



2018 VOL. 1 | BROADCAST & CINEMA LENS CATALOG

# See Brilliance, Color and Light Through CANON'S LENS TECHNOLOGY



**60**  
YEARS

**INNOVATION**  
In TV Optics Since 1958  
Toward 100 years anniversary



The size and weight of all lenses within this brochure may vary according to the applicable camera models. Specifications subject to change without notice.

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YEARS

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In TV Optics Since 1958  
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## CANON BROADCAST ZOOM LENSES

# Celebrating Canon's Storied History

### Development of Broadcast Zoom Lenses

In 1958, Canon launched its broadcast lens business by introducing the innovative high zoom ratio 6.7 IF-1 lens. Ever since, Canon has continued to listen to the demands of broadcasters and cinematographers around the world by developing lenses based on industry trends.

### Canon's Emmy®-Winning Lens Technology

Canon's highly regarded lens technology is a recipient of the Technology and Engineering Emmy® Award from The National Academy of Television Arts and Sciences awarded Canon an Technology & Engineering EMMY® Award 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."* In addition, we received an EMMY® in 2017 for "Large Format 4K Zoom Lenses".

2017 EMMY® AWARD WINNER

**LARGE FORMAT  
4K ZOOM LENSES**





# CANON'S LENS TECHNOLOGY: WELCOME TO THE 4K/UHD ERA



Canon has been an innovator in the video industry for more than half a century. Today, Canon's innovation continues with the development of 4K/UHD lens technology. State-of-the-art optical and mechanical technology was born from tireless research, materials engineering, and production technology. Rigorous evaluation and tests developed innovative products with high-end optical design, operability and reliability.

While approaching the 60th anniversary of servicing the broadcast industry, Canon's advanced lens technology continues to deliver beautiful high-end imaging. Today we offer an exciting range of innovative high-end imaging products that stimulate creativity and deliver superb results, as we continue our pioneering pursuit of excellence into the 21st century.



UHDxs CJ45ex9.7B



UHDxs CJ45ex13.6B



UHDxs CJ12ex4.3B



UHDxs CJ20ex7.8B



UHD6c CJ14ex4.3B



UHD6c CJ18ex7.6B



UHD6c CJ24ex7.5B



CN-E14.5-60mm T2.6 L S  
CN-E14.5-60mm T2.6 L SP



CN-E30-300mm T2.95-3.7 L S  
CN-E30-300mm T2.95-3.7 L SP



CN-E15.5-47mm T2.8 L S  
CN-E15.5-47mm T2.8 L SP



CN-E30-105mm T2.8 L S  
CN-E30-105mm T2.8 L SP



UHDxs UHD-DIGISUPER 27



UHDxs UHD-DIGISUPER 86



UHDxs UHD-DIGISUPER 66



UHDxs UHD-DIGISUPER 90



COMPACT-SERVO  
18-80mm T4.4 EF



COMPACT-SERVO  
70-200mm T4.4 EF



CINE-SERVO 17-120mm T2.95-3.9 EF  
CINE-SERVO 17-120mm T2.95-3.9 PL



CINE-SERVO 50-1000mm T5.0-8.9 EF  
CINE-SERVO 50-1000mm T5.0-8.9 PL



CN-E14mm T3.1 L F



CN-E20mm T1.5 L F



CN-E24mm T1.5 L F



CN-E35mm T1.5 L F



CN-E50mm T1.3 L F



CN-E85mm T1.3 L F



CN-E135mm T2.2

# Broadcast Zoom Lens Lineup



Studio & Field Lenses



ENG/EFP Lenses



Pro-Video & Remote-Controlled Lenses

## Broadcast Studio and Field Lenses

P. 14 - 15

4K UHD 2/3"

UHD-DIGISUPER 86  
4K Premium  
UHD XS



UHD-DIGISUPER 90  
4K  
UHD XS



UHD-DIGISUPER 66  
4K  
UHD XS



HD 2/3"

UHD-DIGISUPER 27  
4K Premium  
UHD XS



DIGISUPER 100AF  
HD XS Auto Focus



DIGISUPER 100  
HD XS



DIGISUPER 95 TELE  
HD XS



DIGISUPER 95  
HD XS



DIGISUPER 86AF  
HD XS Auto Focus



DIGISUPER 80  
HD XS



DIGISUPER 76  
HD XS



DIGISUPER 27AF  
HD XS Auto Focus



DIGISUPER 27  
HD XS



DIGISUPER 22 XS  
HD XS



## Broadcast ENG/EFP Lenses

P. 18 - 19

4K UHD 2/3"

CJ45ex13.6B  
4K UHD XS



CJ45ex9.7B  
4K UHD XS



CJ20ex7.8B  
4K UHD XS



CJ12ex4.3B  
4K UHD XS



HD 2/3"

CJ24ex7.5  
4K UHD GC



CJ18ex7.6  
4K UHD GC



CJ14ex4.3B  
4K UHD GC



HJ40ex14B  
HD XS



HJ40ex10B  
HD XS



HJ15ex8.5B  
HD XS



HJ18ex28B  
HD XS



HJ21ex7.5B  
HD XS



HJ24ex7.5B  
HD XS



HJ18ex7.6B  
HD XS



HJ17ex6.2B  
HD XS



HJ14ex4.3B  
HD XS



KJ22ex7.6B  
HD GC



KJ17ex7.7B  
HD GC



KJ10ex4.5B  
HD GC



HD 1/3"

KT17ex4.3B  
HD GC



## Pro-Video Lenses

P. 20

HD 2/3"

KJ20x8.2B (IRSD)  
HD GC



KJ20x8.2B (KRSD)  
HD GC



KJ13x6B  
HD GC



HD 1/2"

KH20x6.4  
HD GC



KH13x4.5  
HD GC



HD 1/3"

KT20x5B  
HD GC



## Remote Controlled Lenses

P. 21

HD 2/3"

HJ18ex28B (ITS-ME)



HJ24ex7.5B (ITS-ME)



HJ18ex7.6B (ITS-ME)



HJ14ex4.3B (ITS-ME)



KJ17ex7.7B (ITS-ME)



KJ22ex7.6B (ITS-ME)



KJ20x8.2B (KTS)



KH20x6.4 (KTS)  
HD 1/2"



KT20x5B (KTS)  
HD 1/3"





# CANON BROADCAST LENSES

Focal Length Table

Broadcast, Studio and Field Lenses (4K 2/3", HD 2/3")																					
Angle of view horizontal (16:9)	72.9°	66.7°	58.3°	57.2°	56.1°	54.6°	42.3°	39.1°	3.4°	3.1°	1.02°	0.92°	0.81°	0.80°	0.77°	0.69°	0.68°	0.67°	0.65°	0.59°	0.47°
Focal Legnth (mm)	6.5	7.3	8.6	8.8	9	9.3	12.4	13.5	161	180	540	600	675	690	710	800	810	820	840	930	1178
UHD-DIGISUPER 90																					
UHD-DIGISUPER 86																					
UHD-DIGISUPER 66																					
UHD-DIGISUPER 27																					
DIGISUPER 100 AF																					
DIGISUPER 100																					
DIGISUPER 95 TELE																					
DIGISUPER 95																					
DIGISUPER 86 AF																					
DIGISUPER 80																					
DIGISUPER 76																					
DIGISUPER 27 AF																					
DIGISUPER 27																					
DIGISUPER 22 xs																					

Broadcast ENG/EPF Lenses (4K 2/3", HD 2/3")																					
Angle of view horizontal (16:9)	96.3°	93.7°	77.3°	75.5°	65.2°	64.6°	63.9°	63.2°	58.9°	52.7°	51.3°	38.9°	37.8°	35.5°	19.6°	12.2°	10.5°	9.1°	7.0°	5.2°	4.3°
Focal Legnth (mm)	4.3	4.5	6	6.2	7.5	7.6	7.7	7.8	8.5	9.7	10	13.6	14	15	28	45	52	60	78	106	128
CJ45ex13.6B																					
CJ45ex9.7B																					
CJ20ex7.8B																					
CJ12ex4.3B																					
CJ24ex7.5B																					
CJ18ex7.6B																					
CJ14ex4.3B																					
HJ40ex14B																					
HJ40ex10B																					
HJ18ex28B																					
HJ24ex7.5B																					
HJ21ex7.5B																					
HJ18ex7.6B																					
HJ17ex6.2B																					
HJ14ex4.3B																					
HJ15ex8.5B																					
KJ22ex7.6B																					
KJ17ex7.7B																					
KJ10ex4.5B																					

Broadcast ENG/EPF Lenses (HD 1/3")	
Angle of view horizontal (16:9)	58.3°
Focal Legnth (mm)	4.3
KT17ex4.3B	

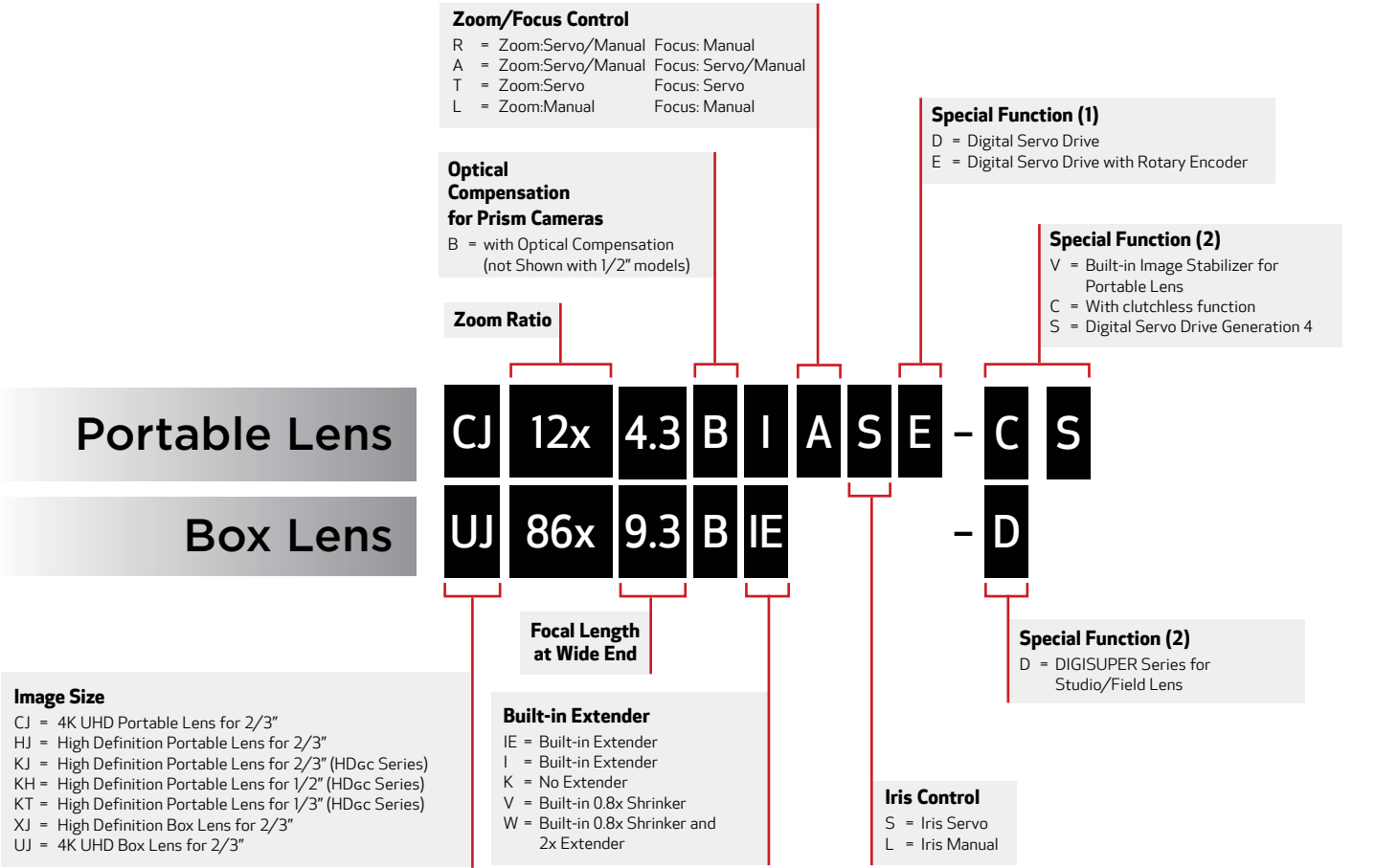
Focal Length Table

Pro-Video Lenses (HD 2/3")	
Angle of view horizontal (16:9)	96.3° 93.7° 77.3° 75.5° 65.2° 64.6° 63.9° 63.2° 60.7° 58.9° 51.3° 47.1° 37.8° 35.5° 19.6° 12.2° 10.5° 9.1° 7.0° 5.2° 4.3° 4.2° 4.0° 3.5° 3.5° 3.4° 3.3° 3.1° 1.45° 1.4° 1.1° 1.15° 1.0°
Focal Legnth (mm)	4.3 4.5 6 6.2 7.5 7.6 7.7 7.8 8.2 8.5 10 11 14 15 28 45 52 60 78 106 128 131 137 156 158 164 168 180 385 400 500 525 560
KJ20x8.2B	
KJ13x6B	

Pro-Video Lenses (HD 1/2")	
Angle of view horizontal (16:9)	75.7° 57.1° 6.8° 3.1°
Focal Legnth (mm)	4.5 6.4 59 128
KH20x6.4	
KH13x4.5	

Pro-Video Lenses (HD 1/3")	
Angle of view horizontal (16:9)	51.9° 2.8°
Focal Legnth (mm)	5 100
KT20x5B	

## Understanding Canon Lens Naming Conventions





# Canon Broadcast Lens Technology

## Optical Performance

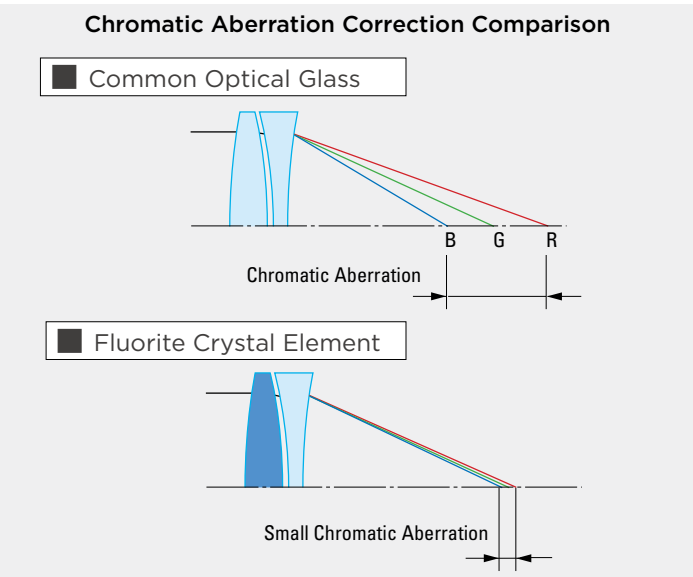
### Superb Optical Materials Produce a High-Performance Lens

#### Fluorite · UD Glass · Hi-UD Glass

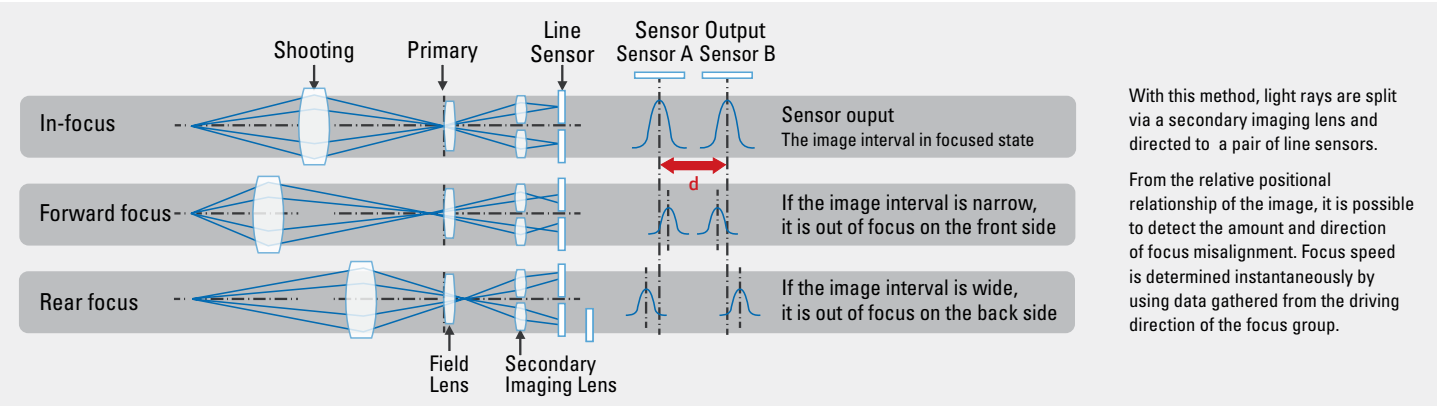
Unlike conventional optical glass, Fluorite has remarkably low dispersion properties. Realizing the effectiveness of Fluorite glass, Canon has put it to practical use in many lenses, primarily in the anterior section of zoom lenses to help correct telephoto chromatic aberration. Both UD<sup>1</sup> glass and Hi-UD glass<sup>2</sup> have dispersion properties similar to Fluorite and are effective for correcting chromatic aberration. Due to its high refractive characteristics, Hi-UD glass is especially known for its spherical aberration correction. Used in the anterior and zooming sections of a lens, Hi-UD glass is effective for controlling aberration fluctuation seen when focusing and zooming.



<sup>\*1</sup> UD-Ultra Low Dispersion.  
<sup>\*2</sup> Hi-UD High Index Ultra Low Dispersion.



### ■ Secondary Imaging Phase Difference Detection Method (Conceptual Diagram).

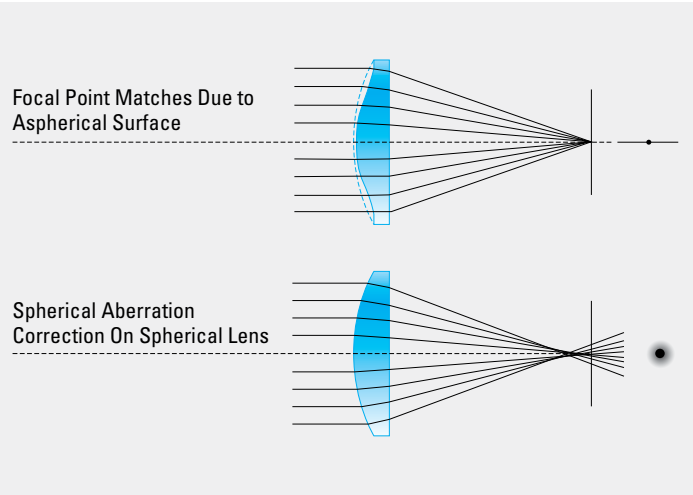


With this method, light rays are split via a secondary imaging lens and directed to a pair of line sensors. From the relative positional relationship of the image, it is possible to detect the amount and direction of focus misalignment. Focus speed is determined instantaneously by using data gathered from the driving direction of the focus group.

### High Quality, Compact Size and Weight

#### Large Aperture Aspheric Lens

Spherical aberration will increase as the diameter of a spherical lens increases. However, aspheric lenses form an ideal shape for aberration correction and are the desired lens type for improving optical performance. As they are more compact, aspheric lenses reduce the weight of the entire lens system. Through its optical design and large aperture processing techniques, Canon has developed compact, large aperture, high magnification field zoom aspheric lenses. As a result of this development, all high-magnification field zoom lenses released since 2000 have a constant total lens length regardless of zoom ratio.



### Focus Breathing Suppression

#### Constant Angle Focusing System (CAFS)

CAFS is a technology that suppresses view-angle fluctuation (breathing) while focusing. The Zooming Effect of Focus is the phenomenon where the picture size (angle of view) changes when focusing. Canon's 32-bit CPU calculates and controls the zoom when focusing in order to counteract this phenomenon. As a result of CAFS, the UHD-DIGISUPER and DIGISUPER Series has zero Zooming Effect of Focus.

### Advanced Design Technology to Help Minimize Various Aberrations

#### Image Stabilizer (IS)

Canon launched its first field zoom lens with a shift type anti-vibration mechanism in 2000\*. Prior to that, Canon introduced the IS-20B anti-vibration adapter for portable zoom lenses. Those cutting-edge technologies, along with the Vari-angle Prism image stabilizer (VAP-IS) lens, helped to usher in the era of optical image stabilization in broadcasting lenses.

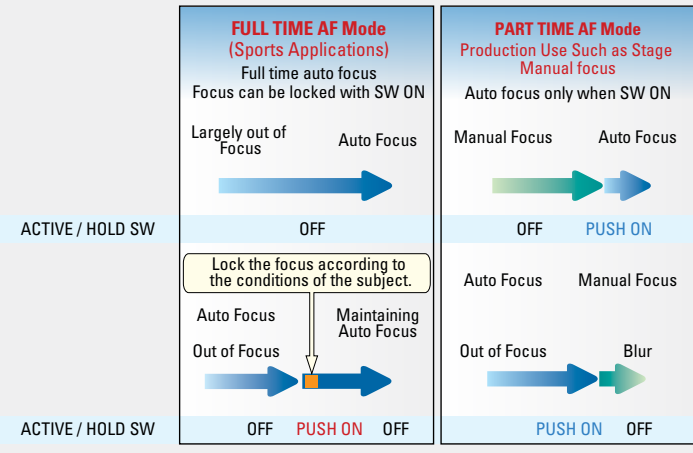
*\*Adopted for DIGISUPER 86 XS (XJ86 × 9.3 B). The world's first field zoom lens for broadcasting.*

## Auto Focus

### TTL Secondary Imaging Phase Difference Detection Method

The Secondary Imaging Phase Difference Detection Method, also used in single lens reflex EOS camera lenses, was adopted for broadcast autofocus systems. As a result of this Method, Canon's Auto Focus System has excellent focusing accuracy within the entire zoom range, along with outstanding focusing speed. Due to high performance servo motors, tracking a moving object at high speed can be possible even from a largely out of focus state.

### ■ Autofocus Two Types of Operation



#### AF Mode

Select DIGISUPER lenses provide two autofocus modes. "FULL TIME AF" provides continuous autofocus operation allowing the camera operator to focus on framing the subject. "PART TIME AF" allows for temporary autofocus use with manual focus. The modes can be switched on and off as needed, using the ACTIVE/HOLD switch.

#### AF In-Focus Display

By using the FDJ - P41 dedicated focus demand, you can change the size (3 options) and position of the AF in-focus frame displayed on the viewfinder\*.

*\*To change the in-focus frame, it is necessary to interlock with the camera.*



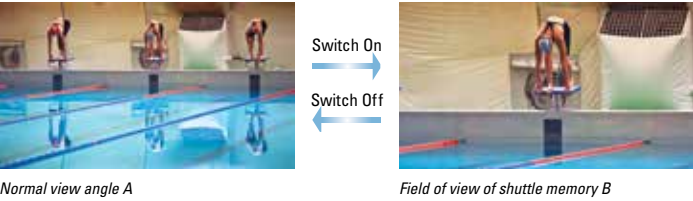
## Digital Technology

### Digital Servo System/Digital Drive Unit

Since the release of the DIGISUPER 70 in 1995, Canon has been a leader in digital broadcast zoom lens control. Canon's ENG/EFP lenses, having the same digital technology, offer a wealth of features to make shooting more efficient. Canon's digital drive unit is installed in all ENG/EFP and Provideo broadcast lenses.

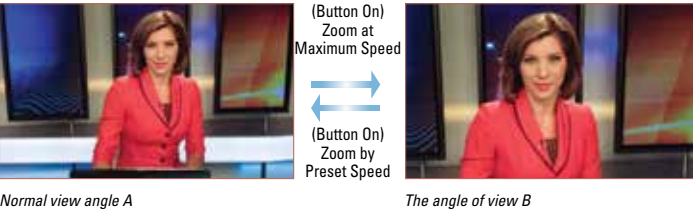
#### ■ Shuttle Shot

At the touch of a button, this feature allows the operator to zoom back and forth instantly between any two positions at the maximum speed or at any speed memorized in the Speed Presets.



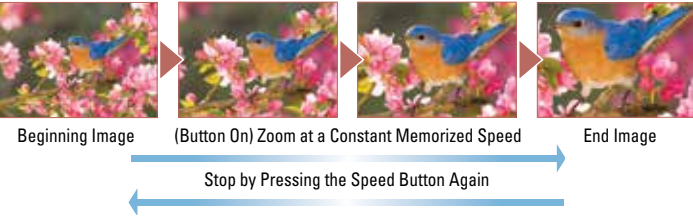
#### ■ Frame Preset

With the Frame Preset feature, a preset frame position can be saved and repeated multiple times.



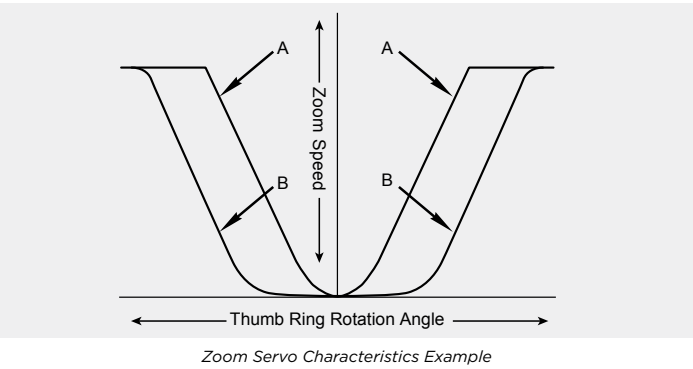
#### ■ Speed Preset

Simply press a button to recall the preset zoom speed.



#### ■ Zoom Servo Characteristics

Zoom Servo characteristics can be selected from two curvature options on the ZDJ-P01 zoom demand.





Virtual Studio System

Canon has a series of HDxs and HDGC (IRSE/IASE version) lenses which are equipped with an enhanced digital drive unit. The digital drive unit’s 16-bit encoder makes detection and output of positional information possible at a much higher resolution than an analog position sensor (equivalent to 10 bits). The 16-bit resolution rotary encoder built into the drive unit can be integrated into a virtual studio system. The encoders enable precise control as the zoom servo has a range of 0.5 second quick zooms to over a 5 minute super slow zoom. Repeatability in focus and iris control are also precise. Canon’s technology has made the encoder device very small, allowing it to be installed in the existing drive unit without adding size or weight.

Further Improving Operational Efficiency

Type S Drive Unit

Canon has improved the operational efficiency of its lenses with the adoption of the Type S Drive Unit \*1.

- Matches the aberration correction function on the camera without initialization at power-on
- Reduced power consumption by about 10% \*2 when using a battery as compared with previous versions
- Real and virtual images can easily be calibrated with high-precision position detection
- Three 20 PIN connectors allow for simultaneous full servo and virtual system operation
- Easy operation with straightforward menu and display

\*1: Please refer to page 6, Understanding Canon Naming Conventions, Special Functions (2).  
\*2: When zoom, focus & iris in operation.

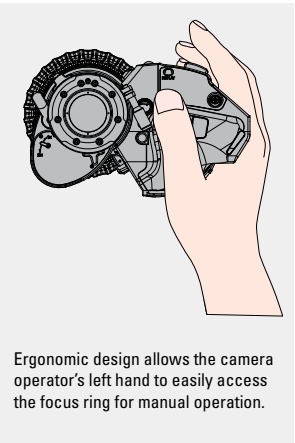
Zoom Track

The zoom control range can be set within a more limited range on both the telephoto and wide-angle sides of UHD-DIGISUPER and DIGISUPER Series lenses. With these lenses and the optional ZDJ-P01 zoom demand, the zoom range can be set to virtually any range smaller than the full focal range of the lens. If not used to limit the zoom range, the feature can be used to memorize an additional preset zoom position.

Ergonomic Design

Compact and Lightweight Drive Unit

Canon’s HDxs, and HDGC (IRSE/IASE models) Ergonomic Drive Units are tilted at an ideal angle of 12.5 degrees to realize good balance and comfort. An informational display has been added which now allows the user to customize the enhanced digital functions easily, precisely and fully. The enhanced digital functions are easily accessed and set using the Digital Function Selector, an X-Y axis switch located next to the display.



THE NEW ERA OF

NEW BCTV LENSES DESIGNED TO SUPPORT THE TRANSITION TO 4K UHD CONTENT CREATION

HDTV is now firmly established worldwide and HD production is expected to continue for many years to come. Ultra HDTV – generally referred to as UHD – has more recently emerged as the next generation of enhanced television service. In 2015 the International Telecommunications union published their ITU-R BT.2020 standard “Parameter Values for UHDTV Systems for Production and international Program Exchange” – that included both 4K UHD and 8K UHD production formats. This standard includes a Wide Color Gamut (WCG). In 2016 they published the ITU-R BT.2100 standard “Image Parameter Vales for High Dynamic Range Television for use in Production and International Program Exchange”. This standard specifically applies the High Dynamic Range (HDR) to the HD, 4K UHD, and 8K UHD production formats (all exclusively progressive scan). In September 2017 the industry body – Ultra HD Forum – published their updated Guidelines on technologies and practices that support a commercially deployable Ultra HD real-time linear service with live and pre-recorded content in 2016, which is termed a “UHD Phase A” service. They include 4K UHD and 1080P HD (that includes both HDR and WCG).

These standards and guidelines have spurred increasing attention to the adoption of 4K UHD origination of sports, concerts, and major events. The anticipated protracted coexistence of HDTV and UHDTV has spawned a new generation of 2/3-inch multi format broadcast camera systems – from most of the major international camera manufacturers – that can selectively originate HD or UHD. To support this new era of mixed HD / UHD origination Canon has invested heavily into the development of an array of 2/3-inch 4K UHD broadcast lenses that encompass long zoom field lenses, a studio lens, and a broadening family of portable lenses.

STUDIO / FIELD BOX LENSES			EFP / ENG PORTABLE LENSES		
LENS SERIES	PERFORMANCE		LENS SERIES	PERFORMANCE	
UHDxs	4K Premium	1080P/HDR/WCG	UHDxs	4K	1080P/HDR/WCG
UHDxs	4K		UHDgc	4K	
HDxs	HD		HDxs	HD	
HDgc	HD		HDgc	HD	

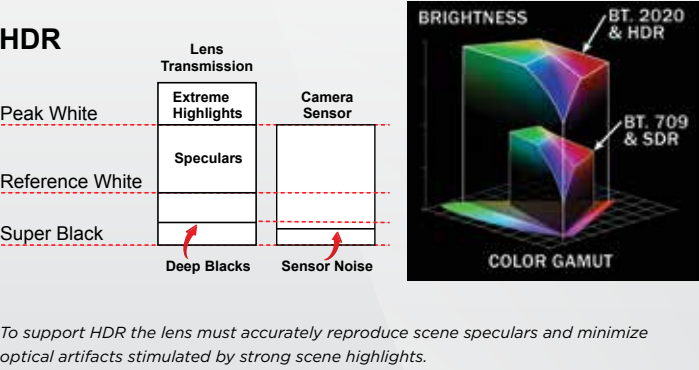
Simplistic mapping of the performance levels within the separate categories of box lenses and portable lenses.

IMPLICATIONS OF HDR AND WCG

Delivering the requisite high image sharpness required for 4K UHD – while simultaneously lowering traditional optical aberrations (that can be more exposed by the high resolution image sensors) – called for multiple innovations in lens design and manufacturing. Lateral chromatic aberration causes color misregistration on high contrast edges within the imagery – especially toward picture extremities. Longitudinal chromatic aberration causes color fringing on any speculars with this imagery. HDR and WCG further enhance the visibility of these

ENHANCED HDTV AND UHDTV

aberrations – because of the elevation in the color volume of the camera video – placing a greater onus on suppressing them to where they become subjectively invisible.

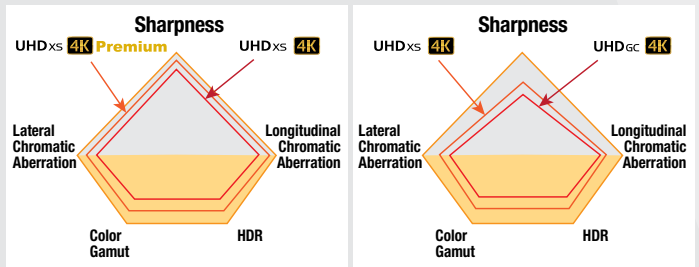


To support HDR the lens must accurately reproduce scene speculars and minimize optical artifacts stimulated by strong scene highlights.

UHD LENS PERFORMANCE HIERARCHY

In the case of the large box field and studio lenses and the portable EFP/ENG lenses Canon has created two performance levels in each. A special priority is assigned to elevating image sharpness (the essence of 4K UHD). An attendant high priority underlies design strategies that aggressively curtail the visibility of the two chromatic aberrations. Higher luminance levels and allied greater color volume associated with HDR / WCG combine to elevate the visibility of even small levels of these chromatic aberrations.

In the case of the Box lenses advanced design strategies allied with advanced optical glass materials are mobilized to maintain high image sharpness across the image plane, over the total focal ranges, and over a wide range of object distances. The 4K PREMIUM box lenses take these strategies to a particularly high level to further tighten those optical performance specifications.

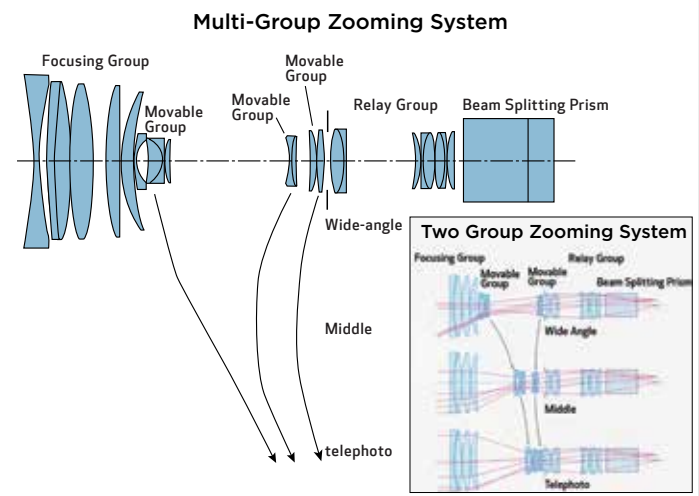


In the case of the portable lenses, similar priorities apply. The UHDxs manifests higher sharpness and lower chromatic aberrations when compared to the UHDgc – although on a different scale to the box lenses.

MULTI-GROUP ZOOMING SYSTEM

In seeking longer focal ranges for the box field and studio lenses and some of the longer focal length portable lenses, challenges in achieving the requisite zooming speeds while also achieving UHD performance were escalated. This called for a radical new design approach to the zooming optical subsystems. The central goals were to achieve greater control over multiple lens aberrations to help ensure full 4K performance while at the same time expediting

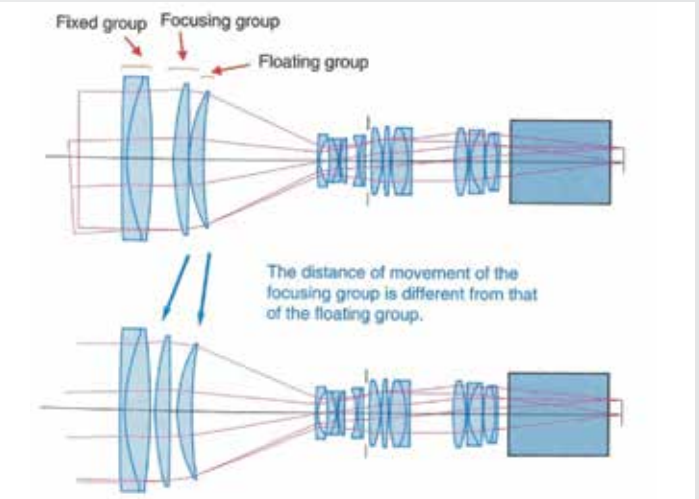
an increase in the speed of the zooming action (when the digital drive unit is set to maximum zoom speed).



The traditional two group zooming system (right picture) is being replaced with a three group zooming system (left picture). Three movable groups move differentially with respect to each other over the zoom range. Design optimization consisted in balancing the weight of the three individual groups with their stroke distance during zooming action.

FLOATING FOCUSING SYSTEM

The focus optical subsystem entails high responsibility for numerous optical performance parameters and operational considerations. The lens maximum relative aperture is largely determined by the diameter of this lens input optical grouping. In addition, focus breathing (undesirable alteration to the field angle as the focus control is actuated) characteristics and aberration behavior are associated with this optical subsystem. Overall lens size and weight are heavily proportional to decisions made in the overall design of this system. Central to the design is curtailing the size and weight of the moving lens system. To help ensure UHD optical performance focus fluctuations must be suppressed – and this was accomplished by using two separate moving groups.



New innovations in a floating focus group support 4K UHD performance while curtailing size and weight



Broadcast Studio/Field Lenses

4K UHD 2/3"

				
Appearance	<div>4K Premium</div> <div>IMAGE STABILIZER</div>	<div>4K</div> <div>IMAGE STABILIZER</div>	<div>4K</div> <div>IMAGE STABILIZER</div>	<div>4K Premium</div> <div>IMAGE STABILIZER</div>
Model Name	UJ86×9.3B		UJ90×9B	
Zoom Ratio	86x		90x	
Focal Length	9.3 ~ 800mm 18.6 ~ 1600mm (2.0x)		9 ~ 810mm 18 ~ 1620mm (2.0x)	
Maximum Relative Aperature	F1.7 (9.3 ~ 340mm) F4.0 (800mm)		F2.4 (9 ~ 486mm) F4.0 (810mm)	
Angular Field of View	54.6°×32.4° (9.3mm) 0.69°×0.39° (800mm)		56.1°×33.4° (9mm) 0.68°×0.38° (810mm)	
M.O.D.*	3.0m		3.0m	
Object Dimensions at M.O.D.*	271.9×152.9cm (9.3mm) 3.3×1.9cm (800mm)		287.9×161.9cm (9mm) 3.3×1.9cm (810mm)	
Approx. Size (WxHxL)	9.9x10x25 in. (250.6×255.5×637.4mm)		9.9x10x24 in. (250.6×255.5×610mm)	
Approx. Weight	59.5 lbs (27.0kg) ※		51.2 lbs (23.2kg) ※	

		
Appearance	<div>4K</div> <div>IMAGE STABILIZER</div>	<div>4K Premium</div> <div>IMAGE STABILIZER</div>
Model Name	UJ66×9B	
Zoom Ratio	66x	
Focal Length	9 ~ 600mm 18 ~ 1200mm (2.0x)	
Maximum Relative Aperature	F1.7 (9 ~ 340mm) F3.0 (600mm)	
Angular Field of View	56.1°×33.4° (9mm) 0.92°×0.52° (600mm)	
M.O.D.*	3.0m	
Object Dimensions at M.O.D.*	287.9×161.9 cm (9mm) 4.4×2.5 cm (600mm)	
Approx. Size (WxHxL)	9.9x10.1x24.0 in. (250.6×255.5×610mm)	
Approx. Weight	51.1 lbs (23.2kg) ※	

	
Appearance	<div>4K Premium</div> <div>IMAGE STABILIZER</div>
Model Name	UJ27×6.5B
Zoom Ratio	27x
Focal Length	6.5 ~ 180mm 13 ~ 360mm (2.0x)
Maximum Relative Aperature	F1.5 (6.5 ~ 123mm) F2.2 (180mm)
Angular Field of View	72.9°×45.1° (6.5mm) 3.1°×1.7° (180mm)
M.O.D.*	0.6m
Object Dimensions at M.O.D.*	106.1×59.7cm (6.5mm) 3.8×2.1cm (180mm)
Approx. Size (WxHxL)	53.1×29.9cm (13mm) 1.9×1.1cm (360mm)
Approx. Weight	47.4 lbs (21.5kg) ※

※ Weight of lens body only (does not include servo module).  
\* M.O.D. = Minimum Object Distance.

UHD-DIGISUPER 86: Highlights

High Zoom Ratio and Long Focal Length

While displaying performance that surpasses 4K, the lens has the high zoom ratio (86x) and long focal length (800 mm) desired by many in television production.

Optical Performance That Goes Beyond 4K Even When Using the Built-in 2X Extender and Image Stabilizer

Thanks to the precision of its high-grade components and assembly, 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 stabilizing mechanism of Canon's highest grade, helping to achieve image stabilization performance commensurate with 4K.

Ideally Suited to 4K Shooting

Lens is ideally suited for 4K UHD shooting required when telecasting live sports events and other applications.

Optical Performance That Goes Beyond 4K

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

Compatibility with HD Lens Systems

The lens enables the use of the same Canon standard controllers for zoom and focus 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.

Broadcast Studio/Field Lenses

HD 2/3"

	DIGISUPER 100AF <b>HDxs</b>	DIGISUPER 100 <b>HDxs</b>	DIGISUPER 95 TELE <b>HDxs</b>	DIGISUPER 95 <b>HDxs</b>
				
Appearance	IMAGE STABILIZER	IMAGE STABILIZER	IMAGE STABILIZER	IMAGE STABILIZER
Model Name	XJ100×9.3B AF		XJ95×8.6B	
Zoom Ratio	100x		95x	
Focal Length	9.3 ~ 930mm 18.6 ~ 1860mm (2.0x)		12.4 ~ 1178mm 24.8 ~ 2356mm (2.0x)	
Maximum Relative Aperature	F1.7 (9.3 ~ 296mm) F4.7 (930mm)		F2.5 (12.4 ~ 491mm) F6.0 (1178mm)	
Angular Field of View	28.9°×16.5° (18.6mm) 0.30°×0.17° (1860mm)		21.9°×12.4° (24.8mm) 0.23°×0.13° (2356mm)	
M.O.D.*	3.0m		3.0m	
Object Dimensions at M.O.D.*	138.2×77.8cm (18.6mm) 1.4×0.8cm (1860mm)		104.8×58.9cm (24.8mm) 1.2×0.7cm (2356mm)	
Approx. Size (WxHxL)	9.9x10x26 in. (250.6×255.5×661.5mm)		9.9x10x24 in. (250.6×255.5×610mm)	
Approx. Weight	59.3 lbs (26.8kg) ※		51.1 lbs (23.2kg) ※	

HD 2/3"

	<div>DIGISUPER 86AF</div> <div></div> <div>HDxs</div>	<div>DIGISUPER 80</div> <div></div> <div>HDxs</div>	<div>DIGISUPER 76</div> <div></div> <div>HDxs</div>
Appearance	<div>IMAGE STABILIZER</div>	<div>IMAGE STABILIZER</div>	
Model Name	XJ86×9.3B AF		XJ76×9B
Zoom Ratio	86×		76×
Focal Length	9.3 ~ 800mm	18.6 ~ 1600mm (2.0x)	9.0 ~ 690mm
Maximum Relative Aperature	F1.7 (9.3 ~ 340mm) F4.0 (800mm)	F3.4 (18.6 ~ 680mm) F8.0 (1600mm)	F1.7 (9.0 ~ 340mm) F3.45 (690mm)
Angular Field of View	54.6°×32.4° (9.3mm) 0.69°×0.39° (800mm)	28.9°×16.5° (18.6mm) 0.34°×0.19° (1600mm)	56.1°×33.4° (9mm) 0.80°×0.45° (690mm)
M.O.D.*	3.0m		3.0m
Object Dimensions at M.O.D.*	276.4×155.5cm (9.3mm) 3.2×1.8cm (800mm)	138.2×77.8cm (18.6mm) 1.6×0.9cm (1600mm)	282.4×158.9cm (9mm) 3.8×2.1cm (690mm)
Approx. Size (WxHxL)	9.9x10x26 in. (250.6×255.5×661.5mm)		9.9x10x24 in. (250.6×255.5×610mm)
Approx. Weight	59.3 lbs (26.8kg) ※		50.6 lbs (23.0kg) ※

HD 2/3"

	DIGISUPER 27AF	HD XS	DIGISUPER 27	HD XS	DIGISUPER 22 xs	HD XS
Appearance						
Model Name	XJ27×6.5B AF		XJ27×6.5B		XJ22×7.3B	
Zoom Ratio	27×		27×		22×	
Focal Length	6.5 ~ 180mm    13 ~ 360mm (2.0x)		6.5 ~ 180mm    13 ~ 360mm (2.0x)		7.3 ~ 161mm    14.6 ~ 322mm (2.0x)	
Maximum Relative Aperature	F1.5 (6.5 ~ 123mm) F2.2 (180mm)		F1.5 (6.5 ~ 123mm) F2.2 (180mm)		F1.8 (7.3 ~ 111.5mm) F2.6 (161mm)	
Angular Field of View	72.9°×45.1° (6.5mm) 3.1°×1.7° (180mm)		72.9°×45.1° (6.5mm) 3.1°×1.7° (180mm)		66.7°×40.6° (7.3mm) 3.4°×1.9° (161mm)	
M.O.D.*	0.6m		0.6m		0.8m	
Object Dimensions at M.O.D.*	106.1×59.7cm (6.5mm) 3.8×2.1cm (180mm)		106.1×59.7cm (6.5mm) 3.8×2.1cm (180mm)		118.1×66.4cm (7.3mm) 5.2×2.9cm (161mm)	
Approx. Size (WxHxL)	9.9x10.1x22.3 in. (250.6×255.5×567mm)		9.9x10.1x21.7 in. (250.6×255.5×550mm)		6.5x6.9x13.2 in. (165×175×336mm)	
Approx. Weight	51.4 lbs (23.3kg) ※		48.3 lbs (21.9kg) ※		13.42 lbs (6.1kg)	

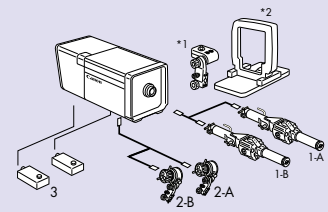
※ Weight of lens body only (does not include servo module).  
\* M.O.D. = Minimum Object Distance.

Control Accessories for Studio/Field Lenses

DIGITAL UHD-DIGISUPER/DIGISUPER Series

For:  
UHD-DIGISUPER 90 / UHD-DIGISUPER 86 / UHD-DIGISUPER 66 / UHD-DIGISUPER 27 / DIGISUPER 100 /  
DIGISUPER 95 TELE / DIGISUPER 95 / DIGISUPER 80 / DIGISUPER 76 / DIGISUPER 27

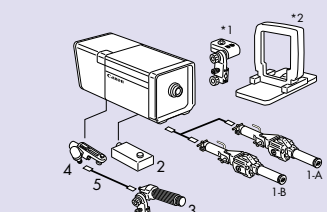
FULL SERVO SYSTEM



**KIT DETAIL**

No.	DESCRIPTION
1-A.	Zoom Demand ZDJ-D02 (Digital Servo)
1-B.	Zoom Demand ZDJ-P01 (Digital Servo)
2-A.	Focus Demand FDJ-D02 (Digital Servo)
2-B.	Focus Demand FDJ-P01 (Digital Servo)
3.	Servo Module SMJ-E01 (2pcs)

SEMI-SERVO SYSTEM

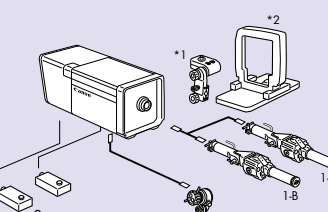


**KIT DETAIL**

No.	DESCRIPTION
1-A.	Zoom Demand ZDJ-D02 (Digital Servo)
1-B.	Zoom Demand ZDJ-P01 (Digital Servo)
2.	Servo Module SMJ-E01
3.	Flexible Focus Controller FFP-T61
4.	Flexible Module FMJ-702
5.	Flexible Cable 36"

For:  
DIGISUPER 100AF / DIGISUPER 86AF /  
DIGISUPER 27AF

FULL SERVO SYSTEM

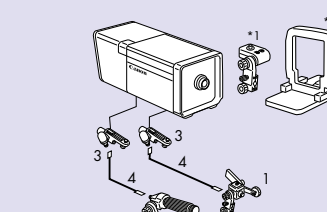


**KIT DETAIL**

No.	DESCRIPTION
1-A.	Zoom Demand ZDJ-D02 (Digital Servo)
1-B.	Zoom Demand ZDJ-P01 (Digital Servo)
2.	Focus Demand FDJ-P41 (Digital Servo)*3
3.	Servo Module SMJ-E01 (2pcs)

For:  
All UHD-DIGISUPER / DIGISUPER Lenses

FULL MANUAL SYSTEM



**KIT DETAIL**

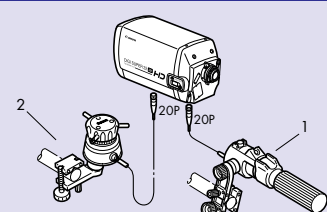
No.	DESCRIPTION
1.	Flexible Zoom Controller FZP-T61
2.	Flexible Focus Controller FFP-T61
3.	Flexible Module FMJ-702 (2pcs)
4.	Flexible Cable 36" (2pcs)

\*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, FDJ-P41 is necessary to control the AF function. FDJ-P31 is also available for right hand users.  
• Zoom Demand and Focus Demand with Pre-set Box is also available.  
• For detail information, please contact a Canon Sales Office.

Control Accessories for Studio/Field Lenses

For:  
DIGISUPER 22 xs  
The DIGISUPER 22 xs can be used with our current optional Studio/Field lens controllers as well as those for our ENG lenses. At the same time, the lens also offers compatibility with our Compact Studio/Field demands by use of a conversion cable.

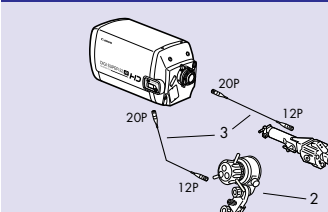
With Current ENG Demand (Standard)



**KIT DETAIL**

No.	DESCRIPTION	MODEL #
1	Digital Zoom Demand	ZSD-300D
2	Digital Focus Demand	FPD-400D

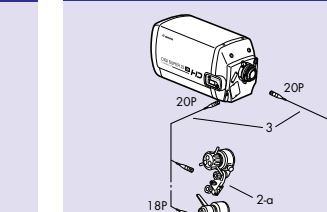
With Compact Field/Studio Demand



**KIT DETAIL**

No.	DESCRIPTION	MODEL #
1	Digital Zoom Demand	ZDJ-P01
2	Digital Focus Demand	FDJ-P01
3	Conversion Cable	BDC-21

With Current Field/Studio Demand



**KIT DETAIL**

No.	DESCRIPTION	MODEL #
1-a	Digital Zoom Demand	ZDJ-D02
2-a	Digital Focus Demand	FDJ-D02
2-b	Digital Focus Demand Propeller Type	FDJ-D12
3	Conversion Cable	BDC-11

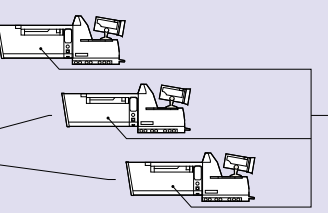
The SUP-400 SUPPORTER is included as a standard component with the lens.

Studio/Field Lenses Mount Compatibility

To Use Camera Manufacturer’s Original Mount Lens

Studio/Field lenses are made with 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:

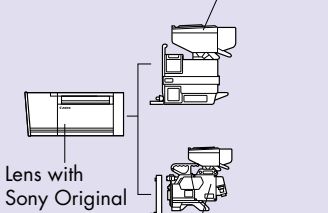
**Standard HD Mount (BTA)**  
Panasonic, Ikegami, Hitachi, Thomson Grass Valley



Standard HD Mount Studio Camera Systems from Various Manufacturers

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

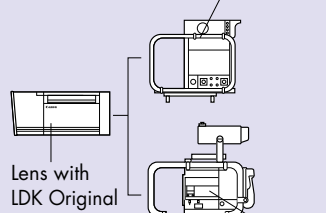
**Sony**  
Sony 2/3" Studio Camera



Lens with Sony Original Mount

Sony System Companion Portable Camera

**Thomson Grass Valley-SDTV**  
LDK 2/3" Studio Camera



Lens with LDK Original Mount

Xpander LDK4489/ Super Xpander LDK4488 Large Lens Adaptor





LDK System Companion Portable Camera

Please confirm with camera manufacturer regarding the proper supporter to use. Some manufacturers vary by camera model.



Broadcast ENG/EFP Lenses

4K UHD 2/3"					
Appearance	CJ45ex13.6B <b>UHDxs</b>		CJ45ex9.7B <b>UHDxs</b>		
					
					
					
					
Model Name	CJ45ex13.6B IASE-V H		CJ45ex9.7B IASE-V H		
Zoom Ratio	45×		45×		
Focal Length	13.6 ~ 612mm	27.2 ~ 1224mm (2.0x)	9.7 ~ 437mm	19.4 ~ 874mm (2.0x)	
Maximum Relative Aperature	F1.2.8 (13.6 ~ 312mm) F1.5.5 (612mm)	F1.5.6 (27.2 ~ 624mm) F1.11.0 (1224mm)	F1.2.0 (9.7 ~ 224mm) F1.3.9 (437mm)	F1.4.0 (19.4 ~ 448mm) F1.7.8 (874mm)	
Angular Field of View	38.9°×22.5° (13.6mm) 0.90°×0.51° (612mm)	20.0°×11.3° (27.2mm) 0.45°×0.25° (1224mm)	52.7°×31.1° (9.7mm) 1.26°×0.71° (437mm)	27.8°×15.8° (19.4mm) 0.63°×0.35° (874mm)	
M.O.D.* from Lens Front	2.8m		2.8m		
Object Dimensions at M.O.D.*	182.9×102.9cm (13.6mm) 4.2×2.4cm (612mm)	91.5×51.5cm (27.2mm) 2.1×1.2cm (1224mm)	254.3×143.0cm (9.7mm) 5.8×3.3cm (437mm)	127.2×71.5cm (19.4mm) 2.9×1.7cm (874mm)	
Filter Thread Size (Hood/Lens Barrel)	— / 127mm P0.75		— / 127mm P0.75		
Approx. Size (WxHxL)	6.8×5.8×14.0 in. (173.2×147.5×355.0mm)		6.8×5.8×13.3 in. (173.2×147.5×337.0mm)		
Approx. Weight	12.4 lb (5.64kg)		12.3 lbs (5.60kg)		

4K UHD 2/3"					
Appearance	CJ20ex7.8B <b>UHDxs</b>		CJ12ex4.3B <b>UHDxs</b>		
					
					
					
	CJ20ex7.8B IASE S		CJ12ex4.3B IRSE S/IASE S		
Model Name	CJ20ex7.8B IASE S		CJ12ex4.3B IRSE S/IASE S		
Zoom Ratio	20×		12×		
Focal Length	7.8 ~ 156mm	15.6 ~ 312mm (2.0x)	4.3 ~ 52mm	8.6 ~ 104mm (2.0x)	
Maximum Relative Aperature	F1.8 (7.8 ~ 108mm) F2.6 (156mm)	F3.6 (15.6 ~ 216mm) F5.2 (312mm)	F1.8 (4.3 ~ 40mm) F2.4 (52mm)	F3.6 (8.6 ~ 80mm) F4.8 (104mm)	
Angular Field of View	63.2°×38.2° (7.8mm) 3.5°×2.0° (156mm)	34.2°×19.6° (15.6mm) 1.8°×1.0° (312mm)	96.3°×64.2° (4.3mm) 10.5°×5.9° (52mm)	58.3°×34.9° (8.6mm) 5.3°×3.0° (104mm)	
M.O.D.* from Lens Front	0.8m		0.3m		
Object Dimensions at M.O.D.*	91.7×51.6cm (7.8mm) 4.8×2.7cm (156mm)	45.9×25.8cm (15.6mm) 2.4×1.4cm (312mm)	76.4×43.0cm (4.3mm) 6.0×3.4cm (52mm)	38.2×21.5cm (8.6mm) 3.0×1.7cm (104mm)	
Filter Thread Size (Hood/Lens Barrel)	105mm P1 / 94mm P1		127mm P0.75 / —		
Approx. Size (WxHxL)	6.7×4.5×9.1 in. (169.9×114.4×230.0mm)		6.4×4.3×9.8 in. (163.5×108.0×247.8mm)		
Approx. Weight	4.81 lb (2.18kg)		4.63 lbs (2.1kg) (IRSE S))		

4K UHD 2/3"						
Appearance	CJ24ex7.5B <b>UHD GC</b>		CJ18ex7.6B <b>UHD GC</b>		CJ14ex4.3B <b>UHD GC</b>	
						
	CJ24ex7.5B IRSE S/IASE S		CJ18ex7.6B IRSE S/IASE S		CJ14ex4.3B IRSE S/IASE S	
	24x		18x		14x	
	7.5 ~ 180mm		7.6 ~ 137 mm		4.3 ~ 60mm	
Model Name	CJ24ex7.5B IRSE S/IASE S		CJ18ex7.6B IRSE S/IASE S		CJ14ex4.3B IRSE S/IASE S	
Zoom Ratio	24x		18x		14x	
Focal Length	7.5 ~ 180mm	15.0 ~ 360mm (2.0x)	7.6 ~ 137 mm	15.2 ~ 274 mm (2.0x)	4.3 ~ 60mm	8.6 ~ 120 mm (2.0x)
Maximum Relative Aperature	F1:1.8 (7.5 ~ 120mm) F1:2.7 (180mm)	F1:3.6 (15 ~ 240mm) F1:5.4 (360mm)	F1:1.8 (7.6 ~ 103mm) F1:2.4 (137mm)	F 1:3.6 (15.2 ~ 206mm) F1:4.8 (274mm)	F1:1.8 (4.3 ~ 40 mm) F1:2.7 (60mm)	F1:3.6 (8.6 ~ 80mm) F1:5.4 (120mm)
Angular Field of View	65.2°×39.6° (7.5mm) 3.1°×1.7° (180mm)	35.5°×20.4° (15mm) 1.5°×0.9° (360mm)	64.6°×39.1° (7.6mm) 4.0°×2.3° (137mm)	35.1°×20.1° (15.2mm) 2.0°×1.1° (274mm)	96.3°×64.2° (4.3mm) 9.1°×5.2° (60mm)	58.3°×34.9° (8.6mm) 4.6°×2.6° (120mm)
M.O.D.* from Lens Front	0.80m		0.56m		0.30m	
Object Dimensions at M.O.D.*	96.0×54.0 cm (7.5mm) 4.1×2.3 cm (180mm)	48.0×27.0 cm (15mm) 2.1×1.2 cm (360mm)	65.5×36.8 cm (7.6mm) 3.8×2.1 cm (137mm)	32.8×18.4 cm (15.2mm) 1.9×1.1 cm (274mm)	76.4×43.0 cm (4.3mm) 5.2×2.9 cm (60mm)	38.2×21.5 cm (8.6mm) 2.6×1.5 cm (120mm)
Filter Thread Size (Hood/Lens Barrel)	105mm P1 / 94mm P1		— / 82mm P0.75		127mm P0.75 / —	
Approx. Size (WxHxL)	6.5×4.3×8.7 in. (164.6×109.1×221.4mm)		6.3×4.1×8.1 in. (160.5×105.0×206.2mm)		6.4×4.3×9.8 in. (163.5×108.0×247.8mm)	
Approx. Weight	4.0 lb (1.82kg, (IRSE S))		3.3 lb (1.65kg, (IRSE S))		4.7 lb (2.11kg, (IRSE S))	

\* M.O.D. = Minimum Object Distance.

Broadcast ENG/EFP Lenses

HD 2/3"

	<div><div>HJ40ex14B</div><div><div>HDxs</div><div>IMAGE STABILIZER</div></div></div>	<div><div>HJ40ex10B</div><div><div>HDxs</div><div>IMAGE STABILIZER</div></div></div>	<div><div>HJ18ex28B</div><div><div>HXS</div></div></div>
Appearance			
Model Name	HJ40ex14B IASE-V H		HJ18ex28B IASE S
Zoom Ratio	40x		18x
Focal Length	14 ~ 560mm	28 ~ 1120mm (2.0x)	28 ~ 500mm
Maximum Relative Aperature	F2.8 (14 ~ 307mm) F5.1 (560mm)	F5.6 (28 ~ 614mm) F10.2 (1120mm)	F2.8 (28 ~ 286mm) F4.9 (500mm)
Angular Field of View	37.8°×21.8° (14mm) 1.0°×0.6° (560mm)	19.4°×11.0° (28mm) 0.5°×0.3° (1120mm)	19.6°×11.1° (28mm) 1.1°×0.6° (500mm)
M.O.D.* from Lens Front	2.8m		2.2m
Object Dimensions at M.O.D.*	177.1×99.5cm (14mm) 4.5×2.5cm (560mm)	88.6×49.8cm (28mm) 2.3×1.3cm (1120mm)	71.1×40.0cm (28mm) 4.1×2.3cm (500mm)
Filter Thread Size (Hood/Lens Barrel)	— / 127mm P0.75		127mm P0.75 / —
Approx. Size (WxHxL)	6.6x5.2x14 in. (167.5x133.0x355.5mm)		6.9x4.9x10.6 in. (176.2x124.5x268.3mm)
Approx. Weight	12.2 lbs (5.55 kg)		5.65 lbs (2.56kg)

HD 2/3"

	HJ24e×7.5B <b>HXS</b>		HJ21e×7.5B <b>HXS</b>		HJ18e×7.6B <b>HXS</b>	
Appearance						
Model Name	HJ24×7.5B IRSE S/IASE S		HJ21e×7.5B IASE S		HJ18e×7.6B IRSE S/IASE S	
Zoom Ratio	24×		21×		18×	
Focal Length	7.5 ~ 180mm	15 ~ 360mm (2.0x)	7.5 ~ 158mm	15 ~ 316mm (2.0x)	7.6 ~ 137mm	15.2 ~ 274mm
Maximum Relative Aperture	F1.8 (7.5 ~ 120mm) F2.7 (180mm)	F3.6 (15 ~ 240mm) F5.4 (360mm)	F1.9 (7.5 ~ 116mm) F2.6 (158mm)	F3.8 (15 ~ 232mm) F5.2 (316mm)	F1.8 (7.6 ~ 103mm) F2.4 (137mm)	F3.6 (15.2 ~ 206mm) F4.8 (274mm)
Angular Field of View	65.2°×39.6° (7.5mm) 3.1°×1.7° (180mm)	35.5°×20.4° (15mm) 1.5°×0.9° (360mm)	65.2°×39.6° (7.5mm) 3.5°×2.0° (158mm)	35.5°×20.4° (15mm) 1.7°×1.0° (316mm)	64.6°×39.1° (7.6mm) 4.0°×2.3° (137mm)	35.1°×20.1° (15.2mm) 2.0°×1.1° (274mm)
M.O.D.* from Lens Front	0.80m		0.85m		0.56m	
Object Dimensions at M.O.D.*	96.0×54.0cm (7.5mm) 4.1×2.3cm (180mm)	48.0×27.0cm (15mm) 2.1×1.2cm (360mm)	120.4×67.7cm (7.5mm) 5.6×3.2cm (158mm)	60.2×33.9cm (15mm) 2.8×1.6cm (316mm)	65.5×36.8cm (7.6mm) 3.8×2.1cm (137mm)	32.8×18.4cm (15.2mm) 1.9×1.1cm (274mm)
Filter Thread Size (Hood/Lens Barrel)	105mm P1 / 94mm P1		127mm P0.75 / —		— / 82mm P0.75	
Approx. Size (W×H×L)	6.5×4.3×8.7 in. (164.6×109.1×221.4mm)		6.9×4.8×10.2 in. (175.2×122×260.1mm)		6.5×4.1×8.1 in (165.1×105.0×206.2mm)	
Approx. Weight	3.92 lbs (1.78kg (IRSE S))		5.94 lbs (2.69kg)		3.48 lbs (1.58kg (IRSE S))	

HD 2/3"					
Appearance	HJ17ex6.2B <b>HDXS</b>		HJ14ex4.3B <b>HDXS</b>		HJ15ex8.5B <b>HDXS</b>
					
					
	HJ17ex6.2B IRSE S/IASE S		HJ14ex4.3B IRSE S/IASE S		HJ15ex8.5B KRSE-V S
	17×		14×		15×
Model Name	HJ17ex6.2B IRSE S/IASE S		HJ14ex4.3B IRSE S/IASE S		HJ15ex8.5B KRSE-V S
Zoom Ratio	17×		14×		15×
Focal Length	6.2 ~ 106mm	12.4 ~ 212mm (2.0x)	4.3 ~ 60mm	8.6 ~ 120mm (2.0x)	8.5 ~ 128mm
Maximum Relative Aperature	F1.8 (6.2 ~ 65.8mm) F2.9 (106mm)	F3.6 (12.4 ~ 131.6mm) F5.8 (212mm)	F1.8 (4.3 ~ 40mm) F2.7 (60mm)	F3.6 (8.6 ~ 80mm) F5.4 (120mm)	F2.5 (8.5 ~ 68mm) F4.7 (128mm)
Angular Field of View	75.5°×47.1° (6.2mm) 5.2°×2.9° (106mm)	42.3°×24.6° (12.4mm) 2.6°×1.5° (212mm)	96.3°×64.2° (4.3mm) 9.1°×5.2° (60mm)	58.3°×34.9° (8.6mm) 4.6°×2.6° (120mm)	58.9°×35.2° (8.5mm) 4.3°×2.4° (128mm)
M.O.D.* from Lens Front	0.4m		0.3m		0.8m
Object Dimensions at M.O.D.*	73.3×41.2cm (6.2mm) 4.1×2.3cm (106mm)	36.7×20.6cm (12.4mm) 2.1×1.2cm (212mm)	76.4×43.0cm (4.3mm) 5.2×2.9cm (60mm)	38.2×21.5cm (8.6mm) 2.6×1.5cm (120mm)	95.8×53.9cm (8.5mm) 6.4×3.6cm (128mm)
Filter Thread Size (Hood/Lens Barrel)	105mm P1 / —		127mm P0.75 / —		— / 82mm P0.75
Approx. Size (WxHxL)	6.5×4.4×9.5 in. (165.0×111.8×240.5mm)		6.4×4.4×9.8 in. (163.5×111.8×247.8mm)		6.7×4.7×9.4 in. (170.2×119.4×239.1mm)

Broadcast ENG/EFP Lenses

HD 2/3"				HD 1/3"				
Appearance	KJ22ex7.6B 		KJ17ex7.7B 		KJ10ex4.5B 		KT17ex4.3B 	
								
	Model Name		KJ22ex7.6B IRSE S/IASE S		KJ17ex7.7B IRSE S/IASE S		KJ10ex4.5B IRSE S/IASE S	
	Zoom Ratio		22x		17x		10x	
	Focal Length		7.6–168mm 15.2–336mm (2.0x)		7.7–131mm 15.4–262mm (2.0x)		4.5–45mm 9–90mm (2.0x)	
	Maximum Relative Aperture		1:1.8 at 7.6–116.3mm 1:3.6 at 15.2–232.6mm 1:2.6 at 168mm 1:5.2 at 336mm (2.0x)		1:1.8 at 7.7–102.5mm 1:3.6 at 15.4–205mm 1:2.3 at 131mm 1:4.6 at 262mm		1:1.8 at 4.5–34.5mm 1:3.6 at 9–68.9mm 1:2.35 at 45mm 1:4.7 at 90mm	
	Angular Field of View		64.6°x39.1° at 7.6mm 35.1°x20.1° at 15.2mm 3.3°x1.8° at 168mm 1.6°x0.9° at 336mm		63.9°x38.6° at 7.7mm 34.6°x19.9° at 15.4mm 4.2°x2.36° at 131mm 2.1°x1.18° at 262mm		93.7°x61.9° at 4.5mm 56.1°x33.4° at 9mm 12.2°x6.9° at 45mm 6.1°x3.4° at 90mm	
	M.O.D.* from Lens Front		0.8m		0.6m		0.3m	
	Object Dimensions at M.O.D.*		95.0x53.4cm at 7.6mm 47.5x26.7cm at 15.2mm 4.4x2.5cm at 168mm 2.2x1.3cm at 336mm		68.5x38.5cm at 7.7mm 34.3x19.3cm at 15.4mm 4.2x2.4cm at 131mm 2.1x1.2cm at 262mm		74.1x41.7cm at 4.5mm 37.0x20.8cm at 9mm 6.4x3.6cm at 45mm 3.2x1.8cm at 90mm	
	Filter Thread Size (Hood/Lens Barrel)		105mm P1 / 94mm P1		— / 82mm P0.75		127mm P0.75 / —	
Approx. Size (WxHxL)		6.5x4.4x8.6 in. (164.7x111.8x218.6mm)		6.3x4.2x7.8 in. (159.3x106.6x197.8mm)		6.6x4.4x9.4 in. (168.2x111.8x237.7mm)		
Approx. Weight (IRSE/IASE)		4.0 lbs (1.82kg)/4.19 lbs (1.90kg)		3.26 lbs (1.48kg)/3.44 lbs (1.56kg)		4.04 lbs (1.83kg)/4.22 lbs (1.91kg)		

Pro-Video Lenses

HD 2/3"					
Appearance	KJ20x8.2B 		KJ20x8.2B 		KJ13x6B 
					
	Model Name		KJ20x8.2B IRSD		KJ20x8.2B KRSD
	Zoom Ratio		20x		20x
	Focal Length		8.2–164mm		16.4–328mm (2.0x)
	Maximum Relative Aperature		1:1.9 at 8.2–115.4mm 1:2.7 at 164mm		1:3.8 at 16.4–230.8mm 1:5.4 at 328mm
	Angular Field of View		60.7°x36.5° at 8.2mm 3.4°x1.9° at 164mm		32.6°x18.7° at 16.4mm 1.7°x0.9° at 328mm
	M.O.D.* from Lens Front		0.9m		0.9m
	Object Dimensions at M.O.D.*		98.2x55.2cm at 8.2mm 5.0x2.8cm at 164mm		49.1x27.6cm at 16.4mm 2.5x1.4cm at 328mm
	Filter Thread Size (Hood/Lens Barrel)		— / 82mm P0.75		— / 82mm P0.75
Approx. Size (WxHxL)		6.4x4.1x8.2 in. (163.3x104.1x208.0mm)		6.4x4x7.2 in. (163.3x101.6x181.8mm)	
Approx. Weight		3.13 lbs (1.42kg)		2.76 lbs (1.25kg)	
				105mm P1 / —	
				6.5x4.1x8.3 in. (165.4x104.1x211.7mm)	
				3.51 lbs (1.59kg)	

HD 1/2"		HD 1/3"					
Appearance	<div><div>KH20x6.4</div><div><div>HDC</div></div></div>	<div><div>KH13x4.5</div><div><div>HDC</div><div></div></div></div>	<div><div>KT20x5B</div><div><div>HDC</div></div></div>				
	Model Name	KH20x6.4 KRSD SY14		KH13x4.5 KRSD SY14		KT20x5B KRSD A	
	Zoom Ratio	20x		13x		20x	
	Focal Length	6.4–128mm		4.5–59mm		5–100mm	
	Maximum Relative Aperature	1:1.4 at 6.4–89.6mm 1:2.0 at 128mm		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	57.1°x34.1° at 6.4mm 3.1°x1.8° at 128mm		75.7°x46.9° at 4.5mm 6.8°x3.8° at 59mm		55.2°x32.8° at 5mm 3.0°x1.7° at 100mm	
	M.O.D.* from Lens Front	0.9m		0.4m		0.9m	
	Object Dimensions at M.O.D.*	89.8x50.5cm at 6.4mm 4.6x2.6cm at 128mm		73.4x41.3cm at 4.5mm 5.4x3.0cm at 59mm		88.1x49.6cm at 5.0mm 4.5x2.5cm at 100mm	
	Filter Thread Size (Hood/Lens Barrel)	— / 82mm P0.75		105mm P1 / —		— / 82mm P0.75	
	Approx. Size (WxHxL)	6.4x4x7.2 in. (163.3x101.6x182.5mm)		6.5x4.1x8.5 in. (165.4x104.1x215.3mm)		6.4x4.1x6.7 in. (163.3x104.1x171.2mm)	
Approx. Weight	2.8 lbs (1.27kg)		3.51 lbs (1.59kg)		2.62 lbs (1.19kg)		

\* M.O.D. = Minimum Object Distance.

Remote Control Lenses

HD 2/3"				
HDTV	HJ18ex28B 		HJ24ex7.5B 	
	Model Name		HJ18ex7.6B ITS-ME <sup>†1</sup>	
	Zoom Ratio		18x	
	Image Size		2/3"	
	Built-in Extender		2.0x	
	Range of Focal Length (with Extender)		28–500mm 56–1000mm (2.0x)	
	Model Name		HJ24ex7.5B ITS-ME	
	Zoom Ratio		24x	
	Image Size		2/3"	
	Built-in Extender		2.0x	
	Range of Focal Length (with Extender)		7.5–180mm 15.0–360mm (2.0x)	
	Model Name		HJ14ex4.3B ITS-ME	
	Zoom Ratio		14x	
	Image Size		2/3"	
	Built-in Extender		2.0x	
	Range of Focal Length (with Extender)		4.3–60mm 8.6–120mm (2.0x)	

HD 2/3"		
HDTV	KJ22ex7.6B 	
	Model Name	
	Zoom Ratio	
	Image Size	
	Built-in Extender	
	Range of Focal Length (with Extender)	
	KJ17ex7.7B 	
	Model Name	
	Zoom Ratio	
	Image Size	
	Built-in Extender	
	Range of Focal Length (with Extender)	

HDTV	HD 2/3"	HD 1/2"	HD 1/3"	
	KJ20x8.2B	KH20x6.4	KT20x5B	
				
	Appearance			
	Model Name	KJ20x8.2B KTS	KH20x6.4 KTS*2	KT20x5B KTS
	Zoom Ratio	20x	20x	20x
	Image Size	2/3"	1/2"	1/3"
	Built-in Extender	N/A	N/A	N/A
Range of Focal Length	8.2-164mm	6.4-128mm	5-100mm	

\*2: Specifically designed for Sony HDC-X300/X310.



Broadcast ENG/EFP, Pro Video Lens Optical Accessories



Adaptor Type Converters/Attachments

		CJ45ex13.6B CJ45ex9.7B	CJ12ex4.3B CJ14ex4.3B HJ14ex4.3B KJ10ex4.5B HJ18ex28B HJ40ex14B HJ40ex10B HJ21ex7.5B	HJ17ex6.2B KJ13x6B KH13x4.5	HJ15ex8.5B	CJ20ex7.8B CJ24ex7.5B HJ24ex7.5B KJ22ex7.6B	CJ18ex7.6B HJ18ex7.6B KJ20x8.2B KT17ex4.3B KJ17ex7.7B KT20x5B KH20x6.4
CATEGORY	MODEL						
TELESIDE CONVERTER *1	T15HG					●	●
WIDE CONVERTER *1	W80HD					●*2	●*2
	W80HG					●	●
WIDE ATTACHMENT *1	WA75HG					●	●
FISHEYE ATTACHMENT *1	FEA60HG					●	●
ADAPTER RING	ACC-85 III						●
	ACC-98 II					●	
CLOSE-UP LENS	82CL-UP800H				●*3		●*3
	82CL-UP1300H				●*3		●*3
	105CL-UP900H					●*2,*3	
	105CL-UP800HD					●*2	
	105CL-UP800HG					●	
UV FILTER	UV / 82				●		●
	UV / 94					●	
	UV / 105			●		●	
	UV / 127		●				
	UV / 127-H	●	●				
CLEAR FILTER	CL / 127		●				
	CL/127-H	●	●				
POLARIZATION FILTER	PL / 82				●		●
	PL / 105			●		●	
	PL / 127		●				

\*1: An adaptor ring is necessary to attach it to the lens. \*2: Can not be used with CJ20ex/CJ18ex/CJ14ex \*3: Close-up lens supported for SD.  
• The number of each filter type name, indicates the screw diameter. Screw pitch: screw diameter 82 mm = 0.75 mm, thread diameter 127 mm = 0.75 mm, thread diameter other than the left = 1.00 mm.

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	Image Size Conversion			Electronic Conversion
		Lens*4	Camera	Shift Ratio to Telephoto Side	
	LO-32BMT	2/3" B4 Mount	1/2" Sony*5	Approx. 1.4x	N/A
	LCV-40B	2/3" B4 Mount	1/2 Standard Mount*6	Approx. 1.4x	N/A
	LCV-42T	2/3" B4 Mount	1/3" Standard Mount	Approx. 1.8x	N/A
	LCV-41E	2/3" B4 Mount	Sony PMW-EX3	Approx. 1.4x	Lens Cable (12 pin) EX3 Hot Shoe (14 pin)

\*4: The converters are to be used with lenses weighing less than 4.4 lbs (2.0kg). \*5: Sony's Hot Shoe mount camera, excluding PMW-EX3.  
\*6: 1/2" Camera of standard type mount (Panasonic, JVC, Grass Valley).

Broadcast ENG/EFP, Pro Video Lens Optical Accessories

Converter/Attachments

TELE-SIDE CONVERTER



- The use of the telephoto converter would shift the focal length of a lens with 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 eclipsed at wide angle.
- The minimum object distance becomes 2.25x that of the original lens.

CHANGE IN FOCAL LENGTH

Model	M.O.D.	Eclipse Point
HJ24ex7.5B	1.8m	f:100mm
KJ17ex7.7B	1.35m	f:60mm

FISH-EYE ATTACHMENT



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

CHANGE IN FOCAL LENGTH

Model	Master Lens	With Fish-Eye Attachment
HJ24ex7.5B	7.5-180mm	4.5mm
KJ17ex7.7B	7.7-131mm	4.6mm

POLARIZED LIGHT FILTER



- Used to intercept light reflected from the surface of water or glass.
- The polarizer is threaded on to a lens hood.

Extenders



- The X2.0-B4 extender mounts in between a camera and lens to magnify an image.
- The extender doubles the focal length of the master lens and doubles the F-number.

Model	Applicable Lenses
X2.0-B4	Applicable to all B4 type mount Canon 2/3" lenses.

WIDE CONVERTER



- The wide converter W80/W80Y-85 would shift the focal length of a lens with a factor of 0.8x.
- F No. of the original lens is not affected.
- The minimum object distance becomes 0.64x with the W80/W80Y-85.

CHANGE IN FOCAL LENGTH

Model	Master Lens	With Wide Converter
HJ24ex7.5B	7.5-180mm	6.0-144mm
KJ17ex7.7B	7.7-131mm	6.2-104.8mm

WIDE ATTACHMENT



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

CHANGE IN FOCAL LENGTH

Model	Master Lens	With Wide Attachment
HJ24ex7.5B	7.5-180mm	5.6mm
KJ17ex7.7B	7.7-131mm	5.8mm

Broadcast ENG/EFP, Pro Video Lens Optical Accessories

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:  
New minimum object distance =  $fc \times S / (fc + S)$   
fc = Focal length of the close-up lens  
S = M.O.D.\* of the master lens

Imaging range for KJ17ex7.7B with close-up lenses

		82CL-UP800H				82CL-UP1300H			
KJ17ex7.7B (16:9)		Tele end : 131mm		Wide end : 7.7mm		Tele end : 131mm		Wide end : 7.7mm	
	Focusing Scale (mm)	∞	0.6	∞	0.6	∞	0.6	∞	0.6
	Object Distance (mm)	800	343	800	343	1300	411	1300	411
	Object Dimensions (mm)	58x33	24x14	989x556	376x212	95x53	29x16	1634x919	455x256

Model	Applicable Lenses
82CL-UP800H*1	CJ18ex7.6B, HJ18ex7.6B, HJ15ex8.5B, KJ17ex7.7B, KJ20x8.2B, KH20x6.4, KT17ex4.3B, KT20x5
82CL-UP1300H*1	CJ18ex7.6B, HJ18ex7.6B, HJ15ex8.5B, KJ17ex7.7B, KJ20x8.2B, KH20x6.4, KT17ex4.3B, KT20x5
105CL-UP900H*1	CJ24ex7.5B, HJ24ex7.5B, KJ22ex7.6B
105CL-UP800HG	CJ20ex7.8B , CJ24ex7.5B, HJ24ex7.5B, KJ22ex7.6B

\*M.O.D. = Minimum Object Distance.  
\* 1: It is not recommended for 4K shooting.

Broadcast ENG/EFP, Pro Video Lens Accessories

Compatible Zoom/Focus Control List

OPERATION	CATEGORY	MODEL	CJ45e×13.6B CJ45e×9.7B HJ18×28B HJ40e×14B HJ40e×10B	CJ20e×7.8B CJ12e×4.3B CJ24e×7.5B CJ18e×7.6B CJ14e×4.3B HJ24e×7.5B HJ21e×7.5B HJ18e×7.6B	HJ17e×6.2B HJ15e×8.5B HJ14e×4.3B KJ22e×7.6B KJ17e×7.7B KJ10e×4.5B KT17e×4.3B	KJ20e×8.2B KJ13×6B KT20×5B KH20×6.4B KH13×4.5B
FOCUS	FOCUS DEMAND	FPD-400D	●	●		●*1
	DRIVE UNIT	FPM-77				●
		FPM-420D			● (IRS,KRS)	
	FLEX CONTROLLER	FFC-200	●*3	●*2		●
		FFC-15				●
	FLEXIBLE CABLE (32 INCHES)	FC-40	●*3	●*2		●
		FFM-100		●*2		
ZOOM	OUTLET	FM-12				●
		FFM-300	●*3			
	ZOOM DEMAND	ZSD-300D	●	●		●*1
	PROVIDEO ZOOM	ZSD-15MII				●
	SERVO GRIP	ZSG-200M	●*1	●*1		●

\* 1: A unit that can be attached using a conversion cable.  
\* 2: It is not recommended for 4K shooting.  
\* 3: Can not be used with CJ45ex9.7B and CJ45ex13.6B.

Broadcast ENG/EFP, Pro Video Lens Optical Accessories

Focus Controller



Zoom Controller



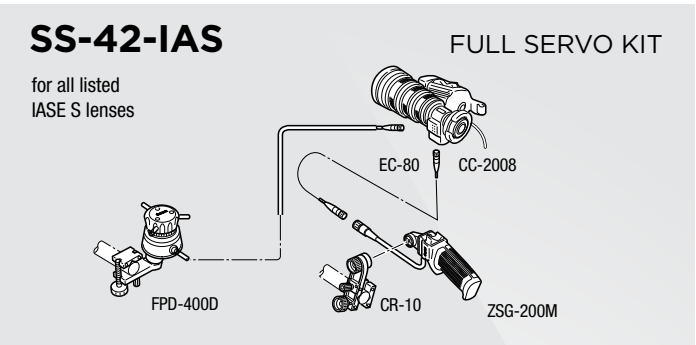
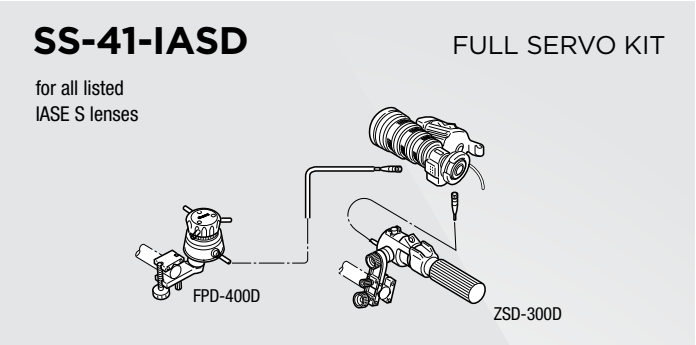
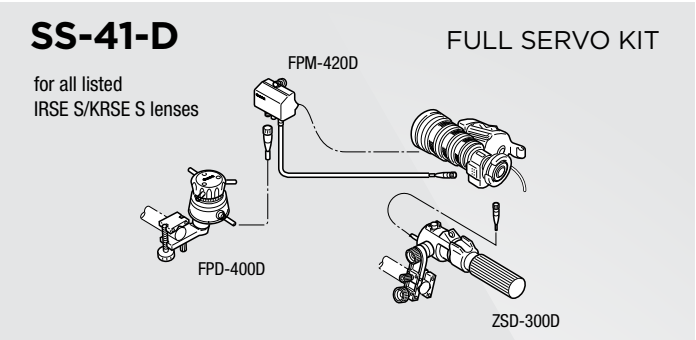
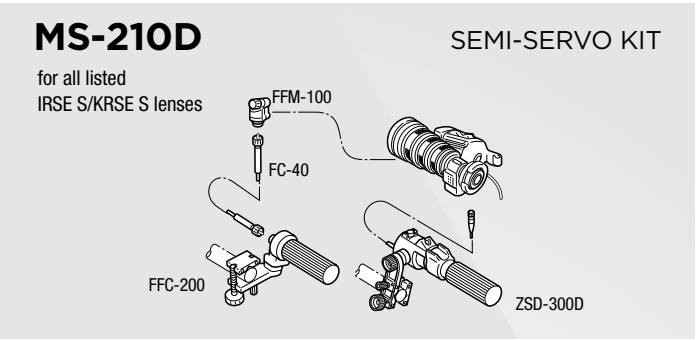
Conversion Cable is Necessary When Using with the Following Combinations

Model Name	Applicable Lens	Adapter Cable	Lens Side Pin#	Control Side Pin#
FPM-420D	Analog Drive Lens	CC-1220	12	20
FPD-400D		CC-0620	6	20
ZSD-300D		CC-0820	8	20

Control Accessories for Digital Drive ENG/EFP Lenses

KJ22ex7.6B / KJ17ex7.7B / KJ10ex4.5B / KT17ex4.3B / HJ14ex4.3B / HJ15ex8.5B KRSE S / HJ17ex6.2B / HJ18ex7.6B / HJ18ex28B / HJ21ex7.5B / HJ24ex7.5B / HJ40ex10B / HJ40ex14B / CJ14ex4.3B / CJ18ex7.6B / CJ24ex7.5B / CJ45ex9.7B / CJ45ex13.6B / CJ12ex4.3B / CJ20ex7.8B

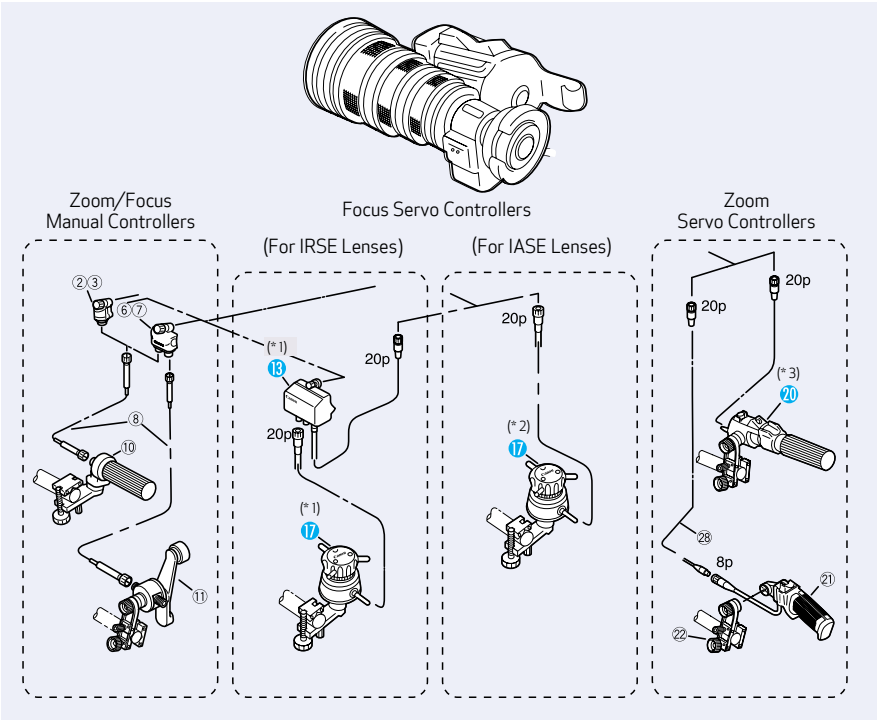
Recommended Kit Configurations





DIGITAL Control Accessories of Digital Drive ENG/EFP Lenses

Applicable Component Detail



#	UNIT	DESCRIPTION
②	FFM-100	Flex Focus Module
③	FFM-300	Flex Focus Module
⑥	FFM-200 <sup>*1</sup>	Flex Dual Module
⑦	FFM-400 <sup>*1,2</sup>	Flex Dual Module
⑧	FC-40	Flex Cable
⑩	FFC-200	Flex Focus Controller
⑪	FZC-100 <sup>*1</sup>	Flex Zoom Controller
⑬	FPM-420D <sup>*1</sup>	Focus Positional Servo Module
⑰	FPD-400D <sup>*1</sup>	Focus Positional Demand
⑳	ZSD-300D <sup>*1</sup>	Zoom Demand
㉑	ZSG-200M	Zoom Servo Grip
㉒	CR-10	Clamper
㉔	CC-2008	20p-8p Cable

<sup>\*1</sup>: FZC-100, FFM-200, FFM-400, FPD-400, FPM-420 and ZSD-300A/M are discontinued.

<sup>\*2</sup>: Analog FPD-400 is also applicable, however, CC-2006 conversion cable is necessary to connect between IASD/IASE Digital Drive Lens and FPD-400.

<sup>\*3</sup>: Analog ZSD-300A/M is also applicable.

● The controllers support the new DD functions.

Applicable Kit Detail

For IRSE Type Lenses

	Kit Name	Zoom		Focus	
		System	Component	System	Component
Zoom Servo Only	(ZR-1D)	ZR-1D	20	—	—
	—	ZR-2(A)	21, 22, 28	—	—
Semi-Servo	MS-210D	ZR-1D	20	FR-2	2, 8, 10
	MS-220	ZR-2(A)	21, 22, 28	FR-2	2, 8, 10
Full Servo	SS-41-D	ZR-1D	20	FPS-4D	13, 17
Full Manual	—	FZC-1	6, 8, 11	FR-2 (w/o 2)	8, 10

For IASE Type Lenses (Except HJ40ex)

	Kit Name	Zoom		Focus	
		System	Component	System	Component
Zoom Servo Only	(ZR-1D)	ZR-1D	20	—	—
	—	ZR-2(A)	21, 22, 28	—	—
Semi-Servo	MS-210D	ZR-1D	20	FR-2	2, 8, 10
	MS-220	ZR-2(A)	21, 22, 28	FR-2	2, 8, 10
Full Servo	SS-41-IASD	ZR-1D	20	FPS-4D	17
	SS-42-IASD	ZR-2(A)	21, 22, 28	FPS-4D	17
Full Manual	—	FZC-1	6, 8, 11	FR-2 (w/o 2)	8, 10

For HJ40ex14B and HJ40ex10B

	Kit Name	Zoom		Focus	
		System	Component	System	Component
Zoom Servo Only	—	ZR-1D	20	—	—
	—	ZR-2(A)	21, 22, 28	—	—
Semi-Servo	—	ZR-1D	20	FR-2	3, 8, 10
	—	ZR-2(A)	21, 22, 28	FR-2	3, 8, 10
Full Servo	SS-41-IASD	ZR-1D	20	FPS-4D	17
	SS-42-IASD	ZR-2(A)	21, 22, 28	FPS-4D	17
Full Manual	—	FZC-1	6, 8, 11	FR-2 (w/o 2)	8, 10

Recommended kit configuration.

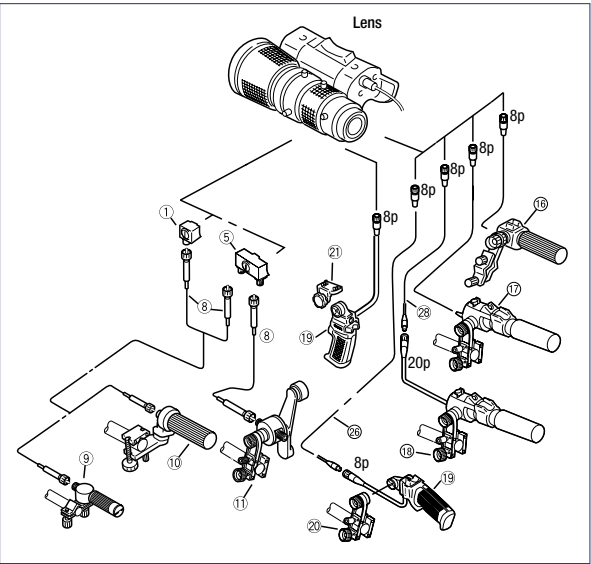
ANALOG Control Accessories for Analog Drive HDgc Lenses

Recommended Kit Configuration



<sup>\*1</sup>: "A" or "M" type demands depend upon camera. Type "A" demands are no longer available from Canon.

Applicable Component Detail



#	UNIT	DESCRIPTION
①	FM-12	Flex Focus Module
⑤	FM-70 <sup>*</sup>	Flex Dual Module
⑧	FC-40	Flex Cable
⑨	FFC-15	Flex Focus Controller
⑩	FFC-200	Flex Focus Controller
⑪	FZC-100 <sup>*</sup>	Flex Zoom Controller
⑯	ZSD-15A II /M II Zoom Demand <sup>*3</sup> A (A or M types, depends on applicable camera)	M
⑰	ZSD-300A/M Zoom Demand <sup>*3</sup> A (A or M types, depends on applicable camera)	M
⑱	ZSD-300D	Zoom Demand
⑲	ZSG-200A/M Zoom Servo Grip <sup>*3</sup> A (A or M types, depends on applicable camera)	M
㉑	CR-10	Clamper
㉒	GA-70 <sup>*</sup>	Grip Adapter
㉔	EC-80	Zoom Extension Cable (8P)
㉔	CC-0820	Conv. Cable (8pM-20pF)

<sup>\*1</sup>FM-70, FZC-100, and GA-70 are discontinued.

<sup>\*3</sup>: ZSD-15A II, ZSD-300A/M, ZSG-200A, and FPD-400 are not available from Canon stock.

<sup>\*5</sup>: Consult Product Admin for more information.

Applicable Kit Detail

	Kit Name	Zoom		Focus	
		System	Component	System	Component
Zoom Servo Only	—	ZSD-15	16	—	—
	—	ZR-1	17	—	—
	—	ZR-2(A)	19, 20, 26	—	—
	—	ZR-2(B)	19, 21 <sup>*</sup>	—	—
Semi-Servo	MS-15	ZSD-15	16 <sup>**</sup>	FRC-15	1, 8, 9 <sup>**</sup>
	MS-21	ZR-1	17	FR-2	1, 8, 10
	MS-21D	ZR-1D	18, 28	FR-2	1, 8, 10
	MS-22	ZR-2(A)	19, 20, 26	FR-2	1, 8, 10
Full Manual	FZC-1	FZC-1	5 <sup>*</sup> , 8, 11	FR-2(w/o 1)	8, 10

<sup>\*</sup> ⑤ & ㉒ are not applicable to YH14x7.3 and YH16x7.

<sup>\*\*</sup> In USA, ⑯ and ⑨ are available only as MS-15 kit configuration and not as individual products.

Recommended kit configuration.

# Cinema Lens Lineup



## ZOOM Series

Canon Cinema Zoom Lenses offer superb optical performance that exceeds 4K resolution and are designed to meet the most demanding of high-end productions. They combine fluorite and aspherical lens elements, the latest in advanced optical coatings and superior lens designs for outstanding edge-to-edge image quality.



## COMPACT ZOOM Series

Canon Cinema Compact Zoom Lenses offer 4K resolution in form factors that enable more flexible, less intrusive shooting. They also feature a constant T-number (2.8) throughout their zoom ranges as well as the latest advancements in lens design for outstanding image quality and minimal distortion.



## PRIME Series

The flexible series of Canon Cinema Prime Lenses offers spectacular 4K-image quality and a full-frame image circle, in lightweight, compact designs. They feature high optical speed, produce remarkably sharp 4K images and superb contrast, and maintain tightly controlled focus breathing and geometric distortion. Low T-numbers enable better low-light shooting.



## CINE-SERVO Series

Canon CINE-SERVO Lenses support cinema production as well as 4K content creation for broadcast. Featuring a servo drive unit, they can be ideal for shooting scenarios where mobility is key.

## COMPACT-SERVO Series

COMPACT-SERVO lenses combine the benefits of compact size and light weight for outstanding mobility. Designed to shoot video, these lenses combine the functionality of our EF lenses with the video shooting features of our Cinema lenses.



## ZOOM Lens Series

P. 36

CN-E14.5-60mm T2.6 L S  
CN-E14.5-60mm T2.6 L SP



CN-E30-300mm T2.95-3.7 L S  
CN-E30-300mm T2.95-3.7 L SP



## COMPACT ZOOM Lens Series

P. 36

CN-E15.5-47mm T2.8 L S  
CN-E15.5-47mm T2.8 L SP



CN-E30-105mm T2.8 L S  
CN-E30-105mm T2.8 L SP



## PRIME Lens Series

P. 37



CN-E14mm T3.1 L F



CN-E20mm T1.5 L F



CN-E24mm T1.5 L F



CN-E35mm T1.5 L F



CN-E50mm T1.3 L F



CN-E85mm T1.3 L F



CN-E135mm T2.2

## CINE-SERVO Lens Series

P. 38

CN7x17 KAS S/E1  
CN7x17 KAS S/P1



CN20x50 IAS H/E1  
CN20x50 IAS H/P1



## COMPACT-SERVO Lens Series

P. 38

CN-E18-80mm T4.4 L IS KAS S



CN-E70-200mm T4.4 L IS KAS S



ZSG-C10



MEETING THE DEMANDS OF THE 4K ERA

# Canon Cinema Lens Technology

## Optical Performance

### Crystal Clear Canon Optical Technology

Super 35mm,\* High quality 4K/HDR

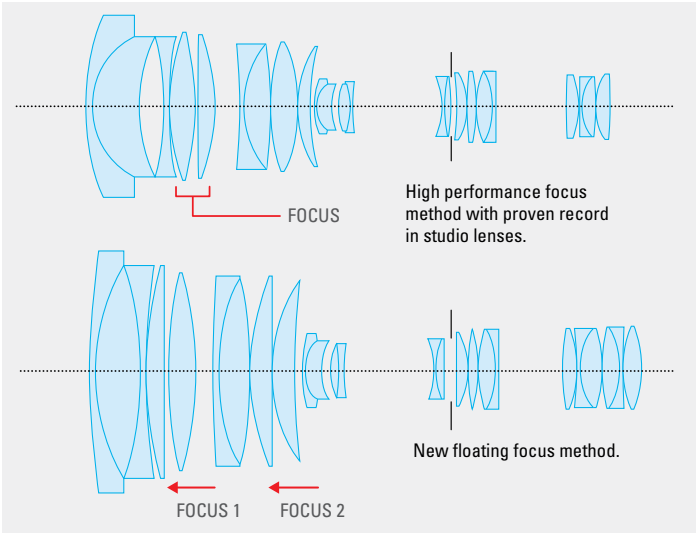
From the center to the periphery of our cinema lenses, a high-quality 4K/HDR image is achieved for both single focus and zoom lenses within the entire zoom range. Canon’s optical technologies are combined to help correct various aberrations and provide high contrast while achieving a high resolution of about 80 lines/mm throughout the Super 35 mm sensor.

*\*The PRIME Lens series also supports the image size of Full Frame or APS-H.*



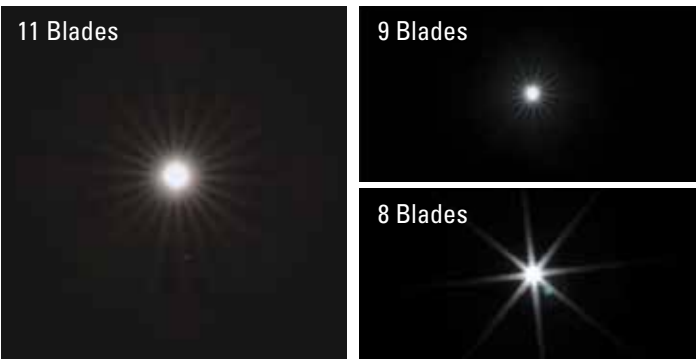
### Focus Breathing Suppression

Focus breathing is caused when the focus group moves and exerts a “zooming” effect. In order to prevent this, cinema lenses implement a 3-group inner focus method and a new floating method to help minimize field angle fluctuation and achieve stable framing.



### 11 Blade Aperture

Halos from points of light at night or from rays of sunlight in shots that show the sun take on the shape of the Iris blades. The odd number of blades make the iris aperture look circular even when the Iris is contracted, enabling beautiful, round highlight bokeh.



### Warm Color Balance

Cinema lens color balance, ideal for movie production, reproduces warm skin tones. Color balance is strictly uniform across all Canon cinema lenses making lens substitution during the same scene possible. Anti-reflection film technology, including super spectral coatings and thorough corrections for slight color variations caused by glass components allow Canon lenses to achieve this effect.



### Flange Back Adjustment

A flange back adjustment mechanism is installed on the lens mounts to allow for back focus adjustments.

*\* Excluding PRIME Lens series.*

CANON RECEIVED A  
**TECHNOLOGY & ENGINEERING EMMY® IN 2017**  
FOR “**LARGE FORMAT 4K ZOOM LENSES**”  
FROM THE NATIONAL ACADEMY OF TELEVISION ARTS AND SCIENCES.

### Luminous Index

The focus index on the front lens barrels is printed with luminescent paint to improve visibility at night and in dark studio conditions.



### Dust/Splash Resistant Seals and Casing\*

Our prime lenses use dust and splash resistant rubber gaskets at the casing joints.

*\* Lenses are not designed to be submersible in water or exposed to heavy rain.*



### Cinema Lens Focal Distance Table

ZOOM Lenses				
Angle of view horizontal (1.78:1)*1	79.2°	43.6°	22.6°	4.6°
Focal Distance (mm)	14.5	30	60	300
CN-E14.5-60mm T2.6 L				
CN-E30-300mm T2.95-3.7 L				

COMPACT ZOOM Lenses				
Angle of view horizontal (1.78:1)*2	75.5°	43.6°	28.6°	13.0°
Focal Distance (mm)	15.5	30	47	105
CN-E15.5-47mm T2.8 L				
CN-E30-105mm T2.8 L				

PRIME Lenses							
Angle of view horizontal (1.78:1)*2	82.6°	63.2°	54.3°	38.7°	27.6°	16.5°	10.4°
Focal Distance (mm)	14	20	24	35	50	85	135
CN-E14mm T3.1 L F							
CN-E20mm T1.5 L F							
CN-E24mm T1.5 L F							
CN-E35mm T1.5 L F							
CN-E50mm T1.3 L F							
CN-E85mm T1.3 L F							
CN-E135mm T2.2 L F							

CINE-SERVO Lenses				
Angle of view horizontal (1.78:1)*2	71.8°	27.6°	11.7°	1.4°
Focal Distance (mm)	17	50	120	1000
CN7×17 KAS S				
CN20×50 IAS H				

COMPACT-SERVO Lenses				
Angle of view horizontal (1.78:1)*2	68.7°	19.9°	17.5°	7.0°
Focal Distance (mm)	18	70	80	200
CN-E70-200mm T4.4 L IS KAS S				
CN-E18-80mm T4.4 L IS KAS S				

\*1: When the screen size is 24.0 × 13.5 mm. \*2: When the screen size is 24.6 × 13.8 mm.

ZOOM / COMPACT ZOOM Lens Series: Highlights

Easy-to-Read Controls

Focus, Zoom, and Iris markings are provided on angled surfaces. These markings are easy to read from behind the camera.

Support Industry-Standard Cameras

Covers Super 35mm and APS-C sensors.

Light, Compact

Small and light to meet a variety of shooting needs.

Marked on Both Sides

Lenses are marked on both sides. This makes markings visible from either side of the lens.

Switchable Unit for Focus Marking

The outer piece on marked focus rings can be switched from non-metric to metric labeling.

Comfortable Usability

Control rings maintain the right amount of resistance while offering exceptional usability with consistent operating torque.

Inner Focus

Helps minimize focus-induced changes in the angle of view.

Unified Front Lens Diameter, Gear Position

Uniform gear positions within the same categories eliminate the need for accessory gear position adjustment when switching lenses.

Zoom Lens Series



Compact Zoom Lens Series



Flange-Back Adjustment Mechanism

A covered flange-back adjustment mechanism is included, with broadcast applications in mind.



Attractive Bokeh

11-Blade Circular Aperture enables soft, beautiful background bokeh.

PRIME Lens Series: Highlights

Covers Full-frame, Super 35mm and APS-C Sensors

The lenses are also compatible with the large imaging area of cameras equipped with a full-size 35mm-equivalent CMOS sensor.

Light, Compact

Small and light among many conventional cinema lenses, to meet a variety of shooting needs.

Standard Accessories Supported

Supports industry-standard accessories such as power-drive devices and matte boxes.

Accepts 105mm filters (except for 14mm)

PL or other individual filters 105mm in diameter can be attached to the end of the lens, enabling filter work in handheld shooting or other scenarios without using a matte box.

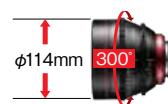
Fast Aperture

Enables shooting with the shallow DOF and broad bokeh that large sensors offer.

Unified Front Lens Diameter, Gear Position

Compact Zoom and Prime lenses have the same front lens diameter and consistent gear positions, so lenses within each series can be switched without adjusting the rig setup.

Prime Lens Series



Attractive Bokeh

11-Blade Circular Aperture enables soft, beautiful background bokeh.

Switchable Unit for Focus Marking

The outer piece on marked focus rings can be switched from non-metric to metric labeling.

Consistent Torque

Control Rings maintain the right amount of resistance while offering outstanding usability with consistent operating torque.



CINE-SERVO 50-1000mm: Highlights

Support Industry-Standard Cameras

Covers Super 35mm and APS-C sensors.  
Covers Full Frame and APS-H with Built-in 1.5x Extender.

Robust and Durable Housing Structure

20x Zoom Magnification

Ultra Telephoto

50-1000mm Focal Range

Removable Servo Drive Unit

Removable servo drive unit with various user setting capabilities.

Accessory Connectors

Three 20-pin connectors for externally operated accessories and a 16-bit metadata output for virtual studio systems.

Multiple Communication Capability with Compatible Cameras

11-Blade Iris Provides Natural Bokeh

Designed for Cinema and Broadcast Applications

Compact and Lightweight

Compact and lightweight lens available in an EF mount and PL mount that can be converted at an authorized Canon service facility.

Support High Quality 4K/HDR Shooting

High optical performance with support for Super35mm large format cameras.

Built-In 1.5x Optical Extender

Cover the image size of Full Frame or APS-H Camera.



EF Mount



PL Mount

CINE-SERVO 17-120mm: Highlights

Support Industry-Standard Cameras

Covers Super 35mm and APS-C sensors.

High Durability and Ruggedness

7x Zoom Magnification

Wide 17-120mm Focal Range

Ergonomic Design

Ergonomically designed drive unit for ease of operation.

Removable Servo Drive Unit

Removable servo drive unit with various user setting capabilities.

Accessory Connectors

Three 20-pin connectors for externally operated accessories and a 16-bit metadata output for virtual studio systems.

Multiple Communication Capability with Compatible Cameras

11-Blade Iris Provides Natural Bokeh

Designed for Cinema and Broadcast Applications

Compact and Lightweight

Compact and lightweight lens available in an EF mount and PL mount that can be converted at an authorized Canon service facility.

Support High Quality 4K/HDR Shooting

High optical performance with support for Super35mm large format cameras.



EF Mount



PL Mount



Drive Unit

Removable Drive Unit

Canon CINE-SERVO lenses include a drive unit that provides the same user experience as found in our broadcast zoom lenses. Removing the drive unit allows for full manual operation of the lenses.



No Initialization

Initialization of the drive unit is not required at power-on. Initialization is required at power-on for conventional drive units. Immediate startup helps contribute to more efficient shooting.

Compatible With Standard Broadcast Demands

Demand Supported

Compatible with Canon's standard broadcast industry demands such as ZSD-300D and FPD-400D. Canon's 8-pin demand\* can be connected via a conversion cable.

Enables High-Precision, Natural Composition

Virtual Studio System

A high precision 16-bit encoder (zoom and focus only) makes connection to various virtual studio systems possible. Three, 20-pin terminals allow a virtual connection even when zoom and focus demands are connected.

*\* Iris operation is also possible by connecting FDJ-P01 via conversion cable. It will be selected as either virtual output or iris operation.*



20-PIN CONNECTOR

Peripheral Illumination Correction

EF Mount Communication Protocol Support<sup>1</sup>

Information communication is possible via CINEMA EOS SYSTEM cameras and mounts. It is possible to record lens information at the time of shooting and peripheral illumination correction<sup>2</sup>.

*\*1: ZOOM Lenses are excluded. Only EF mounted lenses are supported.  
\*2: Some lenses require a camera firmware update. Some lenses are scheduled to be handled by firmware update.*

Supports Broadcast Industry Standards

12-Pin Serial Communication\*

Supports 12-pin serial communication which is a broadcasting communication standard.

*\* Applicable lens: CINE-SERVO Lens series.  
It is necessary for the camera side to support 12 pin serial communication.*

Supports Communication Standards of Film Production Industry

/i Technology Compatible\*

Canon's PL-mount CINE-SERVO lenses are compatible with Cooke's "/i Technology" communication standard which has been widely adopted throughout the video production industry. Focus/zoom/aperture position data can be sent to the corresponding camera, recorded and displayed.

*\* Applicable lens: PL mount lens of CINE-SERVO Lens series only.  
The camera side must support /i Technology.  
Communication is possible when drive unit is installed.*

COMPACT-SERVO Lens Series: Highlights

Refined Iris Mechanism

- Seamless Manual Control Capability
- 9-Blade Iris
- Iris Closing

Compatible with EF-mount Cameras

Supports a Wide Range of Accessories

Practical Layout of Switches

Compact and Lightweight for Increased Mobility

Dual Pixel CMOS Auto-Focus (DAF)

- Enhanced Servo Drive Unit
- Servo Control Capability for all Zoom, Focus, and Iris
  - Compatible with broadcast style servo lens controllers
  - Optional ZSG-C10 Grip

High Level 4K Optical Performance

Covers Super 35mm and APS-C Sensors



Image Stabilization

Minimized Focus Breathing

4K

COMPACT-SERVO

ZOOM Lens Series

Appearance		<div>CN-E14.5-60mm T2.6 L S</div> <div>CN-E14.5-60mm T2.6 L SP</div> 		<div>CN-E30-300mm T2.95-3.7 L S</div> <div>CN-E30-300mm T2.95-3.7 L SP</div> 	
Model Name		CN-E14.5-60mm T2.6 L S	CN-E14.5-60mm T2.6 L SP	CN-E30-300mm T2.95-3.7 L S	CN-E30-300mm T2.95-3.7 L SP
Mount		EF Mount	PL Mount	EF Mount	PL Mount
Zoom Ratio		4.1×		10×	
Focal Length		14.5 ~ 60mm		30 ~ 300mm	
Max. Relative Aperture (T-Number)		T2.6 14.5 ~ 60mm		T2.95 30 ~ 240mm / T3.7 300mm	
Iris Blades		11		11	
Angle of View	1.5:1 36.0x24.0mm	79.2°×49.9° 14.5mm 22.6°×12.8° 60mm <sup>*1</sup>		43.6°×25.4° 30mm 4.6°×2.6° 300mm <sup>*1</sup>	
	1.9:1 26.2x13.8mm	80.6°×50.9° 14.5mm 23.2°×13.1° 60mm <sup>*2</sup>		44.6°×25.9° 30mm 4.7°×2.6° 300mm <sup>*2</sup>	
M.O.D. (Minimum Object Distance)		0.70m/2'4"		1.5m/5'	
Object Dimensions at M.O.D	1.5:1 36.0x24.0mm	65.2×36.7cm 14.5mm 15.0×8.4cm 60mm <sup>*1</sup>		98.8×55.6cm 30mm 9.6×5.4cm 300mm <sup>*1</sup>	
	1.9:1 26.2x13.8mm	66.9×37.5cm 14.5mm 15.4×8.6cm 60mm <sup>*2</sup>		101.3×56.8cm 30mm 9.9×5.6cm 300mm <sup>*2</sup>	
Image Size		29.6mm		29.6mm	
Front Diameter		136.0mm		136.0mm	
Approx. Size (WxHxL)		5.35x6.42x12.83 in. (136.0×163.1×326.0mm)	5.35x6.42x12.52 in. (136.0×163.1×318.0mm)	5.67x6.58x13.78 in. (144.0×167.1×350.1mm)	5.67x6.58x13.47 in. (144.0×167.1×342.1mm)
Approx. Weight		9.9 lbs (4.5kg)		12.79 lbs (5.8kg)	

※ Lenses compatible with Super 35mm Sensor cameras.  
\*1: Aspect ratio 1.78: 1, Screen size 24.0 x 13.5 mm. \*2: Aspect ratio 1.78:1, Screen size 24.6 x 13.8 mm

COMPACT ZOOM Lens Series

Appearance		<div>CN-E15.5-47mm T2.8 L S</div> <div>CN-E15.5-47mm T2.8 L SP</div> 		<div>CN-E30-105mm T2.8 L S</div> <div>CN-E30-105mm T2.8 L SP</div> 	
Model Name		CN-E15.5-47mm T2.8 L S	CN-E15.5-47mm T2.8 L SP	CN-E30-105mm T2.8 L S	CN-E30-105mm T2.8 L SP
Mount		EF Mount	PL Mount	EF Mount	PL Mount
Zoom Ratio		3×		3.5×	
Focal Length		15.5 ~ 47mm		30 ~ 105mm	
Max. Relative Aperture (T-Number)		T2.8 15.5 ~ 47mm		T2.8 30 ~ 105mm	
Iris Blades		11		11	
Angle of View	1.5:1 36.0x24.0mm	75.5°×47.1° 15.5mm 28.6°×16.3° 47mm <sup>*1</sup>		43.6°×25.4° 30mm 13.0°×7.4° 105mm <sup>*1</sup>	
	1.9:1 26.2x13.8mm	80.4°×48.0° 15.5mm 31.1°×16.7° 47mm <sup>*2</sup>		47.2°×25.9° 30mm 14.2°×7.5° 105mm <sup>*2</sup>	
M.O.D. (Minimum Object Distance)		0.50m/1'8"		0.60m/2'	
Object Dimensions at M.O.D	1.5:1 36.0x24.0mm	43.6×24.5cm 15.5mm 14.1×7.9cm 47mm <sup>*1</sup>		32.3×18.2cm 30mm 9.3×5.2cm 105mm <sup>*1</sup>	
	1.9:1 26.2x13.8mm	47.6×25.1cm 15.5mm 15.4×8.1cm 47mm <sup>*2</sup>		35.3×18.6cm 30mm 10.2×5.4cm 105mm <sup>*2</sup>	
Image Size		31.4mm		31.4mm	
Front Diameter		114mm		114mm	
Approx. Size (WxHxL)		4.49x4.92x8.74 in. (114.0×125.0×222.0mm)	4.49x4.92x8.43 in. (114.0×125.0×214.0mm)	4.49x4.92x8.58 in. (114.0×125.0×218.0mm)	4.49x4.92x8.26 in. (114.0×125.0×210.0mm)
Approx. Weight		4.85 lbs (2.2kg)		4.85 lbs (2.2kg)	

※ Lenses compatible with Super 35mm Sensor cameras.  
\*1: Aspect ratio 1.78:1, Screen size 24.0 x 13.5 mm. \*2: Aspect ratio 1.78:1, Screen size 24.6 x 13.8 mm

PRIME Lens Series

Appearance		<div>CN-E14mm T3.1 L F</div> 	<div>CN-E20mm T1.5 L F</div> <div>NEW</div> 	<div>CN-E24mm T1.5 L F</div> 
Model Name		CN-E14mm T3.1 L F	CN-E20mm T1.5 L F	CN-E24mm T1.5 L F
Mount		EF Mount	EF Mount	EF Mount
Zoom Ratio		—	—	—
Focal Length		14mm	20mm	24mm
Max. Relative Aperture (T-Number)		T3.1	T1.5	T1.5
Iris Blades		11	11	11
Angle of View	1.5:1 36.0x24.0mm	104.3°×81.2° <sup>*1</sup>	84.0°×61.9° <sup>*1</sup>	73.7°×53.1° <sup>*1</sup>
	1.7.8:1 24.6x13.8mm	82.6°×52.5° <sup>*2</sup>	63.2°×38.1° <sup>*2</sup>	54.3°×32.1° <sup>*2</sup>
M.O.D. (Minimum Object Distance)		0.20m / 8"	0.30m / 12"	0.30m / 12"
Object Dimensions at M.O.D	1.5:1 36.0x24.0mm	24.8×16.5cm <sup>*1</sup>	33.8×22.5cm <sup>*1</sup>	28.8×19.2cm <sup>*1</sup>
	1.7.8:1 24.6x13.8mm	16.9×9.5cm <sup>*2</sup>	23.1×13.0cm <sup>*2</sup>	19.7×11.0cm <sup>*2</sup>
Front Diameter		114mm	114mm	114mm
Approx. Size (WxHxL)		4.66x4.66x3.70 in. (118.4×118.4×94.0mm)	4.66x4.66x4.0 in. (118.4×118.4×101.5mm)	4.66x4.66x4.0 in. (118.4×118.4×101.5mm)
Approx. Weight		2.65 lbs (1.2kg)	2.65 lbs (1.2kg)	2.65 lbs (1.2kg)

Appearance		<div>CN-E35mm T1.5 L F</div> 	<div>CN-E50mm T1.3 L F</div> 	<div>CN-E85mm T1.3 L F</div> 
Model Name		CN-E35mm T1.5 L F	CN-E50mm T1.3 L F	CN-E85mm T1.3 L F
Mount		EF Mount	EF Mount	EF Mount
Zoom Ratio		—	—	—
Focal Length		35mm	50mm	85mm
Max. Relative Aperture (T-Number)		T1.5	T1.3	T1.3
Iris Blades		11	11	11
Angle of View	1.5:1 36.0x24.0mm	54.4°×37.8° <sup>*1</sup>	39.6°×27.0° <sup>*1</sup>	23.9°×16.1° <sup>*1</sup>
	1.7.8:1 24.6x13.8mm	38.7°×22.3° <sup>*2</sup>	27.6°×15.7° <sup>*2</sup>	16.5°×9.3° <sup>*2</sup>
M.O.D. (Minimum Object Distance)		0.30m / 12"	0.45m / 18"	0.95m / 3'2"
Object Dimensions at M.O.D	1.5:1 36.0x24.0mm	20.1×13.4cm <sup>*1</sup>	24.9×16.6cm <sup>*1</sup>	34.3×22.9cm <sup>*1</sup>
	1.7.8:1 24.6x13.8mm	13.7×7.7cm <sup>*2</sup>	17.0×9.5cm <sup>*2</sup>	23.4×13.1cm <sup>*2</sup>
Front Diameter		114mm	114mm	114mm
Approx. Size (WxHxL)		4.66x4.66x4.0 in. (118.4×118.4×101.5mm)	4.66x4.66x4.0 in. (118.4×118.4×101.5mm)	4.66x4.66x4.0 in. (118.4×118.4×101.5mm)
Approx. Weight		2.43 lbs (1.1kg)	2.43 lbs (1.1kg)	2.87 lbs (1.3kg)

Appearance		<div>CN-E135mm T2.2 L F</div> 
Model Name		CN-E135mm T2.2 L F
Mount		EF Mount
Zoom Ratio		—
Focal Length		135mm
Max. Relative Aperture (T-Number)		T2.2
Iris Blades		11
Angle of View	1.5:1 36.0x24.0mm	15.2°×10.2° <sup>*1</sup>
	1.7.8:1 24.6x13.8mm	10.4°×5.9° <sup>*2</sup>
M.O.D. (Minimum Object Distance)		1.0m / 3'3"
Object Dimensions at M.O.D	1.5:1 36.0x24.0mm	21.1×14.1cm <sup>*1</sup>
	1.7.8:1 24.6x13.8mm	14.4×8.1cm <sup>*2</sup>
Front Diameter		114mm
Approx. Size (WxHxL)		4.66x4.66x4.55 in. (118.4×118.4×115.6mm)
Approx. Weight		3.09 lbs (1.4kg)

※ Lenses compatible with Full-frame and Super 35mm Sensor cameras.  
\*1: Aspect ratio 1.5:1, Screen size 36.0 × 24.0 mm. \*2: Aspect ratio 1.78:1, Screen size 24.6 x 13.8 mm.



CINE-SERVO Lens Series

		CN7×17 KAS S/E1 CN7×17 KAS S/P1		CN20×50 IAS H/E1 CN20×50 IAS H/P1	
Appearance					
Model Name		CN7×17 KAS S/E1		CN7×17 KAS S/P1	
Mount		EF Mount		PL Mount	
Zoom Ratio		7×		20×	
Focal Length		17 ~ 120mm		50 ~ 1000mm	
Max. Relative Aperture (T-Number)		T2.95 17 ~ 91mm / T3.9 120mm		T5.0 (50-560mm) / T8.9 (1000mm)	
Iris Blades		11		11	
Angle of View	1.5:1 36.0×24.0mm	71.8°×44.2° 17mm 11.7°×6.6° 120mm <sup>*1</sup>		27.6°×15.7° 50mm 1.4°×0.8° 1000mm <sup>*1</sup>	
	1.9:1 26.2×13.8mm	75.2°×44.2° 17mm 12.5°×6.6° 120mm <sup>*2</sup>		29.4°×15.7° 50mm 1.5°×0.8° 1000mm <sup>*2</sup>	
M.O.D. (Minimum Object Distance)		0.85m/2.8'		3.5m/11.5'	
Object Dimensions at M.O.D	1.5:1 36.0×24.0mm	86.3×48.4cm 17mm 12.0×6.7cm 120mm <sup>*1</sup>		139.3×78.1cm 50mm 7.3×4.1cm 1000mm <sup>*1</sup>	
	1.9:1 26.2×13.8mm	92.1×48.5cm 17mm 12.7×6.7cm 120mm <sup>*2</sup>		148.3×78.1cm 50mm 7.8×4.1cm 1000mm <sup>*2</sup>	
Image Size		31.4mm		31.4mm	
Front Diameter		114mm		136.0mm	
Approx. Size (WxHxL)		6.86×4.92×10.35 in. (174.2×125.0×262.9mm)		6.89×6.72×16.27 in. (175.0×170.6×413.2mm)	
Approx. Weight		6.39 lbs (2.9kg)		14.55 lbs (6.6kg)	

※ Lenses compatible with Super 35mm Sensor cameras.  
\*1: Aspect ratio 1.78:1, Screen size 24.6 x 13.8 mm. \*2: Aspect ratio 1.9:1, Screen size 26.2 x 13.8 mm. \*3: When using the built-in extender.

COMPACT-SERVO Lens Series

		CN-E18-80mm T4.4 L IS KAS S	CN-E70-200mm T4.4 L IS KAS S
Appearance			
Model Name		CN-E18-80mm T4.4 L IS KAS S	CN-E70-200mm T4.4 L IS KAS S
Mount		EF Mount	EF Mount
Zoom Ratio		4.4×	2.8×
Focal Length		18 ~ 80mm	70 ~ 200mm
Max. Relative Aperture (T-Number)		T4.4 18 ~ 80mm	T4.4 70 ~ 200mm
Iris Blades		9	9
Angle of View	1.5:1 36.0×24.0mm	68.7°×41.9° 18mm 17.5°×9.9° 80mm <sup>*1</sup>	19.9°×11.3° 70mm 7.0°×4.0° 200mm <sup>*1</sup>
	1.9:1 26.2×13.8mm	72.1°×41.9° 18mm 18.6°×9.9° 80mm <sup>*2</sup>	21.2°×11.3° 70mm 7.5°×4.0° 200mm <sup>*2</sup>
M.O.D. (Minimum Object Distance)		0.5m/1.7'	1.2m/4.0'
Object Dimensions at M.O.D	1.5:1 36.0×24.0mm	43.4×24.3cm 18mm 9.5×5.3cm 80mm <sup>*1</sup>	31.3×17.5cm 70mm 11.5×6.4cm 200mm <sup>*1</sup>
	1.9:1 26.2×13.8mm	46.2×24.3cm 18mm 10.1×5.3cm 80mm <sup>*2</sup>	33.3×17.5cm 70mm 12.2×6.4cm 200mm <sup>*2</sup>
Front Diameter		84mm	84mm
Approx. Size (WxHxL)		3.67×4.22×7.18 in. (93.4×107.2×182.3mm)	3.67×4.22×7.18 in. (93.4×107.2×182.3mm)
Approx. Weight		2.65 lbs (1.2kg) (including servo unit)	2.76 lbs (1.25kg) (including servo unit)

※ Lenses compatible with Super 35mm Sensor cameras.  
\*1: Aspect ratio 1.78:1, Screen size 24.6 x 13.8 mm.  
\*2: Aspect ratio 1.9:1, Screen size 26.2 x 13.8 mm.

COMPACT-SERVO Lens Accessories



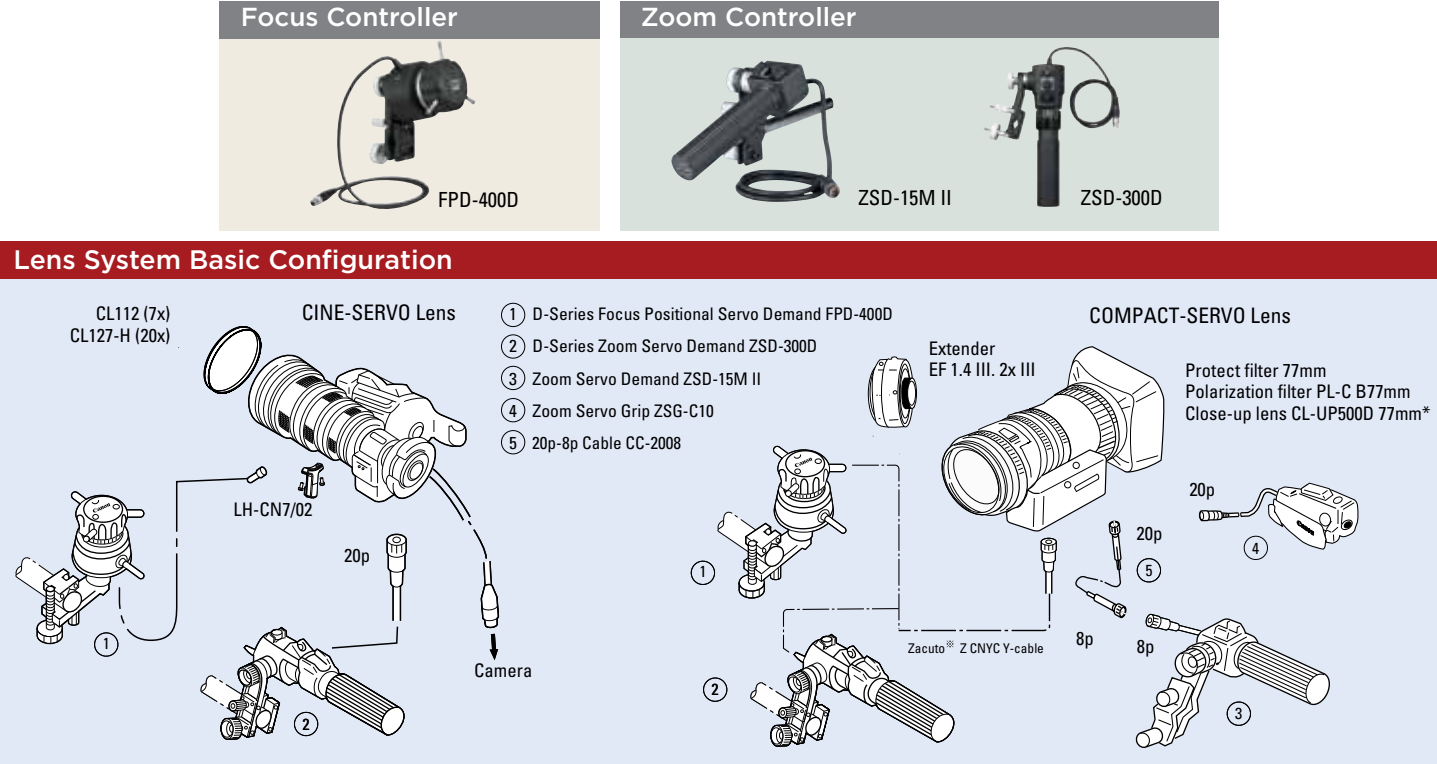
- Rocker seesaw
- Start/Stop button<sup>\*1</sup>
- ONE-SHOT AF button<sup>\*1</sup>
- 20 PIN cable<sup>\*2</sup>
- Flexible mounting angle.

※ Sold separately.  
※ Support strut, bracket, hex wrench included.  
\*1: For compatible cameras, please visit our website: [cinemaeos.usa.canon.com](http://cinemaeos.usa.canon.com)  
\*2: For connection to the lens body.

CINE-SERVO Lens / COMPACT-SERVO Lens Accessories

Category	Model	Notes	CN7×17 KAS S/E1 CN7×17 KAS S/P1	CN20×50 IAS H/E1 CN20×50 IAS H/P1	CN-E18-80mm CN-E70-200mm
Focus Demand	FPD-400D	There is no need for an optional cable.	●	●	● ※1 ※2
	FDJ-D02	BDC - 11 cable (20p - 18p) is required.	●	●	—
	FDJ-P01	BDC - 21 cable (20p - 12p) is required.	●	●	—
Zoom Demand	ZSD-300D	There is no need for an optional cable.	●	●	● ※1 ※2
	ZSD-15MII	CC-2008 Cable (20p - 8p) is required.	●	●	● ※1 ※2
	ZDJ-D02	BDC-11 cable (20p-18p) is required.	●	●	—
	ZDJ-P01	BDC - 21 cable (20p - 12p) is required.	●	●	—
Iris Demand	FDJ-D02	BDC - 11 cable (20p - 18p) is required.	●	●	—
	FDJ-P01	BDC - 21 cable (20p - 12p) is required.	●	●	—
Demand Cable	BDC-21	20p-12p cable. Required for FDJ-P01 / ZDJ-P01.	●	●	—
	BDC-11	20p - 18p cable. It is necessary for FDJ-D02 / ZDJ-D02.	●	●	—
	CC-2008	20p - 8p cable. Required for ZSD-15II	●	●	●
Clear Filter	77MM Protect Filter	77MM Protect filter	—	—	●
	CL/127MM-H	CL/127MM-H	●	●	—
	CL/112MM	CL/112MM	●	—	—
Polarizaton Filter	PL-C B 77MM	PL-C B 77MM	—	—	●
Close-Up Lens	CL-UP500D 77MM	CL-UP500D 77MM	—	—	●
Lens Holder	LH-CN7/02	Used when you want to improve the degree of freedom of Focus ring rotation operation. (The lens support attached to the main unit is supported on the front side.)	●	—	—
Power Cable	C-ZLPR*	For power supply from external battery. 12-pin - Dtap cable.	●	●	—

\* Made by IDX.  
※ 1: Multiple controllers can not be connected at the same time (because there is only one connector). When installing the ZSG - C10 and enabling the operation on the grip side, you can not connect the external controller.  
※ 2: For use in studio configurations, an optional Zacuto Z-CNYC. Y-cable can be used to connect zoom and focus controllers to each lens. This configuration allows for simultaneous zoom and focus operation with COMPACT-SERVO lenses.  
※ 3: Some vignetting occurs when used in combination with RED's Epic system.



# High Definition PTZ Cameras



## EVERCAM XU-81 and EVERCAM XU-81W

### ENGINEERED TO LAST

As the worldwide transition to HD imaging continues to accelerate, many video content creators-including broadcasters, cable networks, Houses of Worship, and diverse businesses are seeking cost-effective, turnkey, remotely-controllable Pan-Tilt-Zoom HD camera systems to provide unique visual perspectives while helping to ensure high image quality of the production. In order to satisfy these demands, Canon has combined its highly advanced technology, developed over many years, to successfully engineer the EVERCAM XU-81 and XU-81W cameras.

The XU-81 and XU-81W cameras feature a 1/3" CMOS imaging sensor with 2.1 megapixels and an optical 20x zoom lens (along with the 12x digital zoom) that supports Auto Focus. They achieve astounding performance that enables them to be used in high end production applications. Along with the aluminum die-cast body, they also feature a dust proof and water proof (IP55) construction and are small and lightweight enough to be carried around. These features allow these multi-use products, with their excellent durability, to be installed in virtually any location, whether indoors or outdoors.

Canon is firmly committed to researching and developing cutting-edge technological innovations in an effort to deliver innovative products capable of reproducing some of the world's most beautiful images.

## BU-47H

### Outdoor Remote Control Pan-Tilt System

To meet the diverse needs of outdoor broadcasters, cable networks, businesses, industrial entities, weather monitoring, and traffic POV, Canon has created a solution for cost-effective, turnkey, remotely-controllable Pan-Tilt-Zoom (PTZ) HD Camera systems allowing users to extend creative flexibilities. Canon has harnessed multiple unique technologies and experience in HD optics and digital cameras, robotics, and control software to produce a cost-effective, integrated HD lens-camera PTZ product offering outstanding HD picture quality. The BU-47H is a rugged yet elegant outdoor PTZ system following a legacy of decades of Canon expertise in designing such systems. A sister product, the BU-51H, has a design tailored for indoor applications.



**XU-81**






**XU-81W**

With wiper and ND filter for outdoor installation



**BU-47H**

## HD PTZ Cameras

	<b>BU-47H</b>	<b>EVERCAM XU-81</b>	<b>EVERCAM XU-81W</b> With wiper and ND filter for outdoor installation
Appearance			
Model Name	BU-47H	EVERCAM XU-81	EVERCAM XU-81W
Operation Condition	Outdoor	Indoor	Outdoor
Operation Angle	Pan: 340° Tilt: + 30°~50°	Pan: ±180° Tilt: +220°~40°	Pan: ±180° Tilt: +220°~40°
Operation Speed	Panning: 0.5° ~ 25°/s Tilting: 0.3° ~ 20°/s	Pan/Tilt: 0.3~40°/s (normal speed mode) Pan/Tilt: 0.3~60°/s (high speed mode)	Pan/Tilt: 0.3~40°/s (normal speed mode) Pan/Tilt: 0.3~60°/s (high speed mode)
Repeatability	Less than ±10 arc degrees	Within ±10 arc degrees	Within ±10 arc degrees
Wiper	Built-in Electric Wiper	None	Built-in Electric Wiper
Mic Input	Jack provided, pedestal section	Waterproof Microphone: lower part of the camera / 0dBm / 600 unbalanced output (with limiter)	Waterproof Microphone: lower part of the camera / 0dBm / 600 unbalanced output (with limiter)
Input/Output Connectors	DC terminal, Control (RS-422), SDI out, SD composite, Genlock, Aux out	5mm DC barrel-type; DB-9 (RS-232), RJ-45 (RS-422), HD-SDI out, Genlock, SD composite	5mm DC barrel-type; DB-9 (RS-232), RJ-45 (RS-422), HD-SDI out, Genlock, SD composite
Video Output	HD-SDI (embedded audio) BNC output x 1 (receptacle unit) SD analog composite BNC output x 1	HD: BNC (HD-SDI), SD: BNC (Composite Monitor)	HD: BNC (HD-SDI), SD: BNC (Composite Monitor)
Genlock Input	BNC (receptacle unit) (tri-level/black burst)	BNC (BB Sync/HD3value Sync)	BNC (BB Sync/HD3value Sync)
Operating Temperature	5°C to 40°C, less than 90% humidity (no condensation)	Ambient -15~40°C / ~90% (non-condensing)	Ambient -15~40°C / ~90% (non-condensing)
Wind Velocity-Resistance	Normal Operation: 0~55m / s Operation Possible: 55 ~ 78m / s * Non Destruction: 78 ~ 134m / s	Normal Operation: ~15mm / s Operation Possible: ~30m / s Non Destruction: ~60m / s	Normal Operation: ~15m / s Operation Possible: ~30m / s Non Destruction: ~60m / s
Noise	NC55 below	NC30 (40° / s), NC45 (60° / s)	NC30 (40° / s), NC45 (60° / s) (when Wiper, ND Filter, and IRC Filter are not in operation)
Power Source	DC10.5~15V, 80W	DC12V±10%	DC12V±10%
Dustproof Waterproof Efficiency	IP45	IP55	IP55
Image Sensor	1/3" CMOS x 3 (HD CMOS PRO)	1/3" HD CMOS, total of ~ 2.1 million pixels	1/3" HD CMOS, total of ~ 2.1 million pixels
Range Of Focal Length / F No.	f=4.1-73.8mm / F1.6-2.8	f=4.7-94mm / F1.6-3.5	f=4.7-94mm / F1.6-3.5
Zoom Ratio	18x Optical Zoom (1.5x digital extender)	20x Optical Zoom (12x digital extender)	20x Optical Zoom (12x digital extender)
Dimensions (W x D x H) (Including Camera & Lens)	15.19x13.2x15.35 in. (386x337x390 mm)	8.54x8.54x12.24 in. (217x217x311 mm (without projection))	8.54x8.54x12.24 in. (217x217x311 mm (without projection))
Weight (Including Camera & Lens)	37.4 lbs (Approx. 16.9kg)	14.55 lbs (6.6kg) (without ND Filter and Wiper)	14.55 lbs (6.6kg) (without ND Filter and Wiper)

\*Some functions may be limited depending on operating environment.



# Invaluable Learning and Training Resources

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Learning and experience is another important cornerstone of Canon's commitment to professional cinematographers. Whether working online, in production, on a studio lot, or as part of a remote shoot, we are here to provide you with the essential resources that you need to remain current and keep your creative passion alive.

Canon Live Learning (CLL) seminars and workshops are conducted nationwide including in our Hollywood Professional Technology and Support Center. Our classes are taught by professional trainers and industry experts, as well as Canon's renowned and experienced Explorers of Light. Covering a wide range of still and cinematic topics, ranging from techniques through equipment selection to in-depth system configuration, CLL events offer professionals and enthusiasts alike the opportunity to sharpen their skills in a number of immersive hands-on settings.



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USA.CANON.COM/CANONLIVELEARNING

# Customer Satisfaction

Canon is committed to total customer satisfaction. In order to optimize customer satisfaction, Canon's aim is to support users by developing new lens technologies, high-quality technical service systems, and other sales support.

## Canon's Worldwide Support Network



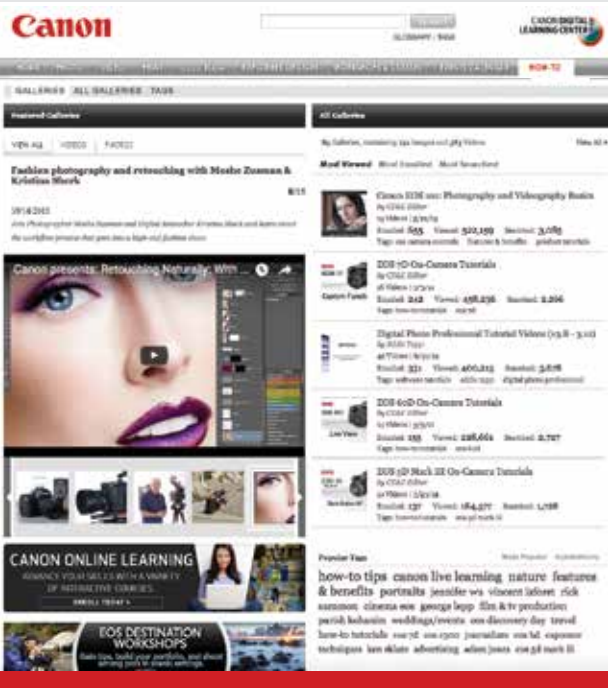
Well trained sales people and service technicians are ready to support you at these locations.

## Canon Digital Learning Center

And because the Canon Digital Learning Center website is tablet friendly, our encyclopedic online materials are always accessible 24/7 via the internet, anywhere in the world. Think of it as the "Anytime, Anywhere" resource for professionals, enabling you to hit the set running with the confidence and know-how to make the very most of the Cinema EOS system. Watch product tutorials, practice camera menu simulators, and be inspired by filmmakers and cinematographers using Canon gear to bring their projects to life.



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