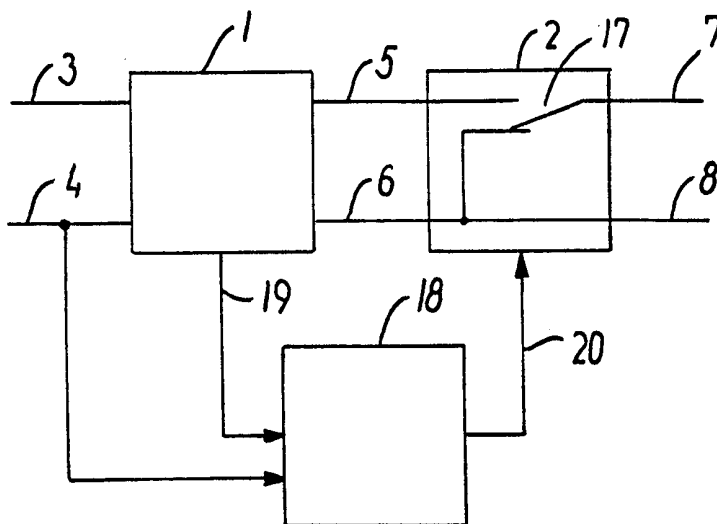




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(21) International Application Number: PCT/DK99/00262 (22) International Filing Date: 11 May 1999 (11.05.99) (30) Priority Data: 0642/98 11 May 1998 (11.05.98) DK (71) Applicant (for all designated States except US): TOCCATA TECHNOLOGY [DK/DK]; Birkedommervvej 27, 3, DK-2400 Copenhagen NV (DK). (72) Inventors; and (75) Inventors/Applicants (for US only): ANDERSKOUV, Niels [DK/DK]; Reventlovsgade 18, 4. tv, DK-1651 Copenhagen V (DK). RISBO, Lars [DK/DK]; Markmandsgade 14, 5. tv, DK-2300 Copenhagen S (DK). (74) Agent: LINGPAT; v/ Ole Jagtboe, Køjevænget 56, DK-2791 Dragør (DK).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). 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> (88) Date of publication of the international search report: 29 December 1999 (29.12.99)

(54) Title: A METHOD OF REDUCING DISTORTION AND NOISE OF SQUARE-WAVE PULSES, A CIRCUIT FOR GENERATING MINIMALLY DISTORTED PULSES AND USE OF METHOD AND CIRCUIT

**(57) Abstract**

An amplifier output stage of the class D type has a noise reducing circuit for attenuating the noise which occurs because of the switching terminals incorporated in the amplifier. The noise reducing circuit consists of an inductance which is connected between the voltage supply for the noise reducing circuit and the switch elements. A series connection of a measuring resistor and a capacitor is connected from the common point between the inductance and the switch elements. The capacitor and the measuring resistor have connected between them a current measuring circuit which in one embodiment consists of a voltage divider to whose voltage divider terminal one terminal of a diode is connected. The other terminal of the diode is connected to a measuring capacitor across which a voltage proportional to the current in the switched circuit is provided. The voltage across the measuring capacitor can be fed to a control circuit which is adapted to instantaneously break the switch elements in the switched circuit if the current exceeds a predetermined value. The current measuring circuit is used for protecting inter alia the switch elements in a class D amplifier output stage.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/DK 99/00262

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: H03F 1/52, H03F 3/217
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: H03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0369716 A2 (NEC CORPORATION), 23 May 1990 (23.05.90), see the whole document --	1-13
A	US 3798559 A (MASAO TOMITA ET AL), 19 March 1974 (19.03.74), see the whole document -- -----	1-13

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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