

Sahi Rasa

**pioneer in equipping
educational laboratories and
universities**

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PLC Training Set



Master the Nerve Center of Modern Automation A

complete, hands-on learning platform for programming, configuring, and troubleshooting industrial control systems. This set includes:

- **Full range of PLC models** for diverse applications
- **Relays, drivers, and I/O cards** (digital and analog) for real-world interfacing
- **Human–Machine Interface (HMI)** for user-friendly control
- **Inverters (1/3 phase)** for motor speed regulation
- **Power supply cards and Japanese-brand transformers** for robust, safe operation

💡 *Perfect for teaching the full cycle — from signal input to automated system output — in a controlled training environment.*

Controller Training Set



From Theory to Precision

Control Designed for in-depth exploration of industrial control strategies and motion systems, featuring:

- **PID controllers** for fine-tuned process regulation
- **DC and AC motors** for understanding varied drive systems
- **Mass-spring mechanisms** for mechanical dynamics studies
- **Inverse pendulum controllers** for stability and feedback control experiments
- Premium components from **Germany, China, and Japan** for diverse technology comparisons

🎯 *Ideal for developing skills in process optimization, motion control, and feedback system engineering.*

Automation Training Set

Bring Industrial Sequences to Life A versatile platform for teaching the integration of electrical, pneumatic, and hydraulic systems, including:



- **Linear RC and RN-LCT controllers** for automation logic
- **Pneumatic & hydraulic actuators** to demonstrate force and motion control
- **Solenoid E-valves, contactors, and jacks** for practical circuit-building

🔧 A true bridge between mechanical power and intelligent control, giving learners the tools to design complete automation workflows.

Advanced Industrial Controller



High-Performance Control for the Next Generation of Engineers This advanced kit empowers learners to explore precision motion, sensor integration, and smart control, featuring:

- **Servo and step motors** with matching drivers for accurate positioning
- **Encoders** for motion feedback
- **Comprehensive sensor suite:** pressure, optical, load cell transmitter, level, CT/PT, color, gyroscope, PID driver, and photoelectric sensors

 *Engineered for research labs and technical universities looking to simulate industry-grade control scenarios with pinpoint accuracy.*

Industrial 5R Robot Arm (Training Class)



**Open and Real-World Robotics,
Scaled for Learning** A professional-grade articulated robot arm designed for hands-on training in automation, mechatronics, and robotics engineering

PT-600 — Compact 5-Axis Articulated Robot

Applications: Arc welding, assembly, material handling **Weight:** 360 kg **Degrees of Freedom:** 5 **Max Load Capacity:** 12 kg **Repeatability:** ± 0.1 mm **Motion & Speed:**

- **Base traverse:** $\pm 150^\circ$ at $90^\circ/\text{sec}$
 - **Arm swing:** $\pm 105^\circ$ at $90^\circ/\text{sec}$
 - **Wrist revolution:** $\pm 200^\circ$ at $180^\circ/\text{sec}$
- Teaching & Control:**
- Playback robot with direct teaching via teaching box
 - Microcomputer control with CP and interpolating functions
 - 1000-step memory (expandable to 3000)
- Power:** AC 200/229 V, 50/60 Hz, 2.0 kVA
- Special Features:**
- Optimized axis range for wide work coverage
 - Compact enough for ceiling or inverted installation
 - High-precision positioning even at high speed
 - Particularly suited for complex welding task.

-  *Built for technical universities and advanced vocational centers to teach real industrial workflows—without compromise.*



Includes all the equipment for
non-stop training
Open Source





- | | |
|---|---|
| <ul style="list-style-type: none"> • Degrees of freedom: 6 degrees • Operating Capacity : 42 Kg • Controller : PLC • Repeatability Accuracy : 0.1 MM • Position Measurement System : Absolute Encoder • Robot Classification : Repetitive Robots • Motion Classification : Strapping robots • Actuator : Servo DC Brush • Gearbox Series : Harmonic Gearbox • Workspace Final End Effector: 105°/s • Workspace of The Joints of the period: 150°/s | <ul style="list-style-type: none"> • Speed of Rotation Of The Joints: 90°/s • Device speed: 180 °/s • Power Input: AC 220 Volt - 50 / 60Hz • 2.0KVA-6.0KG / CMG • Producer Country / Year of Construction: 2018 • Iran -Kurdistan- Engineering Company of Knowledge Engineering of Aviate Novin Gostar Kurdistan • Model: Robotic Arm 6 Degree Freedom IR-6R-97 • End Effector type: adjustable • Application: painting-welding-displacement-tracing • Work Area of joints: 80°c • Weight of the Machine: 360 Kg |
|---|---|

Precision Cyclo-Gearbox

High-Torque, Zero-Backlash Motion Control An industry-grade transmission system for robotics and automation studies, featuring:



- **RV reducer gearbox** for smooth, high-torque output
- **Comprehensive bearing and joint selection** common in industrial robots
- Configurations for prismatic, rotary, hydraulic, pneumatic, and parallel mechanisms
- Includes SRF vacuum gripper for versatile end-effector demonstrations

🔍 *Essential for understanding the mechanical backbone of precision positioning systems.*

Multi-Rotor & Brushless Servo Motor Training Set (Quadrature)



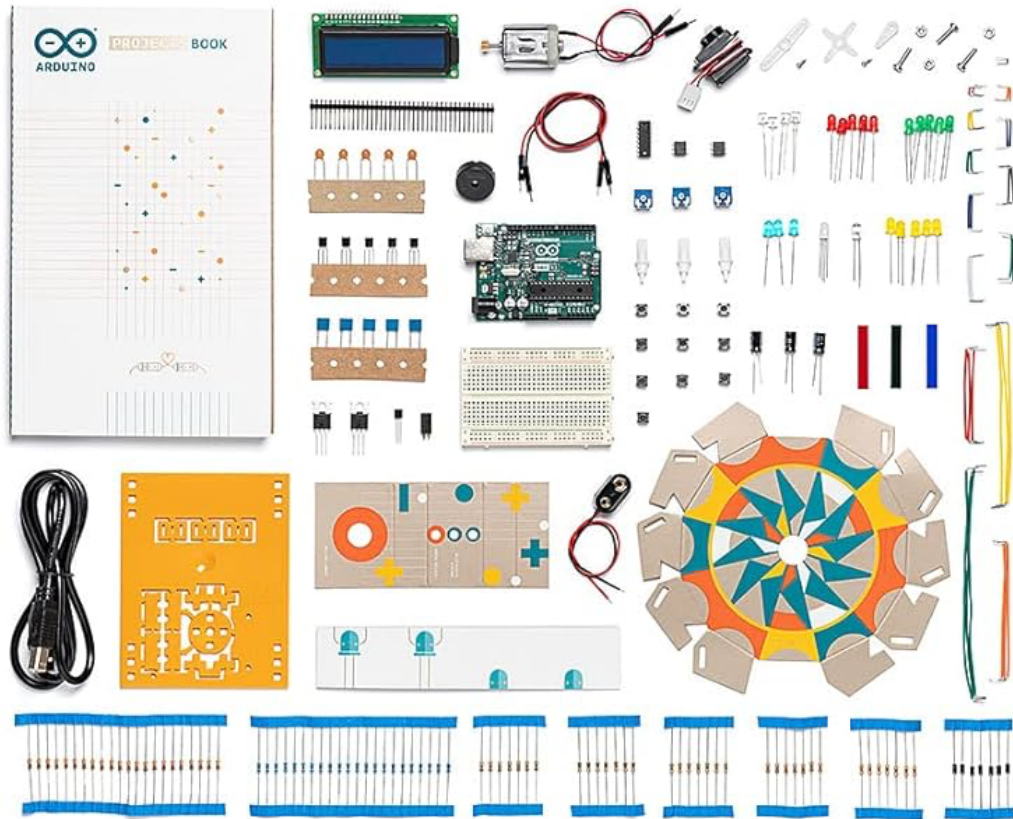
Flight Dynamics in Your Hands A complete platform for exploring unmanned aerial vehicle (UAV) control systems:

- Radio-frequency multi-channel controller
- Electronic speed controllers (ESC)
- Flight control module for stabilized, programmable operations

 *Ideal for research labs and courses on drones, robotics, and advanced control systems.*

Arduino Sensor Pack

From Prototype to IoT Innovation A versatile kit with an extensive range of motors, drivers, and sensors for rapid prototyping and experimentation:



- Brush, brushless, servo, DC, and geared motors with miniature drivers
- Sensors for light, gas, material, sound, image processing, motion, speed, pressure, flow-rate, temperature, and more
- Specialized modules: gyroscope, laser, ultrasonic, infrared, load cell, Zigbee, RF, IoT transmitters, DAQ card

💡 *Perfect for teaching electronics, embedded systems, and connected device development.*

Logic Gate Training Set

The Building Blocks of Digital Electronics A compact, hands-on board for understanding and experimenting with:

- AND, OR, XOR, NOR, XNOR, and other logic gates
- Complete circuit training for Boolean logic and combinational design

✦ *An essential foundation for courses in electronics, computing, and digital systems engineering.*





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