

# patents news

## recent publications in the noise field

### Acoustics conditioner

Patent number: US6359992  
 Publication date: 19 March 2002  
 Inventor: Shen Ning, et al.

This apparatus includes an attenuator to limit excessive noise which has a circuit for comparing an output sound pressure level below a desired level, over a period. The mechanism also includes an amplifier for condition ambient sound level in accordance with the normal needs of a hearing impaired person using the conditioning apparatus. Additionally included is a switch in an electrical circuit to enable selection of attenuation of excessive noise levels or normal amplification. The switch can be controlled either manually by means of a toggle on a housing enclosing the various components, or automatically in response to the sensed noise level.

### Acoustic covering

Patent number: RU2170461  
 Publication date: 10 July 2002  
 Inventor: V.A. Golland et al.

A plate of flexible material has air perforations sealed on the outer side with a structural material layer. Perforations are made in the form of axially symmetrical ducts uniformly arranged on the plate area. Sealing layer is made of rubber and has hollows in some portions through its thickness. Diameter of hollows equals 0.1 to 1.0 of sealing layer thickness. Thickness of this layer is between 0.02 and 0.2 of total thickness of acoustic covering. The covering gives enhanced acoustic effectiveness and stabilisation at low audio frequencies.

### System and method for characterising voiced excitations of speech and acoustic signals, removing noise from speech, and synthesising speech

Patent number: US2001021905  
 Publication date: 13 September 2001  
 Inventor: Lawrence Ng, et al.

This invention uses a low power EM sensor to detect the motions of windpipe tissues in the glottal region of the human speech system before, during, and after voiced speech is produced by a user. From these tissue motion measurements, a voiced excitation function can be derived. The excitation function provides speech production information to enhance noise removal; from human speech and it enables accurate transfer functions of speech to be obtained. Previously stored excitation and transfer functions can be used for synthesising personalised or modified human speech. Configurations of EM sensor and acoustic microphone systems are described to enhance noise cancellation and to enable articular measurements.

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