External Equipment Connections

PC Setup

- This monitor provides Plug and Play capability, meaning that the PC adjusts automatically to its settings. The monitor sends configuration information (EDID) to the PC using the Video Electronics Standard Association (VESA) Display Data Channel (DDC) protocol.
- The monitor perceives 640x480, 60Hz as DTV 480p based on the PC graphic card. In this case, change the screen scanning rate for the graphic card.

How to connect
1. To get the best picture quality, adjust the PC graphics card to a 1600x1200, 60Hz.
2. Use the monitor's RGB INPUT or HDMI1 port for video connections, depending on your PC connector.
   If the graphic card on the PC does not output analog and digital RGB simultaneously, connect only one of either RGB INPUT or HDMI1 INPUT to display the PC on the monitor.
   If the graphic card on the PC does output analog and digital RGB simultaneously, set the monitor to either RGB or HDMI1; (the other mode is set to Plug and Play automatically by the monitor.)
3. Then, make the corresponding audio connections. If using a sound card, adjust the PC sound as required.
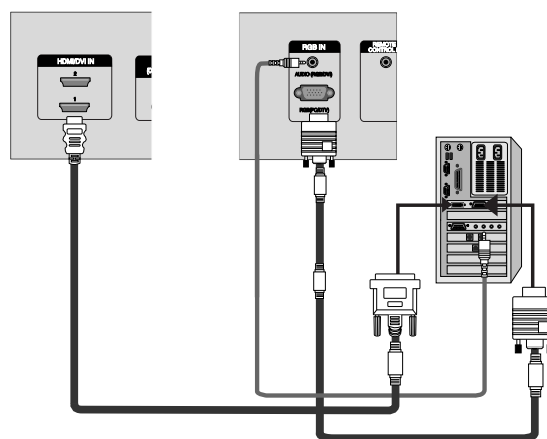
How to use
1. Turn on the PC and the monitor.
2. Turn on the display by pressing the POWER button on the monitor's remote control.
3. Use the **INPUT** button on the remote control to select **RGB** or **HDMI1**.
4. Check the image on your monitor. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC mode to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.

NOTES: • Use a HDMI to DVI cable.
   • Avoid keeping a fixed image on the monitor's screen for a long period of time. The fixed image may become permanently imprinted on the screen. Use the Orbiter screen saver when possible.
   • The synchronization input form for Horizontal and Vertical frequencies is separate.

Monitor Display Specifications (RGB-PC / DVI-PC Mode)

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
	43.269	85.00
800x600	37.879	60.31
	46.875	75.00
	53.674	85.06
832x624	49.725	74.55
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
1280x1024	63.981	60.02
	80.000	75.00
1600x1200	75.00	60.00
1920x1080	66.587	59.934

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

- HDMI™, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC."
- This monitor can receive the High-Definition Multimedia Interface(HDMI).
- This monitor supports HDCP(High-bandwidth Digital Contents Protection) Protocol for 480p, 720p, 1080i, 1080p modes.
- When you Connect with HDMI Source Devices (DVD Player or Set Top Box) supporting Auto HDMI function, automatically, support Plug & Play and then set the HDMI Source Devices(1920 x 1080i). After reading in HDMI Source Devices using Display Data Channel(DDC) Protocol, EDID stored in monitor is used. If HDMI Source Devices not supported Auto HDMI is been, the Resolution is setted, manually.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 1920 x 1080i.

How to connect

When Source Devices(DVD Player or Set Top Box) support HDMI.
- If Source Devices have HDMI Output Connector, Source Devices connect to DTV with HDMI Cable .(not supplied with the product).
- If Source Devices support Auto HDMI, automatically, Source Devices divert output resolution in 1920 x 1080i. But if not, resolution divert Manually Setting for reference Manual of Source Devices.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 1920 x 1080i.
- Because HDMI sends Digital Video and Audio with one cable, need not especial Audio Cable for using HDMI Cable.

Operation

Turning on the Monitor

Turning on the Monitor just after installation

1. Connect power cord correctly. At this moment, the Monitor is switched to standby mode.

2. Press the **INPUT** or ⏻ button on the Monitor or press the **POWER**, **INPUT** button on the remote control and then the Monitor will switch on.

Menu Language Selection

- The menus can be shown on the screen in the selected language. First select your language.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SPECIAL** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Language**.

3. Press the ▶ button and then use ▲ / ▼ button to select your desired language.
   From this point on, the on-screen menus will be shown in the language of your choice.

4. Press the **ENTER** button to save.

• Press the **MENU** button to return to the previous menu.

Picture Menu Options

- Readjust Picture menu settings for each following input source as preferred.

APC (Auto Picture Control)

- APC adjusts the Monitor for the best picture appearance.
- When adjusting Picture menu options (contrast, brightness, color, sharpness, and tint) manually, APC automatically changes to **Off**.

1. Press the **APC** button repeatedly to select the picture appearance setup option as shown below.

    Daylight ⟶ **Optimum** ⟶ **Night time** ⟶ **Off**
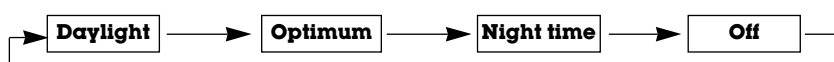
- You can also select **Daylight**, **Optimum**, **Night time** or **Off** in the **PICTURE** menu.
- **Daylight**, **Optimum**, and **Night time** settings are preset for optimum picture quality at the factory and cannot be changed.

XD

- XD is LG Electronic's unique picture improving technology to display a real HD source through an advanced digital signal processing algorithm.
- When selecting APC options (Daylight, Optimum and Night time), XD is automatically change to On.

1. Press the **XD** button repeatedly as shown below.

    On ⟷ **Off**

Auto Color Temperature Control

- To initialize values (reset to default settings), select the **Normal** option.

PICTURE	APC
SOUND	XD
TIMER	ACC
SPECIAL	Fleshtone
SCREEN	Contrast 100
PIP/DW	Brightness 55
	Color 55
	Sharpness 60
	Tint 0
Move Select	

≫

PICTURE	APC	
SOUND	XD	
TIMER	ACC ▶	Cool
SPECIAL	Fleshtone	√ Normal
SCREEN	Contrast 100	Warm
PIP/DW	Brightness 55	
	Color 55	
	Sharpness 60	
	Tint 0	
Move Select		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **PICTURE** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **ACC** .

3. Press the ▶ button and then use ▲ / ▼ button to select either **Cool** (Preset), **Normal** (Default), **Warm** (Preset).

4. Press the **ENTER** button to save the new settings.

Picture Menu Options continued

Fleshtone (Video1-2-3-4, Component 1-2, RGB-DTV, DVI-DTV and HDMI-DTV Mode only)

- Use Fleshtone to select the desired skin color option.

PICTURE				PICTURE			
SOUND	APC			SOUND	APC		
TIMER				TIMER	XD		
SPECIAL	ACC			SPECIAL	ACC ▶		0
SCREEN	Fleshtone			SCREEN	Fleshtone		
PIP/DW	Contrast 100			PIP/DW	Contrast 100		
	Brightness 55				Brightness 55		
	Color 55				Color 55		
	Sharpness 60				Sharpness 60		
	Tint 0				Tint 0		
◆ Move ◉ Select				◆ Move ◉ Select			

1. Press the **MENU** button and then use ▲ / ▼ button to select the **PICTURE** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Fleshtone**.

3. Press the ▶ button and then use ◀ / ▶ button to make appropriate adjustments.

   • The adjustment range is 0 ~ 3.

4. Press the **ENTER** button to save the new settings.

sRGB (only RGB-PC, DVI-PC Modes)

- If the monitor is connected to external equipment using sRGB, set sRGB to On to adjust for the color difference.

PICTURE		PICTURE		
SOUND	APC	SOUND	APC	
TIMER	XD	TIMER	XD	
SPECIAL	ACC	SPECIAL	ACC	✓ On
SCREEN	sRGB	SCREEN	sRGB ▶	Off
PIP/DW	Contrast 100	PIP/DW	Contrast 100	
	Brightness 55		Brightness 55	
	Color 55		Color 55	
◆ Move ◉ Select		◆ Move ◉ Select		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **PICTURE** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **sRGB**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

4. Press the **ENTER** button to save the new settings.

Manual Picture Control (**Off** option)

- You can adjust picture contrast, brightness, color, sharpness, and tint to the levels you prefer.

PICTURE ▶		PICTURE	
SOUND	APC	SOUND	APC
TIMER	XD	TIMER	XD
SPECIAL	ACC	SPECIAL	ACC
SCREEN	Fleshtone	SCREEN	Fleshtone
PIP/DW	Contrast 100	PIP/DW	Contrast 100 ▶
	Brightness 55		Brightness 60
	Color 55		Color 50
	Sharpness 60		Sharpness 50
	Tint 0		Tint 0
◆ Move ◉ Select		◆ Move ◉ Select	

≫

1. Press the **MENU** button and then use ▲ / ▼ button to select the **PICTURE** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select the desired picture option (**Contrast**, **Brightness**, **Color**, **Sharpness** or **Tint**).

3. Press the ▶ button and then use ◀ / ▶ button to make appropriate adjustments.

4. Press the **ENTER** button to save the new settings.

Sound Menu Options

DASP (Digital Auto Sound Processing)

- DASP lets you enjoy the best sound without any special adjustment because the Monitor has the appropriate sound options based on the program content.
- When adjusting sound options (treble, bass) manually, DASP automatically changes to **Off**.

1. Press the **DASP** button repeatedly to select the appropriate sound setup as shown below.

SRS TSXT → **Flat** → **Music** → **Movie** → **Sports** → **Off**
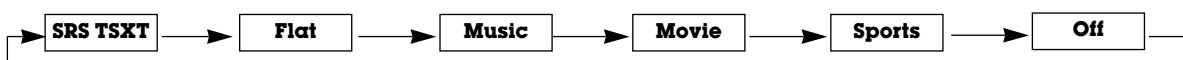
- You can also adjust **DASP** in the **SOUND** menu.
- **SRS TSXT**, **Flat**, **Music**, **Movie**, and **Sports** are preset for good sound quality at the factory and cannot be changed.
- **SRS(●)** is a trademark of SRS Labs, Inc.
- TruSurround XT technology is incorporated under license from SRS Labs, Inc.

Manual Sound Control (Dasp **Off** option and balance)

PICTURE	DASP
SOUND ▸	BBE
TIMER	AVL
SPECIAL	Balance 0
SCREEN	Treble 50
PIP/DW	Bass 50

≫

PICTURE	DASP
SOUND	BBE
TIMER	AVL ▶
SPECIAL	Balance 0
SCREEN	Treble 50
PIP/DW	Bass 50

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SOUND** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select the desired sound option (**Balance**, **Treble** or **Bass**).

3. Press the ▶ button and then use ◄ / ▶ button to make appropriate adjustments.

4. Press the **ENTER** button to save the new settings.

BBE

- BBE High Definition Sound restores clarity and presence for better speech intelligibility and musical realism.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SOUND** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **BBE**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

4. Press the **ENTER** button to save the new settings.

- **BBE** Manufactured under license from BBE Sound, Inc.
- Treble, Bass or BBE aren't suitable for **SRS TSXT** mode.

AVL (Auto Volume Leveler)

- This feature maintains an equal volume level; even if you change channels.
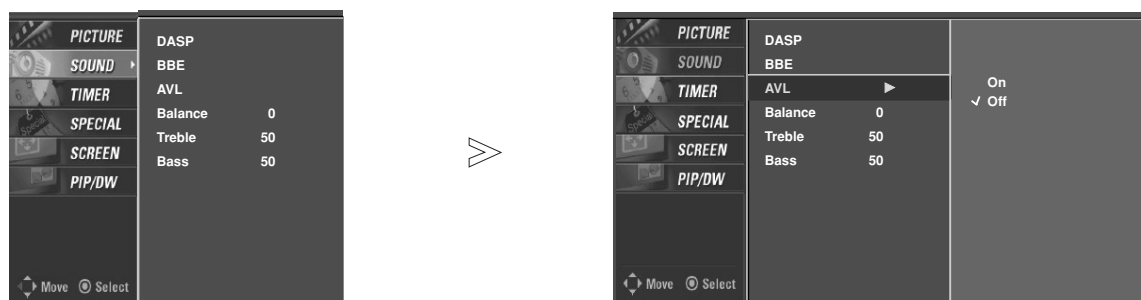
1. Press the **MENU** button and then use ▲ / ▼ button to select the **SOUND** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **AVL**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

4. Press the **ENTER** button to save the new settings.

Timer Menu Options

Clock Setup

- If current time setting is wrong, correct the clock setting.

PICTURE	Clock
SOUND	Off timer
TIMER ▶	On timer
SPECIAL	Auto off
SCREEN	
PIP/DW	

≫

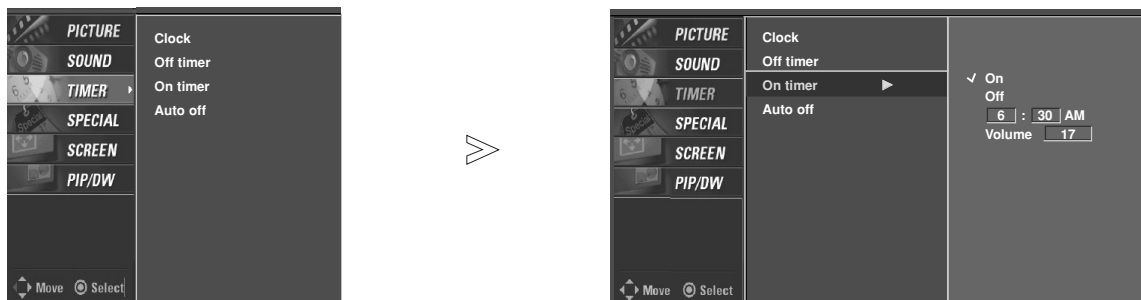| PICTURE	Clock ▶	-- : -- AM
SOUND	Off timer	
TIMER	On timer	
SPECIAL	Auto off	
SCREEN		
PIP/DW		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **TIMER** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Clock**.

3. Press the ▶ button and then use ▲ / ▼ button to set the hour.

4. Press the ▶ button and then use ▲ / ▼ button to set the minutes.

5. Press the **ENTER** button to save the new settings.

On/Off Timer Setup

- Timer function operates only if current time has already been set.
- Off-Timer function overrides On-Timer function if they are set to the same time.
- If you do not press any button within 2 hours after the monitor turns on with the On Timer function, the monitor will automatically revert to standby mode.

PICTURE	Clock
SOUND	Off timer
TIMER ▶	On timer
SPECIAL	Auto off
SCREEN	
PIP/DW	

≫

PICTURE	Clock	✓ On
SOUND	Off timer	Off
TIMER	On timer ▶	6 : 30 AM
SPECIAL	Auto off	Volume 17
SCREEN		
PIP/DW		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **TIMER** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Off timer** or **On timer**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On**.
   • To cancel **On/Off timer** function, select **Off**.

4. Press the ▶ button and then use ▲ / ▼ button to set the hour.

5. Press the ▶ button and then use ▲ / ▼ button to set the minutes.

   For only On timer function; Press the ▶ button and then use ▲ / ▼ button to set volume level.

6. Press the **ENTER** button to save the new settings.

Auto Off

- If there is no input signal, the Monitor turns off automatically after 10 minutes.

PICTURE	Clock
SOUND	Off timer
TIMER ▶	On timer
SPECIAL	Auto off
SCREEN	
PIP/DW	
◊ Move ⊙ Select	

≫

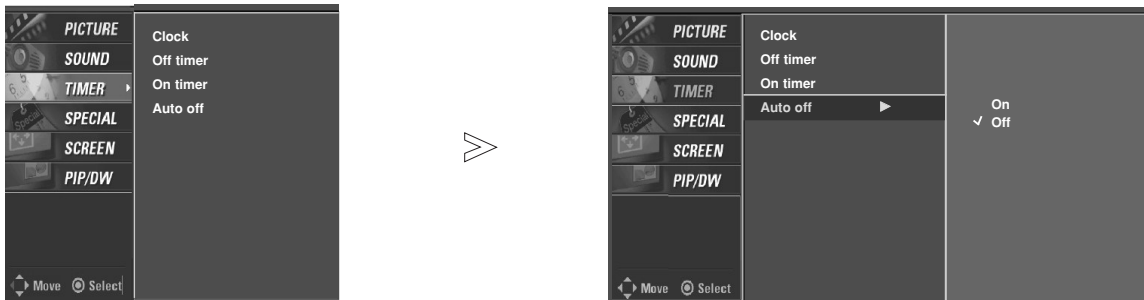| PICTURE | Clock | |
SOUND	Off timer	
TIMER	On timer	
SPECIAL	Auto off ▶	On
SCREEN		✓ Off
PIP/DW		
◊ Move ⊙ Select		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **TIMER** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Auto off**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

4. Press the **ENTER** button to save the new settings.

Sleep Timer

- The sleep timer turns the Monitor off at a preset time. Note that this setting is cleared when the monitor is turned off.

1. Press the **SLEEP** button repeatedly to select the number of minutes. First the 🕐zz --- **Min** option appears on the screen, followed by the following sleep timer options: 10, 20, 30, 60, 90, 120, 180, and 240 minutes.

2. When the number of minutes you want is displayed on the screen, press the **ENTER** button. The timer begins to count down from the number of minutes selected.

3. To check the remaining minutes before the monitor turns off, press the **SLEEP** or **ENTER** button once.

4. To cancel the Sleep Timer, press the **SLEEP** button repeatedly until 🕐zz --- **Min** appears.

Special Menu Options

Key Lock

- The monitor can be set up so that it can only be used with the remote control.
- This feature can be used to prevent unauthorized viewing by disabling the front panel controls.
- This Monitor is programmed to remember which option it was last set to even if you turn the monitor off.
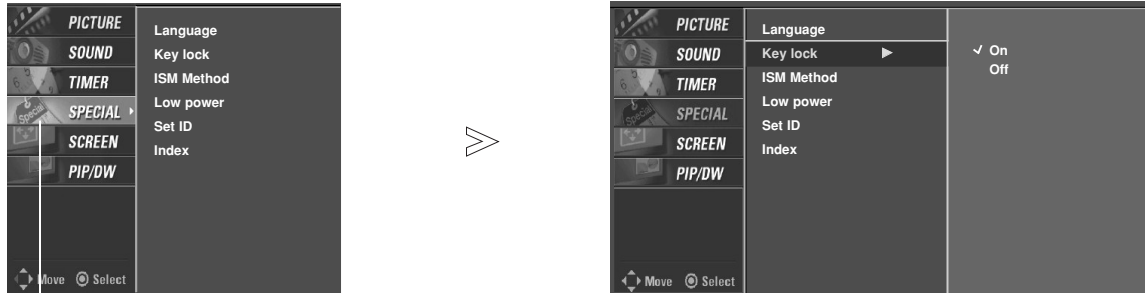
PICTURE	Language
SOUND	Key lock
TIMER	ISM Method
SPECIAL ▸	Low power
SCREEN	Set ID
PIP/DW	Index

◇ Move ⊙ Select

≫

PICTURE	Language	
SOUND	Key lock ▶	✓ On
TIMER	ISM Method	Off
SPECIAL	Low power	
SCREEN	Set ID	
PIP/DW	Index	

◇ Move ⊙ Select

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SPECIAL** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Key lock**.
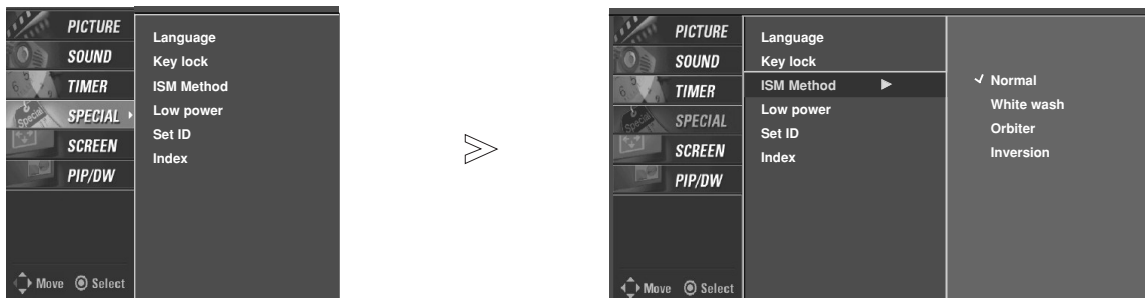
3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

   • When you select **On**, the display '⚠ **Key lock**' appears on the screen if any button on the front panel is pressed.

4. Press the **ENTER** button to save the new settings.

> -In setting **Key lock** '**On**', if the monitor is turned off with the remote control, press the **INPUT** on the monitor or **POWER**, **INPUT** on the remote control to turn the monitor on.

ISM (Image Sticking Minimization) Method

- A frozen still picture from a PC/video game displayed on the screen for prolonged periods will result in an ghost image remaining; even when you change the image. Avoid allowing a fixed or still image to remain on the Monitor's screen for a long period of time.

PICTURE	Language
SOUND	Key lock
TIMER	ISM Method
SPECIAL ▸	Low power
SCREEN	Set ID
PIP/DW	Index

◇ Move ⊙ Select

≫

PICTURE	Language	
SOUND	Key lock	
TIMER	ISM Method ▶	✓ Normal
SPECIAL	Low power	White wash
SCREEN	Set ID	Orbiter
PIP/DW	Index	Inversion

◇ Move ⊙ Select

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SPECIAL** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **ISM Method**.

3. Press the ▶ button and then use ▲ / ▼ button to select either **Normal**, **White wash**, **Orbiter**, or **Inversion**.

   • **Normal**
   If image sticking is never a problem, ISM is not necessary - set this to Normal.
   • **White wash**
   White Wash removes permanent images from the screen. Note: An excessive permanent image may be impossible to clear completely using White Wash. To return to normal viewing, press the any button.
   • **Orbiter**
   Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the image will move every 2 minutes.

   • **Inversion**
   Inversion will automatically invert the plasma display panel color every 30 minutes.

4. Press the **ENTER** button to save the new settings.

INDEX

- Switches LED Display on or off.
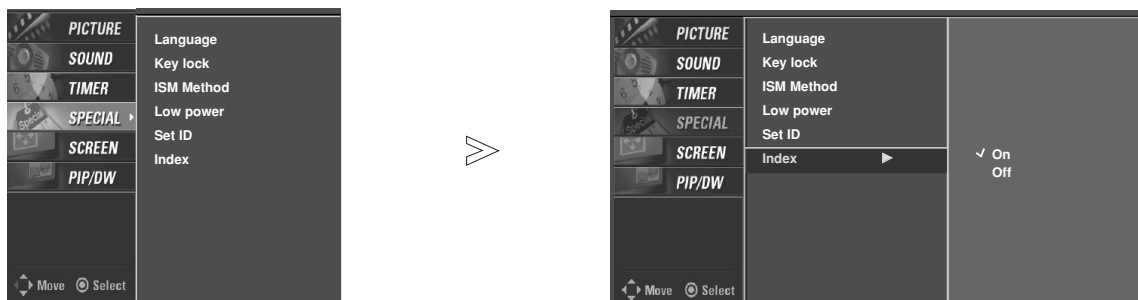
PICTURE	Language
SOUND	Key lock
TIMER	ISM Method
SPECIAL ▸	Low power
SCREEN	Set ID
PIP/DW	Index

Move Select

≫

PICTURE	Language	
SOUND	Key lock	
TIMER	ISM Method	
SPECIAL	Low power	
SCREEN	Set ID	
PIP/DW	Index ▶	✓ On
		Off

Move Select

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SPECIAL** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Index**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

4. Press the **ENTER** button to save the new settings.

Low Power

- Low power reduces the plasma display's power consumption.
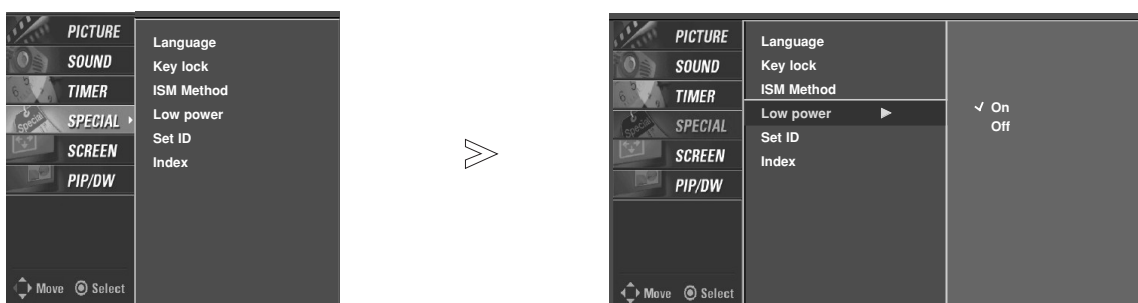
PICTURE	Language
SOUND	Key lock
TIMER	ISM Method
SPECIAL ▸	Low power
SCREEN	Set ID
PIP/DW	Index

Move Select

≫

PICTURE	Language	
SOUND	Key lock	
TIMER	ISM Method	
SPECIAL	Low power ▶	✓ On
SCREEN	Set ID	Off
PIP/DW	Index	

Move Select

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SPECIAL** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Low power**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

   • When you select **On**, the screen darkens.

4. Press the **ENTER** button to save the new settings.

Screen Menu Options

Auto Adjustment

- RGB (PC) mode only; This function doesn't work for RGB-DTV.
- Automatically adjusts picture position and minimizes image shaking.
- After adjustment, if the image is still not correct, your Monitor is functioning properly but needs further adjustment.
- The **Auto config.**, **Position** and **Manual config.** are not active in DVI mode.

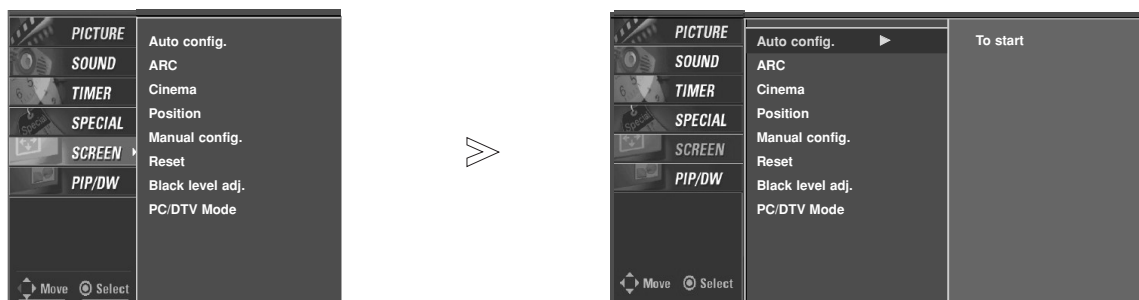| PICTURE | Auto config. | | PICTURE | Auto config. ▶ | To start |
SOUND	ARC		SOUND	ARC	
TIMER	Cinema		TIMER	Cinema	
SPECIAL	Position	≫	SPECIAL	Position	
SCREEN ▶	Manual config.		SCREEN	Manual config.	
PIP/DW	Reset		PIP/DW	Reset	
	Black level adj.			Black level adj.	
	PC/DTV Mode			PC/DTV Mode	
◆ Move ◉ Select			◆ Move ◉ Select		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Auto config.**.

3. Press the ▶ button to run Auto configure.

   • When **Auto config.** has finished, **OK** will be shown on screen.
   • If the position of the image is still not correct, try Auto adjustment again.

4. In RGB (PC) mode, if the image needs to be adjusted more after using **Auto config.**, you can make further adjustments with the **Manual config.** option.

Setting Picture Format

- Caution: If a 4:3 fixed image is on the screen for a long time, it may remain visible.
- RGB/DVI-PC: 4:3, 16:9
- Component 480i, Video sources : 4:3, 16:9, Horizon and Zoom.
- RGB-DTV/DVI-DTV/Component 480p,720p,1080i/HDMI 480p,720p,1080i : 4:3, 16:9 and Zoom.

1. Press the **ARC** button repeatedly to select the desired picture format. You can also select picture format in the
   SCREEN menu.

   • **4:3**
   - Choose **4:3** when you want to view a picture with an original 4:3 aspect ratio, with black bars appearing at both
     the left and right sides.

   • **16:9**
   - Choose **16:9** when you want to adjust the picture horizontally, in a linear proportion to fill the entire screen.

   • **Horizon**
   - Choose **Horizon** when you want to adjust the picture in a non-linear proportion, that is, more enlarged at both
     sides, to create a spectacular view.

   • **Zoom**
   - Choose **Zoom** when you want to view the picture without any alteration. However, the top and bottom portions
     of the picture will be cropped.

Split Zoom

- Enlarges the picture in correct proportions.
- Split Zoom can be used for all input sources.
- In 2-Split Zoom mode, you can only move the image up or down.
- If a screen is enlarged, a screen can move without selecting section of screen Split Zoom.

1. Press the **SPLIT ZOOM** button repeatedly to select either 2, 4 , or 9 Split Zoom.

2. Press the number button corresponding to the section you wish to enlarge. You can move within the enlarged image with the ▲ / ▼ / ◄ / ► button. To return to normal viewing, press the **SPLIT ZOOM** button again.

Example of choosing 5.

Section 5 is enlarged to fill the screen.
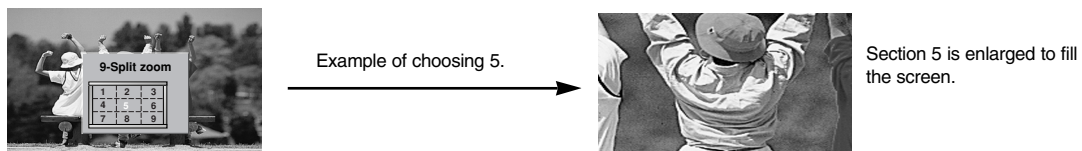
Cinema Mode Setup (Video1-2 and Component 480i mode only)

- Sets up the monitor for the best picture appearance for viewing movies.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ► button and then use ▲ / ▼ button to select **Cinema**.

3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.

4. Press the **ENTER** button to save the new settings.

Screen Menu Options continued

Screen Position

- This function works in the following mode:
  RGB-PC, RGB-DTV (480p,720p,1080i,1080p), COMPONENT (480p,720p,1080i).

PICTURE	Auto config.
SOUND	ARC
TIMER	Cinema
SPECIAL	Position
SCREEN ▸	Manual config.
PIP/DW	Reset
	Black level adj.
	PC/DTV Mode
◆ Move ◉ Select	

≫

PICTURE	Auto config.	
SOUND	ARC	
TIMER	Cinema	
SPECIAL	Position ▶	
SCREEN	Manual config.	
PIP/DW	Reset	
	Black level adj.	
	PC/DTV Mode	
◆ Move ◉ Select		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Position**.

3. Press the ▶ button and then use ▲ / ▼ / ◀ / ▶ button to adjust the position.

4. Press the **ENTER** button to save the new settings.

Manual Configure (RGB-PC mode only)

- If the image still isn't clear after auto adjustment is completed and especially if characters are still jittery, adjust the picture **Phase** manually.
- To correct the screen size, adjust **Clock**.

PICTURE	Auto config.
SOUND	ARC
TIMER	Cinema
SPECIAL	Position
SCREEN ▸	Manual config.
PIP/DW	Reset
	Black level adj.
	PC/DTV Mode
◆ Move ◉ Select	

≫

PICTURE	Auto config.	
SOUND	ARC	
TIMER	Cinema	
SPECIAL	Position	
SCREEN	Manual config. ▶	Phase 0
PIP/DW	Reset	Clock 0
	Black level adj.	
	PC/DTV Mode	
◆ Move ◉ Select		

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **Manual config.**.

3. Press the ▶ button and then use ▲ / ▼ button to to select **Phase** or **Clock**.

4. Use the ◀ / ▶ button to make appropriate adjustments.

   • The **Phase** adjustment range is 0 ~ 30.
   • The **Clock** adjustment range is -127 ~ +128.

5. Press the **ENTER** button to save the new settings.

Initializing (Reset to original factory value)

- This function operates in every mode.
- To initialize the adjusted value.
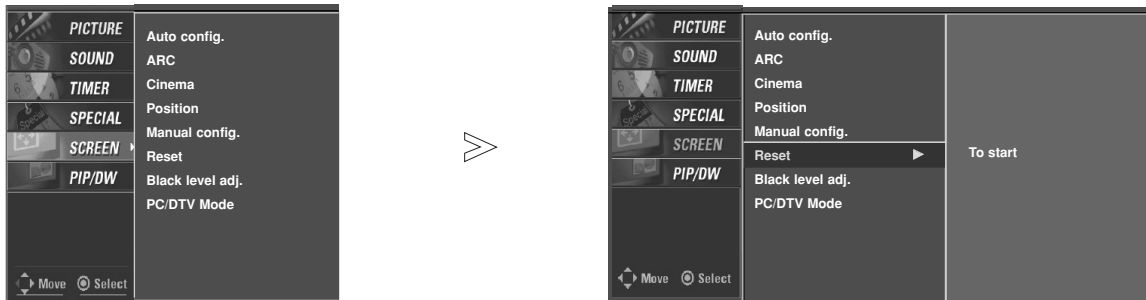
PICTURE	Auto config.
SOUND	ARC
TIMER	Cinema
SPECIAL	Position
SCREEN ▸	Manual config.
PIP/DW	Reset
	Black level adj.
	PC/DTV Mode

◇ Move ◉ Select

≫

PICTURE	Auto config.	
SOUND	ARC	
TIMER	Cinema	
SPECIAL	Position	
SCREEN	Manual config.	
PIP/DW	Reset ▸	To start
	Black level adj.	
	PC/DTV Mode	

◇ Move ◉ Select

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ▸ button and then use ▲ / ▼ button to select **Reset**.

3. Press the ▸ button.

   • You can initialize Manual config., Position, Split zoom, PIP size, PIP position, PIP transparency and sub pic-
     ture size for DW.

PC/DTV Mode

- To see a normal picture, match the resolution of RGB mode (480p/640x480, 1080p/1920x1080) or HDMI mode
  (1080p/1920x1080) in the **SCREEN** menu.
- It can be selected the DTV/PC mode by user.

PICTURE	Auto config.
SOUND	ARC
TIMER	Cinema
SPECIAL	Position
SCREEN ▸	Manual config.
PIP/DW	Reset
	Black level adj.
	PC/DTV Mode

◇ Move ◉ Select

≫

PICTURE	Auto config.	
SOUND	ARC	
TIMER	Cinema	
SPECIAL	Position	
SCREEN	Manual config.	
PIP/DW	Reset	
	Black level adj.	
	PC/DTV Mode ▸	640x480

◇ Move ◉ Select

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ▸ button and then use ▲ / ▼ button to select **PC/DTV Mode**.

3. Press the ▸ button and then use ▲ / ▼ button to select the desired resolution.

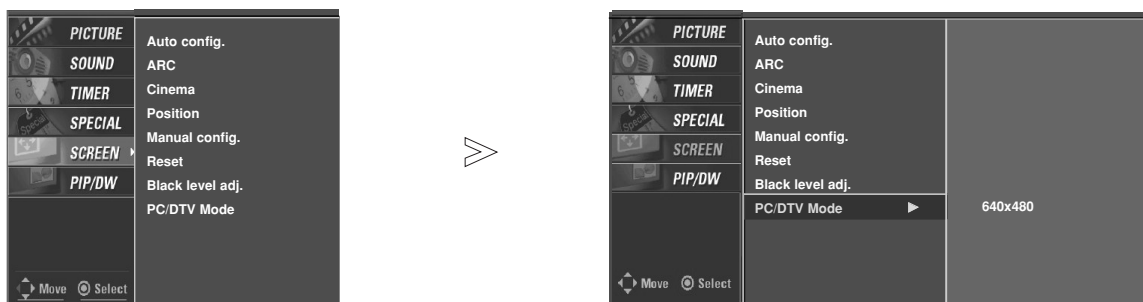4. Press the **ENTER** button to save the new settings.

Screen Menu Options continued

Screen Adjustments (Video1-2 and Component 480i mode only)

- Use this function to correct jittering or picture instability while viewing a video tape.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ► button and then use ▲ / ▼ button to select **Screen adj.**.

3. Press the ► button and then use ▲ / ▼ button to select **TV** or **VCR**.

   • Select the **VCR** option if watching a VCR.
   • Select the **TV** option for other equipment. (Except VCR)

4. Press the **ENTER** button to save the new settings.

NR (Noise Reduction)

- You can select **NR** to reduce the picture noise which may appear on the screen during watching the TV.
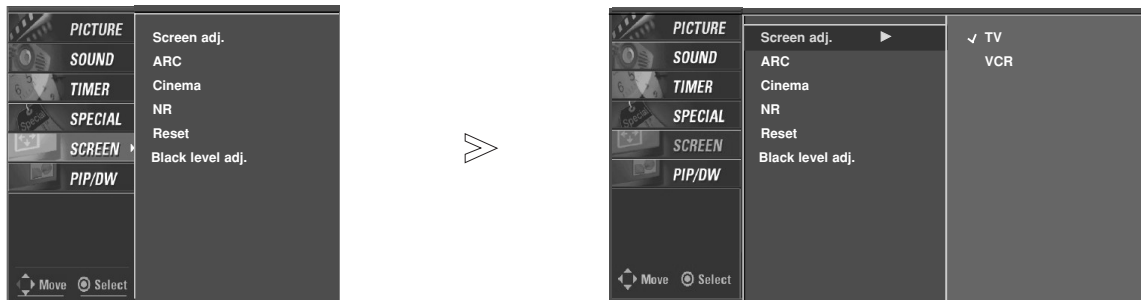- This function is not available for use in RGB[PC], HDMI[PC] mode.
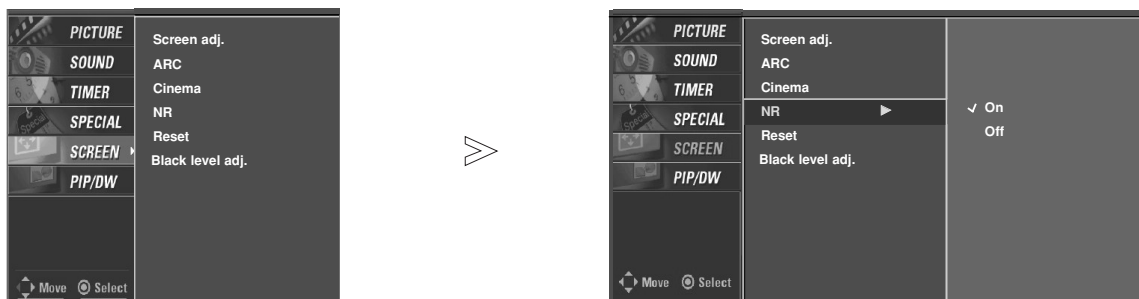
1. Press the **MENU** button and then use ▲ / ▼ button to select the **SCREEN** menu.

2. Press the ► button and then use ▲ / ▼ button to select **NR**.

3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.

4. Press the **ENTER** button to save the new settings.

PIP (Picture-In-Picture) Feature

- PIP lets you view 2 different inputs (sources) on your monitor screen at the same time. One source will be large, and the other source will show a smaller inset image.
- This function doesn't work for RGB-DTV(1080p).
- If input signals(50Hz/60Hz) of the main and sub pictures are different in PIP/DW mode, the screens are unnatural.

Watching PIP

Press the **PIP** button repeatedly to turn PIP on or off.

PIP Size

Press the **WIN.SIZE** button and then use ◄ / ► button to change the sub picture size.

PIP Transparency (PIP Mode only)

- To make the PIP clear or opaque.

1. Press the **MENU** button and then use ▲ / ▼ button to select the **PIP/DW** menu.
2. Press the ► button and then use ▲ / ▼ button to select **PIP Transparency** .
3. Press the ► button and then use ◄ / ► button to adjust PIP transparency.
4. Use the ◄ / ► button to make appropriate adjustments.

   • The adjustment range of **PIP Transparency** is 0 ~ 10.
5. Press the **ENTER** button to save.

Moving the PIP

Press the **WIN.POSITION** button.

Press the ▲ / ▼ / ◄ / ► button repeatedly until desired position is achieved. The sub picture moves up/down/left/right.

Selecting an Input Signal Source for the PIP

Use the **PIP INPUT** button to select the input source for the sub picture.

Main Picture Source	Available Sub Picture Sources
Video	Video, Component 480i/480p/720p/1080i, RGB/DVI/HDMI 480p/720p/1080i, RGB/DVI-PC
Component 480i	Video, Component 480i/480p/720p/1080i, RGB/DVI/HDMI 480p/720p/1080i, RGB/DVI-PC
Component 480p/720p/1080i	Video, Component 480i, RGB/DVI 480p/720p/1080i, RGB/DVI-PC
RGB/DVI-DTV(480p/720p/1080i)	Video and Component 480i/480p/720p/1080i
RGB/DVI-PC	Video and Component 480i/480p/720p/1080i
HDMI 480p/720p/1080i	Video and Component 480i

DW Setup Option

- As the name suggests, this mode splits the screen into 2, allowing 2 picture sources to be shown on the monitor screen at the same time. Each source is given half the screen.
- This function doesn't work for RGB-DTV(1080p).

Watching DW

Press the **DW** button repeatedly to select one of the DW options.

Sub Picture Size Adjustment

Press the **WIN.SIZE** button.

• Use the ◄ / ► button to change the sub picture size.
• Using the WIN.SIZE function in DW mode, main and sub picture sizes are changed simultaneously.
  Using the WIN.SIZE function in PIP mode, sub picture size is changed.
• WIN.POSITION is not functional in DW mode.

Swapping the DW

Use the **SWAP** button to switch the main and sub pictures in DW mode.

| Main Picture | Sub Picture |
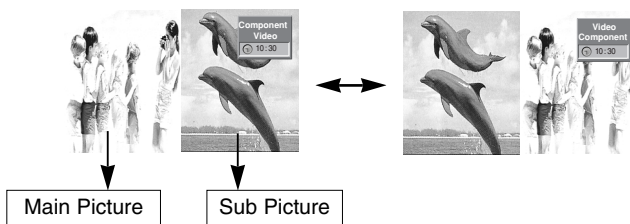
Selecting a Source for the DW

Use the **PIP INPUT** button to select the input source for the sub picture.

Main Picture Source	Available Sub Picture Sources
Video	Video, Component 480i/480p/720p/1080i, RGB/DVI/HDMI 480p/720p/1080i, RGB/DVI-PC
Component 480i	Video, Component 480i/480p/720p/1080i, RGB/DVI/HDMI 480p/720p/1080i, RGB/DVI-PC
Component 480p/720p/1080i	Video, Component 480i, RGB/DVI 480p/720p/1080i, RGB/DVI-PC
RGB/DVI-DTV(480p/720p/1080i)	Video and Component 480i/480p/720p/1080i
RGB/DVI-PC	Video and Component 480i/480p/720p/1080i
HDMI 480p/720p/1080i	Video and Component 480i

External Control Device Setup

- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the Monitor's functions externally.
- Connect the serial port of the control device to the RS-232C jack on the Monitor back panel.
- RS-232C connection cables are not supplied with the Monitor.
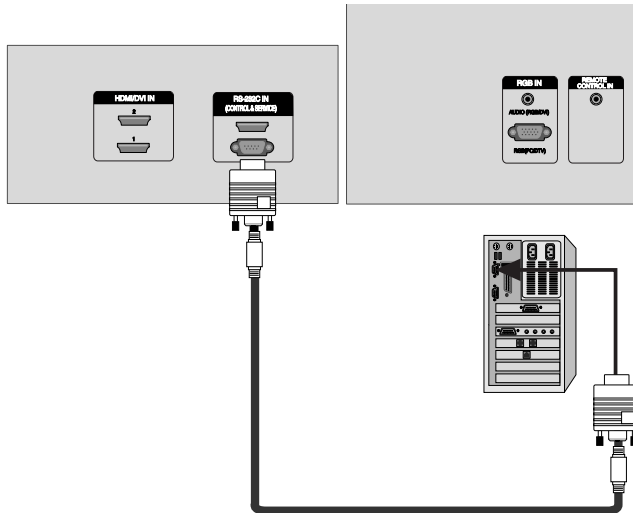
Type of Connector: D-Sub 9-pin Male

No.	Pin Name
1	No Connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection
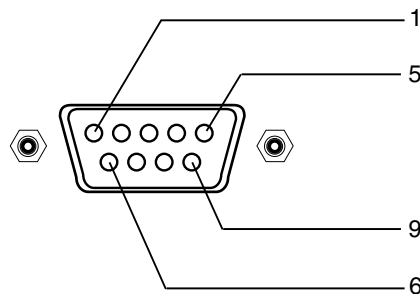
RS-232C Configurations

7-Wire Configuration
(Standard RS-232C cable)

	PC			PDP	
RXD	2		3	TXD	
TXD	3		2	RXD	
GND	5		5	GND	
DTR	4		6	DSR	
DSR	6		4	DTR	
RTS	7		8	CTS	
CTS	8		7	RTS	

D-Sub 9   D-Sub 9
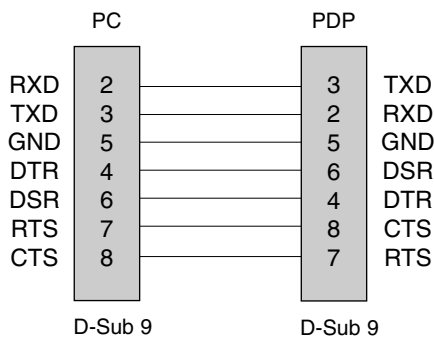
3- Wire Configuration
(Not standard)

	PC			PDP	
RXD	2		3	TXD	
TXD	3		2	RXD	
GND	5		5	GND	
DTR	4		4	DTR	
DSR	6		6	DSR	
RTS	7		7	RTS	
CTS	8		8	CTS	

D-Sub 9   D-Sub 9
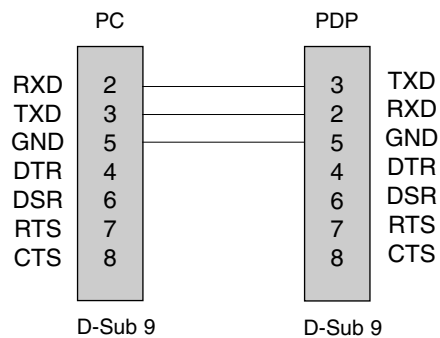
Set ID

- Use this function to specify a monitor ID number.
- Refer to 'Real Data Mapping 1'. See page 34.

PICTURE	Language
SOUND	Key lock
TIMER	ISM Method
SPECIAL ▸	Low power
SCREEN	Set ID
PIP/DW	Index
⬍ Move ⦿ Select	

▷

PICTURE	Language	
SOUND	Key lock	
TIMER	ISM Method	
SPECIAL	Low power	
SCREEN	Set ID ▸	1
PIP/DW	Index	
⬍ Move ⦿ Select		
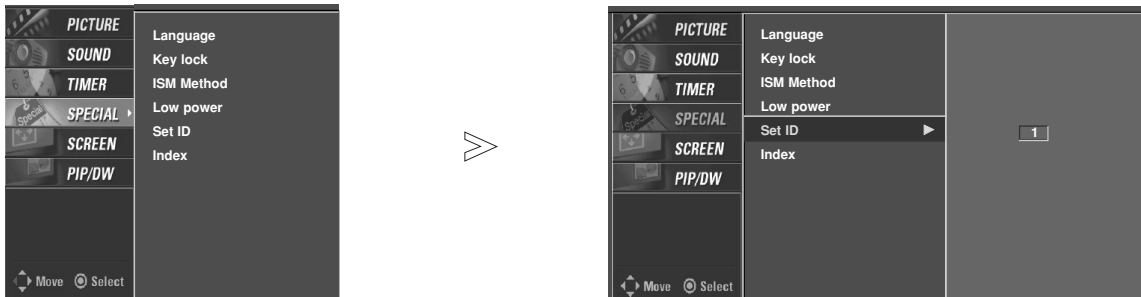
1. Press the **MENU** button and then use the ▲ / ▼ button to select the **SPECIAL** menu.

2. Press the ▸ button and then use ▲ / ▼ button to select **Set ID**.

3. Press the ▸ button and then use ◂ / ▸ button to adjust **Set ID** to choose the desired monitor ID number.

   • The adjustment range of **Set ID** is 1 ~ 99.

Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Input Select	k	b	1 ~ 9
03. Aspect Ratio	k	c	0 ~ 3
04. Screen Mute	k	d	0 ~ 1
05. Volume Mute	k	e	0 ~ 1
06. Volume Control	k	f	0 ~ 64
07. Contrast	k	g	0 ~ 64
08. Brightness	k	h	0 ~ 64
09. Color	k	i	0 ~ 64
10. Tint	k	j	0 ~ 64
11. Sharpness	k	k	0 ~ 64
12. OSD Select	k	l	0 ~ 1
13. Remote Control Lock Mode	k	m	0 ~ 1
14. PIP/DW	k	n	0 ~ 3
15. Split Zoom	k	p	0 ~99
16. PIP Position	k	q	0 ~ 3
17. Treble	k	r	0 ~ 64
18. Bass	k	s	0 ~ 64
19. Balance	k	t	0 ~ 64
20. Color Temperature	k	u	0 ~ 2
21. PIP Input Select	k	y	1 ~ 9
22. Abnormal State	k	z	0 ~ a
23. ISM Method	j	p	0 ~ 3
24. Low Power	j	q	0 ~ 1
25. Picture Size Setting for DW mode	j	t	0 ~30
26. Auto Configure	j	u	1
27. Key	m	c	Key code

Transmission / Receiving Protocol

Transmission

[Command1][Command2][ ][Set ID][ ][Data][Cr]

∗ [Command 1]: k, j, m
∗ [Command 2]: To control PDP set.
∗ [Set ID]: You can adjust the set ID to choose desired moni-
tor ID number in Special menu. Adjustment range
is 1 ~ 99. When selecting Set ID '0', every con-
nected PDP set is controlled. Set ID is indicated
as decimal (1~99) on menu and as Hexa decimal
(0x0~0x63) on transmission/receiving protocol.
∗ [DATA]: To transmit command data.
Transmit 'FF' data to read status of command.
∗ [Cr]: Carriage Return
ASCII code '0x0D'
∗ [ ]: ASCII code 'space (0x20)'

OK Acknowledgement

[Command2][ ][Set ID][ ][OK][Data][x]

* The Monitor transmits ACK (acknowledgement) based on
this format when receiving normal data. At this time, if the
data is data read mode, it indicates present status data. If
the data is data write mode, it returns the data of the PC
computer.

Error Acknowledgement

[Command2][ ][Set ID][ ][NG][x]

* The Monitor transmits ACK (acknowledgement) based on
this format when receiving abnormal data from
non-viable functions or communication errors.

Data 1: Illegal Code
2: Not supported function

01. Power (Command 2:a)

► To control Power On/Off of the Monitor.

Transmission

[k][a][ ][Set ID][ ][Data][Cr]

Data 0 : Power Off   1 : Power On

Acknowledgement

[a][ ][Set ID][ ][OK][Data][x]

► To show Power On/Off.

Transmission

[k][a][ ][Set ID][ ][FF][Cr]

Data 0 : Power Off   1 : Power On

Acknowledgement

[a][ ][Set ID][ ][OK][Data][x]

* In a like manner, if other functions transmit 'FF' data based on this format, Acknowledgement data feedback presents status about each function.

02. Input Select (Command 2:b) (Main Picture Input)

► To select input source for the Monitor. You can also select an input source using the INPUT button on the Monitor's remote control.

Transmission

[k][b][ ][Set ID][ ][Data][Cr]

Data	1 : Video1	6 : DVI
	2 : Video2	7 : Video3
	3 : Component1	8 : Video4
	4 : Component2	9 : HDMI
	5 : RGB	

Acknowledgement

[b][ ][Set ID][ ][OK][Data][x]

Data	1 : Video1	6 : DVI
	2 : Video2	7 : Video3
	3 : Component1	8 : Video4
	4 : Component2	9 : HDMI
	5 : RGB	

03. Aspect Ratio (Command 2:c) (Main picture format)

► To adjust the screen format. You can also adjust the screen format using the ARC (Aspect Ratio Control) button on remote control or in the Screen menu.

Transmission

[k][c][ ][Set ID][ ][Data][Cr]

Data 0 : Normal screen (4:3)
     1 : Wide screen (16:9)
     2 : Wide screen (Horizon)
     3 : Full screen (Zoom)

Acknowledgement

[c][ ][Set ID][ ][OK][Data][x]

04. Screen Mute (Command 2:d)

► To select screen mute on/off.

Transmission

[k][d][ ][Set ID][ ][Data][Cr]

Data 0 : Screen mute off (Picture on)
     1 : Screen mute on (Picture off)

Acknowledgement

[d][ ][Set ID][ ][OK][Data][x]

Data 0 : Screen mute off (Picture on)
     1 : Screen mute on (Picture off)

05. Volume Mute (Command 2:e)

► To control volume mute on/off. You can also adjust mute using the MUTE button on remote control.

Transmission

[k][e][ ][Set ID][ ][Data][Cr]

Data 0 : Volume mute on (Volume off)
     1 : Volume mute off (Volume on)

Acknowledgement

[e][ ][Set ID][ ][OK][Data][x]

Data 0 : Volume mute on (Volume off)
     1 : Volume mute off (Volume on)

06. Volume Control (Command 2:f)

► To adjust volume. You can also adjust volume with the volume buttons on remote control.

Transmission

[k][f][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64

    • Refer to 'Real data mapping1' as shown below.

Acknowledgement

[f][ ][Set ID][ ][OK][Data][x]

Data Min : 0 ~ Max : 64

07. Contrast (Command 2:g)

▶ To adjust screen contrast.
You can also adjust contrast in the picture menu.

Transmission

[k][g][ ][Set ID][ ][Data][Cr]

Data   Min : 0 ~ Max : 64
 • Refer to 'Real data mapping1' as shown below.

Acknowledgement

[g][ ][Set ID][ ][OK][Data][x]

Data   Min : 0 ~ Max : 64

* **Real data mapping 1**

 0 : Step 0

 A : Step 10 (SET ID 10)

 F : Step 15 (SET ID 15)
10 : Step 16 (SET ID 16)

63 : Step 99 (SET ID 99)
64 : Step 100

08. Brightness (Command2:h)

▶ To adjust screen brightness.
You can also adjust brightness in the Picture menu.

Transmission

[k][h][ ][Set ID][ ][Data][Cr]

Data   Min : 0 ~ Max : 64
 • Refer to 'Real data mapping 1'.

Acknowledgement

[h][ ][Set ID][ ][OK][Data][x]

Data   Min : 0 ~ Max : 64

09. Color (Command2:i)

▶ To adjust the screen color.
You can also adjust color in the Picture menu.

Transmission

[k][i][ ][Set ID][ ][Data][Cr]

Data   Min : 0 ~ Max : 64
 • Refer to 'Real data mapping 1'.

Acknowledgement

[i][ ][Set ID][ ][OK][Data][x]

Data   Min : 0 ~ Max : 64

10. Tint (Command2:j)

▶ To adjust the screen tint.
You can also adjust tint in the Picture menu.

Transmission

[k][j][ ][Set ID][ ][Data][Cr]

Data   Red : 0 ~ Green : 64
 • Refer to 'Real data mapping 1'.

Acknowledgement

[j][ ][Set ID][ ][OK][Data][x]

Data   Red : 0 ~ Green : 64

11. Sharpness (Command2:k)

▶ To adjust the screen sharpness.
You can also adjust sharpness in the Picture menu.

Transmission

[k][k][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 64
 • Refer to 'Real data mapping 1'.

Acknowledgement

[k][ ][Set ID][ ][OK][Data][x]

Data   Min : 0 ~ Max : 64

12. OSD Select (Command2:l)

▶ To select OSD (On Screen Display) on/off.

Transmission

[k][l][ ][Set ID][ ][Data][Cr]

Data 0: OSD off   1: OSD on

Acknowledgement

[l][ ][Set ID][ ][OK][Data][x]

Data 0: OSD off   1: OSD on

13. Remote Control Lock Mode (Command2:m)

▶ To lock the remote control and front panel controls on the monitor

Transmission

[k][m][ ][Set ID][ ][Data][Cr]

Data 0: lock off   1: lock on

Acknowledgement

[m][ ][Set ID][ ][OK][Data][x]

Data 0: lock off   1: lock on

• If you're not using the remote control and front panel controls on the monitor, use this mode. When main power is on/off, remote control lock is released.

14. PIP / DW (Command2:n)

▶ To control the PIP (Picture-in-Picture) or DW.
You can also control the PIP/DW using the PIP or DW button
on the remote control or in the PIP/DW menu.

Transmission

[k][n][ ][Set ID][ ][Data][Cr]

Data 0: PIP/DW off   2: DW1
      1: PIP   3: DW2

Acknowledgement

[n][ ][Set ID][ ][OK][Data][x]

Data 0: PIP/DW off   2: DW1
      1: PIP   3: DW2

15. Split Zoom (Command2:p)

▶ To operate split zoom function and select the split
zoom section number.

Transmission

[k][p][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 99
• Refer to 'Real data mapping 2'.

Acknowledgement

[p][ ][Set ID][ ][OK][Data][x]

Data   Min: 0 ~ Max: 99

* **Real Data Mapping 2**

0 : Reset split zoom
21 : Selection 1 of 2 split zoom
24 : Selection 4 of 2 split zoom
41 : Selection 1 of 4 split zoom
42 : Selection 2 of 4 split zoom
44 : Selection 4 of 4 split zoom
45 : Selection 5 of 4 split zoom
91 : Selection 1 of 9 split zoom

99 : Selection 9 of 9 split zoom

16. PIP Position (Command2:q)

▶ To select sub picture position for PIP.
You can also adjust the sub picture position using
Win.position on the remote control or in the PIP/DW menu.

Transmission

[k][q][ ][Set ID][ ][Data][Cr]

Data 0: Right down on screen
      1: Left down on screen
      2: Left up on screen
      3: Right up on screen

Acknowledgement

[q][ ][Set ID][ ][OK][Data][x]

Data 0: Right down on screen
      1: Left down on screen
      2: Left up on screen
      3: Right up on screen

17. Treble (Command2:r)

▶ To adjust treble.
You can also adjust treble in the Sound menu.

Transmission

[k][r][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 64
• Refer to 'Real data mapping 1'. See page 34.

Acknowledgement

[r][ ][Set ID][ ][OK][Data][x]

Data   Min: 0 ~ Max: 64

18. Bass (Command2:s)

▶ To adjust bass.
You can also adjust bass in the Sound menu.

Transmission

[k][s][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 64
• Refer to 'Real data mapping 1'. See page 34.

Acknowledgement

[s][ ][Set ID][ ][OK][Data][x]

Data   Min: 0 ~ Max: 64

19. Balance (Command2:t)

▶ To adjust balance.
You can also adjust balance in the Sound menu.

Transmission

[k][t][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 64
• Refer to 'Real data mapping 1'. See page 34.

Acknowledgement

[t][ ][Set ID][ ][OK][Data][x]

Data   Min: 0 ~ Max: 64

20. Color Temperature (Command2:u)

▶ To adjust color temperature.
You can also adjust ACC in the Picture menu.

Transmission

[k][u][ ][Set ID][ ][Data][Cr]

Data 0: Cool   1: Normal   2: Warm

Acknowledgement

[u][ ][Set ID][ ][OK][Data][x]

Data 0: Cool   1: Normal   2: Warm

21. PIP Input Select (Command2:y)

► To select input source for sub picture in PIP mode.

Transmission

[k][y][　][Set ID][　][Data][Cr]

Data 1 : Video1   6 : DVI
      2 : Video2   7 : Video3
      3 : Component1   8 : Video4
      4 : Component2   9 : HDMI
      5 : RGB

Acknowledgement

[y][　][Set ID][　][OK][Data][x]

Data 1 : Video1   6 : DVI
      2 : Video2   7 : Video3
      3 : Component1   8 : Video4
      4 : Component2   9 : HDMI
      5 : RGB

22. Abnormal State (Command2:z)

► To recognize an abnormal state.

Transmission

[k][z][　][Set ID][　][FF][Cr]

Data FF:Read

Acknowledgement

[z][　][Set ID][　][OK][Data][x]

Data 0: Power on(signal)   6: AC detect off
      1: Power on(No signal)   7: Fan Alarm off
      2: Remote control off   8: Off timer off
      3: Sleep time off   9: No signal off
      4: RS-232C off   a: Connection Detect off
      5: 5V monitor off

* If you do not press any button within 2 hours after the monitor turns
  on with the On Timer function, the monitor will automatically revert to
  standby mode.

23. ISM Method (Command2:p)

► To avoid having a fixed image remain on screen.

Transmission

[j][p][　][Set ID][　][Data][Cr]

Data 0: Normal   2: Orbiter
      1: White wash   3: Inversion

Acknowledgement

[p][　][Set ID][　][OK][Data][x]

Data 0: Normal   2: Orbiter
      1: White wash   3: Inversion

24. Low Power (Command2:q)

► To control the low power function on/off.

Transmission

[j][q][　][Set ID][　][Data][Cr]

Data 0: Low power off
      1: Low power on

Acknowledgement

[q][　][Set ID][　][OK][Data][x]

Data 0: Low power off
      1: Low power on

25. Picture Size Setting for DW mode (Command2:t)

► To adjust main picture size in DW mode.

Transmission

[j][t][　][Set ID][　][Data][Cr]

Data Min: 0 ~ Max: 30
      • Refer to 'Real data mapping1'. See page 34.

Acknowledgement

[t][　][Set ID][　][OK][Data][x]

Data Min: 0 ~ Max: 30

26. Auto Configure (Command2:u)

► To adjust picture position and minimize image shaking
  automatically. Auto Configure only works in RGB-PC
  mode.

Transmission

[j][u][　][Set ID][　][Data][Cr]

Data 1
      • Refer to 'Real data mapping1'. See page 34.

Acknowledgement

[u][　][Set ID][　][OK][Data][x]

Data 1

27. Key (Command2:c)

► To adjust Key code for IR remote control.

Transmission

[m][c][　][Set ID][　][Data][Cr]

Data Key code : Refer to See page 38.

Acknowledgement

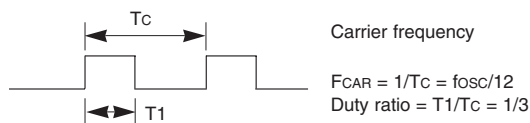[c][　][Set ID][　][OK][Data][x]

IR Code

How to Connect

► Connect your wired remote control to the Remote Control port on the Monitor.
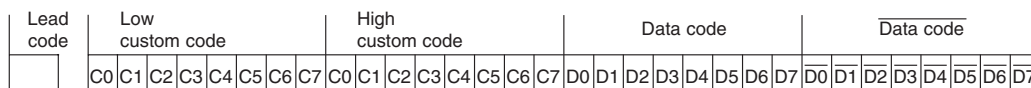
Remote Control IR Code

► **Output waveform**

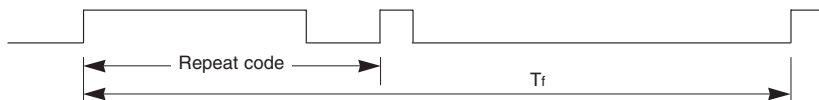Single pulse, modulated with 37.917KHz signal at 455KHz

Carrier frequency

$F_{CAR} = 1/T_C = f_{OSC}/12$
Duty ratio = $T1/T_C = 1/3$

► **Configuration of frame**

• 1st frame

Lead code	Low custom code	High custom code	Data code	$\overline{Data\ code}$
	C0 C1 C2 C3 C4 C5 C6 C7	C0 C1 C2 C3 C4 C5 C6 C7	D0 D1 D2 D3 D4 D5 D6 D7	$\overline{D0}$ D1 D2 D3 D4 D5 D6 D7

• Repeat frame

Repeat code

Tf

► **Lead code**

9 ms   4.5 ms

► **Repeat code**

0.55 ms

9 ms

2.25 ms
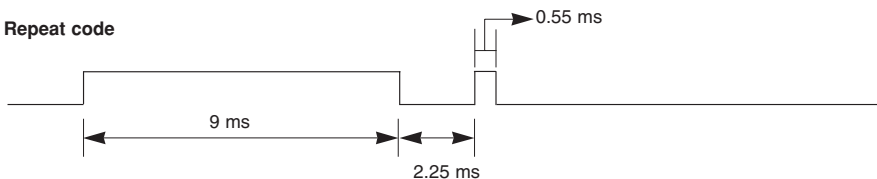
► **Bit description**

• Bit "0"

0.56 ms

1.12 ms

• Bit "1"

0.56 ms

2.24 ms
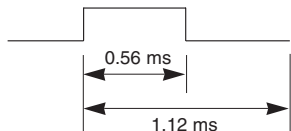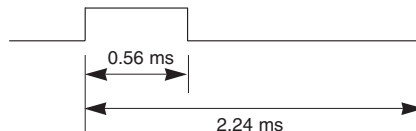
► **Frame interval : Tf**

The waveform is transmitted as long as a key is depressed.

Tf   Tf

Tf=108ms @455KHz
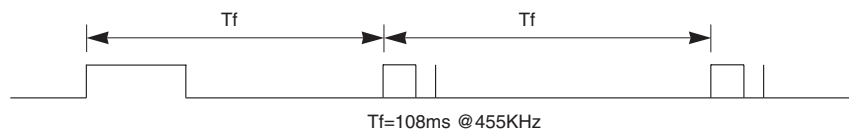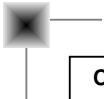
Code (Hexa)	Function	Note
10	Number Key 0	R/C Button
11	Number Key 1	R/C Button
12	Number Key 2	R/C Button
13	Number Key 3	R/C Button
14	Number Key 4	R/C Button
15	Number Key 5	R/C Button
16	Number Key 6	R/C Button
17	Number Key 7	R/C Button
18	Number Key 8	R/C Button
19	Number Key 9	R/C Button
0E	SLEEP	R/C Button
09	MUTE	R/C Button
08	POWER	R/C Button (Power On/Off)
02	VOL+	R/C Button
03	VOL-	R/C Button
00	CH+	R/C Button
01	CH-	R/C Button
4D	APC	R/C Button
52	DASP	R/C Button
44	ENTER (■)	R/C Button
0B	All INPUT SELECT	R/C Button
43	MENU	R/C Button
79	ARC	R/C Button (4:3/16:9/Horizon/Zoom mode Selection)
7B	Split Zoom	R/C Button
62	Window Position	R/C Button
64	Window Size	R/C Button
07	◄	R/C Button
06	►	R/C Button
40	▲	R/C Button
41	▼	R/C Button
5B	EXIT	R/C Button
60	PIP	R/C Button
92	XD	R/C Button
61	PIP Input	R/C Button
6B	DW	R/C Button
CD	Video	R/C Button
CE	HDMI	R/C Button
3E	Key lock	R/C Button
75	Index	R/C Button
99	Auto config.	Discrete IR Code (Only RGB mode)
5A	Input video1	Discrete IR Code (Input Video 1 Selection)
D0	Input video2	Discrete IR Code (Input Video 2 Selection)
BF	Input Component 1	Discrete IR Code (Input Component 1 Selection)
D4	Input Component 2	Discrete IR Code (Input Component 2 Selection)
D5	Input RGB	Discrete IR Code (Input RGB Selection)
C6	Input DVI	Discrete IR Code (Input DVI Selection)

Programming the Remote

▶ The remote control is a multi-brand or universal remote control. It can be programmed to operate most remote-controllable devices of other manufacturers.
Note that the remote control may not control all models of other brands.

Programming a code into a remote mode

1. Test your remote control.
   To find out whether your remote control can operate the component without programming, turn on the component such as a VCR and press the corresponding **MODE** button (VCR) on the remote control, while pointing at the component.

2. Turn on the component to be programmed, then press the corresponding **MODE** button on the remote control.

3. Press the **MENU** and **MUTE** buttons simultaneously, the remote control is ready to be programmed for the code.

4. Enter a code number using the number buttons on the remote. Programming code numbers for the corresponding component can be found on the following pages. Again, if the code is correct, the device will turn off.

5. Press the **MENU** button to store the code.

6. Test the remote control functions to see if the component responds properly. If not, repeat from step 1.

Programming Codes

VCRs

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
AIWA	034	KENWOOD	014 034 039 043 047 048	PORTLAND	108	TATUNG	039 043
AKAI	016 043 046 124 125 146	LG (GOLDSTAR)	001 012 013 020 101 106 114 123	PULSAR	072	TEAC	034 039 043
AMPRO	072	LLOYD	034	QUARTZ	011 014	TECHNICS	031 033 070
ANAM	031 033 103	LXI	003 009 013 014 017 034 101 106	QUASAR	033 066 075 145	TEKNIKA	019 031 033 034 101
AUDIO DYNAMICS	012 023 039 043	MAGIN	040	RCA	013 020 033 034 040 041 062 063 107 109 140 144 145 147	THOMAS	034
BROKSONIC	035 037 129	MAGNAVOX	031 033 034 041 067 068			TMK	006
CANON	028 031 033	MARANTZ	012 031 033 067 069	REALISTIC	003 008 010 014 031 033 034 040 053 054 101	TOSHIBA	008 013 042 047 059 082 112 131
CAPEHART	108	MARTA	101			TOTEVISION	040 101
CRAIG	003 040 135	MATSUI	027 030	RICO	058	UNITECH	040
CURTIS MATHES	031 033 041	MEI	031 033	RUNCO	148	VECTOR RESEARCH	012
DAEWOO	005 007 010 064 065 108 110 111 112 116 117 119	MEMOREX	003 010 014 031 033 034 053 072 101 102 134 139	SALORA	014	VICTOR	048
				SAMSUNG	032 040 102 104 105 107 109 112 113 115 120 122 125	VIDEO CONCEPTS	012 034 046
DAYTRON	108	MGA	045 046 059			VIDEOSONIC	040
DBX	012 023 039 043	MINOLTA	013 020	SANSUI	022 043 048 135	WARDS	003 013 017 024 031 033 034 040 053 054 131
DYNATECH	034 053	MITSUBISHI	013 020 045 046 049 051 059 061 151	SANYO	003 007 010 014 102 134		
ELECTROHOME	059			SCOTT	017 037 112 129 131	YAMAHA	012 034 039 043
EMERSON	006 017 025 027 029 031 034 035 036 037 046 101 129 131 138 153	MTC	034 040	SEARS	003 008 009 010 013 014 017 020 031 042 073 081 101	ZENITH	034 048 056 058 072 080 101
		MULTITECH	024 034				
		NEC	012 023 039 043 048	SHARP	031 054 149		
FISHER	003 008 009 010			SHINTOM	024		
FUNAI	034	NORDMENDE	043	SONY	003 009 031 052 056 057 058 076 077 078 149		
GE	031 033 063 072 107 109 144 147	OPTONICA	053 054				
		PANASONIC	066 070 074 083 133 140 145	SOUNDESIGN	034		
GO VIDEO	132 136			STS	013		
HARMAN KARDON	012 045	PENTAX	013 020 031 033 063	SYLVANIA	031 033 034 059 067		
HITACHI	004 018 026 034 043 063 137 150	PHILCO	031 034 067				
INSTANTREPLAY	031 033	PHILIPS	031 033 034 054 067 071 101	SYMPHONIC	034		
JCL	031 033	PILOT	101	TANDY	010 034		
JCPENNY	012 013 015 033 040 066 101	PIONEER	013 021 048				
JENSEN	043						
JVC	012 031 033 043 048 050 055 060 130 150 152						

CATV

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
ABC	003 004 039 042 046 052 053	GOLDEN CHANNEL	030		065 085 090	SL MARX	030
		HAMLIN	049 050 055	PIONEER	034 051 052 063 076	SPRUCER	047 078
AJIN	112	HITACHI	052 055			STARCOM	002 004 008 009
ANTRONIK	014	HOSPITALITY	070 077	POST NEWS WEEK	016	STARGATE	008 030
ARCHER	005 007 014 024	JERROLD	002 003 004 008 009 010 052 069 074	PRUCER	059	SYLVANIA	067
CABLE STAR	026			PTS	011 048 071 072 073 074	TADIRAN	030
CENTURION	092	LG (GOLDSTAR)	001 106 101 005			TAEKWANG	110
CENTURY	007	M-NET	037	PULSAR	100	TAIHAN	105
CITIZEN	007	MACOM	033	RCA	047	TANDY	017
COLOUR VOICE	065 090	MAGNAVOX	010 012 064 079	REGAL	049 050	TEXSCAN	029 067
COMBANO	080 081	MEMOREX	100	REGENCY	057	TOCOM	039 040 056
COMTRONICS	019 030	MOVIE TIME	028 032	REMBRANT	025	TOSHIBA	100
DIAMOND	023	NSC	015 028 038 071 073	RK	091	UNIKA	007 014 024
EAGLE	020 030 040			SAMSUNG	102 107 030 068	UNITED CABLE	004 053
EASTERN	057 062 066	OAK	016 031 037 053	SCIENTIFIC ATLANTA	003 011 041 042 043 045 046	UNIVERSAL	005 007 014 024 026 027 032 035
ELECTRICORD	032	PANASONIC	044 047				
GE	072	PARAGON	100	SHERITECH	022	VIEWSTAR	012 015 018 086 087 088 089
GEMINI	008 022 025 054	PHILIPS	006 012 013 020	SIGNAL	030		
GI	052 074			SIGNATURE	052	ZENITH	100 114 060 093

HDSTB

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
ALPHASTAR DSR	123	EUROPLUS	114	MEMOREX	057	STARCAST	041
AMPLICA	050	FUJITSU	017 021 022 027	NEXTWAVE	028 124 125	SUPER GUIDE	020 124 125
BIRDVIEW	051 126 129		133 134	NORSAT	069 070	TEECOM	023 026 075 087
BSR	053	GENERAL INSTRUMENT	003 004 016 029	PACE SKY SATELLITE	143		088 090 107 130
CAPETRONICS	053		031 059 101	PANASONIC	060 142		137
CHANNEL MASTER	013 014 015 018	HITACHI	139 140	PANSAT	121	TOSHIBA	002 127
	036 055	HOUSTON TRACKER	033 037 039 051	PERSONAL CABLE	117	UNIDEN	016 025 042 043
CHAPARRAL	008 009 012 077		057 104	PHILIPS	071		044 045 048 049
CITOH	054	HUGHES	068	PICO	105		078 079 080 086
CURTIS MATHES	050 145	HYTEK	053	PRESIDENT	019 102		101 135 136
DRAKE	005 006 007 010	JANIEL	060 147	PRIMESTAR	030 110 111	VIEWSTAR	115
	011 052 112 116	JERROLD	061	PROSAT	072	WINEGARD	128 146
	141	KATHREIN	108	RCA	066 106	ZENITH	081 082 083 084
DX ANTENNA	024 046 056 076	LEGEND	057	REALISTIC	043 074		091 120
ECHOSTAR	038 040 057 058	LG	001	SAMSUNG	123		
	093 094 095 096	LUTRON	132	SATELLITE SERVICE CO	028 035 047 057		
	097 098 099 100	LUXOR	062 144		085		
	122	MACOM	010 059 063 064	SCIENTIFIC ATLANTA	032 138		
ELECTRO HOME	089		065	SONY	103		

Audio

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
AIWA	014 028 070 096	JVC	004 013 141	PHILIPS	026 112 143 253		147 218
	125 129 139 229	KEC	185 186 187	PIONEER	039 042 043 063	TOSHIBA	137
	230	KENWOOD	038 050 067 089		065 091 093 094	THE	061
AKAI	163		170 171 197 206		115 123 127 250	VICTOR	088 131
ANAM	003 014 017 023		215 222	QUASAR	113	WARDS	089
	059 106 189 216	KOHEL	030	RCA	080	YAMAHA	054 055 066 092
	217 235 236	NAD	045 046	RCX	092		199
BURMECTER	252	LOTTE	014 016 036 098	REALISTIC	103 106		
CARVER	086		100 172 173 174	SAMSUNG	124 145 146 182		
CLARION	199		175 176 177 178		193 194 195 203		
DAEWOO	027 053 060 184		179 180 181 183		204 244 245 246		
	102 148 198 221		201 202 208 213	SANSUI	011 135 138 144		
DENON	015 075 130 143		214 219 223 232	SANYO	019 083 234		
FANTASIA	071		238 240	SCOTT	106 186		
FINEARTS	022	LXI	103	SHARP	031 032 051		
FISHER	089 099	MAGNAVOX	111		072 082 117 119		
LG(GOLDSTAR)	001 021 024 029	MARANTZ	002 018 020 025		156 184 199 200		
	087 107 108 110		034 041 081 090		206 209		
	190 191 192 210		097 112	SHERWOOD	005 006 158		
	211 212 239	MCINTOSH	049	SONY	044 045 109 114		
HAITAI	034 035 188 222	MCS	104		118 126 248 249		
HARMAN/KARDON	068	MEMOREX	107	TAEKWANG	012 020 073 074		
INKEL	037 058 062 069	NAD	046		076 077 105 161		
	078 079 095 121	ONKYO	013 040 041 047		162 163 164 165		
	122 149 150 151		048 056 057 132		166 167 168 169		
	152 153 154 155		133 140		205 231 233 242		
	157 158 159 160	OPTIMUS	158		254		
	189 207 222 224	PANASONIC	007 033 064 113	TEAC	010 085 106 136		
	225 226 227 243		142 220 241 251		185 187 237		
	247	PENNEY	104	TECHNICS	101 113 128 134		

DVD

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
APEX DIGITAL	022	MAGNAVOX	013	PHILIPS	013	SONY	007
DENON	020 014	MARANTZ	024	PIONEER	004 026	THOMPSON	005 008
GE	005 006	MITSUBISHI	002	PROCEED	021	TOSHIBA	019 008
HARMAN KARDON	027	NAD	023	PROSCAN	005 006	YAMAHA	009 018
JVC	012	ONKYO	008 017	RCA	005 006	ZENITH	010 016 025
LG	001 010 016 025	PANASONIC	003 009	SAMSUNG	011 015		

Troubleshooting Checklist

No picture & No sound	• Check whether the Monitor is turned on. • Power cord inserted into wall outlet? • Test the wall power outlet, plug other product's power cord into the wall outlet where the Monitor's power cord was plugged in.
Picture OK & No sound	• Press the **VOLUME** (+) button. • Sound muted? Press **MUTE** button.
The remote control doesn't work	• Check to see if there is any object between the Plasma Display and the remote control causing obstruction. • Are batteries installed with correct polarity (+ to +, - to -)? (Refer to p.9) • Install new batteries. (Refer to p.9)
Picture appears slowly after switching on	• This is normal, the image is muted during the plasma display startup process. Please contact your service center, if the picture has not appeared after five minutes.
No or Poor color or Poor picture	• Select **Color** in the **Picture** menu and press the ▶ button. (Refer to p.20) • Keep a sufficient distance between the Monitor and the VCR. • Activate any function to restore the brightness of the picture. (If still picture is on the screen for more than 5 minutes, the screen gets dark.)
Horizontal/vertical bars or picture shaking	• Check for local interference such as an electrical appliance or power tool.
No output from one of the speakers	• Adjust **Balance** in the **Sound** menu. (Refer to p.21)
Unusual sound from inside the monitor	• A change in ambient humidity or temperature may result in an unusual noise when the plasma display is turned on or off and does not indicate a fault with the monitor.

Product Specifications

MODELS	71PY1M (71PY1M-WA)
Width (inches / mm)	68.9 / 1750
Height (inches / mm)	38.7 / 982
Depth (inches / mm)	3.9 / 98
Weight (pounds / kg)	190.6 / 86.5
Power requirement	AC110-240V ~ 50/60Hz
Resolution	1920 x 1080 (Dot)
Viewing Size (mm)	1512.26

Environmental condition	Operating Temperature	32 ~ 104°F (0 ~ 40°C)
	Operating Humidity	Less than 80%
	Storage Temperature	-4 ~ 140°F (-20 ~ 60°C)
	Storage Humidity	Less than 85%

• The specifications shown above may change without notice for quality improvement.