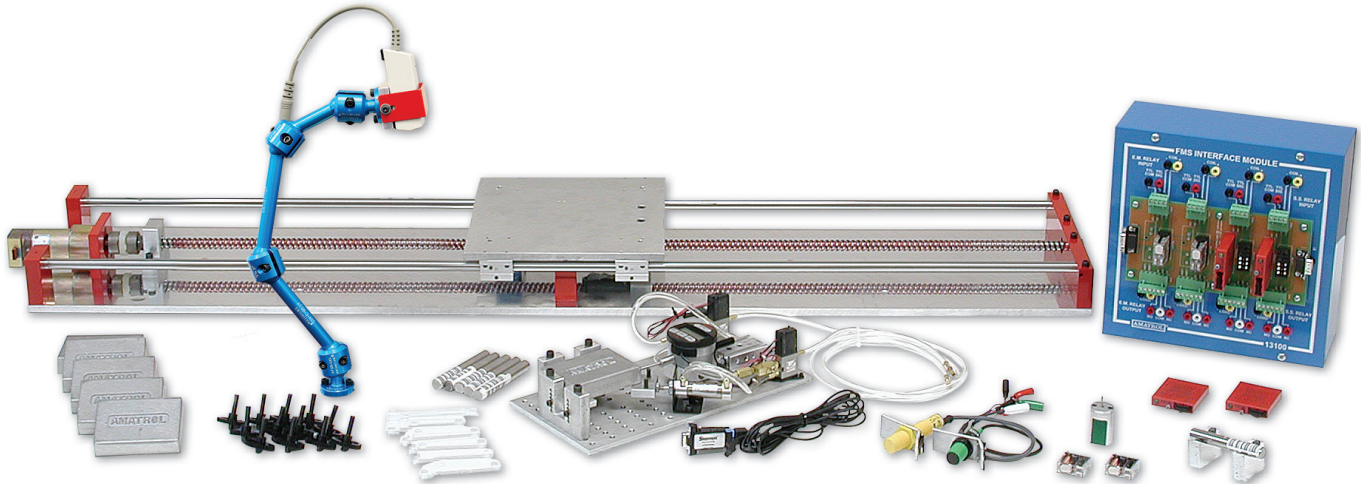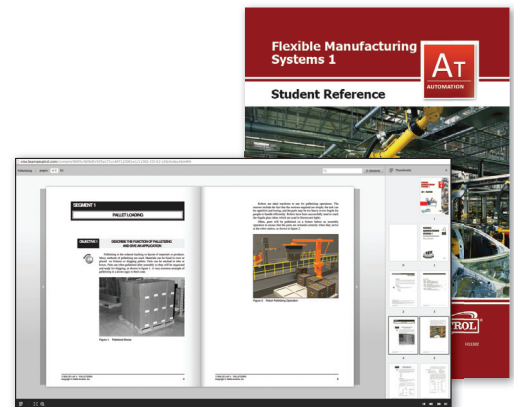# Flexible Manufacturing Learning System 1

94-FMS1A

94-FMS1A

Optional eBook and Student Reference Guide

Learning Topics:

- Jogging Modes
- Servo Traverse Axis
- Servo Gripper Control
- Point-to-Point Assembly
- Linear Motion Assembly
- Palletizing
- Robot FMS Workcell
- Robot Communications
- Serial Interfacing
- Serial Device Applications
- Barcode Reader Operation
- Multitasking
- Global Variables

The Flexible Manufacturing Learning System (94-FMS1A) covers advanced programming applications of robotic systems. Applications include linear motion, palletizing, barcode readers, digital gauging, CNC workcells, serial communications, multitasking and interrupts. These capabilities are commonly found in the current generation of industrial robots. The 94-FMS1A adds to the Robotics and Computer Programming 1 Learning System (94-RCP1) or the Robotics 2 Learning System (96-ROB2A).

The Flexible Manufacturing Learning System features real-world components used to create workcells that model advanced industrial robotics applications. The 94-FMS1A includes a digital gauging module, barcode reader, servo traverse axis, FMS interface module, sensors, and test components. This system allows learners to develop programs, design and build interfaces, install automation components, and demonstrate the operation of live systems. It also offers an option to integrate a CNC machine in order to demonstrate robot loading and unloading.

Learn to Program Robots and Use Them with Barcode Readers and Digital Gauging Systems

Learners use the 94-FMS1A to practice a variety of industrial robotic skills like programming a robot to use RS-232 serial communications to receive and interpret data from barcode readers and other serial devices. Learners will also use the digital gauging system, which includes modular fixtures and an electronic indicator, to measure precision dimensions on cylindrical and rectangular parts. Additionally, the 94-FMS1A provides a flexible manufacturing system interface module to link the robot to an optional CNC machine. Learners will determine what type of interface is needed as well as how to build and test it.
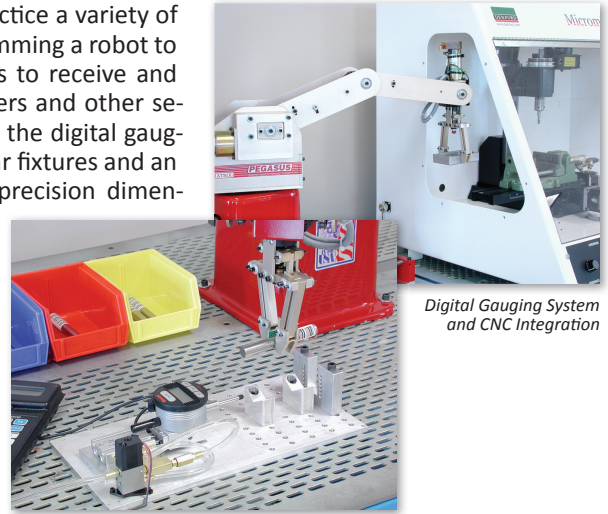
Digital Gauging System and CNC Integration

Study How to Interface Two Devices via RS-232 Serial Ports

The 94-FMS1A's curriculum covers a variety of topics like point-to-point assembly, linear motion assembly, palletizing, robot communications, serial device applications, and multitasking. Specifically, learners will study objective such as: the function of global robot variables; the operation of a digital indicator communication port; how to interface two devices via RS-232 serial ports; and the function of mechanical fastening. In addition to the supplied printed curriculum, Amatrol also offers an optional eBook format. Amatrol's eBooks look like a real book and allow users to flip between pages with ease. Enhanced with features such as keyword searches and zoom controls that enable a user to quickly locate and view information, these eBooks are a fantastic learning tool. Easy to use zoom controls make reading schematic diagrams and other technical charts and graphs a snap.
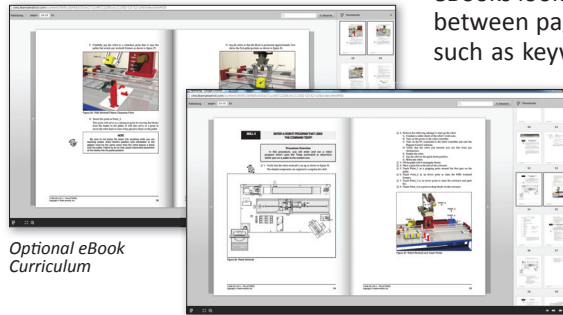
Optional eBook Curriculum

Student Reference Guide

A sample copy of the Flexible Manufacturing Systems 1 Student Reference Guide is also included with the system for your evaluation. Sourced from the system's curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.

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