Getting Started with GenStat

This quick start manual is aimed to provide the user with the basic skills needed to navigate their way around GenStat and be able to open files and perform basic statistical analyses. For a fully comprehensive guide to using GenStat, please refer to the GenStat Help menu for further assistance.

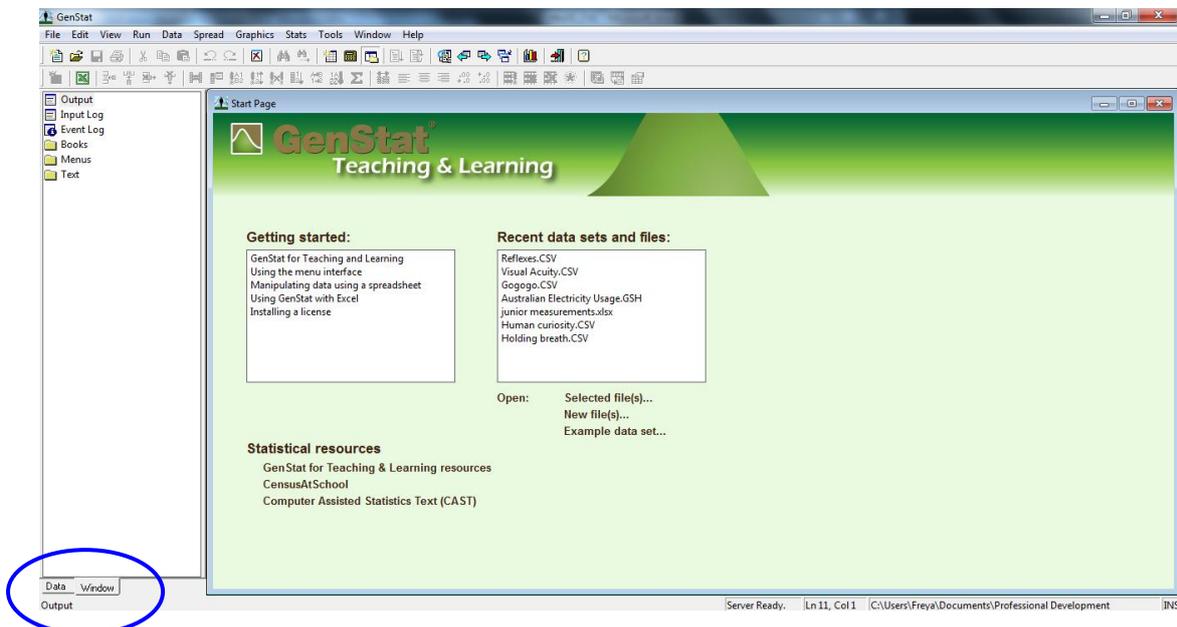**Contents:**

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Section 1.1: Opening GenStat

To open the GenStat program click on **Start>All Programs** from your computer desktop and open the program through that path, or **double-click** on the icon on your desktop. The program will open to the Start Page Window as shown below:

On the bottom left-hand side of the screen, click the tab **Window**, as this allows you to view the different windows (Spreadsheets, Input, Output) with ease.

To switch between the different windows **double-click** on the desired window in the left hand side column menu. The main windows that need to be accessed are the **Output Window** (this is where the results of the analyses appear) and the activated **Spreadsheet** (this will appear once a spreadsheet is open). The **Input Window** shows the code that is run for each procedure. If you wish to write coding instead of using the interactive program menus this is the window to use.

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Getting started: For a comprehensive guide to using GenStat, select an option under Getting started, found on the Start Page. These options provide in depth guidance for using GenStat.

Recent data sets and files: when using GenStat for the first time, this box will be blank as no files have yet been opened. When opening it at any other time, data sets and files that you have opened recently will appear in the window. To open any of these **double-click** on the name of the data set or file, or click once on the file name and then click **Selected File(s)** (see below).

Open:
Selected File(s): this opens the file(s) selected in the **Recent data sets and files** window.
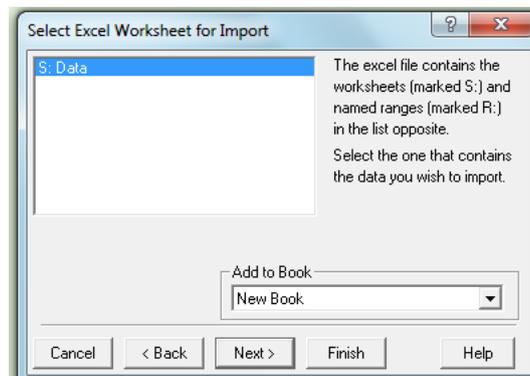
New File(s): This opens a new file, and a pop-up window appears that allows you to browse through your computer to find the required file (of any type).

Example data sets: This brings up a window with a list of all datasets available in the GenStat Program. These data sets are all GenStat files and are often allocated to videos and lessons available online.

Section 1.2: Opening an Excel File:

To open an Excel file in GenStat either click on **New File(s)** on the GenStat Start Menu or click on **File>Open.** Select the Excel file required and click **Open.** In this example a dataset *Paint drying data* is used.
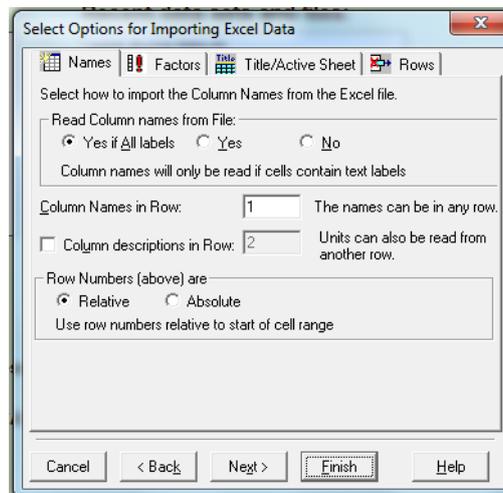
A window will appear with the title "Select Excel Worksheet for Import"**.** If there are multiple worksheets available in the Excel file these will appear. Select the worksheet required and click **Next.** Note, clicking **Finish** will open the Worksheet immediately in GenStat. For illustrative purposes this manual will go through all the steps available when opening an Excel file, however once the user is familiar with opening Excel files clicking **Finish** immediately will speed up the process.

Proceeding clicking **Next**, the Import window will illustrate what the imported file will look like in GenStat. If you are satisfied with this, click **Finish,** otherwise click **Next.**
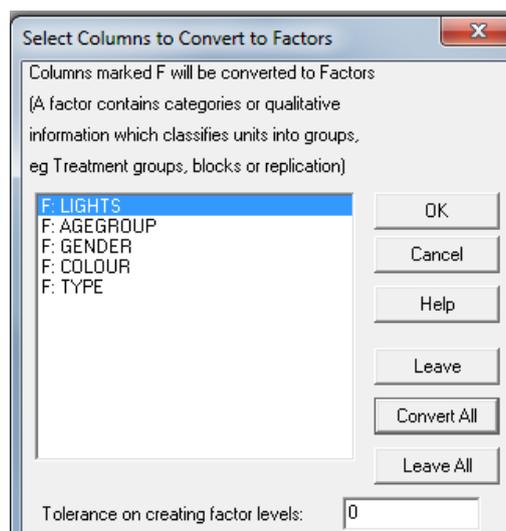
This allows you to select all or specified columns from the excel file. If all columns are wanted, click **Finish** or **Next**, otherwise select the columns you wish to import.

The next window allows various alterations to the data set. To specify which row the variable names are in type in the row number under **Column Names in Row** (the default is row 1).

Click **Next** or **Finish** once any alterations have been made. The Spreadsheet will appear in the GenStat Window. Note that GenStat automatically converts text/group variables to factors. If a variable is a factor then a pink exclamation mark (!) will appear next to the variable name. To convert variables to factors or back to variates, **right-click** on the variable name and select **Convert to Variate** or **Convert to Factor**.

If you are opening a different type of file, such as a comma delimited file, an extra option at the end will appear as follows *(the specific file below is not available on the University of Otago website)*:

Here, text variables that are recognised by GenStat as factors will appear in the window, and you can select which variables to convert to a factor. If all variables in the window need to be converted to factors, click on **Convert All** then click **OK.**

Section 1.3: The Menu Bar

The following drop-down menus are available on the menu bar at the top of the GenStat Window:

File   Edit   View   Run   Data   Spread   Graphics   Stats   Tools   Window   Help

The File Menu: This is similar to most programs, and allows you to open data sets, print output and exit the program.

New: This creates a new GenStat Spreadsheet to the dimensions specified
Open: This lets you open any dataset on your computer
Close: Closes the current active window
Example data sets: Opens a GenStat Example Data Set
Save: Saves the current spreadsheet
Save As: Saves the current spreadsheet as a new file
File>Print: Prints the information on the active window
File>Exit: Exits the program

The Edit Menu:

Undo/Redo: This allows changes to the active spreadsheet to be undone or redone
Find: Finds a specified value or word in the spreadsheet

The View Menu: This allows you to switch between the data view and window view of the taskbar on the left hand side of the screen, and can take you to the Start Page (**View>Start Page)**

The Run Menu: This is mostly for those doing programming in GenStat.

Restart Session: This will clear all output, input and clear all the data in the program being currently used
Restart Server: Restarts GenStat

The Data Menu:

Save: Saves the current spreadsheet as a GenStat File
Clear All Data: This removes all data from the GenStat memory, except the active sheet. GenStat has a memory where, if in the same session, the variables from all spreadsheets that had been opened are saved in its memory even if the spreadsheet is no longer open.
Calculations: This provides a "calculator" that allows you to calculate values as Output, new Columns in the spreadsheet, or values in a new spreadsheet.
Probability Calculations: Calculates probability values for the Normal, Binomial or Poisson Distribution

The Spread Menu:

Calculate:

    Fill: This fills a column with the values specified

    Column: Creates a new column, and takes you to the **Data>Calculations** window

    Random Subset: selects a random subset of the data for the number of data values specified

    Summary Stats: Creates summary statistics (such as the mean values) for selected columns.

    This is useful for finding the average seasonal effect in Time Series data.

Delete: deletes selected rows or columns

Insert: inserts new rows or columns as required

Restrict/Filter:

    To Groups/factor levels: restricts the dataset to only include/exclude particular groups or subsets.

    By value: restricts the dataset to only include/exclude data points meeting the specified value requirements

The Graphics Menu: This menu is where you will find all graphing options. Once all the information has been input into a selected graphing option and you click **Run** the graphic will appear in the GenStat Graphics Viewer. This window will pop up automatically as soon as a graph is drawn. The exception to this is the Stem and Leaf graph, which will show up in the GenStat Output Window as it is numbers and not a graphical image.

The Stats Menu: This is where the majority of the Statistical analyses can be found. Once the analysis has been run, the results will appear in the GenStat Output Window.

The Tools Menu:

Options: This allows you to switch between the GenStat Schools Edition and the GenStat Undergraduate Edition. For the change in Edition to take place, GenStat must be restarted.

Graphics Environments: To create a Graphics Environment click on this option then click **New.** This allows the user to change the default graphics options (such as line colour, plot colour etc) that will show up when using GenStat. If the program is being used as part of an organisation, different graphics environments may have already been created.

The Window Menu: Used to select which GenStat Window is to be viewed.

The Help Menu: This is where all GenStat help can be found. **Contents and Index:** This is an in depth help file on getting started with GenStat **Search:** Allows the user to input specific search terms and returns all possible results **Online Support:** Opens the GenStat Support webpage in the default browser (to use this you must be connected to the internet)

Section 1.4: The Toolbar

On the toolbar there are shortcut buttons that are commonly used. All of the functions on the toolbar can also be found in the Menu bar (located directly above the toolbar). By hovering the mouse over each icon, a brief description of the function of each button will appear. A few commonly used buttons are explained below:

This is "open file" and allows you to open a file located on the computer

This saves the current spreadsheet (under the same name)

This prints the current information in the active GenStat window

This clears all Output in the GenStat Output Window

This brings up the GenStat Graphics Window

This brings up the Help menu

These buttons, in order from left to right, are restricting data by factor/group level, and restricting data by value

These buttons, in order from left to right, are insert row before current (highlighted) row, insert column before current column, delete highlighted row, and delete highlighted column.