



# Pinball Wizard

**The Pinball Construction Set — a remarkable advance in software design — allows you to design and play your own pinball games on the screen of an Apple computer**

Even in the fast-developing microcomputer industry, where one can reasonably expect remarkable new developments to be quite commonplace, it is still a rare thing to come across a product that is radically different both in concept and quality. Such a piece of software is Budgetco's Pinball Construction Set (PCS). Running on a 48 Kbyte Apple II, with one disk drive and a joystick, this package performs an apparently simple function. It gives the user a picture of a bare pinball table, and a menu of 38 different types of 'furniture' that are used to equip it to the player's own design. There is, in addition, a functions menu from which to choose the tools you can use.

Having filled the table according to your plan — you are allowed to position up to 128 pieces on the table, but there is no limit to the number of times you may use any one type — all that remains is to play the game. You do this by selecting yet another function with the joystick. Up to four players may take turns, but each is allowed only one ball, instead of the three on most pinball

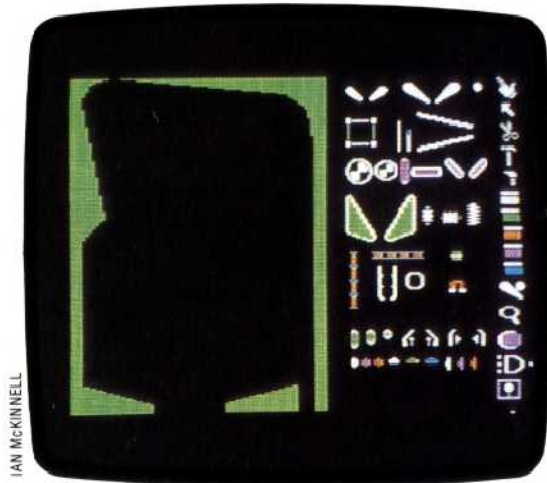
hand 'picks up' the object indicated. The hand pulls it to its desired position on the table, and when you release the joystick button, the object is put firmly in place.

The interesting thing here is that you are moving not only the collection of data that defines the shape of the object, but also the set of rules that will govern the way it behaves when you come to play the game. A flipper, for example, always moves through 45 degrees, first up and then back down again. A bumper always repels the ball whilst accelerating it according to a definable 'kick' factor. The ball obeys the Newtonian laws of motion, and falls down the table according to the laws of gravity.

But having said all this, there is one tool (suitably given the symbol of a planet in partial sunlight) that allows you to alter the parameters of the real world — gravitational force, for example, or even time! This function is also controlled by the joystick. The position of each value on a scale is altered, just as one would move a slide-type

## Do-It-Yourself Games

The Pinball Construction Set displays an empty table; a variety of types of 'furniture' — bumpers, targets, roll-overs, flippers and so on; and, in the column on the right, the tools for placing the objects on the table. This column also contains functions for adjusting the size, shape, colour and degree of interaction of the pieces, as well as for saving finished games on disk



IAN MCKINNELL

machines, and there is no 'free ball' facility. At the end of the game, pressing ESCAPE gets you back to the menu. You are encouraged to go on developing the table after each game by the degree of feedback you get every time you play.

Both in its conception and execution, PCS points the way towards truly user-friendly software. As soon as the program is loaded (and this requires the user simply to insert the disk and press RETURN) virtually all the action is controlled from the joystick. The first tool to be used is a hand. It is moved so that it points to an object in the 'furniture' menu (such as a bumper or a flipper) and when you press the joystick button the

## Kids' Stuff

PCS even gives you authentic sounds and the equivalent of flashing lights! But it's actually more fun to devise and build games than to play them. Now, if it had a TILT built into it...



THE IMAGE MAKER