

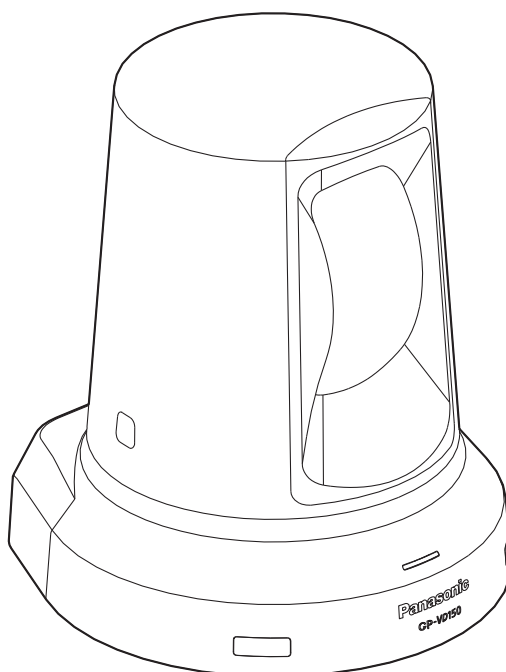
Panasonic®

Operating Instructions <Basics>

Installation Instructions provided

HD Communication Camera

Model No. **GP-VD150**



HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

Before operating this product, please read the instructions carefully and save this manual for future use.

For instructions on how to operate this HD Communication Camera and how to establish its settings, refer to the “Operations and Settings” manual (PDF file).


Download the “Operations and Settings” manual from the home page given below.

http://panasonic.net/psn/products/hdvc/resource/users_guides.html

Safety precautions



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 TO 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 (service) instructions in the literature accompanying the appliance.

WARNING:

■ THIS APPARATUS MUST BE EARTHED

To ensure safe operation, the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.

Extension cords used with the apparatus must have three cores and be correctly wired to provide connection to the earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the apparatus operates satisfactorily does not imply that the power point is earthed or that the installation is completely safe. For your safety, if you are in any doubt about the effective earthing of the power point, please consult a qualified electrician.

— For CANADA —

This class A digital apparatus complies with Canadian ICES-003.

WARNING:

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

WARNING:

TO PREVENT INJURY, THIS APPARATUS MUST BE SECURELY ATTACHED TO THE FLOOR IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

FCC Note:

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 instruction manual, 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.

Warning:

To assure continued FCC emission limit compliance, the user must use only shielded interface cables when connecting to external units. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate it.

CAUTION:

In order to maintain adequate ventilation, do not install or place this unit in a bookcase, built-in cabinet or any other confined space. To prevent risk of electric shock or fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation.


The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

A warning that an apparatus with CLASS 1 construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Safety precautions

IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

- 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) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) 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. 
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) 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.

 indicates safety information.

VERSION FRANÇAISE

(FRENCH VERSION)

Consignes de sécurité



L'éclair à extrémité fléchée placé dans un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'une "tension potentiellement dangereuse" et non isolée se trouvant dans les limites du coffret de l'appareil dont la puissance est suffisante pour constituer un risque important d'électrocution.



Le point d'exclamation placé dans un triangle équilatéral sert à attirer l'attention de l'utilisateur sur des instructions de fonctionnement et d'entretien (de dépannage) à caractère important dans la brochure qui accompagne l'appareil.

AVERTISSEMENT:

■ Cet appareil doit être relié à la terre.

Pour assurer un fonctionnement en toute sécurité, la fiche trois broches ne doit être insérée que dans une prise trois broches standard qui est reliée à la terre efficacement par le système électrique domestique normal.

Des rallonges utilisées avec l'appareil doivent comporter trois noyaux et être correctement raccordées pour assurer la connexion à la terre.

Des rallonges mal reliées sont une cause majeure d'accidents mortels.

Le fait que l'appareil fonctionne correctement ne signifie pas que le branchement électrique est relié à la terre ou que l'installation est complètement sûre.

Pour votre sécurité, en cas de doutes sur la mise à la terre du branchement électrique, veuillez vous adresser à un électricien qualifié.

— Pour Canada —

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

AVERTISSEMENT:

- POUR RÉDUIRE LES RISQUES D'INCENDIE OU D'ÉLECTROCUTION, NE PAS EXPOSER CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ.
- CET APPAREIL NE DOIT PAS ÊTRE EXPOSÉ À DES SUINTEMENTS OU DES ÉCLABOUSSURES, ET AUCUN OBJET REMPLI DE LIQUIDE, COMME UN VASE, NE DOIT ÊTRE POSÉ DESSUS.

AVERTISSEMENT:

POUR ÉVITER TOUT RISQUE DE BLESSURES, L'APPAREIL DOIT ÊTRE SOLIDEMENT FIXÉ AU PLANCHER CONFORMÉMENT AUX INSTRUCTIONS D'INSTALLATION.

ATTENTION:

POUR ÉVITER TOUT RISQUE D'INCENDIE, DE CHOCS ÉLECTRIQUES OU D'INTERFÉRENCES, N'UTILISER QUE LES ACCESSOIRES RECOMMANDÉS.

Remarque de la Commission Fédérale des Communications des États-Unis:

Cet équipement a été testé et déclaré conforme aux spécifications de la Classe A des appareils numériques, suivant le chapitre Part 15 des Règles FCC. Ces limites sont prévues pour assurer une protection suffisante contre les interférences nuisibles dans une installation commerciale. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence, et, s'il est installé sans tenir compte des recommandations du mode d'emploi, peut causer des interférences nuisibles dans les communications radio. L'utilisation de cet équipement dans une zone résidentielle risque fort de provoquer des interférences nuisibles, auquel cas il sera demandé à l'utilisateur de remédier à ces interférences à ses frais.

Avertissement:

Pour assurer une conformité continue aux limites d'émission imposées par la FCC, l'utilisateur ne doit utiliser que des câbles d'interface blindés pour la connexion avec des appareils externes. Par ailleurs, tout changement ou modification non autorisé de cet équipement pourrait annuler la compétence de l'utilisateur à l'utiliser.

ATTENTION:


Pour maintenir une bonne ventilation, ne pas installer ni placer l'appareil dans une étagère, un meuble encastré ni aucun endroit confiné. Pour éviter tout risque de choc électrique ou de feu dû à une surchauffe, vérifier qu'aucun rideau ni aucun autre matériau ne fait obstacle à la ventilation.

La prise électrique doit être installée près de l'équipement et facilement accessible, sinon la fiche principale ou un coupleur doivent rester utilisables à tout moment.

Un appareil avec une construction de CLASSE 1 doit être raccordé à une prise secteur avec une connexion à la terre sécurisée.

Instructions de sécurité importantes

Veiller à lire ces instructions attentivement avant d'utiliser l'appareil. Respecter les instructions de sécurité apposées sur l'appareil et les instructions de sécurité applicables ci-dessous. Conserver ces instructions à portée de main pour pouvoir s'y référer ultérieurement.

- 1) Veiller à lire ces instructions.
- 2) Conserver ces instructions.
- 3) Tenir compte de tous les avertissements.
- 4) Se conformer à toutes les instructions.
- 5) Ne pas utiliser cet appareil près de lieux en présence d'eau.
- 6) Nettoyer uniquement avec un chiffon sec.
- 7) N'obturer aucune des ouvertures d'aération. Installer conformément aux instructions du fabricant.
- 8) Ne pas utiliser à proximité de sources de chaleur telles que des radiateurs, des bouches de chauffage, des appareils de chauffage ou tout autre appareil (y compris les amplificateurs) produisant de la chaleur.
- 9) Ne pas asservir l'objectif de sécurité de la prise polarisée ou de la prise de mise à la terre. Une prise polarisée possède deux lames dont l'une est plus large que l'autre. Une prise de mise à la terre possède deux lames ainsi qu'un troisième élément, un ergot de mise à la terre. La lame qui est large ou le troisième élément, l'ergot, sont installés pour assurer votre sécurité. Si la prise fournie ne s'engage pas correctement dans votre prise, consulter un électricien pour qu'il effectue le remplacement de l'ancienne prise de sortie secteur.
- 10) Protéger le cordon d'alimentation afin que personne ne puisse marcher dessus ni ne soit pincé, notamment près des prises, les prises pratiques et les points de sortie de l'appareil.
- 11) Utiliser uniquement les fixations ou les accessoires spécifiés par le fabricant.
- 12) Utiliser uniquement le chariot, le support, le trépied, la platine de fixation ou la tablette spécifiée par le fabricant ou vendu avec l'appareil. Quand un chariot est utilisé, prendre toutes les précautions nécessaires lors du déplacement de la combinaison chariot-appareil afin que le tout ne se renverse pas. 
- 13) Débrancher cet appareil pendant les orages électriques ou s'il n'est pas utilisé sur de longues périodes de temps.
- 14) Toute réparation ou dépannage doit être confié à un personnel qualifié. Un dépannage est nécessaire lorsque l'appareil a été endommagé d'une manière quelconque, par exemple, lorsque le cordon d'alimentation électrique ou la prise ont été endommagés, quand du liquide s'est répandu dessus ou si des objets sont tombés dans l'appareil, lorsque l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement ou s'il a fait une chute.

VERSIÓN ESPAÑOLA

(SPANISH VERSION)

Precauciones de seguridad



El símbolo del relámpago con cabeza de flecha, dentro de un triángulo equilátero, tiene la función de llamar la atención del usuario a la presencia de "tensión peligrosa" no aislada dentro de la caja del producto que puede ser de intensidad suficiente para constituir un riesgo de sacudidas eléctricas a las personas.



El símbolo del punto de exclamación dentro de un triángulo equilátero tiene la función de llamar la atención del usuario a la presencia de importantes instrucciones de mantenimiento (servicio) en la literatura que acompaña el equipo.

ADVERTENCIA:

■ Este aparato deberá ser conectado a tierra

Para garantizar un funcionamiento seguro, la clavija de tres contactos deberá introducirse solamente en una toma de corriente para tres contactos estándar que se encuentre conectada a tierra mediante el cableado normal de la casa. Los cables prolongadores utilizados con el aparato deberán tener tres conductores y estar cableados correctamente para proporcionar la conexión a tierra adecuada. Los cables prolongadores mal cableados son una de las causas principales de que se produzcan accidentes mortales.

El hecho de que el aparato funcione correctamente no significa que éste esté conectado a tierra o que la instalación sea completamente segura. Para su seguridad, si usted tiene alguna duda de la conexión a tierra eficaz del aparato, consulte a un electricista cualificado.

— Para Canadá —

Este aparato digital de clase A satisface las Regulaciones canadienses ICES-003.

ADVERTENCIA:

- **PARA REDUCIR EL RIESGO DE INCENDIO O DESCARGA ELÉCTRICA NO EXPONGA ESTE APARATO A LA LLUVIA NI A LA HUMEDAD.**
- **EL APARATO NO DEBERÁ EXPONERSE AL GOTEÓ NI A LAS SALPICADURAS, Y NINGÚN OBJETO CON LÍQUIDOS, COMO FLOREROS, DEBERÁ PONERSE ENCIMA DEL APARATO.**

ADVERTENCIA:

PARA EVITAR HERIDAS, ESTE APARATO DEBE ESTAR FIRMEMENTE INSTALADO AL PISO DE ACUERDO CON LAS INSTRUCCIONES DE INSTALACIÓN.

PRECAUCIÓN:

PARA REDUCIR EL RIESGO DE INCENDIOS, SACUDIDAS ELÉCTRICAS E INTERFERENCIAS MOLESTAS, UTILICE SOLAMENTE LOS ACCESORIOS RECOMENDADOS.

NOTA de FCC:

Este equipo ha sido probado y se ha comprobado que cumple con los límites de un dispositivo digital de clase A, según lo indicado en la Parte 15 de las Normas de FCC. Estos límites se han establecido para ofrecer una protección razonable contra interferencias perjudiciales cuando se opera el equipo en entornos comerciales. Este equipo genera, emplea, y puede radiar energía de radiofrecuencia y, si no se instala y emplea de acuerdo con el manual de instrucciones, puede causar interferencias perjudiciales en las radiocomunicaciones. La operación de este equipo en áreas residenciales puede causar con facilidad interferencias perjudiciales en cuyo caso el usuario deberá solucionar el problema de las interferencias por cuenta propia.

Advertencia:

Para asegurar el cumplimiento continuado con los límites de emisión de la FCC, el usuario deberá usar solamente cables de interfaz blindados cuando conecte a unidades externas. Además, cualquier cambio o modificación no autorizado hecho en este equipo puede anular la autorización que tiene el usuario para utilizarlo.

PRECAUCIÓN:

Para mantener unas buenas condiciones de ventilación, no instale ni ponga este aparato en una librería, mueble empotrado u otro espacio reducido. Para evitar el riesgo de que se produzcan sacudidas eléctricas o peligros de incendio debidos al recalentamiento, asegúrese de que las cortinas y otros materiales no obstruyan la ventilación.

La toma de corriente deberá estar instalada cerca del equipo, y a ella deberá tenerse un acceso sin problemas, o la clavija de alimentación o un acoplador que tenga el aparato deberán poder manejarse fácilmente.

En la toma de corriente con conexión a tierra de protección deberá ponerse un aviso indicando que en ella se pueden conectar aparatos CLASS 1.

Precauciones de seguridad

Instrucciones importantes de seguridad

Lea cuidadosamente estas instrucciones de funcionamiento antes de utilizar la unidad. Siga las instrucciones de seguridad de la unidad y las instrucciones de seguridad aplicables enumeradas a continuación. Guarde estas instrucciones de funcionamiento a mano para poder consultarlas en el futuro en caso de ser necesario.

- 1) Lea este manual de instrucciones.
- 2) Guarde este manual de instrucciones.
- 3) Observe todas las advertencias.
- 4) Siga todas las instrucciones.
- 5) No emplee este aparato cerca del agua.
- 6) Límpielo sólo con un paño seco.
- 7) No bloquee ninguna de las aberturas de ventilación. Instálelo de acuerdo con las instrucciones del fabricante.
- 8) No lo instale cerca de fuentes de calor como puedan ser radiadores, calefactores, estufas u otros aparatos (incluyendo amplificadores) que produzcan calor.
- 9) No elimine el propósito de seguridad de la clavija polarizada o del tipo de toma de tierra. Una clavija polarizada tiene dos cuchillas, una más ancha que la otra. Una clavija del tipo de toma de tierra tiene dos cuchillas y un tercer saliente para toma de tierra. La cuchilla ancha o el tercer saliente se incorporan para su seguridad. Si la clavija suministrada no se acopla a la toma de corriente, solicite a un electricista que le reemplace la toma de corriente anticuada.
- 10) Proteja el cable de alimentación para que no pueda ser pisado ni pellizcado, especialmente por la parte de las clavijas, por los enchufes de extensión y por el punto por donde salen del aparato.
- 11) Utilice sólo los acopladores/accesorios especificados por el fabricante.
- 12) Empléelo solo en el carrito, soporte, trípode, ménsula o mesa especificados por el fabricante, o vendidos con el aparato. Cuando se emplee un carrito, tenga cuidado cuando mueva la combinación del carrito con el aparato para evitar heridas debidas a caídas del aparato.
- 13) Desenchufe el aparato durante tormentas con rayos o cuando se proponga dejarlo sin utilizar durante períodos prolongados de tiempo.
- 14) Solicite todo tipo de servicio a personal de servicio cualificado. Será necesario realizar el servicio técnico cuando se haya dañado de algún modo el aparato, como cuando se haya dañado el cable o la clavija de alimentación, se haya derramado algún líquido o se hayan introducido objetos en el interior del aparato, se haya expuesto el aparato a la lluvia o a la humedad, cuando no funcione con normalidad, o cuando se haya caído al suelo.



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How the model's Operating Instructions manuals are configured

- The manual of this HD communication camera (hereafter, "the unit") is divided into two manuals: one is the <Basics> (this manual), and the other is the <Operations and Settings>. Before installing the unit, be sure to read the <Basics> to ensure that the unit is installed correctly.
- This manual explains how to install the unit. For details on how to operate the unit and select its settings, refer to the "Operating Instructions <Operations and Settings>" (PDF file). Download the "Operating Instructions <Operations and Settings>" from the home page given below.
http://panasonic.net/psn/products/hdvc/resource/users_guides.html
To read PDF files, you will need Adobe® Reader® which is available from Adobe Systems.

Before use

■ Overview

- This unit is a full HD camera integrated with a pan-tilt head and featuring a 1/3-type full HD MOS sensor and digital signal processor (DSP).
- In addition to its optical 12× zoom lens, the unit comes with a 10× digital zoom to achieve high-quality shooting that overflows with ambiance.
- This unit is designed to be used exclusively with Panasonic HD visual communications system.
Compatible HD visual communication units:
KX-VC300NA, KX-VC300BX,
KX-VC600NA, KX-VC600BX

■ Concerning HD Visual Communications System

- For descriptions of the panning, tilting, zooming, preset and other camera operations using an HD visual communication unit, refer to the operating instructions of the unit which is supported.

■ Concerning the Operating Instructions

- For the purposes of this manual, the two KX-VC300NA and KX-VC300BX models are referred to as the “KX-VC300” and the two KX-VC600NA and KX-VC600BX models are referred to as the “KX-VC600”.

■ Concerning the wireless remote controller (optional accessory)

- This unit can be operated remotely using a wireless remote controller (model AW-RM50G) available as an optional accessory.
It cannot be operated directly using the wireless remote controller of an HD visual communication unit.
To purchase a wireless remote controller, contact your dealer.

■ Trademarks and registered trademarks

- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
- Adobe, Acrobat Reader, and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

■ About copyright and licence

Distributing, copying, disassembling, reverse compiling, reverse engineering, and also exporting in violation of export laws of the software provided with this unit are expressly prohibited.

■ Disclaimer of warranty

IN NO EVENT SHALL Panasonic Corporation BE LIABLE TO ANY PARTY OR ANY PERSON, EXCEPT FOR REPLACEMENT OR REASONABLE MAINTENANCE OF THE PRODUCT, FOR THE CASES, INCLUDING BUT NOT LIMITED TO BELOW:

- ① ANY DAMAGE AND LOSS, INCLUDING WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, CONSEQUENTIAL OR EXEMPLARY, ARISING OUT OF OR RELATING TO THE PRODUCT;
- ② PERSONAL INJURY OR ANY DAMAGE CAUSED BY INAPPROPRIATE USE OR NEGLIGENT OPERATION OF THE USER;
- ③ UNAUTHORIZED DISASSEMBLE, REPAIR OR MODIFICATION OF THE PRODUCT BY THE USER;
- ④ INCONVENIENCE OR ANY LOSS ARISING WHEN IMAGES ARE NOT DISPLAYED, DUE TO ANY REASON OR CAUSE INCLUDING ANY FAILURE OR PROBLEM OF THE PRODUCT;
- ⑤ ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, OR LOSS OR DAMAGE, ARISING OUT OF THE SYSTEM COMBINED BY THE DEVICES OF THIRD PARTY;
- ⑥ LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE.

Characteristics

1/3-type MOS sensor and high-performance 12× zoom lens featured

- A 1/3-type full HD MOS sensor and DSP (digital signal processor) are incorporated.
High-quality pictures are obtained by video processing in many different kinds of ways.
- In addition to its optical 12× zoom lens, the unit comes with a 10× digital zoom to achieve high-quality images that overflow with ambience.
- A dynamic range stretch (DRS) function that compensates for overexposure and loss of dark detail and a new hybrid digital noise reduction (Hybrid DNR) function for minimizing image lag even in dark locations and shooting scenes clearly are incorporated to reproduce clean and clear images in a wide range of applications.

Easy operation of unit enabled by its integration with a high-performance pan-tilt head unit

- Operations at the high speed of 90°/s
- Wide rotational angles with a panning range of $\pm 100^\circ$ and a tilting range of $\pm 30^\circ$
- Quiet operation with noise levels of NC35 (normal speed) and NC40 (when preset)

Use of easy-to-operate wireless remote controller (optional accessory) is possible

- A wireless remote controller capable of operating up to four units can be used.
It can easily be used to set the various functions or switch between them while viewing the menu screens.

Accessories

Check that the following accessories are present and accounted for.

Operating Instructions <Basics> (this manual)	1	Power cable (2 m {6.6 feet})	1
Warranty	1	AC adapter	1

Installation precautions

In addition to heeding the points presented in the “Safety precautions”, observe the following precautions as well.

Ensure that the installation work complies with the technical standards governing electrical equipment.

This unit is for indoor use only.

It cannot be used outdoors.

Avoid installation in a location where the unit will be exposed to direct sunlight for extended periods or near a cooling or heating appliance.

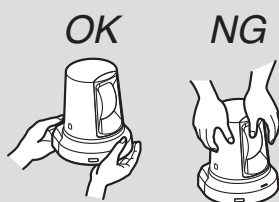
Otherwise, deformation, discoloration, malfunctioning and/or problems in operation may result. Operate the unit where it will not be splashed or sprayed by water.

Use this unit on a flat and level surface.

Do not install the unit on the surface of a wall, on a ceiling or in a location where the unit will end up being inclined at an angle.

Note

- Do not hold the camera head while undertaking the installation work. Doing so may cause malfunctioning.



Concerning the installation location

Install the unit in a stable location which will not be susceptible to shaking. If the unit is installed in a location which is susceptible to shaking, this will cause the unit's images to shake in turn.

Install the unit after conferring in detail with your dealer.

Do not install or use the unit in the following kinds of locations.

- On the surface of a wall (where the unit will be installed sideways and/or where the unit will be secured to the wall using a mounting bracket)
- On a ceiling (where the unit would be installed so that it is pointing downward)
- In locations (including places such as under the eaves of a building) where the unit would be directly exposed to rain or water
- In locations such as kitchens where there are high concentrations of steam and grease
- In outdoor locations or hot places where the temperature will exceed 40 °C {104 °F}
- In cold locations where the temperature will drop below 0 °C {32 °F}
- In locations where the humidity will exceed 85 %
- In locations where chemicals are used such as near swimming pools
- At sea, in coastal areas or in locations where corrosive gases are emitted
- In locations where radiation, X-rays, or strong radio waves or magnetic fields are generated
- In locations where the unit would be subject to a great deal of vibration such as on board a vehicle or ship (this unit is not designed to be used in vehicles)
- In locations where the temperature is subject to sudden changes such as near the air outlet of an air conditioner or near a door which allows the outside air to come in

What to avoid to ensure that the unit will perform stably over a prolonged period

- Using the unit for a prolonged period in a location with high temperature and humidity levels will cause its parts to deteriorate and shorten its service life.
- Ensure that a cooling unit or heating unit will not blow any air directly toward the installation location.

When the unit is no longer going to be used, do not leave it lying around, but be absolutely sure to dispose of it properly.

When installing, transferring or disposing of the unit, be absolutely sure to hold it by its pedestal area.

Problems may result if the camera head is held or rotated.

Do not attach a filter, hood, extender or other parts to the unit.

Installation precautions

Use the dedicated AC adapter and power cable provided with the unit.

Connect the AC adapter and power cable to the power inlet securely.

The power cable supplied with this unit must always be used with this unit. The unit cannot be used with a power cable which is not supplied with the unit. Neither can the power cable supplied with the unit be used with any other device.

Installing the AC adapter

- Do not place the AC adapter in direct contact with a floor or any other such surface. An extreme danger is posed by water pooling on the surface as a result of leaking rainwater or some other reason.
Anchor the AC adapter securely to a surface on which no water, dust, etc. will collect.
- Secure the adapter firmly so that there will be no chance that it will fall off or fall down.
Secure it using a strength which can withstand the mass (approx. 320 g {0.71 lbs.}) of the AC adapter.

Install the accessory AC adapter near the main power outlet, and position it in such a way that its power plug can be plugged into and unplugged from the outlet easily.

If the AC adapter is to be connected where dust collects, remove the dust and dirt from the power plug at regular intervals as a measure to prevent tracking.

Power switch

This unit does not have a power switch. The power turns on when its power plug is connected to a power outlet. When the power is turned on, the pan, tilt, zoom and focusing operations are performed. Before proceeding with maintenance, be absolutely sure to disconnect the power plug from the power outlet.

Connecting the power cable

Be absolutely sure to connect the power cable of the AC adapter through a circuit breaker using one of the following methods.

- (1) Connect the power cable through a power control unit.
- (2) Connect the power cable to a circuit breaker in a power distribution panel with a contact distance of 3.0 mm or more.
Use a circuit breaker which is capable of shutting off all the poles of the main power supply with the exception of the protective ground conductor.
- (3) Install the AC adapter near the power outlet, and connect it through the power plug.

Grounding

Before using the unit, check that the grounding wire has been fastened securely.

Check the grounding resistance (less than 100 Ω) of the grounding terminal.

When the power plug is to be converted into a 2-pin plug for use, first consult with your dealer. Then use a plug adapter which is equipped with a grounding terminal, and be absolutely sure to connect this terminal to ground.

In a case like this, be absolutely sure to make the connection to ground before proceeding to connect the power plug to the main power source.

Similarly, before the ground connection is to be disconnected, be absolutely sure to disconnect the power plug from the main power source first.



If there is a possibility of noise interference

Either wire the cables so that the power cable (ceiling light cord) of AC 100 V or more, and the signal cable are placed at least 1 m {3.3 feet} apart. Alternatively run each cable through its own metal conduit. (The metal conduits must be grounded.)

Radio signal interference

If the unit is positioned near a TV or radio transmitting antenna or a strong electrical field or magnetic field (such as that generated by a motor, transformer or power lines), its images may be distorted and/or the images may be affected by noise.

When connecting the cables, ensure that the connector areas will not be subject to any load.

Doing so may cause malfunctioning.

Allowing the generated heat to escape

This unit allows the heat generated inside to escape from its surfaces.

Do not install the unit in a location where it will be surrounded by walls or other surfaces and where heat will be trapped. In addition, the heat is dissipated to the bottom panel which will warm up over time: This is normal and not indicative of any trouble.

IMPORTANT

- The product name and its electrical ratings are marked on its bottom panel.

Operating precautions

Shoot under the proper lighting conditions.

To produce pictures with eye-pleasing colors, shoot under the proper lighting conditions.
The pictures may not appear with their proper colors when shooting under fluorescent lights.
Select the proper lighting as required.

To ensure a stable performance in the long term

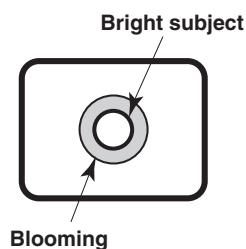
Using the unit for prolonged periods in locations where the temperature and humidity levels are high will cause its parts to deteriorate, resulting in a reduction of its service life.
(Recommended temperature: Max. 35 °C {95 °F})
Ensure that a cooling unit or heating unit will not blow any air directly toward the installation location.

Image persistence on the MOS sensor color filters

If parts of the MOS sensor are exposed continuously to spotlights or other bright lights, the color filters inside the MOS sensor will deteriorate, and the parts concerned may become discolored. The discoloration may be noticeable when the direction of fixed monitoring is changed.

Do not point the camera at strong lights.

When parts of the MOS sensor are exposed to spotlights or other strong lights, blooming (a phenomenon where the edges of strong lights become blurred) may occur.



Concerning the color reproduction of MOS sensors

Depending on the color tones of the subjects, the color reproduction may deteriorate: This is normal and not indicative of any trouble.

What happens with high-brightness subjects

Flare may occur if an extremely bright light source is pointed at the lens. In a case like this, change the angle or take some other remedial action.

When using the automatic functions

- If "FullAuto" has been selected as the setting for Scene on the camera menu, for example, all the auto settings will be turned on, and manual operations will no longer be possible for some of the items.
- When using the ATW (auto tracking white adjustment) function under fluorescent lights, the white balance may vary.
- In some situations, it may be hard to focus at the auto setting. In cases like this, select the manual setting, and focus manually.
- The appropriate brightness may not be obtained when shooting bright objects using the auto settings for the gain and iris. In cases like this, set the shutter speed to manual, and adjust.

Zooming and focusing

When the focus is set manually, out-of-focusing may occur during zooming.

After zooming, if necessary, either adjust the focus or set the focus to auto.

When using the focus at the manual setting, proceed with zooming after setting the focus position at the Tele end where the focusing accuracy is higher.

(However, if the distance from the unit to the subject is less than 1.5 m {4.92 feet}, the subject may shift out of focus at the Wide end.)

If zooming is performed to the Tele end after having adjusted the focus at the Wide end, out-of-focusing may occur.

Concerning the zoom position when the power is turned on

When the unit's power is turned on, the zoom, focus and iris return to the positions they occupied immediately before the power was turned off. (This happens for the focus and iris when they were set manually.)

However, this position may not be restored if, for instance, the power cable was disconnected during operation.

Operating temperature range

Avoid using the unit in cold locations where the temperature drops below 0 °C {32 °F} or hot locations where the temperature rises above +40 °C {104 °F} since these temperatures downgrade the picture quality and adversely affect the internal parts.

Concerning the HDMI interface standard

This unit has been certified as HDMI-compatible, but on rare occasions images may not be displayed depending on the HDMI device which has been connected to the unit.

Turn off the power before connecting or disconnecting the cables.

Always be sure to turn off the power before connecting or disconnecting the cables.

Operating precautions

Handle the unit carefully.

Do not drop the unit or subject it to strong impact or vibration. Doing so may cause the unit to malfunction.

When the unit is not in use

Turn off the unit's power when it is not in use.

When the unit is no longer going to be used, do not leave it lying around, but be absolutely sure to dispose of it properly.

Do not touch the optical system parts.

The optical system parts are the very heart of the camera.

Under no circumstances must they be touched.

In the unlikely event that they have become dusty, remove the dust by using a camera blower or by wiping them gently with a lens cleaning paper.

Do not allow foreign matter to make contact with the rotating parts.

Otherwise, trouble may be caused.

Keep the unit away from water.

Avoid all direct contact with water. Otherwise, problems may occur.

Maintenance

Turn off the unit's power before proceeding with maintenance.

Otherwise, you may injure yourself.

Wipe the surfaces using a soft dry cloth. Avoid all contact with benzine, paint thinners and other volatile substances, and avoid using these substances. Otherwise, the casing may become discolored.

Do not turn the camera head by hand.

Turning the camera head by hand may cause the unit to malfunction.

Use the unit in an environment with minimal moisture and dust.

Avoid using the unit in an environment with high concentration of moisture or dust since these conditions will damage the internal parts.

Disposal of the unit

When the unit has reached the end of its service life and is to be disposed of, ask a qualified contractor to dispose of the unit properly in order to protect the environment.

Concerning the wireless remote controller (optional accessory)

This unit can be operated by remote control using a wireless remote controller (model number: AW-RM50G) which is sold separately.

The unit cannot be operated directly using the wireless remote controller of an HD visual communication unit. Check out the following points before using the wireless remote controller.

Consult your dealer concerning the purchase of a wireless remote controller.

- Operate the wireless remote controller from positions less than 6 m {19.7 feet} away from the unit.

- The wireless remote controller may not work when it is pointed from certain angles at the unit.

From a place where the wireless remote controller signal light-sensing area (hereafter, "light-sensing area") can be seen, point the signal transmission window of the wireless remote controller at the light-sensing area, and operate the buttons.

It may prove to be more difficult to operate the unit when the remote control is operated from behind the unit.

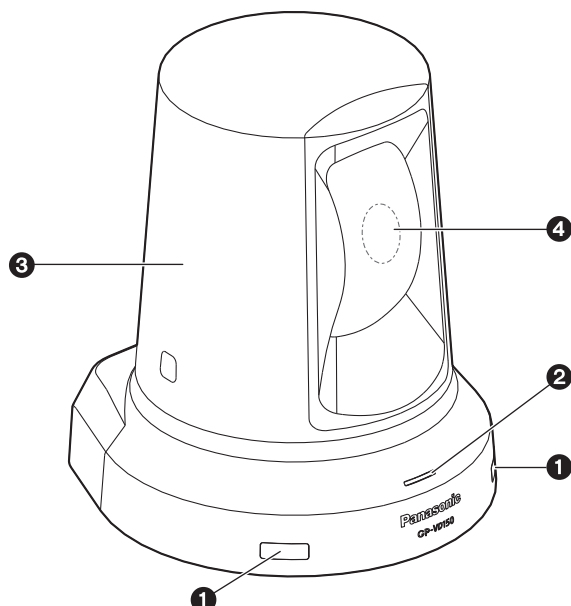
- If the unit is installed near fluorescent lights, plasma monitors or other such products or if the unit is exposed to sunlight, the effects of the light may make it impossible for the unit to be operated using the wireless remote controller.

Be sure to follow the steps below for installation and use.

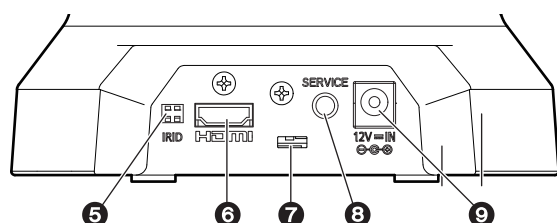
- Take steps to ensure that the light-sensing area will not be exposed to the light from fluorescent lights, plasma monitors or other such products or from the sun.
 - Install the unit away from fluorescent lights, plasma monitors and other such products.
- For about 10 minutes even after the batteries have been removed from the wireless remote controller, the selection of the operation to be performed (the [CAM1], [CAM2], [CAM3] or [CAM4] button which was pressed last) will remain stored in the memory. When a longer period of time elapses, however, the selection is reset to the status established when the [CAM1] button was pressed.

Parts and their functions

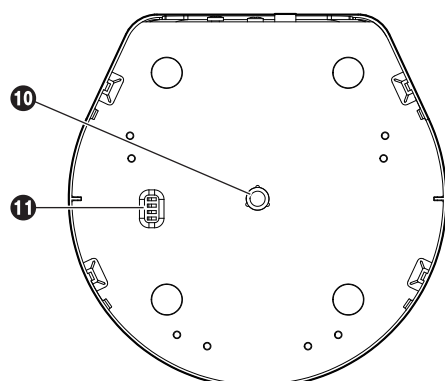
■ Camera unit



<Rear panel>



<Bottom panel>



① Wireless remote controller signal light-sensing area

Light sensors are located in two places at the front of the camera pedestal.

② Status display lamp

This lights in the following way depending on the status of the unit.

Orange: When the standby status is established

Green: When the power is on

Red: When trouble has occurred in the unit

Green and blinks twice:

When a signal matched by the remote control ID has been received from the wireless remote controller (optional accessory) while the power is on

Orange and blinks twice:

When a signal which is not matched by the remote control ID has been received from the wireless remote controller (optional accessory) while the power is on

③ Camera head

This rotates in the horizontal direction.

④ Lens unit

This rotates in the up and down direction.

⑤ IR ID switches [IRID]

[CAM1]	[CAM2]	[CAM3]	[CAM4]
IRID	IRID	IRID	IRID

These are used to select the ID of the wireless remote controller (optional accessory).

The IR ID switch settings “CAM1” to “CAM4” correspond to the [CAM1] to [CAM4] buttons on the wireless remote controller.

⑥ HDMI connector [HDMI]

This is the HDMI video output connector.

⑦ Anti-theft wire mounting hole

Use this hole to attach the wire bracket.

⑧ Service connector

This connector is used only when maintenance is carried out.

⑨ DC IN connector [12V IN]

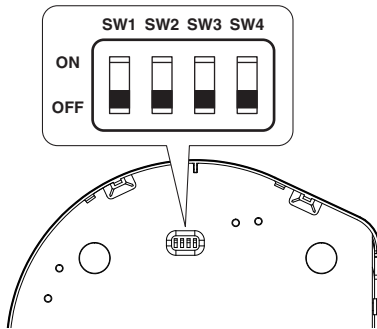
Connect the AC adapter supplied with the unit to this connector to supply the DC 12 V voltage to the unit.

Parts and their functions

⑩ Threaded hole (thread: 1/4-20UNC) for mounting the camera

Use this hole when mounting the camera on a tripod, etc.

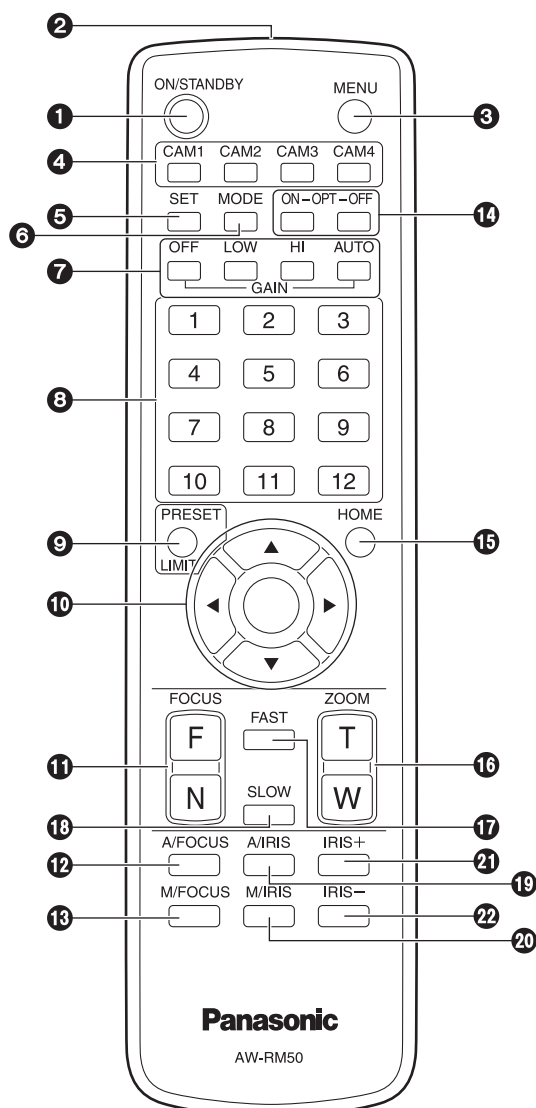
⑪ Service switches



The camera is used with all the switches at the OFF setting.

Parts and their functions

■ Wireless remote controller (optional accessory)



1 ON/STANDBY button

Each time this is pressed for at least 2 seconds, operation switches between turning on the unit's power and establishing the standby status.

Notes

- When operation is transferred to the STANDBY mode: The current pan-tilt position is stored in the memory (as a POWER ON preset), and the camera moves so that it points toward the back.
- When operation is transferred to the POWER ON mode: The camera moves to the position which was stored in the memory (as a POWER ON preset) when operation was transferred to the STANDBY mode.

2 Signal transmission window

3 MENU button

Each time this is pressed for at least 2 seconds, operation switches between displaying the unit's menu and exiting the menu.

When it is pressed quickly (for less than 2 seconds) while a menu is displayed, the setting change is canceled.

4 CAM1 to CAM4 buttons

These are used to select the units that are to be operated.

Once a button has been selected, the unit corresponding to the selected button can be operated.

5 SET button

If this button is pressed when one of the "Manual1 to 3" settings has been selected for "Scene" on the camera menu and the AWB A memory or AWB B memory has been selected by the white balance adjustment, the white balance is automatically adjusted and registered in the selected memory.

6 MODE button

This is used for future expansion of the functions.

It is not used at the present time.

7 GAIN buttons [OFF] [LOW] [HI] [AUTO]

These are used to set the gain.

The gain increase can be set in three steps using the [OFF], [LOW] and [HI] buttons.

[LOW] is set to 9 dB, and [HI] is set to 18 dB.

When the [AUTO] button is pressed, the AGC function is activated, and the gain is adjusted automatically depending on the light quantity.

The maximum gain of the AGC function can be set using the menu.

8 Preset memory call buttons [1] to [12]

These are used to call the information on the unit's directions and other settings, which have been registered in the unit's preset memories No.1 to No.12, and reproduce those settings.

Parts and their functions

9 PRESET/LIMIT button

This is used to register the settings in the preset memories.

When a preset memory call button is pressed while the PRESET/LIMIT button is held down, the information on the unit's current direction and other settings is registered in the call button.

Preset memory call buttons [1] to [12] correspond to the unit's No.1 to No.12 preset memories.

10 Pan-tilt buttons and menu operation buttons

[▲] [▼] [◀] [▶] [○]

(1) These are used to change the unit's direction.

The unit is tilted in the up/down direction using the [▲] and [▼] buttons and panned in the left/right direction using the [◀] and [▶] buttons.

The [○] button does not work during tilting and panning.

When the [▲] or [▼] and [◀] or [▶] buttons are pressedd at the same time, the unit moves diagonally.

(2) The buttons are used for menu operations when the unit displays the menus.

Use the [▲], [▼], [◀] and [▶] buttons to select the menu items.

When a selected item has a sub-menu, the sub-menu will be displayed by pressing the [○] button.

When the cursor is aligned with a particular item and the [○] button is pressed on the setting menu at the bottom hierarchical level, the setting of the selected item blinks.

When the [○] button is pressed after the setting has been changed using the [▲], [▼], [◀] and [▶] buttons, the setting stops blinking, and the new setting is entered.

With a regular menu, the new setting is reflected immediately after it has been changed if the change was made from the setting in the blinking status, but there are some menus (Scene, Format and Initialize) where it is reflected only after the [○] button has been pressed, the blinking has stopped and the new setting has been entered.

If the MENU button is pressed quickly (for less than 2 seconds) while the setting is in the blinking status, the change will be canceled, and the setting selected prior to the change will be restored.

11 FOCUS buttons [F] [N]

These are used to adjust the lens focus manually when the manual setting is established for the lens focus.

The focus is adjusted in the far using the [F] button and in the near using the [N] button.

12 A/FOCUS button

This is used when automatically adjusting the lens focus.

13 M/FOCUS button

This is used when manually adjusting the lens focus.

The FOCUS buttons ([F] and [N]) are used when performing the actual adjustment.

14 OPT buttons [ON] [OFF]

These are used for future expansion of the functions.

They are not used at the present time.

15 HOME button

When this is pressed for at least 2 seconds, the unit's direction (panning or tilting) returns to the reference position.

16 ZOOM buttons [T] [W]

These are used to adjust the lens zoom.

The zoom is adjusted in the wide-angle using the [W] button and in the telephoto using the [T] button.

17 FAST button

This is used to change the movement speed at which the panning, tilting, zooming and focusing operations are performed to the high speed.

Note

- The operating speed for panning and tilting when the preset memory settings have been called can be changed using the Preset Speed item of the camera menu.

18 SLOW button

This is used to change the movement speed at which the panning, tilting, zooming and focusing operations are performed to the low speed.

19 A/IRIS button

This establishes the setting for adjusting the lens iris automatically in line with the light quantity.

20 M/IRIS button

This establishes the setting for adjusting the lens iris manually.

The IRIS + and IRIS – buttons are used when performing the actual adjustment.

21 IRIS + button

This is used to adjust the lens iris in the opening direction.

22 IRIS – button

This is used to adjust the lens iris in the closing direction.

Setting the remote control IDs

The wireless remote controller (optional accessory) is capable of operating up to four units.

IDs are used to set which units are selected when the [CAM1], [CAM2], [CAM3] and [CAM4] buttons on the wireless remote controller have been pressed.

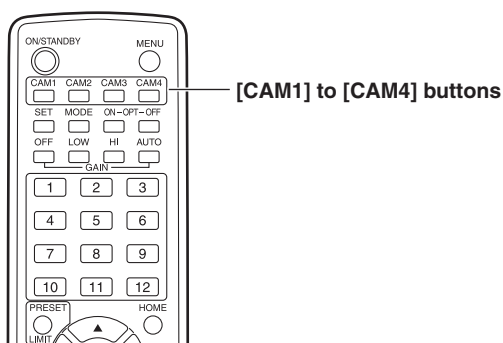
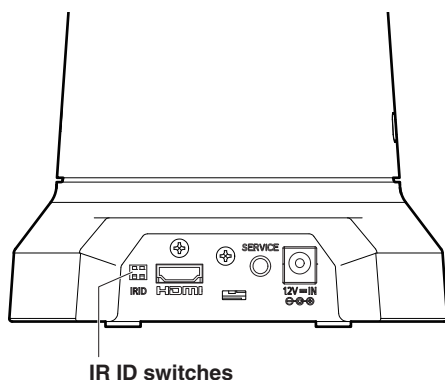
- When using a multiple number of units, set a different remote control ID for each unit.
- When using one unit, set the remote control ID to “CAM1” unless the setting needs to be changed.

Setting procedure

Operate the IR ID switch on the units rear panel, and select “CAM1”, “CAM2”, “CAM3” or “CAM4” as the remote control ID. (See page 17)

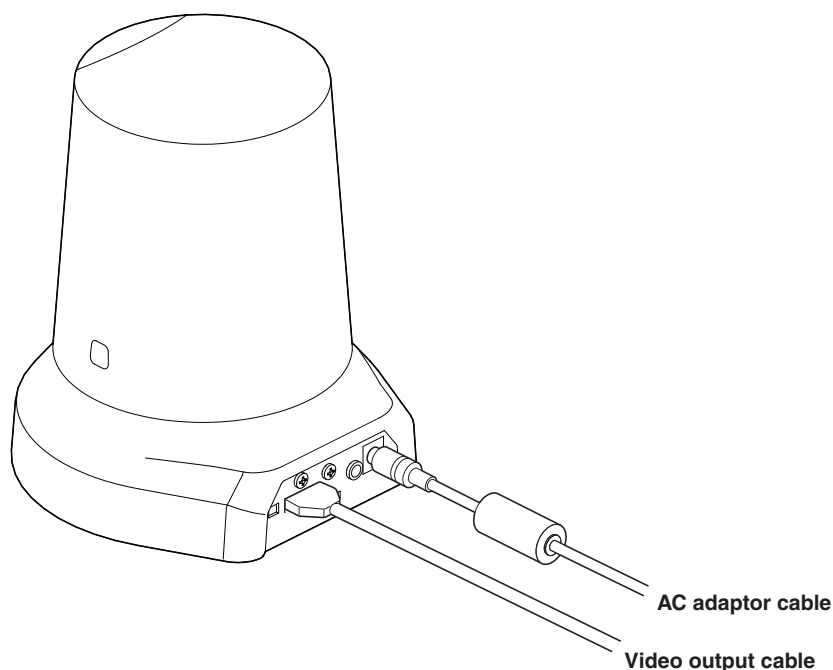
The IR ID switch settings “CAM1” to “CAM4” correspond to the [CAM1] to [CAM4] buttons on the wireless remote controller.

(The factory setting is “CAM1”).



Installation

1 Connect the rear panel connectors.



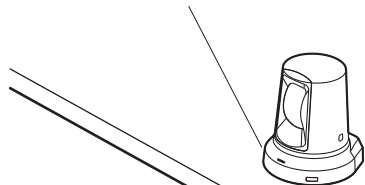
■ When installing the unit on a desk

Place the unit flat on the surface.

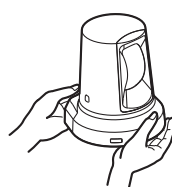
Notes

- Install the unit in a stable location which will not be susceptible to shaking. If the unit is installed in a location which is susceptible to shaking, this will cause the unit's images to shake in turn.
- Take care not to allow the unit to fall or otherwise be damaged during installation.
- When carrying the unit, do not hold it by its head.
- Do not take hold of the camera head or rotate it. Doing so may cause malfunctioning.
- Take care not to pull the connected cables. Doing so may cause the unit to fall and/or it may result in injury.

Ensure that the unit will not fall off.



OK



NG



Installation

■ When mounting the unit on a tripod

Use a highly stable tripod which can bear the weight of the camera mounted on it.

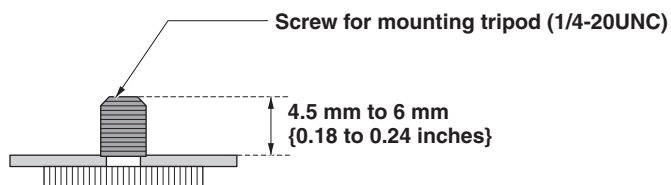
Attach the tripod to the threaded hole for mounting the camera on the camera's bottom panel.

Place the tripod on a completely flat and level surface.

Tighten the screw by hand to mount the tripod securely.

Do not tighten the screw by rotating the camera body. Doing so may cause malfunctioning.

Use screw for mounting the tripod that satisfy the following standard.

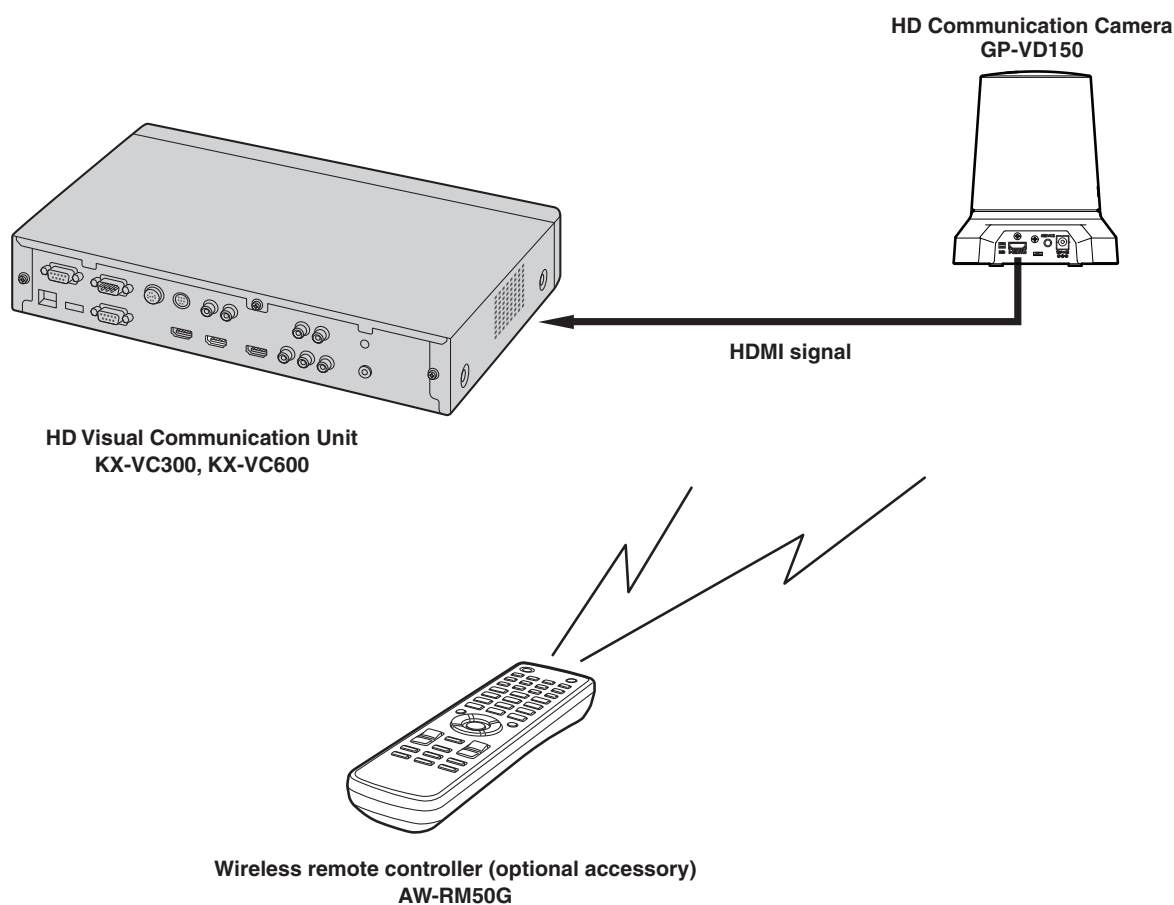


Notes

- Do not install the unit where people will be passing back and forth.
- When using the unit mounted on a tripod, do not put the tripod high above the floor level.
- Mount the unit securely so there is no looseness. Looseness may cause the unit to fall off and/or result in injuries.
- When the unit is going to be used for a prolonged period of time, take steps to ensure that the unit will not topple or fall over and that it will not fall off or fall down. After using the unit, restore the installation location to its original state without delay.

Connections

■ Connections with an HD Visual Communications System



- For descriptions of the panning, tilting, zooming, preset and other camera operations using an HD visual communication unit, refer to the operating instructions of the unit which is supported.

Troubleshooting

● Operation

Symptom	Cause and remedial action	Reference pages
No power	<ul style="list-style-type: none"> Is the AC adapter securely connected to the AC outlet? 	—
	<ul style="list-style-type: none"> Is the power plug of the AC adapter connected properly? 	—
	<ul style="list-style-type: none"> When the unit is being operated by the wireless remote controller → Also refer to the “Cannot operate using the wireless remote controller” item. 	—
Cannot operate (common to wireless remote controller, HD Visual Communication Unit)	<ul style="list-style-type: none"> Is the power on? → If the unit’s status display lamp is off or if it has lighted up orange, it means that the unit’s power is not being supplied. 	<Operations and Settings>
	<ul style="list-style-type: none"> Has the correct unit to be operated been selected? 	<Operations and Settings>
Cannot operate using the wireless remote controller	<ul style="list-style-type: none"> Have the remote control’s batteries run down or have the batteries been installed with their polarities reversed? → If the status display lamp does not blink even when the wireless remote controller is operated near the wireless remote controller signal light-sensing area, it means that the batteries have run down. Replace the batteries. 	—
	<ul style="list-style-type: none"> Is there a fluorescent light or plasma monitor near the unit and, if so, is the wireless remote controller signal light-sensing area exposed to its light? 	P.16

Troubleshooting

● Video

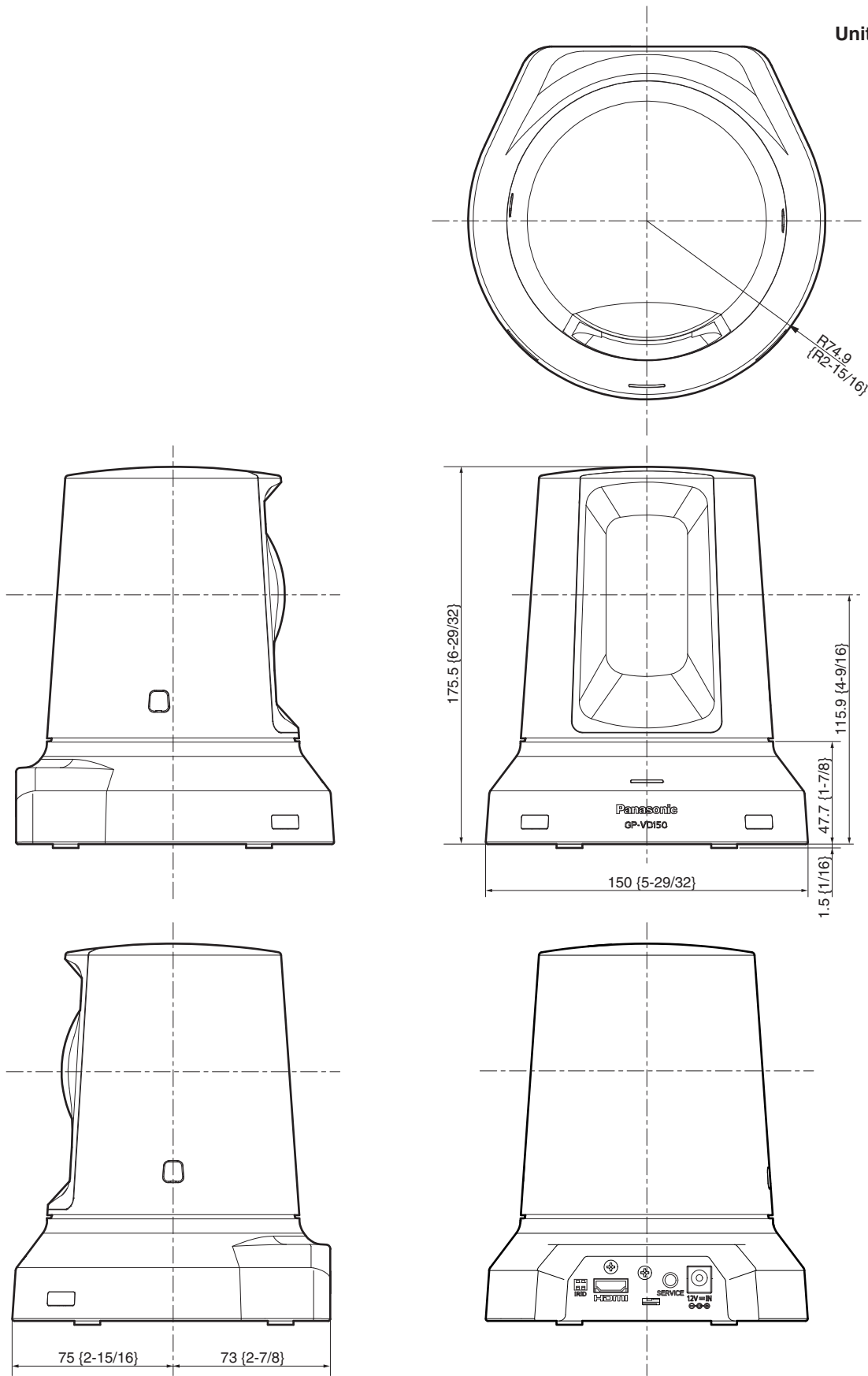
Symptom	Cause and remedial action	Reference pages
No pictures are displayed or the pictures are disturbed	<ul style="list-style-type: none"> Has the unit been connected properly to the other connected devices? 	P.24
	<ul style="list-style-type: none"> If the system is configured in such a way that the picture is also switched when the unit to be operated is selected, has the correct unit been selected? 	<Operations and Settings>
	<ul style="list-style-type: none"> Has the video signal setting been selected correctly? 	<Operations and Settings>
The menu screen is displayed	<ul style="list-style-type: none"> Exit the menu. 	<Operations and Settings>
It is difficult to view the menu screens	<ul style="list-style-type: none"> Depending on the HDMI monitor you are using, you may experience one or more of the symptoms described below. <ul style="list-style-type: none"> The resolution of the characters in the menu displays changes as the background image changes. Depending on the edge enhancement setting established for the monitor, white lines appear in front of the black shadows of the menus. Depending on the edge enhancement setting established for the monitor, the background colors may be superimposed onto the white parts of the menus. 	—
No auto focusing	<ul style="list-style-type: none"> Is the focus set to manual? → Auto focusing is initiated as soon as the focus is set to auto. 	<Operations and Settings>
	<ul style="list-style-type: none"> In some situations, it may be hard to focus at the auto setting. → In cases like this, select the manual setting, and focus manually. 	<Operations and Settings>
The subject is not brought into focus during zooming when the manual setting is used for the focus	<ul style="list-style-type: none"> Was the focus adjusted at the Tele end? → First adjust the focus at the Tele end where the focusing accuracy is higher, and then proceed with the zooming. 	—
	<ul style="list-style-type: none"> Under some operating conditions, it may be hard to bring subjects into focus. → In such cases, use the focus at the auto setting. 	<Operations and Settings>
Ring-shaped reflections appear in the four corners of the images	<ul style="list-style-type: none"> These are caused by the reflections of the light between the lens and the cover in front of the lens. Find a way of optimizing the position of the lighting relative to the position of the unit, and install and use the unit in a location where the reflections will not occur. 	—
Something is wrong with the coloring of the pictures	<ul style="list-style-type: none"> Activate the ATW (Auto tracking white adjustment) function. 	<Operations and Settings>
	<ul style="list-style-type: none"> In some situations, the proper colors may not be reproduced using the ATW function. → In cases like this, proceed with the white balance adjustment. 	<Operations and Settings>

Troubleshooting

Symptom	Cause and remedial action	Reference pages
The pictures are too light or too dark	<ul style="list-style-type: none"> Either select the auto setting for the iris or select the manual setting and adjust the iris manually. 	<Operations and Settings>
	<ul style="list-style-type: none"> The pictures may be dark if the video signal cables are too long because this will cause signal attenuation. 	—
The subjects appear distorted	<ul style="list-style-type: none"> If a subject has suddenly crossed in front of the camera, it may appear slightly distorted because this camera uses a MOS image sensor. This is normal and not indicative of any problem. 	—
When the flash is fired during shooting, only the top or bottom of the screen becomes lighter	<ul style="list-style-type: none"> With a MOS image sensor, the shooting timing differs slightly between the top left and bottom right of the screen. This means that when the flash is fired, the bottom of the screen will become lighter in the field concerned and the top will become lighter in the next field. This is normal and not indicative of any problem. 	—
The brightness changes cyclically or the colors change, and horizontal stripes can be seen passing across the screen	<ul style="list-style-type: none"> These phenomena (flicker) may occur under the illumination produced by fluorescent lighting, mercury bulbs or other types of discharge tubes. This is normal and not indicative of any problem. At a time like this, it is recommended that the electronic shutter speed be set to 1/100 in areas with a 50 Hz power line frequency or to OFF in areas with a 60 Hz power line frequency. 	<Operations and Settings>
When fine lines or cyclical patterns are shot, flickering is seen or coloring is added to them	<ul style="list-style-type: none"> This phenomenon occurs because the pixels are arranged systematically on each image sensor. It is noticeable when the spatial frequency of a subject and the pixel pitch are brought into proximity so change the camera angle or take other such action. 	—

Appearance

Unit: mm {inch}



Specifications

Power requirements:	DC 12 V \pm 10 % (AC adapter provided)
Power consumption:	1.0 A

 indicates safety information.

■ GENERAL

- Ambient operating temperature:** 0 °C to +40 °C {+32 °F to +104 °F}
- Storage temperature:** -20 °C to +50 °C {-4 °F to +122 °F}
- Allowable humidity ranges:** 20 % to 90 % (no condensation)
- Mass:** Approx. 1.2 kg {2.65 lbs.}
- Dimensions (W × D × H):**
150 × 148 × 177 mm
{5-29/32 inches × 5-13/16 inches × 6-31/32 inches}
- Finish:** Silver

■ INPUT

- Input connector:** DC 12 V IN

■ OUTPUT

- Video output:** HDMI (HDMI connector)

Specifications

■ FUNCTIONS AND PERFORMANCE

[Camera unit]

Imaging sensors:	1/3-type Full-HD MOS
Lens:	Motorized 12× zoom, f/1.6 to 2.0 (f=4.7 to 56.4 mm; 35 mm equivalent: 36.9 mm to 442.8 mm)
Focus:	Switching between auto and manual
Focus distance:	Entire zooming range: 1.5 m {4.9 feet} Wide end: 30 cm {0.98 feet}
Color separation optical system:	On-chip color filter system
Minimum illumination:	3 lx (50 IRE, F1.6, +36 dB)
Horizontal resolution:	850 TV lines Typ (Center area)
Gain selection:	Auto, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 15 dB, 18 dB
Storage mode:	0 dB, 6 dB, 12 dB, 18 dB
Electronic shutter speed:	Step: 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 Synchro scan: 60.24 Hz to 646.21 Hz
Gamma:	Off, Normal (Low, Mid, High), Cinema
White balance:	AWB A, AWB B, ATW
Chroma amount variability:	7 levels variability
Scene file:	FullAuto, Manual1, Manual2, Manual3
Output format:	HD 1080: 59.94i, SD 480: 59.94p

[Pan-tilt head unit]

Pan/tilt operation speed:

Max. 90°/s or more

Panning range: ±100°

Tilting range: ±30°

- Depending on the pan or tilt position, the camera may be reflected in the image.

Quietness: NC35 (normal speed),
NC40 (when preset)

■ AC adapter

Input: AC 100 V to 240 V, 1.5 A,
50 Hz/60 Hz

Output: DC 12 V, 2.5 A, 30 W

The provided power cable is for 125 V AC or less.
Use it within AC 100 V to 120 V.

■ Optional accessories

- **Wireless remote controller AW-RM50G**
(Manufactured by Panasonic)
(Size “AA” dry battery × 2, obtained separately)

Mass and dimensions shown are approximate.
Specifications are subject to change without notice.

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