

[54] ELECTRONIC SCORECARD FOR GOLF
 [76] Inventors: **Kenneth L. Martz**, 1532 Canadian Trail, Plano, Tex. 75023; **Roger L. Nations**, Rte. 2, Anna, Tex. 75003

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[21] Appl. No.: 890,408
 [22] Filed: Mar. 27, 1978

Primary Examiner—David H. Malzahn
 Attorney, Agent, or Firm—Richards, Harris & Medlock

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 787,617, Apr. 14, 1977, abandoned.
 [51] Int. Cl.² G06F 15/44; A63B 57/00
 [52] U.S. Cl. 364/411; 273/162 A
 [58] Field of Search 364/411, 900 MS File; 235/92 GA; 273/162 A, 32 R

[57] **ABSTRACT**

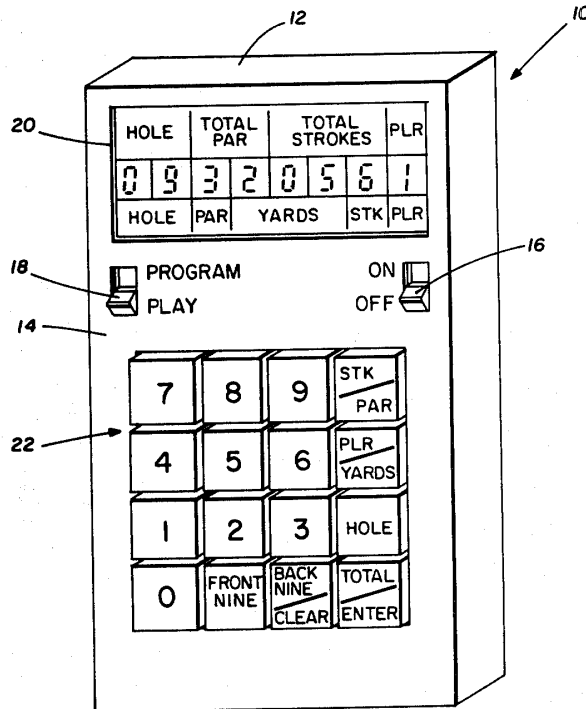
An electronic scorecard for golf includes a keyboard having keys or switches representative of the digits 0-9 and commands. A preprogrammed microprocessor is responsive to manipulation of the keyboard to store in memory golf course data and player scoring data for multiple players. Appropriate manipulation of the keyboard commands the microprocessor to perform arithmetic operations on certain of said data. A display connected to the microprocessor visually presents the desired data or results individual to each player for comparison during the game.

[56] **References Cited**

U.S. PATENT DOCUMENTS

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15 Claims, 6 Drawing Figures



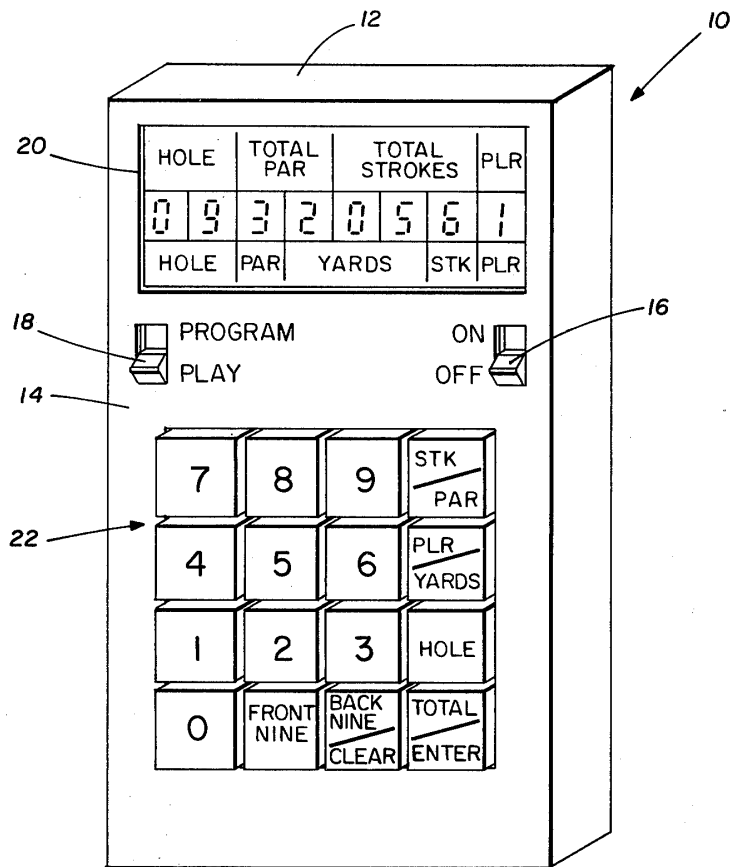


FIG. 1

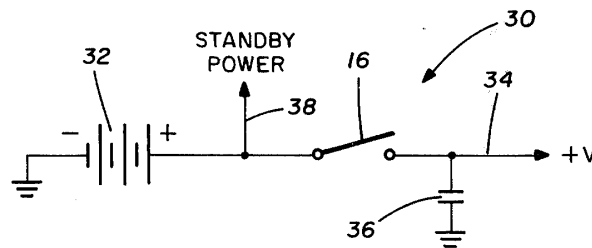


FIG. 2

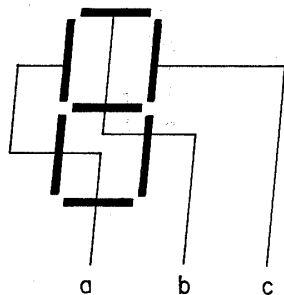
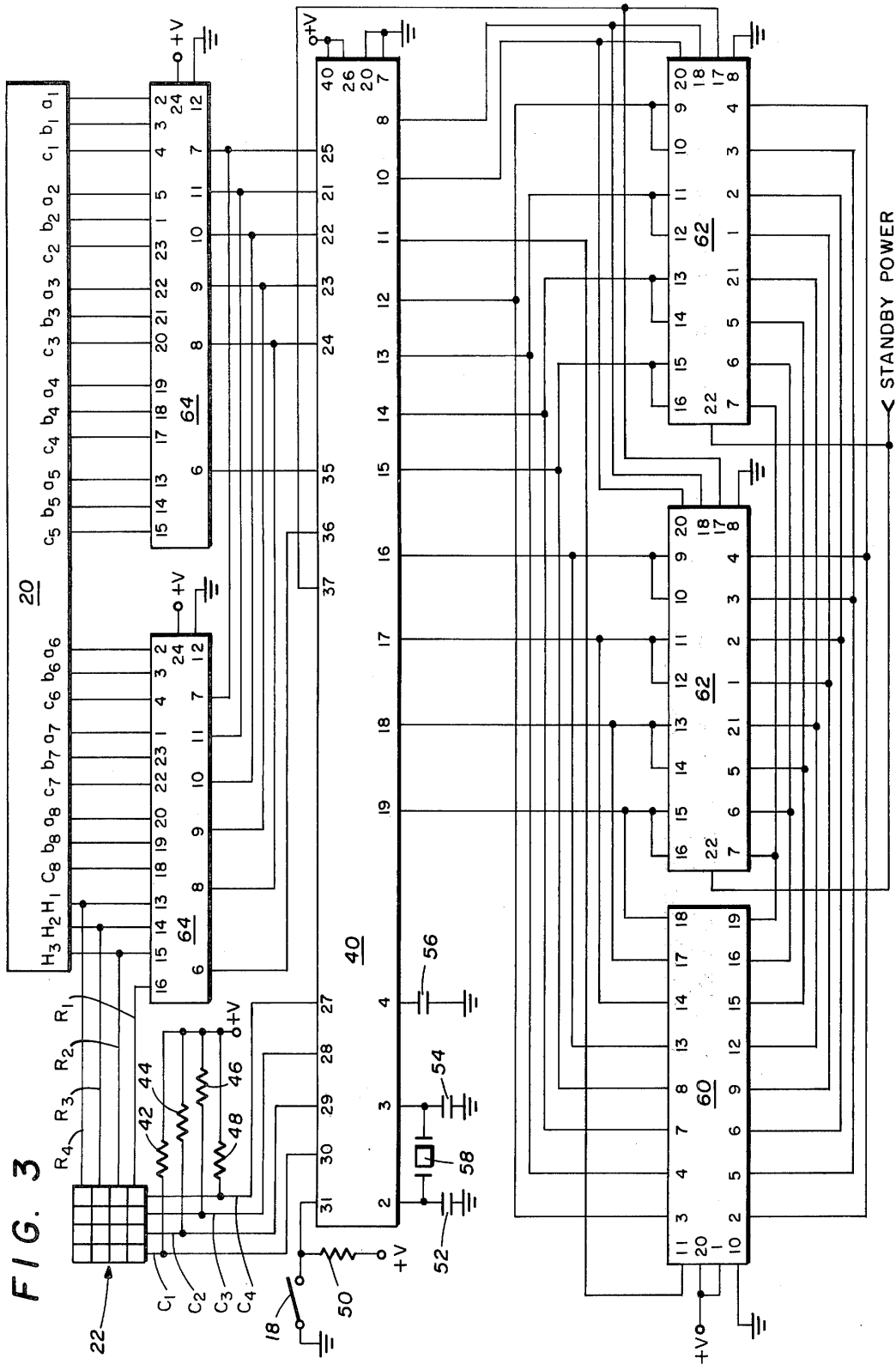


FIG. 4



**ELECTRONIC SCORECARD FOR GOLF
CROSS-REFERENCE TO RELATED
APPLICATION**

This application is a continuation-in-part of application Ser. No. 787,617, filed Apr. 14, 1977, now abandoned.

**BACKGROUND AND SUMMARY OF THE
INVENTION**

The present invention relates generally to a device for keeping score during a game of golf. More particularly, this invention concerns a handheld electronic scorecard for receiving, storing and displaying golf course and player scoring information.

The game of golf has become extremely popular in the United States as well as in other countries. The game is played outdoors on a golf course with golf balls and a set of different types of golf clubs. The standard golf course consists of eighteen units of play, commonly referred to as holes. Each hole is assigned a numerical value known as par, which represents the number of strokes required by an expert to play the ball from the tee into the hole on the green. The par value for each hole is determined by the distance between the tee and the green together with any obstacles or hazards which may be located therebetween. Consequently the par value is an indicator of the difficulty of the hole. The par value for the course is simply the cumulative par values of the holes. The player score is simply the cumulative stroke values required to play the holes. The objective of the game is to skillfully play the ball into each hole with the fewest number of strokes.

Scoring during a game is commonly kept on a hole by hole basis. At the present this is mostly done manually by writing on a paper scorecard the number of strokes required at the completion of each hole. If desired for comparison purposes, the subtotals of the par and stroke values can be figured at the same time. These subtotals, of course, must be refigured after each hole. It will thus be apparent that this continual score keeping and figuring can be a considerable distraction and nuisance not only to each golfer, but also to the other golfers with whom he or she is playing. Although present electronic devices could be employed, the results are unsatisfactory. Heretofore such prior art devices have been incapable of maintaining scoring and course data for multiple players over the lengthy time period required for a game. There is thus a need for a portable scoring device for quickly and conveniently manipulating such data.

The present invention comprises an electronic scorecard for golf which overcomes the foregoing problems and other difficulties associated with the prior art. In accordance with the broader aspects of the invention, the yardage and par values for each hole of the golf course are entered by appropriate manipulation of a keyboard and electronically stored. During play, the stroke value for each hole individual to each player is also entered by manipulation of the keyboard and electronically stored. This data is available for processing and display at any time during play. The information for a particular hole, or the accumulated par and stroke values after play of the desired number of holes can be selectively displayed for reference purposes by any one of the players. Use of the invention eliminates the distracting and time consuming operations typical of the prior art approaches to score keeping.

According to more specific aspects of the invention, a handheld electronic scorecard for golf comprises input means, processing means, memory means and output means. The scorecard has two modes of operation. In the program mode, the yardage and par values for each hole of the golf course are entered by means of a keyboard included in the input means. A preprogrammed microprocessor takes this data and stores it in a memory for subsequent retrieval and use. The memory is continuously powered so that data storage is maintained for at least the duration of the game. In the play mode, the stroke values for each hole of the golf course individual to each one of a multiplicity of players are similarly entered and stored for subsequent retrieval and use. By appropriate manipulation of the keyboard, the data for a preselected hole, or the accumulated par and stroke values after play of several holes, individual to each player can be selectively displayed for visual comparison by the player on a digital display included in the output means.

DESCRIPTION OF THE DRAWINGS

A more complete understanding of the invention can be had by reference to the following Detailed Description when taken in conjunction with the accompanying Drawings, wherein:

FIG. 1 is a front perspective view of an electronic scorecard for golf incorporating the invention;

FIG. 2 is a schematic diagram of the power supply utilized in the invention;

FIG. 3 is a schematic diagram of the circuitry utilized in the invention;

FIG. 4 is a diagram illustrating one typical connection to the display; and

FIGS. 5a and 5b are detailed flow charts of the program employed in the invention.

DETAILED DESCRIPTION

Referring now to the Drawings, wherein like reference characters designate like or corresponding parts throughout the several views, and particularly referring to FIG. 1, there is shown an electronic scorecard for golf 10 incorporating the invention. The scorecard 10 includes a casing 12 of generally shallow, box-like configuration. The casing 12 can be constructed of any suitable material, such as high impact plastic. The casing 12 is of compact overall dimensions so that the scorecard 10 can be easily carried by any golfer. As will be described more fully hereinafter, all of the components comprising the scorecard 10 are contained in or on the casing 12.

The controls for operating the scorecard 10 are found on the front panel 14 of casing 12. The panel 14 includes switches 16 and 18. The switch 16 comprises a power switch having ON and OFF positions. The switch 18 comprises a mode select switch having PROGRAM and PLAY positions. A digital display 20 is provided near the top of panel 14. The display 20 is preferably of the type characterized by low power consumption and high visibility under daylight conditions. Legends are imprinted on the panel 14 above and below the display 20 for correlation of the information displayed. For example, the digits shown on the display 20 in FIG. 1 could represent that player number one required six strokes to play hole number nine, which has a par value of three and a yardage value of 205. Alternatively, the same readout on the display 20 could represent that player number one required 56 strokes against the total

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