AQA B PHYB1a

Spec Ref	Topic	TAP episode	comments
	synthesising sounds electronically	311-8	
	longitudinal and transverse waves, polarisation	309, 313	
	speed, frequency, wavelength, amplitude, intensity, phase $c = f\lambda$	311	
	experiment for the speed of sound in air	311	
	Intensity of sound in W m^{-2}, variation with distance		
	Intensity α amplitude^2, dB scale		
	curves of equal loudness		
	range of normal adult human hearing and deterioration		
	standing and progressive waves.	308/324	
	superposition and standing waves.	320, 324	
	***F=1/2 l √(T/μ),* Harmonics and overtones**	324	
	stationary waves in closed and open pipes	324-10	
	beat frequency	311-7,	
B	**sound recording and playback systems**		
	sampling audio signals for transmission in digital form.		
	Pulse Code Modulation		
	noise in communication systems & recovery of signal		
	required bandwidth = 2 × maximum frequency in baseband		
	filtration techniques for audio files		
C	**audio CD/DVD read/write system**	504	How lasers work only
	laser and diffraction grating	322	
	Young slits experiment, $w = \lambda D/s$	321	
	$n\lambda = d \sin\theta$ phase difference	322	
D	**electromagnetic spectrum**	314, 314-1	
	carrier wave, modulation		
	time-division multiplexing		
	compare fibre optics, copper cable and satellites		
	reflection, refraction, refractive index	317	
	total internal reflection, critical angle	318	
	cladding and sheath, graded-index fibre	318-2	
	energy losses & dispersion in fibre optic transmission	318-2	
	polarised waves and the need for aerial alignment	313-5	
	typical range on Earth's surface		

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