# Common Operations in Maestro 9.3

### **Viewing Structures**

Rotate xy: Middle button

Rotate z: Ctrl+middle button

Fix rotation in x or y direction: Shift+middle button and move mouse up or down for x and left or right for y.

Translate xy: Right button

Translate z: Ctrl+right button

Fix translation in x or y direction: Shift+right button and move mouse up or down for x and left or right for y.

**Zoom:** Middle+right button or mouse scroll wheel.

**Spot Center:** Right-click an atom to center the view and rotation around it.

**Stereo view:** Ctrl+S to turn stereo view on and off.

Save and restore views: Click the button in the Saved Views Toolbar, or choose View > Save View. To restore a view, click the numbered icons in the View Toolbar (1, 2, 3, etc) or choose View > Manage Views.

# **Working with Projects**

Create a new project: Ctrl+N

**Open an existing project:** Ctrl+O or click the button in the Project Toolbar.

Close a project: Ctrl+W

**Save a project:** Choose **Project** > **Save As.** Subsequent work is saved automatically.

Undo/Redo: Ctrl+Z or use the \(^{\sigma}\) / \(^{\sigma}\) buttons in the Edit Toolbar.

Display shortcut menus: Right-click and hold in an empty portion of the Workspace, on an Atom or Bond, in the Sequence Viewer, or on Project Table rows or column headers.

#### Using the Project Table

**Open the Project Table: Ctrl+T** or click the button in the Project Toolbar.

Include and exclude structures: To include only a single entry (row) from the Project Table in the Workspace, click the box next to that entry's name in the Project Table. Shift-click to include a range of entries in the Workspace; Ctrl-click to add or remove an entry.

Scroll up/down: Up/down arrow keys

Scroll up/down one page: Page Up / Page Down

Jump to top/bottom of the Project Table: Home/End

Jump to previous/next included entry: Ctrl+Page Up/Down

Jump to previous/next selected entry: Shift+Page Up/Down

Include the next or previous selected entry in the Workspace: Right arrow or left arrow, respectively.

Display entry information in the Workspace: Click the button in the Labels Toolbar or press the S key to display single-entry feedback. To change which properties are displayed, right-click on a column header and choose a Workspace Feedback option from the menu that appears.

Fix selected entry in the Workspace: Right-click an entry and select Fix.

**Include only selected entries in Workspace:** Ctrl+N while the mouse pointer is over the Project Table.

Exclude selected entries from Workspace: Ctrl+X while the mouse pointer is over the Project Table. This will not delete any entries from the Project Table.

### **Working with Multiple Structures**

Import single or multiple structures:
Ctrl+I or click the button in the Project Tooblar.

Clear the workspace: Click the button in the Workspace Toolbar. This does not delete any rows (entries) in the Project Table; it only excludes them from the Workspace.

Move one molecule while keeping others fixed: Press Ctrl+G or click the button in the Edit Toolbar then select molecules for local transformation. Press Ctrl+G or click the button again to leave local transformation mode. After selecting atoms for local transformation, holding down the space bar will toggle between global and local mode.

**Tile entries:** Ctrl+L or click the button in the View Toolbar.

### Finding and Selecting Structures

Find structures or entries: Ctrl+F will display the Find toolbar in either the Workspace or Project Table. Use Alt+N and Alt+P to trayerse matches.

Select atoms in the Workspace:  $\operatorname{Click}$ 

the A button in the Edit Toolbar or press the `key to enter selection mode. Drag the mouse pointer over atoms in the Workspace to select them. Click and hold the A button to choose whether Workspace selections capture atoms, residues, molecules, chains, or entries.

# Working With Surfaces and Hypotheses in the Project Table

Open the Manage Surfaces panel for a given entry: Click s in the right-hand side of the Title column.

Open the Manage Hypothesis panel for a given entry: Click H in the right-hand side of the Title column.

# Building and Modifying Structures

**3D Building:** Click **Build** in the Manager toolbar to display the Build Toolbar.

**2D Building:** In the Edit toolbar, click the sutton to open the 2D sketcher.

Add hydrogens: Double-click the +H button in the Edit Toolbar to add missing hydrogens to all structures in the Workspace.

Adjust torsions: Click the button in the Edit Toolbar, and then click on a bond to select it. Click and drag left or right to adjust the torsion.

**Create entry from Workstpace:** Click the button in the Workspace Toolbar.

**Measurements:** Press and hold the button in the Labels Toolbar.

**Structure sculpting:** Click the sculpting button in the Build toolbar, then click and drag on an atom in the Workspace.

# **Using the Style Toolbar**

**Workspace Style:** Click and hold the button to define visual styles. Click the button once to apply the currently defined style to the entire Workspace.

Automatically apply style: Click the button to automatically reapply the workspace style whenever the contents of the workspace change.

**View interactions:** Click the button to display H-bonds and contacts.

**Create surfaces:** Click the button to create ligand or binding-site surfaces. Click and hold the button to show or hide existing surfaces.



# Keyboard and Toolbar Shortcuts in Maestro 9.3

### **Project Operations**

Show/Hide Project Table: Ctrl+T

New project: Ctrl+N Open project: Ctrl+O Close project: Ctrl+W

Import structures: Ctrl+I

Cut: Ctrl+X
Copy: Ctrl+C
Paste: Ctrl+V

Paste by placing: Ctrl+Shift+V

Undo: Ctrl+Z

Open Command Script Editor: Ctrl+E

Create Project Table entry from contents of Workspace: Ctrl+Shift+N

Mark target entry: X

Display single-entry feedback in

Workspace: S

Quit Maestro: Ctrl+Q

Open help page for active panel: F1

Open online help: Ctrl+H

# **Modifying Structures**

Toggle between local and global transformation: Ctrl+G

Delete selected atoms: Del

**Clean up geometry:** Press U to perform a quick minimization with loose convergence criteria.

Minimize structures in the Workspace: Press Ctrl+M to perform a more thorough minimization.

### **Using Atom Sets**

Save selected atoms as Atom Set 1: Press Ctrl+1. Ctrl+0 through Ctrl+9 work similarly.

**Select atoms from Atom Set 1:** Press 1. Keys 0 through 9 work similarly.

### **Workspace Operations**

Full screen Workspace mode: Press Ctrl+=. Press Esc or Ctrl+= to exit.

Apply Workspace style: Ctrl+Y

Tile Workspace: Ctrl+L

Transform all tiles: Ctrl+Shift+L

**Fit to selected atoms:** Press **Z**. If no atoms are selected, all Workspace contents will be fit to screen.

Fit ligand to Workspace: L

Zoom in: K
Zoom out: J

Move clipping planes back: -

Move clipping planes forward: +

Move clipping planes together: F

Move clipping planes apart: G

Toggle enhanced depth view on/off: D

Stereo view: Ctrl+S

Go to previous/next scene: Ctrl+Shift+,

and Ctrl+Shift+.

### Finding and Selecting Atoms

Find substructures or entries: Ctrl+F. Alt+N and Alt+P select next and previous matches.

Activate atom selection tool: `

Select clicked atoms: A

Select clicked bonds, residues, chains, molecules, or entries: B, R, C, M, or E, repsectively.

Select all: Ctrl+A

### **Saving Views and Scenes**

The Saved Views toolbar can be used to save and restore specific vantage points in the Workspace. To save and restore the contents of the Workspace, use the Workspace > Scenes > New and Workspace > Scenes > Manage menu items.

#### **Toolbar Guide**

