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[Home](#) \* [Engines](#) \* **FCP**

**FCP**, (Forth Chess Program)

a derivation of [Tom Kerrigan's](#) simple chess program [TSCP](#) 1.71 written by [Ian Osgood](#) as an exercise in learning the [Forth](#) programming language. At the time it was started, there were no other chess programs in Forth which used modern search techniques. FCP retains the values of small footprint (XBoard and running [EPD test suites](#).

## Enhancements

Although FCP started with a nearly identical [evaluation function](#) as an aid to detecting bugs when porting from [C](#) to Forth, FCP diverged from TSCP in many ways <sup>[1]</sup>:

- [0x88](#) <sup>[2]</sup>
- [Piece lists](#)
- Track king positions for faster [check](#) detection
- Procedural [move generation](#) with loop unrolling
- [Alpha-beta](#) with [aspiration windows](#)
- Using the open parameter [stack](#) allows only passing [alpha](#) to [search](#) and [quiescence](#) (the alpha from the ancestor node is -beta for this node)
- [Killer heuristic](#)
- [Null move pruning](#)
- [Check extensions](#)
- [Incremental material](#) and [pawn evaluation](#)

- [Opening Book](#)

## Future plans

- [Transposition table](#)
- [Search extensions](#)
- [Late move reductions.](#)

## See also

- [Acronym](#)

## Forum Posts

- [TSCP enhancements \(Re: Short chess programs\)](#) by [Ian Osgood](#), [CCC](#), September 19, 2002

## External Links

- [FCP home page](#)
- [Forth application benchmark suite \(ZIP\)](#) contains both FCP and another Forth chess program called [Brainless](#) by [David Kühling](#) <sup>[3]</sup>

## References

1. [^ TSCP enhancements \(Re: Short chess programs\)](#) by [Ian Osgood](#), [CCC](#), September 19, 2002
2. [^ 0x88 is not so smart](#) by [Christophe Théron](#), [CCC](#), June 13, 2000
3. [^ brainless | Free Games software downloads at SourceForge.net](#)

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<a href="#">FCP</a>	Jun 15, 2013
<a href="#">Forth</a>	Jun 15, 2013
<a href="#">Ian Osgood</a>	Jun 14, 2013
<a href="#">Open Source Engines</a>	Jul 14, 2015
<a href="#">TSCP</a>	Feb 5, 2016

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