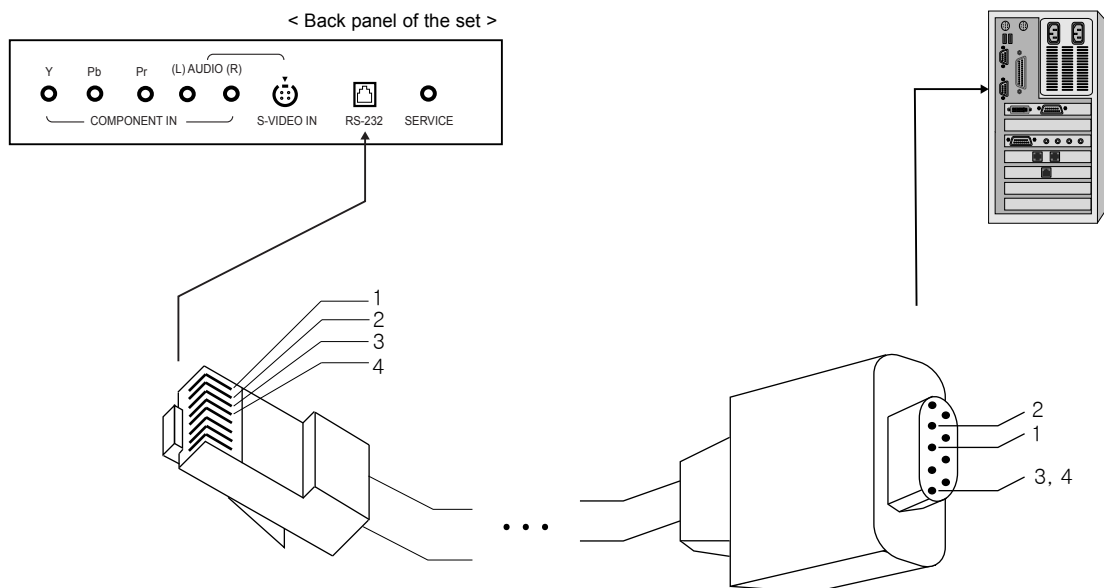


AccuSync PV Series External Control Device Setup

Connect the RS-232 input jack to a control device (such as a computer or an A/V control system) in order to control the set's functions externally.

■ Connect External Equipment



Connect the serial port of the control device to the RS-232 jack on the set.

RS-232 connection cables are not supplied with the Monitor.

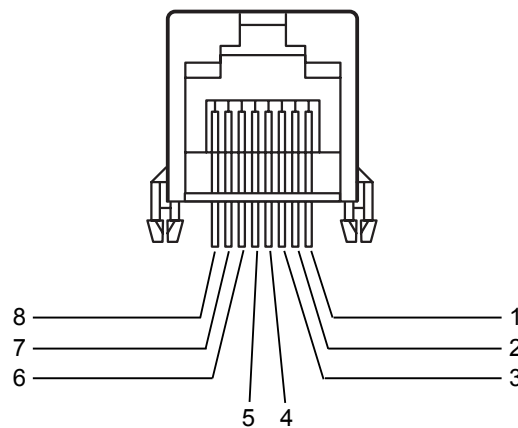
The Monitor remote control and front panel controls (except main power) will not be functional if the set is controlled by a PC computer or other external device.

■ RJ-45 8PIN CONNECTOR

NO.	PIN NAME
1	RXD(RECEIVE DATA)
2	TXD(TRANSMIT DATA)
3	GND
4	GND
5	NO CONNCETION
6	NO CONNCETION
7	NO CONNCETION
8	NO CONNCETION

Communication Parameters

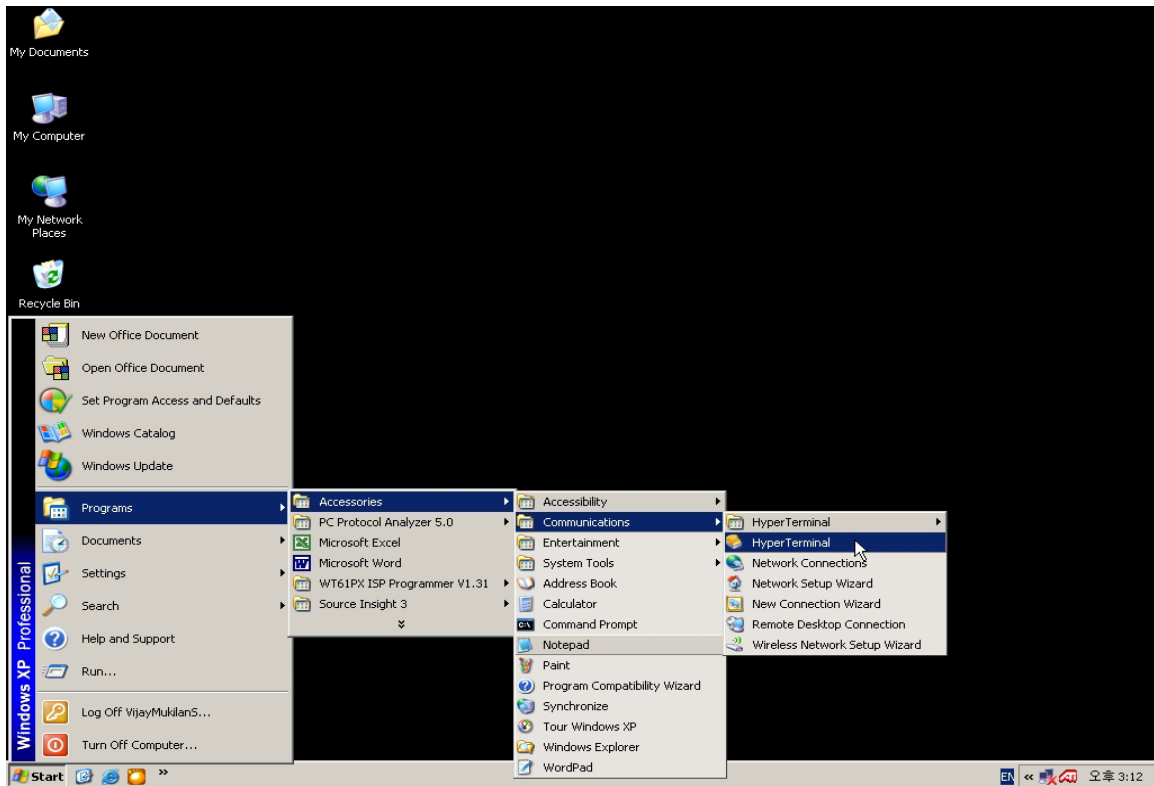
- Baud rate : 9600bps (UART)
- Data length : 8bits
- Parity : None
- Stop bit : 1bit
- Communication code : HEX code



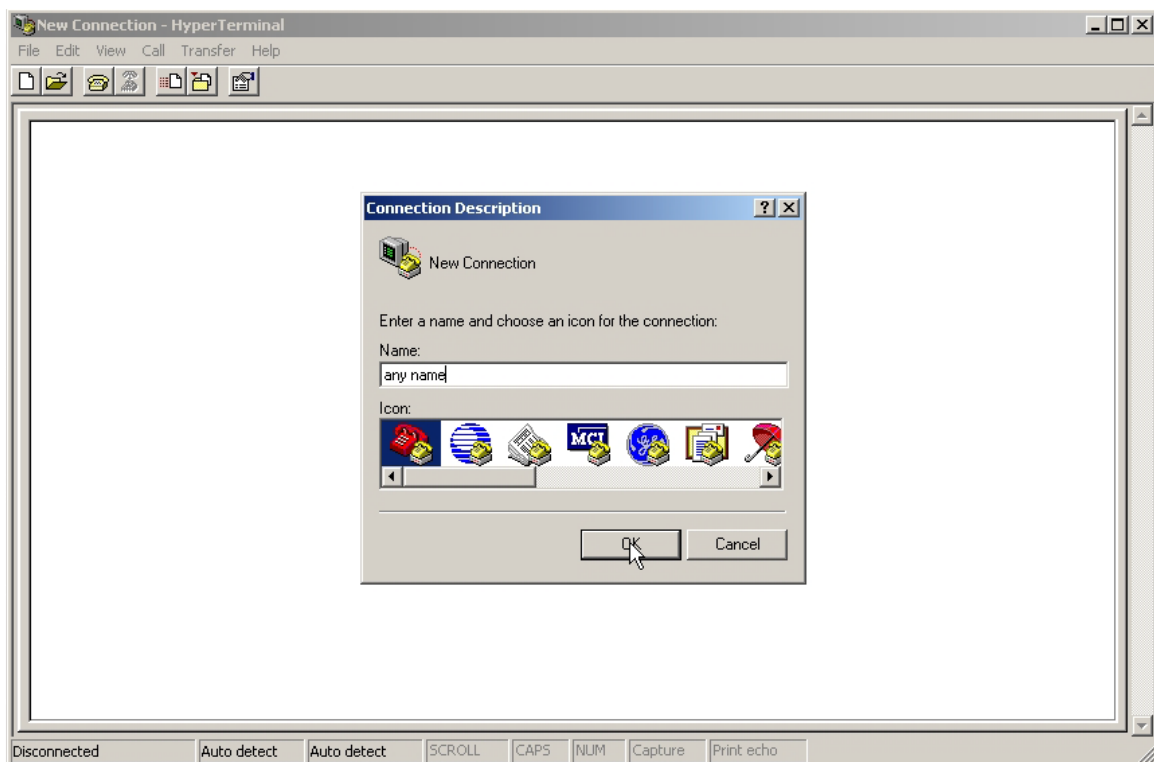
External Control Device Setup

■ Hyper Terminal Setting

1. Run 'Start > Programs > Accessories > Communications > Hyper Terminal'.



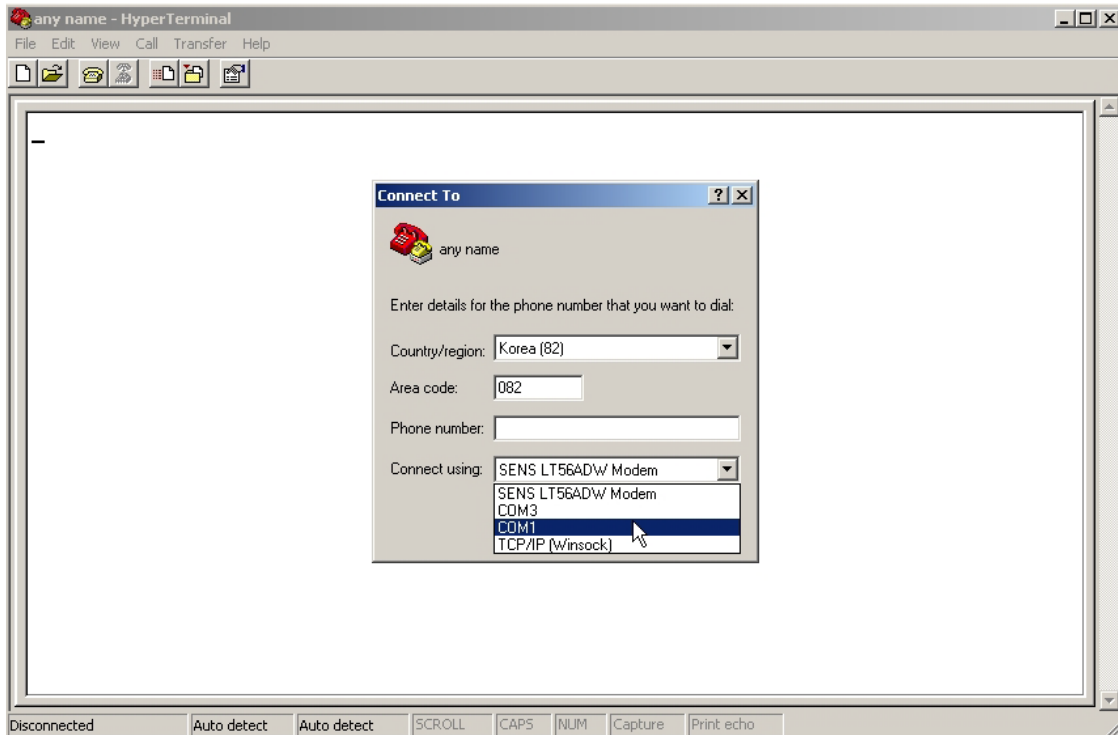
2. Enter a name and chose an icon for the connection.



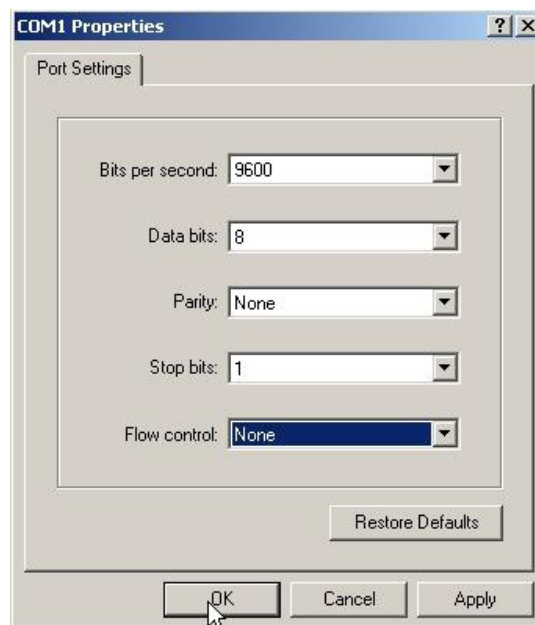
External Control Device Setup

■ Hyper Terminal Setting

3. Enter your Serial(RS-232) Port number.
(For example, 'set to COM1, COM2 or etc.)



4. Set up the port setting as below
 - Bits per second : 9600
 - Data bits : 8
 - Parity : None
 - Stop bits : 1
 - Flow control : None

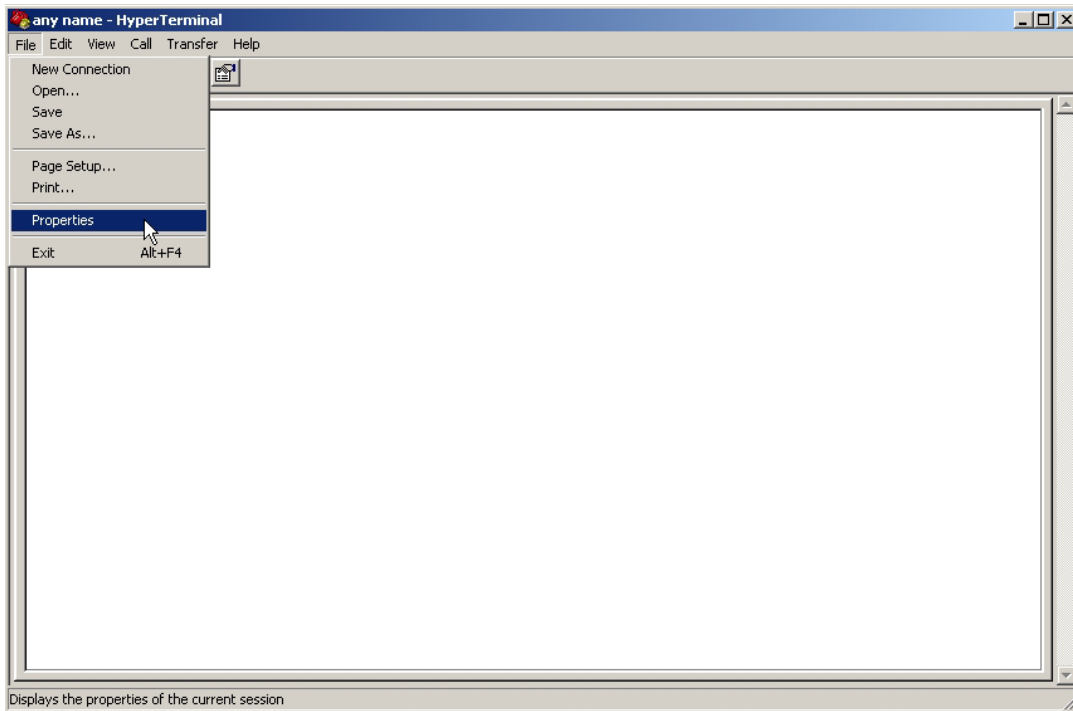


Then Click 'OK'.

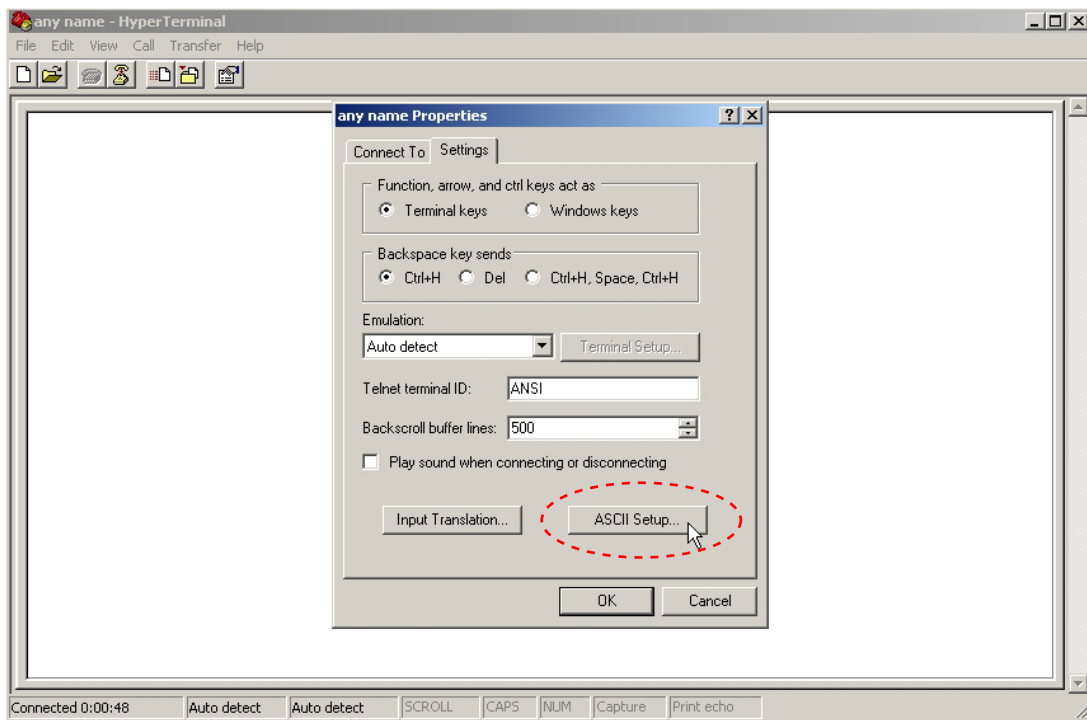
External Control Device Setup

■ Hyper Terminal Setting

3. Open 'File > Properties'.



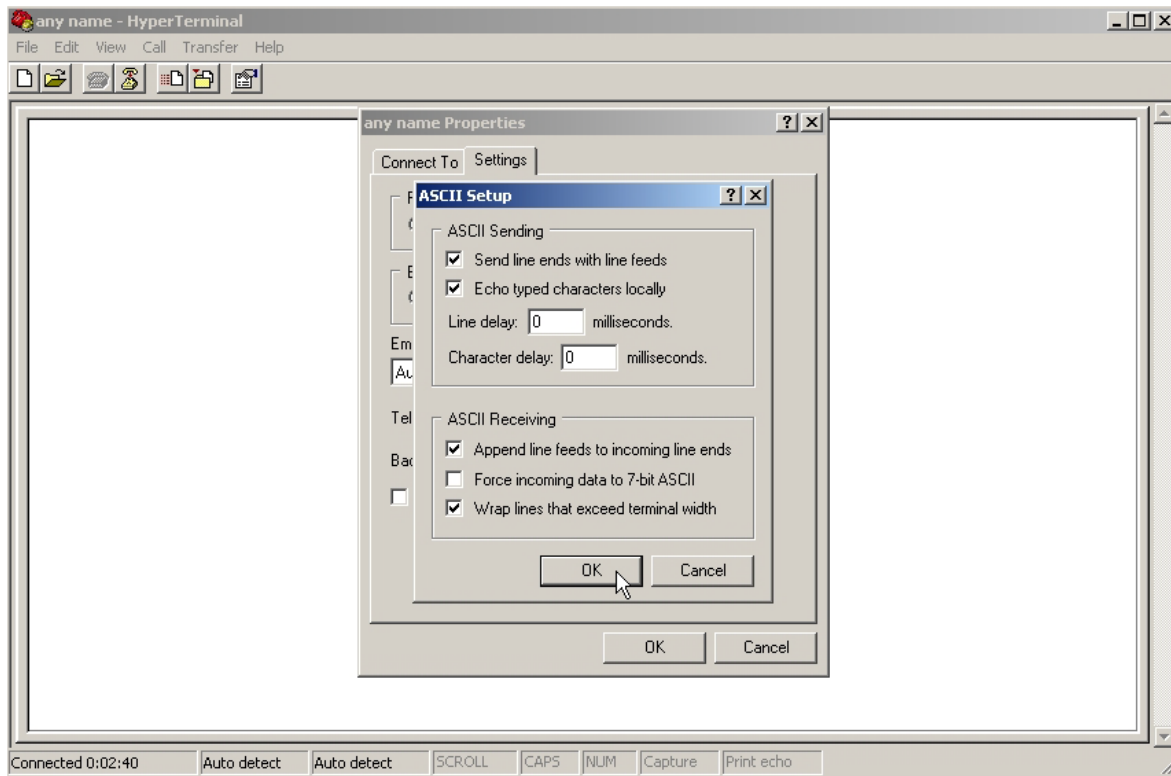
4. Chose the 'Setting' tab and click the 'ASCII Setup' button as following image.



External Control Device Setup

■ Hyper Terminal Setting

3. Check the following items in the 'Settings' tab as below.
 - 'Send line ends with line feeds'
 - 'Echo typed characters locally'
 - 'Append line feeds to incoming line ends'
 - 'Wrap lines that exceed terminal width'



■ Set ID

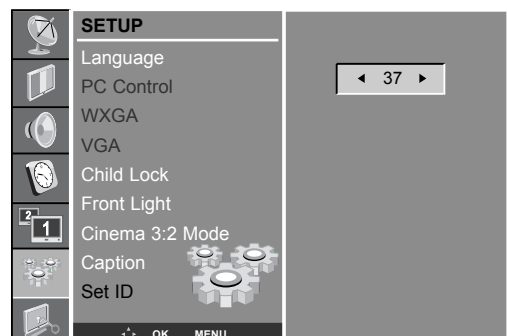
Press the **MENU** button and then **▲ / ▼** button to select the **SETUP** menu.

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

Press the **▶** button and then **◀ / ▶** button to adjust **Set ID** to choose the desired monitor ID number.

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

Use this function to specify a monitor ID number.



External Control Device Setup

■ Command Reference List

	COMMAND1	COMMAND2	DATA(Hex)
01. Power	k	a	0~1
02. Input Select	k	b	0~8(32"), 0~9(40", 46")
03. Aspect Ratio	k	c	0~5(TV~Svideo), 0~1(DTV, Com~HDMI3)
04. Volume Mute	k	d	0~1
05. Screen Mute	k	e	0~1
06. Contrast	k	f	0~64
07. Brightness	k	g	0~64
08. Color	k	h	0~64
09. Tint	k	i	0~64
10. Sharpness	k	j	0~64
11. CSM	k	k	0~3
12. PSM	k	l	0~4
13. SSM	k	m	0~4
14. PIP Mode (PIP, POP, DW1, DW2)	k	n	0~4
15. PIP input source	k	o	0~4
16. PIP Position	k	p	0~3
17. Volume Control	k	q	0~64
18. Balance	k	r	0~64
19. AVL	k	s	0~1
20. SRS	k	t	0~1
21. TV Speaker	k	u	0~1
22. PC Auto	k	v	0
23. PC Reset	k	w	0
24. reserved commend	k	x	*
25. reserved commend	k	y	*
26. reserved commend	k	z	*
27. Channel up/down (DTV)	t	a	0~1 (0 : up, 1 : down)
28. Channel up/down (AnalogTV)	t	b	0~1 (0 : up, 1 : down)

External Control Device Setup

Transmission / Receiving Protocol

Transmission

[Command1][Command2][][SetID][][Data][Cr]

- * [Command1] : First Command (k or t)
- * [Command2] : Second Command
- * [] : Spece(ASCII Code)
- * [SetID] : SetID in special menu
- * [Data] : To transmit command data
- * [Cr] : Carriage Return

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 Acknowledgment

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

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

01. Power (Command 2 : a)

- ▶ To control Power On/Off of the set

Transmission

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

Data 0 : Power Off 1 : Power On

OK Acknowledgement

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

- ▶ To show Power On/Off

Transmission

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

OK Acknowledgement

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

- * In like manner, if other functions transmit '0xFF' data based on this format, Acknowledgement data feed back presents status about each function.

02. Input Select (Command 2 : b)

- ▶ 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 0 : DTV 1 : TV
2 : AV1 3 : AV2
4 : AV3 5 : S-Video
6 : Component 7 : PC-RGB
8 : HDMI1 9 : HDMI2
A : HDMI3 (Option)

OK Acknowledgement

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

03. Aspect Ratio (Command 2 : c) (Main Picture Size)

- ▶ To adjust the screen format. (Main picture format) You can also adjust the screen format using the ASPECT button on remote control or in the Main/PIP menu.

Transmission

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

Operating mode : TV, AV, S-VIDEO

Data 0 : 16:9 1 : 14:9
2 : 4:3 3 : ZOOM1
4 : ZOOM2 5 : SPECTACLE

Operating mode : DTV, Component, PC-RGB, HDMI

Data 0 : 16:9 1 : 4:3

OK Acknowledgement

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

04. Volume Mute (Command 2 : d)

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

Transmission

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

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

OK Acknowledgement

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

05. Screen Mute (Command 2 : e)

- ▶ To select screen mute on/off

Transmission

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

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

OK Acknowledgement

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

External Control Device Setup

06. Contrast (Command 2 : f)

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

Transmission

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

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

07. Brightness (Command 2 : g)

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

Transmission

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

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

08. Color (Command 2 : h)

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

Transmission

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

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

09. Tint (Command 2 : i) (option)

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

Transmission

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

Data Red : 0 ~ Green : 64

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

10. Sharpness (Command 2 : j)

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

Transmission

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

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

11. CSM (Command 2 : k)

- ▶ To adjust colour temperature.
You can also adjust CSM in the PICTURE menu.

Transmission

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

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

OK Acknowledgement

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

12. PSM (Command 2 : l)

- ▶ To select picture mode.
You can also adjust PSM in the PICTURE menu.

Transmission

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

Data 0 : Dynamic 1 : Standard
2 : Mild 3 : Game
4 : User

OK Acknowledgement

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

13. SSM (Command 2 : m)

- ▶ To select sound mode.
You can also adjust SSM in the SOUND menu.

Transmission

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

Data 0 : Flat 1 : Music
2 : Movie 3 : Speech
4 : User

OK Acknowledgement

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

External Control Device Setup

14. PIP Mode (Command 2 : n)

- ▶ To select PIP mode.
You can also adjust PIP Mode in the Main/PIP menu.

Transmission

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

Data 0 : Off 1 : PIP
2 : POP 3 : DW1
4 : DW2

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

15. PIP Input (Command 2 : o)

- ▶ To select PIP Input.
You can also adjust PIP Input in the Main/PIP menu.

Transmission

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

Data 0 : TV 1 : AV1
2 : AV2 3 : AV3
4 : S-Video

OK Acknowledgement

[o][][Set ID][][OK][Data][x]

16. PIP Position (Command 2 : p)

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

Transmission

[k][p][][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

OK Acknowledgement

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

17. Volume Control (Command 2 : q)

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

Transmission

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

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

18. Balance (Command 2 : r)

- ▶ To adjust sound balance.
You can also adjust balance in the SOUND menu.

Transmission

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

Data Min : 0 ~ Max : 64

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

19. AVL (Command 2 : s)

- ▶ To control AVL On/Off of the set.

Transmission

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

Data 0 : Off 1 : On

* Refer to 'Real data mapping'. See page 52.

OK Acknowledgement

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

20. SRS (Command 2 : t)

- ▶ To select SRS mode.
You can also adjust SRS in the SOUND menu.

Transmission

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

Data 0 : Off 1 : On

OK Acknowledgement

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

21. TV Speaker (Command 2 : u)

- ▶ To control TV Speaker On/Off of the set.
You can also adjust TV Speaker in the SOUND menu.

Transmission

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

Data 0 : Off 1 : On

OK Acknowledgement

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

22. PC Auto (Command 1 : k, Command 2 : v)

- ▶ To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

Transmission

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

Data 0 : Execute

OK Acknowledgement

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

External Control Device Setup

23. PC Reset (Command 2 : w)

- ▶ To select the PC Reset.
You can also setting Restores factory.

Transmission

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

Data 0 : Execute

OK Acknowledgement

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

27. Channel up/down-Digital TV (Command 1 : t, Command 2 : a)

- ▶ Tune channel to following physical number.

Transmission

```
[t][a][ ][Set ID][ ][Data][Cr]
```

Data 0 : Up 1 : Down

OK Acknowledgement

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

28. Channel up/down-Analog TV (Command 1 : t, Command 2 : b)

- ▶ Tune channel to following physical number.

Transmission

```
[t][b][ ][Set ID][ ][Data][Cr]
```

Data 0 : Up 1 : Down

OK Acknowledgement

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

* Real data mapping

0	: Step 0	33	: Step 51
1	: Step 1	34	: Step 52
2	: Step 2	35	: Step 53
3	: Step 3	36	: Step 54
4	: Step 4	37	: Step 55
5	: Step 5	38	: Step 56
6	: Step 6	39	: Step 57
7	: Step 7	3A	: Step 58
8	: Step 8	3B	: Step 59
9	: Step 9	3C	: Step 60
A	: Step 10	3D	: Step 61
B	: Step 11	3E	: Step 62
C	: Step 12	3F	: Step 63
D	: Step 13	40	: Step 64
E	: Step 14	41	: Step 65
F	: Step 15	42	: Step 66
10	: Step 16	43	: Step 67
11	: Step 17	44	: Step 68
12	: Step 18	45	: Step 69
13	: Step 19	46	: Step 70
14	: Step 20	47	: Step 71
15	: Step 21	48	: Step 72
16	: Step 22	49	: Step 73
17	: Step 23	4A	: Step 74
18	: Step 24	4B	: Step 75
19	: Step 25	4C	: Step 76
1A	: Step 26	4D	: Step 77
1B	: Step 27	4E	: Step 78
1C	: Step 28	4F	: Step 79
1D	: Step 29	50	: Step 80
1E	: Step 30	51	: Step 81
1F	: Step 31	52	: Step 82
20	: Step 32	53	: Step 83
21	: Step 33	54	: Step 84
22	: Step 34	55	: Step 85
23	: Step 35	56	: Step 86
24	: Step 36	57	: Step 87
25	: Step 37	58	: Step 88
26	: Step 38	59	: Step 89
27	: Step 39	5A	: Step 90
28	: Step 40	5B	: Step 91
29	: Step 41	5C	: Step 92
2A	: Step 42	5D	: Step 93
2B	: Step 43	5E	: Step 94
2C	: Step 44	5F	: Step 95
2D	: Step 45	60	: Step 96
2E	: Step 46	61	: Step 97
2F	: Step 47	62	: Step 98
30	: Step 48	63	: Step 99
31	: Step 49	64	: Step 100
32	: Step 50		