United States Patent [19]

Kaleita et al.

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[54] **PROGRAMMABLE TELEPHONE SWITCHER**

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[52] **U.S. Cl.** **379/201**; 379/386; 379/387; 379/397

[58] **Field of Search** ..... 179/84 L, 84 R, 81 R, 179/84 VF, 99 H, 99 E, 99 R, 84 T; 379/165, 166, 201, 211, 212, 386, 372, 387, 397, 210

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,965,306	6/1976	Watkins	179/81 R
3,971,899	7/1976	McIntosh	179/99
4,017,692	4/1977	Garcia et al.	179/81 R
4,065,642	12/1977	McClure	179/18 B
4,088,846	5/1978	McEowen	179/99
4,278,844	7/1981	Jones	179/84 C X
4,346,264	8/1982	Sharvit	179/18 DA
4,349,703	9/1982	Chea, Jr.	179/18 HB
4,350,848	9/1982	Kariya et al.	179/2 DP
4,376,875	3/1983	Beirne	179/18 B
4,408,102	10/1983	Lumpkin	179/99 H
4,429,188	1/1984	Allen	179/84 C
4,446,334	5/1984	Groff	179/81 R
4,459,434	7/1984	Benning et al.	179/81 B
4,481,384	11/1984	Matthews	179/18 DA
4,482,786	11/1984	Flynn, Jr.	179/90 BD X
4,485,273	11/1984	Bartelink	179/81 R
4,488,006	12/1984	Essig et al.	179/81 R
4,490,583	12/1984	Bednarz et al.	179/99 R
4,491,693	1/1985	Sano et al.	179/99 R
4,538,031	8/1985	Benning et al.	179/81 B
4,582,957	4/1986	Hayes et al.	179/84 C X

OTHER PUBLICATIONS

TalkTo 109 System Guide by Trillium Telephone Systems Advanced TeleCom Systems Introduces EasyTel. Zoom Update, Jan. 1985 by Zoom Telephonics, Inc. Newsletter Advertisement by Mr. Phone Butler.

Jameco Electronics Spring Flyer #127, Electronic Business Update, Nov. 1, 1984.

Cynex Manufacturing Corp. Advertisement for Phone Forward, The TF-Switcher brochure by Command Communications, Inc. 1986.

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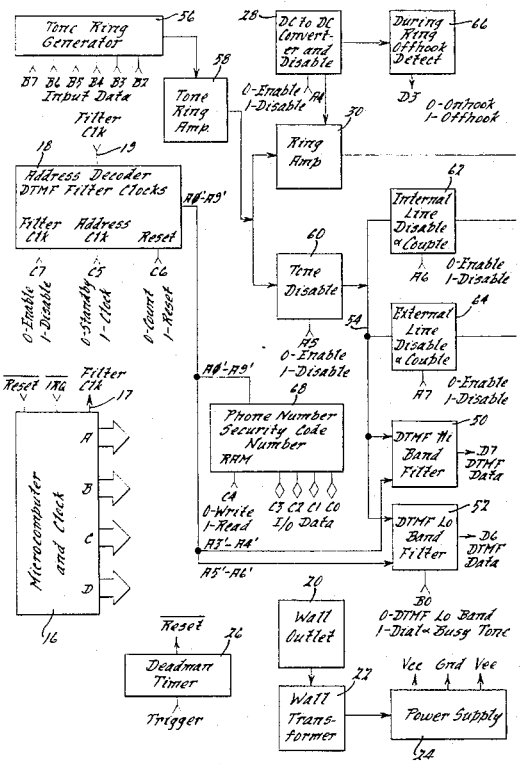
[57] **ABSTRACT**

The programmable telephone screening device routes an incoming call to a selected telephone device, depending on preestablished device priorities and upon access codes dialed by the caller. The device provides call hold, call forwarding and automatic dialing and is capable of testing the telephone utility network to determine DTMF and pulse dialing compatability. The device generates ringer signals for directly energizing the ringer circuits of standard telephone devices.

33 Claims, 14 Drawing Figures