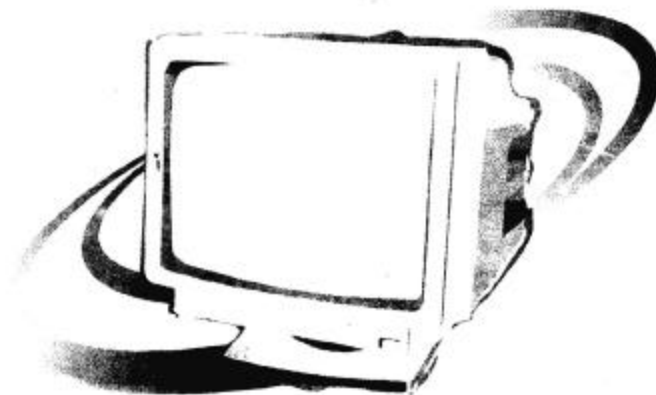


COLOR

Monitor

DIGITAL



OPERATION MANUAL

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Introduction

Congratulations! You are now the owner of our Color Monitor.

To ensure proper operation, please carefully read this manual. After you've read this manual, keep it in a safety place for future reference. The C156 D is a 10-inch(9 inches viewable) intelligent, microprocessor based monitor compatible with most analog RGB (Red, Green, Blue) display standards. The monitor provides crisp text and vivid color graphics with VGA, SVGA, XGA, VESA Ergo modes (non-interlaced) when used with the appropriate adapter.

The monitor's wide compatibility makes it possible to upgrade video cards or software without purchasing a new monitor.

Digitally controlled auto-scanning is done with the microprocessor, for horizontal scan frequencies between 30 and 38 or 50KHz, and vertical scan frequencies between 50 and 90Hz.

This model also has a built-in power management system that allow the monitor to reduce its power consumption automatically when not in use. This unique ability can reduce power consumption functions **ONLY** when if used with VESA DPMS (Display Power Management Signaling) compatible PC's or video controllers. This model complies with the new Energy Star Computers Program initiated by the EPA.

In the display card setting, please set the vertical frequency $\geq 70\text{Hz}$ to protect your eyes and decrease the strength of glaring.

Safety Precautions

- * Disconnect the monitor from the main supply if the monitor is not to be used for an extended period of time.
- * Do not attempt to remove the back cover, as you will be exposed to a shock hazard. The back cover should only be removed by qualified service personnel.
- * Do not place objects on top of the monitor cabinet, which could fall into vents or which could cover them and prevent proper cooling of the monitor's electronics.
- * Do not expose the monitor to rain or excessive moisture to avoid the risk of shock or permanent damage to the set.
- * This product can be damaged by detergents, thinners, etc. If necessary, clean with a slightly damp cloth. Disconnect the monitor from the main supply before cleaning.
- * Consult a service technician if the monitor does not operate normally when the operating instructions are followed.

Package

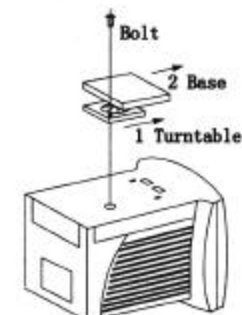
After unpacking, check to make sure the following items are included:

1. The monitor : one
2. Tilt / Swivel base : one
3. Operation Manual : one
4. Power cord : one
5. Signal cable : one

Before Use

Install the tilt / swivel base

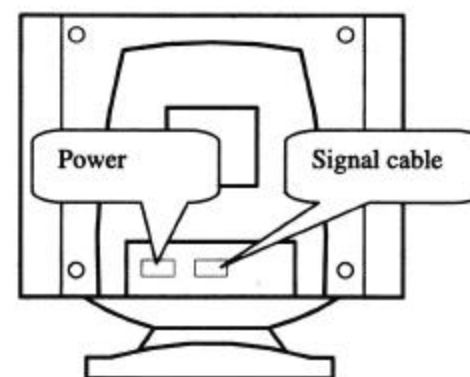
- * Place the monitor upside-down with the screen facing you.
- * Hold the base upside-down.
- * Insert the hooks of the turntable into the slots of monitor, Slide the turntable toward the front of the monitor(direction 1), until the hooks clicks into the locked position.
- * Push base toward direction 2 entirely, moving base clockwise or anti-clockwise until aligning the holes of the turntable and monitor, screw down.



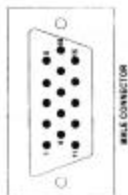
Computer connection

Notice: Shut down the power of the computer before connecting the monitor.

- Connect the monitor power.
- Connect the monitor signal cable.

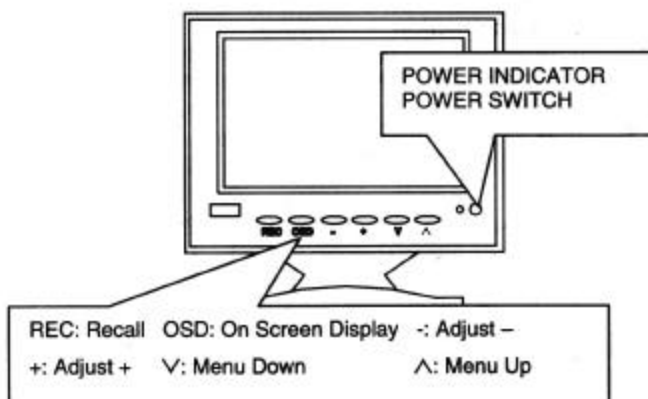


Signal Cable Description:



PIN NO.	DESCRIPTION
1	RED
2	GREEN
3	BLUE
4	GROUND
5	DDC RETURN
6	RED GROUND
7	GREEN GROUND
8	BLUE GROUND
9	NC
10	SELF RASTER
11	GROUND
12	DDC DATA
13	HOR-SYNC
14	VER-SYNC
15	DDC CLOCK

Front Panel Control Knob:

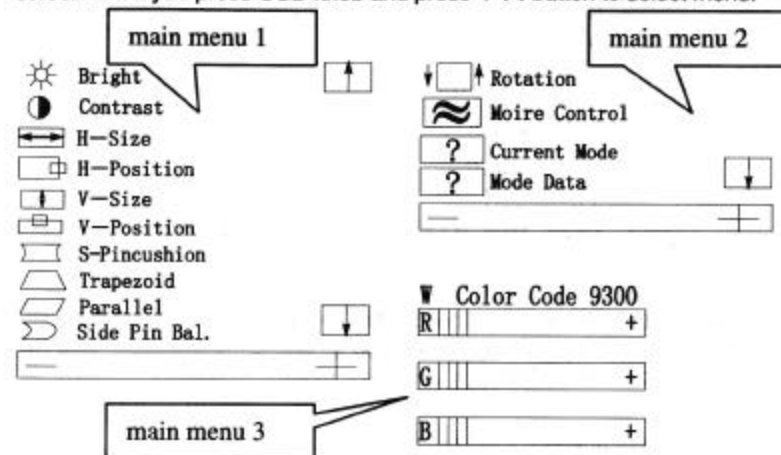


The OSD button (ON Screen Display) is located at the front of the monitor. User could make a good appearance of the monitor to suit personal preference by this knob.

User Control Adjustment

Select the OSD menu

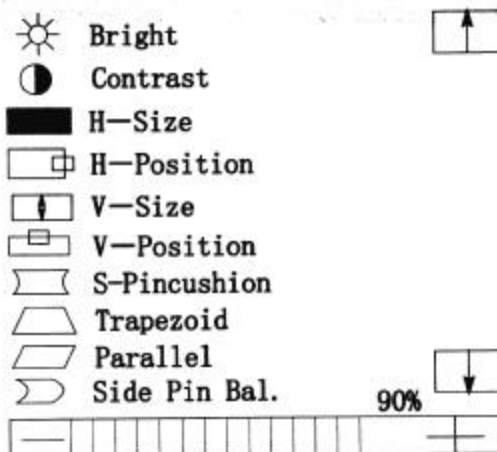
1. The OSD main menu (refer to the following figure) will display on the screen when you press OSD knob and press V ^ button to select menu.



2. Press V ^ knob until the icon you want is highlighted, then press the - + knob to make the desired adjustments. The following is an outline of the available adjustments and selections you can make us the OSD menu.

Example (assuming that you already select the icon of H-Size) :

Note: (Monitor and PC should be on, with an image or prompt on the screen) The main picture area will show the selected icon (highlighted) and a brief description (here **H-Size**). The display will look like:



The bar graph shows you the current level of the selected "H-Size" control. Use the - + button to increase or decrease the level to fit the screen or your desired size.

4.After finished the adjustments you can go back to OSD menu by pressing ∇ $\blacktriangle$ button .

5.The OSD window will automatically shut off after about 5 seconds.

Adjust The Picture

1.Brightness

Adjusts brightness.

2.Contrast

Adjusts contrast.

3..H-Size

To enlarge or reduce horizontal size.

4.H-Position

To reposition display to the right or left.

5.V-Size

To enlarge or reduce vertical size.

6.V-Position

To move the entire picture upward or downward.

7.S-Pincushion

For optimal pincushion or barrel picture.

8.Trapezoid

For optimal trapezoid picture.

9.Parallel.

For optimal parallelogram screen picture.

10.Side Pin Bal.

Side pincushion balance control.

11.Rotation

For optimal tilt screen picture.

12.Moire Control

Moire Control

13.Current Mode

It is used to display the horizontal/vertical frequency and their polarity of the input signal.

13.Mode Data

Video mode list of factory preset modes and user modes that are in use.

14.Color Code 9300 /7200

It presents color temperature 9300K or 7200K on the screen.

15.Color Code User

When select this icon, color temperature windows is displayed:

Use ∇ $\blacktriangle$ to select **R G B**, then use $\rightarrow$ to adjust red/blue/green for optimal color (suit personal preference).

16.REC button on the front panel

It is used to recall the factory preset value among the 8 preset timing modes. Except the 8 preset timing modes, it can't be recalled and it is defined as the user's modes.

RECALL OK only when the following display:

RECALL	
	YES
-	+

Power Management System

For the power saving feature to operate, the monitor must be used with either a PC having power saving circuitry or a PC running screen blanking software. The monitor has three power-saving states, and the power saving operation is indicated by the power indicator on the front panel.

When the power indicator is green, operation is normal. When the power indicator is orange (stand-by, suspend) or flash orange (off state), the monitor is in a power saving mode. If the power indicator is orange and you wish to use the PC again, move your mouse pointer or touch a keyboard button. When the monitor is not in use, save energy by turning it off.

Image Adjustment (Brief)

This monitor has a microprocessor-based control system for adjusting the following items: Contrast, Brightness, Horizontal width, Horizontal position, vertical height and position, Side pincushion and trapezoid, etc. When you make adjustments to any of the above items, the microprocessor will automatically memorize the adjustments you made. Your setting will be maintained even if you turn off the monitor and turn it on again.

Video Memory Modes

For convenience, the monitor has a 28 mode memory, of which 8 modes come from the factory preset to popular video modes as described below.

Model	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
1	31.5	70
2	31.5	70
3	31.5	60
4	38.0	73
5	37.9	61
6	46.9	75
7	35.5	87
8	48.3	60

Modes 8-28 are empty and can accept new video data.

If the monitor detects one of the above signals from your computer's video card, then it will recall that mode and any stored image adjustments you may have made before by searching through modes 1-25. If the monitor detects a new video mode that had not been present before or is not one of the above listed factory presets then it will display "NEW VIDEO MODE", its H-Frequency, V-Frequency, and store a new mode in one of the blank (empty) memory modes (in this example, mode 9) only after you adjust at least one of the **Menu 1** or **Moire Control** or **R/G/B** of **Color Code User**. When you now adjusted the controls to your preference, these image settings will also be stored in mode 9. Whenever your video card or PC switches to the mode that the monitor recognizes as mode 9, your personal image setting also be recalled.

A Note About The Video Memory Modes

There is a total of 28 video memory modes, generally more modes than your needs at any one time. Of these 28 modes, 8 are factory fixed modes that don't need to be changed. The remaining 20 modes are left blank (empty). If you use up the 20 blank modes and still have more new video modes, the monitor will delete the lowest memory mode and add the new mode.

If you use a video card that has a number of resolutions and frequencies that do not correspond to any of the monitor video modes set at the factory, here's what will happen:

1) As the monitor encounters new video data, if you adjust the image control, the monitor will save the new information in the next available empty mode (mode 9 if this is the first new data encountered).

2) If you have used modes 28 with 20 new video modes, and the monitor encounters another mode (29th mode), it will store the new data in mode 9 and the old data of mode 9 is deleted.

If you have used modes 28 with 20 new video modes, and the monitor encounters 30th data will replace the mode 10, with above method, when this monitor encounters new mode, it can update from mode 9 to mode 28 sequentially and continuously.

Example: All 28 modes are filled with following data

1 2 3 4 5 6 7 8 9 10 28

Factory fixed

User modes

When new data (the 29th mode) is encountered

1 2 3 4 5 6 7 8 9 10.....28

Factory fixed User modes (old mode 9 deleted)

Because the monitor is designed this way, you will have the most common 20 video modes generated by your graphics card available with your own image setting recalled automatically.

DDC (Display Data Channel)

DDC is a communication channel over which the monitor automatically informs the host system (PC) about its capabilities. This monitor has DDC functions:DDC1,DDC2B .

NOTE: The PC must support DDC functions to do this.

Specifications

1. General Information

Model		C156D
CRT	SIZE (VIEWABLE)	10"(9")
	TYPE	10" CONVENTIONAL
	DOT PITCH	0.26mm
	FACE PLACE	NON-GLARE
VIDEO	INPUT SIGNAL	ANALOGUE
	AMP BANDWIDTH	65MHz
HORIZONTAL	FREQUENCY	30-38/48 KHz
	RESOLUTION(MAX)	1024DOTS
VERTICAL	FREQUENCY	50-90Hz
	RESOLUTION(MAX)	768DOTS
DISPLAY	AREA(mm)	192X142
CONTROL	DIGITAL	OSD
POWER	INPUT VOLTAGE	100-240V AC (AUTO VOLTAGE) 60 / 50Hz
	CONSUMPTION	MAX 70 WATTS
	EPA(OPTION) (POWER MANAGEMENT)	ON,OFF,SUSPEND, STAND BY
	VIDEO CONNECTOR	15PIN D-SUB
ACCESSORY	POWER CORD	6 FEET AC POWER CORD
OPERATING TEMPERATURE		0°C to 40°C
OPERATING HUMIDITY		20% to 90%
REGULATIONS SAFETY		UL, CUL, TUV/GS, CE, DHHS, FCC, ISO9241-3(8), TCO-95

Notice: Design and specifications are subject to change without notice, and don't represent a commitment on the part of our company.

Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in 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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and 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.

FCC Caution: To assure continued compliance, use only the provided shielded signal cable when connecting to computer. Also, any changes or modifications which have not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Use only RF shielded cable that was supplied with the monitor when connecting this monitor to a computer device.

THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

Commission Federale de la Communication (FCC)

Cet équipement a été testé et déclaré conforme aux limites des appareils numériques de class B, aux termes de l'article 15 des règles de la FCC. Ces limites sont conçues de façon à fournir une protection raisonnable contre les interférences nuisibles dans le cadre d'une installation résidentielle. Cet appareil produit, utilise et peut émettre des hyperfréquences qui, si l'appareil n'est pas installé et utilisé selon les consignes données, peuvent causer des interférences nuisibles aux communications radio. Cependant, rien ne peut garantir l'absence d'interférences dans le cadre d'une installation particulière. Si cet appareil est la cause d'interférences nuisibles pour la réception des signaux de radio ou de télévision, ce qui peut être décelé en fermant l'équipement, puis en le remettant en fonction, l'utilisateur pourrait essayer de corriger la situation en prenant les mesures suivantes:

- Ré orienter ou dé placer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'équipement sur un autre circuit que celui utilisé par le récepteur.
- Demander l'aide du marchand ou d'un technicien chevronné en radio/ télévision.

ATTENTION: Toutes modifications n'ayant pas reçu l'approbation des services compétents en matière de conformité est susceptible d'interdire à l'utilisateur l'usage du présent équipement.

N'utiliser que des câbles RF armés pour les connexions avec des ordinateurs ou périphériques.

CET APPAREIL NUMERIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU REGLEMENT SUR LE MATERIEL BROUILLEUR DU CANADA.

Sicherheitshinweise

1. Die Stechdose muß sich in der Nähe des Gerätes befinden und leicht zugänglich sein.
2. Zum Reinigen den Stecker aus der Steckdose ziehen. Beim Reinigen keine Flüssigreiniger oder sprays verwenden, sondern ein angefeuchtetes Tuch.
3. Das gerät nicht in Naßräume oder in der Nähe von Wasser benutzen, wie z.B. Badezimmer, Schwimmbad, Spülbecken usw.. Das Eindringen von Wasser kann zur Zerstörung des Gerätes führen.
4. Das gerät nicht auf einer instabilen Unterlage, wie z.B. Rollwagen, Gestell usw., aufstellen. Es Könnte herunterfallen und Verletzungen oder Beschädigungen von Mensch und Gerät verursachen.
5. Die Belüftungsöffnungen nicht blockieren oder auf falscher Oberfläche, wie Bett, Sofa usw., stellen. Durch die Blockierung kann es zur Zerstörung des Gerätes durch Überhitzung kommen.
6. Versuchen Sie niemals dieses Gerät selbst zu warten, da beim Öffnen oder Abnehmen des Gehäuses die Gefahr eines elektrischen Schlages besteht.

7. Keine Gegenstände auf das Anschlußkabel stellen, damit es nicht durch scharfe Kanten zerstört werden kann.
8. Keinerlei Gegenstände durch die Öffnungen in das Gerät stecken, da es dadurch sonst zu Kurzschlüssen kommen kann.
9. Bei Störungen des Gerätes den Wartungsdienst verständigen.
10. Bei Reparaturen dürfen nur Originalersatzteile oder Bauteile mit gleichen Eigenschaften verwendet werden. Andere Bauteile können Feuer, elektrischen Schlag oder andere Gefahren verursachen.
11. Nach Beendigung von Wartungsarbeiten oder Reparaturen durch den Kundendienst sollte die Sicherheitsprüfung durchgeführt werden.
12. Bei längerem Stillstand des Gerätes, ist diese von der Versorgungsspannung zu trennen. Dies verhindert eine Beschädigung des Gerätes durch eine Überspannung in der Zuleitung.
13. Der arbeitsplatzbezogene Lärmschutzpegel nach DIN 45 635

Power Management

Mode	Power Indicator	Power Used
On	Green	< 70 Watts
Stand-by	RED	< 30 Watts
Suspend	RED	< 30 Watts
Off	FLASH RED	< 5 Watts



10"彩色高分辨率显示器



360-815156-00