

Haag-Streit BP900 Settings

Canon S60 Digital Camera

Camera Settings		
Manual Mode	M / C	on wheel on top of camera (picture b, j)
Shutter	Range 60 - 200	Up and down arrows of the Onmi-Selector button
ISO	200	Function button @ left of the screen, select the iso and leave the func button. Choose the iso setting (left or right button) and leave the menu by pressing func again.
Focus	Infinity	MF button @ left of screen, move with up/down button of "joystick" – always after new start. MF sign on display (picture c, d)!
Zoom	Full (maximum optical)	Buttons on right top of camera (picture f)
Exp.Time	1/60	Left/right button of "joystick"
Aperture	f5.3 (minimum)	Up/down button of "joystick"
Flash	Off	Button top left (picture g)

Function Menu (func button@ left of screen)		Rec Menu (menu button right bottom)	
Colour Balance	Tungsten	Flash Sync	1 st Curtain
Drive Mode	Single Frame	Red Eye	Off
ISO	200	Wireless Delay	0
Effect	Off	Spot AE Point	Centre
BKT	Off	MF Zoom Point	Off
Flash Output	NA	AF Assist Beam	Off
M1	2048 x 1536	Digital Zoom	Off
		Review	4 seconds
		Raw + JPEG	s 640 x 480

After you made these settings, you may store them to be recovered automatically every time you turn on the camera. Go to manual mode and select all options as described above. After doing so, go to the Rec Menu and store the settings by selecting the option "Save Settings..." and pressing the SET button. To recover the stored settings the next time you turn the camera on or re-power it after the display has been turned off, select C on the mode wheel.

BP 900

When using the Canon S60 Digital camera it is recommended that the cold light source with pivoting mirror is used. Furthermore the diffuser, in position over a fully open slit, provides ample illumination for imaging.

The Eco Light can be used with the BP900 for video applications that in general require less illumination.

The camera view for both video and digital photo is that from the operators left eyepiece. It is strongly recommended, that you use a cross hair eyepiece for accurate focusing

Imaging -Digital

The Canon S60, in manual mode, provides a guide to the exposure in the top left of the screen (image k). For overview images i.e. no slit, attempt to make this figure close to 0 by changing the shutter speed. Use as much illumination as is tolerable by the patient. The exposure should be set by observing the camera screen. Fine focus should be made by observing the image through the microscope. The cross hair eyepiece will ensure accurate focus.

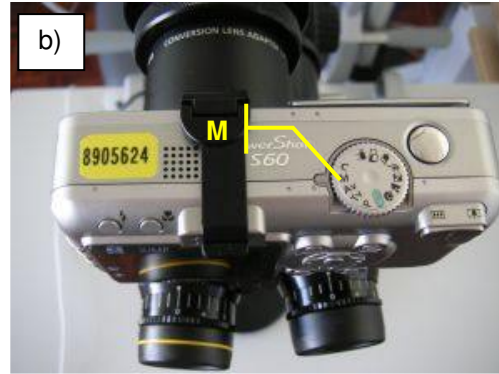
The exposure for slit images is more difficult. A value of -1 to -2 at the top left of the screen can be used as a start but an accurate exposure is dependant on the subject matter.

Imaging – Video

Video imaging is as per other slit lamps. If the Eco Light is used the gain of the video camera should be increased slightly to compensate for the reduced illumination. The orange filter over the LED is to correct the colour to that of the slit lamp. The video camera should be either set to AWB or Tungsten.

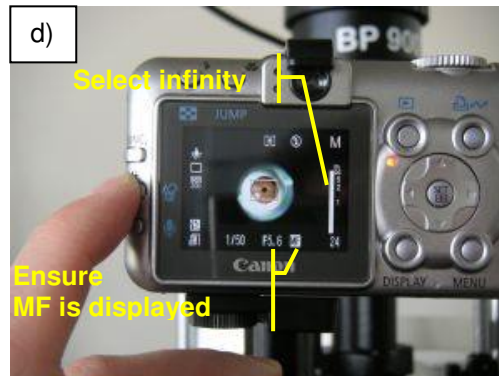
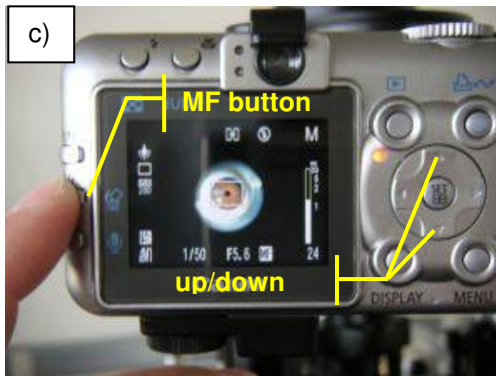
Setting up the Canon S60 step by step

After mounting the camera to the camera adaptor of your slit lamp, as described in the respective user manual, turn it on by completely opening the lens cover (a).

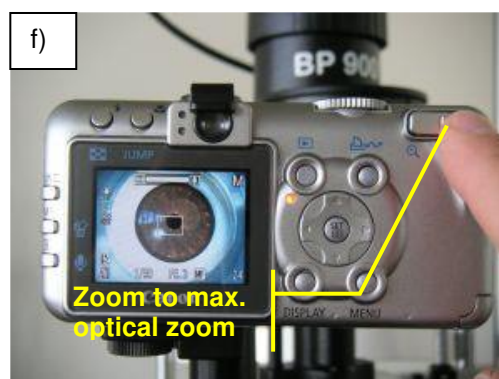
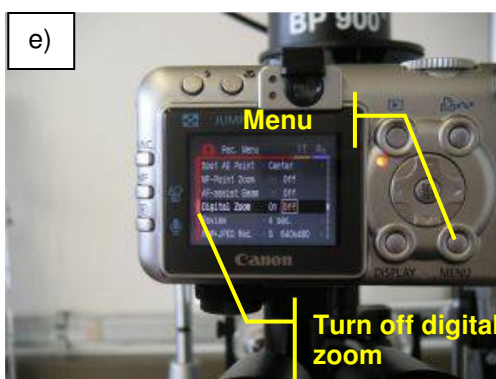


Select manual mode on the mode wheel on top of the camera (b)

Set the focus to manual by pressing the MF button on the left side of the LCD display of the camera's back. Hold the button and set the focus to infinity using the up-down arrows of the "joystick". Ensure that MF is displayed on the LCD screen (c, d). If not, repeat this step.



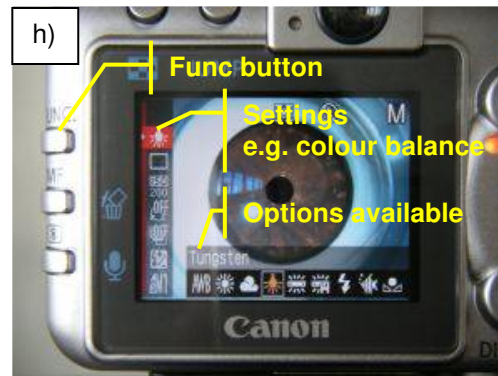
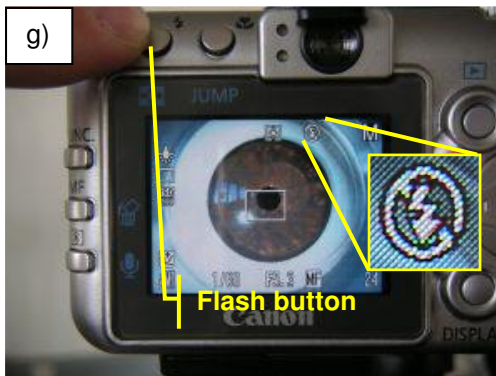
Select maximum optical zoom. First turn off the digital zoom. Go to menu (Rec Menu), select the option digital zoom and change the option to off (e). Now zoom to maximum optical zoom by pressing the zoom button on the top right of the camera's back (f).



In the Rec Menu, you should also make the following settings (e):

Flasch Synch:	1 st Curtain	AF Assistant Beam:	Off
Red Eye:	Off	Digital Zoom:	Off
Wireless Delay:	0	Review:	4 seconds
Spot AE Point:	Center	Raw + JPEG	s 640x480
MF Zoom Point:	OFF		

The integrated flash has to be turned off by pressing the flash button on the top left until you see the crossed out flash sign in the top right part of the display (g)

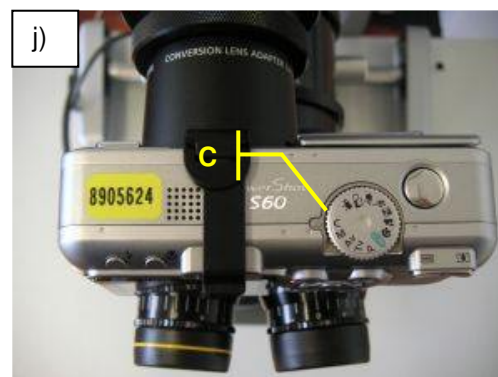


Use the Func button to choose the following final settings (see the setting for the colour balance on the image displayed). Use the up and down arrow buttons to choose between the different settings and the left/right buttons to select the desired option. Leave and store your settings by pressing Func again (h).

Settings in the Func Menu:

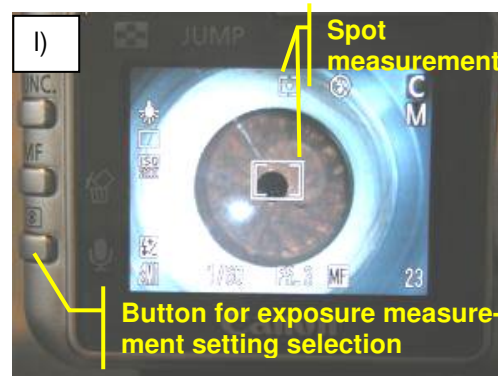
Colour balance:	Tungsten	BKT:	Off
Drive Mode:	Single Frain	Flash option	N.A.
ISO:	200	M1:	2048x1536
Effect	Off		



To store the settings made for the next time you turn on the camera, go to the Rec Menu and select the option: "Save Settings..." (i). To recover the made camera settings the next time you turn on your camera or re-power it after the display has been turned off automatically, select the position C on the mode wheel on top of the camera (j) and open or re-open the lens cover.



Change aperture and shutter speed for different illumination situations:

You should adjust the shutter speed to the individual illumination situations. For overview pictures, we found aperture of 5.3 and shutter speed of 1/60s is a good starting point. Fine-adjustments due to patient individual features (light or dark iris, ...) are always necessary (left/right arrows for shutter and up/down arrows for aperture). The camera displays a warning on the top left of the display for over or underexposure (k). For overview pictures it should be possible to get this number to ± 0 . Situations with slit illumination may lead to -1 to -2 underexposure.



Depending on the illumination situation you may want to change the exposure measurement method for the exposure measurement. Spot  for slit images and multi-area  for overview images (l).