



Solutions for Demanding Applications

VarTech Systems Inc.

Industrial CRT and Flat Panel Displays



VT15B and VT17B Series 15" & 17" Auto Sync Color Monitor

Models Supported:

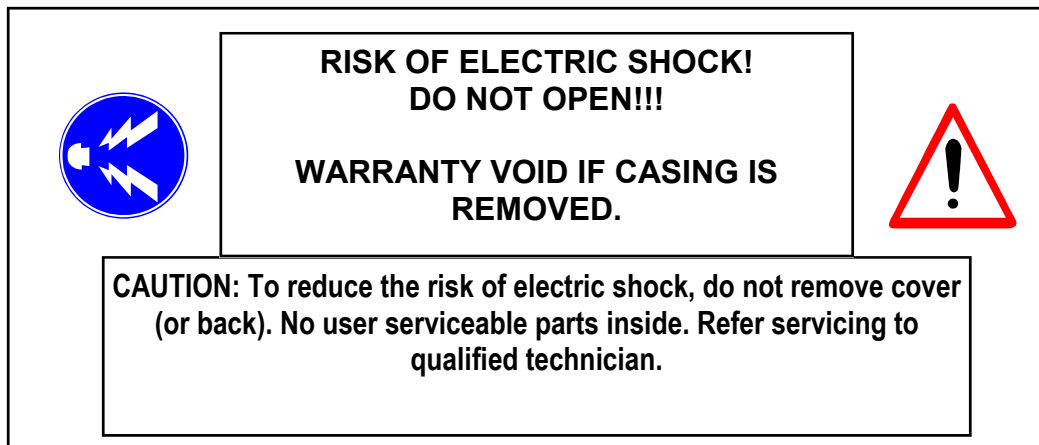
VT15B-C · VT15B-P · VT15B-R · VT15B-M
VT17B-C · VT17B-P · VT17B-R · VT17B-M

User's Guide

Read these instructions completely before attempting to operate your new Color Display.

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**WARNING**

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS MONITOR TO RAIN OR MOISTURE.

“HIGH VOLTAGE EXISTS ON THE CATHODE-RAY TUBE ANODE LEAD OF THIS MONITOR. BEFORE SERVICING, DETERMINE THE PRESENCE OF HIGH VOLTAGE BY CONNECTING THE H.V. METER BETWEEN THE ANODE OF CRT CAP AND CHASSIS ONLY.”

CAUTION

1. Keep monitor away from excessive dust, high temperature, moisture or direct sunlight.
2. Use in well ventilated area and do not cover ventilation openings.
3. Unauthorized modifications of this equipment or substitution or attachment of not shielded connecting cable may cause excessive interference.
4. When the monitor is not in use for a long time, turn off power switch.

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IMPORTANT SAFETY INSTRUCTIONS

Prior to using this product, please ensure that you have carefully followed all the procedures outlined in the user's manual for this product.

1. Read all of these instructions.
2. Save these instructions for later use.
3. Follow all warnings and instructions marked on the product.
4. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use this product near water.
6. Do not place this product on an unstable cart, stand or table. The product may fall causing serious damage to the product.
7. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, those openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should be operated from the type of power source indicated on the marketing label. If you are not sure of the type of power available, consult your dealer or local power company.
9. This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of grounding type plug.
10. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
11. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
12. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
13. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
14. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power cord or plug is damaged or frayed.
 - B. If liquid has been spilled into the product.
 - C. If the product has been exposed to rain or water.
 - D. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - E. If the product has been dropped or the cabinet has been damaged.
 - F. If the product exhibits a distinct change in performance, indicating a need for service.

The equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a business installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in strict accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnected cables and shield power cords must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

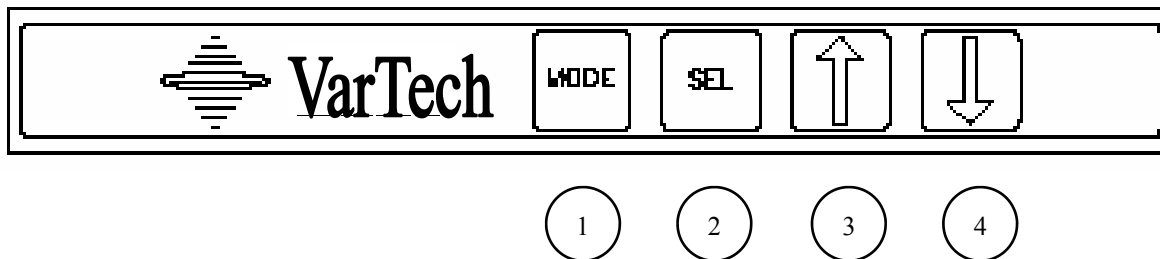
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INSTALLATION

1. Be sure your cable is attached to the respective video source.
2. Connect the AC power cable to a properly grounded outlet.
3. Boot your computer. Turn on the monitor power. The power LED indicator should be illuminated. If your monitor screen remains blank, check your video controller and computer system.

CONTROL LOCATION

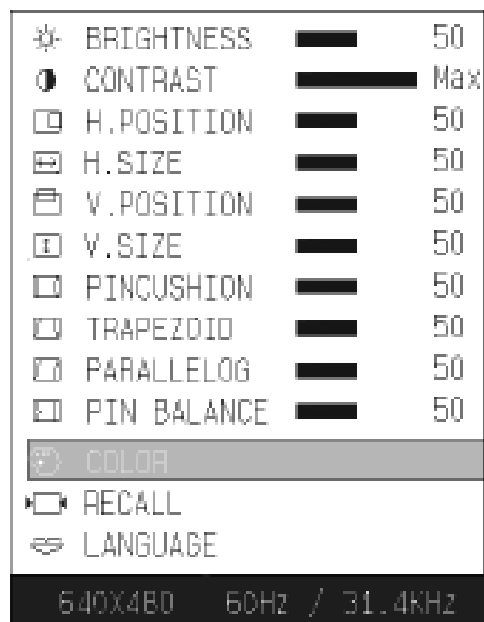
All controls are located on the front of the monitor for the rack, panel and cabinet models. The controls are located on the rear of the console model.



OSD (On Screen Display menu) CONTROLS AND ADJUSTMENTS:

There are four switches on the control panel with Key Function:

1. MODE: Call the Main-Menu OSD or to exit the OSD
2. SEL: Call the Sub-Menu OSD
3. & 4. UP/DOWN: When the Main-Menu is displayed you can select each function using these keys. When the Sub-Menu is displayed, you can change the value of the selected function of the screen using these keys.



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CONTROLS AND ADJUSTMENTS

If you require different display characteristics other than the factory mode presets of size, position, color settings, use the control panel to program it to your requirements in each resolution mode. These factory adjusted settings are kept in memory even if you change resolution mode or turn off the monitor. If you change display settings in the USER MODE, they will be automatically stored when your specific FORMAT is automatically detected by the monitor via sync frequencies and polarity characteristics. A (NO SIGNAL MESSAGE) is displayed on the screen if no signal is present at the signal input cable while the monitor is powered on.

ADJUSTMENT PROCEDURE

1. Press the "MODE" key—the Main-Menu OSD is displayed.
2. Search "BRIGHTNESS" using "UP" and "DOWN" keys on the Main-Menu OSD.
3. Search the "BRIGHTNESS" by pressing "SEL" key. The "BRIGHTNESS" OSD color changes from yellow to red.
4. Adjust Brightness to desired level using "UP" and "DOWN" keys.
5. After finishing the "BRIGHTNESS", press the "MODE" key. The "BRIGHTNESS" OSD color changes from red to yellow and the changed Brightness value saves automatically.
6. If you want to adjust other functions (sub-menu), search the function using "UP/DOWN" keys, and then repeat the same procedures to steps 3-5.
7. Press the "MODE" key again to finish adjustments and the OSD will disappear.
8. If no action is taken in the OSD, the menu will disappear by itself in a few seconds.
9. When the "RECALL" key is pressed, all user's adjustment values are changed back to the factory values.
10. "LANGUAGE" can be selected and changes.
11. "COLOR" can be selected and changed to the 2 factory presets or USER temperature can be adjusted by the customer.

AUTOMATIC SAVE

Whenever you open the OSD menu and allow an adjustment window to remain active for about 3 seconds without pressing another button, the monitor automatically saves any adjustments you have made. These changes are saved into a user area in the monitor. User areas are reserved according to the signal frequency from your computer. The monitor can save adjustments for up to 10 user modes.

If you have made no adjustments, the on-screen menu disappears and the monitor does not save anything. To exit without saving the changes you have made, press the MODE button before the 3 seconds elapse.

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PIN ASSIGNMENTS

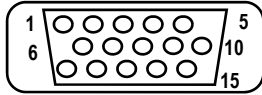


Figure 1: Male Type

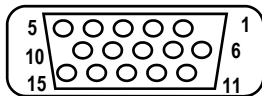
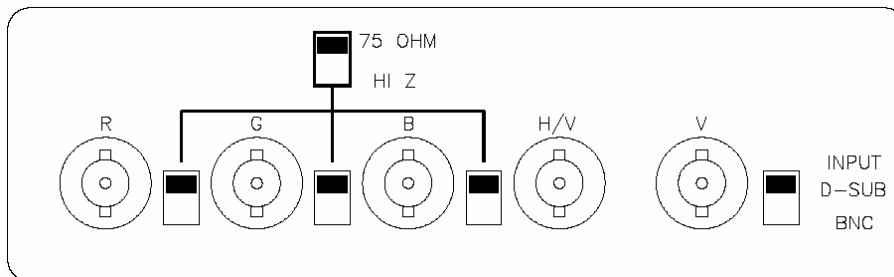


Figure 2: Female Type

15-Pin Connector (Figure 1 and 2)	
Pin No.	Separate
1	Red
2	Green
3	Blue
4	
5	
6	GND-R
7	GND-G
8	GND-B
9	
10	GND
11	GND
12	DDC Data
13	H-Sync.
14	V-Sync.
15	DDC Clock

BNC Option



TROUBLE SHOOTING

The following list represents possible anomalies you may encounter with subsequent troubleshooting procedures. Please refer to this checklist prior to contacting a service representative.

SYMPTOM	WHAT TO CHECK
There is no screen image	1. Power cord disconnected? 2. Power switch on? 3. Signal cable properly connected?
“No Signal, Check Signal Cable” appears	Check the signal cable connections between the computer and the monitor.
“Out of Range” appears	1. Check the maximum resolution and the frequency on the video port of your computer. 2. Compare these values with the data in the Display
Display image is too light or dark	Brightness and contrast at minimum or maximum?
Display image is	Adjust the Size settings.
The colors are distorted with dark or shadowed areas	Disconnect the monitor for 2-3 minutes. Restart monitor to start auto degauss

ENGINEERING SPECIFICATIONS	
Picture Tube	15" (14" Viewable), 17" (16" Viewable) Dot Pitch: 0.28mm Anti-reflective coating Medium-short persistence phosphor
Synchronization	Horizontal: 30 kHz to 48kHz (15") 30 kHz to 68kHz (17") Vertical: 40 Hz to 160Hz
Display Colors	Unlimited Colors
Resolution Capabilities	VGA to XGA (15") VGA to SXGA (17")
Input Signal, Terminated	Video Signal: Analog video 0.7V p-p positive at 75Ω Sync Input: Separate Sync, TTL Level, positive or negative BNC option: Separate Sync, TTL Level, positive or negative Composite Sync, TTL Level, positive or negative Sync-on-Green(SOG), Composite Sync, 0.3V p-p negative
Input Connectors	Standard: HD15(F) (VGA) BNC option: HD15(F) (VGA) 5BNC
Video Bandwidth (-3bd)	60 MHz (15") 75 MHz (17")
Power Supply	90-264 VAC 50-60Hz
Power Consumption	80 Watts Maximum (15") 95 Watts Maximum (17")
Temperature	Operating: 0°C to 55°C (32°F to 134°F) Storage: -20°C to 60°C (-4°F to 140°F)
Humidity	Operating: 10% to 80%, non-condensing Storage: 0% to 90%, non-condensing

NOTE

This monitor automatically returns to normal operation when horizontal and vertical sync return. This occurs when you move the computer's mouse or press a key on the keyboard.

This monitor is EPA ENERGY STAR® compliant and NUTEK compliant when used with a computer equipped with VESA DPMS functionality. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods.

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15" and 17" Fast Scan User Guide

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