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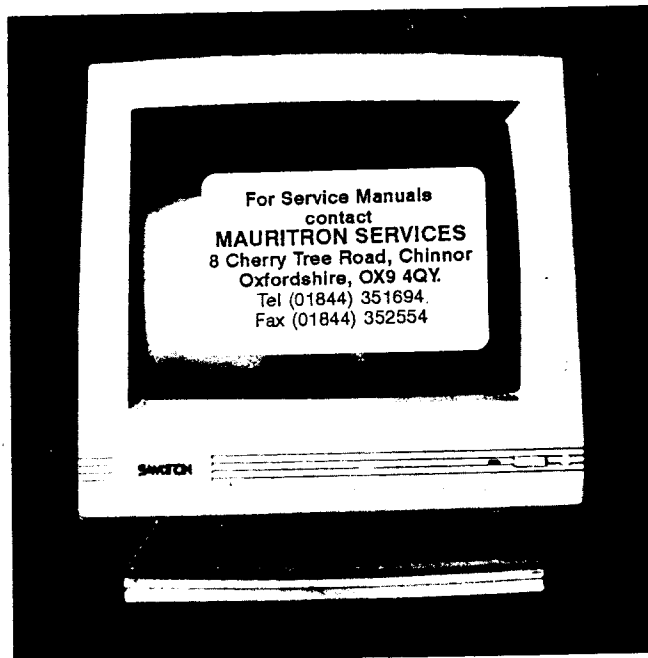
SAMTRON
SAMSUNG ELECTRON DEVICES

PERICOM

14" COLOR MONITOR

SERVICE MANUAL

SC-431E



SPECIFICATION

| | |
|--------------|--|
| Picture tube | 3709 B22 |
| | 14 Inches diagonal |
| | 90 degree deflection, 0.31mm dot pitch, black matrix |
| Input signal | Video : RGBI / RGBrgb TTL level positive |
| | Sync : TTL level positive / negative |
| Display | |
| -colors | 16 colors / 64colors |
| Synchro | |
| -nization | Horizontal : 15.75KHz / 21.85KHz |
| | vertical : 47~63Hz |
| Resolution | 21.8KHz Mode : 640 dots(H) × 350lines(V) |
| | 15.75KHz Mode : 640dots(H) × 200lines(V) |
| Video band | |
| -width | 18MHz(−3dB) |
| Display area | Horizontal : 250±4mm |
| | Vertical : 170±4mm |
| AC input | |
| -voltage | AC 115V / 60Hz, AC 230V / 50Hz(Optional) |
| Power | |
| -consumption | 80W(Max) |
| Dimension | 357(W) × 393(H) × 400(L)mm |
| Weight | 14.8Kg |

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SECTION I GENERAL INFORMATION

(1) SAFETY PRECAUTION

WARNING: Service should not be attempted anyone unfamiliar with the necessary precautions on this unit.
The following precautions are necessary during servicing.

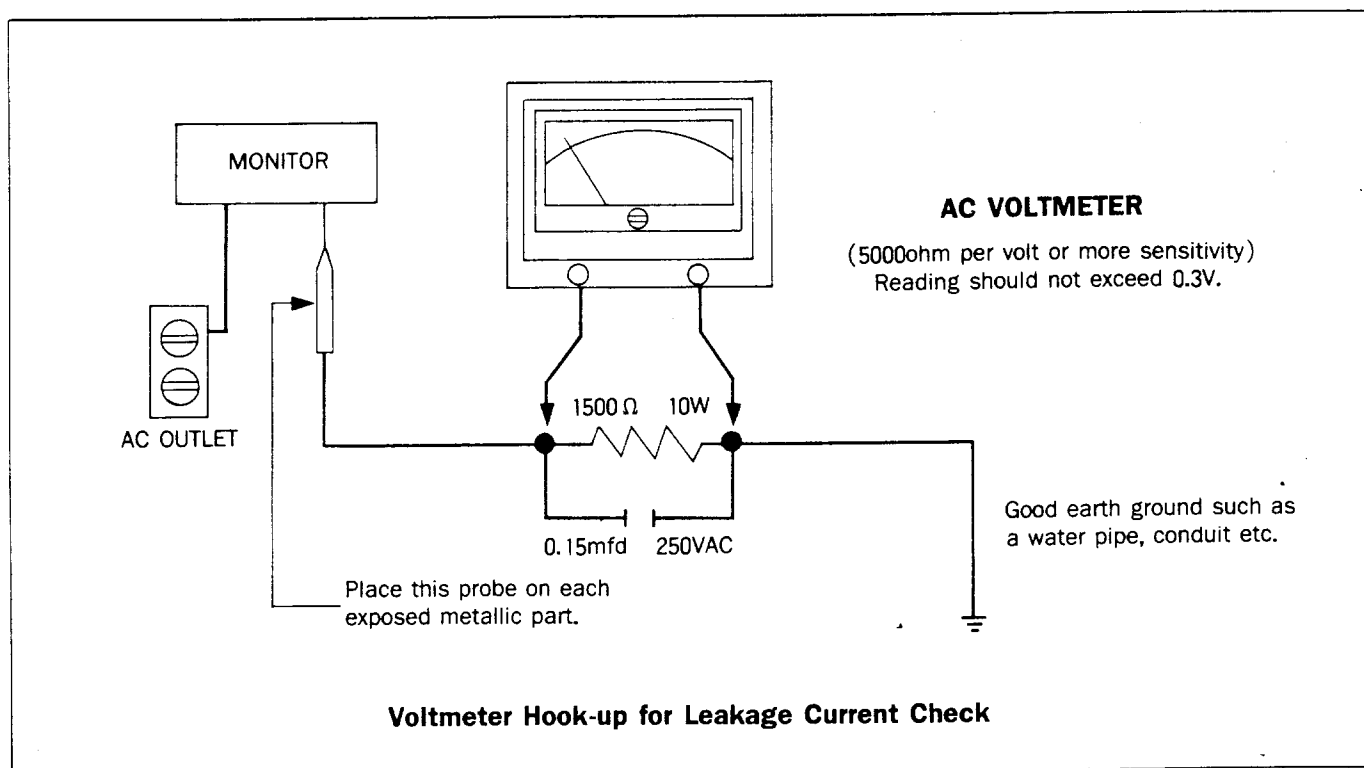
1. Some parts such as a picture tube in this unit have special safety-related characteristics for X-RAY RADIATION protection.
For continued safety, the parts replacement should be undertaken referring to item 2 below.
2. Many electrical mechanical parts in this unit have special safety-related characteristics for protection against shock hazard and others.
These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage wattage, etc.
Replacement parts which have these special characteristics are identified in the manual and supplements by shading on the schematic diagram and the parts list.
Before replacing of these components read the parts list in this manual, carefully.
3. When replacing chassis in the cabinet, always be certain that all the protective devices are installed properly, such as insulating covers, strain relief, etc.
4. Before replacing the back cover of the set, thoroughly inspect inside the cabinet to see that no stray parts or

tools have been left inside.

5. Before returning the set to the customer always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as terminal, screwheads, metal overlays, control shafts, etc. To be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 115V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner.

Connect a 1500 ohm, 10 watt resistor, paralleled by a 0.15mfd(μ F), 250V AC capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time.

Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 mfd(μ F) capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3V RMS. This corresponds to 0.2mA AC any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



(2) DOCUMENT DESCRIPTION

This is technical specification for a SC-431E Color display monitor.

(3) PRODUCT DESCRIPTION

This SC-431E Color display monitor to be operated in TTL Drive mode in put a highlight of these is

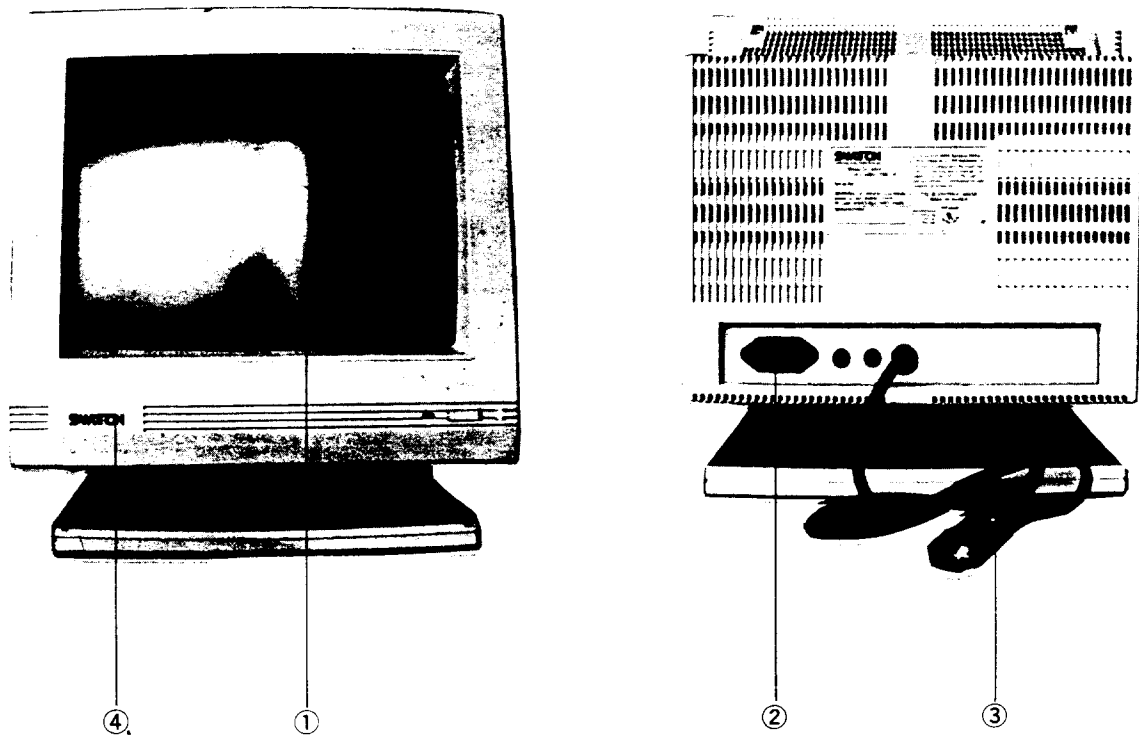
provided below.

- Resolution : 640 dots(H) × 200 lines
640 dots(H) × 350 lines
- Display capability : 2000 Characters(80 × 25)
- Active display area : Horizontal ~ 250mm ± 4mm
Vertical 170mm ± 4mm
- Horizontal frequency : 15.75KHz / 21.85KHz
- Vertical frequency : 60Hz / 50Hz

USING COLOR DISPLAY MONITOR

Meting SC-431E Color display monitor.

Refer to the diagram below to be sure that your SC-431E package includes all the items in this picture. Save the original box and packing materials in case you have to ship or transport



- ① Color display monitor(SC-431E)
- ② Power Input
- ③ Signal cable : Connects IBM PC or Compacibles
- ④ Swivel / Tilt stand

[4] OPERATING INSTRUCTION

1. External instruction
 - * Front
Power switch, Contrast, Brightness
 - * Rear
Vertical size 1, 2
2. Service instruction (internal controls)
Supply voltage, H-HOLD 1,2, H-SHIFT 1,2
H-SIZE 1,2, V-HOLD, V-SHIFT

[5] ELECTRICAL CHARACTERISTICS

1. AC Power input
AC 115V \pm 15%, 60Hz
AC 220~240V, 50Hz (Optional)
Power consumption is 80W under normal viewing condition and be used internal fuse protection.
2. Video input
Video : RGB1 / RGBrgb TTL Level, Positive
Sync : TTL Level, Positive / Negative
Band width : 18MHz
3. Horizontal electronics
Frequency : 15.75KHz / 21.85KHz
Retrace time : 6.5m Sec.
4. Vertical electronics
Frequency : 47Hz~63Hz
Retrace time : 0.72m Sec.

[6] MECHANICAL SPECIFICATION

Figure-Shows the mechanical specification for the CPT display monitor.

[7] DISPLAY CHARACTERISTICS

1. Display size : H : 250 \pm 4mm
V : 170 \pm 4mm

2. Display capability : 5 \times 7 dot matrix character pattern 2000 characters, 80 \times 24 lines.

[8] CPT CHARACTERISTICS

1. Type : 14" in-line GUN (3709 B22)
90 degree deflection angle
 2. Phosphor : P22 C.I.E Coordinates
 3. Neck diameter : 29.1 ϕ
 4. Phosphor dot pitch : 0.31mm Maximum
 5. Implosion protection to be approved by U.L and C.S.A
 6. Degaussing : Automatic degaussing shall be provided
- * Deflection yoke and neck components are preset in CPT factory, So there is no need for purity adjustment.

[9] ENVIRONMENTAL SPECIFICATION

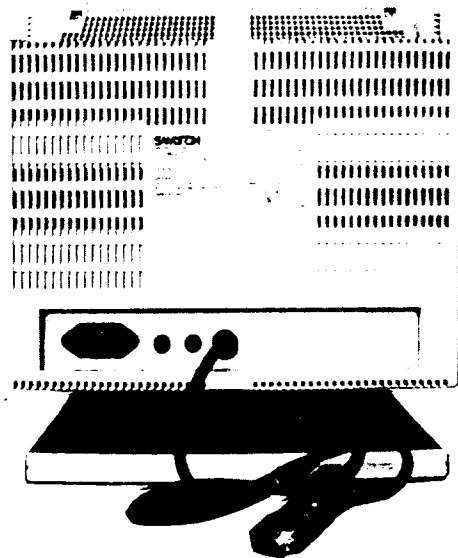
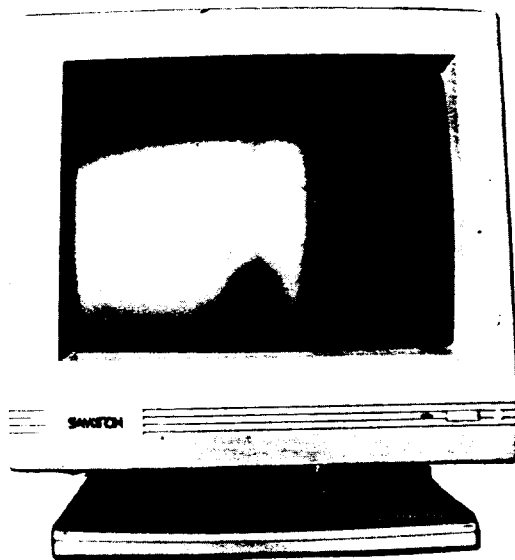
1. Operating temperature : 5 $^{\circ}$ C to 40 $^{\circ}$ C Centigrade in side enclosure
2. Relative humidity : 20% to 80% Enclosure convection cooled (non condensing)
3. Temperature storage : -20 $^{\circ}$ C to 60 $^{\circ}$ C out side enclosure

[10] WEIGHT

- Weight : 14.8kg

SECTION II SERVICE INFORMATION

* Control and terminal identification



[Important notice for service personel before servicing]

PLEASE READ BEFORE ATTEMPTING SERVICE

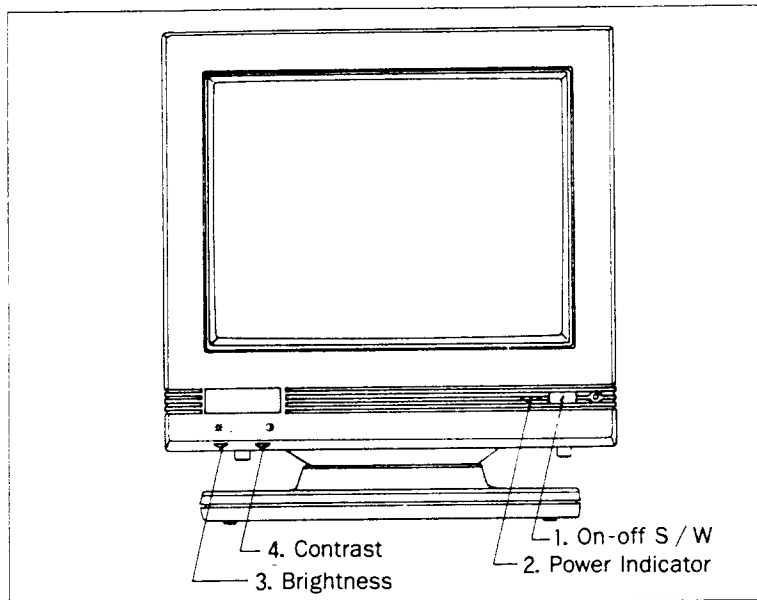
- ① Line voltage must be kept with in $\pm 15\%$ of the rated voltage.
- ② Do not discharge ARC or measure high voltage when high voltage lead is connected to CPT.
Discharge 2ND anode of CPT only after high voltage lead has been disconnected.
Do not discharge high voltage lead at any time, damage to transistors may result.
- ③ While the monitor is in operation, do not attempt to connect or disconnect any wires.
- ④ Disconnect all power before attempting any repairs.
- ⑤ When the power is on do not attempt to short any portion of the circuit.
This shorting may cause damage to the transistor in receiver.

(1) ADJUSTMENT

Apply power and TTL video signal to the data display

I. ADJUSTING THE FRONT CONTROLS

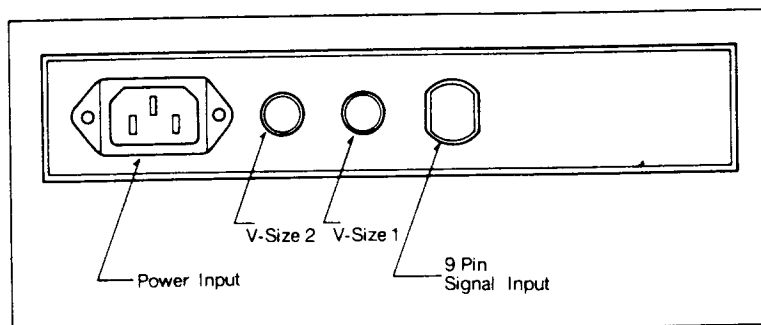
FRONT VIEW



- ① Power switch
Used to push the power on or off.
- ② When the power is on the power indicator (LED) is lit.
- ③ Bright control
 - 1) The brightness control knob shall provide the customer with means for adjusting the display intensity off set level as viewing conditions vary.
 - 2) The maximum brightness (fully clock wise) level shall be limited with the internal sub brightness factory adjustment.
 - 3) Control shall adjust the ground raster to the point of extinction.
- ④ Contrast control
Adjusts the display to the contrast preferred by the user.

2. ADJUSTING THE REAR CONTROLS

REAR VIEW



① V-Size 1,2 Control

Turn this knob for the proper vertical size 1, 2 of the display. Turn the knob clock wise for a larger display, turn it counter clock wise for smaller display.

3. ADJUSTING THE INTERNAL CONTROLS

HORIZONTAL ADJUSTMENT

- ① Received the cross hatch pattern.
- ② Turn VR 702, 722 and adjust it until synchronization is secured.
- ③ Signal and turn the power switch ON / OFF and this confirm the stability of sync.
- ④ If picture positions is left or right at center oc CPT face, adjust othe H-sshift of VR 714, 717 properly.

VERTICAL ADJUSTMENT

- ① Received the cross hatch pattern.
- ② Turn VR 503, and adjust it until sync secured.
- ③ The pattern position is up or down at the center of CPT face by adjust the V-shift of VR 519 properly.

FOCUS ADJUSTMENT

- ① Received the bull's eye (@) pattern.
- ② Adjust the brightness V/R control for generally bright.
- ③ Adjust the focus V/R control for best condition.

COLOR PURITY ADJUSTMENT

- ① Operate the receiver for 15Min. With brightness control at maximum to warm up the CPT.
- ② Degauss the receiver fully by using an external degaussing coil.
- ③ Roughly adjust convergency.
- ④ Receive a black and white signal.
- ⑤ Turn red and blue low light controls fully counter clock wise, if green field.
Adjust drive controls, if green field is not obtained.
- ⑥ Loosen the deflection yoke clamp screw, and move the DY to the purity magnet as close as possible.
- ⑦ Loosen purity magnet clamper and adjust the purity magnet to set the vertical green raster precisely as the center of screen, then tighten the clamper.
- ⑧ Slowly move the deflection yoke forward and adjust for the best overall green screen.
- ⑨ Tighten the deflection yoke clamp screw.

⑩ Produce the blue and raster by low.

Light controls and observe that good purity is obtained on the respective field.

- ⑪ Observe that uniform white raster is obtained by adjusting R.G.B low light controls.
If screen is not uniformly white, repeat above procedure.

WHITE BALANCE ADJUSTMENT

- ① Turn in a black and white program.
- ② Turn the brightness controller fully counter clock wise and adjust VR 101, 102, 201, 202, 301, 302 in the mechanical center.
- ③ Slowly turn the screen control clock wise from the full counter clock wise position, until two colors out of three R.G.B appear horizontal on the picture tube.
- ④ Extinguish the two horizontal all colors on the picture tube by turning the two repective low light controls fully, counter clock wise.
- ⑤ Turn the screen control further clock wise until the three color appears as a faint horizontal line on the picture tube.
- ⑥ Make the horizontal line white by turning the two low light controls white were previously set fully counter clock wise as step 3.
- ⑦ Alternately adjust the red blue drive controls to produce a normal black and white picture, check the black and white picture detail proper black and white condition (no coloration) form low lights to highlights at all brightness level for proper tracking.
Proper tracking at all brightness levels can be obtained when the controls, low light controls, and drive controls are properly adjust, if the results are unset is factory, repeat all the above steps.

CONVERGENCE ADJUSTMENT

* Note; Before adjusting covergence, vertical size, linearity and focus adjustment must be completed.

- ① Received the cross pattern.
- ② The brightness level should be on higher than necessary to obtain a clear pattern.
- ③ Loosen the convergence magnet clamp and converge the red and blue at the center of the screen, by rotating the R-B static convergence magnet.
- ④ Alight the converged red/blue dots wite the green static convergence magnet.
- ⑤ Tighten the convergence magnet clamp.
- ⑥ Remove the-DY wedges, and slightly tilt the DY for horizontal and vertical to obtain good overall convergence.
- ⑦ Secure the deflection by inserting the wedge.
- ⑧ If purity error is found, repeat the purity adjustment.

(2) TROUBLE SHOOTING

I. TROUBLE SHOOTING INFORMATION CHART

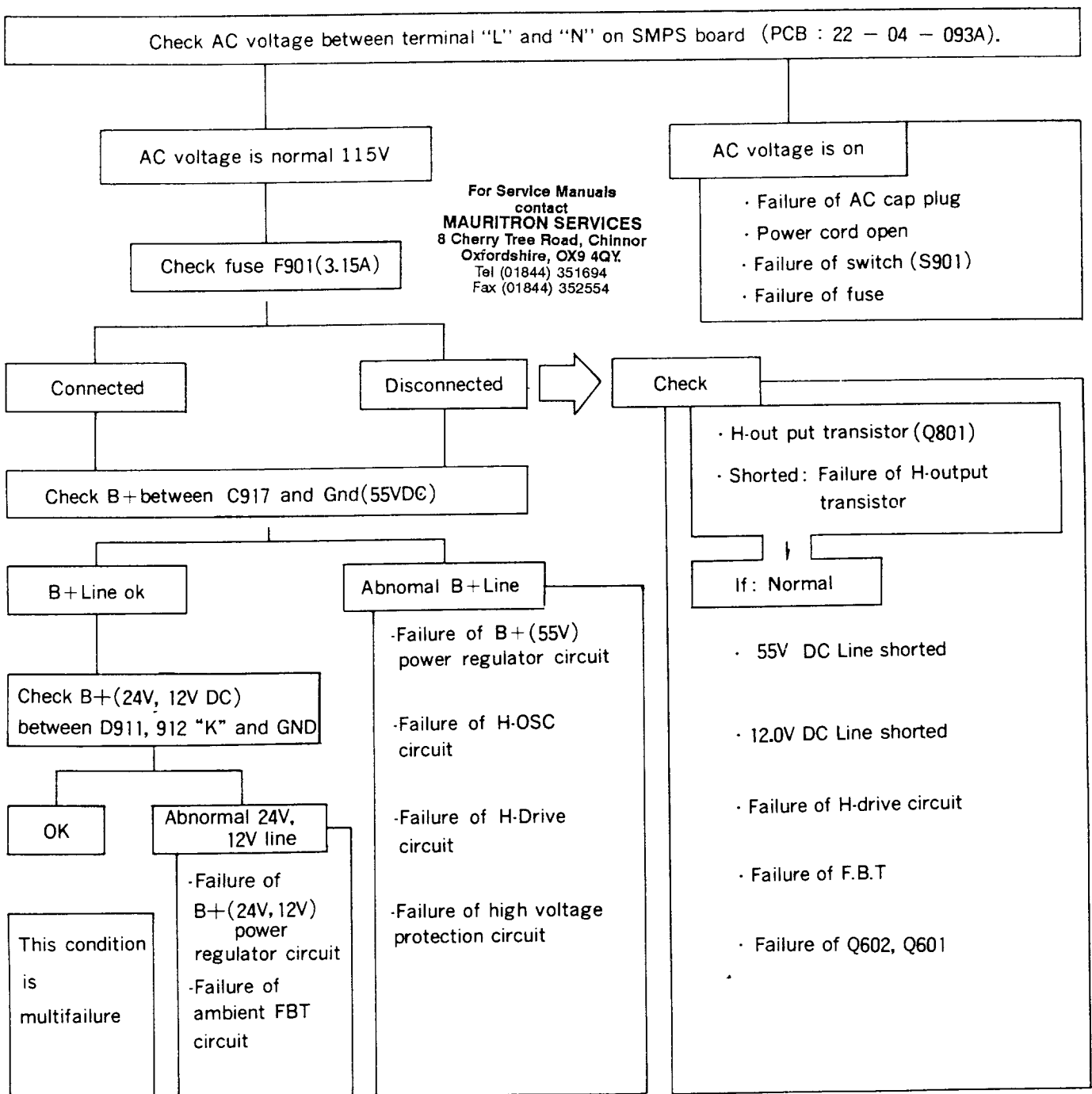
* INTRODUCTION

This is the trouble shooting section. It consists of a symptom chart, showing the symptom and an action to be taken to rectify the problem.

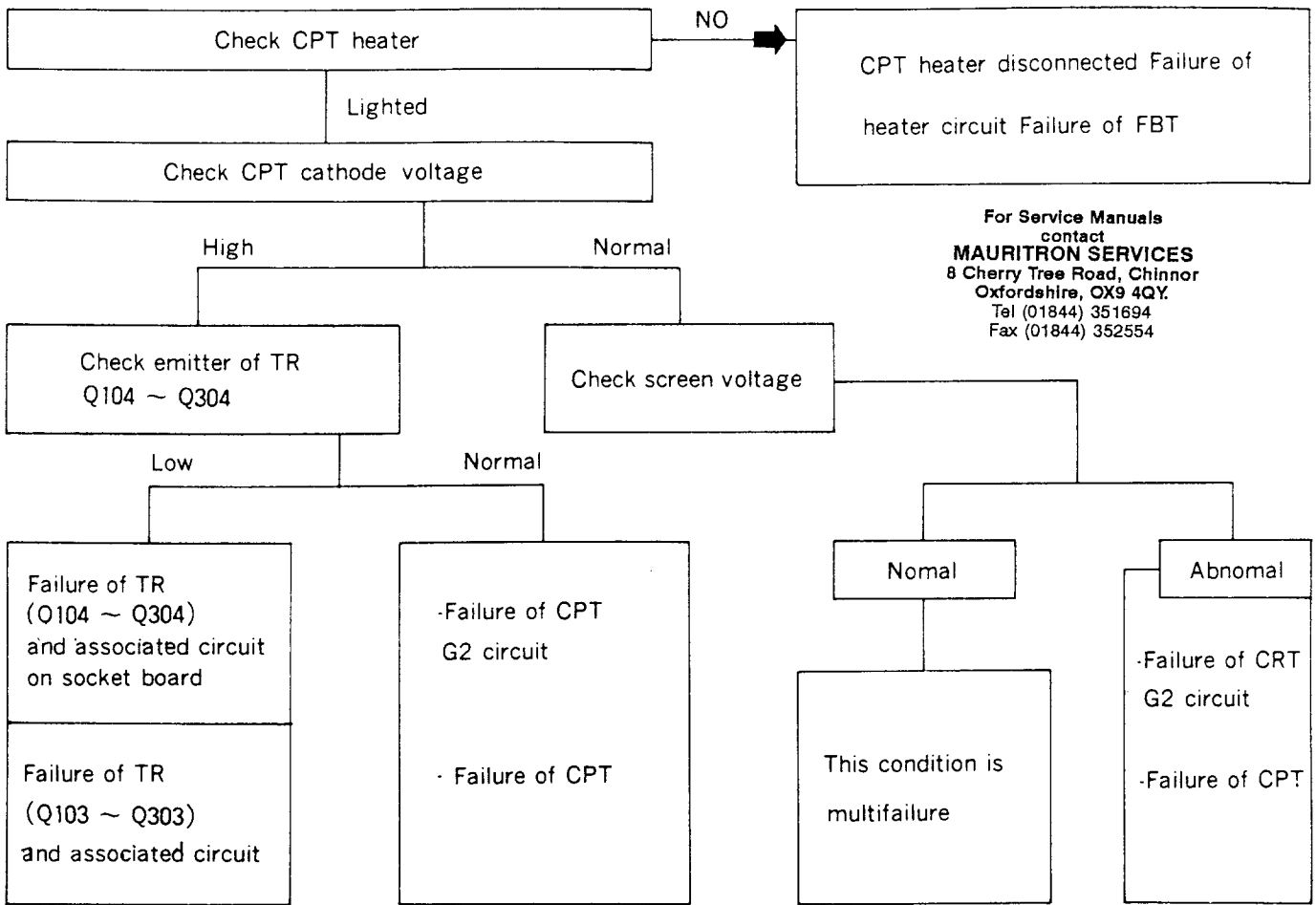
The best way to use this section is;

- ① Look on the chart to find the symptom that matches what the defective monitor is doing
- ② Try the recommended action.

① NO RASTER



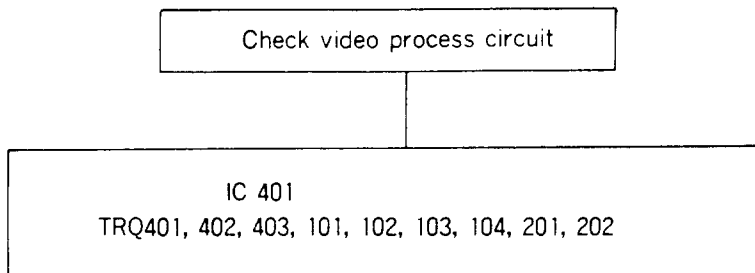
② B+(100V) NORMAL, NO RASTER



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MAURITRON SERVICES
8 Cherry Tree Road, Chinnor
Oxfordshire, OX9 4QY
Tel (01844) 351694
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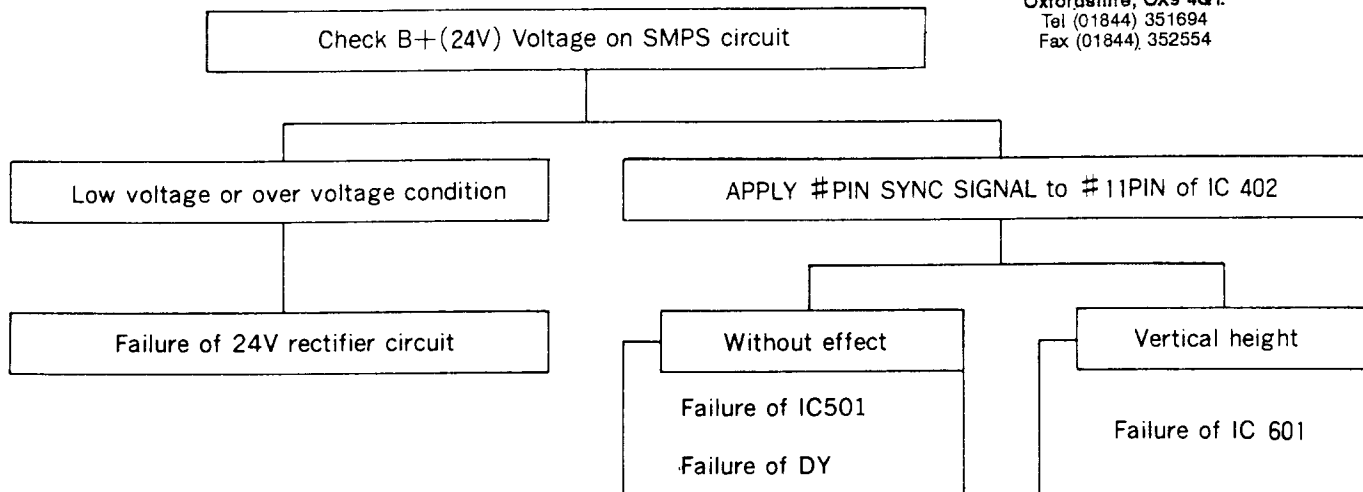
③ NOMAL RASTER, PICTURE ABNOMAL

* NOTE: Apply positive signal as input for RGB1 TTL

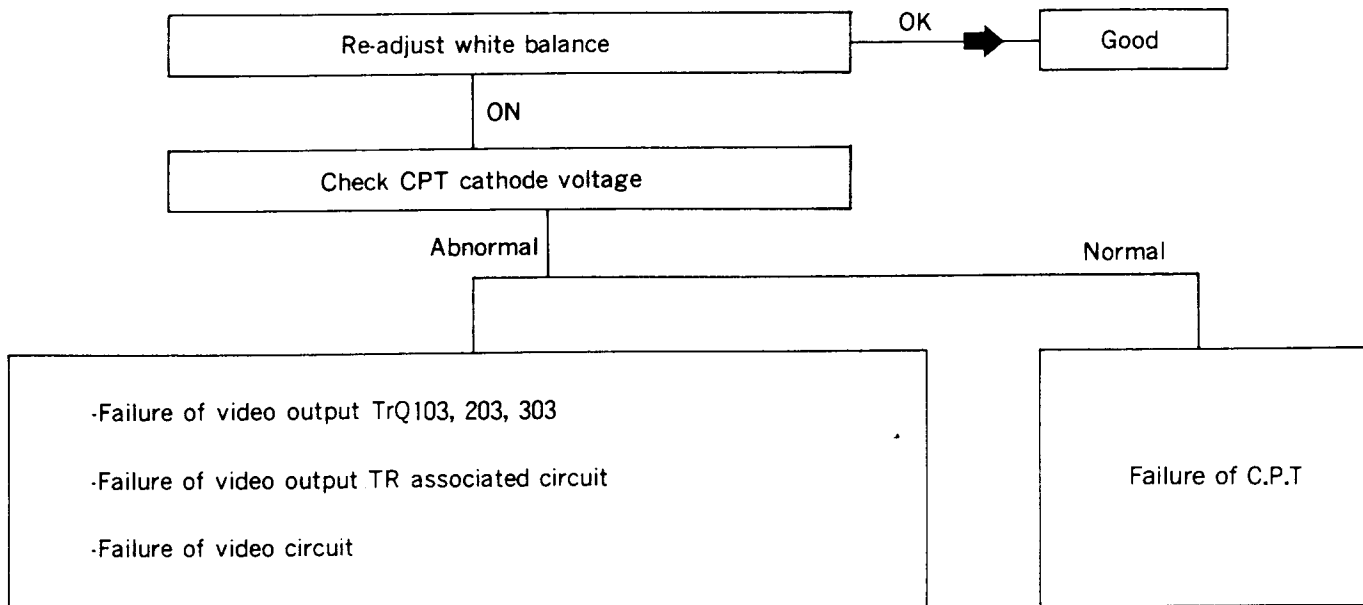


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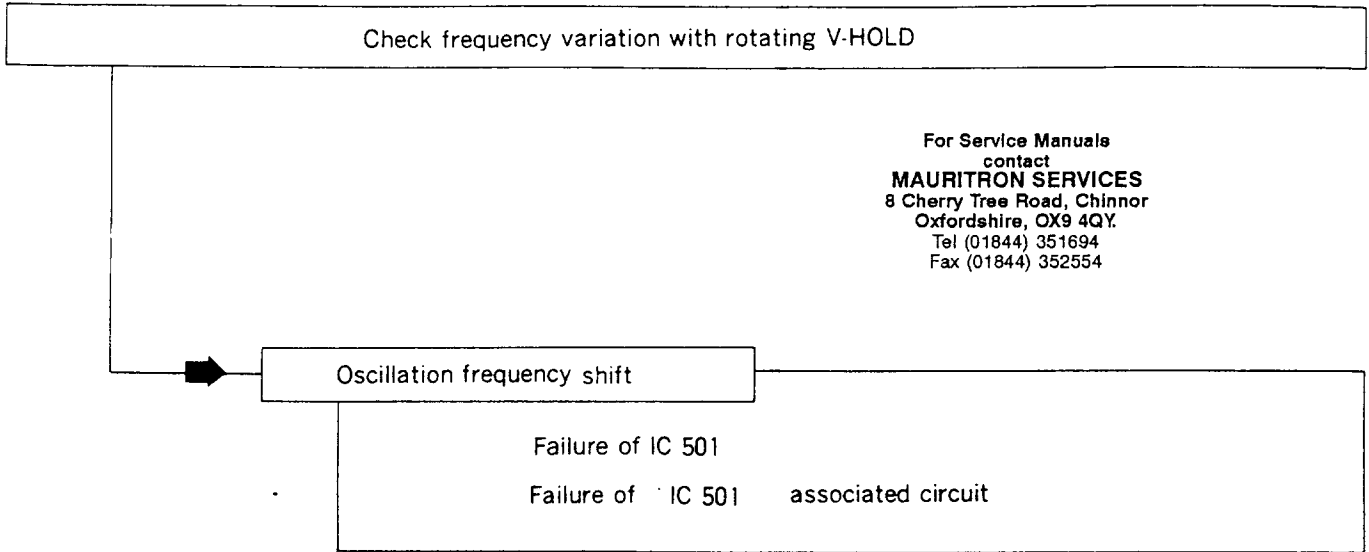
④ NO VERTICAL SWEEP



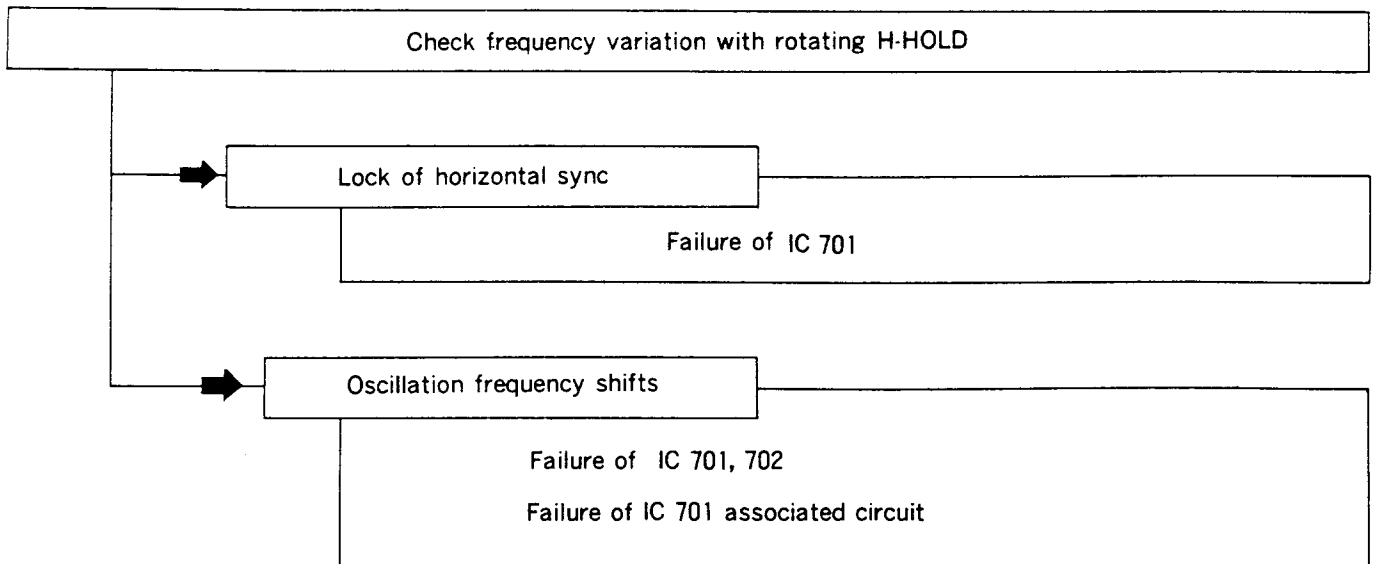
⑤ FAILURE OF WHITE BALANCE



⑥ UNSTABLE VERTICAL



⑦ UNSTABLE HORIZONTAL



2. TROUBLE SHOOTING FOR RESPECTIVE SYMPTOMS

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2.1 NO RASTER

- ① Turn the brightness control clockwise fully. If raster does not appear, check up next item.
- ② Check CPT heater
It is not on; CPT heater disconnect & failure heater of FBT
OK; Proceed to next check item
- ③ Check high voltage by HV voltage meter High voltage is not obtained
: Check of FBT (T801)
Check of Q801 Collector
Check of Q801 BASE
Check of HDT
Check of pin3 IC 701
OK : Proceed to next check item
- ④ Check CPT electrode voltage as follow.
G2 : $500 \pm 50V$
G4 : $6K \pm 500V$
G1 : $-180 \sim 0V$
K : $100 \pm 10V$
Voltage of G2 and G4 are not obtained; check of T801
Voltage of K is not obtained; Check of video oamp. and ambient circuit.
Voltage of G2,G4,G1 and K are normal; CPT is faulty.
OK : Proceed to next check item.
- ⑤ Check AC voltage at AC input point on SMPS AC voltage abnormal; Failure of AC line
OK : Proceed to text check item
- ⑥ Check fuse F901
Disconnected; Failure of switching power transformer. Failure of bridge diode
Failure of degaussing circuit
OK : Proceed to next check item
- ⑦ Check DC output voltage
Abnormal; Failure of IC901 and ambient circuit.
OK : Proceed to next check item.

2.2 ONLY ONE RASTER LINE APPEARS IN HORIZONTAL DIRECTION.

- ① Check of deflectin yoke vertical coil; Vertical coil open and shorted.
- ② Check of pin 1,2 of IC 701 when voltage is not obtained; Check of 701,
- ③ Check of pin 3 of IC 701

2.3 UNSTABLE VERTICAL

- ① Check frequency variation with rotating V-Hold.
- ② Check of pin 3 of IC501.

2.4 UNSTABLE HORIZONTAL

- ① Check of frequency variation with rotating H-Hold.
- ② Check of pin 3 of IC501.

2.5 NO PICTURE

The nearly square pulses output of the oscillator applies it the base of Q702 to switch on and off this transistor, there by passing pulse current through the primary side transformer(HDT).

With each turning on and off of the transistor spiking occur because of inductance.

The horizontal out put transistor Q801 is simply a switch which is truned on and off at the horizontal scan rate by the drivcing signal applied to its base, a sawtooth current through the deflection coil is required to sweep the beam linearly across the CPT screen. This happen when Q801 is turned on and its collector voltage droops to near zero, and the C801, 802 begins discharging through the deflection coil which deflect the beam to the reigh edge of the CPT. At that time, Q801 cuts off and C801, 802 ceases to supply current to the deflection coil. However, an induced voltage appear across the deflection yoke coil as the magnetic field collapes and an oscillation then occurs the deflection coils and C801, 802.

During the first half cycle of this oscillation, the induced voltage is felt across the collector of with cut off C801, 802 and the primary Q801, T801.

This voltage is stepped up T801 rectified to produce high voltage that is applied to anode of the CPT.

(3) SERVICE NOTE

Servicing precautions

The following precautions should be observed when service is required.

1. Replacment parts which have special safety characteristics are identified by shading on the schematics.
Replace these critical components with recommended replacement parts.
Don't degrade the safety of the set through improper servicing.
2. Comply with all cautions and safety-related notes on or inside the monitor cabinet, on the monitor chassis or on the picture tube.
3. Maintain correct lead dress and part placement.
Extra caution should be taken to assure proper dress in the high voltage circuit area.
Where a malefaction has occurred, those components or circuits that indicate evidence of abnormality should be replaced or corrected.
Always use the manufacturer's safety specified replacment components.

4. When replace a chassis in the cabinet, always make certain that all the protective devices are back in their proper place, such as: non metallic control knobs, insulating fishpapers, component cover/shields, isolation resistor capacitor networks etc.

5. Before returning the monitor to the owner, be sure that no protective device built into the set by the manufacturer has become defective, or inadvertently defeated during servicing. Therefore, the following checks are recommended for the continued protection of the customer and service engineer.

* LEAKAGE CURRENT HOT CHECK

Plug the AC line cord directly into a 115V AC outlet (do not use an isolation transformer in this check).

Use a leakage current tester which complies with American National Standards Institute (ANSI C101.1-1971, LEAKAGE FOR APPLIANCE), and UNDERWRITERS LABORATORIES (UL, 1410).

Measure current from all the exposed metal parts of the cabinet, (screwheads, metal overlays, etc.) to earth ground, particularly any exposed metal part having a return path to the chassis.

The test should be conducted with AC switch "ON" and then repeated with "OFF".

Any current measured must not exceed 0.5mA with to AC line cord inserted in the AC supply circuit receptacle.

Any measurement not within the limits outlined above are indicative of a potential shock hazard and corrective action must be taken before returning the set to the customer.

6. X-RADIATION PRECAUTION

This product contains critical electrical and mechanical parts essential for X-RAY protection, see CRITICAL COMPONENT LIST and other service adjustment.

Anode voltage normal is 23KV at 115V line and must not exceed 28KV under any operating condition. To measure anode voltage, set brightness for a very dim picture.

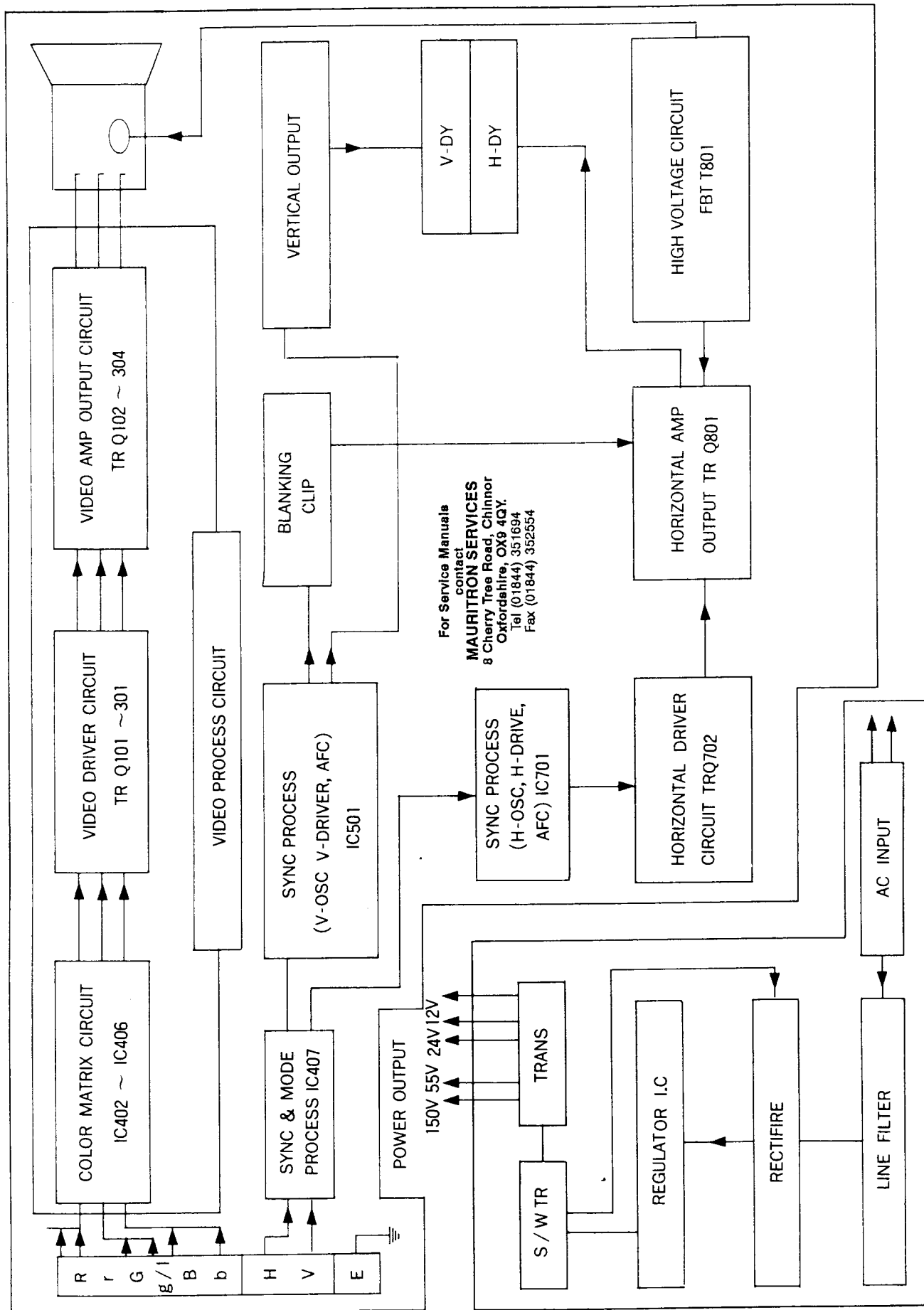
Use a high-voltage meter between the chassis and the anode lead to measure HV.

If high voltage exceeds the specified limits, check each components on the chassis and take necessary corrective action.

7. Do not remove, install or handle the picture tube in any manner unless shatter-proof goggles are worn. People not so equipped should be kept away while a picture tube is handled.

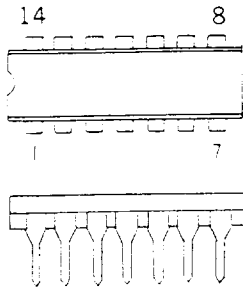
Keep the picture tube away from body while handling.

[4] BLOCK DIAGRAM

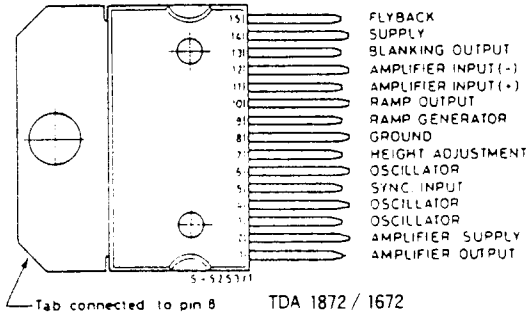


SEMICONDUCTORS BASING

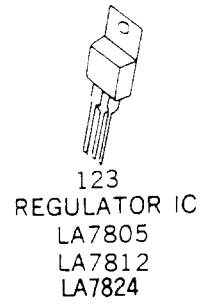
IC



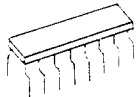
74LS06
86



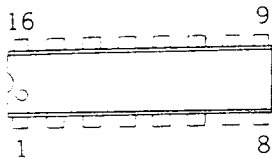
TDA 1872 / 1672



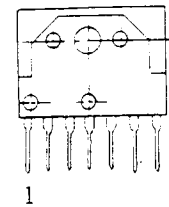
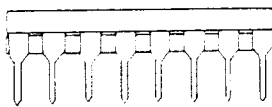
PIN 1. COMMON
2. INPUT
3. OUTPUT



TDA 1180

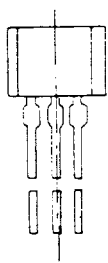


TDA 4601



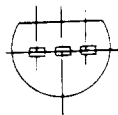
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TRANSISTOR

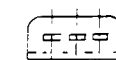


2N 3904
2N 3906

1. EMITTER
2. BASE
3. COLLECTOR



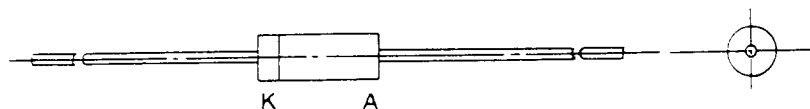
2SC 1507



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

DIODE

K: KATHODE
A: ANODE



5) THEORY OF OPERATION (CIRCUIT DESCRIPTION)

1. General

This monitor contains two independent circuits. This first is the power supply section, and the second is the sweep or CPT drive section.

2. Power supply circuits

LF601 and ambient capacitors from a line filter whose function is to protect the power supply from power line surges and noise, and to prevent the power supply from radiation noise back out to series with the degaussing coil which is across the AC line, initially, when the receiver is turned "on" and the resistance of the posistor is low.

Causing the current to flow through the degaussing coil and demagnetizing the action occurs at CPT.

As a posistor heats, its resistance increases to the point that the current flow through the degaussing coil becomes negligible.

The TAD4601 has been controlled DC output voltage and has been designed for driving, controlling, and protecting the switching transistor in blocking converter power supplies.

At the input of pin 2 the zero crossings of the frequency provided by feedback coil (T602) are registered and forwarded to the control logic.

Pin 3 receives the rectified amplitude fluctuations of the feedback coil.

The regulating amplifier operates with an input voltage of approx. 2V and a current of approx. 1.4mA depending on the internal voltage reference, the overload recognition simulator amplifier.

The collector current is simulated by an external RC combination present at pin 4 and internally set threshold voltages.

The output levels of the control amplifier as well as those of the overload recognition and the collector current simulator are compared in the trigger and forwarded to the control logic.

Via pin 5 it is possible to externally inhibit the operation of the TDA4601.

3. Video section

This section amplifies the output signal of a generator to the level high enough to drive a video output circuit.

Input signals contain R.G.B.r.g.b video signals and H/V sync. Intensity.

These TTL level signals are a positive polarity. Video signals are applied to IC 401~406 and driven through a contrast Volume (V/R 401) and connected to Q101, 201, 301.

Finally, the driven signals are applied to CPT cathode through an output amplifier Q103, 203, 303.

The signal board is a collection point for the voltage and signals required to operate CPT.

The board contains bias and drive controllers.

R.G.B Signals are directly coupled from amplifier of R.G.B. main PCB.

4. Horizontal and vertical processor circuit

The 60Hz signal, originated and amplified in the IC 501, comes to pin 12 and then amplified more by the vertical output circuit.

The amplified 60Hz signal goes out pin of IC 501 to VERTICAL deflection yoke causing the frequency of horizontal oscillation can be changed by means of V/R 720, 723 the pulses occurring in the secondary winding of FBT are admitted as the pulses for a sawtooth wave generation through C709 to IC 701.

These pulses under integration are connected to PIN 6 of IC 701, and Applied as comparison signal to the horizontal AFC voltage to the oscillation circuit. The X-RAY protection circuit operates by shutting down the horizontal oscillator in reference to a Voltage produced by rectifying the flyback pulses. This scheme, based on the proportionality between fly back pulses and high voltage, is put to work in a following manner.

Flyback pulse of a positive polarity are R701 and C701 and the resulting DC Voltage is applied to pin 8 of IC 701 when a high voltage exceeds the limit, the DC voltage will be high, so to shut down the horizontal oscillator, A loss of this oscillation is a loss of raster, but the DC power supply remains unaffected.

The Q702 and T701 is a horizontal drive circuit. This circuit is located between an oscillator circuit and horizontal output circuit, and serves to amplify the output of the oscillator and to drive the output transistor.

The nearly square pulses output of the oscillator is applied to the base of Q702 to switch on and off this transistor, there by passing pulse current through the primary side transformer (HDT). With each turning on and off of the transistor spiking occurs because of inductance.

The horizontal output transistor Q801 is a simple switch which is turned on and off at the horizontal scan rate by the driving signal applied to its base, a sawtooth current through the deflection coil is required to sweep the beam linearly across the CPT screen.

This happens when Q801 is turned on and its collector voltage drops to near zero, and the C801, 802 begins discharging through the deflection coil which deflects the beam to the right of the CPT.

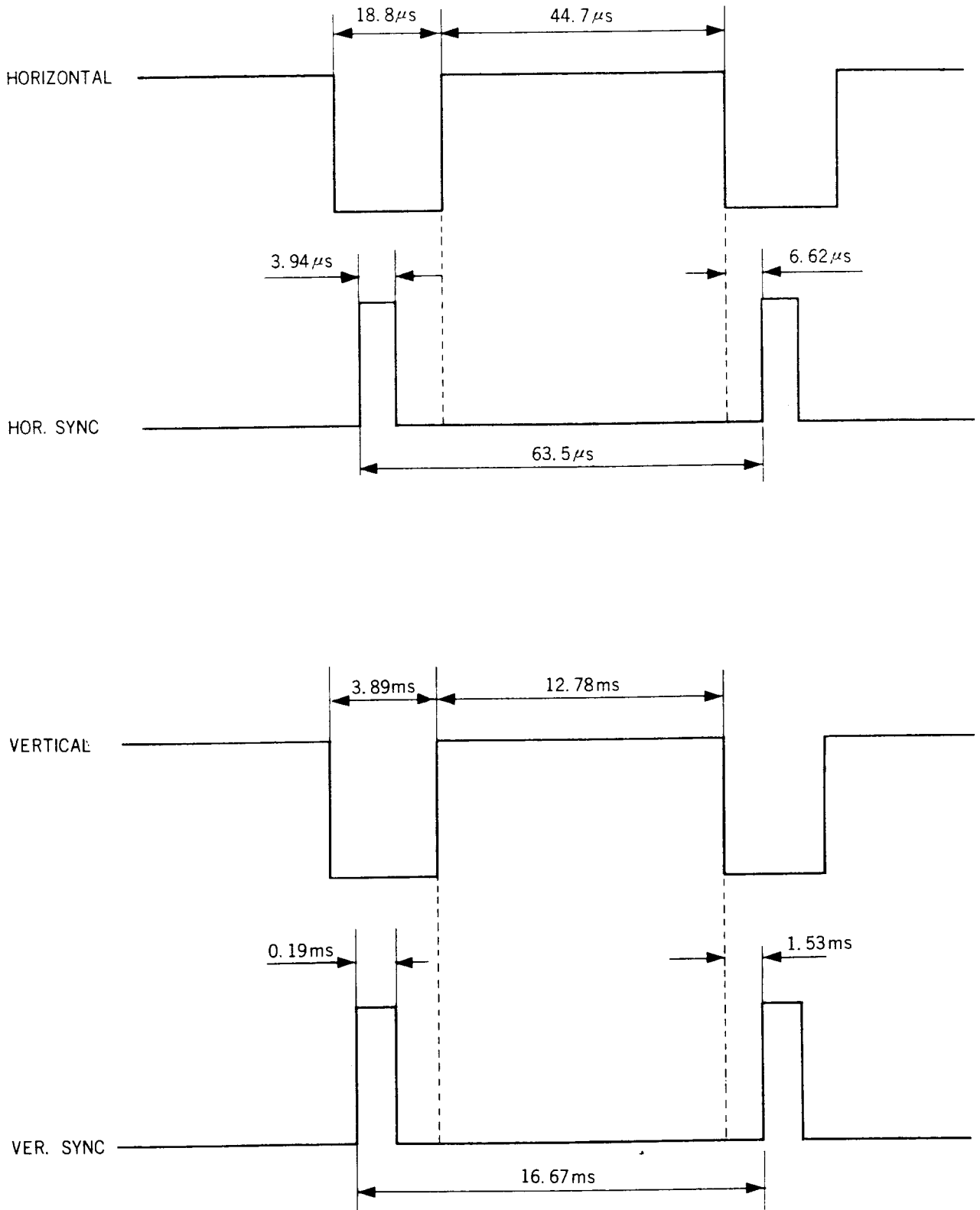
At that time, Q801 cuts off and C801, 802 ceases to supply current of the deflection coil. However, an induced voltage appears across the deflection yoke coil as the magnetic field collapses and then an oscillation occurs the deflection coils and

During the first half cycle of this oscillation, the induced voltage that is applied to the anode of CPT.

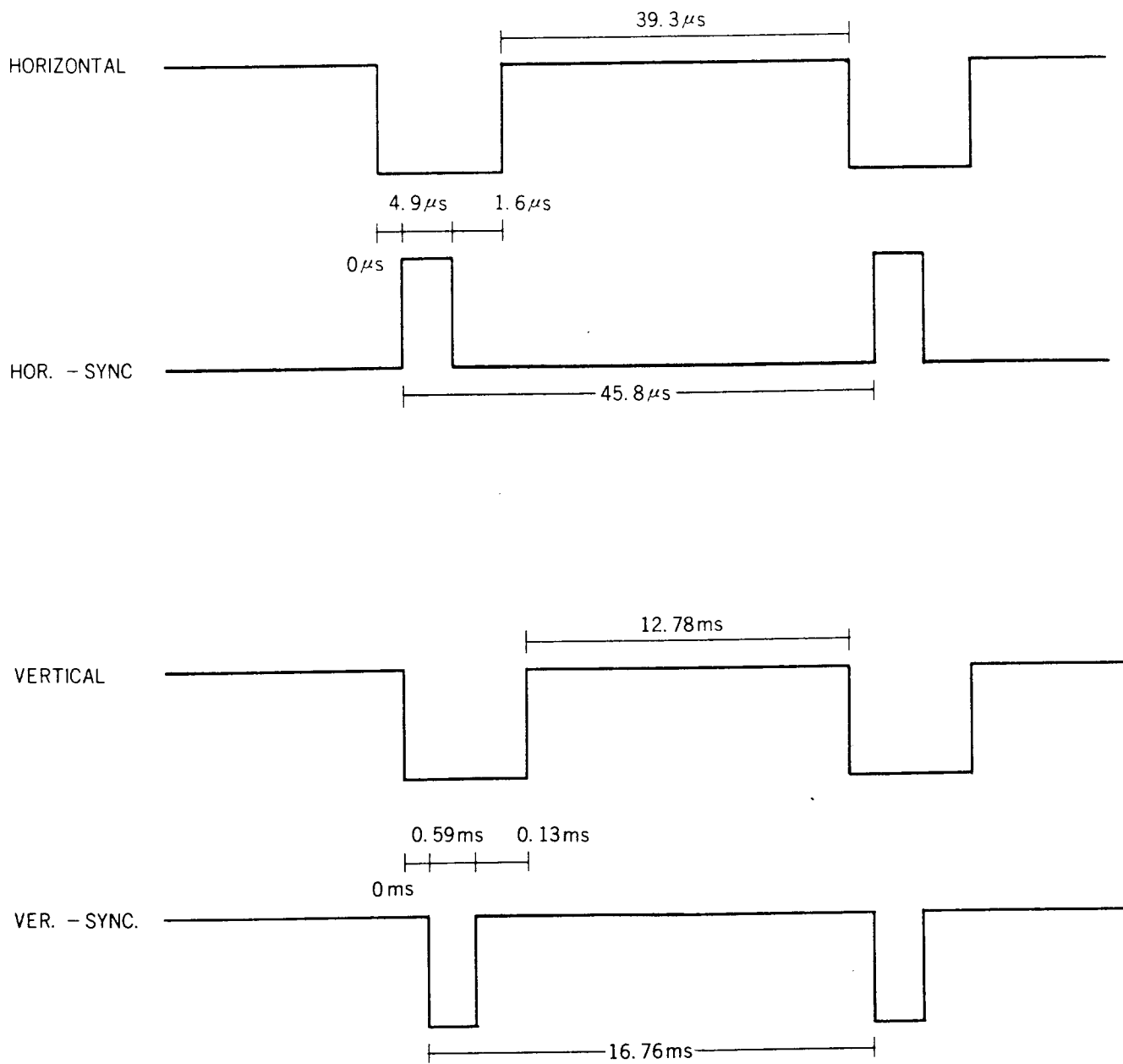
SECTION III FIGURES

1. Timing chart
2. Adjust & Connector for PCB
3. Main PCB Ass'y dimension
4. Mechanical dimension for C.P.T
5. Schematic and Voltagewave form
6. PCB Component location

1. TIMING CHART(MODE 1)

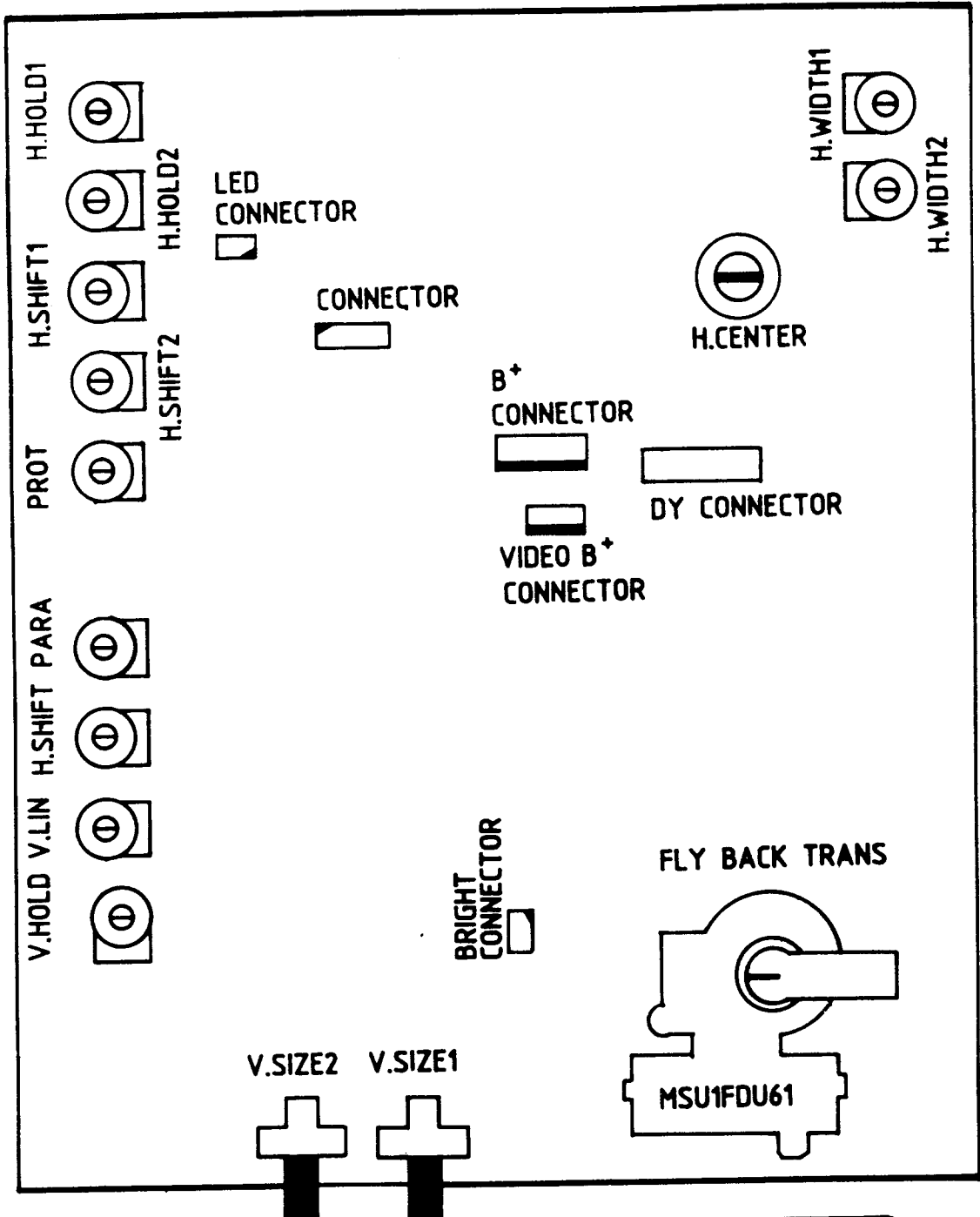


ENHANCED COLOR(MODE 2) TIMING CHART



2. ADJUST AND CONNECTOR FOR PCB

MAIN PCB

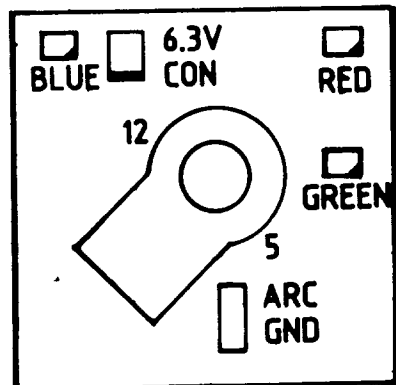


PART NO.-22-08-002A

SOCKET PCB

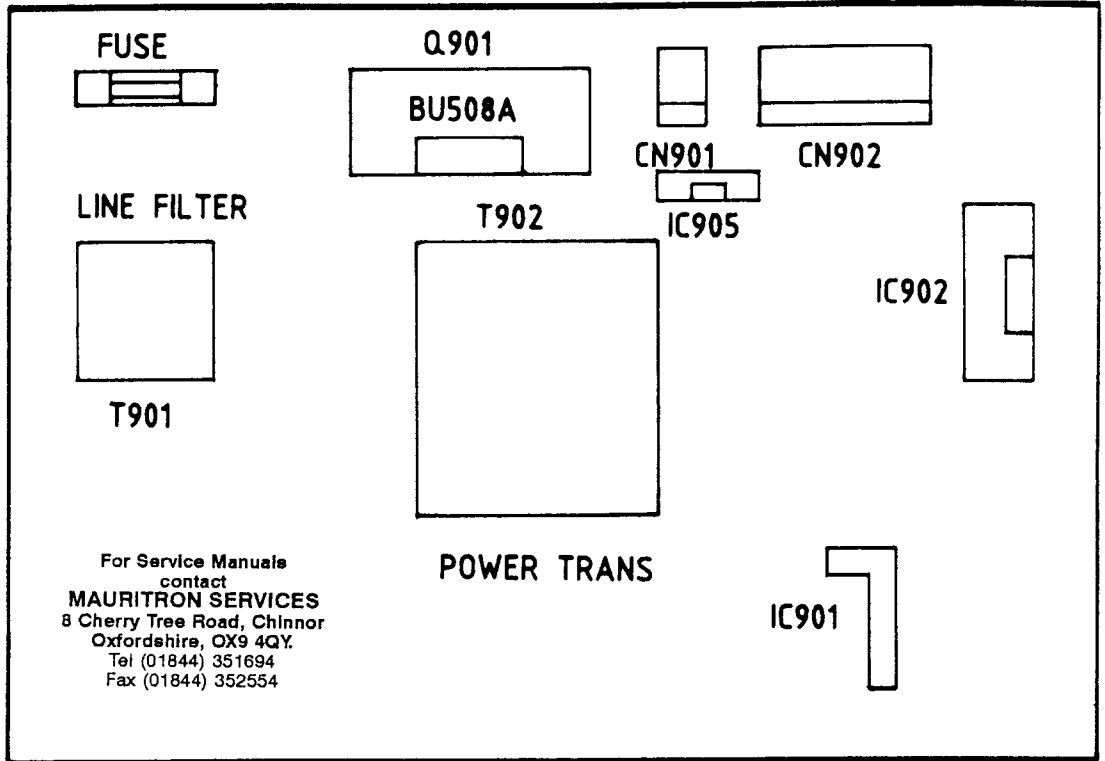
PART NO.-22-04-096A

For Service Manuals contact
MAURITRON SERVICES
 8 Cherry Tree Road, Chinnor
 Oxfordshire, OX9 4QY.
 Tel (01844) 351694
 Fax (01844) 352554

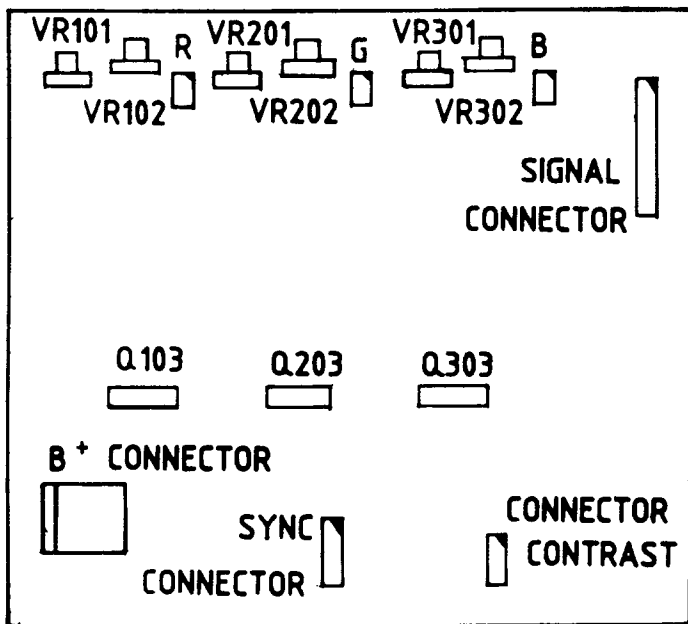


SMPS PCB

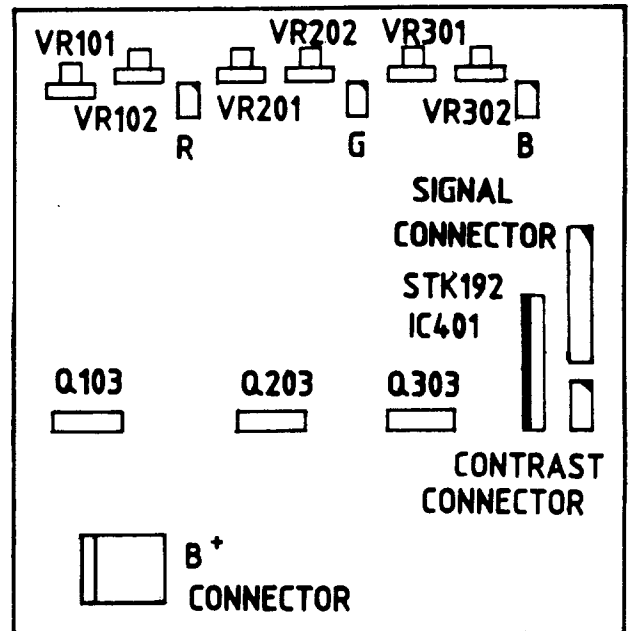
PART NO.-22-04-093A



DISCRETE TYPE VIDEO PCB



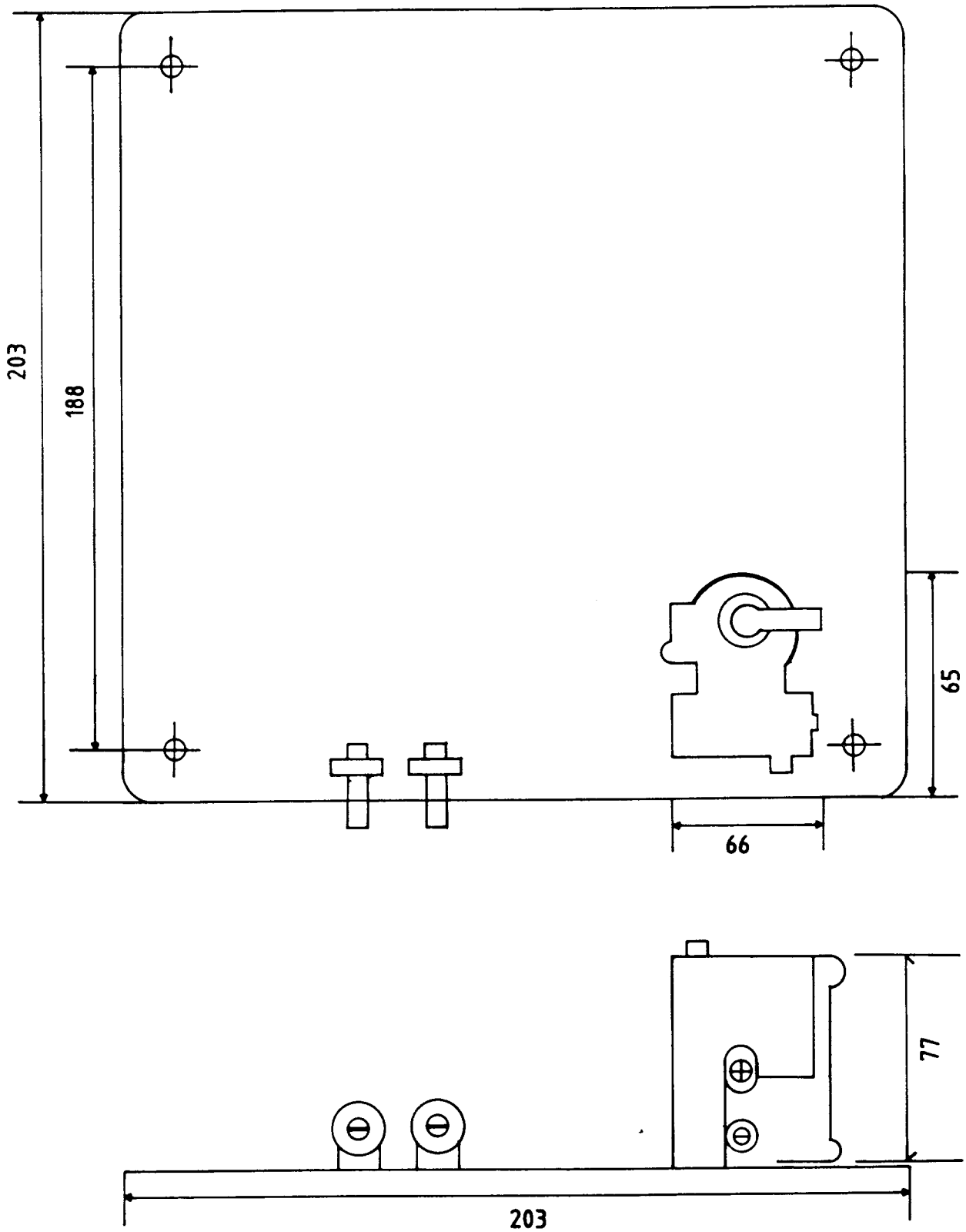
PART NO.-22-04-105A



STK192 TYPE VIDEO PCB
 PART NO.-22-04-095A

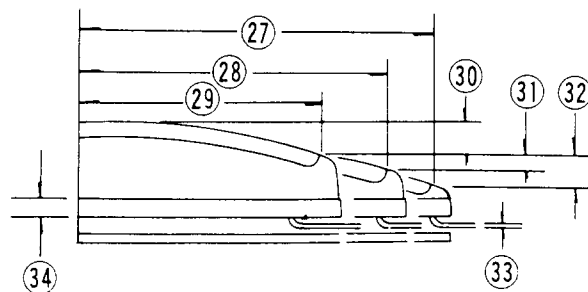
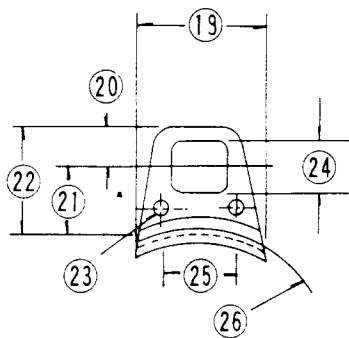
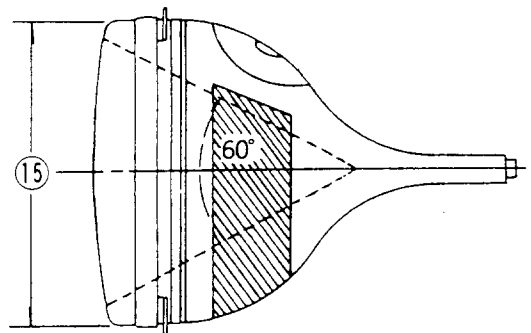
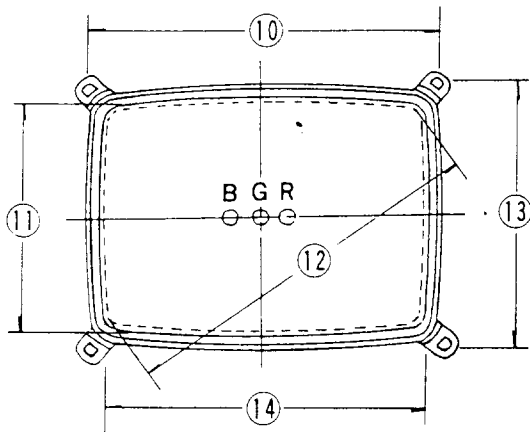
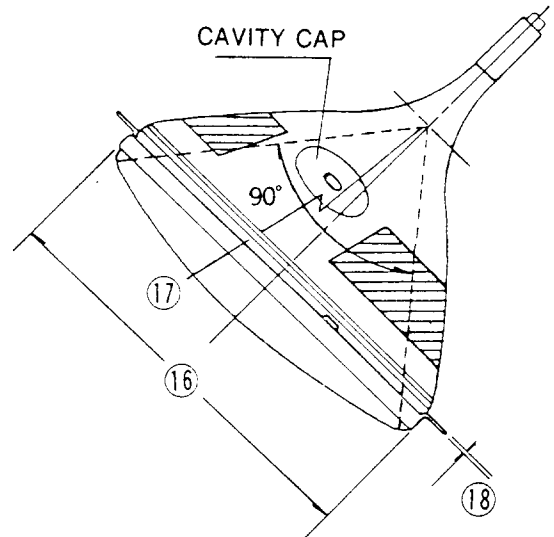
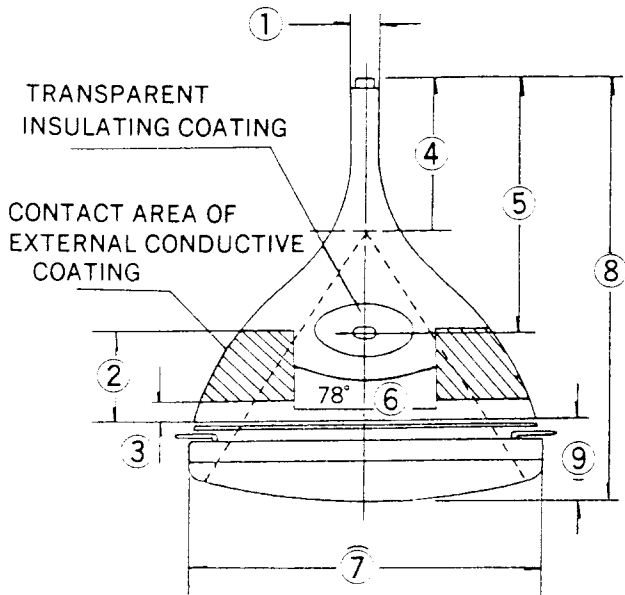
3. MAIN PCB ASS'Y DIMENSION

UNIT: MM



4. MECHANICAL DIMENSION FOR CPT

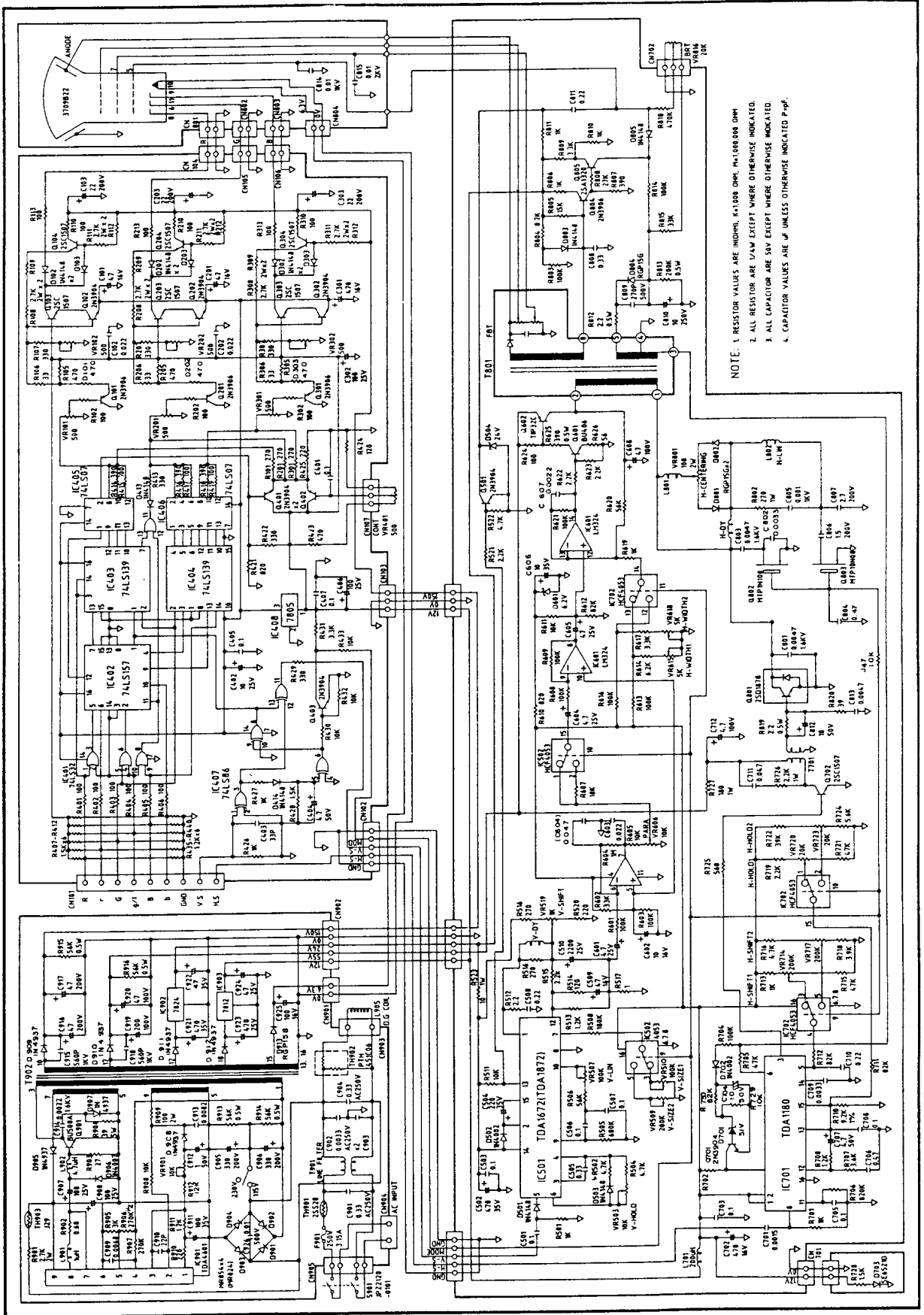
OUTLINE DRAWINGS



Outline Dimensions

| Dimension Number | Dimension (inches / mm) | Dimension Number | Dimension (inches / mm) |
|------------------|---|------------------|-----------------------------------|
| 1 | $1.146^{+0.059}_{-0.026} / 29.11^{+1.50}_{-0.66}$ | 18 | 0.079 / 2.0 |
| 2 | 2.85min / 72.5min | 19 | $1.181 \pm 0.012 / 30.0 \pm 0.3$ |
| 3 | 1.16 / 29.5 | 20 | 0.386 / 9.8 |
| 4 | $5.406 \pm 0.189 / 137.3 \pm 4.8$ | 21 | 0.571 / 14.52 |
| 5 | $8.173 \pm 0.315 / 207.6 \pm 8.0$ | 22 | $0.957 \pm 0.0079 / 24.3 \pm 0.2$ |
| 6 | 5.52 / 140.2 | 23 | $0.118 \phi / 3.0 \phi$ |
| 7 | $12.47 / 0.094 / 316.8 \pm 2.4$ | 24 | 0.155 / 14 |
| 8 | $13.299 \pm 0.37 / 337.8 \pm 9.5$ | 25 | 0.787 / 20.0 |
| 9 | $2.83 / 0.09 / 72.0 \pm 2.4$ | 26 | 1.06 / 27.12R |
| 10 | $12.260 \pm 0.118 / 311.4 \pm 3.0$ | 27 | 6.72 / 170.9 |
| 11 | 8.29min / 210.6min | 28 | 5.63 / 143.6 |
| 12 | 13.20min / 335.4min | 29 | 4.27 / 108.5 |
| 13 | $9.539 \pm 0.118 / 243.2 \pm 3.0$ | 30 | 0.40 / 10.3 |
| 14 | 11.05min / 280.8min | 31 | 0.31 / 7.9 |
| 15 | $9.78 \pm 0.118 / 248.5 \pm 3.0$ | 32 | 0.61 / 15.7 |
| 16 | 14.274 ± 0.118 | 33 | $1.34 \pm 0.079 / 34.0 \pm 2.0$ |
| 17 | 22.638R / 575R | 34 | 0.74 / 19 |

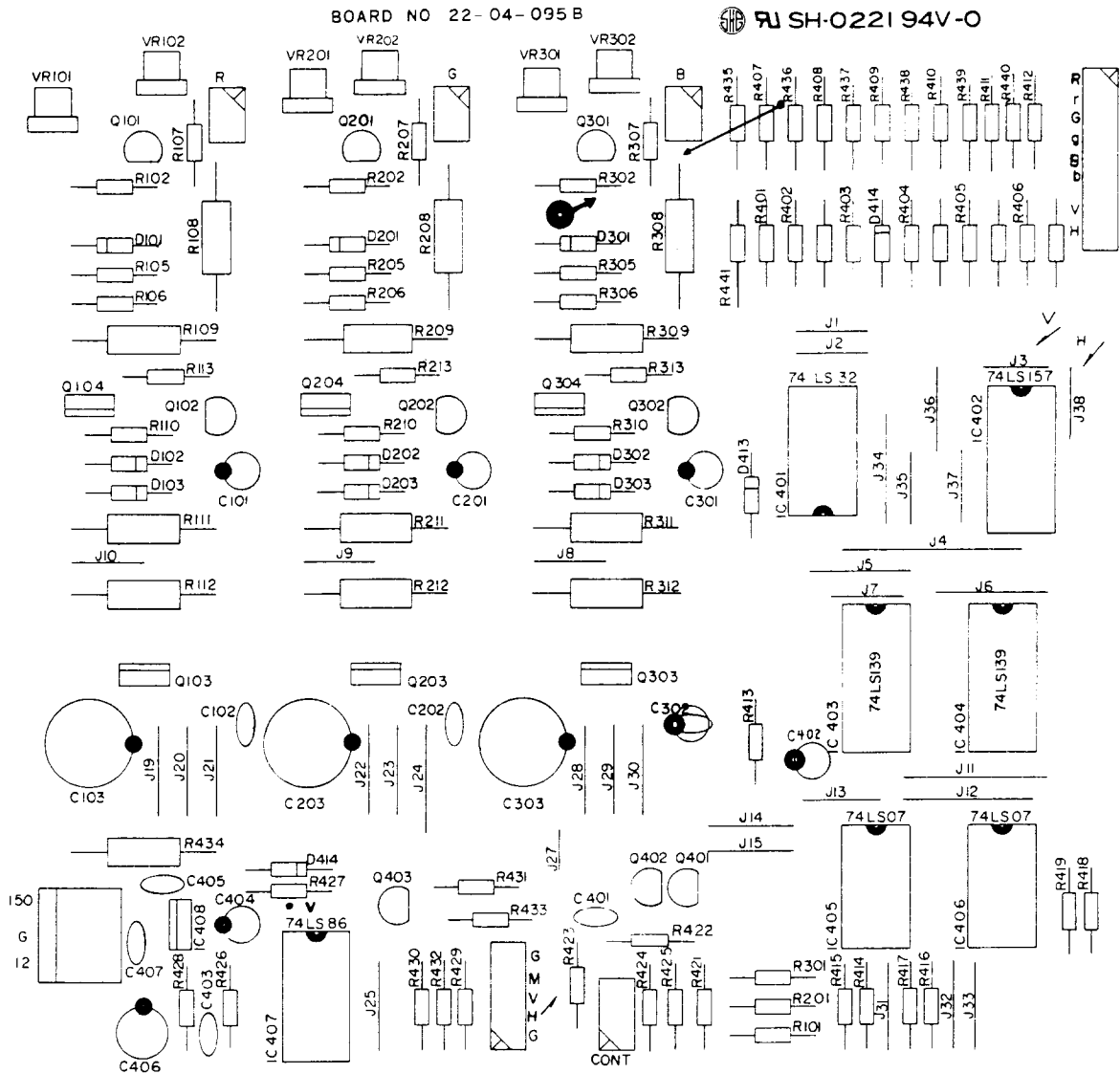
5. SCHEMATIC



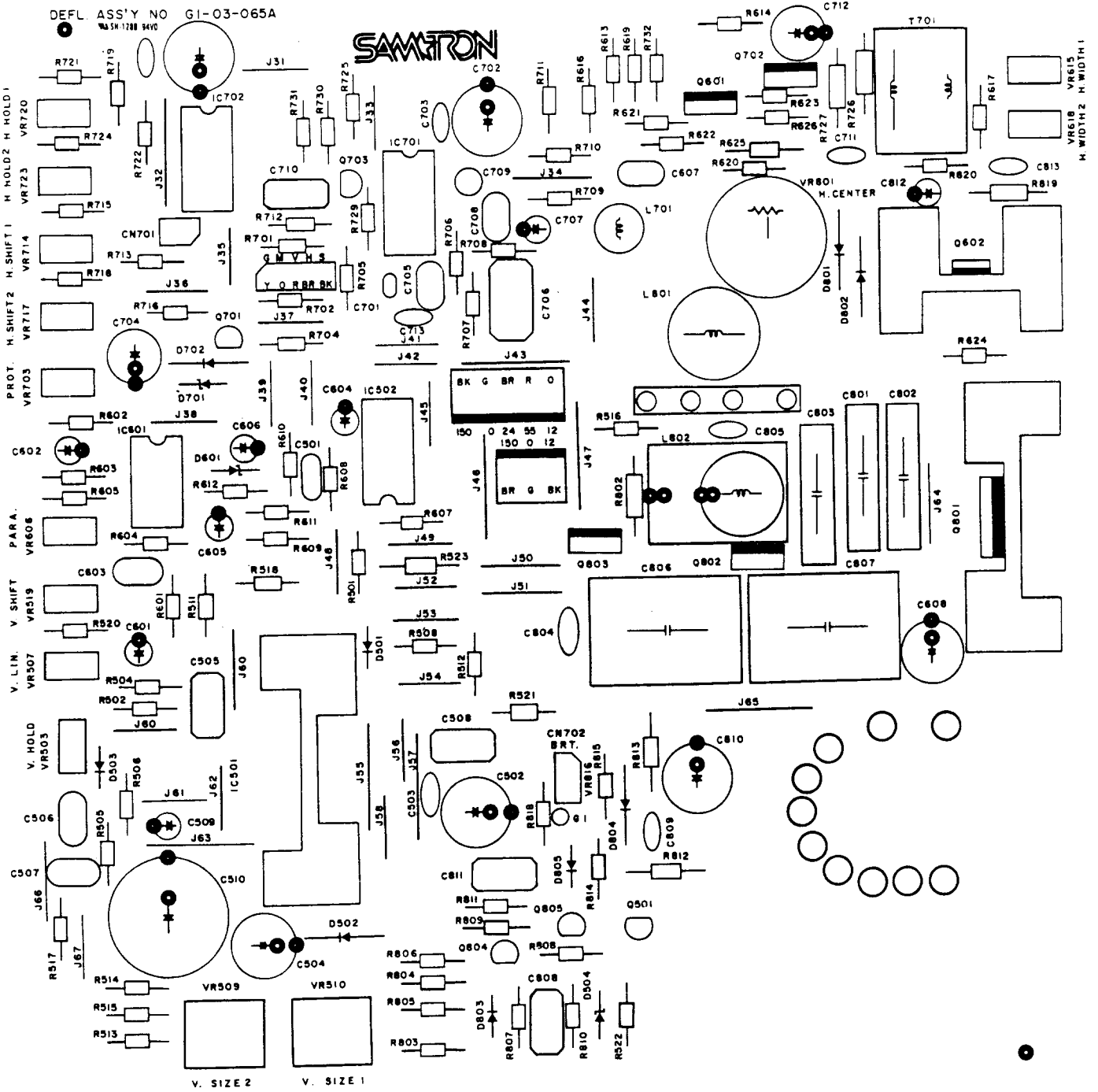
ALSO
ENLARGED ON
OTHER PAGES

- NOTE: 1. RESISTOR VALUES ARE IN OHMS, K=1000 OHM, M=1000000 OHM.
 2. ALL RESISTOR ARE 1/4W EXCEPT WHERE OTHERWISE INDICATED.
 3. ALL CAPACITOR ARE 50V EXCEPT WHERE OTHERWISE INDICATED.
 4. CAPACITOR VALUES ARE μ F UNLESS OTHERWISE INDICATED P-PF.

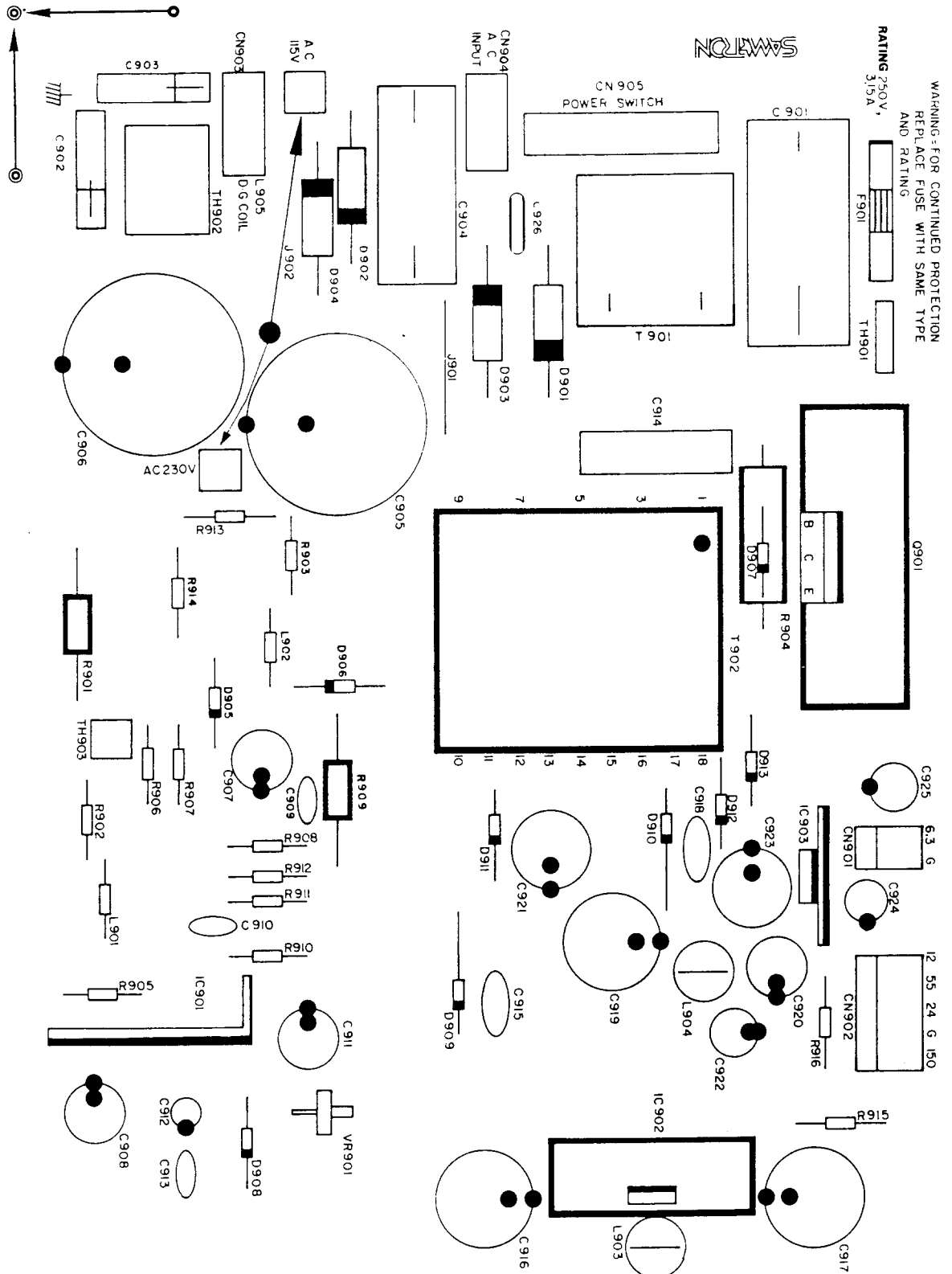
6. PCB COMPONENT LOCATION



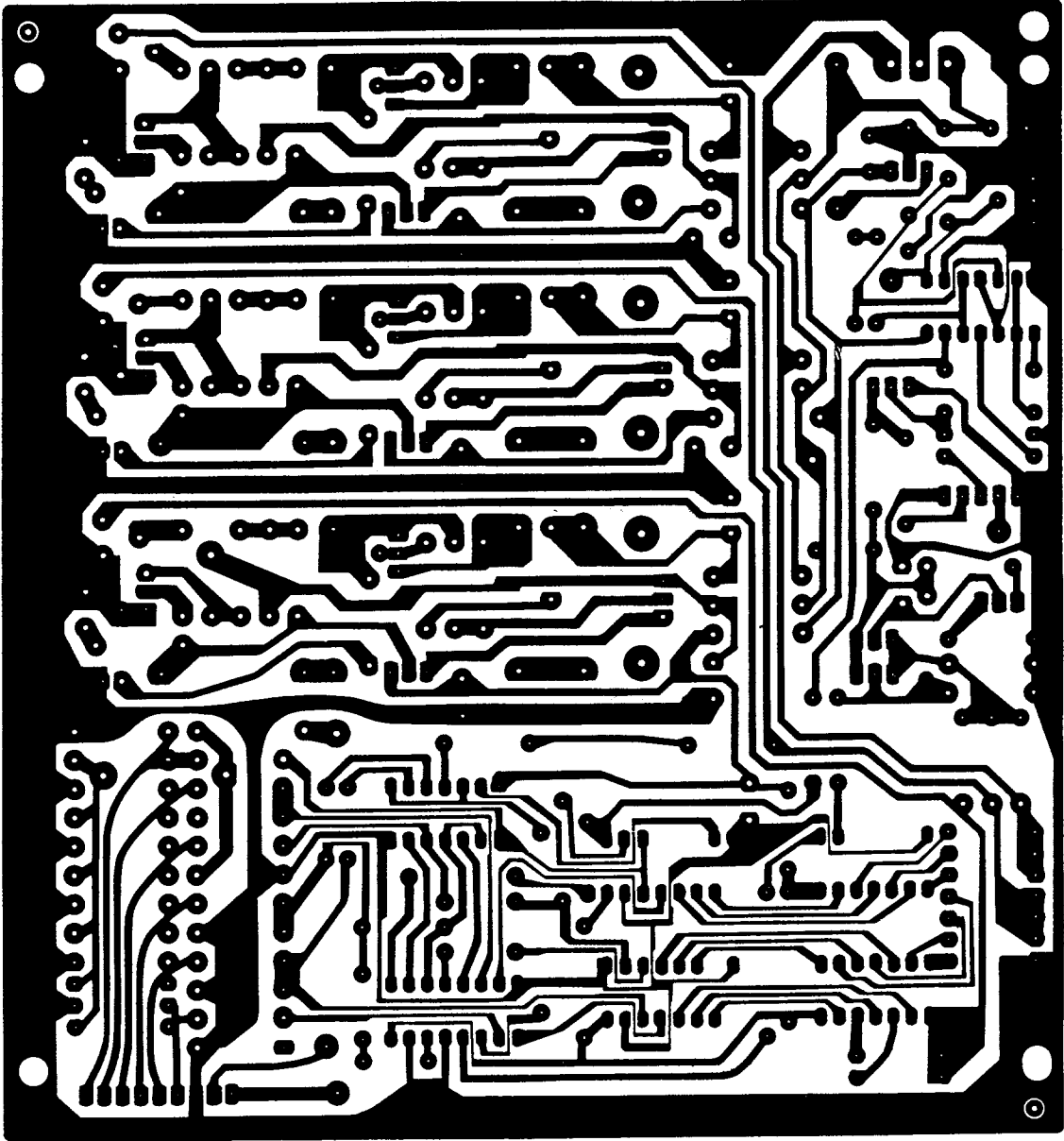
< VIDEO BOARD >



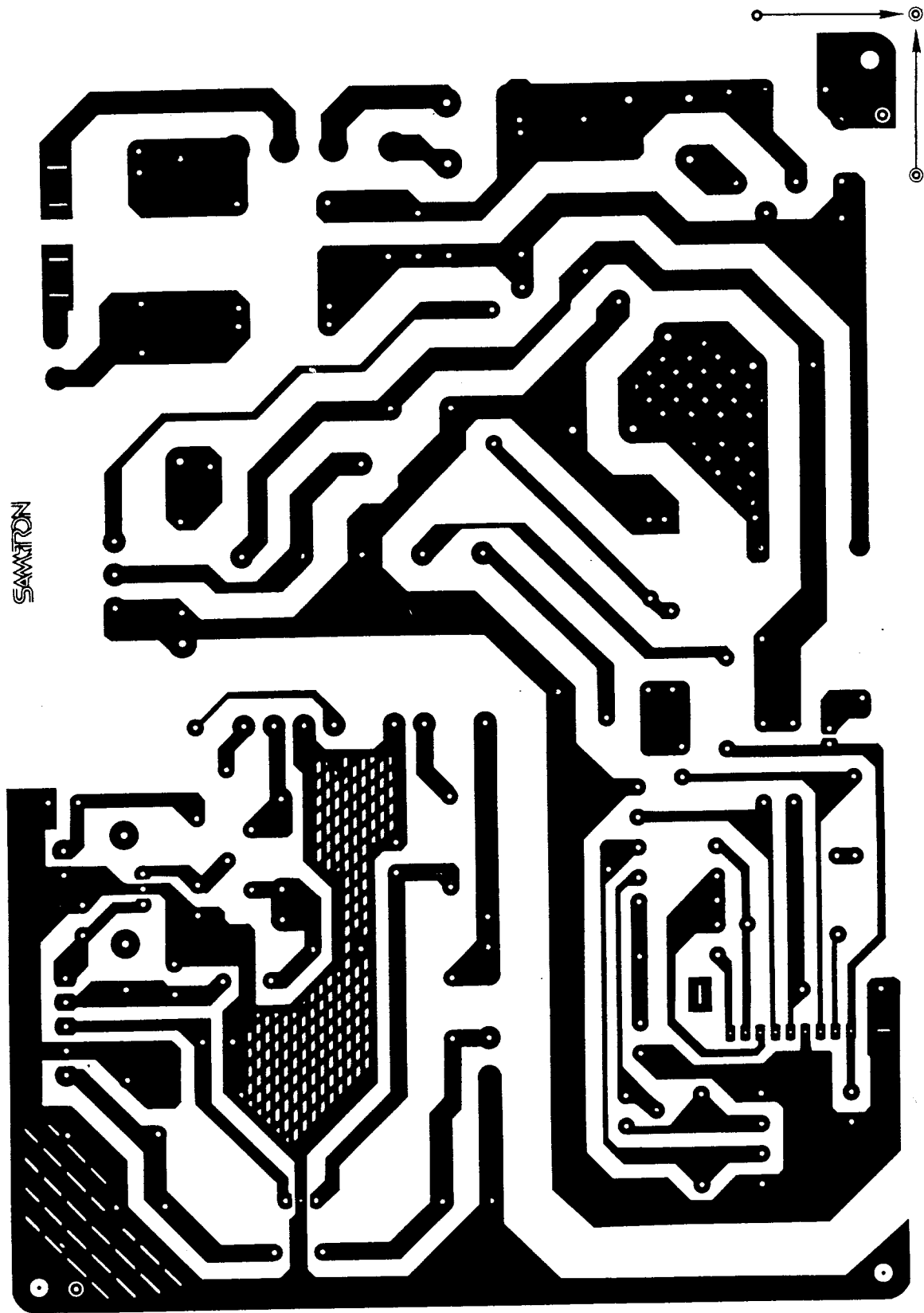
< MAIN BOARD >



7. PCB LAND PATTERN DRAWING

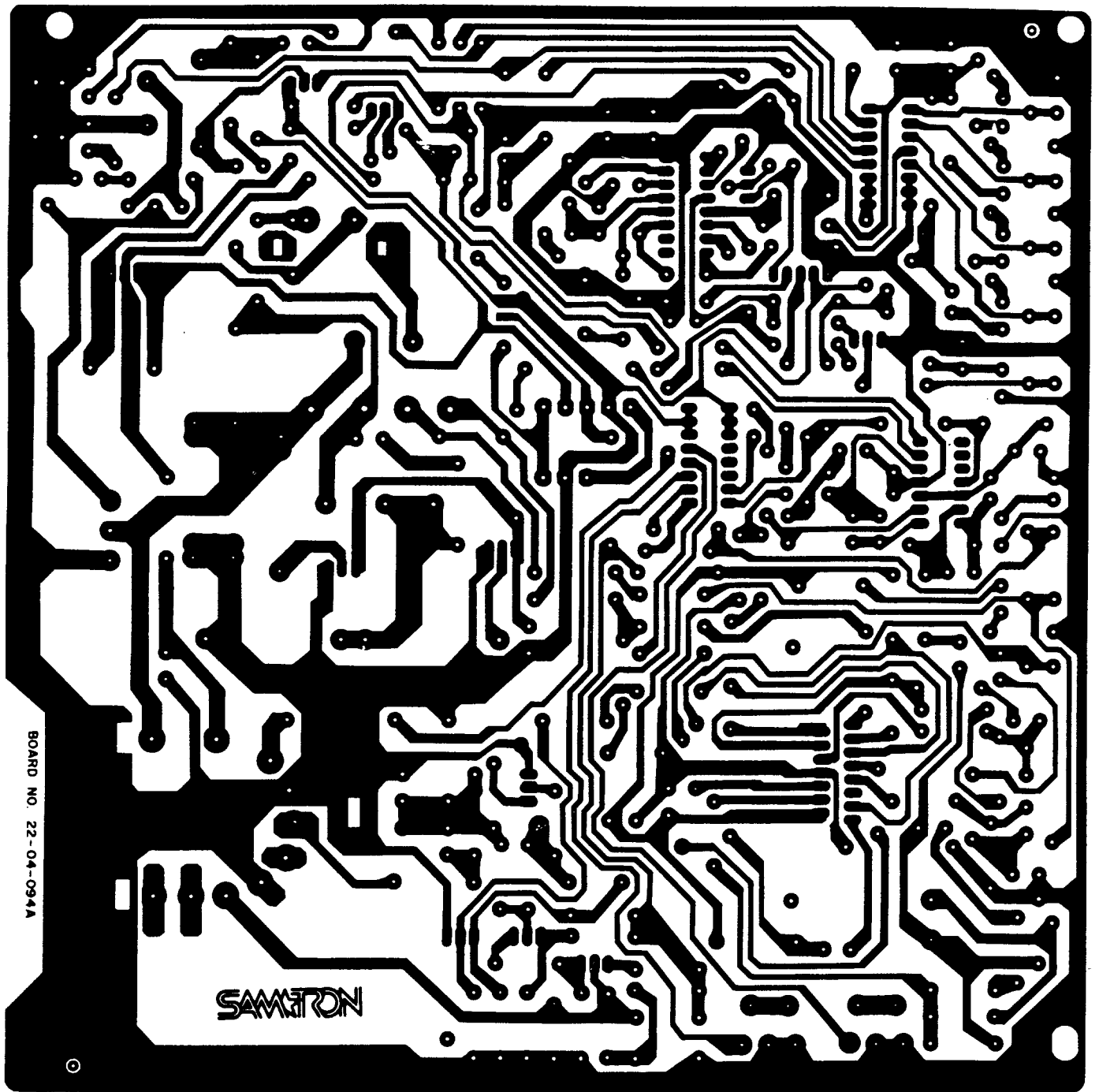


〈 VIDEO BOARD 〉



SAMATON

(SMPS BOARD)

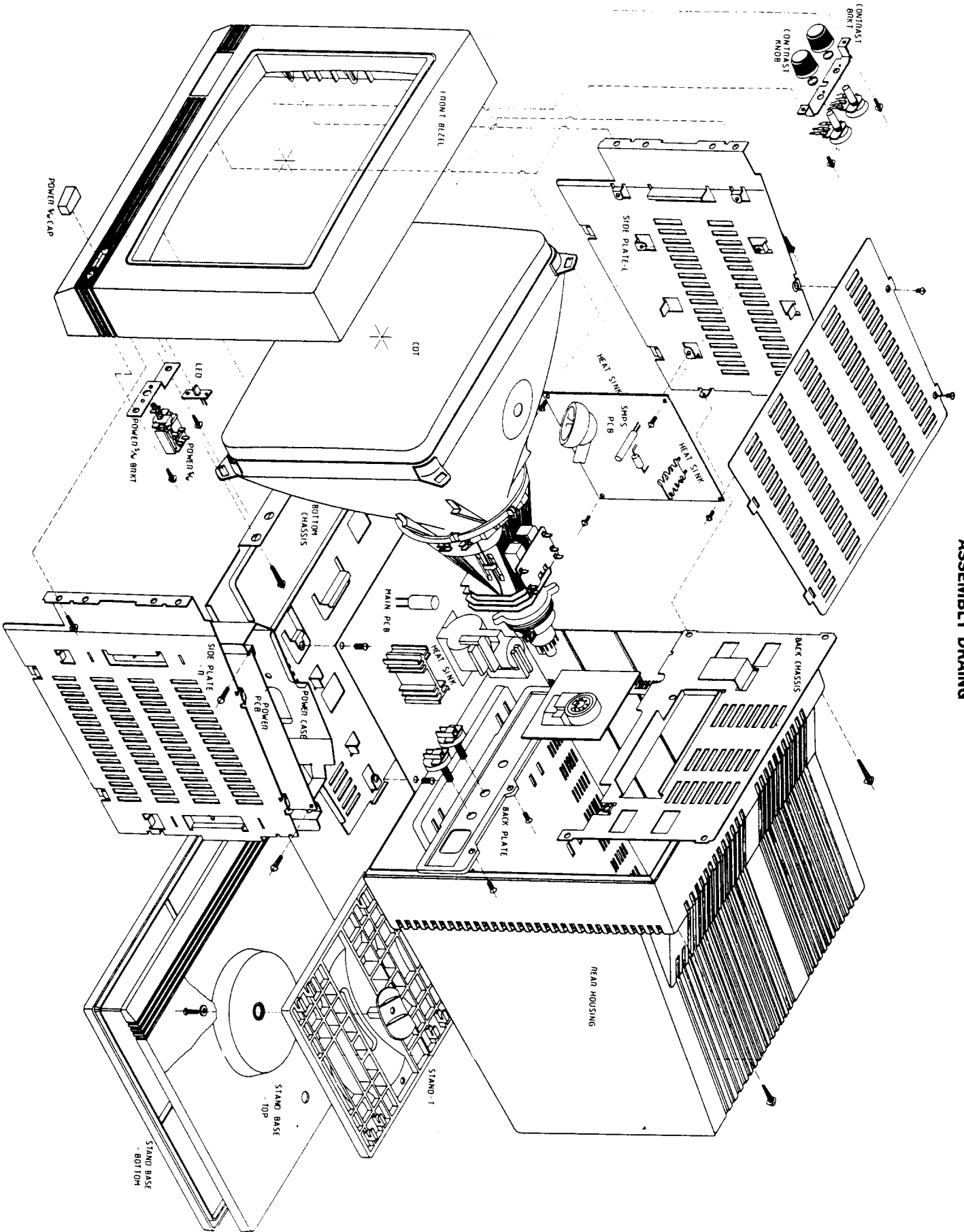


〈 MAIN BOARD 〉

SECTION IV ATTACHMENTS

1. ASSEMBLY DRAWING
2. Parts list

ASSEMBLY DRAINING



VIDEO PCB

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|---------------------------------|-------------------------------------|----------------------------|
| | G1-03-066A 22-04-105A | ASS'Y P.C BDARD, VIDEO P.C BOARD | FR-1, 1.6t, 150mm × 160mm |
| R101 | 14-04-271A | RESISTOR CARBON FILM | 270 ohm 1 / 4W 5% |
| R102 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R105 | 14-04-471A | RESISTOR CARBON FILM | 470 ohm 1 / 4W 5% |
| R106 | 14-04-330A | RESISTOR CARBON FILM | 33 ohm 1 / 4W 5% |
| R107 | 14-04-331A | RESISTOR CARBON FILM | 330 ohm 1 / 4W 5% |
| R108 | 14-10-682A | RESISTOR METAL OXIDE | 6.8 Kohm 2W 5% |
| R109 | 14-10-682A | RESISTOR METAL OXIDE | 6.8 Kohm 2W 5% |
| R110 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R111 | 14-10-272A | RESISTOR METAL OXIDE | 2.7 Kohm 2W 5% |
| R112 | 14-10-272A | RESISTOR METAL OXIDE | 2.7 Kohm 2W 5% |
| R113 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| VR101 | 15-05-048A | RESISTOR VARBON FILM | 500 ohm 0.2W, RED<CET119A> |
| VR102 | 15-05-048A | RESISTOR CARBON FILM | 500 ohm 0.2W, RED<CET119A> |
| C101 | 16-04-010A | CAPACITOR ELECTORLYTIC | 47uF 16V |
| C102 | 16-14-016A | CAPACITOR MYLAR | 0.022uF 100V |
| C103 | 16-01-109A | CAPACITOR ELECTROLYTIC | 22uF 200V |
| R114 | 14-04-471A | RESISTOR CARBON FILM | 470 ohm 1 / 4W 5% |
| D102 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| D103 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| Q101 | 18-03-004A | TRANSISTOR | 2N3906 |
| Q102 | 18-04-001A | TRANSISTOR | 2N3904 |
| Q103 | 18-07-016A | TRANSISTOR | 2SC1507-Y |
| Q104 | 18-07-016A | TRANSISTOR | 2SC1507-Y |
| R201 | 14-04-271A | RESISTOR CARBON FILM | 270 ohm 1 / 4M 5% |
| R202 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R205 | 14-04-471A | RESISTOR CARBON FILM | 470 ohm 1 / 4W 5% |
| R206 | 14-04-330A | RESISTOR CARBON FILM | 33 ohm 1 / 4W 5% |
| R207 | 14-04-331A | RESISTOR CARBON FILM | 330 ohm 1 / 4W 5% |
| R208 | 14-10-682A | RESISTOR METAL OXIDE | 6.8 Kohm 2W 5% |
| R209 | 14-10-682A | RESISTOR METAL OXIDE | 6.8 Kohm 2W 5% |
| R210 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R211 | 14-10-272A | RESISTOR METAL OXIDE | 2.7 Kohm 2W 5% |
| R212 | 14-10-272A | RESISTOR METAL OXIDE | 2.7 Kohm 2W 5% |
| R213 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| VR201 | 15-05-049A | RESISTOR VARIABLE | 500 ohm 0.2W, RED<CET119A> |
| VR202 | 15-05-049A | RESISTOR VARIABLE | 500 ohm 0.2W, RED<CET119A> |
| C201 | 16-04-010A | CAPACITOR ELECTORLYTIC | 47uF 16V |
| C202 | 16-14-016A | CAPACITOR MYLAR | 0.022uF 100V |
| C203 | 16-01-109A | CAPACITOR ELECTROLYTIC | 22uF 200V |

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|-------------|------------------------|----------------------------|
| R214 | 14-04-471A | RESISTOR CARBON FILM | 470 ohm 1 / 4W 5% |
| D202 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| D203 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| Q201 | 18-03-004A | TRANSISTOR | 2N3906 |
| Q202 | 18-04-001A | TRANSISTOR | 2N3906 |
| Q203 | 18-07-016A | TRANSISTOR | 2SC1507-Y |
| Q204 | 18-07-016A | TRANSISTOR | 2SC1507-Y |
| R301 | 14-04-271A | RESISTOR CARBON FILM | 270 ohm 1 / 4W 5% |
| R302 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R305 | 14-04-471A | RESISTOR CARBON FILM | 470 ohm 1 / 4W 5% |
| R306 | 14-04-330A | RESISTOR CARBON FILM | 33 ohm 1 / 4W 5% |
| R307 | 14-04-331A | RESISTOR CARBON FILM | 330 ohm 1 / 4W 5% |
| R308 | 14-10-682A | RESISTOR METAL OXIDE | 6.8 Kohm 2W 5% |
| R309 | 14-10-682A | RESISTOR METAL OXIDE | 6.8 Kohm 2W 5% |
| R310 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R311 | 14-10-272A | RESISTOR METAL OXIDE | 2.7 Kohm 2W 5% |
| R312 | 14-10-272A | RESISTOR METAL OXIDE | 2.7 Kohm 2W 5% |
| R313 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| VR301 | 15-05-048A | RESISTOR VARBON FILM | 500 ohm 0.2W, RED<CET119A> |
| VR302 | 15-05-048A | RESISTOR CARBON FILM | 500 ohm 0.2W, RED<CET119A> |
| C301 | 16-04-010A | CAPACITOR ELECTORLYTIC | 47uF 16V |
| C302 | 16-14-016A | CAPACITOR MYLAR | 0.022uF 100V |
| C303 | 16-01-109A | CAPACITOR ELECTROLYTIC | 22uF 200V |
| R314 | 14-04-471A | RESISTOR CARBON FILM | 470 ohm 1 / 4W 5% |
| D302 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| D303 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| Q301 | 18-03-004A | TRANSISTOR | 2N3906 |
| Q302 | 18-04-001A | TRANSISTOR | 2N3904 |
| Q303 | 18-07-016A | TRANSISTOR | 2SC1507-Y |
| Q304 | 18-07-016A | TRANSISTOR | 2SC1507-Y |
| R401 | 14-04-271A | RESISTOR CARBON FILM | 270 ohm 1 / 4M 5% |
| R402 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R403 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R404 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R405 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R406 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R407 | 14-04-152A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R408 | 14-04-152A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R409 | 14-04-152A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R410 | 14-04-152A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R411 | 14-04-152A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R412 | 14-04-152A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R413 | 14-04-331A | RESISTOR CARBON FILM | 330 ohm 1 / 4W 5% |
| R414 | 14-04-391A | RESISTOR CARBON FILM | 390 ohm 1 / 4W 5% |
| R415 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R416 | 14-04-391A | RESISTOR CARBON FILM | 390 ohm 1 / 4W 5% |

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|-------------|-----------------------------|------------------------------|
| R417 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R418 | 14-04-391A | RESISTOR CARBON FILM | 390 ohm 1 / 4W 5% |
| R419 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R421 | 14-04-821A | RESISTOR CARBON FILM | 820 ohm 1 / 4W 5% |
| R422 | 14-04-471A | RESISTOR CARBON FILM | 470 ohm 1 / 4W 5% |
| R423 | 14-04-121A | RESISTOR CARBON FILM | 120 ohm 1 / 4W 5% |
| R425 | 14-04-221A | RESISTOR CARBON FILM | 220 ohm 1 / 4W 5% |
| R426 | 14-04-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 5% |
| R427 | 14-04-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 5% |
| R428 | 14-04-152A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R429 | 14-04-331A | RESISTOR CARBON FILM | 330 ohm 1 / 4W 5% |
| R430 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R431 | 14-04-332A | RESISTOR CARBON FILM | 3.3 Kohm 1 / 4W 5% |
| R432 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R433 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R435 | 14-04-122A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| R436 | 14-04-122A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| R437 | 14-04-122A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| R438 | 14-04-122A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| R439 | 14-04-122A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| R440 | 14-04-122A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| VR401 | 15-04-019A | RESISTOR VARIABLE<CONTRAST> | 500 ohm 0.2W <V16L4N25F> |
| C401 | 16-11-101A | CAPACITOR CERAMIC | 0.1 uF 50V |
| C402 | 16-04-004A | CAPACITOR ELECTROLYTIC | 10 UF 25V |
| C403 | 16-10-022A | CAPACITOR CERAMIC | 330 pF 50V |
| C404 | 16-04-013A | CAPACITOR ELECTROLYTIC | 4.7 uF 50V |
| C405 | 16-11-010A | CAPACITOR CERAMIC | 0.1 uF 50V |
| C406 | 16-04-007A | CAPACITOR ELECTROLYTIC | 100uF 50V |
| C407 | 16-11-010A | CAPACITOR CERAMIC | 0.1 uF 50V |
| D413 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| D414 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| Q401 | 18-04-001A | TRANSISTOR | 2N3904 |
| Q402 | 18-04-001A | TRANSISTOR | 2N3904 |
| Q403 | 18-04-001A | TRANSTSTOR | 2N3904 |
| IC401 | 20-01-016A | TTL IC | 74LS32 |
| IC402 | 20-01-020A | TTL IC | 74LS157 |
| IC403 | 20-01-010A | TTL IC | 74LS139 |
| IC404 | 20-01-010A | TTL IC | 74LS139 |
| IC405 | 20-12-007A | TTL IC | 74LS07 |
| IC406 | 20-02-007A | TTL IC | 74LS07 |
| IC407 | 20-01-033A | TTL IC | 74LS86 |
| IC408 | 20-03-016A | REGULATOR IC | MC7805CT |
| | 10-11-041A | HDR, SHROUDE, 2P, 2.5W, N | WAFER 5267-02A "R", "G", "B" |
| | 10-11-028A | HDR, SHROUDE, 3P, 2.5W, N | WAFER 5267-03A |
| | 10-11-073A | HDR, SHROUDE, 9P, 2.5W, N | WAFER 5267-09A |
| | 10-11-080A | HDR, SHROUDE, 5P, 2.5W, N | WAFER 5267-05A |
| | 10-11-006A | HDR, SHROUDE, 3P, 3.96W, N | WAFER 5273-03A |
| | 21-02-084A | WIRE ASS'Y <V-SYNC> | 140mm RED |
| | 21-02-042A | WIRE ASS'Y <H-SYNC> | 170mm YELLOW |
| | 21-02-036A | WIRE ASS'Y <12V用> | 64mm ORANGE |
| | 21-05-159A | WIRE,CONN,HOUSING,2P,2.5W,N | BACK CABLE 240mm "R" |
| | 21-05-167A | WIRE,CONN,HOUSING,2P,2.5W,N | BACK CABLE 240mm "G" |
| | 21-05-168A | WIRE,CONN,HOUSING,2P,2.5W,N | BACK CABLE 240mm "B" |

| CKKT NO | SED PART NO | DESCRIPTION | |
|--|--|---|---|
| Q103, Q203, Q303 | 00-07-051B 00-06-077A 18-07-016A | ASS'Y SIGNAL CABLE ASS'Y HEAT SINK FOR < 030 > TRANSISTOR, NPN | 9PIN D-SUB 1318mm±20% 2SC1507-Y |
| | 06-25-030A 24-01-005A | HEAT SINK CROSS RECESS PAN HEAD MACHINE SCREW | H:36, W:5.0, L:22.8 M3 φ × 12 |
| | 24-01-001A | HEXAGON NUT | M3 φ |
| | G1-03-066A 22-04-113A | ASS'Y P.C BOARD, MAIN P.C BOARD | FR-1, 1.6t, 203mm × 203mm |
| | R501 R502 | 20-06-020A 20-07-050A | IC IC |
| Q501 | 18-04-001A | TRANSISTOR | 2N3904 |
| D501 D502 D503 D504 | 19-03-004A 19-03-009A 19-03-004A 19-05-038A | DIODE SWITCHING DIODE DIODE SWITCHING DIODE ZENER | 1N4148 1N4937 1N4148 ZD24V<ZPD> |
| C501 C502 C503 C504 C505 C506 C507 C508 C509 C510 | 16-14-008A 16-01-078A 16-11-010A 16-01-091A 16-13-044A 16-14-008A 16-14-008A 16-13-036A 16-04-010A 16-01-049A | CAPACITOR MYLAR CAPACITOR ELECTROLYTIC CAPACITOR CERAMIC CAPACITOR ELECTROLYTIC CAPACITOR MYLAR CAPACITOR MYLAR CAPACITOR MYLAR CAPACITOR MYLAR CAPACITOR ELECTROLYTIC CAPACITOR ELECTROLYTIC | 0.1 uF 100V 470 uF 35V 0.1 uF 50V 220 uF 100V 0.33uF 100V 0.1 uF 100V 0.1 uF 100V 0.22uF 100V 47 uF 16V 2200uF 25V |
| R501 R502 VR503 R504 R505 R506 R507 R508 VR509 VR510 R511 R512 R513 R514 R515 R516 R517 R518 VR519 | 14-04-102A 14-04-472A 15-05-037A 14-04-472A 14-04-684A 14-04-563A 15-05-038A 15-04-184A 15-03-025A 15-03-009A 14-04-103A 14-04-022A 14-04-122A 14-04-121A 14-04-222A 14-04-271A 14-04-010A 14-04-271A 15-05-040A | RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR VARIABLE, V-HOLD RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR METAL OXIDE RESISTOR VARIABLE, V-LIN RESISTOR CARBON FILM RESISTOR VARIABLE, V-SIZE 1 RESISTOR VARIABLE, V-SIZE 2 RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR CARBON FILM RESISTOR VARIABLE, V-SHIFT | 1 Kohm 1 / 4W 5% 4.7 Kohm 1 / 4W 5% 10 Kohm B 0.2W<CET92A> 4.7 Kohm 1 / 4W 5% 680 Kohm 1 / 4W 5% 56 Kohm 1 / 4W 5% 100 Kohm 0.2W<CET92A> 180 Kohm 1 / 4W 5% 100 Kohm 0.2W<V16L8PHN35KS> 200 Kohm 0.2W<V16L8PHN35KS> 10 Kohm 1 / 4W 5% 2.2 ohm 1 / 4W 5% 1.2 Kohm 1 / 4W 5% 120 ohm 1 / 4W 5% 2.2 Kohm 1 / 4W 5% 270 ohm 1 / 4W 5% 1 ohm 1 / 4W 5% 270 ohm 1 / 4W 5% 1 Kohm B 0.2W<CET92A> |

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|-------------|------------------------------|------------------------|
| R520 | 14-04-221A | RESISTOR CARBON FILM | 220 ohm 1 / 4W 5% |
| R521 | 14-04-222A | RESISTOR CARBON FILM | 2.2 Kohm 1 / 4W 5% |
| R522 | 14-04-472A | RESISTOR CARBON FILM | 4.7 Kohm 1 / 4W 5% |
| R523 | 14-09-100A | RESISTOR METAL OXIDE | 10 ohm 1 / 4W 5% |
| IC601 | 20-06-003A | IC | LM324N |
| D601 | 19-05-036A | DIODE ZENER | ZD 6.2V<ZPD> |
| Q601 | 18-05-006A | TRANSISTOR | BU406 |
| Q602 | 18-08-007A | TRANSISTOR | TIP 32C |
| C601 | 16-04-003A | CAPACITOR ELECTROLYTIC | 47uF 25V |
| C602 | 16-04-023A | CAPACITOR ELECTROLYTIC | 10uF 16V |
| C603 | 16-14-017A | CAPACITOR MYLAR | 0.047uF 100V |
| C604 | 16-04-003A | CAPACITOR ELECTROLYTIC | 4.7 uF 25V |
| C601 | 16-04-006A | CAPACITOR ELECTROLYTIC | 47uF 25V |
| C606 | 16-04-031A | CAPACITOR ELECTROLYTIC | 20uF 35V |
| C607 | 16-14-029A | CAPACITOR MYLAR | 0.0022uF 100V 5% |
| C608 | 16-01-079A | CAPACITOR ELECTROLYTIC | 47uF 100V |
| C609 | 16-14-017A | CAPACITOR MYLAR | 0.047uF 100V |
| R601 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R602 | 14-04-333A | RESISTOR CARBON FILM | 33 Kohm 1 / 4W 5% |
| R603 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R604 | 14-04-105A | RESISTOR CARBON FILM | 1 Mohm 1 / 4W 5% |
| R605 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| VR606 | 15-05-037A | RESISTOR VARIABLE, PARABOLA | 10 Kohm B 0.2W<CET924> |
| R607 | 14-04-183A | RESISTOR CARBON FILM | 18 Kohm 1 / 4W 5% |
| R608 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R609 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R610 | 14-04-821A | RESISTOR CARBON FILM | 820 Kohm 1 / 4W 5% |
| R611 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R612 | 14-04-823A | RESISTOR CARBON FILM | 82 Kohm 1 / 4W 5% |
| R613 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R614 | 14-04-622A | RESISTOR CARBON FILM | 6.2 Kohm 1 / 4W 5% |
| VR615 | 15-05-036A | RESISTOR VARIABLE, H-WIDTH 1 | 5 Kohm B 0.2W<CET92A> |
| R616 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R617 | 14-04-332A | RESISTOR CARBON FILM | 3.3 Kohm 1 / 4W 5% |
| VR618 | 15-05-036A | RESISTOR VARIABLE, H-WIDTH 2 | 5 Kohm B 0.2<CET92A> |
| R619 | 14-04-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 5% |
| R620 | 14-04-563A | RESISTOR CARBON FILM | 56 Kohm 1 / 4W 5% |
| R621 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R622 | 14-04-222A | RESISTOR CARBON FILM | 2.2 Kohm 1 / 4W 5% |
| R623 | 14-04-222A | RESISTOR CARBON FILM | 2.2 Kohm 1 / 4W 5% |
| R624 | 14-04-101A | RESISTOR CARBON FILM | 100 ohm 1 / 4W 5% |
| R625 | 14-06-391A | RESISTOR CARBON FILM | 390 ohm 1 / 2W 5% |
| R626 | 14-04-560A | RESISTOR CARBON FILM | 56 ohm 1 / 4W 5% |
| R627 | 14-04-823A | RESISTOR CARBON FILM | 82K ohm 1 / 4W 5% |
| IC701 | 20-06-006A | IC | TDA1180 |
| IC702 | 20-07-050A | IC | HCF4053BE |
| Q701 | 18-04-001A | TRANSISTOR | 2N3904 |
| Q702 | 18-07-016A | TRANSISTOR | 2SC1507-Y |

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|-------------|------------------------------|-------------------------|
| D701 | 19-05-018A | DIODE ZENER | ZD 5.1B 0.5B |
| D702 | 19-03-009A | DIODE RECTIFIER | ZD 5.1B 0.5B |
| D703 | 19-06-013A | L.E.D RECTANGULAR | SC6521D, GREEN |
| T701 | 17-07-024A | DRIVE TRANS HORIZONTAL | 28mH $\pm 5\%$ |
| L701 | 17-09-024B | CHOKE COIL | 200 μ H |
| C701 | 16-13-009A | CAPACITOR MYLAR | 0.0015 μ F 100V |
| C702 | 16-01-010A | CAPACITOR ELECTROLYTIC | 470 μ F 16V |
| C703 | 16-11-010A | CAPACITOR CERAMIC | 0.1 μ F 50V |
| C704 | 16-04-027A | CAPACITOR ELECTROLYTIC | 10 μ F 50V |
| C705 | 16-15-008A | CAPACITOR MYLAR | 0.1 μ F 100V |
| C706 | 16-13-017A | CAPACITOR MYLAR | 0.47 μ F 100V |
| C707 | 16-04-013A | CAPACITOR ELECTROLYTIC | 470 μ F 16V |
| C708 | 16-14-008A | CAPACITOR MYLAR | 0.01 μ F 100V |
| C709 | 16-23-008A | CAPACITOR POLYSTYRENE | 3300 μ F 50V 5% |
| C710 | 16-13-036A | CAPACITOR MYLAR | 0.22 μ F 100V |
| C711 | 16-14-017A | CAPACITOR MYLAR | 0.047 μ F 100V |
| C712 | 16-04-008A | CAPACITOR ELECTROLYTIC | 4.7 μ F 100V |
| C713 | 16-14-016A | CAPACITOR MYLAR | 0.022 μ F 100V |
| R701 | 14-04-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 5% |
| R702 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R704 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R705 | 14-04-473A | RESISTOR CARBON FILM | 47 Kohm 1 / 4W 5% |
| R706 | 14-04-824A | RESISTOR CARBON FILM | 820 Kohm 1 / 4W 5% |
| R707 | 14-04-362A | RESISTOR CARBON FILM | 3.6 Kohm 1 / 4W 5% |
| R708 | 14-04-122A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| R709 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R710 | 14-25-021A | RESISTOR CARBON FILM | 9.2 Kohm 1 / 4W 1% |
| R711 | 14-04-823A | RESISTOR CARBON FILM | 82 Kohm 1 / 4W 5% |
| R712 | 14-04-823A | RESISTOR CARBON FILM | 82 Kohm 1 / 4W 5% |
| R713 | 14-04-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 5% |
| VR714 | 15-05-039A | RESISTOR VARIABLE, H-SHIFT 1 | 200 Kohm B 0.2W<CET92A> |
| R715 | 14-04-473A | RESISTOR CARBON FILM | 47 Kohm 1 / 4W 5% |
| R716 | 14-04-472A | RESISTOR CARBON FILM | 4.7 Kohm 1 / 4W 5% |
| VR717 | 15-05-039A | RESISTOR VARIABLE, H-SHIFT 2 | 200 Kohm B 0.2W<CET92A> |
| R718 | 14-04-392A | RESISTOR CARBON FILM | 3.9 Kohm 1 / 4W 5% |
| R719 | 14-04-222A | RESISTOR CARBON FILM | 2.2 Kohm 1 / 4W 5% |
| VR720 | 15-05-041A | RESISTOR VARIBALE, H-HOLD 1 | 20 Kohm B 0.2W<CET92A> |
| R721 | 14-04-473A | RESISTOR CARBON FILM | 47 Kohm 1 / 4W 5% |
| R722 | 14-04-3923 | RESISTOR CARBON FILM | 39 Kohm 1 / 4W 5% |
| VR723 | 15-05-041A | RESISTOR VARIABLE, H-HOLD 2 | 20 Kohm B 0.2<CET92A> |
| R724 | 14-04-562A | RESISTOR CARBON FILM | 5.6 Kohm 1 / 4W 5% |
| R725 | 14-04-561A | RESISTOR CARBON FILM | 560 ohm 1 / 4W 5% |
| R726 | 14-04-392A | RESISTOR METAL OXIDE | 2.2 Kohm 1 / 4W 5% |
| R727 | 14-04-222A | RESISTOR METAL OXIDE | 180 Kohm 1 / 4W 5% |
| R728 | 14-04-181A | RESISTOR CARBON FILM | 1.5 Kohm 1 / 4W 5% |
| R729 | 14-04-152A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R730 | 14-04-823A | RESISTOR CARBON FILM | 82 Kohm 1 / 4W 5% |
| Q801 | 18-07-031A | TRANSISTOR | 2SD 1878 |
| Q802 | 18-12-009A | F.E.T | MTP 1N100 |
| Q803 | 18-12-010A | F.E.T | MTP 10N08 |
| Q804 | 18-03-004A | TRANSISTOR | 2N3906 |
| Q805 | 18-05-011A | TRANSISTOR | 2SA1320 |

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|-------------|---------------------------------|---------------------------------|
| D801 | 19-01-038A | DIODE RECOVERY | RGP 15G |
| D802 | 19-01-038A | DIODE RECOVERY | RGP 15G |
| D803 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| D804 | 19-01-038A | DIODE RECOVERY | RGP 15G |
| D805 | 19-03-004A | DIODE SWITCHING | 1N4148 |
| C801 | 16-28-010A | CAPACITOR M.P.P | 3300pF 1.6KV, BUP TYPE |
| C802 | 16-28-010A | CAPACITOR M.P.P | 3300pF 1.6KV |
| C803 | 16-28-010A | CAPACITOR M.P.P | 3300pF 1.6KV |
| C804 | 16-11-010A | CAPACITOR CERAMIC | 0.1uF 50V |
| C805 | 16-10-079A | CAPACITOR CERAMIC | 1000pF 1KV |
| C806 | 16-28-009A | CAPACITOR M.P.P | 1.5pF 200V |
| C807 | 16-28-008A | CAPACITOR M.P.P | 2.2uF 200V |
| C808 | 16-13-044A | CAPACITOR MYLAP | 0.33uF 100V |
| C809 | 16-11-012A | CAPACITOR CERAMIC | 27pF 500V |
| C810 | 16-01-098A | CAPACITOR ELECTROLYTIC | 10uF 250V |
| C811 | 16-13-036A | CAPACITOR MYLAR | 0.22uF 100V |
| C812 | 16-04-027A | CAPACITOR ELECTROLYTIC | 10uF 50V |
| C813 | 16-14-019A | CAPACITOR MYLAR | 0.0047uF 100V |
| VR801 | 15-07-003A | RESISTOR VARIABLE, H-CENTERING | 100ohm 2W WIRE W DUND <SN11210> |
| R802 | 14-09-271A | RESISTOR METAL OXIDE | 270 ohm 1W 5% |
| R803 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R804 | 14-04-822A | RESISTOR CARBON FILM | 8.2 Kohm 1 / 4W 5% |
| R805 | 14-04-153A | RESISTOR CARBON FILM | 15 Kohm 1 / 4W 5% |
| R806 | 14-04-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 5% |
| R807 | 14-04-391A | RESISTOR CARBON FILM | 390 ohm 1 / 4W 5% |
| R808 | 14-04-273A | RESISTOR CARBON FILM | 27 Kohm 1 / 4W 5% |
| R809 | 14-04-332A | RESISTOR CARBON FILM | 3.3 Kohm 1 / 4W 5% |
| R810 | 14-25-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 1% |
| R811 | 14-04-102A | RESISTOR CARBON FILM | 1 Kohm 1 / 4W 5% |
| R812 | 14-06-022A | RESISTOR CARBON FILM | 2.2 Kohm 1 / 2W 5% |
| R813 | 14-06-224A | RESISTOR CARBON FILM | 220 Kohm 1 / 2W 5% |
| R814 | 14-04-104A | RESISTOR CARBON FILM | 100 Kohm 1 / 4W 5% |
| R815 | 14-04-333A | RESISTOR CARBON FILM | 33 Kohm 1 / 4W 5% |
| VR816 | 15-04-020A | RESISTOR VARIABLE, BRIGHTNESS | 20 Kohm B 0.2W <V16L4N25F> |
| R818 | 14-04-474A | RESISTOR CARBON FILM | 470 Kohm 1 / 4W 5% |
| R819 | 14-06-022A | RESISTOR CARBON FILM | 2.2 ohm 1 / 2W 5% |
| R820 | 14-04-390A | RESISTOR CARBON FILM | 39 ohm 4 / 1W 5% |
| L801 | 17-09-028A | H-CENTERING COIL | 5mH |
| L802 | 17-05-028A | H-LINEARITY COIL | 10 uH 20% |
| T801 | 17-02-041A | FLY BACK TRANS | MSUIF DU61 |
| | 16-11-029A | BEAD PIN | 2.36 ϕ |
| | | JUM WIRE | 12mm |
| | | JUM WIRE | 15mm |
| | | JUM WIRE | 20mm |
| | 10-11-041A | HDRN, SHROUDED, 2P, 2.5W, N | WAFER 5267-02A |
| | 10-11-028A | HDRN, SHROUDED, 2P, 2.5W, N | WAFER 5267-03A |
| | 26-17-007A | CDT W / DY <TCD8231>, <SJD1406> | 3709 B22 ST-06 |
| | 10-05-162A | LOCKING SUPPORT | 4 ϕ 66N YLON |

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|-------------------|--|------------------------------------|
| | 21-01-035A | WIRE, BUS, SPA | AWM 0.6 |
| | 21-05-152A | WIRE, CONN, HOUSING,5P,3.96W,N | AWM1015 / #22,305mm,BL,G,BR,RED,OR |
| | 21-05-154A | WIRE, CONN, HOUSING,3P,3.96W,N | AWM1015 / #22,210mm,BL,G,BR |
| | 21-05-160A | WIRE, CONN, HOUSING,2P,2.5W,N | AWM1007 / #22,260mm,BL,G,BR,RED |
| | 21-05-157A | WIRE, CONN, HOUSING,3P,2.5W,N | AWM1007 / #22,350mm,BL,G,BR,RED |
| | 21-05-158A | WIRE, CONN, HOUSING,3P,2.5W,N | AWM1015 / #22,350mm,YE,WH,OR |
| | 21-05-156A | WIRE, CONN, HOUSING,5P,2.5W,N | AWM1015 / #22,250mm,BL,BR,R,OR,VE |
| | 21-06-106A | WIRE, BRAID SHIELD, LEAD | 편조선<CDT GROUND> |
| | 21-02-106A | LINE, MANUF, STANDEB | AWM1007 / #22,180mm,YELLOW |
| | 24-45-010A | SPRING, COMPRESSION | 40 × 5 × 0.6Y |
| | 00-06-068A | ASS'Y HEAT SINK FOR < 025 > | TIP 32C |
| Q602 | 18-08-007A | TR | 11:50 W:23 L:34 |
| | 24-01-005A | CROSS RECESS PAN HEAD MECHINE SCREW | M3 φ × 12 |
| | 24-31-001A | HEXAGON NUT | M3 φ |
| | 00-06-070A | ASS'Y HEAT SINK FOR < 024 > | 2SD 1878 |
| Q801 | 06-25-024A | HEAT SINK | H:40 W:18 L:46.8 |
| | 18-07-031A | TR | 2SD1879 |
| | 06-25-003A | CROSS RECESS PAN HEAD MACHINE SCREW | M3 φ × 8 |
| | 24-31-001A | HEXAGON NUT | M3 φ |
| | 00-06-061A | ASS'Y HEAT SINK FOR < 024 > | TDA 1872 |
| IC501 | 20-06-020A | IC | TDA 1872 |
| | 06-25-024A | HEAT SINK | H:40 W:18 L:46.8 BLACK |
| | 24-01-003A | CROSS RECESS PAN HEAD MEACHINE SCREW | M3 φ × 8 |
| | 23-31-001A | HEXAGON NUT | M3 φ |
| | 00-05-028A | ASS'Y CONT, BRT, V/R, BRACKET | |
| | 00-05-022A | ASS'Y CONTRAST VOLUME | |
| | 15-05-048A | CONTRAST VOLUMME | 500 ohm B 0.2W<V16L4N25F> |
| | 21-05-157A | WIRE, CONN, HOUSING,3P,2.5W,N | AWM1007 / #22,350mm,BL, BW,RED |
| | 06-22-062A | BRACKET | H:59.8 W:250.0 L:9.0 |
| | 24-04-005A | CROSS RECESS PAN HEAD PLASTITE SCREW | #6 × 10 |
| | 21-12-002A | SHRINKABLE<WHITE> | 4 φ × 10mm |
| | 00-05-023A | ASS'Y BRIGHTNESS VOLUME | |
| | 15-04-020A | BRIGHTNESS VOLUME | 20 Kohm B 0.2W<V16L4N25F> |
| | 21-05-020A | WIRE, CONN, HOUSING,3P,2.5W,N | AWM1007 / #22,350mm,YE,WH, OR |
| | 24-04-005A | CROSS RECESS PAN HEAD PLASTITE SCREW | #6 × 10 |
| | 21-12-002A | SHRNKABLE<WHITE> | 4 φ × 10mm |

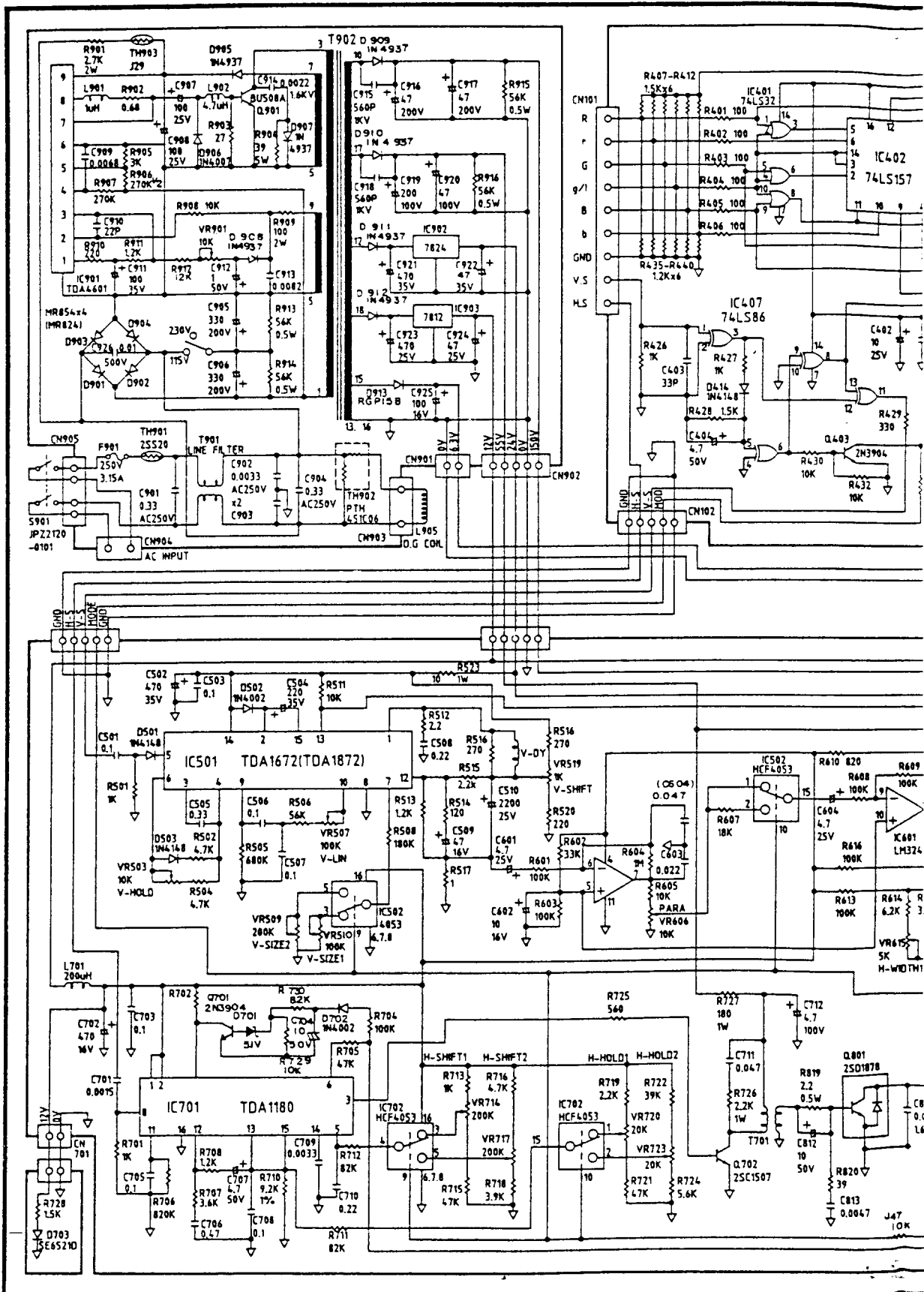
SCOKET PCB

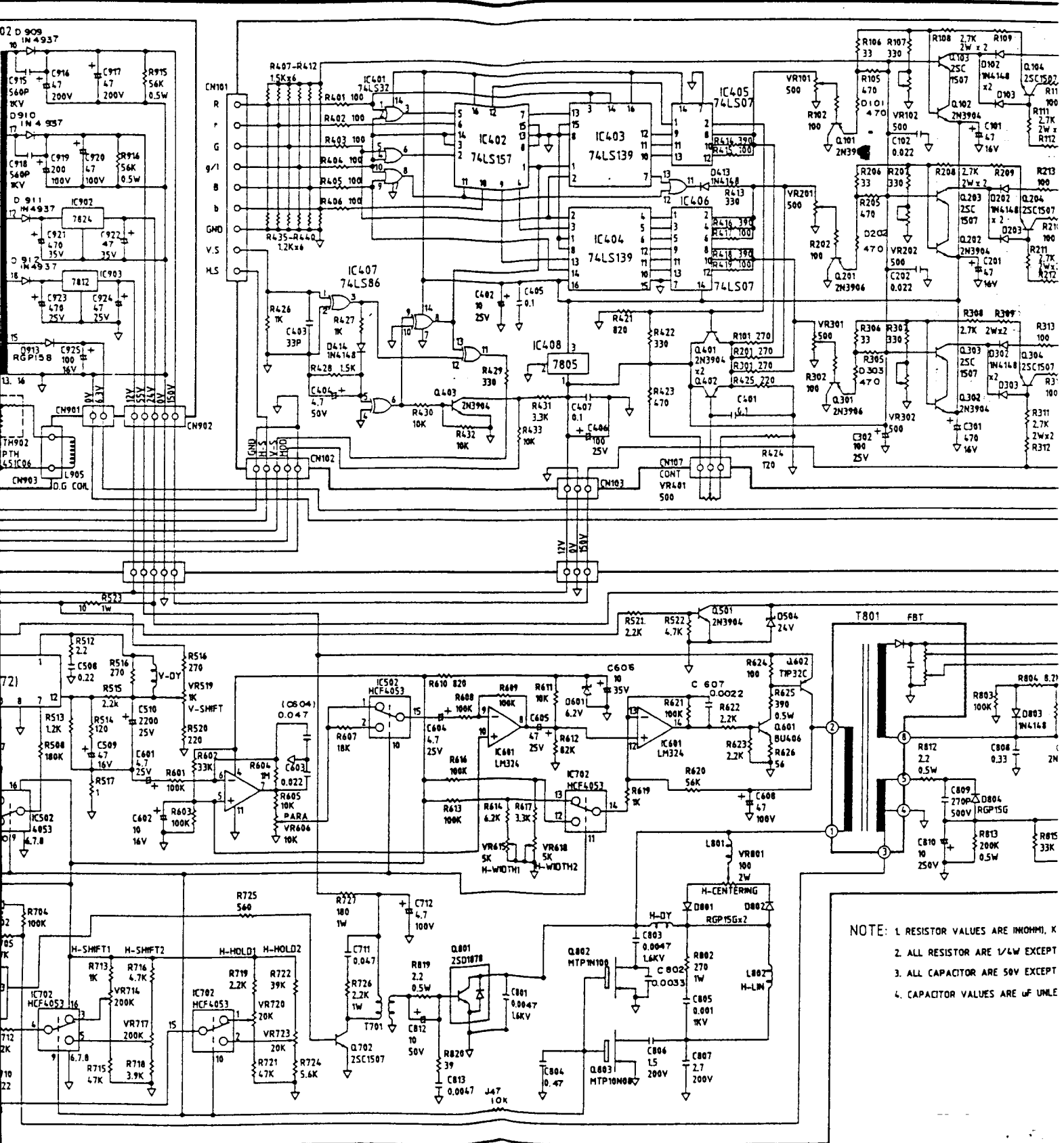
| CKKT NO | SED PART NO | DESCRIPTION | |
|--------------|-----------------------------|--------------------------------|------------------------|
| C814 C815 | 00-02-042A | ASS'Y P.C BOARD, SOCKET | |
| | 22-04-096A | P.C BOARD | RE-1, 1.6t 80mm × 78mm |
| | 16-10-042A | CAPACITOR CERAMIC | 0.01uF 1KV |
| | 16-10-047A | CARACITOR CERAMIC | 0.01uF 2KV |
| | 10-08-030A | CDT SOCKET | HPS0176-01-010 |
| 10-11-002A | HDR, SHROUDEN, 2P, 3.96W, N | WAFER 5273-02A | |
| 10-11-041A | HDR, SHROUDED, 2P, 2.5W, N | WAFER 5267-02A "R","G","B" | |
| 10-11-029A | BEAD PIN | 2.36 ϕ | |

| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|---------------------------------|---|--------------------------|
| | G2-01-014A 22-04-093B | ASS'Y P.C BOARD, SMPS P.C BOARD | FR-1, 1.6t, 21mm×150mm |
| IC901 | 20-06-010A | IC LINEAR SIP-9 | TDA 4601 |
| IC902 | 20-03-028A | IC REGULATOR | MC 7824 CT TO220 TYPE |
| IC903 | 20-03-004A | IC REGULATOR | MC 7812 CT TO220 TYPE 1A |
| T901 | 17-08-021A | TRANS LINE FILTER | 4 mH |
| T902 | 17-01-056A | TRANS SWITCHING | 0105017-0 |
| D901 | 19-01-024A | DIODE RECTIFIER | MR 854 |
| D902 | 19-01-024A | DIODE RECTIFIER | MR 854 |
| D903 | 19-01-024A | DIODE RECTIFIER | MR 854 |
| D904 | 19-01-024A | DIODE RECTIFIER | MR 854 |
| D905 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| D906 | 19-03-006A | DIODE RECTIFIER | IN 4007 |
| D907 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| D908 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| D909 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| D910 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| D911 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| D912 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| D913 | 19-03-009A | DIODE RECOVERY | IN 4937 |
| Q901 | 18-14-005A | TRANSISTOR | BU508A |
| TH901 | 15-06-001A | THERMISTER | 2SS20 |
| TH902 | 15-08-001A | POSISTOR | PTC 45IC06BG |
| TH903 | 15-08-002A | THERMISTER | J29 |
| C901 | 16-25-004A | CAPACITOR M.P.P | 0.33uF AC250V |
| C902 | 16-25-027A | CAPACITOR M.P.P | 3300uF AC250V |
| C903 | 16-25-027A | CAPACITOR M.P.P | 3300uF AC250V |
| C904 | 16-25-004A | CAPACITOR M.P.P | 0.33uF AC250V |
| C905 | 16-01-104A | CAPACITOR ELECTROLYTIC | 3300uF 200WV, NM TYPE |
| C906 | 16-01-104A | CAPACITOR ELECTROLYTIC | 3300uF 200WV, NM TYPE |
| C907 | 16-01-026A | CAPACITOR ELECTROLYTIC | 100uF 35V, SM TYPE |
| C908 | 16-01-026A | CAPACITOR ELECTROLYTIC | 100uF 35V, SM TYPE |
| C909 | 16-14-021A | CAPACITOR MYLAR | 0.0068uF 100V |
| C910 | 16-11-008A | CAPACITOR CERAMIC | 22uF 50V |
| C911 | 16-01-026A | CAPACITOR ELECTROLYTIC | 100uF 35V, SM TYPE |
| C912 | 16-04-001A | CAPACITOR ELECTROLYTIC | 1uF 50V, SM TYPE |
| C913 | 16-14-030A | CAPACITOR MYLAR | 0.0082uF 100V |
| C914 | 16-28-095A | CAPACITOR M.P.P | 2200uF 1.6KV |
| C915 | 16-11-014A | CAPACITOR CERAMIC | 56pF 500V |
| C916 | 16-11-076A | CAPACITOR ELECTROLYTIC | 47uF 160V, SM TYPE |
| C917 | 16-01-076A | CAPACITOR ELECTROLYTIC | 47uF 160V, SM TYPE |
| C918 | 16-11-014A | CAPACITOR CERAMIC | 560uF 500 |
| C919 | 16-01-081A | CAPACITOR ELECTROLYTIC | 220uF 100V, SM TYPE |
| C920 | 16-01-079A | CAPACITOR ELECTROLYTIC | 47uF 100V, SM TYPE |
| C921 | 16-01-078A | CAPACITOR ELECTROLYTIC | 470uF 35V, SM TYPE |
| C922 | 16-04-016A | CAPACITOR ELECTROLYTIC | 47uF 35V, SM TYPE |

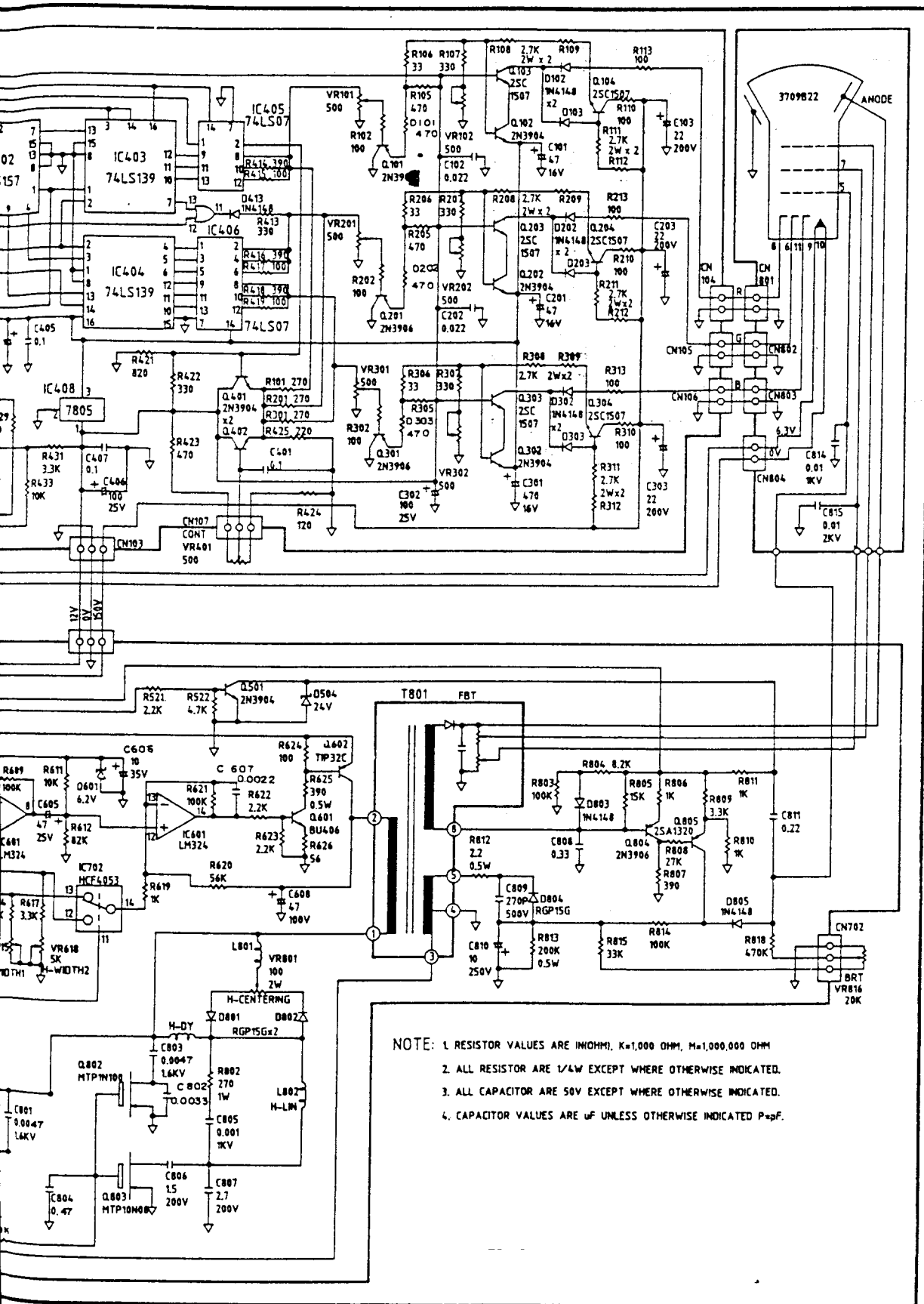
| CKKT NO | SED PART NO | DESCRIPTION | |
|---------|-------------------|--|---|
| C923 | 16-01-022A | CAPACITOR ELECTROLYTIC | 470uF 25V, SM TYPE |
| C924 | 16-01-019A | CAPACITOR ELECTROLYTIC | 47uF 27V, SM TYPE |
| C925 | 16-04-014A | CAPACITOR ELECTROLYTIC | 100uF 16V, SM TYPE |
| C926 | 16-01-046A | CAPACITOR ELECTROLYTIC | 0.01uF 500V, 5% |
| R901 | 14-01-272A | RESISTOR METAL OXIDE | 2.7 Kohm 2W 5% |
| R902 | 14-04-268A | RESISTOR CARBON FILM | 0.68 Kohm 1 / 4W 5% |
| R903 | 14-04-270A | RESISTOR CARBON FILM | 27 ohm 1 / 4W 5% |
| R904 | 14-26-003A | RESISTOR WIRE WOUND | 39 ohm 5W 5% |
| R905 | 14-04-302A | RESISTOR CARBON FILM | 3 Kohm 1 / 4W 5% |
| R906 | 14-04-274A | RESISTOR CARBON FILM | 270 Kohm 1 / 4W 5% |
| R907 | 14-04-274A | RESISTOR CARBON FILM | 270 Kohm 1 / 4W 5% |
| R908 | 14-04-103A | RESISTOR CARBON FILM | 10 Kohm 1 / 4W 5% |
| R909 | 14-10-101A | RESISTOR METAL OXIDE | 100 ohm 2W 5% |
| R910 | 14-04-221A | RESISTOR CARBON FILM | 220 ohm 1 / 4W 5% |
| R911 | 14-04-123A | RESISTOR CARBON FILM | 1.2 Kohm 1 / 4W 5% |
| R912 | 14-04-123A | RESISTOR CARBON FILM | 12 Kohm 1 / 4W 5% |
| R913 | 14-06-563A | RESISTOR CARBON FILM | 56 Kohm 1 / 2W 5% |
| R914 | 14-06-563A | RESISTOR CARBON FILM | 56 Kohm 1 / 2W 5% |
| R915 | 14-06-563A | RESISTOR CARBON FILM | 56 Kohm 1 / 2W 5% |
| R916 | 14-06-563A | RESISTOR CARBON FILM | 56 Kohm 1 / 2W 5% |
| VR901 | 15-05-051A | RESISTOR VARIABLE | 10 Kohm B 0.W<CET119A> |
| L901 | 17-16-005A | READ CORE | 1uH |
| L902 | 17-16-001A | INDUCTOR COIL | 4.7uH |
| F901 | 23-01-039A | FUSE 20mm | 3.15A 250V 5 ϕ |
| | 23-04-007A | FUSE CLIP | 5 ϕ 20mm |
| | 17-17-004A | EMI FILTER | IA5-S32, 250V, 3A |
| | 17-11-005A | DEGAUSSING COIL | 2.35 ϕ , 60T, BLACK, 1060mm |
| | 21-07-004A | P / S CORD, SVT SET | 115V, BLACK, 6ft |
| | | JUMP WIRE | 15mm |
| | 10-11-029A | BEAD PIN | 2.36 ϕ |
| | 10-11-002A | HDRN, SHROUDED, 2P, 3.96W,N | WAFER 5273-02A |
| | 10-11-002A | HDRN, SHROUDED, 2P, 3.96W,N | WAFER 5273-05A |
| | 23-02-008A | POWER SWITCH | JPZ 2120-0101 |
| | 21-05-153A | WIRE,CONN,HOUSING,2P,3.96W,N | AWM1015 / # 22,220mm,BLACK,BRAWN |
| | 21-05-162A | WIRE, CONN, HOUSING, 1P, BL101 | AWM1672 / # 22,100mm,BLACK |
| | 21-05-155A | WIRE, CONN, HOUSING, 2P, BL102 | AWM1672 / # 22,120mm,WHITE,BRAWN |
| | 21-05-161A | WIRE, CONN, HOUSING, 4P, BL104 | AWM1672 / # 22,500mm,RED,BLUE |
| | 21-06-063A | WIRE RING TERMINAL | AWM1015 / # 18,110mm,GR / YE,4 ϕ |
| | 00-04-023A | ASS'Y POWER SWITCH | |
| | 23-02-008A | POWER SWITCH | JPZ 2120-0101 |
| | 21-05-161A | WIRE, CONN, HOUSING, 4P | AWM1672 # 22,500mm, RE,BL,RE,BL |
| | 06-22-061A | BRKT FOR POWER SWITCH | H: 170.0 W: 79.0 L: 6.0 |
| | 24-01-003A | CROSS RECESS PAN HEAD MACHINE SCREW | 270 Kohm 1 / 4W 5% M3 ϕ \times 5 |
| | 00-06-069A | ASS'Y HEAT SINK FOR 024 | |
| Q901 | 18-14-005A | TRANSISTOR | BU508A |

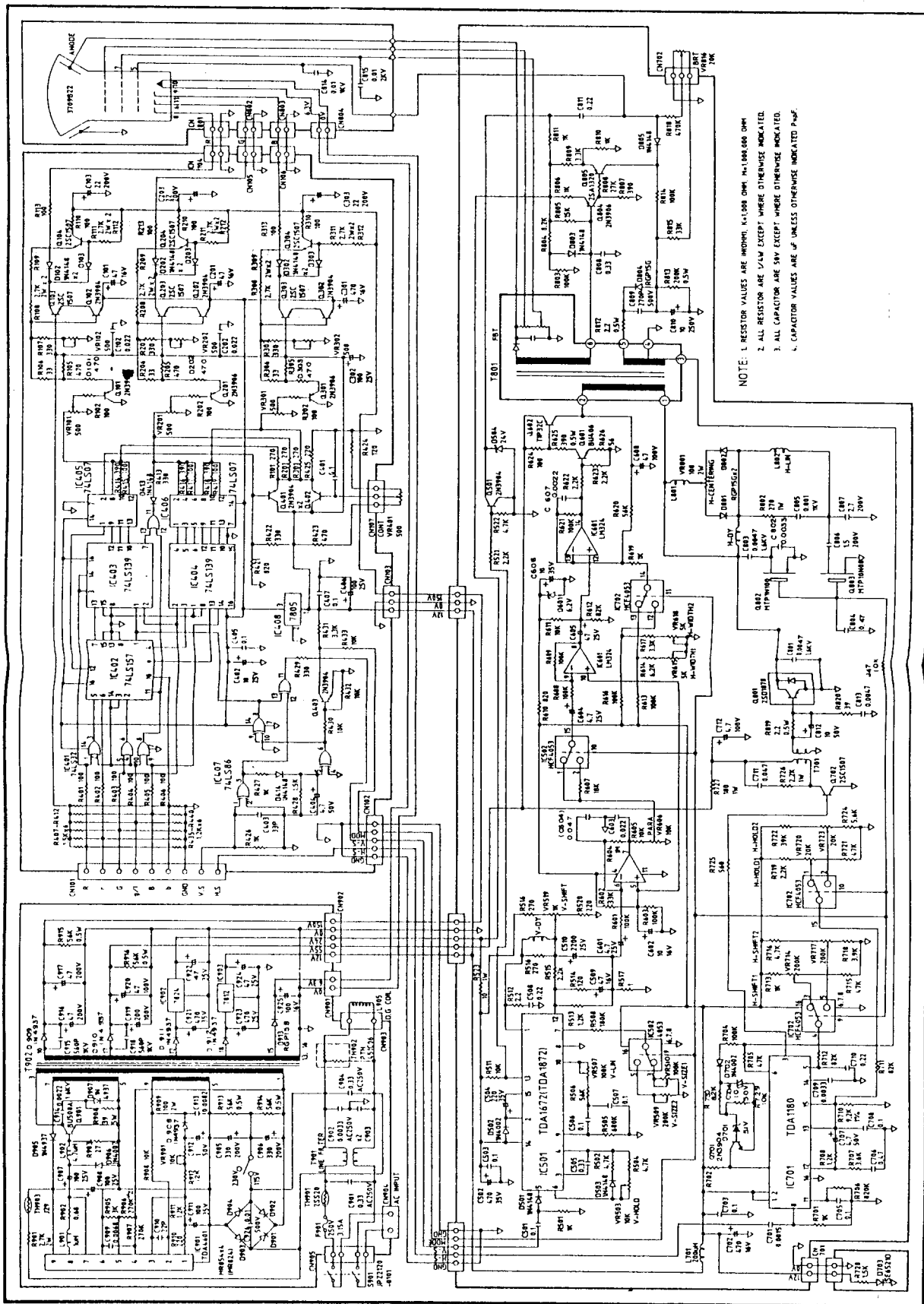
| CKKT NO | SED PART NO | DESCRIPTION | |
|-------------------|---|--|---|
| IC901 | 06-25-024A | HEAT SINK | H:40 W:18 L:46.8 |
| | 24-01-003A | CROSS RECESS PAN HEAD MACHINE SCREW | M3 ϕ \times 8 |
| | 24-31-001A | HEXAGON NUT | M3 ϕ |
| | 00-06-038A | ASS'Y HEAT SINK FOR < 034 > | |
| | 20-06-101A | IC | TDA4601 |
| | 06-25-034A | HEAT SINK | H:34 W:32 L:60 |
| IC903 | 24-02-003A | CROSS RECESS PAN HEAD MACH SCREW | M3 ϕ \times 8 |
| | 24-31-001A | HEXGON NUT | M3 ϕ |
| | 00-06-072A | ASS'Y HEAT SINK FOR < 030 > | |
| | 20-03-003A | IC | MC7812CT |
| | 06-25-030A | HEAT SINK | H:36 W:50 L:22.8 |
| | 24-01-005A | CROSS RECESS PAN HEAD | M3 ϕ |
| | 00-08-030A | ASS'Y LINE FILTER | |
| | 17-17-004A | EMI FILTER | IA5-S32, 250V-3A |
| | 21-05-155A | WIRE, CONN HOUSING, 2P, BL102 | AW 1672 / #22, 140mm, WH, BL |
| | 21-06-063A | WIRE, RING, TERMINAL | AWM1015 / #18, 130mm, GR / YE, 4 ϕ |
| | 00-14-044A | ASS'Y BACK PLATE | |
| | 10-05-211A | BACK PLATE | H:59.8 W:250 L:9.0 |
| 10-05-017A | STARIN RELIFE | 5P-4 | |
| 00-07-051B | ASS'Y SIGNAL CABLE | 9PIN D-SUB, 1318mm \pm 20mm | |
| 00-08-030A | ASS'Y LINE FILTER | | |
| 17-17-004A | EMI FILTER | IA5-S32, 250V, 3A | |
| 21-05-155A | WIRE, CONN HOUSING, 2P, BL102 | AWM1672 / #22, 140mm, WH, BL | |
| 21-06-063A | WIRE, RING, TERMINAL | AWM1015 / #18, 130mm, GR / YE, 4 ϕ | |
| 24-26-011A | CROSS RECESS CONT-SINK HEAD PLASTITE SCREW | # 12 | |
| 21-12-002A | SHRINKABLE(WHITE) | 4 ϕ \times 10mm | |
| 00-11-095A | ASS'Y CHASSIS | SC-431EM 115V / 230V | |



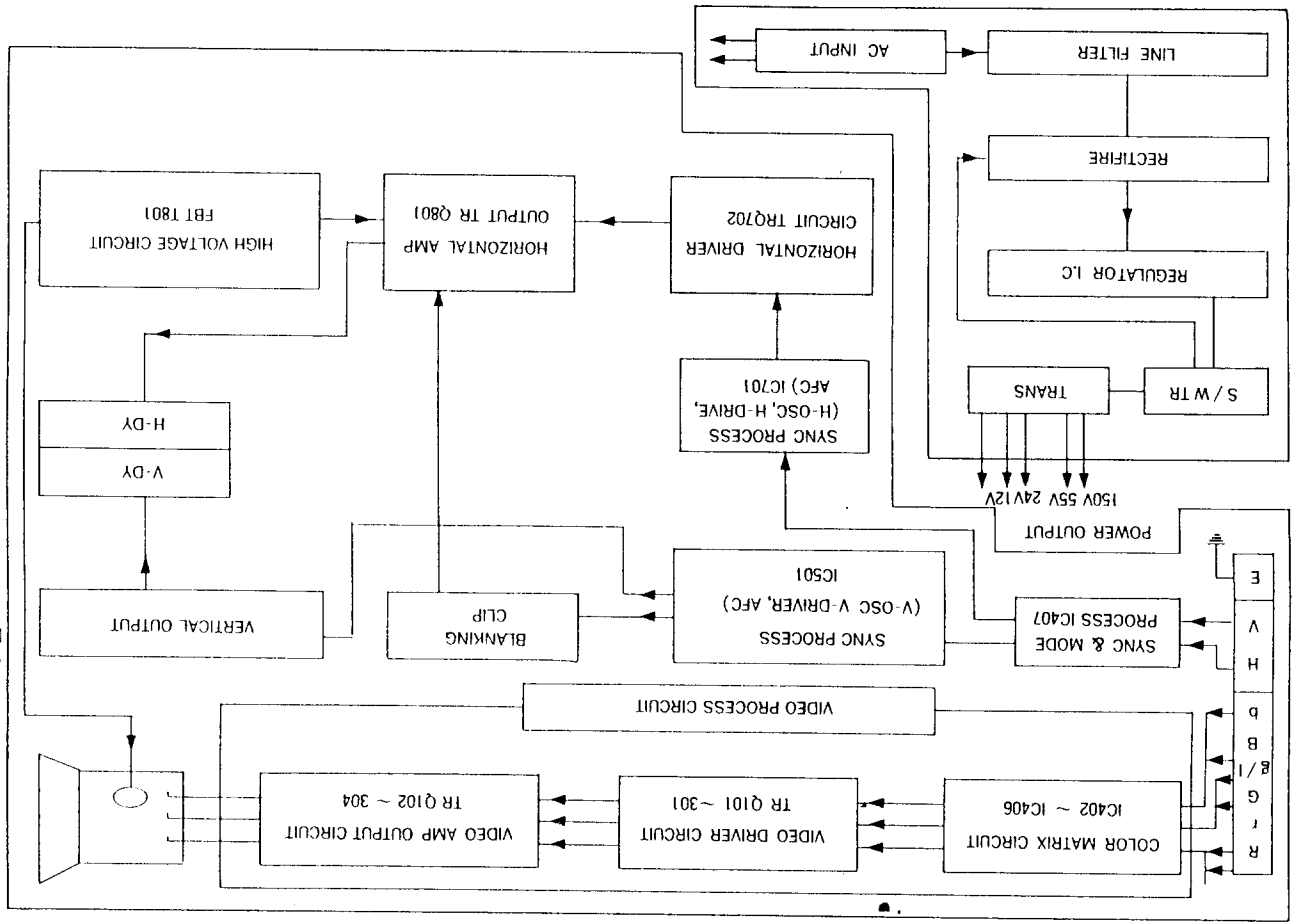


NOTE: 1. RESISTOR VALUES ARE IN OHMS, K
 2. ALL RESISTOR ARE 1/4W EXCEPT
 3. ALL CAPACITOR ARE 50V EXCEPT
 4. CAPACITOR VALUES ARE UF UNLESS

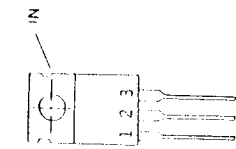




NOTE: 1. RESISTOR VALUES ARE IN OHMS, K=1,000 OHM, M=1,000,000 OHM.
 2. ALL RESISTORS ARE 1/4W EXCEPT WHERE OTHERWISE INDICATED.
 3. ALL CAPACITORS ARE 50V EXCEPT WHERE OTHERWISE INDICATED.
 4. CAPACITOR VALUES ARE μ F UNLESS OTHERWISE INDICATED.

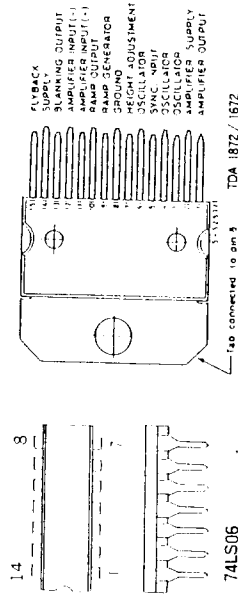


IC



REGULATOR IC
LA7805
LA7812
LA7824

PIN 1. COMMON
2. INPUT
3. OUTPUT



TDA 1872 / 1872

TDA 4601

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2. TROUBLE SHOOTING FOR RESPECTIVE SYMPTOMS

2.1 NO RASTER

① Turn the brightness control clockwise fully. If raster does not appear, check up next item.

② Check CPT heater
It is not on; CPT heater disconnect & failure heater of FBT

OK; Proceed to next check item
③ Check high voltage by HV voltage meter High voltage is not obtained

Check of FBT (T801)
Check of Q801 Collector
Check of Q801 BASE
Check of HDT

Check of pin3 IC 701
OK; Proceed to next check item
④ Check CPT electrode voltage as follow.

G2 : 500±50V
G4 : 6K±500V
G1 : -180~0V
K : 100±10V
Voltage of G2 and G4 are not obtained; check of T801

Voltage of K is not obtained; Check of video oamp. and ambient circuit.
Voltage of G2,G4,G1 and K are normal; CPT is faulty.

OK; Proceed to next check item.
⑤ Check AC voltage at AC input point on SMPS AC voltage abnormal; Failure of AC line

OK; Proceed to text check item
⑥ Check fuse F901
Disconnected; Failure of switching power transformer. Failure of bridge diode
Failure of degaussing circuit

OK; Proceed to next check item.
⑦ Check DC output voltage
Abnormal; Failure of IC901 and ambient circuit.
OK; Proceed to next check item.

2.2 ONLY ONE RASTER LINE APPEARS IN HORIZONTAL DIRECTION.

① Check of deflectin yoke vertical coil; Vertical coil open and shorted.

② Check of pin 1,2 of IC 701 when voltage is not obtained; Check of 701.

③ Check of pin 3 of IC 701

2.3 UNSTABLE VERTICAL

① Check frequency variation with rotating V-Hold.

② Check of pin 3 of IC501.

2.4 UNSTABLE HORIZONTAL

① Check of frequency variation with rotating H-Hold.
② Check of pin 3 of IC501.

2.5 NO PICTURE

The nearly square pulses output of the oscillator applies it the base of Q702 to switch on and off this transistor, there by passing pulse current through the primary side transformer(HDT).

With each turning on and off of the transistor spiking occur because of inductance.

The horizontal out put transistor Q801 is simply a switch which is turned on and off at the horizontal scan rate by the driving signal applied to its base, a sawtooth current through the deflection coil is required to sweep the beam linearly across the CRT screen. This happens when Q801 is turned on and its collector voltage droops to near zero, and the C801, 802 begins discharging through the deflection coil which deflect the beam to the reigh edge of the CPT. At that time, Q801 cuts off and C801, 802 ceases to supply current to the deflection coil. However, an induced voltage appear across the deflection yoke coil as the magnetic field collapses and an oscillation then occurs the deflection coils and C801, 802.

During the first half cycle of this oscillation, the induced voltage is felt across the collector of with cut off C801, 802 and the primary Q801, T801.

This voltage is stepped up T801 rectified to produce high voltage that is applied to anode of the CPT.

{3} SERVICE NOTE

Servicing precautions

The following precautions should be observed when service is required.

1. Replacement parts which have special safety characteristics are identified by shading on the schematics.

Replace these critical components with recommended replacement parts.

Don't degrade the safety of the set through improper servicing.

2. Comply with all cautions and safety-related notes on or inside the monitor cabinet, on the monitor chassis or on the picture tube.

3. Maintain correct lead dress and part placement. Extra caution should be taken to assure proper dress in the high voltage circuit area.

Where a malefaction has occurred, those components or circuits that indicate evidence of abnormality should be replaced or corrected.

Always use the manufacturer's safety specified replacement components.

4. When replace a chassis in the cabinet, always make certain that all the protective devices are back in their proper place, such as: non metallic control knobs, insulating fishpapers, component cover/shields, isolation resistor capacitor networks etc.

5. Before returning the monitor to the owner, be sure that no protective device built into the set by the manufacturer has become defective, or inadvertently defeated during servicing. Therefore, the following checks are recommended for the continued protection of the customer and service engineer.

* LEAKAGE CURRENT HOT CHECK

Plug the AC line cord directly into a 115V AC outlet (do not use an isolation transformer in this check).

Use a leakage current tester which complies with American National Standards Institute (ANSI) C101.1-1971, LEAKAGE FOR APPLIANCE), and UNDERWRITERS LABORATORIES (UL 1410).

Measure current form all the exposed metal parts of the cabinet, (screwheads, metal overlays, etc.) to earth ground, particularly any exposed metal part having a return path to the chassis.

The test should be conducted with AC switch "ON" and then repeated with "OFF".

Any current measured must not exceed 0.5mA with to AC line cord inserted in the AC supply circuit receptacle.

Any measurement not within the limits outlined above are indicative of a potential shock hazard and corrective action must be taken before returning the set to the customer.

6. X-RADIATION PRECAUTION

This product contains critical electrical and mechanical parts essential for X-RAY protection, see CRITICAL COMPONENT LIST and other service adjustment.

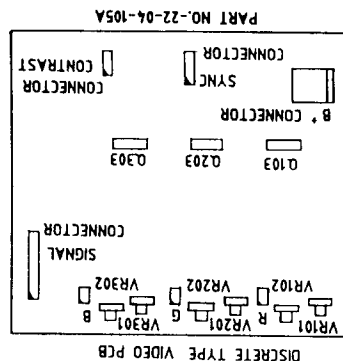
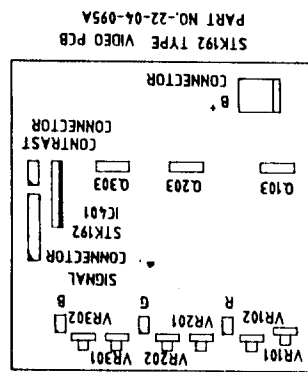
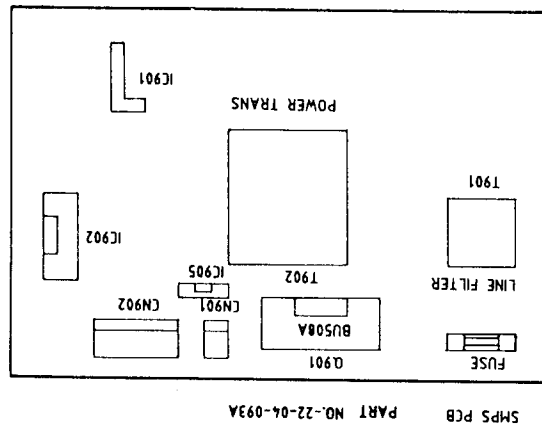
Anode voltage normal is 23KV at 115V line and must not exceed 28KV under any operating condition. To measure anode voltage, set brightness for a very dim picture.

Use a high-voltage meter between the chassis and the anode lead to measure HV.

If high voltage exceeds the specified limits, check each components on the chassis and take necessary corrective action.

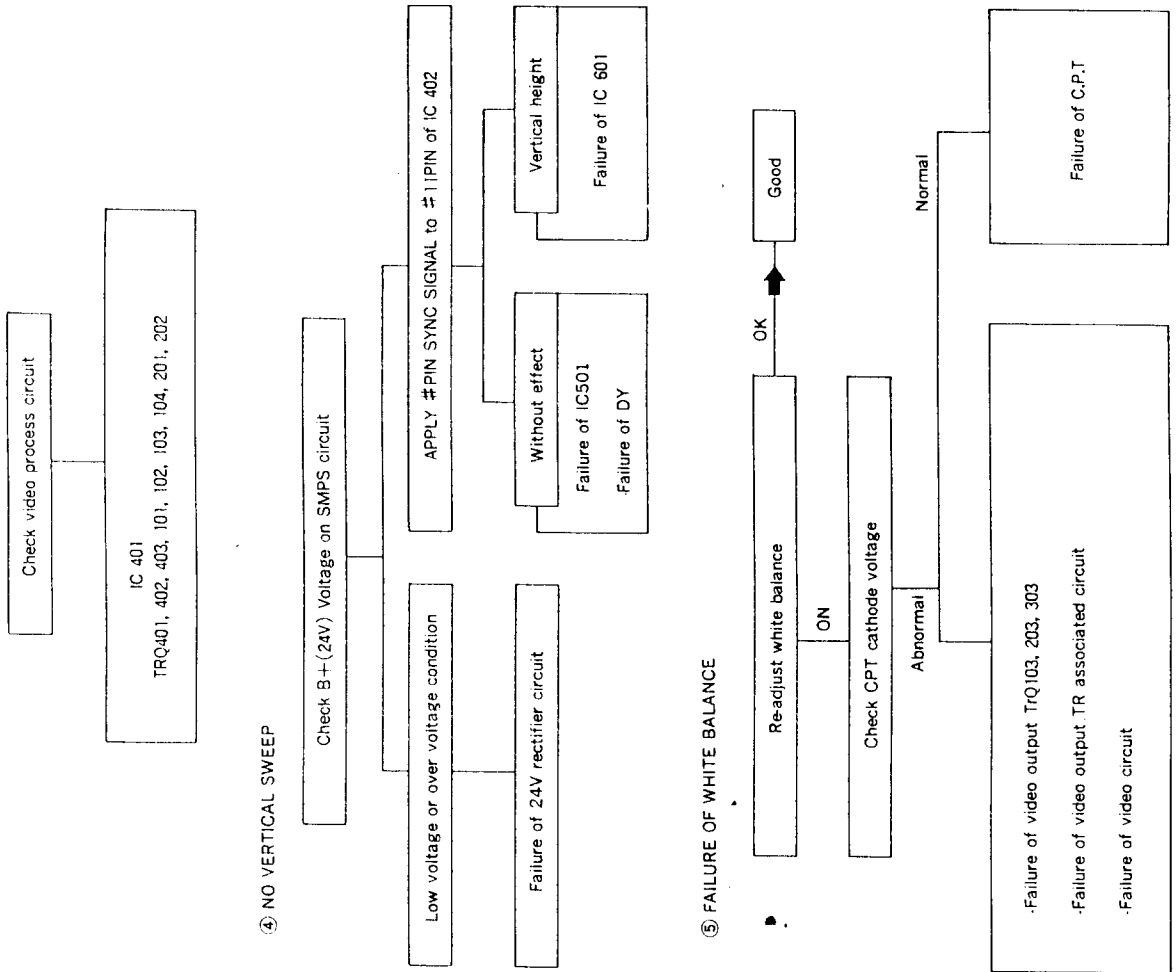
7. Do not remove, install or handle the picture tube in any manner unless shatter-proof goggles are worn. People not so equipped should be kept away while a picture tube is handled.

Keep the picture tube away from body while handling.

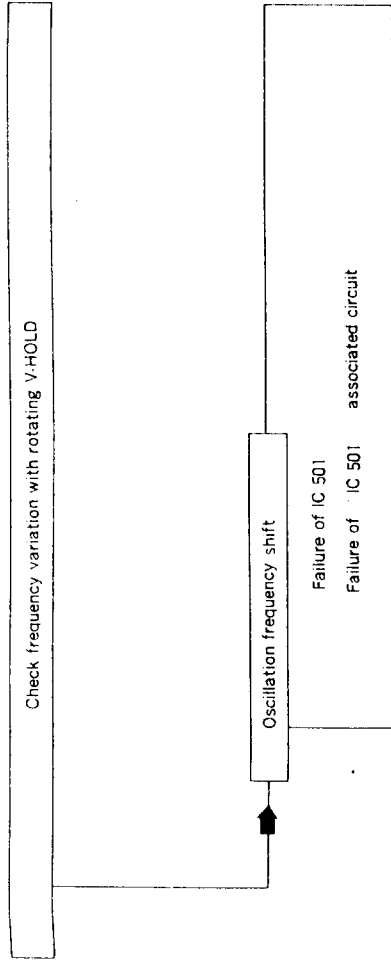


③ NOMAL RASTER, PICTURE ABNOMAL

* NOTE : Apply positive signal as input for RGB1 TTL



⑥ UNSTABLE VERTICAL



⑦ UNSTABLE HORIZONTAL

