JVC

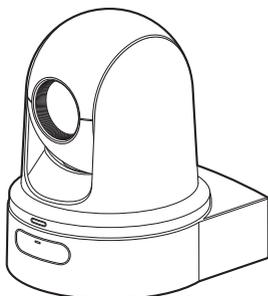## HD PTZ REMOTE CAMERA

KY-PZ100WU / KY-PZ100WE
KY-PZ100BU / KY-PZ100BE

INSTRUCTIONS
(Installation/IP Address Settings)

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:
http://www.service.jvcpro.eu/public/
China:
http://www.jvc.com.cn/service/download/index.html

Please read the following before getting started:

Thank you for purchasing this JVC 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-PZ100WU/KY-PZ100BU) have been evaluated by UL.

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

Model No.   KY-PZ100WU/KY-PZ100BU
Serial No.

B5A-1712-00

FOR USA
These are general IMPORTANT SAFEGUARDS and certain items may not apply to all appliances.

IMPORTANT SAFEGUARDS

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.

CAN ICES-3 A / NMB-3 A

For USA-California Only
This product contains a CR Coin Cell Lithium Battery which contains Perchlorate Material – special handling may apply.
See www.dtsc.ca.gov/hazardouswaste/perchlorate

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.

This device complies with Part 15 of 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.

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.

CAUTION:

The mains plug shall remain readily
operable.
● Remove the mains plug immediately if
the camera functions abnormally.

WARNING:

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.**

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

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.

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.

Caution on Replaceable lithium battery
The battery used in this device may
present a fire or chemical burn hazard if
mistreated.
Do not recharge, disassemble, heat
above 100°C (212°F) or incinerate.
Replace battery with Panasonic, Sanyo,
Sony or Maxell CR2025.
Danger of explosion or risk of fire if the
battery is incorrectly replaced.
● Dispose of used battery promptly.
● Keep away from children.
● Do not disassemble and do not dispose
of in fire.

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.

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).

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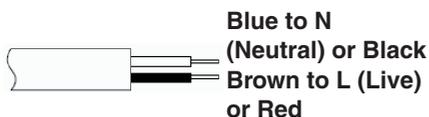
If these colours do not correspond with the terminal identifications of your plug, connect as follows:

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.

FOR EUROPE

This equipment is in conformity with the provisions and protection requirements of the corresponding European Directives.
This equipment is designed for professional video appliances and can be used in the following environments:
● Controlled EMC environment (for example, purpose-built broadcasting or recording studio), and rural outdoors environments.

In order to keep the best performance and furthermore for electromagnetic compatibility we recommend to use cables not exceeding the following lengths:

| Port	Cable	Length
DC	Exclusive Cable	1.8 m
LAN	LAN Cable	3 m
HDMI	Shielded Cable	2.5 m
SDI	Coaxial Cable	3 m
AUDIO	Shielded Cable	4.5 m
RS-232C IN/OUT	Shielded Cable	2 m
RS-422	LAN Cable	2 m

The inrush current of this apparatus is 4.5 A.

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.
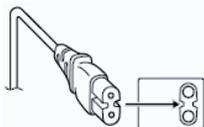
FOR EUROPE

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.

Dear Customer

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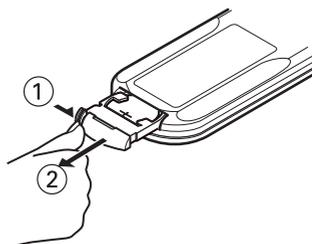Konrad-Adenauer-Allee 1-11
61118 Bad Vilbel
GERMANY

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 JVC KENWOOD Corporation ist:
JVC Technical Services Europe GmbH
Konrad-Adenauer-Allee 1-11
61118 Bad Vilbel
DEUTSCHLAND

■ 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.

Importer (EU only)
JVCKENWOOD U.K. Limited
12 Priestley Way, London NW2 7BA,
UNITED KINGDOM

Importeur (Nur EU)
JVCKENWOOD Deutschland GmbH
Konrad-Adenauer-Allee 1-11, 61118 Bad Vilbel,
DEUTSCHLAND

Importateur (EU uniquement)
JVCKENWOOD France S.A.S.
7 Allee des Barbanniers, CS20034
92632 Gennevilliers Cédex, FRANCE

Importatore (Solo EU)
JVCKENWOOD Italia S.p.A.
Via G. Sirtori 7/9, 20129 Milano, ITALIA

Importador (Solamente EU)
JVCKENWOOD Ibérica S.A.
Ctra. Rubi, 88 Edificio Can Castanyer,
08174 Sant Cugat del Valles, Barcelona,
ESPAÑA

Importeur (Alleen EU)
JVCKENWOOD Belgium N.V.
Leuvensesteenweg 248J, 1800 Vilvoorde,
BELGIQUE

Importeur (Alleen EU)
JVCKENWOOD Nederland B.V.
Amsterdamseweg 37, 1422 AC Uithoorn,
NEDERLAND

Manufacturer
JVCKENWOOD Corporation
3-12,Moriya-cho, Kanagawa-ku,Yokohama-shi,
Kanagawa, 221-0022, JAPAN

关于环保使用期限

环保使用期限

- 此图标表示了中华人民共和国的法律所规定的环保使用期限。只要用户在使用本产品时遵守注意事项中的各项规定，从制造日期开始到此图标标出的期限为止（环保使用期限）既不会污染环境也不会产生对人体有害的物质。
- 附件和消耗性零件的环保使用期限如下所示：
  （不同产品中包含的附件和消耗性零件也不相同。）
  遥控器、交流转换器、电缆类：10年

关于产品中的有害物质

部件名称	有害物质					
	铅 （Pb）	汞 （Hg）	镉 （Cd）	六价铬 （Cr(VI)）	多溴联苯 （PBB）	多溴二苯醚 （PBDE）
线路板组件	×	○	○	×	○	○
机箱	×	○	○	×	○	○
光学系统	×	○	○	×	○	○
交流转换器	×	○	○	×	○	○
其他附件	×	○	○	×	○	○

本表格依据 SJ/T11364 的规定编制。
○：表示该有害物质在该部件所有均质材料中的含量均在 GB/T26572 规定的限量要求以下。
×：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T26572 规定的限量要求。

For KY-PZ100WE, KY-PZ-100BE
GB4943.1-2011
GB9254-2008
GB17625.1-2012

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. 2.0 kg
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 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+ (IEEE802.3at Type2) 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.

Contents

Getting Started

Installation/Connection

Others

| 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.

Content of this manual

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- HDMI (High-Definition Multimedia Interface) and **HDMI** are trademarks of HDMI Licensing, LLC.
- QuickTime, Mac OS and Safari are trademarks of Apple Inc. registered in the U.S. and other countries.
- Google Chrome is a trademark and/or registered trademark of Google Inc.
- Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and other countries.
- The company name of Fontworks, Fontworks, and the name of the fonts are registered trademarks of Fontworks Inc.
- Zixi and the Zixi logo are trademarks of Zixi LCC.
- Other product and company names included in this instruction manual are trademarks and/or registered trademarks of their respective companies. Marks such as ™ and ® have been omitted in this manual.

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 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.
■ The camera unit is designed to be rotated easily,
secure the camera unit such that it does not rotate
before transporting. Otherwise, an error may
occur during camera operation.
① Face the lens upward, and secure the lens unit
and the camera head with tape.
② Secure the camera head and the base at multiple
positions with tape.
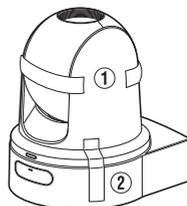
Carrying the Camera

■ 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.

microSDHC/microSDXC Cards

■ "microSDHC/microSDXC card" is referred to as "microSD card" in this manual.
■ This camera recorder saves the recorded images and audio sound to the microSD card (sold separately) that is inserted into the card slot.
■ If the microSD card contains files recorded by devices other than this camera recorder or files that are saved from a PC, the recordable time may be shorter or data may not be properly recorded. In addition, the remaining space on the card may not increase even when files are deleted using a PC.

* Using cards other than those from Panasonic, TOSHIBA or SanDisk may result in recording failure or data loss.

Handling of microSD Cards

■ Do not remove the microSD card during data access (such as recording or formatting). And, do not turn off the power or remove the AC adapter during access.
■ Do not use or store the microSD card in a place that is subject to static electricity or electrical noise.
■ Do not place the microSD card near locations that are exposed to strong magnetic fields or radio waves.
■ Inserting the microSD card incorrectly may result in damage of this unit or the microSD card.
■ We are not liable for any accidental loss of data stored on the microSD card. Please back up any important data.
■ Make use of the microSD card within the prescribed conditions of use.
Do not use it at the following locations.
Places that are subject to direct sunlight, high humidity or corrosion, places near thermal equipment, sandy or dusty places, or in a car under the sun with the doors and windows closed.
■ Do not bend or drop the microSD card, or subject it to strong impact or vibration.
■ Do not splash the microSD card with water.
■ Do not dismantle or modify the microSD card.
■ Do not touch the terminals with your hands or with a metal object.
■ Do not allow dust, dirt, water, or foreign objects to adhere to the terminals.
■ Do not stick any label or sticker.

■ Do not use a pencil or ballpoint pen to write on the microSD card. Always use oil-based pens.
■ If you format (initialize) the microSD card, all data recorded on the card, including video data and setup files, will be deleted.
■ You are recommended to use cards that are formatted (initialized) on this camera recorder.
 ● The microSD card may be damaged if the camera recorder is not functioning correctly. Formatting (Initializing) the microSD may allow it to operate correctly.
 ● microSD cards that have been formatted (initialized) on another camera, computer or peripheral equipment may not function correctly. In this case, format (initialize) the microSD card on this camera recorder.
■ If you want to discard the microSD card by completely erasing the data inside, we recommend either using commercially available software that is specially designed for that purpose or physically destroying the microSD card with a hammer, etc. When formatting or erasing data using the camera recorder, only the file administration information is changed. The data is not completely erased from the microSD card.
■ The microSD card may pop out when it is being ejected from the slot. Be careful not to lose the card.

Zoom Operation

■ The following phenomena are the results of the built-in lens performance and are not malfunctions.
 ・ When manual operation or preset is selected, focus moves slightly after the zoom operation has stopped near the TELE end.
 ・ The zoom operation is not smooth during manual operation.
 ・ When Preset is selected, the camera becomes out of focus for an instant during zooming.

Encryption in Network Connection

■ Wireless LAN connections make use of an encryption function.
This encryption is designed for commercially-sold equipment, and it cannot be altered.

License Notices

■ MPEG LA AVC
THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO
(i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR
(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.
NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE
HTTP://WWW.MPEGLA.COM

Copyright

■ Any recordings made on this camera recorder 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.

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 ±175°. 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.
■ The time of the internal clock may be significantly out of alignment if the power of the product is turned off for a long time or when there is prolonged power failure. If this occurs, readjust the clock time.
■ 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 insert objects other than the memory card into the card slot.
- Do not put anything into the camera unit. Metal and flammable items entering from the connectors can result in fire or electric shock.
- Do not turn On/Off the power or remove the supplied AC adapter during recording.
- The camera recorder 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.
- This camera recorder makes use of fonts by Fontworks Inc.
- This camera recorder makes use of M+FONTS.

- 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
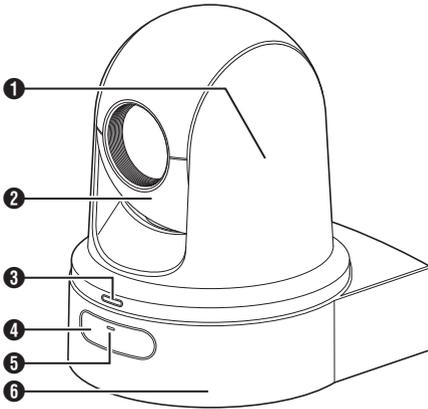
❶ Camera head
Rotates horizontally.

❷ Lens section
Rotates vertically.

❸ Tally lamp
Turns on/off according to the menu setting and blinks depending on the status of this camera. For details, refer to the "INSTRUCTIONS" downloadable from the URL stated on the cover page.

❹ Infrared remote control sensor

❺ POWER lamp
Lights up as follows depending on the status of this camera.
Lights up: When Video is "Off"
in red
Lights up: When Video is "On"
in green

❻ Base

Bottom Section
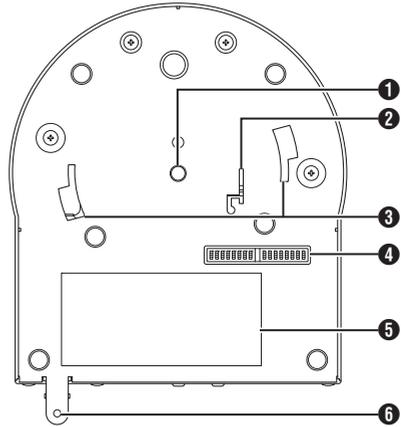
❶ Tripod socket hole
For attaching the tripod.

❷ Fall prevention wire mounting hole

❸ Ceiling mount bracket guide slot

❹ DIP switch
Use the DIP switch to configure various settings.

❺ Rating label

❻ Ceiling mount bracket fixing screw hole

Ceiling mount bracket
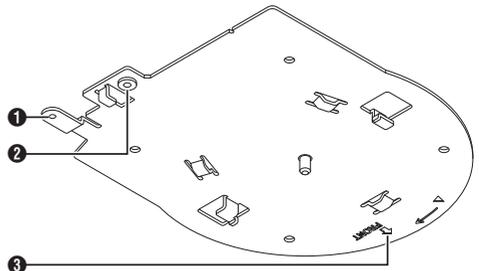
❶ Fall prevention wire (for ceiling) mounting hole

❷ Fall prevention wire (for camera) mounting hole

❸ "Front" mark

Terminal Section
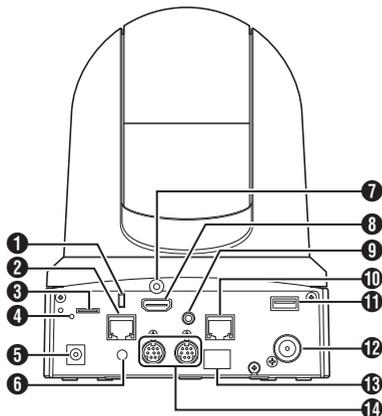
❶ Anti-theft wire mounting hole

❷ [LAN(PoE+)] LAN (PoE+) terminal
   For connecting the LAN cable.

❸ microSD card slot
   For inserting the microSD card.

❹ Reset switch
   Short press : Restores the video output setting to the default setting. (*1)
   Press and hold : Restores all items in the [Network] menu to their default settings. (*2)

*1 Applies to [HDMI/SDI Out] and [Resolution] in the Video Set menu, [Frame Rate] in the Network menu, [System Mode] in the [System] menu, and [Frame Rate] and [Bit Rate] in the Record Set menu.
*2 Works in the same way as [Reset Network Settings].

❺ [DC 12V] DC input terminal
   For connecting the supplied AC adapter to supply DC 12 V.

❻ Cable clamp hole

❼ HDMI cable fixing hole

❽ [HDMI] HDMI terminal
   Output terminal for HDMI video signal.

❾ [AUDIO IN] AUDIO input terminal
   For connecting the stereo mini plug.

❿ [RS-422] RS-422 terminal
   For connecting the RS-422 cable.
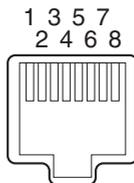
Pin Number	Signal Name	Pin Number	Signal Name
1	GND	5	TXD+
2	TALLY	6	RXD+
3	RXD-	7	-
4	TXD-	8	-

⓫ [USB] USB terminal
   For connecting a network device.

⓬ [SDI OUT] SDI output terminal
   Output terminal for SDI video signal.

⓭ Infrared remote control sensor

⓮ [RS-232C IN/OUT] RS-232C input/output terminal
   For connecting the RS-232C cable.
   [RS-232C IN]: Input terminal for RS-232C remote (Mini DIN 8-pin)
   [RS-232C OUT]: Output terminal for RS-232C remote (Mini DIN 8-pin)
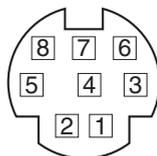
RS-232C IN		RS-232C OUT	
Pin Number	Signal Name	Pin Number	Signal Name
1	DTR_IN	1	DTR_OUT
2	DSR_IN	2	DSR_OUT
3	TXD_IN	3	TXD_OUT
4	GND	4	GND
5	RXD_IN	5	RXD_OUT
6	GND	6	GND
7	IR_OUT	7	NC
8	IR_OUT	8	NC

Infrared Remote Control
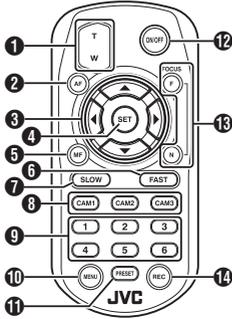
❶ ZOOM button
Pressing the button at the T end moves the zoom lens toward the telephoto range and the angle of view becomes narrower.
Pressing the button at the W end moves the zoom lens toward the wide-angle range and the angle of view becomes wider.

❷ AF button
Sets the camera to the Auto Focus mode.

❸ Pan/Tilt, Menu operation button
Moves the display area.
Moves the cursor when the menu is displayed.

❹ SET button
Restores the display area to the default position.
Functions as a confirmation button when the menu is displayed.

❺ MF, Cancel button
Sets the camera to the Manual Focus mode.
Functions as a cancel button when the menu is displayed.

❻ FAST button
Sets pan/tilt and zoom to high speed.
Short press : High speed mode
Press and hold : Maximum speed mode

❼ SLOW button
Sets pan/tilt and zoom to low speed.
Short press : Low speed mode
Press and hold : Minimum speed mode

❽ CAM1 to CAM3 buttons
Press and hold to select the camera to operate.

Memo : ───────────────────────
- Configure the IR ID setting in [Main Menu] ➜ [System] ➜ [IR ID].
- In the event that the [IR ID] setting is not consistent with the selection of the CAM1 to CAM3 buttons, the POWER lamp on the camera will appear blinking in orange.

❾ PRESET number button
Moves the display area to the recorded pan, tilt or zoom position.

❿ MENU button
Press and hold to open the menu for the camera unit.

⓫ PRESET button
To be used concurrently with the PRESET number button.
Stores the current pan, tilt or zoom position in the PRESET number.

⓬ ON/OFF button
Pressing and holding the button disables HDMI and SDI output as well as operation from the remote control unit.
Pressing and holding the ON/OFF button again restores the camera to the camera mode.

⓭ FOCUS button
Use the F button to adjust focus toward the far end and the N button to adjust toward the near end during manual focus.

⓮ REC button
Saves recording to the microSD card on the camera unit.
Pressing the button while recording is in progress stops the recording.

Memo : ───────────────────────
- When using the remote control unit for the first time, remove the battery insulation film before use.
- The remote control unit uses one "CR2025" lithium battery.
Make sure to load the battery in the correct +/- orientation.

+ mark
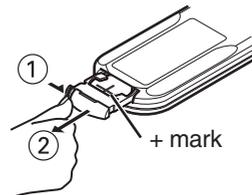
Caution : ─────────────────────
- Do not place the remote control at a location that is subject to high temperature. Otherwise, the remote control may be deformed, thus resulting in malfunction.
- Place the batteries at a location that is out of reach of children. In the event that the battery is swallowed 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 lithium battery, use one that is of the same model or type. Using a different type of battery may cause it to explode.

About microSD Cards

Compatible microSD Cards

Bit Rate Setting and Usable microSD Card Combinations

System	Format	Bit Rate	Usable microSD Card
HD	QuickTime	50M	Class 10 or higher
		35M 28M 18M 5M	Class 6 or higher

Memo :
- To use a microSDHC card, set [4GB File Spanning(SDXC)] to "On".

Caution :
- Using cards other than those from Panasonic, TOSHIBA or SanDisk may result in recording failure or data loss.
- If an UHS-I card with no classification indication is used, it may not be possible to perform recording.

Estimated Recordable Time of microSD Cards

The estimated recordable time is only a guide. Differences may occur depending on the condition of the microSD card in use.

| Frame Rate (*1)	60p, 60i, 50p, 50i	60i, 30p, 50i, 25p	60p, 50p	60i, 30p, 50i, 25p	60i, 50i
Frame Rate (*2)	-	60p, 50p	-	60p, 50p, 30p, 25p	30p, 25p
Bit Rate	50M	35M	28M	18M	5M
4GB	9	12	15	23	84
8GB	18	25	31	47	170
16GB	36	50	62	95	340
32GB	72	100	125	190	680
64GB (SDXC)	145	200	250	380	1360
128GB (SDXC)	290	400	500	760	2720

(Unit: minute)

*1   When [Main Menu] ➡ [System] ➡ [System Mode] is set to "1080/60" or "1080/50"
*2   When [Main Menu] ➡ [System] ➡ [System Mode] is set to "720/60" or "720/50"

Memo :
- If the microSD card contains files recorded by devices other than this camera recorder or files that are saved from a PC, the recordable time may be shorter or data may not be properly recorded.
- Up to 600 clips can be recorded to one microSD card on this unit. When 600 clips are recorded to one card, the remaining space is displayed as 0 min regardless of the estimated recordable time, and no further recording can be performed.

Inserting an microSD Card
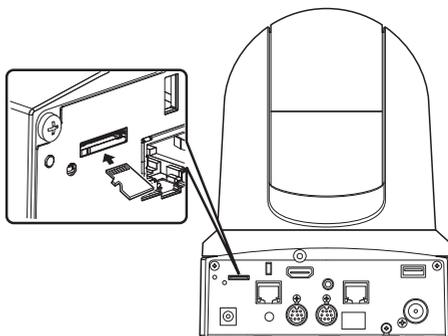
1   **Insert the microSD card into the slot according to the orientation indicated by the illustration.**
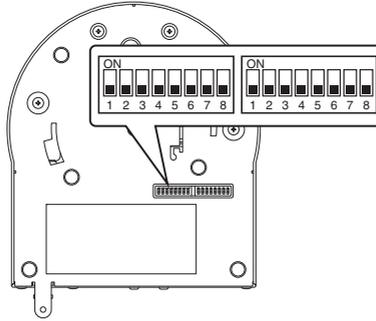
Removing the microSD Card

1   **Push the microSD card and remove it from the slot.**

Caution :
- Data may be lost if you turn off the power of the camera recorder or remove the microSD card when it is being accessed. All data recorded on the card, including the file that is being accessed, may be corrupted. To turn off the power or remove the card, do so at least 20 seconds after data access has been stopped.
- The microSD card may not be recognized if you insert and remove the card within a short time. When this happens, remove the card and wait for a few seconds before you reinsert.

DIP Switch Setting

Configure the DIP switch before installing this unit.

Switch	Bit	Function	Description	Remarks
Left	1	Select communication mode	For selecting a communication mode.	OFF: LAN; ON: Serial
	2 to 4	Select protocol	For selecting protocols.	Setting values when LAN is set: 0: JVC; 1: D star; 2: Standard; 3 to 7: Reserved Setting values when Serial is set: 0: Reserved; 1: D star; 2: Standard; 3 to 7: Reserved * For latest information on compatibility, please visit our website.
	5 to 7	Set camera address	For selecting a camera address.	Setting values when bit2 to bit 4 is set to "Standard": 0: AUTO; 1 to 7: Cameras 1 to 7
	8	Baud rate	For selecting a baud rate for serial communication.	OFF: 9600 bps, ON: 38400 bps
Right	1	RS-232C, RS-422/485	For selecting a communication terminal for serial communication.	OFF: RS-232C; ON: RS-422/485
	2	Remote control infrared output	For selecting an infrared output.	OFF: No output; ON: Outputs IR_OUT from RS-232C IN terminal Directing the infrared remote control that comes with commercially available controllers toward the camera allows you to operate the commercially available controller (connected via RS-232C).
	3 to 7	Service terminals	Set them to OFF during use.	-
	8	RS-422/485 termination	RS-485 receiving end 110 Ω termination	OFF: Do not terminate; ON: Terminate

* Combination of bit and setting values of DIP switches 2 to 4 and 5 to 7

Setting Value (The following is for DIP switches 2 to 4. It is the same for DIP switches 5 to 7)
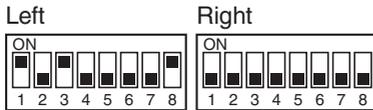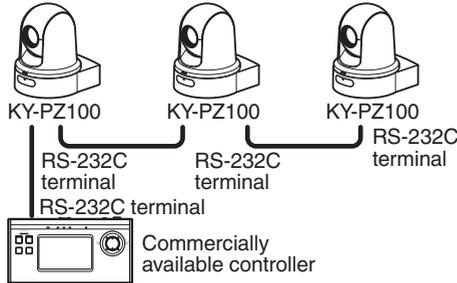

Bit
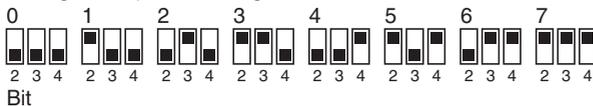
■ Connection example 1: IP control

KY-PZ100 KY-PZ100 KY-PZ100

HUB — LAN cable

RM-LP100
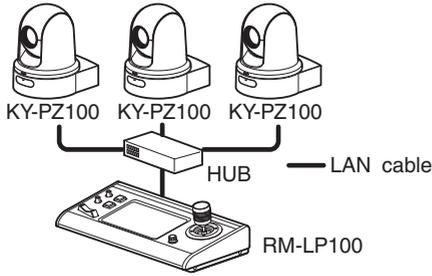
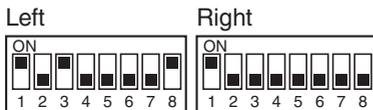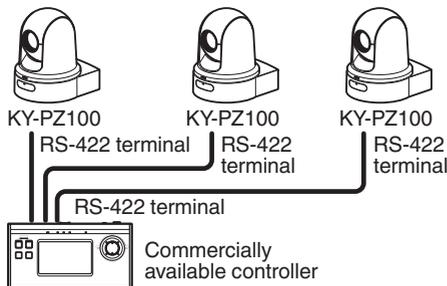| Switch	Bit	Function	Settings
Left	1	Select communication mode	Set to LAN (OFF).
	2 to 4	Select protocol	Set to JVC (0).

Left   Right

ON
1 2 3 4 5 6 7 8   1 2 3 4 5 6 7 8
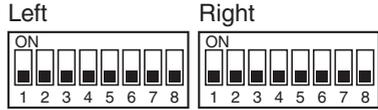
■ Connection example 2: Daisy chain connection of commercially available controller (standard protocol) with RS-232C

KY-PZ100   KY-PZ100   KY-PZ100

RS-232C terminal   RS-232C terminal   RS-232C terminal

RS-232C terminal

Commercially available controller

Switch	Bit	Function	Settings
Left	1	Select communication mode	Set to Serial (ON).
	2 to 4	Select protocol	Set to Standard (2).
	5 to 7	Set camera address	Set AUTO (0) or 1 to 7. (Make sure that there are no duplicate address numbers.)
	8	Baud rate	Set to 9,600 bps (OFF) or 38,400 bps (ON) according to the controller.
Right	1	RS-232C, RS-422/485	Set to RS-232C (OFF).

Left   Right

ON
1 2 3 4 5 6 7 8   1 2 3 4 5 6 7 8

■ Connection example 3: Connection of commercially available controller (standard protocol) with RS-422

KY-PZ100   KY-PZ100   KY-PZ100

RS-422 terminal   RS-422 terminal   RS-422 terminal

RS-422 terminal

Commercially available controller

Switch	Bit	Function	Settings
Left	1	Select communication mode	Set to Serial (ON).
	2 to 4	Select protocol	Set to Standard (2).
	8	Baud rate	Set to 9,600 bps (OFF) or 38,400 bps (ON) according to the controller.
Right	1	RS-232C, RS-422/485	Set to RS-422/485.

Left   Right

ON
1 2 3 4 5 6 7 8   1 2 3 4 5 6 7 8

DIP Switch Setting   21

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.
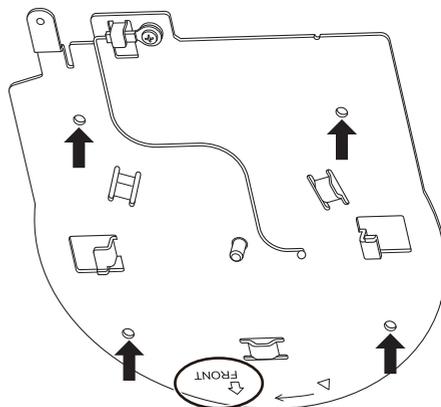
Caution :
- The fall prevention wire (for ceiling) is not supplied. Make use of the wire while taking note of its length, strength, pull and material (insulation).
- Attach the fall prevention wire (ceiling) to a place with sufficient strength (ceiling slab, etc.).
- Take note of the length, strength, 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.

1 **Fix the fall prevention wire (camera) to the ceiling mount bracket using the screw (M2.6) provided.**
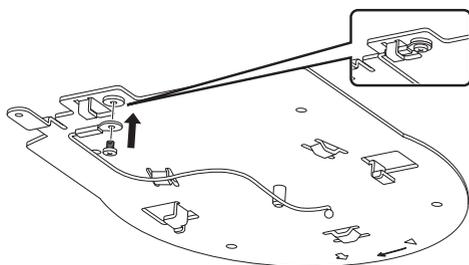
2 **Place the supplied template against the ceiling, and fasten the ceiling mount bracket with four screws (M4 wooden screws: Φ4.1).**

- Prior to mounting, check the "FRONT" mark on the ceiling mount bracket to ensure that it is facing the same direction as the front of the camera.
- Check that the screws are tighten securely when mounting is completed.

Caution :
- The fall prevention wire (camera) is designed exclusively for hanging this product. Do not load anything other than this product.
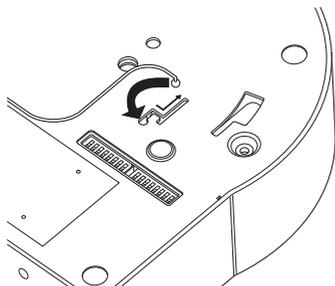
Installing the Camera on the Ceiling

1 **Set the DIP switch.**
   • Set the DIP switch prior to mounting the camera to the ceiling mount bracket.

2 **Insert an microSD card.**
   • Insert the card as necessary during installation.

3 **Attach the fall prevention wire (camera), which is fixed to the ceiling mount bracket, to the camera.**


   • Insert the tip of the fall prevention wire (camera) to the groove of the camera, and move it toward the direction indicated by the arrow.
   • Check that the fall prevention wire (camera) is fixed securely to the camera.

4 **Mount the camera to the ceiling mount bracket.**
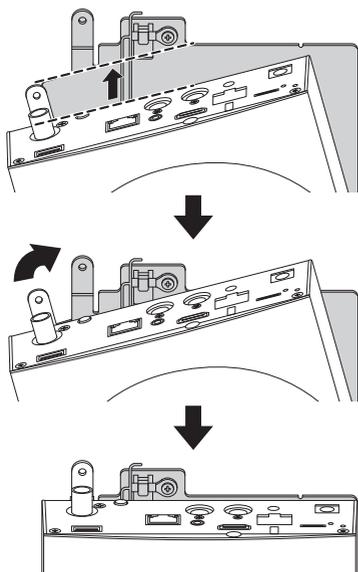
   • Align the cutout of the ceiling mount bracket and the line indicated on the camera. Press the camera unit to insert, and then turn the camera clockwise.

5 **Fix the camera and the fall prevention wire (ceiling) on the ceiling mount bracket using the provided screw (M3).**
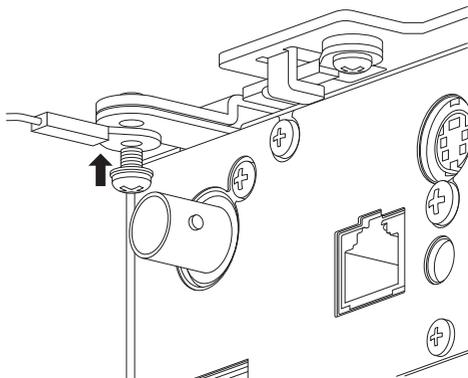
   • Check that the screws are tighten securely when mounting is completed.

6 **Connect the adapter to the [USB] terminal.**
   • When needed, connect the adapter according to the intended purpose. For details on the settings, please refer to INSTRUCTIONS.

Connect the cables after these procedures.

Installing the Camera on a Desktop

- Set the DIP switch prior to installing the camera.
- 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

- Set the DIP switch prior to installing the camera.
- Attach a tripod using the screw hole at the bottom of this product.
  (1/4-20UNC, ISO1222 (6.35 ㎜))
- To prevent the camera recorder 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 recorder 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 power cable.**
  - To supply power from an AC adapter, connect an AC adapter cable.
  - To supply power via PoE+, proceed to the next step without connecting an AC adapter cable.
  - Fix the AC adapter cable with a cable clamp.
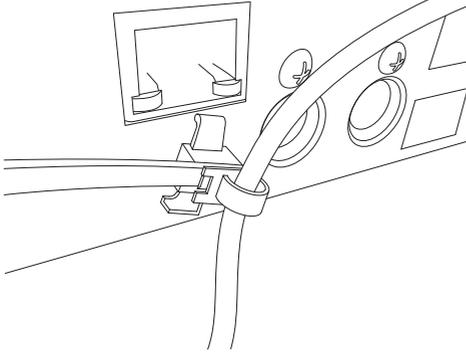
2 **Connect the LAN cable.**

3 **Connect the SDI cable. (Optional)**

4 **Connect the HDMI cable. (Optional)**

5 **Connect the microphone cable or audio cable. (Optional)**

6 **Remove the protective sheet attached to the infrared remote control sensor.**

Caution :
  - For safety reasons, turn on the power only after ensuring that all the connections are in place.
  - 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+ (IEEE802.3at Type2) 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). |

IP Address Settings

Using the IP Setting Tool

- Connect the camera to be configured to the network via the LAN terminal.
- Download the "IPSettingTool" from the URL stated on the cover page.
- Connect the computer for executing the "IPSettingTool" to the network to establish communication with the camera to be configured.

1 **Start up "IPSettingTool".**

2 **Click the [Search] button.**
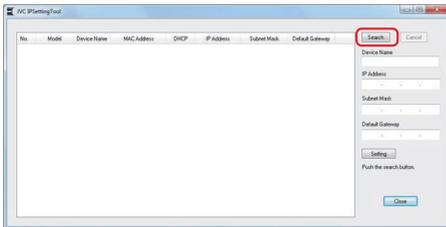
3 **Select from the list the camera to be configured.**
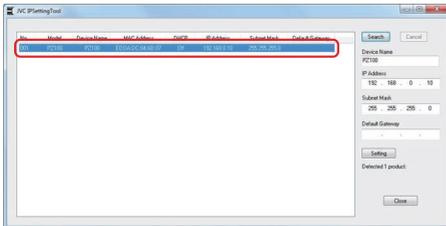
4 **Enter the respective network setting items and click the [Setting] button. After a confirmation screen appears, click [OK].**

- "Default Gateway" can be omitted.
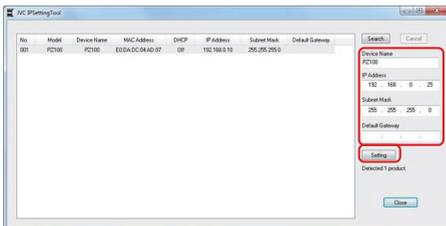
- If setting is successful, the search list display will be updated.
- If there are multiple cameras to be configured, repeat steps 3 to 4 for each camera.

Memo :
- When the "Failed in the Setting." message is displayed, check the setting details and review the connecting device then try again.

5 **Click the [Close] button to exit.**
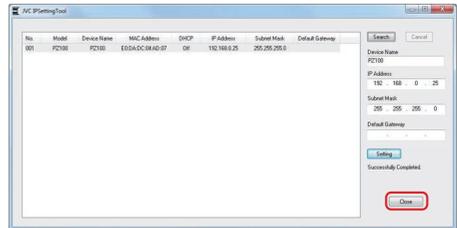
Memo :
- Cameras with the same IP address as the computer for configuring the IP address cannot be detected.
- Make sure that there is no duplication in the IP address configured for each camera.
- When a firewall has been installed, change the setting to allow communication access by the "IPSettingTool".
- The "IPSettingTool" runs on Windows. For more information on setting the IP address in an environment other than Windows, please refer to the "Instruction Manual".

Installation/Connection

Confirm the connection

Operating Environment
Operation has been verified for the following
environments.

- Computer
  - OS: Windows 7
    Web browser: Google Chrome
  - OS: Windows 10
    Web browser: Google Chrome
  - OS: Mac OS X 10.11
    Web browser: Safari

1 **Start up the web browser on the terminal
you wish to connect to the camera
recorder, and enter the [IP Address] in the
address field.**
- (Example: http://192.168.0.25)

Memo : ───────────────────
- The default IP address of camera is http://
  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.

Troubleshooting

Problem	Symptom	Action
Power does not turn on.	The AC adapter is not properly connected.	Check whether the AC adapter is properly connected.
	There is problem in the connection with the PoE+ (IEEE802.3at Type2) power supply device.	• Check whether connection is established using a PoE+ (IEEE802.3at Type2) power supply device and a LAN cable of Category 5e or higher. For some PoE+ power supply devices (such as a hub), power will not be supplied when the number of PoE+ terminals connected exceeds the limit of the total electrical power that can be supplied. For more information, please refer to the instruction manual of the PoE+ power supply device. • Check whether the LAN cable is properly connected and whether the cables are disconnected.
	The power was turned on again immediately after it was turned off.	Wait for an interval of at least 5 seconds before turning on the power again.
Unable to operate the infrared remote control unit.	The battery of the infrared remote control unit is not functioning properly.	Check whether there is remaining battery power and whether the battery is loaded in the correct orientation.
	IR ID is not correctly configured.	Configure IR ID correctly.
The adjustable pan/tilt range is narrow.	The pan/tilt limit setting is enabled.	Check the pan/tilt limit setting.
Pan/tilt operation moves in the opposite direction.	The method for installing the camera does not match the standing installation settings.	Check whether the standing installation settings are correctly selected.
The video images are upside down.	The method for installing the camera does not match the standing installation settings.	Check whether the standing installation settings are correctly selected.
Unable to operate the controller and web browser screen.	The LAN cable is not properly connected.	Check whether the LAN cable (Category 5e or higher) is properly connected.
	The IP address is not correctly configured.	• Check whether the IP address setting is correct. • Set a different network address (network segment) for the LAN terminal and USB terminal.
	[Web Access] in the menu has been set to "Off".	If you are unable to operate via a web browser, set [Web Access] in the menu to "On".
	The DIP switches at the bottom surface of this unit are not correctly configured.	If you are unable to operate using a controller, check the settings of the DIP switches at the bottom surface of this unit.
The View Remote screen turns black. The screen flickers. The screen freezes. Cannot perform remote operation.	The network path is congested.	Wait a while before refreshing (reloading) the web browser.

Others

Problem	Symptom	Action
Cannot connect to wireless LAN.	Wireless LAN is not correctly configured.	Check the mode of connection and method of setting ([SSID] and [Passphrase] in cases other than "WPS").
	The passphrase is incorrect.	Even if the passphrase is wrong, "Completed the Setup Wizard. Please Input the Passphrase into Your Device." may appear in the wizard setting depending on the type of encryption. Adjust [Passphrase] again.
Wireless LAN connection is disrupted.	Wireless LAN connection is subject to disruption due to the surrounding environment.	Wireless LAN connection may be disrupted depending on the environment. Change the usage environment.
The images and audio sound during live streaming are choppy.	The encoding bitrate configured is too high for the transfer speed of the network in use.	Depending on the type of network adapter used and the connection, streaming may not be possible with the encoding bit rate specified. Please reduce the encoding bit rate.
Unable to start recording.	The recording mode is not supported by the microSD card.	Use a microSD card that supports the recording mode.
The actual recording time is shorter than the estimated time.	-	The recordable time may be shorter depending on the shooting conditions or the subject.
The clips cannot be uploaded to the FTP server.	[Clip Server] is not correctly configured.	Adjust the [Clip Server] settings.
	The size of the recorded clip has exceeded 64 GB.	The maximum size of the recorded clip is 64 GB. If a file size limit is set in the FTP server settings, set the size limit to more than 64 GB.
	An FTP transfer error message is displayed.	Take the necessary actions according to the "List of FTP Transfer Errors".

Others

Specifications

General

Item	Description
Power	DC 12 V (when an AC adapter is used) DC 42 V to 57 V (when PoE+ power supply is used)
Current consumption	1.2 A (*1) 0.4 A (*2)
Mass	Approx. 2.0 kg
Allowable operating temperature	0 °C to 40 °C
Allowable operating humidity	30 %RH to 80 %RH (No condensation)
Allowable storage temperature	-20 °C to 50 °C
Dimensions (W × H × D)	154 mm × 200.7 mm × 191 mm

*1 During recording in the factory settings when an AC adapter is in use.
*2 During recording in the factory settings when this unit is operated using power supply from PoE+ via a LAN cable.

Terminal Section

Item	Description
[SDI OUT] terminal (720p/1080i/1080p: embedded audio), BNC (unbalanced)	
3G-SDI	Compliant with SMPTE ST424
HD-SDI	Compliant with SMPTE ST292
[HDMI] output terminal (Type A)	V1.4-compliant
[LAN (PoE+)] terminal	RJ-45 PoE+ power supply: DC 42 V to 57 V Ethernet: 100BASE-TX/1000BASE-T
[AUDIO IN] terminal	Φ3.5 mm stereo mini jack
Mic Input	Balanced monaural Unbalanced stereo (plug-in power: 2.5 V)
Line input	Balanced monaural Unbalanced stereo
[RS-422] terminal	RJ-45 Input terminal for remote control unit of RS-422 serial control
[RS-232C IN] terminal	Mini DIN 8-pin Input terminal for RS-232C remote control unit
[RS-232C OUT] terminal	Mini DIN 8-pin Output terminal for RS-232C remote control unit (Termination function)
[DC 12V] terminal	DC jack (for the supplied AC adapter)
[USB] terminal	USB-A type, USB2.0, network connection function only

Lens Section

Item	Description
Lens	f/1.6 to f/4.7, 30x, f = 4.3 mm to 129.0 mm (35 mm equivalent: 30.5 mm to 915 mm)

Camera Section

Item	Description
Image pickup device	1/2.8-inch Progressive CMOS
Sync system	Internal sync (built-in SSG)
Gain	0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB, 21dB, 24dB, 30dB, 36dB, 42dB, 48dB
Electronic shutter	1/8 to 1/10000, 19 steps

Rotation mechanism section

Item	Description
Horizontal rotation range	±175°
Horizontal rotation speed	Maximum 480°/s (AC adapter power) Maximum 400°/s (PoE+ power)
Vertical rotation range	-30° to 90°
Vertical rotation speed	Maximum 300°/s (AC adapter power) Maximum 200°/s (PoE+ power)

Storage Section

Item	Description
Supported media	microSDHC/microSDXC

Others

Video/Audio

Item	Description
HD mode (QuickTime)	
Recording file format	QuickTime File Format
Video	

Item		Description
	50M mode (LPCM)	MPEG-4 AVC/H.264, 50 Mbps (Max) 1920×1080/59.94p, 59.94i, 29.97p, 50p, 50i, 25p
	35M mode (LPCM)	MPEG-4 AVC/H.264, 35 Mbps (Max) 1920×1080/59.94i, 29.97p, 50i, 25p 1280x720/59.94p, 50p
	28M mode (LPCM)	MPEG-4 AVC/H.264, 28 Mbps (Max) 1920x1080/59.94p, 50p
	18M mode (LPCM)	MPEG-4 AVC/H.264, 18 Mbps (Max) 1920×1080/59.94i, 29.97p, 50i, 25p 1280x720/59.94p, 29.97p, 50p, 25p
	5M mode (µ-law)	MPEG-4 AVC/H.264, 5 Mbps 1920x1080/59.94i, 50i 1280x720/29.97p, 25p
Audio		LPCM 2ch, 48 kHz/16 Bit, µ-law 2ch (Video 5 Mbps)
Streaming Mode (When the [LAN] terminal is connected)		
	Video	1920×1080 (59.94p, 50p) 20/16/12/8 Mbps 1920×1080 (59.94i, 50i,29.97p, 25p) 20/16/12/8/5/3 Mbps 1280x720 (59.94p, 50p) 20/16/12/8/5/3 Mbps 1280x720 (29.97p, 25p) 8/5/3/1.5 Mbps 640×360 (29.97p, 25p) 3/1.5/0.8/0.3 Mbps
	Audio	AAC 2ch 128 kbps (Video 20/16/12/8/5/3/1.5 Mbps) AAC 2ch 64 kbps (Video 0.8/0.3 Mbps)

| Item		Description
Streaming Mode (When the [USB] terminal is connected)		
	Video	1920×1080 (59.94p, 50p) 12/8 Mbps 1920×1080 (59.94i, 50i, 29.97p, 25p) 12/8/5/3 Mbps 1280x720 (59.94p, 50p) 12/8/5/3 Mbps 1280x720 (29.97p, 25p) 8/5/3/1.5 Mbps 640×360 (29.97p, 25p) 3/1.5/0.8/0.3 Mbps
	Audio	AAC 2ch 128 kbps (Video 12/8/5/3/1.5 Mbps) AAC 2ch 64 kbps (Video 0.8/0.3 Mbps)
Live View Mode		640x360 320x180

Infrared Remote Control

Item	Description
Remote control system	Infrared type
Battery	CR2025 (DC 3.0 V)
Battery life	Approx. 1 year (varies with the frequency of use)
Operating distance	7 m (horizontal distance from the front)
Allowable operating temperature	0 °C to 40 °C
Dimensions (W × H × D)	42 mm × 14.6 mm × 90 mm
Mass	Approx. 29 g (including button battery)

Accessories

Accessories	
Warranty Card (U model only)	1
INSTRUCTIONS (Installation/IP Address Settings)	1
AC Adapter	1
Power Cord (U model: 1, E model: 2)	
Remote control unit	1
Ceiling mount bracket	1
M3 screw (* for fastening ceiling mount bracket)	1
M2.6 screw (* for fall prevention wire (camera))	1
Fall prevention wire	1
Template	1

Others

Dimensional Outline Drawing (Unit: mm)
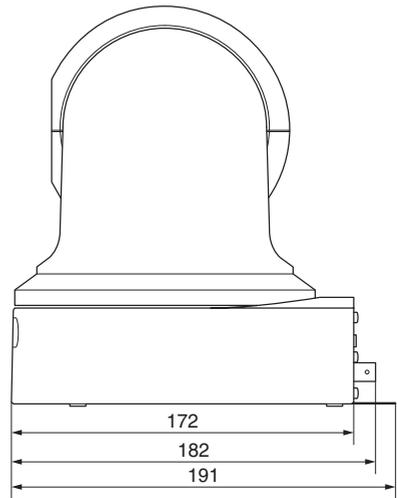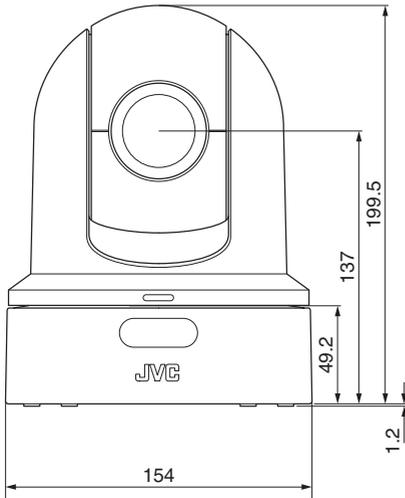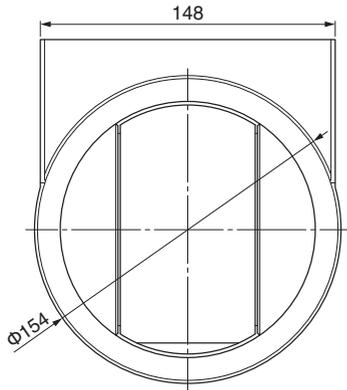
* The specifications and appearance of this product are subject to changes for further improvement without prior notice.

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① Start up Live View.
② Open the [MENU] tab and click the [MENU] button to display the camera menu.
③ Select [Main Menu] → [System] → [System Information] → [Open Source License].

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