

Electromagnetism - Magnetic Induction

Barlow's Wheel

	1055998	Barlow's Wheel	\$49.00
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Barlow's wheel was one of the first machines to harness the interplay between electric and magnetic forces that had been discovered just two years earlier by Hans Christian Ørsted. The machine represents the right-hand rule at work.

Current Balances

	A 1052020	Current Balance (PSSC Type)	\$59.50
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Comes with the air core solenoid

	B 1052036	Current Balance Electric Complete	\$120.00
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Complete Unit WITH measuring scale and weights contained in base for safe keeping. Instructions.

	C 1035652	Current Balance Kit - PSSC	\$57.00
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IEC - Australian made. **WITHOUT AIR CORE SOLENOID.**

	A 1011094	Current Balance PSSC type WITHOUT the AIR CORE SOLENOID!	\$15.00
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Electromagnets - See also Air Coils p.161

	D 1010128	Electromagnet 4-6V 1A U shape	\$27.04
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	E 1055011	Electromagnet demonstration	\$33.80
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Using only 1.5V Battery lift 80K. Shows uses of Electromagnets in industry eg. Lifting cars in junk yard.

	F 1019004	Electromagnetic Kit(1/4) Westminster	\$295.00
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Kit for 4 students to investigate magnets and properties, magnetic field, magnetic field produced by electric current, galvanometers, induction, transformers, Eddy current, and much more. Designed in UK.

	G 1055012	Electromagnetic Kit (Gilley Coil)	\$36.00
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Experiment with induced currents, reversed polarity, magnetic lines and MORE. Complete with instructions

	H 1052998	Floating Magnets on stand	\$7.00
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	I 1019010	Force on a Conductor in Magnetic Field	\$28.00
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When the axel is placed on the rails between the poles and power turned on.

Helmholtz Coil

	1035790	Helmholtz Coil with foot 400T x 1Amp	\$80.00
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	J 1035338	Helmholtz Coils Pair.	\$150.00
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150mm Diam. Aligned on metre rule and mounted on support guides. Series of connected coils physically arranged to be parallel and coaxial. Create a uniform magnetic field in between the coils.

Induction

	K 1035339	Inductance Apparatus	\$595.00
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The IEC Inductance apparatus is a special unit designed to provide extremely high inductance. It consists of a large iron core 35x35mm section, with coils of very large number of turns of very fine wire. Experiments in inductance, electro magnetism, transformer action, resonance, oscillation and L-R time constants may be performed with or without the iron core in place. Windings may be bucked or boosted and connected in series or parallel for various experiments.

	1035645	Inductance Apparatus Spare Coil 2x10k Turns	\$203.00
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	1035644	Inductance Apparatus Spare Coil 2k,15k Turns	\$226.00
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	L 1052994	Inductance Coil VARIABLE.	\$254.00
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For measuring Inductance & Self Inductance of a current carrying coil depending on insertion of Iron Core. Handle for moving iron core in/out of coil. With printed scale on case measurements can be taken.

	M 1035427	Induction (Ruhmkorf) Coil	\$386.67
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With Removable Secondary Winding. Operates on 12volt D/C. Spark approximately 50mm.

	1035815	Induction Coil (Ruhmkorf) Spare 2nd Coil without point	\$140.00
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	1035877	Induction Coil (Ruhmkorf) Spare Point Only	\$12.00
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	1035250	Induction Coil (Ruhmkorf) Spare Point/pillar	\$20.00
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	N 1052383	Induction Coil	\$245.00
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Powerful 80MM Spark. Used for operating Spectrum Tubes /Crookes Tubes/Discharge Tubes etc... Operates from 6 to 12volts DC.

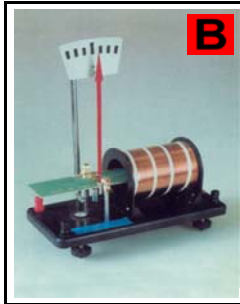
	O 1010135	Induction Coils (Mutual)	\$49.00
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Two Coils wound on separate bobbins. Primary 1340 turns (0.38mm). Secondary 320 turns (0.67mm Copper wire). Pure Iron Rod through centre will induce a current.

	1010135A	Induction Induced current Apparatus Spare Iron Rod for 1010135	\$9.00
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	P 1035732	Induction (Electromagnetic) Apparatus:	\$210.00
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Rotating Conductor around a magnet by crank. Demonstrates law of electromagnetic induction. Connects to a Sensitive Galvanometer & 1035468 Amplifier to measure low current.



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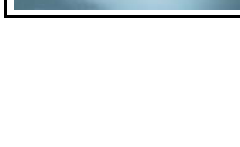
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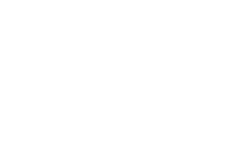
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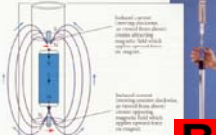





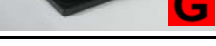


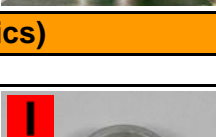
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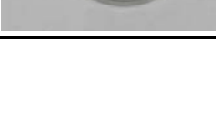
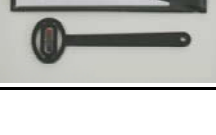








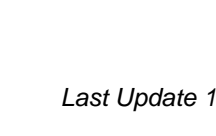



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	A	1035735	Induction Kit	\$114.92	
The theory of Induction with Detailed Instructions. Build a Transformer, Induction Motor, Simple Motor, Thompson's Ring, Eddy Currents, Laminations etc... Spare parts available.					
Contact Us for Prices and Availability of ANY Spares!					
Lenz Law					
	A	1099020	Lenz Law Demonstrator 1.5m long	\$55.00	
	A	1001001	Magnetic Induction & Lenz Law Kit	\$30.00	
Drop a magnet down tube. Shows Lenz law and Magnetic Induction. Simple demonstration of both these experiments.					
Superconductivity					
	D	1082001	Levitron - Spinning in space!	\$49.00	
The antigravity force is produced by a strong magnet in the base and magnets in the top. Spinning at between 20 to 35 revolutions per second balances all the forces.					
	E	1245001	Levitron Conductivity kit	\$98.00	
Demonstrate the Meissner Effect & Low Friction magnetic Bearing. Kit includes 25mm YBa ₂ Cu ₃ O ₇ Superconductivity Disc, Rare Earth Magnet, Non Magnetic Tweezers, 36 page Experiment Guide.					
	F	1245002	Levitron Critical Temperature Comparison Kit	\$398.00	
Compares the critical temperatures of YBa ₂ Cu ₃ O ₇ and the "HOT" Bi ₂ Sr ₃ CaCu ₂ O ₃ Super Conductor. Plus Meissner Effect. Detailed Instructions.					
		1008006	Superconductivity Disc	\$75.00	
Tangent Galvanometer					
	G	1035679	Tangent Galvanometer	\$78.00	
Demonstrates magnetic field direction of an electric current. ALSO shows that deflection is proportional to the current. Shows students the principles of simple working analogue meters.					

Magnetism - (for Magnets - See Independent Section at the end of Physics)

	H	1014092	Bar Stand: Free wheeling support for magnets. Show repulsion, Earth fields etc...	\$6.00	
	I	1010116	Compass Plotting 19mm Diameter	\$10.00	
		1222005	Floating Dove with Stand	\$4.80	
Magnaprobe and Magnaswings					
		1001006	Magnaprobe Mk I. Same as 1001005 but MORE sensitive and accurate.	\$74.50	
	J	1001005	Magnaprobe Mk II sensitive and accurate.	\$29.74	
Magnetic Field Demonstrations					
	K	1052589	Magnetic Field Demonstration 2D: Acrylic block (flat) filled with light oil & filings. Place magnet on unit (H/S or bar) watch field develops. OHP operation also.	\$28.00	
		1052589A	Magnetic Field Demonstration 2D Spare Bar Magnet	\$5.00	
		1052589B	Magnetic Field Demonstration 2D Spare Horse Shoe Magnet	\$5.00	
	L	1052593	Magnetic Field Demonstration 3D: Acrylic block 75x75x75mm filled with oil and filings with centre Hole. Insert magnet and a visual representation of the field develops.	\$39.50	
	M	1052010	Magnetic Field Demonstration 3D: Large two units show fields for a bar & horse magnet. Shows how field spreads. Free compass needles react to magnet to shoe HUGE display of magnetic field.	\$79.77	
	N	1204013	Magnetic Marbles Packet of 12	\$8.00	
Magnetic Needles					
	O	1010117	Magnetic Needle (Dip): German Design. Measures the Vertical component of the Earth's field. Hold Horizontally to measure the Declination.	\$69.00	



A	1052026	Magnetic Needle with Stand	\$4.00
B	1035669	Magnetic Needle with Stand - Deluxe	\$10.20
	1035654	Magnetic Needle without stand 100 mm long	\$4.50
	1052329	Magnetic Needle - Stand Only	\$2.00
	1052027	Magnetic Needles Theory Board.	\$20.00

Compass Needles mounted on board. React to type of magnetic field.



Magnetic Sphere

C	1003014	Magnetic Sphere Kit	\$30.00
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Learn about the Earth's Magnetic Core. Create a Mini magnetic field. Locate the magnetic poles & observe the effect.



Metals Kit

	1172058	Metals Kit	\$16.00
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Set of 12 metals each stamped for identification. For checking Magnetism.



Re-Magnetiser			
D	1204001	Re-Magnetiser Portable	\$49.50

Save your older magnets and remagnetise your ALNICO bar and horseshoe magnets. No electricity.

	1060024	Revolution Magnetic Demonstrator	\$12.00
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Rotates in magnetic stand with nose point on plastic face.

Rock Lodestone

E	1086002	Rock Lodestone 25mm single specimen	\$2.50
E	1086003	Rock Lodestone 50mm single specimen	\$6.50



Search Coils			
F	1035341	Search Coil - Axial & Lateral.	\$58.00

A search coil is used to measure field strengths and flux densities between the poles of electromagnets. An oscilloscope can be connected to measure the induced voltages.

F	1035340	Search Coil - Axial Winding	\$68.00
G	1052336	Search Coil - Current Set of 3	\$49.50

Pass a current through the windings and watch the fields take shape. Set of 3 as in picture.



Electronics



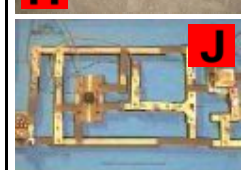
Electronics Kits

Electroflash

H	1015001	Electronics Kit Electroflash	\$97.34
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Innovative magnetic connection system allows you to build circuits quickly. Includes easy to follow Learning Guide with cartoon illustrations, storage box with separate wells for components; kit with the resistors, thermistor, light bulb, switches, speaker buzzer, earpiece, LEDs, power and signal diode, capacitors, transistors, radio, aerial coil, transformer, relay, motor, connector packs, connecting wires, magnets, copper tape, mounting etc ...

I	1015003H	Electronics Kit Electroflash - 555 Timer I.C. Kit	\$18.00
J	1015061	Electronics Kit Electroflash - Op Amplifier Kits	\$36.50



For Full List of Spares - See Page 162!

K	1035886	Electronics Kit with Photonics	\$275.00
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The **ELECTRONICS KIT with PHOTONICS** is a set of electronic components on a special panel that permits excellent experiments to be performed to fit the Australian HSC curriculum. Teachers do not need electronics training.

	1035886A	Electronics Kit CD W/Teacher Notes	\$39.00
L	1035997	Electronics Kit Expandable for Basic Electronic Training	\$780.00



Electronics Trainer

M	1035446	Electronics Trainer Demo Gates	\$135.00
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Held up for students to see demonstrations of gates. Use bright LEDs. Teacher instruction on rear. Overlays for gates AND, OR, NAND, NOR, NOT, OR.

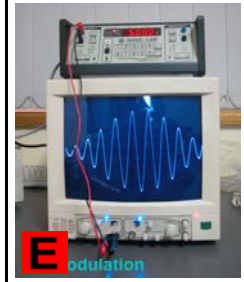




A	1035439	Electronics Trainer Digital Logic Gate	\$159.00
	1035441	Electronics Trainer Digital Spare Leads pkt/10	\$15.00
	1035440	Electronics Trainer Digital Spare Manual	\$15.00
B	1035443	Electronics Trainer Systems with manual	\$220.00
Uses digital logic for students to create working systems of their own design. Illustrates how to control machines, alarms etc...			



	1035445	Electronics Trainer Systems Spare Leads	\$19.00
	1035444	Electronics Trainer Systems Spare Manual	\$15.00
	1085014	Hall Effect Semiconductor P-type	\$70.00
	1035580	Hall Effect Spare - Probe & Cable Axial	\$109.00
	1035579	Hall Effect Spare - Probe & Cable lateral	\$109.00



C	1035337	Hall Effect with Power Supply & probe	\$449.00
To measure the magnetic fields of solenoids or permanent magnets. Field strengths in range of 0-10 or 0-100 millitesla measured. Parts, accessories available. 300 x 152 x 105mm			

D	2007001	Microcontroller	\$99.50
Introductory kit to microcontrollers, sensors and programming through 100 experiments. 144 page experiment manual.			



E	1149002	Oscilloscope Single Input 10Mhz	\$395.00
Extra Large Screen 16x20cm; Ideal for classroom Viewing. Includes Power microphone and 4mm terminals adapter. Instructions included.			

F	1149001	Oscilloscope Single Input 10Mhz	\$390.00
Oscilloscope 20MHz with probes and POWER microphone. Dual Chanel of Bandwidth to 20MHz with vertical sensitivity of 5mv/div-20v/div, horizontal sweep speed of 0.1 s/div-0.2s/div & 5x MAG function to magnify to 20ns/div.			



Thermionic Tubes			
G	1035437	Diode on Base - c/w 6X4 Tube	\$47.50
H	1035438	Triode on Base - c/w 6C4 Tube	\$49.00
	1035595	Spare - Diode on Base without Tube	\$27.00
I	1035596	Spare - Diode Tube type 6X4	\$20.30
	1035597	Spare - Triode on Base without Tube	\$30.50
I	1035598	Spare - Triode Tube Type 6C4	\$20.30

