

DataFetch™ Event Log Recorder Users Manual

Revision 2.0x

DataFetch LLC
720 Washington Street, Liberty 1
Hanover, MA 02339
781-829-2022

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1.0 About This Manual

The DataFetch Event Log Recorder program is specifically designed for environments where it is desired to log the admission or presence of holders of ID cards (students, employees, contractors, etc) as well as guests and visitors with state driver's licenses. The program is organized by named event.

In applications where a guest must be associated with a student or member host who holds a valid ID card, the DataFetch Unilogger program may be more appropriate.

2.0 Installing the Event Log Recorder Program

Prior to installing the software, users should first install the supplied Bluetooth adaptor, and then 'pair' the DF3D scanner to their PC or laptop. Instructions for accomplishing this are provided in a separate document, '**How to Pair the DF2D or DF3D.pdf**'.

Installation of the Event Log Recorder (ELR) program is straightforward. It is supplied as a self-installing executable (.exe) file which sets up the necessary files. The program is accompanied with additional information, including all reference manuals, as well as a sample student database, and two sheets of test barcode targets which can be used for practice or familiarization purposes.

The executable file is installed in C:\Program Files\DataFetch\ELR2, and a shortcut is placed on the desktop, named '**DataFetch Event Log Recorder Version 2.0x**'.

If your institution will be using the optional magnetic stripe reader, please see the separate document entitled '**Installing the Mag Stripe Reader.pdf**'

(NOTE: Users of RFID cards (either low frequency proximity types, or higher frequency types) should consult DataFetch. The RFID reader must be of the type which is compatible with DataFetch software, and we offer RFID readers for either low frequency (125KHz) or high frequency (13.56MHz) RFID cards as an accessory product. We cannot support other types of RFID readers.)

Upon installation, the optional settings default to a condition which permits immediate testing with the sample barcode sheets included with the program. Administrators will want to alter the options to fit their particular institutional requirements, but we suggest working with the sample student database and sample barcode targets first, before making any options changes. After familiarization, please consult the separate document '**Installation for IT Staff Rev X.x.pdf**' supplied with the product.

2.1 Installation Checklist

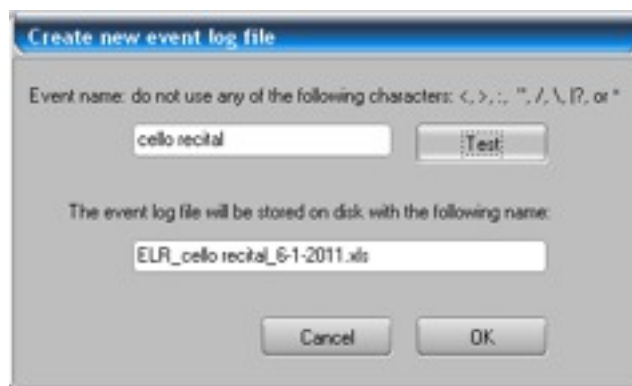
1. Install the Bluetooth adaptor supplied with the product onto the laptop or PC
2. Install the batteries into the DF3D Scan & See scanner
3. Pair the scanner with the PC or laptop; see **'How to Pair the DF2D or DF3D.pdf'**.
4. Install the program by launching **'ELR_setup_V2.xx.exe'**
5. Familiarize and practice with the program, using the supplied sample student database, and the supplied sample target sheets (Print out the files **'sample guest license barcodes.pdf'** and **'sample student ID barcodes.pdf'**; we recommend that you print these using the best resolution your printer offers)
6. If your institution will be using the optional magnetic stripe card reader, install it; consult the file **'Installing the Mag Stripe Reader.pdf'**
7. Consult the document **'Installation for IT Staff Rev X.x.pdf'** before substituting your own student database, and setting the options.

3.0 Basic Operation

When the program is opened, the main screen will appear:

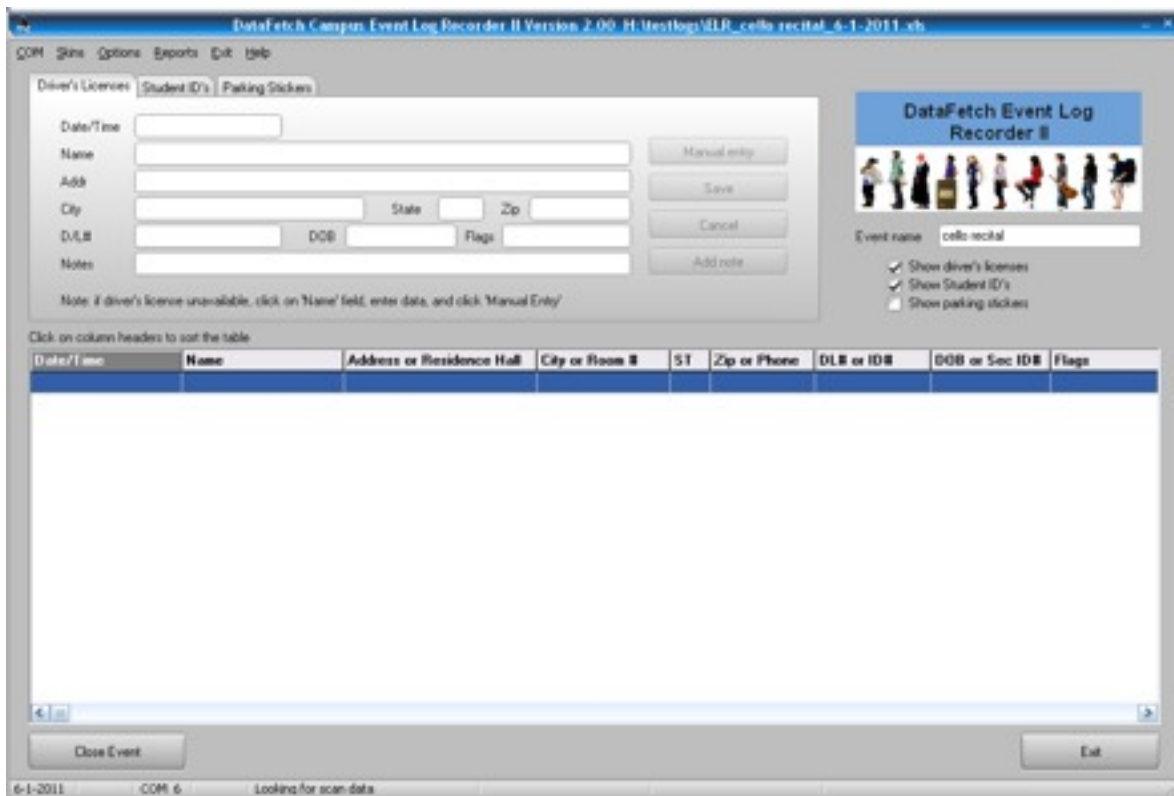


The program is designed around a 'named event' paradigm, where the file structure associated with an event is named for that event. You can either create a new event, or open an existing event. To create a new event, click the 'Create New Event' button in the center of the screen, which will bring up the following window:



You can enter a name for the event in the window provided, and then press the 'test' button, which will create a legal Windows file name for the event log file. Note that the name is always preceded by the prefix 'ELR', and also contains the date of the creation of the event file. This helps you to locate the event for later review.

After pressing OK, the main window will show a text grid where the logged information will appear:



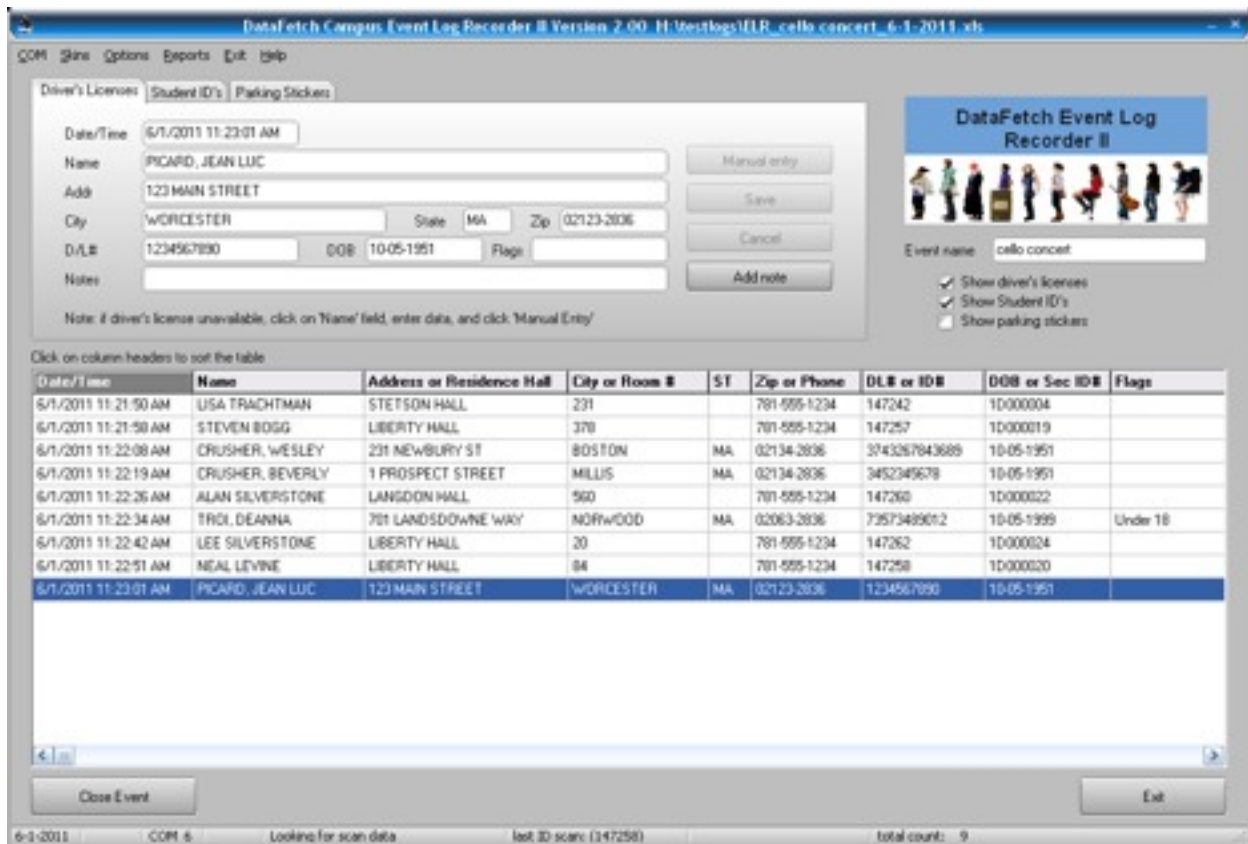
At this point, you may begin to record data. You may scan student or member ID's using the DataFetch DF3D scanner, or swipe magnetic stripe ID cards using the optional mag stripe reader, supplied by DataFetch. Additionally, if your system is configured to recognize RFID cards, you may use an RFID card reader (consult DataFetch for details).

Three types of data may be scanned or swiped: driver's licenses (scanned by the DF3D), ID card barcodes, mag striped cards, or RFID cards (based on whatever reader you have installed), or parking sticker barcodes (using the DataFetch parking sticker format). Each type will automatically select the appropriate tab on the data field at the top of the form, and will enter the data into the grid.

Each time you perform a scan or swipe, the information will be appended to the visible grid. Driver's licenses and student or member ID card info share the same grid (note

the titles described in the column headers on the grid); parking stickers use a different grid, in the same location on the form. However, all three types of scans will be entered into the database file for the event. The checkboxes at the upper right simply determine what information, and which grid, will be shown.

The following example shows a mix of driver's licenses and student ID's after scanning:



Note that certain conditions will be flagged, such as an indication that a guest is under 18 or 21. Also, students which have a restriction noted in the student database file (or in the external studentrestriction.xls file) will result in the restriction being noted on screen.

3.1 Entering a Student Host or Guest without an ID card

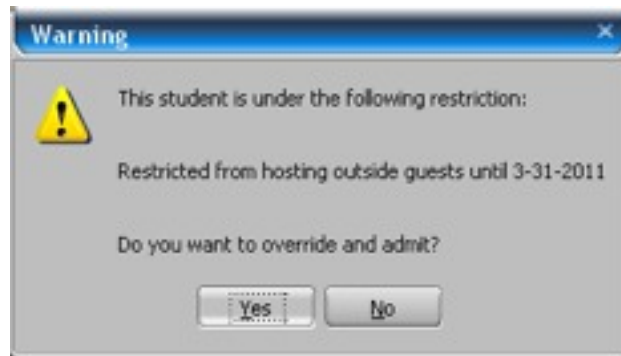
If a student or member presents, but is not in possession of their ID card, the security personnel can manually enter as much information as desired, by first clicking on the 'name' field, and then filling out as many additional fields as desired, before clicking on the 'manual entry' button.

3.2 Entering Outside Guest Info without a Driver's License

If an outside guest is presented who has no driver's license, the information can be entered manually. Click on the 'Name' field in the outside guest section, and type in the information manually, using the TAB key to advance from one field to the next, before entering the data by clicking on the 'manual entry' button.

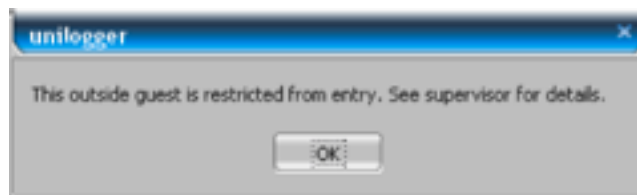
4.0 Warnings and Exceptions

In some cases, there may be warnings presented on-screen. For example, scanning a student who is under a restriction will result in a warning message containing the restriction text; the security personnel operating the system has the discretion of either permitting the student to enter the event, or denying entrance, as shown:



Restrictions on outside guests are handled differently. These restrictions are established by making an entry into a separate file, 'restricted.xls', which results in an absolute prohibition against being logged in.

In the event that an outside guest on the restriction list presents their driver's license, the following warning message will appear:

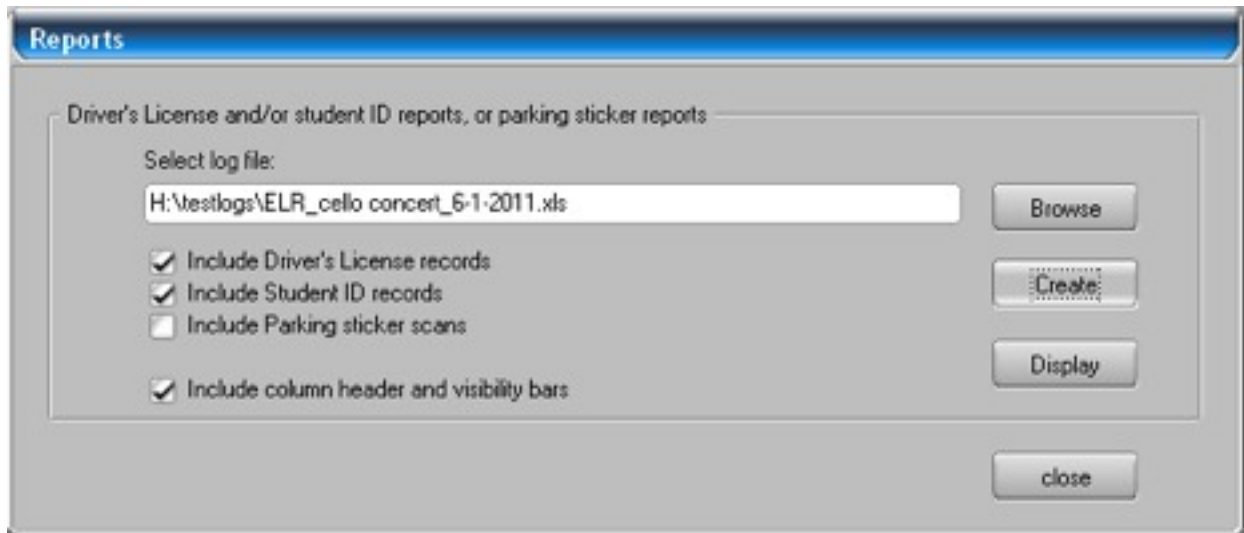


The institution administrator can automatically transfer the information of any logged-in outside guest, to the restricted list, by clicking on the grid to highlight the person's information, and then right clicking and selecting 'add to outside guest restriction log'. Alternatively, the entry can be made by directly editing the restricted.xls file.

5.0 Generating a Report

The menu item entitled 'Reports' is used to create a viewable and printable report of any particular event (Note: it doesn't matter if the report is opened or not; you may create a report for any event, at any time, even if a different event is presently open).

Selecting the 'Reports' menu item will generate the following window:



You start by selecting the event log file for which you wish to generate a report, by clicking on the 'Browse' button. You must select an actual event log (which can be easily identified by the file name prefix 'ELR', and the file type '.xls'. Do NOT select any other spreadsheet file that is not actually an event log file).

After selecting the event log file, you can click on the 'Create' button to actually create the report. The default file name for the report will be the same as the log file name, except with the extension '.htm' (an HTML file, viewable with any browser).

Clicking on the 'Display' button will result in launching your computer's default browser (ordinarily, Internet Explorer, but it will work with Firefox, Chrome, and others) and bring up the file for examination.

The checkboxes on the left permit you to select which logged items should be included in the report. Note that a parking sticker report is always independent of a report which includes driver's license data and/or student ID data.

The checkbox labeled 'include column header and visibility bars' formats the report with a descriptive header for each column, and alternating white and light blue background bars in the body of the report, for enhanced readability.

An example of a report is shown below:

Type	DateTime	Name	Address or Residence Hall	City or Room #	ST	Zip or Phone	DL# or ID#	DOB or Sec ID#	Flags	Notes
ID	6/1/2011 11:21:50 AM	LISA TRACHTMAN	STETSON HALL	231		781-555-1234	147242	10000004		
ID	6/1/2011 11:21:58 AM	STEVEN BOGG	LIBERTY HALL	378		781-555-1234	147257	10000019		
DL	6/1/2011 11:22:08 AM	CRUSHER, WESLEY	231 NEWBURY ST	BOSTON	MA	02134-2836	3743267843689	10-05-1951		
DL	6/1/2011 11:22:19 AM	CRUSHER, BEVERLY	1 PROSPECT STREET	MILLIS	MA	02134-2836	3452345678	10-05-1951		
ID	6/1/2011 11:22:26 AM	ALAN SILVERSTONE	LANGDON HALL	560		781-555-1234	147260	10000022		
DL	6/1/2011 11:22:34 AM	TROI DEANNA	701 LANDSDOWNE WAY	NORWOOD	MA	02063-2836	73573489012	10-05-1999	Under 18	
ID	6/1/2011 11:22:42 AM	LEE SILVERSTONE	LIBERTY HALL	20		781-555-1234	147262	10000024		
ID	6/1/2011 11:22:51 AM	NEAL LEVINE	LIBERTY HALL	84		781-555-1234	147258	10000020		
DL	6/1/2011 11:23:01 AM	PICARD, JEAN LUC	123 MAIN STREET	WORCESTER	MA	02123-2836	1234567890	10-05-1951		
DL	6/1/2011 11:53:39 AM	TROI DEANNA	701 LANDSDOWNE WAY	NORWOOD	MA	02063-2836	73573489012	10-05-1999	Under 18	

The 'type' designation indicates whether the log entry is a driver's license ('DL') or a student ID ('ID'). The format for a parking sticker report is similar.

The report can be printed directly from your browser, just like any other HTML document.

Alternatively, the event log file can be opened in Excel, if you want to perform any other sorting or formatting operations. If this is the case, un-checking the 'include column headers and visibility bars' before generating the report may ease the task of performing secondary operations on the data, via Excel, afterwards.

6.0 Options and Preferences

The Event Log Recorder can be configured for a variety of operating environments through the 'Options' menu at the top of the screen. These options are described below.

(NOTE: Many of the options selected here are coordinated with options selected in the DataFetch Unilogger program. If you are using both, be aware that most options will affect both programs in the same way)

6.1 Option: Administrative Password

The program features an optional administrative password capability; when enabled, it prevents desk security personnel from changing any of the options or configuration information after the administration or IT personnel have installed the program.

Program options

Log and database directories Administrative Password Mag Stripe Option Security and Search Options

When this box is checked, an administrative password is required to alter any of the program options

Enter password (case sensitive):

Login

Enter new password (case sensitive):

Enter new password

If password is forgotten or lost, contact DataFetch

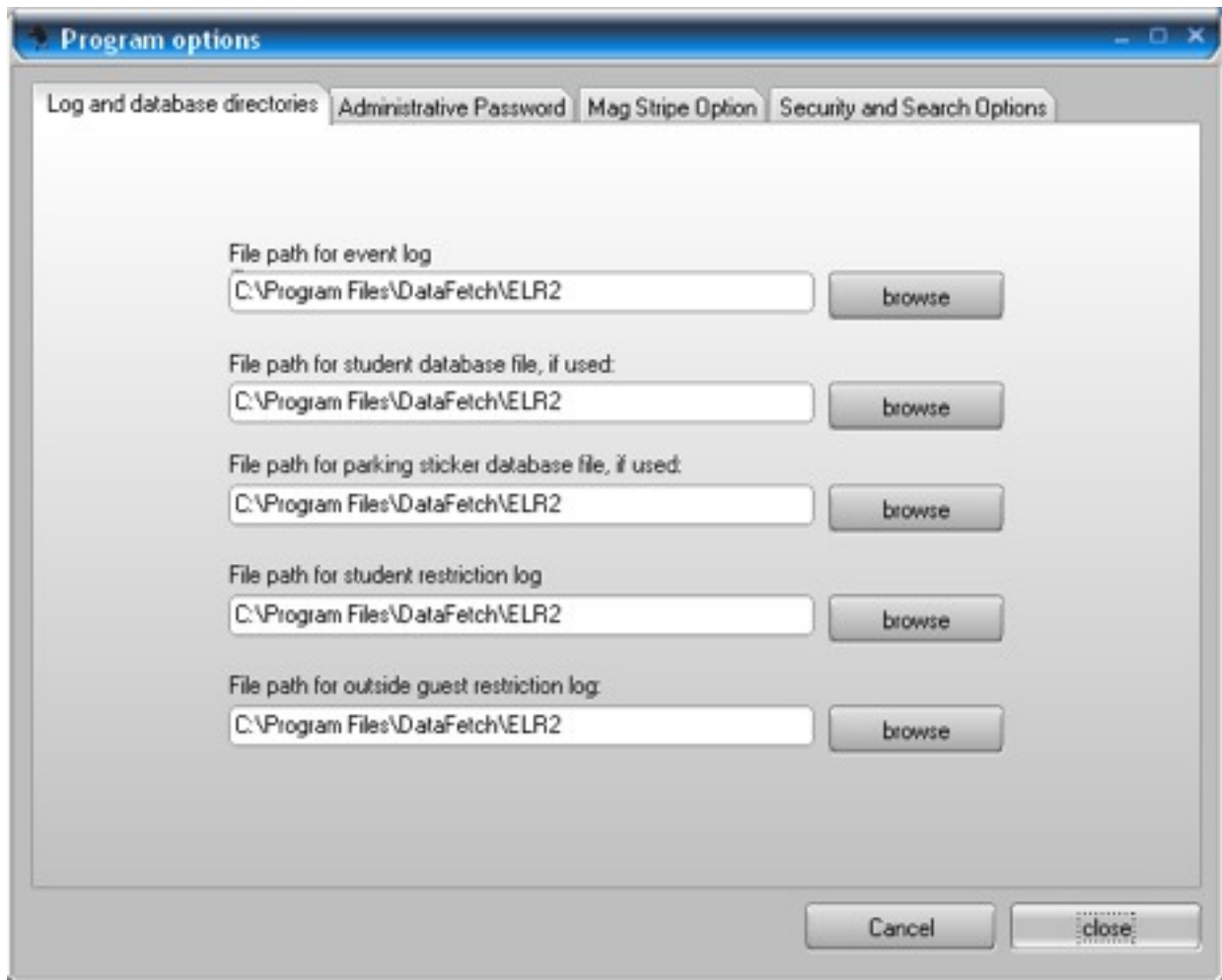
Cancel close

When the option is clicked, all other options within the options menu are disabled, and can only be enabled after the password is entered. The default password (case sensitive) is 'admin'. Once the options are enabled with the correct password, the administrator may change the password. To re-establish the security lockout, the option must then be clicked again.

In the event of a lost or forgotten password, contact DataFetch.

6.2 Option: Logging and database directories

The Event Log Recorder provides for setting the path to the directories where log information and the student and restriction databases are stored. The default paths are set for the same directory as where the program is installed, but most users will want to create separate directories, either on the local PC or laptop, or on a networked server.



The first path defines the location of the event log files. There will be one file created, for every named event.

The second path defines the location where the student database file (either studentdb.xls, or studentdb.xlsx) is located. This would normally be located on a server path, but in the case of large student databases which are using DataFetch encryption, faster performance will be realized if the file is hosted on the local machine.

The **third path** defines the location of a parking sticker database file, if used.

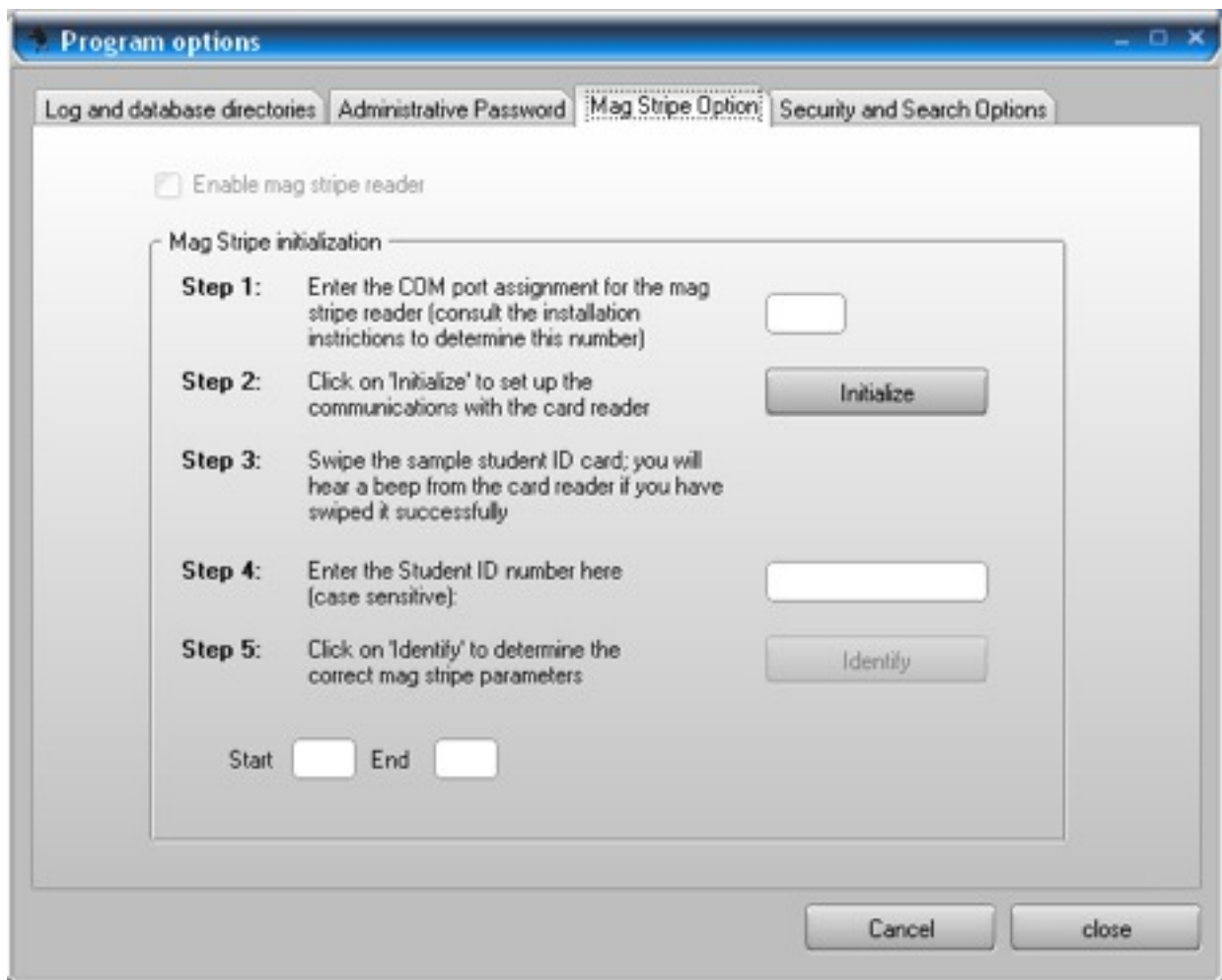
The **fourth path** defines the location where an optional studentrestrictions.xls file may be found. In Revision 2.00 and up, this is an optional alternative to recording student restrictions in the studentdb.xls or studentdb.xlsx file, and may make it easier to maintain and update.

The **fifth path** defines the location of the outside guest restriction log ('restricted.xls').

6.3 Option: Mag Stripe Options

This option refers to the optional magnetic stripe reader, supplied by DataFetch, for use in institutions where the ID card uses a magnetic stripe instead of a bar code.

When this option tab is selected for the first time, the following screen appears:



Mag Stripe initialization is a one-time process which automatically adapts the Event Log Recorder program to the mag stripe format being used by the institution. To use this capability, you need to have a sample student ID card available.

Before using this initialization process, the mag stripe reader must be installed first, and the COM port number associated with the mag stripe reader must be determined (See 'installing the Mag Stripe reader').

To perform the initialization, enter the COM port number in the box provided. Next, click on the 'Initialize' button, which will confirm and establish the COM port availability for the mag stripe reader. Next, swipe the sample ID card. Finally, enter the ID number for the sample student ID card, and click on 'Identify'. The mag stripe data will be analyzed, and the screen will indicate that the ID card has been successfully analyzed, and the important parameters stored.

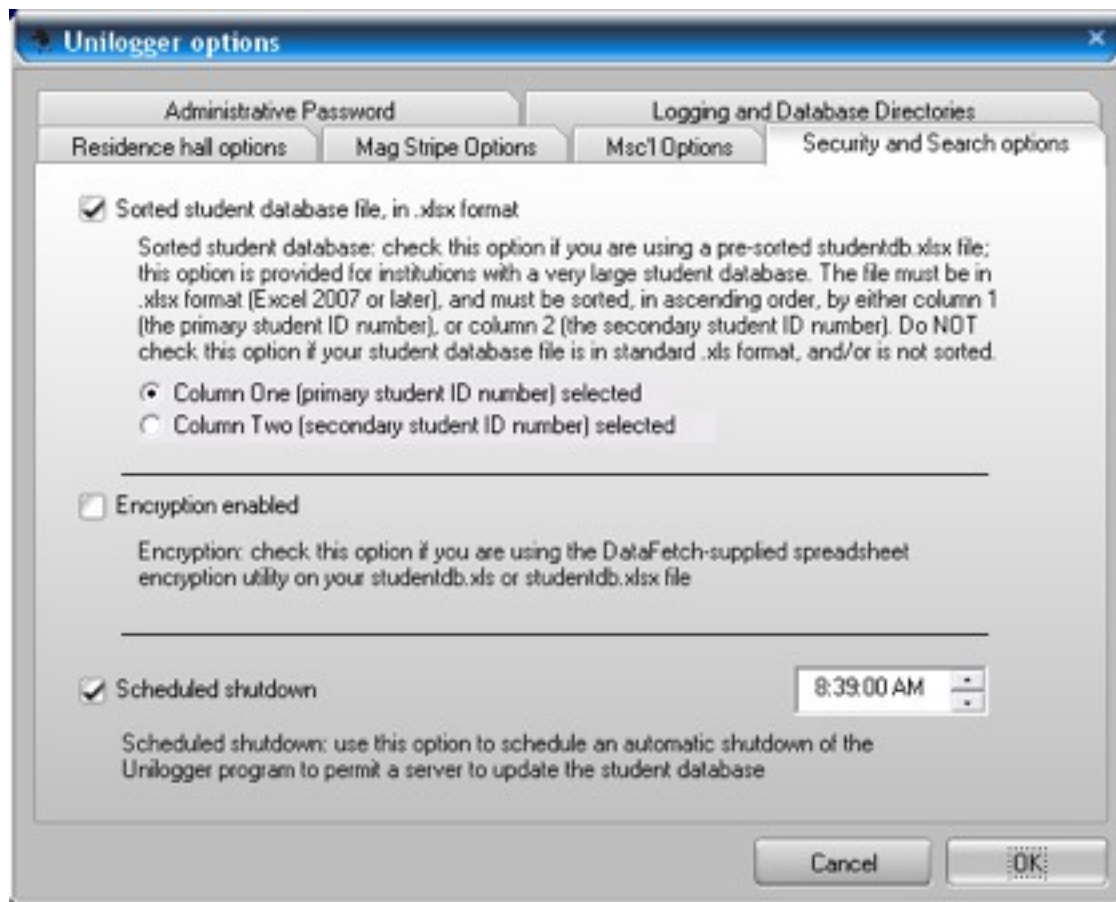
At this point, you can click on 'Enable mag stripe reader', and the Mag Stripe Initialization box will disappear. The mag stripe reader is now configured for your particular mag stripe card data format.

In the event of error, or a change to the ID card data format, the initialization process can be repeated by simply disabling the mag stripe reader, and clicking on the 'configure' button.

6.4 Option: Security and Search Options

This option page permits the user to optionally employ several features new to Version 3.00, including:

- Encryption for the student database file
- Fast searching for large student databases
- A programmable timeout which will automatically terminate the program to permit a server to access and update the student database, or restriction files



Sorted student database file, in .xlsx format: this option is provided primarily for users with very large student database files (>65,536 students, faculty, and employees). With student database files this large, the time required to search for student information can be very long, unless a ‘fast search’ algorithm is used; however, the algorithm requires that the database be sorted, in ascending order, using either column 1 (the primary student ID), or column 2 (the secondary student ID) as the

sort key. The sort is easily done in Excel. The file must be in .xlsx format (Excel 2007 or later).

Instructions for preparing the studentdb.xlsx file can be found in the document **'Installation for IT Staff Rev X.x.pdf'**, provided with the software.

Smaller student databases can avoid the sort requirement, and can be supplied in standard .xls format (Excel 2003 or earlier). The delay in accessing student info is insignificant for student databases smaller than 10,000 students.

Encryption enabled: The Event Log Recorder program provides a capability for encrypting the studentdb.xls or studentdb.xlsx file, in order to keep it confidential. A utility program, 'DFencrypt.exe', is provided, and can be found in the installation directory. This encryption system uses a cell-by-cell algorithm, rather than encrypting the entire file; once encrypted, the spreadsheet file looks like it is filled with hexadecimal strings. The algorithm is highly secure, and proprietary to DataFetch; it is a progressive encryption algorithm in which equivalent data appears to be different, even though the underlying original data may be the same. The encryption utility also provides for a decryption function, for use in checking the integrity of the data.

The following image shows a portion of a sample student database, without encryption:

studentdb.xls [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing

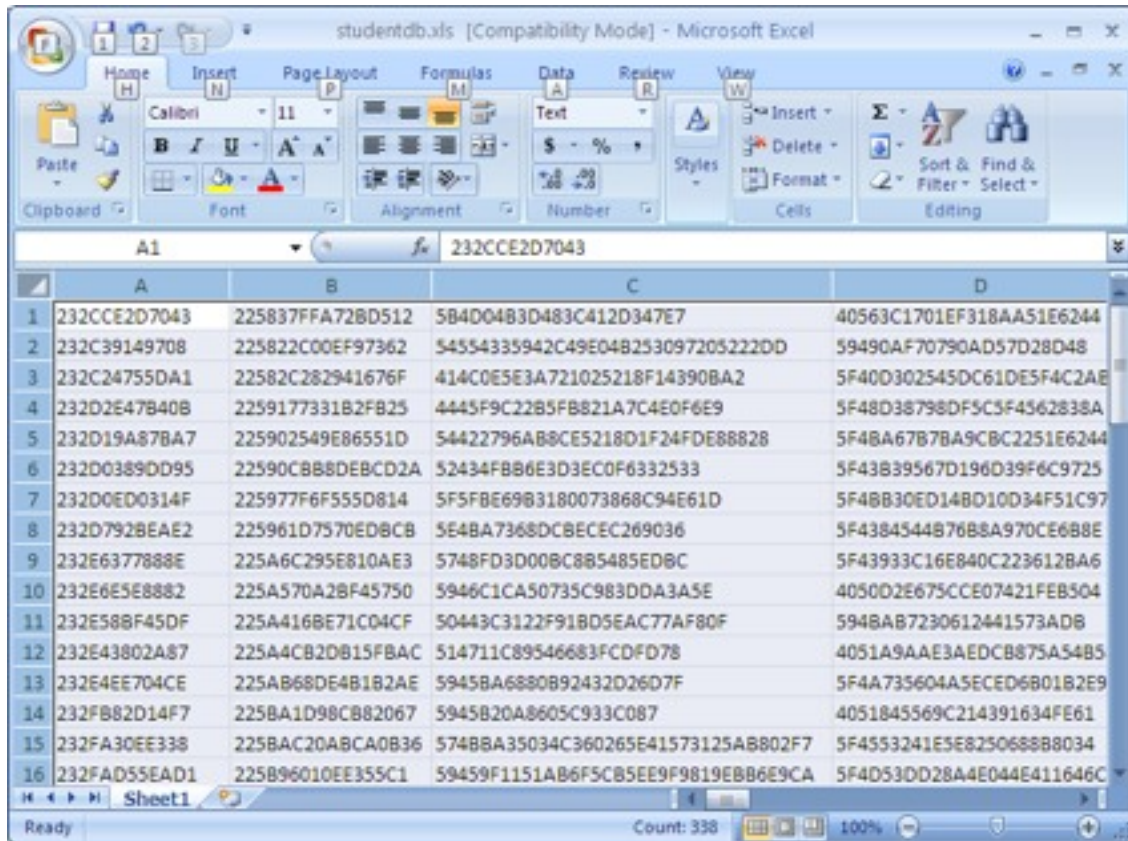
A8 000007

	A	B	C	D	E	F
1	000000	10000033	Henry Aaron	Stetson Hall	1987	781-555-1234
2	000001	10000034	Grover Alexander	Jacobs Hall	1956	781-555-1234
3	000002	10000035	Roberto Alomar	Liberty Hall	2001	781-555-1234
4	000003	10000036	Walter Alston	Langdon Hall	2005	781-555-1234
5	000004	10000037	George Anderson	Langdon Hall	1924	781-555-1234
6	000005	10000038	Adrian Anson	Liberty Hall	1956	781-555-1234
7	000006	10000039	Luis Aparicio	Langdon Hall	1952	781-555-1234
8	000007	10000040	Matt Albers	Liberty Hall	1952	781-555-1234
9	000008	10000041	Daniel Bard	Liberty Hall	1952	781-555-1234
10	000009	10000042	Josh Beckett	Stetson Hall	1952	781-555-1234
11	000010	10000043	Clay Buckholz	Jacobs Hall	1952	781-555-1234
12	000011	10000044	Bobby Jenks	Stetson Hall	1952	781-555-1234
13	000012	10000045	John Lackey	Langdon Hall	1952	781-555-1234
14	000013	10000046	Jon Lester	Stetson Hall	1952	781-555-1234
15	000014	10000047	Daisuke Matsuzaka	Liberty Hall	1952	781-555-1234
16	000015	10000048	Jonathan Papelbon	Langdon Hall	1952	781-555-1234

Select destination and press ENTER or choose Paste

100%

The same file, after using the DFEncrypt.exe utility, looks like this:



The encryption utility requires approximately 90 seconds to encrypt a 130,000 line student database file, on a reasonably fast PC. Once encrypted, access to each student is very quick, and the combination of encryption and use of the 'fast search' option results in little perceptible delay when scanning or swiping a student ID card. The encryption algorithm roughly doubles the raw size of the file, but still results in a much faster lookup speed.

While the encrypted studentdb.xls or .xlsx file may be hosted on a server, it will be faster, in many applications, to simply download the file to the workstation; the encryption will keep the data secure.

Scheduled shutdown: The Event Log Recorder program 'opens' the student database file upon startup. Since opening a large file takes considerable time, this means that the file remains 'opened' until Event Log Recorder is shut down. During this time, the file may not be updated.

The scheduled shutdown feature is provided to insure that the Event Log Recorder program, if it is running continuously, will automatically shut down at a specified time so that a server may update the file.

Note that the Event Log Recorder program, and the Unilogger program, may NOT be running simultaneously.