BIE-7067-000

ENGLISH

Canon

Network Camera

VB-R11 Installation Guide

Please be sure to read the "Safety Precautions" section for correct use. After reading this Installation Guide, keep it in a readily accessible location for future reference. This camera is for indoor use only.

* Some cameras are not available in certain countries or regions.

⚠WARNING To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

⚠Caution Request a professional installer for all installation work. Never try to install the camera yourself. Doing so may result in unforeseen accidents such as dropping the camera or electric shock.

Check Included Items

Camera
Installation Guide (This document)
Warranty Card
Notice
Power connector
Template
Setup CD-ROM
Ceiling Plate
Dedicated wrench

Accessories

The following accessories can be purchased separately as necessary. Some accessories are not available in certain countries or regions.

Recessed Mounting Kit SR11-S-VB

Dedicated accessory used to install the camera recessed into a wall or ceiling.

Plenum Mounting Kit SR11-P-VB

Dedicated accessory used to install the camera recessed into a ceiling. The part projecting out within the ceiling can be covered.

Pendant Mounting Kit PC640-VB

Dedicated accessory is used to install the camera to the end of pipe that extends from high ceilings, such as in big-box stores.

Dome Unit DU10-S-VB

Smoked dome cover.

Canon AC Adapter PA-V18

Dedicated AC adapter for this camera.

Printed in Japan

Symbols Indicating Safety Precautions

This Installation Guide uses the following symbols to indicate important information the user should know in order to use the product safely. Explanations are provided for each symbol so that users will understand the level of importance for each. Be sure to observe these items.

⚠ Warning	Failure to follow the instructions accompanied by this symbol may result in death or serious injury.
⚠ Caution	Failure to follow the instructions accompanied by this symbol may result in injury.
Caution	Failure to follow the instructions accompanied by this symbol may result in property damage.
Important	This symbol indicates important or restricted items.
Note	Contains reference information for operation or additional explanations.

Safety Precautions

Installation Precautions

⚠ Warning

Do not install in the following places:
- Places in direct sunlight, near heat-generating objects, or locations subject to high temperatures
- Places near fire sources or flammable solvents (alcohol, thinner, fuel, etc.)
- Humid or dusty places
- Places subject to oily smoke or steam
- Places subject to sea air
- Confined or enclosed places

Failure to do so may result in fire or electric shock.

Notes on Power Supply
- Only use the dedicated AC Adapter (sold separately) for AC power.
- Do not set any heavy objects on the power cable (or the LAN cable for a PoE power supply).
- Do not pull, forcibly bend, scratch, or modify the power cable (or the LAN cable for a PoE power supply).
- Do not cover or wrap the AC adapter (sold separately) with cloth or blankets.

Failure to do so may result in fire or electric shock.

⚠ Caution

For installation or inspection of this camera, consult the dealer where you purchased the product.
- This installation should be made by a qualified service person and should conform to all local codes.
- When installing, make sure the surface is capable of withstanding the total weight of the camera and accessories, and that it is sufficiently reinforced.
- Be sure to use installation screws designed for the type of surface the camera is to be installed.
- Periodically check the parts and screws for rust and loosening, in order to prevent injuries and equipment damage due to falling items.

- Do not install in unstable places, places subject to significant vibration or impact, or places subject to salt damage or corrosive gas.
- Be sure to attach the safety wire when installing the camera.

Failure to do so may result in the camera falling or other accidents.

- Do not touch the edges of metal parts with bare hands.
- Take care not to catch your fingers when installing.

Failure to do so may result in injuries.

Caution

- Do not turn the camera rotator by hand.
- Do not install on an unstable surface. Also, make sure the camera is installed ±5°or less horizontal.
- After turning off the power, do not turn the power on again for at least five seconds.
- Take measures to remove static electricity before performing any procedures.
- If there is condensation, please wait to power on, until the condensation dissipates.

Failure to do so may result in malfunction.

- Take care not to damage wiring or piping.

Failure to do so may result in damage to peripheral items.

Important
- We recommend the installation of a lightning arrester (a surge protection device) as a measure against failures caused by lightning strikes. Refer to our website for details.

Precautions for Use

⚠ Warning

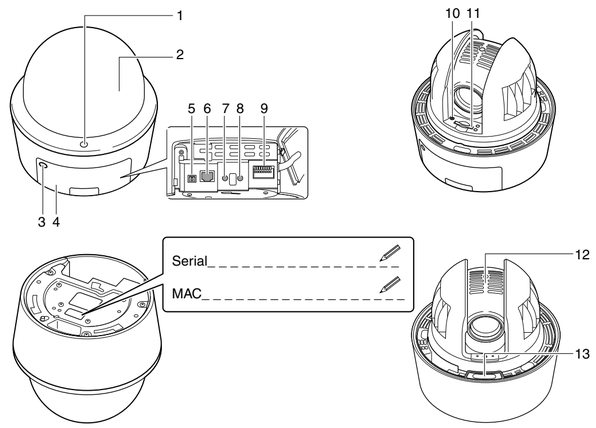
- If you discover defective conditions such as smoke, strange sounds, heat or strange odors, immediately stop using the camera and contact your nearest dealer.

Fire or electric shock may result from continued use of the product.

- If thunder starts, stop installation or inspection etc. and do not touch the camera or continue connecting the cable.
- Do not disassemble or modify the camera.
- Do not damage the connecting cable.
- Do not spray the camera with water, or otherwise make it wet.
- Do not insert foreign objects such as water or metal into the camera.
- Do not use flammable sprays near the camera.
- Do not leave LAN cables, external power supply, or the power connector for the AC adapter (sold separately) connected when the camera is not in use for long periods.
- Do not use flammable solvents such as alcohol, paint thinner or benzine when cleaning the camera.

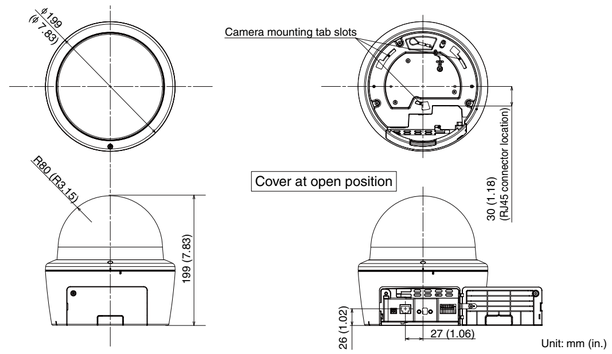
Failure to do so may result in fire or electric shock.

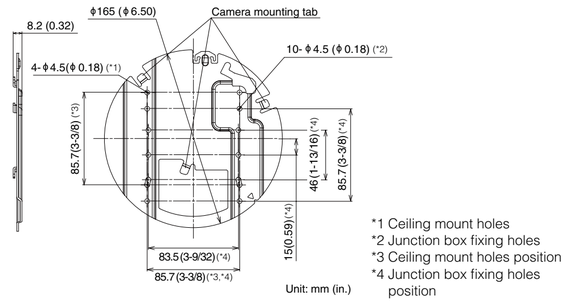
Part Names



1. Dome case lock screw / 2. Dome case / 3. Interface cover lock screw / 4. Interface cover
5. Power connection terminal / 6. 100Base-TX LAN connector /
7. Audio input terminal (common LINE IN and MIC IN) / 8. Audio output terminal (LINE OUT) /
9. External device I/O terminals / 10. Reset switch / 11. Memory card slot / 12. Lens unit /
13. Mounting-release button

External Dimensions





*1 Ceiling mount holes
*2 Junction box fixing holes
*3 Ceiling mount holes position
*4 Junction box fixing holes position

Specifications

Please refer to the installation procedures or the Appendix – Specifications for specifications not listed below.

Camera

Lens	30x optical zoom (20x digital zoom) lens with auto focus
Viewing Angle	For 16:9 aspect ratios Horizontal: 58.4° (W) – 2.1° (T) Vertical: 34.1° (W) – 1.2° (T) For 4:3 aspect ratios Horizontal: 58.4° (W) – 2.1° (T) Vertical: 45.0° (W) – 1.6° (T)
Min. Subject Illumination	Day Mode (color): 0.03 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE) Night Mode (monochrome): 0.002 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE) When using the Dome Unit (Smoked) (sold separately) Day Mode (color): 0.06 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE) Night Mode (monochrome): 0.004 lux (F1.4, shutter speed 1/30 sec., when smart shade control is off, 50IRE)
Pan Angle Range	360° continuous panning
Tilt Angle Range	180° (ceiling-mounted position: 0° – 180°) When the horizontal direction of the camera is 0°

Interface

Network Terminal	LAN x 1 (RJ45, 100Base-TX (auto/full-duplex/half-duplex))
Audio Input Terminal (Common for LINE IN & MIC IN)	φ3.5 mm (φ0.14 in.) mini-jack connector (monaural) LINE IN (connect to an amplifier microphone) or MIC IN (connect to a microphone w/o amplifier) Switch LINE IN/MIC IN in the setting page.
Audio Output Terminal (LINE OUT)	φ3.5 mm (φ0.14 in.) mini-jack connector (monaural) LINE OUT (connect to an amplifier speaker)
External Device I/O Terminal	Input x 2, Output x 2
Memory Card*	SD Memory Card, SDHC Memory Card, SDXC Memory Card Compatible. Recorded Content: Log, Video (Event, Manual, ONVIF, Timer, Upload) Frame Rate: Max. 1 fps (JPEG) Max. 30 fps (H.264) * Use CLASS 10 cards. Cards under CLASS 10 may not have sufficient performance for tasks such as video recording.

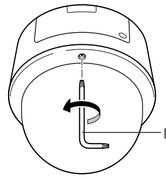
Others

Operating Environment	Temperature: AC, DC, PoE: -10°C – +50°C (+14°F – +122°F) Humidity: 5% – 85% (without condensation)
Storage Environment	Temperature: -30°C – +60°C (-22°F – +140°F) Humidity: 5% – 90% (without condensation)
Installation Method	Ceiling mount Canon will not guarantee proper operation if the cameras are installed on surfaces where the angle is more than ±5° from horizontal or on walls, because this will put a heavy load onto sliding mechanical parts and may affect durability.
Power Supply	PoE: PoE power supply via LAN connector (IEEE802.3at Type1 compliant) AC Adapter: PA-V18 (100 – 240 V AC) (sold separately) External power source: 24 V AC/12 V DC
Power Consumption	PoE: Max. approx. 9.5 W AC Adapter PA-V18: Max. approx. 9.6 W (100 V AC) Max. approx. 9.8 W (240 V AC) DC: Max. approx. 8.8 W AC: Max. approx. 9.2 W
Weight	Approx. 1990 g (4.39 lb.)

Before installing the camera

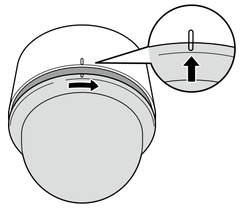
Set the IP address and other network information on the camera using the "Camera Management Tool" on the Setup CD-ROM.
For details on how to operate the "Camera Management Tool", please refer to the "Camera Management Tool User Manual".

Dome case attachment/detachment method



Dome case removal method

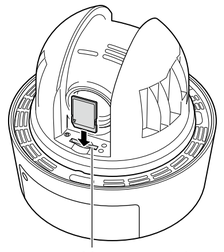
Loosen the dome case lock screw with the dedicated wrench and rotate it counter-clockwise to remove it.



Attaching the dome case

1. Align the marks on the camera and the dome case and turn it clockwise to attach it.
2. Tighten the dome case lock screw with the dedicated wrench.

Using a Memory Card



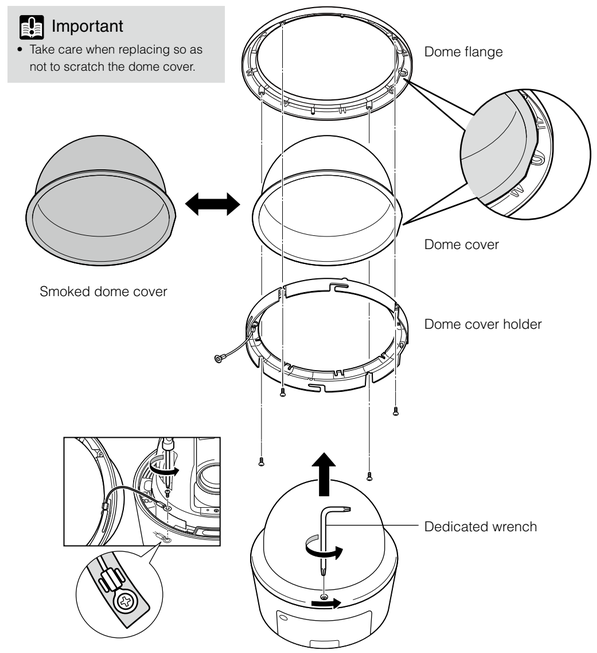
Remove the dome case and place the memory card in the memory card slot.
To remove the memory card, push it in all the way until the card slightly pops out and remove.

Important
- Insert a memory card before installing the camera.
- When using a memory card with the camera for the first time, it is recommended to format the card after inserting it into the camera (please refer to the "Operation Guide" > "Setting Page" > "Memory Card").
- Always unmount the memory card before removing it (please refer to the "Operation Guide" > "Setting Page" > "Memory Card").

Using the Dome Unit (sold separately)

Remove the dome case from the camera, then remove the dome cover holder and dome flange, and replace with the smoked dome.

Important
- Take care when replacing so as not to scratch the dome cover.

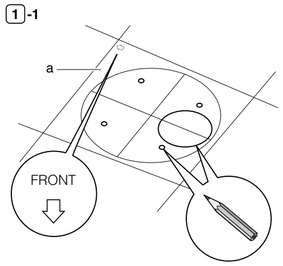


Installing the Camera

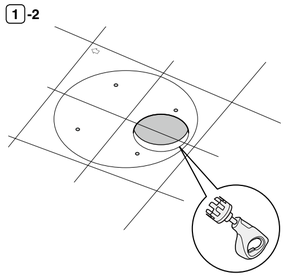
1

Direct-mounting on ceiling

1-1

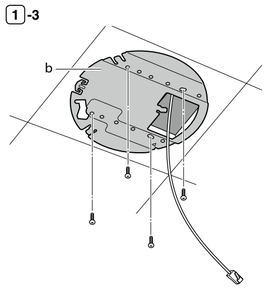


1-2



a. Template

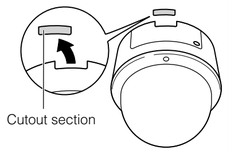
1-3



b. Ceiling plate

If the cables cannot be stored above a ceiling

If the cables cannot be stored above a ceiling made of concrete, etc., break the cutout section of the dome case using pliers to remove the section to guide the cables.

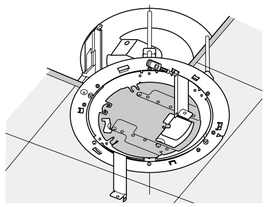


Attaching to a junction box

Attach the ceiling plate to the junction box after confirming the fixing holes locations with the external dimensions diagram.

Ceiling recessed mounting

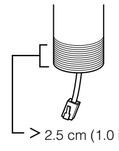
Mount using Recessed Mounting Kit or Plenum Mounting Kit (each sold separately). For details please refer to the Installation Guide included with the kit.



Ceiling pendant mounting

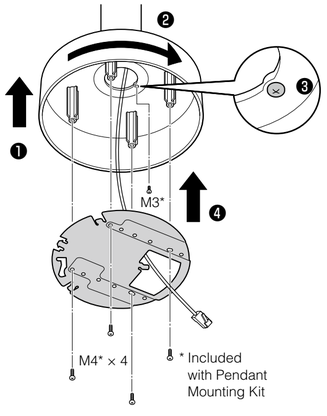
Mount using the Pendant Mounting Kit (sold separately).
For details please refer to the Installation Guide included with the kit.

1-1

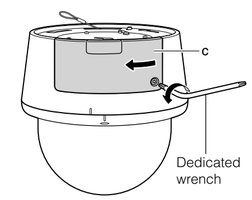


Pass necessary cables for connecting the camera through the pipe.

1-2

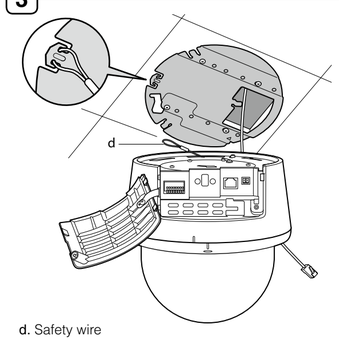


2



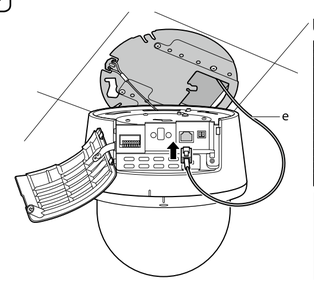
c. Interface cover

3



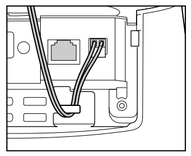
d. Safety wire

4



e. LAN cable

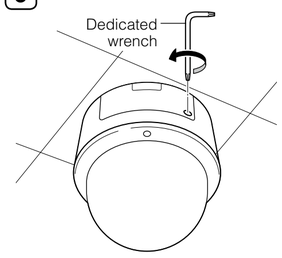
Using an external power supply



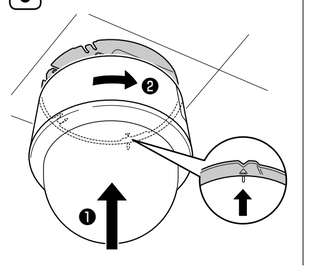
Note

Connect the cable after hooking around the tab, to prevent accidental removal.

5

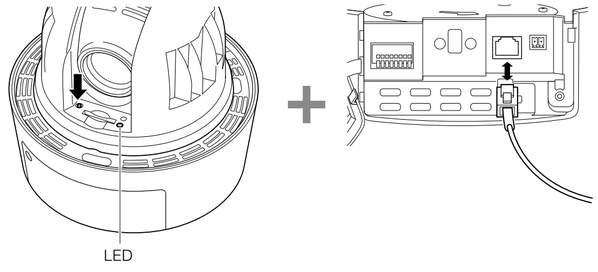


6



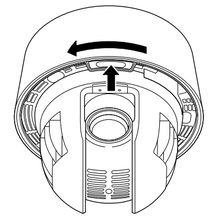
Resetting the camera

Remove the dome case, and push in the power cable while pressing the reset switch. Release the switch once the LED starts to flash. When the LED stops flashing, the reset procedure is complete.



Removing the camera

Remove the dome case, and while pushing the mounting-release button, rotate it counter-clockwise to remove.



Connecting the Camera

Power Connection

Power can be supplied to the camera in the three ways described below. Please be sure to read the user manual for the dedicated power supply before use.

Note

- Power supply should conform to all local codes.
- The power supply should also comply with IEC/UL60950-1 (SELV/LPS) standards.
- The camera does not have a power switch. Connecting and disconnecting the LAN cable (PoE power supply), AC adapter, or external power supply plug turns the power ON and OFF, respectively.
- When the camera needs to be rebooted, perform the reboot operation from the camera setting page (please refer to the “Operation Guide” > “Setting Page” > “Maintenance”).

■ PoE (Power over Ethernet)

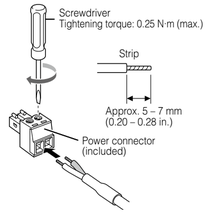
The camera supports PoE functions. Power can be supplied to the camera by using a LAN cable connected to a PoE HUB that conforms to the IEEE802.3at Type1 standard.

Important

- Check with your dealer for more information about PoE HUB and Midspan technology. Midspan (a LAN cable power supply device) is a device that, like a PoE HUB, supplies power to the camera via a LAN cable.
- Some PoE HUBs allow the limitation of currents for each port, but applying limits may interfere with performance. If using this type of PoE HUB, do not limit the operating current.
- Some PoE HUBs have limits for the total current consumption for the ports which can interfere with performance when multiple ports are in use. For more information, check the instruction guide for your PoE HUB.
- When the camera is connected to both a PoE HUB and an external power supply (12 V DC or 24 V AC), power from the power supply first connected is given priority. But when both power supplies are connected, according to the combination, problems such as failure of the network connection may occur. When a problem has occurred, either shut off the PoE HUB power supply setting or use the AC adapter that is sold separately as the external power supply.

■ External Power Supply

12 V DC or 24 V AC input can be used.
Connect the power connector included in the package, as shown below.



12 V DC can be connected in a non-polar configuration.

Important

- The power supply should be within the following voltage range.
- 24 V AC: Voltage fluctuation within ±10% of 24 V AC (50 Hz or 60 Hz ±0.5 Hz or less)
  Current supply capacity of at least 1.0 A per camera
- 12 V DC: Voltage fluctuation within ±10% of 12 V DC
  Current supply capacity of at least 1.5 A per camera
- When using a 12 V DC battery power supply, be sure to connect resistors of at least 0.5 – 1.0 Ω/20 W in series to the power line.
- For an external power supply, use a double-insulated device.

Recommended Power Cables [Reference]

Cable (AWG)		24	22	20	18	16
Conductor size	mm (in.)	ϕ0.52 (ϕ0.020)	ϕ0.65 (ϕ0.026)	ϕ0.82 (ϕ0.032)	ϕ1.03 (ϕ0.041)	ϕ1.30 (ϕ0.051)
12 V DC maximum cable length	m (ft.)	5 (16.4)	9 (29.5)	14 (45.9)	23 (75.5)	32 (105.0)
24 V AC maximum cable length	m (ft.)	11 (36.1)	18 (59.1)	29 (95.1)	46 (150.9)	64 (210.0)

Use UL cable (UL-1015 or equivalent) for 12 V DC or 24 V AC wiring.

■ AC Adapter

Please use the dedicated AC Adapter (sold separately).

External Device I/O Terminals

External device I/O terminals consist of two input and output systems each. Viewer can be used to check external device input status and control output to an external device (please refer to the “Operation Guide” > “External device output operation” and “Event display panel”).

■ External Device Input Terminals (IN1, IN2)

External device input terminals consist of two sets (IN1, IN2) of two terminals, with the negative terminals connected to the camera interior GND. Connecting cables to the positive and negative terminals and opening or closing the circuit notifies the Viewer.

Important

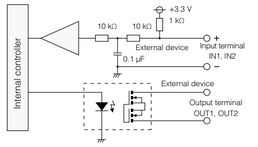
- When connecting sensors and switches, connect terminals that are electrically isolated from the respective power and GND.
- Do not push the external device I/O terminal button with too much force. Doing so may cause the button to remain pushed-in.

■ External Device Output Terminals (OUT1, OUT2)

External device output terminals consist of two sets (OUT1, OUT2) of two terminals. The sets have no polarity. Controls from the viewer can be used to open and close the circuit between the terminals. Using optical couplers, the output terminals are isolated from the camera’s internal circuit.

The load connected to the output terminals should be within the following rating range.
Rating between output terminals:
Maximum voltage 50 V DC
Continuous load current at or below 100 mA
On resistance: Max. 30 Ω

Internal Connection Diagram



Note

Adaptive wiring for external device cables
Solid conductor AWG: No. 28 – 22
Conductor size: ϕ0.32 – ϕ0.65 mm (ϕ0.013 – ϕ0.026 in.)
Cable strip should be approx. 8 – 9 mm (0.31 – 0.35 in.).

Audio Input/Output Terminals

Each audio input/output terminal only has one input system and one output system.
Connecting the camera to an audio input/output device such as a microphone or a speaker with an amplifier allows you to send/receive audio through the Viewer.
Use the ϕ3.5 mm (ϕ0.14 in.) monaural mini-jack connector to connect an audio input/output device.

■ Audio Input Terminal Common LINE IN/MIC IN (monaural input)

Although the camera only has a single audio input system, it supports two types of microphone input: LINE IN and MIC IN. Before using the audio input, please confirm the [Audio Input] on the Setting Page (please refer to the “Operation Guide” > “Audio Input”). LINE IN is selected by default.
Input terminal: ϕ3.5 mm (ϕ0.14 in.) mini jack (monaural)

- Dynamic MIC IN
  Input impedance: 1.75 kΩ ±20%
  * Supported microphones: Output impedance: 400 – 600 Ω
- Condenser MIC IN
  Input impedance (microphone bias resistance): 2.2 kΩ ±20%
  Microphone power supply: plug-in power (voltage: 1.8 V)
  * Supported microphones: Condenser microphones with plug-in power support
- LINE IN
  Input level: Max. 1 Vp-p
  * Use a microphone with an amplifier.

■ Audio Output Terminal LINE OUT (monaural output)

Connect the camera to a speaker with an amplifier. Audio can be sent to the speaker from the Viewer.
Output terminal: ϕ3.5 mm (ϕ0.14 in.) mini jack (monaural)
Output level: Max. 1 Vp-p
* Use a speaker with an amplifier.

Only for European Union and EEA (Norway, Iceland and Liechtenstein)

These symbols indicate that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU), the Battery Directive (2006/66/EC) and/or national legislation implementing those Directives.
If a chemical symbol is printed beneath the symbol shown above, in accordance with the Battery Directive, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in this battery or accumulator at a concentration above an applicable threshold specified in the Battery Directive.
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/weee, or www.canon-europe.com/battery.

CANON INC.
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