



BROADCAST TELEVISION LENSES 2019/2020



Canon

Live for the story_



PIONEERING EXCELLENCE IN BROADCAST LENSES

Canon is a pioneer in the design of broadcast lenses. It was more than 60 years ago that we introduced the first BCTV lens – the “Field Zoom IF-1” with a 6.7x zoom range, which was the highest in the industry at the time. Since then we have energetically advanced the art of high-end optical design on many fronts – working in close collaboration with international broadcasters and producers to develop innovative products and enhance customer satisfaction. Today we offer an exciting range of innovative high-end imaging products that stimulate creativity and deliver superb quality results, as we continue our pioneering pursuit of excellence in the 21st century.

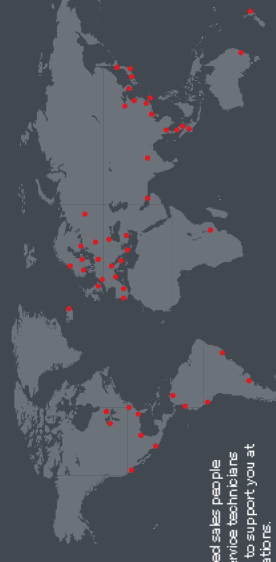
Emmy Award

The National Academy of Television Arts and Sciences awarded Canon an Emmy® in 2005 in recognition of our engineering creativity in Lens Technology Developments for Solid State Imager Cameras in High Definition Formats. We also received an Emmy® in 1996 for “Implementation in Lens Technology to Achieve Compatibility with CCD Sensors”.

Customer Satisfaction

Canon is committed to total Customer Satisfaction. To meet this commitment we aim to support users by developing new lens technologies, high-quality technical service systems and other sales support.

Canon's Worldwide Support Network



Well trained sales people and/or service technicians are ready to support you at these locations.

BROADCAST TELEVISION LENSES



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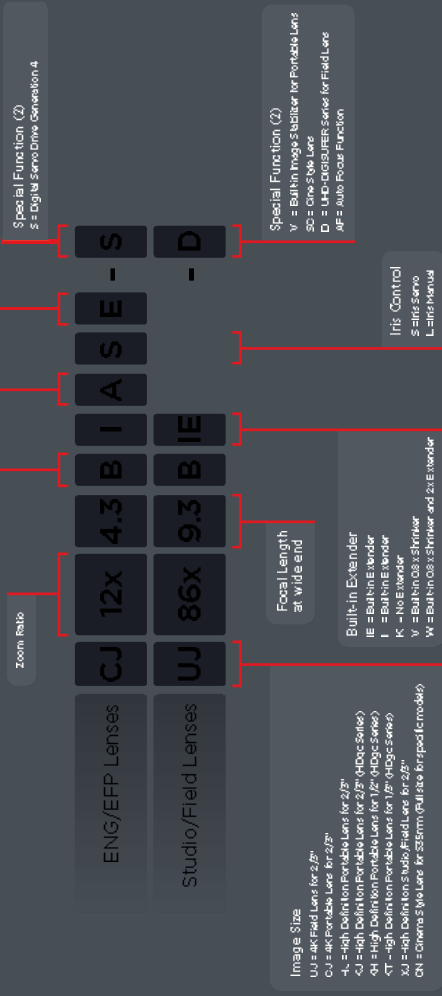
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UNDERSTANDING THE LENS MODEL NAMING CONVENTIONS



INNOVATION
In TV Optics Since 1958
Toward 100 years anniversary

CANON'S EPOCH-MAKING TECHNOLOGY

UHD/HDTV LENSES

Canon began developing lenses for the "HDTV System" more than 20 years ago and continues to lead the broadcast industry into the 21st century "DTV" era - most recently with the next generation of HDTV lenses and our pioneering Cinema EOS 4K lenses. The series are:

UHD XS 4K
4K 2/3" Lens Series
Shown on Page 14-12

4K 2/3" Studio Lens

HD XS
HDxs Series
Shown on Page 14-13

Compact Studio Lens

HXS
Portable HDxs Series
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ENG/EFP Lenses

HDGC
HDGc Series
Shown on Page 54-38

ENG Lenses for 1/2" Cameras

4K
EF Cinema Lens Series
Shown on Page 60-65

Zoom Lenses

4K 2/3" ENG/EFP Lenses

EFP Lenses

ENG Lenses for 1/2" Cameras

Cine Servo Lenses

4K 2/3" Lens Series

New BCTV lenses designed to accelerate the pace of 4K UHD content creation

As 4K continues its steady integration into mainstream television dramas, documentaries and movies, Canon has been at the technological forefront with our innovative Cinema EOS series and development of 4K Optics.

The needs of broadcast television producers to achieve the high image quality of 4K UHD and more powerful ways of expression are now spreading to live telecasts of sports, concerts, and

events. The imperative for 4K lenses that can offer the long focal ranges that are central to contemporary sports coverage while maintaining the usability and ease of operation that the broadcast industry favours, is increasing at a rapid pace.

In response to these new marketplace needs, Canon is offering lenses whose performance neatly dovetails with the various new 2/3" small-format 4K UHD cameras as part of our onward drive to support this new movement. By offering lenses that fit in with the applications and

objectives of users, Canon is taking steps to actively open up new dimensions of potential in video performance. 4K images can convey such a sense of presence and an almost 3-dimensional feeling that viewers sense they are actually involved in the action; through such images, these lenses can impart new values to user content and allow viewers to experience videos in new and fresh ways.



AUTO FOCUS TECHNOLOGY

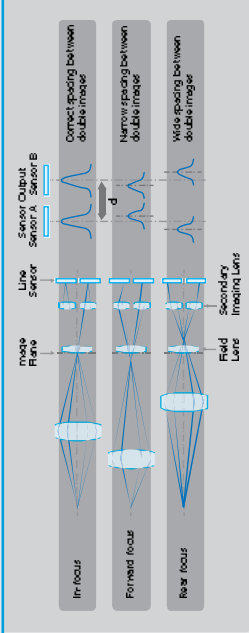
To meet the increasing demand in broadcast HDTV production for highly accurate focusing, Canon has introduced a revolutionary HDTV Auto Focus System. This pioneering technology automatically keeps images in focus, allowing professional camera operators to concentrate on capturing action and beauty shots.

Canon's advanced Auto Focusing for DIGISUPER HDTV Zoom Lenses employs the TTL-Secondary Image Registration Phase-detection system originally developed for single-lens reflex still cameras, to deliver both high accuracy and a high tracking capability for broadcast HDTV.



TTL-Secondary Image Registration Phase-detection System

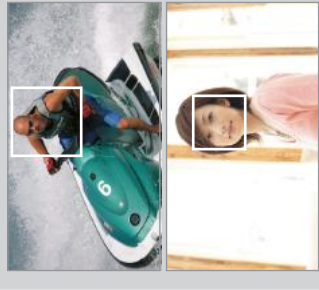
The light transmitted through a pair of secondary imaging lenses focuses on separate sensors (as illustrated). The TTL-Secondary Image Registration Phase-detection System determines the positional relationship between the two images (See "d" in diagram right) to detect the amount and direction of defocusing.



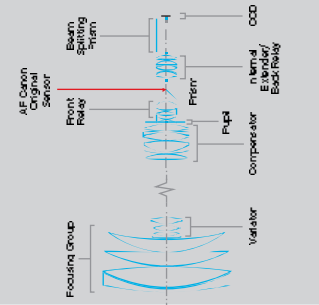
Features

- Extremely high focusing accuracy in full HDTV specifications
- Ability to focus from a completely de-focused status without hunting
- Ability to focus on a high speed moving object
- Size and position of the AF frame (target area) in the camera viewfinder can be changed from the Focus Demand FDU-P31/P41. (The size of the AF Frame can be changed in 3 steps). Please confirm the AF camera-lens interface with your chosen camera manufacturer
- Two operation modes - full time AF and Part Time AF - to meet needs of professional camera operators

Changeable AF frame



Layout of the elements



2 kinds of AF Operation modes with ACTIVE/HOLD switch

Mode	FULL TIME AF	PART TIME AF
How AF works	Usually activated. Focus position is locked while the SW is pushed.	Usually off. Activated while the SW is pushed.
Recommended Applications	Sporting event etc. To follow a moving object.	Studio production etc. To confirm the best focus position.

This article refers to Auto Focus Technology for the DIGISUPER HDTV Zoom Lenses listed below. For full lens specifications see Page 16-17 and 18

CANON'S EPOCH-MAKING TECHNOLOGY

oIFxs, HXS and HGC Technology

In 2004, Canon introduced a new broadcast lens technology **oIFxs**, with the launch of the HJ22x7.6B. Two aspects of the new technology are represented by the letter "e". One is "ecological design", as these lenses are harmless to the environment; the other "enhanced digital" technology, which improves the performance of the digital drive unit. These improvements are now also incorporated in the **HGC** (IRSE S / IASE S model) and the **HXS** lenses.

Enhanced Digital Drive

- The **oIFxs**, **HXS** and the **HGC** (IRSE S / IASE S model) series are equipped with an information display and digital function selector, an X-Y axis switch, so that users can customise and optimise the enhanced digital functions much more easily and precisely.
- User settings are simple and easy to operate including: speed preset, frame presets (2 memory positions), shuttle shot, zoom track and new focus preset with IASD / IASE S lens.
- Follow signal display for iris, zoom and focus (IASD / IASE S only) for virtual reality, robotic control and other uses.
- User settings for zoom and focus curve mode offer precise control based upon user requirements.
- AUX 1 and AUX 2 switches can be assigned to basic functions for enhanced memory capability.
- A precise movement mode can be memorised for the zoom sawtooth control, zoom demand control and preset control.
- The drive unit can memorise 9 patterns of user-customised settings and also transmit the data between different drive units.
- The self-diagnostic mode provides error messages.
- The HDxs/e-IFxs/HGC (IRSE S / IASE S model) Ergonomic Drive Unit is tilted at an ideal angle of 12.5° for good balance and comfort. An information display offers easy, precise and full customisation of enhanced digital functions, which are easily accessed and set via the Digital Function Selector, an X-Y axis switch located next to the display.



Rotary Encoder

Canon offers a series of **oIFxs** / **HXS** / **HGC** (IRSE S / IASE S model) lenses, which are equipped with an enhanced digital drive unit. 16-bit resolution Rotary Encoder Devices are built into the unit, so the lenses can simply be integrated into a virtual digital studio system without any additions. The encoder also enable superior precise control.



Ecological Design

Sustainability is at the heart of Canon's Kyosei philosophy - living and working together for the common good - and we are always looking to further reduce our environmental impact.

The **oIFxs** / **HXS** / **HGC** series avoid using any materials or substances that are harmful to the environment. For example optical parts feature lead free glass, while mechanical parts are virtually free of all harmful products, such as cadmium, PBBs (Poly Bromo Bi Phenyls), PBOPE (Poly Bromo Di Phenyl Ethers) or mercury.



CANON 3D SOLUTION

Recognising the continuing requirement for 3D program origination, Canon has prioritised adoption of most of the standard HD lens series for 3D production systems. Originally this entailed using our original 16-bit resolution encoders, while allowing off sets of zoom, focus and iris positions to compensate for the tracking of each position. However we now have a new solution for a simpler, low cost 3D production system with increased interoperability.

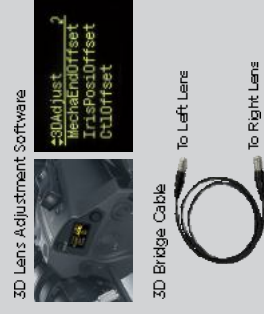
3D Lens Lineups

Canon's ergonomic Digital Drive Unit incorporates Canon-developed, ultra-compact rotary encoders capable of 0.1µm position detection, which produces 16-bit resolution of the positions of zoom, iris, and focus controls. This unique device allows for one zoom controller and one focus controller to simultaneously operate both lenses, while providing even higher interoperability and precision in the synchronisation of zoom, focus and iris positions of the lens pairs.

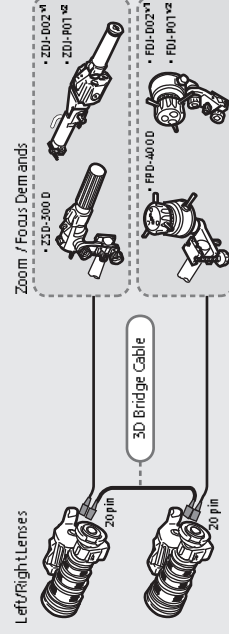


Lens Refinements for 3D

The "3D Lens Adjustment Software" makes stereoscopic tracking of the zoom, focus and iris even more precise. It allows appropriate offsets to be easily made using the Digital Drive Unit's display, to compensate for minor zoom and focus tracking differences between any two lens pairs. Using the software, Canon's synchronous lens control system doesn't require special controllers. All the servo controllers for digital servo lenses, as shown below, will be compatible by simply connecting the two lenses with a 3D Bridge Cable (BC-100), saving additional costs when implementing 3D production systems.



System Configuration



- * BDC-10 conversion cable is necessary to connect between ZDU-D02 or FDU-D02 (18pin) and Digital Drive Lens (20pin).
- * BDC-20 conversion cable is necessary to connect between ZDU-P01 or FDU-P01 (21pin) and Digital Drive Lens (20pin).

CANON'S EPOCH-MAKING TECHNOLOGY

OPTICAL IMAGE STABILIZER

VARI-ANGLE PRISM IMAGE STABILIZER (VAP-IS)

Canon's portable HD production lens, the HJ15ex8.5B KRSE-V, incorporates an innovative built-in optical image stabilisation system – the patented Vari-Angle Prism Image Stabilizer (VAP-IS) – that's designed to significantly enhance HD motion imaging on location shoots.

It delivers highly stable HD imagery - counteracting a wide range of disturbance frequencies that the lens-camera system may be subjected to in a variety of shooting environments. These can range from the very low frequencies encountered during handheld or

shoulder-mount shooting by a walking or running camera operator, to the higher vibration frequencies associated with shooting from motorbikes, moving vehicles, and helicopters. Various stabilisation modes can be selected to address diverse shooting operations.

OPTICAL SHIFT IMAGE STABILIZER (SHIFT-IS)



Canon, renowned for its Optical Image Stabilization technologies, developed a built-in Optical Shift Image Stabilizer (Shift-IS) for broadcast field lenses to overcome image shaking at telephoto focal lengths. First introduced in the super telephoto DIGISUPER 86 xs zoom lens, Shift-IS is now used in the DIGISUPER 100, DIGISUPER 100AF, DIGISUPER 95, DIGISUPER 86AF, DIGISUPER 80, HJ40x10B IASD-V and HJ40x14B IASD-V.

HOW THE OPTICAL SHIFT IMAGE STABILIZER (SHIFT-IS) WORKS

When the lens moves, the light rays from the subject are deflected, relative to the optical axis, resulting in an unsteady image. By shifting the IS lens group on a plane perpendicular to the optical axis to counter the degree of image shake, the light rays reaching the image plane can be steadied. Since image shake occurs in both horizontal and vertical directions, two shake-detecting sensors for yaw and pitch detect the angle and speed of movement and send this information to a high-speed 32-bit microcomputer, which converts the information into drive signals for the IS lens group. The actuator then moves the IS lens group

horizontally and vertically to counteract the image shake and maintain a stable picture. The Shift-IS component is located within the lens group, without increasing the overall size and weight of the master lens, and is most effective for lower frequency movements caused by platform vibration or wind effect.

The products with Optical Image Stabilizer technologies are shown with the legend on pages 12, 13, 22 and 24.



IMAGE STABILIZER

P.28

HJ15ex8.5B KRSE-V



P.16

UHD DIGISUPER 86
UHD DIGISUPER 90
DIGISUPER 100AF
DIGISUPER 100
DIGISUPER 95



P.17

DIGISUPER 86AF
DIGISUPER 80



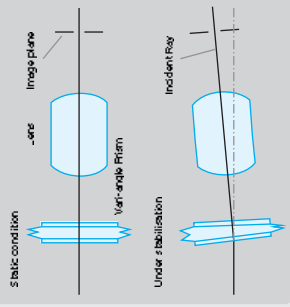
P.24

HJ40x10B IASD-V
HJ40x14B IASD-V

HOW THE VAP-IS (VARI-ANGLE-PRISM IMAGE STABILIZER) WORKS

Under perfect shooting conditions, light rays from a scene pass through the lens optical system in a tightly prescribed manner. Any vibration or jolt to the lens-camera system will deflect those light rays and produce unsteady images.

The VAP-IS technology is incorporated within the lens optical system to intercept and correct such light ray deviations in real-time. The technology is based upon a flexible optical bellows that comprises two flat glass elements separated by a special liquid, forming



The details of the HDgc Series Lenses are shown on page 36

HDgc SERIES

HDgc



CONCEPT OF THE HDgc SERIES

The HDgc series supports the emergence of a new generation of cost-effective HD acquisition systems. Using Canon's unique technology, the new HDgc lenses exhibit high Modulation Transfer Function (MTF), high resolution and high contrast from the centre of the image to its extreme edges, while maintaining compact size and weight.

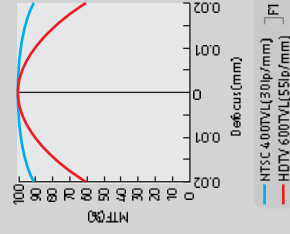
QUALITY OF THE HDgc SERIES

The HDgc Series lenses are based upon Canon's latest design concepts, which support the new generation of cost-effective HD acquisition systems. They are designed to meet the specific bandwidth frequency (or the number of scanning lines) of HD camera systems and at the same time offer an excellent performance-cost ratio.

COMPARISON OF THE HDgc SERIES WITH SDTV LENSES

In the HDTV system the pixel size is about half, so the spread of a point image caused by a spherical aberration, coma etc. will be diminished to about half. The MTF varies as the focus changes and, even if the image is slightly out of focus, the MTF is greatly influenced as shown in Graph 01.

HDgc Lenses are specially designed with optical elements - such as "Hi UD Glass", "Aspherical Elements" and other special elements - that effectively minimise chromatic aberrations, while maintaining high MTF throughout the image.



Graph 01

Test frequency of Broadcast camera	SD		HDgc
	320 TV lines / 4MHz	up to 640 TV lines / 8MHz	up to 800 TV lines
Test frequency of Broadcast lens	at lines / mm	up to 48 lines / mm	up to 74 lines / mm
	Up to 75 lines / mm		up to 100 lines / mm

2/3" 4K LENS SERIES

UHD DIGISUPER Series for 4K System

Step up to 4K broadcasting with fully-featured high-quality 2/3" 4K field and studio zoom lenses.



UHDxs series
4K UHD lenses for
portable cameras

Easily make the move to 4K ENG and studio applications with high quality 2/3" 4K wide and standard zoom lenses



Focal Length (mm)	6.5	8.2	9.3	9	9.7	10.5	
Field Lens	U026.6 TB	Standard Field Lens K ₁ 27"					
	U065.9 TB	Average 2.5-300 mm 3.75-46" field lens with image stabilization					
	J085.5 TB	4K Perim with outstanding optical performance					
	U030.3 TB	Average 2.5-300 mm 3.75-46" field lens with outstanding optical performance					
	U078.8 TB	4.4K Perim field lens with an 11m, 3.5-228 mm zoom					
Focal Length (mm)	U026.6 TB	4.4K Perim field lens with 11m, 3.5-228 mm zoom					
	C026.6 TB	6.5	7.5	7.6	8.5	9.7	10.5
	C030.3 TB	11M purpose wide angle lens with superb optical performance					
	C035.9 TB	Average 2.5-300 mm 3.75-46" field lens with optical quality					
	C041.4 TB	Lens for 10K-46" application with outstanding optical performance					
BIO/EPF Lens	C035.9 TB	Stunning stabilization and image quality					
	C036.7 TB	Average 2.5-300 mm 3.75-46" field lens with optical quality					
	C036.9 TB	Lightweight and versatile with incredible image quality					
	C026.6 TB	Standard EXEND image lens					
	C026.7 TB	A 46" and 30" broadcast lens with 46" optical quality					
Focal Length (mm)	C026.7 TB	A top tier 10K-25" broadcast lens with an 11m, 3.5-228 mm zoom					
	C026.8 TB	3.5K optical broadcast quality broadcast lens					
	C026.9 TB	Ultracompact lens with advanced 10K zoom system					

UHD 4K 2/3" LENSES

	4K PREMIUM				4K	
	UHD Digi4K x 122	UHD Digi4K x 111	UHD DigiSLIDER 86	UHD DigiSLIDER 27	UHD DigiSLIDER 30	UHD DigiSLIDER 66
Model Number	JU0226.2B IE3D	U116.3B IE3D	U086.9.3B IE3D	U027.6.5B IE3D	JU00.9B IE3D	U085.3B IE3D
Zoom Ratio	122x	111x	86x	27x	90x	66x
Built-in Extender	2.0x	2.0x	2.0x	2.0x	2.0x	2.0x
Range of Focal Length (With Extender)	6.6 - 1300 mm 16.4 - 2600 mm	6.6-65 mm 16.5-165 mm	6.6-60 mm 16.5-160 mm	6.6-60 mm 16.5-160 mm	6-60 mm 16-160 mm	6-60 mm 16-160 mm
Maximum Relative Aperture (With Extender)	1:1.7 (8.2 - 240 mm) 1:2.0 (241 - 350 mm) 1:3.0 (351 - 1300 mm) 1:4.0 (2000 mm)	1:1.8 (2.3-240 mm) 1:2.0 (241-350 mm) 1:3.0 (351-1300 mm) 1:4.0 (1850 mm)	1:1.7 (4.3-240 mm) 1:2.0 (241-350 mm) 1:3.0 (351-1300 mm) 1:4.0 (1800 mm)	1:1.5 (4.6-240 mm) 1:2.0 (241-350 mm) 1:3.0 (351-1300 mm) 1:4.4 (1360 mm)	1:2.4 (4.3-488 mm) 1:2.8 (489-700 mm) 1:4.0 (701-1300 mm) 1:5.0 (1301-1800 mm)	1:1.7 (4.3-240 mm) 1:2.0 (241-350 mm) 1:3.0 (351-1300 mm) 1:4.0 (1800 mm)
Angular Dimensions of View (With Extender)	60.7° x 36.5° (8.2 mm) 0.58° x 0.31° (1000 mm) 0.38° x 0.18° (2000 mm) 0.25° x 0.12° (2600 mm)	60.7° x 36.0° (8.3 mm) 0.58° x 0.30° (240 mm) 0.37° x 0.17° (350 mm) 0.25° x 0.12° (1300 mm)	54.9° x 32.4° (4.3 mm) 0.68° x 0.38° (4.800 mm) 0.34° x 0.15° (1300 mm) 0.23° x 0.10° (1800 mm)	72.3° x 45.1° (4.5 mm) 1.1° x 1.7° (8.0 mm) 0.34° x 0.15° (1300 mm) 0.23° x 0.10° (1800 mm)	56.7° x 33.4° (4.3 mm) 0.68° x 0.38° (4.80 mm) 0.34° x 0.15° (1300 mm) 0.23° x 0.10° (1800 mm)	56.7° x 33.4° (4.3 mm) 0.68° x 0.38° (4.800 mm) 0.34° x 0.15° (1300 mm) 0.23° x 0.10° (1800 mm)
M.O.D. from Lens Front	3.0 m*	3.0 m*	3.0 m*	0.6 m	3.0 m	3.0 m
Object Dimensions at M.O.D. (With Extender)	314.9 (171 mm) 2.715 cm (10.7 mm) 1.468 cm (5.8 mm) 14.68 cm (200 mm)	316.5 (175.3 mm) 2.965 cm (11.7 mm) 1.568 cm (62.5 mm) 15.68 cm (280 mm)	27.9 x 162.8 cm (4.3 mm) 3.2 x 1.5 cm (60 mm) 1.7 x 1.0 cm (180 mm) 1.7 x 1.0 cm (180 mm)	100.4 (60.7 cm) (4.5 mm) 2.8 (1.5 cm) (60 mm) 1.3 (1.0 cm) (180 mm) 1.3 (1.0 cm) (180 mm)	28.9 x 161.8 cm (4.3 mm) 3.2 x 1.5 cm (60 mm) 1.7 x 1.0 cm (180 mm) 1.7 x 1.0 cm (180 mm)	28.9 x 161.8 cm (4.3 mm) 3.2 x 1.5 cm (60 mm) 1.7 x 1.0 cm (180 mm) 1.7 x 1.0 cm (180 mm)
Approx. Size (WxHxL)	250.6 x 255.5 x 673.4 mm	250.6 x 255.5 x 673.4 mm	250.6 x 255.5 x 673.4 mm	25.06 x 25.55 x 550 mm	250.6 x 255.5 x 670 mm	250.6 x 255.5 x 670 mm
Approx. Mass	26.6 kg	26.6 kg	27.0 kg	20.5 kg	23.2 kg	23.2 kg
Protection Filter	Optional	Optional	✓	Optional	Optional	✓
Built-in Optical Image Stabilizer	✓	✓	✓	✓	✓	✓
Auto Focus System	--	--	--	--	--	--

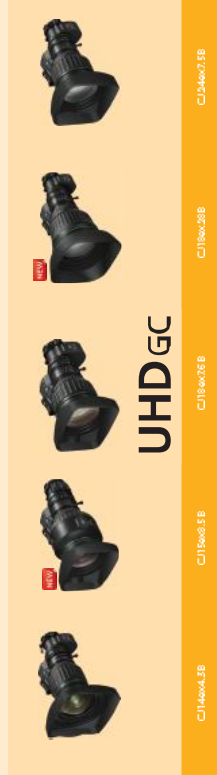
*When using zoom, the minimum shooting distance and the shooting proximity will differ. Please see the manual for details.

✓ Standard — Not Applicable

- Please refer to page 10 regarding the difference between HD TV and SD TV lenses. Please note that HD TV lenses also perform excellently when they are adopted to SD TV cameras.
- M.O.D. = Minimum Object Distance
- Black colour cover lenses are also available as an alternative to the white colour lenses.

	UHD XS				CJ46x4.5 8B	
	CJ18x4.1B	CJ12x4.1B	CJ00x3.7B	CJ25x7.5B	CJ46x3.7B	CJ46x4.5 8B
Model Number	CJ18x4.1B IASE S	CJ12x4.1B IASE S	CJ00x3.7B IASE S	CJ25x7.5B IASE S	CJ46x3.7B IASE V-H	CJ46x4.5 8B IASE V-H
Zoom Ratio	18x	12x	20x	25x	46x	46x
Built-in Extender	2.0x	2.0x	2.0x	2.0x	2.0x	2.0x
Range of Focal Length (With Extender)	4.1 - 75 mm 6.6 - 150 mm	4.2-60 mm 6.6-120 mm	7.6-57 mm 16.5-130 mm	10.6-90 mm 16.6-130 mm	9.7 - 497 mm 14.4 - 374 mm	16.5 - 417 mm 232 - 1241 mm
Maximum Relative Aperture (With Extender)	1:1.8 (4.3 - 40 mm) 1:2.0 (41 - 75 mm) 1:2.8 (86 - 150 mm) 1:4.0 (150 mm)	1:1.8 (4.2-40 mm) 1:2.0 (41-60 mm) 1:2.8 (61-120 mm) 1:4.0 (120 mm)	1:1.8 (7.6-108 mm) 1:2.0 (109-157 mm) 1:2.8 (158-257 mm) 1:5.2 (258 mm)	1:2.0 (10.6-118 mm) 1:2.5 (119-150 mm) 1:3.5 (151-222 mm) 1:5.6 (223 mm) 1:5.6 (280 mm)	1:2.0 (12.0-124 mm) 1:2.5 (125-157 mm) 1:3.5 (158-214 mm) 1:5.6 (215-374 mm) 1:7.8 (375 mm)	1:2.8 (12.8-232 mm) 1:3.5 (233-374 mm) 1:5.6 (375-1241 mm) 1:11.0 (1242 mm)
Angular Dimensions of View (With Extender)	94.3° x 64.2° (4.3 mm) 84.4° x 49.6° (65 mm) 62.7° x 37.9° (150 mm) 42.7° x 24.7° (150 mm)	96.3° x 64.2° (4.3 mm) 105.5° x 5.3° (4.15 mm) 85.3° x 50.4° (10.8 mm) 55.3° x 30.4° (16.5 mm)	62.2° x 39.2° (7.6 mm) 35.5° x 20.7° (4.85 mm) 19.2° x 10.7° (4.85 mm) 12.5° x 6.5° (25.0 mm)	64.8° x 39.3° (10.6 mm) 35.5° x 16.5° (180 mm) 18.2° x 10.7° (180 mm) 12.5° x 6.5° (280 mm)	52.7° x 31.7° (9.7 mm) 13.8° x 7.7° (4.83 mm) 6.8° x 3.5° (13.4 mm) 3.5° x 1.8° (37.4 mm)	35.3° x 22.5° (4.15 mm) 13.8° x 10.5° (4.83 mm) 6.8° x 3.5° (12.4 mm) 3.5° x 1.8° (37.4 mm)
M.O.D. from Lens Front	0.30 m (0 mm with Macro)	0.30 m	0.80 m	0.80 m	2.80 m	2.80 m
Object Dimensions at M.O.D. (With Extender)	76.4 x 46.8 cm (4.3 mm) 6.0 x 3.4 cm (4.3 mm) 2.5 x 1.4 cm (4.3 mm) 2.5 x 1.4 cm (130 mm)	76.4 x 42.0 cm (4.3 mm) 6.0 x 3.4 cm (4.3 mm) 2.5 x 1.4 cm (4.3 mm) 2.5 x 1.4 cm (130 mm)	91.7 x 51.6 cm (7.6 mm) 4.8 x 2.7 cm (4.8 mm) 2.4 x 1.4 cm (4.8 mm) 2.4 x 1.4 cm (32 mm)	93.3 x 52.8 cm (10.6 mm) 3.3 x 2.3 cm (180 mm) 1.7 x 1.0 cm (180 mm) 2.0 x 1.1 cm (280 mm)	254.3 x 143.0 cm (9.7 mm) 6.5 x 3.2 cm (4.83 mm) 3.1 x 1.7 cm (13.4 mm) 2.3 x 1.7 cm (3.3 mm)	162.9 x 101.9 cm (12.8 mm) 4.2 x 2.4 cm (4.83 mm) 2.1 x 1.2 cm (12.4 mm) 2.1 x 1.2 cm (124 mm)
Approx. Size (WxHxL)	163.0 x 107.6 x 240.6 mm	163.5 x 108 x 247.8 mm	163.9 x 114.4 x 230.0 mm	163.5 x 114.1 x 223.3 mm	173.2 x 147.5 x 373.0 mm	173.2 x 147.5 x 385.0 mm
Approx. Mass	2.9 kg	2.9 kg	2.1 kg	1.9 kg	5.60 kg	5.64 kg
Protection Filter	Optional	Optional	Optional	Optional	Optional	Optional
Built-in Optical Image Stabilizer					✓	✓
Auto Focus System	--	--	--	--	--	--

UHD 4K 2/3" LENSES



UHDgc

Model Number	C14xx4.3B 14x S/ 14x S	C115xx3.8 15x V	C118xx3.8 18x S/ 18x S	C118xx2.1B 18x S/ 18x S	C14xx2.1B 24x S/ 24x S
Zoom Ratio	14x	6x	18x	18x	24x
Built-in Extender	2.0x	—	2.0x	2.0x	2.0x
Range of Focal Length (with Extender)	4.3-60mm 6.8-80mm	8.5-128mm	26-127mm 8.2-214mm	28-500mm 56-1000mm	7.5-180mm 15.0-360mm
Maximum Relative Aperture (with Extender)	1:1.8 (4.3-40mm) 1:2.7 (60mm) 1:2.8 (80mm) 1:5.4 (120mm) 1:5.4 (130mm)	1:2.5 (8.5-68mm) 1:4.7 (128mm)	1:1.8 (26-103mm) 1:2.4 (137mm) 1:2.8 (214mm) 1:4.8 (274mm)	1:2.5 (28-288mm) 1:5.6 (56-1000mm) 1:5.6 (1000mm)	1:1.8 (7.5-120mm) 1:2.7 (180mm) 1:2.8 (360mm) 1:5.4 (360mm)
Angular Field of View (with Extender)	96.3° x 64.0° (43mm) 91° x 52.2° (60mm) 53.3° x 24.8° (80mm) 48° x 28° (120mm)	56.3° x 35.2° (8.5mm) 43° x 24° (128mm)	64.6° x 39.7° (26mm) 40° x 22° (137mm) 35.7° x 20° (214mm) 2.0° x 1.1° (274mm)	13.5° x 11.0° (28mm) 110° x 65.2° (1000mm) 9.8° x 5.5° (600mm) 0.35° x 0.31° (1000mm)	65.0° x 39.0° (18mm) 31° x 17° (180mm) 35.5° x 20.4° (360mm) 15° x 0.3° (360mm)
M.O.D. from Lens Front	0.30m	0.80m	0.58m	2.2m	0.80m
Object Distance at M.O.D. (with Extender)	16.4 x 10.0 cm (43mm) 5.2 x 2.2 cm (60mm) 2.6 x 1.1 cm (80mm) 2.6 x 1.1 cm (120mm)	96.8 x 55.9 cm (8.5mm) 6.4 x 3.6 cm (128mm)	65.5 x 36.8 cm (26mm) 3.9 x 2.1 cm (137mm) 1.5 x 0.8 cm (214mm) 1.9 x 1.1 cm (274mm)	71.0 x 39.9 cm (28mm) 41 x 2.2 cm (1000mm) 8.5 x 4.5 cm (600mm) 2.1 x 1.2 cm (1000mm)	94.0 x 54.0 cm (18mm) 41 x 2.2 cm (180mm) 35.5 x 20.4 cm (360mm) 2.1 x 1.2 cm (360mm)
Approx. Size (WxHxL)	165 x 106.0 x 243mm	1702 x 1152 x 233.5mm	905 x 105.0 x 2062mm	1778 x 122.5 x 265.3mm	1646 x 103 x 2214mm
Approx. Mass	2.1 kg	2.03 kg	1.68 kg	2.76 kg	1.82 kg
Protection Filter	Optional	Optional	Optional	Optional	Optional
Built-in Optical Image Stabilizer	—	Yes	—	—	—
Auto Focus System	—	—	—	—	—

UHD DIGISUPER 122

UHD DIGISUPER 122 - our 4K Premium flagship broadcast lens. As our most refined lens designed to support 4K UHD broadcast systems, it boasts extremely high optical performance that surpasses even 4K criteria and, at the same time, embodies the ease of operation that are ideally suited for use in broadcast television production.

High zoom ratio and long focal length. While displaying performance that surpasses 4K, the lens has the high zoom ratio (360x) and long focal length (800mm) desired by many in television production.

Optical performance that goes beyond 4K. This lens has outstanding performance that goes beyond 4K resolution, all the way from screen centre to the edges. Picture sharpness is maintained over the focal range of the lens and with changes in subject distance from the lens.

Optical performance that goes beyond 4K even when using the built-in 2x extender and image stabiliser (function that counters lens-camera inadvertent movements and vibrations). Thanks to the precision of its high-grade glass elements and superbly constructed optical system, the lens achieves optical performance that goes beyond 4K even when the built-in 2x extender has been engaged. Also featured is an optical shift-type image stabiliser that achieves the highest grade, helping to achieve image stabilising performance commensurate with 4K.

Applicability and ease of operation ideally suited to 4K shooting. The lens is designed to be used well at the servo speed and stability required for the telecasting of live sports events and other applications, it ensures the applicability and ease of operation ideally suited to 4K shooting.

Compatibility with HD lens systems. This lens is compatible with Canon standard controllers for zoom, focus and iris, as well as servo modules currently used by HD equipment. It comes with a 20-pin connector compatible with virtual units and that enables high-accuracy position information of the zoom, focus and iris to be read out.

UHDgc

UHDgc - combines 2/3" 4K camera optical performance with the same practicality and operability found in HD lenses (high specifications, compact size, light weight). And for customers considering a shift to 4K system in the future, this 4K lens series is the popular class at an affordable price that users can truly consider a good up-front investment.

Minimizes axial and magnification chromatic aberration. Optimum arrangement of fluorite and UD glass delivers exceptional color reproduction to every corner of the image.

Optical performance to support 4K cameras. Our exclusive optical design technology ensures optical performance to support 4K cameras.



Virtual Systems. The high-resolution 16-bit encoder makes detailed representation of images possible. The accurate position information enables precise calibration easy during CG synthesis.

Operability. Three Canon-made 20-pin connectors are provided. The assured integration with virtual units, even with a full servo setup, with focus and zoom controls connected.

Quick power-on. With its absolute value encoder, it can power on without initialization. Camera-side aberration correction function, position information, and viewfinder position display are possible at time of start-up.

Built-in 2x extender. Delivers 4K camera optical performance even when using 3x.

Control Accessories for Studio/Field Lenses. Please refer to page 26.

STUDIO/FIELD LENSES

DIGISUPER Series
for HDTV / SDTV System

The DIGISUPER series lenses are controlled by Canon's ground breaking Digital Servo System.



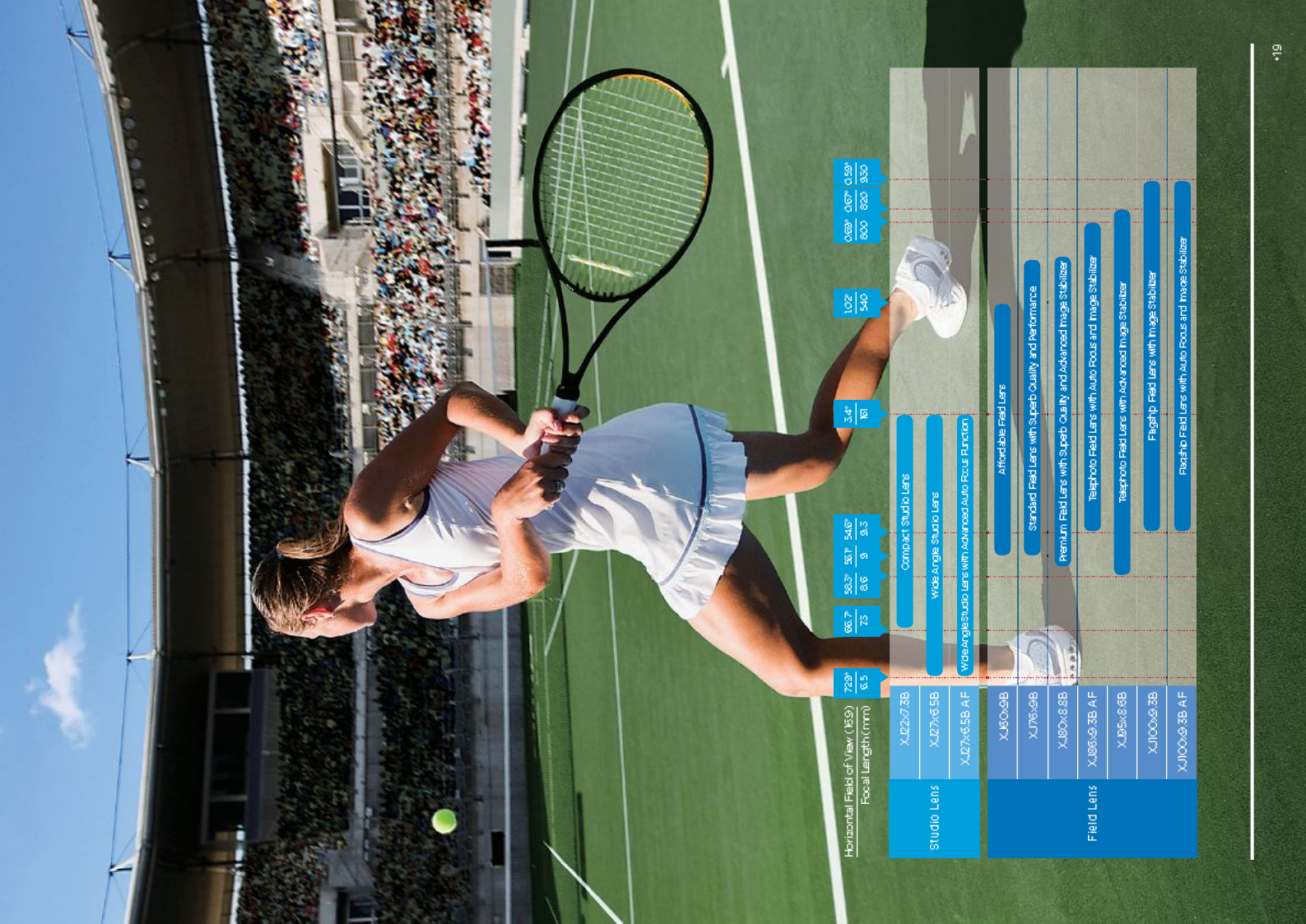
See page 20 & 21

DIGISUPER 22 xs
for Portable Camera

The DIGISUPER 22 xs is a studio lens based on a new concept to be used with portable cameras.



See page 22



Horizontal Field of View (1/35) Focal Length (mm)	72.3° 6.5	65.7° 7.5	58.3° 8.6	55.1° 9	54.0° 9.3	5.4° 101	1.02° 540	0.639° 600	0.67° 620	0.59° 650

Studio Lens	XJ22x7.3B	XJ27x6.5B	XJ27x6.5B A.F.	Wide Angle Studio Lens with Advanced Auto Focus Function	Compact Studio Lens	Wide Angle Studio Lens	Affordable Field Lens	Standard Field Lens with Superb Quality and Performance	Premium Field Lens with Superb Quality and Advanced Image Stabilizer	Telephoto Field Lens with Auto Focus and Image Stabilizer	Telephoto Field Lens with Advanced Image Stabilizer	Flagship Field Lens with Image Stabilizer	Flagship Field Lens with Auto Focus and Image Stabilizer
Field Lens	XJ50x9B	XJ75x9B	XJ80x8.8B	XJ86x9.3B A.F.	XJ95x8.8B	XJ100x9.3B	XJ100x9.3B A.F.						

STUDIO/FIELD LENSES: HDTV



HD XS ■ DIGI SUPER ■ MINI-MOUNT



HD XS ■ DIGI SUPER ■ MINI-MOUNT



HD XS ■ DIGI SUPER ■ MINI-MOUNT



HD XS ■ DIGI SUPER ■ MINI-MOUNT



HD XS ■ DIGI SUPER ■ MINI-MOUNT



HD XS ■ DIGI SUPER ■ MINI-MOUNT



HD XS ■ DIGI SUPER

	DIGISUPER 100AF	DIGISUPER 100	DIGISUPER 95
Model Number	XJ100-9.3B AF	XJ100-9.3B	XJ95-8.8B
Zoom Ratio	100x	100x	95x
Built-in Extender	2.0x	2.0x	2.0x
Range of Focal Length (with Extender)	9.3-930mm 18.6-1860mm	9.3-930mm 18.6-1860mm	8.6-820mm 17.2-1640mm
Maximum Relative Aperture (with Extender)	1:1.7 at 9.3-296mm 1:4.7 at 930mm 1:3.4 at 18.6-592mm 1:9.4 at 1860mm	1:1.7 at 9.3-296mm 1:4.7 at 930mm 1:3.4 at 18.6-592mm 1:9.4 at 1860mm	1:1.7 at 8.6-340mm 1:4.1 at 820mm 1:3.4 at 17.2-680mm 1:8.2 at 1640mm
4:3 Aspect Ratio (8.8 x 6.6mm)	50.6° x 39.1° at 9.3mm 0.34° x 0.41° at 930mm 26.6° x 20.1° at 186mm 0.27° x 0.20° at 1860mm	50.6° x 39.1° at 9.3mm 0.34° x 0.41° at 930mm 26.6° x 20.1° at 186mm 0.27° x 0.20° at 1860mm	54.2° x 42.0° at 8.6mm 0.61° x 0.46° at 820mm 28.7° x 21.7° at 172mm 0.31° x 0.23° at 1640mm
Angular Field of View (with Extender)	54.6° x 32.4° at 9.3mm 0.59° x 0.33° at 930mm 28.9° x 16.5° at 186mm 0.30° x 0.17° at 1860mm	54.6° x 32.4° at 9.3mm 0.59° x 0.33° at 930mm 28.9° x 16.5° at 186mm 0.30° x 0.17° at 1860mm	58.3° x 34.9° at 8.6mm 0.67° x 0.39° at 820mm 31.2° x 17.8° at 172mm 0.34° x 0.19° at 1640mm
16:9 Aspect Ratio (9.6 x 5.4mm)			
M.O.D. from Lens Front	3.0m	3.0m	3.0m
4:3 Aspect Ratio (8.8 x 6.6mm)	253.9 x 190.4mm at 9.3mm 2.54 x 190.0mm at 930mm 127.0 x 95.2cm at 186mm 127 x 0.95cm at 1860mm	253.9 x 190.4mm at 9.3mm 2.54 x 190.0mm at 930mm 127.0 x 95.2cm at 186mm 127 x 0.95cm at 1860mm	274.1 x 205.6mm at 8.6mm 3.0 x 205.6mm at 820mm 157.1 x 102.8mm at 172mm 15 x 12cm at 1640mm
Object Dimensions at M.O.D. (with Extender)	276.4 x 155.5mm at 9.3mm 2.76 x 156mm at 930mm 138.2 x 77.8cm at 186mm 138 x 0.78cm at 1860mm	276.4 x 155.5mm at 9.3mm 2.76 x 156mm at 930mm 138.2 x 77.8cm at 186mm 138 x 0.78cm at 1860mm	298.4 x 167.7mm at 8.6mm 3.2 x 166mm at 820mm 149.1 x 83.9cm at 172mm 16 x 0.9cm at 1640mm
16:9 Aspect Ratio (9.6 x 5.4mm)			
Approx. Size (WxHxL)	250.6 x 255.5 x 661.5mm	250.6 x 255.5 x 610mm	250.6 x 255.5 x 610mm
Approx. Mass	26.8kg (59.3lbs)	23.5kg (51.8lbs)	23.2kg (51.1lbs)
Macro	—	—	—
Protection Filter	✓	✓	Optional
Built-in Optical Image Stabilizer	✓	✓	✓
Crossover Type			
Auto Focus System	✓	—	—

	DIGISUPER 86AF	DIGISUPER 80	DIGISUPER 76	DIGISUPER 60XS
Model Number	XJ86-9.3B AF	XJ80-8.8B	XJ76-9B	XJ60-9B IE-D
Zoom Ratio	86x	80x	76x	60x
Built-in Extender	2.0x	2.0x	2.0x	2.0x
Range of Focal Length (with Extender)	9.3-800mm 18.6-1600mm	8.8-710mm 17.6-1420mm	9-690mm 18-1380mm	9-540mm 18-1080mm
Maximum Relative Aperture (with Extender)	1:1.7 at 9.3-340mm 1:4.0 at 800mm 1:3.4 at 18.6-680mm 1:8.0 at 1600mm	1:1.7 at 8.8-340mm 1:3.55 at 710mm 1:3.4 at 17.6-680mm 1:7.1 at 1420mm	1:1.7 at 9-340mm 1:3.45 at 690mm 1:3.4 at 18-680mm 1:6.9 at 1380mm	1:1.7 at 9-306mm 1:3.0 at 540mm 1:3.4 at 18-612mm 1:6.0 at 1080mm
4:3 Aspect Ratio (8.8 x 6.6mm)	50.6° x 39.1° at 9.3mm 0.63° x 0.47° at 800mm 26.6° x 20.1° at 186mm 0.32° x 0.24° at 1600mm	53.1° x 41.1° at 8.8mm 0.71° x 0.53° at 710mm 28.1° x 21.2° at 176mm 0.36° x 0.27° at 1420mm	52.1° x 40.3° at 9mm 0.75° x 0.55° at 690mm 27.5° x 20.8° at 18mm 0.37° x 0.27° at 1380mm	52.1° x 40.3° at 9mm 0.93° x 0.70° at 540mm 27.5° x 20.8° at 18mm 0.47° x 0.35° at 1080mm
Angular Field of View (with Extender)	54.6° x 32.4° at 9.3mm 0.69° x 0.33° at 800mm 28.9° x 16.5° at 186mm 0.34° x 0.19° at 1600mm	57.2° x 34.1° at 8.8mm 0.77° x 0.44° at 710mm 30.5° x 17.4° at 176mm 0.39° x 0.22° at 1420mm	56.1° x 33.4° at 9mm 0.80° x 0.45° at 690mm 29.9° x 17.1° at 18mm 0.40° x 0.22° at 1380mm	56.1° x 33.4° at 9mm 1.02° x 0.57° at 540mm 29.9° x 17.1° at 18mm 0.51° x 0.29° at 1080mm
16:9 Aspect Ratio (9.6 x 5.4mm)				
M.O.D. from Lens Front	3.0m	3.0m	3.0m	2.8m
4:3 Aspect Ratio (8.8 x 6.6mm)	253.9 x 190.4mm at 9.3mm 2.8 x 190.0mm at 800mm 127.0 x 95.2cm at 186mm 32 x 18cm at 800mm	266.8 x 200.1mm at 8.8mm 3.4 x 200.1mm at 710mm 133.4 x 100.1mm at 176mm 17 x 13cm at 1420mm	249.9 x 184.9mm at 9mm 3.5 x 200.1mm at 690mm 130.0 x 97.5cm at 18mm 18 x 13cm at 1380mm	243.8 x 182.9mm at 9mm 4.1 x 81cm at 540mm 121.9 x 91.5cm at 18mm 2.1 x 16cm at 1080mm
Object Dimensions at M.O.D. (with Extender)	276.4 x 155.5mm at 9.3mm 3.2 x 18cm at 800mm 138.2 x 77.8cm at 186mm 16 x 0.9cm at 1600mm	290.0 x 163.1mm at 8.8mm 3.7 x 21cm at 710mm 145.0 x 81.6cm at 176mm 19 x 11cm at 1420mm	282.4 x 158.9mm at 9mm 3.8 x 21cm at 690mm 141.2 x 79.5cm at 18mm 19 x 11cm at 1380mm	265.1 x 149.1mm at 9mm 4.5 x 25cm at 540mm 132.6 x 74.6cm at 18mm 2.3 x 13cm at 1080mm
16:9 Aspect Ratio (9.6 x 5.4mm)				
Approx. Size (WxHxL)	250.6 x 255.5 x 661.5mm	250.6 x 255.5 x 610mm	250.6 x 255.5 x 610mm	250.6 x 255.5 x 547.8mm
Approx. Mass	26.8kg (59.3lbs)	23.2kg (51.1lbs)	23.0kg (50.6lbs)	19.9kg (43.8lbs)
Macro	—	—	—	—
Protection Filter	✓	Optional	Optional	Optional
Built-in Optical Image Stabilizer	✓	✓	—	—
Crossover Type				Optional
Auto Focus System	✓	—	—	—

✓ Standard — Not Applicable

• Please refer to page 10 regarding the difference between HDTV and SDTV lenses. Please note that HDTV lenses also perform excellently when they are adapted to SDTV cameras.
• M.O.D. = Minimum Object Distance
• Black colour cover lenses are also available as an alternative to the white colour lenses.

STUDIO/FIELD LENSES: HDTV



HD XS ■ **DIGI SUPER**



HD XS ■ **DIGI SUPER**

COMPACT STUDIO LENS



HD XS ■ **DIGI SUPER**

	DIGISUPER 27AF	DIGISUPER 27	DIGISUPER 22 XS
Model Number	XJ27x5.5B AF	XJ27x5.5B	XJ22x7.3B IE-D
Zoom Ratio	27x	27x	22x
Built-in Extender	2.0x	2.0x	2.0x
Range of Focal Length (with Extender)	6.5-180mm 13-360mm	6.5-180mm 13-360mm	7.3-161mm 14.6-322mm
Maximum Relative Aperture (with Extender)	(2.0x)	(2.0x)	(2.0x)
Maximum Relative Aperture (without Extender)	11.5 at 6.5-12.3mm 12.2 at 180mm 13.0 at 13-246mm 14.4 at 360mm	11.5 at 6.5-12.3mm 12.2 at 180mm 13.0 at 13-246mm 14.4 at 360mm	11.8 at 7.3-11.5mm 12.6 at 161mm 13.6 at 14.6-22.3mm 15.2 at 322mm
4:3 Aspect Ratio (8.8 x 6.6mm)	68.2° x 53.8° at 6.5mm 2.8° x 2.1° at 180mm 37.4° x 28.5° at 13mm 14° x 11° at 360mm	68.2° x 53.8° at 6.5mm 2.8° x 2.1° at 180mm 37.4° x 28.5° at 13mm 14° x 11° at 360mm	52.2° x 48.7° at 7.3mm 3.1° x 2.3° at 161mm 33.5° x 25.5° at 14.6mm 16° x 12° at 322mm
Angular Field of View (with Extender)	72.9° x 45.1° at 6.5mm 31° x 17° at 180mm 40.5° x 23.5° at 13mm 15° x 0.9° at 360mm	72.9° x 45.1° at 6.5mm 31° x 17° at 180mm 40.5° x 23.5° at 13mm 15° x 0.9° at 360mm	66.7° x 40.6° at 7.3mm 3.4° x 1.9° at 161mm 36.4° x 21.0° at 14.6mm 1.7° x 1.0° at 322mm
M.O.D. from Lens Front	0.6m (10mm with Macro)	0.6m (10mm with Macro)	0.8m (10mm with Macro)
4:3 Aspect Ratio (8.8 x 6.6mm)	97.0° x 72.8mm at 6.5mm 3.5° x 2.6mm at 180mm 48.5° x 36.4mm at 13mm 18° x 13mm at 360mm	97.0° x 72.8mm at 6.5mm 3.5° x 2.6mm at 180mm 48.5° x 36.4mm at 13mm 18° x 13mm at 360mm	107.8° x 80.9mm at 7.3mm 4.8° x 3.6mm at 161mm 53.9° x 40.5mm at 14.6mm 2.4° x 1.8mm at 322mm
Object Dimensions at M.O.D. (with Extender)	106.1 x 59.7mm at 6.5mm 32 x 2.1cm at 180mm 53.1 x 29.9mm at 13mm 19 x 11mm at 360mm	106.1 x 59.7mm at 6.5mm 32 x 2.1cm at 180mm 53.1 x 29.9mm at 13mm 19 x 11mm at 360mm	118.1 x 66.4mm at 7.3mm 5.2 x 2.9cm at 161mm 59.1 x 33.2cm at 14.6mm 2.6 x 1.5cm at 322mm
Approx. Size (WxHxL)	250.6 x 255.5 x 567mm	250.6 x 255.5 x 550mm	165 x 175 x 336mm
Approx. Mass	23.3kg (51.4lbs)	21.9kg (48.3lbs)	5.1kg (13.42lbs)
Macro	Optional (Remote)	Optional (Remote)	Standard (Manual)
Protection Filter	Optional	Optional	—
Built-in Optical Image Stabilizer	—	—	—
Crosscover Type	—	Optional	Optional
Auto Focus System	✓		

✓ Standard — Not Applicable

• Please refer to page 10 regarding the difference between HDTV and SDTV lenses. Please note that HDTV lenses also perform excellently when they are adopted to SDTV cameras.
• M.O.D. = Minimum Object Distance
• Black colour cover lenses are also available as an alternative to the white colour lenses.

COMPACT STUDIO LENS: DIGISUPER 22 XS

The DIGISUPER 22 xs is a "Compact HD Studio lens" specifically designed to be used with a portable camera. Incorporating Canon's pioneering technologies it offers superior optical performance and ease of operation, compared with both HD portable lenses and SD Studio Box Type Lenses.

High Optical Performance

The DIGISUPER 22 xs offers higher contrast and resolution compared with portable lenses and at the same time, reduces Focus Breathing to zero.

Small In Size, Light In Weight

In order to realize the best capabilities from the camera / lens combination, the lens was specifically designed to be as small and light as possible.

Advanced Operation

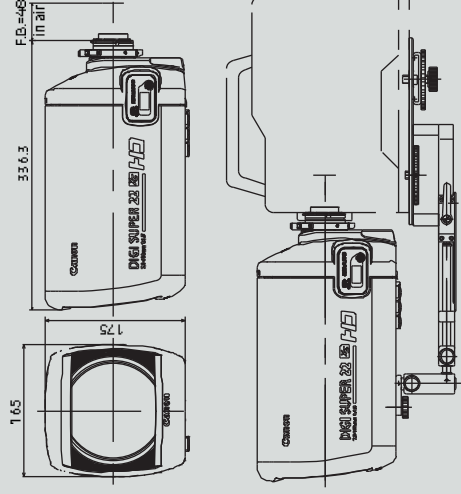
Incorporating an "Encoder Device", it has the capability to zoom from a very fast 0.5 sec. to a very slow 5 min. while improving the precision and repeatability of zoom, focus and iris control. The encoder device also enables the lens to be easily integrated into virtual studio applications.

Diverse Functions

The DIGISUPER 22 xs is equipped with an information display, which enables diverse digital functions to be used easily and precisely.



Dimensions



The SUP-400 supporter for the DIGISUPER 22 xs is included as a standard component with the lens.





1. The unit pictured is the ZDJ-G01
2. Not available on the ZDJ-S01.
3. This is a framing preset switch on the ZDJ-S01

Main features

Frame Preset/Shuttle Shot/Speed Preset

This function moves to a prerecorded zoom position with the push of a switch. Frame preset and shuttle shot moves each at maximum speed, while speed preset moves at a prerecorded speed. Let go of the switch in shuttle shot to return to the original position. Moving speed with framing preset can be set with the ZDJ-G01.

4. Supports framing preset only.



ON

OFF



Zoom Track

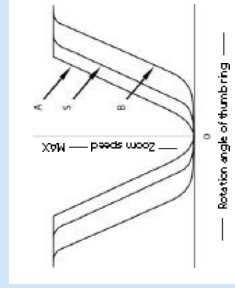
Zoom control range can be set for both the wide angle and telephoto sides, to control zoom range required for actual shooting.

Other Functions

User settings can be registered and functions can be assigned to switches from the display screen. Preset speeds can also be set, and curves can be selected. Users can also check connection status and see whether various functions are on or off.

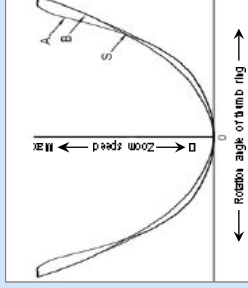
With zoom demand, the zoom curve (zoom speed curve characteristics according to thumb ring rotation angle) can be selected from provided patterns. The ZDJ-S01 features three types of zoom curves in total, while the ZDJ-G01 offers a total of 19 types; from these, three types of curves can be assigned to the selector switch so users can set the optimum zoom curve for the shooting setting, such as studio recording or live sports.

Available Zoom Curves



Output Curve 00*

This is the standard zoom curve available in the ZDJ-G01/S01. Curve A offers a faster zoom speed with smaller thumb ring rotation angle, making it ideal for high-speed zoom operation. Curve B is the opposite of Curve A, making it useful for operation at lower zoom speeds. Curve S is midway between A and B.



Output Curve 09

This is an example of the selectable zoom curves available with the ZDJ-G01. This zoom curve is ideal for fine zoom operation at medium speed. Curve A gives more priority to fine zoom operation, while Curve B places greater emphasis on trackability. Curve S is similar to A in low speed ranges, and similar to Curve B in high speed ranges.

Curve Selection and Settings



Display makes curve settings simple and clear

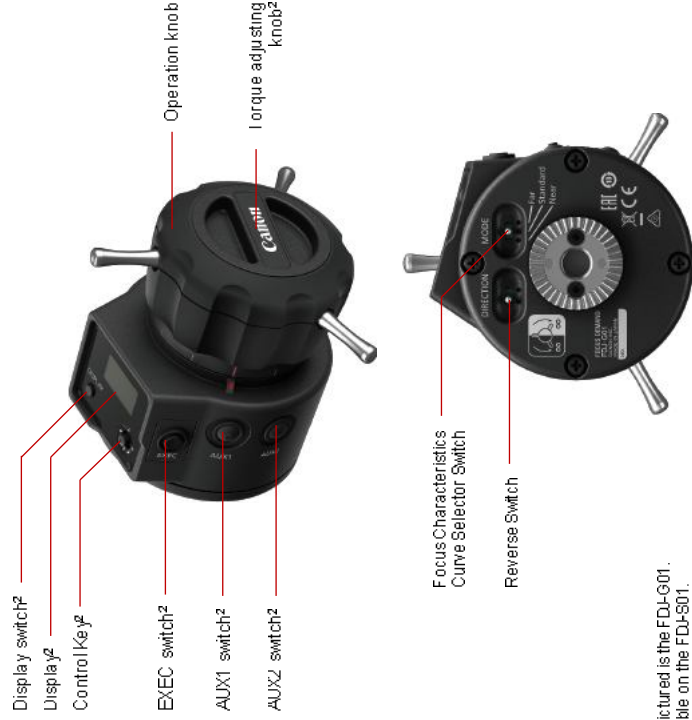
This is the standard zoom curve available in the ZDJ-G01/S01. Curve A offers a faster zoom speed with smaller thumb ring rotation angle, making it ideal for high-speed zoom operation. Curve B is the opposite of Curve A, making it useful for operation at lower zoom speeds. Curve S is midway between A and B.



Select using switch on side of main unit

Switch curves directly with switch on side of unit

Switch from among three zoom curves including the assigned output curves according to the situation.



- 1 | The unit pictured is the FDJ-G01.
- 2 | Not available on the FDJ-S01.

Main features

Focus Range Limit

Focusing within the required range is made possible by limiting the focus range (subject distance). This is effective for situations such as stage performances, where focus range is fixed to some extent.



Focus Preset

This feature lets users move from the current position to a predetermined focus position with the push of a switch. When released, focus returns to the position shown on the operation knob.



Fine Focus Mode 1/2

This function adjusts precision of focusing. Setting 1 sets a range and enables fine focusing within that range. Setting 2 enables fine focusing from the current focus position.



Other Features

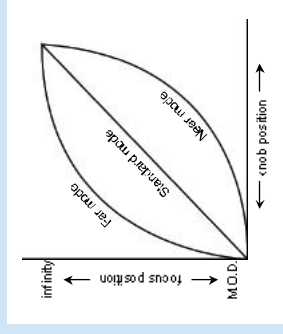
User settings can be registered and functions can be assigned to switches from the display screen. Preset speeds can also be set, and curves can be selected. Users can also check connection status and see whether various functions are on or off. (See p. 10 for more details.)

FOCUS CURVE

With the focus demand, the focus curve (focus position in relation to knob position) can be selected from provided patterns. The FDJ-S01 features three types of focus curves in total, while the FDJ-G01 offers a total of 19 types; users can switch between 9 types in Far mode and Near mode to choose the optimum focus curve for the shooting situation.

Available Focus Curves

Focusing within the required range is made possible by limiting the focus range (subject distance). This is effective for situations such as stage performances, where focus range is fixed to some extent.



Far mode

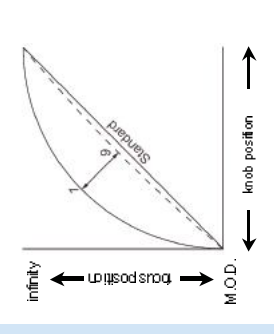
This is the curve in which the focus position changes less the more the knob is turned toward the infinity side. This makes fine adjustments easy on the infinity side.

Standard mode

This is the standard mode where focus position change is in direct relation to knob operation.

Near mode

This is the opposite of Far mode, in which focus position changes less the more the knob is turned toward the close side. This makes fine adjustments easy on the close side.



With the ZDJ-G01, users can select from nine types of curves¹, numbered 1 through 9, in both Far mode and Near mode. The higher the number, the closer the curve is to a straight line. This enables fine curve adjustments for each shooting situation.

- 3 Far and Near modes cannot be selected independently. The same curve number will be set.

Curve Selection and Settings



Display makes curve settings simple and clear

The nine types² of focus curves in Far and Near modes can be assigned to the curve selector switch easily using the display.



Select using switch on side of main unit

Switch on side of unit makes selecting faster

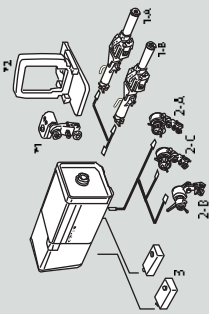
Users can switch between three assigned focus curves depending on usage situation.

CONTROL ACCESSORIES FOR STUDIO/FIELD LENSES

DIGITAL DIGISUPER SERIES

For :
UHD DIGISUPER and DIGISUPER series

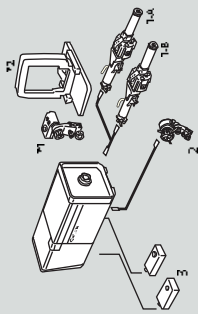
FULL SERVO SYSTEM



1-A.	Zoom Demand ZDU-G0*	-
1-B.	Zoom Demand ZDU-S01	-
2-A.	Focus Demand FDU-G01	-
2-B.	Focus Demand FDU-G11	-
2-C.	Focus Demand FDU-S01	-
3.	Servo Module SMU-E01 ("2pcs")	-
*1	Switch Box	-
*2	Supporter	-

For :
DIGISUPER100AF /DIGISUPER 86AF / DIGISUPER 27AF

FULL SERVO SYSTEM



1-A.	Zoom Demand ZDU-G0*	-
1-B.	Zoom Demand ZDU-S01	-
2.	Focus Demand FDU-G01	-
3.	Servo Module SMU-E01 ("2pcs")	-
*1	Switch Box	-
*2	Supporter	-

*A20P12P demand cable (BDC-21) is required for use with XJ22x/portable lenses

*1 Switch Box is optionally available. The equivalent switches are integrated into Zoom Demands. It is recommended to have the Switch Box with Full Manual System.

*2 Lens Supporter is necessary for portable camera mounting. Some cameras need separate power supply for zoom and focus servo operation.

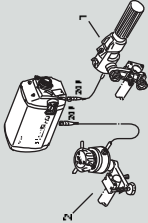
*3 For DIGISUPER 100AF, DIGISUPER 86AF and DIGISUPER 27AF, FDU-P01 is necessary to control the AF function. FDU-P01 is also available for left hand users

• Zoom Demand and Focus Demand with Pie-set Box is also available.

• For detail information, please contact a Canon Sales Office.

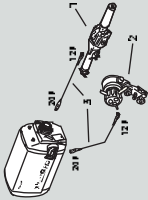
For :
DIGISUPER 22 xs

With Current ENG Demand



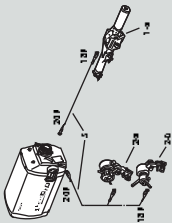
Kit Detail		
No.	DESCRIPTION	
1	Digital Zoom Demand ZSD-3000	
2	Digital Focus Demand FFD-4000	

With Compact Field/Studio



Kit Detail		
No.	DESCRIPTION	
1	Digital Zoom Demand ZDU-P01	
2	Digital Focus Demand FDU-P01	
3	Conversion Cable BDC-20	

With Current Field/Studio



Kit Detail		
No.	DESCRIPTION	
1-a	Digital Zoom Demand ZDU-D02	
2-a	Digital Focus Demand FDU-D02	
2-b	Digital Focus Demand FDU-D02	
	Propeller Type	
3	Conversion Cable BDC-10	

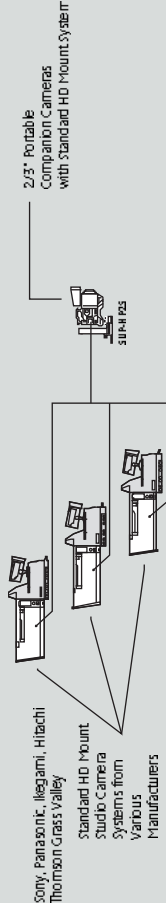
The DIGISUPER 22 xs can be used with our current Studio/Field lens controllers as well as those for our ENG lenses.
At the same time, the lens also offers compatibility with our Compact Field/Studio demands by use of a conversion cable.
• The SUP-4000 SUPPORTER is included as a standard component with the lens.

STUDIO/FIELD LENSES MOUNT COMPATIBILITY

TO USE CAMERA MANUFACTURER'S ORIGINAL MOUNT LENS

Studio/Field lenses are made with unique mounts corresponding to each manufacturer's Studio/Field cameras. To make the lenses compatible with Portable Studio/Field Companion cameras, the correct lens Support System must be chosen from the following.

Standard HD Mount (BTA)



Sony, Panasonic, Ikegami, Hitachi
Thomson Grass Valley

Standard HD Mount
Studio Camera
Systems from
Various
Manufacturers

SUP-H P03

2/3" Portable
Companion Camera
with Standard HD Mount System

BROADCAST ENG/EFP LENSES

ENG/EFP lenses
for HDTV / SDTV System

Canon offers a variety of Broadcast ENG/EFP lenses, including both HDTV and SDTV versions. Please refer to page 10 regarding the difference between HDTV and SDTV lenses.

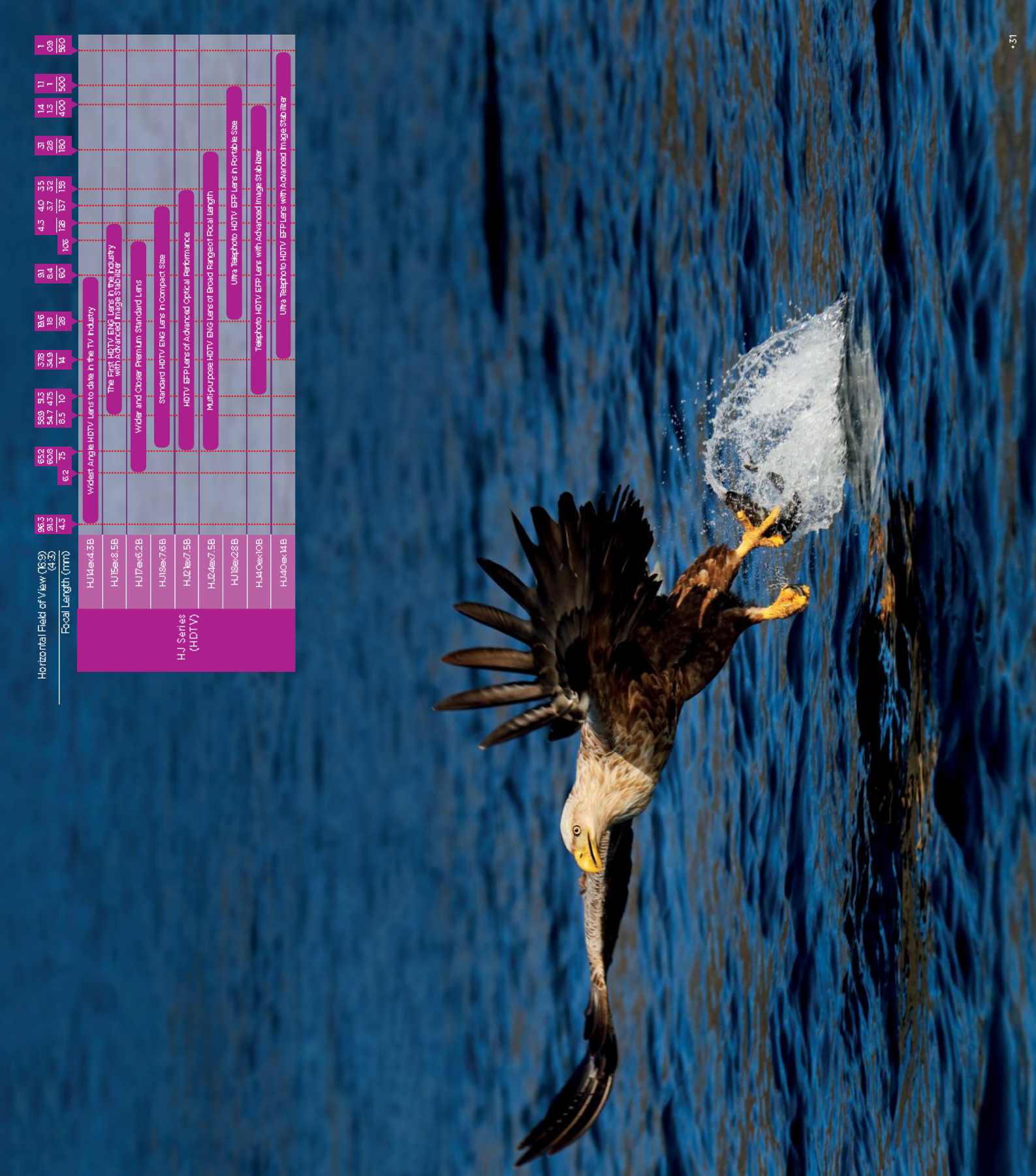


See page 32

Please note that the HDTV lenses perform excellently when they are used on SDTV cameras. Please refer to page 7.9 regarding HDxs and HDgc series lenses. All Broadcast ENG/EFP lenses are equipped with Canon's "ix" technology as well as our enhanced "Digital Drive" which is explained on page 34 & 35.

The DIGISUPER 22 xs is a box type lens developed to be used with a portable camera. The lens provides higher optical performance compared with the HD portable lenses and higher versatility as opposed to the large box type lenses. Please refer to page 17 for the details.

Horizontal Field of View (°:9) (4:3)		65.2 62.8 6.2		56.9 54.7 6.5		37.8 34.9 14		31.6 19 28		31 6.4 60		4.5 3.7 125		3.5 3.2 135		2.8 2.6 180		2 1.5 250		1 1 500	
Focal Length (mm)		4.5		6.2		14		28		60		125		135		180		250		500	
H.J Series (HDTV)	HJ14x4.3B	Widest Angle HDTV Lens to date in the TV Industry																			
	HJ15x4.5B	The First HDTV ENG Lens in the Industry with Advanced Image Stabilizer																			
	HJ17x4.6.2B	Wider and Clearer Premium Standard Lens																			
	HJ18x4.7.6B	Standard HDTV ENG Lens in Compact Size																			
	HJ21x4.7.5B	HDTV EFP Lens of Advanced Optical Performance																			
	HJ24x4.7.5B	Multi-purpose HDTV ENG Lens of Broad Ranged Focal Length																			
	HJ18x4.2.3B	Ultra Telephoto HDTV EFP Lens in Portable Size																			
	HJ40x4.10B	Telephoto HDTV EFP Lens with Advanced Image Stabilizer																			
HJ40x4.14B	Ultra Telephoto HDTV EFP Lens with Advanced Image Stabilizer																				



2/3" ENG/EFP LENSES: HDTV



H440x14B IASD-V
H440x14B IASD-V



H440x10B IASD-V
H440x10B IASD-V



H418x28B IASE S
H418x28B IASE S

	H440x14B IASD-V	H440x10B IASD-V	H418x28B IASE S
Zoom Ratio	40x	40x	18x
Image Size	2/3"	2/3"	2/3"
Built-in Extender	2.0x	2.0x	2.0x
Range of Focal Length (with Extender)	14-560mm 28-1200mm	10-400mm 20-800mm	28-500mm 56-1000mm
Maximum Relative Aperture (with Extender)	12.8 at 14-307mm 15.1 at 560mm 15.6 at 28-614mm 110.2 at 120mm	12.0 at 10-220mm 13.65 at 400mm 14.0 at 20-440mm 17.3 at 800mm	12.8 at 28-286mm 14.9 at 500mm 15.6 at 56-572mm 19.8 at 1000mm
Angular Field of View (with Extender)	34.9° × 26.5° at 14mm 0.9° × 0.8° at 560mm 17.9° × 13.4° at 28mm 0.5° × 0.3° at 120mm	47.5° × 36.5° at 10mm 13° × 0.9° at 400mm 24.8° × 18.7° at 20mm 0.6° × 0.5° at 800mm	18.0° × 13.5° at 28mm 10° × 0.8° at 500mm 9.0° × 6.8° at 56mm 0.5° × 0.4° at 1000mm
4:3 Aspect Ratio (8.8 × 6.6mm)	37.8° × 21.8° at 14mm 10° × 0.8° at 560mm 19.4° × 11.0° at 28mm 0.5° × 0.3° at 120mm	51.3° × 30.2° at 10mm 14° × 0.8° at 400mm 27.0° × 15.4° at 20mm 0.7° × 0.4° at 800mm	19.6° × 11.1° at 28mm 11° × 0.6° at 500mm 9.9° × 5.6° at 56mm 0.6° × 0.3° at 1000mm
M.O.D. from Lens Front	2.8m (10mm with Macro)	2.8m (10mm with Macro)	2.2m (10mm with Macro)
M.O.D. from Image Plane	3.20m	3.18m	2.92m
4:3 Aspect Ratio (8.8 × 6.6mm)	162.3° × 121.7cm at 14mm 41° × 3.6mm at 560mm 812° × 60.9cm at 28mm 21° × 1.6mm at 120mm	227.7° × 170.8cm at 10mm 57° × 4.3cm at 400mm 115.9° × 85.4cm at 20mm 2.9° × 2.2cm at 800mm	65.4° × 49.1cm at 28mm 3.8° × 2.9cm at 500mm 32.7° × 24.6cm at 56mm 1.9° × 1.5cm at 1000mm
Object Dimensions at M.O.D. (with Extender)	171° × 99.5cm at 14mm 4.5° × 2.5cm at 560mm 826° × 49.8cm at 28mm 2.3° × 1.3cm at 120mm	248.4° × 139.7cm at 10mm 62° × 3.5cm at 400mm 124.2° × 89.9cm at 20mm 31° × 1.8cm at 800mm	711° × 40.0cm at 28mm 41° × 2.3cm at 500mm 35.6° × 20.0cm at 56mm 21° × 1.2cm at 1000mm
Approx. Size (WxHxL)	174.1 × 133 × 355.5mm	174.1 × 133 × 335.4mm	176.2 × 120.8 × 288.3mm
Approx. Mass (IRSE/IASE)	5.45kg (12.02lbs)	5.40kg (11.90lbs)	2.59kg (5.65lbs)
Filter Thread Size (Hood/Lens Barrel)	/127mm P0.75	/127mm P0.75	/127mm P0.75/-
Built-in Optical Image Stabilizer	✓	✓	✓
Information Display	-	-	✓



H424ex7.5B IRSE S/IASE S
H424ex7.5B IRSE S/IASE S



H421ex7.5B IASE S
H421ex7.5B IASE S



H418ex7.6B IRSE S/IASE S
H418ex7.6B IRSE S/IASE S



H417ex6.2B IRSE S/IASE S
H417ex6.2B IRSE S/IASE S

	H424ex7.5B IRSE S/IASE S	H421ex7.5B IASE S	H418ex7.6B IRSE S/IASE S	H417ex6.2B IRSE S/IASE S
Zoom Ratio	24x	21x	18x	17x
Image Size	2/3"	2/3"	2/3"	2/3"
Built-in Extender	2.0x	2.0x	2.0x	2.0x
Range of Focal Length (with Extender)	7.5-180mm 15.0-360mm	7.5-158mm 15-36mm	7.6-137mm 15.2-274mm	6.2-106mm 12.4-212mm
Maximum Relative Aperture (with Extender)	11.8 at 7.5-120mm 12.7 at 180mm 13.6 at 15.0-240mm 15.4 at 360mm	11.9 at 7.5-116mm 12.6 at 158mm 13.8 at 15-232mm 15.2 at 36mm	11.8 at 7.6-103mm 12.4 at 137mm 13.6 at 15.2-206mm 14.8 at 274mm	11.8 at 6.2-65.8mm 12.9 at 106mm 13.6 at 12.4-131.6mm 15.8 at 212mm
Angular Field of View (with Extender)	60.8° × 47.5° at 75mm 2.8° × 2.1° at 180mm 32.7° × 24.8° at 75mm 14° × 11° at 180mm	60.8° × 47.5° at 75mm 3.2° × 2.4° at 158mm 32.7° × 24.8° at 15mm 18° × 12° at 36mm	60.1° × 46.9° at 76mm 3.7° × 2.8° at 137mm 35.1° × 20.1° at 15.2mm 1.8° × 1.4° at 274mm	70.7° × 56.0° at 6.2mm 4.8° × 3.6° at 106mm 39.1° × 29.8° at 12.4mm 2.4° × 1.8° at 212mm
M.O.D. from Lens Front	0.85mm (10mm with macro)	0.85mm (10mm with Macro)	0.56m (10mm with Macro)	0.4m (10mm with Macro)
M.O.D. from Image Plane	1.16m	1.16m	0.81m	0.69m
4:3 Aspect Ratio (8.8 × 6.6mm)	65.2° × 39.6° at 75mm 3.1° × 17° at 180mm 35.5° × 20.4° at 75mm 15° × 0.9° at 180mm	64.6° × 39.1° at 76mm 4.0° × 2.3° at 137mm 35.1° × 20.1° at 15.2mm 2.0° × 1.1° at 274mm	75.5° × 47.1° at 6.2mm 5.2° × 2.9° at 106mm 42.3° × 24.6° at 12.4mm 2.6° × 1.5° at 212mm	
Object Dimensions at M.O.D. (with Extender)	88.3 × 66.2cm at 75mm 3.8 × 2.9cm at 180mm 44.2 × 33.1cm at 150mm 1.9 × 1.4cm at 360mm	110.1 × 82.6cm at 75mm 5.1 × 3.8cm at 158mm 55.1 × 41.3cm at 15mm 2.6 × 1.9cm at 36mm	66.9 × 50.2cm at 6.2mm 3.8 × 2.9cm at 106mm 33.5 × 25.1cm at 12.4mm 1.9 × 1.5cm at 212mm	
Approx. Size (WxHxL)	96.0 × 54.0cm at 75mm 41° × 2.3cm at 180mm 48.0 × 27.0cm at 150mm 21 × 1.2cm at 360mm	120.4 × 67.7cm at 75mm 5.6 × 3.2cm at 158mm 60.2 × 33.9cm at 15mm 2.8 × 1.6cm at 36mm	65.5 × 36.8cm at 76mm 3.9 × 2.1cm at 137mm 32.8 × 18.4cm at 15.2mm 1.9 × 1.1cm at 274mm	73.3 × 41.2cm at 6.2mm 4.1 × 2.3cm at 106mm 36.7 × 20.8cm at 12.4mm 2.1 × 1.6cm at 212mm
Approx. Mass (IRSE/IASE)	178kg (392lbs) / 1.86kg (4.10lbs)	150kg (330lbs) / 1.66kg (3.65lbs)	185.0 × 106.5 × 240.5mm	197kg (4.34lbs) / 2.05kg (4.52lbs)
Filter Thread Size (Hood/Lens Barrel)	105mm P1/84mm P	127mm P0.75/-	- / 82mm P0.75	105mm P1/-
Built-in Optical Image Stabilizer	✓	✓	✓	✓
Information Display	-	-	✓	✓

✓ Standard — Not Applicable

* Please refer to page 10 regarding the difference between HDTV and SDTV lenses. Please note that HDTV lenses also perform excellently when they are adopted to SDTV cameras.
 * M.O.D. = Minimum Object Distance
 * Black colour cover lenses are also available as an alternative to the white colour lenses.



HXS



HXS

	HJ14EX4.3B IRSE S/ASE S	HJ15EX8.5B KRSE-V
Zoom Ratio	14x	15x
Image Size	2/3"	2/3"
Built-in Extender	2.0x	—
Range of Focal Length (with Extender)	4.3-60mm 8.6-120mm	8.5-128mm
Maximum Relative Aperture (with Extender)	11.8 at 4.3-40mm 12.7 at 60mm 13.6 at 8.6-80mm 15.4 at 120mm	12.5 at 8.5-68mm 14.7 at 128mm
Angular Field of View (with Extender)	4.3 Aspect Ratio (8.8 x 6.6mm) 8.4° x 6.3° at 4.3mm 8.4° x 6.3° at 60mm 54.2° x 42.0° at 8.6mm 42° x 32° at 120mm	54.7° x 42.4° at 8.5mm 39° x 30° at 128mm
Angular Field of View (with Extender)	16:9 Aspect Ratio (9.6 x 5.4mm) 9.7° x 5.2° at 4.3mm 9.7° x 5.2° at 60mm 58.3° x 34.9° at 8.6mm 46° x 26° at 120mm	59.9° x 35.2° at 8.5mm 4.3° x 2.4° at 128mm
M.O.D. from Lens Front	0.3m (10mm with Macro)	0.8m (10mm with Macro)
M.O.D. from Image Plane	0.59m	—
Object Dimensions at M.O.D. (with Extender)	4.3 Aspect Ratio (8.8 x 6.6mm) 69.9 x 52.4cm at 4.3mm 4.8 x 3.6cm at 60mm 35.0 x 26.2cm at 8.6mm 2.4 x 1.8cm at 120mm	5.8 x 4.4cm at 128mm
Object Dimensions at M.O.D. (with Extender)	16:9 Aspect Ratio (9.6 x 5.4mm) 76.4 x 4.3cm at 4.3mm 5.2 x 2.9cm at 60mm 38.2 x 21.5cm at 8.6mm 2.6 x 1.5cm at 120mm	95.8 x 53.9cm at 8.5mm 6.4 x 3.6cm at 128mm
Approx. Size (WxHxL)	133.5 x 108.0 x 247.8mm	170.2 x 116.2 x 239.1mm
Approx. Mass (IRSE/ASE)	199kg (4.39lbs)/2.07kg (4.56lbs)	199kg (4.37lbs)
Filter Thread Size (Hood/Lens Barrel)	127mm P0.75 / —	— / 82mm P0.75
Built-in Optical Image Stabilizer	—	✓
Information Display	✓	✓

✓ Standard — Not Applicable

* Please refer to page 10 regarding the difference between HDTV and SDTV lenses. Please note that HDTV lenses also perform excellently when they are adapted to SDTV cameras.

* M.O.D. = Minimum Object Distance

* Black colour cover lenses are also available as an alternative to the white colour lenses.

WORLD'S FIRST HDTV PORTABLE LENS
WITH BUILT-IN IMAGE STABILIZER

The HJ15ex8.5B KRSE-V is the world's first portable HD lens with built-in Optical Image Stabilization. Compact and lightweight the lens offers a high zoom ratio and wide angle of view and incorporates Canon's patented VAP-IS technology to ensure stable HD imagery in shooting environments that cause vibration and physical disturbances to the lens-camera system.

The Vari-angle Prism Image Stabilizer technology overcomes a wide range of disturbance frequencies throughout the entire zoom range, while maintaining a high optical performance, to ensure a high level of HD Image Stabilization. (See page 9 for the specification)



HJ15ex8.5B KRSE-V

MAIN FEATURES

- Full HDTV Optical Performance
- Powerful Image Stabilization throughout the entire zoom range
- Real-time compensation for a wide range of disturbance frequencies encountered by a camera operator who is shooting handheld while walking, running, or operating from a motorcycle pillion, within a moving vehicle, boat, or helicopter etc.
- Various Stabilising Modes: combination of two modes from two categories is available and each mode is simply set by changing the switches on the lens.

Select According to the Shooting Situation	Portable mode	Compensates for motion-related disturbances while shooting shoulder mounted or handheld by unsteady platform or wind
	Tripod mode	Effectively compensates for disturbances caused by unsteady platform or wind
Select According to the Direction of Disturbance	H+V mode	Optimises stabilisation when disturbance frequencies are both horizontal and vertical
	V mode	Effectively counters vertical disturbances while panning the lens-camera



DIGITAL DRIVE ENG/EFP LENSES: FEATURES

HDgc (IRSE / IASE model) lenses incorporate an enhanced "Digital Drive" that delivers a wide range of features for improved ease of operation.

1. THREE PRESET FUNCTIONS

Canon's Digital Drive provides the following "three preset functions":

Shuttle Shot

By memorising any two focal lengths, the Digital Drive can automatically "shuttle" between the two points, moving in either direction.



Frame Preset

An angle of view can be preset in either of two memories (DD: one memory) and the lens will zoom to that position by simply pushing a button. During a performance, frame preset will reproduce the zoom position decided upon in rehearsal as often as you like either at maximum speed or a preset zoom speed.



Speed Preset

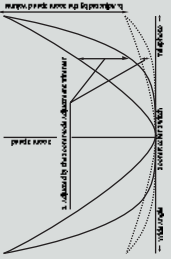
A specific zoom speed can be preset in memory and repeated as often as you like by simply pushing a button.



2. ZOOM MODE SELECT



One of several operational curves can be chosen, which will allow different zoom movement characteristics when operating the seasaw switch. This is accomplished as a linear adjustment as opposed to an adjustment done in steps.



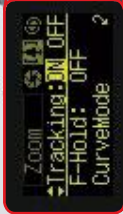
3. USER-CUSTOMISED SETTING



The drive unit can memorize 9 patterns of user-customised settings and also transmit the data between different drive units.

4. ZOOM TRACK

"Zoom Track" allows the camera operator to adjust the electronic focal length to their desired range by memorising zoom positions at both the tele and the wide side of the zoom.



5. IMPROVED MAXIMUM ZOOM AND FOCUS SERVO SPEED

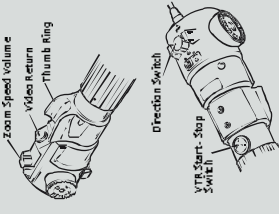
Zoom: 0.5 sec., Focus: 1.5 sec.



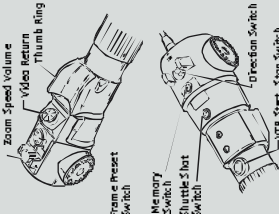
6. DEMAND SERIES TO SUPPORT DIGITAL FUNCTION

Canon offers a series of servo controllers for Digital Drive lenses. The ZSD-300D (zoom demand), ZSD-400D (focus demand) and ZSD-420D (focus servo module) are designed to support the Digital Drive's unique functions. They are quickly and easily connected to the "Digital Drive" via a 20-pin one-touch type connector. With the ZSD-400D, focus servo operational curve can also be selected, unlike a conventional focus demand. Except for the unique digital functions, the digital series of demands is fully compatible with conventional demands although a conversion cable may be required. (Please refer to Page 37)

ZSD-300A/M (for Analog Drive Lens)



ZSD-300D (for Digital Drive Lens)



7. COMPATIBILITY WITH VIRTUAL STUDIO SYSTEM

Canon has a series of HDxs/iFxs/HDgc (IRSE / IASE model) lenses, which are equipped with an enhanced digital drive unit, 16-bit resolution Rotary Encoder. Devices are built into the enhanced digital drive unit, so the lens can be simply integrated into a virtual digital studio system without any additions. The encoders also enable superior precise control.

The zoom servo provides a dynamic range of 0.5 sec. quick zooms to over a 5 min. super slow zoom. Reproducibility in focus and iris control is also much more precise. Canon's unique technology allows the surprisingly small Encoder Device to be installed in the existing drive unit without changes in size or weight.



Lens with the Optional Encoder Unit



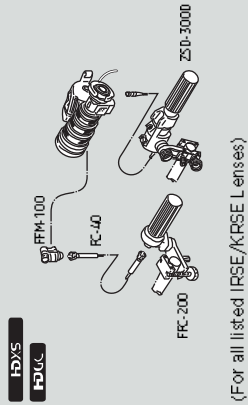
Lens with Encoder Device included in the Drive Unit

CONTROL ACCESSORIES OF DIGITAL DRIVE ENG/EFP LENSES

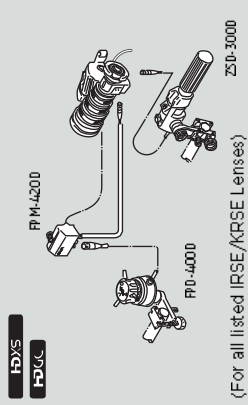
J35ex11B/J35ex15B/KJ22ex76B/KJ7ex77B/KJ10ex45B/KH21ex5.7/KH10ex3.6/KTT7ex4.3B/HJ4ex4.3B/HJ15ex8.5B/KRSE-V/HJ7ex6.2B/HJ8ex7.6B/HJ18ex28B/HJ21ex7.5B/HJ22ex7.6B/HJ40x10B/HJ40x14B

RECOMMENDED KIT CONFIGURATION

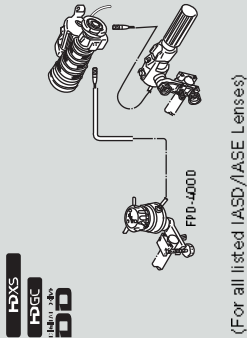
MS-210D SEMI-SERVO KIT



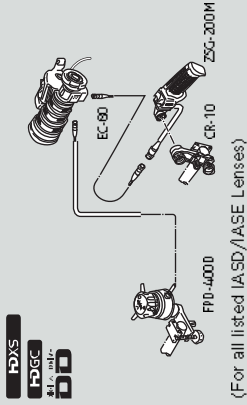
SS-41-D FULL SERVO KIT



SS-41-IASD FULL SERVO KIT



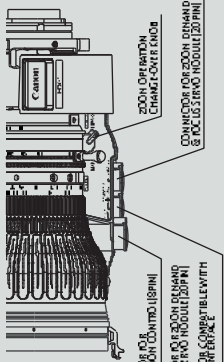
SS-42-IAS FULL SERVO KIT



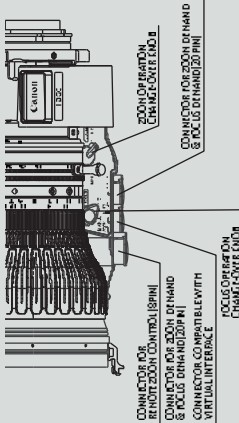
THE DIFFERENCE BETWEEN IRSE AND IASE (IASD) TYPE LENSES

The IRSE lenses are the standard type of Portable lens with a Servo Zoom Focus Drive Unit. For Servo Focus operation, IRSE lenses require both a Servo Focus Module and a Servo Focus Demand. The IASE (IASD) lenses are a special type of Portable lens equipped with a Digital Drive Unit offering both Servo Zoom and Focus. For Servo Focus operation, IASE (IASD) lenses only require a Servo Focus Demand. The IASE (IASD) lenses can be used in both the Studio and the Field.

IRSE TYPE



IASE (IASD) TYPE

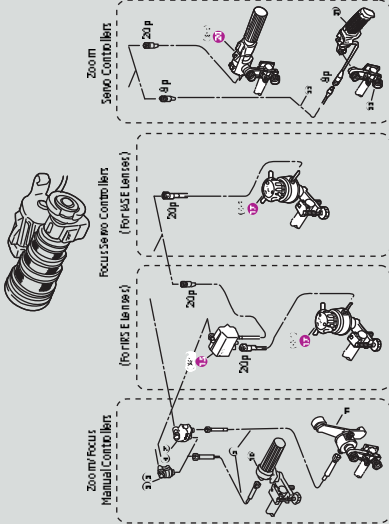


* The telephoto lenses (HJ40x, J35ex) are not compatible with virtual interface.

APPLICABLE COMPONENT DETAIL

HDXS HDGC

#	Unit	Description
②	FPM-100	Flex Focus Module
③	FPM-300	Flex Focus Module
⑥	FPM-200	Flex Dual Module
⑦	MS-FFM-400	Flex Dual Module
⑧	FC-40	Flex Cable
⑩	FFC-200	Flex Focus Controller
⑪	FZC-100	Flex Zoom Controller
⑬	FPM-4200D	Focus Positional Servo Module
⑭	FPD-4000	Focus Positional Demand
⑮	ZSD-3000	Zoom Demand
⑰	ZSG-20M	Zoom Servo Grip
⑱	CR-10	Clamper
⑳	EC-80	Zoom Extension Cable (8P)



(*)1 Analog FPD-400 and FPM-420 are also applicable, however, CC-2012 conversion cable is necessary to connect between IRSE Digital Drive Unit and FPM-420.
(*)2 Analog FPD-400 is also applicable, however, CC-2005 conversion cable is necessary to connect between IASD/IAS E Digital Drive Unit and FPD-400.
(*)3 Analog ZSD-3000 is also applicable.

APPLICABLE KIT DETAIL

For :
IRSE Type Lenses

Kit Name	Zoom	System	Component	Focus	Component
Zoom Servo Only	(Z)R-1D	ZR-1D	②	-	-
Semi-Servo	MS-210D	ZR-1D	②	FR-2	③
Full Servo	SS-41-D	ZR-1D	②	FR-2	③
Full Manual	-	FZC-1	⑥	FR-2(w/o)	⑤

For :
HJ40x14B / HJ40x10B / J35ex15B / J35ex11B

Kit Name	Zoom	System	Component	Focus	Component
Zoom Servo Only	-	ZR-1D	②	-	-
Semi-Servo	-	ZR-2(A)	②	FR-2	③
Full Servo	SS-41-IASD	ZR-1D	②	FR-2	③
Full Manual	-	FZC-1	⑥	FR-2(w/o)	⑤

For :
IASE Type Lenses (Except HJ40x, J35ex)

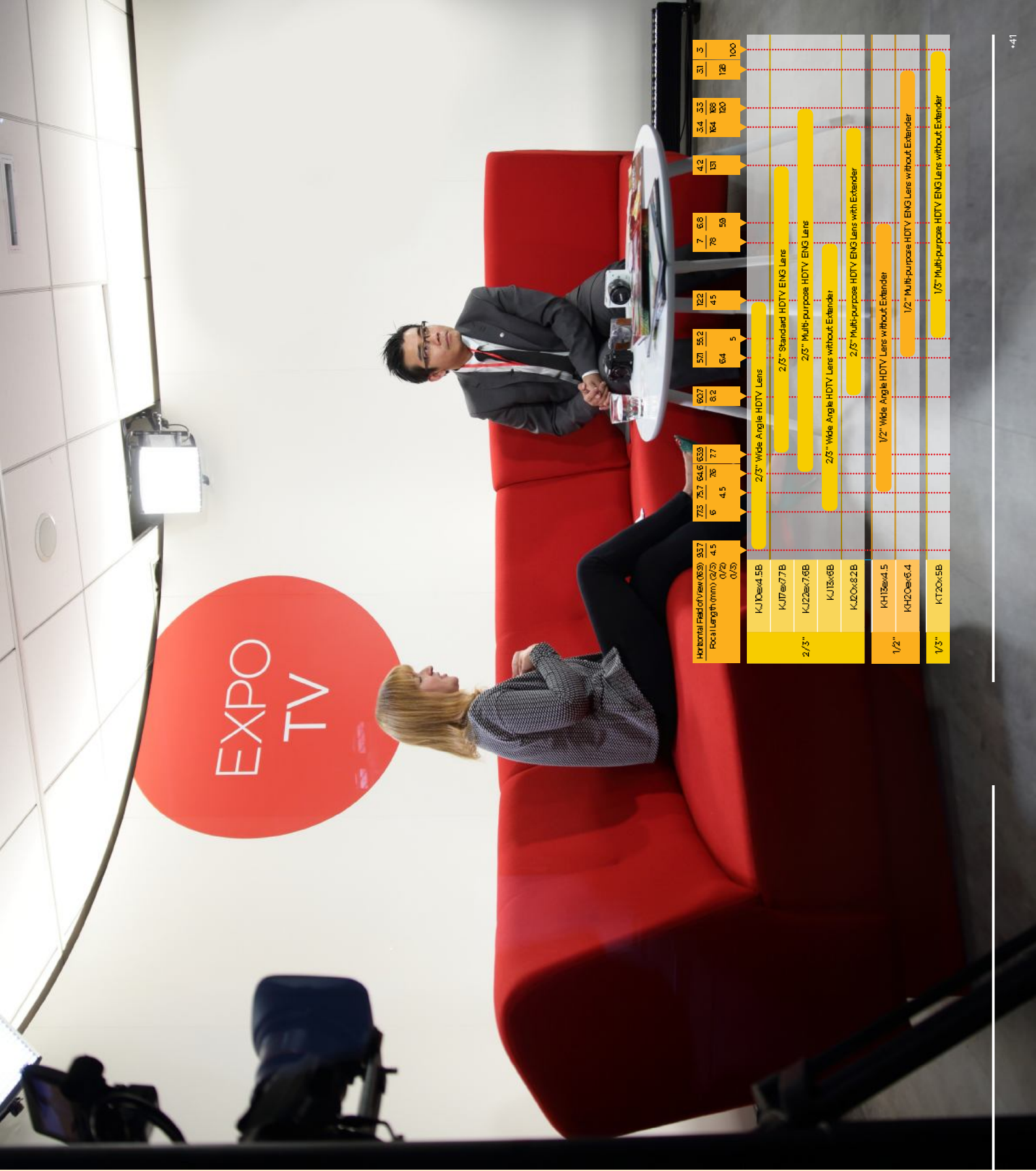
Kit Name	Zoom	System	Component	Focus	Component
Zoom Servo Only	(Z)R-1D	ZR-1D	②	-	-
Semi-Servo	MS-210D	ZR-1D	②	FR-2	③
Full Servo	SS-41-IASD	ZR-1D	②	FR-2	③
Full Manual	-	FZC-1	⑥	FR-2(w/o)	⑤

Recommended kit configuration for the listed lenses.
(See previous page)
The controllers support the new DD functions.

HDgc SERIES ENG LENSES

HDgc Series ENG Lenses

The HDgc lens series is designed for the new generation of cost-effective HD acquisition systems and comprises a variety of HDTV ENG Lenses for 2/3", 1/2" and 1/3" image size cameras

[illegible]

HDgc SERIES LENSES: HDTV



HDgc 2/3" **HDgc** 2/3"



HDgc 2/3" **HDgc** 2/3"



HDgc 2/3" **HDgc** 2/3"



HDgc 2/3" **HDgc** 2/3"



HDgc 2/3" **HDgc** 2/3"



HDgc 2/3" **HDgc** 2/3"

	K120x7.6B IRSE S/A/SE S	K107x7.7B IRSE S/A/SE S	K106x4.5B IRSE S/A/SE S
Zoom Ratio	22x	17x	10x
Image Size	2/3"	2/3"	2/3"
Built-in Extender	2.0x	2.0x	2.0x
Range of Focal Length (with Extender)	76-188mm 152-336mm	77-131mm 154-262mm	4.5-45mm 9-90mm
Maximum Relative Aperture (with Extender)	1:1.8 at 76-183mm 1:2.6 at 188mm 1:3.6 at 152-232.6mm 1:5.2 at 336mm	1:1.8 at 77-102.5mm 1:2.3 at 131mm 1:3.6 at 154-205mm 1:4.6 at 262mm	1:1.8 at 4.5-34.5mm 1:2.35 at 45mm 1:3.6 at 9-63.9mm 1:4.7 at 90mm
Angular Field of View (with Extender)	60.1° × 46.9° at 76mm 30° × 2.3° at 188mm 32.3° × 24.5° at 152mm 15° × 11° at 336mm	59.5° × 46.4° at 77mm 3.85° × 2.89° at 131mm 319° × 24.2° at 154mm 192° × 144° at 262mm	88.7° × 72.5° at 4.5mm 112° × 8.4° at 45mm 52.1° × 40.3° at 9mm 5.6° × 4.2° at 90mm
16:9 Aspect Ratio (9.6 × 5.4mm)	64.6° × 39.1° at 76mm 3.3° × 1.8° at 188mm 35.1° × 20.1° at 152mm 18° × 0.9° at 336mm	63.9° × 33.6° at 77mm 4.2° × 2.36° at 131mm 34.6° × 19.9° at 154mm 2.1° × 1.18° at 262mm	33.7° × 61.9° at 4.5mm 12.2° × 6.9° at 45mm 56.1° × 35.4° at 9mm 5.1° × 3.4° at 90mm
M.O.D. from Lens Front	0.8m (10mm with Macro)	0.6m (10mm with Macro)	0.3m (10mm with Macro)
4:3 Aspect Ratio (8.8 × 6.6mm)	87.4 × 65.6mm at 76mm 4.0 × 3.0mm at 188mm 43.7 × 32.3mm at 152mm 2.0 × 1.5mm at 336mm	63.1 × 47.3mm at 77mm 3.8 × 2.9mm at 131mm 316 × 237mm at 154mm 19 × 15mm at 262mm	87.9 × 50.9mm at 4.5mm 5.9 × 4.4mm at 45mm 34.0 × 25.5mm at 9mm 3.0 × 2.2mm at 90mm
Object Dimensions at M.O.D. (with Extender)	95.0 × 53.4mm at 76mm 44 × 2.5mm at 188mm 47.5 × 26.7mm at 152mm 2.2 × 1.3mm at 336mm	69.5 × 38.5mm at 77mm 4.2 × 2.4mm at 131mm 34.3 × 19.3mm at 154mm 2.1 × 1.2mm at 262mm	74.1 × 41.7mm at 4.5mm 5.4 × 5.6mm at 45mm 37.0 × 20.8mm at 9mm 3.2 × 1.8mm at 90mm
Approx. Size (WxHxL)	164.7 × 121.1 × 218.6mm	159.3 × 106.6 × 197.8mm	168.2 × 110.6 × 237.7mm
Approx. Mass (IRSE/A/SE)	182kg (4.0lbs)/150kg (4.19lbs)	148kg (3.26lbs)/156kg (3.44lbs)	183kg (4.04lbs)/191kg (4.22lbs)
Information Display	✓	✓	✓
Filter Thread Size (Hood/Lens Barrel)	105mm P1/94mm P	— /82mm P0.75	127mm P0.75/ —

- ✓ standard — Not applicable
- * For control accessories, please refer to page 36 and 37.
- * Please refer to page 36 for explanation about IRSE models.
- * For K170x Digital by the Unit come equipped with Zoom, Iris and Focus Encoders.
- * For K102x/K115x/K105x/K106x Digital by the Units come equipped with Zoom and Iris Encoders only. A Focus Encoder is available as an option in these units.
- * The above specification for each lenses are based on the following image size formats (V2: 66mm, V3: 96mm)

	K120x8.2B IRSD	K120x8.2B KRSD	K103x6B KRSD
Zoom Ratio	2.0x	2.0x	13x
Image Size	2/3"	2/3"	2/3"
Built-in Extender	2.0x	—	—
Range of Focal Length (with Extender)	82-164mm 16.4-328mm	8.2-164mm	6-78mm
Maximum Relative Aperture (with Extender)	1:1.9 at 82-115.4mm 1:2.7 at 164mm 1:3.8 at 164-230.8mm 1:5.4 at 328mm	1:1.9 at 8.2-115.4mm 1:2.7 at 164mm	1:2.0 at 6-58mm 1:2.7 at 78mm
Angular Field of View (with Extender)	56.4° × 43.8° at 82mm 3.1° × 2.3° at 164mm 30.0° × 22.8° at 164mm 15° × 12° at 328mm	56.4° × 43.8° at 8.2mm 3.1° × 2.3° at 164mm	72.5° × 57.6° at 6mm 9.5° × 4.2° at 78mm
16:9 Aspect Ratio (9.6 × 5.4mm)	60.7° × 36.5° at 82mm 3.4° × 1.9° at 164mm 32.6° × 18.7° at 164mm 17° × 0.9° at 328mm	60.7° × 36.5° at 8.2mm 3.4° × 1.9° at 164mm	77.3° × 48.5° at 6mm 7.0° × 4.0° at 78mm
M.O.D. from Lens Front	0.9m (10mm with Macro)	0.9m (10mm with Macro)	0.4m (10mm with Macro)
4:3 Aspect Ratio (8.8 × 6.6mm)	90.1 × 67.6mm at 82mm 4.6 × 3.5mm at 164mm 45.1 × 33.8mm at 164mm 2.3 × 1.8mm at 328mm	90.1 × 67.6mm at 8.2mm 4.6 × 3.5mm at 164mm	57.8 × 50.9mm at 6mm 5.0 × 3.6mm at 78mm
Object Dimensions at M.O.D. (with Extender)	98.2 × 55.2mm at 82mm 50 × 2.8mm at 164mm 49.1 × 27.6mm at 164mm 2.5 × 1.4mm at 328mm	98.2 × 55.2mm at 8.2mm 50 × 2.8mm at 164mm	74.3 × 41.8mm at 6mm 5.4 × 3.0mm at 78mm
Approx. Size (WxHxL)	163.3 × 103.0 × 208.0mm	163.3 × 103.0 × 181.8mm	165.4 × 105.1 × 211.7mm
Approx. Mass (IRSE/A/SE)	142kg (3.13lbs)/ —	125kg (2.78lbs)	159kg (3.51lbs)
Information Display	— /82mm P0.75	— /82mm P0.75	105mm P1/ —

HDgc SERIES LENSES: HDTV

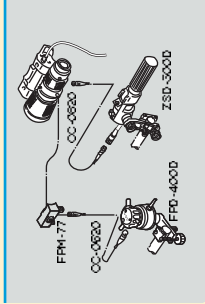


	HDgc 1/2"	HDgc 1/3"
Zoom Ratio	13x	20x
Image Size	1/2"	1/3"
Built-in Extender	—	—
Range of Focal Length (with Extender)	4.5-59mm	5-100mm
Maximum Relative Aperture (with Extender)	1:1.5 at 4.5-44mm 1:2.0 at 59mm	1:1.4 at 5.0-90.3mm 1:1.55 at 100mm
Angular Field of View (with Extender)	70.8° × 56.1° at 4.5mm 62° × 4.7° at 59mm	51.3° × 39.6° at 5mm 2.8° × 2.1° at 100mm
Object Dimensions at M.O.D. (with Extender)	75.7° × 46.9° at 4.5mm 6.8° × 3.8° at 59mm	55.2° × 32.8° at 5mm 3.0° × 1.7° at 100mm
M.O.D. from Lens Front	0.4m (10mm with Macro)	0.9m (10mm with Macro)
Object Dimensions at M.O.D. (with Extender)	66.7 × 50.0cm at 4.5mm 4.9 × 3.7cm at 59mm	80.9 × 60.7cm at 5mm 4.2 × 3.2cm at 100mm
Approx. Size (WxHxL)	73.4 × 41.3mm at 4.5mm 54 × 30cm at 59mm	88.1 × 49.6cm at 5.0mm 4.5 × 2.5cm at 100mm
Approx. Mass (RSE/LASE)	165.4 × 105.1 × 215.3mm 159kg (3.5lbs)	163.3 × 103 × 171.2mm 154kg (2.82lbs)
Information Display	—	—
Filter Thread Size (Hood/Lens Barrel)	105mm P1/—	— /82mm P0.75

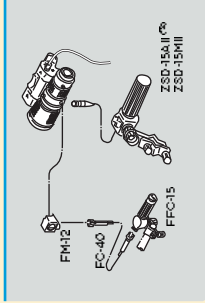
✓ standard — Not applicable
* For control accessories, please refer to page 36-37
* M.O.D. = Minimum Object Distance
* The above specification for each lens are based on the following image size formats: 2/3" x 20mm.

Control Accessories for Pro-video ENG Lenses¹ Lenses RECOMMENDED KIT CONFIGURATION (FOR ALL PRO-VIDEO ENG LENSES)

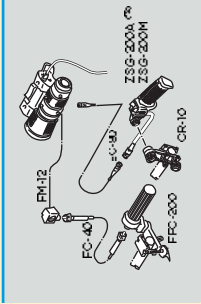
FULL-SERVO SET



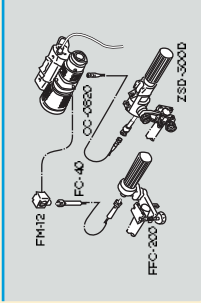
MS-15 SEMI-SERVO KIT



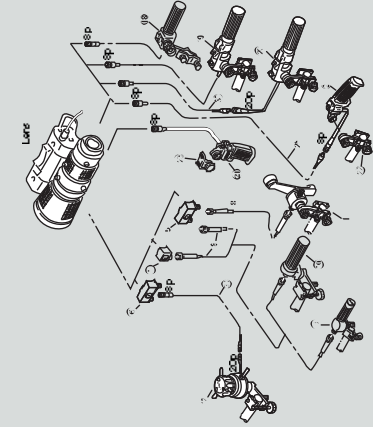
MS-22 SEMI-SERVO KIT



MS-21D SEMI-SERVO KIT



Applicable Component Detail



#	Unit	Description	Code
①	FM12	Flex Focus Module	1834.A01E
②	FM70	Flex Dual Module	00027071
③	FMH-1/	Focus Servo Module	1834.A02D AF
④	FC40	Flex Cable	1834.A01D
⑤	FC15	Flex Focus Controller	1834.A024
⑥	FC200	Flex Focus Controller	1834.A014
⑦	FC2100	Flex Focus Controller	1834.A028
⑧	FFC4000	Focus Positioning Demand	1834.A024 AF
⑨	ZSD-15A 1/4 II	Zoom Demands (A)	1834.A070
⑩	(A or H type, depends on applicable camera)		M
⑪	ZSD-300 A/H	Zoom Demands (A)	1834.A086
⑫	(A or H type, depends on applicable camera)		M
⑬	ZSD-100 D	Zoom Demands	1834.A023
⑭	ZSD-200 A/H	Zoom Servo Outputs	1834.A088
⑮	(A or H type, depends on applicable camera)		M
⑯	CR-10	Strip Adapter	1834.A007
⑰	GA70	Zoom Extension Cable (8P)	0018731
⑱	EC-90	Zoom Extension Cable (8P)	1834.A009
⑲	CC-0600	Conn. Cable (8P/4-20P D)	1834.A026C

(*) ZSD-15A, ZSD-300A, M and ZSD-200A are not available from Canon stock.

Applicable Kit Detail

Kit Name	Zoom		Focus	
	System	Component	System	Component
Zoom Servo Only	—	ZSD-15 ①	—	—
	—	ZR-1 ②	—	—
	—	ZR-2(A) ③ ④ ⑤	—	—
Semi-Servo	MS-15	ZSD-15 ①	FRC-15 ① ② ③	—
	MS-21	ZR-1 ④	FR-2 ① ② ③	—
	MS-21D	ZR-1D ④ ⑤	FR-2 ① ② ③	—
Full Manual	MS-22	ZR-2(A) ② ③ ④	FR-2 ① ② ③	—
	FZC-1	FZC-1 ⑤ ⑥ ⑦	FR-2(w/c ①) ⑤ ⑥	—

* ① & ② are not applicable to YH4x7.3 and YH5x7.
** In USA, ③ & ④ are available only as MS-15 kit configuration and not as individual product.

Recommended kit configuration for the listed lenses.
(See previous page)

CINEMA EOS LENSES

Cinema EOS Lenses

Canon offers a full line up of zoom and prime lenses which are designed and engineered to meet or exceed the exacting standards of cinematographers, supporting 4K resolution and beyond.

Zoom lenses are available in both PL or EF mount and are compatible with Super 35mm sensors, while EF Cine Primes (EF mount only) and Sunfire Primes (interchangeable PL mount) can be used with both 35mm Full Frame and Super 35mm sensor cameras.

Refer to the following pages for more details.



See page 50



DIGITAL CINEMA LENSES



Canon's range of Cinema lenses is exclusively designed to stimulate creative expression and offer outstanding optical performance in movie, video and broadcast production. Reliable and robust, they include a host of advanced features, ensuring unsurpassed image quality and exceptional usability in every shooting situation.

MAIN FEATURES

Superb 4K optical performance for exceptional results

The Digital Cinema lens series with 4K quality, offers unrivalled optical performance in professional shooting environments. Large aspherical lens elements ensure sharp, consistent images in virtually every shooting situation. An innovative glass construction counteracts barrel expansion and contraction to avoid temperature-induced marking discrepancies.

Uncompromising operability for working professionals

Industry standard manual control rings are engineered to maintain the proper amount of resistance with consistent operating torque. Focus, zoom, and iris markings are provided on angled surfaces on both sides of the barrel, making it easy to read settings from behind or either side of the camera.

Versatile range of focal lengths

Together these lenses support versatile shooting at many focal lengths and cover the range most commonly used in cinema shooting. These include wide angle, telephoto zooms and prime lenses.



HIGHLIGHTS

Specialty designed 'cinematic look'

A unique optical design offers a nuanced look at the lens' wider aperture settings, subtly modifying textural renderings for pleasing bokeh with superb expressiveness.

Fine focusing with filter and gear consistency

With carefully developed focus resistance, delicate focus adjustments can be made over a 300-degree rotation angle. All lenses accept 105mm screw-on filters, have a 114mm diameter lens front and have consistently positioned gears for ease of use.

Sumire Prime



Personalise your craft with a range of Full-Frame cinema prime lenses named Sumire, with a specially designed 'cinematic look' and interchangeable PL mount.

A range of seven fast aperture Full-Frame prime lenses designed for cinematographers seeking beautifully delicate detail for a more creative, personal and expressive feel.

Designed to offer delicate and subtle rendering of a subject, these seven prime lenses offer fast apertures and precise manual control with a crafted focus bokeh aimed at careful creative expression.

DIGITAL CINEMA LENSES

TOP-END ZOOM LENS SERIES



4K



4K

Cine Zoom Lens	CN-E14.5-60mm T2.8 L S/SP				CN-E30-300mm T2.95-3.7 L S/SP			
Mount	EF		PL		EF		PL	
Focal Length	14.5-60mm							
Zoom Ratio	4.1x							
Max. Relative Aperture (T-Number)	12.8 at 14.5-60mm							
Iris Blades	11							
Angle of View	84.2° × 50.9° at 14.5mm 24.6° × 13.1° at 60mm							
M.O.D. (from image sensor)	0.70m/24"							
Object Dimensions at M.O.D.	712 × 37.5mm at 14.5mm 164 × 86mm at 60mm							
Front Diameter	ø136mm							
Approx. Size (W×H×L)	136.0 × 133.1 × 326.0mm 5.35 × 5.24 × 12.8in.							
Approx. Mass	4.5kg (9.9lbs)							
Pitch of Follow Focus Gear	0.8							

COMPACT CINE SERVO SERIES



4K



4K

Cine Servo Lens	CN-E19-80mm T4.4 L IS KAS S		CN-E70-200mm T4.4 L IS KAS S	
Mount	EF		EF	
Focal Length	19-80mm		70-200mm (up to 400mm with EF 2x extender)*	
Zoom Ratio	4.4x		2.85x	
Max. Relative Aperture (T-Number) (with Extender)	(T No.) 14.4 at 18.80mm		(T No.) 14.4 at 70-200mm	
Iris Blades	9		9	
Angle of View	68.7° × 41.9° at 18mm 17.5° × 9.9° at 80mm		19.9° × 11.3° at 70mm 7.0° × 4.0° at 200mm	
M.O.D. (from image sensor)	0.5m		12m	
Object Dimensions at M.O.D.	434 × 243mm [at 18mm] 9.5 × 5.6m [at 80mm]		313 × 175mm [at 70mm] 115 × 64cm [at 200mm]	
Front Diameter	ø77mm		ø77mm	
Approx. Size (W × H × L)	934 × 1072 × 182.3mm		934 × 1072 × 182.3mm	
Approx. Mass	12kg (2.64lbs) (incl. servo unit)		125kg (2.75lbs) (incl. servo unit)	
Pitch of Follow Focus Gear	0.8		0.8	

*This lens is compatible with EF 1.4x and 2x extenders

COMPACT ZOOM LENS SERIES



4K



4K

Compact Zoom Lens	CN-E15.5-47mm T2.8 L S/SP		CN-E30-105mm T2.8 L S/SP	
Mount	EF		PL	
Focal Length	15.5-47mm			
Zoom Ratio	3x			
Max. Relative Aperture (T-Number)	12.8 at 15.5-47mm			
Iris Blades	11			
Angle of View	80.4° × 48.0° at 15.5mm 31.1° × 16.7° at 47mm			
M.O.D. (from image sensor)	0.5m/16"			
Object Dimensions at M.O.D.	476 × 25.1mm at 15.5mm 154 × 8.1mm at 47mm			
Front Diameter	ø114mm			
Approx. Size (W×H×L)	114.0 × 125.0 × 222.0mm 4.49 × 4.92 × 8.74in.			
Approx. Mass	2.2kg (4.85lbs)			
Pitch of Follow Focus Gear	0.8			

CINE SERVO SERIES



4K



4K

Cine Servo Lens	CN-X17 1A S S EI / P1		CN-X20 S0 1A S EI / P1	
Mount	EF / PL		EF / PL	
Focal Length	17mm-20mm		50-1000mm (7.5-1500mm with 1.5x Extender)	
Zoom Ratio	7x		20x	
Max. Relative Aperture (T-Number) (with Extender)	12.95 at 17.91mm / 13.9 at 20mm		15.0 at 50-560mm / 15.9 at 1000mm / 17.5 at 7.5-840mm / 113.35 at 1500mm	
Iris Blades	11		11	
Angle of View	75.2° × 44.2° at 17mm 12.5° × 6.6° at 20mm		29.4° × 15.7° at 50mm 1.5° × 0.8° at 1000mm 19.8° × 10.5° at 75mm 1.0° × 0.5° at 1500mm	
M.O.D. (from image sensor)	0.85m/2.8"		154m from lens front with macro	
Object Dimensions at M.O.D.	32.8 × 48.5 at 17mm 12.7 × 6.7 at 20mm		14.3 × 78.1mm at 50mm 14.3 × 12.5 × 1.5mm at 1000mm 68.9 × 170.6 × 10.3mm (EF mount) 5.2 × 2.7mm at 1500mm	
Front Diameter	ø114mm		ø136mm	
Approx. Size (W × H × L)	174.2 × 125.0 × 262.9mm / 14.2 × 12.5 × 20.9mm		175 × 170.6 × 413.2mm / 68.9 × 170.6 × 16.3mm (EF mount) 68.9 × 67.1 × 159.5 in (PL Mount)	
Approx. Mass	2.9kg (6.39lbs)		6.6kg (14.55lbs)	
Pitch of Follow Focus Gear	0.8		0.5 or 0.8	

EF CINE PRIME LENS SERIES

Cine Prime Lens	 		 		 		 		
	Mount	EF		EF		EF		EF	
	Focal Length	14mm		20mm		24mm		35mm	
	Zoom Ratio	—		—		—		—	
	Max. Relative Aperture (F-Number)	T 3.1		T 1.5		T 1.5		T 1.5	
	Iris Blades	11		11		11		11	
	Angle of View	104.3° x 81.2°		84.0° x 61.9°		73.7° x 55.1°		54.4° x 37.8°	
	M.O.D. (from image sensor)	82.8" x 52.9"		63.2" x 38.1"		54.3" x 32.1"		38.7" x 22.3"	
	Object Dimensions at M.O.D.	25.2 x 16.8 cm		33.8 x 22.5 cm		28.8 x 19.2cm		20.2 x 13.5 cm	
	Front Diameter	17.2 x 3.7 cm		23.1 x 13.0cm		19.7 x 11.0cm		15.8 x 7.7cm	
Approx. Size (W x H x L)	ø14mm		ø14mm		ø14mm		ø14mm		
Approx. Mass	118.4 x 118.4 x 94.0mm		118.4 x 118.4 x 101.5 mm		118.4 x 118.4 x 101.5mm		118.4 x 118.4 x 101.5mm		
Pitch of Follow Focus Gear	1.3kg (2.85lbs)		1.3kg (2.85lbs)		1.3kg (2.85lbs)		1.1kg (2.43lbs)		
	ø8		ø8		ø8		ø8		

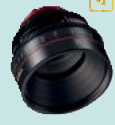
* M.O.D. = Minimum Object Distance

SUMIRE PRIME LENS SERIES

Cine Prime Lens								
	CN-E14mm T1.5 FF X		CN-E20mm T1.5 FF X		CN-E24mm T1.5 FF X		CN-E35mm T1.5 FF X	
	Interchangeable PL**		Interchangeable PL**		Interchangeable PL**		Interchangeable PL**	
	14mm		20mm		24mm		35mm	
	—		—		—		—	
	T 3.1		T 1.5		T 1.5		T 1.5	
	11		11		11		11	
	151.36.0 x 24.0mm 1761.24.6 x 13.6mm		84.0° x 61.9° 63.2° x 38.1° 0.3m/12"		73.7° x 53.1° 54.3° x 32.1° 0.3m/12"		54.4° x 37.8° 38.7° x 22.3° 0.3m/12"	
	151.36.0 x 24.0mm 1761.24.6 x 13.6mm		33.8 x 22.5 cm 23.1 x 13.0 cm		28.8 x 19.2 cm 19.7 x 11.0 cm		20.2 x 13.5 cm 13.8 x 7.7 cm	
	Object Dimensions at M.O.D.		25.2 x 16.8 cm 17.2 x 9.7 cm		19.8 x 11.0 cm		13.8 x 7.7 cm	
Front Diameter		ø14mm		ø14mm		ø14mm		
Approx. Size (W x H x L)		118.4 x 118.4 x 86.0 mm		118.4 x 118.4 x 93.5 mm		118.4 x 118.4 x 93.5 mm		
Approx. Mass		1.3kg (2.85lbs)		1.3kg (2.85lbs)		11kg (24.3lbs)		
Pitch of Follow Focus Gear		0.8		0.8		0.8		

* M.O.D. = Minimum Object Distance

** PL mount is changeable to EF and back again via an authorized service facility

 		 		 	
EF		EF		EF	
50mm		85mm		135mm	
—		—		—	
T 1.3		T 1.3		T 2.2	
11		11		11	
38.6" x 27.0"		23.9" x 16.1"		15.2" x 10.2"	
276" x 15.7"		16.5" x 9.3"		10.4" x 5.9"	
0.45m/18"		0.95m/32"		1.0m/33"	
25.0 x 16.7 cm		34.4 x 22.9cm		21.1 x 14.1cm	
17.1 x 9.6 cm		23.5 x 13.2 cm		14.4 x 8.1cm	
ø114mm		ø114mm		ø114mm	
118.4 x 118.4 x 101.5mm		118.4 x 118.4 x 101.5mm		118.4 x 118.4 x 115.6mm	
1.1kg (2.43lbs)		1.3kg (2.87lbs)		1.4kg (3.08lbs)	
0.8		0.8		0.8	

					
Interchangeable PL**		Interchangeable PL**		Interchangeable PL**	
50mm		85mm		135mm	
—		—		—	
T 1.3		T 1.3		T 2.2	
11		11		11	
38.6" x 27.0"		23.9" x 16.1"		15.2" x 10.2"	
276" x 15.7"		16.5" x 9.3"		10.4" x 5.9"	
0.45m/18"		0.95m/32"		1.0 m/33"	
25.0 x 16.7 cm		34.4 x 22.9 cm		21.1 x 14.1 cm	
17.1 x 9.6 cm		23.5 x 13.2 cm		14.4 x 8.1 cm	
ø114mm		ø114mm		ø114mm	
118.4 x 118.4 x 93.5 mm		118.4 x 118.4 x 93.5 mm		118.4 x 118.4 x 102.6mm	
1.1kg (2.43lbs)		1.3kg (2.87lbs)		1.4kg (3.08lbs)	
0.8		0.8		0.8	

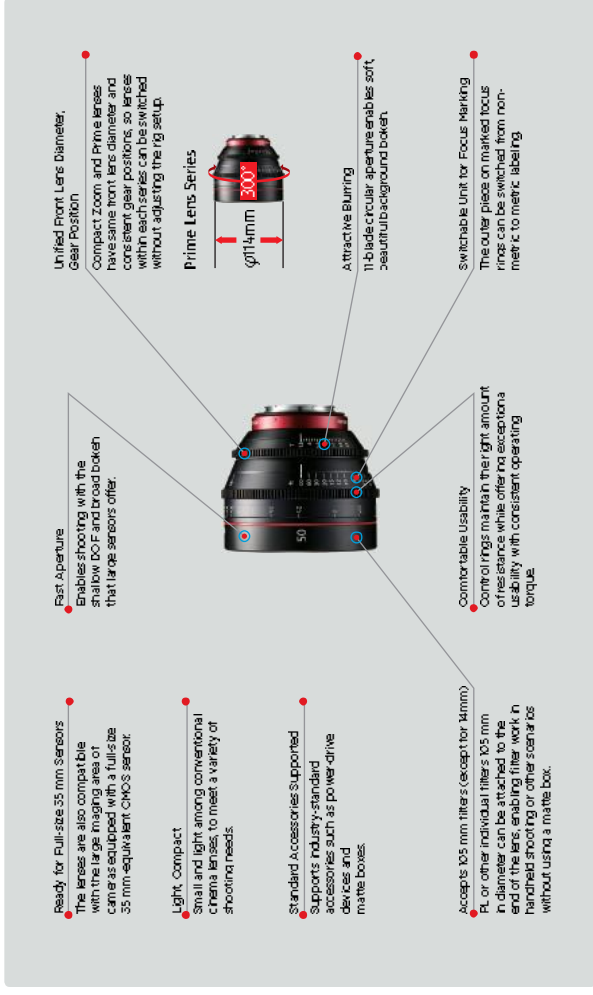
CN7X17 KAS S E1 / P1: FEATURES FOR BROADCAST USE



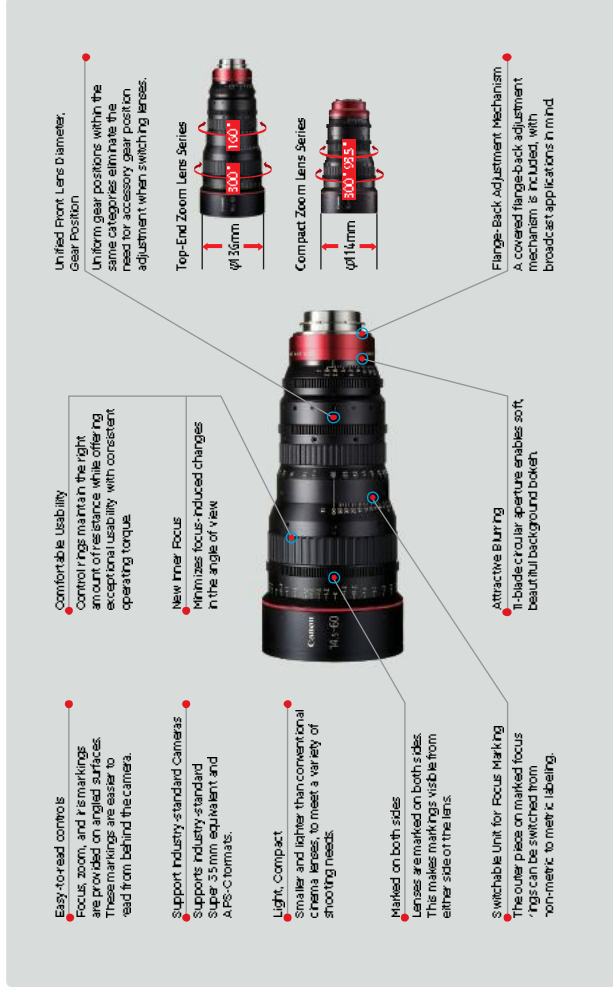
CN7X17 KAS S E1 / P1: FEATURES FOR CINEMA USE



PRIME LENSES: HIGHLIGHTS

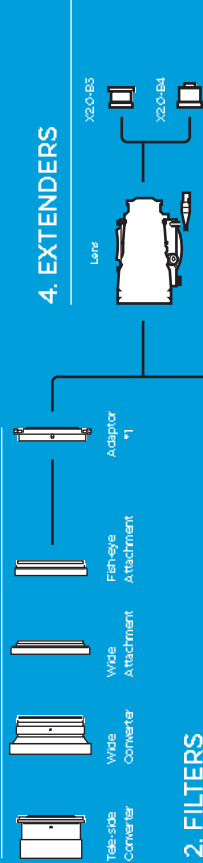


TOP-END/COMPACT ZOOM LENSES: HIGHLIGHTS



SYSTEM

1. CONVERTERS/ATTACHMENTS



2. FILTERS

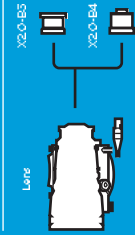
JV	SV	SW	IL	NO
CLEAR	CFS	SNV	SPT	

3. CLOSE-UP LENSES



CL-UP

4. EXTENDERS



*1 Most Canon Converters and Attachments use a separate adaptor ring as shown in the table on page 53, which allows compatibility between several lens models. The W80Y-E5 is special Wide Converter and is exclusive to certain lens models as shown in the table on page 53.

*2 Some lens models allow for the filter to be attached to the threaded lens barrel. In other models, the filter is attached to the threaded hood unit. For lens model filter size compatibility, please refer to page 55.

1. CONVERTERS/ATTACHMENTS

TELE-SIDE CONVERTER

- Focal length is shifted to the telephoto side by a factor of 1.5x.
- F.No. of the original lens is not affected.
- Only the telephoto side of the lens can be used, the picture corners are clipped at wide angle.
- The minimum object distance becomes 2.25 times that of the original lens.

Model	Filter Size	Filter Size
HJ25x23B	19mm	18mm
KJ70x27B	135mm	60mm
XJ20x15B	2.00mm	18mm

WIDE ATTACHMENT

- The zoom lens becomes a wider fixed focal length lens with the wide attachment.
- The focal length is widened by a factor of 0.75x that of the original lens.
- Focus is adjusted by use of the macro lever.

Model	Filter Size	Filter Size
HJ25x23B	76x85mm	5.7mm
KJ70x27B	77x13mm	5.9mm
XJ20x15B	8.5x10mm	6.4mm

WIDE CONVERTER

- Focal length becomes wider by a factor of 0.6x that of the original lens with the W50Y-E5.
- F.No. of the original lens is not affected.
- The minimum object distance becomes 0.64 times with the W50Y-E5.

Model	Filter Size	Filter Size
HJ25x23B	76x85mm	6.3x8mm
KJ70x27B	77x13mm	6.2x10x8mm
XJ20x15B	8.5x10mm	6.8x26mm

FISH-EYE ATTACHMENT

- The zoom lens becomes a fish-eye fixed focal length lens (distorted image) with the fish-eye attachment.
- The focal length is widened by a factor of 0.6x that of the original lens.
- Focus is adjusted by use of the macro lever.

Model	Filter Size	Filter Size
HJ25x23B	76x85mm	4.8mm
KJ70x27B	77x13mm	4.6mm
XJ20x15B	8.5x10mm	5.1mm

APPLICATIONS OF SDTV AND HDTV ADAPTOR TYPE CONVERTERS / ATTACHMENTS

CONVERTER / ATTACHMENT TYPE	MODEL NAME	CODE	APPLICABLE LENSES									
			Front Lens Diameter		Shift Ratio to Telephoto Side		Electronic Conversion					
TELE-SIDE CONVERTER	T5 - IT	1825-A005										
	T15HG - II	002-57399										
	Adaptor-E5 III	1824-A002										
	Adaptor-E5 II	1824-A004										
WIDE CONVERTER	W80Y-E5	1825-A009										
	W80 - B - III	1825-A006										
	W-50HG	1825-A004										
	Adaptor-E5 III	1824-A002										
WIDE ATTACHMENT	W75 - II	1825-A008										
	W75HG	1825-A005										
	Adaptor-E5 II	1824-A004										
	FEA-B - II	1825-A011										
FISH-EYE ATTACHMENT	Adaptor-E5 III	1824-A002										
	Adaptor-E5 II	1824-A004										
	Adaptor-E5 III	1824-A002										
	Adaptor-E5 II	1824-A004										

*1 The HQ quality accessories offer higher optical performance.

*2 The drawing is an image of the W50Y-E5.

When purchasing, please specify model name of both Body and Adaptor. It is possible to use Body and Adaptor in different combinations. But it is impossible to use in combinations not shown in above table.

MOUNT CONVERTERS FOR DIFFERENT IMAGE FORMAT SIZE CAMERAS

Canon offers a variety of Mount Converters to be used between a lens and a camera of different image format sizes. Each converter will extend the effective Angular Field of View of the associated lens according to the Shift Ratio listed below.

Converter	Lens ²	Image Size Conversion		Shift Ratio to Telephoto Side	Electronic Conversion
		Camera	Slide		
LD-32BMT	2 1/2" B4 Mount	1/2" Sony 4	approx. 1.4x	-	-
LCV-40B	2 1/2" B4 Mount	1/2" Standard Mount ⁴	approx. 1.4x	-	-
LCV-48T	2 1/2" B4 Mount	1/2" Standard Mount	approx. 1.8x	-	-
LCV-48E	2 1/2" B4 Mount	SONY PMW-E3	approx. 1.4x	-	-
LCV-50E	1 1/2" S	SONY PMW-E3	-	-	-

¹ The converters are to be used with lenses weighing less than 2.0kg (4.4lb).

² The drawing is an image of the W50Y-E5.

³ 1/2" Camera of standard type mount (Panasonic, JVC, Grass Valley).

⁴ Only applicable to K100w/K160w/K182x. The other 1/2" mount lenses are not available.

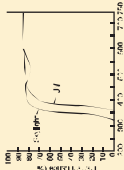
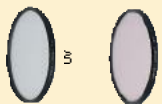


LCV-48E

LCV-50E

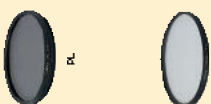
2. FILTERS

UV/CLEAR/SKY LIGHT FILTER



- A UV (ultraviolet) filter is nearly colourless. It absorbs short wavelength ultraviolet rays that the naked eye cannot see.
- A skylight filter has a light bluish colour. Used when shooting on clear days, it removes ultraviolet, and prevents infrared light from giving a bluish-green cast to shaded foliage etc.
- These filters are also advisable to protect the front lens surface.

POLARIZED LIGHT FILTER



- A polarizer is used to intercept light reflected from the surface of water or glass.
 - A polarizer is screwed into the threads of the hood, turned, and stopped in the position in which the reflected light is removed.
- SOFTON FILTER**
- A soft-focus filter has a matte-like surface that imparts a soft, misty effect to the entire picture.
 - Soft-focus filters are frequently used for lyric scenery shots.

CROSS/SNOW/CROSS/
SUNNY CROSS FILTER



- A cross filter creates a cross or star of light by scattering rays from a strong light source in the subject in a radial pattern. The brighter and more point like the subject is, the better the effect is. Cross filters should not be used to enhance night scenery or stage show broadcasts.

TYPES OF CROSS FILTER

- Cross Filter
Scatters light in a four-pointed cross.
- Snow Cross Filter
Scatters light in a six-pointed star.
- Sunny Cross Filter
Scatters light in an eight-pointed star.

ND4/ND8 FILTER



- An ND (neutral density) filter uniformly reduces light of all wavelengths which enters a lens.
- It is used when the subject is too bright for the light to be adjusted by the diaphragm alone.
- An ND filter is also effective to create a shallow depth of field.

ND filter type	Transmittance	Density
ND4	25%	0.6
ND8	12.5	0.9

APPLICABLE LENSES

FILTER TYPE	MODEL NAME	CODE	HOOD UNIT THREAD SIZE										
			LENS BARREL THREAD SIZE	127mm P.O.75	-	127mm P.O.75	-	105mm P.I	105mm P.I	82mm P.O.75	127mm P.O.75	127mm H	
UV	UV/127P.O.75	1923A-083	-	•	•	•	•	•	•	•	•	•	•
	UV/105P.I	1923A-022	-	•	•	•	•	•	•	•	•	•	•
	UV/84P.I	1923A-021	-	•	•	•	•	•	•	•	•	•	•
	UV/82P.O.75	1923A-030	-	•	•	•	•	•	•	•	•	•	•
CLEAR	CL/127	1923A-083	-	•	•	•	•	•	•	•	•	•	•
	CL/112	1923A-103	-	•	•	•	•	•	•	•	•	•	•
SKY LIGHT	CL/127H	01171881	-	•	•	•	•	•	•	•	•	•	•
	SKY/105P.I	1923A-023	-	•	•	•	•	•	•	•	•	•	•
	SKY/82P.O.75	1923A-031	-	•	•	•	•	•	•	•	•	•	•
	SNW/127P.O.75	1923A-087	-	•	•	•	•	•	•	•	•	•	•
SNOW CRO.SS	SNW/105P.I	1923A-047	-	•	•	•	•	•	•	•	•	•	•
	SNW/82P.O.75	1923A-034	-	•	•	•	•	•	•	•	•	•	•
SUNNY CRO.SS	SNV/127P.O.75	1923A-088	-	•	•	•	•	•	•	•	•	•	•
	SNV/105P.I	1923A-025	-	•	•	•	•	•	•	•	•	•	•
POLARIZED LIGHT	SNV/82P.O.75	1923A-033	-	•	•	•	•	•	•	•	•	•	•
	PL/127P.O.75	1923A-08C	-	•	•	•	•	•	•	•	•	•	•
	PL/105P.I	1923A-026	-	•	•	•	•	•	•	•	•	•	•
	PL/82P.O.75	1923A-036	-	•	•	•	•	•	•	•	•	•	•
SOFTON	SFT/127P.O.75	1923A-088	-	•	•	•	•	•	•	•	•	•	•
	SFT/105P.I	1923A-027	-	•	•	•	•	•	•	•	•	•	•
ND	SFT/82P.O.75	1923A-037	-	•	•	•	•	•	•	•	•	•	•
	ND6/127P.O.75	1923A-086	-	•	•	•	•	•	•	•	•	•	•
	ND4/82P.O.75	1923A-035	-	•	•	•	•	•	•	•	•	•	•
	ND6/105P.I	1923A-028	-	•	•	•	•	•	•	•	•	•	•
	ND6/82P.O.75	1923A-036	-	•	•	•	•	•	•	•	•	•	•

3. CLOSE-UP LENSES



- A close-up lens is used to shorten the M.O.D. of the master lens for close-up shooting.
- The maximum object distance becomes the focal length of the close-up lens.
- The minimum object distance is calculated by the following formula:
 $f_c = \text{focal length of the close-up lens}$
 $S = \text{M.O.D. of the master lens}$

Model	Code	Applicable Lenses
88CL-U1900H	1923-A041	Y80x4.5B, KJ78x7.7B, KJ20x6.2B, KJ18x5.7, KJ20x6.4, KJ78x4.3B, KJ20x.5
88CL-U1920H	1923-A042	Y80x4.5B, KJ78x7.7B, KJ20x6.2B, KJ18x5.7, KJ20x6.4, KJ78x4.3B, KJ20x.5
105CL-U1900H	1923-A043	KJ28x7.6B*
105CL-U1900HD	1923-A036	KJ28x7.6B, KJ18x5.7, KJ28x7.6B*

*The HD quality accessories offer higher optical performance

88CL-U1900H				88CL-U1920H			
KJ78x7.7B (16:9)	Tele end 13mm	Wide end 7.7mm	Tele end 13mm	Wide end 7.7mm	Tele end 13mm	Wide end 7.7mm	Wide end 7.7mm
Focusing Scale (mm)	∞	0.6	∞	0.6	∞	0.6	∞
Object Distance (mm)	800	2.42	800	2.42	1300	411	1300
Object Divergence (mm)	53 x 33	24 x 14	89.2 x 56	23 x 12	56 x 33	23 x 16	163 x 93
Focusing Scale (mm)	∞	0.9	∞	0.9	∞	0.9	∞
Object Distance (mm)	800	420	800	420	1300	570	1300
Object Divergence (mm)	41 x 21	20 x 15	86 x 63	26 x 20	641 x 1005	434 x 371	641 x 1005

4. EXTENDERS



- An extender X2.0-B4 is mounted between the camera and the lens to enlarge the image of the subject.
- It doubles the focal length of the master lens, making it into a more telephoto lens.
- The 2.0X Extender also doubles the F-number.

Master lens		With Extender	
Y80x4.5B	F-number	8.5-170mm	17-340mm
		1:9-2.7	3.6-5.4

*Only for 2.0 lenses

Model	Code	Applicable Lenses
X2.0-B5	1923-A041	Applicable to all B5 type mount Canon 2.0" lenses
X2.0-B4	1923-A042	Applicable to all B4 type mount Canon 2.0" lenses

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