

Panasonic
Network Camera
Technical Notes

CGI Specifications
for Simultaneous MPEG-4and JPEG Camera series
Ver. 3.51

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Panasonic Communications Co., Ltd.

Version History

Ver.	Revision	Date
3.12	First version	3.27.2007
3.13	Added commands and parameters for HCM581/580	6. 12.2007
3.20	Added commands and parameters for the new firmware "ver 3.20".	10.22.2007
3.30	Added commands and parameters for HCM527	4.7.2008
3.50	Added commands and parameters for the new firmware "ver 3.50".	6.13.2008
3.51	Added commands and parameters for the new firmware "ver 3.51".	10.31.2008

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1. NOTICE

This document describes the specifications of the new CGI common interface for Panasonic Network Cameras. Also included is a sample program for including live images from a Panasonic Network Camera on a web page.

By sending the CGI commands described in this document to the built-in web server contained in a Panasonic Network Camera, you can program and control the various features provided by the Network Camera. Please refer to this document when including live images from your Network Camera on your web page or when you need to process information from the Network Camera using your own program.

2. NOTES

In no event shall Panasonic make any kind of warranty or representation and be responsible for any expenses, damages or loss incurred using this information.

This information may be changed or updated without notice.

Sample programs included in this document are for reference only. Panasonic cannot provide support regarding the programs described in this document. This document is provided for use by people who are familiar with HTML.

The information in this document is written for use with the following Panasonic Network Cameras:

[Cgii/fVer:3.10]

BL-C111/C131 (firmware Ver 3.10 or later)

[Cgii/fVer:3.11]

BB-HCM515 (firmware Ver 3.11 or later)

[Cgii/fVer:3.12]

BB-HCM511, BB-HCM531 (firmware Ver 3.12 or later)

[Cgii/fVer:3.13]

BB-HCM581/580 (firmware Ver 3.13 or later)

[Cgii/fVer:3.20]

The new firmware "Ver 3.20" for BB-HCM511, 531, 581, 580 (firmware Ver 3.20 or later)

[Cgii/fVer:3.30]

BB-HCM527 (firmware Ver 3.30 or later)

[Cgii/fVer:3.50]

BL-C140, 160

The new firmware "Ver 3.50" for BL-C111, 131 (firmware Ver 3.50 or later)

[Cgii/fVer:3.51]

BB-HCM547

The new firmware "Ver 3.51" for BB-HCM511, 531, 581, 580 (firmware Ver 3.51 or later)

(Cgii/fVer: New Camera CGI interface version)

Access by general users to certain parameters described in this document is prohibited based on the access privileges assigned to each general user by the administrator. General users that are allowed to access these parameters are noted throughout this document.

- **All parameters are set to the factory default settings at the time of shipment.**
- **In most situations, the current settings/values contained in the camera will be effective in the event you do not set one of the parameters when using the CGI commands.**

For this reason, please set all parameters of the command whenever possible.

The camera will automatically determine which parameters are needed for each command, therefore there is no need to set unused/unavailable parameters. Certain commands have parameters that must be set at the time the command is set; an error will be returned if you do not set one of these required parameters.

- If command parameters are sent to the cameras that are not supported by your camera model, those parameters will be ignored and only the supported parameters will be set.
- When the value for a command parameter is changed, the value shown on the corresponding camera web setting screen will change also.
- If you mistakenly set the same parameter more than once, the first setting will take effect. Example:
Get?Func=PresetName&Kind=2&Kind=1----- Kind=2 is the effective setting
- The character code used for setting text items (such as camera name, preset position name, etc.) is determined by the character code used by the system that is sending the command to the camera. For this reason, it is possible that the text sent to the camera with the Set command will not be displayed correctly when viewing the corresponding camera web setting screen. When sending commands to the camera, we recommend using a system that uses the same character code that will be used when viewing the camera's web pages.
Similarly, it is possible that text originally set using the camera's web setting screen will not be displayed correctly when retrieving it from the camera with the Get command. When retrieving commands from the camera, we recommend using a system that uses the same character code that was used to set the camera using the camera's web setting screen.
- The Set command must be sent by a user with administrator authorization (exceptions are listed below). The Get command must be sent by a user who has administrator privileges (Retrieving the camera name or time has not restrictions; other exceptions are listed below).

Exceptions:

Get?Func=Playback&Kind=n

This can also be used to retrieve the number of buffered images by general users authorized to retrieve the number of buffered images.

- You need HTTP BASIC authentication, if you access authentication page. You should install BASIC authentication on your system.
- Please send UserAgent when you access the camera from the HTTP client.
- Please insert the slash in the forefront of command when you access the camera from the HTTP client.
Example: /nphMotionJpeg?Resolution=320x240&Quality=Standard
- For access authorization for Set, Get, and other commands, refer to the chart on the next page.

2.1 Setting items/Access authorization

No.	Item	Set	Get
3.1.1	Camera name	Administrator	ALL
3.1.2	White balance	Administrator and general users authorized to control white balance	Administrator and general users authorized to control white balance
3.1.3	Return specified position	Administrator	Administrator
3.1.4	Return specified position for 20 Camera Position(BB-HCM models)	Administrator	Administrator
3.2	Clock	Administrator	ALL
3.3	Administrator setting	Administrator	---
3.4	Transfer buffered image	Administrator	Administrator
3.5.1	Preset Setting	Administrator	Administrator and general users authorized to access Preset control
3.5.2	Preset Setting for 20 Camera Position (BB-HCM models)	Administrator	Administrator and general users authorized to access Preset control
3.6	Restart	Administrator	---
3.7.1	Pan		
	When "Kind" is set to 0 (General user authorization)	0: Administrator and general users authorized to control Pan/Tilt	---
	When "Kind" is set to 1 (Administrator)	Administrator	Administrator
3.7.2	Tilt		
	When "Kind" is set to 0 (General user authorization)	0: Administrator and general users authorized to control Pan/Tilt	---
	When "Kind" is set to 1 (Administrator)	Administrator	Administrator
3.7.3	Zoom (BB-HCM581/580,527,547)		
	When "Kind" is set to 0 (General user authorization)	0: Administrator and general users authorized to control Zoom	---
	When "Kind" is set to 1 (Administrator)	Administrator	---
3.7.4	Focus (BB-HCM581/580)		
	When "Kind" is set to 0 (General user authorization)	0: Administrator and general users authorized to control Focus	---
	When "Kind" is set to 1 (Administrator)	Administrator	Administrator and general users authorized to control Focus

No.	Item	Set	Get
3.8	Privacy Mode (BL-C111/C131)	Administrator	ALL
3.9	Network setting	Administrator	Administrator
3.10	Camera model information	---	ALL
3.11	General user setting	Administrator	Administrator
3.17	Delete buffered image	Administrator	---
3.18	Wireless connection status(BL-C131)	---	Administrator
3.19	Number of buffered images	---	Administrator and general users authorized to access buffered images
3.20	Sensor detection	---	Administrator
3.21	AC Power source frequency	Administrator	Administrator
3.22	Reset to factory default settings	Administrator	---
3.23	Limit Continuous Motion JPEG	---	Administrator and general users authorized to set Image refresh interval (BB-HCM models, BL-C111/C131/C140/C160: General users authorized to set Image refresh interval)
3.24	NTP server	Administrator	Administrator
3.27	Audio control	Administrator	Administrator
3.28	IPv6 Network Setting	Administrator	Administrator
3.29	Daylight saving time	Administrator	ALL
3.30	Color night vision	Administrator	Administrator
3.31.1	Preset Control	Administrator and general users authorized to access Preset control	---
3.31.2	Preset Control for 20 Camera Position (BB-HCM models)	Administrator and general users authorized to access Preset control	---
3.32	Digital output (BB-HCM models)	Administrator and general users authorized to control digital output	Administrator and general users authorized to control digital output (BB-HCM models)
3.33	Image time stamp	Administrator	Administrator
3.36	Alarm log Setting	Administrator	Administrator
3.37	Motion Detection Setting	Administrator	Administrator
3.38	UPnP Setting	Administrator	Administrator
3.39	Banner Setting	Administrator	Administrator
3.40	DDNS Setting	Administrator	Administrator
3.41	Retrieving UPnP Status	---	Administrator
3.42	Retrieving Error Log Information	---	Administrator
3.43	Indicator Setting	Administrator	Administrator
3.44	Video Streaming Setting	Administrator	Administrator and general users authorized to retrieve motion images
3.45	Proxy Setting	Administrator	Administrator
3.46	Backlight/Gray Level Correction Setting (BB-HCM515,527,547)	Administrator and general users authorized to control camera's backlight/gray level	Administrator and general users authorized to control camera's backlight/gray level
3.47	Overlay Setting	Administrator	Administrator

3.48	Support Image Resolution Retrieving	---	ALL
3.51	Retrieving total number of frames and image type for buffered images	---	Administrator and general users authorized to access buffered images
3.52	Retrieving SD memory card status information	---	Administrator
3.53	Retrieving Buffering image file information	---	Administrator and general users authorized to access buffered images
3.54	Set Cgi Detection of Buffer/Transfer image	Administrator	---
3.55	SD memory card formatting	Administrator	---
3.56	Light setting(BL-C160)	Administrator	Administrator
3.57	Brightness setting	Administrator and general users authorized to control camera's brightness level	Administrator and general users authorized to control camera's brightness level
3.58	Alarm Log retrieval	---	Administrator
3.59	Sensor sensitivity setting (BL-C111,131,160)	Administrator	Administrator
3.60	Wireless setting(BL-C131)	Administrator	Administrator
3.61	HTTPS setting (BB-HCM527,547,BL-C140,160)	Administrator	Administrator
3.62	Image Quality setting(BB-HCM515)	Administrator	Administrator
3.63	Sensor,Alarm Information retrieval	---	ALL

ALL: Administrator and all registered general users. (Includes guest users, when administrator allows guest users to access the camera.)

---: No command.

2.2 Access authorization for other features

No.	Item	Access authorization
3.12	Camera Control (nphControlCamera)	Administrator and general users authorized to access features designated by Direction parameter (Includes guest users, when administrator allows guest users to access the camera)
3.13	Retrieve motion images (nphMotionJpeg)	Administrator and general users authorized to view motion images (Includes guest users, when administrator allows guest users to access the camera)
3.14	Retrieve still images (SnapshotJPEG)	Administrator and general users authorized to view still images (Includes guest users, when administrator allows guest users to access the camera)
3.15	Retrieve motion images stored in the Network Camera buffer (nphReplayRecord)	Administrator and general users authorized to view buffered images (Includes guest users, when administrator allows guest users to access the camera)
3.16	Retrieve still images stored in the Network Camera buffer (BufferingImage)	Administrator and general users authorized to view buffered images (Includes guest users, when administrator allows guest users to access the camera)
3.25	Image display (ImageViewer)	Administrator and general users authorized to view images (All general users)(Includes guest users, when administrator allows guest users to access the camera)
3.26	Camera name and Capture Image Button display (CgiTitle)	Administrator and general users authorized to view images (Includes guest users, when administrator allows guest users to access the camera)
3.34	Audio Retrieval (nphAudio)	Administrator and general users authorized to access Audio Data (Includes guest users, when administrator allows guest users to access the camera)
3.35	Synchronized Image/Audio Retrieval (nphVideo)	Administrator and general users authorized to view camera images and access Audio Data (Includes guest users, when administrator allows guest users to access the camera)
3.49	Buffered MPEG-4 Retrieval (nphReplayAsf) (BL-C111/131/140/160,BB-HCM5xx)	Administrator and general users authorized to view buffered images (Includes guest users, when administrator allows guest users to access the camera)
3.50	Retrieve MPEG-4 (nphMpeg4) (BL-C111/131/140/160,BB-HCM5xx)	Administrator and general users authorized to view motion images (Includes guest users, when administrator allows guest users to access the camera)

2.3 The models list of command unsupported

No	feature command	Unsupported Models
3.7.3	Func=Zoom Zoom Control	except BB-HCM581/580,527,547
3.7.4	Func=Focus Focus information	except BB-HCM581/580
3.8	Func=Powerdown Privacy mode	except Privacy mode Supported Camera
3.18	Func=Wireless wireless radio wave condition	except BL-C131
3.32	Func=Doutput Digital output	BL-C111/C131/C140/C160
3.46	Func=BackLight Backlight/Gray Level Correction	BL-C111/C131
3.56	Func=Illumination Light setting	except BL-C160
3.59	Func=SSensitivity Sensor sensitivity setting	except BL-C111,131,160
3.60	Func=WirelessSet Wireless setting	except BL-C131
3.61	Func=HTTPS HTTPS setting	except BB-HCM527,547,BL-C140,160
3.62	Func=MegaQuality Image Quality setting	except BB-HCM515

Note: Other commands have the parameter that doesn't correspond depending on the model.

Please refer to the explanation of each command for details.

2.4 Difference with Ver.1.06 command for past camera

No.	Item	Contents
---	Version of Cgii/fVer	
	Version No. grant method is modified.	Until recently, to CGI command (Ver.1.06) of the camera, differs from the version of the firmware and becomes independent the version No. which It had granted, but with new Simultaneous MPEG-4 and JPEG Camera, as for version of CGI command, the same version as the firmware No. It grants that way.
3.4	Buffer/transfer image	Set/Get?Func=ImageTransfer
	Addition of Image format (OutFormat parameter)	Because MPEG-4 was added to the Image format, Image format selection was added.
	Setting of resolution (PResolution parameter)	With new Simultaneous MPEG-4 and JPEG Camera, there is no setting of the resolution of 2:160x120. Therefore until recently , as for resolution it was set to 160x120 with 'PResolution=2' ,but in the new Simultaneous MPEG-4 and JPEG Camera, as for resolution it is set to 192x144 with 'PResolution=2'.
	Adding HTTP transfer (TMode=1024) to Buffer/transfer method (TMode parameter)	HTTP transfer can do with new Simultaneous MPEG-4 and JPEG Camera.
	HTTP notification (MMode=128) setting	Until recently, separately from the setting with of camera similar HTTP notification URL (MHttpUrl parameter), host name (MHttpHost) and port number (MHttpPort) and with file pass (MFileName) the setting it is possible.
3.9	Network(IPv4)	Set/Get?Func=Network
	Allow access from the Internet(Open parameter)	Until recently, in the camera as for Open parameter only at the time of network automatic setting it was the parameter which can be set, but it can set with new Simultaneous MPEG-4 and JPEG Camera, with all connected modes.
3.10	camera model information	Get?Func=Model
	Modification of PTZF value of Function	Until recently, 01:with Pan/Tilt,07: with Pan/Tilt/Zoom/Focus. In new Simultaneous MPEG-4 and JPEG Camera, 19: with Pan/Tilt, 1f: with Pan/Tilt/Zoom/Focus.
3.11	User Information	Set/Get?Func=User
	User level (ULevel parameter) addition of specification	In case of the new register, with new Simultaneous MPEG-4 and JPEG Camera, when ULevel set to "0", the setting classified by feature of access level can do. Because with BB-HCM5xx it is ULevel=0 with default, when there is no appointment of ULevel, the specification classified by feature becomes effective, with BL-C111/C131/C140/C160 when there is no appointment of ULevel, all being feature effective, as ULevel=3 access level is set.
	White balance operation feature access (UWBCont parameter) addition of setting	Until recently, in the camera it could not set white balance operation feature access level, but setting of white balance operation feature access level can do with new Simultaneous MPEG-4 and JPEG Camera.
	Access level parameter acquisition change (FuncMode parameter) addition	Whether with new Simultaneous MPEG-4 and JPEG Camera, you acquire ULevel, or acquire the access level of classified by each feature, it can select with FuncMode parameter.
3.13	MotionJPEG retrieval	nphMotionJpeg
	Resolution (Resolution parameter) addition of specification	In new Simultaneous MPEG-4 and JPEG Camera, resolution 160x120 does not exist. When Resolution=160x120 it is set, it sets resolution to 192x144. In addition only in case of the resolution 1280x1024 corresponding type it can set to also resolution 1280x1024 with new Simultaneous MPEG-4 and

		JPEG Camera.
3.14	SnapshotJPEG retrieval	SnapshotJPEG
	Resolution (Resolution parameter) addition of specification	In new Simultaneous MPEG-4 and JPEG Camera, resolution 160x120 does not exist. When Resolution=160x120 it is set, it sets resolution to 192x144. In addition only in case of the resolution 1280x1024 corresponding type it can set to also resolution 1280x1024 with new Simultaneous MPEG-4 and JPEG Camera.
3.23	Limit Continuous Motion JPEG	Set/Get?Func=TopView
	Limit Continuous Motion JPEG	With new Simultaneous MPEG-4 and JPEG Camera, Unsupported Setting mode. It's processed by the general user setting. The function of limiting Continuous Motion JPEG is setting in the each general user setting by new Simultaneous MPEG-4 and JPEG Camera.
3.25	Image display	ImageViewer
	Resolution (Resolution parameter) addition of specification	In new Simultaneous MPEG-4 and JPEG Camera, resolution 160x120 does not exist. When Resolution=160x120 it is set, it sets resolution to 192x144. In addition only in case of the resolution 1280x1024 corresponding type it can set to also resolution 1280x1024 with new Simultaneous MPEG-4 and JPEG Camera.
	Image mode (Mode parameter) addition of value	With new Simultaneous MPEG-4 and JPEG Camera, the value which corresponds to MPEG-4 output attendant upon MPEG-4 correspondence has been added.
3.26	Display the camera name	CgiTitle
	Resolution (Resolution parameter) addition of specification	In new Simultaneous MPEG-4 and JPEG Camera, resolution 160x120 does not exist. When Resolution=160x120 it is set, it sets resolution to 192x144. In addition only in case of the resolution 1280x1024 corresponding type it can set to also resolution 1280x1024 with new Simultaneous MPEG-4 and JPEG Camera.
3.32	Digital output	Get?Func=Doutput
	Supported Getting mode	The function of getting Digital output is supported by new Simultaneous MPEG-4 and JPEG Camera.
3.35	Synchronized Image/Audio	nphVideo
	Resolution (Resolution parameter) addition of specification	In new Simultaneous MPEG-4 and JPEG Camera, resolution 160x120 does not exist. When Resolution=160x120 it is set, it sets resolution to 192x144. In addition only in case of the resolution 1280x1024 corresponding type it can set to also resolution 1280x1024 with new Simultaneous MPEG-4 and JPEG Camera.
3.36	Vertical resolution	Set/Get?Func=OddMode
	Unsupported Vertical resolution	In new Simultaneous MPEG-4 and JPEG Camera, Unsupported Vertical resolution Setting and Getting mode. As for new Simultaneous MPEG-4 and JPEG Camera, because of progressive system in principle there is no flicker. Therefore, as for vertical resolution change because there is no necessity, it has deleted. Get/Set? Func=OddMode... together return value Return: -17 it becomes.
3.41	DDNS	Set/Get?Func=DDNS
	Viewnetcam (Type=1) additional setting item when selecting	With new Simultaneous MPEG-4 and JPEG Camera, at the time of Viewnetcam selection Updating time (UpdateTime parameter) setting became addition.

2.5 Command added compared with Ver.1.06 command of past camera

No.	Added Command	
3.44	Set/Get?Func=VDelivery	Video Streaming setting ,retrieval
3.45	Set/Get?Func=Proxy	Proxy setting ,retrieval
3.46	Set/Get?Func=BackLight	Backlight/Gray Level Correction setting,retrieval
3.47	set/Get?Func=Overlay	Overlay setting ,retrieval
3.48	Get?Func=ImageResolution	Support Image Resolution
3.49	nphReplayAsf	Buffered MPEG-4 retrieval
3.50	nphMpeg4	Real time MPEG-4 retrieval
3.51	Get?Func=ImageNum	Retrieving total number of frames and image type for buffered images
3.52	Get?Func=SdInfo	Retrieving SD status information
3.53	Get?Func=SdFile	Retrieving Buffering image file information
3.54	Set?Func=SoftTrigger	Set Cgi Detection of Buffer/Transfer image
3.55	Set?Func=SDFormat	SD memory card formatting
3.56	Set/Get?Func=Illumination	Light setting ,retrieval
3.57	Set/Get?Func=Bright	Brightness setting ,retrieval
3.58	Get?Func=AlarmLog	Alarm Log retrieval
3.59	Set/Get?Func=SSensitivity	Sensor Sensitivity setting ,retrieval
3.60	Set?/Get?Func=WirelessSet	Wireless setting ,retrieval
3.61	Set/Get?Func= HTTPS	HTTPS setting ,retrieval
3.62	Set/Get?Func=MegaQuality	Image Quality setting ,retrieval
3.63	Get?Func=SensorCheck	Sensor,Alarm Information retrieval

This document may be updated without prior notice.

Please access following the URL for the latest documents and sample programs.

<http://panasonic.co.jp/pcc/products/en/netwcam/>

3. COMMAND LIST

* Some commands are only for BL-C111/C131/C140/C160 models and HCM5xx models. Also, some commands have different parameters depending on the models.

Note 1: If alphanumeric characters are specified as a parameter and the command is expecting a numeric value, it may not detect an error (depending on the combination with numeric values), and a numeric value may be set. For example, if the Kind value in "Set?Func=PresetName" contains alphanumeric characters, the following values will be set.

Kind=A → The value "0" is set to Kind.

Kind=1A (The value "1" is set to Kind.

Kind=A8 (The value "0" is set to Kind.

Refer to the list of parameters for each command, and specify valid values.

3.1 Camera information setting, retrieval (Set, Get)

3.1.1 Camera information setting, retrieval (Set, Get)

Func=CameraName

Set: Set camera name.

Accessible only for administrator

Parameters	Setting
Func	CameraName (Fixed)
Kind	1 (Fixed)
Data	Camera name (one-byte characters: 1-15 characters, two-byte characters: 1-7 characters) *The following two-byte characters can be used: Hiragana, Katakana, Kanji, English alphabet, Arabic numbers, and symbols. Spaces cannot be used. *The following one-byte characters can be used: English alphabet, Arabic numbers, and symbols. The following cannot be used: [Space], ["], ['], [&], [<], [>].

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=CameraName&Kind=1&Data=NetworkCamera

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value in Supported Privacy Mode Camera Not accessible during Privacy Mode Invalid number of characters in data value	Check parameters Disable Privacy Mode Check the Data value
Return: -6	Error while writing to flash memory	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve camera name.

Accessible for administrator and all general users

(Includes guest users, when administrator allows guest users to access the camera)

Parameters	Setting
Func	CameraName (Fixed)
Kind	1 (Fixed)

Example:

```
Get?Func=CameraName&Kind=1
(Received)
HTTP/1.0 200 OK
Content-type: text/plain
Data:NetworkCamera
```

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters

* Administrator registration screen will be displayed when the unit is set to its factory default settings (administrator setting is not set).

3.1.2 Camera Home Position white balance information setting, retrieval (Set, Get) Func=CameraWB

Set: Set camera white balance.

Kind=0 Accessible for administrator and general users authorized to control white balance

Kind=1 Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	CameraWB (Fixed)
Kind	0: General user authorization to control white balance 1: administrator
Data ^{Note 1}	White balance 0: Auto, 32: Indoor, 48: Fluorescent light (white) 64: Fluorescent light (Day light), 80: Outdoor, 16: Hold

Return value:

```
HTTP/1.0 200 OK
Content-type: text/plain
Return:0 ----- 0: OK, -n: Error
```

The meaning of "-n" values returned upon error are explained below.

Example:

```
Set?Func=CameraWB&Kind=1&Data=0
```

* Camera is set and saved for Home Position White Balance Data at Kind=1.

At Kind=0, camera is only set white balance.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Invalid number of characters in data value	Check the Data value
Return: -6	Error while writing to flash memory	Retry
Return: -7	Cannot be set due to incorrect Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve camera white balance.

Kind=0 Accessible for administrator and general users authorized to control white balance

Kind=1 Accessible only for administrator

Parameters	Setting
Func	CameraWB (Fixed)
Kind	0: General user authorization to control white balance 1: administrator

Example:

Get?Func=CameraWB&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Data:0

*Retrieved Camera white balance value is current white balance value. If Camera position is preset position 5, Camera white balance set value may be different from Home position set value.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

* Administrator registration screen will be displayed when the unit is set to its factory default settings (administrator setting is not set).

*The Get command is a white balance value of the camera at the time of the transmission of the command.

3.1.3 Specified position return time, position setting, retrieve (Set,Get)

Func=CameraHT

Set: Set camera's return specified position and time.

Accessible only for administrator

Parameters	Setting
Func	CameraHT (Fixed)
Kind	1 (Fixed)
RetTime ^{Note 1}	Specified position return time 0: Do not specify 10: 10 seconds 20: 20 seconds 30: 30 seconds 60: 1 minutes 300: 5minutes 600: 10 minutes 1800: 30 minutes 3600: 1 hour (It frequently returns to a specified position automatically when setting it to a small value, and set it to a big value as much as possible, please.)
RetPos ^{Note 1}	Specified position 0: Home position 1: Preset 1, 2: Preset 2, 3: Preset 3, 4: Preset 4, 5: Preset 5, 6: Preset 6, 7: Preset 7, 8: Preset 8, 9: Sensor or Alarm 1, 10: Alarm 2

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0¥r¥n ----- 0: OK, -n: Error

Example: No mentioning of the return time of specified position, specified position: Home position.

Set?Func=CameraHT&Kind=1&RetTime=0&RetPos=0

* If the camera is not operated during the specified period, the camera turns to the specified position.

Note: If you did not set any presets, the camera cannot turn to the preset position.

When registering preset positions, set Time long enough to complete the registration process.

If Time is set too short, the camera will return to the specified position while registering preset positions.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Unsupported feature	Retry using a model supporting the feature
Return: -6	Error while writing to flash memory	Retry
Return: -7	Invalid value	Check parameters
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve camera's return position and time.

Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	CameraHT (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=CameraHT&Kind=1

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

RetTime:0¥r¥n

RetPos:0¥r¥n

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Unsupported feature	Retry using a model supporting the feature
Return: -11	Not accessed by administrator	Retry as administrator

*Administrator registration screen will be displayed when the unit is set to its factory default settings (administrator setting is not set).

Note: When Camera supported 20 Camera Position that is set from Preset 9 to Preset 20 receives

"Get?Func=CameraHT&Kind=1" , Camera's return value is "39" to "50".

Please use next command "Func=CameraReturn" for camera supported 20 camera positions.

3.1.4 Specified position return time, position setting, retrieve (Set,Get) for 20 Camera Position

Func=CameraReturn

(BB-HCM models)

Set: Set camera's return specified position and time.

Accessible only for administrator

Parameters	Setting
Func	CameraReturn (Fixed)
Kind	1 (Fixed)
RetTime ^{Note 1}	<p>Specified position return time</p> <p>0: Do not specify 10: 10 seconds 20: 20 seconds 30: 30 seconds 60: 1 minutes 300: 5minutes 600: 10 minutes 1800: 30 minutes 3600: 1 hour</p> <p>(It frequently returns to a specified position automatically when setting it to a small value, and set it to a big value as much as possible, please.)</p>
RetPos ^{Note 1}	<p>Specified position</p> <p>0: Home position 1: Preset 1, 2: Preset 2, 3: Preset 3, 4: Preset 4, 5: Preset 5, 6: Preset 6, 7: Preset 7, 8: Preset 8, 9: Preset 9, 10: Preset 10, 11: Preset 11, 12: Preset 12, 13: Preset13, 14: Preset14, 15: Preset 15, 16: Preset 16, 17: Preset 17, 18: Preset18, 19: Preset 19, 20: Preset20, 81: Sensor or Alarm1, 82: Alarm 2</p>

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example: No mentioning of the return time of specified position, specified position: Home position.

Set?Func=CameraReturn&Kind=1&RetTime=0&RetPos=0

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -6	Error while writing to flash memory	Retry
Return: -7	Invalid value	Check parameters
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Note:

- No supported 20 Camera Position Camera cannot set Preset 9 to Preset20 for "RetPos" .
- No supported Alarm 2 Camera cannot set "82(Alarm2)" for "RetPos" .

Get: Retrieve camera's return position and time.

Accessible only for administrator

Parameters	Setting
Func	CameraReturn (Fixed)
Kind	1 (Fixed)

Example:

```
Get?Func=CameraReturn&Kind=1
(Return)
HTTP/1.0 200 OK
Content-type: text/plain
RetTime:0
RetPos:0
```

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

* Administrator registration screen will be displayed when the unit is set to its factory default settings (administrator setting is not set).

3.2 Clock setting, retrieval (Set, Get)

Func=Date

Set: Set clock.

Accessible only for administrator

Parameters	Setting
Func	Date (Fixed)
Kind	1 (Fixed)
Data	yyyymmddHHii (Ex: 200701110900)

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=Date&Kind=1&Data=200701110900

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Invalid number of characters in data value	Check the Data value
Return: -7	Cannot be set due to incorrect Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve clock time.

Accessible for administrator and all general users

(Includes guest users, when administrator allows guest users to access the camera)

Parameters	Setting
Func	Date (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Date&Kind=1

(Received)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Data:200405134163012587¥r¥n ----- Retrieved data is in the following format: yyyymmddwHHiissxxx (Time is retrieved up to "mSec")

Description of retrieved data:

yyyy: Year (Example: 2004)

mm: Month (Example: 05) [May]

dd: Day of month (Example: 13)

w: Day of week (Example: 4) [Thursday]

w: 0 (Sun), 1: (Mon), 2: (Tue), 3: (Wed), 4: (Thu), 5: (Fri), 6: (Sat)

HH: Hour (Example: 16)

ii: Minute (Example: 30)

ss: Second (Example: 12)

xxx: Milliseconds (Example: 587)

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters

- * Administrator registration screen will be displayed when the unit is set to its factory default settings (administrator setting is not complete).

3.3 Administrator information setting (Set)

Func=Admin

Set: Set administrator information.

Accessible only for administrator after completing administrator settings.

Parameters	Setting
Func	Admin (Fixed)
Kind	1 (Fixed)
Mode ^{Note 1}	Authorization setting. 1: Allow guest users, 3: Do not allow guest users 2: Allow guest users (mobile only),
ID	Administrator ID (6-15 characters) *Only one-byte characters can be used. The following cannot be used: [Space], ["], ['], [&], [<], [>], [:].
Pass	Administrator password (6-15 characters) *Only one-byte characters can be used. The following cannot be used: [Space], ["], ['], [&], [<], [>], [:].

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=Admin&Kind=1&Mode=3&ID=camera&Pass=camera1

When camera is in factory default state and administrator ID and password are not set, only this Set command can be used.

When camera is in factory default state, if set command can be used, network setting becomes automatic setting.

To maintain security, administrator information cannot be retrieved (Get).

Note: If you set Mode=2 [Permit access from guest users (mobile only)], an authentication window is not displayed even if you access the cell phone page. All guest users can view images without a user name and password.

Upon error:

(Factory default)

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No ID, password parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	More than 15 characters are entered for ID or password	Check ID, password
Return: -6	Error while writing to flash memory	Retry
Return: -7	Less than 6 characters are entered for ID or password	Check ID, password
	Invalid Mode value	Check the Mode value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -21	This User ID already used	Check ID
Return: -22	User ID not registered	Check ID

3.4 Buffer/transfer image setting, retrieval (Set, Get)

Func=ImageTransfer

- 5 triggers can be set for buffering/transferring images.
- Image transfer can be initiated by sensor and by timer.
- You can set 5 Kind parameters (triggers).
- For each "Kind", select one "TCondition" (timer or sensor/alarm or motion detection or cgi detection), set a common timer/sensor/motion detection/cgi detection operating date and time, and set the details for the image to be recorded (camera position, image resolution and quality, etc.). In addition, the image recording interval (before and after sensor or motion detection or cgi detection, if using the sensor or motion detection or cgi detection) and the total number of images to be recorded can be specified. When setting a timer, the recording interval can be specified, as well as the Buffer/Transfer method (TMode) which determines whether recorded images are saved or not saved in memory, are transferred by FTP, or are transferred by E-mail.
- When setting FTP transfer, set FTP-related settings such as FTP server settings.
- When setting E-mail transfer, set E-mail-related settings such as E-mail server settings.
- When setting E-mail notification (MMode) for image buffer/save, set E-mail-related settings such as E-mail server settings.

Set: Set image buffer/transfer.

Accessible only for administrator

Parameters	Setting
Func	ImageTransfer (Fixed)
Kind	Buffer/transfer trigger number: 1-5
TaskEnable (*1) ^{Note 1}	Setting enable/disable. 1: Enable, 0: Disable
TCondition (*1) ^{Note 1}	Condition (trigger type)
	BL-C111/C131/C140/C160
	BB-HCM models
	1: Sensor(except C140), 2: Timer 4: Motion detection 7: Cgi detection(from Cgii/fVer:3.20) (Command "Set?Func=SoftTrigger..." Operation is started to a trigger.)
Trigger (for Alarm) (*2) ^{Note 1}	Detected signal 2: Start (Open), 3: End (Short)
Week ^{Note 1}	Day setting Set the desired days of the week by adding the numbers as shown below. 1: Sun, 2: Mon, 4: Tue, 8: Wed, 16: Thu, 32: Fri, 64: Sat (Example) 127: Set for every day (1+2+4+8+16+32+64 = 127) 65: Set for Sun and Sat only (1+64 = 65) 42: Set for Mon, Wed, and Fri (2+8+32 = 42)
TimeMode ^{Note 1}	Operating time. 1: Always, 0: Specified time Note: If this parameter is not specified, "Always" will be selected.
Start	Start time (24-hour time format) (Example: 0000) Note: If this parameter is not specified, it will be automatically set to "0000"
Stop	Stop time (24-hour time format) (Example: 2359) Note: If this parameter is not specified, it will be automatically set to "2359"
OutFormat	Image format setting for buffering / transferring 0:MPEG-4 1:JPEG
Position (for Sensor, Alarm trigger) (*1) ^{Note 1}	Sensor position (for Sensor, Alarm trigger) If not specified, the last position is used. Support 20 camera positions (BB-HCM models) 9:Sensor position , 0,255:None 30:Home position, 1,31:Preset 1, 2,32:Preset 2, 3,33:Preset3, 4,34:Preset4, 5,35:preset5 6,36:Preset 6, 7,37:Preset 7, 8,38:Preset 8, 39:Preset 9, 40:Preset 10 41:Preset 11, 42:Preset 12, 43:Preset 13, 44:Preset14, 45:Preset 15 46:Preset 16, 47:Preset 17, 48:Preset 18, 49:Preset 19, 50:Preset 20, 81:Alarm 1, 82:Alarm 2 No supported Sensor position Camera will be automatically set to "255(None)".

Position (Motion detection , Cgi detection trigger)	<p>Motion Detection, Cgi Detection position (for Motion detection , Cgi Detection trigger)</p> <p>If not specified, the last position is used.</p> <p>0:Home position, 1:Preset 1, 2:Preset 2, 3:Preset 3, 4:Preset 4, 5:Preset 5, 6:Preset 6, 7:Preset 7, 8:Preset 8, 9:Sensor or Alarm 1, 10:Alarm 2, 255:None,</p> <p>Support 20 camera positions (BB-HCM models)</p> <p>0,30:Home position, 1,31:Preset 1, 2,32:Preset 2, 3,33:Preset3, 4,34:Preset4, 5,35:preset5 6,36:Preset 6, 7,37:Preset 7, 8,38:Preset 8, 39:Preset 9, 40:Preset 10 41:Preset 11, 42:Preset 12, 43:Preset 13, 44:Preset14, 45:Preset 15 46:Preset 16, 47:Preset 17, 48:Preset 18, 49:Preset 19, 50:Preset 20, 9,81:Sensor or Alarm 1, 10,82:Alarm 2, 255:*None, No supported Sensor position Camera will be automatically set to "255(None)".</p>
PResolution (*1) ^{Note 1}	<p>Recorded image resolution</p> <p>0: 640 x 480, 1: 320 x 240, 2: 192x144, 3: 1280x1024 (Support 1280x1024 models BB-HCM515 JPEG Only)</p>
PQuality (*1) ^{Note 1}	<p>Recorded JPEG image quality</p> <p>4: Favor quality, 8: Standard, 12: Favor motion, 128: Mobile phone</p>
PreEnable (for Sensor, Alarm trigger) ^{Note 1} (for JPEG)	<p>Buffer/transfer before detection: Enable/disable (for BL-C111/C131/C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger)</p> <p>1: Enable, 0: Disable</p> <p>Note: If this parameter is not specified, the setting will be disabled.</p>
PreIntervalPer ^{Note 1} (for Sensor, Alarm trigger) (for JPEG)	<p>Unit of time used for recording interval before detection (for BL-C111/C131 /C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger)</p> <p>1000: 1 second, 60000: 1 minute</p>
PreIntervalNum ^{Note 1} (for Sensor, Alarm trigger) (for JPEG)	<p>Number of recorded images for each time unit before detection (for BL-C111 /C131/C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger)</p> <p>1-30</p>
PreNum ^{Note 1} (for Sensor, Alarm trigger) (for JPEG)	<p>Total number of recorded images before detection (for BL-C111/C131 /C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger)</p> <p>1-10,20,30,40,50,60,70,80,90, 100,200,300,400,500,600</p>
PostEnable ^{Note 1} (for Sensor, Alarm trigger) (for JPEG)	<p>Buffer/transfer after detection. Enable/disable (for BL-C111/C131/C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger)</p> <p>1: Enable, 0: Disable</p> <p>Note: If this parameter is not specified, this setting will be disabled.</p>
PostIntervalPer ^{Note 1} (for JPEG)	<p>Unit of time used for recording interval after detection (for BL-C111/C131 /C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger)</p> <p>1000: 1 second, 60000: 1 minute</p> <p>Unit of time used for recording interval (for Timer trigger)</p> <p>1000: 1 second, 60000: 1 minute, 3600000: 1 hour</p>
PostIntervalNum ^{Note 1} (for JPEG)	<p>Number of recorded images after detection for each time unit (for BL-C111/C131/C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger)</p> <p>1-30</p> <p>Number of recorded images for each time unit (for Timer trigger)</p> <p>1-30</p>

PostNum ^{Note 1} (for Sensor, Alarm trigger)	<p>Total number of recorded JPEG images after detection (for BL-C111/C131 /C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger) 1-10,20,30,40,50,60,70,80,90, 100,200,300,400,500,600,700,800,900, 1000,1100,1200,1300,1400,1500</p> <p>Total number of seconds for recording MPEG-4 images after detection (for BL-C111/C131/C160 Sensor trigger or BB-HCM5xx Alarm, MotionDetection trigger) The setting range is different in each recording resolution. 640x480:1--10, 320x240:1--20, 192x144:1--40</p>
IgnoreTime ^{Note 1} (for BL-C111/C131/C160 Sensor trigger, BB-HCM5xx Alarm trigger and Motion Detect trigger)	<p>During non-detection (the period of time between sensor detections) 0-600 seconds Note that one of the following values is recommend (otherwise the camera web page will not be displayed properly): 0, 10, 30, 60, 180, 300, or 600</p>
OutputTime (BB-HCM5xx models)	<p>Digital output setting with trigger or detection. 0: disable(default), 1: 1 sec --- 1800: 30 minutes , 65535: during recording</p>
TMode ^{Note 1}	<p>Buffer/transfer method 0: No Transfer, No Memory Overwrite 16: No Transfer, Memory Overwrite 32: FTP transfer 48: E-mail transfer 1024: HTTP transfer Note: for MPEG-4 SD card model: No Transfer: 0 or 16 Non SD card model: for timer mode No Transfer, No Memory Overwrite: 0 for detection mode No Transfer: 0 or 16</p>

*1: If not specified, the last setting will be retained.

Note: Refer to the camera setting screens for character limitations (maximum number, restricted characters, etc.)

When TMode is set to "32" (FTP transfer)	
FtpServer (*2)	<p>FTP server IP address or host name Note: Set using 4 numbers (0-255) each separated by a period; "0.0.0.0" and "255.255.255.255" are unavailable. When setting the host name, use 1-255 one-byte characters. The following cannot be used: [Space], ["], ['], [&], [<], [>].</p>
FtpPortNo (*2)	<p>FTP port number Note: Standard 21, 1-65535</p>
FtpLoginID	<p>Login ID Note: 0-63 one-byte characters. The following cannot be used ["]</p>
FtpPassword	<p>Password Note: 0-63 one-byte characters. The following cannot be used: ["]</p>
FtpLoginMode (*2) ^{Note 1}	<p>Login timing. 0: Every time, 64: One time</p>
FtpFileName (*2) ^{Note 1}	<p>Upload File Name Note: 1-234 one-byte characters. The following cannot be used: [Space], ["], ['], [&], [<], [>]</p>
FtpFileNameMode (*2) ^{Note 1}	<p>Overwrite setting. 0: Overwrite file, 1: Save as new file with time stamp</p>
FtpPortMode (*2) ^{Note 1}	<p>Data transfer method. 0: Passive mode, 16: Active mode</p>

*2: Required setting

Note: Refer to the camera setting screens for character limitations (maximum number, restricted characters, etc.)

When TMode is set to "48" (E-mail transfer)	
TMailServer (*2)	<p>E-mail server address or host name for sending E-mail (SMTP) Note: Set using 4 numbers (0-255) each separated by a period; "0.0.0.0" and</p>

	<p>"255.255.255.255" are unavailable.</p> <p>When setting the host name, use 1-255 one-byte characters.</p> <p>The following cannot be used: [Space], ["], ['], [&], [<], [>].</p>
TMailPort	<p>Sending E-mail (SMTP) server Port No.</p> <p>Note: Standard port number is 25.</p>
TPopServer	<p>E-mail server address or host name for receiving E-mail (POP3)</p> <p>Note: Set using 4 numbers (0-255) each separated by a period; "0.0.0.0" and "255.255.255.255" are unavailable.</p> <p>When setting the host name, use 0-255 one-byte characters.</p> <p>The following cannot be used: [Space], ["], ['], [&], [<], [>].</p>
TPopPort	<p>Receiving E-mail (POP3) server Port No.</p> <p>Note: Standard port number is 110</p>
TPopID (When Setting TPopServer, Required setting)	<p>Login ID (When you can select SMTP authentication, this is SMTP Login ID.)</p> <p>Note: 0-63 one-byte characters.</p> <p>The following cannot be used: ["]</p>
TPopPassword	<p>Password (When you can select SMTP authentication, this is SMTP Login Password.)</p> <p>Note: 0-63 one-byte characters.</p> <p>The following cannot be used: ["]</p>
TCertification	<p>Authentication You can select how to authenticate.</p> <p>0: No authentication</p> <p>1: SMTP authentication</p> <p>2: POP before SMTP authentication</p> <p>(When unsetting it, it sets it internally according to the setting of TPopServer automatically. When TPopServer is set, it sets it to the POP before SMTP authentication. When TPopServer is unset, it sets it without the authentication.)</p>
TMailFrom (*2)	<p>Sender (Reply E-mail address)</p> <p>Note: Set in the following order: [text]+[@]+[text]+[.]+[text]</p> <p>5-63 one-byte characters</p> <p>The following cannot be used: [Space], ["], ['], [&], [<], [>].</p>
TMailTo1 (*2)	<p>Destination E-mail address 1</p> <p>Note: Set in the following order: [text]+[@]+[text]+[.]+[text]</p> <p>5-63 one-byte characters</p> <p>The following cannot be used: [Space], ["], ['], [&], [<], [>].</p>
TMailTo2	Destination E-mail address 2. Note: Refer to TMailTo1 for notes
TMailTo3	Destination E-mail address 3. Note: Refer to TMailTo1 for notes
TMailSubject (*2)	<p>Subject</p> <p>Note: One-byte characters: 0-44, two-byte characters: 0-22</p> <p>["] cannot be used.</p>
TMailText	<p>Text</p> <p>Note: One-byte characters: up to 63, two-byte characters: up to 31</p> <p>[Line break] and [] cannot be used.</p>

*2: Required setting

When TMode is set to "1024" (HTTP transfer)	
THttpUrl(*2)	<p>HTTP host server address or host name for sending images (HTTP)</p> <p>Note: Set using 4 numbers (0-255) each separated by a period; "0.0.0.0" and "255.255.255.255" are unavailable.</p> <p>When setting the host name, use 1-255 one-byte characters.</p> <p>The following cannot be used: [Space], ["], ['], [&], [<], [>].</p> <p>ex: 192.168.0.1</p>
THttpPort	<p>HTTP server Port No.</p> <p>Note: Standard port number is 80.</p>
TID (When Setting TPopServer, Required setting)	<p>Login ID</p> <p>Note: 0-63 one-byte characters.</p> <p>The following cannot be used: ["]</p>

TPassword	Password Note: 0-63 one-byte characters. The following cannot be used: ["]
TFileName	Upload File Name Note: 1 to 234 Characters Example: To save the file "image.jpg" in the directory "test". test/image
TFileMode	Overwrite setting 0: Overwrite 1: Add Time Stamp

MMode	Notification setting 128: HTTP notification Enable 64: E-mail notification Enable 0: Disable
-------	---

Note: E-mail notification is only available when "Sensor" and "Motion Detection" is selected as the trigger type.

When MMode is set to "128" (HTTP notification)	
MHttpHost	HTTP Host Name up to 255
MHttpPort	HTTP server Port No. Note: Standard port number is 80.
MFileName	File Path 1 to 234 Characters (Replace "&" with "%26" .)
MID	Basic authentication ID Note: 0-63 one-byte characters. The following cannot be used: ["]
MPassword	Basic authentication Password Note: 0-63 one-byte characters. The following cannot be used: ["]
(MHttpUrl)	HTTP notification Url up to 256 (Replace "&" with "%26" .) ex: "http://server.com/cgi-bin/alarmget.cgi..."

Note: It is also possible to set it by using HCM3xx parameter "MHttpUrl" in the form of the following.

MHttpUrl=http://"/Host Name:"/server Port No."/File Path "

When both "MHttpHost" and "MHttpUrl" are set, It gives priority to "MHttpHost".

When only "MHttpUrl" is set, the setting of "MHttpPort" and "MFileName" is disregarded.

Note: Please replace "&" with "%26" and set it when "&" is included in "MFileName" and "MHttpUrl" at the HTTP notification destination.

Example:

When you want to set to

"http://xxxx.xxx:80/cgi-bin/alarmget.cgi?Task=1&CamUrl=http://camera111.yyy.yyy.yyy/&Mode=2"
by the HTTP notification

Set?Func=ImageTransfer&Kind=1& &MMode=128
&MHttpHost=xxxx.xxx
&MHttpPort=80
&MFileName=cgi-bin/alarmget.cgi?Task=1%26CamUrl=http://camera111.yyy.yyy.yyy/%26Mode=2
&...

or

Set?Func=ImageTransfer&Kind=1& &MMode=128
&MHttpUrl=http://xxxx.xxx:80/cgi-bin/alarmget.cgi?Task=1%26CamUrl=
http://camera111.yyy.yyy.yyy/%26Mode=2
&...

Example:

When you want to set ID to "userid", Password to "userpassword" for Basic authentication

```
Set?Func=ImageTransfer&Kind=1& . . . . . &MMode=128
&MHttpHost=xxxx.xxx
&MHttpPort=80
&MFileName=cgi-bin/alarmget.cgi?Task=1%26CamUrl=http://camera111.yyy.yyy.yyy/%26Mode=2
&MID=userid&MPassword=userpassword
```

Example of HTTP notification:

The image is preserved before and after the operation detection one by one by recording task 1, and the setting example to notify

"http://xxxx.xxx/cgi-bin/alarmget.cgi?Task=1&CamUrl=http://camera111.yyy.yyy.yyy/&Mode=2" by the HTTP notification is shown.

```
Set?Func=ImageTransfer&Kind=1&TaskEnable=1&TCondition=4&PostEnable=1&PostIntervalPer=100
0&PostIntervalNum=1&PostNum=1&PreEnable=1&PreIntervalPer=1000&PreIntervalNum=1&PreNum=
1&TMode=16&MMode=128&MHttpHost=xxxx.xxx&MHttpPort=80&MFileName=cgi-bin/alarmget.cgi?Ta
sk=1%26CamUrl=http://camera111.yyy.yyy.yyy/%26Mode=2&MID=userid&MPassword=userpassword
```

When MMode is set to "64" (E-mail transfer)	
MMailServer (*2)	E-mail server address or host name for sending E-mail (SMTP)
MMailPort	Sending E-mail (SMTP) server Port No. Note: Standard port number is 25
MPopServer	E-mail server address or host name for receiving E-mail (POP3)
MPopPort	Receiving E-mail (POP3) server Port No. Note: Standard port number is 110
MPopID (When Setting MPopServer, Required setting)	Login ID (When you can select SMTP authentication, this is SMTP Login ID.) Note: 0-63 one-byte characters. The following cannot be used: [""]
MPopPassword	Password (When you can select SMTP authentication, this is SMTP Login Password.) Note: 0-63 one-byte characters. The following cannot be used: [""]
MCertification	Authentication You can select how to authenticate. 0: No authentication 1: SMTP authentication 2: POP before SMTP authentication (When unsetting it, it sets it internally according to the setting of MPopServer automatically. When MPopServer is set, it sets it to the POP before SMTP authentication. When MPopServer is unset, it sets it without the authentication.)
MMailFrom (*2)	Sender (Reply E-mail address)
MMailTo1 (*2)	Destination E-mail address 1
MMailTo2	Destination E-mail address 2
MMailTo3	Destination E-mail address 3
MMailSubject (*2)	Subject One-byte characters: 0-44, two-byte characters: 0-22 [""] cannot be used.
MMailText	Text One-byte characters: up to 63, two-byte characters: up to 31

*2: Required setting

Note: Character limitations (maximum number, restricted characters, etc.) are the same "E-mail transfer" setting.

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example 1: Set trigger 1 as a sensor that operates all day Saturday and Sunday, records images after detection, transfers via FTP, and does not send E-mail notification.

Set?Func=ImageTransfer&Kind=1&TaskEnable=1&TCondition=1&Trigger=3&Week=65&TimeMode=0&Start=0000
&Stop=2359&Position=81&PResolution=2&PQuality=8&PreEnable=0&PostEnable=1&PostIntervalPer=1000&PostIntervalNum=10&PostNum=100&TMode=32&FtpServer=ftp.server.com&FtpPortNo=21&FtpLoginID=robert&FtpPassword=robertpassword&FtpLoginMode=64&FtpFileName=test/image&FtpFileNameMode=1&FtpPortMode=16&MMode=0

Example 2:

Set trigger 4 as a timer that is always in operation, does not transfer images, and overwrites images every 1 minute.

Set?Func=ImageTransfer&Kind=4&TaskEnable=1&TCondition=2&Week=127&TimeMode=1

&PostIntervalPer=60000&PostIntervalNum=1&TMode=16

Note: In the Pan/Tilt unsupported and the Preset unsupported model, even if "Position" is set, everything is set to "Position=255 (none)".

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Trigger parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Exceed max. number of characters in each setting	Check the number of characters
Return: -5	No PreIntervalPer	Set PreIntervalPer
	No PreIntervalNum	Set PreIntervalNum
	No PreNum	Set PreNum
	No PostIntervalPer	Set PostIntervalPer
	No PostIntervalNum	Set PostIntervalNum
	No PostNum	Set PostNum
Return: -6	Error while writing to flash memory	Retry
Return: -7	Invalid Start, Stop value	Check the Start, Stop values
	Invalid TCondition value	Check the TCondition value
	Invalid Position value	Check the Position value
	Invalid PResolution value	Check the PResolution value
	Invalid PQuality value	Check the PQuality value
	Invalid PreIntervalPer value	Check the PreIntervalPer value
	Invalid PreIntervalNum value	Check the PreIntervalNum value
	Invalid PreNum value	Check the PreNum value
	Invalid PreEnable value	Check the PreEnable value
	Invalid PostIntervalPer value	Check the PostIntervalPer value
	Invalid PostIntervalNum value	Check the PostIntervalNum value
	Invalid PostNum value	Check the PostNum value
	Invalid PostEnable value	Check the PostEnable value
	Invalid TMode value	Check the TMode value
	FtpServer not set	Set FtpServer
	Invalid FTP-related value	Check FTP-related settings
	TMailServer not set	Set TMailServer

	MMailServer not set	Set MMailServer
	PreEnable and PostEnable cannot both have the Value "0" when setting Sensor and Alarm	Set "1" to one of them
Return: -8	Invalid PreIntervalTime setting	Check PreInterval-related settings
	Invalid PostIntervalTime setting	Check PostInterval-related settings
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve information for buffered/transferred images.

Accessible only for administrator

Parameters	Setting
Func	ImageTransfer (Fixed)
Kind ^{Note 1}	Buffer/transfer trigger number: 1-5

Example:

```

Get?Func=ImageTransfer&Kind=1
(Received)
HTTP/1.0 200 OK
Content-type: text/plain
TaskEnable:1
TCondition:1
Trigger:3
OutputTime:0
Week:65
TimeMode:0
Start:0000
Stop:2359
Position:81
(30:Home position, 31---50:Preset 1---Preset 20, 81:Sensor or Alarm 1, 82:Alarm 2, 255:None)
OutFormat:1
PResolution:2
PQuality:8
PreEnable:0
PreIntervalPer:1000
PreIntervalNum:1
PreNum:1
PostEnable:1
PostIntervalPer:1000
PostIntervalNum:10
PostNum:100
TMode:32
FtpServer:ftp.server.com
FtpPortNo:21
FtpLoginID:robert
FtpPassword:robertpassword
FtpLoginMode:64
FtpFileName:test/image
FtpFileNameMode:1
FtpPortMode:16
MMode:64
MMailServer:mail.server.com
MMailPort:25
MPopServer:mail.server.com
MPopPort:110
MPopID:user
MPopPassword:userpassword
MCCertification:2
MMailFrom:cam@mail.com
MMailTo1:tocam@mail.com
MMailTo2:

```

MMailTo3:¥r¥n
MmailSubject:ImageTest¥r¥n
MmailText:GetImage¥r¥n

Note: The retrievable setting values vary by the buffer/transfer method ("No Transfer, No Memory Overwrite, No Transfer, Memory Overwrite, FTP transfer, E-mail transfer) selected for TMode. For example, when setting FTP transfer, E-mail transfer-related information cannot be retrieved because it doesn't exist.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

TCondition = 1 or 3 (for Alarm)

"Position" Parameter value	Ver1.05 or later
Sensor position	----
None	255
Homeposition	30
Preset 1 --- Preset 8	31 --- 38
Preset 9 --- Preset 20	39 --- 50
Alarm 1	81
Alarm 2	82

TCondition = 4 (forMotion detection)

"Position" Parameter value	Ver1.05 or later
None	255
Homeposition	30
Preset 1 --- Preset 8	31 --- 38
Preset 9 --- Preset 20	39 --- 50
Alarm 1	81
Alarm 2	82

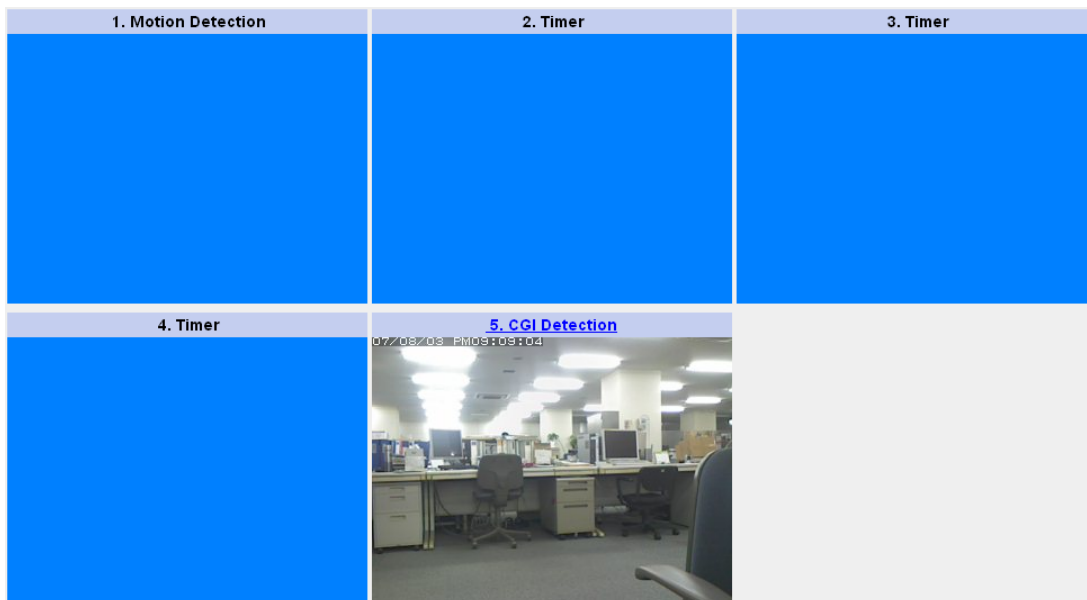
About Cgi detection:

Cgi detection, same as motion detection and sensor/alarm, is one of trigger conditions.

In the camera which sets Cgi detection to Buffer/transfer trigger setting number n, cgi command (/Set?Func=SoftTrigger&Kind=n) Buffer/transfer is started by sending. It cannot set cgi detection in the trigger setting page of the camera. It can set in only the cgi Command which is started here. In the trigger setting page the cgi detection is indicated, as shown "Using Cgi Command".

Trigger													
No.	Status	Trigger	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Active Time of Trigger	Transfer Method	Notify	Sensor deactivation
1	OFF	Motion Detection	X	X	X	X	X	X	X	Always	No Transfer, Memory Overwrite	NO	None
2	ON	Timer	X	X	X	X	X		X	Always	No Transfer, No Memory Overwrite	-	-
3	OFF	Timer	X	X	X	X	X	X	X	Always	No Transfer, No Memory Overwrite	-	-
4	OFF	Timer	X	X	X	X	X	X	X	Always	No Transfer, No Memory Overwrite	-	-
5	Using Cgi Command												

In the Buffered Image page the cgi detection is indicated, as shown "CGI Detection".



Example 3: Cgi Detectin Set trigger 5 as Cgi Detection that operates all day, records images after detection.
Set?Func=ImageTransfer&Kind=5&TaskEnable=1&TCondition=7&Week=127&TimeMode=1&Position=255&OutFormat=1
&PreEnable=0&PostEnable=1&PostIntervalPer=1000&PostIntervalNum=30&PostNum=30&IgnoreTime=0&TMode=0&MM
ode=0

Please refer to "3.54 Setting Cgi Detection of Buffer/Transfer image(Set?Func=SoftTrigger)".

Func=PresetName

Accessible only for administrator

Set: Set preset information.
Accessible only for administrator

Return:0¥r¥n ----- 0: OK, -n: Error

“Set?Func=PresetName&Kind=5&Data=Left” will be issued. Preset name “Left” is used for preset position number 5, and the direction of camera will be saved.

"Set?Func=PresetName&Kind=0"), and the direction of the camera will be preset.

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Invalid preset name value	Check the preset name
	Invalid preset no.	Check the preset no.
Return: -6	Error while writing to flash memory	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve preset information.

Accessible for administrator and general users authorized to access Preset control

Parameters	Setting
Func	PresetName (Fixed)
Kind ^{Note 1}	Preset number 1-8: preset position number 9: Sensor (BL-C111/C131), Alarm1 (BB-HCM models) 10: Alarm2 (BB-HCM models) 0: Home position

Example:

```
Get?Func=PresetName&Kind=5
(Received)
HTTP/1.0 200 OK
Content-type: text/plain
Data:Left0
```

Note: If a preset name has been set for preset positions 1-8, the preset name will be returned (Ex. "Data: Top Left").
 If no preset has been set, "Data:" will be returned.
 For home position (preset number 0), "Data:HomePosition" will be returned.
 For the sensor position (preset number 9), the corresponding name will be returned.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Invalid preset name value	Check the preset name
	Invalid preset no.	Check the preset no.
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Note: Please use next command "Func=PresetNamePos" for camera supported 20 camera positions.

3.5.2 Preset setting, retrieval for 20 Preset Camera(Set, Get)

Func=PresetNamePos

(BB-HCM models)

Set: Set preset information.

Accessible only for administrator

Parameters	Setting
Func	PresetNamePos (Fixed)
Kind ^{Note 1}	Preset number • 8 Preset Camera 1-8: preset position number 81: Sensor (BL-C111/C131), Alarm1 (BB-HCM models) 82: Alarm2 (BB-HCM models) 0: Home position • 20 Preset Camera 1-20: preset position number 81: Sensor , Alarm1 (BB-HCM models) 82: Alarm2 (BB-HCM models) 0: Home position
Data	Preset name Note: One-byte characters: 1-15, two-byte characters: 1-7 The following cannot be used: [Space], ["], ['], [&], [<], [>]. (When setting sensor or alarm or home position, Data parameter does not need to be set; only pan/tilt direction can be preset.) Null: When deleting

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

(Set preset position 5: Preset name "Left") Pan/tilt the camera in the direction of the preset, then "Set?Func=PresetNamePos&Kind=5&Data=Left" will be issued. Preset name "Left" is used for preset position number 5, and the direction of camera will be saved.

(Delete preset position number 5 setting)

Set?Func=PresetNamePos&Kind=5&Data=

Note: Preset names for preset positions 1-20 can be set in Data parameter.

On the other hand, setting Data parameter to "Data=" (No name entered) will delete the preset setting itself.

As for presets other than 1-20 (i.e., sensor and home position), the name setting does not need to be set in the Data parameter. (The preset name will not be changed even if a new name is set)

Aim the camera in the direction that you want to set as preset and enter a command (for example, "Set?Func=PresetNamePos&Kind=0"), and the direction of the camera will be preset.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Invalid preset name value	Check the preset name
	Invalid preset no.	Check the preset no.
Return: -6	Error while writing to flash memory	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve preset information.

Accessible only for administrator and general users authorized to access Preset control

Parameters	Setting
Func	PresetNamePos (Fixed)
Kind ^{Note 1}	Preset number 1-20: preset position number 81: Sensor (BL-C111/C131), Alarm1 (BB-HCM5xx) 82: Alarm2 (BB-HCM5xx) 0: Home position

Example:

Get?Func=PresetNamePos&Kind=5

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Data:Left0

Note: If a preset name has been set for preset positions 1-20, the preset name will be returned (Ex. "Data: Top Left"). If no preset has been set, "Data:" will be returned.

For home position (preset number 0), "Data:HomePosition" will be returned.

For the sensor position (preset number 9), the corresponding name will be returned.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Invalid preset name value	Check the preset name
	Invalid preset no.	Check the preset no.
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.6 Restart (Set)

Func=Restart

Set: Restart camera.

Accessible only for administrator

Parameters	Setting
Func	Restart (Fixed)
Kind	1 (Fixed)
Data	OK (Fixed)

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=Restart&Kind=1&Data=OK

Note: After "Return:0" is displayed, the camera will be restarted.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value (Not "Data=OK")	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Note: Access is also possible during Privacy Mode.

Restarting the camera takes about 1 minute.

All buffered images will be erased.

3.7 Camera control, control information setting, retrieval (Set,Get)

3.7.1 Camera Pan control and Pan information setting, retrieval (Set,Get)

Func=Pan

Set: Camera Pan control and Pan information setting.

Kind=0 Accessible for administrator and general users authorized to control Pan/Tilt

Kind=1 Accessible only for administrator

Parameters	Setting		
Func	Pan (Fixed)		
Kind	0: General users authorized to control Pan/Tilt 1:administrator		
When "Kind" is set to 0 (General user authorization)			
DegMode ^{Note 1}	4: PanLeft: Same procedure as when controlling from the PC screen 6: PanRight: Same procedure as when controlling from the PC screen		
When "Kind" is set to 1 (Administrator)			
DegMode	Same as “Kind=0”		
PanRM ^{Note 1}	Pan minimum (5 degree increments)		
	BL-C111/C131	BB-HCM models	
	Current: Current value -5000 - 0 - 5000 (-50 degrees to 0 degrees to +50 degrees)	All models except HCM581/580/527/547	HCM581/580/527/547
		Current: Current value -6000 - 0 - 6000 (-60 degrees to 0 degrees to +60 degrees)	Current: Current value -17500 - 0 - 17500 (-175 degrees to 0 degrees to +175 degrees)
PanHome ^{Note 1}	Pan minimum (5 degree increments)		
	BL-C111/C131	BB-HCM models	
	Current: Current value -5000 - 0 - 5000 (-50 degrees to 0 degrees to +50 degrees)	All models except HCM581/580/527/547	HCM581/580/527/547
		Current: Current value -6000 - 0 - 6000 (-60 degrees to 0 degrees to +60 degrees)	Current: Current value -17500 - 0 - 17500 (-175 degrees to 0 degrees to +175 degrees)
PanRP ^{Note 1}	Pan minimum (5 degree increments)		
	BL-C111/C131	BB-HCM models	
	Current: Current value -5000 - 0 - 5000 (-50 degrees to 0 degrees to +50 degrees)	All models except HCM581/580/527/547	HCM581/580/527/547
		Current: Current value -6000 - 0 - 6000 (-60 degrees to 0 degrees to +60 degrees)	Current: Current value -17500 - 0 - 17500 (-175 degrees to 0 degrees to +175 degrees)

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

- Move to PanLeft with general user authorization

Set?Func=Pan&Kind=0&DegMode=4

- Set the minimum Pan angle: -50 degrees, home position: 0 degree, the maximum Pan angle 50 degrees (Administrator)

Set?Func=Pan&Kind=1&PanRM=-5000&PanHome=0&PanRP=5000

(Error code when limit is reached) When moving comparatively, if the camera reaches its range limit and the next action would move the camera past its range limit, an error code will be issued.

Return: -14 Left end
Return: -16 Right end

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value BL-C111/C131 Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -6	Error while writing to flash memory	Retry
Return: -7	Invalid DegMode value Invalid value for each range setting	Check the DegMode value Check the each setting value
Return: -8	Internal data retrieval error	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator When "Kind" is set to 0: Not accessed by users authorized to control Pan/Tilt	Retry as administrator Retry as a user authorized to control Pan/Tilt
Return: -14	Show left end	
Return: -16	Show right end	
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve camera Pan information.

Accessible only for administrator

Parameters	Setting
Func	Pan (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Pan&Kind=1

(Received)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Deg:-3000¥r¥n

Speed:30¥r¥n ----- Speed is 0, when Pan is not functioning

PanRM:-5000¥r¥n

PanHome:0¥r¥n

PanRP:5000¥r¥n

Note: In this case, the Deg value shows the absolute angle position of camera Pan.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.7.2 Camera Pan control and Pan information setting, retrieval (Set,Get)

Func=Tilt

Set: Camera Tilt control and Tilt information setting.

Kind=0 Accessible for administrator and general users authorized to control Pan/Tilt

Kind=1 Accessible only for administrator

Parameters	Setting			
Func	Tilt (Fixed)			
Kind	0: General users authorized to control Pan/Tilt 1:administrator			
When "Kind" is set to 0 (General user authorization)				
DegMode ^{Note 1}	8: TiltUp: Same procedure as when controlling from the PC screen 2: TiltDown: Same procedure as when controlling from the PC screen			
When "Kind" is set to 1 (Administrator)				
DegMode ^{Note 1}	Same as “Kind=0”			
TiltRM ^{Note 1}	Tilt minimum (5 degree increments)			
	BL-C111/C131	BB-HCM models		
	Current: Current value -4000 - 0 - 1000 (-40 degrees to 0 degrees to +10 degrees)	All models except HCM581/580/527/547	HCM527/547	HCM581/580
		-4500 - 0 - 2000 (-45 degrees to 0 degrees to +20 degrees)	0 - 4500 - 8200 (0 degrees to +45 degrees to +82 degrees)	On the ceiling: 0 - 9000 (0 degrees to +90 degrees) On the table: -12000 - 0 (-120 degrees to 0 degrees)
		Current: Current value		
TiltHome ^{Note 1}	Tilt minimum (5 degree increments)			
	BL-C111/C131	BB-HCM models		
	Current: Current value -4000 - 0 - 1000 (-40 degrees to 0 degrees to +10 degrees)	All models except HCM581/580/527/547	HCM527/547	HCM581/580
		-4500 - 0 - 2000 (-45 degrees to 0 degrees to +20 degrees)	0 - 4500 - 8200 (0 degrees to +45 degrees to +82 degrees)	On the ceiling: 0 - 9000 (0 degrees to +90 degrees) On the table: -12000 - 0 (-120 degrees to 0 degrees)
		Current: Current value		
TiltRP ^{Note 1}	Tilt minimum (5 degree increments)			
	BL-C111/C131	BB-HCM models		
	Current: Current value -4000 - 0 - 1000 (-40 degrees to 0 degrees to +10 degrees)	All models except HCM581/580/527/547	HCM527/547	HCM581/580
		-4500 - 0 - 2000 (-45 degrees to 0 degrees to +20 degrees)	0 - 4500 - 8200 (0 degrees to +45 degrees to +82 degrees)	On the ceiling: 0 - 9000 (0 degrees to +90 degrees) On the table: -12000 - 0 (-120 degrees to 0 degrees)
		Current: Current value		
SetupType (for setup type support models) ^{Note 1}	Setup type. 0: On the ceiling, 1: On the table (Default)			

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

- Move to TiltUp with general user authorization

Set?Func=Tilt&Kind=0&DegMode=8

- Set the minimum Tilt angle: -40 degrees, home position: 0 degree, the maximum Tilt angle 40 degrees

(Administrator)

Set?Func=Tilt&Kind=1&TiltRM=-4000&TiltHome=0&TiltRP=1000

(Error code when limit is reached) When moving comparatively, if the camera reaches its range limit and the next action would move the camera past its range limit, an error code will be issued.

Return: -18 Up end

Return: -12 Down end

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
Return: -6	Error while writing to flash memory	Retry
Return: -7	Invalid DegMode value	Check the DegMode value
	Invalid value for each range setting	Check the each setting value
Return: -8	Internal data retrieval error	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
	When "Kind" is set to 0: Not accessed by users authorized to control Pan/Tilt	Retry as a user authorized to control Pan/Tilt
Return: -17	Unsupported feature	Retry using a model supporting the feature
Return: -18	Show up end	
Return: -12	Show down end	

* Setup Type support setup type support models : [SetupType] parameter must be set to specify the Setup type (On the ceiling/On the table). If not specified (No SetupType parameter or No value is specified following "SetupType="), the existing setting will be used.

* The Tilt range is between 0 degree and +90 degrees when "0: On the ceiling" is set to SetupType. The Tilt range is between -120 degrees and 0 degree when "1: On the table" is set to SetupType.

* The following default settings will be used, if the SetupType setting is changed without modifying TiltRM, TiltHome, and TiltRP settings.

SetupType	Minimum (TiltRM)	Home (TiltHome)	Maximum (TiltRP)
0: On the ceiling	0 degree	+90 degrees	+90 degrees
1: On the table	-120 degrees	-90 degrees	0 degree

* If SetupType is not specified, the existing setting will be used.

Get: Retrieve camera Tilt information.

Accessible only for administrator

Parameters	Setting
------------	---------

Func	Tilt (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Tilt&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Deg:-3000

Speed:30 ----- Speed is 0, when Tilt is not functioning

TiltRM:-4000

Tilt Home:0

Tilt RP:1000

SetupType:0 ----- (HCM Zoom) 0: On the ceiling

Note: In this case, the Deg value shows the absolute angle position of camera Tilt.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.7.3 Camera Zoom control (Set)

Func=Zoom

(Zoom support models such as BB-HCM581/580/527/547)

Set: Camera Zoom control.

Kind=0 Accessible for administrator and general users authorized to control Zoom

Kind=1 Accessible only for administrator

Parameters	Setting
Func	Zoom (Fixed)
Kind	0: General users authorized to control Zoom 1: Administrator
ZoomMode ^{Note 1}	Zoom Control Mode. 4: ZoomTele, 6: ZoomWide

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example: Control ZoomTele on single screen as a general user, authorized to control Zoom.

Set?Func=Zoom&Kind=0&ZoomMode=4

Zoom control using ZoomMode offers similar controls with Standard zoom (4: ZoomTele) and Wide zoom (6: ZoomWide) on single screen.

An error returns, if the user attempted to zoom in/out beyond the camera's capability.

Return: -14 (Tele end)

Return: -16 (Wide end)

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters

Return: -3	No ZoomMode parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Unsupported feature for BL-C1xx	Retry using a model supporting the feature
Return: -7	Invalid ZoomMode value	Check the ZoomMode value
Return: -8	Internal data retrieval error	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
	When "Kind" is set to 0: Not accessed by users authorized to control Zoom	Retry as a user authorized to control Zoom
Return: -14	Show tele end	
Return: -16	Show wide end	
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.7.4 Camera Focus control and Focus information setting retrieval (Set,Get) Func=Focus

(Focus support models such as BB-HCM581/580)

Set: Camera Focus control.

Kind=0: Accessible for administrator and general users authorized to control Focus

Kind=1: Accessible only for administrator

Parameters	Setting
Func	Focus (Fixed)
Kind	0: General users authorized to control Focus 1: Administrator
When "Kind" is set to 0 (General user authorization)	
FocusMode ^{Note 1}	4: FocusNear: Same procedure as when controlling from the PC screen 5: Focus Auto: Same procedure as when controlling from the PC screen 6: FocusFar: Same procedure as when controlling from the PC screen
Dist ^{Note 1}	1: Small displacement, 2: Large displacement (FocusMode=4 or 6 only) (Default value: 1)
When "Kind" is set to 1 (Administrator)	
FocusMode ^{Note 1}	Same as "Kind=0"
Dist ^{Note 1}	Same as "Kind=0"
ShortFocus ^{Note 1}	Minimum focal length. 0: 5mm, 1: 1m

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

- Control FocusNear on single screen as general users, authorized to control Focus.
Set?Func=Focus&Kind=0&FocusMode=4&Dist=1
- Set focal length to 5mm as an Administrator.
Set?Func=Focus&Kind=1&ShortFocus=0

Focus control using FocusMode offers similar controls with Focus near (4: FocusNear), Auto focus (5: FocusAuto) and Focus far (6: FocusFar) on single screen.

Displacement is also work in a similar manner with Focus on when Dist is not set. Set "Dist=2" to increase displacement.

An error returns, if the user attempted to focus near/far beyond the camera's capability.

Return: -14 (Near end)

Return:- 16 (Far end)

Minimum focal length setting using ShortFocus offers similar Minimum focal length setting with camera. The setting is independent from FocusMode and Dist.

Example: Set?Func=Focus&Kind=1&ShortFocus=1 (Set the minimum focal length to 1m.)

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	When "Kind" is set to 0: No FocusMode parameter When "Kind" is set to 1: No FocusMode & No ShortFocus parameter	Check parameters Check parameters
Return: -4	Invalid Func value or Invalid Kind value Unsupported feature for BL-C1xx	Check parameters Retry using a model supporting the feature
Return: -7	Invalid ShortFocus value Invalid FocusMode value Invalid Dist value	Check the ShortFocus value Check the FocusMode value Check the Dist value
Return: -8	Internal data retrieval error	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator When "Kind" is set to 0: Not accessed by users authorized to control Focus	Retry as administrator Retry as a user authorized to control Focus
Return: -14	Show near end	
Return: -16	Show far end	
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve camera Focus information.

Accessible for administrator and general users authorized to control Focus

Parameters	Setting
Func	Focus (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Focus&Kind=1

(Received)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

ShortFocus:0¥r¥n ----- Minimum focal length: 5mm

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value Unsupported feature for BL-C1xx	Check parameters Retry using a model supporting the feature
Return: -11	Not accessed by administrator Not accessed by users authorized to control Focus	Retry as administrator Retry as a user authorized to control Focus
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.8 Private Mode setting, retrieval (Set, Get)

Func=Powerdown

(BL-C111/C131)

Set: Set Privacy mode.

Accessible only for administrator

Parameters	Setting	
Func	Powerdown (Fixed)	
Kind ^{Note 1}	1	2
Data ^{Note 1}	Privacy Mode on/off 1: On, 0: Off	Enable/disable Privacy button 1: Enable, 0: Disable

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=Powerdown&Kind=1&Data=0

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Unsupported feature	Retry using a model supporting the feature
Return: -6	Error while writing to flash memory	Retry
Return: -7	Privacy button setting (enable/disable) changed while Privacy Mode was turned on	Privacy button setting (enable/disable) cannot be changed while Privacy Mode is turned on
Return: -8	Upper data setting error	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve Privacy Mode setting information.

Accessible for administrator and all general users

Parameters	Setting
Func	Powerdown (Fixed)
Kind ^{Note 1}	1: Retrieve Privacy Mode status, 2: Retrieve Privacy Button enable/disable information

Example:

Get?Func=Powerdown&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Data: 0

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Unsupported feature	Retry using a model supporting the feature
Return: -11	Not accessed by administrator	Retry as administrator

Note: When Privacy Mode is turned on after setting (Set?Func=Powerdown&Kind=1&Data=1), only the following Set commands will be accepted:

Privacy Mode off (Set?Func=Powerdown&Kind=1&Data=0)

Privacy Mode on (Set?Func=Powerdown&Kind=1&Data=1) Restart

(Set?Func=Restart&Kind=1&Data=OK)

All other Set commands will not be accepted.

Privacy Button enable/disable setting is not accepted.

Get commands are accepted.

3.9 Network setting, retrieval (Set, Get)

Func=Network

Set: Set network information.

Accessible only for administrator

Parameters	Setting
Func (*1)	Network (Fixed)
Kind (*1)	1 (Fixed)
Mode (*1) ^{Note 1}	Network connection mode. 0: Automatic Setup, 1: DHCP, 2: Static
When Mode is set to 0 (Automatic Setup)	
Open (*2)	Allow access from the Internet. 128: Yes, 0: No
Bandwidth (*2) ^{Note 1}	Max. Bandwidth Usage (Default value used if not specified) 13107:0.1 Mbps, 26214:0.2 Mbps, 39321:0.3 Mbps 65536:0.5 Mbps, 131072:1 Mbps, 262144:2 Mbps 393216: 3Mbps, 2147483647: Unlimited
ConnectType (*2) ^{Note 1}	Connection Type (Default value used if not specified) 1: Auto negotiation, 2: 100 Mbps/Full-duplex, 3: 100Mbps/Half-duplex 4: 10Mbps/Full-duplex, 5: 10 Mbps/Half-duplex
AutoRestart ^{Note 1}	Auto Restart. 1: Restart automatically, 0: Disabled (This will be selected if not specified)
When Mode is set to 1 (DHCP)	
Open (*2)	Allow access from the Internet. 128: Yes, 0: No
CamBootpEn (*2) ^{Note 1}	Configuration from Setup Program (Default value used in not specified) 1: Enable, 0: Disable
Port (*2)	Internet connection port number (Default is 80; default number used if not specified) 1-65535
DHCP (*3)	Host Name. Note: Only one-byte characters and symbols can be used. The following cannot be used: [Space], ["], ['], [&], [<], [>].
Gateway (*3)	Default gateway (Note 1)
DNS1 (*3)	DNS Server Address 1 (Note 1)
DNS2 (*3)	DNS Server Address 2 (Note 1)
Bandwidth (*2) ^{Note 1}	Max. Bandwidth Usage (Default value used if not specified) 13107:0.1 Mbps, 26214:0.2 Mbps, 39321:0.3 Mbps 65536:0.5 Mbps, 131072:1 Mbps, 262144:2 Mbps 393216: 3Mbps, 2147483647: Unlimited
ConnectType (*2) ^{Note 1}	Connection Type (Default value used if not specified) 1: Auto negotiation, 2: 100 Mbps/Full-duplex, 3: 100 Mbps/Half-duplex, 4: 10 Mbps/Full-duplex, 5: 10 Mbps/Half-duplex
AutoRestart	Auto Restart. 1: Restart automatically, 0: Disabled (This will be selected if not specified)
When Mode is set to 2 (Static)	
Open (*2)	Allow access from the Internet. 128: Yes, 0: No
CamBootpEn (*2) ^{Note 1}	Configuration from Setup Program (Default value used in not specified) 1: Enable, 0: Disable
Port (*2)	Internet connection port number (Default is 80; default number used if not specified) 1-65535
IP (*1)	Internet connection IP address (Note 1)
Netmask (*1)	Subnet mask (Note: Same as IP address)
Gateway (*3)	Default gateway (Note 1)
DNS1 (*3)	DNS Server Address 1 (Note 1)
DNS2 (*3)	DNS Server Address 2 (Note 1)
Bandwidth (*2) ^{Note 1}	Max. Bandwidth Usage (Default value used if not specified) 13107: 0.1 Mbps, 26214: 0.2 Mbps, 39321: 0.3 Mbps 65536: 0.5 Mbps, 131072: 1 Mbps, 262144:2 Mbps 393216: 3Mbps, 2147483647: Unlimited
ConnectType (*2) ^{Note 1}	Connection Type (Default value used if not specified) 1: Auto negotiation, 2: 100 Mbps/Full-duplex, 3: 100 Mbps/Half-duplex, 4: 10 Mbps/Full-duplex, 5: 10 Mbps/Half-duplex
AutoRestart ^{Note 1}	Auto Restart. 1: Restart automatically, 0: Disabled (This will be selected if not specified)

Note: Set using 4 numbers (0-255) each separated by a period; "0.0.0.0" and "255.255.255.255" are unavailable.

*1: Setting is required

*2: Setting not required (Last setting is used)

*3: Even if parameters are not set, errors will not be issued (Settings will be "Null").

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example: Automatic Setup, Do not allow access from the internet, No bandwidth limit, Auto negotiation, Auto restart.

Set?Func=Network&Kind=1&Mode=0&Open=0&Bandwidth=2147483647&ConnectType=1 &AutoRestart=1

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Mode, IP, Netmask parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
Return: -7	Invalid values for each setting	Check parameters
Return: -8	Settings cannot be completed due to incorrect values for each setting	Retry after confirming parameters
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve network information.

Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	Network (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Network&Kind=1

(Received)

(Example 1) When Automatic Setup is selected

HTTP/1.0 200 OK

Content-type: text/plain

Mode:0

Open:0

Bandwidth:2147483647

ConnectType:1

Example 2 (Static is selected):

HTTP/1.0 200 OK

Content-type: text/plain

Mode:2

CamBootpEn:1

Port:80

IP:xxx.xxx.xxx.xxx

Netmask:xxx.xxx.xxx.xxx

Gateway:xxx.xxx.xxx.xxx

DNS1:xxx.xxx.xxx.xxx

DNS2:xxx.xxx.xxx.xxx

Bandwidth:2147483647

ConnectType:1

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.10 Retrieve camera model information (Get)

Func=Model

Get: Retrieve camera model information.

Accessible for administrator and all general users

(Includes guest users, when administrator allows guest users to access the camera)

Parameters	Setting
Func	Model (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Model&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

ModelName:BL-C111 Model name

BootFirm:V3.00R00 Boot version

AplFirm:3.30R00 Apl version

Cgii/fVer:3.30R00 CGI interface version

ModelType:2010001900010101 Model information as shown below.

Function:0101010101 Function information as shown below.

UserAgent:Mozilla/4.0 (Compatible; MSIE 6.0; Windows NT 5.1; .Net CLR 1.1.4322)

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters

ModelType: The Model information allow you to check the status. (Same value as model in the status pages)

Function: Function information. It is 5 bytes data. It shows the function information like this.

| PTZF | PHY | Audio | SD | IPsec |

PTZF----- 00: Non, 19: with Pan/Tilt, 02: with Focus, 04: with Zoom, 1f: with Pan/Tilt/Zoom/Focus

(HCM3xx,Cxx 00: Non, 01: with Pan/Tilt, 02: with Focus, 04: with Zoom, 07: with Pan/Tilt/Zoom/Focus)

PHY-----01: with wired LAN , 10: with wireless LAN, 11: with both wired and wireless LAN

Audio-----00: Not supported, 01: G.726 supported

SD-----00: Not supported, 01: SD supported

IPSec-----00: Not supported, 01: IPsec supported

UserAgent: the HTTP client's UserAgent information from HTTP client (e.g., browser) to the camera.

3.11 User information setting, retrieval (Set, Get)

Func=User

Set: Set general user information.

Accessible only for administrator

Parameters	Setting
Func	User (Fixed)
Kind	1 (Fixed)
UNo ^{Note 1}	General user registration no. 1-50 (However, user registration no. 1: guest user)
Mode ^{Note 1}	Operation Mode 1: Create 2: Modify 3: Delete
UserID	User name Note: 6-15 one-byte characters Only one-byte characters can be used. The following cannot be used: [Space], ["], ['], [&], [<], [>], [:].
UserPassword	Password Note: 6-15 one-byte characters Only one-byte characters can be used. The following cannot be used: [Space], ["], ['], [&], [<], [>], [:].
BL-C111/C131/C140/C160 (BB-HCM5xx models)	
ULevel ^{Note 1}	Access level 1: Level 1 (Camera viewing only) 2: Level 2 (Camera viewing and preset control) 3: Level 3 (Camera viewing and all controls) (C111/C131/C140/C160 Default setting) 0: HCM models like setting enable (HCM5xx Default setting) Note: Access level setting can do also HCM5xx models same as BL-C111/C131/C140/C160.
BB-HCM models / BL-C111/C131/C140/C160	
LimitTime ^{Note 1}	Display time limit of motion images 65535: No limit (C1xx Default setting), 0: Do not display (HCM models Default setting) 10: 10 seconds, 30: 30 seconds, 60: 1 minute, 300: 5 minutes, 600: 10 minutes, 1800: 30 minutes, 3600: 60 minutes
LimitInterva ^{Note 1}	Still image refresh interval 3: 3 seconds (HCM models Default setting), 5: 5 seconds, 10: 10 seconds, 30: 30 seconds (C1xx Default setting), 60: 60 seconds
(In case of BL-C111/C131/C140/C160, it can designate the setting of the bellow individual parameters the time of ULevel=0 .)	
UPanTiltCont ^{Note 1}	Pan/Tilt control. 1: Enable, 0: Disable (Default)
UPresetCont ^{Note 1}	Preset control. 1: Enable, 0: Disable (Default)
UClickCCont ^{Note 1}	Click & Centering control. 1: Enable, 0: Disable (Default)
UBrightCont ^{Note 1}	Brightness control. 1: Enable, 0: Disable (Default)
UDegiOutCont ^{Note 1}	External output. : Enable, 0: Disable (Default)
UImgChgCont ^{Note 1}	Image refresh interval. 1: Enable, 0: Disable (Default)
UResoCont ^{Note 1}	Resolution control. 1: Enable, 0: Disable (Default)
UQualityCont ^{Note 1}	Image quality control. 1: Enable, 0: Disable (Default)
USnapShotCont ^{Note 1}	Snapshot. 1: Enable, 0: Disable (Default)
UHearCont ^{Note 1}	Audio output. 1: Enable, 0: Disable (Default)
USpeakCont ^{Note 1}	Microphone input. 1: Enable, 0: Disable (Default)
UMultiCont ^{Note 1}	Multi screen access. 1: Enable, 0: Disable (Default)
UBufferCont ^{Note 1}	Buffered Image Access. 1: Enable, 0: Disable (Default)
UWBCont ^{Note 1}	White Balance control. 1: Enable, 0: Disable (Default)

Example 1: Set mode to 1 (Create).

Kind:1 (Fixed)

Mode 1: Create

UNo Not required

UserID User ID (6-15 one-byte characters) (Required)

UserPassword User password (6-15 one-byte characters) (Required)

ULevel User level 1: Level 1
2: Level 2
3: Level 3 (Level 3 is selected if ULevel is not specified.)

(or)

Set "1 (Enable)" or "0 (Disable)" for each of the above controls.

The default values will be used, if the parameter has not been set before and no value is specified.

Example 2: Set mode to 2 (Modify).

Kind: 1 (Fixed)

Mode 2: Modify

UNo Registration no.: 1-5 (Required)

UserID User ID (6-15 one-byte characters)

UserPassword User password (6-15 one-byte characters)

ULevel User level

(BB-HCM models)

For UserID, UserPassword, and ULevel, only customized settings are updated (i.e., if they are not customized, settings will not be updated).

Example 3: Set mode to 3 (Delete).

Kind:1 (Fixed)

Mode 3: Delete

UNo Registration no.: 2-50 (Required) (1: Guest user cannot be deleted)

Upon error:

<u>Return value</u>	<u>Condition</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1		No Func parameter	Check parameters
Return: -2		No Kind parameter	Check parameters
Return: -3		No Mode	Check parameters
	During Create	No UserID or UserPassword	Check parameters
	During Modify or Delete	No UNo	Check parameters
Return: -4	During Create or Modify	Invalid UserID or UserPassword (Max. number of characters exceeded, etc.)	Check parameters
	During Modify or Delete	Invalid UNo (number is higher than 51, or there is no user number)	Check parameters
		BL-C111/C131	
		Not accessible during Privacy Mode	Disable Privacy Mode
Return: -7	During Create or Modify	Invalid Mode value	Check parameters
		Less than 6 characters are entered for UserID or UserPassword	Check parameters
	During Modify or Delete	Invalid UNo (0 or less)	Check parameters
Return: -8		Invalid ULevel	Check parameters
		Create or Modify cannot be completed due to incorrect LimitTime, LimitInterval, etc.	Check parameters
Return: -9		Administrator ID and password not set	Set administrator ID and password
Return: -11		Not accessed by administrator	Retry as administrator

Get: Retrieve general user information.**Accessible only for administrator**

Parameters	Setting
Func	User (Fixed)
Kind	1 (Fixed)
UNo ^{Note 1}	General user registration no.: 1-50
UserID	User name (6-15 one-byte characters)
FuncMode	Access level expression switch 0:level(C111/C131/C140/C160 Default setting) 1:Each function(HCM5xx Default setting)

To retrieve general user information, specify UNo or UserID.

When both UNo and UserID are specified, UNo will take priority (UserID will be ignored).

Example1:

```
Get?Func=User&Kind=1&UNo=2
(Received)
HTTP/1.0 200 OK
Content-type: text/plain
UNo:2
UserID:robert
LimitTime:0
LimitInterval:3
(BL-C111/C131/C140/C160)
ULevel:3
(BB-HCM5xx)
UPanTiltCont:0
UPresetCont:0
UClickCCont:0
UBrightCont:0
UDegiOutCont:0
UImgChgCont:0
UResoCont:0
UQualityCont:0
USnapShotCont:0
UHearCont:0
USpeakCont:0
UMultiCont:0
UBufferCont:0
UWBCont:0
```

Example2:

```
Get?Func=User&Kind=1&UNo=2&FuncMode=0
(Received)
HTTP/1.0 200 OK
Content-type: text/plain
UNo:2
UserID:robert
LimitTime:0
LimitInterval:3
ULevel:3
```

Example3:

```
Get?Func=User&Kind=1&UNo=2&FuncMode=1
(Received)
HTTP/1.0 200 OK
Content-type: text/plain
UNo:2
UserID:robert
```

LimitTime:0¥r¥n
 LimitInterval:3¥r¥n
 UPanTiltCont:0¥r¥n
 UPresetCont:0¥r¥n
 UClickCCont:0¥r¥n
 UBrightCont:0¥r¥n
 UDegiOutCont:0¥r¥n
 UImgChgCont:0¥r¥n
 UResoCont:0¥r¥n
 UQualityCont:0¥r¥n
 USnapShotCont:0¥r¥n
 UHearCont:0¥r¥n
 USpeakCont:0¥r¥n
 UMultiCont:0¥r¥n
 UBufferCont:0¥r¥n
 UWBCont:0¥r¥n

*For security, user passwords cannot be retrieved.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	Retrieving information cannot be completed due to incorrect UserID and UNo.	Check parameters
Return: -4	Func setting not completed, or each setting not completed.	Check parameters
	Unregistered UNo entered	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Max. number of characters for UserID exceeded, or incorrect UserID	Check parameters
Return: -7	Less than 6 characters are entered for UserID	Check parameters
Return: -8	Searching not completed due to incorrect setting value.	Retry after confirming parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.12 Camera control

(nphControlCamera)

Administrator and general users authorized to access features designated by Direction parameter

(Includes guest users, when administrator allows guest users to access the camera)

nphControlCamera is used for camera control (movement and brightness control). Pan, tilt, pan scan, tilt scan, brightness, etc. can be set.

nphControlCamera: Camera control commands

Parameters	Setting
Direction	PanLeft (pan to left) PanRight (pan to right) TiltUp (tilt up) TiltDown (tilt up) PanScan (Pan scan; camera moves throughout the horizontal range and returns to the original position) TiltScan (Tilt scan; camera moves throughout the vertical range and returns to the original position) HomePosition (Home position; camera returns to the home position) Preset *1 (camera moves to a preset position) Darker (darken the image) DefaultBrightness (Default image brightness) Brighter (Brighten the image) WB_Auto (White Balance Auto) WB_InDoor (Indoor) WB_OutDoor (Outdoor) WB_White (Fluorescent (White)) WB_Daylight (Fluorescent (Daylight)) WB_Hold (Hold) BacklightOn (Backlight On) BacklightOff (Backlight Off)

* 1 When using Direction=Preset, use the following parameters.

Parameters	Setting
PresetOperation	Move (Move to the assigned preset position)
Data ^{Note 1}	1-20 (Desired preset position no.)

Example:

(Pan left)

nphControlCamera?Direction=PanLeft

Accessible only for administrator and general users authorized to control Pan/Tilt

(Tilt scan)

nphControlCamera?Direction=TiltScan

Accessible only for administrator and general users authorized to control Pan/Tilt

(Home position)

nphControlCamera?Direction=HomePosition

Accessible only for administrator and general users authorized to move camera to the Home position

(Move to preset position 1)

nphControlCamera?Direction=Preset&PresetOperation=Move&Data=1

Accessible only for administrator and general users authorized to move camera to preset positions

(Darken the image)

nphControlCamera?Direction=Darker

Accessible only for administrator and general users authorized to control camera brightness

Set the following parameter when controlling PanLeft, PanRight, TiltUp, TiltDown.

Parameters	Setting
Sync	0:Asynchronous mode (Default) 1:Synchronous mode (It responds after the control is completed.)

3.13 MotionJPEG retrieval (Real-time)

(nphMotionJpeg)

Accessible for administrator and general users authorized to view motion images

(Includes guest users, when administrator allows guest users to access the camera)

Used for retrieving MotionJPEG data (motion images) from the camera.

Use a viewer that can playback buffered images on demand to enable real-time monitoring.

Note: Before saving buffered image data (for example, to the computer's hard disk), check the image data size and make sure that there is enough space for saving image data.

Saving a large volume of data may degrade the computer's performance (System instability, etc.).

nphMotionJpeg: Retrieve MotionJPEG.

Parameters	Setting
Resolution	192x144 320x240 640x480 1280x1024 (Support 1280x1024 models such as BB-HCM515)
Quality	Motion (Favor motion) Standard (Standard quality) Clarity (Favor clarity)
Framerate(*1)	FPS (frame per sec) 0.1 --- 30(fps)
Bitrate(*1)	BPS (bit per sec) 102400 ---104857600 (bps)

(*1) When Framerate and Bitrate are set simultaneously, value of the one which becomes the narrow band is used. Furthermore, frame rate and bit rate are not the case that it can be set strictly. When it becomes lower than the value which it sets and when it exceeds, it is.

Image display procedure

(1) Start reception

Establish a connection (open the socket), and send the following command string to HTTP port.

"GET

http://xxx.xxx.xxx.xxx:yy/nphMotionJpeg?Resolution=320x240&Quality=Standard

HTTP/1.0¥r¥n"

xxx.xxx.xxx.xxx: IP address or domain name

yy: HTTP port no. (Not required if the port number is set to 80)

(2) Data reception

"HTTP/1.0 200 OK¥r¥n"

"Content-Type: multipart/x-mixed-replace; boundary=--myboundary..."

"...--myboundary.Content-type: image/jpeg..."

JPEG binary data No. 1 (Hexadecimal notation="FFD8.....FFD9")

"...--myboundary.Content-type: image/jpeg..."

JPEG binary data No. 2 (Hexadecimal notation="FFD8.....FFD9")

:

:

"...--myboundary.Content-type: image/jpeg..."

JPEG binary data No. N (Hexadecimal notation="FFD8.....FFD9")

* Above mentioned Content-type: From FFD8(following image/jpeg) to "--myboundary" (just before FFD9) is 1 JPEG data file.

(3) Image displaying/saving

From the data above, extract JPEG data, and display the extracted consecutively or save it.

A viewer that supports the above data is required to view images.

(4) Finish reception

End connection (close the socket).

3.14 SnapshotJPEG retrieval (Real-time retrieval of Snapshot JPEG data) (SnapshotJPEG)

Accessible for administrator and general users authorized to view still images

(Includes guest users, when administrator allows guest users to access the camera)

SnapshotJPEG: Retrieve SnapshotJPEG.

Parameters	Setting
Resolution	192x144 320x240 640x480 1280x1024 (Support 1280x1024 models such as BB-HCM515)
Quality	Motion (Favor motion) Standard (Standard quality) Clarity (Favor clarity)

SnapshotJPEG should call every 3 seconds or more.

Example:

SnapshotJPEG?Resolution=320x240&Quality=Standard

3.15 MotionJPEG retrieval

(nphReplayRecord)

Accessible for administrator and general users authorized to view buffered images

(Includes guest users, when administrator allows guest users to access the camera)

nphReplayRecord: Retrieve buffered image.

Parameters	Setting
Type	Buffer/transfer trigger no. 1 to 5
Record	First image frame of the motion image. No. 0-n
Interval	Interval: Buffered image retrieving interval (mS) 1 to 1000 Note: Default is 100. default number used if not specified.
DeleteMode	DeleteMode: After buffered image retrieving , buffered image delete or not 1: delete 0: none delete(Default is 0, default number used if not specified.) (Accessible for administrator)
Number	JPEG image retrieve total number (All images are retrieved, if not specified .)

Example 1:

Retrieve a buffered MotionJPEG image from buffer/transfer trigger No. 4, which operates under the conditions set by the buffer/transfer setting.

nphReplayRecord?Type=4

Example 2:

Retrieve a buffered MotionJPEG image starting from its first image frame from buffer/transfer trigger No. 4, which operates under the conditions set by the buffer/transfer setting.

nphReplayRecord?Type=4&Record=0

Example 3:

Retrieve a buffered MotionJPEG image starting from its first image frame from buffer/transfer trigger No. 4, which operates under the conditions set by the buffer/transfer setting.

Retrieving interval is 200 mS. After retrieving, buffered image is deleted.

nphReplayRecord?Type=4&Record=0&Interval=200&DeleteMode=1

Note: "DeleteMode" is available only when administrator accesses.

In general user access, "DeleteMode" is invalid.

Note: When "DeleteMode" sets 1, "Record" must be set 0.

Even if "Record" sets excluding 0, at "DeleteMode" it is downloaded from the first No.0 image and deleted from the first No.0 image all in "Type" set Trigger no..

Note: Camera before Cgi/ifVer:3.20 is not supported to set retrieving images number by "Number".

Note: Camera from Cgi/ifVer:3.20, for protecting the SD memory card, "DeleteMode"=1 at the time of the SD video recording picture processing method has been modified.

Blank gray screen image data (160x120) will be retrieved, if no image is found in buffer.

3.16 Buffered image retrieval (JPEG retrieval)

(BufferingImage)

Accessible for administrator and general users authorized to view buffered images

(Includes guest users, when administrator allows guest users to access the camera)

BufferingImage: Retrieve buffered image.

Parameters	Setting
ImageAdr	0-n (Image No. 0 (the first image) to n)
Type	Buffer/transfer trigger no. 1-5

Example:

Retrieve a buffered SnapshotJPEG image from buffer/transfer trigger No. 4, which operates under the conditions set by the buffer/transfer setting.

BufferingImage?Type=4&ImageAdr=0

3.17 Buffered image deletion (Set)

Func=ImageTransfer&Kind=n&ClearImage=1

Set: Delete buffered images.

Accessible only for administrator

Parameters	Setting
Func	ImageTransfer
Kind ^{Note 1}	Buffer/transfer trigger no. 1-5
ClearImage	Delete. 1 (Fixed)

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error is explained below.

Example:

Delete a buffered image from buffer/transfer trigger No. 4, which operates under the conditions set by the buffer/transfer setting.

Set?Func=ImageTransfer&Kind=4&ClearImage=1

When the ClearImage parameter is set, the other parameters set by Func=ImageTransfer will become ineffective, and only image deletion can be performed.

Only parameter 1 can be set for ClearImage. When attempting to set other values, an error will be issued.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Incomplete Func value or Invalid Kind value BL-C111/C131 Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -7	Invalid ClearImage parameter value	Check parameters
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

3.18 Retrieving information on wireless radio wave condition (Get)

Func=Wireless

(Wireless support models such as BL-C131)

Get: Retrieve information on wireless radio wave condition.

Accessible only for administrator

Parameters	Setting
Func	Wireless (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Wireless&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Data:10-----Wireless radio wave value issued, 10%

State:2-----1:Wired 2:Wireless 3:Detecting

A higher number indicates stronger radio wave reception.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Incomplete Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.19 Retrieving total number of frames for buffered images (Get)

Func=Playback

Get: Retrieve total number of frames for buffered images.

Accessible for administrators and general users authorized to access buffered images

Parameters	Setting
Func	Playback (Fixed)
Kind ^{Note 1}	Buffer setting no. 1-5

Example:

Get?Func=Playback&Kind=4

(Retrieve total number of frames for buffered image setting no. 4)

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Data:24 ----- Current total number of frames is 24

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Incomplete Func value or Invalid Kind value	Check parameters
Return: -8	Number of frames cannot be retrieved	Retry
Return: -11	Not accessed by administrator	Retry as administrator
	No authorization to access buffered images	Retry with authorization to access buffered images

3.20 Retrieving sensor detection information (Get)

Func=Sensor

Get: Retrieve sensor detection information.

Accessible only for administrator

Parameters	Setting	
Func	Sensor (Fixed)	
Kind ^{Note 1}	BL- C111/C131/C160	BB-HCM models
	1: Sensor	1: Alarm1 , 2: Alarm2

Example:

Get?Func=Sensor&Kind=1

(Retrieve current sensor detection status)

(Received)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Data:1¥r¥n -----(BL-C111/C131/C160) Sensor is currently making a detection
(BB-HCM5xx) The Alarm1 input is in the state of opening.

or

Data:0¥r¥n----- (BL-C111/C131/C160) Sensor is currently not making a detection
(BB-HCM5xx) The Alarm1 input is in the state of the short-circuit.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Incomplete Func value or Invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
Return: -7	Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

Note: If (BL-C111/C131/C160)Sensor is currently making a detection, the output (Data:1) is held for 1 second.

Set: Setting AC power source frequency information.

Accessible only for administrator

Parameters	Setting
Func	Powerfrq (Fixed)
Kind	1 (Fixed)
Data ^{Note 1}	50: 50 Hz 60: 60 Hz 256:Auto Setting (new Simultaneous MPEG-4 and JPEG Camera)

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=Powerfrq&Kind=1&Data=50

Note: Automatic setting of power source frequency can do with new Simultaneous MPEG-4 and JPEG Camera.

But automatic setting is unsupported in BB-HCM527,547.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Incomplete Func value or Invalid Kind value BL-C111/C131 Not accessible during Privacy Mode Invalid data setting value	Check parameters Disable Privacy Mode Check parameters
Return: -6	Error while writing to flash memory	Retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve power supply frequency information setting.

Accessible only for administrator

Parameters	Setting
Func	Powerfrq (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Powerfrq&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Data:60

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Incomplete Func value or Invalid Kind value	Check parameters
Return: -8	Retrieving information not allowed	Retry
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.22 Reset to factory default settings (Set)

Func=FactoryDef

Set: Reset all settings (except for clock setting) to the factory default settings.

Accessible only for administrator

Parameters	Setting
Func	FactoryDef (Fixed)
Kind	1 (Fixed)
Data	OK (Fixed)

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=FactoryDef&Kind=1&Data=OK

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or incorrect Kind value	Check parameters
	BL-C111/C131	Disable Privacy Mode
	Not accessible during Privacy Mode	
Return: -7	Invalid Data setting value	Check parameters
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Caution: Buffered images are erased when you execute this function.

Never turn off the power during Reset to Factory Default.

After resetting, Network setting will return to "Automatic setting".

Get: Retrieve Limit Continuous Motion JPEG information setting.

Accessible only for administrator and general users authorized to set image refresh interval

(General users authorized to set image refresh interval)

Parameters	Setting
Func	TopView (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=TopView&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

TMLimit:0

TMInterval:30

BB-HCM models, BL-C111/C131/C140/C160 also support "Get?Func=TopView" for general users authorized to control Image refresh interval to get information on Display time limit of motion images.

TMInterval is set to 65535 (Unlimited), if accessed to "Get?Func=TopView" as an administrator using BB-HCM models, BL-C111/C131/C140/C160.

Setting mode is unsupported in New Simultaneous MPEG-4 and JPEG Camera. The function of limiting Continuous Motion JPEG is setting in each general user setting by new Simultaneous MPEG-4 and JPEG Camera (such as BL-C111/C131/C140/C160, BB-HCM5xx).

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or incorrect Kind value	Check parameters
Return: -8	TMLimit and TMInterval values cannot be retrieved	Retry
Return: -11	Not accessed by administrator	Retry as administrator

Parameters	Getting
TMLimit ^{Note 1}	Motion images playback time 0: No limit 10: 10 seconds 30: 30 seconds 60: 60 seconds 300: 5 minutes 600: 10 minutes 1800: 30 minutes 3600: 60 minutes
TMInterval ^{Note 1}	Still image refresh interval 3: 3 seconds 5: 5 seconds 10: 10 seconds 30: 30 seconds 60: 60 seconds

3.24 NTP server-related setting, retrieval (Set, Get)

Func=Ntp

Set: Set NTP server setting.

Accessible only for administrator

Parameters	Setting
Func	Ntp (Fixed)
Kind	1 (Fixed)
NtpEnable* ^{Note 1}	Automatic clock adjustment by NTP server 1: Enable, 0: Disable
NtpServer*	NTP server address or host name Note: Consult network administrator or provider for the address and name before entering them.
TimeZone* ^{Note 1}	Time zone -24: GMT-12:00 -23: GMT-11:30 -22: GMT-11:00 -21: GMT-10:30 -20: GMT-10:00 Hawaii -19: GMT-09:30 -18: GMT-09:00 Alaska -17: GMT-08:30 -16: GMT-08:00 Pacific Standard Time -15: GMT-07:30 -14: GMT-07:00 Mountain Standard Time -13: GMT-06:30 -12: GMT-06:00 Central Standard Time -11: GMT-05:30 -10: GMT-05:00 Eastern Standard Time -9: GMT-04:30 -8: GMT-04:00 -7: GMT-03:30 -6: GMT-03:00 -5: GMT-02:30 -4: GMT-02:00 -3: GMT-01:30 -2: GMT-01:00 -1: GMT-00:30 0: GMT 00:00 Greenwich Mean Time 1: GMT+00:30 2: GMT+01:00 Central Europe 3: GMT+01:30 4: GMT+02:00 Eastern Europe 5: GMT+02:30 6: GMT+03:00 Baghdad 7: GMT+03:30 8: GMT+04:00 9: GMT+04:30 10: GMT+05:00 11: GMT+05:30 12: GMT+06:00 13: GMT+06:30 14: GMT+07:00 15: GMT+07:30 16: GMT+08:00 China, Western Australia 17: GMT+08:30 18: GMT+09:00 Japan 19: GMT+09:30 Central Australia 20: GMT+10:00 Eastern Australia 21: GMT+10:30 22: GMT+11:00

	23: GMT+11:30 24: GMT+12:00
--	--------------------------------

*Items that do not require settings (Items that retain the last settings)

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=Ntp&Kind=1&NtpEnable=1&NtpServer=xxx.xxx.xxx.xxx&TimeZone=18

Perform NTP automatic setting. NTP server: xxx.xxx.xxx.xxx Time zone: GMT.+9:00 Japan

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	Settings not completed for all NtpEnable, NtpServer and TimeZone settings	Check parameters
Return: -4	Invalid Func value or incorrect Kind value BL-C111/C131 Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -7	Invalid NtpEnable, NtpServer value	Check parameters
Return: -8	NtpServer, TimeZone setting error	Check parameters
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve NTP server related information.

Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	Ntp (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Ntp&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

NtpEnable:1

NtpServer:xxx.xxx.xxx.xxx

TimeZone:18

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or incorrect Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.25 Image display

(ImageViewer)

Accessible for administrators and general users authorized to view images

(All general users)

(Includes guest users, when administrator allows guest users to access the camera)

ImageViewer is used to display images and set various image qualities. By setting ImageViewer parameters, you can specify to display motion or still images, select image resolution, quality (favor motion, clarity, etc.) and still image interval.

ImageViewer: Accessible for administrators and all general users

(All general users)

Parameters	Setting
Mode	Motion (Display motion images) Refresh (Display still images) (for new Simultaneous MPEG-4 and JPEG Camera) JPEG(Display motion JPEG images) MPEG-4(Display MPEG-4 images)
Resolution	192x144 320x240 640x480 1280x1024 (Support 1280x1024 models such as BB-HCM515)
Quality	Motion (Favor motion) Standard (Standard quality) Clarity (Favor clarity)
Interval	Specify the image refresh interval for still images in seconds

Example:

(Display motion images)

ImageViewer?Resolution=320x240&Quality=Standard&Mode=Motion

(Display still images at a refresh rate of 1 per 5 seconds)

ImageViewer?Resolution=320x240&Quality=Standard&Mode=Refresh&Interval=5

3.26 Display the camera name and Capture Image button and audio control

(CgiTitle)

Accessible for administrators and general users authorized to view images

(Includes guest users, when administrator allows guest users to access the camera)

CgiTitle is used to display the camera name and Capture Image button and Full-screen button(Full-screen button: for new Simultaneous MPEG-4 and JPEG Camera). By setting CgiTitle parameters, you can specify the width of the title bar.

Users must be authorized to control Audio output and Microphone input to access Audio control. (Audio features are only for models that support audio.)

CgiTitle: Accessible for administrators and general users authorized to view images

(BB-HCM models: General users authorized to view images)

Parameters	Setting
Resolution	192x144 320x240 640x480 1280x1024 (Support 1280x1024 models such as BB-HCM515)
Sound	Enable :Audio function enable (When un setting it, it becomes disable.)
Size	Specifies the width of the title bar STD (Standard) Expand (Standard x1.5)
Max(for new Simultaneous MPEG-4 and JPEG Camera)	Full-screen button display 1:display

Example:

CgiTitle?Resolution=320x240&Size=STD&Sound=Enable&Max=1

3.27 Audio setting, retrieval (Set,Get)

Func=AudioSetup

Set: Set audio.

Accessible only for administrator

Parameters	Setting
Func	AudioSetup (Fixed)
Kind	1 (Fixed)
OutputEnable ^{Note 1}	Output (Computer microphone input) 1: Enable, 0: Disable
OutputGain ^{Note 1}	Camera audio volume (Speaker) 3: Max., 2: Standard, 1: Min.
TimeOut	Duration (In Seconds) 60: 1 minute, 120: 2 minutes, 180: 3 minutes, 300: 5 minutes, 600: 10 minutes, 1200: 20 minutes, 1800: 30 minutes, 3600: 60 minutes Note: Available values are 60 – 3600, but the values listed above are available to specify on the Web screen.
InputEnable ^{Note 1}	Input (Computer audio output) 1: Enable, 0: Disable
InputGain ^{Note 1}	Camera microphone sensitivity 3: Max., 2: Standard, 1: Min.
PanTiltMute ^{Note 1}	Mute during Pan/Tilt 1: Enable, 0: Disable

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0 ----- 0: OK, -n: Error

Example:

Set?Func=AudioSetup&Kind=1&OutputEnable=1&OutputGain=2&TimeOut=3600
&InputEnable=1&InputGain=2&PanTiltMute=1

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	OutputGain, TimeOut, InputEnable, InputGain and PanTiltMute parameters missing	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid value (e.g. OutputEnable)	Check values
Return: -8	Unable to set value (e.g. TimeOut)	Check parameters and retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve audio setting.

Accessible only for administrator

Parameters	Setting
Func	AudioSetup (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=AudioSetup&Kind=1

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

OutputEnable:1¥r¥n

OutputGain:2¥r¥n

TimeOut:60¥r¥n

InputEnable:1¥r¥n

InputGain:2¥r¥n

PanTiltMute:0¥r¥n

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -8	Error retrieving OutputGain and InputGain values	Retry
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.28 Network (IPv6) setting, retrieval (Set,Get)

Func=V6Network

Set: Set IPv6 network information.

Accessible only for administrator

Parameters	Setting
Func*	V6Network (Fixed)
Kind*	1 (Fixed)
Mode* ^{Note 1}	Network connection type 0 : Auto, 2 : Static
Mode=0 (Auto)	
Open◇ ^{Note 1}	Internet access. 128: Public, 0: Private
DNS1^	DNS server address 1 (Caution 1)
DNS2^	DNS server address 2 (Caution 1)
Bandwidth◇ ^{Note 1}	Communication bandwidth limit (The default value is used, if not specified.) 13107: 0.1 Mbps, 26214: 0.2 Mbps, 39321: 0.3 Mbps, 65536: 0.5 Mbps, 131072: 1 Mbps, 22147483647: Unlimited 262144:2 Mbps ,393216:3 Mbps (new Simultaneous MPEG-4 and JPEG Camera)
ConnectType◇ ^{Note 1}	Connection type (The default value is used, if not specified.) 1: Automatic, 2: 100 Mbps/Full duplex, 3: 100 Mbps/Half duplex, 4: 10 Mbps/Full duplex, 5: 10 Mbps/Half duplex
AutoRestart	Auto restart. 1: Enable, 0: Disable (Disabled, if not specified.)
Mode=2 (Static)	
Open◇ ^{Note 1}	Internet address. 128: Public, 0: Private
Port◇	Port number for Internet connection (Default: 80) (The default value is used, if not specified.) 1 - 65535
IP*	IP address (Caution 1)
Gateway^	Default gateway (Caution 1)
DNS1^	DNS server address 1 (Caution 1)
DNS2^	DNS server address 2 (Caution 1)
Bandwidth◇ ^{Note 1}	Communication bandwidth limit (The default value is used, if not specified.) 13107: 0.1 Mbps, 26214: 0.2 Mbps, 39321: 0.3 Mbps, 65536: 0.5 Mbps, 131072: 1 Mbps, 22147483647: Unlimited 262144:2 Mbps ,393216:3 Mbps (new Simultaneous MPEG-4 and JPEG Camera)
ConnectType◇ ^{Note 1}	Connection type (The default value is used, if not specified.) 1: Automatic, 2: 100 Mbps/Full duplex, 3: 100 Mbps/Half duplex, 4: 10 Mbps/Full duplex, 5: 10 Mbps/Half duplex
AutoRestart ^{Note 1}	Auto restart. 1: Enable, 0: Disable (Disabled, if not specified.)

Caution 1) : Delimit 8 hexadecimal values using ":". Zero "0" can be omitted as "::". (e.g. fe80:2:3:4:5:6::8)

Legend:

*: Required parameter.

◇: Optional parameter. (Inherits the existing settings.)

^: Returns no error, but the value is set to NULL, if omitted.

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example:

Auto connection, private Internet address, unlimited bandwidth, auto connection type, auto restart enabled.

```
Set?Func=V6Network&Kind=1&Mode=0&Open=0&DNS1=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx
&DNS2=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx&Bandwidth=2147483647&ConnectType=1
&AutoRestart=1
```

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Mode and IP parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid value for each range setting	Check the each setting value
Return: -8	Unable to set value	Check parameters and retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve IPv6 network information.

Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	V6Network (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=V6Network&Kind=1

(Return)

(Example 1: Auto connection)

HTTP/1.0 200 OK

Content-type: text/plain

Mode:0

Open:0

DNS1:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx

DNS2:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx

Bandwidth:2147483647

ConnectType:1

(Example 2: Static connection)

HTTP/1.0 200 OK

Content-type: text/plain

Mode:2

Open:0

Port:80

IP:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx

Gateway:

DNS1:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx

DNS2:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx

Bandwidth:2147483647

ConnectType:1

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.29 Daylight saving time setting, retrieval (Set,Get)

Func=Daylight

Set: Set daylight saving time.

Accessible only for administrator

Parameters	Setting
Func*	Daylight saving (Fixed)
Kind*	1 (Fixed)
DstEnable* <small>Note 1</small>	Automatically adjust clock for daylight saving changes (Required). 1: Enable, 0: Disable
BeginMonth◇ <small>Note 1</small>	Starting month: 1-12 (The default value is used, if not specified.)
BeginDay◇ <small>Note 1</small>	Starting day 16: First Sunday, 32: Second Sun, 48: Third Sun, 64: Fourth Sun, 80: Last Sun 17: First Monday, 33: Second Mon, 49: Third Mon, 65: Fourth Mon, 81: Last Mon 18: First Tuesday, 34: Second Tue, 50: Third Tue, 66: Fourth Tue, 82: Last Tue 19: First Wednesday, 35: Second Wed, 51: Third Wed, 67: Fourth Wed, 83: Last Wed 20: First Thursday, 36: Second Thu, 52: Third Thu, 68: Fourth Thu, 84: Last Thu 21: First Friday, 37: Second Fri, 53: Third Fri, 69: Fourth Fri, 85: Last Fri 22: First Saturday, 38: Second Sat, 54: Third Sat, 70: Fourth Sat, 86: Last Sat
BeginHour◇ <small>Note 1</small>	Start time: 0-23
EndMonth◇ <small>Note 1</small>	Ending month: 1-12 (The default value is used, if not specified.)
EndDay◇ <small>Note 1</small>	Ending day 16: First Sunday, 32: Second Sun, 48: Third Sun, 64: Fourth Sun, 80: Last Sun 17: First Monday, 33: Second Mon, 49: Third Mon, 65: Fourth Mon, 81: Last Mon 18: First Tuesday, 34: Second Tue, 50: Third Tue, 66: Fourth Tue, 82: Last Tue 19: First Wednesday, 35: Second Wed, 51: Third Wed, 67: Fourth Wed, 83: Last Wed 20: First Thursday, 36: Second Thu, 52: Third Thu, 68: Fourth Thu, 84: Last Thu 21: First Friday, 37: Second Fri, 53: Third Fri, 69: Fourth Fri, 85: Last Fri 22: First Saturday, 38: Second Sat, 54: Third Sat, 70: Fourth Sat, 86: Last Sat
EndHour◇ <small>Note 1</small>	End time: 0-23

Legend:

*: Required parameter.

◇: Optional parameter. (Inherits the existing settings.)

(Caution) BeginDay, BeginHour, EndMonth, EndDay and EndHour are enabled only when DstEnable=1 (Enable). These parameter settings will be ignored, if DstEnable=0 (Disable).

Return value:

HTTP/1.0 200 OK¥¥¥¥¥¥

Content-type: text/plain¥¥¥¥¥¥¥¥¥¥

Return:0¥¥¥¥¥¥ ----- 0: OK, -n: Error

Example:

Daylight saving enabled, starting on the first Sunday of April at 2 o'clock, ending on the last Sunday of October at 2 o'clock.

Set?Func=Daylight&Kind=1&DstEnable=1&BeginMonth=4&BeginDay=16&BeginHour=2
&EndMonth=10&EndDay=80&EndHour=2

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No DstEnable parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value BL-C111/C131 Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -7	Invalid value for each range setting	Check the each setting value
Return: -8	Unable to set value	Check parameters and retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -13	Country code mismatch	Check the camera model

Get: Retrieve daylight saving time setting.

Accessible for administrator and all general users

(Includes guest users, when administrator allows guest users to access the camera)

Parameters	Setting
Func	Daylight (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Daylight&Kind=1

(Return)

(Example)

HTTP/1.0 200 OK

Content-type: text/plain

DstEnable:1

BeginMonth:4

BeginDay:16

BeginHour:2

EndMonth:10

EndDay:80

EndHour:2

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -13	Country code mismatch	Check the camera model

3.30 Color night vision setting, retrieval (Set,Get)

Func=NightView

Set: Set color night vision.

Accessible only for administrator

Parameters	Setting														
Func*	NightView (Fixed)														
Kind*	1 (Fixed)														
Data* ^{Note 1}	Enable color night vision (Required). 1: Enable, 0: Disable In case of Shutter Speed Support Model(ex.BB-HCM581/580) 1:color night vision enable 0:Shutter Speed setting enable														
STSpeed	<p>Shutter Speed(Sec)</p> <table border="1"> <thead> <tr> <th>Model</th><th>Shutter Speed Setting Value(sec)</th></tr> </thead> <tbody> <tr> <td>BB-HCM511/531</td><td>1/15(default), 1/30, 1/100, 1/250, 1/500, 1/1000</td></tr> <tr> <td>BB-HCM580/581</td><td>1/30(default), 1/100, 1/250, 1/500, 1/1000</td></tr> <tr> <td>BB-HCM515</td><td>AC power source frequency 50Hz 1/12.5(default),1/25,1/50,1/100 AC power source frequency Auto or 60Hz 1/15(default),1/30,1/60,1/120</td></tr> <tr> <td>BL-C111/131</td><td>AC power source frequency 50Hz 1/12.5(default),1/25,1/50,1/100 AC power source frequency Auto or 60Hz 1/15(default),1/30,1/60,1/120</td></tr> <tr> <td>BB-HCM527/547</td><td>AC power source frequency 50Hz 1/15(default),1/50,1/100, 1/250, 1/500, 1/1000 AC power source frequency 60Hz 1/15(default),1/30(default),1/60,1/120, 1/250, 1/500, 1/1000</td></tr> <tr> <td>BL-C140/160</td><td>AC power source frequency 50Hz 1/25(default),1/50,1/100 AC power source frequency Auto or 60Hz 1/30(default),1/60,1/120</td></tr> </tbody> </table> <p>As for setting of shutter speed only in case of Data=0 validity. In case of Data=1, setting of STSpeed is invalid. When STSpeed is not set with Data=0, STSpeed is established value. but when first change from nigh view mode, if STSpeed is not set with Data=0, STSpeed is set default balue. And In case of BB-HCM527/547, if STSpeed is not set with Data=0, STSpeed is set default balue.</p>	Model	Shutter Speed Setting Value(sec)	BB-HCM511/531	1/15(default), 1/30, 1/100, 1/250, 1/500, 1/1000	BB-HCM580/581	1/30(default), 1/100, 1/250, 1/500, 1/1000	BB-HCM515	AC power source frequency 50Hz 1/12.5(default),1/25,1/50,1/100 AC power source frequency Auto or 60Hz 1/15(default),1/30,1/60,1/120	BL-C111/131	AC power source frequency 50Hz 1/12.5(default),1/25,1/50,1/100 AC power source frequency Auto or 60Hz 1/15(default),1/30,1/60,1/120	BB-HCM527/547	AC power source frequency 50Hz 1/15(default),1/50,1/100, 1/250, 1/500, 1/1000 AC power source frequency 60Hz 1/15(default),1/30(default),1/60,1/120, 1/250, 1/500, 1/1000	BL-C140/160	AC power source frequency 50Hz 1/25(default),1/50,1/100 AC power source frequency Auto or 60Hz 1/30(default),1/60,1/120
Model	Shutter Speed Setting Value(sec)														
BB-HCM511/531	1/15(default), 1/30, 1/100, 1/250, 1/500, 1/1000														
BB-HCM580/581	1/30(default), 1/100, 1/250, 1/500, 1/1000														
BB-HCM515	AC power source frequency 50Hz 1/12.5(default),1/25,1/50,1/100 AC power source frequency Auto or 60Hz 1/15(default),1/30,1/60,1/120														
BL-C111/131	AC power source frequency 50Hz 1/12.5(default),1/25,1/50,1/100 AC power source frequency Auto or 60Hz 1/15(default),1/30,1/60,1/120														
BB-HCM527/547	AC power source frequency 50Hz 1/15(default),1/50,1/100, 1/250, 1/500, 1/1000 AC power source frequency 60Hz 1/15(default),1/30(default),1/60,1/120, 1/250, 1/500, 1/1000														
BL-C140/160	AC power source frequency 50Hz 1/25(default),1/50,1/100 AC power source frequency Auto or 60Hz 1/30(default),1/60,1/120														

Legend:

*: Required parameter.

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example1: Enable color night vision.

Set?Func=NightView&Kind=1&Data=1

Example2: Sutter Speed 1/30

Set?Func=NightView&Kind=1&Data=0&STSpeed=1/30

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Invalid STSpeed value	Check the STSpeed value
Return: -7	Invalid Data value or Invalid STSpeed value	Check the Data value or STSpeed value
Return: -8	Unable to set Data value	Check parameters and retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported Shutter Speed	Retry using a model supporting the feature

Get: Retrieve color night vision setting.

Accessible only for administrator

Parameters	Setting
Func	NightView (Fixed)
Kind	1 (Fixed)

Example:

```
Get?Func=NightView&Kind=1
(Return)
(Example)
HTTP/1.0 200 OK
Content-type: text/plain
Data:1
```

or

```
Data:0
STSpeed:1/30
```

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -8	Unable to set value	Check parameters and retry
Return: -11	Not accessed by administrator	Retry as administrator

3.31.1 Preset control (Set)

Func=PresetCnt

Set: Preset camera and get the Preset name.

Accessible only for administrator and general users authorized to access Preset control

Parameters	Setting
Func	PresetCnt (Fixed)
Kind ^{Note 1}	Preset no. 1-8: Preset position no., 9: Sensor (C111/C131), Alarm 1(HCM5xx models), 10: Alarm 2 (HCM5xx models), 0: Home position

(Caution) Only administrator may preset Kind=9 (Sensor) and Kind=10 (Alarm).

Specifying the preset number using the Kind parameter allows the user to get the preset name. (e.g. Return: top right¥r¥n)

The value "Return:-33¥r¥n" returns, if unregistered preset position is specified.

Example: Move the camera to Preset No.4 and get the preset name.

Set?Func=PresetCnt&Kind=4

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return: bottom right¥r¥n ----- (Preset name) 0: OK, -n: Error

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value BL-C111/C131 Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -32	Unable to preset due to invalid value	Check parameters and retry
Return: -33	Unregistered preset	Register preset
Return: -17	Unsupported feature	Retry using a model supporting the feature

Note: Please use next command "Func=PresetCntPos" for camera supported 20 camera positions.

3.31.2 Preset control for 20 Preset Camera (Set)

Func=PresetCntPos

(BB-HCM5xx models)

Set: Preset camera and get the Preset name.

Accessible only for administrator and general users authorized to access Preset control

Parameters	Setting
Func	PresetCntPos (Fixed)
Kind ^{Note 1}	Preset no. · 8 Preset Camera 1-8: Preset position no., 81: Alarm1 82: Alarm2 0:Home position · 20 Preset Camera 1-20: Preset position no., 81: Alarm1 82: Alarm2 0:Home position

(Caution) Only administrator may preset Kind=81 (Alarm1) and Kind=82 (Alarm2).

Specifying the preset number using the Kind parameter allows the user to get the preset name. (e.g. Return: top right¥r¥n)

The value "Return:-33¥r¥n" returns, if unregistered preset position is specified.

Example: Move the camera to Preset No.4 and get the preset name.

Set?Func=PresetCntPos&Kind=4

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return: bottom right¥r¥n ----- (Preset name) 0: OK, -n: Error

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C111/C131	Disable Privacy Mode
	Not accessible during Privacy Mode	
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -32	Unable to preset due to invalid value	Check parameters and retry
Return: -33	Unregistered preset	Register preset
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.32 Digital output setting, retrieval (Set, Get)

Func=Doutput

(BB-HCM models)

Set: Set camera's digital output.

Accessible only for administrator and general users authorized to control digital output

Parameters	Setting
Func	Doutput (Fixed)
Kind	1 (Fixed)
Data ^{Note 1}	Digital output setting 0: Short, 1: Open

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

Example: Set the camera's digital output to Open.

Set?Func=Doutput&Kind=1&Data=1

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value Unsupported feature for BL-C111/C131/C140/C160	Check parameters Retry using a model supporting the feature
Return: -7	Invalid Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Insufficient privileges	Retry as administrator or general users authorized to control external output

Get: Retrieve output setting.

Accessible only for administrator and general users authorized to control digital output

Parameters	Setting
Func	Doutput (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Doutput&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Data: 1

Getting mode is unsupported in the past models (such as BB-HCM3xx).

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value Unsupported output feature	Check parameters Retry using a model supporting the feature
Return: -11	Not accessed by administrator	Retry as administrator

3.33 Image time stamp setting, retrieval (Set,Get)

Func=TimeStamp

Set: Set time stamp format.

Accessible only for administrator

Parameters	Setting
Func	TimeStamp (Fixed)
Kind	1 (Fixed)
Data ^{Note 1}	Time stamp. 0: Do not display, 16: 12 hour time (AM/PM), 32: 24 hour time (Military time)

Set the format of the time stamp used for images.

Note: If you set Data=16 or 32, time stamp display not only on single camera image but also buffered image

If you set Data=0, time stamp do not display on camera image, but time stamp still display on the lower side in the buffered image page.

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example: Set the time stamp format to 24 hour time (Military time).

Set?Func=TimeStamp&Kind=1&Data=32

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value	Check the Data value
Return: -8	Unable to set Data value	Check parameters and retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve time stamp setting.

Accessible only for administrator

Parameters	Setting
Func	TimeStamp (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=TimeStamp&Kind=1

(Return)

(Example)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Data:32¥r¥n ----- 24 hour time

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

Accessible only for administrator and general users authorized to access Audio data

(Includes guest users, when administrator allows guest users to access the camera)

Used for retrieving audio captured by using camera's microphone. Store data cumulatively to record audio.

Use a player that can playback buffered audio on demand to enable real-time monitoring.

Caution: Before saving buffered audio data (for example, to the computer's hard disk), check the audio data size and make sure that there is enough space for saving audio data.

Saving a large volume of data may degrade the computer's performance (System instability, etc.).

Caution: This command is not mounted on the camera which does not have audio function. "404 Not Found" reply.

nphAudio: Audio Retrieval

Parameters	Setting
Mode	Mixed: audio input and output mixed mode

Audio playback procedure

Mixed mode

(1) Start reception

Establish a connection (open the socket), and send the following command string to HTTP port.

"GET

http://xxx.xxx.xxx.xxx:yy/nphAudio?Mode=Mixed

HTTP/1.0\r\n"

xxx.xxx.xxx.xxx: IP address or domain name

yy: HTTP port no. (Not required if the port number is set to 80)

(2) Data reception

"HTTP/1.0 200 OK\r\n"

"Content-type: multipart/x-mixed-replace;boundary=--myboundary\r\n"

"\r\n"

"--myboundary\r\n"

"x-Control=Idle\r\n"

"x-Permission=Output:Enable;Input:Disable\r\n"

"Content-Type: audio/g726-mixed\r\n"

"Content-Length: 2048\r\n\r\n"

(data)

"\r\n"

"--myboundary\r\n"

"x-Control=Idle\r\n"

"x-Permission=Output:Enable;Input:Disable\r\n"

"Content-Type: audio/g726-mixed\r\n"

"Content-Length: 2048\r\n\r\n"

(data)

"\r\n"

The lines 1 and 2 are the header lines. The line 3 takes the carriage-return/linefeed character pairs indicating the end of the header field. The value of "boundary=" on the header line 2 is the boundary string of the boundary header, namely "--myboundary" in this example.

The boundary line 1 takes the boundary string "--myboundary", and the boundary line 2 a client command statement. If the client command is STOP, the client must immediately stop sending audio data (See the sample code above). The boundary line 3 determines the available features (See the sample code above.). The boundary line 4 specifies the Content-type of the data to transfer, and the boundary line 5 the audio data length. The boundary line 5 ends with the carriage-return/linefeed character pairs indicating the end of the boundary header field, and audio data of the specified length follows. (Note that the above sample code shows the carriage-return/linefeed character pairs following the audio data, and it may seem that the audio data closes with the carriage-return/linefeed character pairs, but there is no carriage-return/linefeed character pair appended at the end of the audio data.)

x-Control	Meaning	Operation that client should execute
Idle	The camera shows the state that the voice is not output from the speaker including other clients.	The voice data can be transmitted and the speaker of the camera be output. To output the speaker, it only has to transmit the voice data directly.
Start	It is shown to be able to acquire the resource by receiving and applying the transmission data from the client.	It can know becoming the voice reproduction with the speaker of the camera possible. The client may keep transmitting data.
Run	It is shown that the camera has reproduced the voice from the speaker.	Data may keep being transmitted as well as the above-mentioned.
Stop	It is shown to stop the reproduction from the speaker of the camera. The camera is waited for the transmission stop of data from the client, and changes to Idle.	When this value is received, the client should stop the transmission of data at once.

Operation that meaning and client of value of x-Control should do

x-Permission	value	Meaning
Output	Enable/Disable	Permission authority of output from speaker of PC. When this value is Disable, the voice data of the camera is not sent.
Input	Enable/disable	Mike input (output of speaker of camera) permission authority of PC. Even if data is transmitted when this value is Disable, it is not accepted to the camera.

(3) Reproduction and preservation of voice

The G.726 voice data is taken out of the above-mentioned data, and it continuous reproduces or it preserves it.

It is necessary to prepare the correspondence player in the above-mentioned data to reproduce the voice.

(4) Finish reception

End connection (close the socket).

3.35 Synchronized Image/Audio Retrieval (MJPEG/G.726 speech coder algorithm) (nphVideo)

Accessible only for administrator and general users authorized to view camera images and access Audio data

(Includes guest users, when administrator allows guest users to access the camera)

Used for retrieving motion images and audio from the camera. Store data cumulatively to record audio image.

Use a player that can playback buffered images and audio on demand to enable real-time monitoring.

Caution: **Concurrent connection is maximum of 3 connections.**

Before saving buffered image/audio data (for example, to the computer's hard disk), check the image/audio data size and make sure that there is enough space for saving data.

Saving a large volume of data may degrade the computer's performance (System instability, etc.).

Caution: This command is not mounted on the camera which does not have audio function. "404 Not Found" reply.

nphVideo: Synchronized Image/Audio Retrieval

Parameters	Setting
Mode	0 (Fixed). Reserved for future expansion.
Resolution	192x144 320x240(The default setting will be used, if the user is not an authorized user.) 640x480 1280x1024 (Support 1280x1024 models such as BB-HCM515)
Quality	Motion (Favor motion) Standard (Standard quality) (The default setting will be used, if the user is not an authorized user.) Clarity (Favor clarity)

Image display procedure

(1) Start reception

Establish a connection (open the socket), and send the following command string to HTTP port.

"GET

http://xxx.xxx.xxx.xxx:yy/nphVideo?Mode=0&Resolution=320x240&Quality=Standard

HTTP/1.0\r\n"

xxx.xxx.xxx.xxx: IP address or domain name

yy: HTTP port no. (Not required if the port number is set to 80)

(2) Data reception

"HTTP/1.0 200 OK\r\n"

"Content-type: multipart/x-mixed-replace: boundary=--myboundary\r\n"

"\r\n"

"--myboundary\r\n"

"Content-type: audio/g726\r\n"

Content-length: [audio length]\r\n\r\n"

(Audio data)

"\r\n"

"--myboundary\r\n"

"Content-type: image/jpeg\r\n"

Content-length: [image length]\r\n\r\n"

(Image data)

"\r\n"

(3) Image with audio displaying/saving

From the data above, extract JPEG data and G.726 audio, and playback or save them.

Or, save the extracted data as an audio image.

A viewer or a player that supports the extracted data is required to view images and playback the audio.

(4) Finish reception

End connection (close the socket).

3.36 Alarm log Notification setting, retrieval (Set,Get)

Func=AlarmMessage

Set: Set alarm log notification parameters.

Accessible only for administrator

Parameters	Setting
Func	AlarmMessage (Fixed)
Kind	1 (Fixed)
AMessageEnable	Alarm log notification 0: Do not notify 1: Notify the user of alarm log, if alarm log exist 2: Notify the user of alarm log even if alarm log do not exist.
Week	Day setting Set the desired days of the week by adding the numbers as shown below. 1: Sun 2: Mon 4: Tue 8: Wed 16: Thu 32: Fri 64: Sat (Example) 127: Set for every day (1+2+4+8+16+32+64 = 127) 65: Set for Sun and Sat only (1+64 = 65) 42: Set for Mon, Wed, and Fri (2+8+32 = 42)
Hour	Operating hour (Default: 0) (The default value is used, if not specified.) 0-23
Min	Operating minute. (Default: 0) (The default value is used, if not specified.) 0, 10, 20, 30, 40, 50, 60
AMailServer*	E-mail server address or host name for sending E-mail (SMTP) Note: Set using 4 numbers (0–255) each separated by a period; “0.0.0.0” and “255.255.255.255” are unavailable. When setting the host name, use 1–255 one-byte characters. The following cannot be used: [Space], ["], ['], [&], [<], [>].
AMailPort	Sending E-Mail (SMTP) server Port No. (Default: 25) (The default value is used, if not specified.) Note: Standard port number is 25.
APopServer	E-mail server address or host name for receiving E-mail (POP3) Note: Set using 4 numbers (0–255) each separated by a period; “0.0.0.0” and “255.255.255.255” are unavailable. When setting the host name, use 0–255 one-byte characters. The following cannot be used: [Space], ["], ['], [&], [<], [>].
APopPort	Receiving E-mail (POP3) server Port No. (Default: 110) (The default value is used, if not specified.) Note: Standard port number is 110
APopID (When Setting APopServer, Required setting)	Login ID (When you can select SMTP authentication, this is SMTP Login ID.) Note: 0–63 one-byte characters. The following cannot be used: ["]
APopPassword	Password (When you can select SMTP authentication, this is SMTP Login Password.) Note: 0–63 one-byte characters. The following cannot be used: ["]
ACertification	Authentication You can select how to authenticate. 0: No authentication 1: SMTP authentication 2: POP before SMTP authentication (When unsetting it, it sets it internally according to the setting of APopServer automatically. When APopServer is set, it sets it to the POP before SMTP authentication. When APopServer is unset, it sets it without the authentication.)
AMailFrom*	Sender (Reply E-mail address) Note: Set in the following order: [text]+[@]+[text]+[.]+[text] 5–63 one-byte characters The following cannot be used: [Space], ["], ['], [&], [<], [>].

AMailTo1*	Destination E-mail address 1 Note: Set in the following order: [text]+[@]+[text]+[.]+[text] 5–63 one-byte characters The following cannot be used: [Space], ["], ['], [&], [<], [>].
AMailTo2*	Destination E-mail address 2. Note: Refer to AMailTo1 for notes
AMailTo3*	Destination E-mail address 3. Note: Refer to AMailTo1 for notes
AMailSubject	Subject Note: One-byte characters: 0–44, two-byte characters: 0–22 ["] cannot be used.

*: Required setting

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK -n: Error

Example: Notice of alarm log at 3 o'clock every Sunday and Saturday, even if alarm log do not exist.

Set?Func=AlarmMessage&Kind=1&AMessageEnable=2&Week=65&Hour=15&Min=0

&AMailServer=smtp.server.com&AMailPort=25&APopServer=pop.server.com

&APopPort=110&APopID=robert &APopPassword=robertpassword&AMailFrom=xxx@xxx.xxx.xxx

&AMailTo1=xxx@xxx.xxx.xxx&AMailSubject=AlarmMessage

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature
Return: -19	No alarm and motion detection setting	Retry after alarm or motion detection setting

Get: Retrieve alarm log notification setting.

Accessible only for administrator

Parameters	Setting
Func	AlarmMessage (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=AlarmMessage&Kind=1

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

AMessageEnable:2¥r¥n

Week:65¥r¥n

Hour:5¥r¥n

Min:0¥r¥n

AMailServer:smtp.xxxxxx.xxx¥r¥n

AMailPort:25¥r¥n

APopServer:pop.xxxxxx.xxx¥r¥n

APopPort:110¥r¥n

APopID:robert¥r¥n

APopPassword:robertpassword¥r¥n

ACertification:2¥r¥n

AMailFrom:cam@xxxxxx.xxx¥r¥n

AMailTo1:tocam@xxxxxx.xxx¥r¥n

AMailTo2:¥r¥n

AMailTo3:¥r¥n

AMailSubject:AlarmLogTest¥r¥n

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature
Return: -19	No alarm and motion detection setting	Retry after alarm or motion detection setting

3.37 Motion detection setting, retrieval (Set,Get)

Func=MotionDetect

Set: Set motion detection parameters.

Accessible only for administrator

Parameters	Setting
Func	MotionDetect (Fixed)
Kind	1 (Fixed)
Thresh	Threshold: Adjust the threshold. If the threshold is set low, this software sensitively detects changes. 1-20
Sense	Sensitivity: If you set sensitivity high, amplitude of motion detection bar gets jumpy. 1-20

Return value:

HTTP/1.0 200 OK\r\n

Content-type: text/plain\r\n\r\n

Return:0\r\n ----- 0: OK -n: Error

Example: Set the threshold to 10 and the sensitivity to 10.

Set?Func=MotionDetect&Kind=1&Thresh=10&Sense=10

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Thresh and Sense parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -7	Invalid data value	Check the data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve alarm log setting.

Accessible only for administrator

Parameters	Setting
Func	MotionDetect (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=MotionDetect&Kind=1

(Return)

HTTP/1.0 200 OK\r\n

Content-type: text/plain\r\n\r\n

Thresh:10\r\n

Sense:10\r\n

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.38 UPnP setting, retrieval (Set,Get)

Func=Upnp

Set: Set UPnP .

Accessible only for administrator

Parameters	Setting
Func	Upnp(Fixed)
Kind	1 (Fixed)
Portmap	Portmap: Enable/disable Auto Port Forwarding. If the network setting is [Static] or [DHCP], enabling auto port forwarding allows you to access the camera from the Internet. 0: Disable 1: Enable *If the network setting is [Automatic Setup], enable [Open: Allow Access from the Internet] on Network setting.
Icon	Icon: Enabling it displays a shortcut to the camera in the My Network Places folder. 0: Disable 1: Enable *if you use Windows XP or Windows Me, this feature is available. Enable UPnP Windows component before using the feature.

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK -n: Error

Example: Set the Auto Port Forwarding to Disable and the shortcut to Enable.

Set?Func=Upnp&Kind=1&Portmap=0&Icon=1

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Portmap and Icon parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
Return: -7	Invalid data value	Check the data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -20	Not changed Portmap, If the network setting is [Automatic Setup].	Check the network setting

Get: Retrieve UPnP setting.

Accessible only for administrator

Parameters	Setting
Func	Upnp(Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Upnp&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Portmap:0

Icon:1

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.39 Banner setting, retrieval (Set,Get)

Func=Banner

Set: Set Banner .

Accessible only for administrator

Parameters	Setting
Func	Banner(Fixed)
Kind	1 (Fixed)
BEnable	BEnable: Enable/disable Banner Display. 0: Disable 1: Enable
BMethod	BMethod: Select Banner user. 1: Administrator only 2:General user only 3:All users
BImageUrl	BImageUrl: Enter the image URL you want to display as a banner. When BEnable is 1[Enable] , enter the image URL. (1 --- 127 characters) ex) http://xxx.yyy.zzz/ppp.jpg Note that [Space],[",["],["&],[<],and [>] are not available.
BLinkUrl	BLinkUrl: Enter the target URL you want to display when clicking the banner. (0 --- 127 characters) ex) http://xxx.yyy.zzz/index.html Note that [Space],[",["],["&],[<],and [>] are not available.

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK -n: Error

Example: Set Banner Display to Enable and the banner can be displayed for all users.

Image URL : http://xxx.yyy.zzz/ppp.jpg

Link URL : http://xxx.yyy.zzz/index.html

Set?Func=Banner&Kind=1&BEnable=1&BMethod=3

&BImageUrl=http://xxx.yyy.zzz/ppp.jpg

&BLinkUrl=http://xxx.yyy.zzz/index.html

*When the Banner Display is enabled, the camera access the Image URL every time the Single page is displayed. The intermittent and continuous switching of the Single page burden the PC that stores the image linked with the URL.

When setting the images on the PC or the server that required to be authenticated to a Image URL, displaying the authentication window when displaying the Single Camera page.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value BL-C111/C131 Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -7	Invalid data value	Check the data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve Banner setting.

Accessible only for administrator

Parameters	Setting
Func	Banner(Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Banner&Kind=1

(Return)

HTTP/1.0 200 OK
Content-type: text/plain
BEnable:1
BMethod:3
BImageUrl: http://xxx.yyy.zzz/ppp.jpg
BLinkUrl: http://xxx.yyy.zzz/index.html

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.40 DDNS setting, retrieval (Set,Get)

Func=DDNS

Set: Set DDNS .

Accessible only for administrator

Parameters	Setting
Func	DDNS(Fixed)
Kind	1 (Fixed)
Type	Type: Select DDNS Type. 0: Disable 1: Viewnetcam.com 2: User-specified DynamicDNS

Type=1(Viewnetcam.com)

Parameters	Setting
UpdateTime	UpdateTime: Updating time 60000: 10 min 120000: 20min 180000: 30 min 240000: 40min 300000: 50min 360000: 1h (default) * settings will not be updated, if not specified. There were errors in setting value up to of Ver.3.30.
GlobalAdrFlg	Global address notification 1:enable 0:disable

Type=2(User-specified DynamicDNS)

Parameters	Setting
DDNSUrl	DDNSUrl: DynamicDNS Server URL （ 1 to 255 Characters ）
UpdateTime	UpdateTime: Updating time -1: At the time of starting 60000: 10 min 2160000: 6h 180000: 30 min 4320000: 12h 360000: 1h 8640000: 24h 1080000: 3h * settings will not be updated, if not specified.
UserID	UserID: get DynamicDNS information from the DynamicDNS service industry company. （ 0 to 63 Characters ） Note that ["],and [:], are not available.
UserPassword	UserPassword: get DynamicDNS information from the DynamicDNS service industry company. （ 0 to 63 Characters ） Note that ["],and [:], are not available.

Return value:

HTTP/1.0 200 OK

Content-type: text/plain r n r n

Return:0¥r¥n ----- 0: OK -n: Error

Example: Set Viewnetcam.com to Enable.

and Update time 30min. , Global address notification enable

Set?Func=DDNS&Kind=1&Type=1&UpdateTime=180000&GlobalAdrFlg=1

* Default Gateway and DNS server addresses must be set to use DynamicDNS.

* It may take several minutes for the registered URL to connect.

Some DynamicDNS service is not connected.

*Confirming the Internet access

Due to the router specifications, the image may not be displayed even if you access the camera from your PC on the same LAN as the camera. In this case, access the camera in the following procedures.

-- Accessing from the PC on another network

- Accessing from your cell phone

*When you change "Type" from "2" to "1", please change to "1" after it change to "0" once.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value BL-C111/C131 Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -7	Invalid data value	Check the data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve DDNS setting.

Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	DDNS(Fixed)
Kind	1 (Fixed)

Example:

```
Get?Func=DDNS&Kind=1
(Return)
HTTP/1.0 200 OK
Content-type: text/plain
Type:1
CamUrl:http://camxxx.viewxxx.com:50000
AccountLink:https://www.xxx-xx.com/registration/index.php?xxxxxx
Status:4
UpdateTime:180000
GlobalAdrFlg:1
```

Type: DDNS Type 0: Disable 1: Viewnetcam.com 2: User-specified DynamicDNS
 CamUrl: Personal Camera URL registered with the Viewnetcam.com service.
 AccountLink: Your Account Link registered with the Viewnetcam.com service.
 Status: Viewnetcam.com Status Information
 -1: You have not registered for the service.
 0: You have not registered for the service.
 (The camera is not communicating with the Viewnetcam.com server.)
 1: You have not registered for the service.
 2: The camera has been registered successfully with Viewnetcam.com service.

Example2(Type=2):User-specified DynamicDNS

```
(Return)
HTTP/1.0 200 OK
Content-type: text/plain
Type:2
DDNSUrl:http://xxx.xxx.xxx.xxx:xxxxx/
UpdateTime:60000
UserID:xxxxxx
```

DDNSUrl: DynamicDNS Server URL.
 UpdateTime: Updating time.
 UserID: User Name get from the DynamicDNS service industry company.
 *For security, UserPassword cannot be retrieved.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.41 Retrieving UPnP Status (Get)

Func=UpnpStatus

Get: Retrieve UPnP Status.

Accessible only for administrator

Parameters	Setting
Func	UpnpStatus(Fixed)
Kind	1 (Fixed)

Example:

Get?Func=UpnpStatus&Kind=1

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Status:1¥r¥n

Port:50000¥r¥n

Adress:xxx.xxx.xxx.xxx¥r¥n

Status: UpnP Status Information
0: Disable 1: Enable 2: Setup on process
3: Deletion on process 4: Setup Failed
5: Deletion Failed 6: Port number refreshing failed
16: Failed to detect IDG 17: Access to outer DDNS on process

Port: Setting Port No.

Address: Global address set up to camera by UPnP

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.42 Retrieving Error Log Information (Get)

Func=ErrorLog

Get: Retrieve Error Log Information.

Accessible only for administrator

Parameters	Setting
Func	ErrorLog(Fixed)
Kind	1 (Fixed)

Example:

Get?Func=ErrorLog&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

TotalErrorNum:17

Error1:2005/ 8/22 20:19,UPNP,10,100

Error2:2005/ 8/22 20:22,SMTP,6,1

Error3:2005/ 8/22 20:23,SMTP,6,1

Error4:2005/ 8/22 20:24,SMTP,1,1

Error5:2005/ 8/22 20:24,POP3,1,1

Error6:2005/ 8/22 20:27,SMTP,6,1

Error7:2005/ 8/22 20:27,POP3,4,1

Error8:2005/ 8/22 20:28,SMTP,6,1

Error9:2005/ 8/22 20:28,POP3,4,1

Error10:2005/ 8/22 20:29,SMTP,6,1

Error11:2005/ 8/22 20:29,POP3,4,1

Error12:2005/ 8/22 20:30,SMTP,6,1

Error13:2005/ 8/22 20:30,POP3,4,1

Error14:2005/ 8/22 20:31,SMTP,6,1

Error15:2005/ 8/22 20:31,POP3,4,1

Error16:2005/ 8/22 20:32,SMTP,6,1

Error17:2005/ 8/22 20:32,POP3,4,1

TotalErrorNum: Total Error Log Number.

Error1:2005/ 8/22 20:19,UPNP,10,100

Date of Error: 2005/ 8/22 20:19

Protocol of Error UPNP

Division of Error 10

Code of Error 100

*Retrieve Error Log on Camera Maintenance > Status Screen.

* Last 20 Error Log displayed.

*Error Log Protocol: SMTP,POP3,FTP,NTP,DNS,DDNS,SDDNS,DHCP,
UPNP,BOOTP,HTTP-NOTIFICATION ,AUTOCONFIG,HTTPS

*If Error Log is none ,only TotalErrorNum is only displayed.

*Added Error Log Protocol for BB-HCM527: HTTPS.

*Error log Status Information : <http://panasonic.co.jp/pcc/products/en/netwcam/technic/index.html>

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.43 Indicator setting, retrieval (Set,Get)

Func=PowerLed

(Indicator setting supported models)

Set: Set Indicator Display .

Accessible only for administrator

Parameters	Setting
Func	PowerLed(Fixed)
Kind	1 (Fixed)
Data	Data: Select Indicator operation. Indicator has four options. 0: Always on 1: Turn the indicator on when the camera is accessed. 2: Turn the indicator on during sensor reaction.(only BL-C111/C131/C160) 3: Always off

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK -n: Error

Example: Set turn the indicator on during sensor reaction.(BL-C111/C131/C160)

Set?Func=PowerLed&Kind=1&Data=2

* Built-in Human Detection Sensor none supported camera cannot set Data=2(Turn the indicator on during sensor reaction).

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
	Setting Data=2	Check the data value
	(Supported BL-C111/C131/C160)	
Return: -7	Invalid data value	Check the data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve Indicator Display Information.

Accessible only for administrator

Parameters	Setting
Func	PowerLed(Fixed)
Kind	1 (Fixed)

Example:

Get?Func=PowerLed&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Data:0

(Always on)

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

Set: Set Video Streaming .

Accessible only for administrator

Parameters	setting
Func	VDelivery(Fixed)
Kind	1(Fixed)
640framerate	640x480 MPEG-4 Max. Frame Rate 1--30
320framerate	320x240 MPEG-4 Max. Frame Rate 1--30
192framerate	192x144 MPEG-4 Max. Frame Rate 1--30
640bitrateL	640x480 MPEG-4 Min. Bit Rate 192 -- 2048
640bitrateH	640x480 MPEG-4 Max. Bit Rate 192 -- 2048
320bitrateL	320x240 MPEG-4 Min. Bit Rate 64 -- 1024
320bitrateH	320x240 MPEG-4 Max. Bit Rate 64 -- 1024
192bitrateL	192x144 MPEG-4 Min. Bit Rate 32 -- 512
192bitrateH	192x144 MPEG-4 Max. Bit Rate 32 -- 512
RTSPPortNo	RTSP Port No. 1 -- 65535,(Usually Use 554)
RTPPortMin	RTP Port Min.No. 2--65400 Use Even Number
Multicast	Multicast Setting 0:Disable 1:Enable Note: If "Multicast" does not set to "1", multicast related parameter setting is disable.
MulticastTTL	Packet Availability Time 1--255,(Usually Use 5)
MulticastV4	Multicast(IPv4) 0:Disable 1:Enable
MV4Adr	Address(IPv4) (Ex. 231.244.244.241)
MV4MPEGPortNo	MPEG-4 Port No. Min(IPv4) 2000 -- 65520 Use Even Number
MV4AUDPortNo	Audio Port No.(IPv4) 2000 -- 65520 Use Even Number
MulticastV6	Multicast(IPv6) 0:Disable 1:Enable
MV6Adr	Address(IPv6) (Ex. ff1e::0010)
MV6MPEGPortNo	MPEG-4 Port No. Min(IPv6) 2000 -- 65520 Use Even Number
MV6AUDPortNo	Audio Port No.(IPv6) 2000 -- 65520 Use Even Number

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK -n: Error

Example: Set

MPEG-4 Max frame rate each 30

MPEG-4 bit rate

640x480 192 --- 768 Kbps

320x240 64 --- 384 Kbps

192x144 32 --- 128 Kbps

RTSP Port No. 554

RTP Port Min. No. 33000

Multicast Enable

Packet Availability Time 5

Multicast (IPv4) Enable

Address (IPv4) 231.244.244.241

MPEG-4 Port No. Min(IPv4) 30000

Audio Port No.(IPv4) 30020

Multicast(IPv6) Disable

Set?Func=VDelivery&Kind=1&640framerate=30&320framerate=30&192framerate=30&640bitrateL=192&640bitrateH=768&320bitrateL=64&320bitrateH=384&192bitrateL=32&192bitrateH=128&RTSPPortNo=554&RTPPortMin=33000&Multicast=1&MulticastTTL=5&MulticastV4=1&MV4Adr=231.244.244.241&MV4MPEGPortNo=30000&MV4AUDPortNo=30020&MulticastV6=0

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters

Return: -4	Invalid Func value or invalid Kind value A big and small relation of a set value is illegal. BL-C111/C131 Not accessible during Privacy Mode	Check parameters Check the data value Disable Privacy Mode
Return: -7	Invalid data value	Check the data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve Video Streaming Information.

Accessible for administrator and general users authorized to retrieve motion images

Parameters	setting
Func	VDelivery(Fixed)
Kind	1(Fixed)

Example:

Get?Func=VDelivery&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

```

640framerate:30
320framerate:30
192framerate:30
640bitrateL:192
640bitrateH:768
320bitrateL:64
320bitrateH:384
192bitrateL:32
192bitrateH:128
RTSPPortNo:554
RTPPortMin:33000
Multicast:1
MulticastTTL:5
MulticastV4:1
MV4Adr:231.244.244.241
MV4MPEGPortNo:30000
MV4AUDPortNo:30020
MulticastV6:0
MV6Adr:::ff1e:::0010
MV6MPEGPortNo:30100
MV6AUDPortNo:30120

```

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

* From Cgii/fVer:3.20 the general users authorized to retrieve motion images can retrieve the video streaming information.

* With general user setting, "Limit time of Continuous Motion JPEG" setting "Not permitted" users are not accessible.

Set: Set Proxy .**Accessible only for administrator**

Parameters	setting
Func	Proxy(Fixed)
Kind	1(Fixed)
ProxyAddress	Proxy server address or host name Note: Set using 4 numbers (0–255) each separated by a period; “0.0.0.0” and “255.255.255.255” are unavailable. When setting the host name, use 1–255 one-byte characters. The following cannot be used: [Space], ["], ['], [&], [<], [>].
ProxyPortNo	Proxy server Port No. (Default: 8080)
ProxyLoginID	Login ID Note: 0–63 one-byte characters. The following cannot be used: ["]
ProxyPassword	Password Note: 0–63 one-byte characters. The following cannot be used: ["]

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK -n: Error

Example:Set the proxy server.

Set?Func=Proxy&Kind=1&ProxyAddress=192.168.0.1&ProxyPortNo=8080&ProxyLoginID=abcdxxx&ProxyPassword=passxxx

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
	BL-C111/C131	
	Not accessible during Privacy Mode	Disable Privacy Mode
Return: -7	Invalid data value	Check the data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve Proxy Information.**Accessible only for administrator**

Parameters	setting
Func	Proxy(Fixed)
Kind	1(Fixed)

Example:

Get?Func=Proxy&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

ProxyAddress:192.168.0.1

ProxyPortNo:8080

ProxyLoginID:abcdxxx

ProxyPassword:*****

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

Func=BackLight

(except BL-C111/C131)

Set: Set camera's backlight/gray level correction feature.

Accessible for administrator and general users authorized to control camera's backlight/gray level

Parameters	Setting
Func	BackLight (Fixed)
Kind	0:general users authorized to control camera's backlight/gray level 1:administrator
Data	Back Light 0:Disable, 1:Enable.

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example: Set the Back Light to Enable.

Set?Func=BackLight&Kind=1&Data=1

* Camera is set and saved for Home Position backlight/gray level data at Kind=1.

At Kind=0, camera is only set backlight/gray level.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Unsupported feature for BL-C111/C131	Retry using a model supporting the feature
Return: -7	Invalid Data value	Check the Data value
Return: -8	Unable to set value due to invalid Data value	Check parameters and retry
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve Back Light setting.

Accessible for administrator and general users authorized to control camera's backlight/gray level

Parameters	Setting
Func	BackLight (Fixed)
Kind	0:general users authorized to control camera's backlight/gray level 1:administrator

Example:

Get?Func=BackLight &Kind=1

(Return)

```
HTTP/1.0 200 OK¥r¥n
```

Content-type: text/plain r n r n

Data:1¥r¥n ----- backlight/gray level correction feature is enabled.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Unsupported feature for BL-C111/C131	Retry using a model supporting the feature
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Set: Set camera's Overlay feature.**Accessible only for administrator**

Parameters	Setting
Func	Overlay (Fixed)
Kind	1 (Fixed)
DateFlag	Date & Time Include 0:Non Include, 1:Include
DateType	Date Format 1: YY/MM/DD (06/04/15) 2:Mmm.DD,YY (Apr.15,06) 3:DD Mmm,YY (15 Apr,06)
TextFlag	Text Include 0:Non Include, 1:Include
TextData	Include Text Data 1 to 20 Characters
AlarmFlag	Trigger status Include 0:Non Include, 1:Include

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

Example: Set Overlay Date, Text, Trigger Status all Include, Text is Play Room".

Set?Func=Overlay&Kind=1&DateFlag=1&DateType=2&TextFlag=1&TextData=PlayRoom&AlarmFlag=1

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve Overlay setting.**Accessible only for administrator**

Parameters	Setting
Func	Overlay (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=Overlay&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

DateFlag:1

DateType:2

TextFlag:1

TextData:PlayRoom

AlarmFlag:1

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.48 Support Image Resolution retrieval (Get)

Func=ImageResolution

Get: Retrieve camera's support resolution.

Accessible for administrator and all general users

(Includes guest users, when administrator allows guest users to access the camera)

Parameters	Setting
Func	ImageResolution (Fixed)
Kind	1 (Fixed)
Mode	select image format 0:MPEG-4, 1:JPEG

Example:

Get?Func=ImageResolution&Kind=1&Mode=0 this camera's MPEG-4 support resolution

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Data:640x480,320x240,192x144

Support resolutions are separated by comma.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.49 Buffered MPEG-4 retrieval

(nphReplayAsf)

Accessible for administrator and general users authorized to view buffered images

(Includes guest users, when administrator allows guest users to access the camera)

nphReplayAsf: Retrieve buffered Asf File.

Parameters	Setting
Type	Buffer/transfer trigger no. 1 to 5
File	Asf File No. 1 to n If DeleteMode=1, specification is ignored.
Record (*)	Asf File No. 0 to n-1 If DeleteMode=1, specification is ignored. "Record" is equal to "File"-1. The value which is set with File is preferred.
TaskNo	Buffer/transfer trigger no. 1 to 5 "TaskNo" is equal to "Type". The value which is set with Type is preferred.
DeleteMode(*)	DeleteMode: After buffered first Asf file retrieving , buffered first Asf file delete or not 1: delete 0: none delete(Default is 0, default number used if not specified.) (Accessible for administrator)

(*) It adds from Cgii/fVer:3.20. From Cgii/fVer:3.20 it is not necessary to set "TaskNo". "Type" is preferred.

Example1 :

Retrieve a first buffered Asf File from buffer/transfer trigger No. 4, which operates under the conditions set by the buffer/transfer setting.

nphReplayAsf?Type=4&File=1&TaskNo=4

(From Cgii/fVer:3.20 Equality nphReplayAsf?Type=4&File=1.)

(Received)

HTTP/1.0 200 OK

Content-type: video/x-ms-asf

(Asf file data)

If no image is found in buffer:

(Received)

HTTP/1.0 503 Service Unavailable

Asf file is not retrieved.

Example2 :

Retrieve a first buffered Asf File from buffer/transfer trigger No. 4, which operates under the conditions set by the buffer/transfer setting and a first buffered Asf File is Deleted.

nphReplayAsf?Type=4&DeleteMode=1

(Received)

HTTP/1.0 200 OK

Content-type: video/x-ms-asf

(Asf file data)

Then the first buffered Asf File is Deleted.

Note: "DeleteMode" is available only when administrator accesses.

In general user access, "DeleteMode" is invalid.

Note: When "DeleteMode" sets 1, "Record" must be set 0.

Even if "Record" sets excluding 0, at "DeleteMode" it is downloaded from the first No.1 MPEG-4 Asf file and deleted from the first No.1 MPEG-4 Asf file all in "Type" set Trigger no..

3.50 MPEG-4 retrieval (MPEG-4 stream retrieval: Real-time)

(nphMpeg4)

Accessible for administrator and general users authorized to view motion images

(Includes guest users, when administrator allows guest users to access the camera)

(for new Simultaneous MPEG-4 and JPEG Camera)

Used for retrieving MPEG-4 stream by camera. Store data cumulatively to record MPEG-4.

Use a player that can playback buffered MPEG-4 on demand to enable real-time monitoring.

Caution: Before saving buffered MPEG-4 data (for example, to the computer's hard disk), check the MPEG-4 data size and make sure that there is enough space for saving MPEG-4 data.

Saving a large volume of data may degrade the computer's performance (System instability, etc.).

1. Outline of function

1.1 Function and performance

(1) MPEG4(RTP) reproduction function

-- Reproduced MPEG-4 Video and G726 Audio of the RTP unicast and the multicast

(Unicast)

PC communicates with the camera by the one to one. Because UDP is used compared with HTTP(TCP), the delay is small.

Controlled session by RTSP.

Communicated two RTP stream of RTP(MPEG-4) and RTP(G.726).

(Multicast)

The stream can be received by all clients that receive the multicast by a throw of the packet at the multicast address from the camera.

Because all clients can be received by one stream, the band is made, and it is condensable, and can make the reception potential client unrestricted in fact.

(2) HTTP reproduction function

-- MPEG4/G726 can be reproduced by way of HTTP for the environment to which the RTP unicast cannot be received.

(3) User interface

-- Play back and Stop Button : Start of the played back video and audio. (It is an automatic operation and a start of the play back according to JavaScript to display the page.)

-- Microphone: Function that inputs voice from PC microphone, and played back with camera speaker.

-- Speaker and volume control: On/off of G.726 voice. The played back audio stops when turning it off.

The volume changes the play back volume.

-- Elapsed time /FPS indication: After ActiveX starting, time, it indicates FPS of the MPEG-4 video which in addition is played back.

-- A digital zoom: The digital zoom that the image Zoomings can be done by the wheel or moving the mouse the upper side or under the image on the image while doing the right-clicking pressing.

Video Streaming

unicast	Used RTP unicast.
multicast	Used RTP multicast.
HTTP	Used HTTP.

Method of deciding Video Streaming

-- It executes it in order to specify by SetUrl()/SetHttpUrl/SetMulticastUrl(). The method of the following address is tested if failing.

-- When ConnectionMode is set to 'Auto' , it connects it by the following method without testing the connection when not applying to the terms and conditions above.

2. Parameter

function	parameter	value	Meaning
Connection Mode	ConnectionMode	"Auto"/"Static"	Setting to 'Auto', It follows Auto Select. Setting to 'Static', The specified method is sequentially tested. default: Static
Display Mode	DisplayMode	"Normal"/"Enlarge"	The screen display is enlarged or it matches to the size of the image data. Setting to 'Normal', The size of the display area is changed according to the size of the image data. Setting to 'Enlarge', The display size is fixed by the size specified when ActiveX starts. default: Normal
Microphone	Mic	"Enable"/"Disable"	from PC microphone to camera speaker. Setting to 'Enable', microphone is enable. Setting to 'Disable', microphone is disable. default: Disable
Digital Zoom	DigitalZoom	"Enable"/"Disable"	Setting Digital Zooming to 'Enable' or 'Disable' . default: Disable
Click & Centering control target	ControlTarget	String	Specified Click & Centering control target CGI name. default: nphControlCamera
Language	Language	Integer	Specified Click & Centering control target CGI language value. default: 0

3. Method of Video Streaming and Communication flow

3.1 RTP unicast

PC is connected with the camera with peer-to-peer.

RTSP is used for the control of the connection.

RTP/UDP is used for the transmission of data.

RTCP is used for the control of data.

General knowledge concerning RTSP, RTP, RTCP, and SDP is needed.

Communication flow:

(1)It connects it with the RTSP server of the camera.

- (2)The DESCRIBE method is issued, and SDP is acquired.
- (3)The SETUP method is issued.
- (4)The PLAY method is issued.
- (5)It receives the data, and it play back.
- (6)The TEARDOWN method is issued.
- (7) The connection is closed.

(1)It connects it with the RTSP server of the camera.

The socket is opened, and it connects it with the RTSP server of the camera with TCP. The RTSP server is initial value 554.

(2)The DESCRIBE method is issued, and SDP is acquired.

"DESCRIBE rtsp://10.75.52.218/nphMpeg4/g726-320x240 RTSP/1.0\r\n

CSeq: 1\r\n

Accept: application/sdp\r\n

\r\n

"

Response data

"RTSP/1.0 200 OK\r\n

CSeq: 1\r\n

Content-Type: application/sdp\r\n

Content-Length: 481\r\n

\r\n

v=0\r\n

o=- 1 1 IN IP4 0.0.0.0\r\n

s=NWC-Live\r\n

u=rtsp://10.75.52.218/nphMpeg4/g726-320x240\r\n

t=0 0\r\n

a=control:rtsp://10.75.52.218/nphMpeg4/g726-320x240\r\n

m=audio 0 RTP/AVP 99\r\n

b=AS:32.00\r\n

a=rtpmap:99 G726-32/8000/1\r\n

a=control:rtsp://10.75.52.218/nphMpeg4/g726-320x240/audio\r\n

m=video 0 RTP/AVP 96\r\n

b=AS:3000.0\r\n

a=rtpmap:96 MP4V-ES/90000/0\r\n

a=control:rtsp://10.75.52.218/nphMpeg4/g726-320x240/video\r\n

a=fmtp:96\r\n

profile-level-id=1;cpresent=0;config=000001b001000001b5090000010000000120008c4007a85020f0a31f\r\n"

'g726-320x240' is parameter.

Specified audio enable or disable, and MPEG-4 resolution.

(audio)-(resolution)

audio:

nil audio disable

g726 G.726enable

resolution:

192x144: used resolution 192x144

320x240: used resolution 320x240

640x480: used resolution 640x480

Please demand everything in one connection (communication of 1-7) by the same parameter value.

(3)The SETUP method is issued.

The SETUP method is issued.

Please do the port used to receive it in bind, put the port number in which bind is done in the client_port column of the Transport header, and transmit the client.
When both the video and audio are played back like this example, it is necessary to issue SETUP of two times to the video and audio individual.
Server_port of the response of the camera becomes a transmission sender port of data.

SETUP of audio

```
"SETUP rtsp://10.75.52.218/nphMpeg4/g726-320x240/audio RTSP/1.0\r\nCSeq: 2\r\nTransport: RTP/AVP/UDP;unicast;client_port=2634-2635\r\n\r\n"
```

Response data

```
"RTSP/1.0 200 OK\r\nCSeq: 2\r\nSession: 1;timeout=60\r\nTransport: RTP/AVP;unicast;client_port=2634-2635;server_port=11530-11531\r\n\r\n"
```

SETUP of video

```
"SETUP rtsp://10.75.52.218/nphMpeg4/g726-320x240/video RTSP/1.0\r\nCSeq: 3\r\nSession: 1\r\nTransport: RTP/AVP/UDP;unicast;client_port=2636-2637\r\n\r\n"
```

Response data

```
"RTSP/1.0 200 OK\r\nCSeq: 3\r\nSession: 1;timeout=60\r\nTransport: RTP/AVP;unicast;client_port=2636-2637;server_port=48836-48837\r\n\r\n"
```

(4)The PLAY method is issued.

The transmission of data is begun to the port specified that the PLAY method is issued by the SETUP method.

```
"PLAY rtsp://10.75.52.218/nphMpeg4/g726-320x240 RTSP/1.0\r\nCSeq: 4\r\nSession: 1\r\nRange: npt=0-\r\n\r\n"
```

```
"RTSP/1.0 200 OK\r\nCSeq: 4\r\nSession: 1\r\nRTP-Info:  
url=rtsp://10.75.52.218/nphMpeg4/g726-320x240/video;seq=22298;rtptime=31542,url=rtsp://10.75.52.218/nphMpeg4/g726-320x240/audio;seq=27433;rtptime=10049\r\nRange: npt=0-\r\n\r\n"
```

The content has been delimited by "," in the data of RTP-Info becomes each transmission information on the video and audio.

The first half is information on video. The latter half is information on audio.

Seq and rtpTime are contained respectively. They are the sequence number and the time stamp of the first packet when the transmission is begun.

(5) It receives the data, and it plays back.

After the PLAY method is issued, the RTP data packet is sent. Please refer to RFC for details of the RTP data packet.

The time-out exists in the transmission of the RTP data. When it keeps receiving data, it should keep alive it with RTSP.

Here, the OPTIONS method is issued and keep alive. Please issue OPTIONS at about 45 seconds from 30 seconds because the time-out time is 60 seconds. OPTIONS is issued for keep alive.

"OPTIONS rtsp://10.75.52.218/nphMpeg4/g726-320x240 RTSP/1.0\r\n

CSeq: 5\r\n

Session: 1\r\n

\r\n"

Response data

"RTSP/1.0 200 OK\r\n

Public: DESCRIBE SETUP PLAY PAUSE TEARDOWN OPTIONS\r\n

CSeq: 5\r\n

Session: 1\r\n

\r\n"

(6) The TEARDOWN method is issued.

When the reception of data is stopped, TEARDOWN is issued.

TEARDOWN destroys the resource of the camera, and stops transmitting.

The TEARDOWN method is issued.

"TEARDOWN rtsp://10.75.52.218/nphMpeg4/g726-320x240 RTSP/1.0\r\n

CSeq: 13\r\n

Connection: close\r\n

Session: 1\r\n

\r\n"

Response data

"RTSP/1.0 200 OK\r\n

CSeq: 13\r\n

Session: 1\r\n

\r\n"

(7) The connection is closed.

Please close the socket.

3.2 RTP multicast

The RTP data is sent by the multicast. It controls with HTTP. Keep alive from the connected client.

When 60 seconds pass from the last keep alive, the transmission of the multicast is stopped.

advantages:

Because two or more clients can be received by one packet, data can be transmitted by a small band.

disadvantages:

If it is not a router for the multicast, the multicast packet doesn't exceed the router.

3.3 RTP over HTTP

The RTP data is transmitted on the HTTP connection.

advantages:

If it is an environment with which HTTP can be connected, it is possible to connect it. HTTP Proxy can be used.

disadvantages:

The delay is large because it is transported on HTTP.

4.Related CGI

4.1 getSdpForUrl(SDP retrieved CGI)

CGI for the SDP retrieving is returned. It is used at the RTP multicast and RTPoverHTTP.

Expression

`getSdpForUrl?HttpUrl={HttpUrl}`

`getSdpForUrl?MulticastUrl={MulticastUrl}`

Specified value

`HttpUrl = "nphMpeg4/"` audio "-" resol

`MulticastUrl = "nphMpeg4/"` audio "-" resol

`audio = "g726" | "nil"`

`resol = "192x144" | "320x240" | "640x480"`

4.2 rtpOverHttp(RTPoverHTTP Data flow)

The RTP data is transmitted on the HTTP session. After the capsule, the transmission packet is transmitted to the RTP form.

Expression

`rtpOverHttp?Url=nphMpeg4/` audio "-" resol

4.3 rtpMulticast(RTP multicast control)

Beginning the RTP multicast or the state is retrieved. The transmission of media specified that Start is specified for Method begins. A present transmission is returned for Query.

Expression

`rtpMulticast?Url=nphMpeg4/"` audio "-" resol "&Method=" Method

`Method = "Start" | "Query"`

5 Sample

General screen display method

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<HTML>
<HEAD>
<TITLE>ImageViewer</TITLE>
<META HTTP-EQUIV="Content-type" CONTENT="text/html; charset=Shift_JIS">
<SCRIPT type="text/javascript">
<!--
var audio = "g726";
var resolution = "320x240";

//The address in the connection destination is set.
function setParam()
{
    url = document.URL;
    if (url.substring(0, 7) == "http://")
    {
        url = url.substring(7);
        url = url.substring(0,url.indexOf("/"));
    }
    //RTP multicast
    PPlayer.SetMulticastUrl("http://" + url + "/getSdpForUrl?MulticastUrl=nphMpeg4/" + audio + "-" +
resolution);
    //RTP unicast
    PPlayer.SetUrl("rtsp://" + url + "/nphMpeg4/" + audio + "-" + resolution);
    //RTPOverHTTP
    PPlayer.SetHttpUrl("http://" + url + "/getSdpForUrl?HttpUrl=nphMpeg4/" + audio + "-" + resolution);
}
//Starting play back.
function play()
{
    PPlayer.Play();
}
// -->
</SCRIPT>

</HEAD>
<BODY onLoad="setParam();play();" BGCOLOR="#EFEFEF" TEXT="#ffffff" LINK="#ffffff" VLINK="#ffffff"
ALINK="#ffffff" TOPMARGIN="0" LEFTMARGIN="0" MARGINHEIGHT="0" MARGINWIDTH="0">
<object          width=320          height=240          ID="PPlayer"          CODEBASE="install.cab"
CLASSID="clsid:EAEFAD15-8753-45ef-94B0-1BAA7970CC21">
    <param name="ConnectionMode" value="Auto">
    <param name="Mic" value="Enable">
</object>
</BODY>
</HTML>

```

3.51 Retrieving total number of frames and image type for buffered images (Get) Func=ImageNum

Get: Retrieve total number of frames for buffered images.

Accessible for administrator and general users authorized to access buffered images

Parameters	Setting
Func	ImageNum (Fixed)
Kind	Buffer/transfer trigger no. 1 to 5

Example: Retrieve total number of frames for Buffer/transfer trigger no. 4.

Get?Func=ImageNum&Kind=4

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

TotalData:24¥r¥n

MemData:8¥r¥n

SDData:16¥r¥n

ImageType:JPEG¥r¥n

Total number of frames for Buffer/transfer trigger no. 4 is 24.

The number of frames in internal memory is 8.

The number of frames in SD memory card is 16.

The buffered image format is JPEG.

Parameters	
TotalData	Total number of recorded image frames for the Buffer/transfer trigger. In case of JPEG, 'TotalData' is number of recorded JPEG image frames. In case of MPEG-4, 'TotalData' is number of recorded MPEG-4 Asf files.
MemData	The number of recorded JPEG image frames or MPEG-4 Asf files in internal memory.
SDData	The number of recorded JPEG image frames or MPEG-4 Asf files in SD memory card.
ImageType	Image format setting for the Buffer/transfer trigger JPEG or MPEG-4

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
	No authorization to access buffered images	Retry with authorization to access buffered images

Note: Camera before Cgii/fVer:3.20 is not supported this command and the return value is "Return:-4".

3.52 Retrieving SD memory card status information (Get)

Func=SdInfo

Get: Retrieve SD memory card status information.

Accessible only for administrator

Parameters	Setting
Func	SdInfo (Fixed)
Kind	1 (Fixed)

Example: Retrieve SD memory card status information.

Get?Func=SdInfo&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

SDRec:1

SDSet:1

SDCap:256

Used1:None

Used2:0%

Used3:28%

Used4:45%

Used5:60%

Retrieve SD memory card status information.

A card is inserted. The total capacity of SD memory card is 256MB.

Buffer/transfer setting no.1 is not enable.

The amount of SD memory consumed of Buffer/transfer setting no.2 is 0%.

The amount of SD memory consumed of Buffer/transfer setting no.3 is 28%.

The amount of SD memory consumed of Buffer/transfer setting no.4 is 45%.

The amount of SD memory consumed of Buffer/transfer setting no.5 is 60%.

Parameters	
SDRec	Presence of SD memory card slot. 1: Enable, 0: Disable
SDSet	Insertion state of SD memory card. 1: inserted, 0: not inserted
SDCap	Total capacity of SD memory card. (MB)
Used1 - Used5	The amount of SD memory consumed of Buffer/transfer setting no.1 - 5.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

Note: Camera before Cgii/fVer:3.20 is not supported this command and the return value is "Return:-4".

3.53 Retrieving Buffering image file information (Get)

Func=SdFile

Get: Retrieve buffering image file information.

Accessible for Administrator and general users authorized to access buffered images

Parameters	Setting
Func	SdFile (Fixed)
Kind	Buffer setting no. 1-5
Number	Buffered JPEG image frame No. or Buffered MPEG-4 Asf file No. 1---

Example: Retrieve first file information for Buffer setting no.3.

Get?Func=SdFile&Kind=3&Number=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

TotalNum:17

Number:1

Format:MPEG-4

Size:152662bytes

StartDate:20070402172913000

EndDate:20070402172946000

Retrieve first file information for Buffer setting no.3.

The number of buffered files for Buffer setting no.3 is 17 files.

Retrieved file format is MPEG-4.

File size is 152662bytes.

Start time is 2007-04-02 17:29:13 000mS.

End time is 2007-04-02 17:29:46 000mS.

Parameters	
TotalNum	The number of buffered files for Buffer setting no.
Number	Buffered JPEG image frame No. or MPEG-4 Asf file No.
Format	Buffered Image file format JPEG or MPEG-4
Size	File size (bytes)
StartDate	Start day and time yyyyymmddHHiissxxx Description of retrieved data: yyyy: Year (Example: 2004) mm: Month (Example: 05) [May] dd: Day of month (Example: 13) HH: Hour (Example: 16) ii: Minute (Example: 30) ss: Second (Example: 12) xxx: Milliseconds (Example: 587)
EndDate	End day and time yyyyymmddHHiissxxx

Upon error:

Return value	Symptom	Possible solution
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -5	Invalid Kind value or Invalid Number value	Check parameters
	No desire file	
Return: -7	Invalid Number value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
	No authorization to access buffered images	Retry with authorization to access buffered images

Note: Camera before Cgii/fVer:3.20 is not supported this command and the return value is "Return:-4".

3.54 Setting Cgi Detction of Buffer/Transfere image (Set)

Func=SoftTrigger

Set: Set Cgi Detection of Buffer/Transfer image

Accessible only for administrator

Parameters	Setting
Func	SoftTrigger (Fixed)
Kind	Buffer/transfer trigger number: 1-5

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example: Set Cgi detection for Buffer/transfer trigger setting no.3.

Set?Func=SoftTrigger&Kind=3

Note: If Buffer/transfer image setting(Func=ImageTransfer) "TCondition" parameter of Buffer/transfer trigger No. which is set with "Kind" is Cgi detection(7), this command becomes the trigger.

In other words, the camera starts buffer/transfer operation with this command as a trigger.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return:-1	No Func parameter	Check parameters
Return:-2	No Kind parameter	Check parameters
Return:-4	Invalid Func value or Invalid Kind value	Check parameters
Return:-7	Invalid Buffer/transfer trigger No.(none CGI detection)	Check parameters
	It is not accountable time of Buffer/transfer setting	Check accountable time
	Ignore Time (During non-detection)	Check Ignore Time
Return:-11	Not accessed by administrator	Retry as administrator

Note: Camera before Cgii/fVer:3.20 is not supported this command and the return value is "Return:-4".

Set: SD memory card formatting feature.

Accessible only for administrator

Parameters	Setting
Func	SDFormat (Fixed)
Kind	1 (Fixed)
Data	OK(Fixed)

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

The meaning of "-n" values returned upon error are explained below.

Example:

Set?Func=SDFormat&Kind=1&Data=OK

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value (Not "Data=OK")	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Not SD memory card slot	Retry using a model with SD memory card slot
Return: -20	SD memory card not yet insertion	Check SD memory card insertion

Note: Camera before Cgii/fVer:3.20 is not supported this command and the return value is "Return:-4".

Set: Set Light.

Accessible only for administrator

Parameters	Setting
Func	Illumination (Fixed)
Kind	1(Fixed)
Data	1:The light turns on when it is dark. 2:The light turns on when there is a motion or sensor detection. 3:The light turns on when there is a motion or sensor detection when it is dark. 4:Off

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

Example:

Set the light turns on when there is a motion or sensor detection.

/Set?Func=Illumination&Kind=1&Data=2

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve Light setting.

Accessible only for administrator

Parameters	Setting
Func	Illumination (Fixed)
Kind	1 (Fixed)

Example:

/Get?Func=Illumination&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Data:2

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Set: Set Brightness**Accessible for administrator and general users authorized to control camera's brightness level**

Parameters	Setting
Func	bright (Fixed)
Kind	0:general users authorized to control camera's brightness level 1:administrator
Data	Brightness (Min brightness)-4, -3, -2, -1, 0(standard) , +1, +2, +3, +4(Max brightness)
Save	OK (Fixed) Camera is saved for Home Position brightness at Kind=1.

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example:

Set standard brightness and camera is saved for Home Position brightness.

/Set?Func=Bright&Kind=1&Data=0&Save=OK

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve brightness setting.**Accessible for administrator and general users authorized to control camera's brightness level**

Parameters	Setting
Func	Bright (Fixed)
Kind	0:general users authorized to control camera's brightness level 1:administrator

Example:

/Get?Func=Bright&Kind=1

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Data:0¥r¥n

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.58 Alarm Log retrieval (Get)

Func=AlarmLog

Get: Retrieve Alarm Log.

Accessible only for administrator

Parameters	Setting
Func	AlarmLog (Fixed)
Kind	1 (Fixed)

Example:

/Get?Func=AlarmLog&Kind=1

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

NewAlarmLogNum:2¥r¥n

AlarmLog1:2008/ 3/27 09:44:44,1,-¥r¥n

AlarmLog2:2008/ 3/27 09:13:11,1,-¥r¥n

NewAlarmLogNum: the number of new alarm logs

AlarmLog1:2008/ 3/27 09:44:44,1,-

Date,Alarm Type,Short/Open(for Alarm trigger)

Date of AlarmLog1: 2008/ 3/27 09:44:44

Alarm Type of AlarmLog1: 1:Motion Detection, 2:Sensor, 3:Alarm/Alarm1, 4:Alarm2

Alarm trigger of AlarmLog1: 1:Open, 2:Short, -:none

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.59 Sensor Sensitivity setting, retrieval (Set,Get)

Func=SSensitivity
(BL-C111,131,160)

Set: Set sensor sensitivity.

Accessible only for administrator

Parameters	Setting
Func	SSensitivity (Fixed)
Kind	1(Fixed)
Data	BL-C111/131 1:High 2:Middle 3:Low BL-C160 1:High 2:Middle 3:Low 4:Very Low

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

Example:

Set Middle

/Set?Func=SSensitivity&Kind=1&Data=2

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve sensor sensitivity setting.

Accessible only for administrator

Parameters	Setting
Func	SSensitivity (Fixed)
Kind	1 (Fixed)

Example:

Get?Func=SSensitivity&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Data:2

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

Set: Set camera's wireless network feature.**Accessible only for administrator**

Parameters	Setting
Func	WirelessSet (Fixed)
Kind	1(Fixed)
SSID	SSID The name of wireless network. ---to 32 characters * settings will not be updated, if not specified. In case of blank, "ANY" it sets. In case of "any" of small letter mixture, it sets SSID to "ANY" of all capital letters.
FreqBand	Communication mode 1: 802.11b 2: 802.11b/g 3: 802.11g exclusive * settings will not be updated, if not specified.
CipherMode	Encryption method 0:No encryption 1: WEP 2 : WPA-PSK(TKIP) 3 : WPA2-PSK(AES) * settings will not be updated, if not specified.
CipherMode=1 WEP Setting	
DefKey	The number of key to use from WEP Key 1 to 4. 1---4 * settings will not be updated, if not specified.
WEPKey1 --- WEPKey4	Key Characters *Please follow type of character and the number of characters to Key Format. In case of the modification of "DefKey" or "WEPKeyType" or "CipherMode", the WEPKey of selected number is setting necessary.
WEPKeyType1 ---WEPKeyType4	Key Format 1:HEX, 10 characters, 64-bit 2:HEX, 26 characters, 128-bit 3:HEX, 32 characters, 152-bit 4:ASCII, 5 characters, 64-bit 5:ASCII, 13 characters, 128-bit 6:ASCII, 16 characters, 152-bit *In case of the modification of "DefKey" or "CipherMode", the WEPKeyType of selected number is setting necessary.
CipherMode=2,3 WPA-PSK(TKIP) or WPA2-PSK(AES) Setting	
WPAKey	Network Key Characters *Please follow type of character and the number of characters to Key Format. settings will not be updated, if not specified. When "WPAKeyType" is modified to the value which is not "0", WPAKey is setting necessaty.
WPAKeyType	Network Key Format 0 : Unestablished state 1 : HEX, 64 Characters 2 : ASCII, 8 to 63 Characters *settings will not be updated, if not specified. In case of "0" of current setting, WPAKeyType is "1" or "2" setting necessary.

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example:

Set WEP.

```
/Set?Func=WirelessSet&Kind=1&SSID=NetCam3799&FreqBand=2&CipherMode=1&DefKey=1&WEPKey1=0123456789key&WEPKeyType1=5
```

*In case of WEP of CipherMode=1, the setting of WEPKey and WEPKeyType which are identical with number which is selected with DefKey is effective. Setting WEPKey and WEPKeyType other than the number which is selected with DefKey, the setting is not reflected.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No setting parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid Data value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator

Get: Retrieve camera's wireless network setting.**Accessible only for administrator**

Parameters	Setting
Func	WirelessSet (Fixed)
Kind	1 (Fixed)
RefKey *Only WEP setting	1 --- 4 *When it is set to the WEP of CipherMode=1, by the fact that RefKey is set, it can acquire the WEPKey information other than the number which is selected with DefKey.

Example1:

```
/Get?Func=WirelessSet&Kind=1
(Return)
HTTP/1.0 200 OK
Content-type: text/plain
SSID:NetCam3799
FreqBand:2
CipherMode:1
DefKey:1
WEPKey1:*****
WEPKeyType1:5
```

Example2: RefKey setting

```
/Get?Func=WirelessSet&Kind=1&RefKey=2
(Return)
HTTP/1.0 200 OK
Content-type: text/plain
SSID:NetCam3799
FreqBand:2
CipherMode:1
RefKey:2
WEPKey2:*****
WEPKeyType2:2
```

* The sign "*"using, it outputs the information of the key due to the circumstances of security.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid RefKey value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.61 HTTPS setting, retrieval (Set,Get)

Func=HTTPS

(BB-HCM527,547,BL-C140,160)

Set: Set camera's HTTPS feature.

Accessible only for administrator

Parameters	Setting
Func	HTTPS (Fixed)
Case Kind=1	Setting Use HTTPS or Use HTTP and Certificate Information. Start of key formation.
SaveHttps	1: Use HTTPS 0: Use HTTP
Server	Camera IP Address or Host Name to 64 Characters
Case Kind=2	Only Saved Use HTTP
HTTPOffSet	1(Fixed)

Return value:

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Return:0¥r¥n ----- 0: OK, -n: Error

Example1:

Set Use HTTPS and Server=192. 168. 0. 3 .

/Set?Func=HTTPS&Kind=1&SaveHttps=1&Server=192.168.0.3

* Formation of Key is started with this setting. After that the below-mentioned

/Get?Func=HTTPS&Kind=1(&AutoRestart=1) when so formation state of the key completes, restarting,it starts HTTPS communication.

In case of AutoRestart=1 when formation of the key completes,it restarts sutomatically.

Example2:

Setting only 'use HTTP' saved.

/Set?Func=HTTPS&Kind=2&HTTPOffSet=1

*The below-mentioned

/Get?Func=HTTPS&Kind=1 command, it is something in order to reset saved setting state to HTTP (not HTTPS) before when in the middle which repeatedly acquires the formation state of key ,becomes timeout and / or it forms fails.

Upon error:

In case of Kind=1

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No SaveHttps and Server parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid parameter value	Check the parameter value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return:-17	Unsupported feature	Retry using a model supporting the feature

In case of Kind=2

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid HTTPOffSet value	Check the Data value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return:-17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve HTTPS setting.**Accessible only for administrator**

Parameters	Setting
Func	HTTPS (Fixed)
Kind	1 (Fixed)
AutoRestart	Validity to only the case key having formed and completing with SslStatus:32. Auto Restart. 1: Restart automatically When value other than 1 is set and when it is unestablished, it does not restart.

Example:

```

/Get?Func=HTTPS&Kind=1
(Return)
HTTP/1.0 200 OK
Content-type: text/plain
SslStatus:32
Https:0
SaveHttps:1
Server:192.168.0.3
RestartLocalURL:https://192.168.0.3:80
RestartInternetURL:https://xxx.xxx.xxx.xxx:80

```

SslStatus: Key formation state

32: Completion of key formation

Because the key was produced, restarting, really in HTTPS communication change possible state.
In case of AutoRestart=1 camera restarts automatically.

In case of AutoRestart unestablished, until the camera is restarted, mode of present condition
(HTTPS or HTTP) with it operates.

64: In the midst of key formation

Maximum of 5 minutes waiting, in case while it is this state, it is thought that it cannot form the key
with a some problem.

Command /Set?Func=HTTPS&Kind=2&HTTPOffSet=1 Using, it is necessary to set only the
save setting of HTTPS to invalidity.

80: Failure of key formation

In this case instantaneously command /Set?Func=HTTPS&Kind=2&HTTPOffSet=1 Using,
it is necessary to set only the save setting of HTTPS to invalidity.

* Please execute the above-mentioned appropriate processing according to the return value of
SslStatus.

```

Https :          Present HTTPS state    1:HTTPS  0:HTTP
SaveHttps :      Saved HTTPS state      1:HTTPS  0:HTTP
Server :          Camera IP Address or Host Name
RestartLocalURL : Local URL of camera after the restarting
RestartInternetURL : Global URL of camera after the restarting

```

*RestartLocalURL and RestartInternetURL are indicated in after the completing the key formation
with SslStatus:32.

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.62 Image Quality setting, retrieval (Set,Get)

Func=MegaQuality
(BB-HCM515 Only)

Set: Set camera's Image Quality.

Accessible only for administrator

Parameters	Setting
Func	MegaQuality (Fixed)
Kind	1(Fixed)
Data	Image Quality 1: Favor Clarity (Max 10fps) 0: Favor Motion (Max 30fps)

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return:0 ----- 0: OK, -n: Error

Example:

Set Favor Clarity.

/Set?Func=MegaQuality&Kind=1&Data=1

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid parameter value	Check the parameter value
Return: -9	Administrator ID and password not set	Set Administrator ID and password
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve camera's Image Quality setting.

Accessible only for administrator

Parameters	Setting
Func	MegaQuality (Fixed)
Kind	1 (Fixed)

Example:

/Get?Func=MegaQuality&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Data:1

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

Get: Retrieve camera's Image Quality setting.

Accessible for administrators and all general users

(Includes guest users, when administrator allows guest users to access the camera)

Parameters	Setting
Func	SensorCheck (Fixed)
Kind	1 (Fixed)

Example:

/Get?Func=SensorCheck&Kind=1

(Return)

HTTP/1.0 200 OK¥r¥n

Content-type: text/plain¥r¥n¥r¥n

Sensor:1¥r¥n :with Sensor (1 fixed)

Alarm1:1¥r¥n :with Alarm1 (1 fixed)

Alarm2:1¥r¥n :with Alarm2 (1 fixed)

*Only the parameter which corresponds to the sensor and alarm which it is on-board is output.

(ex.)BB-HCM511 with Alarm1 and Alarm2

Alarm1:1¥r¥n

Alarm2:1¥r¥n

Upon error:

<u>Return value</u>	<u>Symptom</u>	<u>Possible solution</u>
Return: -1	No Func parameter	Check parameters
Return: -2	No Kind parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters

4. ERROR CODES

4.1 Error codes during Set

Shown below are the typical Return values that appear when Set commands are issued.

Set

Func	Return value	Symptom	Possible solution
Common	Return: 0	Process completed successfully	
	Return: -1	No Func parameter	Check parameters
	Return: -2	No Kind parameter	Check parameters
	Return: -3	No Data parameter	Check parameters
	Return: -4	Illegal characters used for Func, Kind value Prohibited during Privacy Mode	Check parameters
	Return: -5	No characters entered	Check parameters
	Return: -6	Error while writing to flash memory	Retry
	Return: -7	Invalid setting value	Check parameters
	Return: -8	Abnormal response from upper APL	Retry after confirming parameters
	Return: -9	Admin setting not completed	Retry after setting Admin
	Return: -11	No authorization to access settings	Retry as authorized user
Admin	Return: -21	Admin ID already registered	Check parameters
	Return: -22	Admin ID not registered	Check parameters

4.2 Error codes during Get

Shown below are the typical Return values that appear when Get commands are issued.

Get

Func	Return value	Symptom	Possible solution
Common	Return: 0	Process completed successfully	
	Return: -1	No Func parameter	Check parameters
	Return: -2	No Kind parameter	Check parameters
	Return: -4	Illegal characters used for Func, Kind value	Check parameters
	Return: -8	Abnormal response from upper APL	Retry after confirming parameters
	Return: -11	No authorization to access settings	Retry as authorized user
	Administrator setting Screen output	Admin setting not completed	Retry after setting Admin

5. SAMPLE WEB PAGE

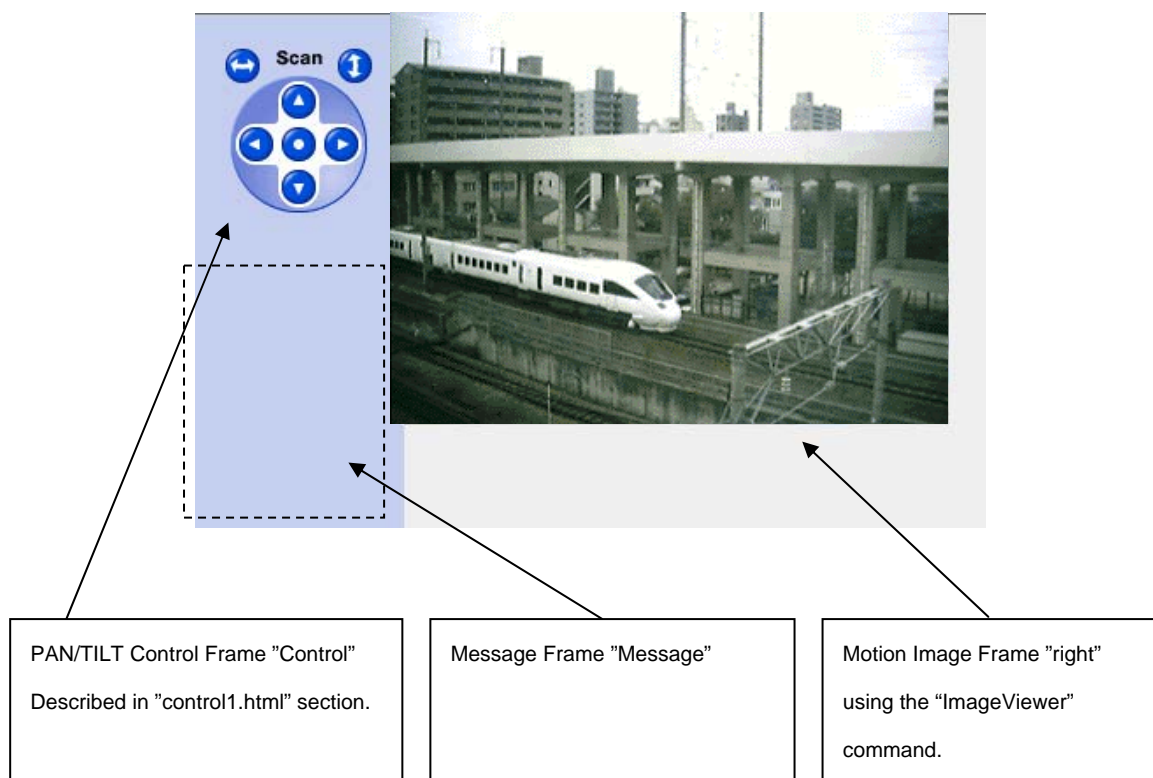
The following section shows an example of a web site which has embedded a live image from a Panasonic Network Camera. The sample web page consists of 3 frames:

- the live image frame
- the camera "Control" frame
- the "Message" frame which displays messages from the camera.

The Control Pad graphic can be customized. In this example, the file "pad.gif" is used. This file can be extracted from the Panasonic Network Camera screen by right clicking on the image in a web browser, and choosing "Save image..."

If ActiveX is not installed in your web browser, you will be asked to download and install it the first time you access the web page.

Sample Web page <sample1.html>



Source Code of Sample Web page <sample1.html>

```
<!-- This is Sample Code. Panasonic will not be held responsible for damages or loss incurred by using
this information. -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<!-- sample1.html PAN/TILT Control Pad and Live Image Frame-->
<HTML>
<HEAD>
<TITLE>Sample1</TITLE>
</HEAD>
<FRAMESET COLS="123,*" FRAMEBORDER=0 BORDER=0 FRAMESPACING=0>
  <FRAMESET ROWS="175,*">
    <!--Upper Left: PAN/TILT Control Pad Display Frame -->
    <FRAME BGCOLOR="#C4CEEF" SCROLLING=no SRC="frame/control1.html" NAME="Control">
    <!--Lower Left: Dummy frame to respond to PAN/TILT Control -->
    <!-- Note: "Message" frame is used to show feedback from "frame/control1.html"-->
    <FRAME BGCOLOR="#C4CEEF" SCROLLING=no SRC="http://xx.xx.xx.xxx/nphControlCamera?Direction="
NAME="Message">
  </FRAMESET>
  <!-- RIGHT: Live Image Frame -->
  <!--Type Camera's URL address in the field to replace "xx.xx.xx.xxx"-->
  <!--An Error Message will be displayed if the wrong URL is typed in for "xx.xx.xx.xxx". -->
  <FRAME
SRC="http://xx.xx.xx.xxx/ImageViewer?Mode=Motion&Resolution=320x240&Quality=Standard&Interval=10"
NAME="right">
  <NOFRAMES>
  <BODY>
    <!--Message for a viewer using an incompatible browser -->
    Please Use Appropriate Browser to View the Frame
  </BODY>
  </NOFRAMES>
</FRAMESET>
</HTML>
```

Source Code of Camera Control Pad <control1.html>

```
<!-- This is Sample Code. Panasonic will not be held responsible for damages or loss incurred by using
this information. -->
<!-- PAN/TILT Control pad Frame control1.html -->
<html>
<head>
<title>
Control1 Frame
</title>
</head>
<body BGCOLOR="#C4CEEF">
<center>
<!-- Display PAN/TILT Control Pad-->
<table><tr><TD BGCOLOR="#C4CEEF" ALIGN=center>

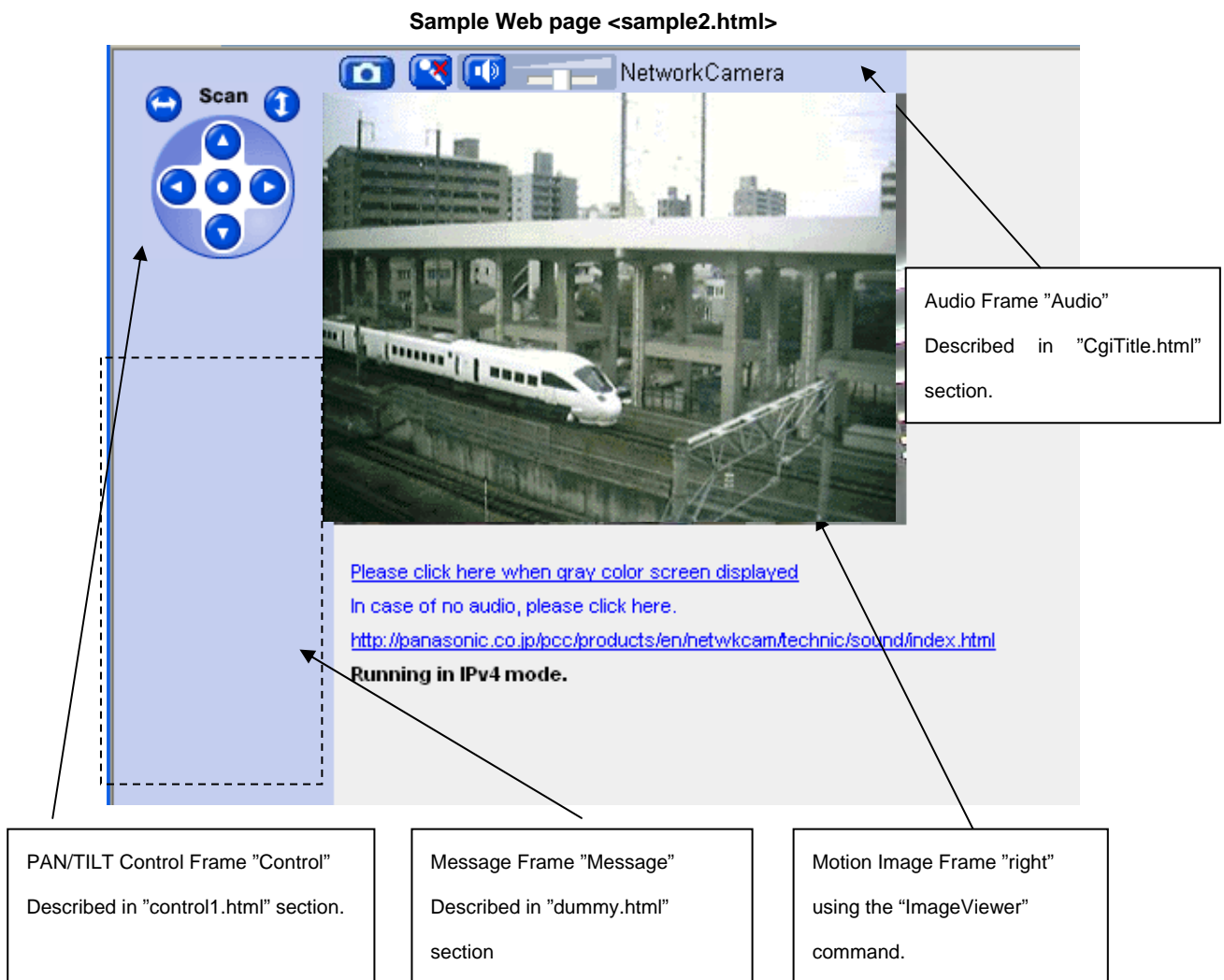
</TD></tr></table>
<!-- Clickable Image Map for PAN/TILT -->
<!--Type Camera's URL address in the field to replace "xxx.xxx.xxx.xxx"-->
<map name="pad">
<area shape="circle" coords="12,12 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=PanScan&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="PanScan"
TITLE="PanScan">
<area shape="circle" coords="78,12 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=TiltScan&Resolution=320x240&Quality=Standar
d&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="TiltScan"
TITLE="TiltScan">
<area shape="circle" coords="45,33 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=TiltUp&Resolution=320x240&Quality=Standard&
RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="TiltUp" TITLE="TiltUp">
<area shape="circle" coords="20,58 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=PanLeft&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="PanLeft"
TITLE="PanLeft">
<area shape="circle" coords="45,58 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=HomePosition&Resolution=320x240&Quality=Sta
ndard&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="HomePosition"
TITLE="HomePosition">
<area shape="circle" coords="70,58 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=PanRight&Resolution=320x240&Quality=Standar
d&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="PanRight"
TITLE="PanRight">
<area shape="circle" coords="45,83 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=TiltDown&Resolution=320x240&Quality=Standar
d&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="TiltDown"
TITLE="TiltDown">
</map>
</center>
</body>
</html>
```

The sample with audio function

The following section shows an example of a web site which has embedded a live image and audio from a Panasonic Network Camera. The sample web page consists of 4 frames:

- the live image frame
- the camera "Control" frame
- the "Message" frame which displays messages from the camera
- the audifo frame.

If ActiveX is not installed in your web browser, you will be asked to download and install it the first time you access the web page.



Source Code of Sample Web page <sample2.html>

```
<!-- This is Sample Code. Panasonic will not be held responsible for damages or loss incurred by using
this information. -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<!-- sample2.html PAN/TILT Control Pad, Audio Famere, and Live Image Frame -->
<HTML>
<HEAD>
<TITLE>sample2</TITLE>
</HEAD>
<FRAMESET FRAMEBORDER=0 BORDER=0 FRAMESPACING=0 Scrolling="no" Cols="123,*">
  <FRAMESET ROWS="175,*">
    <!--Upper Left: PAN/TILT Control Pad Display Frame -->
    <FRAME BGCOLOR="#C4CEEF" SCROLLING=no SRC="frame/control1.html" NAME="Control">
    <!--Lower Left: Dummy frame to respond to PAN/TILT Control -->
    <!-- Note: "Message" frame is used to show feedback from "frame/control1.html" -->
    <FRAME BGCOLOR="#C4CEEF" SCROLLING=no SRC="http://xx.xx.xx.xxx/nphControlCamera?Direction="
NAME="Message">
  </FRAMESET>
  <FRAMESET Rows="24,*">
    <!--Upper Right: Audio Frame -->
    <FRAME Src="frame/CgiTitle.html" NAME="audio">
    <!-- RIGHT: Live Image Frame -->
    <!--Type Camera's URL address in the field to replace "xx.xx.xx.xxx"-->
    <!--An Error Message will be displayed if the wrong URL is typed in for "xx.xx.xx.xxx". -->
    <FRAME
Src="http://xx.xx.xx.xxx/ImageViewer?Mode=Motion&Resolution=320x240&Quality=Standard&Interval=10
&Size=STD&RPeriod=0&Sound=Enable" NAME="right">
  <NOFRAMES>
</BODY>
<!--Message for a viewer using an incompatible browser -->
  Please Use Appropriate Browser to View the Frame
</BODY>
</NOFRAMES>
</FRAMESET>
</HTML>

</FRAMESET>
</HTML>
```

Source Code of Camera Control Pad <control1.html>

```
<!-- This is Sample Code. Panasonic will not be held responsible for damages or loss incurred by using
this information. -->
<!-- PAN/TILT Control pad Frame control1.html -->
<html>
<head>
<title>
Control1 Frame
</title>
</head>
<body BGCOLOR="#C4CEEF">
<center>
<!-- Display PAN/TILT Control Pad-->
<table><tr><TD BGCOLOR="#C4CEEF" ALIGN=center>

</TD></tr></table>
<!-- Clickable Image Map for PAN/TILT -->
<!--Type Camera's URL address in the field to replace "xxx.xxx.xxx.xxx"-->
<map name="pad">
<area shape="circle" coords="12,12 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=PanScan&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="PanScan"
TITLE="PanScan">
<area shape="circle" coords="78,12 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=TiltScan&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="TiltScan"
TITLE="TiltScan">
<area shape="circle" coords="45,33 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=TiltUp&Resolution=320x240&Quality=Standard&
RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="TiltUp" TITLE="TiltUp">
<area shape="circle" coords="20,58 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=PanLeft&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="PanLeft"
TITLE="PanLeft">
<area shape="circle" coords="45,58 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=HomePosition&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="HomePosition"
TITLE="HomePosition">
<area shape="circle" coords="70,58 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=PanRight&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="PanRight"
TITLE="PanRight">
<area shape="circle" coords="45,83 10"
href="http://xx.xx.xx.xxx/nphControlCamera?Direction=TiltDown&Resolution=320x240&Quality=Standard
&RPeriod=0&Size=STD&PresetOperation=Move&Language=1" TARGET="Message" ALT="TiltDown"
TITLE="TiltDown">
</map>
</center>
</body>
</html>
```

Source Code of Audio Frame <CgiTitle.html>

```
<!-- This is Sample Code. Panasonic will not be held responsible for damages or loss incurred by using
this information. -->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<HTML>
<HEAD>
<META HTTP-EQUIV="Content-type" CONTENT="text/html; charset=Shift_JIS">
<META HTTP-EQUIV="expires" CONTENT="0">
<META HTTP-EQUIV="Pragma" CONTENT="no-cache">
<META HTTP-EQUIV="Cache-Control" CONTENT="no-cache">
<META NAME="robots" CONTENT="none">
<META NAME="robots" CONTENT="noindex,nofollow">
<META NAME="robots" CONTENT="noarchive">
<TITLE>CgiTitle</TITLE>
</HEAD>
<BODY BGCOLOR="#efefef" TEXT="#000000" LINK="#000000" VLINK="#000000" ALINK="#000000"
TOPMARGIN=0 MARGINHEIGHT=0 leftmargin="0" marginwidth="0">
<!-- Type Camera's URL address in the field to replace "xx.xx.xx.xxx"-->
<!-- You check the "Version No." from the source of
http://xx.xx.xx.xxx/CgiTitle?Resolution=320x240&Size=STD&Sound=Enable&Language=1, and then you
wirite it in this program-->
<TABLE cellSpacing="0" cellPadding="0" border="0" width="320" height="24" style="text-align: left;">
<TR bgcolor="#C5D0F0">
<TD width="40" height="24"><IMG src="http://xx.xx.xx.xxx/image/SnapShotButton.jpg" style="cursor:
pointer;"
onClick="window.open('http://xx.xx.xx.xxx/CgiSnapshot?Resolution=320x240&Quality=Clarity&Languag
e=0','_blank','width=340,height=360')" alt="Capture image." title="Capture image."></TD>
<TD width="120" height="24"><SCRIPT src="http://xx.xx.xx.xxx/ActiveX_script.js"></SCRIPT>
<div id="actControlAudio"></div>
<SCRIPT language="JScript">
var arrObj = new Array();
arrObj[arrObj.length] = '<OBJECT ID="pmjpegaudio" WIDTH="120" HEIGHT="24"
CLASSID="CLSID:33704B0F-9EB7-434b-B752-EA6CFFB87423"
CODEBASE="http://xx.xx.xx.xxx/JpegInst.cab#Version=3,0,0,4">';
arrObj[arrObj.length] = '<PARAM NAME="Width" VALUE="120">';
arrObj[arrObj.length] = '<PARAM NAME="Height" VALUE="24">';
arrObj[arrObj.length] = '<PARAM NAME="AudioPath"
VALUE="http://xx.xx.xx.xxx/nphAudio?Mode=Mixed">';
arrObj[arrObj.length] = '<PARAM NAME="Mic" VALUE="Enable">';
arrObj[arrObj.length] = '<PARAM NAME="RedirectPath"
VALUE="http://xx.xx.xx.xxx/CgiTitle?Resolution=320x240&View=Normal&Max=1&Language=0">';
arrObj[arrObj.length] = '<PARAM NAME="RedirectTarget" VALUE="_self">';
arrObj[arrObj.length] = '</OBJECT>';
load_ActiveX("actControlAudio", arrObj);
</SCRIPT>
</TD>
<TD width="136" height="24"><FONT style="font-size: 13px; text-align: left;" face="Arial"
color="#000000">NetworkCamera</FONT></TD>
<TD width="24" height="24" align="right">
</TD>
</TR>
</TABLE>
</BODY>
</HTML>
```

note) This source code differs from the code of version 1.06A.

6. Motion JPEG SD file format

It is the format of the video recording file of MotionJPEG which is retained in the SD memory card. (ex. 1T000001.PNC)

Header 128Byte	File Version (0x00000001)	(4 Byte)
	Image Type (0 : JPEG)	(4 Byte)
	Image Size	(4 Byte)
	Reserve	(8 Byte)
	Identifier "Panasonic Network Camera"	(24 Byte)
	Reserve	(84Byte)
Image Size	Actual Image Size	(4Byte)
	Image Data (JPEG Data)	
	Reserve (Image Size - Actual Image Size)	
Image Size	Actual Image Size	(4Byte)
	Image Data (JPEG Data)	
	Reserve (Image Size - Actual Image Size)	
	: Repetition of Image :	