# **Robotics 1 Learning System**

96-ROB1-A





# **Learning Topics:**

- Basic Robot Operation
- Manual Operation
- Homing
- End Effector Operation
- Basic Robot Programming
- Teaching Points
- Movement and End Effector Commands
- Interfacing and Material Handling
- Looping and Speed Commands
- I/O Interfacing
- Material Handling

Amatrol's Robotics 1 Learning System (96-ROB1-A) teaches articulated arm servo robotics and how it's applied in industrial tasks like assembly, material handling, machine tending, gluing, and inspection. This learning system includes 5-axis articulated servo robot arm with a 360 degree work envelope, mobile workstation, industrial controller, and state-of-the-art teach pendant which are used to practice over 140 executable commands using the powerful MCL II language.

The 96-ROB1-A also includes world-class multimedia curriculum covering the major topic areas of basic robot operation, basic robot programming, and interfacing and material handling. Within these topics, learners will study: the operation of homing procedures for a servo robot; commands like grasp, release, and Pmove; applications of robots in material handling; and much more! Amatrol's combination of theoretical knowledge and hands-on practice allows learners to gain both conceptual and practical knowledge, which broadens their competency in robotic applications. This is just one reason why Amatrol is the world-leader in skills-based, interactive technical learning.

#### **Technical Data**

Complete technical specifications available upon request.

#### **Pegasus Servo Robot**

5-Axis Servo Robot Arm with Electric Servo Gripper Motor Cable Encoder Cable Teach Pendant

Teach Pendant Pegasus Control Software

Servo Controller Power Cord

Mounting Hardware

#### Flexible Workstation

Robotics Workstation
Controller Mounting Module (2)
Keyboard / Monitor Mounting Module
Utilities Distribution Module
Electrical Power Module

Compressed Air Distribution Module

Basic Rectangular Parts Set
Parts Feeder
Parts Bins (3)
Manual Pushbutton
Indicator Light

Interactive Multimedia Curriculum (MB761)

Instructor's Guide (CB761)
Installation Guide (DB761)
Student Reference Guide (HB761)
Additional Requirements:

Computer, See requirements: http://www.amatrol. com/support/computer-requirements/

Utilities:

Electricity (120 VAC/60 Hz/1 phase)

## **Industrial Quality Pegasus II Robot**

The 96-ROB1-A features a powerful, 5-axis Pegasus II articulated servo robot arm with a gripper. This robot features a double-jointed arm that enables it to work on both sides of its work

cell and has a 360 degree work envelope, which increases work cell efficiency. The robot also has industrial quality repeatability (0.18mm) due to worm screw drives, high-resolution encoders, infrared homing sensors, and multiple microprocessors. This repeatability supports training of more precise industrial tasks such as assembly.



### **Learn Programming Using a Teach Pendant**

The 96-ROB1-A's teach pendant is a state-of-the-art device that features two-line display, an emergency stop button, jog capability, and four soft keys which allows the robot to take on a variety of functions according to the menu shown on the teach pendant display. This unit becomes a handheld programming terminal, enabling users to enter and edit teach points.



# Robotics Workstation Provides Various Programming Opportunities

The 96-ROB1-A also features a heavy-duty, mobile robotics workstation capable of supporting industrial quality robots, feeders, fixtures and other accessories. The workstation is constructed of heavy-duty welded tube steel and a perforated steel top. The perforated work surface enables fixtures and tooling to be quickly attached and removed, allowing multiple groups to share the use of the robotic workstation.

## **Interactive Multimedia Curriculum Brings Robotics Training to Life!**

This course's multimedia curriculum covers a vast range of topics related to robot operation and programming. Sample topics inlcude robot homing, teach points, end effector commands, loop-

ing and speed control, I/O interfacing, and material handling. Learners will use this information to practice skills such as jogging a servo robot, testing and editing teach points, manually

test discrete inputs and outputs, and design a robot program that uses a manual operator station. This world-class multimedia format features vibrant interactive quizzes, 3D animations, videos, and audio voiceovers of all of the text.



# Robotics 1 Student Reference

#### **Student Reference Guide**

A sample copy of the Robotics 1 Student Reference Guide is also included with the system for your evaluation. Sourced from the system's multimedia curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfect-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.

