EasySense software Multi-user Site Licence

Definitions

The following expressions have the meanings given here:

- 'DHG' means **Data Harvest Group Limited**, being owner of all intellectual property rights in the Software
- '**Documentation**' means both printed and electronic user documentation.
- '**Software**' means the program supplied.

Licence

This software package may be freely used, copied, and disseminated. This includes any associated documentation and user guides.

The software may not be amended, changed or altered in anyway.

Limited Warranty and Disclaimer of Liability

The Software is supplied 'as is'; DHG makes no warranty, whether express or implied, as to the merchant ability of the Software or its fitness for any particular purpose. In no circumstances will DHG be liable for any damage, loss of profits, goodwill or for any indirect or consequential loss arising out of your use of the Software, or inability to use the Software, even if DHG has been advised of the possibility of such loss.

General

These conditions supersede any prior agreement, oral or written, between the licensee and DHG relating to the software.

System requirements

Operating System:	Windows XP, Windows Vista and Windows 7 (32 and 64 bit compatible)
Display minimum: Recommended:	800 x 600 with 256 colours 1024 x 768 with high colour – 16 bit
Minimum Software:	Windows Installer 3.1* Microsoft .NET Framework 2* Microsoft Internet Explorer 8** Adobe Reader (V7.0)**

* If Microsoft .NET Framework 2 or Installer 3.1 is not detected during the installation set up process, they will be automatically installed prior to the EasySense application install. This will extend the installation time significantly.

** V8 minimum Internet Explorer is required to view documentation on the EasySense CD. To view and print PDF files you will need Adobe Reader installed.

Installing the EasySense software

USB users: Make sure the **EASY**SENSE logger is **not** connected to the USB port prior to, or while, the EasySense software is being installed.

- Log on as ADMINISTRATOR (or with equivalent access rights) on the system.
- Close any open programs – you may need to restart your machine for configuration changes to be made.
- Insert the EasySense CD ROM into the CD Drive. Windows should detect the CD and automatically start up the EasySense auto run program. If auto run fails to start, use Windows Explorer to navigate the CD ROM contents and double click on the **Setup.exe** file.
- Follow the on-screen instructions to complete the installation of EasySense and its associated files* onto the hard disk.
- When the installation is complete, eject the CD ROM and store it safely. Restart your system.

* Complete installs all, whereas a Custom install allows you to deselect the installation of logger manuals or to change their installation path.

A Windows installer package (**.msi**) of the EasySense software is available. The .msi package for 32 bit systems is supplied in the **i386** directory and for 64 bit systems in the **amd64** directory.

Note: To check your system properties, click on Start, right click on Computer and select Properties. The operating system will be specified in the System's description.

Starting EasySense for the first time

Step 1: Connect the interface or data logger to the computer

- **USB connection:**
  Connect the **EASY**SENSE logger to the USB port on the computer. Windows will automatically detect a new device and install the drivers.

- **Bluetooth™ connection:**
  Use the instructions provided in the **EASY**SENSE logger's user manual.

- **Serial connection:**
  Connect the interface/data logger to the serial port on the computer.

Step 2: Start the EASYSENSE software

E.g. Start ► Programs ► Data Harvest ► and click on EasySense Software.

Step 3: Select the language

If a choice of language is available a Set Language window will open.

To choose a different language, select from the drop-down menu and OK. The program will close. Restart to apply your choice.

Step 4: Select a user level

The first time the EasySense program is opened a 'Select Program Level' window will automatically open. Select a suitable user level.

- Level 1 is aimed at 'start' level (e.g. up to 9 years old)
- Level 2 is aimed at 'mid' level (e.g. 9 – 15 years old)
- Level 3 is aimed at 'exam' level (e.g.15 years plus)

Note: The program level can be altered at anytime by clicking on the Level icon and cycling through the levels.
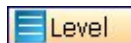
The currently selected level will be saved when the EasySense program is closed.

Step 5: Select an Interface and connection

A 'Select Interface' window will automatically open to allow the correct interface and connection to be selected.

Open Setup

To select and open an experimental set up file. This will pre-set the software for a specific operation.

Set up Remote

Used to set up the options for capturing data while disconnected from the computer (remote). These options can include the duration of a recording, the time between each sample and triggers.

Retrieve Remote

Use this option to retrieve a data set stored in your data logger's memory.

Downloading the EasySense software from our website

The 4500 EasySense software is available as a download from the Data Harvest website (www.data-harvest.co.uk). Save the compressed file to your computer, then 'unzip' to extract all files before you run the setup.exe or msi.

Note: The method used to unzip a file will depend on the computers operating system and the decompression program on your computer. For example:

- Download the 4500 EasySense software zip file; select to **Save** it to a temporary directory on your computer.

- **Right** click on the zipped 4500 folder and select **Extract All** (or Extract or Unzip)**.** Select the extract destination as the temporary folder. When the 4500 folder has decompressed the folder will appear minus its 'zip'.

  Compressed (zipped) folder   Decompressed (unzipped) folder

- From the unzipped folder either run the Setup.exe or select the appropriate Windows installer package **(.msi**).

Note: The .msi package for 32 bit systems is supplied in the **i386** folder and for 64 bit systems in the **amd64** folder.

Make your selection from the right-hand control panel and click on the **Start** icon ▶ to begin logging.

Note: Scope is only available if the User level is set to Level 3.

Timing
Timing is used to allow students to study Time, Velocity, Acceleration, Momentum and Kinetic Energy relationships using switch-type (digital) sensors such as Light gates.

Sensors must be connected to the inputs labeled A or A & B.

A recording wizard will open with options to select before recording data. (The availability of options will depend on the user level you have selected to work at). When the selection has been made, click on Finish.

Click on the **Start** ▶ icon and a reading will be displayed when a change in signal is detected from the digital sensors.

Counting
Use to count events by using switch-type (digital) sensors. The chart type can be displayed as images or a colour block or bar chart oriented either horizontally or vertically.

The program will open with logging started. The count will increase by one each time a change in signal is detected from the digital sensors and be displayed as a bar chart.

Click on the **Stop** icon ■ to stop logging.

Note: Counting is only available if the User level is set to Level 1 or 2.

Open File
Used to load a previously saved .SSL or .sid file. Locate the correct file and click on open.
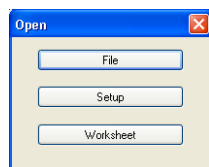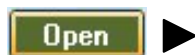
Open Worksheet
To select and open a worksheet and its accompanying experimental set up file.

(a) Select the correct interface from the drop-down menu.

- **EasySense Range** for an **EASY**SENSE data logger or interface
- **Flash Logger** for the **EASY**SENSE Flash Logger (XP only)
- **Sense and Control** for the Sense & Control.
- **Example Data** for stored example data to show how sensor readings are displayed. If this option is selected you will not be able to collect data from your interface or data logger.
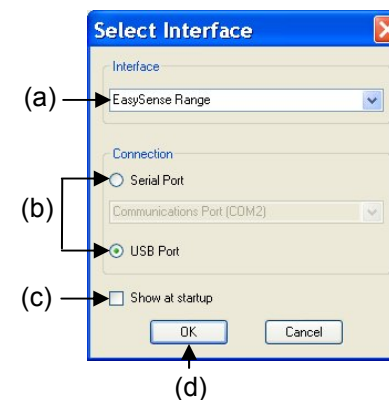
(b) Select the appropriate connection i.e. either Serial or USB Port.

- If you are connecting via a **USB** lead, select **USB Port**.
- If you are using a **USB/serial adapter**, select **Serial Port** and then the adapter from the serial ports drop-down list e.g. USB-to-Serial Com Port (COM4).
- If you are using **Bluetooth**, select **Serial Port** and then the serial port configured for Bluetooth from the serial ports drop-down list e.g. Bluetooth Communications Port (COM4).
- If you are using a **serial** lead, select **Serial Port** and then the number of the communication port used from the serial port drop-down list e.g. Communications Port (COM2).

(c) If these settings will stay the same leave the 'Show at startup' box unticked.

Note: If the box is ticked the 'Select Interface' window will automatically open when you next start EasySense, so you can check that the currently selected Interface and method of connection are correct. This is useful if you use different types of interface or if the interfaces use different methods of connection.

(d)   Click on OK. The program will save the current selection.

Note: To change this selection at any time, CANCEL any 'failure to connect' errors, select **Interface** from the **File** menu and alter the selection.
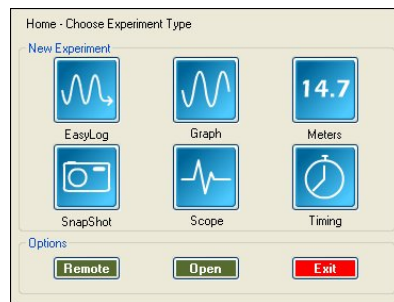
The Home screen

Home is the main navigation screen, which contains the icons for all available options. The appearance of the Home screen and the complexity of the toolbars and functions are altered by the user level selected.
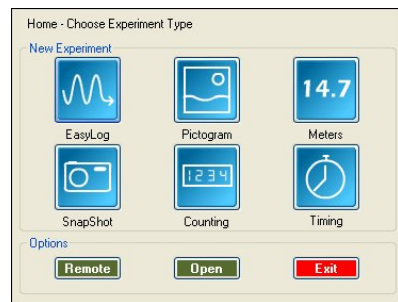
The Home page at Level 1   The Home page at Level 3

Note: If the interface/data logger detected cannot use an option it will appear greyed out e.g. the Setup and Retrieve Remote options will only be available for data loggers which support remote data collection.

EasyLog
The Graph window will open pre-set to record sensor values **continuously** as a line graph until stopped.

Click on the **Start** icon to begin logging. Recording will start with a time span of 30 seconds and when it has elapsed the time span will double automatically. This will continue until the recording is stopped by clicking on the **Stop** icon .

Meters
The Meters window gives an introduction to sensors and how they respond to change. Up to four section displays can be open at any one time and they can be any combination of sensors and displays.

The program will open with live data being displayed from a sensor in a Numeric window. Click on the appropriate picture icon on the Menu bar to open other section displays i.e. Numeric, Gauge, Colour Change or Bar. To alter the sensor displayed in a section, **right** click in the individual section window and select the sensor from the list.

Click on the **Stop** icon to stop logging.

Pictogram
The value from the sensors is displayed as images, abstract colour blocks or a bar chart. Each represents a 10th of the range (or span) of the sensor and is also displayed as a number from zero to ten.

The program will open with live data being displayed as images. Click on the **Store** icon to capture a live reading from the sensors.

Click on the **Stop** icon to stop logging.

Note: Pictogram is only available if the User level is set to Level 1.

Snapshot
The graph window will open pre-set to record sensor values on demand (**manual sampling**) with a bar graph display.

Click on the **Start** icon to begin logging. Click in the graph area to record the current value for each active sensor.

Click on the **Stop** icon to stop data being recorded.

Graph
Graph is used to record sensor values against a **chosen time span** as a line graph display.

A real time logging wizard will open from which the time span, interval between samples, start condition and triggers for the recording can be chosen. (The options available will depend on the logger and user level). When your selection has been made, click on Finish.

Click on the **Start** icon . Recording will start when the start condition you have selected is met e.g. if None is the selected trigger then the recording will start as soon as the **Start** icon is clicked. The recording will stop when the selected time span has passed.(If you want to stop a recording before it has run the full term, click on the **Stop** icon).

Note: Graph is only available if the User level is set to 2 or 3.

Scope
Scope is a simple oscilloscope type display. A scope trace is redrawn continuously on the screen. It is ideal for demonstrating fast events where there are rapid changes such as ECG traces, sound waveform, etc.