Chapter 2

Using the LCD TV

2.1 Watching TV

1 Check the antenna connection. (For more information on connection, see
'1.4 Connecting the LCD TV and Peripheral Devices'.)

2 Press the power button on the rear panel of the LCD TV.

3 Press the <POWER> button on the remote control.

4 Press the <TV/AV> button on the remote control, and press the number button
to select a channel (For example, if selecting channel no. 99, press the 9
button twice on the remote control).

5 Press the < VOL VOL > button to adjust the volume.
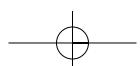
N・O・T・E

▶ **To mute the LCD TV sound**

Press the <MUTE> button on the remote control once to mute the LCD TV sound. Press the button once again to turn the sound back on.

▶ **To completely turn off the LCD TV power.**

❶ Press the <POWER> button on the remote control. The LCD TV will be turned off and remain in standby mode.

❷ Press the power button on the rear panel of the LCD TV (or unplug the power cord from the wall outlet).

2.2 To configure the menu

To configure the LCD TV functions, press the [MENU] button. Knowing the method for configuring the menu will make using the LCD TV much easier.

▶ Menu Settings

1 Press the power button on the rear panel of the LCD TV, and press the <POWER> button on the remote control.

2 Press the <MENU> button on the remote control.
Press the < [CH▼] [CH▲] > button on the remote control to navigate to different menus.

PICTURE

PSM

Exit : Menu ◀ ▶ ▲ ▼

<PICTURE>

SOUND

Effect
Surround
AVL
Balance

Exit : Menu ◀ ▶ ▲ ▼

<SOUND>

PIP/POP/PBP

On/Off

Exit : Menu ◀ ▶ ▲ ▼

<PIP/POP/PBP>

SET UP

Language
Transparency
ARC
ISM Method
Set ID
Factory Reset
Timer
Caption
Parental

Exit : Menu ◀ ▶ ▲ ▼

<SET UP>

CHANNEL

Air/CATV
Auto CH Progress
Channel
Add/Del Channel
Fine Tune

Exit : Menu ◀ ▶ ▲ ▼

<CHANNEL>
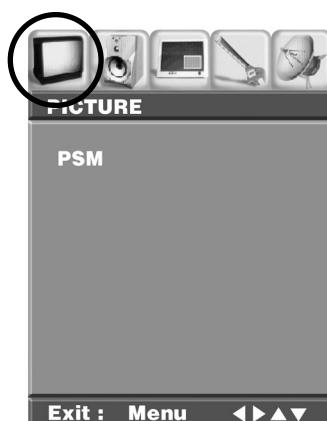
3 Press the <OK> button or the < CH / CH > button on the remote control to select the menu to configure. Submenus will be available for each selection.
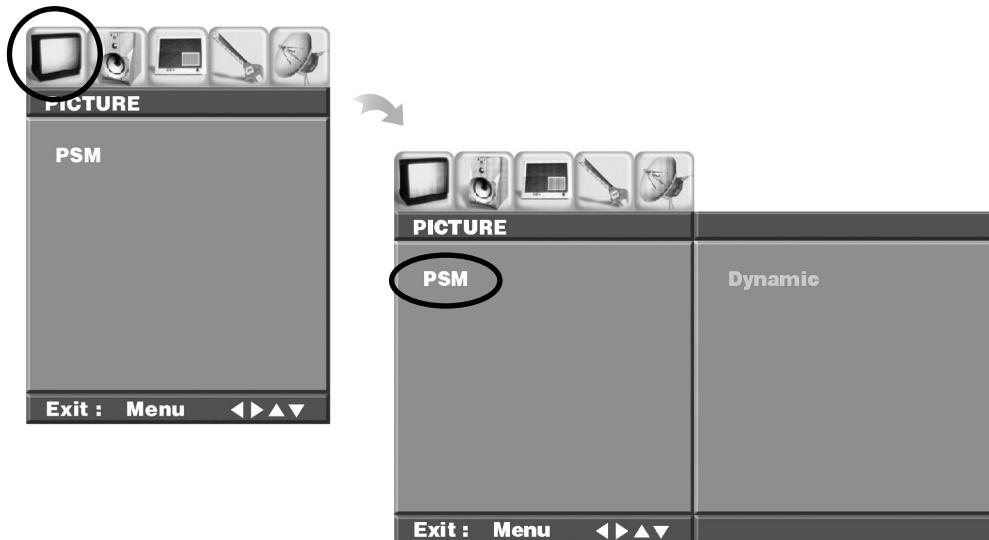
4 In the submenus, use the < CH / CH > button on the remote control to navigate to different items. Use the < VOL / VOL > button to make adjustments. When selecting PIP Source, use the < VOL / VOL > button to make adjustments, and then press the <OK> button on the remote control to make a selection (Select the 'User' item under the 'PSM' submenu).
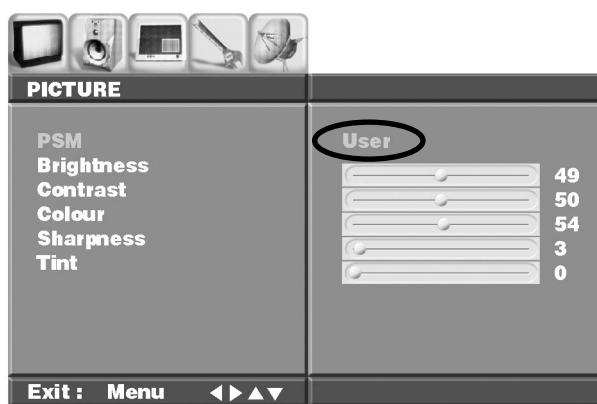
5 Use the < CH CH > button and the < VOL VOL > button on the remote control to adjust the settings for different items. (For example, adjustment can be made of items such as Brightness, Contrast, Color, Sharpness, and Tint.)

PICTURE

PSM   User
Brightness   49
Contrast   50
Colour   54
Sharpness   3
Tint   0

Exit :   Menu   ◀ ▶ ▲ ▼

6 When adjustments are complete, press the <OK> button once to close the adjustment screen. Press the <MENU> button once again to close the 'Menu' screen.

N · O · T · E

▶ **To configure the menu without using the remote controller**

❶ Press the <MENU> button located at the bottom of the LCD TV.

❷ Press the <CH ▲/ ▼> buttons to navigate to submenus.

❸ Press the <VOL < ◀ / ▶> buttons to adjust each item.

❹ If 'Menu for Local Key' is on, the <SOURCE> button is used as the <OK> button. When adjustments have been completed, press the <MENU> button to close the 'Menu' screen.

▶ TV Menu Categories and Items

The Main Menu contains 5 categories, which in turn contain submenus and option items:

Main Menu	Sub Menu 1	Sub Menu 2	Sub Menu 3
PICTURE	PSM (Select Screen View)	Dynamic	Vivid Picture Appearance
		Standard	Standard Picture Appearance
		Mild	Softer Picture Appearance
		Game	Select when playing video games on LCD TV
		User	Brightness : Adjust brightness. (Brightness means the brightness of the screen.)
			Contrast : Adjust contrast. (Contrast means the difference in brightness between an object and its background.)
			Colour : Adjust color (RGB).(Adjusting the color to make it look more natural.)
			Sharpness : Adjust sharpness.(Sharpness means the sharpness of the object's profile.)
			Tint : Adjust color intensity.(Color intensity indicates color depth.)
SOUND	Effect	Flat	Standard factory settings.
		Music	When watching music video or concerts.
		Movie	When watching movies.
		Speech	When watching a show that is mostly dialogue.
		User	Bass : Adjust bass.
			Treble : Adjust treble.
	Surround	Off	Surround Output Off
		Normal	Optimal Surround for Output Condition
		Spatial	Enhanced Surround
	AVL	On/Off	AVL Function On/Off
	Balance	-10 ~ 10	Adjust balance between the left & right speakers.

Main Menu	Sub Menu 1	Sub Menu 2	Sub Menu 3	Description
PIP/POP/PBP	On/Off	Off		PIP/POP/PBP Function Off
		PIP	Source	TV, AV1~AV3, Component1~2, RGB, DVI
			Swap	To Set
			PIP Size	Small, Large
			PIP Position	PIP Screen Position Selection
		POP	Source	TV, AV1~AV3, Component1~2, RGB, DVI
			Swap	To Set
		PBP1~2	Source	TV, AV1~AV3, Component1~2, RGB, DVI
			Swap	To Set
SET UP	Language	English, Deutsch, Français, Español, Italiano, Korean (Menu Screen Display Language Selection)		
	Transparency	0~10		Adjusts the image transparency
	ARC	16:9, 14:9, 4:3		Screen Aspect Selection
	ISM Method	Normal		Normal screen
		Orbit		Moves the screen up, down, left and right in small increments to prevent overheating of the panel during prolonged use.
		White		Sets the whole screen to white.
	Set ID	0~99		Set ID Selection
	Factory Reset	Off		Selects the factory default.
	Timer	Clock	AM, PM	Time Selection
		Off Timer	AM, PM, On/Off	TV Off Time Selection
		On Timer	AM, PM, On/Off	TV On Time Selection
			CHANNEL	CATV/Air
			Volume	0~100
		Auto Off	On/Off	TV Off Auto Function Selection
	Caption	TEXT 1~4		Text function support
		Off		Caption function Off (when the subtitle function is provided)
		CC1~4		Closed Captioning function support
	Parental	Lock On/Off		Parental function On/Off
		MPAA		MPAA(Motion Picture Association of America) Guideline setup available
		TV Guidelines		TV Guidelines function support
		Set Password		Password setup available

Main Menu	Sub Menu 1	Sub Menu 2
CHANNEL	Air/CATV	Scan by broadcasting method
	Auto CH Progress	Automatic channel scan
	Channel	Scans the TV channels and registers the channels on air
	Add/Del Channel	Saves the selected channels
	Fine Tune	Manually fine tune the channels if the channel reception is not good

2.3 To Configure TV Channels

**To watch TV with the LCD TV, configure the channels. (Always check the TV connection before use.)**
To save TV channels, configure the channels during the broadcasting hours. Use Automatic Channel Scanning to save all the channels currently airing.

▶ Setting channels automatically

1 Press the <MENU> button on the remote control, and press the < VOL VOL > button on the remote control to navigate to the 'Channel' menu.

CHANNEL

Air/CATV
Auto CH Progress
Channel
Add/Del Channel
Fine Tune

Exit : Menu ◀▶▲▼

2 Press the < CH > button on the remote control to select the 'Air/CATV' submenu. Press the < VOL > button on the remote control to select the broadcasting method (external input).

CHANNEL

Air/CATV	Air	
Auto CH Progress	To Start	▶
Channel	25	
Add/Del Channel	Add	
Fine Tune	50	

Exit : Menu ◀▶▲▼

3 Press the < CH CH > button on the remote control to move to the 'Auto CH Progress'
submenu. At the 'Auto CH Progress' item, press the < VOL ▶ > button on the remote
control to run 'To Start'. Channels will be scanned and saved automatically.

CHANNEL

Air/CATV   Air
Auto CH Progress   To Start   ▶
Channel   25
Add/Del Channel   Add
Fine Tune   50

Exit :   Menu   ◀ ▶ ▲ ▼

Auto CH Progress

Air   35   50 %

Stop :   Menu
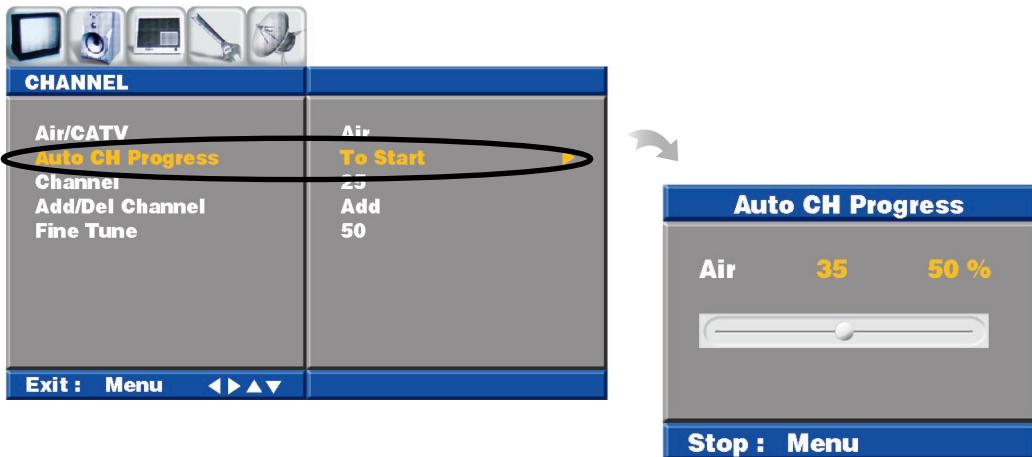
4 Press the <MENU> button on the remote control to close the 'Menu' screen.

▶ Storing the Channel Manually

**1** Press the <MENU> button on the remote control, and press the < VOL ◀ VOL ▶ > button on
the remote control to navigate to the 'CHANNEL' menu.

CHANNEL

Air/CATV
Auto CH Progress
Channel
Add/Del Channel
Fine Tune

Exit :   Menu   ◀ ▶ ▲ ▼

2 Press the < 🔽 🔼 > button on the remote control to move to the 'Channel'
submenu, and press the < ◀ ▶ > button to select the channel with the best video
quality from the channels found.

CHANNEL

Air/CATV	Air
Auto CH Progress	To Start ▶
Channel	25
Add/Del Channel	Add
Fine Tune	50

Exit :   Menu   ◀ ▶ ▲ ▼
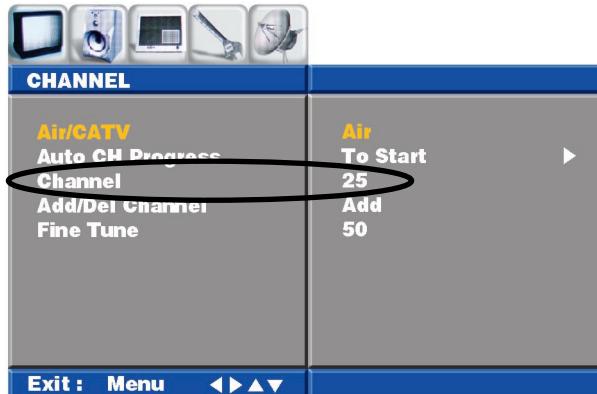
3 Press the < 🔽 > button on the remote control to move to the 'Add/Del Channe'
submenu. Press the < ▶ > button on the remote control to select 'Add' and press the
<OK> button.
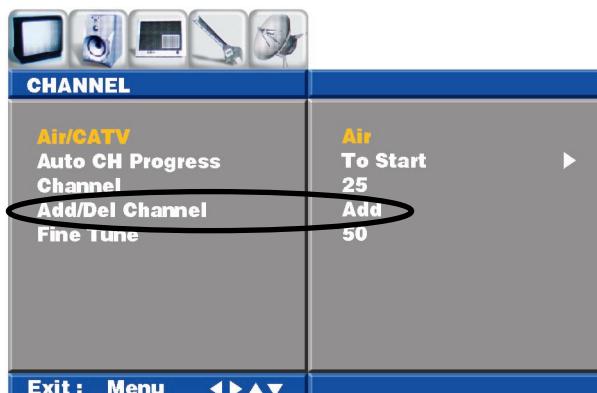
CHANNEL

Air/CATV	Air
Auto CH Progress	To Start ▶
Channel	25
Add/Del Channel	Add
Fine Tune	50

Exit :   Menu   ◀ ▶ ▲ ▼

4 Press the <MENU> button on the remote control to close the 'Menu' screen.

MEMO

2.4 To Select TV/External Input

An external input signal connected to the LCD TV can be selected for viewing. (VCR, DVD, Camcorder, etc.)

▶ Selecting an External Input Device Connected to the LCD TV for viewing

1 Press the <SOURCE> button on the remote control.

2 The 'MAIN SOURCE' screen will be displayed. Press the < CH CH > button on the remote control to select the external device connected to the LCD TV, and press the <OK> button.

3 LCD TV screen will be displayed when you play the external input device.

> **MAIN SOURCE**
> TV
> AV 1
> AV 2
> AV 3
> Component1
> Component2
> RGB
> DVI
> **Select : Enter**
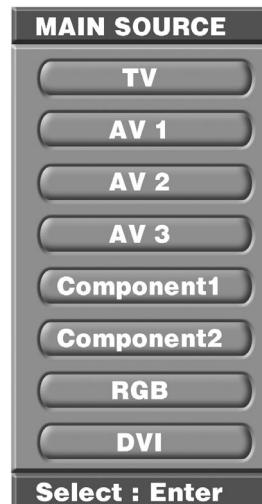
N·O·T·E

▶ Press the <SOURCE> button at the bottom of the LCD TV to open the 'MAIN SOURCE' screen. Use the CH ▲/▼ button to navigate to the 'Connected External Device' mode, and press the <SOURCE> button to make a selection.

▶ Selecting External Input Device When Playing PIP/POP/PBP

Check the location of the external input device connected to the LCD TV, and select an appropriate item. (Connection with cable broadcast, connection with VCR, connection with DVD, connection with camcorder, etc.)

1 Press the <MENU> button on the remote control.

2 Press the < ⟨VOL⟩ ⟨VOL⟩ > button on the remote control to navigate to the 'PIP/POP/PBP' menu, and press the < ⟨CH⟩ ⟨CH⟩ > button to navigate to the 'On/Off' submenu.

PIP/POP/PBP

On/Off

Exit : Menu ◀▶▲▼

3 Press the < ⟨VOL⟩ ⟨VOL⟩ > button on the remote control. Option items will be displayed according to the items 'PIP, POP, PBP1, and PBP2'.

4 Configure settings for each of the items PIP, POP, PBP1, and PBP2. Select the external input device connected to the LCD TV and configure the appropriate option item (PIP/POP/PBP).

PIP/POP/PBP

| On/Off | PIP |
Source	Component1
Swap	To Set
PIP size	Large
PIP position	

Exit : Menu ◀▶▲▼

Using PIP Mode   **LCD TV Screen**

PIP/POP/PBP

On/Off   POP
Source   TV
Swap   To Set

Exit :   Menu   ◀ ▶ ▲▼

Using POP Mode

LCD TV Screen

PIP/POP/PBP

On/Off   PBP 1
Source   TV
Swap   To Set

Exit :   Menu   ◀ ▶ ▲▼
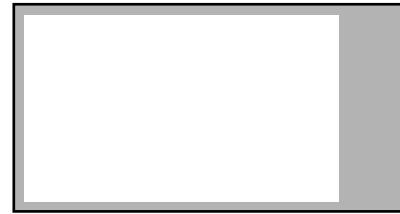
Using PBP1 Mode

LCD TV Screen

PIP/POP/PBP

On/Off   PBP 2
Source   TV
Swap   To Set

Exit :   Menu   ◀ ▶ ▲▼
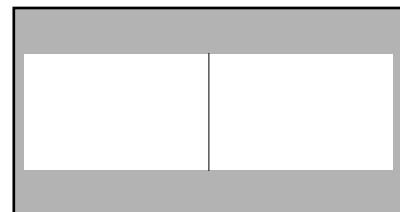
Using PBP2 Mode
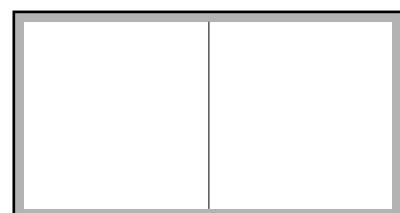
LCD TV Screen
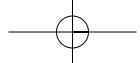
5 When option configuration for each item is complete, press the **<OK>** button on the remote control.

6 To swap between the main screen and the sub-screen when in PIP, POP, or PBP mode, press the **<SWAP>** button on the remote control.
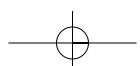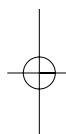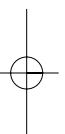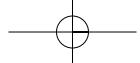
2.5 Adjusting the Picture

The LCD TV has been configured with optimal contrast, brightness, sharpness, colors, etc. by factory default, and there is no need for any further user configuration. However, if you wish to adjust the picture settings, follow the instructions below.

1 Press the <MENU> button on the remote control.

2 Press the < CH > button on the remote control to navigate to the 'PSM' submenu. Press the < VOL > button on the remote control to select options provided in PSM (Picture Standard Mode).

```
PICTURE

  PSM                    Dynamic




Exit :   Menu      ◄ ► ▲ ▼
```

3 PSM (Picture Standard Mode) provides the following functions:

● **Standard** : Standard Picture Appearance

● **Mild** : Softer Picture Appearance

● **Game** : Select this when playing video games on LCD TV.

● **Dynamic** : Vivid Picture Appearance

● **User** : Available user setting items are Brightness, Contrast, Colour, Sharpness, Tint, etc.

- Brightness : Adjust brightness. (Brightness means the brightness of the screen.)

- Contrast : Adjust contrast. (Contrast means the difference in brightness between an object and its background.)

- Color : Adjust color (RGB). (Adjusting the color to make it look more natural.)

- Sharpness : Adjust sharpness. (Sharpness means the sharpness of the object's profile.)

- Tint : Adjust color intensity. (Color intensity indicates color depth.)

4 When configuration is complete, press the <OK> button on the remote control, and then press the <MENU> button on the remote control to close the 'Menu' screen.

2.6 Adjusting the Sound

1. Press the <MENU> button on the remote control.

2. Press the < VOL > button on the remote control to navigate to the 'SOUND' menu.

   SOUND

Effect	Flat
Surround	Off
AVL	On
Balance	───────○─────── 0

   Exit : Menu ◄ ► ▲ ▼

3. Press the < CH > button on the remote control to navigate to the 'Effect' submenu.
   Press the < VOL > button on the remote control to select the options provided in 'Effect'.
   When configuration is complete, press the <OK> button.

   - Flat : Standard factory settings.

   - Music : When watching music video or concerts.

   - Movie : When watching movies.

   - Speech : When watching a show that is mostly dialogue.

   - User : Available user setting items are Bass, Treble, etc.

● **Bass** : Adjusts bass

● **Treble** : Adjusts treble

4 Press the < CH > button on the remote control to navigate to the 'Surround' submenu.
Press the < VOL > button on the remote control to select options provided in 'Surround'.
When configuration is complete, press the <OK> button.

- Off : Select this if not using the Surround output function.

- Normal : Surround sound optimized to the output conditions will be used.

- Special : Enhances the surround output.

5 Press the < CH > button on the remote control to navigate to the 'AVL' submenu.
Press the < VOL > button on the remote control to select whether to use the 'AVL' function.
When selection is complete, press the <OK> button.

```
                    SOUND

         Effect              User
         Surround            Normal
         AVL                 On
         Balance                              0
         Bass                                 10
         Treble                               10




         Exit :  Menu      ◀▶▲▼
```

6 Press the < CH > button on the remote control to navigate to the 'Balance' submenu.
Press the < VOL > button on the remote control to adjust 'Left and Right Speaker Sound
Balance'. When adjustment is complete, press the <OK> button.
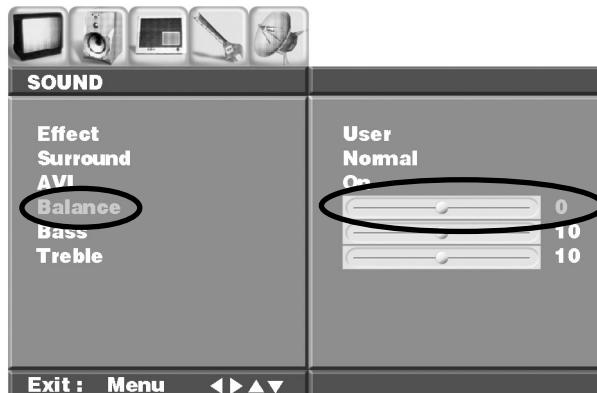
```
                    SOUND

         Effect              User
         Surround            Normal
         AVL                 On
         Balance                              0
         Bass                                 10
         Treble                               10




         Exit :  Menu      ◀▶▲▼
```

7 When configuration is complete, press the <MENU> button to close the 'Menu' screen.

MEMO
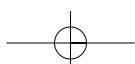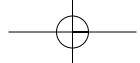
2.7 Configuring the PIP/POP/PBP Functions

Two channels can be shown on the TV screen simultaneously. Available screen division methods are PIP (Picture in a Picture), POP (Picture on a Picture), and PBP (Picture by a Picture).

▶ PIP Function Settings

1 Press the <MENU> button on the remote control.

2 Press the < VOL ▶ > button on the remote control to navigate to the 'PIP/POP/PBP' menu.

3 Press the < CH > button on the remote control to navigate to the 'On/Off' submenu. Press the < VOL ▶ > button on the remote control to select 'PIP'. When configuration is complete, press the <OK> button.
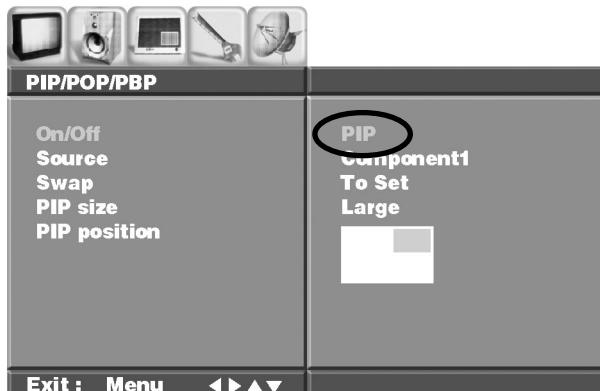
PIP/POP/PBP	
On/Off	PIP
Source	Component1
Swap	To Set
PIP size	Large
PIP position	
Exit : Menu ◀ ▶ ▲ ▼	

- ● **Source** : Select the external input source (TV, AV1~AV3, Component1~2, RGB, or DVI).

- ● **Swap** : Swap between the main screen and the sub-screen (To Set).

- ● **PIP size** : Select the PIP screen size (Small or Large).

- ● **PIP position** : Select the PIP screen position.

4 When configuration is complete, press the <MENU> button to close the 'Menu' screen.

▶ POP Function Settings

1 Press the <MENU> button on the remote control.

2 Press the < ⃗▶ > button on the remote control to navigate to the 'PIP/POP/PBP' menu.

3 Press the < ⃗ > button on the remote control to navigate to the 'On/Off' submenu.
Press the < ⃗▶ > button on the remote control to select 'POP'. When configuration is
complete, press the <OK> button.

PIP/POP/PBP

On/Off   POP
Source   TV
Swap   To Set

Exit :   Menu   ◀ ▶ ▲ ▼

● **Source** : Select the external input source (TV, AV1~AV3, Component1~2, RGB, or DVI).

● **Swap** : Swap between the main screen and the sub-screen (To Set).

4 When configuration is complete, press the <MENU> button to close the 'Menu' screen.

▶ PBP Function Settings

1 Press the <MENU> button on the remote control.

2 Press the < ⃗▶ > button on the remote control to navigate to the 'PIP/POP/PBP' menu.
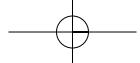
3 Press the < > button on the remote controller to navigate to the 'On/Off' submenu.
Press the < > button on the remote controller to select 'PBP1 or PBP2'. When
configuration is complete, press the <OK> button.

PIP/POP/PBP

On/Off   PBP 1
Source   TV
Swap   To Set

Exit :   Menu   ◄ ► ▲ ▼

● **Source** : Select the external input source (TV, AV1~AV3, Component1~2, RGB, or DVI).

● **Swap** : Swap between the main screen and the sub-screen (To Set).

4 When configuration is complete, press the <MENU> button to close the 'Menu' screen.

MEMO

2.8 To Configure the SET UP

Various functions for watching TV can be configured.
(Language, Transparency, ARC, ISM Method, Timer, Caption, Parental etc.)

▶ Selecting the Main Screen Language

1 Press the <MENU> button on the remote control.

2 Press the < ▶ > button on the remote control to navigate to the 'SET UP' menu.

3 Press the < ▼ > button on the remote control to navigate to the 'Language'
submenu. Press the < ▶ > button on the remote control to select the preferred
language. When selection is complete, press the <OK> button.
(English, Deutsch, Français, Español, Italiano, Korean)

SET UP	
Language	English
Transparency	10
ARC	16 : 9
ISM Method	Off
Set ID	1
Factory Reset	Off
Timer	▶
Caption	Off
Parental	▶
Exit : Menu ◀ ▶ ▲ ▼	
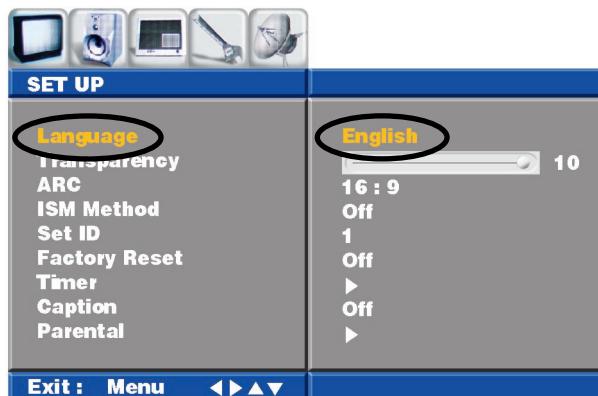
4 When configuration is complete, press the <MENU> button to close the 'Menu' screen.

▶ Adjusting Image Transparency

1 Press the <MENU> button on the remote control.

2 Press the < ▶ > button on the remote control to navigate to the 'Setup' menu.

3 Press the < CH > button on the remote control to navigate to the 'Transparency' submenu. Press the < VOL ▶ > button on the remote control to adjust the Image Transparency. When adjustment is complete, press the <OK> button (the settings possible are 0~10).

<Before Adjusting Image Transparency: 0>

<After Adjusting Image Transparency: 10>

4 When configuration is complete, press the <MENU> button to close the 'Menu' screen.

▶ Selecting Screen ARC

1 Press the <MENU> button on the remote control.

2 Press the < VOL ▶ > button on the remote control to navigate to the 'POP/POP/PBP' menu.

3 Select 'Off' in the 'On/Off' submenu, and press the <OK> button.

4 Press the < |VOL▶| > button on the remote control to navigate to the 'SET UP' menu.

5 Press the < CH > button on the remote control to navigate to the 'ARC' submenu.
Press the < |VOL▶| > button on the remote control to select Screen Aspect. When selection
is complete, press the <OK> button (16:9, 14:9 or 4:3).

<div align="center">

<16:9>   **<14:9>**   **<4:3>**

Supported Only When the PIP/POP/PBP mode is Set to OFF

</div>

6 When configuration is complete, press the <MENU> button to close the 'Menu'
screen.

▶ Setting Sleep Timer

Set the sleep timer to switch the TV power to the standby mode automatically when a
specified time has elapsed.

N · O · T · E

▶ Press the <SLEEP TIMER> button on the remote control to set the sleep timer.

1 Press the <MENU> button on the remote control.

2 Press the < |VOL▶| > button on the remote control to navigate to the 'SET UP' menu.

3 Press the < > button on the remote control to navigate to the 'Timer' submenu, and press the < > button on the remote control. The 'Time Selection' screen will be displayed.

```
Time

 Clock              - - : - - AM
 Off Timer          - - : - - AM    Off
 On Timer           - - : - - AM    Off
                    CHANNEL : CATV 10
                    Volume        31
 Auto Off           Off


Prev :  Menu      ◀ ▶ ▲ ▼
```

4 Under 'Clock', press the < > button and the < > button on the remote control to set the current time. (When setting time, press the < > button on the remote control to set 'Hour', press the < > button to move to'Minutes', press the < > button to set 'Minutes', press the < > button to move to 'AM/PM', and press the < > button to select 'AM/PM'.)

5 When setting is complete, press the < > button on the remote controller to navigate to 'Clock', and press the < > button to navigate to 'Off Timer'.

6 In 'Off Timer', press the < > button and the < > button on the remote control to set the 'TV Off' timer. (When setting time, press the < > button on the remote control to set 'Hour', press the < > button to move to 'Minutes', press the < > button to set 'Minutes', press the < > button to move to 'AM/PM', and press the < > button to select 'AM/PM'.)

N · O · T · E

▶ To turn the TV off automatically, see the section on 'Off Timer' settings for visual settings.
The program channel and volume level can also be configured for cases when the LCD TV is turned on.

7 When configuration is complete, press the < > button on the remote control to navigate to 'Off Timer', and press the < > button on the remote control to navigate to 'Auto Off'. Press the < > button on the remote control to select 'On'.

8 When configuration is complete, press the <MENU> button to close the 'Menu' screen.

▶ Viewing Closed Captions

The LCD TV can decodes and displays the closed caption that are broadcast with certain TV shows. These captions are usually subtitles for the hearing impaired or foreign-language translations. All VCRs record the colsed caption signal from television program, so home-recorded video tapes also provide closed captions. Most prerecorded commercial video tapes provide closed captions as well. Check for the closed caption symbol in television schedule and on the tape's packing : CC

N · O · T · E

▶ The Caption feature dose not work with PC signals.

---

1 Press the <MENU> button on the remote control.

2 Press the < 🔘 > button on the remote control to navigate to the 'SET UP' menu.

3 Press the < 🔘 > button on the remote control to navigate to the 'Caption' submenu.

SET UP

Language	English
Transparency	▭▭▭▭▭▭▭○ 10
ARC	16 : 9
ISM Method	Off
Set ID	1
Factory Reset	Off
Timer	▶
Caption	Off
Parental	▶

Exit : Menu ◀ ▶ ▲ ▼
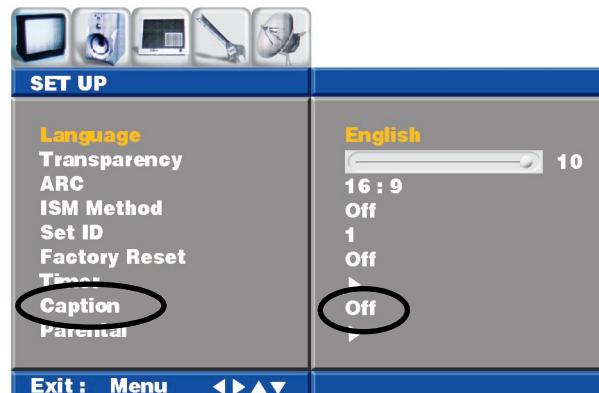
4 Press the < 🔘 🔘 > buttons to select 'CC1~4' or 'TEXT1~4'.

5 When you have finished, press the <MENU> button to close the 'Menu' screen.

▶ Using the Parental

The Parental feature automatically locks out programming that is deemed inappropriate for childern. The user must enter a PIN(Personal Id Number) before any of the Parental restriction can be changed.

Setting Up Your PIN (Personal ID Number)

❶ Press the <MENU> button on the remote control.

❷ Press the < ▶VOL > button on the remote control to navigate to the 'SET UP' menu.

❸ Press the < CH > button on the remote control to navigate to the 'Parental' submenu.

SET UP

Language	English
Transparency	10
ARC	16 : 9
ISM Method	Off
Set ID	1
Factory Reset	Off
Timer	▶
Caption	Off
Parental	▶

Exit :　Menu　◀ ▶ ▲ ▼

❹ Press the < VOL ▶ > button. The 'Enter the Password : ----' screen is displayed.

Enter the Password :

＿ ＿ ＿ ＿

❺ Enter 4-digit PIN number.

N・O・T・E

▶ The default PIN number for a new set is '1-1-1-1'.

❻ After entering a valid PIN number, the 'Parental' menu screen will appear.
Press the < > buttons to select 'Set Password'.

Parental

Lock On/Off
MPAA
TV Guidelines

Set Password

Prev : Menu

On
Unblocked

- FV V S L D
TV-Y
TV-Y7
TV-G
TV-PG
TV-14
TV-MA
▶

Set Password

Enter New Code

_ _ _ _
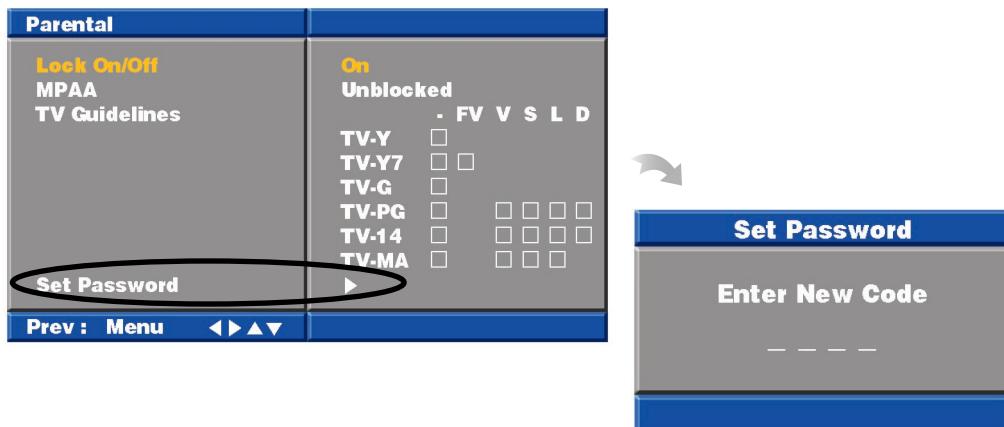
❼ When you have finished, press the **<MENU>** button to colse the 'Menu' screen.

How to On/Off the Parental

❶ Press the **<MENU>** button on the remote control.

❷ Press the < > button on the remote control to navigate to the 'SET UP' menu.

❸ Press the < > button on the remote control to navigate to the 'Parental' submenu.

SET UP

Language
Transparency
ARC
ISM Method
Set ID
Factory Reset
Timer
Caption
Parental

Exit : Menu

English
10
16 : 9
Off
1
Off
▶
Off
▶
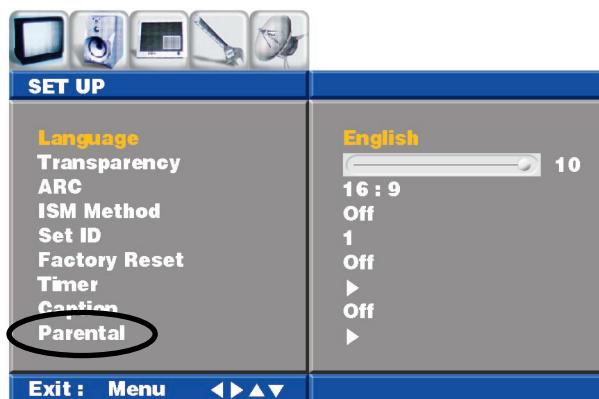
❹ Press the < > button. The 'Enter the Password : ----' screen is displayed.

Enter the Password :

_ _ _ _
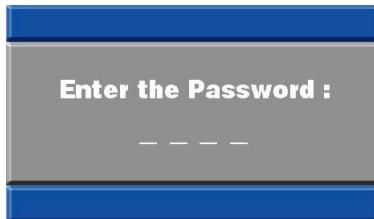
❺ Enter 4-digit PIN number.

❻ After entering a valid PIN number, the Parental menu is displayed and the Parental Lock will be highlighted.

To On or Off the Parental feature, press the < > buttons to select Parental Lock On/Off.

Parental

Lock On/Off   On
MPAA   Unblocked
TV Guidelines   · FV V S L D
                     TV-Y   □
                     TV-Y7 □ □
                     TV-G   □
                     TV-PG □   □ □ □ □
                     TV-14 □   □ □ □ □
                     TV-MA □   □ □ □
Set Password   ▶

Prev : Menu   ◀ ▶ ▲ ▼

❼ When you have finished, press the <MENU> button to colse the 'Menu' screen.

How to Setup Restriction Using the MPAA

❶ Press the <MENU> button on the remote control.

❷ Press the < > button on the remote control to navigate to the 'Setup' menu.

❸ Press the < > button on the remote control to navigate to the 'Parental' submenu.

❹ Press the < [VOL►] > button. The 'Enter the Password : ----' screen is displayed.

```
Enter the Password :

            _ _ _ _
```

❺ Enter 4-digit PIN number.

❻ After entering a valid PIN number, the Parental sub menu screen will appear.
Press the < [CH▼] [CH▲] > buttons to move to 'MPAA' sub menu.

```
Parental
Lock On/Off           On
MPAA                  Unblocked
TV Guidelines              · FV  V  S  L  D
                   TV-Y    ☐
                   TV-Y7   ☐ ☐
                   TV-G    ☐
                   TV-PG   ☐     ☐ ☐ ☐ ☐
                   TV-14   ☐     ☐ ☐ ☐ ☐
                   TV-MA   ☐     ☐ ☐ ☐
Set Password            ▶
Prev :  Menu    ◀ ▶ ▲ ▼
```
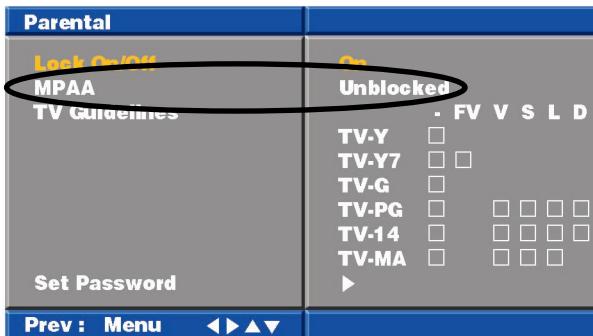
❼ Press the < [VOL◀] [VOL►] > buttons to select particular MPAA category.
The < [VOL◀] [VOL►] > buttons will cycle through the MPAA categories.

- G & Above : General audience (no restrictions).

- PG & Above : Parental guidance suggested.

- PG-13 & Above : Parents strongly cautioned.

- R & Above : Restricted. Children under 17 should be accompanied by an adult.

- NC-17 & Above : No Children under age 17.

- X : Adults only

- Unblocked : Not rated

❽ When you have finished, press the <MENU> button to colse the 'Menu' screen.

N · O · T · E

▶ The Parental will automatically block any category that is 'More restrictive'. For example, if you block the
   PG-13 & Above category, then R & Above, NC-17 & Above, and X will be automatically blocked also.

How to Setup Restriction Using the TV Guidelines

❶ Press the <MENU> button on the remote control.

❷ Press the < VOL ▶ > button on the remote control to navigate to the 'Setup' menu.

❸ Press the < CH ▾ > button on the remote control to navigate to the 'Parental' submenu.

❹ Press the < VOL ▶ > button. The 'Enter the Password : ----' screen is displayed.

Enter the Password :

＿ ＿ ＿ ＿

❺ Enter 4-digit PIN number.
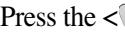
❻ After entering a valid PIN number, the Parental sub menu screen will appear.
Press the < CH ▾ > buttons to select 'TV Guidelines'.

Parental

Lock On/Off	On
MPAA	Unblocked
TV Guidelines	· FV V S L D

TV-Y
TV-Y7
TV-G
TV-PG
TV-14
TV-MA
▶

Set Password

Prev : Menu   ◀ ▶ ▲ ▼
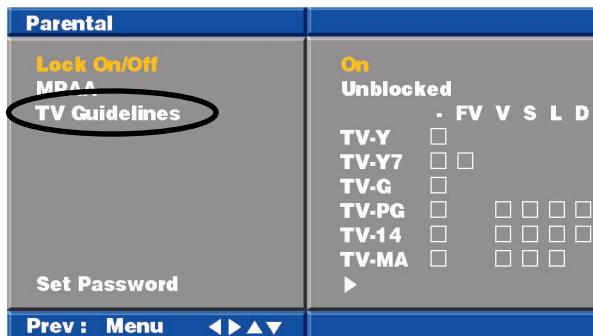
❼ Press the < VOL ◀ VOL ▶ > buttons to move to one of the six age-based categories in column
and press the < CH ▾ CH ▴ > buttons will cycle through the MPAA categories.

- TV-Y : Young Children

- TV-Y7 : Children 7 and Over

- TV-G : General audience

- TV-PG : Parental guidance

- TV-14 : Viewers 14 and Over

- TV-MA : Mature audience

For example, if you block TV-Y category, then TV-Y7 will be automatically blocked. Similarly, if you block TV-G category, then all the categories in the 'young adult' will be blocked (TV-G, TV-PG, TV-14 and TV-MA). The sub-ratings (FV, V, S, L, D) work together similarly. (See step 8)

❽ To set the FV, D, L, S and V sub-ratings, first select one of these TV-Ratings : TV-Y7, TV-PG, TV-14 and TV-MA (See step 7).
Next, while the TV-Ratings is selected, repeatedly press the < VOL ▶ > button.
This will cycle through the available sub-ratings (FV, D, L, S or V).
Press the <OK> button to change the sub-ratings.

N · O · T · E · S

▶ These categories consist of two separate groups :
  TV-Y and TV-Y7(Young Children through age 7), and TV-G through TV-MA(everybody else).

▶ The restrictions for these two groups work independently :
  If a household includes very young children as well as young adults, the TV guidelines must be set separately for each group.

▶ The TV-Y7, TV-PG, TV-14 and TV-MA have additional options.

  - : All

  FV : Fantasy Violence

  V : Violence

  S : Sexual Situation

  L : Adult Language

  D : Sexual Suggestive Dialog

N · O · T · E

▶ The Parental will automatically block certain categories that are 'More restrictive'.

  For example, if you block 'L' sub-rating in TV-PG, then the 'L' sub-rating in TV-14 and TV-MA will be automatically blocked.

❾ When you have finished, press the <MENU> button to colse the 'Menu' screen.

2.9 External Control Device Setup

1 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.

2 Connect the serial port of the control device to the RS-232C jack on the Monitor back panel.

3 RS-232C connection cables are not supplied with the Monitor.
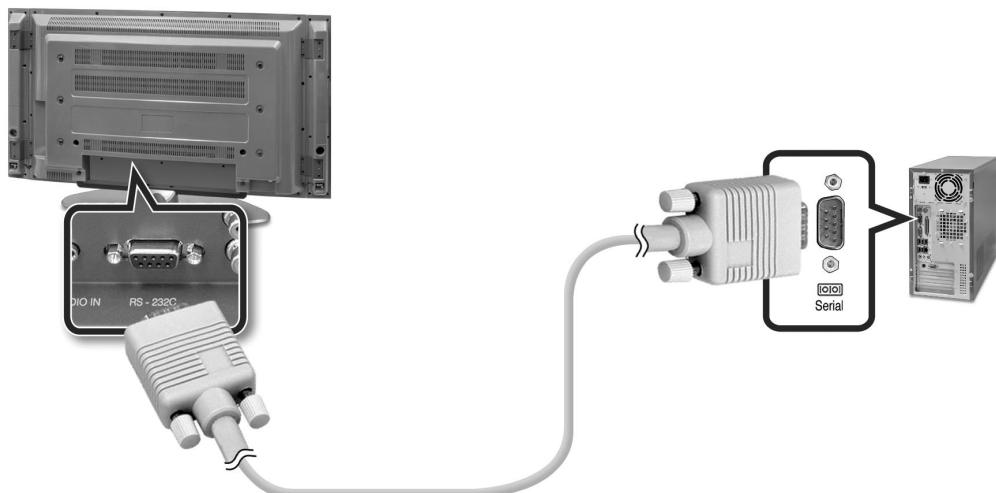
N・O・T・E

▶ **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
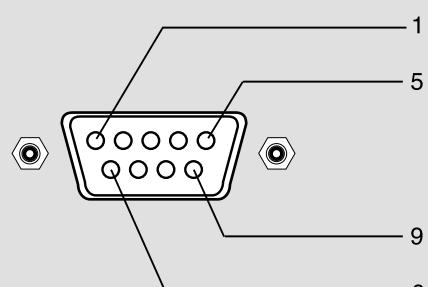
N・O・T・E

▶ **RS-232C Configurations**

| 7-Wire Configuration (Standard RS-232C cable) |
| 3-Wire Configuration (Not standard) |

PC   LCD   PC   LCD

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

D-Sub 9   D-Sub 9   D-Sub 9   D-Sub 9

▶ Set ID

- Use this function to specify a monitor ID number.

- Refer to 'Real Data Mapping 1'.

❶ Press the <MENU> button and then use the ▲/▼ button to select the SPECIAL menu.

❷ Press the ▶ button and then use ▲/▼ button to select **Set ID**.

❸ 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 0 ~ 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)
Power	k	a	0 ~ 1
Input Select	k	b	0 ~ 7
Volume Mute	k	e	0 ~ 1
Volume Control	k	f	0 ~ 64
Contrast	k	g	0 ~ 64
Brightness	k	h	0 ~ 64
Color	k	i	0 ~ 64
Tint	k	j	0 ~ 64
Sharpness	k	k	0 ~ 64
PIP/POP/PBP	k	n	0 ~ 4
PIP Position	k	q	0 ~ 3
Treble	k	r	0 ~ 14
Bass	k	s	0 ~ 14
Balance	k	t	0 ~ 64
Color Temperature	k	u	0 ~ 3
Red Adjustment	k	v	0 ~ C8
Green Adjustment	k	w	0 ~ C8
Blue Adjustment	k	$	0 ~ C8
PIP Input Source	k	y	0 ~ 7

• Menu doesn't display on screen when setting the 4, 12, 13, and 26 ~ 32.

N · O · T · E

▶ **Transmission / Receiving Protocol**

Transmission

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

[Command 1] : k,

[Command 2] : To control LCD set.

[Set ID] : You can adjust the set ID to choose desired moni-tor ID number in Special menu. Adjustment range is 0 ~ 99. When selecting Set ID '0', every connected LCD set is controlled. Set ID is indicated as decimal (0~99) 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

3 : Wait more time

⊙ Power (Command2 : 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.

Input Select (Command2 : b) (Main Picture Input)

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

- Transmission

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

Data	0 : TV	1 : AV1	2 : AV2
	3 : AV3	4 : COMPONENT1	5 : COMPONENT2
	6 : RGB	7 : DVI	

- Acknowledgement

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

Volume Mute (Command2 : 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]

⊙ Volume Control (Command2 : 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]

⊙ Contrast (Command2 : g)

● To adjust screen contrast. You can also adjust contrast in the Video 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]

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)
                                 ⋮
                                 64 : Step 100

⊙ Brightness (Command2 : h)

● To adjust screen brightness. You can also adjust brightness in the Video 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]

⊙ Color (Command2 : i)

● To adjust the screen color. You can also adjust color in the Video 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]

⊙ Tint (Command2 : j)

● To adjust the screen tint. You can also adjust tint in the Video 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]

⊙ Sharpness (Command2 : k)

● To adjust the screen sharpness. You can also adjust sharpness in the Video 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]

▶ PIP/POP/PBP (Command2 : n)

● To control the PIP (Picture-in-Picture) or Twin Picture. You can also control the PIP/Twin picture mode using the PIP or TWIN PICTURE button on the remote control or in the Twin menu.

- Transmission

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

Data   0 : PIP OFF   1 : PIP
               2 : POP   3 : PBP1   4 : PBP2

- Acknowledgement

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

▶ 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 Twin 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]

▶ Treble (Command2 : r)

● To adjust treble. You can also adjust treble in the Audio menu.

- Transmission

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

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

- Acknowledgement

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

(Operates only when SSM is set to USER.)

Bass (Command2 : s)

● To adjust bass. You can also adjust bass in the Audio menu.

- Transmission

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

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

- Acknowledgement

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

(Operates only when SSM is set to USER.)

Balance (Command2 : t)

● To adjust balance. You can also adjust balance in the Audio menu.

- Transmission

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

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

- Acknowledgement

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

Color Temperature (Command2 : u)

● To adjust color temperature. You can also adjust CSM in the PC menu.

- Transmission

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

Data   0: Normal   1: Cool
                2: Warm   3: User

- Acknowledgement

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

Red Adjustment (Command2 : v)

● To adjust red in color temperature.(Operates only when CSM is set to USER.)

- Transmission

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

Data 0 ~ FF

- Acknowledgement

[v][ ][Set ID][ ][OK][Data][x]

Green Adjustment (Command2 : w)

● To adjust green in color temperature.(Operates only when CSM is set to USER.)

- Transmission

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

Data 0 ~ FF

- Acknowledgement

[w][ ][Set ID][ ][OK][Data][x]

Blue Adjustment (Command2 : $)

● To adjust blue in color temperature.(Operates only when CSM is set to USER.)

- Transmission

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

Data 0 ~ FF

- Acknowledgement

[$][ ][Set ID][ ][OK][Data][x]

PIP Input Select (Command2 : y)

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

- Transmission

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

Data	0 : TV	1 : AV1	2 : AV2
	3 : AV3	4 : COMPONENT1	5 : COMPONENT2
	6 : RGB	7 : DVI	

- Acknowledgement

[y][ ][Set ID][ ][OK][Data][x]