

## **Bang! Bang!**

Bang! Bang! is a cannon-fire game for one or two players for Microsoft Windows. In this game, each player owns a cannon, which is generally aimed at the opposing player. Players take turns firing their cannons at the opponent until one of the players is hit and destroyed.

### **Starting a Game**

To begin a new game, select the New item on the Game menu. A new battlefield terrain will be randomly calculated, and the speed and direction of the wind will be randomly selected. The player who gets the first shot will also be randomly selected, as will be indicated by the "Next Shot" indicator.

Once a new game has been started, the Aim! menu will be enabled, and players may begin firing.

If you are not pleased with the layout of the game, you can repeat the Game/New menu selection until you get a layout you like.

### **Stopping a Game**

Other than one opponent destroying the other's cannon, a game in progress can be stopped at any time by one of two methods:

1. Select the Stop option on the Game menu
2. Exit Bang! Bang! (select the Exit option on the File menu).

When you use the first method, the Aim! menu becomes disabled (preventing further firing of either cannon). At this point, you can choose Configure... on the Game menu to change configuration options, start a new game, or exit.

\* \* Note: The Game/Stop option is only available while a game is in progress (including immediately after Game/New has been selected).

### **Firing the Cannon**

A player initiates the firing of his cannon by selecting the Aim! menu. This brings up a dialog box that allows you to enter the initial angle and velocity of the cannonball. You may type the values directly into the respective fields on the panel, or you can increment or decrement the current values using the [+] and [-] buttons that surround each input field (the increment/decrement amount is set by the .1/1/10 radio buttons at the right of the dialog).

Once you have selected the angle and velocity, press the Fire! button. The cannon will fire, and the cannonball will travel across the screen until it either leaves the screen (to the right or left), or strikes something (the ground or the other player).

Don't forget to take into account the wind factor when selecting your angle and velocity. Wind drag will greatly affect the travel of the ball. For more information, read Tips and Hints.

\* \* Note: The firing control dialog will "remember" your most recent settings between firings, making it a little easier to "range in" on your opponent.

## **Game Configuration**

Certain play features of Bang! Bang! can be enabled/disabled or modified by selecting the Configure... option on the Game menu and altering the settings in the Configuration dialog panel. There are four items you can change - the following list summarizes them and the effect they have on the game:

### **Hit Accuracy**

Controls the accuracy required to destroy a target. There are three settings (Bang! Bang! always starts with a default setting of "Medium"). The "Fine" setting makes

the targets more difficult to destroy by causing a strike to be registered only when the cannonball lands nearly dead-center on the cannon (this tends to extend the length of a battle slightly by making it more difficult to hit the target). The "Coarse" setting causes a strike to be registered when a cannonball hits anywhere on the cannon, making it much easier to hit the target. The medium setting, of course, is somewhere in between.

### **Wind**

Checking this box (default) enables the random wind generator. When enabled, random velocity wind is selected, blowing in a randomly selected direction, for each

battle. When disabled, there is no wind.

### **Divots**

When this box is checked (default), cannonballs that miss the target (but strike the ground before leaving the play window) will explode and create divots. This has the

effect of gradually eroding the battlefield terrain during play, subtly changing the characteristics of the battle (for example, blowing the top off of a hill causes wind drag to take effect at a lower altitude on the next shot, altering the next cannonball flight). When this box is unchecked, cannonballs just explode and disappear, leaving the ground undisturbed.

### **1 Player**

When this box is checked, Bang! Bang! enters single-player mode. In single-player mode, one cannon is used for the duration of each battle to take practice shots at

the other cannon. This is handy if you just want to brush up your skills. The cannon that is used for single-player mode is still randomly selected at the beginning of

each new battle, but it does not change from that point till the end of the battle.

## **Saving a Game**

Occasionally, you may come across a combination of terrain shape and wind direction/speed that you like, and you may want to be able to recall it later. Likewise, you may need to save a game that is already in progress, so that it may be resumed and finished later. Bang! Bang! allows you to save the state of the current game in a state file so that it may be recalled later.

Select the Save... option on the File menu. Bang! Bang! will display a standard Windows file save dialog box, into which you enter the name of the state file to which you want the game saved. Bang! Bang! uses a default file extension of .SAV, but you can use any extension you want by explicitly specifying it.

Enter the file name and press the [Save] button. If the specified file already exists, Bang! Bang! will ask your permission before overwriting it. Once the game state has been saved, it may be recalled with the File/Open... option at any time to resume the game.

\* \* Note: The File/Save... option is only available when a game is in progress (including immediately after Game/New has been selected).

### **Restoring a Saved Game**

A game that has been previously saved with the File/Save... option can be restored and resumed using the Open... option on the File menu. This option will bring up a standard Windows file open dialog box showing a list of files and directories. Enter the name of the game state file to be loaded (default extension is .SAV), or select a file name from the list, and press the [Open] button.

After the file is read, the game window will be updated with all of the game state parameters from the file, and the saved game may then be resumed.

\* \* Note: The File/Open... option is available at all times. If a battle is currently underway when this option is selected, Bang! Bang! will ask permission to cancel and discard it before loading a saved game over it.

### **Tips and Hints**

Here are a few hints for playing the game that may help...

§ It can take much more time to narrow in on your opponent if you try and vary both the angle and velocity parameters for your cannon. It is much better if you pick an angle or velocity that gets you close to your target, and then vary the other parameter to zero in on it.

§ Depending on the layout of the battlefield, and the speed and direction of the wind, you may find that your target appears almost impossible to hit. There may even be some layouts in which neither opponent appears to be able to hit the other (for example, with a very high "hill" between cannons, and a high wind). Bang! Bang! allows you to use a range of angles from 5° to 95° for just this reason. You may find that sometimes you have to use some pretty strange angles (90° or more) and rely on the wind to help carry the ball to its target.

§ When a ball leaves the game window on either side, it is considered gone, and the next player's turn comes up. This, however, is not true of the top of the window.

The ball may pass the top of the window, leaving the range of visibility, and re-enter the window later in its flight path. This allows room for large arcs (primarily

for getting around hills). There is a limit on how high the ball can go before it is considered lost (approximately 2.5 times the window height). If the ball passes this

limit, the game moves on to the other player. Likewise, if the ball leaves the left or right borders of the window while it is out of view, it also is considered lost. If this

occurs, you can tell it has happened when the Windows mouse cursor changes back from the hourglass to its normal shape (the arrow).

## **Credits and Notes**

Bang! Bang! was inspired by a game that I originally encountered on a Tektronix S-3270 ATE (test system). The game was called SHOOT. As a new Windows programmer, I thought writing a Windows version of this game might be a fun and interesting way to "get my feet wet" with Windows. It has been an interesting project, and as my first Windows program, I am pleased with the way it turned out. I hope you share my feelings and find some enjoyment in it.

The original version of SHOOT was designed for the multi-user environment of the Tektronix S-3270. In this version, two players sat at two different graphics terminals, each with a copy of the playfield on his screen, and took turns shooting at each other. There were some interesting angles (no pun intended) that this arrangement added to the game (for example, you couldn't see each other's angle/velocity inputs, so you didn't know for sure how close the other guy was to getting you). In the future, I would very much like to add equivalent capability to Bang! Bang!, so that players can sit at separate PCs (most likely linked together via serial ports). Your shareware support will go a long way towards helping this to happen. When you register, send along your name, address, and any comments, hints, or suggestions you may have. I will file the information and let you know when a new version is available.