

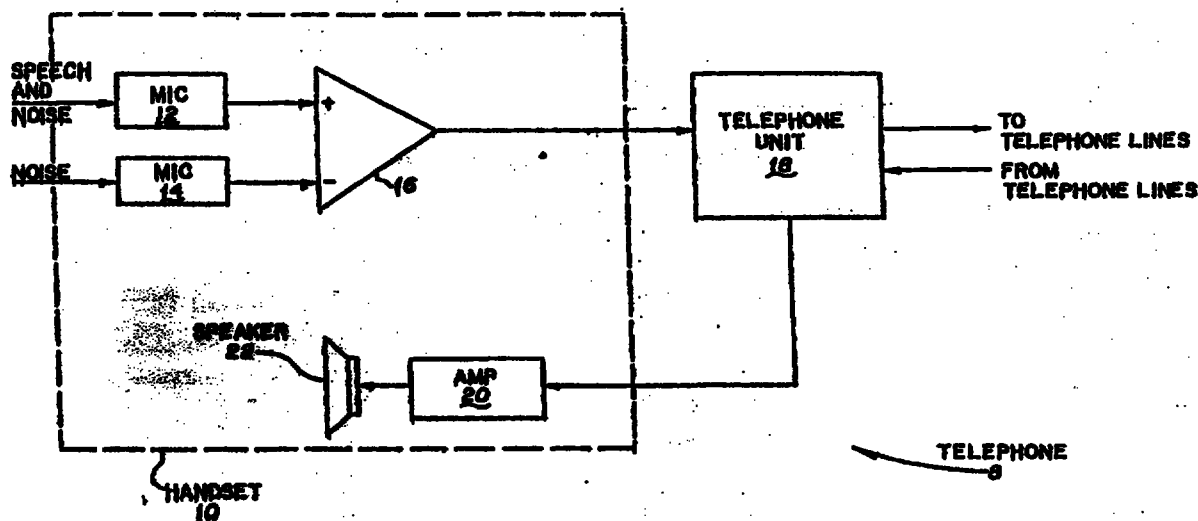


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(21) International Application Number: PCT/US95/14756 (22) International Filing Date: 14 November 1995 (14.11.95) (30) Priority Data: 08/339,126 14 November 1994 (14.11.94) US (71) Applicant: ANDREA ELECTRONICS CORPORATION [US/US]; 11-40 45th Road, Long Island City, NY 11101 (US). (72) Inventors: ANDREA, Douglas; 165 Brookville Lane, Old Brookville, NY 11545 (US). TOPF, Martin; 15 Paerdegat 13 Street, Brooklyn, NY 11236 (US). (74) Agents: KOWALSKI, Thomas, J. et al.; Curtis, Morris & Safford, 530 Fifth Avenue, New York, NY 10036 (US).	(81) Designated States: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, LS, MW, SD, SZ, UG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	

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(54) Title: NOISE CANCELLATION APPARATUS**(57) Abstract**

Apparatus for reducing acoustic background noise for use with a telephone handset (10) or a boom microphone device (100) or a boom headset (401) or the like. The apparatus includes first (12) and second (14) microphones which are arranged such that the first microphone (12) receives a desired speech input and the background noise present in the vicinity of the speech, and the second microphone (14) receives substantially only the background noise. The background noise from the second microphone (14) is converted into a corresponding electrical signal and subtracted (16) from a signal corresponding to the speech and background noise obtained from the first microphone (12) so as to produce a signal representing substantially the speech.