

Title (en)  
Silencer arrangement for combustion engines.

Title (de)  
Schalldämpferanordnung für Verbrennungsmotoren.

Title (fr)  
Dispositif silencieux pour des moteurs à combustion.

Publication  
**EP 0589516 A2 19940330 (EN)**

Application  
**EP 93202669 A 19930915**

Priority  
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• EP 92202914 A 19920923

Abstract (en)  
A silencer arrangement for a combustion engine (1) whose exhaust gases are discharged via a exhaust pipe (3) comprises a microphone (9), a tachometer (11) for the engine speed, a control unit (13) and a loudspeaker enclosure (19). The loudspeaker enclosure accommodates two loudspeakers (15, 17) secured to a partition (21). The partition divides the volume of the loudspeaker enclosure into two subvolumes (23, 25). The subvolumes communicate with one another via a tube (27) in order to reduce the electric power required to obtain the desired acoustic power of the sound emitted by the loudspeaker enclosure. One of the subvolumes (25) is acoustically coupled to a tube (33). One end (35) of the tube is situated near the end (7) of the exhaust pipe (3). The sound issuing from the loudspeaker enclosure via the tube interferes with the exhaust-gas sound. A Helmholtz resonator (41) is acoustically coupled to the tube (33) in order to suppress undesired resonances in the tube (33). The Helmholtz resonator contains such an amount of an acoustic damping material (43) in the form of glass wool or rock wool that the quality factor QHelmh. of the Helmholtz resonator lies between the values 1 and 3. <IMAGE>

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