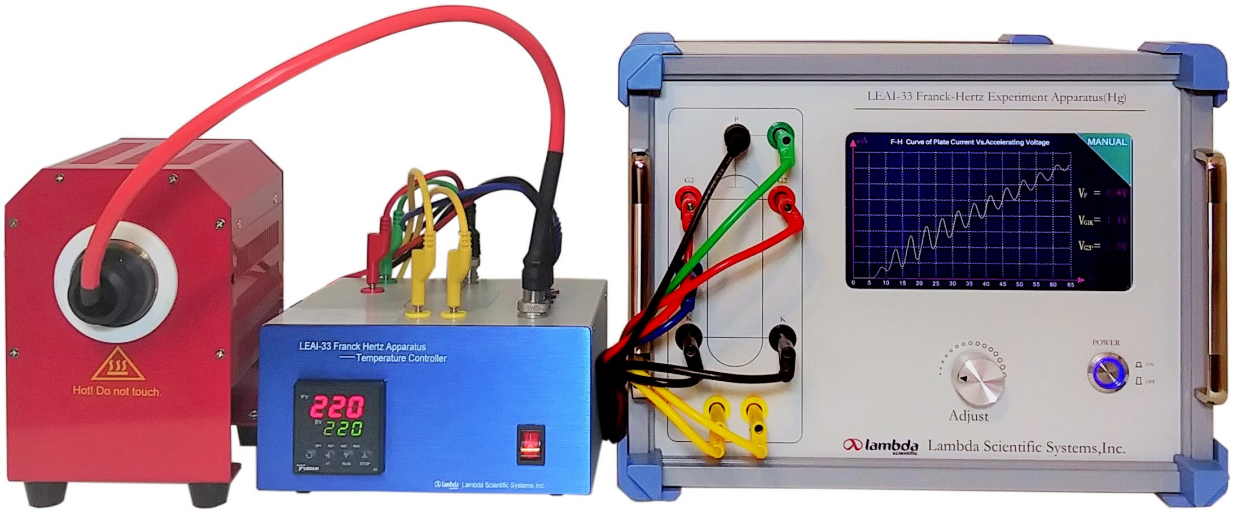
Construct, Conduct & Comprehend Physics Experiments

LEAI-33 Apparatus of Franck-Hertz Experiment - Mercury (Hg)



- Micro-current measurement accuracy ± 1%
- Multiple modes: manual data recording, direct observation on screen, data export to PC
- More than 10 peaks for 1st excitation potential measurement
- Can measure higher-level excitation potentials of mercury atoms
- Parameters setting, adjustment and display on a touch screen

The LEAI-33 Franck-Hertz experiment apparatus can demonstrate the existence of Bohr atomic energy levels of mercury atoms. Experimental results can be recorded by manual data taking, viewed on an built-in screen, or exported to PC for analysis. The most prominent feature is that in addition to measuring the first excitation potential, it can also measure higher-level excitation potentials of mercury atoms. It is an ideal teaching apparatus for physics laboratories at colleges and universities.

The instruction manual contains comprehensive materials including experimental configurations, principles and step-by-step instructions.

Using this instrument, the following experiments can be conducted:

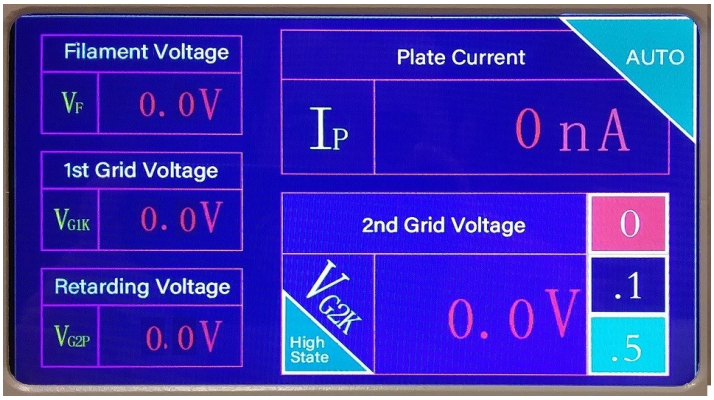
1. Understand the processes of electron-atom collision and energy exchange
2. Calculate the 1st excitation potential of Mercury atom from experimental data
3. Study the influence of temperature and voltages on F-H curve
4. Measure high-level excitation potential of mercury atoms.

Specifications

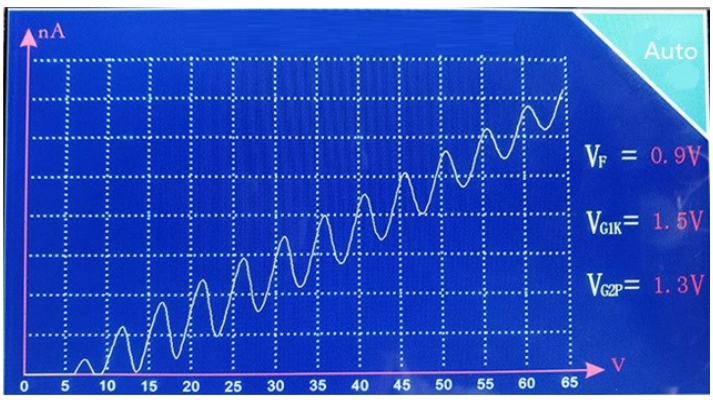
Description	Specifications
F-H curve peaks (1st potential)	≥ 10
Franck-Hertz tube	Mercury filled, diameter 18 mm, height 50 mm
Filament voltage VF	0 ~6. 5 V, adjustable
1st grid voltage VG1K	0 ~ 12 V, adjustable
Accelerating voltage VG2K	0 ~ 99 V, adjustable
Retarding voltage VG2P	0 ~ 15 V, adjustable
Micro current measurement	0.001 nA - 1.999 μA, accuracy +/- 1%
Display	7-inch LCD screen, resolution 1024 × 600
Furnace	with temperature controller
Working modes	automatic scan, manual recording data, exporting data to PC

Part List

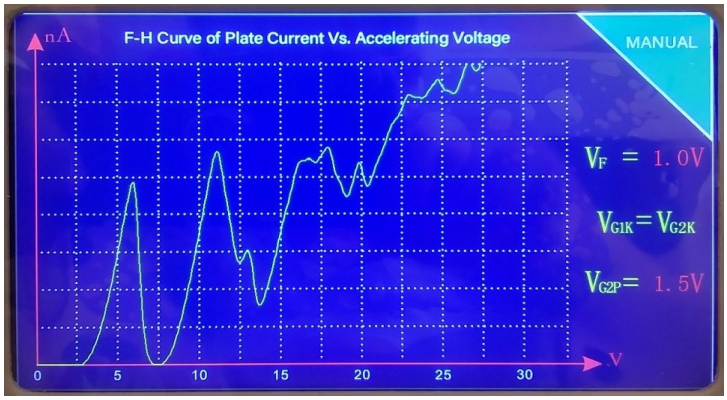
Description	Qty
Main electric unit	1 unit
Temperature controller	1
Furnace	1
A set of cables	1
Software CD	1
Power cord	1



Parameters setting, display & adjustment on screen



F-H curve of 1st excitation potential on screen



F-H curve of high-level excitation potential on screen

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Note: above product information is subject to change without notice.