



SKLS 940  
SKYELYNX AUTO 2003  
SOFTWARE V4.7

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## SKYELYNX AUTO 2003

# 1. INTRODUCTION

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### **Welcome to SkyeLynx Auto 2003 Edition**

The Software is designed to automatically download data from the Skye DataHog2 or MiniMet2 datalogger, without user intervention. This enables data to be present on the PC's hard drive when needed. SkyeLynx Auto is a time and money saving tool.

Up to 25 loggers can be accessed via a cable link or via modem (whether a 'land line' or GSM cellular link). Each logger is individually handled and the program can be set up to download data at intervals ranging from every hour, daily or weekly as required.

Data is stored on the PC hard drive in ASCII numerical format. These files are directly compatible with spreadsheets such as Excel and also Skye's own graphing software SkyeLynx Deluxe and its predecessor WizzCom.

SkyeLynx Auto has been upgraded in 2003 to include compatibility for Windows 2000NT and Windows XP Professional Editions.

## 2 SOFTWARE OVERVIEW

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### 2.1 DataHog and MiniMet Dataloggers

Skye's DataHog and MiniMet loggers are placed in locations (outdoor or indoor) and left to measure and store readings from their attached sensors. There is a maximum of 25 software channels per logger, which can be configured to each record different data (limited obviously to the attached sensors). This data needs then to be downloaded to a PC in order to be analysed.

### 2.2 Software Aims

The aim of this software is to supply a reliable, consistent, economical and time saving way of downloading your data from DataHog and/or MiniMet loggers.

The program allows you to specify the times and days on which to download your loggers. Once this information is entered the software will sit in the background of your machine and automatically fire up and perform the Downloads at the times you specified.

This means that without any further user intervention, data is automatically pulled off the loggers and stored systematically on your hard disk ready to be manipulated as needed.

The overall aim is to automate the Download process and hence make data Downloading a much more seamless and much less time consuming operation.

SkyeLynx Auto allows you a good deal of flexibility for setting up your instruments, and the setup can be altered at any time. Summaries of your setup can be printed for your reference and also as a means of trouble shooting should any problems occur.

The program also keeps logs of all the Downloads it performs, to allow you to look at any problems that may be occurring.

### 2.2 Data Format

When a logger is Downloaded, a composite ASCII file is created which contains the following information,

#### DataFile Identifier

This is in effect the name you give to the data that your logger produces that uniquely sets it aside from any other logger. It must be 12 characters long and should not contain any non standard characters (such as "ö") or any spaces, full stops etc. The Datafile Identifier is actually written into the logger's memory. The logger will have been given a datafile identifier before leaving the factory which can be changed if required.

#### Channel Number (For each channel)

These are the numbers that you have assigned to your **software channels**. Software channels are set up within the logger. There are 25 Software Channels in each DataHog or MiniMet device. Each one can be tied to a Hardware Channel. A Hardware Channel gets a measurement of some environmental condition and points this data at the software channel, which records all the data it receives into the loggers memory. Software channels then can be set up to contain the data recorded by the sensors on the logger.

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### Channel Data (For each data point for each channel)

This is the data that the logger has recorded. Each piece of data (each recorded value) is referred to as a data point. When the data is downloaded from the logger, a composite ASCII file is created and stored in the folder c:\lynxauto\files. This is of the following format,

#### Datafile Identifier – DataHogTest1

```
08:52:00 08/01/1999 17 0007178.00000 18 -0007178.00000 20 ....
08:52:10 08/01/1999 17 0005113.00000 18 -0007179.00000 20 ....
08:52:20 08/01/1999 17 0005113.00000 18 -0007179.00000 20 ....
08:52:30 08/01/1999 17 0007178.00000 18 -0007178.00000 20 ....
08:52:40 08/01/1999 17 0005113.00000 18 -0007180.00000 20 ....
08:53:00 08/01/1999 17 0007178.00000 18 -0007178.00000 20 ....
08:53:10 08/01/1999 17 0005113.00000 18 -0007180.00000 20 ....
08:53:20 08/01/1999 17 0005114.00000 18 -0007180.00000 20 ....
```

where the Datafile Identifier is “DataHogTest1” and the channels that recorded data were 17, 18 20...

If wished (see Program Options in Chapter 6) these composite files can be broken down into “Day Files” (files of data from 00:00 to 23:59 for each day) for compatibility with Skye’s graphing packages SkyeLynx Deluxe and its predecessor WizzCom 265CS. The dayfiles allow ease of manipulation and better organisation of the saved data. If the dayfile options are activated, when the data is Downloaded from the logger using SkyeLynx Auto these dayfiles are automatically created and stored in the folder c:\skyedata. The files are named as

“Date (yyyy/mm/dd)  
“1<sup>st</sup> 9 chars of the Datafile Identifier” +  
“.” + “and the next 3 chars from the Datafile Identifier”

Typical filenames may be

```
19990305DemoLogge.r01
19990306DemoLogge.r01
19990307DemoLogge.r01
19990308DemoLogge.r01
```

For the Datafile Identifier : DemoLogger01  
For dates 5 March 1999 to 8 March 1999

**Note:** If you name your Datafile ID sensibly you can make sorting your data a lot simpler. For instance if you have three loggers, and you name the Datafile Identifiers as

```
HogOutsid001
HogOutsid002
HogOutsid003
```

Then the files produced will have extensions - .001, .002 and .003 which leads to well organised filenames and structures.

However, it is dangerous to change your Datafile Identifier after you have already been recording data, since it becomes very hard to keep track of the day files that have previously been created.

This file format is newly designed for the SkyeLynx range, and will not work with WizzCom (SkyeLynx’s predecessor). However, WizzCom compatible files are also produced by the software meaning that any WizzCom users can also use this Downloading software seamlessly with their existing software.

## 3 INSTALLING THE SOFTWARE

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To install the software insert the SkyeLynx Auto CD which will AutoRun and guide you through the installation process. In case of problems, please follow the 'Quickstart Manual' instructions to find and run the SkyeLynx Auto "setup".

Follow the simple install program to setup the package on your machine. The first thing that you will have to do is supply the program with a target code. You will need to email or telephone Skye Instruments for this and quote the source number that is shown to you. If this is not convenient at the time of installation, then make a note of the source number, so that you can quote it at a later time to Skye Instruments, and press the "I'll get a target Number later" button.

**YOU WILL NOT BE ABLE TO START THE SOFTWARE WITHOUT ENTERING A TARGET NUMBER.** If you do not enter the number at setup time, then you will be asked for it upon running the program.

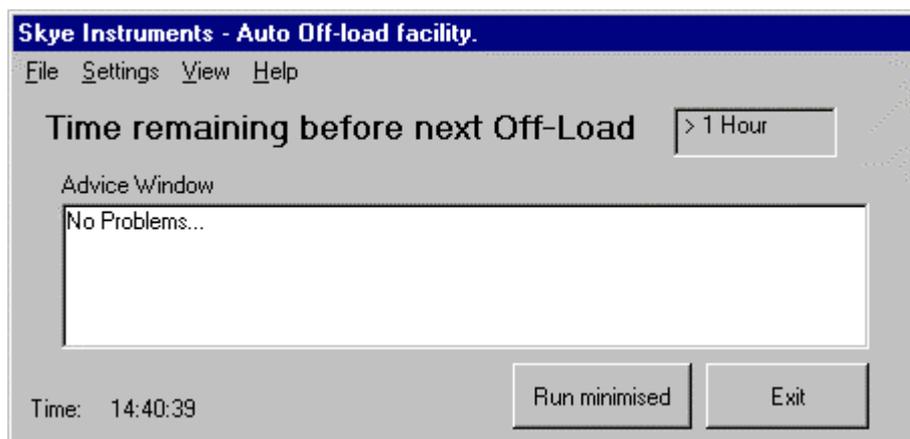
The only things you will have to choose during the setup wizard are the name of the directory in which to install the .exe file (the default will be C:\LynxAuto) which we recommend you use, however feel free to specify a different path if you wish. You will also have to specify the program group to insert the package into. Again a default option is supplied, though you can enter your own if you wish to.

### 3.1 Running the Program

When the program is installed, it is placed in the **Programs** menu on the *Start Bar*. To run **Auto Download** press the **start** button, move the mouse pointer up to the **programs** menu, and move across to '**SkyeLynx Auto**'.

Upon Loading the software for the first time, you will be confronted with a window asking you to enter the Com port that your modem is plugged into.

Every time you subsequently run the software you will go straight into the screen shown below. This is the main window, and houses are the main menu options, such as Settings, View and access to the help files. To setup your instruments please see Chapter 5.



When you have setup your instruments and you are happy with your settings you need to let the program run in the background. To do this, click the button that says "Run Minimised". This will minimise the program window, ie. Reduce it to button on your **start bar** (The bar along the bottom of your Windows screen). To re-maximise the program, simply click the button and the package will spring back up.

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To quit the program click the “Exit” button.

**Note:** If you exit the program then it will be unloaded from memory, and no Downloading will happen. Always click the “Run Minimised” button when you have finished looking at the program. If you click the “Exit” button you really will exit the program, and Downloading will not occur.

**DO NOT SWITCH OFF YOUR PC** once you have setup your Downloads. Your machine **MUST** be kept running at all times in order for the Downloads to happen. If you switch Off your PC and it is not running when any Downloads were supposed to happen, then obviously these Downloads will not be carried out. It is OK to switch off the monitor, but do not switch off the base unit - don't worry, it is no problem to leave your PC running 24hrs a day – they are designed for continued use.

NOTE – don't forget to check the power saving settings for your PC (Start, Settings, Control Panel, Power Options) to make sure that the hard drive doesn't switch off or go into standby mode after a period of no activity, else your automatic downloads may not take place as expected.

The program files for this package will be installed in a directory called **C:\LynxAuto**  
Any Data files that are made will be placed in the directory **C:\SkyeData**

## 4 USING THE SOFTWARE

### 4.1 Creating / Editing the Off-Load settings

To setup your instruments, click 'Settings' on the main menu and then click 'Edit Off-Load Setup'. The window shown below will appear.

In this window you will need to enter the various settings for your instruments.

Ticking the 'Lock Settings' check box will make the details locked, ie. Stop you editing them. This is ticked every time you load this screen, hence you must unlock the settings before you can edit them (simply click the small white box next to "Lock Settings").

You can have a maximum of 25 individual instrument settings. To move between the instrument number (Off-Load settings) click the arrows on the top right of the screen, the current instrument number will be displayed in the small box to the left of these arrows.

You can leave an instrument number entirely blank, if you wish to, however, it must be COMPLETELY blank, if you enter any details then you must enter all of them.

For every instrument that you set up an Download for you must enter the following details, in the ways described:

#### Download name

Enter the name that you want to give the Download eg. If the Download was for a MiniMet in a potato field then you may wish to call it **MiniMet in Potato Field**. As a general rule, try and use a couple of words to uniquely describe the download without making it too long.

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### Phone Number

You only need to enter this if you are using a phone to connect to the current instrument. You **MUST** type the phone number in as a plain number, use no spaces or formatting at all, eg. For phone number **(01597) 123456** enter **01597123456**. You may need to enter another number before the telephone number eg. To get an outside line you may need to add a 9 in front of the number, making it, **901597822761**.

### Pager Number

You only need to enter this if you are using a phone, and if your GSM is woken up by means of a pager.

Pagers are used to wake up the GSM unit by sending it a character. Typically this character will be for example the number 5. This character is normally followed by a “#” symbol. What is actually required is to ring up the pager, wait until the pager has accepted our call and then send it a character and a number and a “#” symbol.

The way to do this in the software is to enter the pager number, followed by a series of comma’s (,) – 5 comma’s is normally about right (a comma gives a delay in sending the phone number, typically 2 seconds). Sending 5 comma’s gives about a delay of about 10 seconds which is normally acceptable).

### Connection

Here you must supply which connection you are using to hook up to your logging device. Select either a Com port, or if you are using a GSM modem, then select “Modem Connection”.

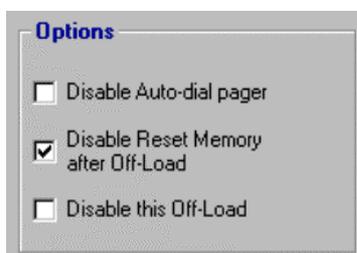
**Note:** Even if you know which Com port your modem is connected to, you must still specify “Modem Connection” if you wish to use employ a modem. The software knows which port the modem is on, so you simply have to specify that you are using a modem.

To clear your settings at any time, click the button that says “Clear Current Setting”. This will blank the current Download settings. No other settings will be effected. For example, if you are currently at setting 2, and you ‘Clear Current Setting’, only setting 2 will be cleared, the others will not be effected.

Once you have finished entering your details, click the “OK” button. You will be prompted to save your details, and if you say “Yes” then your details will be saved to disk. Or click “Cancel” to abandon any changes that you may have made.

## 4.2 Download Options

There are three options that you can select for each Download you set up. Those are shown below,



### Disable Auto-Dial pager

If you are not using a modem then you can ignore this topic. If you are using a modem then this is quite important. It is possible that you are using a pager on your GSM to wake it up. This being the case then the software needs to dial the pager before phoning the GSM. The program will

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automatically dial the pager number you have entered (if you haven't entered one then again you can ignore this) unless you tell it not to. This is done by clicking the small white box next to "Disable Auto-dial pager". If a tick appears in the box then auto-dialling the pager is disabled, if the box is empty then the pager will automatically be dialled.

### Disable Reset Memory after Off-Load

Your logger's memory gradually fills up with data. Most of which will be old data that has already been Downloaded and is no longer needed. It is recommended that you reset the memory in your logger every time you have Downloaded and are sure that the data is correct and present on your hard disk. If the memory is not reset then it will continue to build up and eventually get full, whereupon it will either start over writing old data, or it will stop logging depending on the settings on the logger. This program automatically resets the loggers memory every time an download is completed. Don't worry, the program has built in checks to try and ensure that the data is valid, before it resets the device's memory. If an Download crashes, or for any reason there is a suspicion that the data may have errors then the memory reset is not performed.

You can turn off this automatic memory reset by clicking the small white box in the options frame. If the box has a tick in it then the logger's memory will NOT be reset. If you do select this then be sure to reset the memory yourself quite frequently. If your memory builds up it takes a lot longer to Download since there is more data to pull off, which obviously reflects on your phone bill (if you are using a modem) !

Be aware though that once the memory is reset, you neither you nor anyone else will any longer have access to that data on the loggers memory, since it will be cleared. This is no problem, since the data will be on your PC, however, be sure nobody else will be connecting to the logger and finding that the memory is blank.

### Disable this Off-Load

It may be that you want to (perhaps temporarily) disable an Download without actually deleting (clearing) the setting. To do this click the small white box next to "Disable this Off-Load". If the box has a tick in it then the Download for that particular instrument will not be performed, though the settings will be preserved. You can re-activate the Download at any time by clicking the box again to remove the tick.

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### 4.3 Off-Load Intervals

The way that the Download intervals are handled is in hourly slots. A grid is compiled of all the hourly slots for a week. Each hour, on the hour, the program examines the grid and Downloads the instruments in the hour slot. A typical Download grid may be as shown below:

	Sun	Mon	Tue	Wed	Thur	Fri	Sat
00:00 – 01:00							
01:00 – 02:00							
02:00 – 03:00							
03:00 – 04:00	1	1	1	1	1	1	1
04:00 – 05:00							
05:00 – 06:00							
06:00 – 07:00							
07:00 – 08:00			4				
08:00 – 09:00							
09:00 – 10:00							
10:00 – 11:00							
11:00 – 12:00							
12:00 – 13:00							
13:00 – 14:00							
14:00 – 15:00							
15:00 – 16:00							
16:00 – 17:00							
17:00 – 18:00							
18:00 – 19:00							
19:00 – 20:00							
20:00 – 21:00							
21:00 – 22:00	2	2	2	2	2	2	2
22:00 – 23:00	3	3	3	3	3	3	3
23:00 – 00:00							

Where the numbers are the Instrument numbers in your settings. For example, Number 1 could be a logger in a greenhouse. Number 2 a logger in a field etc.

The above grid shows that

Logger number 1 is set to Download in the 03:00 to 04:00 slot every day,  
Logger number 2 is set to Download in the 21:00 to 22:00 slot every day,  
Logger number 3 is set to Download in the 22:00 to 23:00 slot every day,  
Logger number 4 is set to Download in the 07:00 to 08:00 slot every Tuesday,

As the above grid demonstrates, it is a good idea to make the loggers Download at night time when the phone network is quieter, and possibly cheaper !

You do not specify an exact time for an Download (eg. 9:32) simply an hourly slot in which the Download is to be performed.

To complete an Download from initially connecting to the device to making the files on your hard disk and dis-connecting from the logger can take a total of up to (and in some cases beyond) 10 minutes.

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For this reason there cannot be more than 5 Downloads set up in the same hourly slot. If you attempt to do this then you will be told by the software and asked to alter the setup.

Once you have setup your instrument details, you must edit the Off-Load grid. Do this by selecting "Settings" on the main menu, then "Edit the Off-Load grid".

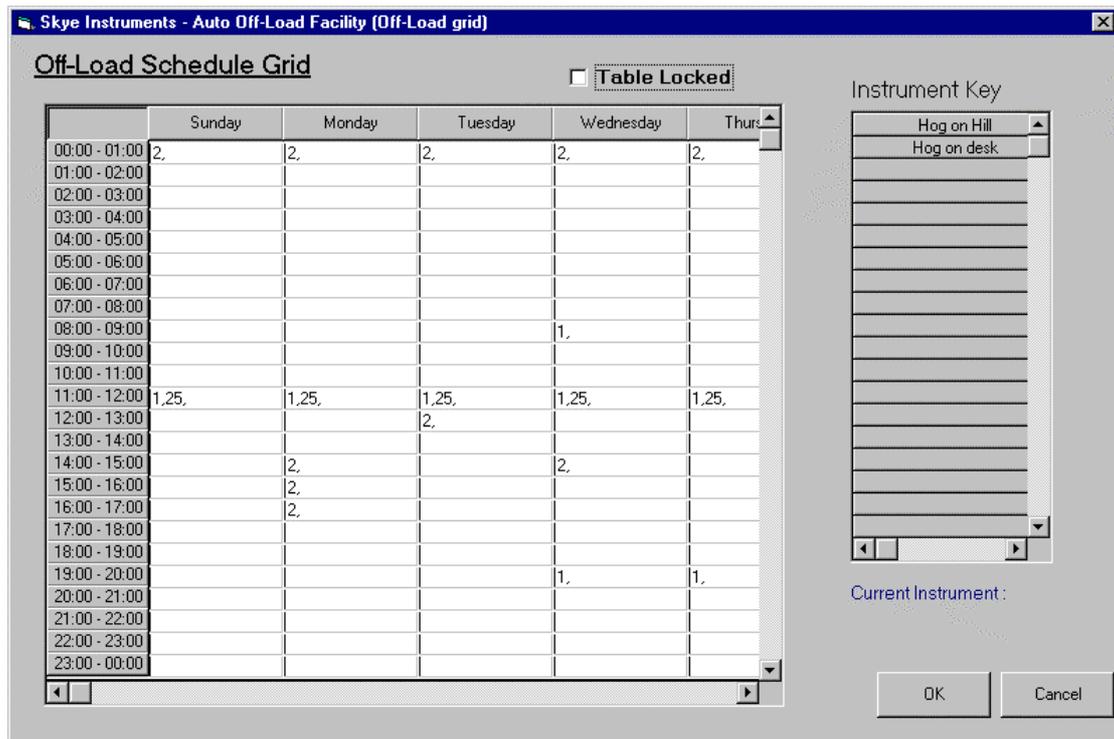
### 4.4 Specifying Downloading Times

Click on "Settings" on the main menu, then "Edit the Off-Load grid" as shown below,



You will subsequently be confronted with the screen below.

Upon loading this screen, the Download grid will be disabled along with the buttons along the top and sides of it. This is to prevent any accidental entries or alterations being made. Click the check box entitled "Table Locked" to unlock the table.



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### Entering the Download times

The first thing that you must do is to select the instrument that you wish to specify the Download times for.

You will see on the right hand side of the screen a list of the instruments that you have setup, in order of Download number. To select one of these instruments, click the button on which it is written. The caption underneath the instrument box will read "Current Instrument" followed by the number of the instrument that you have selected. Eg. "Current Instrument : 1".

There are three ways that you can insert your chosen instrument number into the grid,

### Specify a Daily slot

This is where the instrument will be Downloaded every day at a specific time, eg in the slot 04:00 – 05:00. To do this click the button on the left of the grid that has the time you require on it. If you do not have the current instrument already setup for each day at the specified time, then you will be asked if you are sure that you want to insert a daily Download for the current instrument. Click "yes" or "no" as you please. If however you do already have this instrument set to Download in the current slot every day, then you will be asked if you want to remove the instrument from the every day slot, reply "yes" or "no" as you please.

### Specify an Hourly slot

This is where you insert the instrument into every hourly slot on a given day. Much the same as with the Daily slot, however to specify this you must click one of the buttons on the top of the grid with the day that you wish to insert an hourly slot for on it, e.g. "Monday"

### An individual slot

This allows you to place your chosen instrument into a specific slot that you choose. Simply double click the box that you wish to insert the instrument into, e.g. "02:00 – 03:00" on Wednesday. If the current instrument is already in the slot, before you double click it, then it will be removed, otherwise it will be inserted.

Any instrument can only be inserted into any slot once. This is because there is no point in Downloading the same instrument more than once in any one hour.

Once you have inserted your Downloads at your chosen times, click the "OK" button if you wish to save your setup. You will be prompted to confirm the settings for use in the program. If you want to abandon any changes that you have made since entering the Download grid screen, then press the "Cancel" button. You will be warned that any changes you may have made will be lost. Click "OK" to abandon the changes, or "Cancel" to return to the Download screen.

### Priority in the Downloads

Priority is assigned in the order that you enter the instruments into the Download grid cells. For instance if in the 10:00 – 11:00 on Friday cell, you entered **1,5,2** then the Downloads would be done in the order, 1 then 5 then 2.

## 5 DOWNLOADING

### 5.1 Testing a download

Once you have setup your instruments you may like to test them. To test them click on the file menu, then move down to “Test an Off-Load”.



A screen will appear prompting you to select the instrument that you wish to test. Choose the one you want off the pull down menu, and click the “OK” button. A Download will be performed on the instrument. If there are no problems reported, and the data has appeared as you would expect then you may assume that the instrument is setup correctly. It is advised that you test all the instruments in this way after setting them up.

### 5.2 Tips for making a good Download setup

There are no wrong ways to setup the Download intervals for your instruments. However, some methods are much better than others. It is suggested that you follow the guidelines below in order to attain a setup which is both economical, reliable and well structured.

#### Try and limit the number of Instruments in any one hourly slot to a maximum of 3

This is a good idea for two reasons. Firstly, if an Download is unsuccessful then it will be retried after the rest of the queued Downloads in the relevant hour. In order to be retried however, there must be at least 10 minutes remaining in the hourly slot. If this condition was not enforced then Downloads could run over into the next hourly slot and cause delays and confusion. This kept in mind it is advisable to try and leave some time at the end of each hour slot to allow for possible retrying of failed Downloads. Keeping the number of Downloads to be performed in any one hour to three, normally means that there is around about half an hour at the end of every hour to allow for retrying etc. If on the other hand you have five Downloads placed in the same hour then there may well be very little time at the end of the slot to be allocated for retries. Secondly you need to have some time to use the program, to view summaries, perhaps change your settings etc. and if all your hourly slots are filled up then the program will always be active (Downloading). Since you cannot use the program facilities whilst it is in the middle of an Download you may wish to leave yourself time in every hour for these purposes.

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### Setup your Downloads for night time

This is advisable since the phone networks are sometimes cheaper and also less busy than in the middle of the day. This means that the Download operations will be both quicker (and hence cheaper) as well as more reliable. If you are not using a modem then this is not particularly relevant. Either way, Downloading at night means that your PC is not in use so much in the day, when you may need to use it.

### Think about how often you need to Download

Give some consideration to how often you actually want to Download. If you need to look at a new days data every day then you are naturally best to Download every day (say at 4:00 in the morning, so that when you get into work the next day the data is there and ready for you). If you want to keep a close eye on your data or if you have a lot of alarms set up in this software then you may wish to Download every hour (since alarms are only triggered at the end of an Download). Quite often it will be more than adequate to Download weekly, this will reduce phone bills and free up computer time (since the program will not be active as much).

### Reset the memory

It is advised that you reset the logger's memory often, to avoid it getting full up with data that you have already Downloaded. Unless you specify otherwise on the Download options (See Topic 1.5 – Downloading Options for more details on this) the memory will be reset automatically once the data has been Downloaded successfully. This helps keep phone call lengths and computational power down to a minimum.

## 5.3 Downloading the data

When you have set up your Downloads the program will automatically connect to your logger and Download the data at the specified time(s). This process consists of a series of stages,

- 1) Connecting to the Logger, via phone (GSM) or directly via a Communications Port
- 2) Waking up the Logger
- 3) Downloading the data
- 4) Returning the Logger to Log mode
- 5) Disconnecting from the logger
- 6) Creating the Composite ASCII file and the Day files (if chosen)

This entire process can take up to and in some cases over 10 minutes. For this reason the amount of Downloads that can be setup in any single hour is limited to five. See topic 2.7 for more information on this issue.

## 5.4 Data Storage

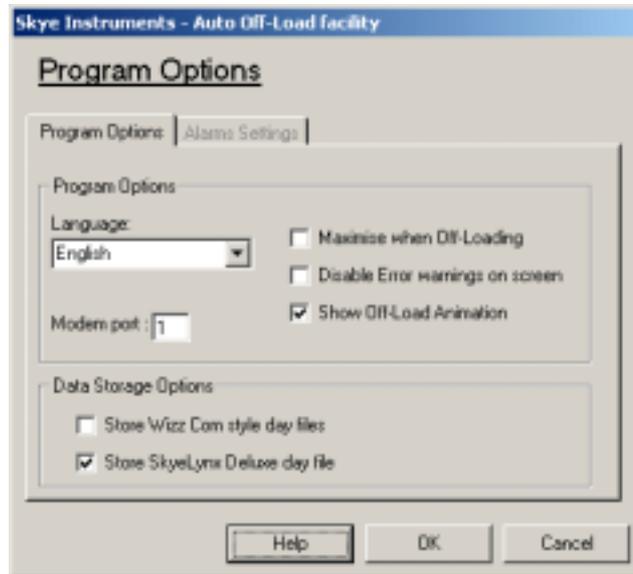
Every time an Download happens, a backup copy of your new data is placed in the directory “C:\LynxAuto\Files” which is called the *Datafile Identifier* followed by a number from 1 to 99 (which increases each time a file is made), followed by **.asc**

The maximum number of backup data files that can be held for each logger is 99. This is to avoid there becoming too many files in the directory. When there are 90 files for any of the instruments, you will be warned that these files will soon be deleted. If you want to keep this old backup data then you must move it out of the “C:\LynxAuto\Files” directory, otherwise it will automatically be deleted upon reaching 99 files. This will NOT effect the day files which are stored in the “C:\Skyedata” directory, it is only concerned with the automatic backup that is created.

## 6 PROGRAM OPTIONS

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The options screen allows you to customise your version of the software, by selecting your required language etc. You can access this window from the main menu under 'Settings' then 'Program Options'



### Language

Sets the language that you wish the program text to Appear in, (currently English only)

### Show Off-Load Animation

If this is ticked then an animation of a 'DataHog' will be played when the program is Downloading data. Click the tick to disable this

### Maximise when Off-Loading

If this is ticked then the program will maximise automatically (if minimised) and display the Download information as the data is being pulled off the logger. If not ticked the window will remain minimised.

### Disable error warnings

You are informed of any errors that may occur in Downloading when each set of Downloads are finished, typical errors may include, for example, failure to connect to the logger due to perhaps the phone network being down. These are shown to you so that you can act upon the situation should it be necessary. You can however disable these warnings should you wish to by ticking this box, although this is not advisable.

### Modem Port

This shows the port that your modem is connected to.

### Data Storage Options

When the DataHog logger is automatically downloaded using SkyeLynx Auto, data can be stored in a choice of formats. The 'composite' or complete logger memory backup file is always stored in "C:\LynxAuto\Files" as described in Chapter 5.4.

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To use the graphing & summarising facilities in the sister software package SkyeLynx Deluxe, you need to tick the option to store SkyeLynx Deluxe dayfiles.

To use the graphing & summarising facilities in SkyeLynx Deluxe's predecessor software WizzCom 265SC , you need to tick the option to store WizzCom type dayfiles.

Leave either or both tick boxes blank if you do not need data in these formats, to save using up hard disk space unnecessarily.

## 7 USING A MODEM

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If you have a GSM unit connected to your logger then you can hook up to the device using a modem in your PC.

If you are using a modem, then on setting up the Instrument Details, you must specify 'Connection' to be **Modem Connection**. You must also then enter a phone number and if you are using a pager to wake up the logger then you must supply a pager number as well. Please see **Topic 2.1 – Creating/Editing Instrument settings** for information about how to enter a phone/pager number correctly.

Due to the fact that using modems and GSM's for communication entails sending characters over a phone network, it is inevitable that firstly this process will take longer than simply having the logger connected directly (via a serial cable) into your PC, and secondly the process is obviously not as secure (it is possible that data can be become corrupted during transmission).

This software overcomes the problem of possible corruption by performing a *secure Off-Load*. This is where the data is Downloaded from the logger twice ! The two Downloaded datafiles are then compared. If they do not match exactly then the Download is performed again. The Download is performed a maximum of 6 times. If after this the files still do not match then the data is not recorded, and the memory is not reset (if this option was not disabled). A secure Off-Load is performed to prevent data corruption during transmission being recorded as good data. It is essential that this is done when using a modem link, and hence the software is setup to do it automatically when using a GSM (this happens without you having to specify anything). If the files are consistently different then an error is generated and you will be warned (unless you have turned off error messages in the Program Options) and the data is not kept, since there is no point in accepting erroneous data.

Due to the new development software used for this package we can keep a much closer check on the state of the phone call to the logger, and quickly detect crashes on the phone network which inevitably happen from time to time. Bear in mind however that conditions on the phone networks are out of our control, and whilst the software can detect crashes and warn you of them it cannot prevent them happening.

You can configure your modem from within the auto Download package, to change the maximum Baud Rate etc. that your modem can use. To do this click "Settings" on the main menu, then "Modem Settings".

## 8 VIEW MENU

### 8.1 Download Summaries

It may well be useful for you to look at summaries of your Download setup. This section deals with how to view summaries of your setup in the form of,

*A Summary table of your Instrument details* – ie. A tabular form of all the relevant details for your Downloads, such as Name, Phone numbers etc.

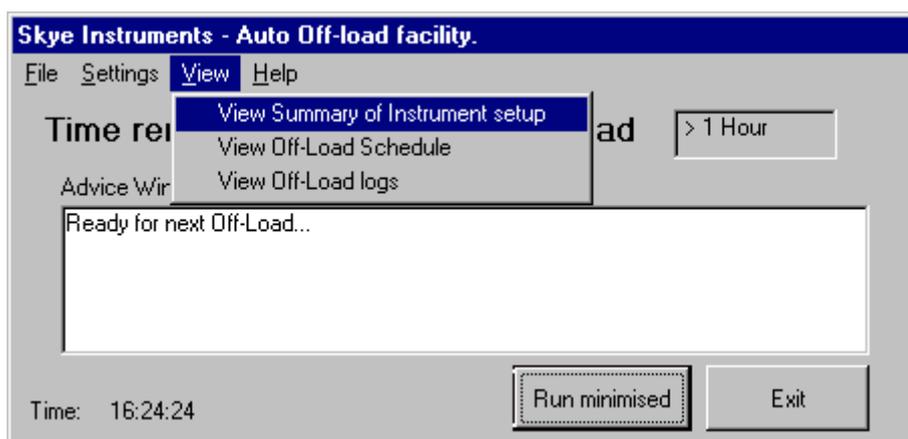
*The Off-Load Schedule grid* – ie. A compiled grid of all your Download times.

*Off-Load logs* – ie. A log of all the Downloads that have occurred and any problems that may have happened.

It is very important when using a program such as this, (which MUST keep running all the time and cannot halt to give errors on the screen), to keep a log of any errors that may occur for later viewing. Whilst the program is written to avoid errors and correct (or compensate for) them if possible, it is unavoidable that some errors may well occur. The software itself should not produce any problems, however there are many factors that are out of our control, such as the telephone networks. If there is a problem in the telephone network that you are using then there may well be a problem with the Download(s) performed. For instance if the network goes down in the middle of an Download then the signal to the logger is literally lost, and the process cannot continue. What will happen here is that the software will re-queue this Download for later in the hourly slot (if there is enough time – see Chapter 2 – “Tips for making a good Download”), and log a message saying that there was a problem. This chapter also deals with how to view these logs, and how to decide if there is a problem that needs some attention, eg. A recurring error.

### 8.2 View a Summary of the Instrument setup

Once you have set your instruments up, you may well want to view a summary of all the details. To do this click “View” on the main menu, then “View Summary of Instrument setup” as shown below.



You will be confronted with a screen that shows you all the relevant details of each of your instruments, in tabular form. You may wish to take a print-out of this for your records, and for troubleshooting purposes.

# SKYELYNX AUTO 2003

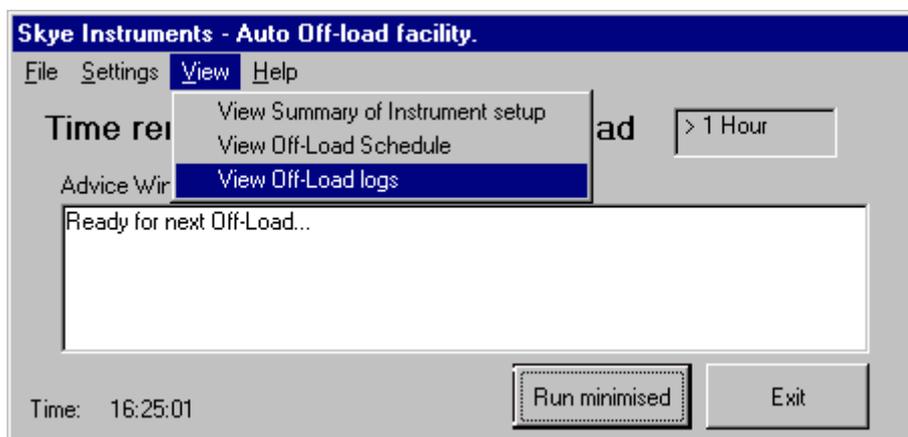
## 8.3 Viewing the Download Schedule

It is often useful to look at your Download setup in the form of a grid of Days against Times. To view this click “View” on the main menu, then “View Off-Load Schedule”. You will be prompted to select the instrument whose schedule you wish to view from a list of all your configured instruments. At the end of this list you will see “All Instruments”. Click this to view all the instruments you have configured. You can change the instrument(s) at any time by selecting the one you require from the pull down menu on the top of the screen.

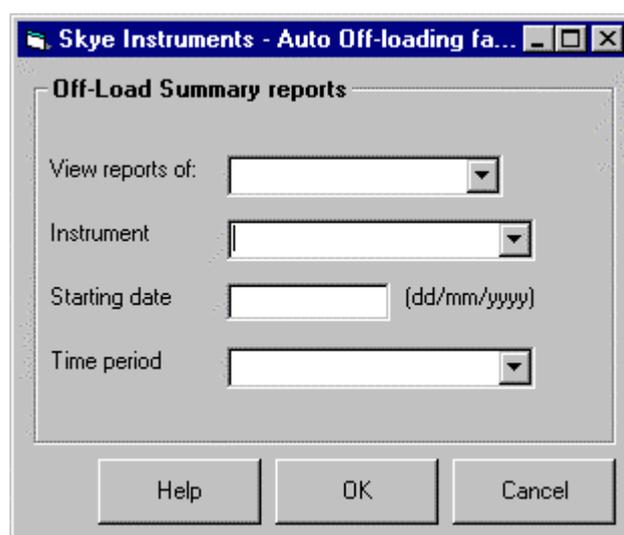
Viewing your setup like this allows you to see more clearly when all the Downloads will happen. It is recommended that you take a print-out of this for your records, and also for troubleshooting purposes.

## 8.4 Viewing Off-Load Logs

To view logs of these details, click “View” on the main menu, then “View Off-Load Logs”, as shown below,



You will then be met with the following screen.



## SKYELYNX AUTO 2003

You can view reports of  
Off-Load Results,  
Detailed Off-Load Logs,

Select the one you want from the pull down menu next to “View Reports of:”

Next select the instrument from the next pull down menu, in this menu you will see all the instrument names that you have setup. You also have the option of selecting “**All instruments**” from the list in order to view logs of every instrument in your setup.

Next specify the starting date. Do this in the form **dd/mm/yyyy** as the form suggests, for instance 01/07/1999. If you wish to view all the records then leave this blank.

Finally select a time period over which to see the logs. This is the period from the starting date you have specified. Your choices here are,

- Single Day** - This will only do the day you specified as a starting date,
- Entire Week** - This will do the week starting at the starting date you specified,
- Entire Month** - This will do the month starting at your chosen starting date. If you do select the 1st of a month here then that entire month will be shown. If you select a day other than the 1<sup>st</sup> of a month then a period of 31 days is displayed.
- Entire Records** This shows all the records that have been recorded.

### Off-Load Logs

It is very important when using a program such as this, which **MUST** keep running all the time and cannot halt to give errors on the screen, to keep a log of any errors that may occur for later viewing. Whilst the program is written to avoid errors and correct (or compensate for) them if possible, it is unavoidable that some errors may well occur. The software itself should not produce any problems, however there are many factors that are out of our control, such as the telephone networks. If there is a problem in the telephone network that you are using then there may well be a problem with the Download(s) performed. For instance if the network goes down in the middle of an Download then the signal to the logger is literally lost, and the process cannot continue (this is only relevant if you are using GSM). What will happen here is that the software will re-queue this Download for later in the hourly slot (if there is enough time – see Chapter 2 – “Tips for making a good Download”), and log a message saying that there was a problem. It is a very good idea to regularly view these logs, in case any problems have occurred, and also to decide if there is a problem that needs some attention, eg. A recurring error.

#### **8.4.1 Basic Off-Load Logs**

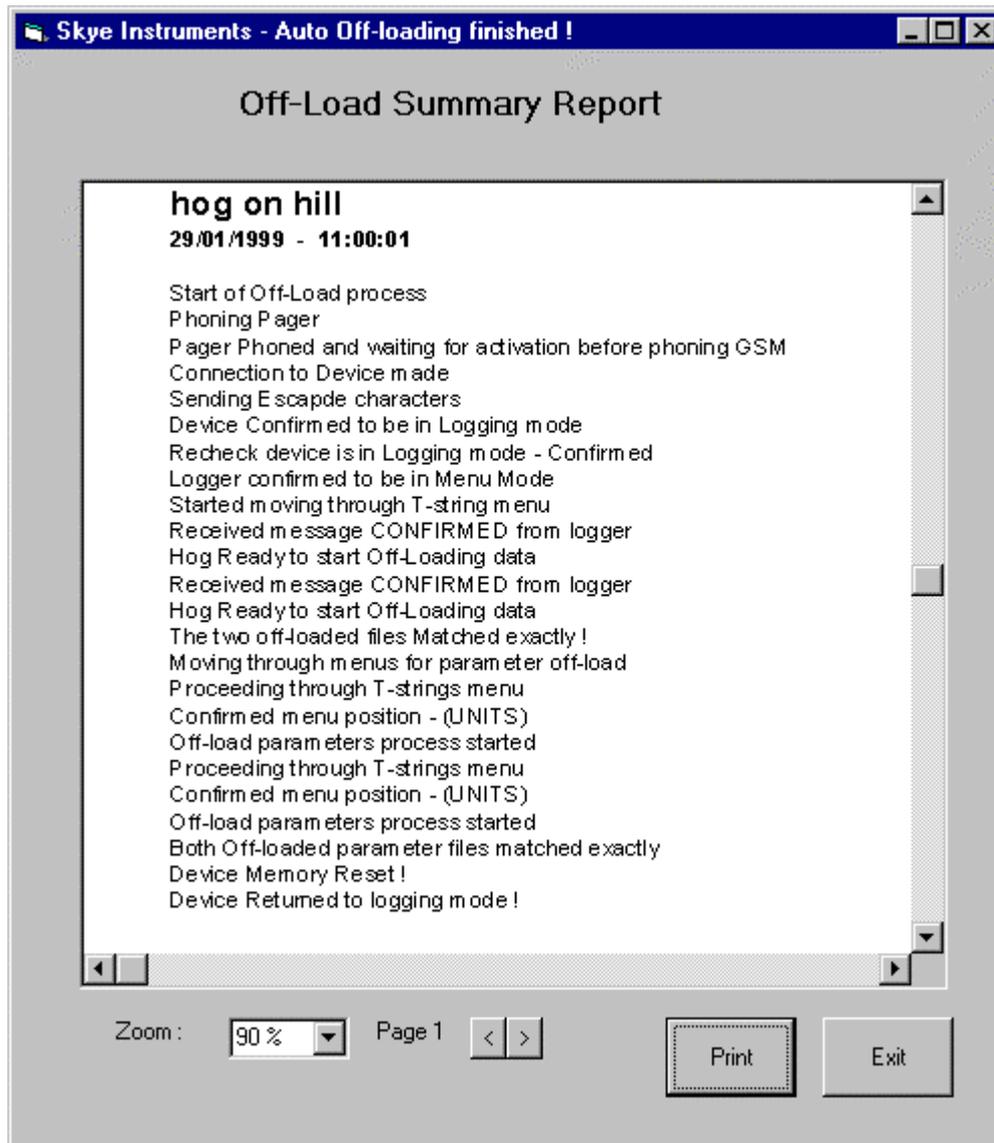
These logs give very little detail, simply whether the Download was successful or not, and if not then why. An excerpt from such a log is shown below,

<b>Name</b>	<b>Date</b>	<b>Time</b>	<b>Off-Load result</b>
Hog on hill	29/01/1999	11:05	The Off-Load was Successful
Hog on Desk	29/01/1999	11:12	There was a problem connecting to the logger

#### **8.4.2 Detailed Off-Load Logs**

These logs give a detailed description of exactly what happened in the Download. If there was a problem in the Download process then you will be able to see exactly where it happened. An excerpt from such a log is shown below,

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The above log is a text book example of a perfect Download. This is what all the Downloads should look like if there are no problems. If a problem has occurred then you will be able to see exactly where it happened by looking at this log. For instance if the phone line went down while the program was moving through the Download menu, then after the line "Started Moving through T-string menu" a line would be inserted saying that the connection to the logger had been lost, and that the Download would be abandoned. These logs are very useful for spotting errors.

## 9 MANIPULATING THE DATA

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### 9.1 The SkyeLynx Deluxe Package

This SkyeLynx Auto Downloading software is simply designed for getting the data off the loggers. It has no facilities for viewing or manipulating this data. Neither does it allow you to interact with the logger in any way.

The SkyeLynx Deluxe software package allows you to manipulate your data in many ways, as well as interact with and configure your logger among many other things.

Some of the more notable features offered by SkyeLynx Deluxe are listed below,

- **Construct up to 25 instrument profiles** containing details for each of your loggers.
- **Link these profiles to the Auto Download software** to give seamless integration between the two packages, allowing the Auto Download software to get the data from the logger (automatically) and put it in the relevant place to allow you to use SkyeLynx Deluxe to manipulate it.
- **View Summaries of your data** in the form of summary tables, or graphs.
- **Choose from multiple graph styles** to display your data including line, bar, scatter etc. in both 2D and 3D, as well as a **WindRose**. You can also plot multiple lines on your graphs, either of the same data type, eg. To compare the Air Temperature recorded from the same or different loggers over specified time periods, or using different data types on the same graph using multiple y-axis, allowing you to view for example Temperature and Relative Humidity on the same graph.
- **Take quality print-outs** of your data summaries or graphs
- **Display live data from your logger**, eg. Connect to the instrument, set it transmit the data to your PC and display it on the screen in real time. This is very useful for viewing the current weather conditions.
- **Configure your logger** (Change Channel configurations, logging intervals, your Datafile Identifier etc.) using a neat set of forms and wizards which guide you through the process, and check you have not entered invalid details.
- **Check the status of your logger**, by connecting to the instrument and obtaining the relevant details – Battery Voltage, Current setup etc. and displaying this in a well structured, neat format, as well as automatically studying these settings and warning you if anything is obviously out of place. This is very useful for troubleshooting any problems you may have.
- **Many other useful facilities** are also included such as being able to connect to your device and return it to logging mode, or Reset the instrument's memory at the click of a button.

SkyeLynx Deluxe is remarkably useful for manipulating your data, as well as maintaining and re-configuring your instruments.

To find out more information about SkyeLynx Deluxe, phone us on +44 (0)1597 824 811 and ask for "Sales", or visit the website on [www.skyeinstrum.ents.com](http://www.skyeinstrum.ents.com)

## SKYE LYNX AUTO 2003

# SKYE LYNX AUTO SOFTWARE SPECIFICATIONS

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PC Operating System	Windows 95 / 98 / 2000NT / XP
Minimum PC Specification	496 processor 8 Mb RAM 10 Mb Hard Disk Space VGA monitor
Recommended PC Specification	Pentium 2 processor or better 32 Mb RAM 10 Mb Hard Disk Space SVGA monitor Quality hardware modem (not a budget software modem). Modem used exclusively for Lynx Auto. Multi-use modem sharing with other softwares, e.g. internet and fax is not recommended PC should be switched on 24 hours to allow automatic dial up at any time.
Instrument Profiles	The program allows the user to create 25 unique instrument profiles, each one containing details on a DataHog / MiniMet system. Each profile contains the connection details for the station - e.g. phone, Cable link (Direct to Com Port), phone / pager numbers if required, and the logger's Datafile Identifier.
Data Downloading	Data is taken off the logger in binary format to allow for quick Data Transfer and hence minimise the time spent on-line to the logger.
Downloading Options	The user can set up the time and day for regular automatic downloading of the 25 instrument profiles. Hourly, daily, or user set timed downloading options can be chosen, a maximum of 5 stations can be downloaded in any one hour. The Test Offload function allows manual data download at any time.
Data Format	Data is stored as day files to allow for easy organisation and also as a backup composite file to allow for exporting to other packages, and also simply for security. File names are automatically created from the date and / or the logger's individual DataFile Identifier. All created data files are in a space delimited ASCII format. The day file formats are suitable for direct use in the Skye WizzCom and Skye Lynx Deluxe graphing packages.



## SKYE SKYE LYNX AUTO SOFTWARE LICENCE AGREEMENT

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**SKYELYNX AUTO 2003**