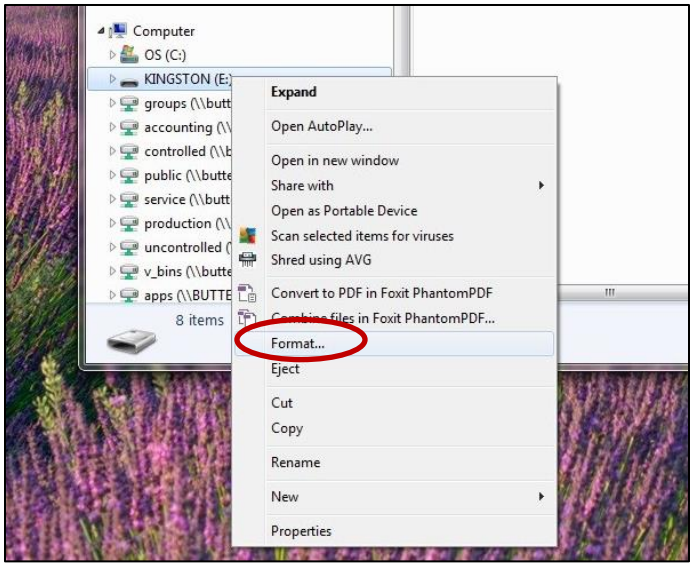
PURPOSE

The purpose of this document is to explain how to use the macro-enabled Excel spreadsheet to download and manage fusion information from an electrofusion processor in conjunction with a USB flash drive. It has been written with the assumption that the user has a working knowledge of Microsoft Excel. Functions such as navigating through worksheets, printing, and sorting data are beyond the scope of this document.

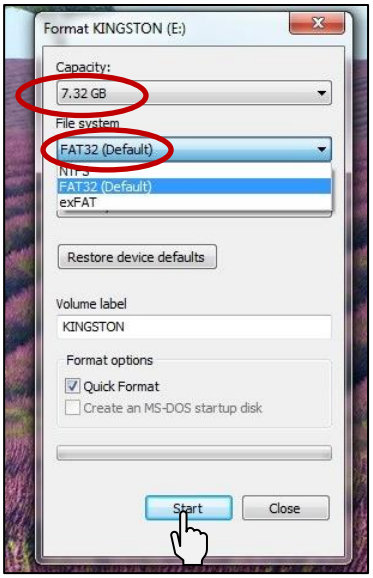
FORMATTING A USB FLASH DRIVE

Before attempting to download fusion data, make sure the USB flash drive is formatted with a FAT or FAT32 file system. If it is not, you can reformat the drive using Windows as long as the drive is 32GB or smaller:

Plug the USB flash drive into your laptop or PC. From the desktop, right-click on the drive and select "Format":



Next, make sure the drive is 32GB or smaller and that FAT or FAT32 is selected. Click "Start":



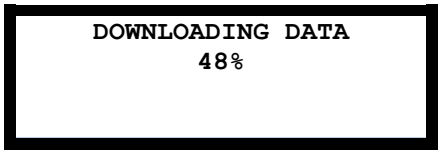
NOTE:

If the USB flash drive is larger than 32GB, you will need a 3rd party tool to re-format the drive to a FAT or FAT32 file system. Windows only allows the EXFAT format for drives larger than 32GB. ***The EXFAT format will not work with the electrofusion processor.***

DOWNLOADING TO A USB FLASH DRIVE

To download the fusion data from your processor to a USB flash drive, perform the following steps:

1. Turn ON the processor and allow it to proceed through the INTERNAL SELF TEST until it reaches the CONNECT FITTING screen.
2. Plug a formatted USB flash drive into the USB port on the face of the processor.
3. The USB flash drive will be detected automatically, and the fusion data will be written to the drive.
4. A progress screen similar to the following will be displayed as the download proceeds:



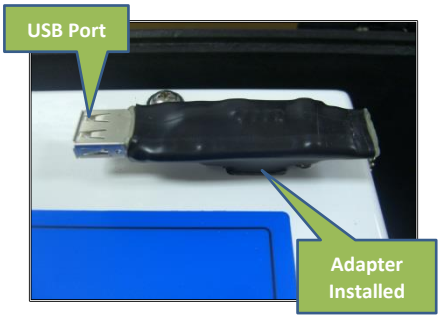
5. After the download is complete, the processor will return to the CONNECT FITTING screen. You may now disconnect the USB flash drive from the USB port to resume normal operation.

ONLY NEW FUSIONS PERFORMED SINCE THE LAST DOWNLOAD WILL BE WRITTEN TO THE DRIVE.

REMEMBER: THE USB FLASH DRIVE MUST BE FORMATTED USING FAT OR FAT32.

NOTE:

If your processor has a 9 pin D-sub serial port instead of a USB port on the face plate, you will need to use the adapter shown below to perform the download. Please note, not all processors are equipped to download to a USB flash drive. If you have questions about the compatibility of your processor, please contact EF Technologies at (302) 451-1088 for more information. The pictures below show a D-sub serial port and an installed adapter for your reference:



Recovery download

If necessary, it is possible to run a RECOVERY DOWNLOAD. This will write the processor's *entire* fusion history to the USB flash drive, not just the fusions performed since the last download was run.

To run a recovery download, start by following steps 1 and 2 above. ***After the processor detects the USB flash drive and the processor screen changes, press and hold the UP button until the processor screen says, "Data Recovery."*** Release the UP button. The processor will proceed normally with the download as described in steps 4 and 5 above.

SOFTWARE INSTALLATION

Fusion data is downloaded from the processor in binary format and must be imported into the macro-enabled Excel spreadsheet to be viewed.

There is no actual installation required. The file is an Excel spreadsheet and may be manipulated and stored just like any other workbook file. Once imported, the fusion data is stored within this file and may be copied from computer to computer without restrictions, as long as you have read-write privileges to those locations.

It is strongly recommended that the file be backed up periodically to preserve the integrity of the data and to ensure that no data is lost in the event of a hardware failure.

Macro Enabled

The Excel file contains macros which allow the program to gather, parse, and load fusion data from the USB flash drive. ***For the spreadsheet to work correctly, macros must be enabled before you import the data from the USB flash drive.*** (A macro works like a micro-program that runs inside the spreadsheet to perform repeated tasks. A complete discussion of macros is beyond the scope of this document.)

The program will not work unless macros are enabled.

The specific procedure for enabling macros depends on the version of Excel you are using. When the spreadsheet is first opened, you should be prompted with a message that indicates there are macros in this file. The message will ask you if you want to allow these macros to run.

You must allow the macros to run for the program to work.

QUICK START

To import fusion data into the spreadsheet, perform the following steps:

1. Follow the instructions outlined above to download fusion data onto a USB Flash Drive.
2. Connect the USB flash drive to the computer and make sure the operating system assigns it a drive letter. This should happen automatically.
3. Open the spreadsheet and navigate to the Main Worksheet. If/when prompted, allow macros to run.
4. Double click on the “Import Data” cell in the Commands section.
5. The drive will be scanned and the Messages section will be updated as any data found is imported.
6. Double click on the “Clear Messages” cell in the Commands section to clear the Messages section after the data is imported.
7. View your data in the worksheet that corresponds to the serial number of the processor you downloaded.

WORKSHEETS

This section explains a little about the various worksheets that are found in the spreadsheet.

DO NOT ALTER OR CHANGE THE CELLS IN ANY OF THE WORKSHEETS. THIS WILL CAUSE THE DOWNLOAD DATA TO BE STORED IMPROPERLY.

Main

The Main worksheet is the one from which all download functions are performed. There are three sections in the Main tab:

1. Commands
2. Settings
3. Messages

Commands

There are two commands available to the system: Import Data and Clear Messages. These commands can be executed by double-clicking the cell that contains the command.

For example, double-click the cell containing the text, “Import Data,” to run the import data command. Double-click the cell containing the text, “Clear Messages,” to execute the clear messages command.

Import Data

The Import Data command runs the macro that retrieves the fusion data from the disk. When executed, the macro will:

1. Search each drive attached to the computer for fusion data files.
2. Extract the data from any files found and place it in a data worksheet that corresponds to the serial number of the processor that the data came from.

The operation progress will be shown in the Messages section of the worksheet.

Clear Messages

The Clear Messages command clears all the data in the Messages section. It does not affect the fusion data at all and is provided so that old messages can be removed.

Settings

The Settings section displays user-adjustable settings to control how fusion data is displayed. Currently, the only setting available is unit of temperature.

A setting value of “C” will show temperature units in Celsius. A setting of “F” will show temperature units in Fahrenheit. Please note, the setting only applies to new data imported into the spreadsheet. Once the data is loaded, the units are fixed and changing this setting will not change data already in the worksheets. If you want to change the unit of temperature, set it BEFORE you import the fusion data.

Messages

The messages section provides details about what is going during the execution of the macros. It is provided for informational purposes only and does not affect the fusion data. Clear the message window by running the Clear Messages command.

Data

There can be one or more data worksheets in a spreadsheet. The Data worksheets contain the raw fusion data. Once imported, the program generates one Data worksheet for each processor. The worksheet name will correspond to the serial number of the processor that generated the data.

Do not alter the columns or the cells. This will cause future downloads to improperly display fusion data. If you need to manipulate the fusion data for a custom report, copy the worksheet to another spreadsheet and perform your manipulation there. That way, you always maintain a master copy of the data in one place to refer back to.

REFERENCES

This section contains some useful web references.

MICROSOFT OFFICE HELP
http://office.microsoft.com/en-us/excel-help/