

# TUG-MACTEX-FOR-DVD

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## 1. MACTEX

This is the portion of the TUG documentation which deals with making the MacTeX install package for the DVD. The ultimate product of this work will be a folder named MacTeX-Install to be placed in the DVD mactex folder. This install folder will contain two documents, “MacTeX Install Part 1” and “MacTeX Install Part 3”, an install package constructed below, “MacTeX Install Part 2.pkg”, and a folder named TLprofiles.

The RLprofiles folder should duplicate the TLprofiles folder inside TeXLive-2013, as constructed earlier.

## 2. IMPORTANT WARNINGS

This section contains lessons learned in 2013. The material here is important for all packages made with the new PackageMaker.

Folders in which packages are built should live on the hard disk rather than an external disk. Building constructs subfolders named “root” which contain copies of material to be installed. This root folder and its contents are usually owned by root. But material on an external drive is owned by the user instead, so owners will be incorrect after installing.

The final MacTeX template refers to root folders of the various sub projects. In the template, each sub project is listed in the left column; clicking on an arrow there reveals a panel in which the root folder is determined and configured.

Configuration of a root folder is governed by a panel with four tabs: Configuration, Contents, Components, and Scripts. The material in the first and last tabs is important and should be entered carefully. The second Contents tab allows owners, groups, and permissions of individual files in the folder to be set. This task is impossible for a huge root folder like TeXLive, but luckily Apple provides a button “Apply Recommendations” which does it automatically following Apple’s “best practices policy.” Always click this button.

For binary files like texlive/2013/bin/universal-darwin, the recommendations are unexpected. Actual binaries have owner root and group wheel, but symbolic links have owner

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an individual user and group wheel. Permissions are -rwxr-xr-x. Experiments and email conversations show that these choices work well.

For the GUI-package, the third tab, "Components", is very important. It lists actual apps and offers to relocate them. *Turn this off*. Otherwise the installer won't upgrade programs in /Applications/TeX, but instead will search the disk for a copy to update. Always check that these items are off.

### 3. CONTENTS

This is a final product of the build directory, built for DVD distribution.

A clean package file will contain

- Files "MacTeXDVDMaker" and "signPackage.sh"
- Files "background.jpg", "License.rtf", "ReadMe.rtf", and "Welcome.rtf"
- A folder MacTeX-Install, with two files named "MacTeX Install Part 1" and "MacTeX Install Part 3".
- scripts\_convert folder, containing files "postinstall", "setloginpath", and "settexpath"
- scripts\_ghostscript folder, containing files "postinstall" and "setloginpath"
- scripts\_gui folder, containing file "postinstall"
- scripts\_texdist folder, containing files "Description.rtf", "postinstall", "setloginpath", "setmanpath", "texdist", "TeXDist-description.rtf", "TeXDistVersion", "TeX-ManPath", and "TeXPath" and PrefPane folder containing the file "Info.plist" and the "TeX Distribution" preference pane
- "TUG" folder with this document

This package is easy to maintain. To update the package for a new year, edit the three rtf files, changing the package name to reflect the new date and release date.

#### 4. BUILDING MAC<sub>TE</sub>X INSTALL PART 2 WITH PACKAGEMAKER

Edit MacTeXDVDMaker, the Packagemaker project file, using the GUI interface, as follows.

- (1) Click the top item on the left. The right side will change to a view with three tabs. First select the Configuration tab. Edit so
  - (a) Title: MacTeX Install Part 2
  - (b) User Sees: Easy and Custom Intall
  - (c) Install Destination: System volume
  - (d) Certificate: Leave this blank. You might think that putting a certificate name here would correctly sign the package, but experiments show that it does not. The package needs to be signed after it is constructed.
  - (e) Description: Empty
- (2) The Requirements and Actions tab entries for the top item can be left blank

Click the entry TeXDist-and-PrefPane in the Contents section on the left. The right side will change to a view with two tabs.

- (1) Select the Configuration tab. Edit so
  - (a) Choice Name: TeXDist-and-PrefPane
  - (b) Identifier: choice1
  - (c) Initial State: Selected and Enabled
  - (d) Destination: /
  - (e) Tooltip: Leave Blank
  - (f) Description: Leave Blank
- (2) The Requirements tab entries for this contents item can be left blank
- (3) Open the Library entry in the bottom left column. This item should show a “Library” directory, obtained by dragging ../TeXDist-and-PrefPane/root/Library to the left column. The right side will change to a view with four tabs. It is not necessary to edit the items under the Contents or Components tabs. The items under the Configuration tab should be edited as follows:
  - (a) Install: ../TeXDist-and-PrefPane/root/Library (The item on the right should have selected “Relative To Project”)
  - (b) Destination: /Library (The item on the right should have selected “Relative To Project”)
  - (c) Do not check “Allow custom location”
  - (d) Patch: No patch root selected
  - (e) Package Identifier: org.tug.texdist-and-prefpane
  - (f) Package Version: 1.0
  - (g) Restart Action: None
  - (h) Check “Require admin authentication”
  - (i) PackageLocation: Self-Contained

The items under the Scripts tab should be edited to read

- (a) Scripts directory: scripts\_texdist (The item on the right should have selected “Relative To Project”)
- (b) Preinstall: Leave Blank
- (c) Postinstall: scripts\_texdist/postinstall (The item on the right should have selected “Relative To Project”)

Click the entry GUI-Applications in the Contents section on the left. The right side will change to a view with two tabs.

- (1) Select the Configuration tab. Edit so
  - (a) Choice Name: GUI-Applications
  - (b) Identifier: choice2
  - (c) Initial State: Selected and Enabled
  - (d) Destination: /
  - (e) Tooltip: Leave Blank
  - (f) Description: Leave Blank
- (2) The Requirements tab entries for this contents item can be left blank
- (3) Open the GUI-Applications entry in the bottom left column. Add an “Applications” directory to this item by dragging ../GUI-Applications/root/Applications to the left column. The right side will change to a view with four tabs. It is not necessary to edit the items under the Contents tab. But it is *very important* to edit the items under the Components tab, turning off all boxes labeled “Allow Relocation.” The items under the Configuration tab should be edited as follows:
  - (a) Install: ../GUI-Applications/rootDVD/Applications (The item on the right should have selected “Relative To Project”)
  - (b) Destination: /Applications (The item on the right should have selected “Relative To Project”)
  - (c) Do not check “Allow custom location”
  - (d) Patch: No patch root selected
  - (e) Package Identifier: org.tug.mactex.gui
  - (f) Package Version: 1.0
  - (g) Restart Action: None
  - (h) Check “Require admin authentication”
  - (i) PackageLocation: Self-Contained

The items under the Scripts tab should be edited to read

- (a) Scripts directory: scripts\_gui (The item on the right should have selected “Relative To Project”)
- (b) Preinstall: Leave Blank

- (c) Postinstall: scripts\_gui/postinstall (The item on the right should have selected “Relative To Project”)

Click the entry Ghostscript-9.07 in the Contents section on the left. The right side will change to a view with two tabs.

- (1) Select the Configuration tab. Edit so
  - (a) Choice Name: Ghostscript-9.07
  - (b) Identifier: choice3
  - (c) Initial State: Selected and Enabled
  - (d) Destination: /
  - (e) Tooltip: Leave Blank
  - (f) Description: Leave Blank
- (2) The Requirements tab entries for this contents item can be left blank
- (3) Open the Ghostscript-9.07 entry in the bottom left column. This item should show a “local” directory, obtained by dragging ../Ghostscript-9.07/root/usr/local to the left column. The right side will change to a view with four tabs. It is not necessary to edit the items under the Contents or Components tabs. The items under the Configuration tab should be edited as follows:
  - (a) Install: ../Ghostscript-9.07/root/usr/local (The item on the right should have selected “Relative To Project”)
  - (b) Destination: /usr/local (The item on the right should have selected “Relative To Project”)
  - (c) Do not check “Allow custom location”
  - (d) Patch: No patch root selected
  - (e) Package Identifier: org.tug.mactex.ghostscript9.07
  - (f) Package Version: 1.0
  - (g) Restart Action: None
  - (h) Check “Require admin authentication”
  - (i) PackageLocation: Self-Contained

The items under the Scripts tab should be edited to read

- (a) Scripts directory: scripts\_ghostscript (The item on the right should have selected “Relative To Project”)
- (b) Preinstall: Leave Blank
- (c) Postinstall: scripts\_ghostscript/postinstall (The item on the right should have selected “Relative To Project”)

Click the entry Convert-IM-6.8.3 in the Contents section on the left. The right side will change to a view with two tabs.

- (1) Select the Configuration tab. Edit so
  - (a) Choice Name: Convert-IM-6.8.3
  - (b) Identifier: choice4
  - (c) Initial State: Selected and Enabled
  - (d) Destination: /
  - (e) Tooltip: Leave Blank
  - (f) Description: Leave Blank
- (2) The Requirements tab entries for this contents item can be left blank
- (3) Open the Convert-IM-6.8.3 entry in the bottom left column. This item should show an “local” directory, obtained by dragging ../Convert-IM/rot/usr/local to the left column. The right side will change to a view with four tabs. It is not necessary to edit the items under the Contents or Components tabs. The items under the Configuration tab should be edited as follows:
  - (a) Install: ../Convert-IM/root/usr/local (The item on the right should have selected “Relative To Project”)
  - (b) Destination: /usr/local (The item on the right should have selected “Relative To Project”)
  - (c) Do not check “Allow custom location”
  - (d) Patch: No patch root selected
  - (e) Package Identifier: org.tug.mactex.imagemagick-convert-6.8.3-3
  - (f) Package Version: 1.0
  - (g) Restart Action: None
  - (h) Check “Require admin authentication”
  - (i) PackageLocation: Self-Contained

The items under the Scripts tab should be edited to read

- (a) Scripts directory: scripts\_convert (The item on the right should have selected “Relative To Project”)
- (b) Preinstall: Leave Blank
- (c) Postinstall: scripts\_convert/postinstall (The item on the right should have selected “Relative To Project”)

## 5. BUILDING

After verifying all these items, build the install package by clicking the “Build” icon. When asked to select a name, choose “MacTeX Install Part 2-Temp.pkg”.

## 6. SIGNING

After the package has been made, sign it by executing the following line in Terminal:

```
sh signPackage.sh
```

This script simply calls

```
productsign --sign "Developer ID Installer: Richard Koch" old-name new-name
```

where “old-name” is MacTeX Install Part 2-Temp.pkg and “new-name” is MacTeX Install Part 2.pkg.