*Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, 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 articles 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 the twelfth article in a series based on the "*The Video Encyclopedia of Pool Practice (VEPP),*" a five-disc instructional-DVD collection I recently created with fellow BD columnist Bob Jewett. VEPP is an organized and methodical training program and pool workout. It teaches you how to develop, assess, and track progress of skills for all facets of your game. An outline of the entire VEPP series along with video excerpts from each DVD can be viewed online at: ***dr-dave-billiards.com/vepp***. Last month, we looked at bank shot drills and effects from Disc IV: "VEPP IV- Banks, Kicks, and Advanced Shots." This month, we'll look at some useful jump shot drills and advice, also from the 4th DVD.

If you haven't had much experience or success jumping the cue ball (CB), you might want to view the jump shot resource page in the FAQ section of my website (***billiards.colostate.edu***), which covers jump shot technique in great detail. Here's a quick summary of the important elements of good technique:

1. Make sure your bridge is as high and stable as possible, while remaining comfortable.

2. With a standard stroke, bend your bridge arm elbow to get your upper body over the CB and down, with your grip arm up.

3. To jump the CB more vertically and have it land sooner, elevate the cue more.

4. To jump the CB longer and higher, with a given cue elevation, use more speed.

5. For the best jumping action, aim between center-ball (from the perspective of looking down the cue) and the resting point of the CB on the cloth. Aim lower when draw is needed or when the cue is elevated more.

See the resource page for more information and demonstrations.

Diagram 1 shows the setup for the first and easiest jump drill. It is a progressive practice drill, where you start with an easy shot and increase the difficulty level with each success. This is a good drill to start with, especially if you haven't had much success or experience with jump shots in the past. The goal is to jump through or over the gap between two obstacle balls, shooting the CB into the far corner pocket. Start with the obstacle balls one ball apart. The CB is a diamond from the balls, lined up straight to the corner pocket. With a large gap between the obstacle balls, you don't need much jump height to clear them. A regular playing cue with only a slight amount of cue elevation will get the job done. With each success, close the gap a small amount and continue. Add more speed (and check you aim) if you are having trouble clearing the obstacle balls.
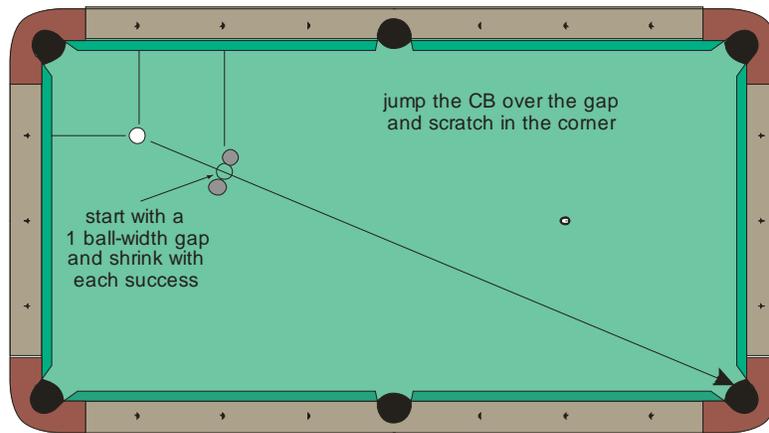
Diagram 1 Ball-gap jump drill

As shown in **Diagram 2a**, with about a ½-ball gap, not much cue elevation is needed (here, about 15º) to jump the CB enough to clear the balls. Here, Bob is aiming though the center of the CB. If you are not clearing the balls, it is probably because you don't have enough shot speed. As the gap gets smaller, you will need to add more cue elevation (and maybe speed) to get more jump height. Continue to narrow the gap with each success until the obstacle balls are touching. Even with the balls touching, you still don't need to jump over a full ball height. You might be successful with a regular playing cue, but a lighter and shorter jump cue with a hard tip will make jump shots much easier. After succeeding with the gap closed, replace the two balls with a single ball in line with the shot. Now you will be jumping an entire ball. In **NV C.16**, we demonstrate how to aim carefully. When some people elevate the cue, their visual alignment tends to shift. Be careful to not do this, and consider trying the aiming method we demonstrate in the video. It is also very important that the cue tip be aligned with the vertical centerline of the CB. If you are off center even slightly, the CB will swerve off line, and you won't have much success with jump shot accuracy.

a.) playing cue, low cue elevation   a.) jump cue, medium cue elevation   c.) jump cue, high cue elevation, with "dart" stroke
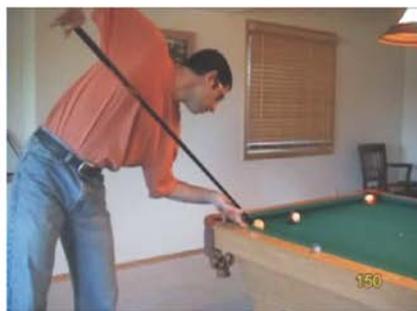
Diagram 2 Jump shot stance and cue elevation differences

Diagram 3 shows the setup for a drill useful in working on higher cue elevation shots, where you need to jump over a closer obstacle and/or land the CB over a shorter distance. The goal in this drill is to jump over a full ball and pocket the hanger in the corner. Start out with the CB close to the rail to make it easier to create an elevated bridge, and start with the obstacle ball 4-5 balls from the CB. This drill can be difficult or impossible with a regular playing cue (especially if the tip is soft); but with practice, you should be successful with a jump cue. Higher cue elevations are required with this drill, as compared to the previous one. You don't want the CB to still be hopping when it reaches the object ball, because this can cause one or both of the balls to jump off the table, which is a foul. This is also important in game situations where you are jumping to cut a ball in, because the effective cut angle will be different if the CB hits the OB while airborne

(for more information and demonstrations, see the jump shot overcut resource page in the FAQ section of my website).
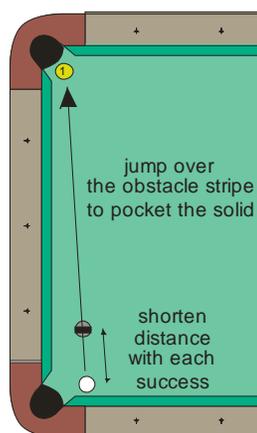
Diagram 3 High-and-quick jump-shot drill

With each shot success, advance the obstacle ball about a ball or ½-ball closer to the CB, and be sure to chalk the tip before each shot. Also remember to keep your bridge hand as stable and still as possible, keep your grip very light during the entire stroke, and stay on the vertical centerline of the CB. As the obstacle ball gets closer to the CB, you will need to elevate the cue more to get the CB up and over the ball soon enough. At modest cue elevations, most people prefer a standard underhand stroke as shown in **Diagram 2b**. With higher cue elevations, you might find an overhand "dart" stroke (see **Diagram 2c**) more comfortable and effective. As demonstrated in the **NV C.16**, the "dart" stroke uses a flicking or throwing motion, mostly with the wrist. Again, it is important to keep the grip (in this case, with the first 3 fingers) as light as possible.

For modest-elevation jump shots (as in the first drill) you can aim through the center of the CB, but this won't work well for high elevations. With higher elevations, you need to be careful to not jamb the CB into the table. As shown in **Diagram 4**, you need to aim through the resting point of the CB (**Diagram 4b**) or even lower (**Diagram 4c**) if necessary. Aim lower as the elevation increases. And don't be afraid to drive the tip into the table, as long as you don't try to "muscle" it. If you can jump the CB over an obstacle ball less than a ball-width away, you're doing quite well; although, this takes some practice to be accurate and consistent. See **NV C.16** is you want to see a demonstration.

After you master the 2nd drill with your bridge on the rail, place the CB and obstacle ball farther from the rail, where you will need to bridge on the table instead. This makes the drill more difficult because you will have less stroke length available and will need to accelerate the cue more quickly over a shorter distance. Again, make sure your bridge and body are as stable and still as possible during the entire shot. See **NV C.16** for more useful advice and for demonstrations of both drills.
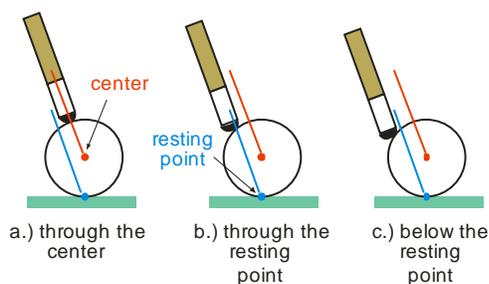
Diagram 4 Line of action of the cue

I hope you are enjoying and benefitting from my series of articles featuring drills from the "*Video Encyclopedia of Pool Practice (VEPP)*." Example clips from Disc IV can be viewed on the VEPP website or at **billiards.colostate.edu** under **NV C.13** through **NV C.16**. Next month, we'll look at some useful concepts and drills for improving your safety game.

Good luck with your game,
Dr. Dave

NV C.13 – Shallow-angle one-rail kick drills, from VEPP IV
NV C.14 – Bank shot cut-angle-effects drills, from VEPP IV
NV C.15 – Bank-to-all-pockets challenge drill, from VEPP IV
NV C.16 – Jump shot drills, from VEPP IV

normal video

PS:

- I know other authors and I tend to use lots of terminology, 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.

Dr. Dave is author of the book, DVD, and CD-ROM: "The Illustrated Principles of Pool and Billiards," and co-author of the DVD Series: "Video Encyclopedia of Pool Shots (VEPS)" and "Video Encyclopedia of Pool Practice (VEPP)."