

Instrument Configuration Application

User Manual

gillinstruments.com

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1. Welcome

1.1. About This Manual

This manual describes how the WindSet application can be used to configure your Gill instrument.

The latest version of this manual is available to download from the gillinstruments.com website.

Note that different features are available on different Gill instruments, and some parts of this manual may only apply to specific instruments.

1.2. Legal Information

Gill Instruments reserves the right to change or revise the software and / or the information supplied in this manual without notice or obligation to notify any person or organisation of such change or revision.

While the information in this manual has been compiled with great care, it may not be deemed an assurance of software characteristics. Gill Instruments shall be liable only to the degree specified in the Terms of Sale.

The reproduction and distribution of the documentation and software supplied with this device and the use of its contents are subject to written authorisation from Gill Instruments.

1.3. Software Licenses

The product uses some software developed by third parties. In accordance with the licence agreements, the relevant acknowledgements can be found at gillinstruments.com

1.4. User Manual Revision History

Document Version	Release Date	Key Changes
1.0	November 2024	First Release





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2. Instrument Configuration using WindSet Software

Gill Instruments provide a free of charge software package called WindSet to enable selected Gill instruments to be configured. WindSet software can be downloaded from www.gillinstruments.com.

Gill Instruments can be configured via the USB port (if present) or via RS485 2-wire serial cable. Firmware Update and Factory Reset functions require use of the RS485 serial connection.

Ell WindSet					-	□ ×
GILL						\odot
	Device Connect	ion				
	Device State:		Disco	nnected, please select a COM port.		
	COM Port:		CO	47	*	
		CONFIGURE DEVICE		RE-SCAN PORTS		
	WindSet Version: v2.16.1-11-gf0c8b53, an updat ©2024 Gill Instruments Limited Gill G	e (to v2.15.0) is available roup Software Licence Agreem	ent			

Figure 1 - WindSet connection screen

2.1. Using WindSet to connect to a compatible Gill instrument

To use WindSet:

- 1. Download WindSet from gillinstruments.com
- 2. Install WindSet on your PC
- 3. At the end of the installation WindSet will run automatically, and present the license agreement, which must be read and agreed to before the software can be used
- 4. Connect the instrument to your PC (Gill Instruments recommend using a USB to USB power and data lead)
- 5. Select the appropriate COM Port from the drop down list:
- 6. If there are no COM Ports showing in the drop down list, click on RE-SCAN PORTS
- 7. If a "No device found" box appears, please refer to Appendix I (Fault Finding).
- 8. Click on CONFIGURE DEVICE
- 9. If not configuring via the USB, power-cycle the device
- 10. WindSet will display the set-up HOME screen

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2.2. WindSet setup screen explained

WindSet uses a Graphical User Interface (GUI). The navigation aids within WindSet are shown below. The terms shown in the table (Screen, Button, etc.) will be used to describe how to use WindSet. When using WindSet, additional information about a setting can be seen by hovering over a drop down list or text entry box.

	tion		Home Commu	nications Measurements	System 🔅 📀
Product:		WindUltra WU	2		
Model:		1416-00-210	_		
Serial Number:		22060008			
Software Number:		2933			
Software Version:		v1.5-21-gc5cf1a	6		
READ FROM WF DEVICE D	ITE TO EVICE	DISCONNECT FROM DEVICE	IMPORT FROM FILE	EXPORT TO FILE	[←
The device is configured as follows: Protocol: NMEA 0183 (RS-422, 115200 Mode: Talker Talker Ident: " WI (Weather Instrume	baud, 8/N/1) nts)"				
WindSet					
	0.45.001 0.11				

Figure 2 - WindSet home screen

	Navigation Aid	Purpose
1	Navigation Controls	Enables access to different screens within WindSet. These screens allow different parts of the instrument set-up to be changed
2	Cog icon	Enables "notifications of updates to WindSet" to be switched on or off
3	Lifebuoy icon	Enables access to features to help with Technical Support
4	Instrument Information	Information about the hardware and software of the instrument currently connected to WindSet
5	Set-up Management Buttons	These buttons allow set up files to be read from or written to the connected device or to folders on the PC being used
6	Protocol Summary	Information about the set-up (or configuration) of the instrument currently connected to WindSet
7	WindSet information	Summary information about the WindSet program, including information about new versions of WindSet

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2.3. Overview of Using WindSet to set up a Gill instrument

Once the current instrument configuration has been downloaded, WindSet can be used to change the configuration as required. WindSet can be used to:

- > Change the communications configuration
- Configure measurements
- > Change the system configuration

2.4. Using WindSet to change the communications protocol

The COMMUNICATIONS screen can be used to select the protocol used by the instrument. To select one of the protocols available

- 1. Click the Selected Protocol drop down list
- 2. A list of the protocols available in the connected instrument will appear
- 3. Click on the required protocol
- 4. The variable associated with the selected protocol will be displayed in the lower section of the screen. These variables can now be entered as required. More information about the variables available is contained in the relevant protocol appendix of the instrument user manual.

💷 WindSet					-		×
GILL		Home	Communications	Measurements	System	۵	٢
	The current configuration differs from that wh	ich was read from the device, se	e details.				
	User Serial Interface						
	Selected Protocol:	Gill ASCII Protocol		•	/		
	Gill ASCII Protocol						
	Interface Standard:	RS-485		•	,		
	Baud Rate:	57600		•	,		
	Message Mode:	Polled Output		•	,		
	Message Terminator:	<cr></cr>		•	i		
	Node Address:	Q					
	Units-of-Speed:	km/h (Kilometres per hour)		•	i		
	Power-up Messages:	Enabled		•	·		
	User-defined Info in Power-up Messages:	Show UDEF Info.		•	,		
	Fixed Field Mode:	Show NCD Values		•	<i>i</i>		
	Speed Threshold to Freeze Wind Direction:	0.04					
	Report String Items:	S	HOW				
	WindSet Version: v2.16.1-11.gf0c8b53, an update (to v2.15.0) is available ©2024 Gill Instruments Limited Gill Group Software Licence Agreement						

Figure 3 - WindSet communication settings





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2.5. Using WindSet to change the measurement settings

The **MEASUREMENTS** screen can be used to change the measurement settings used by the instrument. Hovering over any of the drop-down menus will bring up a context help box providing details of the options available.

💷 WindSet					-		×
GILL		Home	Communications	Measurements	System	٥	٢
	The current configuration differs from that w	iich was read from the device, s o	ee details.				
	Relative Wind Measurement						
	North Alignment Offset:	299.7					
	Wind Sample Rate:	4Hz		•			
	Derived Measurements						
	Gust Interval:	1					
	Long-term Average Period:	2-min		•			
	WindSet Version: v2.16.1-11-gf0c8b53, an update (to v2.15.0) is available ©2024 Gill Instruments Limited Gill Group Software Licence Agreement						

Figure 4 - WindSet measurement settings screen





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2.6. Using WindSet to change System Configuration

The **SYSTEM** screen can be used to change configuration that applies to the instrument.

2.6.1. User Defined Strings

User Defined Strings are available in various protocols including Gill ASCII and Modbus, and can be used for a number of purposes including:

- > Additional identification information (e.g. longitude and latitude information, site name, etc.)
- > Additional device information (e.g. last inspection date)
- Additional set-up explanation

Each User Defined String can contain up to 16 characters.

💷 WindSet						-		×
GILL		He	lome	Communications	Measurements	System	Ø	\odot
	The current configuration differs from that wh	ich was read from the devic	ie, see	details.				
	System-wide Settings							
	User-defined String 1:	location						
	User-defined String 2:	altitude						
	User-defined String 3:	instrument name						
	Heater Control							
	Heating Mode:	Enabled (Thermostatic)			•	·		
	Lower Temperature Limit:	5						
	Upper Temperature Limit:	10						
	WindSet Version: v2.16.1-11-gf0c8b53, an update (to v2.15.0) is available ©2024 Gill Instruments Limited Gill Group Software Licence Agreement							

Figure 5 - WindSet system settings screen



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2.6.2. Heater Control Settings

For those instruments that include heating, there are two sets of heating settings.

Heating Mode

This setting selects the way the heater will work. The options are

- > Disabled this mode disables the heater until the heater setting is changed
- Enabled (Thermostatic) this mode switches on the heater at the Lower Temperature Limit (e.g. 5°C) and switches the heater off at the Upper Temperature Limit (e.g. 10°C).

Lower and Upper Temperature Limits

If the Enabled (Thermostatic) mode is selected, it is possible to set the temperature at which the heating will be switched on and off.

- > The Lower Temperature Limit should be set to the temperature at which the heater will switch on.
- > The Upper Temperature Limit should be set to the temperature at which the heater will switch off.



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3. Change WindSet's behaviour using the Cog Icon 🥸

The cog icon in the navigation bar allows you to alter WindSet's behaviour.

By default, WindSet will attempt to automatically update itself if it detects a newer version is available. This behaviour can be disabled by pressing the Cog Icon, and setting this setting to "off".

4. Maintain Instrument Firmware using the Lifebuoy Icon $^{igodom{}{}}$

The lifebuoy icon can be used to provide our support team with additional information, or update/factory reset a connected device.

4.1. Troubleshooting report

The WindSet application can generate a troubleshooting report in case this is requested by Gill Support to help resolve a customer issue. Follow the on-screen instructions under the Lifebuoy icon to generate the report.

4.2. Firmware Update

Under certain circumstances, it may be necessary to update the instrument's firmware, and this can be done here. The device's RS-485 interface must be connected directly to the PC with WindSet installed, via a USB to RS-485 convertor (e.g. Connective Peripherals ES-U-2001-STB) or a dedicated RS-485 port. Any USB interface must be disconnected.

The device must be connected to a power supply in such a way that it can easily be powered on and off.

A **.dcu** file that is compatible with the device must be obtained from Gill Instruments. These files are used to update the firmware and configuration of one or more devices.

Firmware Update Process

- 1. Launch WindSet and select the serial COM port to which the device is connected from the 'COM Port' drop-down list, then click 'Configure Device'.
- 2. Click the Lifebuoy icon and then Firmware Update. You will be prompted to select a .dcu file.
- 3. Start the update process and, when prompted, power the device off and back on to continue the update process.
- 4. Wait until the progress messages in WindSet will display a message to confirm that the update process has completed.
- 5. Power-cycle the device. It is now ready for use.





5. Troubleshooting

Symptom	Solution
WindSet doesn't start.	The Microsoft .NET Framework may not be installed on the PC for some reason. Install the .NET Framework, restart the machine, and try again.
Cannot connect / disconnect COM port.	Windows sometimes holds on to the COM port for longer than usual. Restart the app. If this doesn't work, restart the PC.





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Important Notices:

- ➢ Gill Instruments Limited can take no responsibility for installation and/or use of its equipment if this is not done in accordance with the appropriate issue and/or amendment of the manual.
- > The user of this manual should ensure that it is appropriate in all details to the exact equipment to be installed and/or operated. If in doubt, the user should contact Gill Instruments Limited for advice.
- If further details are required which do not appear in this manual, contact Gill Instruments Limited or one of their agents.
- > Install and use the instrument in accordance with the local regulations.
- Gill Instruments Limited reserve the right to change or revise the information supplied in this document without notice and without obligation to notify any person or organisation of such revision or change.

Feedback:

Every effort has been made to ensure the accuracy in the contents of our documents, however, Gill Instruments Limited can assume no responsibility for any errors or omissions in our documents or their consequences. Gill Instruments Limited would greatly appreciate being informed of any errors or omissions that may be found in the contents of any of our documents.

After Sales Support

Should you require after sales assistance with this device, please go to gillinstruments.com where you can request support by clicking on the "Get Support" button and filling out the form. Alternatively, call us during UK office hours on 01590 613500 (UK). Please have details of the device and serial number whenever possible.

Additionally, you can access further information on the device from the support section of the website at www.gillinstruments.com/support

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