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External Control Manual

(for PX-42VM5/42VP5/42XM3/50XM4/61XM3)

This manual shows the communication system and control commands between the plasma monitors and the communications control equipments.

Contents

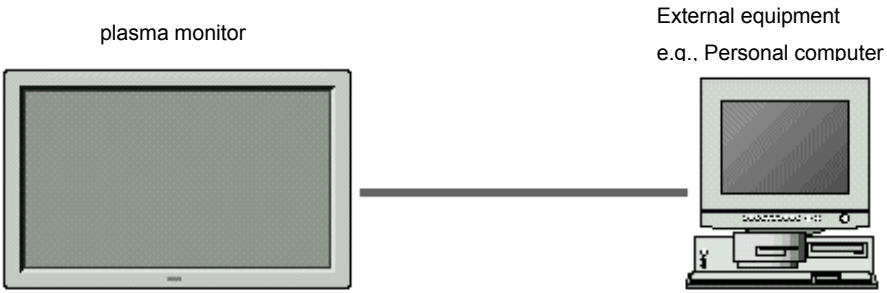
Applicable models

Company : NEC Corporation
Models : PX-42VM5,PX-42VP5, PX-42XM3,
PX-50XM4, PX-61XM3

And these models support the communication commands for PD series.

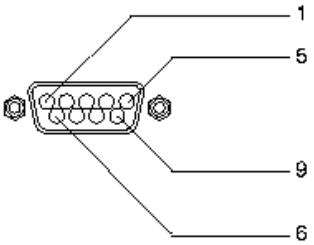
Connections

Connections should be made as described below.



1) Connector on the plasma monitor side: EXTERNAL CONTROL connector.
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



2) Connector on the external equipment side: Serial port (RS-232C) connector. See the specifications of the equipment that is to be connected for the type of connector and the pin assignment.

3) Wiring

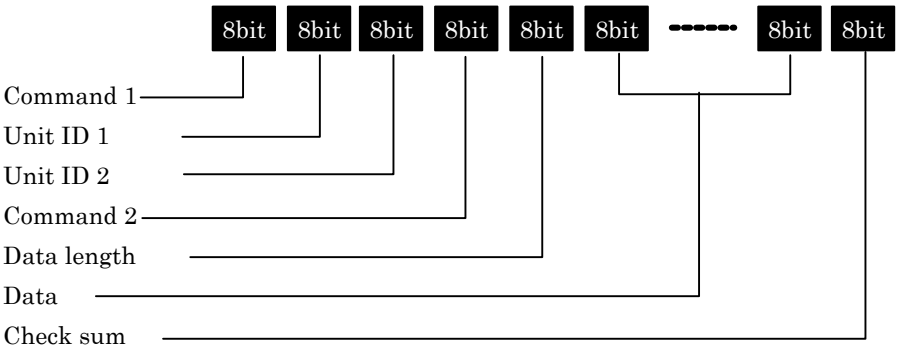
Use a crossed (reverse) cable.

Wire the cable so that each pair of data lines cross between the two devices. These data line pairs are RXD (Receive data) and TXD (Transmit data), DTR (DTE side ready) and DSR (DCE side ready), and RTS (Ready to send) and CTS (Clear to send).

Communication Parameters

(1) Communication system	Asynchronous
(2) Interface	RS-232C
(3) Baud rate	9600 bps
(4) Data length	8 bits
(5) Parity	No
(6) Stop bit	1 bit
(7) Communication code	Hex

Communication Format



Command1

Command 1, along with command 2, is a number used to distinguish each command.
When making it operate using ID, bit1 and bit0 are set up as follows.

Bit1,Bit0 Unit ID distinction bit

11B	:Usually, a form (with no ID)
10B	:Usually, a form (with no ID)
01B	:Set ID
00B	:Video wall ID

In the case of ACK, when the lower order 4 bits is FH (as in 3FH and 7FH), this indicates that the commands and data of the supported equipment have been received. When the lower order 4 bits is BH (as in 3BH and 7BH), this indicates that unsupported commands and data have been received.

Unit ID1,2 (UA1,UA2)

Unit ID 1 and unit ID 2 are numbers used to identify the equipment that is to be connected.
60H is used for the plasma monitor and 80H is used for external control equipment such as a personal computer.

1) Unit ID 1: Indicates the equipment sending the signal. When supporting Set ID by the command 1, 4 bits of low ranks of Set ID are set up.
2) Unit ID 2: Indicates the equipment receiving the signal. When supporting Set ID by the command 1, 4 bits of higher ranks of Set ID are set up.

* Set ID : it is the apparatus number assigned to each plasma monitor.

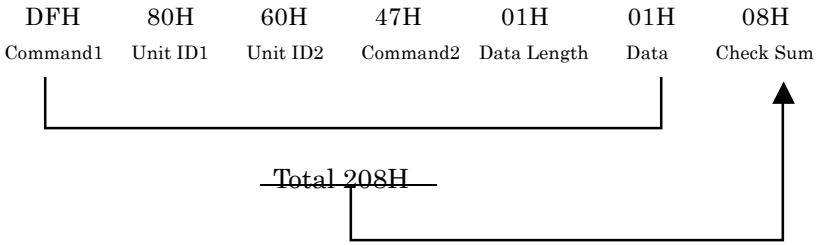
Command 2

Command 2, along with command 1, is a number used to distinguish each command.

Check Sum (CKS), Error Processing, and ACK

1) The check sum described below and RS-232C no parity are used together for a check of the received data. The check sum is the lower order 8 bits of one frame of sent or received data comprising the sum total of Command 1, Unit ID 1 and 2, Command 2, Data Length, and Data.

Check Sum Example



2) Error Processing

・When the communication interval is vacant for more than 4 ms, thereafter a

received Command 1 will be recognized. If, at this time, meaningful data cannot be recognized, that data will not be recognized (as valid data).

- An ACK will not be returned unless the receive data error, the check sum error, and the receive data are all taken in.

The control method of the set by Set ID

When controlling two or more sets of plasma monitors, if the command using Set ID is used, it will become controllable individually.

The example of the POWER ON command to the plasma monitor which set ID as "5" is shown below.

It is not based on ID but is the POWER ON command to all sets.

9F 80 60 4E 00 CD

In ID= "5", the value of ID-1=4 is set up.

9D 84 60 4E 00 CF

The example of a change in the single mode of a 4th page multi-system configuration and the multi-mode is shown below.

ID of the set used as a master (etc PC) is set to 50, and it assumes that ID is shaken by AUTO ID to each set. ID shaken at each set is as follows.

Upper left set (master) ID = 50 = 32h

Upper right set ID = 51 = 33h

Lower right set ID = 52 = 34h

Lower left set ID = 53 = 35h

Transmission Data

DD 81 63 03 03 03 01 00 CB

DD 82 63 03 03 03 02 00 CD

DD 83 63 03 03 03 03 00 CF

DD 84 63 03 03 03 04 00 D1

Transmission of the above command performs a 4th page multi SPLIT display.

Moreover, the following commands are published in order to change a 4th page multi-display into a single mode display.

DF 80 60 03 03 01 01 00 C7

All sets become a single mode display by the above-mentioned command.

Since this command does not specify Set ID, all sets execute it.

*: Control by ID may not be able to be performed depending on connection with external control apparatus.

Command Reference List

		CMD1	CMD2	LEN
01	Power ON	9FH	4EH	00H
02	Power OFF	9FH	4FH	00H
03	Input Switch Change	DFH	47H	01H
04	VOLUME Gain Data	DFH	7FH	03H
05	AUDIO Mute ON	9FH	3EH	00H
06	AUDIO Mute OFF	9FH	3FH	00H
07	CONTRAST Gain Data	DFH	7FH	03H
08	BRIGHT Gain Data	DFH	7FH	03H
09	SHARPNESS Gain Data	DFH	7FH	03H
10	Color Gain Data	DFH	7FH	03H
11	TINT Gain Data	DFH	7FH	03H
12	PICTURE MODE Select	DFH	0AH	01H
13	COLOR TEMP SELECT	DFH	00H	01H
14	RED Gain Data	DFH	7FH	04H
15	GREEN Gain Data	DFH	7FH	04H
16	BLUE Gain Data	DFH	7FH	04H
17	NR MODE Set	DFH	C0H	01H
18	BASS Gain Data	DFH	7FH	03H
19	TREBLE Gain Data	DFH	7FH	03H
20	BALANCE Gain Data	DFH	7FH	03H
21	SCREEN MODE Select	DFH	51H	01H
22	V.POSITION Gain Data	DFH	7FH	03H
23	H.POSITION Gain Data	DFH	7FH	03H
24	V-HEIGHT Gain Data	DFH	7FH	03H
25	H-WIDTH Gain Data	DFH	7FH	03H
26	AUTO PICTURE Select	DFH	7FH	03H
27	PHASE Gain Data	DFH	7FH	03H
28	CLOCK Gain Data	DFH	7FH	03H
29	OSM Select	DFH	58H	01H
30	OSM ADJ. Gain Data	DFH	1AH	02H
31	POWER MGT Select	DFH	1AH	02H
32	GRAY LEVEL Set	DFH	C6H	01H
33	CINEMA MODE Set	DFH	C1H	01H
34	LONG LIFE Set	DFH	6BH	03H
35	INVESE Set	DFH	C7H	03H
36	SCREEN WIPER Set	DFH	C8H	04H
37	RESET	1FH	54H	00H
38	Audio Select Set	DFH	70H	02H
39	BNC INPUT	DFH	8CH	01H
40	RGB Select	DFH	8BH	01H
41	HD Select	DFH	8AH	01H
42	LANGUAGE Select	DFH	5BH	01H

43	COLOR SYSTEM Select	DFH	5CH	01H
44	FREQUENCY Request	1FH	26H	00H
45	Input MODE Request	1FH	41H	00H
46	VIDEO ADJ Request	1FH	45H	00H
47	Audio Select Request	1FH	6FH	00H
48	Failure Mode Request	1FH	3FH	00H
49	MODEL NAME Request	1FH	17H	00H
50	D-SUB INPUT	DFH	8DH	01H
51	TIMER SWITCH	DFH	02H	01H
52	LOW TONE	DFH	0CH	01H
53	COLOR TUNE	DFH	0DH	08H
54	TIMER PROGRAM SETTING	DFH	30H	08H
55	PRESENT TIME SETTING	DFH	31H	03H
56	MULTI MODE Select	DFH	03H	03H
57	MULTI MODE Request	1FH	3BH	00H
58	AUTO ID SET START	5FH	F0H	01H
59	PLE LINK	DFH	F1H	03H
60	VIDEO WALL SETTING	DFH	F3H	02H
61	POWER DELAY ON (DIVIDER setting : 1/4/9)	DFH	F2H	01H
62	POWER DELAY ON (DIVIDER setting : 16/25)	DFH	F6H	01H
63	GAMMA Gain Data	DFH	13H	04H
64	Running Sense	1FH	88H	00H
65	ORBITTER SET	DFH	1EH	04H
66	OSM OBITER	DFH	5FH	01H
67	OSM ANGLE	DFH	60H	01H
68	Input Skip	5FH	61H	01H
69*1	PICTURE Size	DFH	2AH	01H
70	OPTION Select	DFH	63H	04H
71	REPEAT Timer	DFH	64H	06H
72	SERIAL No. Request	1FH	15H	00H
73	S1/S2 SELECT	DFH	89H	01H
74	SOFT FOCUS	DFH	65H	01H
75	PLUG and PLAY	DFH	8EH	01H
76	DIGITAL SIGNAL LEVEL SELECT	DFH	8FH	01H
77*1	MULTI (SPRIT) SCREEN Select	DFH	07H	01H
78*1	SUB.P DETECT	DFH	7AH	01H
79*1	ZOOM NAV	DFH	7BH	01H
80*1	PIC FREEZE	DFH	7CH	01H
81*1	PAUSE COMMAND	DFH	7DH	01H
82*1	SEAMLESS SW	DFH	7EH	03H
83*1	MULTI (SPRIT) SCREEN PROGRAM TIMER	DFH	32H	0AH

84*1	MULTI (SPRIT) SCREEN POWER ON MODE	DFH	33H	04H
85*1	MULTI (SPRIT) SCREEN REPEAT TIMER	DFH	34H	09H
86	OSM CONTRAST	DFH	37H	01H
87*2	CLOSECAPTION (Closed Caption)	DFH	3CH	01H
88*2	CAPTION CONT	DFH	3DH	01H

*1:This function is only 50 or 61-inch model

*2:This function is only A version

Command

01. Power ON

Function

The external control equipment switches on the power of the plasma monitor.

Transmission Data

9FH	80H	60H	4EH	00H	CKS

ACK

The plasma monitor returns the following ACK when the power is switched on.

3FH	60H	80H	4EH	00H	CKS

NOTE: Do not set the Power ON or Power OFF command continuously.

02. Power OFF

Function

The external control equipment switches off the power of the plasma monitor.

Transmission Data

9FH	80H	60H	4FH	00H	CKS

ACK

The plasma monitor returns the following ACK when the power is switched off.

3FH	60H	80H	4FH	00H	CKS

NOTE: Do not set the Power ON or Power OFF command continuously.

03. Input Switch Change

Function

The external control equipment switches the input of the plasma monitor.

Transmission Data

DFH	80H	60H	47H	01H	DATA00	CKS

DATA00 : Input Select

01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2(DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

ACK

The plasma monitor returns the following ACK when the input is switched.

3FH	60H	80H	47H	00H	CKS

04. VOLUME Gain Data

Function

The external control equipment changes the VOLUME gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER SOUND Gain Flag 05H

DATA01: VOLUME Gain Flag 01H

DATA02: VOLUME Gain 00H: Step0
:
0AH: Step10 (Default)
:
2AH: Step42

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER SOUND Gain Flag 05H

DATA01: VOLUME Gain Flag 01H

05. AUDIO Mute ON

Function

The external control equipment switches on AUDIO Mute of the plasma monitor.

Transmission Data

9FH	80H	60H	3EH	00H	CKS

ACK

3FH	60H	80H	3EH	00H	CKS

06. AUDIO Mute OFF

Function

The external control equipment switches off AUDIO Mute of the plasma monitor.

Transmission Data

9FH	80H	60H	3FH	00H	CKS

ACK

3FH	60H	80H	3FH	00H	CKS

07. CONTRAST Gain Data

Function

The external control equipment changes the CONTRAST gain data of the plasma c

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag	01H
DATA01 : CONTRAST Gain Flag	07H
DATA02 : CONTRAST Gain	CCH : -52
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	14H : +20

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag	01H
DATA01: CONTRAST Gain Flag	07H

08. BRIGHT Gain Data

Function

The external control equipment changes the BRIGHT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag	01H
DATA01 : BRIGHT Gain Flag	08H
DATA02 : BRIGHT Gain	E0H : -32
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	20H : +32

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00 : USER PICTURE Gain Flag 01H
DATA01 : BRIGHT Gain Flag 08H

09. SHARPNESS Gain Data

Function

The external control equipment changes the SHARPNESS gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag 01H
DATA01 : SHARPNESS Gain Flag 06H
DATA02 : SHARPNESS Gain F0H : -16
:
FFH : -01
00H : 0
01H : +01
:
10H : +16

Only when a RGB signal is connected
DATA02 : SHARPNESS Gain 01H : 1
02H : 2
03H : 3
04H : 4

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00 : USER PICTURE Gain Flag 01H
DATA01 : SHARPNESS Gain Flag 06H

10. COLOR Gain Data

Function

The external control equipment changes the COLOR gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag — 01H

DATA01 : COLOR Gain Flag — 04H

DATA02 : COLOR Gain — E0H : -32 / : / FFH : -01 / 00H : 0 / 01H : +01 / : / 20H : +32

* COLOR Gain is from -22 (EAH) to +22 (16H) only during video.

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00 : USER PICTURE Gain Flag — 01H

DATA01 : COLOR Gain Flag — 04H

11. TINT Gain Data

Function

The external control equipment changes the TINT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag — 01H

DATA01 : TINT Gain Flag — 05H

DATA02 : TINT Gain — E0H: -32 / : / FFH : -01 / 00H : 0 / 01H : +01 / : / 20H : +32

* TINT Gain is from -22 (EAH) to +22 (16H) only during video.

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00 : USER PICTURE Gain Flag 01H

DATA01 : TINT Gain Flag 05H

12. PICTURE MODE Select

Function

The external control equipment sets the picture mode of the plasma monitor.

Transmission Data

DFH	80H	60H	0AH	01H	DATA00	CKS

DATA00: 01H : NORMAL
02H : THEATER1(It cannot choose in the still picture input of a personal computer.)
03H : THEATER2(It cannot choose in the still picture input of a personal computer.)
04H : Default
05H : Bright

ACK

7FH	60H	80H	0AH	01H	DATA00	CKS

DATA00: 01H : NORMAL
02H : THEATER1
03H : THEATER2
04H : Default
05H : Bright

13. COLOR TEMP SELECT

Function

The external control equipment changes the COLOR TEMP of the plasma monitor.

Transmission Data

DFH	80H	60H	00H	01H	DATA00	CKS

DATA00 : 00H: low
01H: middle
02H: high
03H: middle low

ACK

7FH	60H	80H	00H	01H	DATA00	CKS

DATA00 : 00H: low
01H: middle
02H: high
03H: middle low

14. RED Gain Data

Function

The external control equipment changes the RED Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00 : USER PICTURE Gain Flag 01H
DATA01 : RED Gain Flag 01H
DATA02 : RED Gain1(Bias) D8H : -40
:
FFH : -01
00H : 0
01H : +01
:
1EH : +30
DATA03: RED Gain2(Drive) D8H : -40
:
FFH : -01
00H : 0
01H : +01
:
1EH : +30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00 : USER PICTURE Gain Flag 01H
DATA01 : RED Gain Flag 01H

15. GREEN Gain Data

Function

The external control equipment changes the GREEN Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00 : USER PICTURE Gain Flag	01H
DATA01 : GREEN Gain Flag	02H
DATA02 : GREEN Gain1(Bias)	D8H : -40 : FFH : -01 00H : 0 01H : +01 : 1EH : +30
DATA03: GREEN Gain2(Drive)	D8H : -40 : FFH : -01 00H : 0 01H : +01 : 1EH : +30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag	01H
DATA01: GREEN Gain Flag	02H

16. BLUE Gain Data

Function

The external control equipment changes the BLUE Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00 : USER PICTURE Gain Flag 01H

DATA01 : BLUE Gain Flag 03H

DATA02 : BLUE Gain1(Bias) D8H :-40
:
FFH : -01
00H : 0
01H : +01
:
1EH : +30

DATA03: BLUE Gain2(Drive) D8H :-40
:
FFH : -01
00H : 0
01H : +01
:
1EH : +30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: BLUE Gain Flag 03H

17. NR MODE Set

Function

The external control equipment sets the NR (Noise Reduction) mode of the plasma monitor.

Transmission Data

DFH	80H	60H	C0H	01H	DATA00	CKS

DATA00: 01H : NR OFF
02H : NR-1
03H : NR-2
04H : NR-3

ACK

7FH	60H	80H	C0H	01H	DATA00	CKS

DATA00: 01H : NR OFF
02H : NR-1
03H : NR-2
04H : NR-3

18. BASS Gain Data

Function

The external control equipment changes the BASS gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag — 05H
DATA01 : BASS Gain Flag — 03H
DATA02 : BASS Gain — F3H : -13
:
FFH : -01
00H : 0
01H : +01
:
0DH : +13

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00 : USER PICTURE Gain Flag — 05H
DATA01 : BASS Gain Flag — 03H

19. TREBLE Gain Data

Function

The external control equipment changes the TREBLE gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag	05H
DATA01 : TREBLE Gain Flag	04H
DATA02 : TREBLE Gain	F3H : -13
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	0DH : +13

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag	05H
DATA01: TREBLE Gain Flag	04H

20. BALANCE Gain Data

Function

The external control equipment changes the BALANCE gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag	05H
DATA01 : BALANCE Gain Flag	02H
DATA02 : BALANCE Gain	EAH : -22
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	16H : +22

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag	05H

DATA01: BALANCE Gain Flag 02H

21. SCREEN MODE Select

Function

The external control equipment switches the screen mode of the plasma monitor.

Transmission Data

DFH 80H 60H 51H 01H DATA00 CKS

DATA00 02H : STADIUM
03H : ZOOM
04H : NORMAL
05H : FULL
06H : REAL
08H : UNDERSCAN
09H : 14:9
0AH : 2.35:1

ACK

7FH 60H 80H 51H 01H DATA00 CKS

DATA00 02H : STADIUM
03H : ZOOM
04H : NORMAL
05H : FULL
06H : REAL
08H : UNDERSCAN
09H : 14:9
0AH : 2.35:1

22. V.POSITION Gain Data

Function

The external control equipment changes the V. POSITION gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag	03H
DATA01 : V.POSITION Gain Flag	01H
DATA02 : V.POSITION Gain	C0H : -64
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	40H : +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag	03H
DATA01: V.POSITION Gain Flag	01H

23. H.POSITION Gain Data

Function

The external control equipment changes the H. POSITION gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag 03H

DATA01 : H.POSITION Gain Flag 02H

DATA02 : H.POSITION Gain 80H : -128
:
FFH : -01
00H : 0
01H : +01
:
7FH : +127

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H

DATA01: H.POSITION Gain Flag 02H

24. V-HEIGHT Gain Data

Function

The external control equipment changes the V-HEIGHT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag 03H

DATA01 : V-HEIGHT Gain Flag 07H

DATA02 : V-HEIGHT Gain 00H : 0
:
40H : +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H

DATA01: V-HEIGHT Gain Flag 07H

25. H-WIDTH Gain Data

Function

The external control equipment changes the H-WIDTH gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag 03H

DATA01 : H-WIDTH Gain Flag 08H

DATA02 : H-WIDTH Gain 00H : 0

:

40H : +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H

DATA01: H-WIDTH Gain Flag 08H

26. AUTO PICTURE Select

Function

The external control equipment switches on or off the AUTO PICTURE of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag 03H

DATA01 : AUTO PICTURE Select Flag 09H

DATA02 00H : ON

01H : OFF

ACK

7FH	60H	80H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag 03H

DATA01 : AUTO PICTURE Select Flag 09H

DATA02 00H : ON

01H : OFF

27. PHASE Gain Data

Function

The external control equipment changes the PHASE gain data (Phase) of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag	03H
DATA01 : PHASE Gain Flag	03H
DATA02 : PHASE Gain	00H : 0
	:
	40H : +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag	03H
DATA01: PHASE Gain Flag	03H

28. CLOCK Gain Data

Function

The external control equipment changes the CLOCK gain data (ratio of frequency division) of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : USER PICTURE Gain Flag	03H
DATA01 : CLOCK Gain Flag	04H
DATA02 : CLOCK Gain	C0H : -64
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	40H : +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag	03H
DATA01: CLOCK Gain Flag	04H

29. OSM Select

Function

The external control equipment switches on or off the on-screen menu (OSM) of the plasma monitor.

Transmission Data

DFH 80H 60H 58H 01H DATA00 CKS

DATA00: 01H: On-Screen menu On
02H: On-Screen menu Off

ACK

7FH 60H 80H 58H 01H DATA00 CKS

DATA00: 01H: On-Screen menu On
02H: On-Screen menu Off

*Operation is as described in the table below.

Operation	On-Screen Menu (OSM)			
	Display of items and adjustments on the menu		Volume display, input display, and screen size display	
	When screen menu is ON	When screen menu is OFF	When screen menu is ON	When screen menu is OFF
Remote control operation	Yes	Yes	Yes	No
Personal computer control operation	No	No	Yes	No

30. OSM ADJ. Gain Data

Function

The external control equipment sets the position of the OSM menu of the plasma monitor.

Transmission Data

DFH 80H 60H 1AH 02H DATA00 DATA01 CKS

DATA00 : OSM ADJ. Gain Flag 02H

DATA01 01H : 1
:
06H : 6

ACK

7FH 60H 80H 1AH 01H DATA00 CKS

DATA00 : OSM ADJ. Gain Flag 02H

31. POWER MGT Select

Function

The external control equipment switches on or off the POWER MANAGEMENT of the plasma monitor.

Transmission Data

DFH	80H	60H	1AH	02H	DATA00	DATA01	CKS

DATA00 : POWER MGT Select 03H

DATA01 01H : ON

02H : OFF

ACK

7FH	60H	80H	1AH	02H	DATA00	DATA01	CKS

DATA00 : POWER MGT Select 03H

DATA01 01H : ON

02H : OFF

32. GRAY LEVEL Set

Function

The external control equipment sets the GRAY LEVEL of the plasma monitor.

Transmission Data

DFH	80H	60H	C6H	01H	DATA00	CKS

DATA00 : GRAY LEVEL 00H : 0

:

0FH : 15

ACK

7FH	60H	80H	C6H	01H	DATA00	CKS

DATA00 : GRAY LEVEL 00H : 0

:

0FH : 15

33. CINEMA MODE Set

Function

The external control equipment switches on or off the CINEMA MODE of the plasma monitor.

Transmission Data

DFH	80H	60H	C1H	01H	DATA00	CKS

DATA00 : CINEMA MODE Set
- 01H : ON
- 02H : OFF

ACK

7FH	60H	80H	C1H	01H	DATA00	CKS

DATA00 : CINEMA MODE Set
- 01H : ON
- 02H : OFF

34. LONG LIFE Set

Function

The external control equipment sets the PLE, ORBITER, and INVERSE (inverse of image brightness) of the plasma monitor.

Transmission Data

DFH	80H	60H	6BH	03H	DATA00	DATA01	DATA02	CKS

DATA00 : PLE
- 01H : AUTO
- 02H : LOCK1
- 03H : LOCK2
- 04H : LOCK3

DATA01 : INVERSE
- 01H : ON
- 02H : OFF
- 03H :WHITE

DATA02 : ORBITER (PICTURE SHIFT)
- 01H : AUTO1
- 02H : OFF
- 03H : AUTO2

ACK

The plasma monitor returns the following ACK when setting the PLE, ORBITER, and INVERSE (inverse of image brightness):

3FH	60H	80H	6BH	00H	CKS

35. INVERSE Set

Function

The external control equipment sets the INVERSE (inverse of image brightness) and the WHITE of the plasma monitor.

Transmission Data

DFH 80H 60H C7H 03H DATA00 DATA01 DATA02 CKS

DATA00: INVERSE/WHITE	00H : No operation
	01H : ON (INVERSE)
	02H : OFF
	03H : WHITE
DATA01 : WORKING TIME	00H : ON
	01H: 03M (minutes)
	02H: 06M (minutes)
	:
	FFH: 12H (hours) and 45M (minutes)
DATA02 : WAITING TIME	01H: 03M (minutes)
	02H: 06M (minutes)
	:
	FFH: 12H (hours) and 45M (minutes)

ACK

3FH 60H 80H C7H 00H CKS

NOTE: The WORKING TIME and the WAITING TIME can be set in units of 3 minutes.
Example: 03H=9 minutes
1EH=1 hour and 30 minutes

36. SCREEN WIPER Set

Function

The external control equipment sets the SCREEN WIPER of the plasma monitor.

Transmission Data

DFH 80H 60H C8H 04H DATA00 to DATA03 CKS

DATA00 : SCREEN WIPER	00H : No operation
	01H : ON
	02H : OFF
DATA01 : WORKING TIME	00H : ON
	01H: 03M (minutes)
	02H: 06M (minutes)
	:
	FFH: 12H (hours) and 45M (minutes)
DATA02 : WAITING TIME	01H: 03M (minutes)
	02H: 06M (minutes)
	:
	FFH: 12H (hours) and 45M (minutes)
DATA03 : SPEED	01H : 1
	:
	05H : 5

ACK

3FH 60H 80H C8H 00H CKS

NOTE: The WORKING TIME and the WAITING TIME can be set in units of 3 minutes.
Example: 03H=9 minutes
1EH=1 hour and 30 minutes

37. ALL RESET

Function

The external control equipment resets the user adjustment of the plasma monitor.

Transmission Data

1FH	80H	60H	54H	00H	CKS

ACK

3FH	60H	80H	54H	00H	CKS

38. Audio Select Set

Function

The external control equipment sets combinations of audio and video inputs for the plasma monitor.

Transmission Data

DFH	80H	60H	70H	02H	DATA00	DATA01	CKS

DATA00 : AUDIO INPUT
- 01H : AUDIO1
- 02H : AUDIO2
- 03H : AUDIO3

DATA01 : VISUAL INPUT
- 01H : VIDEO1
- 02H : VIDEO2
- 03H : VIDEO3
- 05H : HD(HD1 or DTV or DTV1)
- 06H : HD2(DTV2)
- 07H : RGB1/PC1
- 08H : RGB2/PC2
- 0CH : RGB3/PC3
- 0DH : HD3(SCART3)

ACK

The plasma monitor returns the following ACK when the input is switched.

3FH	60H	80H	70H	00H	CKS

* The plasma monitor returns “Not Available” when selecting the video input same as the one set at one of the AUDIO 1 to 3.

Example:

The plasma monitor returns “Not Available” when selecting the VIDEO1 for AUDIO2 or VIDEO3 after VIDEO1 has been set to AUDIO1.

39. BNC INPUT

Function

The external control equipment sets the BNC SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8CH	01H	DATA00	CKS

DATA00 : BNC SELECT
- 01H : RGB
- 02H : Component
- 04H : SCART1(*:Only Europe can be chosen.)
- 05H : SCART2(*:Only Europe can be chosen.)

ACK

The plasma monitor returns the following ACK when setting the BNC SELECT:

7FH	60H	80H	8CH	01H	DATA00	CKS

DATA00 : BNC SELECT
- 01H : RGB
- 02H : Component
- 04H : SCART1(*:Only Europe can be chosen.)
- 05H : SCART2(*:Only Europe can be chosen.)

40. RGB Select

Function

The external control equipment sets the RGB SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8BH	01H	DATA00	CKS

DATA00
- 01H : AUTO
- 02H : STILL
- 03H : MOTION
- 04H : WIDE1
- 05H : WIDE2
- 06H : DTV
- 07H : WIDE3
- 08H : WIDE4

ACK

7FH	60H	80H	8BH	01H	DATA00	CKS

DATA00
- 01H : AUTO
- 02H : STILL
- 03H : MOTION
- 04H : WIDE1

05H : WIDE2
06H : DTV
07H : WIDE3
08H : WIDE4

41. HD Select

Function

The external control equipment sets the HD SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8AH	01H	DATA00	CKS

DATA00 01H : 1035I
02H : 1080A
03H : 1080B

ACK

7FH	60H	80H	8AH	01H	DATA00	CKS

DATA00 01H : 1035I
02H : 1080A
03H : 1080B

42. LANGUAGE Select

Function

The external control equipment sets the LANGUAGE SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	5BH	01H	DATA00	CKS

DATA00: 01H : ENGLISH
02H : GERMAN
03H : FRENCH
04H : SPANISH
05H : ITALIAN
06H : SWEDISH
07H : JAPANESE
0AH : CHINESE
0BH :RUSSIAN

ACK

7FH 60H 80H 5BH 01H DATA00 CKS

DATA00: 01H : ENGLISH
02H : GERMAN
03H : FRENCH
04H : SPANISH
05H : ITALIAN
06H : SWEDISH
07H : JAPANESE
0AH : CHINESE
0BH :RUSSIAN

NOTE: As for the change to JAPANESE (07H), SHIP needs to be set as "J." When SHIP is "J", a setup of CHINESE (0AH) cannot be performed.

43. COLOR SYSTEM Select

Function

The external control equipment sets the COLOR SYSTEM of the plasma monitor.

Transmission Data

DFH 80H 60H 5CH 01H DATA00 CKS

DATA00: 01H : 3.58NTSC
02H : 4.43NTSC
03H : PAL
04H : SECAM
0AH : AUTO
0BH : PAL60
0DH : PAL-M
0EH : PAL-N

ACK

7FH 60H 80H 5CH 01H DATA00 CKS

DATA00: 01H : 3.58NTSC
02H : 4.43NTSC
03H : PAL
04H : SECAM
0AH : AUTO

0BH : PAL60
0DH : PAL-M
0EH : PAL-N

44. FREQUENCY Request

Function

The external control equipment inquires the Horizontal frequency, Vertical frequency, Horizontal sync polarity, Vertical sync polarity, Mode, and Resolution of the plasma monitor.

Transmission Data

1FH	80H	60H	26H	00H	CKS

ACK

7FH	60H	80H	26H	0BH	DATA00 to DATA0A	CKS

Horizontal frequency

DATA00: Integer part 00H: 0 (No signal: 00H)
:
FFH : 255

DATA01: One decimal place 00H: 0 (No signal: 00H)
:
09H : 9

Vertical frequency

DATA02: Integer part 00H: 0 (No signal: 00H)
:
FFH : 255

DATA03: One decimal place 00H: 0 (No signal: 00H)
:
09H : 9

Horizontal sync polarity

DATA04 00H : -
01H : Positive
02H : Negative

Vertical sync polarity

DATA05 00H : -
01H : Positive
02H : Negative

MODE

DATA06	00H	: No signal	—
	01H to 80H	: RGB signal	Identification number of PC mode
	81H	: Video signal	3.58NTSC
	82H	:	4.43NTSC
	83H	:	PAL
	84H	:	PAL-M
	85H	:	PAL-N
	86H	:	PAL60
	87H	:	SECAM
	88H	:	B/W60
	89H	:	B/W50
	A0H	: HD/DVD/DTV signal	480I
	A1H	:	480P
	A2H	:	576I
	A3H	:	576P
	A4H	:	720P
	A5H	:	1035I
	A6H	:	1080I

RESOLUTION

DATA07: Dots (Low-order byte) 00H: 0 (No signal: 00H)
:
FFH 255

DATA08: Dots (High-order byte) 00H: 257 (No signal: 00H)
:
FFH

DATA09: Lines (Low-order byte) 00H: 0 (No signal: 00H)
:
FFH 255

DATA10: Lines (High-order byte) 00H: 257 (No signal: 00H)
:
FFH

45. Input MODE Request

Function

The display returns the current input information by the external control equipment' s request.

Transmission Data

1FH 80H 60H 41H 00H CKS

ACK

7FH 60H 80H 41H 01H DATA00 CKS

DATA00 : Input Select

01H : Video
02H : Video2
03H : Video3
04H : HD (HD1 or DTV or DTV1)
05H : PC1
06H : PC2
0AH : DVD (DVD1)
0CH : HD2 (DTV2)
0DH : DVD2
0EH : PC3
0FH : DVD3(SCART3)

46. VIDEO ADJ. Request

Function

The display returns the video adjustments information by the external control equipment's request.

Transmission Data

1FH 80H 60H 45H 00H CKS

ACK

7FH 60H 80H 45H 0CH DATA00 to DATA0B CKS

DATA00: RED Gain (Bias)

D8H : -40
:
FFH : -01
00H : 0
01H : +01
:
1EH : +30

DATA01: GREEN Gain (Bias)

D8H : -40

	:
	FFH : -01
	00H : 0
	01H : +01
	:
	1EH : +30
DATA02: BLUE Gain (Bias)	D8H : -40
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	1EH : +30
DATA03: COLOR Gain	E0H : -32
	:
* COLOR Gain is from -22 (EAH) to +22 (16H) only during video.	FFH : -01
	00H : 0
	01H : +01
	:
	20H : +32
DATA04: TINT Gain	E0H : -32
	:
* TINT Gain is from -22 (EAH) to +22 (16H) only during video.	FFH : -01
	00H : 0
	01H : +01
	:
	20H : +32
DATA05: SHARPNESS Gain	F0H : -16
	:
	FFH : -01
	00H : 0
	01H : +01
	:
	10H : +16
DATA06: CONTRAST Gain	CCH : -52

:
FFH : -01
00H : 0
01H : +01
:
14H : +20

DATA07: BRIGHT Gain

E0H : -32
:
FFH : -01
00H : 0
01H : +01
:
20H : +32

DATA08: RED Gain (Drive)

D8H : -40
:
FFH : -01
00H : 0
01H : +01
:
1EH : +30

DATA09: GREEN Gain (Drive)

D8H : -40
:
FFH : -01
00H : 0
01H : +01
:
1EH : +30

DATA0A: BLUE Gain (Drive)

D8H : -40
:
FFH : -01
00H : 0
01H : +01
:

1EH : +30

DATA0B: COLOR TEMP SELECT 00H: low
01H: middle
02H: high
03H: middle low

47. Audio Select Request

Function

The external control equipment inquires the current combinations of audio and video inputs for the plasma monitor.

Transmission Data

1FH 80H 60H 6FH 00H CKS

ACK

The plasma monitor returns the following ACK:

7FH 60H 80H 6FH 03H DATA00 DATA01 DATA02 CKS

DATA00 : AUDIO1
01H-0CH : VISUAL INPUT DATA

DATA01 : AUDIO2
01H-0CH : VISUAL INPUT DATA

DATA02 : AUDIO3
01H-0CH : VISUAL INPUT DATA

<VISUAL INPUT DATA>
01H : VIDEO1
02H : VIDEO2
03H : VIDEO3
05H : HD(HD1ORDTVORDTV1)
06H : HD2(DTV2)
07H : RGB1/PC1
08H : RGB2/PC2
0CH : RGB3/PC3
0DH : HD3

48. Failure Mode Request

Function

The external control equipment inquires the detection of failures of the plasma monitor.

Transmission Data

1FH 80H 60H 3FH 00H CKS

ACK

The plasma monitor returns the following ACK:

7FH 60H 80H 3FH 02H DATA00 DATA01 CKS

DATA00: FAILURE MODE 1

Bit 0 : PDP MODULE

0: Abnormal

1: Normal

Bit 1 : 1: fixed (backup)

Bit 2 : TEMPERATURE

0: Abnormal

1: Normal

Bit 3 : FAN

0: Abnormal

1: Normal

Bit 4 : TEMPERATURE SENSOR

0: Abnormal

1: Normal

Bit 5 : 1: fixed (backup)

Bit 6 : 1: fixed (backup)

Bit 7 : 1: fixed (backup)

DATA01: FAILURE MODE 2

Bit 0-7 : 1: fixed (backup)

49. MODEL NAME Request

Function

The external control equipment inquires the product code of the plasma monitor.

Transmission Data

1FH 80H 60H 17H 00H CKS

ACK

The plasma monitor returns the following ACK:

7FH 60H 80H 17H 0CH DATA00 to DATA11 CKS

DATA00 : 1st character of the product code

DATA01 : 2nd character of the product code

:

DATA11 : 12th character of the product code

Received data

00H-09H : 0-9
80H : - (Hyphen)
81H : +
82H : ×
83H : /
84H : (
85H :)
86H : .
87H : ‘
96H : (Blank)
10H-29H : A-Z

Corresponding character	A	B	C	D	E	F	G	H	I	J
Received data (H)	10	11	12	13	14	15	16	17	18	19

Corresponding character	K	L	M	N	O	P	Q	R	S	T
Received data (H)	1A	1B	1C	1D	1E	1F	20	21	22	23

Corresponding character	U	V	W	X	Y	Z
Received data (H)	24	25	26	27	28	29

If there are fewer than 12 characters in the product code, product code

would be padded right with blanks.

Example: If the product code of your plasma monitor is “PX-42VP4G”, the returned codes would be as follows.
DATA00:1FH, DATA01:27H, DATA02:80H, DATA03:04H, DATA04:02H, DATA05:25H, DATA06:1FH, DATA07:04H, DATA08:16H, DATA09:96H, DATA10:96H, DATA11:96H

50. D-SUB INPUT

Function

The external control equipment sets the D-SUB SELECT of the plasma monitor.

Transmission Data

DFH 80H 60H 8DH 01H DATA00 CKS

DATA00 : D-SUB INPUT 01H : RGB

02H : SCART3(*:Only Europe can be chosen.)

ACK

The plasma monitor returns the following ACK when setting the D-SUB SELECT:

7FH 60H 80H 8DH 01H DATA00 CKS

DATA00 : D-SUB INPUT 01H : RGB

02H : SCART3(*:Only Europe can be chosen.)

51. TIMER SWITCH

Function

The external control equipment sets the timer reservation of the plasma monitor.

Transmission Data

DFH 80H 60H 02H 01H DATA00 CKS

DATA00: 00H : Reservation OFF

01H : Reservation ON

ACK

7FH 60H 80H 02H 01H DATA00 CKS

DATA00: 00H : Reservation OFF

01H : Reservation ON

52. LOW TONE

Function

The external control equipment sets the dithering processing or error diffusion processing of the plasma monitor.

Transmission Data

DFH	80H	60H	0CH	01H	DATA00	CKS

DATA00: 00H:AUTO
01H: dithering processing(MOTION)
02H: dithering processing (STILL)
03H: error diffusion processing

ACK

7FH	60H	80H	0CH	01H	DATA00	CKS

DATA00: 00H:AUTO
01H: dithering processing (MOTION)
02H: dithering processing (STILL)
03H: error diffusion processing

53. COLOR TUNE

Function

External control equipment can adjust RGB each color that a plasma monitor wants to emphasize.

Transmission Data

DFH	80H	60H	0DH	07H	DATA00 to DATA06	CKS

DATA00:RED
00H : -32
:
20H : 0
:
40H : +32

DATA01:GREEN
00H : -32
:
20H : 0
:
40H : +32

DATA02:BLUE
00H : -32
:
20H : 0
:
40H : +32

DATA03:YELLOW
00H : -32
:
20H : 0
:
40H : +32

DATA04:MAZENTA
00H : -32
:
20H : 0
:
40H : +32

DATA05:CYAN
00H : -32
:
20H : 0
:
40H : +32

DATA06:RESET
00H : OFF

01H : ON

ACK

7FH 60H 80H 0DH 00H CKS

54. TIMER PROGRAM SETTING

Function

External control apparatus sets up the timer program of a plasma monitor.

Transmission Data

DFH 80H 60H 30H 08H DATA00 to DATA07 CKS

DATA00 PROGRAM No

01H~07H :No1~No7

DATA01 DATE

01H~07H : Sunday - Saturday

08H : Every day

09H~0FH : Every week Sunday - every week Saturday

FFH : - (with No Setup)

DATA02 ON time (HOUR)

00H~09H :00~09

10H~19H :10~19

20H~23H :20~23

FFH : - (with No Setup)

DATA03 ON time (MIN)

00H~09H :00~09

10H~19H :10~19

20H~29H :20~29

30H~39H :30~39

40H~49H :40~49

50H~59H :50~59

FFH : - (with No Setup)

DATA04 OFF time (HOUR)

00H~09H :00~09

10H~19H :10~19

20H~23H :20~23

FFH : - (with No Setup)

DATA05 OFF time(MIN)

00H~09H :00~09

10H~19H :10~19
20H~29H :20~29
30H~39H :30~39
40H~49H :40~49
50H~59H :50~59
FFH : - (with No Setup)

DATA06 INPUT
01H : Video1
02H : Video2
03H : Video3
04H : HD1(HD1 or DTV or DTV1)
05H : HD2(DTV2 or SCART1/SCART2)
06H : RGB1
07H : RGB2
08H : RGB3
09H : HD3(SCART3)
FFH : - (with No Setup)

DATA07 MODE
01H : OBIT
02H : INV
03H : WT
04H : WIPER
FFH : - (with No Setup)

ACK

7FH 60H 80H 30H 00H CKS

55. PRESENT TIME SETTING

Function

External control apparatus sets up the present time of a plasma monitor.

Transmission Data

DFH 80H 60H 31H 03H DATA00 to DATA02 CKS

DATA00 Day of the week 01H-07H : 1-7 (Sunday - Saturday)

DATA01 HOUR	00H-09H:00-09
	10H~19H:10~19
	20H~23H:20~23
DATA02 minute	00H-09H:00-09
	10H~19H:10~19
	20H~29H:20~29
	30H~39H:30~39
	40H~49H:40~49
	50H~59H:50~59

ACK

7FH 60H 80H 31H 00H CKS

56. MULTI MODE Select

Function

External control apparatus changes MULTI MODE of a plasma monitor.

Transmission Data

DFH 80H 60H 03H 03H DATA00 DATA01 DATA02 CKS

DATA00 (SCREEN DIVIDER SETTING)

- 01H : Single mode
- 02H : Multi mode 1 screens
- 03H : Multi mode 4 screens
- 04H : Multi mode 9 screens
- 05H : Multi mode 16 screens
- 06H : Multi mode 25 screens

DATA01 (POSITION OF DIVIDE)

- 01H : Upper left selected (4 screens)
- 02H : Upper right selected (4 screens)
- 03H : Lower right selected (4 screens)
- 04H : Lower left selected (4 screens)
- 07H : Top left selected (9 screens)

08H : Top middle selected (9 screens)
09H : Top right selected (9 screens)
0AH : Middle left selected (9 screens)
0BH : Middle center selected (9 screens)
0CH : Middle right selected (9 screens)
0DH : Bottom left selected (9 screens)
0EH : Bottom middle selected (9 screens)
0FH : Bottom right selected (9 screens)

10H : position1(16 screens, refer to figure1)
11H : position2(16 screens, refer to figure1)
:
18H : position9(16 screens, refer to figure1)
19H : position10(16 screens, refer to figure1)
:
1FH : position16 (16 screens, refer to figure1)

20H : position1(25 screens, refer to figure2)
21H : position2(25 screens, refer to figure2)
:
29H : position10(25 screens, refer to figure2)
2AH : position11(25 screens, refer to figure2)
:
32H : position19(25 screens, refer to figure2)
33H : position20(25 screens, refer to figure2)
:
38H : position25(25 screens, refer to figure2)

1	2	3	4
6	7	8	9
11	12	13	14
16	17	18	19

Figure1

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

Figure2

DATA02 (DISP MODE)
00H : SPLIT

01H : BRANKING

ACK

7FH 60H 80H 03H 03H DATA00 DATA01 DATA02 CKS

DATA00 (SCREEN DIVIDER SETTING)

01H : Single mode
02H : Multi mode 1 screens
03H : Multi mode 4 screens
04H : Multi mode 9 screens
05H : Multi mode 16 screens
06H : Multi mode 25 screens

DATA01 (POSITION OF DIVIDE)

01H : Upper left selected (4 screens)
02H : Upper right selected (4 screens)
03H : Lower right selected (4 screens)
04H : Lower left selected (4 screens)
07H : Top left selected (9 screens)
08H : Top middle selected (9 screens)
09H : Top right selected (9 screens)
0AH : Middle left selected (9 screens)
0BH : Middle center selected (9 screens)
0CH : Middle right selected (9 screens)
0DH : Bottom left selected (9 screens)
0EH : Bottom middle selected (9 screens)
0FH : Bottom right selected (9 screens)

10H : position1(16 screens, refer to figure1)
11H : position2(16 screens, refer to figure1)
:
18H : position9(16 screens, refer to figure1)
19H : position10(16 screens, refer to figure1)
:
1FH : position16 (16 screens, refer to figure1)

20H : position1(25 screens, refer to figure2)
21H : position2(25 screens, refer to figure2)
:
29H : position10(25 screens, refer to figure2)

2AH : position11(25 screens, refer to figure2)

:

32H : position19(25 screens, refer to figure2)

33H : position20(25 screens, refer to figure2)

:

38H : position25(25 screens, refer to figure2)

1	2	3	4
6	7	8	9
11	12	13	14
16	17	18	19

Figure1

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

Figure2

DATA02 (DISP MODE)

00H : SPLIT

01H : BRANKING

Note) In the case of 4 screens or 9 screens video wall system and connecting each PDP by wired cable, please refer to No.60."VIDEO WALL SETTING".

57. MULTI MODE Request

Function

External control apparatus can know the MULTI MODE information on a plasma monitor.

Transmission Data

1FH 80H 60H 3BH 00H CKS

ACK

7FH 80H 60H 3BH 02H DATA00 DATA01 DATA02 CKS

DATA00 (SCREEN DIVIDER SETTING)

01H : Single mode
02H : Multi mode 1 screens
03H : Multi mode 4 screens
04H : Multi mode 9 screens
05H : Multi mode 16 screens
06H : Multi mode 25 screens

DATA01 (POSITION OF DIVIDE)

01H : Upper left selected (4 screens)
02H : Upper right selected (4 screens)
03H : Lower right selected (4 screens)
04H : Lower left selected (4 screens)
07H : Top left selected (9 screens)
08H : Top middle selected (9 screens)
09H : Top right selected (9 screens)
0AH : Middle left selected (9 screens)
0BH : Middle center selected (9 screens)
0CH : Middle right selected (9 screens)
0DH : Bottom left selected (9 screens)
0EH : Bottom middle selected (9 screens)
0FH : Bottom right selected (9 screens)

10H : position1(16 screens, refer to figure1)
11H : position2(16 screens, refer to figure1)
:
18H : position9(16 screens, refer to figure1)
19H : position10(16 screens, refer to figure1)
:
1FH : position16 (16 screens, refer to figure1)

20H : position1(25 screens, refer to figure2)
21H : position2(25 screens, refer to figure2)
:
29H : position10(25 screens, refer to figure2)
2AH : position11(25 screens, refer to figure2)
:
32H : position19(25 screens, refer to figure2)
33H : position20(25 screens, refer to figure2)
:
38H : position25(25 screens, refer to figure2)

1	2	3	4
6	7	8	9
11	12	13	14
16	17	18	19

Figure1

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

Figure2

DATA02 (DISP MODE)
00H : SPLIT
01H : BRANKING

58. AUTO ID SET START

Function

External control apparatus sets up ID automatically to two or more plasma monitors.

Transmission Data

5FH 80H 60H F0H 01H DATA00 CKS

DATA00 00H~FFH: ID of a master*1 is set up.

*: When you use it by the multi-system, please remove the link input of a master*1.

*1: "Master" means the 1st set of PDP at the time of cable connection at the time of AUTO ID execution.

59. PLE LINK

Function

External control apparatus sets up equally PLE between two or more plasma monitors.

Transmission Data

DFH 80H 60H F1H 03H DATA00 to DATA02 CKS

DATA00 00H:PLE LINK ON
01H:PLE LINK OFF

DATA01 FFH

DATA02 FFH

*: This command is premised on the system configuration of two or more plasma monitor being a multi-system. When renewal of the PSC data based on this command is not carried out during a certain fixed period (about 2 seconds) during PLE LINK enforcement, each plasma monitor sets PSC data as FFH. Since this command is one-way traffic, there is no ACK.

*DATA01: Please set up FFH, when you publish this command from external control apparatus. A master*1 sets up its own PSS data. As compared with its own PSS data, the plasma monitor after the master that received this command sets up the data of the larger one, and equips the output of a command with it.

*DATA02: Please set up FFH, when you publish this command from external control apparatus. The 1st round which PSS data has not decided is FFH.

*1: "Master" means the 1st set of PDP at the time of cable connection at

the time of AUTO ID execution.

60. VIDEO WALL SETTING

Function

External control apparatus sets four screens or nine screens as a video wall.

Transmission Data

DFH 80H 60H F3H 03H DATA00 DATA01 DATA02 CKS

DATA00:	01H:1 screen (Matrix diplay function does not work.)
	04H:4 screens (2*2 video wall)
	09H:9 screens (3*3 video wall)
DATA 01:	00H-FFH:Master's ID*1
DATA 02:	01H : Video1
	02H : Video2
	03H : Video3
	04H : HD (HD1 or DTV or DTV1)
	05H : HD2 (DTV2)
	06H : HD3 (DTV3)
	07H : RGB1 / PC1
	08H : RGB2 / PC2
	09H : RGB3 / PC3

*: This command is used to following system.

1. The system configuration is video wall system (4screens or 9screens). Then please connect each PDP by wired cable.

In the case of 16 screens or 25 screens video wall system, please refer to No.56."MULTI MODE Select".

2. The ID number from a master[1] display is set the continuous number.

DATA00: Specify the composition of a multi-system.

DATA01: Set master's ID*1.

*1: "Master" means the 1st set of PDP at the time of cable connection at the time of AUTO ID execution.

61. POWER DELAY ON(at 4 or 9 multiscreen)

Function

External control apparatus attaches a time lag to two or more plasma monitors, and turns on a power supply.

Transmission Data

DFH 80H 60H F2H 01H DATA00 CKS

DATA00: 00H-FFH: Delay time (second)

*: This command is premised on two or more plasma monitor system composition being multi-systems. In command issue of master[1] OSD operation, the value of DATA00 is 01H (1 second). This command does not have ACK for one-way traffic.

*1: "Master" means the 1st set of PDP at the time of cable connection at the time of AUTO ID execution.

62. POWER DELAY ON (at 16 or 25 multi screens)

Function

External control apparatus attaches a time lag to 10 or more plasma monitors, and turns on a power supply.

Transmission Data

DFH 80H 60H F6H 01H DATA00 CKS

DATA00: 01H mode1

02H mode2

ACK

7FH 60H 80H F6H 01H DATA00 CKS

DATA00: 01H mode1

02H mode2

NOTE: When multi mode is 16 or 25, this function is available.

63. GAMMA GAIN Data

Function

External control apparatus changes Gamma of a plasma monitor.

Transmission Data

DFH 80H 60H 13H 02H DATA00 DATA01 CKS

DATA00: GAMMA FLAG 01H : Gamma change

DATA01: GAMMA 00H :1

01H :2

02H :3

03H :4

ACK

7FH 60H 80H 13H 01H DATA00 CKS

DATA00: GAMMA FLAG 01H : Gamma change

64. Running Sense

Function

External control apparatus grasps the power supply state of a plasma monitor.

A plasma monitor is made to recognize connection of PC CONTROL.

Transmission Data

1FH 80H 60H 88H 00H CKS

ACK

7FH 60H 80H 88H 01H DATA CKS

DATA: Bit0:Connect Condition

0: No connection

1: Connected

Bit1 0: Fixed

1:-

Bit2:Power Status

0:POWER ON

1:POWER OFF(STANBY)

Bit3 0: Fixed

Bit4 0: Fixed

Bit5 0: Fixed

Bit6 0: Fixed

Bit7 0: Fixed

65. ORBITER SET

Function

A picture shift function is set up. (*1)

Transmission Data

DFH 80H 60H 1EH 04H DATA00 to DATA03 CKS

DATA00: Mode 00H : OFF
01H : Auto 1 (*2)
02H : Auto 2 (*3)
03H : Manual (*4)

DATA01: The horizontal amount of movements
1 dot : 01H
to : -
20 dot : 14H

DATA02: The vertical amount of movements
One line : 01H
to : -
20 line : 14H

DATA03: Interval of operation 1 - 5 minutes : 01H - 05H

ACK

7FH 60H 80H 1EH 01H DATA00 CKS

DATA00: Mode 00H : OFF
01H : Auto 1
02H : Auto 2
03H : Manual

(*1)A picture shift function is a function that is made to carry out rotation movement of the image, and mitigates printing on a screen.

(*2)At the time of PC input, after reducing an image, a picture shift is performed. Reduction of an image does not carry out at the time of an animation input.

(*3) At the time of PC input, after expanding an image, a picture shift is performed. Expansion of an image does not carry out at the time of an animation input.

(*4) It is not concerned with PC input and an animation input, and expansion reduction of an image is not performed. It operates at intervals of the horizontal and vertical amount of movements specified by DATA 01-03, and operation.

66. OSM OBITER

Function

In order to decrease printing of a screen by OSM display, whenever it displays OSM, shift operation of the OSM is carried out.

Transmission Data

DFH	80H	60H	5FH	01H	DATA00	CKS

DATA00 01H : OBITER ON

02H : OBITER OFF

ACK

7FH	60H	80H	5FH	01H	DATA00	CKS

DATA00 01H : OBITER ON

02H : OBITER OFF

67. OSM ANGLE

Function

The vertical display of OSM and a horizontal display are chosen.

Transmission Data

DFH	80H	60H	60H	01H	DATA00	CKS

DATA00 01H : Horizontal display

02H : Vertical display

ACK

7FH	60H	80H	60H	01H	DATA00	CKS

DATA00 01H : Horizontal display

02H : Vertical display

68. Input Skip

Function

In a monitor's key "an input change", when there is no signal, it flies and shifts to the following channel.

Transmission Data

DFH	80H	60H	61H	01H	DATA00	CKS

DATA00 01H : ON

02H : OFF

ACK

7FH	60H	80H	61H	01H	DATA00	CKS

DATA00 01H : ON

02H : OFF

69. PICTURE Size

Function

Screen mode selection.

Transmission Data

DFH	80H	60H	2AH	01H	DATA00	CKS

DATA00 01H : ON

02H : OFF

ACK

7FH	60H	80H	2AH	01H	DATA00	CKS

DATA00 01H : ON

02H : OFF

*This function is only 50 or 61-inch model.

70. OPTION Select

Function

Power-on mode, a control lock, and IR remote are set up.

Transmission Data

DFH	80H	60H	63H	04H	DATA00 to DATA03	CKS

DATA00 : Power ON mode
- 00H : LAST
- 01H : Video1
- 02H : Video2
- 03H : Video3
- 05H : HD (HD1 or DTV or DTV1)
- 06H: HD2 (DTV2 or SCART1/SCART2)
- 07H : RGB1 / PC1
- 08H : RGB2 / PC2
- 0CH : RGB3 / PC3
- 0DH : HD3(SCART3)

DATA01 : Control Lock
- 00H : OFF
- 01H : ON

DATA02 : IR remote
- 00H : OFF
- 01H : ON

DATA03 : Loop Out
- 00H : OFF
- 01H : ON

ACK

7FH	60H	80H	63H	00H	CKS

71. REPEAT Timer

Function

External control apparatus sets up the repeat timer of a plasma monitor.

Transmission Data

DFH	80H	60H	64H	07H	DATA00 to DATA06	CKS

DATA00 00H :REPEAT Timer OFF
01H :REPEAT Timer ON

DATA01 PROGRAM 1
01H :DIVIDER 1
02H :DIVIDER 4
03H :DIVIDER 9

DATA02 SOURCE 01H :Video1
02H :Video2
03H :Video3
05H :HD (HD1 or DTV-or-DTV1)
06H :HD2 (DTV2 or SCART1/SCART2
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3 (SCART3)

DATA03 WORK TIME
01 H-FFH:1 - 255 minutes (1 minute - 4 hours and 15 minutes)

DATA04 PROGRAM 1
01H :DIVIDER 1
02H :DIVIDER 4
03H :DIVIDER 9

DATA05 SOURCE 01H :Video1
02H :Video2
03H :Video3
05H :HD (HD1 or DTV-or-DTV1)
06H :HD2 (DTV2 or SCART1/SCART2
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3 (SCART3)

DATA06 WORK TIME
01 H-FFH:1 - 255 minutes (1 minute - 4 hours and 15 minutes)

ACK

7FH 60H 80H 64H 00H CKS

72. SERIAL No. Request

Function

External control apparatus read the serial number of the set recorded by EEPROM of a plasma display.

Transmission Data

1FH	80H	60H	15H	00H	CKS

ACK

7FH	60H	80H	15H	0CH	DATA00 to DATA11	CKS

Even DATA00-DATA11 is set up as follows.

Setting value	00H-09H	:	0 - 9
	96H	:	Blank
	10H-29H	:	A-Z of Alphabet

73. S1/S2 SELECT

Function

External control apparatus sets up the S1/S2 detection of a plasma monitor.

Transmission Data

DFH	80H	60H	89H	01H	DATA00	CKS

DATA00 01H : AUTO
02H : OFF

ACK

7FH	60H	80H	89H	01H	DATA00	CKS

DATA00 01H : AUTO
02H : OFF

74. SOFT FOCUS

Function

External control apparatus sets up the Soft Focus of a plasma monitor.

Transmission Data

DFH	80H	60H	65H	01H	DATA00	CKS

DATA00 01H : OFF
02H : 1
03H : 2
04H : 3
05H : 4

ACK

7FH	60H	80H	65H	01H	DATA00	CKS

DATA00 01H : OFF
02H : 1
03H : 2
04H : 3
05H : 4

75. PLUG and PLAY(only HDCP model)

Function

External control apparatus sets up the Plug and Play of a plasma monitor.

Transmission Data

DFH	80H	60H	8EH	01H	DATA00	CKS

DATA00 01H : PC
02H : STB/DVD(HDCP signal)

ACK

7FH	60H	80H	8EH	01H	DATA00	CKS

DATA00 01H : PC
02H : STB/DVD(HDCP signal)

76. DEGITAL SIGNAL LEVEL SELECT(only HDCP model)

Function

External control apparatus sets up the digital signal level of a plasma monitor.

Transmission Data

DFH	80H	60H	8FH	01H	DATA00	CKS

DATA00 01H : LOW
02H : HIGH

ACK

7FH	60H	80H	8FH	01H	DATA00	CKS

DATA00 01H : LOW
02H : HIGH

77. MULTI(SPRIT) SCREEN Select

Function

External control apparatus selects a screen mode from alternatives mentioned below, such as single mode, side-by-side, picture in picture, etc., of Plasma Monitor.

Transmission Data

DFH	80H	60H	07H	01H	DATA00	CKS

DATA00:
- 00H: Single Screen
- 01H: Side by Side 1 (Same Size Screen)
- 02H: Side-by-Side 2R (Left Screen smaller)
- 03H: Picture in Picture 1 (sub screen Bottom Left) with size1
- 04H: Picture in Picture2(sub screen Bottom Right) with size1
- 05H: Side-by-Side 2L (Left Screen Bigger)
- 06H: Picture in Picture 1(sub screen Bottom Left) with size2
- 07H: Picture in Picture 2(sub screen Bottom Right) with size2
- 08H: Picture in Picture 1(sub screen Bottom Left) with size3
- 09H: Picture in Picture 2(sub screen Bottom Right) with size3
- 0AH: Picture in Picture 1(sub screen Bottom Left) with size4
- 0BH: Picture in Picture 2(sub screen Bottom Right) with size4
- 41H: Picture in Picture 3(sub screen Top Right) with size1
- 42H: Picture in Picture 3(sub screen Top Right) with size2
- 43H: Picture in Picture 3(sub screen Top Right) with size3

44H: Picture in Picture 3(sub screen Top Right) with size4
45H: Picture in Picture 4(sub screen Top Left) with size1
46H: Picture in Picture 4(sub screen Top Left) with size2
47H: Picture in Picture 4(sub screen Top Left) with size3
48H: Picture in Picture 4(sub screen Top Left) with size4
49H: Side by Side 3 (Same Size Screen vertical expand)
4AH: Side by Side 4 R(Left Screen smaller vertical expand)
4BH: Side by Side 4 L(Left Screen Bigger vertical expand)

In case of Side by Side mode;

20H: Active Left
21H: Active Right

In case of Picture in picture mode;

30H: Active Main
31H: Active Sub

ACK

7FH	60H	80H	07H	01H	DATA00	CKS

DATA00: 00H: Single Screen
01H: Side by Side 1 (Same Size Screen)
02H: Side-by-Side 2R (Left Screen smaller)
03H: Picture in Picture 1 (sub screen Bottom Left) with size1
04H: Picture in Picture2(sub screen Bottom Right) with size1
05H: Side-by-Side 2L (Left Screen Bigger)
06H: Picture in Picture 1(sub screen Bottom Left) with size2
07H: Picture in Picture 2(sub screen Bottom Right) with size2
08H: Picture in Picture 1(sub screen Bottom Left) with size3
09H: Picture in Picture 2(sub screen Bottom Right) with size3
0AH: Picture in Picture 1(sub screen Bottom Left) with size4
0BH: Picture in Picture 2(sub screen Bottom Right) with size4
41H: Picture in Picture 3(sub screen Top Right) with size1
42H: Picture in Picture 3(sub screen Top Right) with size2
43H: Picture in Picture 3(sub screen Top Right) with size3
44H: Picture in Picture 3(sub screen Top Right) with size4
45H: Picture in Picture 4(sub screen Top Left) with size1
46H: Picture in Picture 4(sub screen Top Left) with size2
47H: Picture in Picture 4(sub screen Top Left) with size3
48H: Picture in Picture 4(sub screen Top Left) with size4
49H: Side by Side 3 (Same Size Screen vertical expand)

4AH: Side-by-Side 4R (Left Screen smaller vertical expand)

4BH: Side-by-Side 4L (Left Screen Bigger vertical expand)

In case of Side by Side mode;

20H: Active Left

21H: Active Right

In case of Picture in picture mode;

30H: Active Main

31H: Active Sub

78. SUB PICTURE DETECT SELECT

Function

External control apparatus selects whether to display the sub picture or not, under picture in picture mode, of plasma monitor.

Transmission Data

DFH	80H	60H	7AH	01H	DATA00	CKS

DATA00 01H : OFF

02H : AUTO

ACK

7FH	60H	80H	7AH	01H	DATA00	CKS

DATA00 01H : OFF

02H : AUTO

79. ZOOM NAVIGATION SELECT

Function

External control apparatus selects digital zoom display of a plasma monitor, from the alternatives mentioned below;

Transmission Data

DFH	80H	60H	7BH	01H	DATA00	CKS

DATA00 01H : NORMAL

02H : Side By Side(Left Screen smaller)

03H : Picture in Picture1(Sub Screen Bottom Left)

04H : Picture in Picture2(Sub Screen Bottom Right)

05H : Picture in Picture3(Sub Screen Top Right)

06H : Picture in Picture4(Sub Screen Top Left)

ACK

7FH	60H	80H	7BH	01H	DATA00	CKS

DATA00 01H : NORMAL

02H : Side-By-Side
03H : Picture in Picture1(Sub Screen Bottom Left)
04H : Picture in Picture2(Sub Screen Bottom Right)
05H : Picture in Picture3(Sub Screen Top Right)
06H : Picture in Picture4(Sub Screen Top Left)

80. PICTURE FREEZE SELECT

Function

External control apparatus selects the picture freeze function of a plasma monitor.

Transmission Data

DFH	80H	60H	7CH	01H	DATA00	CKS

DATA00 01H : OFF(single screen)
02H : Side By Side1(Same Size Screen)
03H : Picture in Picture1(Sub Screen Bottom Left)
04H : Picture in Picture2(Sub Screen Bottom Right)
05H : Picture in Picture3(Sub Screen Top Right)
06H : Picture in Picture4(Sub Screen Top Left)
07H: Side by Side2 (Same Size Screen vertical expand)

ACK

7FH	60H	80H	7CH	01H	DATA00	CKS

DATA00 01H : OFF(single screen)
02H : Side By Side1
03H : Picture in Picture1(Sub Screen Bottom Left)
04H : Picture in Picture2(Sub Screen Bottom Right)
05H : Picture in Picture3(Sub Screen Top Right)
06H : Picture in Picture4(Sub Screen Top Left)
07H : Side by Side2(Same Size Screen vertical expand)

81. PICTURE FREEZE Command

Function

External control apparatus sets picture freeze or remove picture freeze of a plasma monitor.

Transmission Data

DFH	80H	60H	7DH	01H	DATA00	CKS

DATA00 01H : FREEZE
02H : FREEZE OFF

ACK

7FH	60H	80H	7DH	01H	DATA00	CKS

DATA00 01H : FREEZE
02H : FREEZE OFF

82. SEAMLESS SWITCH SELECT

Function

External control apparatus selects the seamless switch function of a plasma monitor.

Transmission Data

DFH	80H	60H	7EH	01H	DATA00	DATA01	DATA02	CKS

DATA00: SEAMLESS SWITCH
01H :OFF
02H :ON

DATA01 : SELECT1
01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

DATA02 : SELECT2
01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

ACK

7FH	60H	80H	7EH	01H	DATA00	CKS

DATA00 01H : OFF
02H : ON

83. MULTI (SPRIT) SCREEN PROGRAM TIMER SET

Function

External control apparatus sets multi (sprit) screen program timer of a plasma monitor.

Transmission Data

DFH	80H	60H	32H	0AH	DATA00～DATA09 CKS

DATA00	PROGRAM No	01H～07H :No1～No7
DATA01	DATE	01H～07H : Sunday~Saturday
		08H : Everyday
		09H～0FH:Every Sunday~Every Saturday
		FFH : - (no setteing)
DATA02	ON time(hour)	00H～09H:00～09
		10H～19H:10～19
		20H～23H:20～23
		FFH : - (no setteing)
DATA03	ON time(minute)	00H～09H : 00～09
		10H～19H:10～19
		20H～29H:20～29
		30H～39H:30～39
		40H～49H:40～49
		50H～59H:50～59
		FFH : - (no setteing)
DATA04	OFF time(hour)	00H～09H:00～09
		10H～19H:10～19
		20H～23H:20～23
		FFH : - (no setting)
DATA05	OFF time(minute)	00H～09H : 00～09
		10H～19H:10～19
		20H～29H:20～29
		30H～39H:30～39
		40H～49H:40～49
		50H～59H:50～59
		FFH : - (no setteing)
DATA06	MULTI MODE	01H : Side By Side1(Same Size Screen)
		02H : Side By Side2(Left Screen Smaller)
		03H : Side By Side2(Left Screen Bigger)

04H : Picture in Picture1(Sub Screen Bottom Left)
05H : Picture in Picture2(Sub Screen Bottom Right)
06H : Picture in Picture3(Sub Screen Top Right)
07H : Picture in Picture4(Sub Screen Top Left)

DATA07 INPUT1 (Left or main)

01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

DATA08 INPUT2(Right or Sub)

01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

DATA09 MODE

01H : ORBITER
02H : INVERSE
03H : WHITE
04H : WIPER
FFH : - (no setting)

ACK

7FH	60H	80H	30H	00H	CKS

84. MULTI (SPRIT) SCREEN POWER ON MODE SET

Function

External control apparatus sets “multi (sprit) screen power on mode” of a plasma monitor.

Transmission Data

DFH 80H 60H 33H 04H DATA00～DATA03 CKS

DATA00 POWER ON MODE

01H:LAST

02H:MULTI

DATA01 MULTI MODE

01H : Side By Side1(Same Size Screen)

02H : Side By Side2(Left Screen Smaller)

03H : Side By Side2(Left Screen Bigger)

04H : Picture in Picture1(Sub Screen Bottom Left)

05H : Picture in Picture2(Sub Screen Bottom Right)

06H : Picture in Picture3(Sub Screen Top Right)

07H : Picture in Picture4(Sub Screen Top Left)

DATA02 INPUT1 (Left or main)

01H : Video1

02H : Video2

03H : Video3

05H : HD (HD1 or DTV or DTV1)

06H : HD2 (DTV2 or SCART1/SCART2)

07H : RGB1 / PC1

08H : RGB2 / PC2

0CH : RGB3 / PC3

0DH : HD3(SCART3)

DATA03 INPUT2(Right or Sub)

01H : Video1

02H : Video2

03H : Video3

05H : HD (HD1 or DTV or DTV1)

06H : HD2 (DTV2 or SCART1/SCART2)

07H : RGB1 / PC1

08H : RGB2 / PC2

0CH : RGB3 / PC3

0DH : HD3(SCART3)

ACK

7FH	60H	80H	33H	00H	CKS

85. MULTI (SPRIT) REPEAT TIMER SET

Function

External control apparatus sets “multi (sprit) screen repeat timer” of a plasma monitor.

Transmission Data

DFH	80H	60H	34H	09H	DATA00～DATA03	CKS

DATA00 REPEAT TIMER 00H:OFF
01H:ON

REPEAT1

DATA01 MULTI MODE
00H : SINGLE
01H : Side By Side1(Same Size Screen)
02H : Side By Side2(Left Screen Smaller)
03H : Side By Side2(Left Screen Bigger)
04H : Picture in Picture1(Sub Screen Bottom Left)
05H : Picture in Picture2(Sub Screen Bottom Right)
06H : Picture in Picture3(Sub Screen Top Right)
07H : Picture in Picture4(Sub Screen Top Left)

DATA02 INPUT1 (Left or main)
01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

DATA03 INPUT2(Right or Sub)
01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)

06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

DATA04 WORK TIME 01H～FFH : 1～255 minutes
(1 minutes～4 hour 15 minutes)

REPEAT2

DATA05 MULTI MODE
00H : SINGLE
01H : Side By Side1(Same Size Screen)
02H : Side By Side2(Left Screen Smaller)
03H : Side By Side2(Left Screen Bigger)
04H : Picture in Picture1(Sub Screen Bottom Left)
05H : Picture in Picture2(Sub Screen Bottom Right)
06H : Picture in Picture3(Sub Screen Top Right)
07H : Picture in Picture4(Sub Screen Top Left)

DATA06 INPUT1 (Left or main)
01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3
0DH : HD3(SCART3)

DATA07 INPUT2(Right or Sub)
01H : Video1
02H : Video2
03H : Video3
05H : HD (HD1 or DTV or DTV1)
06H : HD2 (DTV2 or SCART1/SCART2)
07H : RGB1 / PC1
08H : RGB2 / PC2
0CH : RGB3 / PC3

0DH : HD3(SCART3)

DATA08 WORK TIME

01H～FFH : 1～255 minutes

(1 minutes～4 hour 15 minutes)

NOTE: When “SINGLE” is selected at DATA01 or DATA04, ”INPUT MODE 1” will be repeated.

ACK

7FH	60H	80H	34H	00H	CKS

86. OSM CONTRAST SELECT

Function

External control apparatus selects the OSM contrast function of a plasma monitor.

Transmission Data

DFH	80H	60H	37H	01H	DATA00	CKS

DATA00 01H : NORMAL

02H : LOW

ACK

7FH	60H	80H	37H	01H	DATA00	CKS

DATA00 01H : NORMAL

02H : LOW

87. CC (Closed caption) SELECT

Function

External control apparatus selects the Closed Caption function of a plasma monitor.

Transmission Data

DFH	80H	60H	3CH	01H	DATA00	CKS

DATA00
- 00H : OFF
- 01H : CC1(closed caption1)
- 02H : CC2(closed caption2)
- 03H : CC3(closed caption3)
- 04H : CC4(closed caption4)
- 05H : TEXT1
- 06H : TEXT2
- 07H : TEXT3
- 08H : TEXT4

ACK

7FH	60H	80H	3CH	01H	DATA00	CKS

DATA00
- 00H : OFF
- 01H : CC1(closed caption1)
- 02H : CC2(closed caption2)
- 03H : CC3(closed caption3)
- 04H : CC4(closed caption4)
- 05H : TEXT1
- 06H : TEXT2
- 07H : TEXT3
- 08H : TEXT4

88. CC (Closed caption) CONTRAST SELECT

Function

External control apparatus selects the Closed Caption Contrast function of a plasma monitor.

Transmission Data

DFH	80H	60H	3DH	01H	DATA00	CKS

DATA00 01H : NORMAL
02H : LOW

ACK

7FH	60H	80H	3DH	01H	DATA00	CKS

DATA00 01H : NORMAL
02H : LOW