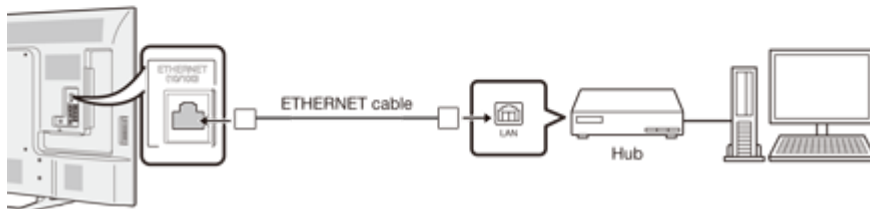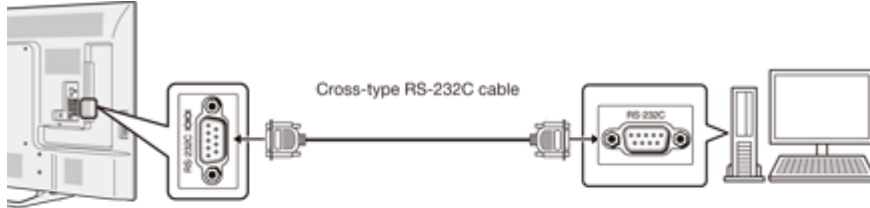# Using a PC

Control of the TV

- The TV can be controlled from a PC, control panels and other devices using the RS-232C or IP.
- Use a cross-type RS-232C cable, ETHERNET cable (commercially available) or wireless LAN for the connections.

Cross-type RS-232C cable

ETHERNET cable

Hub

NOTE

- This operation system should be used by a person who is accustomed to using computers.

IP Control

Set this function when operating the TV from equipment connected by LAN. To perform the operation, refer to "Network Settings".

IP Control
When "IP Control" is selected, "Change" will be highlighted. Press **ENTER**.

Detailed Settings
Make the detailed settings (Login ID, password, etc.).
Follow the on-screen instructions to configure the settings.

Device Name Setting

Set the name of the TV displayed on other network devices.
- Use the software keyboard to set the name.
  for details on the software keyboard.

Communication Conditions for IP

Connect to the TV with the following settings made for IP on the PC.

IP protocol:	TCP/IP
Host IP address:	Set the IP address on the TV menu
Service:	None (Do not select Telnet or SSH)
TCP port#:	Set a port number on the TV menu (Control port)

When you set your ID and password on the TV menu, you need to enter them as soon as you connect to the TV.

NOTE

- When you use this function, make settings for "IP Control".
- The connection will be cut off when there has been no communication for 3 minutes.

Communication Conditions for RS-232C

Set the RS-232C communication settings on the PC to match the Monitors communication conditions.
The Monitor's communication settings are as follows:

Baud rate:	9,600 bps
Data length:	8 bits
Parity bit:	None
Stop bit:	1 bit
Flow control:	None

Communication procedure
Send the control commands from the PC via the RS-232C or IP.
TheMonitor operates according to the received command and sends a response message to the PC.
Do not send multiple commands at the same time.
Wait until the PC receives the OK response before sending the next command.

Control of the TV (Continue)

Command format
Eight ASCII codes +CR

| C1 | C2 | C3 | C4 | P1 | P2 | P3 | P4 | ↵ |

Command 4-digits   Parameter 4-digits   Return code

Command 4-digits: Command. The text of four characters.
Parameter 4-digits: Parameter 0–9, x, blank, ?

Parameter
Input the parameter values, aligning left, and fill with blank(s) for the remainder. (Be sure that 4 values are input for the parameter.)
When the input parameter is not within an adjustable range, "ERR" returns. (Refer to "Response code format".)
Any numerical value can replace the "x" on the table.

| 0 | | | |

| 0 | 0 | 0 | 9 |

| – | 3 | 0 | |

When "?" is input for some commands, the present setting value responds.

| ? | | | |

| ? | ? | ? | ? |

Response code format
Normal response

| O | K | ↵ |

Return code (0DH)

Problem response
(communication error or incorrect command)

| E | R | R | ↵ |

Return code (0DH)
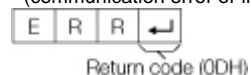
Command table
● Commands not indicated here are not guaranteed to operate.

CONTROL ITEM		COMMAND				PARAMETER				CONTROL CONTENTS	
POWER ON COMMAND SETTING		R	S	P	W	0	_	_	_	Off	The Power On command rejected.
						1	_	_	_	On [RS-232C]	The Power On command accepted. (For LE661U and EQ30U models only)
						2	_	_	_	On [IP]	The Power On command accepted.
POWER SETTING		P	O	W	R	0	_	_	_	Power Off	It shifts to standby.
						1	_	_	_	Power On	Power On *1
INPUT SELECTION	TOGGLE	I	T	G	D	x	_	_	_	(Toggle)	It input-switches by the toggle. (It is the same as an input change key)
	TV	I	T	V	D	0	_	_	_		It input-switches to TV. (A channel remains as it is. (Last memory))

*1 Select "Initial Setup" from the menu screen and set "Quick Start Mode" to "On" to enable the Power On command for LAN and Wi-Fi.
You can "Wake On LAN (Magic Packet)" to turn on the power via LAN. It is not available on Wi-Fi connection.

NOTE
● If an underbar (_) appears in the parameter column, enter a space.
● If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.
● Any numerical value can replace the "x" on the table.

Using a PC

Control of the TV (Continue)

CONTROL ITEM		COMMAND				PARAMETER				CONTROL CONTENTS	
INPUT SELECTION	1-6	I	A	V	D	*	_	_	_	1: HDMI IN 1, 2: HDMI IN 2, 3: HDMI IN 3, 4: VIDEO IN 1, 5: COMPONENT/VIDEO IN 2, 6: PC IN	
AV MODE SELECTION		A	V	M	D	*	_	_	_	0: (Toggle), 1: STANDARD, 2: MOVIE, 4: USER, 5: DYNAMIC (Fixed), 6: DYNAMIC, 7: PC	Although it can choose now, it is toggle operation in inside.
VOLUME		V	O	L	M	*	*	*	_	Volume (0-100)	
POSITION	H-POSITION	H	P	O	S	*	*	*	_	(-50-50)	For PC input. The screen position variable ranges depend on the View Mode or the signal type. The ranges can be seen on the position-setting screen.
	V-POSITION	V	P	O	S	*	*	*	_	(-50-50)	
	CLOCK	C	L	C	K	*	*	*	_	(0-100)	
	PHASE	P	H	S	E	*	*	_	_	(0-63)	

CONTROL ITEM		COMMAND				PARAMETER				CONTROL CONTENTS	
VIEW MODE		W	I	D	E	*	*	_	_	0: (Toggle) [AV], 1: Side Bar [AV], 2: S.Stretch [AV] 3: Zoom [AV], 4: Stretch [AV, USB-Video, Home Network Video or Internet applications], 5: Normal [PC] 7: Stretch [PC], 8: Dot by Dot [PC] [AV], 9: Full Screen [AV] 10: Auto [USB-Video, USB-Photo, Home Network Video, Photo or Internet applications], 11: Original [USB-Video, USB-Photo, Home Network Video, Photo or Internet applications]	0: Although it can choose now, it is toggle operation in inside. 1: Only available when 4:3 signal is being input. 5: Only available when 4:3 signal is being input. 8: [PC] Available except when UXGA is being input. [AV] Only available when 1080i/p is being input. 9: Only available when 720p is being input. 10, 11: Available when USB-Video, USB-Photo, Home Network Video, Photo or Internet application is used.
MUTE		M	U	T	E	*	_	_	_	0: (Toggle), 1: On, 2: Off	

NOTE
- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.
- Any numerical value can replace the "x" on the table.

Using a PC

Control of the TV (Continue)

CONTROL ITEM	COMMAND				PARAMETER				CONTROL CONTENTS	
SURROUND	A	C	S	U	*	_	_	_	0: (Toggle), 1: On, 2: Off	
AUDIO SELECTION	A	C	H	A	x	_	_	_	(Toggle)	
SLEEP TIMER	O	F	T	M	*	_	_	_	0: Off, 1: OFF TIMER - 30 MIN., 2: OFF TIMER - 60 MIN., 3: OFF TIMER - 90 MIN., 4: OFF TIMER - 120 MIN. 5: OFF TIMER - 150 MIN.	

CONTROL ITEM		COMMAND				PARAMETER				CONTROL CONTENTS	
CHANNEL	DIRECT CHANNEL (ANALOG)	D	C	C	H	*	*	*	_	The channel number of TV (1-135)	An input change is included if it is not TV display. In Air, 2-69ch is effective. In Cable, 1-135ch is effective.
	DIRECT CHANNEL (DIGITAL)	D	A	2	P	*	*	*	*	(0100-9999)	DIGITAL Air (Two-Part numbers, 2-digit plus 2-digit)
		D	C	2	U	*	*	*	_	(1-999)	DIGITAL Cable (Two-Part numbers, 3-digit plus 3-digit) Front half of DIGITAL CABLE CHANNEL NO. (Designate major channel)
		D	C	2	L	*	*	*	_	(0-999)	DIGITAL Cable (Two-Part numbers, 3-digit plus 3-digit) Rear half of DIGITAL CABLE CHANNEL NO. (Designate minor channel)

NOTE
- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.
- Any numerical value can replace the "x" on the table.

Using a PC

Control of the TV (Continue)

CONTROL ITEM		COMMAND				PARAMETER				CONTROL CONTENTS	
CHANNEL	DIRECT CHANNEL (DIGITAL)	D	C	1	0	*	*	*	*	(0-9999)	DIGITAL Cable (One-Part numbers, 5-digit, less than 10,000)
		D	C	1	1	*	*	*	*	(0-6383)	DIGITAL Cable (One-Part numbers, 5-digit, more than 10,000)
	CH UP	C	H	U	P	x	_	_	_	The channel number of TV +1	If it is not TV display, it will input-switch to TV. (same function as CH ∧)
	CH DOWN	C	H	D	W	x	_	_	_	The channel number of TV -1	If it is not TV display, it will input-switch to TV. (same function as CH ∨)
CC		C	L	C	P	x	_	_	_	(Toggle)	Toggle operation of a closed caption.
DEVICE NAME		T	V	N	M	1	_	_	_		The device name set in "Device Name Setting" is displayed.
MODEL NAME		M	N	R	D	1	_	_	_		The model name of the TV.

| CONTROL ITEM	COMMAND				PARAMETER				CONTROL CONTENTS
SOFTWARE VERSION	S	W	V	N	1	_	_	_	The current version of the TV software is displayed.
IP PROTOCOL VERSION	I	P	P	V	1	_	_	_	The currently supported version of IP protocol is displayed.

NOTE
- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.
- Any numerical value can replace the "x" on the table.

Using a PC

Control of the TV (Continue)

CONTROL ITEM	COMMAND				PARAMETER				CONTROL CONTENTS	
REMOTE CONTROL BUTTONS	R	C	K	Y	*	*	_	_	0-9: 0-9, 10: DOT, 12: POWER, 13: DISPLAY, 23: OPTION, 24: SLEEP, 31: MUTE, 32: VOL -, 33: VOL +, 34: CH∧, 35: CH∨, 36: INPUT, 38: MENU, 40: ENTER, 41:▲, 42:▼, 43:◀, 44:▶, 45: RETURN, 46: EXIT, 49: AUDIO, 50: A (red), 51: B (green), 52: C (blue), 53: D (yellow), 61: MANUAL	

NOTE

- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.
- Any numerical value can replace the "x" on the table.
- You can use "Wake On LAN (Magic Packet)" to turn on the power via LAN. It is not available on Wi-Fi connection.