

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

[New Glarus yodelers](#) in traditional  
Swiss garb <sup>[1]</sup>

**Charly**, ("Chess heuristics and algorithms for relaxing lazy yodelers")  
an early chess program developed in 1967/68 by [Gerald Tripard](#), [Gerhard Rudolf](#) and [Werner Joho](#) at [ETH Zurich](#), to run on a [CDC 1604](#).

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## Description

The main tree [search](#) went 4 [plies deep](#), with the final position including an extensive [evaluation](#) of all possible exchanges on the square occupied by the piece being moved there on the last ply. This made the program relatively strong [tactically](#) but there was not much in the program incorporating [strategy](#). Strategy, besides [material](#) advantage, included [mobility](#) of the pieces, [pawn structure](#) and advancement to queening. It required a considerable amount of time making the program totally move-legal, such as incorporating all of the rules associated with [castling](#), [en passant](#), and [stalemate](#) through [move repetition](#). The only thing not included was pawn [promotion](#) to something other than a queen. The [opening book](#) was programmed by Gerhard Rudolf, the machine language expert, the chess playing algorithm was programmed in [Fortran](#). The library entries were collected from books, mainly, the 10th edition of [Larry Evans](#), [Modern Chess Openings](#) <sup>[2]</sup>.

## ETH-MIT Match

In 1968, [Gerald Tripard](#) asked [Richard Greenblatt](#) for a match versus [Mac Hack VI](#). Three games were played in October and November 1968 via [ham radio](#) <sup>[3]</sup>:

### Game 1

[\[4\]](#) [\[5\]](#)

```
[Event "ETH-MIT Match"]
[Site "Zurich/Cambridge"]
[Date "1968.10.27"]
[Round "1"]
[White "Charly"]
[Black "Mac Hack VI"]
[Result "0-1"]
```

```
1.e4 e5 2.Nf3 Nf6 3.d4 Nxe4 4.Bd3 d5 5.Nxe5 Bd6 6.O-O O-
O 7.c4 Bxe5 8.dxe5 Nc6
9.cxd5 Qxd5 10.Qf3 Bf5 11.Qxf5 Qxd3 12.Nc3 Nc5 13.Qxd3 Nxd3 14.f4 Rfd8
15.Rf3 Rd7
16.Ne4 Rad8 17.b3 R7d4 18.Nc3 Ne1 19.Rg3 Nc2 20.Rb1 Kf8 21.Nb5 R4d1+ 2
2.Kf2 R8d7
23.Ke2 R1d5 24.a4 N6d4+ 25.Nxd4 Nxd4+ 26.Kf2 Nf5 27.Ba3+ c5 28.Rc3 R5d
2+ 29.Kg1 b6
30.g4 Nd4 31.Kh1 Nc2 32.Bc1 Re2 33.Bb2 Ne3 34.h3 Rd1+ 35.Rxd1 Nxd1 36.
Ba1 Nxc3
37.Bxc3 Rc2 38.Be1 Rc1 39.g5 Rxe1+ 40.Kg2 Re4 41.b4 cxb4 0-1
```

### Games 2 and 3

[\[6\]](#)

```
[Event "ETH-MIT Match"]
[Site "Zurich/Cambridge"]
[Date "1968.11.26"]
[Round "2"]
```

[White "Mac Hack VI"]  
[Black "Charly"]  
[Result "1-0"]

1.e4 e5 2.Nf3 Nc6 3.Bb5 d6 4.d4 exd4 5.Nxd4 Nge7 6.Nc3 a6 7.Ba4 b5 8.Bb3 Na5  
9.Qf3 Nxb3 10.axb3 c5 11.Ndxb5 d5 12.Nxd5 Nxd5 13.exd5 Qe7+ 14.Qe3 Qxe3+ 15.Bxe3 Kd7  
16.Nc3 Bd6 17.Na4 Rb8 18.Nxc5+ Bxc5 19.Bxc5 Re8+ 20.Be3 Kd6 21.O-O-O Rb5 22.Bf4+ 1-0

[Event "ETH-MIT Match"]  
[Site "Zurich/Cambridge"]  
[Date "1968.11.26"]  
[Round "3"]  
[White "Charly"]  
[Black "Mac Hack VI"]  
[Result "0-1"]

1.e4 e5 2.Nf3 Nc6 3.Bb5 Nf6 4.O-O Bc5 5.Nxe5 Qe7 6.Nxc6 dxc6 7.Bc4 Bg4 8.Be2 Bxe2 9.Qxe2 Nxe4 10.d3 Nd6 11.Qxe7+ Kxe7 12.Re1+ Kd7 13.c3 Rae8 14.Rd1 Re2 15.d4 Bb6  
16.g4 Rhe8 17.Kg2 f5 18.g5 Nc4 19.b3 Ne3+ 20.Bxe3 R8xe3 21.g6 hxg6 22.d5 R3e4  
23.dxc6+ Kxc6 24.Rf1 Rc2 25.a4 Ree2 26.Rd1 Rxf2+ 0-1

## See also

- [Acronym](#)
- [Charlie](#)
- [Given Name](#)

## External Links

- [Computer chess via ham radio](#) by [Lawrence J. Krakauer](#)
- [July 1, 2010 letter from Dr. Gerald Tripard](#), hosted by [Lawrence J. Krakauer](#)
- [Charly \(disambiguation\)](#) from Wikipedia

## References

- ↑ [Outdoor group portrait of a group of Swiss yodelers in costume](#), 1922, Moen Photo Service, [La Crosse, WI](#), [Yodeling from Wikipedia](#)
- ↑ Description taken from [July 1, 2010 letter from Dr. Gerald Tripard](#), hosted by [Lawrence J.](#)

[Krakauer](#)

3. [^ Computer chess via ham radio](#) by [Lawrence J. Krakauer](#)
4. [^ The first inter-computer chess game via ham radio](#) by [Lawrence J. Krakauer](#)
5. [^ October 30, 1968 letter from Richard Greenblatt to G. Tripard](#)
6. [^ Games 2 and 3](#)

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<a href="#">Werner Joho</a>	Sep 22, 2013

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