Construct, Conduct & Comprehend Physics Experiments

LEAI-10 CW Nuclear Magnetic Resonance - Complete Model

Note: oscilloscope not included

- *NMR signals of H-nuclei and F-nuclei*
- *Stable & large adjustment range of magnetic field*
- *Homogeneous magnetic field*
- *Multiple coda wave peaks*
- *Reliable & affordable*

This LEAI-10 experimental system of continuous-wave nuclear magnetic resonance (CW-NMR) consists of a probe, an electromagnet, and a main control unit. It is easy to use with a high SNR. It is an ideal experimental instrument for advanced physics laboratories.

Using this unit, the following experiments can be conducted:

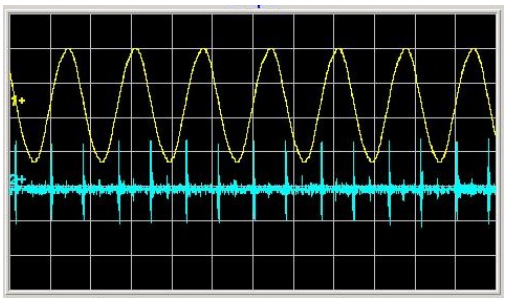
1. Understand the classical theory of NMR.
2. Learn how to study NMR phenomena.
3. Observe NMR absorption signals of H-nuclei and F-nuclei, and measure magnetic field strength.
4. Observe NMR phenomena and determine gyromagnetic ratio, *g*-factor and nuclear magnetic moment.

Specifications

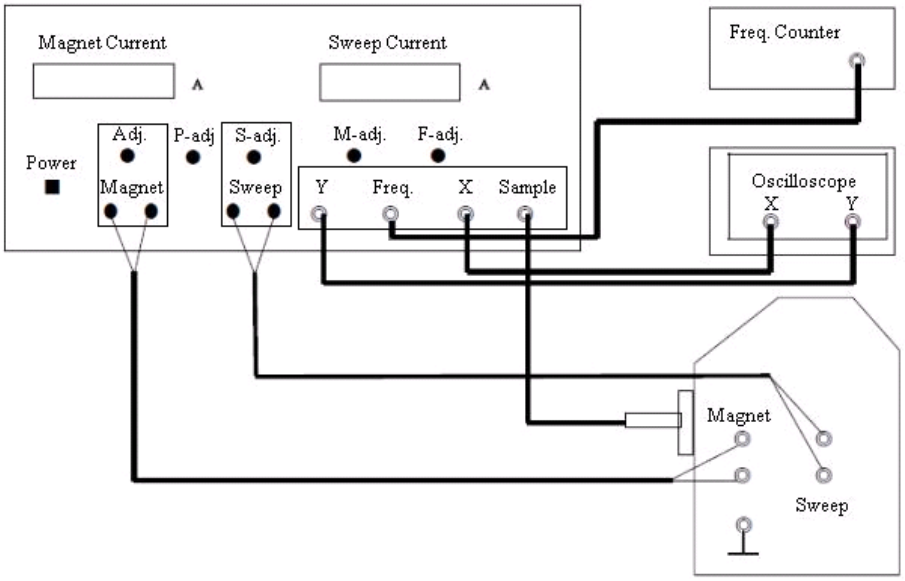
Power supply	max output voltage: ≥30 VDC
	output current: DC 0 ~ 3.0 A adjustable
	meter accuracy: 1%
Electromagnet	max magnetic field: ≥400 mT
Sweeping field	max output voltage: ≥10 VAC (effective value)
	output current: AC 0.2 ~ 0.5 A adjustable
	phase adjustment range: ≥180°
Sweeping field	2 ~ 20 mT
Signal amplitude	≥0.5 Vp-p, water sample
Sample	$FeCl_3$ or $CuSO_4$ solution (user supply), φ5 mm; solid PTFE, φ4X40 mm
Oscillator frequency	10 MHz to 14 MHz

Part List

Main Control Unit	1
Electromagnet	1
Sample Probe	2
Power Cord	1
Cables	7
Optional Teslameter	1
Optional Frequency Meter	1
Instruction Manual	1



Observed NMR signal of PTFE



Schematic of system

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

Lambda Scientific Systems, Inc.
16300 SW 137th Ave, Unit 132
Miami, FL 33177, USA
Phone: 305.252.3838 Fax: 305.517.3739
E-mail: sales@lambdasys.com
Web: www.lambdasys.com