VISCA Command/ACK Protocol

Command	Command Message	Reply Message	Comments
General Command	81 01 04 38 02 FF (Example)	90 41 FF (ACK)+90 51 FF (Completion) 90 42 FF 90 52 FF	Returns ACK when a command has been accepted, and Completion when a command has been executed.
	81 01 04 38 FF (Example)	90 60 02 FF (Syntax Error)	Accepted a command which is not supported or a command lacking parameters.
	81 01 04 38 02 FF (Example)	90 60 03 FF (Command Buffer Full)	There are two commands currently being executed, and the command could not be accepted.
	81 01 04 08 02 FF (Example)	90 61 41 FF (Command Not Executable) 90 62 41FF	Could not execute the command in the current mode.
Inquiry Command	81 09 04 38 FF (Example)	90 50 02 FF (Completion)	ACK is not returned for the inquiry command.
	81 09 05 38 FF (Example)	90 60 02 FF (Syntax Error)	Accepted an incompatible command.
Address Set	88 30 01 FF	88 30 0w FF	w: Returned the device address to +1. (2 to 8)
IF_Clear(Broadcast)	88 01 00 01 FF	88 01 00 01 FF	Returned the same command.
IF_Clear (For x)	8x 01 00 01 FF	z0 50 FF (Completion)	ACK is not returned for this command.
Command Cancel	8x 2y FF (y:Socket No.)	z0 6y 04 FF (Command Canceled)	Returned when the command of the socket specified is canceled. Completion for the command canceled is not returned.
		z0 6y 05 FF (No Socket)	Returned when the command of the specified socket has already been completed or when the socket number specified is wrong.

z = Device address + 8

VISCA Camera-Issued Messages

ACK/Completion Messages

	Command Messages	Comments
ACK	z0 4y FF (y:Socket No.)	Returned when the command is accepted.
Completion	z0 5y FF (y:Socket No.)	Returned when the command has been executed.

z = Device address + 8

Error Messages

	Command Messages	Comments
Syntax Error	z0 60 02 FF	Returned when the command format is different or when a command with illegal command parameters is accepted.
Command Buffer Full	z0 60 03 FF	Indicates that two sockets are already being used (executing two commands) and the command could not be accepted when received.
Command Canceled	z0 6y 04 FF (y:Socket No.)	Returned when a command which is being executed in a socket specified by the cancel command is canceled. The completion message for the command is not returned.
No Socket	z0 6y 05 FF (y:Socket No.)	Returned when no command is executed in a socket specified by the cancel command, or when an invalid socket number is specified.
Command Not Executable	z0 6y 41 FF (y:Execution command Socket No. Inquiry command:0)	Returned when a command cannot be executed due to current conditions. For example, when commands controlling the focus manually are received during auto focus.

z = Device address + 8

Network Change Message

	Command Message	Comments
Network Change	z0 38 FF	Issued when power is being routed to the camera, or when the VISCA device is connected to or disconnected from the VISCA OUT connector.

z = Device address + 8

EVI-H100S/H100V Commands

EVI-H100S/H100V Command List (1/4)

Command Set	Command	Command Packet	Comments
AddressSet	Broadcast	88 30 01 FF	Address setting
IF_Clear	Broadcast	88 01 00 01 FF	I/F Clear
CommandCancel		8x 2p FF	p: Socket No. (=1 or 2)
CAM_Power	On	8x 01 04 00 02 FF	Power ON/OFF
	Off (Standby)	8x 01 04 00 03 FF	
CAM_Zoom	Stop	8x 01 04 07 00 FF	
	Tele (Standard)	8x 01 04 07 02 FF	
	Wide (Standard)	8x 01 04 07 03 FF	
	Tele (Variable)	8x 01 04 07 2p FF	p=0 (Low) to 7 (High)
	Wide (Variable)	8x 01 04 07 3p FF	
	Direct	8x 01 04 47 0p 0q 0r 0s FF	pqrs: Zoom Position
CAM_DZoom	On	8x 01 04 06 02 FF	Digital zoom ON/OFF
	Off	8x 01 04 06 03 FF	
CAM_Focus	Stop	8x 01 04 08 00 FF	
	Far (Standard)	8x 01 04 08 02 FF	
	Near (Standard)	8x 01 04 08 03 FF	
	Far (Variable)	8x 01 04 08 2p FF	p=0 (Low) to 7 (High)
	Near (Variable)	8x 01 04 08 3p FF	
	Direct	8x 01 04 48 0p 0q 0r 0s FF	pqrs: Focus Position
	Auto Focus	8x 01 04 38 02 FF	AF ON/OFF
	Manual Focus	8x 01 04 38 03 FF	
	Auto/Manual	8x 01 04 38 10 FF	
	One Push Trigger	8x 01 04 18 01 FF	One Push AF Trigger
	Infinity	8x 01 04 18 02 FF	Forced infinity
	Near Limit	8x 01 04 28 0p 0q 0r 0s FF	pqrs: Focus Near Limit Position *The lower 1 byte (rs) is fixed at 00.
AF Sensitivity	Normal	8x 01 04 58 02 FF	AF Sensitivity High/Low
	Low	8x 01 04 58 03 FF	
CAM_AFMode	Normal AF	8x 01 04 57 00 FF	AF Movement Mode
	Interval AF	8x 01 04 57 01 FF	
	Zoom Trigger AF	8x 01 04 57 02 FF	
	Active/Interval Time	8x 01 04 27 0p 0q 0r 0s FF	pq: Movement Time, rs: Interval
CAM_IRCorrection	Standard	8x 01 04 11 00 FF	FOCUS IR compensation data switching
	IR Light	8x 01 04 11 01 FF	
CAM_ZoomFocus	Direct	8x 01 04 47 0p 0q 0r 0s 0t 0u 0v 0w FF	pqrs: Zoom Position tuvw: Focus Position
CAM_WB	Auto	8x 01 04 35 00 FF	Normal Auto
	Indoor	8x 01 04 35 01 FF	Indoor mode
	Outdoor	8x 01 04 35 02 FF	Outdoor mode
	One Push WB	8x 01 04 35 03 FF	One Push WB mode
	Manual	8x 01 04 35 05 FF	Manual Control mode
	One Push Trigger [1) 6)]	8x 01 04 10 05 FF	One Push WB Trigger
CAM_RGain	Reset	8x 01 04 03 00 FF	Manual Control of R Gain
	Up	8x 01 04 03 02 FF	
	Down	8x 01 04 03 03 FF	
	Direct	8x 01 04 43 00 00 0p 0q FF	pq: R Gain

EVI-H100S/H100V Command List (2/4)

Command Set	Command	Command Packet	Comments
CAM_BGain	Reset	8x 01 04 04 00 FF	Manual Control of B Gain
	Up	8x 01 04 04 02 FF	
	Down	8x 01 04 04 03 FF	
	Direct	8x 01 04 44 00 00 0p 0q FF	pq: B Gain
CAM_AE	Full Auto	8x 01 04 39 00 FF	Automatic Exposure mode
	Manual	8x 01 04 39 03 FF	Manual Control mode
	Shutter Priority	8x 01 04 39 0A FF	Shutter Priority Automatic Exposure mode
	Iris Priority	8x 01 04 39 0B FF	Iris Priority Automatic Exposure mode
	Bright [2)]	8x 01 04 39 0D FF	Bright Mode (Manual control)
CAM_SlowShutter	Auto	8x 01 04 5A 02 FF	Auto Slow Shutter ON/OFF
	Manual	8x 01 04 5A 03 FF	
CAM_Shutter	Reset	8x 01 04 0A 00 FF	Shutter Setting
	Up	8x 01 04 0A 02 FF	
	Down	8x 01 04 0A 03 FF	
	Direct	8x 01 04 4A 00 00 0p 0q FF	pq: Shutter Position
CAM_Iris	Reset	8x 01 04 0B 00 FF	Iris Setting
	Up	8x 01 04 0B 02 FF	
	Down	8x 01 04 0B 03 FF	
	Direct	8x 01 04 4B 00 00 0p 0q FF	pq: Iris Position
CAM_Gain	Reset	8x 01 04 0C 00 FF	Gain Setting
	Up	8x 01 04 0C 02 FF	
	Down	8x 01 04 0C 03 FF	
	Direct	8x 01 04 4C 00 00 0p 0q FF	pq: Gain Position
	AE Gain Limit	8x 01 04 2C 0p FF	p: Gain Position (4-F)
CAM_Bright	Up	8x 01 04 0D 02 FF	Bright Setting
	Down	8x 01 04 0D 03 FF	
	Direct	8x 01 04 4D 00 00 0p 0q FF	pq: Bright Position
CAM_ExpComp	On	8x 01 04 3E 02 FF	Exposure Compensation ON/OFF
	Off	8x 01 04 3E 03 FF	
	Reset	8x 01 04 0E 00 FF	Exposure Compensation Amount Setting
	Up	8x 01 04 0E 02 FF	
	Down	8x 01 04 0E 03 FF	
	Direct	8x 01 04 4E 00 00 0p 0q FF	pq: ExpComp Position
CAM_BackLight	On	8x 01 04 33 02 FF	Back Light Compensation ON/OFF
	Off	8x 01 04 33 03 FF	
CAM_WD	On	8x 01 04 3D 02 FF	Wide-D ON/OFF
	Off	8x 01 04 3D 03 FF	
	Auto On Off	8x 01 04 3D 00 FF	Wide dynamic ON/OFF auto switching
	On (Ratio Fix)	8x 01 04 3D 01 FF	Wide dynamic ON (Fixed exposure ratio mode)
	On (Histogram)	8x 01 04 3D 04 FF	Wide dynamic ON (Histogram mode)
	Refresh	8x 01 04 10 0D FF	Wide dynamic Refresh
	Set Parameter	8x 01 04 2D 0p 0q 0r 0s 0t 0u 00 00 FF	p: Screen display (0: Combined image, 2: Long-time, 3: Short-time) q: Detection sensitivity (0: L 1: M 2: H) r: Blocked-up shadow correction level (0: L 1: M 2: H 3: S) s: Blown-out highlight correction level (0: L 1: M 2: H) tu: Exposure ratio of short exposure (x1 to x64)
CAM_Aperture	Reset	8x 01 04 02 00 FF	Aperture Control
	Up	8x 01 04 02 02 FF	
	Down	8x 01 04 02 03 FF	
	Direct	8x 01 04 42 00 00 0p 0q FF	pq: Aperture Gain

EVI-H100S/H100V Command List (3/4)

Command Set	Command	Command Packet	Comments
CAM_HR	On	8x 01 04 52 02 FF	High-Resolution Mode ON/OFF
	Off	8x 01 04 52 03 FF	
CAM_NR		8x 01 04 53 0p FF	p: NR Setting (0: OFF, level 1 to 5)
CAM_Gamma		8x 01 04 5B 0p FF	p: Gamma setting (0: Standard, 1 to 4)
CAM_HighSensitivity	On	8x 01 04 5E 02 FF	High Sensitivity mode ON/OFF
	Off	8x 01 04 5E 03 FF	
CAM_PictureEffect	Off	8x 01 04 63 00 FF	Picture Effect Setting
	Neg.Art	8x 01 04 63 02 FF	
	B&W	8x 01 04 63 04 FF	
CAM_ICR	On	8x 01 04 01 02 FF	Infrared Mode ON/OFF
	Off	8x 01 04 01 03 FF	
CAM_AutoICR	On	8x 01 04 51 02 FF	Auto dark-field mode On/Off
	Off	8x 01 04 51 03 FF	
	Threshold	8x 01 04 21 00 00 0p 0q FF	pq: ICR ON → OFF Threshold Level
CAM_Memory	Reset [3) 6)]	8x 01 04 3F 00 0p FF	p: Memory Number (=0 to 5) Corresponds to 1 to 6 on the Remote Commander.
	Set [3) 6)]	8x 01 04 3F 01 0p FF	
	Recall [3) 4)]	8x 01 04 3F 02 0p FF	
CAM_IDWrite		8x 01 04 22 0p 0q 0r 0s FF	pqrs: Camera ID (=0000 to FFFF)
CAM-ChromaSuppress		8×01 04 5F pp FF	pp: Chroma Suppress setting level 00: OFF 1 to 3: ON (3 levels) Effect increases as the level number increases.
CAM_ColorGain	Direct	8x 01 04 49 00 00 00 0p FF	p: Color Gain setting 0h (60%) to Eh (200%)
CAM_ColorHue	Direct	8x 01 04 4F 00 00 00 0p FF	p: Color Hue setting 0h (– 14 degrees) to Eh (+14 degrees)
SYS_Menu	Off	8x 01 06 06 03 FF	Turns off the menu screen.
VideoSystem SET [5)]		8x 01 06 35 00 0p FF	p: Video format / EVI-H100S / EVI-H100V 0: 1080i/59.94 (29.97PsF) — Yes / Yes — 59.94 Hz system 1: 1080p/29.97 — Yes / Yes — 59.94 Hz system 2: 720p/59.94 — Yes / Yes — 59.94 Hz system 3: 720p/29.97 — Yes / Yes — 59.94 Hz system 4: NTSC (LB) — Yes (SD OUT) / No — 59.94 Hz system 8: 1080i/50 (25PsF) — Yes / Yes — 50 Hz system 9: 720p/50 — Yes / Yes — 50 Hz system A: 720p/25 — Yes / Yes — 50 Hz system B: 1080i/50 — Yes / Yes — 50 Hz system C: PAL (LB) — Yes (SD OUT) / No — 50 Hz system
IR_Receive	On	8x 01 06 08 02 FF	IR(remote commander) receive ON/OFF
	Off	8x 01 06 08 03 FF	
	On/Off	8x 01 06 08 10 FF	
IR_ReceiveReturn	On	8x 01 7D 01 03 00 00 FF	IR (remote commander) receive message via the VISCA communication ON/OFF For contents of messages, see page 37.
	Off	8x 01 7D 01 13 00 00 FF	
Information Display	On	8x 01 7E 01 18 02 FF	ON/OFF of the Operation status display of One Push Trigger of CAM_Memory and CAM_WB
	Off	8x 01 7E 01 18 03 FF	

EVI-H100S/H100V Command List (4/4)

Command Set	Command	Command Packet	Comments
Pan-tiltDrive	Up [3]	8x 01 06 01 VV WW 03 01 FF	VV: Pan speed 01 to 18 WW: Tilt Speed 01 to 17 YYYY: Pan Position E1E5 to 1E1B (center 0000) ZZZZ: Tilt Position FC75 to 0FF0 (IMAGE FLIP: OFF) (center 0000) Tilt Position F010 to 038B (IMAGE FLIP: ON) (center 0000) See page 46
	Down [3]	8x 01 06 01 VV WW 03 02 FF	
	Left [3]	8x 01 06 01 VV WW 01 03 FF	
	Right [3]	8x 01 06 01 VV WW 02 03 FF	
	UpLeft [3]	8x 01 06 01 VV WW 01 01 FF	
	UpRight [3]	8x 01 06 01 VV WW 02 01 FF	
	DownLeft [3]	8x 01 06 01 VV WW 01 02 FF	
	DownRight [3]	8x 01 06 01 VV WW 02 02 FF	
	Stop [3]	8x 01 06 01 VV WW 03 03 FF	
	AbsolutePosition	8x 01 06 02 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
	RelativePosition	8x 01 06 03 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
	Home	8x 01 06 04 FF	
	Reset	8x 01 06 05 FF	
Pan-tiltLimitSet	LimitSet	8x 01 06 07 00 0W 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	W: 1 UpRight YYYY: Pan Limit Position 0001 to 1E1B ZZZZ: Tilt Limit Position 0001 to 0FF0 (IMAGE FLIP: OFF) Tilt Limit Position 0001 to 038B (IMAGE FLIP: ON) W: 0 DownLeft YYYY: Pan Limit Position E1E5 to FFFF ZZZZ: Tilt Limit Position FC75 to FFFF (IMAGE FLIP: OFF) Tilt Limit Position F010 to FFFF (IMAGE FLIP: ON)
	LimitClear	8x 01 06 07 01 0W 07 0F 0F 0F 07 0F 0F 0F FF	

1) After an ACK to a One Push White Balance Trigger is sent until the operation is completed, "Not Executable" is sent as a reply when any other commands are received.
2) Bright can be set only in Full Auto mode or Shutter Priority mode.
3) When the menu is displayed, this operation is ignored.
4) When other commands are received after a Completion notification for the Recall command is sent, "Command not executable" may be returned for a maximum of 240 msec due to internal processing. In this case, please transmit the command again.
5) Can be configured when the SYSTEM SELECT switch at the rear of the camera is set to position 7.
Use one of the following methods to apply the settings.
- Turn off DC power, and turn it on again.
- Turn off power using the IR remote commander, and turn it on again.
- Send CAM_Power On and Off commands.

6) If Information Display is set to ON, the next command action may be delayed due to Operation status display internal processing after these commands are executed.

EVI-H100S/H100V Inquiry Command List (1/3)

Inquiry Command	Command Packet	Inquiry Packet	Comments
CAM_PowerInq	8x 09 04 00 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_ZoomPosInq	8x 09 04 47 FF	y0 50 0p 0q 0r 0s FF	pqrs: Zoom Position
CAM_DZoomModeInq	8x 09 04 06 FF	y0 50 02 FF	D-Zoom On
		y0 50 03 FF	D-Zoom Off
CAM_FocusModeInq	8x 09 04 38 FF	y0 50 02 FF	Auto Focus
		y0 50 03 FF	Manual Focus
CAM_FocusPosInq	8x 09 04 48 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Position
CAM_FocusNearLimitInq	8x 09 04 28 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Near Limit Position
CAM_AFSensitivityInq	8x 09 04 58 FF	y0 50 02 FF	AF Sensitivity Normal
		y0 50 03 FF	AF Sensitivity Low
CAM_AFModeInq	8x 09 04 57 FF	y0 50 00 FF	Normal AF
		y0 50 01 FF	Interval AF
		y0 50 02 FF	Zoom Trigger AF
CAM_AFTimeSettingInq	8x 09 04 27 FF	y0 50 0p 0q 0r 0s FF	pq: Movement Time, rs: Interval
CAM_IRCorrectionInq	8x 09 04 11 FF	y0 50 00 FF	Standard
		y0 50 01 FF	IR Light
CAM_WBModeInq	8x 09 04 35 FF	y0 50 00 FF	Auto
		y0 50 01 FF	In Door
		y0 50 02 FF	Out Door
		y0 50 03 FF	One Push WB
		y0 50 05 FF	Manual
CAM_RGainInq	8x 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: R Gain
CAM_BGainInq	8x 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: B Gain
CAM_AEModeInq	8x 09 04 39 FF	y0 50 00 FF	Full Auto
		y0 50 03 FF	Manual
		y0 50 0A FF	Shutter Priority
		y0 50 0B FF	Iris Priority
		y0 50 0D FF	Bright
CAM_SlowShutterModeInq	8x 09 04 5A FF	y0 50 02 FF	Auto
		y0 50 03 FF	Manual
CAM_ShutterPosInq	8x 09 04 4A FF	y0 50 00 00 0p 0q FF	pq: Shutter Position
CAM_IrisPosInq	8x 09 04 4B FF	y0 50 00 00 0p 0q FF	pq: Iris Position
CAM_GainPosInq	8x 09 04 4C FF	y0 50 00 00 0p 0q FF	pq: Gain Position
CAM_AEGainLimitInq	8x 09 04 2C FF	y0 50 0p FF	p: Gain Limit
CAM_BrightPosInq	8x 09 04 4D FF	y0 50 00 00 0p 0q FF	pq: Bright Position
CAM_ExpCompModeInq	8x 09 04 3E FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_ExpCompPosInq	8x 09 04 4E FF	y0 50 00 00 0p 0q FF	pq: ExpComp Position
CAM_BackLightModeInq	8x 09 04 33 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_WDModeInq	8x 09 04 3D FF	y0 50 02 FF	On
		y0 50 03 FF	Off
		y0 50 00 FF	Auto On Off
		y0 50 01 FF	On (Ratio Fix)
		y0 50 04 FF	On (Histogram mode)

EVI-H100S/H100V Inquiry Command List (2/3)

Inquiry Command	Command Packet	Inquiry Packet	Comments
CAM_WDParameterInq	8x 09 04 2D FF	y0 50 0p 0q 0r 0s 0t 0u 00 00 FF	p: Screen display q: Detection sensitivity r: Blocked-up shadow correction level s: Blown-out highlight correction level tu: Exposure ratio of short exposure
CAM_ApertureInq	8x 09 04 42 FF	y0 50 00 00 0p 0q FF	pq: Aperture Gain
CAM_HRModeInq	8x 09 04 52 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_NRInq	8x 09 04 53 FF	y0 50 0p FF	p: NR level
CAM_GammaInq	8x 09 04 5B FF	y0 50 0p FF	p: Gamma
CAM_HighSensitivityInq	8x 09 04 5E FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_PictureEffectModeInq	8x 09 04 63 FF	y0 50 00 FF	Off
		y0 50 02 FF	Neg.Art
		y0 50 04 FF	B&W
CAM_ICRModeInq	8x 09 04 01 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_AutoICRModeInq	8x 09 04 51 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_AutoICRThresholdInq	8x 09 04 21 FF	y0 50 00 00 0p 0q FF	pq: ICR ON → OFF Threshold Level
CAM_IDInq	8x 09 04 22 FF	y0 50 0p 0q 0r 0s FF	pqrs: Camera ID
CAM_VersionInq	8x 09 00 02 FF	y0 50 00 01 mn pq rs tu vw FF	mnq: Model Code (H100V: 050E/H100S: 050F) rstu: ROM version vw: Socket Number (=02) See page 25.
CAM_ChromaSuppresslnq	8x 09 04 5F FF	y0 50 pp FF	pp: Chroma Suppress setting level
CAM_ColorGainlnq	8x 09 04 49 FF	y0 50 00 00 00 0p FF	p: Color Gain setting 0h (60%) to Eh (200%)
CAM_ColorHueInq	8x 09 04 4F FF	y0 50 00 00 00 0p FF	p: Color Hue setting 0h (– 14 degrees) to Eh (+ 14 degrees)
Information Display	8x 09 7E 01 18 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
Video SystemInq	8x 09 06 23 FF		Video format EVI-H100S / EVI-H100V
		y0 50 00 FF	1080i/59.94 (29.97PsF) — EVI-H100S: Yes, EVI-H100V: Yes — 59.94 Hz system
		y0 50 01 FF	1080p/29.97 — Yes — Yes — 59.94 Hz system
		y0 50 02 FF	720p/59.94 — Yes — Yes — 59.94 Hz system
		y0 50 03 FF	720p/29.97 — Yes — Yes — 59.94 Hz system
		y0 50 04 FF	NTSC (LB) — Yes (SD OUT) — No — 59.94 Hz system
		y0 50 08 FF	1080i/50 (25PsF) — Yes — Yes — 50 Hz system
		y0 50 09 FF	720p/50 — Yes — Yes — 50 Hz system
		y0 50 0A FF	720p/25 — Yes — Yes — 50 Hz system
		y0 50 0B FF	1080i/50 — Yes — Yes — 50 Hz system
		y0 50 0C FF	PAL (LB) — Yes (SD OUT) — No — 50 Hz system

EVI-H100S/H100V Inquiry Command List (3/3)

Inquiry Command	Command Packet	Inquiry Packet	Comments			
Next Power ON Video SystemInq [1]	8x 09 06 33 FF		Video format	EVI-H100S	EVI-H100V	
		y0 50 00 FF	1080i/59.94 (29.97PsF)	Yes	Yes	59.94 Hz system
		y0 50 01 FF	1080p/29.97	Yes	Yes	
		y0 50 02 FF	720p/59.94	Yes	Yes	
		y0 50 03 FF	720p/29.97	Yes	Yes	
		y0 50 04 FF	NTSC (LB)	Yes (SD OUT)	No	
		y0 50 08 FF	1080i/50 (25PsF)	Yes	Yes	50 Hz system
		y0 50 09 FF	720p/50	Yes	Yes	
		y0 50 0A FF	720p/25	Yes	Yes	
		y0 50 0B FF	1080i/50	Yes	Yes	
		y0 50 0C FF	PAL (LB)	Yes (SD OUT)	No	
IR_Receive	8x 09 06 08 FF	y0 50 02 FF	On			
		y0 50 03 FF	Off			
IR_ReceiveReturn		y0 07 7D 01 04 00 FF	Power ON/OFF			
		y0 07 7D 01 04 07 FF	Zoom tele/wide			
		y0 07 7D 01 04 38 FF	AF On/Off			
		y0 07 7D 01 04 33 FF	CAM_Backlight			
		y0 07 7D 01 04 3F FF	CAM_Memory			
		y0 07 7D 01 06 01 FF	Pan_tiltDrive			
IR_ConditionInq	8x 09 06 34 FF	y0 50 00 FF	Stable reception from the IR Remote Commander			
		y0 50 01 FF	Unstable reception from the IR Remote Commander			
		y0 50 02 FF	Impossible to detect the infrared signals from the Remote Commander because the camera is turned on by the Remote Commander.			
Pan-tiltMaxSpeedInq	8x 09 06 11 FF	y0 50 ww zz FF	ww = Pan Max Speed xx = Tilt Max Speed			
Pan-tiltPosInq [2]	8x 09 06 12 FF	y0 5 50 0w 0w 0w 0w 0z 0z 0z 0z FF	wwww = Pan Position zzzz = Tilt Position See page 46.			
Pan-tiltModeInq	8x 09 06 10 FF	y0 50 pq rs FF	pqrs: Pan-tilt Status See page 46.			
Cooling fan condition Inq	8x 09 7E 01 38 FF	y0 50 00 FF	Working			
		y0 50 01 FF	Stop			

1) Can be configured when the SYSTEM SELECT switch at the rear of the camera is set to position 7.
Use one of the following methods to apply the settings.
- Turn off DC power, and turn it on again.
- Turn off power using the IR remote commander, and turn it on again.
- Send CAM_Power On and Off commands.

2) If a Pan-tiltPosInq command is received after Pan-tiltDrive Reset, the pan/tilt position may be different for 1-2 addresses.

EVI-H100S/H100V Block Inquiry Command List

Lens Control System Inquiry Commands ..... Command Packet 8x 09 7E 7E 00 FF

Byte	Bit	Comments
0	7	Destination Address
	6	
	5	
	4	
	3	Source Address
	2	
	1	
	0	
1	7	0 Completion Message (50h)
	6	1
	5	0
	4	1
	3	0
	2	0
	1	0
	0	0
2	7	0
	6	0
	5	0
	4	0
	3	Zoom Position (HH)
	2	
	1	
	0	
3	7	0
	6	0
	5	0
	4	0
	3	Zoom Position (HL)
	2	
	1	
	0	
4	7	0
	6	0
	5	0
	4	0
	3	Zoom Position (LH)
	2	
	1	
	0	
5	7	0
	6	0
	5	0
	4	0
	3	Zoom Position (LL)
	2	
	1	
	0	

Byte	Bit	Comments
6	7	0
	6	0
	5	0
	4	0
	3	Focus Near Limit (H)
	2	
	1	
	0	
7	7	0
	6	0
	5	0
	4	0
	3	Focus Near Limit (L)
	2	
	1	
	0	
8	7	0
	6	0
	5	0
	4	0
	3	Focus Position (HH)
	2	
	1	
	0	
9	7	0
	6	0
	5	0
	4	0
	3	Focus Position (HL)
	2	
	1	
	0	
10	7	0
	6	0
	5	0
	4	0
	3	Focus Position (LH)
	2	
	1	
	0	
11	7	0
	6	0
	5	0
	4	0
	3	Focus Position (LL)
	2	
	1	
	0	

Byte	Bit	Comments
12	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
13	7	0
	6	0
	5	0
	4 3	0: Normal 1: Interval 2: Zoom Trigger
	2	AF Sensitivity 0: Slow 1: Normal
	1	Digital Zoom 1: On 0: Off
	0	Focus Mode 0: Manual 1: Auto
14	7	0
	6	0
	5	0
	4	0
	3	Low Contrast Detection 1: Yes 0: No
	2	Camera Memory Recall 1: Executing 0: Stopped
	1	Focus Command 1: Executing 0: Stopped
	0	Zoom Command 1: Executing 0: Stopped
15	7	1 Terminator (FFh)
	6	1
	5	1
	4	1
	3	1
	2	1
	1	1
	0	1

Camera Control System Inquiry Commands ..... Command Packet 8x 09 7E 7E 01 FF

Byte	Bit	Comments
0	7	Destination Address
	6	
	5	
	4	
	3	Source Address
	2	
	1	
	0	
1	7	0 Completion Message (50h)
	6	1
	5	0
	4	1
	3	0
	2	0
	1	0
	0	0
2	7	0
	6	0
	5	0
	4	0
	3	R Gain (H)
	2	
	1	
	0	
3	7	0
	6	0
	5	0
	4	0
	3	R Gain (L)
	2	
	1	
	0	
4	7	0
	6	0
	5	0
	4	0
	3	B Gain (H)
	2	
	1	
	0	
5	7	0
	6	0
	5	0
	4	0
	3	B Gain (L)
	2	
	1	
	0	

Byte	Bit	Comments
6	7	0
	6	0
	5	0
	4	0
	3	WB Mode
	2	
	1	
	0	
7	7	0
	6	0
	5	0
	4	0
	3	Aperture Gain
	2	
	1	
	0	
8	7	0
	6	0
	5	0
	4	Exposure Mode
	3	
	2	
	1	
	0	
9	7	0
	6	0
	5	High-Resolution 1: On 0: Off
	4	Wide-D (1: Other than Off, 0: Off)
	3	0
	2	Back Light 1: On 0: Off
	1	Exposure Comp. 1: On 0: Off
	0	Slow Shutter 1: Auto 0: Manual
10	7	0
	6	0
	5	0
	4	Shutter Position
	3	
	2	
	1	
	0	
11	7	0
	6	0
	5	0
	4	Iris Position
	3	
	2	
	1	
	0	

Byte	Bit	Comments
12	7	0
	6	0
	5	0
	4	0
	3	Gain Position
	2	
	1	
	0	
13	7	0
	6	0
	5	0
	4	Bright Position
	3	
	2	
	1	
	0	
14	7	0
	6	0
	5	0
	4	0
	3	Exposure Comp. Position
	2	
	1	
	0	
15	7	1 Terminator (FFh)
	6	1
	5	1
	4	1
	3	1
	2	1
	1	1
	0	1

Other Inquiry Commands ..... Command Packet 8x 09 7E 7E 02 FF

Byte	Bit	Comments
0	7	Destination Address
	6	
	5	
	4	
	3	Source Address
	2	
	1	
	0	
1	7	0 Completion Message (50h)
	6	1
	5	0
	4	1
	3	0
	2	0
	1	0
	0	0
2	7	0
	6	0
	5	0
	4	0
	3	0
	2	Auto ICR 1: On 0: Off
	1	0
	0	Power 1: On 0: Off
3	7	0
	6	0
	5	0
	4	ICR 1: On 0: Off
	3	0
	2	0
	1	0
	0	0
4	7	0
	6	0
	5	0
	4	Inconsistent
	3	Inconsistent
	2	Inconsistent
	1	0
	0	0
5	7	0
	6	0
	5	0
	4	0
	3	Picture Effect Mode
	2	
	1	
	0	

Byte	Bit	Comments
6	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
7	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
8	7	0
	6	0
	5	0
	4	0
	3	Camera ID (HH)
	2	
	1	
	0	
9	7	0
	6	0
	5	0
	4	0
	3	Camera ID (HL)
	2	
	1	
	0	
10	7	0
	6	0
	5	0
	4	0
	3	Camera ID (LH)
	2	
	1	
	0	
11	7	0
	6	0
	5	0
	4	0
	3	Camera ID (LL)
	2	
	1	
	0	

Byte	Bit	Comments
12	7	0
	6	0
	5	0
	4	1
	3	0
	2	1
	1	0
	0	1: 1/50, 1/25 0: 1/60, 1/30
13	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
14	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
15	7	1 Terminator (FFh)
	6	1
	5	1
	4	1
	3	1
	2	1
	1	1
	0	1

Enlargement Function1 Query Command..... Command Packet 8x 09 7E 7E 03 FF

Byte	Bit	Comments
0	7	Destination Address
	6	
	5	
	4	
	3	Source Address
	2	
	1	
	0	
1	7	0 Completion Message (50h)
	6	1
	5	0
	4	1
	3	0
	2	0
	1	0
	0	0
2	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
3	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
4	7	0
	6	0
	5	0
	4	0
	3	AF Activation Time (H)
	2	
	1	
	0	
5	7	0
	6	0
	5	0
	4	0
	3	AF Activation Time (L)
	2	
	1	
	0	

Byte	Bit	Comments
6	7	0
	6	0
	5	0
	4	0
	3	AF Interval Time (H)
	2	
	1	
	0	
7	7	0
	6	0
	5	0
	4	0
	3	AF Interval Time (L)
	2	
	1	
	0	
8	7	0
	6	0
	5	0
	4	0
	3	1
	2	0
	1	0
	0	0
9	7	0
	6	0
	5	0
	4	0
	3	1
	2	0
	1	0
	0	0
10	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0

Byte	Bit	Comments
11	7	0
	6	Color Gain (0h (60%) to Eh (200%))
	5	
	4	
	3	
	2	1
	1	1
	0	1
12	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	1
13	7	0
	6	Gamma
	5	
	4	
	3	High Sensitivity mode (1: ON, 0: OFF)
	2	NR Level
	1	
	0	
14	7	0
	6	Chroma Suppress
	5	
	4	
	3	AE Gain Limit
	2	
	1	
	0	
15	7	1 Terminator (FFh)
	6	1
	5	1
	4	1
	3	1
	2	1
	1	1
	0	1

Enlargement Function2 Query Command..... Command Packet 8x 09 7E 7E 04 FF

Byte	Bit	Comments
0	7	Destination Address
	6	
	5	
	4	
	3	Source Address
	2	
	1	
	0	
1	7	0 Completion Message (50h)
	6	1
	5	0
	4	1
	3	0
	2	0
	1	0
	0	0
2	7	0
	6	0
	5	0
	4	0
	3	0
	2	WideD mode (0: OFF, 1: ON, 2: Auto ON/OFF, 3: ON (RatioFIx), 4: ON (Dver))
	1	
	0	
3	7	0
	6	0
	5	0
	4	0
	3	WideD screen display 0: Combined image 2: Long-time 3: Short-time
	2	
	1	WideD detection sensitivity 0: L 1: M 2: H
	0	
4	7	0
	6	0
	5	0
	4	0
	3	WideD blocked-up shadow correction level 0: L 1: M 2: H 3: S
	2	
	1	WideD blown-out highlight correction level 0: L 1: M 2: H
	0	
5	7	0
	6	0
	5	0
	4	0
	3	WideD short exposure Exposure ratio (H)
	2	
	1	
	0	

Byte	Bit	Comments
6	7	0
	6	0
	5	0
	4	0
	3	WideD short exposure Exposure ratio (L)
	2	
	1	
	0	
7	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
8	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
9	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
10	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0

Byte	Bit	Comments
11	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
12	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
13	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
14	7	0
	6	0
	5	0
	4	0
	3	0
	2	0
	1	0
	0	0
15	7	1 Terminator (FFh)
	6	1
	5	1
	4	1
	3	1
	2	1
	1	1
	0	1

Enlargement Function3 Query Command..... Command Packet 8x 09 7E 7E 05 FF

Byte	Bit	Comments
0	7	Destination Address
	6	
	5	
	4	
	3	Source Address
	2	
	1	
	0	
1	7	0 Completion Message (50h)
	6	1
	5	0
	4	1
	3	0
	2	0
	1	0
	0	0
2	7	0
	6	0
	5	0
	4	0
	3	Color Hue (0h(– 14 degrees) to Eh(+ 14 degrees))
	2	
	1	
	0	
3	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
4	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
5	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
6	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
7	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
8	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
9	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
10	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
11	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
12	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
13	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
14	7	0
	6	Reserved
	5	
	4	
	3	
	2	
	1	
	0	
15	7	1 Terminator (FFh)
	6	1
	5	1
	4	1
	3	1
	2	1
	1	1
	0	1

VISCA Command Setting Values

Exposure control (1/2)

		60/30 mode	50/25 mode
Shutter Speed	15	1/10000	1/10000
	14	1/6000	1/6000
	13	1/4000	1/3500
	12	1/3000	1/2500
	11	1/2000	1/1750
	10	1/1500	1/1250
	0F	1/1000	1/1000
	0E	1/725	1/600
	0D	1/500	1/425
	0C	1/350	1/300
	0B	1/250	1/215
	0A	1/180	1/150
	09	1/125	1/120
	08	1/100	1/100
	07	1/90	1/75
	06	1/60	1/50
	05	1/30	1/25
	04	1/15	1/12
	03	1/8	1/6
	02	1/4	1/3
	01	1/2	1/2
	00	1/1	1/1
Iris	11	F1.6	
	10	F2	
	0F	F2.4	
	0E	F2.8	
	0D	F3.4	
	0C	F4	
	0B	F4.8	
	0A	F5.6	
	09	F6.8	
	08	F8	
	07	F9.6	
	06	F11	
	05	F14	
	00	CLOSE	

Gain	0F	+28 dB
	0E	+26 dB
	0D	+24 dB
	0C	+22 dB
	0B	+20 dB
	0A	+18 dB
	09	+16 dB
	08	+14 dB
	07	+12 dB
	06	+10 dB
	05	+8 dB
	04	+6 dB
	03	+4 dB
	02	+2 dB
	01	0 dB
	00	−3 dB
Gain Limit	0F	+28 dB
	0E	+26 dB
	0D	+24 dB
	0C	+22 dB
	0B	+20 dB
	0A	+18 dB
	09	+16 dB
	08	+14 dB
	07	+12 dB
	06	+10 dB
	05	+8 dB
	04	+6 dB

Exposure control (2/2)

		IRIS	GAIN
Bright	1F	F1.6	+28 dB
	1E	F1.6	+26 dB
	1D	F1.6	+24 dB
	1C	F1.6	+22 dB
	1B	F1.6	+20 dB
	1A	F1.6	+18 dB
	19	F1.6	+16 dB
	18	F1.6	+14 dB
	17	F1.6	+12 dB
	16	F1.6	+10 dB
	15	F1.6	+8 dB
	14	F1.6	+6 dB
	13	F1.6	+4 dB
	12	F1.6	+2 dB
	11	F1.6	0 dB
	10	F2	0 dB
	0F	F2.4	0 dB
	0E	F2.8	0 dB
	0D	F3.4	0 dB
	0C	F4	0 dB
	0B	F4.8	0 dB
	0A	F5.6	0 dB
	09	F6.8	0 dB
	08	F8	0 dB
	07	F9.6	0 dB
	06	F11	0 dB
	05	F14	0 dB
	00	CLOSE	0 dB
Exposure Comp.	0E	+7	+10.5 dB
	0D	+6	+9 dB
	0C	+5	+7.5 dB
	0B	+4	+6 dB
	0A	+3	+4.5 dB
	09	+2	+3 dB
	08	+1	+1.5 dB
	07	0	0 dB
	06	−1	−1.5 dB
	05	−2	−3 dB
	04	−3	−4.5 dB
	03	−4	−6 dB
	02	−5	−7.5 dB
	01	−6	−9 dB
	00	−7	−10.5 dB

Zoom Ratio and Zoom Position (for reference)

Zoom Ratio ×36 Lens	Optical Zoom Positon Data
×1	0000
×2	1851
×3	22BE
×4	28F6
×5	2D45
×6	3086
×7	3320
×8	3549
×9	371E
×10	38B3
×11	3A12
×12	3B42
×13	3C47
×14	3D25
×15	3DDF
×16	3E7B
×17	3EFB
×18	3F64
×19	3FBA
×20	4000

Digital Zoom Ratio	Digital Zoom Position Data
×1	4000
×2	6000
×3	6A80
×4	7000
×5	7300
×6	7540
×7	76C0
×8	7800
×9	78C0
×10	7980
×11	7A00
×12	7AC0

Focus and Focus Distance (for reference)

Zoom Position	0000 to 4000 to 7AC0 Wide end Optical Tele end Digital Tele end	
Focus Position	1000 to F000* Far end Near end *Depending on the Focus Near Limit setting.	
Focus Near Limit	1000: Over Inf 2000: 25 m 3000: 11 m 4000: 7 m 5000: 4.9 m 6000: 3.7 m 7000: 2.9 m 8000: 2.3 m 9000: 1.85 m A000: 1.5 m B000: 1.23 m C000: 1 m D000: 30 cm (initial setting) E000: 8 cm F000: 1 cm	As the distance on the left will differ due to temperature characteristics, etc., use as approximate values. *The lower 1 byte is fixed at 00.

Others

AF Active Time[1)]	00	to	FF
AF Interval Time[1)]	00	to	FF
R Gain	00	to	FF
B Gain	00	to	FF
Aperture Level	00	to	0F
NR Level	00	to	05
AutoICR ON → OFF Threshold Level	00	to	1C
Chroma Suppress setting level	00	to	03
Color Gain setting level	00	to	0E
Color Hue setting level	00	to	0E

[1)] Unit: One second

Pan/Tilt Status Code List

P	Q	R	S	
- - - -	- - - -	0 - - -	- - - 1	A Pan movement all the way to the left
- - - -	- - - -	0 - - -	- - 1 -	A Pan movement all the way to the right
- - - -	- - - -	0 - - -	- 1 - -	A Tilt movement all the way up
- - - -	- - - -	0 - - -	1 - - -	A Tilt movement all the way down
- - - -	- - - -	- - 0 0	- - - -	Pan movement is correct
- - - -	- - - -	- - 0 1	- - - -	Pan position cannot be detected
- - - -	- - 0 0	0 - - -	- - - -	The Tilt movement is correct
- - - -	- - 0 1	0 - - -	- - - -	The Tilt position cannot be detected
- - - -	0 0 - -	0 - - -	- - - -	No movement instructions
- - - -	0 1 - -	0 - - -	- - - -	In the midst of a Pan/Tilt
- - - -	1 0 - -	0 - - -	- - - -	Pan/Tilt completed
- - - -	1 1 - -	0 - - -	- - - -	Pan/Tilt failed
- - 0 0	- - - -	0 - - -	- - - -	Not initialized
- - 0 1	- - - -	0 - - -	- - - -	Initializing
- - 1 0	- - - -	0 - - -	- - - -	Initialization completed
- - 1 1	- - - -	0 - - -	- - - -	Initialization failed

(- : optional)

Pan/Tilt Position (for reference)

	Parameter (position)
PAN	E1E5 (–170 degree) to 1E1B (+170 degree)
TILT	FC75 (–20 degree) to 0FF0 (+90 degree) (IMAGE FLIP: OFF) F010 (–90 degree) to 038B (+20 degree) (IMAGE FLIP: ON)

LED Status

Status			POWER (Green)	STANDBY (Orange)
Main power ON	**Power On** (including initializing period)		On	Off
		When receiving infrared signals form Remote Commander	Blinking	Off
		At position detection error	On	Blinking
	Standby status Power off by VISCA or the Remote Commander		Off	On
Main power Off			Off	Off
Initialization error	Pan/tilt error		Blinking	Blinking
	Internal error(LSI, etc.)		Blinking alternately	
BOTTOM switch and SYSTEM SELECT switch	Setting error (Example: when the SYSTEM SELECT switch is set to positions “4 - 6” or “C - F” for the EVI-H100V, or positions “5 - 6” or “D - F” for the EVI-H100S.)		On	On
Cooling fan malfunction (camera images still output)			Blinking alternately (slow)	