

# Training Courses and Information

## Training by seasoned veteran Doug Bell of InterConnecting Automation, Inc.

Do you need training courses for PLCs or drives, taught by someone who has used many of our products to solve difficult, real-world application problems? Would you be even more interested if the training was held in a city near you? We thought so!

### 2010 Training Schedule \*

#### Introductory PLC Training

- Chicago, IL April 13-15, 2010
- Atlanta, GA May 4-6, 2010\*\*
- Las Vegas, NV June 15-17, 2010
- Atlanta, GA Sept. 21-23, 2010\*\*
- Las Vegas, NV Oct. 19-21, 2010
- Dallas, TX Nov. 9-11, 2010
- Atlanta, GA Dec. 7-9, 2010\*\*
- Cleveland, OH Feb. 8-10, 2011
- Irvine, CA March 8-10, 2011
- Chicago, IL April 5-7, 2011
- Atlanta, GA May 3-5, 2011\*\*
- Newark, NJ May 31-June 2, 2011

#### Advanced PLC Training

- Chicago, IL April 20-22, 2010
- Atlanta, GA May 11-13, 2010\*\*
- Atlanta, GA Sept. 28-30, 2010\*\*
- Las Vegas, NV Oct. 26-28, 2010
- Atlanta, GA Dec. 14-16, 2010\*\*
- Cleveland, OH Feb. 15-17, 2011
- Irvine, CA March 15-17, 2011
- Chicago, IL April 12-14, 2011
- Atlanta, GA May 10-12, 2011\*\*
- Newark, NJ June 7-9, 2011

#### PID Training

- Atlanta, GA May 18-20, 2010\*\*
- Las Vegas, NV Nov. 2-4, 2010
- Atlanta, GA May 17-19, 2011\*\*

\* Dates and cities subject to change. Confirm at time of class reservations.

\*\* Classes held at AutomationDirect headquarters in Cumming, GA.

For the most current schedule, visit the InterConnectingAutomation website:

[www.interconnectingautomation.com](http://www.interconnectingautomation.com)

If your city isn't listed here, or if you need an on-site class, custom class etc., then please call the folks at InterConnecting Automation. They can usually create a class to suit a wide variety of special requirements.

Mr. Doug Bell of InterConnecting Automation, Inc., has been using both our products and competitive products for over 25 years. He has years of design and consulting experience, has been the focus of PLC magazine articles, and now offers training classes taught at various locations around the country.

Mr. Bell started his career as an Electronics Technician on the factory floor at Crown Cork & Seal, one of the world's premier suppliers of cans and closure systems. So, he can relate to the day-to-day problems associated with using and troubleshooting PLC systems. After his stint at Crown, he established a very successful firm that designs and implements control applications, including programming and startup. Here's a brief list of Mr. Bell's qualifications and applications experience:

- Nearly 20 years of experience in PLC and control system design, for more than 45 facilities worldwide, including sites in the U.S., France, Germany, England, and Mexico
- Managed various automation projects, including specification, procurement, programming, site startup and maintenance
- Applications experience, including electronic feeder controls, HVAC controls, automated test stations, coating systems, printing lines, motion control systems, high-speed applications, communication systems, device-level network applications, PC-based control solutions, HMI systems, etc.
- Experience in training both factory technicians and operations personnel

**Note:** *PID class may be taught by guest instructors chosen by Mr. Bell.*

AUTOMATIONDIRECT does not set prices or take reservations for these classes. For additional information, course prices, schedules, reservations, contact:

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12154 North Ridge Trail  
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**Fax:** 414-425-8363

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[info@interconnectingautomation.com](mailto:info@interconnectingautomation.com)

**Website:**  
[www.interconnectingautomation.com](http://www.interconnectingautomation.com)

## Introductory PLC course contents

You'll use custom-built training panels that contain our D4-450 CPU, a variety of I/O modules, operator panels, and **DirectSOFT**.

- PLC family overview for all **DirectLOGIC** products
- Basic PLC theory of operation including CPU, bases, discrete I/O, analog I/O, and communications
- System configuration techniques
- Simple RLL programming including timers, counters, drums, basic math, and more.
- Advanced programming including number conversions, subroutines, RLL Plus, PID theory, etc.

## Advanced PLC contents

Using training panels that contain our D4-450 CPU, a variety of I/O modules, operator panels, and **DirectSOFT**, you will:

- Create programs based on specs given to you in class
- Learn table and pointer commands
- Wire, program and use Terminator and 205 remote I/O
- Writing and structuring programs using Stage
- Debug, diagnose and program PLC over cell phone

### Networking

- Serial RS-232 and RS-422
- Ethernet
  - MAC-IP-PLC-Addressing
- Networking with multiple PLCs
- Control motor speed from a master PLC to a slave w/motor/encoder setup
- Learn to use Read and Write commands and the wiring of a network

## PID course contents

You'll use custom-built training panels to:

- Learn PID short cuts and tools
- Learn to setup, tune, troubleshoot and debug PID loops.
- Adjust the gain, reset, rate, and many other PID parameters, to see how they affect the loop

# Training Videos and Online Training

## “Introduction to PLC Logic and Principles” Training Video Set

Mr. Doug Bell of InterConnecting Automation, Inc., offers a basic PLC video training package.

The kit includes the following:

- Two video tapes showing examples of programming with **DirectSOFT**. You can get “Hands-On” experience by following along with the instructor who is using the same hardware. (**DirectSOFT V2.4a**, or later, can be used with this course.)
- Pre-wired PLC trainer based on the **AUTOMATIONDIRECT D0-05AR PLC**, with push-buttons, lights, selector switches and a programming cable ready to plug into your computer
- A **DL05 Users Manual**, which is referred to throughout the video and is great for future reference

**Benefits of this video course:**

- Work in the privacy of your own home/office
- No need to travel anywhere — your family won’t have to do without you!
- Learn at your own pace — take a break when you need it
- Refer to the video at any time — you’ll still have the hardware to experiment with

**Overview of course content:**

- Basics: introduction, basic wiring, logic AND & OR, sensors, relays, reasons for using a PLC, **AUTOMATIONDIRECT PLC families**
- CPU Internals: scan time, addressing, I/O (Xs and Ys), commands
- I/O: inside the I/O boards, octal addressing, programming methods -- hand-held programmer - **DirectSOFT**
- **DirectSOFT**: getting started, the launch pad, links, offline vs. online programming, maneuvering through & using **DirectSOFT**, creating and editing rungs
- Programming & Debugging: using inputs and outputs, debugging and status mode, PLC commands, troubleshooting

## “PLC Analog I/O” Training Video Set

Mr. Doug Bell of InterConnecting Automation, Inc., offers a PLC Analog I/O training video set.

The kit includes the following:

- Two 2-hour analog training videos, firmware upgrade instructional video, a pre-wired analog trainer and **DL05 analog I/O module and manual**. This unit is a “plug-and-play” add-on to the **DL05 PLC Trainer** or any existing **DL05 PLC**.

**PLC Pre-wired Analog I/O Trainer:**

- Two 0-10 VDC meters
- Two 0-5 VDC potentiometers
- 24 VDC wall-mount power supply
- **DL05 analog combo module**, plus pre-wired cable from the trainer to the module, ready to plug into your **DL05 PLC trainer** or any existing **DL05 PLC**.

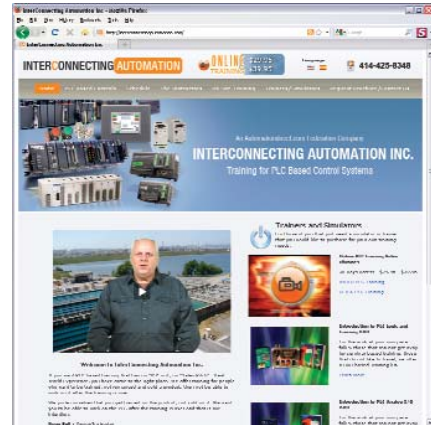
**Benefits of this video course:**

- Work in the privacy of your own home/office
- No need to travel anywhere — your family won’t have to do without you!
- Learn at your own pace — take a break when you need it
- Refer back to the video at any time — you’ll still have the hardware to experiment with.

**Overview of course content:**

- Analog I/O principles - voltage, current, thermocouples
- PLC analog modules - input, output, thermocouple
- Configuring the analog I/O modules in the PLC
- **DL05 PLC analog tutorial** includes configuration, wiring, scaling (standard and non-standard) and programming, using the potentiometers and voltmeters on the trainer unit
- Application programming examples, including controlling motor speed with a drive and an analog output card in a PLC

To order the **PLC Logic and Principles video** or the **PLC Analog I/O video**, contact **InterConnecting Automation directly at: 414-425-8348**, or online at [www.interconnectingautomation.com](http://www.interconnectingautomation.com)



## Inexpensive online PLC training now available

Interconnecting Automation offers an inexpensive subscription-based online training program. The online training section is a component of [www.interconnectingautomation.com](http://www.interconnectingautomation.com).

Visitors can view the complete list of videos in each “library” as well as watch sample videos; when ready to purchase, the prospective member registers and pays for their selected libraries on a monthly basis. The member receives unlimited access from a maximum of two PCs anytime during the 30 days; videos can be viewed as many times as needed during the subscription period. Most libraries range from \$29.95 - \$39.95 per month.

Libraries currently available include:

- **Introduction to PLC Principles (For the novice-non user with limited controls knowledge)**
- **CLICK series PLC Training (includes Introduction to PLCs library)**

Future libraries include **Productivity3000 Training (includes Introduction to PLCs library)** and **C-more HMI training**.

Many of these video libraries will also be offered as interactive training courses, with progress tests and certification upon completion.

For more information, to view sample videos or register for a subscription, visit:

[www.interconnectingautomation.com](http://www.interconnectingautomation.com)