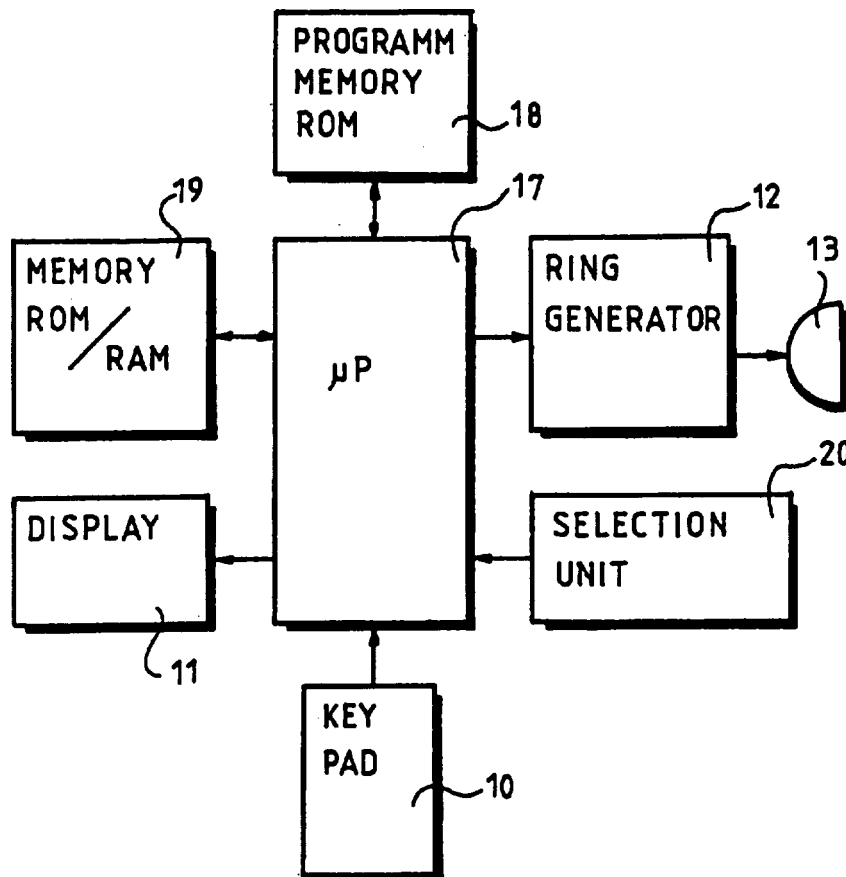


EXHIBIT D

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(21) International Application Number: PCT/EP96/01100 (22) International Filing Date: 8 March 1996 (08.03.96) (30) Priority Data: 95200569.2 8 March 1995 (08.03.95) EP (34) Countries for which the regional or international application was filed: AT et al. (71) Applicant (for all designated States except US): TELEFON-AKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-126 25 Stockholm (SE). (72) Inventors; and (75) Inventors/Applicants (for US only): VAN DER SALM, Peter [NL/NL]; Buys Ballotstraat 14, NL-3572 ZR Utrecht (NL). TEN WOLDE, Jan, Hendrik, Louis [NL/NL]; Vincent van Goghlaan 76, NL-7545 RP Enschede (NL). (74) Agent: DOHMEN, Johannes, Maria, Gerardus; Ericsson Business Mobile Networks B.V., P.O. Box 75564, NL-1070 AN Amsterdam (NL).	(81) Designated States: AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, 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). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(54) Title: A TELEPHONE SET HAVING CALLING PARTY DEPENDENT RINGING		
(57) Abstract		

A telecommunications terminal device such as a telephone set, in particular a radio telephone set (1), comprising ring generator means (12, 16) for producing a ringing sound in accordance with signalling information received by the terminal device and relating to the identity of a calling party. The ring generator means (12, 16) are arranged for producing a ringing sound from calling party identity data provided by the signalling information. The ringing sound may be produced directly from the received signalling information data, through different processing algorithms and, additionally, from data stored in memory means (19) and associated with the identity of a calling party for producing a dedicated programmable ringing sound or even the name of a calling party.



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Title

A TELEPHONE SET HAVING CALLING PARTY DEPENDENT RINGING

5

Field of the Invention

The present invention relates generally to telecommunications terminal devices comprising ringing means and, more particularly, to telephone sets comprising ringing devices capable of providing a variety of distinctive ringing or alerting sounds for information purposes.

Background of the Invention

15

Conventional wired and wireless telephone sets include ring tone generator means of an electro-mechanical or electronic type. The ring tone generator means are either directly actuated by a separate ring signal provided by a public or private telephone network to which the telephone set is connected, or indirectly, via an actuation circuit in the telephone set itself, which circuit is triggered by call arriving data obtained from signalling information provided by the telephone network.

25

A plurality of such ring tone devices are already known. European Patent Application 0,203,394 discloses an electronic music/voice ringer circuit for use in telephone sets. The circuit can be connected directly to the telephone network line providing a series of intermittent ring pulses. The circuit converts these ring pulses into continuous music ringing signals or voice ringing signals. The piece of music or voice signals to be reproduced are pre-stored.

35

British Patent Application 2,220,822 discloses a telephone set providing the user of the set with the possibility of recording various sounds in a recording and reproducing unit, such that the telephone can have a

distinctive ringing sound, e.g. among a number of adjacent telephones.

US Patent 4,866,766 discloses a telephone device having
5 a customized ring capability. The telephone set comprises a user programmable ring tone generator. A ringing sound has to be stored in dedicated memory means by inputting from the dialling keypad of the telephone set coded ring parameters. On receipt of a ring signal from the telephone switching
10 network, the ring parameters are activated from the memory means to produce an audible ring pattern and ring tone.

European Patent Application 0,604,081 discloses a ring tone device for creating a ringing sound in accordance with
15 data, such as the subscriber number or any other identification number unique to the telephone set. The ring tone device comprises a user programmable ring tone parameter memory for storing a ring tone sequence defining a particular ringing sound.

20

These known ring tone devices are limited to the extent that they can only produce distinct ringing or alerting sounds to distinguish one's own telephone among a plurality of adjacent telephones. However, in some telecommunication
25 systems a number of users share the same telephone device.

US Patent 5,073,922 and International Patent Application 9,107,041 disclose telecommunications arrangements comprising ring tone means for identifying a specific user to receive a
30 call on a telephone terminal device which is shared by a number of users and/or to distinguish a particular terminal device among a plurality of terminal devices connected to the same subscriber line. Each user and/or terminal is assigned a specific ring tone signal stored in a memory of the terminal
35 device. The calling party has to dial the telephone number of the telephone device as well as an additional number to identify that the call is for a particular person and/or terminal.

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