

Agilent U1251A and U1252A GUI Datalogger Software

Quick Start Guide



Agilent Technologies

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Introduction

The meter has a bi-directional (full duplex) communication capability that eases data storing from the meter to PC. The required accessory for this communication capability is the U1173A IR-USB cable and the application software in the accompanying CD.

NOTE

The U1173A IR-USB cable functions as a serial RS-232 that connects the instrument to the USB port of the computer.

System Requirements

PC and Memory

Agilent GUI Datalogger Basic Edition will run using the same minimum PC and memory as required by the following operating system.

32-bit Platforms Windows 2000 and above

Supported Model Agilent U1251A, U1252A

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Installing and Connecting the Instrument

- 1 Run setup.exe in the accompanying CD to install the Agilent GUI Datalogger.
- 2 Go to **Start > All Programs > Agilent > Agilent GUI Datalogger** or you can click the Agilent GUI Datalogger shortcut icon

 on desktop.

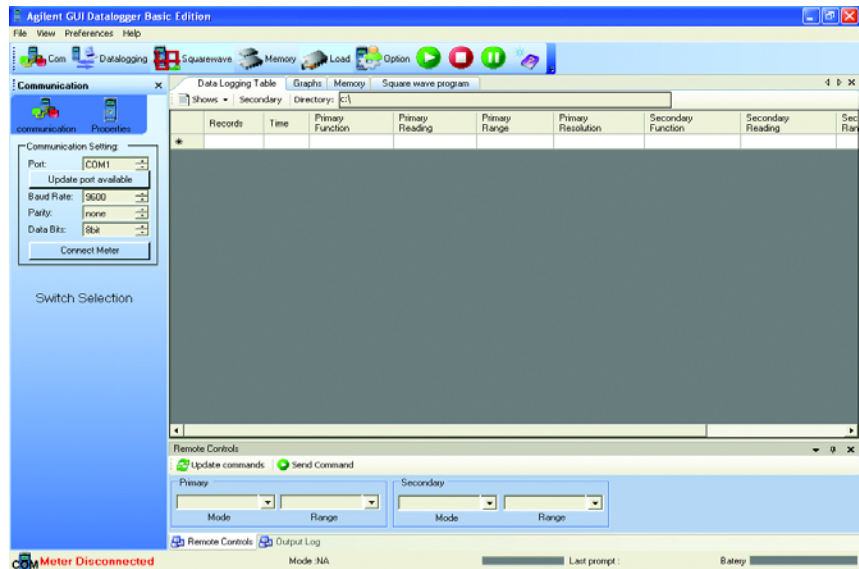


Figure 1 Agilent GUI Datalogger Basic Edition

- 3 Connect the instrument to the computer via U1173A IR-USB cable (Figure 1) and turn on the instrument.

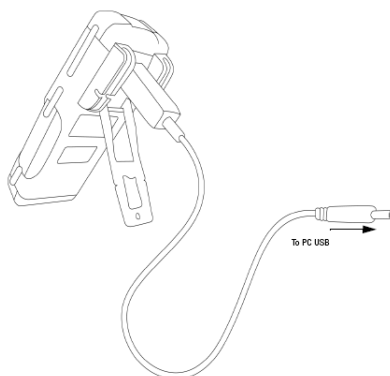


Figure 2 Cable connection for remote communication

NOTE

The U1173A IR-USB cable is an optional accessory. You can purchase the cable at a reasonable price from Agilent.

- 4 Click on the **Communication** panel and configure the meter's setup settings. Select the communication **Port** (Figure 3) on your PC that the instrument is connected to. The typical communication port is COM4, COM7, or COM8.

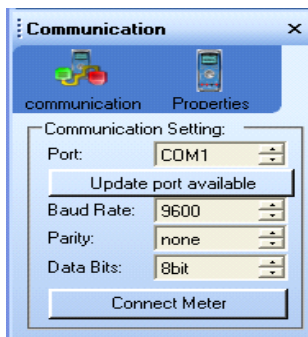


Figure 3 Communication panel

NOTE

The default settings for baud rate, parity and data bit are shown in Figure 3.

- 5 Clicking the **Update port available** button will update the port that is available on your PC.
- 6 After all the settings are configured, click **Connect Meter**. If the configured settings matched with the meter settings, the software will return a message and status will change to “**Meter Connected**” as shown in Figure 4.

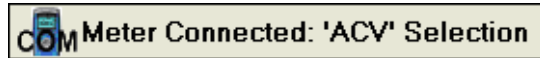


Figure 4 Meter connection success

- 7 If connection failed (Figure 5), check that U1173A IR-USB cable is connected to the meter and the meter is turned on.



Figure 5 Meter connection failed

- 8 You can check the meter properties by clicking and selecting **Properties** to view the meter properties panel (Figure 6).

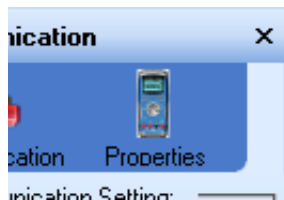


Figure 6 Properties panel

- 9 The meter settings will be shown in Figure 7. No amendments is allowed on the setting properties.

Properties

communication

Properties

A terminal plu	no
Auto	on
Auto power o	on
Average func	off
Back light lit	off
Batery level	normal
Beep selectic	2kHz
Charge termir	normal
Current perce	4-20mA
dB Function	off
FC devided p	1
Input warning	normal
Meter mode	normal
Null function	off
Output status	standby
Peak hold fur	off
Rate count	52
Refresh fold f	off
Rotary positic	ΔCV
Trigger sourc	IMM
Zero tempera	off

A terminal plug

A terminal plug for meter

Figure 7 Meter settings properties

10 Check the switch settings options shown in Figure 8. Each setting has its specific functions.

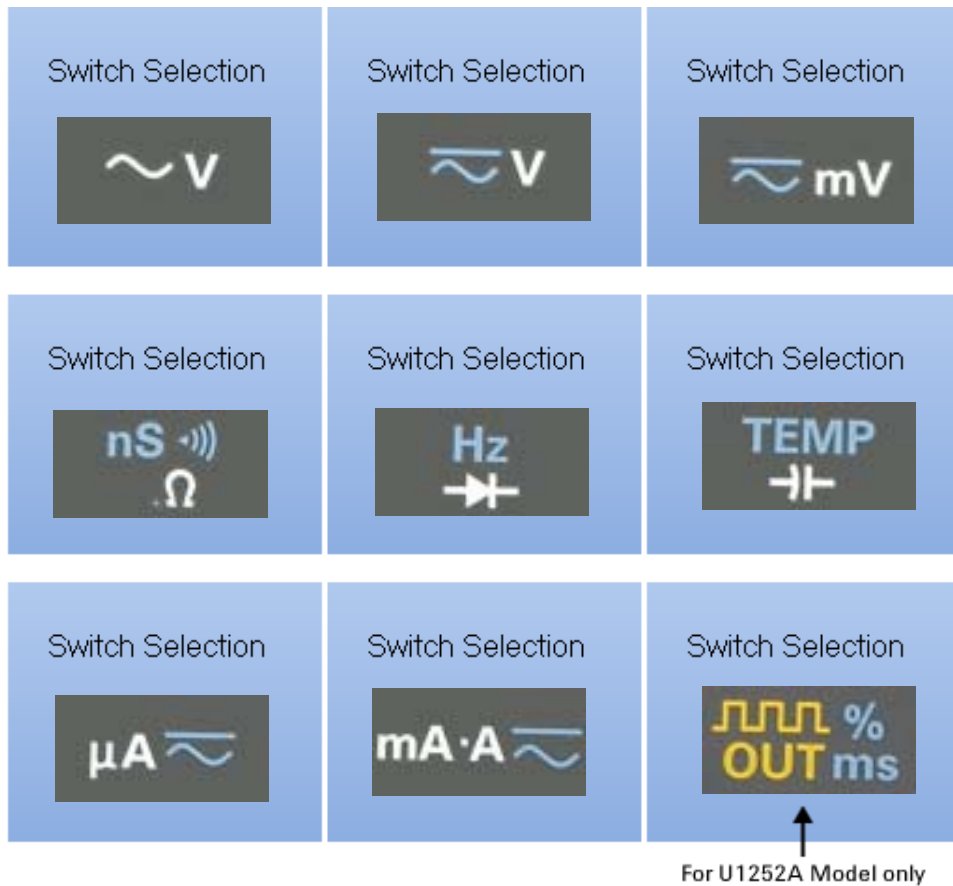



Figure 8 Switch positions with specific functions

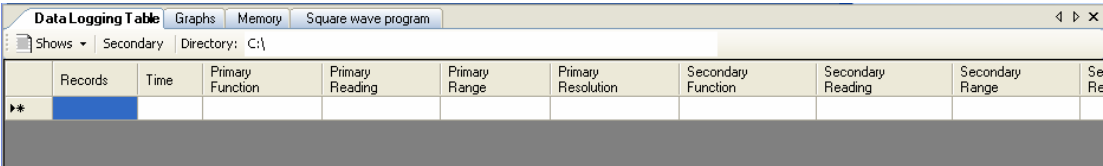
Data Logging

- 1 Set the rotary switch of the instrument to the position of the preferred measuring function.

NOTE

To know more about the functions at different rotary switch positions, refer to Selecting a Measuring Function in *Agilent U1251A & U1252A Handheld Digital Multimeter User's and Service Guide*.

- 2 Click  icon, the program will operate as data logging mode. **Data Logging Table** tab will be activated. Data from meter will be captured and sorted in the table as shown in Figure 9.



Records	Time	Primary Function	Primary Reading	Primary Range	Primary Resolution	Secondary Function	Secondary Reading	Secondary Range	Secondary Resolution
▶▶									

Figure 9 Data Logging Table

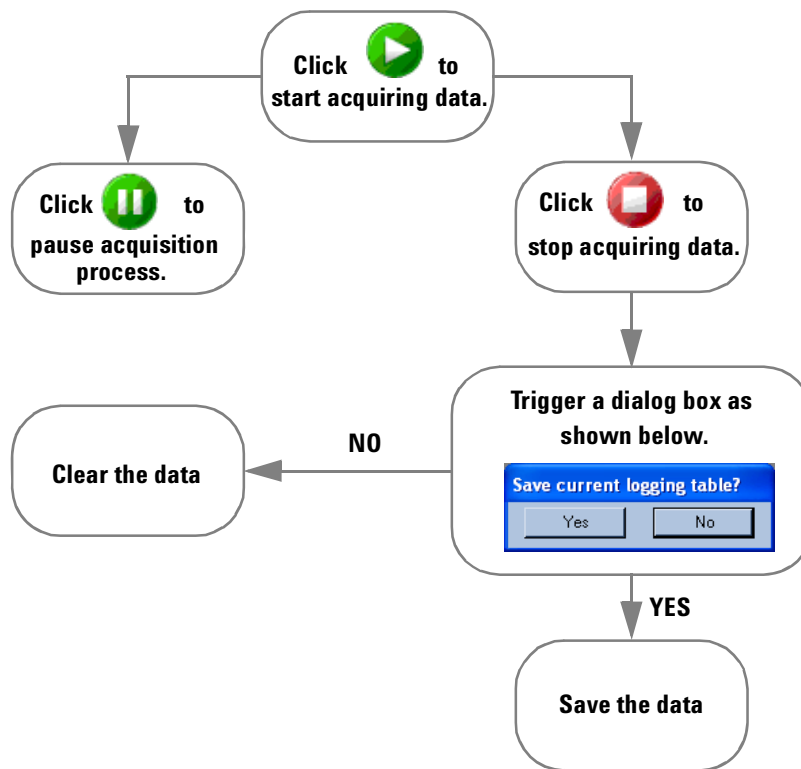


Figure 10 Data logging process

3 Location to save the data can be manually setup.

- a** Double click on the **Directory: ...** panel as shown in Figure 11.



Figure 11 Directory panel.

- b** A **Select your directory and filename** dialog box will pop out (Figure 12). Choose your preferred save directory and file name. Then, click **Save**.

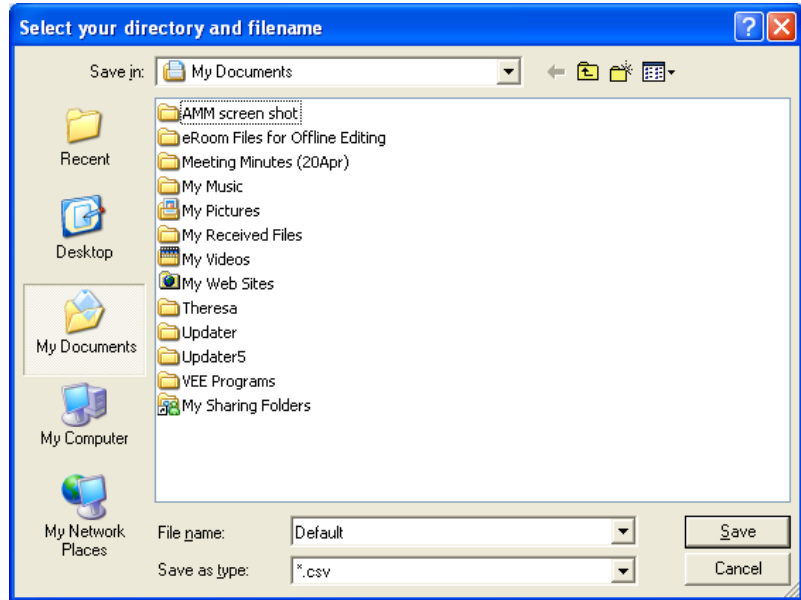


Figure 12 Select your directory and filename.

- 4** The data logging table also provides an option to log secondary display data. Click the **Secondary** button to log the data in the secondary display, see Figure 13.

Data Logging Table										
Shows ▾ Secondary		Dir: C:\								
Records	Time	Primary Function	Primary Reading	Primary Range	Primary Resolution	Secondary Function	Secondary Reading	Secondary Range	Secondary Resolution	
1	07/21/2006 15:01:37	VOLT:AC	0.0019	5.000	100.0 μ					
2	07/21/2006 15:01:38	VOLT:AC	0.0018	5.000	100.0 μ					
3	07/21/2006 15:01:39	VOLT:AC	0.0022	5.000	100.0 μ					
4	07/21/2006 15:01:40	VOLT:AC	0.0017	5.000	100.0 μ					
5	07/21/2006 15:01:41	VOLT:AC	0.0017	5.000	100.0 μ					
6	07/21/2006 15:01:42	VOLT:AC	0.0018	5.000	100.0 μ					
7	07/21/2006 15:01:43	VOLT:AC	0.0018	5.000	100.0 μ					
8	07/21/2006 15:01:44	VOLT:AC	0.0018	5.000	100.0 μ					
*										

Data Logging Table										
Shows ▾ Secondary		Dir: C:\								
Records	Time	Primary Function	Primary Reading	Primary Range	Primary Resolution	Secondary Function	Secondary Reading	Secondary Range	Secondary Resolution	
1	07/21/2006 15:03:15	VOLT:AC	0.0019	5.000	100.0 μ	FREQ	0	100.0	1.000 m	
2	07/21/2006 15:03:16	VOLT:AC	0.0018	5.000	100.0 μ	FREQ	0	100.0	1.000 m	
3	07/21/2006 15:03:17	VOLT:AC	0.0018	5.000	100.0 μ	FREQ	0	100.0	1.000 m	
4	07/21/2006 15:03:18	VOLT:AC	0.0019	5.000	100.0 μ	FREQ	0	100.0	1.000 m	
5	07/21/2006 15:03:19	VOLT:AC	0.0017	5.000	100.0 μ	FREQ	0	100.0	1.000 m	
6	07/21/2006 15:03:20	VOLT:AC	0.0017	5.000	100.0 μ	FREQ	0	100.0	1.000 m	
*										

Figure 13 Agilent GUI Datalogger software allows data logging in the data logging table. This table can be set with any preferred number of rows. To setup the table properties, refer to [User Settings](#).

- 5 Go to **Show** menu as shown in Figure 14 to customize the column display preference.

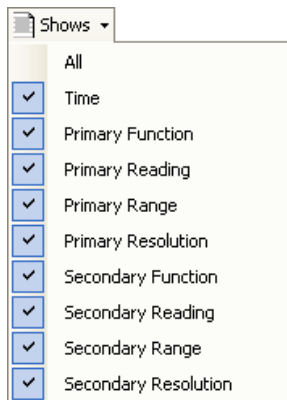


Figure 14 Column display customization

- 6 This GUI software also provides two strip graphs to display the logged data. These graphs are meant for displaying purpose only.

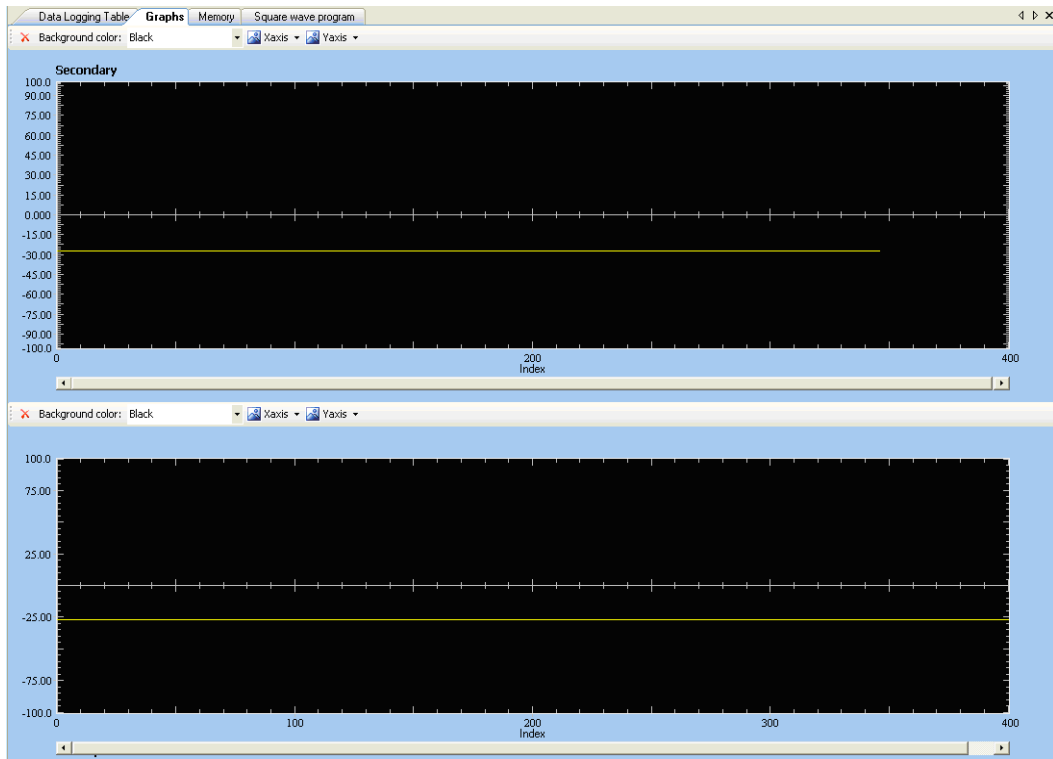


Figure 15 Graph function


Downloading Data from the Instrument

- 1 The meter contains two types of memory loading modes with different maximum storage size.
- manual meter logging mode
 - auto meter logging memory mode



- 2 Click  to select memory loading mode.



- 3 Click  to load logged data.



Manual Data Logging  Shows ▾									
	Address	Function	Value	SignH	SignL	Range	Behavior	MathL	MathM
▶	1	FREQ	0.000	+AUTO	AC	NA	trig+FCOFF	NA	NA
	2	FREQ	0.000	+AUTO	AC	NA	trig+FCOFF	NA	NA
	3	FREQ	0.000	+AUTO	AC	NA	trig+FCOFF	NA	NA
	4	FREQ	0.000	+AUTO	AC	NA	trig+FCOFF	NA	NA
*									
Auto Data Logging  Shows ▾									
	Address	Function	Value	SignH	SignL	Range	Behavior	MathL	MathM
*									


Figure 16 Memory mode


- 4 To clear the table or export the data contained in the table, select the options in the context menu (Figure 16). To activate the context menu, right-click on any area outside the table.



Figure 17 Table options context menu

Square Wave Mode (for U1252A)

1 Turn rotary switch of the instrument to .

2 Click  icon to activate square wave mode.

There are two types of operations as shown in Figure 18:

- Manual
- Use Pre-programmed Table

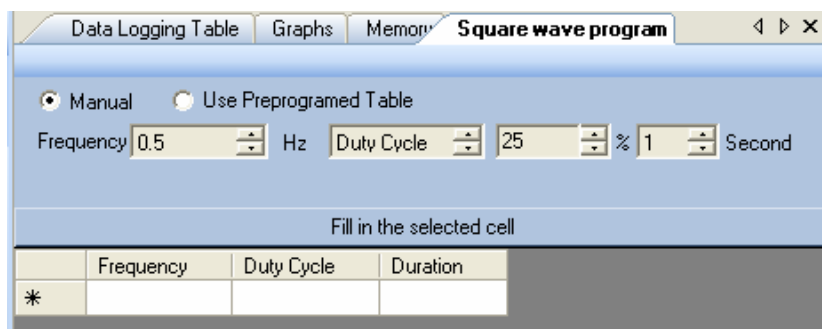



Figure 18 Square wave program operations

- ✓ The frequency and duty cycle/pulse width can be remotely set via PC.
- ✓ When selecting **Use Pre-programmed Table**, use  to start, stop or pause the data logging operation.
- ✓ To input data into the square wave pre-programmable table, follow the instructions below:
 - 1 Set the frequency, duty cycle/pulse width and duration accordingly (Figure 18).
 - 2 Drag and drop the frequency value into the **Frequency** column cell in the table.

- 3 Select the respective **Duty Cycle** and **Duration** column cell, then click **Fill in the selected cell** button to input the parameters (Figure 19).

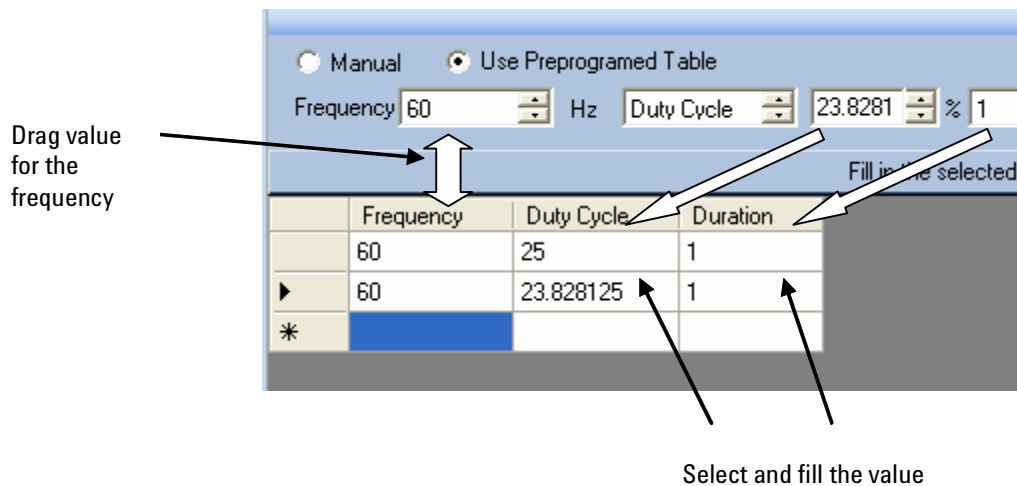


Figure 19 Square wave program settings

Remote Controls

- 1 Instrument can be controlled remotely according to the switch functions selected.
- 2 Click on **Update Commands**, to update the lists of command available for different rotary switch functions selected. The list of command can be view through the drop-down combo box menu (Figure 20).
- 3 Click on **Send Commands** to send command parameters to the instrument.

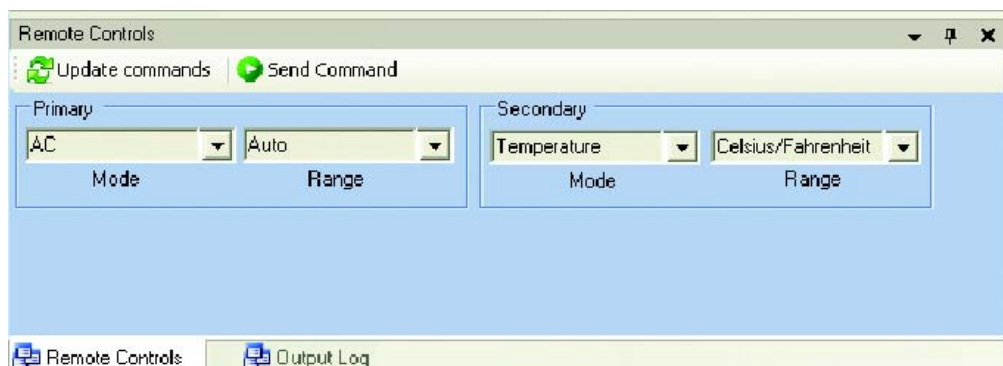


Figure 20 Remote Controls

User Settings



- ✓ To customize user setting, press **Options** or go **Preferences** → **Options**.
- ✓ There are two tab controls
 - Setup (Figure 21)
 - Schedule (Figure 22)
- ✓ In **Setup** tab, there are three sections (Figure 21)
 - data logger interval
 - records
 - meter setup

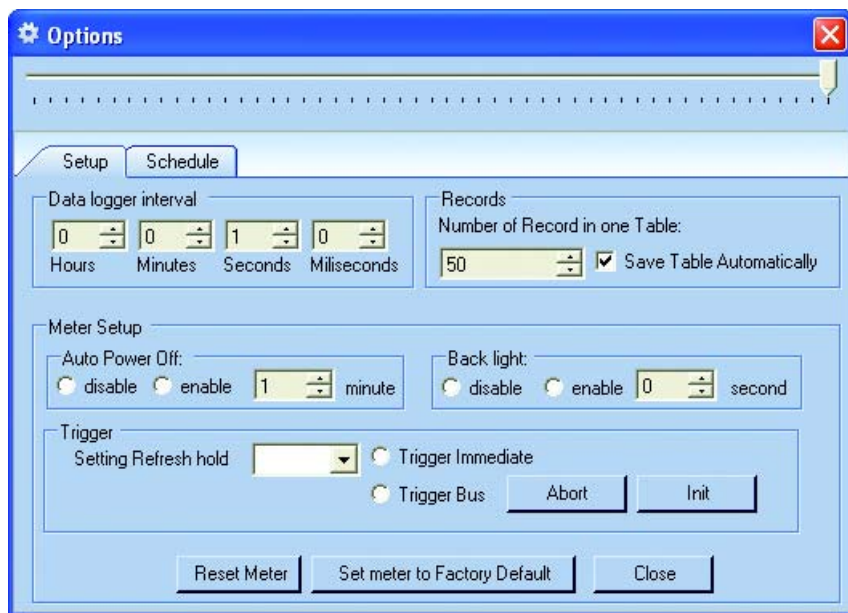


Figure 21 User setting **Setup** tab

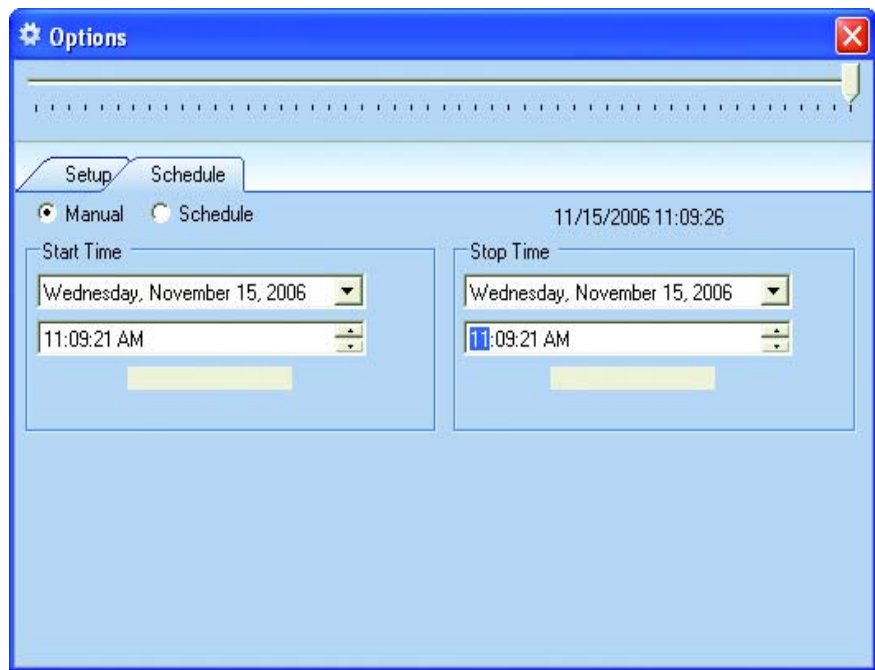


Figure 22 User setting **Schedule** tab

- ✓ To set interval of data logging, set up the time interval in the data logger interval section (Figure 23) by **Hours**, **Minutes**, **Seconds**, or **Milliseconds**.

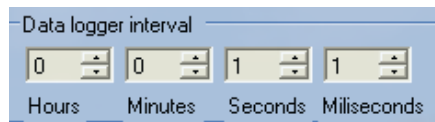


Figure 23 Data logger interval settings

- ✓ Records section allows users to set the number of rows in the table (Figure 24).
- ✓ Check option for **Save Table Automatically** to enable or disable auto saving of data in the table (Figure 24).

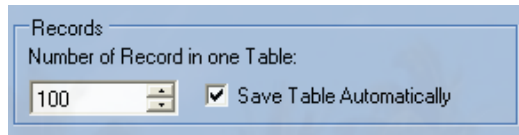


Figure 24 Records option

- ✓ **Meter Setup** (Figure 25) allows users to control the instrument with controlling options—auto power off function, backlight, triggering instrument.
- ✓ To reset instrument, click **Reset Meter** button.
- ✓ To set instrument to default setting, click **Set meter to Factory Default** button.

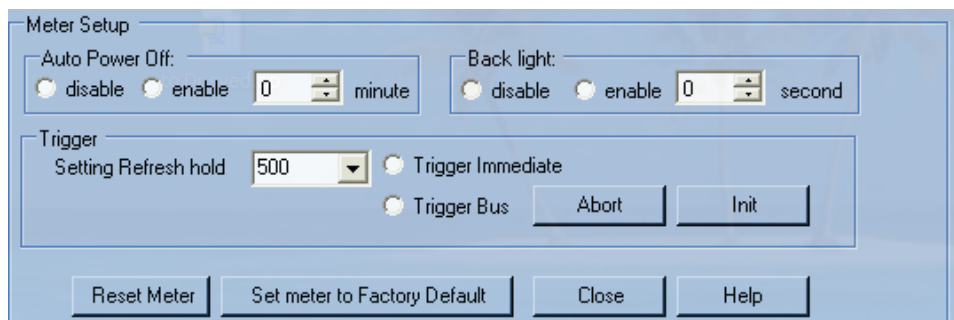


Figure 25 Meter setup

- ✓ Besides manually to the log data, this GUI also provides scheduling mechanism. To activate auto scheduling, choose **Schedule** (Figure 26). Then, set the start and stop time preferred. When the scheduling mechanism activated, the manual data logging functions icon



will be disabled.

- ✓ The default setting for data logging is manual logging.

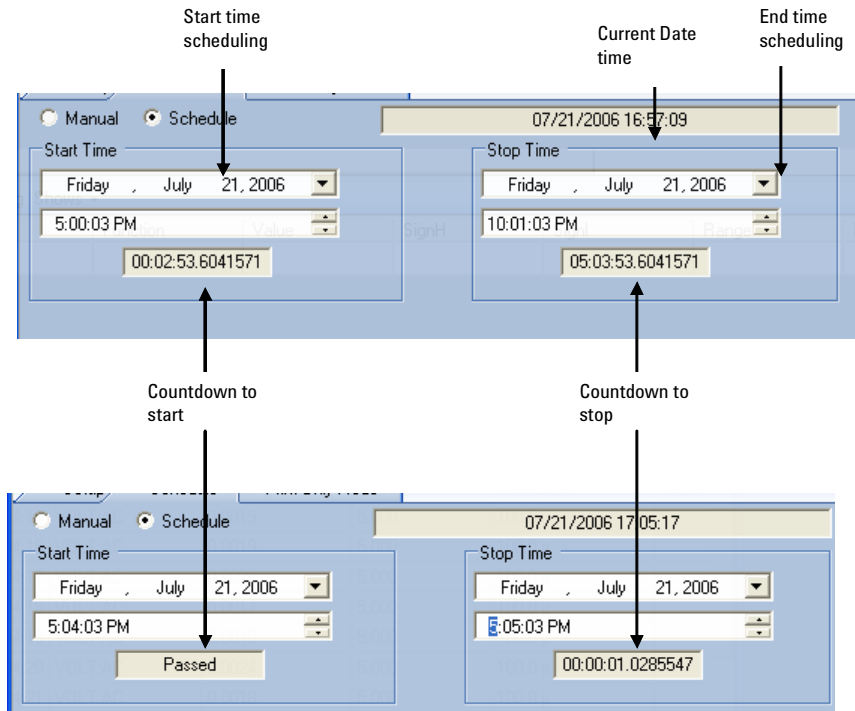


Figure 26 Scheduling mechanism

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