

PeakTech DGraph Software Getting Started

Install Battery, Software & Driver according to *User Manual*. To use the data logger, take the following steps:

1. Make sure the battery is correctly installed, or if you use USB port to power the data logger directly, you must not remove data logger from USB port when the data logger is logging.

2. Insert the data logger into an available USB port of a PC which has installed the Data Logger Graph software and driver.

3. Double click on the **Data Logger Graph** icon on your Windows desktop. This will load the Data

Logger Graph software. On the left top of the software main screen, you can see *Start* button and

click on it. This will open *Data Logger Device* dialog.

4. Select data logger device that will be set (or default). Here you can check the firmware version, status, etc. of the selected data logger device.

5. Click on the *Setup* button to load *Data Logger Setup* dialog. Here you can follow the screen instructions and setup the data logger (or default if first attempts).

6. Click on the *Finished* button. The data logger will start according to your settings.

7. Remove the data logger from PC USB port except USB port will be used as power supply as your required.

8. When a task is finished, you can download data to PC. Do according to step 2 to 4 above firstly, and then click on the *Download* button on the *Data Logger Device* dialog. Here you can follow the screen instructions to download and save the data to PC. Please note that you need to input correct password to operate this step if the data logger has been set a password before (No for factory default).

9. You can use the Data Logger Graph software to graph, analyze and print the data, and export the data to other file formats (xls, txt, jpg, etc.).

Data Logger Setup

Double click on the **Data Logger Graph** icon on your Windows desktop. This will load the Data Logger

Graph software. On the left top of the software main screen, you can see *Start* button and click on

it. This will open *Data Logger Device* dialog.



📸 Data Logger Graph		
Elle Logger Help		
► = = = = = = = = = = = = = = = = =		
Graph List		т ×
Ready		CAP NUM SCRL
		×.
📸 Data Logger Device		×
Data Logger Device Information and Status		
Data Logger Device information and Status		
	Setup	Setup and start the
Select Device(S/N) 141112RHT0010939		data logger.
LED		ļ
Device Description Temperature, Relative Humidity and De		
Tomporatale, Heative Hannaky and be		Stop the data logger
Firmware Version 1.2	Download	and download data to
		your PC
Password Exist No password		ļ
Logger Status Finished		
Logger Status Finished		
Battery Status OK		
		Insert the data logger into USB port,and view
Start Logging Stop Logging Refresh Details	Realtime	real time measuring
		data.
		Exit
		EXIL

Select Device: All connected data logger devices will be listed, and you can select a data logger device that will be set. Each data logger device has a serial number arranged by factory. Move and put the mouse on the *LED* button. You can see the yellow LED flash on the case of the selected data logger. The selected device information and status will be shown, including device description, firmware version, password exist, logger status and battery status. Click on the *Refresh* button, user can refresh the selected device information and status manually. Click "Details" button to see the details and status of the selected data logger.

Click "Stop Logging" to stop current logging.

Click "Start Logging" to start logging directly without re-setup.

Setup: Click on the *Setup* button to open *Data Logger Setup* dialog.
 Select the *General* tab.

)ata Logger Set	up - 130821	NTC0000020(Connected	d)
General Cha	nnel Settings	Start and Stop Method	Advaced
-Logger Nam	e		
Name the d	ata logger to g	give it a unique identity.	
Logger Nar	ne NTC Data	Logger	(Max 30 char.)
Sample Rate Select time	interval for a d	lata logging.	
Sample Rat	e 10s	•	
Password			
password w	hen download		and it will need you to enter the same you forget it, you can't download data and t logging in any case.
Passwo	d		
Again			
			Finish Cancel

- a. Logger Name. Name the data logger to give it a unique identity.
- b. Sample Rate. Select time interval to instruct the logger to log readings at a specific rate.
- c. Password. If user set a password for the data logger, it will need user to enter the password when download data.

Then, select the *Channel Settings* tab. Here it lists all channel related settings.

ieneral Channel Settings Start and Stop Method Advaced						
Channel	Description		Status	Unit	Low Limit	High Li
0	Temp.		Enable	Ċ	-35.0	80.0
1	RH		Enable	%rh	0.0	100.0
•	III					4

- a. Description. Name the channel.
- b. Status. Double-click to show a pop-up menu, and user can *Enable or Disable* the channel.

Channel	Description	Status	Unit	Low Limit	High Li
0	Temp.	Enable 👻	Ċ	-35.0	80.0
1	RH	Enable	%rh	0.0	100.0
		Disable			

- c. Unit. Double-click to show a pop-up menu, and user can select the unit for the channel.
- d. Low Limit/ High Limit. Here allows user to set low/high alarm limit.
- e. LED Alarm. User can select or unselect to enable or disable LED Alarm when Logged readings exceed the low/high alarm limit.
- f. Alarm Hold. Tick *Hold* to continue indicating an LED Alarm condition even when the logged readings have been returned within the set alarm limit.

ieneral (Channel Settings	Start and Stop I	Method Advac	ed	
Channel	Low Limit	High Limit	LED Alarm	Alarm Hold	Sample Mode
0	-35.0	80.0	Alarm	Hold	Instant
1	0.0	100.0	Alarm	Hold	Instant
•		m			•
4		III			Þ

g. Sample Mode. When the sample rate is more than internal basic sample rate, the readings between sample rate interval will be processed as below

-Instant. Ignore the readings between sample rate intervals.

-Average. Get the average of all the readings between sample rate intervals.

-Maximum. Get the maximum of all the readings between sample rate intervals.

-Minimum. Get the minimum of all the readings between sample rate intervals.

Data	ata Logger Setup - 130819RHT0000006(Connected)					
0	General Channel Settings Start and Stop Method Advanced				_	
	Channel	Sample Mode	Calibration[1] Target	Calibration[1] Actual	Calibration[2] Target	
	0	Instant 👻	0.0	0.0	0.0	
	1	Instant Average	0.0	0.0	0.0	
		Maximum Minimum				
	•				۱.	
				(Finish Cancel	

h. Calibration. It can support up to two point calibration. *Target* is the value that will be calibrated.
 Actual is the actual value for target value.

Important Note: Measurement error will occur if user does any calibration incorrectly. User can clear wrong calibration value. See the *advanced* tab for more details.

User must input 0 for all target and actual if user don't want to change any calibration settings.

Then, Select the *Start and Stop Method* tab.

ata Logger Setup - 13082	21RHT0000025(Connected)				
Start Select how or when to start logging.					
 Start Immediately Start by Button 	Start Immediately Data logger will start logging when setup is finished. Start by Button Press and hold the button until the green LED lights to start logging.				
Start at	Data logger will delay to start until the DATE and TIME which are set below.				
Date 2013/ 8/2	1 Time 16:26:55				
Select how to stop loggi Stop When Full Overwrite When Full Sample Points	Overwrite When Full Logger continues to log when memory is full,and the oldest data will be overwritten.				
	16000 ogging Duration 1 Days-20 Hours-26 Minutes-40 Seconds				
	Finish Cancel				

- a. Start Method. Select how or when to start logging.
- b. Stop Method. Select how to stop logging. Note that if user selects "Overwrite When Full", user can stop logging via the button on the housing of data logger.
- c. Logging Duration. Indicate duration time under the settings.

Finally, select the *Advanced* tab.

Data Logger Setup - Demo

2 zogger setap Demo	
eneral Channel Settings Start and Sto	op Method Advanced
LED	
Green LED Indication for Logger Sta	atus Including LOGGING, DELAYED and FINISHED status.
LCD	
The LCD Always On	The LCD is always on, and it won't save power
Clear Calibration	Alarm Phone Number
Clear Calibration	SMS Alarm Phone Number Setup
Select Thermocouple Type	
) Type K 🔘 Type J 🔇	🔘 Type T 🛛 Type R 🔘 Type S
Alarm Delay	
🖲 No Delay 🔘 10 min. 🔅	🔘 30 min. 🛛 🔘 60 min.
Scale and Offset	
Output Unit Point 1 Input	0 Display Output 0
hPa	
Point 2 Input	t 0 Display Output 0
	Finish

X

- a. LED. User can enable or disable the green LED indication for logging status.
- b. LCD. If user ticks it, the LCD always on (**Only for some specific product**)
- c. Clear Calibration. User can reset and clear calibration that be set on data logger before.
- d. Select Thermocouple Type. Select thermocouple type for data logger (NOTE: Only for specific model)
- e. Alarm Phone Number. Click "SMS Alarm Phone Number Setup" button. Enter the mobile phone number via which you want to get the alarm message when SMS alarm appears. 5 mobile phone numbers available at most and please make sure the integrality and the accuracy of the input numbers, otherwise users can not receive the SMS normally. Meanwhile, users can query the Data Logger readings and battery status by dialing the Data Logger and this number will be written into the alarm number list automatically. Notice: the top mobile number in the 5 numbers list will be forced to delete if Data Logger being written more than 5 numbers. (NOTE: Only for specific model)

SMS Alarm Phone Number Setup	×
Up to 5 Phone Number	
	Clear
OK E	xit

f. Alarm Delay. Users can select alarm delay. Data logger will start alarm after the selected delay time(**NOTE: Only for specific model**)

Click on the *Finish* button to setup. Press the *Cancel* button to abort the setup.

Notes:

- Any stored data will be permanently erased when Setup is finished. To ensure you to save this data before it is lost, click Cancel and then you need to download data.
- The battery will likelihood run out before logger will have finished specified sample points. Always ensure that the remaining charge in the battery is sufficient to last the complete duration of your logging exercise. If in doubt, we recommend that you always install a fresh battery before logging critical data.
- If user selects the "Start by Button", please start logging manually.

Data Download

On the left top of the software main screen, you can see *Start* button and click on it. This will

open Data Logger Device dialog.

C Data Logger Device	
Data Logger Device Information and Status	
Select Device(S/N) 141112RHT0010939	Setup Setup and start the data logger.
Device Description Temperature, Relative Humidity and De	Stop the data logger
Firmware Version 1.2	Download and download data to your PC
Password Exist No password	
Logger Status Finished	
Battery Status OK Start Logging Stop Logging Refresh Details	Realtime Insert the data logger into USB port, and view real time measuring data.
	Exit

- a. Select Device to download data.
- b. Click on the *Download* button and input password if existed, and a *Save* dialog will be shown.



c. Specify the saved path and name the saved file. Click on the *Save* button to save data.

📸 Save		×
🖉 🗢 🗮 Desktop 🕨	✓ 4 Search Desktop	٩
Organize 🔻 New folder	5.7 ▼ 1977 ▼	(?)
★ Favorites ↓ Libraries E Libraries Computer Mindows7_OS (C Local Disk (D:) しcal Disk (D:) しcal Disk (D:) C Lenovo_Recovery 國 Microsoft Office @ 金山快盘	Libraries System Folder admin System Folder Computer System Folder Network System Folder	<
File name: Save as type: Logger F	iles (*.dlg)	•
Hide Folders	Save	el

d. When downloading finished, a dialog below will be shown, and user click "Open" to open the downloaded file directly, or click "Add" to add the downloaded file to current graph, or click "Nothing" to exit.

Downloading Finished		×
Click "Open" to open this downloaded file in multi-	is downloaded file, or Click -graph mode.	"Add" to open this
Оре	en Add	Nothing

Realtime Readings

When the data logger connected to PC, user can view the real-time readings.

Data Logger Device Information and Status Select Device(S/N) 130821NTC0000020 ▼ LED Setup	the
Device Description Temperature Data Logger Firmware Version 1.0 Password Exist No password Logger Status Stop	gger lata to Channel 0 °C
Battery Status OK Refresh Stop Details Realtime reasu data.	logger nd view rring

Stop Logging

User can click on the *Stop* button to stop logging if the data logger is logging.

📸 Data Logger Dev	ice		23	Data Logger Graph
	e Information and Status 130821NTC0000020 LED	Setup	Setup and start the data logger.	Are you sure to stop logging?
Device Description Firmware Version Password Exist	Temperature Data Logger 1.0 No password	Download	Stop the data logger and download data to your PC	Yes No
Logger Status Battery Status	Logging OK Refresh Stop Details	Realtime	Insert the data logger into USB port,and view real time measuring data.	
			Exit	

Logger Details

Click on the *Details* button to view the information and status details for the data logger.

📸 Data Logger Devi	ce		X	Info	ormation and Status	; Details	×
Data Logger Device	e Information and Status		1	ſ	Summary]
		Setup	Setup and start the		Logger Name	NTC Data	a Logger
Select Device(S/N)	130821NTC0000020 -	Jonap	data logger.		Sample Rate	10s	
	LED		J		Completed Sample Po		
					Start Date and Time		21 19:30:12
Device Description	Temperature Data Logger		Stop the data logger		Stop Date and Time		
Firmware Version	1.0	Download	Stop the data logger and download data to your PC		Channels		
Password Exist	No password		J		Channel Ch	iannel 0	
Logger Status	Logging				Description NT	C	
Battery Status	ОК				Unit °C		
			Insert the data logger into USB port,and view		Low/High Limit -1	7.6/23.0	
	Refresh Stop Details	Realtime	real time measuring data.			.7/37.3	
			J data.		Sample Mode Ins	tant	
				U		_	
			Exit				Refresh OK
				-			

Software Interface



The above picture show the following information:

- 1. Standard Toolbar
- 2. Zoom and Pan Toolbar
- 3. Graph Toolbar
- 4. Grid line
- 5. The left vertical axis
- 6. The right vertical axis
- 7. Graph line
- 8. Floating line
- 9. The horizontal axis
- 10. The readings for the current floating line
- 11. Legend
- 12. Graph background
- 13. Page background
- 14. Graph list window
- 15. Statistics window
- 16. Data table window
- 17. Main menu

Open File

Click on the second icon on the standard toolbar or click on the Main Menu->File->Open to open the *.dlg or *.mdlg file.



Add File and Multi-Graph Mode

The software can support several files are shown in a graph interface. User can click on the third icon or Main Menu->File->Add File to add files to current graph interface. User can compare and analyze the files using this function.

DGraph Software Guide		
K Multi Graph1.mdlg* - Data Logger Graph		X
Eile Edit <u>G</u> raph Logger Iool <u>H</u> elp		
^{Mo} Adla Multi Graph1.mdlg* ×		•
Multi Graph1		
[A] 130812DDD0000024 - Temp. and Humi. Logger: ——— Temp.(°C) ——— Temp. HL(°C) ——— RH(%rh) ——— Dew Point(°C)		
[B] 130812DDD0000024 - Temp. and Humi. Logger: ——— Temp.(°C) ——— Temp. HL(°C) ——— RH(%rh) ——— Dew Point(°C)		
76.80 65.28 53.76 42.24 30.72 42.24 19.20 42.24 -3.84 -4 -15.36 -26.88 -38.40 -11:13:03 11:13:03 11:14:35 11:15:21 11:13:03 11:13:49 11:14:35 11:13:03 11:13:49 11:14:35 2013/8/19 2013/8/19 2013/8/19 2013/8/19 2013/8/19 2013/8/19 2013/8/19 2013/8/19	82.00 78.10 74.20 70.30 66.40 62.50 58.60 54.70 50.80 46.90 43.00	Relative Humidity(%rh)
Graph List		τ×
□ [A] kkk.dlg - 130812DDD0000024 - Temp. and Humi. Logger □ ○ □ ○ □ ○ □ ○ ○ ○ □ ○ ○ ○ <td< td=""><td></td><td></td></td<>		
🕄 Graph List 🛛 Statistics 🗐 Data Table		
Ready	CAP NUM S	CRL .

The graph line with A letter is a file, and the graph line with B letter is another file. User can save it to a new *.mdlg file. Note that the *.mdlg file need the original *.dlg file to graph correctly.

Zoom and Pan



-Auto Zoom and pan in any direction

-Horizontal Zoom and pan only in horizontal direction

-Vertical Zoom and pan only in vertical direction

-Manually Set the start time and end time for horizontal axis, and set the scale for the vertical axis.

Zoom and Pa	an Manually			×
Horizontal	- Date and Time			
Start:	2013/ 8/19		11:13:03	×
End:	2013/ 8/19		11:14:13	
Vertical - R	lange of Readings			
Scale:	100% 🔻	Enable		
			ОК	Cancel

Zoom In and Pan

- Use the mouse to click and drag a box around any graph area to magnify the area selected.

-Press and hold the mid-button of the mouse at any graph location, and move the mouse to pan the graph area.

Zoom Out

-Click on the Market Market **Undo Last** button to show last graph area.

-Click on the **Undo All** button to show the original graph area.

Refresh

Export and Save

The software can save and open the *.dlg or *.mdlg file type in default. Use can also save as other file types, including *.txt, *.csv, *.xls, *.bmp, and *.jpg.

File	Edit Graph	Logger	Tool	Help
5	Open			Ctrl+O
	Close			
	Save			Ctrl+S
	Save As		Ctrl	+Shift+S
=	Add File		Ctrl	+Shift+O
	Save As Templa	te		
	Use Template			
	Default Templat	e		
≜	Print			Ctrl+P
	Print Preview			
	Print Setup			
	Print and Expor	t Options.		
	User can	click on	the N	Aain Meni

User can click on the Main Menu->Edit->Copy to copy the graph area to clipboard.

Graph List

User can use the graph list window to operate file and channel related functions easily. -Add or remove file using right-button of the mouse at file area of the tree.



-Open the channel related settings at channel area of the tree.



-Show or hide the selected graph line.



Statistics Window

The window will show the data logger information and statistics of readings

Statis	stics									μ×
	File Name: I	kkk.dlg - S/N: 1308	12DDD0000024 -	Logger Name: Temp.	and Humi. Logger					
	Details	Readings/Total	Sample Rate	First Reading Ti	me Last Reading Ti	me	Duration Time	e		
	L	7/8	10s	2013/8/19 11:13:1	3 2013/8/19 11:14:	13	0d, 0h, 1m, 0s			
	- Channel	ls Number	Name	Minimum/Maximum	Low Limit/High Limit	Average	e Std. Dev.	Unit		
		0	Temp.	37.8/38.3	/23.0	38.0	0.2	°C		
		1	RH	56.0/57.0	/	56.5	0.4	%rh		
		2	Dew Point	27.7/28.2	/	27.9	0.2	°C		
3 0	iraph List 📋	Statistics 📃 Da	ta Table							

Data Table

The window will show the readings in table

Data Table							
	A	В	С	D	E	F	
1	Serial Number	130812DDD000					
2	Logger Name	Temp. and Humi					
3	File Name	kkk.dlg					
4	Index	Timestamp	Temp.(°C)	Temp. HL(°C)	RH(%rh)	Dew Point(°C)	
5	1	2013/8/19 11:1	38.3	23.0	56.7	28.2	
6	2	2013/8/19 11:1	38.2	23.0	56.1	27.9	
7	3	2013/8/19 11:1	38.1	23.0	56.3	27.9	
8	4	2013/8/19 11:1	38.0	23.0	56.0	27.7	

Print

To print the graph, statistics and data table, click on the printer icon on standard toolbar or select Print from the File pull-down menu.

User can also select the printed contents in the following dialog.

Print and Export O	ptions	×
Please select exproted in p		that will be printed or
🔽 Graph	V Statistics	🔽 Data Table
		OK Cancel

Graph Settings

To set the graph area, click on the Graph Settings icon on graph toolbar or select graph settings from the graph pull-down menu.

raph Settings	×
Title Font Color Line	Axis
Main Title:	
Temp. and Humi. Logger	
Sub Title:	
	<< Undo Refresh
Basic Settings	OK Cancel

Mark Data Points

Click right-button on graph area to show the pop-up menu below, Click "Mark Data Points" to show marks on all sample point locations.



Add Comment

User can add comment at any location of graph area, and also add comment for any sample points.

	Add Comment	
	Zoom and Pan Method	Þ
<u>م</u>	Undo Last	Ctrl+Z
\$	Undo All	Ctrl+A
	Refresh	F5
	Grid Line Options	Þ
<u>-</u>	Mark Data Points	
	Graph Settings	Ctrl+G
	Сору	Ctrl+C

Units Conversions

To create new unit and sub-unit, click on the units conversions from the tool pull-down menu.

nits Conversions		×
Unit Category		
Select unit category from list b	low:	
		▼
Add New Unit Category	Remove Unit Category and Subunits	
Subunits		
Add Edit	Delete	
		UK
Add Edit	Delete	ОК

Compound Line

User can create new graph data and line via expression and the readings from data logger. Click on the compound line from tool pull-down menu.

Channel	Description	Unit	Fomula		1
0					-17
					-
2					-11
3					-Ц
4					-
5					-
x)					
tan exp 10^x x^2	arctan tanh In int log rad sqrt abs	artanh cot deg sign) / * e 8 9 - Pi 5 6 + 2 3 * =	Select Physical Constant C= 2.99792E+008	
ame the	compound line				