Chess Tests: Basic Suite, Positions 6-10
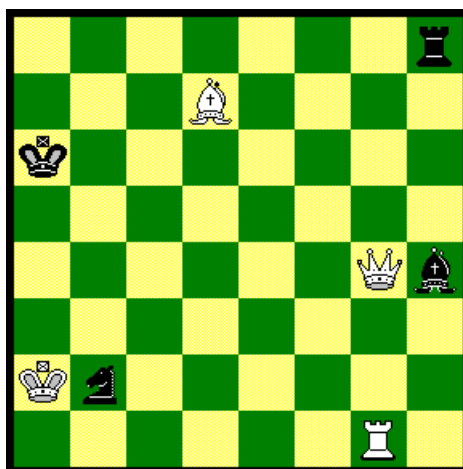
See the *Notes on Problem Solving*

6.- Sam Loyd, Paris Tournament, 1878

FEN: 7r/3B4/k7/8/6Qb/8/Kn6/6R1/ w

White to play and mate in 5:
1. Qb4 Bf6 2. Rg7 Bxg7 3. Qb5+ Ka7 4. Bc6

Results

Program	CPU/Mhz	Hash table	Move	Value	Plys/Max	Time	Notes
Chess Master 2175	P100	2 Mb	Qg4-b4	Mate5	9	00:06:17	seen at 00:04:51
Chess Genius 1.0	P100	320 Kb	Qg4-b4	Mate8	3/15	00:00:04	sees mate in 8
Chess Genius 1.0	P100	320 Kb	Qg4-b4	Mate5	9/10	00:01:30	level=mate5
Rebel Decade 1.2	P100	192 Kb	Qg4-b4	Mate5	9	00:01:23	leve=mate5
Rebel Decade 1.2	P100	192 Kb	Qg4-b4	Mate6	6	00:05:37	sees mate in 6
NEW Rebel Decade 2.0	P100	512 Kb	Qg4-b4	Mate6	6	00:02:26	seen at 1 m 36 s
HEXNER Rebel 8	K6/233	60 Mb	Qg4-b4	Mate6	6	00:00:07	
KAI Rebel 9	Pentium Pro 200 Mhz	60 Mb	Qg4-b4	Mate6	6	00:00:11	seen at 2 sec.
KAI Crafty 12.6	Pentium Pro 200 MHz	24 Mb + 16 Mb	Bc8+	Mate8	7	00:00:52	see notes
KAI Crafty 12.6	Pentium Pro 200 MHz	24 Mb + 16 Mb	Qg4-b4	Mate6	8	00:01:42	see notes
KAI Chess Master 5500	Pentium Pro 200 Mhz	?	Qg4-b4	Mate6	7	00:00:13	
KAI	Pentium Pro 200 Mhz	?	Qg4-b4	Mate5	7	00:00:44	

Chess Master 5500							
KAI MChess Pro 5.0	Pentium Pro 200 Mhz	10 Mb	Qg4-b4	Mate9	5	00:03:30	see notes
KAI MChess Pro 5.0	Pentium Pro 200 Mhz	10 Mb	Qg4-b4	Mate5	8	00:03:08	level=mate5
PFiSTER Patzer 2.99y	Sun Ultra1/167 Mhz	32 Mb	Qg4-b4	MateX	8	00:03:03	see notes
FODEN Green Light Chess 2.04h	6x86 P200+	24 Mb	Qg4-e2+	Mate6	7	00:03:05	not shortest

Notes:

Another Mate in 5 problem for human players, but *much more difficult*, because of the very large number of moves available with so many powerful pieces on an open position.

Once again, the special Mate level finds the solution faster than the Indefinite level. Curiously enough, **Chess Genius 1.0** finds the correct initial move extremely quickly, but evaluates it as a slower Mate in 8. Its Mate in 5 level finds the shortest mate, but it takes much longer.

Rebel Decade 1.2 finds the correct move, but evaluates it as a Mate in 6 (!) after looking at some 5 million positions in a reasonable amount of time. However, using its special Mate level it looks at 5.198.667 positions and discovers the required mate in 5, slightly faster than CG1.0.

Rebel Decade 2.0 does exactly the same as RD1.2, except that thanks to its larger hash table (512 Kb vs 192 Kb), it does it *2 times faster*, examining in all *2.382.923 positions*. This test is really ideal for hash tables, as there are a large number of moves of very few pieces. I once tried this position on a slow micro without hash tables, and after a *week* it hadn't found the mate yet.

Rebel 8 and **Rebel 9** perform exactly as their freeware limited cousins, but thanks to much larger (no less than 60 Mb !) hash tables and superior hardware, do it many times faster, in just a few seconds, some of the best times among the programs tested. But they don't find the existing shortest mate in 5.

Crafty 12.6 running on powerful hardware does not find the shortest mate. Looking at 7 plies, it finds a much longer mate in 8. One more ply, and it finds the correct move, but evaluates it as a mate in 6, not the required mate in 5. Besides, it takes longer than CG1.0, despite the big difference in hardware.

Chess Master 5500 does better. It always finds the correct move with just a 7-ply search, and evaluates it first as a mate in 6, then as the required shorter mate in 5, with very good timing.

On the other hand, **MChess Pro 5.0** does far worse. First, it finds *Qe6+* when searching to 5 plies in a somewhat long 2:47, and evaluates it as a mate in 10. Then it finds the correct *Qb4*, but evaluated as a far too long mate in 9, instead of the required mate in 5. In fact, it does not find the shortest mate even when letting it search for 10 full minutes. It's special "Mate in 5" level does it, more or less with the same timing than **Chess Genius 1.0** or **Rebel Decade 1.2**.

Patzer 2.99y found the correct move and evaluated it as a mate, while looking at a depth of 8 plies in an average time. Unfortunately, it could not specify in how many moves it was mate. It examined *5.716.188* nodes.

Green Light Chess 2.04h doesn't find the shortest mate but a mate in 6, after looking at 7 plies and examining *8.576.269 nodes* in some 3 minutes. This is roughly comparable to **MChess Pro 5.0**, but much slower than **Chess Master 5500**, say.

7.- Position taken from "Chess skills in man and machine", Fig. 3.4.

FEN: 2r2bk1/1b1rqp1p/p2p2p1/1p2P2n/3BP2Q/P2BN2R/1PP3PP/5R1K/ w

Results

| Program	CPU/Mhz	Hash table	Move	Value	Plys/Max	Time	Notes
Chess Master 2175	P100	2 Mb	Qh4xh5	+2.73	13	04:01:38	sees to N-B5
Chess Genius 1.0	P100	320 Kb	Qh4xh5	+1.60	6/18	00:00:28	sees to Q-B1
Chess Genius 1.0	P100	320 Kb	Qh4xh5	+2.03	7/19	00:02:23	sees to Q-B1
NEW Rebel Decade 2.0	P100	512 Kb	Qh4xh5	+2.20	10	00:08:34	seen at 1m 33s
HEXNER Rebel 8	K6/233	60 Mb	Qh4xh5	+0.86	8	00:00:28	
KAI Rebel 9	Pentium Pro 200 Mhz	60 Mb	Qh4xh5	+2.20	10	00:02:26	8 ply,+0.86 in 0:44
KAI Crafty 12.6	Pentium Pro 200 MHz	24 Mb + 16 Mb	Qh4xh5	+1.75	10	00:03:55	seen at 3m21s
KAI Chess Master 5500	Pentium Pro 200 Mhz	?	Qh4xh5	+2.24	7	00:00:28	seen at 11 sec.
KAI Chess Master 5500	Pentium Pro 200 Mhz	?	Qh4xh5	+3.11	8	00:00:40	
KAI MChess Pro 5.0	Pentium Pro 200 Mhz	10 Mb	Qh4xh5	+3.63	7	00:01:18	seen at 1:03
PFiSTER Patzer 2.99y	Sun Ultra1/167 Mhz	32 Mb	Qh4-g4	+1.07	11	01:05:05	can't see it
FODEN Green Light Chess 2.04h	6x86 P200+	24 Mb	Qh4xe7	+1.10	8	00:05:00	can't see it

Notes:

Very tactical position, solved with a *Queen sacrifice*. Note that **Chess Genius 1.0** sees with a 7-ply search more or less the same as **Chess Master 2175** with a 13-ply one, just *100 times faster* !

This is due to the efficient quiescence search applied to the terminal nodes, which effectively extends the 7-ply search to a 19-ply one for tactical positions such as this.

Rebel Decade 2.0 finds too the sacrifice, but it needs to look at 10 full plies and evaluate *10.003.323* positions before assigning it a respectable +2.20 value. It saw the correct move for the first time at 8 plies in 1m 33s, and also at 9 plies in 2m 1s, but in both cases with a low +0.86 value.

Rebel 8 and **Rebel 9**, the commercial versions, do the same as freeware **Rebel Decade 2.0**, same move found, same plies, same evaluation, just more than *3 times faster*, due mainly to better hardware. It's somewhat curious that **Rebel 9** seems to be somewhat *slower* than **Rebel 8** at 8 plies: 44 seconds vs 28 seconds, running on similar hardware. Maybe the hardware is not so similar after all.

Crafty 12.6 also finds the correct Queen sacrifice, but it needs to look at 10 plies and, despite the faster hardware and the much larger hash tables, takes substantially longer than CG1.0.

Another program which also takes longer than CG1.0 is **Chess Master 5500**. Taking into account the hardware difference, it's some *3 times slower* and also needs to look at 7 plies instead of 6, but finds a greater gain. A further 8th ply doubles the time but then it finds even more gain still.

MChess Pro 5.0 takes triple the time than CM 5500 to search to the same 7 plies, but it finds substantially more gain.

Patzer 2.99y, surprisingly, fails to see the sacrifice. It goes to a depth of 11 plies taking more than an hour to do so, examines *89.174.580 nodes*, yet it doesn't find it. This is surprising because several other programs were able to find the correct move while searching to just 7 full plies, instead of 11.

Finally, **Green Light Chess 2.04h** is the other program tested that fails to find the correct sacrifice. It searches up to 8 plies in 5 minutes, examines *7.433.245 nodes*, but does not see the winning capture.

8.- Position taken from "How computers play chess"
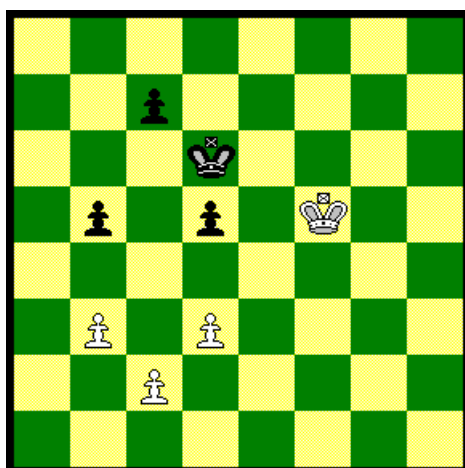
FEN: 8/2p5/3k4/1p1p1K2/8/1P1P4/2P5/8/ w

White to play and win: 1. b3-b4

Results

Program	CPU/Mhz	Hash table	Move	Value	Plys/Max	Time	Notes
Cray Blitz	Cray XMP	Yes	b3-b4	?	18	00:01:30	sees draw
Chess Master 2175	P100	No	b3-b4	+0.23	15	00:08:21	without hash
Chess Master 2175	P100	2 Mb	b3-b4	+0.27	15	00:00:23	with hash
Chess Genius 1.0	P100	320 Kb	b3-b4	+0.12	13/25	00:00:29	selective=12
Chess Genius 1.0	P100	320 Kb	b3-b4	+0.09	13/13	00:00:06	selective=0
NEW➤ Rebel Decade 2.0	P100	512 Kb	b3-b4	+0.21	20	00:25:14	20.436.154 nodes
HEXNER Rebel 8	K6/233	60 Mb	b3-b4	+2.07	19	00:00:35	sees win
KAI Rebel 9	Pentium Pro 200 Mhz	60 Mb	b3-b4	+2.71	23	00:15:01	largest gain
Crafty 12.7	P100	12/5 Mb	b3-b4	+0.000	19	00:51:29	sees draw
KAI Crafty 12.6	Pentium Pro 200 MHz	24 Mb + 16 Mb	b3-b4	+0.000	up to ply 16	instantly	see notes
KAI Chess Master 5500	Pentium Pro 200 Mhz	?	b3-b4	+0.25	18	00:04:50	seen at 27 sec.
KAI MChess Pro 5.0	Pentium Pro 200 Mhz	10 Mb	b3-b4	+0.11	10	00:00:02	
PFiSTER Patzer 2.99y	Sun Ultra1/167 Mhz	32 Mb	b3-b4	+1.78	12	00:00:21	see notes
FODEN Green Light Chess 2.04h	6x86 P200+	24 Mb	b3-b4	+0.00	14	00:01:00	sees draw

Notes:

Very difficult endgame position. None of the programs tested (including **Cray Blitz** running on a Cray supercomputer (!) could see the win, though all of them made the correct move.

Notice what an enormous difference a hash table makes in this kind of endgame: **Chess Master 2175** is *25 times slower* when searching to the same depth without hash table than with a 2 Mb one.

On the other hand, **Chess Genius G1.0** is *6 times faster* when it forgets about the extra 12-ply search for captures at the terminal nodes, mostly irrelevant in this position.

Rebel Decade 2.0 sees the correct move, but it needs to look at 20 plies, taking much longer than the other programs (except **Crafty 12.7**, see below), before it evaluates the move at +0.21. By then, it has examined *20.436.154 positions*.

Rebel 8 searches to one ply less, at 19 plies, but it does it more than *40 times faster* than RD2.0, and more importantly, *sees the win*, evaluating the move at +2.07, one of the largest evaluations among the programs tested.

The newer version, **Rebel 9**, searches even deeper, at 23 plies, and finds the largest gain, +2.71. The timing is very good for such depth. The correct move is seen as early as at 2 sec., and by the time a depth of 21 plies is reached (in only 2 min. 31 sec.), the evaluation has already raised to +2.05.

Crafty 12.7 searches also very deep, to a maximum of 19 plies, needing a very long time, but though it finds the correct move, it doesn't see the win, just a dead draw (+0.000). **Crafty 12.6** evaluates the correct move at +0.000, too, for all plies up to ply 16. It was not tested beyond that.

Chess Master 5500 looks at an incredible 18 plies very very fast, but then it also doesn't find any win, thoug it does find the correct move.

Same for **MChess Pro 5.0**, which looks at 10 plies in just a few seconds. As all the other programs, it finds the correct move, but it doesn't see any win either.

Patzer 2.99y seems to be the only program which sees some win here. It finds the correct move with a 12-ply search in an average time, and evaluated as +1.78, a gain worth nearly *two pawns*. It evaluated only *773.178 nodes* thanks to its large 32 Mb hash table.

Green Light Chess 2.04h can't see any win. First it sees the correct move **b4** at 7 plies after 0.44 seconds, but changes its mind to **d4** at 12 ply (8.51 seconds). It doesn't get back to **b4** until 14 ply (1 min.) with a drawn evaluation (+0.00). Though it finally reaches 16 plies in 5 min., examining a total of *13.229.166 nodes*, it doesn't see the win.

NEW►
9.- Karpov vs Kasparov, Moscu 1984/85
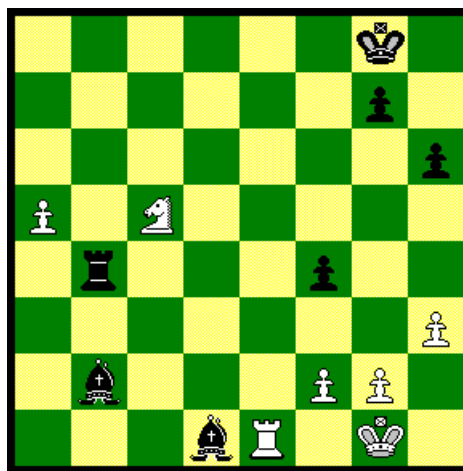
FEN: 6k1/6p1/7p/P1N5/1r3p2/7P/1b3PP1/3bR1K1/ w

White to play and win:
1. a5-a6 Bd1-b3; 2. Nc5xb3 Rb4-a4; 3. Nb3-c5 Ra4-a5

Results

Program	CPU/Mhz	Hash table	Move	Value	Plys/Max	Time	Notes
Chess Genius 1.0	P100	320 Kb	a5-a6	+0.90	9/21	00:03:42	sees it fast
PANEK Chess Genius 5.0	PII/266	10 Mb	a5-a6	+1.51	6/18	00:00:22	sees it faster
NEW► Rebel Decade 2.0	P100	512 Kb	a5-a6	+1.08	12	00:43:09	
HEXNER Rebel 8	K6/233	60 Mb	a5-a6	+1.14	10	00:00:25	good timing
KAI Rebel 9	Pentium Pro 200 Mhz	60 Mb	a5-a6	+1.06	10	00:00:49	good timing
Crafty 12.9	P100	6+1 Mb	a5-a6	+1.360	14/23	06:22:11	took too long
NEW► Comet-A.75	P100	13786 Kb	a5-a6	+1.73	10	00:04:02	

Notes:

This is a *truly historic* position, taken from the 4lth game between **Karpov** and **Kasparov** while playing the *World Championship match in Moscow, 1984/85*.

Should White have played *1. a5-a6 !* he would have won the match !!. In the *Principal Variation*, Black loses at least his Bishop, and afterwards the game. But **Karpov** was short of time and stamina at the moment, played instead *1. Re1xd1 ?* and the game ended

in a draw. Later **Kasparov** became World Champion.

Chess Genius 1.0, like most programs and **Karpov** himself, cannot resist the temptation to take the Bishop at once. But after it calms and looks at the position for a few minutes, he reaches 9/21 plies and finds the correct move *and Principal Variation* up to the moves given. **Karpov** himself wouldn't do better.

Chess Genius 5.0 does even better than its older incarnation, and thanks to its better hardware and bigger hashtable, finds the correct move *10 times faster*, and with a better evaluation (+1.51 vs +0.90). More significantly, it finds it while searching just 6/18 plies deep, instead of 9/21. Compare this with **Crafty 12.9**'s performance below.

Comet-A.75, a freeware program, also does quite well. It uses a large hashtable, and finds the correct move while looking 10 plies deep, with the largest evaluation. All in all, it looked at *6 million positions*.

Interestingly enough, **Rebel Decade 2.0** does halfway between the best and the worst results. It needs to look at 12 plies to find the correct move, evaluated at +1.08, and taking much longer than both **Chess Genius** versions or freeware **Comet-A.75**. But its performance is much faster than **Crafty**'s. Anyway, it looked at *42.140.344 positions* to arrive at that result.

Rebel 8 and **Rebel 9** both find the same correct move as RD2.0, but need to look at only 10 plies for a similar evaluation (+1.14 and +1.06 vs +1.08), and their timing is between *60 and 100 times faster*. Letting **Rebel 9** go one ply deeper, to 11 plies, takes just 1 min. 40 sec., but the evaluation remains similar, +1.01. Compared to **Chess Genius 5.0**, they both need to look 4 plies deeper (10 vs 6) to see the correct move with a slightly lower evaluation (+1.14 vs +1.51), but the timings are similar nevertheless.

Crafty 12.9 finds the correct move, too, but despite being a more modern program and using a *much larger* hashtable, it does it nearly *100 times slower* than CG1.0, in fact it takes *several hours* !. It needs to look at 14 full plies (instead of CG1.0's just 9 or CG5.0's just 6) to see that *1. a5-a6* is best. Till then, it prefers **Karpov**'s move, taking the Bishop with the Rook, which spoils the win (and for poor **Karpov**, the World Title !). The comparison against CG5.0 is much worse.

If you want to have a chance at analyzing why **Crafty** does so poorly this time, here's a resume of its analysis for this position, extended to *more than 20 hours (16/23 plies)*:

```
depth   time    score   variation
  5->   1.06    1.702   Rxd1 Rb5 Nd3 Bc3 a6 Rd5
  6->   3.47    1.598   Rxd1 Rb5 Rd8+ Kf7 Nd3 Bf6 Rd7+ Ke6
  7->   6.57    1.601   Rxd1 Rb5 Nd3 Bf6 a6 Rb6 Nc5 Rb2
  8->  12.78    1.649   Rxd1 Rb5 Nd3 Ba3 a6 Ra5 Nxf4 Rxa6 Rd7
  9->  50.42    1.533   Rxd1 Rb5 Nd3 Bf6 a6 Ra5 Nb4 Ra4 Rb1 Bd4
 10->   1:33    1.512   Rxd1 Rb5 Nd3 Ba3 Nxf4 Rxa5 Rd7 Bb2
                        Ne6 Ra1+ Kh2 Kh7
 11->   3:55    1.378   Rxd1 Rb5 Nd3 Ba3 Nxf4 g5 Ne2 Rxa5
                        Rd7 Bc5 Nc3
 12->  27:38    1.332   Rxd1 Rb5 Rd8+ Kf7 Nd3 Bf6 Ra8 g5 Kf1
                        Rb1+ Ke2 Ra1 a6 Ra2+ Kf3 Bd4
 13->  88:57    1.262   Rxd1 Bd4 Ne6 Bf6 Rd5 Ra4 Rc5 Kf7 Nc7
                        Ra1+ Kh2 Ra2 a6 f3 gxf3 Rxf2+
 14   111:03    1.250   Rxd1 Bd4 Nd3 Ra4 Nxf4 Bc3 a6 Rxa6
                        Nd5 Bb2 f4 Ra2 Nb4 Ra3
 14   382:11    1.360   a6 Bb3 Nxb3 Rxb3 a7 Ra3 Re8+ Kf7 a8=Q
                        Rxa8 Rxa8 Bd4 Kf1 Ke6 Ke2 Kd5 Ra5+
                        Kc4 Ra4+ Kc3 Kf3 g5 g3
 14-> 400:53    1.360   a6 Bb3 Nxb3 Rxb3 a7 Ra3 Re8+ Kf7 a8=Q
                        Rxa8 Rxa8 Bd4 Kf1 Ke6 Ke2 Kd5 Ra5+
                        Kc4 Ra4+ Kc3 Kf3 g5 g3
 15-> 836:26    1.402   a6 Rb5 a7 Ra5 Re8+ Kf7 a8=Q Rxa8 Rxa8
                        Bf6 Ra7+ Be7 Rc7 Be2 g3 g5 gxf4 gxf4
                        Kg2 Kf6 f3
 16  1278:40    1.359   a6 Rb5 a7 Ra5 Re8+ Kf7 a8=Q Rxa8 Rxa8
                        Bf6 Nd7 Bc2 Ra6 Bg5 Ne5+ Ke7 Ng4 g6
                        Ne5 Bf6 Rc6 Bxe5 Rxc2
```

10.- Posicion taken from "How computers play chess"
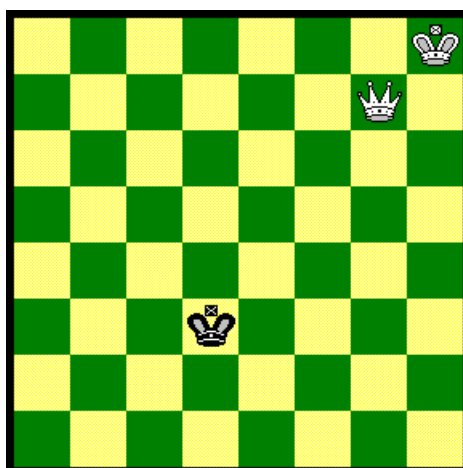
FEN: 7K/6Q1/8/8/3k4/8/8/ w

White to play and mate in 9: 1. Qg7-b2

Results

Program	CPU/Mhz	Hash table	Move	Value	Plys/Max	Time	Notes
Chess Master 2175	P100	2 Mb	Qg7-b2	Mate9	17	00:07:25	seen at 6m55s
Chess Genius 1.0	P100	320 Kb	Qg7-g1	Mate10	14/26	00:16:48	level=infinite
NEW Rebel Decade 2.0	P100	512 Kb	Qg7-d7+	+9.87	11	00:40:11	can't see it
HEXNER Rebel 8	K6/233	60 Mb	Qg7-g6+	+10.23	14	00:10:57	not found
KAI Rebel 9	Pentium Pro 200 Mhz	60 Mb	Qg7-d7+	+10.05	13	00:04:46	does not find mate
Crafty 12.7	P100	6 Mb + 640k	Qg7-g6+	Mate11	14	00:35:10	seen at 34m 10s
KAI Crafty 12.6	Pentium Pro 200 MHz	24 Mb + 16 Mb	Qg7-d7+	+13.868	14	00:17:52	see notes
KAI Chess Master 5500	Pentium Pro 200 Mhz	?	Qg7-b2	Mate11	13	00:04:42	
KAI Chess Master 5500	Pentium Pro 200 Mhz	?	Qg7-g3	Mate10	13	00:05:20	
COOTER Fritz 4.1	Cyrix P166/48Mb	18 Mb	?	Mate9	13/24	00:00:19	
COOTER Fritz 5	Cyrix P166/48Mb	18 Mb	?	Mate11	17/24	00:00:14	
COOTER Hiarcs 6.0	Cyrix P166/48Mb	18 Mb	?	Mate23	8/19	00:06:19	
PFiSTER Patzer 2.99y	Sun Ultra1/167 Mhz	32 Mb	Qg7-f7	MateX	15	00:04:14	see notes

Notes:

This is a difficult mate, too many moves in too open a position, and with a queen. Most supercomputer programs (**Deep Blue**, for instance) solve this kind of position with no tree searching at all, just a look at their *precompiled endgame databases*. This takes virtually no time at all.

Microcomputer programs don't normally do that, but they use hash tables to speed the search. In any case, using a special Mate level is *not* a good idea once the required number of moves exceeds 8 or so.

In this position, a larger hash table would have helped **Chess Genius 1.0** to reduce the large computing time, though it still manages to solve the mate using just a 14-ply search instead of the full 19-ply apparently needed, and with a very good timing.

Crafty 12.7 could solve this position instantly, using the pertinent endgame tablebase, but while this is desirable for actual play, for testing purposes it's better to see how well it succeeds at finding the mate unassisted. Unfortunately, it finds a *slower* mate in 11, taking more time than CG1.0 did. In the process, it searches *70.372.436* positions, of which only 2.464.140 are evaluated.

Surprisingly, **Crafty 12.6** *could not see the mate*, taking quite a long time to search up to 14 plies. **Kai Luebke** was using such large hash tables, but told me he disabled the endgame tablebases, to test the engine. Otherwise, it would have found the shortest mate

at once, inmediately, with a simple tablebase lookup.

Rebel Decade 2.0, also freeware, fails to find the mate too. After some 40 min. it has gone only 11 plies deep (compare with 14/26 plies for **Chess Genius 1.0** in 16 min.) but it merely finds **Crafty 12.6**'s move, *Qg7-d7+*, with the lowest evaluation, +9.87. No mate. In all, it examined *66.609.365 positions*.

Most surprisingly of all, top commercial programs **Rebel 8** and **Rebel 9** also fail to find this mate. They search to 14 and 13 plies respectively, but do not see any mate at all. This is surprising, as old **Chess Genius 1.0**, running in slower hardware and with a much smaller hash table (320 Kb vs 60 Mb) *does* find the mate in 10 when looking at the same depth, 14 plies, in a comparable time. Among the modern programs, **Chess Master 5500** also discovers the mate when looking at 13 plies, in a time comparable to that of **Rebel 9**.

Patzer 2.99y uses its large 32 Mb hash table to go 15 plies deep. At that depth, after examining *8.436.864 nodes*, it discovers a move recognized as a mate, but it can't reliably say in how many moves. The time is quite reasonable, however.

Chess Master 5500 looks at 13 plies and finds at first the correct move, though it evaluates it as a longer mate in 11. Then, after a while, it discovers another move which gives mate in 10. It does not seem to find the correct mate in 9.

The **Fritz** family does some *curious things* with this position. First, **Fritz 4.1** finds a mate in 9 while looking at 13/24 plies in an incredibly short time. Then, **Fritz 5** who supposedly is better, needs to look deeper, at 17/24 plies, yet it finds a slower mate in 11, though still faster. Finally, **Hiarcs 6.0** only looks at 8/19 plies, but it takes many times longer and reports a *mate in 23 !* It should have been using some sort of endgame tablebase or something like that. But then, it wouldn't have taken *so long !*. **Mike Cooter** sent these results, together with a result for **Fritz 3.10** who found a *mate in 7 !!*. But that *simply can't be*. This position *is not a mate in 7*. Mike, *can you explain ?*.