

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 February 2003 (27.02.2003)

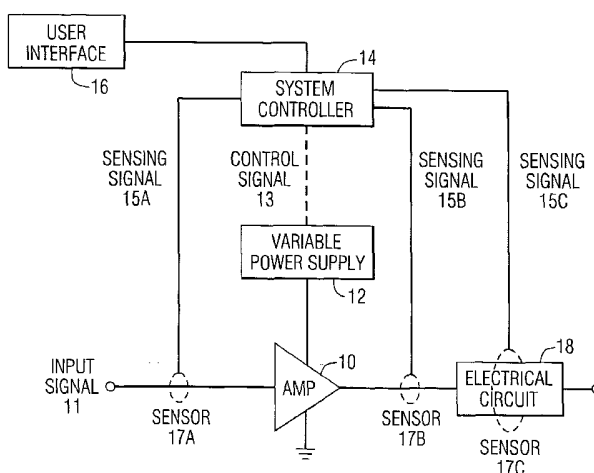
PCT

(10) International Publication Number
WO 03/017468 A3

- (51) International Patent Classification⁷: **H03F 3/04**
- (21) International Application Number: PCT/US02/25349
- (22) International Filing Date: 12 August 2002 (12.08.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/931,737 20 August 2001 (20.08.2001) US
- (71) Applicant: **HARRIS CORPORATION** [US/US]; 1025 W. Nasa Blvd., Melbourne, FL 32919 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
21 August 2003
- (72) Inventors: **POGGI, Peter, John**; 595 Concord Drive, Webster, NY 14580-8923 (US). **DITTMER, Timothy**; 6044 Green Meadow, Mason, OH 45040-7714 (US). **CABRERA, George**; 8308 Cora Court, Mason, OH 45040-8325 (US).
- (74) Agents: **YATSKO, Michael, S.** et al.; Harris Corporation, 1025 W. Nasa Boulevard, Melbourne, FL 32919 (US).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A SYSTEM AND METHOD FOR MINIMIZING DISSIPATION IN RF POWER AMPLIFIERS



(57) Abstract: The variable power supply (12) to an amplifier (10) in an electrical circuit is dynamically controlled through the use of a lookup table (14) responsive to one or more operating conditions of the electrical circuit. The lookup table is indexed by one or more of the operating conditions and the amount of amplification to be applied to an input signal to the amplifier is determined. One embodiment of the invention comprises a television transmitter circuit including a power amplifier circuit capable of amplifying a variable frequency COFDM or 8VSB input signal (11) where the amount of amplification applied to the input signal is dynamically controlled through the use of a lookup table as a function of the frequency of the input signal.

WO 03/017468 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/25349

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : HO3F 3/04

US CL : 330/ 98, 123, 127, 279, 278

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)

U.S. : 330/ 98, 123, 127, 279, 278

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
USPTO EAST text (variable, power, supply, sens\$3, detect\$3)**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,977,833 A (Attimont et al.) 02 November 1999 (02.11.1999), Fig. 1	1 - 28
X	US 4,547,746 A (Erickson et al.) 15 October 1985 (15.10.1985), Fig. 2	1 - 28
X	US 6,137,355 A (Servic et al.) 24 October 2000 (24.10.2000), Fig. 1	1 - 28

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

Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

30 August 2002 (30.08.2002)

Date of mailing of the international search report

24 JAN 2003

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231
Facsimile No. (703)305-3230

Authorized officer

Linh Van Nguyen

Telephone No. (703)305-1934

Deborah P. Vega