

How to use these scripts

All these scripts are written with reference to the help doc and other one's idea or take from open source code by mentor.

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Install these scripts

- Unzip these file to local disk, like D:\EETB_2412\
 - Add EETB file pathname to WDIR environment variable, so Xpedition can find the scripts.ini file and run it when started. Make sure the EETB folder is not the first path in the WDIR definition as the first path is also used for temporary space by various Xpedition tools and is stores the users default Xpedition environment.
- For VX you have to add the EETB path to the release specific WDIR variables as below.

For VX.2.10 it would be:

WDIR_EEVX_2_10 = C:\WDIR\EEVX.2.10;D:\EETB_2412

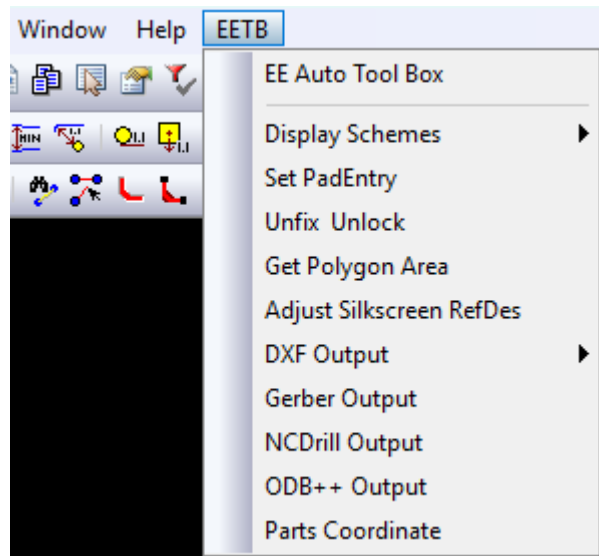
For XPENTP2409 it would be:

WDIR_XPENTP2409 = C:\WDIR\XPENTP2409;D:\EETB_2412

- Define a EETB environment variable as below, the value is the pathname of EETB directory you just unzipped, so these scripts can be invoked correctly.
EETB_2412 = D:\EETB_2412\

Using scripts in Mentor Xpedition Layout through menu bar

A EETB menu will appear in the last position of menu bar when you open a project. You can run scripts through clicking menu button under EETB menu.



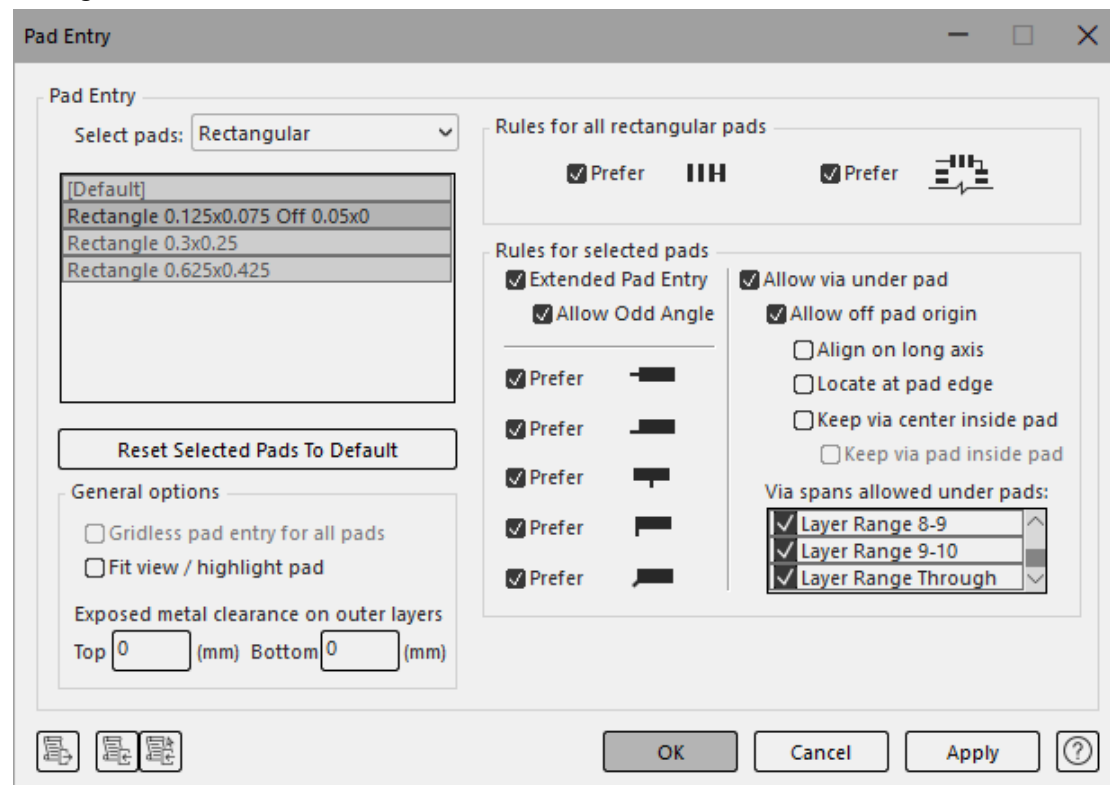
You can invoke scripts or commands by a shortcut key defined in KeyBindings2409.vbs too.

Illustration of scripts

Constraint

SetPadEntry.vbs

This script will set rules of pad entry. It's the same to behaviors we do in "Pad Entry" Dialog in Editor Control. Rules will be check as below.



Display

ColorGndPwrNets.vbs

This script will color GND/PWR nets. All nets that match the reg expression as below will be colored.

GND = "*GND*"

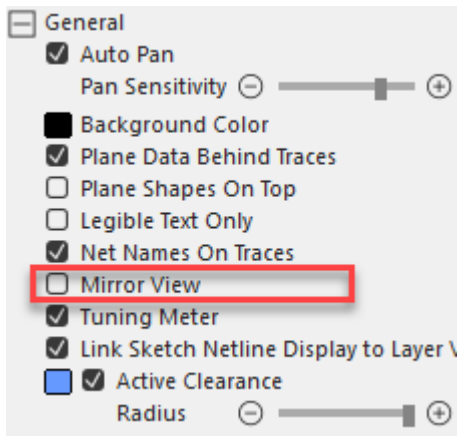
PWR = "*VREG*", "*VDD*", "*VCC*", "*VBUS*", "*VSIM*", "*VPH*", "*PWR*", "*VBAT*"

ColorNetClasses.vbs

This script will color nets class which named like Z*[0-9]* and so on.

DisplayNormalView.vbs

This script will uncheck the "Mirror View" option in display control window.



DisplaySchemeAssemblyTop.vbs

DisplaySchemeAssemblyBottom.vbs

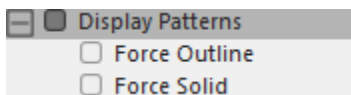
This scripts will show a assembly view, which contains board outlines, cutout and components information which contain silkscreen, RefDes, soldermask pad, solderpaste pad and so on. Of course it will hide any other layers, trace, via ,plane .

DisplaySchemeRoute.vbs

This script will show a route view, means that it will check the trace, via, plane ... options and color them properly in the display control window, give us a clear view when we are routing.

ToggleDisplayPatterns.vbs

This script will uncheck "Display Patterns" option in display control window.



ToggleDisplayPlanes.vbs

This script will toggle the plane display options between enable and disable of Fill/Hatch, and display of planes.



ToggleMirrorView.vbs

This script will toggle the "Mirror View" option.

Manufacturing

AdjustRefDes.vbs

This script will move [Silkscreen Items] RefDes] to cell center, resize them and rotate them to a orientation consistent with [Place] Part Ref Des].

ExcelCompList.vbs

This script creates excel and loads it with component information, such as RefDes, Part Name, Location and so on.

ExcelCompListSeperate.vbs

This script creates excel and loads it with component information into different sheet according to their placed layer.

RunDXFExportTop.vbs & RunDXFExportBottom.vbs

These two script will create .dxf file that contains top or bottom components assembly view. And save them to .\PCB\Output\DXFExport directory.

RunGerber.vbs

This script generates gerber file to .\PCB\Output\Gerber\ directory. And also write a configuration file named UserGerberPlotSetup.gpf into .\PCB\Config\ directory so we can reuse this config file through "Gerber Output" dialog directory to generate gerber file.

本地磁盘 (D:) > PCB_RD > Mentor > > PCB > Output > Gerber

名称	修改日期	类型	大小
BoardOutline.gdo	2024/12/22 13:49	GDO 文件	2 KB
DrillDrawingThrough.gdo	2024/12/22 13:49	GDO 文件	2 KB
EtchLayer1.gdo	2024/12/22 13:49	GDO 文件	75 KB
EtchLayer2.gdo	2024/12/22 13:49	GDO 文件	3 KB
EtchLayer3.gdo	2024/12/22 13:49	GDO 文件	3 KB
EtchLayer4.gdo	2024/12/22 13:49	GDO 文件	3 KB
EtchLayer5.gdo	2024/12/22 13:49	GDO 文件	3 KB
EtchLayer6.gdo	2024/12/22 13:49	GDO 文件	3 KB
EtchLayer7.gdo	2024/12/22 13:49	GDO 文件	3 KB
EtchLayer8.gdo	2024/12/22 13:49	GDO 文件	4 KB
EtchLayer9.gdo	2024/12/22 13:49	GDO 文件	4 KB
EtchLayer10.gdo	2024/12/22 13:49	GDO 文件	89 KB
SoldermaskBottom.gdo	2024/12/22 13:49	GDO 文件	731 KB
SoldermaskTop.gdo	2024/12/22 13:49	GDO 文件	567 KB
SolderPasteBottom.gdo	2024/12/22 13:49	GDO 文件	722 KB
SolderPasteTop.gdo	2024/12/22 13:49	GDO 文件	559 KB

RunNCDrill.vbs

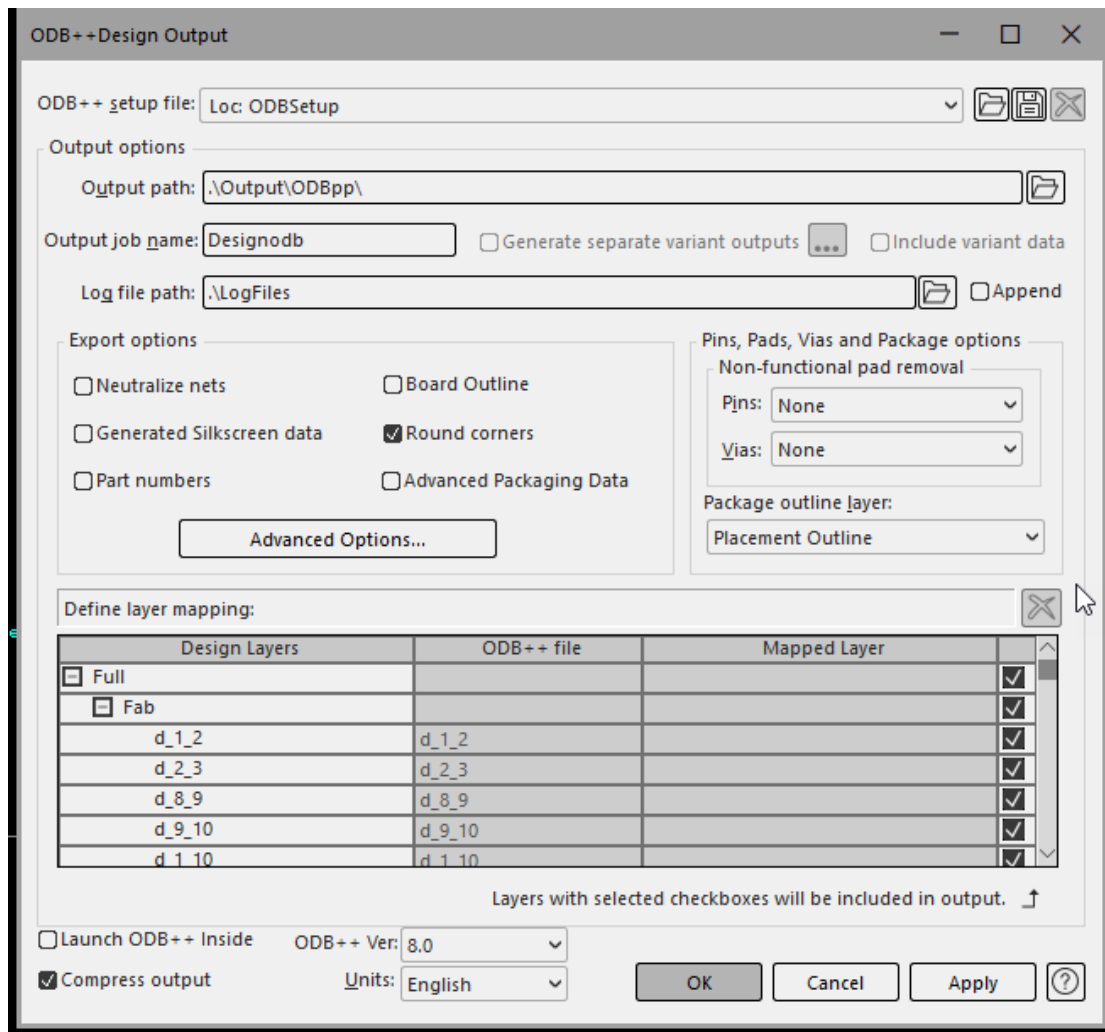
This script generates nc drill file to .\PCB\Output\NCDrill directory. And also overwrite the .\Config\DrillPreferences.hkp file and write a UserDrill.dsf configuration file so we can reuse this scheme through “NCDrill Output” dialog.

本地磁盘 (D:) > PCB_RD > Mentor > > PCB > Output > NCDrill

名称	修改日期	类型	大小
ThruHoleNonPlated.ncd	2024/12/22 14:00	NCD 文件	1 KB
ThruHolePlated.ncd	2024/12/22 14:00	NCD 文件	1 KB

RunODBpp.vbs

This script creates a ODB++ file into .\PCB\Output\ODBpp directory. It's the same to generate ODB++ file through “ODB++ Design Output” dialog. Options are checked as below.



Misc

EETBMenu.vbs

This script create a menu in menu bar so we can invoke scripts by clicking simply.

KeyBindings.vbs

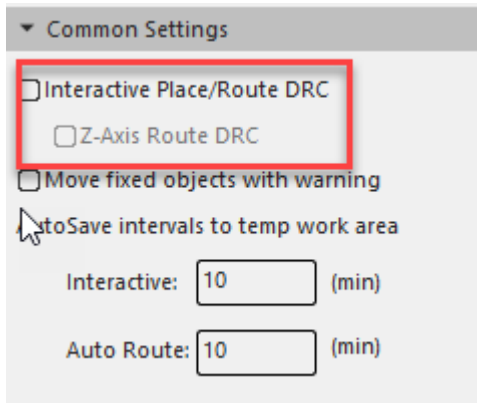
This script creates shortcut key for running commands and scripts.

KeyBindings2409.vbs

This script also creates shortcut key for running commands and scripts. But it's also compatible with new released UX, like version XPENTP2409.

ToggleDRC.vbs

This script toggles the "Interactive Place/Route DRC" option



ToggleMode.vbs

This script toggles design mode like Place mode, Route mode and Draw Mode



Route

AssignNetName.vbs

This script assign net name to a unconnected trace or via

ChangeConductiveShapeToPlane.vbs

ChangePlaneToConductiveShape.vbs

These two scripts toggle the property of shape between conductive and dynamic plane.

DeleteAllStackMicroVia.vbs

This script delete all vias on that position where a via is selected. It's useful to delete stack vias which used in HDI design mostly.

DeleteStackMicroViaAbove.vbs

This script delete all vias above active layer on that position where a via is selected. It's useful to delete stack vias.

DeleteStackMicroViaBelow.vbs

This script delete all vias under active layer on that position where a via is selected. It's useful to delete stack vias.

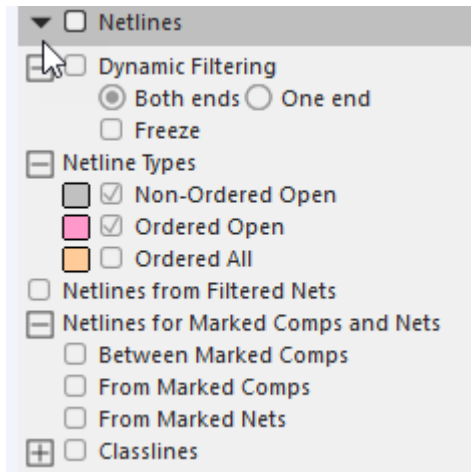
GetPolyArea.vbs

This script calculates the area of components or polygons selected. The area of a

component is equal to max area of placement outlines in cell.

ToggleDisplayNetlines.vbs

This script toggle the “Netlines” option in display control window.



UnfixUnlockObject.vbs

This script unfix or unlock objects in design database. It's useful if these property can't be modified by menu button or popup commands.

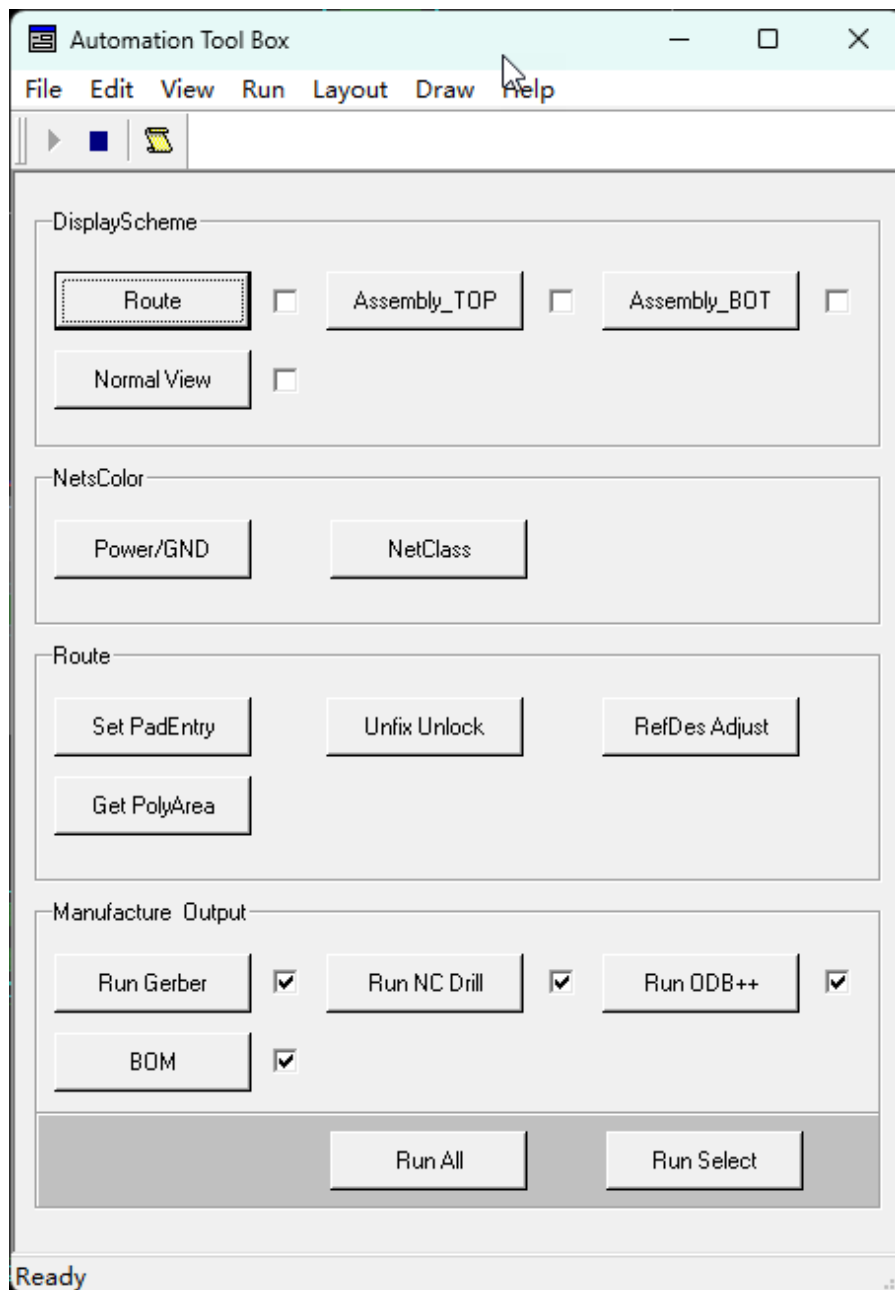
Scripts.ini

Mentor Xpedition invoke this file when started. Scripts described here are runned immediately. We run KeyBindings2409.vbs and EETBMenu.vbs here so we can use all EETB scripts correctly.

```
[Expedition PCB]
Script#0=pcbееvm.vbs
Script#1=ShadowMovePart.vbs
Script#2=%EETB%\Misc\KeyBindings2409.vbs
Script#2=%EETB%\Misc\EETBMenu.vbs
```

XpeditionAutoToolBox.efm

This file create a dialog for invoking our scripts.



When you check the DisplayScheme button, Next time you run it a .dcs config file will be saved to our system location.

You can check manufacture output button then run one or more scripts one a time.