ADAM DU – Data Capture Utility for ADAM Balances & Scales

ADAM DU (Data Utility) is an application that allows you to quickly and easily capture data from an ADAM Laboratory Balance or Weighing Scale and perform various functions on the collected readings.

ADAM DU can perform tasks, such as graphing the data, mathematical statistical analysis & export the readings to several common file formats. Also quickly export data to other applications (e.g. Microsoft® Excel®, Microsoft® Word® or the Windows® Clipboard). ADAM DU can provide basic remote control of the balance/scale*.

Adam DU can collect data from up to 8 different balances/scales simultaneously, each data collection session can be individually monitored, configured and customised to your requirements.

ADAM DU can quickly provide you with data, that is easy to integrate into any project!

*(Note: the various ADAM products have different remote facilities).
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Version: 1.0.13 16/3/2009
AE Part Number: 9230

Feature List:

- Quick and easy to use interface, supports capturing data simultaneously over a serial communication port(s) from up to 8 balances/scales
- Main Commander Window to manage and overview all data capture sessions
- Graph readings in real-time
- Perform statistical analysis on readings (Min, Max, Median, Mean, Variance, Standard Deviation) in real-time
- Use a Timer control to regularly poll balances/scales for readings
- Export captured readings to several file formats (Text, CSV, HTML, XML)
- Export captured readings automatically to other applications (MS Excel and MS word)*
- Export captured readings to the Windows® Clipboard for quick importing into other Windows® applications
- Capture custom data along with the scales data readings, supports up to 6 additional user defined data fields that can have data inputted by a user
- User defined fields support drop down lists, to make it quick and easy to select data from pre-defined options. The lists of options can be imported from a CSV file - created from your computer systems or they can be manually entered
- Interact with the connected Balance/Scale - send remote commands to control certain aspects of the balance/scale (certain commands are only applicable to certain models). Ideal for situations where you may only have remote access to a scale/balance
- Log calibration reports to file for complete tracking of calibration records
- Log form output (custom defined multiple line data from a balance) to a file
- Continuously log readings to a file in real-time
- Print raw readings and the graphed readings
- Collect date and time with readings, where supported collect the Scale/Balances serial number for unique identification of data readings/balance
- Quickly search for readings - a specific reading(s), max or min reading
- Collect Density Determination readings when used with an appropriate balance and Density Determination Kit
- Collect unit weight, pieces count, unit price and total price from counting and retail scales.

*(You need a licenced copy of Microsoft® Word/Excel to use this facility)

Installation

You can download an evaluation copy of ADAM DU from www.adamdu.com or you may have received an evaluation copy of the software on a CDROM that came with your ADAM balance/scale.

To install from the Website:

1. Visit ADAM DU Download Page. Make sure you have read the hardware & software requirements before downloading a copy of the evaluation software.
2. Once downloaded, run the "**adamdu.msi**" file.
3. Follow the on screen installation prompts to correctly install the software.
4. You now have a 14 day free evaluation of the ADAM DU software
5. To purchase the software before or after the evaluation period has expired, please visit: ADAM DU Website and follow the instructions on how to pay for a licence.

To install from a CDROM:

1. Insert the ADAM DU CDROM into the CDROM drive on your computer.
2. If "CDROM autorun" is enabled on your computer then shortly after inserting the disc you should see a menu screen with instructions on how to install an evaluation copy of ADAM DU on your computer.
3. If "CDROM autorun" is not enabled (or no menu appears) then open up Windows Explorer (File Manager). Click on your CDROM drive. Then run the program **"adamdu.msi"** and a installation menu with instructions will appear shortly..
4. You now have a 14 day evaluation of the ADAM DU software
5. To purchase the software before or after the evaluation period has expired, please visit: ADAM DU Website and follow the instructions on how to pay for a licence.

Quick Start Guide

After running ADAM DU, a licence expiry reminder will pop up if you are running an evaluation copy of ADAM DU. If you are running ADAM DU for the first time then you will also have to agree to the terms of use in the licence. After that the ADAM DU Commander Window will appear.
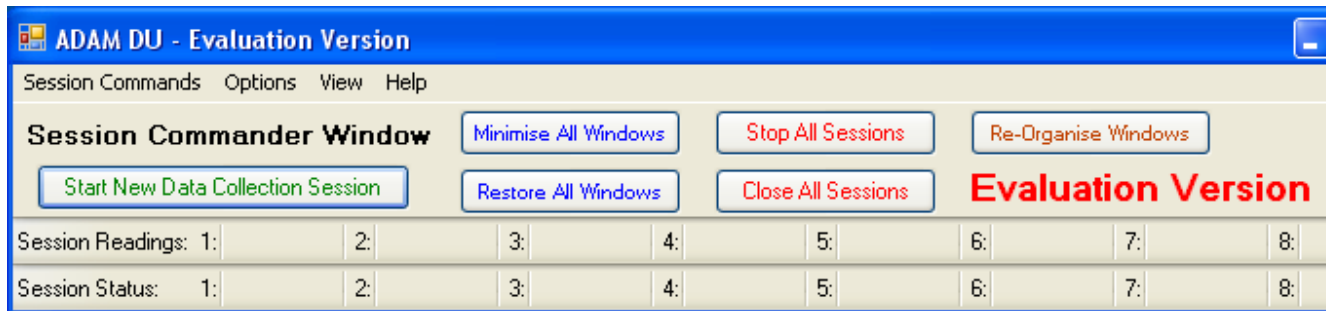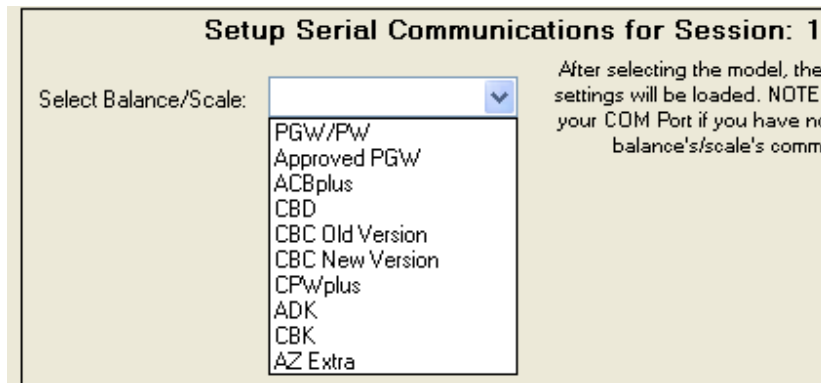

The Commander Window allows you to manage & obtain an overview of your data collection sessions. You can create a new data collection session by clicking on the green "Start New Data Collection Session" button.
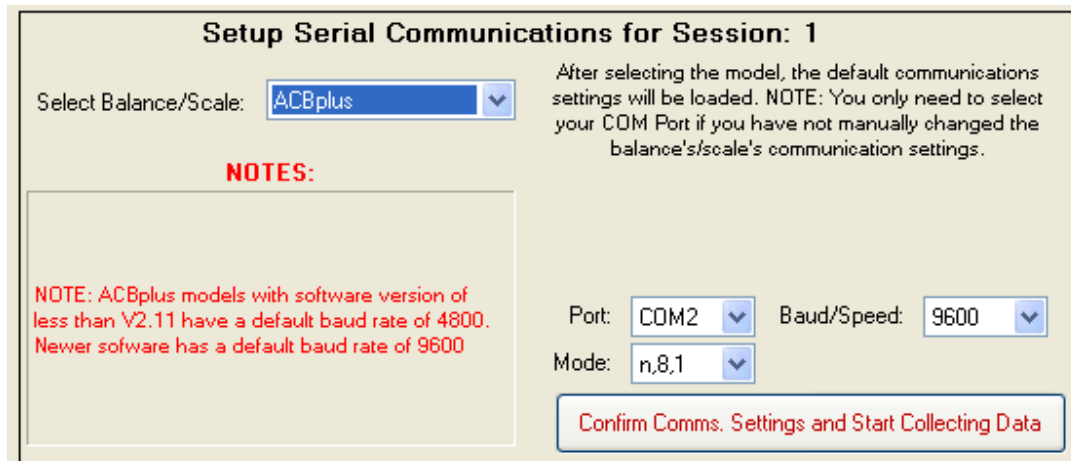
A new window will pop up:
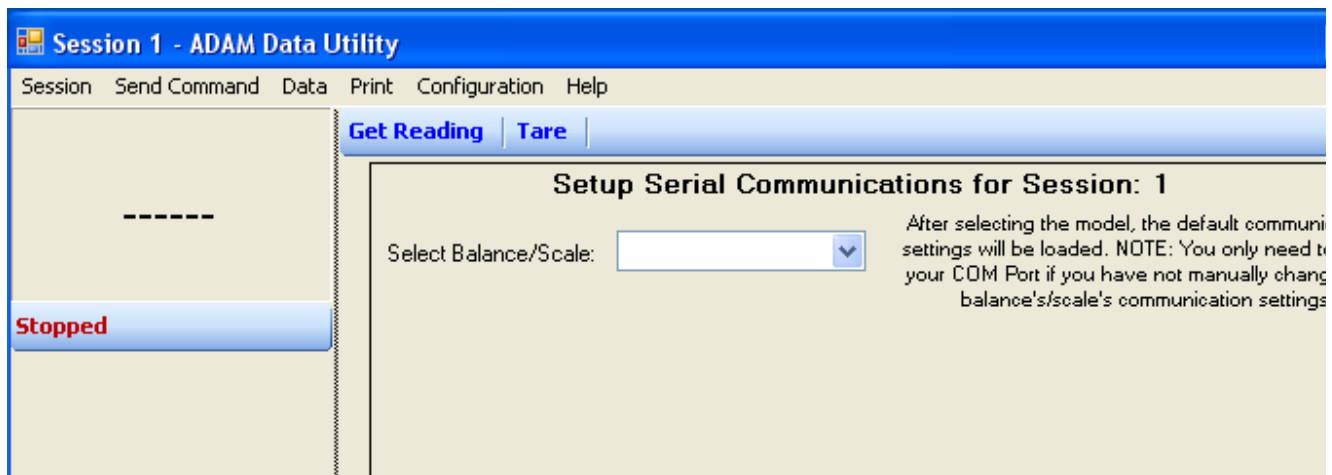
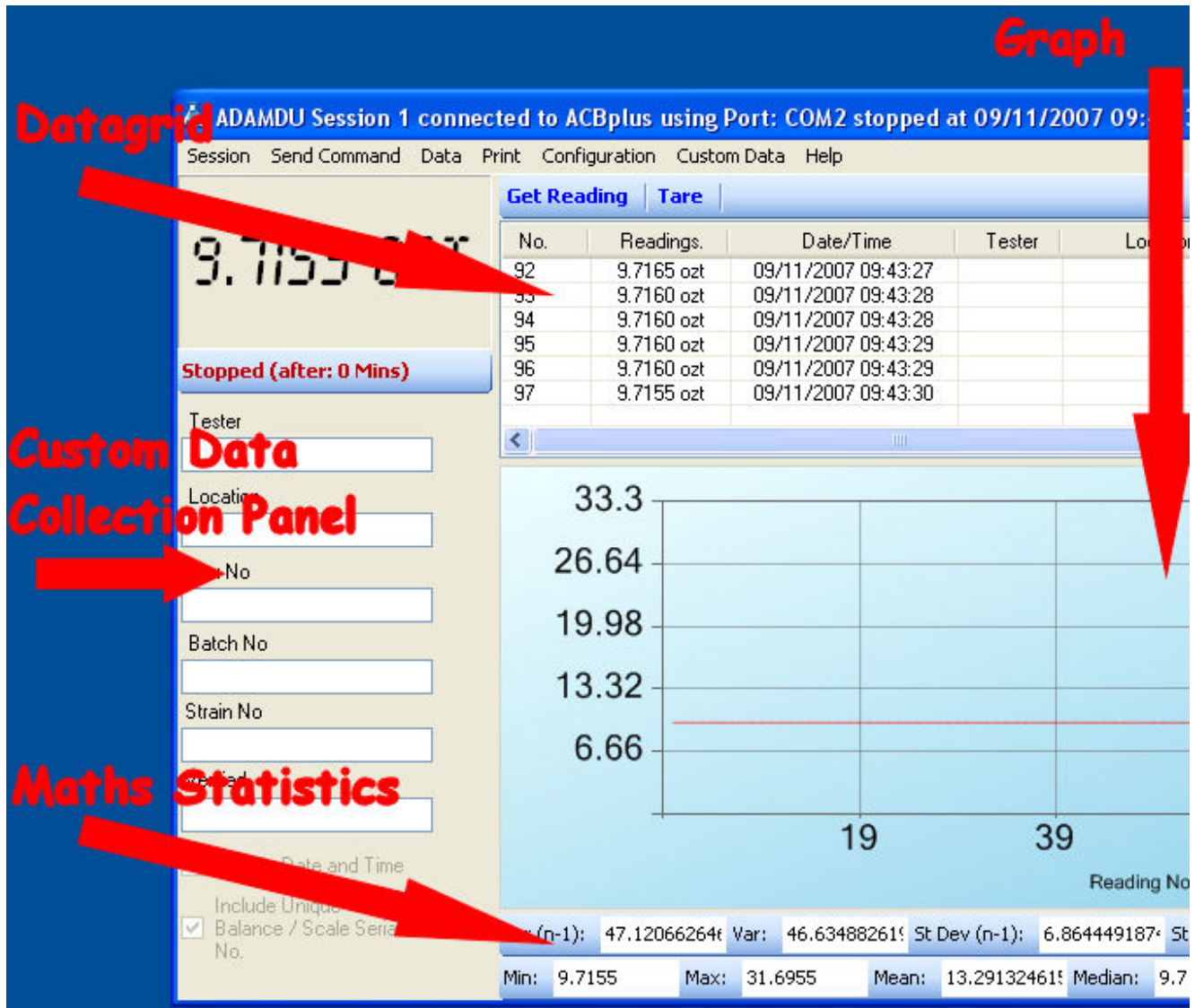Select your balance/scale from the drop down list.

After selecting a model, more information will be displayed. Some notes may also be displayed about the particular ADAM model, also the default factory serial port communication settings will also be loaded.

Other than selecting the Com Port that your balance/scale is connected to, you should not need to change any of the other settings unless you have changed from the default factory settings in the balance/scale's software.

Press the "Confirm Comms. Settings and Start Collecting Data" button. The Datagrid(see diagram below of the main areas of the Session window) is enabled by default, depending upon the ADAM balance/scale model. You should be able to press the Print key on a balance/scale (please refer to the model's user manual for more details on how to print) and this should send the current reading to ADAM DU software.

Screenshot annotations: **Graph**, **Datagrid**, **Custom Data Collection Panel**, **Maths Statistics**

ADAMDU Session 1 connected to ACBplus using Port: COM2 stopped at 09/11/2007 09:

Session   Send Command   Data   Print   Configuration   Custom Data   Help

Get Reading | Tare

9.7155 c

Stopped (after: 0 Mins)

Tester

Location

...No

Batch No

Strain No

...ted

Date and Time
Include Unique
Balance / Scale Seria
No.

No.	Readings.	Date/Time	Tester	Lo...
92	9.7165 ozt	09/11/2007 09:43:27		
93	9.7160 ozt	09/11/2007 09:43:28		
94	9.7160 ozt	09/11/2007 09:43:28		
95	9.7160 ozt	09/11/2007 09:43:29		
96	9.7160 ozt	09/11/2007 09:43:29		
97	9.7155 ozt	09/11/2007 09:43:30		

Graph y-axis: 33.3, 26.64, 19.98, 13.32, 6.66
Graph x-axis: 19, 39   Reading No

(n-1): 47.12066264(Var: 46.63488261(St Dev (n-1): 6.864449187(St
Min: 9.7155   Max: 31.6955   Mean: 13.29132461(Median: 9.7

If ADAM DU does not display a reading, try again, if it still does not work then check the serial port settings in the scale/balance (please refer to the user manual that came with the scale/balance or download the latest copy from our website). More troubleshooting help may be found at: Problems connecting to a Balance Section of this manual.

Hardware Requirements

There are no specific hardware requirements but the computer must be good enough to run one of the required operating systems below. Note: obviously the more sessions and/or analysis functions you enable, the more processor & memory resources are used. See the Frequently Asked Questions section on customising ADAM DU to run on slower computers.

A RS-232 port is required on the computer to connect to the balance/scale and also a RS-232 Null Modem Cable (please see the user manual of your balance/scale for the exact wiring specification required). You can also use the computer's USB port with the addition of a "RS-232 serial port to USB converter" (available at most computer stores).

Operating System Requirements

ADAM DU will work on Windows® 98SE*, Windows® 2000*, Windows® ME*, Windows® XP* & Windows Vista® - all operating systems should have the latest service packs & updates/security patches installed.

The Microsoft .NET v2 framework is also required for the software to run. This can be downloaded through Windows Update where available or manually downloaded/installed from: Microsoft Web Site

* These operating systems must also have a minimum of Windows Internet Explorer v6 service pack 1 and Microsoft Installer V2. Again these can be downloaded from Windows Update or manually downloaded/installed from the following links:

Windows Installer v2 for Windows 98 SE / Windows ME
Windows Installer v3 for Windows 2000 / Windows XP

Windows Internet Explorer V6 for Windows 2000, Windows ME & Windows 98 SE
Windows Internet Explorer v7 for Windows XP

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Single End-User PC Licence Agreement

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7.1 Subject to the limitations upon its liability set out in clause 8, Adam Equipment Co. Ltd. warrants that:
7.1.1 for a period of 90 days from you purchasing the Software, it will materially conform to the electronic documentation provided with it; and
7.1.2 with respect to any physical diskette(s), the same shall be free from defects in materials and workmanship for a period of 90 days from purchase.
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8.1 Nothing in this Agreement shall limit Adam Equipment Co. Ltd's liability for:
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8.1.2 personal injury or death caused by our negligence;
8.1.3 any other liability that cannot be excluded by law.
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9 SEVERABILITY

If a Court or other competent authority decides that any provision of this Agreement is void or otherwise ineffective in whole or in part then any other part and the other terms and conditions of this Agreement shall continue in full force and effect.

10 THIRD PARTY RIGHTS

The parties do not intend that any term of this Agreement shall be enforceable solely by virtue of the Contracts (Rights of Third Parties) Act 1999 by any person who is not a party to this Agreement.

11 ENTIRE AGREEMENT
This Agreement constitutes the entire agreement between the parties with respect to the subject matter of this Agreement and supersedes all previous agreements, arrangements or undertakings between the parties relating to the subject matter of this Agreement and any representations or warranties previously given or made to it.

12 ASSIGNMENT
You may not assign this Agreement nor any of its rights or obligations hereunder nor sub-license the use (in whole or in part) of the Software without Adam Equipment Co. Ltd's prior consent.

13 NOTICES
13.1 All notices shall be given:
13.1.1 to Adam Equipment Co. Ltd. via e-mail at adamdu@adamequipment.com
13.1.2 to you at either the e-mail or postal address you provide during any ordering process.
13.2 Notice will be deemed received when an e-mail is received in full (or else on the next business day if it is received on a weekend or a public holiday in the place of receipt) or 3 days after the date of posting.

14 GOVERNING LAW
This Agreement is governed by and interpreted in accordance with English law. Any disputes or claims relating to this Agreement shall be subject to the exclusive jurisdiction of the English Courts.

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If the software is to be used/installed in the U.S. then the Software and documentation are provided with Restricted Rights. Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 or subparagraphs(c)(1),(2), and (3) of the Commercial Computer Software - Restricted Rights at 48 CFR 52.227-19, as applicable, and any amendments thereto.

Version 1.1 21/7/2008

Standard Data Collection & Analysis

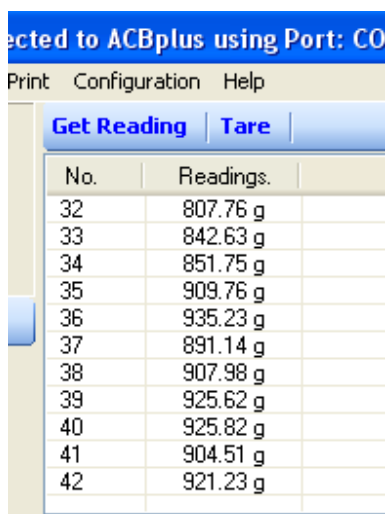Data can be displayed & analysed in real-time in 3 separate ways, via the:

1. Datagrid
2. Graph
3. Mathematical Statistics

Note: Custom Data can also be collected - see Custom Data Collection for more details.

Datagrid

You can toggle the Datagrid on/off via the "Data" menu in the Session window, then select the "Enable Data Grid" option.

If the Datagrid is enabled then each reading received by ADAM DU will be placed on the grid. A unique sequential reference number is placed next to each reading. The reading also includes the weighing measurement unit.

You can turn the Datagrid off if it is not required - freeing up processing & memory resources on the computer (see Frequently Asked Questions for more details about this). You can also restrict the amount of data readings that are displayed on the grid at any time by using the "Configuration" menu in the Session window. The "Number of Readings to Show on the Data Grid" menu option allows you to toggle between the following numbers of readings - 100, 1000, 10000 or All.

You can also search the Datagrid see: [Using the Data Collection Session Window](#)

Graph

You can toggle the Graph on/off via the "Data" menu in the Session window, then select the "Enable Data Graphing" option.

If the Graph is enabled then each reading received by ADAM DU will be plotted on the graph. The graph displays the reading amount on the horizontal Y axis and the reading number on the vertical X axis.

You can turn the Graph off if it is not required - freeing up processing & memory resources on the computer (see [Frequently Asked Questions](#) for more details about this). You can also restrict the amount of data readings that are displayed on the Graph at any time by using the "Configuration" menu in the Session window. The "Number of Readings to Show on Graph" menu option allows you to toggle between the following numbers of readings - 100, 1000, 10000 or All.

You can print the graph from the "Print" menu in the session window.

Mathematical Statistics

You can toggle the Graph on/off via the "Data" menu in the Session window, then select the "Enable Math Statisitics" option.

If the Mathematical Statistics is enabled then each reading received by ADAM DU will be included in the statistics. The following statistics are calculated in real-time:

Variance
Variance (n-1)
Standard Deviation
Standard Deviation (n-1)

Minimum reading
Maximum reading
Mean reading
Median reading

Var (n-1):	67431.12276(	Var:	65825.61984:	St Dev (n-1):	259.6750330(	St Dev:	256.5650401{
Min:	199.25	Max:	935.23	Mean:	584.0980965:	Median:	664.0449829:

You can turn the Mathematical Statistics off if it is not required - freeing up processing & memory resources on the computer (see Frequently Asked Questions for more details about this). You can also restrict the amount of data readings that are displayed on the Mathematical Statistics bar at any time by using the "Configuration" menu in the Session window. The "Number of Readings to Perform Math Stats on" menu option allows you to toggle between the following numbers of readings - 100, 1000, 10000 or All.

Note: you can copy and paste the results from any of the statistics fields into another application.
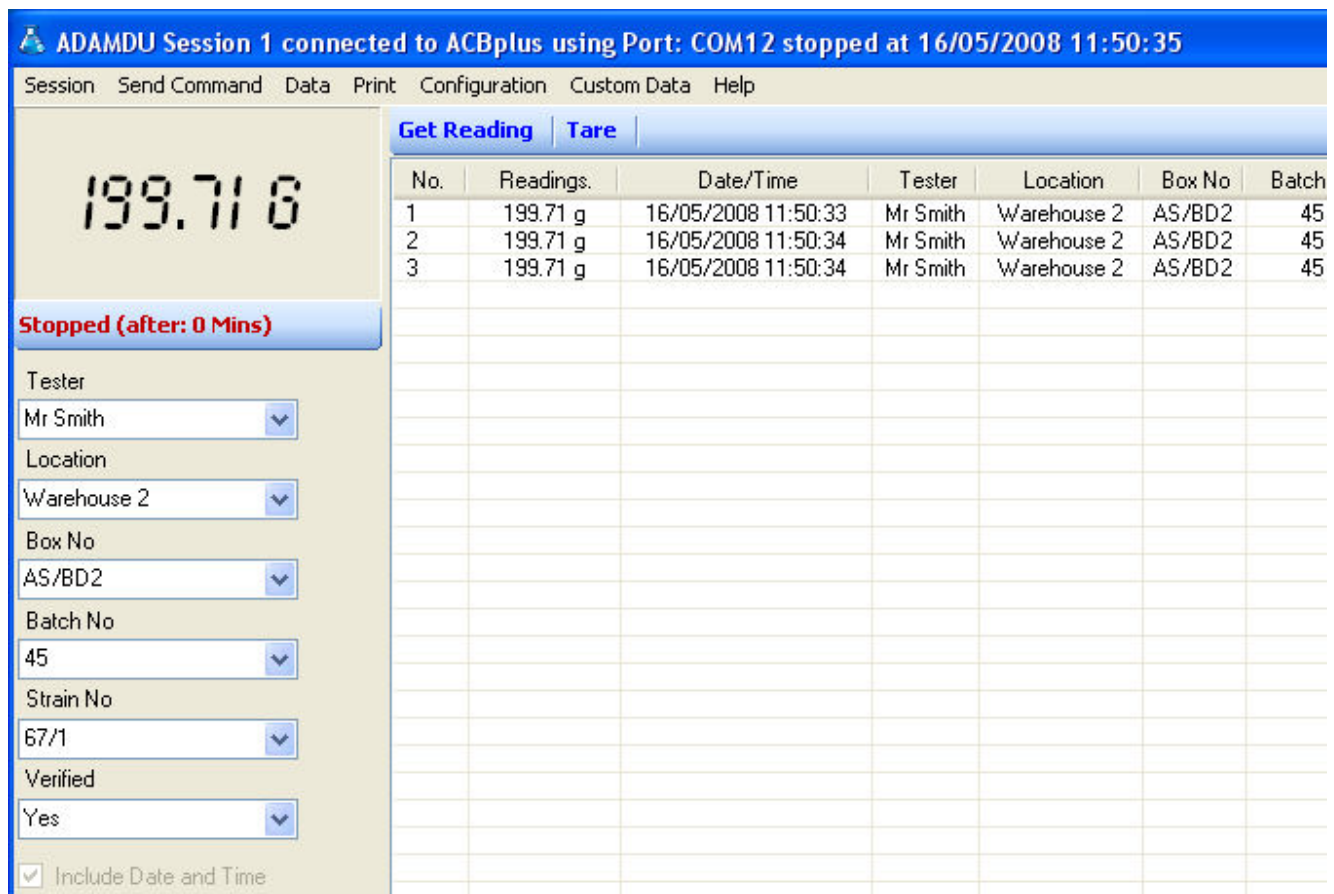
Custom Data Collection

Custom data collection can be enabled by the "Enable Custom Data Collection Panel" option, from the "Data" menu in a Session window.

Note: the "Custom Data" menu will also appear once it has been enabled.

You can collect additional custom data besides the reading, using up to 6 customisable fields. The custom fields allow you to collect any additional data along with the reading, see example below:
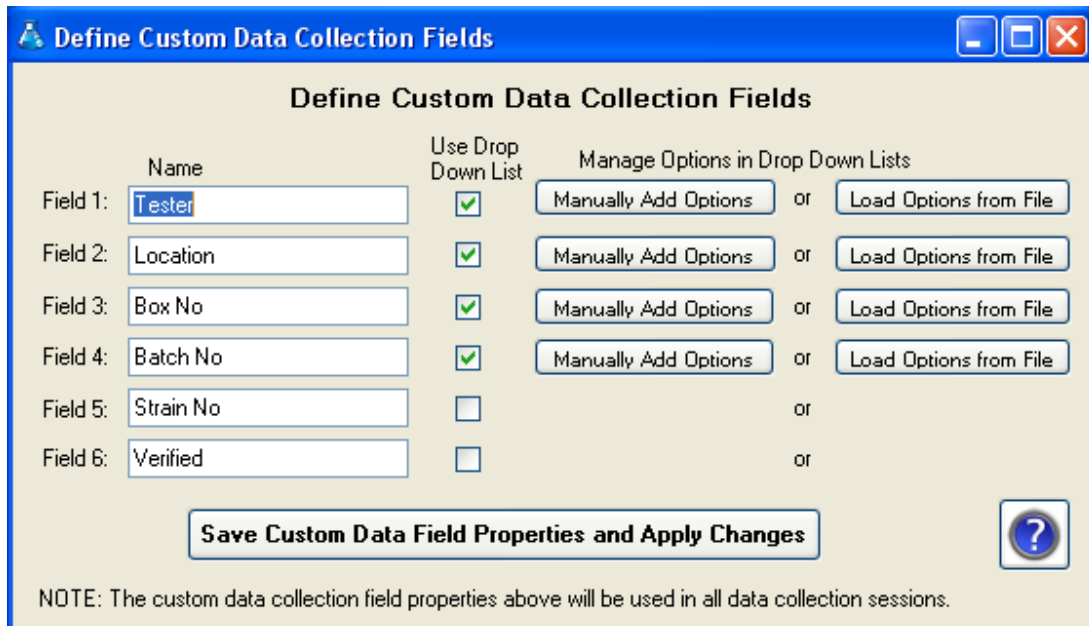

When you print a reading from a balance/scale, any data currently entered into the custom fields will also be collected and entered into the Datagrid.

You can setup the names of the custom fields on the Datagrid from the "Define Custom Data Collection Fields", located on the Session Window, under the "Custom Data" menu option.

Simply type in the new names of the fields (you do not need to use all the fields) and make any adjustments to column widths for the Datagrid.

You can specify how many of the 6 custom fields you wish to use by using the "Enable/Disable Custom Data Collection Fields" option under the "Custom Data" menu. Simply tick/un-tick to enable/disable any fields.

The custom field column widths on the Datagrid will be automatically saved when you exit the session window, alternatively you can manually save the column widths from the "Configuration" menu, then select the "Save Data Grid Column Widths" option. Simply use the cursor to "grab" a column separator and drag it to the required width to display all your text in that column.

Using Drop Down Lists in the Custom Fields

You can specify the custom fields to work with drop down lists, the list could for example contain a series of products or operator names. This helps to speed up data entry as you only need to type in a couple of characters and an item is auto-selected alphabetically. Simply tick the box next to each custom field that you require to use a drop down list.

You can manually specify the options to appear in a list or you can import the options into a list from a CSV file.

If you decide to manually type in the options for a custom field list, press the

"Manually Add Options" next the desired custom field. A new screen will appear (see below), this allows you to add an option, select and remove an existing option or remove all the options from the list. Once you have entered all your options click the "Save Drop Down List Options" button to save your data.

If you decide to import the list options from a file then you need to make sure the file is of a CSV (comma separated value) file, the options need to be separated by commas and the options need to be enclosed in speech marks. For example the CSV could look like:

"Mr Smith","Mr Jones","Mrs Andrews","Dr Davies"

Click on the "Load Options from File" button, a pop up message reminds you of the required file format, then a new file selection window appears, select your .csv file. ADAM DU will do a basic check on the file contents to make sure it is of the correct format and will load the data into the list on the screen. Any blank options in the file will be removed. Once you have entered all your options click the "Save Drop Down List Options" button to save your data.

Notes: ADAM DU stores all the custom field lists in CSV files located in the sub folder "drop_down_list_options" within the ADAM DU application folder.
The drop down list does not restrict you to only the options in the list, you can still manually enter any text into the Datagrid.

Special Custom Fields

There are 2 extra special custom fields besides the 6 user configurable custom fields. These are:

- Date and Time
- Balance/Scale Serial Number

"Date and Time" option will automatically collect & display the computers time in a separate column on the grid.

The "Balance/Scale Serial Number" option is only available if an ADAM DU is being used in conjunction with PGW or PW balances. The balances will transmit their ADAM serial number (e.g. AE123456789) when connected to ADAM DU. This allows you to get a unique identifier from the balance which may be useful for auditing purposes or help to identify a balance/station in a multiple balance/ADAM DU configuration environment.

Note: the PGW/PW balances must have up to date firmware installed to transmit the AE serial number to ADAM DU.

Collection of Unit Weight, Piece Count, Unit Price or Total Price readings

Enabling of the collection of Unit Weight, Piece Count, Unit Price or Total Price readings (via the Data Menu - available only for certain models) will automatically use Custom Fields 1 & 2. The two Custom Fields will be automatically renamed and disabled from user customisation until this facility is switched off again.

Specify Custom Fields to Preserve Data Typed in
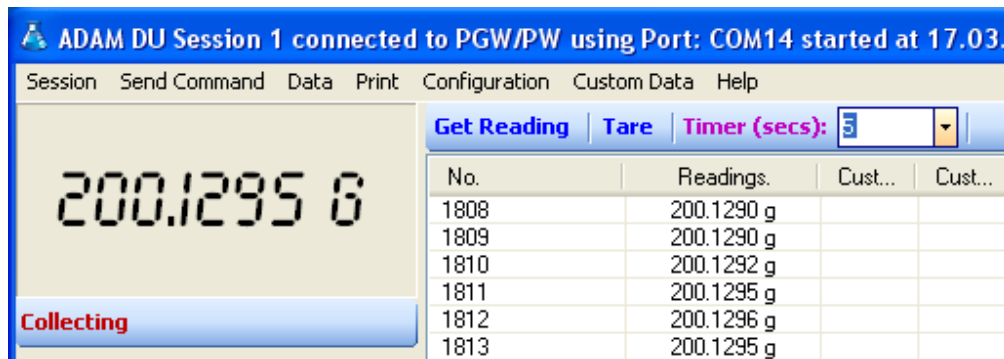
To help speed up data entry you can specify whether the data in each of the 6 user defined custom fields is wiped or preserved after each reading is received by ADAM DU. If a custom field's data does not change for each captured data reading, for example maybe a Testers Name - "Mr Smith" who is using the balance for a period of time - then you can specify it to preserve the typed in data using the "Preserve Data in Custom Fields after Data Collection" option under the "Custom Data" menu.

If a custom field is not specified to preserve data then, the field will be wiped after each collected reading, to allow you to type in new data.

Using the Timer Control to get Readings

The timer control sends out a command via the RS232 com port to a balance/scale every x seconds. The timer control is located on the toolbar above the datagrid.

The interval can be changed quickly using the drop down list of options or a value can be manually entered. The frequency cannot be set smaller than 1 second. If you require faster readings than this, then it is best to set the scale/balance into continuous data mode (if the scale provides such a mode).

To use the timer, select an interval and start a data collection session, the interval can be changed whilst a session is running. To stop the timer either stop the data collection session or select "disabled" from the interval list options.

NOTE: If the timer control does not show on the toolbar then the scale/balance does not support a remote RS232 print command.

Exporting/Saving Data to a File

Once you have captured some data readings you can save the readings to file in 4 different formats:

1. CSV - Comma Separated Value format
2. TXT - Basic Text file
3. HTML - A web page
4. XML - Extensible Markup Language file (commonly used to import data into other systems/applications)

To save your readings to file, under the "Data" menu, select the "Save Current Data Readings to File" option. (Note: you must have stopped the current data collection session before you save any data).

You will be presented with a file save dialog box (as commonly used in Windows), here you can specify the file location and name.
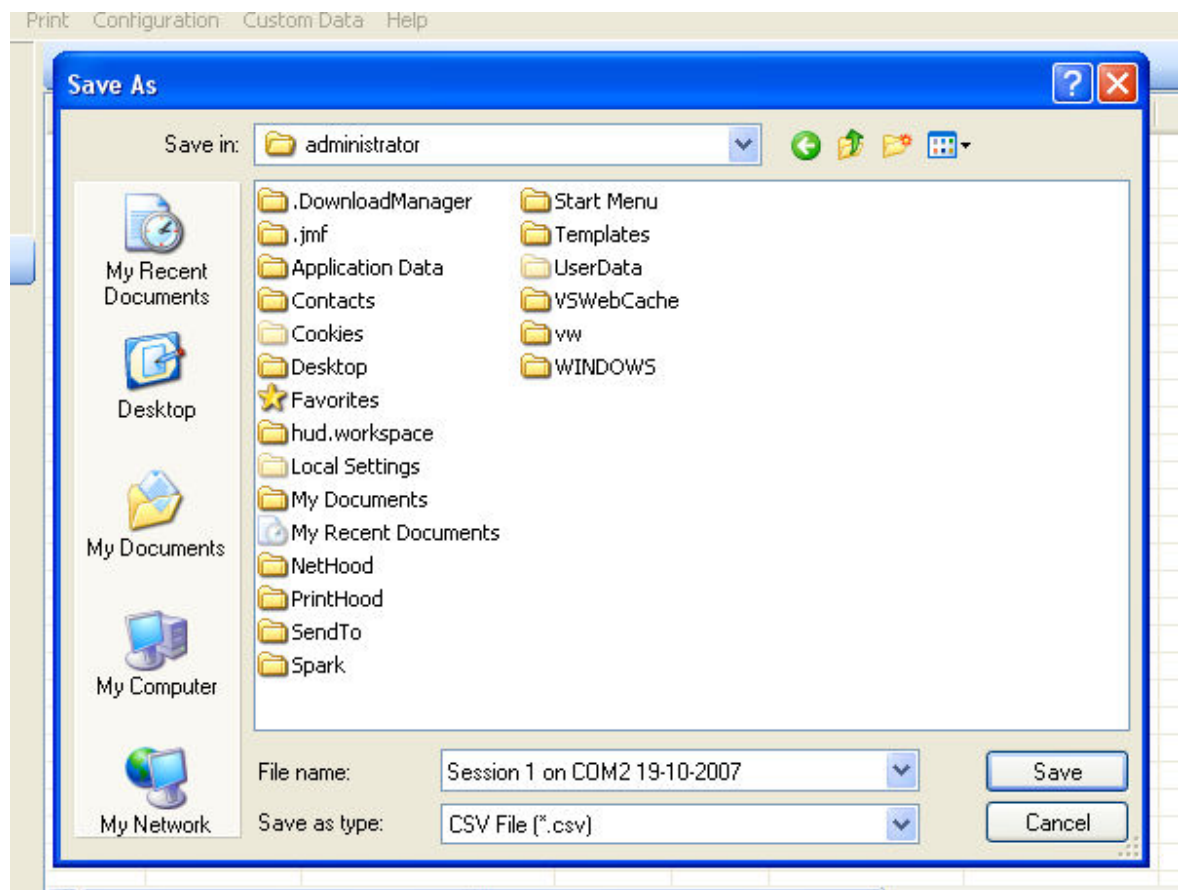
To specify the file type, click on the drop down box next to "Save as type" in the

bottom of the example above. You can select one of the 4 file formats.

Note: a default file name is automatically entered for the file, based on the session number, serial com port and the current date.

Depending upon how many readings you have collected, it may take some time to save the readings to a file. A progress indicator is placed at the top of session window showing its current progress.

Next to the progress indicator is a cancel button which can stop the process of saving the readings to file.

A pop up message window will appear informing you once all the readings have been saved to file.

If Custom Data fields have been used then these will be saved too. Though the custom field names must start with an alphabetic character (eg dont use: 1_field or #678) if you are exporting to XML - as these are not valid field names for XML.

Exporting Data to another Application

You can quickly and easily transfer collected readings to Microsoft® Word or Microsoft® Excel (You need Microsoft® Excel/MS Word installed on your computer to use this facility).

Under the "Data" menu, select the "Export Current Data to MS Excel" to transfer data to Excel or "Export Current Data to MS Word" to transfer data to Word from the Session window.

Depending upon how many readings you have collected, it may take some time to transfer the readings. A progress indicator is placed at the top of session window showing its current progress.

Next to the progress indicator is a cancel button which stop the process of saving the readings to file.

Microsoft® Excel or Microsoft® Word will be automatically displayed on the screen on completion of the process.

Notes: if you have collected a lot of readings, 65,000+, then Excel may have the readings displayed in multiple worksheets within the workbook, as older versions of Excel only support a limited amount of rows in a single worksheet.
If Custom Data fields have been used then these will be exported too.

Exporting Data to another Application using the Windows Clipboard

You can also transfer collected readings to the Windows® clipboard, which will then allow you to transfer the readings into other Windows® applications. Once the operation is complete you can then user Control+V to paste into your desired application.

Notes: the readings are placed into the clipboard using tab separators between the fields. If Custom Data fields have been used then these will be exported too.

Continual Data Logging

ADAM DU can be specified to continually save collected readings from a Session to a file in real-time. You can enable this option from the "Data" menu, then choose the "Continual Data Logging to File" option - move the mouse to side to click the "Enable" option.

A file save dialog box will be presented, allowing you to specify the filename and location. Also the file format can be specified, see Exporting/Saving data to a file for more information of the different file formats.

Once this option has been enabled, you can check the location of the saved file at any time, as an extra menu option will appear under "Continual Data Logging to File" menu item, listing the currently used file and location.

Note: the Continual logging options can only be enabled/disabled if the Data Collection Session is not currently collecting data.

Logging Calibration Reports

If your PGW/PW balance has internal calibration that is enabled, then periodically the Balance will calibrate itself & output a calibration report over the RS-232 port. If you require this report (maybe for auditing purposes) then you can set ADAM DU to save it to file (it has no effect on the data readings captured).

From the "Data" menu option in the Session window, select the option "Collect Calibration Reports" & tick the "Enable" sub option. You will be presented with a Windows Save file dialog window. You can specify the filename and location of the log file.

The data is saved to a simple text file.

Selecting the same menu option will now display a sub menu item, showing the current filename & location of the file - should you forget.

Note: you can also manually force the PGW/PW balances to do calibrations (whether they have internal or no internal calibration).

This option can be remembered & set to auto start when the session starts, see section: Configuring a Data Collection Session

Logging Form Data

PGW/PW balances have the option of outputting more detailed mult-line form data to the RS-232 port. If you require this data then you can set ADAM DU to save it to file (it has no effect on the data readings captured).

From the "Data" menu option in the Session window, select the option "Collect Form Data" & tick the "Enable" sub option. You will be presented with a Windows Save file dialog window. You can specify the filename and location of the log file.

The data is saved to a simple text file.

Selecting the same menu option will now display the current filename & location of the file should you forget.

This option can be remembered & set to auto start when the session starts, see section: Configuring a Data Collection Session

Configuring & Using the Commander Window

The Commander Window allows you manage &oversee one or more sessions. The Commander Window will become more useful when using multiple sessions simultaneously taking data from scales/balances.

ADAM DU - Evaluation Version

Session Commands   Options   View   Help

Session Commander Window   Minimise All Windows   Stop All Sessi

Start New Data Collection Session   Restore All Windows   Close All Sessi

Session Readings: 1: 37.154 g   2: 40.88 g   3: 500.904 g   4: 52.503 g   5: 41.

Session Status: 1: Running   2: Running   3: Running   4: Running   5: Ru

ADAM DU Session 8 connected to PGW/PW using Port: COM10 started at 28/09/2007 11:28:54
Session   Send Command   Data   Print   Configuration   Help

ADAM DU Session 7 connected to PGW/PW using Port: COM9 started at 28/09/2007 11:28:41
Session   Send Command   Data   Print   Configuration   Help

ADAM DU Session 6 connected to PGW/PW using Port: COM8 started at 28/09/2007 11:
Session   Send Command   Data   Print   Configuration   Help

ADAM DU Session 5 connected to PGW/PW using Port: COM7 started at 28/
Session   Send Command   Data   Print   Configuration   Help

ADAM DU Session 4 connected to PGW/PW using Port: COM6 star
Session   Send Command   Data   Print   Configuration   Help

ADAM DU Session 3 connected to PGW/PW using Port: CO
Session   Send Command   Data   Print   Configuration   Help

ADAM DU Session 2 connected to PGW/PW using
Session   Send Command   Data   Print   Configuration   Help

ADAM DU Session 1 connected to PGW/
Session   Send Command   Data   Print   Configuratio

Get Reading

12   Collecti

200   Collecting

100.   Collecting

41   Collecting

52   Collecti

50   Collecti

40   Collecting

37.154 g

Collecting

No.	Read
63368	37.15
63369	37.15
63370	37.15
63371	37.15
63372	37.15
63373	37.15
63374	37.15
63375	37.15
63376	37.15
63377	37.15
63378	37.15
63379	37.15
63380	37.15
63381	37.15
63382	37.15
63383	37.15
63384	37.15
63385	37.15
63386	37.15

The Commander Window shows the current status of each session, along with the last reading received. This allows you minimse all the session windows to the taskbar and keep the smaller Commander Window open to oversee what is

happening in each session.

You can also do several tasks quickly & easily via buttons on the Commander Window:

- Minimise & Restore all windows - including the Commander Window & all open Session windows
- Stop All Sessions - stop each Session that is currently collecting data readings
- Close All Sessions - close each open session, whether it is collecting data or not.
- Re-Organise Windows - it can get a bit cluttered on the desktop if you have up to 8 Session windows open at the same time. This function re-organises the all windows into a cascaded formation so you quickly access the window you want.

Shortcuts

You can quickly bring to the foreground a particular session window by double clicking on the session reading or status area on the Commander Window.

Starting Multiple Sessions Simultaneously

To save time in starting lots of individual Sessions, you can start them from a single screen, from the Commander Window, select the "Session Commands" menu, then select the "Start Multiple Data Collection Sessions" option.

A new window will appear showing the options for starting up to 8 sessions at the same time:
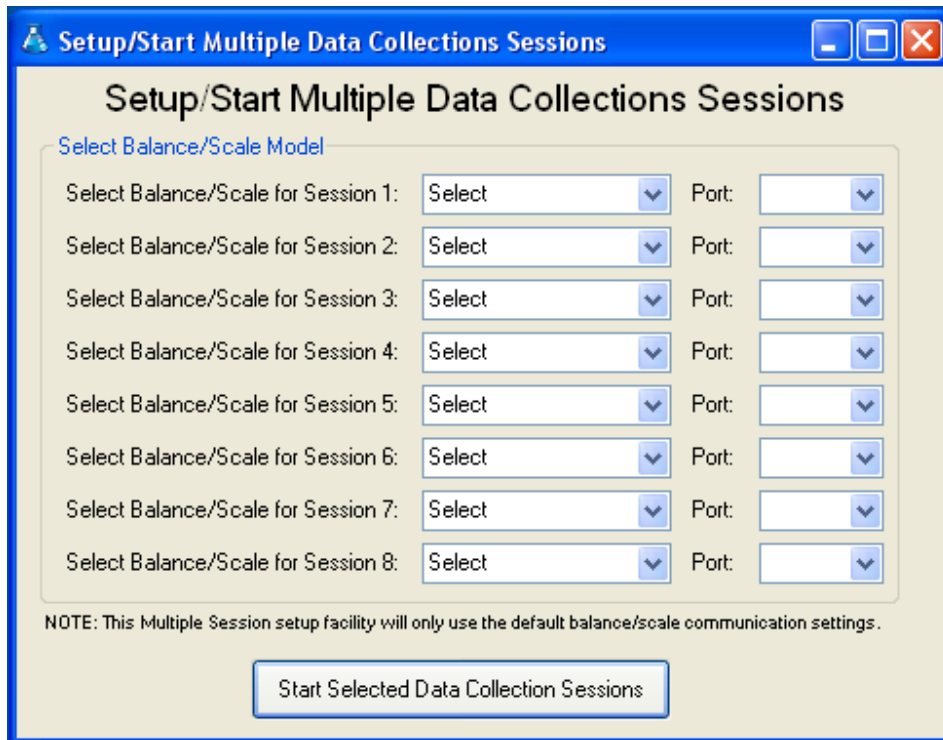
For each session you want to start, select a Balance/Scale model & the serial com port it is connected to. Once you have specified all session details (leave session details blank if you do not need that particular Session), click on the "Start Selected Data Collection Sessions" to start them.

Notes: After using a Session in ADAM DU for the first time, the Com Port number will be remembered for the Session. So the above window will automatically load in a previously used Com Port numbers to help speed up the process.

This facility is restricted to using the factory default com port settings, so if you have manually changed the com port settings in the balance/scale for some reason then this facility will not work for you.

Standard computers only have one or two com ports, so you will need to purchase a device(s) to give you extra com ports if required.

Other Options

From the "Options" menu are the following options:

- Remember Window Positions - Enable this option if you wish to place/size any of the ADAM DU windows in specific positions on your desktop, then when you load ADAM DU or open a Session the windows will place/size in their last position/size.
- Reset All Window Positions - if a window becomes "lost" or sized so it

becomes a problem, this option will reset the window positions & sizes.
- Show Data readings from Sessions - enables or disables the Data Readings bar in the Commander window
- Show Session Statuses - enables or disables the Session Status bar in the Commander window
- Hide Session Windows when main window is minimised - if this option is enabled then every time the Commander Window is minimsed all open Session windows will also be mininised.

Taskbar Options

Whilst ADAM DU is running, a blue "laboratory flask" icon is placed on the taskbar:

Right clicking on the "Laboratory Flask" icon will present a menu of options, all of which have been explained earlier in this section of the user manual.

Using the Data Collection Session Window

The Quick Start Guide covers the basics of connecting a Data Collection Session to an ADAM Balance and the section Standard Data Collection and Analysis covers what you can do with the data readings collected.

Sending Commands via the RS-232 Port to a Scale/Balance

You can remotely control some of the functions of the balance/scale from ADAM DU. The amount of remote control options you have depends upon the model. After selecting a model during the connection process, the "Send Command" menu in the Session window will be populated with possible options.

Note: For some ADAM balances these options are further restricted depending upon the firmware/software version of the balance.

Printing

If the Graph is enabled, you will be able to print this from the "Print" menu in the Session window.

If the Datagrid is enabled then you will be able to print the data in it from the "Print" menu in the Session window. Custom Data will also be printed if it has been collected. The Printing of the data in the Datagrid is fairly basic. If you require more advanced printing options/layouts then it is suggested you export the data to another application like Microsoft® Word or Excel where you can format the data to your requirements & then print.

Note: ADAM DU will print to the windows default printer. If you require other printers then you can export to another application for more flexible printing options.

Clear All Data

This will wipe **ALL** the data from the current Data Collection Session. Once cleared, you will not be able to retrieve any of the data unless you have previously saved the data to a file or you have continual data logging to a file enabled.

Searching on the Datagrid

You can search for readings on the Datagrid using the "Find Reading" facility - found under the "Data" menu on the Session window.
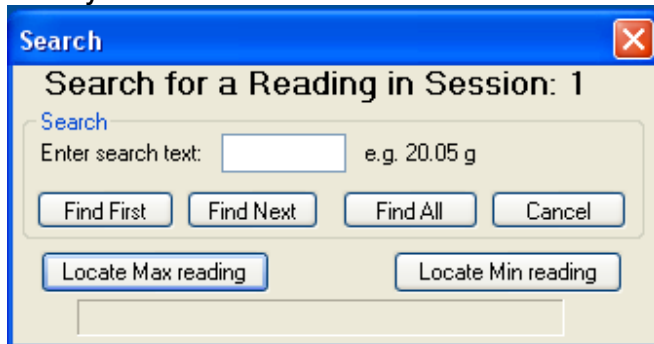
If you need to find a particular reading collected in a Session, rather than manually scrolling through the readings you can use this facility.

Find First: will find the first reading on the grid and highlight it.
Find Next: will find the next reading matching the search criteria after the previous match.
Find All: will find and highlight all readings matching the criteria.
Locate Max Reading: will find the the highest value during the data collection session
Locate Min Reading: will find the the lowest value during the data collection session

Notes: when searching for a reading you must also enter a space and the weighing unit after the numerical reading e.g. 1234.9 g or 0.15 kg etc. The length of time to find a match will vary depending upon the speed of the computer and the number of readings captured in the session.

Configuring a Data Collection Session

The Data Collection Session can be customised in many ways to tailor the way the Session collects data to your needs. There are lots on customisations you can set, to make your experience using ADAM DU quicker.

Data Readings Options

You can restrict the amount of readings shown/used in the main core components of ADAM DU. These are set via the "Configuration" menu in the Session window:

• Number of Readings to Show on Graph
• Number of Readings to Perform Math Stats on
• Number of Readings to Show on the Data Grid

These are covered in more detail in section: Standard Data Collection and Analysis

Serial Communication Port Settings

You can revisit the Serial Communication Port Settings at any time after initially starting to collect data when the Session window is first opened, by using the "Serial Communication Port Settings" option under the "Configuration" menu.

Note: that the current Session must be stopped before you can make any changes to the serial coms port.

Other Options

If you are using ADAM DU with an approved balance or scale, then you can optional toggle whether to show or suppress the last digit in the reading. This can be set from the "Configuration" menu, then the "Use Last Digit for Approved Scales/Balances" option.

By default if the Datagrid is enabled, it is set to refresh with every reading received by ADAM DU and also make sure the last reading is visible on the grid. If you do no wish the screen to keep refreshing/scrolling to the newest reading then you can toggle the option using the "Ensure Last Reading is Always Visible on Data Grid" menu option under the "Configuration" menu.

The "View Debug Data Panel" option is designed for support staff from Adam Equipment to help diagnose problems should the need arise.

Similarly the "Save Debug Log to File for Support" option may be used upon request of the ADAM DU support team.

Remember Settings for this Session

This menu option expands into another sub menu, allowing various options to be set, so the next time you start the current session certain settings will be remembered. These options are:

- *Remember the Serial Port Settings used for this Session:* Next time you open the current Session window, all the last com port settings will be shown automatically. This will over ride the default settings that are first used by ADAM DU for the selected balance/scale.
- *Collecting Form Data - Remember Filename and Auto Start:* If the you are using ADAM DU with a PGW/PW balance that outputs Form data reports on a regular basis & tick this option to remember the filename/path & auto start the logging the next time the Session starts (once the file details have been specified for the first time).
- *Collecting Calibration Reports - Remember Filename and Auto Start:* If the you are using ADAM DU with a PGW/PW balance that is set to output calibration data reports on a regular basis & tick this option to remember the filename/path & auto start the logging the next time the Session starts (once the file details have been specified for the first time).
- *Continual Logging to File - Remember Filename and Auto Start:* If you are using continual file logging, you can use this option to remember the filename/path & auto start saving when the Session starts (once the file details have been specified for the first time).
- *Continual Logging to File - Always Append to file when Starting New Session:* If you are using the option above you specify the action to be taken if the file exists.
- *Continual Logging to File - Always Overwrite file when Starting New Session:* The alternative option to appending the to the log file is to overwrite the log file.
- *Always Enable Maths Stats for this Session:* Whenever the current session starts Maths Stats will be visible.
- Always Enable Graphing for this Session: Whenever the current session starts the Graph will be visible.
- *Always Enable Data Collection Grid for this Session:* Whenever the current session starts the Datagrid will be visible.
- *Always Enable Custom Data Collection Panel for this Session:* Whenever the current session starts the Custom data collection panel will be visible.
- *Always use Last Digit for Approved Scales/Balances:* Whenever the current Session starts & the balance/scale is approved, then the the last digit can be made visible or suppressed - the specified option will be remembered for the

next time the Session starts.

Note: each Session 1-8 has its own "Remembered" settings & also per model, so this allows you to easily use a wide selection of different ADAM Balances/Scales and cater for different setups.

FAQ:

1. My computer operates slowly when running ADAM DU, is there anything i can do?

Each session & each individual real-time process in that session (graphing, datagrid, continual file logging & maths stats) takes up some processing power and memory from your computer. So if you run ADAM DU on a slower computer it will help if you disable any real-time features that are not needed (you turn features on/off in each session under the "Data" menu option on the Session window).

Also most of the real-time features display data on the screen & refresh it regularly, keeping ADAM DU minimised on the taskbar stops the need for this and thus frees up more of the CPU.

If you have problems with running out of memory, check that the real-time processes: Datagrid, Graph and Maths stats (if enabled) are NOT set to work on ALL the collected readings, this will especially help if you are collecting tens or hundreds of thousands of readings. You can restrict the real-time processes to only work on the last 100, 1000 or 10000 readings - thus restricting the amount of memory used. This is done from each session window under the "Configuration" menu.
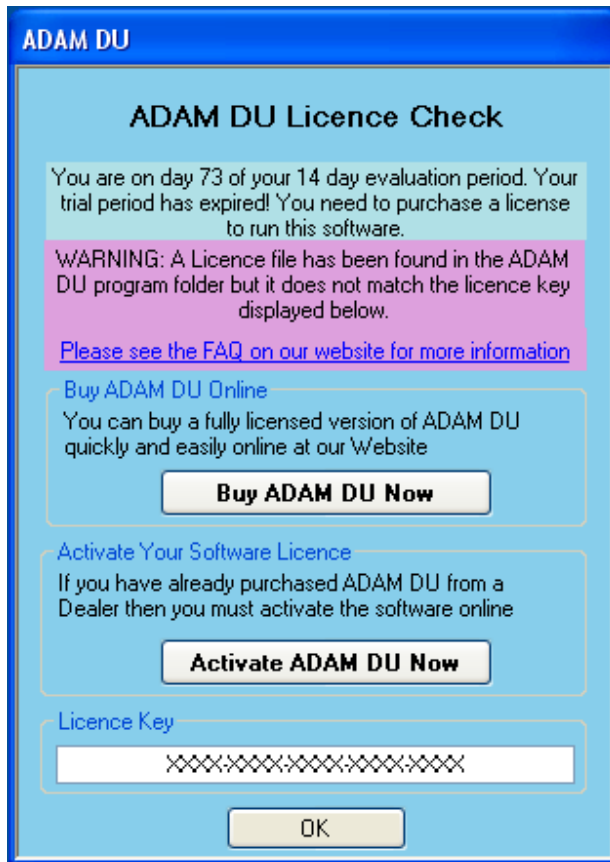
2. I have a licenced copy of ADAM DU & it has suddenly stopped working - its telling me my evaluation period has expired?

OR

I have just purchased/activated ADAM DU but it still says I am using an evaluation version

OR

I get a warning message of "A Licence file has been found in the ADAM DU program folder but it does not match the licence key displayed below"

You might see a message window similar to this, the purple area explains that the licence file is not valid, as it does not match your licence key. This may have occurred because of 2 reasons:

1. You have changed some main hardware components in your computer since you licenced/activated ADAM DU.

2. You incorrectly entered your licence key into the ADAM DU website whilst activating or purchasing ADAM DU.

The licence key is tied into the main hardware components of your computer (to stop illegal software copying).

If the main hardware components of your computer change then the Licence key will also change thus it does not match licence file we issued to you.

Please contact us via our website support page for assistance in obtaining a new licence www.adamdu.com

3. My Balance/Scale is not mentioned in the List of Supported Models by ADAM DU.

If you have recently purchased a new ADAM balance/scale that has an RS-232 port and it is not listed in the Supported Models then please visit **ADAM DU Website** as a newer version of ADAM DU will be most likely available for download that will contain support for current models. Just install the newer version of ADAM DU over your old version to benefit from the latest software. If you still cannot see the your Model listed on the website, then please use the "Contact Us" form on the website for further information

4. Can I get software updates/bug patches for free?

Adam Equipment may provide free software updates for your version of ADAM DU at our discretion, as per the Licence agreement. See the download page on the ADAM DU Website for more information on the latest updates for ADAM DU & the changes from previous updates. If there is a newer update available then you can simply download it and install it on your computer. It will automatically upgrade your current version.

5. Is it ok to unplug the USB lead/switch the HCB off whilst ADAM DU is running?

Please do not unplug or switch off the HCB whilst ADAM DU is running as the sudden disappearance of the virtual com port can cause ADAM DU to have problems reconnecting back to the HCB. If you do disconnect the HCB you may have to close ADAM DU down & restart it, if it has problems accessing the HCB's virtual com port or it does not show it in the list of available com ports.

6. Can the CBK A (USA version) work with ADAM DU when using the lbs & oz weiging unit?

No, due to mathematical calculations inside ADAM DU, the space separator between the lbs and the ozs causes too many problems to make it feasible to work. All the other weighing units are supported on the CBK eg Lbs, ozs, KG, g etc..

Problems with ADAM DU

Problems Connecting to a Balance/Scale or not Receiving Readings Correctly or not able to send a remote command to the scale.

Points to check:

1. Check the serial data cable is correctly wired as per the RS-232 specification in the user manual for your ADAM scale/balance (not all serial cables are wired the same!)
2. Check that the Serial port settings in the balance/scale match the serial port settings in ADAM DU - baud rate (speed) & mode. Please see the relevant section in the scale/balance's user manual or see this section: Supported Balances and Scales. If you get some yellow pop up information balloons from ADAM DU, warning you about "unusable data" whilst trying to receive readings from your balance/scale, then this would indicate a mis-match in the communications settings between ADAM DU & your balance/scale.
3. Determine that the RS-232 Serial Com port/USB port on the computer is working by connecting another device to it if possible. You can always use Windows HyperTerminal to connect to the balance/scale to see if you can receive data readings in raw format from the scale/balance. The readings should look something like what is displayed on the display of the balance/scale (though there may be other text included with the reading).

Unexpected Crashes

Unexpected crashes in the software can be caused by a corrupted version of the Microsoft .NET Framework version 2. Try uninstalling the Framework (from add & remove programs) and then re-install it. Then visit the Microsoft Updates website for your operating system and download the latest service pack for the Framework.

Technical Support

Please make sure you have looked at the relevant section in the ADAM DU manual with regards your problem. Also look at the following sections for help: Problems with ADAM DU & Frequently Asked Questions.

If you cannot find the answer to your problem, then please look at the support section of our website as that may have more up to date support information than in this user manual.

You may also see if there are any software updates for ADAM DU on the website, there will will be a change release log on the download page. Consult this to see if an update has fixed your current problem.

If the above options have not helped then please visit the website Support section for instructions on how to contact Adam Equipment for Technical Support.

How to Purchase ADAM DU

You must install ADAM DU on the computer you intend to run ADAM DU on when licenced/purchased - as part of the purchasing process you need to provide a licence key. The licence key is unique to a single computer.

When ADAM DU is first run it activates a 14 Day Evaluation Period. During that evaluation period, every time you start ADAM DU you will be presented with a small pop up screen informing you that it is in Evaluation mode, how long you have left before the evaluation runs out and the licence key - should you wish to purchase the software.

You can also get the licence key from the "Help" menu on any ADAM DU window, then select the "How to Purchase On-line" option & follow instructions

If you are unable to purchase online then please contact your local Dealer or ADAM office, details of local ADAM offices can be found on the ADAM Website

Note: If the evaluation period expires before you purchase a licence then you will still be presented with the pop up screen giving instructions on how to purchase ADAM DU before ADAM DU automatically closes.

Miscellaneous

ADAM DU will collect the PGW/PW Balance's serial number & firmware version automatically when a Session is started (if the firmware in the PGW/PW balance supports this function, otherwise the information will not appear). This information is displayed on the top right section of the Session window, see below:
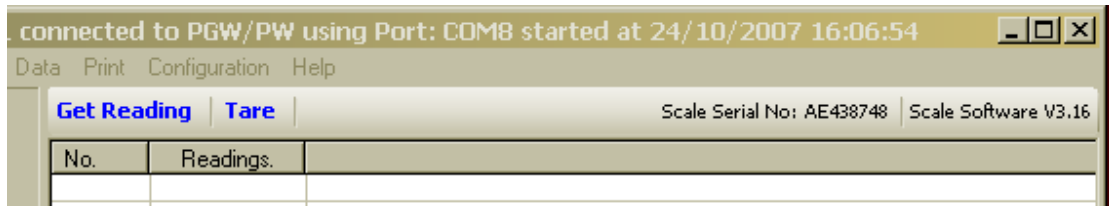
The collection of the Serial number of the balance may be included in the captured data via the custom data collection facility - to help uniquely identify a data collection session/balance.

Supported ADAM Balances & Scales

- PGW Precision Balances
- PW Analytical Balances
- ACBplus Compact Balances
- CBD Counting Scales
- CBC Bench Counting Scales
- CPWplus Weighing Scales
- ADK Precision Balances
- CBK Bench Scales
- AZextra Price Computing Retail Scales
- AE 202 Indicators
- BFW Platform Scales
- CFW Check Weighing Floor Scales
- HCB Compact Balances
- PGL Precision Balances
- AE 401 Indicators

ADAM Factory Default Serial Communication Settings

PGW/PW Precision Balances
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)
Note: prior to v2.41 default baud rate was 9600

ACBplus Compact Balances
9600 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)
Note: prior to v2.11 default baud rate was 4800

CBD Counting Scales
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

CBC Bench Counting Scales
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

CPWplus Weighing Scales
9600 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

ADK Precision Balances
2400 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

CBK Bench Scales
9600 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

AZextra Price Computing Retail Scales
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

AE 202 Indicators
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

BFW Platform Scales
9600 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)
Note: RS-232 Pin 2 is output & Pin 3 is input – which is the reverse of
most standard RS-232 cables. See BFW user manual for more details.

CFW Check Weighing Floor Scales
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

HCB Compact Balances
9600 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

CFC Floor Counting Scales
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

PGL Precision Balances
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)

AE 401 Indicators
4800 Baud N,8,1 (No Parity, 8 Data bits, 1 Stop Bit)