This manual is for reference and historical purposes, all rights reserved.

This page is copyright© by M. Butkus, NJ.
This page may not be sold or distributed without the expressed permission of the producer.
I have no connection with any camera company.

On-line camera manual library
This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

If you find this manual useful, how about a donation of $3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your e-mail address so I can thank you. Most other places would charge you $7.50 for a electronic copy or $18.00 for a hard to read Xerox copy.

This will allow me to continue to buy new manuals and pay their shipping costs. It'll make you feel better, won't it?

If you use Pay Pal or wish to use your credit card, click on the secure site on my main page.
PayPal Name Lynn@butkus.org
1. Outstanding Features

This originally and ingeniously designed zoom lens system covers a zooming ratio as wide as 6X, ranging from 50mm (normal) to 300mm (telephoto) focal length, yet provides high resolution and high contrast pictures for the entire zooming range. Unlike other conventional zoom lenses where zooming is effected by almost only one constituent lens group, so that the optical burden is imposed merely on this group, resulting in unsatisfactory picture quality, the Zoom-NIKKOR Auto 50mm-300mm f/4.5 is so designed its zooming operation is uniformly distributed to all groups, to minimize the burden on each group, thus making it possible to achieve an excellent picture quality in spite of such a wide zooming range.

From the viewpoint of focal length distribution and moving mechanism, the lens system is divided into four groups; the first positive, the second negative, the third positive and the fourth positive one. The first and third positive groups combined as a unit are moved together in one direction and at the same time the second negative group in the opposite direction, so that not only the zooming ratio is increased but also the unbalanced correction of aberrations which, caused by varying focal length, is liable to take place in conventional zoom lenses, has been eliminated to the highest extent. The occurrence of chromatic aberrations on the side of longer focal length, and unsatisfactory picture quality not improved even by stopping down the aperture, both also being inherent to general zoom lenses, are prevented by the proper combination of glass materials used.

With regard to color rendition, the careful selection of glass materials and of coating method also enables us to gain a superior balance and faithful representation of colors on color film, even though the zoom system comprises such a great number of lens elements.
2. Characteristics

Variable range of focal length:  
50mm - 300mm

Maximum aperture ratio:  
1 : 4.5

Construction of lens system:  
13 groups, 20 elements

Type of mount:  
Nikon F mount

Focusing distance:  
Infinity to 2.5m (8.5 ft.)

Focal lengths graduated:  
50, 60, 70, 85, 105, 135, 200, 250, 300mm

f-number scale:  
4.5, 5.6, 8, 11, 16, 22

Aperture diaphragm:  
fully automatic

Exposure meter coupling:  
Possible

Zooming:  
Performed by rotating zooming ring

Focusing:  
Performed by rotating focusing ring

Dimensions:  
98mm (in dia.) x 291.5mm (in length)

Weight:  
2270 g
3. Nomenclature

Subject distance
Focal length
scale
Zooming ring
Subject distance index line
Focusing ring
Fig. 2
Focal length index

Aperture scale
index
Tripod socket lock
Meter coupling prong
Shoulder strap

Rotating tripod socket ring
Aperture scale
4. **Manipulation**

1) **Zooming**

For zooming, turn the zooming ring. The focal length for each position is indicated by the figure opposite to the index. The figure is engraved at 9 positions in the range from 50mm to 300mm. Any intermediate position can be used.

2) **Focusing and depth-of-field**

For focusing, turn the focusing ring, the subject distance being read by means of the distance scale on the ring. The depth-of-field will be seen on the finder screen by depressing the depth-of-field preview control button on the camera. To find its approximate numerical value, use the nomograph [A] and the scale [B] on the last page of this instructions.

**Example:**

When the focal length and subject distance are given as 70mm and 5m respectively, bring the top edge of the scale [B] along the horizontal line 70 on the nomograph [A], and the position 5m to the central index line. Provided the f-number be f/22, the depth-of-field will be read by the positions where the curve 22 on either side intersects the distance scale [B], that is, about 3.2m (10.5 ft.) and 12m (40 ft.) in this example.

3) **Infrared photography**

When taking infrared photographs using infrared film, use R-line in the nomograph [A] as below: Placing the scale [B] on the nomograph [A] (See Fig. C) for each focal length, move laterally the position of the distance found by focusing on the finder screen to R-Line. Take reading of the compensated distance in this position with the central index line. Then, turn the focusing ring so that it is set to this compensated value.
4) Tripod socket

Release the tripod socket lock, and the lens barrel can be freely rotated around the optical axis with click stops at every 90° position.
In this way, the position of the camera is changed from the vertical to horizontal or from the horizontal to vertical format.

5) Others

Mounting and dismounting of the lens from the camera and coupling to the exposure meter are performed the same way as in the case of other NIKKOR Auto lenses.

5. Accessories (Available on order)

Front cap: 95mm screw-in type
Rear cap: F type for NIKKOR Auto
Filters: L39, Y48, 056 and R60
95mm screw-in type
Leather case: Accepts the lens with the camera attached.

6. Picture Angle

<table>
<thead>
<tr>
<th>Focal length (mm)</th>
<th>Diagonal</th>
<th>Vertical</th>
<th>Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>46°</td>
<td>26°</td>
<td>39°</td>
</tr>
<tr>
<td>60</td>
<td>39°40'</td>
<td>22°40'</td>
<td>33°20'</td>
</tr>
<tr>
<td>70</td>
<td>34°20'</td>
<td>19°30'</td>
<td>28°50'</td>
</tr>
<tr>
<td>85</td>
<td>28°30'</td>
<td>16°</td>
<td>24°</td>
</tr>
<tr>
<td>105</td>
<td>23°20'</td>
<td>13°</td>
<td>19°30'</td>
</tr>
<tr>
<td>135</td>
<td>18°</td>
<td>10°</td>
<td>15°</td>
</tr>
<tr>
<td>200</td>
<td>12°20'</td>
<td>6°50'</td>
<td>10°20'</td>
</tr>
<tr>
<td>250</td>
<td>10°</td>
<td>6°</td>
<td>8°</td>
</tr>
<tr>
<td>300</td>
<td>8°10'</td>
<td>4°30'</td>
<td>6°50'</td>
</tr>
</tbody>
</table>

[Fig. 3]
is conveniently used by attaching on the lens barrel.

A Depth-of-field nomograph

| m (m) | 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5 | 11 | 12 | 15 | 20 | 25 | 30 | 40 | 50 | 100 |
|-------|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|
| feet  | 70  | 50 | 40  | 30 | 25  | 20 | 18  | 16 | 15  | 14 | 13  | 12 | 11  | 10.5| 10  | 9.5| 9   | 8.5| 8   | 7.5| 7   | 6.5| 6   | 5.5| 5   | 4.5| 4   | 3.5| 3   | 2.5| 2   | 1.5| 1   |

B Subject distance scale