SHARP

PN-E869
PN-E759
PN-E659
PN-E559
PN-E509
PN-E439
PN-E329

LCD MONITOR

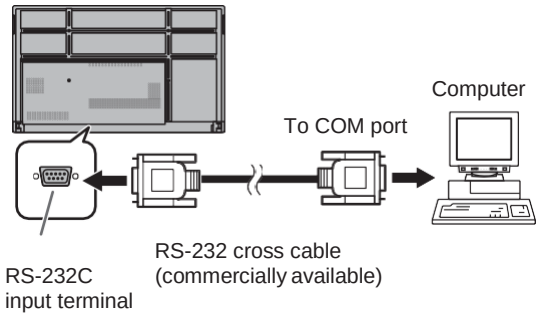
OPERATION MANUAL for S-Format command

Controlling the Monitor with a computer (RS-232C)

You can control this monitor from a computer via RS-232C (COM port) on the computer.
This is the description when “Command Format” is set to “S-Format”.

Computer connection

Connect with RS-232 straight cable between the computer’s COM port (RS-232C connector) and the RS-232C input terminal on the monitor. The terminal on the monitor is a female-type connector.



Communication conditions

Set the RS-232C communication settings on the computer to match the monitor’s communication settings as follows:

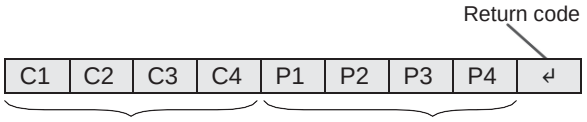
Baud rate	9600 bps
Data length	8 bits
Parity bit	None

Stop bit	1 bit
Flow control	None

Communication procedure

■Command format

When a command is sent from the computer to the monitor, the monitor operates according to the received command and sends a response message to the computer.



Command field
(4 prescribed alphanumerical characters)

Parameter field
(4 character string comprised of: 0-9, +, -, space, ?)

Example: VOLM0030
VOLM ␣ ␣ 30

* Be sure to input 4 characters for the parameter. Pad with spaces (“␣”) if necessary.
(“↵” is a return code (0DH, 0AH or 0DH))

Wrong : VOLM30↵

Right : VOLM␣␣30↵

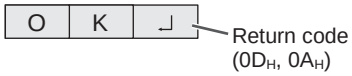
If a command has “R” listed for “Direction” in the “RS-232C command table” on page 4, the current value can be returned by using “?” as the parameter.

Example:

VOLM ? ? ? ?	←	From computer to monitor (How much is current volume setting?).
30	←	From monitor to computer (Current volume setting: 30).

■Response code format

When a command has been executed correctly



A response is returned after a command is executed.

When a command has not been executed

TIPS

- “ERR” is returned when there is no relevant command or when the command cannot be used in the current state of the monitor.
- If communication has not been established for reasons such as a bad connection between the computer and monitor, nothing is returned (not even ERR).
- “ERR” may be returned when a command cannot be received correctly due to interference from the surrounding environment. Please ensure that the system or software resends the command if this occurs.

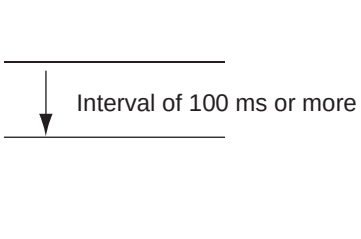
If execution of the command is taking some time

When the following commands are used, “WAIT” is returned. In this case, a value will be returned if you wait a while. Do not send any command during this period.

- Commands which return “WAIT”:
  POWR, INPS, BOMD, WIDE

■Communication interval

- After “OK” or “ERR” is returned, you can send the following commands.
  To set a timeout for the command response, specify 10 seconds or longer.
- Provide an interval of 100 ms or more between the command response and the transmission of the next command.



TIPS

- After executing a power “Off” command, wait for least 10 seconds before sending the next command.

RS-232C command table

How to read the command table

Command: Command field (See page 2.)

Direction: W When the “Parameter” is set in the parameter field (see page 2), the command functions as described under “Control/Response Contents”.

R The returned value indicated under “Reply” can be obtained by setting “????” or “␣␣␣?” in the parameter field. (See page 2.)

Parameter: Parameter field (See page 2.)

Reply: Response (Returned value)

* : “●” : Indicates a command which can be used in standby state, input signal waiting state or when the power is on.

“○” : Indicates a command which can be used in input signal waiting state or when the power is on.

“–” : Indicates a command which can be used when the power is on.

Power control/Input mode selection

Function	Command	Direction	Parameter	Reply	Control/Response contents	*
POWER CONTROL	POWR	W	0		Switches to standby state.	
			1		Returns from standby state.	
		R		0	Standby state	●
				1	Normal mode	
				2	Input signal waiting state	
Input mode selection	INPS	W	0		Toggle change for input mode.	
			10		HDMI1	
			11		MEDIA PLAYER	○
			13		HDMI2	
			27		USB-C	

PICTURE menu

Function	Command	Direction	Parameter	Reply	Control/Response contents	*
PICTURE MODE	BMOD	WR	0		STANDARD	
			4		HIGH BRIGHT	
			8		CUSTOM	
			22		RETAIL	
			23		CONFERENCING	
			25		TRANSPORTATION	
BACKLIGHT	VLMP	WR	0-100	0-100		
ASPECT (Image aspect ratio)	WIDE	WR	1		WIDE	
			2		NORMAL	
			3		1:1	-
			11		FULL	
COLOR TEMPERATURE	CTMP	WR	0		THRU	
			8		WARM	
			13		NORMAL	
			22		COOL	
			99		CUSTON	
R GAIN	CRTR	WR	0-255	0-255	The gain value when the COLOR TEMPERATURE is set to CUSTOM. Error if the COLOR TEMPERATURE is not set to CUSTOM.	
G GAIN	CRTG	WR	0-255	0-255		
B GAIN	CRTB	WR	0-255	0-255		

SYSTEM menu

Function		Command	Direction	Parameter	Reply	Control/Response contents	*
DATE & TIME		DATE	WR	AABBCCDDEE	AABBCCDDEE	AA: Year, BB: Month, CC: Day, DD: Hour, EE: Minute	-
THERMAL SENSOR SETTING		STDR	WR	0-1	0-1	0: LANDSCAPE, 1: PORTRAIT	
Model		INF1	R		Value		●
Serial no.		SRNO	R		Value		-
KEY LOCK SETTINGS		ALCM	WR	0-1	0-1	0: UNLOCKED, 1: LOCK ALL	
IR LOCK SETTINGS		ALCR	WR	0		UNLOCKED	
				1		LOCK ALL	
				2		LOCK EXCEPT VOLUE	
				3		LOCK EXCEPT POWER	
MOTION		SCSV	WR	0-1	0-1	0: OFF, 1: ON	
MOTION INTERVAL		MINT	WR	10-600	10-600	Valid values are multiple of 10.(10, 20, 30, ..., ,600)	
REFRESH MODE		PREF	WR	0-2	0-2	0: OFF, 1: MODE1, 2: MODE2	
TILE MATRIX		ENLG	WR	0-1	0-1	0: OFF, 1: ON	
TILE MATRIX SETTING	TILE MATRIX MODE	EMHV	WR	12,13,22,21,31	12,13,22,21,31	“m x n” is expressed as “mn”, where m and n are the numbers of monitors specified for the longest direction and the shortest direction respectively.	
	POSITION	EPOS	WR	1-4	1-4		
	TILE MATRIX MODE/POSITION	ESPG	WR	XXYY	XXYY	XX: ENLARGE MODE (Same as EMHV), YY: SCREEN POSITION (Same as EPOS)	
	BEZEL ADJUST	BZCO	WR	0-1	0-1	0: OFF, 1: ON	

Others

Function	Command	Direction	Parameter	Reply	Control/Response contents	*
VOLUME	VOLM	WR	0-100	0-100		-
MUTE AUDIO	MUTE	WR	0-1	0-1	0: OFF, 1: ON	
Temperature sensor	DSTA	R		0	Internal temperature normal	●
				1	Internal temperature abnormal has occurred and the monitor is in standby state	
				2	Internal temperature abnormal occurred (To delete the information of temperature abnormal, turn off the main power.)	
				3	Internal temperature abnormal has occurred and backlight brightness is dimmed	
				4	Temperature sensor abnormal	
Temperature acquisition	ERRT	R		value	Returns the temperature at the temperature sensors. Indicates a temperature sensor abnormality when “126” is returned	-
Check the resolution	PXCK	R		-	Returns current resolution in the form of hhh, vvv.	

Controlling the Monitor with a computer (LAN)

Your monitor can be connected to a LAN allowing you to control it from a computer on the LAN.
This is the description when “Command Format” is set to “S-Format”.

TIPS

- This monitor must be connected to a network.
  Set “PC CONTROL” to on in “PC CONTROL” of “CONTROL SETTINGS” on the SYSTEM Settings menu.
- When “PC CONTROL” is set to on, USER NAME and PASSWORD must be changed from default value(ADMIN).

Command-based control

You can control the monitor using RS-232C commands (see page 4) via terminal software and other appropriate applications.
Read the manual for the terminal software for detailed instructions.

(1) Connect the computer to the monitor.

1. Specify the IP address and data port number (10008) and connect the computer to the monitor.
   When connection has been established successfully, [Login: ↵] is returned as response.
2. Send the user name.
   - Send [user name] + [↵].
   - If the user name is not set, send [↵].
   - When the transmission is successful, [Password:↵] is returned as response.
3. Send the password.
   - Send [password] + [↵].
   - If the password is not set, send [↵].
   - When the transmission is successful, [OK ↵] is returned as response.

(2) Send commands to control the monitor.

- The commands used are the same as those for RS-232C. Refer to the communication procedure (see page 2) for operation.
- Usable commands are provided in the RS-232C command table (see page 4).

(3) Disconnect the connection with the monitor and quit the function.

1. Send [BYE↵].
   When the transmission is successful, [Goodbye ↵] is returned and the connection is disconnected.

TIPS

- Connection is automatically disconnected when the time specified in “Auto Logout Time” elapses over a no-communication period.