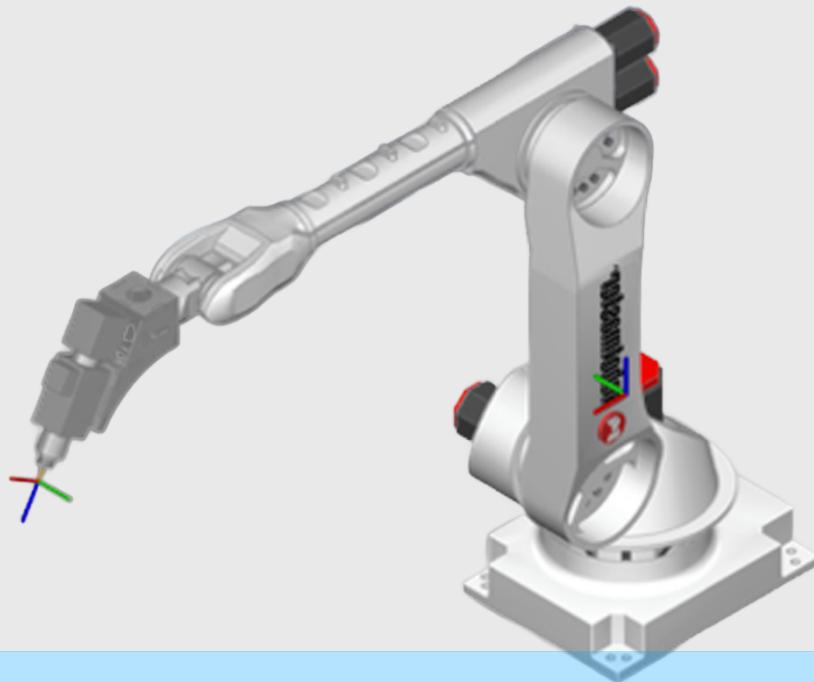


Robotmaster Professional Learning System (PLS)

Master Training Curriculum & Index

V7 Edition | 24 Volumes | 400+ Topics



Core Fundamentals & Cell Setup

The foundation for every Robotmaster project.

Volume AA | Cell & Tooling Creator

- Creating a Basic Cell (Parts 1, 2, 3)
- Creating a RTCP Trimming Cell
- Creating Rotary Components (Single-Axis, 2-Axis)
- Creating Linear Axis & Gantry Components
- Tooling Creation: Plasma, Spindle, Welding Torch

Volume 1 | Introduction to Robotmaster

- Introduction to Robotmaster V7
- Contouring & Welding Demonstrations

Volume 2 | Screen, CAD & Stitching

- Files & Configuration (Importing/Exporting)
- Screen Modes (Device Mode vs. Task Mode)
- CAD Basic Selection (Entities, 3D Navigation)
- CAD Advanced Selection
- CAD Hierarchy (Simple & Complex)
- CAD Stitching

Volume 3 | Frames, Gnomons & Transform

- Frames Introduction (World, User, Tool/TCP)
- Gnomon Snapping & Attaching
- Transform Examples (3D Move, Rotation, Alignment)

Volume 9 | Importing CAD & NC

- Importing STP, NC & APT files

Path Programming & Optimization

The daily workflow: Creating, Editing, and Optimizing paths.

Volume 4 | Path Manager

- Quick Path Creation
- Undo/Redo & MultiOp
- Reordering Paths

Volume 5 | Contouring Parameters

- Contouring Edges (Auto, Swarf, Curve, Manual)
- Tools & Speeds
- Path Parameters (Deviation, Lead/Lag, Side Tilt)
- Retract/Approach Strategies (Clearance Heights)
- Entry/Exit Methods (Arc, Tangent, Closed Loop)

Volume 6 | Cycles

- Geometry Prerequisites & Matching Tolerance
- Drill/Cycle Path Optimization
- Hole Selection

Volume 8 | Path & Cycle Editing

- Graphics Screen Edit (Tilt, Push/Pull, Path Split)
- Path Manager Edit (Transform, Order, Join/Extract)
- Editing Paths from Bad Geometry

Volume 10 | Device Operation Manager

- Zone Management
- Assigning Robot Operations & Setups
- Manipulator Settings (User Frames, Overrides)

Volume 11 | Optimization & Axis Configuration

- Axis Configuration (Spherical Interpolation, Profile Tracking)
- Optimization Maps & Contours
- Optimization with Path Planning
- Advanced Maps & Layers

Volume 12 | Transitions

- Robot Motion Types (Joint, Linear, 3D Arc)
- Manual & Graphical Transitions
- The "Shape Shifter" Vector

Volume 13 | Recipes

- Creating & Importing Recipes

Volume 14 | Device Operation Icons

- Processor, Time, Generate Code & Calculate Icons

Volume 15 & 16 | Point & Joint Lists

- Point List Task/Device Mode
- Joint List Editing

Advanced Kinematics & Safety

Managing complex hardware, tools, and collisions

Volume 17 | Tool Center Point (TCP)

- TCP Manager
- Automatic vs. Manual Calculation

Volume 18 | Tools & Tool Manager

- Creating Milling Tools & Holders
- Creating Welding & Cutting Tools
- Manually Adjusting TCP

Volume 19 | Collision Control

- Creating Collision Groups (Part vs. Fixture vs. Robot)

Volume 20 | Rotaries

- Rotary Positioner (Indexing Mode)
- Full Rotary & Combined Mode

Volume 21 | Linear Axes (Rails)

- Fixed Position vs. Variable Optimization
- Rail Configuration

Volume 22 | Surface Paths

- Surface Path Functions (Sanding, Polishing, Grinding)
- Morph Paths
- Advanced Features (Spiral, Zig-Zag, Patterns)

Manufacturing Processes

Specific applications and parameters

Volume 7 | Welding & Touch Sensing

- Welding Controls (Obstacle Detection, Rolling Ball)
- Techniques (Push/Pull, Stitch, Multipass)
- Touch Sensing (Creating Routines, 1D/2D/3D Touches)
- Advanced Touch Sensing & Copying Welds

Volume 23 | Additive Material

- Additive Manufacturing Strategies (3D Printing)

Volume 24 | Spraying

- Spraying Basics (Calibration, Occlusion)
- Simulation Accuracy & Refinement
- Coverage Simulation