Strategic Billiard v.1.0 Manual

General info

Strategic Billiard is a freeware game. It was developed by me (Igor Galochkin) for fun and practice in programming. Comments from you about the bugs, the faults of the game and any possible improvements that you think are necessary would be even more appreciated than financial support :))

This manual provides complete information you may need to play Strategic Billiard. You can also go through the in-game tutorial, which will get you accustomed to the controls and tell the basics.

Installation

No installation is needed. Unpack the archive to any location and double-click on **sb.exe** to launch the game.

The game is written in C++ with SDL library, and all required dll's are already in the game folder. It runs well in Windows XP and maybe runs well in earlier versions of Windows, too.

General Idea

The idea of the game is more of a Strategic than Billiard. Actually, this game has very little in common with real Billiard games.

The main difference is that you can pause at any moment, even when all balls are running, and perform as many actions as you want before resuming the game. That would, of course, be physically impossible in real world.

Another difference is that in addition to a Cue (a standard tool in all Billiard games), you can use a number of special tools like Magnet, Hammer, Tilt table, Jump, Accelerator etc. The first version of the game has just 12 tools, but in future versions more will be added.

One more difference is that in single turn one player can use all those tools a number of times, not just hit one ball with one cue, as in standard billiard game. The number of uses is however limited. For example, you can use a Cue 5 times, a Hammer 2 times and a Magnet only once per turn. This proved a wide range of strategic possibilities for you and allows long and complicated combinations.

Goal of the game

The goal is, of course, to get more points than the other person playing against you. However, that does not mean driving more balls into pockets.

Balls have different value, which is represented by their color. The most valuable balls (with value of over 30) are pink. When you score a ball, this ball goes to the Panel (which is in the upper part of the game screen), and its value is added to your current score.

So, to win you should score more balls of higher value. Value of a ball increases in two cases: when it rebounds from a rail (by 1) and when it collides with any other ball (values of both balls increase by 1). Value of balls can decrease when you apply certain tools to them. A cue stroke decreases the ball's value by 1, and the Teleportation tool decreases the ball's value by 5.

In his turn player applies any tools he wants (if they are available and not used up), each time he tries to do that the game pauses to give him enough time to apply the tool. If all balls come to stop and the game is currently not in a state of a pause, the turn ends and is passed to the opponent.

The game ends when no balls remain on the table. The player with higher score wins.

The game has also a single player mode. In this mode you have to get as much score as possible in 10 turns. To get an A grade you need 700+ pts.

Arrows

Every time you pause you will see arrows on the balls. Those arrows show the speed vectors of the balls, namely, the current direction they are heading in and their speed. The speed is shown not by the length of an arrow (as usually in mathematics), but by the COLOR of the arrow. White color represents speed close to zero (the ball will stop very soon). The pink color represents maximal possible speed.

Arrows will help you a lot, if you are planning a complicated combination.

When you are applying some tool, which has direction, an arrow will represent the direction, and the color of the arrow the power of the tool. E.g. when applying a Cue stroke, arrow shows the direction and the color – the power of the stroke.

Tools

	Play button – launches and stops time. Note that if the game is running, and you click on any tool, the game will pause automatically to let you apply the tool without rush.
	Cue stroke – usual tool of all Billiard games, instantly changes the direction and speed of one ball. Note that if you paused the game, and the ball already had some speed vector at the moment of pause, than the stroke you apply will be added to that vector. For example, if a ball was heading past a pocket, you won't drive it into that pocket, if you just strike in the direction of the pocket. The vectors will be added, and the ball will miss. Instead, you can first apply the Stop tool and just after that strike. Or, if Stop is unavailable, you should try to estimate the angle that would neutralize the current speed of the ball and correct your shot by it. That is not an easy task, but I like it most.
	Fan (or Ventilator) – thought of blowing those balls off? After you put that thing on the table and set the direction a powerful windblast will accelerate the balls in that direction, if they come close enough and get in the area of the blast coverage. This is a great tool to blow many balls into one pocket. However, when balls are in the field of influence of the fan, they don't get their value increased (see Special rules).

	Tilt table – all balls start moving in the same direction. However, that is not like a real tilt. Think what you could do if it were possible to raise one edge of the table. All balls would inevitably roll into the opposite corner pocket. So, in this game tilting a table creates only one-shot acceleration in the direction you show. You need to click on some edge or corner (but not too close to a rail) to show the direction.
	Stop – instantly stops the ball on which you click. This may seem a weak tool at first glance, but in fact it can help a lot if you see a ball running close to pocket, but in a wrong direction. Instead of trying to guess what vector to add to it with Cue stroke, you first stop the ball and then stroke precisely at the pocket.
	Reflector (horizontal) – acts as a rail, but collisions with it provide no score. You may use this tool to change the ball's direction, if the Cue and the Stop tools are used up. Also, you can win many points of value for a ball, if you place this tool near a rail, put a ball there and make it bounce quickly between the rail and the reflector. This may be useful in the end of the game, when there are not many balls left, and collisions are less frequent.
	Reflector (vertical) – the same as horizontal reflector
	Teleport – instantly teleports the selected ball to whatever location you want (even to the edge of the pocket). The speed of the ball however is reduced to zero. This is a good tool for pocketing a valuable ball with pink color. You teleport it to a place very near to a pocket and then use Cue (or Hammer, or Fan) to drive it into the pocket. To balance the game I introduced a special disadvantage for teleport tool: each time you teleport a ball, it looses 5 points of value. So, if you can use other tools, like Stop and then Cue stroke, use them and save this tool for really hard positions.
	Jump – the ball jumps a distance you require, it doesn't loose it's speed, but the jump can be attempted only in the same direction as the ball is currently moving. This is not a very powerful tool, but it can be useful in some cases. Imagine, there is a pink ball, that is heading directly into the pocket, but some other ball is moving just to intercept our winning ball and collide with it. After the collision, of course, the route of the pink ball would change, and most certainly it won't end in the pocket. To avoid a collision you can apply Jump tool either to the pink ball (to pass the dangerous area) or to the intercepting ball (jump over the path of the pink ball). There is a number of other uses for this tool in combination with others, e.g. first apply Cue and just after that, without resuming the time, apply jump. You get teleport without loss of speed and smaller decrease of value of the ball (-1 instead of –5).

	Switch page – clicking on this button will open the next row of buttons. After that you can click on the button with '2' to return to the first page.
	Magnet – when put on field, it will magnify balls that are no farther away than 60 pixels and no closer than 25 pixels. In general, after you put it, balls in the vicinity will start grouping around the magnet, and after some 20-30 seconds will form a hex lattice like in honeycombs. The disadvantage is that while in the field of a magnet, balls won't increase in value when colliding or bouncing from the rail. You may use this tool in the end of the turn early in the game, when there are still many balls. After the balls collided enough times and got red or pink color, you may set up a Fan, blowing into a pocket, and a Magnet near it. To lure the balls you may use Chaos or Tilt command.
	Hammer – imagine that you take out a maul and deliver a heavy blow at some place on the table. The table was very lucky and did not fall apart; moreover, there isn't even a scratch on it. However, the effect on the balls is quite predictable: they are scared and run away like hens from a cat. This tool is good to get many balls moving, if the direction of their movement is not important and you just need to increase their value before pocketing them. However, if a ball gets close to a pocket, you may use Hammer like a Cue by blowing behind that ball so as it rolls in fear precisely into the pocket.
	Accelerate – all balls are accelerated. This tool is good to use after Hammer or Chaos tool, when balls get tired a bit and start thinking of having a rest. However, there may be some other uses, too.
	Chaos – all balls get random directions and random speeds. This tool is useless for pocketing a ball (it can even spoil a good shot if applied before a winning ball reaches that pocket). But it is great to get the balls moving in the beginning of the turn.
	Exit – not actually a tool. Just a button which lets you exit the current game
	End turn – instantly stops any balls that are running and passes the turn to the next player. This may be needed if you intentionally want to lose (for whatever purpose you have). Or, it may also be useful in certain cases if you get stuck with something. For example, if you set a magnet and a fan blowing right at it, some balls may eternally wander over that magnet, getting acceleration each time they enter the stream. If you do not see any opportunities for a good shot (say, if all your tools are used up), you can stop the stupid performance by just ending the turn. This will wipe out all the tools that were placed by you.

	Switch page – returns you to the first row of buttons

Special rules

There are some special rules that you might need to know: a ball's value can't exceed 49. That means that at some point of time further collisions and bounces become useless and you need to pocket that ball.

Tools can't be applied very close to borders: that is needed to avoid a trick of placing a magnet next to a pocket and watching balls flock into it.

Ventilator and magnet tool have a special disadvantage: when balls are under their influence, their value won't increase, no matter how many times they collide or rebound from rails. That is a specific rule to prevent winning by just setting up a magnet and a fan near a pocket. A magnet would attract lots of balls which would crowd around it and collide a multitude of times, increasing their value, and finally the fan would blow them into a pocket, making some easy score. Also, magnetic field has a very limited range: it doesn't influence balls which are too far or too near to it. That prevents eternal regrouping around the magnet that would take place otherwise.

Another special rule is that the speed of balls can't exceed a certain limit (3 pixels per 1 frame, to be exact). That is needed for smoother drawing routines, but also has a balancing impact on the game as a whole. Your cue stroke can't be powerful enough to get many balls moving. It is good only to shoot one ball with 3-4 collisions at maximum. For moving many balls simultaneously, use area-based tools like Randomizer, Hammer and Fan.

Note that after each turn all tools get recharged and any area tools that were put on the table in previous turn are wiped out.

Keyboard shortcuts

SPACE – pause / run game

ESC – exit to start menu

ENTER – (in tutorial) go to next page (or you can wait about 6 seconds until the game switches to the next page automatically).

Credits etc.

The code and the images were made by myself. If you need to see the code (say, for collision formulas), feel free to write me, and I will send the code to you. You can use the images for any purpose. The music is, as you might have recognized, Mozart and Bach. If you hate classic music, there is an option to switch the damn thing off.

You may distribute the game, but this should not be a commercial way of distribution. Good manners would also be mentioning my name and maybe my site or e-mail.

There is no computer opponent in the game. I could make it, but I actually think that it is not really needed, because in this game players are completely independent from each other, their turns are very much separated. So, watching a computer stroking those balls with incredible precision would not be much fun, if this has no influence on your own actions.