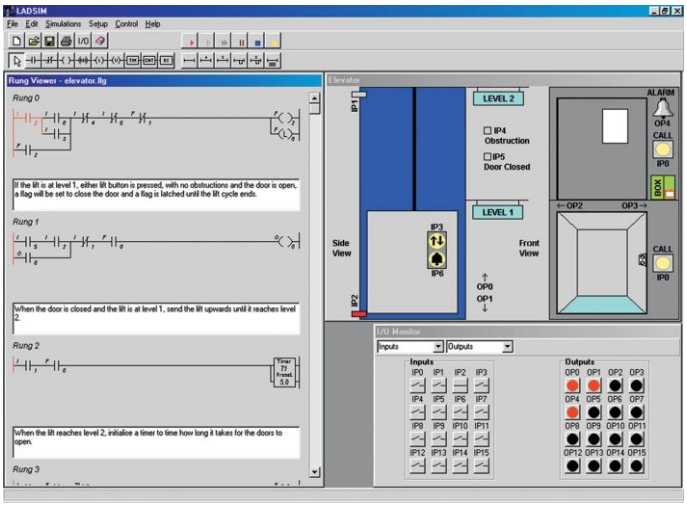
BYTRONIC
Educational Technology

Ladder Logic Simulation Software LADSIM



Key Features:

- Introduction to Ladder Logic programming
- Turns the PC into a virtual PLC
- Eight internal simulations
- PLCs can be used to control internal simulations
- Control of external device using built in I/O through an interface card
- I/O monitor

LADSIM is a fully functional ladder logic design and PLC simulation software program that incorporates the functions used in PLC ladder programming. LADSIM uses the PC as a virtual PLC.

LADSIM includes a visual editing environment for graphical programming. A simple 'drag and drop' method is used to add functions to the ladder rung, and comments can be added to each rung for documentation purposes. LADSIM functions include inputs, outputs, timers, counters, flags and shift registers. An interactive debugger is included allowing the program to be tested before being used to control a specific application.

LADSIM has eight internal simulations; Annunciator, Traffic Light, Car Park, Elevator, Drinks Machine, Packing Line, Bottling Plant, and the ICT3. Each simulation is designed to aid and test knowledge of programming in ladder logic.

LADSIM has the ability to be connected to external devices, through a suitable interface. The student can start with the internal simulations and then move onto the ICT3 simulation once completed it is then possible to connect an actual ICT3, using an interface card and control this through the real I/O. The courseware begins with a general introduction to PLCs, the various programming methods available and the fundamentals of ladder logic programming and then moves onto the functions of LADSIM. Developing programs to monitor and control each of the simulations is part of the curriculum coverage.

Curriculum Coverage

- Programmable Logic Controller; manufacturers and types
- Methods of programming:
  - Ladder diagram
  - Statement language
  - Graph type method
  - Advantages and disadvantages
- Formats: Ladder, Statement Language, Graphical Format
- Programming devices: hand held programmers, dedicated programmers, PCs' off-line programming
- Introduction to Ladder Logic:
  - Programming symbols and terminology
  - Auxiliary relays
  - Ladder equivalent of electrical circuits
  - Addressing
  - IEC1131-3 standardised terminology
- Logic terminology: AND function, OR function ,NOT function
- Ladder Logic Design and PLC Simulator (LADSIM)
- Programming in LADSIM
- Program testing: simulating the program, saving ladder diagrams, opening ladder diagrams, printing ladder diagrams, OR ladder function, deleting a branch, The NOT function
- Additional LADSIM facilities: adding a rung, inserting a rung, deleting a rung, program and add control comments.
- Further functions: the latch and unlatch functions, timer functions, on-delay timer, latched on-delay timer, counter function, shift registers, bit shift right (BSR) and bit shift left (BSL)
- Simulations: I/O monitor, traffic light, annunciator, car park, elevator, drinks machine, packing line, bottling plant, ICT3
- External control: setup procedure,
- Controlling an external device

Specification	
Functions	Visual editing environment
	Drag and drop ladder functions
	Rung comments
	Interactive debugger
	Single step and single program loop modes
	Simulation displayed when editing program
	Control of simulations from a PLC
Eight built in simulations	Annunciator
	Traffic light
	Car park
	Elevator
	Drink machine
	Packing line
	Bottling plant
	Industrial control trainer ICT3
Real I/O capabilities	12 inputs
	12 outputs
Internal functions	16 inputs
	16 outputs
	16 flags
	8 counters
	8 timers

Required

A suitable PC with Minimum; Pentium processor, 1GB RAM, 20GB HDD, CDROM Drive, USB Interface and Windows XP or above

Ordering Information

Consists of :	Software CD and Software protection dongle
	Installation instructions
	Instruction Manual
Licence Agreement	**Order Code**
Single user licence, Stand Alone	LADSIM
Additional licences, Stand Alone	LADSIM/x
10 user licence Network	LADSIM10/n
20 users licence Network	LADSIM20/n
50 user licence Network	LADSIM50/n
Additional licences Network	LADSIM/xn

Weights and Dimensions

Un-Packed		**Packed**	
Approximate Dimensions (mm)	210W x 20D x 300H	Approximate Dimensions (mm)	250W x 25D x 350H
Approximate Weights	0.5Kg	Approximate Weights	1Kg

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