

## Resonance frequencies of Helmholtz resonators with Cobra3 1.5.08-11



### What you can learn about ...

- Cavity resonator
- Resonance frequency
- Acoustic resonant circuit

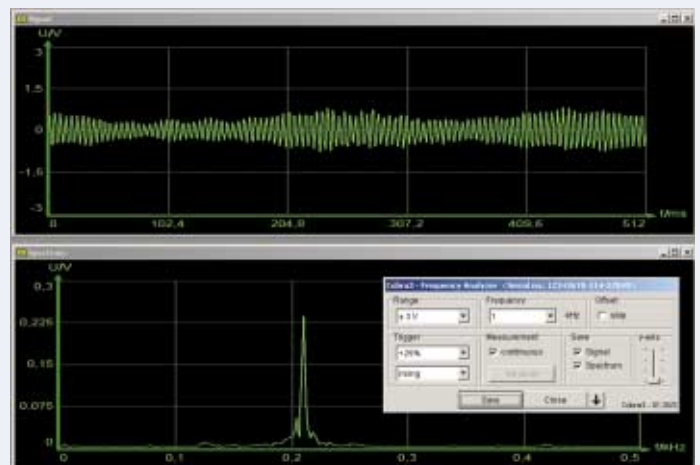
### Principle:

Acoustic cavity resonators possess a characteristic frequency which is determined by their geometrical form. In this case the resonator is excited to vibrations in its resonance frequency by background noise.

### What you need:

Cobra3 Basic Unit	12150.00	1
Power supply, 12 V	12151.99	1
RS232 data cable	14602.00	1
Cobra3 Frequency Analysis Software	14514.61	1
Microphone with amplifier	03543.00	1
Flat cell battery, 9 V, 6 F 22 DIN 40871	07496.10	1
Glass tube, $l = 300$ mm, $d = 12$ mm	45126.01	1
Tripod base -PASS-	02002.55	1
Support rod, $l = 50$ cm, round	02032.00	1
Universal clamp	37715.00	2
Right angle clamp	02043.00	2
Measuring tape, $l = 2$ m	09936.00	1
Round-bottom flask, 1000 ml, narrow neck	36050.00	1
Round-bottom flask, 100 ml, narrow neck	36046.00	1
Connecting cord, $l = 50$ cm, red	07361.01	1
Connecting cord, $l = 50$ cm, blue	07361.04	1
PC, Windows® 95 or higher		

**Complete Equipment Set, Manual on CD-ROM included**  
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Time signal, spectrum and parameter settings for measurements on the empty 1000 ml round-bottomed flask.

### Tasks:

Determination of different resonance frequencies of a resonator depending on the volume.