

## [Omron CJ Series PLC Level 1](#)

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<b>Software</b>	CX Developer / CX One
<b>Duration</b>	5 Days
<b>PLC-Type</b>	Omron CJ Series
<b>Pre-Requisites</b>	No prerequisites this is a beginners course
<b>Maximum Delegates</b>	6

### Brief Description

- \* Be able to recognise C series hardware and be able to replace modules when a fault occurs.
- \* Be able to operate the Omron CX Developer software to make it perform certain tasks.
- \* Understand basic instruction set and be able to make minor modifications to software.
- \* Be able to backup and restore a PLC program when required.
- \* Be able to perform basic system diagnostics when a problem occurs.

### Course Documentation

- \* Training Log
- \* Pre Course Exercises
- \* Course Exercises
- \* Post Course Exercises
- \* Filofax Pocket Reference Guides

### Course Content

To fault find a system you need to know EXACTLY how it works HOW EXACTLY DOES A PLC WORK?

- \* Am I getting the input to the PLC?
  - \* The Led on the output card means i am getting voltage out right? does it?
  - \* What exactly happens in between? ,theres more than just a program in the CPU
  - \* How exactly does it scan the program?
  - \* What is this Watchdog Timer? Is it that important?
  - \* Can I use the same output twice? That's bad programming isn't it?
  - \* A PLC is a logic controller, so use a logical approach to fault find it.
  - \* What are the 8 simple test points to check?
  - \* The PLC is in RUN, that means theres a program right? does it?
  - \* FORCING a bit and toggling a bit is pretty much the same yeah? depends on which PLC
- Then you need to Know the specifics HOW DO I DO THE FOLLOWING? (some straight forward some not so)
- \* Identify component parts of the C Series PLC system
  - \* I/O addressing and configuration
  - \* Memory organization
  - \* System connection
  - \* Understand and interpret system LED's

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- \* Modes of operation
- \* Communicating with the PLC
- \* Addressing
- \* Contact and relay-type instructions
- \* Timer and counter instructions
- \* Program control instructions
- \* Comparison instructions
- \* Maths instructions
- \* Force functions
- \* Search functions
- \* Save function
- \* Replacement of battery, I/O modules and CPU
- \* Fault find simple software problems
- \* Fault find simple hardware faults
- \* Interpret cross references & printouts
- \* Generation of documentation to assist fault finding

## Equipment

- \* CJ Series PLC
- \* PC or Laptop
- \* Simulator

*Solutions, Not Courses.*