

## ASCOM C# Drivers Inno Setup Checklist

The following is a checklist and an annotated [walk-through](#) example of generating a Windows install .EXE using the example of generating an ASCOM C# Driver for a fictitious company/product called Acme. The end result is a working Windows install .EXE of a tested "working", "non-functional" ASCOM Focuser driver skeleton framework.

- - "working" means the driver passes the Conformance Checker tool
- - "non-functional" means it controls no actual hardware (yet)

### Development Environment

- 64-bit Windows 7
- Visual C# 2010 Express Edition
- ASCOM Platform 6.1SP1 installed
- ASCOM Platform Developer Components installed
- ASCOM Driver Conformance Checker installed
- Inno Setup installed
- Inno Setup QuickStart Pack installed

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Checklist	Image
<input type="checkbox"/> 1) Run the ASCOM <i>Driver Install Script Generator</i>	<a href="#">SetupScreen.png</a>
<input type="checkbox"/> 2) Select Driver Information:➤Technology: <b>.NET assembly (dll)</b>	
<input type="checkbox"/> 3) Set Driver Information:➤Short Name : <b>Acme</b>	
<input type="checkbox"/> 4) Select Driver Information:➤Type: <b>Focuser</b>	
<input type="checkbox"/> 5) Set Driver Information:➤Version: <b>1.2</b>	
<input type="checkbox"/> 6) Browse to and select Focuser Source Files:➤Source Folder: <b>...\CSharp Projects\ASCOM\Acme\Focuser</b>	
<input type="checkbox"/> 7) Browse to and select Focuser's Source Files:➤Main Driver File: <b>ASCOM.Acme.Focuser.dll</b>	
<input type="checkbox"/> 8) Browse to and select Focuser's Source Files:➤ReadMe File: <b>ReadMe.htm</b>	
<input type="checkbox"/> 9) Driver Developer:➤Name: <b>XYZ</b>	
<input type="checkbox"/> 10) Driver Developer:➤Email: <b>xyx@xyz.com</b>	<a href="#">Driver.png</a>
<input type="checkbox"/> 11) Save	

The script generator saves the information in an Inno script in the Focuser's project folder and opens Inno Script Studio.

- ☐ 12) In Inno Script Studio, change the [Setup]AppSupportURL to  
**"http://groups.yahoo.com/group/ASCOM-Talk/"**
- ☐ 13) In Inno Script Studio, change the [Setup]OutputBaseFilename to **"Acme Focuser Setup"**
- ☐ 14) In Inno Script Studio, replace the contents of the [Files] section with:  

```
Source: ".\bin\Debug\ASCOM.Acme.Focuser.dll"; DestDir: "{app}"
Source: ".\ReadMe.htm"; DestDir: "{app}"; Flags: isreadme
```
- ☐ 15) Save any changes
- ☐ 16) Make sure solution is closed in the Visual Studio IDE and compile the Inno script with  
Project➤Compile
- ☐ 17) Exit Inno Script Studio

The driver setup EXE is now located in the Focuser project folder as: **Acme Focuser Setup.exe**

- ☐ 18) Run the setup's *Acme Focuser Setup.exe* to install the Acme Focuser driver [SetupWizard.png](#)
- ☐ 19) Verify the following files are added in:  
C:\Program Files (x86)\Common Files\ASCOM\Focuser
  - ASCOM.Acme.Focuser.dll
  - ReadMe.htm

- ☐ 20) Verify the following folder and files are added in:
  - C:\Program Files (x86)\Common Files\ASCOM\Uninstall\Focuser\Acme
  - unins000.dat
  - unins000.exe

At this point, the Acme Focuser driver should be available for use.

- ☐ 21) Run the 32-bit ASCOM **Conform** tool, choose the *ASCOM Focuser Driver for Acme.*, Check Conformance and verify that no errors, warnings or issues are found and the Focuser driver passes ASCOM validation!!
- ☐ 22) Run the 64-bit ASCOM **Conform** tool, choose the *ASCOM Focuser Driver for Acme.*, Check Conformance and verify that no errors, warnings or issues are found and the Focuser driver passes ASCOM validation!!
- ☐ 23) Run the Windows uninstall tool to uninstall *ASCOM Acme Focuser Driver 1.2*
- ☐ 24) Verify the following files have been removed from:
  - C:\Program Files (x86)\Common Files\ASCOM\Focuser
  - ASCOM.Acme.Focuser.dll
  - ReadMe.htm
- ☐ 25) Verify the following folder (and its files) has been removed from:
  - C:\Program Files (x86)\Common Files\ASCOM\Uninstall\Focuser
  - Acme

At this point, the Acme Focuser should no longer be available in **Conform**'s Select Driver.

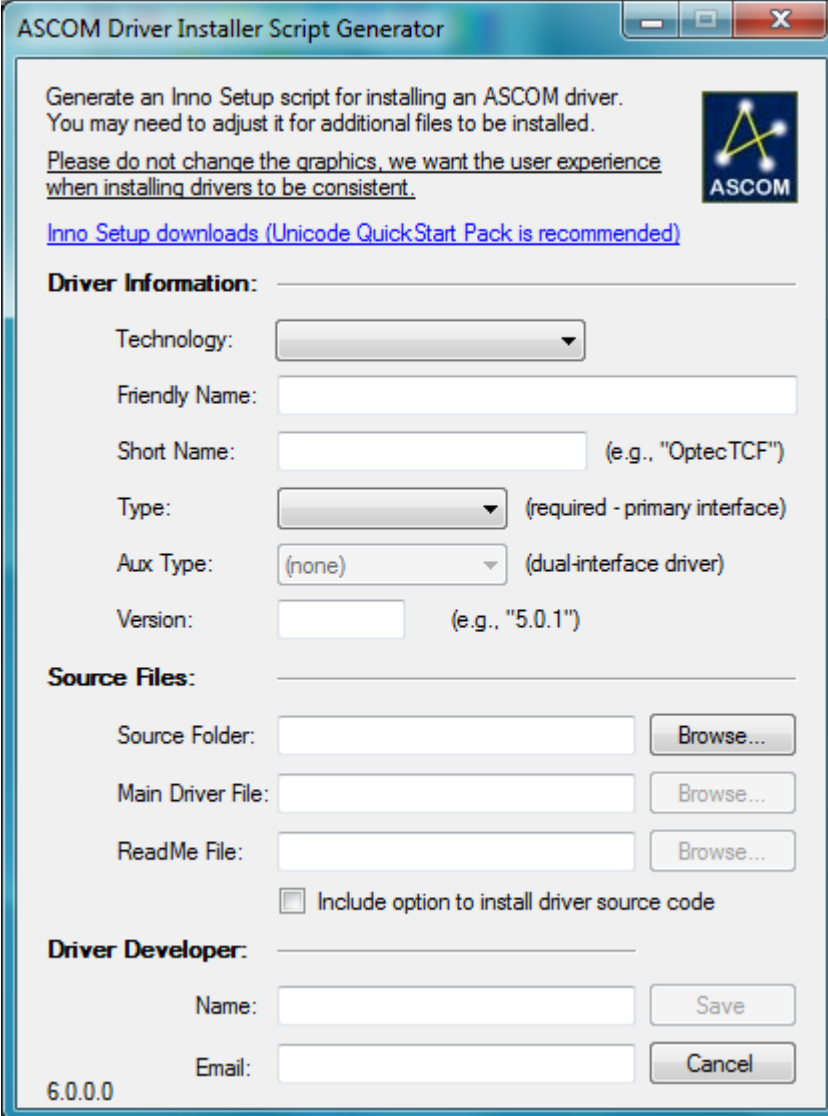
Note: If the driver was installed on a 64-bit O.S., after the uninstall, some of the registry entries associated with the 64-bit install still remain in the registry. This is a known issue!

(Work-around: In the Inno Setup script, in the [UninstallRun] section, after the "{dotnet4032}\regasm.exe" line, add a "{dotnet4064}\regasm.exe" line, copied from the [Run] section, to re-register the 64-bit driver immediately before unregistering it.)

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## ASCOM C# Drivers Inno Setup Walk-Through

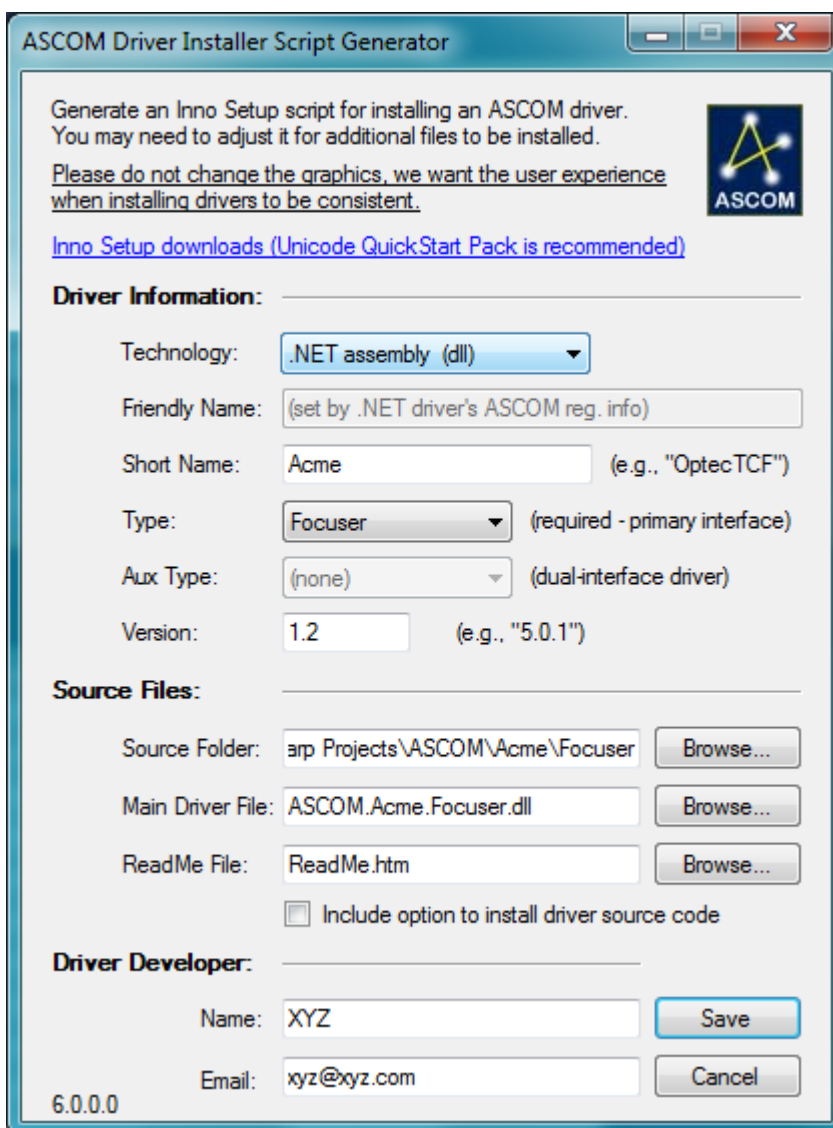
- 1) Run the ASCOM Driver Install Script Generator



The screenshot shows the 'ASCOM Driver Installer Script Generator' window. It has a title bar with standard Windows window controls. The main area contains instructions: 'Generate an Inno Setup script for installing an ASCOM driver. You may need to adjust it for additional files to be installed.' followed by a note: 'Please do not change the graphics, we want the user experience when installing drivers to be consistent.' and a link: 'Inno Setup downloads (Unicode QuickStart Pack is recommended)'. The window is divided into three sections: 'Driver Information:', 'Source Files:', and 'Driver Developer:'. The 'Driver Information:' section has fields for Technology (a dropdown), Friendly Name, Short Name (with an example '(e.g., "OptecTCF")'), Type (a dropdown with '(required - primary interface)' next to it), Aux Type (a dropdown with '(none)' and '(dual-interface driver)' next to it), and Version (with an example '(e.g., "5.0.1")'). The 'Source Files:' section has fields for Source Folder, Main Driver File, and ReadMe File, each with a 'Browse...' button. There is also a checkbox 'Include option to install driver source code'. The 'Driver Developer:' section has fields for Name and Email, with 'Save' and 'Cancel' buttons. The version '6.0.0.0' is displayed in the bottom left corner. The ASCOM logo is in the top right corner.

- 2) Select Driver Information: ➤ Technology: **.NET assembly (dll)**  
(Drivers developed in Visual C# are .NET assembly DLL's.)
- 3) Set Driver Information: ➤ Short Name: **Acme**  
(This is the company or product name as shown in the install screens.)
- 4) Select Driver Information: ➤ Type: **Focuser**
- 5) Set Driver Information: ➤ Version: **1.2**
- 6) Browse to and select Focuser Source Files: ➤ Source Folder: **...\\CSharp Projects\\ASCOM\\Acme\\Focuser**  
(This is the base folder path of the driver, read-me, and source files.)
- 7) Browse to and select Focuser's Source Files: ➤ Main Driver File: **ASCOM.Acme.Focuser.dll**  
(Note: The script generator always prepends "bin\\Release" to this file name. If this is not correct, it will need to be subsequently changed in the Inno Script Studio tool.)

- 8) Browse to and select Focuser's Source Files: ➤ ReadMe File: **ReadMe.htm**  
(This needs to be the release notes or driver user information file, not the ReadMe.htm that is part of the Driver template.)
- 9) Driver Developer: ➤ Name: **XYZ**  
(This is the company or developer's name as shown in the "Support" dialog of the Windows *Add/Remove Programs* tool.)
- 10) Driver Developer: ➤ Email: **xyx@xyz.com**  
(This is the email address as shown in the "Support" dialog of the Windows *Add/Remove Programs* tool.)



The screenshot shows the "ASCOM Driver Installer Script Generator" window. It contains instructions to generate an Inno Setup script for an ASCOM driver. The "Driver Information" section includes fields for Technology (set to ".NET assembly (dll)"), Friendly Name (set by .NET driver's ASCOM reg. info), Short Name (Acme), Type (Focuser), Aux Type (none), and Version (1.2). The "Source Files" section has fields for Source Folder (arp Projects\ASCOM\Acme\Focuser), Main Driver File (ASCOM.Acme.Focuser.dll), and ReadMe File (ReadMe.htm), each with a "Browse..." button. There is also a checkbox for "Include option to install driver source code". The "Driver Developer" section has fields for Name (XYZ) and Email (xyz@xyz.com), with "Save" and "Cancel" buttons. The version number "6.0.0.0" is displayed at the bottom left.

- 11) Save

The script generator saves the information in an Inno script in the Focuser's project folder and opens Inno Script Studio.

- 12) In Inno Script Studio, change the [Setup]AppSupportURL to **"http://groups.yahoo.com/group/ASCOM-Talk/"**  
(This is the link address as shown in the "Help link" dialog of the Windows *Add/Remove Programs* tool.)

- 13) In Inno Script Studio, change the [Setup]OutputBaseFilename to "**Acme Focuser Setup**"  
(This will be the file name of the generated Windows install .EXE.)
- 14) In Inno Script Studio, replace the contents of the [Files] section with:  

```
Source: ".\bin\Debug\ASCOM.Acme.Focuser.dll"; DestDir: "{app}"  
Source: ".\ReadMe.htm"; DestDir: "{app}"; Flags: isreadme
```

  
(For the Release build configuration, the DLL path will probably include "Release" instead of "Debug".)
- 15) Save any changes
- 16) Make sure solution is closed in the Visual Studio IDE and compile the Inno script with Project>Compile
- 17) Exit Inno Script Studio

The driver setup EXE is now located in the Focuser project folder as: **Acme Focuser Setup.exe**

- 18) Run the setup's *Acme Focuser Setup.exe* to install the Acme Focuser driver



- 19) Verify the following files are added in:  
C:\Program Files (x86)\Common Files\ASCOM\Focuser  
- ASCOM.Acme.Focuser.dll  
- ReadMe.htm
- 20) Verify the following folder and files are added in:  
C:\Program Files (x86)\Common Files\ASCOM\Uninstall\Focuser\Acme  
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At this point, the Acme Focuser driver should be available for use.

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- 23) Run the Windows uninstall tool to uninstall *ASCOM Acme Focuser Driver 1.2*
- 24) Verify the following files have been removed from:
  - C:\Program Files (x86)\Common Files\ASCOM\Focuser
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  - ReadMe.htm
- 25) Verify the following folder (and its files) has been removed from:
  - C:\Program Files (x86)\Common Files\ASCOM\Uninstall\Focuser
  - Acme

At this point, the Acme Focuser should no longer be available in **Conform**'s Select Driver.

Note: If the driver was installed on a 64-bit O.S., after the uninstall, some of the registry entries associated with the 64-bit install still remain in the registry. This is a known issue!

(Work-around: In the Inno Setup script, in the [UninstallRun] section, after the "{dotnet4032}\regasm.exe" line, add a "{dotnet4064}\regasm.exe" line, copied from the [Run] section, to re-register the 64-bit driver immediately before unregistering it.)