# Canon

# BCTV ZOOM LENS 广播电视变焦镜头

# HJ15ex8.5B KRSE-V

# 取扱説明書 (レンズ編) OPERATION MANUAL (LENS)

ご使用の前に必ずこの取扱説明書をお読みください。 なお、取扱説明書は必要に応じてご覧になれるよう大切に保管してください。 この取扱説明書は KRSE などの E タイプレンズにご使用になれます。

Read this operation manual before using the product.

Keep the manual in place for future reference.

This operation manual refers to the KRSE for E-type.

在使用本产品之前,请务必先仔细阅读本使用说明书。 请务必妥善保管好本书,以便日后能随时查阅。请在充分理解内容的基础上,正确使用。 本使用说明书可用于 KRSE 等 E 型镜头。



# ENGLISH VERSION

APPENDIXES

#### FCC REGULATIONS

This device complies with Part 15B 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.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15B 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.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

#### Canadian Radio Interference Regulations

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

# €

We, Canon Inc., in Japan and Canon Europa N. V., in The Netherlands, confirm that the BCTV zoom lens is conformity with the essential requirements of EC Directive(s) by applying the following standards: EN55103-1 and EN55103-2

Note:

- a) Applicable Electromagnetic Environments:
   E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).
- b) Use of shielded cable is required to comply with limits specified by above standards.

Dieses Produkt ist zum Gebrauch im Wohnbereich, Geschäfts- und Gewerbebereich sowie in Kleinbetrieben vorgesehen.

#### European Union (and EEA) only.



This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC) and your national law. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city

office, waste authority, approved WEEE scheme or your household waste disposal service. Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources and will avoid incurring administrative sanctions according to art. 50 and following of Italian legislative decree 22/97. For more information regarding return and recycling of WEEE products, please visit

www.canon-europe.com/environment.

(EEA: Norway, Iceland and Liechtenstein)

#### HDXS LENSES

## GENERAL SAFETY INFORMATION

The safety cautions provided on the product or in this operation manual must be observed. Failure to observe cautions provided to guard against hazards may result in injury or accident.

Read this operation manual carefully to familiarize yourself with its contents and ensure that you can operate the product properly.

Also, store this manual in a safe place where it can easily be referenced whenever required.

This operation manual uses the following symbols and terms to identify hazards to protect you and others by aiming to prevent the occurrence of accidents.

	Indicates hazardous situations which, if not heeded, may result in minor or moderate injury to you or other persons, or damages to your property.
NOTE	Emphasizes essential information which, if not heeded, may render the product unworkable or cause it to function improperly. Also, provides helpful information for operation.

#### HANDLING THE PRODUCT

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Never allow water to enter or be spilled on the product.
 Immediately stop using the product if water enters the product. Otherwise, a fire or electric shock hazard may result.

2. Do not stare at the sun or other source of high-intensity light through the lens. Doing so may result in injury to your eyes.

#### NOTE

- 1. Do not drop the lens when transporting it or when attaching or detaching it to or from the camera head. The lens may fall, possibly causing injury.
- 2. Make sure all mountings are tightened securely. If any of these mountings becomes loose, the lens may fall, possibly causing injury.
- 3. Always grasp the connector itself when connecting or disconnecting the lens cable. Pulling on the cable portion may result in damage to the cable, such as breakage of the conductors. Power leaking from a damaged cable may present a fire or electric shock hazard.
- 4. Inspect all mountings periodically (about every 6 months to year) to make sure they are securely tightened, and tighten any loose portions. Otherwise, the lens may fall, possibly causing injury.
- 5. If it becomes necessary to repair this product, or to perform any operations or adjustments not mentioned in this operation manual, contact Canon's representative or the dealer who originally supplied the lens.
- 6. Protect the lens from strong impacts of shocks. Striking or dropping the lens may result in a malfunction.
- 7. This lens is not completely waterproof, so avoid exposing it directly to rain or snow. When the lens must be used in rain or snow, provisions should be made to prevent the lens from getting wet.
- 8. Under dusty conditions, the lens should be mounted or dismounted with a cover placed over the mount so as to prevent dust from entering into the interior.
- Do not bring the lens, kept in a very cold ambient temperature, into a warm room, because the lens may fog on the inside or condensation may occur. In these cases, the lens cannot be used until these problems clear.

If the lens must be used under such conditions, countermeasures are recommended. (For instance, before bringing the lens into a warm room, put it in a vinyl bag with an effective desiccant, and then bring it into the room. After the temperature acclimatizes to the same level as the room temperature, take out the lens out of the vinyl bag.)

10. If the lens is to be used in adverse environments, such as in a chemical laden atmosphere, consult with Canon's representative beforehand.

#### DEALING WITH ABNORMALITIES

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- 1. Should any of the abnormalities described below occur, immediately unplug the lens cable from the camera, and then contact Canon's representative or the dealer from whom you purchased the lens.
  - Smoke, abnormal smell, or abnormal noise.
  - · Entry of foreign objects (including metals and liquids) inside the lens

#### MAINTENANCE AND INSPECTION

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1. Unplug the lens cable and remove the lens from the camera, before attempting to clean the lens. Never use flammable substances such as benzene or thinner for cleaning, as this may present a serious fire or electric shock hazard.

2. Dust or fingerprints on the lens surface. Gently blow or brush away dust or dirt on the lens surface using a lens blower or a soft lens brush. Remove any fingerprints or other stains with a clean cotton cloth moistened with commercially available lens cleaning fluid or lens cleaning paper.

Gently swirl the cloth or cleaning paper over the lens surface, starting at the center area of the lens, and then circling gradually outward until whole lens surface has been covered.

Be careful not to rub dust across the lens, as the lens surface may be scratched.

3. Periodic inspection

A periodic inspection about once a year is recommended.

The inspection and maintenance interval depends on the operating conditions, the frequency of use, and the environment. If required, overhaul the lens.

#### STORAGE

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1. Always attach the lens cap (or hood cap) and the dust cap before storing the lens. Storing the lens without these caps attached may present a fire hazard. (Very bright light, such as sunlight, may be focused by the lens and cause a fire.)

Moisture inside the lens
 If the lens becomes damp because of use in fog, mist or drizzle, wipe off the moisture with a soft dry cloth and seal the
 lens together with an efficient desiccant in a vinyl bag to remove moisture which has entered into the interior.

#### TO THE CUSTOMER

- 1. Canon shall bear no responsibility for damage resulting from improper operation of this product by the customer.
- Canon shall make no guarantees about the product quality, functions, or operation manual and its marketability and suitability for the customer's purpose.
   Moreover, Canon shall bear no responsibility for any damage, direct or incidental, that results from usage for the
- customer's purpose. 3. Canon shall make no guarantees about the results obtained using this product.
- 4. The product specifications, configuration, and appearance are subject to change without prior notice.
- 5. For further information on repairs, maintenance, or adjustments not mentioned in this operation manual, contact your Canon dealer or your Canon sales representative.
- 6. Note that Canon may be unable to undertake servicing or repair of a product if it is modified without consulting Canon or your Canon sales representative.

#### CANON INC.

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CANON EUROPA N.V.

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#### HOXS LENSES \_\_

# - FOREWORD -

Thank you for purchasing the Canon BCTV zoom lens.

This is the broadcast ENG/EFP lens which is incorporated with the Canon's patented optical technology Vari-Angle Prism [VAP] image stabilizer.

This operation manual consists of the followings.

①Operation Manual "Lens"

2 Operation Manual "Information Display CD-ROM"

③Pocket Guide

This operation manual is applicable for the following models:

#### HDXS LENSES

HJ15ex8.5B

KRSE-V

Operation manual "Information Display" contains the operation method and operation procedure of the information display. Please refer to the Information Display Manual when it is needed.

Refer to the table below for the text stylistic features in this operation manual.

Stylistic feature Example		Explanation	
* * screen The <u>Top screen</u> appears.		The name of the screen is indicated by underlining.	
[]]	An underline appears at [Frame1].	The name of a setting item is indicated within the [ ] square brackets.	
{ }	Select {FAST}.	The name of an item or function to be selected is indicated by the { } set of parentheses.	

1 STANDARD PRODUCT LIST		<b>E6</b>
2 NOMENCLATURE		E7
3 HOW TO MOUNT	<ul><li>3-1. MOUNT THE LENS ON THE CAMERA</li><li>3-2. MOUNT THE HOOD ON THE LENS</li><li>3-3. TURN IT ON</li><li>3-4. INITIALIZE THE LENS</li></ul>	E10
4 ADJUSTMENT	4-1. BACK FOCUS ADJUSTMENT OF THE LENS 4-2. IRIS GAIN ADJUSTMENT	E13
5 OPERATION	<ul> <li>5-1. ZOOM OPERATION</li> <li>5-2. FOCUS OPERATION</li> <li>5-3. IRIS OPERATION</li> <li>5-4. IMAGE STABILIZER (IS) OPERATION</li> <li>5-5. MACRO OPERATION</li> <li>5-6. SWITCH OPERATIONS</li> </ul>	E15
6 LIST OF FUNCTIONS		E31
7 PRODUCT SPECIFICATIONS		E34
LENS DESIGNATION		E35
APPENDIXES	TECHNICAL INFORMATION SIEMENS STAR CHART INDEX	END



Ambient temperature ∶ -30°C to +60°C

- Ambient humidity : up to 60% RH (no condensation)
- 2) Do not suddenly move the lens from storage at a very cold ambient temperature into a warm room. Doing so may cause the lens to fog on the inside or may cause condensation.
- 3) Do not subject the lens to strong physical shocks or vibration.

# **2 NOMENCLATURE**



※ AUX2 Function can be allocated. See E29 for details.

#### 1 Hood Lock Knob

Loosen or tighten this knob to remove or fix the lens hood on the lens.

#### **2** Iris Gain Adjusting Trimmer

Adjusts the iris responce speed in Auto iris mode.

#### **③** Instant Auto-Iris Switch

While pressing this switch, automatic iris operation instantly takes effect.

#### (4) Iris Operation Mode Change-over Switch

Use this switch to change from manual to automatic or vice versa.

#### **5** Zoom Rocker Seesaw

Use this rocker for servo zoom operation.

The zoom speed changes according to how far down the rocker is pressed.

#### 6 RET Switch (Video Return Switch)

While this switch is held down, (on air picture/being recorded picture can be seen in the viewfinder through camera control system when multi cameras are conncted to its system.)

#### ⑦ Memo Button (Memory Botton)

Memorize the shuttle memory position and/or zoom speed by pressing this button together with one of other buttons (AUX1,AUX2,or Zoom Rocker Seasaw).

# In the second second

Loosen this screw and turn this ring to adjust the back focus.

#### 9 Locating Pin

Determines the mounting position of the lens.

#### 10 Macro Button/Macro Ring

Use this button and ring to shoot an object which is closer than the M.O.D.

#### 11 Iris Ring

Turn the iris ring to operate the iris manually.

#### 12 Zoom Lever/Zoom Ring

Use the zoom ring and zoom lever to operate the zoom manually.

#### **13** Focus Ring

Turn this ring to focus on the object.

#### 14 IS ON Lever

Use the IS ON lever to enable the image stabilization.

#### 15 IS OFF Switch

Use the IS OFF switch to disable the image stabilization.

#### 2 NOMENCLATURE





※ AUX1
 Function can be allocated.
 See E29 for details.

#### 16 Zoom Operation Change-over Knob

Use this knob to change from manual to servo zoom operation or vice versa.

#### 1 Connector for Remote Zoom Control (8-pin)

Zooming is performed by remote control when this connector is used to connect the unit to an optional control unit for zoom operations.

Normally, this connector is covered with a cap.

#### 18 Virtual & Zoom Remote Connectors (20-pin)

**NOTE) Virtual output port is Connector**  $\star$  **only.** Use these connectors to connect the control accessory (equipped with a 20 pin connector) for zooming. Connector  $\star$  is also used to connect to the interface of such as virtual system. It can output each positioning signal of zoom, and iris.

#### **19 VTR Switch**

Use this switch to start or stop the VTR.

#### 20 Max. Zoom Speed Volume

The maximum zoom speed by zoom rocker seesaw can be adjusted.

#### 21 IS LED

This LED shows if power is supplied to the circuit of image stabilizer and let us know whether the stabilizer (IS) is being executed or on standby.

#### **22 EFFECT Switch**

Use this switch to select the direction of compensation by the image stabilizer (IS).

#### **23 IS MODE Switch**

Use this switch to select the appropriate image stabilizer function; TRIPOD for using the tripod or PORTABLE for shoulder-carried.

#### **24 PAN Switch**

Use this switch to momentarily disable the image stabilizer (IS) to reduce the image fluctuation at the point of finishing the panning operation.

#### Information Display



#### How to Operate the Control Key

Name	Operation	Detailed description	
Set key	Push	This key is pushed when $\{ \ 2 \ \}$ has appeared on the screen display or when a selection is to be entered.	
Arrow key (Ex. Right key)	Move right	The operation of right key takes effect when { ▶ } has appeared on the screen display. ( ▲, ▼, ▶, ◀ for up,down,right,left)	

# **3 HOW TO MOUNT**

#### 3-1. MOUNT THE LENS ON THE CAMERA

Before mounting the lens on the camera, make sure that the camera's power is turned off.





- **1** Position the camera horizontally.
- Turn the bayonet ring of the camera counterclockwise as viewed from the lens. Remove the dust cap from the camera mount.
- **3** Remove the dust cap from the lens.
- **4** Align the locating pin on the lens mount with the slot on the camera mount and press the lens into the camera mount surface.
- **5** Turn the bayonet ring clockwise until the lens mount is firmly fixed in place.
- 6 Connect the power/iris control cable on the back of the drive unit housing to the appropriate receptacle on the camera head.

Never hold the lens, drive unit and band portion to support the entire weight of the camera. Excessive force to the mount portion and drive unit of the lens may result in damage to the lens mechanism.

#### NOTE

- 1) Once it has been removed, keep the caps in a safe place so that it will not be lost or misplaced.
- 2) A master key mark is provided on the power/iris control cable.

Connection can be performed smoothly by aligning the master key mark on the camera connector with this mark.

3) Depending on systems, it is required to check the camera's specification.

#### 3-2. MOUNT THE HOOD ON THE LENS

The lens cap is attached to the lens at the factory.

Please remove the lens cap and attach the hood as instructed below.



- **1** Fit the hood on the front of the lens barrel.
- 2 Align the index marks.
- **3** Turn the hood lock knob clockwise to tighten the hood securely.

#### NOTE

Keep the removed hood cap in a safe place so as not to lose it.

#### 3-3. TURN IT ON

Turn on the camera, and the power of the lens will be supplied.

#### 3-4. INITIALIZE THE LENS

This lens has a built-in encoder for a position sensor of zoom, iris and focus, and enables highaccuracy control and advanced for virtual interface. To use these functions, the initialization of encoder is required when the power is turned on.

The Auto [on] / Manual [off] setting of initialization can be set from the information display. The simple way of setting is described below. For more information, refer to the Information Display Manual.



Auto [ON] : The lens is automatically initialized on power-up.

Manual[OFF]: Turn the rings by servo or manual operation to both mechanical ends to detect positions on power-up.

\* Default setting at factory : OFF

(		
<b>‡</b> ∢Info	►	🎨 🚯 🏭
Encoder:		OFF
Initialize		
CamSeri:		ON
Info		🎨 🚯 🎬
Initialize		2
Zoom:		OFF

OFF

Focus:

- **1** Push the DISPLAY switch to turn on the display.
- 2 Push the Set key and move the left or right key to display the <u>Info</u> <u>screen</u>. (See left top figure.)
- **3** Move the down key twice, and then press the Set key. The display is switched to the <u>Initialize screen</u>. (See left bottom figure.)
- **4** Select [Zoom] or [Focus] using the down key.
- 5 Select {ON} or {OFF} using the left or right key.
- 6 For the changes in the settings to take effect, turn the power off and then turn it back on.

How to detect the position of ZOOM/FOCUS

#### ZOOM

Servo/manual switch setting	Initialization setting	How to detect the position	
Servo	ON (Auto)	When the power is turned on, the lens automatically detects the position. Then, it returns to the position where it used to be when the power was turned on.	
	OFF (Manual)	Perform servo zooming operation to the both mechanical ends to detect positions.	
Manual	ON or OFF	Turn the zoom ring manually to both mechanical ends to detect positions.	

FOCUS: Turn the focus ring manually to both mechanical ends to detect positions.

The following problems will be appeared unless position detection is completed.

- Lens position signals to the camera and its signals shown on the information display will be inaccurate.
- Disabled Shuttle Shot, Frame Preset, Speed Preset and Zoom Track functions.

#### Notes

- Iris is always initialized at turn-on regardless of auto mode or manual mode.
- During initialization, lens operation is disabled. After initialization is completed, the lens returns to the position where it used to be before initialization. However, if the lens is operated in the position servo mode, the lens moves to the currently controlled position.
- When switched from manual mode to servo mode after power-up, the lens will automatically detect the position unless initialization has not been completed if the setting of initialization is auto [on].
- On/off setting of initialization can be set from the information display on the drive unit. Whenever changing the setting, turn off and on the lens power since the lens status on power-up has priority.

#### Initialization Error

#### ErrorDisplayScreen

Initialize Error! "Initialize Error!" appears on the display unless the lens is set to the servo mode or if the lens is mechanically locked. In such case, check the lens condition, clear the problem, and then turn off and on the power again.

#### **4 ADJUSTMENT** 4-1. BACK FOCUS ADJUSTMENT OF THE LENS If the relationship between the image plane of the lens and the image plane of the television camera is incorrect, the object goes out of focus when the lens is zoomed. Follow the procedure below to adjust the back focus of the lens. 1 Select an object at an appropriate distance (2 to 5 meters recommended). A Siemens star chart is preferable for this adjustment. If no such chart is available, use any object that offers sharp contrast to facilitate the adjustment work. **2** Set the iris fully open. Siemens star chart **3** Set the lens to the telephoto angle by turning the You can use the Siemens star chart at zoom ring. the end of this book. **4** Bring the object into focus by turning the focus ring. **5** Set the lens to the widest angle by turning the zoom ring. ..... **6** Loosen the flange back lock screw, and turn the Flange Back Adjusting Ring flange back adjusting ring to bring the object into focus. lange Back **7** Repeat steps 3 to 6 a few times until the object is brought into focus at both the widest angle and telephoto ends. T oseniña **8** After making sure that the object is in sharp focus, tighten the flange back lock screw. Õ The adjustment procedure is now completed. lange Back Screw NOTE Refer to "5 OPERATION" as for details on Tiahtenina zooming,focusing,and iris operation performed with the back focus adjustment.

#### 4-2. IRIS GAIN ADJUSTMENT

An iris gain adjusting trimmer is located on the front of the lens drive unit.

The iris gain is set at middle of range at the factory.

However, if you wish to change the iris gain, adjust the trimmer through the procedure described below.



Refer to the Information Display Manual.

# **5 OPERATION**

#### 5-1. ZOOM OPERATION

5-1-1. Manual Zoom Operation



- **1** Set the zoom operation change-over knob at the bottom of the lens drive unit to "MANU." position.
- 2 Turn the zoom ring (itself or with the zoom lever)

Clockwise as viewed from the camera : to zoom out (to Wide side) Counterclockwise : to zoom in (to Tele side)

#### 

The zoom operation change-over knob must be set to the "MANU." position before performing manual zoom operations.

The lens may be damaged if manual zoom operations are forcibly performed with the knob at the "SERVO" position.

#### 5-1-2. Servo Zoom Operation

In servo zoom operation, pressing the switch drives the motor built-in the lens and performs zoom operation.

The servo zoom operations are broadly classified into (A) basic operations and (B) automatic playback operations. A zoom track function is provided to enable operations (A) and (B) to be performed in combination. The variations of the possible combinations are listed below.

#### (A) BASIC OPERATIONS

- 1) Zoom rocker seesaw operation
- 2) Zoom rocker seesaw operation + zoom track function (The function which can limit the control range to selected positions)

#### (B) AUTOMATIC PLAYBACK OPERATIONS

- 3) Shuttle shot
- 4) Speed preset
- 5) Framing preset
- 6) Zoom track function

Enjoy combinations of 3),4),5),and 6).



The maximum speed in servo zoom automatic playback operation is always set at the highest speed regardless of the adjustment setting of the maximum zoom speed volume.

%This adjustment can be performed on the information display. Refer to the Information Display Manual. F-Hold Function

As a regular zoom lens is turned toward the telephoto end, the f-number decreases. This phenomenon is referred to as "F drop." The F-Hold function has been provided in order to enable zoom operations to be performed only within the range of the focal length where this F drop does not occur.

The settings are performed on the information display, and a simple method which can be used to set this function is described here. For further details, refer to page E3-57 in the Information Display Manual.



Setting F-Hold (default setting: "OFF")

**1** Push the DISPLAY switch to turn on the display. **‡**∢Zoom → **\$**[\$] ſ Tracking: OFF **2** Push the Set key, and use the right key to display the Zoom screen. F-Hold: OFF (see left figure) Movement T **3** Move the down key twice, and move the left or right key to select ON or OFF. ſ 4 This completes the setting. NOTE When F-Hold is ON

- 1) The shuttle function is adversely affected.
- 2) If the current zoom position is outside the F-Hold range, the zoom automatically moves to a position immediately before the F drop.
- 3) When the extender has been switched or the power has been turned off, the function is released. If required, turn it again.

When Iris is set as Auto, F-Hold can not be set on.

5-1-3. Zoom Track Function

The zoom control range (zoom track) can be limited to selected zoom positions.

This function allows virtual settings to be made for the Tele end and Wide end. The zoom track function is enabled for all servo zoom operations. (This does not affect manual zoom operation.)

The first step which must be taken if the zoom track function is to be used is to set the function to ON. There are two ways to set this function to ON or OFF. Refer to the following page for the setting method.

Setting the Zoom Track Function to "ON" or "OFF"

A: Setting "ON" or "OFF" on the information display



- **1** Push the DISPLAY switch to turn on the display.
- 2 Select [Trk] using the control key, and then push the Set key. [Trk] and the last setting now blink on the display. (see left figure)
- **3** Move the left or right key to select ON or OFF.

**4** Push the Set key. This completes the setting.

For details, refer to page E2-14 in the Information Display Manual.

B: Setting "ON" or "OFF" by operating the switches

The zoom track function can be set to ON or OFF by operating the switch as shown below.

	Selection method	Operation	How to ascertain the selection
To set the function to "ON"	Hold down the Memo botton and Instant auto-iris switch simultaneously for at least 3 seconds.	The zoom control range is fixed to the zoom range set last. (If there is no previous setting, it is set to the mechanism end point.)	Automatic zooming from current zoom position to the closer of the two set positions.
To set the function to "OFF"		The zoom range is set to the mechanical end .	Automatic zooming from current zoom position to the closer of the two mechanical ends.



#### Setting the Zoom Track Positions

The first step which must be taken if the zoom track position is to be set is to set the zoom track function to ON. To set this function to ON or OFF, refer to the previous page.



- **1** Zoom to the zoom track position that you want to set.
  - ↓
- While holding this zoom position, press the Instant auto-iris switch while holding down the Memo button. If the zoom position is at the Tele end with respect to the center position of the zoom range for this lens, the position is stored as the zoom track position for the Tele end. If the position is at the Wide end, it is stored as the zoom track position for the Wide end.
- Steps 1 and 2 are repeated to make the setting for both the Tele and Wide ends. It is also possible to make the setting for only one end.
- To reset the zoom track position, perform steps 1 to 3 again. (The position setting that is made last overwrites the setting in the memory.)

#### NOTE

- If the zoom track position is to be set again, the zoom position cannot move beyond the end point setting toward the mechanical end by performing servo zoom operations. To move the zoom, take one of the steps below.
  - Set the zoom track function to OFF. (See previous page)
  - Proceed with the zooming operation at the setting established by operating the zoom rocker seesaw (see page E15).
  - Perform the zooming operation manually.
- Although up to two zoom track positions (Tele end and Wide end) can be set, two positions cannot be set that are on the same side of the center position of the zoom range of this lens. (In this case, the setting that was made last is stored as the zoom track position of this side.)

#### 5-1-4. Shuttle-Shot Function

Before using shuttle-shot function, the "Shtl" function must be allocated to VTR,RET,AUX1 or AUX2 switch.For details, refer to "5-6 Switch Operations".

#### 1. How to set the shuttle memory position



To set the zoom position, press the "Shtl" button while holding down the Memo button.

Clockwise : toward Tele side Counterclockwise : toward Wide side

#### NOTE

- 1) Since operation with the "Shtl" button is given priority, operation cannot be performed with the zoom rocker seasaw while the "Shtl" button is held down.
- 2) This shuttle memory position is different from the framing preset memory position (Refer to "5-1-6 Framing Preset"). The stored zoom position remains in the memory, even after the power is turned off.
- 2. How to move to the shuttle memory position



Max

When holding down the "Shtl" button, the zoom moves toward the shuttle memory position at the maximum speed, and stops at the shuttle memory position (preset zoom position).

So long as the "Shtl" button is held down, the zoom stays at the shuttle memory position.

When the "Shtl" button is released, the zoom returns to the original position. In other words, this allows the zoom to shuttle between two zoom positions (shuttle memory and original positions) at the maximum speed.



Present position



Suttle memory position



Max speed



Original position

#### HOXS LENSES

#### 5-1-5. Speed Preset

Allocate the "Sped" function to VTR, RET, AUX1 or AUX2 switch. In this manual, operations are described on the assumption that "Sped" function was allocated to the VTR switch.

#### 1. How to preset the zoom speed and direction



#### 2. How to operate the speed preset function



Operate the zoom rocker seesaw to determine the zoom speed and direction (toward telephoto angle or widest angle) which you want to store, and press the memo button. The zoom speed and direction are stored.

#### NOTE

The stored zoom speed is applied to the framing preset.

When the "Sped" button is pressed, the zoom starts to move at the preset speed and to the determined direction (toward telephoto angle or widest angle) stored in section 1 until the zoom reaches its end.

#### NOTE

When the switch is once pressed, the zoom moves to its end, and stays there. It is not necessary to holding down the switch as for the Shuttle-Shot Function.

#### 3. How to cancel movement in Speed Preset



Movement in Speed Preset can be canceled by any of the following operations.

- Press the "Sped" button again.→ Zoom movement stops.
- 2) Performing zoom operation with the zoom rocker seasaw / the "Shtl" button / the "FRM1" button.

#### 5-1-6. Framing Preset

#### Framing Preset [Zoom]

This enables a predetermined picture angle and movement speed (zoom speed) to be reproduced easily. "PRE" is the factory setting. If the "FAST" setting is used, it must be set on the information display.

#### Zoom ON/OFF setting and Movement speed setting

		Movement speed setting		
		"PRE" (speed can be set)	"FAST" (maximum speed)	
Zoom *1	ON	The zoom moves at the preset speed.	The zoom moves at the maximum speed	
setting	OFF	×	×	

\*1 : Concerning the zoom ON/OFF setting For the procedure to be following for performing the settings on the information display, refer to the following pages in the Information Display Manual.

Frame1: Zoom ----- Page E3-43 Frame2: Zoom ----- Page E3-45

#### NOTE

Up to two framing presets, Frame1 and Frame2, can be stored in the memory. Only Frame1 is described in the description given on the following pages. Frame1 is indicated as "FRM1".

How to set the zoom speed to the framing memory position

<b>‡</b> ∢Preset	
Frame1:	PRE
Frame2:	PRE
ZSpeed:	800

On the information display, select "PRE" or "FAST" as the "FRM1" speed setting.

"PRE"-----For the preset speed setting (preset speed) "FAST"-----For the maximum speed setting (fast speed)

#### Framing Preset [Zoom] Setting

#### Concerning the illustrations

#### NOTE

The illustrations show the switches with the functions below allocated to them. Bear in mind, however, that if these functions have been allocated to other switches, there will be a discrepancy between what is shown in the illustrations and the actual statuses of the switches.

- 1) "Shtl" function------This is allocated to the AUX1 switch (factory setting).
- 2) "FRM1" function------This is allocated to the AUX2 switch (factory setting).
- 1. How to store the Framing memory position



2. How to move to the framing memory position



Zoom (and focus) to the position that you want to store, while holding this zoom (and zoom focus) position, press the "FRM1" button while holding down the Memo button. This stores the framing memory position.

#### NOTE

This framing memory position is different from the shuttle memory position (Refer to "5-1-4. Suttle-Shot Function").

The stored zoom position remains in the memory, even after the power is turned off.

Once the "FRM1" button is pressed, the zoom starts to move toward the framing memory position at the preset speed. When the zoom reaches to the framing memory position, it stops and stays there.

#### NOTE

It is not necessary to hold down the "FRM1" button, until the zoom reaches to the framing memory position, as for the Shtl button. (refer to "5-1-4. Shuttle-Shot Function") Just simply press the "FRM1" button.

3. How to cancel movement to the framing memory position or switch to other zoom operations

During movement to the framing memory position, the movement can be canceled and/or switched to other zoom operation by any of the following operations.

[Zoom Framing Preset]

- Pressing the "FRM1" button again.
- · Zoom operation with the zoom rocker seesaw can immediately take over.
- · Zoom operation with the "Shtl" button can immediately take over.

#### 5-2. FOCUS OPERATION



Turn the focus ring to focus on the subject at the Near end or Far end based on the rotation directions below.

Directions as viewed from the camera side Clockwise direction ..... : Near end Counterclockwise direction ... : Far end

#### 5-3. IRIS OPERATION

The iris can be operated automatically or manually by changing the iris operation mode change-over switch.

A (Automatic): Automatic iris operation from the camera.

M (Manual): Manual iris operation by rotating the iris ring.





#### 5-3-1. AUTOMATIC IRIS OPERATION

Slide the iris operation mode change-over switch to the "A" position.

The video level (or the iris) is automatically adjusted by the camera.

The iris ring rotates automatically (driven by a motor in the drive unit) according to a camera signal.

#### 5-3-2. MANUAL IRIS OPERATIN

Slide the iris operation mode change-over switch to the "M" position for performing manual iris operations.

Adjust the video level by rotating the iris ring of the lens manually.

Turn the iris ring

Clockwise as viewed from the camera	
: to close the iris	
Counterclockwise	
: to open the iris	

#### 

The iris operation mode change-over switch must be set to the "M" position before performing manual iris operations. The lens may be damaged if manual iris operations are forcibly performed with the knob at the "A" position.

%This adjustment can be performed on the information display. Refer to the Information Display Manual.



#### Instant auto iris switch

When the instant auto-iris switch is pressed during manual iris operation mode, the iris changes to automatic operation mode while the switch is held down.

#### 5-4. IMAGE STABILIZER (IS) OPERATION

By switching the IS mode, you can select the image stabilization feature which is suitable for your shooting environment.



Combination of image stabilization features

		Mode selected on Information Display		
		STD	HIGH	
Mode selected or Switch Panel	TRIPOD	Appropriate for using the tripod, with much panning operation Minimum image fluctuation at the point of finishing the panning operation	Appropriate for using the tripod, with less panning operation	
	PORTABLE	Appropriate for shoulder-carried	Maximum image stabilization Maximum image fluctuation at the point of finishing the panning operation	

# IS OFF Switch

#### 5-4-1. BASIC SETTINGS OF IMAGE STABILIZER

#### 1 EFFECT switch

Selection switch of the direction for compensation by the image stabilizer

- V + H : Executing compensation both in the horizontal and vertical directions
- V : Executing compensation only in the vertical direction

#### ② IS MODE switch

Selection switch of the mode of the image stabilizer

- TRIPOD : Recommended mode for using the lens mounted on the tripod.
- PORTABLE : Recommended mode for using the lens with shoulder-carried

#### NOTE

The IS mode is determined by combination of "TRIPOD" or "PORTABLE" with the mode setting on the information display (See the left table). For details, please refer to page E3-35 of Information Display.

#### 5-4-2. TUNING ON THE CAMERA POWER

Press the IS OFF switch, check that the IS ON lever automatically returns to the position as shown in the left figure, then turn on the camera. (Mechanically locked state).



#### 5-4-3. UNLOCKING THE MECHANICAL LOCK AND SETTING THE IMAGE STABILIZER ON

Slide the IS ON lever in the direction of "IS ON" arrow until it clicks to stop. The IS ON lever is now locked and the image stabilizer is ready to use. At the same time, the IS LED on the switch panel of the lens illuminates.

To reduce the image fluctuation at the point of finishing the panning operation when the image stabilization is enabled, perform panning while pushing the PAN switch to momentarily disable the image stabilization feature.

\* The function of the PAN switch can be set on the information display, either to momentarily disable the image stabilization feature or to alternate the feature ON/OFF.

# 5-4-4. EXECUTING THE MECHANICAL LOCK AND SETTING THE IMAGE STABILIZER OFF

The image stabilizer equipped on this camera is not mechanically locked automatically by turning off the power of the camera with it mechanically unlocked (image stabilization enabled). It requires manual mechanical lock after finishing the shooting.

When the image stabilization is not necessary, you can shoot with the image stabilizer mechanically locked (image stabilization disabled).

To execute the mechanical lock, press the IS OFF switch.

The image stabilizer goes mechanically locked state automatically.

#### NOTE

Never slide the IS ON lever in the reverse direction of the arrow to execute the mechanical lock. Doing so may cause a damage to the IS ON lever.

#### 5-5. MACRO OPERATION

When the macro function of the lens is used, macro shooting is enabled.

In macro shooting, the object distance becomes shorter than the normal minimum object distance (M.O.D.).

The minimum object distance by macro operation for this lens is 10mm at widest angle.



To operate the macro, press the macro button to unlock the macro ring. While holding it down, turn the macro ring at the rear of the lens clockwise as viewed from the camera side to allow macro shooting.

**1** Set the lens to widest angle by manual or servo zoom operation.

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**2** Bring the object into focus by turning the macro ring.

#### NOTE

Macro operation is also possible at any zoom position other than the widest angle, but the object distance increases.

For object distance and object dimensions, see "7 PRODUCT SPECIFICATIONS".

#### Multi-point Focus Shooting

In macro shooting, when zooming to change the focal length, the focal point varies. The multi-point focus shooting technique uses this characteristic. The focal point is shifted by the zoom operation.

Follow the steps bellow :

- **1** Zoom in to a far object, and bring it into focus by normal focus operation.
- **2** Zoom out to a near object and bring into focus by macro operation.
- **3** Zoom in to the far object again while not touching the macro button set by above step 2, and bring into focus again by normal focus operation.

When steps  $\mathbf{1}$  to  $\mathbf{3}$  have been performed, the setting for multi-point focus shooting is completed.

When zooming in, the focal point is shifted from the object in the foreground to the farther object in the background continuously.

Or, when zooming out, the focal point is shifted from the farther object in the background to the object in the foreground continuously.

#### 5-6. SWITCH OPERATIONS

Four of the switches provided on the lens VTR, RET, AUX1 and AUX2 had the functions of "VTR", "RET", "Shtl" and "FRM1" respectively allocated to them at the factory.

Alternative functions can be allocated to these switches to suit the ways in which the switches will be used.





#### VTR Switch

Press the VTR switch to execute the operation of VTR and press it again to stop the operation of VTR.

#### RET Switch

While the RET switch is held down, on air picture/ being recorded picture can be seen in the viewfinder.

#### Allocating The Functions To The Swichies

The functions allocated to the switches can be changed on the information display. The selectable items and brief descriptions of the functions are provided in the table below.

Selectable item	Brief description of functions	Page where function or operation is described
VTR	The switch to which the "VTR" function has been allocated allows the VTR to start and stop.	Dava 500
RET	While the RET switch is held down, on air picture / being recorded picture can be seen in the viewfinder.	Faye E29
FRM1	The zoom or focus moves to the zoom or focus position stored in the memory by pushing the switch to which the "ERM1" or "ERM2" function has been allocated. Memory and	Page E22
FRM2	playback are possible at one position each for "FRM1" and "FRM2."	Tage LZZ
Sped	The zoom moves at the zoom speed and in the zoom direction (telephoto or wide end) stored in the memory by pushing the switch to which the "Sped" function has been allocated.	Page E21
Shtl	The zoom moves at the maximum speed to the zoom position stored in the memory by pushing the switch to which the "Shtl" function has been allocated. When the switch is released, it returns at the maximum speed to the original zoom position.	Page E20
PAN	The switch to which the "PAN" function has been allocated to enable and disable the IS.	Page E27
NON	No function	

The allocation of the functions is changed on the information display. A simple method for changing the allocation is described here. For information on the detailed procedure, refer to the Information Display Manual.

Allocating the functions to the swichies

MENU	[亦] 1
[I-Gain]	[Trk]OFF
A1 Shtl 🗘	▶ 🔍 VTR
A2 FRM1	RRET

- **1** Push the DISPLAY switch to turn on the display.
- After using the control key to select the name of the switch key to which the function is to be allocated, push the Set key. The name of the switch and the default or last setting now blink on the display. (See left figure.)

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- **3** Move the left or right key until the function to be changed to appears on the display.
- **4** Push the Set key. This completes the setting.

# **6 LIST OF FUNCTIONS**

FUNCTION	Page (Lens)	Page (Display)
User Selection (User 0 to 9)		E2-5
Analog Mode Settings (User A)		E2-6
Analog Mode Operations (User A)		E2-9
Iris Gain Setting		E2-12
(1) Auto Iris Gain Setting	E14	E2-12
(2) Remote Iris Gain Setting		E2-13
Zoom Track Function ON/OFF Selection	E18	E2-14
Function Allocation to AUX1 Switch		E2-15
Function Allocation to VTR Switch		E2-16
Function Allocation to AUX2 Switch		E2-17
Function Allocation to RET Switch		E2-18
Frame Preset1 Settings		E2-19
(1) Frame Preset1 Preset Speed Setting		E2-19
(2) Frame Preset1 Zoom ON/OFF Selection		E2-20
Frame Preset2 Settings		E2-21
(1) Frame Preset2 Preset Speed Setting		E2-21
(2) Frame Preset2 Zoom ON/OFF Selection		E2-22
Iris Torque Setting		E2-23
Zoom Curve Mode Setting		E2-24
(1) Seesaw Switch Curve Characteristics Setting		E2-24
(2) Analog Demand Curve Characteristics Setting		E2-25
Iris A/M Switch Setting	E25	E2-26
Function Allocation to Seesaw Switch		E2-27
MENU Screen		E3-2
User		E3-3
User Selection (User 0 to 9)		E3-4
Giving Names to the Users		E3-5
Resetting		E3-6
(1) Resetting the Settings for One User		E3-6
(2) Resetting the Settings for All the Users		E3-7
Copying the Settings Established for One User to Another User		E3-8
Copying Data Between Lenses		E3-10
(1) Copying the Data Settings Established for One User into Another Lens		E3-10
(2) Copying the Data Settings Established for All the Users into Another Lens		E3-12
(3) When an Error Display Has Appeared		E3-14
Lock Mode Settings (User 0 to 9)		E3-15
Analog Mode Settings (User A)		E3-19

#### 6 LIST OF FUNCTIONS

FUNCTION	Page (Lens)	Page (Display)
Analog Mode Operations (User A)		E3-23
Escape Operation		E3-26
Switch Screen		E3-27
Allocating a Function to the AUX1 Switch		E3-28
Allocating a Function to the AUX2 Switch		E3-29
Allocating a Function to the VTR Switch		E3-30
Allocating a Function to the RET Switch		E3-31
Setting the Iris A/M Switch		E3-32
Allocating a Function to the Seesaw Switch		E3-33
IS Screen		E3-35
IS Mode Setting		E3-36
PAN Switch Setting		E3-37
(1) PAN Switch Momentary/Alternate Setting		E3-37
(2) PAN Switch Polarity Setting		E3-38
(3) PAN Switch Valid Direction Setting		E3-39
Preset Screen		E3-41
Setting the Frame Preset1 Preset Speed		E3-42
Setting the Frame Preset1 Zoom to ON or OFF		E3-43
Setting the Frame Preset2 Preset Speed		E3-44
Setting the Frame Preset2 Zoom to ON or OFF		E3-45
Setting the Zoom Speed in the Preset Mode		E3-46
Setting the Zoom Start Characteristics for Preset Operations		E3-47
Setting the Zoom Stop Characteristics for Preset Operations		E3-48
Iris Screen		E3-49
Iris Gain Setting		E3-50
(1) Auto Iris Gain Setting		E3-50
(2) Remote Iris Gain Setting		E3-51
Setting the Iris Torque		E3-52
Setting the Iris Correction to ON or OFF		E3-53
Setting the Iris Close Detection to ON or OFF		E3-54
Zoom Screen		E3-55
Setting the Zoom Track to ON or OFF	E18	E3-56
Setting F-Hold to ON or OFF	E17	E3-57
Setting the Zoom Servo Start Characteristics		E3-58
Setting the Zoom Servo Stop Characteristics		E3-59
Setting the Zoom Mechanism End Stop Characteristics		E3-60
Setting the Curve Characteristics of the Seesaw Switch		E3-61
Setting the Analog Demand Curve Characteristics		E3-62
Setting the Maximum Value of the Zoom Speed Control		E3-63

#### **6 LIST OF FUNCTIONS**

#### HOXS LENSES \_\_\_\_\_

Page	Page
(Lens)	(Display)
	E3-64
	E3-65
	E3-66
	E3-67
	E3-69
	E3-70
E11	E3-71
	E3-73
	E3-74
	E3-77
	E3-78
	Page (Lens) E11

# 7 PRODUCT SPECIFICATIONS

Focal	I Length	8.5-128mm							
Zoor	n Ratio	15×							
Maximu	m Relative	1:2.5 (at 8.5-68mm)							
Аре	erture	1:4.7 (at 128mm)							
Image	e Format	9.6×5.4mm (Φ11mm)							
Angular Field	(Widest angle)	58.9° × 35.2° (at 8.5mm)							
of View	(Telephoto angle)	4.3°×2.4° (at 128mm)							
Minimu Distanc	um Object e (M.O.D)	0.8m (10mm from the front lens vertex in macro mode)							
Object Dimensior	ns (Widest angle)	95.8 × 53.9cm(at 8.5mm)							
at M.O.D	(Telephoto angle)	6.4 × 3.6cm (at 128mm)							
Object Dimensi	ons in Macro Mode (Widest angle)	6.6×3.7cm							

Flange back	48 mm (in air)
Thread for filters	Φ 82 mm P 0.75 (Front lenz barrel)
Zoom speed for full range	Max. 0.5 ± 0.2 s
Iris	Control from camera
Mount	B4
Power source	Nominal DC12V (10~17V)
Current consumption	500 mA (max.)
Size	170.2 x 119.1 x 239.1 mm
(W x H x L)	
Mass	approx. 1.99 kg
Operating temperature	Temperature : -20°C to + 45°C
	Humidity : 5% to 95%RH (no condensation)



# 資料集 TECHNICAL DOCUMENTS 资料汇编



#### TABLE OF THE CONTENTS FOR THE TECHNICAL DOCUMENTS —

#### - 资料汇编目录-

資料集として「製品の外観図と総合結線図」をまとめてあります。 必要に応じてご使用ください。

The technical documents consist of external views and general circuit diagrams. They should be referenced as required.

资料汇编中归纳了《产品的外观图和总接线图》。 请根据需要,相应地选择使用。

- 1. 外観図 EXTERNAL VIEW 外观图......T1 (1) HJ15ex8.5B KRSE-V
- 2. 総合結線図 GENERAL CIRCUIT DIAGRAM 总接线图 ... T21
  - (1) HJ15ex8.5B KRSE-V (1/2)
  - (2) HJ15ex8.5B KRSE-V (2/2)

1. 外観図 EXTERNAL VIEW 外观图

(1) HJ15ex8.5B KRSE-V



B26-2109-A101\_01



#### 2. 総合結線図 GENERAL CIRCUIT DIAGRAM 总接线图

(1) HJ15ex8.5B KRSE-V (1/2)

(2) HJ15ex8.5B KRSE-V (2/2)





#### 索引

RET	29
VTR	29
アイリス	25
エンコーダー	11
オートアイリス	25
ジーメンススターチャート	13
ズーム	15
像ぶれ補正機構(IS:イメージスタビライザー)	26
フード	11
フォーカス	24
フランジバック	13
マクロ	28

#### INDEX

AUTO IRIS	E25
ENCORDER	E11
BACK FOCUS	E13
FOCUS	E24
HOOD	E11
IMAGE STABILIZER (IS)	E26
IRIS	E25
MACRO	E28
RET	E29
SIEMENCE STAR CHART	E13
VTR	E29
ZOOM	E15

# 索引

RET .																		•						•		 •						C29
VTR .																																C29
变焦																																C15
编码	器																													• •		C11
光圈																														• •		C25
后焦																														• •		C13
聚焦																														• •		C24
趋近	拍投	Į																												• •		C28
图像	罢支	办	卜	尝	朷	朴	勾	(	ľ	S	:	<u>冬</u>	31	象	稳	15	È	器	¦)											• •		C26
西门	子星	1日日 - 日田 -	彡	冬																										• •		C13
遮光	罩																													• •		C11
自动	光圈	46																										 				C25

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