F18 Magnetic and Electromagnetic Experiments

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Experiments:

1.Geomagnetic measurement :

> 1-1.Tangent Galvanometer

> 1-2.Determination by the magnetic moment

2.Magnetic effect of electric current and applications :

> 2-1.Current Balance

> 2-2.DC Motor

3.Electromagnetic induction and applications :

> 3-1.Faraday's law

> 3-2.Lenz's law

> 3-3.Self-inductance and mutual inductance

> 3-4.Generator

> 3-5.Transformer

4.Magnetic communication

Specification:

1. Aluminum experimental platform x1

   Aluminum alloy, a 3 D biconvex guide track ,on the top surface, is fastened by U-shaped clips at below and both sides, one of which is adhered to an meter of inclination of 45-degree. And the type of three-point level-supporter of the size 30 x12x4.5cm, at both ends, is subjected.

2. Aluminum support base with clamp and support rod 60cm   x1

3. Tangent Galvanometer   x1

4. Torque on a magnet dipole apparatus   x1

5. Current balance apparatus   x1

   5-1. Variable magnetic field include six NdFeB magnet fix on inside of the movable jaws to change magnetic field.

   5-2. Current carrying conductor set include 20 turns enameled wires to support length 30/40/50/60mm conductor.

   5-3. Hard EVA material stand 10x10x10cm   x1

   5-4. Electric balance   x1

   5-5. Conductor holder   x1

6. DC motor model   x1

   6-1. Magnet sets label N,S   x1

   6-2. Rotatable circle conductor made by enameled wire suspend by a U   type plastic holder   x1

7. Transformer model   x1

   7-1 Coil set : N300 x1   N900x1

   7-2 Transformer stand   x1

   7-3. EC type Ferrite core made ,size 92x45x31mm outside protected by clear acrylic.

8. Faraday's law tube   x1

9. Lenz's law magnet   x1

10. Lenz's law aluminum tube   x1

11. Aluminum ring and iron core with adaptor ring for ring launch experiment

12. Holder for plastic or aluminum tube   x1

13. Generator model   x1

14. Radio   x1

15. Sound pick up   x1

16. Connecting cables   x4

17. RCA connecting cable   x1

Optional:

1. AC/DC power supply   x1

2. Multiple meter   x1

3. Datalogger   x1

4. Voltage sensor   x1

5. Current sensor   x1