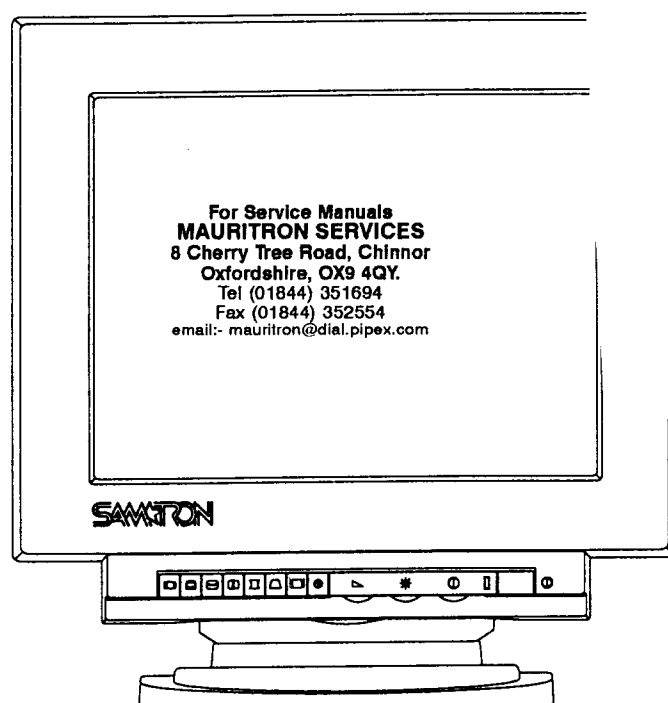


SAMTRON

17" SUPER VGA COLOR MONITOR

SERVICE MANUAL

SC-728SXL



2990

CONTENTS

1. SPECIFICATION	3
2. SAFETY PRECAUTION	4
3. GENERAL INFORMATION	6
4. DISPLAY PERFORMANCE	13
5. SIGNAL TIMING CHART	15
6. DISASSEMBLY	17
7. WIRING DIAGRAM	18
8. BLOCK DIAGRAM	19
9. ALIGNMENT PROCEDURE	20
10. TROUBLESHOOTING	26
11. EXPLODED VIEW AND PARTS LIST	31
12. SCHEMATIC DIAGRAM	35
13. PRINTED CIRCUIT BOARD	43
14. ELECTRICAL PARTS LIST	52
15. WAVEFORMS	75
16. SEMICONDUCTOR LEAD IDENTIFICATION	79

SPECIFICATION

Classification	Specifications
Picture Tube	17" (16V) Full Square, Flat Face, 90° deflection, 0.28 mm Dot Pitch, Silica-coated with anti-electrostatic, Medium short persistence phosphor.
Scanning Frequency Horizontal Vertical	30 kHz to 64 kHz (Automatic). 50 Hz to 100 Hz (Automatic).
Display Colors Analog Input	Unlimited Colors.
Maximum Resolution Horizontal x Vertical	1280 Dots x 1024 Lines.
Input Video Signal	Analog 0.714 Vp-p positive at 75 Ω terminated.
Input Sync Signal	Separate Sync : TTL level positive/negative Composite Sync : TTL level positive/negative Sync on green : Composite sync 0.286 Vp-p negative Video 0.714 Vp-p positive
Video Band Width (Pixel Time)	106 MHz.
Power Supply Power consumption	100 Watt (MAX). AC 100-120/220-240 Volt, 60/50 Hz $\pm$ 3 Hz .
Active Display	Horizontal : 281 mm $\pm$ 3 mm (5:4 ratio), 300 mm $\pm$ 3 mm (4:3 ratio). Vertical : 225 mm $\pm$ 3 mm. * Active display area is changed by signal timing.
Dimension Unit (HxWxD) Carton (HxWxD)	17.1 x 16.6 x 17 inches (435 x 421 x 431 mm). 22 x 21.2 x 21.5 inches (558 x 538 x 547 mm).
Weight Approximately Net Gross	46.3 Lbs (21 Kg). 55.1 Lbs (25 Kg).
Environmental Considerations Operating Temperature Humidity Storage Temperature Humidity	32° F to 104° F (0° C to 40° C). 10 % to 80 %. -4° F to 113° F (-20° C to 45° C). 5 % to 95 %.
MPRII compliance	This model complies with SWEDAC (MPRII) recommendations for reduced electric and magnetic fields.

NOTE : DESIGNS and SPECIFICATIONS are subjected to change without prior NOTICE.

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:

1. 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.

2. Servicing the High Voltage System and Picture Tube

When servicing the high voltage system, remove the static charge by connecting a 10 kohm 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.

3. 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 solid state 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. Every time 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 un recommended 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.

4. 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 nonmetallic 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:
 - ① Plug the AC line cord directly into an AC 100-120/22-240 Volt outlet. (Do not use an isolation transformer for this test)
 - ② Using two clips leads, connect 1.5 kohm, 10 watt resistor paralleled by a 0.15 uF 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.
 - ③ 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.)

SAFETY PRECAUTIONS

- ④ 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.
- ⑤ Any reading of 5.25 Volt RMS (this corresponds to 3.5 milliampere AC) or more is excessive and indicates a potential shock hazard which must be corrected before returning the display monitor to the user.

5. Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by $\triangle$ on schematics and parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

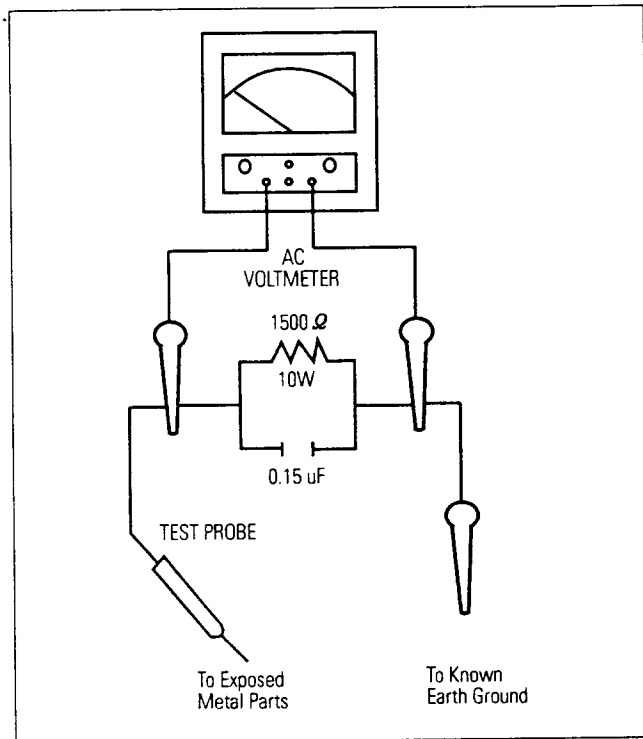


Figure1. Leakage Current Test Circuit

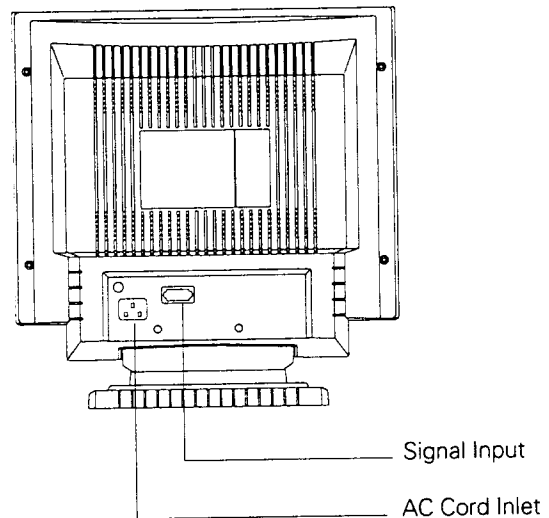
GENERAL INFORMATION

1. Features

- 1) 17 inch (16 inch visual) Flat Square Technology CRT reduces glare and enhances viewing area.
- 0.28 mm Dot Pitch
- 2) Anti-Static CRT coating eliminates static electric shock and helps keep the screen dirt free.
- 3) Dynamic focusing provides optimum clarity in all areas of the display.
- 4) Automatically scans horizontal frequencies from 30-64 kHz, and vertical frequencies from 50-100 Hz.
- 5) Compatible with a wide variety of video standards including VGA, Super-VGA, IBM XGA, XGAII, MacintoshII, IBM 8514/A, 1024x768 non-interlaced, and 1280 x 1024 non-interlaced.
- 6) With the optional cable adapter this monitor is compatible with the MacintoshII family, the Macintosh LC/LCII and QUADRA series.
- 7) Supports VESA flicker-free modes.
- 8) Microprocessor based digital control system saves up to 11 user definable display settings. Also includes 12 factory preset display settings.
- 9) This model complies with SWEDAC(MPRII) recommendations for reduced electric and magnetic fields.
- 10) Power supply operates on AC 100-120/220-240 Volt 60/50 Hz for use all over the world.
- 11) Your display has been designed to operate on all power systems, including "IT" power systems.
- 12) Power Management System
Power management circuit, when signaled by the computer system, will reduce power consumption when the computer system is not in use.
- 13) Optional Feature
Please consult your dealer for information about these optional features. Apple Macintosh connector adapter are available for connecting the monitor to the Apple Macintosh family, Macintosh LC/LCII/LCIII, Centris, and Quadra series computer.

For Service Manuals
MAURITRON SERVICES
8 Cherry Tree Road, Chinnor
Oxfordshire, OX9 4QY.
Tel (01844) 351694
Fax (01844) 352554
email:- mauritron@diat.pipex.com

2. Installation



This monitor can be connected to any IBM compatible analog display adapter. Such adapters include VGA, 8514/A, XGA, and the built-in video system of IBM PS/2 computers and compatibles. Also, this monitor can be connected to a high resolution (1280 x 1024) video controller, such as those used with CAD / CAM applications. Both connections can be used separately or simultaneously. Selection between the two signal sources is controlled by a front panel switch.

To attach the monitor to your system, use the following instructions:

- 1) Turn off the power to the computer.
- 2) Connect video signal cable to the D-SUB connector on the rear of the monitor.
- 3) Connect video signal cable to the video port of the computer's controller.
- 4) Insert AC power cord into the monitor and then into an AC power outlet.
- 5) Before turning on the power to the monitor and computer, check your computer's owner's manual for instructions about turning on equipment connected to the computer. Also, check for any instructions for your video system when using a multi-sync monitor. In some cases, jumper or switch settings may be required for the video board to output extended resolution modes.
- 6) To turn on the monitor, push the power switch. The power indicator LED will light. To turn the monitor off, push the power switch again. The power indicator LED will also turn off.

GENERAL INFORMATION

3. Connection to your computer (MacintoshII Family)

With the cable adapter, this monitor is compatible with Apple MacintoshII Family, Macintosh LC/LCII /LCIII, Centris, and Quadra series computers. (Please see page 12 for the pin assignment.)

To attach the monitor to your system, follow these instructions:

- 1) Turn off the power to the monitor and computer.
- 2) Connect the cable adapter to the video output port of your video controller. Tighten the screws on the cable adapter.
- 3) Connect the 9 pin side of the signal cable to the 9 pin D-SUB connector on the rear side of the monitor.
- 4) Connect the 15 pin side of the signal cable to the other end of the cable adapter. Tighten the screws of the signal cable to ensure proper connection.
- 5) Connect one end of the power cable to the monitor and the other end to the power outlet.
- 6) Turn on the monitor and the computer.

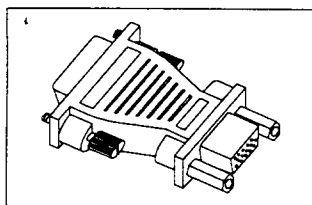


Figure 1. Cable Adapter

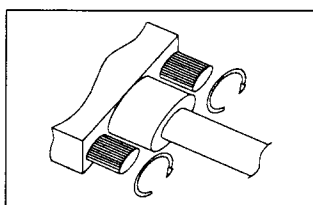


Figure 2. The screw of the signal cable

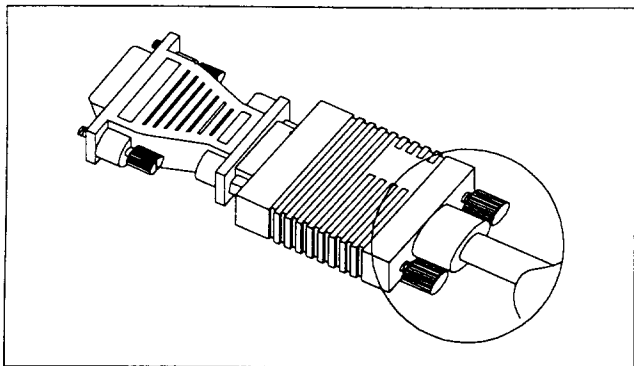
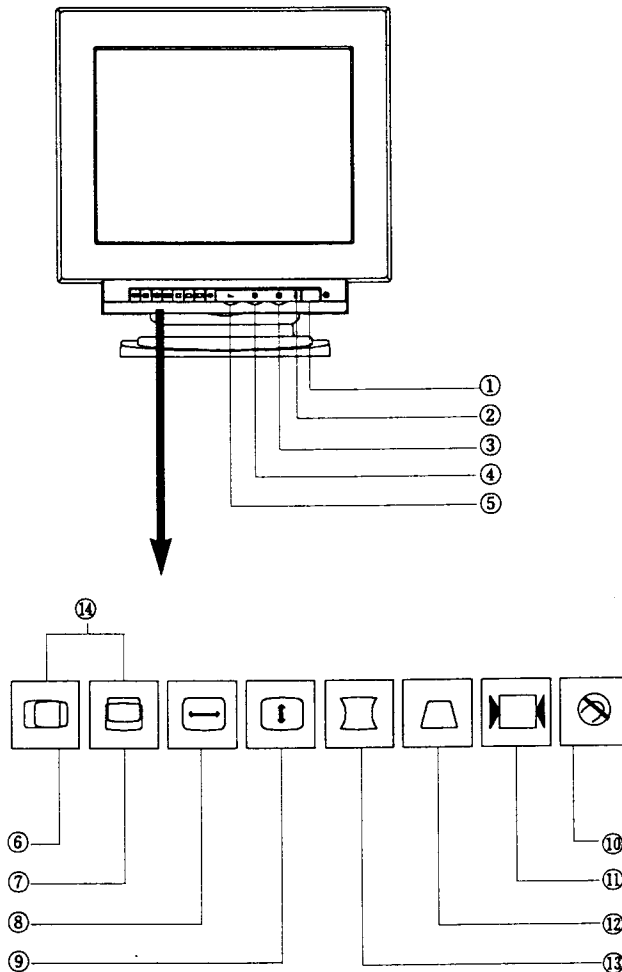


Figure 3. Cable Adapter installing diagram

GENERAL INFORMATION

4. Control Location & Functions

4-1. Front View



4-2. Basic Controls and LED Indicator Functions

1) Power Switch



Use to switch monitor power on and off. Push the power switch once to turn monitor power on. The indicator LED glow green. Push the switch again to turn monitor power off.

2) Power Indicator (Dual color)



When the monitor is powered on, and no adjustments are being made, the indicator LED glows green. When an adjustment function is selected the indicator LED glows orange.

3) Contrast Control



Use to adjust the contrast level of the displayed image. Contrast controls the difference between dark and light areas of the displayed image.

4) Brightness Control



Use to adjust the overall brightness of the displayed image.

The Display Adjustment

Use the Variable adjustment control to adjust the displayed image when a control function is enabled (the indicator's color is orange).

Note : After completing an adjustment the indicator LED will return to short green after 3-4 seconds showing that your adjustment has been saved. The OSD will remain on for about 10 seconds.

5) Variable Adjustment Control



Turn the Variable adjustment control counterclockwise to decrease the value of the adjustment function. Turn the Adjustment control clockwise to increase the value of adjustment function.

GENERAL INFORMATION

Microprocessor Controls & Functions

General Description

The monitor has preset display settings for each of the standard signal timings listed on the timing chart. In other words, the monitor will automatically adjust itself to an optimum size and position when it senses one of the standard signal timings. However, some users wish to adjust the monitor to their preferred setting rather than the factory preset. The microprocessor controlled adjustments will microprocessor controlled adjustments will automatically memorize the display settings that you prefer a specific signal timing and automatically adjust itself when the monitor senses that signal. Up to 11 different timing/settings can be saved.

Control Function Buttons

The monitor incorporates single and multi-function buttons. Single function buttons, when pressed, allow access to one of the control functions. Multi-function buttons can access a second function in addition to the first one. To access the second adjustment function, push the function button twice. The chart below shows you the buttons that allow access to a second function.

Button No.	PUSH	
	ONCE	TWICE
6	Horizontal Position	Help
7	Vertical Position	Help
8	Horizontal Size	Help
9	Vertical Size	Help
12	Trapezoid	Help
13	Side Pincushion	Help

Note: If you push a button three times the selected function returns to normal condition.

The Display Adjustment

Use the variable adjustment control to adjust the displayed image when a control function is enabled (the indicator's color is orange).

On Screen Display

This monitor features an On Screen Display (OSD) that shows information about the display settings to the user. The OSD will appear on the screen when a function button is selected. The OSD will show the name, range, and current setting of that control function.

In addition, the OSD will show the current input signal frequency, and the list of factory and user preset timing. The OSD will remain activated approximately 10 seconds after any adjustments are completed.

6) Horizontal Position / Help



First function : Horizontal Position

Push this button once to adjust the horizontal position (centering) of the display. Use the variable adjustment control to adjust.

Second function : Help

Push this button twice to access the help function. The OSD will show the contents of the factory preset timing modes and user modes. Use the variable adjustment control to "page" through the list.

7) Vertical Position / Color



First Function : Vertical Position

Push this button once to adjust the vertical position(centering) of the display. Use the variable adjustment control to adjust.

Second Function : Help

Push this button twice to access the help function. The OSD will show the contents of the factory preset timing modes and user modes. Use the variable adjustment control to "page" through the list.

8) Horizontal Size / Help



First Function : Horizontal Size

Push this button once to adjust the horizontal size (width) of the display. Use the variable adjustment control to adjust.

Second Function : Help

Push this button twice to access the help function. The OSD will show the contents of the factory preset timing modes and user modes. Use the variable adjustment control to "page" through the list.

9) Vertical Size/Help



First Function: Vertical Size

Push this button once to adjust the vertical size(height) of the display. Use the variable adjustment control to adjust.

Second Function: Help

Push this button twice to access the help function. The OSD will show the contents of the factory preset timing modes and user modes. Use the variable adjustment control to "page" through the list.

GENERAL INFORMATION

10) Degauss



Magnetic fields can build up on the CRT and cause color impurity. Use the DEGAUSS switch to demagnetize the CRT. Push the switch once to activate the degaussing circuit. The degaussing circuit automatically turns itself off after a few seconds.

11) Recall



Use this button to recall factory preset settings. When the recall button is pushed, the indicator LED will change color from green to orange (the same as any other function) and the OSD will appear. Keep pressing the recall button for 2-3 seconds until the indicator LED's color is changed to green which indicates that the factory settings for that timing have been recalled. The OSD will show the progress of the recall function.

Note: This operation resets all of the data in the user memory area for the current signal timing.

12) Trapezoid/Help



First Function: Trapezoid

Push this button once to access the trapezoid adjustment control to correct any trapezoid distortion of the display.

Second function: Help

Push this button twice to access the help function. The OSD will show the contents of the factory preset timing modes and user modes. Use the variable adjustment control to "page" through the list.

13) Side Pincushion/Help



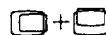
First Function: Side Pincushion

Push this button once to adjust the vertical sides of the display from bowing in (pincushion) or bowing out (barrel distortion). Turn the variable adjustment control until the vertical sides are straight.

Second Function: Help

Push this button twice to access the help function. The OSD will show the contents of the factory preset timing modes and user modes. Use the variable adjustment control to "page" through the list.

14) Parallelogram



To activate the parallelogram adjustment function press the horizontal position button and the vertical position button simultaneously for 4-5 seconds. Use the variable adjustment control.

About burn-in mode : You can operate or disable power saving function if you need. In no signal state (video cable is disconnected from this monitor), the indicator's color is orange. Push horizontal position button before monitor run into power saving mode, the power saving function is disabled and then you can warm up this monitor. This burn-in mode is removed when the power of monitor is off and on again.

GENERAL INFORMATION

5. Option Power Management Circuit (Power Saving Function)

If your computer system features a display power management function, this monitor, when signaled, will enter power saving modes. The purpose of power management is to automatically reduce power consumption when the computer system is not in use. This monitor can enter 3 different power saving modes as described below.

Table: Display Power Management Signaling (DPMS) Standard

State Sync	Normal Operation	Power Saving Function Mode		
		Stand-by mode	Suspend mode	Power-Off mode
Horizontal Vertical Video	Active Active Active	Inactive Active Blanked	Active Inactive Blanked	Inactive Inactive Blanked
Remark (LED Color)	Green	Orange	Orange/Green Blinking (0.5 Sec interval)	Orange Blinking (1 Sec interval)
Power Consumption	100W (Max)	60W (Max)	Less than 30W	Less than 8W

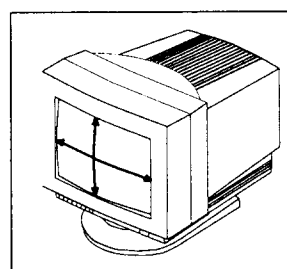
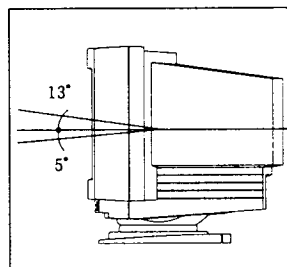
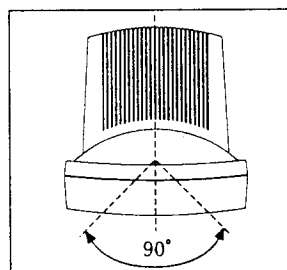
Note: This monitor automatically returns to normal operation state when horizontal and vertical sync rare detected.

When you turn power off in power-off mode, LED indicator may continuously blink on-off about for 4 to 5 seconds.

6. Use of the tilt-swivel

With the tilt-swivel, this unit can be adjusted to be viewed at your desired angle within 90° will the swivel and 18° with the tilt.

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



GENERAL INFORMATION

7. Signal Connections and Pin Assignments

Sync Type	9 Pin Side of the Signal Cable (Figure 1)			15 Pin Side of the Signal Cable (Figure 2)			Cable Adapter (Figure 3)
Pin No.	Separate	Composite	Sync on green	Separate	Composite	Sync on green	Apple MACII
1	Red	Red	Red	Red	Red	Red	Gnd-R
2	Green	Green	Green+Sync	Green	Green	Green+Sync	Red
3	Blue	Blue	Blue	Blue	Blue	Blue	H/V-Sync
4	H-Sync	H/V-Sync	Not Used	Gnd	Gnd	Gnd	Sense 0
5	V-Sync	Not Used	Not Used	NC	NC	NC	Green
6	Gnd-R	Gnd-R	Gnd-R	Gnd-R	Gnd-R	Gnd-R	Gnd-G
7	Gnd-G	Gnd-G	Gnd-G	Gnd-G	Gnd-G	Gnd-G	Sense 1
8	Gnd-B	Gnd-B	Gnd-B	Gnd-B	Gnd-B	Gnd-B	Reserved
9	Gnd-Sync	Gnd-Sync	Gnd-Sync	NC	NC	NC	Blue
10	-	-	-	Gnd-Sync	Gnd-Sync	Gnd-Sync	Sense 2
11	-	-	-	Gnd	Gnd	Gnd	Gnd
12	-	-	-	NC	NC	NC	V-Sync
13	-	-	-	H-Sync	H/V-Sync	Not Used	Gnd-B
14	-	-	-	V-Sync	Not Used	Not Used	Gnd
15	-	-	-	NC	NC	NC	H-Sync

- "NC" means No Connection.

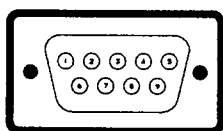


Figure 1: Male Type

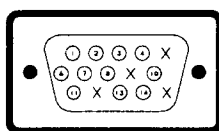


Figure 2 : Male Type

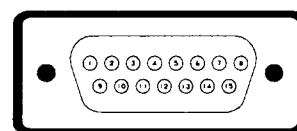


Figure 3 : Male Type

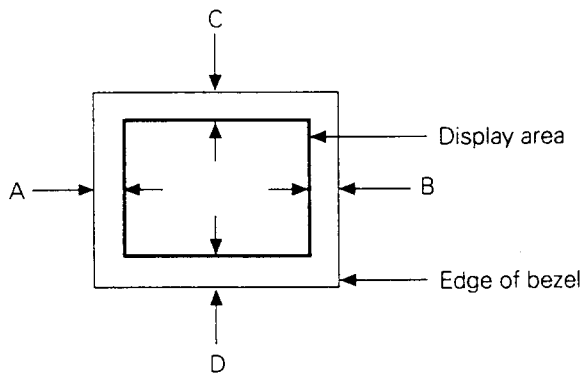
DISPLAY PERFORMANCE

1. Display Area

- 1) Width : 281 ± 3 mm (5:4 ratio)
 300 ± 3 mm (4:3 ratio)
- 2) Height : 225 ± 3 mm

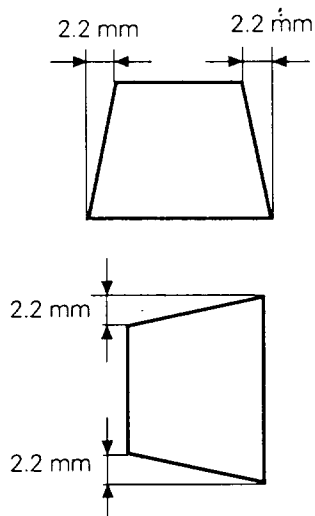
2. Centering

- $$|A - B| \leq 6.0 \text{ mm}$$
- $$|C - D| \leq 6.0 \text{ mm}$$

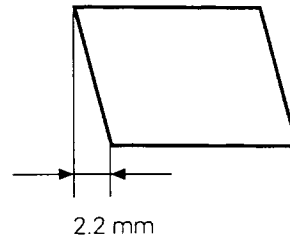


3. Distortion

1) Trapezoid

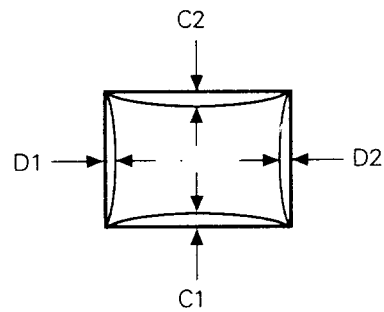


2) Parallelogram



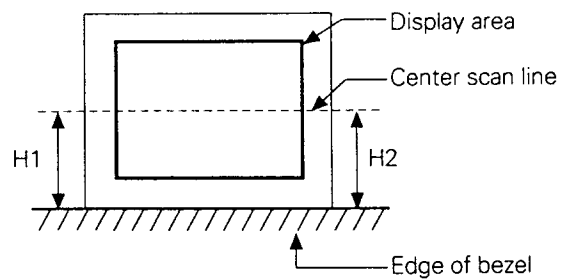
3) Pincushion

- $$|C1|, |C2| \leq 2.2 \text{ mm}$$
- $$|D1|, |D2| \leq 2.2 \text{ mm}$$
- $$|D1 - D2| \leq 1 \text{ mm}$$



4) Rotation

- $$|H1 - H2| \leq 2.5 \text{ mm}$$



DISPLAY PERFORMANCE

4. Linearity

1) Standard Mode : VESA EVGA/70Hz, SEC 1280/60Hz

Horizontal Linearity (HL) :

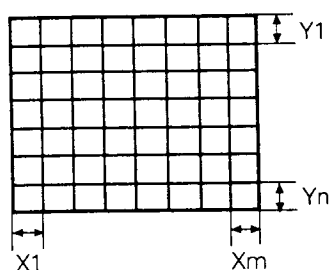
$$\frac{X_{\max} - \bar{X}}{\bar{X}} \times 100 \text{ or } \frac{\bar{X} - X_{\min}}{\bar{X}} \times 100 \leq 5\%$$

Vertical Linearity (VL) :

$$\frac{Y_{\max} - \bar{Y}}{\bar{Y}} \times 100 \text{ or } \frac{\bar{Y} - Y_{\min}}{\bar{Y}} \times 100 \leq 5\%$$

2) Other Modes

HL, VL $\leq$ 7% for other signal timing modes.



m=16
n=12

3) Conditions

Display image : Crosshatch pattern

Maximum and minimum values should not be adjacent to each other.

Xmax is maximum value among X1 ~ Xm

Xmin is minimum value among X1 ~ Xm

$$\bar{X} = \frac{X1 + X2 \dots X_m}{m} \quad (m=16)$$

Ymax is maximum value among Y1 ~ Yn

Ymin is minimum value among Y1 ~ Yn

$$\bar{Y} = \frac{Y1 + Y2 \dots Y_n}{n} \quad (n=12)$$

5. Brightness Uniformity

Value	70% (Min) Variation = $\frac{C}{A} \times 100$
Conditions	Display Image : White flat field Luminance : 20 F/L at the center of display area A : Luminance at position of the highest C : Luminance at position of lowest brightness

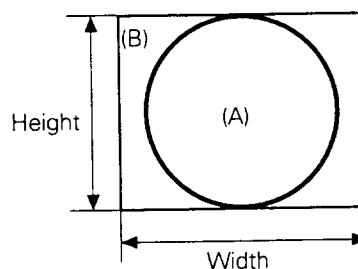
6. Color Point

Value	9300° K X = 0.283 $\pm$ 0.02, Y = 0.298 $\pm$ 0.02
Conditions	Display Image : White flat field at the center of display area. Luminance Min : 5 FL, Max : 20 FL

7. Misconvergence

Center area of display ("A" circle is 225 mm) (A) : 0.3 mm

Peripheral area of display (B) : 0.4 mm



1) Conditions

Display Image : Crosshatch pattern mixed with R,G,B colors.

8. Purity

Conspicuous mislending shall not be visible within display area at distance of 50 cm from CRT surface

1) Conditions

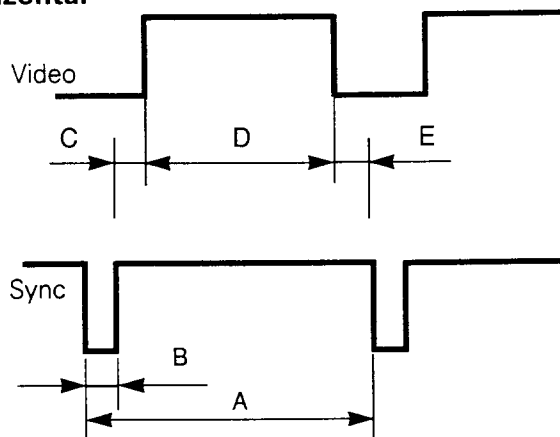
Display image : White flat field

Luminance : 15 FL at the center of display area.

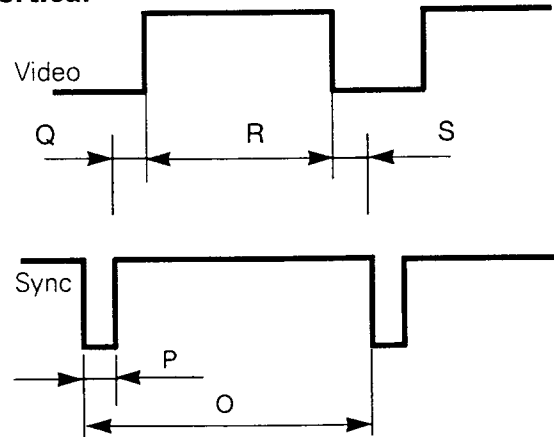
SIGNAL TIMING CHART

Mode Timing	IBM					VESA
	VGA1/70Hz	VGA2/70Hz	VGA3/60Hz	XGA/87iHz	XGAII/75Hz	Ergo VGA
	640 × 350	720 × 400	640 × 480	1024 × 768	1024 × 768	640 × 480
Fh(KHz)	31.469	31.469	31.468	35.522	61.100	37.861
A μ sec	31.778	31.778	31.778	28.151	16.372	26.413
B μ sec	3.813	3.813	3.813	3.920	3.720	1.270
C μ sec	1.907	1.907	1.907	1.247	0.651	4.064
D μ sec	25.422	25.422	25.422	22.807	11.907	20.317
E μ sec	0.636	0.636	0.636	0.177	0.093	0.762
Fv (Hz)	70.087	70.087	59.941	86.958	75.780	72.809
O msec	14.268	14.268	16.683	11.500	13.196	13.735
P msec	0.064	0.064	0.064	0.113	0.131	0.079
Q msec	1.907	1.080	1.048	0.563	0.491	0.739
R msec	11.122	12.711	15.253	10.810	12.574	12.678
S msec	1.176	0.413	0.318	0.014	0.000	0.237
Clock Fre. (MHz)	25.175	28.322	25.175	44.900	86.000	31.500
Polarity						
H.Sync	Positive	Negative	Negative	Positive	Positive	Negative
V.Sync	Negative	Positive	Negative	Positive	Positive	Negative
Remark	—	—	—	Interlace	—	—

Horizontal



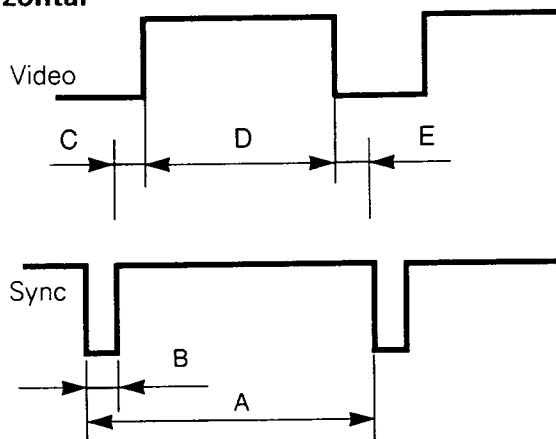
Vertical



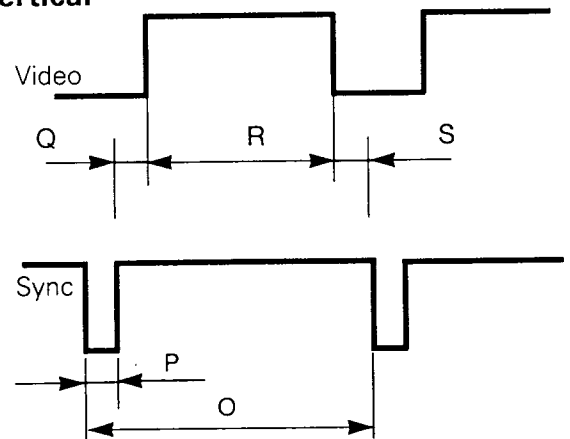
SIGNAL TIMING CHART

Mode Timing	VESA				SAMTRON	APPLE MAC.
	800/56Hz	800/72Hz	1024/60Hz	1024/70Hz	1280/60Hz	MAC/832/75Hz
	800 × 600	800 × 600	1024 × 768	1024 × 768	1280 × 1024	832 × 624
f_H (kHz)	35.156	48.077	48.363	56.476	63.702	49.726
A μ sec	28.444	20.800	20.677	17.707	15.698	20.110
B μ sec	2.000	2.400	2.092	1.813	1.359	1.117
C μ sec	3.556	1.280	2.462	1.920	1.811	3.910
D μ sec	22.222	16.000	15.754	13.653	12.075	14.524
E μ sec	0.667	1.120	0.369	0.320	0.453	0.559
f_V (Hz)	56.250	72.188	60.004	70.069	60.096	74.551
O msec	17.778	13.853	16.666	14.272	16.640	13.410
P msec	0.057	0.125	0.124	0.106	0.047	0.060
Q msec	0.626	0.478	0.600	0.513	0.471	0.784
R msec	17.067	12.480	15.880	13.599	16.075	12.549
S msec	0.028	0.770	0.062	0.053	0.047	0.020
Clock Frq. (MHz)	36.000	50.000	65.000	75.000	106.000	57.284
Polarity						
H.Sync	Pos./Neg.	Positive	Negative	Negative	Negative	Negative
V.Sync	Pos./Neg.	Positive	Negative	Negative	Negative	Negative
Remark	—	—	—	—	—	—

Horizontal

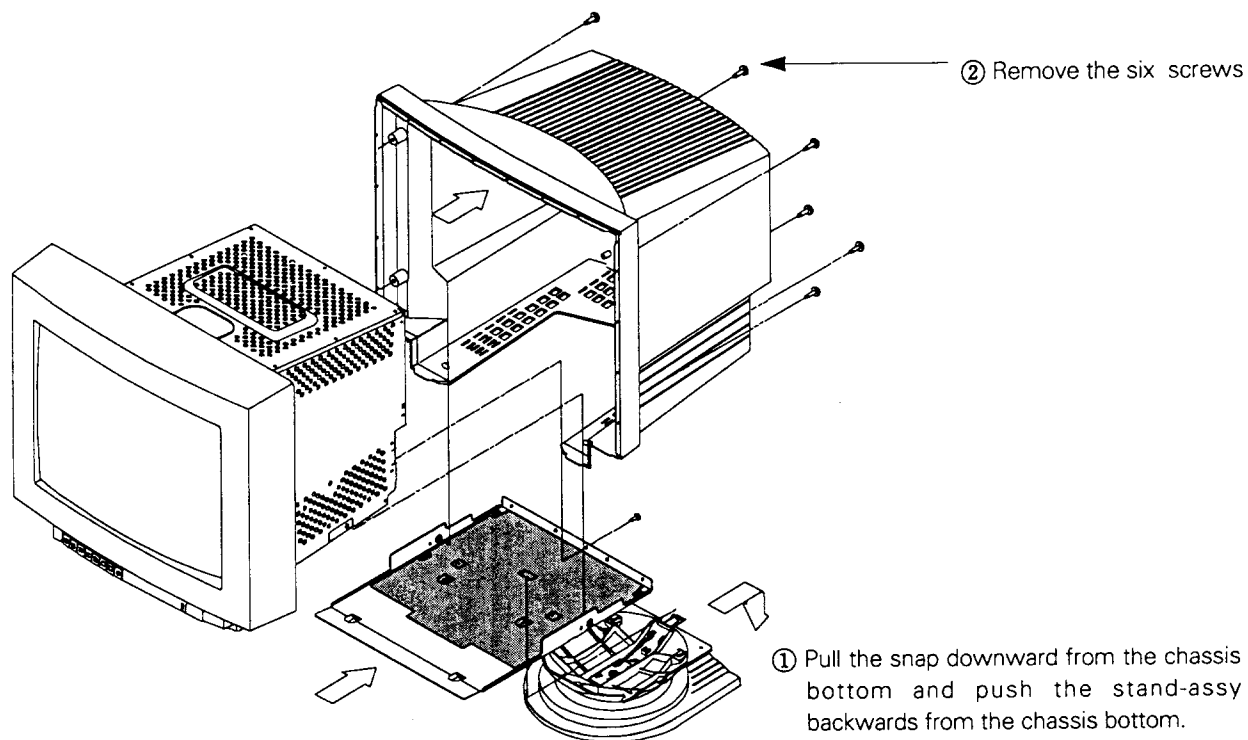


Vertical

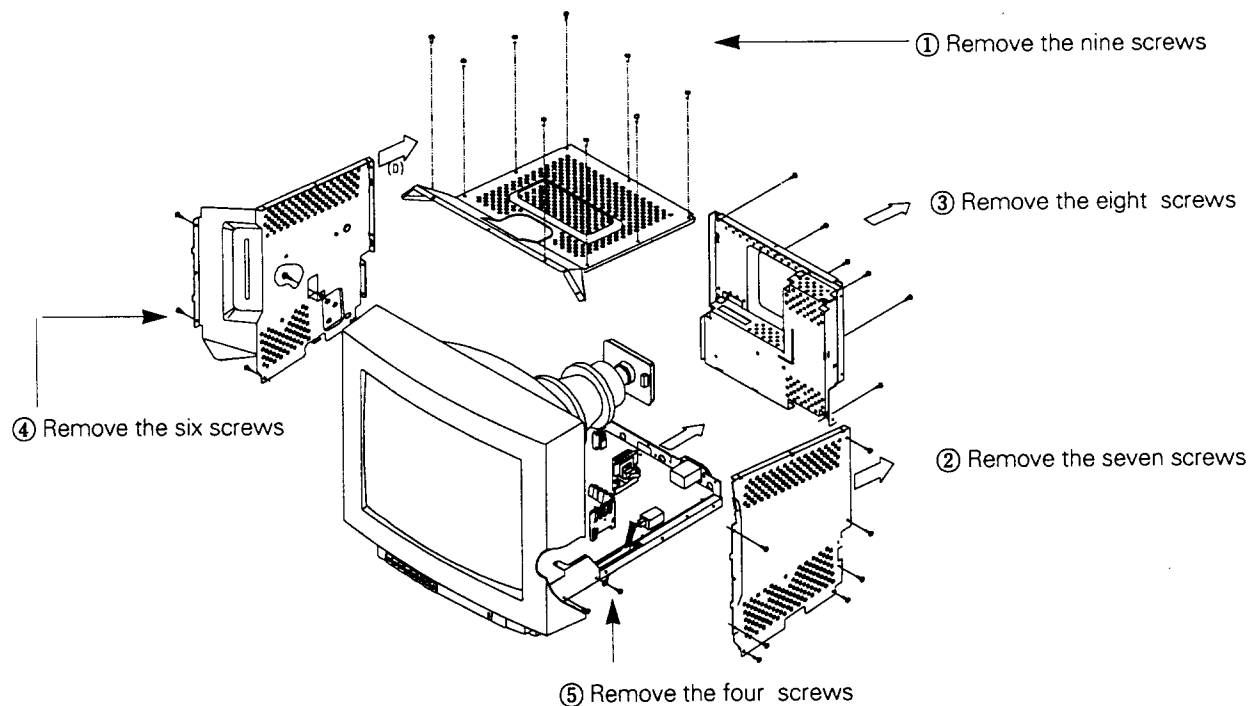


DISASSEMBLY

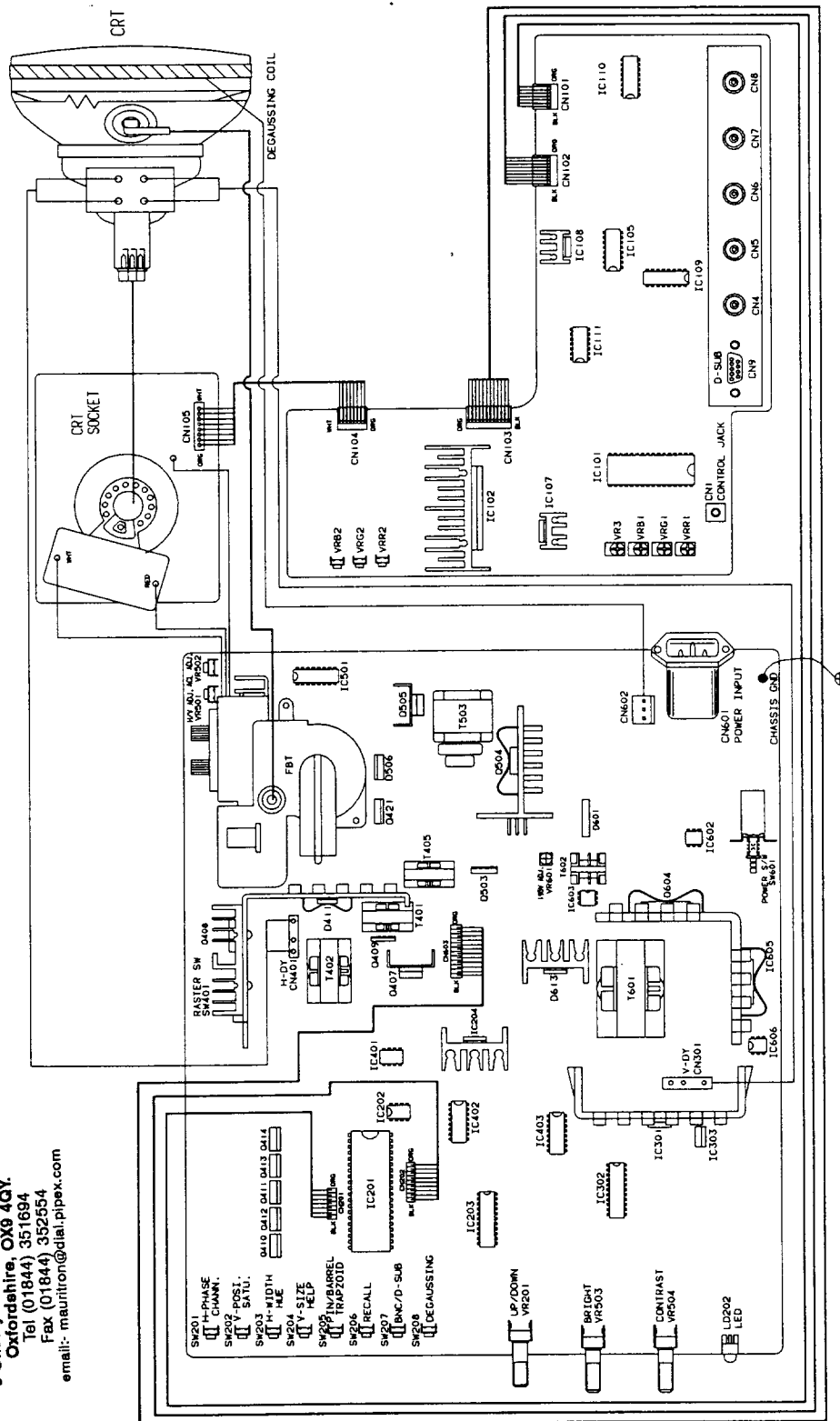
1. Stand & Cabinet Removal



2. Bottom Shield Removal

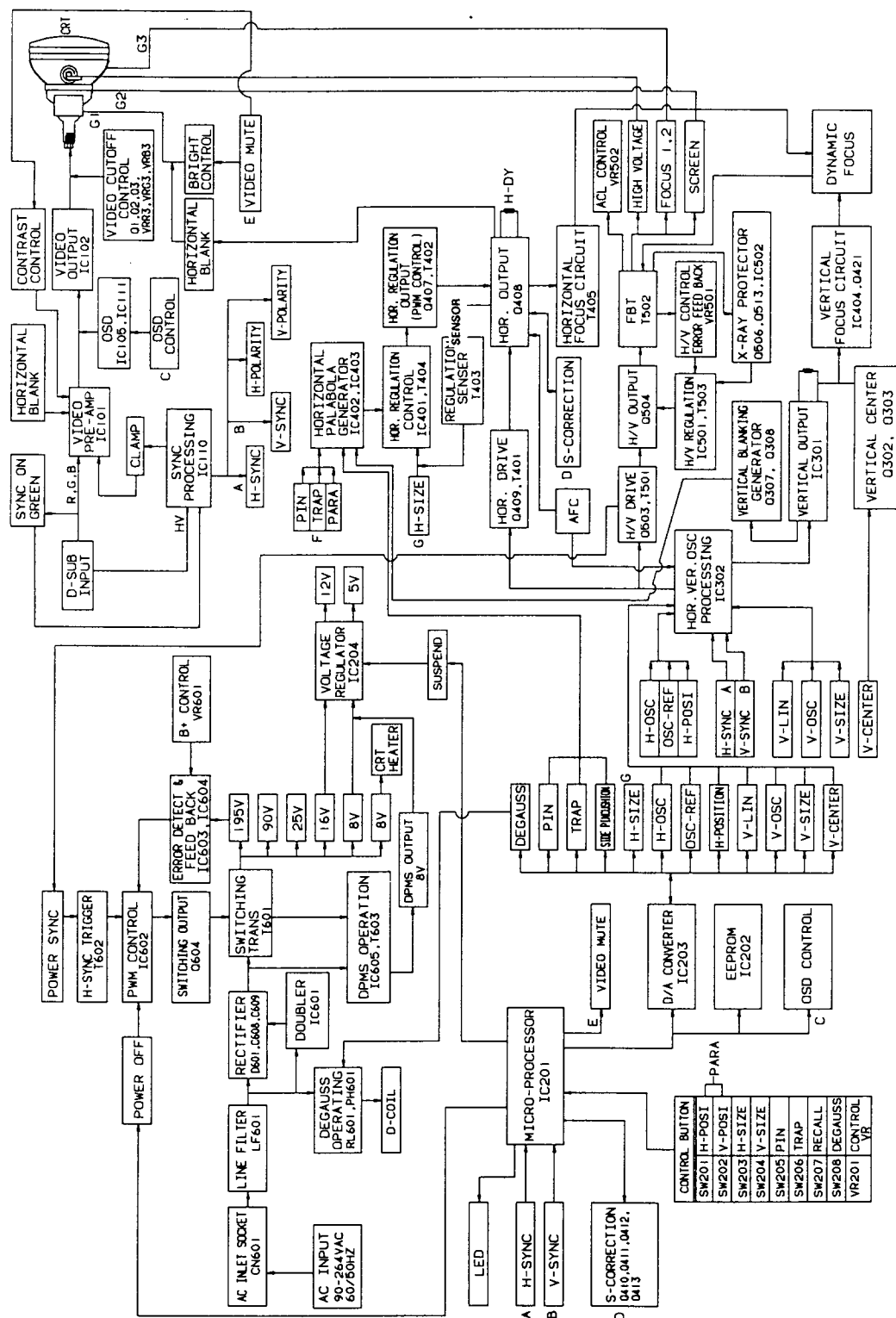


WIRING DIAGRAM



For Service Manuals
MAURITRON SERVICES
8 Cherry Tree Road, Chinnor
Oxfordshire, OX9 4QY.
Tel: (01844) 351694
Fax: (01844) 352554
email: mauritron@dial-pipe.com

PAGE 19



ALIGNMENT PROCEDURE

1. Adjustment Conditions and Precautions

- 1) Power supply voltage
AC 100-120 / 220-240 Volt (60/50 Hz)
- 2) Warm up time
The display must be on for 30 minutes before starting alignment. This is especially critical in color temperature and white balance adjustments.
- 3) Signal
Video analog 0.714 Vp-p positive at 75 ohm terminated.

SYNC On Green : Video 0.714 Vp-p positive
 : SYNC 0.286 Vp-p negative
SYNC : TTL level negative/positive,
 separate , composite
- 4) Scanning frequency
Horizontal : 30 kHz-64 kHz (Automatic)
Vertical : 50 Hz-100 Hz (Automatic)

- Unless otherwise specified, adjust at VESA
(fh: 56.4 kHz, fv: 70 Hz) signals.

CAUTION

- ☞ Alignment procedure without micom control jig: You can do adjust this step after set the monitor to the burn-in mode. (See Page 10)
- ☞ Alignment procedure with micom control jig: Before doing below steps,
 - ① Apply standard timing (1024x768/70 Hz) to a monitor.
 - ② Press a button #24 (Memory Dump Key) on the Micom control jig to call the data of the all mode based 1024x768/70 Hz.
 - ③ Please refer to block diagram of the Micom control jig on the Page 22.

2. Main PWB Prepare Adjustment

- 1) +B 195V Line adjustment
Adjust VR601 to be DC 195 ± 1 V at Q407 Heat Sink and GND. (Beam Contrast: MAX Brightness: MAX)
- 2) High voltage control
Adjust VR501 to be 26.0 kV ± 0.5 kV.
(Beam Contrast: MAX, Brightness: MIN)

3. Main PWB Adjustment

- Unless otherwise specified, adjust the EXT-VR
VR504 (Contrast) : MAX (Fully clockwise)
VR503 (Brightness) : So that no background raster appears.
- 1) Horizontal Hold
- Alignment procedure with micom control jig:
Push Horizontal OSC up button (#17 button) or Horizontal OSC down button (#18 button) to be DC 3.7 ± 0.5 V at pin3 of IC302 and GND.
- 2) Horizontal Raster Center
Adjust SW401 so that back raster position to come center when signal of 63.7 kHz/60 Hz applied.
- 3) Vertical Linearity
- Alignment procedure without micom control jig:
Push the horizontal position button and the horizontal size button simultaneously for 4-5 seconds to activate the vertical linearity adjustment function. Use the variable adjustment control.

- Alignment procedure with micom control jig:
Push vertical linearity up button (#15 button) or vertical linearity down button (#16 button) so that the image or pattern becomes optimum.
- 4) Horizontal Position Adjustment
- Adjustment procedure without micom control jig:
After pushing the Horizontal Position button, adjust variable adjustment control so that the image (or the test pattern) is placed on the center of the raster.

- Adjustment procedure with micom control jig:
Push Horizontal Position Up button (#1 button on the Micom Control Jig) or Horizontal Position Down button (#2 button) so that the image (or the test pattern) is placed on the center of the raster.

ALIGNMENT PROCEDURE

5) Vertical Position Adjustment

- Alignment procedure without micom control jig:
After pushing the Vertical Position button, adjust variable adjustment control so that the image (or the test pattern) is placed on the center of the raster.
- Alignment procedure with micom control jig:
Push Vertical Position Up button (#⑤ button) or Vertical Position Down button (#⑥ button) so that the vertical image or pattern is placed on the center of the raster.

6) Horizontal Size Adjustment

- Alignment procedure without micom control jig:
After pushing the Horizontal Size button, adjust variable adjustment control so that the horizontal width of the displayed pattern becomes 300 mm. (The tolerance is ± 3 mm)
- Alignment procedure with micom control jig:
Push Horizontal Size Up (#④ button) or Horizontal Size Down button (#③ button) so that the horizontal width of the displayed pattern becomes 300 mm. (The tolerance is ± 3 mm)

7) Vertical Size Adjustment

- Alignment procedure without micom control jig:
After pushing the Vertical Size button, adjust variable adjustment control so that the vertical size of the displayed pattern becomes 225 mm. (The tolerance is ± 3 mm)
- Alignment procedure with micom control jig:
Push Vertical Size Up button (#⑦ button) or Vertical Size Down (#⑧ button) so that the vertical image or pattern becomes 225 mm. (The tolerance is ± 3 mm)

8) Side Pincushion Adjustment

- Alignment procedure without micom control jig:
After pushing the Side Pincushion button, adjust variable adjustment control so that each side of the pattern (or the image) becomes straight.
- Alignment procedure with micom control jig:
Push Side Pincushion Up button (#⑨ button) or Side Pincushion Down button (#⑩ button) so that each side of the pattern or image becomes straight.

9) Parallelogram Adjustment

- Alignment procedure without micom control jig:
Keep pressing the Horizontal Position button and Vertical Position button simultaneously for 4-5 seconds to active the parallelogram function. Use the variable adjustment control.
- Alignment procedure with micom control jig:
Push Parallelogram Up button (#⑬ button) or Parallelogram Down button (#⑭ button) so that the image or pattern becomes to rectangular.

10) Trapezoid Adjustment

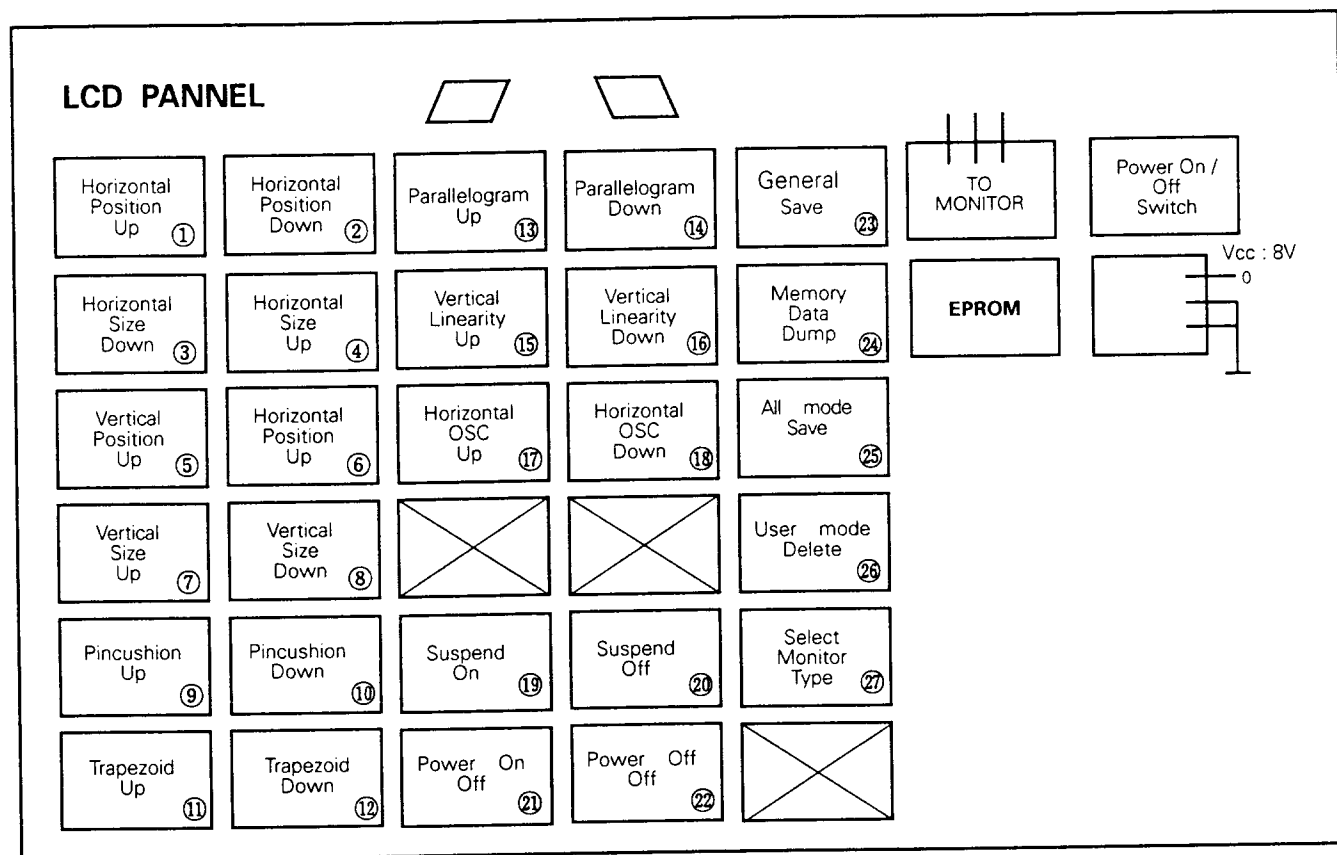
- Alignment procedure without micom control jig:
Push trapezoid button once to access the trapezoid distortion function. Use the variable adjustment control to correct any trapezoid distortion of the display.
- Alignment procedure with micom control jig:
Push Trapezoidal Up button (#⑪ button) or Trapezoidal Down button (#⑫ button) so that the image or pattern becomes to rectangular.

11) To save the picture data to a monitor

- Alignment procedure without micom control jig:
The alignment data is automatically saved after 4-5 seconds.
- Alignment procedure with micom control jig:
To save the picture data of a mode, push general save button. (#⑚ button on the Micom control)

ALIGNMENT PROCEDURE

The Block Diagram of the Micom control Jig (Alignment Procedure with micom control jig)



Note:

- 1) General Save button (#23 button)
 - To save the picture data of a mode individually.
- 2) All mode Save button (#25 button)
 - To save the picture data of all mode (16 modes) referring standard mode (1024x768/75 Hz).
- 3) Memory Dump button (#24 button)
 - To call the standard picture data from EPROM on the Micom Control Jig.
- 4) User Delete button (#26 button)
 - To delete the data in the user mode. (Saved by a user)
- 5) Select monitor type button (#27 button)
 - To select the picture data which be dumped from EPROM on the Micom Control Jig by a CRT.
 - Keep pressing for 2 seconds.
- 6) Suspend mode test button (#19, #20 buttons)
 - To test the suspend function among the power management function.
 - Push suspend on button (#19 button), then the monitor becomes to suspend mode.
 - And push suspend off button (#20 button), then the monitor returns to normal operation status.
- 7) Power-Off mode test button (#21, #22 buttons)
 - To test the Power-Off function among the power management function.
 - Push Power-Off On button (#21 button), then the monitor becomes to Power-Off mode,
 - and push Power-Off Off button (#22 button), then the monitor returns to normal operation status.

ALIGNMENT PROCEDURE

4. Adjustment of Video PWB

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

Video : Analog 0.714 Vp-p (at 75 Ω Terminated).
SYNC : Synchronizing : Separate TTL level.
Unless otherwise specified,
use signal 1024x768/70 Hz for the adjustments.

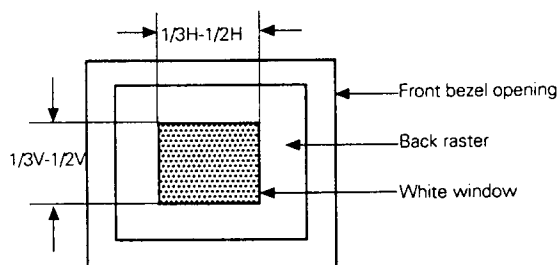
4-1. Adjustment of video amplitude and white balance of back raster

Locate VRR1 (R-Gain), VRG1 (G-Gain), VRB1 (B-Gain) controls on the video PWB to mechanically center position. Locate VRR3 (R-Bias), VRG3 (G-Bias), VRB3 (B-Bias) controls on the video PWB to mechanically center position.

4-2. Video Contrast Adjustment

Adjust of gain control (1024x768/70 Hz)
(White window pattern)

- 1) Display the white window pattern (within a range for which the ABL circuit does not active even though maximum contrast is set) preferably with a video area of 1/3 to 1/2H and 1/3 to 1/2V.

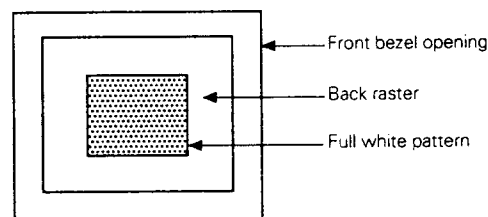


- 2) Turn brightness controls fully clockwise and turn the contrast controls fully counterclockwise.
- 3) Adjust the screen VR of FBT so that the brightness of back raster is to be 0.5 to 1.0 Ft/L. (Typically 0.7 Ft/L)
- 4) Adjust the VRR2 (R-Bias), VRB2 (B-Bias) so that the back raster color is white.
($X=0.283 \pm 0.02$, $Y=0.298 \pm 0.02$)
- 5) Turn the contrast controls fully clockwise and turn the brightness controls fully counterclockwise.
- 6) Adjust the VRR1 (R-Gain), VRB1 (B-Gain) so that the video is to be white. ($X=0.283 \pm 0.02$, $Y=0.298 \pm 0.02$)

- 7) Turn the contrast and the brightness controls fully clockwise.
- 8) Adjust the sub-contrast (VR3) so that the brightness of white window is to be 48 Ft/L.
- 9) And check whether the white window of video meets the above coordinate SPEC and brightness (over 48 Ft/L) or not.
- 10) If the white balance and brightness is off for the above SPEC, re-adjustment must be done. (Following above procedure again)

4-3. Adjustment of White Balance of Video

- 1) Display a full white pattern.



- 2) Turn the contrast and the brightness controls fully clockwise.
- 3) Adjust the ACL VR (VR502) controls on the main PWB so that the brightness of video is to be about 30 ± 1 Ft/L.

4-4. Fine Adjustment of White Balance

Note : White coordinate ($X=0.283 \pm 0.02$, $Y=0.298 \pm 0.02$)
Do not touch VRG1 (G-Gain)

- 1) Display the full white pattern.
- 2) Turn the contrast control so that the brightness of video is to be about 5 Ft/L.
- 3) And check whether the white coordinate of video meets the above coordinate SPEC or not.
- 4) For the contrast control so that the brightness of video is about 20 Ft/L.
- 5) Check whether the white coordinate of video satisfy above SPEC or not.
- 6) If the white balance is off for the above SPEC, re-adjustment must be done. (Following above procedure again)

ALIGNMENT PROCEDURE

5. Focus Adjustment

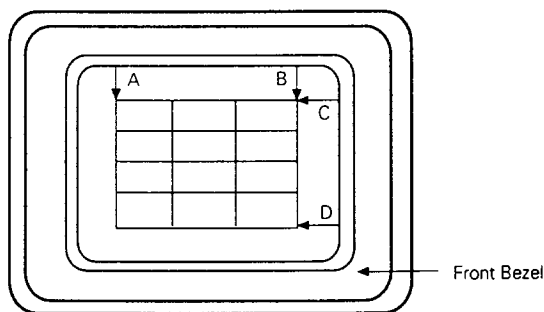
- 1) Display the character pattern so that adjust the focus can be done. (the highest resolution is recommended)
- 2) Turn the contrast and the brightness controls fully clockwised.
- 3) Adjust the focus control of FBT, so that the focus is to be at the best condition.

6. Purity Adjustment

- 1) Be sure that the display is not exposed to any external magnetic fields.
- 2) Ensure that the spacing between the purity convergence magnet (PCM) assembly and the CRT stem is $29 \text{ mm} \pm 1 \text{ mm}$
- 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 tags, which should be approximately 180° .
- 4) Check the complete blue and complete green patterns to observe their respective color purity. Make minor adjustment is needed.

7. CRT Tilt Adjustment

Reassemble the CRT with fastening screws so that the dimension A, B and C, D are separately equal.



8. Static(Center) Convergence

Switch the monitor on and warm up for 15 minutes. Operate the computer in such a way that the cross hatch pattern is displayed on screen. Convergence error should not be over than following table.

Position	Error In (mm)	CRT Dot-Pitch
Center	0.3	0.28
Corner	0.4	0.28

Proceed as follows:

- 1) Locate the pair of four pole magnet rings.
- 2) Rotate the individual rings (change spacing between tabs) to converge the vertical red and blue lines.
- 3) Rotate the pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue lines.
- 4) After completing the red and blue center convergence, locate the pair of six pole magnet ring.
- 5) Rotate the individual rings (change spacing between tabs) to converge the vertical red and blue (magenta) and green lines.
- 6) Rotate the pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue (magenta) and green lines.
- 7) Magnet position is 2 pole/4 pole/6 pole (from the front of CRT).
- 8) Don't rotate the 2 pole magnet because it's object is to adjust the purity.

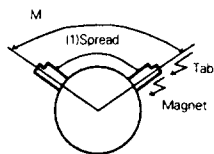
ALIGNMENT PROCEDURE

9. Dynamic Convergence

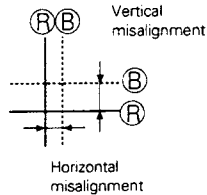
Dynamic convergence (convergence of the three color fields at the edge of the CRT screen) is accomplished by the proper insertion and positioning of the three wedges between the edge of deflection yoke and the funnel of the CRT.

9-1. Alignment of (R) and (B) with the 4pole magnet

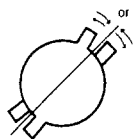
Movable in spread condition



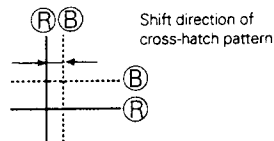
O-MAGNETIC FIELD



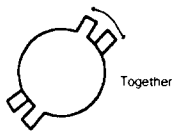
Vertical direction



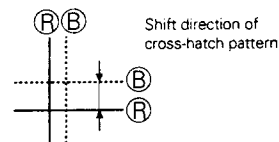
MOTION (1)



Horizontal direction

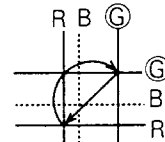


MOTION (2)

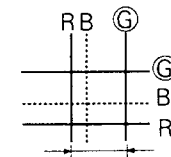


9-2. Alignment of (R) and (B) with (G) (6 pole magnet)

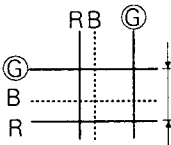
O-MAGNETIC FIELD



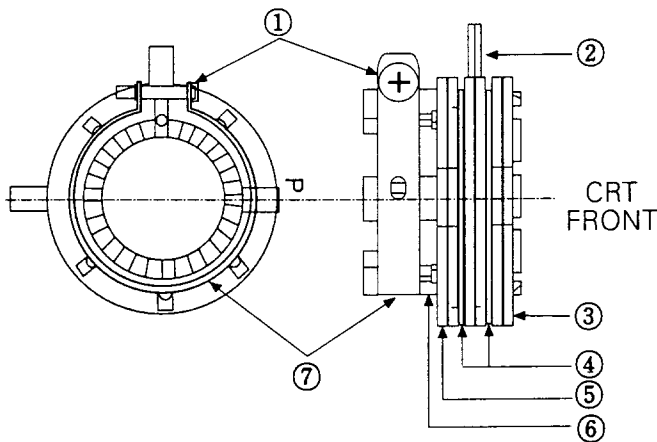
MOTION (1)



MOTION (2)



※ Convergence Purity Magnet



- ① Setup Bolt ② 4 pole Magnet ③ Purity Magnet (2 pole Magnet)
- ④ Spacers ⑤ 6 pole Magnet ⑥ Holder ⑦ Band

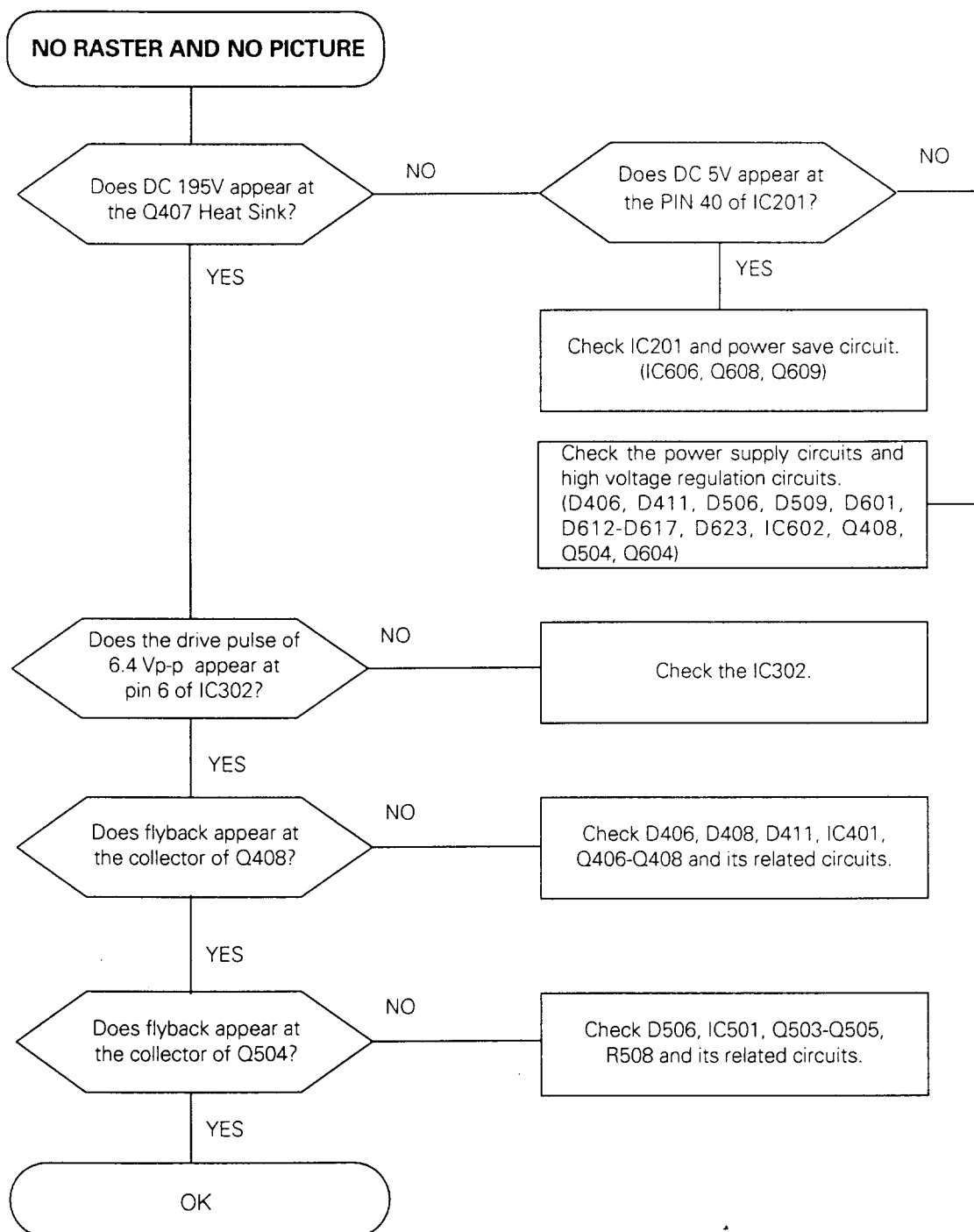
For Service Manuals
MAURITRON SERVICES
 8 Cherry Tree Road, Chinnor
 Oxfordshire, OX9 4QY.
 Tel (01844) 351694
 Fax (01844) 352554
 email:- mauritron@dial.pipex.com

TROUBLESHOOTING

Note :

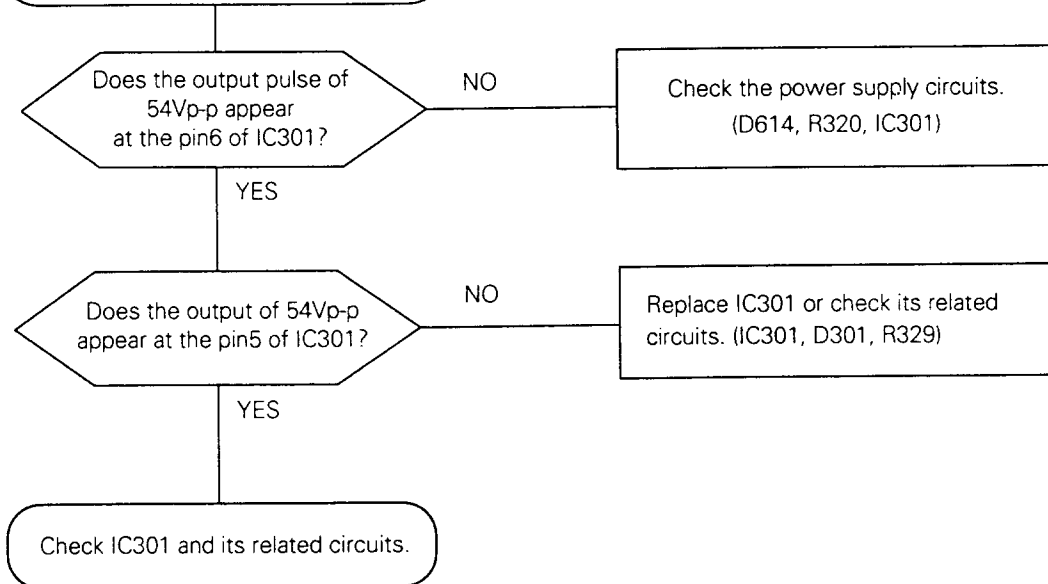
1. If picture does not appear, fully rotate the brightness and contrast control clockwise before inspection.
2. Circuit to be checked

- 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 developed : Horizontal output circuits.

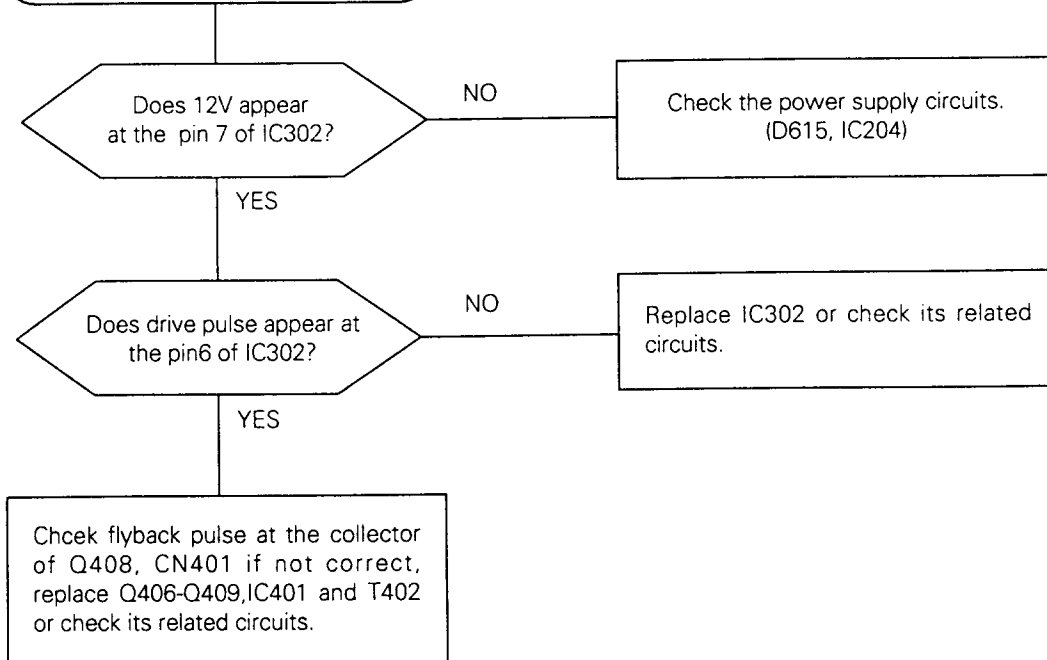


TROUBLESHOOTING

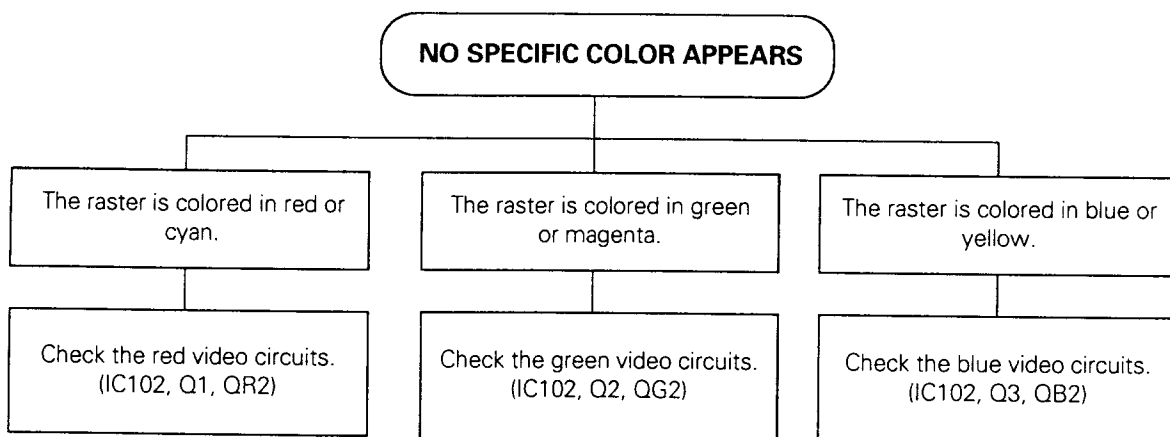
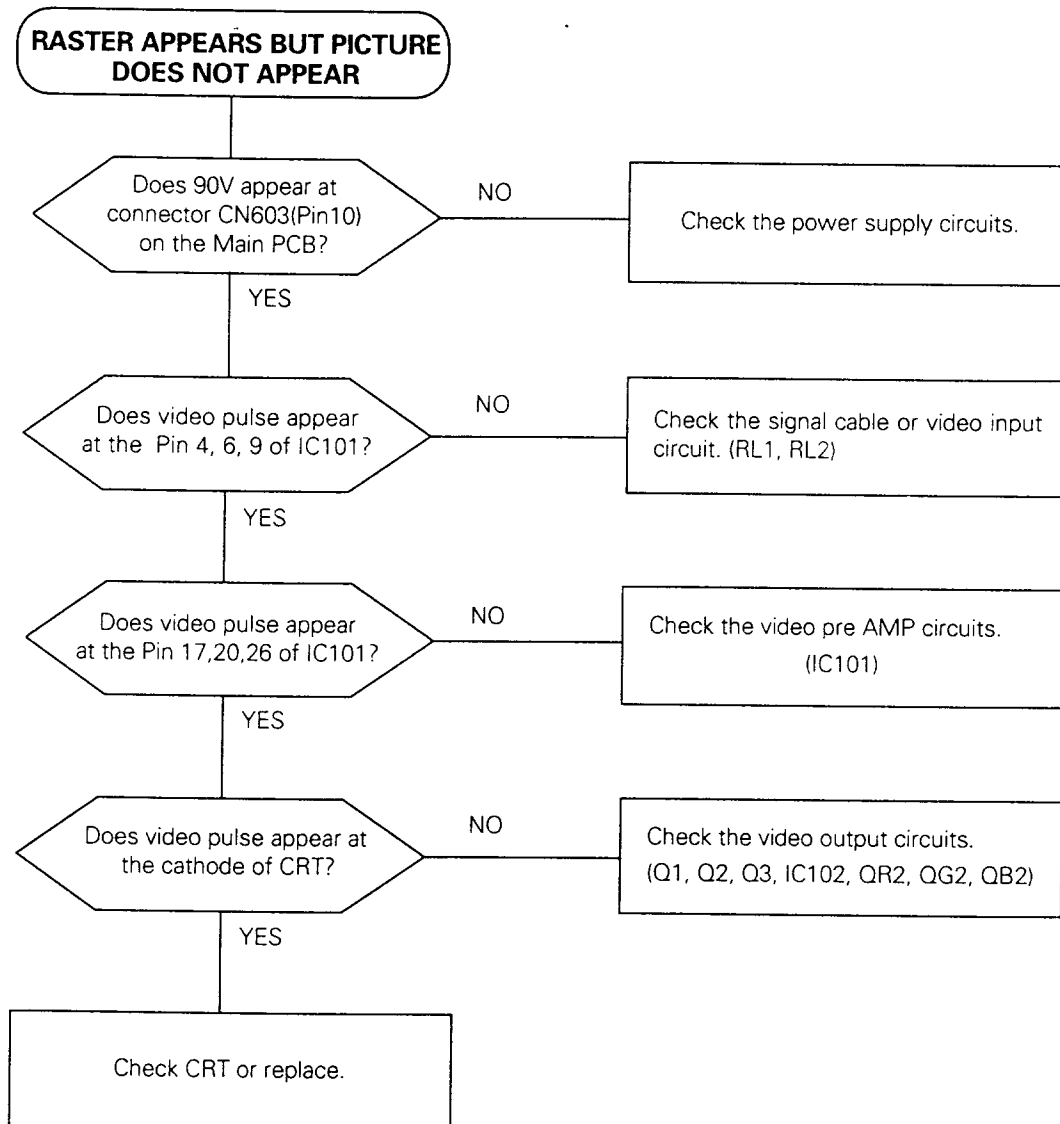
HORIZONTAL LINE ON RASTER



VERTICAL LINE ON RASTER



TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE

NO POWER

Does proper DC 300V
voltage appear between
the plus pole of C608 and
the minus pole of C609?

NO

Check F601, D601, PTH601, LF601,
IC601, SWITCH.

YES

Check IC602, IC603, IC605, Q604,
Q607-Q609, R627, T601 and power
circuits.

DOES NOT AUTO RECOVER

Does 8V appear at
the cathode of D622?

NO

Check the power saving control
circuit.
(D621, IC605, Q607, T603)

YES

Check the power saving
control circuit.
(IC201, IC204, IC606, Q608, Q609)

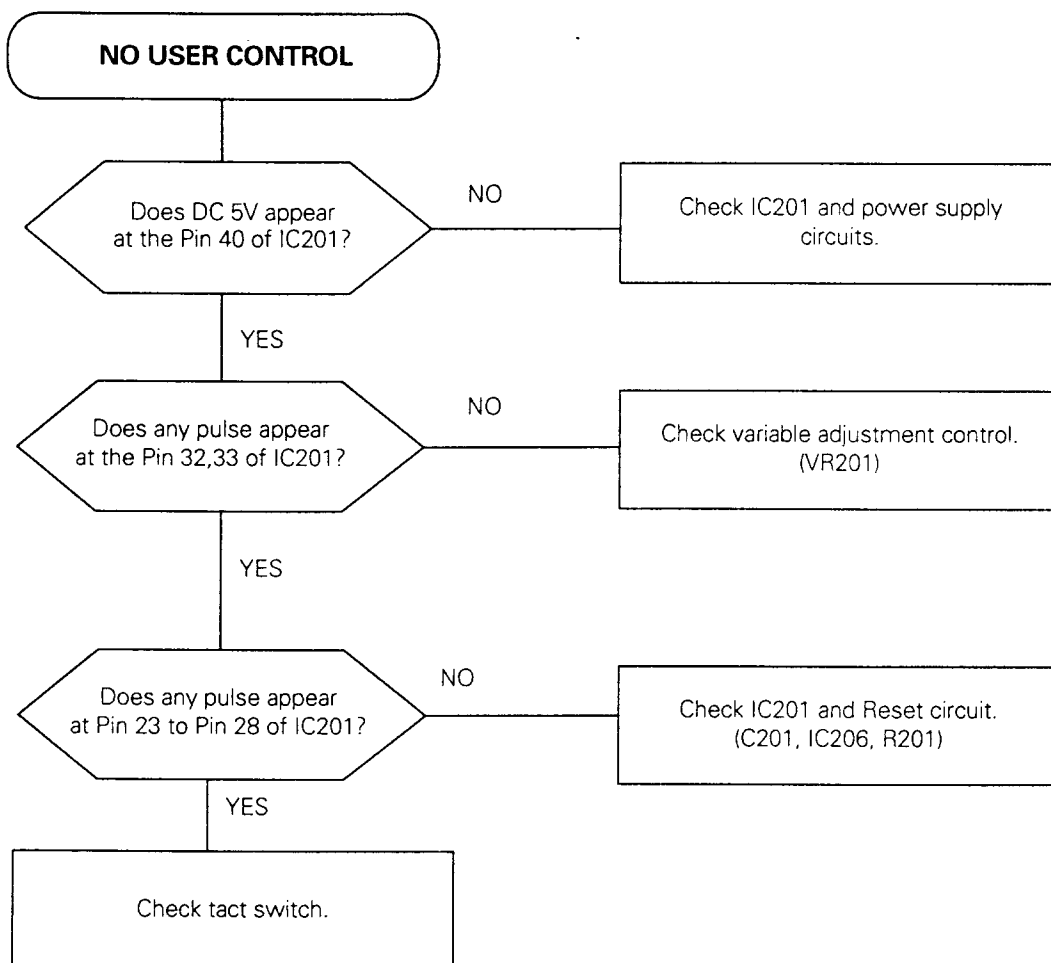
COLOR PURITY FAILURE

Check the connector CN602 on
degaussing circuit, if OK, replace
PTH601, RL601.

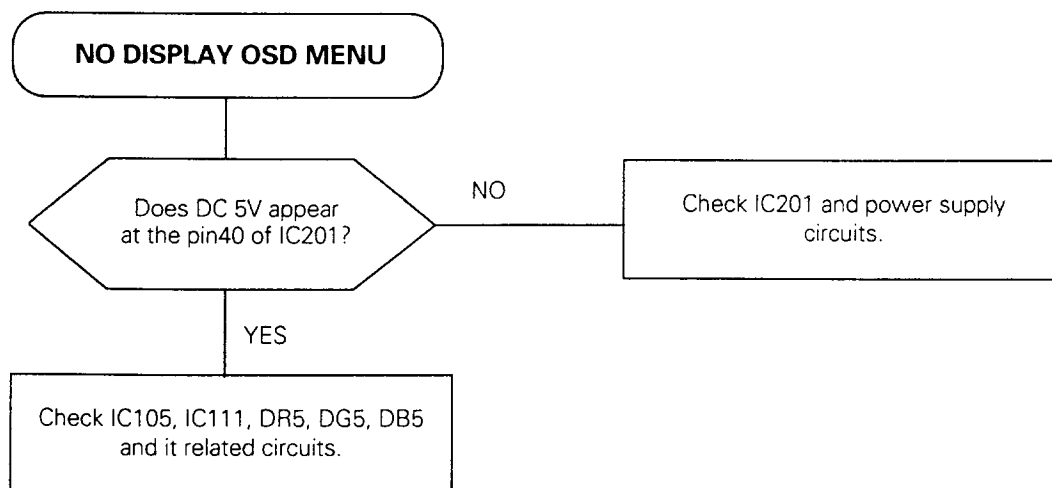
Switch the display monitor ON or push
manual degause button and allow it to warm
up for 30 minutes, then check the purity. If
the purity is not improved, replace the CRT.

NOTE: If color purity is not normal, manual degaussing
should be done by mandatory method using the manual
degaussing coil before inspection.

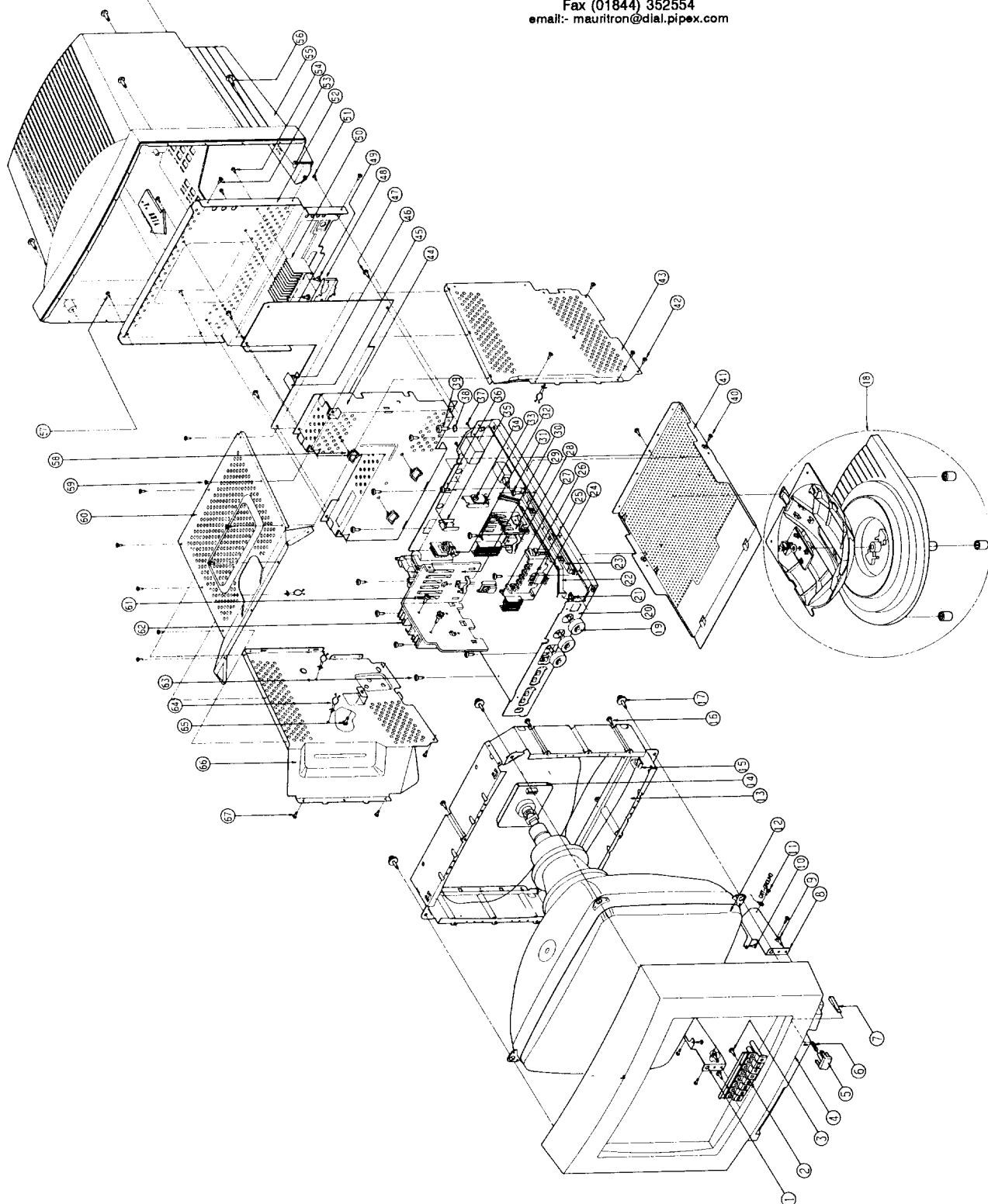
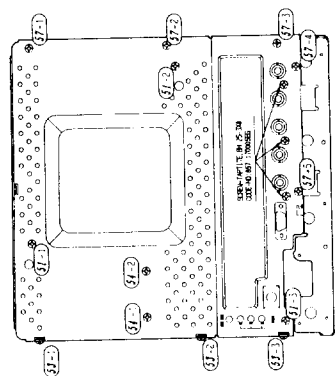
TROUBLESHOOTING GUIDE



Note: If save function does not operate, check IC202 (EEPROM).



EXPLODED VIEW AND PARTS LIST



For Service Manuals
MAURITRON SERVICES
 8 Cherry Tree Road, Chinnor
 Oxfordshire, OX9 4QY.
 Tel (01844) 351694
 Fax (01844) 352554
 email:- mauritron@dal.pipex.com

EXPLODED VIEW AND PARTS LIST

NO.	DESCRIPTION	CODE NO.	SPECIFICATION	Q'TY	REMARK
1	BRKT-MAIN, LEFT	813 460264AA	SECC-1 T1.2	1	
2	KNOB-FUNCTION	821 469084AA	ABS VH-0800S C7262	1	
3	SCREW-TAPTITE	847 501007FB	2S-4X12 ZPC3 FZY	2	
4	COVER-FRONT	821 460324A*	ABS VH-0800S C7262	1	
5	KNOB-POWER	821 469082A*	ABS VH-0800S C7262	1	
6	SPRING-POWER	831 522033AD	SPS-2 T0.5	1	
7	LENS-LED,POWER	821 468255AA	ACRYL CLEAR	1	
8	BRKT-MAIN, RIGHT	813 460263AA	SECC-1 T1.2	1	
9	SCREW-TAPTITE,BH	847 501007FB	2S-4X12 ZPC3 FZY	2	
10	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	2	
11	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	4	
12	17" COLOR CRT	897 250144AA	M41KKL180X12	1	
13	SHIELD-CRT, COVER	813 464181AC	SECC-1 T1.0	1	
14	SHIELD-CRT, PCB	813 464190AA	SPTE T0.2	1	
15	HOLDER-D.G COIL	857 170024EA	NYLON 6/6(DAWS-IN)	4	
16	SCREW-TAPTITE, BH	847 501007FB	2S-4X12 ZPC3 FZY	6	
17	CRT-SCREW, TAPPTING	847 840020CA	2S-5X30 ZPC3 FZY	4	
18	ASS'Y STAND	811 460044A*	STAND-ASS'Y	1	
19	KNOB-VR	831 171037BC	ABS VH-0800S C7262	3	
20	BRKT-MAIN, PCB	813 460261AA	SECC-1 T1.2	1	
21	HOLDER-LED	953 310015AA	PP V0 BLK	1	
22	SHAFT-POWER	821 468228AA	STAROY VB-1108R C8117	1	
23	SHAFT-GUIDE, POWER	821 468243AA	ABS +PC C8117	1	
24	HEAT-SINK, TR	831 511012AC	A6063S EXTR	1	
25	SCREW-TAPTITE,BH	847 501007EG	S2-3X8 ZPC3	1	
26	HEAT-SINK, IC	831 513022AA	A1050S H-14 T3.0	1	
27	SCREW-MACHINE,RH	841 413024BB	2S-3X12 ZPC3	1	
28	SPRING-TR	813 468062AC	SUS 304-1 T0.5	5	
29	HEAT-SINK POWER	831 515030AA	A1050S H-14 T3.0	1	
30	HEAT-SINK, FBT	831 515029AA	A1050S H-14 T3.0	1	
31	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	1	
32	HEAT-SINK, TR	831 513020DA	A6063 EXTR	1	
33	HEAT-SINK, TR	831 513023AA	SPCC T1.0 SN	1	

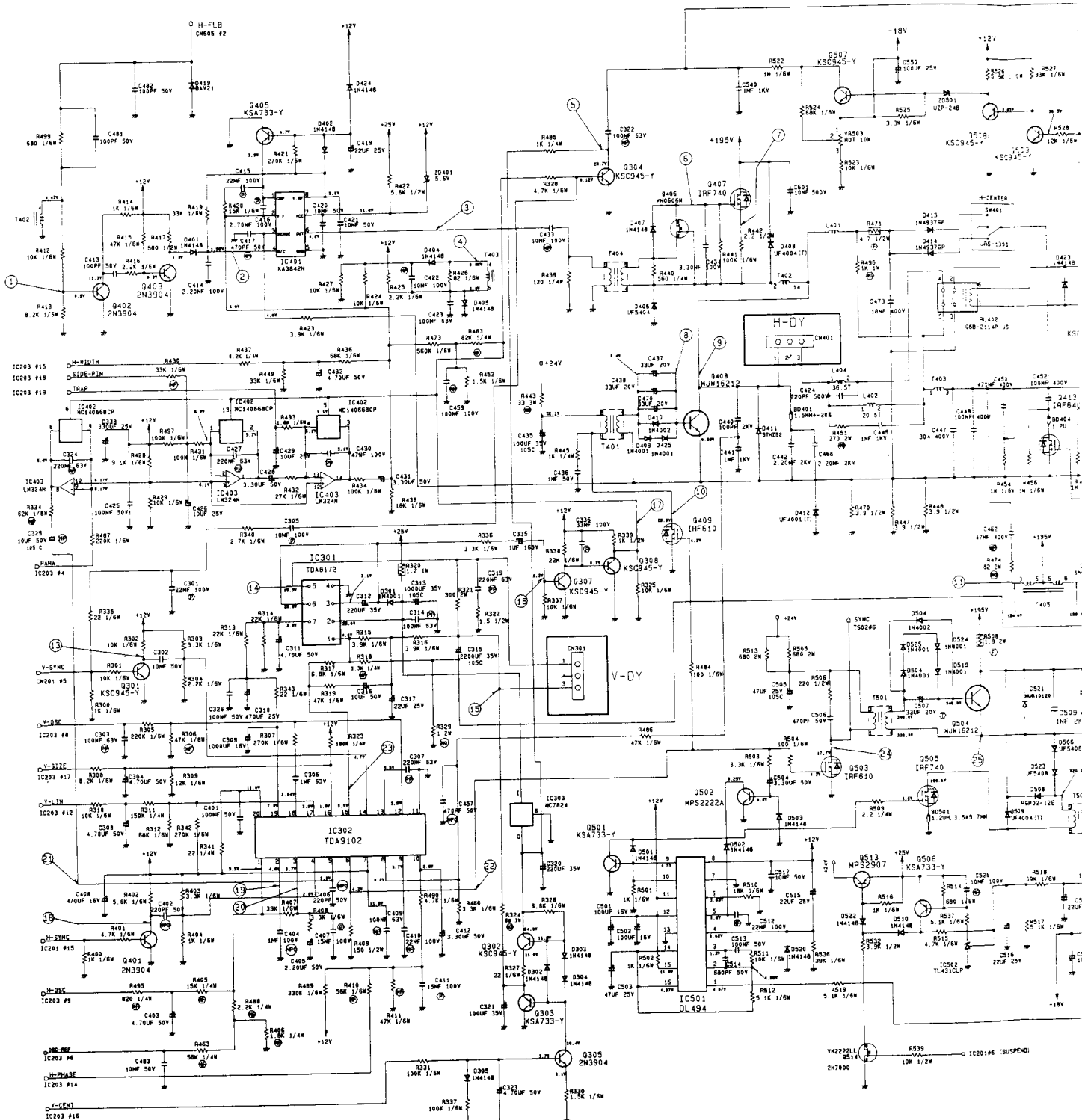
EXPLODED VIEW AND PARTS LIST

NO.	DESCRIPTION	CODE NO.	SPECIFICATION	Q'TY	REMARK
34	SCREW-TAPTITE,BH	847 502005AA	2S-3X8 W/W ZPC	1	
35	HEAT-SINK,TR	831 513021AA	SPCC T1.0 SN	2	
36	SCREW-TAPTITE,BH	847 502005AA	2S-3X10 W/W ZPC3	2	
37	SCREW-TAP,FH	842 243013AC	2S-3X8 FH BLK	2	
38	WASHER-SPRING	855 124001BB	ID4.1 T1.3 FE, FZY	1	
39	SCREW-TAPTITE,BH	847 501007FA	2S-4X10 ZPC3 SWCH18A	1	
40	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	3	
41	BRKT-CHASS,BOTTOM	813 460262AA	SECC-1 T1.2	1	
42	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	4	
43	SHIELD-RIGHT	813 464182AA	SECC-1 T1.0	1	
44	SHIELD-VIDEO	813 464184AA	SECC-1 T0.8	1	
45	HEAT-SINK,TR	831 511006AC	A6063 EXTR	2	
46	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	2	
47	SCREW-TAPTITE,BH	847 501007EG	2S-3XP ZPC3	3	
48	BRKT-BNC	813 460276AA	SPTT T0.5	1	
49	SCREW-TAPTITE,BH	841 810026AA	2S-3X16 W/W ZPC3	2	
50	HEAT-SINK,IC	831 513020CA	A6063S EXTR	1	
51	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	3	
52	SHIELD-REAR	815 464099AA	A1050S-H14 T1.5	1	
53	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	2	
54	SCREW-TAPTITE,BH	841 810007CA	2S-3X8 ZPC3 W/W	2	
55	COVER-REAR	821 460325MA	ABS VH-0800S C7262	1	
56	SCREW-TAPTITE,BH	847 501007FB	2S-4X12 ZPC3 FZY	6	
57	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	5	
58	HOLDER-WIRE	857 170035AF	NATURAL, NYLON 6/6	3	
59	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	6	
60	SHIELD-TOP	815 464106AA	A1050S T0.5	1	
61	SCREW-TAPTITE,BH	847 501007FB	2S-4X12 ZPC3 FZY	2	
62	H/SINK-FBT(SUB)	831 512009BA	A6063 EXTR	1	
63	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	8	
64	HOLDER-WIRE	857 170035AF	NATURAL, NYLON 6/6	3	
65	SCREW-TAPTITE,BH	847 501007FB	2S-4X12 ZPC3 FZY	1	
66	SHIELD-LEFT	813 464183AA	SECC-1 T1.0	1	
67	SCREW-TAPTITE,BH	847 501007EG	2S-3X8 ZPC3	4	

SCHEMATIC DIAGRAM

MAIN CIRCUITRY

MAIN CIRCUIT



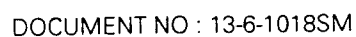
SCHEMATIC DIAGRAM

REF	CONTENT
1	...
2	...
3	...
4	...
5	...
6	...
7	...
8	...
9	...
10	...
11	...
12	...
13	...
14	...
15	...
16	...
17	...
18	...
19	...
20	...
21	...
22	...
23	...
24	...
25	...
26	...
27	...
28	...
29	...
30	...
31	...
32	...
33	...
34	...
35	...
36	...
37	...
38	...
39	...
40	...
41	...
42	...
43	...
44	...
45	...
46	...
47	...
48	...
49	...
50	...
51	...
52	...
53	...
54	...
55	...
56	...
57	...
58	...
59	...
60	...
61	...
62	...
63	...
64	...
65	...
66	...
67	...
68	...
69	...
70	...
71	...
72	...
73	...
74	...
75	...
76	...
77	...
78	...
79	...
80	...
81	...
82	...
83	...
84	...
85	...
86	...
87	...
88	...
89	...
90	...
91	...
92	...
93	...
94	...
95	...
96	...
97	...
98	...
99	...
100	...

[illegible]

LOC NO	QIP #	QIP # - 100	WASTING VERSION
0459 0465	0459	0459	0459 100 1/00
0460 0472	0460	0460	0460 100 1/00

POWER CIRCUITRY



REV	CONTENT	LOC	DATE
-----	---------	-----	------

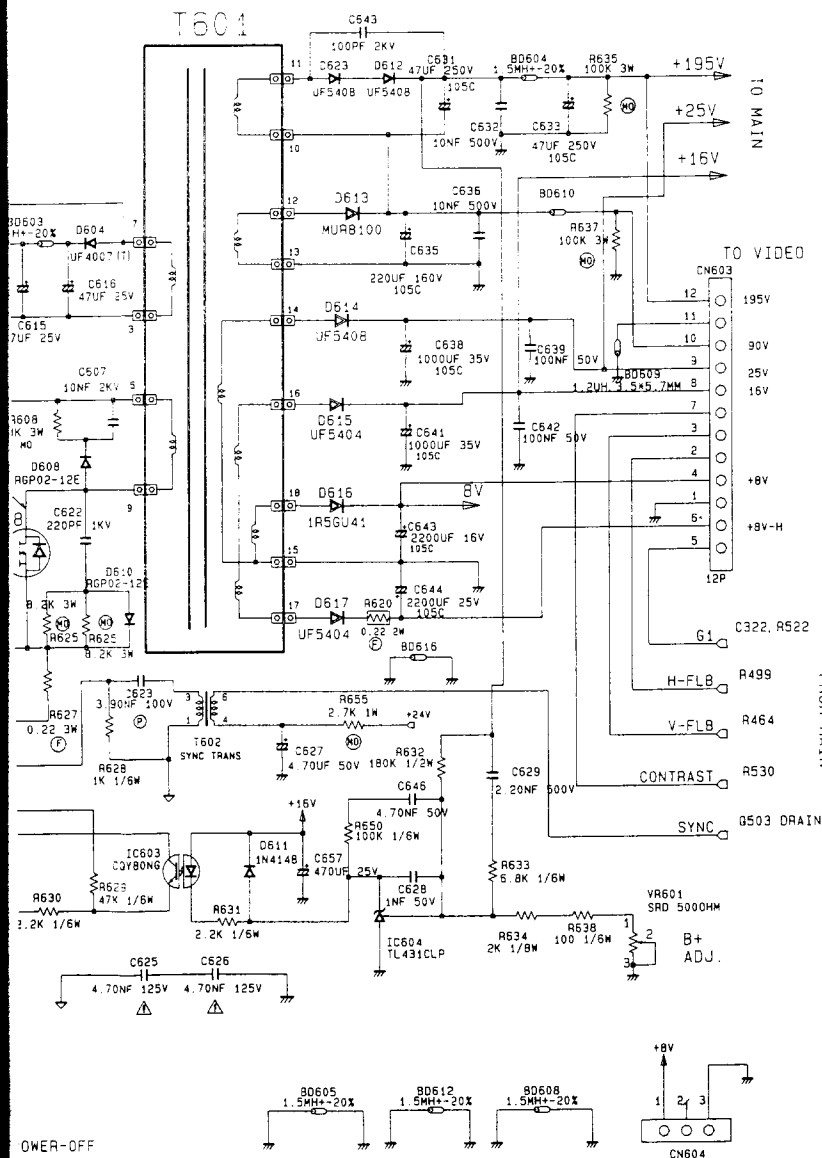
CASION

1. **CAUTION:** THE SHADED AREAS OR  MARKS IN THE SCHEMATIC DIAGRAM AND THE PARTS LIST DESIGNATE COMPONENTS WHICH HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY AND SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. IF THE PARTS LIST PARTS LIST REFERENCE INDICATES ANY OF THIS COMPONENTS, READ CAREFULLY THE "PRODUCT SAFETY NOTICE".
2. DURING A NUMEROUS MEASUREMENT OF THIS MONITOR MATTERS THAT DEMAND SPECIAL ATTENTION ARE THE FOLLOWING:
- 1. DO NOT USE THE INSTRUMENT TO MEASURE PRIMARY WINDING SYMBOL  AND SECONDARY CIRCUIT SYMBOL .
 - 2. DO NOT USE YOUR INSTRUMENT BETWEEN SECONDARY WINDING SYMBOL  AND SECONDARY CIRCUIT SYMBOL .
3. THE SHADED AREAS ARE PRIMARY SECTION (HOT PART)

NOTE

1. RESISTANCE IS SHOWN IN OHM K=1000, M=1000000
 2. WATTAGE POWER IS SHOWN NOT NOTED IN SCHEMATIC
 3. CAPACITANCE IS SHOWN OR NOT NOTED
 4. CAPACITANCE IS SHOWN IN 1000000OFF.
 5. RATED VOLTAGE OF CONDENSER NOT NOTED IN
 6. SCHEMATIC DIAGRAM IS 50V.
 7. ABBREVIATION AND SYMBOL
 8. WIRE-LEAD WIRE
 9. W- R-WIRE, WOUND
 10. R-FUSIBLE
 11. C- CONDENSATION
 12. CM- R-SEMENT
 13. POLY- C-POLYESTER
 14. PRIMARY GND
 15. SECONDARY GND
 16. PRIMARY VOLTAGE IS READ WITH VTVM FROM
 17. INDICATED POINT TO SECONDARY GROUND (*)
 18. THE PRIMARY VOLTAGE IS READ WITH VTVM FROM
 19. INDICATED POINT TO PRIMARY GROUND (P)
 20. THE SECONDARY VOLTAGE IS SUBJECT TO CHANGE
 21. WITHOUT NOTICE FOR FURTHER IMPROVEMENT.

AVERTISSEMENT: CE RECEPTEUR EST EQUIPE DE COMPOSANTS CRITIQUES POUR LA SECURITE TOUTES LES PIECES INDIQUEES DANS LES ZONES OMBREES OU SCHEMA SONT CRITIQUE POUR LA SECURITE POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LE FABRICANT CONT. LE FONCTIONNEMENT EST CRITIQUE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT CONSULTER LA NOMENCLATURE DES PIECES POUR TROUVER LES PIECES DE REMENAGE EXACTES.



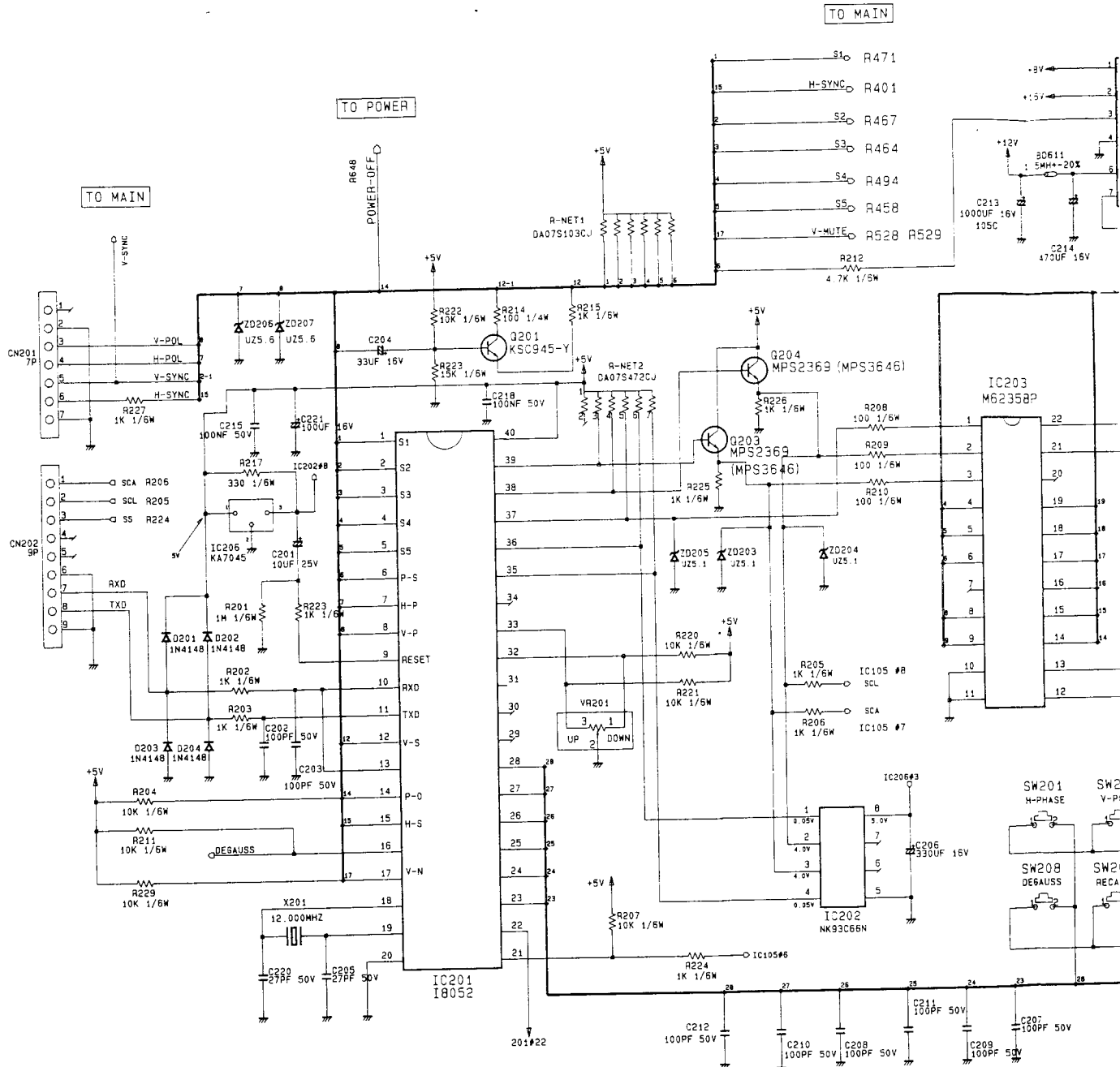
POWER-OFF
IC201 #14
ROM U-COM

E D								
REF. NO			SEC	CODE NO:	257-210043XXXX	SH NO:	2/4	

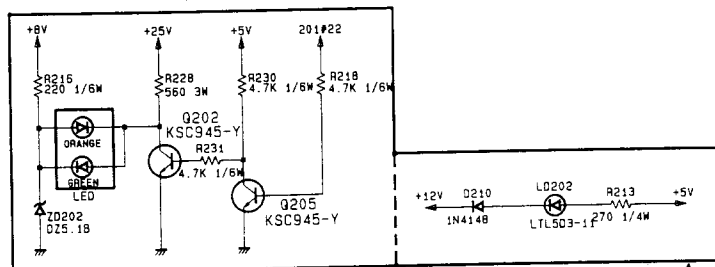
SCHEMATIC DIAGRAM

MICOM CIRCUITRY

MICOM CIRCUIT



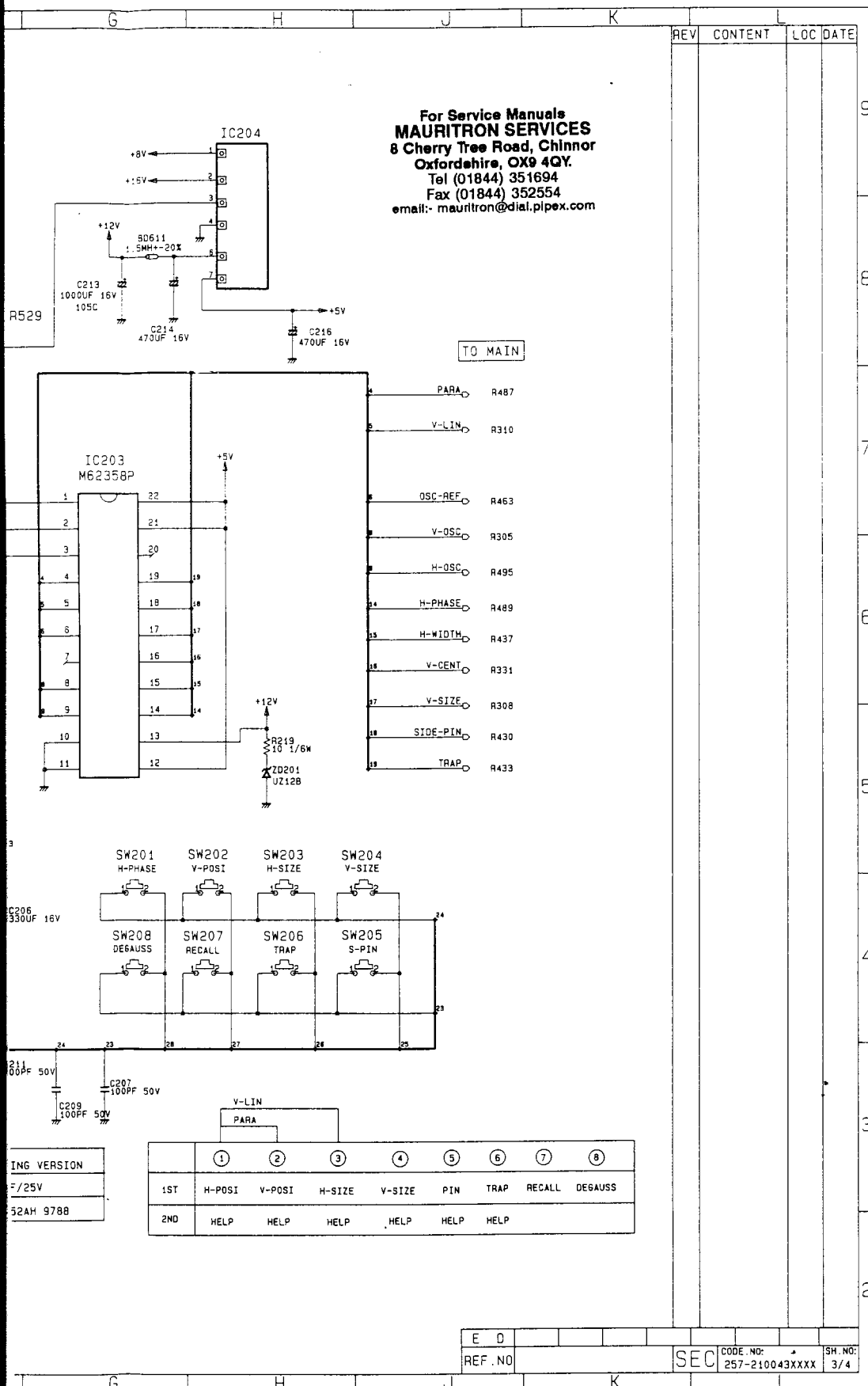
BASIC (PRIVATE)



VERSION	OTP VERSION	MASKING VERSION
LOC. NO.		
C205	330UF/16V	22UF/25V
IC201	P87529H	P8052AH 9788

1ST	H
2ND	

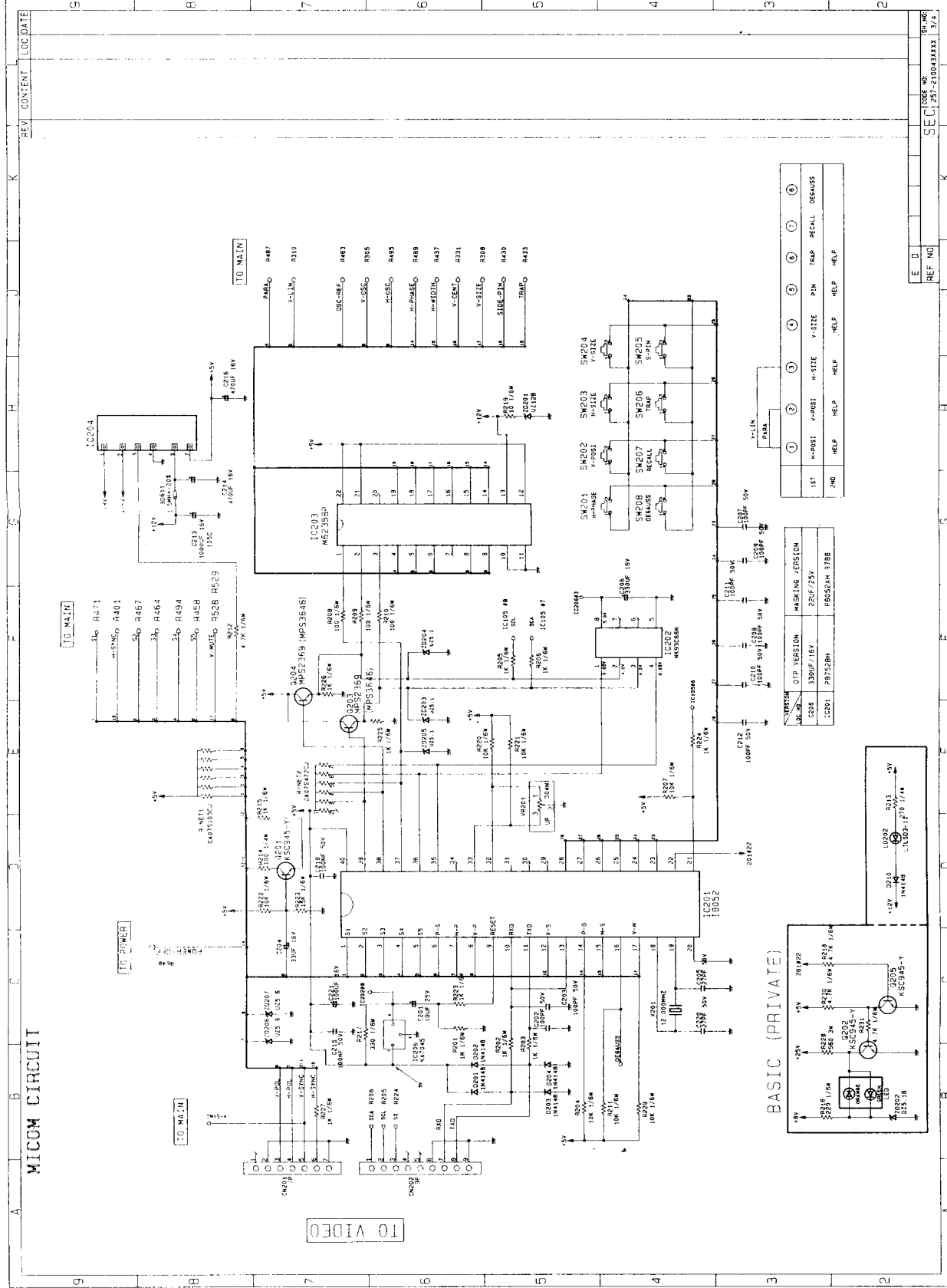
For Service Manuals
MAURITRON SERVICES
 8 Cherry Tree Road, Chinnor
 Oxfordshire, OX9 4QY.
 Tel (01844) 351694
 Fax (01844) 352554
 email:- mauritron@dial.pipex.com



SCHEMATIC DIAGRAM

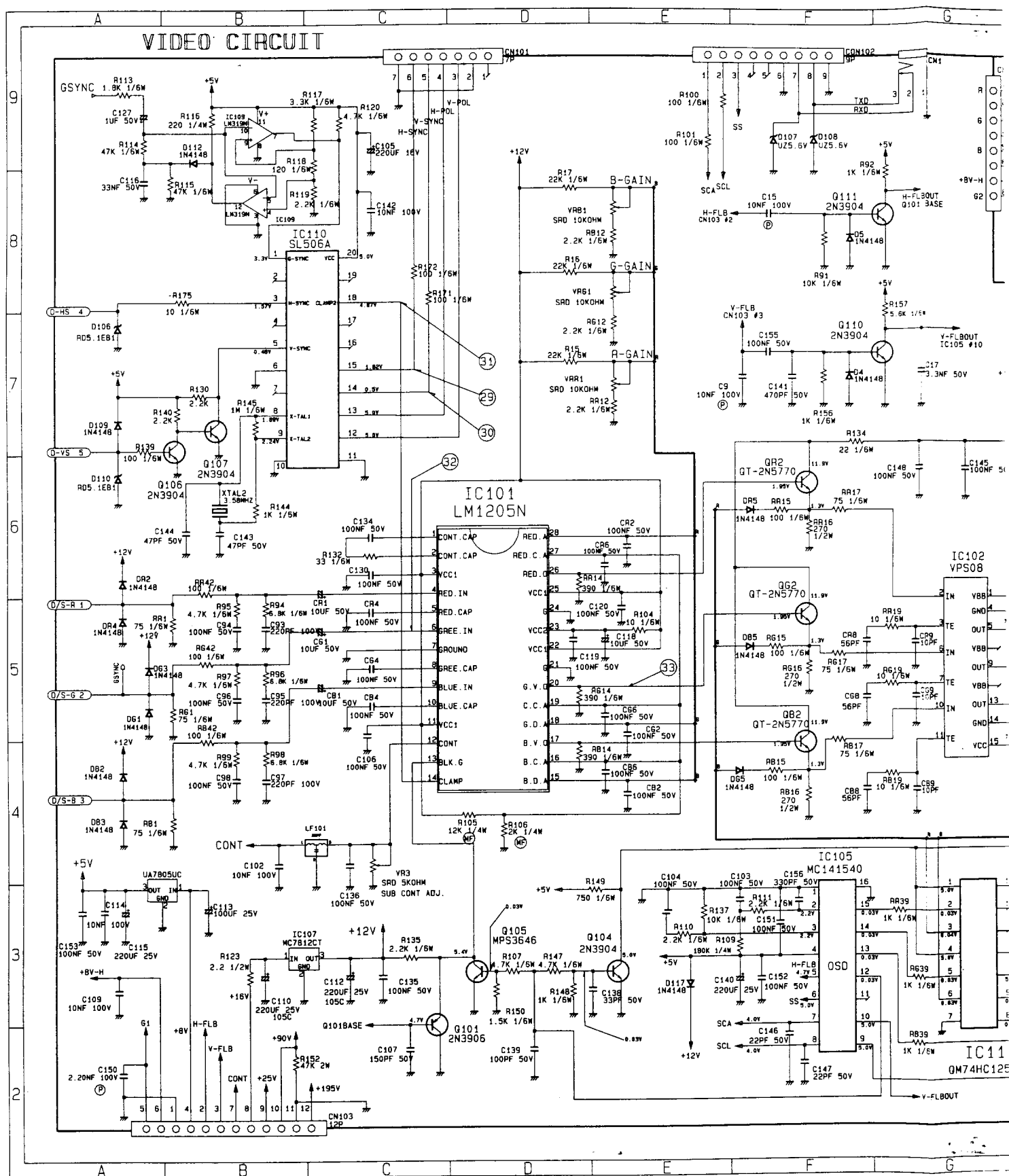
MICOM CIRCUITRY

MICOM CIRCUIT



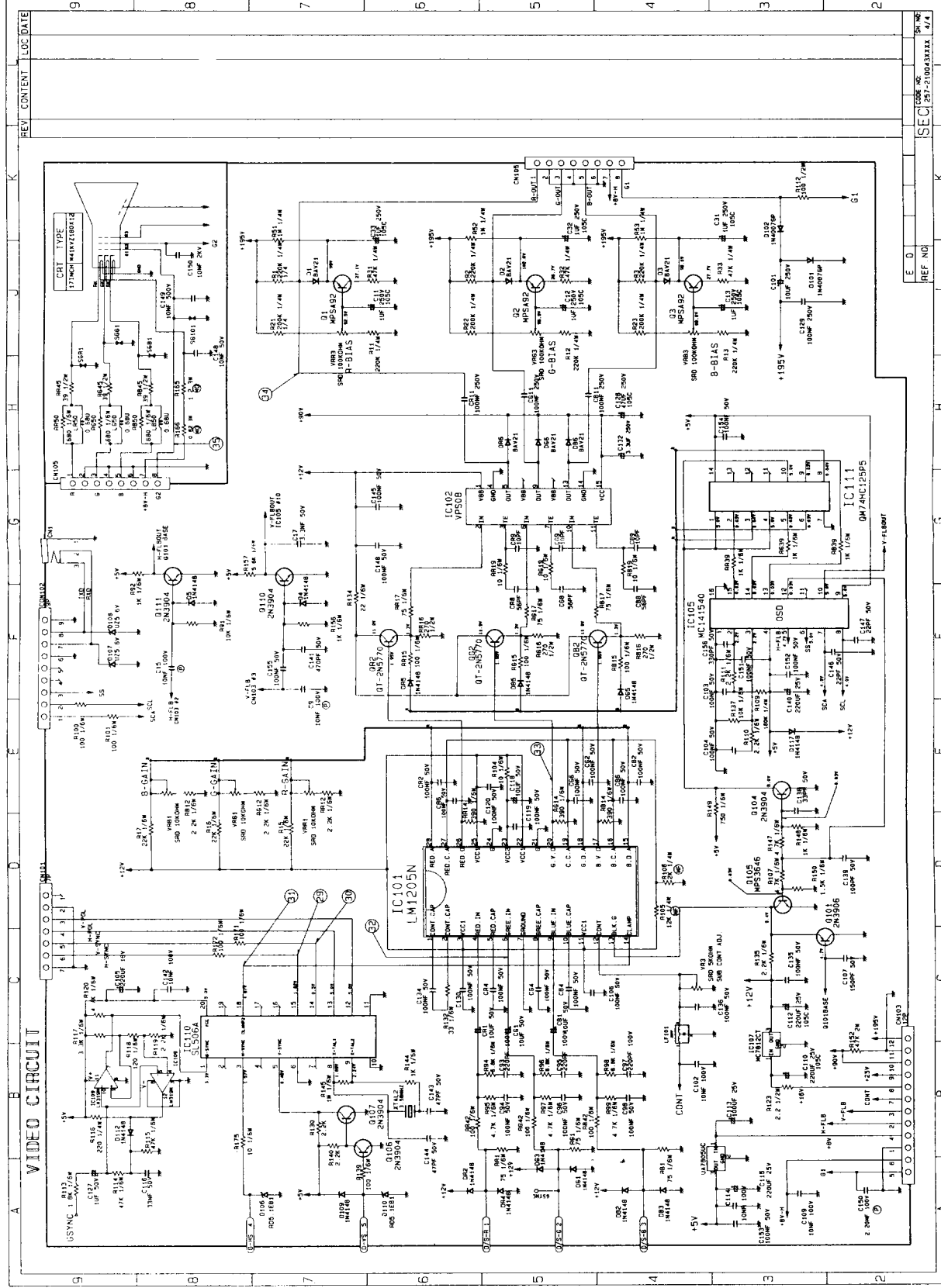
SCHEMATIC DIAGRAM

VIDEO & CRT CIRCUITRY



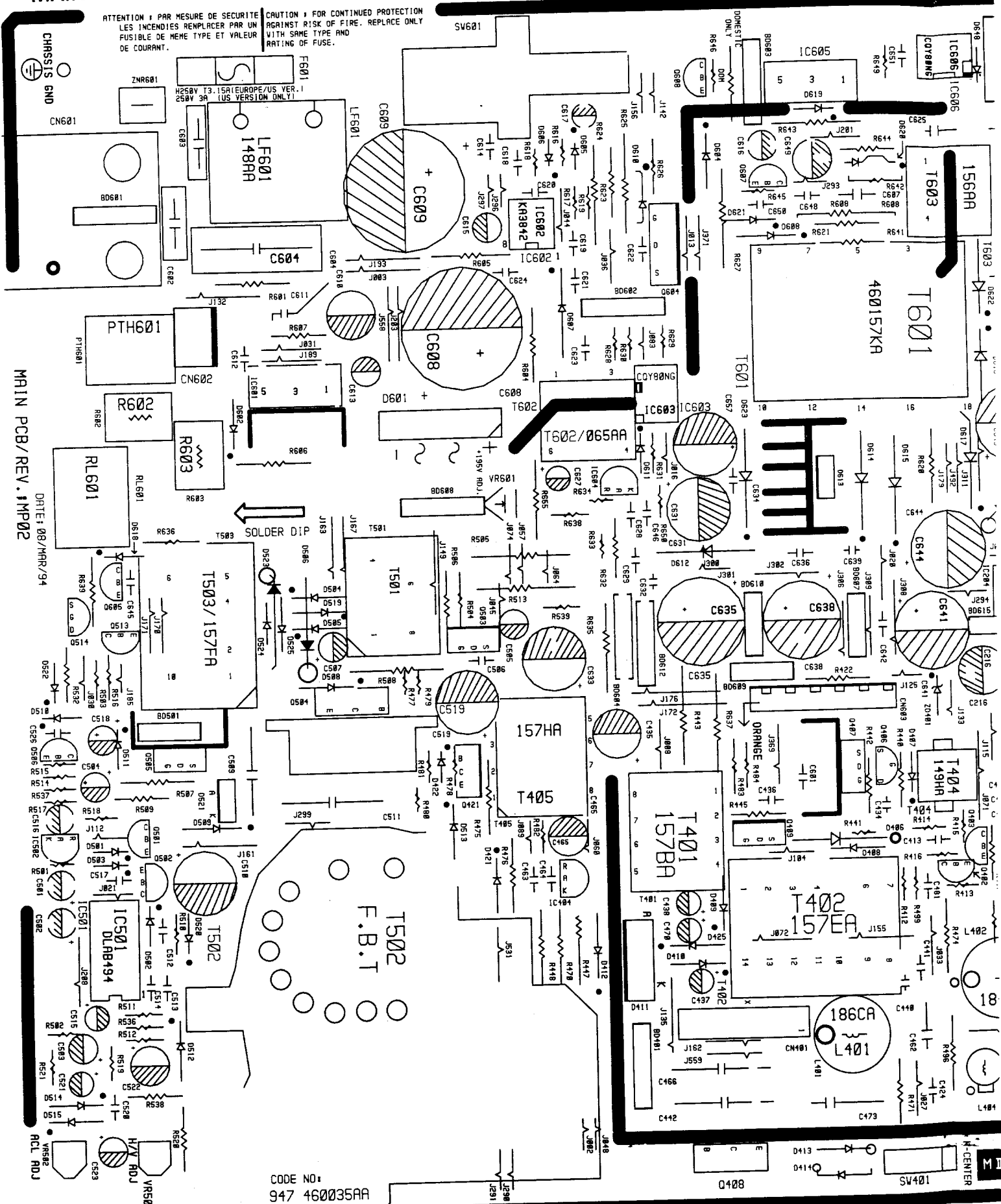
VIDEO & CRT CIRCUITRY

VIDEO & CRT CIRCUITRY

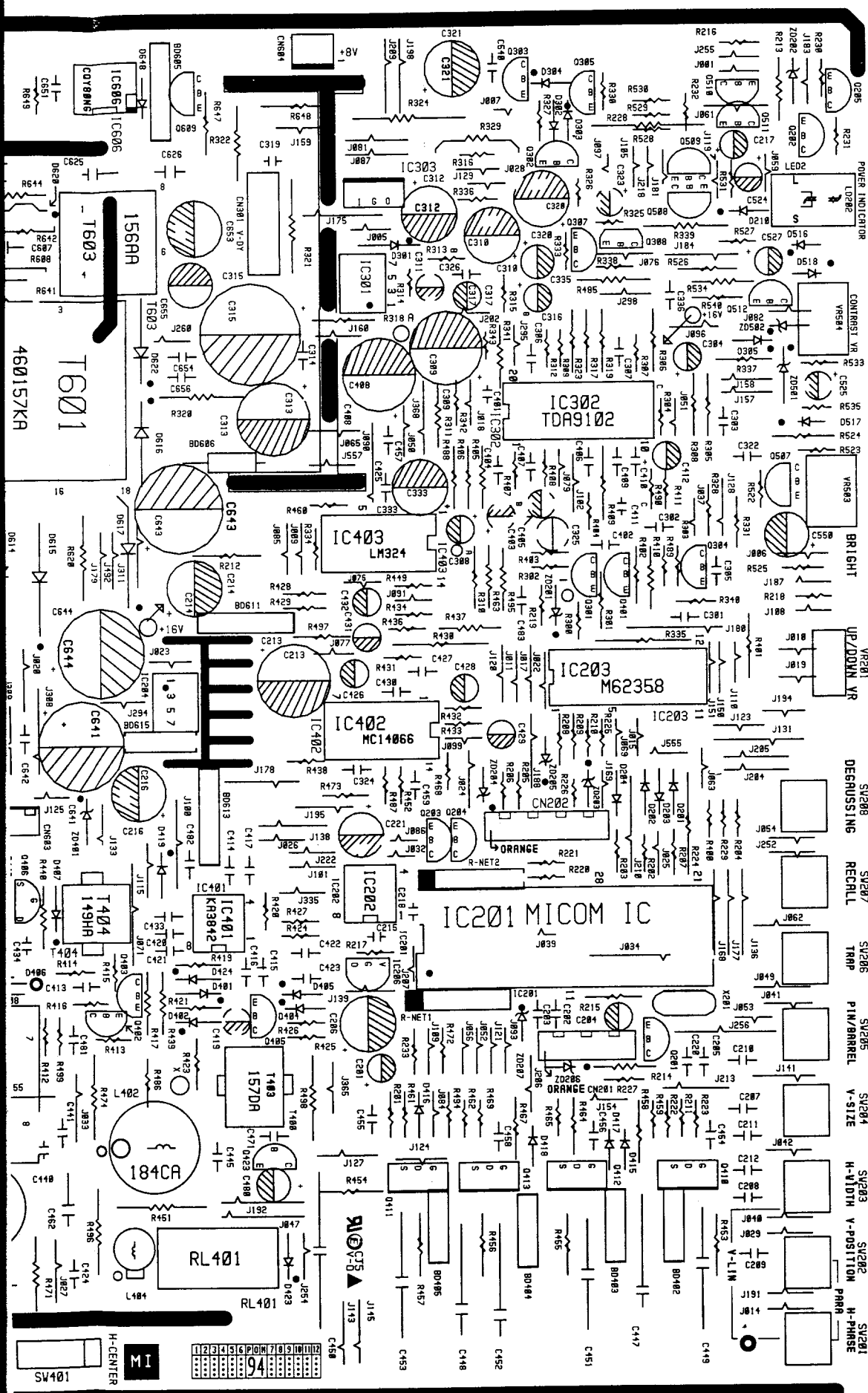


MAIN PCB (TOP VIEW)

CAUTION : FOR CONTINUED PROTECTION
AGAINST RISK OF FIRE. REPLACE ONLY
WITH SAME TYPE AND
RATING OF FUSE.



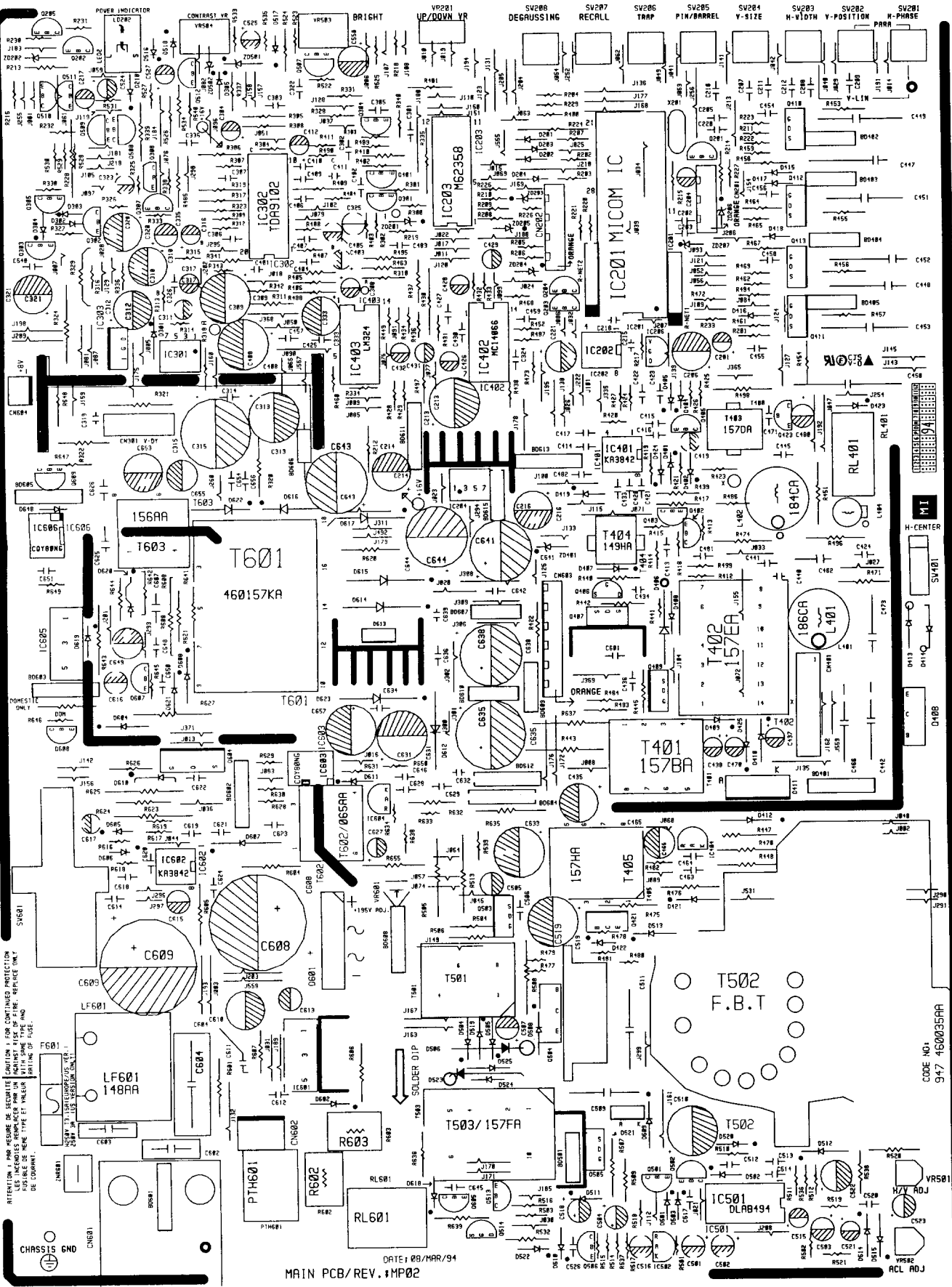
CODE NO:
947 460035AA



PRINTED CIRCUIT BOARD

MAIN PCB (TOP VIEW)

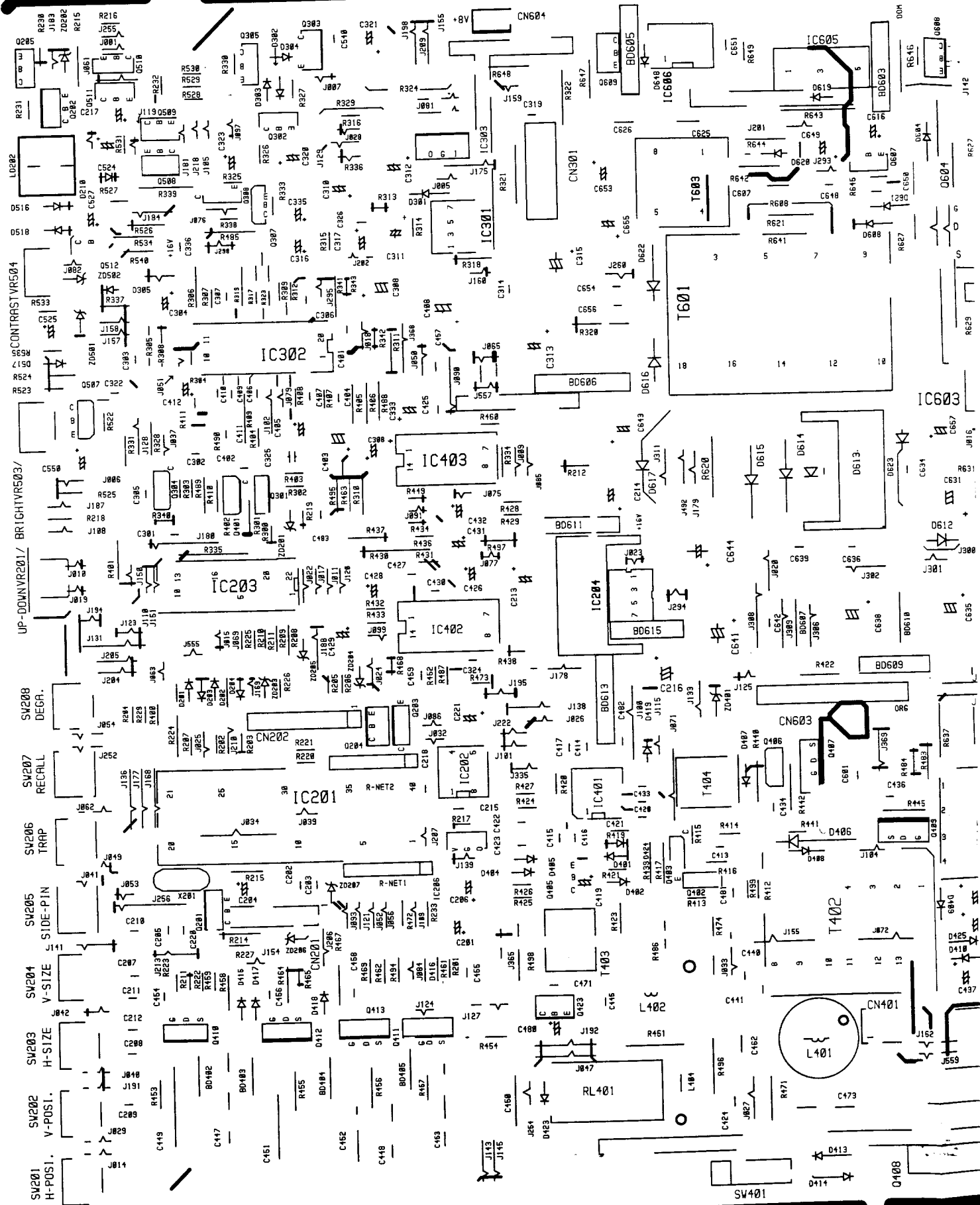
ATTENTION : POUR CONTINUER PROTECTION
DES LIGES EN CAS DE REMPLACEMENT
DE COMMANDE, NE PAS ENLEVER LE
FIL DE SURETÉ ET NE PAS
CHANGER LE TYPE ET LE NOMBRE
DE COMMANDE.

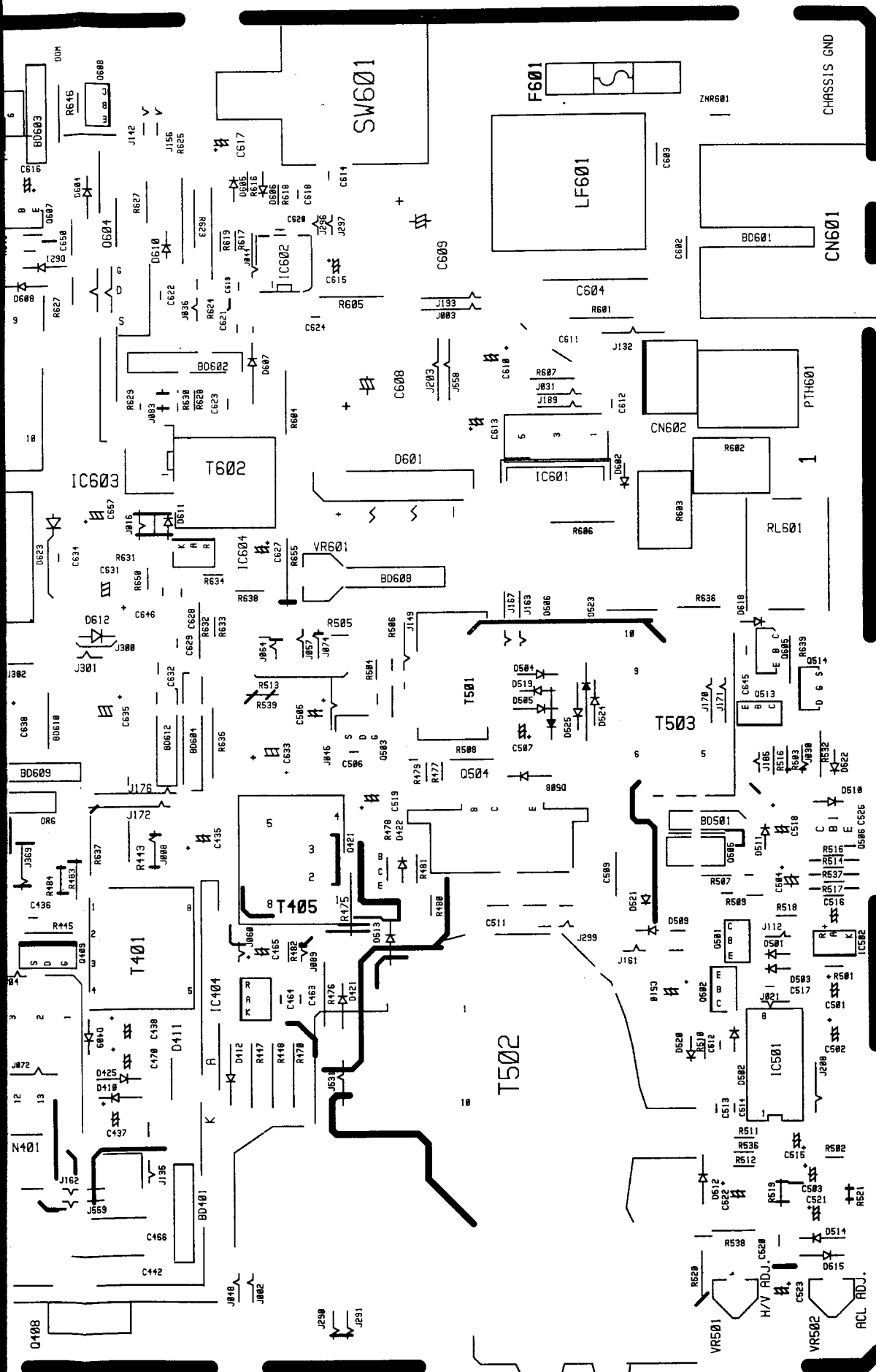


DATE: 08/MAR/94
MAIN PCB/REV. 1MP02

PRINTED CIRCUIT BOARD

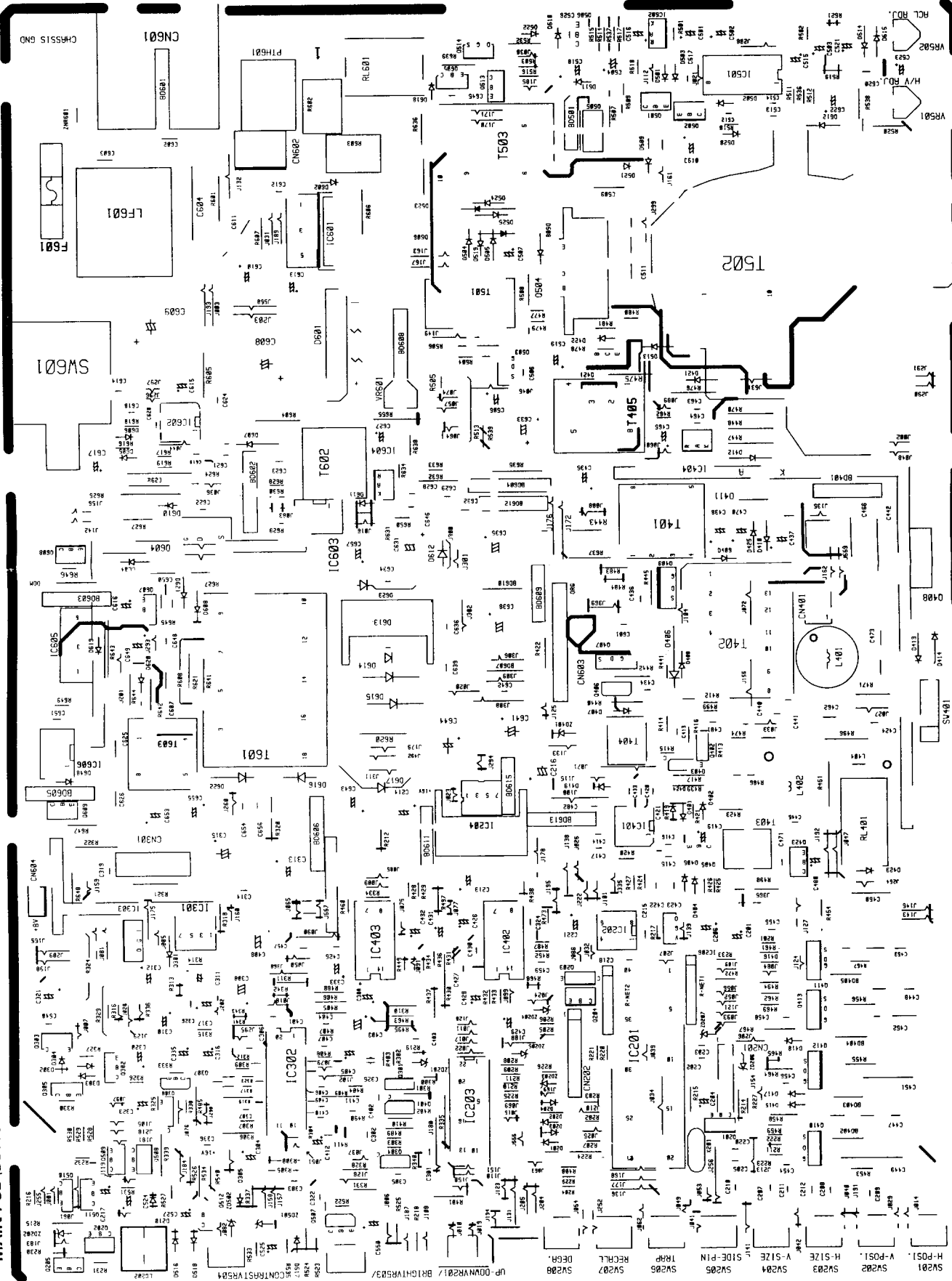
MAIN PCB (BOTTOM VIEW)





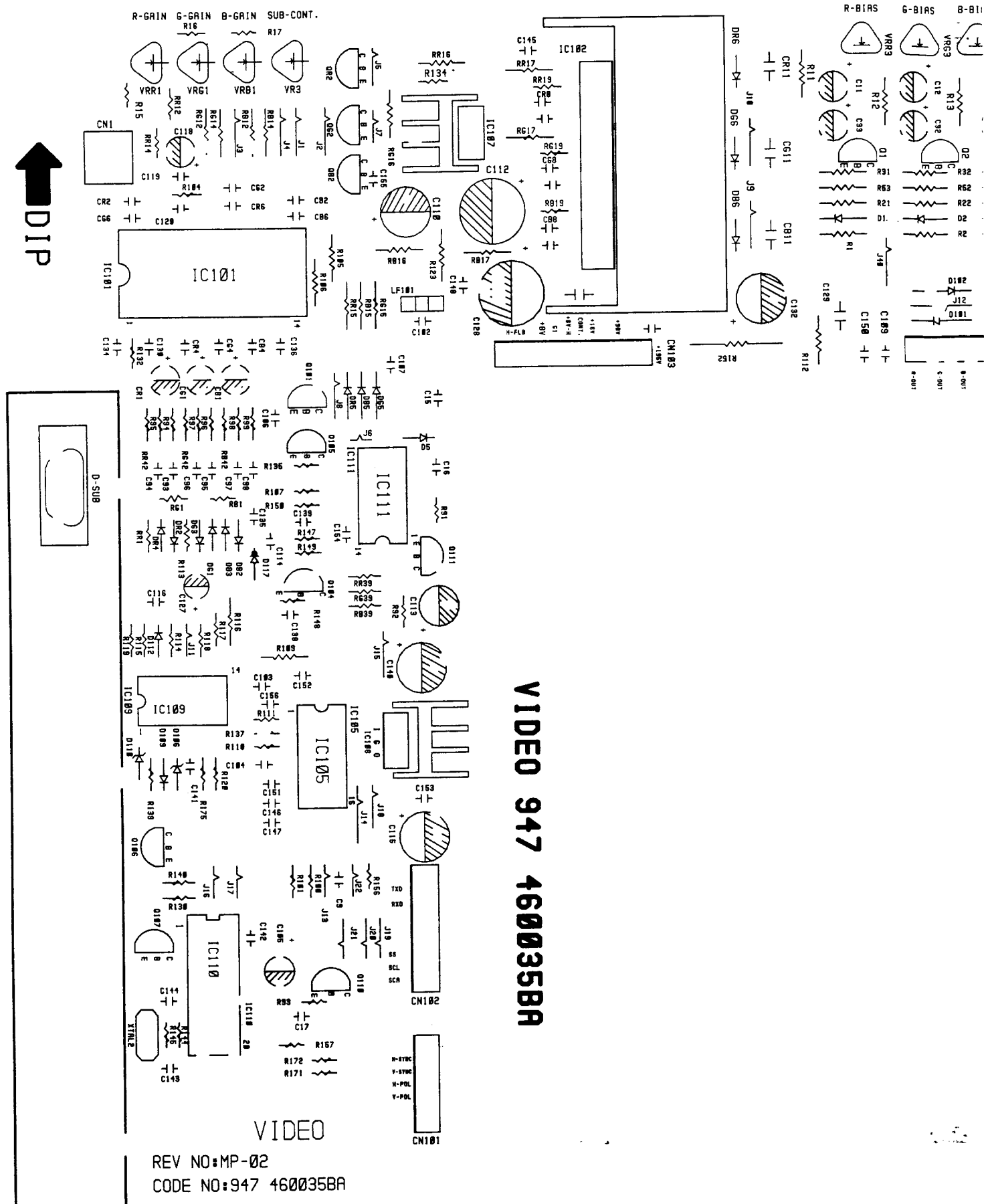
PRINTED CIRCUIT BOARD

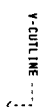
MAIN PCB (BOTTOM VIEW)



PRINTED CIRCUIT BOARD

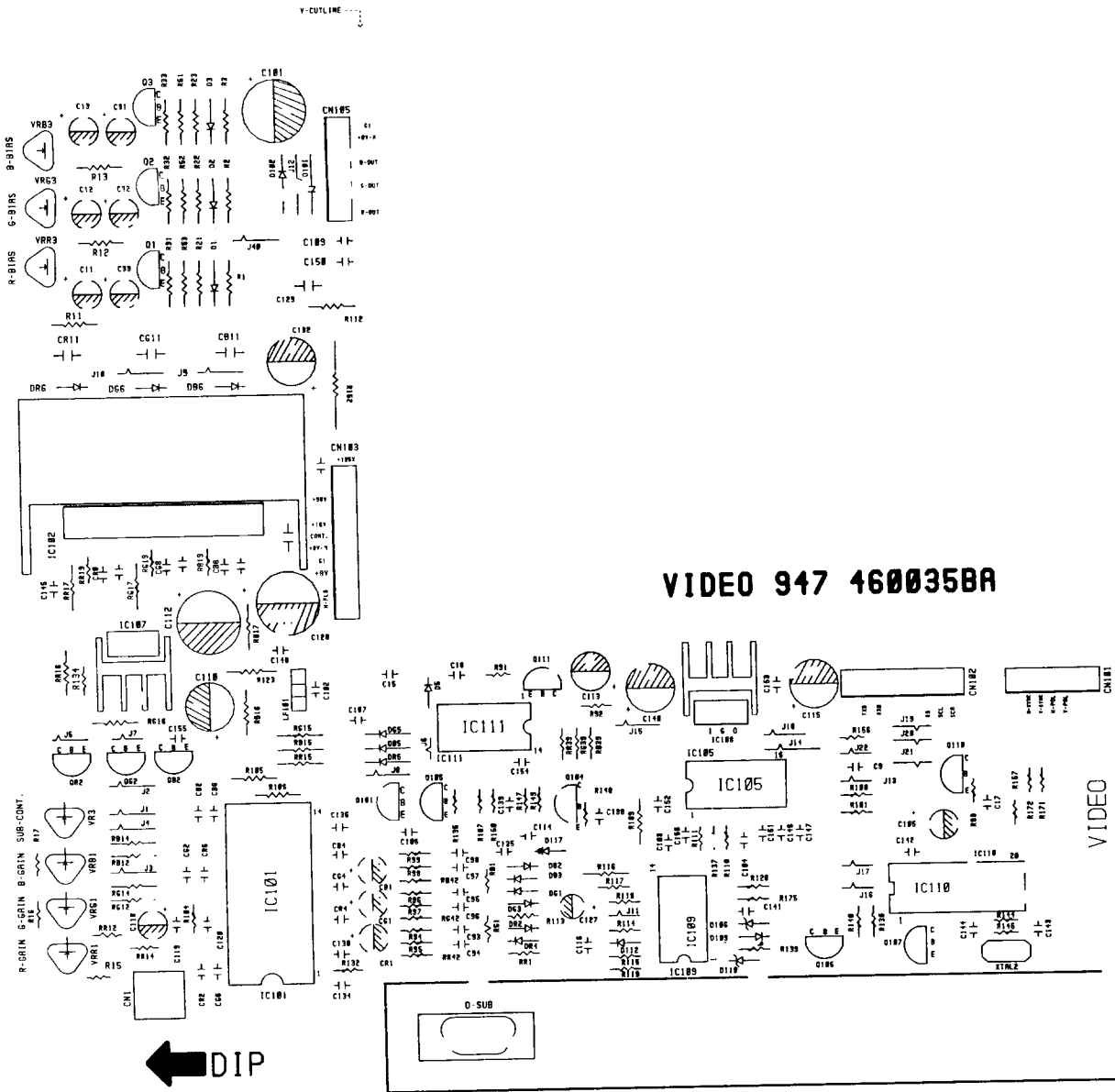
VIDEO PCB (TOP VIEW)





PRINTED CIRCUIT BOARD

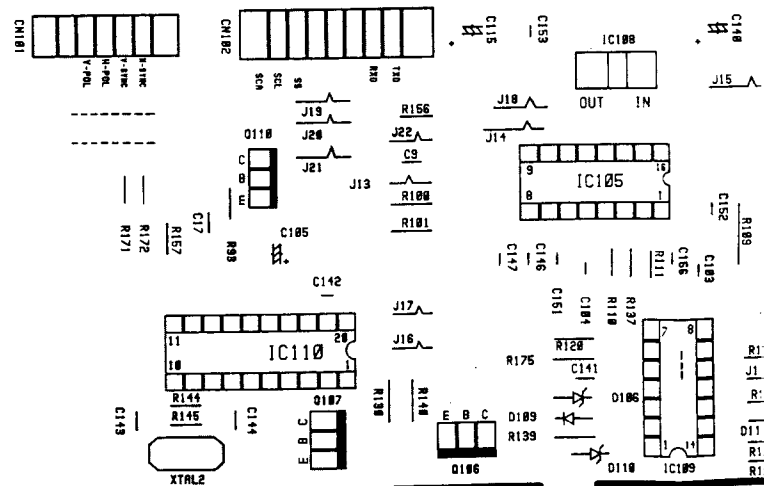
VIDEO PCB (TOP VIEW)



VIDEO 947 4600358A

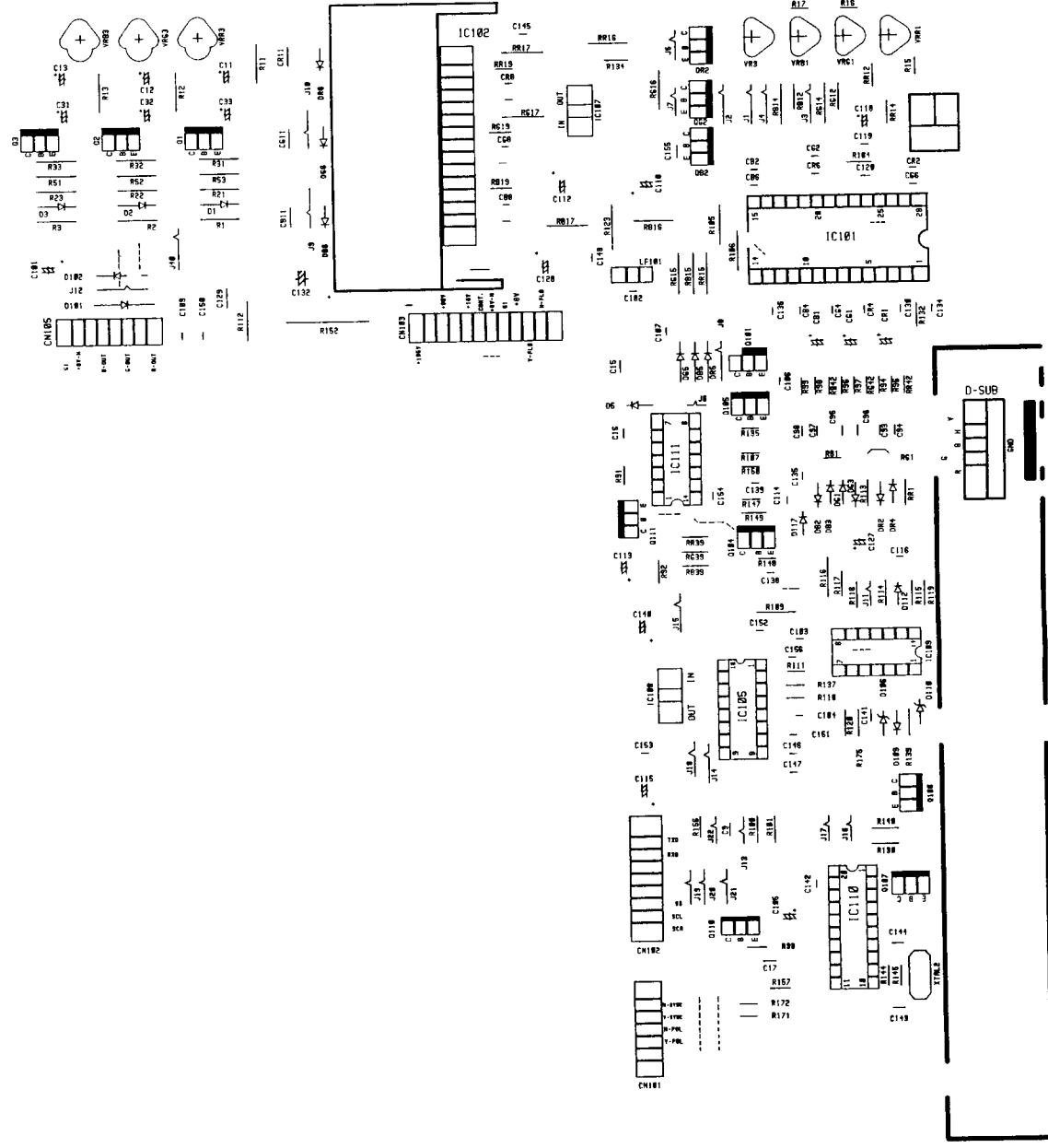
VIDEO

REV NO: MP-02
CODE NO: 947 4600358A



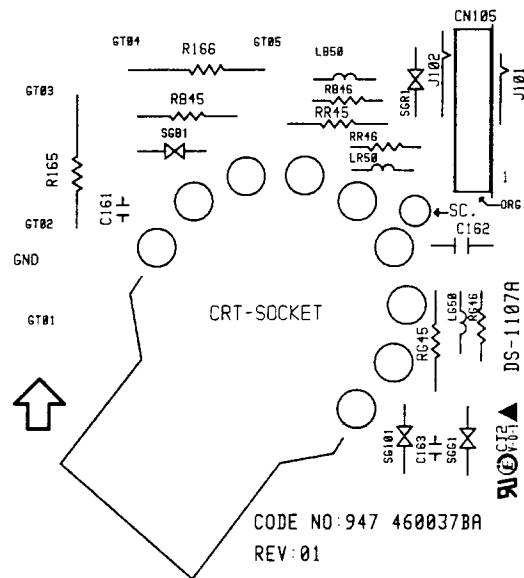
3



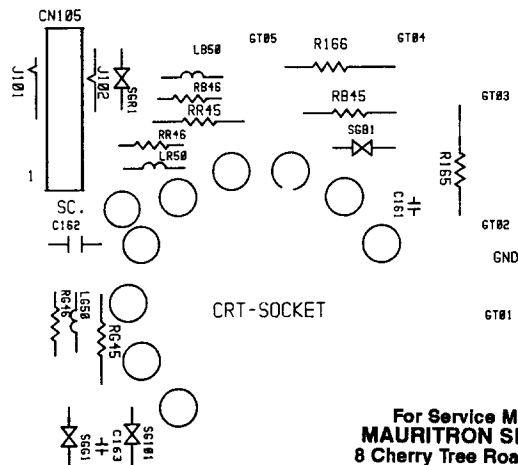
[illegible]

PRINTED CIRCUIT BOARD

CRT SOCKET PCB (TOP VIEW)



CRT SOCKET PCB (BOTTOM VIEW)



For Service Manuals
MAURITRON SERVICES
 8 Cherry Tree Road, Chinnor
 Oxfordshire, OX9 4QY.
 Tel (01844) 351694
 Fax (01844) 352554
 email:- mauritron@dial.pipex.com

ELECTRICAL PARTS LIST

IMPORTANT SAFETY NOTICE

Component identified by the symbol  have special characteristic important to safety. When replacing any of these components, use only manufacturer's specified parts.

NOTE

- Tolerance : F; $\pm 1\%$, J; $\pm 5\%$, K; $\pm 10\%$, M; $\pm 20\%$, P; $+100\sim 0\%$, Z; $+80\sim -20\%$
- Rated Voltage

0J: 6.3V, 1A:10V, 1C:16V, 1D:20V, 1E:25V, 1F:35V, 1G:40V, 1H:50V, 1J:63V, 1K:75V, 2A:100V, 2B:125V, 2C:160V, 2D:200V, 2E:250V, 2V:350V, 2G:400V, 2W:450V, 2H:500V, 2J:630V, 3A:1KV, 3C:1.6KV, 3D:2KV.

LOC. NO	DESCRIPTION	CODE NO	REMARK
MAIN PCB PARTS			
CAPACITORS			
C201	CAP-AL.ELEC,106M,1E	917 122100EM	
C202	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C203	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C204	CAP-AL.ELEC,336M,1C	917 122330CM	
C205	CAP-CERAMIC,270J,1H,NPO	915 312270HJXH	
C206	CAP-AL.ELEC,226M,1E	917 122220EM	
C207	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C208	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C209	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C210	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C211	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C212	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C213	CAP-AL.ELEC,108M,1C,105C	917 744100CM	
C214	CAP-AL.ELEC,477M,1C,105C	917 743470CM	
C215	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C216	CAP-AL.ELEC,477M,1C	917 123470CM	
C217	CAP-AL.ELEC,106M,1E	917 122100EM	
C220	CAP-CERAMIC,270J,1H,NPO	915 312270HJXH	
C221	CAP-AL.ELEC,107M,1C	917 123100CM	
C301	CAP-MYLAR,223J,2A,5P	916 165220LJAH	
C302	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C303	CAP-MPETP,104J,1J,5P	916 566100JJAH	
C304	CAP-AL.ELEC,475M,1H	917 121470HM	
C305	CAP-MYLAR,103J,2A,5P	916 165100LJAH	
C306	CAP-MPETP,105K,1J,5P	916 567100JKAH	
C307	CAP-MPETP,224K,1J,5P	916 566220JKAH	

LOC. NO	DESCRIPTION	CODE NO	REMARK
C308	CAP-AL.ELEC,475M,1H	917 121470HM	
C309	CAP-AL.ELEC,108M,1V,105C	917 874100FMAX	
C310	CAP-AL.ELEC,477M,1C	917 123470CM	
C311	CAP-AL.ELEC,475M,1H	917 121470HM	
C312	CAP-AL.ELEC,227M,1V	917 123220FM	
C313	CAP-AL.ELEC,108M,1V,105C	917 874100FMAX	
C314	CAP-MPETP,104J,1J,5P	916 566100JJA	
C315	CAP-AL.ELEC,228M,1V,105C	917 744220FMBX	
C316	CAP-AL.ELEC,106M,1E	917 122100EM	
C317	CAP-AL.ELEC,226M,1E	917 122220EM	
C318	CAP-MYLAR,103J,2A,5P	916 165100LJA	
C319	CAP-MPETP,224K,1J,5P	916 566220JKA	
C320	CAP-AL.ELEC,227M,1V,105C	917 743220FM	
C321	CAP-AL.ELEC,107M,1V	917 123100FMAX	
C322	CAP-MPETP,104J,1J,5P	916 566100JJA	
C323	CAP-AL.ELEC,475M,1H	917 121470HM	
C324	CAP-MPETP,224K,1J,5P	916 566220JKA	
C325	CAP-AL.ELEC,106M,1E,105C	917 242100EM	
C326	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C333	CAP-AL.ELEC,337M,1E	917 123330EM	
C335	CAP-AL.ELEC,105M,2C	917 121100NM	
C336	CAP-MYLAR,333K,2A,5P	916 165330LKA	
C401	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C402	CAP-CERAMIC,221J,2A,MONO	915 163220LJXH	
C403	CAP-AL.ELEC,475M,1H	917 121470HM	
C404	CAP-PPF,102J,2A,7.5P	916 354100LJA	
C405	CAP-AL.ELEC,225M,1H	917 121220HM	
C406	CAP-CERAMIC,221J,2A,MONO	915 163220LJXH	
C407	CAP-MYLAR,153J,2A,5P	916 165150LJA	
C408	CAP-AL.ELEC,477M,1E	917 123470EM	
C409	CAP-MPETP,104J,1J,5P	916 566100JJA	
C410	CAP-MPETP,223J,2A	916 585220LJAX	
C411	CAP-MYLAR,153J,2A,5P	916 165150LJA	
C412	CAP-AL.ELEC,335M,1H	917 121330HM	
C413	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C414	CAP-PPF,222J,2A	915 354220LJAX	
C415	CAP-MYLAR,223J,2A,5P	916 165220LJA	
C416	CAP-MYLAR,272J,2A,5P	916 164270LJA	
C417	CAP-CERAMIC,471J,2A,MONO	915 163470LJXH	
C419	CAP-AL.ELEC,226M,1E	917 122220EM	
C420	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C421	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C422	CAP-MPETP,103K,2A,5P	916 565100LKA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
C423	CAP-MPETP,104J,1J,5P	916 566100JJA	
C424	CAP-CERAMIC,221K,3A,Y5P	915 323220XKPH	
C425	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C426	CAP-AL.ELEC,106M,1E	917 122100EM	
C427	CAP-MPETP,224K,1J,5P	916 566220JKAH	
C428	CAP-AL.ELEC,335M,1H	917 121330HM	
C429	CAP-AL.ELEC,106M,1E	917 122100EM	
C430	CAP-MPETP,473K,2A,5P	916 565470LKAH	
C431	CAP-AL.ELEC,335M,1H	917 121330HM	
C432	CAP-AL.ELEC,475M,1H	917 121470HM	
C433	CAP-MPETP,103K,2A,5P	916 565100LKAH	
C434	CAP-MYLAR,332J,2A,5P	916 164330LJAH	
C435	CAP-SL.ELEC, 107M, 1V	917 123100FMAX	
C436	CAP-CERAMIC,102K,1H,Y5P	915 324100HKPH	
C437	CAP-TANTAL,336K,1D	917 312330DK	
C438	CAP-TANTAL,336K,1D	917 312330DK	
C440	CAP-CERAMIC,101K,3D,Y5P	915 323100YKPX	
C441	CAP-CERAMIC,102K,3A,DISC	915 324100XKPH	
C442	CAP-PPF,222J,3C	916 354220YJAX	
C445	CAP-CERAMIC,102K,3A,DISC	915 324100XKPH	
C447	CAP-MPPF,304J,2G	916 656300TJAX	
C448	CAP-MPPF,104J,2G,12.5P	916 656100TJAX	
C449	CAP-MPPF,474J,2G	916 656470TJAX	
C450	CAP-MPPF,474J,2G	916 656470TJAX	
C451	CAP-MPPF,154J,2G	916 656150TJAX	
C452	CAP-MPPF,104J,2G,12.5P	916 656100TJAX	
C453	CAP-MPPF,334J,2G	916 656330TJAX	
C454	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C455	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C456	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C457	CAP-CERAMIC,471J,2A,MONO	915 163470LJXH	
C458	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C459	CAP-MPETP,103K,2A,5P	916 565100LKAH	
C462	CAP-MYLAR,473K,2G	916 165470TKAX	
C463	CAP-CERAMIC,102K,3A,DISC	915 324100XKPH	
C464	CAP-MYLAR,332J,2A,5P	916 164330LJAH	
C465	CAP-AL.ELEC,336M,1H	917 122330HM	
C466	CAP-PPF,222J,3C	916 354220YJAX	
C470	CAP-TANTAL,336K,1D	917 312330DK	
C471	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C473	CAP-PPF,183J,2G	916 355180TJAX	
C480	CAP-AL.ELEC,476M,1E	917 122470EM	
C481	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	

LOC. NO	DESCRIPTION	CODE NO	REMARK
C482	CAP-CERAMIC,101J,1H,SL	915 313100HJHH	
C483	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C501	CAP-AL.ELEC,107M,1C	917 723100CM	
C502	CAP-AL.ELEC,107M,1C	917 723100CM	
C503	CAP-AL.ELEC,476M,1E	917 122470EM	
C504	CAP-AL.ELEC,335M,1H	917 121330HM	
C505	CAP-AL.ELEC,476M,1E,105C	917 742470EM	
C506	CAP-CERAMIC,471K,1H,Y5P	915 323470HKPH	
C507	CAP-TANTAL,336K,1D	917 312330DK	
C509	CAP-PPF,102K,3D,17.5P	916 354100ZKAX	
C510	CAP-AL.ELEC,476M,2E,105C	917 872470QM	
C511	CAP-MPPF,334J,2G	916 656330TJAX	
C512	CAP-MPETP,223J,2A	916 585220LJAX	
C513	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C514	CAP-CERAMIC,681K,1H,Y5P	915 323680HKPH	
C515	CAP-AL.ELEC,226M,1E	917 122220EM	
C516	CAP-AL.ELEC,226M,1E	917 122220EM	
C517	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C518	CAP-AL.ELEC,226M,1V	917 122220FM	
C519	CAP-AL.ELE,106M,2E,10X20	917 742100QM	
C520	CAP-MPETP,104J,1J,5P	916 566100JJAH	
C521	CAP-AL.ELEC,335M,1H	917 121330HM	
C522	CAP-AL.ELEC,107M,1E	917 123100EM	
C523	CAP-AL.ELEC,476M,1C	917 122470CM	
C524	CAP-AL.ELEC,105M,1H	917 121100HM	
C525	CAP-AL.ELEC,105M,1H	917 121100HM	
C526	CAP-MPETP,103K,2A,5P	916 565100LKAH	
C527	CAP-AL.ELEC,105M,1H	917 121100HM	
C540	CAP-CERAMIC,102K,3A,DISC	915 324100XKPH	
C550	CAP-AL.ELEC,107M,1E	917 123100EM	
C601	CAP-CERAMIC,103Z,2H,DISC	915 325100VZVH	
C602	CAP-MPAPER,472M,250VAC	918 144470QM	
C603	CAP-MPAPER,472M,250VAC	918 144470QM	
C604	CAP-MPAPER,474K,250VAC	918 146470QK	
C607	CAP-CERAMIC,103P,3D,Y5U	915 325100YPUX	
C608	CAP-AL.ELEC,477M,2E 105C	917 793470QMAX	
C609	CAP-AL.ELEC,477M,2E 105C	917 793470QMAX	
C610	CAP-AL.ELEC,335M,2W,105C	917 871330UM	
C612	CAP-MYLAR,104J,2A,5P	916 166100LJAH	
C613	CAP-AL.ELEC,107M,1E	917 123100EM	
C614	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C615	CAP-AL.ELEC,476M,1E	917 122470EM	
C616	CAP-AL.ELEC,476M,1E	917 122470EM	

LOC. NO	DESCRIPTION	CODE NO	REMARK
C617	CAP-AL.ELEC,105M,1H	917 121100HM	
C618	CAP-PPF,272J,2A	916 354270LJAH	
C619	CAP-MYLAR,152J,2A,5P	916 164150LJAH	
C620	CAP-CERAMIC,471J,2A,MONO	915 163470LJXH	
C621	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C622	CAP-CERAMIC,221K,3A,Y5P	915 323220XKPH	
C623	CAP-MYLAR,392K,2A,5P	916 164390LKAH	
C624	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C625	CAP-CERAMIC,472M,2B,DISC	915 344470MMVH	
C626	CAP-CERAMIC,472M,2B,DISC	915 344470MMVH	
C627	CAP-AL.ELEC,475M,1H	917 121470HM	
C628	CAP-CERAMIC,102K,1H,Y5P	915 324100HKPH	
C629	CAP-CERAMIC,222K,2H,Y5P	915 324220VKPH	
C631	CAP-AL.ELEC,476M,2E,105C	917 872470QM	
C632	CAP-CERAMIC,103Z,2H,DISC	915 325100VZVH	
C633	CAP-AL.ELEC,476M,2E,105C	917 872470QM	
C634	CAP-CERAMIC,101K,3D,Y5P	915 323100YKPX	
C635	CAP-AL.ELEC,227M,2C,105C	917 813220NM	
C636	CAP-CERAMIC,103Z,2H,DISC	915 325100VZVH	
C638	CAP-AL.ELEC,108M,1V,105C	917 744100FM	
C639	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C641	CAP-AL.ELEC,108M,1V,105C	917 744100FM	
C642	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C643	CAP-AL.ELEC,228M,1C,105C	917 874220CMAH	
C644	CAP-AL.ELEC,228M,1E,105C	917 874220EM	
C645	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C646	CAP-CERAMIC,472K,1H,Y5P	915 324470HKPH	
C648	CAP-MYLAR,682J,2A,5P	916 164680LJAH	
C649	CAP-AL.ELEC,107M,1C	917 123100CM	
C650	CAP-MYLAR,103J,2A,5P	916 165100LJAH	
C651	CAP-MYLAR,103J,2A,5P	916 165100LJAH	
C653	CAP-AL.ELEC,477M,1C	917 123470CM	
C654	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C655	CAP-AL.ELEC,107M,1E	917 123100EM	
C656	CAP-CERAMIC,104Z,1H,Y5V	915 336100HZVH	
C657	CAP-AL.ELEC,477M,1E	917 123470EM	
DIODES			
D201	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D202	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D203	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D204	DIODE-SIG,1N4148,DO-35	893 114148AANM	

LOC. NO	DESCRIPTION	CODE NO	REMARK
D210	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D301	DIODE-REC,1N4001,DO-41	893 314001AANH	
D302	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D303	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D304	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D305	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D401	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D402	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D404	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D405	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D406	DIODE-REC,UF5404,DO201AD	893 399044AA	
D407	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D408	DIODE-REC,UF4004,DO-41	893 394004AA	
D409	DIODE-REC,1N4001,DO-41	893 314001AANH	
D410	DIODE-REC,1N4002,DO-41	893 314002AANE	
D411	DIODE-REC,5THZ52,	893 399073AA	
D412	DIODE-REC,UF4001,DO-41	893 394001AA	
D413	DIODE-REC,1N4937,DO-41	893 314937AB	
D414	DIODE-REC,1N4937,DO-41	893 314937AB	
D415	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D416	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D417	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D418	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D419	DIODE-SIG,BAV21,DO-35	893 190021AANA	
D421	DIODE-REC,UF4007,DO-41	893 394007AA	
D422	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D423	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D424	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D425	DIODE-REC,1N4001,DO-41	893 314001AANH	
D501	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D502	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D503	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D504	DIODE-REC,1N4001,DO-41	893 314001AANH	
D505	DIODE-REC,1N4002,DO-41	893 314002AANE	
D506	DIODE-REC,UF5408,DO201AD	893 395408AA	
D508	DIODE-RGP02-12	02169-206-297	
D509	DIODE-REC,UF4004,DO-41	893 394004AA	
D510	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D511	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D512	DIODE-REC,1N4937,DO-41	893 314937AB	
D513	DIODE-REC,1N4937,DO-41	893 314937AB	
D514	DIODE-REC,1N4002,DO-41	893 314002AANE	
D515	DIODE-REC,1N4002,DO-41	893 314002AANE	
D516	DIODE-SIG,1N4148,DO-35	893 114148AANM	

LOC. NO	DESCRIPTION	CODE NO	REMARK
D517	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D518	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D519	DIODE-REC,1N4001,DO-41	893 314001AANH	
D520	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D521	DIODE-MUR10120E	02169-205-200	
D522	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D523	DIODE-REC,UF5408,DO201AD	893 395408AA	
D524	DIODE-REC,1N4001,DO-41	893 314001AANH	
D525	DIODE-REC,1N4001,DO-41	893 314001AANH	
D601	DIODE-REC,KBL06,BRIDGE	893 399012AA	
D602	DIODE-REC,1N4007GP,DO-41	893 314007BA	
D604	DIODE-REC,UF4007,DO-41	893 394007AA	
D605	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D606	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D607	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D608	DIODE-RGP02-12	02169-206-297	
D610	DIODE-RGP02-12	02169-206-297	
D611	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D612	DIODE-REC,UF5408,DO201AD	893 395408AA	
D613	DIODE-REC,MUR8100,TO-220	893 398100AA	
D614	DIODE-REC,UF5408,DO201AD	893 395408AA	
D615	DIODE-REC,UF5404,DO201AD	893 399044AA	
D616	DIODE-REC,1R5GU41	893 399030AA	
D617	DIODE-REC,UF5404,DO201AD	893 399044AA	
D618	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D619	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D620	DIODE-REC,1N4002,DO-41	893 314002AANE	
D621	DIODE-REC,UF4004,DO-41	893 394004AA	
D622	DIODE-REC,1R5GU41	893 399030AA	
D623	DIODE-REC,UF5408,DO201AD	893 395408AA	
D648	DIODE-SIG,1N4148,DO-35	893 114148AANM	
ZD201	DIODE-ZEN,UZ-12BM,DO-35	893 290031BB	
ZD202	DIODE-ZEN,UZ-5.1B,DO-35	893 290031FB	
ZD203	DIODE-ZEN,UZ-5.1B,DO-35	893 290031FB	
ZD204	DIODE-ZEN,UZ-5.1B,DO-35	893 290031FB	
ZD205	DIODE-ZEN,UZ-5.1B,DO-35	893 290031FB	
ZD206	DIODE-ZEN,BZX79C5V6,DO35	893 290004AE	
ZD207	DIODE-ZEN,BZX79C5V6,DO35	893 290004AE	
ZD401	DIODE-ZEN,BZX79C5V6,DO35	893 299004AE	
ZD501	DIODE-ZEN,UZP-24B,DO-41	893 290032AC	
ZD502	DIODE-ZEN,ZPD2,7,DO-35	893 290002AC	
ICS			
IC201	IC-MPU,MASKING,8052	877 808052EB	
IC201	CON-IC SOCKET,40P	935 155140DC	

LOC. NO	DESCRIPTION	CODE NO	REMARK
IC202	IC-MEM,EEPROM,93C66,-	883 609366AA	
IC203	IC-LIN,62358,D/A CONVERT	881 462358AA	
IC204	IC-LIN,8138A,REGULATOR	881 308138SA	
IC206	IC-LIN,7045,REGULATOR	881 307045TA	
IC301	IC-LIN,8172,VERTICAL	881 708172SA	
IC302	IC-LIN,9102,H/V PROCCSSO	881 709102AA	
IC303	IC-LIN,7824,REGULATOR	881 307824KA	
IC401	IC-LIN,3842,PWM CONTROL	881 903842AB	
IC402	IC-MOS,14066,SWITCH	873 404066AANG	
IC403	IC-LIN,324,OP AMP	881 100324AANB	
IC404	IC-LIN,431,REGULATOR	881 300431TANB	
⚠ IC501	IC-LIN,DL494,PWM	881 600494AA	
IC502	IC-LIN,431,REGULATOR	881 300431TANB	
⚠ IC602	IC-LIN,3842,PWM CONTROL	881 903842AB	
⚠ IC603	OPT-COUPPL,TR,CQY80NG	895 520080AA	
IC604	IC-LIN,431,REGULATOR	881 300431TANB	
⚠ IC605	IC-HYB,VOLTAGE REGULATION	887 490042AA	
⚠ IC606	OPT-COUPPL,TR,CQY80NG	895 520080AA	
R-NET1	IC-HYB,R-NETWORK,7P,10K	887 135103SE	
R-NET2	IC-HYB,R-NETWORK,7P,4.7K	887 135472SE	
TRANSISTORS			
Q201	TR-NPN,KSC945,TO-92	891 390006XB	
Q202	TR-NPN,KSC945,TO-92	891 390006XB	
Q203	TR-NPN,MPS3646,TO-92	891 393646AA	
Q204	TR-NPN,MPS3646,TO-92	891 393646AA	
Q205	TR-NPN,KSC945,TO-92	891 390006XB	
Q301	TR-NPN,KSC945,TO-92	891 390006XB	
Q302	TR-NPN,KSC945,TO-92	891 390006XB	
Q303	TR-PNP,KSA733,TO-92	891 190733XC	
Q304	TR-NPN,KSC945,TO-92	891 390006XB	
Q305	TR-NPN,2N3904,TO-92	891 323904XANC	
Q307	TR-NPN,KSC945,TO-92	891 390006XB	
Q308	TR-NPN,KSC945,TO-92	891 390006XB	
Q401	TR-NPN,2N3904,TO-92	891 323904XANC	
Q402	TR-NPN,2N3904,TO-92	891 323904XANC	
Q403	TR-NPN,2N3904,TO-92	891 323904XANC	
Q405	TR-PNP,KSA733,TO-92	891 190733XC	
Q406	FET-N,VN0606M,TO-237	891 890606AA	
Q407	FET-IRF 740 LSS(T)	02149-601-441	
Q408	TR-NPN,MJW16212,340B-03	891 499010AA	
Q409	FET-N,IRF610,TO-220AB	891 890610AA	
Q410	FET-N,IRF640,TO-220AB	891 890021AB	

LOC. NO	DESCRIPTION	CODE NO	REMARK
Q411	FET-N,IRF640,TO-220AB	891 890021AB	
Q412	FET-N,IRF640,TO-220AB	891 890021AB	
Q413	FET-N,IRF640,TO-220AB	891 890021AB	
Q421	TR-NPN,2SC3675,TO-220	891 463675AA	
Q423	TR-NPN,KSC1008,TO-92	891 391008XA	
Q501	TR-PNP,KSA733,TO-92	891 190733XC	
Q502	TR-NPN,KSP2222A,TO-92	891 392222XA	
 Q503	FET-N,IRF610,TO-220AB	891 890610AA	
 Q504	TR-NPN,MJW16212,340B-03	891 499010AA	
 Q505	FET-IRF 740 LSS(T)	02149-601-441	
Q506	TR-PNP,KSA733,TO-92	891 190733XC	
Q507	TR-NPN,KSC945,TO-92	891 390006XB	
Q508	TR-NPN,KSC945,TO-92	891 390006XB	
Q509	TR-NPN,KSC945,TO-92	891 390006XB	
Q510	TR-NPN,KSC945,TO-92	891 390006XB	
Q511	TR-PNP,KSA733,TO-92	891 190733XC	
Q512	TR-PNP,KSA733,TO-92	891 190733XC	
Q513	TR-PNP,MPS2907A,TO-92	891 192907XANA	
Q514	FET-N,(T)2N7000,TO-92	891 827000AA	
Q604	FET-N,2SK1358,TO-3P	891 881358AA	
Q605	TR-NPN,KSC1008,TO-92	891 391008XA	
Q607	TR-NPN,KSC945,TO-92	891 390006XB	
Q608	TR-NPN,KSC945,TO-92	891 390006XB	
Q609	TR-PNP,KSA733,TO-92	891 190733XC	
RESISTORS			
DOM	REF-CF,39K,5%,1/2W	911 153907FA	FOR KOREA
R201	REF-CF,1M,5%,1/6W	911 171007YA	
R202	REF-CF,1K,5%,1/6W	911 141007YA	
R203	REF-CF,1K,5%,1/6W	911 141007YA	
R204	REF-CF,10K,5%,1/6W	911 151007YA	
R205	REF-CF,1K,5%,1/6W	911 141007YA	
R206	REF-CF,1K,5%,1/6W	911 141007YA	
R207	REF-CF,10K,5%,1/6W	911 151007YA	
R208	REF-CF,100,5%,1/6W	911 131007YA	
R209	REF-CF,100,5%,1/6W	911 131007YA	
R210	REF-CF,100,5%,1/6W	911 131007YA	
R211	REF-CF,10K,5%,1/6W	911 151007YA	
R212	REF-CF,4.7K,5%,1/6W	911 144707YA	
R213	REF-CF,270,5%,1/4W	911 132707DA	
R214	REF-CF,100,5%,1/4W	911 131007DA	
R215	REF-CF,1K,5%,1/6W	911 141007YA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
R216	REF-CF,220,5%,1/6W	911 132207YA	
R217	REF-CF,330,5%,1/6W	911 133307YA	
R218	REF-CF,4.7K,5%,1/6W	911 144707YA	
R219	REF-CF,10,5%,1/6W	911 121007YA	
R220	REF-CF,10K,5%,1/6W	911 151007YA	
R221	REF-CF,10K,5%,1/6W	911 151007YA	
R222	REF-CF,10K,5%,1/6W	911 151007YA	
R223	REF-CF,15K,5%,1/6W	911 151507YA	
R224	REF-CF,1K,5%,1/6W	911 141007YA	
R225	REF-CF,1K,5%,1/6W	911 141007YA	
R226	REF-CF,1K,5%,1/6W	911 141007YA	
R227	REF-CF,1K,5%,1/6W	911 141007YA	
R228	REF-MO,560,5%,3W(S)	911 335607LF	
R229	REF-CF,10K,5%,1/6W	911 151007YA	
R230	REF-CF,4.7K,5%,1/6W	911 144707YA	
R231	REF-CF,4.7K,5%,1/6W	911 144707YA	
R232	REF-CF,10K,5%,1/6W	911 151007YA	
R233	REF-CF,1K,5%,1/6W	911 141007YA	
R300	REF-CF,1K,5%,1/6W	911 141007YA	
R301	REF-CF,10K,5%,1/6W	911 151007YA	
R302	REF-CF,10K,5%,1/6W	911 151007YA	
R303	REF-CF,3.3K,5%,1/6W	911 143307YA	
R304	REF-CF,2.2K,5%,1/6W	911 142207YA	
R305	REF-MF,220K,1%,1/4W	911 462205DA	
R306	REF-MF,47K,1%,1/4W	911 454705DA	
R307	REF-CF,270K,5%,1/6W	911 162707YA	
R308	REF-CF,8.2K,5%,1/6W	911 148207YA	
R309	REF-CF,12K,5%,1/6W	911 151207YA	
R310	REF-CF,10K,5%,1/6W	911 151007YA	
R311	REF-CF,150K,5%,1/6W	911 161507YA	
R312	REF-CF,68K,5%,1/6W	911 156807YA	
R313	REF-CF,22K,5%,1/6W	911 152207YA	
R314	REF-CF,22K,5%,1/6W	911 152207YA	
R315	REF-CF,3.9K,5%,1/6W	911 143907YA	
R316	REF-CF,3.9K,5%,1/6W	911 143907YA	
R317	REF-CF,6.2K,5%,1/6W	911 146207YA	
R318	REF-MF,3.3K,1%,1/4W	911 443305DA	
R319	REF-CF,47K,5%,1/6W	911 154707YA	
R320	REF-FUSIBLE,1.2,5%,1W	911 811207GA	
R321	REF-MO,300,5%,2W(S)	911 333007JF	
R322	REF-CF,1.5,5%,1/2W	911 111507FA	
R323	REF-CF,180K,5%,1/4W	911 161807DA	
R324	REF-MO,68,5%,3W(S)	911 326807LF	

LOC. NO	DESCRIPTION	CODE NO	REMARK
R325	REF-CF,10K,5%,1/6W	911 151007YA	
R326	REF-CF,6.8K,5%,1/6W	911 146807YA	
R327	REF-CF,22,5%,1/6W	911 122207YA	
R328	REF-CF,4.7K,5%,1/6W	911 144707YA	
R329	REF-MO,1,5%,2W(S)	911 311007JF	
R330	REF-CF,1.5K,5%,1/6W	911 141507YA	
R331	REF-CF,100K,5%,1/6W	911 161007YA	
R333	REF-CF,10K,5%,1/6W	911 151007YA	
R334	REF-CF,62K,5%,1/6W	911 156207YA	
R335	REF-CF,22,5%,1/6W	911 122207YA	
R336	REF-CF,3.3K,5%,1/6W	911 143307YA	
R337	REF-CF,100K,5%,1/6W	911 161007YA	
R338	REF-CF,22K,5%,1/6W	911 152207YA	
R339	REF-CF,1K,5%,1/2W	911 141007FA	
R340	REF-CF,2.7K,5%,1/6W	911 142707YA	
R341	REF-CF,22,5%,1/4W	911 122207DA	
R342	REF-CF,270K,5%,1/6W	911 162707YA	
R343	REF-CF,22,5%,1/6W	911 122207YA	
R400	REF-CF,1K,5%,1/6W	911 141007YA	
R401	REF-CF,4.7K,5%,1/6W	911 144707YA	
R402	REF-CF,5.6K,5%,1/6W	911 145607YA	
R403	REF-CF,3.3K,5%,1/6W	911 143307YA	
R404	REF-CF,1K,5%,1/6W	911 141007YA	
R405	REF-MF,15K,1%,1/4W	911 451505DA	
R406	REF-MF,2.2K,1%,1/4W	911 442205DA	
R407	REF-CF,33K,5%,1/6W	911 153307YA	
R408	REF-CF,3.3K,5%,1/6W	911 143307YA	
R409	REF-CF,150,5%,1/2W	911 131507FA	
R410	REF-CF,56K,5%,1/6W	911 155607YA	
R411	REF-CF,47K,5%,1/6W	911 154707YA	
R412	REF-CF,10K,5%,1/6W	911 151007YA	
R413	REF-CF,8.2K,5%,1/6W	911 148207YA	
R414	REF-CF,1K,5%,1/6W	911 141007YA	
R415	REF-CF,47K,5%,1/6W	911 154707YA	
R416	REF-CF,2.2K,5%,1/6W	911 142207YA	
R417	REF-CF,680,5%,1/2W(S)	911 136807FF	
R419	REF-CF,33K,5%,1/6W	911 153307YA	
R420	REF-CF,15K,5%,1/6W	911 151507YA	
R421	REF-CF,270K,5%,1/6W	911 162707YA	
R422	REF-CF,5.6K,5%,1/2W(S)	911 145607FF	
R423	REF-CF,3.9K,5%,1/6W	911 143907YA	
R424	REF-CF,10K,5%,1/6W	911 151007YA	
R425	REF-CF,2.2K,5%,1/6W	911 142207YA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
R426	REF-CF,82,5%,1/6W	911 128207YA	
R427	REF-CF,10K,5%,1/6W	911 151007YA	
R428	REF-CF,9.1K,5%,1/6W	911 149107YA	
R429	REF-CF,10K,5%,1/6W	911 151007YA	
R430	REF-CF,33K,5%,1/6W	911 153307YA	
R431	REF-CF,100K,5%,1/6W	911 161007YA	
R432	REF-CF,27K,5%,1/6W	911 152707YA	
R433	REF-CF,1.8M,5%,1/6W	911 171807YA	
R434	REF-CF,100K,5%,1/6W	911 161007YA	
R436	REF-CF,68K,5%,1/6W	911 156807YA	
R437	REF-CF,8.2K,5%,1/6W	911 148207YA	
R438	REF-CF,18K,5%,1/6W	911 151807YA	
R439	REF-CF,120,5%,1/4W	911 131207DA	
R440	REF-CF,560,5%,1/4W	911 135607DA	
R441	REF-CF,100K,5%,1/6W	911 161007YA	
R442	REF-CF,2.2,5%,1/2W	911 112207FA	
R443	REF-MO,33,5%,3W(T)	911 323307LAXA	
R445	REF-CF,1K,5%,1/4W	911 141007DA	
R447	REF-CF,3.9,5%,1/2W	911 113907FA	
R448	REF-CF,3.9,5%,1/2W	911 113907FA	
R449	REF-CF,33K,5%,1/6W	911 153307YA	
R451	REF-MO,270,5%,2W(S)	911 332707JF	
R452	REF-CF,1.5K,5%,1/6W	911 141507YA	
R453	REF-CF,1M,5%,1/6W	911 171007YA	
R454	REF-CF,1M,5%,1/6W	911 171007YA	
R455	REF-CF,1M,5%,1/6W	911 171007YA	
R456	REF-CF,1M,5%,1/6W	911 171007YA	
R457	REF-CF,1M,5%,1/6W	911 171007YA	
R458	REF-CF,1.2K,5%,1/6W	911 141207YA	
R459	REF-CF,10K,5%,1/6W	911 151007YA	
R460	REF-CF,3.3K,5%,1/6W	911 143307YA	
R461	REF-CF,1.2K,5%,1/6W	911 141207YA	
R462	REF-CF,4.7K,5%,1/6W	911 144707YA	
R463	REF-CF,56K,5%,1/4W	911 155607DA	
R464	REF-CF,1.2K,5%,1/6W	911 141207YA	
R465	REF-CF,10K,5%,1/6W	911 151007YA	
R467	REF-CF,1.2K,5%,1/6W	911 141207YA	
R468	REF-CF,22K,5%,1/6W	911 152207YA	
R469	REF-CF,10K,5%,1/6W	911 151007YA	
R470	REF-CF,3.9,5%,1/2W	911 113907FA	
R471	REF-FUSIBLE,4.7,5%,1/2W	911 814707FA	
R472	REF-CF,10K,5%,1/6W	911 151007YA	
R473	REF-CF,560K,5%,1/6W	911 165607YA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
R474	REF-MO,82,5%,2W(S)	911 328207JF	
R475	REF-CF,390K,5%,1/2W	911 163907FA	
R476	REF-CF,330K,5%,1/2W	911 163307FA	
R477	REF-CF,1.2K,5%,1/6W	911 141207YA	
R478	REF-CF,10K,5%,1/6W	911 151007YA	
R479	REF-CF,1K,5%,1/6W	911 141007YA	
R480	REF-CF,2.7K,5%,1/6W	911 142707YA	
R481	REF-CF,2.7K,5%,1/6W	911 142707YA	
R482	REF-CF,220K,5%,1/6W	911 162207YA	
R483	REF-CF,220K,5%,1/6W	911 162207YA	
R484	REF-CF,100,5%,1/6W	911 131007YA	
R485	REF-CF,1K,5%,1/4W	911 141007DA	
R486	REF-CF,47K,5%,1/6W	911 154707YA	
R487	REF-CF,220K,5%,1/6W	911 162207YA	
R488	REF-MF,1.8K,1%,1/4W	911 441805DA	
R489	REF-CF,330K,5%,1/6W	911 163307YA	
R490	REF-CF,4.7K,5%,1/6W	911 144707YA	
R494	REF-CF,22K,5%,1/6W	911 152207YA	
R495	REF-MF,820,1%,1/4W	911 438205DA	
R496	REF-MO,1K,5%,1W(S)	911 341007GF	
R497	REF-CF,33K,5%,1/6W	911 153307YA	
R498	REF-CF,100,5%,1/2W	911 131007FA	
R499	REF-CF,680,5%,1/6W	911 136807YA	
R501	REF-CF,1K,5%,1/6W	911 141007YA	
R502	REF-CF,1K,5%,1/6W	911 141007YA	
R503	REF-CF,3.3K,5%,1/6W	911 143307YA	
R504	REF-CF,100,5%,1/6W	911 131007YA	
R505	REF-MO,680,5%,3W(S)	911 336807LF	
R506	REF-CF,220,5%,1/2W	911 132207FA	
R507	REF-FUSIBLE,1.2,5%,1/2W	911 811207FA	
R509	REF-CF,2.2,5%,1/4W	911 112207DA	
R510	REF-CF,18K,5%,1/6W	911 151807YA	
R511	REF-CF,10K,5%,1/6W	911 151007YA	
R512	REF-CF,5.1K,5%,1/6W	911 145107YA	
R513	REF-MO,680,5%,3W(S)	911 336807LF	
R514	REF-CF,680,5%,1/6W	911 136807YA	
R515	REF-CF,4.7K,5%,1/6W	911 144707YA	
R516	REF-CF,1K,5%,1/6W	911 141007YA	
R517	REF-CF,5.1K,5%,1/6W	911 145107YA	
R518	REF-CF,39K,5%,1/6W	911 153907YA	
R519	REF-CF,5.1K,5%,1/6W	911 145107YA	
R520	REF-MF,68K,1%,1/4W	911 456805DA	
R521	REF-CF,12K,5%,1/6W	911 151207YA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
R522	REF-CF,1M,5%,1/6W	911 171007YA	
R523	REF-CF,10K,5%,1/6W	911 151007YA	
R524	REF-CF,68K,5%,1/6W	911 156807YA	
R525	REF-CF,3.3K,5%,1/6W	911 143307YA	
R526	REF-CF,5.6K,5%,1/6W	911 145607YA	
R527	REF-CF,33K,5%,1/6W	911 153307YA	
R528	REF-CF,12K,5%,1/6W	911 151207YA	
R529	REF-CF,12K,5%,1/6W	911 151207YA	
R530	REF-CF,1.5K,5%,1/6W	911 141507YA	
R531	REF-CF,1.5K,5%,1/6W	911 141507YA	
R532	REF-CF,3.9K,5%,1/2W	911 143907FF	
R533	REF-CF,470,5%,1/6W	911 134707YA	
R534	REF-CF,1K,5%,1/4W	911 141007DA	
R535	REF-CF,8.2K,5%,1/6W	911 148207YA	
R536	REF-CF,39K,5%,1/6W	911 153907YA	
R537	REF-CF,5.1K,5%,1/6W	911 145107YA	
R538	REF-MF,27K,1%,1/4W	911 452705DA	
R539	REF-CF,10K,5%,1/6W	911 151007YA	
R540	REF-CF,10K,5%,1/6W	911 151007YA	
R601	REF-CF,330K,5%,1/2W	911 163307FA	
R602	REF-VWV,2.7,5%,7W	911 612707QW	
R603	REF-VWV,2.7,5%,7W	911 612707QW	
R604	REF-MO,100K,5%,2W(S)	911 361007JF	
R605	REF-MO,100K,5%,2W(S)	911 361007JF	
R606	REF-CC,100,10%,1/2W	911 231008FA	
R607	REF-CF,4.7,5%,1/4W	911 114707DA	
R608	REF-MO,68K,5%,3W(S)	911 356807LF	
R616	REF-CF,1M,5%,1/6W	911 171007YA	
R617	REF-CF,51K,5%,1/6W	911 155107YA	
R618	REF-CF,27K,5%,1/6W	911 152707YA	
R619	REF-CF,2.7K,5%,1/6W	911 142707YA	
R620	REF-FUSIBLE,0.22,5%,1W	911 802207GA	
R621	REF-CF,270K,5%,1/2W	911 162707FA	
R623	REF-CF,4.7,5%,1/2W	911 114707FA	
R624	REF-MO,8.2K,5%,3W(S)	911 348207LF	
R625	REF-MO,8.2K,5%,3W(S)	911 348207LF	
R626	REF-CF,100K,5%,1/6W	911 161007YA	
R627	REF-VWV,0.22,1%,2W(NON)	911 602205JV	
R628	REF-CF,1K,5%,1/6W	911 141007YA	
R629	REF-CF,47K,5%,1/6W	911 154707YA	
R630	REF-CF,2.2K,5%,1/6W	911 142207YA	
R631	REF-CF,2.2K,5%,1/6W	911 142207YA	
R632	REF-CF,180K,5%,1/2W	911 161807FA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
R633	REF-CF,6.8K,5%,1/6W	911 146807YA	
R634	REF-MF,2K,5%,1/8W	911 442007CA	
R635	REF-MO,100K,5%,3W(S)	911 361007LF	
R636	REF-CF,4.7K,5%,1/6W	911 144707YA	
R637	REF-MO,100K,5%,3W(S)	911 361007LF	
R638	REF-CF,100,5%,1/6W	911 131007YA	
R639	REF-CF,100,5%,1/2W	911 131007FA	
R641	REF-CF,220K,5%,1/2W	911 162207FA	
R642	REF-CF,150,5%,1/2W(S)	911 131507FF	
R643	REF-CF,6.8,5%,1/2W	911 116807FA	
R644	REF-CF,33,5%,1/4W	911 123307DA	
R645	REF-CF,22K,5%,1/6W	911 152207YA	
R646	REF-CF,1K,5%,1/6W	911 141007YA	
R647	REF-CF,330,5%,1/4W	911 133307DA	
R648	REF-CF,10K,5%,1/6W	911 151007YA	
R649	REF-CF,1K,5%,1/6W	911 141007YA	
R650	REF-CF,100K,5%,1/6W	911 161007YA	
R655	REF-MO,2.7K,5%,1W(S)	911 342707GF	
VR501	RES-VAR,SF-ROUND,50KOHM	913 455008BF	H/V ADJ.
VR502	RES-VAR,SF-ROUND,10KOHM	913 451008BF	ACL ADJ.
VR503	RES-VAR,ROTARY,10K	913 151007YANA	BRIGHTNESS
VR504	RES-VAR,ROTARY,5K	913 145007YA	CONTRAST
VR601	RES-VAR,SF-ROUND,500OHM	913 435008BH	B+(195V) ADJ.
COILS & TRANSFORMERS			
L401	COIL-CHOKE,7.5mH	925 460186CA	
L402	COIL-LINEARITY,3.4uH	925 460184CA	
L404	COIL-CHOKE,46uH	925 460184BA	
 LF601	COIL-LINE FILTER	925 460148AA	
T401	TRANS-HOR.DRIVE	923 460157BA	
T402	TRANS-HOR.PULSE	923 460157EA	
T403	TRANS-CURRENT SENCE	923 460157DA	
T404	TRANS-H-SIZE DRIVE	923 460149HA	
 T405	TRANS-FOCUS	923 460157HA	
 T501	TRANS-H/V.DRIVE	923 460157CA	
 T502	TRANS-FLYBACK,100mH	923 460157AA	
T503	TRANS-H/V REG.CFA7679	923 460157FA	
 T601	TRANS-POWER S/W	923 460157KA	
 T602	TRANS-SYNC	923 460065AA	
 T603	TRANS-POWER(DPMS)	923 460156AA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
CONNECTORS			
CN201	CBF-CONN ASSY,430MM,7P	955 460507AAAA	
CN202	CBF-CONN ASSY,430MM,9P	955 460509AAAA	
CN301	CON-NOWALL HEADER,3P,1R	935 220103TE	
CN401	CON-NOWALL HEADER,3P,1R	935 220103TD	
CN602	CON-WALL HEADER,3P,3.96	935 240903DLA	
CN603	CBF-CONN ASSY,330MM,12P	955 460510AAAA	
CN604	CON-WALL HEADER,3P,2.5MM	935 240903DW	
GND	CBF-CONN ASSY,100MM,1P	955 460495AAAA	
MAGNET BEADS			
BD401	FERRITE-CORE,1.2MH	02429-048-017	
BD402	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD403	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD404	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD405	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD501	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD601	FERRITE-CORE,1.2MH	02429-048-017	
BD602	FERRITE-CORE,1.2MH	02429-048-017	
BD603	FERRITE-CORE,1.2MH	02429-048-017	
BD604	FERRITE-CORE,1.2MH	02429-048-017	
BD605	FERRITE-CORE,1.2MH	02429-048-017	
BD606	FERRITE-CORE,1.2MH	02429-048-017	
 BD607	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD608	FERRITE-CORE,1.2MH	02429-048-017	
BD609	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD610	MAG-CORE,FERRITE,BEAD	937 120211AA	
BD611	FERRITE-CORE,1.2MH	02429-048-017	
BD612	FERRITE-CORE,1.2MH	02429-048-017	
BD613	FERRITE-CORE,1.2MH	02429-048-017	
BD615	MAG-CORE,FERRITE,BEAD	937 120211AA	
SWITCHS			
SW201	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	
SW202	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	
SW203	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	
SW204	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	
SW205	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	
SW206	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	
SW207	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	
SW208	SWITCH-TACT,6.2X6.2X4MM	933 210043AE	

LOC. NO	DESCRIPTION	CODE NO	REMARK
SW401 ! SW601	SWITCH-TOGGLE,SP3T SWITCH-KEY,SPST	933 110034TC 933 217007AB	Raster Center S/W POWER S/W
MISCELLANEOUS			
! CN601 F/CORE ! F601 FUSE CLIP LD202 ! PTH601 RL401 ! RL601 VR201 X201 ZNR601	FIL-LPF,EMI,250V,3A MAG-CORE,FERRITE,TOROIDAL FUSE-CERA TUB,3.15A,250V FUSE-CLIP,5.2X20,30MOHM LED,G/Y,ROUND,4.8MM POSISTOR,14,SQUARE,13.5X1 RELAY-MINIATURE,12VDC RELAY,MINIATURE,12VDC SWITCH-ROTARY,3POS CRYSTAL,12M,50 VARI,679~829V,AXIAL,12MM	943 150034BA 937 120105AA 949 115105THNA 953 260023BC 895 110048DA 897 110535AA 927 300019BB 927 300052BB 933 230035AA 941 110067UBNA 897 130528AA	AC INLET FBT CORE POWER LED
VIDEO & CRT PCB PARTS			
CAPACITORS			
C101 C102 C103 C104 C105 C106 C107 C109 C11 C110 C112 C113 C114 C115 C116 C118 C119 C12 C120 C127 C128	CAP-AL.ELE,106M,2E,10X20, CAP-CERAMIC,103J,1H,MONO CAP-CERAMIC,104J,1H,MONO CAP-CERAMIC,104J,1H,MONO CAP-AL.ELEC,227M,1C,10X9M CAP-CERAMIC,104J,1H,MONO CAP-CERAMIC,151J,1H,NPO CAP-CERAMIC,103J,1H,MONO CAP-AL.ELEC,105M,2E,105'C CAP-AL.ELEC,227M,1E,105C CAP-AL.ELEC,227M,1E,105C CAP-AL.ELEC,107M,1E CAP-CERAMIC,103J,1H,MONO CAP-AL.ELEC,227M,1E CAP-CERAMIC,333K,2A,X7R CAP-AL.ELEC,106M,1H,6X7 CAP-CERAMIC,104J,1H,MONO CAP-AL.ELEC,105M,2E,105'C CAP-CERAMIC,104J,1H,MONO CAP-AL.ELEC,105M,1H,4X7 CAP-AL.ELEC,476M,2E,105C	917 742100QM 915 265100HJXH 915 266100HJXH 915 266100HJXH 917 713220CM 915 266100HJXH 915 313150HJXH 915 265100HJXH 917 741100QM 917 743220EM 917 743220EM 917 123100EM 915 265100HJXH 917 123220EM 915 265330LKXXNA 917 722100HM 915 266100HJXH 917 741100QM 915 266100HJXH 917 721100HM 917 872470QM	

LOC. NO	DESCRIPTION	CODE NO	REMARK
C129	CAP-MPETP,104J,2E,7.5P	916 556100QJAL	
C13	CAP-AL.ELEC,105M,2E,105'C	917 741100QM	
C130	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C132	CAP-AL.ELEC,335M,2E,105C	917 871330QM	
C134	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C135	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C136	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C138	CAP-CERAMIC,330J,1H,NPO	915 312330HJXH	
C139	CAP-CERAMIC,101J,1H,NPO	915 313100HJXH	
C140	CAP-AL.ELEC,227M,1E	917 123220EM	
C141	CAP-CERAMIC,471K,1H,Y5P	915 323470HKPH	
C142	CAP-CERAMIC,103J,1H,MONO	915 265100HJXH	
C143	CAP-CERAMIC,470J,1H,NPO	915 312470HJXH	
C144	CAP-CERAMIC,470J,1H,NPO	915 312470HJXH	
C145	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C146	CAP-CERAMIC,220J,1H,SL	915 312220HJHH	
C147	CAP-CERAMIC,220J,1H,SL	915 312220HJHH	
C148	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C15	CAP-MYLAR,103J,2A,5P	916 165100LJAH	
C150	CAP-MYLAR,222J,2A,5P	916 164220LJAH	
C151	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C152	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C153	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C154	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C155	CAP-CERAMIC,103J,1H,MONO	915 265100HJXH	
C156	CAP-CERAMIC,331J,2A,MONO	915 163330LJXH	
C161	CAP-CERAMIC,103Z,1H,Y5V	915 325100HZVH	
C162	CAP-CERAMIC,103P,3D,Y5U	915 325100YPUX	
C163	CAP-CERAMIC,103Z,2H,DISC	915 325100VZVH	
C17	CAP-CERAMIC,332K,1H,Y5D	915 324330HKPH	
C31	CAP-AL.ELEC,105M,2E,105'C	917 741100QM	
C32	CAP-AL.ELEC,105M,2E,105'C	917 741100QM	
C33	CAP-AL.ELEC,105M,2E,105'C	917 741100QM	
C9	CAP-CERAMIC,103J,1H,MONO	915 265100HJXH	
C93	CAP-CERAMIC,221J,2A,MONO	915 163220LJXH	
C94	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C95	CAP-CERAMIC,221J,2A,MONO	915 163220LJXH	
C96	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C97	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
C98	CAP-CERAMIC,221J,2A,MONO	915 163220LJXH	
CB1	CAP-AL.ELEC,106M,1H,6X7	917 722100HM	
CB11	CAP-MPETP,104J,2E,7.5P	916 556100QJAL	
CB2	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CB4	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	

LOC. NO	DESCRIPTION	CODE NO	REMARK
CB6	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CB8	CAP-CERAMIC,560J,1H,SL	915 312560HJHH	
CB9	CAP-CERAMIC,100D,1H,NPO	915 312100HDXH	
CG1	CAP-AL.ELEC,106M,1H,6X7	917 722100HM	
CG2	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CG4	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CG6	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CG8	CAP-CERAMIC,560J,1H,SL	915 312560HJHH	
CG9	CAP-CERAMIC,100D,1H,NPO	915 312100HDXH	
CG11	CAP-MPETP,104J,2E,7.5P	916 556100QJAL	
CR1	CAP-AL.ELEC,106M,1H,6X7	917 722100HM	
CR11	CAP-MPETP,104J,2E,7.5P	916 556100QJAL	
CR2	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CR4	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CR6	CAP-CERAMIC,104J,1H,MONO	915 266100HJXH	
CR8	CAP-CERAMIC,560J,1H,SL	915 312560HJHH	
CR9	CAP-CERAMIC,100D,1H,NPO	915 312100HDXH	
DIODES			
D1	DIODE-SIG,BAV21,DO-35	893 190021AANA	
D101	DIODE-REC,1N4007GP,DO-41	893 314007BA	
D102	DIODE-REC,1N4007GP,DO-41	893 314007BA	
D106	DIODE-ZEN,UZ-5.1B,DO-35	893 290031FB	
D107	DIODE-ZEN,BZX79C5V6	893 299004AE	
D108	DIODE-ZEN,BZX79C5V6	893 299004AE	
D109	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D110	DIODE-ZEN,UZ-5.1B,DO-35	893 290031FB	
D112	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D117	DIODE-SIG,1N4148,DO-35	893 114148AANM	
D2	DIODE-SIG,BAV21,DO-35	893 190021AANA	
D3	DIODE-SIG,BAV21,DO-35	893 190021AANA	
D5	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DB2	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DB3	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DB5	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DB6	DIODE-SIG,BAV21,DO-35	893 190021AANA	
DG1	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DG3	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DG5	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DG6	DIODE-SIG,BAV21,DO-35	893 190021AANA	
DR2	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DR4	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DR5	DIODE-SIG,1N4148,DO-35	893 114148AANM	
DR6	DIODE-SIG,BAV21,DO-35	893 190021AANA	

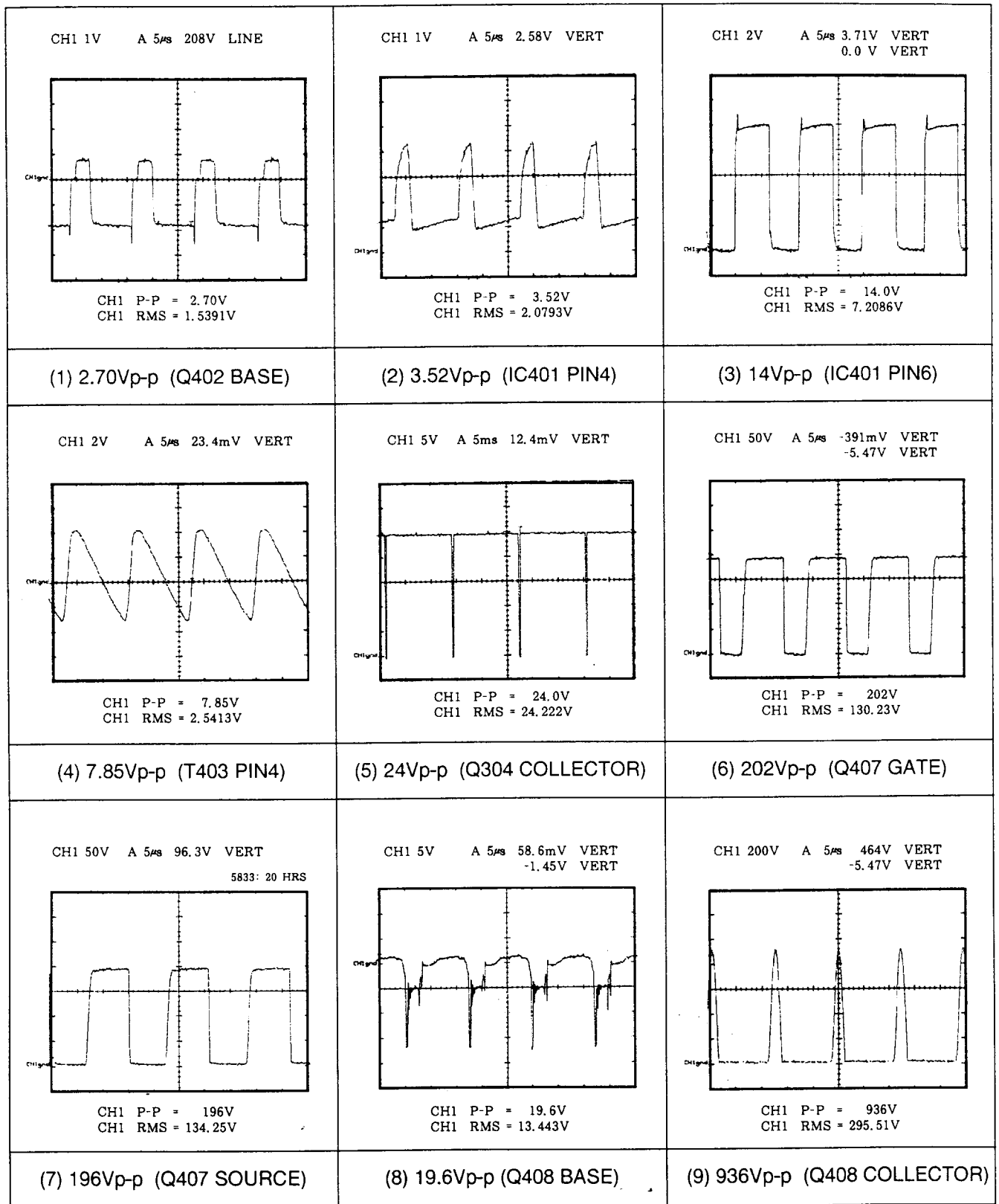
LOC. NO	DESCRIPTION	CODE NO	REMARK
ICS			
IC101	IC-LIN,1205,VIDEO AMP	881 101205AA	
IC102	IC-HYB,CCG7577,AMP	887 490036AA	
IC105	IC-LIN,141540,OSD	881 699008AA	
IC107	IC-LIN,7812,REGULATOR	881 307812KANB	
IC108	IC-LIN,7805,REGULATOR	881 307805KANE	
IC109	IC-LIN,LM319,COMPARATOR	881 200319AA	
IC110	IC-CUS,SL506,SYNC PROCES	885 460005AA	
IC111	IC-MOS,74HC125,BUFFER	873 760125AA	
TRANSISTORS			
Q1	TR-PNP,MPSA92,TO-92	891 190092AANA	
Q101	TR-PNP,2N3906,TO-92	891 123906XANC	
Q104	TR-NPN,2N3904,TO-92	891 323904XANC	
Q105	TR-NPN,MPS3646,TO-92	891 393646AA	
Q106	TR-NPN,2N3904,TO-92	891 323904XANC	
Q107	TR-NPN,2N3904,TO-92	891 323904XANC	
Q110	TR-NPN,2N3904,TO-92	891 323904XANC	
Q111	TR-NPN,2N3904,TO-92	891 323904XANC	
Q2	TR-PNP,MPSA92,TO-92	891 190092AANA	
Q3	TR-PNP,MPSA92,TO-92	891 190092AANA	
QB2	TR-NPN,2N5770,TO-92	891 325770AA	
QG2	TR-NPN,2N5770,TO-92	891 325770AA	
QR2	TR-NPN,2N5770,TO-92	891 325770AA	
RESISTORS			
R1	REF-CF,220K,5%,1/4W	911 162207DA	
R100	REF-CF,100,5%,1/6W	911 131007YA	
R101	REF-CF,100,5%,1/6W	911 131007YA	
R104	REF-CF,10,5%,1/6W	911 121007YA	
R105	REF-MF,12K,1%,1/4W	911 451205DA	
R106	REF-MF,2K,1%,1/4W	911 442005DA	
R107	REF-CF,4.7K,5%,1/6W	911 144707YA	
R109	REF-CF,180K,5%,1/4W	911 161807DA	
R11	REF-CF,220K,5%,1/4W	911 162207DA	
R110	REF-CF,2.2K,5%,1/6W	911 142207YA	
R111	REF-CF,2.2K,5%,1/6W	911 142207YA	
R112	REF-CF,100,5%,1/2W(S)	911 131007FF	
R113	REF-CF,1.8K,5%,1/6W	911 141807YA	
R114	REF-CF,47K,5%,1/6W	911 154707YA	
R115	REF-CF,47K,5%,1/6W	911 154707YA	

LOC. NO	DESCRIPTION	CODE NO	REMARK
R116	REF-CF,220,5%,1/4W	911 132207DA	
R117	REF-CF,3.3K,5%,1/6W	911 143307YA	
R118	REF-CF,120,5%,1/6W	911 131207YA	
R119	REF-CF,2.2K,5%,1/6W	911 142207YA	
R12	REF-CF,220K,5%,1/4W	911 162207DA	
R120	REF-CF,4.7K,5%,1/6W	911 144707YA	
R123	REF-CF,2.2,5%,1/2W(S)	911 112207FF	
R13	REF-CF,220K,5%,1/4W	911 162207DA	
R130	REF-CF,2.2K,5%,1/6W	911 142207YA	
R132	REF-CF,33,5%,1/6W	911 123307YA	
R134	REF-CF,22,5%,1/6W	911 122207YA	
R135	REF-CF,2.2K,5%,1/6W	911 142207YA	
R137	REF-CF,10K,5%,1/6W	911 151007YA	
R139	REF-CF,100,5%,1/6W	911 131007YA	
R140	REF-CF,2.2K,5%,1/6W	911 142207YA	
R144	REF-CF,1K,5%,1/6W	911 141007YA	
R145	REF-CF,1M,5%,1/6W	911 171007YA	
R147	REF-CF,4.7K,5%,1/6W	911 144707YA	
R148	REF-CF,1K,5%,1/6W	911 141007YA	
R149	REF-CF,750,5%,1/6W	911 137507YA	
R15	REF-CF,22K,5%,1/6W	911 152207YA	
R150	REF-CF,1.5K,5%,1/6W	911 141507YA	
R152	REF-MO,47K,5%,2W	911 354707JF	
R156	REF-CF,1K,5%,1/6W	911 141007YA	
R157	REF-CF,5.6K,5%,1/6W	911 145607YA	
R16	REF-CF,22K,5%,1/6W	911 152207YA	
R165	REF-MO,1.2,5%,3W(T)	911 311207LFXA	
R166	REF-MO,0.82,5%,1W(S)	911 308207GF	
R17	REF-CF,22K,5%,1/6W	911 152207YA	
R171	REF-CF,100,5%,1/6W	911 131007YA	
R172	REF-CF,100,5%,1/6W	911 131007YA	
R175	REF-CF,10,5%,1/6W	911 121007YA	
R2	REF-CF,220K,5%,1/4W	911 162207DA	
R21	REF-CF,200K,5%,1/4W	911 162007DA	
R22	REF-CF,200K,5%,1/4W	911 162007DA	
R23	REF-CF,200K,5%,1/4W	911 162007DA	
R3	REF-CF,220K,5%,1/4W	911 162207DA	
R31	REF-CF,47K,5%,1/4W	911 154707DA	
R32	REF-CF,47K,5%,1/4W	911 154707DA	
R33	REF-CF,47K,5%,1/4W	911 154707DA	
R51	REF-CF,1M",5%,1/4W	911 171007DA	
R52	REF-CF,1M",5%,1/4W	911 171007DA	
R53	REF-CF,1M",5%,1/4W	911 171007DA	
R91	REF-CF,4.7K,5%,1/6W	911 144707YA	

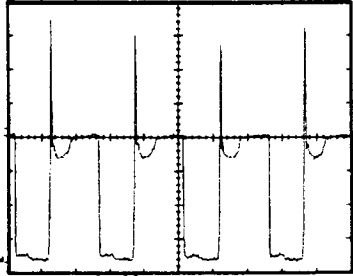
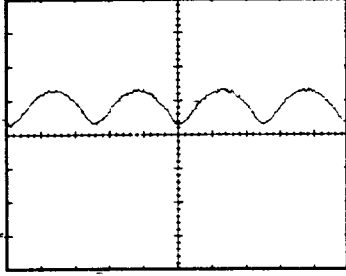
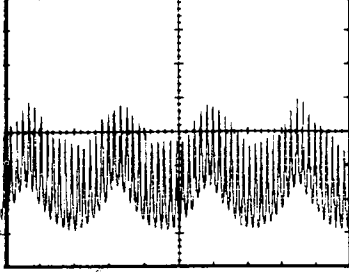
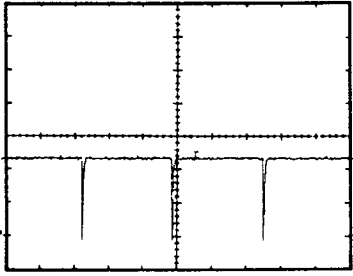
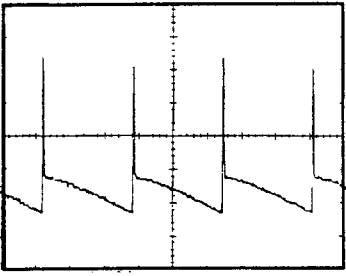
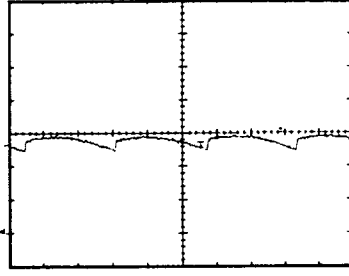
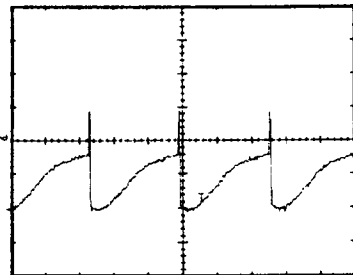
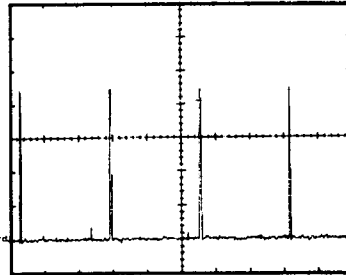
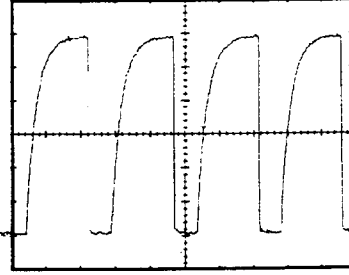
LOC. NO	DESCRIPTION	CODE NO	REMARK
R92	REF-CF,1K,5%,1/6W	911 141007YA	
R94	REF-CF,6.8K,5%,1/6W	911 146807YA	
R95	REF-CF,4.7K,5%,1/6W	911 144707YA	
R96	REF-CF,6.8K,5%,1/6W	911 146807YA	
R97	REF-CF,4.7K,5%,1/6W	911 144707YA	
R98	REF-CF,6.8K,5%,1/6W	911 146807YA	
R99	REF-CF,4.7K,5%,1/6W	911 144707YA	
RB1	REF-CF,75,5%,1/6W	911 127507YA	
RB12	REF-CF,2.2K,5%,1/6W	911 142207YA	
RB14	REF-CF,390,5%,1/6W	911 133907YA	
RB15	REF-CF,100,5%,1/6W	911 131007YA	
RB16	REF-CF,270,5%,1/2W(S)	911 132707FF	
RB17	REF-CF,75,5%,1/6W	911 127507YA	
RB19	REF-CF,10, 5%,1/6W	911 121007YA	
RB39	REF-CF,1K,5%,1/6W	911 141007YA	
RB42	REF-CF,100,5%,1/6W	911 131007YA	
RB45	REF-CC,39,10%,1/2W	911 223908FA	
RB46	REF-CF,680,5%,1/6W	911 136807YA	
RG1	REF-CF,75,5%,1/6W	911 127507YA	
RG12	REF-CF,2.2K,5%,1/6W	911 142207YA	
RG14	REF-CF,390,5%,1/6W	911 133907YA	
RG15	REF-CF,100,5%,1/6W	911 131007YA	
RG16	REF-CF,270,5%,1/2W(S)	911 132707FF	
RG17	REF-CF,75,5%,1/6W	911 127507YA	
RG19	REF-CF,10%,1/6W	911 121007YA	
RG39	REF-CF,1K,5%,1/6W	911 141007YA	
RG42	REF-CF,100,5%,1/6W	911 131007YA	
RG45	REF-CC,39,10%,1/2W	911 223908FA	
RG46	REF-CF,680,5%,1/6W	911 136807YA	
RR1	REF-CF,75,5%,1/6W	911 127507YA	
RR12	REF-CF,2.2K,5%,1/6W	911 142207YA	
RR14	REF-CF,390,5%,1/6W	911 133907YA	
RR15	REF-CF,100,5%,1/6W	911 131007YA	
RR16	REF-CF,270,5%,1/2W(S)	911 132707FF	
RR17	REF-CF,75,5%,1/6W	911 127507YA	
RR19	REF-CF,10%,1/6W	911 121007YA	
RR39	REF-CF,1K,5%,1/6W	911 141007YA	
RR42	REF-CF,100,5%,1/6W	911 131007YA	
RR45	REF-CC,39,10%,1/2W	911 223908FA	
RR46	REF-CF,680,5%,1/6W	911 136807YA	
VR3	RES-VAR,SF-ROUND,5KOHM	913 445009WA	SUB-Contrast ADJ.
VRB1	RES-VAR,SF-ROUND,10KOHM	913 451009WA	B-GAIN
VRB3	RES-VAR,SF-ROUND,100K	913 461009VL	B-BIAS
VRG1	RES-VAR,SF-ROUND,10KOHM	913 451009WA	G-GAIN

LOC. NO	DESCRIPTION	CODE NO	REMARK
VRG3	RES-VAR,SF-ROUND,100K	913 461009VL	G-BIAS
VRR1	RES-VAR,SF-ROUND,10KOHM	913 451009WA	R-GAIN
VRR3	RES-VAR,SF-ROUND,100K	913 461009VL	R-BIAS
COILS			
LB50	INDUCTOR-AXIAL,0.68UH	925 001001AF	
LG50	INDUCTOR-AXIAL,0.68UH	925 001001AF	
LR50	INDUCTOR-AXIAL,0.68UH	925 001001AF	
CONNECTORS			
CN101	CON-WALL HEADER,7P,2.5MM	935 241307EA	
CN102	CON-WALL HEADER,9P,2.5M	935 241309EA	
CN103	CON-WALL HEADER,12P,2.5M	935 241312EA	
CN105	CON-WALL HEADER,8P,2.5MM	935 241308EA	
CN105	CBF-CONN ASSY,100MM,8P	955 460508AAAA	
D-SUB	CON-D-SUB,9P,RECEPTACLE	935 100209CB	
PHONE	CON-MINIATURE JACK	935 720084AA	
SOCKET	CON-JACK CRT SOCKET	935 720901JB	
MISCELLANEOUS			
GT01	PIN-GT	03124-700-810	For Service Manuals MAURITRON SERVICES 8 Cherry Tree Road, Chinnor Oxfordshire, OX9 4QY. Tel (01844) 351694 Fax (01844) 352554 email:- mauritron@dial.pipex.com
GT02	PIN-GT	03124-700-810	
GT03	PIN-GT	03124-700-810	
GT04	PIN-GT	03124-700-810	
GT05	PIN-GT	03124-700-810	
LF101	FILTER-LPF,EMI,LC	943 150021AB	
SG101	SPARK GAP,DSP-301N	04569-002-210	
SGB1	SPARK GAP,DSP-301N	04569-002-210	
SGG1	SPARK GAP,DSP-301N	04569-002-210	
SGR1	SPARK GAP,DSP-301N	04569-002-210	
XTAL2	C-RESO,3.58M,0.5%	941 210011TA	
OTHERS			
CRT	CRT,COLOR,17",M41KVZ180X12	897 250144AA	HITACHI 0.28MM
CRT-GND	CBF-CRT GND ASSY,CCB7577	955 460435AAAA	
D/COIL	COIL-DEGAUSSING,7.5mH	925 460184DA	
P/CORD	CBF-POWER CORD,1850MM,UC	955 001434AAAA	US WALL
P/CORD	CBF-POWER CORD,1830MM,CAP	955 001436AAAA	KOREA CAP
P/CORD	CBF-POWER CORD,1830MM,WAL	955 001437AAAA	KOREA WALL
P/CORD	CBF-POWER CORD,1220MM,EC	955 001439AAAB	EUROPE CAP
P/CORD	CBF-POWER CORD,1830MM,AU	955 001443AAAA	AU WALL
P/CORD	CBF-POWER CORD,1830MM,EC	955 001445AAAA	EUROPE WALL
S/CABLE	CBF-SIGNAL CABLE,1830MM	955 460511AAAA	SIGNAL CABLE

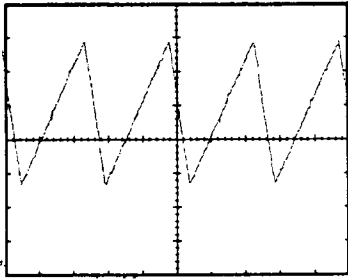
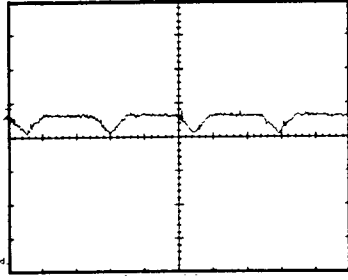
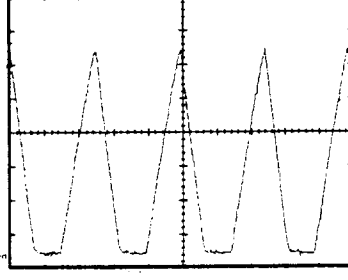
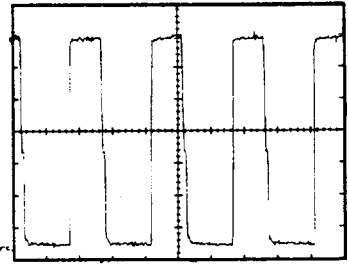
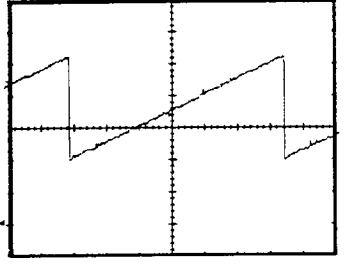
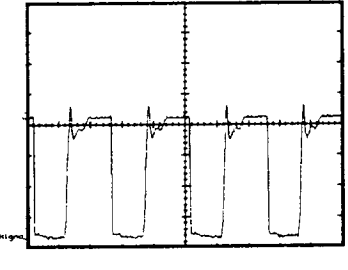
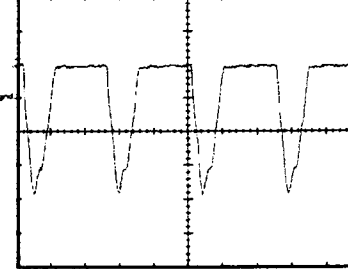
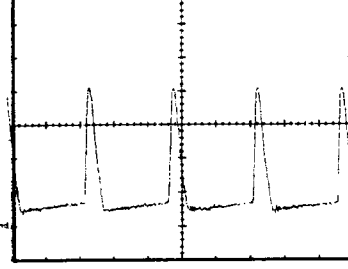
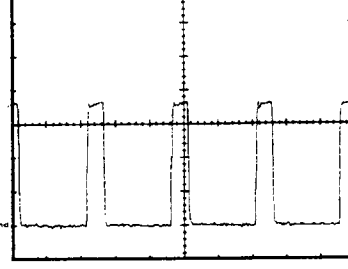
WAVEFORMS



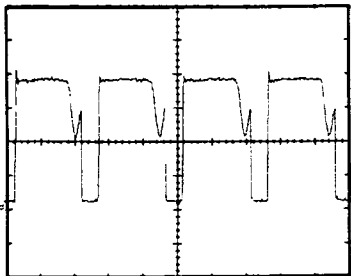
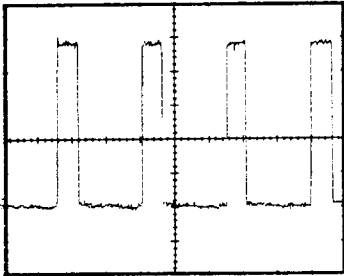
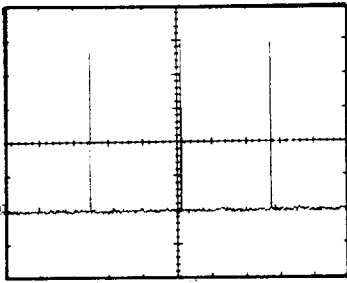
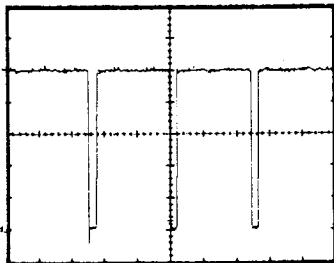
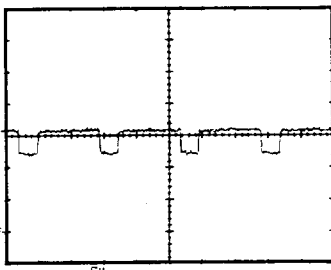
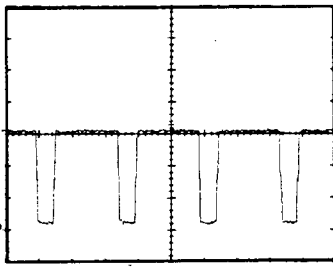
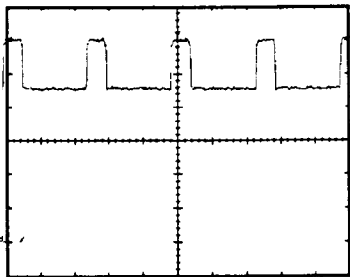
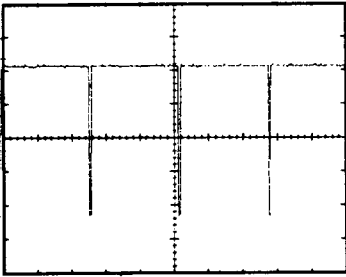
WAVEFORMS

CH1 10V A 5μs 24.7V VERT -5.47V VERT  CH1 P-P = 71.2V CH1 RMS = 23.834V	CH1 50V A 5μs 187V VERT  CH1 P-P = 46.0V CH1 RMS = 195.25V	CH1 100V A 5ms 204V VERT  CH1 P-P = 345V CH1 RMS = 209.25V
(10) 71.2Vp-p (Q409 DRAIN)	(11) 46Vp-p (T405 PIN7)	(12) 345Vp-p (Q421 COLLECTOR)
CH1 5V A 5ms 23.8V LINE  CH1 P-P = 12.0V CH1 RMS = 11.403V	CH1 10V A 5ms 28.0V VERT 0.0V VERT  CH1 P-P = 52.0V CH1 RMS = 15.157V	CH1 5V A 5ms 208V LINE  CH1 P-P = 2.60V CH1 RMS = 13.765V
(13) 12.0Vp-p (Q301 Collector)	(14) 52Vp-p (IC301 PIN5)	(15) 2.6Vp-p (CN301 PIN3)
CH1 1V A 5ms 208V LINE  CH1 P-P = 3.00V CH1 RMS = 1.3141V	CH1 2V A 5ms 2.34V VERT  CH1 P-P = 8.6V CH1 RMS = 1.5362V	CH1 2V A 5μs 5.90V VERT  CH1 P-P = 11.9V CH1 RMS = 8.7478V
(16) 3.0Vp-p (Q307 BASE)	(17) 8.6Vp-p (Q308 Collector)	(18) 11.9Vp-p (Q401 Collector)

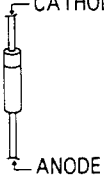
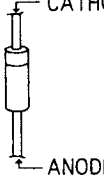
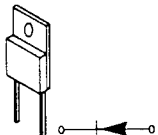
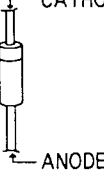
WAVEFORMS

CH1 1V A 5μs 4.00V VERT -5.47V VERT  CH1 P-P = 4.28V CH1 RMS = 4.2896V	CH1 1V A 5μs 4.17V VERT -5.47V VERT  CH1 P-P = 560mV CH1 RMS = 4.2306V	CH1 1V A 5μs 4.17V VERT -5.47V VERT  CH1 P-P = 6.12V CH1 RMS = 2.5266V
(19) 4.28Vp-p (IC302 PIN2)	(20) 560mVp-p (IC302 PIN3)	(21) 6.12Vp-p (IC302 PIN5)
CH1 1V A 5μs 4.17V VERT -5.47V VERT  CH1 P-P = 6.5V CH1 RMS = 4.1477V	CH1 1V A 2ms 3.61V VERT -5.47V VERT  CH1 P-P = 2.90V CH1 RMS = 3.4648V	CH1 5V A 5μs 11.1V VERT -5.47V VERT  CH1 P-P = 19.3V CH1 RMS = 12.002V
(22) 6.5Vp-p (IC302 PIN6)	(23) 2.90Vp-p (IC302 PIN15)	(24) 19.3Vp-p (Q503 DRAIN)
CH1 200V A 5μs -10.2V VERT -5.47V VERT  CH1 P-P = 905V CH1 RMS = 258.52V	CH1 2V A 5μs 1.17V VERT -5.47V VERT  CH1 P-P = 6.45V CH1 RMS = 2.7409V	CH1 5V A 5μs 1.17V VERT -5.47V VERT  CH1 P-P = 18.0V CH1 RMS = 8.0752V
(25) 905Vp-p (Q504 EMITTER)	(26) 6.45Vp-p (IC602 PIN4)	(27) 18.0Vp-p (IC602 PIN6)

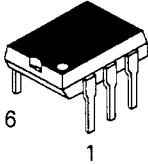
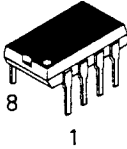
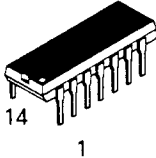
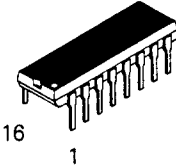
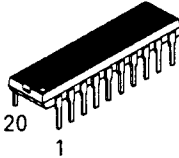
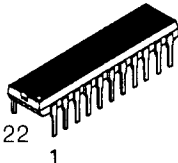
WAVEFORMS

CH1 100V A 5μs 201V VERT -5.47V VERT  CH1 P-P = 460V CH1 RMS = 324.65V	CH1 1V A 5μs 2.01V VERT -5.47V VERT  CH1 P-P = 5.0V CH1 RMS = 2.4043V	CH1 1V A 5ms 2.01V VERT -6.11V VERT  CH1 P-P = 5.0 V CH1 RMS = 522.73mV
(28) 460Vp-p (Q604 DRAIN)	(29) 5.0Vp-p (IC110 PIN15)	(30) 5.0Vp-p (IC110 PIN14)
CH1 1V A 5μs 3.91mV VERT  CH1 P-P = 5.0V CH1 RMS = 4.7848V	CH1 1V A 5μs 3.91mV VERT  CH1 P-P = 960mV CH1 RMS = 3.0005V	CH1 1V A 5μs 3.91mV VERT  CH1 P-P = 3.04V CH1 RMS = 2.6809V
(31) 5.0Vp-p (IC110 PIN18)	(32) 960mVp-p (IC101 PIN6)	(33) 3.04Vp-p (IC101 PIN20)
CH1 20V A 5μs 0.0V VERT  CH1 P-P = 32.8V CH1 RMS = 98.656V	CH1 5V A 5ms -7.30V VERT -5.47V VERT  CH1 P-P = 21.0V CH1 RMS = 6.2491V	
(34) 32.8Vp-p (CN105 PIN1)	(35) 21Vp-p (CN105 PIN8)	

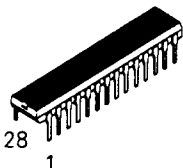
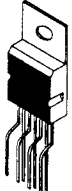
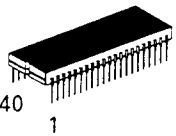
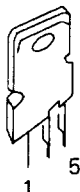
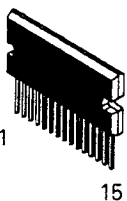
SEMICONDUCTOR LEAD IDENTIFICATION

PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
	IN4148	D105,D109,D112, D117,D201,D202, D203,D204,D210, D302,D303,D304, D305,D4, D401, D402,D404,D405, D407,D415,D416, D417,D418,D422, D423,D424,D5, D501,D502,D503, D510,D511,D516, D517,D518,D520, D522,D605,D606, D607,D611,D618, D619,D648,DB2, DB3,DB5,DG1, DG3,DG5,DR2, DR4,DR5		UF4004 UF4007 UF5408 UF5404 1R5GU41	D408,D509,D621 D421,D604 D506,D523,D612, D614,D623 D406,D615,D617 D622,D616
	BAV21	D1,D2,D3,D419 DB6,DG6,DR6,		MUR10120 MUR8100 5THZ52	D521 D613 D411
	ZENER2.7V ZENER5.1V ZENER5.6V ZENER12V ZENER24V	ZD502 D106,D110,ZD202 ZD401 ZD201 ZD501		KSA733	Q303,Q405,Q501, Q506,Q511,Q512, Q609
	RGP02-12	D508,D608,D610		MPSA92 MPS2907 2N3906	Q1,Q2,Q3 Q513 Q101
	IN4001	D301,D409,D425, D504,D519,D524, D525		2N3904	Q104,Q106,Q107, Q111,Q305,Q401, Q402,Q403
	IN4002	D410,D505,D514 ,D515,D620		2N5770	QB2,QG2,QR2
	IN4007	D101,D102,D602		KSC945	Q110,Q201,Q202, Q205,Q301,Q302, Q304,Q307,Q308, Q507,Q508,Q509, Q510,Q607,Q608
	IN4937	D413,D414,D512, D513		KSC1008	Q423,Q605
	UF4001	D412		MPS2222 MPS2369 MPS3646	Q502 Q108,Q109,Q203, Q204 Q105

SEMICONDUCTOR LEAD IDENTIFICATION

PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
 S G D	VN0606 2N7000	D406 Q514	 6 1	CQY80NG	IC603 IC606
 B C E	MJW16212 2SC3675	Q408,Q504 Q421	 8 1	KA3842 93C66	IC401,IC602 IC202
 G D S	IRF610 IRF740 IRF640	Q409,Q503 Q407,Q505 Q410,Q411,Q412, Q413,	 14 1	74HC125 LM319 MC14066 M324	IC111 IC109 IC402 IC403
 G D S	2SK1358	Q604	 16 1	MC141540 DL494	IC105 IC501
 R A K	KA431	IC404,IC502 IC604	 20 1	SL505 TDA9102	IC110 IC302
 I G O	MC7805 MC7812 MC7824	IC108 IC107 IC303	 22 1	M62358	IC203

SEMICONDUCTOR LEAD IDENTIFICATION

PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
	LM1205	IC201		TDA8138 TDA8172	IC204 IC301
	P8752	IC201		STR17006	IC605
	KIA7045	IC206		GBL06	D601
	VPS08	IC102			