Using the IR EZ OMNIC

Assuming everything is set up from the last person running the IR.   In general if you don't know what the command is, hover over it and it will tell you.

1)   Collecting Background:

(a) In the very top tool bar where it says

File   Edit   Collect   View   Process   Analyze   Window   Help

Click on   **Collect** and choose   **Collect Background**

(You may also use the toolbar below the blue bar and choose   **Col Bkg**   from

Col Bkg   Col Smp   Print   Copy etc.)

(b) You will get a **Confirmation** window

& IR will say " Please prepare to collect background spectrum."   **OK** or **cancel**

(c) Into the sample compartment input your IR cell with the same solvent in which you will be running your sample IR

(d) After your background sample is in your sample compartment, click on **OK**

2)   Collecting Sample:

(a) Go back to the top tool bar and click on **Collect** and choose   **Collect Sample**.

(b) You will get another **confirmation** window

& IR will say "Please prepare to collect sample spectrum"   **OK** or **cancel**

(c) Into the sample compartment input your IR cell with the sample and solvent.   If your sample is air sensitive turn on the N_2 just a tiny bit.   If you turn on too much N_2, your sample will evaporate. (N_2 going to the IR sample chamber is the one with the spigot attached to the gauge with the little ball.   Do not touch any other valves.)

And click on **OK**.

3)   To print spectrum:

(a) Click on **View** from your top toolbar.   Select **Display Limits** from the drop down menu.

Set **start** to **2300**   and **end** to **1600** (for the x axis)

For the (y axis) set the numbers to show the window you want to show in the y axis by looking at the numbers on the spectra that you just collected.

(b) Click on **view** from your top toolbar.   Select **Display Setup** from the drop down menu

Under **Spectral View** check "Sampling Information"
Under Sampling Information check "Title of Spectra" and "Date and Time"

(c) To select a spectrum click on the selection tool

To select the spectrum that you are going to work with, if your window has more than one spectrum displayed: (You can always get rid of any spectrum you don't want by clicking on it to select the spectrum. Then in top tool bar click **edit** and in the drop down menu choose **cut**)

(d) To display peak numbers on the spectrum peaks: Click on the ⓣ
and then click on the peaks that you want wavenumber.   You can move the wavenumber box a little so that you can see the number easily.

(e) To get a title of your spectrum to print:

Inside the **i** window, write down what ever you want and it will show up in the spectrum.   You can move the **i** text in the spectrum by moving it with the cursor.

(f) Go to **File** in top toolbar   Choose   **Print**   Choose   **HP2020** and choose grayscale to print data.

4) Opening a new Window:

You can open a new window by clicking on **Window** in the top toolbar and choose open new window. You can also choose toggle among the windows already opened.

5)   **Don't forget to shut off the N$_2$** if you turned it on at the beginning of your sample collection.

6)   If no one uses the IR between your background collection and when you run your spectrum, you can keep using the same background spectrum without having to redo the background collection.   Put the **IN USE** sign on it if you are still using it.   However if someone uses a different solvent (& IR cell) and collects a different background, you will have to retake the background before you collect your spectrum.

Non Standard Problems:

1)   If there is no IR **EZ OMNIC** displayed when you get to the computer, find the **EZ OMNIC** icon and double click on it.

2)   If something is not right and you get weird results:

In the top toolbar choose   **Collect**   and then **Experiment Setup**

Most of the parameters should not change from the values given below.   The only parameter that you may want to change is **Number of Scans.**   More scans will give you better signal to noise.

Collect Tab:

Number Scans **10**

Resolution   **1.0**

Final Format   **% Transmittance**

Correction   **none**

Automatic atmospheric suppression (do not check box)

Preview Data Collection   (do not check box)

File Handling
        Save automatically (check box)

Background Handling
        Collect Background after 3000 minutes (should be selected)

Bench Tab

The big window should show an interferogram.   The big window should not be a straight line.

Single beam (do not check box)

Tone (do not check box)

Gain **8 or autogain**	sample compartment **main** (no choice)
Velocity **1.8988**	detector **DTGS KBr** (no choice)
Aperture **10**	min /max should be chosen
	Beam splitter **KBr** (no choice)
	Source **IR**
Accessory **Transmission ESP**	
Window material **NaCl**	

Spectral Range   recommended is 4000 to 625   should be set to **2300 to 1600** (this gets messed up every time the EZ OMNIC is rebooted)*****************************

Quality Tab
        Select   view   **spectrum** (should be chosen)

Under top tool bar **Edit   Options**

Print Tab   **Select**   show outer box (should be chosen)

show x & y (should be chosen)

Window Tab   **connect to spectrum** (should be displaying all annotations) should be checked