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# WARNING

## Read Before Operating

This manual must be carefully read by all individuals who have or will have the responsibility of using, maintaining, or servicing this product. The product will perform as designed only if it is used, maintained, and serviced in accordance with the manufacturer's instructions.

## Automatic Updates via ProRAE Update

When you start ProRAE Studio II and log in, ProRAE Update automatically checks with RAE Systems for updates to ProRAE Studio (this requires an active connection with the Internet). If any updates are available, it shows them, along with new features, version number, and release date. You can then download any updates, or dismiss them and perform updates at a later time.

RAE Update	ne gas detection. For real	-time decisions.		
ProRAE l				1
Software	Last check for updates: Oc	tober 21, 2013 at 3:19 PM	Check for	Jpdates
Product	Size	Released On	Action	
ProRAE Studio II v1.8 Installed Version: 1.8.0	6.65MB	Oct 9, 2013	Download	
VroRAE Update v1.0. Installed Version: 1.0.0	0 4.57MB	Sep 2, 2013	Download	

## **1. General Information**

ProRAE Studio II allows datalogs and configuration settings from RAE Systems instruments to be downloaded to a computer, and configurations to be uploaded from a computer.

ProRAE Studio II supports the following RAE Systems instruments. They must already be loaded with the firmware versions shown below (or a higher version):

Instrument Name	Lowest Firmware Version
ppbRAE 3000	1.03B
MiniRAE 3000	1.05A
MiniRAE Lite	1.1.20
MiniRAE Lite (ATEX)	1.05B
MiniRAE Lite (Fumigation)	1.07
UltraRAE 3000	1.05
QRAE II	3.50
QRAE 3	1.20
ToxiRAE Pro PID	1.66
ToxiRAE Pro LEL	1.66
ToxiRAE Pro	1.66
GammaRAE II R	4.00
GammaRAE II R Rechargeable	4.00
NeutronRAE II (PRM-3020)	2.00
NeutronRAE II (PRM-3021)	3.01
MultiRAE Lite	1.18
MultiRAE	1.18
MultiRAE Pro	1.18
AutoRAE 2 Controller (DKS-6000)	1.24
MultiRAE (Pumped) Cradle (DKS-6001)	1.22
ToxiRAE Pro Cradle (DKS-6002)	1.22
QRAE 3 Cradle (DKS-6003)	1.22

ProRAE Studio II communicate with these instruments via serial port, SD card, and an AutoRAE 2 Controller (depending on which instruments are connected) when configuring them or retrieving their datalog. Refer to your product's manual for details on connecting with a computer, as well as all safety requirements.

This version of the software allows you to:

- Download datalogs
- Download configuration settings
- Change and upload new configurations settings
- Upload firmware
- Download reports

## 2. Hardware & Software Requirements

#### 2.1. Hardware

CPU:	Pentium processor, 1GHz
Reader:	CD-ROM drive
Monitor:	VGA monitor with resolution of at least 1024 x 768, 16-bit color
Memory (RAM):	256MB
<b>Disc Space:</b>	10MB of free space

#### 2.2. Software

**Operating System:** Windows XP, Windows Vista, or Windows 7, Windows 8

## 3. ProRAE Studio II Installation

1. Load ProRAE Studio II software from the CD or double-click the icon if the software was downloaded from the Internet. (If an installation window does not appear automatically, open the folder and double-click "Autorun.exe.")

ProRAE Studio II Resources	udio II Resources			
ProRAE Studio II	User's Guide			
Drivers	License Agreement			
For Windows XP, Windows Vista, Windows 7 and Windows 8. Adobe Reader 5.0 or higher is required to view the User's Guide and License Agreement. Free software may be downloaded at http://get.adobe.com/reader/				
© 2014 RAE System	ns by Honeywell EXIT			

**Note:** Your computer may require a USB driver for connection with some monitors. Click Adapter Drivers, and follow the instructions for installation.

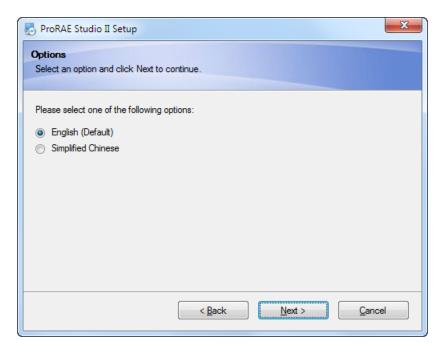
ProRAE Studio II Resources			_ X
SY ST E M S by Honeywell	roRAE S	tudio II Resou	rces
MiniRAE 3000, MiniRAE Lit AutoRAE 2 Controller and via the adapter.	e, UltraRAE 3000, To Cradles for MultiRA	ecessary to connect the ppbR/ oxiRAE Pro family instruments E (pumped) and ToxiRAE Pro to connect an AutoRAE 2 Cor	and to a PC
CP2 10x USB to UA	RT Bridge	AutoRAE 2 Controller	
BACK	© 2014 RAE Syste	ms by Honeywell	EXIT

**Note:** For GammaRAE II R and NeutronRAE II, you need a Bluetooth adapter and to install the proper driver for the adapter. It is recommended that you use an adapter from IOGEAR.

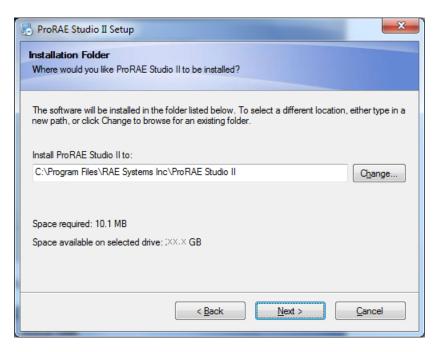
2. Read the recommendation before proceeding. In order to ensure a successful installation, it is suggested that you exit all other running programs. Then click "Next."



3. Select the language in which you would like the program to run. Then click "Next."



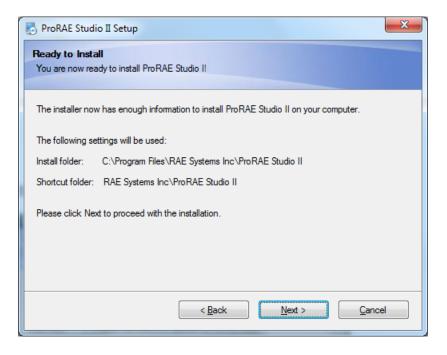
4. Select the folder for the software to be installed into. Accept the default folder by clicking "Next," or choose a new folder by clicking the "Change..." button, which allows you to browse to a new location. When you are done, click the "Next" button.



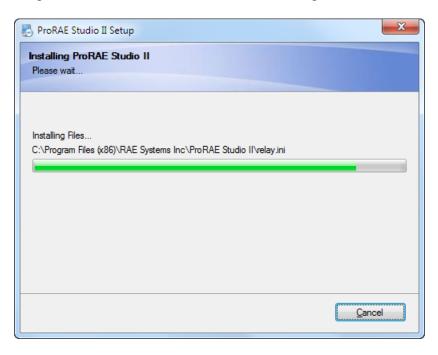
5. Select the folder for a shortcut to be installed into. Then click "Next."

ProRAE Studio II Setup
Shortcut Folder Where would you like the shortcuts to be installed?
The shortcut icons will be created in the folder indicated below. If you don't want to use the default folder, you can either type a new name, or select an existing folder from the list.
Shortcut Folder:
RAE Systems Inc\ProRAE Studio II
< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

6. The software is now ready to install. Click "Next" to begin.



7. Progress bars indicate that the software is being installed:



8. Once the ProRAE Studio II software is successfully installed, this window appears:

ProRAE Studio II Setup	x
	Installation Successful The ProRAE Studio II installation is complete. Thank you for choosing ProRAE Studio II! Please click Finish to exit this installer.
	< Back Einish Cancel

**Note:** If the correct drivers are not installed or if the drivers on the PC are outdated, a pop-up box will appear, prompting you to install the appropriate driver(s).

9. Click "Finish." The window closes. Your software is now ready to use.

## 4. Connecting An Instrument To Your Computer

Your instrument must be connected to the computer, turned on, and in communication mode in order to transmit and receive data via ProRAE Studio II.

**Note:** A QRAE II does not need to be turned on. Make sure it is in its cradle, and the cradle is connected to the computer. In addition, make sure the charger is plugged in.

Different instruments require different connection methods to connect to a PC. Follow the instructions in the user's guide that accompanies the instrument, ensuring that you use the correct cable and communication method. In addition, you should make sure the instrument's battery is charged.

# 4.1. Connecting RAE Systems Instruments through the USB Adapter

For MiniRAE 3000, ppbRAE 3000, MiniRAE Lite, UltraRAE 3000, ToxiRAE Pro Family or New MultiRAE Family, QRAE 3, AutoRAE 2 Controller, or AutoRAE 2 Cradle

Make sure the CP210x Virtual COM Port driver is installed properly (this driver is available on the installation CD). Put the instrument on the cradle and connect the cradle to the computer's USB port. In the Device Manager, find the corresponding virtual COM port. Turn on your instrument and make it operate under PC Communication Mode. (The user's guide covers this.) If you are using an AutoRAE 2 Controller, this is done automatically.

### 4.2. Radiation Products (GammaRAE II R And NeutronRAE II)

Make sure the Bluetooth adapter driver is properly installed, and a virtual COM port is created for communication

## 4.3. AutoRAE 2 Controller

Refer to page 39 for details on establishing connections and transferring data with an AutoRAE 2 Controller via USB.

## 4.4. SD Card (AutoRAE 2 Controller)

Refer to page 39 for details on establishing connections and transferring data with an AutoRAE 2 Controller via SD card. You must remove the SD card from the AutorRAE 2 Controller and connect it to a PC, and then open it via ProRAE Studio II.

## 5. Port Configuration

In addition to connecting the instrument and computer, you may need to configure the port. The following steps guide you to getting the correct port number.

- 1. Connect the instrument to your computer using a USB cable (this may require an adapter).
- 2. Configure your computer's port. Follow this path:

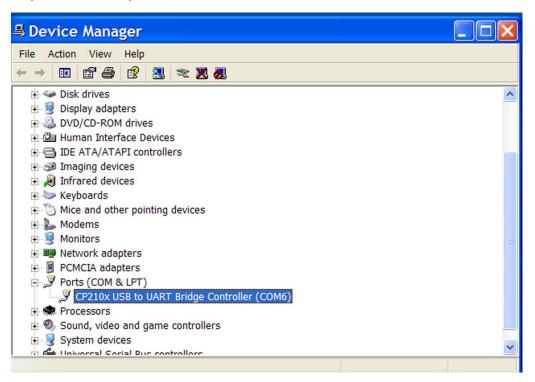
Start >> Settings >> Control Panel >> System.

3. You now see the "System Properties" dialog box. Click "Hardware."

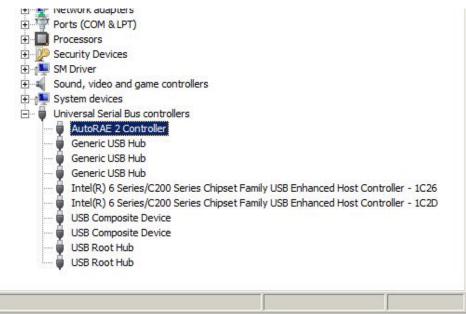
oyocom re	estore A	utomatic Upda	ates	Remote
General	Computer Nam	e Ha	rdware	Advanced
evice Man	12.00r			
	he Device Manager li	sts all the hard	ware devices	installed
or 📡	n your computer. Use	the Device Ma		
pr	operties of any devic	e.		
			Device Mar	nager
)rivers				
	river Signing lets you			
式 🖌 co	river Signing lets you ompatible with Windo ow Windows connect	ws. Windows	Update lets yo	ou set up
式 🖌 co	ompatible with Windo ow Windows connect	ws. Windows	Update lets yo Update for dr	ou set up ivers.
式 🖌 co	ompatible with Windo	ws. Windows	Update lets yo	ou set up ivers.
	ompatible with Windo ow Windows connect Driver Signing	ws. Windows	Update lets yo Update for dr	ou set up ivers.
ardware P	ompatible with Windo ow Windows connect Driver Signing rofiles	ws. Windows I ts to Windows	Update lets yo Update for dr Windows Up	ou set up ivers. odate
ardware P	ompatible with Windo ow Windows connect Driver Signing	ws. Windows to Windows	Update lets yo Update for dr Windows Up	ou set up ivers. odate
ardware P	ompatible with Windo ow Windows connect Driver Signing rofiles ardware profiles provi	ws. Windows to Windows	Update lets yo Update for dr Windows Up	ou set up ivers. odate
ardware P	ompatible with Windo ow Windows connect Driver Signing rofiles ardware profiles provi	ws. Windows to Windows	Update lets yo Update for dr Windows Up	ou set up ivers. odate
ardware P	ompatible with Windo ow Windows connect Driver Signing rofiles ardware profiles provi	ws. Windows to Windows	Update lets yo Update for dr Windows Up ou to set up a	ou set up ivers. odate

4. Click "Device Manager." You should see a list of devices in and attached to your computer. Scroll down the list until you see "Ports."

5. Open Ports (click on the "+" to the left of it) and you should see the name of the driver, plus its port number (for example, COM6). Write down this port number; you may need it when you start ProRAE Studio II.



**Note:** The USB port connection is shown under "Universal Serial Bus Controller," which is below "Ports (COM & LPT)" in the list. It should require no configuration, but it does tell if the connection is working properly.



6. Close Device Manager and System Properties.

## 6. Starting ProRAE Studio II

## 6.1. ProRAE Studio II "Dump" Function

#### **IMPORTANT!**

By default, ProRAE Studio II provides a "dump" function that generates a text file named "dump.txt," which it places in the ProRAE Studio II folder in the computer's Program Files folder (for example, C:\Program Files\RAE Systems Inc\ProRAE Studio II). This file is very useful if you ever run into a problem with the program and require technical support. If you wish to send this file, do not start up ProRAE Studio again before you can make a copy of this file, because this file will be truncated when ProRAE Studio II is started.

To access this, use your mouse to right-click on the shortcut to ProRAE Studio II. You will see this window:

Security [ General	Sector sector	s Versions	Security	1 500 1	
-		mpatibility	General	Details Shortcut	Previous Versions Compatibility
ProRAE Stud	dio II		Pro F	RAE Studio II	
Target type: Applicatio	n		Target type: A	Application	
Target location: ProRAE S	Studio II		Target location: P	ProRAE Studio II	$\frown$
Target: )\RAE S	ystems Inc∖ProRAE Studio	II\PRS2.exe"	Target:	ystems Inc∖ProRAE Studi	d II\PRS2.exe-nodump"
Start in: "C:\Prog	ram Files (x86)\RAE System	is Inc\ProRAI	Start in:	"C:\Program Files (x86)\F	RAE Systems Inc\ProRAI
Shortcut key: None			Shortcut key:	None	
Run: Normal w	vindow	•	Run:	Normal window	•
Comment:			Comment:		
Open File Location	Change Icon A	dvanced	Open File Loc	ation Change Icon	Advanced
	OK Cancel	Apply	-	οκ	Cancel Apply

If you choose to omit the "dump" function, you can disable it by adding a suffix of "-nodump" to the program shortcut.

**Note:** The path may be different from that shown in this example, depending on where the installation has been located.

## 7. Starting ProRAE Studio II From The Desktop

With your computer and monitor connected via cable, you are ready to start communication.

- 1. Follow the instructions in your monitor's User's Guide. This includes turning the monitor on and making sure it is connected either directly via cable, or through a cradle that is connected to the computer via a cable. Some monitors automatically sense the computer and software, and place themselves in communication mode. Others, such as the ppbRAE 3000, for instance, require that you place it in PC Communications mode.
- 2. Double-click the ProRAE Studio II icon on your desktop to start the program:



3. The program starts and a login dialog box appears:

Login	
Select User Type O Basic User (No password) O Data Manager O Administrator	
	ОК

**Note:** There are three access levels. The following sections cover the Administrator level, since it has the greatest functionality. "Basic" allows viewing only, whereas "Data Manager" allows reading the datalog and configuration but does not allow changes, and Basic User requires no password.

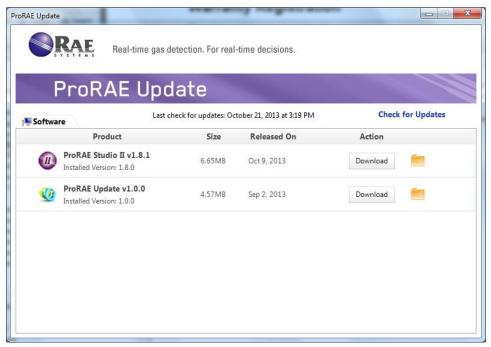
Type the password and click "OK."

**Note:** The default password is "rae". This password will provide you with full access. You can change it later (refer to page 19).

ProRAE Studio II may display a message window reminding you that one or more of your instruments has not been registered. For more information, see page 17.

## 7.1. Automatic Updates via ProRAE Update

When you start ProRAE Studio II and log in, ProRAE Update automatically checks with RAE Systems for updates to ProRAE Studio (this requires an active connection with the Internet). If any updates are available, it shows them, along with new features, version number, and release date. You can then download any updates, or dismiss them and perform updates at a later time.



## 8. Main Toolbar

Along the top of the ProRAE Studio II main window are five buttons:



Button	Function
17	Open a ProRAE Studio file
H	Save the current data to a file
	Print information shown in bottom pane
A	Automatically detect instruments
M	Manually detect instruments
×	Setup options (configuration)

These buttons are the same as the text options above them in "File" and "Operation," but follow a different organization structure. There are a few differences, however. Under "File," there are two different saving options ("Save," which is simple saving, and "Save As..." for saving the file with a new name and/or location). In addition, there is a "Change Password..." option and an Exit command. Note that there is also a "Help" option.

#### File

Open... Close Save Save As... Print Print Preview Print Setup Change Password... Exit

#### Operation

Auto Detect Manual Detect Setup... Language

Help

User's Guide ProRAE Studio II Registration Batch Instruments Registration Check for Updates About...

The Help section contains several useful features:

**User's Guide.** Click the "User's Guide" to view a PDF of the User's Guide on your screen.

**ProRAE Studio II Registration.** Check your ProRAE Studio Registration, or make and submit changes.

	time gas detection. For real-time decisions.
ProRAE	Studio II
	g you informed about this product upgrades and new information that is important for you
l your company. Click <u>here</u> t	to know more
Please provide the following	ng information: Machine ID:2452098176-4F5E
*Company Name:	Igneous Industries
* Address:	2468 Hook Rd.
* Address: * City:	2468 Hook Rd. Brandish
	Brandish
• City:	Brandish
* City: * State / Province: * Country:	Brandish WY USA
* City: * State / Province: * Country: * Postal / ZIP Code:	Brandish WY USA 82445
* City: * State / Province: * Country:	Brandish WY USA

If you make changes, click Update to submit them to RAE Systems (your computer must be connected to the Internet). The data is retained at RAE Systems, as well as in your computer.

**Batch Instruments Registration.** When you have one or more instruments connected to your computer running ProRAE Studio II, and you select Batch Instruments Registration, it checks whether those instruments are registered with RAE Systems. Any instruments that are connected but are not registered show up in the list. To register them, click Register. Alternatively, you can do it some other time; just click Remind Me Later. If you want to bypass this process and allow ProRAE Studio to automatically register new instruments whenever they are connected to the computer and ProRAE Studio II is running, click the check box labeled "Register new instruments automatically".

Serial Number	Model	Name
500100003	PGM-1800	ToxiRAE Pro

Note: The computer must be connected to the Internet.

**Check for Updates.** When you click this, ProRAE Studio contacts RAE Systems to see if there are any updates available. If there are, a window displays the product name, available version, size, and release date. It also includes information about new features in the version. Finally, each available update has a "Download" button. Click this to download the update.

Note: The computer must be connected to the Internet.

**About.** Click this to see which instruments are supported by the version of ProRAE Studio II that you are using. A second tab titled "Module Info" shows the running program's version and a list of support applications running in the background.

out	ProRAE Studio II V1.8.1 Build136		
	© 2014 RAE Systems by Honeywell	ОК	
Supporte	d Instrumments   Module Info		
Index	Instrument Name	Library Information	
1	Auto RAE2 Controller(DKS-6000)	V1.00, 20120304	
2	MultiRAE (Pumped) Cradle(DKS-6001)	V1.00, 20120304	
3	ToxiRAE Pro Cradle(DKS-6002)	V1.00, 20130108	
4	QRAE 3 Cradle(DKS-6003)	V1.00, 20140108	
5	ToxiRAE Pro PID(PGM-1800)	V1.01, 20111020	

## 8.1. Changing Your Password

ProRAE Studio II accommodates two different passwords for Data Manager and Administrator. (No password is needed for Basic User.)

- 1. Select the password you would like to change.
- 2. Type the new password.
- 3. Type the new password again.
- 4. Click "OK."

Note: Passwords are case-sensitive.

ange Password		
assword 🗘 Data Manager	Administrator	ок
New Password		Cancel
Repeat New Password		_

The two new passwords you supply must match. If they do, then you see this message:



Click "OK" to return to the main screen.

If you typed two new passwords that do not match, you see this message:

ERRO	R	
8	The two new passwords do not match. Please try again.	

Click "OK" to dismiss this message and then type the passwords again.

**Note:** If you forget your password, use the resource CD to reinstall the program. The default password will be restored.

### 8.2. Automatic Detection

If You Are Using An AutoRAE 2 Cradle: You must put the AutoRAE 2 Cradle in PC Communications Mode before attempting to detect it with ProRAE Studio II. Press and hold the Bump button until "PC" is shown in the display.

Before performing any other operation, you must tell ProRAE Studio II to detect an instrument. The Automatic Detect function is convenient since it requires just clicking one button.

To automatically detect an instrument, click the Automatic Detect button:



The Automatic Detect dialog window appears and the detection process begins. When an instrument is detected, it is shown in the following way:

strument	Version	Serial Number	Device Location	Baud Rate	-1
AutoRAE 2 Contr	oller V1.20	T0210007P1	AutoRAE2 Controller(T0210007P1)	N/A	

The instrument shown depends on what is connected to your computer. To continue, select an instrument. If you click "Cancel," no instrument is selected and the dialog box closes.

**Note:** If your computer has difficulty connecting with an instrument, click "Refresh." If an instrument does not show up, check your cables, the instrument, and the port number. If you have already selected an instrument and open Automatic Detection again and click "Select," you will see this dialog box:

PROM	РТ		
1	This operation will drop the c	urrent data. Would you	like to continue?

If you click "Yes," data is taken from the selected instrument and overwrites the data in ProRAE Studio II. If you click "No," the data is not overwritten, and the dialog box closes.

## 8.3. Manual Detection

You may want to use manual detection for an instrument if it does not show up in the list when you click Automatic Detection. Also, it may be faster than using Automatic Detect, since it does not check all existing COM ports.



Before you click the Manual Detection button, you should click the Setup Options button and set the COM Port:



The Configuration dialog box appears:

Communication Setup				
Device Location	DM3			
Baud Rate 11	5200	<u> </u>	uto	Browse
AutoRAE 2 Controller				
IP Address List 12	7.0.0.1		•	Delete
TCP Port 98	00			
Date/Time Format				
Date/Time Format	/d/yyyyy	•	4/1	0/2014
		•		0/2014 :47:39
Date Format M. Time Format H		<b>•</b>		
	H:mm:ss	Microsiev	10	

Click "Refresh" to refresh the COM port selections. Then pull down the appropriate COM port that matches the location of your instrument. You can select a communication

baud rate (the rate of data transfer), or simply click "Auto" and let the program determine the optimum transfer rate.

**Note:** If you are using an Ethernet cable or WiFi to connect the AutoRAE 2 Controller (version 1.22 or higher) to a network, you must set the IP address and TCP port.

Now click "OK." Configuration is complete.

When you click the Manual Detection button, this dialog box appears, showing information about the selected instrument:

				l	Refresh
nstrument	Version	Serial Number	Device Location	Baud Rate	
AutoRAE 2 Co	ontroller V1.20	T0210007P1	Auto RAE2 Controller(T0210007P1)	N/A	

Click "OK" to load the instrument's data into ProRAE Studio II. A warning dialog box appears:

PROM	РТ	
1	This operation will drop the c	current data. Would you like to continue?
	Yes	No

If you click "Yes," data is taken from the selected instrument and overwrites the data in ProRAE Studio II. If you click "No," the data is not overwritten, and the dialog box closes.

# 9. Setup (Configuration) Module

Once you have selected either Manual or Automatic detection, some or all of the following buttons appear along the left side of the screen:



**Note:** The icons/options available depend on the operation mode and the instrument. In Data Manager mode, only Setup, Datalog, and Gas buttons are shown. In Basic User mode, only Setup and Gas are shown.

Click "Setup" to configure ProRAE Studio II by downloading data from the instrument:



A progress bar shows that the data is being transferred. The process takes a few seconds (elapsed time is indicated).

Downl	oad Config	2
6		Cancel
9	Downloading	Time Elapsed: 2

Once configuration is done, the screen is now filled with data from the instrument:

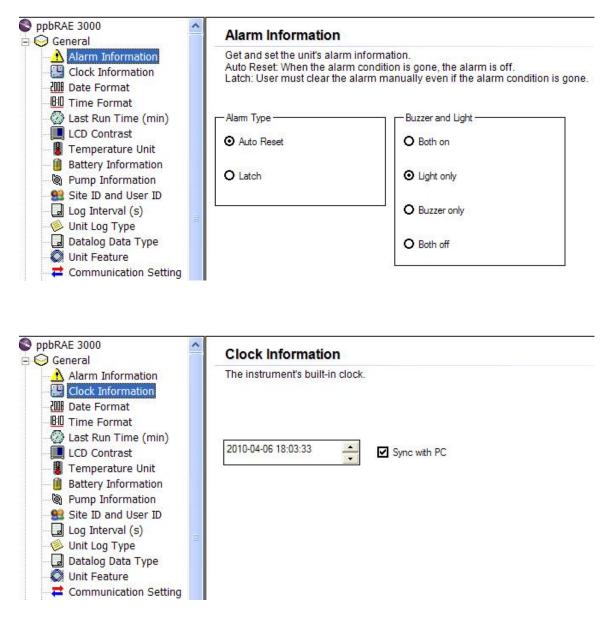
ProRAE Studio II - [Untitled] File Operation Help			
	A M 🔀		⊡ Online ⊟ MultiRAE2 Cradle(F011DEMO14) MultiRAE Pro(MCB30898N1)
Setup Datalog Control	MultiRAE Pro Model :: PGM-6240 SN:MCB30899N1  MultRAE Pro General  MultRAE Pro Clock Information Clock Information Clock Information Clock Information Clock Contrast(%) Cloc Fip Clock Contrast(%) Cloc Fip Clock Contrast(%) Cloc Fip Clock Contrast(%) Cloc Fip Clock Contrast(%) Clock	Alarm Information Get and set the unit's alarm Auto Reset: When the alarm Latch: User must clear the a Alarm Type O Auto Reset O Latch	Information. n condition is gone, the alarm is off. alarm manually even if the alarm condition is gone. Buzzer and Light All On Ught Only Ubrator Only Buzzer Only Buzzer + Vibrator Ubrator + Light All Off
MultiRAE2 Cradle V1.00	COM5 115200bps		Administrator //

**AutoRAE 2 Controller Or Cradle:** If you are using an AutoRAE 2 Cradle or AutoRAE 2 Controller, the configuration screen looks like this:

ProRAE Studio II - [Untitle File Operation Help	d]			
🗐 💾 🥪	A M 🔀		Online     MultiRAE2 Cradle(F011DEMO14)	
Setup	🛛 🚭 MultiRAE2 Cra	adle		
	Model:DKS-6001 SN:F011DEM014			
Firmware Firmware	MultiRAE2 Crade MultiRAE2 Crade General Gas Config 1 Gas Config 1 Gas Config 2 Gas Config 3 Gas Config 3 Gas Config 5 Gas Config 8	Gas Config 8 Please expand the node to display the details.		
MultiRAE2 Cradle V1.00	COM5 115200bps		Administrator	

The name of the instrument is shown at the top, as well as the model and serial number. In the pane on the left side of the window is a "tree" of controls, including all of the parameters you can read and adjust. As you click on one of the items in the "tree," a new parameter is selected and its information is shown in the right pane.

Here are two selections. Notice how the data in the right pane changes as a selection is made in the left pane.



**Note:** Each instrument has different parameters shown in the left pane, depending on parameters available in the instrument itself.

## 9.1. Configuration Toolbar

There is also a toolbar across the top of the right pane for moving configuration data to and from the instrument.



## 9.1.1. Configuration Toolbar Button Function Summary

Button	Function
¥	Update the current item's configuration from the same instrument
1	Set the current item's configuration from the same instrument
	Download all items' configurations from the same instrument
	Upload all items' configurations to the same instrument
-	Upload all items' configurations to the same instrument, without checking the serial number
*	When the root of the tree is selected, this button is blue (instead of gray), and allows you to export the configuration data to a text file.

**Note:** An antenna icon alongside this toolbar indicates that the instrument has wireless functionality.

M. Y		
V V		
C ppbRAI	1	
Model: 000-3000039	Y	
C profitAE 30000		Al

## 10. Datalog Module

Click the button labeled "Datalog" to access the data in the datalog from your instrument.

#### **IMPORTANT!**

**AutoRAE 2 Controller:** If you are using an AutoRAE 2 Controller with a PC running ProRAE Studio II, refer to page 11, "Transferring AutoRAE 2 Controller Data To A Computer," for details on downloading data.



The Datalog window is now shown in the right pane and the "Datalog" button is highlighted.



Button	Function
	Order
	Reverse order
N	Display record number
《 》	Expand or collapse
2	Refresh (update) event information
	Download all data
	Download selected events
-	Download current event
	Summary (of current events)
	Sheet (sheet views of all current event data)
1	Graph (trend line of current event's data)
STEL	TWA/STEL
	Export selected events
A A	Export/print options
7	Filter
$\varkappa$	Erase datalog

## **10.1. Datalog Button Functions Summary**

• Order and Reverse Order. Use these two buttons to sort the event display in sequential order or in reverse order.

**N** Display Record Number. This button allows you to choose to display whether the event's name or event record number is in the left list.

Data	alog						
		N	«				
001	41		Γ	No curre	ent even	ıt.	
002	16						
003	1057						
004	370						

**Expand/Collapse.** Expand or collapse the data in the column.

**Refresh Event Information.** When you click this button, the events are downloaded. **Note**: This does not work for all instruments.

Event ID	Date	~	Automatic
001	09/09/14 - 09/09/14		
002	09/09/25 - 09/09/25		Checked Only
003	09/09/25 - 09/09/25		chostos chij
004	09/10/08 - 09/10/08		Download All
005	09/10/08 - 09/10/08		Download Al
006	09/12/01 - 09/12/01		
007	09/12/01 - 09/12/01		Just Update
008	09/12/01 - 09/12/01		
009	09/12/01 - 09/12/01		Cancel
010	09/12/01 - 09/12/01		
011	09/12/01 - 09/12/01		
012	09/12/01 - 09/12/01		
013	09/12/01 - 09/12/01		
014	09/12/01 - 09/12/01		
015	09/12/01 - 09/12/01		
016	09/12/01 - 09/12/01		
017	09/12/01 - 09/12/01	10000	
018	09/12/01 - 09/12/01	*	

Button	Function
Automatic	Download the events that have not been downloaded yet.
Checked Only	Download only checked events
Download All	Download all events. It acts like the Download Data ( ) button
Just Update	Just update the item list to the list control
Cancel	Cancel (do nothing and return to the main program window)

Five buttons stacked along the right side provide the following options:

**Download All Data.** Download all data in the datalog.

**Download Selected Events.** Only download items that you have selected from the list. If you want to download events directly from the datalog display, you can first pick multiple events by pressing the "Shift" key while pressing the left mouse button. (Ctrl-click on each event.) Then press the right mouse button to choose "Download Selected Event(s)" from the pop-up menu, as shown:

001	09/01/19	Summary
002	09/01/19	
003	09/01/19	Unit Name Unit SN
004	09/01/20	Unit Firmware Ver
005	09/01/20	
006	09/01/21	Running Mode
007	09/01/21	Update Event Info
008	09/01/21	
009	09/01/21	Download <u>S</u> elected Event(s)
010	09/01/21	Export selected event(s) 5
011	09/01/22	Order
012	09/01/22	<u>R</u> everse
013	09/01/23	Rename event
014	09/01/23	Fnd

Other options allow you to export selected events, change their order, and even rename them.

**Download Current Event.** Although many events can be selected at one time, there can be only one focused event. The focused event is the current event. Its content is displayed in the datalog window.

**Summary.** This views the current event's summary information.

Summary	
Unit Name	MiniRAE 3000
Unit SN	592-000833
Unit Firnware Ver	V1.01
	Hygiene Mode Avg; Max; Real Continuous Auto No Pause in Communication Mode
Site ID	RAE00001
User ID	00000001
Begin End Sample Period(s)	2009/02/02 08:20:30 2009/02/02 14:06:27 25 830
Sensor	VOC(ppb)
Span	100000
Span H	N/A
Low Alarm	50000
Migh Alarm	100000
Over Alarm	15000000
STEL Alarm	25000
TWA Alarm	10000
Calibration Time	2008/02/25 20:50
Peak	110
Valley	0
Average	16

**Sheet.** The sheet views all data of the current event.

	Date/Time	VOC (ppb) (Avg)	VOC (ppb) (Max)	VOC (ppb) (Real)
001	2009/02/02 08:20:30	11	72	0
002	2009/02/02 08:20:55	0	0	0
003	2009/02/02 08:21:20	0	0	0
004	2009/02/02 08:21:45	0	0	0
005	2009/02/02 08:22:10	0	0	0
006	2009/02/02 08:22:35	0	0	0
007	2009/02/02 08:23:00	0	0	0

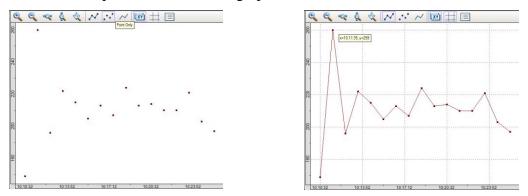
**Note:** You can copy content from this grid if you want to paste it into a report, etc. Use Shift-left click to select and Control-C to copy. (Most programs let you use Control-V to paste, but check your program's user's guide to be sure.)

**Graph.** The graph shows the trend line of the current event's data. When you select this graph view, an additional toolbar appears, with options for viewing.



Button	Function
e,	Zoom in
	Zoom out
	Fit width
Ś.	Fit height
<b></b>	Fit page
N	Points-and-lines graph
	Points-only graph
$\sim$	Lines-only graph
(YX)	Show/hide X and Y information
#	Show/Hide axis (graph lines)
	Show/hide notes

Here are examples of two different graph views:



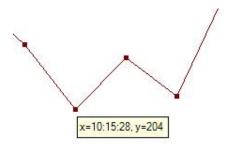
**Note:** You can move the graph around in the window by clicking and dragging with your mouse.

**Zoom In** and **Zoom Out** give you different enlargements of the graph, and can be helpful when trying to examine dense data.

Fit Width, Fit Height, and Fit Page also provide different views, compressing or expanding the graphic area to fit your needs.

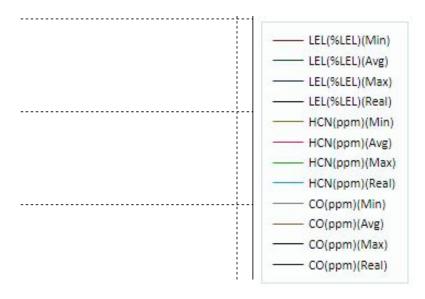
The **Points-and-lines, Points-only,** and **Lines-only** graph styles change the references so that you can see different representations of the data with greater or less reference information. Only one of these can be selected at a time.

**Show/Hide X and Y information** lets you turn on or off a tool tip that follows your cursor as you move your mouse. The tool tip window shows the cursor's X and Y locations on the grid, which is helpful during discussions of locations and trending.



**Show/Hide graph lines**, as its name implies, turns on and off the vertical and horizontal grid behind the graph.

**Show/Hide notes** allows you to view part of the graph with a label that tells you what the line represents. The small dialog box indicates the line color, allows you to show or hide the line by clicking the check box.



**TWA/STEL.** This refers to time-weighted average (TWA) and short-term exposure limit (STEL) values. The values shown on the screen are not from the instrument, but are worked out by ProRAE Studio II. Typically, you would set the instrument's measuring type for accurate TWA/STEL values. Refer to RAE Systems Technical Note TN-119 for information on calculating TWA and STEL values.

**Export Selected Events.** Export selected events to text (.txt) format. You can select more than one event and export them simultaneously into a single file. Select from the list of events by Control-clicking on each item to select. When they are highlighted, click the Export Options button. A dialog box appears, which allows you to select where the file will go, plus you can name it (the default name includes "PRS\_EXPORT" followed by a date; for example, PRS\_EXPORT\_20100407.txt)

**Export/Print Options.** When you click this button, the following dialog box with two options appears:

Export/Print Options	×
Export Options	
Use 'TAB' instead of comma to separate	
TWA/STEL	
Print Options	
Summary	
Sheet	
🗹 Graph	
TWA/STEL	
ОКСС	ancel
	ancei

You can elect to export TWA/STEL data, and to save the data with a tab instead of a comma to separate items in each row (this is useful for files that will be imported into spreadsheets such as Microsoft Excel). In addition, there are print options, which allow you to select Summary, Sheet, Graph, and/or TWA/STEL.

Right-clicking in the graph gives you a menu with the options indicated by the icons, plus additional options.

Point	t Marks	
Scat	ter Graph	
✓ Trace	e Mouse Coordin	nates
🖌 Grid		
Fit	N	•
Prop	erties	
Split	Y Axis	
Filter	·	
Cop)	y Graph	
Expo	ort Graph	
Print	Graph	

Point Marks. Shows the sample points on the graph as dots on the line.

Scatter Graph. Shows only the sample points as dots (no line).

**Trace Mouse Coordinates.** When this is on, as you move the mouse along a line on the graph, it shows X and Y coordinates, as well as the name of the sensor/gas when you mouse over a Point Mark.

Grid. Turns the grid on and off (shows or hides it).

**Fit...** This provides the option of different views, compressing or expanding the graphic area to fit your needs, once the image is zoomed in or out.

**Properties**. This pop-up window has controls for setting/changing colors for the graph lines, showing and hiding one or more graph lines.

Properties
General
Sensor Selection
Sensor Name VOC(ppm)(Avg)
Color Hide Hide Others Show All
✓ Point Marks
Trace Mouse Coordinates
Show Grid
OK Cancel Apply

**Split Y Axis.** Selecting this splits each line into its own graph, with all aligned to the time values.

**Filter.** This lets you independently set the "from" and "to" times in order to focus on one part of the time line for graphic display.

Copy Graph. This copies the graph.

Export Graph. This allows you to export the graph as a .png graphic file.

**Print Graph.** This lets you send the graph to a printer (if one is connected to your PC).

**Filter.** Once you select an event, you can filter it for time and value ranges, which is helpful when you want to see only data in a specific date range or in in a specific range of TWA or STEL values. When you click the Filter button, this window appears:

From	2014/04/14 11:49:35	
То	2014/04/14 11:49:35	<u>·</u>

**Time Filter.** Set time and date values for a date range ("From" and "To") by clicking on the portion you want to change, and then either type over the value or use the up/down arrows to the right of each field to increase/decrease the value.

**Erase Datalog.** Clicking this erases the instrument's datalog.

**CAUTION!** If you erase the datalog, it cannot be recovered—all data is deleted. Therefore, if you must keep the datalog's information, save it first.

# 11. Transferring AutoRAE 2 Controller Data To A Computer

Bump and calibration data is collected each time an instrument is bump tested or calibrated. The AutoRAE 2 Controller collects this data and stores it on an SD Card, providing a convenient means of storage and easy data transfer.

Follow this procedure for reading calibration and bump testing data from an AutoRAE 2 controller:

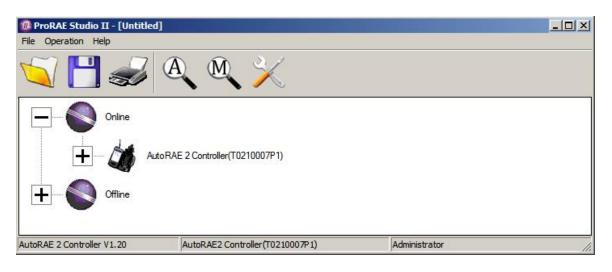
- 1. Connect a USB cable (or use an Ethernet cable or WiFi; refer to the AutoRAE 2 User's Guide for connection and configuration information) to the AutoRAE 2 Controller and to a PC running ProRAE Studio II software
- 2. Make sure the AutoRAE 2 Controller has power and is turned on.
- Start ProRAE Studio II software on the PC.
   Note: You can get reports with any level of access privileges.
- 4. Click "Detect the instruments automatically" (the magnifying glass icon with the letter "A" in it). After a few seconds, the AutoRAE 2 Controller is found and it is shown, along with its firmware version, serial number, COM port:
- 5. Click "Select."

tection complete.					Refresh
nstrument	Version	Serial Number	Device Location	Baud Rate	·
AutoRAE 2 Controller	V1.20	T0210007P1	Auto RAE2 Controller(T0210007P1)	N/A	
			Sele	ct	Cancel

This screen appears:



- 6. Expand either Online or Offline to view Instruments.
- 7. Click "Instruments."



Instruments that have been bump tested and calilbrated on a system with this AutoRAE 2 Controller are shown:

ProRAE Studio II - [Untitled]			<u> </u>
File Operation Help			
	$\mathcal{A}$ $\mathcal{M}$ $\mathcal{H}$		
Auto R/	AE 2 Controller(T0210007P1)		
	MultiRAE(MBB3Z045N8)		
	MultiRAE(MBB3Z044N8)		
	ToxiRAE Pro (G0242029PB)		
AutoRAE 2 Controller V1.20	AutoRAE2 Controller (T0210007P1)	Administrator	1.

8. Double-click on an instrument to view its reports:

ProRAE Studio II - [Untitled]		
File Operation Help		
<u>i i i i i i i i i i i i i i i i i i i </u>		
Online Conline AutoRA	NE 2 Controller(T0210007P1)	
<i>[</i> ]	MultiRAE(MBB3Z045N8)	
	MultiRAE(MBB3Z044N8)	
	ToxiRAE Pro (G0242029PB)	
AutoRAE 2 Controller V1.20	AutoRAE2 Controller (T0210007P1)	Administrator

The Reports window opens for this instrument:

ProRAE Studio II - [Untitled     File Operation Help	]	-	
🟹 💾 🥪	A M 🔀	⊟ Offline ⊡ Instruments └── ToxiRAE Pro (G0242029PB)	
Datalog	RAF	ORAE ORAE ORAE	C
	SRAE STERNS	Tip: Please make sure to put the unit firmly on the cradle for a better connection.	0
AutoRAE 2 Controller V1.20	AutoRAE2 Controller (T0210007P1)	RAE SRAE RAE	

9. Click "Reports," and the window changes:

ProRAE Studio II - [Untitled] File Operation Help			
	A M 🔀	⊡ Offline ⊟ Instruments ☐ ToxIRAE Pro (G02)	42029PB)
Datalog	Calibration/Bump Test	Reports	
	▲ ▼ ≪ え 🖏		×
ିନ୍ତୁ Reports	No ci	irrent report	
AutoRAE 2 Controller V1.20	AutoRAE2 Controller (T0210007P1)		Administrator

10. Click the "Download All Reports" button:



If there are no reports, an alert appears:



If there are reports, then they are downloaded and put in a list in the left column:

ProRAE Studio II - [Until File Operation Help	led *]	
🧃 💾 🕰	. Q. 🔀	⊖ Offine ⊖ Instruments - MubRAE Lite(MAB10101N4)
Reports	Calibration/Bump T	Test Reports
Reports		
	001 2012/05/14 17:08:52	No current report

If the list is long, you can change the order so the list order is reversed (from 001, 002, 003, etc., to 003, 002, 001, etc.). Press one of these two buttons to change the sort order:



11. Select a report by clicking on the report's date and number:

ProRAE Studio II - [Untitled] File Operation Help		
🟹 💾 🥪	A, M, X	B-Offline È⊦ Instruments └─ MubIRAE Lite(MAB10101N4)
ିନ୍ତୁ Reports	Calibration/Bump T	est Reports
•1	▲ ▼ ≪ 2	
	001         2012/05/14         17:08:52           002         2012/05/14         17:17:45	No current report

**Note:** You can change the name of a report by double-clicking its name and then changing the name in the dialog box that pops up:

ОК
Cancel

12. When you are done, click "OK."

**Caution!** Once you change the name of the report and click "OK," the change cannot be undone. If you want to change the report's name back to its original, you must do it by typing in the information.

With a record set highlighted, click any of the three report types:

	Calibration report
<b>*</b>	Bump Test report
	Policy Violation report

Depending on your selection, a bump test, calibration, or policy violation report is shown in the right window:

ProRAE Studio II - [Untitled File Operation Help	1							<u>_0×</u>
		₫ 🗙			🚊 [01] Q	oRAE 2 Controller( RAE 3 Cradle(T026 RAE 3(M02GB2001	A10021)	
Setup	Calib	oration/B	ump T	est Reports	Current Report: 001 2014/	04/01 10:38:01		
Setup		▼≪	2				*	
Datalog		2014/04/01 10:38				s by Honeyw		-
	<b>1</b> 003	2014/04/01 10:40	:45		No.:	T CERTIFICAT	<u> </u>	
វិទ្ទ Reports		2014/04/01 16:32		TEST SUMMARY				
Firmware				Bump Test Result	Fail			
				Recommended Action				
				Test performed on	4/1/2014 10:37:50	D		
~~~				Instrument Tested Product Name	QRAE 3			
				Model Name FirmWare	PGM-2530 V1.16			
				Serial Number	M02GB20015			
				AutoRAE 2 Automatic	Test and Calibration Syst	em		
				2	Controller		Cradle	
				Product Name Model Name	AutoRAE 2 Control DKS-6000	ler	DKS-6003	
				FirmWare	V1.20		V0.00	-
				Serial Number	F0xx000001		T026A10021	
				DETAILED TEST RESULT	<u>s</u>			
				Audible Alarm	N/A			
				Visual Alarm	N/A			
				Gas Information				
				Sensors Installed	Serial Number	Status	Result	-
			4	LEL(%LEL)		Enable	Fail	
AutoRAE 2 Controller V1.20	AutoRAE	E2 Controller (T021	.0007P1)			Ad	dministrator	1.

## **11.1. Exporting Reports**

The report can be exported for archiving or sending. It can be saved as a Rich Text Format (.rtf) file, making it easy to import into most word-processing programs such as Microsoft Word, or it can be saved as a text file (.txt). Click the "Export Current Report" button, locate where you want to save the file, select the type of file (RTF or TXT), rename it if you like, and then click "Save."

## **11.2. Saving A Configuration Upon Exit**

When you close ProRAE Studio II after you have downloaded reports or made changes, you will see this prompt:



If you do not want to save changes to the configuration, click "No." If you want to save the changes, click "Yes." Select a name for the file, which will be saved as a ProRAE Studio configuration file with an extension of ".prs," and select where you would like to save it. Then click "Save."

## 12. Using A Stand-Alone AutoRAE 2 Cradle For Datalog Transfer, Monitor Configuration, and Firmware Upgrades

Datalogs can be downloaded from a MultiRAE, ToxiRAE Pro, or QRAE 3 to a computer, and firmware updates and configuration data can be uploaded to a MultiRAE via the USB port on a stand-alone AutoRAE 2 Cradle. Use the included USB cable to connect the AutoRAE 2 Cradle to a computer running ProRAE Studio II (version 1.5 or higher).

Follow the instructions in Section 10 of the MultiRAE User's Guide for more details on accessing datalogs and other procedures on the MultiRAE-family instruments.

# **13. Reports Module**

The Reports Module is accessed by clicking the button labeled "Reports." This module provides you with access to calibration and bump reports, as well as information about instrument configuration. Reports can be printed.



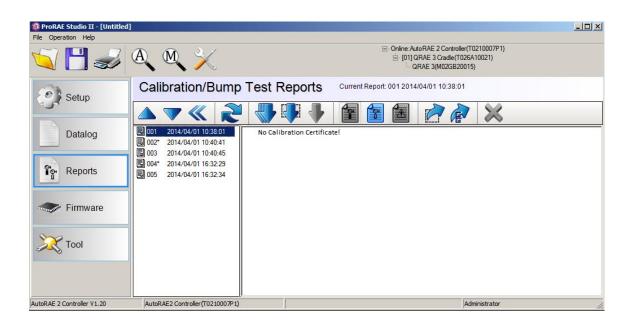
Make sure an instrument or AutoRAE 2 cradle is attached to the computer, and click the "Download All Reports" icon:

ProRAE Studio II - [Untitled] File Operation Help					
🟹 💾 🥪	A M 🔀			AE2 Cradle(F011DEMO14) ultiRAE Pro(MCB30898N1)	
Setup	Calibration/Bump T	est Reports			
				×	
Datalog		rent report			
िक Reports					
Firmware					
X Tool					

While reports are being transferred from the instrument to the computer, a progress bar is shown:

	Reports	
		Cancel
	Downloading	Time Elapsed: 2
<b>V</b>	Downloading	Time Elapsed:

Once the reports have been downloaded to ProRAE Studio II, a list is shown:



To view a report, click on its name/date/time in the list. The report is now shown in the pane to the right:

ProRAE Studio II - [Untitled] File Operation Help	]								<u>_                                    </u>
	A	₫, 🏏				🚊 [01] G	to RAE 2 Controller(T0 RAE 3 Cradle(T026A RAE 3(M02GB20015)	10021)	
Setup	Cali	bration/B	ump Te	est Reports	Current	Report: 001 2014	/04/01 10:38:01		
		▼≪		🗣 🗣 🦊		<b>*</b>		×	
Datalog	<b>001</b>	2014/04/01 10:38					s by Honeywe		-
	003	2014/04/01 10:40	):45			No.:		-	
ि Reports	005	2014/04/01 16:32	2:34	TEST SUMMARY					
Firmware				Bump Test Result		Fail			
				Recommended Action			<u>8</u> 1		
Tool				Test performed on		4/1/2014 10:37:5	i0		
~~~~				Instrument Tested Product Name		QRAE 3			
				Model Name		PGM-2530			
				FirmWare		V1.16			
				Serial Number		M02GB20015			
				AutoRAE 2 Automat			tem		
						Controller	11	Cradle	
				Product Name Model Name		AutoRAE 2 Contro DKS-6000	ller	DKS-6003	
				FirmWare		V1.20		V0.00	
				Serial Number		F0xx000001		T026A10021	
				DETAILED TEST RESU	JLTS				
				Audible Alarm		N/A			
				Visual Alarm		N/A			
				Gas Information					
				Sensors Installed		Serial Number	Status	Result	and a
				LEL(%LEL)		*****	Enable	Fail	
AutoRAE 2 Controller V1.20	AutoR	AE2 Controller (T02:					Adn	ninistrator	

If you would like to print the report, click the printer icon:



A standard printing dialog box appears, and you can select the print range, number of copies to print, etc. Alternatively, you can click File > Print to get the same printing dialog.

If you follow File > Print, you can also select "Preview," which allows you to see how your printout will appear.

# 14. Firmware Module

The Firmware Module calls the corresponding programmer for the selected instrument so that you can update the firmware (if new firmware is available).



Information about the instrument is displayed in the right pane, and a button allows you to call up the programmer for the instrument. Information about the selected instrument and its firmware version are shown, and there is a button for calling up the programmer.

**Note:** The correct programmer must be in the correct folder for it to operate. This is typically set properly during software installation. However, you may have to make sure the correct COM port number is used.

ProRAE Studio II - [Untitled] File Operation Help					
	Q Q 🔀			⊡- Online ⊟: MutiRAE2 Cradle(F011DEMO14) └─ MutiRAE Pro(MCB30898N1)	
Setup		IultiRAE Pr	o Applicatio	on Firmware	
Datalog	NONRORMAN A	Current Firmware V	/er :	V1.10	
ि Reports		Programmer : Run programmer		RAE Programmer 4000 V1.25 Build 108	
Firmware	N	/lultiRAE Pr	o Sensor F	irmware	
		Current Firmware V	/er :	V1.03	
	ſ	Programmer : Run programmer		RAE Programmer 4000 V1.25 Build 108	
MultiRAE2 Cradle V1.00	COM5 115200bps			Administrator	

## 14.1. Updating Firmware On The AutoRAE 2 Cradle

Updates to the AutoRAE 2 Cradle's firmware may be produced, and these can be loaded into the AutoRAE 2 Cradle using ProRAE Studio II software running on a PC.

- 1. Download firmware from the RAE Systems web site or from a CD-ROM.
- 2. Connect a PC running ProRAE Studio II to the AutoRAE 2 Cradle via a USB cable.
- 3. Press and hold the Bump key until "PC" appears in the display.
- 4. Start ProRAE Studio II.



5. Click "Administrator."



6. Enter the password (the default is "rae").

jin Select User Type	
O Basic User (No password)	
O Data Manager	

- 7. Click "OK."
- 8. Click "Detect the instruments automatically."



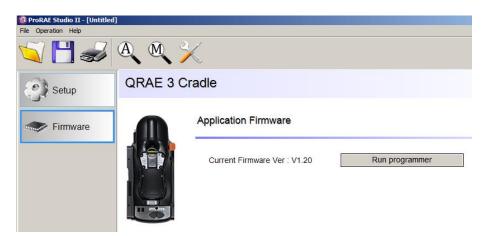
9. Select the AutoRAE 2 Cradle.

strumer	nt	Version	Serial Number	Device Location	Baud Rate		
	QRAE 3 Cradle	V1.20	T026A10021	СОМЗ	115200		

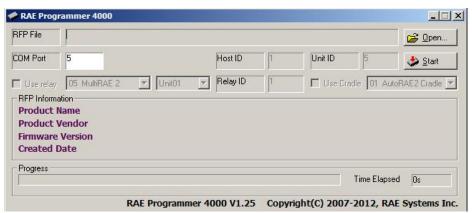
- 10. Click "Select."
- 11. The options on the left are "Setup," and "Firmware." Click "Firmware."



12. Click "Run Programmer."



The RAE Programmer	4000	window	opens:
--------------------	------	--------	--------



13. Click the button that says, "Open..."

🔁 <u>O</u>pen...

14. Find and select the firmware file with a ".rfp" extension.



15. Click "Open."



16. Click "Start."



- 17. The firmware is uploaded to the AutoRAE 2 Cradle.
- 18. Exit PC Communications mode on the AutoRAE 2 Cradle by pressing and holding "Bump." The display should now show "G8."
- 19. Exit ProRAE Studio II on the PC.
- 20. Disconnect the USB cable.

## 14.2. Updating Firmware On The AutoRAE 2 Controller

Updates to the AutoRAE 2 Controller's firmware may be produced, and these can be loaded into the AutoRAE 2 Controller using ProRAE Studio II software running on a PC.

- 1. Download firmware from the RAE Systems web site or from a CD-ROM.
- 2. Connect a PC running ProRAE Studio II to the AutoRAE 2 Controller via a USB cable.
- 3. Start ProRAE Studio II.



4. Click "Administrator."



5. Enter the password (the default is "rae").



- 6. Click "OK."
- 7. Click "Detect the instruments automatically."



8. Select the AutoRAE 2 Controller.

trument	Version	Serial Number	Device Location	Baud Rate	
Auto RAE 2 Contro	oller V1.00	F0xx000001	Auto RAE 2 Controller(F0XX000001)	N/A	

9. Click "Select."

Detect				Refr	esh
nstrument	Version	Serial Number	Device Location	Baud Rate	
Auto RAE 2 Controlle	er V1.00	F0xx000001	Auto RAE 2 Controller(F0XX000001)	N/A	
			Selec	ct Can	cel

10. The AutoRAE 2 Controller is shown, along with its serial number.

A M ×
to RAE 2 Controller(T0210007P1)

11. Double-click on the AutoRAE 2 Controller's icon, and this screen appears:



The options on the left are "Setup," "Firmware," and "Tool." Click "Firmware." This screen is shown:

ProRAE Studio II - [Untitled]		
File Operation Help		
🟹 💾 🥪	A M AutoRAE 2 Controller(T0210007P1)	
Setup	AutoRAE 2 Controller	
Firmware	Application Firmware	Upload Firmware
X Tool	Current Firmware Ver : V1.20 Target Firmware Ver : RFP File :	
	Options Upgrade for specific SN T0210007P1	
	Forcible execution operation Read-Back Check	

- 12. Where it says "RFP File:" click the button labeled "..." and locate the firmware file with the ".rfp" suffix. Then click "Upload Firmware."
- 13. Click the box labeled "Upgrade for specific SN, and then pull down the menu and select the serial number that matches the one shown in the upper right side of the window.

ProRAE Studio II - [Untitled] File Operation Help		
	$\mathcal{A}$ $\mathcal{M}$ ${\succ}$	⊡ Online — AutoRAE 2 Controller(T0210004P1)
Setup	AutoRAE 2 Contro	oller
Firmware	Current Firmware Ver :	V1.00
	Option Upgrade for specific SN Forcible execution operation Read-Back Check	T0210004P1  F0x800001 T0210004P1

- 14. Click "Upload Firmware."
- 15. Find and select the firmware file with a ".rfp" extension.

File name:	▼ RFP Files (*.RFP)	]
	Open Cancel	1
		- //

16. Click "Open."



- 17. The firmware file is uploaded to the AutoRAE 2 Controller's SD card, and the AutoRAE 2 Controller uploads the firmware to the AutoRAE 2 Controller or MultiRAE (Pumped) Cradle, respectively.
- 18. Exit ProRAE Studio II on the PC.
- 19. Disconnect the USB cable.

# **15. User Configuration Tool**

This tool provides another way to configure the instrument. It is simple to use and uses commands stored in an ".ezcfg" file, which is provided by RAE Systems.

Note: This tool is not used with the AutoRAE 2 Controller or AutoRAE 2 Cradle.



Click the button labeled "Tool," and the right pane is filled:

rogram Files (RAE Systems Inc)	ProRAE Studio II\Programmer\R	AEProgrammer/000\		Select Folder
name	Created Date	/Time		Gol
			Timeout(ms)	
			Information	
			Comment	
Refresh	Choose	Clear Log		

#### User Configuration Tool

Click the "Select Folder" button. You will now see a "Browse For Folder" dialog box. Find the .ezcfg file you need, and then double-click on it.

When the .ezcfg file is loaded, data fills the screen and the button labeled "Go" can be clicked.

The .ezcfg file contains some commands for the instrument. After clicking "Go," ProRAE Studio II sends these commands to the instrument. The reply from the instrument shows as "\*\*\*\*". ProRAE Studio II does not check the command passing to or from the instrument.

With this function, ProRAE Studio II can configure the instrument with new commands predefined in the .ezcfg file, if the new command is supported by the instrument but is not supported by the working ProRAE Studio II.

Note: The .ezcfg file is provided by RAE Systems when an update is needed.

# 16. Exiting ProRAE Studio II

When you are done using ProRAE Studio II and want to exit the program, make sure you have saved any data that you need to transfer or retain. Once that is done, click "File" and select "Exit" from the menu.

ProRAE Studio II		
File Operation Help		
Open Close	M	
Save Save As		
Change Password		
Exit		

ProRAE Studio II closes. You may now disconnect your instrument and place it back in operation.

#### **IMPORTANT!**

Before using the instrument, check its parameters and settings, in order to make sure that no incorrect data was transferred while you were using ProRAE Studio II.

# 17. Technical Support

To contact RAE Systems Technical Support Team:

Monday through Friday, 7:00AM to 5:00PM Pacific (US) Time Phone (toll-free): +1 888-723-4800 Phone: +1 408-952-8461 Email: tech@raesystems.com

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