WINNING HANDS DOWN

Bridge, like chess, is a game of obsessive interest to enthusiasts at all levels of skill. It is ideally suited to computer adaptation, since it eliminates the need for playing partners. In this article we look at a program that teaches bridge, and programs that aim to enhance the skills of experienced players.

Commercially available bridge programs fall into two distinct categories, depending on whether they are designed specifically as teaching aids or as playing packages.

There are a number of good tutorial packages on the market. Among the best of these, in terms of design and presentation, is the Bridgemaster series. There are versions of this package available for the Spectrum, ZX81, BBC Model B, Electron and Commodore 64. This series is designed by Terence Reese, a former world champion, the bridge correspondent of the *Observer* and the London *Standard*, and the author of a number of books on bridge.

The principle behind all bridge tutor programs is that the beginner works through a series of pre-arranged hands, written into the program. This is the essential difference between a tutor and a playing package, which generates random hands. Because the tutor 'knows' what each of the hands contains, the program is able to guide the player step by step through the many rules and conventions that make bridge such an enjoyable and intellectually demanding game.

The Bridgemaster series provides an excellent example of what can be achieved by a tutorial

package. There are two programs in the course, which are aimed at the complete beginner and the average player respectively. The first is called the Complete Learning Package For The Beginner At Bridge, the second is Expert Bridge. The beginner's package consists of two program cassettes, two commentary tapes, a slim instruction booklet and Reese's *Begin Bridge*, a paperback book published by Penguin. This last is not meant to be used at the same time as programs on the screen. The commentary tapes provide all the backup the beginner needs.

Bridge tutor programs that do not have a tape-based commentary have to provide either a very comprehensive manual or extensive narrative commentary on the screen. Alternatively, they can assume at least a basic knowledge of bridge and restrict themselves to improving your play.

For those who do not know the game, the pack of cards is first dealt out to the four players who pair into teams of two. In computer bridge, the standard convention of naming the four players (North, South, East and West) is generally adopted. Bidding precedes play, in which the players, without showing their hands to each other, must declare the strength of their hand of cards. The strength of a hand is determined by the number of high cards or the number of cards in any one suit or both. In our diagram, we show an example of bidding. The winning bid will determine the contract. This selects what suit is to be trumps as well as the number of tricks that the winning side must try to make. After bidding, the hand is played. In the play, the player that has won the bidding becomes the 'declarer' and his partner the 'dummy'. The dummy's cards are displayed for all to see. The declarer will win or lose points according to whether he takes the number of tricks specified in the contract.

All bridge tutor programs represent bidding, whether or not they allow the player to win it properly. In Bridgemaster, the player is given the opportunity of making his own bid, having seen his cards displayed on the screen. The computer will then declare the bid that is to be made. This may differ from the player's choice of bid. Reese's program, like many tutor programs, is rigged so that the computer will accept only the bid or the play that the program's designer wants you to make. Reese admits that this leads, on occasion, to a perfectly sensible play by the beginner being rejected in favour of the predetermined route that has been mapped out.

Besides displaying your hand and the bidding, the program has to deal with the play of the hand. The most common method of display is a square in

Successful Bid
The values of the cards in the bidding are: Ace–4; King–3; Queen–2; Jack–1. The type in red refers to the players' first bid, and the type in blue shows their second bid

① In the bid 'One No Trumps', NORTH is telling his partner that he carries at least 12 to 14 points in his hand, but that he is not particularly strong in any one suit

⑤ NORTH is telling SOUTH that he can definitely win three tricks with the help of his partner's hand

② EAST's hand is weak

③ The bid 'Two No Trumps' indicates that SOUTH holds some high cards in various suits; probably a total of 6 to 10 points

④ WEST is telling EAST that his hand is also weak. This partnership is now out of the bidding

⑥ SOUTH cannot improve on NORTH's bid; his hand will serve only as a back-up to NORTH's stronger hand. This partnership has won the contract

N
1 N.T
3 N.T
W PASS PASS
PASS PASS E
PASS
2 N.T
S