United States Patent [19]

Huizinga et al.

[54] KEY TELEPHONE STATION SET CIRCUIT

- [75] Inventors: Donald Dean Huizinga, Indianapolis; Edward William Underhill, Knightstown; James Arthur Whitcomb, Indianapolis, all of Ind.
- [73] Assignce: Bell Telephone Laboratories, Incorporated, Murray Hill, N.J.
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- [22] Filed: Oct. 27, 1976
- [51] Int. Cl.² H04Q 5/18
- [52] U.S. Cl. 179/99; 179/84 L; 179/84 T
- [58] Field of Search 179/99, 18 J, 18 F,
- 179/18 FA, 84 T, 84 L

[56] References Cited

U.S. PATENT DOCUMENTS

3,146,314	8/1964	Boehly et al 17	9/84 T
3,385,935	5/1968	Anderson et al	179/99
3,519,757	7/1970	Anderson et al	179/18
3,763,326	10/1973	Murtu et al	179/99
3,843,845	10/1974	Ridley	179/99

[11] **4,046,972**

[45] Sept. 6, 1977

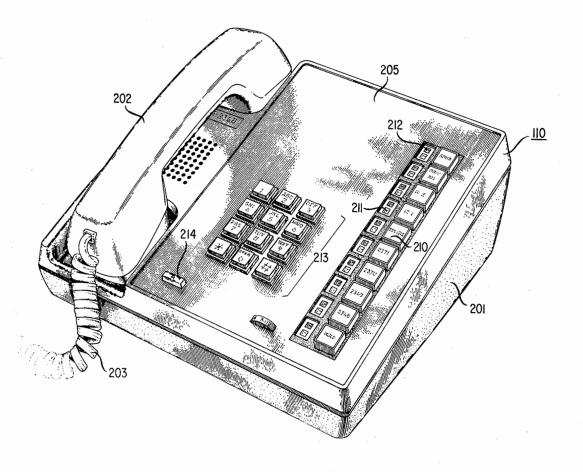
3,906,168 3,935,396	9/1975 1/1976	McEdwen Barsellotti et al	
3,946,146	3/1976	Brown et al	179/99
3,973,085	8/1976	Shiff	179/99
3.991.282	11/1976	Feil	179/99

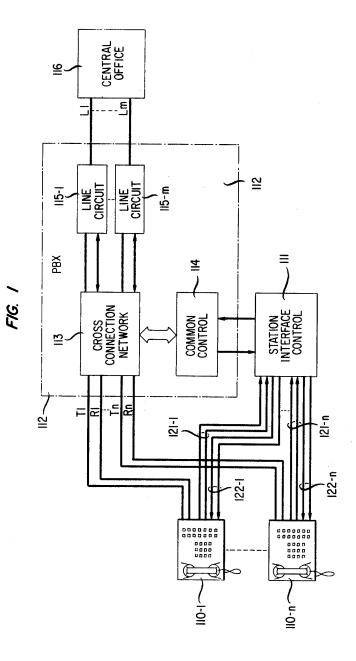
Primary Examiner—Kathleen H. Claffy Assistant Examiner—Gerald L. Brigance Attorney, Agent, or Firm—John W. Fisher

[57] ABSTRACT

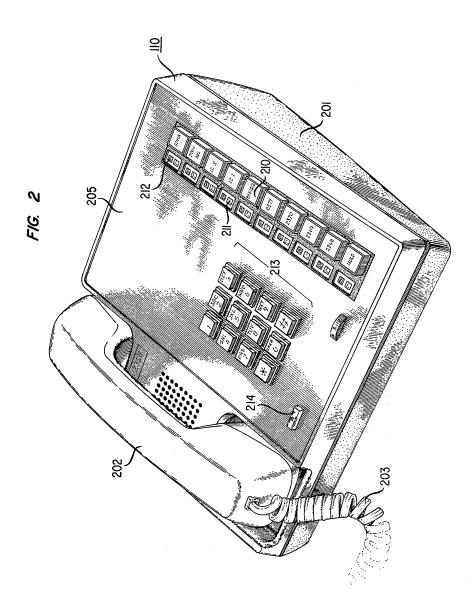
An electronic key telephone station set includes a plurality of nonlocking line selection buttons. Adjacent each button is a pair of light emitting diode lamps, one for indicating which line selection button has been actuated and one for indicating which ones of other lines having an appearance on the station set are in use. Digital data coupled to and from the station set control the activation of the indicating lamps as well as the type of alerting signal generated to indicate an incoming call. Numerous other features may be advantageously implemented under data stream control.

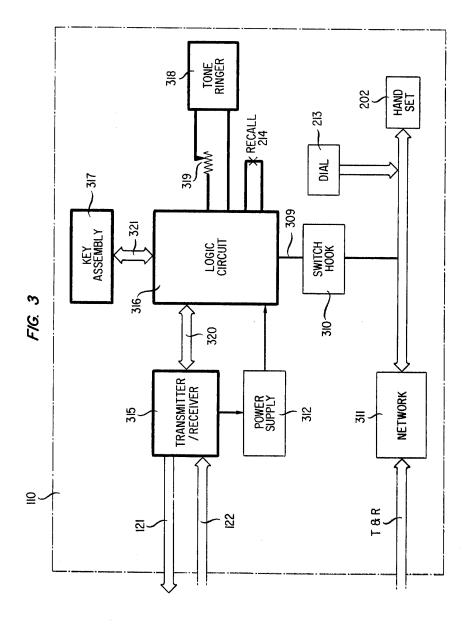
16 Claims, 15 Drawing Figures





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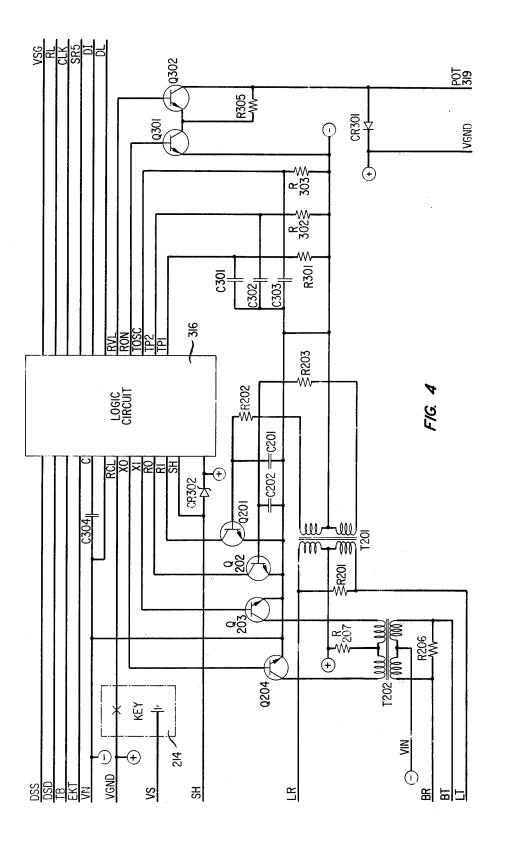
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