

## GoMoku Narabe Help Contents:

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**Gozilla (the 5ster, the master of 5 stones, the monster of in-a-row) is a copyrighted character of P.S. Neeley and is not based on, or related to, Godzilla.**

\* In Japan, for superstitious people, the numbers 4 and 9 are sometimes considered unlucky ( for instance, an apartment building may not have a floor numbered 4 or 9). This is because the number 4, although most often

called 'Yon', can be called 'Shi' (pronounced 'Shee') which is also the Japanese word for death. The number 9 is 'Ku' which is also the word for suffering and pain. You may think all of this odd but frankly, this is a lot more justification than that given in the U.S.A for the number 13 being unlucky.

## 2. What is GoMoku Narabe?

The words GoMoku Narabe, which are pronounced GO-MO-KU-NA-RA-BAY, mean:

5 (GO)  
stones or pieces (Moku)  
in a row (Narabe).

GoMoku Narabe is an ancient Japanese game played, traditionally, on a GO\* board with GO pieces -- small, smoothly convex black and white stones.

The goal in GoMoku Narabe is to get 5 stones of the same color in a row -- which is not easy to reach since your opponent is continually blocking you as he or she tries to do the same.

The game is often described (unfortunately) as Japanese tic-tac-toe. Nothing could be further from the truth (See 'Okay, tell me about the deep Mathematics stuff' for more on this).

### [5. Okay, tell me about the deep Mathematics stuff.](#)

The game is non-trivial and has no known "do this and you'll always win or draw" strategy as in tic-tac-toe.

It has the advantages of being fast (you can play a lot of games in a half an hour), being easy to understand, and requiring practice to play really well.

No one would say that GoMoku Narabe is as complicated as Chess, Shogi (Japanese Chess), or Go, but it offers ample opportunity for players to exhibit and develop strategy and skill. It has a rich historical and cultural heritage, furnishes an accessible 'jumping-off' point into an interesting area of mathematics, and is playable by even children of age 4 or 5. Besides, its darn fun!

GoMoku Narabe was introduced into Europe in the 1880's where it became very popular. It is still known there as 'Spoil Five', 'Go-bang', or 'Pegity'.

\* Note: GO is another ancient Chinese and Japanese game, extremely complicated, that has nothing in common with GoMoku Narabe -- except of course, the board and the stones. In Go, the board is considered a field of 19 x 19 intersecting lines and the stones are placed on the intersections, not in the cells themselves.

### 3. How do you play?

The game is played on a GO board which, for the purposes of GoMoku Narabe, is a square playing board with 18 intersecting rows and columns.

Each player has a pile\* of GO stones -- one player holds black stones, one player holds white stones -- and each draws from his or her pile, in turn, to place a stone on the board.

Black moves first in the game\*\*.

You can place your stones on any of the boards 324 squares\*\*\* -- you don't have to start in the center of the board if you don't want to.

There is no concept of 'capturing' your opponents pieces in GoMoku Narabe; you put stones down -- one stone to a square ( you can't stack your stones on top of your opponents ) -- and try to get 5 in a row.

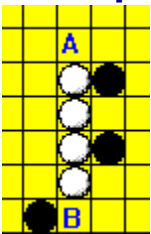
The sole object of the game is to get 5 of your stones in a row -- up or down, right or left, or diagonally in any direction\*\*\*\*.

In deciding who plays the black stones ( and thus starts a series of games) and who plays the white stones, it is traditional to 'Jung'. Japanese do not flip coins; they Jung -- play the rock, paper, scissors game -- to decide (See 'What's this 'Jung-Ken-Po . . ' thing?' for more information about this).

The winner of a game gets to play black (move first) in the next game.

#### 4. What's this 'Jung, Ken, Po . . . ' thing?

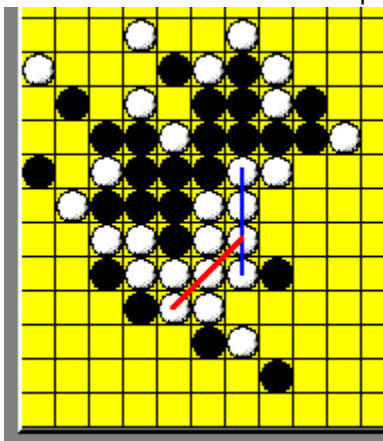
#### **A simple look at strategy:**



You win by getting 5 stones in a row. But obviously, as soon as a player gets 4 adjoining stones in a row that is open on both sides, as white has in the picture at left, they have the win since their opponent can only block on side of the row on the next move (say at 'A') and cannot prevent the forming of 5 in-a-row on the other side (at 'B'). Pushing this idea a little further, this also means that a player threatens to win the game whenever they can get three stones in-a-row with open ends, since they can form 4 stones in-a-row on their next move if their opponent does not block them. This is known as a single threat, and an opponent must block a single threat immediately to prevent a win.

So if a good defensive player can always block a single threat, how do you win? First of all single threats are not always easily recognized -- since as the number of stones on the board increases, so does the visual complexity. Its often easy to overlook a single threat -- a three in a row with open ends or a four in a row with one open end -- and an opponent can lose a game from simple oversight if they're not careful. But your strategy against a good opponent must not rely on 'oversight' to win -- its not going to happen that often. Rather, you should try to form multiple threats simultaneously -- a double threat for

instance. To form a double threat, you form two intersecting single threats. For instance, two 4's simultaneously, or two open 3's (which will lead to an open 4 on one of the 3's if you play it right), or a closed-end 4 and open 3 simultaneously. The picture below shows such a multiple threat:



See the closed-end 4 ( blue line) and open-end 3 ( red line) combination at left? It's black's move, but no matter what black does (either block the open 3 on one end, or close the open 4) they will lose either on the next move of white or the one after that. Since it is possible to block only one threat at a time, a player with a double threat can automatically win.

There are many interesting and subtle multiple threats in GoMoku Narabe. They can creep up on you when you are not watching and they can snatch victory away from you just as you are about to close a trap on your opponent. They make the game extremely interesting and fill it with ample opportunity for each player to exhibit cunning and strategy. On the surface, without multiple threats, GoMoku Narabe seems a fierce battle of strength, with each side laying down open-ended 3's and closed-end 4's in an attempt to overpower the opposition. But with a knowledge of multiple threats, and with that strategy in mind, a player can transform play into an equally fierce battle of cunning and strategy -- subtle, yet exciting in that the game can be won suddenly as an opponent falls into a well-laid trap.

In addition to a knowledge of double threats, a player should not always assume that play will take place in the center of the board. Black may decide to begin the game near an edge or corner, which confines the subsequent play in a manner you may not be used to if you haven't practiced. Further, multiple front games, where there are two or more clusters of stones, near one another or widely separated, can be a challenge. Bottom line: Don't always play in the center of the board, and don't always assume that clustering your stones right next to your opponents in 'close in combat' is the only way to play.

Be creative. Try an aggressive game; try a defensive game; try to strategize and force multiple threats. Against a good opponent, you'll need all of this, and a little luck besides.

\* Some sources( recreational mathematics books, game books, etc.) limit each person to 100 stones each. When this limit is reached, the game is to be declared a draw. However, This was not a rule when I played the game in Japan. In any case, using-up 200 stones to play a game is extremely rare.

\*\* In Go, black moves first also. Of course, it doesn't really matter to the strategy and mathematics of the game.

\*\*\* Some sources describe GoMoku Narabe as using the intersection points instead of the cells -- just as in Go. I was taught to use the cells. Once again it doesn't really matter. In the book 'The World of Games' by

Botermans, et al, page 108 shows an old Japanese print showing two Geishas playing GoMoku Narabe. They are clearly placing the stones on the cells and not the intersections.

\*\*\*\* Some sources refer to special rules such as '6 in-a-row' doesn't count, or 'two intersecting rows of three stones with open ends are not permitted', etc. We never played using any of these kinds of rules. This version of GoMoku Narabe is simple -- any 'in-a-row' of 5 or greater wins; no special rules.

## 5. What do the items on the Menu do?

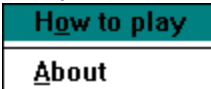
The menu bar at the top of the board form has four selections:



### Options:

Here's where the game controls are -- all the options are explained below.

### Help:



'About' and 'How to Play'. Gets you what little help you're reading here. Suspends the background music temporarily.

### Undo:

Lets you undo the last move, up to the last 10 moves, when you've changed your mind or when the mouse has mysteriously malfunctioned (I know a person such as you won't misuse this feature). Undo 'undoes' 2 moves at a time when your playing the computer. Because it is often hard to keep 10 moves in one's head and remember exactly where you played you stone when, Undo causes the next stone(s) that will be undone if you choose undo again to blink momentarily. This is so you can more easily reverse play back to the spot you need and also so that the pieces that undo will undo at successive mouse-clicks is not such a surprise.

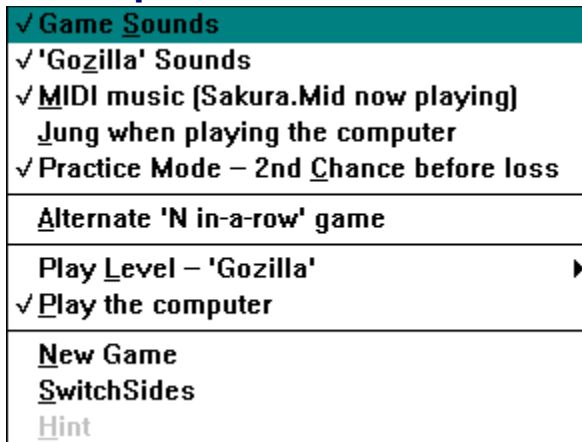
### Exit:

Gets you out of the game when you've had enough and records your set-up in the GOMOKU.INI file.

### 'Its White's move . . .':

The far right of the menu bar is a reminder as to whose turn it is.

## The 'Options' menu has a number of selections:



### Game Sounds:

Do you want game sounds -- the click of stones on the wood board, winning trumpeting, and the sound of stones being cleared from the board. Simple sounds that I hope add to the enjoyment of the game. \* Please see the Sound Volume note below.

### 'GoZilla' Sounds:

Do you want to hear GoZilla laugh with delight when he wins and groan when he loses. Applies only to the 'GoZilla' level. \* Please see the Sound Volume note below.

### MIDI music:

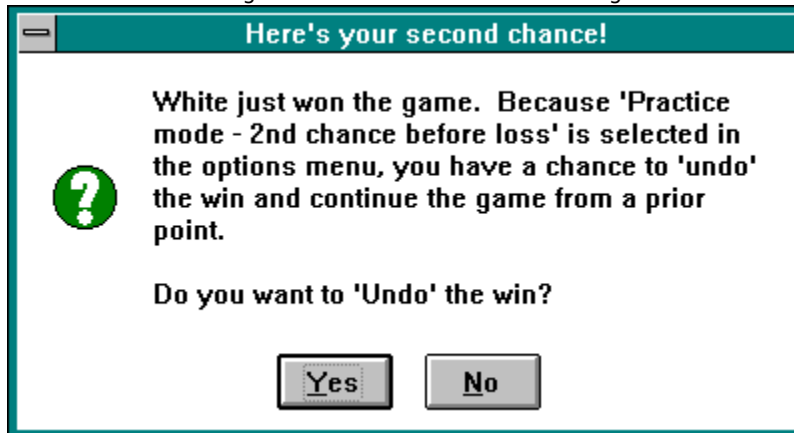
Do you want Yoshinori Takechi's MIDI Koto music to play during the game? The background music will be temporarily suspended if you are accessing help, or if GoMoku Narabe is minimized. There is a 15 second period of 'silence' between performances of the music between random playings of 5 Koto music pieces. The name of the MIDI file currently playing is noted in this menu option title -- in the above menu fragment, for instance, Sakura.Mid is currently playing. \* Please see the sound Volume note below.

### Jung when playing the computer:

Do you want to Jung for the advantage of playing white at the start of a series of games with the computer? GoMoku Narabe always starts-up with a Jung sequence, but if you leave this option unchecked you will skip the Jung sequence when going from a 'Play against a friend' state to 'Play against the computer'

### Practice mode -- 2nd chance before loss

If this options is turned on you get a chance after a loss to reverse the winning move and play from an earlier position. You can then use the 'Undo' option to back-up to a point where you can prevent the loss and continue the game. See '2nd chance' message box below:



### Switch to an alternate 'N in a row' game:

The portal to the experimental mathematics laboratory. Explore alternate N in a row on an M x M board.

### Play the Computer:

Do you want to start play against the computer? Clicking this off will suspend play against the computer.

### Play Level -- 'Earth':



What play level are you on? You can switch game levels here if you wish instead of going through the Jung sequence.

### New Game:

Begins a new game.

### Switch Sides:

When your playing the computer, switches hands so that you inherit the computer's game position and it inherits yours. You get to play from the other side!

### Hint:

Get a hint as to the best move anytime after the first move. Hints are always given at the most expert level. This most expert level is 'GoZilla' in the case of GoMoku Narabe; 'Fire' for the other 'N in-a-row' games.

**\* Sound Volume Note: WAV sound file vs. MIDI sound file volume can be a problem. I've tried to set the relative volumes between the MIDI files and the WAV files at a good spot. Because of the maddening difference between the many sound cards out in the world, this might not be right for everyone. If you find your Music too loud compared to the Game Sounds, or the Game Sounds too loud compared to the music, look for and use your 'Mixer'**



**application ( it came with your sound card for sure), before playing or even during play of GoMoku Narabe, to adjust the relative volumes.**

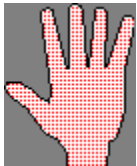
## 6. What's this 'Jung, Ken, Po . . .' thing?

'Junging' means play the rock, scissors, paper game to decide an issue rather than flipping a coin. You probably played 'rock, scissors, paper' when you were a kid?

Basically two people form their hands into fists and chant "Jung, Ken, Po, Aiko, Desho" ( pronounced like Jung, Ken, Po, Eyeko, Deshow ) and then throw one of:



1. a still closed fist (rock).



2. a flat, open hand (paper).



3. scissors (form the scissors with their index and middle fingers).

Rock beats scissors, Paper covers rock, and Scissors cuts paper.

In real life, If you each happen to throw the same hand ( rock and rock, etc.), then you have to Jung again to break the tie. This version of GoMoku Narabe is arranged so that if the computer detects a tie, it throws it's hand (fairly) again until there is a clear winner.\*

Note: Actually, Jung, Ken is really JyanKen from the verb Jyanken suru, 'to throw or toss' . Aiko means 'a tie' and Desho means 'probably' or 'may be'. Thus Jung, Ken, Po, Aiko, Desho roughly means "'throw a hand and we'll see if its a tie". Sometimes you'll hear a short form of this as 'Gu, Pa, Choki' which are the sounds, in Japanese, that a Rock, Paper, Scissors make -- they sound like the right sounds to me.

\*Note: This is done to save you frustration -- a series of ties is common when 'Jung'ing. I once watched 2 people throw six, yes 6!, ties in a row. Everyone else was laughing, but they both became so frustrated that they asked two others in the group to 'Jung' in their stead. Of course, the next two were successful on the first try. Were the two 'tie'ers mentally linked in some way? Probably not. The mathematics of the situation says that this sort of thing will happen once in a while.

## 8. Okay, tell me about the deep Mathematics stuff.

There are all kinds of games whose object is to get  $N$  things in a row on a  $M$  by  $M$  board. Take tic-tac-toe, for example. The object here is to get 3 X's or O's in a row on a 3 by 3 board. Simple and trivial. GoMoku Narabe is the same kind of a game where we try to get 5 stones of the same color in a row on an 18 by 18 board -- not so trivial or simple. Of course, there are an infinite number of such games -- 4 things in a row on a 10 by 10 board, 9 things in a row on a 20 by 20, board, etc.

For anything but tic-tac-toe, the mathematics are complicated and interesting. Read Scientific American's Sept. 1993 Mathematical Recreations section entitled 'A Shepherd Takes a Sheep Shot' for a good introduction.

According to this article, here is what we know about these kinds of games:

5 (GoMoku Narabe) and 6 in a row are complicated to play and are the most interesting.

5(GoMoku Narabe) played on a 15 by 15 board can always be won.

Black can force a draw every time in 9 in-a-row and 8 in-a-row.

That's it. There's no sure strategy, no real proof that White has any advantage from the first move, or, in most cases, no known strategy for either side to force a draw. Mathematicians are working on these kinds of problems all the time and you can too. In the options menu you'll find an Alternate games capability. Here you can change the game to an alternate game of  $N$  in a row on an  $M$  by  $M$  board.

Experiment and try a few (even lowly tic-tac-toe is playable)!

Remember that GoMoku Narabe's strategies against you are consistent for a given level of play no matter what the dimensions of the board ( $M$ ) or the number in a row you must get to win ( $N$ ). This means that you can test the effects of different  $M$  and  $N$  combinations on your own strategies. For instance: How must you change your strategies to win?, How well does a winning strategy in 5 in-a-row do in 6 in-a-row?, Does a two front attack in 5 in-a-row work in 7 in-a-row?, etc. I think you'll be surprised at the great difference that  $M$  and  $N$  make in the play of the game.

Note: If you request a configuration that is fundamentally non-winnable ( like 5 in a row on a 4 x 4 board) the program defaults to the smallest winnable configuration ( for 5 in a row this would be 5 x 5).

## 7. How do you win the computer?



There are three levels of general play; Earth, Wind, and Fire. Earth is the easiest; Fire the hardest. However, the computer plays pretty well even on Earth and you shouldn't feel too bad if you get beat here. Just keep trying.

On Fire, the computer is tough to beat. Your strengths are strategy and cunning, the computer's are cold, calculating methodology and untiring attention to detail.



There is a fourth level -- Gozilla (the 5ster, the master of 5 stones, the monster of in-a-row) -- that applies only to GoMoku Narabe. Gozilla only plays GoMoku. That's what he does, that's all he does . . . Oh Yeah!, and groans a lot when he loses too. The name says it all!

If you find that you can beat Gozilla readily, then you need to seek out a living, breathing person for your adversary -- and I hope I never meet you some day in a dark alleyway and you with some GO stones in your pocket.

Note: Gozilla (the 5ster, the master of 5 stones, the monster of in-a-row) is a copyrighted character of P.S. Neeley and is not based on, or related to, Godzilla. He even plays GoMoku better than Godzilla!

You can play the computer straight-up, head-on, winner takes all or you can use some of the options to make play with the computer more of a teaching session. For instance:



You can use the 'Switch Sides' option any time it is your turn to 'turn the tables' and play from the other side.



You can always start the game fresh by choosing 'New Game'.



You can decrease (or increase) the level the computer is playing, any time it is your turn, by setting the 'Play Level' option.



You can use the 'Undo' command, anytime it is your turn, to take back the computer's last move and your own move before that ( 'Undo' during computer play always takes back two moves ) if you feel your last move and the computer's subsequent response left you in a poor situation.



Best of all, you can turn on the 'Practice Mode -- 2nd chance before losing' option which let's you lose but then allows you to 'turn back the clock' to just before you lost. From that point you can examine why you lost, back-up to that critical, loss causing move (using the 'Undo' option), and correct your mistake.

## **12. The boss key.**

I am sensitive to the fact that you might want to play GoMoku Narabe in private at times.

To that end if you hit the space bar anytime during play ( whether playing on the board, doing a 'Jung', or choosing an alternate game) GoMoku Narabe will instantly minimize to an unassuming icon labeled 'Temp1.doc'.

This is also why GoMoku Narabe minimizes program manager on start-up -- so that after the boss key is used you won't see an embarrassing 'Games' program group, up top, in front, for all to see.

## **13. Resizing GoMoku Narabe.**

The playing board of GoMoku Narabe is resizable at any time. For instance, you can be playing at the normal start-up size, and suddenly decide to think small and resize the board to the size of a postage stamp (by dragging the borders). Of course, its hard to play GoMoku Narabe on a board the size of a postage stamp but . . .

## **15. How to contact the author.**

If you have comments or suggestions, you can contact me by:

**E-Mail at CompuServe: 74212,1123**

or by letter to:

**P. S. Neeley  
248 W. 3325 N.  
North Ogden, Utah 84414**



## 16. Credits (or where did all this stuff come from anyway?).



GoMoku Narabe was written in Microsoft's Visual Basic for Windows 3.0.



The 'GoZilla' image was fashioned from a cut portion of a CompuServe Fantasy forum GIF file, converted, re-outlined, re-painted, touched-up, etc., all with Windows PaintBrush. Gozilla (the 5ster, the master of 5 stones, the monster of in-a-row) is a copyrighted character of P.S. Neeley and is not based on, or related to, Godzilla. He even plays GoMoku better than Godzilla too!

The Kanjis for Earth, Wind, and Fire were downloaded from a BBS, converted to BMPs, and sized to fit. They were said to be scanned images of the calligraphy of a 16th century Samurai -- Myamoto Musashi. But I'll bet a bean-curd filled ice cream bar that they really meant Myamoto Musashi, the great 17th century samurai and the subject of all those great Toshio Mifune movies.

The picture of the young samurai on the 'Jung' form was cropped and resized from a picture downloaded from a BBS. The picture was titled ANGEL.BMP and depicted a modern-day, women samurai riding a motorcycle. Hmm . . . I wonder what Myamoto Musashi would have thought about that.

The board, stones, Hint check-mark, various icons, etc. were created using IconMaster -- an application furnished with Visual Basic. Most of the BMP images had to be re-touched using Microsoft's Paint program.

The fine graphics in the start-up 'Splash' form and the Alternate Games form are MetaFiles from Microsoft's PowerPoint.

Many thanks to GoMoku Narabe's Beta testers: Brent Larsen and Tom Higginbotham. Brent approached GoMoku Narabe as a complete novice, and through many games, progressing through the levels, improved the game play, and supplied valuable advice. Tom, an expert GoMoku player, challenged and prodded GoMoku Narabe's upper levels with critical testing and scrutiny.

This Help file was written with the aid of Craig Villalon's shareware help authoring system -- VB Automatic Help Author v.1.32 .

The game sounds -- Go stones being placed on the board, the winning oriental gong sound, and the sound of Go stones being cleared from the board, were created via Microsoft's Windows Sound Recorder with my trusty Radio Shack microphone. These are simple sounds that I hope add to your enjoyment of the game.

The five fine MIDI background Koto music pieces -- NeoSakura, Kotsun, Kotogoto, Tubaki, and Hanabana -- are used with the kind permission of Yoshinori Takechi. If you redistribute any of these MIDI files, please be sure to include the copyright notice file -- Takechi.txt.

The knowledge of Japanese and GoMoku Narabe came from two years spent in Japan, speaking Japanese, and living with the Japanese people as a missionary for the Church of Jesus Christ of Latter-day Saints (the Mormons) as I worked the Japan West mission ( and later when Honshu was broken out, the Japan Fukuoka mission) under the wise guidance of President Nishimoto. My teachers were the many good people of Kyushu and Okinawa -- especially those living in Nobeoka, Kumamoto, Kagoshima, Futenma, Naha, and Fukuoka -- during the period of October 1973 through August of 1975. I will always remember their kindness, good humor, and patience.

The knowledge and interest in Mathematics and programming is due to my father Pat's influence and the fine education I received from the many Math and Science teachers and professors who taught so very well (obligating a debt I can never repay).

The time to complete this programming project was donated by my wife, Barbara and my children, Jon, Melissa, Christie, Patrick, Nick, and James.

Some day they may come to understand that while other fathers were tinkering with the family car, mowing the lawn, doing woodwork in the garage, etc. -- tending to normal business -- their father, high in the dark castle tower, and bathed in the soft glow of the electron's fire, was practicing modern-day sorcery. For he was building something that would never really grow old and decay, that could be copied exactly many times with almost no effort, that could be used and enjoyed by many, many people at the same time, and that could be scattered on the electronic winds to the ends of the Earth. Yet, this something was made out of nothing but an idea, diagrams in the air, and glowing bits of phosphorus. Can there be anything more magic than that?

## 17. Other Creations by the Author (or maybe you'll like one of these too?).

Here are some of my other humble shareware creations that you might enjoy. All can be found in CompuServe's WINFUN or WINSHARE forums and, I would hope, eventually other services and BBSs.



### Family Memory Match:

A Windows memory match game for the whole family. Play on an infinite number of levels against the computer, or play against a friend. Great graphics, fun for the children, definitely challenging for adults.



### Shuttle Save:

A Windows 3.1 screen saver that uses your BMP collection as material to create stunningly beautiful collages in the contrails of launching rockets. Full featured including password protection. Not gimmicky, not intruding, ever changing as you swap BMP pictures in your library. The family will love it at home; as good as an office with a window at work.



### Lunar BBall:

A Windows simulation (not just a game) of a small basketball court that can be moved from Earth, to Orbit, to the Moon, and even Jupiter. What would it be like to play basketball on the Moon? Could you play in orbit. Can you even shoot the ball on Jupiter? Find out! Great user interface, great graphics, basket ball sounds -- educational and definitely fun. Real physics! Real action!



### Space Dodge'm:

A Windows version of the classic game of Dodgem. Get your Landers or Shuttles off the space station before the rogue asteroid hits. Great graphics, sounds, MIDI background music. An example of a game without a known winning strategy that is simple to learn and play. Challenging yet fun to play. Beautiful!



### tinyCAM!:

A Windows screen capture program that captures the screen image, or the active window, to successive BMP files. Looks, acts, and sounds just like a camera. BUT, you never run out of film as long as you have disk space. An essential tool to collect the raw images needed to build help files, illustrate user documentation, record unusual program events, or capture and preserve screen saver images. Simple, elegant, yet powerful -- it's actually fun to use!



### **Collage**

A true Windows 3.1 screen saver ( .SCR file) that uses the BMP files from the directory you choose as material to create stunningly beautiful collages. Full featured including password protection. Not gimmicky, not intruding, ever changing as your swap BMP pictures in your library. The very best way to display your favorite BMP pictures!



### **Race Track**

A Windows version of the classic Swiss racing simulation game. Not an arcade game, but just as exciting -- it requires thinking rather than reflexes. A good example of a game based on simple rules that models the real world with amazing accuracy. Design and build your own tracks -- race against a friend or the 'ghost' of the track champion. Challenging but fun, easy to learn and play, great graphics, sound effects, and MIDI background music!

# **1. Please consider registering.**

Please consider registering. GoMoku Narabe is not freeware, it's shareware; even though it is not 'hobbled' in any way, nor are there pesky 'nag' screens to bother you.

If you want to continue to legally use this software, you must register this program after 21 days. To register, send \$10 to:

**P.S. Neeley**  
**248 W. 3325 N.**  
**North Ogden, Utah 84414**

## **11. The GOMOKU.INI file.**

GoMoku Narabe uses the information in the GOMOKU.INI file in the Windows directory to re-set its configuration -- board size, N in-a-row, whether to always Jung, whether you want game sounds, etc. -- when you start the game. This INI file is updated when you exit, via the menu 'Exit' command, for use next time you play. If you ever want to delete GoMoku Narabe from your system, you should also delete GOMOKU.INI in addition to the files in your GOMOKU directory. Also, if you ever need to reset GoMoku Narabe for some reason to the configuration you had when you first received the game, you can do this by simply deleting GOMOKU.INI and then starting GoMoku Narabe. Upon start-up, GoMoku Narabe will establish itself in the standard default configuration.

# Version Change Log:

## Version 1.0 (March 1994)

Initial release

## Version 1.11 (September 1994)

Fixed a bug that caused an 'subscript out of range' error when 'Undo' was used immediately after resizing the playing board.

Added Game Sounds option to the Menu. When this option is selected, the sounds of stones being placed on the board ( GMCLICK0.WAV, GMCLICK1.WAV and GMCLICK2.WAV), the stones being cleared from the board at the end of a game (GMCLEAR.WAV), and a celebration sound when the game has been won (GMWIN.WAV) will sound. These sounds will not play if GoMoku Narabe is in a minimized state.

Changed the logic to use TwipsperPixelY for the vertical scaling parameter rather than TwipsperPixelX for both horizontal and vertical parameters. One report has the game in EGA misplacing stones from mouse clicks -- this may be the fix since EGA has an aspect ratio  $<> 1$  (unlike VGA and super-VGA which have aspect ratios = 1).

Modified the Jung logic so that ties are not allowed. If a tie is encountered, the computer (fairly and randomly) throws its hand again until there is a clear winner. This should save frustration on the user's part since a string of ties is not all that uncommon and it is sometimes to clear to one anyway what to do in the case of a tie.

Modified the game start-up so that we always start in Play the Computer mode and we always start with a Jung (even though the user may have chosen to not always Jung at the start of a series of games). This keeps the Jung process part of the game and saves most users a step since the most common mode is to play the computer anyway.

## Version 2.0B (Beta Test -- October 1994)

Shoved the turn indicator menu entry ( on the menu bar, that shows whose turn it is) to the far right of the menu bar to improve readability.

Fixed a problem that caused a stone to be placed on the board when you double clicked the GoMoku Narabe Icon ( when minimized). This problem occurred only when the Icon was within the board dimensions of the newly resized GoMoku Narabe board, the 2nd click was over a valid move on the newly resized board, and the system interpreted the 2nd click of the double click as a move -- inconvenient, especially if you happened to be playing the computer given the fact that v1.0 didn't allow 'Undo's in this situation (v 2.0 does support 'Undos' during computer play -- see below).

Added 10 levels of 'Undo' (formerly only 1) and added logic to support 'Undo's during play with the computer (formerly 'Undo's' were not allowed during play with the computer).

Added a 'Switch Sides' menu entry and capability so that during a match with the computer, the user can exchange 'hands' with the computer and play from the other side.

Expanded the Help file and 'beautified' (is this a word?) it by adding graphics.

Added logic to store (1) whether the user want background MIDI music, (2) whether to always Jung when beginning a series of games with the computer, (3) the level of play -- Earth, Wind, Fire -- last used, (4) Whether the user wants game sounds, and (5) the size and position of the playing board on the screen, in the GOMOKU.INI file. This file is retrieved upon starting GoMoku Narabe and updated upon exiting the program. The retrieved values are used to set-up to the configuration of that game which was present when you exited last time.

Eliminated the system control box at the upper left corner of the board form so that the user will be forced to use the 'Exit' menu item to exit the program. This will record start-up parameters in GOMOKU.INI for use next time GOMOKU NARABE is used.

Added a new menu option -- "Jung when playing the computer". When this is checked, a new series of games with the computer will always start with a "Jung". In addition, when this is checked, a tie game

(cat's game) will also result in a 'Jung' to see who starts the next game. If this option is not checked, then the computer will begin play with the current turn and with the current board and in the case of a tie (cat's game) a new game will begin based upon whose turn it was when the tie game started. This allows the user to 'set-up' a playing position for the computer, have the computer 'take-over' a game already in progress, or just get around what to some users is a 'pesky' Jung process (like one user's comments: If the computer wants to play white so bad, let it -- I don't have the energy, sometimes, to contest it.)

Added a new menu option -- Play level -- that shows what level the computer is set to play on ('Earth', 'Wind', 'Fire'). Clicking on this option brings up a lower-level menu that allows the user to change the level without going through the 'Jung' form.

Added logic so that the 'New Game' menu option is always active and will allow you to start a new game at any point -- whether playing a friend or the computer. 'New Game' will not take you through the 'Jung' process. The 'Jung' process will only be initiated upon beginning a new series of games, as opposed to a single game, with the computer when the 'Always Jung' menu item is checked and the 'Play computer' menu item has gone from an unchecked state to a checked state.

Added MIDI background music option to the Menu. When this option is selected the MIDI Koto music piece, NeoSakura (SAKURA.MID), will play. Music is temporarily stopped when GoMoku Narabe is minimized or the 'About' or 'How to Play' Help options are accessed.

Added a 'Reset to Std. GoMoku?' command button to the Alternate Games form so that, using this button, it is easy to go back to a 5 in-a-row on an 18 x 18 cell board configuration. This is especially useful given the 'sticky' nature of the version 2.0 playing board. Someone may have left it last time playing tic-tac-toe and you may want to quickly get to standard GoMoku Narabe. Or, after exploring alternate games, it may be hard to remember just what the standard GoMoku Narabe set-up is without having to access the help file -- this button should solve this dilemma.

Added a 'Practice Mode -- 2nd chance before loss' option to the options menu. When this option is checked, the user is given a 2nd chance before losing to do an undo and replay (block) the winning move and continue the game.

Added logic so that after an undo, the next piece(s) that would be 'undone' (if the user picks undo again) will blink momentarily. This should improve the ability to 'undo' back to the right place and it will no longer be a surprise as to what pieces 'undo' will undo the next time it is chosen.

Added a new level called 'Godzilla' that will apply only to GoMoku so that it can give even the advanced, advanced player a good fight.

Sped up computer play by 2 to 3 times by using concept of 'active rectangle' of play as well as skipping non-adjacent cells in the evaluation process.

Modified the game so that black is the first mover. This is consistent with the literature on GoMoku, even though I remember playing white on the first move. It really doesn't matter and playing black first will keep purists happy.

Made the old 'Wind' level the new 'Earth' level. Made the old 'Fire' level the new 'Wind' level. Created a new 'Fire' level that is much more knowledgeable about double threats. And created new 'GoZilla' logic for the 'GoZilla' level -- a level that is an expert in double threats. In short: All the levels are harder now -- hopefully not too hard on the beginning end.

## **Version 2.0 (February 1995)**

Corrected a 'stretch' problem with the GoZilla 'laughing form' that occurred at higher resolution screen sizes -- 800 x 600, 1024 x 768, and higher.

Added 4 more MIDI files from Yoshinori and integrated them into the game.

Corrected a bug that caused the 'whose turn' text to get 'out of sync' with the current turn color.



## 14. The Koto Background Music.

The five pieces of background Koto music are the work of Yoshinori Takechi, a software engineer and multimedia specialist in Japan. The pieces are:

File	Title
<b>Sakura.Mid</b>	<b>NeoSakura</b>
<b>Kotsum.Mid</b>	<b>Sunflower</b>
<b>Kotgot.Mid</b>	<b>Kotogoto</b>
<b>Tubaki.Mid</b>	<b>Red Camellia</b>
<b>Hanaba.Mid</b>	<b>Hanabana</b>

Each is played in random sequence with a 10 to 15 second delay between each performance. You can always tell which piece is playing by selecting the options menu and noting the text of the MIDI music sub-menu (i.e., Midi music (Sakura.Mid now playing), Midi music (Tubaki.Mid now playing), etc.). These five pieces are excellent, totally original, new-style Koto pieces. They are used with the kind permission of Yoshinori and must not be redistributed unless they are accompanied by the copyright notice file, Takechi.Txt.

Yoshinori would love to hear your comments. Please send comments via E-Mail to :

**Internet: [HGF02073@niftyserve.or.jp](mailto:HGF02073@niftyserve.or.jp)**

or

**CompuServe: 101165,2073**

**Note: WAV sound file vs. MIDI sound file volume can be a problem. I've tried to set the relative volumes between the MIDI files and the WAV files at a good spot. Because of the maddening difference between the many sound cards out in the world, this might not be right for everyone. If you find your Music too loud compared to the Game Sounds, or the Game Sounds too loud compared to the music, look for and use your 'Mixer' application ( it came with your sound card for sure), before playing or even during play of GoMoku Narabe, to adjust the relative volumes.**

## 10. Alternate games -- a chance to do a little exploring . . .

As you probably know by now, the menu option "Alternate 'N in-a-row' game" gives you the opportunity to explore other N in-a-row game besides GoMoku Narabe. Please try some! For the kids, tic-tac-toe is a great game and GoMoku Narabe v2.0 will give them a good challenge. Ever try 4 in-a-row? Give it a shot. Of course, 5 in-a-row you've played by now. But 6 in-a-row is a great game that you've probably never played. It is a longer, more complex game than GoMoku Narabe, that has no name (that I know of) -- it just hasn't been played that much. 6 in-a-row is mathematically more complex than 5 in-a-row and is not as easy to master either. 7, and especially 8 and 9, in-a-row can be somewhat frustrating to play -- your opponent is given too much forewarning as to when 'a row' is developing. In any case, these alternate games make great explorations and fun.

Now for some interesting fun, try the 'reverse' of each of these N in-a-row games! In fact, reverse 5, 6, 7, 8, and 9 in-a-row are my small son's favorite games to play. What do we mean by 'reverse' GoMoku Narabe or 'reverse' 6 in-a-row? Simply that the winner of the game is that person who avoids getting 5 in-a-row or 6 in-a-row, as the case may be. If you get 5 in-a-row, in reverse GoMoku Narabe for instance, you lose (rather than win). It's not as easy as it sounds because, once a again, the visual complexity of the game blinds you to the consequences of your moves. These 'twists' on the games are called 'reverse' in the mathematics literature and often prove extremely hard to analyze and strategize. In fact, as sort of general rule, even though the 'plain' version of a given two-person game may have a known or knowable winning strategy, the 'reverse' game most probably does not. So --- play (with GoMoku Narabe v2.0 on manual mode, against yourself or a friend -- you can't play the computer (yet) in these games) a rousing game of Reverse GoMoku Narabe or Reverse 7 in-a-row. You'll have a great time!

I will also mention one other thing that children, especially (although, heck, even 'adults' -- like me -- enjoy it), like to do with GoMoku Narabe -- create pretty patterns with the stones. Just put the game on '9 in-a-row', run the number of cells on a side up to 20, and let them create. They can 'paint' stones to their heart's content (with a slight chance of accidentally getting 9 in-a-row and thus clearing the board). Soon your little ones will come running to show you the 'pretty spider web' or the 'terrible monster' they've created with the Go stones. I know it sounds boring, but try it yourself -- it can be kind of enjoyable.



