Zoom-Flash AF 32

Autofocus/TTL flash for:

- Red focusing beam for poor lighting conditions
- Through-the-lens metering (TTL)
- Automatic shutter speed setting
- Flash readiness indication in viewfinder
- Zoom head adjustable to focal length (28 mm - 85 mm)
- Adjustable angle of illumination for C-drive mode and maximum lighting

Technical data:

- Guide number (ISO 100)
- 32 (m) at 50 mm setting
- Angle of illumination
- 28 mm - 35 mm - 50 mm - 85 mm
- Power source
- 4x AA-type or R6 1.5 V batteries
- Flash duration
- 1/1000 sec. - 1/50,000 sec.
- Recycling time
- 0.2 - 9 sec.
- Number of flashes
- High: approx. 120 - 2500 flashes
- Low: approx. 1500 - 2500 flashes
- Colour temperature
- 5700 K
- Dimensions
- 197 x 73 x 68 mm
- Weight
- 220 g

Loading the batteries

Remove the battery compartment cover and insert 4 AA-type (R6) 1.5 V batteries as indicated in the compartment. Ensure correct polarity (WARNING: The flash will not operate properly and can even be damaged if the polarity of the loaded batteries is incorrect.) Return the battery compartment cover.

Mounting the flash unit on the camera

1. Ensure that the ON/OFF switch is set at OFF before mounting or removing the flash unit.
2. Push the foot of the flash unit into the camera's accessory shoe and secure with the locking screw.
3. For removal release the locking screw and withdraw the foot from the accessory shoe.

Hi/Lo switch (normal or economy)

This flash unit has a 2-stage power control system. Accordingly, the switch has two settings: "Hi" for optimal normal flash mode and "Lo", an economy circuit for fast recharging and recycling when operated in C-drive mode.

Shooting pictures in autofocus/TTL mode

1. Adjust the film speed selector to the sensitivity of the film loaded in the camera.
2. The light output is controlled by the camera. The maximum flash range can be read off the distance table. It depends on the aperture set on the camera.
3. Focus the image and depress the shutter release when flash readiness is indicated in the viewfinder.
4. A dark subject automatically activates a focusing beam to simplify focusing.

Shooting distance Auto TTL

Please study the following table (A/B). The operating distance depends upon the film speed, the aperture setting and the shutter speed, as well as the selected power control system (normal or economy).

Aperture setting/program and distance scale

The aperture setting/program and distance scale on the back of the flash unit indicates the different combinations of optimal shooting distance, zoom head position and aperture setting for different film speeds:

- Film speed (ISO) 25 50 100 200 400 1000
- Guide number 0.5 0.7 1.4 2 3.17

Example: If the optimal shooting distance with ISO 100 film is 5.4 m, then this would be 12.8 m with an ISO 400 film.

Read the blue program scale to find the shooting distance when the camera is operating in P-Mode.

Note:

- White indicates the shooting distance in the "Lo" mode
- Blue indicates the shooting distance in the "Hi" mode
- A change of ISO and zoom head position changes the "Hi/Lo"
Available flash modes
In conjunction with the Canon autofocus 35mm SLR camera you can choose one of the following four flash modes:

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</tbody>
</table>

- The program cannot be changed when the flash is in P-Mode.
- With the camera in S-Mode (aperture priority) flash photography should be completed as in P-Mode.

AF sensor for autofocus
In poor lighting conditions or in total darkness, and when the flash unit is switched on, the AF sensor (LED) is automatically activated by light depression of the shutter release. A beam is projected onto the subject to activate the camera's autofocus mechanism. The range of this sensor is approx. 1-19 m (3.3-62 feet) with a normal 50 mm lens. The above range is diminished when a zoom lens is used at smaller aperture values. Manual setting is then recommended.

IMPORTANT: The AF sensor only functions if the camera's autofocus switch is set at "AF".

Auto O.K. indicator
If sufficient power is available for correct flash exposure, then a flash symbol appears in the camera's viewfinder. At the same time the "Auto O.K. Indicator" lights up for approximately two seconds.

Auto-Off (automatic shut-off)
The flash unit is automatically shut off approximately one minute after it was used for the last time, and the flash ready indicator goes out. To reactivate the flash you must switch it off and on again.

Operation in AV mode (aperture priority)
1. Set "AV Mode" and the required aperture (f-number) on the camera. The exposure time is then automatically adjusted to between 30 and 1/125 seconds with the EOS 500, and between 30 and 1/250 seconds with the EOS 620.
2. Set the ON/OFF switch to ON.
3. Ensure that the subject lies within the distance range given for the selected aperture (f-number) (compare with the TTL distance scale on the back of the flash unit).
4. Make sure that the flash symbol is displayed in the camera's viewfinder. It confirms that flash readiness has been established and that the shutter speed is compatible with the flash.
5. Direct the AF window in the camera's viewfinder at the subject and completely depress the shutter release to take the picture.
6. The "Auto O.K. Indicator" will light up for approximately two seconds if sufficient light has been available for a correct exposure. If the indicator fails to light up, reduce the distance to the subject or use a wider aperture (smaller f-number).

Synchronizing the motor drive
The flash unit can be synchronized for a series of three to four flash shots for operation with an inbuilt or separate motor drive. For this purpose, new batteries are recommended. Flash shots in quick succession can be taken in the aperture priority mode (AV-Mode) at a wide aperture setting (f/8) and a relatively short distance, e.g. maximum 3 m.
Operating Instructions

Operation in P-mode (program)
1. Set the camera to "P-Mode".
2. Set the ON/OFF switch to ON. The ON indicator (red LED) lights up.
3. Set the Hi/Lo switch either to "Hi" or "Lo". "Lo" (economy) is recommended for operation in the "C-Drive Mode".
4. The flash ready indicator will light up after a few seconds. By depressing the shutter release halfway the flash symbol will appear in the camera's viewfinder, together with the selected aperture setting and shutter speed.
5. Ensure that the subject lies within the correct distance for automatic operation and completely depress the shutter release to take the picture.
6. The "Auto O.K. Indicator" will light up for approx. two seconds if the light output has been sufficient for a correct exposure. Should the indicator fail to light up, reduce the distance to the subject or change over to AV-Mode and use a wider aperture (smaller f-number).

Operation in AV mode (aperture priority)
1. Set "AV Mode" and the required aperture (f-number) on the camera. The exposure time is now automatically adjusted to between 30 and 1/125 seconds with the EOS 660, and between 30 and 1/250 seconds with the EOS 630.
2. Set the ON/OFF switch to ON.
3. Ensure that the subject lies within the flash range for the selected aperture (f-number). Compare with the TTL distance scale on the back of the flash unit.
4. Make sure that the flash symbol is displayed in the camera's viewfinder. It confirms that flash readiness has been established and that the shutter speed is compatible with the flash.
5. Direct the AF window in the camera's viewfinder at the subject and completely depress the shutter release to take the picture.
6. The "Auto O.K. Indicator" will light up for approx. two seconds if sufficient light output has been available for a correct exposure. If the indicator fails to light up, reduce the distance to the subject or use a wider aperture (smaller f-number).

Operating the camera in manual mode
1. For manual camera mode you select the shutter speed and aperture setting yourself. However, the exposure is made under automatic TTL control. This feature allows you to combine normal daylight with flash. Since the camera's maximum X sync speed is 1/125 sec. with the EOS 660, and 1/250 sec. with the EOS 630, it is not possible to set a slower shutter speed once the flash ready indicator lights up.
2. Select the aperture according the instructions and the guide number for TTL flash exposure or in accordance with the descriptions for the "A-Mode" (aperture priority). The selected aperture must be compatible with the flash-to-subject distance recommended for automatic TTL exposure. Set a shutter speed of between 30 and 1/125 seconds (EOS 660) or 1/250 seconds (EOS 630), depending on the requirements of the given photographic situation.
3. Make sure that the flash symbol is displayed in the camera's viewfinder. It confirms that both the flash unit and the camera are ready for shooting pictures in the TTL flash mode.
4. Direct the AF window in the camera's viewfinder at the subject and completely depress the shutter release to take the picture.
5. The "Auto O.K. indicator" will light up for approx. two seconds if sufficient light output has been available for a correct exposure. If the indicator fails to light up, reduce the distance to the subject, or change over to AV mode and use a wider aperture (smaller f-number).

Operation in A-Mode (aperture priority)

1. Select "A-Mode" on your camera and set the desired aperture. 
   Check in the TTL exposure table that the selected aperture permits exposures over a wider range than the flash-to-subject distance.
   TIP: The wider the aperture (i.e. the smaller the f-number), the larger the flash range and the better the overall illumination.
2. Continue as explained under Sections 2-6 of the previously described 'P-Mode'.

Manual camera mode

1. For manual camera mode you determine the shutter speed and aperture setting yourself. However, the exposure is made under automatic TTL control. This feature allows you to combine normal daylight with flash. Since the camera's maximum X sync speed is 1/125 sec., it is not possible to set a slower shutter speed once the flash-ready indicator lights up.

2. Select the aperture according to the instructions and the guide number for TTL flash exposure or in accordance with the descriptions for "A-Mode" (aperture priority). Switch off the flash unit and set "A-Mode" on the camera to establish the corresponding exposure time. Remember this value and reset the camera to "M-Mode". Then enter the determined shutter speed. From now on the entered shutter speed will always remain constant and the camera is ready for use.

Slow-synchronization

This means that you can select a shutter speed slower than the normal X-sync speed for your flash shots. This increases background exposure, while correct exposure of the main subject is maintained.

1. Slow-synchronization in "A-Mode"
   1. Select "A-Mode" on your camera and frame the subject in the viewfinder without having switched on the flash unit.
   2. Set a shutter speed of 1/60 sec. or slower.

3. Press the "Spot Metering" button and simultaneously switch on the flash unit. If the flash is fully charged the shutter speed will automatically be set one step faster than the measured speed. (If the measured speed was 1/100 sec., then the actual exposure time will be 1/60 sec.)
4. To take the picture, press the shutter release all the way down.

2. Slow-synchronization in "M-Mode"

1. Set your camera to "M-Mode" and point it at the background.
2. Select the aperture and adjust a shutter speed of 1/100 sec. or slower for proper exposure of the background.
3. Press the shutter release all the way down to take the picture.

Using the camera in "C-Drive Mode"

This flash unit permits synchronization of up to two exposures per second for any TTL mode when the camera is used in "C-Drive Mode". Set the Hi/Lo switch to "Lo" (economy) and then perform all further settings manually because the autofocus mode only permits single shots to be taken. However, in "A-Mode", with a wide aperture and a flash-to-subject distance of less than 2 m, up to 4 or 5 pictures per second can be shot if a high-speed film is used.

Bounce flash

The zoom flash head can be tilted upwards by up to 90 degrees, and swivelled by 165 degrees to the left and up to 180 degrees to the right. Indirect flash exposures can be made with the aid of the camera's TTL metering system.

Auto fill-in flash

Fill-in flash can automatically be used in the "P-Mode". Simply point the camera at the subject and operate the shutter release as described under "P-Mode". The camera's AE memory function also permits use of the fill-in flash in the "A-Mode" (see also "Slow-synchronization").

Test button

This button is used to test the flash unit. When the flash unit is switched on and the flash ready LED lights up, you can depress this button to fire a test flash. Please note that this test function is independent of the TTL auto exposure mechanism and, therefore, cannot be used for testing the correct exposure.
### TTL-Auto Anwendung/Auto TTL mode (ISO 100)

#### 1. Normalschaltung/Normal mode (Hi)

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<th>W1(35)</th>
<th>S(50)</th>
<th>T(85)</th>
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### TABELLE/ TABLE A

#### 2. Sparschaltung/Economy mode (Lo)

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### TABELLE/Table B