

# FUJINON

FUJIFILM

*The Ultimate Image*

## PRODUCT GUIDE 2009



## INTRODUCING...NEW 2009 LENSES



**NEW**

**ZA SELECT**

**HD Series 2/3"**  
**ZA12x4.5B RM/RD**



**NEW**

**ZA SELECT**

**HD Series 2/3"**  
**ZA17x7.6B RM/RD**



**NEW**

**HDTV Field**  
**XA50x9.5BE SM**



**NEW**

**PL Mount Cine Zoom**  
**18-85mm T2.0**

*(more models to be released late 2009)*

### **Videoconferencing 2/3"**

**ZA12x4.5B MD**

**ZA17x7.6B MD**

**ZA22x7.6B MD**

**ZA12x4.5BE MD**

**ZA17x7.6BE MD**

**ZA22x7.6BE MD**

*(photos not yet available)*

**FUJINON**  
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*Not every product shown in this guide is available worldwide.*

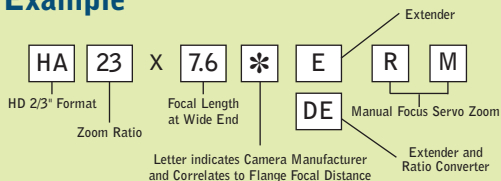
## Prefix

A	2/3" FORMAT (ENG)
Ah	2/3" FORMAT (EFP)
S	1/2" FORMAT (ENG)
T	1/3" FORMAT (ENG)
HA/XA/HAS	2/3" FORMAT (High Definition)
ZA	2/3" FORMAT (High Definition)
HAc	2/3" FORMAT (High Definition, Cine Compact Zoom)
HAe	2/3" FORMAT (High Definition, Cine Super Zoom)
HAeF	2/3" FORMAT (High Definition, Cine Super Prime)
HS/HSs/XS	1/2" FORMAT (High Definition)
HTs/Th	1/3" FORMAT (High Definition)
HK	PL MOUNT LENSES

## Suffix

MD	Motor Drive
RM	Manual Focus Servo Zoom
ZM	Manual Focus Servo Zoom with Quick Frame
RD	Full Servo (ENG Style)
ZD	Full Servo with Quick Frame
SM	Manual/Servo Module Interchangeable

## Example



# HD & SD ENG FEATURES

## DIGIPOWER

In order to enhance the newest optical design technology, Fujinon has developed the digital servo control system **DIGI POWER** offering advanced performance of its zoom lenses. In addition to improved specification and performance the utilization of digital circuitry in our **DIGI POWER** product line has made many new features available that were virtually impossible in the past. **DIGI POWER** lenses provide for vastly improved accuracy and repeatability over previous designs and enable custom control parameters to be memorized for individual camera operator's preferences. An optional 16 bit processor for zoom, focus and iris is available for applications requiring a high degree of accuracy.

## QuickZoom

**QUICKZOOM** speed is 0.6 sec. / 0.7 sec.\* from end to end. **QUICKZOOM** provides a rapid zoom movement to the telephoto position to check focus by the simple push of a button. Releasing the button returns the lens to the previously selected zoom position. Furthermore, by setting the switch, **QUICKZOOM** can be performed remotely from zoom rate demand units.

- \* 0.6 sec. : Studio and Field lens
- 0.7 sec. : ENG/EFP lens



1 Frame your shot.



2 Press Q-Z button.



3 Lens automatically zooms in. Check focus and release Q-Z button.



4 Lens zooms back to original frame in full focus.

**QUICKZOOM** solves the problem of having to reframe a shot after checking focus. This exclusive feature is a standard component on all of **DIGI POWER** lenses.

Utilizing the **QUICKZOOM** function can be an extremely time saving and productive production tool, by allowing a quick check if focus after a framed shot has been established. Simply press the Q-Z button and the lens zooms in tight at maximum speed, check focus and release the Q-Z button. The lens zooms out to the pre-selected shot automatically. No more guess work as to what the framed shot was prior to checking focus.



## ONE SHOT PRESET

Zoom and focus can be preset and memorized in advance at a selected position. One touch of the switch during shooting will instantly return to the memorized position for time saving production.



# HD & SD ENG FEATURES

## ZOOM MODE SELECT

A zoom mode switch provides the option to change the zoom response from "normal" to more sensitive on the wide or telephoto side. With the 3-zoom mode (10-zoom mode on ENG/EFP) the user can select the most suitable fine touch. These zooming mode settings are ideal when switching between productions such as drama and sports.



## ZOOM LIMIT

The zoom limit function can be used in the servo operational mode. By using this function, the zoom movement toward both the wide side and the telephoto side can be limited. An override switch quickly returns the lens to normal mode.

Standard on: DIGI POWER Studio and Field lens, DIGIPOWER ENG / EFP lens



## AUTO-CRUIISING ZOOM

Pressing the C-Z button while zooming will fix the zoom speed at the existing rate. Pressing the seesaw switch a second time slightly will return the zoom speed to normal.

Standard on: DIGI POWER Studio and Field lens, DIGIPOWER ENG / EFP lens



## ZOOM MAXIMUM SPEED ADJUSTMENT

The maximum zooming speed obtained when pressing the seesaw switch to the end can be adjusted.

## 16 BIT ACCURACY FOR REMOTE CONTROL

Remote control of zoom, focus and iris for all **DIGI POWER** lenses is possible via 13 bit serial digital connection. Optional 16 bit processing is available for more accurate positioning in virtual studios and other applications.



## ACCESSORY COMPATIBILITY

Analog control accessories can be used with the **DIGI POWER** lens. (Some functions may be limited.)



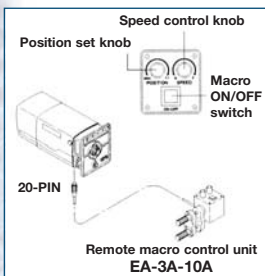
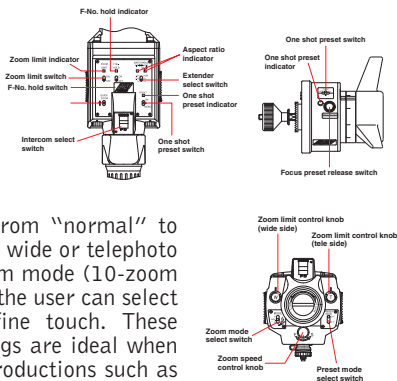
# HD & SD STUDIO/FIELD FEATURES

## ONE SHOT PRESET

Zoom and focus can be preset and memorized in advance at a selected position. One touch of the switch during shooting will instantly return to the memorized position for time saving production.

## ZOOM MODE SELECT

A zoom mode switch provides the option to change the zoom response from "normal" to more sensitive on the wide or telephoto side. With the 3-zoom mode (10-zoom mode on ENG/EFP) the user can select the most suitable fine touch. These zooming mode settings are ideal when switching between productions such as drama and sports.



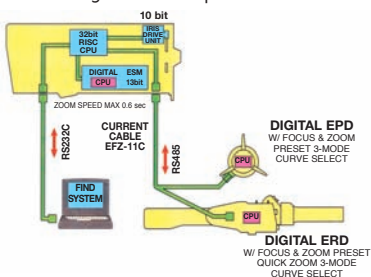
## ADVANCED BACK FOCUS: REMOTE MACRO AND FOCUS FADER

This system allows macro shooting as close as 0.3m (0.05m on HA27x6.5) from the object. Focus fades are also possible at the wide side of the zoom range with the use of a simple remote control unit. Focus fader enhances the creative possibilities

of these lenses while adding a unique look to the production. Standard on DigiPower Field lenses and HA27x6.5.

## AUTOMATIC COMPENSATION OF FOCUS BREATHING

When focusing is operated, the angular field of view normally changes, which creates an effect similar to zooming. This is called focus breathing. This compensation mechanism enables the angular field of view to remain constant by synchronizing the zoom movement to the focus movement, thus reducing image size change when focusing.

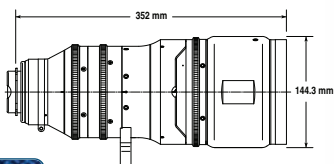


## Find SYSTEM

Fujinon has developed a self-diagnostic system to provide immediate analysis of the lens electronic systems. This system, called "FIND" is available as option for all DIGI POWER lenses. Installing software for DIGI POWER in your PC allows a graphical user interface for lens history and diagnostic functions.

# NEW FUJINON PL SERIES CINE LENSES FOR FILM AND DIGITAL CINEMATOGRAPHY

New Fujinon PL Series zoom lenses are designed for current and emerging 35mm motion picture Film and Digital Cinematography cameras, with useful focal ranges, fast T stops, and exceptional optical performance. Familiar marks and gear placement, comparable physical size and weight, and consistent image quality in four focal range choices enable fast and efficient production without compromise. With focal length coverage from 14.5mm to 400mm, Fujinon's new PL Series open new opportunities for creative Cinematic expression.



18-85mm / T2.0

**NEW**

<b>LENS</b>	<b>18-85mm</b> (HK4.7 x 18-F)
Application	35mm Film and Digital Cinema Camera
Focal Length	18 ~ 85 mm
Zoom Ratio	4.7x
Maximum Relative Aperture	F1.9 (18 ~ 85 mm)
T-No.	T2.0
Iris Range	T2 - T16 / Closed
Image Format	24.0 x 13.5 mm (ø 27.5 mm) Aspect ratio / 16:9
Flange Focal Length (in air)	52mm (Adjustable Range ±0.2mm)
Close Focus Limit (from image plane)	0.82 m / 2.7 ft
Field Angle	18 mm 67°23' 85 mm 16°04'
Object at Close Focus	18 mm 658 x 369 mm 85 mm 139 x 78 mm
Mount	PL Mount
Weight	5.5 kg / 12.1 lbs

**Available End of 2009:** (Specifications subject to change)



14.5-45mm / T 2.0

**NEW**



24-180mm / T2.6

**NEW**



75-400mm / T2.8

**NEW**

## E SERIES CINE ZOOM LENSES FOR 2/3" HD

Fujinon's premiere lens series for 2/3 HD format Digital Cinematography. Four zoom and nine prime lenses, designed to meet the highest quality requirements of big screen, green screen, commercial production, scripted feature and broadcast productions. E Series are the fastest in the class, designed for top performance wide open, enabling maximum depth-of-field control. No breathing, no ramping, familiar focal ranges, and top optical performance places the E Series in a league of its own.



LENS	5-15mm T 1.6	10-100mm T 1.8
Model Number	HAe3x5	HAe10x10
Zoom Ratio	3X	10X
T-No.	T1.6	T1.8
Close Focus from Image Plane	0.56 m / 1.84 ft	0.94 m / 3.08 ft
Object at Close Focus	5 mm 541x304 mm	10 mm 633x356 mm
16:9 Aspect Ratio	15 mm 178x100 mm	100 mm 65x37 mm
Angular Field of View	5 mm 87°36'x56°39'	10 mm 51°14'x30°10'
16:9 Aspect Ratio	15 mm 35°27'x20°22'	100 mm 5°29'x3°05'
Focus Rotation	280°	280°
Zoom Rotation	160°	160°
Diameter x Length	ø 128 x 287 mm	ø 128 x 302 mm
Weight	5 kg / 11 lbs	5.8 kg / 12.76 lbs



LENS	6-30mm T 1.8	9.5-114mm T 1.6
Model Number	HAe5x6	HAe12x9.5
Zoom Ratio	5X	12X
T-No.	T1.8	T1.6
Close Focus from Image Plane	0.56 m / 1.84 ft	1.2 m / 3.94 ft
Object at Close Focus	6 mm 458x257 mm	9.5 mm 861x484 mm
16:9 Aspect Ratio	30 mm 92x51 mm	114 mm 72x40 mm
Angular Field of View	6 mm 77°16'x48°23'	9.5 mm 53°34'x31°41'
16:9 Aspect Ratio	30 mm 18°10'x10°16'	114 mm 4°49'x2°43'
Focus Rotation	280°	280°
Zoom Rotation	160°	160°
Diameter x Length	ø 128 x 277 mm	ø 156 x 433.5 mm
Weight	4.7 kg 10.34 lbs	10 kg / 22 lbs

## C SERIES CINE ZOOM LENSES FOR 2/3" HD

Fujinon's compact zoom lenses for 2/3" HD format Digital Cinematography. Three high performance lenses in this class, more compact than the E Series in size and weight, yet with generous zoom ranges and stunning images. The C Series are especially effective when a portable, versatile, cost effective Cine-style zoom is required. The 7.3-110mm, T 2.0, is the workhorse of the series, has a 15x range without ramping or breathing. C Series stands for Compact... not compromise.



LENS	4.5-59mm T 2-2.9	7.3-110mm T 2.0	7.6-137mm T 1.9-2.6
Model Number	HAc13x4.5	HAc15x7.3	HAc18x7.6
Zoom Ratio	13X	15X	18X
Close Focus From Image Plane	0.59 m / 1.92 ft	1.18 m / 3.87 ft	.87 m / 2.85 ft
T-No.	T2 (4.5 ~ 39.2 mm) T2.9 (59 mm)	T2 (7.3 ~ 110 mm)	T1.9 (7.6 ~ 105 mm) T2.6 (137 mm)
Object at Close Focus	4.5 mm 757x425 mm	7.3 mm 1222x687 mm	7.6 mm 738x415 mm
16:9 Aspect Ratio	59 mm 56x31 mm	110 mm 79x44 mm	137 mm 41x23 mm
Angular Field of View	4.5 mm 93°38'x61°50'	7.3 mm 66°36'x40°32'	7.6 mm 64°30'x39°03'
16:9 Aspect Ratio	59 mm 9°18'x5°14'	110 mm 5°00'x2°48'	137 mm 4°01'x2°15'
Focus Rotation	280°	280°	280°
Diameter x Length	ø 95 x 238.5 mm	ø 110 x 287.3 mm	ø 85 x 204 mm
Weight	1.7 kg / 3.74 lbs	2.9 kg / 6.38 lbs	1.6 kg / 3.52 lbs



# E SERIES CINE PRIME LENSES FOR 2/3" HD



LENS	5mm T 1.7	8mm T 1.5	10mm T 1.5
Model Number	HAeF5	HAeF8	HAeF10
Close Focus From Image Plane	0.5 m / 1.64 ft	0.4 m / 1.31 ft	0.5 m / 1.64 ft
T-No.	T1.7	T1.5	T1.5
Object at Close Focus 16:9 Aspect Ratio	591 x 332 mm	288 x 162 mm	335 x 188 mm
Angular Field of View 16:9 Aspect Ratio	87°36' x 56°39'	61°52' x 37°14'	51°14' x 30°10'
Filter Size	—	M86x1	M86x1
Focus Rotation	280°	280°	280°
Diameter x Length	ø 95 x 180.5 mm	ø 95 x 144 mm	ø 95 x 144 mm
Weight	2.2 kg / 4.84 lbs	1.6 kg / 3.52 lbs	1.62 kg / 3.56 lbs



LENS	12mm T 1.5	16mm T 1.5	20mm T 1.5
Model Number	HAeF12	HAeF16	HAeF20
Close Focus From Image Plane	0.4 m / 1.31 ft	0.4 m / 1.31 ft	0.45 m / 1.48 ft
T-No.	T1.5	T1.5	T1.5
Object at Close Focus 16:9 Aspect Ratio	220 x 124 mm	175 x 98 mm	165 x 93 mm
Angular Field of View 16:9 Aspect Ratio	43°34' x 25°19'	33°22' x 19°07'	26°58' x 15°21'
Filter Size	M86x1	M86x1	M86x1
Focus Rotation	280°	280°	280°
Diameter x Length	ø 95 x 144 mm	ø 95 x 144 mm	ø 95 x 144 mm
Weight	1.65 kg / 3.63 lbs	1.6 kg / 3.52 lbs	1.6 kg / 3.52 lbs



LENS	34mm T 1.5	40mm T 1.5	54mm T 1.6
Model Number	HAeF34	HAeF40	HAeF54
Close Focus From Image Plane	0.4 m / 1.31 ft	0.5 m / 1.64 ft	0.6 m / 1.97 ft
T-No.	T1.5	T1.5	T1.6
Object at Close Focus 16:9 Aspect Ratio	83 x 47 mm	99 x 56 mm	92 x 52 mm
Angular Field of View 16:9 Aspect Ratio	16°03' x 9°04'	13°40' x 7°42'	10°09' x 5°43'
Filter Size	M86x1	M86x1	M86x1
Focus Rotation	280°	280°	280°
Diameter x Length	ø 95 x 144 mm	ø 95 x 144 mm	ø 95 x 144 mm
Weight	1.65 kg / 3.63 lbs	1.65 kg / 3.63 lbs	1.65 kg / 3.63 lbs

## 1.4X RANGE EXTENDER

HAeE14-1

E Series 1.4x Tele-Extender increases focal range of zooms and primes by 1.4x, with a minimal 1 stop loss.



For 2/3" HD

# PRECISION FOCUS LENSES



## PF-BUILT-IN LENSES

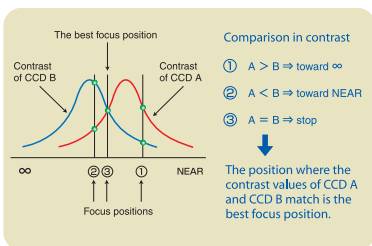
Fujinon's Precision Focus Assist enables camera operators the ability to ensure fast accurate focusing of high definition images under varying conditions. The PF system is the first to incorporate Fujinon's patented system which utilizes a unique contrast method of achieving precise focus.

## FEATURES AND FUNCTIONS

### Contrast focusing method

The Precision Focus System adopts a contrast method that utilizes differences in optical path length. It can instantly focus the image without searching for focus and can maintain precise focus even when following moving objects.

CCD A and CCD B are built into the lens barrel to detect the focusing conditions and are positioned at equal distances before and after the camera image forming plane.



### CAN BE MOUNTED ON ANY 2/3" CAMERA

The PF function is built into the lens and can be operational with the lens mounted on a 2/3" camera with no additional settings or optional devices. Camera software provides additional viewfinder information on some cameras.

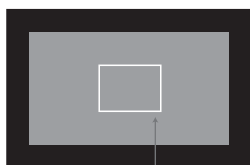
### FOCUS MODE SELECTION

The momentary mode provides for PF function only when pressing the button or the continuous mode may be selected for continuous PF function. These two modes of operation provide precise focusing according to the shooting situation, whether a still or moving image.

### FOCUS AREA SETTING

When the PF lens is mounted on a camera, a focus area is shown on the viewfinder. The size and the position of the focus area can be changed at the camera operator's discretion. This function allows greater flexibility in the selection of the focus area depending on the type of production.

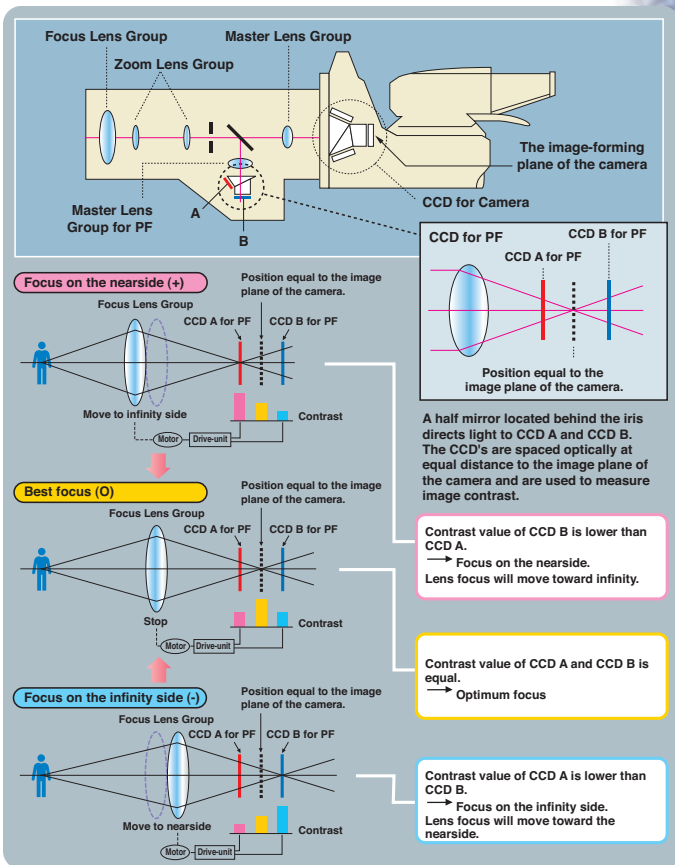
### Camera viewfinder image



User selectable

# PRECISION FOCUS LENSES

Fujinon's exclusive Precision Focus Assist is now in the fourth generation and features improved focusing response, lower light loss and reduced size. The PF system is the only focusing system that can maintain focus at any zoom position from the narrowest to the widest angle.



## USER FRIENDLY PF CONTROLLER

The new focus controller for Fujinon's exclusive Precision Focus Assist provides operators with a simple to use yet powerful tool to maintain precise focus in the most demanding production situations. The familiar manual type focus controller has been adapted to encompass all of the precise servo features of the PF lens.



# PRECISION FOCUS LENSES

WIDE POWER



## HA13x4.5BRD HA22x7.3BRD

LENS	HA13x4.5BRD	HA22x7.3BRD
Zoom Ratio / Format	13X / 2/3"	22X / 2/3"
Focal Length	4.5 to 59 mm	7.3 to 161 mm
Maximum Relative Aperture	1:1.8 (4.5 ~ 41 mm) 1:2.6 (59 mm)	1:1.9 (7.3 ~ 113 mm) 1:2.7 (161 mm)
Maximum Photometric Aperture T-No.	1:2.3 (4.5 ~ 41 mm) 1:3.3 (59 mm)	1:2.3 (7.3 ~ 113 mm) 1:3.3 (161 mm)
Angular Field of View	4.5 mm 93° 38' x 61° 50'	7.3 mm 66° 36' x 40° 32'
16:9 Aspect Ratio	59 mm 9° 18' x 5° 14'	161 mm 3° 25' x 1° 55'
M.O.D. from Image Plane	0.60 m	1.19 m
M.O.D. from Front of Lens	0.30 m	0.85 m
Object Dimensions at M.O.D.	4.5 mm 757 x 425 mm 59 mm 55 x 31 mm	7.3 mm 1222 x 687 mm 161 mm 55 x 31 mm
Dia $\phi$ x Length (w/o Hood)	$\phi$ 95 x 256.1 mm	$\phi$ 110 x 300.2 mm
Weight (w/o Hood)	2.7 kg	3.9 kg
Features	Inner Focus, Zoom Limit	Inner Focus, Zoom Limit



## HA27x6.5BE SM

Zoom Ratio / Format		27X / 2/3"
Focal Length		6.5 ~ 180 mm
	Extender	(2X) 13 ~ 360 mm
Maximum Relative Aperture		1:1.5 (6.5 ~ 123 mm) 1:2.2 (180 mm)
Maximum Photometric Aperture T-No.		1:1.8 (7.2 ~ 149 mm) 1:2.6 (158 mm)
Angular Field of View (Hor. x Vert. in °)		6.5 mm 72° 50' x 45° 02'
16:9 Aspect Ratio		180 mm 3° 03' x 1° 43'
	(2X)	13 mm 40° 30' x 23° 25'
		360 mm 1° 32' x 0° 51'
M.O.D. from Image Plane		1.23 m
M.O.D. from Front of Lens		0.6 m
Object Dimensions at M.O.D.		6.5 mm 1053 x 592 mm
(Hor. x Vert. in mm)		180 mm 39 x 22 mm
16:9 Aspect Ratio	(2X)	13 mm 527 x 296 mm
		360 mm 20 x 11 mm
Size (HxWxL)		228 x 231 x 588 mm
Weight (w/o Hood)		21.5 kg



## XA88x8.8BE SM XA101x8.9BE SM

LENS	XA88x8.8BE SM	XA101x8.9BE SM
Zoom Ratio / Format	88X / 2/3"	101X / 2/3"
Focal Length	8.8 ~ 777 mm	8.9 ~ 900 mm
	Extender (2X) 17.6 ~ 1554 mm	(2X) 17.8 ~ 1800 mm
Maximum Relative Aperture	1:1.7 (8.8 ~ 348 mm) 1:3.8 (777 mm)	1:1.7 (8.9 ~ 291 mm) 1:4.7 (900 mm)
Maximum Photometric Aperture T-No.	1:1.9 (8.8 ~ 348 mm) 1:4.2 (777 mm)	1:2.1 (8.9 ~ 291 mm) 1:5.8 (900 mm)
Angular Field of View (Hor. x Vert. in °)	8.8 mm 57° 10' x 34° 03'	8.9 mm 56° 38' x 33° 42'
16:9 Aspect Ratio	777 mm 0° 42' x 0° 24'	900 mm 0° 37' x 0° 21'
	(2X) 17.6 mm 30° 29' x 17° 25'	(2X) 17.8 mm 30° 09' x 17° 13'
	1554 mm 0° 21' x 0° 12'	1800 mm 0° 18' x 0° 10'
M.O.D. from Image Plane	3.56 m	3.65 m
M.O.D. from Front of Lens	2.9 m	2.9 m
Object Dimensions at M.O.D.	8.8 mm 3029 x 1703 mm	8.9 mm 2865 x 1610 mm
(Hor. x Vert. in mm)	777 mm 34 x 19 mm	900 mm 28 x 16 mm
16:9 Aspect Ratio	(2X) 17.6 mm 1515 x 851 mm	(2X) 17.8 mm 1433 x 805 mm
	1554 mm 17 x 10 mm	1800 mm 14 x 8 mm
Size (HxWxL)	265 x 270 x 625 mm	265 x 270 x 720 mm
Weight (w/o Hood)	26 kg	24.7 kg

# LENSES FOR 1/3" HD CAMERAS

Maximize the performance of your 1/3 inch HD Camcorder with Fujinon's new Th13x3.5BRM wide angle lens and the HTs18x4.2BRM high performance standard lens. Both feature minimal chromatic aberration, high contrast and Fujinon's exclusive Digi Power servo with Quick Zoom, One Shot preset, Cruise Zoom, zoom limit and zoom speed adjust.

Th17x5BRM is an economically priced lens featuring high zoom range, close focusing and exceptional optical quality.



## Th13x3.5BRM

Zoom Ratio / Format	13X / 1/3"
Focal Length	3.5 to 46 mm
Maximum Relative Aperture	1:1.4 (3.5 ~ 43 mm)
Angular Field of View	3.5 mm 72° 32' x 45° 34'
16:9 Aspect Ratio	46 mm 6° 30' x 3° 40'
M.O.D. from Image Plane	0.66 m
M.O.D. from Front of Lens	0.40 m
Object Dimensions at M.O.D.	3.5 mm 660 x 371 mm
	46 mm 53 x 30 mm
Filter Size	ø 82 mm P=0.75
Dia ø x Length (w/o Hood)	ø85 x 228 mm
Weight (w/o Hood)	1.68 kg
Features	Inner Focus



## Th17x5BRM

Zoom Ratio / Format	17X / 1/3"
Focal Length	5 to 85 mm
Maximum Relative Aperture	1:1.4 (5 ~ 85 mm)
Angular Field of View	5 mm 55° 13' x 32° 46'
16:9 Aspect Ratio	85 mm 3° 31' x 1° 59'
M.O.D. from Image Plane	1.11 m
M.O.D. from Front of Lens	0.90 m
Object Dimensions at M.O.D.	5 mm 872 x 490 mm
	85 mm 51 x 29 mm
Filter Size	ø 82 mm P=0.75
Dia ø x Length (w/o Hood)	ø85 x 185.5 mm
Weight (w/o Hood)	1.25 kg
Features	Inner Focus

Accessories for Th13x3.5BRM and Th17x5BRM shown on page 31.

QuickZoom

DIGI POWER



QuickZoom

DIGI POWER



## HTs18x4.2BRM HTs18x4.2BERM

LENS	HTs18x4.2BRM	HTs18x4.2BERM
Zoom Ratio / Format	18X / 1/3"	18X / 1/3"
Focal Length	4.2 to 76 mm	4.2 to 76 mm
Extender		(2X) 8.4 to 152 mm
Maximum Relative Aperture	1:1.4 (4.2 ~ 76 mm)	1:1.4 (4.2 ~ 76 mm)
		(2X) 1:2.8 (152 mm)
Angular Field of View	4.2 mm 63° 49' x 39° 35'	4.2 mm 63° 49' x 39° 35'
16:9 Aspect Ratio	76 mm 4° 00' x 2° 13'	76 mm 3° 56' x 2° 13'
		(2X) 8.4 mm 34° 35' x 19° 51'
		152 mm 1° 52' x 1° 6'
M.O.D. from Image Plane	0.83 m	0.84 m
M.O.D. from Front of Lens	0.60 m	0.60 m
Object Dimensions at M.O.D.	4.2 mm 768 x 409 mm	5.5 mm 741 x 417 mm
	76 mm 40 x 23 mm	100 mm 43 x 24 mm
Filter Size	ø 82 mm P=0.75	ø 82 mm P=0.75
Dia ø x Length (w/o Hood)	ø85 x 207 mm	ø85 x 206.6 mm
Weight (w/o Hood)	1.53 kg	1.58 kg
Options	16 Bit Encoder	16 Bit Encoder
Features	Inner Focus / Quick Zoom / Zoom Limit	



# LENSES FOR 1/2" HD CAMERAS

The introduction of HD cameras utilizing the 1/2 inch imager brought on the need for high quality 1/2 inch HD lenses for News and Production applications. Fujinon offers a complete line including the HS16x4.6BERM that combines wide angle and a 16 X zoom range and the HS18x5.5BERM/BERD. Both feature an integral 2x extender. The HSs18x5.5BRM/BRD standard lens, wide angle XS13x3.3BRM and the economical XS17x5.5 round out the complete line. All lenses utilize Fujinon's exclusive DigiPower servo system for precise control over zoom functions.

## HS16x4.6BERM



QuickZoom



Zoom Ratio / Format	16X / 1/2"	
Focal Length	4.6 to 74 mm	
Extender	(2X) 9.2 to 148 mm	
Maximum Relative Aperture	1:1.4 (4.6 ~ 47 mm) 1:2.2 (74 mm)	
Maximum Photometric Aperture T-No.	1:1.5 (4.6 ~ 47 mm) 1:2.4 (74 mm)	
Angular Field of View	4.6 mm 74° 18' x 46° 09'	
16:9 Aspect Ratio	74 mm 5° 24' x 3° 02'	
M.O.D. from Image Plane	0.68 m	
M.O.D. from Front of Lens	0.40 m	
Object Dimensions at M.O.D.	4.6 mm 710 x 399 mm 74 mm 44 x 25 mm	
Filter Size	ø 107 mm P=1 (In Hood)	
Dia ø x Length (w/o Hood)	ø95 x 240 mm	
Weight (w/o Hood)	1.98 kg	
Options	16 Bit Encoder	
Features	Inner Focus / Quick Zoom / Zoom Limit	

## HS18x5.5BERM/RD\* HSs18x5.5BRM/RD\*



QuickZoom



LENS	HS18x5.5BERM/RD*	HSs18x5.5BRM/RD*
Zoom Ratio / Format	18X / 1/2"	18X / 1/2"
Focal Length	5.5 to 100 mm	5.5 to 100 mm
Extender	(2X) 11 to 200 mm	
Maximum Relative Aperture	1:1.4 (5.5 ~ 78 mm) 1:1.8 (100 mm)	1:1.4 (5.5 ~ 77 mm) 1:1.8 (100 mm)
Maximum Photometric Aperture T-No.	1:1.5 (5.5 ~ 78 mm) 1:1.9 (100 mm)	1:1.5 (5.5 ~ 77 mm) 1:1.9 (100 mm)
Angular Field of View	5.5 mm 64° 43' x 39° 14'	5.5 mm 64° 43' x 39° 14'
16:9 Aspect Ratio	100 mm 4° 00' x 2° 15'	100 mm 4° 00' x 2° 15'
M.O.D. from Image Plane	0.84 m	0.84 m
M.O.D. from Front of Lens	0.60 m	0.60 m
Object Dimensions at M.O.D.	5.5 mm 741 x 417 mm 100 mm 41 x 23 mm	5.5 mm 741 x 417 mm 100 mm 43 x 24 mm
Filter Size	ø 82 mm P=0.75	ø 82 mm P=0.75
Dia ø x Length (w/o Hood)	ø85 x 206.6 mm	ø85 x 206.6 mm
Weight (w/o Hood)	1.58 kg (RM) / 1.65 kg (RD)	1.53 kg (RM) / 1.60 kg (RD)
Options	16 Bit Encoder	16 Bit Encoder
Features	Inner Focus / Quick Zoom / Zoom Limit	

\*RD contain servos for zoom and focus.

## XS13x3.3BRM XS17x5.5BRM



QuickZoom



LENS	XS13x3.3BRM	XS17x5.5BRM
Zoom Ratio / Format	13X / 1/2"	17X / 1/2"
Focal Length	3.3 to 43 mm	5.5 to 94 mm
Maximum Relative Aperture	1:1.4 (3.3 ~ 32 mm) 1:1.9 (43 mm)	1:1.4 (5.5 ~ 77 mm) 1:1.7 (94 mm)
Maximum Photometric Aperture T-No.	1:1.5 (3.3 ~ 32 mm) 1:2.1 (43 mm)	1:1.5 (5.5 ~ 77 mm) 1:1.8 (94 mm)
Angular Field of View	3.3 mm 93° 07' x 61° 25'	5.5 mm 64° 43' x 39° 14'
16:9 Aspect Ratio	43 mm 9° 16' x 5° 13'	94 mm 4° 15' x 2° 23'
M.O.D. from Image Plane	0.58 m	0.84 m
M.O.D. from Front of Lens	0.30 m	0.60 m
Object Dimensions at M.O.D.	3.3 mm 752 x 406 mm 43 mm 58 x 31 mm	5.5 mm 741 x 417 mm 94 mm 41 x 23 mm
Filter Size	ø 127 mm P=0.75 (In Hood)	ø 82 mm P=0.75 (On Barrel)
Dia ø x Length (w/o Hood)	ø95 x 240.5 mm	ø85 x 206.6 mm
Weight (w/o Hood)	1.93 kg	1.53 kg
Options	16 Bit Encoder	16 Bit Encoder
Features	Inner Focus	Inner Focus

# ZA SELECT

## HD Series

Fujinon's Select Series is designed to meet the performance needs of the next generation of cost-effective HD cameras. Fujinon worked closely with all major camera manufacturers to engineer true HD lenses that are designed specifically to enhance the performance of lower cost HDTV cameras.

New for 2009 is the addition of the ZA12X4.5B RM/RD and the ZA17X7.6B RM/RD without 2x range extenders. The "RD" versions feature servo zoom and focus for full remote control. These lenses are ideally suited for studio applications where the use of an extender is not necessary.

**WIDE POWER**  
**QuickZoom**



### ZA12x4.5B RM/RD\*

Zoom Ratio / Format	12X / 2/3"
Focal Length	4.5 to 54 mm
Maximum Relative Aperture	1:1.8 (4.5 ~ 41 mm) 1:2.4 (59 mm)
Maximum Photometric Aperture T-No.	1:1.9 (4.5 ~ 41 mm) 1:2.6 (59 mm)
Angular Field of View	4.5 mm 93° 38' x 61° 50'
16:9 Aspect Ratio	54 mm 10° 09' x 5° 43'
M.O.D. from Image Plane	0.59 m
M.O.D. from Front of Lens	0.3 m
Object Dimensions at M.O.D.	4.5 mm 757 x 425 mm 54 mm 59 x 33 mm
Filter Size	ø 127 mm P=0.75 (In Hood)
Dia ø x Length (w/o Hood)	ø95 x 237.5 mm
Weight (w/o Hood)	1.83 kg (RM) / 1.9 kg (RD)*
Options	16 Bit Encoder / Videoconferencing
Features	Inner Focus / Zoom Limit / Quick Zoom

\*RD contain servos for zoom and focus.

**WIDE POWER**  
**QuickZoom**



### ZA12x4.5BE RM/RD\*

Zoom Ratio / Format	12X / 2/3"
Focal Length	4.5 to 54 mm
Extender (2X)	9 to 108 mm
Maximum Relative Aperture	1:1.8 (4.5 ~ 41 mm) 1:2.4 (59 mm)
Maximum Photometric Aperture T-No.	1:1.9 (4.5 ~ 41 mm) 1:2.6 (59 mm)
Angular Field of View	4.5 mm 93° 38' x 61° 50'
16:9 Aspect Ratio	54 mm 10° 09' x 5° 43'
(2X)	9 mm 56° 06' x 33° 20' 108 mm 5° 05' x 2° 52'
M.O.D. from Image Plane	0.59 m
M.O.D. from Front of Lens	0.3 m
Object Dimensions at M.O.D.	4.5 mm 757 x 425 mm 54 mm 59 x 33 mm (2X) 9 mm 373 x 210 mm 108 mm 31 x 17 mm
Filter Size	ø 127 mm P=0.75 (In Hood)
Dia ø x Length (w/o Hood)	ø95 x 237.5 mm
Weight (w/o Hood)	1.93 kg (ERM) / 2.0 kg (ERD)*
Options	16 Bit Encoder / Videoconferencing
Features	Inner Focus / Zoom Limit / Quick Zoom

\*RD contain servos for zoom and focus.

# ZA SELECT HD Series

**QuickZoom**



**NEW**



**QuickZoom**

## ZA17x7.6B RM/RD\* ZA17x7.6BE RM/RD\*

LENS	ZA17x7.6B RM/RD*	ZA17x7.6BE RM/RD*
Zoom Ratio / Format	17X / 2/3"	17X / 2/3"
Focal Length	7.6 to 130 mm	7.6 to 130 mm
Extender		(2X) 15.2 to 260 mm
Maximum Relative Aperture	1:1.8 (7.6 ~ 102 mm) 1:2.3 (130 mm)	1:1.8 (7.6 ~ 102 mm) 1:2.3 (130 mm)
Maximum Photometric Aperture T-No.	1:1.9 (7.6 ~ 102 mm) 1:2.5 (130 mm)	1:1.9 (7.6 ~ 102 mm) 1:2.5 (130 mm)
Angular Field of View 16:9 Aspect Ratio	7.6 mm 64° 30' x 39° 03' 130 mm 4° 13' x 2° 23'	7.6 mm 64° 30' x 39° 03' 130 mm 4° 13' x 2° 23'
(2X)		15.2 mm 35° 01' x 20° 07' 260 mm 2° 07' x 1° 11'
M.O.D. from Image Plane	0.84 m	0.84 m
M.O.D. from Front of Lens	0.6 m	0.6 m
Object Dimensions at M.O.D.	7.6 mm 696 x 392 mm 130 mm 43 x 24 mm	7.6 mm 696 x 392 mm 130 mm 43 x 24 mm
(2X)		15.2 mm 362 x 204 mm 260 mm 21 x 12 mm
Filter Size	ø 82 mm P=0.75 (On Barrel)	ø 82 mm P=0.75 (On Barrel)
Dia ø x Length (w/o Hood)	ø 85 x 203 mm	ø 85 x 203 mm
Weight (w/o Hood)	1.43 kg (RM) / 1.5 kg (RD)*	1.53 kg (ERM) / 1.6 kg (ERD)*
Options	16 Bit Encoder / Videoconf.	16 Bit Encoder / Videoconf.
Features	Inner Focus / Zoom Limit Quick Zoom	Inner Focus / Zoom Limit Quick Zoom

\*RD contain servos for zoom and focus.

ERM version with extender

**QuickZoom**



## ZA22x7.6BE RM/RD\*

Zoom Ratio / Format	22X / 2/3"
Focal Length	7.6 to 167 mm
Extender	(2X) 15.2 to 334 mm
Maximum Relative Aperture	1:1.8 (7.6 ~ 120 mm) 1:2.5 (167 mm)
Maximum Photometric Aperture T-No.	1:1.9 (7.6 ~ 120 mm) 1:2.6 (167 mm)
Angular Field of View 16:9 Aspect Ratio	7.6 mm 64° 30' x 39° 03' 167 mm 3° 17' x 1° 51'
(2X)	15.2 mm 35° 01' x 20° 07' 334 mm 1° 39' x 0° 55'
M.O.D. from Image Plane	1.07 m
M.O.D. from Front of Lens	0.8 m
Object Dimensions at M.O.D.	7.6 mm 915 x 514 mm 167 mm 43 x 24 mm
(2X)	15.2 mm 473 x 266 mm 334 mm 22 x 12 mm
Filter Size	ø 95 mm P=1.0 (On Barrel) ø 107 mm P=1.0 (In Hood)
Dia ø x Length (w/o Hood)	ø100 x 222.6 mm
Weight (w/o Hood)	1.75 kg (ERM) / 1.82 kg (ERD)*
Options	16 Bit Encoder / Videoconferencing
Features	Inner Focus / Zoom Limit / Quick Zoom

\*RD contain servos for zoom and focus.

# HA PREMIER

## HD Series

Fujinon's Premier Series lenses are designed to complement and enhance the quality of the worlds most advanced 2/3 inch HDTV cameras.

Great consideration in the design and development of these high-end HD lenses has been taken to incorporate the highest optical and mechanical specifications while ensuring unmatched performance in the most rugged of production environments.

**DIGI POWER**  
**WIDE POWER**  
**QuickZoom**



### HA13x4.5BE RM/RD\*

Zoom Ratio / Format	13X / 2/3"	
Focal Length	4.5 to 59 mm	
Extender	(2X) 9 to 118 mm	
Maximum Relative Aperture	1:1.8 (4.5 ~ 41 mm) 1:2.6 (59 mm)	
Maximum Photometric Aperture T-No.	1:2.0 (4.5 ~ 41 mm) 1:2.9 (59 mm)	
Angular Field of View 16:9 Aspect Ratio	4.5 mm	93° 38' x 61° 50'
	59 mm	9° 18' x 5° 14'
	(2X) 9 mm	56° 06' x 33° 20'
	118 mm	4° 39' x 2° 37'
M.O.D. from Image Plane	0.59 m	
M.O.D. from Front of Lens	0.3 m	
Object Dimensions at M.O.D.	4.5 mm	757 x 420 mm
	59 mm	55 x 31 mm
	(2X) 9 mm	373 x 210 mm
	118 mm	28 x 16 mm
Filter Size	ø 127 mm P=0.75 (In Hood)	
Dia ø x Length (w/o Hood)	ø95 x 238.5 mm	
Weight (w/o Hood)	1.98 kg (RM) / 2.05 kg (RD)*	
Options	Ratio Converter / 16 Bit Encoder	
Features	Inner Focus / Zoom Limit / Quick Zoom	

\*RD contain servos for zoom and focus.

**DIGI POWER**  
**QuickZoom**



### HA16x6.3BE RM/RD\*

Zoom Ratio / Format	16X / 2/3"	
Focal Length	6.3 to 101 mm	
Extender	(2X) 12.6 to 202 mm	
Maximum Relative Aperture	1:1.8 (6.3 ~ 63 mm) 1:2.9 (101 mm)	
Maximum Photometric Aperture T-No.	1:1.9 (6.3 ~ 63 mm) 1:3.1 (101 mm)	
Angular Field of View 16:9 Aspect Ratio	6.3 mm	74° 33' x 46° 19'
	101 mm	4° 00' x 3° 03'
	(2X) 12.6 mm	41° 40' x 24° 09'
	202 mm	2° 43' x 1° 32'
M.O.D. from Image Plane	0.69 m	
M.O.D. from Front of Lens	0.4 m	
Object Dimensions at M.O.D.	6.3 mm	712 x 400 mm
	101 mm	45 x 25 mm
	(2X) 12.6 mm	356 x 200 mm
	202 mm	22 x 13 mm
Filter Size	ø 107 mm P=1 (In Hood)	
Dia ø x Length (w/o Hood)	ø95 x 238.5 mm	
Weight (w/o Hood)	1.98 kg / 2.05 kg*	
Options	16 Bit Encoder	
Features	Inner Focus / Zoom Limit / Quick Zoom	

\*RD contain servos for zoom and focus.

# HA PREMIER

## HD Series

### HA18x7.6BE RM/RD\*



QuickZoom



Zoom Ratio / Format	18X / 2/3"	
Focal Length	7.6 to 137 mm	
Extender	(2X)	15.2 to 274 mm
Maximum Relative Aperture	1:1.8 (7.6 ~ 103 mm) 1:2.4 (137 mm)	
Maximum Photometric Aperture T-No.	1:1.9 (7.6 ~ 105 mm) 1:2.6 (137 mm)	
Angular Field of View	7.6 mm	64° 30' x 39° 03'
16:9 Aspect Ratio	137 mm	4° 01' x 2° 15'
	(2X) 15.2 mm	35° 01' x 20° 07'
	274 mm	2° 00' x 1° 08'
M.O.D. from Image Plane	0.87 m	
M.O.D. from Front of Lens	0.6 m	
Object Dimensions at M.O.D.	7.6 mm	738 x 415 mm
	137 mm	41 x 23 mm
	(2X) 15.2 mm	362 x 204 mm
	274 mm	21 x 12 mm
Filter Size	ø 82 mm P=0.75 (On Barrel)	
Dia ø x Length (w/o Hood)	ø85 x 204 mm	
Weight (w/o Hood)	1.58 kg / 1.65 kg*	
Options	Ratio Converter / 16 Bit Encoder	
Features	Inner Focus / Zoom Limit / Quick Zoom	

### HAs18x7.6B RM/RD\*



QuickZoom



Zoom Ratio / Format	18X / 2/3"	
Focal Length	7.6 to 137 mm	
Maximum Relative Aperture	1:1.8 (7.6 ~ 103 mm) 1:2.4 (137 mm)	
Angular Field of View	7.6 mm	64° 30' x 39° 03'
16:9 Aspect Ratio	137 mm	4° 01' x 2° 15'
M.O.D. from Image Plane	0.84 m	
M.O.D. from Front of Lens	0.6 m	
Object Dimensions at M.O.D.	7.6 mm	738 x 415 mm
	137 mm	41 x 23 mm
Filter Size	ø 82 mm P=0.75 (On Barrel)	
Dia ø x Length (w/o Hood)	ø85 x 204 mm	
Weight (w/o Hood)	1.26 kg / 1.33 kg*	
Options	16 Bit Encoder	
Features	Inner Focus / Zoom Limit / Quick Zoom	

### HA23x7.6BE RM/RD\*



QuickZoom



Zoom Ratio / Format	23X / 2/3"	
Focal Length	7.6 to 175 mm	
Extender	(2X)	15.2 to 350 mm
Maximum Relative Aperture	1:1.8 (7.6 ~ 122 mm) 1:2.65 (175 mm)	
Maximum Photometric Aperture T-No.	1:1.9 (7.6 ~ 122 mm) 1:2.8 (175 mm)	
Angular Field of View	7.6 mm	64° 30' x 39° 03'
16:9 Aspect Ratio	175 mm	3° 08' x 1° 46'
	(2X) 15.2 mm	35° 01' x 20° 07'
	350 mm	1° 34' x 0° 53'
M.O.D. from Image Plane	1.07m	
M.O.D. from Front of Lens	0.8m	
Object Dimensions at M.O.D.	7.6 mm	915 x 514 mm
	175 mm	41 x 23 mm
	(2X) 15.2 mm	473 x 266 mm
	350 mm	21 x 12 mm
Filter Size	ø 95m P=1 (On Barrel) / ø 107m P=1 (In Hood)	
Dia ø x Length (w/o Hood)	ø100 x 223.6 mm	
Weight (w/o Hood)	1.88 kg (RM) / 1.95 kg (RD)	
Options	Ratio Converter / 16 Bit Encoder	
Features	Inner Focus / Zoom Limit / Quick Zoom	

\*RD contain servos for zoom and focus.



# HA PREMIER

## HD Series

### HA22x7.3BE RM/RD\*



QuickZoom



Zoom Ratio / Format	22X / 2/3"	
Focal Length	7.3 to 161 mm	
Extender	(2X)	14.6 to 322 mm
Maximum Relative Aperture	1:1.9 (7.3 ~ 113 mm) 1:2.7 (161 mm)	
Maximum Photometric Aperture T-No.	1:2.0 (7.3 ~ 113 mm) 1:2.9 (161 mm)	
Angular Field of View	7.3 mm	66° 36' x 40° 32'
16:9 Aspect Ratio	161 mm	3° 25' x 1° 55'
	(2X)	14.6 mm 36° 22' x 20° 55' 322 mm 1° 42' x 0° 58'
M.O.D. from Image Plane	1.18 m	
M.O.D. from Front of Lens	0.85 m	
Object Dimensions at M.O.D.	7.3 mm	1222 x 687 mm
	161 mm	55 x 31 mm
	(2X)	14.6 mm 609 x 342 mm 322 mm 28 x 16 mm
Filter Size	ø 127 mm P=0.75 (On Hood)	
Dia ø x Length (w/o Hood)	ø110 x 287.3 mm	
Weight (w/o Hood)	3.15 kg / 3.22 kg*	
Options	Ratio Converter / 16 Bit Encoder	
Features	Inner Focus / Quick Zoom / Zoom Limit	

### HA25x11.5BE RD\*



QuickZoom



Zoom Ratio / Format	25X / 2/3"	
Focal Length	11.5 to 288 mm	
Extender	(2X)	23 to 576 mm
Maximum Relative Aperture	1:2.0 (11.5 ~ 206 mm) 1:2.8 (288 mm)	
Maximum Photometric Aperture T-No.	1:2.1 (11.5 ~ 206 mm) 1:2.9 (288 mm)	
Angular Field of View	11.5 mm	45° 16' x 26° 23'
16:9 Aspect Ratio	288 mm	1° 54' x 1° 04'
	(2X)	23 mm 23° 33' x 13° 22' 576 mm 0° 57' x 0° 32'
M.O.D. from Image Plane	2.51 m	
M.O.D. from Front of Lens	2.2 m	
Object Dimensions at M.O.D.	11.5 mm	1740 x 978 mm
	288 mm	70 x 39 mm
	(2X)	23 mm 870 x 489 mm 576 mm 35 x 20 mm
Filter Size	ø 107mm P=1 (On Barrel)	
Dia ø x Length (w/o Hood)	ø110 x 265 mm	
Weight (w/o Hood)	2.8 kg	
Features	Inner Focus/Quick Zoom / Inner Focus	

### HA25x16.5BE RD\*



QuickZoom



Zoom Ratio / Format	25X / 2/3"	
Focal Length	16.5 to 413 mm	
Extender	(2X)	33 to 826 mm
Maximum Relative Aperture	1:2.8 (16.5 ~ 289mm) 1:4.0 (413 mm)	
Maximum Photometric Aperture T-No.	1:2.9 (16.5 ~ 289 mm) 1:4.2 (413 mm)	
Angular Field of View	16.5 mm	32° 25' x 18° 33'
16:9 Aspect Ratio	413 mm	1° 20' x 0° 45'
	(2X)	33 mm 16° 32' x 9° 20' 826 mm 0° 40' x 0° 22'
M.O.D. from Image Plane	2.52 m	
M.O.D. from Front of Lens	2.2 m	
Object Dimensions at M.O.D.	16.5 mm	1213 x 682 mm
	413 mm	49 x 27 mm
	(2X)	33 mm 606 x 341 mm 826 mm 24 x 14 mm
Filter Size	ø 107mm P=1 (On Barrel)	
Dia ø x Length (w/o Hood)	ø110 x 278 mm	
Weight (w/o Hood)	2.9 kg	
Features	Quick Zoom / Zoom Limit	

\*RD contain servos for zoom and focus.

# HA PREMIER HD Series

OS-TECH QuickZoom



## HA42x9.7BE RD

Zoom Ratio / Format	42X / 2/3"
Focal Length	9.7 ~ 410 mm
Extender	(2X) 19.4 ~ 820 mm
Maximum Relative Aperture	1:2.0 (9.7 ~ 225 mm)
Aperture	1:3.7 (410 mm)
Maximum Photometric Aperture T-No.	1:2.2 (9.7 ~ 225 mm)
Aperture T-No.	1:4.0 (410 mm)
Angular Field of View	9.7 mm 52° 37' x 31° 03'
16:9 Aspect Ratio	410 mm 1° 20' x 0° 45'
	(2X) 19.4 mm 27° 46' x 15° 49'
	820 mm 0° 40' x 0° 23'
M.O.D. from Image Plane	3.18 m
M.O.D. from Front of Lens	2.8 m
Object Dimensions at M.O.D.	9.7 mm 2619 x 1472 mm
	410 mm 64 x 36 mm
	(2X) 19.4 mm 1339 x 753 mm
	820 mm 33 x 19 mm
Filter Size	ø 127 mm P=0.75 (On Barrel)
Dia ø x Length (w/o Hood)	ø130 x 338.5 mm
Weight (w/o Hood)	5.3 kg
Options	Built In OS-TECH
Features	Inner Focus / Zoom Limit / Built In OS-TECH / Quick Zoom

OS-TECH QuickZoom



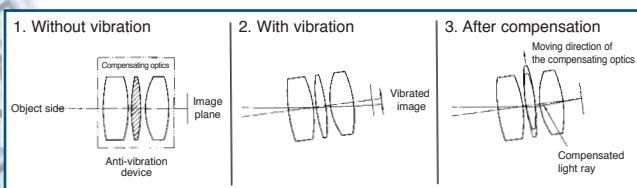
## HA42x13.5BE RD

Zoom Ratio / Format	42X / 2/3"
Focal Length	13.5 ~ 570 mm
Extender	(2X) 27 ~ 1140 mm
Maximum Relative Aperture	1:2.8 (13.5 ~ 307 mm)
Aperture	1:5.2 (570 mm)
Maximum Photometric Aperture T-No.	1:3.0 (13.5 ~ 307 mm)
Aperture T-No.	1:5.6 (570 mm)
Angular Field of View	13.5 mm 39° 07' x 22° 35'
16:9 Aspect Ratio	570 mm 0° 58' x 0° 33'
	(2X) 27 mm 20° 08' x 11° 24'
	1140 mm 0° 29' x 0° 16'
M.O.D. from Image Plane	3.2 m
M.O.D. from Front of Lens	2.8 m
Object Dimensions at M.O.D.	13.5 mm 1888 x 1061 mm
	570 mm 45 x 25 mm
	(2X) 27 mm 944 x 530 mm
	1140 mm 22 x 13 mm
Filter Size	ø 127 mm P=0.75 (On Barrel)
Dia ø x Length (w/o Hood)	ø130 x 358.5 mm
Weight (w/o Hood)	5.4 kg
Options	Built In OS-TECH
Features	Inner Focus / Zoom Limit / Built In OS-TECH / Quick Zoom

\*RD contain servos for zoom and focus.

## OS-TECH

The HA42x9.7 and HA42x13.5 are equipped with Fujinon's built-in optical stabilization technology (OS-TECH). This feature optically compensates for image vibration as shown below.



# HDTV STUDIO LENSES

Studio lenses are essential for applications requiring the ultimate in control and optical quality. The Compact XA22x7BES studio lens featuring sharp images and quite precise servo zoom and focus in a compact package is designed for mounting to 2/3 inch ENG style cameras.



## XA22x7BES HA22x7.2BE SM

LENS	XA22x7BES	HA22x7.2BE SM
Zoom Ratio / Format	22X / 2/3"	22X / 2/3"
Focal Length	7.0 ~ 154 mm	7.2 ~ 158 mm
Extender	(2X) 14 ~ 308 mm	(2X) 14.4 ~ 316 mm
Maximum Relative Aperture	1:1.8 (7 ~ 116 mm)	1:1.7 (7.2 ~ 149 mm)
	1:2.4 (154 mm)	1:1.8 (158 mm)
Maximum Photometric Aperture T-No.	1:2.2 (7 ~ 116 mm)	1:1.9 (7.2 ~ 149 mm)
	1:2.9 (154 mm)	1:2.0 (158 mm)
Angular Field of View (Hor. x Vert. in °)	7.0 mm 68° 49' x 42° 07'	7.2 mm 67° 20' x 41° 03'
	154 mm 3° 34' x 2° 00'	158 mm 3° 29' x 1° 57'
16:9 Aspect Ratio	(2X) 14 mm 37° 49' x 21° 48'	(2X) 14.4 mm 36° 50' x 21° 12'
	308 mm 1° 47' x 1° 0'	316 mm 1° 44' x 0° 59'
M.O.D. from Image Plane	1.17 m	1.20 m
M.O.D. from Front of Lens	0.8 m	0.6 m
Object Dimensions at M.O.D.	7.0 mm 1197 x 673 mm	7.2 mm 1047 x 589 mm
	154 mm 54 x 31 mm	158 mm 48 x 27 mm
(Hor. x Vert. in mm)	(2X) 14 mm 599 x 337 mm	(2X) 14.4 mm 524 x 294 mm
16:9 Aspect Ratio	308 mm 27 x 15 mm	316 mm 24 x 13 mm
Filter Size	ø 127mm P=0.75	-
Size (HxWxL)	179 x 187 x 340 mm	228 x 231 x 543 mm
Weight	6.6 kg	19.5 kg
Options	FIND / 16 Bit Encoder	Ratio Converter / FIND
Features	Auto Compensation of Focus Breathing	Floating System / Auto Compensation of Focus Breathing

**DIGI POWER**  
Vformat



## HA27x6.5BE SM

Zoom Ratio / Format	27X / 2/3"
Focal Length	6.5 ~ 180 mm
Extender	(2X) 13 ~ 360 mm
Maximum Relative Aperture	1:1.5 (6.5 ~ 123 mm)
	1:2.2 (180 mm)
Maximum Photometric Aperture T-No.	1:1.6 (6.5 ~ 123 mm)
	1:2.4 (180 mm)
Angular Field of View (Hor. x Vert. in °)	6.5 mm 72° 50' x 45° 02'
	180 mm 3° 03' x 1° 43'
16:9 Aspect Ratio	(2X) 13 mm 40° 30' x 23° 25'
	360 mm 1° 32' x 0° 51'
M.O.D. from Image Plane	1.18 m
M.O.D. from Front of Lens	0.6 m
Object Dimensions at M.O.D.	6.5 mm 1053 x 592 mm
	180 mm 39 x 22 mm
(Hor. x Vert. in mm)	(2X) 13 mm 527 x 296 mm
16:9 Aspect Ratio	360 mm 20 x 11 mm
Size (HxWxL)	233 x 231 x 537 mm
Weight (w/o Hood)	19.7 kg
Options	Ratio Converter / FIND
Features	Advanced Back Focus / Remote Macro Focus Fader / Auto Compensation of Focus Breathing Dust Proof & Anti Fogging

# HDTV FIELD LENSES

New for 2009 is the XA50X9.5BESM featuring an integral camera/lens adaptor for easy mounting to most ENG style cameras. The new XA50X9.5BESM is ideal for smaller sports trucks, houses of worship, corporate events and other budget conscious applications requiring a high quality telephoto lens.



**DIGI  
POWER**

## XA50x9.5BE SM

Zoom Ratio / Format	50X / 2/3"	
Focal Length	9.5 ~ 475 mm	
Extender	(2X)	19 ~ 950 mm
Maximum Relative Aperture	1:1.7 (9.5 ~ 311 mm) 1:2.6 (475 mm)	
Maximum Photometric Aperture T-No.	1:1.9 (9.5 ~ 311 mm) 1:2.9 (475 mm)	
Angular Field of View (Hor. x Vert. in °) 4:3 Aspect Ratio	(2X)	9.5 mm 49° 42' x 38° 19' 475 mm 1° 04' x 0° 48' 19 mm 26° 05' x 19° 42' 950 mm 0° 32' x 0° 24'
Angular Field of View (Hor. x Vert. in °) 16:9 Aspect Ratio	(2X)	9.5 mm 53° 34' x 31° 41' 475 mm 1° 09' x 0° 39' 19 mm 28° 20' x 16° 09' 950 mm 0° 35' x 0° 20'
M.O.D. from Image Plane	3.6 m	
M.O.D. from Front of Lens	3.0 m	
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 4:3 Aspect Ratio	(2X)	9.5 mm 2573 x 1930 mm 475 mm 51 x 39 mm 19 mm 1287 x 965 mm 950 mm 26 x 19 mm
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 16:9 Aspect Ratio	(2X)	9.5 mm 2800 x 1575 mm 475 mm 56 x 31 mm 19 mm 1400 x 787 mm 950 mm 28 x 16 mm
Size (HxWxL)	343 x 272 x 838 mm	
Weight	20.5 kg	
Options	—	
Features	Built-In Supporter Dust Proof & Anti Fogging	



**DIGI  
POWER**

## XA66x9.3BE SM

Zoom Ratio / Format	66X / 2/3"	
Focal Length	9.3 ~ 615 mm	
Extender	(2X)	18.6 ~ 1230 mm
Maximum Relative Aperture	1:1.7 (9.3 ~ 325 mm) 1:3.2 (615 mm)	
Maximum Photometric Aperture T-No.	1:1.8 (9.3 ~ 325 mm) 1:3.4 (615 mm)	
Angular Field of View (Hor. x Vert. in °) 4:3 Aspect Ratio	(2X)	9.3 mm 50° 38' x 39° 04' 615 mm 0° 49' x 0° 37' 18.6 mm 29° 37' x 20° 07' 1230 mm 0° 25' x 0° 18'
Angular Field of View (Hor. x Vert. in °) 16:9 Aspect Ratio	(2X)	9.3 mm 54° 33' x 32° 19' 615 mm 0° 54' x 0° 30' 18.6 mm 28° 55' x 16° 29' 1350 mm 0° 27' x 0° 15'
M.O.D. from Image Plane	3.37m	
M.O.D. from Front of Lens	2.7 m	
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 4:3 Aspect Ratio	(2X)	9.3 mm 2346 x 1760 mm 615 mm 36 x 27 mm 18.6 mm 1173 x 880 mm 1230 mm 18 x 13 mm
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 16:9 Aspect Ratio	(2X)	9.3 mm 2558 x 1438 mm 615 mm 39 x 22 mm 18.6 mm 1279 x 719 mm 1230 mm 19 x 11 mm
Size (HxWxL)	265 x 270 x 634 mm	
Weight	21.5 kg	
Options	Ratio Converter/FIND	
Features	Advanced Back Focus / Remote Macro Focus Fader / Dust Proof & Anti Fogging	

# HDTV FIELD LENSES

## XA72x9.3BE SM

**DIGI  
POWER**  
Vformat



Zoom Ratio / Format	72X / 2/3"	
Focal Length	9.3 ~ 675 mm	
Extender	(2X)	18.6 ~ 1350 mm
Maximum Relative Aperture	1:1.7 (9.3 ~ 328 mm) 1:3.5 (675 mm)	
Maximum Photometric Aperture T-No.	1:1.8 (9.3 ~ 328 mm) 1:3.7 (675 mm)	
Angular Field of View (Hor. x Vert. in °) 4:3 Aspect Ratio	(2X)	9.3 mm 50° 38' x 39° 04' 675 mm 0° 45' x 0° 34' 18.6 mm 26° 37' x 20° 07' 1350 mm 0° 22' x 0° 17'
Angular Field of View (Hor. x Vert. in °) 16:9 Aspect Ratio	(2X)	9.3 mm 54° 33' x 32° 19' 675 mm 0° 49' x 0° 27' 18.6 mm 28° 55' x 16° 29' 1350 mm 0° 24' x 0° 14'
M.O.D. from Image Plane	3.37 m	
M.O.D. from Front of Lens	2.7 m	
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 4:3 Aspect Ratio	(2X)	9.3 mm 2346 x 1760 mm 675 mm 33 x 24 mm 18.6 mm 1173 x 880 mm 1350 mm 16 x 12 mm
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 16:9 Aspect Ratio	(2X)	9.3 mm 2558 x 1438 mm 675 mm 36 x 20 mm 18.6 mm 1279 x 719 mm 1350 mm 18 x 10 mm
Size (HxWxL)	265 x 270 x 634 mm	
Weight	21 kg	
Options	Ratio Converter/FIND	
Features	Advanced Back Focus / Remote Macro Focus Fader / Dust Proof & Anti Fogging	

## XA76x9.3BE SM

**DIGI  
POWER**  
Vformat  
OS-TECH



Zoom Ratio / Format	76X / 2/3"	
Focal Length	9.3 ~ 710 mm	
Extender	(2X)	18.6 ~ 1420 mm
Maximum Relative Aperture	1:1.7 (9.3 ~ 334 mm) 1:3.6 (710 mm)	
Maximum Photometric Aperture T-No.	1:1.8 (9.3 ~ 334 mm) 1:3.8 (710 mm)	
Angular Field of View (Hor. x Vert. in °) 4:3 Aspect Ratio	(2X)	9.3 mm 50° 38' x 39° 04' 710 mm 0° 43' x 0° 32' 18.6 mm 26° 37' x 20° 07' 1420 mm 0° 21' x 0° 16'
Angular Field of View (Hor. x Vert. in °) 16:9 Aspect Ratio	(2X)	9.3 mm 54° 33' x 32° 19' 710 mm 0° 46' x 0° 26' 18.6 mm 28° 55' x 16° 29' 1420 mm 0° 23' x 0° 13'
M.O.D. from Image Plane	3.37 m	
M.O.D. from Front of Lens	2.7 m	
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 4:3 Aspect Ratio	(2X)	9.3 mm 2347 x 1760 mm 710 mm 31 x 23 mm 18.6 mm 1173 x 880 mm 1420 mm 15 x 12 mm
Object Dimensions at M.O.D. (Hor. x Vert. in mm) 16:9 Aspect Ratio	(2X)	9.3 mm 2558 x 1438 mm 710 mm 34 x 19 mm 18.6 mm 1279 x 719 mm 1420 mm 17 x 9 mm
Size (HxWxL)	265 x 270 x 634 mm	
Weight	21.8 kg	
Options	Ratio Converter/FIND	
Features	Advanced Back Focus / Remote Macro Focus Fader / Dust Proof & Anti Fogging Built-In OS-TECH	



# HDTV FIELD LENSES

**DIGI POWER** OS-TECH  
Vformat

## XA88x 8.8BE SM XA88x 12.5BE SM



LENS	XA88X8.8BE SM	XA88X12.5BE SM
Zoom Ratio / Format	88X / 2/3"	88X / 2/3"
Focal Length	8.8 ~ 777 mm	12.5 ~ 1100 mm
Extender	(2X) 17.6 ~ 1554 mm	(2X) 25 ~ 2200 mm
Maximum Relative Aperture	1:1.7 (8.8 ~ 348 mm) 1:3.8 (777 mm)	1:2.3 (12.5 ~ 477 mm) 1:5.3 (1100 mm)
Maximum Photometric Aperture T-No.	1:1.8 (8.8 ~ 348 mm) 1:3.6 (777 mm)	1:2.4 (12.5 ~ 477 mm) 1:5.6 (1100 mm)
Angular Field of View (Hor. x Vert. in °)	8.8 mm 53° 08' x 41° 07' 777 mm 0° 39' x 0° 29'	12.5 mm 38° 47' x 29° 35' 1100 mm 0° 28' x 0° 21'
4:3 Aspect Ratio	(2X) 17.6 mm 28° 04' x 21° 14' 1554 mm 0° 19' x 0° 15'	(2X) 25 mm 19° 58' x 15° 02' 2200 mm 0° 14' x 0° 10'
Angular Field of View (Hor. x Vert. in °)	8.8 mm 52° 10' x 34° 03' 777 mm 0° 42' x 0° 24'	12.5 mm 41° 58' x 24° 20' 1100 mm 0° 30' x 0° 17'
16:9 Aspect Ratio	(2X) 17.6 mm 30° 29' x 17° 25' 1554 mm 0° 21' x 0° 12'	(2X) 25 mm 21° 43' x 12° 18' 2200 mm 0° 15' x 0° 08'
M.O.D. from Image Plane	3.51 m	3.53 m
M.O.D. from Front of Lens	2.9 m	2.9 m (12.5-200mm)
Object Dimensions at M.O.D. (Hor. x Vert. in mm)	8.8 mm 2726 x 2044 mm 777 mm 31 x 23 mm	12.5 mm 1919 x 1439 mm 1100 mm 22 x 16 mm
4:3 Aspect Ratio	(2X) 17.6 mm 1363 x 1022 mm 1554 mm 15 x 12 mm	(2X) 25 mm 959 x 720 mm 2200 mm 11 x 8 mm
Object Dimensions at M.O.D. (Hor. x Vert. in mm)	8.8 mm 2971 x 1670 mm 777 mm 34 x 19 mm	12.5 mm 2091 x 1175 mm 1100 mm 24 x 13 mm
16:9 Aspect Ratio	(2X) 17.6 mm 1485 x 835 mm 1554 mm 17 x 9 mm	(2X) 25 mm 1046 x 588 mm 2200 mm 12 x 7 mm
Size (HxWxL)	265 x 270 x 575 mm	265 x 270 x 593 mm
Weight	24.0 kg	24.5 kg
Options	Ratio Converter / FIND	
Features	Advanced Back Focus / Remote Macro / Focus Fader Built-In OS-TECH / Dust Proof & Anti Fogging	

**DIGI POWER** OS-TECH  
Vformat

## XA101x 8.9BE SM



Zoom Ratio / Format	101X / 2/3"	
Focal Length	8.9 ~ 900 mm	
Extender	(2X) 17.8 ~ 1800 mm	
Maximum Relative Aperture	1:1.7 (8.9 ~ 291 mm) 1:4.7 (900 mm)	
Maximum Photometric Aperture T-No.	1:1.8 (8.9 ~ 291 mm) 1:5.0 (900 mm)	
Angular Field of View (Hor. x Vert. in °)	8.9 mm 52° 37' x 40° 41' 900 mm 0° 34' x 0° 25'	
4:3 Aspect Ratio	(2X) 17.8 mm 27° 46' x 21° 00' 1800 mm 0° 17' x 0° 13'	
Angular Field of View (Hor. x Vert. in °)	8.9 mm 56° 38' x 33° 42' 900 mm 0° 37' x 0° 21'	
16:9 Aspect Ratio	(2X) 17.8 mm 30° 09' x 17° 13' 1800 mm 0° 18' x 0° 10'	
M.O.D. from Image Plane	3.59 m	
M.O.D. from Front of Lens	2.9 m	
Object Dimensions at M.O.D. (Hor. x Vert. in mm)	8.9 mm 2629 x 1972 mm 900 mm 26 x 20 mm	
4:3 Aspect Ratio	(2X) 17.8 mm 1315 x 986 mm 1800 mm 13 x 10 mm	
Object Dimensions at M.O.D. (Hor. x Vert. in mm)	8.9 mm 2865 x 1610 mm 900 mm 28 x 16 mm	
16:9 Aspect Ratio	(2X) 17.8 mm 1433 x 805 mm 1800 mm 14 x 8 mm	
Size (HxWxL)	265 x 270 x 660 mm	
Weight	22.9 kg	
Options	Ratio Converter / FIND	
Features	Advanced Back Focus / Remote Macro / Focus Fader Built-In OS-TECH / Dust Proof & Anti Fogging	

# SDTV ENG/EFP PROFESSIONAL LENSES

Fujinon's Professional grade lenses offer high optical quality and a range of focal lengths for every professional production application.

Wide-angle lenses have become increasingly popular for professional videographers and Fujinon's 13x series has set the pace with the widest angle of 6.3mm (2/3"). The optional 2x-range extender adds additional versatility with a maximum focal length of 164mm.

The 20x series features the longest focal length and is available with optional 2x-range extender for telephoto shots.



## A13x6.3B / S13x4.6B RM/ERM\*

LENS	A13x6.3B RM/ERM*	S13x4.6B RM/ERM*
Zoom Ratio / Format	13X / 2/3"	13X / 1/2"
Focal Length	6.3 to 82 mm	4.6 to 60 mm
Extender	(2X) 12.6 to 164 mm	(2X) 9.2 to 120 mm
Maximum Relative Aperture	F2 (to 61 mm) F2.7 (at 82 mm)	F1.5 (to 45 mm) F2.0 (at 60 mm)
Angular Field of View (Hor. x Vert. in °)	6.3 mm 69° 52' x 55° 18' 82 mm 6° 09' x 4° 37' (2X) 12.6 mm 38° 30' x 29° 21' 164 mm 3° 04' x 2° 18'	4.6 mm 69° 39' x 55° 06' 60 mm 6° 06' x 4° 35' (2X) 9.2 mm 38° 21' x 29° 15' 120 mm 3° 03' x 2° 17'
M.O.D. from Image Plane	0.4 m	0.4 m
Object Area (at Wide) at M.O.D	6.3 mm 617mm x 463mm 82 mm 47mm x 36mm	4.6 mm 633mm x 475mm 60 mm 49mm x 37mm
(at Wide) (at Tele)	(2X) 12.6 mm 309mm x 231mm 164 mm 24mm x 18mm	(2X) 9.2 mm 315mm x 236mm 120 mm 24mm x 18mm
Filter Size (on Barrel)	ø 82 mm P=0.75	ø 82 mm P=0.75
Weight RM	1.68 kg	1.68 kg
ERM	1.78 kg	1.78 kg
Features	Inner Focus	Inner Focus

\*ERM version with extender



## A17x9B / S17x6.6B RM

LENS	A17x9B RM	S17x6.6B RM
Zoom Ratio / Format	17X / 2/3"	17X / 1/2"
Focal Length	9 to 155 mm	6.6 to 114 mm
Maximum Relative Aperture	F1.9 (to 115 mm) F2.6 (at 155 mm)	F1.5 (to 90 mm) F1.9 (at 114 mm)
Angular Field of View (Hor. x Vert. in °)	9mm 52° 06' x 40° 16' 155mm 3° 15' x 2° 26'	6.6mm 51° 44' x 39° 58' 114mm 3° 13' x 2° 25'
M.O.D. from Image Plane	0.9m	0.9m
Object Area (at Wide) at M.O.D	9mm 815mm x 611mm 155mm 47mm x 36mm	6.6mm 808mm x 606mm 114mm 47mm x 35mm
Filter Size (on Barrel)	ø 82 mm P=0.75	ø 82 mm P=0.75
Weight w/o hood	1.25 kg	1.25 kg
Features	Inner Focus	Inner Focus

## A20x8.6B / S20x6.4B RM/ERM\*



LENS	A20x8.6B RM/ERM*	S20x6.4B RM/ERM*
Zoom Ratio / Format	20X / 2/3"	20X / 1/2"
Focal Length	8.6 to 172 mm	6.4 to 128 mm
Extender	(2X) 17.2 to 344 mm	(2X) 12.8 to 256 mm
Maximum Relative Aperture	F1.8 (to 115 mm) F2.7 (at 172 mm)	F1.4 (to 90 mm) F2.0 (at 128 mm)
Angular Field of View (Hor. x Vert. in °)	8.6 mm 54° 11' x 41° 59' 172 mm 2° 56' x 2° 12' (2X) 17.2 mm 28° 42' x 21° 43' 344 mm 1° 28' x 1° 06'	6.4 mm 53° 08' x 41° 07' 128 mm 2° 52' x 2° 09' (2X) 12.8 mm 28° 04' x 21° 14' 256 mm 1° 26' x 1° 04'
M.O.D. from Image Plane	0.9 m	0.9 m
Object Area (at Wide) at M.O.D	8.6 mm 866mm x 650mm 172 mm 43mm x 33mm	6.4 mm 846mm x 635mm 128 mm 42mm x 32mm
(at Wide) (at Tele)	(2X) 17.2 mm 433mm x 325mm 344 mm 21mm x 16mm	(2X) 12.8 mm 423mm x 317mm 256 mm 21mm x 16mm
Filter Size	ø 82 mm P=0.75	ø 82 mm P=0.75
Weight RM	1.4 kg	1.4 kg
ERM	1.5 kg	1.5 kg
Features	Inner Focus	Inner Focus

\*ERM version with extender

# HDTV VIDEOCONFERENCING LENSES

Fujinon's HD lenses for videoconferencing and other remote control applications open new markets for HDTV. New for 2009 is the addition of the ZA12x4.5B MD, ZA17x7.6B MD and the ZA22x7.6B MD.

## ZA12x4.5B MD

## ZA12x4.5BE MD

WIDE POWER

NEW

NEW

LENS	ZA12x4.5B MD	ZA12x4.5BE MD
Zoom Ratio / Format	12X / 2/3"	12X / 2/3"
Focal Length	4.5 to 54 mm	4.5 to 54 mm
Extender		(2X) 9 to 108 mm
Maximum Relative Aperture	1:1.8 (4.5 ~ 41 mm) 1:2.4 (59 mm)	1:1.8 (4.5 ~ 41 mm) 1:2.4 (59 mm)
Angular Field of View	4.5 mm 93° 38' x 61° 50'	(2X) 9 mm 56° 06' x 33° 20'
16:9 Aspect Ratio	54 mm 10° 09' x 5° 43'	108 mm 5° 05' x 2° 52'
M.O.D. from Image Plane	0.59 m	0.59 m
Object Dimensions at M.O.D.	4.5 mm 757 x 425 mm 54 mm 59 x 33 mm	(2X) 9 mm 373 x 210 mm 108 mm 31 x 17 mm
Filter Size	ø 127 mm P=0.75 (In Hood)	ø 127 mm P=0.75 (In Hood)
Weight (w/o Hood)	1.9 kg	2.0 kg

## ZA17x7.6B MD

## ZA17x7.6BE MD

NEW

NEW

LENS	ZA17x7.6B MD	ZA17x7.6BE MD
Zoom Ratio / Format	17X / 2/3"	17X / 2/3"
Focal Length	7.6 to 130 mm	7.6 to 130 mm
Extender		(2X) 15.2 to 260 mm
Maximum Relative Aperture	1:1.8 (7.6 ~ 102 mm) 1:2.3 (130 mm)	1:1.8 (7.6 ~ 102 mm) 1:2.3 (130 mm)
Angular Field of View	7.6 mm 64° 30' x 39° 03'	(2X) 15.2 mm 35° 01' x 20° 07'
16:9 Aspect Ratio	130 mm 4° 13' x 2° 23'	260 mm 2° 07' x 1° 11'
M.O.D. from Image Plane	0.84 m	0.84 m
Object Dimensions at M.O.D.	7.6 mm 696 x 392 mm 130 mm 43 x 24 mm	(2X) 15.2 mm 362 x 204 mm 260 mm 21 x 12 mm
Filter Size	ø 82 mm P=0.75 (On Barrel)	ø 82 mm P=0.75 (On Barrel)
Weight (w/o Hood)	1.5 kg	1.6 kg

## ZA22x7.6B MD

## ZA22x7.6BE MD

NEW

NEW

LENS	ZA22x7.6B MD	ZA22x7.6BE MD
Zoom Ratio / Format	22X / 2/3"	22X / 2/3"
Focal Length	7.6 to 167 mm	7.6 to 167 mm
Extender		(2X) 15.2 to 334 mm
Maximum Relative Aperture	1:1.8 (7.6 ~ 120 mm) 1:2.5 (167 mm)	1:1.8 (7.6 ~ 120 mm) 1:2.5 (167 mm)
Angular Field of View	7.6 mm 64° 30' x 39° 03'	(2X) 15.2 mm 35° 01' x 20° 07'
16:9 Aspect Ratio	167 mm 3° 17' x 1° 51'	334 mm 1° 39' x 0° 55'
M.O.D. from Image Plane	1.07 m	1.07 m
Object Dimensions at M.O.D.	7.6 mm 915 x 514 mm 167 mm 43 x 24 mm	(2X) 15.2 mm 473 x 266 mm 334 mm 22 x 12 mm
Filter Size	ø 95 mm P=1.0 (On Barrel)	ø 95 mm P=1.0 (On Barrel)
Weight (w/o Hood)	1.72 kg	1.82 kg

Refer to full size charts on pages 15-16 for more information for all above lenses.

\*EMD version with extender

## HAs18x7.6B MD

## HSs18x5.5B MD



LENS	HAs18x7.6B MD*	HSs18x5.5B MD
Zoom Ratio / Format	18X / 2/3"	18X / 1/2"
Focal Length	7.6 mm ~ 137 mm	5.5 mm ~ 100 mm
Maximum Relative Aperture	1.8 (to 103 mm) 2.4 (at 137 mm)	1.4 (to 77 mm) 1.8 (at 100 mm)
Angular Field of View	7.6 mm 64° 30' x 39° 03'	5.5 mm 64° 43' x 39° 14'
(Hor. x Vert. in °)	137 mm 4° 01' x 2° 15'	100 mm 4° 00' x 2° 15'
M.O.D. from Image Plane	0.84 m	0.84 m
M.O.D. from Front of Lens	0.6 m	0.6 m
Object Area (at Wide)	7.6 mm 738 x 415 mm	5.5 mm 741 x 417 mm
at M.O.D. (at Tele)	137 mm 41 x 23 mm	100 mm 43 x 24 mm
Filter Size	ø 82 x 0.75	ø 82 x 0.75
Weight w/o hood	1.55 kg	1.55 kg

\*Optional Accessory Configuration SS-33A for model HAs18x7.6B MD only.

Refer to pg. 34 for Standard Videoconferencing Accessories.

# SDTV VIDEOCONFERENCING LENSES

Fujinon's complete line of remote control lenses is ideal for everything from graphics stands and videoconferencing to tower cams. A wide array of accessories including wide and telephoto converters, filters and remote controllers are available.

## A13x6.3B MD/EMD\* S13x4.6B MD/EMD\*



LENS	A13x6.3B MD/EMD*	S13x4.6B MD/EMD*
Zoom Ratio / Format	13X / 2/3"	13X / 1/2"
Focal Length	6.3 to 82 mm	4.6 to 60 mm
Extender	(2X) 12.6 to 164 mm	(2X) 9.2 to 120 mm
Maximum Relative Aperture	F2 (to 61 mm) F2.7 (at 82 mm)	F1.5 (to 45 mm) F2.0 (at 60 mm)
Angular Field of View (Hor. x Vert. in °)	6.3mm 69° 52' x 55° 18' 82mm 6° 09' x 4° 37'	4.6mm 69° 39' x 55° 06' 60mm 6° 06' x 4° 35'
	(2X) 12.6mm 38° 30' x 29° 21' 164mm 3° 04' x 2° 18'	(2X) 9.2mm 38° 21' x 29° 15' 120mm 3° 03' x 2° 17'
M.O.D. from Front of Lens	0.4 m	0.4 m
Object Area (at Wide) at M.O.D.	6.3mm 617mm x 463mm 82mm 47mm x 36mm	4.6mm 633mm x 475mm 60mm 49mm x 37mm
(at Tele)	(2X) 12.6mm 309mm x 231mm 164mm 24mm x 18mm	(2X) 9.2mm 315mm x 236mm 120mm 24mm x 18mm
Filter Size (on Barrel)	ø 82 mm P=0.75	ø 82 mm P=0.75
Weight RM	1.73 kg	1.73 kg
ERM	1.83 kg	1.83 kg
Features	Inner Focus	Inner Focus

\*EMD version with extender

## A20x8.6B MD S20x6.4B MD



LENS	A20x8.6B MD	S20x6.4B MD
Zoom Ratio / Format	20X / 2/3"	20X / 1/2"
Focal Length	8.6 mm ~ 172 mm	6.4 mm ~ 128 mm
Maximum Relative Aperture	1.8 (to 115 mm) 2.7 (at 172 mm)	1.4 (to 90 mm) 2.0 (at 128 mm)
Angular Field of View (Hor. x Vert. in °)	8.6 mm 54° 11' x 41° 59' 172 mm 2° 56' x 2° 12'	6.4 mm 53° 08' x 41° 07' 128 mm 2° 52' x 2° 09'
M.O.D. from Front of Lens	0.9 m	0.9 m
Object Area (at Wide) at M.O.D.	8.6 mm 866 x 650 mm 172 mm 43 x 33 mm	6.4 mm 846 x 635 mm 128 mm 42 x 32 mm
Filter Size	ø 82 x 0.75	ø 82 x 0.75
Weight	1.45 kg	1.45 kg
Features	Inner Focus	Inner Focus

## A20x8.6BE MD S20x6.4BE MD



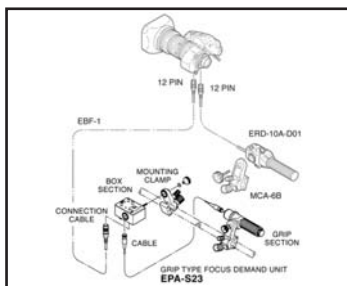
LENS	A20x8.6BE MD	S20x6.4BE MD
Zoom Ratio / Format	20X / 2/3"	20X / 1/2"
Focal Length	8.6 to 172 mm	6.4 to 128 mm
w/ Built-in Extender	(2X) 17.2 to 344 mm	(2X) 12.8 to 256 mm
Maximum Relative Aperture	F1.8 (to 115 mm) F2.7 (at 172 mm)	F1.4 (to 90 mm) F2.0 (at 128 mm)
Angular Field of View (Hor. x Vert. in °)	8.6mm 54° 11' x 41° 59' 172mm 2° 56' x 2° 12'	6.4mm 53° 08' x 41° 07' 128mm 2° 52' x 2° 09'
	(2X) 17.2mm 28° 42' x 21° 43' 344mm 1° 28' x 1° 06'	(2X) 12.8mm 28° 04' x 21° 14' 256mm 1° 26' x 1° 04'
M.O.D. from Front of Lens	0.9 m	0.9 m
Object Area (at Wide) at M.O.D.	8.6mm 866mm x 650mm 172mm 43mm x 33mm	6.4mm 846mm x 635mm 128mm 42mm x 32mm
(at Wide)	(2X) 17.2mm 433mm x 325mm 344mm 21mm x 16mm	(2X) 12.8mm 423mm x 317mm 256mm 21mm x 16mm
(at Tele)		
Filter Size	ø 82 mm P=0.75	ø 82 mm P=0.75
Weight	1.55 kg	1.55 kg
Features	Inner Focus	Inner Focus

◇ For remote application of extender, the ECU motorized extender unit is required.

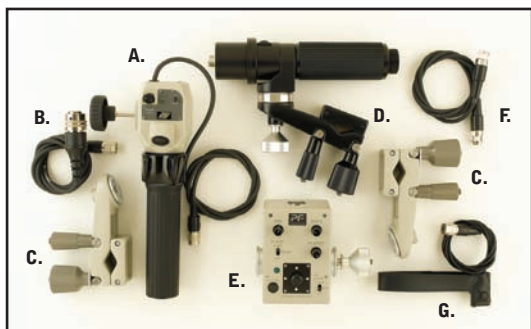
# ACCESSORIES: HD PF CONTROLS ENG/EFP

## SS-13PF Servo Focus/Servo Zoom

For use with PF ENG lenses.

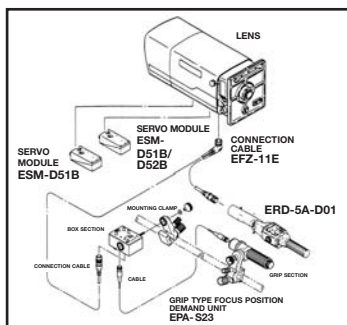


- A. ERD-10A-D01 Digi Zoom Demand
- B. EBF-1 Focus Cable
- C. MCA-6B Mounting Clamp
- D. EPA-S23 (Part of Kit) Focus Grip Section
- E. EPA-S23 (Part of Kit) Focus Box Section
- F. EPA-S23 (Part of Kit) Focus Connection Cable
- G. PF-19A-02A PF Action Switch

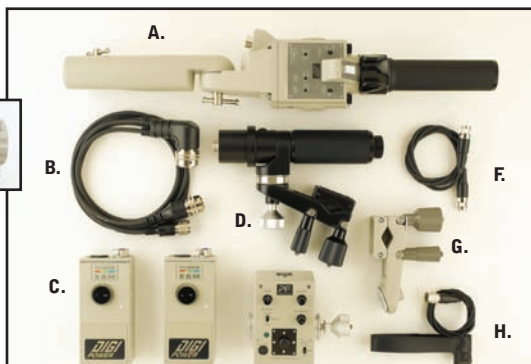


## SS-21PF Servo Focus/Servo Zoom

For use with PF EFP lenses



- A. ERD-5A-D01 Digi Zoom Demand
- B. EFZ-11E Focus/Zoom Cable
- C. ESM-D51B Servo Module
- D. EPA-S23 (Part of Kit) Focus Grip Section
- E. EPA-S23 (Part of Kit) Focus Box Section
- F. EPA-S23 (Part of Kit) Focus Connection Cable
- G. MCA-6B Mounting Clamp
- H. PF-19A-02A PF Action Switch



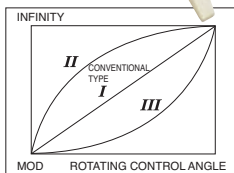
EPD-4A-S13E Digi PF Focus Demand also available.



# ACCESSORIES: HD & SD ENG/EFP

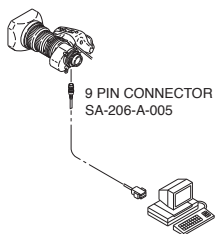
## THREE-MODE FINE FOCUS

By shifting the sensitivity from the wide side to the telephoto side of the focus range, this control provides more precise focusing for studio or sports productions.

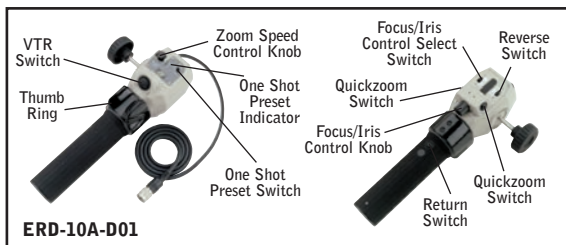


## SERIAL DIGITAL REMOTE CONTROL BY PC

Remote control of zoom, focus and iris for Digipower lenses is possible via serial digital link, providing accurate positioning for virtual studio and other applications requiring digital precision.



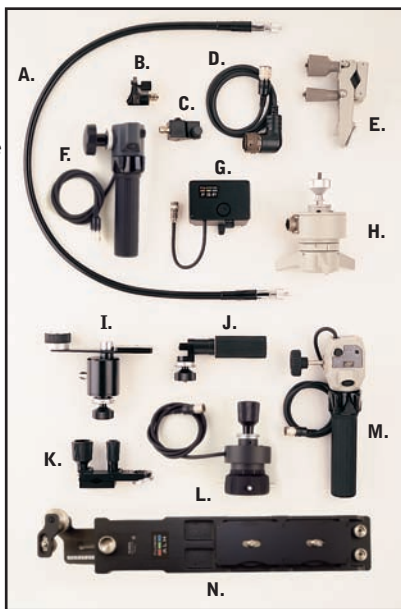
## DIGI ZOOM DEMAND\*



**ERD-10A-D01**

\*New Digital features only available on ERM/ERD-M/S.

- A. CFC-990 Flex Cable
- B. FMM-3B/6B Manual Module
- C. ZMM-6 Manual Module
- D. EBF-1 Focus Cable
- E. MCA-6
- F. ERD-20A-A02 Zoom Demand
- G. FSP-13G Focus Positional Module
- H. EPD-4A-E02
- I. CZH-14 Focus Handle
- J. CFH-11 Focus Handle
- K. MCA-7 Mounting Clamp
- L. EPD-21A-A02 Focus Demand
- M. ERD-10A-D01 Zoom Demand
- N. ALH-117C-01A Support for HA36x/A36x HA42x



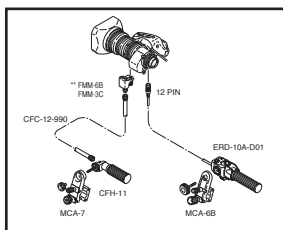
Note: ERD-20A-A02 (F) and EPD-20A-A02 (L) replace the ERD-T22 and EPD-2CA.



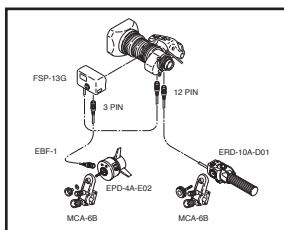
# ACCESSORIES: HD & SD ENG/EFP

## DIGI POWER REAR CONTROL KITS

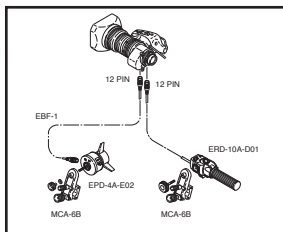
**MS-11D Manual Focus/Servo Zoom**  
For use with RM/ZM type lenses.



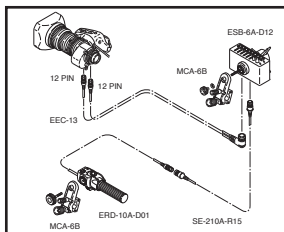
**SS-11D Servo Focus/Servo Zoom**  
For use with RM/ZM type lenses.



**SS-13D Servo Focus/Servo Zoom**  
For use with RD/ZD type lenses.

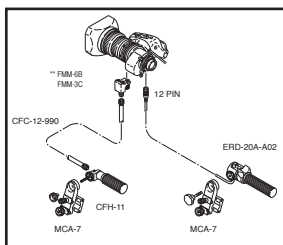


**SS-14S Servo Focus/Servo Zoom**  
For use with RD/ZD type lenses.

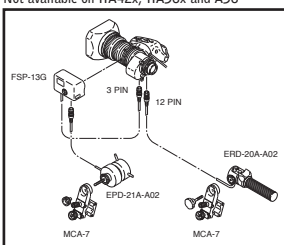


## STANDARD REAR CONTROL KITS

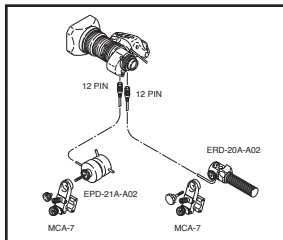
**MS-11 Manual Focus/Servo Zoom**



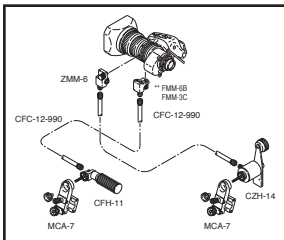
**SS-11 Servo Focus/Servo Zoom**  
Not available on HA42x, HA36x and A36



**SS-13A Servo Focus/Servo Zoom**  
For use with ERD type lenses.



**MM-11 Manual Focus/Manual Zoom**  
Not available on HA42x, HA36x and A36x



\*Specify camera type

\*\*FMM-3C for use on HA42x and HA25x

## MOUNTING SYSTEM

Fujinon has replaced the "cone" shaped mounting system with the "tooth" system. The cone type may still be ordered as a special order.



New Style  
MCA-7

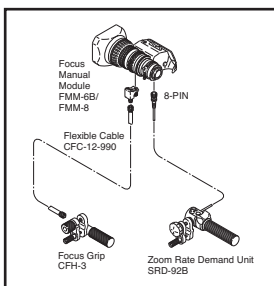


Old Style  
MCA-1A  
(Discontinued)

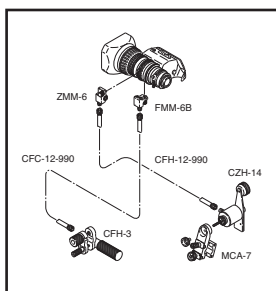
# ACCESSORIES: HD & SD ENG/EFP

## PROFESSIONAL REAR CONTROL KITS

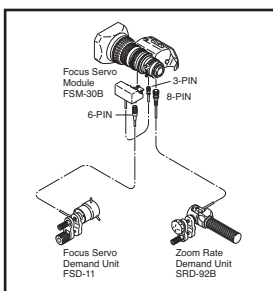
### MS-01 Manual Focus/Servo Zoom



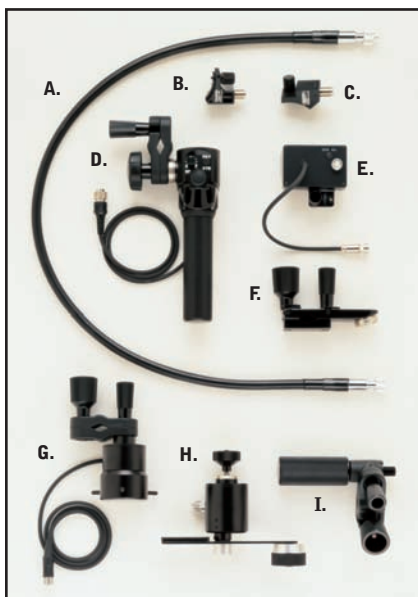
### MM-01 Manual Focus/Manual Zoom Not available on S16x7.3



### SS-01 Servo Focus/Servo Zoom Not available on S16x7.3



\*Specify camera type.



- A. CFC-990 Flex Cable
- B. FMM-6B/FMM-8\* Focus Manual Module
- C. ZMM-6 Zoom Manual Module
- D. SRD-92B Zoom Demand
- E. FSM-30B Focus Servo Module
- F. MCA-7 Mounting Clamp
- G. FSD-11 Focus Demand
- H. CZH-14 Zoom Handle
- I. CFH-3 Focus Handle

\*FMM-8 for use with S16x7.3

# ACCESSORIES: HD ENG/EFP

## LENS CONVERTERS



Wide Converter  
(WCV)

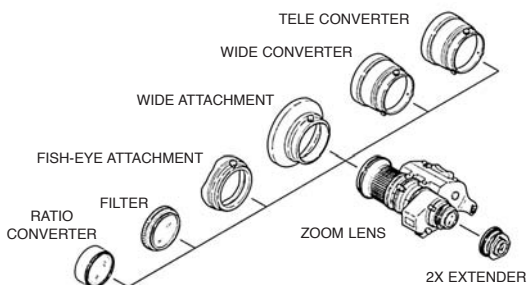


Tele Converter  
(TCV)

## HD/ENG LENS CONVERTERS

Model	Type	Ø Size	Converter*	Mag.	Converted Focal Length (mm)	M.O.D. (m)	Weight (kg)
HS16x4.6	TELE	95 mm	TCV-H95	1.5x	74.0→111.0	0.90	1.00
	WIDE	95 mm	WCV-H95	0.8x	4.6→3.9	0.29	1.00
HS18x5.5/ HSs18x5.5	TELE	85 mm	TCV-H85	1.5x	100.0→150.0	1.35	1.10
	WIDE	85 mm	WCV-H85	0.8x	5.5→4.4	0.38	1.05
	WIDE	85 mm	WAT-H85	0.7x	5.5→3.9	0.29	0.36
	FISHEYE	85 mm	F-ATH85	0.57x	5.5→3.1	0.19	0.36
HA16x6.3	TELE	95 mm	TCV-H955	1.5x	101.0→152.0	0.90	1.00
	WIDE	95 mm	WCV-H95	0.8x	6.3→5.4	0.29	1.00
HA18x7.6E/ HAS18x7.6	TELE	85 mm	TCV-H85	1.5x	137.0→205.5	1.35	1.10
	WIDE	85 mm	WCV-H85	0.8x	7.6→6.1	0.38	1.05
	WIDE	85 mm	WAT-H85	0.7x	7.6→5.3	-	0.36
	FISHEYE	85 mm	F-ATH85	0.57x	-	-	0.36
HA22x7.3E	TELE	110 mm	TCV-H110	1.5x	161.0→242.0	1.90	1.10
HA23x7.6E	TELE	100 mm	TCV-H100	1.5x	175.0→262.5	1.80	1.00
	WIDE	100 mm	WCV-H100	0.8x	7.6→6.1	0.51	1.05
	WIDE	100 mm	WAT-H100	0.7x	7.6→5.3	0.39	0.53
	FISHEYE	100 mm	F-ATH100	0.57x	7.6→4.3	0.26	0.63
XS17x5.5	TELE	85 mm	TCV-H85	1.5x	94.0→141.0	1.35	1.10
	WIDE	85 mm	WCV-H85	0.8x	5.5→4.4	0.38	1.05
	WIDE	85 mm	WAT-H85	0.7x	5.5→3.8	0.29	0.36
	FISHEYE	85 mm	F-ATH85	0.57x	5.5→3.1	0.19	0.36
ZA17x7.6	TELE	85 mm	TCV-H85	1.5x	130.0→195.0	1.35	1.10
	WIDE	85 mm	WCV-H85	0.8x	7.6→6.1	0.38	1.05
	WIDE	85 mm	WAT-H85	0.7x	7.6→5.3	0.29	0.36
	FISHEYE	85 mm	F-ATH85	0.57x	7.6→4.3	0.19	0.36
ZA22x7.6	TELE	100 mm	TCV-H100	1.5x	167.0→250.5	1.80	1.00
	WIDE	100 mm	WCV-H100	0.8x	7.6→6.1	0.51	1.05
	WIDE	100 mm	WAT-H100	0.7x	7.6→5.3	0.39	0.53
	FISHEYE	100 mm	F-ATH100	0.57x	7.6→4.3	0.26	0.63

\*TCV/WCV are zoom thru type \*\*Ø 95mm P-1 screw on type  
Wide attachment and fisheye attachment can be used at WIDE END.  
Number of M.O.D. is at wide end.



## ACCESSORIES: SD ENG/EFP



Wide Attachment  
(WAT)



Fish-Eye Attachment  
(F-AT)

## BROADCAST LENS CONVERTERS

Model	Type	Ø Size	Converter*	Mag.	Converted Focal Length (mm)	M.O.D. (m)	Weight (kg)
A18x7.6	TELE	85 mm	TCV-85C	1.6x	137.0→219.0	1.54	1.15
ERM/ERD	WIDE	85 mm	WCV-85C/-L85	0.8x	7.6→6.1	0.38	1.09/0.57
	WIDE	85 mm	WAT-85C	0.7x	7.6→5.3	–	0.55
	FISHEYE	85 mm	F-AT85C	Approx. 0.55x	–	–	0.62
	RATIO	82 mm	RCV-82SC	0.82x	7.60→6.20	0.40	0.25
A23x7.6	TELE	100 mm	TCV-10C	1.6x	175.0→280.0	2.05	1.06
ERM/ERD	WIDE	100 mm	WCV-100D	0.8x	7.60→6.10	0.51	1.09
	WIDE	100 mm	WAT-100C	0.7x	7.60→5.30	0.39	0.00
	FISHEYE	100 mm	F-ATH100C	0.55x	7.60→4.20	0.24	0.55

## PROFESSIONAL LENS CONVERTERS

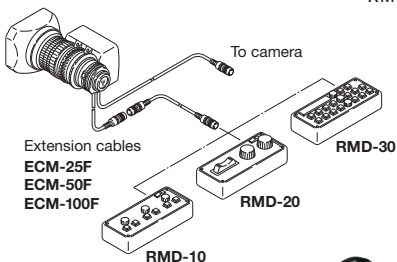
Model	Type	Ø Size	Converter	Mag.	Converted Focal Length (mm)	M.O.D. (m)	Weight (kg)
A13x6.3	TELE	85 mm	TCV-85C	1.6x	82.0→131.2	1.02	1.15
RM/ERM	WIDE	85 mm	WCV-85C	0.8x	6.3→5.0	0.26	1.09
	WIDE	85 mm	WAT-85C	0.7x	6.3→4.4	–	0.55
A20x8.6	TELE	85 mm	TCV-85C	1.6x	172.0→275.2	2.30	1.15
RM/ERM	WIDE	85 mm	WCV-85C/-L85	0.8x	8.6→6.9	0.58	1.09/57
	WIDE	85 mm	WAT-85C	0.7x	8.6→6.0	–	0.55
	FISHEYE	85 mm	F-AT85C	Approx. 0.55x	–	–	0.62
	RATIO	82 mm	RCV-82SC	0.82x	8.6→7.1	0.61	0.25
S13x4.6	TELE	85 mm	TCV-85C	1.6x	60.0→96.0	1.02	1.03
RM/ERM	WIDE	85 mm	WCV-85C	0.8x	4.6→3.7	0.26	1.09
	WIDE	85 mm	WAT-85C	0.7x	4.6→3.2	–	0.55
S17x6.6	TELE	85 mm	TCV-85C	1.6x	114→182.4	2.30	1.15
RM	WIDE	85 mm	WCV-85C	0.8x	6.6→5.3	0.58	1.09
	WIDE	85 mm	WAT-85C	0.7x	6.6→4.6	–	0.55
	FISHEYE	85 mm	F-AT85C	Approx. 0.55x	–	–	0.62
S20x6.4	TELE	85 mm	TCV-85C	1.6x	128.0→204.8	2.30	1.15
RM/ERM	WIDE	85 mm	WCV-85C/-L85	0.8x	6.4→5.1	0.58	1.09/57
	WIDE	85 mm	WAT-85C	0.7x	6.4→4.5	–	0.55
	FISHEYE	85 mm	F-AT85C	Approx. 0.55x	–	–	0.62

\*TCV/WCV are zoom thru type \*\*Ø 95mm P-1 screw on type  
Wide attachment and fisheye attachment can be used at WIDE END.  
Number of M.O.D. is at wide end.

# ACCESSORIES: VIDEOCONFERENCING

## LENS CONTROLLERS

Fujinon's lens controllers all feature control of zoom, focus, and iris. The RMD-10 provides basic control of all functions, while the RMD-20 features a rocker-type zoom control. The RMD-30 provides for up to eight preset zoom and focus positions. Accessory cables up to 100 m are available.



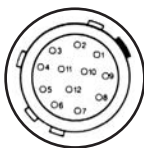
## WIDE/TELE ADAPTERS

Fujinon's wide and tele converters attach easily to the front barrel of the lens to achieve greater wide or tele focal ranges. The 1.6X teleconverter increases the overall range 1.6 times, while the 0.8X wide converter reduces the standard focal length by a factor of 0.8X. Rear-mounted 2X range extenders are available with and without back focus adjustment.



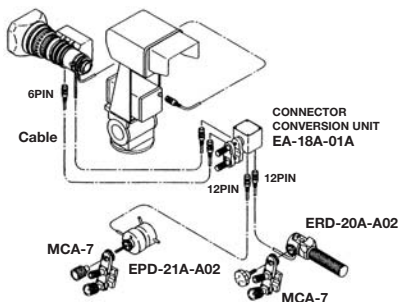
## ELECTRICAL INTERFACE OF 12-PIN CONNECTOR FOR REMOTE CONTROL BOX

1. Focus Mode Select Signal
2. Zoom Mode Select Signal
3. 0V (Ground)
4. Iris Local/Camera Select Signal
5. Iris Control Signal
6. +12 V Out
7. Signal Com. (Reference) +5v
8. Focus Control Signal
9. Zoom Control Signal
10. Iris Mode Select Signal
11. +V Out (7.5v)
12. -V Out (2.5v)



## SS-33A OPTIONAL ACCESSORY CONFIGURATION

Uses Standard ENG Accessories (For model HAs18x7.6B MD only)



# ACCESSORIES: HD & SD FIELD

Fujinon's anti-vibration system optically compensates for image vibration resulting in stable images even at extreme focal lengths. Three types of **OS-TECH** systems are available: two external anti-vibration adapters, TS for box-type lenses and TS-P for barrel-type lenses, and an internal type for box-type lenses.



TS-18A

## Image After-Shaking Reduced to a Minimum

The after-shaking phenomenon of images moving after the pan/tilt operation is stopped is characteristic of an anti-vibration device. Fujinon's exclusive algorithm system has reduced the phenomenon to a minimum for a natural-feeling operation.



The XA101X with internal OS-TECH.

## Type TS and TS-P Adapt to Existing Lenses

**OS-TECH** adapters can be quickly attached between most Fujinon lenses and the camera to provide the anti-vibration function. A single adapter provides stabilization for any adaptable lens. In addition to stabilization, the adapter increases the lens magnification by 1.25 times making extreme close-up shots possible with shorter focal length lenses.



TS-P58A

## Amount of Compensation

At Telephoto End with 2X Extender



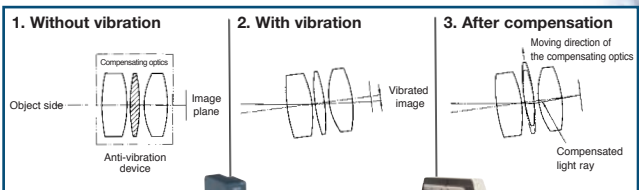
Approx. 20% of Image Height Vertical and Horizontal or Vertical Only



EA-12A-05BA Stabilizer Control with viewfinder indication

The EA-12A-05BA stabilizer controller provides for H or V and H+V plus on/off in a compact controller. This new control includes an LED to indicate on/off in the view finder.

## The Principal of Anti-vibration Device "Optical Stabilized Technology"



## OS-TECH

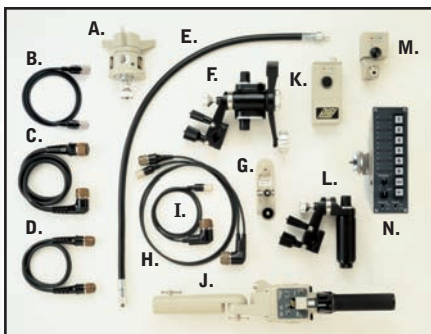
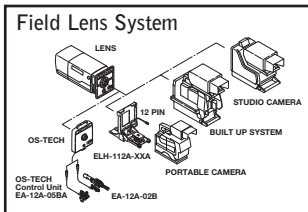
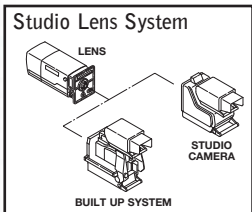


Model	TS-P58A	TS-XXA*
Stabilization System	Optical Shift	Optical Shift
Magnification of Focal Length	1.25	1.25
Mount	Bayonet Mount (2/3 in. B-type)	Bracket
Direction of Compensation	Vertical/Horizontal or Vertical Only	Vertical/Horizontal or Vertical Only
Frequency of Compensation	Approx. 1 to 10 Hz	Approx. 1 to 10 Hz
Anti-vibration Range	Approx. 20% of Vertical at Screen	Approx. 20% of Vertical at Screen
Power Consumption	DC12V, 4.2W (from camera)	DC12V, 6W (with battery or from camera)
Dimensions (L x W x H)	58 x 120 x 150 mm	277 x 260 x 47.5 mm
Mass	0.84kg	3.2kg
Adaptable Lenses	ZA12x4.5B, ZA17x7.6B, ZA22x7.6B, HA13x4.5B, HA16x6.3B, HS16x4.6B, HS18x7.6B, HSs18x5.5B, HA18x7.6B, HA23x7.6B, HA22x7.8B, HA22x7.3B, HA25x16.5B, HA25x11.5B, HA36x10.5B, HA42x9.7B, HA42x13.5B, A13x4.5B, A18x7.6B, A23x7.6B, A22x7.8B, A36x10.5B, A36x14.5B, A42x9.7B, A42x13.5B	XA101x, XA88x, XA87x, XA72x, XA66x, Ah80x, Ah70x, Ah66x, Ah60x, Ah55x

\*For external type only. Specify camera model when ordering.

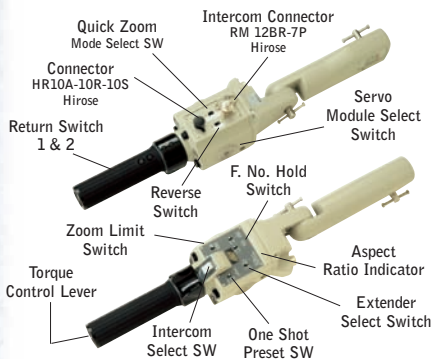


# ACCESSORIES: HD & SD STUDIO/FIELD



- A. EPD-4A-E02 Focus Demand
  - B. ESZ-12 Zoom Demand Cable
  - C. ESL-1C Shot Box Cable
  - D. ESF-1C Focus Shot Box Cable
  - E. BFC-36 Flex Cable
  - F. BZH-2A Zoom Handle
  - G. MCA-6B Mounting Clamp
  - H. EFZ-11E Focus/Zoom Cable
  - I. ELZ-11D Zoom Demand Cable
  - J. ERD-5A-D01 Zoom Rate Demand
  - K. ESM-D51B/D52B Servo Module
  - L. BFH-1A Focus Grip
  - M. EMM-51B Manual Module
  - N. ESB-6A-E12 Shot Box
- EPA-22  
Not shown - see below

## DIGI ZOOM DEMAND



## SERVOS

Digital servos provide precise control of zoom and focus for the most demanding productions.



## THREE-MODE FINE FOCUS

By shifting the sensitivity from the wide side to the telephoto side of the focus range, this control provides more precise focusing for studio or sports productions.



## ELH\*

Fujinon's convenient ELH bracket allows studio/field lenses to be used with hand-held type cameras.

\*Additional power may be required for servos.



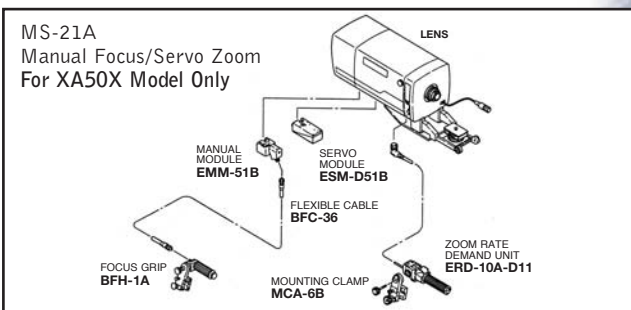
## EPA-22

A unique servo focus demand with the look and feel of a manual control.



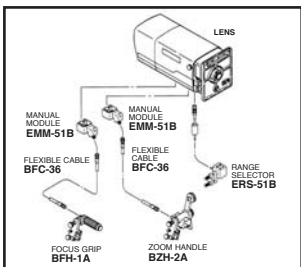
# ACCESSORIES: HD & SD STUDIO/FIELD

## DIGITAL LENS CONFIGURATION

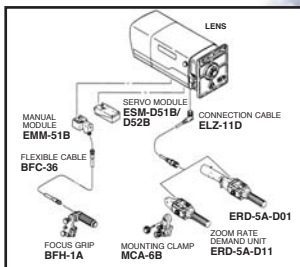


## DIGITAL LENS CONFIGURATION

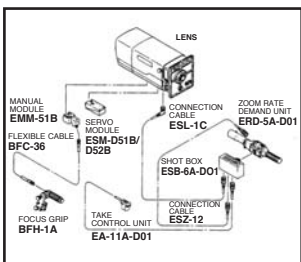
**MM-21**  
Manual Focus/Manual Zoom



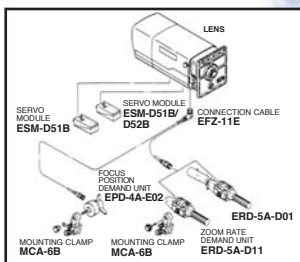
**MS-21D**  
Manual Focus/Servo Zoom



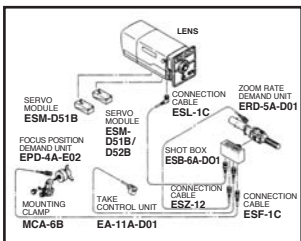
**MS-22D (w/Shot Box)**  
Manual Focus/Servo Zoom



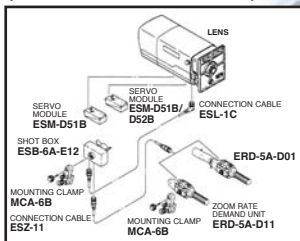
**SS-21D**  
Servo Zoom/Servo Focus



**SS-22D (w/Shot Box)**  
Servo Focus/Servo Zoom

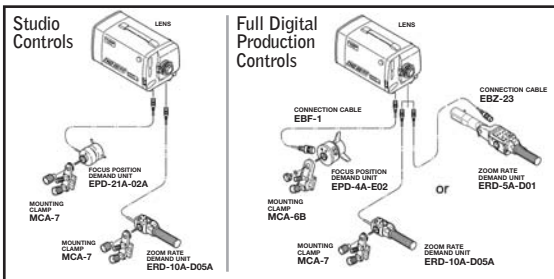


**SS-23D**  
(Shot Box w/Focus Demand)



# ACCESSORIES: XA22x7 BES

## XA22x7BES ACCESSORY OPTIONS



## DIGI ZOOM/ANALOG FOCUS

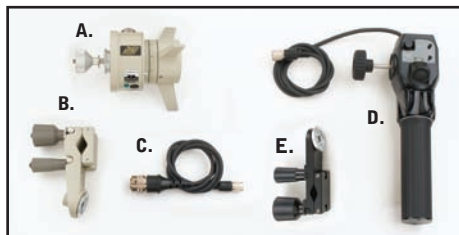
### Studio Controls



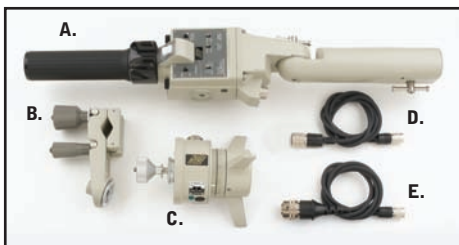
A. MCA-7 Mounting Clamp    B. EPD-21A-02A Focus Demand    C. ERD-10A-D05A Zoom Demand

## DIGI ZOOM/DIGI FOCUS

### Full Digital Production Controls



A. EPD-4A-E02 Digi Focus Demand    C. EBF-1 Focus Cable    E. MCA-7 Mounting Clamp  
 B. MCA-6B Mounting Clamp    D. ERD-10A-D05A Digi Zoom Demand



A. ERD-5A-D01 Digi Zoom Demand    C. EPD-4A-E02 Digi Focus Demand    E. EBF-1 Focus Cable  
 B. MCA-6B Mounting Clamp    D. EBZ-23 Zoom Cable

# PAN & TILT

## PAN & TILT HEAD SPECIFICATIONS



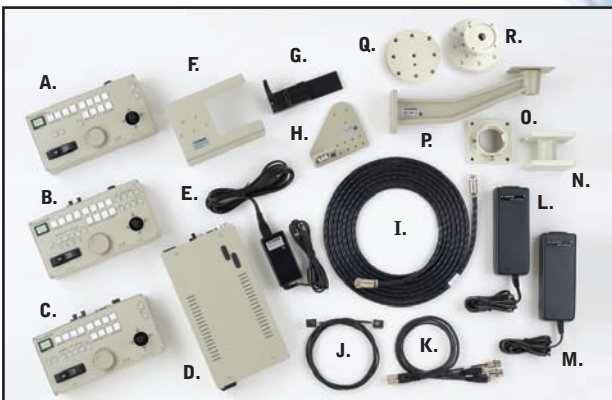
MODEL	CPT-70F-02A	CPT-70D-02A**	EPT-7G-H2A
Pan Range	300°	270°	300°
Pan Speed	25° / Sec.	9° / Sec.	25° / Sec.
Tilt Speed	20° / Sec.	9° / Sec.	20° / Sec.
Tilt Range	+/- 95°	+/- 95°	+/- 95°
Stopping Accuracy	+/- 5'	+/- 15'	+/- 10'
Lens Type	MD	MD	MD
Acoustic Noise	NC40db	NC40db	NC40db
Load Capacity	4 kg / 8.8 lbs.	10 kg / 22 lbs.	4 kg / 8.8 lbs.
Power Consumption	DC 15V / 10W (max)	DC 15V / 10W (max)	DC 15V / 30W (max)
Operating Temperature	-10° C ~ +50° C	-10° C ~ +50° C	0° C ~ +45° C
Power Source (ESC-103K-04A)	15V DC	15V DC	15V DC
Drive System	DC Servo	DC Servo	DC Servo
Weight	2.3 kg / 5.06 lbs.	7 kg / 15.4 lbs.	2.3 kg / 5.06 lbs.
Dimensions WxDxH (mm)	130 x 102 x 222	233 x 277 x 226	130 x 102 x 222
Max. Cable Length*	1350 m / 4430 ft.	1350 m / 4430 ft.	1350 m / 4430 ft.

\* Max. cable length varies depending on multi-head controller options (see S2BA1/S2-CA1 on pg. 40)  
 \*\* EOP-102J-60B not available on CPT-70D-02A

## PAN & TILT CONTROLLERS



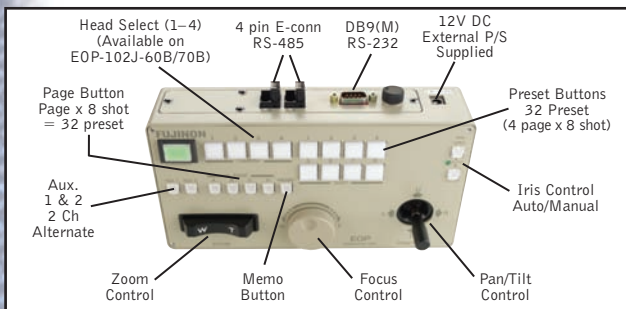
	EOP-102J-30E	EOP-102J-60B	EOP-102J-70B
Operation	RS-485 via twisted pair cable – E-connector/RS-232 via DB-9 connector		
Pan / Tilt	Variable-speed joystick		
Zoom	Variable-speed rocker switch		
Focus	Variable-speed potentiometer		
Iris	Close, open, auto, remote		
Shot Memory	32	32 per head	32 per head
Back-up	Reservable for more than 5 years (Lithium battery)		
Qty of Head Control	1	4	4
Auxiliary Input	2 auxiliary relay contacts for controlling accessory equipment at the pan and tilt head		
Power Source	120 VAC via 12 VDC adapter (included)		
Power Consumption	5 W		
Camera Control		Camera On/Off Shutter Speed Gain Adjust, Color Bar Auto White, Auto Black	
Weight	Approximately 0.8 kg		



- |                 |                        |                           |
|-----------------|------------------------|---------------------------|
| A. EOP-102J-30E | H. UTB-219A-02A/04A    | N. FTA-C10D               |
| B. EOP-102J-60B | I. UHD-344A-XXX        | O. FPA-C10D               |
| C. EOP-102J-70B | J. Communication Cable | P. CMA-200A-01A           |
| D. ESC-103K-04A | Between EOP & ESC      | Q. FHTA-10 Tripod Adapter |
| E. PS-470A-01A  | K. UHC-335J-XXX        | R. FH-10-High Hat Mount   |
| F. UTB-219A-03A | L. MX-462E-01A         |                           |
| G. CLH-8B       | M. MX-462E-02A         |                           |

# PAN & TILT

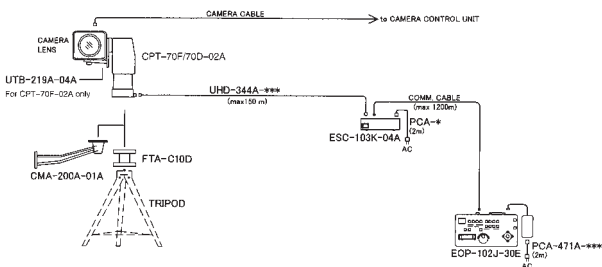
## EOP-102J-70B



## CPT-70F/70D CONFIGURATIONS

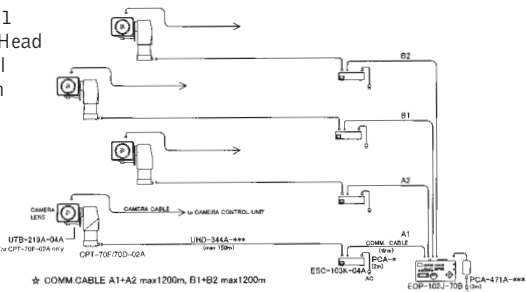
### S1-BA1

#### Single-Head Control System



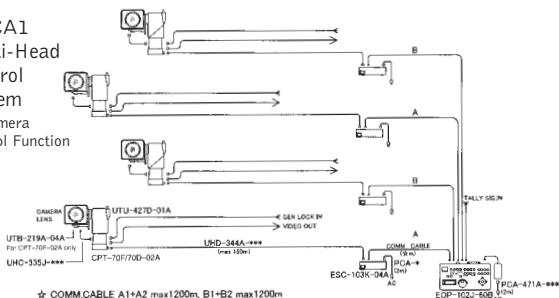
### S2-BA1

#### Multi-Head Control System



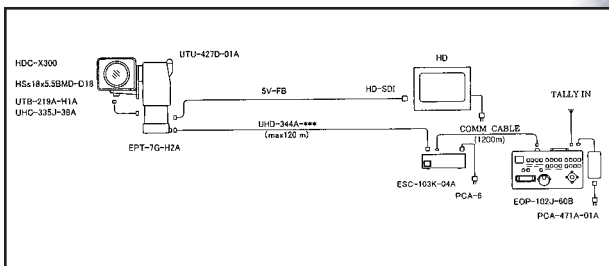
### S2-CA1

#### Multi-Head Control System w/ Camera Control Function



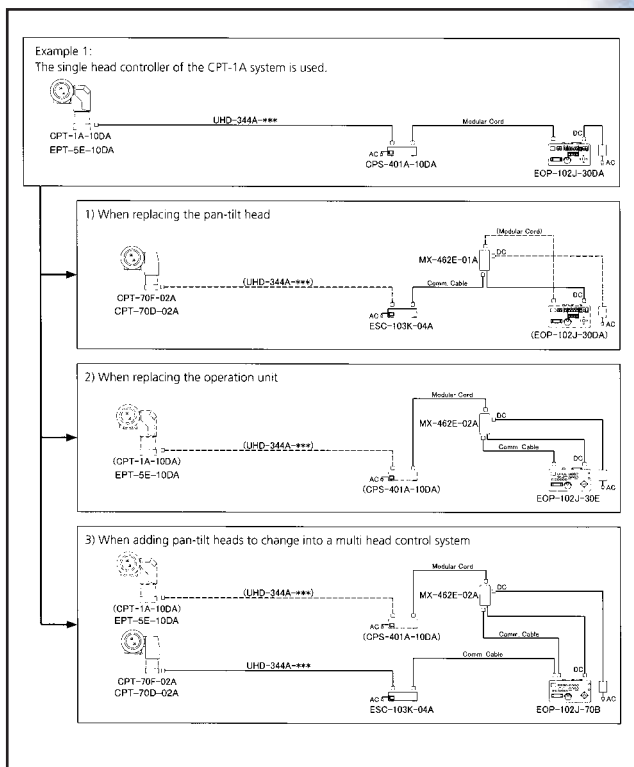
# PAN & TILT

## EPT-7G-H2A CONFIGURATIONS



## COMPATIBILITY WITH EXISTING SYSTEMS

Compatibility with existing CPT-1A and EPT-5E systems is possible by the utilization of certain adaptors. The diagrams below depict some common configuration scenarios.





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