Spot on the Wall

Just once, during the *Jeopardy!* Intros, I want to hear Johnny Gilbert say, "A POOL PLAYER FROM STEUBENVILLE, OHIO…" *We* know that pool attracts intelligence, but I wonder if non-players would guess that. A few days into my college life I began to appreciate some of the intellect surrounding me in the poolroom every afternoon. A gang of math professors almost always controlled the snooker table while my clique gathered near the billiard table seeking wisdom from the room's sage, a former Harvard professor with a National 3-Cushion Key Shot title in his past. I'm sure I'll never meet another player who can make umbrella shots look easy while simultaneously punning on crossword clues in two or three languages. Barry Greenstein, the now famous poker player, stopped in just about every day, finding time somewhere between card games and working on a PhD in math. I used to wonder, "If these are the people I see at the poolroom, what would I find at the law library?" I don't know since I never went there, but maybe I would have found students working their butts off. The guys at the poolroom were smart enough to master their fields with spare time every day to hit some balls.

One needn't dig very deep to behold the brilliance that peppers our sport. A quick look at a few intricate diamond systems with their baffling complexity will confirm it. And we have braniacs out there who continue inventing new ones. But my vote for sheer ingenuity goes to the person who discovered the spot-on-the-wall method to cut through the math without sacrificing precision.

Whenever someone mentions *the* diamond system chances are that person is talking about the corner-5 system, most popular in 3-cushion billiards but also useful in pool. Cue ball A in the diagram is set up for the corner-5's benchmark shot, three rails to the corner from the corner. The basic framework subtracts a number for the first rail from the cue ball's number to determine where it will hit the third rail. Though we don't see it in the diagram, the cue ball's value is 5 since it's coming directly out of the corner, hence the system's name. The corner 5's benchmark shot goes from the corner to blue diamond 3, then hits red diamond 2 on the third rail (5-3=2) before ending its journey in corner A. At least that's the way it works for a table that plays on system, and that's how we see it in books.

Unfortunately, pool tables don't read books, so they don't know how they're supposed to behave. On my favorite table, shooting out of the corner at diamond 3 will send the cue ball to diamond 2 on the third rail, but then it winds up well short of corner A, usually arriving near the X in the diagram. To follow the solid line to corner A on that table one must aim at the yellow spot on the first rail, which is 1 and $^2/_3$ diamonds away from the prescribed target and yields the necessary adjustment for any calculations. So, if I were going to the corner from 5 and ¾ on this table, I would not shoot at 3 and $^3/_4$ as the system instructs but would subtract 1 and $^2/_3$ from 3 and $^3/_4$ for my target on the first rail.

Even without an adjustment the calculations can get messy quickly, so we're fortunate to have a method that eliminates the complexity. Beginning with the benchmark shot to diamond 3 I start looking for corner A by trying different targets on the first rail until I'm hitting the corner consistently with an above-center hit and a tip of running english, left in this case. Once we determine that the yellow dot is our target we then extend a line through it to the wall to find the spot for this shot. Then, from anywhere within range of the shot, we simply aim at the spot on the wall and hit the first cushion on that line. Someone figured out that, because every line that goes three rails to the corner converges at one point, we only need to extend one of the lines to find that point. A math-wizard friend determined that the distance for that point increases with each rail used and devised a formula for computing it. For the three-rail shot in the diagram the spot should be about 15 feet past the table, determined by adding a table width to the right, a table length forward, then another table width to the right.

Our spot-on-the-wall method also works for two-rail kicks as we see with Shot B, which employs another loan from 3-cushion billiards, the plus system. To find your spot for this system place the cue ball anywhere on the line that connects red diamond 3 to the center diamond on the left, short rail. Again, with an above center hit and a tip of running english, right for this shot, begin shooting for corner B with relatively soft speed. Instead of adjusting the target this time to find the corner, you will adjust your english until you find the dotted line to hit the corner consistently from the benchmark line that connects the two diamonds. If the cue ball is arriving on the short rail, add english. If it's coming into the long rail where we see the letter "A," subtract english. Once you are hitting the corner consistently you will extend the line to the wall again to find your target for this two-rail kick. Be sure to use a level cue and remember to allow for squirt in your aiming, which demands aiming to the right of the target diamond for the setup in the diagram.

It seems that the more I learn about pool the more I realize how much I don't know about all the subtle complexities of navigating a simple rectangle. Without the help of some geniuses in our past, I'm sure I would find myself lost at sea doing little more than pushing colored balls around.

For a visual demonstration of Spot on the Wall, watch the video that Dr. Dave and I made at:
http://billiards.colostate.edu/normal_videos/new/NVB-35.htm

To learn the corner-5 system, I recommend Robert Byrne's *New Standard Book of Pool and Billiards*.

TOM
ROSS
POOL