**Achi**
**Version 1.0**
**Released 6/12/92**

## Introduction.

The Achi program can be run on any Macintosh computer. It needs 230K of memory and is 32-bit clean.

Achi is a board game for two people. You can play against the computer or against another person. It is similar to tic-tac-toe, except that you get to move your pieces after you put them all down.

The rules of Achi are explained in the next section. You can read about Achi in books on board games from your local library. My main reference is "Play It Again: Historic Board Games You Can Make and Play" by Asterie Baker Provenzo and Eugene F. Provenzo, Jr. The design of the Achi board and pieces I used in the program can be found in this book.

The product names mentioned in this document are the trademarks or registered trademarks of their manufacturers.

The following tells you how to use this program.

## Game rules.

You win the game if you are the first player to form a mill or stalemate your opponent. A mill is three pieces of the same color in a row or in a column. A player who has no legal moves is stalemated. Note that three pieces of the same color on one of the diagonals is not a win.

A game consists of two stages. In the first stage, the players alternate moving one of their unplayed pieces onto a vacant point of the board. The player who has the white pieces goes first. If nobody wins during this phase, and all eight pieces have been played, then the second stage begins.

In the second stage, the players alternate moving one of their pieces to the vacant point on the board. You can move a piece only if it is immediately adjacent to the vacant point, and both are connected by one of the straight lines drawn on the board.

## Start a game.

When a new game starts, the computer will automatically place the correct color pieces in front of each player. You

can start a new game or quit at any time by selecting the appropriate item from the file menu.

**Who plays first.**
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As one of your options, you can specify who plays first. The first player can be the loser, the "you" player, the "me" player, or the first player can alternate between the two. You specify your choice by selecting the appropriate item from the "who plays first" submenu in the special menu. You can also check the appropriate item in the configuration dialog.

The player who moves first has the white pieces.

Note that the "me" player is always at the top of the screen, and the "you" player is always at the bottom.

**Move a piece.**
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To move a piece, you must click on it and drag it onto the point of the board where you want it to be placed, and then release the mouse button. If you form a mill or stalemate your opponent, the game ends. Otherwise, it's your opponent's turn to play.

If you decide that you don't want to move the piece that you selected, then just drag it to a neutral location off the board and release the mouse button. The piece will return back to its original location. You can then select another piece to move.

**Skill level of computer.**
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You can set the skill level of the computer to be beginner, intermediate, or expert.

When "computer versus computer" is selected from the file menu, the skill level of the second player ("you") can be set differently than that of the first player ("me").

Note that I programmed the first move the computer makes to be always a random choice, no matter what the skill level is set to. I think this will make the game more interesting and challenging to play.

If you wish, you can play against another person by selecting the "you versus me" item in the file menu.

**Kibitzer.**

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The kibitzer will give you advice when it is your turn to play, if you select the "kibitzer" item from the special menu or press its command key equivalent. The kibitzer will tell you his suggestion by using Macintalk or by highlighting one of the points or pieces on the board. The method used depends on which boxes you checked for the kibitzer option in the configuration dialog.

In the first stage of the game, the kibitzer will highlight the point that he suggests you drop your piece on; in the second stage, he will highlight the piece that he suggests you move to the vacant point on the board.

If you want to use Macintalk, be sure to also check the "on" box for the Macintalk option in the configuration dialog.

**Score pad.**
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The score pad will keep a record of the moves made during the current game. Each point on the board is assigned a number, from 1 to 9, counting from left to right, top to bottom. During the first stage of the game, the number of the point that the player drops his piece on is recorded. During the second stage, the point that the piece is moved from is recorded, followed by the point that it is moved to.

**Thanks.**
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I wish to thank Barry L. Wolman for his freeware program SerialPrint II. I used it to print my program listings on a twelve year old Epson FX printer (which my sister gave me two years ago). It is connected to my Mac via a 9-pin Grappler parallel printer interface cable from Orange Micro Inc.

**Credits.**
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I wish to give credit to the following people for code that they developed, which I used in my program.

Dmitri Linde and Peter Kaplan provided C code and assembly code to interface with Macintalk. You can obtain it by downloading the info-mac/source/ctalk.hqx file from sumex-aim.stanford.edu.

Scott Knaster described C code to do offscreen drawing in

his book "Macintosh Programming Secrets."

**Programming tools.**
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I developed the Achi program on a 2Mb/40Mb LC, with an Apple 12" monochrome monitor. I used System 7. The following are the tools that I used to develop the program:

Think C 4.0 by Symantec.

ResEdit 2.1.1 by Apple.

MacsBug 6.2 by Apple.

SoftPaint (A paint program on Issue #26 of Diskworld, one of the monthly "magazine" disks by Softdisk Publishing).

Word 4.0 by Microsoft.

SuperGlue II by Solutions.

SerialPrint II by Barry L. Wolman.

**References.**
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1) Apple. "Inside Macintosh, Volume I."

2) Apple. "Inside Macintosh, Volume II."

3) Chernicoff, Stephen. "Macintosh Revealed, Volume One: Unlocking the Toolbox, Second Edition."

4) Knaster, Scott. "Macintosh Programming Secrets."

5) Knaster, Scott, and Rollin, Keith. "Macintosh Programming Secrets. Second Edition."

6) Little, Gary, and Swihart, Tim. "Programming for System 7."

7) Mark, Dave, and Reed, Cartwright. "Macintosh Programming Primer."

8) Mark, Dave. "Macintosh C Programming Primer, Volume II."

9) Matthies, Kurt W.G., and Hogan, Thom. "Macintosh C Programming by Example."

10) Mednieks, Zigurd R., and Schilke, Terry M. "C Programming Techniques for the Macintosh."

**My programs.**
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The following are the programs I have released:

1) Achi, version 1.0
   Achi is a board game for two people, similar to tic-tac-toe.

2) Gin Rummy, version 1.0
   Gin Rummy is the well-known card game for two people.

**Your comments.**
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You can send your comments, suggestions, and any program bugs that you find to me at this address:

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Or e-mail to PC0TMYS@MUSIC.TCS.TULANE.EDU, where the third character is a zero, not a letter.

Please mention the name and version of the program that you are writing about: Achi, version 1.0.