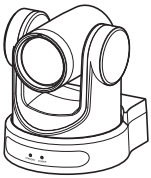
JVC

4K PTZ REMOTE CAMERA
KY-PZ400NWU/KY-PZ400NWE
KY-PZ400NBU/KY-PZ400NBE

HD PTZ REMOTE CAMERA
KY-PZ200NWU/KY-PZ200NWE
KY-PZ200NBU/KY-PZ200NBE
KY-PZ200WU/KY-PZ200WE
KY-PZ200BU/KY-PZ200BE

INSTRUCTIONS



HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE

SRT SECURE RELIABLE TRANSPORT

This illustration is KY-PZ400.
Specifications and appearance of this unit are subject to change for further improvement without prior notice.

Details

For details on settings and operation, refer to “INSTRUCTIONS” on the website.
Please check the latest INSTRUCTIONS, tools, etc. from the URL below.
North America:
http://pro.jvc.com/prof/main.jsp
Europe:
https://eu.jvc.com/#pro

North America Europe

Thank you for purchasing this product.
Before beginning to operate this unit, please read the “INSTRUCTIONS” carefully to ensure proper use of the product.
In particular, please read through the “Safety Precautions” to ensure safe use of the product. After reading, store them with the warranty card and refer to them whenever needed.
The serial number is crucial for the purpose of quality control. After purchasing this product, please check to ensure that the serial number is indicated correctly on this product, and the same serial number is also indicated on the warranty card.

For Customer Use:
Enter below the Serial No. which is located on the body.
Retain this information for future reference.

Model No.	KY-PZ400NWU/KY-PZ400NBU KY-PZ200NWU/KY-PZ200NBU KY-PZ200WU/KY-PZ200BU
Serial No.	

Please read the following before getting started:
Thank you for purchasing this product.
Before operating this unit, please read the instructions carefully to ensure the best possible performance.

In this manual, each model number is described without the last letter (U/E) which means the shipping destination.
(U: for USA and Canada, E: for Europe)
Only “U” models
(KY-PZ400NWU/KY-PZ400NBU/KY-PZ200NWU/KY-PZ200NBU/KY-PZ200WU/KY-PZ200BU)
have been evaluated by UL.

FOR USA

These are general Important Safety Instructions and certain items may not apply to all appliances.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

POUR LES ÉTATS-UNIS
Ces informations sont des CONSIGNES DE SÉCURITÉ IMPORTANTES et certains points peuvent ne pas s'appliquer à tous les appareils.

CONSIGNES DE SÉCURITÉ IMPORTANTES

1. Lire ces instructions.
2. Conserver ces instructions.
3. Tenir compte de tous les avertissements.
4. Respecter toutes les instructions.
5. Ne pas utiliser cet appareil à proximité de l'eau.
6. Ne nettoyer qu'avec un chiffon sec.
7. Ne pas boucher les ouvertures de ventilation.
   Installer selon les instructions du fabricant.
8. Ne pas installer à proximité de sources de chaleur telles que des radiateurs, des accumulateurs de chaleur, des poêles, ou d'autres appareils (comprenant les amplificateurs) qui produisent de la chaleur.
9. Protéger le cordon d'alimentation pour éviter qu'il ne soit piétiné ou ne se coince, tout particulièrement au niveau de la fiche, de la prise de courant et du point où il sort de l'appareil.
10. Utiliser uniquement des équipements/accessoires spécifiés par le fabricant.
11. N'utiliser qu'avec le chariot, le stand, le trépied, le support ou la table spécifié par le fabricant, ou vendu avec l'appareil. Lorsqu'un chariot est utilisé, faire attention pour déplacer la combinaison chariot/appareil pour éviter des blessures causées par un basculement.

12. Débrancher cet appareil pendant un orage ou quand il n'est pas utilisé pendant une longue durée.
13. L'entretien ou la réparation de l'appareil doit être effectué par du personnel qualifié uniquement. Un dépannage est nécessaire lorsque l'appareil a été endommagé d'une façon ou d'une autre, telle que lorsque le cordon d'alimentation ou la fiche est endommagé, si du liquide a été renversé ou si des objets sont tombés à l'intérieur de l'appareil, si l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement ou a fait une chute.

Safety Precautions

FOR USA AND CANADA

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

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.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

POUR CANADA

ATTENTION

RISQUE
D’ELECTROCUTION
NE PAS OUVRIR

ATTENTION:
POUR EVITER TOUT RISQUE D’ELECTROCUTION NE PAS OUVRIR LE BOITER. AUCUNE PIECE INTERIEURE N’EST A REGLER PAR L’UTILISATEUR. SE REFERER A UN AGENT QUALIFIE EN CAS DE PROBLEME.

Le symbole de l’éclair à l’intérieur d’un triangle équilatéral est destiné à alerter l’utilisateur sur la présence d’une “tension dangereuse” non isolée dans le boîtier du produit. Cette tension est suffisante pour provoquer l’électrocution de personnes.

Le point d’exclamation à l’intérieur d’un triangle équilatéral est destiné à alerter l’utilisateur sur la présence d’opérations d’entretien importantes au sujet desquelles des renseignements se trouvent dans le manuel d’instructions.

Ces symboles ne sont utilisés qu’aux Etats-Unis.

Supplier's Declaration of Conformity

Model Number:	KY-PZ400NWU/KY-PZ400NBU KY-PZ200NWU/KY-PZ200NBU KY-PZ200WU/KY-PZ200BU
Trade Name:	JVC
Responsible party:	JVCKENWOOD USA Corporation
Address:	1440 Corporate Drive, Irving, TX 75038
Telephone Number:	678-449-8879

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.

Changes or modifications not approved by JVC could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
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. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Déclaration de conformité du fournisseur

Numéro de modèle :	KY-PZ400NWU/KY-PZ400NBU KY-PZ200NWU/KY-PZ200NBU KY-PZ200WU/KY-PZ200BU
Nom de marque :	JVC
Personne responsable :	JVCKENWOOD USA Corporation
Adresse :	1440 Corporate Drive, Irving, TX 75038
Numéro de téléphone :	678-449-8879

Cet ensemble se conforme à la partie 15 des règles de la FCC (Federal Communications Commission). Le fonctionnement est sujet aux deux conditions suivantes : (1) Cet appareil ne peut pas causer d'interférences nuisibles, et (2) cet appareil doit accepter toute interférence reçue, comprenant des interférences qui peuvent causer un mauvais fonctionnement.

Des changements ou modifications non approuvés par JVC peuvent annuler le droit de l'utilisateur de faire fonctionner l'appareil. Cet appareil a été testé et il a été reconnu qu'il se conforme aux limites concernant l'appareillage informatique de classe A correspondant à la partie 15 des règles de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences dangereuses lorsque l'équipement est utilisé dans un environnement commercial.
Cet appareil génère, utilise et peut émettre de l'énergie des fréquences radio et, s'il n'est pas installé et utilisé selon les instructions du fabricant, peut causer des interférences nuisibles en communications radio. L'utilisation de cet équipement dans une zone résidentielle est susceptible de causer des interférences néfastes, auquel cas l'utilisateur devra prendre des mesures à ses propres frais.

CAUTION:
The mains plug shall remain readily operable.
- Remove the mains plug immediately if the camera functions abnormally.

WARNING:
The battery pack, the camera with battery installed, and the remote control with battery installed should not be exposed to excessive heat such as direct sunlight, fire or the like.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

NOTES:
- The rating plate and safety caution are on the bottom and/or the back of the main unit.
- The serial number plate is on the bottom of the unit.
- The rating information and safety caution of the AC adapter are on its upper and lower sides.

Attention:
La prise secteur doit être opérationnelle.
- Débranchez immédiatement la fiche secteur si le caméscope ne fonctionne pas normalement.

Avertissement:
Évitez d'exposer la batterie, le caméscope avec la batterie insérée ou la télécommande avec la batterie insérée à une chaleur excessive, telle que celle des rayons directs du soleil, d'un feu ou de tout autre source de chaleur.

AVERTISSEMENT : POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A LA PLUIE NI A L'HUMIDITE.

REMARQUES :
- La plaque d'identification et l'avertissement de sécurité se trouvent sous l'appareil et/ou au dos.
- La plaque du numéro de série est située sur la partie inférieure de l'appareil.
- Les informations d'identification et l'avertissement de sécurité de l'adaptateur secteur sont situés sur ses côtés supérieur et inférieur.

When the equipment is installed in a cabinet or on a shelf, make sure that it has sufficient space on all sides to allow for ventilation (10 cm (3-15/16") or more on both sides, on top and at the rear).
Do not block the ventilation holes.
(If the ventilation holes are blocked by a newspaper, or cloth etc. the heat may not be able to get out.)
No naked flame sources, such as lighted candles, should be placed on the apparatus.
When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

Do not point the lens directly into the sun. This can cause eye injuries, as well as lead to the malfunctioning of internal circuitry. There is also a risk of fire or electric shock.

CAUTION!

Connecting cables (Audio/Video, etc.) to this unit and leaving it on top of the TV is not recommended, as tripping on the cables will cause the unit to fall, resulting in damage.

Si le matériel est installé dans un coffret ou sur une étagère, s'assurer qu'il y a un espace suffisant sur tous les côtés pour permettre la ventilation (10 cm (3-15/16") ou plus sur les deux côtés, au dessus et à l'arrière).
Ne pas boucher les orifices de ventilation.
(Si les orifices de ventilation sont bouchés par un journal, un tissu, etc., la chaleur peut ne pas s'éliminer.)
Aucune source à flamme nue, telle que des bougies allumées, ne doit être placée sur l'appareil.
En jetant des batteries aux ordures, les problèmes d'environnement doivent être pris en considération et les réglementations locales ou la législation concernant le rebut de ces batteries doivent être strictement respectées.

L'appareil ne doit pas être exposé à de l'eau ou à des éclaboussures et les objets remplis de liquide, tels que des vases, ne doivent pas être placés sur l'appareil.

Ne dirigez pas l'objectif directement vers le soleil. Vous pourriez vous abîmer la vue et l'appareil pourrait être endommagé. Il y a aussi risque d'incendie ou d'électrocution.

Attention!

Avec des câbles (Audio/Vidéo, etc.) raccordés, il est recommandé de ne pas laisser le caméscope sur le dessus du téléviseur, car tirer sur les câbles pourrait faire tomber le caméscope, causant des dommages.

When using the AC adapter in areas other than the USA

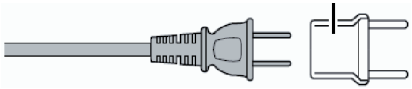
The provided AC adapter features automatic voltage selection in the AC range from 110 V to 240 V.

USING HOUSEHOLD AC PLUG ADAPTER

In case of connecting the unit's power cord to an AC wall outlet other than American National Standard C73 series type, use an AC plug adapter called a "Siemens Plug" as shown.

For this AC plug adapter, please contact the local dealers in your area.

Plug Adapter



- Remove the AC adapter from the AC wall outlet when not in use.
- Do not leave dust or metal objects adhered to the AC wall outlet or AC adapter (power/DC plug).

Lorsque vous utilisez l'adaptateur secteur ailleurs qu'aux États-Unis

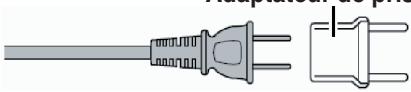
L'adaptateur secteur fourni dispose d'une sélection de tension automatique dans la plage CA de 110 V à 240 V.

UTILISATION D'UN ADAPTATEUR SECTEUR DE PRISE DOMESTIQUE

Si vous raccordez le cordon d'alimentation de l'appareil à une prise secteur autre que le modèle standard américain de série C73, utilisez un adaptateur de prise secteur appelé "Prise Siemens" comme indiqué.

Pour cet adaptateur secteur, veuillez contacter les distributeurs de votre région.

Adaptateur de prise



- Retirez l'adaptateur secteur de la prise murale lorsque vous ne l'utilisez pas.
- Veillez à ce que de la poussière ou des objets métalliques n'adhèrent sur la prise murale ou l'adaptateur secteur (prise d'alimentation/CC).

IMPORTANT (for owners in the U.K.)
Connection to the mains supply in the United Kingdom.
DO NOT cut off the mains plug from this equipment.

If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or contact the local dealers in your area.

BE SURE to replace the fuse only with an identical approved type, as originally fitted, and to replace the fuse cover.

If nonetheless the mains plug is cut off be sure to remove the fuse and dispose of the plug immediately, to avoid possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

DO NOT make any connection to the Larger Terminal coded E or Green.

The wires in the mains lead are coloured in accordance with the following code:

Blue to N (Neutral) or Black
Brown to L (Live) or Red

If these colours do not correspond with the terminal identifications of your plug, connect as follows:

Blue wire to terminal coded N (Neutral) or coloured black.

Brown wire to terminal coded L (Live) or coloured Red.

If in doubt — consult a competent electrician.

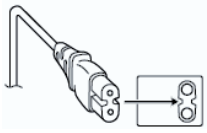
CAUTIONS:

- To prevent shock, do not open the cabinet. No user serviceable parts inside.
  Refer servicing to qualified personnel.
- When you are not using the AC adapter for a long period of time, it is recommended that you disconnect the power cord from AC outlet.

CAUTION:

Where there are strong electromagnetic waves or magnetism, for example near a radio or TV transmitter, transformer, motor, etc., the picture and the sound may be disturbed. In such case, please keep the apparatus away from the sources of the disturbance.

CAUTION:



To avoid electric shock or damage to the unit, first firmly insert the small end of the power cord into the AC Adapter until it is no longer wobbly, and then plug the larger end of the power cord in to an AC outlet.

Dear Customer

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.
European representative of JVCKENWOOD Corporation is:
JVCKENWOOD Deutschland GmbH
Konrad-Adenauer-Allee 1-11
61118 Bad Vilbel
GERMANY

Sehr geehrter Kunde, sehr geehrte Kundin, dieses Gerät stimmt mit den gültigen europäischen Richtlinien und Normen bezüglich elektromagnetischer Verträglichkeit und elektrischer Sicherheit überein.
Die europäische Vertretung für die JVCKENWOOD Corporation ist:
JVCKENWOOD Deutschland GmbH
Konrad-Adenauer-Allee 1-11
61118 Bad Vilbel
DEUTSCHLAND

FOR EUROPE

WARNING
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

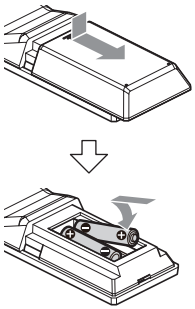
The plastics packaging bags may cause suffocation when they are covered over the head. Tear them open, and keep them away from the reach of infants and children by ensuring that they are disposed of properly.

■ Para Brasil

Informação sobre eliminação de baterias

Este produto não deverá ser eliminado como lixo doméstico em geral.
Devolva a bateria velha ao comerciante ou para a rede autorizada, para que seja devolvida ao fabricante ou importador.
A reciclagem e eliminação de lixo em uma maneira adequada, ajudarão para preservar recursos, prevenindo, ao mesmo tempo, contra efeitos prejudiciais sobre a nossa saúde e o meio ambiente.

Para Retirar a Bateria Recarregável
Pressione botão e puxe a bateria para fora.



Consult your dealer as special technique is required when installing this product. Ensure that the fixing screws or nuts are tightened securely, otherwise, the unit may fall off.

Mounting to a firm place

As the unit contain parts rotating at high speed, mount it on a firm place with sufficient strength to support the vibration and weight of the unit.
Mass : Approx. 1.7 kg **400**
Approx. 1.5 kg **200N** **200**
If the strength is weak, the vibration will cause fuzzy images on the monitor screen. In the worst scenario, the camera may even fall off and hit somebody, resulting in serious accidents.

Mount the camera correctly

When mounting the unit to the ceiling, make sure to use a ceiling mounting bracket.
Be sure to connect the fall prevention wire (sold separately) and tighten the fixing screws or nuts securely.

Using the correct power and voltage

To supply power to this unit, use a DC 12 V or PoE (IEEE802.3af) power. Make use of the correct voltage.
Use the supplied AC adapter for the DC 12 V power supply. Do not use the supplied AC adapter on other devices.

Inspect the unit regularly

Screws may be loosened due to vibration or deterioration of the mounting section. Perform regular inspections for loosened screws and check whether there is any danger of the unit falling off.

Do not hang on this product, shake it, or hang objects over it. Applying an excessive load may cause the product to fall off and result in accidents.

Do not modify this product. It may result in accidents.

Do not place any object inside the product. Placing a metallic or inflammable object may cause a fire or shock hazard.

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Content of this Manual

Symbols used

Caution : Describes precautions concerning the operation of this product.

Memo : Describes reference information, such as functions and usage restrictions of this product.

400 : Feature available on KY-PZ400NWU/KY-PZ400NWE/KY-PZ400NBU/KY-PZ400NBE only.

200N : Feature available on KY-PZ200NWU/KY-PZ200NWE/KY-PZ200NBU/KY-PZ200NBE only.

200 : Feature available on KY-PZ200WU/KY-PZ200WE/KY-PZ200BU/KY-PZ200BE only.

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Main Features

4K Ultra HD 400

Equipped with a new-generation premium-quality 1/2.5" UHD CMOS sensor with a maximum number of 8.51 megapixels, the camera supports 4K (3840 x 2160) ultra-high resolution images. It also offers downward compatibility with other resolutions including 1080p and 720p.

Equipped with a 1/2.8" CMOS sensor (2.07 megapixels) that supports HD output 200N 200

This camera is equipped with a 1/2.8" CMOS sensor (2.07 megapixels) that enables video depiction of different scenes in HD resolution.

71° wide-angle lens + 12x optical zoom 400

The camera comes with an originally-customized premium 4K ultrawide-angle lens that boasts more than 8 megapixels, a 12x optical zoom and a maximum horizontal viewing angle of 71°.

Comes with a 20x optical zoom lens 200N 200

This camera comes with a 20x high-magnification optical zoom lens that captures a large view of the subject from a far distance.

Supports UVC (USB Video Class) and usable as a web camera 200N 200

This camera can be used as a web camera by connecting it to a PC directly using a USB cable (sold separately). You can enjoy high-quality and high-magnification images during web conferences or remote meetings.

Supports the NDI|HX streaming protocol 400 200N

This camera supports the NDI|HX protocol that enables high efficiency, low bandwidth IP transmission, making it possible to connect it with NDI-compatible devices.

Supports the SRT streaming protocol

This camera supports the SRT streaming protocol to help reduce packet loss and network latency and improve the communication quality, thereby enabling stable video distribution.

Streaming in VITC that is synchronized with NTP

This camera supports the VITC (Vertical Interval Time Code) as a format for superimposing time information of the NTP (Network Time Protocol) on the video stream, and enables synchronization with multiple cameras through the network.

H.264/H.265/Motion JPEG encoding and dual streaming

This camera supports “H.265”, which has a lower bitrate than “H.264” while delivering the same level of picture quality. “Motion JPEG” offers compression in high picture quality with low latency and minimal deterioration in picture quality. It also supports dual streaming, which allows the use of two streams (First Stream and Second Stream) separately.

Low power sleep feature

The camera offers a low-power sleep/wake-up feature that consumes less than 400mW in the sleep mode.

Ultra-low light shooting

Applying the 3D noise reduction algorithm helps to reduce image noise significantly. It allows images to remain clean and clear under ultra-low light conditions.

Multiple interfaces

The camera is equipped with a HDMI and a 3G-SDI terminal.
These terminals support simultaneous HDMI and LAN output or simultaneous 3G-SDI and LAN output.

Remote Control Unit

The RS-232 and RS-485 serial ports can be used to control the camera remotely.

Built-in gravity sensor

The camera has a built-in gravity sensor to automatically detect whether it is suspended from the ceiling.

Intelligent exposure

This feature allows effective exposure compensation according to the intentions of the photographer.

Dual power supply

The camera supports dual power supply (PoE and DC IN 12V).

Precautions

Installation Location

■ Be sure to install the camera horizontally.

Storage and Usage Locations

■ Allowable ambient temperature and humidity
Be sure to use this unit within the allowable temperature range of 0 °C to 40 °C (32 °F to 104°F) and a relative humidity of 30 % to 80 %. Using this unit at a temperature or humidity outside the allowable ranges could result not only in malfunction but also serious impact on the CMOS elements as small white spots may be generated. Please exercise care during use.

■ Strong electromagnetic waves or magnetism
Noise may appear in the picture or audio and/or the colors may be incorrect if this unit is used near a radio or television transmitting antenna, in places where strong magnetic fields are generated by transformers, motors, etc., or near devices emitting radio waves, such as transceivers or cellular phones.

■ Use of wireless microphone near this unit
When a wireless microphone or wireless microphone tuner is used near this unit during recording, the tuner could pick up noise.

■ Inadequate heat ventilation may result in malfunction of this product. Be sure not to block vents around the product. This product discharges heat from the surface of the main unit.

■ Do not install it at locations directly subjected to cold air such as near the vents of air-conditioners or at locations with high temperature.

■ Avoid using or placing this unit in the following places.
- Locations beyond the allowable operating humidity range of 30 %RH to 80 %RH. (Condensation is not allowed)
- Near equipment that emits strong magnetic fields, such as transformers or motors.
- Near equipment that emits radio waves, such as transceivers and mobile phones.
- Locations with excessive dust and sand.
- Locations that are subject to vibration such as inside the car or ship.
- Locations prone to moisture such as window side.
- Locations subject to steam or oil, such as kitchens.
- Special environment, such as those with combustible atmosphere.
- Locations that are subjected to radiation, X-rays, salt attack or corrosive gases.
- Locations where chemicals are used such as swimming pools.
- Hot or cold places that are beyond the allowable ambient operating temperature range.

Transportation

■ Do not throw away the original box of the unit. Keep it and use it for transporting the unit in future.

Carrying the Camera

■ Do not drop or hit this unit against a hard object when transporting.

■ Remove the connecting cables when transporting the unit.

■ When transporting the unit, turn off the power of the system.

■ Pack the unit with cushioning material so as to avoid shock when transporting.

■ Handle the unit with care and do not subject it to vibration or shock.

Power Saving

■ If the camera is not to be used for a long time, turn off the power of the system for safety and energy conservation reasons.

Maintenance

■ Turn off the power before performing any maintenance.

■ Wipe the external cabinet of the unit with a soft cloth. Do not wipe the body with benzene or thinner. Doing so may cause the surface to melt or turn cloudy. When it is extremely dirty, soak the cloth in a solution of neutral detergent, wipe the body with it, and then use a clean cloth to remove the detergent.

License Notices

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(ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO.
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Copyright

■ Any recordings made on this camera that are played back for profit or public preview may infringe on the rights of the owner of the recordings.
Do not use the recordings for purpose other than personal enjoyment without prior consent from the owner. And even for personal enjoyment, you may not be able to record without permission from the owner.

Login Password

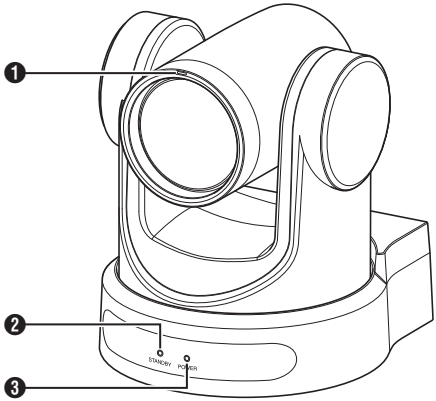
■ The default password is widely known. It is very dangerous to use the password without changing it. Set a password that is not easily guessed.
It is also recommended to change the password regularly.

Others

■ This camera will perform the initial operation of pan/tilt/zoom upon powering on.
■ The camera body may be captured in the recording depending on the pan, tilt or zoom position.
■ Do not subject the lens to strong light source such as sun rays. This may cause the equipment to malfunction.
■ During audio input/output, noise may occur when the rotation mechanism is rotated horizontally/vertically, when zooming is performed or when the power is turned on/off. This is not a malfunction.
■ The pan operation range of this product is limited to ±170 °. Regardless of the function, operation is not possible beyond this range.
■ Some switching hubs of products that are equipped with intelligent features may include a broadcast/multicast suppression function. Viewing of multicast images on this product may fail if this function is enabled.
■ The dark areas on the screen may appear grainy or white spots may increase. When switching between color and black-and-white images, the brighter area on the screen is emphasized, which may reduce the visibility. However, this is not a malfunction.
■ If the power supply voltage is momentarily cut off or reduced due to lightning or turning on of the air conditioner's power, the image may be disrupted or noise interference may occur.
■ When shooting objects with a luminance difference or near a light source, ghost may occur on the screen. This is a feature of the built-in lens, and is not a malfunction.
■ When the monitor in use has a wide display area, lines may appear at the peripheral area of the screen.
■ Operation via an infrared remote control unit may not work depending on where and how the camera is installed.
■ An afterimage can appear if you view a moving object on the monitor output, however this is not a malfunction.
■ Do not put anything into the camera unit.
Metal and flammable items entering from the connectors can result in fire or electric shock.
■ The camera may not show stable pictures for a few seconds immediately after the power is turned on, but this is not a malfunction.
■ Do not drop this unit or subject it to strong impact or vibration as it is a precision equipment.
■ Optical performance of lens
Due to the optical performance of the lens, color divergence phenomena (magnification chromatic aberration) may occur at the periphery of the image. This is not a camera malfunction.
■ Noise may appear in the image when switching modes.
■ Use the supplied AC adapter for the power supply (DC 12 V). Do not use the supplied AC adapter on other devices.
■ Use the supplied power cord. And do not use the supplied power cord for any other devices.

- Before starting an important recording, be sure to perform a test recording in order to confirm that a normal recording is possible.
- We shall not be liable for the loss of recordings or opportunities in the event that recording could not be performed due to a problem that arises during the use of the video camera or recorder.

Names of Parts

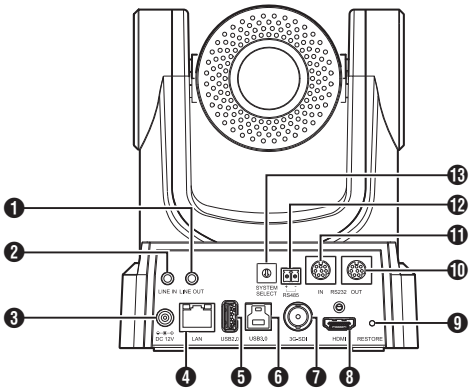


❶ Tally lamp **400**
Light turns on or goes off during external control. Turns on/off according to the menu setting and blinks depending on the status of this camera.

❷ STANDBY lamp
Lights up in green during standby.

❸ POWER lamp
Lights up in blue when the power is turned on.

Terminal Section

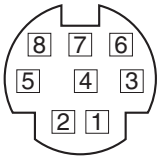


❶ LINE OUT terminal
❷ LINE IN terminal
❸ DC 12V terminal
❹ LAN terminal
❺ USB 2.0 terminal
❻ USB 3.0 terminal **200N** **200**
❼ 3G-SDI terminal
❽ HDMI terminal
❾ RESTORE switch (Reset switch)

Memo :
- Press and hold down to activate reset.

❿ RS232 OUT terminal

⓫ RS232 IN terminal
RS232 communication control
The serial port parameters are as follows.
- Half duplex mode
- Baud rate: 2400/4800/9600/38400 bps
- Start position: 1 bit
- Data bit length: 8 bits
- Stop bit length: 1 bit
- Check digit: None



RS-232C IN		RS-232C OUT	
Pin Number	Signal Name	Pin Number	Signal Name
1	DTR_IN	1	DTR_OUT
2	DSR_IN	2	DSR_OUT
3	TXD_IN	3	TXD_OUT
4	GND	4	GND
5	RXD_IN	5	RXD_OUT
6	GND	6	GND
7	IR_OUT	7	NC
8	NC	8	NC

Corresponding Pins between Camera and Windows DB-9

Camera	Windows DB-9
1.DTR	1.CD
2.DSR	2.RXD
3.TXD	3.TXD
4.GND	4.DTR
5.RXD	5.GND
6.GND	6.DSR
7.IR OUT	7.RTS
8.NC	8.CTS
	9.RI

Corresponding Pins between Camera and Mini DIN

Camera	Mini DIN
1.DTR	1.DTR
2.DSR	2.DSR
3.TXD	3.TXD
4.GND	4.GND
5.RXD	5.RXD
6.GND	6.GND
7.IR OUT	7.NC
8.NC	8.NC

⓬ RS485 terminal
- Half duplex mode
- Baud rate: 2400/4800/9600/38400 bps
- Start position: 1 bit
- Data bit length: 8 bits
- Stop bit length: 1 bit
- Check digit: None

⓭ SYSTEM SELECT switch
For selecting a video format for the HDMI or 3G-SDI output.
(☞ P34 [Video output using the SYSTEM SELECT switch])

■ When [Video]➔[Video Settings]➔[Video Format] in the web menu is configured to "Dial Priority"

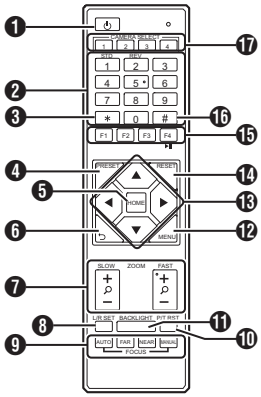
400

Terminal Number	Video Format	
	HDMI	3G-SDI
0	1920x1080/60p	1920x1080/60p
1	1920x1080/50p	1920x1080/50p
2	1920x1080/60i	1920x1080/60i
3	1920x1080/50i	1920x1080/50i
4	1920x1080/30p	1920x1080/30p
5	1280x720/60p	1280x720/60p
6	1920x1080/29.97p	1920x1080/29.97p
7	1920x1080/59.94i	1920x1080/59.94i
8	1920x1080/59.94p	1920x1080/59.94p
9	1280x720/59.94p	1280x720/59.94p
A	3840x2160/29.97p	1920x1080/29.97p
B	1920x1080/60p	1920x1080/60p
C	3840x2160/25p	1920x1080/25p
D	3840x2160/30p	1920x1080/30p
E	1920x1080/25p	1920x1080/25p
F	1280x720/50p	1280x720/50p

200N **200**

Terminal Number	Video Format	
	HDMI	3G-SDI
0	1920x1080/60p	1920x1080/60p
1	1920x1080/50p	1920x1080/50p
2	1920x1080/60i	1920x1080/60i
3	1920x1080/50i	1920x1080/50i
4	1920x1080/30p	1920x1080/30p
5	1280x720/60p	1280x720/60p
6	1920x1080/29.97p	1920x1080/29.97p
7	1920x1080/59.94i	1920x1080/59.94i
8	1920x1080/59.94p	1920x1080/59.94p
9	1280x720/59.94p	1280x720/59.94p
A	1920x1080/60p	1920x1080/60p
B	1920x1080/60p	1920x1080/60p
C	1920x1080/60p	1920x1080/60p
D	1920x1080/60p	1920x1080/60p
E	1920x1080/25p	1920x1080/25p
F	1280x720/50p	1280x720/50p

Infrared Remote Control



❶ STANDBY button
Switches between the standby and normal modes.

Memo :
- Power consumption in the standby mode is approximately half of that in the normal mode.

❷ NUMBER button
For preset configuration or invoking a preset number.

❸ ✳ button
To be used together with other buttons.

❹ PRESET button
Stores the preset position.
[PRESET] + NUMBER button (1 to 9):
Stores the preset position in the selected NUMBER button.

Memo :
- Press the buttons above in sequence.

❺ HOME button
Restores the orientation of the camera to face the front.
Functions as a confirmation button when the menu is displayed.

❻ RETURN button
Functions as a cancel button when the menu is displayed.

❼ ZOOM button
SLOW ZOOM:
Zooms in [+] or zooms out [-] the camera at a low speed.
FAST ZOOM:
Zooms in [+] or zooms out [-] the camera at a high speed.

❽ L/R SET button
Press the button together with the NUMBER button [1] or [2] at the same time to pans the camera toward the left or right.
- Pressing the left or right side of the [L / R SET] + [1] (STD) at the same time pans the camera toward the left or right accordingly.
- Pressing the left or right side of the [L / R SET] + [2] (REV) at the same time pans the camera toward the right or left accordingly. This setting comes in handy in cases such as when the camera is suspended from the ceiling.

❾ FOCUS button
For adjusting the focus.
- [AUTO]:
  Auto Focus mode (AF)
- [MANUAL]:
  Manual Focus mode (MF)
  - During MF, focus is adjusted using [FAR] (for setting focus on a distant subject) and [NEAR] (for setting focus on a nearby subject).

❿ P/T RST button
Resets the pan and tilt positions.

⓫ BACKLIGHT button
Press the button to enable backlight compensation. Pressing the button again disables backlight compensation.

Memo :
- This feature is available only when [Exposure] is configured to “Auto”.
- Use this feature when there is a light source behind the subject that causes the subject to appear dark in the image.

⓬ MENU button
Displays the menu or exits the menu display.

⓭ PAN/TILT CONTROL button
Press the arrow button to pan or tilt the camera.
Pressing the [HOME] button restores the orientation of the camera to face the front.
Moves the cursor when the menu is displayed.

⓮ RESET button
Erases the preconfigured settings.
[RESET] + NUMBER button (0 to 9):
Erases the preset position in the selected NUMBER button.
[✳] + [#] + [RESET]:
Erases all the preset positions.

Memo :
- Press the buttons above in sequence.

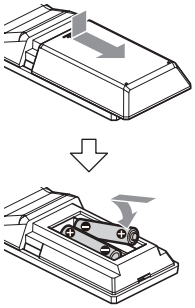
⓯ IR REMOTE CONTROL button
For configuring the number of the camera you want to control using the infrared remote control.
[✳] + [#] + [F1]: Address 1
[✳] + [#] + [F2]: Address 2
[✳] + [#] + [F3]: Address 3
[✳] + [#] + [F4]: Address 4

Memo :
- Press the buttons above in sequence.

⓰ # button
To be used together with other buttons.

⓱ CAMERA SELECT button
Press the number of the camera you want to control using the infrared remote control.

Memo :
- The remote control unit makes use of 2 AAA dry-cell batteries.
- Make sure to load the battery in the correct +/- orientation.



Caution :
- Do not place the remote control at a location that is subject to high temperature. Otherwise, the remote control may be deformed, thus resulting in malfunction.
- Place the batteries at a location that is out of reach of children. In the event that the battery is swallowed by mistake, consult a doctor immediately.
- Do not throw the batteries into fire or place them at a location that is subject to high temperature. Otherwise, the batteries may explode.
- When replacing the batteries, use ones that are of the same model or type. Using a different type of battery may cause it to explode.

Image freeze feature

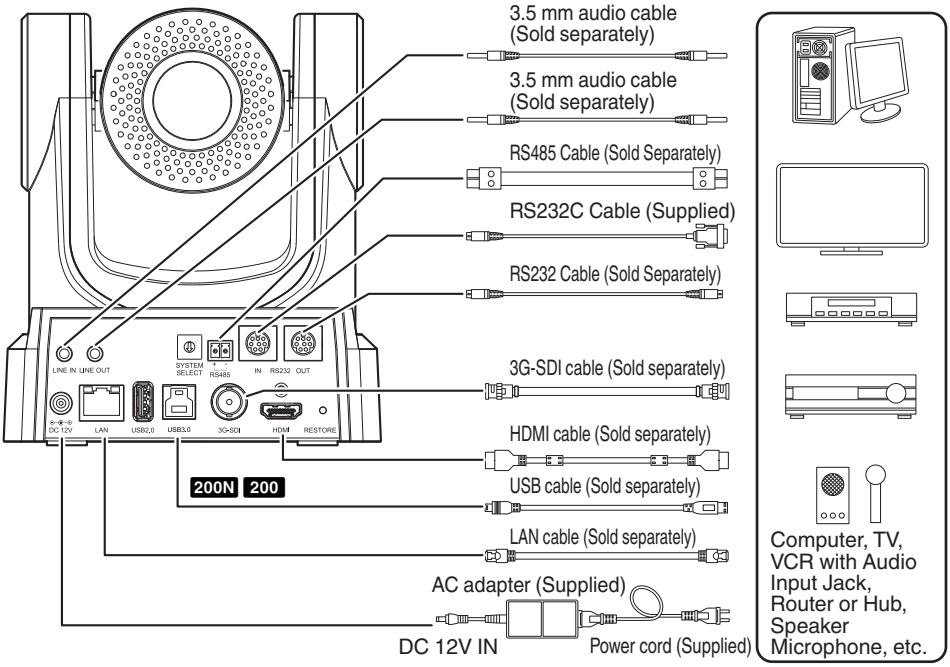
Pressing the [F4] button freezes the video image and displays a “freeze” caption at the top left corner of the screen for about 5 seconds. Pressing the [F4] button again unfreezes and restores the video image to the original state. An “unfreeze” caption will appear at the top left corner of the screen for about 5 seconds.

Shortcut settings

[✳] + [#] + [1]:
Configures the default language of the menu to English.
[✳] + [#] + [3]:
Configures the default language of the menu to Chinese.
[✳] + [#] + [4]:
Displays the current IP address.
[✳] + [#] + [6]:
Resets all menu settings to the default values.
[✳] + [#] + [8]:
Displays the camera version.
[✳] + [#] + [9]:
Flips the video image horizontally or vertically.
[✳] + [#] + [MANUAL]:
Restores the default IP address.

Memo :
Press the buttons above in sequence.

Basic System Diagram



Quick Start

① Check to ensure that the connections are correct before turning on the power.

② Connect the AC adapter to the DC 12 V terminal. The POWER lamp lights up.

③ Initialization is activated after the camera is powered on. The camera lens moves to both the horizontal and vertical limit positions. Initialization is complete after it has moved back to the front view position.

Memo :

- Operation is possible when the light of the STANDBY lamp has turned off.
- If Preset 1 is preconfigured, the camera will move to the Preset 1 position.

Use as a USB camera 200N 200

This camera can be used as a USB camera by connecting the USB3.0 port to a PC using a USB cable (sold separately).

Memo :

- Streaming from the camera will not take place while it is connected to a PC via USB.
- To start video streaming, disconnect the USB connection with the PC and restart the camera.

Mounting the Camera to the Ceiling Mount Bracket

- Be sure to put on protective glasses to protect your eyes from falling objects when mounting the camera.
- Be sure to place the base of the camera horizontally. The camera will not operate properly if it is slanted.

Memo :

- The ceiling mount bracket is not necessary when the camera is installed on a desktop or attached to a tripod.
- If necessary, make a hole (Φ40 mm) to route the connection cable and fall prevention wire (ceiling) into the ceiling.

Caution :

- The fall prevention wire (for ceiling) is not supplied. Make use of the wire while taking note of its length, strength, pull and material (insulation).
- Attach the fall prevention wire (ceiling) to a place with sufficient strength (ceiling slab, etc.).
- Take note of the length, strength, pull and material (insulation) of the fall prevention wire (for ceiling) and use one with a wire strength of 150 N (15 kg) or more.
- The inner diameter of the ring section of the fall prevention wire (ceiling) mounted on the camera should be above Φ3 mm but below Φ4 mm, the outer diameter should be Φ9 mm and below, and the thickness 2 mm and below.
- The camera does not come with mounting screws for attaching it to the ceiling. Make appropriate use of the M5 expansion screws (x4) according to the thickness of the ceiling.

1 **Place the ceiling mounting bracket (ceiling side) against the ceiling and mark the mounting position on the ceiling**

Memo :

- Take note of the front direction of the camera when placing the marks.

2 **Drill holes into the ceiling at the marked positions**

Memo :

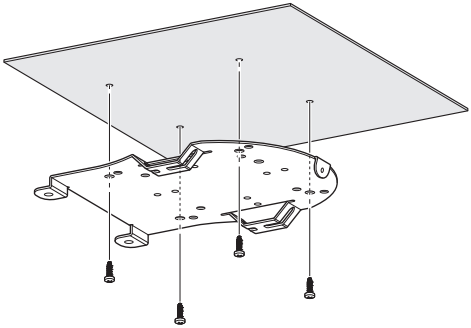
- Insert a straw or toothpick into the mounting holes to determine the depth and required length of the screws.

3 **Place the ceiling mounting bracket (ceiling side) against the ceiling again at the marked position**

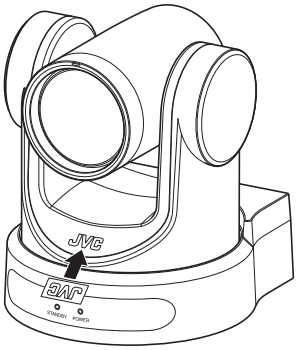
4 **Fasten the mounting bracket using the M5 expansion screws (sold separately)**

Memo :

- Check that the screws are tighten securely when mounting is completed.



Attaching Label to the Camera



Before installing the camera to the ceiling, attach the JVC logo label as illustrated in the diagram.

1 **Peel off the label backing**

2 **Turn the label upside down**

3 **Align the center position of "V" of the JVC logo on the camera with that on the label, followed by attaching the label**

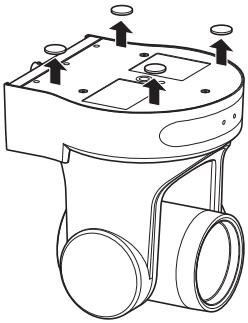
Memo :

- If there is dust or dirt on the surface, remove accordingly before attaching the label.
- Make sure that the JVC logo label is not tilted when attaching.

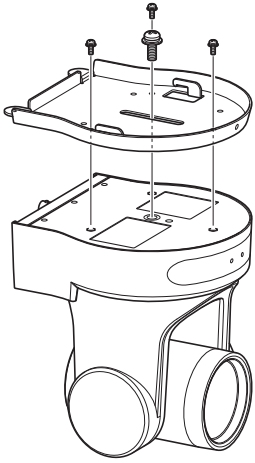
Installing the Camera on the Ceiling

Configure the video format settings using the SYSTEM SELECT switch before installing.
You are recommended to update the firmware to the latest version before installing.
(☞ P26 [Firmware Update])

1 **Remove the 4 feet from the bottom surface of the camera**

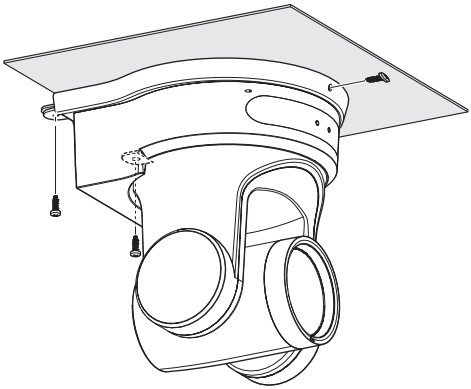


2 **Use three M3 screws and one 1/4 inch screw that come with the camera to attach the ceiling mounting bracket (camera side) to the bottom surface of the camera**

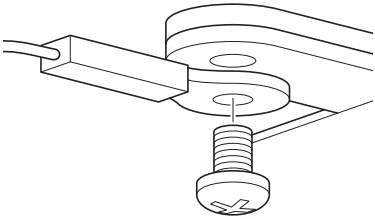


3 **Mount the camera to the ceiling mount bracket (ceiling side)**
Attach the hook on the ceiling mounting bracket (camera side) to the hole on the ceiling mounting bracket (ceiling side).

4 **Use three M3 screws that come with the camera to attach**



Fasten the drop prevention wire (sold separately) together with one of the screws.



Connect the cables after these procedures.

Installing the Camera on a Desktop

Configure the video format settings using the SYSTEM SELECT switch before installing.
You are recommended to update the firmware to the latest version before installing.
(☞ P26 [Firmware Update])

- Place the camera on a flat surface.
- Be sure to place the base of the camera horizontally. The camera will not operate properly if it is slanted.

Memo :

- The use of ceiling mount bracket is not required.

Caution :

- Do not move the camera while the power of the system is on. Doing so may result in malfunctions or accidents.
- Do not hold the camera head while carrying the camera.

Connect the cables after these procedures.

Attaching the Camera to a Tripod

Configure the video format settings using the SYSTEM SELECT switch before installing.

- Attach a tripod using the screw hole at the bottom of this product.
  (1/4-20UNC, ISO1222 (6.35 mm))
- To prevent the camera from falling off, which may result in injuries or damages, read the “INSTRUCTIONS” of the tripod to be used and make sure that it is securely attached.
- To ensure proper pan/tilt operation, set the tripod such that the camera is parallel to the horizontal surface.

Memo :

- The use of ceiling mount bracket is not required.

Caution :

- If the camera exceeds the weight limit of the tripod, do not mount it on the tripod.
- Use the tripod on a stable surface.
- Use screws with a screw length between 4.5 mm and 7 mm.
- Do not install the camera at a high location when the camera is attached to a tripod.

Connect the cables after these procedures.

Connecting the Cables

1 **Connect the cables**
- Connecting to an HDMI/SDI monitor allows you to check the camera images.
- To input or output the audio, connect the audio cables respectively to the LINE IN/OUT terminals.

2 **Connect the LAN cable.**

Caution :

- Connect to the LAN cable to devices (routers, hubs, computers, etc.) that are certified under the Telecommunications Business Act.

3 **Connect the power cable.**
- To supply power from an AC adapter, connect an AC adapter cable.
- To supply power via PoE, do not connect the AC adapter cable.

4 **After the power turns on, the POWER lamp lights up and initialization starts**
The camera lens moves to both the horizontal and vertical limit positions. Initialization is complete after it has moved back to the front view position.

Memo :

- Operation is possible when the light of the STANDBY lamp has turned off.
- If Preset 1 is preconfigured, the camera will move to the Preset 1 position.

Caution :

- Do not supply power through the AC adapter cable and LAN cable at the same time.

Warning

To supply power to this unit, use a DC 12 V or PoE (IEEE802.3af) power. Make use of the correct voltage.
Supplying a power beyond the rated value may result in failures, smoke or fire. If the camera breaks down, turn off the power and contact our service center immediately.
When a power beyond the rated value is supplied, the internal components may be damaged even if no abnormality is found on the appearance and operation of the camera.
Please contact our service center immediately for servicing (charged separately).

Network Features

Operating Environment

Operation has been verified for the following environments.

- Computer
  - OS: Windows 10
    Web browser: Google Chrome
  - OS: macOS 10.12. 6
    Web browser: Google Chrome

Checking the IP address

There are two ways to identify the IP address of the camera.

① Press ✳, # and the number 4 button on the remote control in sequence to display the IP address of the camera on the screen of the HDMI/SDI monitor connected to the monitor.

② Connect the camera to a PC on the same network and run “upgrade_standard.exe”.

Memo :

- Download the “upgrade_standard.exe” from the URL stated on the cover page.

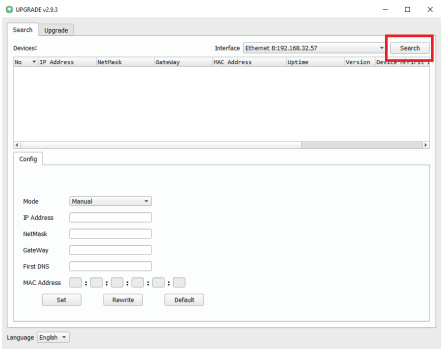
IP address settings

There are two ways to configure the IP address of the camera.

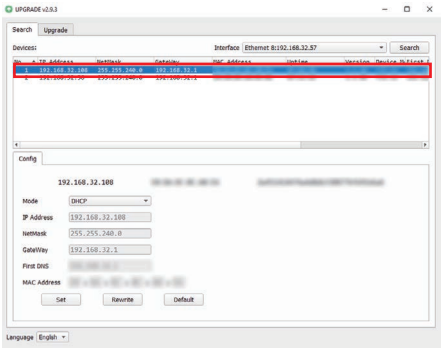
① Log in to the web page, and select [Network] ➡ [Lan Settings] to make changes to the IP address, subnet mask and gateway. Click “Submit” to restart the camera.

② Use “upgrade_standard.exe” to set the IP address.

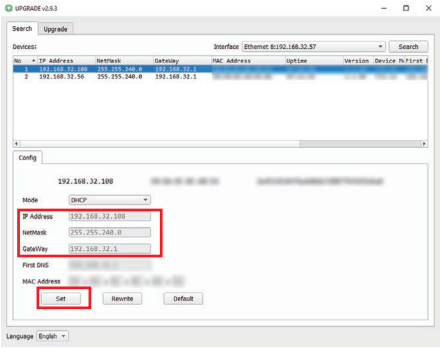
1 Click the [Search] button



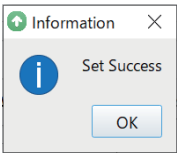
2 Select the IP address of the camera you want to change



3 After changing the value of “IP Address”, “NetMask”, and “GateWay” is complete, click the [Set] button



- When the setting is successful, the following display appears and the camera restarts.



Confirming the Connection

***1* Start up the web browser on the terminal you wish to connect to the camera, and enter the IP address in the address field**
(Example: http://192.168.0.10)

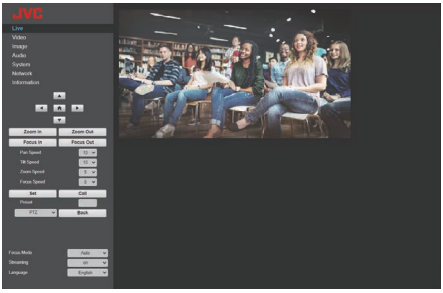
Memo :

- The default IP address of camera is 192.168.0.10.

***2* Enter the user name and password**
Enter the user name (jvc) and the password (initial password: 0000) on the login screen to display the Live View screen.

Memo :

- The screen for changing the password is displayed when you log in for the first time. Please change the password.



Firmware Update

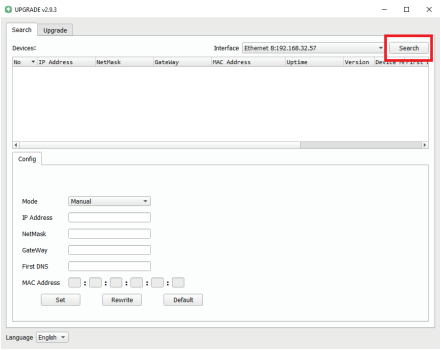
Update the firmware of the camera from a Windows PC.
You are recommended to update the firmware to the latest version once it has been released to the public.

Memo :

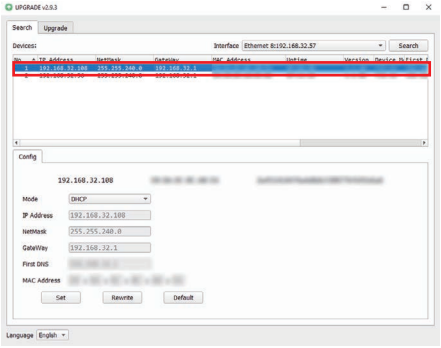
- Download “upgrade_standard.exe” and the firmware update file from the URL link on the cover page of this manual.

1 Connect the camera to a PC on the same network and run “upgrade_standard.exe” on the PC.

2 Click the [Search] button
Cameras connected on the same network are displayed.

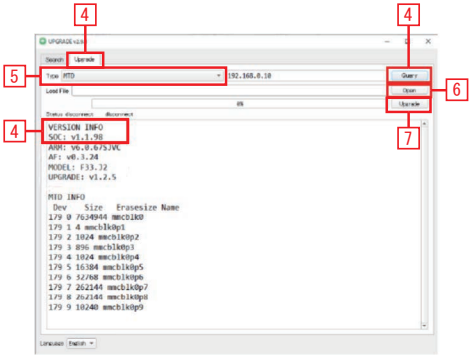


3 Select the camera to update



4 Click the [Query] button under the [Upgrade] tab
The current firmware version is displayed.

5 Click the [Type] button and select “MTD”

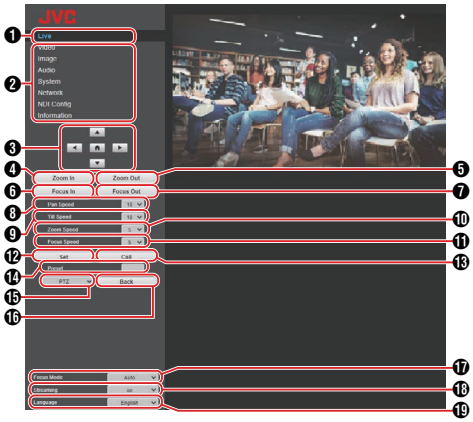


6 Click the [Open] button and select the update file (.img file)

7 Click the [Upgrade] button
Update of the firmware starts.
Update is complete when “Upgrade Success” is displayed.

8 After update is complete, press and hold the “RESTORE” switch on the terminal area at the back of the camera
The camera settings are initialized.

View Remote Screen



Memo :

- Some menu items may not be configurable depending on the operating mode and status of the camera.

❶ Live
Displays the camera's video image.

Memo :

- Audio is not output.
- Supports full-screen display.
- To display the menu on the live screen, configure [Encode Codec] of [First stream] or [Second stream] to "H.264". If the menu display is too small, increase the [Resolution] for [First stream] or [Second stream] accordingly.

❷ Settings menu selection switch
Displays the different settings menus.

❸ Pan/tilt, menu control and HOME buttons
Moves the camera in one of the ◀▶▲▼ directions.
Pressing the HOME button restores the pan, tilt and zoom positions to the default setting.
If the camera menu is open, move the cursor using ◀▶▲▼, followed by pressing the HOME button to confirm.

Memo :

- Selecting "OSD" at ⓯ Pan/tilt operation/ Camera menu call-up enables camera menu operation. Selecting "PTZ" enables the camera operation.

❹ Zoom In button
Moves the zoom toward the Tele-end.

❺ Zoom Out button
Moves the zoom toward the Wide-end.

❻ Focus In button
Moves the focus toward the Tele-end when the camera is in the manual focus mode.

❼ Focus Out button
Moves the focus toward the Wide-end when the camera is in the Manual Focus mode.

❽ Horizontal speed control
For configuring the speed of horizontal movement.
[Setting Values: 1 to ● 10 to 24]

❾ Vertical speed control
For configuring the speed of vertical movement.
[Setting Values: 1 to ● 10 to 20]

❿ Zoom speed control
For specifying the zooming speed.
[Setting Values: 1 to ● 5 to 7]

⓫ Focus speed control
For setting the focusing speed.
[Setting Values: 1 to ● 5 to 7]

⓬ Preset button
Saves the current pan/tilt/zoom position to the preconfigured preset number.

⓭ Preset number
After configuring the preset number, pressing ⓬ Preset button saves the pan/tilt/zoom position. Pressing ⓮ Preset Call button moves the camera to the saved pan/tilt/zoom position.
[Setting Values: 1 to 255]

⓮ Preset Call button
Calls up the corresponding pan/tilt/zoom position using a preset number.

Memo :

- The camera will not move if a pan/tilt/zoom position is not stored in the selected preset number.

⓯ Pan/tilt operation/ Camera menu call-up
Selecting "OSD" displays the camera menu on the live video of the web browser, streaming video and HDMI (SDI) screen.
You can use the buttons in ❸ to move the menu cursor and confirm a selection.
Selecting "PTZ" closes the camera menu. You can use the buttons in ❸ for pan/tilt operation.

⓰ Back button
Returns to the next higher level in the menu during menu operation.

⓱ Focus mode
Switches between Auto Focus and Manual Focus.

⓲ Streaming button
Switches streaming to on or off.

⓳ Language button
For configuring the display language on the web screen.
[Setting Values: ●English, Français, Deutsch, Italiano, Español, русский, 中文(簡), 日本語]

Video

This is the setting screen for the HDMI/SDI terminal and streaming video.
After configuring the different items, press the [Submit] button.
The settings will be applied when the camera is next restarted.

Video Settings

↳ HDMI/SDI Output

For selecting the video output destination.
[Setting Values: ●HDMI, SDI]

↳ Video Format

For selecting the video output frame rate.
[Setting Values: 50Hz, 60Hz, ●Dial Priority]
(☞ P34 [Selecting the Video Output Resolution and Frame Rate])

↳ Encode Level

For selecting a streaming video encoding level.
[Setting Values: ●mainprofile, highprofile]

Memo :

- If [Encode Codec] for [First Stream] or [Second Stream] is configured to “H.265”, the setting is fixed at “mainprofile”.

First Stream, Second Stream

RTSP and RTMP(S) allow simultaneous streaming of videos in the First Stream and Second Stream settings.

↳ Encode Codec

For selecting the streaming video codec.
[Setting Values: ●H.264, H.265, MJPEG]

↳ Resolution

For selecting the streaming video resolution.
[Setting Values (First Stream): 3840x2160 400, ●1920x1080, 1280x720, 1024x576, 720x480, 720x408, 640x480, 640x360]
[Setting Values (Second Stream): 720x480, 720x408, 640x480, ●640x360, 480x320, 320x240]

Memo :

- The selectable resolutions vary according to the SYSTEM SELECT switch setting.

↳ Bit Rate

For configuring the bitrate of the video stream when [Encode Codec] is configured to “H.264” or “H.265”.
[Setting Values: 32kbps to 61440kbps]

↳ Qfactor

For configuring the Q value when [Encode Codec] is configured to “MJPEG”.
[Setting Values: 1 to 99]

↳ Frame Rate

For configuring the streaming video frame rate.

Memo :

- The selectable frame rates vary according to the SYSTEM SELECT switch setting.

↳ I Key Frame Interval

Performs encoding with the I-frame as the starting point.
Lowering the value to shorten the interval helps to maintain a stable picture quality even when there are rapid changes in the video image. However, the picture quality for video images with little change will deteriorate.
[Setting Values: 2 to 60]

Memo :

- The selectable I-frame intervals vary according to the SYSTEM SELECT switch setting.

↳ Bit Rate Control

For selecting Constant Bitrate (CBR) or Variable Bitrate (VBR).
[Setting Values: ●CBR, VBR]

Image

For adjusting the video quality.
After configuring the different items, press the [Submit] button.

Memo :

- If the camera is restarted without pressing the [Submit] button, the settings will be restored to those before the change.
  Pressing the [Default] buttons restores the settings to the factory default.
- To display the menu on the camera's video image, configure [Encode Codec] of [First stream] or [Second stream] to "H.264". If the menu display is too small, increase the [Resolution] for [First stream] or [Second stream] accordingly.

Brightness

For adjusting the brightness.
[Setting Values: 0 to 14 (●7)]

Saturation

For adjusting the saturation.
[Setting Values: 0 to 14 (●4)]

Contrast

For adjusting the contrast.
[Setting Values: 0 to 14 (●7)]

Sharpness

For adjusting the sharpness.
[Setting Values: 0 to 11 (●6)]

Hue

For adjusting the hue.
[Setting Values: 0 to 14 (●7)]

Flip

Flips the image vertically.
[Setting Values: on, ●off]

Mirror

Flips the image horizontally.
[Setting Values: on, ●off]

Audio

This is the setting screen for the HDMI terminal, SDI terminal and streaming audio.
After configuring the different items, press the [Submit] button.
The settings will be applied when the camera is next restarted.

Audio Settings

↳ Audio Switch

Configuring to "on" enables audio input from the LINE IN terminal.
[Setting Values: ●on, off]

Memo :

- This setting remains valid when the camera is connected to a PC via USB. 200N 200

↳ Audio Type

Fixed at AAC.

↳ Sample Rate

For configuring the sampling rate.
[Setting Values: 44.1K, ●48K]

↳ Bit Rate

For configuring the bitrate.
[Setting Values: ●96K, 128K]

↳ Input Type

Fixed at "LINE IN".

↳ Input Vol

For configuring the volume of the audio input.
[Setting Values: 1 dB to 59 dB (●20 dB)]

↳ ADTS Options

For configuring the ADTS option.
[Setting Values: on, ●off]

System

For restarting the system and management of users.

Initialize

↳ Reboot

Restarts the camera. Use this function to apply new video or audio settings.

User

↳ UserName

User name for accessing the camera from the web browser.
Fixed at “jvc”.

↳ Passwd

For configuring the password for accessing the camera from a web browser.

Memo :

- The password cannot be configured to the default password value (0000).

↳ Guest

User name when logging in as a guest.

Memo :

- When logged in as a guest, you will only be able to view the live and device information screens.

↳ Passwd

For configuring the password when logging in as a guest.

Network

For configuring network-related settings.
After configuring the different items, press the [Submit] button.
For Lan Settings, press the [Submit] button below Lan Settings. For other settings, press the [Submit] button right at the bottom.
The settings will be applied when the camera is next restarted.

Lan Settings

↳ IP Configuration Type

For selecting the method for configuring the IP address.
[Setting Values: Dynamic IP Address, ●Fixed IP Address]

↳ IP Address

Displays the current IP address.
The IP address of the camera can be configured manually when IP Configuration Type is configured to “Fixed IP Address”.
The default value is 192.168.0.10.

↳ Subnet Mask

Displays the address of the current subnet mask.
The subnet mask of the camera can be configured manually when IP Configuration Type is configured to “Fixed IP Address”.

↳ Gateway

Displays the address of the current default gateway.
The default gateway of the camera can be configured manually when IP Configuration Type is configured to “Fixed IP Address”.

↳ DNS Address

Displays the current DNS address.
The DNS address of the camera can be configured manually when IP Configuration Type is configured to “Fixed IP Address”.

↳ MAC Address

Displays the MAC address of the camera.

Memo :

- Not changeable.

Port Settings

↳ HTTP Port

For configuring the HTTP port.
[Setting Values: ●80 or 1025 to 65535]

↳ RTSP Port

For configuring the RTSP port.
[Setting Values: ●554 or 1025 to 65535]

↳ TCP Port

For configuring the TCP port.
[Setting Values: 1025 to 65535 (●5678)]

↳ UDP Port

For configuring the UDP port.
[Setting Values: 1025 to 65535 (●1259)]

↳ Standard Protocol

Displays the Standard Protocol port number.

Memo :

- Not changeable.

RTMP(S) Settings

↳ First Stream

For configuring the RTMP(S) First Stream video.
Configure the setting to “on”, select the checkbox corresponding to the “Video” and “Audio” to be streamed, followed by pressing the Save button. RTMP(S) streaming will start after the camera is restarted.
The default value is “off”.

Memo :

- The settings in [Video]-[First Stream] will be applied as the video settings.

↳ Second Stream

For configuring the RTMP(S) Second Stream video.
Configure the setting to “on”, select the checkbox corresponding to the “Video” and “Audio” to be streamed, followed by pressing the Save button. RTMP(S) streaming will start after the camera is restarted.
The default value is “off”.

Memo :

- The settings in [Video]-[Second Stream] will be applied as the video settings.

↳ MRL

For configuring the streaming server address for the RTMP(S) First Stream/Second Stream.
[Default Value: rtmp://192.168.100.138/live/stream0]

SRT Settings

↳ SRT

Configuring it to “on” and pressing the Save button starts SRT streaming after the camera is restarted.

↳ SRT Mode

For configuring the SRT connection mode.
[Setting Values: ●Listener, Caller]

↳ SRT Server

For setting the address of the SRT server.
The default value is 192.168.100.1.

Memo :

- SRT Mode is configurable only when the setting is set to “Caller”.

↳ SRT Port

For configuring the SRT port for use during live streaming.
The default value is “4578”.

↳ SRT Encryption

For configuring SRT encryption.
[Setting Values: AES-256, AES-192, AES-128, ●None]

↳ SRT Password

For configuring the SRT password.
You can enter up to 10 to 15 characters.

↳ SRT Bandwidth Overhead

Enter the SRT bandwidth overhead using an integer between 5% and 100%.
The default value is “25%”.

↳ SRT Latency

Enter the amount of SRT latency using an integer between 20 ms and 8000 ms.
The default value is “500ms”.

↳ SRT FEC

For configuring the FEC mode.
It enables recovery of data streaming packet loss without retransmission.
[Setting Values: 6x6, 8x8, 10x10, ●Off]

↳ SRT StreamId

For setting the registered stream ID of the live distribution destination. It allows direct streaming of multiple cameras on a single device.

* You can enter up to 50 characters.

Memo :

- Input and change are possible only when [SRT Mode] is configured to “Caller”.

RTSP Settings

↳ RTSP Auth

Configuring to “on”, the user name and password are required to receive streaming.
[Setting Values: on, off]

Multicast Settings

↳ Multicast

Configuring to “on” enables RTP (Real-time Transport Protocol) multicast streaming.
[Setting Values: on, ●off]

Memo :

- This item is active only when [Encode Codec] is set to “H.264”.

↳ Address

For entering the IP address for multicast.
The default value is “224.1.2.3”.

↳ Port

For configuring the port number used for multicasting to a value between 1025 and 65533.
The default value is “6688”.

ZeroConfig

For allowing this camera to be detected automatically by external devices (such as switchers) connected to the same LAN. Connection can be established via one link from the menu of the external device.

Memo :

- The Zero Config function is not equipped with the function to change the settings of the camera.

↳ Announcement

For configuring the method of connection from an external device during automatic detection of this camera.
[Setting Values: ●on, off]

↳ Hostname Prefix

Part of the host name can be changed. (Up to 8 characters)

NTP Settings

Enables display of time information acquired from the NTP server on the streaming video.

↳ NTP time sync

Configuring to “on” enables time information to be acquired from the NTP server.
[Setting Values: ●on, off]

↳ Time Zone

For setting the GMT time difference in units of 1 hour.
[Setting Values: GMT-11:00 to GMT+13:00 (●GMT+08:00)]

↳ Server address

For setting the address of the NTP server.

↳ Time interval(min)

For configuring the interval between time queries to the NTP server to a value between 0 and 99999.
[Default Value: 1440]

↳ Main time show, Sub time show

Configuring to “on” displays the NTP time information on the streaming video.
[Setting Values: on, ●off]

Memo :

- To display the NTP time information on the live screen, configure [Encode Codec] of [First Stream] or [Second Stream] to “H.264”. If the display is too small, increase the [Resolution] for [First Stream] or [Second Stream] accordingly.

↳ Position

For configuring the position for displaying the First Stream time or Second Stream time.
Configure the display position with the top left corner of the screen as [X0, Y0] and the bottom right corner as [X100, Y100].

NDI Config 400 200N

This is the setting screen for the NDI (Network Device Interface) protocol.

NDI Settings

↳ NDI Local Device Name

For configuring the device name displayed in the NDI application.
Default value: “PZ400” 400, “PZ200” 200N

↳ NDI Receive Group

For configuring the group name to be used for the NDI application.
The default value is “public”.

↳ NDI Firmware Version

Displays the NDI firmware version.

Information

Information

↳ Device ID

For configuring the device name of this unit.

↳ Device Type

Displays the device type of this unit.

↳ Software Version

Displays the current software version.

↳ Webware Version

Displays the current web-based software version.

↳ Open Source License

Displays the license for the open source software used by this camera.

Basic Shooting Procedures

Preparations

1 **Supply power to the camera via a LAN cable or AC adapter**
(☞ P23 [Connecting the Cables])

2 **Configure the IP address of the camera**
For viewing the IP address of the camera and configuring the IP address.
(☞ P24 [Checking the IP address])
(☞ P24 [IP address settings])

3 **Check the connection**
(☞ P25 [Confirming the Connection])

Memo :

- You are recommended to operate this camera by connecting it to a PC or a controller. The supplied infrared remote control unit might not work depending on the conditions of installation.

Selecting the Video Output Resolution and Frame Rate

On this unit, the SYSTEM SELECT switch is used to configure the HDMI/SDI output resolution and frame rate and determine the selectable streaming formats.
(☞ P36 [Supported Streaming Formats])

Video output using the SYSTEM SELECT switch

Configure the SYSTEM SELECT switch according to the HDMI/SDI format to be output.

Memo :

- After changing the SYSTEM SELECT switch setting, restart the camera.

■ When [Video]➡[Video Settings]➡[Video Format] in the web menu is configured to “Dial Priority”

HDMI OUTPUT	SDI OUTPUT	Frame Rate	SYSTEM SELECT Switch
3840x2160 400 1920x1080 200N 200	1920x1080	30p	D
		29.97p	A
		25p	C
1920x1080		60p	0, B
		59.94p	8
		50p	1
		30p	4
		29.97p	6
		25p	E
		60i	2
		59.94i	7
		50i	3
1280x720	1280x720	60p	5
		59.94p	9
		50p	F

■ When [Video]➡[Video Settings]➡[Video Format] in the web menu is configured to “60Hz”

HDMI OUTPUT	SDI OUTPUT	Frame Rate	SYSTEM SELECT Switch
3840x2160 400 1920x1080 200N 200	1920x1080	30p	A, C, D
1920x1080		60p	0, 1, 4, 6, 8, B, E
		60i	2, 3, 7
1280x720	1280x720	60p	5, 9, F

■ When [Video]➡[Video Settings]➡[Video Format] in the web menu is configured to “50Hz”

HDMI OUTPUT	SDI OUTPUT	Frame Rate	SYSTEM SELECT Switch
3840x2160 400 1920x1080 200N 200	1920x1080	25p	A, C, D
1920x1080		50p	0, 1, 4, 6, 8, B, E
		50i	2, 3, 7
1280x720	1280x720	50p	5, 9, F

Performing Live Streaming

By combining with the decoder or PC application that supports live streaming, you can perform audio and video streaming via the network.

Supported Codecs

H.264, H.265, Motion JPEG

Memo :

- When the supported codec is configured to “H.265” and the resolution to “3820x2160”, live streaming is possible only for RTSP/RTP.

Supported Formats

[Streaming resolution (First Stream)]
3840x2160 400, 1920x1080, 1280x720, 1024x576, 720x480, 720x408, 640x480, 640x360
[Streaming resolution (Second Stream)]
720x480, 720x408, 640x480, 640x360, 480x320, 320x240
[Frame rate (when streaming resolution is 3840x2160)] 400
30p, 29.97p, 25p
[Frame rate (for streaming resolutions other than 3840x2160)]
60p, 59.94p, 50p, 30p, 29.97p, 25p
[Audio]
AAC, 44.1kHz/48kHz, 96kbps/128kbps

Memo :

- The range of configurable resolutions and bitrates varies according to the codec that has been selected.
- Depending on the type of network adapter used and the connection, images and audio sound during live streaming may be choppy.

Supported Protocols

RTSP/RTP, RTMP/RTMPS, SRT, Multicast, NDI|HX 400 200N

Memo :

- Multicast is active only when the supported codec is configured to “H.264”.

Setting Distribution

1. **Configure the SYSTEM SELECT switch**
   Change the SYSTEM SELECT switch setting according to the resolution and frame rate to be used for streaming, followed by restarting the camera.
   (☞ P36 [Supported Streaming Formats])
2. **Configure the streaming video and audio format**
   Configure the codec, resolution, frame rate and bitrate settings in [Video] and [Audio] of the View Remote.
3. **Set the distribution protocol**
   Configure the streaming protocol and related items in the [Network] settings of the View Remote.
4. **Restart the camera**
   After configuring the items, press the [Submit] button followed by the [Reboot] button in the [System] menu to restart the camera.

Receive streaming data

Streaming starts automatically after the camera has restarted. Configure the necessary settings for the decoder and PC application to receive streaming data.

■ URL when receiving streaming data using RTSP/RTP

- First Stream

rtsp://<IP address of this unit>:<Port no.>/1

- Second Stream

rtsp://<IP address of this unit>:<Port no.>/2

■ URL when receiving streaming data using SRT

srt://<IP address of this unit>:<Port no.>?mode=<SRT mode>

■ When receiving streaming data using RTMP(S)

Enter the server and stream key into the MRL field under the RTMP(S) setting in the [Network] settings of the View Remote, and view the content from the designated video link after restarting the camera.

■ URL when receiving streaming data using Multicast

rtp://<IP address for multicast>:<Port no.>

■ When receiving streaming data using NDI|HX 400 200N

Install the NDI Tools on the PC for viewing. For more information, please refer to the instruction manual of the NDI Tools.

Supported Streaming Formats

Streaming formats that are supported using the SYSTEM SELECT switch setting are as follows. Configure the SYSTEM SELECT switch according to the format to be used for streaming.

■ When [Video]➡[Video Settings]➡[Video Format] in the web menu is configured to “Dial Priority”

SYSTEM SELECT Switch	Frame Rate (Max.)	Stream	Resolution								
			3840x2160 400	1920x1080	1280x720	1024x576	720x480	720x408	640x480	640x360 *2	480x320	320x240
D	30p	First	✓	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓*1	✓	✓
A	29.97p *3	First	✓	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓*1	✓	✓
C	25p	First	✓	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓*1	✓	✓
0, 2, 5, B	60p	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓
7, 8, 9	59.94p *4	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓
1, 3, F	50p	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓
4	30p	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓
6	29.97p *3	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓
E	25p	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓

*1 When [Resolution] of [First Stream] is configured to 3840x2160, the [Resolution] for [Second Stream] can only be configured to 640x360. 400

*2 When [Encode Codec] of [Second Stream] is configured to “MJPEG”, the [Resolution] for [Second Stream] can only be configured to 640x360.

*3 Configuring [Frame Rate] to “30fps” streams videos at 29.97p.

*4 Configuring [Frame Rate] to “60fps” streams videos at 59.94p.

■ When [Video]➡[Video Settings]➡[Video Format] in the web menu is configured to “60Hz”

SYSTEM SELECT Switch	Frame Rate (Max.)	Stream	Resolution									
			3840x2160 400	1920x1080	1280x720	1024x576	720x480	720x408	640x480	640x360*2	480x320	320x240
A, C, D	30p	First	✓	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓*1	✓	✓
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, B, E, F	60p	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓

*1 When [Resolution] of [First Stream] is configured to 3840x2160, the [Resolution] for [Second Stream] can only be configured to 640x360. 400

*2 When [Encode Codec] of [Second Stream] is configured to “MJPEG”, the [Resolution] for [Second Stream] can only be configured to 640x360.

■ When [Video]➡[Video Settings]➡[Video Format] in the web menu is configured to “50Hz”

SYSTEM SELECT Switch	Frame Rate (Max.)	Stream	Resolution									
			3840x2160 400	1920x1080	1280x720	1024x576	720x480	720x408	640x480	640x360*2	480x320	320x240
A, C, D	25p	First	✓	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓*1	✓	✓
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, B, E, F	50p	First	–	✓	✓	✓	✓	✓	✓	✓	–	–
		Second	–	–	–	–	✓	✓	✓	✓	✓	✓

*1 When [Resolution] of [First Stream] is configured to 3840x2160, the [Resolution] for [Second Stream] can only be configured to 640x360. 400

*2 When [Encode Codec] of [Second Stream] is configured to “MJPEG”, the [Resolution] for [Second Stream] can only be configured to 640x360.

Menu Screen Hierarchical Chart

Menu ..... (☞ P 39)
- EXPOSURE ..... (☞ P 39)
  - Mode ..... (☞ P 39)
  - ExpCompMode ..... (☞ P 39)
    - ExpComp ..... (☞ P 39)
  - Backlight ..... (☞ P 39)
  - Iris ..... (☞ P 40)
  - Shutter ..... (☞ P 40)
  - Gain ..... (☞ P 40)
  - Bright ..... (☞ P 40)
  - Gain Limit ..... (☞ P 40)
  - Anti-Flicker ..... (☞ P 40)
  - Meter ..... (☞ P 40)
  - DRC ..... (☞ P 40)
- COLOR ..... (☞ P 41)
  - WB Mode ..... (☞ P 41)
  - RG Tuning ..... (☞ P 41)
  - BG Tuning ..... (☞ P 41)
  - R Gain ..... (☞ P 41)
  - B Gain ..... (☞ P 41)
  - Saturation ..... (☞ P 41)
  - Hue ..... (☞ P 41)
- IMAGE ..... (☞ P 42)
  - Luminance ..... (☞ P 42)
  - Contrast ..... (☞ P 42)
  - Sharpness ..... (☞ P 42)
  - Flip-H ..... (☞ P 42)
  - Flip-V ..... (☞ P 42)
  - B&W Mode ..... (☞ P 42)
  - Style ..... (☞ P 42)
- P/T/Z ..... (☞ P 42)
  - SpeedByZoom ..... (☞ P 42)
  - AF-Zone ..... (☞ P 42)
  - AF-Sense ..... (☞ P 42)
  - L/R Set ..... (☞ P 42)
  - Display Info ..... (☞ P 42)
  - Image Freeze ..... (☞ P 42)
  - Digital Zoom ..... (☞ P 42)
  - Call Preset Speed ..... (☞ P 42)
  - Pre Zoom Speed ..... (☞ P 42)
- NOISE REDUCTION ..... (☞ P 43)
  - NR3D-Level ..... (☞ P 43)
- SETUP ..... (☞ P 43)
  - Language ..... (☞ P 43)
  - DVI Mode ..... (☞ P 43)
  - SDI-3G Mode ..... (☞ P 43)
  - Video Output ..... (☞ P 43)
  - Auto Inversion ..... (☞ P 43)
  - Tally Mode ..... (☞ P 43)
- COMMUNICATION SETUP ..... (☞ P 43)
  - Protocol ..... (☞ P 43)
  - V_Address ..... (☞ P 43)
  - V_AddrFix ..... (☞ P 43)
  - Net Mode ..... (☞ P 43)
  - P_D_Address ..... (☞ P 43)
  - P_P_Address ..... (☞ P 43)
  - Baudrate ..... (☞ P 43)
- Restore Default ..... (☞ P 44)
  - Restore? ..... (☞ P 44)
  - P/T Limit Reset ..... (☞ P 44)

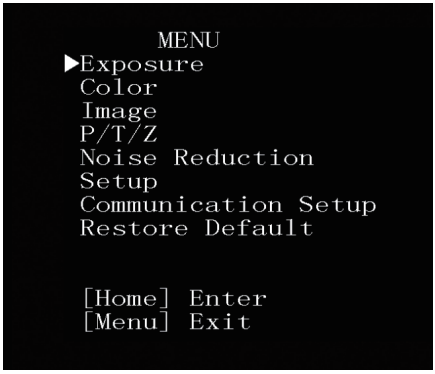
Memo :

- Some menu items may not be configurable depending on the operating mode and status of the camera.
- Setting value with the ● mark is the factory default.

GUI Settings

Menu

Pressing the [MENU] button on the infrared remote control unit displays the main menu on the HDMI/SDI and streaming screens. You can move the cursor using the arrow buttons. Use the [HOME] button to enter the corresponding menu.



Memo :

- To display the menu on the video image on the View Remote screen, configure [Encode Codec] of [First Stream] or [Second Stream] to “H.264”. If the menu display is too small, increase the [Resolution] for [First Stream] or [Second Stream] accordingly.

Exposure

Mode

For selecting the method for controlling the exposure.

- Auto
  Gain/Shutter/Iris are adjusted automatically.
- Manual
  Gain/Shutter/Iris operate according to the menu setting.
- SAE
  Shutter speed is configured according to the setting in the [Shutter] menu, while gain and iris is automatically adjusted.
- AAE
  Iris is configured according to the setting in the [Iris], while gain and shutter speed are automatically adjusted.
- Bright
  Adjusts the brightness of the RAW data.

[Setting Values: ●Auto, Manual, SAE, AAE, Bright]

ExpCompMode

Performs exposure compensation when this is configured to “On”.
[Setting Values: ●Off, On]

Memo :

- This item can be configured when [Mode] is set to “Auto”.

↳ ExpComp

Adjusts the exposure compensation value.
[Setting Values: -7 to +7 (●0)]

Memo :

- This item can be configured when [ExpCompMode] is set to “On”.

Backlight

For configuring backlight compensation.
[Setting Values: ●Off, On]

Memo :

- This item can be configured when [Mode] is set to “Auto”.

Iris

For configuring the iris value (F number).
[Setting Values: ●F1.8, F2.0, F2.4, F2.8, F3.4, F4.0, F4.8, F5.6, F6.8, F8.0, F9.6, F11.0, Close]

Memo :

- This item can be configured when [Mode] is configured to “Manual” or “AAE”.

Shutter

For configuring the shutter speed.

- For “60Hz” [Video Format]
  [Setting values: 1/30, 1/60, 1/90, 1/100, ●1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000]
- For “50Hz” [Video Format]
  [Setting values: 1/25, 1/50, 1/75, 1/100, ●1/120, 1/150, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000]

Memo :

- This item can be configured when [Mode] is configured to “Manual” or “SAE”.
- “1/30” can be selected when frame rate is configured to 30p/29.97p, and “1/25” can be selected when frame rate is configured to 25p. (☞ P34 [Selecting the Video Output Resolution and Frame Rate])

Gain

This function electrically boosts the light sensitivity when there is insufficient illumination on the object. You can set the gain of the video amplifier according to the brightness of the object.
[Setting Values: 0 to 15 (●2)]

Memo :

- This item can be configured when [Mode] is set to “Manual”.

Bright

Adjusts the brightness.
[Setting Values: 0 to 17 (●7)]

Memo :

- This item can be configured when [Mode] is set to “Bright”.

Gain Limit

For configuring the maximum value for automatically switching the gain level according to the brightness.
[Setting Values: 1 to 15 (●9)]

Memo :

- This item can be configured when [Mode] is configured to “Auto”, “SAE”, “AAE” or “Bright”.

Anti-Flicker

For correcting video image flicker that occurs under a fluorescent light.

400

- For “60Hz” [Video Format]
  [Setting Values: 50Hz, ●60Hz, Off]
- For “50Hz” [Video Format]
  [Setting Values: ●50Hz, 60Hz, Off]

200N 200

[Setting Values: 50Hz, 60Hz, ●Off]

Memo :

- This item can be configured when [Exposure] is configured to “Auto”, “AAE” or “Bright”.

Meter

Shutter speed, iris (F number) and ISO speed are controlled to adjust the exposure to an appropriate level according to the brightness of the subject in the [Mode] settings. Use this setting to configure the method of compensation in this case.
[Setting Values: ●Average, Center, Smart, Top]

Memo :

- This item can be configured when [Mode] is configured to “Auto”, “SAE”, “AAE” or “Bright”.

DRC

Adjusts the intensity of DRC.
[Setting Values: 0 to 8 (●0)]

Color

WB Mode

For setting the white balance mode.

- Auto
  Automatically adjusts the white balance according to the color temperature of the lighting for illuminating the subject.
- Indoor
  For configuring to a color temperature that is suitable for indoor shooting.
- Outdoor
  For configuring to a color temperature that is suitable for outdoor shooting.
- OnePush
  When “OnePush” is selected, pressing the [HOME] button adjusts the white balance according to the color temperature of the lighting that is currently used to illuminate the subject.
- Manual
  Enables adjustment of the color temperature using R gain and B gain.

[Setting Values: ●Auto, Indoor, Outdoor, OnePush, Manual]

RG Tuning

Fine-tunes the R (red) component.
[Setting Values: -10 to +10 (●0)]

Memo :

- This item can be configured when [WB Mode] is set to “Auto”.

BG Tuning

Fine-tunes the B (blue) component.
[Setting Values: -10 to +10 (●0)]

Memo :

- This item can be configured when [WB Mode] is set to “Auto”.

R Gain

Adjusts the R (red) gain in the Manual mode.
[Setting Values: 0 to 255 (●213)]

Memo :

- This item can be configured when [WB Mode] is set to “Manual”.

B Gain

Adjusts the B (blue) gain in the Manual mode.
[Setting Values: 0 to 255 (●177)]

Memo :

- This item can be configured when [WB Mode] is set to “Manual”.

Saturation

Adjusts the color density.
[Setting Values: 60% to 200% (●90%)]

Hue

For setting the color phase.
[Setting Values: 0 to 14 (●7)]

Image

Luminance

For adjusting the brightness.
[Setting Values: 0 to 14 (●7)]

* When [Style] is set to a value other than “Bright”

[Setting Values: 0 to 14 (●8)]

* When [Style] is set to “Bright”

Contrast

For adjusting the contrast.
[Setting Values: 0 to 14 (●7)]

* When the [Style] item is configured to “Default” or “Norm”

[Setting Values: 0 to 14 (●9)]

* When the [Style] item is configured to “Bright” or “PC”

Sharpness

Adjusts the outline correction value.
[Setting Values: 0 to 11 (●6)]

* When the [Style] item is configured to “Default” or “Norm”

[Setting Values: 0 to 11 (●7)]

* When the [Style] item is configured to “Bright” or “PC”

Flip-H

Flips the video image in the horizontal direction.
[Setting Values: ●Off, On]

Flip-V

Flips the video image in the vertical direction.
[Setting Values: ●Off, On]

B&W Mode

Switches the video to a grayscale display.
[Setting Values: ●Off, On]

Style

For configuring the picture quality adjustment mode.
[Setting Values: ●Default, STD, Bright, PC]

Memo :

- The settings will not be reset even when you press the RESTORE switch.

P/T/Z (P/T/Z)

SpeedByZoom

Configuring to “On” reduces the speed of pan/tilt movement further as the camera zooms toward the Tele-end.
[Setting Values: ●On, Off]

AF-Zone

For configuring the auto focus reference area.
[Setting Values: ●Center, Bottom, Front, Top]

AF-Sense

Adjusts the auto focus sensitivity level.
[Setting Values: ●High, Low, STD]

L/R Set

Inverts the pan operation.

STD : Use the Right cursor button to move to the right, and the Left button to move to the left

REV : Use the Right cursor button to move to the left, and the Left button to move to the right

[Setting Values: ●STD, REV]

Display Info

Configuring to “On” shows a “Registration is complete” OSD when you have registered a preset position.
[Setting Values: ●On, Off]

Image Freeze

Setting to “On” displays the video image before movement starts as a still image during the interval after preset starts until the camera has reached the registered position.
[Setting Values: ●Off, On]

Digital Zoom

For configuring the digital zoom factor.
[Setting Values: ●Off, 2x, 4x, 8x, 16x]

Call Preset Speed

For configuring the preset pan/tilt speed.
[Setting Values: 1 to 24 (●20)]

Pre Zoom Speed

For configuring the preset zoom speed.
[Setting Values: 0 to 7 (●5)]

Noise Reduction

NR3D-Level

For configuring 3D noise reduction.
[Setting Values: Auto, Off, 1 to 11 (●6)]

Setup

Language

Switches between languages in the menu screen.
[Setting Values: ●English, Français, Deutsch, Italiano, Español, русский, 中文, 日本語]

DVI Mode

For configuring the audio output from the HDMI terminal.
HDMI : Outputs the audio.
DVI : Mutes the audio.
[Setting Values: ●HDMI, DVI]

Memo :

- Press the [HOME] button to confirm the selection and restart the camera.

SDI-3G Mode

For setting the 3G-SDI mapping structure.
[Setting Values: ●LEVEL-A,LEVEL-B]

Video Output

For setting the terminal to output the video.
[Setting Values: ●HDMI, SDI]

Memo :

- Press the [HOME] button to confirm the selection and restart the camera.

Auto Inversion

For configuring the auto flip setting of the video output.
On : Flips the video image when the camera is mounted to the ceiling. Video is not flipped when the camera is installed on a desktop.
Off : Does not flip the video image when the camera is mounted to the ceiling.
[Setting Values: ●On, Off]

Tally Mode 400

For configuring whether to light up the tally lamp at the front of the camera.
[Setting Values: ●On, Off]

Communication Setup

Protocol

For configuring the control protocols.
[Setting Values: ●Standard, PELCO-D, PELCO-P, Auto]

V_Address

For configuring the address of the Standard protocol.
[Setting Values: 1 to 7 (●1)]

Memo :

- This item can be configured when [Protocol] is configured to “Standard” or “Auto”.

V_AddrFix

For configuring the necessity of the Address Set command.
On : Address Set command is not needed.
Off : Address Set command is needed.
[Setting Values: ●Off, On]

Memo :

- This item can be configured when [Protocol] is configured to “Standard” or “Auto”.

Net Mode

For configuring the serial port network control.
[Setting Values: ●Serial, Parallel]

Memo :

- This item can be configured when [Protocol] is configured to “Standard” or “Auto”.

P_D_Address

For configuring the address of PELCO-D.
[Setting Values: 0 to 254 (●1)]

Memo :

- This item can be configured when [Protocol] is configured to “PELCO-D” or “Auto”.

P_P_Address

For configuring the address of PELCO-P.
[Setting Values: 0 to 31 (●0)]

Memo :

- This item can be configured when [Protocol] is configured to “PELCO-P” or “Auto”.

Baudrate

For configuring the baud rate of the serial port.
[Setting Values: 2400, 4800, ●9600, 38400]

Restore Default

Restore?

Resets all the menu item settings except for the language setting.
[Setting Values: No, Yes]

Memo :

- Press the [HOME] button to confirm the selection.
  Preset values will also be initialized.
  IP address, web password and View Remote settings will not be initialized.

P/T Limit Reset

Resets only the menu settings.
[Setting Values: No, Yes]

Memo :

- Press the [HOME] button to confirm the selection.

Troubleshooting

Problem	Action
Video image does not appear on the monitor	• Check to ensure that the power supply of the camera is properly connected, the power voltage is normal and the POWER lamp is on at all times. • Restart the camera and check whether the camera has been initialized. • Check the video format setting and whether the monitor cable is properly connected.
Sometimes the video image is not displayed	Check the video format setting and whether the monitor cable is properly connected.
Video image becomes blurry when zoomed to the Tele end	• Check whether the camera is installed at a stable location. • Check to ensure that there are no vibrating machines or objects near the camera.
Video image does not appear on the Web browser	You can use the VLC media player to receive video and audio streams. Access the VLC website. (http://www.videolan.org/vlc) Download and install the VLC media player.
Unable to access camera from the Web browser	① Access the network using a PC to test whether network access is functioning properly. ② Disconnect from the network, connect the camera and the PC separately, and reset the IP address of the PC. ③ Check the IP address, subnet mask and gateway settings of the camera. ④ Check to ensure that there is no conflict in the MAC address. ⑤ Check whether the HTTP port is occupied by a different device.
I forgot the IP address or login password	Manage the password properly to avoid forgetting it. If you forgot the password, reset the camera to return to its default settings. (Default IP address: 192.168.0.10; default user name: jvc; default password: 0000)
Unable to control using the remote control unit	• Replace the batteries in the remote control with new ones and check again. • Check whether the camera is in the correct operation mode. • Check whether the camera number configured using the remote control unit matches the number of the camera.
Unable to control via the serial port	• Check to ensure that the protocol and address of the camera are consistent. • Check whether the cables are properly connected.
Video and audio distortion during streaming	• If the [Encode Codec] is configured to “H.264” or “H.265”, changing the [Bit Rate] may improve the condition. • If [Encode Codec] is configured to “MJPEG”, changing the [Qfactor] may improve the condition.

Specifications

General

Item	Description
Power	DC 12 V (when an AC adapter is used) PoE
Current consumption	400: 0.62 A (*1), 0.18 A (*2) 200N 200: 0.65 A (*1), 0.19 A (*2)
Mass	400: Approx. 1.7 kg 200N 200: Approx. 1.5 kg
Allowable operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Allowable operating humidity	30 %RH to 80 %RH (No condensation)
Allowable storage temperature	-20 °C to 50 °C (-4 °F to 122 °F)
Dimensions (W × H × D) (*3)	400: 141.5 mm x 164.5 mm x 168.4 mm 200N 200: 141.5 mm x 164 mm x 168.4 mm
MTBF	> 30000 h

*1 Operated in the factory default settings when an AC adapter is in use.
*2 Operated in the factory default settings when using power supply from a PoE via a LAN cable.
*3 When the tilt position is horizontal.

Terminal Section

Item	Description
[LINE IN] terminal	Φ3.5 mm Line input
[LINE OUT] terminal	Φ3.5 mm line output
[RS485] terminal	2-pin Phoenix port Protocols: Standard/Pelco-D/ Pelco-P
[RS232 IN] terminal	8-pin mini DIN Protocols: Standard/Pelco-D/ Pelco-P
[RS232 OUT] terminal	8-pin mini DIN Protocol: Use only Standard network
[LAN] terminal	RJ-45 PoE power supply: DC 37 V to 57 V Ethernet: 10BASE-T/ 100BASE-TX/1000BASE-T
[3G-SDI] terminal	BNC type 720p/1080i/1080p: embedded audio 3G-SDI: SMPTE ST424-compliant HD-SDI: SMPTE ST292-compliant
[HDMI] output terminal	Type A
[USB 2.0] terminal	USB-A type
[USB 3.0] terminal 200N 200	USB-B type
[DC 12V] terminal	For use with the supplied AC adapter

Lens/Camera

Item	Description
Lens	400: 12x, f = 4.4 mm to 52.8 mm, F1.8 to F2.6 200N 200: 20x, f = 4.42 mm to 88.5 mm, F1.8 to F2.8
Image pickup device	400: 1/2.5-inch Progressive CMOS, maximum effective pixel: 8.51 Megapixels 200N 200: 1/2.8-inch Progressive CMOS, maximum effective pixel: 2.07 Megapixels
Digital Zoom	16x
Shutter	1/25 s to 1/10000 s
White balance	Auto, Indoor, Outdoor, One-push, Manual
Backlight compensation	Available
Digital noise reduction	3D digital noise reduction
H&V flip	Available
Image freeze	Available
No. of presets	255
Preset accuracy	0.1°

Rotation Mechanism Section

Item	Description
Horizontal viewing angle	400: 71° to 8.2° 200N 200: 60.7° to 3.36°
Vertical viewing angle	400: 42.7° to 4.5° 200N 200: 34.1° to 1.89°
Horizontal rotation range	±170°
Vertical rotation range	-30° to +90°
Horizontal rotation speed	1.7° to 100°/second
Vertical rotation speed	1.7° to 69.9°/second

Video

Item	Description
Signal system 400	3840x2160/30p, 25p, 29.97p 1920x1080/60p, 50p, 30p, 25p, 59.94p, 29.97p, 60i, 50i, 59.94i 1280x720/60p, 50p, 59.94p
Signal system 200N 200	1920x1080/60p, 50p, 30p, 25p, 59.94p, 29.97p, 60i, 50i, 59.94i 1280x720/60p, 50p, 59.94p

Network

Item	Description
Video compression	H.264, H.265, Motion JPEG
Video stream	First Stream Second Stream
First Stream resolution	3840x2160 400, 1920x1080, 1280x720, 1024x576, 720x480, 720x408, 640x480, 640x360
Second Stream resolution	720x480, 720x408, 640x480, 640x360, 480x320, 320x240
Video bit rate	32 kbps to 61140 kbps
Bit rate type	CBR, VBR
Frame rate	60fps, 59.94fps, 50fps, 30fps, 29.97fps, 25fps
Audio compression	AAC
Audio bit rate	96 kbps,128 kbps
Protocols	Control: Standard, NDI|HX 400 200N Streaming: RTSP/RTP, RTMP/RTMPS, SRT, Multicast, NDI|HX 400 200N

Infrared Remote Control

Item	Description
Remote control system	Infrared type
Battery	AAA dry-cell battery x 2
Battery life	Approx. 1 year (varies with the frequency of use)
Operating distance	8 m (horizontal distance from the front)
Allowable operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Dimensions (W × H × D)	46 mm × 20.8 mm × 168.1 mm
Mass	Approx. 90 g

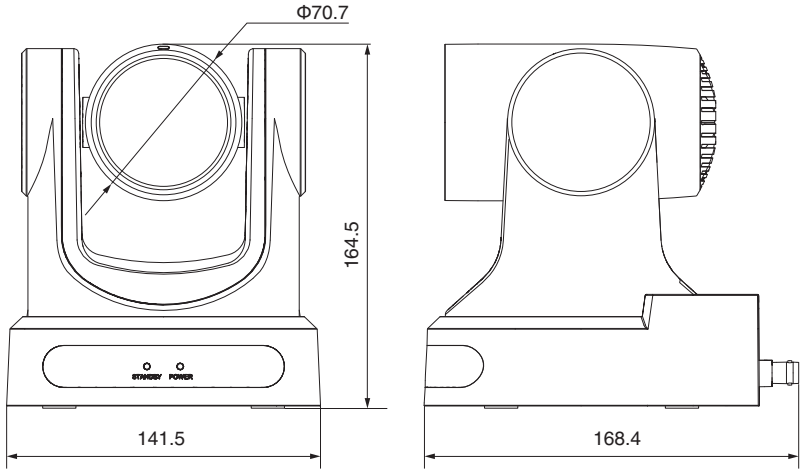
Accessories

Accessories	
Warranty Card (U model only)	1
保修卡 (E model only / For China)	1
INSTRUCTIONS (Installation/IP Address Settings)	1
使用说明书(安装/IP 地址设置) (E model only / For China)	1
AC Adapter	1
Power Cord (U model: 1, E model: 2)	
RS232C cable	1
Remote control unit	1
Ceiling mount bracket set	1
Screws (M3)	6
Screw (1/4")	1
JVC logo label	2
Lens cap	1

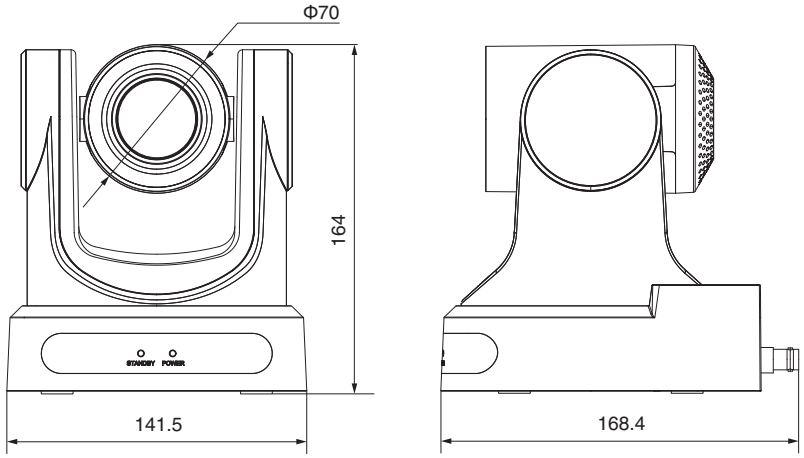
* The warranty card can be found inside INSTRUCTIONS (Installation/IP Address Settings).

Dimensional Outline Drawing (Unit: mm)

KY-PZ400N



KY-PZ200N/KY-PZ200



* The specifications and appearance of this product are subject to changes for further improvement without prior notice.

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① Access the camera from the Web browser
② Click "Information" on the left side of the screen
③ Press the "Open Source License" button in the "Information" menu screen

4K PTZ REMOTE CAMERA
KY-PZ400NWU/KY-PZ400NWE/KY-PZ400NBU/KY-PZ400NBE
HD PTZ REMOTE CAMERA
KY-PZ200NWU/KY-PZ200NWE/KY-PZ200NBU/KY-PZ200NBE/
KY-PZ200WU/KY-PZ200WE/KY-PZ200BU/KY-PZ200BE

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