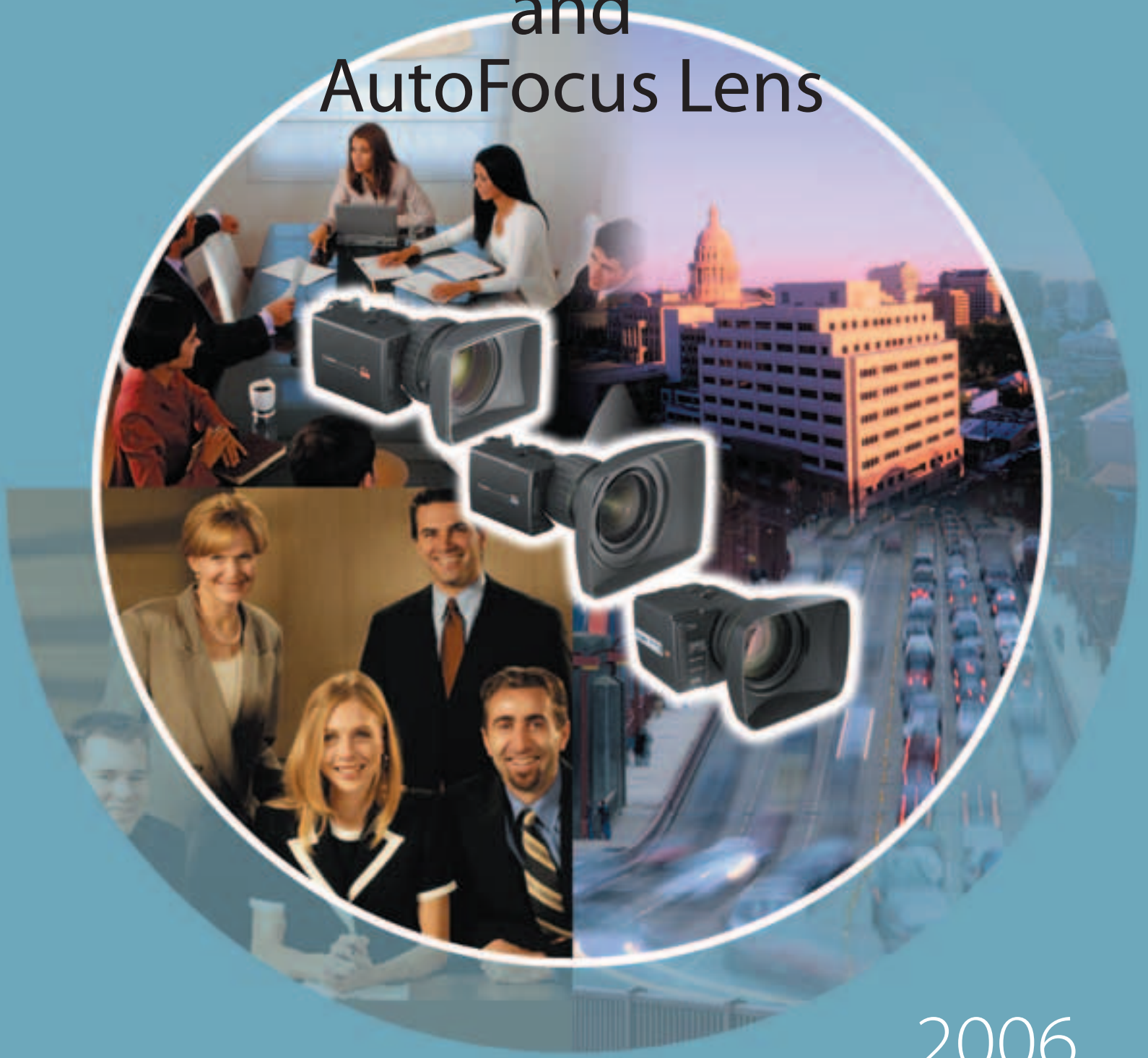
Canon

Remote control HDTV/ SDTV Lenses and AutoFocus Lens



2006

Remote control HDTV/ SDTV Lenses

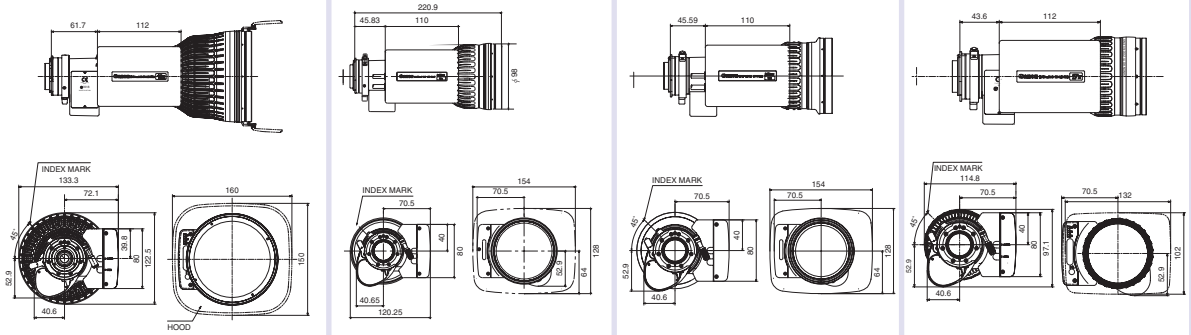
With the introduction of High Definition Technology into compact box type cameras, the requirements from the market of the image production for the television broadcast, and surveillance markets for high performance remote control lenses has dramatically increased. In response, Canon proudly introduces 8 remote control lenses that set new standards for quality, as an addition to our current line. The lenses feature Canon's SDTV and HDTV advanced technology developed over our long history producing the world's best lenses. All 8 lenses, consisting of 3 SDTV lenses and 5 HDTV lenses, offer exceptional optical performance, while providing the same control interface used by our existing remote control pro-video lenses. This will enable the lens to be perfectly compatible with existing pro-video and broadcast pan-tilt systems.

* The 2X extender of ITS-ME model is manually operated.
ITS-RE model which has a motorized 2X extender is also available.

HDTV

		HJ18ex 28B ITS-ME	HJ22ex 7.6B ITS-ME	HJ17ex 7.7B ITS-ME	HJ17ex 7.6B ITS-ME
Image Format Covered		2/3 inch	2/3 inch	2/3 inch	2/3 inch
Zoom Ratio		18X	22X	17X	17X
Built-in Extender		2.0X	2.0X	2.0X	2.0X
Range of Focal Length		28~500mm	7.6~168mm	7.7~131mm	7.6~130mm
(with Extender)		56~1000mm (2.0X)	15.2~336mm (2.0X)	15.4~262mm (2.0X)	15.2~260mm (2.0X)
Maximum Relative Aperture		1:2.8 at 28~286mm	1:1.8 at 7.6~114.1mm	1:1.8 at 7.7~100.3mm	1:1.8 at 7.6~97.5mm
		1:4.9 at 500mm	1:2.65 at 168mm	1:2.3 at 131mm	1:2.4 at 130mm
(with Extender)		1:5.6 at 56~572mm (2.0X)	1:3.6 at 15.2~228.2mm (2.0X)	1:3.6 at 15.4~200.6mm (2.0X)	1:3.6 at 15.2~195mm (2.0X)
		1:9.8 at 1000mm	1:5.3 at 336mm	1:4.7 at 262mm	1:4.8 at 260mm
Angular Field of View	**4:3 Aspect Ratio (8.8 x 6.6mm)**	18.0˚x13.5˚at 28mm	60.1˚x46.9˚at 7.6mm	59.5˚x46.4˚at 7.7mm	60.1˚x46.9˚at 7.6mm
		1.0˚x0.8˚at 500mm	3.0˚x2.25˚at 168mm	3.85˚x2.9˚at 131mm	3.9˚x2.9˚at 130mm
(with Extender)		9.0˚ at 6.8˚at 56mm (2.0X)	32.3˚ at 24.5mmat 15.2mm (2.0X)	31.9˚ at 24.2˚at 15.4mm (2.0X)	32.3˚ at 24.5˚at 15.2mm (2.0X)
		0.5˚x 0.4˚ at 1000mm	1.5˚x 1.13˚ at 336mm	1.9˚x 1.4˚ at 262mm	1.9˚x 1.5˚ at 260mm
	16:9 Aspect Ratio (9.6 x 5.4mm)	19.6˚x11.1˚at 28mm	64.6˚x39.1˚at 7.6mm	63.9˚x38.7˚at 7.7mm	64.6˚x39.1˚at 7.6mm
		1.1˚x0.6˚at 500mm	3.3˚x1.8˚at 168mm	4.20˚x2.4˚at 131mm	4.2˚x2.4˚at 130mm
		9.9˚x 5.6˚ at 56mm (2.0X)	35.1˚x 20.1˚ at 15.2mm (2.0X)	34.6˚x 19.9˚ at 15.2mm (2.0X)	35.1˚x 20.1˚ at 15.2mm (2.0X)
		0.6˚x 0.3˚ at 1000mm	1.6˚x 0.9˚ at 336mm	2.1˚x 1.2˚ at 262mm	2.1˚x 1.2˚ at 260mm
M.O.D from Lens Front		2.2m(10mm with Macro)	0.85m(10mm with Macro)	0.75m(10mm with Macro)	0.56m(10mm with Macro)
Object Dimensions at M.O.D	**4:3 Aspect Ratio (8.8 x 6.6mm)**	65.4x49.1cm at 28mm	92.5x69.4cm at 7.6mm	80.4x60.3cm at 7.7mm	59.9x44.9cm at 7.6mm
		3.8x2.9cm at 500mm	4.25x3.19cm at 168mm	4.8x3.6cm at 131mm	3.7x2.8cm at 130mm
(with Extender)		32.7x24.6cm at 56mm (2.0X)	46.3x34.7cm at 15.2mm (2.0X)	40.2x30.2cm at 15.4mm (2.0X)	30.0x22.5cm at 15.2mm (2.0X)
		1.9x1.5cm at 1000mm	2.13x1.6cm at 336mm	2.4x1.8cm at 262mm	1.9x1.4cm at 260mm
	16:9 Aspect Ratio (9.6 x 5.4mm)	71.1 x40.0cm at 28mm	100.6x56.6cm at 7.6mm	87.4˚x49.2cm at 7.7mm	65.4˚x36.8cm at 7.6mm
		4.1 x2.3cm at 500mm	4.60x2.60 at 168mm	5.3x3.0cm at 131mm	4.0x2.3cm at 130mm
		35.6x20.0cm at 56mm (2.0X)	50.3 x28.4cm at 15.2mm (2.0X)	43.7x24.6cm at 15.4mm (2.0X)	32.7x18.4cm at 15.2mm (2.0X)
		2.1x1.2cm at 1000mm	2.30x1.30cm at 336mm	2.7x1.5cm at 262mm	2.0x1.2cm at 260mm
Approx.Size(WxHxL)		133.3x122.5x268.3mm	120.3x111.9x220.9mm	120.3x111.9x211mm	114.8x97.1x206.4mm
Approx.Mass		2.58Kg (5.69lbs)	1.68Kg (3.70lbs)	1.59Kg (3.51lbs)	1.42Kg (3.13lbs)

DIMENSION:



(Unit:mm)

Moreover, the new remote control SDTV/HDTV lenses are superior to their pro-video counterpartsin the following ways:

*Highly accurate gear Backlash reduction in order to cope with the high level requirements of SDTV and HDTV applications.

*Improved maximum zoom speed of 1.0sec compared with the Remote Control Pro-video Lenses.

*SDTV and HDTV optical performance and specifications.

*Diverse applications include; remote control studio production, point of view cameras, cameras installed in inaccessible locations, as well as many others.

*The optional Extender Changeover Unit will enable the extender of the lens to be controlled remotely.

Additionally, Canon has also added the world's first pro-video Remote Control lens, the YH16x7 KTS-AF, equipped with Canon's advanced Self Contained Auto Focusing system. The system will allow the lens to focus on an object automatically by analyzing the video signal from the camera wholly within the lens unit. It is not necessary to care about existing camera compatibility or the system, you can simply add the YH16x7 KTS-AF with our auto focus feature and dramatically expand the possible applications of the system. (Please refer to page 6 for the details.)

SDTV

HJ11ex 4.7B ITS-ME

2/3 inch
11X
2.0X
4.7~52mm 9.4~104mm (2.0X)
1:1.9 at 4.7~40.3mm 1:2.45. at 52mm 1:3.8 at 9.4~80.6mm (2.0X) 1:4.9 at 104mm
86.2°x70.1°at 4.7mm 9.7°x7.3°at 52mm 50.2° at 38.7mmat 9.4mm(2.0X) 4.8°x 3.6° at 104mm
91.2°x59.8°at 4.7mm 10.5°x5.9°at 52mm 54.1°x 32.1° at 9.4mm(2.0X) 5.3°x 3.0° at 104mm
0.3m(10mm with Macro)
65.3x49.0cm at 4.7mm 5.7x4.3cm at 52mm 32.7x24.5cm at 9.4mm (2.0X) 2.9x2.2cm at 104mm
71.4 x40.2cm at 4.7mm 6.2 x3.5cm at 52mm 35.7x20.1cm at 9.4mm(2.0X) 3.1x1.8cm at 104mm
119x110.6x241mm
1.79Kg (3.95lbs)

J22ex 7.6B ITS-ME

2/3 inch
22X
2.0X
7.6~168mm 15.2~336mm (2.0X)
1:1.8 at 7.6~118.6mm 11:2.55. at 168mm 1:3.6 at 15.2~237.2mm (2.0X) 11:5.1 at 336mm
60.1°x46.9°at 7.6mm 3.0°x2.3°at 168mm 32.3° at 24.5mmat 15.2mm(2.0X) 1.5°x 1.1° at 336mm
64.6°x39.1°at 7.6mm 3.3°x1.8°at 168mm 35.1°x 20.1° at 15.2mm(2.0X) 1.6°x 0.9° at 336mm
0.8m(10mm with Macro)
87.4x65.6cm at 7.6mm 4.0x3.0cm at 168mm 43.7x32.8cm at 15.2mm (2.0X) 2.0x1.5cm at 336mm
95.0 x53.4cm at 7.6mm 4.4 x2.5cm at 168mm 47.5x26.7cm at 15.2mm(2.0X) 2.2x1.2cm at 336mm
120.3x111.9x218.6mm
1.64Kg (3.62lbs)

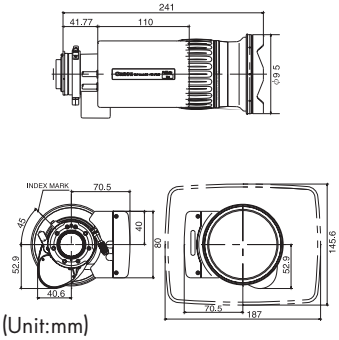
J17ex 7.7B ITS-ME

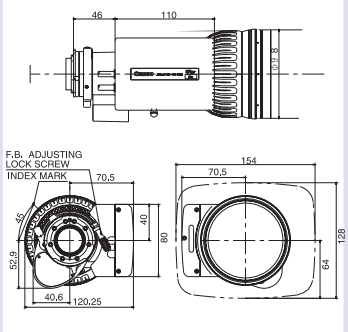
2/3 inch
17X
2.0X
7.7~131mm 15.4~262mm (2.0X)
1:1.8 at 7.7~102.5mm 1:2.3 at 131mm 1:3.6 at 15.4~205mm (2.0X) 1:4.6 at 262mm
59.5°x46.4°at 7.7mm 3.85°x2.89°at 131mm 31.9° at 24.2mmat 15.4mm(2.0X) 1.92°x 1.44° at 262mm
63.9°x38.6°at 7.7mm 4.20°x2.36°at 131mm 34.6°x 19.9° at 15.4mm(2.0X) 2.10°x 1.08° at 262mm
0.6m(10mm with Macro)
63.1x47.3cm at 7.7mm 3.8x2.9cm at 131mm 31.6x23.7cm at 15.4mm (2.0X) 1.9x1.5cm at 262mm
68.5x38.5cm at 7.7mm 4.2x2.4 at 131mm 34.3 x19.3cm at 15.4mm(2.0X) 2.1x1.2cm at 262mm
114.7x106.3x197.4mm
1.32Kg (2.91lbs)

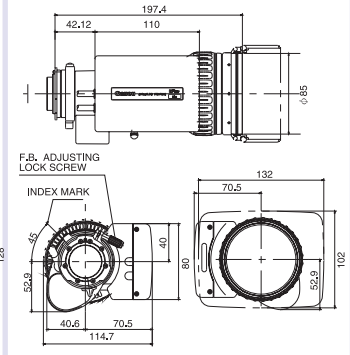
J11ex 4.5B ITS-ME

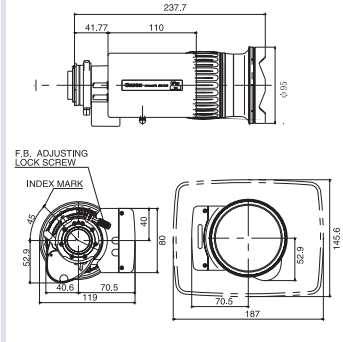
2/3 inch
11X
2.0X
4.5~50mm 9~100mm (2.0X)
1:1.8 at 4.5~36mm 1:2.35 at 50mm 1:3.6 at 9~72mm (2.0X) 1:4.7 at 100mm
88.7°x72.5°at 4.5mm 10.1°x7.6°at 50mm 52.1° at 40.3°at 9mm(2.0X) 5.0°x 3.8° at 100mm
93.7°x61.9°at 4.5mm 11.0°x6.2°at 50mm 56.1°x 33.4° at 9mm(2.0X) 5.5°x 3.1° at 100mm
0.3m(10mm with Macro)
67.9x50.9cm at 4.5mm 5.9x4.4cm at 50mm 34.0x25.5cm at 9mm (2.0X) 3.0x2.2cm at 100mm
74.4°x41.7cm at 4.5mm 6.4x3.6cm at 50mm 37.0x20.8cm at 9mm(2.0X) 3.2x1.8cm at 100mm
119x110.6x237.7mm
1.68Kg (3.70lbs)

DIMENSION:









(Unit:mm)

2/3 inch Pro-video Remote Control lens

YJ19x 9B ITS

NEW

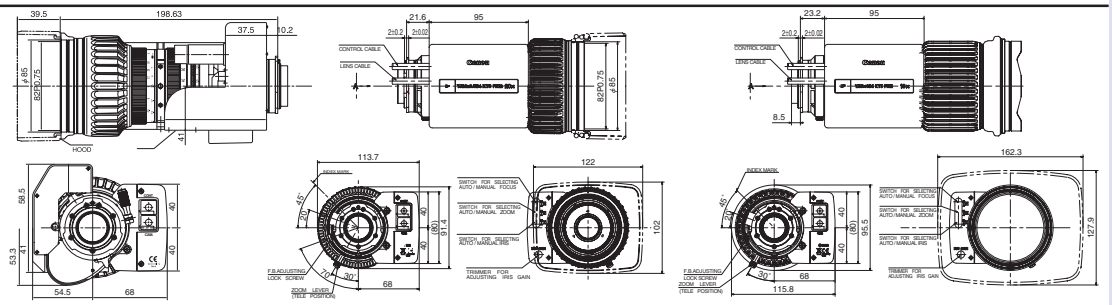
YJ20x 8.5B KTS

NEW

YJ13x 6B KTS

Image Format Covered	2/3"	2/3"	2/3"
Zoom Ratio	19X	20X	13X
Built-in Extender	2.0X	-	-
Range of Focal Length	9~171mm	8.5~170mm	6~78mm
(with Extender)	18~342mm (2.0X)		
Maximum Relative Aperture	1:1.8 at 9~114mm	1:1.8 at 8.5~113.3mm	1:2.0 at 6~58mm
	1:2.7 at 171mm	1:2.7 at 170mm	1:2.7 at 78mm
(with Extender)	1:3.6 at 18-228 (2.0X)		
	1:5.4 at 18-342mm (2.0X)		
Angular Field 4:3 Aspect Ratio of View	52.1°x 40.3° at 9mm	54.7°x42.4° at 8.5mm	72.5°x57.6° at 6mm
	2.97°x2.22° at 171mm	3.0°x2.2° at 170mm	6.5°x4.8° at 78mm
(with Extender)	27.5°x20.8° at 18mm(2.0X)		
	1.47°x1.11° at 342mm(2.0X)		
M.O.D from Lens Front	0.9m(50mm with Macro)	0.9m(10mm with Macro)	0.4m(10mm with Macro)
Object Dimensions 4:3 Aspect Ratio at M.O.D	78.9x59.2cm at 9mm	85.2x63.9cm at 8.5mm	68.1x51.1cm at 6mm
	4.3x3.2cm at 171mm	4.4x3.3cm at 170mm	5.0x3.8cm at 78mm
(with Extender)	39.5x29.6cm at 18mm (2.0X)		
	2.2x1.6cm at 342mm (2.0X)		
Approx.Size(WxHxL)	122.5x111.8x198.6mm	113.7x91.4x170.4mm	115.8x95.5x211.7mm
Approx.Mass	1.53kg (3.37lbs)	1.31kg (2.89lbs)	1.69kg (3.73lbs)
Macro	Yes	Yes	Yes

DIMENSION:



(Unit:mm)

1/2 inch Pro-video Remote Control lens

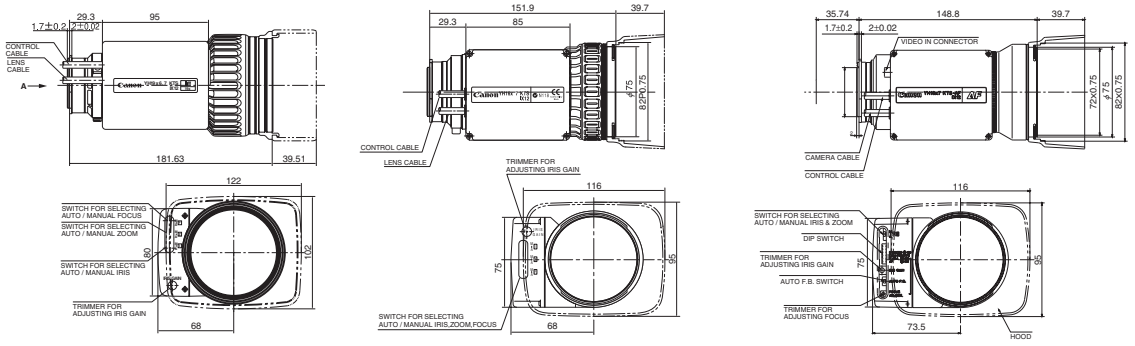
YH19x 6.7 KTS

YH16x 7 KTS

Auto Focus Lens
YH16x 7 KTS-AF

Image Format Covered	1/2"	1/2"	1/2"
Zoom Ratio	19X	16X	16X
Built-in Extender	-	-	-
Range of Focal Length	6.7~127mm	7~112mm	7~112mm
Maximum Relative Aperture	1:1.4 at 6.7~89mm	1:1.9 at 7~106.4mm	1:1.9 at 7~106.4mm
	1:2.0 at 127mm	1:2.0 at 112mm	1:2.0 at 112mm
Angular Field 4:3 Aspect Ratio of View	51.1°x 39.4° at 6.7mm	49.1°x37.8° at 7mm	49.1°x37.8° at 7mm
	2.89°x2.17° at 127mm	3.3°x2.5° at 112mm	3.3°x2.5° at 112mm
M.O.D from Lens Front	0.9m(50mm with Macro)	1.0m(10mm with Macro)	1.0m(50mm with Macro)
Object Dimensions 4:3 Aspect Ratio at M.O.D	77.2x57.9cm at 6.7mm	83.3x62.5cm at 7mm	83.3x62.5cm at 7mm
	4.2x3.2cm at 127mm	5.3x4.0cm at 112mm	5.3x4.0cm at 112mm
Approx.Size(WxHxL)	114.5x92.6x181.6mm	108.4x80.8x151.9mm	113.5x80.0x148.8mm
Approx.Mass	1.43kg (3.15lbs)	0.94kg (2.07lbs)	0.9kg (1.98lbs)
Macro	Yes	Yes	Yes

DIMENSION:



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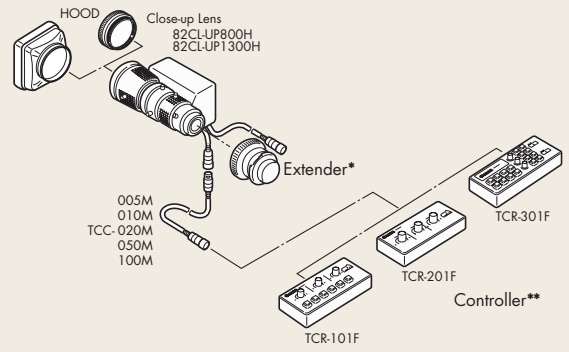
HDTV/SDTV/Pro-video Remote Control Lens

SYSTEM



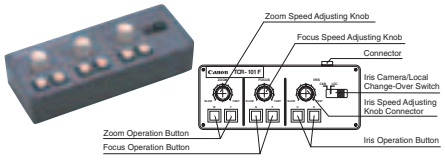
*Only for 2/3" lenses.
**For DXC-990,please contact Canon Sales office for information.

The Canon Remote Control TV Lenses and standard controller system are engineered to satisfy your image capture needs. These broadcast quality products can be used in applications which differ from typical video production applications, such as fast and quiet servo operations.

The Canon Remote Control TV Lenses accept 3 types of Canon standard controllers, as well as the standard remote control cables, which are designed to provide different types of zoom, focus and iris remote control. These lenses are also available with a simple interface for use with custom controllers.

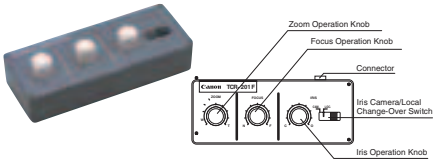
TCR-101F

The TCR-101F is a basic controller that provides push-button control of zoom, focus, and iris. Each of these functions have a speed control. There also is a switch for remote or auto iris.



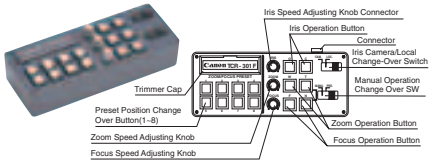
TCR-201F

The TCR-201F provides more exact control of zoom, focus, and iris through the use of positional servos. There also is a switch for remote or auto iris.



TCR-301F

The TCR-301F can present zooming and focusing operations for up to eight shots. Zooming and focusing can be made by pressing the ZOOM/FOCUS/PRESET buttons suited for your application.

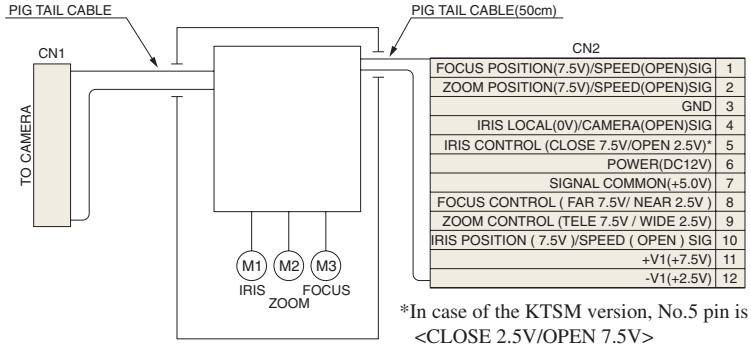


■ CANON STANDARD CONTROL CABLES

CANON provides ready made connection cables in 5m, 10m, 20m, 50m, and 100m lengths. These cables are well shielded to prevent all RF interence. Hirose 12 pin connectors are used exclusively. The cable length can be extended up to 150m by connecting several cables when telecommunications control box TCR-101F/TCR-201F or TCR-301F are used.

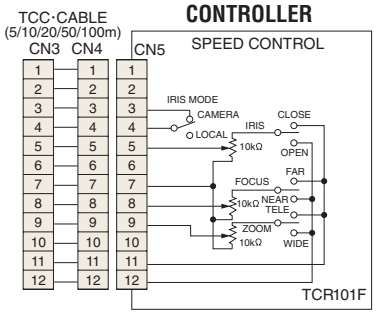
TCC-005M: 5m cable
TCC-010M: 10m cable
TCC-020M: 20m cable
TCC-050M: 50m cable
TCC-100M: 100m cable

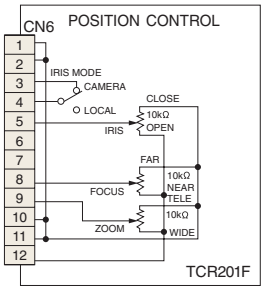
Circuit Diagram



CN2	
FOCUS POSITION(7.5V)/SPEED(OPEN)SIG	1
ZOOM POSITION(7.5V)/SPEED(OPEN)SIG	2
GND	3
IRIS LOCAL(0V)/CAMERA(OPEN)SIG	4
IRIS CONTROL (CLOSE 7.5V/OPEN 2.5V)*	5
POWER(DC12V)	6
SIGNAL COMMON(+5.0V)	7
FOCUS CONTROL (FAR 7.5V/ NEAR 2.5V)	8
ZOOM CONTROL (TELE 7.5V / WIDE 2.5V)	9
IRIS POSITION (7.5V)/SPEED (OPEN) SIG	10
+V1(+7.5V)	11
-V1(+2.5V)	12

*In case of the KTSM version, No.5 pin is the setup of <CLOSE 2.5V/OPEN 7.5V>





CANON REMOTE CONTROL LENS

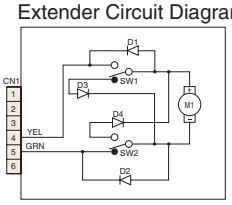
	Model	MFG	Canon Part No.
CN1	Varies depending on type of Camera.		
2	HR10A-10P-12S	HIROSE	BH7-0790
3	HR10A-10J-12P	HIROSE	BH7-0789
4	HR10A-10P-12S	HIROSE	BH7-0790
5	HR10A-10R-12P	HIROSE	BH7-0791
6	HR10A-10R-12P	HIROSE	BH7-0792

*In addition,the TCR-301F offers an 8 shot preset memory of zoom and focus.
The circuit diagram is the same as the TCR-101F.

YJ19x 9B ITS (with 2x Extender type)

MODEL:HR10A-7R-6P
MFG:HIROSE
CANON Part No.BH7-1184
Connector

Extender Circuit Diagram



* Extender is controlled by ±6v on pins No.4 and No.5.
* A mating connector is supplied with the lens.

Optical Accessories for Remote Control Lenses

1. CLOSE-UP LENS

- A close-up lens is used to shorten the M.O.D. of master lens for close up shooting. And the maximum object distance becomes the focal length of the close-up lens. There are the following four models of close-up lenses corresponding to the kind of the master lens.

MODEL	CLASS	APPLICABLE LENSES
82CL-UP800H	SDTV	J17ex7.7B,YJ20x8.5B,YJ19x9B,YH19x6.7,YH16x7
82CL-UP1300H	SDTV	J17ex7.7B,YJ20x8.5B,YJ19x9B,YH19x6.7,YH16x7
105CL-UP900H	SDTV	J22ex7.6B
105CL-UP800HD	HDTV	HJ22ex7.6B

82CL-UP800H 82CL-UP1300H
105CL-UP900H 105CL-UP800HD

Imaging range for J17ex7.7B and YJ20x8.5B with close-up lenses

		82CL-UP800H				82CL-UP1300H			
J17ex7.7B		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	340	800	340	1300	407	1300	407
	Object Dimensions(mm)	53x40	21x16	908x681	341x256	87x65	25x19	1499x1124	411x308
YJ20x8.5B		Tele end : 170mm		Wide end : 8.5mm		Tele end : 170mm		Wide end : 8.5mm	
	Focusing Scale(mm)	∞	0.9	∞	0.9	∞	0.9	∞	0.9
	Object Distance(mm)	800	420	800	420	1300	530	1300	530
	Object Dimensions(mm)	41x31	20x15	816x609	390x293	67x50	26x20	1341x1006	494x371

2. WIDE CONVERTER

- Focal length is becomes wider by a factor of 0.8x that of the original lens with the W80-ⅢB, W80Y-85 and W80-HD.
- F-number of the original lens is not affected.
- The minimum object distance becomes 0.64 times with the W80-ⅢB, W80Y-85 and W80-HD.

MODEL	ADAPTOR	APPLICABLE LENSES
W80-Y85	—	YJ20x8.5B,YJ19x9B, YH19x6.7
W80-ⅢB	85-Ⅱ	J17ex7.7B, YJ20x8.5B,YJ19x9B, YH19x6.7
	98-Ⅱ	J22ex7.6B
W80-HD	85-Ⅱ	HJ17ex7.7B
	98-Ⅱ	HJ22ex7.6B

3. TELE-SIDE CONVERTER

- Focal length shifted to the telephoto side by a factor of 1.5x.
- F-number 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 2.25
- times that of the original lens.

MODEL	ADAPTOR	APPLICABLE LENSES
T15-Ⅱ	85-Ⅱ	J17ex7.7B, YJ20x8.5B, YJ19x9B, YH19x6.7
	98-Ⅱ	J22ex7.6B
T15-HD	85-Ⅱ	HJ17ex7.7B
	98-Ⅱ	HJ22ex7.6B

4. EXTENDER

- In case of an extreme telephoto or high magnification shot is required,a 2x extender is available.
- The 2x Extender also doubles the F-number.
- Only for 2/3" lenses.

YH16x7 KTS-AF

The new **YH16X7KTS-AF** remote control lens breaks new ground by incorporating an exclusive **Auto Focus System** which facilitates continuous AF control, independent of the camera.
This new development has been asked for and eagerly a waited by people in a wide cross section of markets, including building security, traffic control, customs and immigration, education and web broadcasting.One of the great advantages is that the new lens can be used in any kind of existing system capable of **inputting a video signal from the camera**, including those using robotic pan/tilt cameras.

Additional Features

Auto-Adjustment of Back Focus

●By simply pressing a switch located on the front side of the lens drive unit, you will be able to adjust Back Focus automatically and accurately.

High Speed Focus, Low Noise

●By adopting a Rear Focus System design*, the lens features high speed focusing of 1.5sec (when controlled by remote manual operation) while at the same time, decreasing the motor noise of the lens.

Optical Performance

●Between the wide end and the tele end, no matter what distance the object is, the YH16x7 KTS-AF will always maintain high optical performance .

*The Rear Focus System

Usually, the Focus is adjusted by the Front Lens Unit, however, the focus lens unit of the YH16x7 KTS-AF is located behind the zoom lens unit. By this lens design, the focus lens unit has become much smaller and lighter, and allows for a high performance focus response.

SPECIFICATIONS

YH16x7 KTS-AF

Image Format Covered	1/2 inch
Zoom Ratio	16X
Range of Focal Length	7 - 112mm
Maximum Relative Aperture	1:1.9 at 7~106.4mm 1:2.0 at 112mm
Angular Field of View	49.1˚x37.8˚ at 7mm 3.3˚x2.5˚ at 112mm
Minimum Object Distance	1.0m
Object Dimensions at M.O.D.	83.3x62.5cm at 7mm 5.3x4.0cm at 112mm
Macro	50mm
Object Dimension at macro	7.6x5.7cm at 7mm
Size(W x H x L)	113.5x80.0x148.8mm
Mas.(Apprrox.)	0.9kg

Follow Focus System

Even though the lens automatically focuses on a specific object, by using the "Follow Focus Function", you can simply redirect the focusing position to an area nearer or farther away from the current focused position. Select the preferred direction by selecting the "Near" or "Far" Follow Focus Knob and the lens will automatically focus on the next existing object in that direction.

*The function will be available with the existing controllers if the interface has been modified. Please refer to P.8 for the details of the interface.

Follow Focus " Near side" | Original Focus | Follow Focus " Far side"

CONTROL SYSTEM

Example1 : When Constructing a New System

If you are constructing a new system with the YH16x7 KTS-AF: The new AF remote Controller ; TCR-AF1 will enable you to control ON/OFF of the AF function, the remote Follow Focus Function and the remote control of Zoom, Iris and Focus.

Example 2: When Installing as part of an Existing System

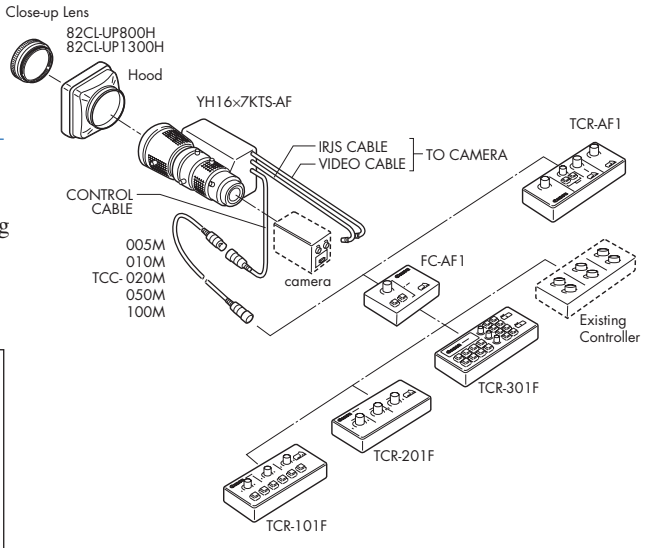
If you already have an existing system, you will be able to control ON/OFF of the AF function and the Follow Focus Function by installing the AF Control Adapter; FC-AF1 in the system. The FC-AF1 will be located between the lens and the controller. The control of the Focus, Zoom and Iris can be done by the existing controller.

<Notice:When used with an existing controller without the FC-AF1>

A. If used by an existing positional servo controller, the lens will automatically focus on the object, however, it cannot remotely control ON/OFF of the AF function or use the Follow Focus Function.

B. If used by an existing speed servo controller, you will be able to use the Follow Focus Function. However, you will not be able to remotely control ON/OFF of the AF function.

*By modifying the inter-face of the controller, you will be able to resolve the above mentioned situations. Please refer to P.4 for the details of the inter-face.



<System Configuration>

YH16x7 KTS-AF: REMOTE CONTROL INTERFACE

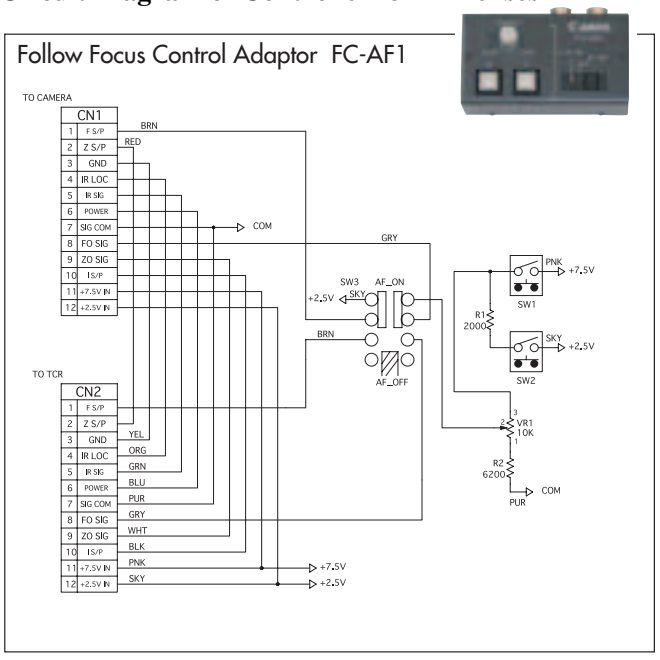
1	Focus mode		Position:+7.5V	Speed:OPEN	AF:+2.5V *1
2	Zoom mode		Position:+7.5V	Speed:OPEN	
3	GND				
4	Iris Remote/Camera		Remote:GND	Camera:OPEN	
5	Iris cont	Speed mode	Close:+7.5V	Open:+2.5V	
		Position mode	Close:+7.5V	Open:+2.5V	Standard
			Close:+2.5V	Open:+7.5V	KTSM Type *2
6	Power(DC12V)				
7	Signal Common(+5.0V)				
8	Focus control		Far:+7.5V	Near:+2.5V *1	
9	Zoom control		Tele:+7.5V	Wide:+2.5V	
10	Iris mode		Position:+7.5V	Speed:OPEN	
11	+V1(+7.5V)				
12	-V1(+2.5V)				

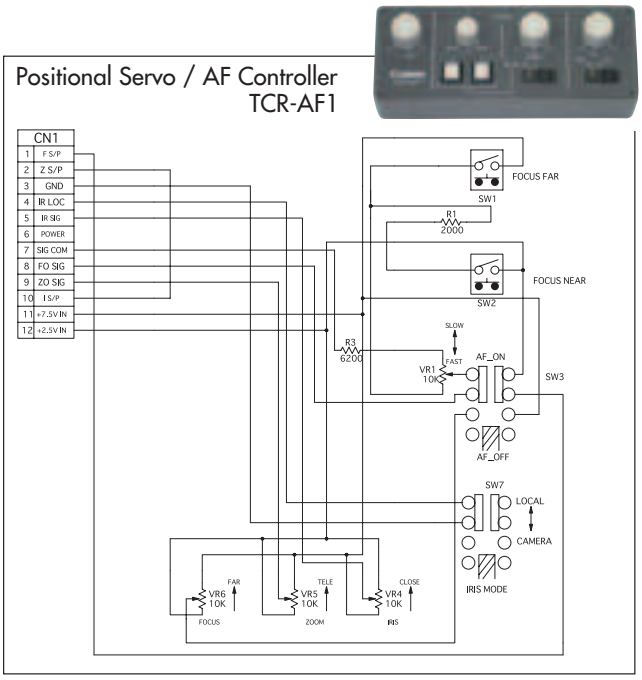
*1 When Pin No. 1 is controlled by the AF (+2.5V) mode, it is necessary that Pin No. 8 is controlled by the Focus Speed Servo (+5V±2.5V). If Pin No.8 is commanded to move by the Focus Speed Servo Signal during the AF mode, the command will take precedence over the AF control. However, if Pin No.8 is commanded to move by the Focus Position Servo Signal during the AF mode, the focus will be uncontrollable. Please be mindful of the Remote Manual Control Signal during the AF mode.

*2 A special version of the 16x, the **YH16x7 KTSM** has been designed to interface with the **Panasonic AW-E650/E655** when used together with **Panasonic's Pan-Tilt systems**

•For using with Sony DXC-990 or Panasonic AW-E650/E655, please contact Canon Sales office for further infomation.

Circuit Diagram of Controller for AF lenses





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