

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 February 2007 (15.02.2007)

PCT

(10) International Publication Number
WO 2007/018683 A3

(51) International Patent Classification:

H04J 3/18 (2006.01) **H04B 7/00** (2006.01)

(21) International Application Number:

PCT/US2006/020503

(22) International Filing Date: 24 May 2006 (24.05.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/186,266 21 July 2005 (21.07.2005) US

(71) Applicant (for all designated States except US): **RA-DIOSHACK CORPORATION** [US/US]; 300 RadioShack Circle, MS CF4-110, Fort Worth, Texas 76102 (US).

(72) Inventors: **LAM, Man Lung**; 1B, Nam Shing Court, 19-23 Nam Shing Street, Tai Po, N.T., Hong Kong (CN). **LAM, Man Tai, Vincent**; Flat F, 5th Floor, Block 7, Woodland Crest, 33 Tin Ping Road, Sheung Shui, N.T., Hong Kong (CN).

(74) Agent: **KELLY, Robert, H.**; 5956 Sherry Lane, Suite 1400, Dallas, TX 75225 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

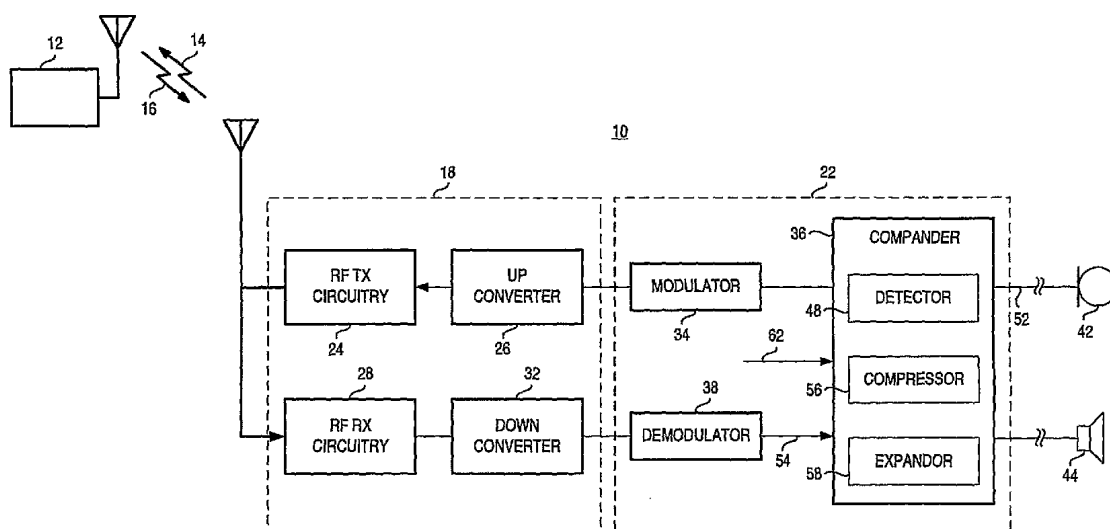
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report

(88) Date of publication of the international search report:
23 April 2009

(54) Title: COMPANDER, AND ASSOCIATED METHODOLOGY, FOR A RADIO COMMUNICATION STATION OPERABLE PURSUANT TO A CODED SQUELCH SCHEME



(57) Abstract: Apparatus, and an associated method, for companding communication data. Companding is provided for a two-way radio communication station operable pursuant to a coded squelch scheme, such as an MURS or FRS radio. A baseband processor invokes compression operations upon originating communication data that is originated at the communication station. And, the processor invokes operation of expansion operations when the communication data comprises terminating data.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2006/020503

A. CLASSIFICATION OF SUBJECT MATTER

Int. CL. **H04J 3/18** (2006.01) **H04B 7/00** (2006.01) US CL. **370/477**

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)

INT. CL: H04J 3/18, H04B 7/00

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)

DWPI, USPTO, Google, Google Patents, ESP@CE: radio, wireless, compress, expand, squelch, CTCSS, DCS, code, program & similar words.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	"Analog Radio Baseband Processor with RF Synthesisers, System Clocks & Auxiliary ADCs & DACs ", Product Preview CMX7031 – The Two-Way Radio Processor CML MICROCIRCUITS, Pages 1-6. October 2005 [Retrieved from the internet on 12 July 2007] <URL: http://www.cmlmicro.com/Products/TwoWay/previews/CMX7031pp_4.pdf >	1-20
Y	US 6,006,108 A (BLACK et al.) 21 December 1999 (See for example the Abstract, Fig. 1, Column 1 Lines 62-67, Column 2 Lines 1-13, Column 2 Line 61- Column 3 Line 16, Column 4 Lines 30-37)	1-20
Y	US 4,541,118 A (EASTMOND et al.) 10 September 1985 (See for example the Abstract, Column 4 Lines 20-23)	1-20



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 but 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
17 July 2007

Date of mailing of the international search report

12 FEB 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US

Commissioner for Patents

P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2006/020503

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. These particulars are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
US	6,006,108	US	6,246,885
US	4,541,118	IL	73613
END OF ANNEX			