

# Beginner's Guide to SolidWorks® 2014 - Level I

Parts, Assemblies, Drawings, PhotoView 360 and Simulation Xpress

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List of commands introduced in each chapter. Note that many commands are used extensively in following chapters after been presented.

<p><b>PART MODELING</b></p> <p><b>Housing:</b></p> <p>New Part          Create Sketch          Confirmation Corner          Sketch Grid          Auto-Rotate view normal to Sketch plane          Sketch Rectangle          Sketch Centerline          Sketch Relations          Smart Dimension          Sketch Status          Extrude Boss/Base          Document Units          View Orientation          Mouse Gestures          Menu Customization          Center Rectangle          Fillet          Magnifying Glass          Extruded Cut          Through All (End condition)          Sketch Fillet          Rename Features          Circle          Instant 3D          Mirror Features          Model Display Styles          Fly-Out FeatureManager          Dimension Tolerance          Hole Wizard          Cosmetic Threads          Sketch Point          Edit Sketch          Rebuild          Circular Pattern          Automatic Relations          Temporary Axes</p>	<p>Sketch Slot          Sketch Numeric Input          Linear Pattern          Edit Material          Mass Properties</p> <p><b>Side Cover</b></p> <p>Revolved Boss/Base          Trim Entities          Extend Entities          Construction Geometry</p> <p><b>Top Cover</b></p> <p>Offset Entities          Mirror Entities (Sketch)          Up to Surface (End condition)          Shell          Measure Tool          Select Other          More Fillet options</p> <p><b>Offset Shaft</b></p> <p>Revolved Cut          Auxiliary Planes          Hide/Show sketch          Convert Entities          Polygon (Sketch)          Flip Side to Cut          Axis (Reference geometry)          Coordinate Systems</p> <p><b>Worm Gear</b></p> <p>Mid Plane (End Condition)          Chamfer          Dimension to Arc          Direction 2 (End Condition)</p> <p><b>Worm Gear Shaft</b></p> <p><i>General Review of previous commands</i></p>	<p><b>SWEEP, LOFT, WRAP</b></p> <p><b>Sweep</b></p> <p>Thin Feature          Ellipse          Auxiliary Plane at point          Sweep          Up to Next (End condition)          Full Round Fillet          Helix          Variable pitch helix          Open Sketch Cut          Guide Curves</p> <p><b>Loft</b></p> <p>Offset Plane          Hide/Show Plane          Loft          Start/End Conditions          Model Section View</p> <p><b>Wrap</b></p> <p>Wrap          Intersection Curve</p> <p><b>DETAIL DRAWING</b></p> <p><b>Housing Drawing</b></p> <p>Part Configurations          Suppress Feature          Parent Child Relation          Unsuppress          Configure Dimensions          Change Configuration          New Drawing          Make Drawing from Part          View Palette (Drawing)          Projected View          Tangent Edge Display          Section View          Detail View          Model Items          (Import dimensions)</p>
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Drawing cleanup  
Center Mark/Centerlines  
Add Sheet to Drawing  
Model View  
Configuration  
Rename Sheet  
Layers

**Side Cover Drawing**

Reference Dimension  
Dimension Parentheses  
Sheet Scale  
View Scale

**Top Cover Drawing**

Display only Cut Surface  
Display Dimension As  
diameter  
Ordinate Dimension  
Add to Ordinate  
Notes  
Custom Document  
Properties  
Parametric Notes  
Link to Property

**Offset Shaft Drawing**

Broken View

**Worm Gear Drawing**

Display Sheet Format  
Insert Model View  
Crop View  
Ellipse  
Angle Dimension  
Tolerance/Precision  
Chamfer Dimension  
Edit Sheet Format / Title  
Block  
Edit Sheet

**Worm Gear Shaft  
Drawing**

Broken-Out Section  
Spline  
Property Tab Builder

**ASSEMBLY MODELING**

New Assembly  
Add New Component  
Change Configuration  
Mates  
Concentric Mate  
Coincident Mate  
Move Component  
Rotate Component  
Change Appearance  
Parallel Mate  
Hide/Show Component  
SmartMates  
Mirror Components  
Width Mate  
Toolbox Fasteners  
Design Library  
Add Fasteners  
Cosmetic Thread Display  
Configurations using  
Design Tables  
Show Feature  
Dimensions  
Rename Dimensions  
Edit Design Table  
Mate Reference  
Design Library  
Assembly Configurations  
Interference Detection  
Change dimensions in  
the assembly  
Collision Detection  
Isolate  
Gear Mate  
Component Transparency  
Display Pane  
Drawing update  
Exploded View creation  
Collapse View  
Animate Exploded view

**Assembly Drawing**

Show Assembly in  
exploded view  
Bill of Materials

Add Custom Properties  
to bill of Materials  
Open Part from  
assembly drawing  
Format Bill of Materials  
Auto Balloons  
Assembly Views  
Selective Assembly  
Section View

**ANIMATION AND  
RENDERING**

**Rendering**

Apply materials  
Edit Scenes  
RealView Graphics  
Edit Lighting  
Save Rendered images  
Best rendering practices

**Animation**

Add Animation  
Exploded animation  
Edit time keys  
Edit View Points  
Save Animation

**SimulationXpress**

Analysis Background  
Split Line  
SimulationXpress  
Model Fixture  
Model Forces  
Meshing  
Run Simulation  
Review results  
Factor of Safety  
Generate reports  
Model changes and  
simulation update  
Model optimization

**eDrawings**

**Appendix**

Document Templates