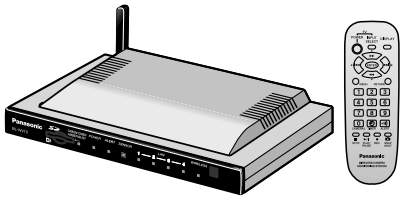
Panasonic®

Operating Instructions



Wireless Camera Monitoring System

Model No. **BL-WV10A**

Please read this manual before using and save this manual for future reference.
Panasonic Network Camera Website: http://www.panasonic.com/netcam
for customers in the USA or Puerto Rico

Main Features

Camera Image Monitoring

Simply connect the BL-WV10A to your Panasonic home network cameras (sold separately) and to your TV, and you'll be able to view camera images conveniently on your TV.

Wireless cameras such as the BL-C30A can be connected as well, meaning you won't have to worry about running cables from the BL-WV10A to each camera.

Pan/Tilt Feature

Aim the camera wherever you want by simply pressing the navigator keys on the included remote control.

Sensor Alert Feature

The camera's built-in sensor detects motion by sensing temperature changes caused naturally by people or animals moving within the sensor's range. When the sensor detects motion, the BL-WV10A can alert you by sounding its built-in buzzer and by displaying the image from the camera that has detected motion.

This feature is not available with HCM series cameras.

Camera Image Recording

Simply insert an optional SD memory card and you'll be able to record movies and pictures of your camera images. Later you can use the remote control to play back movies and view pictures on your TV that were recorded by the BL-WV10A.

Privacy Mode Feature

Simply press the camera's PRIVACY button to hide the camera's lens when you don't want camera images to be seen.

This feature is not available with HCM series cameras.

System Expansion

Up to 8 cameras can be connected, allowing you to keep an eye on every room with just 1 BL-WV10A.

Multi-Camera Monitoring

When multiple cameras are registered, you can view up to 4 camera images at once and switch to monitor a specific camera if necessary.

Quick Setup

Configuration is quick and easy with the BL-WV10A's Quick Setup feature–connect your cameras to the BL-WV10A and Quick Setup will handle the rest.

Recommended Accessories (sold separately)

Compatible router:

- Panasonic BB-HGW700A Network Camera Management System

Compatible Network Cameras:

- Panasonic BL-C10A, BL-C30A (firmware version 1.22 or higher)
- HCM series (firmware version 1.08 or higher, however, some features cannot be used; see page 4 for more information on compatibility).
- Note that the following HCM series cameras are not supported by the BL-WV10A:
  - KX-HCM8
  - KX-HCM10
  - KX-HCM230
  - KX-HCM250
  - KX-HCM270
  - KX-HCM280

For the latest firmware, visit http://panasonic.co.jp/pcc/products/en/netwkcam/

How to Use This Documentation

The following documentation is included:

Setup Guide

Provides basic instructions for connecting your cameras to the BL-WV10A.

Operating Instructions (this manual)

Provides detailed instructions on BL-WV10A operations, configuration, features, etc.

Trademarks

- SD mark is a trademark of the SD Card Association.
- QuickTime and the QuickTime logo are trademarks of Apple Computer, Inc.

- All other trademarks identified herein are the property of their respective owners.

Camera Compatibility

The following HCM series camera features are not supported by the BL-WV10A.

- Zoom
- Focus
- Click to Center Control
- External Output Control
- External Sensor
- Listen
- Talk
- View Buffered Image Page
- IPsec*1

*1 The BL-WV10A is not compatible with IPsec. To use an HCM series camera with the BL-WV10A, make sure the camera's IPsec feature is disabled.

In order to use the following HCM series camera features with the BL-WV10A, set the access settings for the general user (the user profile used by the BL-WV10A to access the HCM series camera) as shown below.

For more information, refer to the operating instructions provided with your HCM series camera.

Feature	Access Setting
Limit time of Continuous Motion JPEG	Unlimited
Pan/Tilt Control	Allow
Preset Control	Allow
Brightness Control	Allow
Change Refresh Interval	Allow
Change Resolution	Allow
Change Quality	Allow

IMPORTANT SAFETY INSTRUCTIONS

When using this product, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or personal injury.

1. Read and understand all instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not install this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
6. Protect the AC adaptor cord and AC cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from this product.
7. The AC cord is used as the main disconnect device. Ensure that the AC outlet is located/installed near the product and is easily accessible.
8. Use only the included Panasonic AC adaptor and AC cord.
9. The AC adaptor must remain connected at all times. (It is normal for the adaptor to feel warm during use.)
10. To prevent the risk of fire or electrical shock, do not expose this product to rain or any type of moisture.
11. Do not touch the product or the AC adaptor and AC cord during lightning storms.
12. Unplug this product when unused for a long period of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as when the AC adaptor, AC cord or plug is damaged, the unit does not operate normally, or after the unit has been dropped.
14. Certain Network Cameras are intended for indoor use only. Never use an indoor camera outdoors.
15. Unplug this unit from power outlets if it emits smoke, an abnormal smell or makes unusual noise. These conditions can cause fire or electric shock. Confirm that smoke has stopped and contact an authorized service center.

SAVE THESE INSTRUCTIONS

Notice Regarding Battery Safety

1. Do not open or mutilate the batteries. Released electrolyte from the batteries is corrosive and may cause burns or injury to the eyes or skin. The electrolyte may be toxic if swallowed. If electrolyte comes in contact with the eyes, flush eyes with water.
2. Do not mix old and new batteries.
3. Do not heat or expose to flame.
4. Do not take apart or short circuit.
5. Do not attempt to recharge alkaline or manganese batteries.
6. Remove if the remote control is not going to be used for a period of time. Store in a cool, dark place.
7. Use only non-rechargeable AA batteries. When replacing the batteries, we recommend using the same type of Panasonic batteries that are included with this product. See the Setup Guide for more information.

Notice Regarding Wireless Communications

1. To avoid wireless communication interference and instability, do not use this product near the following devices.
   - Wireless transmitters (radio transmitters, cellular transmitters, etc.)
   - Wireless devices which operate at 2.4 GHz (security equipment, POS systems, cordless telephones, etc.)
   - Microwave ovens
2. Wireless communication range and quality may be affected if the following types of objects are located between or near this product and other wireless devices connected to this product. In the event that images do not refresh at a regular rate, become cut off, etc., relocate this product, the other wireless devices, or the obstacles (if possible) for more stable wireless communications.
   - Metal door shutters
   - Walls made of concrete, stone, or brick, or walls which contain aluminium-based heat insulation
   - Multiple walls
   - Fire doors and glass
   - Steel racks or shelves
3. Place cameras and this product at least 2 m (6.5 ft.) away from radios. Do not connect cameras and this product to a power outlet used by a radio.

FCC and Other Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This product operates at frequencies that may cause interference to nearby TVs and VCRs. To minimize or prevent such interference, the base of this product should not be placed near or on top of a TV or VCR. If interference is experienced, move this product further away from the TV or VCR. This will often reduce or eliminate interference. Operating near 2.4 GHz electrical appliances may cause interference. Move away from the electrical appliances.

Environment

Do not place the product in a room where the temperature is less than 0 °C (+32 °F) or greater than +40 °C (104 °F). Allow 10 cm (4 inches) clearance around the product for proper ventilation.

Avoid excessive smoke, dust, mechanical vibration, shock, or direct sunlight.

Routine care

Wipe the product with a soft cloth. Do not use benzine, thinner, or any abrasive powder. When you leave the product unused for a long period of time, unplug the AC cord plug from the outlet.

If there is any trouble

Consult an authorized Panasonic Factory Service Center.

FCC RF Exposure Warning:

- To comply with FCC RF exposure requirements in uncontrolled environment:
- This equipment must be installed and operated in accordance with provided instructions and a minimum 20 cm (8 inches) spacing must be provided between antenna and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.
- This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Medical

Consult the manufacturer of any personal medical devices, such as pacemakers, to determine if they are adequately shielded from external RF (radio frequency) energy. (The product operates in the frequency range of 2400 MHz to 2483.5 MHz, and the power output level is 0.1 watts.) Do not use the product in health care facilities if any regulations posted in the area instruct you not to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF (radio frequency) energy.

Other

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

No responsibility will be taken by our company with respect to consequences resulting from the use and/or the damage of this product.

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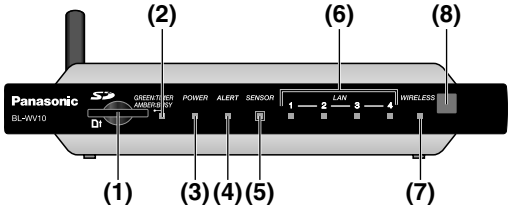
1 Names and Locations

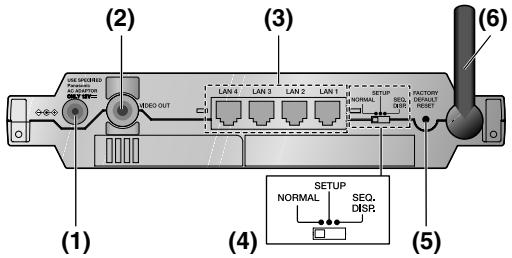
1.1 Main Unit

Front Panel



1. SD Memory Card port (see page 72)
2. Timer/Busy indicator (see page 13)
3. Power indicator (see page 13)
4. Alert indicator (see page 13)
5. Sensor indicator (see page 13)
6. LAN indicators (see page 13)
7. Wireless indicator (see page 13)
8. Remote control sensor (see page 16

Rear Panel



1. DC IN jack (see page 23 or page 32)
2. Video output port (see page 23 or page 32)
3. LAN ports (see page 26 or page 32)
4. Mode switch (see page 23 or page 32)
5. FACTORY DEFAULT RESET button (page 131)
6. Antenna

Indicators

The indicators display the status of the BL-WV10A and network conditions.

During Quick Setup

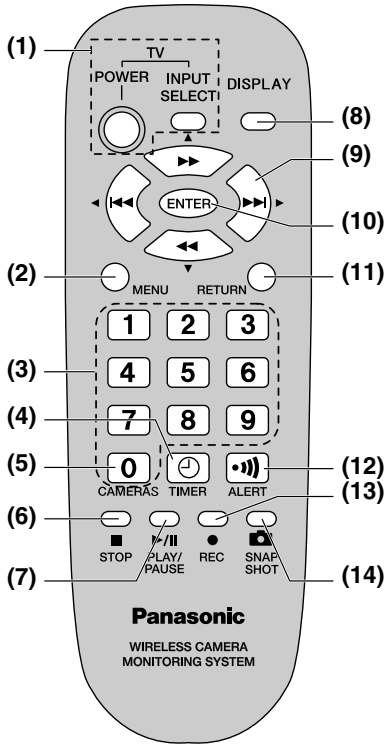
Indicator	Color	Description
Power	Amber (flashing)	Unit is in Quick Setup mode.
Wireless	Green	Quick Setup for a camera is in progress, or Quick Setup has been completed for the BB-HGW700A.
	Green (flashing)	Quick Setup has been completed for a camera.

During Normal Operation

Indicator	Color	Description
Timer/Busy	Green	Timer/Sensor recording has been set. Turn off by pressing [TIMER] on the remote control.
	Green (flashing)	Timer/Sensor recording cannot be turned on because the SD memory card is full. The indicator will flash for about 6 seconds. Also flashes when the timer recording setting is invalid (no SD memory card installed, etc.)
	Off	Timer/Sensor recording is not set. Turn on by pressing [TIMER] on the remote control.
	Amber (flashing)	Data is either being written to or read from the SD memory card.
Power	Green	The unit is turned on.
	Red (flashing)	A problem was detected during the power-on diagnostics.
	Amber (flashing)	Power-on diagnostics are in progress.
Alert	Green	The buzzer is turned on. Turn off by pressing [ALERT] on the remote control.
	Off	The buzzer is turned off. Turn on by pressing [ALERT] on the remote control.

Indicator	Color	Description
Sensor	Amber	The sensor is on.
	Amber (flashing)	The indicator will flash every 0.5 seconds when a camera's built-in sensor is triggered. After detection, the indicator will flash every second. To turn off the indicator, see page 69.
	Off	The sensor is off.
LAN 1–4	Green	The unit is connected to wired cameras or to a router.
Wireless	Green	The unit is connected to wireless cameras.

1.2 Remote Control



1. [POWER] and [INPUT]:
   You can program the remote control to turn your TV on and off when the [POWER] button is pressed, and to change the TV's video input. You must first program your TV's manufacturer code (see page page 18).
2. [MENU]: Press while monitoring a camera to display the [MENU] screen.
3. Number keys: Depending on the current screen, used to enter numbers and text, or aim the camera at a preset position or at the sensor position (see page page 59).
4. [TIMER]: Turns the timer on and off.
5. [0]: Displays the camera list or switches to multi-camera display mode.
6. [STOP]: Stops recording and playback.
7. [PLAY/PAUSE]: Starts and pauses movie playback and picture display.
8. [DISPLAY]: Toggles through the different image data display modes while monitoring a camera (see page page 122).

9. Navigator keys: Used to select on-screen items or aim the camera in a different direction.

10. [ENTER]: Depending on the current screen, selects the highlighted setting or item, saves the current setting, or aims the camera at the home position (see page 59).

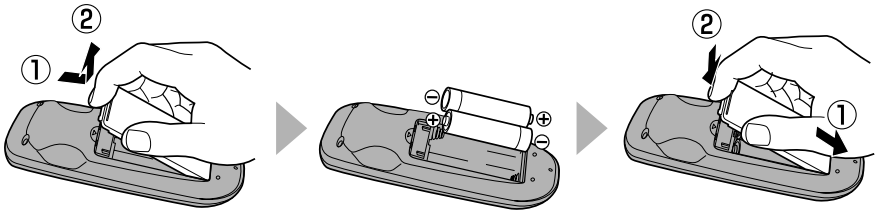
11. [RETURN] Returns to the previous or menu.

12. [ALERT]: Turns the buzzer on and off. The buzzer can be used to alert you to camera sensor detection.

13. [REC]: Press while monitoring a camera to record a movie.

14. [SNAPSHOT]: Press while monitoring a camera to take a picture.

Insert the batteries



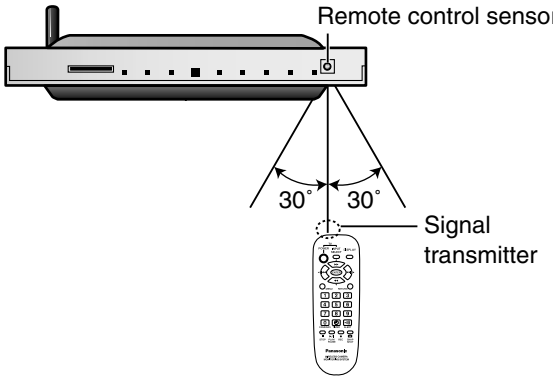
While pulling the cover toward you, lift it up.

Insert the batteries, orienting the + and - poles as indicated.

Align the cover and press down until it snaps into place.

Active range

The remote control can be used up to 7 m (23 ft.) away and within a 30 degree angle from the remote control sensor.



Note

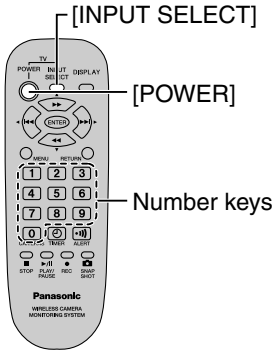
- Do not place anything between the remote control sensor and the remote control.
- Do not expose the remote control sensor to direct sunlight or powerful inverter-type fluorescent light.
- Should dust or grime accumulate on the remote control sensor and/or the remote control transmitter, the effective range will be shortened.
- To clean, wipe the remote control sensor and transmitter with a clean dry cloth.
- If the BL-WV10A is placed in a cabinet, the thickness and/or color of the glass doors of the cabinet may decrease the effective range of the remote control.
- The effective range of the remote control may decrease when the batteries are losing their charge.

Programming the remote control

The remote control can be used to turn a television on and off, and to switch the television's video input selection. If your television is not a Panasonic television, you can set the manufacturer's code for the remote control.

While holding down [POWER], enter the 2-digit code found in the chart below that corresponds to your TV. Release [POWER] after you have entered the code.

Code	Manufacturer	Code	Manufacturer
01 **02**	Panasonic Quasar	**10**	Sanyo Fisher
03	Magnavox Sylvania Philips	**11**	JVC
04	Zenith	**12**	Hitachi
05	Thomson RCA GE	**13**	Mitsubishi
06 **07**	Sharp	**14**	Samsung
08	Sony	**15** **16** **17**	Goldstar LG
09	Toshiba	**18** **19**	Samsung



Note

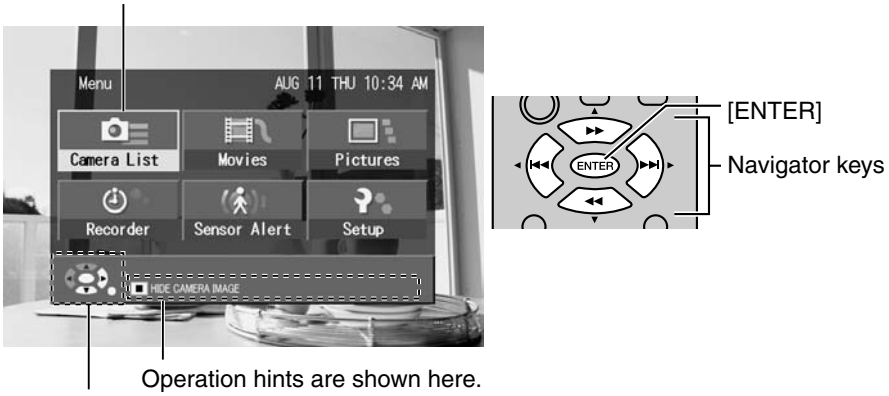
- When using the remote control to operate a television, aim the remote control at the television.

- Some manufacturers have multiple codes. If the code you entered does not work, please select one of the other codes for that manufacturer.
- If the television's manufacturer is not listed above, please use the remote control supplied with the television.
- If the batteries are removed from the remote control for thirty minutes or longer, the remote control setting will be reset and you will need to enter the manufacturer's code again.

Using the remote control

Below is an example of how the remote control is used to navigate through on-screen menus.

Example:
Press [ENTER] to enter the [Camera List] screen.



Remote control buttons and keys that can be used are shown here.

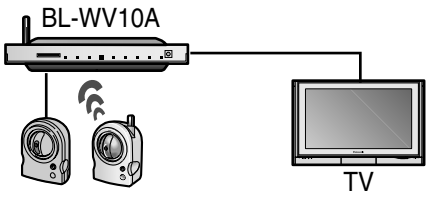
2 Connecting Cameras

Up to 8 cameras can be registered to the BL-WV10A.

To use the BL-WV10A, you will need to configure the network settings for the BL-WV10A as well as store the user names and passwords for cameras connected to the BL-WV10A. This can be done automatically using Quick Setup.

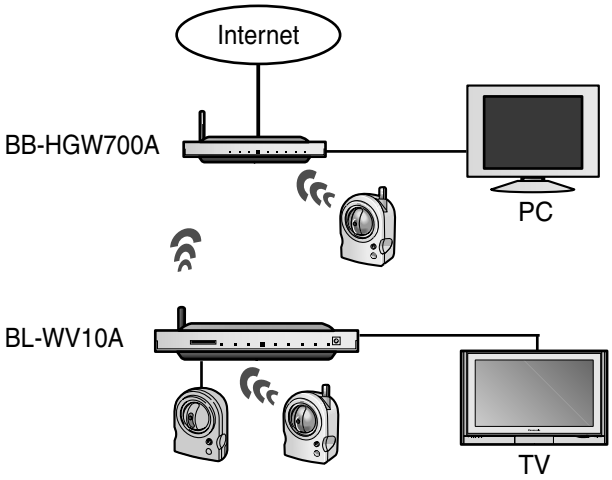
Quick Setup can be done in one of 3 different ways, depending on how the cameras are connected.

Connecting cameras directly to the BL-WV10A



To connect cameras directly to the BL-WV10A, see page 23.

Connecting cameras using an optional BB-HGW700A Camera Control Unit

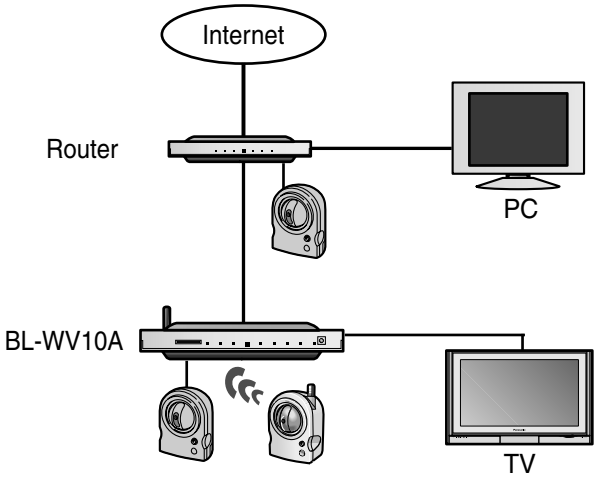


To connect a BB-HGW700A, see page 31.

Note

- Only 1 BB-HGW700A can be connected to the BL-WV10A wirelessly.

Connecting cameras using a router



To connect to a router, see page 42.

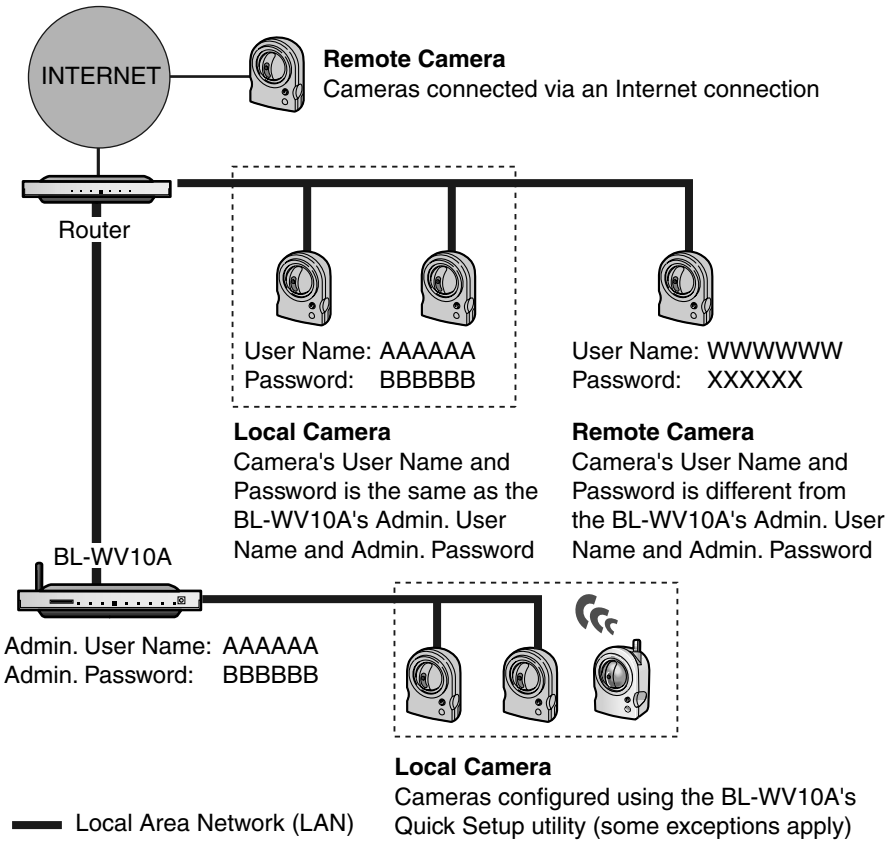
Note

- The only wireless router that can be used with the BL-WV10A is the Panasonic BB-HGW700A. All other routers require a wired connection.

2.1 Local and Remote Cameras

Cameras accessed by the BL-WV10A are referred to as either “local” or “remote” cameras, based on the way in which they are configured.

Local cameras allow you to not only monitor images, but can be used in conjunction with the various features of the BL-WV10A. Remote cameras, such as cameras accessed over the Internet, can be monitored, but certain BL-WV10A features may not be available with remote cameras.



Note

- If the firmware version of a BL-C10A or BL-C30A is older than 1.22, [This camera's firmware is out of date] will be displayed and the camera will be registered as a remote camera.
- HCM series cameras with firmware older than version 1.08, as well as zoom cameras, can be registered as remote cameras only.
- User names and passwords shown here are examples only.

2.2 Connecting Cameras Directly to the BL-WV10A

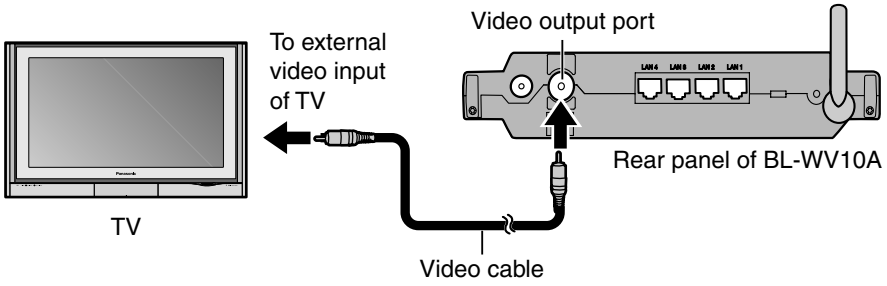
Below is an overview of the procedure for configuring cameras with the Quick Setup feature for cameras connected directly to the BL-WV10A.

2.2.1 Connection Overview

1. Connect the BL-WV10A to a television (see page 23) and turn on the BL-WV10A.
   - The [Basic Setup] screen appears.
2. Run Quick Setup (see page 26).
3. Confirm that the camera images can be viewed with the BL-WV10A (see page 28).
4. Place the camera where you plan on using it permanently (see page 30).

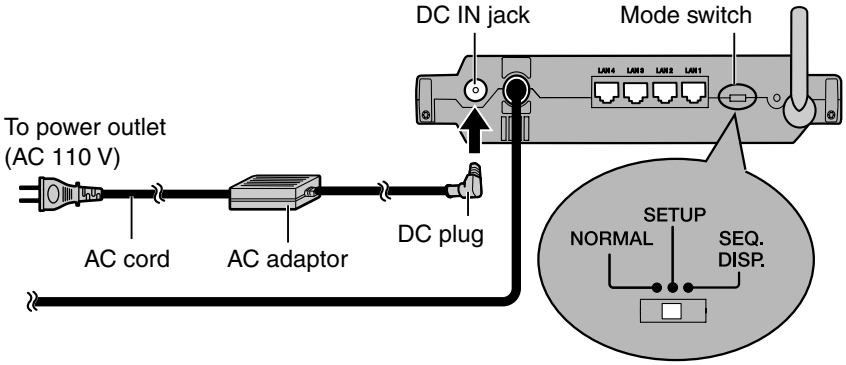
2.2.2 Television Connection

1. Connect the video cable from the BL-WV10A video output port to the television's video input (yellow) jack.



2. Turn on the television.

3. Switch the television input mode to video.



4. Confirm that the mode switch on the back of the BL-WV10A is set to [SETUP].

5. Insert the DC plug from the AC adaptor into the DC IN jack in the BL-WV10A.

6. Connect the AC cord to the AC adaptor and plug it in.

- The [Basic Setup] screen will appear on the television.

Note

- Once Quick Setup is completed, the [Basic Setup] screen will not appear again. Settings can be confirmed and changed from the [Setup] screen (see page 95). In order to display the [Basic Setup] screen again, you will need to restore the BL-WV10A's default settings (see page 131).

7. Select [Finished] and press [ENTER].

- The confirmation screen will appear.

8. Select [Yes] and press [ENTER].

- Quick Setup will start.

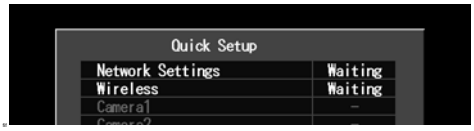
Note

- Changing the IP address in the Shared Camera Settings Screen will prevent a camera from being registered as a local camera during Quick Setup. We recommend leaving the IP address at its default value.

2.2.3 Quick Setup

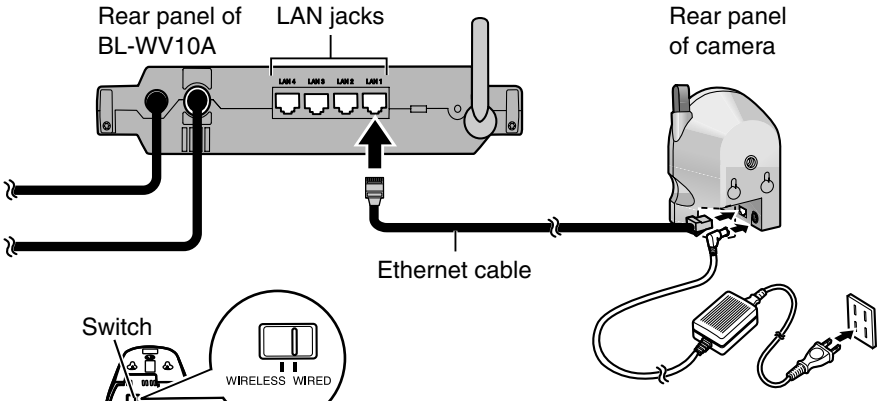
Once basic setup is complete, Quick Setup will automatically launch for network and wireless settings. Setup will be complete in approximately 2 minutes.

- Once registration is complete, [Finished] will be displayed, the buzzer will sound, and the wireless indicator will turn green.



Upon completion of Quick Setup for network and wireless settings, [Finished] will be displayed.

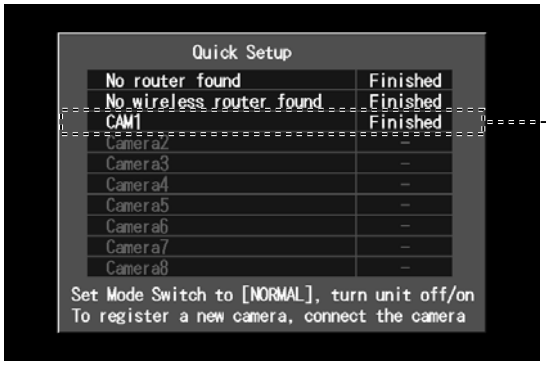
1. Connect a camera (using the Ethernet cable supplied with the camera) to any of the LAN jacks on the BL-WV10A.
2. Turn on the camera.
   - Quick Setup will configure the camera and restart it if necessary.



To configure a BL-C30A wireless camera using the Quick Setup utility, set the switch on the bottom of the camera to [WIRED]

Note

- If a user name and password has already been established for a camera, Quick Setup will be unable to replace that data with the user name and password for the BL-WV10A.
  To register the camera as a local camera, reset the camera by pressing its FACTORY DEFAULT RESET button before connecting it.
- Quick Setup can take place within 20 minutes after the camera is turned on. If the camera is not recognized, or if [Restarting camera] is displayed at the bottom of the screen for more than 2 minutes without camera registration beginning, reset the camera by pressing its FACTORY DEFAULT RESET button and reconnect the camera.
- If a camera needs to be restarted during Quick Setup, camera configuration and restart will take about 2 minutes.
- During Quick Setup, the wireless indicator will light in green.
- Once registration is complete, the buzzer will sound and the wireless indicator will flash green.

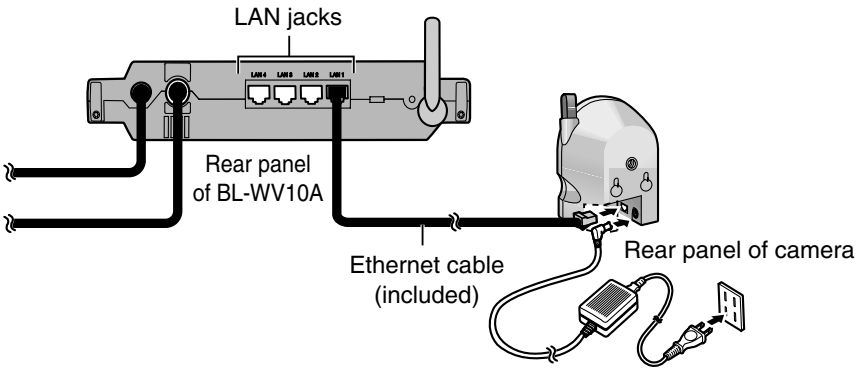


When camera registration is complete, [Finished] is displayed.

3. To register an additional camera, connect the Ethernet cable to the new camera and turn the camera on.

- When registration is complete, the buzzer will sound and the wireless indicator will flash once for each of the cameras registered.

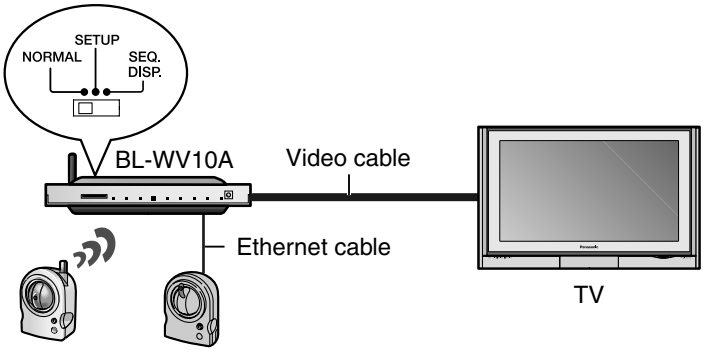
- Cameras must be connected and configured by Quick Setup one at a time.



4. Once all of the cameras have been registered as in step 3, turn the BL-WV10A off.

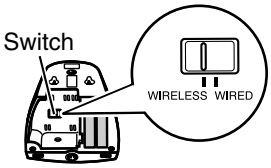
2.2.4 Confirming the Camera Image

1. Connect all cameras registered during Quick Setup and turn them all on.



Note

- To use a wireless connection for the BL-C30A wireless camera, disconnect it from the Ethernet cable, set the camera switch to [WIRELESS] and turn the camera on again.



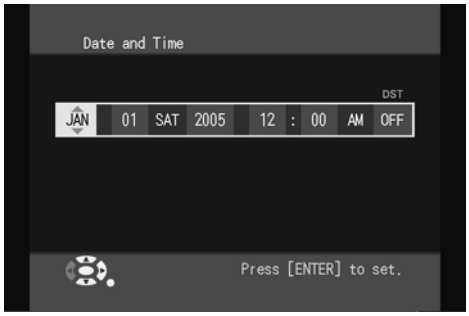
Bottom of BL-C30A

2. Set the mode switch on the back of the BL-WV10A to [NORMAL] and turn it on.

- After the startup screen, the camera monitoring screen will appear.

Note

- As the cameras start up, those registered in camera list 1 will display a monitoring image. If multiple cameras were registered, confirm that monitoring images for all of the cameras registered in the multi-camera screen (see page 64) are displayed.
- If the BL-WV10A does not receive date and time information from any of the connected cameras, the [Date and Time] screen will appear. Select the current date and time using the navigator keys on the remote control, and press [ENTER] when finished.



- If [DST] is turned on, the BL-WV10A will automatically adjust its clock for Daylight Saving Time. The clock will move forward 1 hour at 2:00 AM on the first Sunday in April, and will move back 1 hour at 3:00 AM on the last Sunday in October.
- If a camera image does not appear, check the connection and then restart the camera. If the image still fails to appear, reset the camera to its default values, and re-register it using Quick Setup.
- The date and time is displayed in the upper-right corner of the BL-WV10A's menu. If the date and time setting is not correct, set the correct date and time from the [Date and Time] screen on the [Settings] screen (see page 96).

Current date and time

2.2.5 Placing Cameras

Place cameras after confirming the camera image (see page 28).

1. Disconnect the cameras and place them where you wish to use them.
   - Refer to page 6 in this manual as well as the Operating Instructions included with the camera for proper placement.
2. Connect all wired cameras to the BL-WV10A.
3. Set the mode switch on the back of the BL-WV10A to [NORMAL] and turn it on.
4. Turn on the cameras.
5. Confirm that each camera can be accessed by the BL-WV10A.
   - Camera information can be displayed by pressing [DISPLAY] while monitoring a camera. When placing a wireless camera, refer to the signal strength displayed on-screen for optimum transmission quality. Transmission problems can result in connection faults and problems when monitoring the camera.

Strongest signal

Weakest signal

No signal

2.3 Connecting Cameras Using an Optional BB-HGW700A

Note about connecting a BB-HGW700A

- Before registering existing cameras connected to the BB-HGW700A to the BL-WV10A, make sure the cameras can be accessed with your computer. You may also set the cameras to be accessible over the Internet if so desired. Refer to the Operating Instructions included with your cameras and BB-HGW700A for more information.
- When connecting a BB-HGW700A with a wired connection:
  - A maximum of 8 cameras can be registered and accessed by the BL-WV10A.
  - Turn the BB-HGW700A's wireless mode off.
- When connecting a BB-HGW700A wirelessly:
  - Only 1 BB-HGW700A can be connected to the BL-WV10A.
  - We recommend connecting 1 camera only (wired or wireless) to the BB-HGW700A, and a maximum of 3 wireless cameras to the BL-WV10A.
  - We recommend setting the BL-WV10A's wireless format setting to 802.11g for best results.

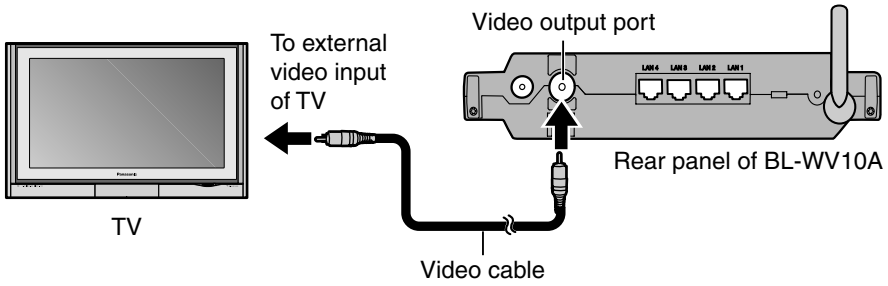
2.3.1 Connection Overview

1. Connect the BL-WV10A to the television and to the BB-HGW700A (see page 32)
   - The [Basic Setup] screen appears.
2. Set the user name and password (see page 34)
   - If the cameras in use are already connected to the BB-HGW700A, change the camera user names and passwords to the administrator name and password for the BL-WV10A and run Quick Setup. If you run Quick Setup without making these changes, the registered cameras will become remote cameras.
   - If the cameras are still set to the default settings, Quick Setup will automatically assign user names and passwords without a need for you to set the administrator name and password.
   - Images from cameras for which the user names and passwords are automatically set cannot be monitored with a computer.
3. Configure the BB-HGW700A and connected cameras using Quick Setup (see page 35)
   - Quick Setup for cameras and the BB-HGW700A.

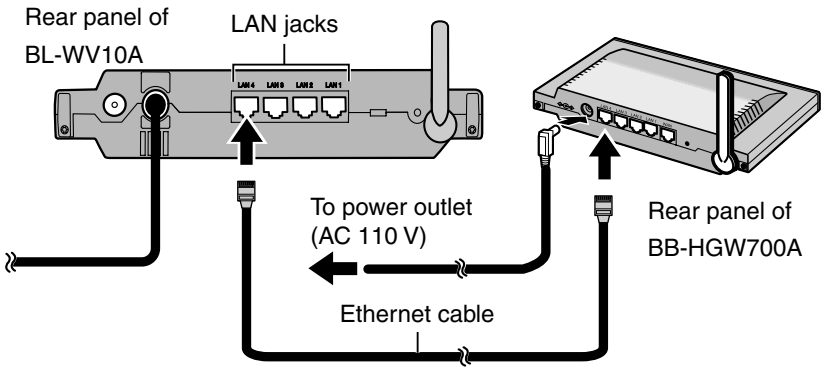
4. Confirm the camera image (see page 38)
5. Place the BB-HGW700A and the cameras (see page 41)

2.3.2 Television and BB-HGW700A Connection

1. Connect the video cable from the BL-WV10A video output port to the television's video input (yellow) jack.



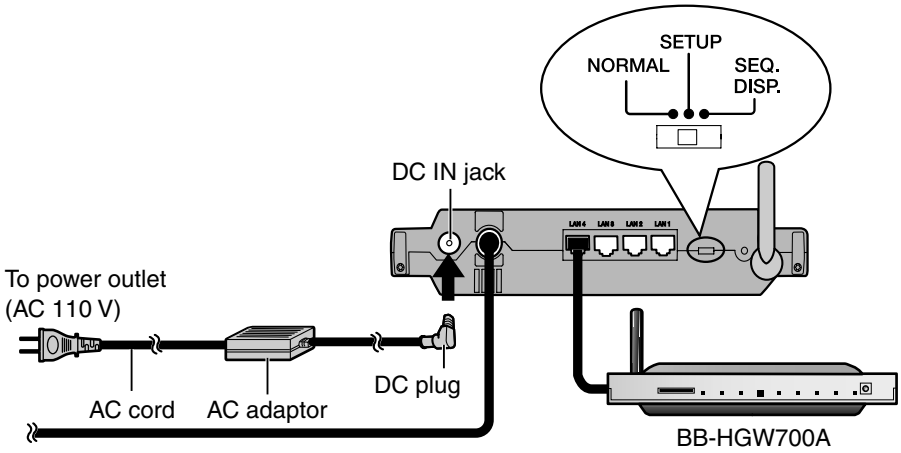
2. Connect the Ethernet cable supplied with the BB-HGW700A to any of the LAN jacks on the BL-WV10A and turn on the BB-HGW700A.



- Turn on all cameras connected to the BB-HGW700A.

3. Turn on the television.
4. Switch the television input mode to video.
5. Confirm that the mode switch on the back of the BL-WV10A is set to [SETUP].
6. Insert the DC plug from the AC adaptor into the DC IN jack of the BL-WV10A.
   - Make sure 2 minutes have passed since you turned on the BB-HGW700A.

7. Connect the AC cord to the AC adaptor and plug it in.



- The [Basic Setup] screen will appear on the television.

Note

- Once Quick Setup is completed, the [Basic Setup] screen will not appear again. Settings can be confirmed and changed from the [Setup] Menu (page 95).

2.3.3 Setting the User Name and Password

If there is no need to change any settings, proceed to steps 7 and 8 to complete the Basic Setup.

Note

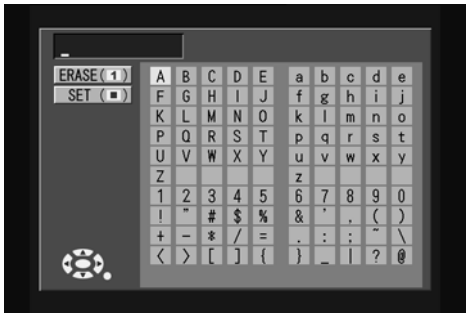
- If the cameras are set to their default settings, user names and passwords will be automatically assigned without a need for you to set the administrator name and password. Images from cameras for which the user names and passwords are not equal to the administrator name and password, however, will not be visible with a computer. To view camera images on a computer, Quick Setup must be performed after setting the administrator name and password for the camera.
- User names and passwords are case sensitive.

1. Select [Camera Settings] in the Basic Setup and press [ENTER].

- The [Camera Settings] screen will appear.

2. Select [Admin. User Name] and press [ENTER].

- The character input screen is displayed.



3. Enter the user name (to learn more about character entry, see page 121).

4. Select [Admin. Password] and press [ENTER].

- The character input screen is displayed.

5. Enter the password and press [ENTER].
6. Press [RETURN].
   - You will return to the [Basic Setup] screen.
7. Select [Finished] and press [ENTER].
   - The confirmation screen will appear.
8. Select [Yes] and press [ENTER].
   - Quick Setup will start.

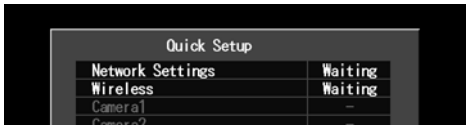
Note

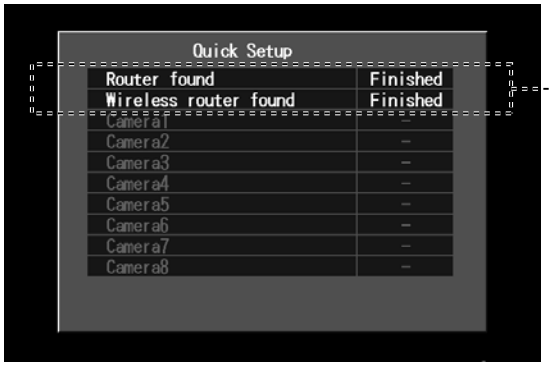
- The administrator name and password must be between 6 and 15 alphanumeric characters in length. The following characters cannot be used:
  " < > : &.

2.3.4 Quick Setup

After completing Basic Setup, Quick Setup for the BB-HGW700A will start.

- Setup will be complete in approximately 2 minutes. Once registration is complete, [Finished] will be displayed, the buzzer will sound, and the wireless indicator will turn green.



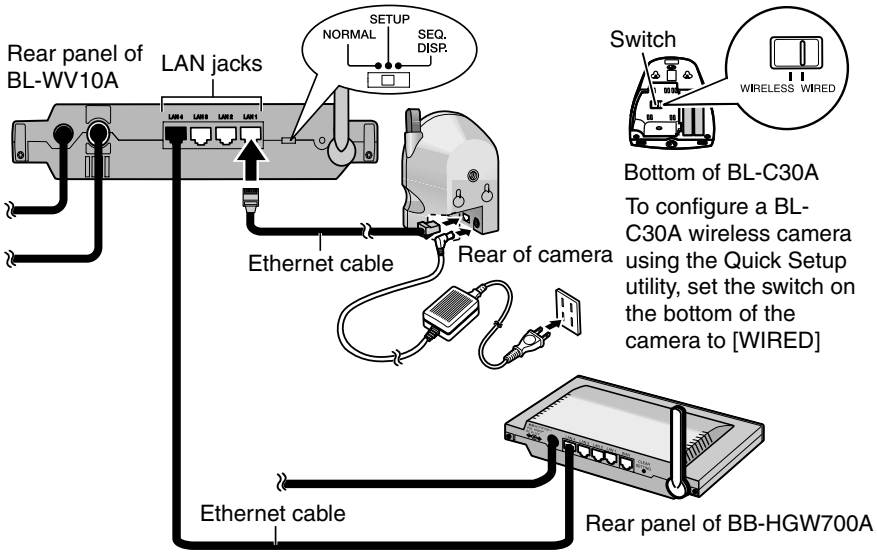


Once Quick Setup for the BB-HGW700A is complete, [Finished] is displayed.

- Cameras registered to the BB-HGW700A will be automatically registered to the BL-WV10A.

1. Connect the cameras using the Ethernet cables provided with them to any of the LAN jacks on the BL-WV10A or BB-HGW700A.

- Connect the cameras while the BB-HGW700A is connected to the BL-WV10A.



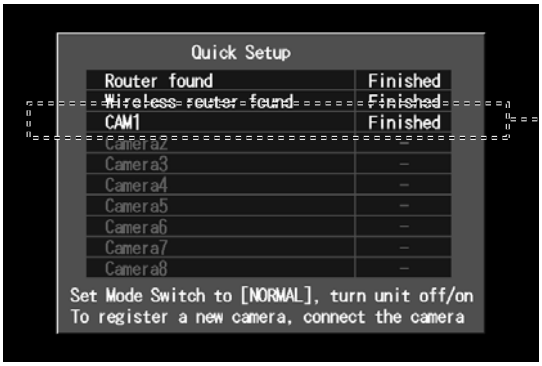
2. Turn on the cameras.

- Quick Setup will register each camera.

Note

- If a camera needs to be restarted during Quick Setup, camera configuration and restart will take about 2 minutes.
- During Quick Setup, the wireless indicator will be green.

- Once registration is complete, the buzzer will sound and the wireless indicator will flash green.



When camera registration is complete, [Finished] is displayed.

Note

- Quick Setup can take place within 20 minutes of turning on a camera. If the camera is not recognized, or if [Restarting camera] is displayed at the bottom of the screen for more than 2 minutes without camera registration beginning, reset the camera to its default settings and reconnect the camera.

3. To register additional cameras, connect the Ethernet cable to the new camera, and turn it on.

- When registration is complete, the buzzer will sound and the wireless indicator will flash once for each of the cameras registered.

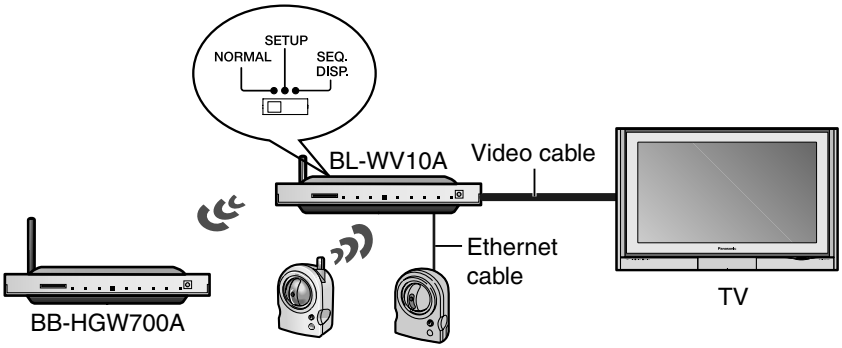
4. Once all of the cameras have been registered as in step 3, turn the BL-WV10A off.

Note

- Cameras for which the user name and password matches that of the BL-WV10A will be automatically registered within the camera list as local cameras. (Non-matching cameras will be registered as remote cameras.)
- Cameras registered as remote cameras will remain so even if the user name and password are changed to match those of the BL-WV10A. To re-register a camera as a local camera, see page 53.

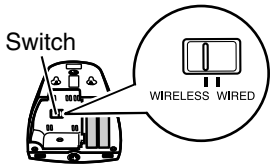
2.3.5 Confirming the Camera Image

1. Disconnect all of the Ethernet cables from the BB-HGW700A.
2. Make sure the BL-WV10A is turned off.
3. Connect the LAN cables to the devices as necessary but do not turn them on.
4. Turn on the cameras connected to the BB-HGW700A.
5. Turn on the BB-HGW700A.
6. Set the mode switch on the back of the BL-WV10A to [NORMAL] and turn it on.
7. Turn on the cameras connected to the BL-WV10A.



Note

- To use a wireless connection for the wireless camera BL-C30A, disconnect it from the Ethernet cable, set the camera switch to [WIRELESS] and turn the camera on again.

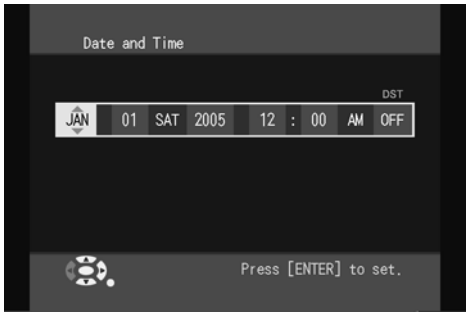


Bottom of BL-C30A

- After the BL-WV10A starts up, the camera monitoring screen will appear.

Note

- As the cameras start up, those registered in camera list 1 will display a monitoring image. If multiple cameras were registered, confirm that monitoring images for all of the cameras registered in the multi-camera screen (see page 64) are displayed.
- If the BL-WV10A does not receive date and time information from any of the connected cameras, the [Date and Time] screen will appear. Select the current date and time using the navigator keys on the remote control, and press [ENTER] when finished.



- If [DST] is turned on, the BL-WV10A will automatically adjust its clock for Daylight Saving Time. The clock will move forward 1 hour at 2:00 AM on the first Sunday in April, and will move back 1 hour at 3:00 AM on the last Sunday in October.
- If a camera image does not appear, check the connection and then restart the camera. If the image still fails to appear, reset the camera to its default values, and re-register it using Quick Setup.
- The date and time is displayed in the upper-right corner of the BL-WV10A's menu. If the date and time setting is not correct, set the correct date and time from the [Date and Time] screen on the [Settings] screen (see page 96).

2.3.6 Placing the BB-HGW700A and the Cameras

Place cameras after confirming the camera image (see page 38).

1. Turn off the BL-WV10A, BB-HGW700A, and cameras.
2. Place the BB-HGW700A and the cameras where you wish to use them.
   - Refer to page 6 in this manual as well as the Operating Instructions included with the camera for proper placement.
3. Make sure the BL-WV10A is turned off.
4. Connect the LAN cables to the devices as necessary but do not turn them on.
5. Turn on the cameras connected to the BB-HGW700A.
6. Turn on the BB-HGW700A.
7. Set the mode switch on the back of the BL-WV10A to [NORMAL] and turn it on.
8. Turn on the cameras connected to the BL-WV10A.
9. Confirm that each camera can be accessed from the BL-WV10A.
   - Camera information can be displayed by pressing [DISPLAY] while monitoring a camera. When placing a wireless camera, refer to the signal strength displayed on-screen for optimum transmission quality. Transmission problems can result in connection faults and problems when monitoring the camera.

Strongest signal Weakest signal No signal

   - If camera images are not smooth, repeat the procedure in this section and try again. If the problem still persists and you are using wireless cameras, refer to the information on page 6.

2.4 Connecting Cameras Using a Router

Note about connecting a router

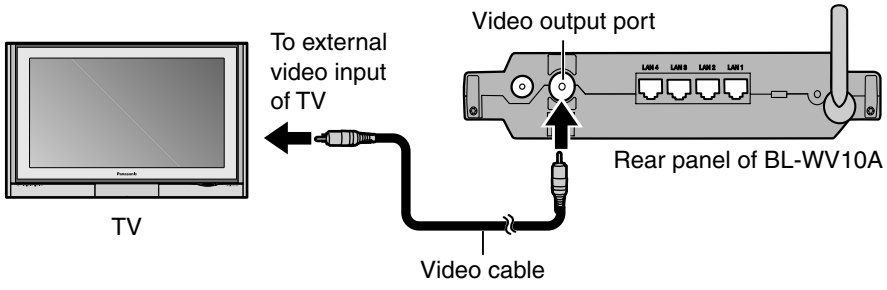
- Before registering existing cameras, assign Static IP addresses to the cameras, and set the cameras to be accessible over the Internet if so desired. Refer to the Operating Instructions included with your cameras and router for more information.

2.4.1 Connection Overview

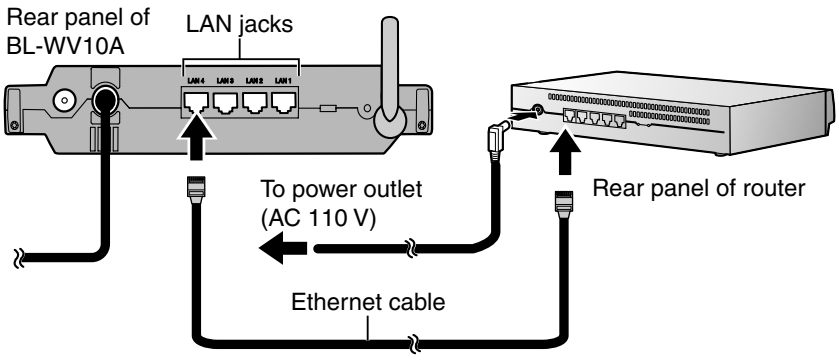
1. Connect the BL-WV10A to the television and router (see page 42)
   - The [Basic Setup] screen appears.
2. Set the camera IP address (see page 44)
3. Set the user name and password (see page 45)
   - If the cameras in use are already connected to a router, change the camera user names and passwords to the administrator name and password for the BL-WV10A and run Quick Setup. If you run Quick Setup without making these changes, the registered cameras will become remote cameras.
   - If the cameras are still set to the default settings, Quick Setup will automatically assign user names and passwords. There is no need to set the administrator name and password manually.
4. Configure the cameras using Quick Setup (see page 47)
5. Confirm the camera images (see page 50)
6. Place the cameras and the router (see page 52)

2.4.2 Television and Router Connection

1. Connect the video cable from the BL-WV10A video output port to the television's video input (yellow) jack.



2. Connect the Ethernet cable that came with the router to any of the LAN jacks on the BL-WV10A and turn on the router.



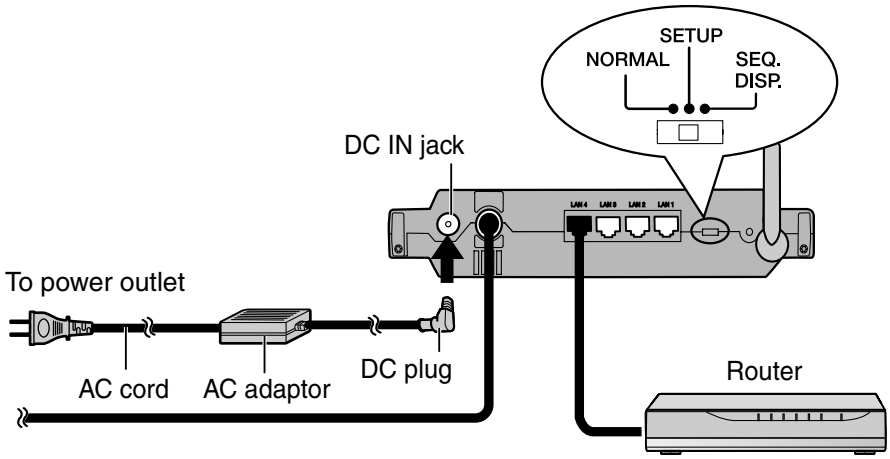
3. Turn on the television.

4. Switch the television input mode to video.

5. Confirm that the mode switch on the back of the BL-WV10A is set to [SETUP].

6. Insert the DC plug from the AC adaptor into the DC IN jack in the BL-WV10A.

7. Connect the AC cord to the AC adaptor and plug it in.



- The [Basic Setup] screen will appear on the television.

Note

- Once Quick Setup is completed, the [Basic Setup] screen will not appear again. Settings can be confirmed and changed from the [Setup] menu (see page 95).

2.4.3 Setting the Camera's IP Address

1. On the [Basic Setup] screen, select [Camera Settings], and press [ENTER].
   - The [Camera Settings] screen will appear.

2. Select [Starting Address] and press [ENTER].
   - The [Starting Address] screen will appear.

3. Enter the IP address for the camera and press [ENTER].

- Use an address with the same DHCP address segment as used by the router, but make sure that address is not assigned in DHCP.
- The address entered here will be assigned to the first camera configured using Quick Setup. Additional cameras will be assigned sequential addresses.
- If you're uncertain which addresses to use, ask the router's manufacturer how to confirm router settings and address usage.

2.4.4 Setting the User Name and Password

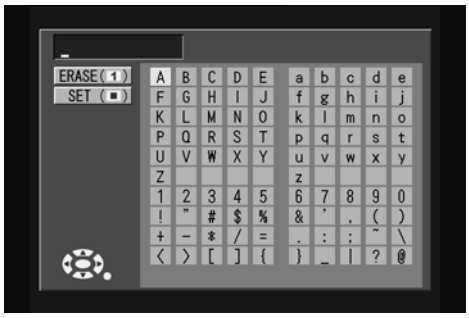
Note

- If the cameras are set to their default settings, user names and passwords will be automatically assigned without a need for you to set the administrator name and password. Images from cameras for which the user names and passwords are not equal to the administrator name and password, however, will not be visible with a computer. To view camera images on a computer, Quick Setup must be performed after setting the administrator name and password for the camera.
- User names and passwords are case sensitive.

1. On the [Basic Setup] screen, select [Camera Settings], and press [ENTER].

- The [Camera Settings] screen will appear.

2. Select [Admin. User Name] and press [ENTER].
   - The character input screen is displayed.



3. Enter the user name (to learn more about character entry, see page 121).
4. Select [Admin. Password] and press [ENTER].
   - The character input screen is displayed.
5. Enter the password and press [ENTER].
6. Press [RETURN].
   - You will return to the [Basic Setup] screen.
7. Select [Finished] and press [ENTER].
   - The confirmation screen will appear.
8. Select [Yes] and press [ENTER].
   - Quick Setup will start.

Note

- The administrator name and password must be between 6 and 15 alphanumeric characters in length. The following characters cannot be used:
  " < > : &.

Note

- If the cameras are set to the default settings, user names and passwords will be automatically assigned without a need for you to set the administrator name and password. Images from cameras for which the user names and passwords are not equal to the administrator name and password, however, will not be visible with a computer. To view camera images on a computer, Quick Setup must be performed after setting the administrator name and password (using a minimum of 6 characters each) for the camera.

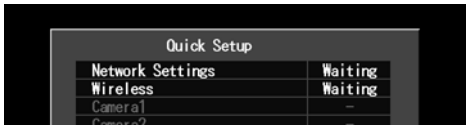
2.4.5 Quick Setup

After completing Basic Setup, Quick Setup will automatically launch and configure the router settings.

- Setup will be complete in approximately 2 minutes. Once registration is complete, [Finished] will be displayed, the buzzer will sound, and the wireless indicator will turn green.

Note

- The BL-WV10A will automatically search out and use a fixed IP address after the router obtains network data via the DHCP feature of the router.

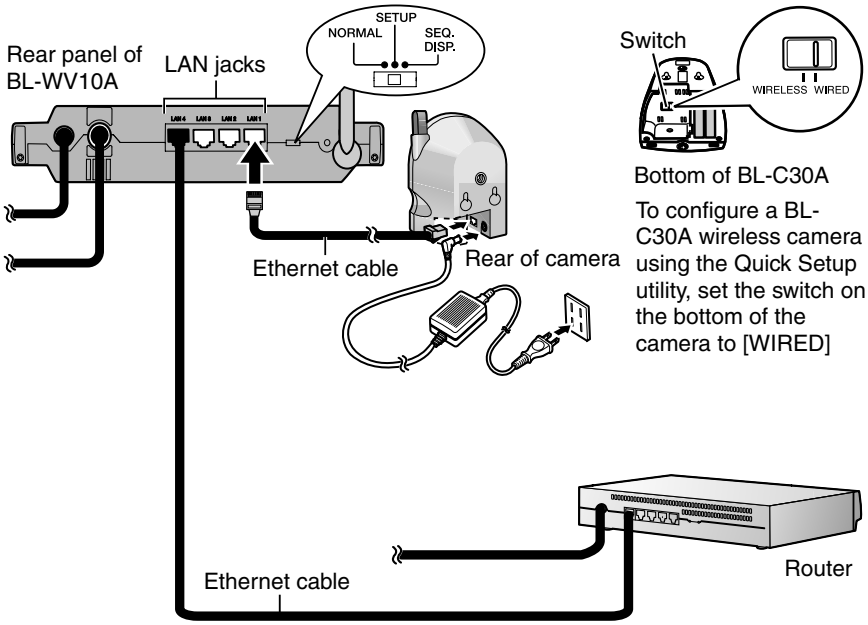


Upon completion of Quick Setup for network and wireless settings, [Finished] will be displayed.

Note

- Cameras connected to the router and for which setup has completed will be automatically registered for the BL-WV10A. Cameras not set up for static address will be automatically registered, but it is possible that they may lose the connection during use. Either change the camera settings to those for a static address, or reset the camera to its default settings by pressing the camera's FACTORY DEFAULT RESET button and use Quick Setup to configure the camera again.

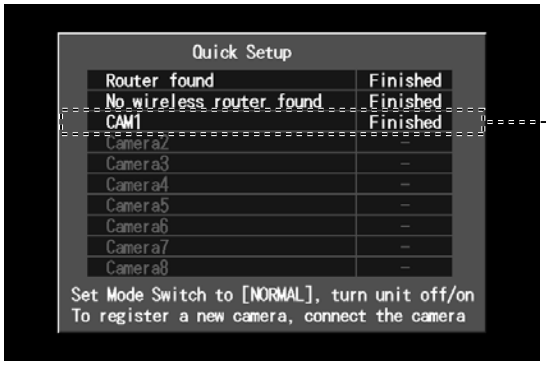
1. Connect the cameras using the Ethernet cables provided with them to any of the LAN jacks on the on the BL-WV10A.
2. Turn on the cameras.
   - Quick Setup will begin for the camera.



Note

- During camera registration, the camera may be restarted, and registration may take longer as a result. A camera restart can take up to 2 minutes.
- During Quick Setup, the wireless indicator will be green.

- Once registration is complete, the buzzer will ring, and the wireless indicator will flash green.



When camera registration is complete, [Finished] is displayed.

Note

- Quick Setup can take place within 20 minutes of powering on the camera. If the camera is not recognized, or if [Restarting camera] is displayed at the bottom of the screen for more than 2 minutes without camera registration beginning, reset the camera to its default settings and reconnect the camera.

3. To register additional cameras, connect the Ethernet cable to the new camera, and turn it on.

- When registration is complete, the buzzer will sound and the wireless indicator will flash once for each of the cameras registered.

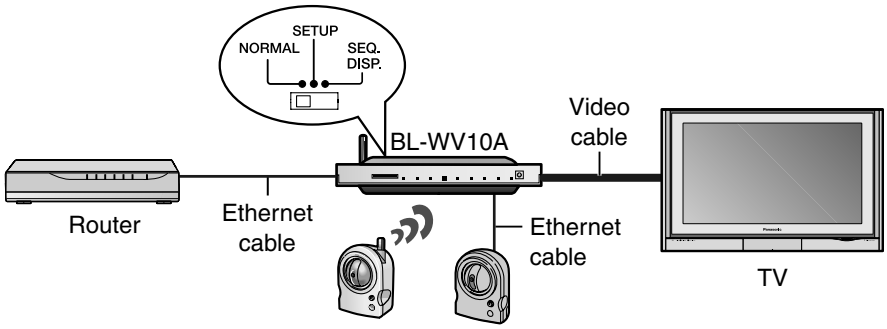
4. Once all of the cameras have been registered as in step 3, turn the BL-WV10A off.

Note

- Cameras for which the user name and password matches that of the BL-WV10A will be automatically registered within the camera list as local cameras. (Non-matching cameras will be registered as remote cameras.)
- Cameras registered as remote cameras will remain so even if the user name and password are changed to match those of the BL-WV10A. To re-register a camera as a local camera, see page 53.

2.4.6 Confirming the Camera Image

1. Turn on the router and the cameras connected to the router.

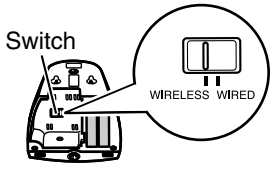


2. Set the mode switch on the back of the BL-WV10A to [NORMAL] and turn it on.

3. Turn on the cameras connected to the BL-WV10A.

Note

- To use a wireless connection for the wireless camera BL-C30A, disconnect it from the Ethernet cable, set the camera switch to [WIRELESS] and turn the camera on again.



Bottom of BL-C30A

- After the launch screen, the Camera Monitoring Screen will appear.

Note

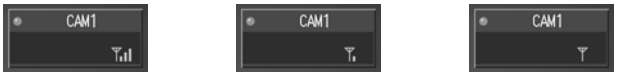
- As the cameras start up, those registered in camera list 1 will display a monitoring image. If multiple cameras were registered, please confirm that monitoring images for all of the cameras registered in the Multi-Camera Screen (see page 64) are displayed.
- If the BL-WV10A does not receive date and time information from any of the connected cameras, the [Date and Time] screen will appear. Select the current date and time using the navigator keys on the remote control, and press [ENTER] when finished.
- If a camera image does not appear, check the connection and then restart the camera. If the image still fails to appear, reset the camera to its default values, and re-register it using Quick Setup.
- The date and time is displayed in the upper-right corner of the BL-WV10A's menu. If the date and time setting is not correct, set the correct date and time from the [Date and Time] screen on the [Settings] screen

(see page 96).

2.4.7 Placing the Router and the Cameras

Place cameras after confirming the camera image (see page 50) and the router after confirming it has been correctly registered and connected.

1. Place the router and the cameras.
   - Refer to page 6 in this manual as well as the Operating Instructions included with the camera for proper placement.
2. Make sure the BL-WV10A is turned off.
3. Connect the LAN cables to the devices as necessary but do not turn them on.
4. Turn on router and all cameras connected to the router.
5. Set the mode switch on the back of the BL-WV10A to [NORMAL] and turn it on.
6. Turn on the cameras connected to the BL-WV10A.
7. Confirm that each camera can be accessed from the BL-WV10A.
   - Camera information can be displayed by pressing [DISPLAY] while monitoring a camera. When placing a wireless camera, refer to the signal strength displayed on-screen for optimum transmission quality. Transmission problems can result in connection faults and problems when monitoring the camera.



Strongest signal Weakest signal No signal

2.5 Re-registering a Remote Camera as a Local Camera

There are 2 ways to re-register remote cameras within the network as a local camera. (For definitions of local and remote cameras, see page 22.)

1. Access the camera with a computer and change its user name and password to match the administrator name and password for the BL-WV10A that you set during Basic Setup.
2. Erase the camera from the camera list (see page 118).
3. Re-register the camera using Quick Setup (see page 26, page 35, or page 47 depending on your connection method).

Or…

1. Erase the registration from the camera list (see page 118).
2. Revert the camera to its default settings.
3. Re-register the camera using Quick Setup (see page 26, page 35, or page 47 depending on your connection method).

3 Viewing Camera Images

Once Quick Setup is complete, set the mode switch on the back of the unit to [NORMAL], disconnect the DC plug from the back of the unit, then reconnect it. After the unit starts up, the camera image will be displayed.

Note

- Frame rate (frames per second, “fps”) may vary depending on the image being viewed by the camera, brightness, and other environment conditions, as well as network conditions such as distance between the BL-WV10A and the cameras, the number of cameras connected, network traffic, wireless network conditions (see page 6), etc.
- For BL-C10A and BL-C30A, a maximum of 15 fps in LOW quality (resolution) and 7.5 fps in HIGH quality is possible (see page 124).
- For HCM series cameras, a maximum of 30 fps in LOW quality and 12 fps in HIGH quality is possible (see page 124).
- Network speed may decrease while the BL-WV10A is turned on and connected to cameras.
- The display size and brightness of the Monitoring Screen can be adjusted (see page 122).

- If you changing the mode switch to [SEQ. DISP.] and turn the power off and back on, the camera will cycle through all registered cameras sequentially and display their images briefly.

[When Using a Computer and/or a Router]

- If remote cameras are registered in camera list 1 and those cameras are set to not save passwords (see page 115), the BL-WV10A will display a password input screen upon launch. After entering the camera's user name and password and pressing [OK], the Monitoring Screen will appear.

- Cameras for which Quick Setup was performed without setting the administrator name and password will have user names and passwords set automatically; their images cannot be monitored on a computer. Change the camera's user name (see page 134).

3.1 Displaying the Menu Screen

Press [MENU] while viewing the monitoring screen.

- The Menu screen is displayed.

Camera List:

Select a camera from the list of registered cameras (see page 63).

Movies:

Displays recorded movies (see page 88). (If no SD memory card is inserted in the unit, [Movies] is displayed in faint blue letters to indicate it cannot be selected.)

Pictures:

Displays recorded pictures (see page 92). (If no SD memory card is inserted in the unit, [Pictures] is displayed in faint blue letters to indicate it cannot be selected.)

Recorder:

Sets timer recording and sensor-triggered recording (see page 71).

Sensor Alert:

When a camera's built-in sensor detects a change in temperature, this feature can automatically display the image from the camera (see page 66).

Setup:

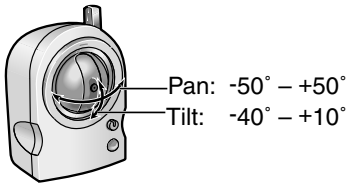
Manages the time settings, the initial settings for the BL-WV10A, camera settings and SD memory cards (see page 95).

Note

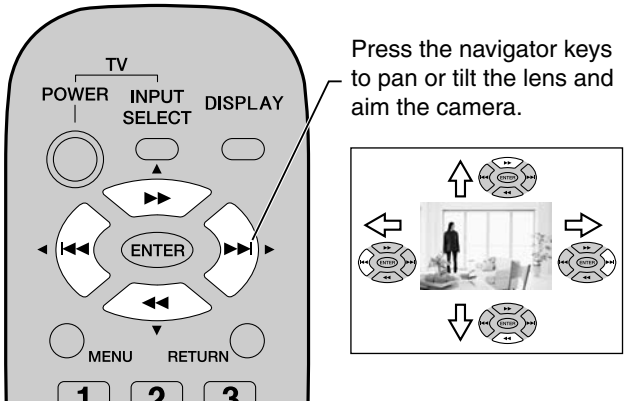
- The Menu screen cannot be displayed when either the camera list or Multi-Camera Screen is visible.
- While the menu is displayed, press [STOP] to hide the camera image. To show the image again, press [PLAY].
- The current time is displayed at the upper right of the Menu screen. If the correct time has not been set, it can be adjusted by selecting [Date and Time] in the Setup menu (see page 95).

3.2 Panning/Tilting

While monitoring a camera you can pan and tilt the camera's lens in order to aim the camera at the object you want to view.



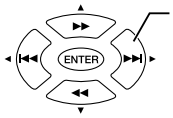
Model shown is BL-C30A



Note

- If another user accesses the camera using a computer and pans or tilts the camera lens, the image displayed by the BL-WV10A will change accordingly.

- If the lens alignment exceeds the maximum coordinates during panning or tilting, notification will appear on screen for approximately 4 seconds.



When the camera is panned to the right end of the camera's range, "Right End" is displayed.

[Setting Cameras from the Computer]

- If the camera has been set to disable pan and tilt control, you will be unable to use panning and tilting functions. (Refer to the camera's Operating Instructions for more information.) Access the camera via a computer and enable pan and tilt functions.

3.3 Home Position/Sensor Position/Preset Keys

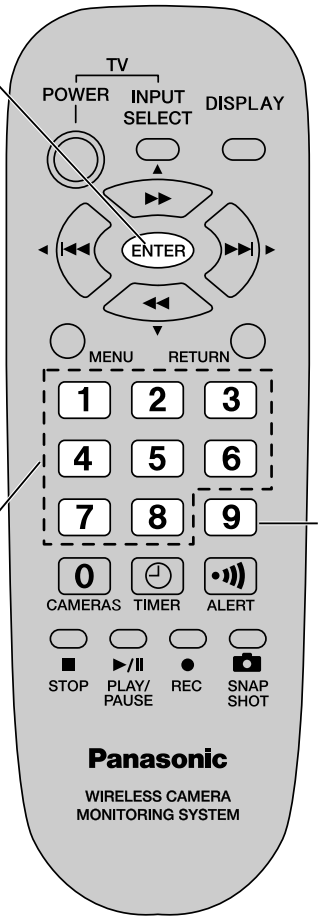
The camera's home position, sensor position and preset keys can be registered, allowing to aim the camera at a predetermined location easily.

Home Position: The direction in which the lens is pointing when the camera is turned on.

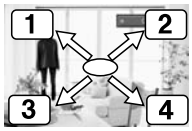
Sensor Position: The direction the lens is pointing when the camera sensor is activated.

Preset Keys (8 total): You can register positions to correspond to the remote control's keypad.

Home position ([ENTER])
Press to aim the camera at the home position.
You can set the home position to the current position by holding [ENTER] down for about 5 seconds.



Presets ([1] to [8])
You can register up to 8 positions and aim the camera by pressing the corresponding button. [1] to [4] are preset but can be changed.

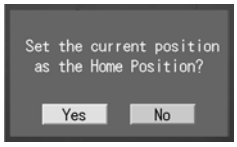


Sensor position ([9])
Press to aim the camera at the sensor position. You can set the sensor position to the current location by holding [9] down for about 5 seconds.

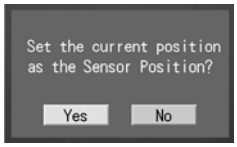
Registering the Home Position/Sensor Position

1. Using the navigator keys, pan and tilt the lens and aim it at the desired home position.
2. To register the current position as the home position, hold the [ENTER] for about 5 seconds. Press and hold [9] to register the current position as the sensor position.
   - A confirmation screen will appear.

Home Position Confirmation Screen



Sensor Position Confirmation Screen



3. Select [Yes] and press [ENTER] to confirm.

Note

- Use of the home and sensor positions stores data to the camera. When multiple users are using the cameras, only the data for the last registration will remain valid; other users can overwrite registered positions.
- You cannot set a camera so that its lens does not move to the sensor position when the camera's sensor is activated.
- Registering the home position and/or sensor position will also register the brightness and white balance settings (see page 124) at the time of the registration.

Registering the Preset Keys

The camera's display positions can be registered to correspond to numbers of the remote control keypad.

1. Using the navigator keys, pan and tilt the lens and aim it at the position you would like to register to a preset key.
2. Hold the desired preset key number key ([1] to [8]) for roughly 5 seconds.
   - A confirmation screen will appear.
   - The currently set name for the preset will appear.

- Select [Yes] to confirm the displayed preset name.

3. To set the preset name manually, select [Yes] and press [ENTER].
- The character input screen is displayed. Enter the preset name. (See page 121 for text entry methods.)

4. Confirm the preset name, select [Yes] and press [ENTER].

Note

- A preset name can use up to 15 alphanumeric characters. The following characters cannot be used:
  " ' & < >.
- Use of the preset keys stores data to the camera. When multiple users are using the cameras, only the data for the last registration will remain valid; other users can overwrite registered presets.
- Registering a preset key will also register the brightness and white balance settings (see page 124) at the time of the registration.

Viewing the home position

Press [ENTER] while monitoring a camera.
- The lens moves to the home position.
- [Home Position] is displayed in the upper left corner of the screen for about 4 seconds.

Viewing the sensor position

Press [9] while monitoring a camera.

- The lens moves to the sensor position.
- [Sensor Position] is displayed in the upper left corner of the screen for about 4 seconds.

Viewing a preset position

Press one of the registered number keys ([1] to [8]) while monitoring a camera.

- The lens moves to the preset position.
- For certain camera models, keys [1] to [4] are registered at the factory and aim the camera to the upper left, upper right, lower left, and lower right positions, respectively.
- The name of the preset will appear in the upper left corner of the screen for about 4 seconds.

The settings for brightness and white balance will change to those at time of registration.

3.4 Choosing a Camera from the Camera List

1. Press [MENU].
   - The menu is displayed.
2. Select [Camera List] and press [ENTER].
   - The Camera List appears.

Note

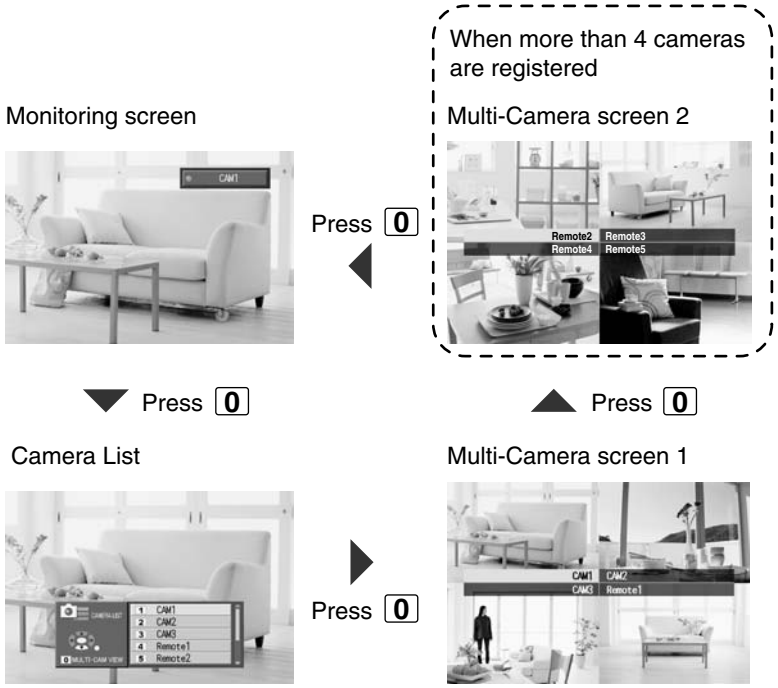
- When you select a camera from the list, its monitoring screen appears in the background.
- The order of the camera list can be changed (see page 119).
- Pressing [0] will display the camera list.

3. Select the desired camera and press [ENTER], or press the camera's number on the remote control.
   - The monitoring screen appears.

3.5 Displaying the Multi-Camera Screen

Press [0] while monitoring a camera to display the multi-camera screen.

- When either the Camera List or Multi-Camera Screens are visible, use the navigator keys to select a camera, then press [ENTER] to monitor a single camera.



Note

- When viewing the Multi-Camera screen, images from HCM series cameras will appear smoother and with less delay than images from BL-C10A and BL-C30A cameras.
- You can set remote cameras to either save or not save their passwords when they are connected (see page 115). If the password is not saved, you will be prompted to enter the user name and password when you try to access the camera.

Multi-Cam View

Images will not be displayed from remote cameras which have [Password Save] set to [Off].

When camera "Remote1" is selected.

Enter the camera's user name and password in order to view the camera.

3.6 Sensor Alert Mode

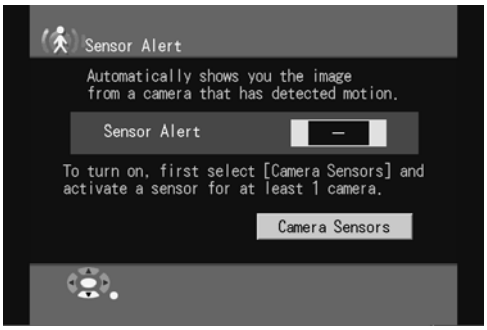
This feature is not available with HCM series cameras.

Sensor Alert uses the camera sensor functionality to automatically switch monitoring cameras with sensor cameras.

Note

- When the sensor is activated the sensor indicator will flash.
- If the buzzer is on, the buzzer will also indicate that the sensor has been activated (see page 69).
- The camera's sensor detects heat variations which occur from the sides with more accuracy than variations which approach the camera.
- The detection range of the sensor may increase or decrease depending on the temperature and environment where the camera is installed.

1. Press [MENU].
   - The menu is displayed.
2. Select [Sensor Alert] and press [ENTER].
   - The Sensor Alert Screen appears.

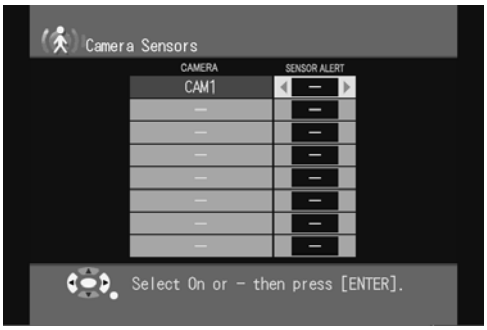


Note

- To activate Sensor Alert, you will need to first turn on a sensor for at least 1 camera on the [Camera Sensors] screen.

3. Select [Camera Sensors] and press [ENTER].

- The [Camera Sensors] screen appears.



4. Use the navigator keys to select either [On] or [–] (off) for each camera's sensor, then press [ENTER].

- The display returns to the [Sensor Alert] screen.

5. Use the navigator keys to select [On], then press [ENTER].

- After these settings are made, the Menu screen returns.

Note

- When Sensor Alert mode is set, the sensor indicator lights.
- The sensor range may differ depending on the camera type. See the camera user guide for cautions in placing the camera to maximize that range.

Sensor Notification Screen

If a camera sensor detects motion when Sensor Alert mode is on, the Monitoring Screen switches to the relevant camera, and that camera lens moves to the sensor position. The sensor position is set as indicated on page 60.

Note

- After the Sensor Notification Screen is displayed, the camera is set to repeat sensor responses every several seconds, and those responses will not be displayed. The sensor must go for roughly 5 seconds without activation. If another camera's sensor is triggered, however, the display will switch to that camera.
- If a camera's sensor triggers Sensor Alert mode, the camera's image will not be displayed if:
  - The TV's video input is not set to the input which the BL-WV10A is connected to
  - You are currently recording a camera image (using standard recording)
  - You are accessing the [Sensor Alert] or [Setup] screen.
  - You are taking a snapshot
  - You have set the timer record or sensor record feature.

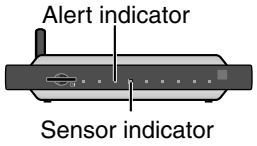
In these situations, you will still be alerted to sensor detection by the flashing of the sensor indicator and by the buzzer, if you have the buzzer turned on.

- When viewing the television, you cannot switch to a sensor-activated screen. Press [INPUT] on the remote control to switch to the camera Monitoring Screen.
- The buzzer volume can be adjusted (see page 97).
- If you have hidden the camera's image (see page 56), the camera's image will be displayed if the sensor is triggered.

Turning the buzzer on

Press [ALERT] to turn the buzzer on.

- The alert indicator will turn green.



Stopping the Buzzer

Press [ALERT] to turn the buzzer off.

- The alert indicator light will go out.
- After turning the buzzer off, pressing [ALERT] again will turn it back on.

Changing the Buzzer Volume

Volume can be changed in the [General Setup] screen from the [Setup] screen. The volume settings are Off, 1, 2, 3 and 4.

Turning off the Flashing Sensor Indicator

When Sensor Alert mode is on, or when using the sensor for set recording times (see page 66 and page 76), the sensor indicator will continue to flash once the camera's sensor has been activated.

To turn it off:

1. Display the [Sensor Alert] screen (see page 66).
2. Set [Sensor Alert] to [–] (unless it is already set to [–]), then press [ENTER].

- To turn Sensor Alert mode on again, set [Sensor Alert] to [On] again on the [Sensor Alert] screen.

Note

- A remote camera can be selected here only if [Sensor] is set to [On] on the camera's setup screen (see page 117).

[For Computer Users]

Note

- When a local camera is set to be used with the timer or sensor recording feature, the camera's Trigger No. 5 (which can be set using your computer by accessing the camera's [Buffer/Transfer] screen) is used for recording. If you also use a computer to access your cameras, do not set Trigger No. 5. For more information refer to "Buffering or Transferring Images by Timer" or "Buffering or Transferring Images by Sensor" in the Operating Instructions included with your camera.

4 Recording Images

There are 3 ways to record images: standard recording, snapshot recording and timer recording.

Standard Recording:

Pressing the [RECORD] while monitoring a camera will record the images as a movie (see page 75).

Snapshot Recording:

Pressing the [SNAPSHOT] while monitoring a camera will record a picture (see page 75).

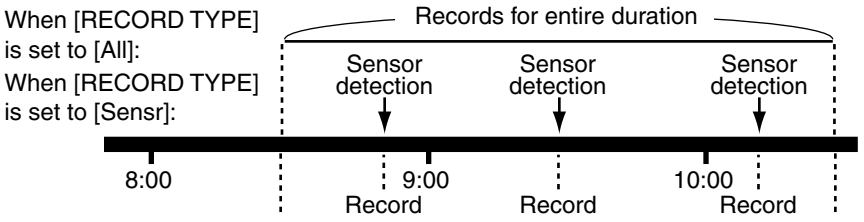
Timer Recording:

There are 2 types of timer recording (see page 76).

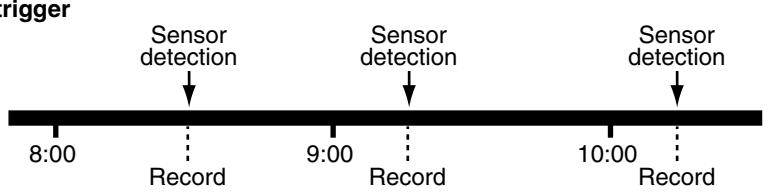
- Timer Trigger: Recording on specified dates only. Recording occurs for the entire duration of the timer, or only when the sensor is triggered (not available with HCM series cameras) during set duration.
- Sensor Trigger: Images are recorded only when the specified camera's sensor is activated (see page 81). Not available with HCM series cameras.

Timer trigger

Example: When the timer is set to record between 8:30 and 10:30



Sensor trigger



Note

- An SD memory card must be inserted in the unit in order to record camera images.
- Timer recording can specify either timer recording or continuous sensor recording, but not both. You must choose one or the other.

- See page 84 for more information on recording frame rates for sensor recording.

Record Mode	Resolution	Image Refresh Interval
HIGH	640 x 480	1 sec.
LOW	320 x 240*	1 sec.
LONG	320 x 240*	5 sec.

*When recording in LOW or LONG mode, a smaller image is recorded and the image appears smaller during playback.

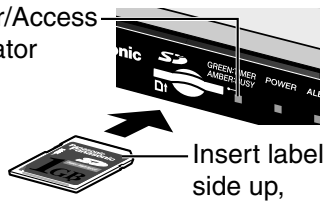
- We recommend using a recording mode of either HIGH or LOW for sensor recording.

4.1 SD Memory Cards

We recommend using Panasonic SD memory cards with the BL-WV10A.

(We cannot guarantee the performance of SD memory cards made by other manufacturers.) Cards with capacities of up to 1 GB can be used.

Inserting an SD memory card



Ejecting an SD memory card

Push the SD memory card slightly, then remove it

CAUTION

When the timer/access indicator is flashing amber, data is either being read from or written to the card. When the indicator is flashing amber, do not do any of the following:

- Remove the SD memory card.
- Turn off the BL-WV10A.
- Press the FACTORY DEFAULT RESET button.

Doing so can result in corrupted data on the SD memory card. If this occurs, the card cannot be used and you will need to reformat the card with the BL-WV10A. All data on the card will be erased.

Note

- Do not use the SD memory card used for the BL-WV10A in other devices (digital cameras, video cameras, etc.). Only image data (movies and pictures) that were recorded with the BL-WV10A can be viewed with the

BL-WV10A. Image data saved on SD memory cards by other devices may not be displayable on the BL-WV10A. Similarly, image data saved on the SD memory card using the WV-10A may not be displayable on other devices.

- FAT12 format and FAT16 format SD memory cards can be used with the BL-WV10A.
- SD memory cards formatted by another device, such as a computer, may not be able to be used with the BL-WV10A.
- We recommend that you format SD memory cards with the BL-WV10A prior to use.
- When you remove the SD memory card, the screen will switch to the monitoring screen.
- The length of time or the number of frames/pictures that can be recorded onto an SD memory card is as indicated below. Those figures were calculated for maximum image size. Image size and content may affect recording time or the number of frames/pictures.
- There are no guarantees for recorded content. Issues with either the BL-WV10A or a card that result in a loss of images cannot be compensated for by Panasonic.
- During standard recording (I.e., pressing the [RECORD] button on the remote control while monitoring a camera), images are recorded at the displayed resolution ([HIGH] or [LOW]), however, the length of time for recording is the same regardless of the resolution.
- In comparison to timer recording, standard recording captures much more data; ordinary recording, therefore, will minimize any capacity needed for timer recording. Always confirm the time available for recording on the Timer Recording Confirmation Screen.

Movie Recording Time

SD Capacity	Timer/Sensor Recording			Standard Recording	
	LONG	LOW	HIGH	HCM Series	C Series
8 MB	1 hr.	10 min.	3 min.	13 sec.	26 sec.
16 MB	2 hr. 30 min.	30 min.	7 min.	30 sec.	58 sec.
32 MB	5 hr. 10 min.	1 hr.	10 min.	1 min.	2min.
64 MB	10 hr. 40 min.	2 hr.	30 min.	2 min.	4 min.
128 MB	21 hr. 40 min.	4 hr. 20 min.	1 hr.	4 min.	8 min.
256 MB	43 hr. 20 min.	8 hr. 40 min.	2 hr.	8 min.	16 min.
512 MB	87 hr. 10 min.	17 hr. 20 min.	4 hr. 10 min.	17 min.	33 min.
1 GB	167 hr. 50 min.	33 hr. 30 min.	8 hr.	33 min.	65 min.

- See page 84 for more information on recording modes (LONG, LOW and HIGH).

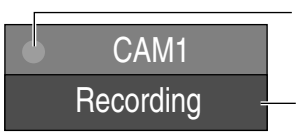
Picture Storage

SD Capacity	No. of Pictures	
	LOW	HIGH
8 MB	270	160
16 MB	450	300
32 MB	940	630
64 MB	1930	1290
128 MB	3900	2600
256 MB	7780	5190
512 MB	15680	10460
1 GB	30170	20120

4.2 Standard Recording

During standard recording, images are recorded at the displayed resolution (see page 124).

1. Insert an SD memory card into the BL-WV10A (see page 72).
2. While monitoring a single camera, press [RECORD].
   - Recording begins.



Status indicator: Red

Shown in upper-right corner of screen for 4 seconds after recording has started

3. To stop recording, press [STOP].
   - A list of all movies can be viewed on the [Movies] screen (see page 88).
   - Press [DISPLAY] while recording to display information on the recording (see page 90).

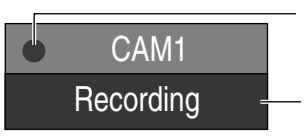
Note

- Neither remove an SD memory card nor turn off the BL-WV10A while it is in ordinary recording mode. Doing so will cancel the recording and may corrupt the data on the card. If this occurs, you will need to reformat the card with the BL-WV10A (see page 120).
- During standard recording, a maximum of 15 frames per second (fps) can be recorded. Results will vary depending on network conditions.

4.3 Snapshot Recording

A picture of the image being monitored is saved to an SD memory card.

1. Insert an SD memory card into the BL-WV10A (see page 72).
2. Display the Monitoring Screen and press [SNAPSHOT].



Status indicator: Red

Shown in upper-right corner of screen while snapshot is being taken

- Upon pressing [SNAPSHOT], the image being monitored will be saved as a picture to the SD memory card.
- A list of recorded pictures can be viewed on the [Pictures] screen (see page 92).

Note

- Snapshot recording is not available when the Multi-Camera Screen is visible (see page 64).

4.4 Timer Recording

Note

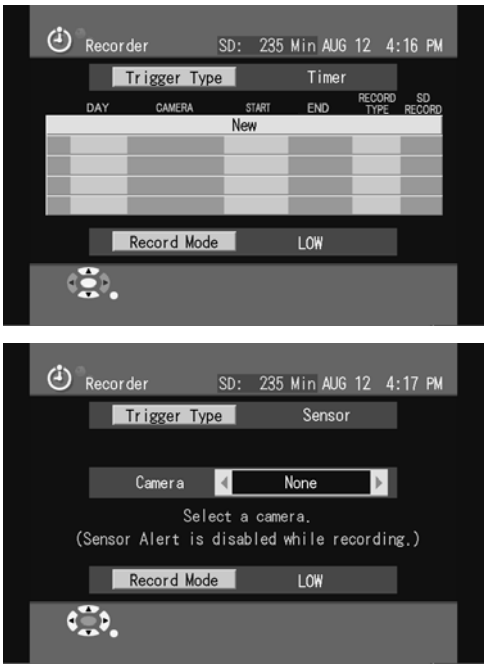
- If the BL-WV10A's date and time setting (page 96) is set to use Daylight Saving Time (i.e., if [DST] is turned on), actual recording time will be based on Daylight Saving Time. Recordings may be up to 1 hour shorter than planned on the first Sunday in April, and 1 hour longer on the last Sunday in October.
- If the SD memory card is removed while setting up for timer recording, the setup screen will change to the Monitoring Screen, with all timer settings cancelled.

4.4.1 Setup for Timer Recording

1. Insert an SD memory card into the BL-WV10A.
   - An SD memory card is not needed if you are not recording to one (see page 79).
2. Press [MENU].
   - The menu is displayed.

3. Select [Recorder] and press [ENTER].

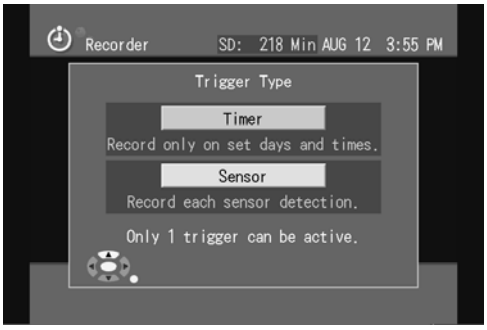
- The Timer Recording Screen appears.



- See page 83 for more information on changing recording modes.

4. If [Sensor] is selected, select [Trigger Type] and press ENTER].

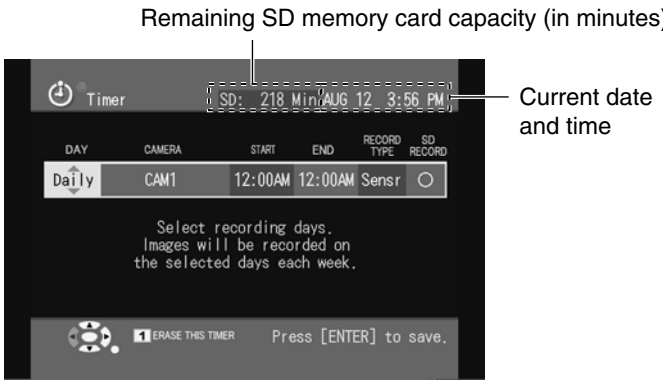
- The Trigger Type screen appears.



- Select [Timer] and press ENTER].
- The [Recorder] screen for timer recording appears.

5. Select [New] and press [ENTER].

- The settings screen for timer recording appears.



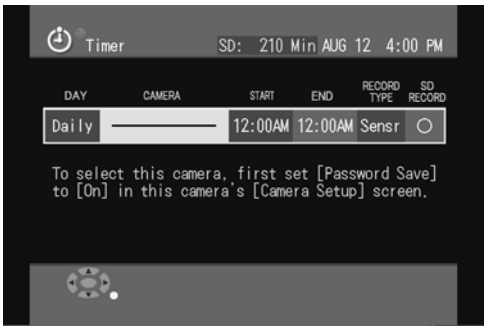
6. Set the timer recording content.

- A maximum of 5 intervals can be recorded with timer recording.

Setting	Content
Day of the Week	Select the day for recording. Use the navigator keys to select the desired option (daily, every Sunday to every Saturday, Monday to Friday, Monday to Saturday, Saturday and Sunday).
Camera Name	Select the camera to be used for recording.
Start Time/End Time	Set the times to begin and end recording. Press the top and bottom navigator keys change the time in 1 minute increments. Press and hold the top and bottom navigator keys to change the time in 15 minute increments.

- Remote cameras for which passwords are not saved will not be displayed. If all registered cameras are remote cameras for which passwords are not saved, the following screen will appear. When using remote cameras for timer

recording, change their settings such that passwords are saved (see page 115).



Setting	Content
Record Type	Select the recording method. All: Records all images from the camera during the time interval specified. Sensr (Sensor): Records images from the camera during the time interval specified, but only when the sensor is activated.
SD Recording	To record to an SD memory card, select [O]. To record to a different destination, select [—]. When [SENSOR] has been selected for content, only [O] is available.

- The sensor range may differ depending on the camera type. To record from remote cameras using sensor activation, confirm that the cameras are set for sensor use (see page 117). See the camera user guide for cautions in placing the camera to maximize that range.
- To record images from the Monitoring Screen to a video deck or a DVD/HDD recorder, select [—]. Use a video cable to connect the video output port on the BL-WV10A to the video input jack on a video deck or DVD/HDD recorder, setting the time for recording on the video deck or DVD/HDD recorder to match that of the BL-WV10A. At the set time, the Monitoring Screen for the specified camera will appear and be recorded on the video deck or DVD/HDD recorder.

7. After setting the content, press [ENTER].

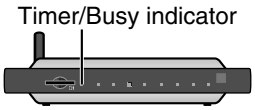
- Timer recording is now set.

8. Press [TIMER] to turn the timer on.

- Upon doing so, the timer/access indicator will turn green.

Note

- HCM series cameras cannot record by sensor. You can set sensor recording on the BL-WV10A, but sensor recording will not occur.
- If the timer is turned on after the time for which recording was to begin, recording will begin when the timer was turned on. If the timer is turned on after the recording was to have ended, recording will begin at the next set interval.
- If recording start and end times conflict with previously set times, “The timer could not be set because the recording time overlaps with another timer. Set a different start and/or end time.“ is displayed and your settings will be invalidated.



- Once timer recording begins, the image switches to that of the recording camera. That image will be displayed at the resolution at which it was set when the recording was set up. If you try to perform any operations, “Now recording. No other operations are possible. Press [TIMER] button to stop recording.” will be displayed.
- Timer recording will take place using the time as set on the BL-WV10A. Be sure to confirm the current time as it is displayed, and if wrong, set the time Date and Time screen (see page 96).
- If you remove the SD memory card when the timer is on, the timer will turn off and timer recording will not take place. Re-inserting the SD memory card will not correct this. To do so, re-insert the SD memory card and turn the timer on. If however, there are timer recordings set to take place without using the SD memory card, removing the card will not turn the timer off.
- When timer recording is set to [SENSOR], the camera lens will move to the sensor position set for that camera (see page 59) when the sensor is activated, and record images to the SD memory card. Local cameras will also record images prior to and after sensor activation as well (see page 84).
- If the power fails or is turned off during a timer recording, you may see an error result. If that occurs, erase the timer recording settings (see page 84).
- During timer recording, when sensor activation is used to record images, the sensor indicator will begin flashing once the camera’s sensor is activated. To stop the flashing, see page 69.

Screen Display when the Timer is On

When set for timer recording, a notification will appear prior to the start of timer recording.

- The following message will be displayed a few minutes before recording begins.
  [Recording will begin shortly.]
- The following message will begin just before recording begins:
  [Recording will begin in 5 seconds. The current operation will be canceled.]
- When recording begins, the current display will automatically end, and the Monitoring Screen for the camera used for timer recording will appear.

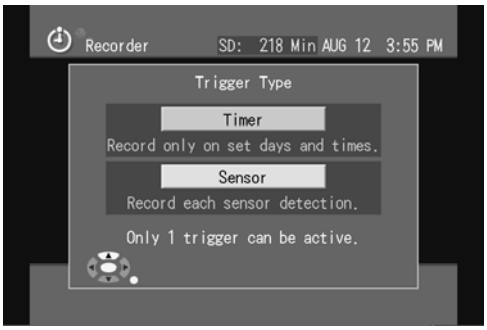
4.4.2 Setup for Continuous Sensor Recording

This feature is not available with HCM series cameras.

When the sensor is activated for cameras set for continuous sensor recording, recording will begin once the camera lens moves to the sensor position (see page 59),

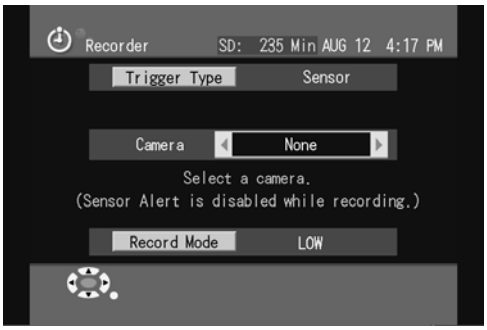
Once continuous sensor recording is set, you can begin timer recording, for example, by using the remote control to turn the timer on before leaving and then turning it off upon your return, whereupon you can review the recorded images. The functionality is similar to that of an answering machine, activated by a single button.

1. Insert an SD memory card into the BL-WV10A.
   - An SD memory card is not needed if you are not recording to one (see page 79).
2. Press [MENU].
   - The menu is displayed.
3. Select [Recorder] and press [ENTER].
4. When [Timer] is selected, select [Trigger Type] and press [ENTER].
   - The Trigger Type screen appears.



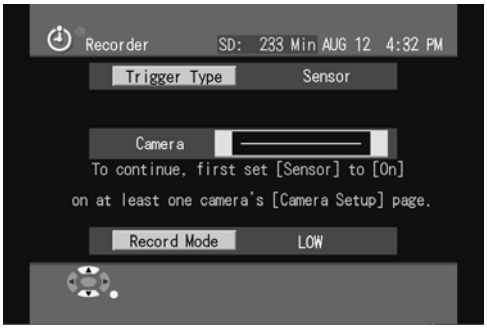
   - Select [Sensor] and press [ENTER].

- The continuous sensor recording [Recorder] screen appears.

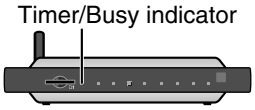


Note

- To record from remote cameras using sensor activation, confirm that the cameras are set for sensor use (see page 117).



5. Select the camera.
6. Press [RETURN].
   - Confirm the name of the selected camera, and continuous sensor recording is now set.
7. **To activate continuous sensor recording, press [TIMER] to turn the timer on.**
   - Upon doing so, the timer/busy indicator will turn green, and timer recording will begin immediately.
   - To end timer recording, press [TIMER] to turn the timer off.



Note

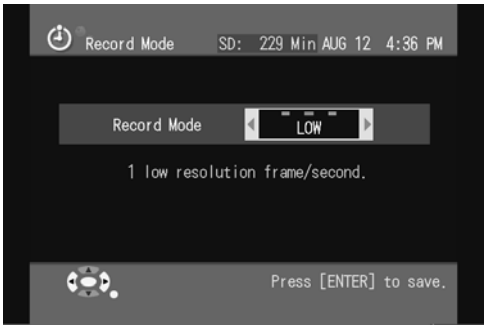
- HCM series cameras cannot record by sensor. Do not set sensor recording for an HCM series camera.
- If the power fails or is turned off during a continuous sensor recording, you may see an error result. If that occurs, erase the timer recording settings (see page 84).
- During continuous sensor recording, when sensor activation is used to record images, the sensor indicator will begin flashing once the camera's sensor is activated. To stop the flashing, see page 69.
- The sensor range may differ depending on the camera type. See the camera user guide for cautions in placing the camera to maximize that range.

4.4.3 Changing the Record Mode

The image mode can be changed for timer and continuous sensor recording.

1. In the [Recorder] screen, select [Record Mode] and press [ENTER].

- The Record Mode screen appears.



2. Using the left and right navigator keys, select the desired mode and press [ENTER].

Note

- A guide for the capacity of a 64MB SD memory card for each recording mode is indicated below (for more information see page 74). If the resolution is set to LOW, the recorded image will appear smaller, as will its image during recording.

Record Mode	Resolution	Image Quality	Image Refresh Interval	Record Time (when recording to a 64 MB SD memory card)
HIGH	640 x 480	Standard	1 sec.	About 30 min.
LOW	320 x 240	Favor Motion	1 sec.	About 2 hr.
LONG	320 x 240	Favor Motion	5 sec.	About 10 hr.

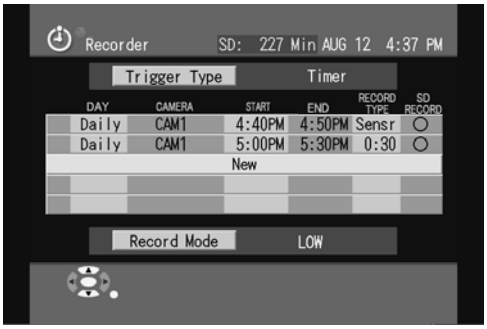
- The content of sensor recording is different for local and remote cameras. Local cameras capture 5 frames both before and after sensor activation. In addition, sensor response timing may lead to fewer recorded frames for each response. Remote cameras record the image at time of activation.
- We recommend using a recording mode of either HIGH or LOW for sensor recording.

4.5 Confirming, Changing and Erasing Timer Recording Programs

When you select [Recorder] from the Menu screen, the recording method (timer recording, continuous sensor recording) currently selected is displayed.

Confirming Timer Recording Programs

In the [Recorder] screen for timer recording, you can confirm the current settings and content for timer recording.



Note

- If an error occurs during timer recording, an error icon appears. (see below)
- When [All] is selected for recording content, the time from recording start to end is calculated and displayed.

Recording Errors

When an error occurs during timer or continuous sensor recording, an error icon appears. Once an error occurs, timer recording stops. Press [1] to cancel the settings, and re-do them to begin recording again.

Icon	Causes and Solutions
	SD memory card is full. The remaining capacity in recording time for the SD is displayed. Erase unneeded images to obtain sufficient capacity (see page 91, page 93).
	Connection to the camera failed at recording start time. Environment conditions (page 6) may be causing poor wireless communication quality. Check the connection to the camera. Turn off Privacy Mode (see page 111). A “ (quotation mark) was used in the FTP User Name or Password (see page 104). Confirm the correct information and enter it again.
	An error in writing to the SD memory card. If the SD memory card is write-protected, disable write-protection. Do not remove or insert SD memory cards during timer recording.
	The camera is in Privacy Mode. Turn off Privacy Mode (see page 111).
	There is no SD memory card inserted. Insert an SD memory card.
	Other error Do not remove or insert SD memory cards during timer recording.

Changing Timer Recording Content

1. In the [Recorder] screen for timer recording, select the timer recording you wish to change and press [ENTER].
   - The Timer Recording Settings Screen appears.
2. Change the recording content and press [ENTER].
   - The timer recording content is changed.

Erasing a Timer Recording Setting

In the [Recorder] screen for timer recording, select the recording program to erase and press [1].

Confirming Continuous Sensor Recording Settings

In the [Recorder] screen for continuous sensor recording, you can confirm the current settings and camera for continuous sensor recording.

Changing Continuous Sensor Recording Settings

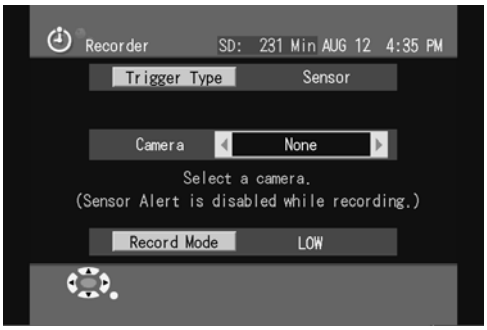
In the [Recorder] screen for continuous sensor recording, select the camera name you wish to change.

- The camera set for continuous sensor recording is changed.

Erasing Continuous Sensor Recording Settings

In the [Recorder] screen for continuous sensor recording, press [1].

- The continuous sensor recording settings are erased and the camera name appears as [None].



[When Errors Occur]

If an error occurs during continuous sensor recording, an error icon appears (see page 85).

Once an error occurs, continuous sensor recording stops.

Press [1] to cancel the settings, and re-do them to begin recording again.

5 Viewing Movies and Pictures

5.1 Playing Movies

There are 2 ways to play recorded movies: press the PLAY key on the remote control or select the movie in the image list.

Pressing the PLAY Key

1. Insert an SD memory card containing movies into the BL-WV10A.
2. When the Monitoring Screen is visible, press [PLAY].
   - The movie selected in the movie list will play.
   - Press [DISPLAY] while the movie is playing to display information (see page 90).

Selecting the Movie

1. Insert an SD memory card containing movies into the BL-WV10A.
2. Press [MENU].
   - The menu is displayed.
3. Select [Movies] and press [ENTER].
   - The movies screen appears.

The recording capacity for the currently selected recording mode for the SD memory card is displayed.

Current date and time

Movie list
Camera name and record date/time is displayed under each movie

Select to view the next page

Guidance

Current page/Total number of pages

Select to view the previous page

4. Select the movie and press [ENTER].
   - The movie will play.
   - Press [DISPLAY] while the movie is playing to display information (see page 90).

Note

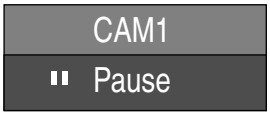
- You can also select any of the images (in thumbnail view) from the list in the Recording Playback Screen.

5.2 Useful Tips for Movie Playback

Pausing Playback

When the movie is playing, press [PLAY] to pause playback.

- To return to playback, press [PLAY] again.



Note

- If you press [SNAPSHOT] while playback is paused, the paused image will be saved as a picture. When saved pictures are viewed, the long information display can be used to confirm time of recording (see page 126). By saving only the needed portions of movies as pictures, you can then erase the movie to more effectively use memory card capacity.

Frame-by-frame Playback

When playback is paused, press the top navigator key to move forward by single frames and the bottom navigator key rewind by single frames.

Fast Forward/Rewind Playback

During playback, press the top navigator key to fast forward playback and the bottom navigator key to rewind playback.

Playing the Next (or Previous) Movie

During playback, press the right navigator key to play the next movie and the left navigator key to start playback from the beginning of the current movie.

If you press the left navigator key during the first 3 seconds of the movie, the previous movie will play.

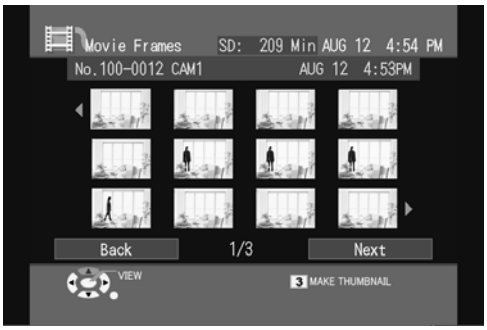
Viewing Movie Information

Select a movie on the [Movies] screen and press [3] to view information on the movie.

The recording mode (HIGH, LOW, LONG, or ———) will be displayed. Movies recorded manually while monitoring the camera image will be recorded at the monitoring resolution and displayed as ———.

Viewing Movies Frame-by-Frame

Press [4] in the movie list screen to display the individual frames of the selected movie.



- Pictures are displayed in the order they were captured. Select a sequentially displayed image and press [ENTER] to view the selected image in full screen mode. Once in full screen mode, press [DISPLAY] to display the LONG information (see page 126) and confirm the time of recording. When an image is displayed, pressing the [SNAPSHOT] will save it as a picture.
- Press [STOP] to return to the Sequential Photo List Screen.
- Select an image in the Sequential Photo List Screen and press [3] to specify images (in thumbnail view) for the list display in the Recording Playback Screen.

Note

- Press [DISPLAY] while an image is displayed to confirm image information. The same will result when viewing pictures.

5.3 Erasing Recorded Movies

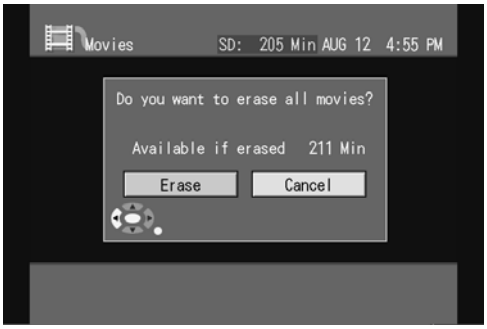
Erasing Movies

1. Select the movie to be erased in the [Movies] screen and press [1].
   - The Confirm Deletion Screen appears.

2. Select [Erase] and press [ENTER].
   - The selected image is erased.

Erasing All Movies

1. Press [2] in the [Movies] screen.
   - The Confirm Deletion Screen appears.

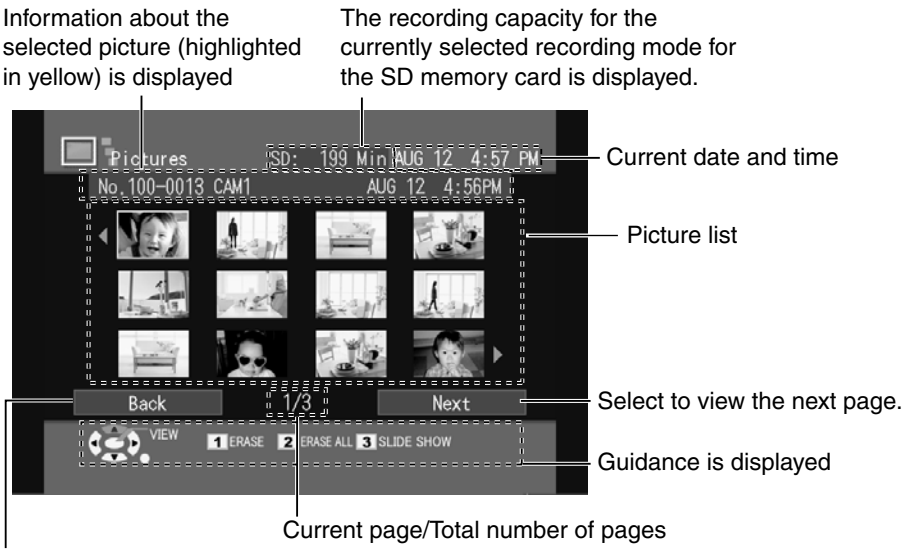


2. Select [Erase] and press [ENTER].
   - All recorded movies are erased.

5.4 Viewing Pictures

View pictures recorded as snapshots.

1. Insert an SD memory card with pictures into the BL-WV10A.
2. Press [MENU].
   - The menu is displayed.
3. Select [Pictures] and press [ENTER].
   - The [Pictures] appears.



4. Select an image and press [ENTER].
   - The picture appears.
   - Press [DISPLAY] while it is displayed to view image information (see page 126).

5.5 Useful Tips for Viewing Pictures

View a Slideshow

Select [3] in the Picture screen, and each individual picture will be sequentially. Pictures are displayed in the order they were captured.

Press [DISPLAY] to view different information about the picture.

When the slideshow ends, the [Pictures] screen returns.

Press [STOP] during the slideshow to end it and return to the [Pictures] screen.

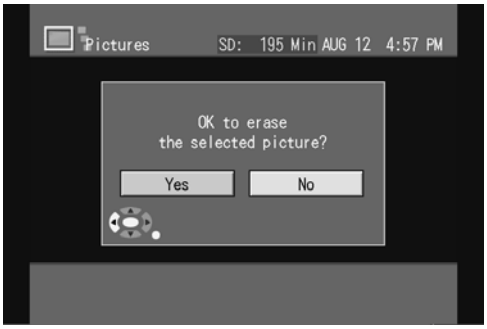
Viewing the Next (or Prior) Image

When a picture is displayed, press the left or right navigator keys to view the next or previous image.

5.6 Erasing Recorded Pictures

Erasing Pictures

1. Select the picture to be erased in the [Pictures] screen and press [1].
   - The Confirm Deletion Screen appears.



2. Select [Yes] and press [ENTER].
   - The selected image is erased.

Erasing All Pictures

1. Press [2] in the [Pictures] screen.

- The Confirm Deletion Screen appears.

2. Select [Yes] and press [ENTER].

- All recorded pictures are erased.

6 Setup Menu

The Setup menu can be used to set the clock for the BL-WV10A, perform its initial setup, configure cameras and manage SD memory cards.

1. Press [MENU].

- The menu is displayed.

2. Select [SETUP] and press [ENTER].

- The Setup menu screen appears.

Date and Time:

The time is set with manual input (see page 96).

General Setup:

Change the initial settings for the BL-WV10A (see page 97).

Camera Setup:

You can register cameras manually (see page 105) and change camera settings (see page 108).

SD Card Info:

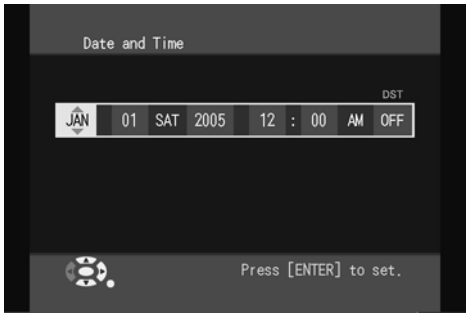
Display information on and format SD memory cards (see page 120).

6.1 Date and Time

The BL-WV10A receives date and time information from registered and connected cameras each time it starts up. In addition, the internal clock can sometimes speed up or slow down based on environment temperatures. If the time displayed is off, the date and time can be set manually.

1. Select [Date and Time] from the [Setup] screen (see page 95) and press [ENTER].

- The Clock Settings screen appears.



2. Use the left and right navigator keys to select the desired information, then press the top or bottom navigator keys to change the setting and press [ENTER].

- When you set the time manually, the clocks of all connected local cameras will be synchronized to match.

Note

- The BL-WV10A will be unable to receive time data if no cameras are connected when it starts up. In that instance, set the clock manually.
- If [DST] is turned on, the BL-WV10A will automatically adjust its clock for Daylight Saving Time. The clock will move forward 1 hour at 2:00 AM on the first Sunday in April, and will move back 1 hour at 3:00 AM on the last Sunday in October.

When Connected to a Router

- Time data can be obtained from remote cameras, but that data will not overwrite settings in the BL-WV10A. The time displayed while monitoring and the time used for recording purposes is taken from the BL-WV10A's clock. If the time in a remote camera is off, connect to it with a computer and reset its clock to match that of the BL-WV10A.

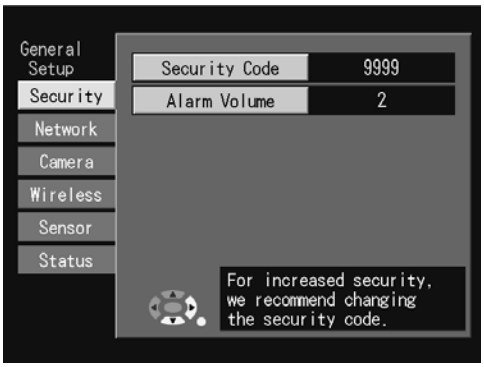
6.2 General Setup

1. Select [General Setup] from the [Setup] screen (see page 95) and press [ENTER].

- The security screen appears.

2. Enter the security code.

- The default code is 9999.
- The [General Setup] screen appears.



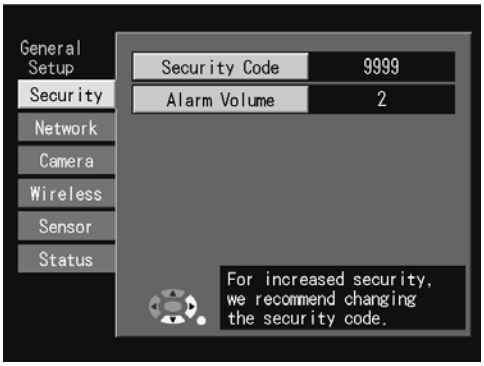
3. Select the category of settings you wish to change, then press [ENTER].

- BL-WV10A settings (security code and alarm volume) (see page 98)
- Network settings (see page 99)
- Camera settings (see page 100)
- Wireless settings (see page 101)
- Sensor settings (see page 104)
- Status settings (see page 105)

4. When your changes are complete, press [RETURN] to return to the prior menu.

Security

Change the settings for the BL-WV10A's security code and alarm volume



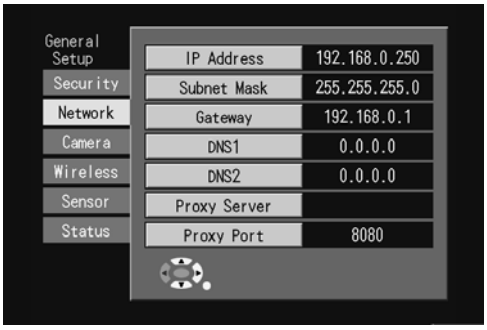
Setting	Description
Security Code	Set the security code needed for [General Setup] and [Camera Setup]. Select [Security Code] and press [ENTER]. The security screen appears. Enter a new (4-digit) security code user the keypad on the remote control and press [ENTER]. The new security code is set. Change the security code frequently to maintain security.
Alarm Volume	Sets the volume for the buzzer in Sensor Alert mode and the operational volume. Select a volume setting (off, 1, 2, 3 or 4) and press [ENTER]. The buzzer will sound to confirm the new volume setting.

Note

- **If you forget the security code, you will be unable to enter the Setup screen, and you will need to reset the BL-WV10A. Doing so, however, will reset all of your settings to their defaults, and sever the connections to the cameras. If necessary, write down the security code and store it in a secure place.**
- The security code must be 4 digits in length.
- If you forget the security code, push the FACTORY DEFAULT RESET button to restore the BL-WV10A's default settings (see page 131). You will need to re-perform Quick Setup to register the cameras and set desired settings again.
- Setting the volume to off will turn off both the buzzer and any operational sounds.
- To turn off the volume for the buzzer in Sensor Alert mode only, press [ALERT].

Network Settings

Change the settings for the BL-WV10A's network information.



Setting	Description
IP Address/ Subnet Mask	Set the IP address and subnet mask for the BL-WV10A.
Gateway	Set the gateway address
DNS1/DNS2	Set the IP address for the DNS server. Up to 2 DNS server addresses can be set.
Proxy Server/ Proxy Port	If you will use a proxy server to view camera images, enter its name and port number here.

Note

- If the BL-WV10A will not be connected to a network (the BL-WV10A will only be connected to cameras), these settings can be ignored.

Note

- Please be aware that when you make changes to values set during Quick Setup, you may lose access to the network.
- If you make a mistake while changing these settings, use the FACTORY DEFAULT RESET button to restore the BL-WV10A's default settings (see page 131). Doing so, however, will reset all of your settings to their defaults, and sever the connections to the cameras. You will need to re-perform Quick Setup to register the cameras and set desired settings again.

Camera Settings

Change the camera network settings.

Setting	Description
Starting Address	Set the IP address to be used when a camera is configured using Quick Setup. A maximum of 8 addresses will be created and used, starting sequentially from this entry. If you run Quick Setup after connecting a BB-HGW700A, the starting address will be displayed as [Auto] and cannot be set manually.
Admin User Name	Set the user name for local cameras for Quick Setup. This user name is used when connecting to local cameras.
Admin Password	Set the password for local cameras for Quick Setup. This password is used when connecting to local cameras.

Note

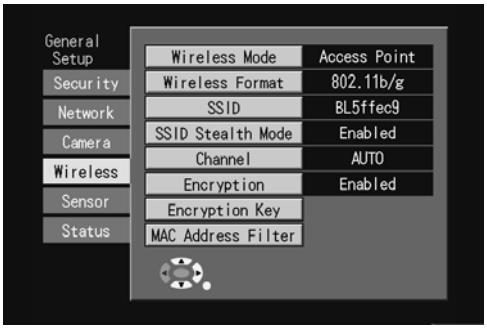
- The administrator name and password must be between 6 and 15 alphanumeric characters in length. The following characters cannot be used: " < > : &.
- When you re-register cameras using Quick Setup after changing the administrator name and password, the user name and password for the camera

will be changed to the new administrator name and password. The new administrator name and password will not overwrite user names and passwords for cameras that have already been registered. You will continue to be able to use the existing user names and passwords for those local cameras. To re-register those cameras with the new administrator name and password, see page 134.

- If you aren't planning to access a camera with a computer, it is not necessary to set an administrator name and password.

Wireless Settings

Change the wireless settings for the BL-WV10A.



Setting	Description
Wireless Mode	Choose either repeater or access point mode. When the BL-WV10A is connected to a BB-HGW700A wirelessly, Quick Setup will automatically change this setting to repeater mode.
Wireless Format	Choose from 802.11b, 802.11g only or 802.11b/g.
SSID	Set the identifier for the wireless network local in use.
SSID Stealth Mode	Choose either [Enabled] or [Disabled]. To make wireless LAN networks easier to detect, the network identifier, or SSID, is regularly transmitted. Turning the stealth features off will allow the network to be easily detected, but unauthorized users may also attempt to access the network as a result, resulting in a possible security issue. Turning the stealth features on will deny access through ANY key, making the network harder to detect.

Setting	Description
Channel	The communications channel to be used can be chosen from either AUTO or a number between 1 and 11. Choosing AUTO will allow the BL-WV10A to automatically detect an available channel at launch. If the quality of the connection is not, you can manually choose another channel as well.
Encryption	Choose to turn encryption either on or off. Sets an encryption key when encryption is turned on.
Encryption Key	Sets an encryption key when encryption is turned on. Up to 4 encryption keys can be set in advance. Allowable keys: Choose from encryption keys 1 through 4 to use with encryption. Key types: The types of encryption keys are 64 bit (10 hexadecimal digits or 5 letters), 128 bit (26 hexadecimal digits or 13 letters), or 152 bit (32 hexadecimal digits or 16 letters). The level of security increases with the number of bits, but there may be a slight decrease in network speed as a result. Keys 1 through 4: Enter an encryption key that corresponds in length to the type selected.
MAC Address Filtering	Choose to either turn MAC address filtering (to specify the addresses of connected devices) on or off. Turning it on will allow you to specify the MAC addresses of the devices which are allowed to connect. Up to 16 address can be specified.

Note

- Use the same encryption key number and type for any wireless terminal to be connected.

Note

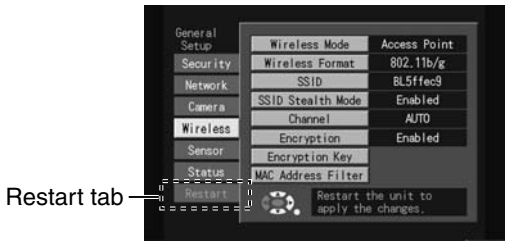
- To register a BL-C30A, you will need to specify 2 MAC addresses. Choose the MAC address indicated on the base of the BL-C30A and one from the following table based on the last digit in the BL-C30A's MAC address.

0 —> 1	2 —> 3	4 —> 5	6 —> 7	8 —> 9	A —> B	C —> D	E —> F

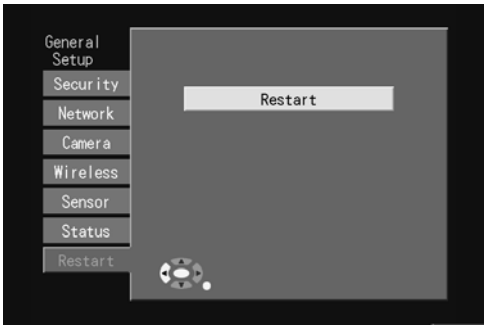
For example, if the MAC address for the BL-C30A is 00:80:F0:54:C0:C4, you should specify 00:80:F0:54:C0:C4 and 00:80:F0:54:C0:C5.

Certain changes may require the BL-WV10A to restart.

1. If after making changes a restart is needed, the [Restart] tab will appear.



2. Select the [Restart] tab and the [Restart] button will appear.



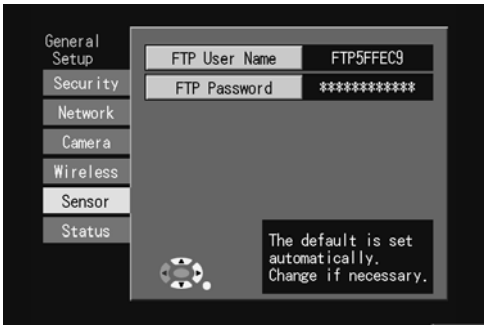
3. Press the [Restart] button, and the Restart Confirmation screen will appear. Select [Yes] and press [ENTER] to restart the BL-WV10A.

Note

- Please be aware that when you make changes to values set during Quick Setup, you may lose access to the network.

Sensor Settings

The BL-WV10A displays an account name and password for its FTP server in order to receive sensor-detected images from the cameras.



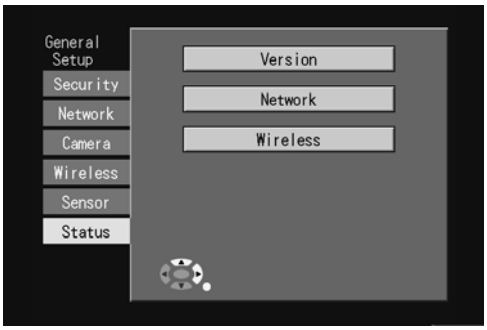
Setting	Description
FTP User Name	Set the account name to log on to the FTP server within the BL-WV10A.
FTP Password	Set the password to log on to the FTP server within the BL-WV10A.

Note

- The FTP account name and password are set automatically. Change them to increase security when necessary.
- The FTP account name and password must be between 6 and 15 alphanumeric characters in length. " cannot be used.

Status Settings

Displays a list of settings



Setting	Description
Version	Displays information on the BL-WV10A firmware and the wireless firmware.
Network	Displays the IP address, subnet mask, DNS servers, proxy server, proxy port and MAC address values.
Wireless	Displays the communications mode, SSID, wireless stealth status, communications channel, BSSID, MAC address filtering status and encryption values.

6.3 Registering a Camera Manually

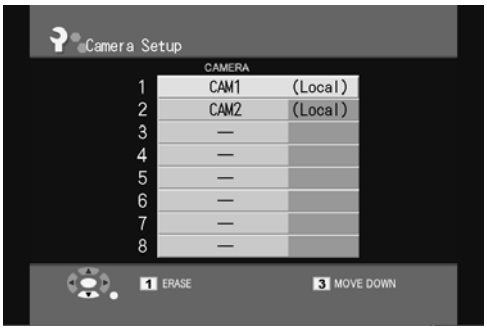
1. Select [Camera Setup] from the [Setup] screen (see page 95) and press [ENTER].

- The security screen appears.

2. Enter the security code.

- The default code is 9999.

- The Camera Setup screen appears.

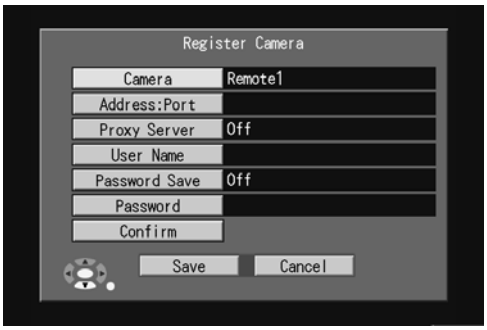


Note

- Local cameras are designated with the word "Local" in the right-hand column.

3. Select [–] from the list of registered cameras and press [ENTER].

- The New Camera Registration screen appears.



4. Enter the appropriate settings.

Setting	Description
Camera	Sets the camera name. Select [Camera] and press [ENTER] to display the character input screen. (See page 121 for more information on text entry.) Specify a name for the camera using between 1 and 15 alphanumeric characters. Registration will occur without this setting.
Address:Port	Sets the IP address or URL and the port number for the camera. Enter in the following format: IP address:port number or URL:port number.

Setting	Description
Proxy Server	Turns the use of a proxy server on or off. Turn this setting on if a proxy server is needed to access the camera's URL or IP address. Also, enter the proxy server and port indicated in the [General Setup] screen (see page 99).
User Name	Sets the user name for the camera.
Password Save	Sets the option to save the camera password. Turning it off will require the entry of a user name and password whenever a camera is accessed. • Turning off password saving will disable timer recording settings (see page 78).
Password	Sets the camera password.
Confirm	Confirms the image of the camera being configured. If an image is not visible, double check the settings above. After confirming the image, proceed to step 5.

5. Select [Save] and press [ENTER].

- If you select [Cancel] and press [ENTER], the entered settings will not be registered.

Note

- When registering a camera via the Internet, set the camera's IP address or URL and its port number in the camera address setting. When using a URL for a camera address, be sure to set the correct IP address for the DNS servers in the [General Setup] screen (see page 99).
- When entering the camera address and port number, 'http://' should be omitted.

Note

- Registering a camera manually will make it a remote camera. Use Quick Setup to register a camera as a local camera (see page 20).

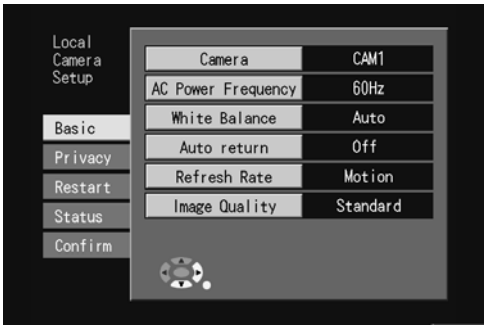
6.4 Camera Setup

You can change camera settings.

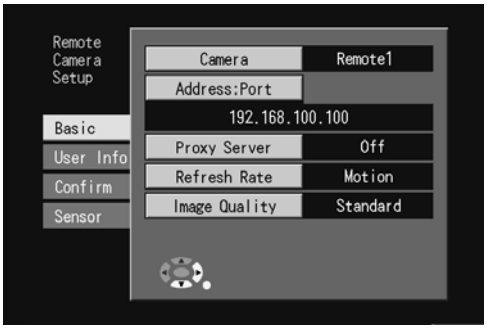
You can also erase a camera from the list or change its position in the list.

1. Select [Camera Setup] from the [Setup] screen (see page 95) and press [ENTER].
2. Select the camera whose settings you wish to change and press [ENTER].
   - When the selected camera is a local camera, the Local Camera Setup screen will appear; for remote cameras, the Remote Camera Setup screen will appear.

Local Camera Setup Screen

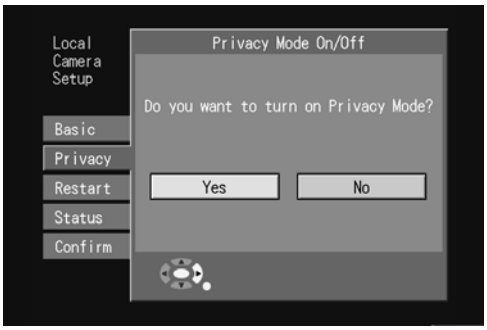


Remote Camera Setup Screen



Note

- When you select a local camera using the Privacy Mode feature, the Disable Privacy Mode screen will appear. To change camera settings, select [Yes] to disable the Privacy Mode feature.

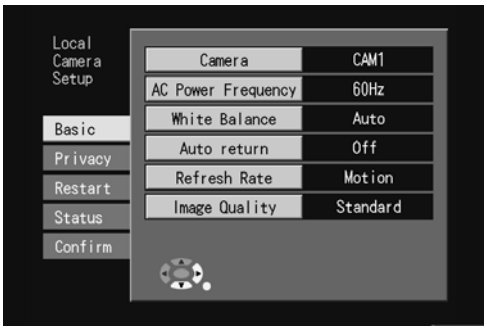


3. Enter the appropriate settings.

- For local cameras, see page 109. For remote cameras, see page 114.

6.4.1 Camera Setup for Local Cameras

Camera Information



Setting	Description
Camera	Display and change the camera name. Select [Camera] and press [ENTER] to display the character input screen. (See page 121 for more information on text entry.)
AC Power Frequency	Choose either [50 Hz] or [60 Hz]. Choose either 50 Hz 60 Hz (typically 60 Hz should be selected).

Setting	Description
White Balance	Choose from Auto, Incandescent, Fluorescent 1, Fluorescent 2, Outdoor, or Manual *1.
Auto Return	Choose either none or a duration between one and thirty minutes. For the camera in question, if no operation occurs during the specified time, the sensor position will move to the lens direction. It can be set to automatically move to the lens direction for Sensor Alert and sensor recording.
Refresh Rate	Choose an interval to refresh the monitoring image from among motion, 3s, 5s or 10s. When publishing the camera externally, this setting can be used to avoid an excessive invasion of privacy. If the update interval is set to a value other than motion, image recording can occur for a longer period of time as a result.
Image Quality	The quality of the monitored image can set to the standard setting, or to favor either clarity or motion.

*1 When selecting [Manual] for the white balance value, the white balance value you choose will be maintained. Any setting other than manual will be constantly adjusted by the camera. If the color balance seems odd during monitoring, wait until a predominantly white image appears well before selecting manual.

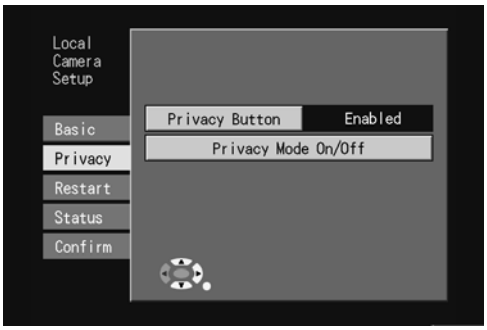
Note

- When registering a preset, the white balance and brightness settings used at the time of registration will also be saved. This settings will be effective when the camera moves to the preset position.

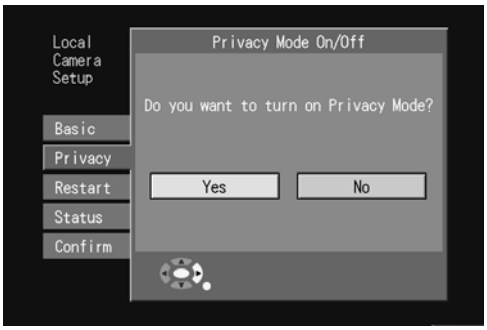
Privacy Mode

"Privacy Mode" allows you to make sure images from the camera cannot be seen by rolling the lens back into the camera. It can be set by pressing the PRIVACY button on the camera.

PRIVACY button lights in red when Privacy Mode is turned on



Setting	Description
Privacy Button	Choose to activate or deactivate the functionality of the camera's PRIVACY button. Setting to [Disable] will disable the camera's PRIVACY button so that it cannot be turned on/off.

Setting	Description
Privacy Mode On/ Off	To turn on Privacy Mode, select [Privacy Mode On/Off] and press [ENTER]. • The Privacy Mode confirmation screen will appear. Select [Yes] and press [ENTER] to set this feature. 

Note

- Cameras with Privacy Mode turned on will not appear on the Monitoring screen.
- When you select a camera that has Privacy Mode turned on, the following screen will appear, and you will be unable to change any settings. To make changes, select [Yes] and turn off Privacy Mode.

- Pressing the camera's PRIVACY button can also be used to disable Privacy Mode.

Restart

This re-initializes and restarts the camera with its default settings.

Re-initialization:

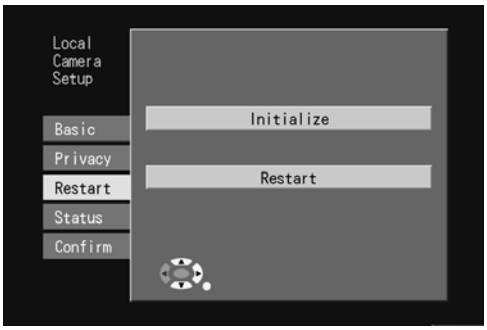
To change the camera's user name and password, or to re-perform Quick Setup, you will need to re-initialize the camera, restoring its default settings.

To do so, press the camera's FACTORY DEFAULT RESET button.

Re-initializing a camera will not erase it from the BL-WV10A's Camera List.

Restarting:

If you adjust a camera's lens direction by hand, the pan/tilt function on the remote control will cease to work. In this instance, restart the camera.



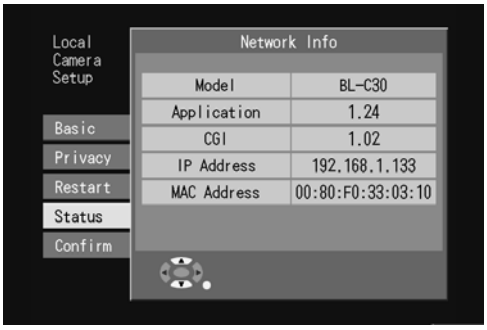
Setting	Description
Initialize	To re-initialize the camera, select [Initialize] and press [ENTER]. • The Re-initialization Confirmation screen will appear. Select [Yes] and press [ENTER] to re-initialize the camera.
Restart	To restart the camera, select [Restart] and press [ENTER]. • The Restart Confirmation screen will appear. Select [Yes] and press [ENTER] to restart the camera.

Note

- Re-initializing the camera will prevent network connection. Re-perform Quick Setup to re-register the camera.

Status Display

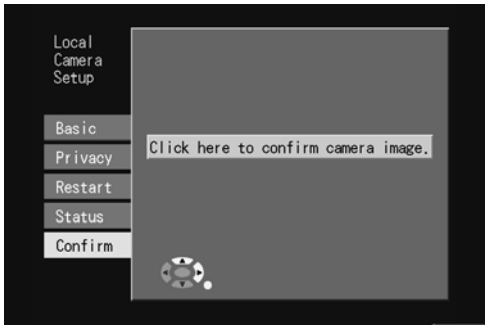
Displays the camera settings.



Setting	Description
Status	Displays the following camera data: model information, application, CGI, IP address and MAC address.

Image Confirmation

Confirms settings on screen.

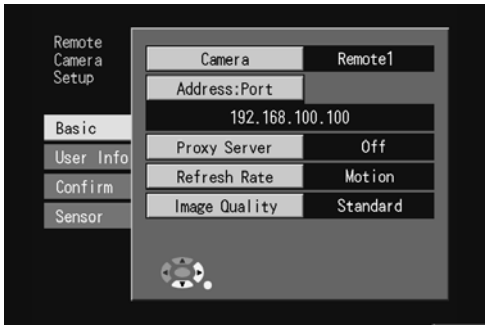


Setting	Description
Confirm	To confirm a set image on screen, select [Click here to confirm camera image.] and press [ENTER]. • The camera image will be displayed at low resolution.

6.4.2 Camera Setup for Remote Cameras

Camera Information

Changes the camera name and address.



Setting	Description
Camera	Display and change the camera name. Select [Camera] and press [ENTER] to display the character input screen. (See page 121 for more information on text entry.)
Address:Port	Sets the IP address or URL and the port number for the camera. Enter in the following format: IP address:port number or URL:port number. If you don't enter a port number, it will be set to 80.
Proxy Server	Turns the use of a proxy server on or off. Turn this setting on if a proxy server is needed to access the camera's URL or IP address. Also, enter the proxy server and port indicated in the [General Setup] screen (see page 99).
Refresh Rate	Choose an interval to refresh the monitoring image from among motion, 3s, 5s or 10s. When publishing the camera externally, this setting can be used to avoid an excessive invasion of privacy. If the update interval is set to a value other than motion, image recording can occur for a longer period of time as a result.
Image Quality	The quality of the monitored image can set to the standard setting, or to favor either clarity or motion.

User Information

Change the camera's user name and password and turn password saving on or off.

Setting	Description
User Name	Display and change the camera's user name. Select [User Name] and press [ENTER] to display the character input screen. (See page 121 for more information on text entry.)
Password Save	Sets the option to save the camera password. Turning it off will require the entry of a user name and password whenever a camera is accessed. Turning off password saving will disable timer recording settings (see page 78).
Password	Changes the password. Select [Password] and press [ENTER] to display the character input screen. (See page 121 for more information on text entry.)

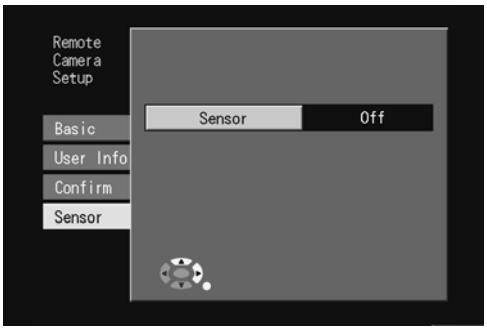
Image Confirmation

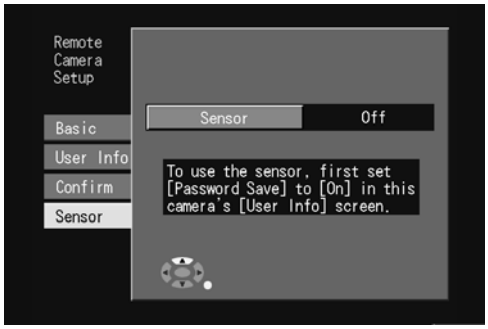
Confirms settings on screen.

Setting	Description
Confirm	To confirm a set image on screen, select [Click here to confirm camera image.] and press [ENTER]. • The camera image will be displayed at low resolution.

Using the Sensor

Sets the use of the sensor.



Setting	Description
Sensor	Choose to turn sensor use on or off. Turn sensor use on for sensor recording or Sensor Alert. • Sensor use cannot be turned on of password saving is turned off. To use sensors, turn password saving on (page 115). 

Note

- When a remote camera's IP address setting is changed, set the camera's sensor setting to the desired setting once again.
- An attempt to disable sensor use for a camera set for continuous sensor recording will display the following error message: [This sensor is used for sensor recording. Turn off the record program.] will be displayed. To turn sensor use off, first erase continuous sensor recording settings (see page 84).
- An attempt to disable sensor use for a camera set for timer sensor recording will display the following error message: [This sensor is used for timer

recording. Turn off the record program.] will be displayed. To turn sensor use off, first erase timer sensor recording settings (see page 84).

- To use a remote camera in Sensor Alert mode, for sensor recording, or for continuous sensor recording, turn on sensor use.

6.5 Erasing a Camera

1. Select [Camera Setup] from the [Setup] screen (see page 95) and press [ENTER].
2. Select the camera to be erased from the list and press [1].
   - The confirmation screen appears.

3. Select [Yes] and press [ENTER].
   - The camera is erased from the list.
   - Once erased, the camera is unregistered.

If you attempt to erase a camera set for timer recording, one of the following errors will appear.

When timer recording is set:

"This camera is used for timer recording. Turn off the record program."

Erase the timer recording program (see page 84) and then try erasing the camera.

When continuous sensor recording is set:

"This camera is used for sensor recording. Turn off the record program."

Erase the sensor recording program (see page 84) and then try erasing the camera.

When both timer and continuous sensor recording is set:

"This camera is used for timer recording. This camera is used for sensor recording. Turn off the record program."

Erase the timer recording and sensor recording programs (see page 84), then try erasing the camera.

Note

- If turning the timer off by pressing [TIMER] does not cancel the timer recording, the camera cannot be erased.

When the camera is used for Sensor Alert:

"This camera is used for Sensor Alert mode. Set Sensor Alert to [-] on the [Camera Sensors] screen."

Deactivate the camera for Sensor Alert mode as explained in the error message and then try erasing the camera.

6.6 Changing the Order of the Camera List

1. Select [Camera Setup] from the [Setup] screen (see page 95) and press [ENTER].
2. To move a camera up in the list, select it and press [2].
3. To move a camera down in the list, select it and press [3].

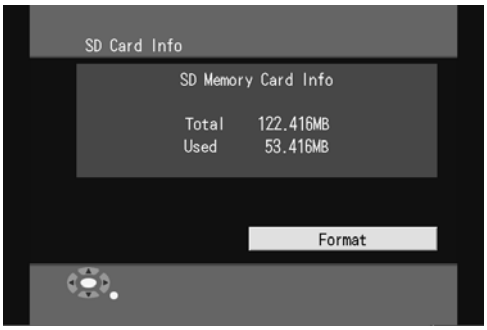
Note

- The order of the cameras displayed in the Camera List in normal mode and the order of cameras displayed in the Quick Setup screen are controlled separately. The order of cameras displayed in the Quick Setup screen when adding cameras is not the same as ordered in the Camera List.

6.7 Viewing SD Memory Card Information

1. Select [SD Card Info] from the [Setup] screen (see page 95) and press [ENTER].

- The SD Memory Card Management screen appears.



Formatting an SD Memory Card

Select [Format] and press [ENTER] to initialize an SD memory card.

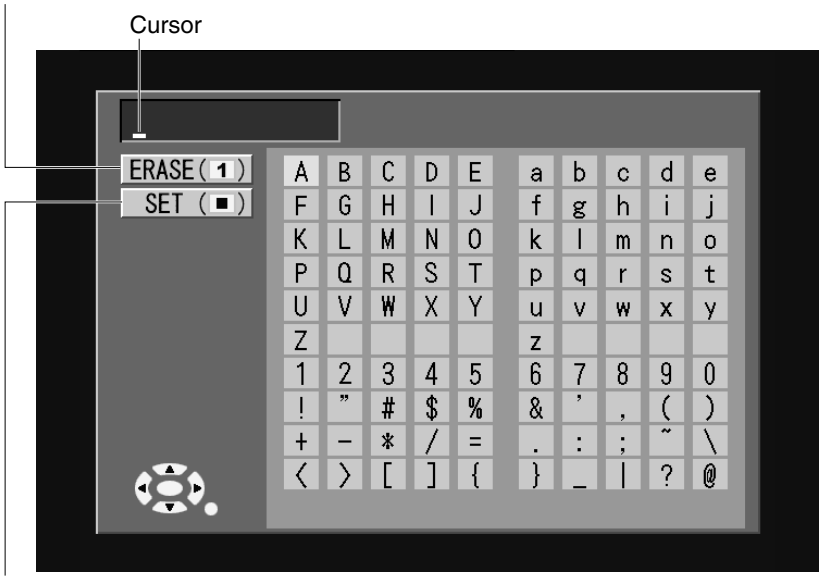
Note

- Once formatting begins, all data on the card will be erased. Be careful not to format the wrong card.

7 Entering Characters

If you select a setting that requires you to enter characters (text), the character entry screen is displayed.

The last character entered (the character to the left of the cursor) can be erased by pressing [1] or by selecting [ERASE] then pressing [ENTER].



The text entered can be registered by pressing [STOP] or by selecting [SET] then pressing [ENTER]. The display will return to the previous screen.

8 Other Features

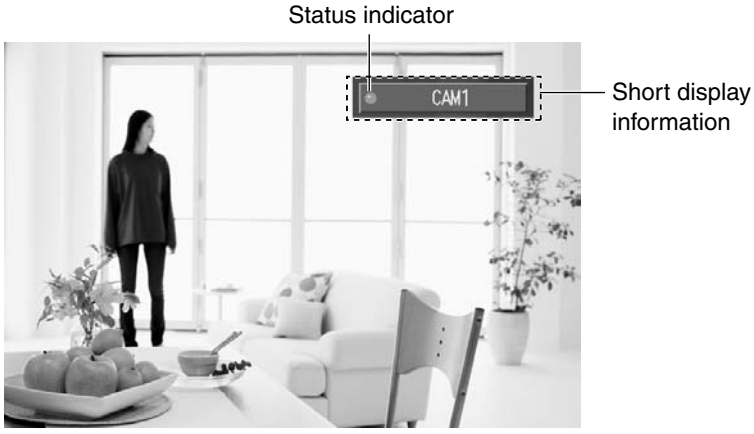
8.1 Displaying Information While Monitoring

When you press [DISPLAY] while the monitoring screen is displayed, the following information is displayed sequentially:

- Short display information
- Long display information
- Extended display information
- Camera image only

Short display information

The camera's name and status are displayed.

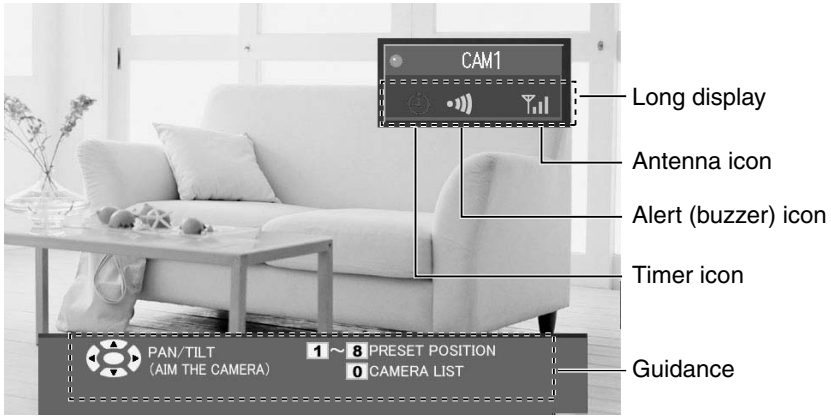


Status Indicator/ Icon	Description
Green	Monitoring
Gray	Lost connection or re-acquiring connection to camera
Red	Recording
	Timer recording that will not record to the SD memory card (recording to a video or DVD recorder)
	Waiting on sensor recording

Long display information

Displays the wireless and settings status of the camera being monitored.

Long display information during camera monitoring



Icon	Description
Timer	Indicates timer recording status. Icon displayed: timer recording set No icon: no timer recording set
Alert	Indicates the status of the buzzer feature. Icon displayed: buzzer is on No icon: buzzer is off
Antenna	Indicates the strength of the wireless signals (in 4 levels) in the antenna icon.

Extended display information

The extended display information is comprised of 3 separate panels, controlling image quality (resolution), pan and tilt scanning, and image brightness. After selecting a panel and changing a setting, press [ENTER] to see apply the changes.

Extended display

Quality (resolution) panel

Scan control panel

Brightness panel

Setting	Description
Quality	Controls the resolution of the monitored image. Setting the resolution to low will shrink the displayed image. High: 640x480 pixels Low: 320x240 pixels
Scan Control	Controls the panning and tilting scans of the camera. Pan: pans the camera from its left to right extremes and back to the original position Tilt: tilts the camera from its top to bottom extremes and back to the original position
Brightness	Adjusts the brightness of the monitored image. -: Decreases the brightness STD: Sets the camera to the standard brightness level +: Increases the brightness

Note

- Other keys (including those for Camera List and Menu screen display) will not function while the extended display is displayed. To use these keys, press [ENTER] to change screens first.
- In preset registration, the resolution and brightness set at registration will also be registered (see page 59).

8.2 Displaying Movie Information

If you press [DISPLAY] while playing a movie, the following information be displayed:

- Short display information
- Long display information
- Camera image only

Short display information

Long display information

The recording mode (HIGH, LOW, LONG, or ——) will be displayed. Movies recorded manually while monitoring the camera image will be recorded at the monitoring resolution and displayed as —— .

8.3 Displaying Picture Information

If you press [DISPLAY] while playing a movie, the following information be displayed:

- Short display information
- Long display information
- Camera image only

Short display information

Long display information

8.4 Displaying Information While Recording

If you press [DISPLAY] in normal or timer recording modes, the following information is displayed sequentially:

- Short display information
- Long display information
- Camera image only.

Short display information

The recording mark that appears while recording is different based on recording mode.

- recording to SD memory card

- waiting to record to SD memory card

- timer recording underway that is not using the SD memory card

Long display information

Elapsed recording time

Remaining SD memory card capacity (in minutes)

8.5 Temporarily Disconnecting a Camera

When multiple users attempt to access and monitor the same camera, the network load increases and the camera's operational speed decreases.

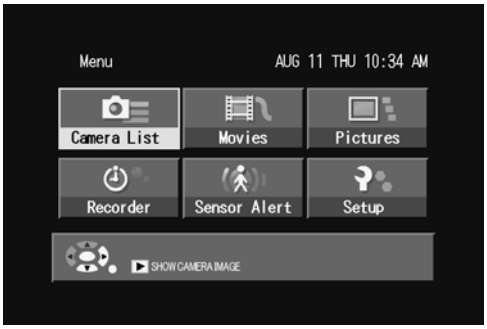
If necessary (for example, when watching a program on the television), halt the video feed from the camera and disconnect it.

1. Press [MENU].

- The menu is displayed.

2. Press [STOP].

- The connection to displayed cameras is stopped, and the Menu screen's background turns blue.



To reconnect a camera (and restart its video feed):

- Press [PLAY] while the Menu screen is displayed.
- Select the camera from the Camera List.

If you restart the BL-WV10A, the camera should automatically re-connect.

8.6 When Two Events Occur Simultaneously

While Camera A is Monitoring

Setting	Operation
Camera B's sensor is activated	The camera B monitoring screen appears.
Camera B sensor recording	The camera B monitoring screen appears and sensor recording begins.
Camera B timer recording	The camera B monitoring screen appears and timer recording begins.
Camera List display	The Camera List appears.
Pan/tilt operations	They work as indicated.

While Camera A is Recording (Standard Recording)

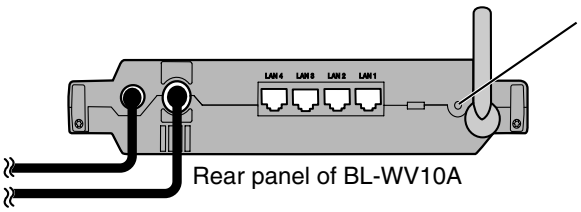
Setting	Operation
Camera B's sensor is activated	Recording takes precedence.
Camera B sensor recording	When the time to begin sensor recording approaches, the following message is displayed: [Recording will begin shortly.]. Standard recording will stop and sensor recording will start.
Camera B timer recording	When the time to begin timer recording approaches, the following message is displayed: [Recording will begin shortly.]. Standard recording will stop and timer recording will start.
Camera List display	The Camera List will not appear.
Pan/tilt operations	They work as indicated.

While Camera A is Sensor or Timer Recording

Setting	Operation
Camera B's sensor is activated	The screen will not change.
Camera List display	The Camera List will not appear.
Pan/tilt operations	These controls will not work.

9 Resetting the BL-WV10A

Press the FACTORY DEFAULT RESET button to return to default settings. You will no longer be able to connect to the camera. After returning to default settings, you will need to re-do the settings completely.



Press and hold the FACTORY DEFAULT RESET button for about 3 seconds using a pointed object.

Rear panel of BL-WV10A

1. While the BL-WV10A is turned on, set the mode switch on the back to Setup.
2. Press and hold the FACTORY DEFAULT RESET button for 3 seconds and then release it.
   - The reset will be complete after you hear 2 beeping sounds.
   - After re-launching, the [Basic Setup] screen will appear.
3. Re-perform Quick Setup (see page 20)

10 Adding Cameras

For BL-C10A and BL-C30A users, the camera's firmware must be version 1.22 or higher in order to function properly with the BL-WV10A.

For HCM series camera users, the camera's firmware must be version 1.08 or higher in order to function properly with the BL-WV10A.

For the latest firmware, visit http://panasonic.co.jp/pcc/products/en/netwkcam/

Refer to the Operating Instructions included with your camera for information on confirming the firmware version of your camera.

Cameras already configured cannot use Quick Setup to become local cameras.

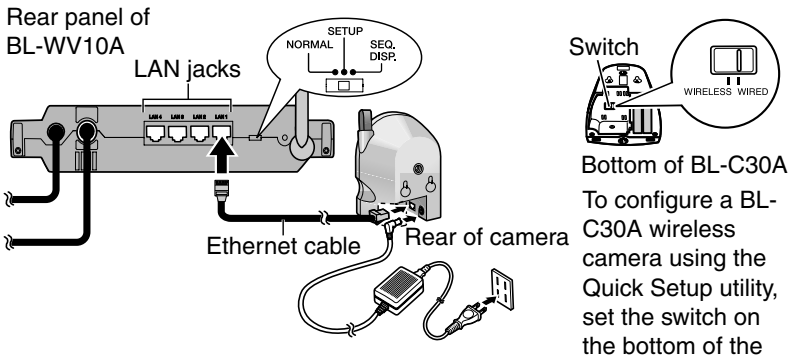
Reset the camera to its default settings and perform Quick Setup (see page 20). A maximum of 8 cameras can be connected.

1. Set the mode switch on the back on the BL-WV10A to [SETUP], turn the BL-WV10A off and then turn it back on again.

- When connecting to the Panasonic camera control unit, BB-HGW700A, connect the BB-HGW700A to one of the LAN jacks on the BL-WV10A before turning either the BB-HGW700A or the BL-WV10A on.

2. Using the Ethernet cable that came with the camera, connect it to one of the 4 LAN jacks on the BL-WV10A and then turn the camera on.

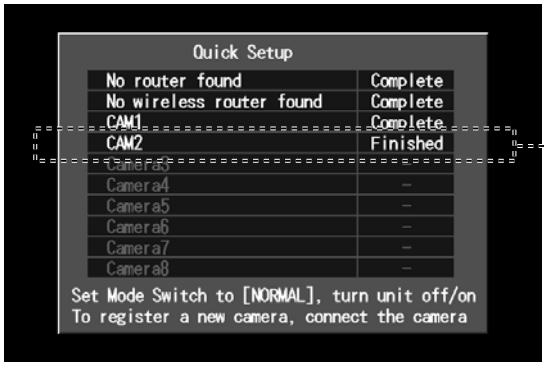
- When connecting a camera to the BB-HGW700A, do so after confirming that the BB-HGW700A is already connected to the BL-WV10A.
- Quick Setup will begin for the camera.



Bottom of BL-C30A

To configure a BL-C30A wireless camera using the Quick Setup utility, set the switch on the bottom of the camera to [WIRED]

- When registration is complete, the buzzer will sound and the wireless indicator will flash once for each of the cameras registered.



When camera registration is complete, [Finished] is displayed.

- The Quick Setup screen will appear differently based on the network on which it is used.
- The camera can also be registered manually (see page 105). However, any additional cameras will be registered as remote cameras.

Note

- To add more cameras, connect the Ethernet cable to the camera to be added, and re-perform step 2.

3. Once all of the cameras have been registered as in step 2, set the mode switch on the back on the BL-WV10A to [NORMAL], turn the BL-WV10A off and then turn it back on again.

4. Confirm the camera images.

- Place the cameras after confirming that they display images correctly.

11 Changing the Camera's User Name

To view images from cameras registered using Quick Setup on a computer without setting the administrator name or password, change the user name and password for a camera using the following procedure.

1. Select [General Setup] from the [Setup] screen (see page 95) and press [ENTER].
2. Set the administrator name and password on the [Camera] tab (see page 100).

3. Move the mode switch on the BL-WV10A to Setup and turn the power on again.
4. Reset the camera to its default settings and re-perform Quick Setup as when adding more cameras (see page 132).
   - To see a camera image on a computer, launch a web browser on the computer and access the camera.
   - The user name and password for the camera are the same as the administrator name and password set in step 2 above.

Note

- When Quick Setup begins, the Quick Setup screen for the camera in question will change from [Complete] to [Setting]. When registration is complete, [Finished] will be displayed.
- The administrator name and password must be between 6 and 15 alphanumeric characters in length. The following characters cannot be used: " < > : &.

12 Default Settings for the BL-WV10A

Item		Default Setting
Date and Time		JAN 01 SAT 2005 12:00 AM
Security	**Security Code**	9999
	Alarm Volume	2
Network	**IP address**	192.168.0.250
	Subnet Mask	255.255.255.0
	Gateway	192.168.0.1
	DNS1	0.0.0.0
	DNS2	0.0.0.0
	Proxy Server	-
	Proxy Port	8080
Camera	**Starting Address**	192.168.0.131
	Admin User Name	-
	Admin Password	-
Wireless	**Wireless Mode**	Access Point
	Wireless Format	802.11b/g
	SSID	noted on back of unit
	SSID Stealth Mode	Enabled
	Channel	AUTO
	Encryption	Enabled
	Encryption Key	Key No. 1: 1
		Key 1 - 4 Type: ASCII 13 Char.
		Keys 1 - 4: noted on back of unit
	MAC Address Filter	Disabled
	MAC Address List	-
Sensor	**FTP User Name**	-
	FTP Password	-

13 Specifications

LAN Interface

Item	Specification
Number of ports	4 port
Connector type	8-pin modular jack (RJ-45)
Physical interface	IEEE802.3 (10BASE-T) IEEE802.3u (100BASE-TX) MDI/MDI-X with auto-detect

Wireless Interface

Item	Specification
IEEE802.11g	
Transmission protocol	OFDM (IEEE802.11g standard)/DS-SS (IEEE802.11b compatible), half duplex
Transmission speed*1	54/48/36/24/18/12/9/6 Mbps (IEEE802.11g standard): automatic fallback
Frequency range (MHz)	2412 to 2462 (primary frequencies)
Number of channels	11
IEEE802.11b	
Transmission protocol	DS-SS, half duplex
Transmission speed*1	11/5.5/2/1 Mbps (IEEE802.11b standard): (automatic fallback)
Frequency range (MHz)	2412 to 2462 (primary frequencies)
Number of channels	11
Communication range	The range will depend on environmental conditions. The proximity of reinforced concrete structures, large metal objects, microwave ranges, and/or theft prevention devices can shorten the range. Obstructions (walls, furniture, equipment) can also shorten the usable range. For more information, see .

*1 The values listed here are the theoretical maximum transmission speeds for wireless networks, and do not represent the actual speed of transmission.

Video Output

Item	Specification
Video format	NTSC
Output port	Single port
Output level	1.0 Vp-p (75 Ω)

User Interface

Item	Specification
FACTORY DEFAULT RESET button	Restoration of default settings
Mode switch	Normal, Setup, Sequential Display
Buzzer	Camera sensor notification
Indicator displays	Power (green/amber/red), Sensor (amber) Alert (green), SD Memory Card (green/amber) Wireless (green), LAN 1–4 (green)
Recording media	SD Memory Card

Other

Item	Specification
AC adaptor	AC110 V (60Hz) DC12 V (part number PQLV202Y) DC cord length: About 3 m (10 ft.) AC cord length (separate): About 1.8 m (5 ft. 11 in.) Power consumption: 7.5 W
Antenna	Diversity antenna
Exterior dimensions	W x H x D: About 220 mm x 42 mm x 171 mm (8.6 in. x 1.6 in. x 6.7 in.) with antenna collapsed and no stand
Weight (main unit only)	About 500 g (1.1 lb.)
Operational environment	0°–40 °C (32°–104 °F) humidity between 20 and 85% (without condensation)
EM radiation shielding	FCC Part 15

Camera Viewer

Item	Specification
Camera image display	Displays a maximum of 8 camera images Video (motion JPEG): 640x480, 320x240 1 screen per 8 pages, 4 screens per 2 pages Camera pan/tilt operations, image size switching, resolution switching
Recording to and playing from SD memory cards	Movies (motion JPEG): 640 x 480, 320 x 240 Saved in QuickTime format Pictures (JPEG): 640 x 480, 320 x 240 Timer recording
Camera motion sensor support	Automatic switch to camera image at sensor input event sensor input triggers buzzer/LED notification Automated camera image recording at sensor input event

Setup

Item	Specification
Quick Setup	Automatically performs necessary network and wireless settings for Panasonic cameras and routers

Wireless Terminal Feature

Item	Specification
Security	WEP (64 bit/128 bit/152 bit), wireless stealth functionality (SSID suppression, connection denial/ permissions through ANY key), MAC address filtering

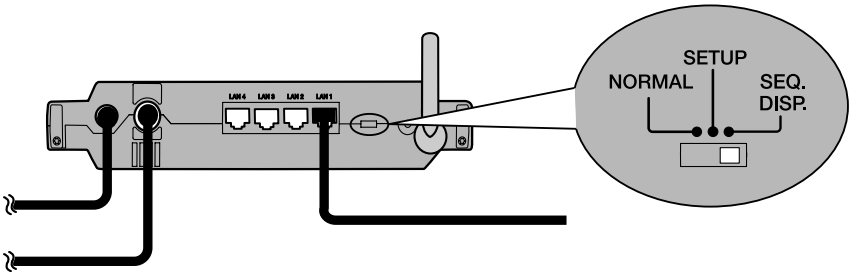
14 When the Remote Control is Missing

14.1 Sequential Display Mode

The BL-WV10A requires the remote control to operate. If you lose your remote control, contact your dealer to purchase a new one (part number PSWEWV10A).

Even without a remote control, however, setting the mode switch to [SEQ. DISP.] will allow you to view sequentially the screens from registered cameras.

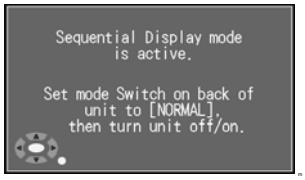
1. Set the BL-WV10A's mode switch to [SEQ. DISP.] and turn it on again.



- After the launch screen, the Camera Monitoring Screen will appear.
- At a fixed interval, the display will run through each of the registered camera screens.

Note

- Use of the remote control during Automatic Display mode will display the following and fail to work.



- Automatic Display mode is for display only; you will be unable to record.
- All registered cameras, local and remote, will be displayed sequentially. If, however, a remote camera has been set to not save its password, its screen will be skipped and the next screen displayed.
- If there is no connection with a camera, because it is turned off, etc., a message indicating that the camera could not be accessed with appear for between 5 and 10 seconds, after which the next camera's image will appear.

15 Error Messages

Quick Setup Error Messages

Error Message	Causes and Solutions
Camera setup error Confirm connections and try again	This error appears if at some point during Quick Setup, connection with the camera was lost, which prevents Quick Setup from completion. • Check all cables, press the FACTORY DEFAULT RESET button on the camera, and re-perform Quick Setup.
This camera's firmware is out of date Update camera firmware	This error appears when the firmware for a camera connected using Quick Setup is out of date. The camera will be registered as a remote camera, but that severely limits its functionality. • After upgrading the firmware, erase the camera from the Camera List and re-register it.
Camera firmware is out of date Update camera firmware	This error appears when the firmware for a camera connected using Quick Setup is out of date. The camera will be registered as a remote camera, but that severely limits its functionality. • After upgrading the firmware, erase the camera from the Camera List and re-register it.
Network setup error Check default settings and router settings	Quick Setup cannot be performed if the subnet mask for the router is set to either 255.255.255.248 or 255.255.255.252. • Use a subnet mask setting of 255.255.255.0. If the router's subnet mask has any value other than 255.255.255.0, you will need to set each camera's starting address manually. • For the camera IP address in the Advanced Settings Screen, enter a network segment address identical to that of the router.

Standard Operation Mode Error Messages

Error Message	Causes and Solutions
Incorrect security code.	This error is displayed if the security code entered to enter the [General Setup] or [Camera Setup] screens in incorrect. • Enter the correct security code. If you've forgotten it, press the FACTORY DEFAULT RESET button to reset the device and re-register the camera using Quick Setup.
Cannot connect to camera.	This error is displayed when the camera cannot be accessed. • Check the camera's power and connections and its IP address as displayed in the Camera Settings. • If using wireless cameras, refer to the wireless communications information on page 6.
Cannot communicate with the camera.	This error is displayed when the camera cannot be accessed. • Check the camera's power and connections and its IP address as displayed in the Camera Settings. • If using wireless cameras, refer to the wireless communications information on page 6.
Settings could not be saved.	This error is displayed if a camera's access is lost when changing local camera settings. • Check the camera's power and connections and its IP address as displayed in the Camera Settings. This error can also be displayed if unusable characters were used to register a camera name for preset registration or local camera settings. • Register using appropriate characters.
Enter a name for the Preset.	This error appears if, during preset registration, the registered name field is left blank. • Enter a preset registered name.

Error Message	Causes and Solutions
The timer could not be set because the recording start and end time are the same. Set a different start or end time.	This error is displayed if the start and end times during Timer Recording Setup are identical. • There must be a difference of at least one minute between start and end times.
The timer could not be set because the recording time overlaps with another timer. Set a different start and/or end time.	This error is displayed during Timer Recording Setup if the day and time are identical to those of a previously set timer recording. • Reset using different specifications for the recording.
To use the sensor, first enter the Administrator user name and password on this camera's [User Info] screen.	This error appears if the ID and password required for sensor use for remote cameras are different than those of the administrator. • Enter the administrator name and password in the [User Info] screen.
No camera name entered.	This error appears when either the Image Confirm or Register button is pressed before entering a camera name when newly registering remote cameras. • Enter a camera name.
The IP address and port are not set.	This error appears when either the Image Confirm or Register button is pressed before entering a camera address when newly registering remote cameras. • Enter a camera address.
There was a recording error.	This error appears if for some reason, during standard recording, the signal from a camera is lost. • Make sure camera monitoring is possible, then try recording again.

Error Message	Causes and Solutions
This sensor is used for timer recording. Set Sensor Alert to [-] on the [Camera Sensors] screen.	This error appears when you attempt to disable a remote camera's sensor when that camera has been set for Sensor Alert. • Turn off Sensor Alert in the Sensor Alert Camera Settings. This error may also appear when you attempt to erase a camera that has been set for Sensor Alert. • Turn off Sensor Alert in the Sensor Alert Camera Settings.
This camera is used for sensor recording. Turn off the record program.	This error appears when you attempt to disable a remote camera's sensor when that camera has been set for timer recording using continuous sensor recording. • Deselect the camera chosen for continuous sensor recording or re-do the settings with a different camera.
This camera is used for timer recording. Turn off the record program.	This error appears when you attempt to disable a remote camera's sensor when that camera has been set for timer recording using the sensor. • Change the timer recording settings or erase them.
This sensor is used for sensor recording. This camera is used for timer recording. Turn off the record program.	This error appears when you attempt to disable a remote camera's sensor when that camera is either being configured for continuous sensor recording or else has been set for timer recording using the sensor. • Deselect the camera chosen for continuous sensor recording or re-do the settings with a different camera. You can also change the timer recording settings or erase them.
This camera is used for sensor recording. Turn off the record program.	This error appears when you attempt to erase a camera that is being configured for continuous sensor recording. • Deselect the camera chosen for continuous sensor recording or re-do the settings with a different camera.

Error Message	Causes and Solutions
This camera is used for timer recording. Turn off the record program.	This error appears when you attempt to erase a camera being used for a timer recording. • Erase the timer recording settings.
This camera is used for sensor recording. This camera is used for timer recording. Turn off the record program.	This error appears when you attempt to erase a camera being set for continuous sensor recording or set for timer recording. • Deselect the camera chosen for continuous sensor recording or re-do the settings with a different camera. You can also change the timer recording settings or erase them.

Automatic Display Mode Error Messages

Error Message	Causes and Solutions
Sequential Display mode is active. Set mode switch on back of unit to [NORMAL], then turn unit off/on.	This error is displayed when the remote control is used during Automatic Display Mode. • Set the mode switch on the back of the device to Normal and turn the power on again.

SD Memory Card Error Messages

Error Message	Causes and Solutions
SD Memory Card is locked. Unlock the SD Memory Card and try again.	This error is displayed when an SD memory card's write-protection is on. • Turn the write-protection off.
No SD Memory Card. Insert card and try again.	This error appears if an SD memory card has not been inserted. • Insert an SD memory card.
SD Memory Card is full.	This error is displayed if there is no free space on the SD memory card. • Insert a blank SD memory card, or erase unneeded data from it.
Cannot use this SD Memory Card.	This error appears when an SD memory card not recognized by the BL-WV10A is used. • Use a recognizable SD memory card or format it using the BL-WV10A (see page 120).
Could not format.	This error appeals when memory card formatting fails. • Re-format the card. If that fails to correct the problem, use a different SD memory card.

Error Messages from the Basic Setup and Setup Screens

Error Message	Causes and Solutions
Enter at least 6 characters. Do you want to go back and try again?	This error appears when you attempt to use 6 or fewer characters to register an administrator name, password, FTP account or FTP password. • Select [Yes] to return to the text panel or select [No] to stop inputting text.
The user name and password must be different. Do you want to go back and try again?	This error appears when the same entry is made for both the administrator name and password. • Select [Yes] to return to the text panel or select [No] to stop inputting text.
The user name and password must be different. Do you want to go back and try again?	This error appears when the same entry is made for both the administrator name and password. • Select [Yes] to return to the text panel or select [No] to stop inputting text.
The FTP user name and password must be different. Do you want to go back and try again?	This error appears when the same entry is made for both the FTP account and password. • Select [Yes] to return to the text panel or select [No] to stop inputting text.
No SSID entered. Do you want to go back and try again?	This entry appears when no text was entered in the SSID field. • Select [Yes] to return to the text panel or select [No] to stop inputting text.
Restricted character was entered. Do you want to go back and try again?	This error appears when an attempt was made to use invalid characters for the administrator name or password. • Select [Yes] to return to the text panel or select [No] to stop inputting text.
This IP address is assigned to the unit. Set a different IP address. Do you want to try again?	This error appears when setting up the BL-WV10A's IP address if the value entered is identical to the starting address registered for the camera network. • Select [Yes] to return to the text panel or select [No] to stop inputting text.

Error Message	Causes and Solutions
Use only hexadecimal characters (0-9, A-F, a-f). Do you want to go back and try again?	This error appears when invalid characters are used in the encryption keys 1 to 4 setting. • Select [Yes] to return to the text panel or select [No] to stop inputting text.
Enter a key matching the length determined by the key type. Do you want to go back and try again?	This error appears when the length of an entered encryption key does not match the specified length. • Select [Yes] to return to the text panel or select [No] to stop inputting text.

16 Troubleshooting the BL-WV10A

16.1 Common Issues

Issue	Causes and Solutions
The unit doesn’t turn on.	Is it plugged in correctly?
The remote control doesn't work.	Are the batteries good and installed correctly? Is the remote control receptor in direct sunlight? Is there an obstruction (including colored glass in a rack door) between the remote control and the receptor? Is the mode switch on the back of the BL-WV10A set to [SEQ. DISP.]? • Set the mode switch to [NORMAL] and turn the power on again.
The remote control doesn't turn the TV on.	Is the power button for the TV turned on? Is the correct manufacturer code set for the remote control?
The unit doesn’t seem to work.	Is the power indicator flashing red? Did the buzzer sound 3 or more times? Remove the power cord from the AC adaptor and re-insert it.If this doesn't resolve the problem, contact your dealer.
I forgot the administrator password and/or security code.	Reset the BL-WV10A to its default settings. • With the power on, press and hold the FACTORY DEFAULT RESET button at the back of the BL-WV10A with a paper clip tip or similar object for 3 seconds.

16.2 Television Screen and Images

Issue	Causes and Solutions
No image appears.	Check the video cable connection and the TV's input mode switch.
The camera image doesn't appear.	The BL-WV10A cannot access the camera. • Check the camera's power and connections and its IP address as displayed in the Camera Settings. If the Ethernet cable is connected properly, the LAN indicator will be lit green. • If using wireless cameras, refer to the wireless communications information on page 6.

Issue	Causes and Solutions
The following is displayed: [There is a problem with the unit. Please note the error code below and contact a Panasonic service center for servicing.	Remove the power cord from the AC adaptor and re-insert it. • If this doesn't resolve the problem, note the error code shown on the screen and contact your dealer.
The image appears stretched horizontally The image size is odd.	Adjust the TV's image mode. (A widescreen mode can produce horizontal stretching.)

16.3 Recording

Issue	Causes and Solutions
I can't record anything.	Is a recordable SD memory card inserted? Is an unformatted SD memory card inserted? Is the SD memory card write-protected? Is there enough free space on the SD memory card? Erase any unneeded data or insert a new SD memory card.
Recorded data disappeared from the SD memory card. The time displayed for a recorded image appears as asterisks.	Did the power go out, or did a power cable come loose during recording? • This can result in a loss of data or damage to the SD memory card. Re-initialize the card or use a new one.(Panasonic cannot be held liable for data loss or damaged SD memory cards.)? Was an SD memory card removed during recording? • Do not remove the card during recording.

16.4 Timer Recording

Issue	Causes and Solutions
Timer recording doesn't work.	Are the timer settings correct? Is the timer indicator lit? Turn on the timer indicator by pressing the [TIMER] button on the remote control. Is the time set correctly?
Timer recording doesn't stop even when I press [STOP].	To stop timer recording, press [TIMER] on the remote control.

16.5 SD Memory Cards

Issue	Causes and Solutions
I cannot format the card.	Is the SD memory card write-protected? Are you using an incompatible card, e.g., an MMC?

16.6 Quick Setup

Issue	Causes and Solutions
The camera cannot be set as a local camera.	Are you attempting to perform Quick Setup on a camera already configured using a computer? • To use Quick Setup to set cameras already configured on a computer as local cameras, you need to set the administrator name and password in Basic Settings to have the same values as those of the camera you wish to perform Quick Setup on. Is the firmware version of the camera out of date? • For the BL-C10A and BL-C30A, the firmware version must be 1.22 or higher. • For HCM series cameras, the firmware version must be 1.08 or higher. Does the camera support local camera registration? • Cameras with a zoom feature cannot be registered as local cameras. Cameras that have been registered as remote cameras cannot be re-registered as local cameras even after re-initializing. • In the Camera Setup screen in normal mode, erase the camera, then re-initialize it, and then perform Quick Setup. When performing Quick Setup on cameras when 2 BL-WV10As are in use, those for one of the BL-WV10As will be registered as local cameras, but those for the other BL-WV10A will be registered as remote cameras. • First, make sure that the administrator name and password for the cameras is identical on both BL-WV10As. Next, connect the cameras to each BL-WV10A prior to connecting the BL-WV10As to each other.

Issue	Causes and Solutions
You cannot use Quick Setup.	Quick Setup will work for a maximum of 8 cameras. Is the Ethernet cable connected properly? • If the Ethernet cable is connected properly, the LAN indicator will be lit green. Quick Setup can only be performed within 20 minutes of turning on a camera that still has its default settings (as at time of purchase). • Turn the camera on again. When performing Quick Setup on the BL-C30A, is the camera switch set to wired? When performing Quick Setup on a computer for cameras already initialized, is the IP address the same as that for the BL-WV10A?
No router is displayed, even though one is connected.	Was the router turned on before the BL-WV10A? • Turn the router on and wait a minute or more before turning the BL-WV10A on. Is the DHCP server option in the router settings turned off? • Quick Setup cannot be performed.Launch the BL-WV10A in normal mode, and manually perform network settings from the Setup menu.
Display indicates no wireless router.	This appears when the BB-HGW700A is not connected. • Each device is initialized with different wireless data settings, but can be used as is. Are the wireless settings for the BB-HGW700A configured to not use wireless options?
Display indicates that no wireless router was found.	Are the wireless settings for the BB-HGW700A configured for the 802.11a communications mode? • If the BL-WV10A is used as a repeater, use a communications mode other than 802.11a for the BB-HGW700A. If the BL-WV10A is used as an access point, launch in normal mode, and then manually input the settings in the Wireless section of the Setup menu.

Issue	Causes and Solutions
Camera Quick Setup fails.	Are you following the procedures shown in "Connecting a camera"? • If registration fails, re-initialize the camera, turn the BL-WV10A off and then on again, and re-perform Quick Setup. If you're using the BB-HGW700A, is an Ethernet cable connecting it to the BL-WV10A? If you're using the BB-HGW700A, are its camera settings accurate? In addition to the router, is there another Panasonic device serving as an access point? • Remove that access point from the network, and turn the BL-WV10A off and then on again.
[Setting wireless parameters...] appears.	This message appears when another BL-WV10A is connected. It indicates that the connected devices will have the same wireless settings configured for them.
It's taking a lot of time to register the cameras.	Network layouts may require a camera re-start, in which case registration can take up to 3 minutes.
The image from network cameras is not visible.	During Quick Setup, the BL-WV10A, after obtaining network data from the router, will seek out an IP address not currently in use for its own fixed IP. In addition, there are fixed IP addresses for cameras on which Quick Setup was performed. If the same IP address is chosen after Quick Setup, this will cause network problems. • Either change the IP settings for one of the duplicate IP devices, change the network settings for the BL-WV10A and the camera(s), or re-perform Basic Setup after resetting the default settings for the BL-WV10A and re-initializing the camera(s).
A signal from a wireless router is being received, even though you're not using one.	This will happen when wireless information is received from connected devices besides the BB-HGW700A which support Panasonic's Quick Setup protocol (including the BL-WV10A itself).

Issue	Causes and Solutions
When 2 BL-WV10A units are connected, the IP addresses are the same.	When using Quick Setup for more than one BL-WV10A, the same IP address will be used for each. • Change the IP addresses to avoid duplication on the network.

16.7 Wireless

Issue	Causes and Solutions
The image from cameras for which Quick Setup was performed is not visible.	When you stand in front of the camera (less than 1 m [39.4 in.] in front of the camera), does the PRIVACY button turn green? If not: • Change the camera's switch from wired to wireless. If it is already set to wireless, re-register the camera using Quick Setup. If so: • Check the wireless signal strength. Refer to the wireless communication information on page 6 and move the camera to a better position.
Cannot connect to wireless camera, connection is unstable.	Other wireless devices are interfering with the camera's wireless signal. • Move the wireless LAN device further away from the BL-WV10A and camera. Another wireless LAN device is using the same channel as the BL-WV10A and wireless camera. • Change the wireless channel used by the BL-WV10A. Obstacles between the BL-WV10A and the camera are interfering with the wireless signal. • Refer to the wireless communication information on page 6 and clear the signal path of any obstacles, or move the BL-WV10A and camera closer. • Connect the camera using a wired connection if convenient.

16.8 Connectivity

Issue	Causes and Solutions
You cannot connect to a camera after registering it for the MAC address filter.	To register MAC address filtering for a wireless-compatible camera, register both MAC addresses assigned to the camera (the MAC addresses for the camera's wired interface and its wireless interface). Refer to the Operating Instructions included with your camera for information on confirming the camera's MAC addresses.

16.9 Indicators on the BL-WV10A

Issue	Causes and Solutions
After turning the power on, the indicator is either solid amber or flashing amber.	The Ethernet cable is not correctly connected. • Re-connect the Ethernet cable. The router is not working properly. • Check the router. You are attempting to connect a BL-C30A in wired mode but the wired/wireless switch is set to wireless, or you are attempting to work in a wireless mode and the wired/wireless switch is set to wired. • Set the switch to the appropriate setting. The wireless settings are different for the router and the BL-WV10A. (for wireless cameras) • Re-perform Quick Setup.
The indicator continues to flash green.	The Quick Setup settings are incomplete. • Re-perform Quick Setup.
The indicator continues to flash red.	There is something wrong with a camera. • Contact your dealer.
The indicator is red.	Privacy Mode is turned on. • Either press the PRIVACY button on the front of the camera or turn off Privacy Mode (see page 111).
The indicator does not turn green when using the wireless LAN.	The signal is bad. (for wireless cameras) • Change the camera location, remove any potential obstructions and try the connection again.

16.10 Camera Images, Screen Display

Issue	Causes and Solutions
The image is unfocused.	The lens is dirty. • Clean the lens using a cotton swab. The subject is too close. • The camera cannot properly focus on subjects less than 0.5 m (20 in.) away. Move the subject further away (at least 0.5 m or 20 in. from the camera).
Images colors are wrong.	The white balance is set incorrectly. • Set the white balance in the camera's Setup screen (see page 109).
I cannot turn Color Night View mode on/off.	This feature can be turned on/off for HCM cameras only by accessing the camera with a PC. For BL-C10A and BL-C30A, this feature turns on and off automatically.
The shutter speed seems slow. Images are out of focus.	The camera's Color Night View mode is activated. • Brighten the camera's environment. • For HCM series users, access the camera with a PC and turn off Color Night View mode.
The image is snowy.	It was dark when the image was shot. • Brighten the camera's environment. The power frequency settings do not match those of the camera. • Match the power frequency for the camera's location using the appropriate settings on the camera's Setup screen (see page 109). Flicker can appear in the image when shooting a bright subject. • Change the subject and the flicker should disappear.
It takes tens of seconds for brightness levels to return to normal after a sudden change in brightness	This reflects the camera's specifications. • Move the camera to a location where it will not be exposed to rapid changes in brightness.

Issue	Causes and Solutions
The image is slow in updating.	Multiple users are accessing at once. • When this occurs, image updating will be slow as a result.
Image freezes for cameras with wireless connections.	The wireless connection environment can result in lost connections and freezing. (for wireless cameras) • Re-select the camera from the Camera List.
The wireless connection is unstable.	The connection channel overlaps that of another wireless LAN. • This can be resolved by changing the router's connection channel setting. An electronic device or other object is blocking the signal. • Check the signal strength on screen (see page 123). This can be resolved by moving the electronic device or other blocking object. • Refer to the wireless communication information on page 6 and clear the signal path of any obstacles, or move the BL-WV10A and camera closer.
When monitoring a camera, the image changes to a static (still) image.	If the camera's refresh interval is changed using a PC, or if network communications are poor, the image may become static. • Switch to another screen on the BL-WV10A, then return to the monitoring screen and try again.

16.11 Sensor

Issue	Causes and Solutions
The sensor does not detect motion.	The sensor does not detect motion while Privacy Mode is turned on. • The motion sensor is turned off while Privacy Mode is turned on. Turn the feature off to restore the motion sensor. Something is blocking the motion sensor. • Even transparent materials like glass and acrylic can greatly impact the motion sensor's sensitivity. Remove anything in the way of the sensor. The surface of the motion sensor is dirty. • Clean the sensor. The motion sensor is attempting to detect people and animals outside of its range. • The motion sensor works by detecting changes in temperature brought on by human movements within its range (30 horizontal degrees, 85 vertical degrees and 5 m or 16.4 ft. in distance). As a result, when the differences in temperature are slight, the range is slowly abbreviated. If there is no change in temperature (despite movement) within the range, the sensor may not detect anything as a result. When changes in temperature are drastic, the sensor range can be extended. • The camera’s sensor detects heat variations which occur from the sides with more accuracy than variations which approach the camera. • The detection range of the sensor may increase or decrease depending on the temperature and environment where the camera is installed. If using a wireless camera with a sensor, poor wireless network conditions may be interfering with the connection between the camera and the BL-WV10A. • Try relocating the camera if possible.

Issue	Causes and Solutions
The sensor is detecting the wrong things.	Detection errors can result when the camera is placed in one of the following locations. Move the camera if the camera is located: • in direct sunlight in a kitchen or other location • where exposure to grease and/or steam is an issue • where changes in temperature are extreme, such as beside an air-conditioner • where the camera is blocked by glass or another object • near a source of light that impacts temperature changes • near a device with strong electromagnetic radiation output

17 Appendix

17.1 GNU General Public License

Version 2, June 1991

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Version 2.1, February 1999

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That's all there is to it!

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