# Developer Notes Tax-Aide TrueCrypt Installer 2010

## The Development Tools 2010

This year this utility has been totally rewritten for greater control over the actual TrueCrypt utility. The bulk of the Tax-Aide utility is written in C# using the Windows .NET 3.5 Framework. In order to sensibly understand the source the IDE Visual Studio 2008 or Visual Studio 2010 should be installed. The free express edition of either of these development environments can be downloaded from Microsoft’s download website. The Tax-Aide TrueCrypt Utility Source v36.7\_0a.zip file contains all the C# source files for this development together with the embedded directory of software, scripts and icons that the source uses.

To use this source do the following

1. Create a new project in Visual Studio for the utility
2. Unzip the zipped source files
3. In the Visual studio project go through and “add existing items” adding each of the source files and the embedded directory of files
4. Go through each of the embedded directory files – properties and change the build action to “Embedded Resource”
5. The project should then successfully build

The Start and Stop Tax-Aide Drive scripts were both developed using a scripting language/interpreter called AutoIT. More information is provided here <http://en.wikipedia.org/wiki/AutoIt> for an introduction and here <http://www.autoitscript.com/autoit3/> for the hardcore information, downloading the tools and Integrated Development Environment, and access to the very very useful AutoIt forums for questions on how to do stuff. The IDE is noteworthy for its very good help file structure. The source for these scripts is the Source for TATC 060.zip zip file. The compiled version of these scripts is included in the embedded file directory of the main C# program.

## Source Folder and File Structure

Source is all maintained in one file let’s call it Tax-Aide TrueCrypt Drive Source. The files in there are

|  |  |
| --- | --- |
| DriveTrueCryptInstallUnFunc.au3 | Common source module used by installer and start files |
| FixOldTcryptCdrive.au3 | Common source module used by installer and start files |
| Progress\_bar.au3 | User entertainment (on a separate thread) |
| Start\_Tax-Aide\_Drive.au3 | Stop script |
| Stop\_Tax-Aide\_Drive.au3 | Start script |
| Tax-Aide\_TrueCrypt\_Installer.au3 | installer |
| Version Number | Included as source is built |

The other folder associated with the project is called “Files to be Installed”. This folder contains all of the files that well be subsumed into the Tax-Aide TrueCrypt Installer 6-3-xxx.exe during the build process. The files in this folder are

|  |  |
| --- | --- |
| autorun.inf | Placed in the root of a flash drive to cause autorun(if enabled) |
| CopyFileMsgBox.au3 | User distraction during copying |
| decryption.ico |  |
| encryption.ico |  |
| favicon.ico |  |
| Progress\_bar.au3 | User distraction during loading |
| Start Traveler.bat | Placed in root of flash drive to allow traveler start when autorun is disabled |
| Start\_Tax-Aide\_Drive.exe |  |
| Stop\_Tax-Aide\_Drive.exe |  |
| Tax-AideDelete.bat | Used by traveler script to delete temporary files during the stop traveler drive process |
| TrueCrypt.exe | Main TrueCrypt Program |
| truecrypt.sys | TrueCrypt IO driver |
| TrueCrypt for Tax-Aide Manual 20091031.pdf | Tax-Aide Manual |
| TrueCrypt Format.exe | TrueCrypt program for setting up TrueCrypt Volumes |
| TrueCrypt Setup 6.2.exe | TrueCrypt install program |
| truecrypt-x64.sys | TrueCrypt 64 bit IO driver |

## Introduction to AutoIT “FileInstall”

In order to understand the build process for the Tax-Aide TrueCrypt driver a brief explanation of the AutoIT FileInstall command is necessary. This explanation will not be exact. For exactness refer to the AutoIT help files. The rough syntax for File Install is

FileInstall (Path of source file, Path of destination directory)

When this command is run on the machine upon which the programming is being done the file is simply copied from the source directory to the destination directory (most frequently to C:\program files\truecrypt\tax-aide in the case of the Tax-Aide TrueCrypt installer). However when the installer is built into a single executable the files are compressed into the executable, so that when the Installer executable is run on a target machine and the fileinstall command is encountered the file is extracted from the executable and installed on the system in the destination directory.

For more details see AutoIT help and write a small script to try it out - it works.

## The Build Process

The relevant static files (everything except Start\_Tax-Aide\_Drive.exe and Stop\_Tax-Aide\_Drive.exe ) need to be in their appropriate folder. Then the process is as follows

1. Open the Start Tax-Aide Drive.au3 file in the scite editor
2. Build the executable (ctrl-F7) naming the executable Start\_Tax-Aide\_Drive.exe
3. Open the Stop\_Tax-Aide\_Drive.au3 file in the scite editor
4. Build the executable (ctrl-F7) naming the executable Stop\_Tax-Aide\_Drive.exe
5. Move the newly produced start and stop executables to the Files to be installed directory
6. Open the Tax-Aide\_TrueCrypt\_Installer.au3 in the scite editor
7. If necessary edit all the FileInstall lines in this file to reflect the path of the “files to be installed” directory
8. Build the executable (ctrl-F7) naming the file Tax-Aide Truecrypt Installer 6-2-xxx.exe where xxx is the release number