Canon

HJ14ex4.3B
CAPTURE THE WORLD WITH THE NEXT GENERATION HD WIDE LENS

HDXS

INNOVATION
In TV Optics Since 1958

50 YEARS
Over the past decade, as the demand for broadcast HDTV production has continued its steady growth, Canon’s HJ11ex4.7B lens has been a popular HDTV wide-angle lens, earning a stellar global reputation for outstanding optical performance and ease of operation. Capitalizing on this legacy of imaging excellence, Canon is expanding the possibilities of HDTV origination with the launch of an even more advanced wide-angle lens, the HJ14ex4.3B. This is a totally new-generation lens design and is particularly innovative in combining an extended 14 times zoom range and unprecedented 4.3mm wide angle, with an enhanced overall optical performance. Unequalled image clarity and sharpness were the design goals.

Even the digital drive-unit is newly developed to provide streamlined ergonomics and ease of operation that further empowers camera operator shooting flexibility.

**Main Features**

**Widest Angle Lens To Date in the TV Industry**

With a minimum focal length of 4.3mm the HJ14ex4.3 lens features the widest angle among presently available 2/3-inch lenses with an angular field of view of 96.3° in the 16:9 format at the wide end. This is significantly augmented with the 14x zoom range reaching to 60mm (120mm with extender), producing an unsurpassed operational combination that greatly expands HDTV production applications.

**Improved Optical Performance**

The past decade has seen dramatic advances in powerful new 3D optical design tools, glass materials, design techniques (such as aspherical elements), and optical coatings. These new technologies allow the HJ14x lens to provide a wider angle and a higher zoom ratio than previous models, while also offering important optical performance enhancements:

- Higher resolution at both picture center and at the extremities of the 16:9 HD image plane
- Further minimization of chromatic aberrations and geometric distortion
- Less light falloff from picture center to corners, especially at wide angle settings
- Reduced focus breathing
- Curtailment of ghosting artifacts created by strong light sources

**Improved Operability & Reduced Operator Fatigue**

Coupled with innovations in optical performance, is a totally new design of the digital drive unit. Refined by long-term market research and worldwide experience, Canon mobilized the latest in 3D CAD-CAM design to significantly improve the human tactile interface to the control of zoom, iris, and focus. Here are some results of Canon’s research:

**Reduced Physical Stress**

By reducing the width of the drive unit, the palm of the camera operator’s hand is positioned closer to the optical axis, thus reducing the degree of arm bend which in turn lessens physical stress during prolonged shooting.

**Ergonomic Design**

The spacing between the focus ring and drive unit has been changed to avoid accidental interference with the drive unit while manipulating the focus control.

**Improved Ease of Operation**

The size and curvature size have been optimized to more comfortably fit in the palm of the operator’s hand (a). Newly developed coatings improve the tactile interface between the user and the drive unit (b) together with the new Rubber Grip Support (c).

**Smaller Hood Size and Higher Versatility**

The HJ14ex4.3 uses a smaller hood unit compared to it’s predecessor. While increasing the versatility of the camera, this also helps the camera operator view the actual scene.
The incorporation of miniature 16-bit, high resolution Rotary Encoder Devices into the new enhanced digital drive unit, has extended the features of the HJ14x to include:

- Precision control of all lens operations
- Precise digital repeatability of zoom, focus and iris control that support innovative image creation
- Simple and direct digital integration into virtual studio systems
- Precision zoom control over a total speed range of 0.5 sec. to more than 5 min.

Moreover, Canon’s unique Information Display provides easy, precise customization of the enhanced digital functions.

### Enhanced Digital Functions

**Shuttle Shot**

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

**Frame Preset**

An angle of view can be preset in either of two memories and the lens will zoom at the highest speed or in a preset zoom speed to the preset position by pushing a simple button.

**Speed Preset**

A specific zoom speed can be preset in memory and it is possible to repeat the zoom speed as often as you like by pressing a simple button.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>HJ14e×4.3B</th>
<th>NORMAL 16:9</th>
<th>SWITCHABLE 4:3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built-in extender</td>
<td>1.0X</td>
<td>2.0X</td>
</tr>
<tr>
<td>Zoom Ratio</td>
<td>14X</td>
<td></td>
</tr>
<tr>
<td>Range of Focal Length</td>
<td>4.3~60mm</td>
<td>8.6~120mm</td>
</tr>
<tr>
<td>Maximum Relative Aperture</td>
<td>1:1.8 at 4.3~40mm</td>
<td>1:3.6 at 8.6~80mm</td>
</tr>
<tr>
<td>Angular Field of View</td>
<td>96.3°×64.2°</td>
<td>58.3°×34.9°</td>
</tr>
<tr>
<td>Minimum Object Distance (M.O.D)</td>
<td>0.3m (10mm with Macro)</td>
<td></td>
</tr>
<tr>
<td>Object Dimensions at M.O.D</td>
<td>76.4×43.0cm at 4.3mm</td>
<td>38.2×21.5cm at 8.6mm</td>
</tr>
<tr>
<td>Approx. Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approx. Mass (IRSE/IASE)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ACCESSORIES

Zoom/Focus Manual Controllers

Focus Servo Controllers

Zoom Servo Controllers

(Four IRSE Lenses)

(Four IASE Lenses)

DIMENSIONS

Specifications subject to change without notice.

North & South America
Canon U.S.A., Inc.
Broadcast & Communications Div. (Headquarters)
65 Challenger Road, Ridgefield Park, NJ 07660
Tel:(201)807-3300/(800)321-4388
Fax:(201)807-3333
Email:bcinfo@cusa.canon.com
http://www.canonbroadcast.com/

Chicago
100 Park Blvd. Itasca, IL 60143
Tel:(630)250-6236   Fax:(630)250-0399

Atlanta
626 Oakbrook Pkwy. Norcross, GA 30093
Tel:(770)849-7890   Fax:(770)849-7888

Los Angeles
1995 Altman Parkway Irvine, CA 92618
Tel:(949)753-4330   Fax:(949)753-4337

Dallas
3200 Regent Blvd. Irving, TX 75063
Tel:(972)403-6871   Fax:(972)403-8868

Latin America
Canon Latin America, Inc.
Optical Products Division
15F Jihin Building No.89 Jihin Street
Daejeonggu District, Busan 100050, South Korea
Tel:+82-51-85139999 Fax:+82-51-85139902
http://www.canon.com.cn

China
Canon (China) Co., Ltd.
Optical Products Division
15F Jihin Building No.89 Jihin Street
Daejeonggu District, Busan 100050, South Korea
Tel:+82-51-85139999 Fax:+82-51-85139902
http://www.canon.com.cn

Asia/Japan
Canon Inc.
(Broadcast Equipment Group)
23-10, Kiyohara-Kogyo-Danchi, Utsunomiya-shi,
Tochigi-ken, 321-3298, Japan
Tel:+81(0)28-667-8669   Fax:+81(0)28-667-8672
http://www.canon.com/bctv

Distributed by

Specifications subject to change without notice.

# | Unit | Description
--- | --- | ---
1 | FFM-100 | Flex Focus Module
2 | FFM-200 | Flex Focus Module
3 | FC-40 | Flex Cable
4 | FFC-200 | Flex Focus Controller
5 | ZSC-100 | Flex Zoom Controller
6 | FPM-420 | Focus Positional Servo Module
7 | FPM-420D | Focus Positional Servo Module
8 | PPD-400 | Focus Positional Demand
9 | PPD-400D | Focus Positional Demand
10 | ZSD-300M | Zoom Servo Demand
11 | ZSD-300D | Zoom Servo Demand
12 | ZBG-200M | Zoom Servo Grip
13 | CR-10 | Clamp
14 | ZGA-500 | Grip Adapter
15 | EC-80 | Zoom Extension Cable (8P)