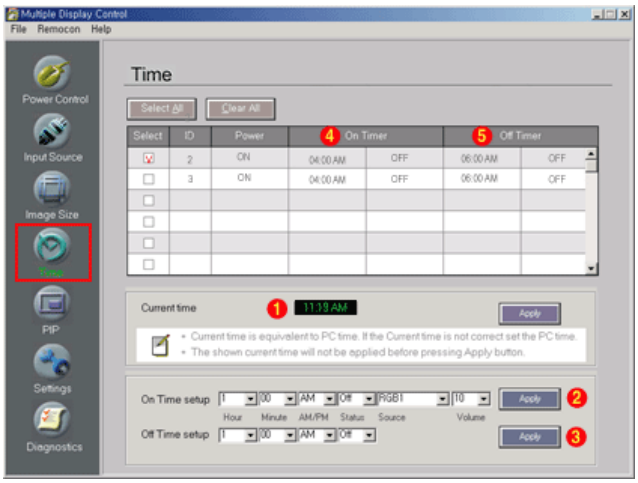
## 7. Time Control

1. Click Time of the main icons and the Time Control screen appears.




- Info Grid shows some basic information necessary to Time Control.

1) Current Time
   - Set the current time for the selected display (PC Time)
   - To change the current time, first change the PC Time.

   Current time is equivalent to PC time, If the Current time is not correct set the PC time
   The shown current time will not be applien before pressing Apply button.

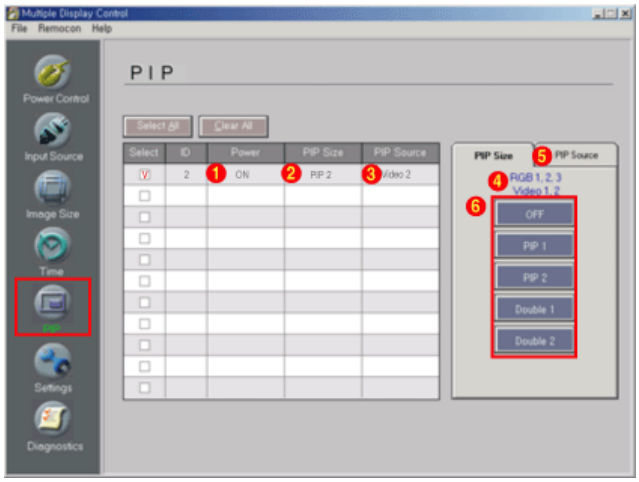
2) On Time Setup
   - Set the hour, minute, AM/PM of On Time, Status, Source, volume of the selected display.
3) Off Time Setup
   - Set the hour, minute, and AM/PM, Status for Off Timer of the selected display.
4) Shows the On Timer settings.
5) Shows the Off Timer settings.

- **Time Control is available only for the displays for which the power status is ON.**

---

## 8. PIP Control - PIP Size

1. Click PIP of the main icons and the PIP control screen appears.
   Click Select All or use Check Box to select a display to control.



▸ Info Grid shows some basic information necessary to PIP Size Control.

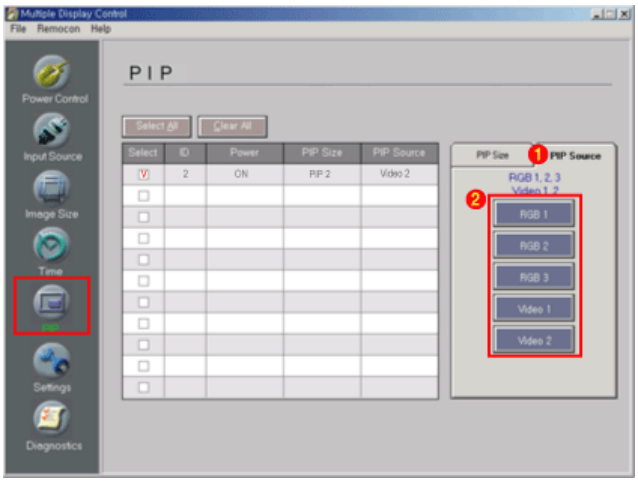
1) Power
   - Shows the power status of the current display.
2) PIP Size
   - Shows the current PIP Size of the display in use.
3) PIP Source
   - Shows the current PIP Source of the display in use.
4) When you click PIP, the PIP Size tabs first appear.
   - The PIP Control button controls PIP Size available for RGB 1, 2, 3, Video 1, 2
5) Click the PIP Source tab to control PIP Source for respective Input source.
6) Click to change PIP Size of the selected display.
   - OFF : Turns off the PIP of the selected display.
   - PIP 1 : Turns on the PIP of the selected display and changes the size to PIP 1.
   - PIP 2 : Turns on the PIP of the selected display and changes the size to PIP 2.
   - Double 1 : Turns on the PIP of the selected display and changes the size to Double 1.
   - Double 2 : Turns on the PIP of the selected display and changes the size to Double 2.

- **PIP Size Control is available only for the displays for which power status is ON.**

---

## 8. PIP Control - PIP Source

1. Click PIP of the main icons and the PIP control screen appears.




▸ Info Grid shows some basic information necessary to PIP Source Control.

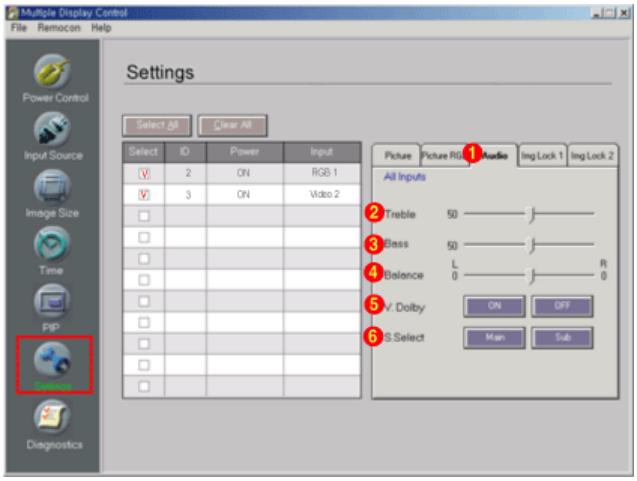
1) Click the PIP Source tab to adjust PIP Source.
   Click Select All or use Check Box to select a display to control.

   - RGB 1 : Changes the source of the PIP of the selected display to RGB 1.
   - RGB 2 : Changes the source of the PIP of the selected display to RGB 2.
   - RGB 3 : Changes the source of the PIP of the selected display to RGB 3.
   - Video 1 : Changes the source of the PIP of the selected display to Video 1.
   - Video 2 : Changes the source of the PIP of the selected display to Video 2.

- **PIP Source Control is available only for the displays for which power status is ON.**

## 9. Settings Control - Picture

1. Click Settings of the main icons and the Settings Control screen appears.




- Info Grid shows some basic information necessary to Settings Control. When each function is selected, the set value of the selected function is displayed in the slide.
  When Select All is selected, the default value (50) returns. If you change the value in the Settings Control screen, it switches to CUSTOM mode automatically.

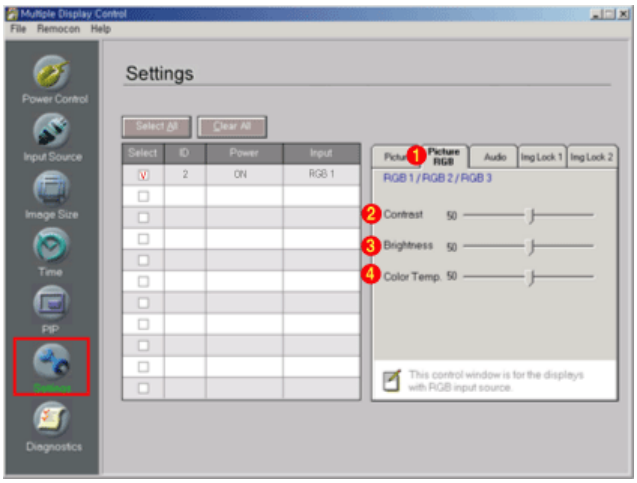
1) Picture
   - Available only for VIDEO 1, VIDEO 2, COMPONENT.
2) Contrast
   - Adjusts Contrast of the selected display.
3) Brightness
   - Adjusts Brightness of the selected display.
4) Sharpness
   - Adjusts Sharpness of the selected display.
5) Color
   - Adjusts Color of the selected display.
6) Tint
   - Adjusts Tint of the selected display.

- **Settings Control is available only for the displays for which the power status is ON and the default value is 50 when no adjustments are made.**

---

## 9. Settings Control - Picture RGB

1. Click Settings of the main icons and the Settings Control screen appears.



- Info Grid shows some basic information necessary to Settings Control. When each function is selected, the set value of the selected function is displayed in the slide.
  When Select All is selected, the default value (50) returns. If you change the value in the Settings Control screen, it switches to CUSTOM mode automatically.

1) Picture RGB
   - Available only for RGB 1, RGB 2, RGB 3.
2) Contrast
   - Adjusts Contrast of the selected display.
3) Brightness
   - Adjusts Brightness for the selected display.
4) Color Temp.
   - Adjusts Color Temperature of the selected display.

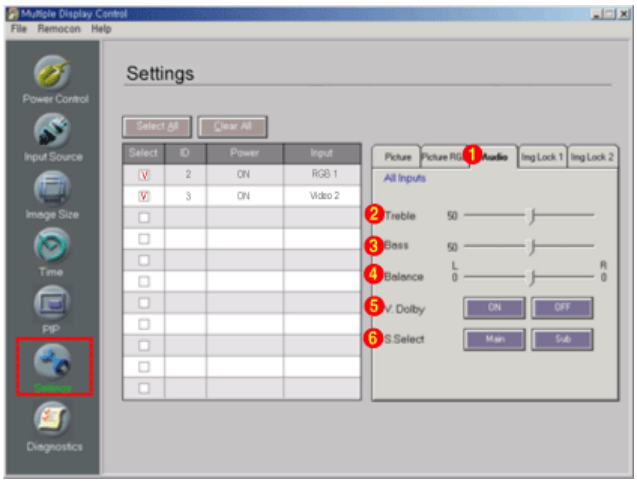
- **Settings Control is available only for the displays for which the power status is ON and the default value is 50 when no adjustments are made.**

**This Control window is for the displays with RGB input source.**

---

## 9. Settings Control - Audio

1. Click Settings of the main icons and the Settings Control screen appears.



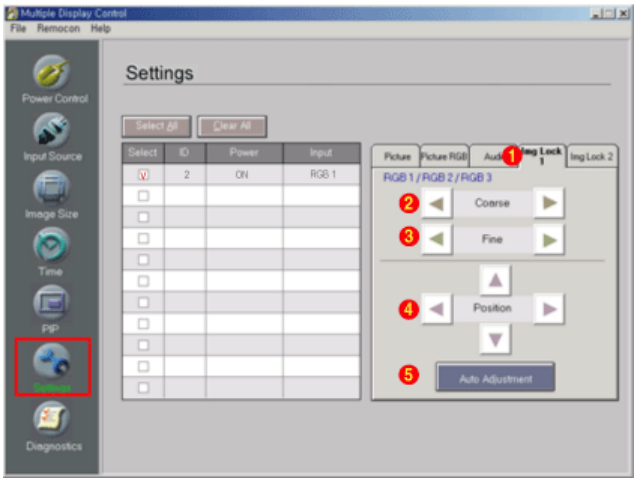

- Info Grid shows some basic information necessary to Settings Control. When each function is selected, the set value of the selected function is displayed in the slide.
  When Select All is selected, the default value (50) returns. If you change the value in the Settings Control screen, it switches to CUSTOM mode automatically.

1) Audio
   - Controls audio settings for all input sources.
2) Treble
   - Adjusts Treble of the selected display.
3) Bass
   - Adjusts Bass of the selected display.
4) Balance
   - Adjusts Balance of the selected display.
5) Virtual Dolby
   - Virtual Dolby Sound On/Off of the selected display.
6) Sound Select
   - Select either Main or Sub when PIP is On.

- **Settings Control is available only for the displays for which the power status is ON and the default value is 50 when no adjustments are made.**

## 9. Settings Control – Image Lock 1

1. Click Settings of the main icons and the Settings Control screen appears.




- Info Grid shows some basic information necessary to Settings Control.

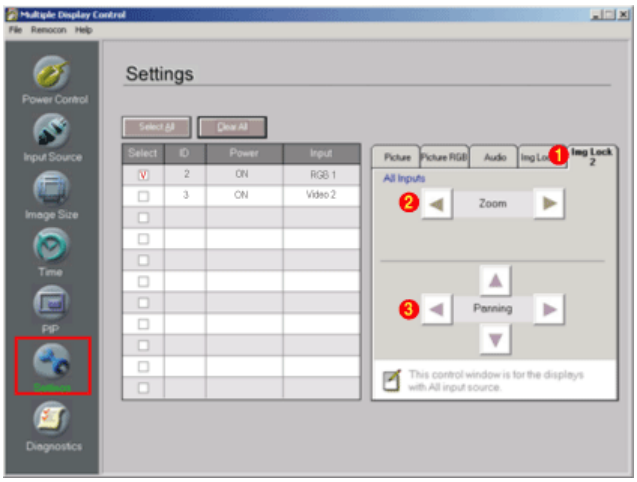
1) Image Lock 1
   - Available only for RGB 1, RGB 2, RGB 3.
2) Coarse
   - Adjusts Coarse of the selected display.
3) Fine
   - Adjusts Fine of the selected display.
4) Position
   - Adjusts Position of the selected display.
5) Auto Adjustment
   - Adjusts the Audio settings of the selected display.

- **Settings Control is available only for the displays for which the power status is ON.**

---

## 9. Settings Control – Image Lock 2

1. Click Settings of the main icons and the Settings Control screen appears.



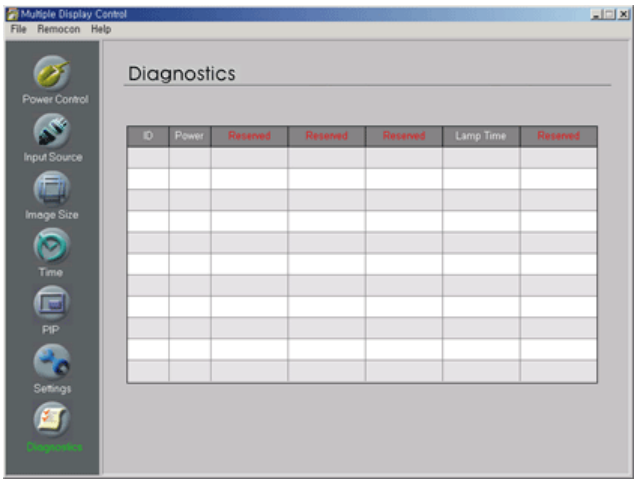

- Info Grid shows some basic information necessary to Settings Control.

1) Image Lock 2
   - Available for all Inputs.
2) Zoom
   - Magnifies the size of the picture on screen.
3) Panning
   - Moves the position of the magnified image on the screen either vertically or horizontally.

- **Settings Control is available only for the displays for which the power status is ON.**

## 10. Diagnostics

1. Click Diagnostics of the main icons and the Settings Control screen appears.




1) SET ID

- Shows the ID of the currently connected display.

2) Power Status

- Shows the power status of the current display.

3) Lamp Time

- Shows the LCD Lamp On time of the currently connected display.

## 11. Troubleshooting

1. The display you wish to control does not appear on the Power Control Info Grid
   - Check the connection of RS232C. (Check if it is properly connected to the Com1 port)
   - Check the displays to see if any of the other displays connected have the same ID. If more than one displays have the same ID, those displays are not properly detected by the program due to data conflict.
   - Check if the Display Set ID is a number between 0 and 10. (Adjust using the Display menu)

   **Note :** A Display Set ID must be a value between 0 and 10. If the value is out of the range, the MDC system cannot control the display. Samsung Electronics guarantees that this program operates up to four displays at a time. Although it may operate between 0 to 10 displays simultaneously, but Samsung Electronics cannot guarantee normal operation in that case.

2. The display you wish to control does not appear on the other Control Info Grids
   - Check to see if the display power is ON. (You can check this in Power Control Info Grid)
   - Check if you can change the input source of the display.

3. The dialogue box appears repeatedly.
   - Check to see if the display you wish to control is selected.

4. Both On Timer and Off Timer have been set but different time is showing.
   - Apply current time to synchronize the display clocks.

5. The remote may not function properly when you turn off the remote Function, disconnect the RS-232C cable, or exit the program in an Irregular manner. Rerun the program and turn the remote function again to Restore normal functions.

6. **<Note>** This program may malfunction due to problems in communication circuits or interference from electronic appliances nearby.

7. If you do need assistance, please call the phone number on the warranty card, the phone number on the Information section or contact your dealer.

## 12. Settings Value Display In Multiple Display Mode

- When there are more than one displays connected, the settings values are displayed as follows.

1. No selection: Displays the Factory Default Value.
2. Selected one display: Fetches and displays the settings value for the selected display.
3. Selected one display (ID1) and add another display (ID3): The program, which was displaying the settings value of ID 1, fetches and displays the value of ID3.
4. Selected all sets using Select All: Returns to the Factory Default Value.

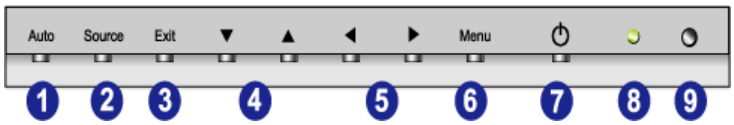
Introduction remote control buttons

The control button configuration may vary slightly depending on the monitor model.

Monitor Buttons | Remote Control Buttons

## | Monitor Buttons |

For more information about screen adjustment, refer to On-Screen Display.




1. **Auto button**

   Press to self-adjust to the incoming PC signal. The values of fine,coarse and position are adjusted automatically.
   To make the automatic adjustment function sharper, execute the 'AUTO' function while the AUTO PATTERN is on. (Press here to view an animation about Auto Adjustment.)

2. **Source button**

   Turns on the indicator to indicate the currently displayed input signal.
   (Press here to view Screen Mode Switching Animation Clips.)

3. **Exit button**

   When screen adjustment menu is on : Exit button exits from the menu screen or closes screen adjustment menu.

4. **Navigate button (Control OSD)**
5. **Adjust button (Control OSD)**

   Moves from one menu item to another horizontally or adjusts selected menu values.

6. **Menu button**

   When screen adjustment menu is off: Use this button to open the OSD and activate a highlighted menu item.

7. **Power button**

   Use this button to turn the monitor on and off.

8. **Power indicator**

   Lights up when you turn the power off. Refer to Specifications > PowerSaver.

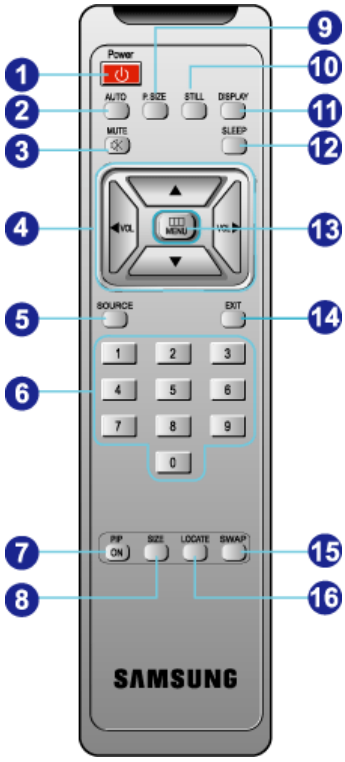
9. **Remote control sensor**

   Aim the remote control towards this spot on the Monitor.

## | Remote Control Buttons |

For more information on the screen adjustment functions, refer to On-Screen Display.

1. **Power button**
2. **Auto button**
3. **Mute button**
4. **VOL(Volume)and Up/Down buttons**
5. **Source button**




6. Number buttons
7. PIP button
8. PIP Size button
9. P.Size button
10. Still button
11. Display button
12. Sleep button
13. Menu button
14. Exit button
15. Swap button
16. Location button

1. **Power button** Up

   Use this button to turn the monitor on and off.

2. **Auto button** Up

   Press to self-adjust to the incoming PC signal. The values of fine,coarse and position are adjusted automatically.
   To make the automatic adjustment function sharper, execute the 'AUTO' function while the AUTO PATTERN is on. (Press here to view an animation about Auto Adjustment.)

3. **Mute button** Up

   Pauses (mutes) the audio output temporarily. The audio resumes if Mute or ◀ VOL ▶ button is pressed in the Mute mode.

4. **VOL(Volume)and Up/Down buttons** Up

   Press to increase or decrease the volume. (Also used to make selections on the on-screen menus.)

5. **Source button** Up

   Press to display all of the available video sources.

6. **Number buttons** Up

   Press to select numbers when setting individual ID to the SET.

7. **PIP button** Up

   Press this button to control the PIP window.

8. **PIP Size button** Up

   Press to make the PIP window PIP 1, PIP 2, Double Screen 1, Double Screen 2.

9. **P.Size button** Up

   Press to change the Screen size.

10. **Still button** Up

Press to stop the action during a particular scene. Press again to resume normal video.

**11. Display button** Up

Shows a Resolution and Frequency on the upper center of the screen.

**12. Sleep button** Up

Press to select a preset time interval for automatic shutoff.

**13. Menu button** Up

When screen adjustment menu is off: Use this button to open the OSD and activate a highlighted menu item.

**14. Exit button** Up

Press to exit the menu.

**15. Swap button** Up

Exchanges the video signal that is currently displayed on the main screen with the signal in the PIP window.

**16. Location button** Up

Press to move the PIP window to any of the nine corners of the monitor screen.

OSD Functions
Screen Adjustment Animation Clips

Characters and icons become highlighted in blue during adjustment for each menu.

PC Control | Video Control | Audio Control | Function Control

## 1. PC Control

For detailed information on Screen Adjustment in the PC mode, refer to PC mode Screen Adjustment Animation Clips.

| | |
|---|---|
| | **Brightness**<br>Adjust Brightness. |
| | **Contrast**<br>Adjust Contrast. |
| | **Color Temperature**<br>The tone of color can be changed from redish white to bluish white. The individual color components are also user customizable.<br><br>**1) Mode 1 :** High Temperature.<br>**2) Mode 2 :** Middle Temperature.<br>**3) Mode 3 :** Low Temperature.<br>**4) User Mode :** User customizable. |
| | **Image**<br>PC Screen Settings.<br><br>**1) Image Lock**<br>Image Lock is used to fine tune and get the best image by removing noises that creates unstable images with jitters and shimmers. If satisfactory results are not obtained using the Fine adjustment, use the Coarse adjustment and then use Fine again.<br><br>• **Coarse** Removes noise such as vertical stripes. Coarse adjustment may move the screen image area. You may relocate it to the center using the Horizontal Control menu.<br>• **Fine** Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed).<br>• **Reset** Image lock and position parameters are replaced with the factory default values.<br><br>**2) Image Size**<br>Allows choosing from different image sizes.<br>(Varies depending on the resolution or signal ratio. The Expand 1, Expand 2 and 1:1 functions work only in PC RGB.)<br>• **Expand 1** Performs full screen image expansion. (No change if the resolution is set at maximum)<br>• **Expand 2** Performs image expansion while maintaining the vertical/horizontal aspect ratio of the original video resolution. (No change if the resolution is set at maximum)<br>• **1 : 1** Displays the image as created by the signal source. (No change if the resolution is set at maximum.) |
| | **Position**<br>This adjusts the screen location horizontally and vertically. |

## 2. Video Control

For detailed information on Screen Adjustment in the Video mode, refer to Video mode Screen Adjustment Animation Clips.
**You can use this function only if your screen mode is Video 1 or Video 2 or Component.**

| | |
|---|---|
| | **Brightness**<br>Adjust Brightness. |
| | **Contrast**<br>Adjusting Contrast. |
| | **Sharpness**<br>Use to adjust the difference between the lightest and darkest areas on the display. |
| | **Color**<br>• **Color :** Use to adjust the lightness/darkness on the display. |
| | **Tint**<br>• **Tint :** Use to add the natural tone to the display. |
| | **Reset**<br>Picture parameters are replaced with the factory default values. |
| | **Image Size**<br>Resizing the screen.<br>• **Expand 1**<br>• **Expand 2**<br>• **1 : 1**<br>• **Panorama**<br>• **Zoom 1**<br>• **Zoom 2** |

## 3. Audio Control

For detailed information on Screen Adjustment in the Audio mode, refer to Audio mode Screen Adjustment Animation Clips.
**When you connnect the speaker set sold separately, you can adjust the audio controls.**
**Sound Select is available when the PIP is on.**

| | |
|---|---|
| | **Sound Select**<br>You can select either Main or Sub when PIP is On. |

## 4. Function Control

For detailed information on Screen Adjustment in the Function mode, refer to Function mode Screen Adjustment Animation Clips.

**ID (MDC Program)**
Assigns individual ID to the SET.

**1) ID Setup :** Assigning distinctive IDs to the SET.
**2) ID Input :** Use to select the transmitter functions of the individual SET. Only the SET whose ID corresponds to the transmitter setting becomes activated.

**PIP**
When external A/V devices such as VCR or DVD are connected to the monitor, PIP allows you to watch video from such devices in a small window super-imposed on pc video signal. (On/Off)

**1) On / Off**

**2) Size**
Resizing the PIP Screen.
- **PIP 1**
- **PIP 2**
- **Double Screen 1**
- **Double Screen 2**

**3) Source**
Select the input source for the PIP.

**PIP Settings**

| | RGB 1 | RGB 2 | RGB3 | Component | Video 2 | Video 1 |
|---|---|---|---|---|---|---|
| RGB 1 | X | X | X | X | O | O |
| RGB 2 | X | X | X | X | O | O |
| RGB 3 | X | X | X | X | O | O |
| Component | X | X | X | X | X | X |
| Video 2 | O | O | O | X | X | X |
| Video 1 | O | O | O | X | X | X |

**4) Position :** Change PIP window position.

**Advanced Picture**

**1) Zoom**
- **Zoom :** Magnifies the size of the picture on screen.
- **Pan :** Moves the position of the magnified image on the screen either vertically or horizontally.

**2) DNIe (Digital Natural Image engine)**
Samsung's New Technology bring you more detailed image with contrast enhancement and white enhancement. New image compensation algorithm gives brighter, cleare, to our customers. DNIe technology will fit every signals into your eyes.
- **Off :** Switches off the DNIe mode.
- **Medium :** Switches on the DNIe mode.
- **High :** The screen is more clear than in Medium.
- **Demo :** The screen before applying DNIe appears on the right and the screen after applying DNIe appears on the left.

**3) Reset**

**Timer**
- **Clock :** Current Time Setting
- **On Time :** Use to set the monitor to turn on automatically at preset time.
- **Off Time :** Use to set the monitor to turn off automatically at preset time.
- **On Time Source :** Use to control the mode at the time the monitor turns on automatically.
- **On Time Volume :** Use to control the volume level at the time the monitor turns on automatically.

| | |
|---|---|
| | **BNC Source**<br>Select an input source from the BNC connection.<br>**1) RGB 3**<br>**2) Component** |
| | **OSD**<br>**1) Language :** You can choose one of 10 languages.<br>**2) Position :** Move the OSD Window to the vertical and horizontal direction.<br>**3) Halftone :** Change the opaqueness of the background of the OSD.<br>**4) Duration :** The number of seconds that the OSD will remain visible before disappearing. |
| | **Information**<br>Display current display mode.<br>**Source / Resolution / Video Mode** |

Check the following items yourself before calling for service. Contact the service center for problems that you cannot solve by yourself.

Self-Test Feature Check | Video mode not supported |
Dot Acceptable | Maintenance and Cleaning | Symptoms & Recommended Actions

## - Self-Test Feature Check

Your monitor provides a self test feature that allows you to check whether your monitor is functioning properly.

1. Turn off both your computer and the monitor.
2. Unplug the video cable from the back of the computer.
3. Turn on the monitor.

   The figure shown below ("Check Signal Cable") appears on a black background when the monitor is in its normal working condition though it does not sense any video signal: While in the Self-Test mode, the LED power indicator remains green and the figure moves around on the screen.

   SAMSUNG
   Check signal cable
   RGB 1

   Failure of any of the boxes to appear indicates a problem with your monitor. This box also appears during normal operation if the video cable becomes disconnected or damaged.

4. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after using the previous procedure, check your video controller and computer system; **your monitor is functioning properly**.

## - Video mode not supported

This indicates the display resolution or refresh rate is not properly set on your computer video card. Reboot the computer in Safe Mode and select "Default" in the "Refresh Rate Unknown" box while setting Adapter for Display Properties.

**Contact the computer dealer or manufacturer for information on Safe Mode Booting.**

Refer to Specifications > Preset Timing Modes for the resolutions or frequencies that are supported by the monitor.

The screen sometimes remains black even though it does not show the message "Video mode not supported." This indicates the monitor is set for a frequency out of range or the PowerSaver mode is on.

## - Dot Acceptable

TFT LCD panel manufactured by using advanced semiconductor technology with precision of 99.999% above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without uneasiness.
The number of TFT LCD pixels : 2,949,120

## - Maintenance and Cleaning

1. Maintaining the Monitor Case
   Clean with a soft cloth after disconnecting the power cord.

- Do not use benzene, thinner or other flammable substances.
- We recommend a Samsung cleansing agent is used to prevent damage to the screen.

2. Maintaining the Flat Panel Display Screen
   Clean with a soft cloth (cotton flannel) smoothly.

- Never use acetone, benzene or thinner.
  (They may cause flaws or deformation of the screen surface.)
- The user will be required to pay costs and related expenses for repair of damages caused by the user.

Troubleshooting

- Check before calling for service
- Problems and Solutions
- Q & A

Main Page

The following table lists possible problems and their solutions. Before calling for service, check the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the warranty card, the phone number on the Information section or contact your dealer.

Installation | Screen | Audio | Remote Control

## 1. Problems related to Installation

Problems related to the monitor installation and their solutions are listed.

| Problems | Solutions |
|---|---|
| **The monitor screen flickers.** | ● Check if the signal cable between the computer and the monitor is securely connected and tightened. (Refer to Connecting to a Computer) |

## 2. Problems related to Screen

Problems related to the monitor screen and their solutions are listed.

| Problems | Solutions |
|---|---|
| **Screen is blank and power indicator is off** | ● Ensure that the power cord is firmly connected and the LCD monitor is on. (Refer to the Connecting Your Monitor) |
| **"Check Signal Cable" message** | ● Ensure that the signal cable is firmly connected to the PC or video sources. (Refer to the Connecting Your Monitor)<br>● Ensure that the PC or video sources are turned on. |
| **"Video mode not supported" message** | ● Check the maximum resolution and the frequency of the video adaptor.<br>● Compare these values with the data in the Preset Timing Modes Chart. |
| **Picture rolls vertically.** | ● Check if the signal cable is securely connected. Connect it again securely.(Refer to Connecting to a Computer) |
| **Image is not clear. Picture is blurred.** | ● Run Frequency Coarse and Fine tuning.<br>● Turn on again after removing all accessories (video extension cable, etc.)<br>● Set resolution and frequency to the recommended ranges. (1280 x 768 @ 60Hz) |
| **The image is too light or too dark** | ● Adjust the Brightness and Contrast (Refer to the Brightness, Contrast) |
| **Screen color is inconsistent.** | ● Adjust color using Mode under OSD Color Adjustment menu. |
| **Color image is distorted with dark shadows.** | |
| **White color is poor.** | |
| **Power Indicator blinks green.** | ● The monitor is currently saving the changes made in settings to the OSD memory. |
| **Screen is blank and power indicator light is steady green or** | ● The monitor is using its power management system.<br>● Move the computer's mouse or press a key on the keyboard |

| | |
|---|---|
| **blinks every 0.5 or 1 seconds** | |

## 3. Problems related to Audio

Problems related to audio signals and their solutions are listed below.

| Problems | Solutions |
|---|---|
| **No sound** | ● Ensure that the audio cable is firmly connected to both the audio-in port on your monitor and the audio-out port on your sound card. (Refer to the Connecting Your Monitor)<br>● Check the volume level. |
| **Sound level is too low.** | ● Check the volume level.<br>● If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program. |
| **Sound is too high pitched or too low pitched** | ● Adjust the Treble and Bass to appropriate level. |

## 4. Problems related to Remote Control

Problems related to the remote control and their solutions are listed.

| Problems | Items to check |
|---|---|
| **The remote control buttons do not respond.** | ● Check the battery polarities (+/-).<br>● Check if the batteries have been exhausted.<br>● Check if the power is on.<br>● Check if the power cord is securely connected.<br>● Check if a special fluorescent or neon lamp is on in the vicinity. |

Frequently asked questions are summarized here for your reference.

| Question | Answer |
|---|---|
| How can I change the frequency? | Frequency can be changed by reconfiguring the video card.<br><br>Note that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.) |
| How can I adjust the resolution? | Windows XP:<br>Reset resolution by clicking Control Panel → Appearance & Theme → Display → Settings.<br><br>Windows ME/2000:<br>Set the resolution at the Control Panel → Display → Settings.<br><br>* Contact the video card manufacturer for details. |
| How can I set the Power Saving function? | Windows XP:<br>Reset Power Saving parameters by clicking Control Panel → Appearance & Theme → Display → Screen Saver or in the computer BIOS SETUP. (Refer to Windows/Computer Manual)<br><br>Windows ME/2000:<br>Set the function at BIOS-SETUP of the computer or the screen saver. (Refer to Windows/Computer Manual). |
| How can I clean the outer case/LCD Panel? | Disconnect the power cord and then clean the monitor with a soft cloth, using either a cleaning solution or plain water.<br><br>Do not leave any remains of the detergent nor scratch the case. Do not allow any water to go inside the monitor. |

Specifications
- General
- PowerSaver
- Preset Timing Modes

Main Page

Design and specifications are subject to change without prior notice.

| | |
|---|---|
| **General** | |
| Model Name | SyncMaster 403T |
| **LCD Panel** | |
| Size | 40.02 inch (Diagonal) / 39.6 inch (Diagonal) |
| Display area | 871.68 (H) x 523.008 (V) |
| Pixel Pitch | 0.681 (H) x 0.681 (V) |
| Type | a-si TFT active matrix |
| Viewing Angle | 170 ° / 170 ° (H/V) |
| **Synchronization** | |
| Horizontal | 30 ~ 70 kHz |
| Vertical | 56 ~ 85 Hz |
| **Display Color** | |
| 16,777,216 Colors | |
| **Resolution** | |
| Optimum resolution | 1080 x 768 @ 60Hz |
| Maximum resolution | 1280 x 768 @ 75Hz |
| **Input Signal** | |
| Sync. | Separate: TTL, P. or N. |
| | Composite: TTL, P. or N. |
| Video signal | 0.7 Vp-p @ 75 ohm |
| **Video** | |
| Color system | NTSC, PAL, SECAM |
| Sound system | M/N |
| Video format | CVBS, S-VHS, RGB, Component |
| **Maximum Pixel Clock** | |
| 90 MHz | |
| **Power Supply** | |
| AC 90 ~ 264 V(50/60 Hz) | |
| **Power Consumption** | |
| 200W (Maximum) | |
| **Power Saving** | |
| Less than 6W | |
| **Dimensions (WxDxH)** | |
| Monitor body | 1006.0 x 300.0 x 746.5 mm |
| **Weight** | |
| Monitor body | 28.0 kg |
| **Environmental considerations** | |
| Operating | Temperature : 50°F ~ 104°F(10°C ~ 40°C)<br>Humidity : 10% ~ 80%, non-condensing |
| Storage | Temperature : -13°F ~113°F (-25°C ~ 45°C)<br>Humidity : 5% ~ 95%, non-condensing |

| Audio Characteristics | |
|---|---|
| Audio Input 1 | RCA Jack Red(R) White(L), 0.5Vrms (-9dB) |
| Audio Input 2 | RCA Jack Red(R) White(L), 0.5Vrms (-9dB) |
| PC Audio Input | 3.5ØStereo Jack, 0.5Vrms (-9dB) |
| Frequency | RF: 80Hz ~ 15kHz (at -3dB) |
| Response | A/V: 80Hz ~ 20kHz (at -3dB) |

## Plug and Play Capability

This monitor can be installed on any Plug & Play compatible system. Interaction of the monitor and computer systems will provide the best operating conditions and monitor settings. In most cases, monitor installation will proceed automatically, unless the user wishes to select alternate settings.

## Dot Acceptable

TFT LCD panel manufactured by using advanced semiconductor technology with precision of 99.999% above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without uneasiness.

The number of TFT LCD pixels : 2,949,120

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The monitor automatically returns to normal operation when you move the computer's mouse or press a key on the keyboard. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPMS compliant video card installed in your computer. Use a software utility installed on your computer to set up this feature.

| State | Normal Operation | Power saving mode EPA/ENERGY 2000 | Power Switch off |
|---|---|---|---|
| Power Indicator | Green | Green, Blinking | Amber |
| Power Consumption | Less than 200W | Less than 6W | Less than 6W |

This monitor is EPA ENERGY STAR® compliant and ENERGY2000 compliant when used with a computer equipped with VESA DPMS functionality.
As an ENERGY STAR® Partner, SAMSUNG has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjust the screen as follows.

**Table 1. Preset Timing Modes**

| Display Mode | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Clock (MHz) | Sync Polarity (H/V) |
|---|---|---|---|---|
| MAC, 640 x 480 | 35.000 | 66.700 | 30.240 | -/- |
| MAC, 832 x 624 | 49.730 | 75.000 | 57.284 | -/- |
| VGA, 640 x 350 | 31.470 | 70.000 | 25.175 | +/- |
| VGA, 720 x 400 | 31.470 | 70.000 | 28.322 | -/+ |
| VGA, 640 x 480 | 31.470 | 59.940 | 25.175 | -/- |
| VGA, 640 x 480 | 37.861 | 72.809 | 31.500 | -/- |
| VGA, 640 x 480 | 37.500 | 75.000 | 31.500 | -/- |
| VGA, 640 x 480 | 43.269 | 85.008 | 36.000 | -/- |
| WVGA, 848 x 480 | 29.820 | 60.000 | 31.490 | +,-/+,- |
| SVGA, 800 x 600 | 35.160 | 56.200 | 36.000 | +,-/+,- |
| SVGA, 800 x 600 | 37.880 | 60.300 | 40.000 | +/+ |
| SVGA, 800 x 600 | 48.100 | 72.200 | 50.000 | +/+ |
| SVGA, 800 x 600 | 46.875 | 75.000 | 49.500 | +/+ |
| SVGA, 800 x 600 | 53.674 | 85.061 | 56.250 | +/+ |
| XGA, 1024 x 768 | 48.363 | 60.004 | 65.000 | -/- |
| XGA, 1024 x 768 | 56.480 | 70.000 | 75.000 | -/- |
| XGA, 1024 x 768 | 60.023 | 75.029 | 78.750 | +/+ |
| XGA, 1024 x 768 | 68.677 | 84.997 | 94.500 | +/+ |
| WXGA, 1280 x 768 | 47.700 | 60.000 | 80.136 | +,-/+,- |

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  400 Valley Road, Suite 201, Mt. Arlington, NJ 07856
  Tel. : (973)601-6000, 1-800-SAMSUNG (1-800-726-7864)
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  http://www.samsungusa.com/monitor/
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  R. Prof. Manoelito de Ornellas, 303, Terro B
  Chacara Sto. Antonio, CEP : 04719-040
  Sao Paulo, SP
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- **Sync Signal**

Sync (Synchronized) Signals refer to the standard signals that are required to display desired colors on the monitor. They are divided into Vertical and Horizontal Sync Signals. These signals display normal color images by the set resolution and frequency.

**Types of Sync Signals**

| | |
|---|---|
| Separate | This is a scheme of transmitting individual vertical sync signals to the monitor. |
| Composite | This is a scheme of combining vertical sync signals into one composite signal and transmitting it to the monitor. The monitor displays the color signals by separating the composite signal into original color signals. |
| Sync On Green | This scheme does not use sync signals. Instead, it combines horizontal and vertical sync signals into a Green signal and transmits to the monitor. It is mainly used for workstations. |

- **Dot Pitch**

The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

- **Vertical Frequency**

The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called Vertical Frequency or Refresh Rate. Unit: Hz

Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz. In this case, flickering of the screen can be detected. To avoid this problem, there is a Flicker-free Mode using a vertical frequency over 70 Hz.

- **Horizontal Frequency**

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

- **Interlace and Non-Interlace Methods**

Showing the horizontal lines of the screen from the top to the bottom in order is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

- **Plug & Play**

This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

- **Resolution**

The number of horizontal and vertical dots used to compose the screen image is called 'resolution'. This number shows the accuracy of the display. High resolution is good for performing multiple tasks as more image information can be shown on the screen.

Example: If the resolution is 1024 X 768, this means the screen is composed of 1024 horizontal dots (horizontal resolution) and 768 vertical lines (vertical resolution).

- **Multiple Display Control (MDC)**

A Multiple Display Control (MDC) is an application allowing various displays to be easily and simultaneously operated on a PC. RS-232C, a standard of serial communication, is used for the communication between a PC and a display.

## FCC Information

**User Instructions**
The Federal Communications Commission Radio Frequency Interference Statement includes the following warning:

**Note:** 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 receptions, 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 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.

**User Information**
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4.

The party responsible for product compliance:
SAMSUNG ELECTRONICS CO., LTD
America QA Lab of Samsung
3351 Michelson Drive,
Suite #290, Irvine, CA92612 USA
Tel) 949-975-7310
Fax) 949-922-8301

**Warning**
User must use shielded signal interface cables to maintain FCC compliance for the product.

Provided with this monitor is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating.
For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed Detachable power supply cord with NEMA configuration 6-15P type (tandem blades) plug cap.

## IC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.

Cet appareil Numérique de classe B respecte toutes les exigences du Règlemont NMB-03 sur les équipements produisant des interférences au Canada.

## MPR II Compliance

This monitor complies with SWEDAC(MPR II) recommendations for reduced electric and magnetic fields.

## European Notice (Europe only)

Products with the CE marking comply with the EMC Directive(89/336/EEC), (92/31/EEC), (93/68/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Norms:

- EN55022:1998+A1:2000 - Radio Frequency Interference
- EN55024:1998 - Electromagnetic Immunity of Information Technology Equipment
- EN61000-3-2:1995+A1/A2:1998 - Power Line Harmonics
- EN61000-3-3:1995 - Voltage Fluctuations

## PCT Notice

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## VCCI

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

## Natural Color Software Program

One of the recent problems in using a computer is that the color of the images printed out by a printer or other images scanned by a scanner or a digital camera are not the same as those shown on the monitor.

The Natural Color S/W is the very solution for this problem. It is a color administration system developed by Samsung Electronics in association with Korea Electronics & Telecommunications Research Institute (ETRI). This system is available only for Samsung monitors and makes the color of the images on the monitor the same as the printed or scanned images.
For more information, refer to Help (F1) in the software program.

**How to install the Natural Color software**
Insert the CD included with the Samsung monitor into the CD-ROM Drive. Then, the initial screen of the program installation will be executed. Click Natural Color on the initial screen to install the Natural Color software. To install the program manually, insert the CD included with the Samsung monitor into the CD-ROM Drive, click the [Start] button of Windows and then select [Execute].
Enter D:\color\eng\setup.exe and then press the <Entrer> key.
(If the drive where the CD is inserted is not D:\, enter the applicable drive.)

**How to delete the Natural Color software program**
Select [Setting]/[Control Panel] on the [Start] menu and then double-click [Add/Delete a program].
Select Natural Color from the list and then click the [Add/Delete] button.

Information


- Service Center
- Terms
- Regulatory
- Natural Color
- Authority

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