README file for MachStdMill

Calypso Ventures, Inc.
June 16th, 2015

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1 Introduction

Welcome to README file for the MachStdMill screen set. We trust you will find this a significant update from the stock Mach3 screen set.

This file contains information you need BEFORE installing the MachStdMill screen set.

Once installation is complete, the full documentation package will be available including Release Notes, User manuals and Reference Manuals.

2 MachStdMill Licensing

The MachStdMill package which includes the MachStdMill software (binaries and sources) and documentation are available only subject to specific license terms. The license terms allow use and/or modification of the software free of charge as long as the license terms conditions are met.

The MachStdMill license terms are displayed by the installer.
Agreement to the license terms is required before MachStdMill can be installed.

After installation, the license terms can be found in Documentation\MachStdMill\MachStdMill License.pdf.

3 Installing MachStdMill

3.1 Update Mach

The minimum Mach version for MSM Mill use is Mach3 3.043.022 or newer.
The minimum Mach version for MSM Turn or Mill-Turn use is Mach3 3.043.038 or newer.
(Note: Some OEM versions of MSM may require newer mach versions than the MSM minimums listed above.)

Check the CVI web site for current recommendation of Mach versions to use for MSM.

MachStdMill requires these as a minimum version of Mach3.
(FYI, the Mach About box displays version numbers using leading zeros (e.g. 3.0.43.022) while many users (my self included sometimes) will simply write 3.43.22 leaving out the leading zeros)

It is best to do any needed Mach3 install/update before the MachStdMill install.

While MachStdMill will install on an earlier version of Mach3, it will refuse to run until it finds an minimal revision level of Mach3 during initialization[1].

Attempting the MachStdMill install with an older version of Mach3 can cause complications with the install instructions given below. To avoid that, please install an appropriate revision level of Mach3 prior to installing MachStdMill.

3.2 Installing MachStdMill

Installing MachStdMill is accomplished by running the MachStdMill installer.

This section illustrates the MachStdMill install procedure. The details of these screen shots will change slightly with revisions of the MachStdMill package,

PLEASE DO NOT SKIP READING THE INSTALL INSTRUCTIONS.
At least make sure you read section 3.2.12 about making a profile to use with MSM. It is important: Doing the install correctly will save you trouble later on!

3.2.1 Set Windows Regional Settings to US English

Mach3 does not support operation windows regional settings. A;; of Mach3 internally assumes that windows is set for US English regional settings. While much of Mach (and hence MSM) will operate with non-US settings, some portions will fail. The only way to avoid these problems is to run mach with US regional (international settings).

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[1] Mach3 versions before 3.42.30 will simply throw an unexplained syntax error when MachStdMill goes to initialize. With Mach3 versions after 3.42.30, MachStdMill can check the Mach3 version information and tell you if the Mach3 version is too old.

3.2.2 Turn off anti-virus programs.

Before installing MachStdMill, turn off all anti-virus programs.

All MachStdMill files are scanned regularly during development, scanned before an installer is built and released, and the installer exe is scanned before being uploaded to the CVI web site.

Unfortunately, anti-virus programs these days don't really know if a program has a virus or Trojan or not – instead they "guess"! Once upon a time scanned programs were checked against known, verified virus signatures. Apparently that has become too much work for the AV programmers…. they now rely on various heuristics and rather questionable algorithms.

Consider this example: Norton File Insight apparently uses a file "reputation" to decide if it should block execution of a file or not. I understand that this "reputation" depends on multiple factors, including whether the file name has been reported as trusted by other Norton users. Effectively, only programs which are well known and widely used will be considered as trusted. A niche CNC program like MachStdMill is never likely to be common enough out in the world to pass that type of test.

A sad fact is that some AV programs create false positive alerts about MachStdMill.

To avoid false positive results from AV programs, and to avoid failed installs (due to an AV program blocking execution of part of the MachStdMill install sequence), turn all AV programs OFF before installing MachStdMill.

Finally, if you intend to use on-line activation for MSM, during the activation process you will need to either turn off any firewalls you are running or grant permission for MSM to access the net. Since MSM runs as part of Mach3, the actual program name you will need to authorize for net access is Mach3.exe.

3.2.3 Start the install

Before starting the installation of MachStdMill, **CLOSE MACH IF IT IS RUNNING.**

You want Mach (and MachStdMIll) to NOT be running. If they are running, you may receive installer messages about files that the installer can not install or can not replace.

Note: If you have an early pre-release version of MachStdMill installed (any MSM version before v1.0.0), you must manually uninstall the pre-release version before continuing. The pre-release alpha and beta versions are not compatible and need to be removed before installing a production release.
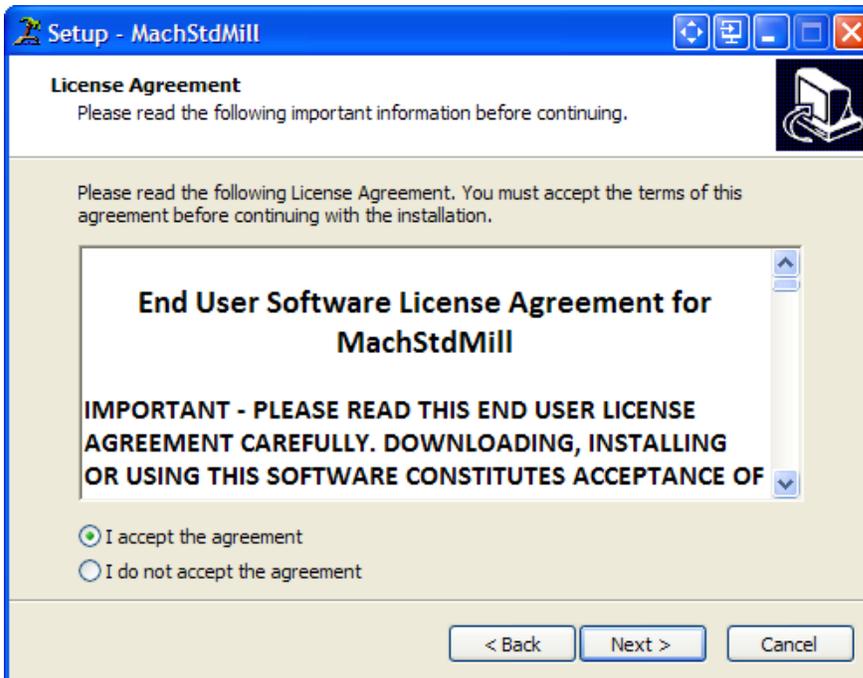
Start the install by running the MachStdMill setup program. You will get the initial install screen:
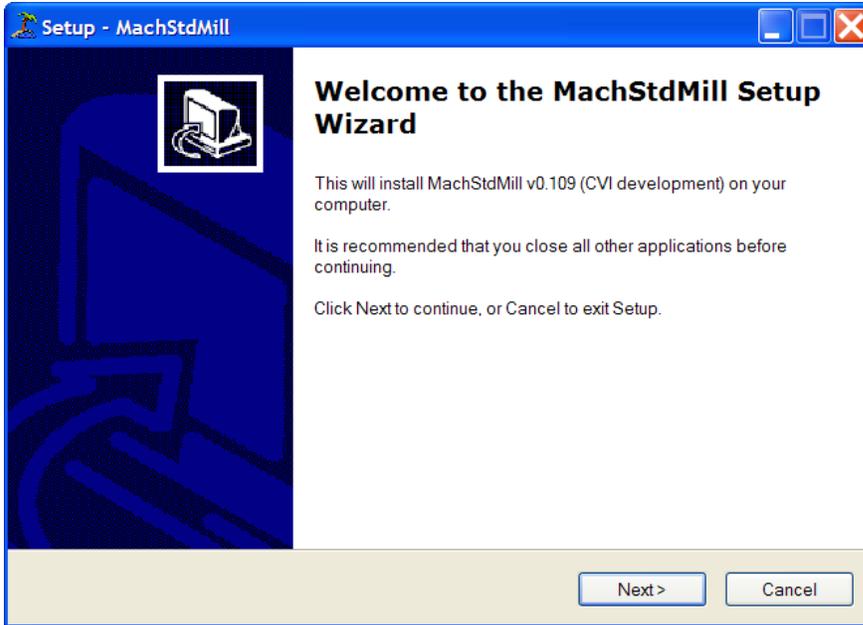
3.2.4 Review License Terms

Read and agree to the license agreement in order to install MachStdMill.
<u>If you do not agree with the license terms, do not continue with the installation.</u>


3.2.5 Pre-Install Information

The installer will then display any information that you should know before commencing the installation. The information presented may differ from the example screen show below.
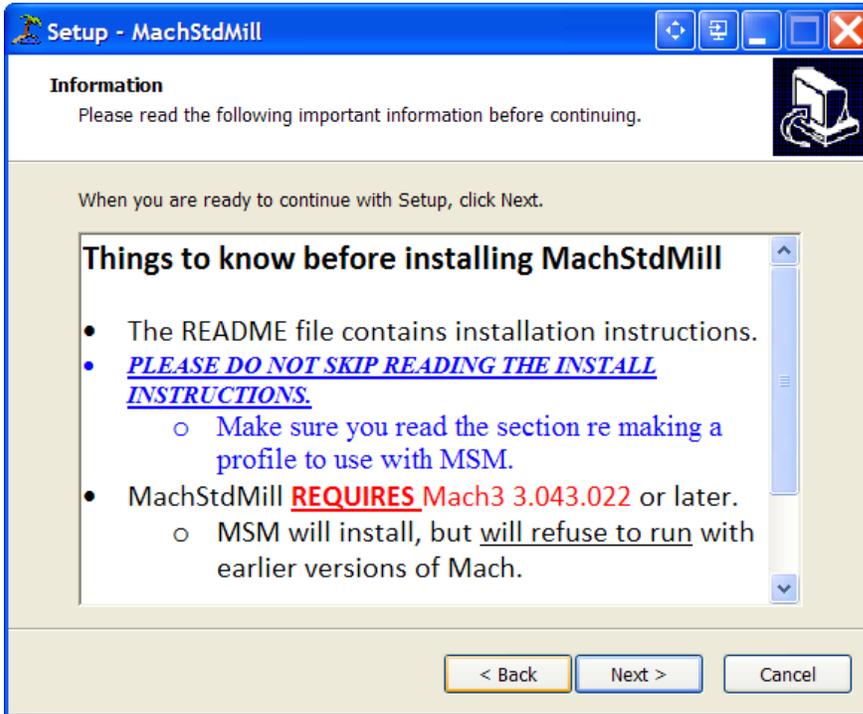
3.2.6 Install Location

Select the default location to install MachStdMill. The installer defaults to the normal install directory for Mach3. Except for unusual circumstances, go ahead and use the default location.

This folder MUST be the same as the Mach3 install folder – change this IF AND ONLY IF Mach3 is installed into a non-standard location.
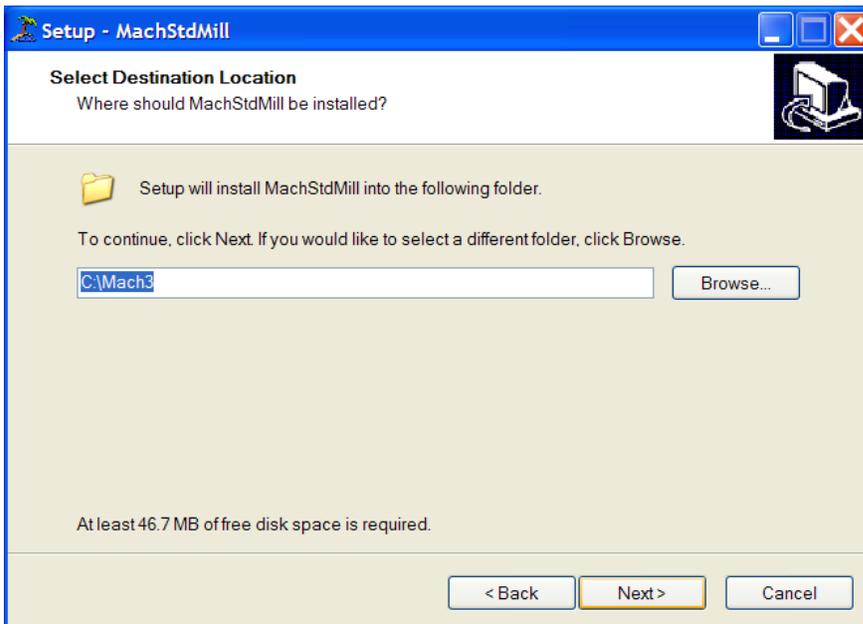
3.2.7 Select Components

This screen allows you to select the set of MachStdMill components that you want to install. There are several prepackaged combinations: Full install, Mill only, Lathe only and custom.

A Full installation will install the components needed to run any/all of MSM's features.

A Mill only installation will install the components necessary to run a mill.

A Lathe only installation will install the components necessary to run a (XZ) lathe.

A Custom installation will allow you to pick and choose the available components.
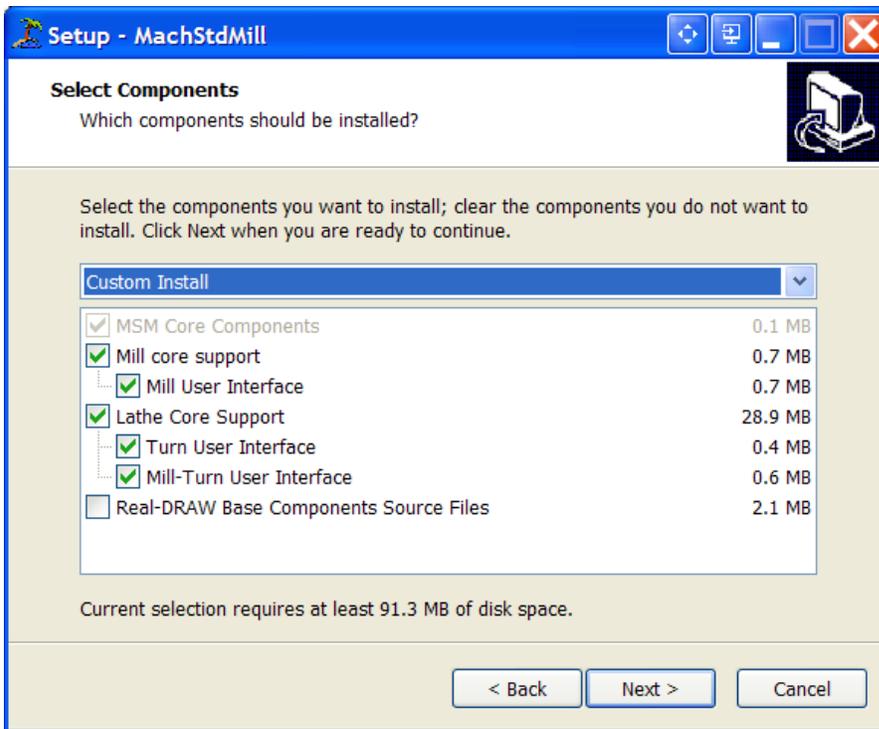
The listed available optional components may differ from the screen shot shown above as components are made available.

3.2.7.1 Real Draw Base Components Source Files

This option will install the Read Draw source files which can be useful if you are customizing MSM. These files are not required to run MSM as shipped.

Note that if you want to install the Real-Draw source files, they are installed via a custom install.

3.2.8 MachStdMill Folder Name

The installer will give you the opportunity to pick the start menu folder name that MachStdMill creates – it is recommended that you use the default name. By default, MachStdMill puts it's folder in the Mach3 start menu folder.
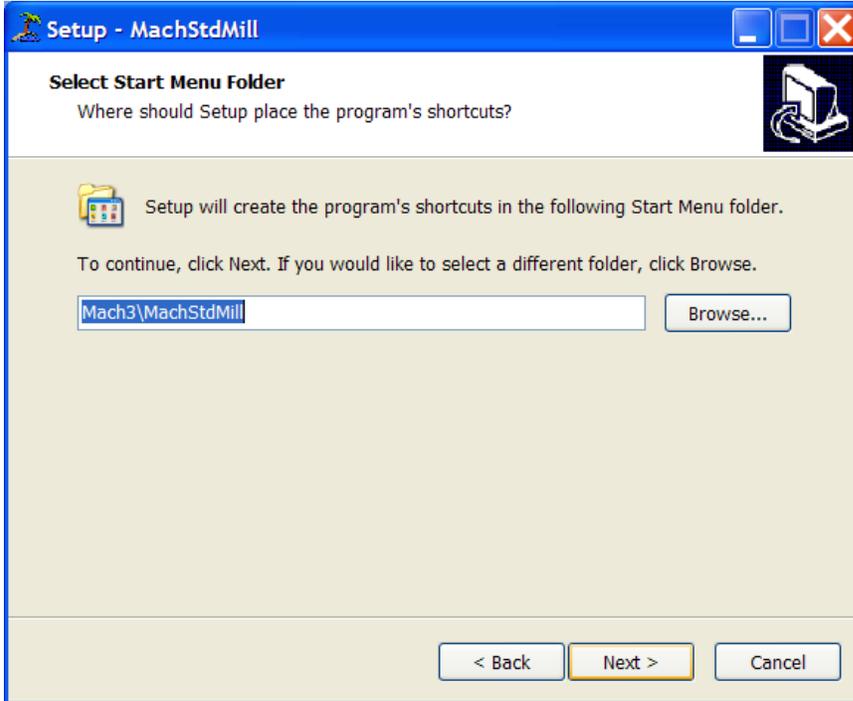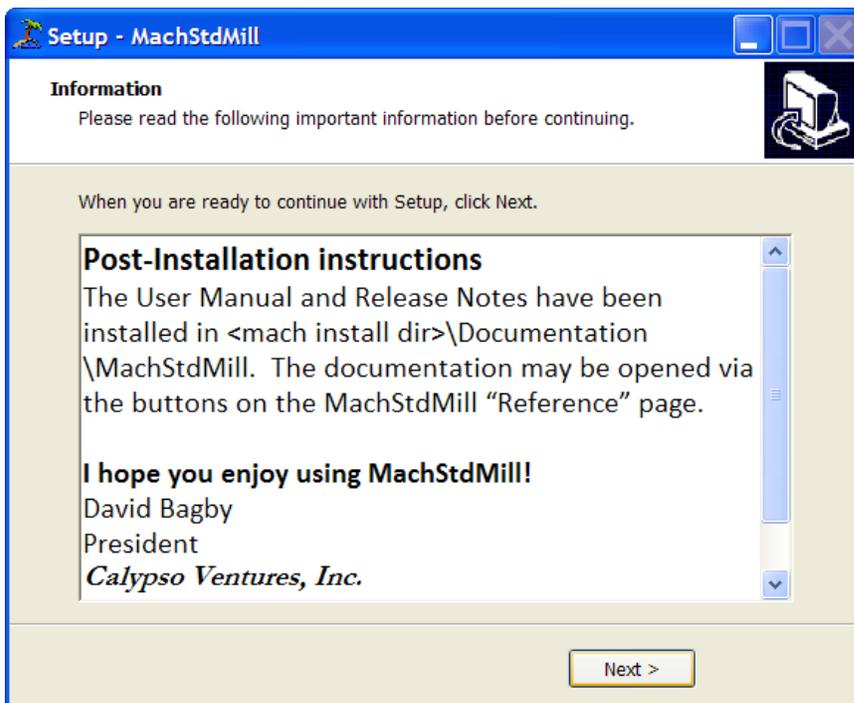
3.2.9 Install the MachStdMill Package

Click the install button to perform the installation.

The exact contents of this screen will vary depending on the optional components selected for the installation.
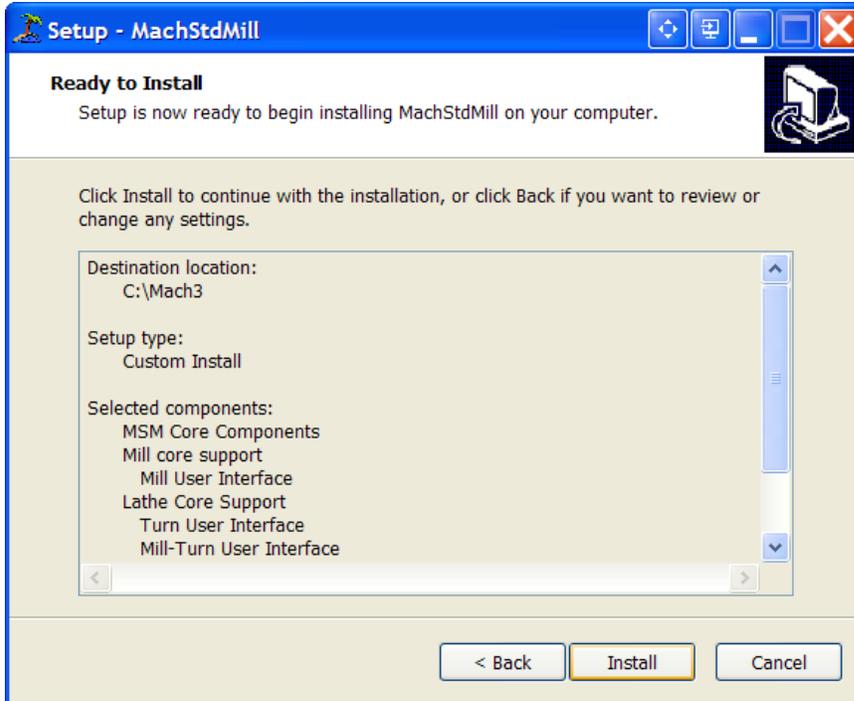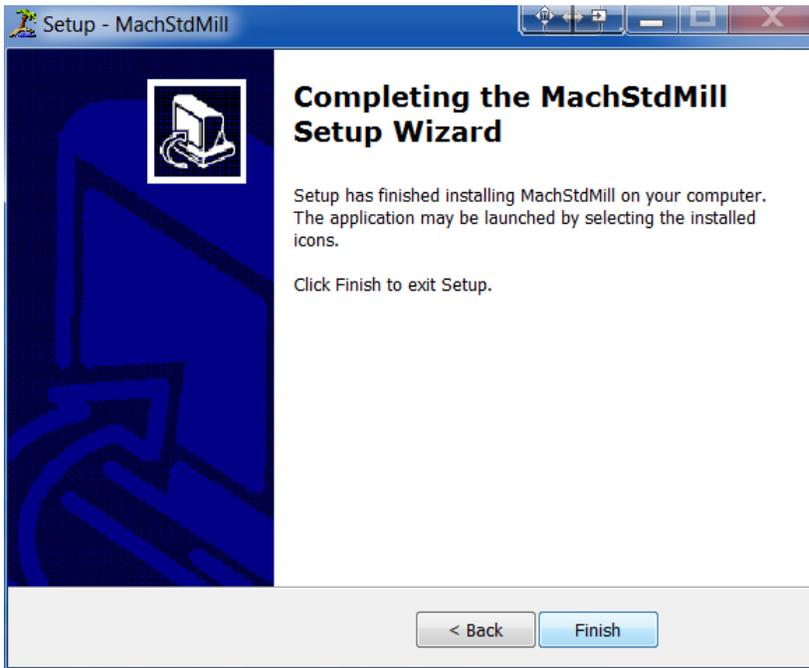
3.2.10   Post-install Information

After installing the MachStdMill files, the installer will present this screen with post install instructions.

3.2.11   Completing the Install

The final page of the installation process is shown below.

If you are doing a MachStdMill update install, just click finish.
You have completed the install process and you can use your existing profile to run the updated version of MachStdMill.

If this is first time install of MachStdMill, please keep reading for instructions about making a profile to run MachStdMill.

3.2.12   Making a New Profile for use with MachStdMill.

The first time you install MachStdMill, you must create a new profile for use with MachStdMill.

This only needs to be done once when you first start using MachStdMill. Once you have a profile configured for MachStdMill, you will not need to do this again.

There are two ways to make a profile for use with MachStdMill:
1. As most people installing MachStdMill already have Mach configured for their machine, the most common method used is to:

    Clone an existing profile that is already configured to run your machine. You will then have to load the MachStdMill.set set file by hand the first time you load the new profile.

    If you are making the profile from an existing, hardware already configured profile, you create a copy of your existing profile.

2. If you do not already have a working Mach profile for you machine, the alternative method is to:

Clone the MASTERMachStdMill master profile and add your hardware configuration settings to the new profile you create. With this method, you will not have to hand load MachStdMill.set the first time as the master profile already has it set as the current screen set.

If you are making the profile from the MASTERMachStdMill master profile, you create a copy of the MASTERMachStdMill master profile.

If you do not make a separate MSM profile, and you attempt to use the **MASTERMachStdMill** profile directly, YOU WILL GET A WARNING when you start MSM.   (Honest, trust me, you don't want to do that – it will cause your configuration settings to get erased when you next update MSM and the master profile gets overwritten by the MSM installer.)

You must do one of the above two choices.

MSM Lathe support users:
Do not try to use your existing MSM profiles to also run MSM Lathe extensions. MSM Turn and MSM Mill-Turn run mach in lathe mode and thus they have to be separate profiles from the ones you use for mill operation. Also, Mill and lathe modes use different M3/4/5/6 macros and so have to be separate mach profiles to avoid Mcode conficlits.

It is Ok to clone an existing MSM Mill profile using mach loader and then use the copy for MSM Mill-Turn (as the copy will be a different profile name). This gets you all the existing Mill hardware configuration information, but creates a separate profile to run Mill-Turn with.

3.2.12.1   Example: Cloning an existing hardware profile to run MachStdMill.

Make a copy of your existing, working, Mach profile using the Mach loader as follows:

When the MSM install completes, the Mach3 loader will open. Use "Create Profile" to make a copy of you existing profile. IN the example below the existing profile To be copied is called "Smithy-1240-w-ppd".
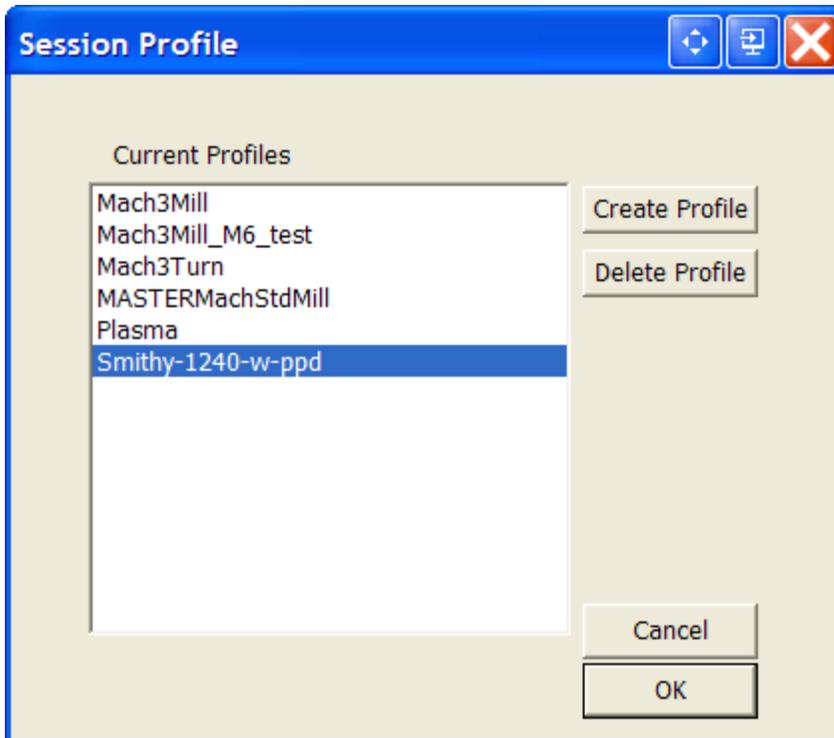
You will be presented with a screen similar to this:
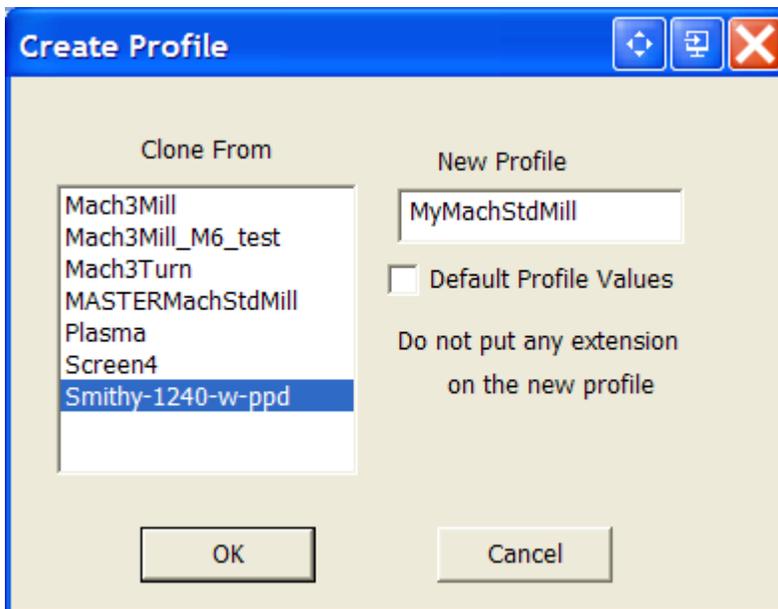
Select the name of your existing profile in the left column.

Create the name for your cloned MSM profile – in this case "MyMachStdMill".

DO NOT click "default profile values".

Click "OK" to create the MyMachStdMill profile.

3.2.12.1.1   Initial Loading of MachStdMill

Since this method cloned a pre-MSM existing profile, your new cloned profile will be set to load some screen set other than MachStdMill.

> You must load MachStdMill screen set manually the (only) first time.

> Use the menu View\Load Screens to load up
> <Mach3 install dir>\MachStdMill.set

> MSM Turn and Mill-Turn:
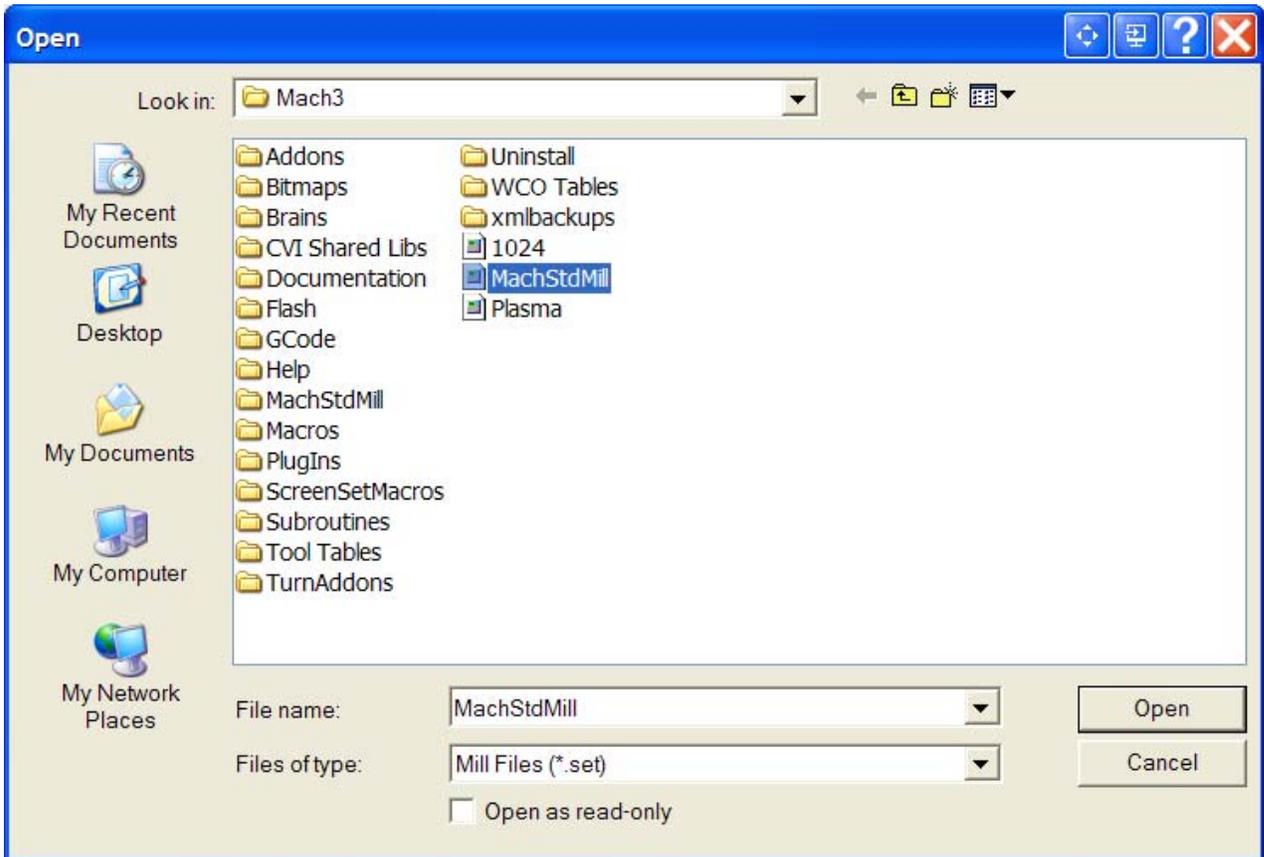> If installing to run MSM Turn or Mill-Turn, the screen set name to load is:
> <Mach3 install dir>\MachStdMillLathe.lset
> (note the .lset extension...)

The first time you start mach with this new profile, you will not load the MSM screens. We need to hand load MSM the first time.

Start Mach with the new profile, and then use the menu bar to do View – Load Screens, you will get a dialog similar to this:

Load ONLY this Set file. Do NOT go looking for other set files that MSM may have installed. The MachStdMill.set file is the ONLY set file that you need. (All other changes for MSM, like selecting the MSM resolution, are done from inside MSM and are not done by using the Mach view/load screens menu).
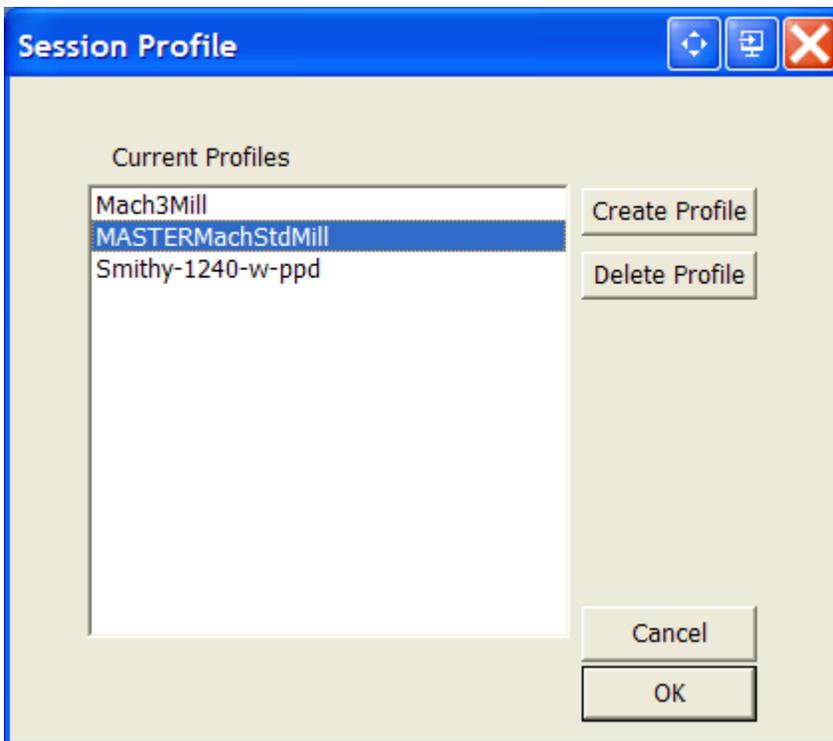
Shut down Mach3 (to get the screen set change recorded in the profile XML file) and then restart Mach3 using your new profile.

From now on, when you start mach with this profile, Mach will start with MSM.

3.2.12.2   Example: Making an MSM Profile from the MachStdMill master profile.

Make your own copy of the MASTERMachStdMill profile using the Mach3 loader as follows:

When the install completes, the Mach3 loader will open. Use "Create Profile" to make your own copy of the MASTERMachStdMill profile for customization.

Session Profile

Current Profiles

Mach3Mill
MASTERMachStdMill
Smithy-1240-w-ppd

Create Profile

Delete Profile

Cancel

OK

You will be presented with a screen similar to this:
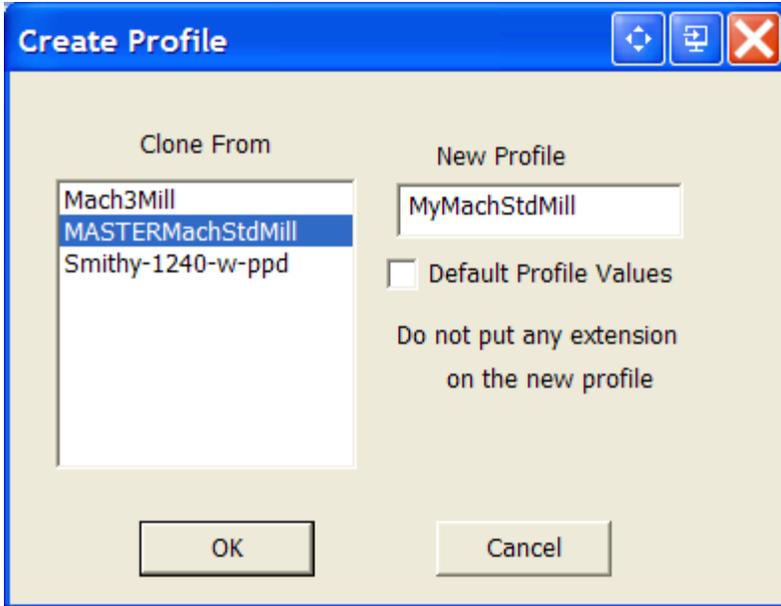
Select "MASTERMachStdMill" in the left column.

Create the name for your cloned MSM profile – in this case "MyMachStdMill".

DO NOT click "default profile values".

Click "OK" to create the MyMachStdMill profile.

MachStdMill is now installed and ready to run via this profile.

3.2.12.2.1   Add your Hardware Configuration to the MyMachStdMill Profile.

If you created your profile from an existing profile for your machine, skip this section as your hardware setup is already in the new profile.

Start Mach3 with the MyMachStdMill profile and use the Mach3 configuration menus to configure your hardware interface. To help avoid forgetting about some setting, go through each of the sub-menus under the main Config menu and look at the settings to verify they are the values you desire.

This installation approach has the disadvantage that you may miss a hardware setting for your new profile. An advantage is that over time, Mach XML files tend to collect crud. Using this approach, makes sure that you are starting clean and not carrying over unknown problems that may be present in an old XML file.

When the hardware interface information has been configured, you are ready to run MachStdMill.

3.3 Post Installer Configuration

3.3.1 Making a Shortcut to the New Profile.

You may also want to create a shortcut which will run your new profile and hence MachStdMill by default.

This is done my setting the /p command line switch for mach3 in the shortcut properties as shown in the example below:
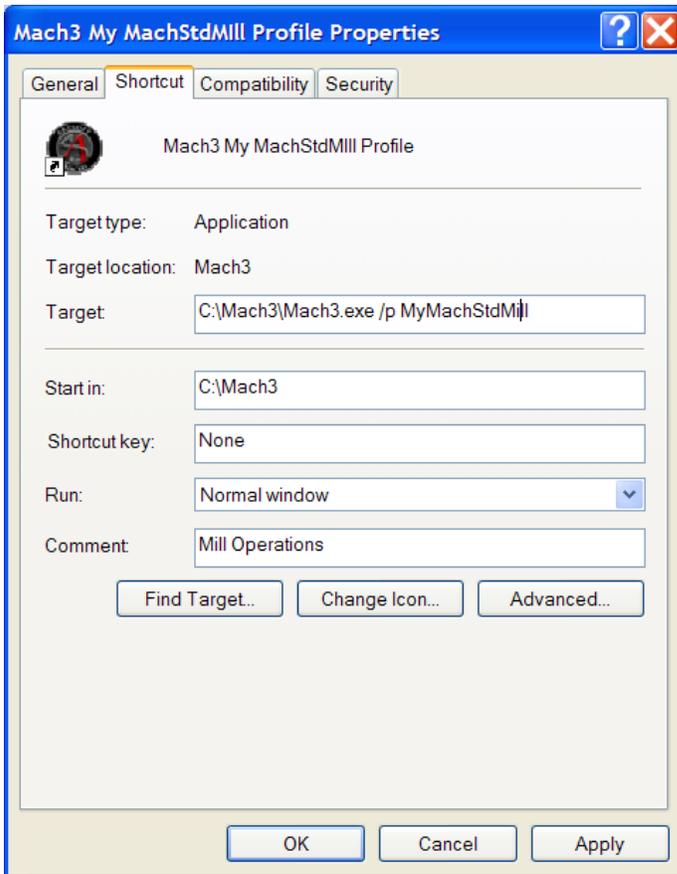
Double click the shortcut to start Mach3 with your new profile.

You may then use the Mach3 configuration menus to add your machine specific configuration (ex: ports & pins) to the new profile.

3.3.2 Installation Complete

The installation of MachStdMill is complete.

See the release notes and the user manual for information re configuration of optional MachStdMill features.

4 MachStdMill Installation vs. Activation

The reader should be aware that The following three terms are NOT synonyms: "installation", "Activation" and "Operation".

The README file covers "installation" (as this information is helpful to know prior to installing the software). Please see the User Manual for more information re "activation" and "Operation" (which are only mentioned briefly in this document).

4.1 Installation

Installation is the process of installing the MachStdMill software on to PC that is already running Mach3. independently, a MachStdMill installation may or may not be "activated".

(For example: A trial version of MachStdMill is "installed" (i.e. it is on the PC can be run for the trial period), but it is not "activated" (i.e. is it not a licensed copy of the software which does not time out).

4.2 Activation

Activation is the process by which a trial installation is converted into a licensed installation or a deactivated installation is restored to licensed service after a move from one PC to another, or after changes to a system's hardware configuration have performed on a deactivated installation's PC.

Activation or deactivation requires interaction with the 24/7 online license service. This interaction can either be direct ("Online activation") or indirect via another PC ("Proxy Activation").

Activation and deactivation of a licensed copy of MachStdMill is documented in the User Manual.

5 MachStdMill Support and Feedback

The MachStdMill user community forum at the

[CVI MachStdMill User Forums](#)

Which is the primary method for end user support for MachStdMill.

Please direct any support issues, including installation questions to that forum.
Please report any bugs or errata discovered.