

Panasonic
Network Camera
Technical Notes

CGI Specifications
for BB-HCM and BL-C series

Ver. 1.02

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Panasonic Communications Co., Ltd.

Version History

Ver.	Revision	Date
1.00	First version	11.15.2004
1.01	Added commands and parameters for network system cameras such as HCM331.	03.25..2005
1.02	Added commands and parameters for HCM381.	04.04.2005

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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:

- BL-C10, BL-C30 (Ver1.20 or later)
- BB-HCM311, BB-HCM331, BB-HCM371, BB-HCM381 (Ver1.03 or later)

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.

- For access authorization for Set, Get, and other commands, refer to the chart on the next page.

Setting items/Access authorization

No.	Item	Set	Get
3.1.1	Camera name	Administrator	ALL(BL-C10/C30: Level 1, 2, 3 users)
3.1.2	White balance	Administrator	Administrator
3.1.3	Return specified position (HCM3xx models)	Administrator	Administrator
3.2	Clock	Administrator	ALL(BL-C10/C30: Level 1, 2, 3 users)
3.3	Administrator setting	Administrator	---
3.4	Transfer buffered image	Administrator	Administrator
3.5	Preset	Administrator	Administrator and general users authorized to access Preset control (BL-C10/C30: Level 2, 3 users)
3.6	Restart	Administrator	---
3.7.1	Pan		
	When "Kind" is set to 0 (General user authorization)	0: General users authorized to control Pan/Tilt (BL-C10/C30 Level 3 users)	---
	When "Kind" is set to 1 (Administrator)	Administrator	Administrator
3.7.2	Tilt		
	When "Kind" is set to 0 (General user authorization)	0: General users authorized to control Pan/Tilt (BL-C10/C30 Level 3 users)	---
	When "Kind" is set to 1 (Administrator)	Administrator	Administrator
3.7.3	Zoom (BB-HCM381)		
	When "Kind" is set to 0 (General user authorization)	0: General users authorized to control Zoom	---
	When "Kind" is set to 1 (Administrator)	Administrator	---
3.7.4	Focus (BB-HCM381)		
	When "Kind" is set to 0 (General user authorization)	0: General users authorized to control Focus	---
	When "Kind" is set to 1 (Administrator)	Administrator	Administrator and general users authorized to control Focus

3.8	Privacy Mode (BL-C10/C30)	Administrator	Administrator
3.9	Network setting	Administrator	Administrator
3.10	Camera model information	---	ALL(BL-C10/C30: Level 1, 2, 3 users)
3.11	General user setting	Administrator	Administrator
3.17	Delete buffered image	Administrator	---
3.18	Wireless connection status (Wireless network cameras)	---	Administrator
3.19	Number of buffered images	---	Administrator and general users authorized to access buffered images (BL-C10/C30: Level 1, 2, 3 users)
3.20	Sensor detection	---	Administrator
3.21	Power supply frequency (BL-C10/C30, BB-HCM381)	Administrator	Administrator
3.22	Reset to factory default settings	Administrator	---
3.23	Limit Continuous Motion JPEG	Administrator (BL-C10/C30)	Administrator and general users authorized to set Image refresh interval (BL-C10/C30: Level 1, 2, 3 users) (HCM3xx models: 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 (IPv6 network cameras)	Administrator	Administrator
3.29	Daylight saving time	Administrator	Administrator
3.30	Color night vision (HCM3xx models)	Administrator	Administrator
3.31	Preset	Administrator or general users authorized to access Preset control (BL-C10/C30: Level 2, 3 users)	---
3.32	Digital output (HCM3xx models)	Administrator or general users authorized to control Digital image output	---
3.33	Image time stamp (HCM3xx models)	Administrator	Administrator
3.36	Vertical resolution (BB-HCM381)	Administrator	Administrator

ALL: Administrator and all registered general users. (BL-C10/C30: Level 1, 2, 3 users) (Includes guest users, when administrator allows guest users to access the camera.)

---: No command.

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 (BL-C10/C30: Level (2), 3 users) (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 (BL-C10/C30: Level 1, 2, 3 users) (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 (BL-C10/C30: Level 1, 2, 3 users) (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 camera images (BL-C10/C30: Level 1, 2, 3 users) (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 camera images (BL-C10/C30: Level 1, 2, 3 users) (Includes guest users, when administrator allows guest users to access the camera)
3.25	Image display (ImageViewer)	Administrator and general users authorized to view camera images (BL-C10/C30: Level 1, 2, 3 users) (HCM3xx models: 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 camera images (BL-C10/C30: Level 1, 2, 3 users) (HCM3xx models: General users authorized to access camera images) (Includes guest users, when administrator allows guest users to access the camera)
3.34	Audio Retrieval (nphAudio) (HCM3xx models)	Administrator and general users authorized to access Audio Data
3.35	Synchronized Image/Audio Retrieval (nphVideo) (HCM3xx models)	Administrator and general users authorized to access camera images and Audio Data

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/>

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 white balance information setting, retrieval (Set, Get) Func=CameraWB

Set: Set camera white balance.

Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	CameraWB (Fixed)
Kind	1 (Fixed)
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: OK, -n: Error
```

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

Example:

```
Set?Func=CameraWB&Kind=1&Data=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 Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	BL-C10/C30	
	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

Get: Retrieve camera white balance.

Accessible only for administrator

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

Example:

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

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

3.1.3 Specified position return time, position setting, retrieve (Set,Get) Func=CameraHT (HCM3xx models)

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

Accessible only for administrator

<u>Parameters</u>	<u>Setting</u>
Func	CameraHT (Fixed)
Kind	1 (Fixed)
RetTime ^{Note 1}	Specified position return time 0: Do not specify 600: 10 minutes 1800: 30 minutes 3600: 1 hour
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: Alarm 1, 10: Alarm 2

Return value:

HTTP/1.0 200 OK
 Content-type: text/plain
 Return:0 ••••• 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

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

Get: Retrieve camera's return position and time.

Accessible only for administrator

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

Example:

```
Get?Func=CameraHT&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: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
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).

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: 200405071630)

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=Date&Kind=1&Data=200405071630

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-C10/C30	
	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 (BL-C10/C30: Level 1, 2, 3 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

Content-type: text/plain

Data:200405134163012587 Retried 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
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

Content-type: text/plain

Return: 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.

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

Upon error:

(Factory default)

Return value	Symptom	Possible solution
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-C10/C30	
	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), set a common timer/sensor 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 detection, if using the sensor) 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-C10/C30 1: Sensor, 2: Timer
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"
Position (for Sensor,Alarm trigger) (*1) ^{Note 1}	Sensor position (for Sensor,Alarm trigger) If not specified, the last position is used. 9: Sensor position, 0: None
PResolution (*1) ^{Note 1}	Recorded image resolution 0: 640 x 480, 1: 320 x 240, 2: 160 x 120
PQuality (*1) ^{Note 1}	Recorded image quality 4: Favor quality, 8: Standard, 12: Favor motion, 128: Mobile phone
PreEnable (for Sensor,Alarm trigger) ^{Note 1}	Buffer/transfer before detection: Enable/disable (for Sensor trigger) 1: Enable, 0: Disable Note: If this parameter is not specified, the setting will be disabled.
PreIntervalPer ^{Note 1} (for Sensor,Alarm trigger)	Unit of time used for recording interval before detection (for Sensor trigger) 1000: 1 second, 60000: 1 minute
PreIntervalNum ^{Note 1} (for Sensor,Alarm trigger)	Number of recorded images for each time unit before detection (for Sensor trigger) 1-15
PreNum ^{Note 1} (for Sensor,Alarm trigger)	Total number of recorded images before detection (for Sensor 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

PostEnable ^{Note 1} (for Sensor,Alarm trigger)	Buffer/transfer after detection. Enable/disable (for Sensor,Alarm trigger) 1: Enable, 0: Disable Note: If this parameter is not specified, this setting will be disabled.
PostIntervalPer ^{Note 1}	Unit of time used for recording interval after detection (for Sensor trigger) 1000: 1 second, 60000: 1 minute Unit of time used for recording interval (for Timer trigger) 1000: 1 second, 60000: 1 minute, 3600000: 1 hour
PostIntervalNum ^{Note 1}	Number of recorded images after detection for each time unit (for Sensor trigger) 1-15 Number of recorded images for each time unit (for Timer trigger) 1-15
PostNum ^{Note 1} (for Sensor,Alarm trigger)	Total number of recorded images after detection (for Sensor 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
IgnoreTime ^{Note 1} BL-C10/C30 (for Sensor trigger)	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
TMode ^{Note 1}	Buffer/transfer method 0: No Transfer, No Memory Overwrite 16: No Transfer, Memory Overwrite 32: FTP transfer 48: E-mail transfer

*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)	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], ["], ['], [&], [<], [>].
FtpPortNo (*2)	FTP port number Note: Standard 21, 1-65535
FtpLoginID	Login ID Note: 0-63 one-byte characters. The following cannot be used ["]
FtpPassword	Password Note: 0-63 one-byte characters. The following cannot be used: ["]
FtpLoginMode (*2) ^{Note 1}	Login timing. 0: Every time, 64: One time
FtpFileName (*2) ^{Note 1}	Upload File Name Note: 1-234 one-byte characters. The following cannot be used: [Space], ["], ['], [&], [<], [>]
FtpFileNameMode (*2) ^{Note 1}	Overwrite setting. 0: Overwrite file, 1: Save as new file with time stamp
FtpPortMode (*2) ^{Note 1}	Data transfer method. 0: Passive mode, 16: Active mode

*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)	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], ["], ['], [&], [<], [>].
TMailPort	Sending E-mail (SMTP) server Port No.

	Note: Standard port number is 25.
TPopServer	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], ["], ['], [&], [<], [>].
TPopPort	Receiving E-mail (POP3) server Port No. Note: Standard port number is 110
TPopID	Login ID Note: 0-63 one-byte characters. The following cannot be used: ["]
TPopPassword	Password Note: 0-63 one-byte characters. The following cannot be used: ["]
TMailFrom (*2)	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], ["], ['], [&], [<], [>].
TMailTo1 (*2)	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], ["], ['], [&], [<], [>].
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)	Subject Note: One-byte characters: 0-44, two-byte characters: 0-22 ["] cannot be used.
TMailText	Text Note: One-byte characters: up to 63, two-byte characters: up to 31 [Line break] and [] cannot be used.

*2: Required setting

MMode	E-mail notification setting 64: Enable // 0: Disable
-------	--

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

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	Login ID Note: 0-63 one-byte characters. The following cannot be used: ["]
MPOPPassword	Password Note: 0-63 one-byte characters. The following cannot be used: ["]
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=00
00&Stop=2359&Position=9&PResolution=2&PQuality=8&PreEnable=0&PostEnable=1&PostIntervalPer=1000&P
ostIntervalNum=10&PostNum=100&TMode=32&FtpServer=ftp.server.com&FtpPortNo=21&FtpLoginID=robert&Ft
pPassword=robertspassword&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
```

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-C10/C30	
	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 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	Set “1” to one of them

the Value "0" when setting Sensor and Alarm

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\r\n\r\n
Content-type: text/plain\r\n\r\n\r\n
TaskEnable:1\r\n\r\n
TCondition:1\r\n\r\n
Trigger:3\r\n\r\n
Week:65\r\n\r\n
TimeMode:0\r\n\r\n
Start:0000\r\n\r\n
Stop:2359\r\n\r\n
Position:9\r\n\r\n
PResolution:2\r\n\r\n
PQuality:8\r\n\r\n
PreEnable:0\r\n\r\n
PreIntervalPer:1000\r\n\r\n
PreIntervalNum:1\r\n\r\n
PreNum:1\r\n\r\n
PostEnable:1\r\n\r\n
PostIntervalPer:1000\r\n\r\n
PostIntervalNum:10\r\n\r\n
PostNum:100\r\n\r\n
TMode:32\r\n\r\n
FtpServer:ftp.server.com\r\n\r\n
FtpPortNo:21\r\n\r\n
FtpLoginID:robert\r\n\r\n
FtpPassword:robertpassword\r\n\r\n
FtpLoginMode:64\r\n\r\n
FtpFileName:test/image\r\n\r\n
FtpFileNameMode:1\r\n\r\n
FtpPortMode:16\r\n\r\n
MMode:64\r\n\r\n
MMailServer:mail.server.com\r\n\r\n
MPopServer:mail.server.com\r\n\r\n
MmailFrom:cam@mail.com\r\n\r\n
MMailTo1:tocam@mail.com\r\n\r\n
MMailTo2:\r\n\r\n
MMailTo3:\r\n\r\n
MmailSubject:ImageTest\r\n\r\n
MmailText:GetImage\r\n\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

3.5 Preset setting, retrieval (Set, Get) Func=PresetName

Set: Set preset information.

Accessible only for administrator

Parameters	Setting
Func	PresetName (Fixed)
Kind ^{Note 1}	Preset number 1-8: preset position number 9: Sensor (BL-C10/C30), Alarm1 (HCM3xx models) 10: Alarm2 (HCM3xx 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=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.

(Delete preset position number 5 setting)

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

Note: Preset names for preset positions 1-8 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 1-8 (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=PresetName&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-C10/C30	
	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

Get: Retrieve preset information.

Accessible only for administrator

Parameters	Setting
Func	PresetName (Fixed)
Kind ^{Note 1}	Preset number 1-8: preset position number 9: Sensor 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

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: 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 (BL-C30: Level 3users)

Kind=1 Accessible only for administrator

Parameters	Setting			
Func	Pan (Fixed)			
Kind	0: General users authorized to control Pan/Tilt (BL-C10/C30 Level 3 users) 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-C10/C30	HCM3xx models		
	Current: Current value -5000 - 0 - 5000 (-50 degrees to 0 degrees to +50 degrees)	All models except HCM381	HCM381	
		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)	Current: Current value -17500 - 0 - 17500 (-175 degrees to 0 degrees to +175 degrees)
PanHome ^{Note 1}	Pan minimum (5 degree increments)			
	BL-C10/C30	HCM3xx models		
	Current: Current value -5000 - 0 - 5000 (-50 degrees to 0 degrees to +50 degrees)	All models except HCM381	HCM381	
		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)	Current: Current value -17500 - 0 - 17500 (-175 degrees to 0 degrees to +175 degrees)
PanRP ^{Note 1}	Pan minimum (5 degree increments)			
	BL-C10/C30	HCM3xx models		
	Current: Current value -5000 - 0 - 5000 (-50 degrees to 0 degrees to +50 degrees)	All models except HCM381	HCM381	
		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)	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-C10/C30 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	

Get: Retrieve camera Pan information.

Accessible only for administrator

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

Example:

Get?Func=Pan&Kind=1

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Deg:-3000

Speed:30 •••• Speed is 0, when Pan is not functioning

PanRM:-5000

PanHome:0

PanRP:5000

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

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 (BL-C30: Level 3 users)

Kind=1 Accessible only for administrator

Parameters	Setting		
Func	Tilt (Fixed)		
Kind	0: General users authorized to control Pan/Tilt (BL-C10/C30 Level 3 users) 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-C10/C30	HCM3xx models	
	Current: Current value -4000 - 0 - 1000 (-40 degrees to 0 degrees to +10 degrees)	All models except HCM381	HCM381
Current: Current value -4500 - 0 - 2000 (-45 degrees to 0 degrees to +20 degrees)		Current: Current value 0 - 9000 (0 degrees to +90 degrees)	Current: Current value On the ceiling: 0 - 9000 (0 degrees to +90 degrees) On the table: -12000 - 0 (-120 degrees to 0 degrees)
TiltHome ^{Note 1}	Tilt minimum (5 degree increments)		
	BL-C10/C30	HCM3xx models	
	Current: Current value -4000 - 0 - 1000 (-40 degrees to 0 degrees to +10 degrees)	All models except HCM381	HCM381
Current: Current value -4500 - 0 - 2000 (-45 degrees to 0 degrees to +20 degrees)		Current: Current value 0 - 9000 (0 degrees to +90 degrees)	Current: Current value On the ceiling: 0 - 9000 (0 degrees to +90 degrees) On the table: -12000 - 0 (-120 degrees to 0 degrees)
TiltRP ^{Note 1}	Tilt minimum (5 degree increments)		
	BL-C10/C30	HCM3xx models	
	Current: Current	All models except HCM381	HCM381

	value -4000 - 0 - 1000 (-40 degrees to 0 degrees to +10 degrees)	Current: Current value -4500 - 0 - 2000 (-45 degrees to 0 degrees to +20 degrees)	Current: Current value On the ceiling: 0 - 9000 (0 degrees to +90 degrees) On the table: -12000 - 0 (-120 degrees to 0 degrees)
SetupType (HCM381) ^{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-C10/C30	
	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	

* Zoom-enabled HCM models (HCM381): [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

3.7.3 Camera Zoom control (Set) Func=Zoom (HCM381)

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
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 (HCM381)

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 Zoom 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	Check parameters
	When "Kind" is set to 1:No FocusMode & No ShortFocus parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
Return: -7	Invalid ShortFocus value	Check the ShortFocus value
	Invalid FocusMode value	Check the FocusMode value
	Invalid Dist 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	Retry as administrator
	When "Kind" is set to 0: Not accessed by users authorized to control Focus	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

Content-type: text/plain

ShortFocus:0 ••••• 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	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator
Return: -17	Unsupported feature	Retry using a model supporting the feature

3.8 Private Mode setting, retrieval (Set, Get) Func=Powerdown (BL-C10/C30)

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:

<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: -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 only for administrator

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:

<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: 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.

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-C10/C30	
	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 only for administrator and general users (BL-C10/C30: Level 1, 2, 3 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\r\n
Content-type: text/plain\r\n\r\n
ModelName:BL-C30\r\n ..... Model name
BootFirm:V1.10\r\n ..... Boot version
AplFirm:1.10\r\n ..... Apl version
Cgii/fVer:1.00\r\n ..... CGI interface version
```

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

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-C10/C30	
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) (Default setting)
HCM3xx models	
LimitTime ^{Note 1}	Display time limit of motion images 65535: No limit, 0: Do not display (Default) 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 (Default), 5: 5 seconds, 10: 10 seconds, 30: 30 seconds, 60: 60 seconds
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)
UFocusCont ^{Note 1}	Focus control. 1: Enable, 0: Disable (Default)
UZoomCont ^{Note 1}	Zoom 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)

(BL-C10/C30)

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

(HCM3xx models)

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

(BL-C10/C30)

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

(HCM3xx 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: Modify
 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-C10/C30 Not accessible during Privacy Mode	Disable Privacy Mode
Return: -7	During Create or Modify	Invalid Mode value Less than 6 characters are entered for UserID or UserPassword	Check parameters Check parameters
	During Modify or Delete	Invalid UNo (0 or less)	Check parameters
Return: -8		Invalid ULevel Create or Modify cannot be completed due to incorrect LimitTime, LimitInterval, etc.	Check parameters 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)

To retrieve general user information, specify UNo or UserID.

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

Example:

```
Get?Func=User&Kind=1&UNo=2
```

```
(Received)
```

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain
```

```
UNo:2
```

```
UserID:robert
```

```
(BL-C10/C30)
```

```
ULevel:3
```

(HCM3xx models)

```
LimitTime:0
```

```
LimitInterval:3
```

```
UPanTiltCont:0
```

```
UPresetCont:0
```

```
UClickCont:0
```

```
UBrightCont:0
```

```
UDegiOutCont:0
```

```
UImgChgCont:0
```

```
UResoCont:0
```

```
UQualityCont:0
```

```
USnapShotCont:0
```

```
UHearCont:0
```

```
USpeakCont:0
```

```
UMultiCont:0
```

```
UBufferCont:0
```

```
UFocusCont:0
```

```
UZoomCont:0
```

*UFocusCont and UZoomCont are available to retrieve for HCM381.

*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-C10/C30	
	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 the Direction parameter (BL-C10/C30: Level 2, 3 users, depending on the 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) ZoomTele (Standard Zoom) ZoomWide (Wide Zoom) FocusNear (Near) FocusAuto (Auto focus) FocusFar (Far)

* ZoomTele, ZoomWide, FocusNear, FocusAuto and FocusFar are supported only by Zoom and Focus-enabled cameras (such as HCM381).

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

Parameters	Setting
PresetOperation	Move (Move to the assigned preset position)
Data ^{Note 1}	1-8 (Desired preset position no.)

Example:

(Pan left)

nphControlCamera?Direction=PanLeft

Accessible only for administrator and general users authorized to control Pan/Tilt (BL-C10/C30: Level 3 users)

Tilt scan

nphControlCamera?Direction=TiltScan

Accessible only for administrator and general users authorized to control Pan/Tilt (BL-C10/C30: Level 3 users)

(Home position)

nphControlCamera?Direction=HomePosition

Accessible only for administrator and general users authorized to move camera to the Home position (BL-C10/C30: Level 2, 3 users)

(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 (BL-C10/C30: Level 2, 3 users)

(Darken the image)

nphControlCamera?Direction=Darker

Accessible only for administrator and general users authorized to control camera brightness (BL-C10/C30: Level 3 users)

*1. Set the following parameters when controlling focus manually. (HCM381)

Parameters	Setting
Direction	FocusNear (Near) FocusFar (Far)
Dist ^{Note 1}	1: Small displacement, 2: Large displacement

Example:

(Manual focus control)

nphControlCamera?Direction=FocusNear&Dist=1

3.13 MotionJPEG retrieval (Real-time) (nphMotionJpeg)

Accessible for administrator and general users authorized to retrieve MotionJPEG (BL-C10/C30: Level 1, 2, 3 users)

(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	160x120 320x240 640x480
Quality	Motion (Favor motion) Standard (Standard quality) 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/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)

Accessible for administrator and general users authorized to retrieve SnapshotJPEG (BL-C10/C30: Level 1, 2, 3 users)

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

SnapshotJPEG: Retrieve SnapshotJPEG.

Parameters	Setting
Resolution	160x120 320x240 640x480
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 all general users (BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: All general users)

(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
HCM3xx models Record	First image frame of the motion image. No. 0-n

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: HCM3xx models

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

Blank blue 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 all general users

(BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: All general users)

(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

3.18 Retrieving information on wireless radio wave condition (Get) Func=Wireless (Wireless network cameras)

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%
```

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 (BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: 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\r\n

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

Data:24\r\n..... 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}	1: Sensor

Example:

Get?Func=Sensor&Kind=1

(Retrieve current sensor detection status)

(Received)

HTTP/1.0 200 OK

Content-type: text/plain

Data:1 ••••• Sensor is currently making a detection

or

Data:0 ••••• Sensor is currently not making a detection

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-C10/C30	
	Not accessible during Privacy Mode	Disable Privacy Mode
Return: -7	Invalid Kind value	Check parameters
Return: -11	Not accessed by administrator	Retry as administrator

3.21 AC power source frequency setting and information retrieval (Set, Get) Func=Powerfrq (BL-C10/C30, BB-HCM381)

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

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=Powerfrq&Kind=1&Data=50

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
	Not accessible during Privacy Mode	Disable Privacy Mode
	Invalid data setting value	Check parameters
Return: -6	Error while writing to flash memory	Retry
Return: -7	Invalid Data value	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 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

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: 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
	Not accessible during Privacy Mode	Disable 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".

3.23 Limit Continuous Motion JPEG setting, retrieval (Set, Get) Func=TopView

Set: Set Limit Continuous Motion JPEG setting. (BL-C10/C30)

Accessible only for administrator

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

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=TopView&Kind=1&TMLimit=0&TMInterval=30

Note: Either TMLimit or TMInterval can be set; both cannot be set.

When there are no parameters or no values entered for TMLimit and TMInterval, an error will be returned (Example: TMLimit=&TMInterval=&Return=)

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 parameters or values entered for either TMLimit or TMInterval	Check parameters
Return: -4	Invalid Func value or incorrect Kind value Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
Return: -8	TMLimit and TMInterval values cannot be set	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 Limit Continuous Motion JPEG information setting.

Accessible only for administrator and general users authorized to set image refresh interval (BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: 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

HCM3xx models 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 HCM3xx models.

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

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	Check parameters
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

Accessible for administrators and general users authorized to view images (BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: 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 (BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: All general users)

Parameters	Setting
Mode	Motion (Display motion images) Refresh (Display still images)
Resolution	160x120 320x240 640x480
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

Accessible for administrators and general users authorized to view images (BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: General users authorized to access 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. 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 (BL-C10/C30: Level 1, 2, 3 users)

(HCM3xx models: General users authorized to view images)

Parameters	Setting
Resolution	160x120 320x240 640x480
Size	Specifies the width of the title bar STD (Standard) Expand (Standard x1.5)

Example:

CgiTitle?Resolution=320x240&Size=STD

3.27 Audio setting, retrieval (Set,Get) Func=AudioSetup (HCM models)

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: OK, -n: Error

Example:

Set?Func=AudioSetup&Kind=1&OutputEnable=1&OutputGain=2&TimeOut=3600
&InputEnable=1&InputGain=2&PanTiltMute=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	OutputGain, TimeOut, InputEnable, InputGain and PanTiltMute parameters missing	Check parameters
Return: -4	Invalid Func value or Invalid Kind value Cxx models Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
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

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

Content-type: text/plain

OutputEnable:1

OutputGain:2

TimeOut:60

InputEnable:1

InputGain:2

PanTiltMute: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: -8	Error retrieving OutputGain and InputGain values	Retry
Return: -11	Not accessed by administrator	Retry as administrator

3.28 Network (IPv6) setting, retrieval (Set,Get) Func=V6Network (HCM models)

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, 2147483647: Unlimited
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, 2147483647: Unlimited
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

Content-type: text/plain

Return: 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=3ffe:0200:0000:010a:0000:0000:0000:0001
&DNS2=3ffe:0200:0000:010a:0000:0000:0000:0001&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
	Cxx models	
	Not accessible during Privacy Mode	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

Get: Retrieve IPv6 network information.

Accessible only for administrator

Parameters	Setting
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

DNS1:3ffe:0200:0000:010a:0000:0000:0000:0001

DNS2:3ffe:0200:0000:010a:0000:0000:0000:0001

Bandwidth:2147483647

ConnectType:1

(Example 2: Staticconnection)

HTTP/1.0 200 OK

Content-type: text/plain

Mode:2

Open:0

Port:80

IP:fe80:0:0:0:280:f0ff:fe33:1fa

Gateway:

DNS1:3ffe:0200:0000:010a:0000:0000:0000:0001

DNS2:3ffe:0200:0000:010a:0000:0000:0000:0001

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 (Overseas models)

Set: Set daylight saving time.

Accessible only for administrator

Parameters	Setting
Func*	Daylight saving (Fixed)
Kind*	1 (Fixed)
DstEnable* ^{Note 1}	Automatically adjust clock for daylight saving changes (Required). 1: Enable, 0: Disable
BeginMonth ^{Note 1}	Starting month: 1-12 (The default value is used, if not specified.)
BeginDay ^{Note 1}	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 ^{Note 1}	Start time: 0-23
EndMonth ^{Note 1}	Ending month: 1-12 (The default value is used, if not specified.)
EndDay ^{Note 1}	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 ^{Note 1}	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\r\n

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

Return:0\r\n•••••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	Check parameters
	Cxx models	Disable Privacy Mode
	Not accessible during 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 only for administrator

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 (HCM models)

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

Legend:

*: Required parameter.

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

Example: Enable color night vision.

Set?Func=NightView&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 Cxx models Not accessible during Privacy Mode	Check parameters Disable Privacy Mode
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 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

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 Preset control (Set) Func=PresetCnt

Set: Preset camera and get the Preset name.

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

(Cxx: Level 2, 3)

Parameters	Setting
Func	PresetCnt (Fixed)
Kind ^{Note 1}	Preset no. 1-8: Preset position no., 9: Sensor (C models), Alarm 1(HCM models), 10: Alarm 2 (HCM 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: -3	No Data parameter	Check parameters
Return: -4	Invalid Func value or Invalid Kind value	Check parameters
	Cxx models	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

3.32 Digital image output setting (Set) Func=Doutput (HCM models)

Set: Set camera's digital output.

Accessible only for administrator and general uses authorized to control external 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	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	Insufficient privileges	Retry as administrator or general users authorized to control external output

3.33 Image time stamp setting, retrieval (Set,Get) Func=TimeStamp (HCM models)

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.

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 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

Content-type: text/plain

Data:32: 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

3.34 Audio Retrieval (G.726 speech coder algorithm: Real-time) (nphAudio) (HCM3xx models)

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

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.).

nphAudio: Audio Retrieval

Parameters	Setting
Mode	Mixed. HCM311 mode (HCM310 compatible mode is used to get audio data when Mode is not set.)

Audio playback procedure

HCM311 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.)

3.35 Synchronized Image/Audio Retrieval (MJPEG/G.726 speech coder algorithm) (nphVideo) (HCM3xx models)

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

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: 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.).

nphVideo: Synchronized Image/Audio Retrieval

Parameters	Setting
Mode	0 (Fixed). Reserved for future expansion.
Resolution	160x120 320x240 (The default setting will be used, if the user is not an authorized user.) 640x480
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 Vertical resolution setting, retrieval (Set,Get) Func=OddMode (BB-HCM381)

Set: Set vertical resolution.

Accessible only for administrator

Parameters	Setting
Func	OddMode (Fixed)
Kind	1 (Fixed)
Data	Vertical resolution. 0: 480, 1: 240

Return value:

HTTP/1.0 200 OK

Content-type: text/plain

Return: 0: OK, -n: Error

Example: Set the vertical resolution to 480.

Set?Func=OddMode&Kind=1&Data=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 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 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 vertical resolution setting.

Accessible only for administrator

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

Example:

Get?Func=OddMode&Kind=1

(Return)

HTTP/1.0 200 OK

Content-type: text/plain

Data: 0: Vertical resolution: 480

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

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

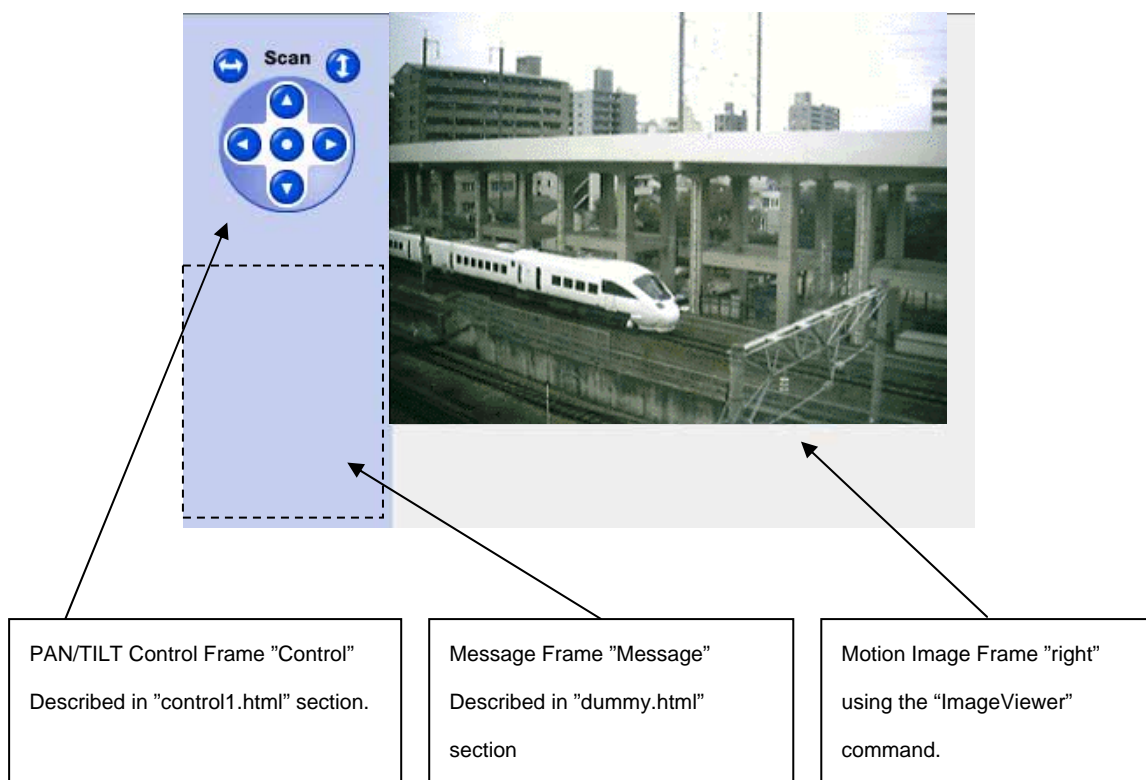
The following section shows an example of a web site which has embedded a live image from a Panasonic Network Camera. The sample web page consists of 3 frames:

- 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="frame/dummy.html" 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>
Controll 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>
```

Source Code of Message Frame <dummy.html>

```
<! This is Sample Code. Panasonic will not be held responsible for damages or loss incurred by using  
this information. >  
<html>  
<head>  
<title>  
Dummy Frame  
</title>  
</head>  
<body BGCOLOR="#C4CEEF" >  
</body>  
</html>
```