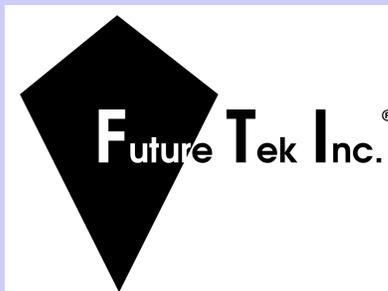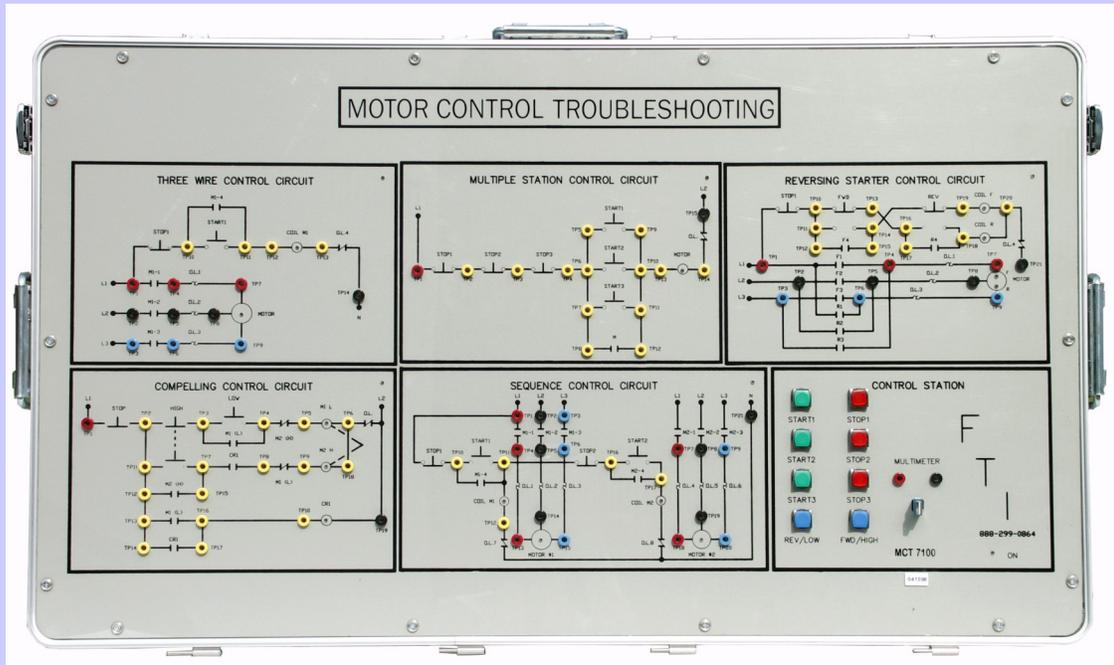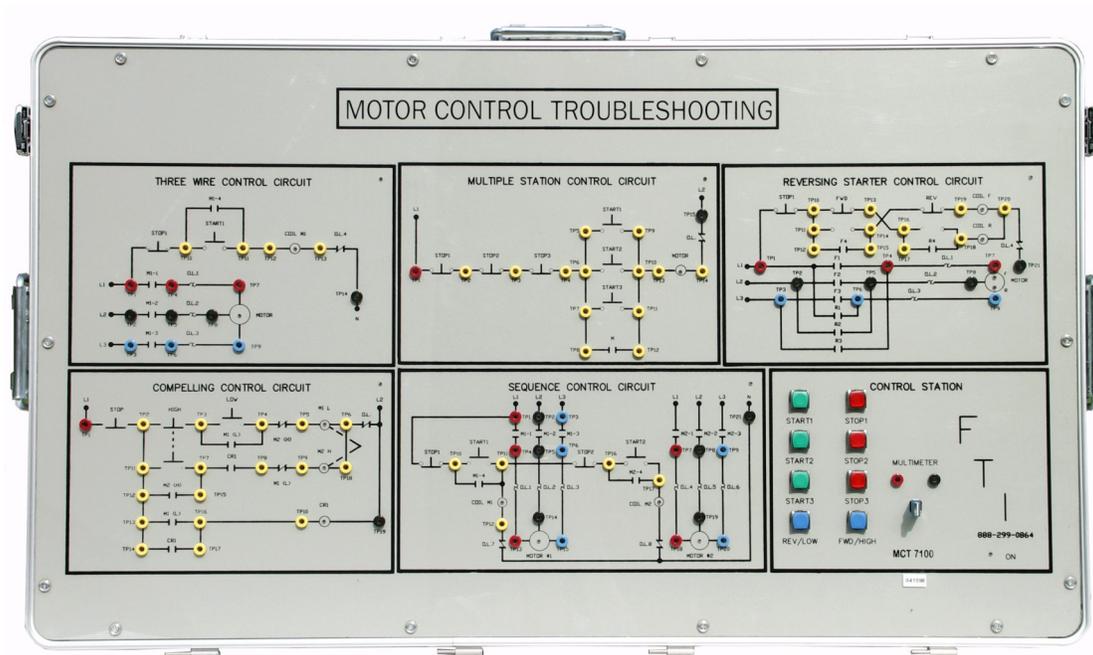# Troubleshooting Trainers

MOTOR CONTROL TROUBLESHOOTING

F T I

"Real-World" Trainers for "Real-World" Jobs

MODEL 7100 Motor Controls Troubleshooting Trainer

AN INSTRUCTORS DREAM COME TRUE

TROUBLESHOOTING AT ITS BEST!

- 152 "Real-World" Troubleshooting Problems and Solutions
- Voltage and Resistance Measurements required to resolve faults
- Detailed individual student reports provide documentation required for accreditation (Lab documentation is essential for
- instructors)
- This versatile trainer meets secondary, post-secondary, and industrial curriculum requirements
- Students and instructors love the challenges that this trainer offers
- The ICST 7100 makes Troubleshooting Labs quick and easy for the instructor
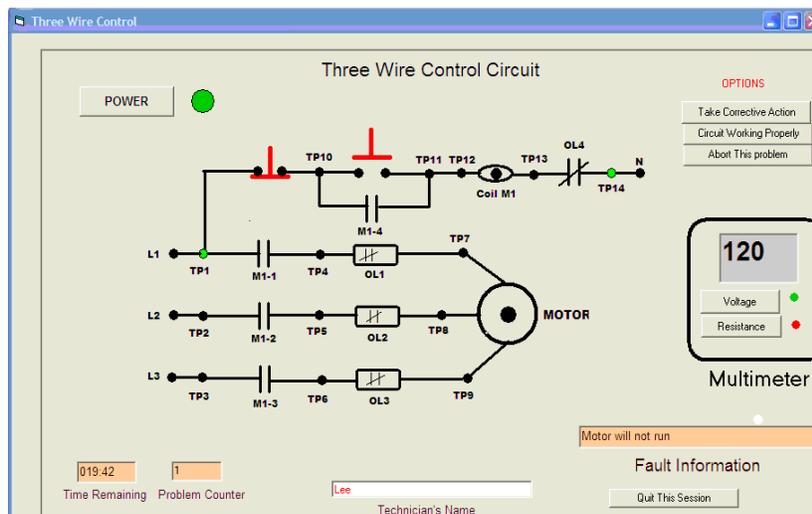
- ## 152 "Real-World" Troubleshooting Problems and Solutions

This 7100 ICST Trainer is based on a computer model of the five most common industrial motor control circuits. Each circuit has test points to check voltage and resistance. The LEDs on each circuit will illuminate indicating which particular device is energized. There are eight pushbutton switches located on the ICST 7100 panel. These serve as the control switches for each circuit. The 152 faults are as real as it gets. For example, if the coil M1 is shorted it will take out the control voltage. If the student just resets the breaker without changing out the bad coil, it will trip the breaker again. The student most ohm out the M1 coil to see if it is bad, and then replace it. After the student has fixed all problems he/she will check to see if the circuit is working properly, then go on to the next fault.

- ## Voltage and Resistance Measurements required to resolve faults

To measure voltage or resistance, simply place the test leads in two of the test point banana jacks. Either voltage or resistance values will appear on the screen depending on which mode the multi-meter is in. The student must troubleshoot the active circuit by taking voltage and resistance measurements on the panel. The Green tests points represent the location of the meter leads on the ICST 7100 trainer.

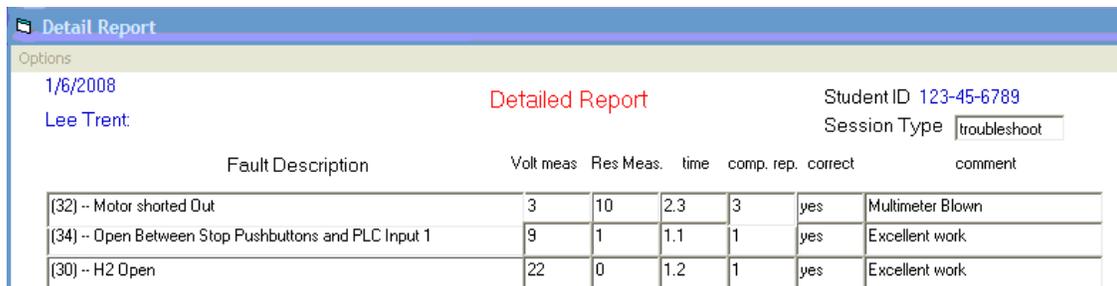This trainer has single phase control, and 3 phase power circuits.

- **Detailed individual student reports provide documentation required for accreditation (Lab documentation is essential for instructors)**

The ICST 7100 Detailed Report is A MUST FOR INSTRUCTORS!
It records each fault, voltage check, resistance check, the time required, and components replaced by each student. This allows the instructor to identify areas requiring additional training.
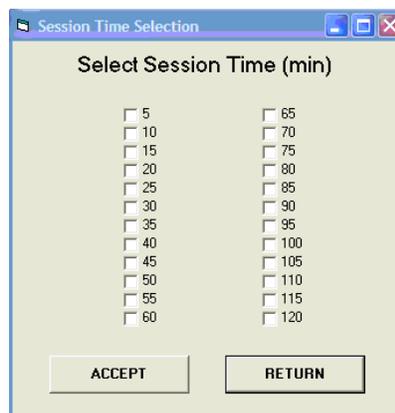
The ICST 7100 makes Troubleshooting Labs quick and easy for the instructor by producing a Detail Report on each individual student, this documentation is required for curriculum and accreditation.

It is used in industry to test new employees in the electrical field, and update existing technicians.

Detail Report

Options

1/6/2008
Lee Trent:

Detailed Report

Student ID 123-45-6789
Session Type | troubleshoot

Fault Description	Volt meas	Res Meas.	time	comp. rep.	correct	comment
(32) -- Motor shorted Out	3	10	2.3	3	yes	Multimeter Blown
(34) -- Open Between Stop Pushbuttons and PLC Input 1	9	1	1.1	1	yes	Excellent work
(30) -- H2 Open	22	0	1.2	1	yes	Excellent work

The Troubleshooting sessions time may be adjusted.

Session Time Selection

Select Session Time (min)

- 5
- 10
- 15
- 20
- 25
- 30
- 35
- 40
- 45
- 50
- 55
- 60

- 65
- 70
- 75
- 80
- 85
- 90
- 95
- 100
- 105
- 110
- 115
- 120

ACCEPT   RETURN

- **This versatile trainer meets secondary, post-secondary, and industrial curriculum requirements**
- **Students and instructors love the challenges that this trainer offers**
- **The ICST 7100 makes Troubleshooting Labs quick and easy for the instructor**
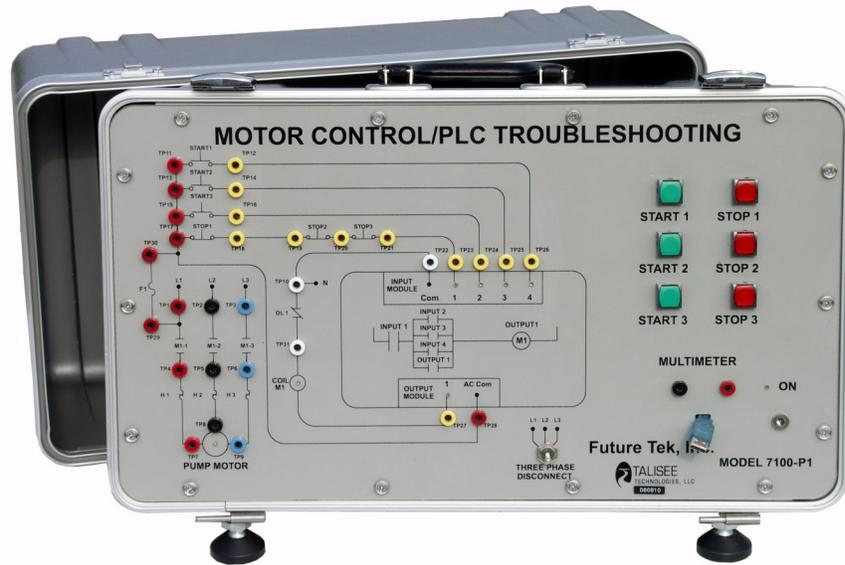
The ICST 7100 is a very versatile troubleshooting trainer that meets most all secondary, post-secondary, and industrial requirements. This trainer challenges the students keeping them motivated and interested in learning. It can be applied to introductory or advanced motor control sessions. The trainer will demonstrate the operation of control circuits and 3 phase power circuits.
Fault selection may be performed Randomly, or by utilizing a Fault Table.

If Random is selected six choices will appear. The instructor can select one of the five circuits or all circuits. In the Random mode, the software will randomly select the faults until the time runs out.
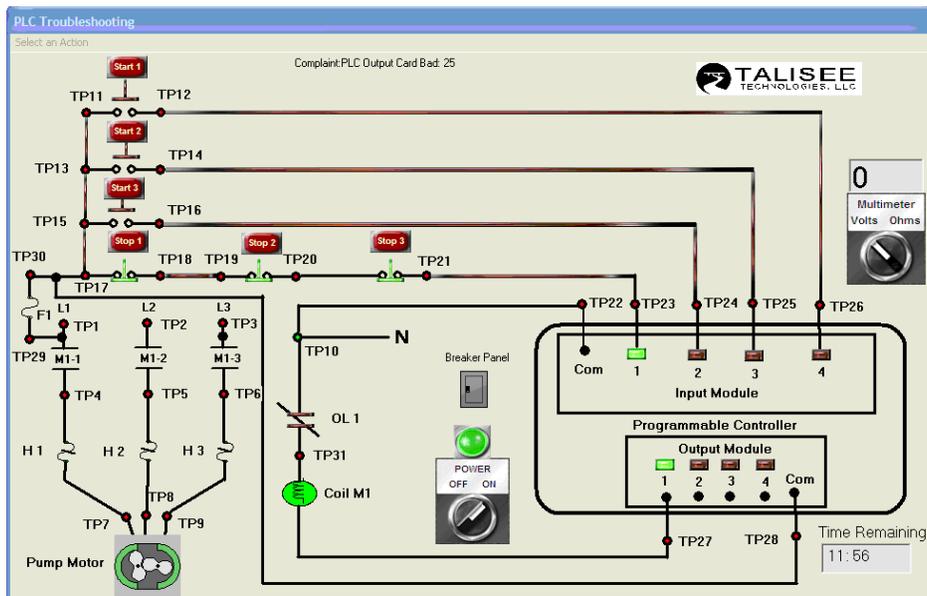
If the Fault Table is selected, the Fault Selection Table appears for all circuits. The instructor can select up to 25 faults in each circuit or 25 faults in all circuits.

Powered by computers USB port only.

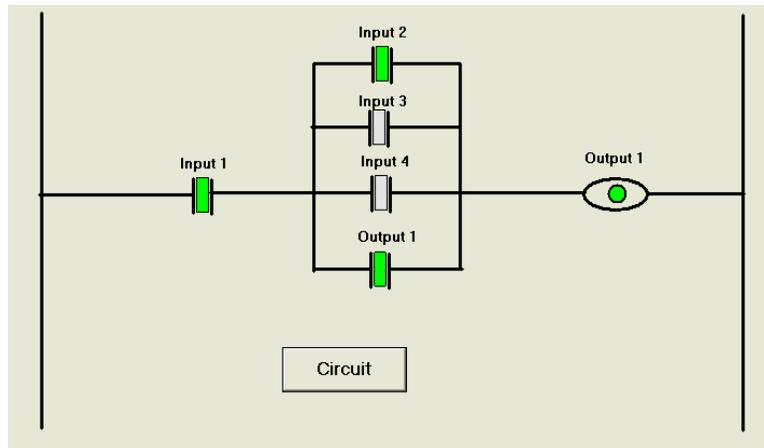# MODEL 7100-P1 Motor Controls/PLC Troubleshooting Trainer

- **51 Interactive Real World Faults**

- **Random Fault Generation or Instructor Selected Faults**

- **Voltage and Resistance Measurements**

- **Com-ing &** ... **ponent Test-Replacement**

View Active Ladder Logic To Make Troubleshooting Easy

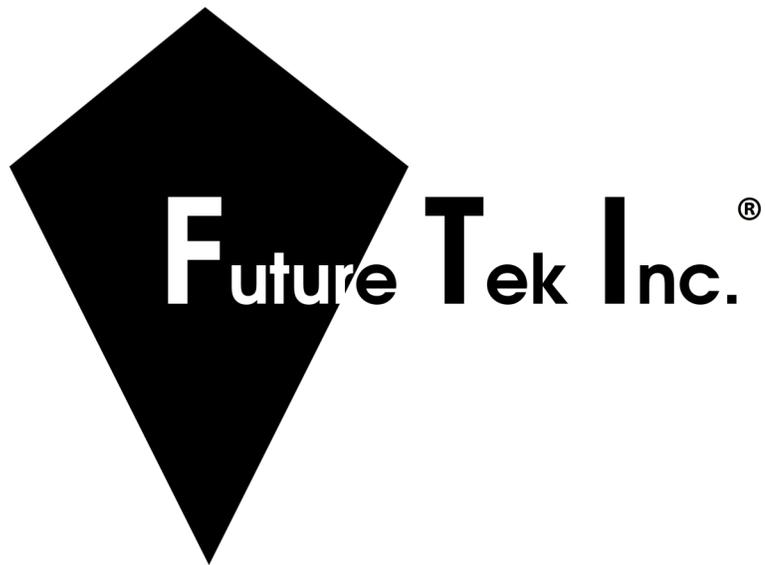|	
51 Faults	**No Fault Switches**
Improves Troubleshooting Skills	**Computer Emulates Each Circuit**
Computer Records All Actions	**Evaluates Troubleshooting Logic**
Tutorial Mode of Operation	**Generates Progress Report**
Practical Job Format	**Instructor Generated Faults**
Computer Generated Faults	**Computer Interactive Troubleshooting**

- **Computer Emulates Voltage and Resistance Measurements**
- **Real World Feed Through Voltages and Resistances**
- **A Great Tool for an Instructor to Start Teaching & Testing Troubleshooting**
- **Student Can't Check Resistance or Change Component With Voltage On**

"Real-World" Trainers For "Real-World" Jobs

Made in the U.S.A.

Future Tek Inc.®

Future Tek, Inc.

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Columbus, MS 39701

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662-328-8584 fax
www.futuretekinc.com