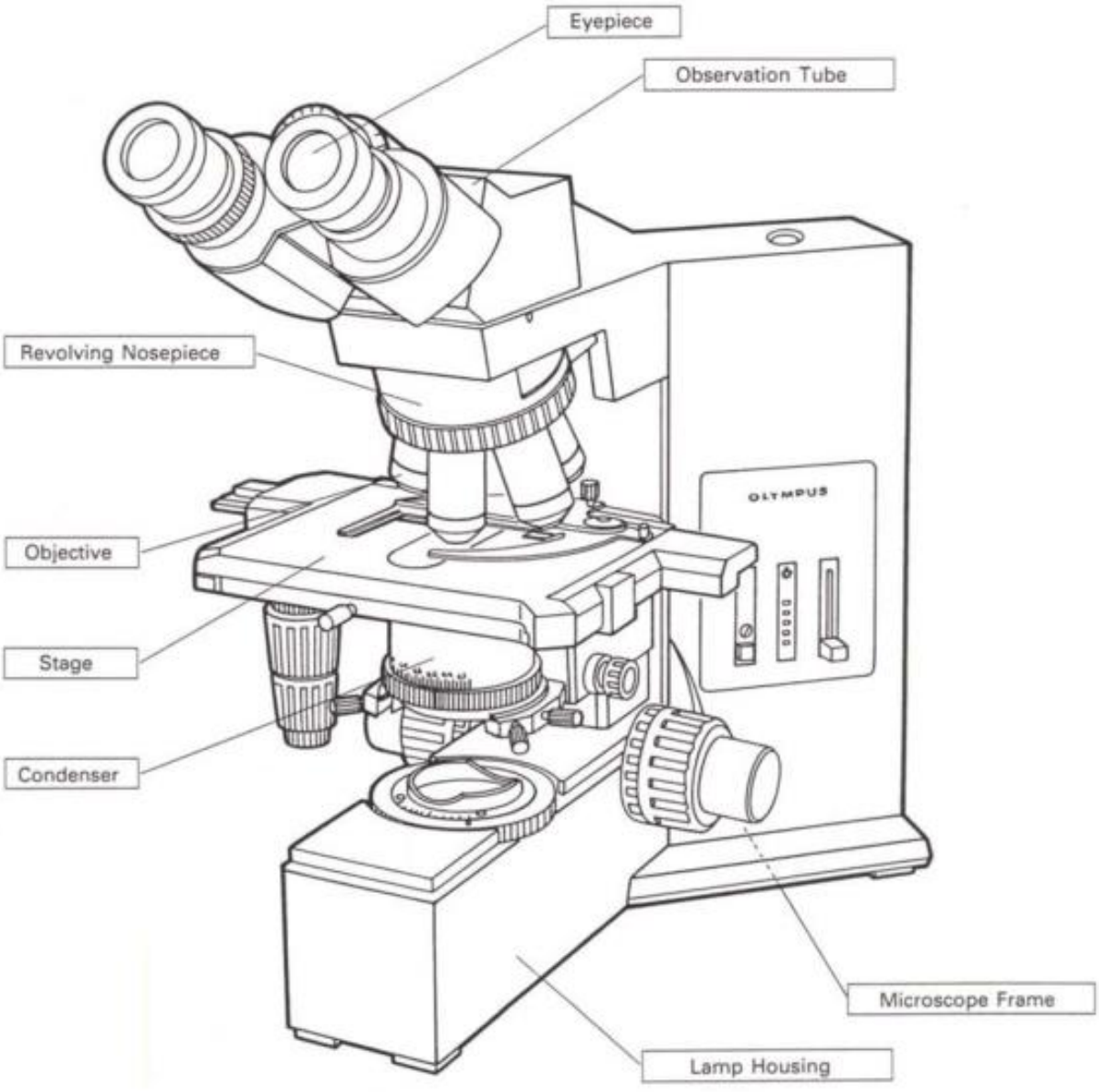
USER MANUAL BX40
WIDE FIELD MICROSCOPE



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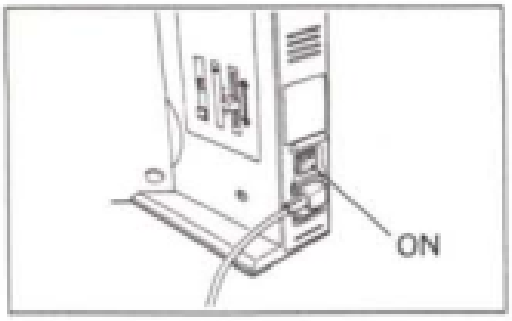
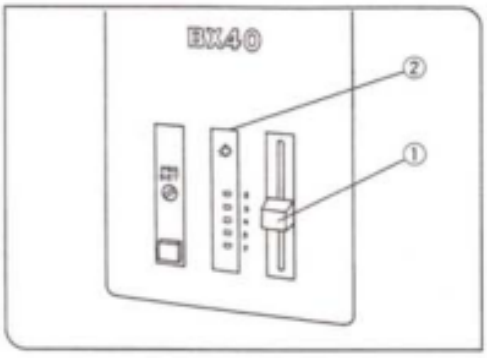
STARTING THE SYSTEM

For white transmission illumination: switch the power on in the back of the microscope right part



And adjust the brightness with the light intensity lever (1)

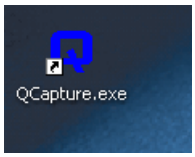


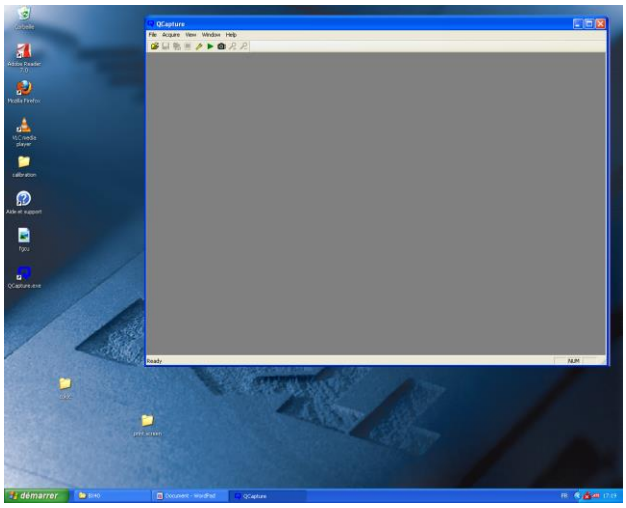
For fluorescence acquisition or visualization: switch on the fluorescent lamp
There are 4 fluorescent cubes: DAPI, GFP, RFP, and deep red (Cy5), their technical characteristics are annexed at the end (p4).

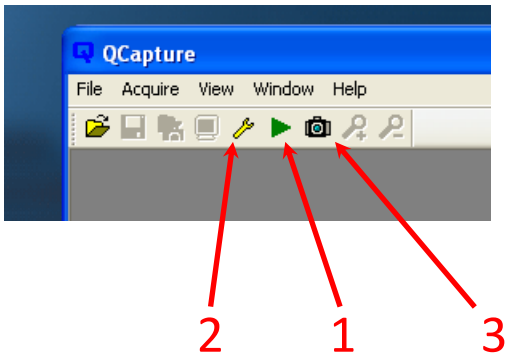
Turn on the computer and log on your **personal session**.

Check if the camera is on (switch and green LED on the top)

Start **Qcapture** software





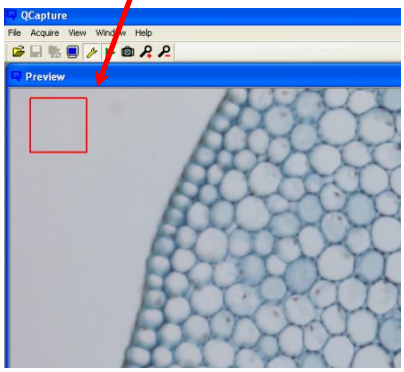


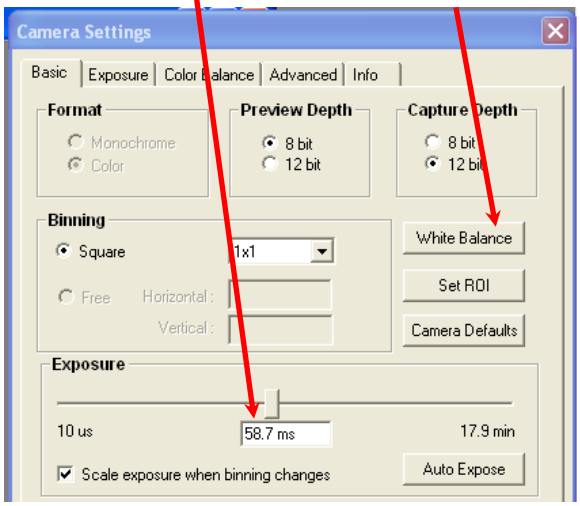
1) Preview (live)

2) Camera Toolbox :

In this window you will: Set the **exposure time** (exposure),

Define white balance for **transmission illumination**:
Create a ROI (drag a rectangle) outside the sample and click on White Balance button





3) Snap a photo (will create another window)

Save it in Tiff format in intranet or external disc.

TURNING OFF THE SYSTEM

1. Check that all your data are saved
2. Close Qcapture software
3. Logout Windows (Start → Log Off).
4. Switch off the fluo lamp and microscope power

ANNEXE

Fluorescent cubes

Fluorophores Cube#	Excitation filter	Dichroic	Emission filter
DAPI 2	363-380	410	435-490
GFP 3	466-498	505	517-555
RFP 4	510-565	560	603-666
Cy5 5	588-650	645	666-740

Objectives (All Dry) :

Enlargement	N.A.	XY resolution (µm) @ 520nm	Z resolution (µm) @ 520nm	Working distance (mm)
4X	0,10	3,17	104	18,5
10X	0,25	1,27	16,64	10,6
20X	0,5	0,63	4,16	2,2
40X	0,65	0,49	2,46	0,6
60X	0,8	0,40	1,63	0,35

Measured calibration (1600X1200 pixels)

	pix/µm	µm/pix	Frame size (µm)
4X	0,544	1,84	2941 X 2206
10X	1,36	0,736	1177 X 883
20X	2.71	0,369	590 X 443
40X	5,474	0,182	292 X 219
60X	8,120	0,123	197 X 148