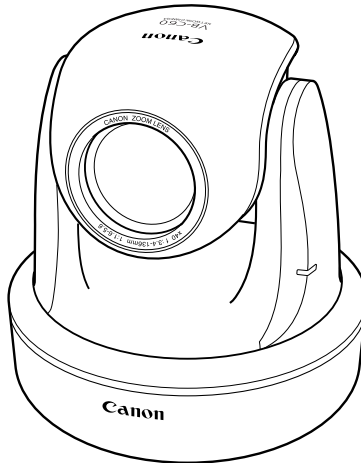


NETWORK CAMERA

# VB-C60

## Start Guide




ENG

Please read this Start Guide and Operation Guide carefully before using.  
Be sure to read the "⚠ Safety Precautions" section before using for proper operation. Keep this guide in a readily accessible location for future reference.

# Introduction

Thank you for purchasing Canon Network Camera VB-C60/VB-C60B (hereafter referred to as VB-C60).

The only difference between VB-C60 and VB-C60B is the body color.

This Start Guide describes how to set up and install VB-C60. The detailed procedures for using VB-C60 are explained in the Operation Guide provided on the Setup CD-ROM. Read these guides carefully before using VB-C60 to ensure that you make the best possible use of this product. Also, be sure to read the “ Safety Precautions” in this guide.

**For the latest information, please refer to Canon Web site.**

## Exclusion of Liability

If the Product is connected to a recording device, Canon Inc. shall not be responsible for any financial losses that may be incurred as a result of the loss of recorded information or images, regardless of the internal or external cause of the loss.

## Copyright

Videos, images or sounds recorded with your VB-C60 may not be utilized or published, without consent of copyright holders, if any, except in such a way as permitted for personal use under the relevant copyright law.

## Notes

1. All rights reserved.
2. The contents of this guide are subject to change without any notice.
3. Every effort has been made to ensure that this guide is flawless. However, if you find any errors, please contact us.
4. Notwithstanding the above, Canon shall not be responsible for any effects resulting from the use of this guide.

## Notes on privacy and publicity rights regarding the utilization of video/audio

When using VB-C60 (for video or audio recording), it is the responsibility of the users to take all care to protect privacy and avoid any violation of publicity rights. Canon shall have no liability whatsoever in this regard.

<Reference>

- Please be sure to gain approval of the building management office before installing a camera, if copyrighted architectural structures or copyrighted premises are got into the frame.

### Legal Notice

In some countries or regions, monitoring via a camera is banned by the law or regulation, and the law or regulation depends on the country or region.

Before using VB-C60, confirm the law or regulation of the country or region where the camera is used.

## Trademark Notice

- Canon and the Canon logo are registered trademarks of Canon Inc.
- Microsoft, Windows and Microsoft Internet Explorer are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.
- Windows is legally recognized as the Microsoft Windows Operating System.
- Other brands or product names in this guide are trademarks or registered trademarks of their respective companies.

**WARNING :** To reduce the risk of electric shock, do not expose this appliance to rain or moisture.

## Use of Bundled Software “VK-Lite” (Disclaimer)

Malfunction, failure of VK-Lite or other factors may cause problems, such as recording failure, recorded data corruption or loss. Canon shall have no liability whatsoever for any loss or damages incurred by the user as a result of such problems.

### ■ European Union (and EEA) only.



These symbols indicate that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC), the Battery Directive (2006/66/EC) and/or your national laws implementing those Directives.

This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy

a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE) and batteries and accumulators. Improper handling of this type of waste could have a possible impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE.

Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources.

For more information about the recycling of this product, please contact your local city office, waste authority, approved scheme or your household waste disposal service or visit [www.canon-europe.com/environment](http://www.canon-europe.com/environment).

(EEA: Norway, Iceland and Liechtenstein)

## **MPEG-4**

NOTICE ABOUT THE MPEG-4 VISUAL STANDARD: THIS PRODUCT IS LICENSED UNDER THE MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG-4 VISUAL STANDARD ("MPEG-4 VIDEO") AND/OR (ii) DECODING MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL, INTERNAL AND COMMERCIAL USES AND ADDITIONAL LICENSING MAY BE OBTAINED FROM MPEG LA, LLC. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpeg-la.com).

This product is licensed under AT&T patents for the MPEG-4 standard and may be used for encoding MPEG-4 compliant video and/or decoding MPEG-4 compliant video that was encoded only (1) for a personal and non-commercial purpose or (2) by a video provider licensed under the AT&T patents to provide MPEG-4 compliant video. No license is granted or implied for any other use for MPEG-4 standard.

## **Third Party's Software**

The product (network camera and bundled VK-Lite viewer) contains third party's software modules. For detail information, please refer to ReadMe-E.txt on the supplied CD-ROM. Each module's license conditions are also available in the License folder on the same CD-ROM.

## **Software under GPL and LGPL**

If you would like to obtain the source code under GPL/LGPL, please contact the dealer, where you purchased the product, or a sales agent.

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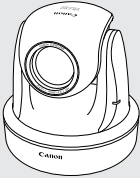
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# Package Contents

A VB-C60 package contains following items. If any of these items are missing, please contact the retailer, where you purchased the product.

## 1. VB-C60 main unit

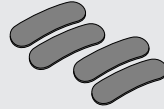


[VB-C60/VB-C60B main unit]

## 2. Power Connector



## 3. Rubber Foot (Four)



## 4. Setup CD-ROM



## 5. Start Guide (This guide)

## 6. Warranty Card (NTSC only)

### Setup CD-ROM Contents

- **ReadMe-J.txt** : Notes not included in this guide (in Japanese)
- ReadMe-E.txt** : Notes not included in this guide (in English)
- MANUAL** : Folder containing instruction manuals (in English and Japanese) other than this guide \*
- VBTools** : Folder for bundled software installers (see below) \*
  - VBToolsInstall.exe** : VB Initial Setting Tool installer and VBAdmin Tools installer \*
  - VKLiteInstall.exe** : VK-Lite installer \*
- LICENSE** : Folder containing the licenses for built-in software and bundled VK-Lite
- SOUND** : Folder containing sample files for audio playback

\* For the latest information, please refer to Canon Web site.



Note

VB-C60B is a black-color version of VB-C60. It is strongly recommended to use VB-C60B when using an optional Indoor Dome Housing (→ P. 1-15), so that the camera's lens ring (lens frame) reflects off the dome's inner surface less than VB-C60.

## User's Manual

VB-C60 comes with two guides; “**Start Guide**” (this guide) and “**Operation Guide**” (on supplied Setup CD-ROM).

### Start Guide




Start Guide explains the safety precautions, the types of bundled software, the system requirements, and the software installation instruction, the initial setting and mounting procedures for VB-C60.

### Operation Guide (VBC60OG\_E.pdf)



Operation Guide explains how to configure the basic settings for VB-C60, how to use VBAdmin Tools and VB-C60 Viewer, and troubleshooting tips.

Sections where the user should refer to the Operation Guide are indicated by the  icon accompanied by the relevant page number.

The Operation Guide is contained in the Setup CD-ROM.

The Setup CD-ROM also contains “VK-Lite”, a simplified version of the Network Video Recorder (→ P.1-6). The instruction manuals below are provided for VK-Lite.

### Setup Guide (VK20SUG\_E.pdf)



Setup Guide provides notes for using VK-Lite, the system requirements, system configuration, installation instruction and setup procedures.

### Administrator's Manual (VK20AM\_E.pdf)



Administrator's Manual provides details of how to use VK-Lite. Be sure to read this manual before use.

### Viewer Operation Guide (VK20VOG\_E.pdf)






Viewer Operation Guide is the operation guide for VK-Lite Viewer. For detailed information on how to use VK-Lite Viewer, refer to the “Administrator's Manual”.



# How to Read This Guide

## Icons

Following icons are used to draw reader's attention to particularly important text in this guide. The screenshots in Start Guide and Operation Guide are taken in Windows Vista. However, those screenshots will be the same as those taken in Windows XP, unless explicitly indicated otherwise.

Icon	Explanation
 Note	Important information that must be observed or actions that are prohibited during an operation. These notes must be read to prevent the equipment from possible faults or damage.
 Tip	Supplementary information or a reference to the operation. Users are recommended to read these memos.
	Please refer to Operation Guide on supplied Setup CD-ROM.

# Safety Precautions



A triangle with an exclamation mark is intended to alert to users the presence of important operating and maintenance (servicing) instructions in the literature accompanying the equipment.

## Important Warnings

### **CAUTION:**

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

A serial number is printed on the bottom of VB-C60, which is a unique number assigned to each camera.

You should record the number and other vital information here and retain this book as a permanent record of your purchase to aid identification in case of theft.

**Date of Purchase**

**Dealer Purchased from**

**Dealer Address**

**Dealer Phone No.**

**Model No. VB-C60**

**Serial No.**

### **For optional PA-V17 Users in the UK**

When replacing the fuse only a correctly rated approved type should be used and be sure to re-fit the fuse cover.

The AC adapter can be connected to VB-C60 from a standard AC power outlet. Please check your instruction manual to make sure that your VB-C60 is compatible with this adapter.

- The socket-outlet should be installed near the equipment and should be easily accessible.
- Unplug the equipment from the wall outlet before cleaning or maintaining.

## Important Operational Instructions

### **WARNING:**

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

### **CAUTION:**

TO REDUCE THE RISK OF ELECTRIC SHOCK AND TO REDUCE ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

 **WARNING:**

**Please contact the dealer where you purchased the camera, for installation and checkups.**

- The place or ceiling, to which a camera is installed, should be strong enough to bear the weight of the camera plus its optional products, including Ceiling Mount Cover and Indoor Dome Housing. Be sure to reinforce the ceiling as needed.
- Please be sure to regularly check for rust on screws and brackets and for screw loose, to avoid injuries or damages to the camera caused by camera falling.
- It is not recommended to install the camera to places with heavy vibration. It may cause mechanical problems.

**FDA regulation**

This Network Camera has not been evaluated by the Food and Drug Administration (FDA) for use as a medical device. When incorporated into a system with medical applications, FDA regulations may apply. Therefore, please consult your legal advisor to determine whether FDA regulations apply.

**FCC NOTICE**

Network Camera, Model Name: VB-C60

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.

**Note:** 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:

- Reorient or relocate the receiving antenna.
- 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.

Use of shielded cable is required to comply with class B limits in Subpart B of Part 15 of FCC Rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

Canon U.S.A. Inc.

One Canon Plaza, Lake Success, NY 11042, U.S.A.

Tel No. (516) 328-5600

**Canadian Radio Interference Regulations**

This Class B digital apparatus complies with Canadian ICES-003.

**⚠ IMPORTANT SAFETY INSTRUCTIONS**

In these safety instructions, the word “equipment” refers to the Canon Network Camera VB-C60 and all its accessories.





1. Read Instructions - All the safety and operating instructions should be read before the equipment is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the equipment and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and maintenance instructions should be followed.
5. Cleaning - Unplug this equipment from the wall outlet before cleaning.  
Wipe the equipment with a clean soft cloth. If necessary, put a cloth in diluted neutral detergent and wring it well before wiping the equipment with it. Finally, clean the equipment with a clean dry cloth. Do not use benzene, thinner or other volatile liquids or pesticides as they may damage the product's finish. When using chemically-treated cleaning cloths, observe those precautions accordingly.
6. Accessories - Do not use accessories not recommended in this guide as they may be hazardous. Always use specified connection cables. Connect devices correctly.
7. Water and Moisture - Hazard of electric shock - Do not use the equipment near water or in rainy/moist situations. Do not put a heater near this equipment.
8. Power Sources - The PA-V17 AC adapter (option) should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your equipment dealer or local power company.
9. Polarization - The PA-V17 AC adapter (option) is equipped with a polarized 2-prong plug (a plug having one blade wider than the other).  
The 2-prong polarized plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
10. Power Cord Protection - Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to plugs and the point from which the cords exit the equipment.
11. Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
12. Object and Liquid Entry - Never push objects of any kind into this equipment through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Be careful not to spill liquid of any kind onto the equipment.
13. Servicing - Do not attempt to service this equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel.
14. Damage Requiring Service - Disconnect this equipment from the wall outlet and all power sources including batteries, and refer servicing to qualified service personnel under the following conditions.
  - a. When the power-supply cord or plug is damaged.
  - b. If any liquid has been spilled onto, or objects have fallen into, the equipment.
  - c. If the equipment has been exposed to rain or water.
  - d. If the equipment does not operate normally even if you follow the operating instructions.

- Adjust only those controls that are covered by the operation instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.
- e. If the equipment has been dropped or the cabinet has been damaged.
  - f. When the equipment exhibits a distinct change in performance. This indicates a need for service.
15. Do not install the equipment in the following locations as this can cause a fire or electric shock:
    - Hot locations
    - Close to a fire
    - Very humid or dusty locations
    - Locations exposed to direct sunlight
    - Locations exposed to salt spray
    - Close to flammable solvents (alcohol, thinners, etc.)
  16. When any of the following occurs, immediately switch off the equipment, unplug it from the main power supply and contact your nearest Canon supplier. Do not continue to use the equipment as this can cause a fire or electric shock.
    - The equipment emits any smoke, heat, abnormal noise, or unusual odor.
    - A metal object falls into the equipment.
    - The equipment is damaged in some way.
  17. Please observe the following when using the equipment. Failure to do so can result in a fire or electric shock.
    - Do not use flammable sprays near the equipment.
    - Do not subject the equipment to strong impacts.
  18. Make sure the power line and network cable are implemented in a safe manner accordingly to the related technical regulations.
  19. Please avoid shooting against sunlight, halogen lights and other high-intensity light sources. Otherwise, it would damage the camera.
  20. This installation should be made by a qualified service person and should confirm to all local codes.



## Notes on bundled VK-Lite, Motion Detection, Automatic Tracking, Stream for Recording and Image Stabilizer

### CAUTION:

- Do not use Motion Detection (→  Operation Guide, P.2-27), Automatic Tracking (→  Operation Guide, P.1-31), Stream for Recording (→  Administrator's Manual, P.95), Image Stabilizer (→  Operation Guide, P.1-16) or VK-Lite recording software (→ P.1-6) for surveillance, where high standards of reliability are required at all times. Canon accepts no liability whatsoever for any problems that arise as a result of the operation of Motion Detection, Automatic Tracking or the VK-Lite recording software.
- Automatic Tracking detects any change in an image in the frame, and then the camera changes its direction to the subject. This function is not to track multiple moving subjects in the frame or subjects with complex movement, so it is not suitable for automated surveillance, such as auto tracking of people or other moving subjects. Please use this function as a supplementary tool for camera control.
- Image Stabilizer corrects image blur caused by camera shake due to small vibration on the ceiling, shaking of the mounting pole etc. However, image blur caused by some factors is not corrected, such as instantaneous shake or vibration that exceeds a certain level. While the Image Stabilizer is being activated, the image quality may decline to some extent and the view angle may be narrower. So, please carefully check the performance before installing the camera.

## Usage Notice of Audio

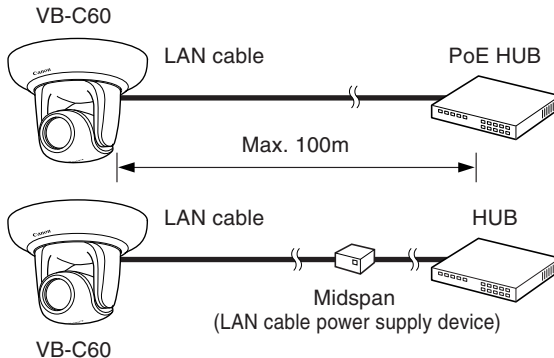
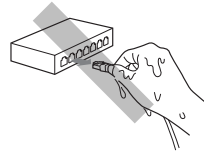
### CAUTION:

- The audio and video may be out of sync.
- The audio may be interrupted according to the performance of your PC and the network environment.
- You can send audio and video to up to 30 clients. However, if there are a large number of clients connecting to one camera, the audio may be interrupted.
- The audio may be interrupted on the PC where antivirus software is running.
- Once the LAN cable is unplugged from the camera and plugged again, the audio will be disconnected. In such case, reconnect to the camera from the viewer.

## Notes on PoE HUB

### ⚠ CAUTION:

- Use the PoE HUB or Midspan which is compliant with IEEE802.3af and has been confirmed for the interoperability with the camera.
- Do not touch the tip of the LAN cable with a wet hand.
- When a PoE HUB and an AC adapter (option) are both connected to the camera, the PoE-supplied power is used while it is activated, and the power from the AC adapter is not used.
- Although some PoE HUBs can limit the current used by each port, limiting may prevent the camera from operating correctly. In this case, do not limit the current for the port used by the camera.
- Some PoE HUBs have a limit on the total current consumption of the ports and using multiple ports of a single hub may prevent the camera from operating correctly. Check the manual of the PoE HUB used.



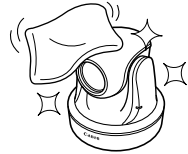
\* Like PoE HUB, Midspan (LAN cable power supply device) supplies power to a camera via a LAN cable.

## Maintenance

Be sure to turn the power off before maintenance (→ P.2-7).

### ■ Cleaning the Equipment

1. Carefully wipe the surface with a soft cloth dampened with water or a solution of mild detergent
2. Wipe with dry cloth



### ■ Cleaning the Lens

Clean the lens surface with a commercial lens cleaner.

- The AF may not function correctly if dust or dirt is on the lens surface.
- Scratches on the lens surface can cause video defects.

### ■ Cleaning the Optional Indoor Dome Housing

The dome should be cleaned regularly because the video quality may get deteriorated if the surface of the dome is dirty.

1. Remove the dome as directed in Steps 9 and 10 in page 2-22
2. Carefully wipe the dome with a soft cloth dampened with water or a solution of mild detergent
3. Wipe with dry cloth
4. Attach the dome as directed in Steps 9 and 10 in page 2-22
  - Please be sure to regularly check for rust on screws and brackets and for screw loose, to avoid injuries or damages to the camera caused by camera falling. Contact the local dealer where you purchased the product, for checkups.

### ■ Maintenance for Optional Ceiling Mount Cover

- Please be sure to regularly check for rust on screws and brackets and for screw loose, to avoid injuries or damages to the camera caused by camera falling. Contact the local dealer where you purchased the product, for checkups.



# *Chapter* **1**

## **Before Using VB-C60**

This chapter describes features, the bundled software, the operating environment and the names and functions of the system components.



# Features

VB-C60 is a compact network camera, equipped with both camera and server functionalities.


## ■ 40x Optical AF Zoom Lens and Pan / Tilt Control

Equipped with a 40x optical (and digital 4x) high-magnification zoom lens, VB-C60 is ideal for a wide variety of video surveillance applications, such as indoors including retails and offices, as well as parking lots, manufacturing plants and other indoors. Moreover, a combination of the auto-focus and the pan / tilt control that move the camera right to left, up and down, makes it easy to adjust the angle of view upon a camera installation. Also, it effectively works to control cameras at distant locations when monitoring remote places.

## ■ High-Quality Video of Moving Subjects

VB-C60 utilizes the progressive-scan CCD to allow capturing noise-less high quality video of even moving subjects.

## ■ Color Video at 0.7 lux and Auto Day / Night Capability

VB-C60 is capable of capturing color images of subject with brightness as low as 0.7 lux (1/30 sec.). In addition, the auto Day / Night capability\* (→  Operation Guide P.1-16) switches automatically between color video in bright daylight conditions and black & white video in dark nighttime conditions. These features make VB-C60 ideal for video monitoring of locations with variable lighting.

\* Operation of the Day / Night switching function should be tested thoroughly before use.

## ■ Simultaneous Distribution of JPEG and MPEG-4

VB-C60 utilizes JPEG/MPEG-4 for video compression, providing high-quality video at a high frame rate of up to 30 fps\*<sup>1</sup> in VGA (640 × 480). VB-C60 is also capable of distributing video to up to 30 clients\*<sup>2</sup> simultaneously.


\*<sup>1</sup> The frame rate may decrease depending on the performance of the Viewer PC, the number of simultaneously connected clients and the amount of network traffic.

\*<sup>2</sup> Up to 10 simultaneous clients in MPEG-4 format.


## ■ Multisize Image Distribution

VB-C60 enables to distribute images in three sizes simultaneously (640 × 480, 320 × 240, 160 × 120) in JPEG format.

## ■ Smart Shade Control

Smart Shade Control improves the brightness of shaded subjects with maintaining the brightness of brighter subjects in the same frame. When shooting a shaded main subject with a bright background, the shade control effectively works to make the shaded subject brighter and easier to see, with mainlining the bright background. Unlike backlight compensation, Smart Shade Control adjusts darker areas with maintaining the brightness of the brighter areas, so the background image remains clear without “blown-out” (→  Operation Guide P.3-28).

## ■ Three Metering Modes for Various Shooting Conditions

VB-C60 offers 3 choices of metering modes\*：“Center-Weighted”, “Average” or “Spot”, which can be switched depending on the shooting condition (→  Operation Guide P.3-25).

\* Methods for measuring brightness (amount of light) of subjects to set the exposure.

## ■ Image Stabilizer

Image Stabilizer effectively works to compensate for image blur caused by shaking of cameras mounted on the ceiling, a pole or other places with vibration.

\* Image Stabilizer cannot correct image blur caused by instantaneous shake or vibration that exceeds a certain level. While Image Stabilizer is being activated, the image quality declines and the angle of view becomes narrower.

## ■ Motion Detection

VB-C60 is capable of uploading images, notifying via e-mail and playing audio by detecting changes in video caused by subject's movement.

## ■ Upload and E-mail Notification

With a motion detection event or an external device input event as a trigger, VB-C60 uploads images, which was buffered in the camera, to a specified destination via FTP, HTTP or SMTP (e-mail), as well as notifies events using HTTP or SMTP (e-mail).

## ■ Panorama Image Creation

The entire area covered by the camera can be registered in the viewer as a panorama image and then used for camera control. Preset ranges can then easily be set visually using a registered panorama image.

## ■ Install-Less VB-C60 Viewer


Since VB-C60 is equipped with built-in VB-C60 Viewer, you don't need to install any viewer application. Three user authority levels are available: Administrator, Authorized Users and Guest Users.

## ■ Two-Way Audio (Full Duplex)

You can send and receive audio (full duplex) via viewers by connecting the camera with an amplifier microphone or a speaker with amplifier\*. Both LINE IN and MIC IN are available for audio input, which can be switched in the setting page.

\* Microphones and speakers are sold separately.

## ■ Upright Position and Ceiling-Mounted Position

VB-C60 can be placed in an upright position or mounted on the ceiling by simply changing the setting (→  Operation Guide P.1-17).

\* The camera should not be installed in locations subject to direct sunlight, high temperatures, high humidity, or other adverse conditions (→ P.xiii).

For ceiling mounted installation, an optional Indoor Dome Housing or Ceiling Mount Cover is available (→ P.1-15).

## ■ PoE

PoE allows the use of a single LAN cable connected to a PoE\* HUB (→ P.xv) to both power the camera and transfer video and audio data. There is no need of additional electrical constructions once you connect the camera to a PoE HUB.

\* PoE stands for Power over Ethernet, which is compliant with the IEEE 802.3af standard by the Institute of Electrical and Electronic Engineers. Maximum length of LAN cable to connect the camera and the PoE HUB is 100 m (→ P.xv).

■ **Suitable for Various Installation Environments**

The optional Indoor Dome Housing and Ceiling Mount Cover are available for ceiling mounted installations (→ P.1-15). There are two types of the dome housing. One is “Smoked”, which enables you to monitor without drawing people’s attention. The other is “Clear”, which makes people more aware of presence of the camera, as well as protects from dusts.

■ **Small-Scale Video Monitoring with Simplified Recording Software “VK-Lite”**

“VK-Lite”, a simplified version of optional software “Network Video Recorder VK-64/VK-16 v.2.0” (→ P.1-6), is supplied with VB-C60. The VK-Lite allows recording and displaying live video from up to 4 cameras, which enables you to build a small-scale video surveillance system.

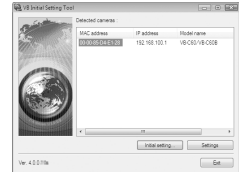
# Bundled Software

The software listed below is bundled with VB-C60.

For the latest information, please refer to Canon Web site.

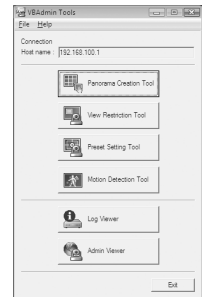
## VB Initial Setting Tool v4.0 (→ P.2-9)

VB Initial Setting Tool is for initial settings of the camera. The tool is available on the Setup CD-ROM (→ P.2-4). Only the administrator needs to install this software.



## VBAAdmin Tools Ver. 4.0 (→ Operation Guide P.2-2)

VBAAdmin Tools are for creating panorama images and visually setting view restriction areas and preset positions using the panorama image. You can also set for motion detection and display logs. The tools are available on the Setup CD-ROM (→ P.2-4). Only the administrator needs to install this software.



## VB-C60 Viewer Ver. 1.0 (→ Operation Guide P.3-2)

VB-C60 Viewer is to view video shot by VB-C60 and to control the camera. Three user authority levels are available: “Administrator”, “Authorized Users” and “Guest Users”. VB-C60 Viewer is a built-in viewer, which doesn't need to be installed. The viewer can display JPEG video, but **you need to install VK-Lite Viewer (→ P.1-6) to view MPEG-4 video.**



**Note** If you use VB-C60 together with VB-C300 or VB-C50 series, firstly install the VBAAdmin Tools for VB-C50 series, then VB-C300, and finally install the VBAAdmin Tools bundled with VB-C60.



**Tip** Once VB Initial Setting Tool v4.0 is installed, it can also be used for VB-C300 and VB-C50 series.

## Network Video Recorder VK-Lite v2.0 (→ Setup Guide)

“VK-Lite v2.0”, a simplified version of the optional software “Network Video Recorder VK-64/VK-16 v2.0” (→ P.1-17), is bundled with VB-C60. VK-Lite consists of two software applications described below.

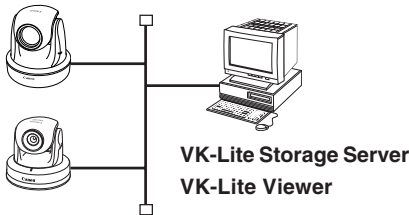


### VK-Lite Software Configuration

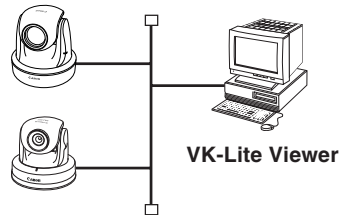
Type	Description	License
<b>VK-Lite Storage Server</b>	<ul style="list-style-type: none"> <li>- Up to 4 cameras can be registered.</li> <li>- Recording video from registered cameras</li> </ul>	1 license
<b>VK-Lite Viewer</b>	<ul style="list-style-type: none"> <li>- Up to 4 cameras can be registered.</li> <li>- Playing recorded video, stored on the storage server</li> <li>- Displaying live video (JPEG/MPEG-4)</li> </ul>	1 license

The VK-Lite storage server and VK-Lite Viewer can also be installed and run on the same PC. VK-Lite Viewer can also be used independently, without being connected to a VK-Lite storage server.

#### Example of VK-Lite Storage Server and VK-Lite Viewer configuration



#### Example of configuration with VK-Lite Viewer only



Following cameras can also be registered to VK-Lite.

<b>Supported Camera</b>	VB-C60/VB-C60B, VB-C300/VB-C300B VB-C50i/VB-C50iR, VB-C50FSi, VB-C50Fi
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**Note** To add VK-Lite Viewer, you need to purchase an optional “VK-Lite Additional Viewer License”.



**Tip** If you use VB-C60 together with VB-C300 or VB-C50 series, it is more convenient to install and use VK-Lite Viewer.

## Main Functional Limitations in VK-Lite and VK-64/VK-16

Type	Main functional limitations	VK-Lite v2.0	VK-64/VK-16 v2.0
Camera connection	Max. number of cameras	4	64/16
Storage server	Recording format	JPEG	JPEG MPEG-4
	Recording mode	Normal Schedule recording (Continuous recording) Manual recording	Normal Schedule recording (Continuous recording, Sensor event recording, Motion detection recording) Special Day Schedule recording Manual recording
	Max. recording frame rate	5 fps	30 fpc*1
	Max. retained history of recorded video	12 weeks (90 days)	999 weeks*1
Viewer	Registration of multiple storage servers*2	—	✓
	Max. number of video windows on the viewer	8 or less is recommended	Unlimited*1
	Layout Sequences*3	—	✓

\*1 Operational limits apply depending on the number of cameras, the PC performance and hard disk capacity, and the amount of network traffic.

\*2 In case of using VK-64/VK-16 with multiple storage servers, you can unify management of cameras registered to each storage server and the recorded data, if you set one master storage server.

When connecting to each storage server using VK-Lite viewer, you need to switch connection one by one.

\*3 Layout Sequences is a function to switch displayed viewer windows at set intervals.



**Note** For more information on how to use VK-Lite and its functional limitations, refer to the VK software instruction manuals (→ “Setup Guide” and “Administrator’s Manual”).



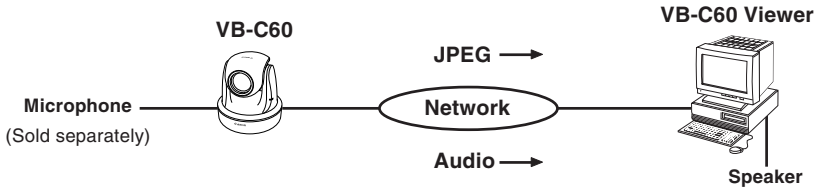
**Tip** You cannot register multiple storage servers to VK-Lite, but can register multiple VK-Lite servers to optional “VK-64 Viewer”. This allows up to 10 VK-Lite storage servers to be centrally managed and operated.

## Comparison between Two Viewers

VB-C60 has two viewers. The main differences between those two viewers are as follows.

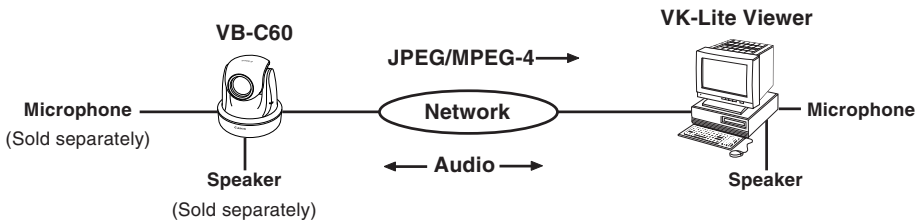
Viewer	Live video display	Audio
VB-C60 Viewer	JPEG	Receive audio from VB-C60 (one-way communication)
VK-Lite Viewer	JPEG/MPEG-4	Send and receive audio (two-way communication)

### VB-C60 Viewer audio reception (one-way communication)



Audio from a microphone connected to VB-C60 can be heard through the Viewer's speaker.

### VK-Lite Viewer audio transmission/reception (two-way communication)



Audio can be transmitted and received between VB-C60 and the Viewer.



Tip

PCs, speakers and microphones are sold separately.



# Operating Environment

For the latest information, please refer to Canon Web site.

## VB Initial Setting Tool v4.0, VBAdmin Tools Ver. 4.0, VB-C60 Viewer Ver. 1.0

<b>Operating System/ Web Browser</b>	Windows Vista Home Premium/Business/Enterprise/Ultimate (SP1)/Internet Explorer 7.0 Windows Server 2003 R2 Standard Edition (SP2)/Internet Explorer 6.0 (SP2) or 7.0 Windows Server 2003 Standard Edition (SP2)/Internet Explorer 6.0 (SP2) or 7.0 Windows XP Professional (SP3)/Internet Explorer 6.0 (SP3) or 7.0
<b>Viewer Display</b>	A high-resolution monitor with an effective display area of at least 1024 × 768 is recommended for the VB-C60 Viewer.
<b>Audio</b>	To use camera's audio functions, PC with audio capability is required.

1

Before Using VB-C60

## Network Video Recorder VK-Lite v2.0

<b>CPU</b>	Pentium 4 2.2 GHz or faster For MPEG-4, Pentium 4 3.4 GHz or faster
<b>Operating System</b>	Windows Vista Home Premium/Business/Enterprise/Ultimate (SP1)*1 Windows Server 2003 R2 Standard Edition (SP2) Windows Server 2003 Standard Edition (SP2) Windows XP Professional (SP3)
<b>Memory</b>	1GB or more
<b>Hard Disk</b>	Storage Server: Minimum 20 GB (NTFS format)*2 Viewer: Minimum 2 GB
<b>Viewer Display</b>	1024 × 768 or higher resolution for the effective display area Color display of 16 bits or more A high performance video card is preferable. With PCI video cards, display performance may be declined.
<b>Audio</b>	To use camera's audio functions from the Viewer and enable the warning tones used for event notification, PC with audio capability is required.

\*1 Both 32-bit and 64-bit editions of Windows Vista are supported. Only the 32-bit editions of other operating systems are supported.

\*2 External hard disk drives are not available.



Note

Optional VK-64/VK-16 v2.0 is not compatible with Windows Vista Home Premium.

# Notes on Operating Environment

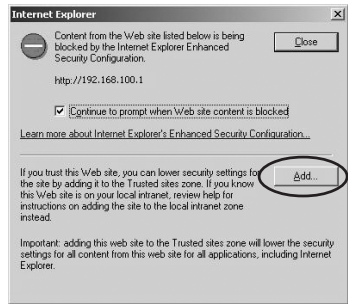
## Windows Vista/XP

If you start up VB Initial Setting Tool on Windows Vista/XP, the Windows Security Alert dialog may appear. If the dialog appears, click “Unblock”. Once you click “Unblock”, the dialog box will not be displayed again.

## Windows Server 2003

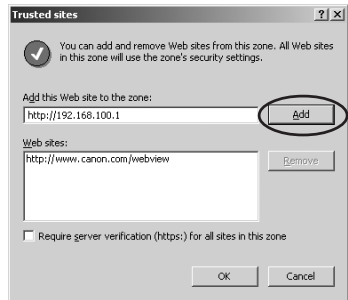
With Windows Server 2003, the default security level for the Internet or intranet sites in Internet Explorer is “High”. As a result, windows such as the settings window do not function normally unless you first register the site in the contents block dialog box that appears when you access the camera’s top page (→ P.2-12). Register the site to ensure normal functioning.

### 1. When you access the camera’s top page via Internet Explorer, the dialog box appears



### 2. Click “Add”, then the trusted sites dialog box appears

If the box for “Require server verification (https:) for all sites in this zone” is ticked, remove the tick.



### 3. Enter your camera’s IP address in the “Add this Web site to the zone” column and then click “Add” to register the camera as a trusted site

For more information on registering trusted sites, click “Learn more about Internet Explorer’s Enhanced Security Configuration...” in the dialog box in step 1 and refer to the summary provided.

If you have enabled the Windows firewall settings, please refer to the “Windows Vista/XP” and follow the instructions.

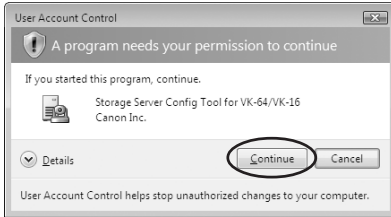
## Windows Vista

When you use VB-C60 and VK-Lite on Windows Vista Home Premium/Business/Enterprise/Ultimate, following functional limitations apply.

### ■ Recording Software VK-Lite v2.0

#### Warning dialog appeared when opening the Storage Server Configuration dialog

If User Account Control is enabled on Windows Vista, the User Account Control dialog will appear when you launch the Storage Server Configuration tool. Click “Continue” to launch the Storage Server Configuration tool.



**Storage location of recorded video**

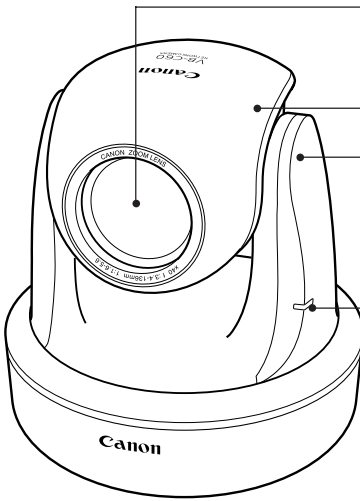
On Windows Vista, snap shots and video files cannot be saved into the Windows folder or the Program Files folder on the system drive.

**Shadow Backup**

You cannot use shadow backup of Windows Vista. So, if once you delete a configuration file of VK-Lite, you cannot restore the file with shadow backup.

# System Components and Operation

## Front



### Lens


40x optical AF zoom lens with 56° horizontal field of view

### Camera head

### Head arm

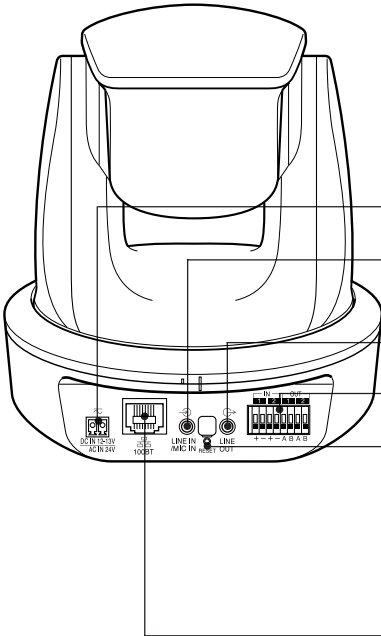
### LED

The LED lights in blue.

- On - When the power is turned on, the camera is rebooted, or while the power is on.
- Off - When LED is set to "Turn Off" (→  Operation Guide P.1-17).

\* Even when the LED is set to "Turn Off", it lights for several seconds and then turns off when the power supply is turned on or VB-C60 is rebooted.

## Rear



### Power connection socket (P.2-8)

### Audio input terminal (LINE IN and MIC IN) (P.3-7)

### Audio output terminal (LINE OUT) (P.3-7)

### External device I/O terminal (P.3-5)

### Reset switch

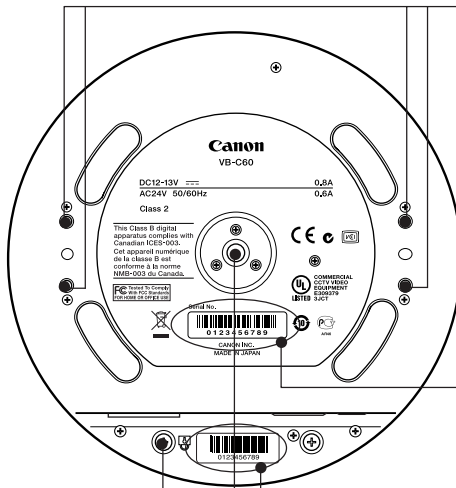
You can initialize all settings other than the date and time by pressing this button with a pointed implement while turning on the power switch, and then keeping the button pressed for another 5 seconds or more.

### 100BT LAN connector

100 Base-TX compatible (compliant with IEEE 802.3af)

## Bottom

The MAC address and serial number required for the network settings are printed on the bottom of the camera. Make a note of them before installing the camera.



### Screw hole for Ceiling Bracket

Used for the in-ceiling bracket of an optional Indoor Dome Housing or the ceiling mounting bracket of a Ceiling Mount Cover.

### Serial No.

Camera's serial number is printed here.

### MAC address

Unique address to this camera. Please make a note before installing this unit (→ P.2-9).

### Safety wire anchoring point

If the camera is installed on the ceiling using an optional Indoor Dome Housing or Ceiling Mount Cover, attach the safety wire included in the bundled options.

### Screw hole for tripod mounting

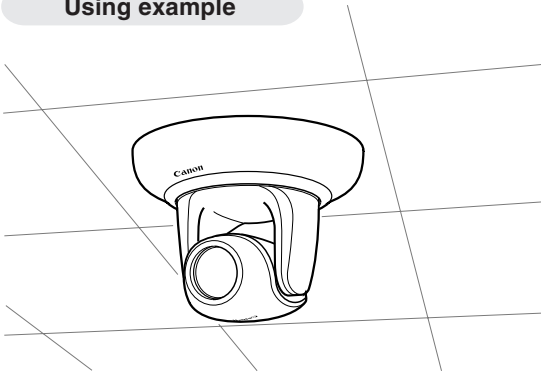
# Options

Please purchase optional components separately as required.

## Ceiling Mount Cover SS60-S-VB/SS60-B-VB

Optional Ceiling Mount Cover is available for VB-C60 only. Two colors are available, Silver (SS60-S-VB) or Black (SS60-B-VB), for use with VB-C60 (silver) and VB-C60B (black) respectively.

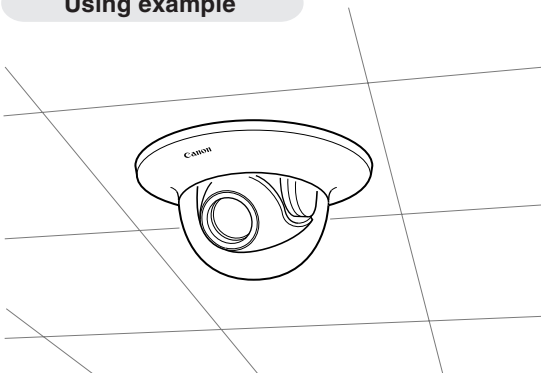
### Using example



## Indoor Dome Housing VB-RD51S-C/S

Optional Indoor Dome Housing is available for VB-C60 only. The dome is available in Clear (VB-RD51S-C) and Smoked (VB-RD51S-S). The dome can be inset into the ceiling for a sleek and stylish installation.

### Using example



### Smoked type (VB-RD51S-S)

- Light transmittance: approx. 50%
  - Minimum subject illumination:
    - Day mode: 1.4 lux  
(1/30 sec., color)
    - Night mode: 0.4 lux  
(1/30 sec., monochrome)
- (→ P.3-3)

The figure shows the Clear dome.



Note

- It is strongly recommended to use VB-C60B when using a dome housing, since the camera's lens ring (lens frame) reflects off the dome's inner surface less than VB-C60.
- When using a camera with a dome housing, the viewing angle is a little wider than normal.

1

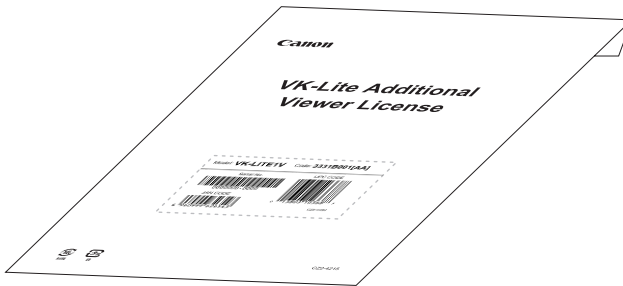
Before Using VB-C60

## AC Adapter PA-V17

Optional AC adapter PA-V17 is available for VB-C60 only. Use the AC adapter when the PoE HUB or external power supply is not used.

## VK-Lite Additional Viewer License

VK-Lite additional Viewer License is a license for additional viewers, which is required for each PC where VK-Lite Viewer is installed. For example, you need to purchase the licenses for a monitoring system, where users use multiple viewers at multiple locations to monitor the video.





## Network Video Recorder VK-64/VK-16 v2.0

VK-64/VK-16 is for viewing and recording video distributed from network cameras. It is useful when using multiple network cameras.

### VK-64/VK-16 Screen Example



**Note**

VB-C60 is not supported by the older versions of VK-64/VK-16. If using an older version, you need to upgrade VK-64/VK-16 to the latest version. Visit Canon Web site for the details.



**Tip**

“VK-Lite”, a simplified version of “VK-64/VK-16 v2.0”, is bundled with VB-C60 (→ P.1-6). Up to 4 cameras can be registered to VK-Lite.

1

Before Using VB-C60



*Chapter*

# 2

## **Initial Setting and Installation**

This chapter explains how to install a camera.

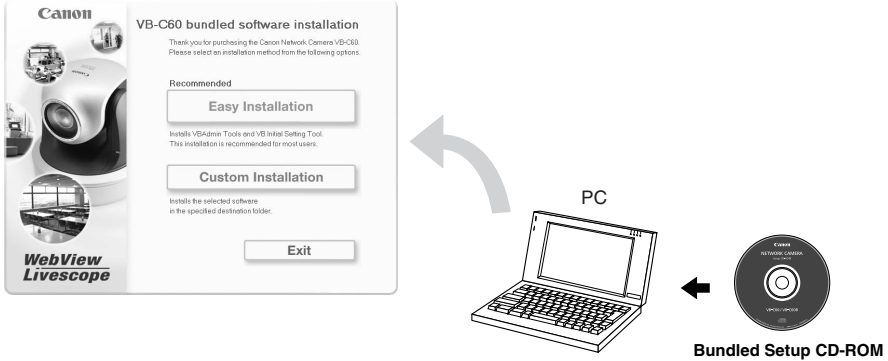
First, install required software from the Setup CD-ROM. Then connect the camera to the network and carry out the initial settings. Check the image on VB-C60 Viewer and then install the camera.

**Please set the camera IP  
address before installing the  
camera.**

# Setup Procedure

## Step1 Software Installation

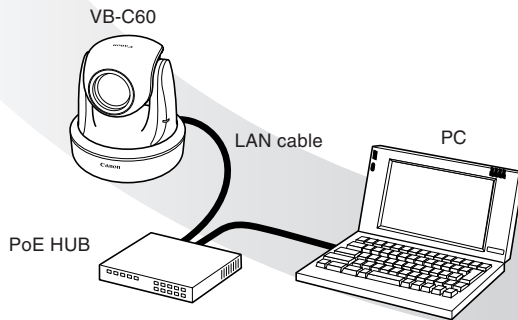
Insert bundled Setup CD-ROM into the PC and install the software (→ P.2-4).



## Step2 Connection to the Network

Connect a camera and PC to the network (→ P.2-6).

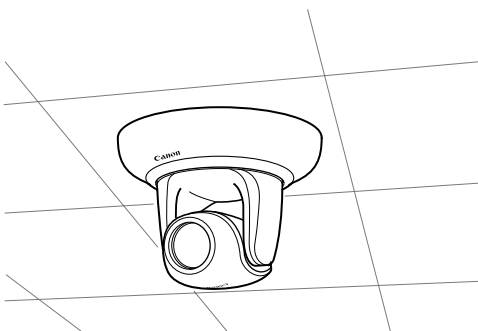
If you are using a PoE HUB or Midspan, contact your Canon sales representative.



The illustration shows the camera connected via a PoE HUB.

## Step4 Camera Installation

Place or install the camera securely  
(→ P.2-14).



The illustration shows an installation example using optional Ceiling Mount Cover.

## Step3 Initial Setting



Start up VB Initial Setting Tool and carry out initial settings for the camera  
(→ P.2-9).

Check the image on VB-C60 Viewer (→ P.2-12).



VB Initial Setting Tool window




VB-C60 Viewer

# Step1 Software Installation

## Installing Software

Install required software from the bundled CD-ROM (→ P.1-6).

### Software for initial settings and management

Type	Description
VB Initial Setting Tool	A tool for initial camera settings (→ P.2-9) Only the administrator needs to install this tool.
VBAdmin Tools	Software for managing the camera (→  Operation Guide, Chapter 2). Only the administrator needs to install this software.

⇒ Install this software from “VBToolsInstall.exe” in the “VBTools” folder on the Setup CD-ROM.

### Recording software

Type	Description
Network Video Recorder VK-Lite	Software for displaying and storing video from cameras. It consists of “Storage Server” and “Viewer” (→ P.1-6).

⇒ Install this software from “VKLiteInstall.exe” in the “VBTools” folder on the Setup CD-ROM.



To view MPEG-4 video from the camera, you need VK-Lite Viewer. The built-in VB-C60 Viewer can only display JPEG video.

### Built-in Software (no installation required)

Type	Description
VB-C60 Viewer	Software for displaying video from the camera. VB-C60 Viewer is a built-in viewer, which doesn't need to be installed (→ P.1-5).

At this point, you are required to install VB Initial Setting Tool required for initial settings for VB-C60.

### 1. Insert the supplied Setup CD-ROM into your PC and follow the steps below

- ① Make sure that all other applications are closed. Select “My Computer” from the “Start” menu bar.
- ② Double-click the displayed CD-ROM icon → VBTools folder → “VBToolsInstall.exe” to start the installation.



### 2. Once the startup screen appears, select the installation type and start installation

Easy Installation: Install VB Initial Setting Tool and VAdmin Tools.

Custom Installation: Install the selected software.



### 3. New icons for the installed software are created on the desktop after the installation

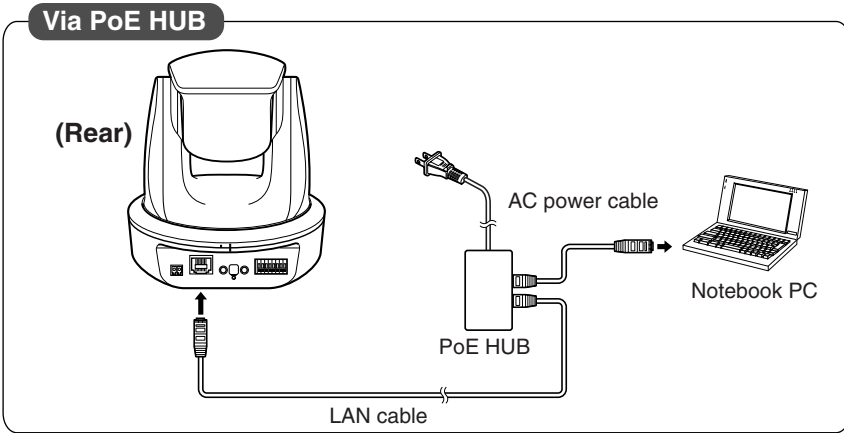
**Installation is now complete.**

# Step2 Connection to the Network

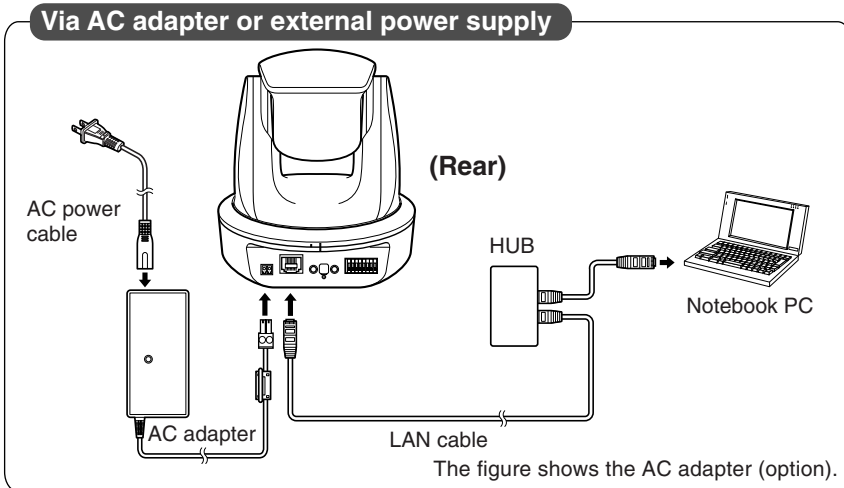
## Connecting to the Network

In the example described here, one camera is connected to a PC via a HUB. Connect a LAN cable to VB-C60 to turn the camera on. Note that if you turn on the camera and then leave it for 20 minutes, VB Initial Setting Tool (→ P.2-9) will no longer be able to detect the camera. In such case, turn the camera off and then on again.

VB-C60 is equipped with PoE (Power over Ethernet). PoE can supply power to the camera via a LAN cable from an IEEE 802.3af-compliant PoE HUB.



When using an AC adapter (option) or external power supply, connect them as shown below.





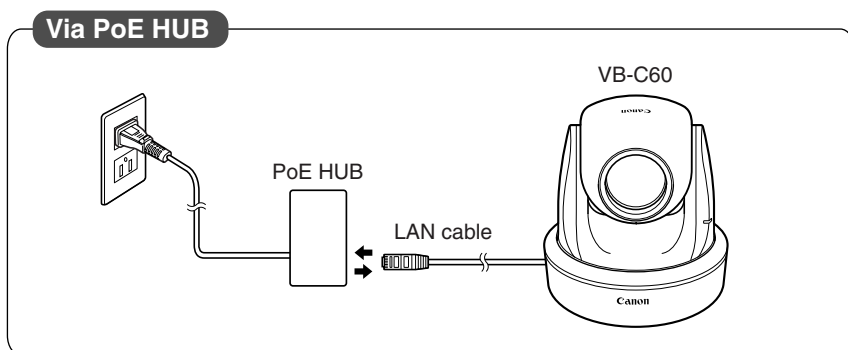


Note

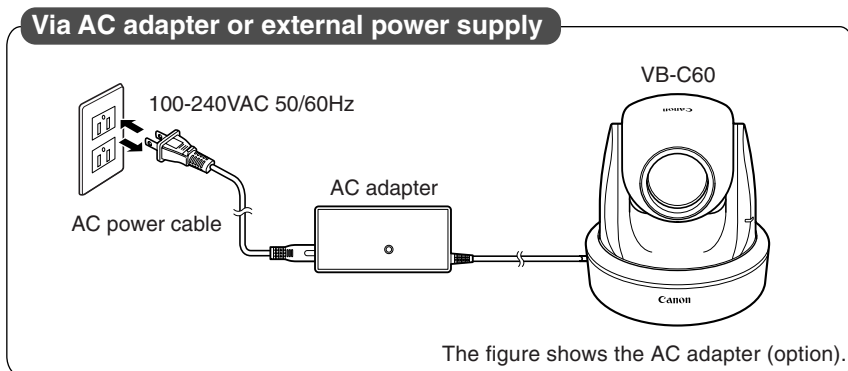
- Please ask our sales personnel about PoE HUB and Midspan.
- Refer to the manual of PoE HUB or Midspan for how to use it.
- The maximum length of a LAN cable to connect a camera and a PoE HUB is 100 m.
- If you connect a camera to a switching hub and change the connection while the camera is operating, the connection might be interrupted due to hub's learning function. Do not change the connection while the camera is operating.

## ■ Turning ON/OFF

VB-C60 does not have a power switch. If the power is supplied via a LAN cable using the PoE function, you can switch on or off by connecting or disconnecting the LAN cable from the PoE HUB.



When using an AC adapter (option) or external power supply, you can switch on or off by plugging or unplugging the AC adapter (option) or external power supply.



### External power supply

When using external power supply, use the Power Connector (→ P.vii) supplied with the camera as shown on the right.

Supply 12VDC or 24VAC from a power supply insulated from 100-240VAC supply. You can connect 12VDC power supply without regard to the polarity.

When using an external power supply, make sure that the voltage falls within the ranges below.

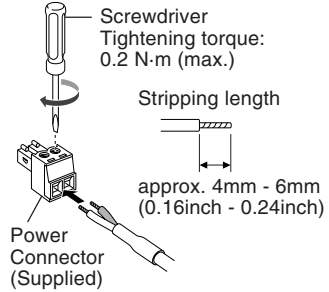
AC24V: Voltage fluctuation within AC24V±10%  
(within 50Hz or 60Hz±0.5Hz)

Current supply capability over 1.0A per camera

DC12V: Voltage fluctuation within DC12V±10%

Current supply capability over 1.5A per camera

\* If using a DC12V battery power source, make sure to use the DC12V by connecting a resistor that is between 0.5 and 1.0Ω, and over 20W in series to the power supply line.



### Recommended power supply cables [reference]

Cable (AWG) Conductor diameter (ømm)	#24 (0.52mm) (0.020inch)	#22 (0.65mm) (0.026inch)	#20 (0.82mm) (0.032inch)	#18 (1.03mm) (0.041inch)	#16 (1.30mm) (0.051inch)
12VDC					
Max. cable length (m)	5	9	14	23	32
Max. cable length (ft)	16.4	29.5	45.9	75.4	105.0
24VAC					
Max. cable length (m)	11	18	29	46	64
Max. cable length (ft)	36.1	59.0	95.1	151.0	210.0

Use a UL cable (equivalent to UL-1015) for 12VDC or 24VAC.



Note

- The camera head position is automatically initialized when the power is turned ON.
- **Do not touch the camera head while its position is being initialized**, or the head position may not be initialized correctly, or other malfunctions may occur.
- After turning off the camera, please wait at least 5 seconds before turning it on again. Turning the power back on within less than 5 seconds may cause a malfunction. When connecting and disconnecting the power, always observe the precautions given in “△ Safety Precautions - Notes on PoE HUB” (→ P.xv).
- **Read the manual of the PoE HUB for how to power it ON or OFF.**
- You can connect an AC adapter (option) to a camera while it is powered using a PoE HUB. In this case, power is supplied using PoE, and the AC adapter is not used. When the PoE-supplied power is disconnected, the power supply automatically switches to the AC adapter.

The network connection is now complete.

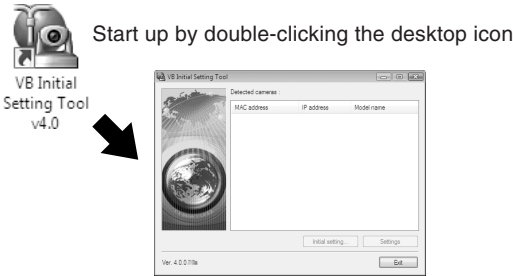
# Step3 Initial Setting

## Initial Setting

Using VB Initial Setting Tool, specify the network settings for VB-C60.

### 1. Start up VB Initial Setting Tool

Double-click the “VB Initial Setting Tool v4.0” on the desktop, or select “Start” menu → “Programs” → “Webview Livescope” → “VB Initial Setting Tool v4.0”.



### 2. VB Initial Setting Tool automatically detects the camera connected to the network, and displays its MAC address, IP address, and model name

The factory default IP address is set to “192.168.100.1”

The MAC address can be found on the bottom of the camera.

Note that VB Initial Setting Tool cannot be used across subnets.

Click on the MAC address, and then click “Initial setting”.



Continued on the next page. ➡

**3. Enter user name “root” and factory default password “VB-C60” (case sensitive) then enter the IP address and subnet mask**

If you do not want to specify a default gateway address, untick the “Enter a default gateway address” box.

After entering those items, click “OK”.

Camera	MAC address :	00-00-85-D4-E1-28
	User name :	
	Password :	
Network	IP address :	192 . 168 . 100 . 1
	Subnet mask :	255 . 255 . 255 . 0
	<input type="checkbox"/> Enter a default gateway address	
	Gateway address :	
Time zone :		(GMT-08:00) Pacific Time
Video signal :		
		OK Cancel

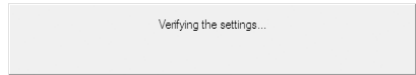


**Note** If you use VB-C60 on Windows Vista/XP, please read “Windows Vista/XP (→ P.1-10)” before use. Also, if you enable Windows Firewall on Windows Server 2003 Standard Edition (SP2), please carefully read the note on the same page.

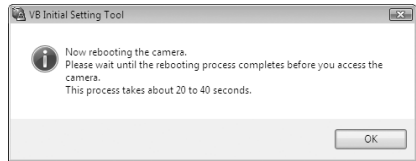


- The factory default administrator password is “VB-C60”. Be sure to change the password to ensure security (→ Operation Guide P.1-7).
- The MAC address is printed on the bottom of the camera (→ P.1-14).
- The factory default IP address is **192.168.100.1**. Please change the IP address that suits the environment in which you use the camera.

4. A setup progress window appears and your settings will be saved



5. Click "OK"



Note

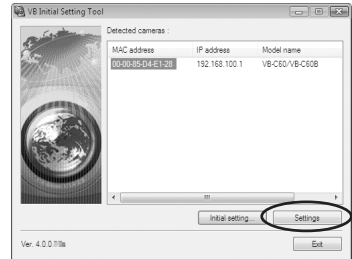
- Set an appropriate IP address for your system. Contact your network administrator for advice on setting the IP address, subnet mask and gateway address.
- If you need to set the IP address from the DHCP server, firstly set a temporary fixed address using VB Initial Setting Tool, and then change the address setting method to "Auto (DHCP)" in "Network" (→ Operation Guide P.1-8) in the setting page.
- If 20 minutes or more pass after the camera is turned on, the camera stops sending requests for IP address allocation and it cannot detect the IP address using VB Initial Setting Tool. In this case, turn the camera off then on again.
- To restore the factory default settings, refer to "Restoring the Factory Default Settings" in the Operation Guide (→ Operation Guide P.5-14).

**Initial setting is now complete.**

## Viewing Image

After completing the initial setting, check the video image from the camera using VB-C60 Viewer. At this point, specify the network settings on the PC so that they match the IP address and subnet mask set on the camera.

1. Click on MAC address you want to check the connection of and then click “Settings”



2. A web browser starts up and the camera's top page appears. Click “VB Viewer” in “VB-C60 Viewer”



Note

- If you use VB-C60 on Windows Server 2003, please read “Windows Server 2003 (→ P.1-10)” before use.
- When you open the setting page from the Settings button, do not change the HTTP port number from 80. For information on HTTP port number setting, refer to Operation Guide P.1-28.

### 3. A viewer starts up and displays the video image from the camera



Note

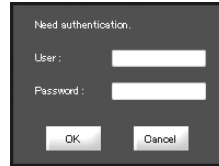
- A user authentication window appears after clicking “Setting Page” or “Admin Viewer” in camera’s top page.

The factory default user name and password are as follows:

User name: **root** Password: **VB-C60**



from Setting Page



from Admin Viewer

- For security reasons, you should change the administrator password (→ Operation Guide P.1-7).
- You need to install VK Viewer (→ P.1-6) to view both JPEG and MPEG-4 video.
- In the factory default settings, no restrictions apply to the distribution destination for video images. When you use a camera for surveillance purpose, you should always specify the destination in “Access Control” in the setting page (→ Operation Guide P.1-35).



Tip

- Refer to the Operation Guide for information on how to use the VB-C60 Viewer.
- Various settings are available in “setting page” (→ Operation Guide P.1-4).

Viewing image is now complete.

# Step4 Camera Installation

## Before Installation


Be sure to set the IP address (→ P.2-10) before installing the camera.



- If 20 minutes or more pass after the camera is turned on, the camera stops sending requests for IP address allocation and it cannot detect the IP address using VB Initial Setting Tool. Therefore, specify the IP address and confirm the camera operation before setting up the camera as directed in “Initial Setting” (→ P.2-9).
- The MAC address is printed on the bottom of the camera (→ P.1-14). Please make a note before installing the camera.
- When holding a camera, hold it with the head arm but not the camera head.
- The camera should not be installed in locations subject to direct sunlight, high temperatures, high humidity, or other adverse conditions (→ P.xiii).

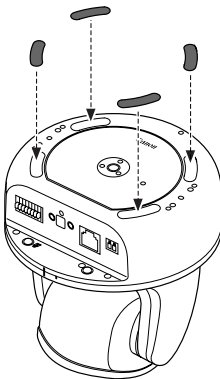
## Setting at Upright Position



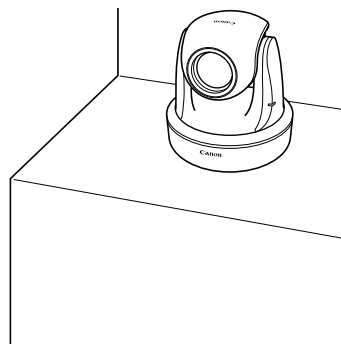
The video image position of VB-C60 is set on the assumption that the camera is mounted on the ceiling. To invert the video image, change the “Mount” setting in “Camera” in the setting page (→  Operation Guide P.1-17).

### ■ Placing at a Flat Location

Attach Rubber Feet to the camera.



Place the camera on a flat and stable place.





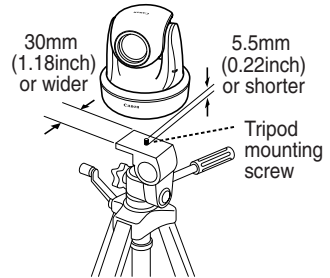
## ■ Using a Tripod

The screw hole for tripod mounting is on the bottom of the camera.



Note

Always use a tripod mounting screw that is less than 5.5 mm (0.22 in.) in length. The use of screws 5.5 mm (0.22 in.) long or longer could damage the camera. Also, the tripod seat used should be at least 30 mm (1.18 in.) in diameter.



## Ceiling-Mounting with Ceiling Mount Cover SS60-S-VB/SS60-B-VB (Option)

Follow the steps below to mount a camera on the ceiling. Install the camera securely.



Note

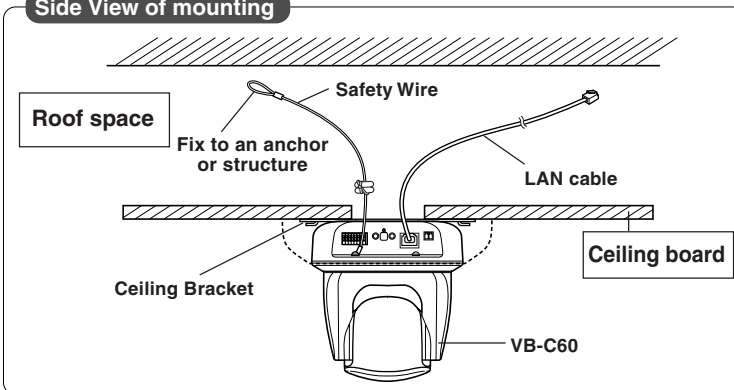
Carefully read and observe the precautions in "Before Installation" (→ P.2-14).

### ⚠ WARNING:

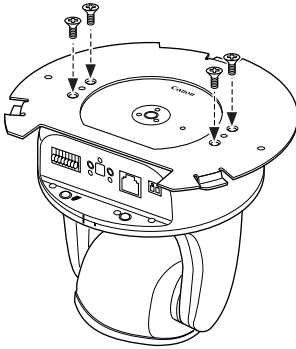
**Please contact the dealer where you purchased the camera, for installation and checkups.**

- The place or ceiling, to which a camera is installed, should be strong enough to bear the weight of the camera plus its optional products, including Ceiling Mount Cover and Indoor Dome Housing. Be sure to reinforce the ceiling as needed.
- Please be sure to regularly check for rust on screws and brackets and for screw loose, to avoid injuries or damages to the camera caused by camera falling.
- It is not recommended to install the camera to places with heavy vibration. It may cause mechanical problems.
- When wiring cables, pay much attention not to damage the indoor wiring or piping.

### Side View of mounting

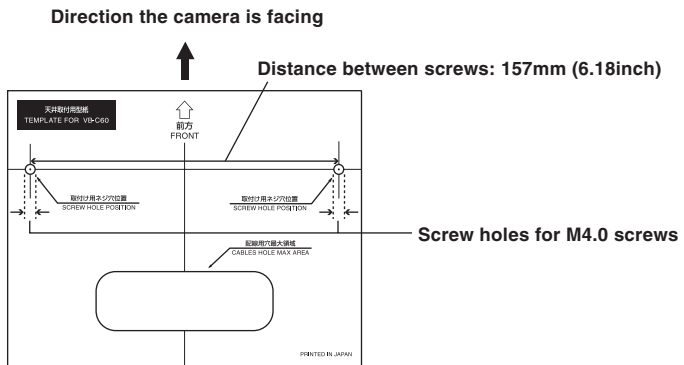


1. Screw the Ceiling Bracket to a camera with supplied four screws



2. Determine the mounting position using supplied Template

Determine and mark the mounting screw and cable hole positions using a pencil, with considering the camera direction.



3. Drill two mounting screw holes and one cable hole in the ceiling



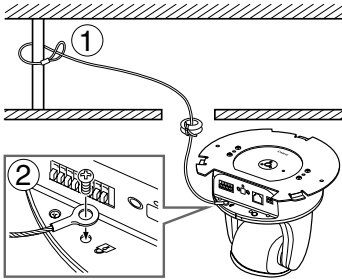
When using an AC adapter (option), be sure to drill a cable hole to be large enough for a ferrite core of the cable.

#### 4. Fix the Safety Wire

Secure the Safety Wire to an anchor or the structure, and then fix the wire to the camera using a supplied screw.



If the cable hole cannot be drilled because the ceiling is concrete etc, secure the wire to an appropriate position.

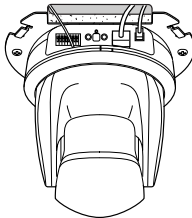


#### 5. Mount the camera on the ceiling

#### 6. Connect the camera with a LAN cable through the cable hole

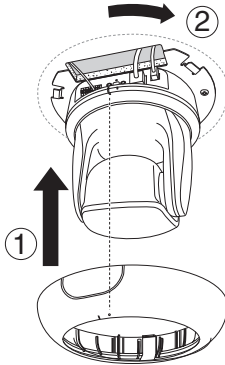
**When using the AC adapter (option) or external power supply, connect the power cable to the camera**

Connect the cables to external device I/O terminal or audio I/O terminal as required.



## 7. Attach Ceiling Mount Cover to the camera

Align the (o) mark on the cover with the (l) mark on the back of the camera, and then rotate the cover clockwise to the (l) mark.

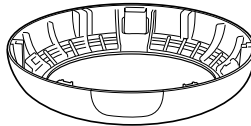



Make sure that the Ceiling Mount Cover is attached securely.



Tip

If the cables cannot be fit in the roof space, because the ceiling is concrete for example, or they cannot be in the Ceiling Mount Cover, cut the notch of the Ceiling Mount Cover with a plier to provide a notch to pass the cables through. In this case, attach the Ceiling Mount Cover first, then connect the cables.



8. After the installation, reboot the camera to initialize the camera position (→  Operation Guide P.1-44).

Installation is now complete.

## Ceiling-Mounting with Dome Housing VB-RD51S-C/S (Option)

Follow the steps below to mount the camera on the ceiling with Indoor Dome Housing (option). See the outer view of the dome (→ P.3-2) to determine the mounting position and direction.



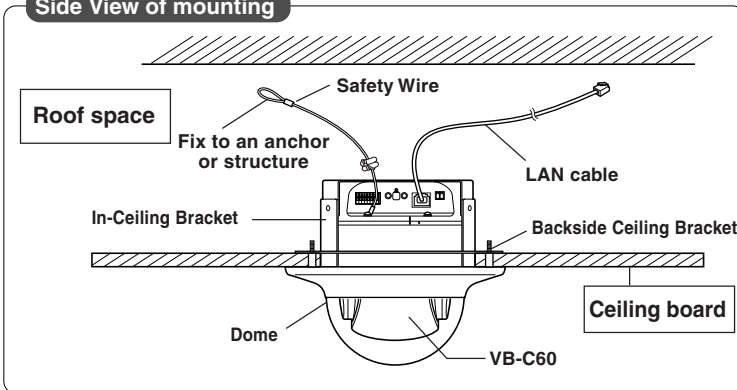
- Carefully read and observe the precautions in “Before Installation” (→ P.2-14).
- It is strongly recommended to use VB-C60B when using a dome housing.

### ⚠ WARNING:

**Please contact the dealer where you purchased the camera, for installation and checkups.**

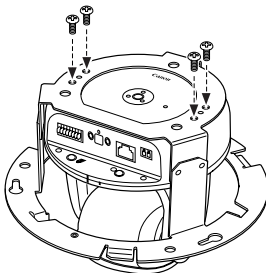
- The place or ceiling, to which a camera is installed, should be strong enough to bear the weight of the camera plus its optional products, including Ceiling Mount Cover and Indoor Dome Housing. Be sure to reinforce the ceiling as needed.
- Please be sure to regularly check for rust on screws and brackets and for screw loose, to avoid injuries or damages to the camera caused by camera falling.
- It is not recommended to install the camera to places with heavy vibration. It may cause mechanical problems.
- When wiring cables, pay much attention not to damage the indoor wiring or piping.

#### Side View of mounting



### 1. Screw to the In-Ceiling Bracket with four screws

Use the screws supplied with the dome housing.

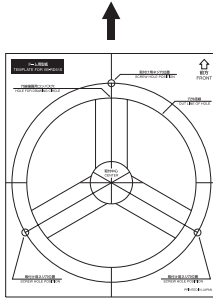


Continued on the next page. →

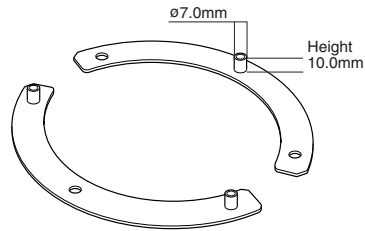
## 2. Determine the mounting position

Determine and mark the hole positions for Backside Ceiling Bracket and In-Ceiling Bracket using the template for dome, with considering the camera direction.

Dome Template  
Direction the camera is facing



Backside Ceiling Bracket



## 3. Drill three mounting holes for Backside Ceiling Bracket and a hole for the In-Ceiling Bracket on the ceiling



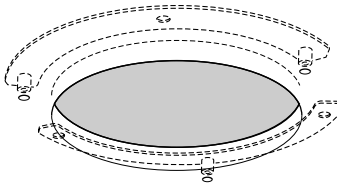
After drilling the holes, clean the mounting position so that drilled refuse does not enter the inside of the dome.

## 4. Fix Backside Ceiling Bracket on the back side of the ceiling

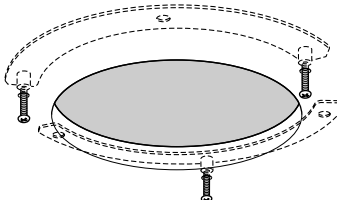


It is recommended to temporarily fix the bracket with a two-sided tape to the ceiling, so that it may not get loose when the dome is mounted on the ceiling.

Insert the convey parts on the Backside Ceiling Bracket into the holes drilled in step 3.

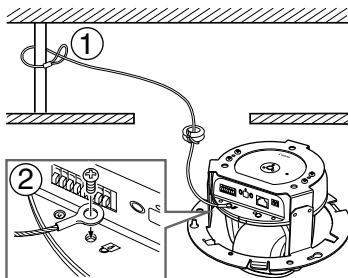


## 5. Tighten the screws half way



## 6. Fix the safety wire

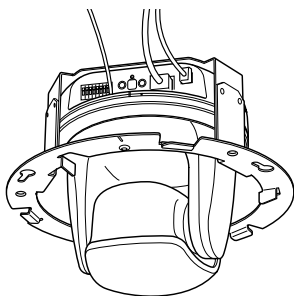
Secure the Safety Wire to an anchor or the structure, and then fix the wire to the camera using a supplied screw.



## 7. Connect the camera with a LAN cable through the cable hole

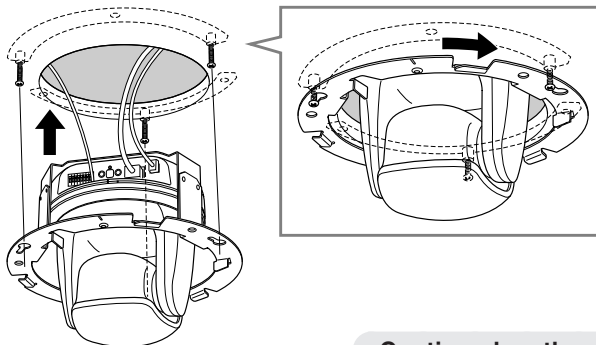
**When using the AC adapter (option) or external power supply, connect the power cable to the camera**

Connect the cables to external device I/O terminal or audio I/O terminal as required.



## 8. Fix the In-Ceiling Bracket to the ceiling

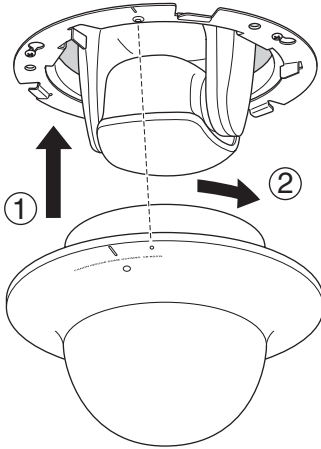
Fit the screw holes of the In-Ceiling Bracket to the screws temporary fixed in step 5, turn the bracket clockwise, and then fully tighten the screws to lock.



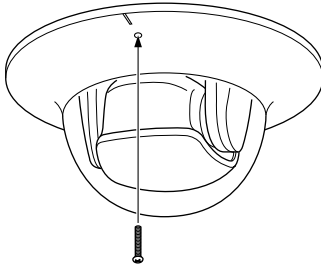
Continued on the next page. →

### 9. Mount the dome

Align the (o) mark on the dome with the (l) mark on the In-Ceiling Bracket, and then rotate the dome clockwise to the (l) mark so that the screw hole for mounting is in the correct position.




### 10. Fix the dome with a screw to prevent the dome from rotating



### 11. After mounting the dome, reboot the camera to initialize the camera position (→ Operation Guide P.1-44).



Tip

If the LED is turned on, the light may be reflected by the dome and captured by the camera. In this case, change the LED setting to “Turn Off” (→  Operation Guide P.1-17).

Installation is now complete.



*Chapter*



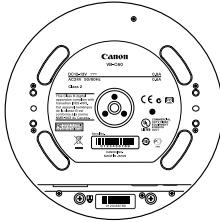
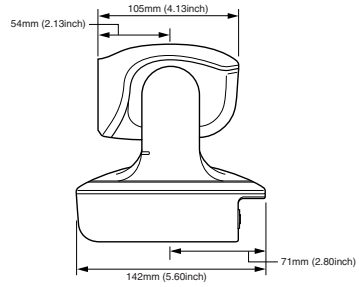
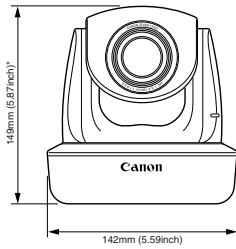
# Appendix

**This appendix lists the dimensions, specifications, external device I/O terminals and audio I/O terminals.**



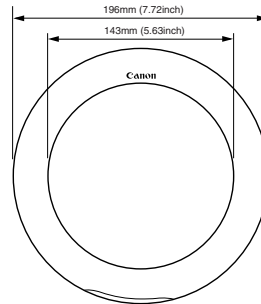
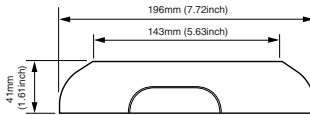
# Dimensions

## VB-C60/VB-C60B

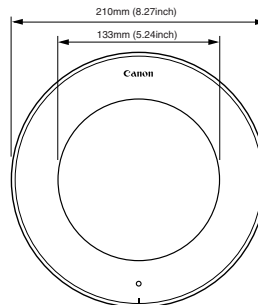
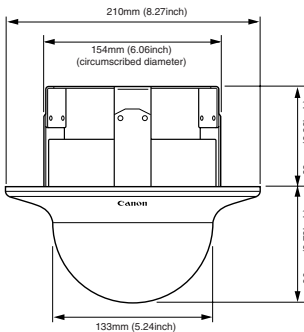


\* Excluded rubber foot thickness

## Ceiling Mount Cover SS60-S-VB/SS60-B-VB (Option)



## Indoor Dome Housing VB-RD51S-C/S (Option)



# Specifications

VB-C60 / VB-C60B			
Camera	Image Sensor	1/4-inch CCD (primary color filter)	
	No. of Pixels	effective 310,000	
	Scanning Method	Progressive	
	Lens	40x optical zoom lens with AF (digital 4x)	
	Focal Length	f=3.4 ~ 136.0mm	
	F-number	F1.6 (W) ~ F5.6 (T)	
	Viewing Angle	Horizontal field of view : 55.8° (W) ~ 1.5 (T) Vertical field of view : 43.3° (W) ~ 1.1 (T)	
	Day / Night switching	Mechanical insertion/removal of IR cut filter: Auto / Manual	
	Min. Subject Illumination	Normal use Day mode : 0.7lux (F1.6, color, 1/30 sec.) Night mode: 0.2lux (F1.6, monochrome, 1/30 sec.) with Indoor dome housing VB-RD51S-S (smoked) Day mode : 1.4lux (F1.6, color, 1/30 sec.) Night mode: 0.4lux (F1.6, monochrome, 1/30 sec.)	
	Focusing	Auto / One-shot AF / Manual / Fixed focus at infinity (for dome use)	
	Focusing Range	Day mode : (W) 0.3m ~ ∞ / (T) 1.5m ~ ∞ Night mode : (W) 0.5m ~ ∞ / (T) 1.8m ~ ∞ (with IR light in Night mode: (W) 0.5m ~ ∞ / (T) 1.8m ~ ∞)	
	Shutter Speed	1/1 ~ 1/8000 sec.	
	White Balance	Auto / One-shot / Preset / Manual	
	Exposure Metering Modes	3 options (Center-weighted / Average / Spot)	
	Exposure Compensation	7 levels	
	Server	Smart Shade Control	7 levels (Function to increase the brightness of shaded subjects in a highly contrasted image)
		Image Stabilizer	Available (electric)
		Pan Angle Range	340° (±170°)
Tilt Angle Range		Upright: 115° (-25° ~ 90°) Ceiling-mounted: 115° (-90° ~ 25°)	
Moving Rate		Pan: Max.150°/sec. Tilt: Max. 150°/sec.	
Video Compression Method		JPEG (JPEG for video) / MPEG-4 Simultaneous distribution is available.	
Video Size		JPEG : 640×480 / 320×240 / 160×120 (Multi-Size Distribution: distribute images in 3 sizes simultaneously) MPEG-4: 640×480 / 320×240 (1 size only)	
Video Quality		JPEG / MPEG-4: 5 levels (can be set by each video size in JPEG)	
Available Frame Rate		JPEG : 30 ~ 0.1fps MPEG-4: 30 / 15 / 10 fps	
Max. Frame Rate		JPEG : Max. 30fps (640×480) *1 MPEG-4: Max. 30fps (640×480) *1	
Simultaneous Client Access		Max. 30 (MPEG-4: Max. 10)	
Audio Compression Method		G.711 μ-law (64kbps)	
Audio Communication Mode		Full duplex (two-way)	
Audio Play		Available (Audio files can be played when an motion detection event or an external device input event occurs.) *2	
Protocol		IPv4: TCP/IP, UDP, HTTP, FTP, SNMP (MIB2), SMTP (client), DHCP (client), DNS (client), ARP, ICMP, POP3, NTP, SMTP authentication, WV-HTTP (Canon only) IPv6: TCP/IP, UDP, HTTP, FTP, SNMP (MIB2), SMTP (client), DNS (client), ICMPv6, POP3, NDP, NTP, SMTP authentication, WV-HTTP (Canon only)	
IPsec		Available	
Camera Control		3 user levels available (Administrator / Authorized users / Guest users) Max. 50 user names and passwords can be registered.	
Preset		Max. 20 positions	
View Restriction	Available (Function for limiting the viewing range (right-to-left, up-and-down, zoom))		
Connection Restrictions	Access control (user name & password) / IP address restriction (IPv4) / Restriction on the number of simultaneous client access		
Motion Detection	Available (up to 4 detection areas can be set in a shooting window)		
JPEG Image Upload	FTP / HTTP / SMTP (e-mail) Camera's buffer memory: Max. approx. 4MB Frame Rate: Max. 10fps		
Event Notification	HTTP / SMTP (e-mail)		

\*1 The frame rate might decrease depending on viewer PC's performance, the number of simultaneous client access, the amount of network traffic and other conditions.

\*2 A separately sold speaker with amplifier is necessary for playing audio.

<b>VB-C60 / VB-C60B</b>		
Interface	Network Terminal	LAN × 1 (RJ45, 100Base-TX (Auto / Full duplex / Half-duplex))
	Audio Input Terminal (LINE IN / MIC IN)	φ3.5 monaural mini-jack connector (LINE IN and MIC IN can be switched in the setting page.) LINE IN × 1 (for amplifier microphone) or MIC IN × 1 (for microphone w/o amplifier)
	Audio Output Terminal (LINE OUT)	φ3.5 monaural mini-jack connector LINE OUT × 1 (for amplifier speaker)
	External Device I/O Terminal	Input × 2 Output × 2
Others	Operating Environment	Temperature: -10 ~ 50° / Humidity: 20 ~ 85%RH (no condensing)
	Power Supply	PoE : PoE power supply via LAN connector (IEEE802.af compliant) AC Adapter : optional PA-V17 (100VAC) External Power Supply : 24VAC / 12VDC (using a supplied power connector *non-polar)
	Power Consumption	with PoE : Max. approx.9W with optional AC Adapter PA-V17: Max. approx.13W
	Dimensions	142 × 142 × 149 mm (5.59 x 5.59 x 5.87 inch) (W x D x H) (Main unit only, excluding rubber feet)
	Weight	approx. 840g (approx. 1.852 lb)

<b>AC Adapter (Option)</b>	
Model	PA-V17
Input	100-240VAC, 50/60Hz
Output	13VDC 1.8A (Max.), Temperature: -10°C to 35°C / Humidity: 20 to 85%RH (no condensing) When using a network camera 13VDC 1.0A (Max.), Temperature: -10°C to 45°C / Humidity: 20 to 85%RH (no condensing)
Polarity	Black (-) / White (+)
Dimensions	58 x 118 x 25 mm (2.28 x 4.65 x 0.98 inch) (W x D x H) (excluding projections)
Weight	Approx. 215g (Approx. 0.474 lb) (excluding cables)

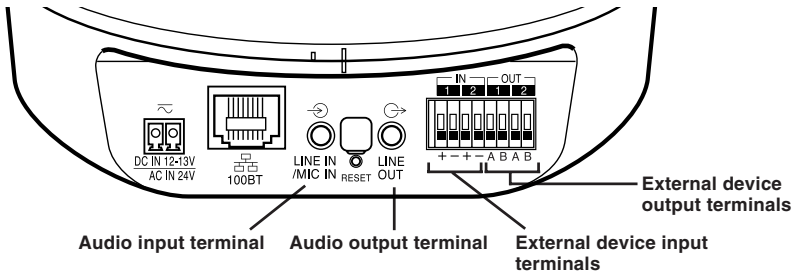
<b>Indoor Dome Housing (Option)</b>	
Model	VB-RD41S-C/S
Type	Clear / Smoked
Use Environment (with camera)	Temperature: -10 to 50°C / Humidity: 20 to 85% RH (no condensing)
Dimensions	ø 210 (ø 133 mm: dome) x 96 mm (H) * including In-Ceiling Bracket: 178 mm (H) ø 8.27 (ø 5.24 inch: dome) x 3.78 inch (H) * including In-Ceiling Bracket: 701 inch (H)
Weight	Approx. 522g (Approx. 1.151 lb)

<b>Ceiling Mount Cover (Option)</b>	
Model	SS60-S-VB/SS60-B-VB
Type	Silver / Black
Use Environment (with camera)	Temperature: -10 to 50°C / Humidity: 20 to 85% RH (no condensing)
Dimensions	ø 196 x 41 mm (H) ø 7.72 x 1.61 inch (H)
Weight	Approx. 271g (Approx. 0.598 lb)

- These specifications are subject to change without notice due to product improvements, etc.

# Built-In Terminal

External Device I/O and Audio I/O are available on the rear of the camera.



## External Device I/O Terminal

VB-C60 has two input and two output terminals for external devices.

VB-C60 Viewer and VK-Lite Viewer allow you to check the status of external device input and to control external device output (→ Operation Guide P.3-22).

### ■ External Device Input Terminals (IN1, IN2)

The external device input terminal consists of two pairs of terminals (IN1 and IN2). The “-” terminal is connected to GND in the camera. When two cables are connected to the “+” and “-” terminals, the electrical status of the connection between the terminals (whether or not current flows between them) notifies the viewer of the event.



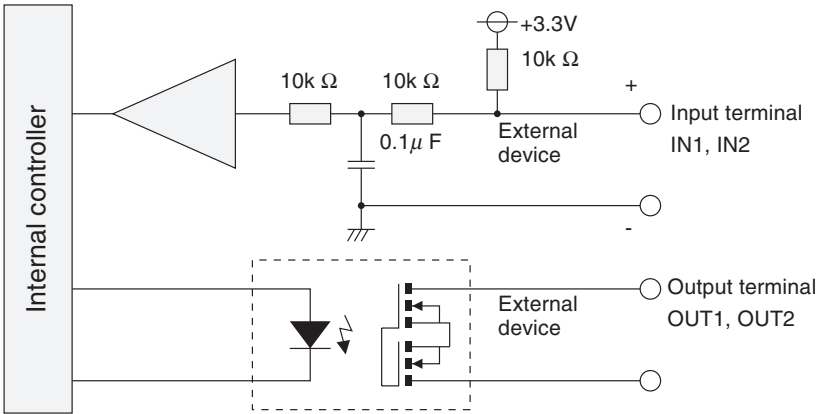
Sensors and switches connected to the terminals should be electrically separated from each power supply and GND.

### ■ External Device Output Terminals (OUT1, OUT2)

The external device output terminal consists of two pairs of output terminals (OUT1, OUT2), which are nonpolar. The Viewer switches the 2 output terminals to disconnected or connected condition. The output terminals use photo couplers and are separate from the internal circuit in the VB-C60.

**A load to the output terminals should be within the following rated range:**  
**Rating across the output terminals: Max. 50VDC**  
**Continuous load current: 100mA or less**

### ■ Internal Connection Chart



Tip

The wire appropriate for external device cable is as follows.

Single wire AWG : # 28 - # 22


Conductor diameter:  $\varnothing$  0.32 - 0.65 mm (0.013 - 0.026 in)

Strip the cables back roughly 8 or 9 mm (0.315 - 0.354 in).

## Audio I/O Terminal

You can send and receive audio via a viewer, by connecting a microphone and a speaker with amplifier to the camera. ø3.5 monaural mini-jack connector is used.

### ■ Audio Input Terminal (LINE IN and MIC IN)

An audio input terminal is to connect a microphone to VB-C60. Two types of microphones, LINE IN and MIC IN, are available for VB-C60 audio input. Since the available audio input terminal is only one, you need to switch the input mode in the setting page depending on the microphone to be used (→  Operation Guide P.1-27). The factory default setting is Line IN.

LINE IN allows connecting with a microphone with amplifier.

MIC IN allows connecting with a dynamic microphone or a condenser microphone.

Input terminal: ø 3.5 mm monaural mini-jack

- Dynamic microphone / IN
  - Input impedance: 1.75kΩ ±20%
  - \* Available microphone
    - Output impedance: 400Ω ~ 600Ω
- Condenser microphone / IN
  - Input impedance (mic bias): 2.2kΩ ±20%
  - Power: Plug-In power (voltage: 1.8V)
  - \* Available microphone
    - Plug-in power type condenser microphone
- LINE IN
  - Input level: Max. 1 V p-p
  - \* A microphone with amplifier is required.


### ■ Audio Output Terminal (LINE OUT)

An audio output terminal is to connect a speaker with amplifier to VB-C60. You can send audio from VK-Lite Viewer to the speaker. Only the administrator can use this function.

- Output level: Max. 1V p-p
- \* A speaker with amplifier is required.



Note

- Switch between LINE IN and MIC IN in the setting page according to the type of microphone (→  Operation Guide P.1-27). Be sure to set properly, otherwise the camera or the microphone may be broken.
- The volume and tone may vary depending on the properties of the microphone.
- Use VK-Lite Viewer to send audio to the speaker. You cannot send audio from VB-C60 Viewer (→ P.1-8).

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