

Library

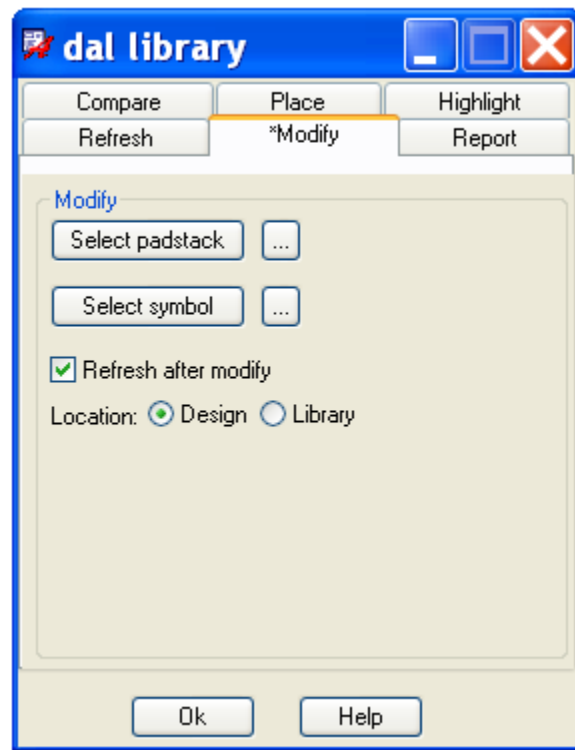
Comprehensive library change and management tool that greatly enhances PCB library development and maintenance.

Features:

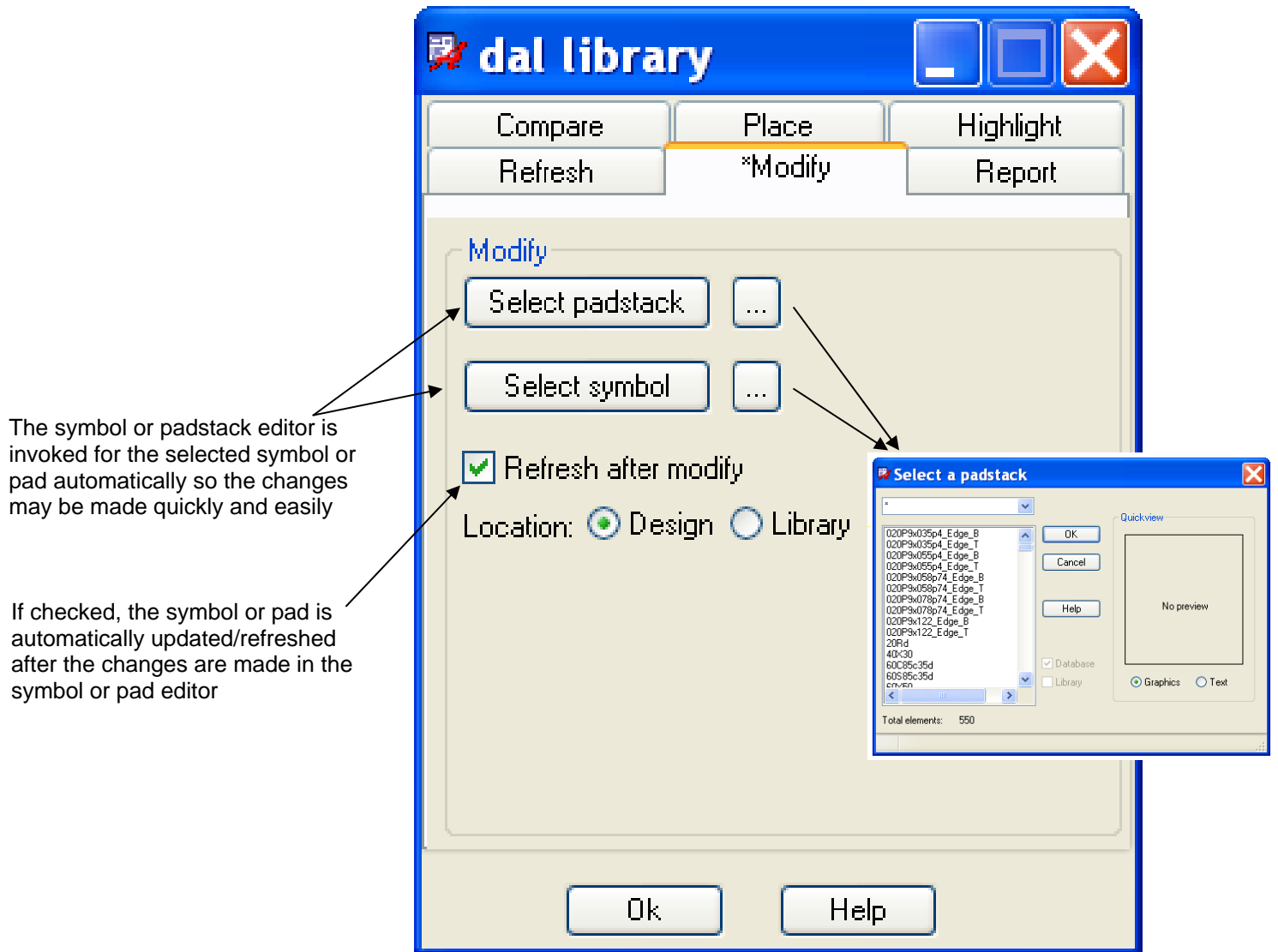
- ❑ Quick symbol and pad modifications and refresh on the fly in the PCB editor database.
- ❑ Place and organize ALL symbols and pads in the library in order to see, fix or find symbols quickly.
- ❑ Query and/or highlight symbols and pads by powerful filters.
- ❑ Verify date stamps of board symbols vs. the library copy.
- ❑ Automatically verifies all graphics and property mismatches between the board copy and the library copy.
- ❑ Extensive library checks and reports. For example, unused pads or missing pads in the library.

Video demonstration available at:

www.dalTools.com



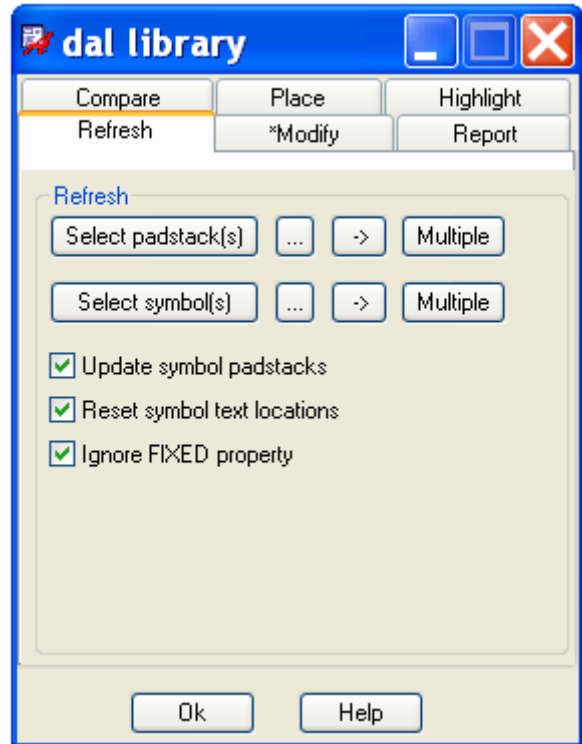
Modify Tab



Fast and easy symbol or pad modifications in the .brd database simply by click on the symbol or pad

Refresh Tab

Quickly select padstacks or symbols that need refreshing or use the “...” browse by name function. Multiple symbols or padstacks may be selected with the Multiple button. This is faster and easier than using the standard refresh symbol command.



[Symbol and padstack refresh by selection or name](#)

Highlight Tab

The image displays the 'dal library' software interface, specifically the 'Highlight' tab. The main window has a blue title bar and a menu bar with 'Refresh', '*Modify', 'Report', 'Compare', 'Place', and 'Highlight'. The 'Highlight' tab is active, showing a 'Highlight' section with the following options:

- Symtype: ... Like
- Padstack: ... Like
- Min pins: [] Max pins: [] = pins: 2 HL
- Min drl: [] Max drl: [] = drl: [] HL
- Min hgt: [] Max hgt: 100 = hgt: [] HL
- ? HEIGHT_MIN HEIGHT_MAX
- Buttons: Pad type ->, Symbol type ->, Duplicates ->, Library path ->
- Color selection: HI color, DHL all
- Buttons: Ok, Help

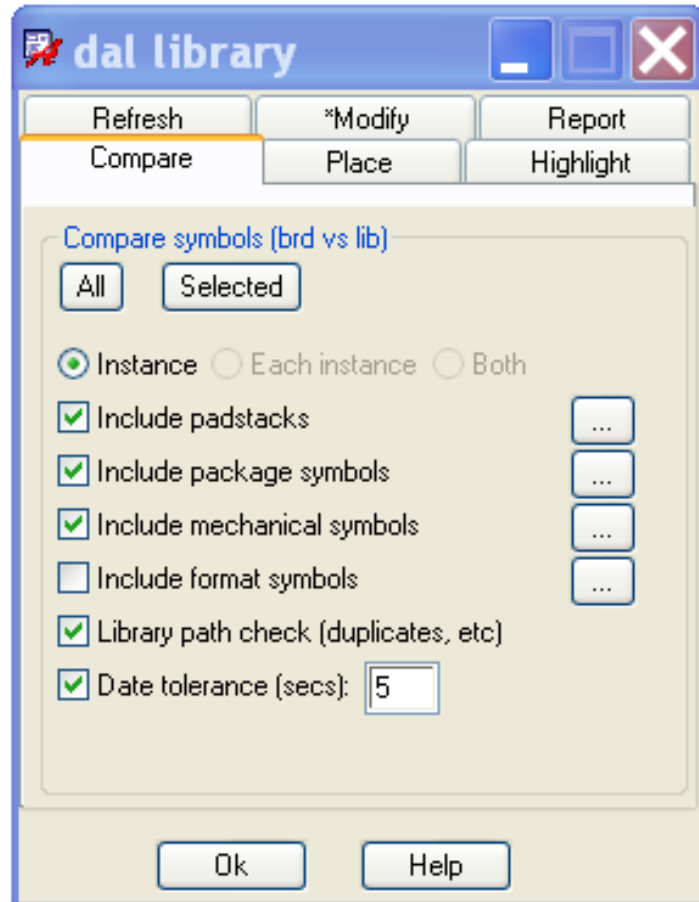
Callout boxes provide additional information:

- 'Package Height' diagram showing 'max' and 'min' dimensions.
- 'Duplicate symbol names' and 'Duplicate padstack (via) names' callout pointing to the 'Symtype' and 'Padstack' options.
- 'All non-plated holes' and 'All smt' callout pointing to the 'Pad type ->' button.
- 'Package Mechanical Format' callout pointing to the 'Symbol type ->' button.
- 'Assign Color' dialog showing a color palette.
- 'Like library path select' and 'Like library path browse ...' callout pointing to the 'Library path ->' button.

Highlight symbols or padstacks by name, selection, number of pins, drill size, etc.

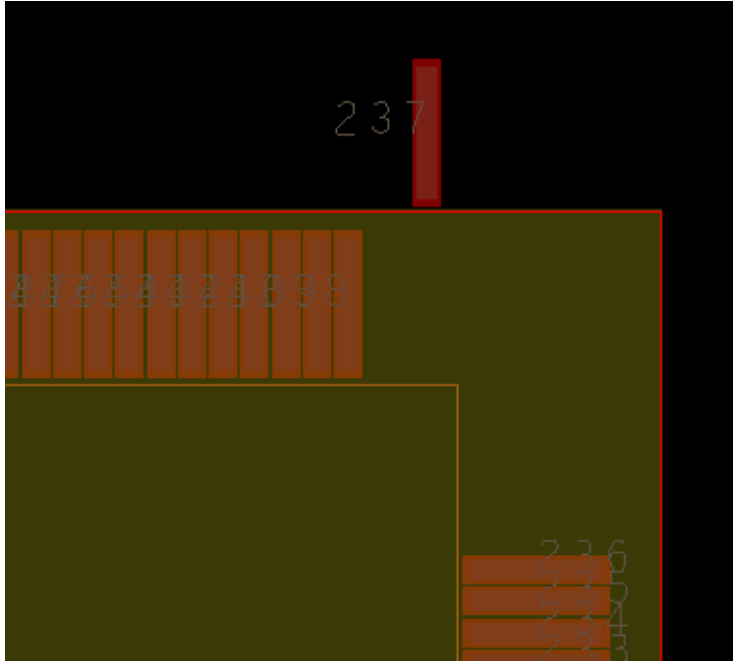
Compare Tab

*See the next page for examples.



Quickly and easily compares the symbols in the .brd database to the .dra files in the psmath. Displays a report of any part that has any differences in graphics or properties. In other words tells you which parts have changed in the library since the parts were imported into the design. Update only those symbols or pads that have changed.

Compare (cont)



The pin was moved in the .dra file.

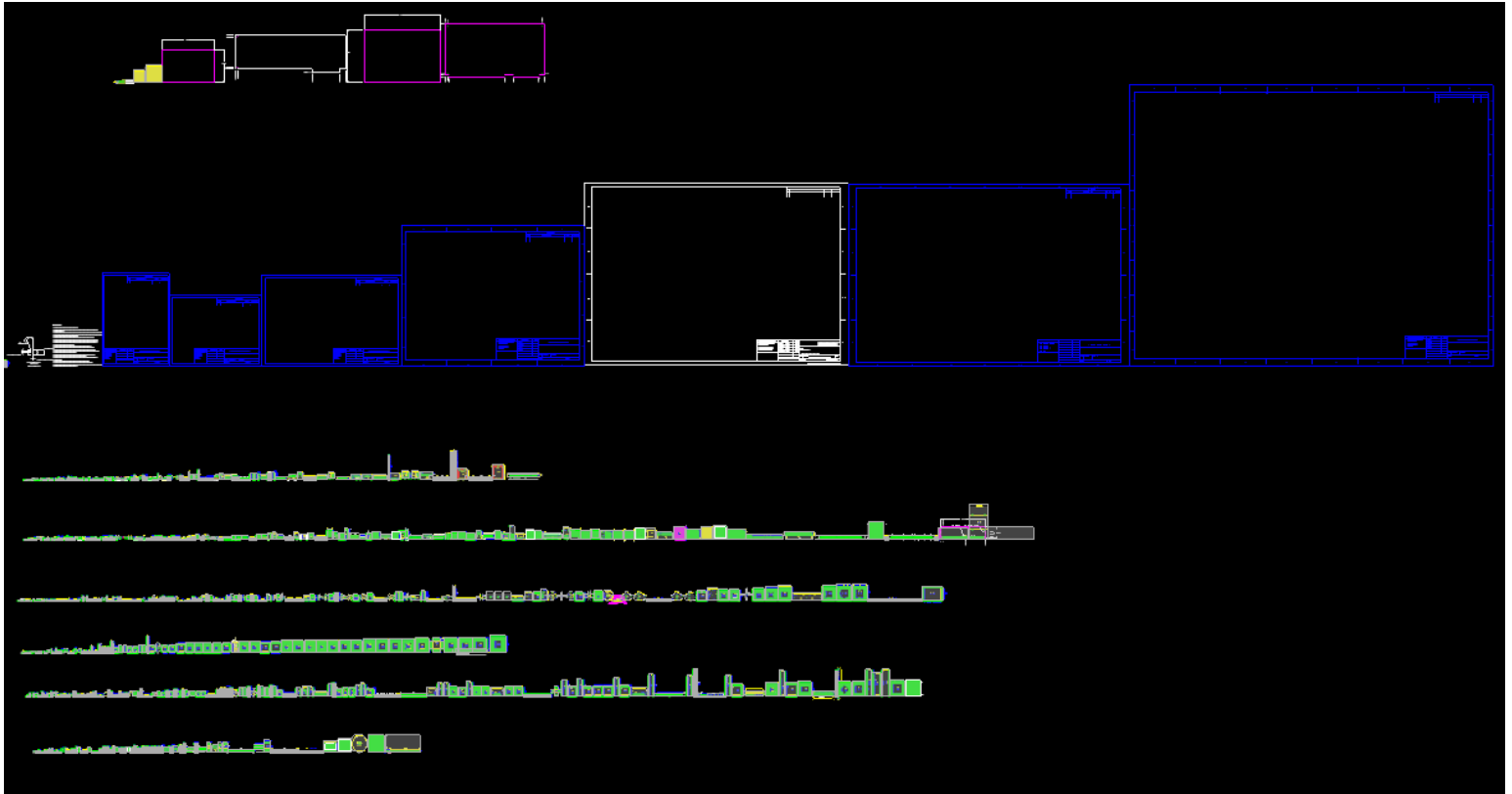
```
Library check
File Close Help
-----
dal library
Drawing      : allLibrary.brd
Software Version : 16.3S041
Date/Time    : Thu Jan 05 14:53:05 2012
-----

Total symbols: 1
1. Out of sync CLCC344 - Type: PACKAGE
   1. Extra: PIN (1070.0 790.0).SMD85REC13.Pin number 237,Rotation 270.0
   2. Missing: PIN (1100.0 900.0).SMD85REC13.Pin number 237,Rotation 270.0
   -- Warning - Internal time (.dra in .brd): Jan 03 23:04:42 2012 File time (.dra) : Jan 05 14:52:53 2012. 2 day(s)
   -- Warning - Symbol was found in more than one directory:
      L:\demoBoards\library\symbols\CLCC344.dra
      C:\Cadence\SPB_16.3\share\pcb\pcb_lib\symbols\clcc344.dra

Library path (psmpath) report:
1. OK (.) I:\demoBoards\library
2. OK (symbols) I:\demoBoards\library\symbols
3. OK (T:\library\convey_lib\allegro) T:\library\convey_lib\allegro
4. OK (.) I:\demoBoards\library
5. OK (symbols) I:\demoBoards\library\symbols
6. OK (...) I:\demoBoards
7. -- Warning - Missing path: (./symbols) I:\demoBoards\symbols
8. OK (C:\Cadence\SPB_16.3\share\local\pcb\symbols) C:\Cadence\SPB_16.3\share\local\pcb\symbols
9. OK (C:\Cadence\SPB_16.3\share\pcb\pcb_lib\symbols) C:\Cadence\SPB_16.3\share\pcb\pcb_lib\symbols
10. -- Warning - Missing path: (C:\Cadence\SPB_16.3\share\pcb\allegrolib\symbols) C:\Cadence\SPB_16.3\share\pcb\alleg:
   -- Warning - 2 duplicate path(s) found in (psmpath).

EOF
```

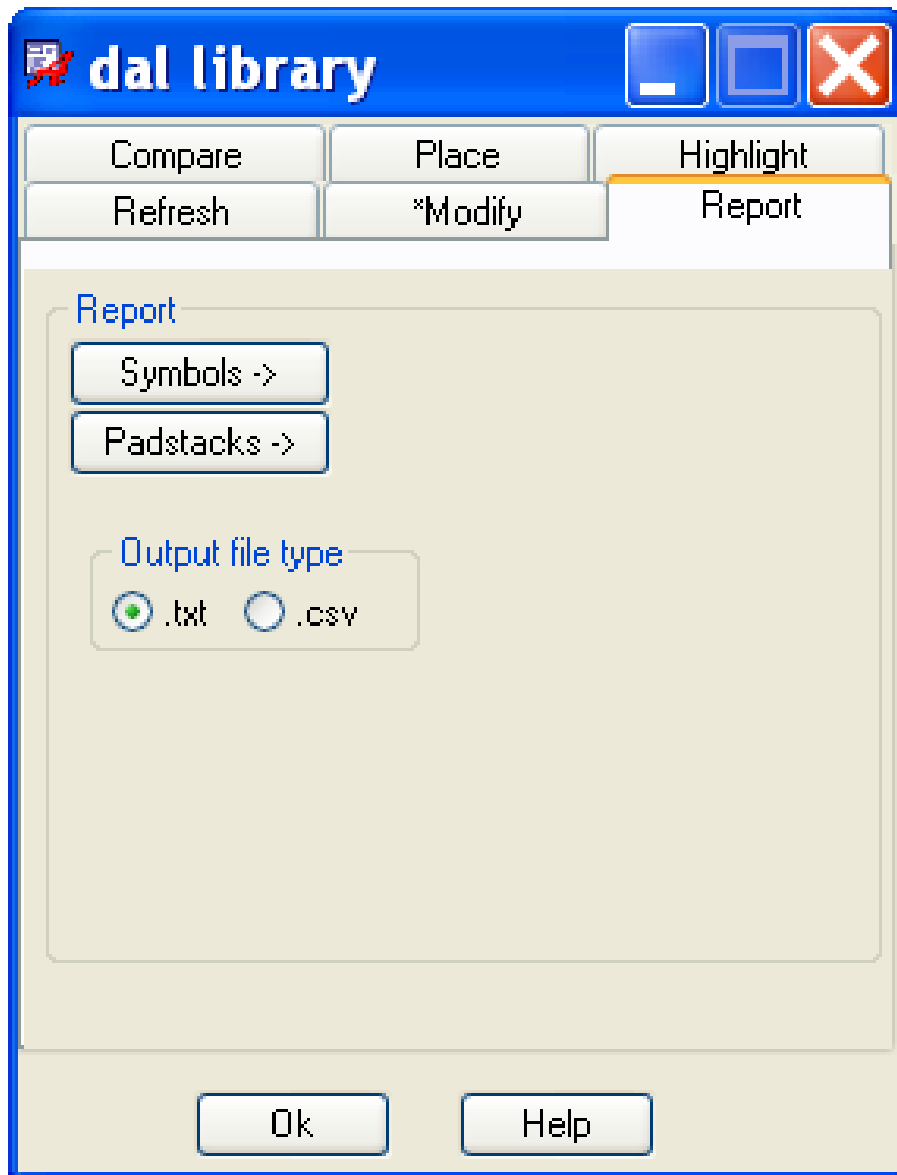
Place Tab



All symbols and padstacks can be quickly placed, verified and viewed in a single master .brd database. This is also very helpful when looking for a particular part type to clone for a new symbol. Symbol and padstack fixes can be initiated here also speeding up changes and making for a better library. One more feature is the replace button that allows quick organization of parts by type, size or number of pins.

*We highly recommended viewing the online demonstration of this powerful application at www.daltools.com

Report Tab



Reports detaild library symbol information.
See the next page for examples.

Report (cont)

Library check									
File Close Help									
#	Name	# Pins	XY	Type	Library path	stored in internal .brd symbol property			
1	031_SCORE_DETAIL	0	(-1155.0 71148.0)	FORMAT	L:\demoBoards\library\symbols\031_score_detail	osm	Jan 03 23:14:50	2012	
2	0603RF_WV_12D	2	(69424.0 41238.0)	PACKAGE	L:\demoBoards\library\symbols\0603rf_wv_12d	psm	Jan 03 23:07:53	2012	
3	0805RF_WV_12D	2	(69849.0 41263.0)	PACKAGE	L:\demoBoards\library\symbols\0805rf_wv_12d	psm	Jan 03 23:07:56	2012	
4	1206RF_WV_12D	2	(69214.0 41248.0)	PACKAGE	L:\demoBoards\library\symbols\1206rf_wv_12d	psm	Jan 03 23:07:53	2012	
5	1210RF_WV_12D	2	(69629.0 41278.0)	PACKAGE	L:\demoBoards\library\symbols\1210rf_wv_12d	psm	Jan 03 23:07:49	2012	
6	2SEG_PWREDGE_RECPT	20	(38203.0 48862.0)	PACKAGE	L:\demoBoards\library\symbols\2seg_pwredge_recpt	psm	Jan 03 23:09:15	2012	
7	302-000007-011	0	(73649.0 49298.0)	PACKAGE	L:\demoBoards\library\symbols\302-000007-011	psm	Jan 03 23:11:22	2012	
8	3118-2_SWAGE_PIN	1	(-1839.0 48657.0)	PACKAGE	L:\demoBoards\library\symbols\3118-2_swage_pin	psm	Jan 03 23:11:32	2012	
9	320-000017-002	0	(11776.0 104451.0)	MECHANICAL	L:\demoBoards\library\symbols\320-000017-002	bsm	Jan 03 23:14:33	2012	
10	320-000017-008	0	(13450.0 104747.0)	MECHANICAL	L:\demoBoards\library\symbols\320-000017-008	bsm	Jan 03 23:14:34	2012	
11	320-000051-001	1	(684.0 48750.0)	PACKAGE	L:\demoBoards\library\symbols\320-000051-001	psm	Jan 03 23:11:21	2012	
12	ACS713_S08	8	(4426.0 48762.0)	PACKAGE	L:\demoBoards\library\symbols\acs713_so8	psm	Jan 03 23:11:24	2012	
13	ACS713_S08_BAK	8	(4752.0 48762.0)	PACKAGE	L:\demoBoards\library\symbols\acs713_so8_bak	psm	Jan 03 23:09:33	2012	
14	ACS754_PFF	37	(43481.0 48681.0)	PACKAGE	L:\demoBoards\library\symbols\acs754_pff	psm	Jan 03 23:11:29	2012	
15	AMPHENOL_RA_SATA	11	(26894.0 48793.0)	PACKAGE	L:\demoBoards\library\symbols\amphenol_ra_sata	psm	Jan 03 23:04:41	2012	
16	ANC-DO58	2	(289.0 48695.0)	PACKAGE	L:\demoBoards\library\symbols\anc-do58	psm	Jan 03 23:08:13	2012	

Library check									
File Close Help									
Library path (psmpath) report:									
1.	OK	(.)	L:\demoBoards\library						
2.	OK	(symbols)	L:\demoBoards\library\symbols						
3.	OK	(T:/library/convey_lib/allegro)	T:\library\convey_lib\allegro						
4.	OK	(.)	L:\demoBoards\library						
5.	OK	(symbols)	L:\demoBoards\library\symbols						
6.	OK	(..)	L:\demoBoards						
7.	-- Warning - Missing path:	(../symbols)	L:\demoBoards\symbols						
8.	OK	(C:/Cadence/SPB_16.3/share/local/pcb/symbols)	C:\Cadence\SPB_16.3\share\local\pcb\symbols						
9.	OK	(C:/Cadence/SPB_16.3/share/pcb/pcb_lib/symbols)	C:\Cadence\SPB_16.3\share\pcb\pcb_lib\symbols						
10.	-- Warning - Missing path:	(C:/Cadence/SPB_16.3/share/pcb/allegrolib/symbols)	C:\Cadence\SPB_16.3\share\pcb\allegrolib\symbols						
-- Warning - 2 duplicate path(s) found in (psmpath).									
1354 Package symbols:									
#	P#	Name	Library path/File date						
1	2	0603RF_WV_12D	L:\demoBoards\library\symbols	Jan 03 23:07:53	2012				
2	2	0805RF_WV_12D	L:\demoBoards\library\symbols	Jan 03 23:07:56	2012				
3	2	1206RF_WV_12D	L:\demoBoards\library\symbols	Jan 03 23:07:53	2012				
4	2	1210RF_WV_12D	L:\demoBoards\library\symbols	Jan 03 23:07:49	2012				
5	2	2SEG_PWREDGE_RECPT	L:\demoBoards\library\symbols	Jan 03 23:09:16	2012				
6	2	302-000007-011	L:\demoBoards\library\symbols	Jan 03 23:11:23	2012				
7	2	3118-2_SWAGE_PIN	L:\demoBoards\library\symbols	Jan 03 23:11:33	2012				
8	2	320-000051-001	L:\demoBoards\library\symbols	Jan 03 23:11:22	2012				
9	2	ACS713_S08	L:\demoBoards\library\symbols	Jan 03 23:11:24	2012				
10	2	ACS713_S08_BAK	L:\demoBoards\library\symbols	Jan 03 23:09:34	2012				
11	2	ACS754_PFF	L:\demoBoards\library\symbols	Jan 03 23:11:30	2012				
12	2	AMPHENOL_RA_SATA	L:\demoBoards\library\symbols	Jan 03 23:04:42	2012				
13	2	ANC-DO58	L:\demoBoards\library\symbols	Jan 03 23:08:14	2012				

Package Height Highlight

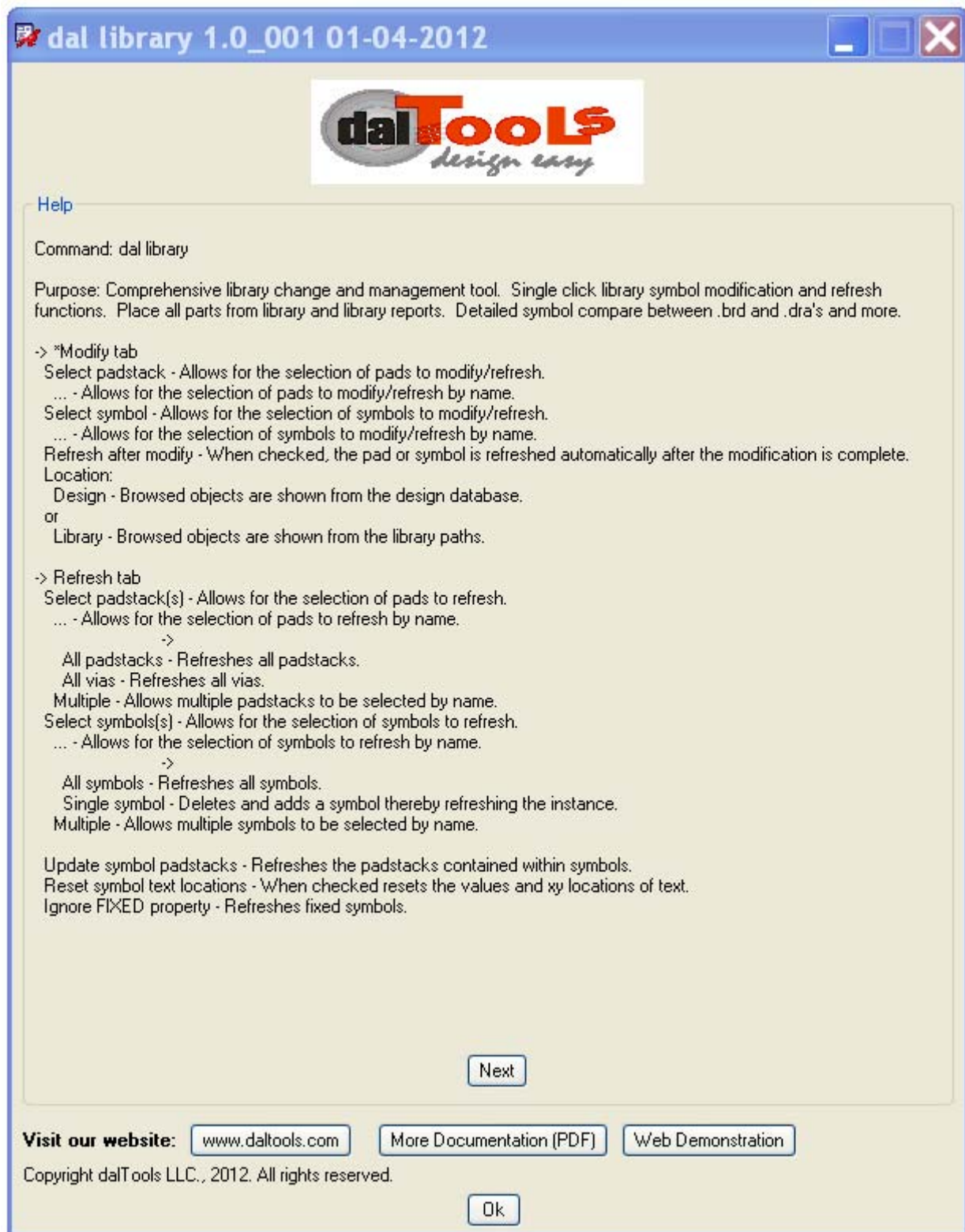
The Min/Max/Equal to package height highlight feature makes it easy to see and find parts that are shorter, in between or taller than a specified value. A sorted report may also be generated.

The screenshot displays a PCB layout with several components highlighted in purple. Two windows are open over the layout:


- dal library**: A dialog box for highlighting components. The "Highlight" section is active, showing "Min hgt:" set to 100. The "HEIGHT_MAX" radio button is selected. The "Rpt" button is visible.
- Library check**: A report window showing the results of the highlight operation. The report lists various components and their package geometry parameters.

```
971 Symbol Bottom height: min "" max 308.0 (2009.21 4180.79) M17 PACKAGE GEOMETRY/PLACE_BOUND_BOTTOM
972 Symbol Bottom height: min "" max 308.0 (2009.21 2080.79) M20 PACKAGE GEOMETRY/PLACE_BOUND_BOTTOM
973 Symbol Bottom height: min "" max 340.0 (8211.0 347.0) P1 PACKAGE GEOMETRY/PLACE_BOUND_BOTTOM
974 Symbol Bottom height: min 140.0 max 984.25 (2395.75 2315.75) HS1 PACKAGE GEOMETRY/PLACE_BOUND_BOT
975 Symbol Bottom height: min 140.0 max 984.25 (2395.75 215.75) HS2 PACKAGE GEOMETRY/PLACE_BOUND_BOTT
976 Shape Top height: min 0.0 max "" (-30.0 12695.0) PACKAGE KEEPOUT/TOP
977 Shape Top height: min 0.0 max "" (-9495.0 12560.0) PACKAGE KEEPOUT/TOP
978 Symbol Top height: min "" max 1.0 (1085.0 890.0) P2 PACKAGE KEEPOUT/TOP
979 Shape Top height: min 470.0 max "" (-170.0 17965.0) PACKAGE KEEPOUT/TOP
980 Shape Bottom height: min 0.0 max "" (19845.0 12380.0) PACKAGE KEEPOUT/BOTTOM
981 Shape Bottom height: min 0.0 max "" (10040.0 12420.0) PACKAGE KEEPOUT/BOTTOM
982 Shape Bottom height: min 1007.87 max "" (9895.0 18210.0) PACKAGE KEEPOUT/BOTTOM
EOF
```

Help



dal library 1.0_001 01-04-2012



Help

Command: dal library

Purpose: Comprehensive library change and management tool. Single click library symbol modification and refresh functions. Place all parts from library and library reports. Detailed symbol compare between .brd and .dra's and more.

-> *Modify tab

- Select padstack - Allows for the selection of pads to modify/refresh.
- ... - Allows for the selection of pads to modify/refresh by name.
- Select symbol - Allows for the selection of symbols to modify/refresh.
- ... - Allows for the selection of symbols to modify/refresh by name.
- Refresh after modify - When checked, the pad or symbol is refreshed automatically after the modification is complete.

Location:

- Design - Browsed objects are shown from the design database.
- or
- Library - Browsed objects are shown from the library paths.

-> Refresh tab

- Select padstack(s) - Allows for the selection of pads to refresh.
- ... - Allows for the selection of pads to refresh by name.
- >
- All padstacks - Refreshes all padstacks.
- All vias - Refreshes all vias.
- Multiple - Allows multiple padstacks to be selected by name.
- Select symbols(s) - Allows for the selection of symbols to refresh.
- ... - Allows for the selection of symbols to refresh by name.
- >
- All symbols - Refreshes all symbols.
- Single symbol - Deletes and adds a symbol thereby refreshing the instance.
- Multiple - Allows multiple symbols to be selected by name.

Update symbol padstacks - Refreshes the padstacks contained within symbols.

Reset symbol text locations - When checked resets the values and xy locations of text.

Ignore FIXED property - Refreshes fixed symbols.

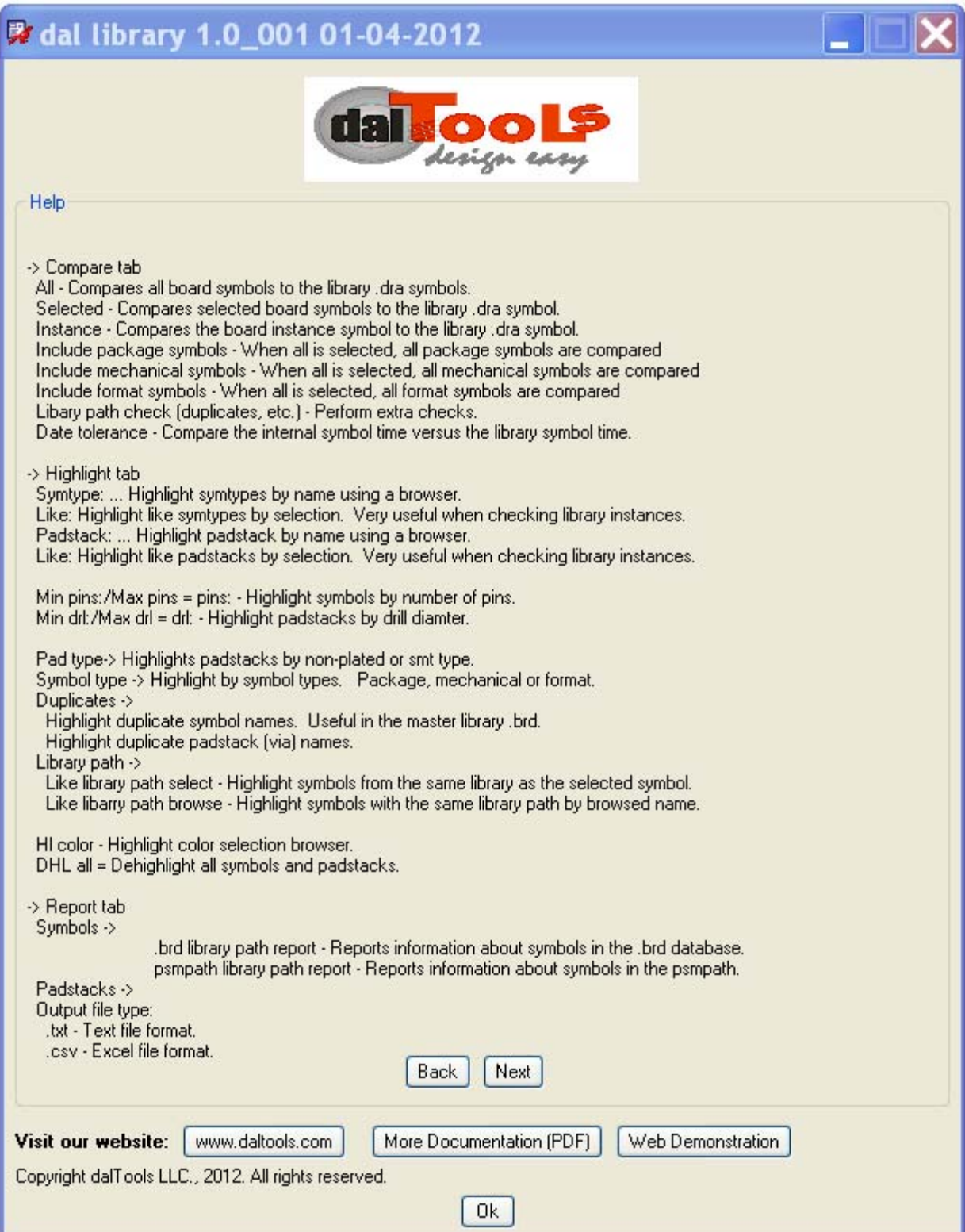
Next

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Ok

Help (cont)



dal library 1.0_001 01-04-2012



Help

-> Compare tab
All - Compares all board symbols to the library .dra symbols.
Selected - Compares selected board symbols to the library .dra symbol.
Instance - Compares the board instance symbol to the library .dra symbol.
Include package symbols - When all is selected, all package symbols are compared
Include mechanical symbols - When all is selected, all mechanical symbols are compared
Include format symbols - When all is selected, all format symbols are compared
Library path check (duplicates, etc.) - Perform extra checks.
Date tolerance - Compare the internal symbol time versus the library symbol time.

-> Highlight tab
Symtype: ... Highlight symtypes by name using a browser.
Like: Highlight like symtypes by selection. Very useful when checking library instances.
Padstack: ... Highlight padstack by name using a browser.
Like: Highlight like padstacks by selection. Very useful when checking library instances.

Min pins:/Max pins = pins: - Highlight symbols by number of pins.
Min drl:/Max drl = drl: - Highlight padstacks by drill diamter.

Pad type-> Highlights padstacks by non-plated or smt type.
Symbol type -> Highlight by symbol types. Package, mechanical or format.

Duplicates ->
Highlight duplicate symbol names. Useful in the master library .brd.
Highlight duplicate padstack (via) names.

Library path ->
Like library path select - Highlight symbols from the same library as the selected symbol.
Like library path browse - Highlight symbols with the same library path by browsed name.

HI color - Highlight color selection browser.
DHL all = Dehighlight all symbols and padstacks.

-> Report tab
Symbols ->
.brd library path report - Reports information about symbols in the .brd database.
psmpath library path report - Reports information about symbols in the psmpath.

Padstacks ->
Output file type:
.txt - Text file format.
.csv - Excel file format.

Back Next

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Ok

Help (cont)

