RB-Lyn-676

Lynxmotion AL5A 4 Degrees of Freedom Robotic Arm Combo Kit (FlowBotics Studio)

About the Robot Arm

The AL5A robotic arm delivers fast, accurate, and repeatable movement. The robot features: base rotation, single plane shoulder, elbow, wrist motion, a functional gripper, and optional wrist rotate. The AL5A robotic arm is an affordable system with a time tested rock solid design that will last and last. Everything needed to assemble and operate the robot is included in the kit, with several different software control options.

The Mechanics

The aluminum robotic arm is made from our Servo Erector Set components for the ultimate in flexibility and expandability. The kit consists of black anodized aluminum brackets, Aluminum tubing and hubs, custom injection molded components, and precision laser-cut Lexan components. The arm uses 1 x HS-422 in the base, 1 x HS-755HB in the shoulder, 1 x HS-645MG in the elbow, 1 x HS-422 in the wrist, and 1 x HS-422 in the gripper.

Arm Control Options

We now have arm control options. They each have their own unique operating methodology and feature sets. They all incorporate advanced Inverse Kinematics to easily and accurately position the end effector in 3D space.

• FlowBotics Studio is an easy to use graphical program which allows you to easily get your AL5 robot up and running without the need to create code. Use the software to manipulate the real arm using the virtual arm, and create, record and play back your own sequences. Software allows for wrist rotation and additional servos. FlowBotics Studio is an easy to use graphical and text-based software suite which allows you to easily get your robot up and running. Among the many examples, FlowBotics includes "ArmControl" where you see and control the arm visually and also create sequences.

• The Dual Lynx Arm Controller program is a free download for a Windows PC. It allows up to two AL5 series arms to be controlled from a single SSC-32 servo controller. It allows the creation of sequences of motion and full editing of sequence steps. It uses a teach pendant style control panel to emulate an industrial arm control system. We also include the FlowStone source code so you can modify and customize the functionality to suit your purpose.

• RIOS is a Windows program for controlling the AL5 series of Robotic Arms with our SSC-32 servo controller. With RIOS, your robot can be taught sequences of motion via the mouse or joystick. The inverse kinematics engine makes positioning the arm effortless. This program uses external digital and analog inputs to affect the robot's motion for closed loop projects. If-then, for-next, and do-while, are supported for the inputs. External outputs can also be controlled. If stand alone operation is desired, RIOS/SSC-32 can actually create the BASIC code to control the arm from our Bot Board and Basic Atom or Basic Stamp 2.

• Alternately the servo motors can be controlled directly from a microcontroller. We sell the arm without electronics for this purpose.

Features:
- Serial port-based version with powerful PC software
- Includes license for full version of FlowBotics Studio software
- Advanced inverse kinematics positioning control using mouse
- Easily control up to TWO arms with a single SSC-32
- Includes everything you need to control the arm from a personal computer (Serial Port)

Specifications:

Includes:

- AL5A Hardware-Only Kit, which includes:
  - Arm Hardware, Gripper and Gripper Attachment Kit
  - Base Rotate (no servos)
  - Electronics Carrier

- Arm Electronics which includes:
  - SSC-32 Servo Controller
  - DB9 Serial Data Cable
  - Regulated Wall Pack

- 3 x HS-422 (a HS-425BB or HS-322HD may be substituted) standard-size servos
- 1 x HS-645MG standard-size servo
- 1 x HS-755HB large-scale servo
- Includes full FlowBotics Studio Software
- Arm control demo project included (graphical interface)