

# TUG-MACTEX-2013

RICHARD KOCH

## 1. MACTEX

This is the portion of the TUG documentation which deals with making the MacTeX-2013 package.

**Warning:** It is important that the folders in which packages are built live on the hard disk rather than an external disk. Building constructs folders named “root” which are copies of material to be installed. This root folder and its contents are often owned by root. But material on an external drive is owned by the user instead.

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

A clean package file will contain

- Files “buildPackage.sh” and “signPackage.sh”
- Files “background.jpg”, “License.rtf”, “ReadMe.rtf”, and “Welcome.rtf”
- scripts\_convert folder, containing files “postinstall”, “setloginpath”, and “settexpath”
- scripts\_ghostscript folder, containing files “postinstall” and “setloginpath”
- scripts\_gui folder, containing file “postinstall”
- scripts\_telive folder, containing files “Description.rtf”, “postinstall”, “setloginpath”, “setmanpath”, “texdist”, “TeXDist-description.rtf”, “TeXDistVersion”, “TeXManPath”, and “TeXPath” and PrefPane folder containing the file “Info.plist” and the “TeX Distribution” preference pane
- The MacTeXMaker project file for PackageMaker
- “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.

## 2. BUILDING TEXLIVE-2013 WITH PACKAGEMAKER

Edit MacTeXMaker, 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-2013
  - (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 TeXLive-2013 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: TeXLive-2013
  - (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 TeXLive-2013 entry in the bottom left column. This item should show an “texlive” directory, obtained by dragging ../TeXLive-2013/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: ../TeXLive-2013/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.texlive2013
  - (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\_texlive (The item on the right should have selected “Relative To Project”)
- (b) Preinstall: Leave Blank
- (c) Postinstall: scripts\_texlive/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/root/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-9.05 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-9.05
  - (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-9.05 entry in the bottom left column. This item should show a “local” directory, obtained by dragging ../Ghostscript-9.05/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-9.05/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.ghostscript9.05
  - (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-6.7.6 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-6.7.6
  - (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-6.7.6 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-6.7.6-9
  - (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”)

Click the entry Latin-Modern-Fonts 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: Latin-Modern-Fonts
  - (b) Identifier: choice5
  - (c) Initial State: 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 Latin-Modern-Fonts entry in the bottom left column. This item should show a “Fonts” directory, obtained by dragging ../Latin-Modern-Fonts/root/Library/Fonts 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: ../Latin-Modern-Fonts/root/Library/Fonts (The item on the right should have selected “Relative To Project”)
  - (b) Destination: /Library/Fonts (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.latin-modern
  - (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 left blank

Click the entry TeX-Gyre-Fonts 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: TeX-Gyre-Fonts
  - (b) Identifier: choice6
  - (c) Initial State: 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 TeX-Gyre-Fonts entry in the bottom left column. This item should show a “Fonts” directory, obtained by dragging ../TeX-Gyre-Fonts/root/Library/Fonts 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: ../TeX-Gyre-Fonts/root/Library/Fonts (The item on the right should have selected “Relative To Project”)
  - (b) Destination: /Library/Fonts (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.tex-gyre
  - (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 left blank

### 3. BUILDING

After verifying all these items, build the install package by clicking the “Build” icon. When asked to select a name, choose “MacTeX-2013-Temp”.

Packagemaker will report a large number of warnings in the Ghostscript package, but all are incorrect permissions for links. I believe these permissions are actually correct; they agree with link permissions set by the TeX Live installer.

Packagemaker will also report warnings in the GUI-Applications package. Almost all of these say “Group ID 80 does not match 20 of root volume.” Experimentation involving changing the groups of these applications changes this to “Group ID 20 does not match 80 of root volume.” I do not believe this warning is important, but it would be nice to know more about it.

### 4. 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-2013-Temp.pkg and “new-name” is MacTeX-2013.pkg.