

Using the Digital Camera on the 1200EX

Amended October 2001

1. Set up the 1200EX as normal going through alignment procedure. Find an area that may be of interest, chose the rough magnification and focus the image. Use the brightness dial to pick an exposure time of about 0.5 seconds.
2. Open the analysis software, then open the database using **Database, Open**. You will be using the database labelled with the date it was started e.g. 04_01_01.
3. Acquire an image in the Search mode (first of the three little video recorders). The camera will automatically be put in when you click on the search mode icon. Using this image as a guide, find the area you want to examine.
4. Terminate the live-acquisition mode (first of the three little clapper boards).
5. Acquire an image in the Focus mode (second of the three little video recorders). Use this to focus and check the objective stigmatism with the help of the fast fourier transform.
6. Terminate the live-acquisition mode (second of the three little clapper boards).
7. Acquire an image in the Snapshot mode (third little video recorder). Use the greyscale histogram to get a 45 – 55% exposure by altering either the brightness dial on the microscope, or the **Camera Control** in the **Image** menu.
8. Terminate the live-acquisition mode (third little clapper board). This will be your final image and is stored at a higher resolution than the previous two images. This image will automatically sit in the image buffer.
9. When prompted, enter the magnification. If you are not prompted for this, set the magnification by going into **Image, Set Magnification**. Then open the database and minimise it. When prompted, enter the image name and other details requested. If you are not prompted, right click on the image buffer, chose **Image Information** and fill in Image Name. Then drag and drop your image from the buffer into the database.

These images are captured as 16-bit .tif files. However, they are automatically changed to 8-bit format on saving. (PaintShop Pro etc. do not read 16-bit files!).

The scale bar that appears after you have entered the correct magnification at the Snapshot stage exists as an overlay. On saving, this overlay is automatically burned onto your image. The scale bar is drawn from a calibration curve that was prepared using a diffraction grating when the camera was installed.

ONLY SAVE RAW DATA TO THE DATABASE – ANY OVERLAYS CAN BE WRITTEN ON AT A LATER DATE.

At the end of your session, please copy the images you want to keep from the database to your folder on the network. To do this, you will have to open each image and use **File, Save As** in the normal way – you cannot save straight from the database. You can move blocks of images from the database into the image buffer. Then highlight all the images and use File, Save As to move them all over. The images will be individually transferred over to the network.

Please make your own record of your image names, magnifications and the date they were taken.

The database will be archived about once a month (after about 500MB) onto CD. Therefore, everything will be stored in date order so if you need to salvage some data it is *imperative* that you know the image name and what date it was created.

After archiving, the database will be deleted.