

# Contents

Content is referenced by Module and Section Number, not by page. This is a “living” document in the sense that additions and improvements are made on a continuous basis in response to our readers’ input and page contents will vary between press runs.

---

## **Module 1 Introduction**

Introduction to the 2D Level 1 Course.  
Previous Skills  
Work Habits  
Units of Measure  
Inclusions

## **Module 2 Startup and Interface Screen**

2.1 Opening a New Design File  
2.2 The Interface Screen  
2.3 Using Settings Boxes and Dialog Boxes  
2.4 Working with MicroStation’s Model system  
2.5 Identify Methods of Saving Design Files.

## **Module 3 Lines, Circles, and View Controls**

3.1 Reopening the Design File  
3.2 Using the Mouse  
3.3 Opening Tool Boxes and Selecting Tools  
3.4 Floating and Docking Tool Boxes  
3.5 Using the View Control Tools  
3.6 Help Options  
3.7 Escape key usage  
3.8 Other Key/Button combinations

## **Module 4 Selecting and Deleting Elements**

4.1 Selecting Single Elements - Element Selection Tool  
4.2 Multi-Element Selection Sets - Element Selection Tool  
4.3 Multi-Element Selection Sets - Power Selector  
4.4 Deleting Elements  
4.5 Undoing and Redoing Actions

## **Module 5      Snaps and Tentative Points**

- 5.1      Setting the Keypoint Snap Mode
- 5.2      Identify Snap Options in the Locks Settings Box
- 5.3      Using AccuSnap to place Tentative Points and Snaps
- 5.4      Element Keypoints Locations and Divisor Setting
- 5.5      Identify All Snap Modes
- 5.6      Manual Tentative Point Placement
- 5.7      Practicing the Snap Override
- 5.8      “Cycling” Through Snap Points
- 5.9      Tentative Points as Coordinates
- 5.10     Use Shift- Tentative Point for Snap Modes
- 5.11     AccuSnap Setting Options

## **Module 6      Design Plane, Working Units, and Inputs**

- 6.1      The Design Plane
- 6.2      Working Units
- 6.3      Entering Precise Dimensions

## **Module 7      AccuDraw**

- 7.1      Activating AccuDraw
- 7.2      AccuDraw’s Rectangular and Polar Compasses
- 7.3      Drawing Plane Coordinates
- 7.4      Keyboard Shortcuts
- 7.5      Circles and AccuDraw
- 7.6      Recalling Previous Values
- 7.7      Constraining Data Points
- 7.8      Relocating the Compass Origin with “O” for “Origin”
- 7.9      Shortcut Snap Modes and Constraints
- 7.10     Unit Roundoff
- 7.11     Using the Popup Calculator
- 7.12     The Complete List of AccuDraw Shortcut Keys

## **Module 8      Absolute Coordinates and Grids**

- 8.1      Opening the Precision Key-In Box
- 8.2      Absolute (XY=) Key-In
- 8.3      Delta and Distance Key-ins
- 8.4      Using the Grid

## **Module 9      Polygons**

- 9.1    The Place Block Tool
- 9.2    Place Shape
- 9.3    Place Orthogonal Shape
- 9.4    Place Regular Polygon

## **Module 10     Arcs and Ellipses**

- 10.1   Arc Properties
- 10.2   The Place Arc Tool
- 10.3   Drawing Arcs - Center Method
- 10.4   Drawing Arcs - Edge Method
- 10.5   Ellipse Tools
- 10.6   Full Ellipse
- 10.7   Placing Half- and Quarter-Ellipses - Arcs Tool Box
- 10.8   Isometric Ellipses
- 10.9   Arc Editing Tools

## **Module 11     SmartLine**

- 11.1   Setting SmartLine Options
- 11.2   Drawing with SmartLine - Vertex Types
- 11.3   SmartLine's Options
- 11.4   Drawing Line Strings - Vertex Types
- 11.5   Drawing with SmartLine - Arcs
- 11.6   SmartLine and Arcs

## **Module 12     Element Symbology**

- 12.1   Adding Color to Elements
- 12.2   Adding Line Style to Elements
- 12.3   Adding Line Weight to Elements
- 12.4   Levels
- 12.5   Setting Construction Class Elements
- 12.6   Setting Fill Color
- 12.7   Apply Element Attributes Quickly
- 12.8   Matching Element Attributes
- 12.9   Modify Line Style Attributes and Change Fill Type
- 12.10  Display Element Information

## **Module 13    Advanced Selection Sets**

- 13.1    Building Fences
- 13.2    Copying with a Fence
- 13.3    Moving with Fences
- 13.4    Copying with the Shape Mode
- 13.5    Deleting fence contents.
- 13.6    Changing fence shapes.
- 13.7    Manipulating fence contents
- 13.8    Saving fence boundaries.
- 13.9    Create element groups using the Group tools.
- 13.10    Select elements using element Attributes as criteria.
- 13.11    Select elements using the Select All option.

## **Module 14    Manipulate Tools**

- 14.1    Copy and Move Tools with Precision
- 14.2    Move and Copy Through the Windows Clipboard
- 14.3    Moving Quickly
- 14.4    Using the Scale Tool
- 14.5    Using the Rotate Tool
- 14.6    Using the Mirror Tool
- 14.7    Using the Construct Array Tool
- 14.8    Using the Align Elements by Edge tool.
- 14.9    Using the Stretch tool
- 14.10    Move Parallel
- 14.11    Move To Contact tool.
- 14.12    Manipulate the contents of a Fence

## **Module 15    Modify Tools**

- 15.1    Element Selection Tool
- 15.2    Modify Element
- 15.3    Delete Part of Element
- 15.4    Extend Line
- 15.5    Extend Two Lines to Intersection
- 15.6    Extend Element to Intersection
- 15.7    Trimming Elements
- 15.8    Insert Vertex
- 15.9    Delete Vertex
- 15.10    Construct Circular Fillet
- 15.11    Construct Chamfer

## **Module 16 Inquiry Tools**

- 16.1 Element Information
- 16.2 Measurement Tools

**Exercises** A collection of drawing exercises to help reinforce the previous instruction and to provide drawings for use in the next two Modules.

## **Module 17 Annotation**

- 17.1 Setting Text Attributes
- 17.2 Placing Text
- 17.3 Text Display
- 17.4 Plotting and Text Height
- 17.5 Text Tools
- 17.6 Create Text Styles
- 17.7 Character Mapping

## **Module 18 Dimensioning**

- 18.1 Dimensions and Text Settings
- 18.2 Dimension Settings
- 18.8 The Dimension Element Tool
- 18.8 The Dimension Size with Arrow and Stroke Tools
- 18.5 Dealing with Small Dimensions
- 18.6 Changing Existing Dimension Settings
- 18.7 Using the Modify Element Tool
- 18.8 Associative and Non-Associative Dimensions
- 18.9 Editing Dimension Text
- 18.10 Angular Dimension Tools
- 18.11 Radial Dimension Tools
- 18.12 Place Notes Tool
- 18.13 Place multiple dimensions
- 18.14 Additional Dimension Tools

## **Module 19 Plotting and Printing**

- 19.1 The Basic Process
- 19.2 Preparing the Drawings
- 19.3 Selecting Elements for Plotting
- 19.4 Plot Setup - English Units
- 19.5 Plot Setup - Metric Units
- 19.6 Plot Output
- 19.7 Additional Information - Plotter Driver Files
- 19.8 Additional Information - Drawing Setup
- 19.9 PDF file plotting support.