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## *Visible Diode Array Spectrophotometers*

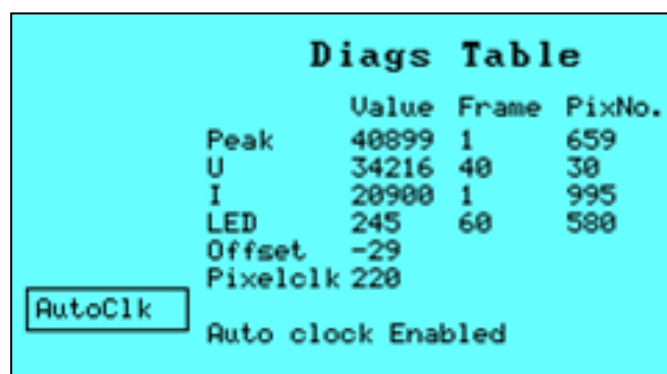
### *Diagnostics Screen*

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In order to diagnose a fault remotely you may be asked to supply the data from the diagnostics screen. This document explains how to obtain this data. Please ensure you also supply the instrument model, serial number and software version.

#### *From the instrument display*

1. Plug in the power supply and switch on the unit. Allow it to work through the calibration routine, and press "OK" when complete.
2. Select "Set up Instrument".
3. To access the diagnostics screen, press the REF, REF, TEST. A New set of functions are now available.
4. Press DIAG, DIAG, DIAG. The following screen should be displayed:



	Value	Frame	PixNo.
Peak	40899	1	659
U	34216	40	30
I	20900	1	995
LED	245	60	580
Offset	-29		
Pixelclk	220		

Auto clock Enabled

Figure 1 Diagnostics Screen

5. Copy all the information and email back this data.

#### *N3 Diagnostics program*

Some instruments do not have a graphical display. For this we supply the N3 diagnostics program. This program must be installed on your PC system.

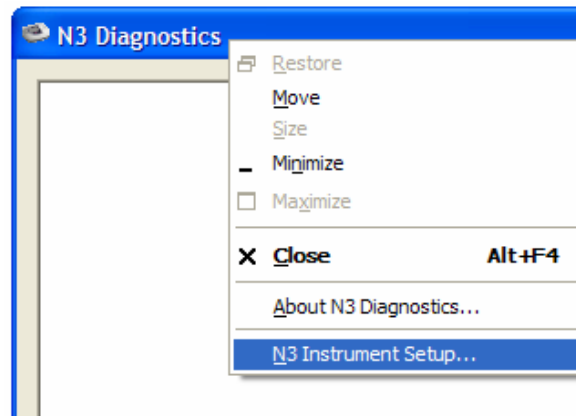
#### *Installation*

1. If a zip file has been supplied extract its contents to your PC's hard disk

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2. Run setup.exe. This will start the installation procedure.
  3. Follow the instructions given by the installation wizard.

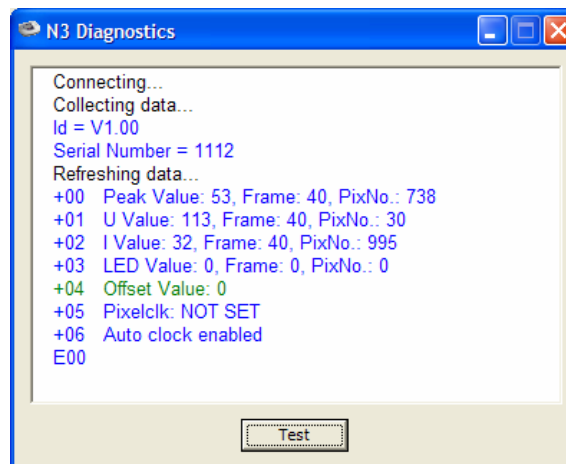
### *Using N3 diagnostics*

1. Connect the instrument to the PC using the appropriate serial cable.
2. Plug in the power supply, switch on the unit and allow it to calibrate.
3. Run the N3 diagnostics program.



**Figure 2** N3 Instrument Setup

4. Right-click on the title bar and select "N3 Instrument Setup".  
A new window opens. Select the appropriate com port from the drop down list.
5. Press the TEST button on the Program.  
The program will instruct the instrument to perform a calibration and the data will appear in the window as shown in Figure 3.
6. The data can be copied from the window using the mouse and Ctrl+C.



**Figure 3** N3 diagnostics data

This program will also work with the graphical display instruments if they have current software and instrument is set to 9600 baud.

- Follow steps 1 -4 above.

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- To change the baud rate you must enter the communications screen. Select “Set up Instrument”, “Comms/Software Update”, “Communications”. Select 9600 baud by pressing Top function key. Select “All OK” and then return to the main screen.
  - Run the N3 diagnostics program and collect the data as above.

**NB: You must exit the N3 diagnostics program to release the instrument from computer control.**

### *Using Hyperterminal*

If you experience problems installing the N3 diagnostics program you can collect the data using Hyperterminal. Again, the instrument must have the appropriate software and baud settings.

1. Connect the instrument to the PC and power supply. Then turn it on, allow it to calibrate and press OK when complete.
2. Run and configure Hyperterminal for the instrument.  
**NB: The PC and instrument must have the same baud rate.**
3. Use the following commands to obtain the diagnostic data:

CONTROL	Establish a link
DIAG REFRESH	Run the diagnostics measurements
DIAG REPORT	Display the data
RELEASE	Release control of the instrument.

The instrument returns E00 upon successful completion commands.  
The whole procedure should look like this:

```
CONTROL
E00
DIAG REFRESH
E00
DIAG REPORT
+00 Peak Value: 30135, Frame: 1, PixNo.: 727
+01 U Value: 32415, Frame: 26, PixNo.: 77
+02 I Value: 32784, Frame: 40, PixNo.: 982
+03 LED Value: 610.375, Frame: 40, PixNo.: 616
+04 Offset Value: -17
+05 Pixelclk: 428
+06 Auto clock enabled
E00
RELEASE
E00
```

**Figure 4**Diagnostic data using Hyperterminal

4. The data can be copied from the Hyperterminal window.