INTELLECT CONTROLS GROUP, INC

2011 SEMINAR TRAINING SCHEDULE

For More Information or To Register Call: (888) 468-3591 ● (502) 499-7522

E-100: Introduction to Electrical Control & Electrical Safety

Locations & Dates of Scheduled Seminars:	**Athens, TN** *(60 miles SW of Knoxville)*	September 21-23, 2011
Course Description:	This 24 hour/three day training program is designed to familiarize entry-level electricians, equipment operators and other skilled trades with electrical control fundamentals, electric terminology and basic troubleshooting techniques.	
Topical Outline:	• Introduction to Electricity • Introduction to Electro-Magnetic Devices • Electrical Safety procedures • Circuit Protection • Use of Multimeter • Fundamentals of Control • Control Components and Pilot Devices • Symbology • Ladder Logic Diagramming and Wiring • Development and Analysis of Control Circuits • Control of Motor Starting • Maintaining and Troubleshooting Control Equipment and Circuits • Documentation	
Prerequisite	This course is designed for entry-level electricians, equipment operators and other skilled trades who need to broaden their understanding of industrial control fundamentals. E-100 is also ideal for anyone who has a need to familiarize himself/herself with basic control fundamentals	
Course Length	3 days/24 hours	
Objectives	Persons completing this course will be able to: • Learn to work safely with electrical components and test equipment. • Understand electrical terms and symbols • Identify electrical control components • Interpret ladder logic diagrams • Troubleshoot control circuits • Design simple electrical control circuits	

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A-6000: Allen-Bradley ControlLogix Programmable Controllers/Level One Maintenance & Troubleshooting

Locations & Dates of Scheduled Seminars:	**Rogers, AR** *(25 miles N of Fayetteville)*	June 6-9, 2011
	Brunswick, GA *(65 miles N of Jacksonville)*	June 28-July 1, 2011
	Spartanburg, SC	August 2-5, 2011
	Athens, TN *(60 miles SW of Knoxville)*	August 22-25, 2011
	Clayton, NC *(16 miles SE of Raleigh)*	September 13-16, 2011
Course Description	This 32-hour/four day training program provides students with hands-on experience in the troubleshooting and maintenance of the Allen-Bradley ControlLogix Programmable Controller. Hardware and software troubleshooting techniques are heavily emphasized throughout the course. Troubleshooting techniques include interpretation of status indicators, diagnostic messages and use of the programming terminal to quickly isolate faults and take proper corrective actions. The instructor will use examples of actual troubleshooting experiences to enhance the learning process. Savannah, GA	
Topical Outline:	• Introduction to Programmable Controllers • Hardware Description • I/O Configurations • Installation • Programming Terminal Operation • Instruction Familiarization (Ladder Diagram, Timer and Counter, Data Manipulation & Program Control) • Use Software Utilities to aid in the troubleshooting Process. (Trend Charts, Search, Cross Reference, Force) • Program Editing • Peripheral Operations (Program Loading & Program Printing) • Troubleshooting (Hardware & Software) • Application Projects Using Industrial Hardware • RSLinx Driver Creation Overview/Hands-on Demonstration • ControlNet, Ethernet or Data Highway Plus Overview (Time Permitting)	
Prerequisite	Intellect Controls Group training program I-100, or a working knowledge of electromechanical control devices, relay ladder logic and Windows, 2000 or XP Software.	

Programming Software	Training utilizes Rockwell Software RSLogix5000, Microsoft Windows, 2000 and XP Software.
Course Length	32 hours / 4 days
Objectives	Persons successfully completing this course will be able to: • Identify hardware components of a ControlLogix Programmable Controller System. • Configure and install a ControlLogix Programmable Controller System. • Use a programming terminal for entering, editing and troubleshooting programs. • Isolate processor and I/O faults to the module level. • Troubleshoot simple programs using ladder instruction of the ControlLogix Programmable Controller. • Properly use peripheral devices to store, copy and print programs. • Properly connect and establish communications over a DF1/RS-232 cable.

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A-5000: Allen-Bradley SLC-500/Level One Maintenance & Troubleshooting

Locations & Dates of Scheduled Seminars:	**Spartanburg, SC**	June 20-23, 2011
	Clayton, NC *(16 miles SE of Raleigh)*	July 12-15, 2011
	Opelika, AL *(7 miles NE of Auburn, AL)*	August 8-11, 2011
Course Description	This 32 hour/4 day training program allows students to gain hands-on experience in the troubleshooting and maintenance of the Allen-Bradley SLC-500 programmable controller. Hardware and software troubleshooting techniques are heavily emphasized throughout the course. The instructor will use example of actual troubleshooting experiences to enhance the learning process.	
Topical Outline:	• Introduction to Programmable Controllers • Hardware Description/Configuration (CPU Processor Module & Input/Output Modules) • Safety Considerations • IBM Compatible Terminal Operation • Program Entry and Interpretation (Ladder Diagram Instructions, Timers and Counters, Data Manipulation Instructions & Program Control Instructions) • Use of Software Utilities in Troubleshooting (Force, Search, Histograms) • Program Editing • Troubleshooting (Software & Hardware Components Including Processor and I/O) • Peripheral Operations (Program Loading) • Program Printing	
Prerequisite	This course is designed to meet the needs of both plant maintenance and engineering personnel. Students should be familiar with relay ladder logic	
Programming Software	Training is available utilizing Rockwell Software APS Series, AI Series and RSLogix500 software products	
Course Length	32 hours/4 days	

A-5000: Allen-Bradley SLC-500/Level One Maintenance & Troubleshooting

Objectives	Students completing this course should be able to: • Identify the hardware components of the SLC-500 programmable controller. • Configure and install a SLC-500 programmable controller system. • Develop and interpret simple programs utilizing an IBM compatible terminal. • Troubleshoot programs and isolate faults within the SLC-500 system. • Properly use peripheral devices to store, copy and print programs.

MC-700: Allen-Bradley PowerFlex 70/700 Variable Frequency Motor Drives Maintenance & Troubleshooting

Locations & Dates of Scheduled Seminars:	**Stockbridge, GA** *(20 miles S of Atlanta, GA)*	June 13-16, 2011
	Jackson, MS	July 18-21, 2011
Course Description	This 32-hour /4 day training program is designed to provide maintenance electricians and engineers with the required knowledge and skills to install, start-up and troubleshoot Allen-Bradley PowerFlex 70/700 Variable Frequency AC Drive systems. Emphasis is on using the Human Interface Module and DriveExplorer software to set and check parameters used in normal operation and for troubleshooting. Students will locate power, signal and control terminals, monitor drive conditions, clear faults and be able to troubleshoot drive and motor problems.	
Topical Outline:	• Introduction to AC Motor Speed Control (Motor Characteristics & Variable Frequency Inverters) • Power and Signal Wiring • Drive Installation/Replacement (Motor Feedback Polarities) • Control Options (Interface Modules & Input Modules) • Human Interface Module (Control and Display Panel, Operating Modes, Start-up Parameters & Advanced Parameter Operation) • Troubleshooting • Fault Identification and Clearing • Troubleshooting Charts and Corrective Action • PLC Operation • SCANport Communication • Discrete Inputs and Outputs • Block Transfer of Data • Other Allen-Bradley Drives • DriveExplorer Software	
Prerequisite	A basic understanding of AC motor operation, electrical control and safety, Allen-Bradley PLC ladder logic and remote I/O.	
Course Length	32 hours/4 days	

MC-700: Allen-Bradley PowerFlex 70/700 Variable Frequency Motor Drives Maintenance & Troubleshooting

Objectives	Persons successfully completing this course will be able to: • Recognize drives in the PowerFlex 70/700 family • Identify input and output power, control and signal terminals • Install/Replace and perform initial start-up of the drive system • Monitor and set drive parameters using the Human Interface Module • Troubleshoot control inputs, outputs, drive and motor faults • Correlate Drive-PLC inputs, outputs and data transfers • Use troubleshooting charts to isolate drive problems • Use DriveExplorer software to monitor and set parameters and troubleshoot problems

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H-100: Hydraulic Reliability & Troubleshooting

Locations & Dates of Scheduled Seminars:	**Chicago, IL**	June 28-30, 2011
	Olive Branch, MS *(22 miles S of Memphis, TN)*	July 20-22, 2011
	Fairborn, OH *(11 miles NE of Dayton, OH)*	July 26-28, 2011
Course Description:	This course focuses on industrial hydraulic systems. We place emphasis on understanding the basic hydraulic fundamentals utilized in all industrial hydraulic systems; the participant will learn to effectively to setup, adjust and troubleshoot industrial hydraulic systems. The participant will apply practical hands on exercises for each basic principle covered in the class. These hands on exercises will be executed utilizing real world hydraulic adjustments and calibrations as used in actual systems. We focus heavily on teaching proper safety procedures, and strictly enforce these procedures to assure participants learn and practice safe work habits. ISO 1219 Industrial hydraulic symbology will be taught and used throughout the class. The participant will utilize this symbology throughout the class, and learn from case history hydraulic prints. Proper adjustment procedures for pressure, flow, and directional control valves will be emphasized and applied.	
Course Length	3 days / 24 hours	
Objectives	Successful completion of the course will enable the participant to: • Demonstrate and identify good safety procedures when working with industrial hydraulic systems. • Match system components with appropriate ISO 1219 symbols. • Assemble hydraulic circuits and verify their operation in a lab setting. • Determine why certain components are required in specific circuits. • Adjust and calibrate system components in a predetermined sequence. • Understand sources of heat in a hydraulic system. • Understand the different types of flow controls and applications of each. • Understand how to control a suspend load. • Understand the purpose of accumulators and how to properly charge them. • Identify the symptoms, causes, and prevention of shock in a hydraulic circuit. • Diagnose failure of components that affect efficiency, but not operation. Successful completion of this program should adequately prepare the participant to successfully pass the written portion of the Fluid Power Societies Industrial Hydraulic Mechanic certification examination.	