SOFTWARE GUIDE

For use with the REED SD-Series (SD-947, SD-1128, SD-2010, SD-230, SD-3007, SD-4023, SD-4207, SD-4214, SD-4307, SD-6020, SD-6100, SD-8205, SD-9300, SD-9901) GU-3001 and TQ-8800.

Compatible with Microsoft Windows© XP, Vista and 7

All screenshots were produced using a PC computer running Microsoft Windows 7

For the purpose of this software guide the REED SD-947 with 4 K-type Thermocouples and USB-01 were used.

Guide Exceptions

SD-2010

• This product features 5 channels that measure type of temperatures. As the user cannot label the different channels in the software, the parameters must be set on the instrument. The user must note the channels and match them to the channels in the software.

SD-9300/SD-230/SD-4307

 This product is a multi-function instrument. All measurements use a single channel and the parameter provided will correspond to the selected probe attached to the instrument. Whether a user is logging in the software or on the meter itself, only one parameter can be logged at a time.

SD-4207/SD-4214

• This product has interchangeable units of measure (m/s, km/h, fpm, etc.). In order to have the software read the desired unit, a user must select the desired unit of measure on the instrument first.

USB Driver

- In order to use the REED Data Acquisition Software, a compatible USB cable is required (REED model USB-01).
- When installing the driver, the USB cable must be plugged into the computer as well as the instrument.
- Ensure the toggle switch located on the USB cable is set to the appropriate number (All SD models should be set to "2", TQ-8800 should be set to "1". For further information on settings, please consult the USB-01 user manual.
- Once plugged in and the instrument is powered on, insert the included driver CD into the computer. The driver will automatically install the driver and assign a COM port for

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the instrument. Please note this COM port is important and should be documented for future use.

Software Installation

*Before installing the SW-U801-WIN software, please ensure your computer is running Microsoft Windows® version XP, Vista or 7.

1) Insert the disc into drive and the following prompt will appear on screen.



- 2) Select the first option, "Run setup.exe". The software installation wizard will take you through a series of prompts to complete the installation.
- 3) To locate the program, click on the start button and search for 'Datalogger'.

Setting up the Data Logger in the Software

1) In order to set up the logger in the software, select the "Setup(S)" option:

232 Data A	cquisition Sof	tware			X
Setup(S)	Monitor(M)	Report(R)	About(H)		

*Please note that the letters in brackets do not correspond to keyboard shortcuts, they must be manually selected with your mouse.

- 2) In the "System Setup" screen, various parameters can be set;
 - a. System Scan Rate: Instrument Sampling rate
 - b. Max Record Data: Maximum # of records that will be kept
 - **c.** Com Port: Assigned port when driver was installed. If forgotten, it can be searched by using the COM port detect button.

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- d. Baud Rate: All REED SD series data loggers use a 9600 Baud rate.
- e. Text Display Type: # of default boxes shown when text display is opened (discussed later in guide).
- **f.** Angular Display: Similar to Text Display Type mentioned above.
- **g.** Chart Display: This mode displays a single channel at a time in real-time. Select the desired channel from this screen. Please note the desired display can also be selected once the data logger is running.
- **h.** Meter Type: Select "Normal Meter" (All REED SD Series data loggers work with this setting)

System	Setup
System Scan Rate 10 (1-3600 Sec)	Text Display Type 4 Display - Angular Display Type 4 Display -
Max Record Data 60 Comm. Port 3	Chart Display Chan. 1
COM Port Detect baud rate © 2400 © 9600	Normal MeterSpecial Meter
Save	Exit

3) Create New Data File to Save Recording

This option under Setup is used to create a new database where recording data will be kept. A new file may be created each time or all data can be kept in one database.

Data File Name data	file	
C:\Program Files\DataL	.ogger\data\datafile	.mdb
Select Channel No 8 Channel 💌	Create	Exit

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4) Setup your Display

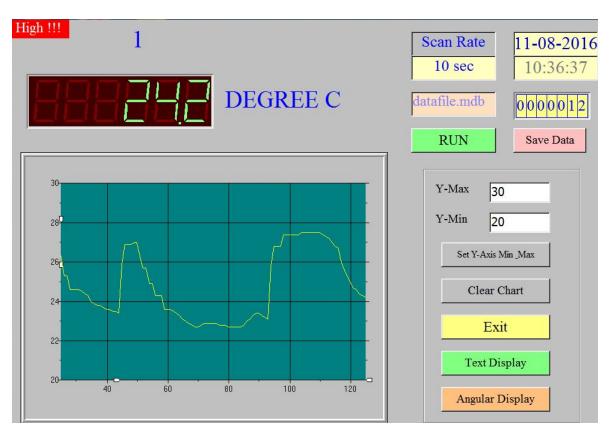
Now that the instrument is setup, the next step is to select "Monitor (M)" from the software.



It is strongly recommended that the automatic power off feature on the instrument is deactivated prior to the start of a logging session. All REED SD Series loggers have the option to switch this feature on or off under the PoFF menu. For more information please see the associated product user manual.

5) Chart Display

Screenshot of "Chart Display" when selected from the drop down menu.



a. This display features a single channel and the parameters that were selected during the system setup. To begin logging data, click the "RUN" button and recording will begin at the set interval.

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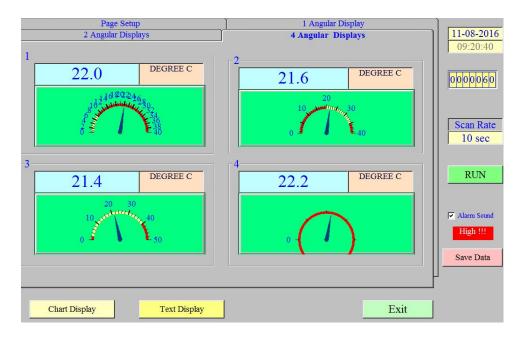
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- b. Once the logging session is complete, click "Save Data". This saves the data to the associated data file selected during the instrument set up.
- c. Please note to obtain the best results, the Y-min and Y-max should be as close as possible to the recorded measurements. Choosing close values will indicate the detail required to analyze results. In order to save changes for the Y-max and Y-min, click the "Set Y-Axis" button.

6) Angular Display

The angular display is the second option from the Monitor dropdown menu and looks like this:



- This display features four channels at once (in this example a SD-947 was used) with a graphical display. Similar to the Chart display, a user can also start the logger by clicking the RUN button and then Save Data to capture readings.
- Angular Display setup provides the user with the option to set different scales for each channel as well as set visual alarms:

7) Display Setup

Further customization can be made in the display setup screen (screenshot below);

- a. Channel No: Dropdown box to select desired Channel to edit.
- b. Min Value: Minimum value displayed

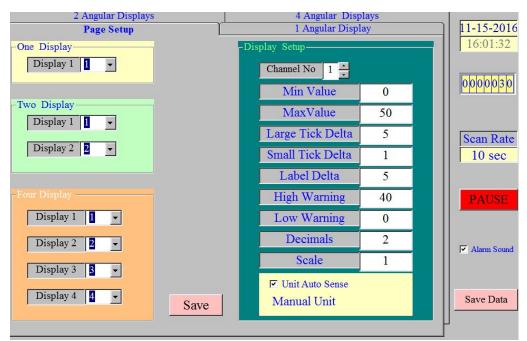
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- c. Max Value: Maximum value displayed
- d. Large Tick Delta: The numeric factor by which the graphic large tick changes
- e. Small Tick Delta: The numeric factor by which the graphic small tick changes
- f. Label Delta: Interval at which labels are present
- g. High Warning: High alarm set point
- h. Low Warning: Low alarm set point
- i. Decimals: # of displayed decimals on the temperature reading above the angular display
- j. Scale: A factor by which the reading is multiplied. E.g.: Instrument is reading 20.0C and a factor of 5 is selected, the reading displayed would be 100.0C
- k. Unit auto sense: Automatically detects primary parameter being measured. In our example, this is temperature.



I. To save these parameters, click the save button.

Text Display

The Text Display is a digital measurement comparable to the instrument LCD screen.

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Page Setup 12 Channel Display 6 Channel Display 2 channel Display	1 Channel Display 16 Channel Display 8 Channel Display 4 channel Display	11-08-2016 09:17:32
DEGREE C 1	DEGREE C 2	Scan Rate 10 sec
DEGREE C 3	DEGREE C 4	RUN
Chart Display	AngularDisplay Exit	

The "RUN" and "Save Data" buttons perform the same functions as previous two display options mentioned above.

12 Channel Display	16 Channel Display	
6 Channel Display	8 Channel Display	11-15-2016
2 channel Display	4 channel Display	16:02:36
Page Setup	1 Channel Display	
Two Channel Display	One Channel Display Display 1	0000030 Scan Rate
	6 Channel Display	10 sec
4 Channel Display Display 1 • Display 2 • Display 3 • Display 4 •	Display 1 • Display 2 • Display 3 • Display 4 • Display 5 • Display 6 •	PAUSE
Save		

Customize which displays are shown on the different channel display options.

Creating a Report

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REED software can also be used to create reports and export data as either a text file (.txt) or a graph in PDF format (.pdf).

📑 Find Data C:\Program Files\DataLogger\data\datafile.mdb Select Database Chan, 1 Chan. 5 Start Date 11/08/2016 End Date 11/24/2016 Chan. 2 Chan, 6 Chan. 3 Chan. 7 END Time Start Time Chan. 4 Chan. 8 Add Time condition hh:mm hh(0-23) mm(0-59) date 11/18/2016 11/18/2016 11/18/2016 11/18/2016 11/18/2016 11/21/2016 time 4:03:54 PM 4:03:59 PM 4:04:04 PM 4:04:09 PM 4:04:14 PM 4:37:04 PM chan 1 unit 1 22.6 DEGREE 22.5 DEGREE 22.5 DEGREE 22.5 DEGREE 22.6 DEGREE 25.1 DEGREE chan 2 unit 2 22.2 DEGREE 22.2 DEGREE 22.2 DEGREE 22.1 DEGREE 22.1 DEGREE 23 DEGREE Data Query Show Chart Print Chart Clear Char Print Data Exit 4 • Reed Sd-947 Header Reed Sd-947 Footer Ambient Desk Temp T25 Y-Max 25 20 20 Y-Min 10 15 15 Y-Grid 10 10 X-Grid 5 Ambient Desk Temp Setup

To create a report, select "Data Query" from the Report dropdown menu.

Query (search criteria) is defined by the selected channels, date and time (optional).

All of the information on the bottom right corner is required. The X and Y grid provide the user with the option to add a grid to the graph for visual reference.

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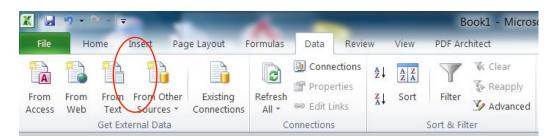
Once the information is obtained, a user can generate a raw data file in text (.txt) format:

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le Edit	rormat view re	20 C		a Report					
uacday	November 08,		nitor Dat	a Keport			Page:	1	
Date	Time	Display1	Unit	Display2	Unit	Display3	Unit	Display4	Uni
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	08 09:01:41	21.9 DEC			DEGREE C	22.2 D			EGREE C
	08 09:01:51	21.7 DEC			DEGREE C	22.1 D			EGREE C
	08 09:02:01	21.7 DEC			DEGREE C	22.3 D			EGREE C
	08 09:02:11	21.6 DEC			DEGREE C		GREE C		EGREE C
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016/11/	08 09:06:01	21.7 DEC	GREE C	21.6	DEGREE C	21.9 DI	GREE C	21.7 D	EGREE (
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016/11/	08 09:06:51	21.7 DEC	REE C	21.7	DEGREE C	22.0 DI	GREE C	21.7 D	EGREE C

Importing a text file into Excel

The text file above can then be imported into Excel for further analysis.

1) Once excel is open, click the tab and select the text button under the External Data Tab:



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2) Select the desired text file.

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Microsoft Excel	Documents library Includes: 2 locations	Arrange by: Fold	ler 🔻
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🗐 Libraries	🗼 Adobe PDF	11/12/2013 1:11 PM	File folde
B Documents ≡	👃 Hewlett-Packard	4/2/2014 11:27 AM	File fold
A Music	👃 microsoft	10/8/2010 6:21 PM	File fold
Pictures	👃 My Data Sources	11/7/2016 12:45 PM	File fold
JUI Videos	👃 Outlook Files	1/22/2013 12:11 PM	File fold
	🐌 PDF Architect Files	11/8/2016 10:13 A	File fold
Scomputer	🐌 Purolator	1/5/2012 3:59 PM	File fold
Local Disk (C:)	LUPS Tools	7/14/2011 11:34 A	File fold
HP_TOOLS (F:)	DeskTemp_081116	11/8/2016 10:26 A	TXT File
Shared Docs (\\15	•)
File na	me: DeskTemp_081116	 Text Files 	•

3) The first step in the import is to select "fixed width" column, this way the data appropriately separates.

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he Text Wizard has determined	that your data is	Fixed Width					
this is correct, choose Next, or	choose the data t	ype that bes	t describes your	data.			
Original data type			a				
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4) The next step is to set the correct column size. As the text format will not be a perfect match with each import, the user is given an opportunity to adjust column sizes and add/delete column lines. Although this can resolve most format issues, a user may be required to make further adjustments once the file is created.

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5) In step 3, the option to adjust the format of the newly created cells is provided. When complete click "finish".

<u>G</u> eneral <u>T</u> ext <u>D</u> ate: M	IDY		eral' converts nur es to text.	neric values	to numbers, c Advanced		ates, and all r	remain
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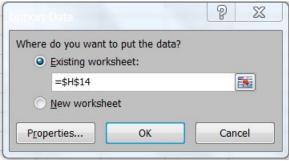
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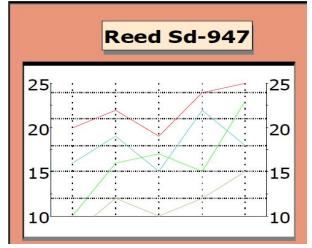
6) Select the "Existing Worksheet" to paste into current workbook:



7) Example of data imported into Excel;

			Monitor Data	Report					
Tuesday,	November 08,	2016					Page:	1	
Date	Time	Display1	Unit	Display2	Unit	Display3	Unit	Display4	Unit
11/8/2016	9:01:31	21.9	DEGREE C	21.9	DEGREE C	22.2	DEGREE C	22.1	DEGREE C
11/8/2016	9:01:41	21.9	DEGREE C	22	DEGREE C	22.2	DEGREE C	22.1	DEGREE O
11/8/2016	9:01:51	21.7	DEGREE C	21.8	DEGREE C	22.1	DEGREE C	21.9	DEGREE C
11/8/2016	9:02:01	21.7	DEGREE C	21.9	DEGREE C	22.3	DEGREE C	22	DEGREE C
11/8/2016	9:02:11	21.6	DEGREE C	21.8	DEGREE C	22.4	DEGREE C	22	DEGREE C
11/8/2016	9:02:21	21.6	DEGREE C	21.8	DEGREE C	22.6	DEGREE C	22.2	DEGREE C
11/8/2016	9:02:31	21.6	DEGREE C	21.8	DEGREE C	22.9	DEGREE C	22.3	DEGREE C
11/8/2016	9:02:41	21.6	DEGREE C	21.8	DEGREE C	22.6	DEGREE C	22.4	DEGREE C
11/8/2016	9:02:51	21.6	DEGREE C	21.8	DEGREE C	22.5	DEGREE C	22.5	DEGREE C
11/8/2016	9:03:01	21.6	DEGREE C	21.8	DEGREE C	22.2	DEGREE C	22.4	DEGREE C
11/8/2016	9:03:11	21.6	DEGREE C	21.7	DEGREE C	22	DEGREE C	22.2	DEGREE C
11/8/2016	9:03:21	21.6	DEGREE C	21.7	DEGREE C	22	DEGREE C	22	DEGREE C
11/8/2016	9:03:31	21.9	DEGREE C	22.2	DEGREE C	22.3	DEGREE C	22.1	DEGREE C
11/8/2016	9:03:41	21.8	DEGREE C	22	DEGREE C	22.3	DEGREE C	22	DEGREE C
11/8/2016	9:03:51	21.7	DEGREE C	21.9	DEGREE C	22.1	DEGREE C	22	DEGREE C
11/8/2016	9:04:01	21.8	DEGREE C	22	DEGREE C	22.2	DEGREE C	22	DEGREE C
11/8/2016	9:04:11	21.7	DEGREE C	21.7	DEGREE C	22.1	DEGREE C	22	DEGREE C
11/8/2016	9:04:21	21.6	DEGREE C	21.7	DEGREE C	22.1	DEGREE C	21.9	DEGREE C
11/8/2016	9:04:31	21.5	DEGREE C	21.7	DEGREE C	22.1	DEGREE C	21.9	DEGREE C
11/8/2016	9:04:41	21.6	DEGREE C	21.7	DEGREE C	22	DEGREE C	21.9	DEGREE C
11/8/2016	9:04:51	21.6	DEGREE C	21.7	DEGREE C	22.1	DEGREE C	22	DEGREE C
11/8/2016	9:05:01	21.6	DEGREE C	21.7	DEGREE C	22.1	DEGREE C	22	DEGREE C
11/8/2016	9:05:11	21.6	DEGREE C	21.6	DEGREE C	22	DEGREE C	22	DEGREE C

8) In addition to exporting a data file, a user can also create a PDF graph (example below)



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