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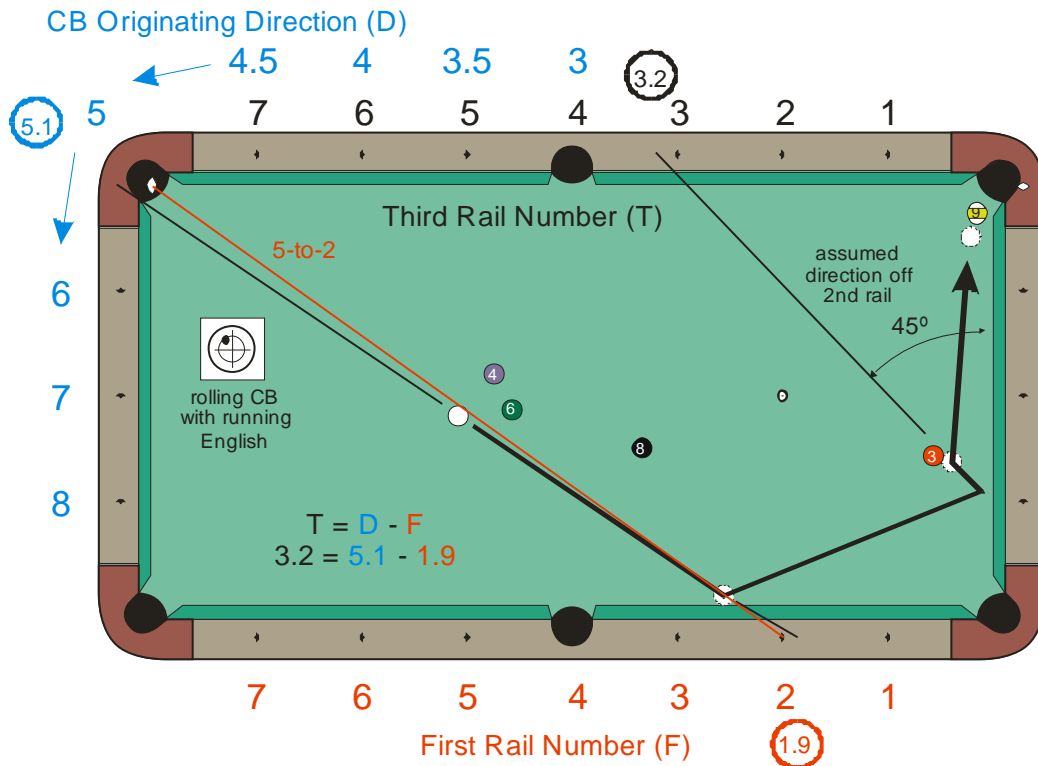
*Note: Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, and technical proofs (TP), and all of my past articles, can be accessed and viewed online at [billiards.colostate.edu](http://billiards.colostate.edu). The reference numbers used in the article help you locate the resources 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](http://dr-dave-billiards.com).*

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This is my twelfth 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. An outline of the entire VEPS series and video excerpts from each DVD can be viewed online at: [dr-dave-billiards.com/veps](http://dr-dave-billiards.com/veps).

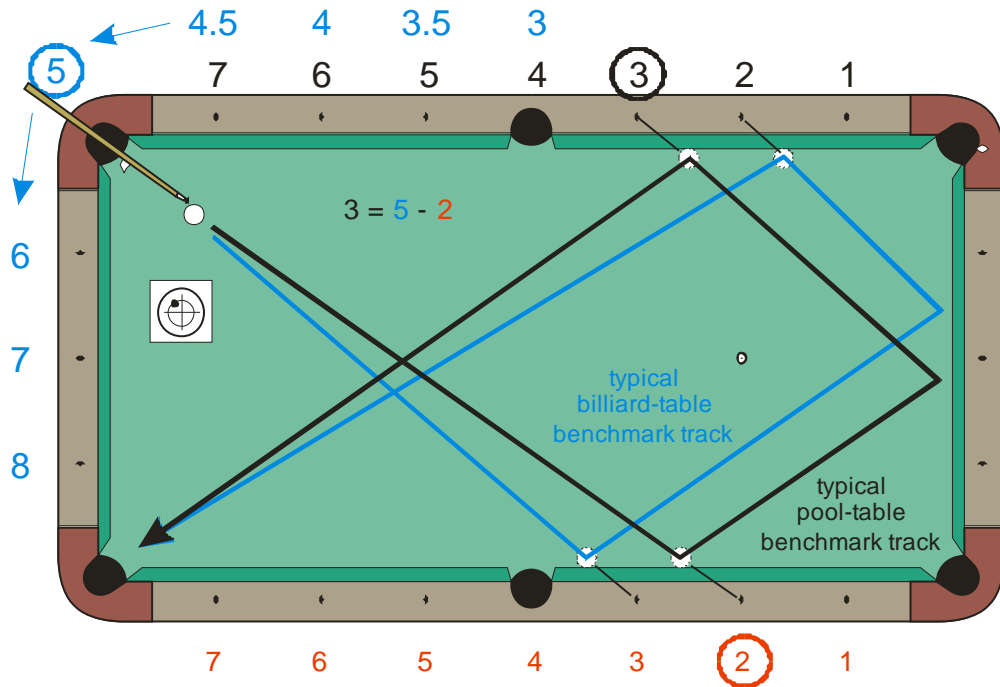
Last month, I introduced the Corner-5 System that is used to aim two-, three-, and four-rail kicks off a long rail. The Corner-5 system is covered in detail on “[VEPS IV - Banks, Kicks, and Advanced Shots](#).” If you don’t remember the details of the Corner-5 system, please review [last month’s article](#) and **NV B.85**. To summarize, for a rolling cue ball (CB) with running English, the Corner-5 system predicts a third-rail target (T) from the CB’s origination-direction number (D) and the first-rail number (F) using the following simple formula:  $T = D - F$ . Last month, we saw examples of how to use this system to aim two- and three-rail kick shots in different game situations. This month, we’ll look at an additional example and then discuss an important benchmark shot for the system.

Our example is illustrated in **Diagram 1**. With this layout, we don’t have a direct shot at the 3-ball, but the 9-ball hanger offers us a carom opportunity. Here, we can use the Corner-5 system to aim a two-rail kick to the bottom side of the 3-ball to deflect the CB into the 9-ball. This shot isn’t easy, especially if you haven’t practiced with the system; but a good hit results in a win. The first step to aim this shot is to visualize the desired ghost-ball position against the 3-ball. We then need to visualize the angle the CB will come off the 2<sup>nd</sup> rail. As we saw last month, if you don’t have a good feel for judging this angle, 45° is a good estimate for a wide range of Corner-5 System shots. Next, as demonstrated in shot #518 of **NV B.85**, you align your cue through the center of the ghost-ball target along the just-visualized angle to determine the required 3<sup>rd</sup>-rail number target (T). For this shot,  $T = 3.2$ . Now we need to find a track through the CB that takes us to 3.2 on the 3<sup>rd</sup> rail. A good approach is to first locate a whole-number track that passes close to the CB and the 3<sup>rd</sup>-rail target, and make adjustments relative to that. Here, the 5-2-3 track (see the red line in the diagram) will suffice. Then, as described last month, you shift and pivot the cue slightly to align with the CB, and adjust as necessary such that the CB origination-direction-number (D) minus the 1st-rail number (F) yields the desired 3<sup>rd</sup>-rail target ( $D - F = T = 3.2$ ). For this shot, shooting from 5.1 to 1.9 yields the desired CB track ( $5.1 - 1.9 = 3.2$ ). All of these steps are demonstrated in shot #523 on [VEPS IV - Banks, Kicks, and Advanced Shots](#).



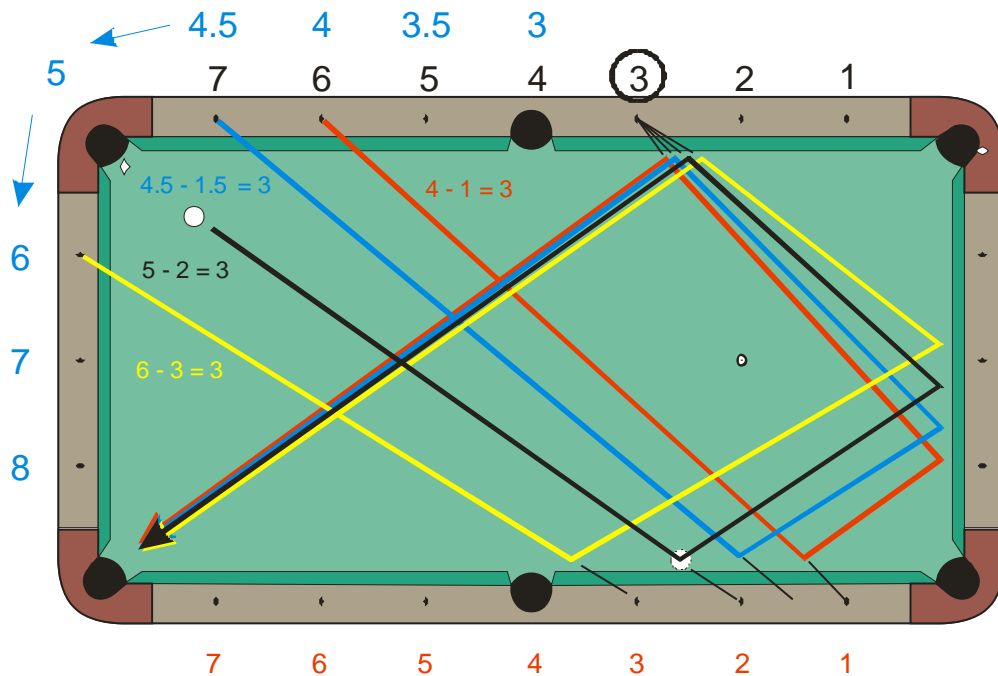
**Diagram 1** Corner-5 two-rail kick billiard

**Diagram 2** illustrates an important benchmark for using the Corner-5 system for three- and four-rail kick shots. It consists of a three-rail kick from the corner pocket to the cross-corner pocket on the same short rail. For a billiard table that plays “on system,” the 5-to-3 track ( $D=5$ ,  $F=3$ ) goes through 2 on the third rail ( $T = 5 - 3 = 2$ ) and proceeds to the target corner pocket, per the blue path. On most pool tables, however, a track closer to 5-to-2 heads to the same corner pocket off the third rail (see shot #519 in **NV B.85**). It is useful to know which particular 3<sup>rd</sup>-rail target results in a path to the corner on the table you happen to be playing on. On my table, the target is 3 ( $5 - 2 = 3$ ), but on yours it might be different (e.g., 3.2). To find the benchmark 3<sup>rd</sup>-rail target on your table, start with the 5-to-2 track and make adjustments, if necessary, from there. If the CB comes up short of the pocket (on the long-rail side), decrease the 1<sup>st</sup>-rail number a little; and if the CB goes long (on the short-rail side), increase the 1<sup>st</sup>-rail number. Even though the path off the 3<sup>rd</sup> rail will vary with the type of table and conditions, the Corner-5 System formula should still be fairly accurate and consistent. For example, in Diagram 2, even though the two tracks to the corner are quite different, the formula still holds for both:  $5-3=2$  and  $5-2=3$ . Again, the system generally does a good job of predicting the 3<sup>rd</sup>-rail target.



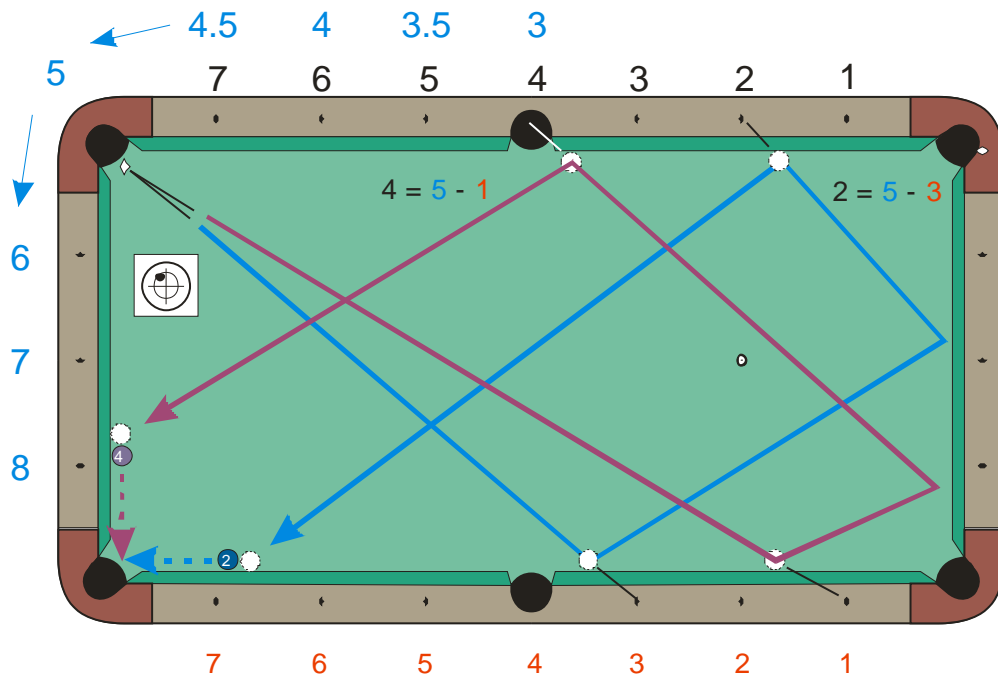
**Diagram 2 Corner-5 System benchmark track**

Knowing which 3rd-rail diamond sends the CB to the corner pocket allows us to target the corner pocket from different positions on the table. As shown in **Diagram 3**, the tracks from 6 to 3 ( $6 - 3 = 3$ ), 5 to 2 ( $5 - 2 = 3$ ), 4.5 to 1.5 ( $4.5 - 1.5 = 3$ ), and 4 to 1 ( $4 - 1 = 3$ ) all go through our benchmark reference (3) on the 3rd rail and continue to the corner pocket. These tracks and several related examples are demonstrated in shots #520 and #522 of **NV B.85**. Again, any track through our 3<sup>rd</sup>-rail reference is predicted to head to the corner.



**Diagram 3** Tracks to the corner from benchmark 3<sup>rd</sup>-rail number

Now that we know how to get to the corner pocket, let's look at how we can execute shifts relative to the benchmark to target balls on either side of it. For example, to pocket the 2-ball in **Diagram 4**, while shooting from 5, we need to decrease the 3<sup>rd</sup>-rail number by one to send the CB one diamond short of the pocket. This is accomplished simply by increasing the 1<sup>st</sup>-rail number by one, relative to our benchmark. That is, our 3<sup>rd</sup> rail target is now 2, thus we aim at 3 on the 1<sup>st</sup> rail ( $5 - 3 = 2$ ). To pocket the 4-ball instead, we need to increase the 3<sup>rd</sup>-rail number by one to send the CB one diamond long of the pocket. This is accomplished by decreasing the 1<sup>st</sup>-rail number by one, relative to our benchmark. Therefore, we aim at 1 on the 1<sup>st</sup> rail to target 4 on the 3<sup>rd</sup> rail ( $5 - 1 = 4$ ). Both of these shots are demonstrated in shot #521 of **NV B.85**.



**Diagram 4** Shift relative to Corner-5 benchmark track

Example shots from the fourth VEPS DVD, including the ones discussed in this article, can be viewed on the [VEPS website](http://www.veps.com) or at [billiards.colostate.edu](http://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



normal video

I hope you are enjoying and benefiting from my series of articles featuring shots from the “[Video Encyclopedia of Pool Shots \(VEPS\)](http://www.veps.com).” Have you been practicing the Corner-5 System? If so, you may have noticed that the system does not work equally well over a full range of CB positions and shot angles. Next month, we’ll look at how to improve the effectiveness of the system.

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](http://www.veps.com) 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](#).”*