

01 Table 1 shows four stages in converting sound into a digital form.

Show the correct order for the stages by labelling them with the numbers 1– 4 (1 being the first stage).

[3 marks]

Table 1

Stage	Order (1 – 4)
binary representation of level stored	
microphone picks up sound waves	
value read at specific point and rounded to a level	
converted to an electrical analogue signal	

02.1 A sound engineer is recording a singer.

The engineer is using a sampling rate of 4000 Hz and a sample resolution of 4 bits. What is the minimum file size of a 7 second recording? Your answer should be given in bytes. You should show your working.

[4 marks]

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Answer:

02.2 The sound engineer currently uses a sample resolution of 4 bits which enables a sample to be stored as one of 16 different bit patterns. She wants to increase the number of bit patterns available from 16 to 32. Shade one lozenge which shows the minimum sample resolution (in bits) she can choose that will allow her to do this..

[1 mark]

- | | |
|------------------|-----------------------|
| A 3 bits | <input type="radio"/> |
| B 5 bits | <input type="radio"/> |
| C 8 bits | <input type="radio"/> |
| D 16 bits | <input type="radio"/> |