

[Home](#) * [Engines](#) * **Carballo**



Storkeegen ^[5]

Carballo,

an [open source chess engine](#) by [Alberto Alonso Ruibal](#), written in [Java](#), licensed under the [GNU General Public License](#), and first released in 2009 ^[1]. Carballo supports the [UCI](#) protocol, and a [HTML5](#) based [GUI](#) dubbed [Mobialia Chess](#) ^[2], developed by [Lukas Laag](#) with the [Google Web Toolkit](#) (GWT) using the *Vectomatic SVG* library ^{[3] [4]}. Carballo features [pondering](#), a [PolyGlot opening book](#), and since version 1.2, [Chess960](#).

Table of Contents

[Etymology](#)

[Description](#)

[Board Representation](#)

[Search](#)

[Move Ordering](#)

[Selectivity](#)

[Evaluation](#)

[Simplified](#)

[Complete](#)

[See also](#)

[Forum Posts](#)

[External Links](#)

[Chess Engine](#)

[Misc](#)

[References](#)

[What links here?](#)

Etymology

Carballo is actually a [Galician](#) word meaning [oak](#), it's all about [search trees](#) ^[6].

Description

^[7]

Board Representation

Carballo is a [bitboard](#) engine and applies [magic bitboards](#) to determine [sliding piece attacks](#). [Staged move generation](#) along with [move ordering](#) is controlled by an [iterator](#) object which gets the next move during [search](#), and uses [legal move generation](#). This is so far implemented by [making](#) and testing whether [pseudo-legal moves](#) leave the own king in [check](#).

Search

The [search](#) performs [alpha-beta PVS](#) inside the [iterative deepening](#) loop with [aspiration windows](#), utilizing a [transposition table](#) also in [quiescence](#), verified and indexed by [Zobrist Keys](#). [Selectivity](#) considers the wide range of state of the art techniques.

Move Ordering

- [History Heuristic](#)
- [Internal Iterative Deepening](#)
- [Killer Heuristic](#) (4 Slots)
- [MVV-LVA](#)
- [Principal Variation Extraction from TT](#)

- [Static Exchange Evaluation](#) (SEE)

Selectivity

- [Check Extensions](#) (SEE ≥ 0)
- [Futility Pruning](#)
- [Late Move Reductions](#)
- [Mate Distance Pruning](#)
- [Mate Threat Extensions](#)
- [Null Move Pruning](#)
- [Passed Pawn Extensions](#)
- [Razoring](#)
- [Quiescence Search](#) (SEE ≥ 0)
- [Static Null Move Pruning](#)

Evaluation

The [evaluation](#) is designed to plug in various [evaluaton functions](#). Available are a [simplified evaluation function](#), a sophisticated, complete evaluation function, an experimental one, and some dynamic for specialized endgames, such as a [KPK bitbases](#) ^[8]. Most important features are listed below.

Simplified

- [Material Balance](#)
- [Piece-Square Tables](#)

Complete

- [Mobility](#)
- [Tapered Eval](#)
- [Pawn Structure](#)
- [King Safety](#)
- [Tempo Bonus](#)
- [Trapped Pieces](#)

See also

- [Geography](#)
- [Godot](#)
- [Mobialia Chess](#)
- [Plants](#)

Forum Posts

- [Carballo \(Java UCI\)](#) by [Alberto Alonso Ruibal](#) by [Christopher Conkie](#), [CCC](#), October 28, 2009
- [Re: Carballo \(Java UCI\)](#) by [Alberto Alonso Ruibal](#), [CCC](#), October 29, 2009
- [A new Carballo 0.5](#) by [Ruxy Sylwyka](#), [CCC](#), April 19, 2011
- [Test Carballo 0.8 JA](#) by [Pedro Castro](#), [CCC](#), July 03, 2013
- [Carballo 1.2 Gauntlet for CCRL 40/40](#) by [Graham Banks](#), [CCC](#), April 15, 2015
- [Carballo 1.2 exe](#) by [Arnaud Iohéac](#), [CCC](#), May 05, 2015
- [Carballo 1.3 is out](#) by [Arnaud Iohéac](#), [CCC](#), July 18, 2015
- [Carballo Chess engines](#) by [Damir Desevac](#), [CCC](#), October 02, 2016

External Links

Chess Engine

- [albertoruibal/carballo · GitHub](#)
- [Carballo Chess Engine | SourceForge.net](#)
- [Index of /chess/engines/Jim Ablett/CARBALLO](#) by [Jim Ablett](#), hosted by [Kirill Kryukov](#)
- [Carballo](#) in [CCRL 40/4](#)
- [Carballo](#) in [CCRL 40/40](#)

Misc

- [Carballo \(disambiguation\)](#) from [Wikipedia](#)
- [Carballo](#) from [Wikipedia](#)
- [The World's Best Photos of carballo and oak - Flickr Hive Mind](#)
- [Serafin Carballo](#) con [Abuña Jazz](#), [YouTube](#) Video

References

1. [^](#) [Re: Carballo \(Java UCI\)](#) by [Alberto Alonso Ruibal](#), [CCC](#), October 29, 2009
2. [^](#) [Mobialia Chess - Mobialia](#)
3. [^](#) [lib-gwt-svg « vectomatic](#)
4. [^](#) [vectomatic - standard dynamic 2D graphics in web browsers - Google Project Hosting](#)
5. [^](#) [Storkeegen](#) was (The last living branch on the tree died in 1981) an old [oak](#) ([Quercus robur](#)) in [Nordskoven](#), [Hornsherred](#) near [Jægerspris](#) in the northern part of the island of [Zealand](#), [Denmark](#). This drawing is by [Axel Schovelin](#) and printed in [Troels Frederik Troels-Lund \(1914\)](#). [Daglivt liv i Norden i det sekstende Aarhundrede](#). Volume 1, 4th Edition, [Egen i Danmark, p. 27](#), [Roble - Wikipedia.es](#) (Spanish), [Quercus robur](#), [Wikimedia Commons](#)
6. [^](#) [albertoruibal/carballo · GitHub](#)
7. [^](#) [carballo/readme.md at master · albertoruibal/carballo · GitHub](#)
8. [^](#) [carballo/core/src/main/java/com/alonsoruibal/chess/evaluation at master · albertoruibal/carballo · GitHub](#)

What links here?

| Page | Date Edited |
|---------------------------------------|--------------|
| Alberto Alonso Ruibal | Sep 23, 2017 |
| Carballo | Oct 2, 2016 |
| Engine releases | Apr 23, 2018 |
| Engines | Mar 10, 2018 |
| Godot | Apr 28, 2015 |

[Up one Level](#)