

**TELEPHONIC HEADSET STRUCTURE FOR REDUCING AMBIENT NOISE****Abstract**

Telephone headsets used by operators and airline pilot headsets are subject to substantial amounts of interfering ambient noise which detract from the intelligibility of incoming speech. Noise reduction circuitry does not altogether eliminate the interfering sound. A headset speaker (55) and error microphone (41) housing (10) are disclosed which enable a greater amount of unwanted noise elimination. The speaker and microphone (41) are configured closely with respect to each other and also to the user's ear. They are acoustically isolated in their own chamber. The microphone is located approximately on the speaker axis and protrudes substantially into the user's ear; and also is disposed close to the speaker cone surface. Additional acoustical tuning features include venting ports (13) in the housing, and acoustic damping padding at the microphone entrance and on either side of the speaker (55). These expedients enhance the ability of the noise-cancelling circuitry to effectively reduce the undesired noise heard by the user.