SHARP

LCD MONITOR

MODEL

TL-M5200
TL-M4600

SETUP MANUAL

RS-232C Specifications and Commands

Computer control

A computer can be used to control the monitor by connecting an RS-232C serial control cable (cross type, commercially available) to the monitor. (See page 20 of the monitor's operation manual for connection.)

Communication conditions

Set the serial port settings of the computer to match that of the table.
Signal format: Conforms to RS-232C standard.   **Parity bit: None**
Baud rate*: 9,600 bps / 115,200 bps   **Stop bit: 1 bit**
Data length: 8 bits   **Flow control: None**
*Set the monitor's baud rate to the same rate as used by the computer.

Basic format

Commands from the computer are sent in the following order: command, parameter, and return code. After the monitor processes the command from the computer, it sends a response code to the computer.

Command format

C1	C2	C3	C4	P1	P2	P3	P4		Return code (0DH)

Command 4-digit   Parameter 4-digit
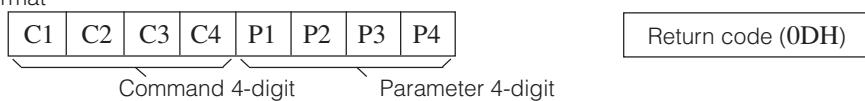
Response code format
Normal response   Problem response (communication error or incorrect command)

O	K	Return code (0DH)

E	R	R	Return code (0DH)

📖 Info

- When controlling the monitor using RS-232C commands from a computer, wait for at least 30 seconds after the power has been turned on, and then transmit the commands.
- After sending an input selection or picture adjustment command and then receiving an "OK" response code, the monitor may take some time to process the command. If a second command is sent while the monitor is still processing the first command, you may receive an "ERR" response code. If this happens, try resending the second command.
- When more than one code is being sent, send each command only after the response code for the previous command from the monitor is verified.
- "POWR????", "TABN _ _ _ 1", "TLTT _ _ _ 1", "TNAM _ _ _ 1", "MNRD _ _ _ 1", "MTN0 _ _ _ 1", "SNRD _ _ _ 1"
  - When the monitor receives the special commands shown above:
    * The on-screen display will not disappear.
    * The "Auto Power Off" timer will not be reset.
  - The special commands are available for applications that require continuous polling.

✎ Note

- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears in the parameter column, enter a value in the range indicated in brackets under Control Contents.

Commands

Example: When turning on the monitor, make the following setting.

Computer → Monitor

| P | O | W | R | _ | _ | _ | 1 | ↵ |

→ ←

| O | K | ↵ |

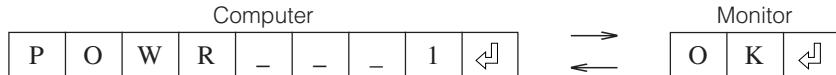| CONTROL CONTENTS		COMMAND				PARAMETER				RETURN	
										Power ON	Standby mode (Mode 1, Mode 2)
Power	Power On	P O W R				_	_	_	1	OK	OK or ERR
	Power Off	P O W R				_	_	_	0	OK or ERR	OK
	Power Status	P O W R				?	?	?	?	1	0
Monitor Condition	Monitor Condition	T A B N				_	_	_	1	0: Normal 1: Temp High, 32: Backlight Ignition Failure	0: Normal 1: Temp High, 32: Backlight Ignition Failure
Backlight Usage Time(Hour)		T L T T				_	_	_	1	0 – 99999(Integer)	
Name	Model Name Check	T N A M				_	_	_	1	TLM5200/TLM4600	
	Model Name Check	M N R D				_	_	_	1	TL-M5200/TL-M4600	
	Serial No. Check	S N R D				_	_	_	1	Serial No.	
	Monitor Name Setting 1 (First 4 characters) *1	M T N 1				*	*	*	*	OK or ERR	
	Monitor Name Setting 2 (Middle 4 characters) *1	M T N 2				*	*	*	*	OK or ERR	
	Monitor Name Setting 3 (Last 4 characters) *1	M T N 3				*	*	*	*	OK or ERR	
	Monitor Name Check	M T N 0				_	_	_	1	Monitor Name (Max 12 characters)	
Input Change	COMPUTER 1	I R G B				_	_	_	1	OK or ERR	ERR
	COMPUTER 2	I R G B				_	_	_	2	OK or ERR	ERR
	DVI	I R G B				_	_	_	3	OK or ERR	ERR
	HDMI	I R G B				_	_	_	4	OK or ERR	ERR
	S-VIDEO	I V E D				_	_	_	1	OK or ERR	ERR
	VIDEO	I V E D				_	_	_	2	OK or ERR	ERR
	Input RGB Check	I R G B				?	?	?	?	1: COMPUTER 1, 2: COMPUTER 2, 3: DVI, 4: HDMI, ERR	ERR
	Input Video Check	I V E D				?	?	?	?	1: S-VIDEO, 2: VIDEO, ERR	ERR
	Input Mode Check	I M O D				?	?	?	?	1: RGB, 2: VIDEO	ERR
	Input Check	I C H K				?	?	?	?	1: COMPUTER 1, 2: COMPUTER 2, 3: DVI, 4: HDMI, 5: S-VIDEO, 6: VIDEO	ERR
Volume	Volume(0 – 60)	V O L A				_	_	*	*	OK or ERR	ERR
	Volume up/down (-10 – +10)	V O U D				_	*	*	*	OK or ERR	ERR
Mute (Sound only)	On	M U T E				_	_	_	1	OK or ERR	ERR
	Off	M U T E				_	_	_	0	OK or ERR	ERR
AV Mute	On	I M B K				_	_	_	1	OK or ERR	ERR
	Off	I M B K				_	_	_	0	OK or ERR	ERR
Freeze	On	F R E Z				_	_	_	1	OK or ERR	ERR
	Off	F R E Z				_	_	_	0	OK or ERR	ERR
Auto Sync	Auto Sync Start	A D J S				_	_	_	1	OK or ERR	ERR
Resize	COMPUTER 1	Normal(Computer)	R A S R				_	_	_	1	OK or ERR	ERR
		Full	R A S R				_	_	_	2	OK or ERR	ERR
		Dot By Dot(Computer) / Normal(Video)	R A S R				_	_	_	3	OK or ERR	ERR
		S.Stretch(Video)	R A S R				_	_	_	4	OK or ERR	ERR
		Cinema16:9(Video)	R A S R				_	_	_	5	OK or ERR	ERR
		Cinema14:9(Video)	R A S R				_	_	_	7	OK or ERR	ERR
		Zoom14:9(Video)	R A S R				_	_	1	2	OK or ERR	ERR

RS-232C Specifications and Commands

CONTROL CONTENTS			COMMAND				PARAMETER				RETURN	
											Power ON	Standby mode (Mode 1, Mode 2)
Resize	COMPUTER 2	Normal (Computer)	R	B	S	R	_	_	_	1	OK or ERR	ERR
		Full	R	B	S	R	_	_	_	2	OK or ERR	ERR
		Dot By Dot(Computer) / Normal(Video)	R	B	S	R	_	_	_	3	OK or ERR	ERR
		S.Stretch(Video)	R	B	S	R	_	_	_	4	OK or ERR	ERR
		Cinema16:9(Video)	R	B	S	R	_	_	_	5	OK or ERR	ERR
		Cinema14:9(Video)	R	B	S	R	_	_	_	7	OK or ERR	ERR
		Zoom14:9(Video)	R	B	S	R	_	_	1	2	OK or ERR	ERR
	DVI	Normal(Computer)	R	C	S	R	_	_	_	1	OK or ERR	ERR
		Full	R	C	S	R	_	_	_	2	OK or ERR	ERR
		Dot By Dot(Computer) / Normal(Video)	R	C	S	R	_	_	_	3	OK or ERR	ERR
		S.Stretch(Video)	R	C	S	R	_	_	_	4	OK or ERR	ERR
		Cinema16:9(Video)	R	C	S	R	_	_	_	5	OK or ERR	ERR
		Cinema14:9(Video)	R	C	S	R	_	_	_	7	OK or ERR	ERR
		Zoom14:9(Video)	R	C	S	R	_	_	1	2	OK or ERR	ERR
	HDMI	Normal(Computer)	R	D	S	R	_	_	_	1	OK or ERR	ERR
		Full	R	D	S	R	_	_	_	2	OK or ERR	ERR
		Dot By Dot(Computer) / Normal(Video)	R	D	S	R	_	_	_	3	OK or ERR	ERR
		S.Stretch(Video)	R	D	S	R	_	_	_	4	OK or ERR	ERR
		Cinema16:9(Video)	R	D	S	R	_	_	_	5	OK or ERR	ERR
		Cinema14:9(Video)	R	D	S	R	_	_	_	7	OK or ERR	ERR
		Zoom14:9(Video)	R	D	S	R	_	_	1	2	OK or ERR	ERR
	S-VIDEO	Full	R	A	S	V	_	_	_	2	OK or ERR	ERR
		Normal	R	A	S	V	_	_	_	3	OK or ERR	ERR
		S.Stretch	R	A	S	V	_	_	_	4	OK or ERR	ERR
		Cinema16:9	R	A	S	V	_	_	_	5	OK or ERR	ERR
		Cinema14:9	R	A	S	V	_	_	_	7	OK or ERR	ERR
		Zoom14:9	R	A	S	V	_	_	1	2	OK or ERR	ERR
	VIDEO	Full	R	B	S	V	_	_	_	2	OK or ERR	ERR
		Normal	R	B	S	V	_	_	_	3	OK or ERR	ERR
		S.Stretch	R	B	S	V	_	_	_	4	OK or ERR	ERR
		Cinema16:9	R	B	S	V	_	_	_	5	OK or ERR	ERR
		Cinema14:9	R	B	S	V	_	_	_	7	OK or ERR	ERR
		Zoom14:9	R	B	S	V	_	_	1	2	OK or ERR	ERR
COMPUTER 1 INPUT	AV Mode	Standard	R	A	P	S	_	_	1	0	OK or ERR	ERR
		Presentation	R	A	P	S	_	_	1	1	OK or ERR	ERR
		Movie	R	A	P	S	_	_	1	2	OK or ERR	ERR
		Game	R	A	P	S	_	_	1	3	OK or ERR	ERR
		sRGB	R	A	P	S	_	_	1	4	OK or ERR	ERR
	OPC	Off	R	A	O	C	_	_	_	0	OK or ERR	ERR
		On	R	A	O	C	_	_	_	1	OK or ERR	ERR
		On(Display)	R	A	O	C	_	_	_	2	OK or ERR	ERR
	Backlight	-16 − +16	R	A	B	L	_	*	*	*	OK or ERR	ERR
	Contrast	0 − +40	R	A	P	I	*	*	*	*	OK or ERR	ERR
	Bright	-30 − +30	R	A	B	R	*	*	*	*	OK or ERR	ERR
	Color	-30 − +30	R	A	C	O	*	*	*	*	OK or ERR	ERR
	Tint	-30 − +30	R	A	T	I	*	*	*	*	OK or ERR	ERR
	Sharpness	-10 − +10	R	A	S	H	*	*	*	*	OK or ERR	ERR
	Red	-30 − +30	R	A	R	D	*	*	*	*	OK or ERR	ERR
	Green	-30 − +30	R	A	G	N	*	*	*	*	OK or ERR	ERR
	Blue	-30 − +30	R	A	B	E	*	*	*	*	OK or ERR	ERR
	Color Temp	-2 − +2	R	A	C	T	_	_	*	*	OK or ERR	ERR
	DNR	Off	R	A	N	R	_	_	_	0	OK or ERR	ERR
		Level 1	R	A	N	R	_	_	_	1	OK or ERR	ERR
		Level 2	R	A	N	R	_	_	_	2	OK or ERR	ERR
	Film Mode	Off	R	A	F	M	_	_	_	0	OK or ERR	ERR
		On	R	A	F	M	_	_	_	1	OK or ERR	ERR
	Black	Off	R	A	B	A	_	_	_	0	OK or ERR	ERR
		On	R	A	B	A	_	_	_	1	OK or ERR	ERR
	Monochrome	Off	R	A	M	N	_	_	_	0	OK or ERR	ERR
		On	R	A	M	N	_	_	_	1	OK or ERR	ERR
	Adjustment Reset		R	A	R	E	_	_	_	1	OK or ERR	ERR
	Signal Type	Auto	I	A	S	I	_	_	_	0	OK or ERR	ERR
		RGB	I	A	S	I	_	_	_	1	OK or ERR	ERR
		Component	I	A	S	I	_	_	_	2	OK or ERR	ERR

CONTROL CONTENTS			COMMAND					PARAMETER				RETURN	
												Power ON	Standby mode (Mode 1, Mode 2)
COMPUTER 2 INPUT	AV Mode	Standard	R	B	P	S	_	_	1	0		OK or ERR	ERR
		Presentation	R	B	P	S	_	_	1	1		OK or ERR	ERR
		Movie	R	B	P	S	_	_	1	2		OK or ERR	ERR
		Game	R	B	P	S	_	_	1	3		OK or ERR	ERR
		sRGB	R	B	P	S	_	_	1	4		OK or ERR	ERR
	OPC	Off	R	B	O	C	_	_	_	0		OK or ERR	ERR
		On	R	B	O	C	_	_	_	1		OK or ERR	ERR
		On(Display)	R	B	O	C	_	_	_	2		OK or ERR	ERR
	Backlight	-16 – +16	R	B	B	L	_	*	*	*		OK or ERR	ERR
	Contrast	0 – +40	R	B	P	I	_	*	*	*		OK or ERR	ERR
	Bright	-30 – +30	R	B	B	R	_	*	*	*		OK or ERR	ERR
	Color	-30 – +30	R	B	C	O	_	*	*	*		OK or ERR	ERR
	Tint	-30 – +30	R	B	T	I	_	*	*	*		OK or ERR	ERR
	Sharpness	-10 – +10	R	B	S	H	_	*	*	*		OK or ERR	ERR
	Red	-30 – +30	R	B	R	D	_	*	*	*		OK or ERR	ERR
	Green	-30 – +30	R	B	G	N	_	*	*	*		OK or ERR	ERR
	Blue	-30 – +30	R	B	B	E	_	*	*	*		OK or ERR	ERR
	Color Temp	-2 – +2	R	B	C	T	_	_	*	*		OK or ERR	ERR
	DNR	Off	R	B	N	R	_	_	_	0		OK or ERR	ERR
		Level 1	R	B	N	R	_	_	_	1		OK or ERR	ERR
		Level 2	R	B	N	R	_	_	_	2		OK or ERR	ERR
	Film Mode	Off	R	B	F	M	_	_	_	0		OK or ERR	ERR
		On	R	B	F	M	_	_	_	1		OK or ERR	ERR
	Black	Off	R	B	B	A	_	_	_	0		OK or ERR	ERR
		On	R	B	B	A	_	_	_	1		OK or ERR	ERR
	Monochrome	Off	R	B	M	N	_	_	_	0		OK or ERR	ERR
		On	R	B	M	N	_	_	_	1		OK or ERR	ERR
	Adjustment Reset		R	B	R	E	_	_	_	1		OK or ERR	ERR
	Signal Type	Auto	I	B	S	I	_	_	_	0		OK or ERR	ERR
		RGB	I	B	S	I	_	_	_	1		OK or ERR	ERR
		Component	I	B	S	I	_	_	_	2		OK or ERR	ERR
DVI INPUT	AV Mode	Standard	R	C	P	S	_	_	1	0		OK or ERR	ERR
		Presentation	R	C	P	S	_	_	1	1		OK or ERR	ERR
		Movie	R	C	P	S	_	_	1	2		OK or ERR	ERR
		Game	R	C	P	S	_	_	1	3		OK or ERR	ERR
		sRGB	R	C	P	S	_	_	1	4		OK or ERR	ERR
	OPC	Off	R	C	O	C	_	_	_	0		OK or ERR	ERR
		On	R	C	O	C	_	_	_	1		OK or ERR	ERR
		On(Display)	R	C	O	C	_	_	_	2		OK or ERR	ERR
	Backlight	-16 – +16	R	C	B	L	_	*	*	*		OK or ERR	ERR
	Contrast	0 – +40	R	C	P	I	_	*	*	*		OK or ERR	ERR
	Bright	-30 – +30	R	C	B	R	_	*	*	*		OK or ERR	ERR
	Color	-30 – +30	R	C	C	O	_	*	*	*		OK or ERR	ERR
	Tint	-30 – +30	R	C	T	I	_	*	*	*		OK or ERR	ERR
	Sharpness	-10 – +10	R	C	S	H	_	*	*	*		OK or ERR	ERR
	Red	-30 – +30	R	C	R	D	_	*	*	*		OK or ERR	ERR
	Green	-30 – +30	R	C	G	N	_	*	*	*		OK or ERR	ERR
	Blue	-30 – +30	R	C	B	E	_	*	*	*		OK or ERR	ERR
	Color Temp	-2 – +2	R	C	C	T	_	_	*	*		OK or ERR	ERR
	DNR	Off	R	C	N	R	_	_	_	0		OK or ERR	ERR
		Level 1	R	C	N	R	_	_	_	1		OK or ERR	ERR
		Level 2	R	C	N	R	_	_	_	2		OK or ERR	ERR
	Film Mode	Off	R	C	F	M	_	_	_	0		OK or ERR	ERR
		On	R	C	F	M	_	_	_	1		OK or ERR	ERR
	Black	Off	R	C	B	A	_	_	_	0		OK or ERR	ERR
		On	R	C	B	A	_	_	_	1		OK or ERR	ERR
	Monochrome	Off	R	C	M	N	_	_	_	0		OK or ERR	ERR
		On	R	C	M	N	_	_	_	1		OK or ERR	ERR
	Adjustment Reset		R	C	R	E	_	_	_	1		OK or ERR	ERR
	Signal Type	D.PC.RGB	I	C	S	I	_	_	_	3		OK or ERR	ERR
		D.PC.Component	I	C	S	I	_	_	_	4		OK or ERR	ERR
		D.Video.RGB	I	C	S	I	_	_	_	5		OK or ERR	ERR
		D.Video.Component	I	C	S	I	_	_	_	6		OK or ERR	ERR
	Dynamic Range	Auto	H	M	C	D	_	_	_	0		OK or ERR	ERR
		Standard	H	M	C	D	_	_	_	1		OK or ERR	ERR
		Enhanced	H	M	C	D	_	_	_	2		OK or ERR	ERR

RS-232C Specifications and Commands

CONTROL CONTENTS			COMMAND				PARAMETER				RETURN	
											Power ON	Standby mode (Mode 1, Mode 2)
HDMI INPUT	AV Mode	Standard	R	D	P	S	_	_	1	0	OK or ERR	ERR
		Presentation	R	D	P	S	_	_	1	1	OK or ERR	ERR
		Movie	R	D	P	S	_	_	1	2	OK or ERR	ERR
		Game	R	D	P	S	_	_	1	3	OK or ERR	ERR
		sRGB	R	D	P	S	_	_	1	4	OK or ERR	ERR
	OPC	Off	R	D	O	C	_	_	_	0	OK or ERR	ERR
		On	R	D	O	C	_	_	_	1	OK or ERR	ERR
		On(Display)	R	D	O	C	_	_	_	2	OK or ERR	ERR
	Backlight	-16 – +16	R	D	B	L	_	*	*	*	OK or ERR	ERR
	Contrast	0 – +40	R	D	P	I	_	*	*	*	OK or ERR	ERR
	Bright	-30 – +30	R	D	B	R	_	*	*	*	OK or ERR	ERR
	Color	-30 – +30	R	D	C	O	_	*	*	*	OK or ERR	ERR
	Tint	-30 – +30	R	D	T	I	_	*	*	*	OK or ERR	ERR
	Sharpness	-10 – +10	R	D	S	H	_	*	*	*	OK or ERR	ERR
	Red	-30 – +30	R	D	R	D	_	*	*	*	OK or ERR	ERR
	Green	-30 – +30	R	D	G	N	_	*	*	*	OK or ERR	ERR
	Blue	-30 – +30	R	D	B	E	_	*	*	*	OK or ERR	ERR
	Color Temp	-2 – +2	R	D	C	T	_		*	*	OK or ERR	ERR
	DNR	Off	R	D	N	R	_	_	_	0	OK or ERR	ERR
		Level 1	R	D	N	R	_	_	_	1	OK or ERR	ERR
		Level 2	R	D	N	R	_	_	_	2	OK or ERR	ERR
	Film Mode	Off	R	D	F	M	_	_	_	0	OK or ERR	ERR
		On	R	D	F	M	_	_	_	1	OK or ERR	ERR
	Black	Off	R	D	B	A	_	_	_	0	OK or ERR	ERR
		On	R	D	B	A	_	_	_	1	OK or ERR	ERR
	Monochrome	Off	R	D	M	N	_	_	_	0	OK or ERR	ERR
		On	R	D	M	N	_	_	_	1	OK or ERR	ERR
	Adjustment Reset		R	D	R	E	_	_	_	1	OK or ERR	ERR
	Signal Type	Auto	I	D	S	I	_	_	2	0	OK or ERR	ERR
		RGB	I	D	S	I	_	_	_	5	OK or ERR	ERR
		YCbCr4:4:4	I	D	S	I	_	_	_	7	OK or ERR	ERR
		YCbCr4:2:2	I	D	S	I	_	_	_	8	OK or ERR	ERR
	Dynamic Range	Auto	H	M	D	D	_	_	_	0	OK or ERR	ERR
		Standard	H	M	D	D	_	_	_	1	OK or ERR	ERR
		Enhanced	H	M	D	D	_	_	_	2	OK or ERR	ERR
	Color Space	Auto	H	M	D	C	_	_	_	0	OK or ERR	ERR
		ITU601	H	M	D	C	_	_	_	1	OK or ERR	ERR
		ITU709	H	M	D	C	_	_	_	2	OK or ERR	ERR
S-VIDEO INPUT	AV Mode	Standard	V	A	P	S	_	_	1	0	OK or ERR	ERR
		Presentation	V	A	P	S	_	_	1	1	OK or ERR	ERR
		Movie	V	A	P	S	_	_	1	2	OK or ERR	ERR
		Game	V	A	P	S	_	_	1	3	OK or ERR	ERR
	OPC	Off	V	A	O	C	_	_	_	0	OK or ERR	ERR
		On	V	A	O	C	_	_	_	1	OK or ERR	ERR
		On(Display)	V	A	O	C	_	_	_	2	OK or ERR	ERR
	Backlight	-16 – +16	V	A	B	L	_	*	*	*	OK or ERR	ERR
	Contrast	0 – +40	V	A	P	I	_	*	*	*	OK or ERR	ERR
	Bright	-30 – +30	V	A	B	R	_	*	*	*	OK or ERR	ERR
	Color	-30 – +30	V	A	C	O	_	*	*	*	OK or ERR	ERR
	Tint	-30 – +30	V	A	T	I	_	*	*	*	OK or ERR	ERR
	Sharpness	-10 – +10	V	A	S	H	_	*	*	*	OK or ERR	ERR
	Red	-30 – +30	V	A	R	D	_	*	*	*	OK or ERR	ERR
	Green	-30 – +30	V	A	G	N	_	*	*	*	OK or ERR	ERR
	Blue	-30 – +30	V	A	B	E	_	*	*	*	OK or ERR	ERR
	Color Temp	-2 – +2	V	A	C	T	_		*	*	OK or ERR	ERR
	DNR	Off	V	A	N	R	_	_	_	0	OK or ERR	ERR
		Level 1	V	A	N	R	_	_	_	1	OK or ERR	ERR
		Level 2	V	A	N	R	_	_	_	2	OK or ERR	ERR
	Film Mode	Off	V	A	F	M	_	_	_	0	OK or ERR	ERR
		On	V	A	F	M	_	_	_	1	OK or ERR	ERR
	Black	Off	V	A	B	A	_	_	_	0	OK or ERR	ERR
		On	V	A	B	A	_	_	_	1	OK or ERR	ERR
	3D-Y/C	Off	V	A	Y	C	_	_	_	0	OK or ERR	ERR
		Fast	V	A	Y	C	_	_	_	1	OK or ERR	ERR
		Standard	V	A	Y	C	_	_	_	2	OK or ERR	ERR
		Slow	V	A	Y	C	_	_	_	3	OK or ERR	ERR
	Monochrome	Off	V	A	M	N	_	_	_	0	OK or ERR	ERR
		On	V	A	M	N	_	_	_	1	OK or ERR	ERR
	Adjustment Reset		V	A	R	E	_	_	_	1	OK or ERR	ERR

RS-232C Specifications and Commands

CONTROL CONTENTS			COMMAND	PARAMETER	RETURN	
					Power ON	Standby mode (Mode 1, Mode 2)
VIDEO INPUT	AV Mode	Standard	V B P S	_ _ 1 0	OK or ERR	ERR
		Presentation	V B P S	_ _ 1 1	OK or ERR	ERR
		Movie	V B P S	_ _ 1 2	OK or ERR	ERR
		Game	V B P S	_ _ 1 3	OK or ERR	ERR
	OPC	Off	V B O C	_ _ _ 0	OK or ERR	ERR
		On	V B O C	_ _ _ 1	OK or ERR	ERR
		On(Display)	V B O C	_ _ _ 2	OK or ERR	ERR
	Backlight	-16 – +16	V B B L	_ * * *	OK or ERR	ERR
	Contrast	0 – +40	V B P I	_ * * *	OK or ERR	ERR
	Bright	-30 – +30	V B B R	_ * * *	OK or ERR	ERR
	Color	-30 – +30	V B C O	_ * * *	OK or ERR	ERR
	Tint	-30 – +30	V B T I	_ * * *	OK or ERR	ERR
	Sharpness	-10 – +10	V B S H	_ * * *	OK or ERR	ERR
	Red	-30 – +30	V B R D	_ * * *	OK or ERR	ERR
	Green	-30 – +30	V B G N	_ * * *	OK or ERR	ERR
	Blue	-30 – +30	V B B E	_ * * *	OK or ERR	ERR
	Color Temp	-2 – +2	V B C T	_ _ * *	OK or ERR	ERR
	DNR	Off	V B N R	_ _ _ 0	OK or ERR	ERR
		Level 1	V B N R	_ _ _ 1	OK or ERR	ERR
		Level 2	V B N R	_ _ _ 2	OK or ERR	ERR
	Film Mode	Off	V B F M	_ _ _ 0	OK or ERR	ERR
		On	V B F M	_ _ _ 1	OK or ERR	ERR
	Black	Off	V B B A	_ _ _ 0	OK or ERR	ERR
		On	V B B A	_ _ _ 1	OK or ERR	ERR
	3D-Y/C	Off	V B Y C	_ _ _ 0	OK or ERR	ERR
		Fast	V B Y C	_ _ _ 1	OK or ERR	ERR
		Standard	V B Y C	_ _ _ 2	OK or ERR	ERR
		Slow	V B Y C	_ _ _ 3	OK or ERR	ERR
	Monochrome	Off	V B M N	_ _ _ 0	OK or ERR	ERR
		On	V B M N	_ _ _ 1	OK or ERR	ERR
	Adjustment Reset		V B R E	_ _ _ 1	OK or ERR	ERR
Position	H-position	-10 – +10	I A H P	_ * * *	OK or ERR	ERR
	V-position	-20 – +20	I A V P	_ * * *	OK or ERR	ERR
	Adjustment Reset		I A R E	_ _ _ 1	OK or ERR	ERR
Fine Sync	Clock	-90 – +90	I N C L	_ * * *	OK or ERR	ERR
	Phase	0 – +15	I N P H	_ * * *	OK or ERR	ERR
	H-position	-90 – +90	I A H P	_ * * *	OK or ERR	ERR
	V-position	-60 – +60	I A V P	_ * * *	OK or ERR	ERR
	Fine Sync Adjustment Reset		I A R E	_ _ _ 1	OK or ERR	ERR
RGB Frequency Check	Horizontal		T F R Q	_ _ _ 1	kHz (***.* or ERR)	ERR
	Vertical		T F R Q	_ _ _ 2	Hz (***.* or ERR)	ERR
HDMI Setup	Auto View	Disable	H M D W	_ _ _ 0	OK or ERR	ERR
		Enable	H M D W	_ _ _ 1	OK or ERR	ERR
	Audio Select	Digital	H M D A	_ _ _ 0	OK or ERR	ERR
		Analog	H M D A	_ _ _ 1	OK or ERR	ERR
Audio	Balance	-30 – +30	A A B L	_ * * *	OK or ERR	ERR
	Treble	-15 – +15	A A T E	_ * * *	OK or ERR	ERR
	Bass	-15 – +15	A A B A	_ * * *	OK or ERR	ERR
	Audio Adjustment Reset		A A R E	_ _ _ 1	OK or ERR	ERR
Audio Out	FAO		A O U T	_ _ _ 1	OK or ERR	ERR
	VAO		A O U T	_ _ _ 2	OK or ERR	ERR
Standby Mode	Mode1		S T B Y	_ _ _ 1	OK or ERR	ERR
	Mode2		S T B Y	_ _ _ 2	OK or ERR	ERR
	Mode3		S T B Y	_ _ _ 3	OK or ERR	ERR
Auto Restart	On		A R E S	_ _ _ 1	OK or ERR	ERR
	Off		A R E S	_ _ _ 0	OK or ERR	ERR
Power Management	Off		P W M N	_ _ _ 0	OK or ERR	ERR
	Mode1		P W M N	_ _ _ 1	OK or ERR	ERR
	Mode2		P W M N	_ _ _ 2	OK or ERR	ERR
No Operation Off	Off		A P O W	_ _ _ 0	OK or ERR	ERR
	30Min		A P O W	_ 3 0	OK or ERR	ERR
	180Min(3h)		A P O W	1 8 0	OK or ERR	ERR
Ecology	Yes		E C L S	_ _ _ 1	OK or ERR	ERR
Closed Caption	Off		C L C A	_ _ _ 0	OK or ERR	ERR
	CC1		C L C A	_ _ _ 1	OK or ERR	ERR
	CC2		C L C A	_ _ _ 2	OK or ERR	ERR
	Text1		C L C A	_ _ _ 3	OK or ERR	ERR
	Text2		C L C A	_ _ _ 4	OK or ERR	ERR

RS-232C Specifications and Commands

CONTROL CONTENTS			COMMAND					PARAMETER			RETURN	
											Power ON	Standby mode (Mode 1, Mode 2)
Video System	AUTO		M	E	S	Y	_	_	_	1	OK or ERR	ERR
	PAL		M	E	S	Y	_	_	_	2	OK or ERR	ERR
	SECAM		M	E	S	Y	_	_	_	3	OK or ERR	ERR
	NTSC4.43		M	E	S	Y	_	_	_	4	OK or ERR	ERR
	NTSC3.58		M	E	S	Y	_	_	_	5	OK or ERR	ERR
	PAL_60		M	E	S	Y	_	_	_	8	OK or ERR	ERR
Background Selection	Blue		I	M	B	G	_	_	_	3	OK or ERR	ERR
	None		I	M	B	G	_	_	_	4	OK or ERR	ERR
LED	Off		L	E	D	S	_	_	_	0	OK or ERR	ERR
	On		L	E	D	S	_	_	_	1	OK or ERR	ERR
Power On Delay	Delay Time 0 – 100 Sec.		P	O	W	D	*	*	*		OK or ERR	ERR
Picture Flip	Reverse	Off	I	M	R	E	_	_	_	0	OK or ERR	ERR
		On	I	M	R	E	_	_	_	1	OK or ERR	ERR
	Invert	Off	I	M	I	N	_	_	_	0	OK or ERR	ERR
		On	I	M	I	N	_	_	_	1	OK or ERR	ERR
Keylock	Main Key	Off	K	E	Y	L	_	_	_	0	OK or ERR	ERR
		Level 1	K	E	Y	L	_	_	_	1	OK or ERR	ERR
		Level 2	K	E	Y	L	_	_	_	2	OK or ERR	ERR
	Remote Control	Off	R	M	C	L	_	_	_	0	OK or ERR	ERR
		Level 1	R	M	C	L	_	_	_	1	OK or ERR	ERR
		Level 2	R	M	C	L	_	_	_	2	OK or ERR	ERR
Set Inputs	COMPUTER 1	Off	R	A	S	I	_	_	_	0	OK or ERR	ERR
		On	R	A	S	I	_	_	_	1	OK or ERR	ERR
	COMPUTER 2	Off	R	B	S	I	_	_	_	0	OK or ERR	ERR
		On	R	B	S	I	_	_	_	1	OK or ERR	ERR
	DVI	Off	R	C	S	I	_	_	_	0	OK or ERR	ERR
		On	R	C	S	I	_	_	_	1	OK or ERR	ERR
	HDMI	Off	R	D	S	I	_	_	_	0	OK or ERR	ERR
		On	R	D	S	I	_	_	_	1	OK or ERR	ERR
	S-VIDEO	Off	V	A	S	I	_	_	_	0	OK or ERR	ERR
		On	V	A	S	I	_	_	_	1	OK or ERR	ERR
	VIDEO	Off	V	B	S	I	_	_	_	0	OK or ERR	ERR
		On	V	B	S	I	_	_	_	1	OK or ERR	ERR
Input Label	COMPUTER 1	(First 3 characters)	R	A	L	B	1	*	*	*	OK or ERR	ERR
		(Middle 3 characters)	R	A	L	B	2	*	*	*	OK or ERR	ERR
		(Last 3 characters)	R	A	L	B	3	*	*	*	OK or ERR	ERR
	COMPUTER 2	(First 3 characters)	R	B	L	B	1	*	*	*	OK or ERR	ERR
		(Middle 3 characters)	R	B	L	B	2	*	*	*	OK or ERR	ERR
		(Last 3 characters)	R	B	L	B	3	*	*	*	OK or ERR	ERR
	DVI	(First 3 characters)	R	C	L	B	1	*	*	*	OK or ERR	ERR
		(Middle 3 characters)	R	C	L	B	2	*	*	*	OK or ERR	ERR
		(Last 3 characters)	R	C	L	B	3	*	*	*	OK or ERR	ERR
	HDMI	Auto	H	D	L	B	_	_	_	0	OK or ERR	ERR
		Manual	H	D	L	B	_	_	_	1	OK or ERR	ERR
		(First 3 characters)	R	D	L	B	1	*	*	*	OK or ERR	ERR
		(Middle 3 characters)	R	D	L	B	2	*	*	*	OK or ERR	ERR
		(Last 3 characters)	R	D	L	B	3	*	*	*	OK or ERR	ERR
	S-VIDEO	(First 3 characters)	V	A	L	B	1	*	*	*	OK or ERR	ERR
		(Middle 3 characters)	V	A	L	B	2	*	*	*	OK or ERR	ERR
		(Last 3 characters)	V	A	L	B	3	*	*	*	OK or ERR	ERR
	VIDEO	(First 3 characters)	V	B	L	B	1	*	*	*	OK or ERR	ERR
		(Middle 3 characters)	V	B	L	B	2	*	*	*	OK or ERR	ERR
		(Last 3 characters)	V	B	L	B	3	*	*	*	OK or ERR	ERR
Language	English		M	E	L	A	_	_	_	1	OK or ERR	ERR
	Deutsch		M	E	L	A	_	_	_	2	OK or ERR	ERR
	Español		M	E	L	A	_	_	_	3	OK or ERR	ERR
	Nederlands		M	E	L	A	_	_	_	4	OK or ERR	ERR
	Français		M	E	L	A	_	_	_	5	OK or ERR	ERR
	Italiano		M	E	L	A	_	_	_	6	OK or ERR	ERR
	日本語		M	E	L	A	_	_	_	8	OK or ERR	ERR
Master& Slave	Normal		S	T	A	K	_	_	_	0	OK or ERR	ERR
	Master		S	T	A	K	_	_	_	1	OK or ERR	ERR
	Slave		S	T	A	K	_	_	_	2	OK or ERR	ERR
P&P (Split-screen)	Off		P	O	T	P	_	_	_	0	OK or ERR	ERR
	On		P	O	T	P	_	_	_	1	OK or ERR	ERR

RS-232C Specifications and Commands

CONTROL CONTENTS			COMMAND	PARAMETER	RETURN Power ON	RETURN Standby mode (Mode 1, Mode 2)
P&P Main Select	Left *2		P O T M	_ _ _ 1	OK or ERR	ERR
	Right *2		P O T M	_ _ _ 2	OK or ERR	ERR
ALL Reset			A L R E	_ _ _ 1	OK or ERR	ERR
Sleep Timer	Sleep Timer	0–12	O F T M	_ _ * *	OK or ERR	ERR
Multi Screen *3	Status	Off	W A L S	_ _ _ 0	OK or ERR	ERR
		2x1	W A L S	0 2 0 1	OK or ERR	ERR
		3x1	W A L S	0 3 0 1	OK or ERR	ERR
		4x1	W A L S	0 4 0 1	OK or ERR	ERR
		2x2	W A L S	0 2 0 2	OK or ERR	ERR
		3x3	W A L S	0 3 0 3	OK or ERR	ERR
		4x4	W A L S	0 4 0 4	OK or ERR	ERR
	Screen Position	1–1	W A L P	0 1 0 1	OK or ERR	ERR
		1–2	W A L P	0 1 0 2	OK or ERR	ERR
		1–3	W A L P	0 1 0 3	OK or ERR	ERR
		1–4	W A L P	0 1 0 4	OK or ERR	ERR
		2–1	W A L P	0 2 0 1	OK or ERR	ERR
		2–2	W A L P	0 2 0 2	OK or ERR	ERR
		2–3	W A L P	0 2 0 3	OK or ERR	ERR
		2–4	W A L P	0 2 0 4	OK or ERR	ERR
		3–1	W A L P	0 3 0 1	OK or ERR	ERR
		3–2	W A L P	0 3 0 2	OK or ERR	ERR
		3–3	W A L P	0 3 0 3	OK or ERR	ERR
		3–4	W A L P	0 3 0 4	OK or ERR	ERR
		4–1	W A L P	0 4 0 1	OK or ERR	ERR
		4–2	W A L P	0 4 0 2	OK or ERR	ERR
		4–3	W A L P	0 4 0 3	OK or ERR	ERR
		4–4	W A L P	0 4 0 4	OK or ERR	ERR
	H-Bezel	0 – 30	W A S H	_ _ * *	OK or ERR	ERR
	V-Bezel	0 – 30	W A S V	_ _ * *	OK or ERR	ERR
	H-Position	-30 – +30	W A L H	_ * * *	OK or ERR	ERR
	V-Position	-30 – +30	W A L V	_ * * *	OK or ERR	ERR

*1 For setting the monitor name, send the commands in the order of MTN1, MTN2 and MTN3.

*2 The P&P Main Select command can be sent only when "P&P (Split-screen)" is set to "On".

*3 When you are setting the Multi Screen, the Status command should be sent first.

Setting up the Monitor Network Environment

This section describes the basic procedure for using the monitor via the network.

If the network is already constructed, the monitor's network settings may need to be changed. Please consult your network administrator for assistance with these settings.

You can make network settings both on the monitor and on the computer. The following procedure is for making settings on the computer.

Network settings on the computer

1. Connecting the monitor to a computer

Connect a LAN cable (Category 5, cross-over type) between the computer and monitor.

LAN cable
(commercially available)
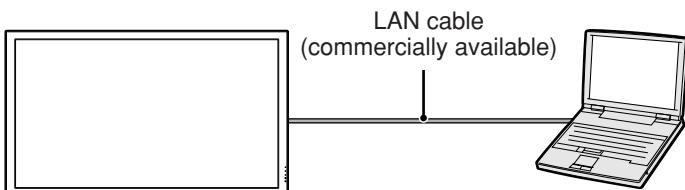
➡ **Page 11**

You can also make the settings of steps 2 and 3 below in the menu operation of the monitor. For details, refer to the operation manual of the monitor. (See page 38.)

2. Setting an IP address for the computer

Adjust the IP settings of the computer to enable one-to-one communications with the monitor.

Temporarily change the computer's IP address.
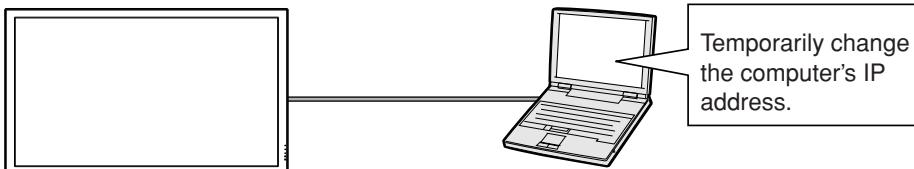
➡ **Pages 12, 13**

3. Setting up a network connection for the monitor

Adjust the monitor network settings to conform to your network.

Use Internet Explorer (version 5.0 or later) to make various monitor settings.
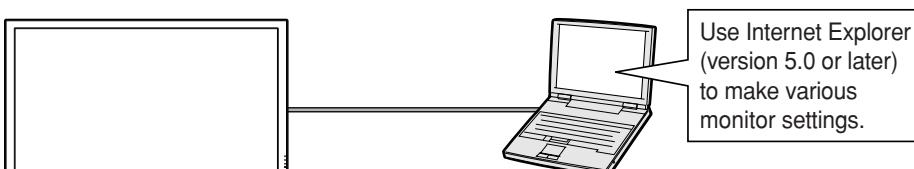
➡ **Page 14**

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1. Connecting the Monitor to a Computer

Establishing a one-to-one connection from the monitor to a computer. Using a LAN cable (Category 5, cross-over type) you can configure the monitor via the computer.

1 | **Disconnect the computer's LAN cable from the existing network.**
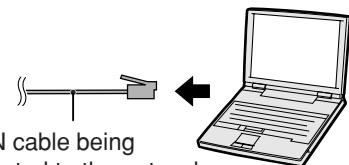
A LAN cable being connected to the network

2 | **Connect a LAN cable (a UTP cable, Category 5, cross-over type) to the monitor's LAN terminal and connect the other end of the cable to the computer's LAN terminal.**
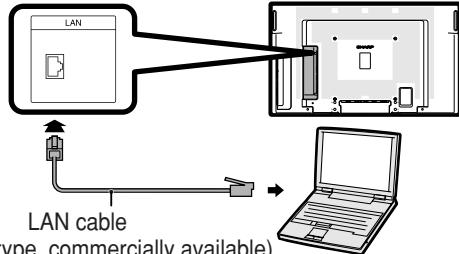
LAN
LAN cable
(cross-over type, commercially available)

3 | **Plug the power cord into the AC socket of the monitor.**
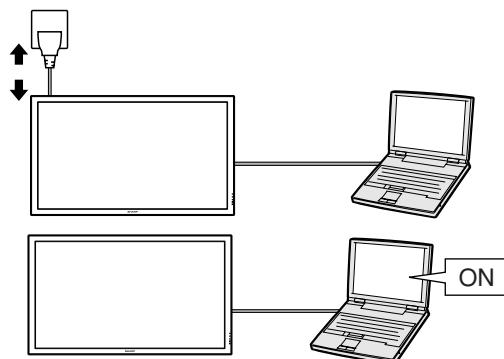
4 | **Turn on the computer.**

ON

📖 Info

Confirm that the LINK LED on the rear of the monitor illuminates. If the LINK LED does not illuminate, check the following :
 • The LAN cable is properly connected.
 • The power switches of both the monitor and the computer are on.

This completes the connection. Now proceed to **"2. Setting an IP Address for the Computer"**.

2. Setting an IP Address for the Computer

The following describes how to make settings in Windows Vista®.

1 Log on the network using the administrator's account for the computer.

2 Click "start", and click "Control Panel".
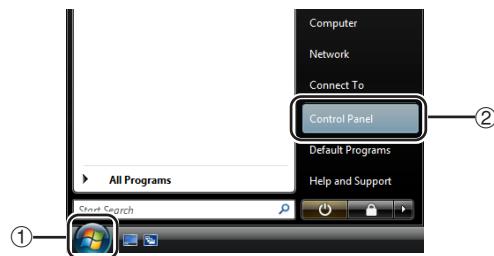
3 Click "View network status and tasks" of "Network and Internet", and click "View status" in the new window.

• This manual uses examples to explain the operations in Category View. If you are using Classic View, double-click "Network and Sharing Center".
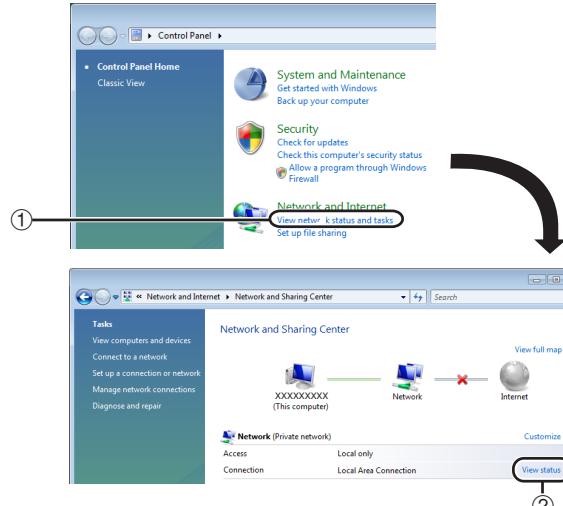
4 Click "Properties".

• When the user account control display is displayed, Click "Continue".
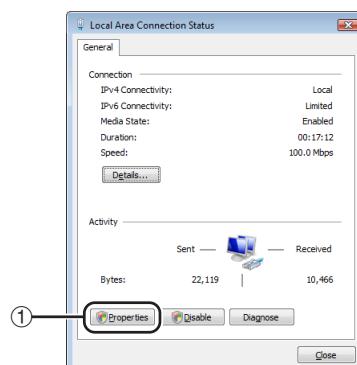
5 **Click "Internet Protocol Version 4 (TCP/IPv4)", and click the "Properties" button.**
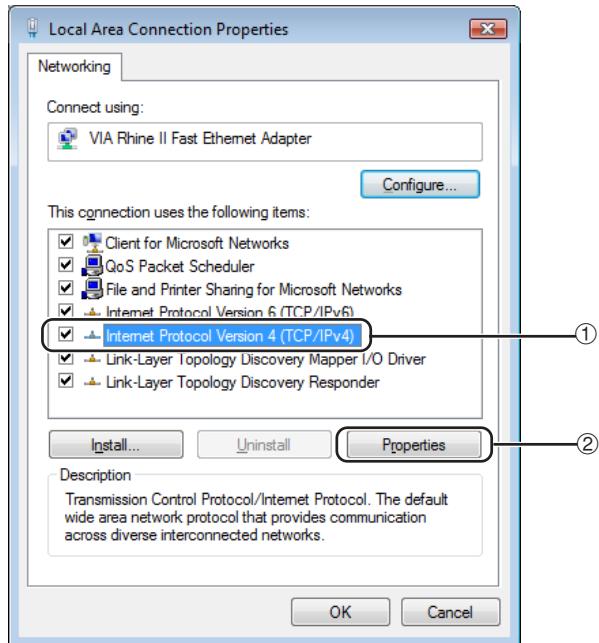
6 **Confirm or change an IP address for the setup computer.**

① **Confirm and note the current IP address, Subnet mask and Default gateway.**
Make sure to note the current IP address, Subnet mask and Default gateway as you will be required to reset them later.

② Set temporarily as follows :
IP address : 192.168.150.3
Subnet mask : 255.255.255.0
Default gateway : (Do not input any values.)
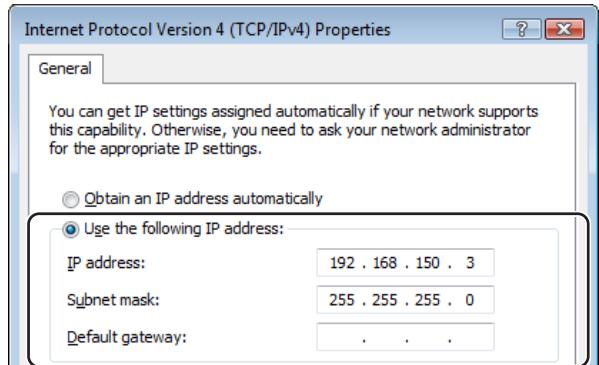
✎ **Note**

• The factory default settings for the monitor are as follows:
DHCP Client : OFF
IP address : 192.168.150.2
Subnet mask : 255.255.255.0
Default gateway : 0.0.0.0

7 **After setting, click the "OK" button, and then restart the computer.**

After confirming or setting, proceed to **"3. Setting up Network Connection for the Monitor"**.

3. Setting up a Network Connection for the Monitor

Settings for such items as the monitor's IP address and subnet mask are compatible with the existing network.
Set each item on the monitor as follows. (See page 38 of the monitor's operation manual for setting.)
DHCP Client : OFF
IP Address : 192.168.150.002
Subnet Mask : 255.255.255.000

**1** Start Internet Explorer (version 5.0 or later) on the computer, and enter "http://192.168.150.2/" in "Address", and then press the "Enter" key.
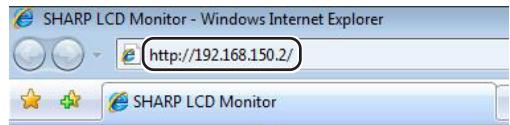
2 If a user name and a password have not yet been set, just click the "OK" button.

- If a user name and a password have been set, input the user name and the password, and click the "OK" button.
- If the user name or password is entered incorrectly three times, an error message will be displayed.
- When you are using Internet Explorer 7, other setup screen may be displayed. In this case, make the proper adjustments for the setup screen.

3 When the screen as shown on the right appears, click "TCP/IP".
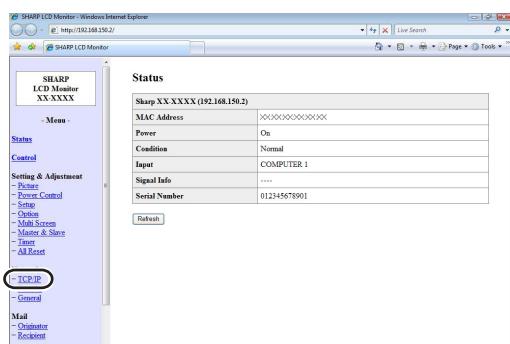
4 **The TCP/IP setting screen appears, ready for network settings for the monitor.**

Items	Setting example / Remarks
DHCP Client	Select "ON" or "OFF" to determine whether to use DHCP Client.
IP Address	You can set this item when "DHCP Client" is set to "OFF". Factory default setting: 192.168.150.2 Enter an IP address appropriate for the network.
Subnet Mask	You can set this item when "DHCP Client" is set to "OFF". Factory default setting: 255.255.255.0 Set the subnet mask to the same as that of the computer and equipment on the network.
Default Gateway	You can set this item when "DHCP Client" is set to "OFF". Factory default setting: 0.0.0.0 * When not in use, set to "0.0.0.0".
DNS Server	Factory default setting: 0.0.0.0 * When not in use, set to "0.0.0.0".

Network - TCP/IP

DHCP Client	⊙ OFF ○ ON			
IP Address	192	168	150	2
Subnet Mask	255	255	255	0
Default Gateway	0	0	0	0
	* "0.0.0.0" means "Using no default gateway."			
DNS Server	0	0	0	0
	* "0.0.0.0" means "Using no DNS server."			

Apply
Refresh

✎ Note

• Confirm the existing network's segment (IP address group) to avoid setting an IP address that duplicates the IP addresses of other network equipment or computers. If "192.168.150.2" is not used in the network having an IP address of "192.168.150.XXX", you don't have to change the monitor IP address.
• For details about each setting, consult your network administrator.

Network - TCP/IP

DHCP Client	⊙ OFF ○ ON			
IP Address	192	168	150	2
Subnet Mask	255	255	255	0
Default Gateway	0	0	0	0
	* "0.0.0.0" means "Using no default gateway."			
DNS Server	0	0	0	0
	* "0.0.0.0" means "Using no DNS server."			

➡ Apply
Refresh

5 **Click the "Apply" button.**

6 **The set values appear. Confirm that the values are set properly, and then click the "Confirm" button.**

Network - TCP/IP

The TCP/IP settings will be changed as below.

DHCP Client   : OFF
IP Address   : 192.168.150.2
Subnet Mask   : 255.255.255.0
Default Gateway : 0.0.0.0
DNS Server   : 0.0.0.0

Do you want to change the TCP/IP settings?

➡ Confirm Cancel

After you click "Confirm", if you want to continue to operate this projector via the network, please wait for 10 seconds and then re-access to "192.168.150.2".

• Close the browser.
• This completes the network settings.
• After setting items, wait for 10 seconds and then re-access.
• Change the IP address of the setting computer back to its original address, which you have noted down in Step 6-① on page **13**, and then connect the computer and the monitor to the network.

Controlling the Monitor via LAN

After connecting the monitor to your network, enter the monitor IP address in "Address" on Internet Explorer (version 5.0 or later) using a computer on the network to start a setup screen that will enable control of the monitor via the network.

Controlling the Monitor Using Internet Explorer (Version 5.0 or later)

Complete connections to external equipment before starting the operation. (See pages 16-20 of the monitor's operation manual.) Complete the AC cord connection. (See page 21 of the monitor's operation manual.)

1 Start Internet Explorer (version 5.0 or later) on the computer.

2 Enter "http://" followed by the monitor IP address set by the procedure on page **15** followed by "/" in "Address", and then press the "Enter" key.

- When "DHCP Client" is set to "OFF" on the monitor, IP address is 192.168.150.2. If you did not change the IP address in **"3. Setting up a Network Connection for the Monitor"** (pages **14**-**15**), enter "http://192.168.150.2/".
- When "DHCP Client" is set to "ON" on the monitor, you can confirm the IP address that is given by the DHCP server in the menu operation of the monitor. For details, refer to the operation manual of the monitor. (See page **38**.)
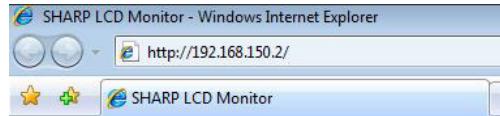
3 A screen for controlling the monitor appears, ready for performing various status conditions, control, and settings.

✎ **Note**
- When connecting the monitor to the LAN, use a LAN cable (Category 5). When connecting the monitor to a hub, use a straight-through cable.
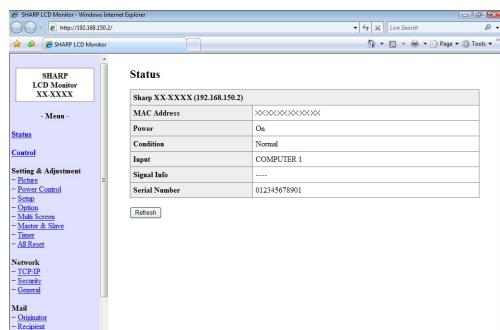
Confirming the Monitor Status (Status)

Status

Sharp XX-XXXX (192.168.150.2)	
MAC Address	XXXXXXXXXXXX
Power	On
Condition	Normal
Input	COMPUTER 1
Signal Info	----
Serial Number	012345678901

Refresh

On this screen, you can confirm the monitor status. You can confirm the following items :

- **MAC Address**
- **Power**
- **Condition**
- **Input**
- **Signal Info**
- **Serial Number**

✎ Note

- If you click the "Refresh" button before the screen is displayed completely, an error message ("Server Busy Error") will be displayed. Wait for a moment and then operate again.
- For details about each item, refer to the monitor's operation manual.

Controlling the Monitor (Control)

Control

Power	○ Standby ⊙ On
Input	Computer1 ▾
Volume	20 ▾
AV Mute	⊙ Off ○ On

Refresh

On this screen, you can perform monitor control. You can control the following items :

- **Power**
- **Input Select**
- **Volume**
- **AV Mute**

✎ Note

- If you click the "Refresh" button before the screen is displayed completely, an error message ("Server Busy Error") will be displayed. Wait for a moment and then operate again.
- You cannot operate this page while the monitor is warming up.
- While the monitor is in standby mode, you can only control "Power ON".
- For details about each item, refer to the monitor's operation manual.

Setting and Adjusting the Monitor (Settings & Adjustments)

Example: "Picture" screen display for COMPUTER

Setting & Adjustment - Picture (-----)

AV Mode	Standard ▾
OPC	On(Display) ▾
Color Temp.	High ▾
DNR	Off ▾
Film Mode	◉ Off ○ On
Black	◉ Off ○ On
3D-Y/C	Standard ▾
Monochrome	◉ Off ○ On

Reset

Refresh

On these screens, you can make monitor settings or adjustments. You can set or adjust the following items :

- **AV Mode**
- **OPC**
- **Color Temp.**
- **DNR**
- **Film Mode**
- **Black**
- **3D-Y/C**
- **Monochrome**
- **Power Management**
- **No Operation Off**
- **Ecology**
- **Old Password**
- **New Password**
- **Keylock**
- **Set Inputs**
- **Input Label**
- **Fine Sync**
- **Auto Sync**
- **Auto Restart**
- **RS-232C**
- **Closed Caption**
- **Audio Output**
- **Video System**
- **Signal Type**
- **Color Space**
- **Dynamic Range**
- **OSD Language**
- **HDMI Setup**
- **Resize**
- **Picture Flip**
- **Power On Delay**
- **LED**
- **Background**
- **Multi Screen**
- **Master & Slave**
- **Clock**
- **Schedule**
- **SleepTimer**
- **All Reset**

✎ Note

- If you click the "Refresh" button before the screen is displayed completely, an error message ("Server Busy Error") will be displayed. Wait for a moment and then operate again.
- You cannot operate this page while the monitor is warming up.
- For details about each item, refer to the monitor's operation manual.
- For details about the items that will be initialized in "All Reset", refer to the monitor's operation manual. (The network setting items will not be initialized.)

Setting the Security (Network – Security)

Network - Security

User Name		(MAX 8 characters)
Password		(MAX 8 characters)

This user name / password is for accessing via Web browser and Telnet.
*You will need to re-login with the new user name / new password after you change the user name / password.

Accept IP Address	◉ All IP Addresses ○ From only specific IP addresses Address 1 [0] [0] [0] [0] Address 2 [0] [0] [0] [0] Address 3 [0] [0] [0] [0]

Apply

Refresh

On this screen, you can make settings relating to security.

Items	Description
User Name	Setting of user name for security protection.
Password	Setting of password for security protection.
Accept IP Address	It is possible to set up to three IP addresses allowing connection to the monitor.
All IP Addresses	No limits are set to IP addresses connecting to the monitor.
From only specific IP addresses	For security improvement, only an IP address set by "Address 1-3" can be connected to the monitor.

✎ Note

- User Name and Password can be up to 8 characters.
- You can input the characters below : a-z, A-Z, 0-9, -, _

Making General Settings for the Network (Network – General)

Network - General

Monitor Name	XX-XXXX	(MAX 12 characters)
Auto Logout Time	5	minutes(0-65535) * If the set value is made 0, the Auto Logout function is disabled.
Data Port	10002	(1025-65535)
Search Port	5006	(1025-65535)

Apply

Refresh

On this screen, you can make general settings relating to the network.

Items	Description
Monitor Name	Setting the monitor name.
Auto Logout Time	Setting the time interval in which the monitor will be automatically disconnected from the network in units of a minute (from 1 to 65535 minutes). If the set value is made 0, the Auto Logout function is disabled.
Data Port	Setting the TCP port number used when exchanging data with the monitor (from 1025 to 65535).
Search Port	Setting the port number used when searching for the monitor (from 1025 to 65535).

After clicking the "Apply" button, the set values appear. Confirm that the values are set properly, and then click the "Confirm" button.

✎ Note

- After setting items, wait for 10 seconds and then re-access.
- Monitor Name can be up to 12 characters.
- You can input the characters below :
  A-Z, 0-9, -, _, (,), space
  (When "a-z" are input, they are converted to "A-Z" automatically.)

Setting for Sending E-mail when an Error Occurs (Mail – Originator Settings)

Mail - Originator Setting

SMTP Server		
		(MAX 64 characters)
Originator E-mail Address		
		(MAX 64 characters)
Originator Name		
		(MAX 64 characters)

Apply

Refresh

On this screen, you can make settings for sending e-mail to report when the monitor has generated an error.

Items	Setting example / Remarks
SMTP Server	Setting an SMTP server address for e-mail transmission. e.g.1 : 192.168.150.253 e.g.2 : smtp123.sharp.co.jp * When using a domain name, make settings for the DNS server.
Originator E-mail Address	Setting the monitor's e-mail address. The e-mail address set here becomes Originator E-mail Address.
Originator Name	Setting the sender's name. The name set here appears in the "Originator Name" column of the body of the message.

✎ Note

- SMTP Server, Originator E-mail Address and Originator Name can be up to 64 characters.
- You can input the characters below:
  SMTP Server and Originator E-mail Address :
  a-z, A-Z, 0-9, !, #, $, %, &, *, +, -, /, =, ?, ^, {, |, }, ~, _, ', ., @, `
  (You can input "@" only one time for "Originator E-mail Address".)
  Originator Name : a-z, A-Z, 0-9, -, _, (,), space
- If the settings of **"3. Setting up a Network Connection for the Monitor"** on pages **14** and **15** are incorrectly set, e-mail will not be send.

Setting Error Items and Destination Addresses to which E-mail is to be Sent when an Error Occurs
(Mail – Recipient Settings)

Mail - Recipient Settings

Recipient Addresses	E-mail Address (MAX 64 characters)		Error Mail Backlight Temp.		
	1		☐	☐	[Test]
	2		☐	☐	[Test]
	3		☐	☐	[Test]
	4		☐	☐	[Test]
	5		☐	☐	[Test]

[Apply]

[Refresh]

On this screen, you can input e-mail destinations to which error notification (error items) e-mails are sent.

Items	Description
E-mail Address	Set addresses to which error notification e-mail is sent. You can set up to five addresses.
Error Mail (Backlight, Temp.)	Error e-mail is sent on the error items checked in their check boxes.
Test	Send test e-mail. This allows you to confirm that the settings for e-mail transmission are properly set.

✎ Note

• E-mail Address can be up to 64 characters.
• You can input the characters below :
  a-z, A-Z, 0-9, !, #, $, %, &, *, +, -, /, =, ?, ^, {, |, }, ~, _, ', ., @, `
  (You can input "@" only one time.)
• For details about error items, refer to the monitor's operation manual.

Setting Error Items and the URL that are to be Displayed when an Error Occurs (Service & Support – Access URL)

Service & Support - Access URL Registration

Access URL	(MAX 64 characters)		Condition Backlight Temp.		
	1		☐	☐	[Test]
	2		☐	☐	[Test]
	3		☐	☐	[Test]
	4		☐	☐	[Test]
	5		☐	☐	[Test]

[Apply]

[Refresh]

On this screen, you can make settings of the URL and error items that are to be displayed when the monitor has generated an error.

Items	Description
Access URL	Set the URL that is to be displayed when an error occurs. You can set up to five addresses.
Condition (Backlight, Temp.)	The URL is displayed when an error checked in their check boxes occurs.
Test	The set URL site is test-displayed. This allows you to confirm that the URL site is properly displayed.

Setting up the Monitor Using RS-232C or Telnet

Connect the monitor to a computer using RS-232C or Telnet, and open the SETUP MENU on the computer to carry out various settings for the monitor.

When Connecting Using RS-232C

1 Launch general purpose terminal emulator.

2 Input settings for the RS-232C port of the terminal emulator as follows.

Baud Rate   : 9600 bps*
Data Length   : 8 bit
Parity Bit   : None
Stop Bit   : 1 bit
Flow Control   : None

* This is the factory default setting. If the value of Baud Rate for the monitor has been changed, set Baud Rate here according to the changed value on the monitor.

3 Input "MTS11234" and press the "Enter" key.

4 "OK" is displayed. Input "MTS25678" and press the "Enter" key within 10 seconds.

5 "User Name:" is displayed. Input the user name and press the "Enter" key.

• If a user name has not yet been set, just press the "Enter" key.

6 "Password:" is displayed. Input the password and press the "Enter" key.

• If a password has not yet been set, just press the "Enter" key.

7 Input "setup" and press the "Enter" key.

• SETUP MENU will be displayed.

▼SETUP MENU

```
-------------------------------SETUP MENU-------------------------------
[1]IP Address            [2]Subnet Mask         [3]Default Gateway
[4]User Name             [5]Password
[6]RS-232C Baud Rate  [7]Monitor Name        [8]DHCP Client
[A]Advanced Setup                              [D]Disconnect All
[V]View All Setting      [S]Save & Quit         [Q]Quit Unchanged

setup>
```

✎ **Note**

• User name and password are not set in the factory default settings.
• If the user name or password is entered incorrectly three times, SETUP MENU will be quit.

Setting up the Monitor Using RS-232C or Telnet

When Connecting Using Telnet

1 Click "Start" from the Windows® desktop and select "Run".

2 Enter "telnet 192.168.150.2" in the text box that opens up. (If the IP address of the monitor is 192.168.150.2.)

3 Click the "OK" button.

4 "User Name:" is displayed. Input the user name and press the "Enter" key.
  • If a user name has not yet been set, just press the "Enter" key.

5 "Password:" is displayed. Input the password and press the "Enter" key.
  • If a password has not yet been set, just press the "Enter" key.

6 Input "setup" and press the "Enter" key.
  • SETUP MENU will be displayed.

▼**SETUP MENU**

```
-------------------------------SETUP MENU------------------------------
[1]IP Address          [2]Subnet Mask      [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate  [7]Monitor Name     [8]DHCP Client
[A]Advanced Setup                          [D]Disconnect All
[V]View All Setting    [S]Save & Quit      [Q]Quit Unchanged

setup>
```

✎ **Note**

• If the IP address has been changed, be sure to enter the new IP address in step 2.
• User name and password are not set in the factory default settings.
• If the user name or password is entered incorrectly three times in steps 4 or 5, SETUP MENU will be quit.

SETUP MENU (Main Menu)

▼SETUP MENU

```
--------------------------------SETUP MENU------------------------------
[1]IP Address          [2]Subnet Mask        [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate   [7]Monitor Name       [8]DHCP Client
[A]Advanced Setup                            [D]Disconnect All
[V]View All Setting    [S]Save & Quit        [Q]Quit Unchanged

setup>
```

[1]IP Address
   IP address settings. (Page **26**)
[2]Subnet Mask
   Subnet mask settings. (Page **26**)
[3]Default Gateway
   Default gateway settings. (Page **26**)
[4]User Name (Factory default setting : Not Required)
   Setting of user name for security protection. (Page **26**)
[5]Password (Factory default setting : Not Required)
   Setting of password for security protection. (Page **27**)
[6]RS-232C Baud Rate (Factory default setting : 9600 bps)
   Baud rate settings for the RS-232C terminals. (Page **27**)
[7]Monitor Name
   It is possible to assign a monitor name. (Page **27**)
[8]DHCP Client
   DHCP Client settings. (Page **27**)
[A]Advanced Setup
   Enters ADVANCED SETUP MENU. (Page **28**)
[D]Disconnect All
   Disconnect all connections. (Page **28**)
[V]View All Setting
   Displays all setting values. (Page **24**)
   Can also be used with ADVANCED SETUP MENU.
[S]Save & Quit
   Save set values and quit menu. (Page **25**)
[Q]Quit Unchanged
   Quit menu without saving setting values. (Page **25**)

✎**Note**

• When "DHCP Client" is set to "OFF" on the monitor:
  IP address : 192.168.150.002
  Subnet mask : 255.255.255.000
  Default gateway : 000.000.000.000

ADVANCED SETUP MENU

▼ADVANCED SETUP MENU

```
****************** ADVANCED SETUP MENU **********************
[1]Auto Logout Time    [2]Data Port
[5]Network Ping Test
[6]Accept IP Addr(1)   [7]Accept IP Addr(2)   [8]Accept IP Addr(3)
[9]Accept All IP Addr  [0]Search Port


[!]Restore Default Setting
[Q]Return to Main Menu


advanced>
```

[1]Auto Logout Time (Factory default setting : 5 minutes)
   Setting of time until automatic disconnection of network connection. (Page **28**)
[2]Data Port (Factory default setting : 10002)
   Setting the TCP port number used when exchanging data. (Page **28**)
[5]Network Ping Test
   It is possible to confirm that a network connection between the monitor and a computer etc. is working normally. (Page **29**)
[6]Accept IP Addr(1)
[7]Accept IP Addr(2)
[8]Accept IP Addr(3)
[9]Accept All IP Addr (Factory default setting : Accept All)
   For improved security, it is possible to set up to three IP addresses allowing connection to the monitor.
   Set IP addresses can be cancelled using [9] Accept All IP Addr. (Page **29**)
[0] Search Port (Factory default setting : 5006)
   Setting the port number used when searching for the monitor. (Page **30**)
[!] Restore Default Setting
   Restores all setting values that can be set using the menu to the default state. (Page **30**)
[Q]Return to Main Menu
   Return to the main SETUP MENU. (Page **30**)

Setting up the Monitor Using RS-232C or Telnet

Enter number or symbol of item to be selected on the SETUP MENU. When setting, input the details to be set. Setting is carried out one item at a time, and saved at the end.

View Setting Detail List
([V]View All Setting)

▼**SETUP MENU**

```
---------------------------SETUP MENU---------------------------
[1]IP Address          [2]Subnet Mask       [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate   [7]Monitor Name      [8]DHCP Client
[A]Advanced Setup                           [D]Disconnect All
[V]View All Setting     [S]Save & Quit      [Q]Quit Unchanged

setup>v                                                          ①
Model Name          : XX-XXXX
Monitor Name        : XX-XXXX
MAC Address         : XX:XX:XX:XX:XX:XX
DHCP Client         : Disable
IP Address          : 192.168.150.2
Subnet Mask         : 255.255.255.0
Default Gateway     : Not Used
RS-232 Baud Rate    : 9600 bps                                    *
Password            : Not Required
**********(Advanced Status)**********
Data Port           : 10002
Accept IP Address   : Accept All
Auto Logout Time    : 5 minutes
Search Port         : 5006
```

① **Enter "v" and press the "Enter" key.**
   Display all setting values(*).

Set Items

Example: When setting IP Address (change from 192.168.150.2 to 192.168.150.3)

▼**SETUP MENU**

```
---------------------------SETUP MENU---------------------------
[1]IP Address          [2]Subnet Mask       [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate   [7]Monitor Name      [8]DHCP Client
[A]Advanced Setup                           [D]Disconnect All
[V]View All Setting     [S]Save & Quit      [Q]Quit Unchanged

setup>1                                                          ①
IP Address          : 192.168.150.2                             *1
Please Enter        : 192.168.150.3                             ②
(change)      —>  192.168.150.3                                 *2
---------------------------SETUP MENU---------------------------
[1]IP Address          [2]Subnet Mask       [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate   [7]Monitor Name      [8]DHCP Client
[A]Advanced Setup                           [D]Disconnect All
[V]View All Setting     [S]Save & Quit      [Q]Quit Unchanged

setup>v                                                          ③
Model Name          : XX-XXXX
Monitor Name        : XX-XXXX
MAC Address         : XX:XX:XX:XX:XX:XX
DHCP Client         : Disable
IP Address          : 192.168.150.3                             *3
Subnet Mask         : 255.255.255.0
Default Gateway     : Not Used
RS-232C Baud Rate   : 9600 bps
Password            : Not Required
**********(Advanced Status)**********
Data Port           : 10002
Accept IP Address   : Accept All
Auto Logout Time    : 5 minutes
Search Port         : 5006
```

① **Enter "1" (number of item to be set), and press the "Enter" key.**
   Display current IP address (*1).
② **Enter IP address to be set and press the "Enter" key.**
   Display IP address after change (*2).
③ **Enter "v" and press the "Enter" key to verify setting detail list.**
   IP address is being changed (*3).

✎ **Note**

• Verification of setting detail list can be omitted.
• Setting details are not effective until they have been saved. (Page **25**)
• If an invalid number is entered, an error message ("Parameter Error!") will be displayed.

Save Settings and Quit
([S]Save & Quit)

Save set values and quit menu.

▼**SETUP MENU**

```
---------------------------SETUP MENU---------------------------
[1]IP Address          [2]Subnet Mask      [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate   [7]Monitor Name     [8]DHCP Client
[A]Advanced Setup                          [D]Disconnect All
[V]View All Setting    [S]Save & Quit      [Q]Quit Unchanged

setup>s                                                        ①
All Connection will be disconnect.
Continue(y/n)? y                                               ②
Apply New setting...Done.
```

① **Enter "s" and press the "Enter" key.**
② **Enter "y" and press the "Enter" key.**

Quit without Saving Settings ([Q]Quit Unchanged)

Quit menu without saving setting values.

▼**SETUP MENU**

```
---------------------------SETUP MENU---------------------------
[1]IP Address          [2]Subnet Mask      [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate   [7]Monitor Name     [8]DHCP Client
[A]Advanced Setup                          [D]Disconnect All
[V]View All Setting    [S]Save & Quit      [Q]Quit Unchanged

setup>q                                                        ①
Quit Without Saving(y/n)? y                                    ②
Setting Unchanged.
```

① **Enter "q" and press the "Enter" key.**
② **Enter "y" and press the "Enter" key.**

Setting up the Monitor Using RS-232C or Telnet

The setting procedure for each item will be explained. For the basic procedure, please refer to "Set Items" on page 24.

IP Address Setting
([1]IP Address)

Setting of IP address.

```
setup>1                          ①
 IP Address       :192.168.150.2
(Please Enter     :192.168.150.3) ②
 (change)   —>    192.168.150.3    *
```

① **Enter "1" and press the "Enter" key.**
② **Enter numerical value to be set and press the "Enter" key.**
   Display IP address after change (*).

Subnet Mask Setting
([2]Subnet Mask)

Setting subnet mask.

```
setup>2                          ①
 Subnet Mask      :255.255.255.0
(Please Enter     :255.0.0.0)     ②
 (change)   —>    255.0.0.0        *
```

① **Enter "2" and press the "Enter" key.**
② **Enter numerical value to be set and press the "Enter" key.**
   Display subnet mask after change (*).

Default Gateway Setting
([3]Default Gateway)

Setting default gateway.

```
setup>3                                        ①
 note: "0.0.0.0" means "Using no default gateway."
 Gateway Address   :0.0.0.0
(Please Enter       :192.168.150.1)             ②
 (change)    —> 192.168.150.1                    *
```

① **Enter "3" and press the "Enter" key.**
② **Enter numerical value to be set and press the "Enter" key.**
   Display gateway address after change (*).

✎ **Note**

• If the values for IP Address, Subnet Mask or Gateway of the monitor have been changed via Telnet, the computer cannot be connected to the monitor depending on the computer's network settings.

User Name Setting
([4]User Name)

Carrying out security protection using user name.

```
setup>4                          ①
 User Name        :
(Please Enter     : XX-XXXX)      ②
 (change)   —>    XX-XXXX          *
```

① **Enter "4" and press the "Enter" key.**
② **Enter user name and press the "Enter" key.**
   Display set user name (*).

✎ **Note**

• User name can be up to 8 characters.
• You can input the characters below :
  a-z, A-Z, 0-9, -, _
• In the default state, user name is not set.

Password Setting
([5]Password)

Carrying out security protection using password.

```
setup>5                              ①
Password        :
Please Enter    : sharppj             ②
(change)   —>   sharppj              *
```

① **Enter "5" and press the "Enter" key.**
② **Enter password and press the "Enter" key.**
   Display set password (*).

✎Note

- Password can be up to 8 characters.
- You can input the characters below :
  a-z, A-Z, 0-9, -, _
- In the default state, the password is not set.

RS-232C Baud Rate Setting ([6]RS-232C Baud Rate)

Setting of baud rate for RS-232C terminals.

```
setup>6                              ①

0 ...   9600 bps
2 ... 115200 bps
Baud Rate Select[0, 2] :2             ②
RS-232C Baud Rate : 115200 bps       *
```

① **Enter "6" and press the "Enter" key.**
② **Select and enter the number 0 or 2 and press the "Enter" key.**
   Display set baud rate (*).

✎Note

- Set the monitor's baud rate to the same rate as that used by the computer.

Monitor Name Setting
([7]Monitor Name)

It is possible to assign a monitor name.

```
setup>7                              ①
Monitor Name   : XX-XXXX
Please Enter   : MY XX-XXXX            ②
(change)   —>   MY XX-XXXX           *
```

① **Enter "7" and press the "Enter" key.**
② **Enter monitor name.**
   Display set monitor name (*).

✎Note

- Monitor name can be up to 12 characters.
- You can input the characters below :
  A-Z, 0-9, -, _, (,), space
  (When "a-z" are input, they are converted to "A-Z" automatically.)
- It is the same as the name which can be confirmed or set, using RS-232C commands "MTN0", "MTN1", "MTN2" and "MTN3".

DHCP Client Setting
([8]DHCP Client)

Setting DHCP Client to "Enable" or "Disable".

Example: When setting DHCP Client to "Enable"

```
setup>8                                          ①
note: It sets DHCP Client.
0 ... Disable
1 ... Enable
DHCP Select[0-1] : 1                             ②
DHCP Client : Enable

Success get data from DHCP server.
[MAC Address    ] : [XX:XX:XX:XX:XX:XX]
[IP Address     ] : [192.168.150.2]
[Subnet Mask    ] : [255.255.255.0]              *
[Default Gateway] : [0.0.0.0]
[DHCP IP Address] : [192.168.150.1]
```

① **Enter "8" and press the "Enter" key.**
② **Enter "1" and press the "Enter" key.**
   Display the obtained values (*).

Disconnecting All Connections ([D]Disconnect All)

It is possible to disconnect all the TCP/IP connections currently recognized by the monitor. Even if the COM Redirect port is fixed in the Busy status due to a problem, it is possible to force the Ready status back by carrying out this disconnection.

```
setup>d                                              ①
Disconnect All Connections(y/n)?y                    ②
Now Disconnecting...
```

① **Enter "d" and press the "Enter" key.**
② **Enter "y" and press the "Enter" key.**

✎ **Note**

- If Disconnect All is performed, the connection to the monitor via network will be forcibly disconnected.

Entering ADVANCED SETUP MENU
([A]Advanced Setup)

Enters ADVANCED SETUP MENU.

```
setup>a                                              ①
****************** ADVANCED SETUP MENU ******************
[1]Auto Logout Time    [2]Data Port
[5]Network Ping Test
[6]Accept IP Addr(1)   [7]Accept IP Addr(2)   [8]Accept IP Addr(3)
[9]Accept All IP Addr  [0]Search Port


[!]Restore Default Setting
[Q]Return to Main Menu


advanced>
```

① **Enter "a" and press the "Enter" key.**

Setting Auto Logout Time
(ADVANCED[1]Auto Logout Time)

If there is no input after a fixed time, the monitor automatically disconnects network connection using the Auto Logout function. It is possible to set the time until the monitor is automatically disconnected in units of a minute (from 1 to 65535 minutes).

```
advanced>1                                           ①
Valid range        : 0 to 65535 (minute)
note: if you enter "0", auto logout function will be disable.
Auto Logout Time : 5
Please Enter       :15                               ②
(change)        —> 15                                *
```

① **Enter "1" and press the "Enter" key.**
② **Enter numerical value and press the "Enter" key.**
   Display set numerical value (*).

✎ **Note**

- If the set value is made 0, the Auto Logout function is disabled.
- If an invalid number is entered, an error message ("Parameter Error!") will be displayed and the screen returns to the ADVANCED SETUP MENU.

Data Port Setting
(ADVANCED[2]Data Port)

Setting of TCP port number. It is possible to set in the range of 1025 to 65535.

```
advanced>2                                           ①
Valid range        :1025 to 65535
Data Port          :10002
Please Enter       :10005                            ②
(change)        —> 10005                             *
```

① **Enter "2" and press the "Enter" key.**
② **Enter numerical value and press the "Enter" key.**
   Display set numerical value (*).

✎ **Note**

- Set according to need. Normally, use with the factory default setting.

Carrying out Network Ping Test
(ADVANCED[5]Network Ping Test)

It is possible to confirm that a network connection between the monitor and a computer etc. is working normally.

```
advanced>5                                           ①
Ping Test IP addr   :192.168.150.1
Please Enter        :192.168.150.152                 ②
(change)        —>  192.168.150.152                  *1
32 bytes from 192.168.150.152: icmp_seq = 1, time = 0 ms
32 bytes from 192.168.150.152: icmp_seq = 2, time = 0 ms    *2
32 bytes from 192.168.150.152: icmp_seq = 3, time = 0 ms
32 bytes from 192.168.150.152: icmp_seq = 4, time = 0 ms
```

① **Enter "5" and press the "Enter" key.**
② **Enter IP address of device to be tested and press the "Enter" key.**
   Display entered IP address (*1).
   Display test result (*2).

✎ Note

- If the "Enter" key is pressed without entering an IP address, the Ping Test IP address used previously is entered.
- If there is a fault with the connection, "Error: No answer" is displayed after a 5 second retry. In this case, please confirm the settings for the monitor and the computer, and contact your network administrator.

Setting of Accept IP Address (ADVANCED[6]Accept IP Addr(1) – [8]Accept IP Addr(3))

It is possible to improve security of the monitor by allowing connection from only a prescribed IP address. It is possible to set up to three IP addresses allowing connection to the monitor.

```
advanced>6                                           ①
Accept IP Addr(1)  : 0.0.0.0
Please Enter       : 192.168.150.152                 ②
(change)       —>  192.168.150.152                   *
```

① **Enter "6", "7" or "8" and press the "Enter" key.**
② **Enter numerical value and press the "Enter" key.**
   Display set numerical value (*).

✎ Note

- To invalidate the Accept IP Address being currently set, enter "0.0.0.0".
- If there is one or more Accept IP Addr being set, no connections are allowed from IP addresses that are not yet set. They can be cancelled using [9]Accept All IP Addr.

Accepting All IP Addresses (ADVANCED[9]Accept All IP Addr)

Removes IP addresses set with "Accept IP Addr".

```
advanced>9                                           ①
Accept All IP Addresses(y/n)? y                      ②
```

① **Enter "9" and press the "Enter" key.**
② **Enter "y" and press the "Enter" key.**

✎ Note

- At the point in time where "y" was entered, the numerical values for Accept IP Addr(1)-(3) are reset to "0.0.0.0".
- If "n" is entered, setting is not altered.

Setting of Search Port
(ADVANCED[0]Search Port)

Sets the port number used when searching for the monitor from the network.

```
advanced>0 ──────────────────────────────── ①
Please Enter Port Number for Search from Computer.
Valid range       : 1025 to 65535
Search Port       : 5006
Please Enter       : 5004 ─────────────────── ②
(change)      —>   5004 ─────────────────────  *
```

① **Enter "0" and press the "Enter" key.**
② **Enter numerical value and press the "Enter" key.**
Display set numerical value (*).

✎ Note

• Set according to need. Normally, use with the factory default setting.

Return to Default Settings
(ADVANCED[!]Restore Default Setting)

Returns all menu setting values to the default state.

```
advanced>! ──────────────────────────────── ①
Restore All Setting to Default(y/n)? y ─────── ②
— User Setting Initialized —
```

① **Enter "!" and press the "Enter" key.**
② **Enter "y" and press the "Enter" key.**

✎ Note

• If the values for IP Address, Subnet Mask or Gateway of the monitor have been returned to the default settings via Telnet, the computer cannot be connected to the monitor depending on the computer's network settings.

Return to Main Menu
(ADVANCED[Q]Return to Main Menu)

Returns to the main SETUP MENU.

```
advanced>q ──────────────────────────────── ①
------------------------------SETUP MENU------------------------------
[1]IP Address          [2]Subnet Mask      [3]Default Gateway
[4]User Name           [5]Password
[6]RS-232C Baud Rate [7]Monitor Name     [8]DHCP Client
[A]Advanced Setup                        [D]Disconnect All
[V]View All Setting    [S]Save & Quit      [Q]Quit Unchanged

setup>
```

① **Enter "q" and press the "Enter" key.**
Returns to the SETUP MENU.

Multi Screen

The monitor comes with the Multi-Screen function. You can display one large image using up to 16 (4 X 4) monitors.
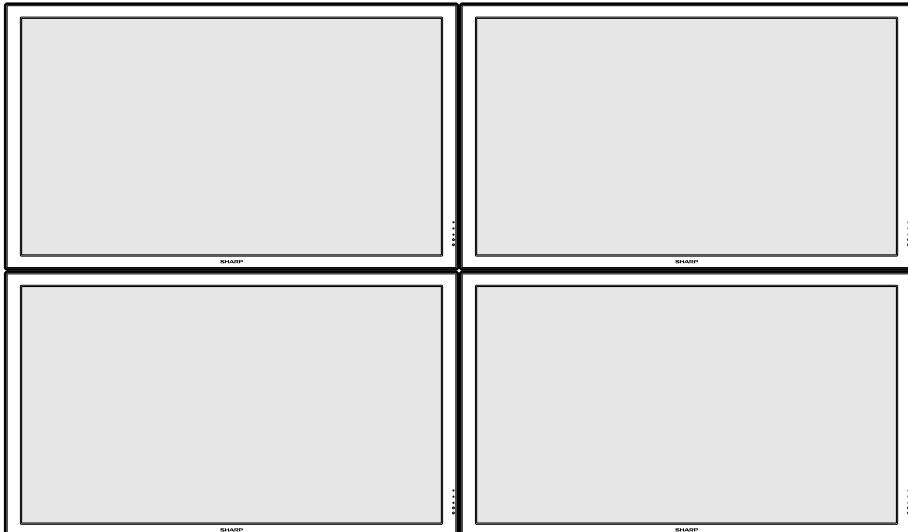
✎ **Note**

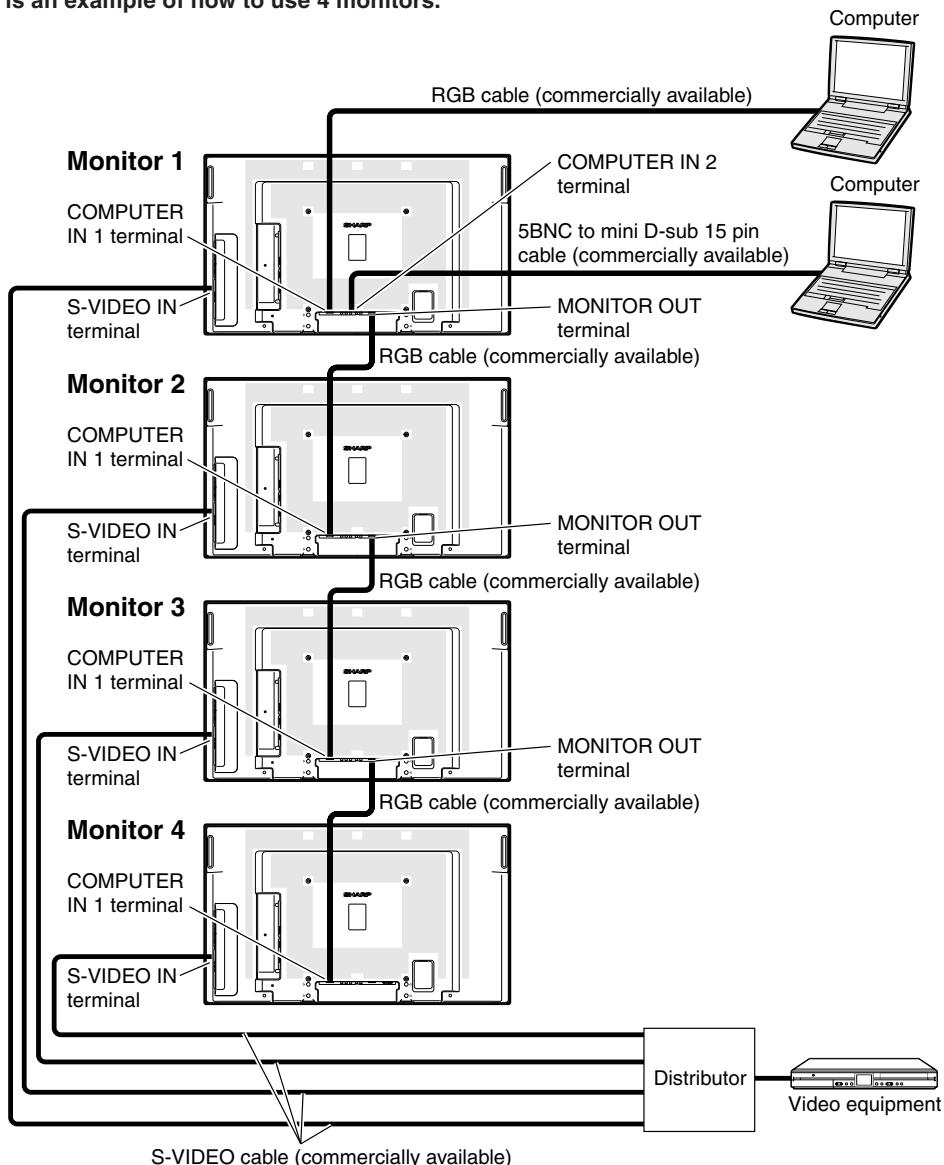• The availability of Multi Screen modes depending on the video signal is as follows.

Input Mode	Video Signal	3×1	4×1	3×3	4×4
S-VIDEO VIDEO	NTSC	N/A	N/A	N/A	N/A
	PAL	N/A	N/A	N/A	N/A
Computer1 Computer2	480I			N/A	N/A
	576I				N/A

N/A (Not Available)

📖 **Info**

• Before setting up the multi screen, install Internet Explorer (version 5.0 or later).
• Image quality may deteriorate when picture signals are input through multiple monitors with an RGB cable in connection.

Setting up the Multi Screen $\boxed{\text{Input Signal}}$

Following is an example of how to use 4 monitors.

Computer

RGB cable (commercially available)

Monitor 1

COMPUTER IN 2 terminal

Computer

COMPUTER IN 1 terminal

5BNC to mini D-sub 15 pin cable (commercially available)

S-VIDEO IN terminal

MONITOR OUT terminal

RGB cable (commercially available)

Monitor 2

COMPUTER IN 1 terminal

S-VIDEO IN terminal

MONITOR OUT terminal

RGB cable (commercially available)

Monitor 3

COMPUTER IN 1 terminal

S-VIDEO IN terminal

MONITOR OUT terminal

RGB cable (commercially available)

Monitor 4

COMPUTER IN 1 terminal

S-VIDEO IN terminal

Distributor

Video equipment

S-VIDEO cable (commercially available)

📖 Info

- Depending on the input signal, Auto Sync adjustment of the multi screen using the MONITOR OUT terminal may not be possible. Note the following.
  - The multi screen is not compatible with resolutions higher than SXGA.
  - Adjust "H-Position", "V-Position", "Clock" and "Phase" manually. (See page **37** of the monitor's operation manual.)
  - If the image quality deteriorates, use a distributor (commercially available).
- For the VIDEO, S-VIDEO, DVI-D or HDMI signal, use a distributor (commercially available).

1 **Access one of the four monitors via Internet Explorer.**
(See "Controlling the Monitor Using Internet Explorer (Version 5.0 or later)" (page **16**) for the details.)

2 **Click "Multi Screen" on the menu.**
• "Multi Screen" display will appear.

3 **Select "2 X 2" on "Status".**

4 **Click the assigning button for the desired position.**
• The monitor will be assigned to the part of the multi screen.
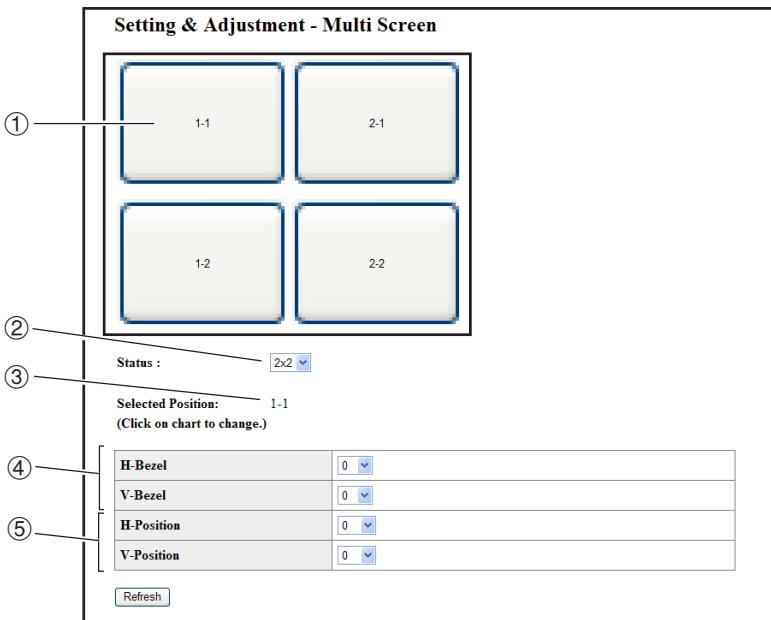
5 **Repeat the same procedure from the step 1 to 4 for the other three monitors.**

That completes the multi screen setup. When the same image signal is input to all the monitors, the multi screen starts.

Returning to the Default Multi Screen Setup

1 **Select "Off" on "Status".**

2 **Click the assigning button 1.**
• The multi screen setup will return to the default settings.

Setting & Adjustment - Multi Screen

1-1	2-1
1-2	2-2

①

Status : 2x2

③

Selected Position: 1-1
(Click on chart to change.)

④

H-Bezel	0
V-Bezel	0
H-Position	0
V-Position	0

⑤

Refresh

① Selects a position for each monitor. (the assigning buttons)
② Selects a number of positions where the multi screen is divided.
③ Displays the currently selected position for the multi screen setup.
④ Adjust the bezel size of the picture that is displayed on the monitor.
⑤ Adjust the position of the picture that is displayed on the monitor.

Notes on the Wide Multi Screen

Selecting "2 X 1", "3 X 1"or "4 X 1" on "Status" (see page 33) allows you to create the wide multi screen.
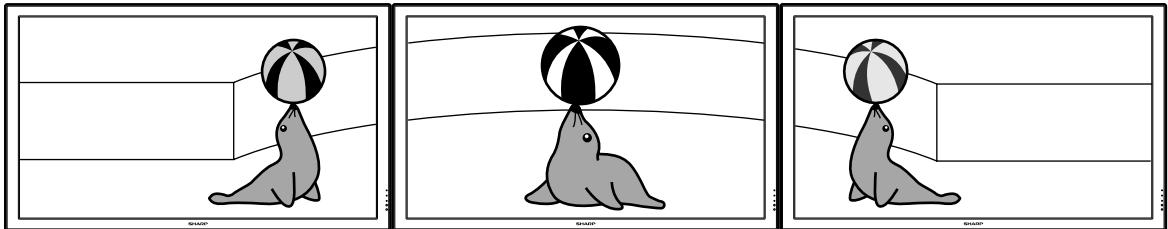
To create the wide multi screen with three monitors lining up in single file from left to right (as shown above), select "3 X 1" on "Status", select a position for each monitor, and then input the image which width is compressed at 1/3 (as shown below).
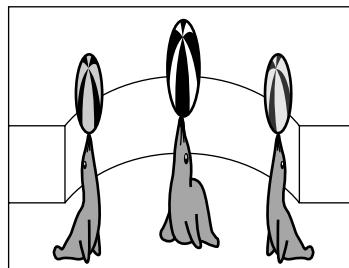
Setting up the Multi Screen Controlling

When you want to control the monitors collectively for the multi screen, connect LAN cables to the LAN terminals and set both "TCP/IP" and "Master & Slave".
Following is an example of how to use 4 monitors with a hub connection.

📖 **Info**

- To set up the multi screen, assign a monitor as the master and the other monitor as the slave and connect the monitors with commercially available LAN cables (UTP cable, Category 5, <u>cross-over type</u>). In this way, you can control the both monitors with one remote control.
- The buttons below can control both the master and the slave at one time.
  - ON button
  - STANDBY button
  - DIRECT INPUT buttons
    (COMPUTER1, COMPUTER2, DVI,
    HDMI, S-VIDEO, VIDEO)
  - AV MUTE button
  - VOLUME buttons
  - AUTO SYNC button
  - RESIZE button
  - AV MODE button
  - FREEZE button
  - P&P button
  - SELECT button
- In normal operation, the monitor set as the slave cannot be controlled by the remote control.
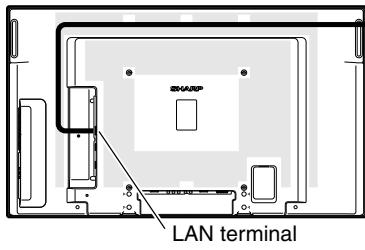- Even while the monitor is set as the slave, the buttons on the monitor can be used.
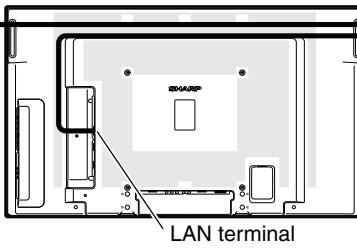

Monitor 1 : Master

Monitor 2 : Slave

Computer

LAN terminal

LAN terminal

LAN cable
(cross-over type,
commercially available)

Hub
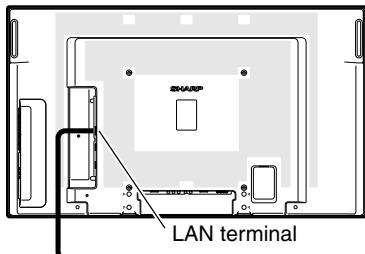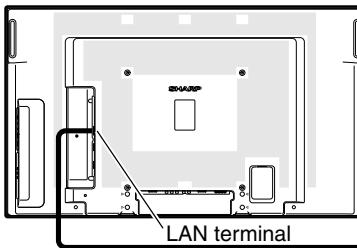
Monitor 3 : Slave

Monitor 4 : Slave

LAN cable
(straight-through type,
commercially available)

LAN terminal

LAN terminal

Multi Screen

■ Preparation
- **Follow the procedure below after setting up the basic connection.**
- When "User Name" and "Password" have been set to the monitor, reset them before the multi screen setup. To set "User Name" and "Password", use the same user name and password for both of the master and slave monitors. (See page **18**.)
- Set "Data Port" with the same number for both of the master and slave monitors. (See page **19**.)

📖 **Info**
- Do not use network software or equipment while it is accessing the monitor via the port of the same number used for the master or slave monitor, otherwise you cannot properly control multiple monitors with one remote control.

---

1 Change the TCP/IP settings for the computer as shown below.
(See "Setting an IP Address for the Computer" on page **12** for the details.)

- IP address   : 192.168.150.2
- Subnet mask   : 255.255.255.0
- Default gateway : (Do not input any values.)

2 Change the TCP/IP settings for each monitor as shown below.
(See "Setting up a Network Connection for the Monitor" on page **14** for the details.)
- IP address   Monitor 1   : 192.168.150.3
                         Monitor 2   : 192.168.150.4
                         Monitor 3   : 192.168.150.5
                         Monitor 4   : 192.168.150.6
- Subnet mask   : 255.255.255.0
- Default gateway   : 0.0.0.0

✎ **Note**
- The TCP/IP settings shown are examples to make connections following the diagram.
- When using other equipment in the same network, be careful about the IP address overlap or other network settings.
- Consult your network administrator for assistance with the network settings.

3 Connect the computer and the monitors as shown below.

4 **Turn on all of the monitors.**

5 **Access the monitor 1 from the computer via Internet Explorer.**
(See "Controlling the Monitor Using Internet Explorer (Version 5.0 or later)" on page **16** for the details.)

6 **Click "Master & Slave" on the menu.**

7 **Select "Master" on "Master & Slave Setting".**
• "Slave Address" display will appear.

Setting & Adjustment - Master & Slave					
Master & Slave Setting	Master ▼				
Slave1	0	0	0	0	(IP Address)
Slave2	0	0	0	0	(IP Address)
Slave3	0	0	0	0	(IP Address)
Slave4	0	0	0	0	(IP Address)
Slave5	0	0	0	0	(IP Address)

8 **Make the IP address for each monitor as shown below.**
• Slave 1 : 192.168.150.4
• Slave 2 : 192.168.150.5
• Slave 3 : 192.168.150.6

9 **Click the "Apply" button.**

10 **Access the monitor 2 from the computer via Internet Explorer.**
(See "Controlling the Monitor Using Internet Explorer (Version 5.0 or later)" on page **16** for the details.)

11 **Click "Master & Slave" on the menu.**

12 **Select "Slave" on "Mater & Slave Setting".**

Multi Screen

13 Repeat the same procedure from the step 10 to 12 for the monitor 3 and 4.

14 Select inputs as specified in the table on the right.

(See page **36** on the monitor operation manual.)

✎ Note

• Set input terminals you will use to "ON". Set input terminals you will not use to "OFF".

15 Turn off all of the monitors.

16 Make connections following the diagram shown on page **35**.

17 Turn on the monitors first, then turn on the computers and the video equipment.

Example: When using the connection described on page 32

Monitor 1　　　　　Monitor 2-4

Master		Slave	
Set Inputs		Set Inputs	
COMPUTER 1	**ON**	COMPUTER 1	**ON**
COMPUTER 2	**ON**	COMPUTER 2	OFF
DVI	OFF	DVI	OFF
HDMI	OFF	HDMI	OFF
VIDEO	OFF	VIDEO	OFF
S-VIDEO	**ON**	S-VIDEO	**ON**

Troubleshooting

Communication cannot be established with the monitor

When connecting the monitor using serial-connection
◀ Check that the RS-232C terminal of the monitor and a computer or the commercially available controller are connected correctly.

◀ Check that the RS-232C cable is a cross-over cable.

◀ Check that the RS-232C port setting for the monitor corresponds to the setting for the computer or the commercially available controller.

When connecting the monitor to a computer using network (LAN)-connection
◀ Check that the cable's connector is firmly inserted in the LAN terminal of the monitor.

◀ Check that the cable is firmly inserted into a LAN port for a computer or a network device such as a hub.

◀ Check that the LAN cable is a Category 5 cable.

◀ Check that the LAN cable is a cross-over cable when connecting the monitor to a computer directly.

◀ Check that the LAN cable is a straight-through cable when connecting the monitor with a network device such as a hub.

◀ Check that the power supply is turned on for the network device such as a hub between the monitor and a computer.

Check the network settings for the computer and the monitor
◀ Check the following network settings for the monitor.
  • IP Address
  Check that the IP address for the monitor is not duplicated on the network.
  • Subnet Mask
  When the gateway setting for the monitor is "0.0.0.0" (Not Used), or the gateway setting for the monitor and the default gateway setting for the computer are the same:
  • The subnet masks for the monitor and the computer should be the same.
  • The IP address parts shown by the subnet mask for the monitor and the computer should be the same.
    (Example)
    When the IP address is "192.168.150.2" and the subnet mask is "255.255.255.0" for the monitor, the IP address for the computer should be "192.168.150.X" (X=3-254) and the subnet mask should be "255.255.255.0".
  • Gateway
  When the gateway setting for the monitor is "0.0.0.0" (Not Used), or the gateway setting for the monitor and the default gateway setting for the computer are the same:
  • The subnets for the monitor and the computer should be the same.
  • The IP address parts shown by the subnet mask for the monitor and the computer should be the same.
    (Example)
    When the IP address is "192.168.150.2" and the subnet mask is "255.255.255.0" for the monitor, the IP address for the computer should be "192.168.150.X" (X=3-254) and the subnet mask should be "255.255.255.0".

✎ Note
• When "DHCP Client" is set to "OFF" on the monitor
  IP address : 192.168.150.2
  Subnet mask : 255.255.255.0
  Gateway address : 0.0.0.0 (Not Used)
• For network settings for the monitor, refer to page **14**.

Troubleshooting

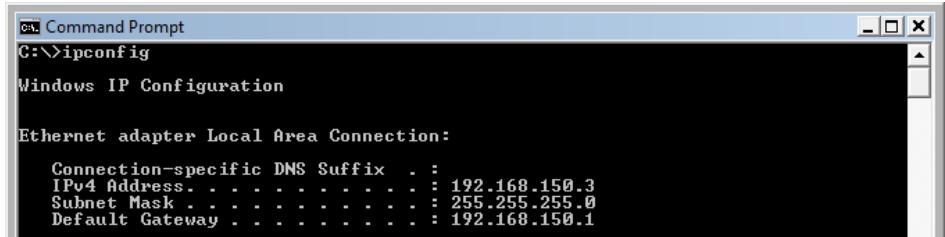◀ Take the following steps for checking the network settings for the computer.
  1. Open a command prompt.
     • In the case of Windows® 2000: click "start" ➜ "Programs" ➜ "Accessories" ➜ "Command Prompt" in order.
     • In the case of Windows® XP, Windows Vista®: click "start" ➜ "All Programs" ➜ "Accessories" ➜ "Command Prompt" in order.
  2. After launching the command prompt, enter the command "ipconfig", and press the "Enter" key.

✎ **Note**

• Communication may not be established even after carrying out the network settings for the computer. In such cases, restart your computer.

C:\>ipconfig


```
Command Prompt                                          _ □ ×
C:\>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

   Connection-specific DNS Suffix  . :
   IPv4 Address. . . . . . . . . . . : 192.168.150.3
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.150.1
```

✎ **Note**

• Usage examples of ipconfig
  C:\>ipconfig /?   displays how to use "ipconfig.exe".
  C:\>ipconfig   displays the set IP address, subnet mask and default gateway.
  C:\>ipconfig /all   displays all the setting information related to TCP/IP.

  3. To return to the Windows® screen, enter "exit" and press the "Enter" key.

◀ Check if the "TCP/IP" protocol is operating correctly using the "PING" command. Also, check if an IP address is set.
  1. Open a command prompt.
     • In the case of Windows® 2000: click "start" ➔ "Programs" ➔ "Accessories" ➔ "Command Prompt" in order.
     • In the case of Windows® XP, Windows Vista®: click "start" ➔ "All Programs" ➔ "Accessories" ➔ "Command Prompt" in order.
  2. After launching the command prompt enter a command "PING".
     Entry example C:\>ping XXX.XXX.XXX.XXX
     "XXX.XXX.XXX.XXX" should be entered with an IP address to be connected to, such as the monitor.
  3. When connecting normally, the display will be as follows.
     (The screen may be slightly different depending on the OS type.)
     <Example> when the IP address connected to is "192.168.150.1"
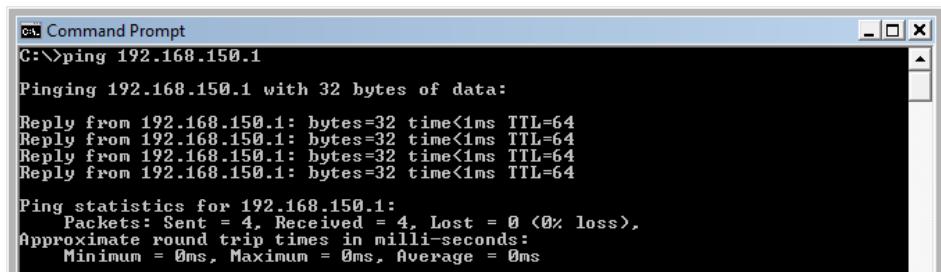
```
Command Prompt                                              _ □ ×
C:\>ping 192.168.150.1

Pinging 192.168.150.1 with 32 bytes of data:

Reply from 192.168.150.1: bytes=32 time<1ms TTL=64
Reply from 192.168.150.1: bytes=32 time<1ms TTL=64
Reply from 192.168.150.1: bytes=32 time<1ms TTL=64
Reply from 192.168.150.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.150.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

  4. When a command cannot be sent, "Request time out" will be displayed.
     Check the network setting again.
     If communication can still not be established properly, contact your network administrator.
  5. To return to the Windows® screen, enter "exit" and then press the "Enter" key.

A connection cannot be made because you have forgotten your user name or your password.

◀ Initialize the settings. (See page **39** of the monitor's operation manual.)
◀ After the initialization, carry out setting again.