Efstratios Grivas

Mastering rook vs pieces endgames

FIDE
GENS UNA SUMUS
Chess Evolution
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# KEY TO SYMBOLS

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<tr>
<td>=</td>
<td>Equality or equal chances</td>
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<tr>
<td>±</td>
<td>White has a slight advantage</td>
</tr>
<tr>
<td>‡</td>
<td>Black has a slight advantage</td>
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<tr>
<td>±</td>
<td>White is better</td>
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<td>‡</td>
<td>Black is better</td>
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<tr>
<td>+-</td>
<td>White has a decisive advantage</td>
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<td>-+</td>
<td>Black has a decisive advantage</td>
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<tr>
<td>∞</td>
<td>unclear</td>
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<tr>
<td>∞∞</td>
<td>with compensation</td>
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<td>⇔</td>
<td>with counterplay</td>
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<td>↑</td>
<td>with initiative</td>
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<td>→</td>
<td>with an attack</td>
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<td>Δ</td>
<td>with the idea</td>
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<td>□</td>
<td>only move</td>
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<tr>
<td>N</td>
<td>novelty</td>
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<tr>
<td>!</td>
<td>a good move</td>
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<td>!!</td>
<td>an excellent move</td>
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<td>?</td>
<td>a weak move</td>
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<td>a blunder</td>
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<td>!?</td>
<td>an interesting move</td>
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<tr>
<td>+</td>
<td>check</td>
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<td>#</td>
<td>mate</td>
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Dear Reader,

As you may already be aware, the publishing house ‘Chess Evolution’ is printing a series called “The Modern Endgame Manual” which will consist primarily of eight books and will deal with everything concerning the endgame.

I was surprisingly pleased when the Editor in Chief, GM Arkadij Naiditsch, asked me to write two of the eight books. But I was a bit ‘disappointed’ when it was made clear to me that I would have to deal with a quite difficult subject: Rook vs Pieces Endgames!

But OK, nothing is really difficult nowadays. The modern author has at his disposal powerful databases, tablebases, analysed material, books and — by adding his own knowledge he will always find what he is looking for!

The endgame is a phase of the game that has been extensively analysed and reduced to concrete conclusions, although in nearly all the books I know of, very little space is dedicated to the queen vs pieces endgame subject.

I think this is mainly because of space limitations and because it’s a difficult theme that doesn’t appear too interesting for readers. But a modern chess player cannot really choose what he likes or prefers — this has nothing to do with openings!

Today we have shorter time-controls and there isn’t really enough time to dig around in the subtleties of each ending. You have to know and to repeat knowledge; don’t be carried away by the usual myth of the ‘chess talent’. As I have repeatedly written and proved, ‘talent is the excuse of the failed’.

‘Unfortunately’, the modern chess player is entitled and forced to work more than his predecessors. The modern chess trainer also needs to prepare more delicate themes, understand them and then teach them to his students as well. So, there is plenty of room for everything and for everybody who is thirsty for knowledge.
Knowledge is the keyword, and knowledge is absorbed subconsciously; it is impossible to remember everything you study. So, it is highly important to work with good material and good trainers in order to improve towards the ‘Chess Olympus’.

Nowadays the help of the Silicon Monster (chess analysis engines) is quite valuable, as it can save an author countless hours of analysis and checking. But still the role of the qualified trainer remains important; he knows where the truth is — he knows what to keep and what to throw away...

I do not want to ‘hold a high nose’ and claim that everything I have written is perfect and completely sound; I am always aware of the surprise factor and I just try to write honestly and with responsibility.

As an author, I feel that I should especially congratulate four important figures of our chess literature world: Alexander Baburin, Karsten Muller, John Nunn and Jan Timman. Dr. John Nunn was kind enough to permit me to publish his analysis of the game Piket-Nunn, Wijk aan Zee 1990 — I truly thank him!

Finally, I would like to thank three readers who each contributed valuable time and effort to check and correct my work:

– Former FIDE Women World Champion, GM & FST Antoaneta Stefanova.
– Lecturer in Computer Science, who has championed advances in the creation and use of chess endgame tables, Guy Haworth.

Have a nice reading journey!

Athens, 2016

Efstratios Grivas
In this series of eight endgame books, FIDE Senior Trainer Adrian Mikhalchishin, FIDE Senior Trainer Efstratios Grivas and IGM Csaba Balogh combine their experience as trainers and as practical players to create something very special.

The authors aim for very understandable explanations of every endgame position in each book.

The specification:
- 1st book — Queen and pawn endgames.
- 2–3 — Minor piece endgames (bishop and knight endgames).
- 4–5 — These will feature the fight between different material constellations.
- 6–8 — These books are going to focus on the most common endgames, which are of course rook endings.

The main concept of each book is to provide theoretical knowledge which can be used in practical games. It means the focus of the books will be on positions which are the most likely to occur and the practical playing of them.

That's why you will firstly meet the theoretical part, and secondly the practical examples of how games actually continued in a particular endgame.

Yes, you're right, you won't find too many very complicated studies, stunning manouevres or rarely-appearing positions — and there is a simple reason why not!

How often do we see positions, for example two knights vs pawn where one knight is blocking the pawn and the other one tries to get the king to the corner before releasing the second knight for the mate? Or constellations with crazy material on the board? This might happen in one game out of 100! You could spend hundreds of hours working on something that might bring you “only” a single point more out of 100 games!
Our approach is quite different: let’s make more points in the other 99 games! And who knows, we might also be lucky in the remaining one, but actually, statistically, it would almost not matter.

“The Modern Endgame Manual” will make an expert out of you in most of the endgames which are going to appear in your long career as a chess player!
1. A Chess Odyssey; Efstratios Grivas; Chesscafe.com 2007 & FIDE 2013
5. Chess Analytics — Training with a Grandmaster; Efstratios Grivas; Russel Enterprises 2012
6. Chess College 1: Strategy; Efstratios Grivas; Gambit 2006
7. Chess College 2: Pawn Play; Efstratios Grivas; Gambit 2006
8. Chess College 3: Technique; Efstratios Grivas; Gambit 2006
9. Chess Expertise Step by Step Vol. 1 — Unexpected Tactics; Efstratios Grivas; ChessBase 2011
10. Chess Expertise Step by Step Vol. 2 — Mastering Strategy; Efstratios Grivas; ChessBase 2011
11. Chess Expertise Step by Step Vol. 3 — Rook Handling; Efstratios Grivas; Chessbase 2011
12. Chess Expertise Step by Step Vol. 4 — Endgame Magic; Efstratios Grivas; Chessbase 2011
13. Chess for Tigers; Simon Webb; Oxford University Press 1978
15. ChessBase Endgame Surveys; Karsten Müller; Chessbase 2010–2013
16. ChessBase Magazine — Strategy; Daniel King; ChessBase 2000–2010
17. ChessBase Mega Database; Various Contributors; ChessBase 2016
18. Dvoretsky’s Endgame Manual; Mark Dvoretsky; Russel Enterprises 2003
20. Exploring the Endgame; Peter Griffiths; A & C Black 1984
21. Fundamental Chess Endings; Karsten Müller & Frank Lamprecht; Gambit 2001
22. Informator; Various Contributors; Informator 1966–2016
23. Learn from the Legends; Mihail Marin; Quality Chess 2004
24. Middlegame Motifs; Nigel Davies; ChessCafe 2009–2010
25. Modern Chess Planning; Efstratios Grivas; Gambit 2007
26. Montreal 1979; Mikhail Tal; Pergamon 1980
27. My System; Aaron Nimzowitsch; Hays Publications 1991
28. New In Chess (Magazine & Yearbook); Various Contributors; Interchess BV 1984–2016
The above sources were my main help and guide while writing this book. I would like to thank the (rest) of the authors for their contributions to chess literature and the chance they gave to all chess players to become better. Wikipedia was quite helpful too!

If I forgot to ‘mention’ somebody or if I used ‘modified’ material and didn’t mention the original author, I want to apologize. Obviously I didn’t do it on purpose; I don’t need to, as I am capable of writing and analysing things myself. I am just getting old and sometimes my collected old material fails to remind me exactly who did what…
CHAPTER 1

ROOK VS ROOK

ROOK VS ROOK & BISHOP

The rook vs rook & bishop ending has been studied many times throughout the years. This combination of material is one of the most common pawnless chess endgames.

In general, this ending is drawn. However, the task of the defending side is particularly hard and thus the danger of defeat is very real; in contemporary practice (with shorter time controls) the stronger side wins with alarming regularity.

In positions that have a forced win, up to 59 moves are required according to Jon Speelman. Pal Benko called this the ‘headache ending’.

Computer endgame tablebases have proved that approximately 40% of the legal positions with this material are theoretical wins, but that includes many unnatural positions that are unlikely to occur in practical games. Edmar Mednis estimated that less than 4% of starting positions that occur in games are theoretical wins.

In 1749 Francois-André Danican Philidor (1726-1795) published a position in which the superior side can force a win:

Example 1

Francois-André Philidor
Study, 1749

This is the basic winning position, referred to as the ‘Philidor Position’. This construction (king on the 6th rank and bishop on the 5th — and of course its mirror images on a horizontal axis) wins, with the sole exception of the knight files (b- and g-). The main points of White’s plan are to drive the black king to the edge of
the board and the black rook to its 6th rank, so as to be unable to return to the king’s defense in time.

1. ** Eb8+ Ed8 2. ** Ef7 Ed2!

The toughest defense. 2... Eh8? 3. Ea7 Eh6+ 4. Ed6 loses quickly.

3. ** Eg7! Ed1 4. ** Eb7 Ec1

The alternative 4... Ec8 does not help Black: 5. Ea7 Eb1 6. Eh7! Eb8 (6... Eb6+ 7. Ec6) 7. Eh8+ Ea7 8. Ea8+ Eb6 9. Eb8+

5. Eb3!! Ec3


6. Ec6 Ed3+ 7. Ec5 Ec3

Compulsory (7... Ec8 8. Ea7!)

8. Ed7+! Ec8

8... Ec8 9. Eg7 reveals the point of forcing the defending rook to its 6th rank; it is now unable to return to the f-file.

9. Ef7 Eb8 10. Eb7+ Ec8 11. Eb4! Ed8

Or 11... Ed3 12. Ea4 and the black rook cannot reach the b-file.

This winning position was discovered by Giambattista Lolli. The position is one rank or file closer to the edge of
the board than the ‘Philidor Position’, so the winning method is slightly different. Switching the attacking rook to the other side of the king is no longer dangerous.

1. \( \text{R}a2 \text{R}b8 \) 2. \( \text{Ra6 \text{R}b6} \) 3. \( \text{Rd3 \text{R}c6+} \)
4. \( \text{Rc4 \text{R}b6} \) 5. \( \text{Rc2+ \text{R}b1} \) 6. \( \text{Re2 \text{Ra1}} \)
7. \( \text{Re5 \text{R}b8} \)

Or 7... \( \text{R}b7 \)

8. \( \text{Ra5+ \text{R}b1} \) 9. \( \text{Rd3+ \text{R}c1} \) 10. \( \text{Ra1+ \text{R}b1} \)

In the second ‘Lolli Position’, the kings are one row closer to the edge than in the first ‘Lolli Position’. Unlike the ‘Philidor Position’ and the first ‘Lolli Position’, this position is a theoretical draw. Several of the moves in the perfect defense are the only move that saves the game.

1. \( \text{Ra8+ \text{R}c8} \) 2. \( \text{Rd7 \text{R}c2} \) 3. \( \text{Rf7 \text{R}c3} \)
4. \( \text{Ra4 \text{R}c1!} \)

The only move. 4... \( \text{Rc4?} \) 5. \( \text{Rc6 \text{R}b4+} \) 6. \( \text{Rb5} \) would lose.

5. \( \text{Rc6 \text{R}b1+} \) 6. \( \text{Rc5 \text{R}b2!} \)

The black rook must remain on the knight’s file.

7. \( \text{Rd5 \text{R}h2!} \)
Preventing 8.\texttt{d6}!

\begin{align*}
8. & \texttt{b7} + \texttt{c8} \quad 9. & \texttt{e7} & \texttt{b8}!
\end{align*}

On the other hand, there are several drawing techniques possible if a winning position such as the ‘Philidor Position’ has not been reached.

The ‘Cochrane Defense’ was discovered by John Cochrane (1798-1878) and it is the most popular among grandmasters for this ending. The basic idea is to pin the bishop to its king when there are at least two ranks or files between it and the defending king.

Accurate play is required for the defense and it is most effective near the center of the board, and does not work on the edge. The ‘Cochrane Defense’ works when:

1. The defending rook pins the bishop to the king on one of the four central files (c- through f-) or ranks (3 through 6).
2. There are two or more ranks or files (respectively) between the kings.

The ‘Cochrane Defense’ can also be used with a rook against a rook and knight.

White would like to get his king to d6 and bishop to d5, and to win by the ‘Philidor Position’ method, however the pin of the bishop to the king prevents it. Usually Black moves his king in the opposite direction, so if the bishop then moves, the black rook cuts-off the white king.

86...\(\text{f8}\)

86...\(\text{e2}\) is fine as well: b) 87.\(\text{d5}\) (a) 87.\(\text{f5}\) \(\text{d8}\) 88.\(\text{d5}\) \(\text{e7}\) 89.\(\text{a8+}\) \(\text{d7}\) 90.\(\text{e6+}\) \(\text{d6}\) 91.\(\text{d8+}\) \(\text{c5}\) 92.\(\text{e5}\) \(\text{h7}\) 93.\(\text{c8+}\) \(\text{b4}\) 94.\(\text{c4+}\) 95.\(\text{d6}\) \(\text{h6}\) 96.\(\text{c3}\) \(\text{h4}\) 97.\(\text{b3+}\) \(\text{b4}\) 98.\(\text{a3}\) \(\text{d4+}\) 99.\(\text{d5}\) \(\text{h4}\) (99...\(\text{g4!}\)=) 100.\(\text{c6+!}\) \(\text{b6}\) 101.\(\text{b3+}\) \(\text{a6}\) 102.\(\text{c5}\) \(\text{a7}\) 103.\(\text{b7+}\) \(\text{a6}\) 104.\(\text{b8}\) \(\text{h5+}\) 105.\(\text{d5}\) \(\text{h7}\) 106.\(\text{b2}\) 1–0 Olafsson,F-Pilnik,H Reykjavik 1957.) 87...\(\text{f8}\) 88.\(\text{f5}\) \(\text{e7}\) 89.\(\text{a1}\) \(\text{f7}\) 90.\(\text{f1}\) \(\text{a7}\) 91.\(\text{e6+}\) \(\text{g6}\) 92.\(\text{e5}\) \(\text{a5+}\) 93.\(\text{d5}\) \(\text{g5}\) 94.\(\text{g1+}\) \(\text{h5}\) 95.\(\text{d4}\) \(\text{h6}\) 96.\(\text{e4}\) \(\text{b5}\) 97.\(\text{e5}\) \(\text{h5}\) 98.\(\text{f1}\) \(\text{g5}\) 99.\(\text{f5+}\) \(\text{g6}\) 100.\(\text{f4}\) \(\text{b6}\) 101.\(\text{f7+}\) \(\text{g7}\) 102.\(\text{g5}\) \(\text{f8}\) ½–½ Stripunsky,A-Morawietz,D Porz 1993.

The defense is most effective near the center of the board. In the position above, if the pieces on the e-file were moved to the f-file, then if 1.\(\text{e5}\) the response 1...\(\text{g8}\), puts the black king dangerously close to the corner according to John Nunn.

There are some key ideas for the defender to observe:

1. Wait by moving the rook between e1 and e2.
2. Answer \(\text{d5}\) with...\(\text{f8}\) and \(\text{f5}\) by...\(\text{d8}\).
3. Drive the rook away from the 7th rank at the first opportunity.
4. Move the king away from the 8th rank, as near the center of the board as possible.
5. Once the king has left the back rank, hold off the attacking king for a few moves.

6. When the white king gets back to the 5th rank (or equivalent in other directions), switch the rook around and head for the ‘Cochrane Defense’ position again (perhaps rotated 90 or 180 degrees). This phase is important because the opposing king must not be allowed to reach the 6th rank (or equivalent).

The ‘Cochrane Defense’ was also used in this game. It occurred again on move 114, rotated 90 degrees.

98. \textcolor{red}{\textbf{d5}} \textcolor{blue}{\textbf{f8!}}

The defending king goes the opposite way to the attacking king.

\begin{center}
\begin{tikzpicture}
\draw[gray!50,ultra thin] (0,0) grid (8,8);
\draw[ultra thick] (1,5) -- (7,5);
\draw[ultra thick] (3,6) -- (3,2);
\node at (1,1) {$\textcolor{red}{\textbf{K}}$};
\node at (7,1) {$\textcolor{blue}{\textbf{K}}$};
\node at (1,6) {$\textcolor{blue}{\textbf{K}}$};
\node at (7,6) {$\textcolor{red}{\textbf{K}}$};
\node at (1,8) {$\textcolor{red}{\textbf{K}}$};
\node at (7,8) {$\textcolor{blue}{\textbf{K}}$};
\node at (8,1) {$\textcolor{blue}{\textbf{R}}$};
\node at (3,3) {$\textcolor{red}{\textbf{R}}$};
\end{tikzpicture}
\end{center}

‘Cochrane’ again, on a different side.

118... \textcolor{red}{\textbf{b5}} 119. \textcolor{blue}{\textbf{e4}} \textcolor{red}{\textbf{h6}} 120. \textcolor{blue}{\textbf{e6}} \textcolor{red}{\textbf{a5}} 121. \textcolor{blue}{\textbf{g4}} \textcolor{red}{\textbf{g7}} 122. \textcolor{red}{\textbf{f4}} \textcolor{blue}{\textbf{a3}} 123. \textcolor{blue}{\textbf{f5}} \textcolor{red}{\textbf{f8}} 124. \textcolor{blue}{\textbf{g5}} \textcolor{red}{\textbf{e7}} 125. \textcolor{blue}{\textbf{d1}} \textcolor{red}{\textbf{a7}} 126. \textcolor{blue}{\textbf{d5}} \textcolor{red}{\textbf{c7}} 127. \textcolor{blue}{\textbf{h3}} \textcolor{red}{\textbf{a7}} 1/2

Jozsef Szen discovered the ‘Szen Position’, a defensive drawing position. The kings are opposite in an L-shape and the weaker side’s rook defends on the side of his king that has more room.

The ‘Szen Position’ is the most important for over-the-board players. Compared to the ‘Philidor Position’, the kings are not opposite each other
and the defending rook can prevent checkmate.

The position is a draw only if there is enough room for the defending king on the side with the rooks.

3

▷ Andreas Bock
▶ Alexander Matthaei
Germany 2002

57...\(\text{b2}\) 58.\(\text{c8}\) \(\text{h2}\) 59.\(\text{c1}\)

The text move and 59.\(\text{c3+}\) are the only moves to draw.

59...\(\text{d3}\) 60.\(\text{c7}\) \(\text{d4}\) 61.\(\text{d1}\) \(\text{c4}\) 62.\(\text{d7+}\) \(\text{c3}\) 63.\(\text{e1}\)?

63.\(\text{e7!}\) is the only move.

63...\(\text{e2+!}\) 64.\(\text{d1}\) \(\text{e5}\) 65.\(\text{c7}\) \(\text{a5}\) 66.\(\text{e1}\) \(\text{f5}\)! 0–1

This game illustrates the ‘Second-rank Defense’. White cannot reach the ‘Cochrane Defense’ and an attempt to get the rook behind the black king would reach a lost ‘Philidor Position’: 87.\(\text{c8?}\) \(\text{b2+}\) 88.\(\text{f1}\) \(\text{f2+}\) 89.\(\text{e1}\) \(\text{d3}\). White uses the ‘Second-rank Defense’ and alternates his rook between c2 and d2 until Black tries to penetrate.

87.\(\text{d2}\) \(\text{h5}\) 88.\(\text{c2}\) \(\text{h2+}\) 89.\(\text{d1}\)
The defending king can be driven to the edge of the board but then the attacker’s rook is under attack, so the king cannot approach.

89...\( \text{h1+} \) 90.\( \text{e2} \) \( \text{h2+} \) 91.\( \text{d1} \) \( \text{h3} \) 92.\( \text{e2} \) \( \text{c3} \)

This is another attempt by Black. It seems that White is in zugzwang and any rook move loses: (93.\( \text{c1} \) \( \text{h2+} \) 94.\( \text{d1} \) \( \text{d3} \)), but White has a good move…

93.\( \text{d1} \)!

Now if 93...\( \text{d3} \) White has a stalemate defense with 94.\( \text{d2+} \) so the black king has to back off.

94.\( \text{e2} \) \( \text{d4} \) 95.\( \text{f3} \) \( \text{f1+} \) 96.\( \text{f2} \) \( \text{a1} \) 97.\( \text{g4} \) \( \text{a8} \) 98.\( \text{g2} \) 1/2

---

\( \text{d} \) Magnus Carlsen
\( \text{d} \) Loek Van Wely
Wijk aan Zee 2007

64.\( \text{d2} \) \( \text{h3} \) 65.\( \text{c2} \) \( \text{c3} \)

It is hard to drive the defending king to the edge. After 65...\( \text{h2+} \) 66.\( \text{d1} \) the black rook must move and the white king goes back to e2.

66.\( \text{d1} \)

White is in zugzwang and has to temporarily leave the 2nd rank.

66...\( \text{d4} \)

Here 66...\( \text{d3} \) is met by 67.\( \text{d2+} \)!

67.\( \text{f2} \) \( \text{d3} \) 68.\( \text{d2+} \) \( \text{c4} \) 69.\( \text{f2} \) \( \text{e3} \) 70.\( \text{e2} \) \( \text{d3+} \) 71.\( \text{c2} \)

And the king is back to the 2nd rank. The game continued and the position on move 74 was a reflection of the position on move 66. On move 80 the same defense was set up on the b-file. Black could make no progress and the game was drawn.

71...\( \text{d4} \) 72.\( \text{d2} \) \( \text{a3} \) 73.\( \text{e2} \) \( \text{e3} \) 74.\( \text{d1} \) \( \text{a1+} \) 75.\( \text{c2} \) \( \text{d4} \) 76.\( \text{b2} \) \( \text{a8} \) 77.\( \text{b1} \) \( \text{h8} \) 78.\( \text{c2} \) \( \text{c8+} \)

79.\( \text{b3} \) \( \text{d3} \) 80.\( \text{b2} \) \( \text{d2} \) 81.\( \text{b1} \) \( \text{a8} \) 82.\( \text{b2} \) \( \text{a1} \) 83.\( \text{a2} \) \( \text{d1} \) 84.\( \text{c2} \) \( \text{a1} \) 85.\( \text{c3+} \) \( \text{d4} \) 86.\( \text{c4+} \) \( \text{d5} \)

87.\( \text{g4} \) \( \text{e3} \) 88.\( \text{c2} \) \( \text{d4} \) 89.\( \text{d3} \) \( \text{a3+} \) 90.\( \text{e2} \) \( \text{c4} \) 91.\( \text{g2} \) \( \text{h3} \)

92.\( \text{d2} \) \( \text{e3} \) 93.\( \text{e2} \) \( \text{a3} \) 94.\( \text{c2} \) \( \text{e3} \) 95.\( \text{b2} \) \( \text{b4} \) 96.\( \text{b1} \) \( \text{d4} \)

97.\( \text{c2} \) \( \text{c4} \) 98.\( \text{d2} \) \( \text{e3} \) 99.\( \text{e2} \)

\( \text{b3} \) 100.\( \text{d1} \) \( \text{d3} \) 101.\( \text{d2+} \) \( \text{e4} \)

102.\( \text{c2} \) \( \text{b8} \) 103.\( \text{d3} \) \( \text{d4} \) 104.\( \text{d2} \) \( \text{c8+} \) 105.\( \text{d1} \) \( \text{e3} \) 106.\( \text{c2} \) \( \text{f8} \) 107.
Other winning and drawing positions were studied by Tassilo von Heydebrand und der Lasa, Josef Kling and Kuiper, and Andre Cheron.

The following games/examples will help us to understand the previous notes:

79...\texttt{a4+} 80.\texttt{d4} \texttt{g5} 81.\texttt{g7+} \texttt{h4}!

The ‘Cochrane Position’ — the safest defensive method when the king is already pressed to the edge. The rook pins the bishop and does not allow the hostile king to come closer. 81...\texttt{h5?} 82.\texttt{f5!} is a losing case.

82.\texttt{e5}

If 82.\texttt{d7} then 82...\texttt{g4!} In case of the waiting attempt 82.\texttt{g8} Black follows the same policy with 82...\texttt{b4} .

If White had played 82.\texttt{e3} the reply would have been 82...\texttt{h5}!

82...\texttt{h3}!

The king escapes from a bishop check in advance, and moves in the opposite direction from the white king.

83.\texttt{g1} \texttt{b4} 84.\texttt{e3} \texttt{g4}!

This is the point! In order to bring his king closer, White has had to move his bishop away, and Black takes advantage of this circumstance immediately. By offering the rook exchange, he releases his king from the edge.

85.\texttt{a1} \texttt{g2} 86.\texttt{f4} \texttt{g8} 87.\texttt{a2+} \texttt{f3} 88.\texttt{a3+} \texttt{e2} 89.\texttt{e4} \texttt{e8+} 90.\texttt{e5} \texttt{e7} 91.\texttt{a2+} \texttt{e1}!

The ‘Cochrane Position’ has arisen again, only this time rotated by 90 degrees.
92. \( \text{d4} \) \( \text{f1} \) 93. \( \text{f4} \) \( \text{e2} \) 94. \( \text{a8} \) \( \text{e7} \) 95. \( \text{d3} \) \( \text{g2} \) 96. \( \text{f8} \) \( \text{e6} \) 97. \( \text{f7} \) \( \text{e8} \) 98. \( \text{e3} \) \( \text{a8} \) 99. \( \text{c5} \) \( \text{a4} \) 100. \( \text{e3} \) \( \text{g4} \)

Black changes his defensive setup. After 100... \( \text{g3} \) 101. \( \text{g7} \) \( \text{h4} \) 102. \( \text{d4} \) \( \text{h5} \)! he could reach the ‘Cochrane Position’ for the third time.

101. \( \text{d6} \) \( \text{g6} \) 102. \( \text{f2+} \) \( \text{h3} \) 103. \( \text{e5} \) \( \text{g4} \) 104. \( \text{e4} \) \( \text{h5} \) 105. \( \text{f6} \) \( \text{g4} \)

Now we have the ‘Second-rank Defense’.

106. \( \text{f4+} \)

The rook is placed two squares away from the king, so that after 106. \( \text{g2+} \) \( \text{h5} \) White has no time for 107. \( \text{f5} \). The waiting 106. \( \text{f1} \) can be dangerous, but Black can defend: 106... \( \text{h5} \) 107. \( \text{f5} \) \( \text{g5}! \) (this is why this technique works only on the 2nd/7th rank or the knight file). The rook cannot be captured, while after 108. \( \text{e6} \) \( \text{g2} \) 109. \( \text{f4} \) \( \text{g6} \) 110. \( \text{h4} \) \( \text{e2+} \) 111. \( \text{e5} \) \( \text{g2} \) 112. \( \text{h8} \) \( \text{g4} \), the defense is created again.

106... \( \text{g3} \) 107. \( \text{e3} \) \( \text{h3} \) 108. \( \text{f5} \) \( \text{g3+} \) 109. \( \text{f2} \) \( \text{g2+} \) 110. \( \text{f1} \) \( \text{c2} \)

A retreat by 110... \( \text{g6} \) preparing... \( \text{g4} \) or... \( \text{g3} \) was simpler.

111. \( \text{g5} \) \( \text{c4} \) 112. \( \text{e5} \) \( \text{h4} \) 113. \( \text{g8} \) \( \text{e4} \) 114. \( \text{g3+} \) \( \text{h5} \) 115. \( \text{f2} \) \( \text{a4} \)

After a few nonchalant moves Black’s position has become suspect.

115... \( \text{g4}! \) was simpler.

116. \( \text{f3} \) \( \text{h6} \) 117. \( \text{e5} \) \( \text{b4} \) 118. \( \text{f4+} \) \( \text{h7} \) 119. \( \text{g5} \) \( \text{a4} \) 120. \( \text{g4} \) \( \text{b4} \) 121. \( \text{f5} \)

A decisive mistake that caused... an immediate draw agreement! The point is that the last pawn had been captured 53 moves ago, and ‘the 50 moves rule’ was duly applied. 121... \( \text{b5+} \) After the text move the position is lost: 122. \( \text{e5} \) \( \text{b6} \) (122... \( \text{a5} \) 123. \( \text{h5+} \) \( \text{g8} \) 124. \( \text{g6+} \)--) 123. \( \text{g7+} \) \( \text{h6} \) 124. \( \text{g8} \) \( \text{h5} \) (the ‘Philidor Position’, rotated by 90 degrees, arises. The winning procedure is already known) 125. \( \text{g2} \) \( \text{b4} \) 126. \( \text{g1!+} \) ; 121... \( \text{b1} \) was still a draw: 122. \( \text{e5} \) \( \text{f1+} \) or even 121... \( \text{b6} \) 122. \( \text{e5} \) \( \text{g6} \) ! 123. \( \text{h5+} \) \( \text{h6} \) 124. \( \text{g5} \) \( \text{g6} \).