

DS400

Docking Station

Software Installation and Operations Manual



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4201 B Street
Anchorage, AK 99503
(907) 770-9041

www.tttenviro.com

25420 74th Avenue S.
Kent, WA 98032
(253) 373-9041

info@tttenviro.com

GfG Instrumentation

1194 Oak Valley Dr, Ste 20, Ann Arbor MI 48108 USA
(800) 959-0329 • (734) 769-0573 • www.gfg-inc.com

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CAUTION: Installation instructions must be followed as presented in the following pages or the DS400 docking station will not work correctly.

Note some screen captures depicted in this manual have been modified for formatting purposes and may appear differently during the installation process.

Installation Step 1. DS400 software

Start the installation software from the CD ROM and follow the install wizard. If your computer has Auto-Run enabled the installation will start automatically. Otherwise, run the program called Setup or Setup.exe from the CDROM.

1. Preparing to Install



2. Select 'Next >' when the Welcome screen is shown



3. Select 'Next >' to start the wizard



4. Select "I accept the terms of the license agreement" and click 'Next >'.



5. Enter the user information and click 'Next >' :



6. Confirm installation parameters and click 'Install'



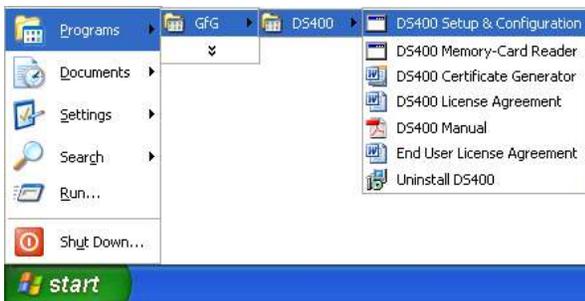
7. Installation progress



8. Click **Finish** When the wizard has completed.



9. To start the DS400 program, select it from the folder you selected (GfG DS400). **Before running the program for the first time complete the USB Driver Installation below.**

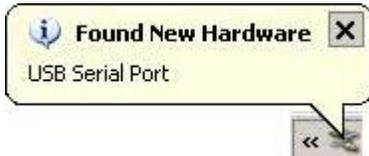


Installation Step 2. GfG USB Driver

IMPORTANT: The steps below must be followed for correct installation of the USB drivers for the DS400 docking station.

Note some screen captures depicted in this manual have been modified for formatting purposes and may appear differently during the installation process.

1. Leave the CDROM labeled “DS400 docking station CD-ROM” in the CD-ROM drive.
2. Connect power to the DS400 Docking Station and connect it to the PC with the USB cable.
3. A “Found New hardware” message will appear



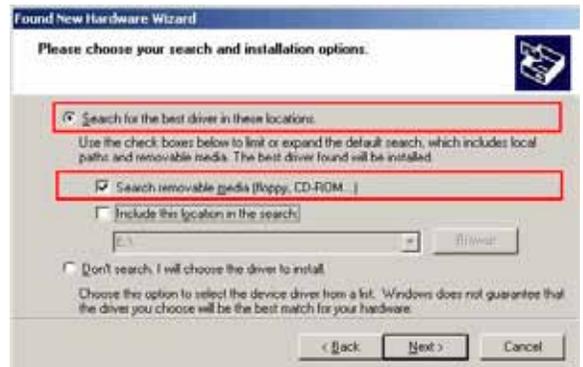
4. Follow the wizard when prompted. The first option is to allow or disallow Windows to search for software. Select “No, not this time”.



5. Next, select “Install from list or specific location (advanced)”.



6. Select “Search for the best driver in these locations”, and “Search removable media.”



7. On the warning screen click **Continue Anyway**



8. The USB driver installation will begin.



9. When the installation is complete click **Finish**.



10. The message “New hardware is installed and ready to use” appears.



The USB driver is now installed properly.

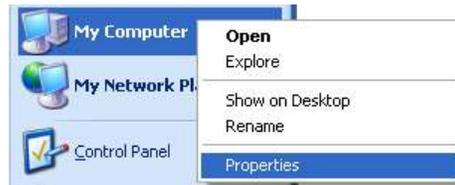
Installation Step 3. Locating the COM port for The DS400 USB device

After installing the GfG USB-Driver and the virtual COM port, the number that Windows assigned must be noted. It is needed to connect with the DS400.

1. Click on “Start”.



2. If the Start menu includes “My Computer”, right click on it and choose Properties, then go to step 3.



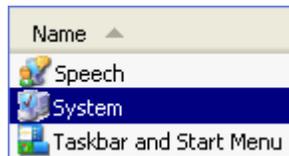
Otherwise select Settings, then Control Panel.



If the Control Panel is setup for Category View select Performance and Maintenance, then System



If the Control Panel is setup for Classic View select System

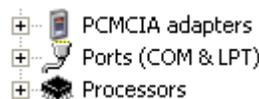


3. Whichever method used in step 2 the System Properties should now be displayed. Click the Hardware tab



5. Click on the **Device Manager** button.

6. Locate the icon for “Ports” and click on the “+” symbol to expand that section.



7. Locate the “GfG USB ctr” Port and note the COM number next to it (i.e. COM4).

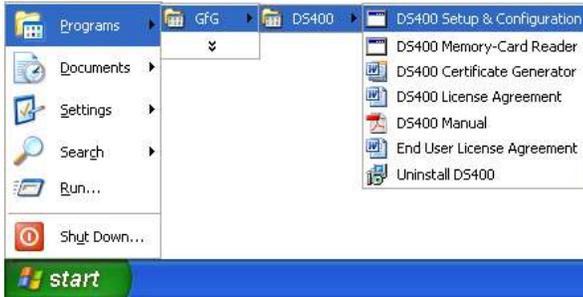


8. This is the COM port number for the GfG DS400 Docking Station. When setting up the DS400 software this COM port will need to be assigned.

Setting up the DS400 and running the software

Connect the power supply and USB cable to the DS400.

To start the DS400 program, select it from the folder you selected (GfG DS400).



Please note: Each of the tabs described below must be saved individually, before proceeding to the next tab. Press “Set” to save each configuration.

The DS400 main screen will be shown



DS400 Configuration – Connect and Disconnect

To open the communication port and to establish connection with the DS400 select the COM port noted in step 7 of the previous section and click the **Connect** button.

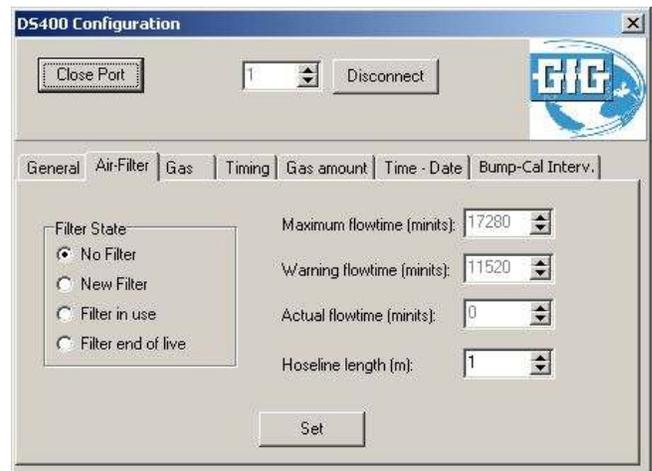
After all configurations are completed and saved in the following tabs, press the **Disconnect** button.

DS400 Configuration - General



Field	Description
DS 400 Name	Enter a unique identifier for the docking station.
Software Version	Displays the version of the docking station software.
Serial No.	Displays the serial number of the DS400.
Production Date	Displays the manufacture date of the DS400
ID	Allows you to set a device select ID. This is only required when multiple docks are connected to the same computer.

Air-Filter



Field	Description
Filter State	Select the appropriate filter choice. No Filter CO ₂ zero not adjusted New Filter CO ₂ zero auto adjusted Filter in Use CO ₂ zero auto adjusted Filter end of life CO ₂ zero not adjusted
Maximum flow time	Shows the approximate life left in the filter.
Warning flow time	Shows when a warning will be received for replacing the filter.

Field	Description
Actual flow Time	Determined by the docking station
Hose line length	Enter the tube length in meters

DS400 Configuration

Close Port 1 Disconnect

General Air-Filter Gas Timing Gas amount Time - Date Bump-Cal Interv.

Gas Bottle No: 1 Hoseline length (m): 1

Gas 1: CH4 Unit 1: Vol% Value 1: 2.5

Gas 2: CO Unit 2: ppm Value 2: 200

Gas 3: H2S Unit 3: ppm Value 3: 20

Gas 4: O2 Unit 4: Vol% Value 4: 18.5

Gas 5: -- none -- Unit 5: -- none -- Value 5: 0

Gas 6: -- none -- Unit 6: -- none -- Value 6: 0

Set

Field	Description
Gas Bottle No	Enter the lot number for the cylinder of gas.
Hoseline length	Enter the tube length in meters
Gas (1-6)	Select the appropriate gas
Unit (1-6)	Set to Vol% or ppm depending on concentration of gas
Value (1-6)	Concentration of calibration gas

Timing

The timing for bump test and calibration parameters can be set on this screen.

DS400 Configuration

Close Port 1 Disconnect

General Air-Filter Gas Timing Gas amount Time - Date Bump-Cal Interv.

Bumptest Time: 100

Bump flush out: 45

ZP- flush: 45

CAL- flush: 45

Flush out: 45

Bump Gas time

No Time

Check T50

Check T90

Set

Field	Description
Bump Test Time	Set the maximum length in seconds for a bump test

Field	Description
Bump flush out	Set the length of time fresh air flows on the unit after gas exposure.
ZP – flush	Set the length of time the sensors are exposed to fresh air before auto zeroing.
CAL – flush	Set the length of time the sensors are exposed to gas before AutoCal® calibration.
Flush out	Set the length of time fresh air flows on the unit after calibration.
Bump Gas time	Allows selection of which response time will be tested.

Gas Amount

This feature is disabled on standard units

DS400 Configuration

Close Port 1 Disconnect

General Air-Filter Gas Timing Gas amount Time - Date Bump-Cal Interv.

Gas State

No

New Gasbottle

Gasbottle in use

Gasbottle end of live

Maximum flowtime (minits): 0

Warning flowtime (minits): 0

Actual flowtime (minits): 11

Set

Time-Date

Displays the PC time and the DS400 time.

Note: Time is automatically adjusted to the PC time if the difference in time is greater than 10 seconds.

DS400 Configuration

Close Port 1 Disconnect

General Air-Filter Gas Timing Gas amount Time - Date Bump-Cal Interv.

PC Time: 4/28/2008 4:13:24 PM

DS400 Time: 4/28/2008 4:13:28 PM

Set

Bump-Cal Intervals



Field	Description
Disable Cal/bump alarm	If checked will turn off the cal and bump reminder on start-up
Allow test without SD-Card	If checked will disable the requirement to have an SD card inserted when testing
Set Delta Days	If checked, it enables the cal/bump reminder on the gas detector.
Delta Bump Days	Set interval between bump test
Delta Cal Days	Set interval between calibrations
Set time at device	Transfers the data from this screen to the gas detector.
Turn device Off after test	If selected will turn off the gas detector after 5 minutes and begin the charge cycle.

Performing a calibration or bump test

Your G450/460 must have firmware version 3.11 or higher to work with the docking station.

To perform either a calibration or bump test:

1. Connect the power cord and the calibration gas cylinder (equipped with a demand flow regulator) to the docking station.
2. Ensure the green power LED on the docking station is lit.
3. Turn on the G450/460 and allow to warm-up. Note: the G450/460 must be in the normal operating screen to bump test/calibrate in the docking station.
4. Firmly place the G450/460 into the docking station, sensor side down, and close the lid.
5. The green LED will turn off, and a countdown will begin on the display of the G450/460.
6. The dock will perform the appropriate test for the G450/460 depending on which operation is due next, according to the configuration set in the instrument.

Note: If the unit has never been used in the docking station, an Autocal[®] is recommended for proper operation and bump test results.

Calibration:

Place the unit into the docking station and observe the display reading. If calibration is displayed then no action is necessary and calibration will proceed in ten seconds. If bump test is displayed, press the center key (autocal) to override the automatic bump test, and calibration will initiate. The docking station will flow fresh air on the unit to set the zero values for combustible and toxic sensors, and to set the fresh air value for the oxygen sensor. Upon completion of the zero, the docking station will flow test gas from the test gas cylinder connected to the dock. Once the sensors have stabilized to the test gas concentration, the unit will set the calibration values for the selected sensors and the calibration will be complete.

Bump test:

Place the unit into the dock and observe the display reading. If bump test is displayed, do nothing and the bump test will proceed in ten seconds. If calibration is displayed, press the right key (test) to override the autocal, and the bump test will initiate. The docking station will flow test gas from the test gas cylinder connected to the docking station to the sensors, and will display the gas values for combustible and toxic sensors.

Failures:

If any sensor fails to bump test or calibrate, the display on the G450/460 will illuminate red, and indicate which sensor failed.

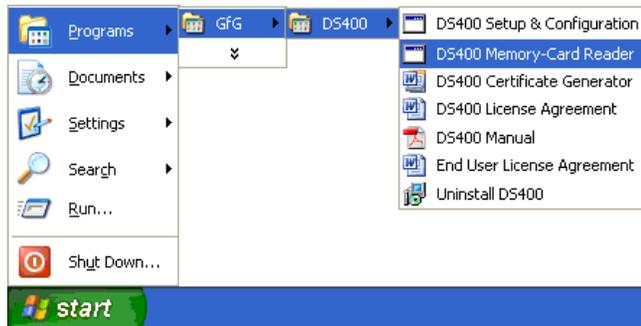
WARNING: The user will not be protected by this sensor!

Downloading Calibration/Bump Test Data from DS400

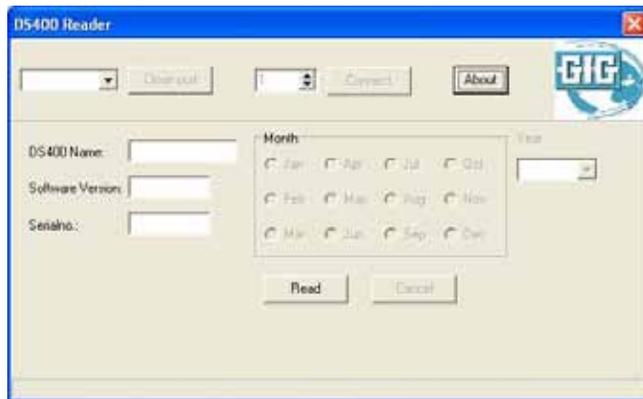
The DS400 software includes a program to download calibration history from the DS400 Docking Station to a computer.

Connect the power supply and USB cable to the DS400.

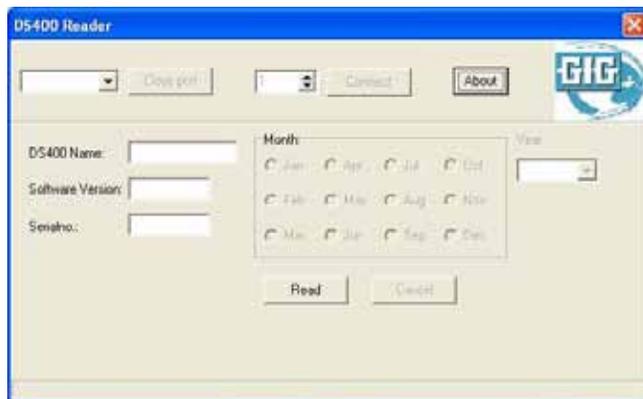
To start the DS400 program, select it from the folder you selected (GfG DS400).



The Memory Card Reader program will start.



Select the port number as determined in step 7 of "Locating the COM port for The DS400 USB device".



Click connect.

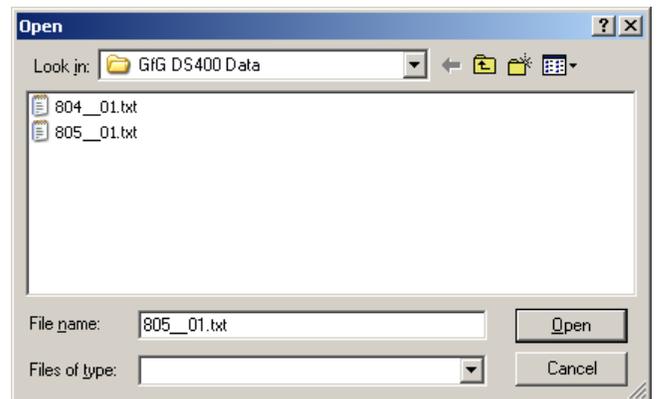


Select the month and year to be downloaded from the DS400 Docking Station and click Read.

The data from the DS400 will be read.



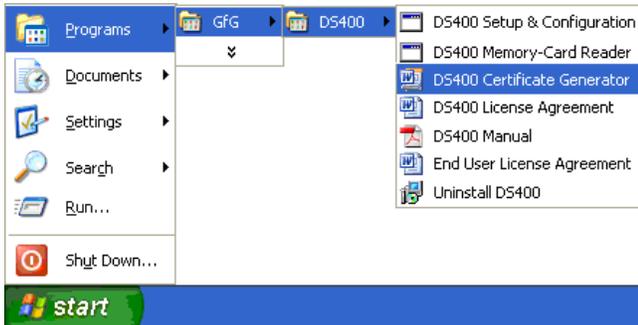
Note: If no data exist for the specific month and year a message will appear and the read/save operation will be canceled.



Save the file to a desired location and click Open.

Creating Bump Test and Calibration Certificates in Microsoft Word for Windows.

The DS400 software includes a Microsoft Word Template, which will allow certificates to be generated quickly. The template is installed with the program files and can be started from the same location in the Start menu as the programs.



The template may be copied to any folder on the users computer and be started by loading it from that location (i.e. double clicking on the template).

The template includes macro code, which requires the macro security settings to be set to "Medium". Medium security will allow macros to run if the user accepts each time the template is loaded.

To change the security settings in Word follow these steps:

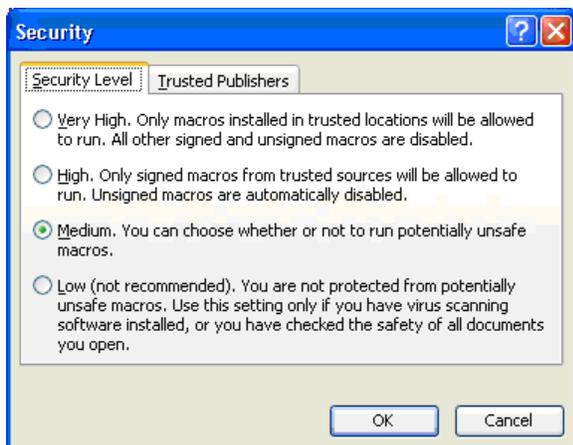
1. Start Word

From the menu select Tools, Macro, Security.



2. The security dialog box will appear.

If a menu item is not visible click to expand the menu.



3. Select Medium on the Security Level tab
4. Press OK

Each time the certificate template is loaded the following dialog box will appear:



Click to allow the certificate functionality to run. If is pressed the certificate generator will not work and password protection will prevent manual editing. After the is pressed a blank copy of the main Certificate Form will appear:



To generate a certificate a DS400 file must first be opened. A DS400 file is a data file from the DS400 SD memory card. Click the button and select the DS400 file from the location where it was stored on the computer. Once the file is opened the fields on the Certificate Form will be populated with the data from the first record in the database.



In the lower left it will be indicated how many records are in the database and which is shown:

Record: 1 of 11. The navigation keys may be used to scroll through the records.

selects the first record, selects the last record, selects the previous record, and selects the next record.



To create a certificate press the  button located between the navigation keys. Note the Certificate Generator will only allow a certificate to be generated if all tests have passed. Tests that have failed are noted with “Fail” in red print (**FAIL**). If an attempt to create an invalid certificate is made the following error will occur:



Once the certificate has been generated,  the Certificate Form to view the final certificate.

The type of certificate generated depends on the specific tests performed on the on the DS400. If the instrument was calibrated a calibration certificate will be generated. If a functional bump test was performed then a bump test certificate will be generated.



The certificate generated may be printed and/or saved as a word document. The document is protected and cannot be edited.

To create another certificate you may load the template



again, or to overwrite the existing certificate select “Start Certificate Generator from the GfG DS400 menu.

Before the next certificate can be generated a warning will appear if the certificate generated previously has not been saved.



If the certificates generated are to be saved individually, use the Save As... function or load a new copy of the certificate generator each time.

GfG Instrumentation, Inc.

1194 Oak Valley Dr.
Suite 20
Ann Arbor, MI 48108
USA

US/Canada: (800) 959-0329
US/Canada Fax: (734) 769-1888
International: +1 734 769 0573
International Fax: +1 734 769 1888
Website: www.gfg-inc.com



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