

# Hit the Groove through the Curve

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[ZipTip: READING GREENS & PUTTS: Hit the Groove through the Curve](#)

To get a more definite sense of the right speed for taking a break without blowing through the break, visualize the final section of the putt curve as a race track banked so that anything faster than the proper speed jumps the track and then deliver the ball with enough speed to keep the ball on the track through the break.

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Here's a visualization tip that integrates perception of speed and path for breaking putts, for finding the right combination that feeds the ball into the cup, not high or low. It helps give you the confidence and commitment to get the ball all the way into the break without upsetting your sense of touch for the whole putt.

## [The Theory:](#)

Many pros and putting instructors suggest for reading break putts that you first see or visualize the speed and then see the "line" or curve of the ball's path in light of that speed. Your brain is capable of doing both at the same time in its holistic processing of spatial relationships and objects moving in space, but it's generally more convincing (confidence instilling) to your analytical and doubting "mind" if you find one first and then the other before seeing this integrated picture of both. The point is, it's okay to treat the speed and line separately, but sooner or later you have to get the combination integrated in a visualization of the ball rolling at speed along the path that speed determines all the way into the hole. This visual mental image helps.

The Image: For a typical breaking putt of 10 feet (ball to hole on direct line, or "baseline"), with a generally flat but sloping surface that slopes along the baseline as axis from upper right to lower left say 3 degrees, on a typical medium fast green (Stimp meter around 8), the speed of the putt will be just a touch slower than a straight-in putt along the baseline. A straight putt would take about 4 seconds to cover this distance, slow down, and rattle into the cup. You don't need to know the number to recall how a "movie" of the ball rolling to the hole looks, so you really already know this timing pretty well. Add a bit of time for the longer path of the curving putt and you pretty well are close on the speed of the putt and can begin to fix on visualizing the exact curve.

In a typical breaking putt like this, the first two-thirds or so of the path is generally straight, because the speed of the putt during this part of the total roll is fast enough so that the modest gravity from slope doesn't result in much deviance off the direct start line. Consequently, the overall shape of the "curve" is more like a fishhook than a rainbow, with most of the curve coming at the end. This is where the image gets tricky.

A racecar driving coming down the backstretch of the track sees the banked curve coming up and plans his entry along the groove through the curve. At those speeds, the

curve MUST be banked or the racecar will be going too fast and shoot “through the break”, if you will. In bobsledding, if the driver misjudges the groove, the bobsled either tumbles to the bottom of the track or jumps the wall. If you get the speed wrong in a breaking putt, the same happens. In this sense, it helps to see the ball through this curved section of the path or track of the putt as rounding a banked surface.

The key to the image is to determine HOW banked the section seems to you. The answer is: banked just enough so that the ball at its likely speed will not either go so slow it slides down the bank to miss low or so fast it jumps the track and rolls on through the break. It's really not any more difficult than seeing how the speed and slope work together to create the curve in the first place.

A little image detail: It helps to see the banking as something of a curving ridge of the putting surface, along a path about as wide as the central section of the hole (about 3” wide). You don't have to get too specific in how you think about this; but you do have to be pretty precise with the accuracy of what you imagine.

In our example, the curved, banked section might amount to a total break of 4-5 inches, and this curvature occupies a section in the last one-third of the putt, with the sharpest section of the curve coming about 1-2 feet out from the hole. The ball's entry into the hole might be at the 4:30 position on the “clock” of the hole, with 6 being nearest you on the baseline. Such a curve, at such a speed, might have banking with a highest point raised maybe 1” above the surrounding flat but sloping surface. So the banking starts about 3 feet out and gently rises until the 3” wide track is tilted at the point of sharpest curvature 1” over its 3” width (sloped 33%) and then gradually subsides as the track feeds into the cup and the ball's speed slow to entry speed.

How this helps: This image gives you a kinetic “feeling” for the critical parameters within which your speed must stay to maintain the “line” you visualize. You can more easily sense just how far out and exactly where the point of maximum sideways deviation off the baseline the “break point” is, so you know something about what it takes to get the ball to the break point. Anything less and the ball rolls low, missing on the “amateur” side. And you also can more precisely “feel” what speed will be too much for the precise character of the curve, so that the ball will jump over the banked ridge and miss “through the break.” This “kinetic” or “feel” sense of where the break point is located in relation to you and the hole, and of the character of the banked curve, gives you a very definite sense of the starting line and the right energy for the roll.

Make this part of your game. Every breaking putt is different, but you're only going to hit one putt, so there is only one speed you need to visualize -- the one that gives the ball its maximum chance of going in. However you figure that out, the speed you settle on fixes the character of the curvature for the breaking putt. Matching this curvature up with appropriate “banking” focuses your attention on the section of the putt where success or failure is determined and gives you a useful, integrated vision of how speed and “line” combine. On the practice green, when you miss low, visualize the ball running out of gas through the bank; when you miss high, see that the banking was too subtle for the ball's speed so the ball ran through the banking of the break. You should find yourself having more confidence about getting the ball all the way to this critical area of the putt.

For more tips and information on putting, including a free 10,000+ database of putting lore and the Web's only newsletter on putting (also free), visit Geoff's website at <http://www.puttingzone.com>, or email him directly at [geoff@puttingzone.com](mailto:geoff@puttingzone.com).