

VDAS[®] e-lab
Versatile
Data Acquisition System e-lab
User Guide

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TecQuipment has taken care to make the contents of this manual accurate and up to date. However, if any errors are found, please let us know so we can rectify the problem.

TecQuipment supply a Packing Contents List (PCL) with the equipment. Carefully check the contents of the package(s) against the list. If any items are missing or damaged, contact TecQuipment or the local agent.




Visit

www.tecquipment.com

For the latest information about VDAS[®]

VDAS[®] is a registered trademark of TecQuipment Ltd.

Symbols Used in this Manual

NOTE		<i>Important information</i>
CAUTION		<i>Failure to carry out this instruction could cause damage to the apparatus, other equipment, personal property, or the environment.</i>
WARNING		<i>Failure to carry out this instruction could cause personal injury.</i>

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Introduction

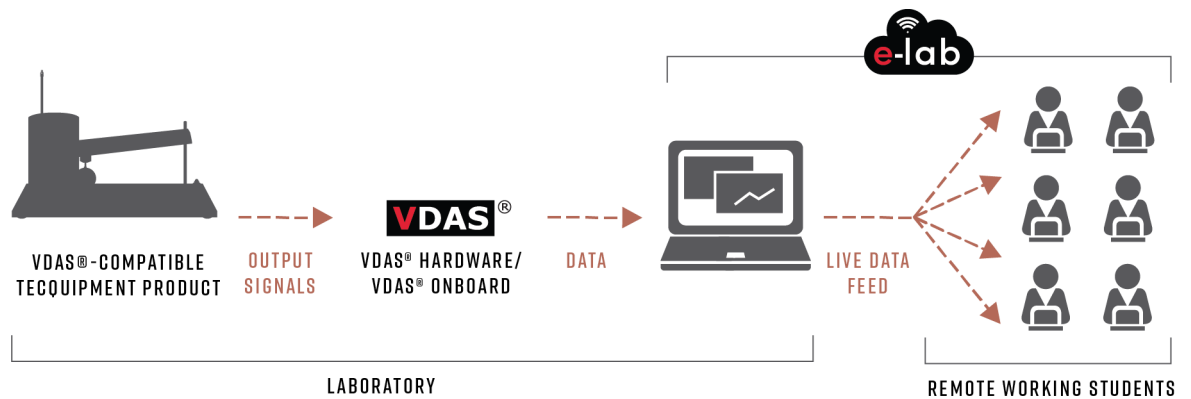


Figure 1 The Versatile Data Acquisition System e-lab (VDAS[®] e-lab) Schematic

It is sometimes not possible for students to be physically present when an experiment is run, they may be in another part of the world or simply in another room on campus. VDAS[®] e-lab is a comprehensive solution that involves the remotely located student with the physical experiment being run by someone else in a lab. The live data from the experiment is streamed via the cloud to students so that they can manipulate and analyse it remotely on their own PCs.

If VDAS[®] e-lab is used in conjunction with TecEquipment's Remote Visual Hardware (RVH) bundles students can also have live multi angled views of the experiment in action while the data is being streamed to them. (See the RVH User Guide for details).

NOTE



A suitable computer will be required (not supplied) to use TecEquipment's VDAS[®] e-lab. For specification see: '**Technical Details**' on page 5

VDAS[®] e-lab Software only works with VDAS[®] compatible TecEquipment

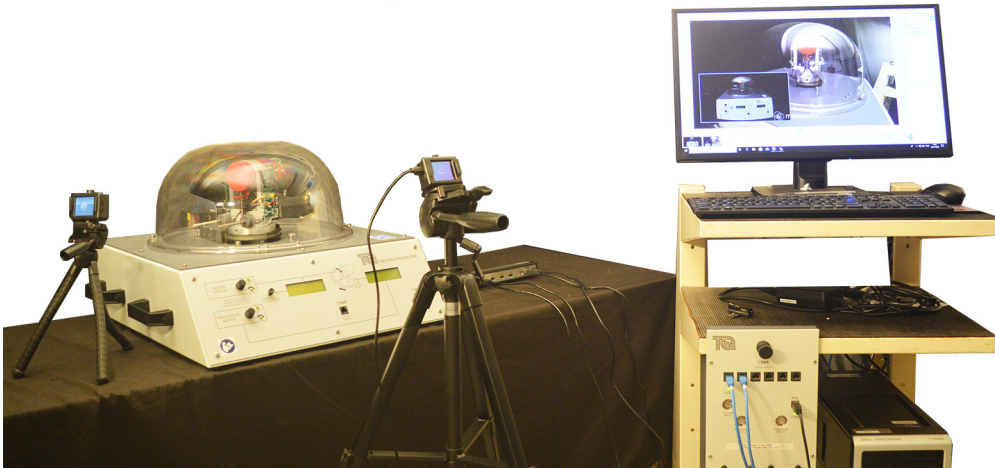


Figure 2 The Versatile Data Acquisition System e-lab (VDAS[®] e-lab) shown with RVH

VDAS[®] e-lab Software Overview

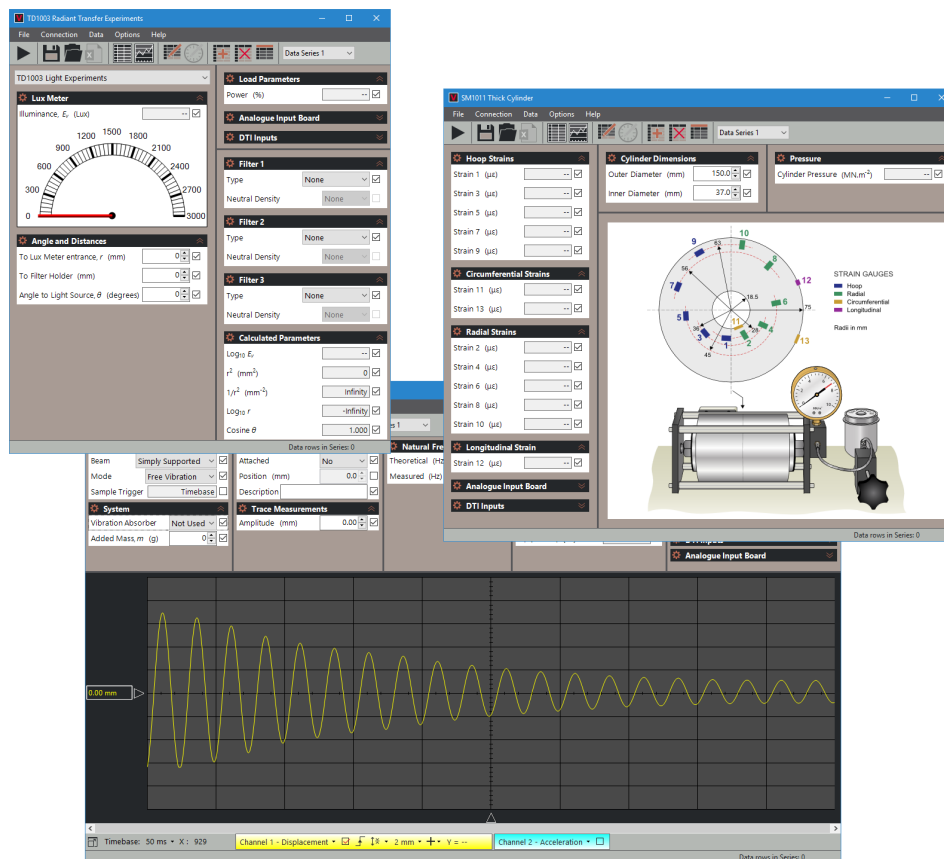


Figure 3 Typical Screenshots of the VDAS[®] e-lab Software

Both students and the demonstrator use the same software. TecQuipment's own specialist software engineers have created VDAS[®] e-lab Software for use with over 50 products. The VDAS[®] e-lab Software:

- Displays real-time data, numerically, as a dial meter or as an analogue trace.
- Logs data for printing and viewing later.
- Exports data for use with other software.
- Performs real-time calculations on the data to generate user-defined data.
- Uses the data to create and print charts and tables.
- Records data automatically or with some manual input.

The default 'Layout' of the software is tailored specifically for each product that it is used with. TecQuipment has created individual layouts that include the fields required for each product. For example, a TecQuipment Wind Tunnel needs different data fields to a TecQuipment Pump Test Set. The flexible VDAS[®] e-lab software also allows the user to create, save and reuse their own 'Custom Layout' as required.

NOTE



VDAS[®] e-lab Software works with older VDAS[®] Hardware, but many newer products require the VDAS[®] (MKII) Hardware for the analogue traces to work correctly.

Technical Details

Item	Details
Demonstrator or Student Computer (not supplied)	
Minimum hardware	Intel® i5 or equivalent processor. Multi-core processors give better performance.
	1280 x 768 screen resolution
	USB 2.0 or 3.0 port
	500 MB of Hard Disc Space
Minimum operating system	Microsoft® Windows 8 or later

Installation

VDAS® Hardware Interface Installation

The experiment and VDAS hardware should be set up as prescribed in the VDAS® and apparatus User Guides.

VDAS® e-lab Software Installation

The latest software is available from the TecQuipment website www.tecquipment.com/downloads.

NOTE



The software will only install if logged in as an administrator. If not, then an error will appear and the computer system administrator must be contacted to install the software.

If there are problems with the installation, it may help to turn off the virus checker software before starting. Turn it back on when the installation has finished.

The demonstrator and each student observing the experiment must download and install the same VDAS® e-lab software onto their PC.

Installing the Software

1. Download the installer from <https://www.tecquipment.com/downloads>.
2. Run the installer to install VDAS® e-lab. This will add an entry to the start menu. Check the 'I agree to the license terms and conditions' check box and click the 'Install' button, the Setup Progress screen will show (Figure 4).

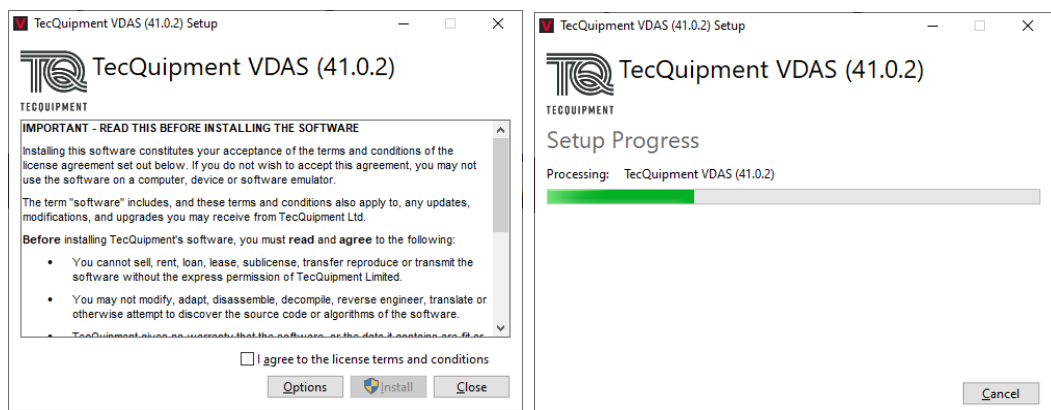


Figure 4 License Screen and Setup Progress Screen

3. Wait until the installation is successfully completed (Figure 5).

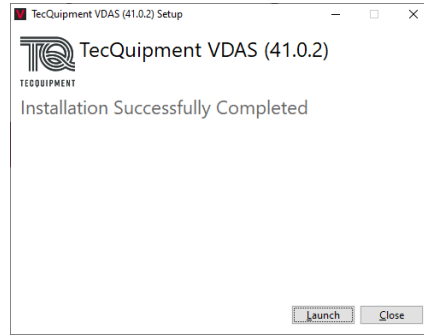


Figure 5 VDAS® e-lab Successful Installation Screen

Activating the License (Tutor PC Only)

NOTE



Only the Tutor PC requires a licence, Student's just log on, they do not need to activate a license.

1. Once the software has been installed it is launched via the on screen icon or start menu item (Figure 13):
2. Select Options, License Manager (Figure 6).

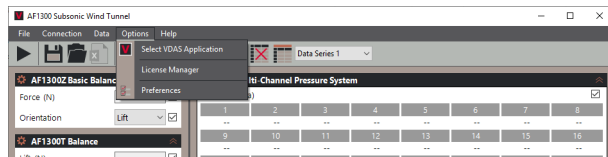


Figure 6 Open License Manager

3. The License Manager window will open (Figure 7), select Apply License.

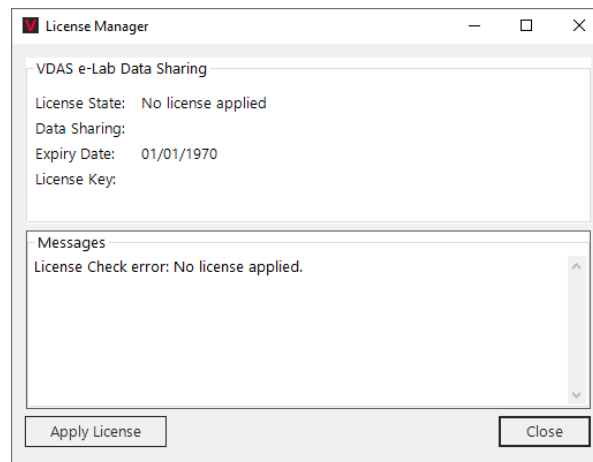


Figure 7 License Manager Window

- The License Application window will open, enter the license key (please contact your supplier if a key is not available). Then click OK (Figure 8).

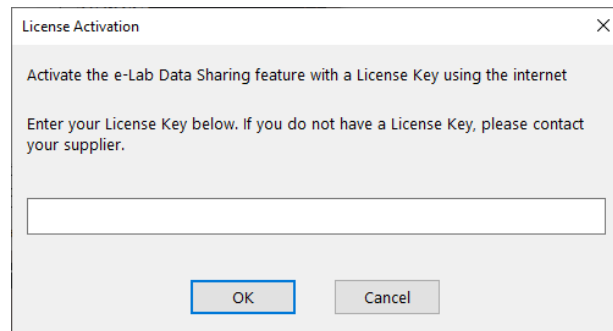


Figure 8 License Activation Screen

- The internet access window will be displayed (Figure 9), click OK.

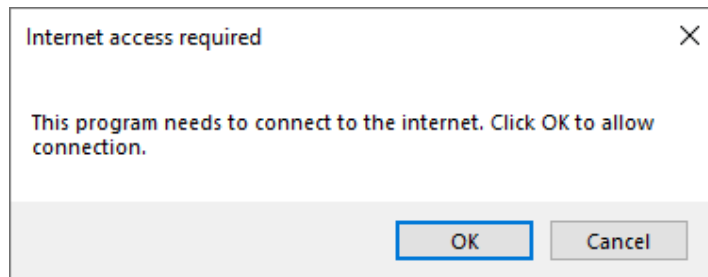


Figure 9 Internet Access Window

- The checking license screen will be displayed (Figure 10).

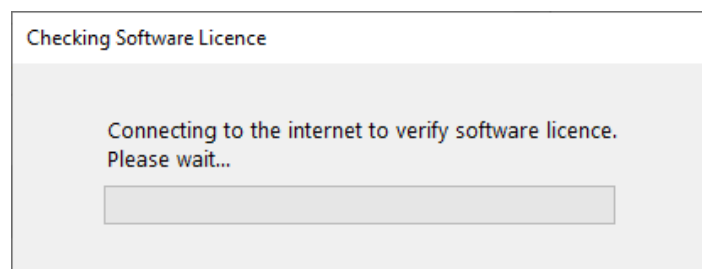
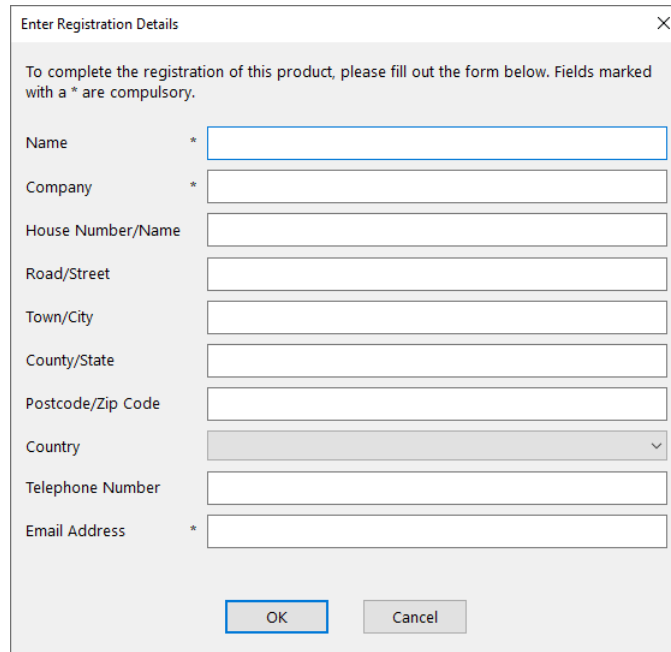


Figure 10 Checking Software Licence Window

- Enter registration details on the next window (Figure 11).



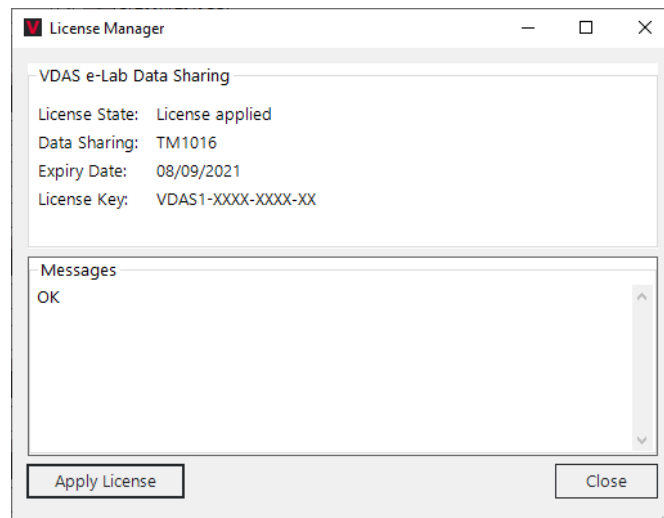
The dialog box is titled "Enter Registration Details" and contains the following fields:

- Name *
- Company *
- House Number/Name
- Road/Street
- Town/City
- County/State
- Postcode/Zip Code
- Country (dropdown menu)
- Telephone Number
- Email Address *

Buttons: OK, Cancel

Figure 11 Enter Registration Details Window

8. When a license is successfully applied the following window is displayed (Figure 12).



The dialog box is titled "License Manager" and contains the following information:

- VDAS e-Lab Data Sharing
- License State: License applied
- Data Sharing: TM1016
- Expiry Date: 08/09/2021
- License Key: VDAS1-XXXX-XXXX-XX

Messages: OK

Buttons: Apply License, Close

Figure 12 License Applied Window

Launching the Software

Once the software has been installed, it is launched via the on screen icon or start menu (Figure 13):

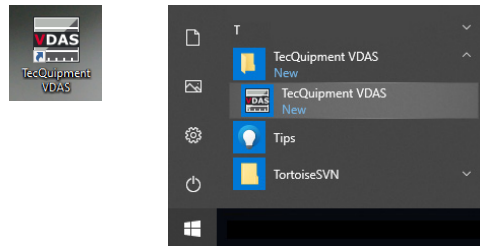


Figure 13 VDAS e-lab Icon and Start Menu Option

1. The first time VDAS[®] e-lab is started an application will be prompted for (i.e. a piece of TecEquipment teaching apparatus). This can be changed at any time by selecting: Option, Select VDAS[®] Application. Select the application for the connected equipment.
2. The VDAS[®] e-lab screen for the selected application will be displayed (Figure 14).

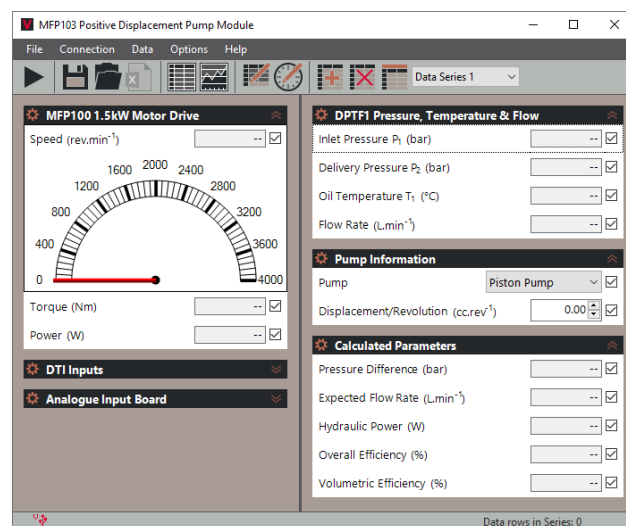


Figure 14 Sample VDAS[®] e-lab Screen

Tutor Data Connection

Live data from an experiment will be streamed for display, capture and analysis on a remote computer by its local copy of VDAS® e-lab.

1. Select: Connection, Communication Settings to open the Communication Settings dialogue box (Figure 15).

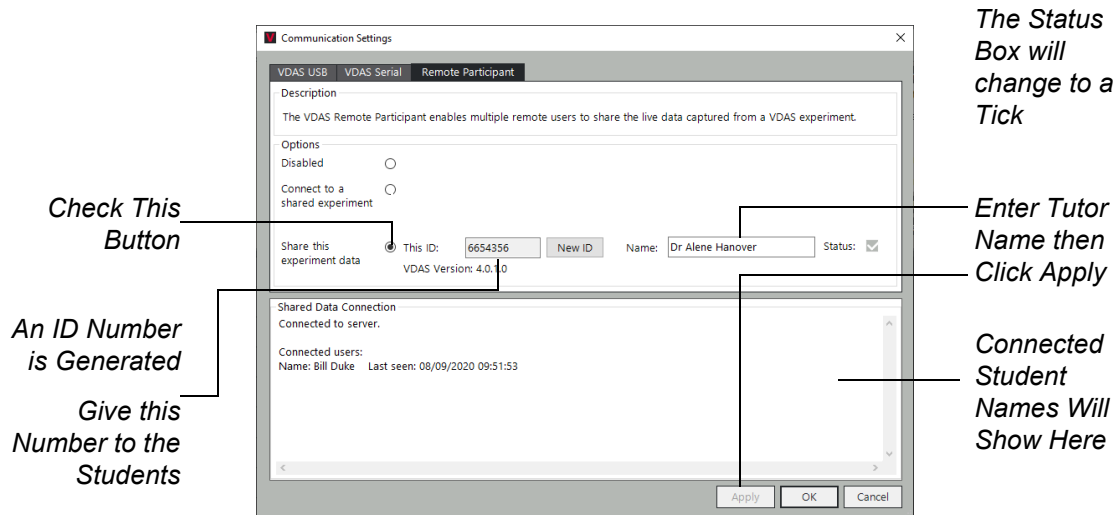


Figure 15 Communications Settings Dialogue Box

2. On the Remote Participant tab select 'Share this experiment data'.
3. Enter the tutor's name.
4. Click the 'Apply' button to connect to the server.
5. Inform the remote participants of the ID they will need this number to be able to connect to the experiment.

NOTE



The students must be supplied with the ID number, they must also have the same apparatus and experiment selected as the tutor.

6. The experiment data is now being shared. The details of the experiment name and the experiment operator's name are broadcast to the remote participants.
7. When a student connects to the shared experiment data their details will be listed. Each student is able to independently start viewing, recording and analysing data, via the too bar controls.

Student Data Connection

1. Select: Connection, Communication Settings to open the Communication Settings dialogue box (Figure 16).

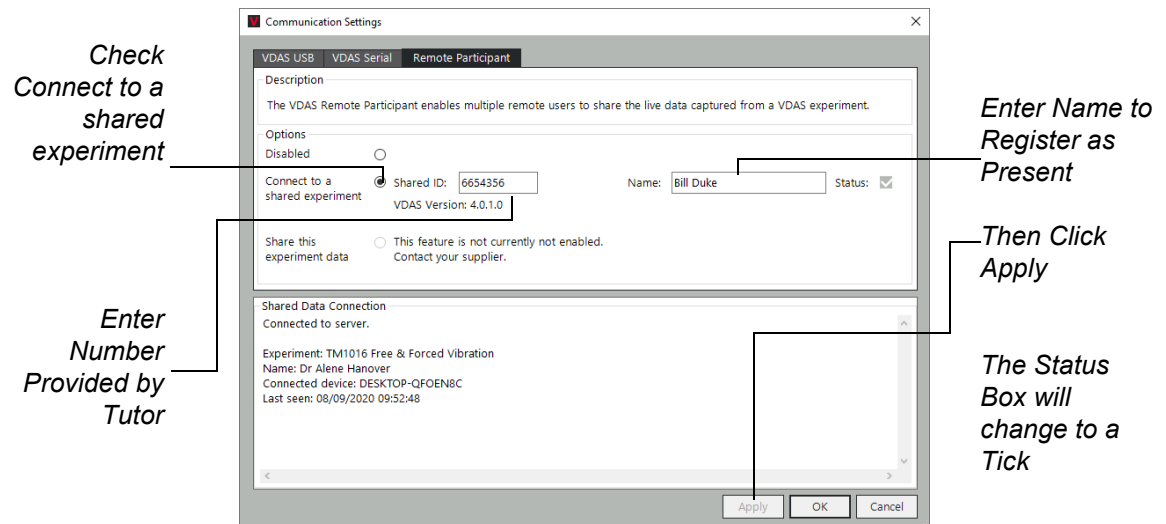


Figure 16 Connect to a Shared Experiment

2. Click on Connect to a shared experiment.
3. Enter the shared ID (provided by the tutor).
4. Enter the student name (this is the student's registration as being present for the experiment).
5. Once correctly connected the status box will contain a tick.
6. When connected click OK to return to the data window.
7. Once in the data window select 'Options' then the apparatus being used, this information is supplied by the tutor.
8. Once the apparatus being used is selected the experiment being performed must also be selected, this information is supplied by the tutor.

NOTE



*For the application to work correctly the student **must** select the apparatus being used under the 'Options' tab.*

*Once the apparatus is selected the experiment being performed **must** also be selected.*

Data viewing, recording and analysing can be independently started via the tool bar controls (*Figure 17*):

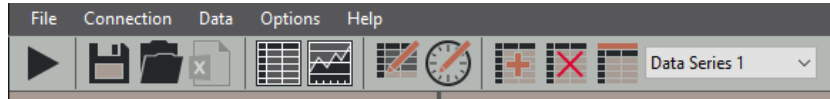


Figure 17 Tool Bar Controls

NOTE



Press F1 in VDAS to activate the online help

Troubleshooting Data Connection

General Connection Issues

- Both student and tutor need to use the same ID
- Both student and tutor need to be using the same experiment within VDAS
- Both student and tutor need ideally to be using the same version of VDAS (the VDAS version being used is displayed beneath the experiment ID)

Communications Disabled

If the Disabled button is checked communications will not be possible. Please select Connect to a shared experiment (Student) or Share this experiment data (Tutor). See Figure 18.

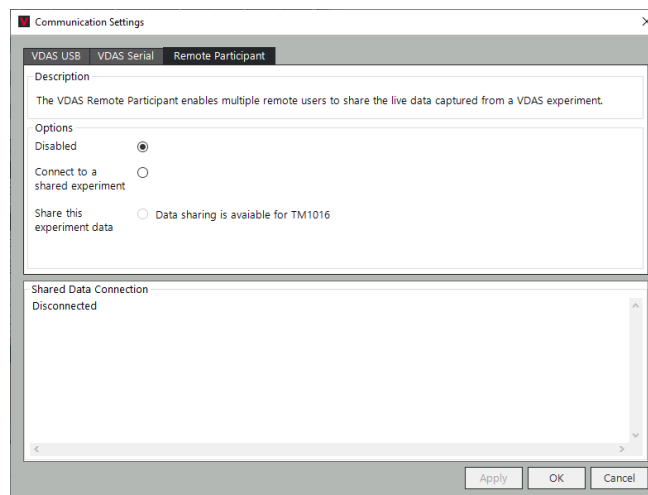


Figure 18 Communications Disabled Selected

Feature Not Currently Enabled

If the feature not currently enabled window is shown (Figure 19), the product needs to be licensed. See **Activating the License (Tutor PC Only)** on page 8.

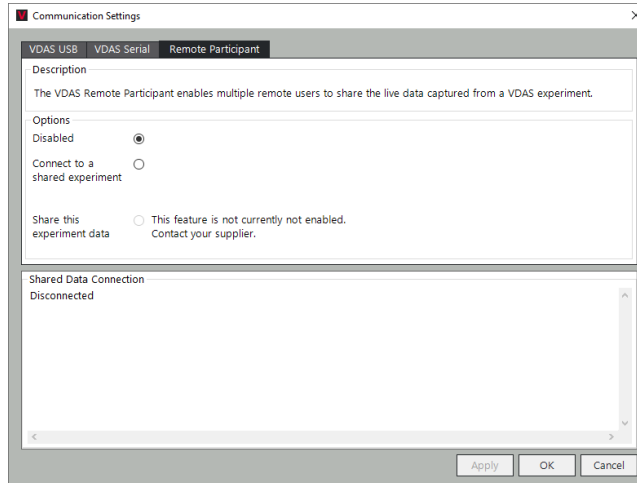


Figure 19 Feature not Enabled Window

License Key Applied too Many Times

If the license key has been applied too many times window appears (Figure 20), this indicates that the number of TecQuipment products to which a license applies has been exceeded. Please contact TecQuipment or the local supplier.

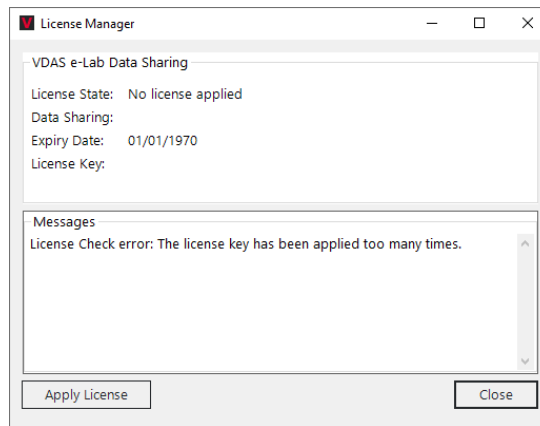


Figure 20 License Key Applied too Many Times Window

Customer Service

Customer Care

We hope our products and manuals are liked. If there are any questions, please contact our Customer Care department:

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