

PRELIMINARIES

PM-910 is a 9"(23cm) diagonal CRT used reliable picture monitor for monochrome video program. Full solid-state with top quality integrated circuits and silicon semi-conductors design assure high quality picture for a long time. Simple circuitry design and compact construction present this monitor as an economical device. The PM-910T external sync driven picture monitor with DC restoration is optionally available for higher class applications.

This manual contains initial set up procedures, operating instructions and service informations for both types, PM-910 and PM-910T.

Please note that the PM-910 picture monitor is finely adjusted precision piece of equipment. To be assured of trouble-free operation, full performance capability and a long service life, we strongly recommend that you check these instructions completely before attempting to assemble, install or operate the monitor.

Although this picture monitor is a solid-state, modular unit using mainly low-voltage circuitry at non-hazardous energy levels, power supply voltages present on certain parts of the interior. Such parts are not accessible in normal use, but while carrying out maintenance or repair, **EXTREME CARE** should be taken. Mains voltage can be **LETHAL!**

It is strongly recommended not to move them unless really necessary, and in such cases, always follow the procedure given in these instructions, and use appropriate tools. And note that the inside adjustment or repair should only be made by a fully qualified technician.

CARE IN HANDLING

Careful handling of the monitor and accessories should be practiced at all times, avoiding unnecessary physical shocks and similar rough handling.

The monitor should always be set up in a well-ventilated area, and shielded from heat sources, high-powered lights, especially strong magnetic fields (such as power transformers), which may cause picture swing or distortion.

Excessively moisture-, gas- or salt-laden atmospheres should be avoided as much as possible, since circuitry components and connector contacts may be adversely affected.

Dust accumulation should be avoided, since many parts of the unit will be adversely affected in time, and the service-life will be shortened.

Regularly check the connection cables, which are prone to damage, especially in outdoor use. The cable should always be handled with care, kept free from sharp bends and kinks, and relieved from strain near the connectors. And checking of the connectors for full insertion and tightness is also recommended, especially where the same setup is used for a long time.

NAMES OF SECTIONS

- Carrying handle
- Upper case
- Front escutcheon
- Picture tube (CRT)
- Power switch
- Power lamp
- V. Hold (Driver control)
- H. Hold (Driver control)
- Brightness
- Contrast
- Video input connectors (bridged)
- Video termination switch (75-ohm ON/OFF)
- Blind plate for optional unit (For EXT sync/DC restore unit)
- EXT Sync/DC restore unit
- DC restoration switch (ON/OFF)
- Sync termination switch (75-ohm ON/OFF)
- Sync mode switch (Internal/External)
- Sync input connectors

SET UP & OPERATION

Position the picture monitor in the desired location and connect the power cord to an AC outlet. And make sure that the monitor is installed securely, in a stable condition.

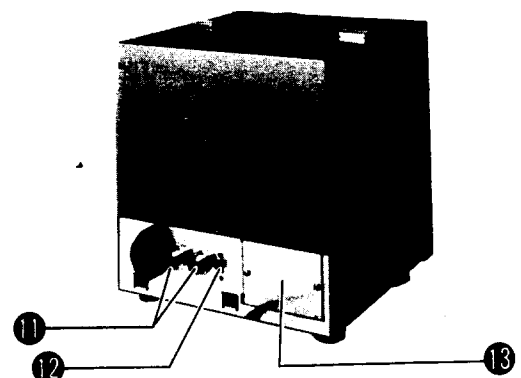
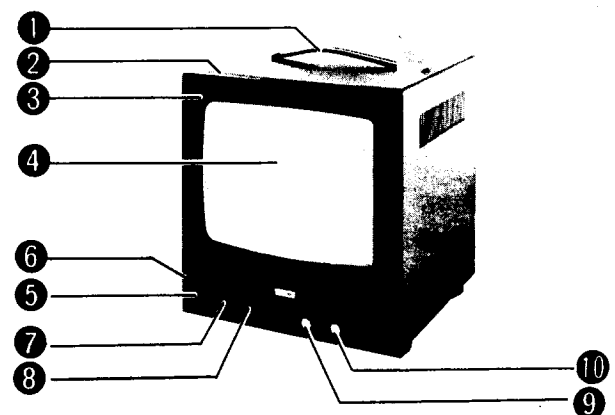
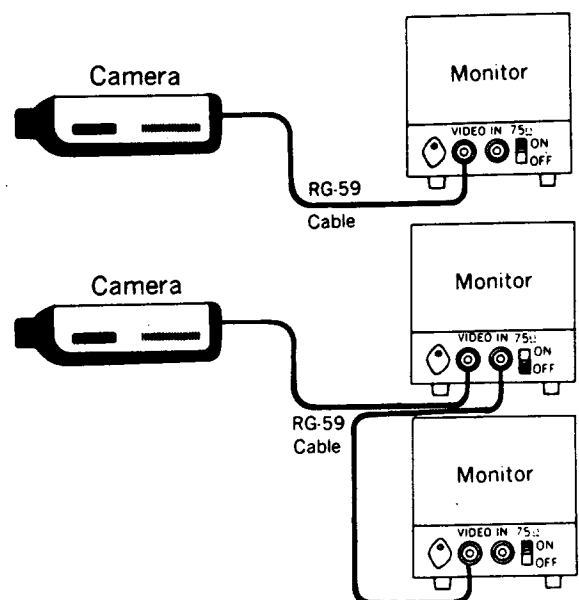
Make the coaxial-cable connection for video signal between the picture monitor and the signal source (video camera or-VTR etc.). And make certain that all connectors are properly and fully mated, and the locking rings are securely tightened.

Set the video termination switch to 75-ohm (if more than one monitor is to be used, see below).

If provided, set the sync internal/external switch to internal (if applicable).

After switching on the monitor and setting up the raster, adjust the brightness and contrast controls for the most pleasing picture.

BASIC CONNECTION

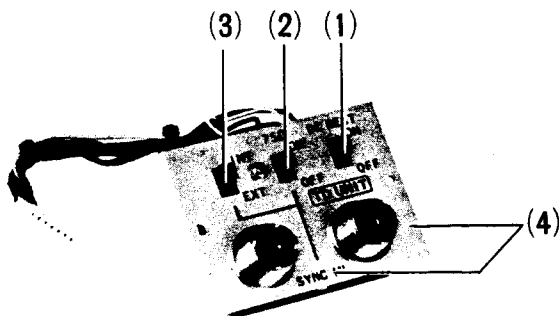


EXTERNAL SYNC DRIVE & DC RESTORATION UNIT

An optional external sync drive & DC restoration unit is available for PM-910. An external sync drive provision is for synchronous operation with other video equipment and DC restoration is for high fidelity reproduction of signals bright or dark signal referred to black level.

This unit is provided with DC restoration circuit and related switch, and with Ext. sync drive circuit with two sync input connectors and necessary switches.

An installation of this unit can be made easily so that the PM-910 basic monitor can be easily converted to PM-910T external drivable monitor with DC restoration. With this unit, required sync input level is 4.0V (p-p) negative polarity sync of 75-ohm impedance.



PROVISIONS

(1) DC REST switch

This is an on/off switch for DC restoration. When DC restoration is not required, set this switch off position.

(2) SYNC IN connectors

Two sync input connectors are provided in a bridge connection for several monitors synchronous operation.

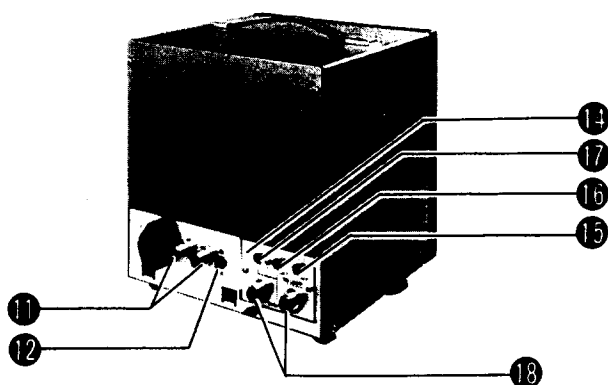
(3) 75-ohm switch (Sync termination)

This is a sync termination switch with 75 ohms. In the case of several monitors operation, set this sync termination switch off, except last monitor in the train.

(4) EXT/INT switch

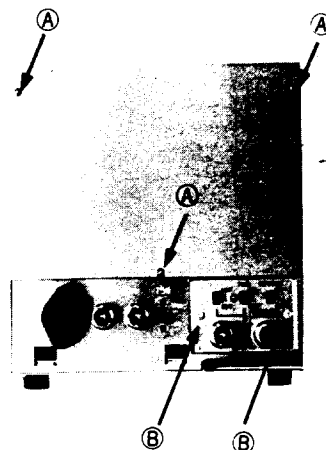
This is a sync mode switch for external sync drive. In the case of external sync drive, set this switch to EXT position.

PM-910/T Rearview



INSTALLATION OF THE EXT SYNC/DC REST UNIT

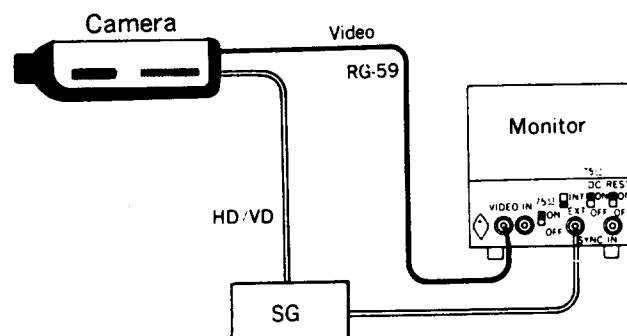
- (1) Take out the 3 screws (A) from rear cover, and remove the cover.
- (2) Take out the 2 screws (B) from the rear blind panel and remove the blind panel.
- (3) Install the EXT SYNC/DC REST unit with 2 screws (B).
- (4) Pull out the jumper plug (7P) putting on a monitor main board.
- (5) Connect the EXT SYNC/DC REST unit to the monitor main board by 7P mini-connector.
- (6) Fix the rear cover as it was, with the 3 screws (A).



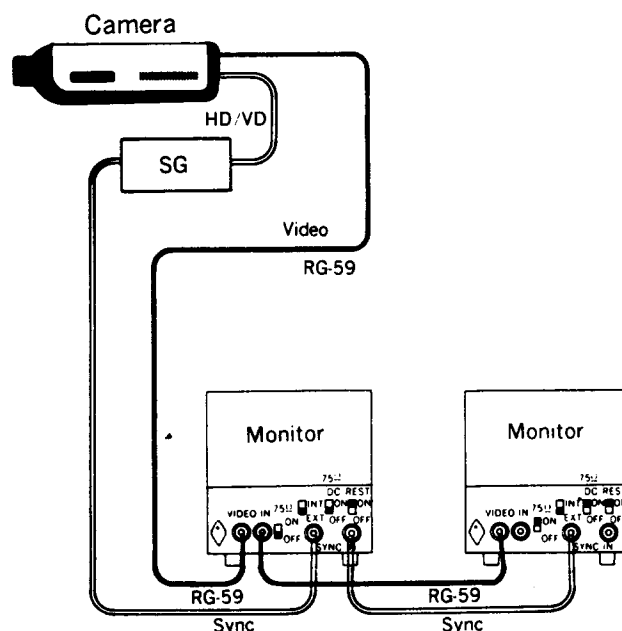
Note that the jumper plug (7P mini-plug) should be on the monitor main board in the case of operation without EXT SYNC/DC REST unit. Without this jumper plug, a monitor never be operated.

EXTERNAL SYNC DRIVE CONNECTION

(1) ONE CAMERA, ONE MONITOR



(2) MULTIPLE MONITORS WITH EXTERNAL SYNC DRIVE



SPECIFICATIONS

PICTURE TUBE : 9" (23cm) diagonal CRT
Implosion protective
Type 230BLB4 or Equiv.

VIDEO INPUT LEVEL & IMPEDANCE : VS 1.0V (p-p), 75 ohms

SCANNING RATES
HORIZONTAL : 15.75KHz or 15.625KHz
VERTICAL : 60Hz or 50Hz

VIDEO FREQUENCY RESPONSE : 5.5MHz or more (+3dB)

VIDEO OUTPUT LEVEL : 30V(p-p)

HORIZONTAL RESOLUTION : 550 lines or better
at center

SIGNAL-TO-NOISE RATIO : 55dB or better
(Sync noise excluded)

LINEARITY : Maximum 2% (of height)

AMBIENT TEMPERATURE : -10°C ~ +45°C

POWER REQUIREMENT : 100/120VAC, 60Hz or
220/240VAC, 50Hz

POWER CONSUMPTION : Approx. 24 watts

DIMENSIONS (WHD) : 218.5 X 226 X 230 (in mm)

WEIGHT : 6.0Kg

RATINGS FOR OPTIONAL UNIT (PM-910T only)

SYNC INPUT LEVEL : 4.0V(p-p) Negative polarity

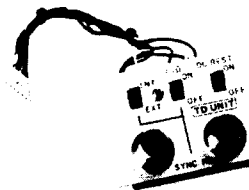
SYNC INPUT IMPEDANCE : 75-ohm or High (Switchable)

DC RESTORATION : Built-in (On/off switchable)

OPTIONAL ACCESSORIES

Following optional accessories & unit are available for PM-910 monitor.

* EXTERNAL SYNC DRIVE & DC RESTORATION UNIT



For external sync operation system, an external sync drive unit of plug-in type is available.

This unit includes DC restoration.

* SCREEN HOOD



Functionally styled snap-on hood of durable material is provided.

* DOUBLE-UNIT RACK PANEL



This fine-finish metal panel accepts two PM-910 or 910T for standard 19" rack. Control panel cover included.

Inexpensive type without panel cover is also provided.

* Design and specifications are subject to change for improvement.



IKEGAMI

IKEGAMI TSUSHINKI CO., LTD.

Head Office & Export Department/
5-6-16 Ikegami, Ohta-ku, Tokyo TELEX 2466738 IKETSU J
PHONE TOKYO (03) 754-2121 CABLE ADDRESS IKETSU TOKYO

INTERNAL ADJUSTMENTS

All internal controls are factory set and locked at the optimum position. Adjustment should not be undertaken except by a qualified service technician, and only when absolutely necessary. This information is provided only as a source of reference for the qualified service technician.

There are five adjustments on the monitor main board.

HORIZONTAL FREQUENCY : This is a screwdriver adjustment to control picture horizontal position when the H. Hold cannot follow.

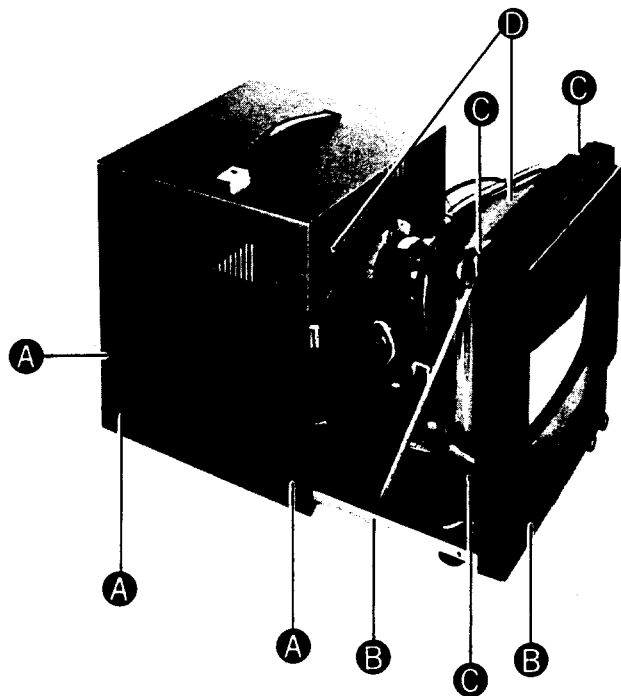
FOCUS : This is a screwdriver adjustment to make a correct focus when the picture is blurred.

VERTICAL BIAS : This is a screwdriver adjustment to control bias of the video output circuit and IC 1. Turn this control when overlapped pictures or shrunk pictures are on the screen.

VERTICAL LINEARITY : This is a screwdriver adjustment to control V. linearity when the picture is distorted in upper or lower part on the screen.

VERTICAL HEIGHT : This is also a screwdriver adjustment to correct a height when the center circle of the test pattern is oblong vertically or horizontally.

PICTURE TUBE (CRT) REPLACEMENT

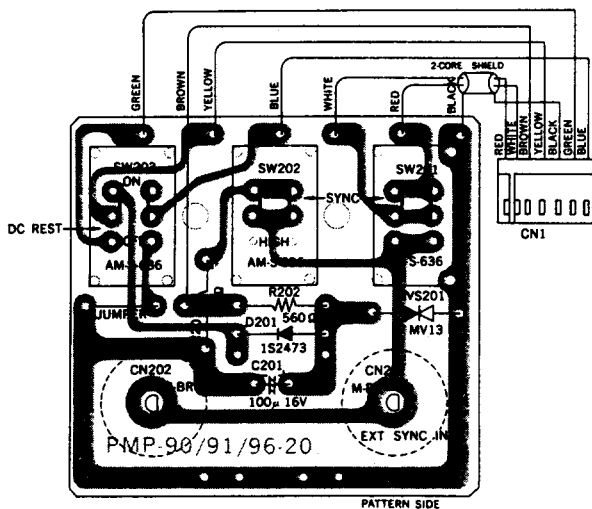


- (1) Switch off the power and unplug the power cord.

In the case of tube replacement, making sure that the monitor has been switched off for several minutes to allow the tube anode to discharge.

- (2) Take out the five screws **A** from a top cover, and remove the cover.
- (3) Take out the 2 screws **B** from a CRT support bar.
- (4) Carefully remove CRT socket, connector to the deflection coil assembly and anode cap. **D**
- (5) Take out the 4 screws **C** and remove old CRT.
- (6) Put new CRT for replacement, and observe reverse sequence in assembling the cover.

Note that the picture tube (CRT) must be replaced only with identical part number.



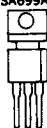
2SC1012A



(BOTTOM VIEW)

- 1 Emitter
- 2 Base
- 3 Collector

2SC1226A
2SA699A



(BOTTOM VIEW)

- 1 Emitter
- 2 Collector
- 3 Base

2SC1815
2SA564
2SC1317



(BOTTOM VIEW)

- 1 Emitter
- 2 Collector
- 3 Base

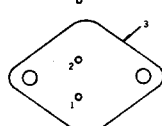
2SD975



(BOTTOM VIEW)

- 1 Base
- 2 Collector
- 3 Emitter

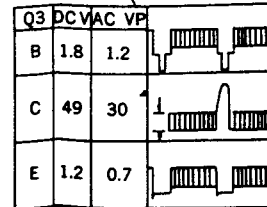
2SD469
2SC681A



(BOTTOM VIEW)

- 1 Base
- 2 Emitter
- 3 Collector

Q4	DOV
B	0.98
C	6.5
E	0.35

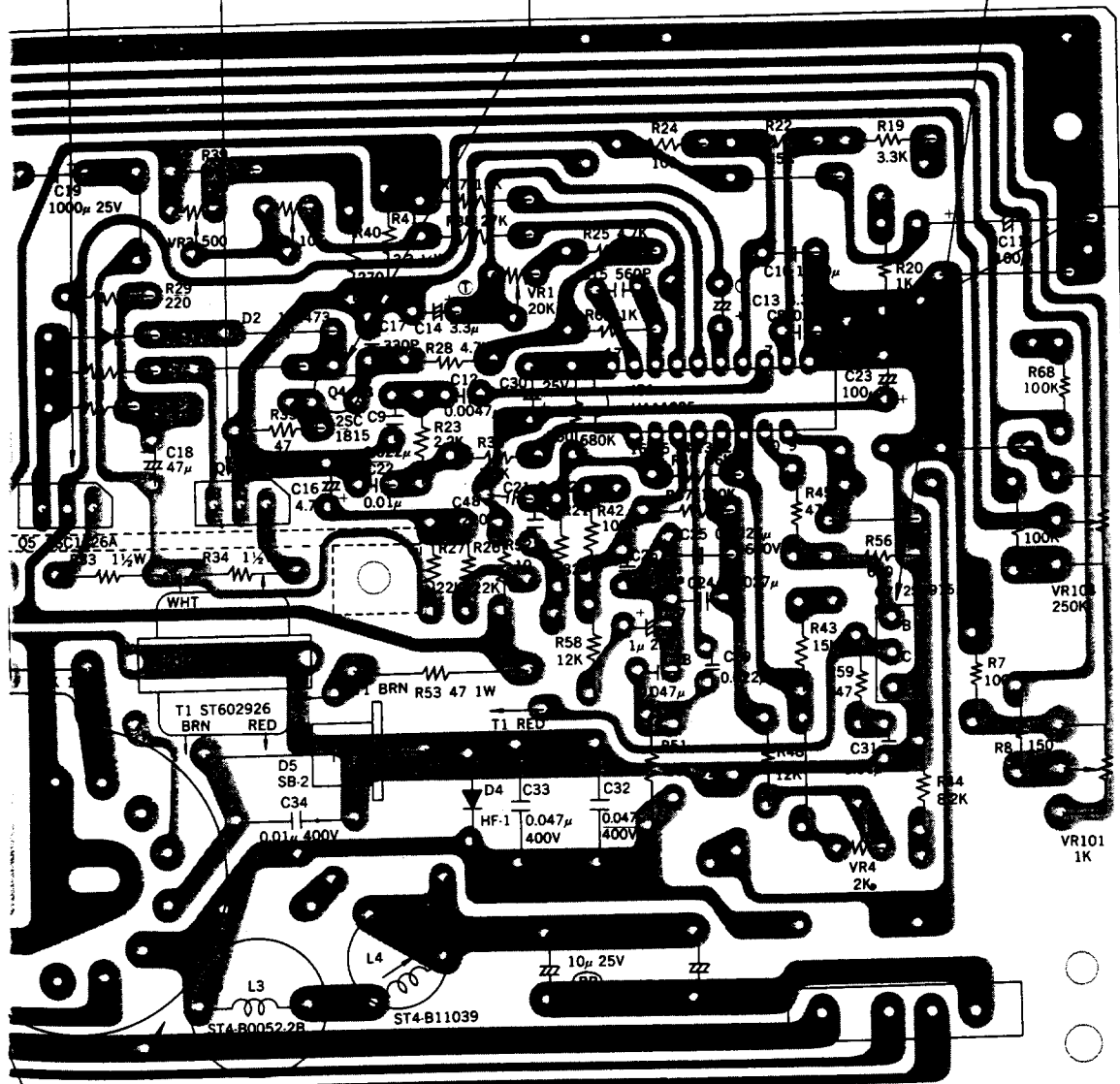


AC VP	
10	
-	
12.0	

Q6 DCVAC VP	
B 6.5 12.0	
C - -	
E 7.3 12.0	

Q4 DCVAC VP	
B 0.98 1.3	
C 6.5 12.0	
E 0.35 0.7	

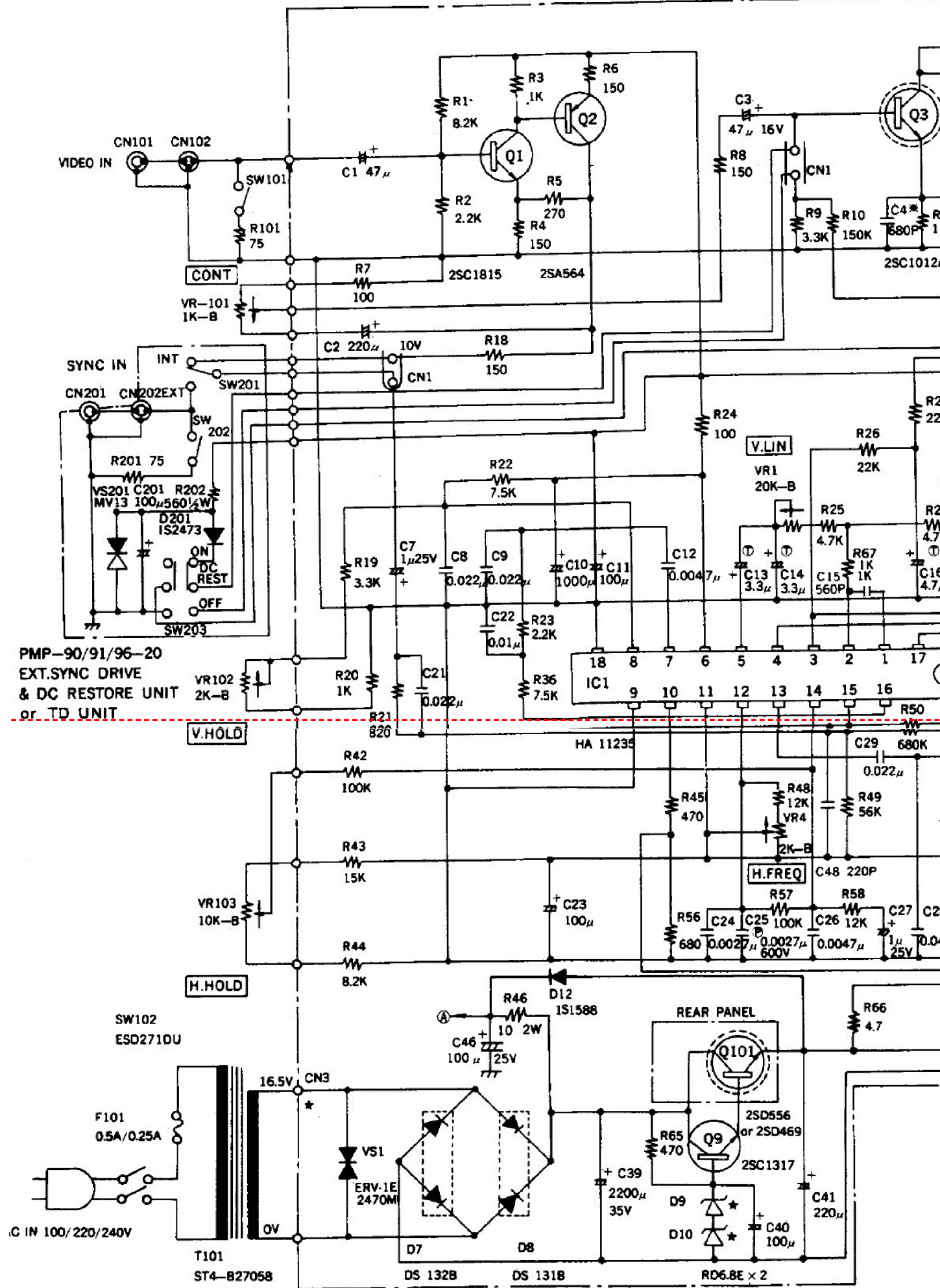
Q7 DCVAC VP	
B 0.32 0.8	
C 10.2 18	
E - -	



IC1 DCVAC VP	
1 3.2 1.8	
2 1.2 2.1	
3 3.1 1.1	
5 7.2 2.3	
6 11.4 -	
7 5.1 4.0	
8 5.2 2.5	
10 1.6 4.0	
12 6.4 5.0	
13 3.4 1.4	
15 12.8 2.3	
16 1.25 11.0	
17 4.1 0.45	

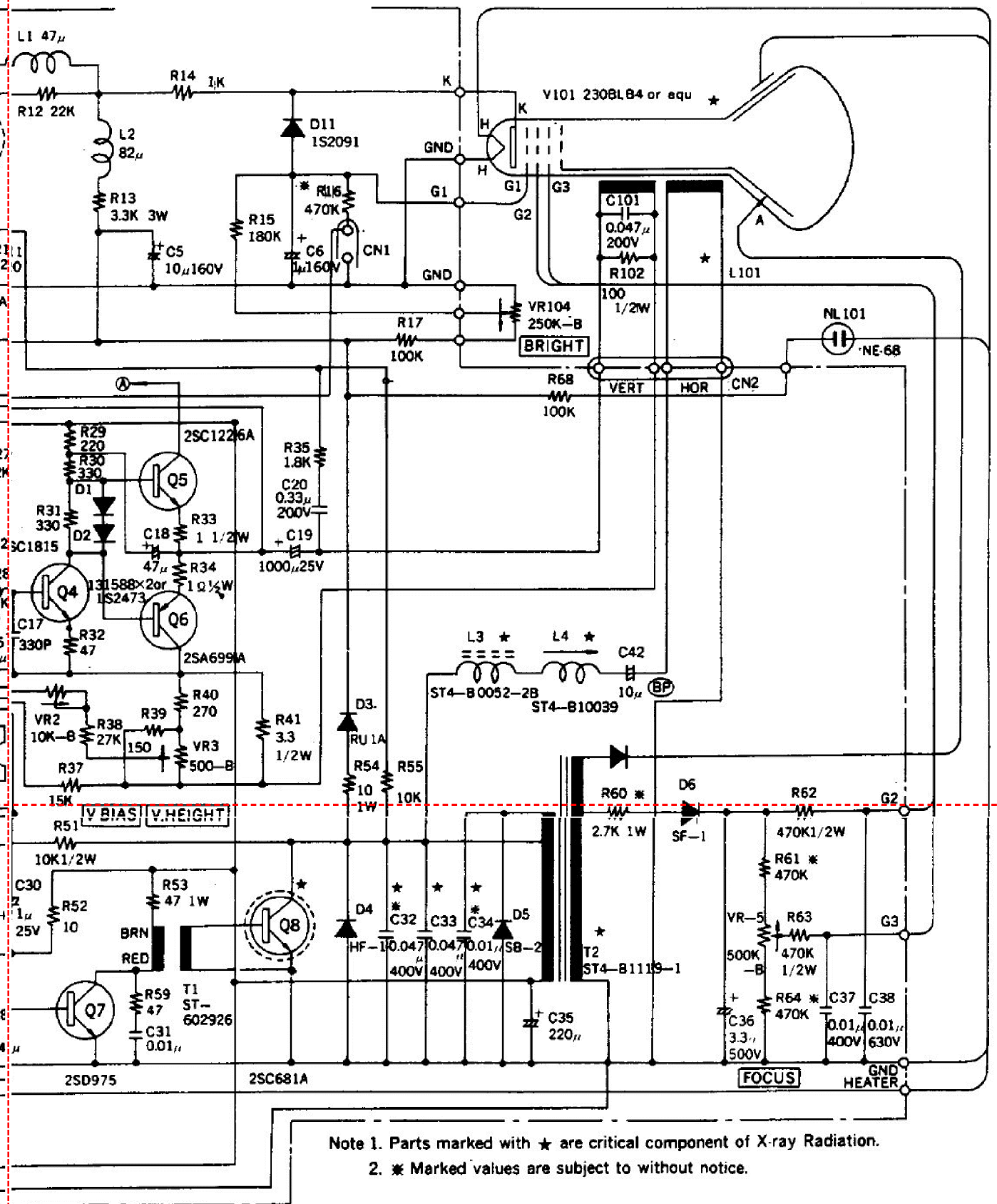
CVAC VP	
.8 1.2	
.19 30	
.2 0.7	

SECTIUNEA 1



SECTIUNEA 3

SECTIUNEA 2



Note 1. Parts marked with ★ are critical component of X-ray Radiation.
 2. ★ Marked values are subject to without notice.

SECTIUNEA 4

