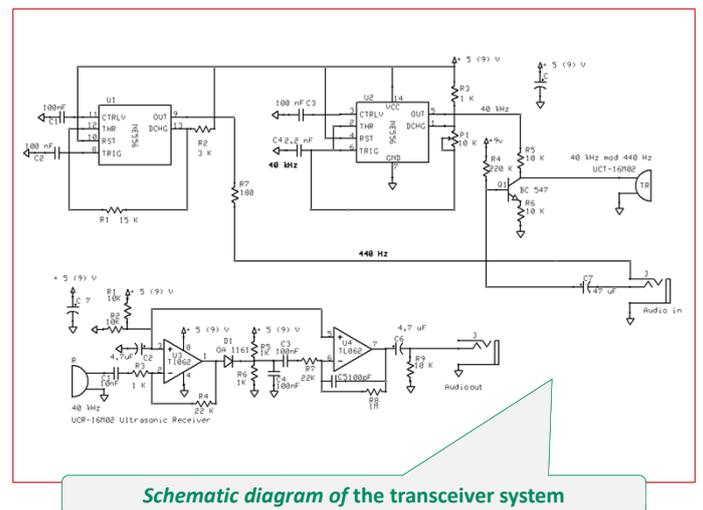
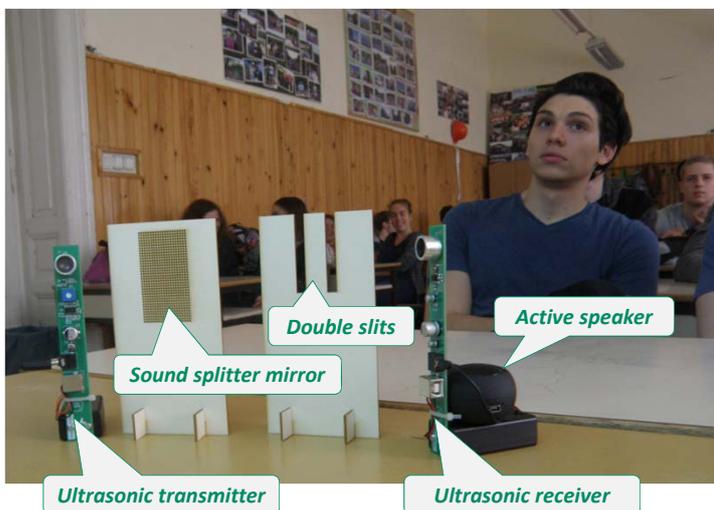
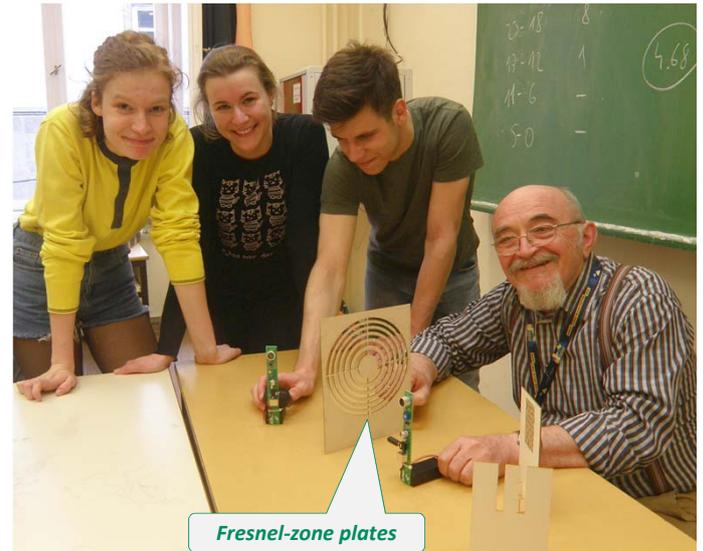


K. Piláth | ELTE Trefort Ágoston Secondary Grammar Laboratory School | Budapest | Hungary

## Physics Experiments With ultrasound

### Using amplitude modulated technic

I developed and built an amplitude modulated ultrasonic transceiver system that use a low cost distance measuring sensor pair. These sensors operate at a frequency of 40 kHz. The carrier signal (40 kHz) is modulated with audible tone (400 Hz) signal. In the receiver site after the demodulation we get hearable sounds that use a computer speakers system. Since the device produces 0.85 cm wavelength sound wave in the air. This wavelength is an ideal tool to demonstrate interference experiments.



This method helps to demonstrate the Lloyd's mirror experiment, or Young's double slit experiment in ultra sound range. But it also helps to demonstrate a Michelson-interferometer, or an A4-sized paper engraved Fresnel-zone plates which will allow the focusing of ultrasounds.



The results of these ultrasonic experiments can be made hearable with a small active speaker.