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# 19" CDU 1964 COLOUR MONITOR UNIT

This monitor is manufactured by **NEC**. As this type of monitor only foresees external adjustments, the disassembly procedures are not included here.

## CHARACTERISTICS

- Screen dimensions: 20", 19" displayed  
Horizontal dimension: 360 mm  
Vertical dimension: 270 mm
- Input voltage: 220 V: 220 - 240 V a.c.  
110 V: 110 - 115 V a.c.
- Dissipated power: 150 W
- Monitor signal: 0.7 or 1.0 Vpp 75 Ohm  
Polarity: Positive
- Synchronism signal: Separated synchronism  
Horizontal synchronism: TTL level  
Vertical synchronism: Positive/Negative  
Composite synchronism: TTL level  
Positive/Negative
- Horizontal synchronizing: 30 KHz to 66 KHz (automatically)  
50 Hz to 90 Hz (automatically)  
Interlaced or not interlaced
- Resolutions: Horizontal: maximum 1280 dots  
Vertical: maximum 1024 columns

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## CONNECTION TO PERSONAL COMPUTER

1. Check that the switch (MODE) on the rear of the monitor is set to OFF.

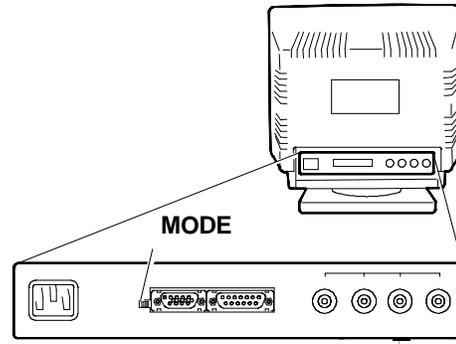


Fig. 8-1 MODE switch position

2. Connect the monitor to the Personal Computer

### Connecting the monitor to a VGA monitor controller

- Connect monitor signals cable (V) connector (D) to connector 15 pin D SUB (S) on the rear of the monitor.
- Connect adapter 15 - 9 pin (A) to the other monitor signals cable connector.
- Connect adapter (A) to the Personal Computer monitor controller connector.
- Connect power cable (P) connector (T) to power connector (Q) on the rear of the monitor.
- Connect power cable (P) to a network socket.

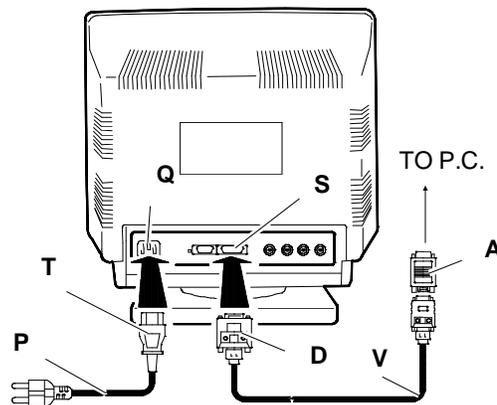


Fig. 8-2 Video-PC connection with VGA video interface

**NOTE:** Do not connect this cable to the Personal Computer power connector.

### Connecting the monitor to a high resolution video-graphic controller board

- Connect the monitor as previously illustrated.
  - In this case, however, the high resolution monitor cables signal (C) must be connected to connectors BNC (R, G, B) on the rear of the monitor.
3. Switch on the monitor and the Personal Computer.
  4. Press the pushbutton that calls up the manufacturer's initializing parameters.

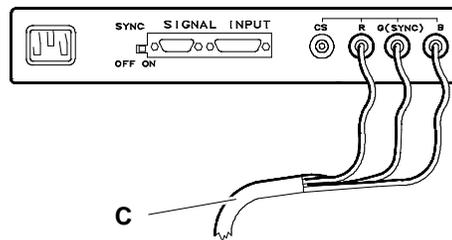


Fig. 8-3 Video-PC connection with high resolution graphic video controller

## ADJUSTING THE MONITOR

### BRIGHTNESS ADJUSTMENT

- Use this potentiometer to adjust the picture brightness on the screen.

### CONTRAST ADJUSTMENT

- Use this potentiometer to adjust the picture contrast on the screen.

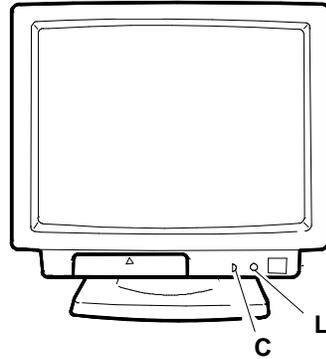


Fig. 8-4 - Brightness adjustment  
- Contrast adjustment

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### PUSHBUTTON TO CALL UP MANUFACTURER'S INITIALIZATION

- This pushbutton (I), **for standard signals**, resets the parameters set by the user in the memory area and calls up the parameter set entered before shipping.
- **For non standard signals**, only resets the parameters set by the user in memory.

**NOTE** Take care not to activate this pushbutton when the manual switch is set to "ON", this would delete the data set by the user.

### INPUT SWITCH

- Use this switch (W) either for signal input operations on connector D-sub or input signal on connector BNC.

### BNC INPUT VOLTAGE SWITCH

- Use this switch (T) to adapt the input voltage level BNC of a monitor graphic adapter, if any.
- For the voltage inputs to use, see the monitor adapter instructions.  
These voltages may be 1.0 V p-p or 0.7 V p-p.

### MODE SWITCH

- Switch (C) on "OFF": The monitor adapts to standard signals set before shipping.  
Switch (C) on "ON": Other 4 parameters are shown that can be set by the user.

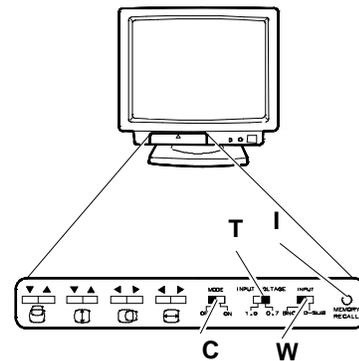


Fig. 8-5 - Push-button to call up manufacturing initializing (I)  
- Input switch (W)  
- Input voltage BNC switch (T)  
- MODE switch (C)

### HORIZONTAL WIDTH ADJUSTMENT

- With this adjustment (A) the horizontal dimension of the picture on the screen can be modified.

### HORIZONTAL CENTERING ADJUSTMENT

- With this adjustment (P) the horizontal centering of the picture on the screen can be modified.

### VERTICAL WIDTH ADJUSTMENT

- With this adjustment (V) the vertical dimension of the picture on the screen can be modified.

### VERTICAL CENTERING ADJUSTMENT

- With this adjustment (Q) the vertical centering of the picture on the screen can be modified.

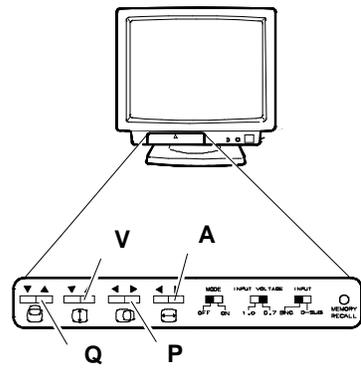


Fig. 8-6 - Horizontal width adjustment (A)  
- Horizontal centering adjustment (P)  
- Vertical width adjustment (V)  
- Vertical centering

### CLEARING PUSHBUTTON

- This pushbutton (U) is used when the screen colours need clearing from impurities.
- Keep the pushbutton pressed for several seconds.

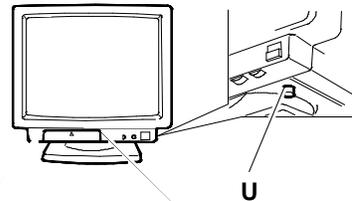


Fig. 8-7 Video cleaning push-button position

### SYNCHRONIZING SWITCH

- Synchronizing switch (S), must be ON when the **15 pin mini D-sub** connector (T) is used.
- It must be OFF for the other connector **D-SUB 15 pin** (W) or connector **BNC** (B).

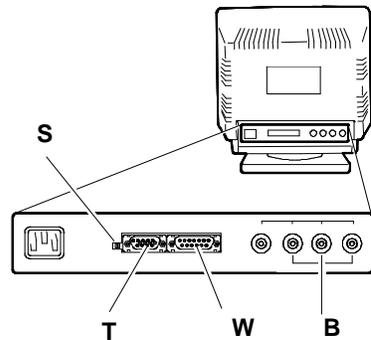


Fig. 8-8 Synchronizing switch position