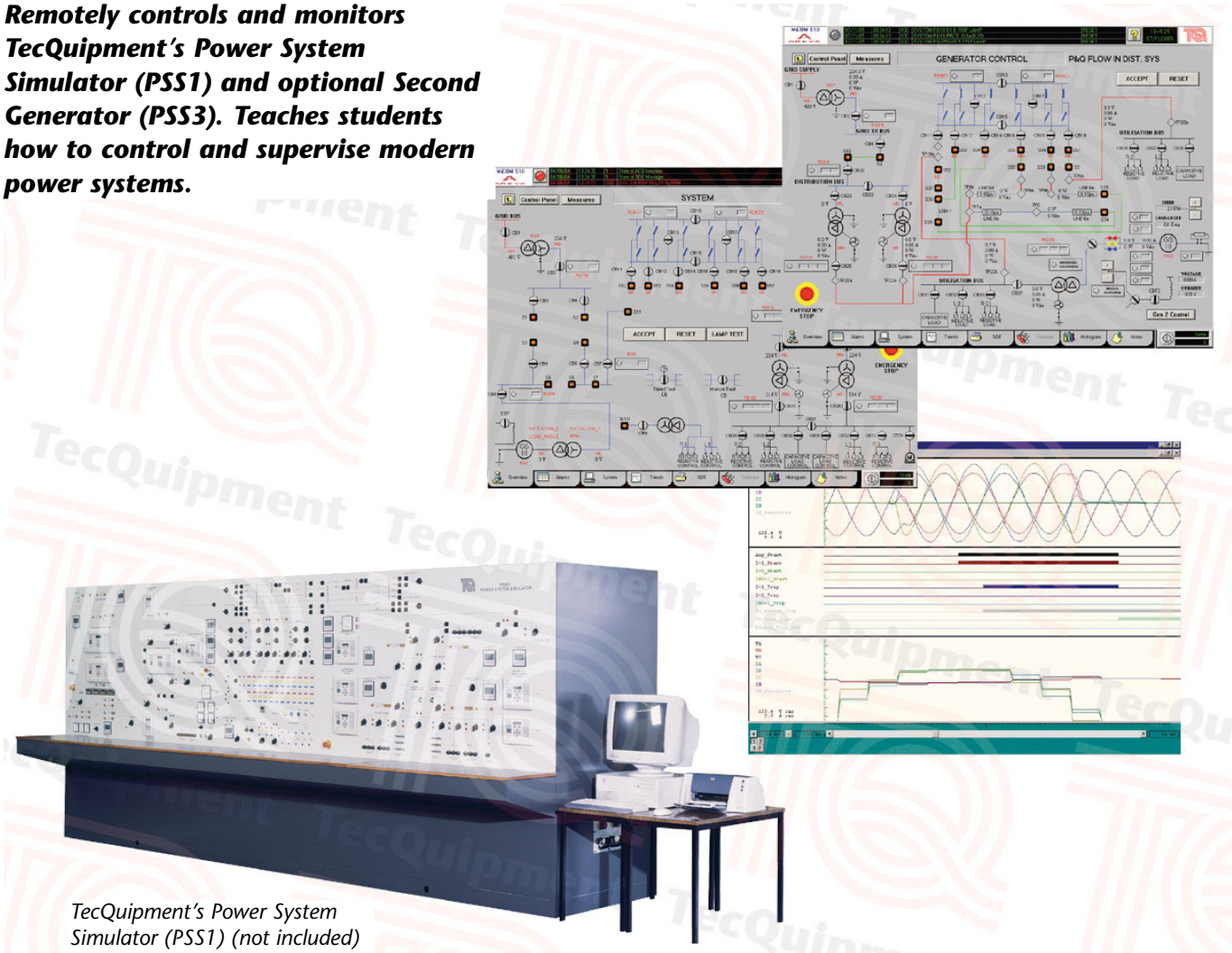
PSS2

Power System Simulator SCADA Package

Remotely controls and monitors TecQuipment's Power System Simulator (PSS1) and optional Second Generator (PSS3). Teaches students how to control and supervise modern power systems.



TecQuipment's Power System Simulator (PSS1) (not included)

- Industry-standard supervisory control and data acquisition (SCADA) software for realistic experience of power system control
- For use with TecQuipment's Power System Simulator (PSS1) to increase students' understanding of power systems
- Can connect to TecQuipment's optional Second Generator (PSS3) for remote control and supervision of embedded and central generation
- Includes alarms and logs data for detailed analysis
- Communicates with the instruments, circuit-breakers and relays of the Power System Simulator to control and collect information from the power system
- Includes high-specification computer and colour printer
- Remotely controls the generator and prime mover of the Power System Simulator and optional Second Generator

TecQuipment Ltd, Bonsall Street, Long Eaton, Nottingham NG10 2AN, UK

T +44 115 972 2611 • **F** +44 115 973 1520 • **E** info@tecquipment.com • **W** www.tecquipment.com

An ISO 9001 certified company

TecQuipment

PSS2 Power System Simulator SCADA Package

Description

The Power System Simulator SCADA Package (PSS2) connects to TecQuipment's Power System Simulator (PSS1) to train students in supervision and control of power systems.

The package includes industrial-standard SCADA software, a computer, colour printer and communications hardware. It will also connect to TecQuipment's optional Second Generator (PSS3) for supervision and control of embedded and central generation.

TecQuipment supplies the software already installed on the high-specification computer. The software does several jobs, including remote control and data display and logging. It includes programs written by TecQuipment to match experiments which students have done directly with the Power System Simulator. The software's on-screen display or 'user interface' shows real-time data and mimics the circuit-breakers (opening and closing). It also mimics the adjustment of the loads and any faults applied by the user. Other screens give details about the settings and data collected at each protection relay or instrument on the simulator.

Students select the correct screen for the experiment they want to perform. They then use the computer mouse to close circuit-breakers, set and adjust any loads and connect the grid supply (or start the generator).

Note: For safety reasons, students can only do generator synchronisation at the Power System Simulator and not with the software.

Students can use the software to log data from the simulator and analyse it. They can then compare conditions before and after faults, and see the effects of faults. They can use this information to predict power system problems and change the power system protection to prevent future problems.

Students may use the colour printer to produce hard copies of experiment results, settings and data.

Experiments

The software includes the experiments already given with the Power System Simulator (PSS1), except for synchronisation (for safety reasons).

The experiments include:

- Generator characteristics and performance
- Transformers
- Transmission, distribution and utilisation
- Power system protection

Standard Features

- Supplied with comprehensive user guide
- Two-year warranty
- Made in accordance with the latest European Union directives

Essential Ancillaries

- Power System Simulator (PSS1)

Recommended Ancillaries

- Second Generator (PSS3)

Essential Services

Electrical supply:
Powered from the Power System Simulator

Bench or desk-top space needed:
Approximately 1 m x 1 m

Operating Conditions

Operating environment:
Laboratory environment

Storage temperature range:
–25°C to +55°C (when packed for transport).

Operating temperature range:
+5°C to +40°C

Operating relative humidity range:
80% at temperatures < 31°C decreasing linearly to 50% at 40°C.

Sound Levels

Less than 70 dB(A)

Specifications

Nett dimensions and weight:
Bench or desk-top space of approximately 1 m x 1 m and a height of approximately 550 mm. Approximately 40 kg total.

Packed dimensions and weight:
1 m^3 and 60 kg

Software:

- Industry-standard supervisory control and data acquisition (SCADA)
- Full colour, compatible with Microsoft® Windows® XP (Professional)
- Multi-level security features
- Real-time display of voltages, currents and powers
- Event logging and alarm functions
- Emergency stop

Hardware:

- High-specification computer, keyboard and mouse
- Large full-colour, high-resolution LCD monitor
- RS232 (serial port) to RS485 and K bus converters

Communications standard:
Modbus and K bus (converter to simulator)

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