

MPC

**mitsubishi**

# **Service Manual**

14781

## **COLOR MONITOR**


MODEL : RM 1404

XC-1404

XC-1404 CB

ALSO COVERS RESEARCH MACHINES



 **mitsubishi ELECTRIC**

SERVICE MAN WARNING

X-RADIATION PRECAUTION

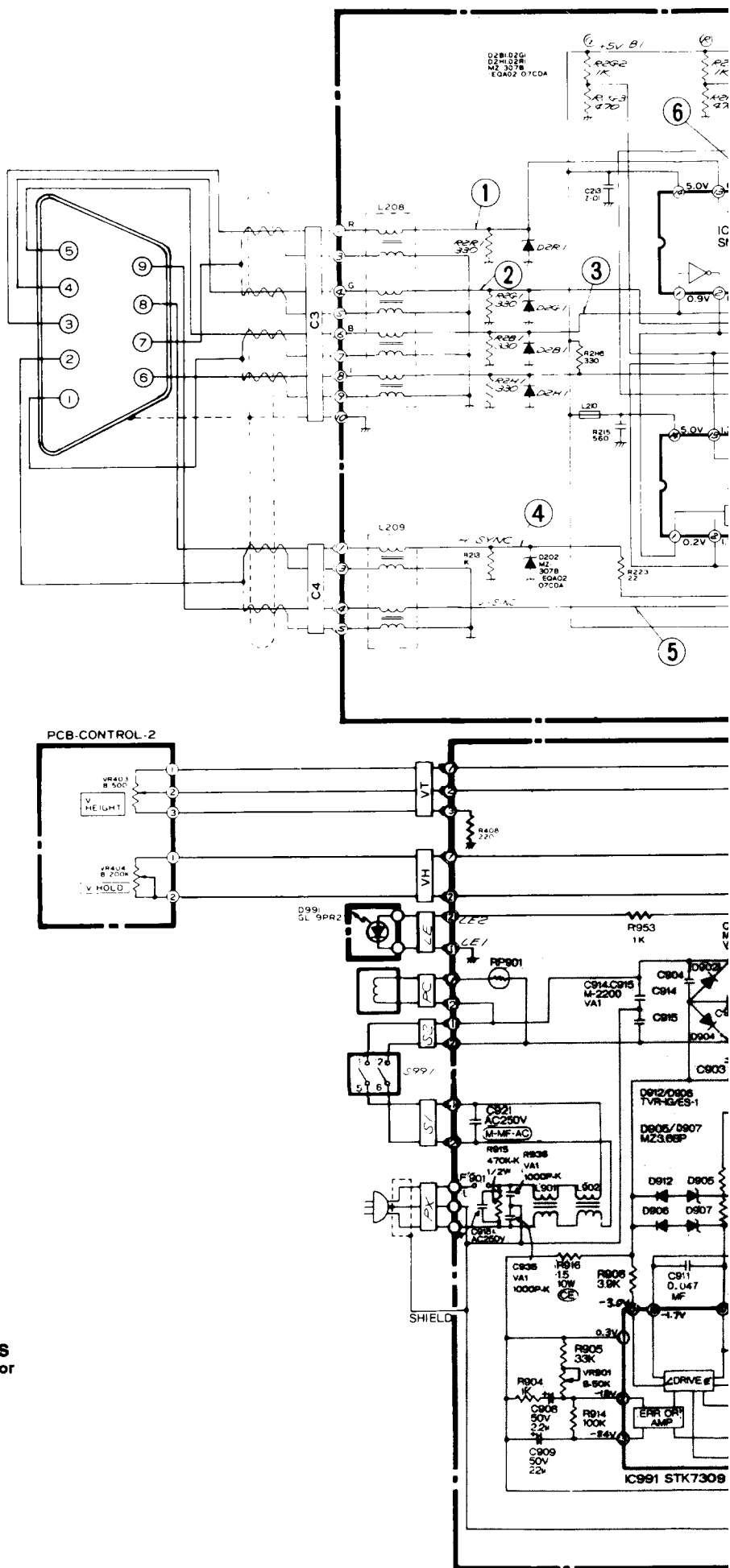
THIS PRODUCT INCLUDES CRITICAL ELECTRICAL AND MECHANICAL PARTS ESSENTIAL FOR X-RADIATION PROTECTION

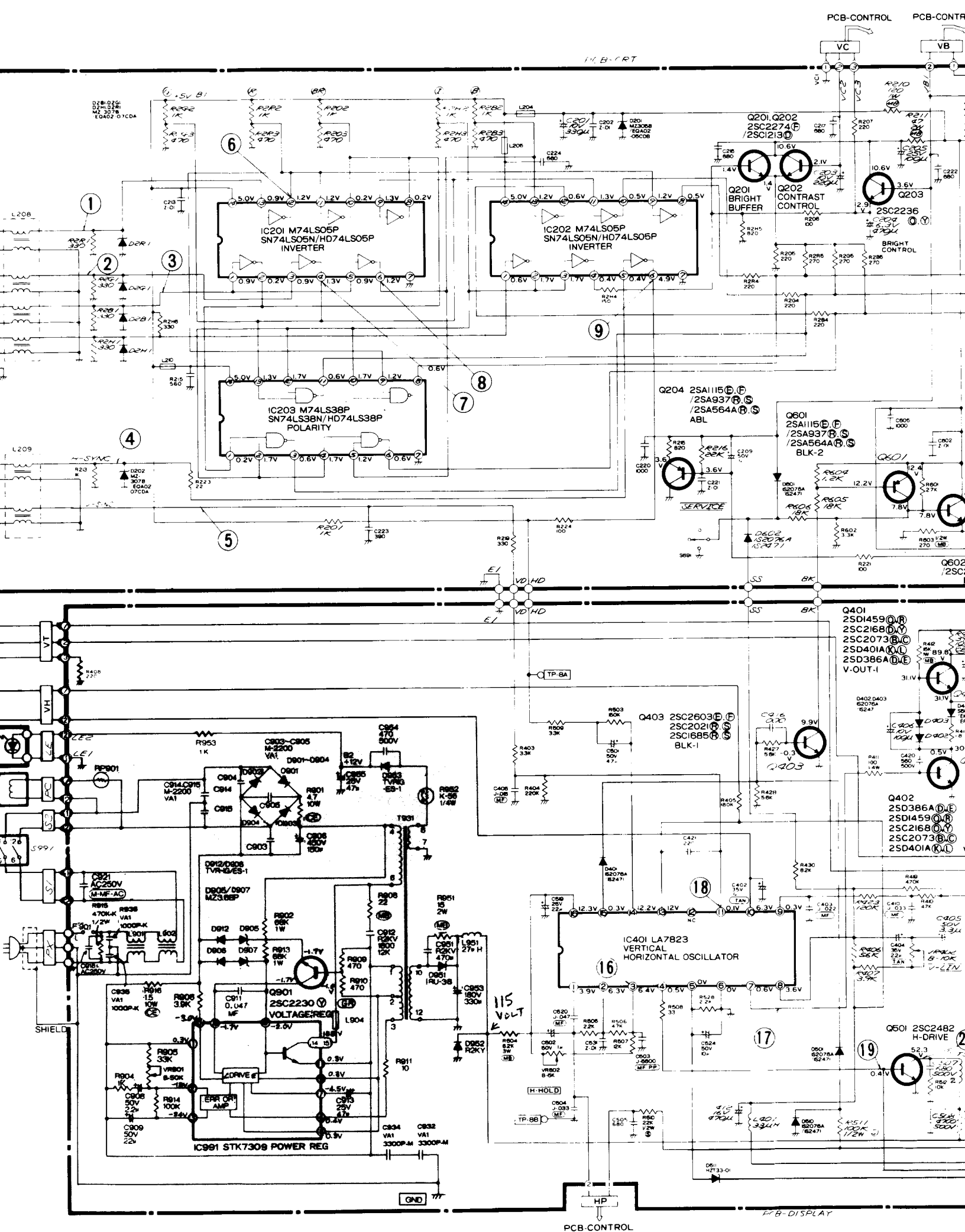
TO AVOID POSSIBLE EXPOSURE TO X-RADIATION TAKE X-RADIATION PROTECTIVE MEASURES FOR PERSONNEL DURING SERVICING

SEE SERVICE INSTRUCTIONS FOR SPECIFIED REPLACEMENT PARTS AND SERVICE ADJUSTMENTS

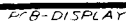
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MAURITRON SERVICES  
8 Cherry Tree Road, Chinnor  
Oxfordshire, OX9 4QY.  
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PCB-CONTROL



# SCHEMATIC DIAGRAM

MODEL :

RM 1404

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## NOTE 1:

- The unit of resistance "ohm" no symbol.  
Accordingly, K 1000 ohms  
M 1000K ohms.
- The wattage of resistor, if not specifically designated, is less than 1/4 watt.
- Resistors, if not specifically designated, are carbon resistors.
- The marks of resistors are as follows
 

CE	Cemented resistor
MB	Metal oxide film resistor (type B)
MPC	Metal plate cement resistor
S	Fixed composition resistor
W	Wire wound resistor
M	Metal film resistor
- The tolerance of resistor value, if not specifically designated, is: J  $\pm 5\%$ , K  $\pm 10\%$ , M  $\pm 20\%$ .
- The unit of capacitance, if not specifically designated, is:
  - $\mu F$ , for numbers less than 1
  - PF, for numbers more than 1
- Capacitors, if not specifically designated are Ceramic capacitors except electrolytic capacitors
- The marks of capacitors are as follows
 

ALM	Aluminum electrolytic capacitor
MF	Polyester capacitor
PP	Polypropylene film capacitor
TAN	Tantalum capacitor
TF	Twin film capacitor
MF PP	Polyester polypropylene film capacitor
MPP	Metallized plastic film capacitor
NP	Non polarized electrolytic capacitor
- The DC working voltage of capacitor, if not specifically designated is: 50V
- The tolerance of capacitor value, if not specifically designated is:
 

$\pm 10\%$ for polyester capacitor	$\pm 5\%$ for ceramic capacitor
------------------------------------	---------------------------------

 and J  $\pm 5\%$  K  $\pm 10\%$  M  $\pm 20\%$  P  $\pm 100\%$   
 C  $\pm 0.25PF$  D  $\pm 0.5PF$  F  $\pm 1PF$  Z  $\pm 80\%$  20%

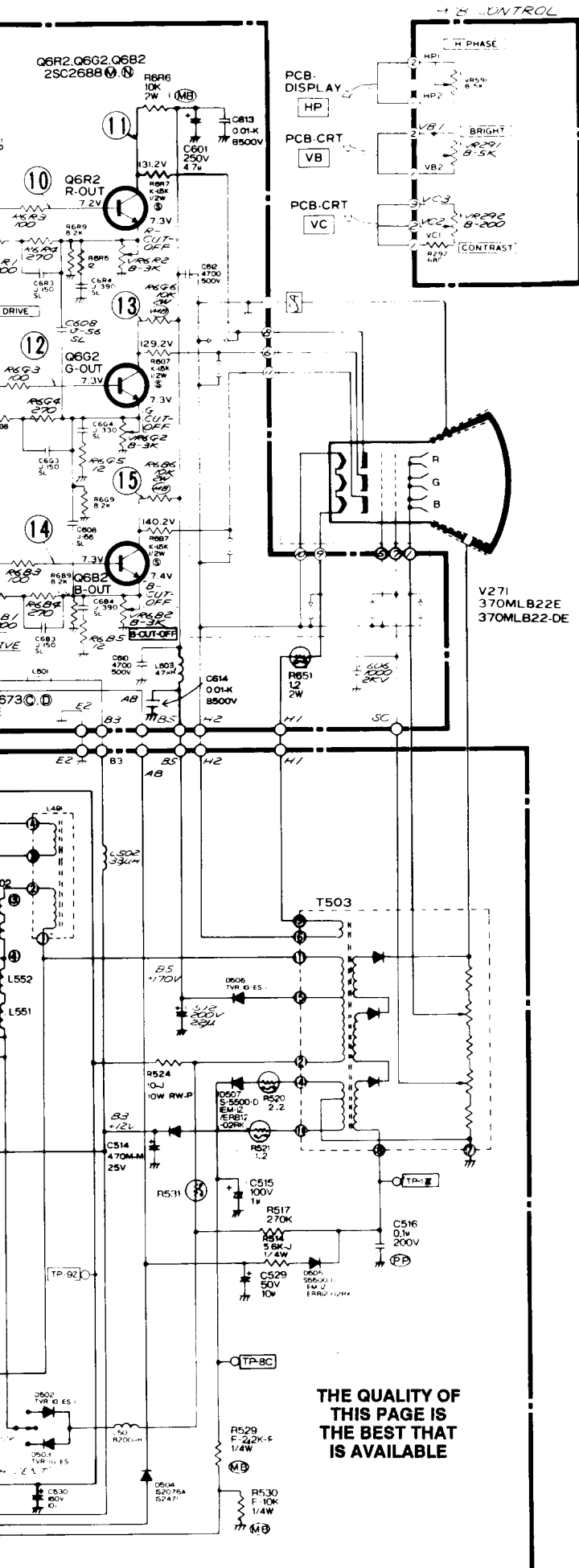
## SPECIFIC SYMBOL

	Zener Diode		Varistor
	Varicap		Crystal unit
	Posistor		Air Gap
	Thermistor		Part (resistor) attached on the copper foil side of PCB
	Fusible Resistor		Ceramic filter

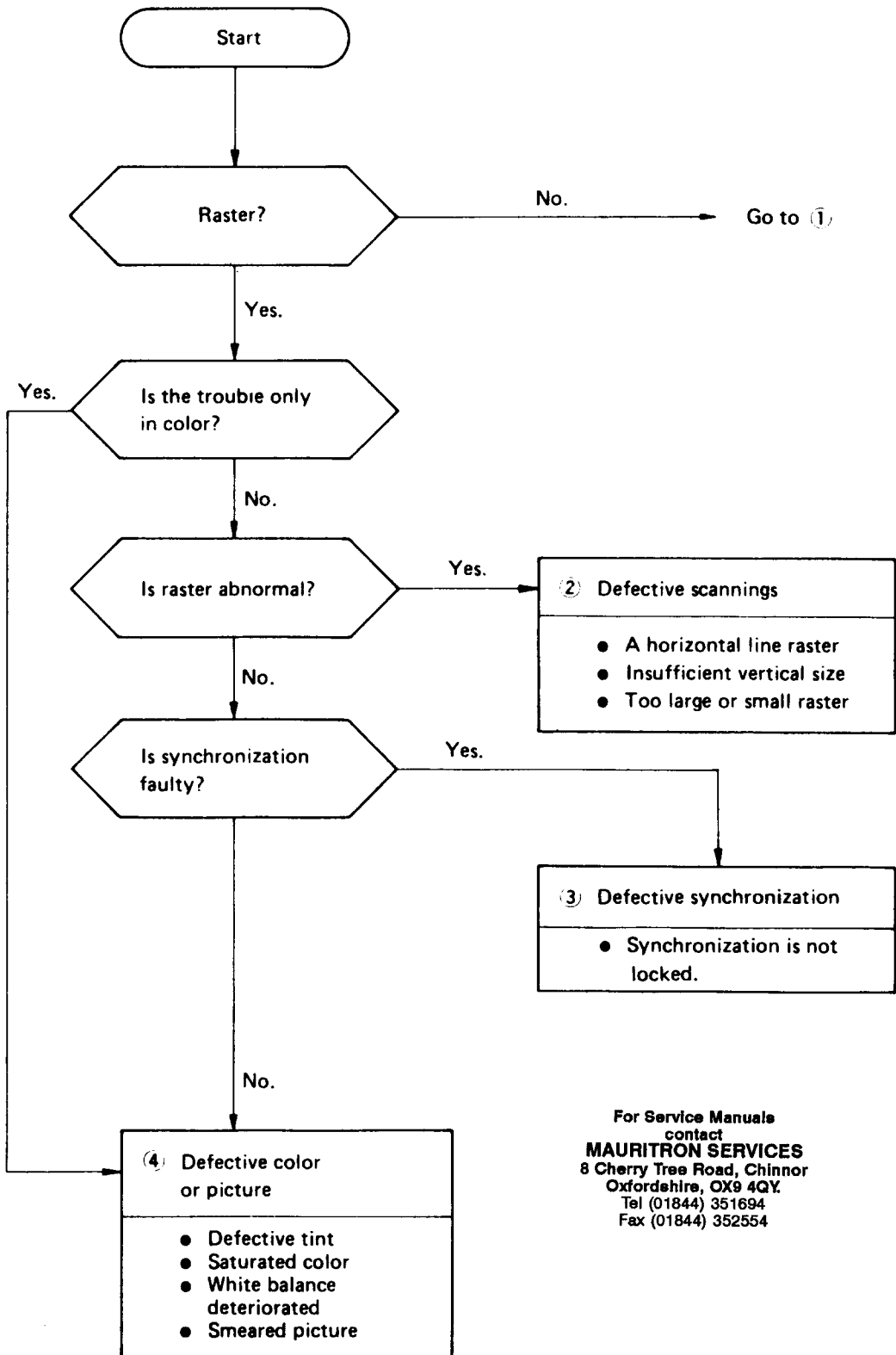
## NOTE 2:

- DC voltages were measured from points indicated to the circuit ground with a VTVM.
- Number in circle indicates waveform number.
- This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

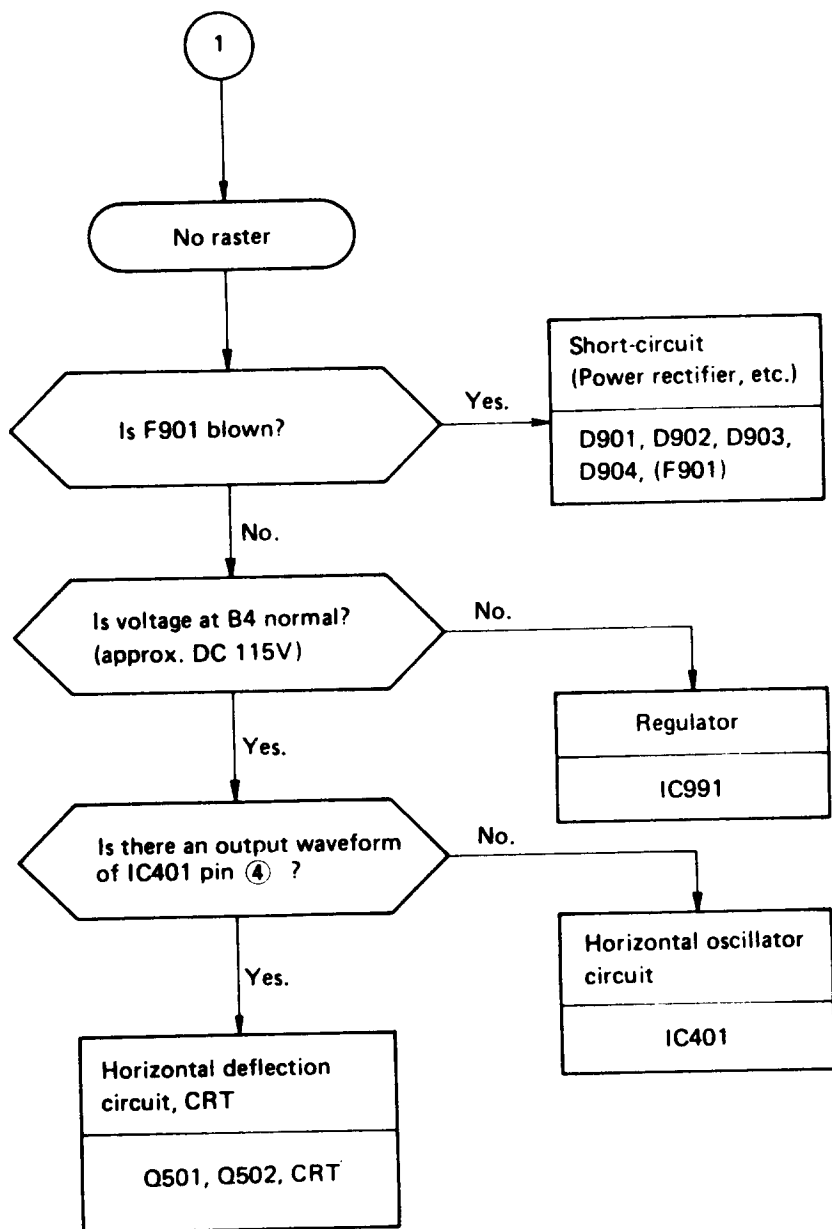
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# TROUBLESHOOTING



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Defective scanings

Is it a horizontal  
line raster?

No.

Too large or small  
raster

..... IC991

Insufficient vertical  
size

..... IC401, Q401,  
Q402

Yes.

Is there an output waveform  
of Q402 (B) ?

No.

Vertical oscillator

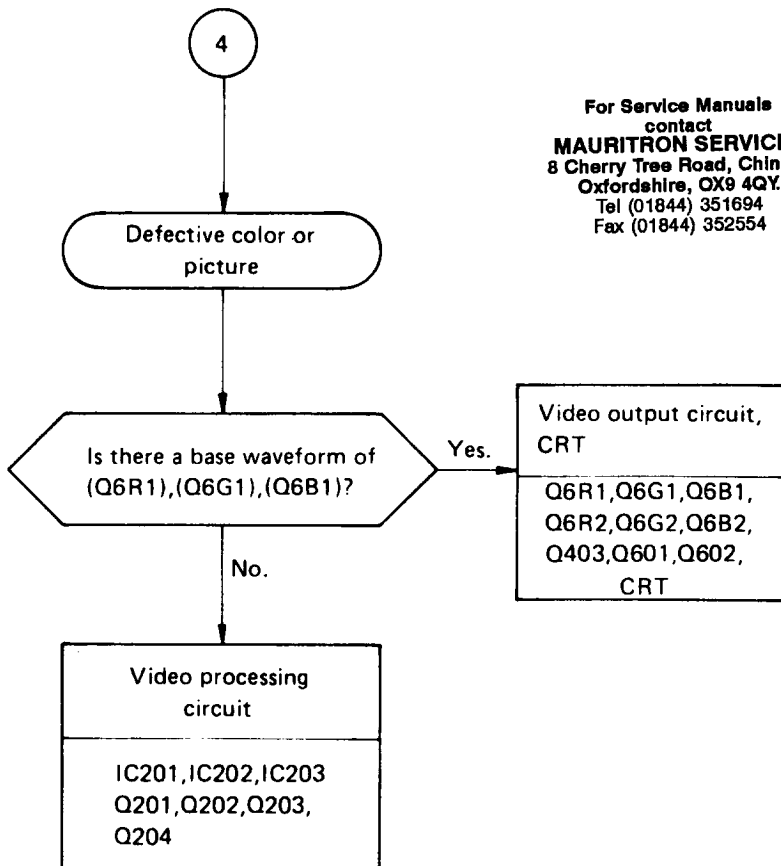
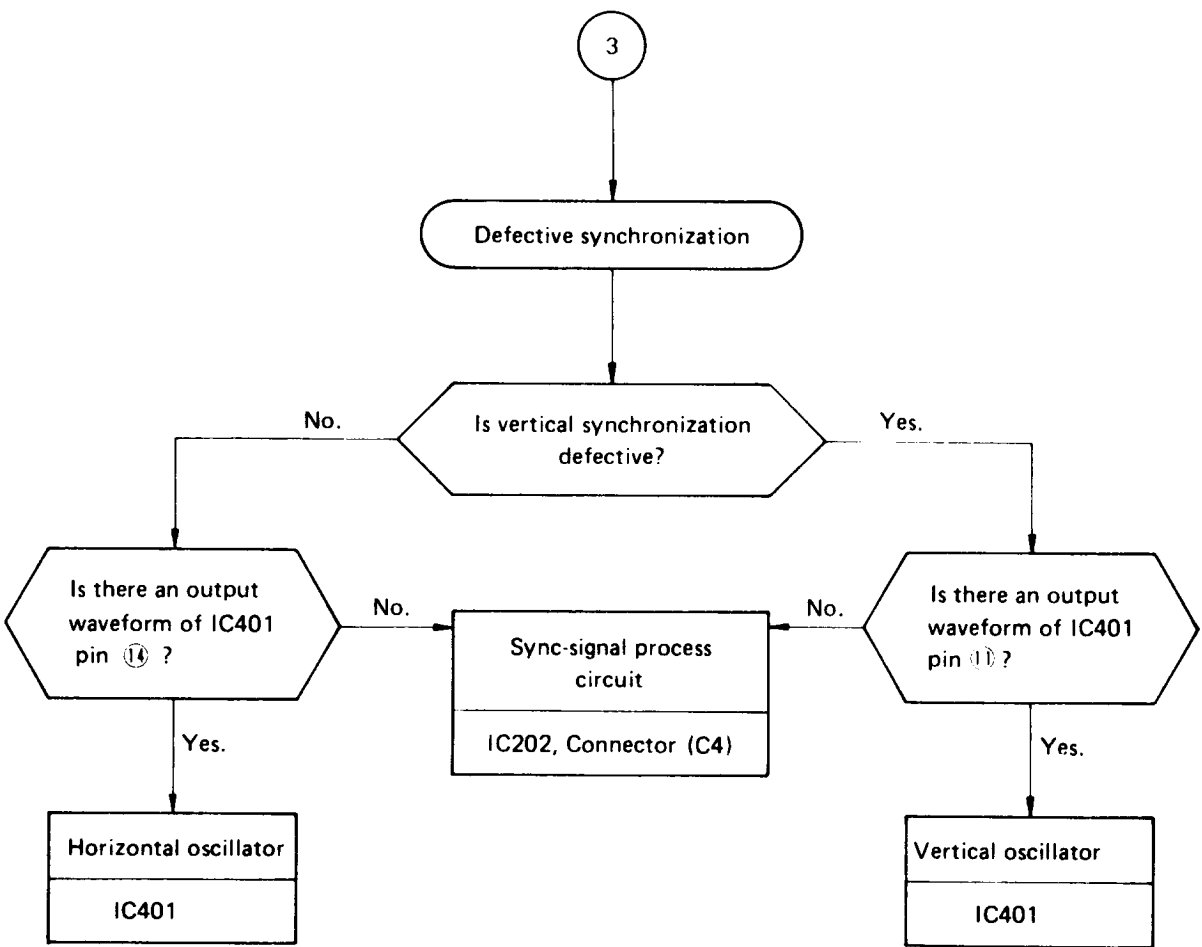
IC401

Yes.

Vertical deflection  
circuit, DY

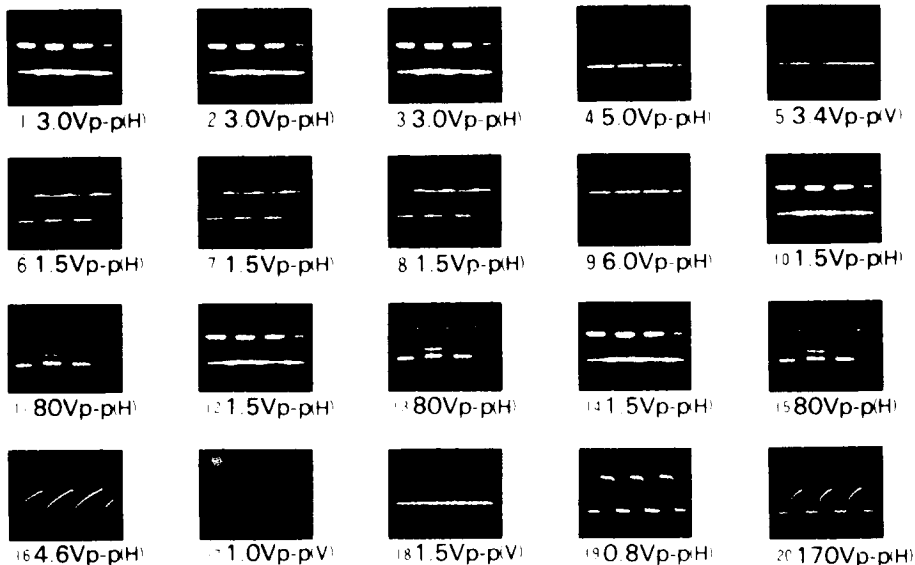
Q401, Q402, DY





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## CHASSIS WAVEFORMS



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Note:  
Waveforms were taken with character signal

## SEMICONDUCTOR LEAD IDENTIFICATION

### Shape of Transistors

Q502		2SD1426	Q204 Q403 Q601		2SC2021 2SA937
Q401 Q402		2SC2073 2SD1459 2SD401	Q6R2 Q6G2 Q6B2		2SC1507
Q201 Q202 Q203 Q204 Q501 Q601 Q602 Q6B1 Q6G1 Q6R1 Q901		2SC2230 2SC2274 2SC2482 2SA564 2SA673 2SC2236 2SC1213	IC201 IC202 IC203		M74LS05P M74LS38P
Q204 Q403 Q601		2SC2603 2SC1685 2SA1115	IC401		LA7823
Q401 Q403		2SC2168 2SD386	IC991		STK7308 STK7309

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