

Panasonic®

Operating Instructions **Excerpted Version**

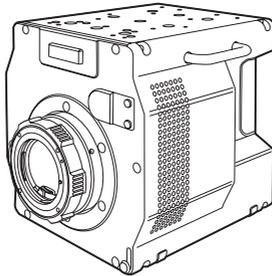
Installation Instructions provided

8K Multi Purpose Camera

Model No. **AK-SHB800G**

Model No. **AK-SHB800PS**

8K



Installation Instructions

Pages 5 to 14

Operating Instructions

Pages 15 to 43

ENGLISH Excerpted Version

Before using this product, be sure to read "Read this first!" (page 5, pages 15 to 18).

This manual is an excerpted version of the full Operating Guide.

For more information, please visit the Panasonic website (<https://pro-av.panasonic.net/manual/en/index.html>), and refer to the Operating Guide (PDF).

FRANÇAIS

Avant d'utiliser cet appareil, assurez-vous de lire la section « Lire ces informations en premier ! » (page 5, pages 19 à 21).

Pour de plus amples informations, visiter le site Web de Panasonic (<https://pro-av.panasonic.net/manual/en/index.html>) et consulter le Guide de fonctionnement (PDF En anglais uniquement).

ESPAÑOL

Antes de usar este producto, asegúrese de leer "Lea esto primero" (página 5, páginas 22 a 24).

Si desea obtener más información, visite el sitio web de Panasonic (<https://pro-av.panasonic.net/manual/en/index.html>) y consulte las Manual de Instrucciones (PDF Solo en inglés).

DEUTSCH

Bitte lesen Sie sorgfältig die „Bitte lesen Sie zuerst diesen Hinweis!“ vor der Nutzung dieses Produkts. (Seite 5, Seiten 25 bis 26).

Weitere Informationen finden Sie auf der Panasonic-Webseite (<https://pro-av.panasonic.net/manual/en/index.html>) und in der Gebrauchsanweisung (PDF Nur Englisch).

ITALIANO

Prima di utilizzare il prodotto, assicurarsi di leggere "Leggere prima quanto segue!" (pagina 5, pagine 27 a 28).

Per maggiori informazioni, per favore visitare il sito web Panasonic (<https://pro-av.panasonic.net/manual/en/index.html>), e fare riferimento alle Guida all'uso (PDF solo in inglese).

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



FJ0719TY0 -FJ
Printed in Japan

ENGLISH

DVQX1907ZA

български	Посетете следния уебсайт относно информация за безопасността и важни уведомления за продукта.
Hrvatski	Za sigurnosne informacije i važne obavijesti o proizvodu posjetite sljedeću internetsku stranicu.
Čeština	Na následujícím webu najdete bezpečnostní informace a důležité poznámky k tomuto produktu.
Dansk	Besøg følgende webside for sikkerhedsinformation og vigtige bemærkninger vedrørende produktet.
Nederlands	Ga naar de volgende website voor veiligheidsinformatie en belangrijke meldingen over het product.
Eesti	Toodet puudutava ohutusteabe ja oluliste märkuste saamiseks külastage järgmist veebilehte.
Suomi	Käy seuraavalla verkkosivulla saadaksesi turvallisuustietoja ja tärkeitä tietoja liittyen laitteeseen.
Ελληνικά	Για πληροφορίες σχετικά με θέματα ασφάλειας και σημαντικές ειδοποιήσεις που αφορούν το προϊόν σας, επισκεφτείτε τον ιστότοπο που ακολουθεί.
Magyar	A termékkel kapcsolatos biztonsági információkért és fontos értesítésekért látogasson el az alábbi weboldalra.
Latviešu	Lai iegūtu informāciju par drošību un skatītu svarīgus paziņojumus par šo produktu, apmeklējiet tālāk norādīto tīmekļa vietni.
Lietuvių	Jei reikia saugos informacijos ir svarbių pranešimų apie gaminį, apsilankykite toliau nurodytoje svetainėje.
Polski	Informacje o bezpieczeństwie i ważne informacje o produkcie znajdując się w poniższej witrynie internetowej.
Português	Consulte o seguinte website para as informações de segurança e importantes notificações sobre o produto.
Română	Vizitați următoarea pagină web pentru informații de securitate și notificări importante cu privire la produs.
Slovensky	Pre bezpečnostné informácie a dôležité oznámenia súvisiace s produktom navštívte túto webovú stránku.
Slovenščina	Za varnostne informacije in pomembna obvestila v zvezi z izdelkom obiščite naslednje spletno mesto.
Svenska	Besök följande webbplats för säkerhetsinformation och viktiga meddelanden om produkten.
العربية	زر موقع الويب التالي لمعرفة أحدث معلومات السلامة والإخطارات الهامة بشأن المنتج.

<https://pro-av.panasonic.net/manual/en/index.html>

- Microsoft®, Windows®, Windows® 7, Windows® 8, Windows® 8.1, Windows® 10, Internet Explorer®, ActiveX®, and DirectX® are registered trademarks or trademarks of Microsoft Corporation in the United States, Japan, and/or other countries.
- Apple, Mac, and OS X are trademarks of Apple Inc., registered in the United States and other countries.
- Intel® and Intel® Core™ are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and/or other countries.
- All other names, company names, product names, etc., contained in this instruction manual are trademarks or registered trademarks of their respective owners.

How to read this document

■ Illustrations

- Illustrations of the camera, menu screens, and other items, may vary from the actual products.
- Screenshots are used according to guidelines provided by Microsoft Corporation.
- Unless specifically stated otherwise, illustrations of the unit are of AK-SHB800PS.

■ Conventions used in this manual

- Words and phrases in [] brackets indicate content displayed in the monitor.
- Words and phrases in < > brackets indicate design text used on this camera, such as button names.

■ Reference pages

- Reference pages in this document are indicated by (page 00).

■ Terminology

- Microsoft® Windows® 7 Professional SP1 32/64-bit is referred to as Windows 7.
- Microsoft® Windows® 8 Professional 32/64-bit is referred to as Windows 8.
- Microsoft® Windows® 8.1 Professional 32/64-bit is referred to as Windows 8.1.
- Microsoft® Windows® 10 Professional 32/64-bit is referred to as Windows 10.
- Windows® Internet Explorer® 8.0, Windows® Internet Explorer® 9.0, Windows® Internet Explorer® 10.0, and Windows® Internet Explorer® 11.0 are referred to as Internet Explorer.
- 8K Multi Purpose Camera is referred to as “camera”.
- Image Processing Unit is referred to as “IPU”.

For the purposes of this manual, the model numbers of the units are given as listed in the table below.

Model number of unit	Model number given in manual
AK-SHB800G	AK-SHB800
AK-SHB800PS	
AK-SHU800PS	AK-SHU800
AK-SHU800E	
AK-HRP1000G	AK-HRP1000
AK-SFC101G	AK-SFC101

Contents

Installation Instructions	
Read this first! / Lire ces informations en premier !	5
Lea esto primero / Bitte lesen Sie zuerst diesen Hinweis!	5
Leggere prima quanto segue!	5
Before installing	6
Drop prevention measure	6
Installation	7
Upper side	7
Bottom side	7
Example where the camera is mounted on a ceiling	8
Example where the camera is mounted on a wall	9
Example of mounting the camera onto a fixture or tripod made by another manufacturer	10
Example where the camera is mounted from top	11
Mounting the lens	12
Using external DC power supply	13
External dimensions	14
Operating Instructions	
Read this first!	15
Read this first! (For AK-SHB800PS)	16
Read this first! (For AK-SHB800G)	18
Lire ces informations en premier !	19
Lire ces informations en premier ! (Pour les modèles AK-SHB800PS)	20
Lire ces informations en premier ! (Pour les modèles AK-SHB800G)	21
Lea esto primero	22
Lea esto primero (Para AK-SHB800PS)	23
Lea esto primero (Para AK-SHB800G)	24
Bitte lesen Sie zuerst diesen Hinweis!	25
Bitte lesen Sie zuerst diesen Hinweis! (Für AK-SHB800G)	26
Leggere prima quanto segue!	27
Leggere prima quanto segue! (Per AK-SHB800G)	28
Before using the camera	29
Notes	30
Required environment for computer	30
Disclaimer.....	30
Notes regarding network.....	30
Using the camera in a system	31
Basic configuration devices	31
Expanded configuration devices	31
System block diagram	31
Accessories	37
Description of parts	38
Front side.....	38
Left side.....	38
Right side.....	39
Rear side.....	39
Upper side.....	40
Bottom side.....	41
Troubleshooting	42
Warning displays	42
Camera warning displays	42
Other warning displays.....	43
Updating the camera firmware	43
Specifications	43
General.....	43

Read this first! / Lire ces informations en premier !

 indicates safety information. / Informations concernant la sécurité. sono le informazioni sulla sicurezza.

ENGLISH

WARNING:

To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

WARNING:

Installation should only be performed by qualified installation personnel. Improper installation may result in the entire apparatus falling down and causing injury.

FRANÇAIS

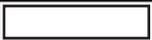
AVERTISSEMENT:

Pour éviter tout risque de blessures, l'appareil doit être solidement fixé au plancher/mur conformément aux instructions d'installation.

AVERTISSEMENT:

L'installation ne doit être effectuée que par du personnel d'installation qualifié. Une mauvaise installation peut avoir pour conséquence la chute de l'appareil et provoquer des blessures.

Lea esto primero / Bitte lesen Sie zuerst diesen Hinweis!

 indica información de seguridad. / ist die Sicherheitsinformation.

ESPAÑOL

ADVERTENCIA:

Para evitar heridas, este aparato debe estar firmemente instalado al piso/pared de acuerdo con las instrucciones de instalación.

ADVERTENCIA:

La instalación solamente debe llevarla a cabo personal cualificado. Una instalación incorrecta podría provocar la caída del dispositivo y causar lesiones.

DEUTSCH

WARNUNG:

Um Verletzungen zu verhüten, muss dieser Apparat gemäß der Installationsanleitung sicher am Boden bzw. an der Wand befestigt werden.

WARNUNG:

Die Installation darf nur durch qualifiziertes Personal ausgeführt werden. Fehlerhafte Installation kann zum Herunterfallen des Gerätes und zu Verletzungen führen.

Leggere prima quanto segue!

 sono le informazioni sulla sicurezza.

ITALIANO

AVVISO:

Per prevenire ferite, questo apparecchio deve essere montato saldamente al pavimento/muro in conformità alle istruzioni di installazione.

AVVISO:

L'installazione deve essere realizzata unicamente da tecnici qualificati. Un'installazione incorretta può risultare nella caduta dell'apparecchio con conseguenti danni alle persone.

Before installing

Before installing

Drop prevention measure

Take the drop prevention measure by attaching the drop prevention wire to the mounting screw hole.

Mounting the camera to the pan/tilt head

Prepare a commercially available drop prevention wire when mounting this unit to the pan/tilt head.

Mounting the camera to anything other than the pan/tilt head

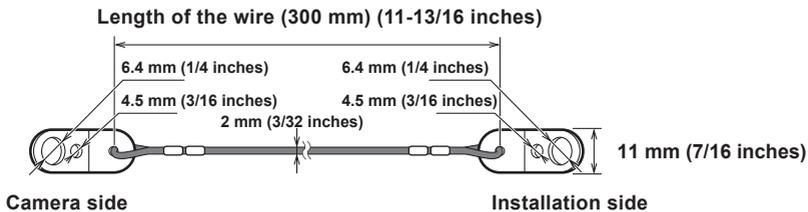
Prepare the drop prevention wire and camera mounting fixture when attaching to anything other than the pan/tilt head.

1 Drop prevention wire (optional): 2

Always use the drop prevention wire.

A drop prevention wire is available as an optional accessory. Use with as small slack as allowed by the installation location or the installation method.

Secure wire diameter of 2 mm (3/32 inches) or more, length of 300 mm (11-13/16 inches) or less, and strength of the mounting section of 2000 N or more when using a commercially available drop prevention wire. Also, separately prepare the mounting screw matching the mounting specification.



- Wire length 300 mm (11-13/16 inches): Parts number (DVDW1001ZA)

2 Camera mounting screws (to be obtained by customer): 2

Size: 3/8-16 UNC



Consider the thickness of the camera mounting fixture for the length.

3 Installation side wire mounting screw (M6 or M4) (to be obtained by customer): 2

Use an anchor bolt at the installation location and secure the strength of ten times of the entire weight.

4 Flat washers (to be obtained by customer): 4 (for mounting the camera)

For 3/8 inch screw

5 Spring washers (to be obtained by customer): 4 (for mounting the camera)

For 3/8 inch screw

6 Camera mounting fixture (to be obtained by customer): 1

Prepare the fixture with material and shape that can withstand the entire weight of the camera and the lens.

Installation

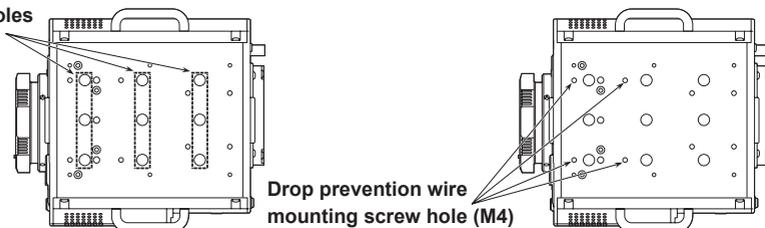
Securely fix to the camera housing, the pan/tilt head, or the tripod using the mounting screw holes at the top and bottom. Always use tools when installing and confirm that there is no danger of drop.

NOTE

- Hold the main unit with both hands by the left and right fittings when attaching it to a tripod or when carrying it.

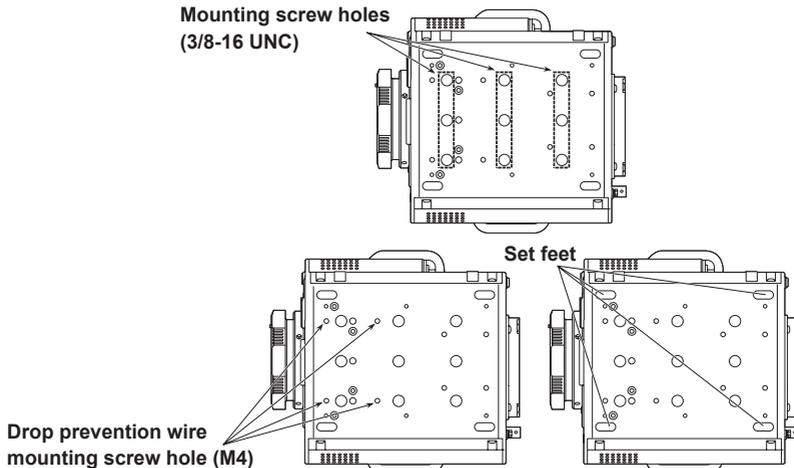
Upper side

Mounting screw holes
(3/8-16 UNC)



Bottom side

Mounting screw holes
(3/8-16 UNC)



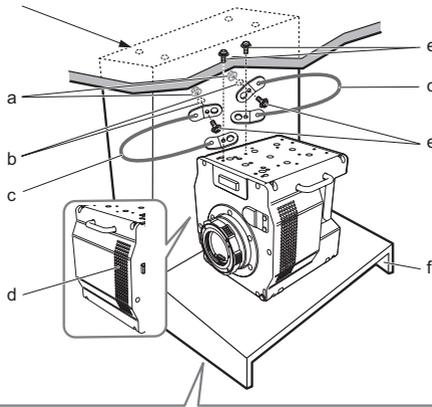
NOTE

- Always use an anchor bolt when installing the mounting fixture into the ceiling or the wall. Secure drawing strength of ten times or larger against the entire weight including the mounting fixture, camera, lens, and cables.
- Always take the drop prevention measure using the screws on the tripod when mounted on a tripod.
- The weight including the camera body, lens, and cables should be 6 kg (13.20 lbs) or less.
- Attach the drop prevention wire so the distance of drop will be 300 mm (11-13/16 inches) or less.
- Tighten the mounting screws with the following torques, and confirm that there is no rattling.
 - 3/8 inch screw: 12 N·m (120 kgf·cm)
 - M4 screw: 1.0 N·m (10 kgf·cm)
- Do not use impact driver. Doing so may damage the screws.
- The set feet may be taken off the main unit to suit the usage situation.
- Securely install the safety wire, etc., separately following the operating instructions of the manufacturer when installing the commercially available mounting fixture.
- Do not reuse the wire that was used (dropped) once. Always use a new wire when reinstalling.
- Take caution to install so the rating plate is visible.

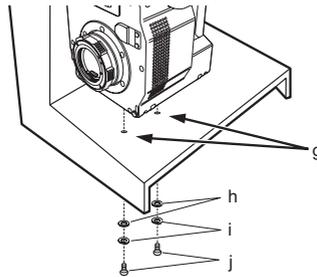
Installation

Example where the camera is mounted on a ceiling

Always attach with an ancor bolt.



When using the inch screw (3/8-16 UNC)



a: Flange nut (supplied)

b: Screw hole

Drill a hole of 5 mm (3/16 inches) diameter.

c: Drop prevention wire (optional)

d: Vents

Take care not to block the vents when attaching the fittings.

e: Wire mounting screw (supplied) (screw: M4)

Purchase a commercially available M4 screw separately when the length of the screw is not enough.

f: Camera mounting fixture (to be obtained by customer)

g: Screw hole

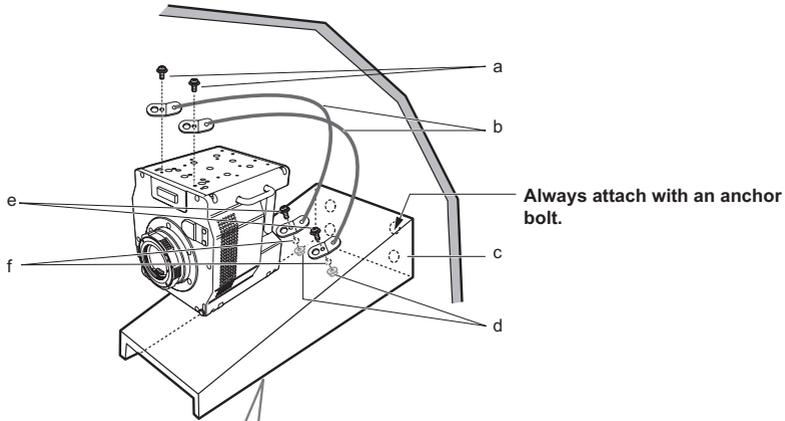
Drill a hole of 10 mm (13/32 inches) diameter.

h: Flat washer (to be obtained by customer)

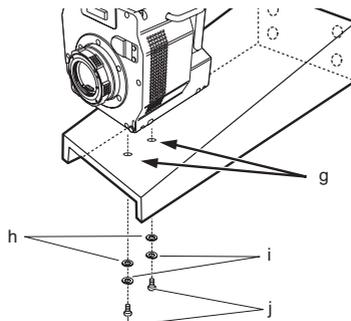
i: Spring washer (to be obtained by customer)

j: Mounting screws (to be obtained by customer) (inch screw: 3/8-16 UNC)

Example where the camera is mounted on a wall



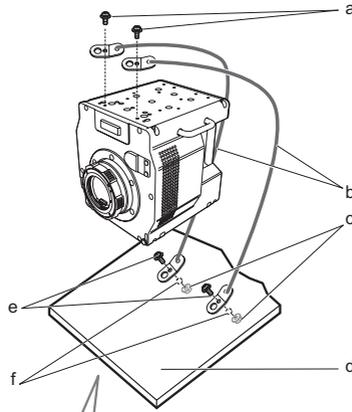
When using the inch screws (3/8-16 UNC)



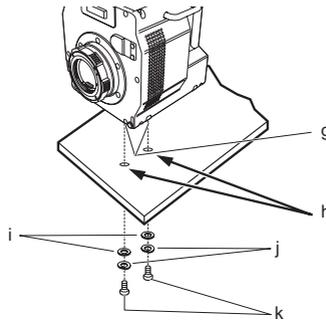
- a: Wire mounting screw (supplied) (screw: M4)**
- b: Drop prevention wire (optional)**
- c: Camera mounting fixture (to be obtained by customer)**
- d: Flange nut (supplied)**
- e: Wire mounting screw (supplied) (screw: M4)**
Purchase a commercially available M4 screw separately when the length of the screw is not enough.
- f: Screw hole**
Drill a hole of 5 mm (3/16 inches) diameter.
- g: Screw hole**
Drill a hole of 10 mm (13/32 inches) diameter.
- h: Flat washer (to be obtained by customer)**
- i: Spring washer (to be obtained by customer)**
- j: Mounting screws (to be obtained by customer) (inch screw: 3/8-16 UNC)**

Installation

Example of mounting the camera onto a fixture or tripod made by another manufacturer

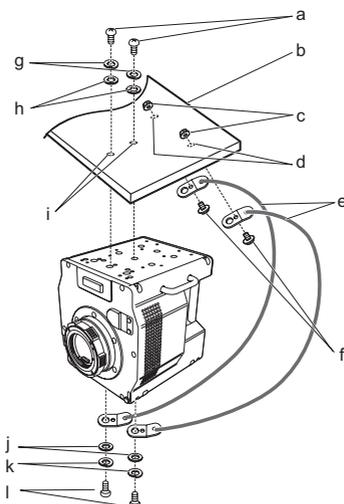


When using the inch screws (3/8-16 UNC)



- a: Wire mounting screw (supplied) (screw: M4)**
- b: Drop prevention wire (optional)**
- c: Flange nut (supplied)**
- d: Fixture or tripod made by another manufacturer (optional)**
- e: Wire mounting screw (supplied) (screw: M4)**
Purchase a commercially available M4 screw separately when the length of the screw is not enough.
- f: Screw hole**
Drill a hole of 5 mm (3/16 inches) diameter.
- g: Camera mounting screw holes**
- h: Screw hole**
Drill a hole of 10 mm (13/32 inches) diameter.
- i: Flat washer (to be obtained by customer)**
- j: Spring washer (to be obtained by customer)**
- k: Mounting screws (to be obtained by customer) (inch screw: 3/8-16 UNC)**

Example where the camera is mounted from top



a: Mounting screws (to be obtained by customer) (inch screw: 3/8-16 UNC)

b: Camera mounting fixture (optional)

c: Flange nut (supplied)

d: Screw hole

Drill a hole of 5 mm (3/16 inches) diameter.

e: Drop prevention wire (optional)

f: Wire mounting screw (supplied) (screw: M4)

Purchase a commercially available M4 screw separately when the length of the screw is not enough.

g: Spring washer (to be obtained by customer)

h: Flat washer (to be obtained by customer)

i: Screw holes

Drill a hole of 10 mm (13/32 inches) diameter.

j: Flat washer (to be obtained by customer)

k: Spring washer (to be obtained by customer)

l: Mounting screw (to be obtained by customer) (inch screw: 3/8-16 UNC)

Mounting the lens

Mounting the lens

An EF lens can be attached.

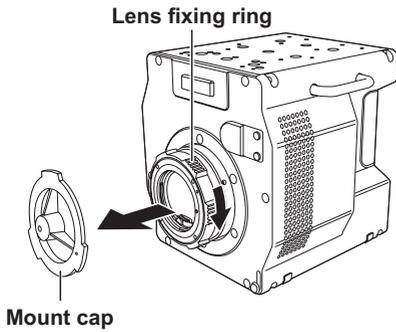


Fig. 1

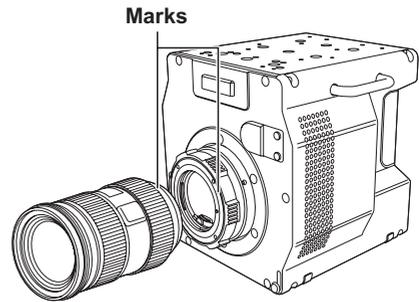


Fig. 2

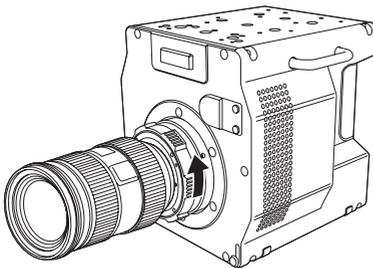


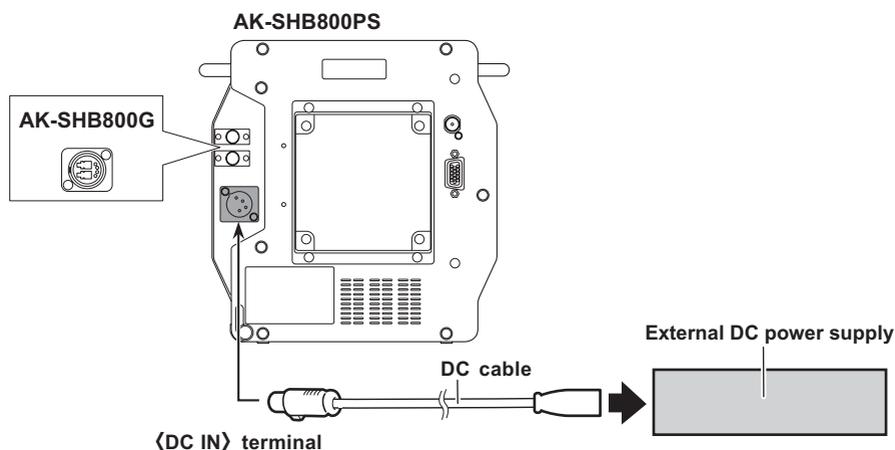
Fig. 3

- 1 Turn the lens fixing ring and remove the mount cap. (Fig.1)
- 2 Match the mark on the lens (red circle) with the mark on the lens mount (red circle) and attach the lens. (Fig.2)
- 3 Turn the lens fixing ring to firmly fix the lens. (Fig.3)

NOTE

- Refer to the operating instructions for the lens for information about using the lens.
- Attach the mount cap to protect the equipment when a lens is not fitted.

Using external DC power supply



- 1 Connect the external DC power supply to the <DC IN> terminal on the camera.
- 2 Turn on the <POWER> switch of the external DC power supply (if the external DC power supply has a <POWER> switch).
- 3 Confirm that the <DC IN> lamp of the camera turns on.

External DC power supply

Connect after making sure that the output voltage of the external DC power supply is compatible with the rated voltage of the camera.

Select an output amperage for the external DC power supply with a margin above the total amperage of the connected devices.

The total amperage of connected devices can be calculated with the following formula.

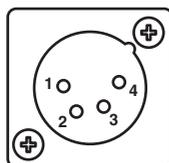
Total power consumption ÷ voltage

When the power of the camera is turned on, inrush current is generated. An insufficient power supply when turning on the power may lead to failure. It is recommended to use an external DC power supply that can assure double the capacity of the total power consumption of the camera and connected devices (such as lens) that are turned on simultaneously when the power of the camera is turned on. Use AWG18 (nominal cross section of 0.824 mm²) or larger double-core shielded cable for the DC cable.

- Check the pin alignment of the DC output terminal of the external DC power supply and the <DC IN> terminal on the camera, and make sure to correctly connect the polarity.

Mistakenly connecting the +12 V power supply to the GND terminal may result in a fire or failure.

DC IN

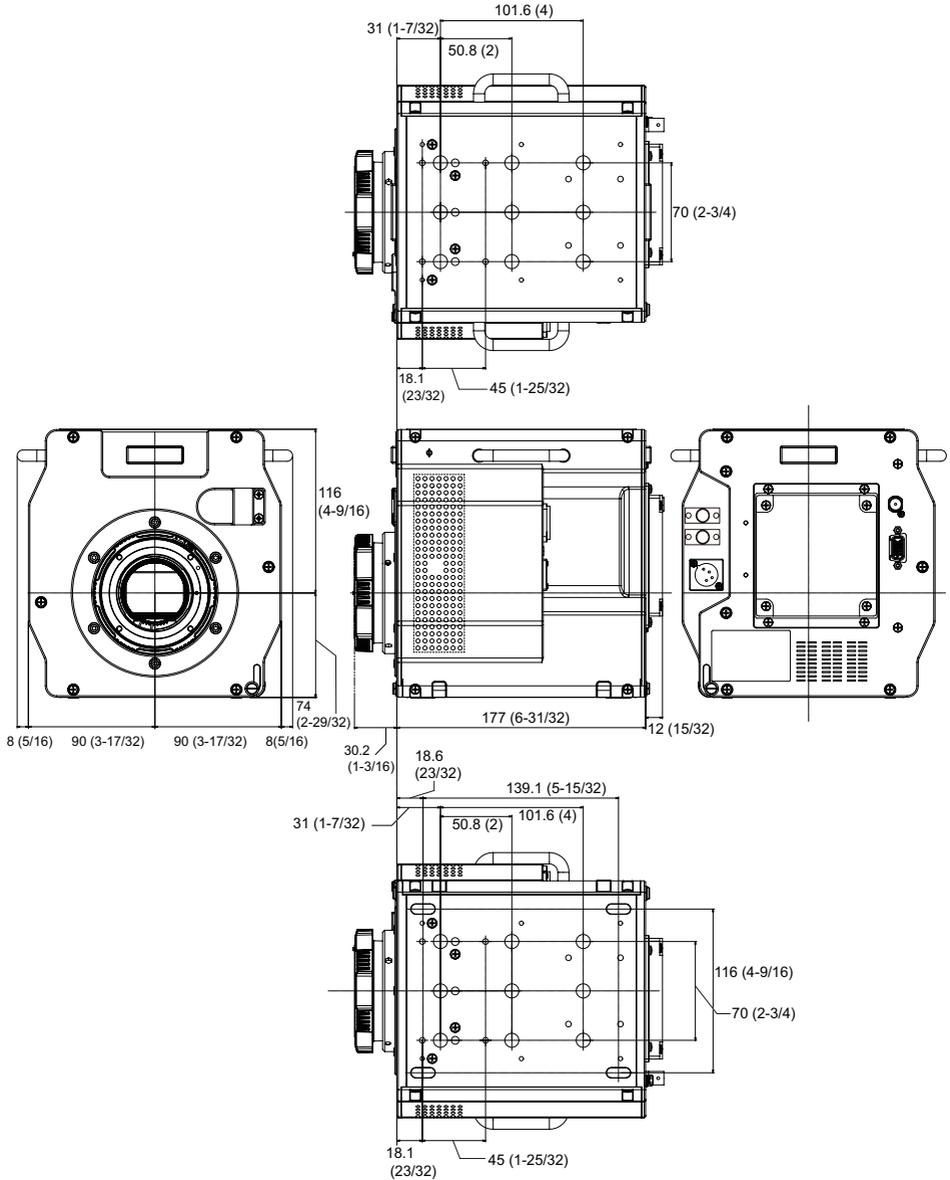


1	UNREG GND
2	Not used
3	Not used
4	+12 V
HA16RA-4P(77) (Hirose Electric Co.)	

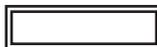
External dimensions

External dimensions

Unit: mm (inch)



Read this first!



indicates safety information.

WARNING:

- To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.
- To reduce the risk of fire or electric shock, keep this equipment away from all liquids. Use and store only in locations which are not exposed to the risk of dripping or splashing liquids, and do not place any liquid containers on top of the equipment.

WARNING:

Always keep the drop-prevention wire (optional accessory) or accessories (flange nut, mounting screw for wire) out of the reach of babies and small children.

WARNING:

This equipment is compliant with Class A of CISPR 32.

In a residential environment this equipment may cause radio interference.

CAUTION:

To reduce the risk of fire or electric shock and annoying interference, use the recommended accessories only.

CAUTION:

Do not remove panel covers by unscrewing. To reduce the risk of electric shock, do not remove the covers. No user serviceable parts inside.

Refer servicing to qualified service personnel.

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.

CAUTION:

Check the installation at least once a year. An improper installation could cause the unit to fall off resulting in personal injury.

CAUTION:

Do not pick up and move the unit while the tripod is attached.

The fitting may break under the weight of the tripod, which may result in injury.

CAUTION:

Do not leave the unit in direct contact with the skin for long periods of time when in use.

Low temperature burn injuries may be suffered if the high temperature parts of this unit are in direct contact with the skin for long periods of time.

When using the equipment for long periods of time, make use of the tripod.

CAUTION:

Naked flame sources, such as lighted candles, should not be placed on the apparatus.

CAUTION:

Invisible Laser radiation is emitted from the Optical fiber connector when this product is turned on. Don't look into directly into the Optical fiber connector of this product.

CAUTION:

This product uses a semiconductor laser system and is a Class 1 Laser Product complies with Radiation Performance Standards, 21CFR SUBCHAPTER J.

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Don't make any modifications.

Don't repair by yourself.

Refer servicing to qualified personnel.

Read this first! (For AK-SHB800PS)



indicates safety information.

FCC NOTICE (USA)

Supplier's Declaration of Conformity

Model Number: AK-SHB800PS

Trade Name: Panasonic

Responsible Party: Panasonic Corporation of North America

Two Riverfront Plaza, Newark, NJ 07102

Support contact: 1-800-524-1448

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

NOTIFICATION (Canada)

CAN ICES-3(A)/NMB-3(A)

Read this first! (For AK-SHB800PS) (Continued)

IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) 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.



Read this first! (For AK-SHB800G)

Manufactured by: Panasonic Corporation, Osaka, Japan
 Importer's name and address of pursuant to EU rules:

Panasonic Marketing Europe GmbH

Panasonic Testing Centre

Winsbergring 15, 22525 Hamburg, Germany



Disposal of Old Equipment

Only for European Union and countries with recycling systems

This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products must not be mixed with general household waste.

For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local municipality, dealer or supplier.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For Turkey

AEEE Yönetmeliğine Uygundur.

AEEE Complies with Directive of Turkey.

ІНФОРМАЦІЯ ПРО ПІДТВЕРДЖЕННЯ ВІДПОВІДНОСТІ ПРОДУКТУ

Виробник:	Panasonic Corporation	Панасонік Корпорейшн
Адреса виробника:	Kadoma, Osaka, Japan	Кадома, Осака, Японія
Країна походження:	Japan	Японія

Імпортер:	ТОВ "ПАНАСОНІК УКРАЇНА ЛТД"
Адреса Імпортера:	провулок Охтирський, будинок 7, місто Київ, 03022, Україна

Примітки:

Термін служби виробу	7 років
----------------------	---------

Дату виготовлення можна визначити за комбінацією букв і цифр серійного номера, що розташований на маркувальній табличці виробу.

Приклад: X X XXXXXXX

Рік: остання цифра року (6 – 2016, 7 – 2017, ... 0 – 2020)

Місяць: А – Січень, В – Лютий... L – Грудень

Lire ces informations en premier !

 Informations concernant la sécurité.

AVERTISSEMENT:

- Pour réduire les risques d'incendie ou de choc électrique, évitez d'exposer cet appareil à la pluie ou à l'humidité.
- Pour réduire tout risque de feu ou de choc électrique, éloigner l'appareil des liquides — utiliser et ranger uniquement dans un endroit ne risquant pas de recevoir des gouttes ou d'être aspergé de liquides, et ne pas mettre de récipient renfermant des liquides sur le dessus de l'appareil.

AVERTISSEMENT:

Toujours tenir le câble anti-chute (accessoire en option) ou les accessoires (écrou à embase, vis de montage pour câble) hors de portée des bébés et jeunes enfants.

AVERTISSEMENT:

Cet équipement est conforme à la Classe A de la norme CISPR 32. Dans un environnement résidentiel, cet équipement peut produire des interférences radio.

ATTENTION:

Pour éviter tout risque d'incendie, de chocs électriques ou d'interférences, n'utilisez que les accessoires recommandés.

ATTENTION:

Ne pas dévisser le couvercle.
Pour réduire tout risque d'électrocution, ne pas retirer le couvercle. Il ne se trouve à l'intérieur aucune pièce qui puisse être réparée par l'utilisateur.
Confier toute réparation à un personnel qualifié.

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, vérifiez qu'aucun rideau ni aucun autre matériau ne fait obstacle à la ventilation.

NOTIFICATION (Canada)

CAN ICES-3 (A)/NMB-3(A)

ATTENTION:

Vérifiez l'installation au moins une fois par an. Une mauvaise installation peut provoquer la chute de l'appareil et engendrer des blessures.

ATTENTION:

Ne pas soulever et déplacer l'appareil quand le trépied est en place.
L'attache risque de se casser sous le poids du trépied, ce qui peut entraîner des blessures.

ATTENTION:

Ne laissez pas l'appareil au contact direct de la peau de façon prolongée lors de l'utilisation. Des brûlures dues aux basses températures pourraient résulter si les parties de cet appareil sont en contact direct avec la peau de façon prolongée.
Quand vous utilisez l'appareil de façon prolongée, utilisez le trépied.

ATTENTION:

Ne pas placer de sources de flammes nues, telles que des bougies allumées, sur l'appareil.

ATTENTION:

Des radiations laser invisibles sont émises par le connecteur de fibre optique quand ce produit est sous tension.
Ne pas regarder directement dans le connecteur de fibre optique de ce produit.

ATTENTION:

Ce produit utilise un système de laser semiconducteur. Il s'agit d'un produit laser de classe 1.
L'utilisation de commandes, les réglages et l'exécution de procédures autres que celles spécifiées dans ce manuel peuvent entraîner une exposition à des radiations dangereuses.
N'effectuez aucune modification.
Ne réparez pas l'appareil vous-même.
Adressez-vous à du personnel qualifié pour l'entretien.

Lire ces informations en premier ! (Pour les modèles AK-SHB800PS)

IMPORTANTES MISES EN GARDE

- 1) Lire ces instructions.
- 2) Conserver ces instructions.
- 3) Respecter ces instructions.
- 4) Suivre toutes les instructions.
- 5) Ne pas utiliser cet appareil près de l'eau.
- 6) Nettoyer avec un chiffon sec seulement.
- 7) Ne pas bloquer les ouvertures pour ventilation. Installer selon les directives du fabricant.
- 8) Éloigner l'appareil de toute source de chaleur telle que radiateurs et autres éléments de chauffage (incluant les amplificateurs).
- 9) Ne pas tenter de contourner les mesures de sécurité des fiches polarisées ou de mise à la terre. Une fiche polarisée possède une lame plus large que l'autre. Une fiche avec mise à la terre possède une troisième broche pour la mise à la terre. Si la fiche ne peut pas être branchée, communiquer avec un électricien pour faire changer la prise de courant.
- 10) Protéger le cordon secteur de manière qu'il ne soit pas piétiné ou écrasé par des objets. Faire particulièrement attention à ses extrémités de branchement, y compris sa fiche.
- 11) N'utiliser que les accessoires recommandés par le fabricant.
- 12) Ne placer l'appareil que dans une baie ou un support recommandé par le fabricant. Déplacer la baie ou le support avec le plus grand soin afin d'en éviter le renversement.
- 13) Débrancher durant un orage ou lors de non-utilisation prolongée.
- 14) Confier toute réparation à un technicien qualifié. Faire réparer l'appareil si le cordon ou la fiche a été endommagé, si l'appareil a été mouillé, si un objet est tombé sur l'appareil, s'il a été exposé à la pluie ou à de l'humidité, s'il ne fonctionne pas normalement ou s'il a été échappé.



S3125A

Lire ces informations en premier ! (Pour les modèles AK-SHB800G)

Fabriqué par : Panasonic Corporation, Osaka, Japon
Nom et adresse de l'importateur en accord avec les règlements de l'Union Européenne :
Panasonic Marketing Europe GmbH
Panasonic Testing Centre
Winsbergring 15, 22525 Hamburg, Allemagne



L'élimination des équipements usagés **Applicable uniquement dans les pays membres de l'Union européenne et les pays disposant de systèmes de recyclage.**

Apposé sur le produit lui-même, sur son emballage, ou figurant dans la documentation qui l'accompagne, ce pictogramme indique que appareils électriques et électroniques usagés, doivent être séparées des ordures ménagères.

Afin de permettre le traitement, la valorisation et le recyclage adéquats des appareils usagés, veuillez les porter à l'un des points de collecte prévus, conformément à la législation nationale en vigueur.

En les éliminant conformément à la réglementation en vigueur, vous contribuez à éviter le gaspillage de ressources précieuses ainsi qu'à protéger la santé humaine et l'environnement. Pour de plus amples renseignements sur la collecte et le recyclage, veuillez vous renseigner auprès des collectivités locales, votre revendeur ou fournisseur.

Le non-respect de la réglementation relative à l'élimination des déchets est passible d'une peine d'amende.

Lea esto primero

 indica información de seguridad.

ADVERTENCIA:

- Para reducir el riesgo de producir un incendio o recibir una descarga eléctrica, no exponga este equipo a la lluvia ni a la humedad.
- Para reducir el riesgo de incendio o sacudida eléctrica, mantenga este equipo alejado de todos los líquidos. Utilícelo y guárdelo solamente en lugares donde no corra el riesgo de que le caigan gotas o le salpiquen líquidos, y no coloque ningún recipiente de líquidos encima del equipo.

ADVERTENCIA:

Mantenga siempre el cable anticaídas (accesorio opcional) o los accesorios (tuerca con resalto y tornillo de montaje del cable) fuera del alcance de los niños.

ADVERTENCIA:

Este equipo se ajusta a los requisitos de la Clase A de CISPR 32. Este equipo puede causar interferencias por radio en un entorno residencial.

PRECAUCIÓN:

Para reducir el riesgo de incendios, sacudidas eléctricas e interferencias molestas, utilice solamente los accesorios recomendados.

PRECAUCIÓN:

No quite la cubierta desatornillándola. No quite la tapa para evitar el riesgo de sacudidas eléctricas. Las piezas del interior no requieren mantenimiento por parte del usuario. Solicite las reparaciones al personal de servicio calificado.

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.

PRECAUCIÓN:

Compruebe la instalación al menos una vez al año. Una instalación incorrecta podría provocar la caída de la unidad, lo cual podría causar lesiones al usuario.

PRECAUCIÓN:

No agarre ni mueva la unidad estando ésta colocada en el trípode. El adaptador podría romperse debido al peso del trípode, lo que podría causarle lesiones.

PRECAUCIÓN:

No mantenga la unidad en contacto directo con la piel durante largos periodos de tiempo cuando está en uso. Es posible que se produzcan quemaduras de baja temperatura si la piel entra en contacto con las piezas de la unidad que se encuentran a temperaturas altas durante periodos de tiempo prolongados. Si va a utilizar el equipo durante largos periodos de tiempo, emplee el trípode.

PRECAUCIÓN:

No coloque encima del equipo llamas desnudas, como velas encendidas.

PRECAUCIÓN:

Cuando este producto está encendido se emite radiación de láser invisible desde el conector de fibra óptica. No mire directamente al conector de fibra óptica de este producto.

PRECAUCIÓN:

Este producto utiliza un sistema láser semiconductor y es un producto láser de clase 1. Si se utilizan controles, ajustes o procedimientos distintos a los aquí especificados, puede producirse una exposición peligrosa a la radiación. No realice ninguna modificación. No lo repare usted mismo. Solicite el trabajo de mantenimiento al personal cualificado.

Lea esto primero (Para AK-SHB800PS)

INSTRUCCIONES DE SEGURIDAD IMPORTANTES

- 1) Lea estas instrucciones.
- 2) Guarde estas instrucciones.
- 3) Preste atención a todas las advertencias.
- 4) Siga todas las instrucciones.
- 5) No utilice este aparato cerca del agua.
- 6) Limpie únicamente con un paño seco.
- 7) No bloquee ninguna abertura de ventilación. Instale el aparato según las instrucciones del fabricante.
- 8) No instale el aparato cerca de fuentes de calor como, por ejemplo, radiadores, registros de calor, estufas y otros aparatos (incluyendo amplificadores) que produzcan calor.
- 9) No anule la función de seguridad de la clavija polarizada o del tipo con conexión a tierra. Una clavija polarizada tiene dos patillas, una más ancha que la otra. Una clavija del tipo con conexión a tierra tiene dos patillas y un tercer contacto de conexión a tierra. La patilla ancha o el tercer contacto se incluyen para su seguridad. Si la clavija suministrada no se puede conectar en su toma de corriente, consulte a un electricista para que le sustituya la toma de corriente obsoleta.
- 10) Proteja el cable de alimentación para que nadie lo pise ni quede pellizcado, particularmente en la clavija, receptáculo de conveniencia y en el punto por donde sale del aparato.
- 11) Utilice solamente los aditamentos/accesorios especificados por el fabricante.
- 12) Utilice el aparato sólo con el carrito, soporte, trípode, ménsula o mesa especificado por el fabricante, o vendido con el aparato. Cuando utilice un carrito, tenga cuidado al mover la combinación del carrito/aparato para evitar lesiones debidas a vuelcos.
- 13) Desenchufe este aparato de la toma de corriente durante las tormentas eléctricas o cuando no vaya a utilizarlo durante periodos largos de tiempo.
- 14) Solicite todos los trabajos de reparación al personal de servicio cualificado. La reparación es necesaria cuando el aparato ha sido dañado de cualquier forma como, por ejemplo cuando está dañado el cable o la clavija de alimentación, se ha derramado líquido sobre el aparato o han entrado objetos en su interior, el aparato ha estado expuesto a la lluvia o a la humedad, no funciona normalmente o se ha caído al suelo.



S3125A

Lea esto primero (Para AK-SHB800G)

Fabricado por: Panasonic Corporation, Osaka, Japón

Nombre y dirección del importador conforme a las normas de la UE:

Panasonic Marketing Europe GmbH

Panasonic Testing Centre

Winsbergring 15, 22525 Hamburg, Alemania



Eliminación de Aparatos Viejos

Solamente para la Unión Europea y países con sistemas de reciclado.

Este símbolo en los productos, su embalaje o en los documentos que los acompañen significa que los productos eléctricos y electrónicos usadas no deben mezclarse con los residuos domésticos.

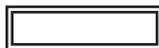
Para el adecuado tratamiento, recuperación y reciclaje de los productos viejos llévelos a los puntos de recogida de acuerdo con su legislación nacional.

Si los elimina correctamente ayudará a preservar valuosos recursos y evitará potenciales efectos negativos sobre la salud de las personas y sobre el medio ambiente.

Para más información sobre la recogida o reciclaje, por favor contacte con su ayuntamiento, su distribuidor o su proveedor.

Puede haber sanciones por una incorrecta eliminación de este residuo, de acuerdo con la legislación nacional.

Bitte lesen Sie zuerst diesen Hinweis!



ist die Sicherheitsinformation.

WARNUNG:

- Zur Reduzierung der Gefahr von Brand und elektrischem Schlag dieses Gerät weder Nässe noch Feuchtigkeit aussetzen.
- Um Brand- oder Stromschlaggefahr zu reduzieren, muss dieses Gerät von allen Flüssigkeiten ferngehalten werden. Vermeiden sie Gebrauch und Lagerung des Gerätes an Orten, an denen die Gefahr besteht, dass es mit Flüssigkeiten betropft oder bespritzt wird, und stellen sie keine Flüssigkeitsbehälter auf das Gerät.

WARNUNG:

Bewahren Sie den Fallschutzdraht (optionales Zusatzteil) oder Zusatzteile (Flanscmutter, Befestigungsschraube für den Draht) stets außer Reichweite von Säuglingen und Kleinkindern auf.

WARNUNG:

Dieses Gerät entspricht Klasse A der CISPR 32. In einem Wohnbereich kann dieses Gerät Funkstörungen verursachen.

VORSICHT:

Nur das empfohlene Zubehör verwenden, um die Gefahr von Feuer und elektrischem Schlag sowie Störungen auszuschalten.

VORSICHT:

Öffnen Sie nicht das Gerät durch Abschrauben von Gehäuseteilen. Zur Vermeidung von elektrischem Schlag darf das Gehäuse nicht geöffnet werden. Im Geräteinneren befinden sich keine Teile, die vom Benutzer gewartet werden können. Wartungs- und Reparaturarbeiten grundsätzlich autorisiertem Kundendienstpersonal überlassen.

VORSICHT:

Um eine ausreichende Belüftung zu gewährleisten, dieses Gerät nicht in einem Bücherregal, Einbauschränk oder an einem anderen engen Platz aufstellen. Sicherstellen, dass die Ventilationsöffnungen im Gehäuse nicht durch Vorhänge oder andere Materialien blockiert werden; anderenfalls besteht die Gefahr von elektrischem Schlag oder Feuer aufgrund von Überhitzung.

VORSICHT:

Die Installation ist mindestens einmal jährlich zu überprüfen. Bei fehlerhafter Installation besteht Verletzungsgefahr durch Herunterfallen des Gerätes.

VORSICHT:

Unterlassen Sie das Aufheben und Transportieren des Gerätes bei angebrachtem Stativ. Die Fassung kann unter dem Gewicht des Stativs brechen, was zu einer Verletzung führen kann.

VORSICHT:

Die Einheit bei längerem Gebrauch nicht direkt mit der Haut berühren. Verbrennungen durch niedrige Temperaturen sind möglich, wenn die heißen Komponenten dieser Einheit für lange Zeit in direktem Hautkontakt stehen. Bei längerer Verwendung der Ausrüstung das Stativ einsetzen.

VORSICHT:

Offene Flammen, wie brennende Kerzen, sollten nicht auf das Gerät gestellt werden.

VORSICHT:

Wenn dieses Produkt eingeschaltet wird, werden unsichtbare Laserstrahlen vom Lichtleiterkabelanschluss abgegeben. Blicken Sie nicht direkt in den Lichtleiterkabelanschluss dieses Produkts.

VORSICHT:

Dieses Produkt verwendet ein Halbleiter-Lasersystem und ist ein Laserprodukt der Klasse 1. Die Durchführung anderer Vorgänge als der hier angegebenen kann zu gefährlicher Strahlung führen. Nehmen Sie keine Änderungen vor. Reparieren Sie das Gerät nicht selbst. Reparaturen dürfen nur von qualifiziertem Fachpersonal durchgeführt werden.

Bitte lesen Sie zuerst diesen Hinweis! (Für AK-SHB800G)

Hergestellt von: Panasonic Corporation, Osaka, Japan
Name und Adresse des Importeurs gemäß EU-Bestimmungen:

Panasonic Marketing Europe GmbH

Panasonic Testing Centre

Winsbergring 15, 22525 Hamburg, Deutschland



Entsorgung von Altgeräten

Nur für die Europäische Union und Länder mit Recyclingsystemen

Dieses Symbol, auf den Produkten, der Verpackung und/oder den Begleitdokumenten, bedeutet, dass gebrauchte elektrische und elektronische Produkte nicht in den allgemeinen Hausmüll gegeben werden dürfen.

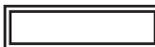
Bitte führen Sie alte Produkte zur Behandlung, Aufarbeitung bzw. zum Recycling gemäß den gesetzlichen Bestimmungen den zuständigen Sammelpunkten zu.

Indem Sie diese Produkte ordnungsgemäß entsorgen, helfen Sie dabei, wertvolle Ressourcen zu schützen und eventuelle negative Auswirkungen auf die menschliche Gesundheit und die Umwelt zu vermeiden.

Für mehr Informationen zu Sammlung und Recycling, wenden Sie sich bitte an Ihren örtlichen Abfallentsorgungsdienstleister, Händler oder Zulieferer.

Gemäß Landesvorschriften können wegen nicht ordnungsgemäßer Entsorgung dieses Abfalls Strafgeelder verhängt werden.

Leggere prima quanto segue!



sono le informazioni sulla sicurezza.

AVVISO:

- Per ridurre il rischio d'incendio o di scosse, non esporre questo prodotto alla pioggia o all'umidità.
- Per ridurre il rischio d'incendio o di scosse elettriche, tenere questo prodotto lontano da tutti i liquidi. Usarlo e conservarlo soltanto in luoghi che non siano esposti a gocciolamenti o spruzzi di liquidi, e non mettervi sopra recipienti di liquidi.

AVVISO:

Conservare sempre il cavo anticaduta (accessorio opzionale) o altri accessori (dado a colletto, vite di montaggio per il calvo) fuori dalla portata dei bambini.

AVVISO:

Questa apparecchiatura è conforme alla Classe A della CISPR 32. In un ambiente di tipo residenziale questa apparecchiatura potrebbe provocare interferenze radio.

PRECAUZIONE:

Per ridurre i pericoli d'incendio o di scosse elettriche e di fastidiose interferenze, usare soltanto gli accessori raccomandati.

PRECAUZIONE:

Non togliere il coperchio svitandolo. Per ridurre i pericoli di scosse elettriche, non togliere il coperchio. All'interno non ci sono parti riparabili dall'utente. Per le riparazioni, rivolgersi a personale tecnico qualificato.

PRECAUZIONE:

Per assicurare una buona ventilazione, non installare o sistemare questo apparecchio in uno scaffale, mobile incorporato od altro spazio chiuso. Per evitare i pericoli di scosse elettriche o d'incendio a causa di un surriscaldamento, accertarsi che tende od altro materiale non ostacolino la ventilazione.

PRECAUZIONE:

Controllare l'installazione almeno una volta all'anno.

Un'installazione incorretta può risultare nella caduta dell'apparecchio con conseguenti danni alle persone.

PRECAUZIONE:

Non sollevare o spostare l'unità quando è montata sul treppiede.

Il supporto potrebbe rompersi a causa del peso del treppiede e causare infortuni.

PRECAUZIONE:

Non lasciare l'unità a diretto contatto con la pelle per un periodo di tempo prolungato durante l'uso.

In caso di un prolungato contatto diretto fra le parti di questa unità con elevate temperature e la pelle potrebbero verificarsi ustioni da bassa temperatura.

Quando si utilizza questo dispositivo per un periodo di tempo prolungato, fare uso del treppiede.

PRECAUZIONE:

Non posizionare sull'apparecchio sorgenti di fiamme libere, quali candele accese.

PRECAUZIONE:

All'accensione del prodotto, il connettore a fibre ottiche emette radiazioni laser invisibili. Non guardare direttamente il connettore a fibre ottiche del prodotto.

PRECAUZIONE:

Questo prodotto utilizza un sistema laser semiconduttore ed è un prodotto laser di Classe 1.

L'uso di apparecchi di controllo o di regolazione o procedure di utilizzo diverse da quelle qui indicate, può causare l'esposizione a radiazioni pericolose.

Non apportare alcuna modifica. Non cercare di riparare da soli.

Per qualsiasi riparazione rivolgersi a personale qualificato.

Leggere prima quanto segue! (Per AK-SHB800G)

Fabbricato da: Panasonic Corporation, Osaka, Giappone
Nome e indirizzo dell'importatore in conformità con le normative UE:

Panasonic Marketing Europe GmbH

Panasonic Testing Centre

Winsbergring 15, 22525 Hamburg, Germania



Smaltimento di vecchie apparecchiature

Solo per Unione Europea e Nazioni con sistemi di raccolta e smaltimento

Questo simbolo sui prodotti, sull'imballaggio e/o sulle documentazioni o manuali accompagnanti i prodotti indica che i prodotti elettrici, elettronici non devono essere buttati nei rifiuti domestici generici.

Per un trattamento adeguato, recupero e riciclaggio di vecchi prodotti vi invitiamo a portarli negli appositi punti di raccolta secondo la legislazione vigente nel vostro paese.

Con uno smaltimento corretto, contribuirete a salvare importanti risorse e ad evitare i potenziali effetti negativi sulla salute umana e sull'ambiente.

Per ulteriori informazioni su raccolta e riciclaggio, vi invitiamo a contattare il vostro comune, rivenditore o fornitore.

Lo smaltimento non corretto di questi rifiuti potrebbe comportare sanzioni in accordo con la legislazione nazionale.

Before using the camera

■ Use appropriate lighting when shooting to capture images with clear color

- To make the color of images clear, use appropriate lighting for shooting.
- Colors may not be reproduced correctly under fluorescent lighting. Select appropriate lighting as necessary.
- Use the ND filter in excessively bright locations.

■ Turn off the power before connecting or disconnecting the cables

- Turn off the power of the devices before connecting or disconnecting the cables.

■ Handling of the camera

- Do not drop or add strong impact or vibration to the camera. Doing so may lead to failure.

■ Do not touch optical system parts

- The optical system parts are the “life” of the camera. Do not touch the optical systems on occasions such as when the lens is removed. In the event that dust has adhered, use a blower for cameras or lens cleaning paper (for use with glasses or cameras) to gently remove the dust.

■ Do not shoot images toward sunlight or a laser beam

- Shooting toward sunlight or a laser beam for a long period of time may result in damage of the MOS.

■ When using the camera in rain or snow, or on a beach or shore

- Prevent water from splashing on or entering the camera.

■ Humidity and dust

- The internal parts of the camera are more easily damaged in humid and dusty locations. Avoid such locations.

■ Temperature range for use

- Using the camera under the following conditions may have negative effects on the image quality or internal parts of the camera.
Cold places where the temperature is -10°C (14°F) or below
Hot places where the temperature is 45°C (113°F) or above
- Preheating is required in a low-temperature environment. Confirm  display is not lit before using the camera.

■ Cleaning

- Turn off the power and clean the camera with a dry cloth. If the dust cannot be removed with a dry cloth, try soaking the cloth with kitchen detergent to gently wipe off the dust.
- Use lens cleaning paper (for use with glasses or cameras) when cleaning the lens.

■ Cooling fan

- The camera has an internal cooling fan.
- The cooling fan is a consumable supply. Replace it after approximately 40,000 hours of use. Be sure to contact your dealer for the replacement.

■ Dust-proof filter

- The cooling performance drops when the filter is dirty. As a guide, it should be replaced about every 6 months. If you notice clogging or deterioration during inspections, replace the filter.

■ Peripheral devices and software

- The software of the peripheral device that is connected to the camera may require updating.
- For details, contact your dealer.

■ Information on software used with this product

- 1 This product includes GNU General Public License (GPL) and GNU Lesser General Public License (LGPL) licensed software, and the customer is entitled to obtain, modify, or redistribute the source code for the software.
- 2 This product includes MIT Licensed software.
- 3 This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).
- 4 This product includes OpenBSD Licensed software.

Before using the camera/Notes

For details, refer to the license conditions.

For details on these descriptions (originally provided in English) and how to obtain the source code, visit the following website.

<https://pro-av.panasonic.net/>

However, do not contact Panasonic for questions regarding obtained source codes.

With the exception of open source software licensed according to GPL/LGPL and other similar licenses, distributing, copying, disassembling, reverse compiling, and reverse engineering of software provided with the unit are expressly prohibited. Furthermore, it is expressly prohibited to export any software provided with the unit in violation of export laws.

Notes

Required environment for computer

Refer to the following website for information about recommended PCs.

<https://pro-av.panasonic.net/>

Disclaimer

In any case, Panasonic will not liable for any of the following:

- Incidental, special, or consequential damage or harm caused directly or indirectly in regard to the camera
- Trouble or malfunctions caused by the misuse or careless use of a user
- Disassembly, repair, or modification of the camera performed by a user
- Inconvenience, damage, or harm arising from the inability to display images as a result of any reason or cause including failure or malfunction of the camera
- Malfunctions arising from a system that has been combined with a third party device or any inconvenience, damage, or harm caused as a result thereof
- Inconvenience, damage, or harm caused by such as improper installation or any reason other than a defect of the camera
- Any loss of stored information due to any reason
- Any damage or claim regarding loss or leakage of image data or setting data saved in the camera, memory card, or computer

Notes regarding network

This camera is provided with functions which are used upon connecting to a network.

When the camera is used while connected to a network, there are the following potential risks.

- Leakage or disclosure of information via the camera
- Manipulation of the camera by a malicious third party
- Interference or interruption of the camera caused by a malicious third party

To prevent such risks, users are responsible for implementing sufficient network security measures inclusive of the following.

- Use the camera over a network where safety is ensured with the installation of a firewall, etc.
- When the camera is used in a system to which a computer is connected, be sure to perform regular checks or detections for computer viruses and malware.

In addition, be sure to observe the following precaution.

- Do not install the camera or cables in a place where they may easily be damaged.

Using the camera in a system

As an example, this section introduces a standard system that is composed of a 8K Multi Purpose Camera (AK-SHB800), an Image Processing Unit (AK-SHU800), and peripheral equipment.

Basic configuration devices

The following are the basic configuration devices of this unit, such as lens.

Part name	Part No.	Remark
Lens	—	—
Remote Operation Panel	AK-HRP1000	<p>This is the controller to control this camera.</p> <p> NOTE</p> <ul style="list-style-type: none"> Update the version on AK-HRP1000. The software needs to be changed for AK-SHB800 and AK-SHU800. <p>For details, contact your dealer.</p>

Expanded configuration devices

In addition to the basic configuration devices, the following expanded configuration device (for a fee) is available.

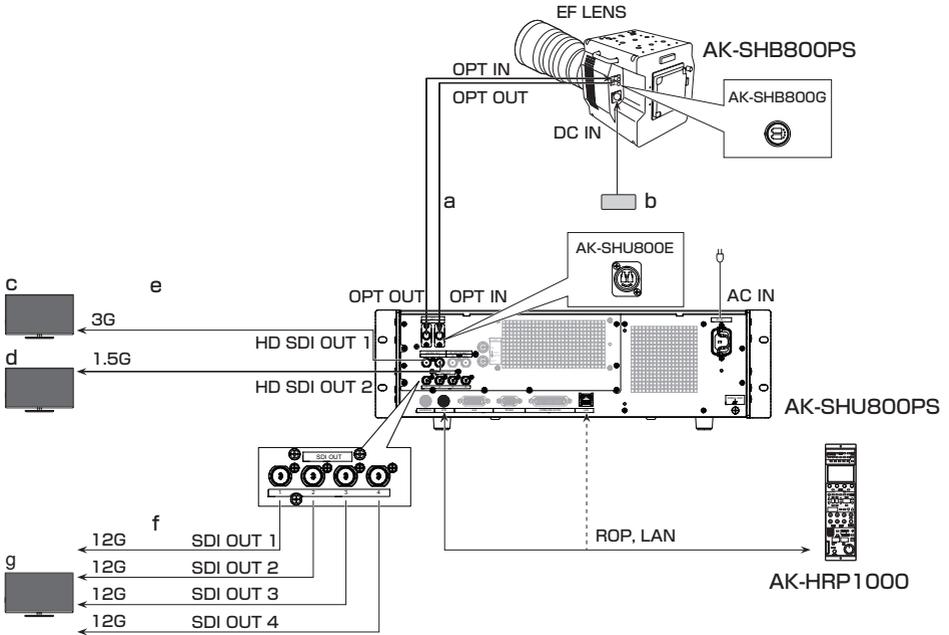
Part name	Part No.	Remark
Software key	AK-SFC101	<p>This is the software key that enables cropping of HD images in the specified places in 8K images.</p> <p> NOTE</p> <ul style="list-style-type: none"> For details, visit the following website. https://pro-av.panasonic.net/

System block diagram

NOTE

- Use the following cables for connection.
 - Optical fiber cable for connecting AK-SHB800 and AK-SHU800: Single-mode optical fiber cable
 - BNC cable for 12G SDI output from AK-SHU800: BNC cable for 12G
 - BNC cable for SDI output other than 12G from AK-SHU800: BNC cable 5CFB or above
- The 8K Multi Purpose Camera (AK-SHB800) and Image Processing Unit (AK-SHU800) do not work separately so make sure they are connected with optical fiber cable for use.

Configuration for outputting 8K and HD

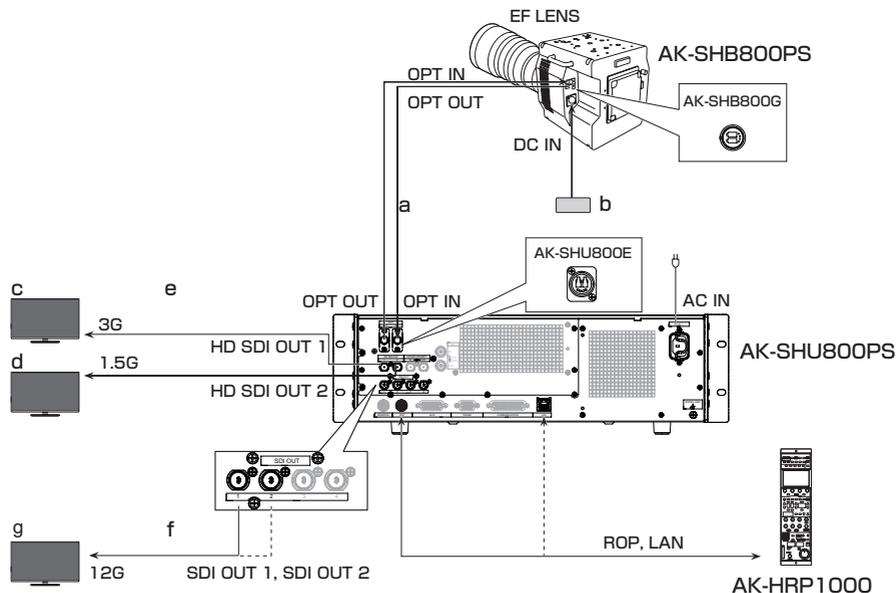


- a: Optical fiber cable ×2
- b: External DC power supply
- c: HD monitor
- d: HD monitor
- e: 5CFB BNC cable ×2
- f: 12G BNC cable ×4
- g: 8K monitor

NOTE

• When connecting AK-HRP1000 via LAN, PoE power supply is required for the AK-HRP1000 <LAN> terminal.

Configuration for outputting 4K and HD (example 1)

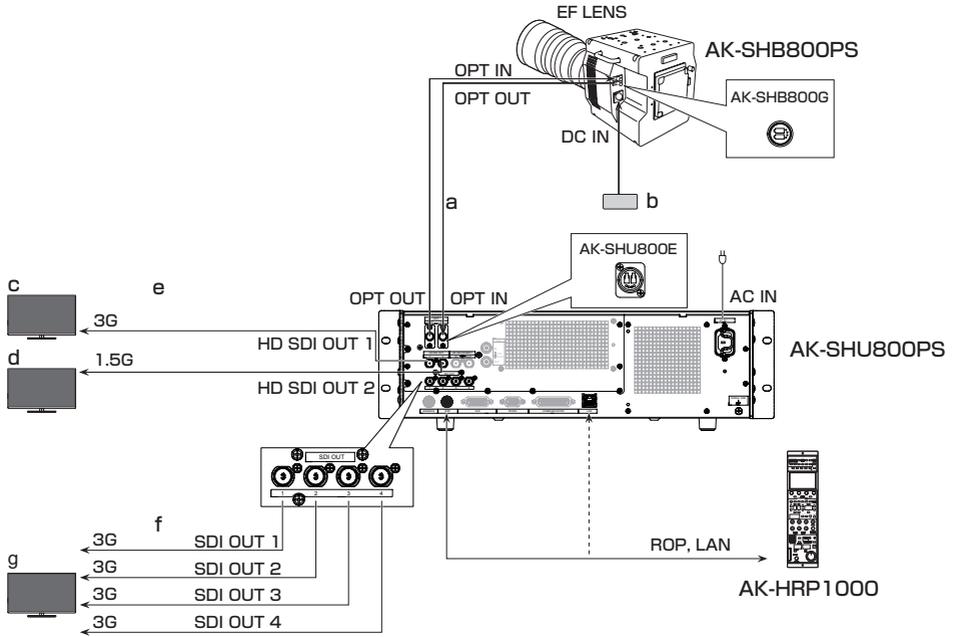


- a: Optical fiber cable ×2
- b: External DC power supply
- c: HD monitor
- d: HD monitor
- e: 5CFB BNC cable ×2
- f: 12G BNC cable
- g: 4K monitor

NOTE

- When connecting AK-HRP1000 via LAN, PoE power supply is required for the AK-HRP1000 <LAN> terminal.

Configuration for outputting 4K and HD (example 2)

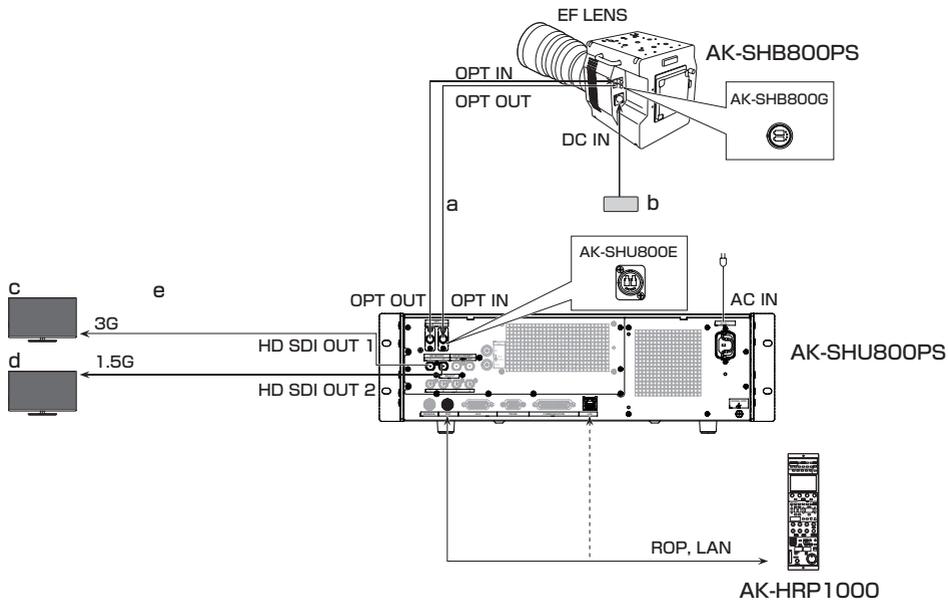


- a: Optical fiber cable ×2
- b: External DC power supply
- c: HD monitor
- d: HD monitor
- e: 5CFB BNC cable ×2
- f: 5CFB BNC cable ×4
- g: 4K monitor

NOTE

- When connecting AK-HRP1000 via LAN, PoE power supply is required for the AK-HRP1000 <LAN> terminal.

Configuration for outputting HD

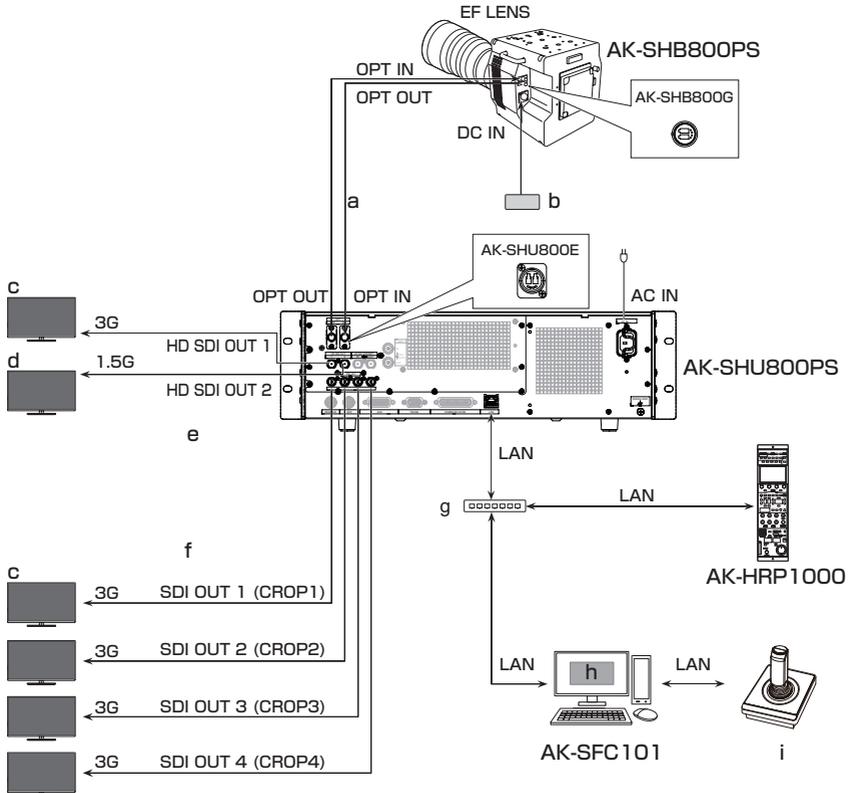


- a: Optical fiber cable ×2
- b: External DC power supply
- c: HD monitor
- d: HD monitor
- e: 5CFB BNC cable ×2

NOTE

- The output from SDI OUT 1 to 4 is HD videos cropped from the center of 8K videos.
- When connecting AK-HRP1000 via LAN, PoE power supply is required for the AK-HRP1000 <LAN> terminal.

Configuration for HD ROI control



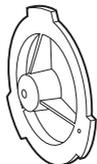
- a: Optical fiber cable ×2
- b: External DC power supply
- c: HD monitor
- d: HD monitor
- e: 5CFB BNC cable ×2
- f: 5CFB BNC cable ×4
- g: Switching hub
- h: PC for ROI control
- i: Joystick controller

NOTE

- A separately available personal computer, software key AK-SFC101 and joystick controller will be required for ROI control. For details, contact your dealer.
- When connecting AK-HRP1000 via LAN, PoE power supply is required for the AK-HRP1000 <LAN> terminal.

Accessories

Mount cap (already attached to the product)



Flange nut (x 2)



Wire mounting screws (x 4)

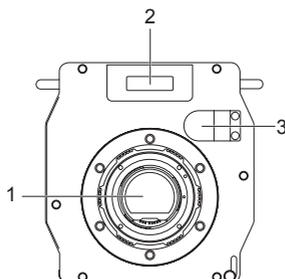


 **NOTE**

- Properly dispose of the packaging materials after unboxing the product.

Description of parts

Front side



1 Lens mount (EF mount)

This is where the lens is mounted.

2 Front tally lamp

Lights up when the tally signal is supplied.

Blinks in red while displaying warning, and blinks in green during the firmware update.



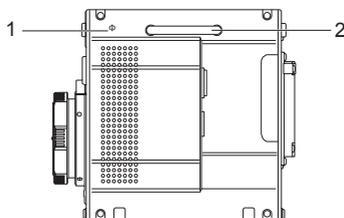
- Brightness can be set in the menus of the IPU.

During firmware updating, irrespective of the brightness setting, the lamp blinks in green at the [LOW] setting. This can also be turned off in the menus of the IPU.

3 Rotating axis for maintenance

Do not touch under normal circumstances.

Left side

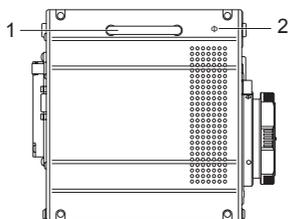


1 ϕ mark

Indicates the imaging plane inside the camera.

2 Handle fitting

Right side

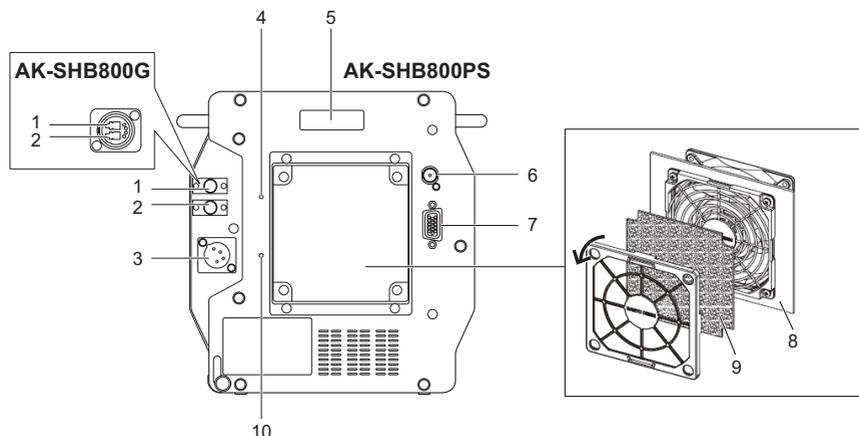


1 Handle fitting

2 ϕ mark

Indicates the imaging plane inside the camera.

Rear side



1 <OPT IN> terminal

Connect to the <OPT OUT> terminal on the IPU using an optical fiber cable.

NOTE

• There is a protective cap on the terminal. Remove it before use.

2 <OPT OUT> terminal

Connect to the <OPT IN> terminal on the IPU using an optical fiber cable.

NOTE

• There is a protective cap on the terminal. Remove it before use.

3 <DC IN> terminal

This is an input terminal for the external DC power supply. Connects to the external DC power supply. (DC 11 V to 17 V)

For details, refer to “Using external DC power supply” (Page 13).

4 <OPT> lamp

This indicates the status of the optical signal reception level on the camera.

When the level is strong: Lights green

When the level is weak: Lights yellow

When there is no reception: Off

Description of parts

NOTE

- When the reception level is weak, turn off this unit and the IPU, then clean the optical fiber connectors. If this does not improve reception, turn off the units immediately and contact your dealer.

5 Back tally lamp

Lights up when the tally signal is supplied.
 Blinks in red while displaying warning, and blinks in green during the firmware update.

NOTE

- Brightness can be set in the menus of the IPU.
 During firmware updating, irrespective of the brightness setting, the lamp blinks in green at the [LOW] setting. This can also be turned off in the menus of the IPU.

6 <HD SDI PROMPT OUT> terminal

This outputs images input to the <HD SDI PROMPT IN> terminal on the IPU.

7 <TRUNK> terminal

This is the terminal for transmitting and receiving IPU trunk data.

8 Cooling fan

This is the fan for cooling the unit.

NOTE

- Do not block or disturb the ventilation while operation. Doing so may cause fire due to overheating.
- Expected life of this fan is approximately 40,000 hours. (When used at room temperature of 25 °C)
 Replace when it reaches the expected life.
- Be sure to contact your dealer for the replacement.

9 Dust-proof filter

This prevents dust from getting into the unit.

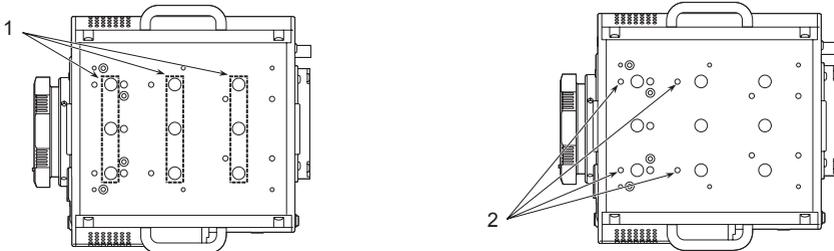
NOTE

- Replace the filter after turning off the unit.
- The cooling performance drops when the filter is dirty. As a guide, it should be replaced about every 6 months. If you notice clogging or deterioration during inspections, replace the filter.
- Use the specified filter when replacing it. For details, contact your dealer.
- Do not wash the filter in water.

10 <DC IN> lamp

This will illuminate in green when power is supplied to the camera.

Upper side



1 Mounting screw holes

These are used during installation.

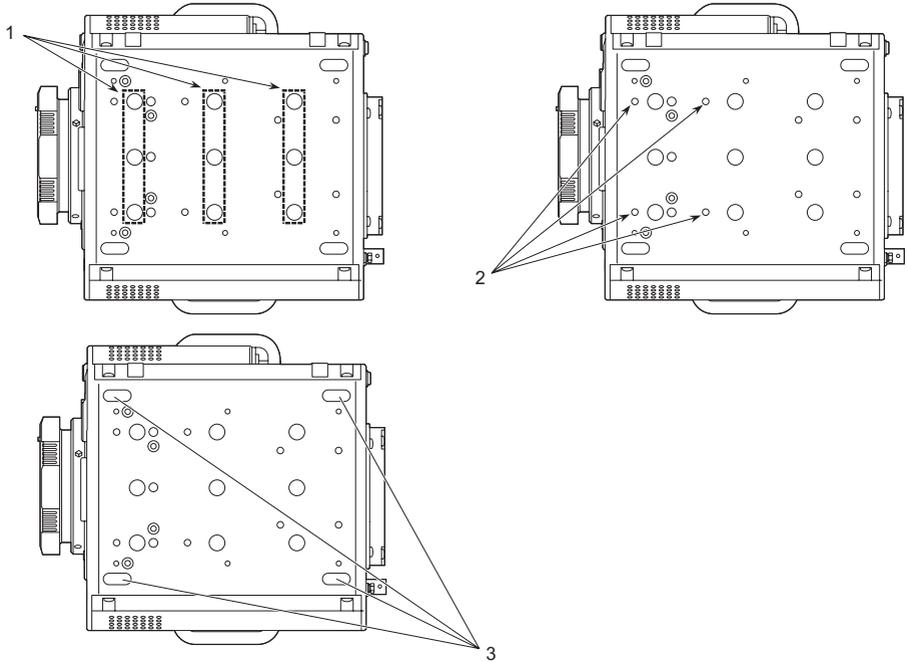
- Mounting hole size
 - 3/8-16 UNC (x 9)

NOTE

- Depth of the screw hole is 8 mm (5/16 inches). Use mounting screws 8 mm (5/16 inches) or shorter.

2 Drop prevention wire mounting screw hole

- Mounting hole size
 - M4

Bottom side**1 Mounting screw holes**

These are used during installation or for attaching a tripod.

- Mounting hole size
 - 3/8-16 UNC (x 9)

NOTE

- Depth of the screw hole is 8 mm (5/16 inches). Use mounting screws 8 mm (5/16 inches) or shorter.

2 Drop prevention wire mounting screw hole

- Mounting hole size
 - M4

3 Set feet

- The set feet may be taken off the unit to suit the usage situation.

Troubleshooting

For more information, please visit the Panasonic website (<https://pro-av.panasonic.net/manual/en/index.html>), and refer to the Operating Guide (PDF).

Symptom	Cause and solution
No power	<p>Is the power on?</p> <ul style="list-style-type: none"> • Confirm that the DC cable plugged into the camera securely. • Confirm that the <DC IN> lamp on the camera is lit.
The image cannot be processed by the IPU.	<p>Is the <OPT> lamp off?</p> <ul style="list-style-type: none"> • Confirm that the unit and IPU are connected correctly by optical fiber cables. • Confirm that the <OPT> lamp is lit. <p>Are the optical connectors or optical fiber cables dirty?</p> <ul style="list-style-type: none"> • When the optical connectors or optical fiber cables are dirty, the optical signal is attenuated and does not work properly. Remove dust and dirt from the optical connectors and optical fiber cables on a regular basis. • Be sure to attach the protective caps when the optical fiber cables are not connected to this unit. <p>Did you shoot with the lens cap on?</p> <ul style="list-style-type: none"> • Remove the lens cap when you shoot with the camera.
This unit cannot be updated.	<p>It is not possible to update only the unit.</p> <ul style="list-style-type: none"> • Confirm that the unit and IPU are connected correctly by optical fiber cables.

Warning displays

The following warnings are displayed if problems are detected during operation.

Camera warning displays

■ When AWB (automatic white balance) is executed

[AWB HIGH LIGHT NG]	Automatic white balance cannot be executed because the light amount is excessive. Set the light amount to an appropriate level.
[AWB LOW LIGHT NG]	Automatic white balance cannot be executed because the light amount is insufficient. Set the light amount to an appropriate level.
[AWB RCH OUT RANGE]	The white balance convergence for red cannot be achieved. Shoot a uniformly white object on the screen, and execute AWB.
[AWB BCH OUT RANGE]	The white balance convergence for blue cannot be achieved. Shoot a uniformly white object on the screen, and execute AWB.

■ When ABB (automatic black balance) is executed

[ABB RCH OUT RANGE]	The black balance convergence for red cannot be achieved. Check if there are any errors in the image.
[ABB BCH OUT RANGE]	The black balance convergence for blue cannot be achieved. Check if there are any errors in the image.
[ABB GCH OUT RANGE]	The black balance convergence for green cannot be achieved. Check if there are any errors in the image.
[ABB NG]	It is possible that the light has not been shut out, with a lens cap not attached.

■ Executing black shading

[BSHD NG]	Attach a lens cap and confirm that light has been properly shut out.
-----------	--

Other warning displays

The IPU <ALARM> lamp lights red while the warnings are being displayed.

Excluding the [CABLE OPEN] warning, the front tally lamp and back tally lamp of the camera both blink red when there is a warning.

[FAN NG]	There is a problem in the fan.
[HIGH TEMPERATURE]	The internal temperature is high.
[LOW VOLTAGE]	The voltage of the external DC power supply is low.
[SHUTDOWN SOON]	The internal temperature is rising more than expected. Or, the voltage of the external DC power supply has lowered beyond the operation guarantee. The power is turned off forcefully in 30 seconds.
[CABLE OPEN]	An optical fiber cable has not been connected, or the camera is not being supplied with power.

Updating the camera firmware

Refer to the following website for new updates of the firmware and for operating instructions.

<https://pro-av.panasonic.net/>

Specifications

For details on specifications, visit the Panasonic website (<https://pro-av.panasonic.net/manual/en/index.html>) and refer to the Operating Guide (PDF).

General

Power DC --- 12 V Power consumption 33 W

indicates safety information.

Ambient operating temperature	-10 °C to 45 °C (14 °F to 113 °F) (Preheating required under a temperature 0 °C (32 °F) or below)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Ambient operating humidity	85% or less (relative humidity)
Weight	Approx. 4.0 kg (8.8 lbs.) (body only)
Dimensions (W×H×D)	Body only 180 mm×190 mm×177 mm (7-3/32 inches×7-15/32 inches×6-31/32 inches) (excluding protrusions)

Panasonic Corporation

Web Site: <https://www.panasonic.com>

© Panasonic Corporation 2019