The video and text provide easy explanations to understand and the kit allows you to verify your progress !

BASIC to APPLICATION

Learning contents are arranged from basics to applications

Outline of Teaching Materials

The quickest way to master programmable controllers (sequencers) is to actually use them.
Utilizes a combination of 2videos and kit. The 2-part course presents a systematic curriculum beginning with the basics then continuing with applications and the practical learning kit (which is composed of various control devices).In video 1 even a beginner will be able master basic circuit sequence control concepts such as ON Circuit, AND Circuit, OR Circuit, Self-holding Circuit (8 hours).In video 2, users will start with motor sequence circuit and finish with a continuous running two motor circuit in a relatively short time (16 hours). We encourage you to test and incorporate this new practical video and kit duo.

CHARACTERISTICS

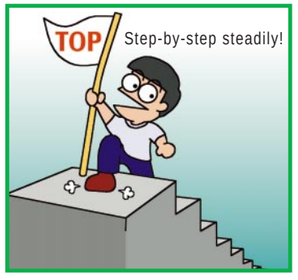
Effective teaching materials utilizing video & practical learning kit

Clear explanations through video will allow easier and quicker understanding and is a more efficient training method than traditional textbook. The use of video allows the instructor to use their time more efficiently. The teacher is able to use their limited class time to provide students with more individualized instruction.

3days course(Standard)	
1st day (6~8hours)	Video1 STEP1~6
2nd day (6~8hours)	Video1&2 STEP7~11
3rd day (6~8hours)	Video2 STEP12~14

Step- by- step learning method minimizes misunderstanding

Problems may often seem insurmountable but if you are willing to take it one step at a time, you will find it to be much more doable. Step- by-step learning method provides gradual levels through, so that users can achieve our mastery with little difficulty.



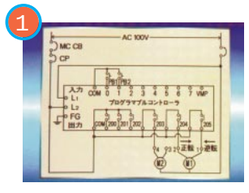
It is possible to acquire practical ability in a short time.

The following learning pattern is adopted in the video: a) basic explanation and outline of the problem, b) thinking points, c) practice, d) corrections and practice again. Utilizing this pattern users can enjoy learning since to them it's like playing the game, the students obtain not only the knowledge but also practical ability since they cannot proceed to the next step without having a thorough understanding of the material in their own minds.

Proved practical teaching materials.

These teaching materials are authorized by the Ministry of Labor (authorization No.40843) as an efficient vocational teaching system for teaching electromechanical sequence control.

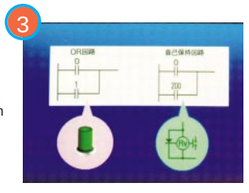
Procedure

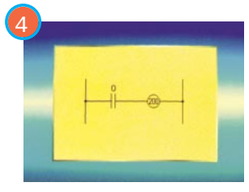
1. 

Prepare the video, kit and textbook. Start the video, and it will show the problem to be solved. The video shows the circuit diagram and the external devices to be used.

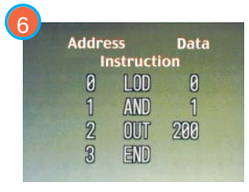
2. 

After the explanation finishes, wire according to the circuit diagram in the textbook.

3. 
The video explains the background knowledge necessary to design the program.

4. 
Using relay symbols and ladder diagrams, current circuit signal states are shown.

5. 
After all the necessary explanation is finished , proceed to coding (programming)and then input the program.

6. 

In conclusion the video explains the program and input and output power signals are are explained and displayed on a monitor. Now that all the steps are finished, students can proceed to the next step.

CONTENTS

Video 1 (45 minutes)

STEP1 What is Programmable Controller ?
The video explains the functions and uses for the Programmable Controller and also the difference or superiority between it and a regular relay sequence.

STEP2 Basic Circuit
Explains basic circuit of the practical learning kit. The current flow of the basic circuit and kit handling advice .

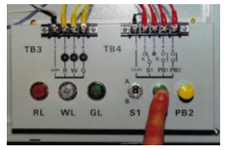
STEP3 ON Circuit
Design a program to wire devices. Learn the ON Circuit (pushing the pushbutton lights the pilot lamp.)

STEP4 AND Circuit
Use two pushbutton switches to turn the pilot lamp on. Three steps are needed.
1.Draw circuit diagram and wire. (hardware)
2.Sequence diagram (ladder diagram): draw the diagram which was give in the theory.
3.Coding (programming). Confirmation.Unless you complete these steps, you cannot get the results.

STEP5 OR Circuit
Pushing either one of the two buttons, the pilot lamp lights. Using the same hardware provides different functions depending on programming.That is the characteristic of the Programmable Controller.

STEP6 Self -holding Circuit (Basic Memory Circuit)
Self- holding (Basic memory)circuit of relay sequence control is very important for the study of the uses of the relay sequence circuit.

STEP7 Timer Circuit
Use the timer function using the timer built into the Programmable Controller.



STEP8 Counter Circuit
Use the preset counter utilizing the subtraction counter built in Programmable Controller.

Video 2 (45 minutes)

STEP9 Motor Driving Circuit (1)
Program the same as ON Circuit to drive the motor.

STEP10 Motor Driving Circuit (2)
Control the rotary direction of two motors through the switch operation.

STEP11 Motor 1 Sequence Circuit
Study sequence activity (such as on and off motor rotation control) using the motor and sensor or timer.

STEP12 Motor 2 Sequence Circuit
Study sequence activity using a motor movement which moves differently from the motor in the previous step.

STEP13 One Cycle Circuit (Automatic Circuit)
Combine two motors' sequence circuits and build an automatic circuit. After one cycle finishes, the next cycle should start.

STEP14 Continuous running Circuit
Add a counter function to the first cycle which activates the second cycle after an arbitrary number of cycles.

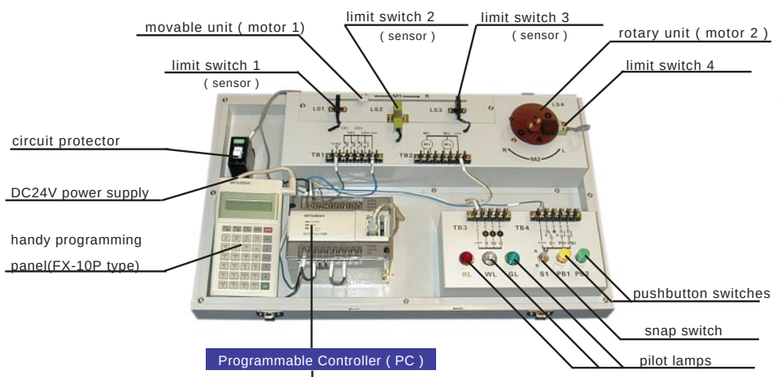
Users Feedback

Hiroshima Technical High School; Electronic Information Department: Mr.Taniguchi

Within our school's; curriculum we have a sequence control component.
The reason we chose this practical kit was because the students can quickly start enjoying from an early stage of learning since the kit is ready to go. We found that since students can have actual hands-on experience, it is more understandable to them. They seem to enjoy doing their own wiring and learning systematically.

Kure National Technical College; Mechanical Engineering Department: Mr. Yamane

Our motivation for introducing the PC kit
In a time of rapid technological innovation, practical training in mechanical control is needed to help cope with these changes.
What they should learn actually is:
The students should learn the relation of the input/ output power going through each wire of practical controllers containing sensors (input) and actuators (output).
Learning results:
After completing the PC kit, they should be able to adopt PC control techniques in order to their own Cartesian controlled robots. I believe that students would really enjoy and learn from the process of producing this kind of robot. I'm happy with the results achieved from using both video tape and kit.



General Specifications

Rated Power
The body : AC100Vor
(except PC) to suit customer's supply
P C : AC100~240V
DC24V
Rated frequency
50/60Hz
Outward measurement:
360(W)*550(L)*150(H)mm

*The picture shows the specifications of FXon-24MR made by MITSUBISHI ELECTRICCORPORATION

IZUMI Model MICRO-1

Specifications
Program Capacity: 600 steps
Input points: 8 points
Output points: 6 points
Auxiliary relay: 160 points
T i m e r : 80 points
C o u n t e r : 47 points

Basic set

Training Kit: 1 set
V i d e o : IZUMI PC No.1(45 minutes)
: IZUMI PC No.2(45 minutes)
Textbook: 1

MITSUBISHI Model FXon-24MR

Specifications
Program Capacity: 2,000 steps
Input points: 14 points
Output points: 10 points
Auxiliary relay: 512 points
T i m e r : 64 points
C o u n t e r : 32 points

Basic set

Training Kit: 1 set
V i d e o : MITSUBISHI No.1(45 minutes)
: MITSUBISHI No.2(45 minutes)
Textbook: 1

Selected past customers

Companies: over 100 Tokyo Electric Power Company Komatsu Ltd., etc.

S c h o o l s : over 300 Technical high schools, technical colleges, universities, Institutes of vocational training.

ADWIN
Manufactured by
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Distributor

Adwin teaching materials Mechatronics series 2

Includes practical video course which enables you to master this material (with practical learning kit and textbook)

Quick mastery sequencer

Programmable Controller Training System

Authorized vocational training materials by Ministry of Labor of Japan

(Authorization No. 40843)

Programmable controller training system is the vital component of the quick mastery sequence control series.

You'll be able to read sequence diagrams
You'll be able to design sequence diagrams
You'll be able to design programs
You'll be able to master the basic operations of programmable controllers.
You'll be able to understand the relationship between controllers and external interfaces.
-This sequence controller training system is designed to cover all of areas.
Please utilize these efficient teaching materials!

ADWIN