








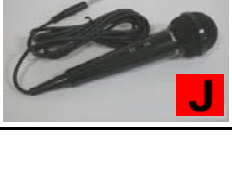











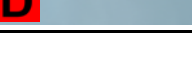










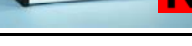






















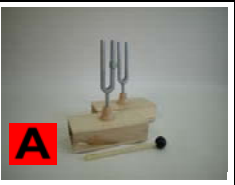
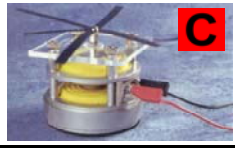




Physics - Sound and Waves

Amplifiers				
A 	A	1035435	Amplifier Audio Large 240V	\$149.00
	B	1035434	Amplifier Audio Small 12V AC/DC	\$95.00
Bells				
C 	C	1010150	Bell Electric Demo for student on Perspex base	\$18.25
	Demonstration and STUDENT unit, that works every time. All parts clearly visible and could be used on Over Head Projector. Operates on 12 Volt DC. Very Sturdy for students.			
D 	D	1052591	Bell in Vacuum with plate & Bell (Electric):	\$130.00
	Comes complete with stopcock and battery operated Bell. VERY POPULAR. Use with 1014149 Vacuum Pump.			
Chladni				
E 	E	1035275	Chladni's Plates with violin bow & sand	\$170.00
		1035574	Chladni's Plate Spare - Special Sand 1Kg	\$15.00
Doppler - See also Microwave Apparatus				
F 	F	1014430	Doppler Effect Apparatus	\$69.00
	Demonstrates the apparent change in PITCH in sound as it emanates from a moving source. Instructions Included.			
Kund's Apparatus				
G 	G	1008003	Kundt's Apparatus with Microphone & Speaker	\$288.00
	The IEC 'Kundt's Apparatus' is a new high quality item for the study of sound and waves, standing waves, resonance, musical instruments and tones. The apparatus includes the transparent resonance tube, 850mm long with metric scale,			
Microphones				
H 	H	1024024	Microphone Oscilloscope	\$28.50
	I	1104008	Microphone Power for use with Cro or Signal Generator	\$19.00
Designed for demonstrating waveforms of sound on the oscilloscope. Sensitivity allows most sound to be displayed without use of amplifier. Built in power supply.				
J 	J	1024025	Microphone UNIDIRECTIONAL for general use	\$20.00
	Unidirectional, sensitivity -76dB, frequency response 80-12000Hz. Great value for school laboratory.			
Microwaves				
K 	K	1035277	Microwave Apparatus Kit	\$635.00
	Used to teach Doppler effect, Polarization, Standing Waves, Wave Length, Velocity of Light, Michelson's Interferometer, Single, Double and Multiple Slit Diffraction, Interference Patterns, Modulation of Radio Waves etc...			
Microwaves Spares				
L 	L	1035283	Diffraction Grating Aluminium	\$22.60
		1035292A	Diode only Reverse Type	\$25.40
M 		1035289	Experiment Manual	\$20.00
	M	1035280	Lens Wax without support plate	\$30.00
M	1035279	Lens Wax with support plate	\$45.00	
N	1035285	Microphone	\$16.50	
	1035284	Polarising Grille PCB	\$20.30	
M	1035287	Prism Hollow Plastic Large	\$48.00	
M	1035288	Prism Wax Large	\$50.00	
O	1035290	Receiver 12VAC	\$283.00	
Inbuilt transistor battery and speaker with volume and sensitivity control. Scale of 1-10 is shown on meter. Inbuilt amplifier and speaker monitors signals.				
	1035292	Receiver Diode only, Forward Type	\$25.40	
	1035291	Receiver Diode Probe Assembly	\$51.00	
L	1035281	Reflector Aluminium Large	\$9.00	
L	1035282	Reflector Aluminium Small	\$7.90	
L	1035286	Reflector Partial, Hardboard	\$15.00	
P	1035293	Transmitter 12VAC	\$200.00	
Transmits continuous wave, modulated wave at 100kHz, 1kHz, 100Hz, voice or external signal. Microphone supplied.				
Organ Pipe				
R 		1010113	Organ Pipe wooden with graduated piston	\$24.50
	Shows how the note produced depends upon the pipe's length. Length varied by the piston.			
R	1035430	Oscillator V.L.F. - AC Sine Generator	\$120.00	
The IEC Very Low Frequency Oscillator provides a sine wave output of 0.1Hz.15V peak to peak and output current is up to 5mA. Accuracy of frequency is about +-5%. A press button will stop the oscillation and hold the output at 7.5V.				



	Resonance Apparatus		
	A 1035273	Resonance Apparatus Advanced	\$159.00
	Designed to perform standard experiments for resonance in air. Complete with water reservoir, resonance tube, tuning fork, hose and aluminium support rail with 1 metre scale. Instructions included.		
	B 1035271	Resonance Apparatus Funnel	\$98.00
	Glass Tube & Support. Consists of 2 glass vessels connected by tubing mounted on a retort stand (not included). By raising and lower the reservoir vessel, different air volume lengths are obtained.		
	1035874	Resonance Apparatus Spare Glass Funnel	\$39.60
	1035875	Resonance Apparatus Spare Glass Resonance Tube	\$32.80
	Resonance Box		
	C 1011146	Resonance Box with Tuning Fork 640HZ	\$18.00
	C 1011140	Resonance Box with Tuning Fork C256	\$24.34
	D 1011141	Resonance Box with Tuning Fork C512	\$24.34
	E 1011142	Resonance Box with Tuning Fork E323	\$24.34
	F 1011143	Resonance Box with Tuning Fork G384	\$24.34
	Resonance Box Spares		
	1011140A	Resonance Box Sp Box & Hammer C256	\$5.50
	1011141A	Resonance Box Sp Box & Hammer C512	\$5.50
	1011142A	Resonance Box Sp Box & Hammer E320	\$5.50
	1011146A	Resonance Box Sp Box & Hammer E640	\$5.50
	1011143A	Resonance Box Sp Box & Hammer G384	\$5.50
	1104016	Resonance Rods (Singing) 5 rods	\$75.00
	Set of 5 rods of varying sizes. Generate ear piercing sound as you slide your fingers along the rod.		
	G 1035270	Resonance Tube Aluminium Anodised	\$43.00
	Ripple Tank		
	H 1035295	Ripple Tank & Kit	\$285.00
	All components included to set up and operate. Designed to stand alone or fit onto the Over Head Projector for class demonstration. The parts listed indicate what is supplied in the kit.		
	1035301	Ripple Tank & Legs without kit	\$106.00
	1214007	Ripple Tank Projection - with Strobe	\$295.00
	Ripple Tank Projection with Strobe & Frequency Meter. LED stroboscope (Frequencies 30 to 100Hz in 0.1Hz steps). Screen size 30x30cm allows a very detailed and clear image. Wave properties such as Reflection, Refraction, Diffraction, Interference, speed of propagation, Doppler effect etc... can be shown. With detailed instructions, drawings and accessories to do all the experiments.		
	I 1214006	Ripple Tank Projection	\$295.00
	30x33cm screen. Connected to a Vibration Generator (supplied) or a Signal Generator (Dual Signal Generator - 1052320 or Wave Lab - 1035719 - NOT SUPPLIED!). Shows on the screen provided Reflection, Refraction, Interference Phenomena etc...		
	J 1214007	Ripple Tank Projection	\$295.00
	Ripple Tank Projection with Strobe & Frequency Meter. LED stroboscope (adjust & read frequency 30 to 100Hz in 0.1Hz steps). Screen size 30x30cm allows a very detailed and clear image. Wave properties such as Reflection, Refraction, Diffraction, Interference, speed of propagation, Doppler effect etc... can be shown. With detailed instructions, drawings and accessories to do all the experiments.		
	Ripple Tank Spares for 1035295		
	1035296	Ripple Tank Spare Barriers set of 4	\$13.60
	1035802	Ripple Tank Spare Globe QI 12V 35W	\$2.40
	1035865	Ripple Tank Spare Illuminator Only	\$29.00
	1035300	Ripple Tank Spare Instruction Book	\$6.20
	1035299	Ripple Tank Spare Ripple Maker Support Bar	\$10.00
	1035553	Ripple Tank Spare Rippler Adjustment Box 12V	\$87.00
	1035876	Ripple Tank Spare Wave Generator Cams pair	\$5.40
	1035297	Ripple Tank Spare Wave Generator/Ripplers set of 3	\$12.00
	K 1035272	Savart's Tone Wheel	\$74.00
	Signal Generators		
	L 1052320	Signal Generator Dual Sound Wave	\$390.00
	Microprocessor Signal Generator produces 2 sets of oscillating waves with frequency up to 40kHz that can be added, shifted or one modulated by the other. Waveforms can be sine, triangular or sawtooth. Oscilloscope can be used to view waveforms etc. Power is digitally controlled and system allows any frequency entered. External inputs can be applied. High power output that can drive speakers.		

	A	1035719	Signal Generator "Wave Lab" 240V AC	\$625.00	
	Special dual wave Signal Generator for the study of wave theory. This microprocessor generates 2x sets of very accurate and absolutely stable frequencies up to 40kHz that can be added to one another.				
	B	1035743	Signal Generator "Mini-Wave"	\$270.00	
	A very compact Digital Signal Generator which provides Waveforms of Sine, Square, Triangle and Sawtooth. It is crystal locked, therefore the accuracy is extremely high (approx 0.01%) and stability is perfect.				
	C	1035431	Signal Generator High Power	\$385.00	
	Frequency range 0.1 Hz to 100kHz over 6 ranges. 240/220V AC 50/60Hz.				
	D	1035428	Signal Generator TRIMODE	\$565.00	
	Metered & Regulated Power supply of 250mA out. Signal 0.1 to 100KHz. Audio Amplifier with high & Low Sensitivity Inputs. Outputs for Oscilloscope & Internal speaker. Popular.				
		1035285	Signal Generator Wave Lab Spare Microphone	\$16.50	
	Siren Disc				
	E	1035274	Siren Disc Aluminium	\$42.00	
	Demonstrates that a musical note is obtained from a rapid succession of regular impulses. Metal with 4 rows of holes to give tone pattern. 190mm diameter with rod for rotation.				
	F	1035278	Siren Disc Blow Tubes Brass	\$5.50	
	A curved Brass tube one end formed to a jet. Nickel plated. Approximately. 600mm long x 6mm Diameter.				
		1035590	Siren Disc Spare Stem 10.6mm diameter	\$5.70	
Sonometer					
	G	1010114	Sonometer 2 wire pattern	\$79.00	
	H	1104015	Sonometer Electronic with Wave Detector	\$390.00	
		1011103	Sonometer Spare Wire set of 6 Steel for 1010114	\$20.00	
	I	1104012	Sound Machine	\$290.00	
	Demonstrate the interference of sound. Calculate the speed of sound. Observe the NODES on your CRO.				
	J	1137026	Sound Meter Level Digital 40-130dB	\$90.00	
	Provides both automatic and manual ranging. Record Max. and Min. Range 40dB SPL to 130dB SPL. Frequency range 300Hz to 6000Hz.				
Speakers					
	K	1035432	Speaker (Loudspeaker) - Small 8Ω, 4mm terminals	\$35.00	
	L	1035721	Speakers for Signal Generator Lab Pair	\$64.00	
Tuning Forks					
	M	1014017	Tuning Fork Adjustable to 7 Frequencies	\$29.50	
	Adjustable weight allows for tuning. C128/D144/E160/F170.7/G192/A213.3/ & B240. Length 20cm.				
		1052606	Tuning Fork Ali Deluxe 128Hz	\$12.50	
	N	1052602	Tuning Fork Ali Deluxe C256	\$14.87	
	O	1052604	Tuning Fork Ali Deluxe E320	\$14.87	
	P	1052605	Tuning Fork Ali Deluxe G384	\$14.87	
		1052608	Tuning Fork Ali Deluxe 426Hz	\$12.50	
	Q	1052603	Tuning Fork Ali Deluxe C512	\$14.87	
	R	1052607	Tuning Fork Ali Deluxe 640Hz	\$12.50	
	S	1010407	Tuning Fork Blue Steel 128Hz	\$6.90	
	S	1010109	Tuning Fork Blue Steel C256	\$6.76	
	S	1010110	Tuning Fork Blue Steel C512	\$6.76	
	S	1010111	Tuning Fork Blue Steel E320	\$6.76	
	S	1010420	Tuning Fork Blue Steel 440Hz	\$6.90	
	S	1010409	Tuning Fork Blue Steel 480Hz	\$6.90	
	S	1010408	Tuning Fork Blue Steel 640Hz	\$6.90	
	S	1010112	Tuning Fork Blue Steel G384	\$6.76	

	A	1052008	Tuning Fork Set of 2 Adjustment Sympathetic	\$69.00		
	B	1010115	Tuning Fork Set of 8	\$30.00		
			Consists of C/D/E/F/G/A/B in wooden case.			
Vibration Generators						
	C	1043004	Vibration Generator (UK STYLE)	\$98.00		
				Dimensions 100x100x90mm. Frequency Response 30-10000Hz. Amplitude Output 4mm Maximum. Electrical Input 5w. Weight 1Kg.		
		1043005	Vibration Generator Accessories	\$32.00		
			1 x spring Rod & 1x spring Plate			
		D	1035276	Vibrator for Strings	\$115.00	
			Melde's Apparatus. To show Standing Waves for investigation. Vibrates string at 50Hz. Weights to alter pattern.			
		1104002	Vibrator Variable for String Analysis	\$160.00		
			Variable frequency, Variable amplitude shown along a length of cord. Demonstrates standing waves and nodes. Also velocity, frequency & wavelength.			
	E	1010108	Wave Demonstration Spring Set	\$25.00		
	F	1001004	Wave Kit Complete - 1 metre long	\$145.00		
				Show Transverse waves, propagation, Superimposition, Amplitude, Decay, Stationary waves & modes, Harmonics etc...Instructions.		
		G	1035269	Wave Motion Apparatus	\$85.00	
			Powell's Pattern. Demonstrate form and propagation of longitudinal and transverse waves. A series of vertical rods are raised and lowered by cams. Hand rotated. Size 480 x 80 x 365mm			