COMPUTER CHE

Thinking of buying a chess program for your micro? Don't know what to expect or which one to buy? Then read on . . . Whether you're a chess fanatic or you just know the rules, you will probably at some time want to set a chess program for your home computer. With the great number of programs now available, it may be a difficult decision to choose the best one for your micro. In this article Chess programmer Martin Bryant looks at the standard of play and the features you can expect from the best modern home computer chess programs.

Standard of play

The very best programs can now play at a fairly good club level, from around 1600 to 1800 ELO (125 to 150 BCF). The standard of play can vary greatly from game to game depending on the type of position encountered and the stage of the game. Modern programs also usually have a much fuller understanding of the more obscure rules of chess such as underpromotions, draws by repetition, draws by the fifty move rule and chess clocks.

Features

Here's what you should look for in a good chess program. The most recent programs are provided with many more features of a much higher quality than their older counterparts, such as:

● Move entry by a cursor positioning method. Why should people have to turn their thoughts into an algebraic form, just because its easier for the program to understand? The cursor method allows you to 'move' the piece on the board, more like a real chess game. The best programs can accept both methods.

● The ability to step backwards or forwards through the entire game. Older programs would allow you to take back only a couple of moves, but with new techniques the whole game record can be stored and scanned with small memory overhead.

● The oreintation of the board should be reversible. That is the board should be displayable with white or black at the bottom of the screen. This allows you to play black "up" the board, like a real chess game, instead of having to reverse your way of looking at it.

Several "modes" of play can add a great deal of flexibility to a program. The old fashioned eight "levels" can be vastly improved upon these days. Some of the sensible "modes" are:

(i) "Tournament" mode: Full tournament parameters can be set up, to make the program play within any specified time limit. An easy to use version of the full mode is helpful as well, where you can just specify the average move time you wish the program to take. This can range from one second to 99 hours, effectively providing thousands of "levels". The program automatically adjusts its "lookahead", to play within the required time.

(ii) "All the moves" mode: Chess clocks are used, where you must play all the moves of the game within a specified game time. If you play too slowly, you lose on time! Club players often use this method in "five-minute" games where both players have five minutes each to play all their moves.

(iii) 'Problem" mode: The ability to solve chess problems of the type in many newspapers is good. Beware however of the programs which claim they can solve mates in five or more, but then take a week or so to do it! If the program averages more than a few seconds on any mate in two it is likely to be horribly slow on deeper mates.

(iv) "Losing" and "Equal" modes: Many players can't beat the programs on their lowest settings. These modes allow the program to quite deliberately try not to win! Instead it either tries to gradually lose or stay roughly level. These modes can be of enormous help to the beginner or very weak player. As the player improves, the program magically improves with him, always challenging him, but not totally smashing him so he just gives up.

The ability to quickly and easily set up different positions is essential. The program should also check that you don't try to play on with an illegal board position. For example, having P's on the first rank, more than one king for each side etc.

Which Program?

The best programs for playing strength are usually the most recently released. Any program which has been around for over a year without an update, is probably totally outdated as far as its playing strength goes. A year is a long time in computer chess, as can be seen from the results of programs which compete in recognised tournaments, such as the European Championships at the *PCW* show each year.

A chess programmer may achieve glory one year, but has to work very hard on new ideas/techniques to improve the program, so as not to be leapfrogged by other programs by the following year.

You should try to go for recognised quality programs, which have competed in many tournaments. There are several reasons for this. Some of the programs have obviously proved themselves by actually winning some of these tournaments.

Others will have at least performed reasonably well. The ones that don't enter at all, would probably be smashed out of sight! Also the programmers behind these programs are dedicated and
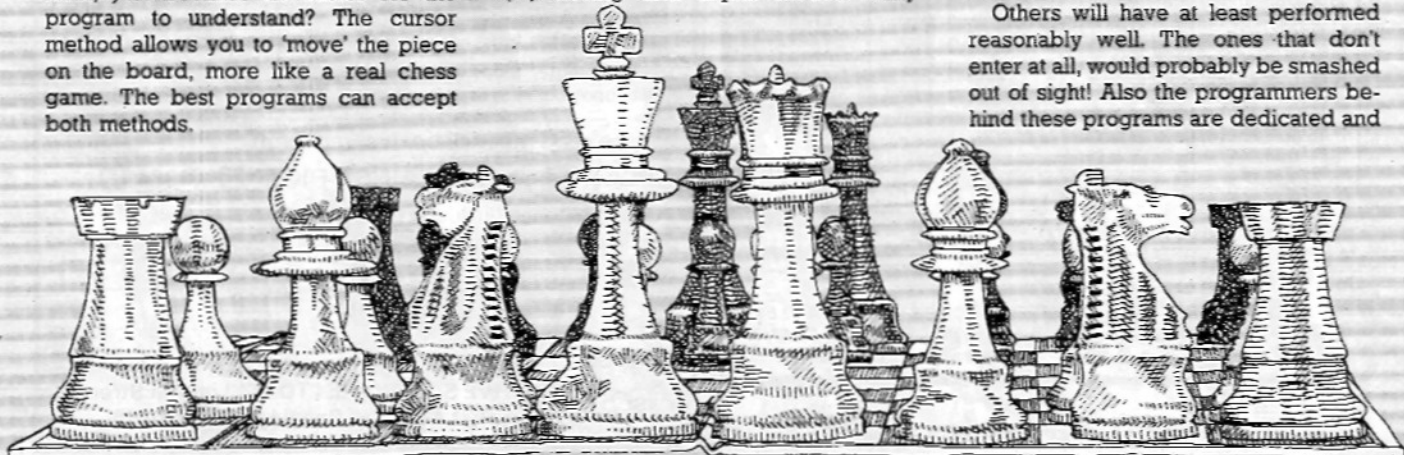
QUE-MATES . . .

knowledgeable enough to really write a quality program, rather than just another software "rip-off" as are many chess programs. The same arguments really apply to the features as well. A "real" chess program will have most of the best features as a matter of course.

Reviews

I'll now take a brief look at two programs which are probably the best available. They are White-Knight Mark II for the BBC Micro and Cyrus I.S. Chess for the Spectrum.

Cyrus was originally written in 1981 by Richard Lang and won the European Championships in the same year. It has competed in several tournaments since, with varying success and has been adapted for several micros.

The Spectrum model is not the latest version of the program, but can still beat almost all other programs. It comes in 16k and 48k versions. The 48k version has more features and also uses an openings book. It contains a wide range of features, including set-up position, saving to tape, printer output and full game take-back. The bottom of the screen shows the various features available as single letter commands.

The display is clear and the programs cursor move entry easy to use. It allows user underpromotions, understands draws by the fifty move rule and some draws by repetition. It has eight levels and can solve problems up to three moves ahead.

White-Knight was originally written in 1977. Mark II won the home computer section of the European Championships in 1983. It is certainly the strongest home computer program available at the moment.

It runs on the BBC model B and like Cyrus, comes with several excellent features, including set up position, whole game takeback/replay, orientation, play-self, blindfold and even volume control.

When it computes its move, it displays the best line it has found so far in its search. This can be used to provide a "hint" move as well as an indication as to what "White-Knight has "seen". Again the display is very clear and the program easy to use. You can use cursor positioning move entry or algebraic notation.

The program can easily be set to play within any average move time you require of it, thus providing thousands of potential "levels". It can also solve mates up to five moves ahead. Its problem solving speed is phenomenal. It examines around 1,200 positions each second and when compared to the Program Power chess program was found to be around 200 (yes, two hundred) times as fast!

It was recently used in a study of several hundred chess problems and found that a dozen of the original problems were in fact in error!

In a series of sixteen test games between the two programs on various levels, White-Knight beat Cyrus I.S. Chess by twelve games to four.

For other micros there is a wide range from fairly good to appalling programs. Cyrus is also available on the Dragon. Not as good as the Spectrum version but still a good buy. White-Knight is soon to be released on the Electron.

The Atari cartridge I tried was horrible and at £25 has got to be one to miss. For the Commodore 64 comes the Grand-Master. It didn't offer many real features and I beat it twice with no real trouble and wasn't very impressed. At £15 I would also give it a a miss.

A new program called Collosus, which won second amateur prize at the European Championships is soon to be released on the CBM 64 and Atari micros. This program promises to be one of the best around. For the Apple, Sargon 2 has had its day, but Sargon 3 is now available.