
Note: Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, and technical proofs (TP), and all of my past articles, can be accessed and viewed online at billiards.colostate.edu. The reference numbers used in the article help you locate the resources on the website. If you have a slow or inconvenient Internet connection, you might want to view the resources from a CD-ROM or DVD. Details can be found online at: dr-dave-billiards.com.

This is my eighth article based on the “[The Video Encyclopedia of Pool Shots \(VEPS\)](#),” an instructional DVD series I recently created with past BD columnist and good friend Tom Ross. VEPS contains 750 shot types within 50 main categories and 5 major areas. Many clips in the series are also designated as “gems,” indicating shots or concepts important to know as a pool player, whether understood explicitly or in a more intuitive way. An outline of the entire VEPS series, the complete list of shot types in each major area, the gem designations, and video excerpts from each DVD can be viewed online at: dr-dave-billiards.com/veps. In the last few months we’ve looked at several one-rail kicking systems from the fourth DVD: “[VEPS IV - Banks, Kicks, and Advanced Shots](#).” Over the next three months we’ll look at the Plus System that can be used to aim two-rail kick shots off the short rail.

The Plus System is based on the modified short-rail diamond numbers shown in **Diagram 1**. The far corner pocket diamond is labeled 1, and the count increases by 1 every half diamond. Thus, the first $\frac{1}{2}$ diamond is labeled 2, the first full diamond is labeled 3, and so on. You can also simply remember that the three visible diamonds on the short rail are designated 3, 5, and 7. The Plus System predicts that the amount the line of the cue ball (CB) will shift up table along the long rail is equal to the diamond through which you are aiming on the short rail. To illustrate, in the diagram, the CB is aimed through diamond 3; therefore, the line of action of the CB should shift 3 diamonds up the long rail as shown. The system applies only for a rolling CB with running English. This shot (VEPS Shot # 507) is demonstrated in **NV B.84**.

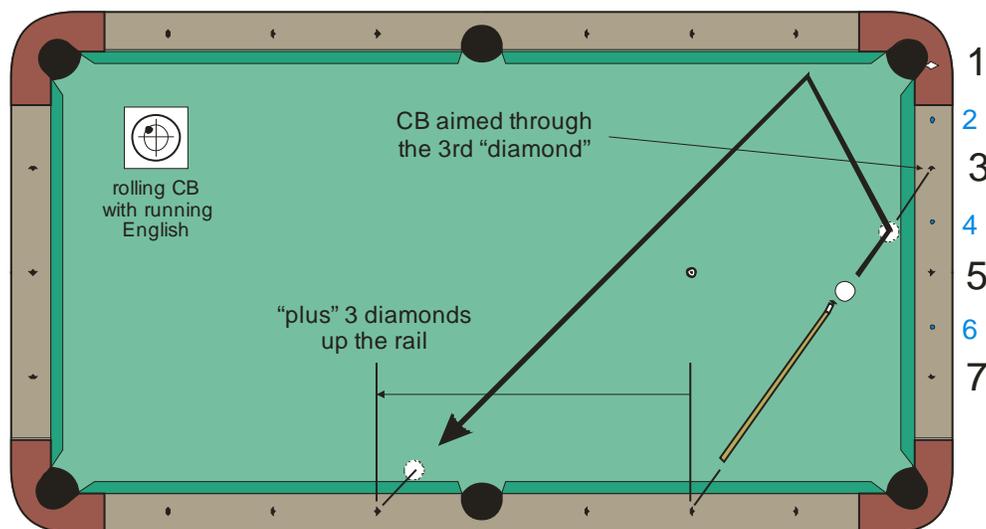


Diagram 1 Plus System

The Plus System is sometimes also called the Plus Two System. In my research, I wasn't able to find a consistent (if any) reason for the name, but here are several plausible explanations:

- 1.) The first diamond is labeled 3, which is 1 "plus" 2.
- 2.) A typical kick in and out of a corner pocket, as shown in **Diagram 2**, shifts up-table by two diamonds. The "plus two" shift is created by aiming through the half diamond past the corner pocket, which is labeled 2.
- 3.) A one-diamond shift on the short rail (e.g., from the first diamond labeled 3 to the second diamond labeled 5) adds a two-diamond shift on the long rail.

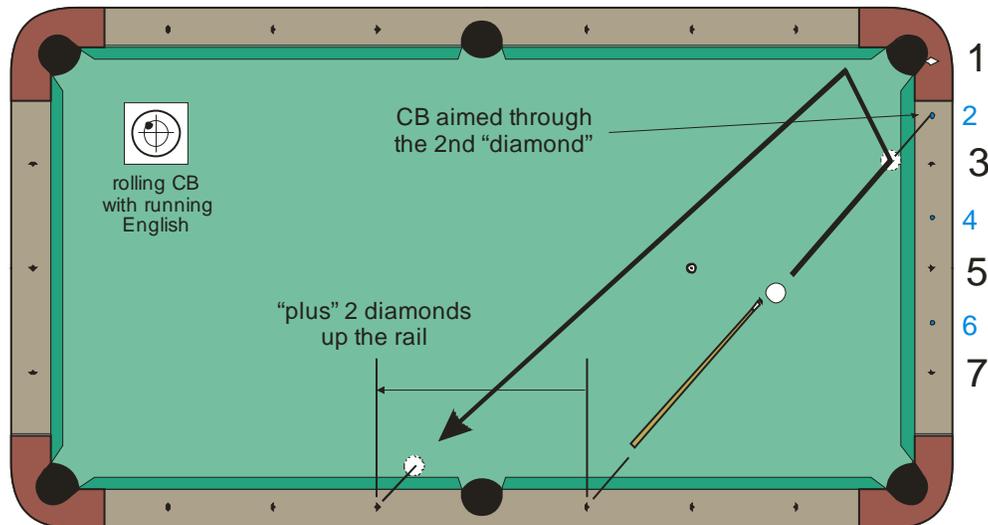


Diagram 2 Plus Two

Unfortunately, things aren't always so simple and you will find that the system needs some tweaking as you move from table to table. To this end, **Diagram 3** illustrates an important reference shot that can be used to calibrate the amount of spin and speed you need for the system on a particular table. The goal is to find the right combination of the two (spin and speed), such that aiming through diamond 5 on the short rail from the 3rd diamond on the long rail results in the line of the CB shifting 5 diamonds up-table directly to the corner pocket. Note that with the Plus System, the corner-pocket diamond is taken to be centered in the pocket as shown in the diagram (see my May '10 article for more info). The effects of spin and speed variations on the final CB line are described next to help you understand how to make changes to find benchmark values. The effects are also demonstrated in **NV B.84** (VEPS Shot # 508).

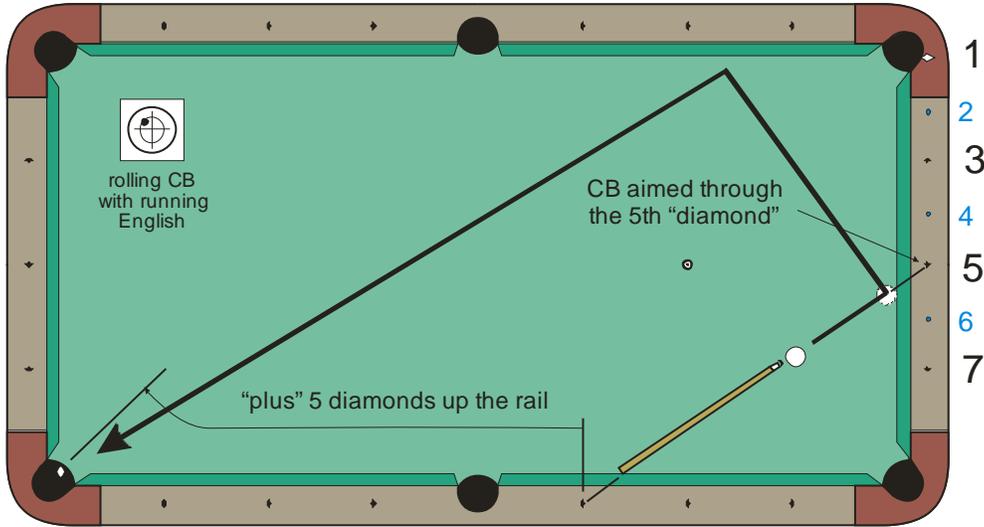


Diagram 3 Plus System reference shot

As shown in **Diagram 4**, increasing the shot speed tends to result in the CB going long, which means past the target (see the red path in the diagram). The reason is that the extra speed causes a delay in the CB's post-rebound curve off the first rail, resulting in contact on the second rail farther up-table. Increasing the amount of English instead makes the CB come up short (see the blue path in the diagram). This is because the extra English lengthens (widens) the angle off the first rail, thus causing the CB to hit the second (long) rail farther down-table (closer to the first rail).

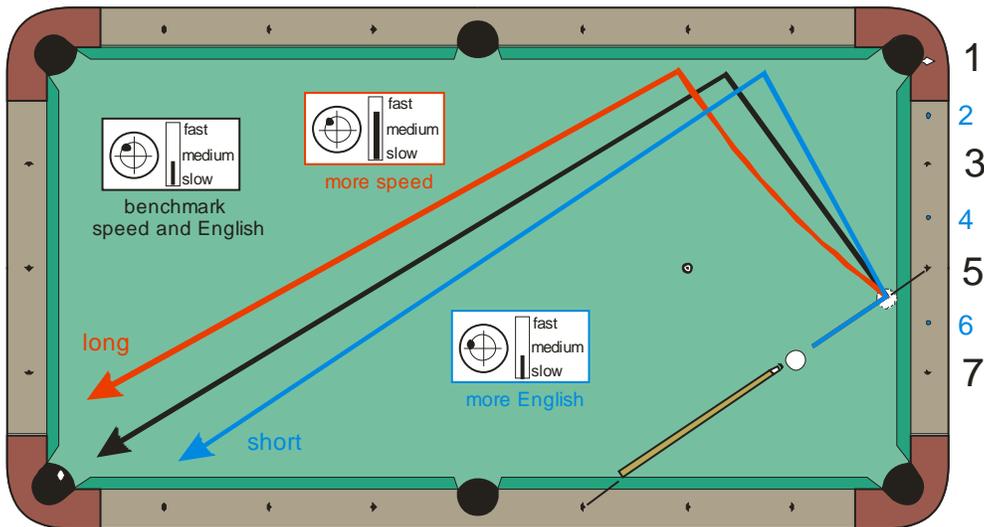


Diagram 4 Plus System speed and English effects

As indicated earlier, every table will play differently. This is why it is important to calibrate the system by practicing the reference shot in Diagram 3. If the CB comes up short, you need to adjust by either increasing shot speed or decreasing the amount of English. And if the CB goes long, you can either decrease speed or increase English. You should try different combinations of speed and English that work on a particular table, and then you can settle on a combination that feels the most comfortable to you as your baseline. This benchmark is an important reference when needing to make adjustments to the system, as we will see next month.

All kick and bank systems are affected by speed and English. If you want to use any system effectively, it is essential to practice it on a particular table. Having reference shots like the one described above can help you quickly adjust to almost any table. So what are you doing still reading this article? Get to a table and practice.

Example gems and other shots from the fourth VEPS DVD, including the ones discussed above, can be viewed on the [VEPS website](#) or at billiards.colostate.edu under **NV B.81** through **NV B.86**.



- [NV B.81](#) – Bank and kick shot terminology and basics, from VEPS IV
- [NV B.82](#) – Rolling-cue-ball through-diamond kick-shot aiming system, from VEPS IV
- [NV B.83](#) – Shallow-angle contact-point-mirror-image kick-shot aiming system, from VEPS IV
- [NV B.84](#) – Plus System for aiming two-rail kick shots, from VEPS IV
- [NV B.85](#) – Corner-Five System for aiming three-rail kick shots, from VEPS IV
- [NV B.86](#) – Cut-induced throw (CIT) and spin-induced throw (SIT), from VEPS IV

Well, I hope you enjoy and benefit from my series of articles highlighting shots and gems from the “[Video Encyclopedia of Pool Shots \(VEPS\)](#).” Next month, we’ll look at how to make adjustments to the Plus System at its extremes.

Good luck with your game,
Dr. Dave

PS:

- I know other authors and I tend to use lots of terminology (e.g., squirt, throw, stun, ball-hit fraction, etc.), and I know not all readers are totally familiar with these terms. If you ever come across a word or phrase you don’t fully understand, please refer to the [online glossary](#) on my website.
- I want to thank Jim Valasina. He graciously proof-reads my articles every month to help find errors and make suggestions. My article quality is better as a result of his efforts. Thanks again Jim!

Dr. Dave is author of the book, DVD, and CD-ROM: “[The Illustrated Principles of Pool and Billiards](#),” the DVD Series: “[The Video Encyclopedia of Pool Shots](#),” and the DVD: “[High-speed Video Magic](#).”