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[Macintosh Sigma Chess 6.2](#)

HIARCS 13 ^[2] ^[3]

Hiarcs (HIARCS), a chess engine written by [Mark Uniacke](#). HIARCS is an acronym for Higher Intelligence Auto Response Chess System, and its history of development lasts over 30 years now. Because Hiarcs is written portable in [C](#), it is available for multiple platforms such as [Pocket PC](#), [Palm](#), [Apple iPhone](#) & [iPod Touch](#), [PDAs](#), [PC](#) and [Macintosh](#) computers.

Hiarcs [opening book authors](#) over the time were [Eric Hallsworth](#), [Sebastian Böhme](#) and [Harvey Williamson](#), who is also operating Hiarcs regular at various computer chess tournaments. Hiarcs won the Gold medal at the [4th Computer Olympiad 1992](#) in [London](#), the [WMCCC 1993](#) in [Munich](#), the [IPCCC 2007](#), after the [Rybka disqualification](#) in 2011, the [WCCC 2008](#) in [Beijing](#), the [ICT 2009](#), the [WCSC 2011](#) in [Tilburg](#), the [WCSC 2013](#) in [Yokohama](#) ^[1], and the [PT 51](#).

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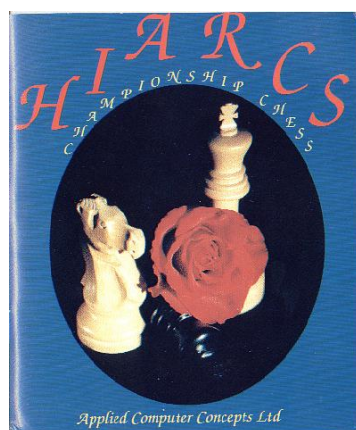
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History



Hiarcs 1 for [MS-DOS](#), 1991 ^[4], download from the Hiarcs site ^[5]

Basic

The very first version of Hiarcs was already written 1980 in [PDP-11 Basic](#), when Mark was a 15 year old schoolboy ^[6]. Subsequent versions (5 aka 0.5) were still written in interpreted Basic as well, and to compensate that speed disadvantage, Hiarcs used to be smart rather than fast. [Mark Uniacke](#) from *Now Walking, 1982-1983: HIARCS 5* ^[7]:

The inspiration for the new HIARCS search was sought from the book [Chess Skill in Man and Machine](#) and in particular the article "The heuristic search: An alternative to the alpha-beta minimax procedure" by [Larry Harris](#) from [Dartmouth College](#) ^[8]. HIARCS was still written in the relatively primitive [BASIC](#) programming language and being interpreted it meant the program was rather slow. To compensate for this I developed some heuristics to help guide the search and evaluation in a more targeted way.

C

End of the 80s Hiarcs was rewritten in [C](#). In 1991 Hiarcs **1.0** was released for [PCs](#) and the [MS-DOS](#) operating system. Subsequent Hiarcs versions were compiled to run under various processors and operating systems, such as [x86](#) and [PowerPC](#) under [Windows](#) and [Mac OS](#), as well as mobile devices.

Achievements

The rewritten Hiarcs soon competed in [computer chess tournaments](#), in 1989 the [1st Computer Olympiad](#), and the [WMCCC 1991](#) in [Vancouver](#) where Hiarcs won the title of the *World Amateur Microcomputer Chess Champion*. Hiarcs won the gold medal (shared) at the [4th Computer Olympiad](#), and became [World Microcomputer Chess Software Champion](#) at the [WMCCC 1993](#) in [Munich](#). Hiarcs won several other tournaments or got top rankings, it won the [IPCCC 2007](#), after [Rybka's disqualification](#) in June 2011 the [WCCC 2008](#), and the [ICT 2009](#) ^[9]. Further, Hiarcs is two time [World Chess Software Champion](#), succeeding at the [WCSC 2011](#) in [Tilburg](#), and the [WCSC 2013](#) in [Yokohama](#).

Man-Machine

- [Aegon 1997](#)
- [Bareev versus Hiarcs 2003](#)

Descriptions

from the [ICGA](#) tournament site [\[10\]](#) :

1999

HIARCS is written entirely in 'C' on a very spare time basis.

HIARCS searches around an order of magnitude less positions per second (av. 18,000) than most of its competitors. However, it makes up for this apparent slow speed by clever searching and accurate evaluation. HIARCS uses many selective search extension heuristics to guide the search and incorporates a sophisticated tapered search to resolve tactical uncertainties while finding positionally beneficial lines.

HIARCS won the title of World Microcomputer Chess Software Champion in [1993 in Munich](#), Germany and has won numerous other computer and human tournaments. HIARCS 7.0 is currently the top rated chess program on the [SSDF](#) and [Selective Search](#) rating lists.

In April 1997, HIARCS 6.0 became the first PC chess program to win a match played at tournament time controls over a [FIDE](#) International Master. This great achievement was further built on when HIARCS won the [Godesberg](#) Open ahead of Grandmasters and International Masters.

The version competing in this tournament is a new experimental version. The program will be a 32bit [Windows](#) version of HiarcS and will support [tablebases](#). It is expected that all 4 piece and most 5 piece endgame tablebases will be available.

2008

HIARCS is one of the few original PC chess programs still competing in top level chess competition. It has been in development over the last twenty years and since 1991 has always been among the top chess programs in the world. In this time it has led world computer rating lists and won World Championship titles. It was the first PC chess program to defeat a FIDE International Master in a match and has been a favourite of a number of World Chess Champions. So much so that [Garry Kasparov](#) said towards the end of [his match](#) with [Deep Blue2](#) that "HIARCS is much better positionally than Deep Blue". HIARCS is available on a number of platforms including PC, Macintosh and

handheld devices. The handheld Palm version has won multiple matches against GMs and even won a GM/IM tournament in the Philippines. HIARCS' playing style is now very aggressive with a distinctive liking for attacking the opponent's king. This often leads to dynamic exciting games which are often played on a knife-edge. HIARCS is now capable of taking advantage of multi-processors/cores to improve its chess performance making it a very dangerous opponent.

Commerce

Hiarcs is commercially available since 1991. PC- and [Windows](#) versions until 12.0 were market as [ChessBase](#) engine in conjunction with the [Fritz GUI](#) ^[11], *PC Chess Hiarcs 13 UCI* is purchased as download product from its own site ^[12], and requires a [Windows](#) PC and an external [GUI](#) supporting the [UCI](#) protocol. Hiarcs 12.1 and 13 are the chess engines of [Pocket Fritz](#) by [ChessBase](#) ^[13] ^[14].

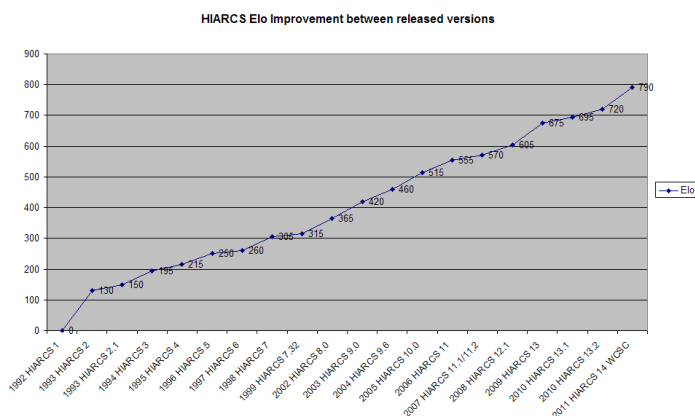
Chess Explorer

Since August 2012, Hiarcs has its own [GUI](#). The [Hiarcs Chess Explorer](#) is bundled with Hiarcs 14, based on the program which won the [WCSC 2011](#), and can further be used with any [UCI](#) compatible chess engine ^[15].

Release Dates

- Hiarcs 1 : 1992
- Hiarcs 2 : 1993
- Hiarcs 2.1 : 1993
- Hiarcs 3 : 1994
- Hiarcs 4 : 1995
- Hiarcs 5 : 1996
- Hiarcs 6 : 1997
- Hiarcs 7 : 1998
- Hiarcs 7.32 : 1999
- Hiarcs 8 : 2002
- Hiarcs 9: 2003
- Hiarcs 9.6 : 2004
- Hiarcs 10 : 2005
- Hiarcs X50 :
- Hiarcs X54 :

- HiarcS 11 : 2006
- HiarcS 11.1 : 2007
- HiarcS 11.2 : 2007
- HiarcS Paderborn 2007-12
- HiarcS 12.1 : 2008
- HiarcS 13 : 2009
- HiarcS 13.1 : 2010
- HiarcS 13.2 : 2010
- HiarcS 14 : 2011



HIARCS [Chess Strength](#) ^[16]

See also

- [Knowledge | Search versus Evaluation](#)

Publications

- [Eric Hallsworth](#) (1992). *HIARCS for PC's*. [Selective Search](#) 43, pp. 2, [pdf](#) hosted by [Mike Watters](#)
- [Jan van Reek](#), [Jos Uiterwijk](#) (2003). *The Match Bareev vs. HiarcS X*. [ICGA Journal](#), Vol. 26, No. 1 » [Bareev versus HiarcS 2003](#)
- [Eric Hallsworth](#) (2003). *HIARCS 8X v Evgeny Bareev*. [Selective Search](#) 104, pp. 20, [pdf](#) hosted by [Mike Watters](#)
- [Eric Hallsworth](#) (2003). *HIARCS 8X v Evgeny Bareev - The Final Game*. [Selective Search](#) 105, pp. 11, [pdf](#) hosted by [Mike Watters](#)
- [Thorsten Czub](#) (2003). *Mark Uniacke interviewed - Programming HIARCS 9*. [Selective Search](#) 108, pp. 12, [pdf](#) hosted by [Mike Watters](#)

Forum Posts

1993 ...

- [Challenger to MCh/CG](#) by [Mark Uniacke](#), [rec.games.chess](#), August 25, 1993
- [QMW computer chess](#) by [Don Beal](#), [rec.games.chess](#), August 19, 1993 » [UPCCC 1993](#)
- [HIARCS 2.0 Chess Program](#) by Bryant Fujimoto, [rec.games.chess](#), December 5, 1993

1995 ...

- [Announcing HIARCS 4.0 for PC and MAC](#) by [Mark Uniacke](#), [rgcc](#), December 19, 1995
- [Hiarchs Mac: First Impressions](#) by [Eric Schiller](#), [rgcc](#), January 27, 1996
- [HIARCS 5 Maximum Search Depth](#) by Kevin Miller, [rgcc](#), January 7, 1997
- [AEGON 97/ 1st round: HIARCS lost](#) by Enrico, [rgcc](#), April 16, 1997
- [\[REVIEW\] HIARCS 6.0 Macintosh \(long\)](#) by Richard A. Fowell, [rgcc](#), December 12, 1997
- [LCT II results of Reb9, F5, and H6 on K6/233](#) by [Albert Silver](#), [CCC](#), January 03, 1998 » [LCT II](#), [Rebel](#), [Fritz](#)
- [Horrible move!](#) by [Tony Hedlund](#), [CCC](#), May 07, 1998 » [Fifty-move Rule](#)

2000 ...

- [HIARCS 11.1 SP / MP Macintosh has arrived!](#) by rafowell, [CCC](#), Apr 03, 2007 » [Macintosh](#)
- [Re: Search or Evaluation?](#) by [Mark Uniacke](#), [Hiarcs Forum](#), October 14, 2007
- [World Computer Chess Championship 2008 Hiarcs wins!](#) by [Harvey Williamson](#), [Hiarcs Forum](#), September 06, 2008 » [WCCC 2008](#)
- [World Computer Chess Championship 2008 Hiarcs wins!](#) by [Harvey Williamson](#), [Hiarcs Forum](#), December 16, 2011

2010 ...

- [World Computer Software Championship 2011 - Hiarcs wins!!](#) by [Harvey Williamson](#), [Hiarcs Forum](#), November 26, 2011 » [WCSC 2011](#)
- [Hiarcs World Computer Software Champion 2013!](#) by [Harvey Williamson](#), [Hiarcs Forum](#), June 04, 2013 » [WCSC 2013](#)
- [The Future of Hiarcs](#) by [Fernando Villegas](#), [Hiarcs Forum](#), July 05, 2016 » [WCCC 2016](#), [WCSC 2016](#)

External Links

- [HIARCS Chess Software for PC, Mac, Pocket PC, iPhone, iPod and Palm Chess](#)
- [Hiarcs' ICGA Tournaments](#)
- [HIARCS from Wikipedia](#)
- [Hiarcs Fan Page](#) by [Thorsten Czub](#)
- [Hiarcs 9](#) by [Thorsten Czub](#)
- [HIARCS 13 – the Professional Openings Book](#) by [Mark Uniacke](#), [ChessBase New](#), March 10, 2011 » [Opening Book](#)

- [Hiarcs King March – Brilliancy Prize? | Denton Chess Club Blog](#) by [Ivan Urwin](#), October 14, 2013
» [TCEC Season 5](#)
- [Hiarcs Forum](#)

References

1. [^ Hiarcs' ICGA Tournaments](#)
2. [^ Macintosh Chess: Sigma Chess HIARCS Chess Software Program](#)
3. [^ Sigma Chess & HIARCS](#)
4. [^ Hiarcs Fan Page](#) by [Thorsten Czub](#)
5. [^ Free HIARCS Chess Software Programs](#)
6. [^ HIARCS: Where It All Began](#)
7. [^ Now Walking, 1982-1983: HIARCS 5](#)
8. [^ Larry R. Harris \(1974\)](#). *Heuristic Search under Conditions of Error*. Artificial Intelligence, Vol. 5, No. 3, pp. 217-234. ISSN 0004-3702. Also published (1977) under the title: *The heuristic search: An alternative to the alpha-beta minimax procedure*. [Chess Skill in Man and Machine](#) (ed. [Peter W. Frey](#)), pp. 157-166. Springer-Verlag, New York, N.Y. ISBN 0-387-07957-2
9. [^ HIARCS Milestone Achievements](#)
10. [^ Hiarcs' ICGA Tournaments](#)
11. [^ ChessBase Shop - Hiarcs 12](#) from [ChessBase](#)
12. [^ HIARCS for PC Chess Software](#)
13. [^ HIARCS Chess Software: What's New](#)
14. [^ HIARCS from Wikipedia](#)
15. [^ HIARCS Chess Explorer - World class chess database and chess playing program](#)
16. [^ HIARCS Chess Strength - from the official Hiarcs site](#)

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