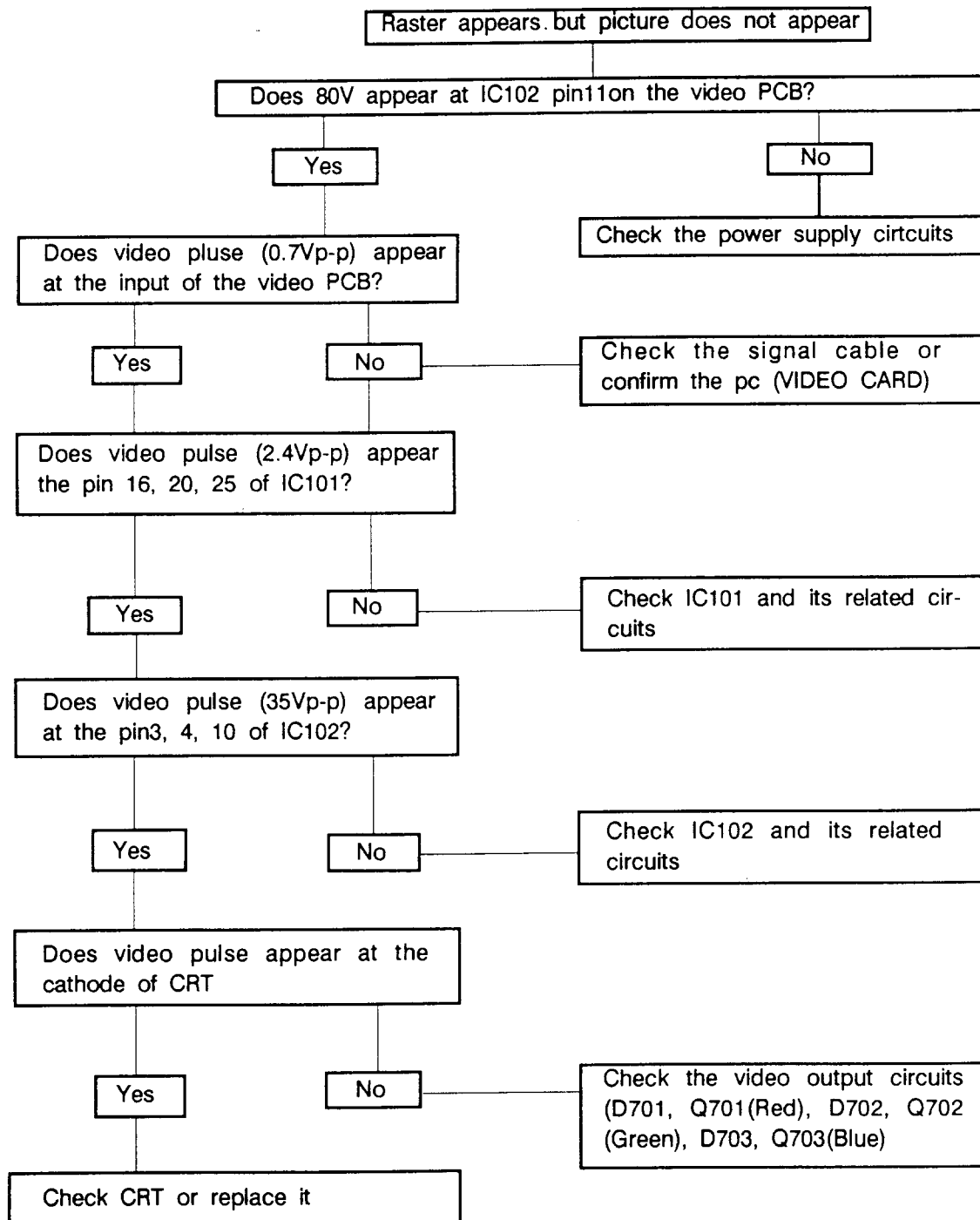
- All signal levels, except for those listed below, are TTL
- Signal level, below ANALOG is 0.7/1.0 Vp-p (VIDEO)
- "*" means 0.7Vp-p (VIDEO)
- "***" means 0.7Vp-p (VIDEO), 0.3vP-P (sync)

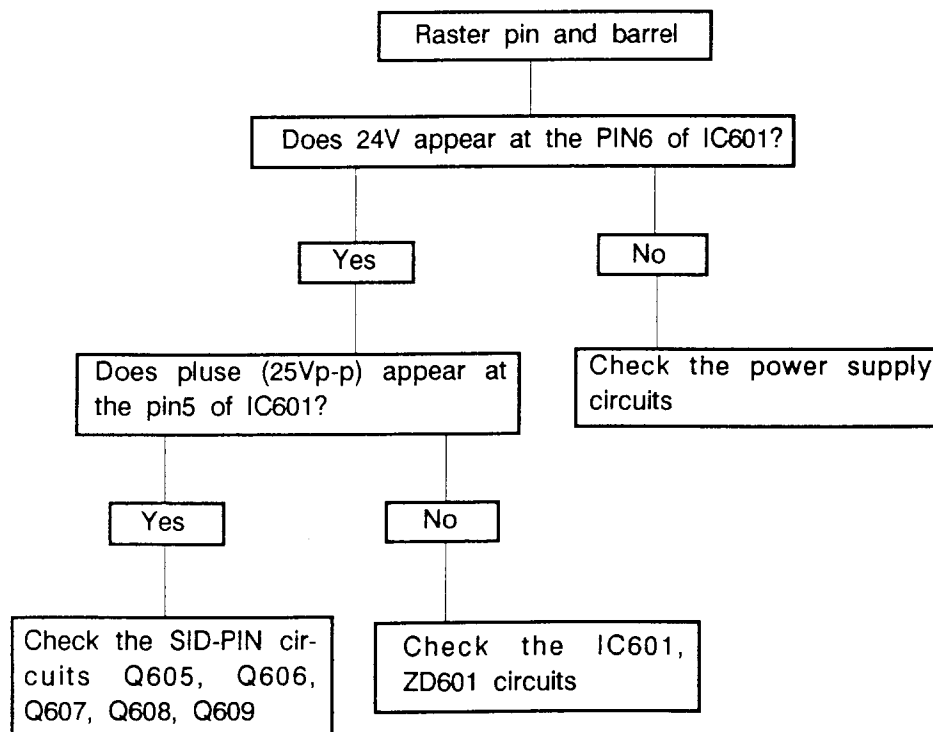
TROUBLE SHOOTING



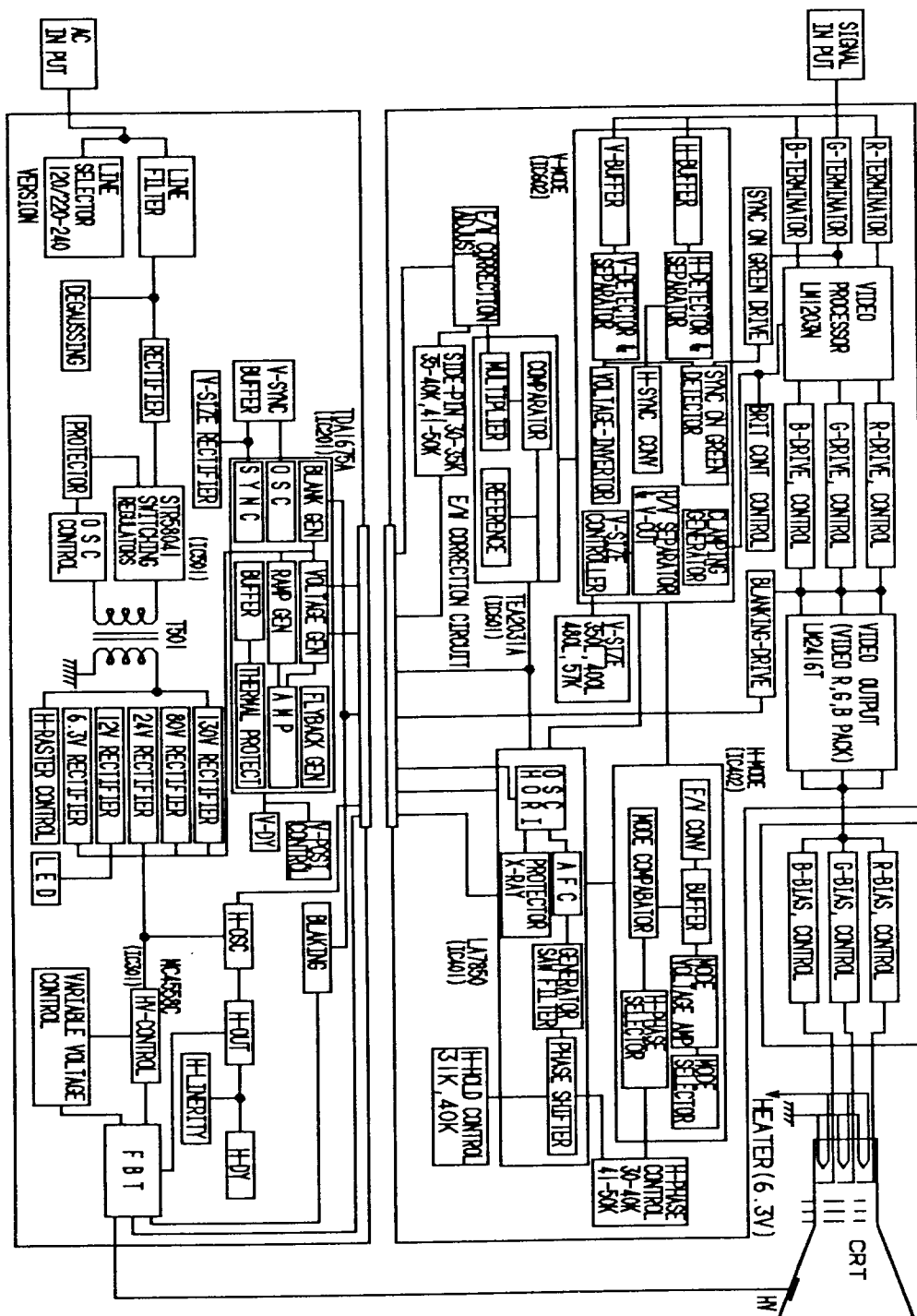
Circuit to be checked

1. No raster appears
-.Power circuits-horizontal output circuits
2. A high voltage develops but no raster appears-video output circuits
3. A high voltage is not appeared





CSJ4927 BLOCK DIAGRAM



ELECTRICAL PARTS LIST

IMPORTANT SAFETY NOTICE

Components identified by the symbol ! have special characteristic
Important for safety. When replacing any of these components use only
Manufacturer's specified parts.

NOTE: Tolerance F: +/-1%, J: +/-5%, K: +/-10%, M: +/-20%, P: +100%-0%, Z: +80%-20%

ASS'Y-MAIN PCB

Loc.No	Code No	Description	Remark
CAPACITORS			
C201	916 166220LJAX	CAP-MYLAR,224J,2A,9P:220NF,100V	
C202	915 324100HZVH	CAP-CERAMIC,102Z,1H,Y5V:1NF,50V	
C203	916 166100LJAH	CAP-MYLAR,223J,2A,5P:22NF,100V	
C204	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C205	916 566100JJA	CAP-MPETP,104J,1J,5P:100NF,63V	
C206	916 566100JJA	CAP-MPETP,104J,1J,5P:100NF,63V	
C208	917 783220EMAX	CAP-AL.ELEC,227M,1E,105C:(T)220UF,25V	
C209	917 874220EM	CAP-AL.ELEC,228M,1E,105C,16X25:(T)2200U	
C210	916 166220LJAX	CAP-MYLAR,224J,2A,9P:220NF,100V	
C211	917 741100HM	CAP-AL.ELEC,105M,1H,105C:(T)1UF,50V	
C212	916 165100LJAH	CAP-MYLAR,103J,2A,5P:10NF,100V	
C213	915 312680HJXH	CAP-CERAMIC,680J,1H,NPO:68PF,50V	
C214	917 743220FM	CAP-AL.ELEC,227M,1V,105C:(T)220UF,35V	
C215	917 743220CM	CAP-AL.ELEC,227M,1C,105C:(T)220UF,16V	
C216	917 744100FM	CAP-AL.ELEC,108M,1V,105C:(T)1000UF,35V	
C216A	917 744100FM	CAP-AL.ELEC,108M,1V,105C:(T)1000UF,35V	
C217	917 743100FM	CAP-AL.ELEC,107M,1V,105C:(T)100UF,35V	
C301	915 313100HJXH	CAP-CERAMIC,101J,1H,NPO:100PF,50V	
C302	915 324100HZVH	CAP-CERAMIC,102Z,1H,Y5V:1NF,50V	
C304	916 566100JJA	CAP-MPETP,104J,1J,5P:100NF,63V	
C305	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C306	917 743220CM	CAP-AL.ELEC,227M,1C,105C:(T)220UF,16V	
C307	915 313220HJHH	CAP-CERAMIC,221J,1H,SL:220PF,50V	
C308	916 556100QJAX	CAP-MPETP,104J,2E:100NF,250V	
C309	917 782330NM	CAP-AL.ELEC,336M,2C,105C:(B)33UF,160V	
C310	917 873220PM	CAP-AL.ELEC,227M,2D,105C,18X40:(B)220UF	
C311	916 165100LJAH	CAP-MYLAR,103J,2A,5P:10NF,100V	
C312	915 324100VKPH	CAP-CERAMIC,102K,2H,Y5P:1NF,500V	
C313 !	916 944720YJAX	CAP-MPE/PP,722J,3C,25P:7.2NF,1.6KV	
C314 !	916 945100YJ	CAP-MP/PP,103J,3C,25P:0.01UF,1600V	

Loc.No	Code No	Description	Remark
C315 !	916 657300LJAX	CAP-MPPF,305J,2A,27.5P:3UF,100V	
C316 !	916 657100QJAX	CAP-MPETP,104J,2E:100NF,250V	
C317 !	916 657120QJAX	CAP-MPETP,104J,2E:100NF,250V	
C318	915 324100XKPX	CAP-CERAMIC,102K,3A,DISC:(T)1NF,1KV	
C319	917 742100LM	CAP-AL.ELEC,106M,2A,105C:(T)10UF,100V	
C320	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C321	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V:10NF,50V	
C322	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C323	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V:10NF,50V	
C325	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C326	917 872470QM	CAP-AL.ELEC,476M,2E,105C,13X25:(T)47UF	
C327	917 742470HM	CAP-AL.ELEC,476M,1H,105C:(T)47UF,50V	
C328 !	916 355300WJAX	CAP-PPF,303J,2J,15P:30NF,630V	
C501 !	918 146470QK	CAP-MPAPER,474K,250VAC:470NF,250VAC	
C502 !	915 344470MMVX	CAP-CERAMIC,472M,2B,Y5V:4.7NF,125V	
C503 !	915 344470MMVX	CAP-CERAMIC,472M,2B,Y5V:4.7NF,125V	
C504 !	918 146470QK	CAP-MPAPER,474K,250VAC:470NF,250VAC	
C505	917 793470QMCX	CAP-AL.ELEC,477M,2E,105C:(B)470UF,250V	
C506	917 793470QMCX	CAP-AL.ELEC,477M,2E,105C:(B)470UF,250V	
C507	915 325100YZVX	CAP-CERAMIC,103Z,3D,DISC:10NF,2KV	
C508	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C509	916 164100LJAH	CAP-MYLAR,102J,2A,5P:1NF,100V	
C510	916 165220LJAH	CAP-MYLAR,223J,2A,5P:22NF,100V	
C511	917 742470LM	CAP-AL.ELEC,226M,2A,105C,10X12.5:(T)22U	
C512	915 323220YKPX	CAP-CERAMIC,221K,3D,Y5P:220PF,2KV	
C513	917 873220PM	CAP-AL.ELEC,227M,2D,105C,18X40:(B)220UF	
C514	917 743100QMBX	CAP-AL.ELEC,107M,2E,105C:(B)100UF,250V	
C515	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C516	917 742470LM	CAP-AL.ELEC,226M,2A,105C,10X12.5:(T)22U	
C517	917 742220LM	CAP-AL.ELEC,226M,2A,105C,10X12.5:(T)22U	
C518	917 743470FM	CAP-AL.ELEC,477M,1V,105C:(T)470UF,35V	
C519	917 743470FM	CAP-AL.ELEC,477M,1V,105C:(T)470UF,35V	
C520	917 743470CM	CAP-AL.ELEC,477M,1C,105C:(T)470UF,16V	
C521	917 744100CM	CAP-AL.ELEC,108M,1C,105C:(T)1000UF,16V	
C522	917 743330FM	CAP-AL.ELEC,337M,1V,105C:(T)330UF,35V	
C523	917 743470CM	CAP-AL.ELEC,477M,1C,105C:(T)470UF,16V	
C526	917 743470FM	CAP-AL.ELEC,477M,1V,105C:(T)470UF,35V	
C527	915 344470MMVX	CAP-CERAMIC,472M,2B,Y5V:4.7NF,125V	
C528	915 344470MMVX	CAP-CERAMIC,472M,2B,Y5V:4.7NF,125V	
DIODES			
D201	895 110025GB	LED,G,ROUND,5MM:5MM,N ,80MW,2.3V,	
D202	893 114148AANM	DIODE-SIG,1N4148	
D203	893 114148AANM	DIODE-SIG,1N4148	
D204	893 114148AANM	DIODE-SIG,1N4148	
D205	893 314001AANH	DIODE-REC,1N4001	
D206	893 114148AANM	DIODE-SIG,1N4148	

Loc.No	Code No	Description	Remark
D207	893 114148AANM	DIODE-SIG,1N4148	
D208	893 114148AANM	DIODE-SIG,1N4148	
D301	893 114148AANM	DIODE-SIG,1N4148	
D302	893 114148AANM	DIODE-SIG,1N4148	
D303	893 114148AANM	DIODE-SIG,1N4148	
D304	893 114148AANM	DIODE-SIG,1N4148	
D305	893 399016AA	DIODE-REC,RG2	
D306	893 399052AA	DIODE-REC,RK14	
D307	893 390915AA	DIODE-REC,ERD09-15	
D308	893 399018AA	DIODE-REC,CTU-G3DR	
D309	893 399018AA	DIODE-REC,CTU-G3DR	
D310	893 114148AANM	DIODE-SIG,1N4148	
D311	893 114148AANM	DIODE-SIG,1N4148	
D312	893 390158AB	DIODE-REC,BA158GP	
D313	02169-302-060	DIODE:TVR-06G	
D314	893 394100AA	DIODE-REC,MUR4100	
D316	893 394100AA	DIODE-REC,MUR4100	
D501	893 399012AA	DIODE-REC,KBL06,BRIDGE	
D502	893 399049AA	DIODE-REC,EP01C	
D503	893 399054AA	DIODE-REC,EU2Z	
D504	893 399021AA	DIODE-REC,EU1Z	
D505	893 399021AA	DIODE-REC,EU1Z	
D506	893 399021AA	DIODE-REC,EU1Z	
D507	893 399054AA	DIODE-REC,EU2Z	
D508	893 399053AA	DIODE-REC,RU2AM	
D509	893 399050AA	DIODE-REC,EU2A	
D510	893 399054AA	DIODE-REC,EU2Z	
D511	893 399054AA	DIODE-REC,EU2Z	
D512	893 399054AA	DIODE-REC,EU2Z	
D513	893 399051AA	DIODE-REC,RU2YX	
D514	893 399051AA	DIODE-REC,RU2YX	
D515	893 399051AA	DIODE-REC,RU2YX	
ZD201	893 290031AA	DIODE-ZEN,UZ-8.2BL	
ZD301	893 290002BC	DIODE-ZEN,ZPD9.1	
RESISTORS			
R201	911 141007FF	REF-CF,1K,5%,1/2W(S)	
R202	911 151007DA	REF-CF,10K,5%,1/4W	
R203	911 151207DA	REF-CF,12K,5%,1/4W	
R204	911 145607DA	REF-CF,5.6K,5%,1/4W	
R205	911 131207DA	REF-CF,120,5%,1/4W	
R206	911 151007DA	REF-CF,10K,5%,1/4W	
R207	911 151007DA	REF-CF,10K,5%,1/4W	
R208	911 151007DA	REF-CF,10K,5%,1/4W	
R209	911 144707DA	REF-CF,4.7K,5%,1/4W	
R210	911 153907DA	REF-CF,39K,5%,1/4W	
R211	911 162207DA	REF-CF,220K,5%,1/4W	
R212	911 164707DA	REF-CF,470K,5%,1/4W	
R214	911 465607DA	REF-MF,560K,5%,1/4W	
R215	911 153907DA	REF-CF,39K,5%,1/4W	
R216	911 451007DA	REF-MF,10K,5%,1/4W	
R217	911 144707DA	REF-CF,4.7K,5%,1/4W	

Loc.No	Code No	Description	Remark
R218	911 152207DA	REF-CF,22K,5%,1/4W	
R220	911 308207GF	REF-MO,0.82,5%,1W(S)	
R221	911 141807DA	REF-CF,1.8K,5%,1/4W	
R222	911 141207DA	REF-CF,1.2K,5%,1/4W	
R223	911 131207DA	REF-CF,120,5%,1/4W	
R224	911 112207DA	REF-CF,2.2,5%,1/4W	
R225	911 162007DA	REF-CF,200K,5%,1/4W	
R226	911 334707GA	REF-MO,470,5%,1W	
R228	911 146807DA	REF-CF,6.8K,5%,1/4W	
R230	911 141007DA	REF-CF,1K,5%,1/4W	
R231	911 151007DA	REF-CF,10K,5%,1/4W	
R233	911 155607DA	REF-CF,39K,5%,1/4W	
R234	911 144707DA	REF-CF,4.7K,5%,1/4W	
R236	911 111007FA	REF-CF,1,5%,1/2W	
R237	911 153307DA	REF-CF,30K,5%,1/4W	
R238	911 331807JF	REF-MO,180,5%,2W(S)	
R239	911 122207DA	REF-CF,22,5%,1/4W	
R241	911 161007DA	REF-CF,100K,5%,1/4W	
R242	911 454705DA	REF-MF,47K,1%,1/4W	
R245	911 173307DA	REF-CF,3.3M",5%,1/4W	
R260	911 168207DA	REF-CF,820K,5%,1/4W	
R301	911 151007DA	REF-CF,10K,5%,1/4W	
R302	911 151007DA	REF-CF,10K,5%,1/4W	
R303	911 131007DA	REF-CF,100,5%,1/4W	
R304	911 153307DA	REF-CF,30K,5%,1/4W	
R305	911 141007DA	REF-CF,1K,5%,1/4W	
R306	911 141007DA	REF-CF,1K,5%,1/4W	
R307	911 464705DA	REF-MF,470K,5%,1/4W	
R308	911 451805DA	REF-MF,18K,1%,1/4W	
R309	911 151007DA	REF-CF,10K,5%,1/4W	
R310	911 161207DA	REF-CF,120K,5%,1/4W	
R311	911 442205DA	REF-MF,2.2K,1%,1/4W	
R312	911 443305DA	REF-MF,3.3K,1%,1/4W	
R313	911 151007DA	REF-CF,10K,5%,1/4W	
R314	911 143307DA	REF-CF,3.3K,5%,1/4W	
R315	911 822207DA	REF-FUSIBLE,22,5%,1/4W	
R316	911 161007FA	REF-CF,100K,5%,1/2W	
R317	911 141007DA	REF-CF,1K,5%,1/4W	
R318	911 351007LF	REF-MO,10K,5%,3W(S)	
R319	911 611207LU	REF-WW,1.2,5%,3W	
R320	911 141007DA	REF-CF,1K,5%,1/4W	
R321	911 613307SW	REF-WW,3.3,5%,10W	
R322	911 161207DA	REF-CF,120K,5%,1/4W	
R323	911 161207DA	REF-CF,120K,5%,1/4W	
R324	911 332207GA	REF-MO,220,5%,1W	
R325	911 122707FA	REF-CF,27,5%,1/2W	
R327	911 132707FF	REF-CF,270,5%,1/2W(S)	
R328	911 121007FF	REF-CF,10,5%,1/2W(S)	
R329	911 811007FA	REF-FUSIBLE,1,5%,1/2W	
R330	911 452705DA	REF-MF,27K,1%,1/4W	

Loc.No	Code No	Description	Remark
R331 !	911 449105DA	REF-MF,9.1K,1%,1/4W	
R333	911 138207DA	REF-CF,820,5%,1/4W	
R501	911 273307FANA	REF-CC,3.3M",5%,1/2W	
R502	911 361007GA	REF-MO,100K,5%,1W	
R503	911 361007GA	REF-MO,100K,5%,1W	
R504	911 364707LF	REF-MO,470K,5%,3W(S)	
R505	911 461007PZ	REF-MF,100K,5%,5W	
R506	911 461007PZ	REF-MF,100K,5%,5W	
R507	911 605007JU	REF-WW,0.5,5%,2W	
R508	911 145607DA	REF-CF,5.6K,5%,1/4W	
R509	911 153007DA	REF-CF,30K,5%,1/4W	
R510	911 323307LAXA	REF-MO,33,5%,3W(T)	
R511	911 321807LF	REF-MO,18,5%,3W(S)	
R512	911 331507LF	REF-MO,150,5%,3W(S)	
R513	911 138207FF	REF-CF,820,5%,1/2W(S)	
R514	911 138207DA	REF-CF,820,5%,1/4W	
R515	911 624707PW	REF-WW,47,5%,5W	
R518	911 811007FA	REF-FUSIBLE,1,5%,1/2W	
R519	911 811007FA	REF-FUSIBLE,1,5%,1/2W	
R520	911 637507PB	REF-WW,750,5%,5W	
R521	911 811007FA	REF-FUSIBLE,1,5%,1/2W	
R522	911 814707FA	REF-FUSIBLE,1,5%,1/2W	
R525	911 800507JA	REF-FUSIBLE,0.5,5%,2W	
R526	911 144707DA	REF-CF,4.7K,5%,1/4W	
R527	911 321007JF	REF-MO,10,5%,2W(S)	
TRANSISTORS			
Q201	891 190733XC	TR-PNP,KSA733,TO-92	
Q202	891 390006XB	TR-NPN,KSC945,TO-92	
Q203	891 323904XANC	TR-NPN,2N3904,TO-92	
Q204	891 390006XB	TR-NPN,KSC945,TO-92	
Q206	891 392222XA	TR-NPN,MPS2222A,TO-92	
Q207	891 391008XA	TR-NPN,KSC1008,TO-92	
Q208	891 190708XC	TR-PNP,KSA708,TO-92	
Q301	891 390006XB	TR-NPN,KSC945,TO-92	
Q302	891 391008XA	TR-NPN,KSC1008,TO-92	
Q303	891 391008XA	TR-NPN,KSC1008,TO-92	
Q304	891 190733XC	TR-PNP,KSA733,TO-92	
Q305	891 390006XB	TR-NPN,KSC945,TO-92	
Q306	891 190733XC	TR-PNP,KSA733,TO-92	
Q307	891 799610AA	FET-P,IRF9610,TO-220	
Q308 !	891 492688AA	TR-NPN,KSC2688,TO-126	
Q309 !	891 463688AA	TR-NPN,2SC3688,TO-3	
Q310	891 390006XB	TR-NPN,KSC945,TO-92	
Q311	891 390006XB	TR-NPN,KSC945,TO-92	
Q501	891 392330XA	TR-NPN,KSC2330,TO-92L	
Q502	891 392383AA	TR-NPN,KSC2383,TO-92L	
CONNECTORS			
CN201	935 220103TE	CON-NOWALL HEADER,3P,1R	
CN301	935 220103TD	CON-NOWALL HEADER,3P,1R	
CN501	935 220102TD	CON-NOWALL HEADER,2P,1R	

Loc.No	Code No	Description	Remark
CN502	935 240903DE	CON-WALL HEADER,3P,3.96	
CN502	955 460343AAAA	CBF-CONN ASSY,200MM,3P:5239-03A(2),200M	
CN503	955 460344AAAA	CBF-CONN ASSY,200MM,3P:5239-03A(2),200M	
CN504	935 220120TC	CON-NOWALL HEADER,20P,1R	
CN505	935 220120TC	CON-NOWALL HEADER,20P,1R	
CN507	935 240902DH	CON-WALL HEADER,2P,7.92	
CN508	955 460342AZAA	CBF-CONN ASSY,300MM,5P	
CN508	935 240903DH	CON-WALL HEADER,3P,7.92	
CN509	955 460345AZAA	CBF-CONN ASSY,350MM,5P	
CN509	935 240903DH	CON-WALL HEADER,3P,7.92	
JW01	955 460380AAAA	CBF-CONN ASSY,150MM,1P:171156-1,150MM,1	
	955 460341AZAA	CBF-LUG TERMINAL,120MM:SRA 51T-4(JST),1	
	955 460347AZAA	CBF-CONN ASSY,350MM,3P:5239-03A,350MM,1	
FERRITE-CORES			
FB301	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB302	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB501	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB502	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB503	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB504	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB505	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB506	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB507	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
ICS			
IC201	881 701675SA	IC-LIN,1675,VERTICAL	
IC301	881 104558AA	IC-LIN,4558,OP AMP	
IC501	881 358041SA	IC-LIN,58041,REGULATOR	
IC502	881 307812KANB	IC-LIN,7812,REGULATOR	
IC503	881 307824KA	IC-LIN,7824,REGULATOR	
COILS			
L201	925 001001AK	INDUCTOR-AXIAL,15UH:FIX,15UH	
L301	925 001001AK	INDUCTOR-AXIAL,15UH:FIX,15UH	
L302	925 460127FA	COIL-CHOKE,2MH:2MH L302 DR 22X20	
L303	925 460127EA	COIL-CHOKE,18UH:18UH L502 DR 8X11	
L304	925 460127AA	COIL-CHOKE,2.2MH:2.2MH L304 DR 14X20	
L305	925 460169BA	COIL-HOR,LINEARITY,7UH:CSJ4927,7UH	
L306	925 460169CA	COIL-HOR,LINEARITY(ADJ):CSJ4927,3UH	
L307	925 460127GA	COIL-CHOKE,130UH:130UH L307 DR 22X20	
L308	925 460127MA	COIL-CHOKE,1.5MH:CSD5577,1.5MH	
L501	925 460127PA	COIL-LINE FILTER,50MH:CSD5577,50MH	
L502	925 460127EA	COIL-CHOKE,18UH:18UH L502 DR 8X11	
L503	925 001001AG	INDUCTOR-AXIAL,15UH:FIX,15UH	
L505	925 460127CA	COIL-CHOKE,150UH:150UH L505 DR 12X15	
L506	925 460127BA	COIL-CHOKE,10MH:10MH L506 DR 14X20	

Loc.No	Code No	Description	Remark
VRS			
VR201 VR301 VR501 VR502 VR503 VR504 VR505	913 461009VC 913 441009VC 913 445009VC 913 426807JA 913 151007AL 913 151007ALCT 913 910006AB	RES-VAR,SF-ROUND,100KOHM RES-VAR,SF-ROUND,1KOHM RES-VAR,SF-ROUND,5KOHM RES-VAR,SF-ROUND,68OHM RES-VAR,ROTARY,10KOHM RES-VAR,ROTARY,10KOHM RES-VAR,ARRAY,ROTARY	
OTHERS			
F501 ! FUSE PTH501 ! PTH502 ! RL301 RL302 S/W SE SW501 SW502 SW503 T301 ! T302 ! T501 ! TH501 ! L/FILT.	953 260023BC 949 110505AE 897 110006AA 897 110005AA 927 300052BB 927 300052AB 933 290071UANA 933 210098AA 933 110034TC 933 290046BB 923 460083AA 923 460139AA 923 460141AA 897 110521AA 943 150015DA	FUSE-CLIP,5.2X20,30MOHM FUSE-GLASS TUBE,3,250:SLOW-BLOW,5X20MM, POSI,8,SQUARE POSI,20,SQUARE RELAY,MINIATURE,12VDC:2FORMA,8A,200MW RELAY,MINIATURE,12VDC:1FORMA,10A,200MW, SWITCH-SLIDE,DIP,DPDT SWITCH-KEY,MULTI TYPE SWITCH-TOGGLE,SP3T SWITCH-SLIDE,SIDE,SPDT TRANS-FBT,MSU1FGV77:MSU1FGV77 TRANS-HORIZ,DRIVE:48MH-51UH,EE20X17MM TRANS-POWER,120V/60HZ:CSJ4927,2.4MH THER,8 OHM,DISK,13MM FILTER-LPF,LC,250V,1.5A:IA5-S22(SEV)	

ASS'Y-VIDEO PCB

Loc.No	Code No	Description	Remark
CAPASISTORS			
C101	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C102	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C103	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C104	917 120470HM	CAP-AL.ELEC,474M,1H:(T)0.47UF,50V	
C105	917 120470HM	CAP-AL.ELEC,474M,1H:(T)0.47UF,50V	
C106	917 120470HM	CAP-AL.ELEC,474M,1H:(T)0.47UF,50V	
C107	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C108	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C109	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C110	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C111	917 122470EM	CAP-AL.ELEC,476M,1E:(T)47UF,25V	
C112	917 122470CM	CAP-AL.ELEC,476M,1C:(T)47UF,16V	
C113	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C114	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C115	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C116	917 742470HM	CAP-AL.ELEC,476M,1H,105C:(T)47UF,50V	
C117	915 312330HJXH	CAP-CERAMIC,330J,1H,NPO:33PF,50V	
C118	915 312330HJXH	CAP-CERAMIC,330J,1H,NPO:33PF,50V	
C119	915 312330HJXH	CAP-CERAMIC,330J,1H,NPO:33PF,50V	
C120	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C121	917 123220CM	CAP-AL.ELEC,227M,1C:(T)220UF,16V	
C122	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C123	917 122470CM	CAP-AL.ELEC,476M,1C:(T)47UF,16V	
C124	917 122100EM	CAP-AL.ELEC,106M,1E:(T)10UF,25V	
C125	916 166100LJAH	CAP-MYLAR,104J,2A,5P:100NF,100V	
C126	917 742470LM	CAP-AL.ELEC,476M,2A,105C:(T)47UF,100V	
C127	917 742100LM	CAP-AL.ELEC,106M,2A,105C:(T)10UF,100V	
C128	916 166100LJAH	CAP-MYLAR,104J,2A,5P:100NF,100V	
C131	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C132	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C133	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C134	917 122470EM	CAP-AL.ELEC,476M,1E:(T)47UF,25V	
C401	916 166100LJAH	CAP-MYLAR,104J,2A,5P:100NF,100V	
C402	915 313100HJXH	CAP-CERAMIC,101J,1H,NPO:100PF,50V	
C403	915 163680HKXH	CAP-CERAMIC,681K,1H,MONO:680PF,50V	
C404	916 164150LJAH	CAP-MYLAR,152J,2A,3P:1.5NF,100V	
C405	916 164150LJAH	CAP-MYLAR,152J,2A,3P:1.5NF,100V	
C406	917 311100FK	CAP-TANTAL,105K,1V:(T)1UF,35V	
C407	916 165100LJAH	CAP-MYLAR,103J,2A,5P:10NF,100V	
C408	917 121100HM	CAP-AL.ELEC,105M,1H:(T)1UF,50V	
C409	916 354270LJAX	CAP-PPF,272J,2A:2.7NF,100V	
C410	915 312220HJXH	CAP-CERAMIC,220J,1H,NPO:22PF,50V	
C411	916 164100LJAH	CAP-MYLAR,102J,2A,5P:1NF,100V	
C412	917 744100CM	CAP-AL.ELEC,108M,1C,105C:(T)1000UF,16V	

Loc.No	Code No	Description	Remark
C413	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C414	917 122470CM	CAP-AL.ELEC,476M,1C:(T)47UF,16V	
C415	916 934150HJ	CAP-PE/PP,152J,1H:1.5NF,50V	
C416	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C417	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C419	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C420	916 164220LJAH	CAP-MYLAR,222J,2A,5P:2.2NF,100V	
C421	916 164470LJAH	CAP-MYLAR,472J,2A,5P:4.7NF,100V	
C423	916 354220LJAX	CAP-PPF,222J,2A:2.2NF,100V	
C424	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C601	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C604	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C605	916 566220JJAH	CAP-MPETP,224J,1J,5P:220NF,63V	
C606	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C607	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C608	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C609	917 121470HM	CAP-AL.ELEC,475M,1H:(T)4.7UF,50V	
C610	916 567100JJAH	CAP-MPETP,105J,1J,5P:1UF,63V	
C611	915 313100HJXH	CAP-CERAMIC,101J,1H,NPO:100PF,50V	
C612	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C614	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C615	917 242100EM	CAP-AL.ELEC,106M,1E,105'C(NP):(T)10UF	
C616	917 241470HM	CAP-AL.ELEC,475M,1H,105'C(NP):(T)4.7UF	
C617	916 165220LJAH	CAP-MYLAR,223J,2A,5P:22NF,100V	
C618	916 164470LJAH	CAP-MYLAR,472J,2A,5P:4.7NF,100V	
C619	917 743470FM	CAP-AL.ELEC,477M,1V,105C:(T)470UF,35V	
C620	916 166100LJAH	CAP-MYLAR,104J,2A,5P:100NF,100V	
C621	917 742470EM	CAP-AL.ELEC,476M,1E,105'C,6X11:(T)47UF	
C622	916 164150LJAH	CAP-MYLAR,152J,2A,3P:1.5NF,100V	
C623	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C624	917 121220HM	CAP-AL.ELEC,225M,1H:(T)2.2UF,50V	
C625	917 742100HM	CAP-AL.ELEC,106M,1H,105C:(T)10UF,50V	
C626	915 313100HJXH	CAP-CERAMIC,101J,1H,NPO:100PF,50V	
C627	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V:100NF,50V	
C628	917 121100HM	CAP-AL.ELEC,105M,1H:(T)1UF,50V	
C629	917 121220HM	CAP-AL.ELEC,225M,1H:(T)2.2UF,50V	
C630	917 123220CM	CAP-AL.ELEC,227M,1C:(T)220UF,16V	
C631	917 122220HMAX	CAP-AL.ELEC,226M,1H:(T)22UF,50V	
DIODES			
D101	02169-202-080	DIODE:ISS83	
D102	02169-202-080	DIODE:ISS83	
D103	02169-202-080	DIODE:ISS83	
D104	893 114148AANM	DIODE-SIG,1N4148	
D105	893 114148AANM	DIODE-SIG,1N4148	
D106	893 114148AANM	DIODE-SIG,1N4148	
D107	893 114148AANM	DIODE-SIG,1N4148	
D108	893 114148AANM	DIODE-SIG,1N4148	
D109	893 114148AANM	DIODE-SIG,1N4148	
D110	893 114148AANM	DIODE-SIG,1N4148	
D111	893 114148AANM	DIODE-SIG,1N4148	

Loc.No	Code No	Description	Remark
D112	893 114148AANM	DIODE-SIG,1N4148	
D113	893 114148AANM	DIODE-SIG,1N4148	
D114	893 114148AANM	DIODE-SIG,1N4148	
D115	893 114148AANM	DIODE-SIG,1N4148	
D402	893 114148AANM	DIODE-SIG,1N4148	
D601	893 114148AANM	DIODE-SIG,1N4148	
D602	893 114148AANM	DIODE-SIG,1N4148	
ZD101	893 290002BC	DIODE-ZEN,ZPD9.1	
ZD102	893 290031AA	DIODE-ZEN,UZ-8.2BL	
ZD103	893 290031AA	DIODE-ZEN,UZ-8.2BL	
ZD401	893 290031FB	DIODE-ZEN,UZ-5.1B	
ZD402	893 290031FB	DIODE-ZEN,UZ-5.1B	
ZD601	893 290031FB	DIODE-ZEN,UZ-5.1B	
ZD602	893 290031FB	DIODE-ZEN,UZ-5.1B	
ZD603	893 290032AB	DIODE-ZEN,UZP-27B	
RESISTORS			
R101	911 427505DA	REF-MF,75,1%,1/4W	
R102	911 427505DA	REF-MF,75,1%,1/4W	
R103	911 427505DA	REF-MF,75,1%,1/4W	
R104	911 141007YA	REF-CF,1K,5%,1/6W	
R105	911 151007YA	REF-CF,10K,5%,1/6W	
R106	911 151007YA	REF-CF,10K,5%,1/6W	
R107	911 151007YA	REF-CF,10K,5%,1/6W	
R108	911 164707YA	REF-CF,470K,5%,1/6W	
R109	911 164707YA	REF-CF,470K,5%,1/6W	
R110	911 164707YA	REF-CF,470K,5%,1/6W	
R111	911 134707YA	REF-CF,470,5%,1/6W	
R112	911 134707YA	REF-CF,470,5%,1/6W	
R113	911 134707YA	REF-CF,470,5%,1/6W	
R114	911 131007YA	REF-CF,100,5%,1/6W	
R115	911 131007YA	REF-CF,100,5%,1/6W	
R116	911 131007YA	REF-CF,100,5%,1/6W	
R117	911 135607FF	REF-CF,560,5%,1/2W(S)	
R118	911 135607FF	REF-CF,560,5%,1/2W(S)	
R119	911 135607FF	REF-CF,560,5%,1/2W(S)	
R120	911 131007YA	REF-CF,100,5%,1/6W	
R121	911 131007YA	REF-CF,100,5%,1/6W	
R122	911 131007YA	REF-CF,100,5%,1/6W	
R123	911 151007YA	REF-CF,10K,5%,1/6W	
R124	911 427505DA	REF-MF,75,1%,1/4W	
R125	911 427505DA	REF-MF,75,1%,1/4W	
R126	911 427505DA	REF-MF,75,1%,1/4W	
R127	911 345107JF	REF-MO,5.1K,5%,2W(S)	
R128	911 345107JF	REF-MO,5.1K,5%,2W(S)	
R129	911 345107JF	REF-MO,5.1K,5%,2W(S)	
R133	911 142207YA	REF-CF,2.2K,5%,1/6W	
R134	911 121507FF	REF-CF,15,5%,1/2W(S)	
R135	911 152007YA	REF-CF,20K,5%,1/6W	

Loc.No	Code No	Description	Remark
R136	911 142707YA	REF-CF,2.7K,5%,1/6W	
R137	911 153307YA	REF-CF,33K,5%,1/6W	
R138	911 156807YA	REF-CF,68K,5%,1/6W	
R140	911 141007YA	REF-CF,1K,5%,1/6W	
R142	911 157507YA	REF-CF,75K,5%,1/6W	
R143	911 145607YA	REF-CF,5.6K,5%,1/6W	
R144	911 132207YA	REF-CF,220,5%,1/6W	
R145	911 141007YA	REF-CF,1K,5%,1/6W	
R146	911 136807YA	REF-CF,680,5%,1/6W	
R147	911 134707YA	REF-CF,470,5%,1/6W	
R148	911 155607YA	REF-CF,56K,5%,1/6W	
R149	911 142207YA	REF-CF,2.2K,5%,1/6W	
R150	911 131207YA	REF-CF,120,5%,1/6W	
R151	911 131207YA	REF-CF,120,5%,1/6W	
R152	911 131207YA	REF-CF,120,5%,1/6W	
R153	911 323307GF	REF-MO,33,5%,1W(S)	
R163	911 132207YA	REF-CF,220,5%,1/6W	
R164	911 132207YA	REF-CF,220,5%,1/6W	
R165	911 132207YA	REF-CF,220,5%,1/6W	
R166	911 134707YA	REF-CF,470,5%,1/6W	
R167	911 134707YA	REF-CF,470,5%,1/6W	
R168	911 134707YA	REF-CF,470,5%,1/6W	
R401	911 141807YA	REF-CF,1.8K,5%,1/6W	
R402	911 136807YA	REF-CF,680,5%,1/6W	
R403	911 143307YA	REF-CF,3.3K,5%,1/6W	
R404	911 141007YA	REF-CF,1K,5%,1/6W	
R405	911 141507YA	REF-CF,1.5K,5%,1/6W	
R406	911 154707YA	REF-CF,47K,5%,1/6W	
R407	911 148207YA	REF-CF,8.2K,5%,1/6W	
R408	911 148207YA	REF-CF,8.2K,5%,1/6W	
R409	911 153307YA	REF-CF,33K,5%,1/6W	
R410	911 141007YA	REF-CF,1K,5%,1/6W	
R411	911 141007YA	REF-CF,1K,5%,1/6W	
R412	911 161007YA	REF-CF,100K,5%,1/6W	
R413	911 141007YA	REF-CF,1K,5%,1/6W	
R414	911 151507YA	REF-CF,15K,5%,1/6W	
R415	911 151507YA	REF-CF,15K,5%,1/6W	
R416	911 131007YA	REF-CF,100,5%,1/6W	
R417	911 141207YA	REF-CF,1.2K,5%,1/6W	
R417	911 154707YA	REF-CF,47K,5%,1/6W	
R420	911 153307YA	REF-CF,33K,5%,1/6W	
R422	911 142207YA	REF-CF,2.2K,5%,1/6W	
R423	911 141007YA	REF-CF,1K,5%,1/6W	
R601	911 161207YA	REF-CF,120K,5%,1/6W	
R602	911 152207YA	REF-CF,22K,5%,1/6W	
R603	911 161507YA	REF-CF,150K,5%,1/6W	
R604	911 155607YA	REF-CF,56K,5%,1/6W	
R606	911 161207YA	REF-CF,120K,5%,1/6W	
R607	911 152207YA	REF-CF,22K,5%,1/6W	
R608	911 153907YA	REF-CF,39K,5%,1/6W	

Loc.No	Code No	Description	Remark
R609	911 151007YA	REF-CF,10K,5%,1/6W	
R610	911 161007YA	REF-CF,100K,5%,1/6W	
R611	911 154707YA	REF-CF,47K,5%,1/6W	
R612	911 141007YA	REF-CF,1K,5%,1/6W	
R613	911 141007YA	REF-CF,1K,5%,1/6W	
R614	911 146807YA	REF-CF,6.8K,5%,1/6W	
R615	911 121007YA	REF-CF,10,5%,1/6W	
R616	911 121007YA	REF-CF,10,5%,1/6W	
R617	911 143307YA	REF-CF,3.3K,5%,1/6W	
R618	911 152207YA	REF-CF,22K,5%,1/6W	
R619	911 132207YA	REF-CF,220,5%,1/6W	
R620	911 161007YA	REF-CF,100K,5%,1/6W	
R621	911 141007YA	REF-CF,1K,5%,1/6W	
R622	911 131807YA	REF-CF,180,5%,1/6W	
R623	911 153907YA	REF-CF,39K,5%,1/6W	
R624	911 152707YA	REF-CF,27K,5%,1/6W	
R625	911 143307YA	REF-CF,3.3K,5%,1/6W	
R626	911 153907YA	REF-CF,39K,5%,1/6W	
R627	911 165607YA	REF-CF,560K,5%,1/6W	
R628	911 151007YA	REF-CF,10K,5%,1/6W	
R629	911 151507YA	REF-CF,15K,5%,1/6W	
R630	911 164707YA	REF-CF,470K,5%,1/6W	
R631	911 144707YA	REF-CF,4.7K,5%,1/6W	
R632	911 144707YA	REF-CF,4.7K,5%,1/6W	
R633	911 154707YA	REF-CF,47K,5%,1/6W	
R634	911 152207YA	REF-CF,22K,5%,1/6W	
R635	911 151007YA	REF-CF,10K,5%,1/6W	
R636	911 161507YA	REF-CF,150K,5%,1/6W	
R637	911 171007YA	REF-CF,1M,5%,1/6W	
R638	911 171007YA	REF-CF,1M,5%,1/6W	
R639	911 162707YA	REF-CF,270K,5%,1/6W	
R640	911 114707FF	REF-CF,4.7,5%,1/2W(S)	
R641	911 142207YA	REF-CF,2.2K,5%,1/6W	
R643	911 145607YA	REF-CF,5.6K,5%,1/6W	
R644	911 146807YA	REF-CF,6.8K,5%,1/6W	
R645	911 152407YA	REF-CF,24K,5%,1/6W	
R646	911 161007YA	REF-CF,100K,5%,1/6W	
R647	911 132207YA	REF-CF,220,5%,1/6W	
R648	911 161207YA	REF-CF,120K,5%,1/6W	
R649	911 161207YA	REF-CF,120K,5%,1/6W	
R650	911 142207YA	REF-CF,2.2K,5%,1/6W	
R651	911 151007YA	REF-CF,10K,5%,1/6W	
R652	911 151007YA	REF-CF,10K,5%,1/6W	
R653	911 151007YA	REF-CF,10K,5%,1/6W	
R654	911 141007YA	REF-CF,1K,5%,1/6W	
R655	911 141007YA	REF-CF,1K,5%,1/6W	
R657	911 144707YA	REF-CF,4.7K,5%,1/6W	
R658	911 153307YA	REF-CF,33K,5%,1/6W	
R659	911 161507YA	REF-CF,150K,5%,1/6W	

Loc.No	Code No	Description	Remark
TRS			
Q101	891 190733XC	TR-PNP,KSA733,TO-92	
Q102	891 190733XC	TR-PNP,KSA733,TO-92	
Q103	891 190733XC	TR-PNP,KSA733,TO-92	
Q104	891 190733XC	TR-PNP,KSA733,TO-92	
Q105	891 190733XC	TR-PNP,KSA733,TO-92	
Q107	891 391008XA	TR-NPN,KSC1008,TO-92	
Q108	891 190708XC	TR-PNP,KSA708,TO-92	
Q401	891 190733XC	TR-PNP,KSA733,TO-92	
Q601	891 390006XB	TR-NPN,KSC945,TO-92	
Q602	891 323904XANC	TR-NPN,2N3904,TO-92	
Q604	891 390006XB	TR-NPN,KSC945,TO-92	
Q605	891 390006XB	TR-NPN,KSC945,TO-92	
Q606	891 392222XA	TR-NPN,MPS2222A,TO-92	
Q607	891 392222XA	TR-NPN,MPS2222A,TO-92	
Q608	891 392222XA	TR-NPN,MPS2222A,TO-92	
Q609	891 392222XA	TR-NPN,MPS2222A,TO-92	
Q610	891 390006XB	TR-NPN,KSC945,TO-92	
Q611	891 490882AB	TR-NPN,KSD882,TO-126	
Q612	891 390006XB	TR-NPN,KSC945,TO-92	
Q613	891 190733XC	TR-PNP,KSA733,TO-92	
Q614	891 390006XB	TR-NPN,KSC945,TO-92	
Q615	891 392222XA	TR-NPN,MPS2222A,TO-92	
Q616	891 390006XB	TR-NPN,KSC945,TO-92	
Q617	891 390006XB	TR-NPN,KSC945,TO-92	
VRS			
VR101	913 435009WB	RES-VAR,SF-ROUND,500OHM	
VR102	913 435009WB	RES-VAR,SF-ROUND,500OHM	
VR103	913 445009WB	RES-VAR,SF-ROUND,5KOHM	
VR104	913 451009WB	RES-VAR,SF-ROUND,10KOHM	
VR105	913 435009WB	RES-VAR,SF-ROUND,500OHM	
VR401	913 445009WA	RES-VAR,SF-ROUND,3KOHM	
VR402	913 471009WA	RES-VAR,SF-ROUND,1MOHM	
VR403	913 451009WA	RES-VAR,SF-ROUND,10KOHM	
VR404	913 451009WA	RES-VAR,SF-ROUND,10KOHM	
VR405	913 443009WA	RES-VAR,SF-ROUND,3KOHM	
VR406	913 451009WA	RES-VAR,SF-ROUND,10KOHM	
VR601	913 455009WA	RES-VAR,SF-ROUND,50KOHM	
VR602	913 455009WA	RES-VAR,SF-ROUND,50KOHM	
VR603	913 455009WA	RES-VAR,SF-ROUND,50KOHM	
VR604	913 462009WA	RES-VAR,SF-ROUND,200KOHM	
VR605	913 432009WA	RES-VAR,SF-ROUND,200OHM	
VR606	913 445009WA	RES-VAR,SF-ROUND,3KOHM	
VR607	913 455009WA	RES-VAR,SF-ROUND,50KOHM	
VR608	913 441009WA	RES-VAR,SF-ROUND,1KOHM	
VR609	913 455009WA	RES-VAR,SF-ROUND,50KOHM	
VR610	913 471009WA	RES-VAR,SF-ROUND,1MOHM	

Loc.No	Code No	Description	Remark
VR611	913 474709VDNA	RES-VAR,SF-ROUND,4.7MOHM	
VR612	913 472009VDNA	RES-VAR,SF-ROUND,2MOHM	
VR613	913 471009WA	RES-VAR,SF-ROUND,1MOHM	
VR614	913 462009WA	RES-VAR,SF-ROUND,200KOHM	
FERRITE-CORES			
FB101	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB102	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB104	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB105	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB106	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB107	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB108	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB109	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB111	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB112	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB113	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB601	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB602	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB603	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB604	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
ICS			
IC101	881 101203AA	IC-LIN,1203,OP AMP	
IC102	881 102416SA	IC-LIN,2416,AMP	
IC401	881 707850AA	IC-LIN,7850,DEFLECTION	
IC402	887 490011AA	IC-HYB,CSD5577,H-MODE	
IC601	881 702031AA	IC-LIN,2031,CORRECTION	
IC602	887 490012AA	IC-HYB,CSD5577,V-MODE	
COILS			
L101	925 001001AE	INDUCTOR-AXIAL,150UH	
L102	925 001001AM	INDUSTOR-AXIAL,10UH	
L103	925 001001AK	INDUCTOR-AXIAL,100UH	
L401	925 001001AE	INDUCTOR-AXIAL,150UH	
L601	925 001001AK	INDUCTOR-AXIAL,100UH	
L602	925 001001AK	INDUCTOR-AXIAL,100UH	
CONNECTORS			
CN101	935 100109FG	CON-D-SUB,9P,RECEPTACLE	
CN102	935 240506KA	CON-BOX HEADER,6P,2.5MM	
CN103	935 240506KA	CON-BOX HEADER,6P,2.5MM	
CN401	935 145820CD	CON-SOCKET,20P,1R	
CN402	935 145820CD	CON-SOCKET,20P,1R	

ASSY-CRT PWA

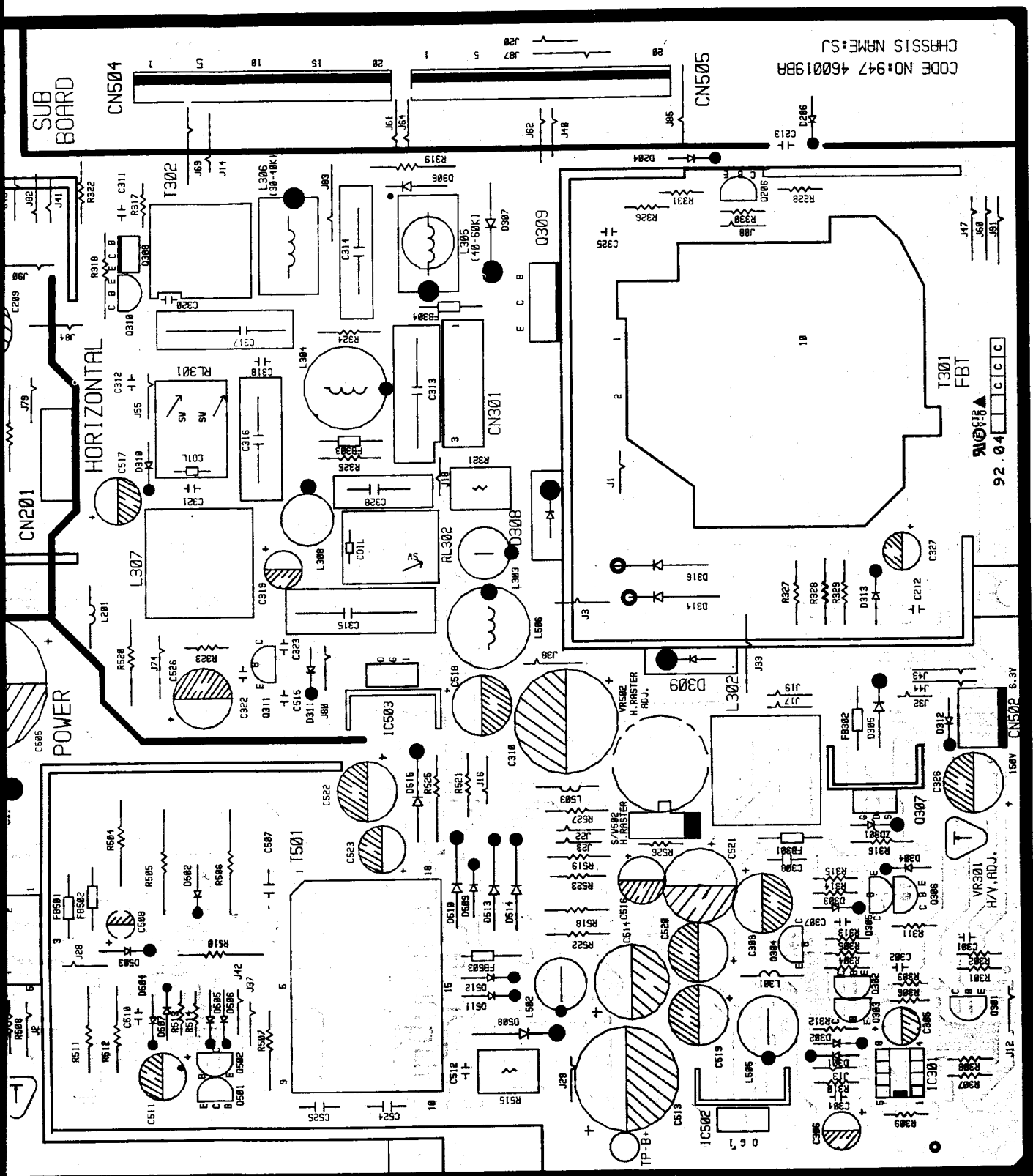
Loc.No	Code No	DESCRIPTION	Remark
CAPACITORS			
C701	916 556100QJAX	CAP-MPETP,104J,2E:100NF,250V	
C702	916 556100QJAX	CAP-MPETP,104J,2E:100NF,250V	
C703	916 556100QJAX	CAP-MPETP,104J,2E:100NF,250V	
C704	917 741100QM	CAP-AL.ELEC,105M,2E,105'C,6X11:(T)1UF	
C705	917 741100QM	CAP-AL.ELEC,105M,2E,105'C,6X11:(T)1UF	
C706	917 741100QM	CAP-AL.ELEC,105M,2E,105'C,6X11:(T)1UF	
C707	915 324330VKPX	CAP-CERAMIC,332K,2H,Y5P:3.3NF	
C708	915 324330VKPX	CAP-CERAMIC,332K,2H,Y5P:3.3NF	
C709	915 324330VKPX	CAP-CERAMIC,332K,2H,Y5P:3.3NF	
C710	917 871470QM	CAP-AL.ELEC,475M,2E,105C,10X16:(T)4.7UF	
C711	915 323680YKPC	CAP-CERAMIC,681K,3D,Y5P:680PF,2KV	
C712	915 325100YZVX	CAP-CERAMIC,103Z,3D,DISC:10NF,2KV	
RESISTORS			
R701	911 231008FA	REF-CC,100,10%,1/2W	
R702	911 231008FA	REF-CC,100,10%,1/2W	
R703	911 231008FA	REF-CC,100,10%,1/2W	
R704	911 152207DA	REF-CF,22K,5%,1/4W	
R705	911 152207DA	REF-CF,22K,5%,1/4W	
R706	911 152207DA	REF-CF,22K,5%,1/4W	
R707	911 171007DA	REF-CF,1M",5%,1/4W	
R708	911 171007DA	REF-CF,1M",5%,1/4W	
R709	911 171007DA	REF-CF,1M",5%,1/4W	
R710	911 162207DA	REF-CF,220K,5%,1/4W	
R711	911 162207DA	REF-CF,220K,5%,1/4W	
R712	911 162207DA	REF-CF,220K,5%,1/4W	
R713	911 163307DA	REF-CF,330K,5%,1/4W	
R714	911 163307DA	REF-CF,330K,5%,1/4W	
R715	911 163307DA	REF-CF,330K,5%,1/4W	
R716	911 311007JF	REF-MO,1,5%,2W(S)	
CONNECTORS			
CN701	935 240906DB	CON-WALL HEADER,6P,2.5MM:STRAIGHT,1WALL	
CN702	935 240903DE	CON-WALL HEADER,3P,3.96:STRAIGHT,1WALL,	
CN703	935 220102TD	CON-NOWALL HEADER,2P,1R:STRAIGHT,SN,8.0	
CRTS			
CRT !	897 250084AA	CRT,COLOR,14" M34KQA22XX07	TOSHIBA SED VLMF,TOSHIBA
CRT !	897 250123AA	CRT,COLOR,14" M34KUQ35X01	
CRT !	897 250115AA	CRT,COLOR,14" M34KQA23XX07(ESF COATING)	
DIODES			
D701	02169-202-080	DIODE:ISS83	
D702	02169-202-080	DIODE:ISS83	
D703	02169-202-080	DIODE:ISS83	

Loc.No	Code No	Description	Remark
FERRITE-CORES			
FB701	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
FB702	02429-048-017	FERRITE-CORE:1.5MH + -20% (T)	
TRANSISTORS			
Q701	891 190092AANA	TR-PNP,MPSA92	
Q702	891 190092AANA	TR-PNP,MPSA92	
Q703	891 190092AANA	TR-PNP,MPSA92	
VRS			
VR701	913 462009WB	RES-VAR,SF-ROUND,200KOHM	
VR702	913 462009WB	RES-VAR,SF-ROUND,200KOHM	
VR703	913 462009WB	RES-VAR,SF-ROUND,200KOHM	
OTHERS			
SG701	04569-001-110	SPARK-GAP:S-23(1KV)	
SG702	04569-001-110	SPARK-GAP:S-23(1KV)	
SG703	04569-001-110	SPARK-GAP:S-23(1KV)	
SG704	04569-001-110	SPARK-GAP:S-23(1KV)	
S-705	935 720901AD	CON-JACK CRT	
R-G-B	955 460378AAAA	CBF-CONN ASSY,150MM 6P	

ASS'Y-P/CORD

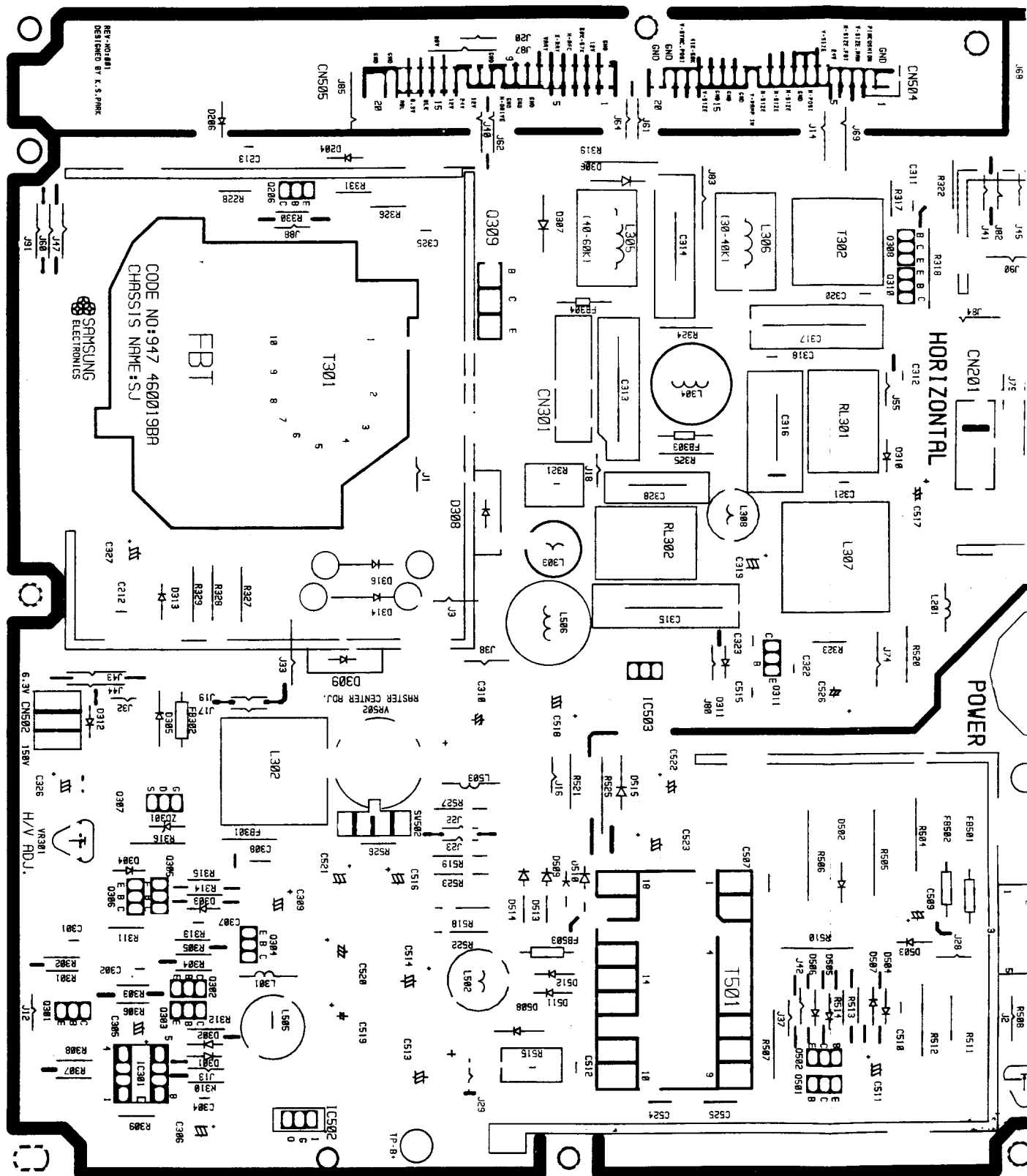
Loc.No	Code No	Description	Remark
POWER-CODES			
	955 000050AAAA	CBF-POWER CORD,AC ASSY:LS-14/LS-13	US CAPTYPE
	955 000126AAAA	CBF-POWER CORD,AC:TA10/LS13	UK CAP TYPE
	955 001372AAAA	CBF-POWER CORD,1830MM:110V	US WALL TYPE
	955 001400AAAA	CBF-P/CORD 1850MM:WALL.DET,BLK	AU WALL TYPE
	955 000129AAAA	CBF-P/CORD 1850MM:LP-34(A)	EU WALL TYPE

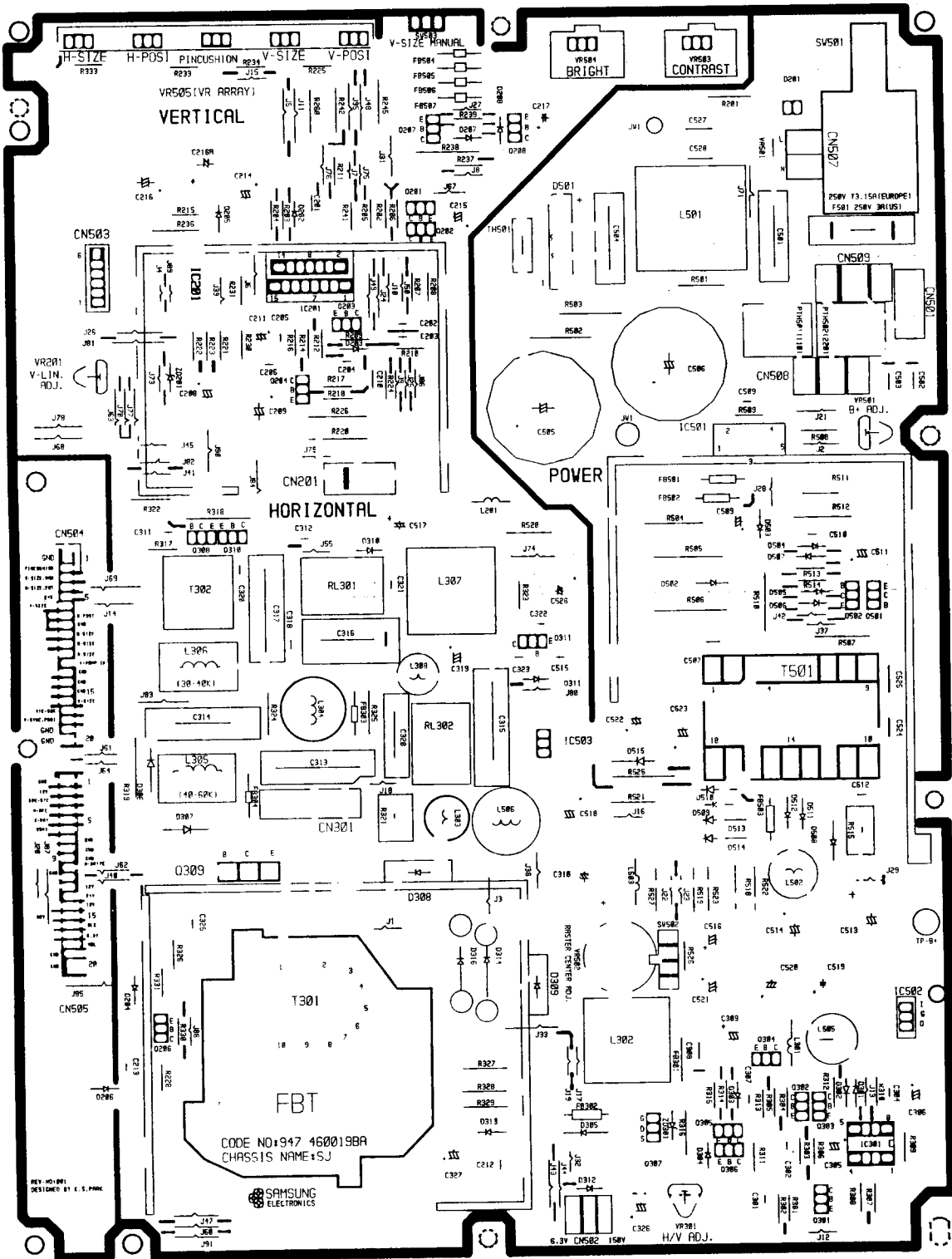
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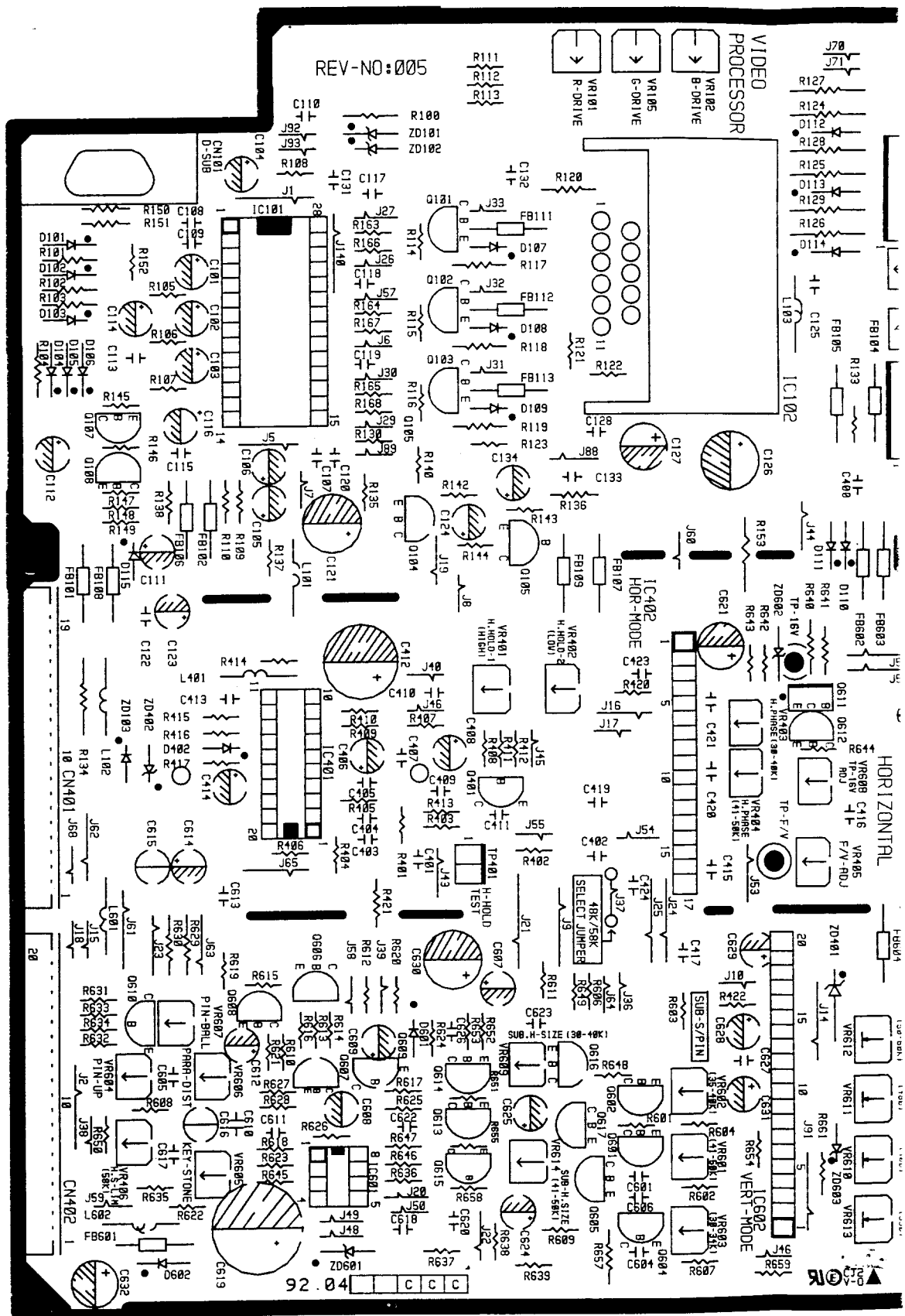
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MAIN PCB (BOTTOM VIEW)

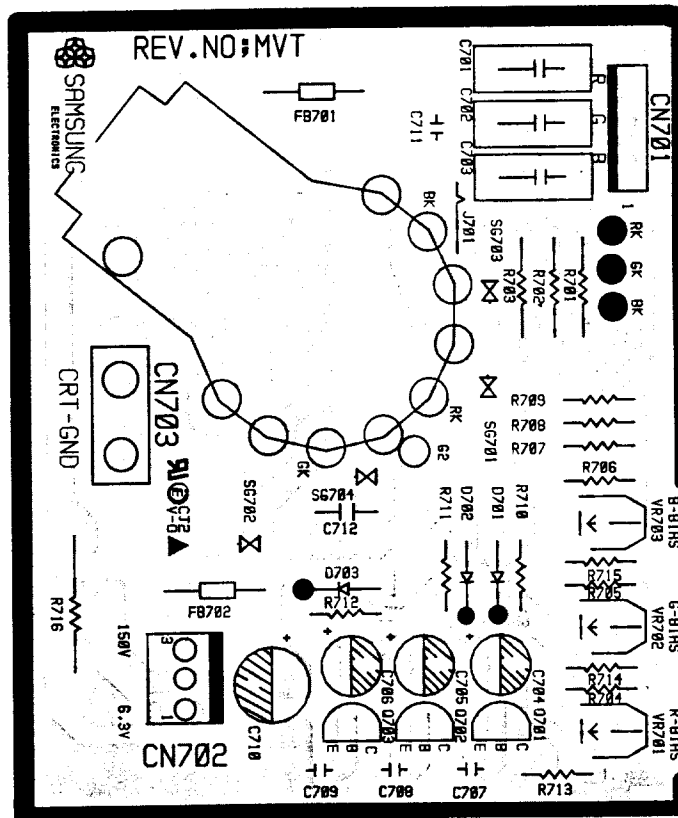




VIDEO PCB (TOP VIEW)



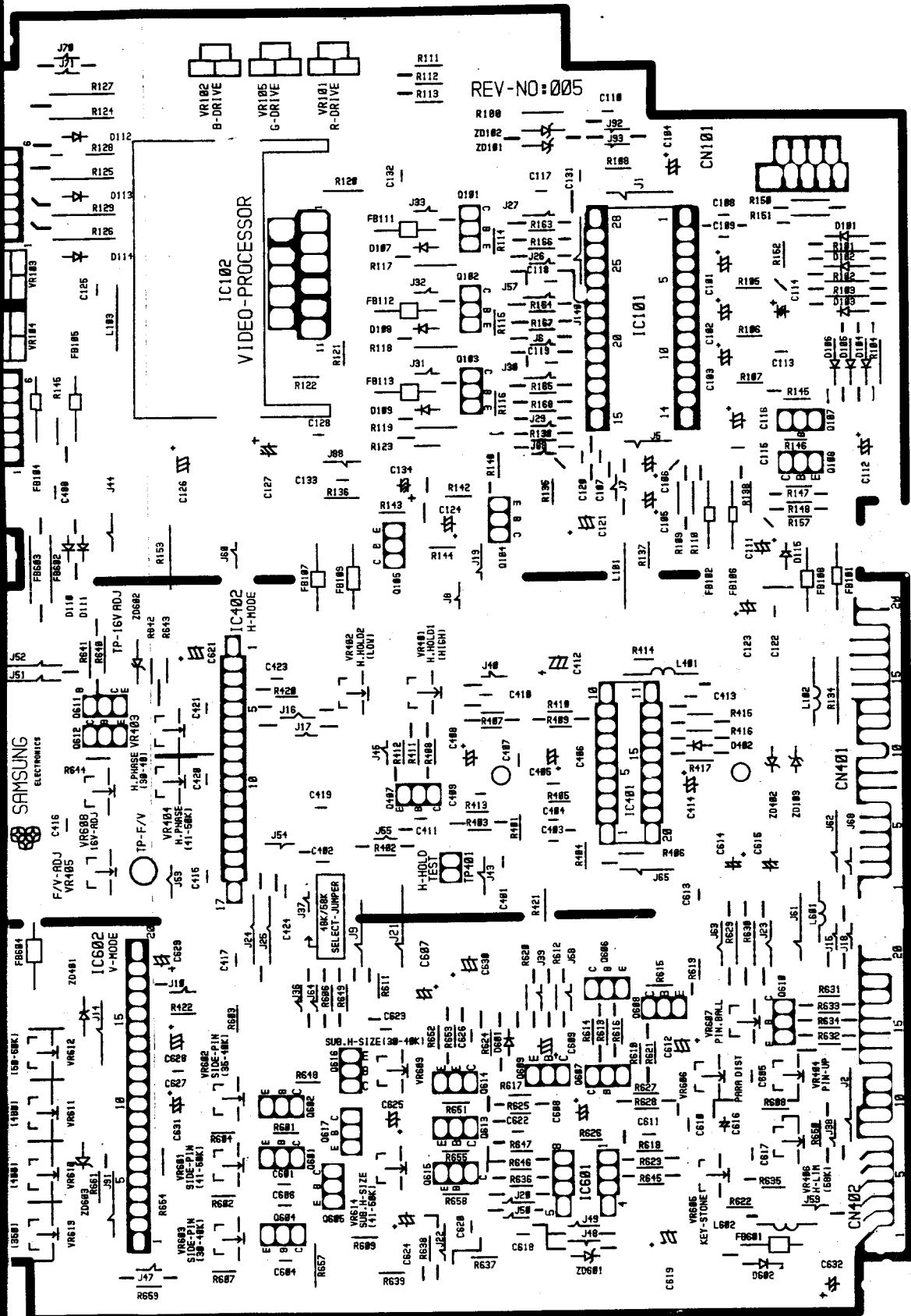
CRT PCB (TOP VIEW)



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VIDEO PCB (BOTTOM VIEW)



REV-NO:005

VIDEO-PROCESSOR IC102

V-DRIVE

H-DRIVE

V-DRIVE

B-DRIVE

IC102

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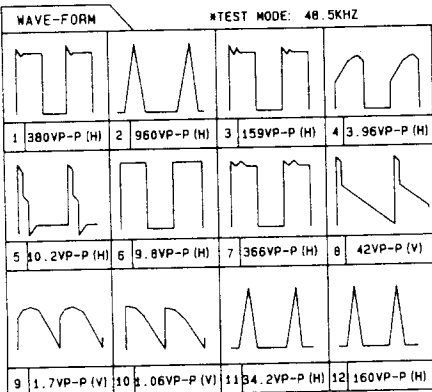
IC490

SCHEMATIC DIAGRAM

MODEL NO: CSJ4927

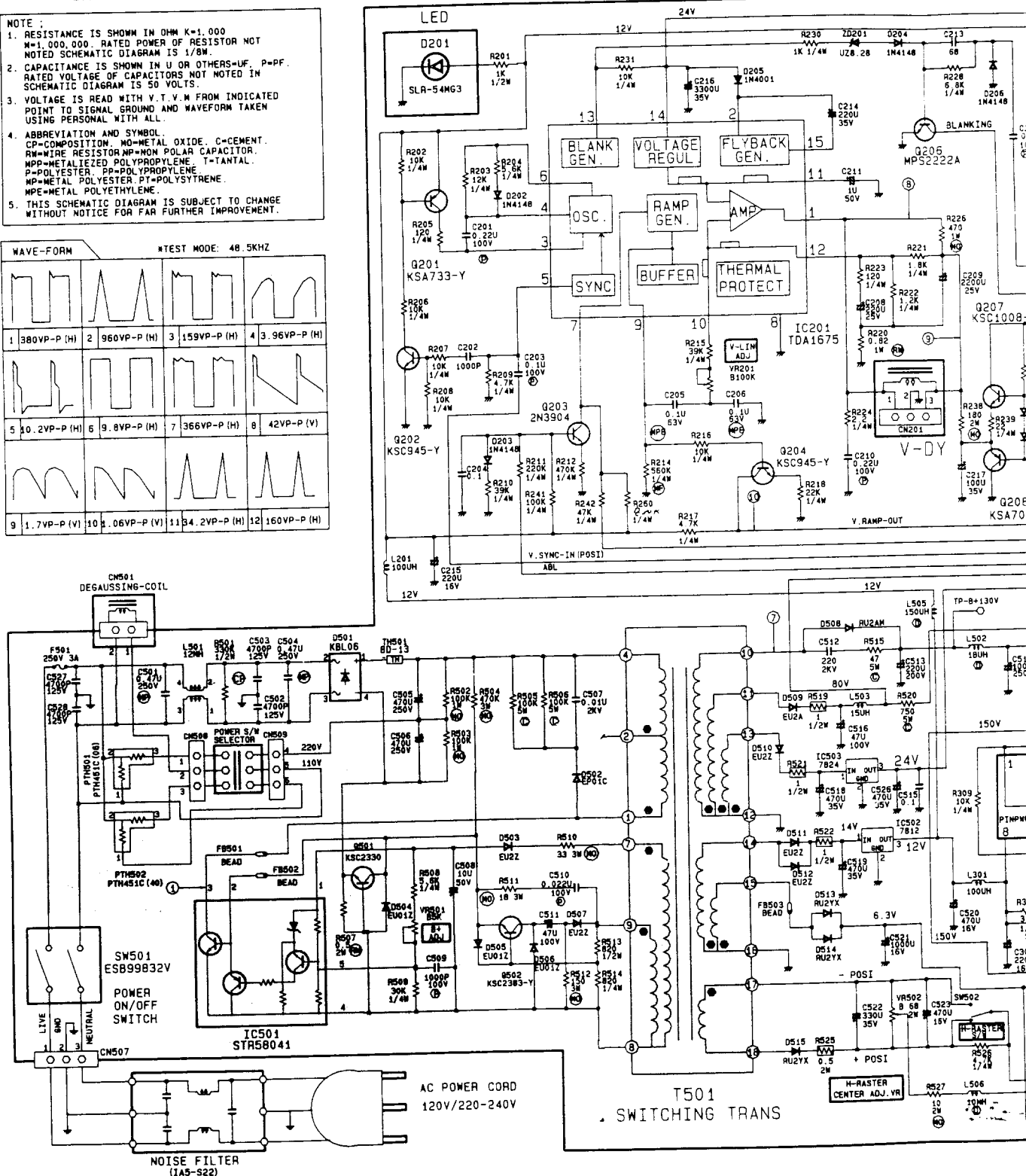
CHASSIS NO: MAIN BOARD (REV-NO: 0004)

- NOTE :
1. RESISTANCE IS SHOWN IN OHM K=1,000
M=1,000,000. RATED POWER OF RESISTOR NOT NOTED SCHEMATIC DIAGRAM IS 1/8W.
 2. CAPACITANCE IS SHOWN IN U OR OTHERS-UF, P=PF.
RATED VOLTAGE OF CAPACITORS NOT NOTED IN SCHEMATIC DIAGRAM IS 50 VOLTS.
 3. VOLTAGE IS READ WITH V.T.V.M FROM INDICATED POINT TO SIGNAL GROUND AND WAVEFORM TAKEN USING PERSONAL WITH ALL.
 4. ABBREVIATION AND SYMBOL:
CP=COMPOSITION, MO-METAL OXIDE, C-CEMENT.
RW=WIRE RESISTOR NP=NON POLAR CAPACITOR.
MPP=METALIZED POLYPROPYLENE, T-TANTALUM.
P=POLYESTER, PP=POLYPROPYLENE.
MP=METAL POLYESTER, PT=POLYSYNTRENE.
MPE=METAL POLYETHYLENE.
 5. THIS SCHEMATIC DIAGRAM IS SUBJECT TO CHANGE WITHOUT NOTICE FOR FAR FURTHER IMPROVEMENT.

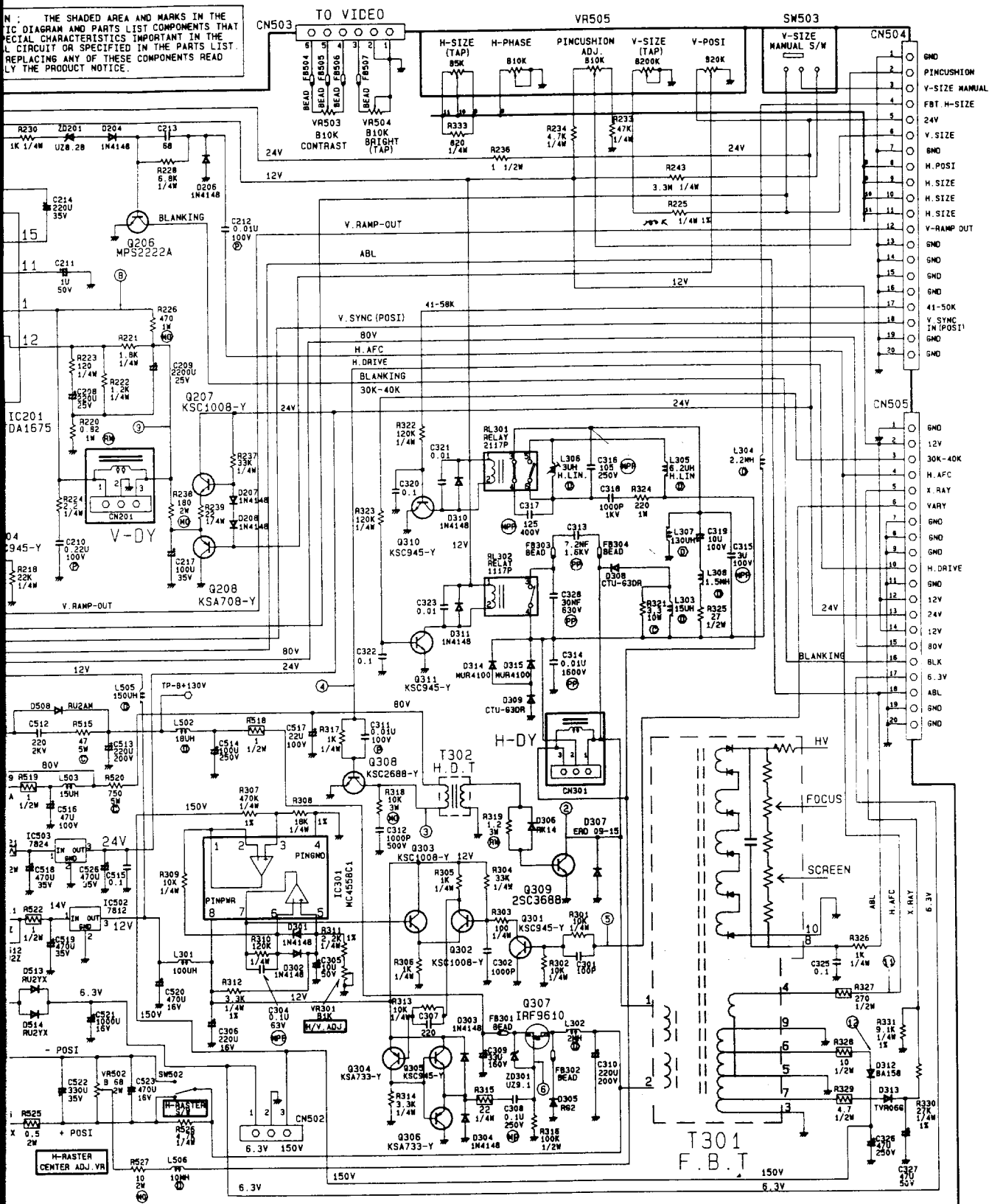


WARNING : THIS EQUIPMENT CONTAINS SAFETY CRITICAL COMPONENTS. ALL PARTS SHOWN IN THE SHADED AREAS OF THE SCHEMATIC ARE IMPORTANT TO SAFETY. REPLACE SAFETY CRITICAL COMPONENT ONLY WITH MANUFACTURERS RECOMMENDED PARTS LIST FOR EXACT REPLACEMENTS

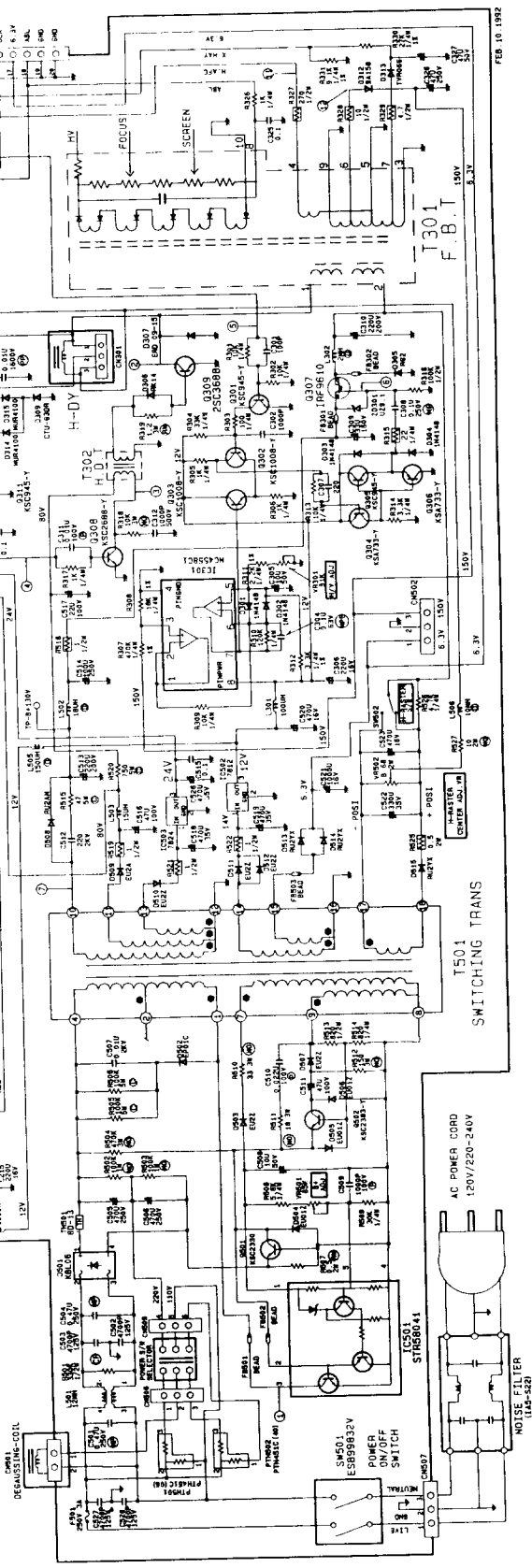
CAUTION : THE SHADED AREA AND MARKS IN THE SCHEMATIC DIAGRAM AND PARTS LIST COMPONENTS THAT HAVE SPECIAL CHARACTERISTICS IMPORTANT IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE PARTS LIST BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT NOTICE.



N : THE SHADED AREA AND MARKS IN THE
IC DIAGRAM AND PARTS LIST COMPONENTS THAT
SPECIAL CHARACTERISTICS IMPORTANT IN THE
CIRCUIT OR SPECIFIED IN THE PARTS LIST.
REPLACING ANY OF THESE COMPONENTS READ
THE PRODUCT NOTICE.



FEB. 10. 1992



CAUTION: THE SHADED AREA AND MARKS IN THE SCHEMATIC DIAGRAM AND PARTS LIST COMPONENTS THAT HAVE SPECIAL CHARACTERISTICS IMPORTANT IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE PARTS LIST BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT NOTICE

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FEB 10 1992

MODEL NO: CSJ4927 (REV-NO: 0004)

CHASSIS NO: INTERFACE & VIDEO

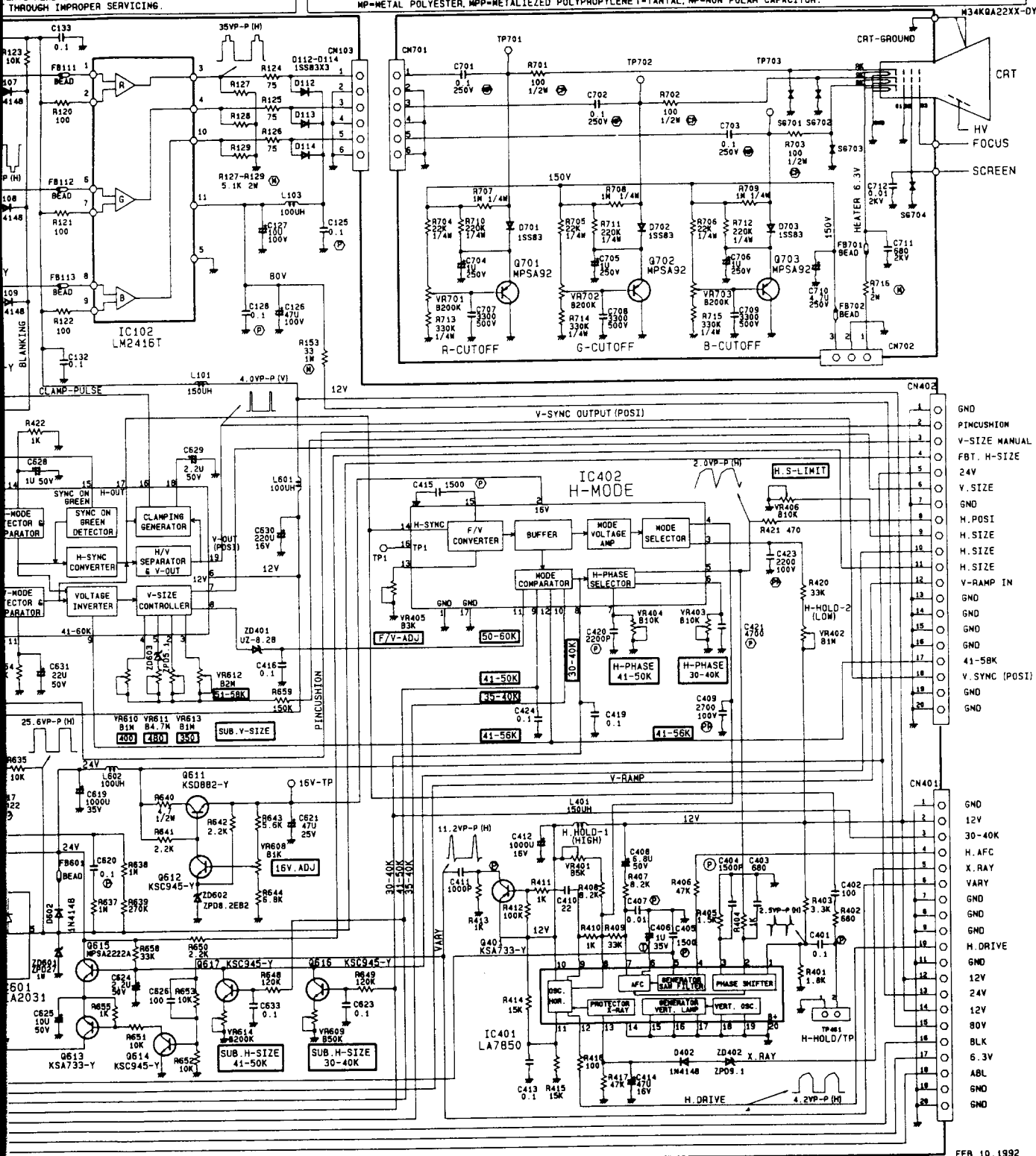
CAUTION : THE SHADED AREA AND MARK IN THE SCHEMATIC DIAGRAM AND PARTS LIST COMPONENT THAT SPECIAL CHARACTERISTICS IMPORTANT IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE PARTS LIST. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY INSTRUCTIONS TO MAKE SURE THE REPLACEMENT COMPONENTS DO NOT DEGRADE IN THE SAFETY OF THE EQUIPMENT THROUGH IMPROPER SERVICING.



K-RAY
TICE IN THE MANUAL.

IC DIAGRAM AND PARTS LIST COMPONENT THAT HAVE
ORIGINAL CIRCUIT OR SPECIFIED IN THE PARTS
MENTS READ CARAFULLY THE PRODUCT SAFETY NOTICE. DO
THROUGH IMPROPER SERVICING.

NOTE: 1. RESISTANCE IS SHOWN IN OHM K=1,000, M=1,000,000. RATED POWER OF RESISTOR NOT NOTED IN SCHEMATIC DIAGRAM IS 1/8 WATTS.
2. CAPACITANCE IS SHOWN IN U OR OTHERS-UF, P=PF. RATED VOLTAGE OF CAPACITORS NOT NOTED IN SCHEMATIC DIAGRAM IS 50 VOLTS.
3. VOLTAGE IS READ WITH V.T.V.M FROM INDICATED POINT TO SIGNAL GROUND AND WAVEFORM TAKEN USING PERSONAL WITH ALL
4. THIS SCHEMATIC DIAGRAM IS SUBJECT TO CHANGE WITHOUT NOTICE FOR FAR FURTHER IMPROVEMENT.
5. ABBREVIATION AND SYMBOL.
C=COMPOSITION, M-METAL OXIDE, RC-CEMENT, RW-WIRE RESISTOR, P-POLYESTER, PP-POLYPROPYLENE
MP-METAL POLYESTER, MPP-METALIZED POLYPROPYLENE T-TANTAL, NP-NON POLAR CAPACITOR.


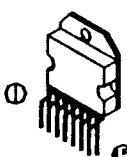

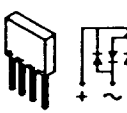

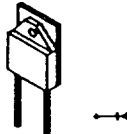

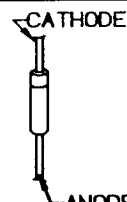

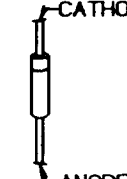

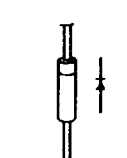

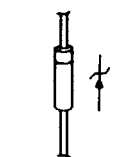



MODEL NO: CSJ4927 (REV-NO: 0004)


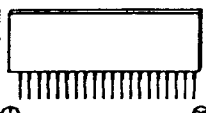

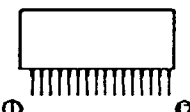

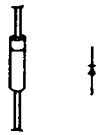
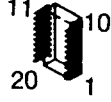
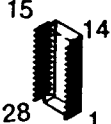
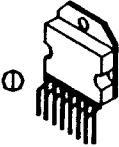
CHASSIS NO: INTERFACE & VIDEO



SEMICONDUCTOR LEAD IDENTIFICATION MAIN VIEW

PARTS	TYPE NO	REF NO	PARTS	TYPE NO	REF NO
 KSC1008-Y Q207,303,302 KSA708-Y Q208 KSC945-Y Q310,311,301,305 Q204,202 KSA733-Y Q201,304,306,101,102,103 2N3904 Q203 MPSA92 Q701,702,703 MPS 2222A Q206			 TDA1675A IC201		
 2SC2383-Y Q502 2SC2330-Y Q501			 KBL06 D501		
 2SC3688 Q309			 CTUG3DR D308 D309		
 2SC2688-Y Q308			 MUR4100 D314,316 ERD09-15 D307 RK-14 D306 RG-2 D305 RU2YX D513,514,515 RU2AM D508		
 MC7812C IC502 MC7824C IC503			 IN4001 D205 BA158GP D312 TVR-06G D313 EP01C D502 EU2Z D503,507,510,511 EU1Z D512 EU2A D504,505,506 D509		
 IRF9610 Q307			 IN4148 D202,203,204,206 D207,208,301,302 D303,304,310,311 D107,108,109 D701,702,703 ISS83		
 STR58041 IC501			 UZ-8.28BL ZD201 UZ-9.1BM ZD301		
 MC4558C IC301					

SEMICONDUCTOR LEAD IDENTIFICATION VIDEO VIEW

PARTS	TYPE NO	REF NO	PARTS	TYPE NO	REF NO
	KSC1008-Y KSA708-Y KSC945-Y KSA733-Y 2N3904 MPS 2907A MPS 2222A	Q107 Q108 Q612,601,604,605,616 Q614,610 Q401,613 Q602 Q104,105 Q615,609,607,606 Q608,206		V-MODE HYBRID	IC602
	KSD882-Y	Q611		H-MODE HYBRID	IC402
	TEA2031A	IC601		IN4148	D101,102,103,104 D105,106,107,108 D109,110,112,114 D117,118,119,402 D601,602,603
	LA7850	IC401		ISS83	D112,113,114
	LM1203	IC101		UZ-8.28BL UZ-5.1B UZ-9.1BM UZP-27B	ZD101,401,602 ZD101,102,103 ZD402 ZD601
	LM2416T	IC102			