As part of the programme to improve science education in the country, the Academy organizes two-week Refresher Courses in Experimental Physics for the benefit of teachers in universities and colleges. For this purpose, a set of experiments and circuits have been designed by Prof. R. Srinivasan, a Fellow of the Indian Academy of Sciences. A kit of these circuits and set-ups has now been licensed to a company in Bangalore for commercial manufacture.

A list of items in the kit and the experiments that can be performed with the kit follows:

- Constant Current Source
- Temperature Controller
- Signal Generator
- Power Amplifier
- Lock-In Amplifier
- Thermal Relaxation Circuit
- AC Bridge Circuit
- DC Differential Amplifier
- Capacitance Circuit
- Furnace
- Stefan’s Constant Setup
- Thermal & Electrical Conductivity of Copper

Experiments possible:

- Calibration of a thermocouple
- Calibration of a Si diode
- Stefan’s constant of radiation
- Thermal and electrical conductivity of copper
- Thermal diffusivity of brass
- Frequency dependence of impedance and phase of a coil
- Frequency dependence of impedance of a capacitor
- Series and parallel resonant circuit
- Low pass, high pass and band pass filters
- AC bridges — Maxwell’s, De-Sauty’s and Anderson’s
- Velocity of sound in air
- Temperature coefficient of resistance of copper
- Bandgap of a semiconductor
- Metal insulator transition in La Ca manganate
- Comparison of capacitances and verifying law of addition of capacitances
- Dielectric constant of benzene and dipole moment of acetone
- Thermal relaxation of a serial light bulb
- Demonstration of working of a lock-in-amplifier
- Measurement of mutual inductance with a lock-in-amplifier
- Measurement of low resistance (0.1 ohm) with a lock-in-amplifier

Several universities, particularly in South India, have introduced these experiments in the curricula of their B Sc and M Sc courses.

Price per package of 12 kits:
Rs 50,000/-