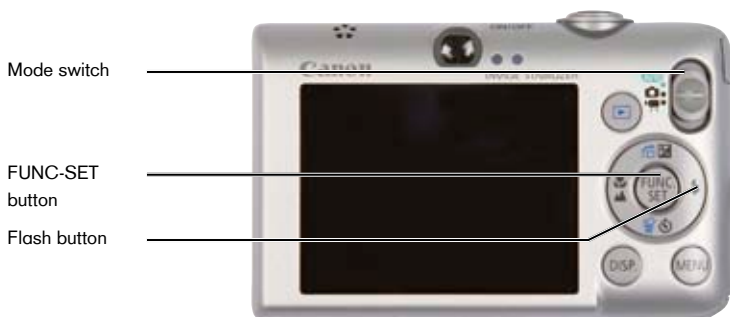


4 Using the Digital Camera _____

4.1 Basic Functions

Please read the camera manual and take some test photos before using the camera with a TT Design patient.



Note the following points when working with the digital camera:

Before taking a photo:

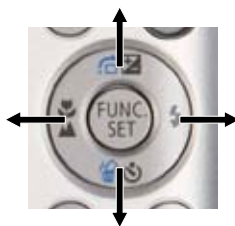
- Before using the camera, ensure that the memory card has been inserted.
- Switch on the camera by pressing the ON/OFF button and make sure that the mode switch is set to shooting mode.

- The camera should be in the *Manual-Mode*:
- To verify this, press the FUNC-SET button once and use the arrow keys to set Manual. Press the FUNC-SET button once again to exit the menu. Make sure that the red eye reduction is turned off (no eye symbol in the top right-hand corner of the display), and that the flash is activated (flash symbol in the top right-hand corner of the display); if this is not the case, turn on the flash by pressing the button with the flash symbol. Furthermore, no macro or wide angle setting should be activated. If activated, turn it off by pressing the macro switch (flower symbol).
- Set to maximum optic zoom using the zoom dial.



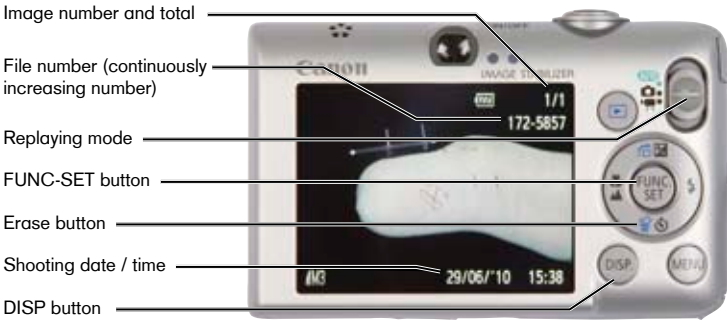
Taking photos

- Push the *Shutter* button down halfway. Position the camera so that the crosshair inside the viewfinder (auto focus field) points to the patient's residual limb.
- When the upper indicator light turns orange, the auto focusing process is finished (two beeps sound).
- If the lower indicator light blinks yellow, the camera is too close to the subject to focus. Note that the camera should be around 1 metre from the patient's limb.
- Press the *Shutter* button fully. You will hear the shutter sound when the shot is complete. Do not move the camera until you hear this sound. The upper indicator blinks green while the image is written onto the memory card. Every photo must be taken with the flash activated.



After taking a photo

- The digital photos can be checked on the LCD display on the back of the camera by setting the mode switch to *Replaying Mode*.
- The display indicates a file number (a continuously increasing number), date and time the picture was taken, and image number together with total number of pictures on the memory card. If this is not the case, you can activate the display by pressing the DISP button.



- Photos that are not needed can be deleted using the erase button either immediately or later, once the photos have been transmitted to the computer.

Transmitting the photos from the camera to the computer

There are two ways:

- Removal of the memory card
- With the USB interface cable



- Press the memory card to release the locking mechanism; now you can remove the memory card from the camera. Insert the SD memory card into the corresponding memory card reader on your computer. You can now use Windows Explorer to transmit and save the photos in a file folder.

B) Plug the USB interface cable to your camera and connect it with your computer. The camera is recognized as a file storage device. If not, then please install the supplied camera software on your computer. You can now use Windows Explorer to save the photos in a file folder so they are available in the program for socket design.

4.2 Taking Photos of the Residual Limb

Essential camera adjustments:

- Resolution: 1600×1200 (M2)
- Red eye reduction: *off*
- Flash: *on*
- Macro or wide angle: *off*
- Manual mode

If necessary, the resolution M2 (1600 x 1200 pixels) must be set in the function menu. Use the cursor keys for the following settings: flash *on*, red eye reduction *off*, wide angle or *Macro off* (see section: Before taking a photo, page 32).

Taking photos

For best accuracy, it is important that the digital camera is at least 1 metre away from the residual limb when photos are taken. With the camera at the maximum zoom setting, an average residual limb should fill the viewfinder with a camera distance of 1 to 1.5 metres. It is essential that the entire residual limb is visible, up to around 10 centimetres proximal of the patella, as well as the entire calibration piece. The black background cloth 743S50 must be in position behind the limb. It is very important that the recommended residual limb flexion of 15° is maintained for both, the anterior and the lateral photo.

The red and yellow 'fins' on the calibration piece are used to ensure correct camera position. By simply positioning the camera so **neither the red nor the yellow** sides of the 'fins' are seen will ensure that the camera position is correct. This gives a direction of view from the camera at right angles to the calibration piece.

**Tip!**

Focus on the calibration piece with your eye and hold your head so that you can see none of the 'fins' color; than simply put the camera's viewfinder in front of your eye and take the photo. This is quicker and more precise than orienting the camera using the display.

Using the guidelines above, take one anterior and one lateral photo of the residual limb, ensuring correct camera orientation and 15° residual limb flexion. It is very important that the calibration piece is not moved in between taking photos. It is also very important that the sock remains in the same position used when making the pen markings. You may also take several photos and then chose the two best digital photos.

Position the mode switch of the camera at *Replaying Mode* and check the photos. If necessary, take further photos.

Attention: It is very important that the calibration piece is not moved in between taking photos. If the calibration piece has been moved, both photos must be taken once again.



Wrong – too low,
neon yellow surface
visible



Wrong – too
high, neon red
surface visible



Correct – only
white anterior
ede visible