

Technician Programming Training Syllabus

Day 1

1. Introduction
 - 1.1. General Safety Procedures
 - 1.2. Recycle - ISO 14001
2. Inputs & Outputs
 - 2.1. Monitor / Command Window
 - 2.2. IO Monitor
 - 2.3. ON/OFF & SW
 - 2.4. Remote Inputs / Outputs
 - 2.5. Memory Bits
 - 2.6. Byte Function / Statement IN / OUT
3. Program Logic Basics
 - 3.1. Function / Fend (Subroutines)
 - 3.2. Keywords - Statement / Function
 - 3.3. Variable Usage
 - 3.4. Print command
 - 3.5. Program Logic Structure
 - 3.5.1. Do / Loop
 - 3.5.2. If / EndIf
 - 3.5.3. For / Next
 - 3.6. Run & Start / Abort (Stop)
4. Robot Controller Basics
 - 4.1. Motor On / Off
 - 4.2. Reset, Abort
 - 4.3. Brake ON / OFF (Pro Six Only)
 - 4.4. Jump, Go, Move (Jump3 for Pro Six)
 - 4.5. Power (SAFETY DISCUSSION WHEN HIGH POWER IS ON)
 - 4.6. Velocity Commands
 - 4.6.1. Speed (point to point)
 - 4.6.2. Accel
 - 4.6.3. Speeds (continuous path)
 - 4.6.4. Accels
 - 4.7. Jog & Teach
 - 4.7.1. Jogging Basics (World, Tool, Joint)
 - 4.7.2. Teaching Points (point file discussion)
 - 4.7.3. Pendant Operation (if applicable)
 - 4.7.4. Direct Teaching (with SFREE or Motor Off on SCARA Robots)
 - 4.8. EPSON Controller Safeguard Operation
 - 4.8.1. Auto / Manual Recovery
 - 4.8.2. Remote Recover
5. Lab 1
 - 5.1. Objective: Pick and place simulation lab using inputs, outputs.
 - 5.2. Objective: Pick and place simulation lab using memory IO, IN, OUT

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6. Debugging
 - 6.1. Setting and clearing breakpoints
 - 6.2. Step Into
 - 6.3. Step Over
 - 6.4. Displaying Variables
 - 6.5. Task Manager (Halt / Resume)

7. Motion Optimization
 - 7.1. Timers
 - 7.2. Arch
 - 7.3. Limz (SCARA Only)
 - 7.4. Weight / Inertia

8. Lab Optimization Techniques
 - 8.1. Objective: Using optimization to reduce cycle time.

9. Tool Offsets
 - 9.1. TLSET
 - 9.2. TOOL
 - 9.3. Create Tool Offset

10. Open Lab
 - 10.1. Question & Answer
 - 10.2. Focused User Topics