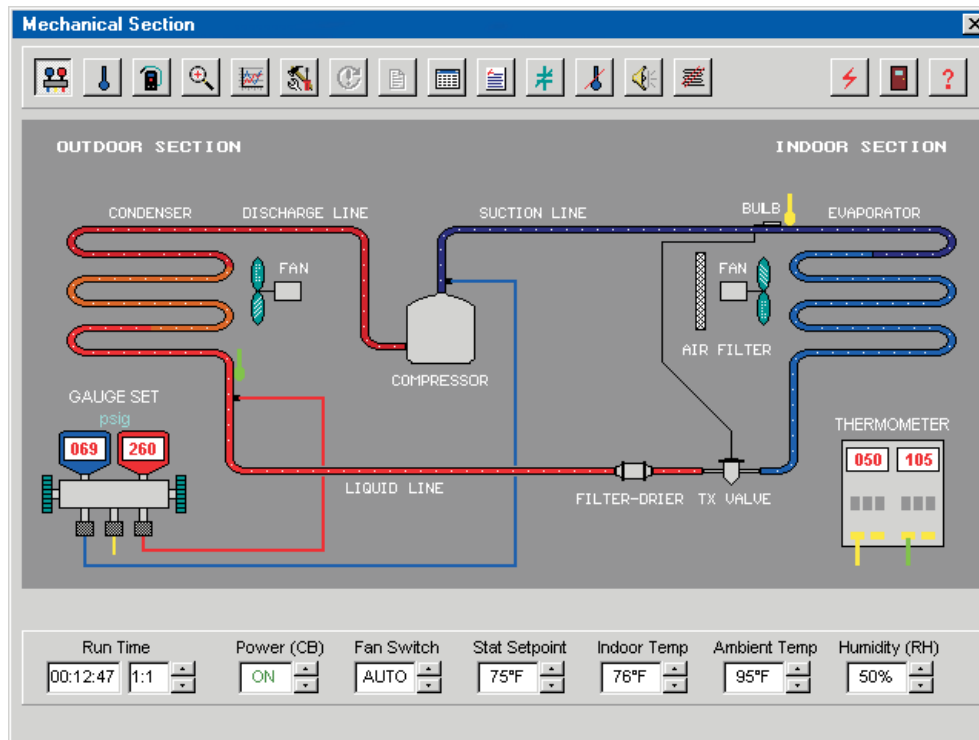


# AIR CONDITIONER SIMULATOR *SIMUAIR™*



*SIMUAIR™* simulates two generic versions of residential and light-commercial air conditioning systems, using either R-22 or R-410A refrigerant. These systems include a **packaged unit** with a capillary tube and PSC motor circuit, and a **split-system** with a thermostatic expansion valve and CSR motor circuit.

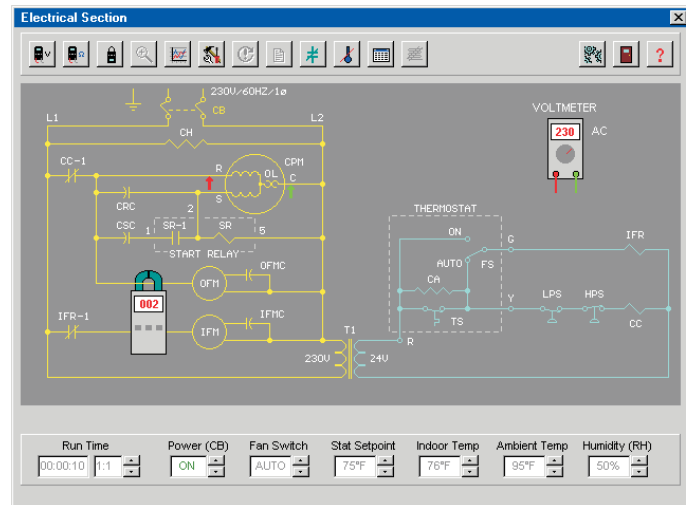
Animated mechanical and electrical schematic diagrams of the simulated system are provided in “real-time”. The **mechanical diagram** shows refrigerant flow, as well as the *liquid, vapor, liquid/vapor, and superheated vapor* states of the refrigerant. In the **electrical ladder diagram**, the controls and switch contacts constantly change state as the system operates. Providing a means of visually tracing refrigerant and current flow during operation, makes it much easier for the trainee to understand how an air conditioner is supposed to work.

Indoor and ambient temperatures, and relative humidity are adjustable and continuously updated and displayed on the screen. Settings for thermostat setpoint, limit switches, TXV, circuit breakers, and other controls may be changed by the trainee. With the capability of changing operating temperatures and relative humidity, a system may be observed under various environmental conditions; something very difficult to do with real mechanical equipment.

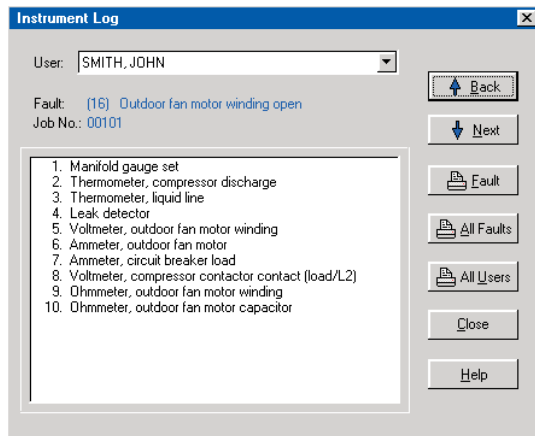
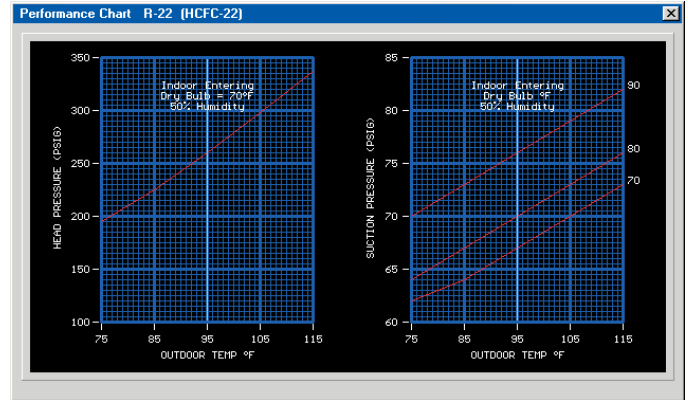
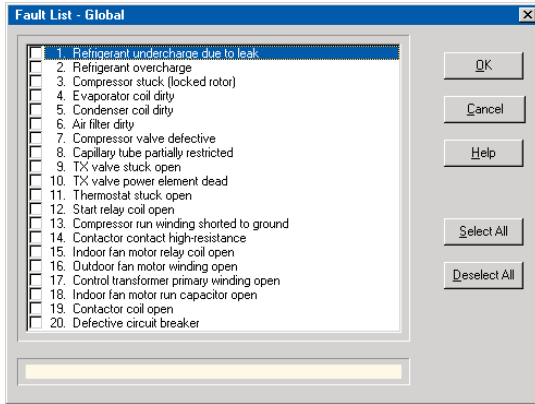
Pressure-temperature charts, performance charts, specifications, and an electrical nomenclature, are available on-screen.

The trainee can “zoom” into the system to visually inspect various components, including dirt or ice on coils, and a dirty air filter. He can also “listen” to the compressor running.

*SIMUAIR* provides easy-to-use “point-and-click” selection of meters and test points, and are saved to an *Instrument Log* to monitor the users’ troubleshooting skill. Temperatures may be displayed in either *Fahrenheit* (°F) or *Celsius* (°C), and pressures may be displayed in either *imperial* (psig) or *metric*



# AIR CONDITIONER SIMULATOR *SIMUAIR™*



## SYSTEM REQUIREMENTS

*SIMUAIR for Windows* requires the following minimum IBM compatible PC computer:

- Pentium, Core, or equivalent processor, 32-bit or 64-bit
- Minimum RAM required by operating system
- Windows 95, 98, 2000, 2003, 2008, NT, Me, XP, Vista, or 7 (32-bit or 64-bit)
- VGA/SVGA display
- Hard drive, 12.5MB available disk space
- Pointing device, such as Windows-compatible mouse

## Network Use

*SIMUAIR* network version is compatible with Novell and Windows NT/XP/Vista/7/2000/Server 2003/Server 2008

## FREE DEMO DISK

[www.simutechsystems.com](http://www.simutechsystems.com) • (800) 648-6209



## ORDERING INFORMATION

### Air Conditioner Simulator

MA-500	<i>SIMUAIR</i> Version 5.5, single license	\$595.00
MA-510	Additional stand-alone computer license	195.00
MA-560	<i>SIMUAIR</i> Network Version 5.5, 25-user	1,595.00
MA-570	<i>SIMUAIR</i> Network Version 5.5, 50-user	2,195.00
TA-500	<i>ACINST</i> Instructor Interface Module	195.00

Refer to Page 16 for multiple-license pricing and additional ordering information

(kPa/barg). The on-screen test instruments include:

- Gauge manifold set
- Thermometers
- Leak detector
- Voltmeter
- Ohmmeter
- Clamp-on ammeter

Up to 20 commonly encountered mechanical and electrical faults may be selected, as shown in the *Fault List* above.

*SIMUAIR* provides testing and troubleshooting of the devices listed below, which are commonly found in air conditioners.

Compressor	Start relay
Condenser coil	Indoor fan relay
Evaporator coil	Crankcase heater
TX valve (TXV/TEV)	Compressor run capacitor
Capillary tube	Compressor start capacitor
Filter-drier	Fan motor capacitor
Air filter	Room thermostat
Outdoor fan motor	Low pressure switch
Indoor fan motor	High pressure switch
Transformer	Fan switch
Contactors	Circuit breaker

# ORDERING INFORMATION

## METHODS OF ORDERING

### MAIL

Simutech Systems, Inc.  
PO Box 7212  
Beaverton OR 97007 (U.S.A.)

### PHONE

(800) 648-6209 (USA & Canada)  
(503) 649-9076  
Hours: 8:00 am to 5:00 pm Pacific Time

### FAX

(503) 649-8972

### INTERNET / E-MAIL

www.simutechsystems.com  
sales@simutechsystems.com

## METHODS OF PAYMENT

### U.S. CUSTOMERS

- Purchase Order from government agency, school, or corporation (OAC), Net 30-days
- Visa, MasterCard, or American Express
- Prepaid by check

### CANADA & INTERNATIONAL CUSTOMERS

- Purchase Order from government agency or school, Net 30-days, payable in U.S. funds
- Visa, MasterCard, or American Express
- Prepaid by International Bank Check, payable in U.S. funds

## SHIPPING

All orders are shipped *FOB shipping point* and a shipping and handling charge is added to invoice. Shipment is normally via *UPS ground* in USA and *UPS Air* to Canada and international. *Next-day* or *second-day air* is available upon request. For Canada and international orders, GST, local taxes, and duty are not included in our prices.

**Orders are normally shipped within 24-hours from receipt**

## SYSTEM CONTENTS

Each simulator system includes the following:

- CD-ROM
- User's Manual
- Instructor's Manual
- Technical Support, unlimited, with toll-free number (USA and Canada)

- (1) Additional licenses are required if simulators are installed and used on more than one stand-alone computer at same campus or training facility
- (2) Network versions are valid for installation on a LAN server at one campus or training facility, for concurrent use by maximum licensed users
- (3) Network versions for more than 50 users are also available

**Prices are subject to change without notice**

Note: Simutech reserves the right to refuse any order, including shipment to countries where prohibited by U.S. export laws or lacking proper international copyright protection.

Export, reshipment, or resale is prohibited without prior written permission, subject to U.S. export laws.



## PRICE LIST – MULTIPLE LICENSES FOR STAND-ALONE COMPUTERS

PRODUCT	5 LICENSES	10 LICENSES	15 LICENSES	20 LICENSES
<i>SIMUAIR™</i>	\$1,095.00	\$1,595.00	\$1,795.00	\$1,995.00
<i>SIMUPUMP™</i>	1,295.00	1,795.00	1,995.00	2,195.00
<i>SIMUREFR™</i>	1,295.00	1,795.00	1,995.00	2,195.00
<i>SIMUMKT™</i>	1,695.00	2,195.00	2,395.00	2,595.00
<i>SIMUGAS™</i>	1,295.00	1,795.00	1,995.00	2,195.00
<i>SIMUOIL™</i>	1,495.00	1,995.00	2,195.00	2,395.00
<i>SIMUHYDRO™</i>	1,495.00	1,995.00	2,195.00	2,395.00

Prices shown include a stand-alone single-license version on CD-ROM (e.g. "5-Licenses" includes a single-license plus 4 additional licenses)

Quantity of licenses can not be combined for multiple products

For greater than 20 licenses, please contact us for a quotation

Prices shown are in US Dollars

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