



The Voice Chess Challenger remains a visually stunning classic chess computer, and the voice never gets old!

Chess Challenger's Voice Comes out of Both Sides of Its Mouth

By EVAN KATZ

After Fidelity Electronics created fabulous Chess Challenger Seven, the computer chess world expected the company's next machine to really be terrific. With promised added features it was to be more enjoyable and much stronger. However, the super-promoted Voice Challenger turned out to be somewhat of a disappointment. Considering the price and the exceptional strength of some of the other micro games and programs, one wonders exactly to whom Voice Challenger was talking.

As a game to be enjoyed, the Voice is much better than previous Fidelity games. The keys have been raised, and they click sharply to insure proper key-in. A new, hard, handsome plastic case with magnetic board and pieces make it a sturdy product which is easy on the eye and finger. *The* feature of the year, of course, is the mechanized human voice that calls out its moves, confirms yours, verifies the board position, and suggests a move for you on many levels. Even though some people consider the voice a "gimmick" or an annoyance, the majority of users reports that it adds much enjoyment to playing chess with a "computer." A good feature for those who get irritable when losing is that the voice can be silenced anytime during the game. The program itself occupies 8K ROM; the voice feature, 4K ROM; and 1K RAM is used for the tree search and variable storage. A fast 4.0 MHz Z-80A processor runs the program.

Voice Challenger could have been a great competitor in the opening. The machine's book is fantastic, composed of 1,274 moves spanning forty prominent opening lines. However, there are some openings which the computer should avoid for one side (e.g., black in the Center Counter), and some more solid ones which it should endeavor to develop more frequently. Overall, though, it's a welcome feeling to play different games each and every time, testing different parts of one's chess strategy knowledge.

But poor Voice Challenger is totally devoid of opening knowledge when on its own. After 1. e4 g6, the unenlightened game plays the super-ugly 2. Qf3 obviously unaware of the most basic of opening rules (not to expose the queen too early in the game without good reason). So, once out of its great book, there's nothing to guide it besides its middle-game strategy which is often inappropriate in the opening. While in the book, though, Voice "teaches" you all its book moves for a given position. This is surely a great benefit for the novice.

In the middle game, Voice Challenger is solid competition for a 1350 player. It sees a bit farther than the earlier seven-level Challenger but nowhere near as much as some other new games and programs in the same amount of time (see the look-ahead table, below, for moves 1-35).

Moves 1-35

Level	Approx. Time	Look-ahead
1	5 seconds	X
2	15 seconds	X,X
3	35 seconds	5,4,X
4	1:20 minutes	5,4,2,X
5	2:20 minutes	X,X,X
6	3 minutes	5,4,2,2,X
7	3:20 minutes	X,X,X + extra
8	6 minutes	5,4,2,2,X
9	11 minutes	X,X,X,X
H	until stopped	X,X,X,X,X,X

In three minutes, Voice and its leading competitor both look ahead five ply, but the former only examines 2400 nodes (based on 30 moves/position) while the latter evaluates 30⁵ or 24,300,00 positions, with better evaluation. Level 7 will go a bit deeper if necessary. Level H can be stopped anytime before it finishes a full six ply search (which takes about 1-1/2 hours. Other programs can do a similar search in less than 15 minutes.) Why do the Fidelity programmers insist on using a forward-pruned search when alphabets are being used now with much better results?

Because of its limited width, Voice misses good moves occasionally, both

for itself and the opponent. The game, on the full width levels (2,5,7,9,H), tells the player what ply number has been completed and suggests a move for the player based on what it saw when it made its own move. Both these features have now become fairly standard and are certainly of interest to the chess player and computer-chess nut. One thing that inhibits the Voice's potential is that it sits still and doesn't move a muscle on your time. At any time limit, most new programs now think on their opponents time. Why this was omitted is unknown.

Voice Challenger's midgame evaluation is fairly good and is well balanced in all its main chess aspects. The game has a fairly good knack for attack and defense. However, it's a bit weak, positionally, for today's breed of computer chess games. Slightly better than the Seven level, it should keep the average player going in this phase of the royal game. All the enjoyable features of the Seven are still implemented; such as, swapping sides, multiple move entry, problem set up, and changing sides in the middle of a battle. The player has to really attack the Voice to score and always has to watch out for his own King's safety.

Voice Challenger has a much improved endgame over its predecessor, although this has always been its weakest point. After move 35, the game expands the width of its thin search at the expense of depth or time (see the chart below).

Moves After 35

Level	Approx. Time	Look ahead
1	5 seconds	X
2	15 seconds	X,X
3	35 seconds	16,X
4	1:20 minutes	25,X
5	2:20 minutes	X,X,X
6	3 minutes	20,5,5,X
7	3:20 minutes	X,X,X + extra
8	6 minutes	30,5,5,4,X
9	11 minutes	X,X,X,X
H	until stopped	X,X,X,X,X,X

Any good chess player knows, though, that the surviving pieces rather than the move number indicates the stage of the

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Source: Personal Computing Magazine - May 1980

game. For example, the Exchange Variation of the Ruy Lopez, with queens off, is certainly not the same type of position at move 15 as a Nadjdorf Sicilian or a closed Ruy Lopez. This type of paradox throws the Voice into its endgame search and strategy (king towards the center) too early. It also keeps the Voice from going into the endgame when it should.

Voice Challenger often misses crucial moves when there is a mate "threat" for one side. The Voice will either announce mate or resign without true cause because it has forward pruned an obvious and simple defense to the forced checkmate. This further embarrassment to the Voice's forward pruning will hopefully persuade the programmers to incorporate a solid alpha-beta search in its program.

The new endgame heuristics of the Voice are good, and the program can apply pressure with aggressive use of

the king and other pieces. It's a bit more intelligent now in regard to passed pawns and pawn chain attack and defense. If the Voice's middlegame play can get it into an even or advantageous endgame, it is pretty capable of handling what used to be a severely weak stage in the game for all computers. After one side is mated, the Voice displays how many moves the game took.

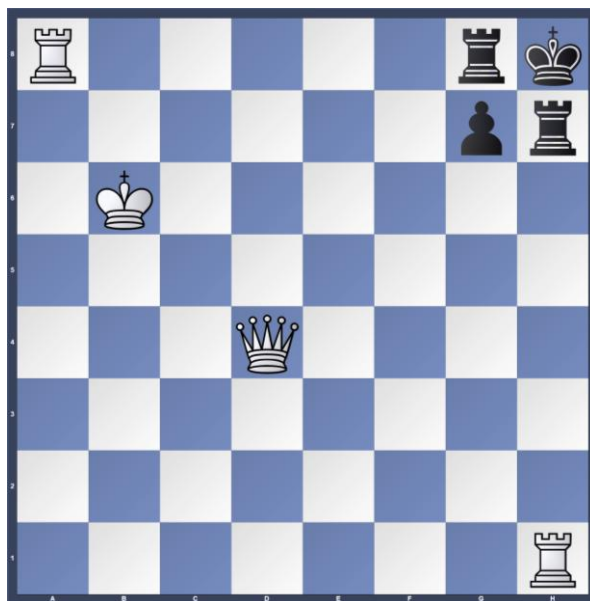
Perhaps I have been too stinging, but one should expect a better chess program by this time and certainly one without the shortcomings I have mentioned. But the game, its features, and its operation are very pleasant to use. The play is adequate vs. an average person of moderate chess interest and experience. As a teaching instrument, I have found it to be quite excellent, improving most players about 200 points over a period of several months. Because it teaches

from its opening book, suggests moves, and is a good partner, one will surely improve even with limited use. If a computer chess game of a high caliber (above 1450) is truly needed, SARGON remains the only choice. But otherwise the Voice is a fine game that can be bought in various places for about \$100 less than SARGON. Since the Voice plays only slightly better than Challenger 7, it's up to the buyer to decide if he wants to pay for the improvements in use and operation of the game and in construction and looks. Since the Voice can be seen and used on display at many major department stores throughout the nation, such as Bloomingdale's, try it out there. If you decide to buy, pick it up at an electronics or camera store known for good service with good prices or from a mail order house — you'll save some money on a very good game. Check out Voice Challenger, you'll like it!

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Source: Personal Computing Magazine – May 1980

An interesting article with a nice explanation of the playing levels and the progression of the calculation depths. Coincidentally or not, a few weeks ago, Luuk Hofman, Rob van Son and I achieved three checkmates in two positions. The result was rather disappointing, as the Voice Chess Challenger couldn't solve a single checkmate problem! I'd like to share the three positions.



White starts and checkmates in two moves!

For a brief discussion and solution, see:

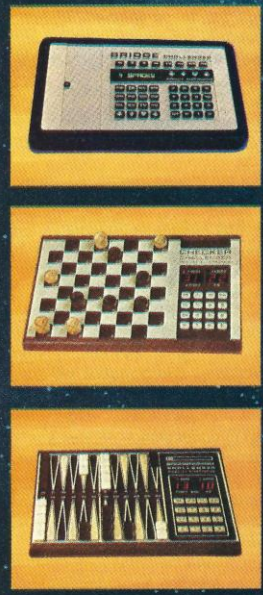
<https://www.youtube.com/watch?v=vIuA1UIb838>

It's actually quite remarkable that the Voice Chess Challenger can't solve this checkmate problem. Not even at level H after half an hour of analysis. The Chess Challenger 9 gives the correct first move within seconds, announcing the checkmate.

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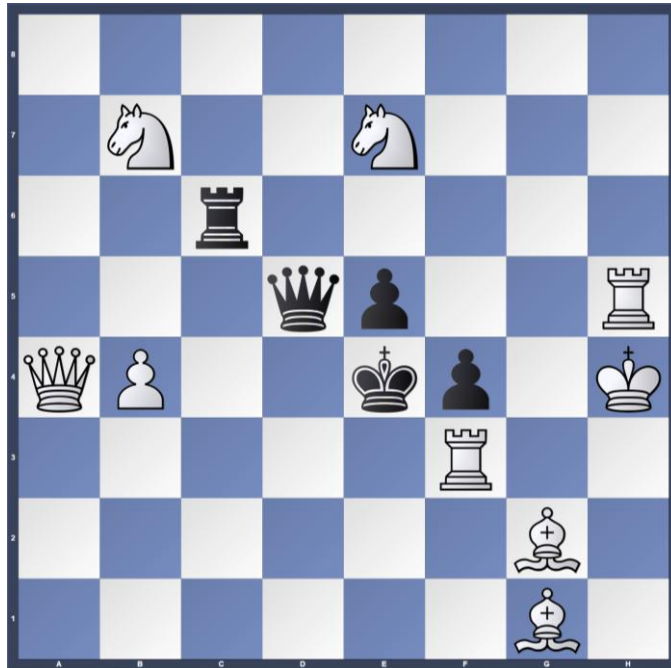
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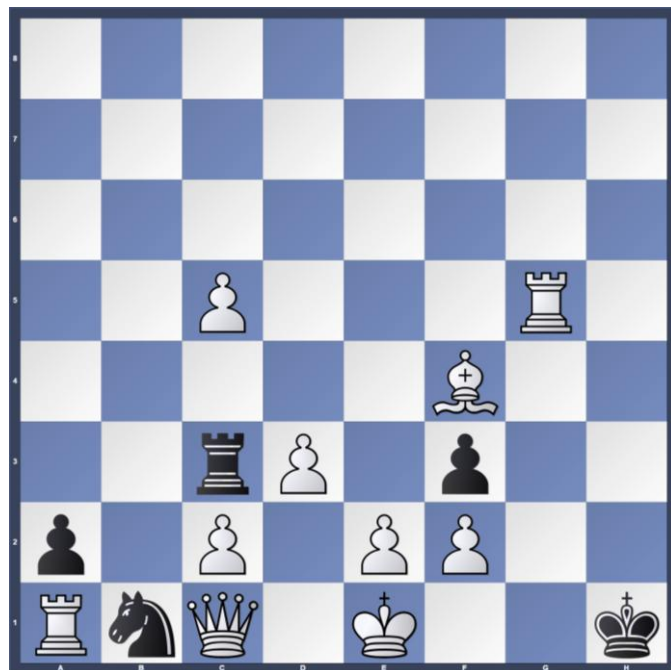


Magnus Carlsen with white to move SOLVES the hardest mate in 2

For a brief discussion and solution, see:

<https://www.youtube.com/watch?v=pInn70bH-Ww>

This problem, too, is clearly too difficult for the Voice Chess Challenger due to its many possibilities.



White starts and checkmate in two moves with a very surprising twist!

For a brief discussion and solution, see:

<https://www.youtube.com/watch?v=KueO2qUqul0>

Voice Chess Challenger doesn't have an adjustable level for a two-move checkmate. However, it won't solve this problem from level 5 and above.



**"The first chess game that not only thinks, but also speaks to you."
Fidelity Electronics commercial featuring the computerized Chess Challenger.
<https://www.youtube.com/watch?v=Czj2koJvJj0>**



**This video, featuring four different voices, was made to last! Because when do you see and hear an English, German, Spanish, and French Voice Chess Challenger in a single video? Sometimes you surpass yourself, and that's exactly what Rob van Son did.
<https://www.youtube.com/watch?v=9YRBavXzVfU&t=20s>**