
Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, technical proofs (TP), and all past articles are available online at billiards.colostate.edu. Reference numbers used in the articles help you locate the resources on the website.

Do you know what bridge length you should use, and why? I recently answered this question in detail in online YouTube video [NV L.55](#). This column summarizes all the important points.

As shown in **Image 1**, bridge length is the distance from the front of the cue ball (CB) to the bridge support. Here, it is about 13 inches or 33 cm. The generally recommended bridge length range is from 8 to 12 inches. 8 inches is a good choice for beginners. And 12 inches is a better choice for intermediate players. Complete novice players might prefer a very short bridge length at 6 inches or less. And an advanced player or pro might prefer something much longer.

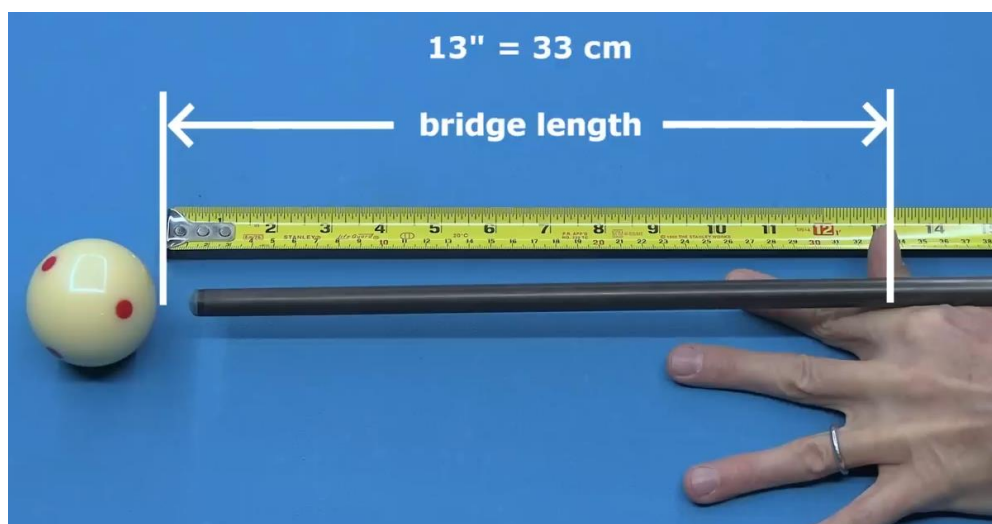


Image 1 Bridge length definition

An advantage of a short bridge is it minimizes aiming error and unintentional sidespin caused by a non-straight stroke. As shown in **Image 2**, with a short bridge (left), the tip does not move very much, even with large sideways motion of the back hand. With a longer bridge (right) and the same sideways motion of the back hand, the aim and sidespin changes are much larger. If these sideways motions might occur during a stroke, as with a novice player, a shorter bridge is much better to minimize the associated tip errors. Better players can use a longer bridge effectively because they have a straight stroke. Another possible error is bridge motion during the stroke. As shown in the video, using a shorter bridge also helps limit the effect this has on a shot.

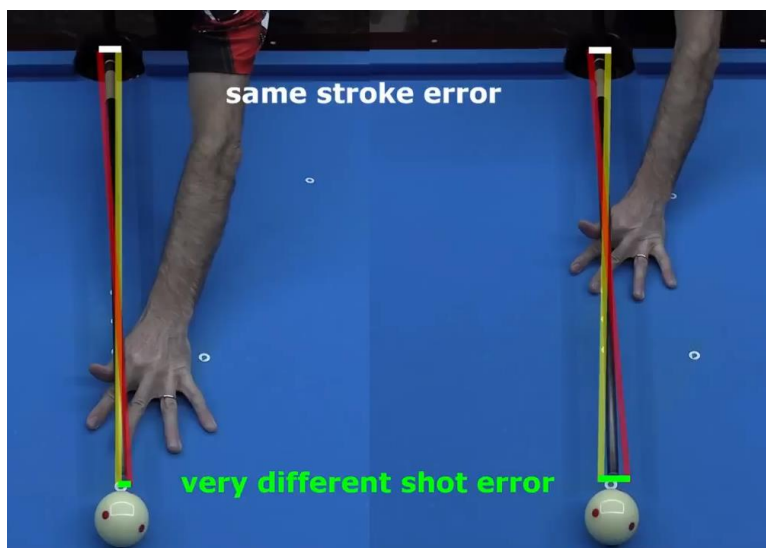


Image 2 Shot error caused by stroke error

As shown in **Image 3**, one advantage of a longer bridge is you can see more of the shaft in front of you to make it easier to align with the desired shot aim. This is especially true with an open bridge. As shown on the left, a closed bridge partially blocks your view of the shaft, especially with a short bridge. As shown on the right, a long and open bridge gives the best visibility of the shaft to help with alignment.

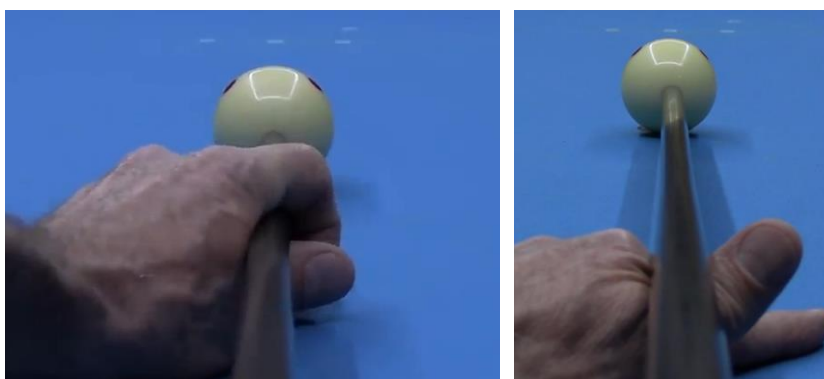


Image 3 Short/closed vs. long/open bridge

Another accuracy factor related to bridge length is cue elevation. When the back of the cue is elevated, shot accuracy suffers. If you have large fingers or use a closed bridge, it can be difficult to get the cue level, especially with draw shots, if using a short bridge (see **Image 4**). As shown in the video, using an open bridge instead can help you get the cue more level. And with a longer bridge, an open bridge can help you get the cue even more level. In the video, I show how with a center-ball aim and good stroke mechanics, I can get an accurate hit with a near level cue, even with the slight tip placement error. But with the back of the cue elevated some, using the same off-center tip-placement error, swerve causes the CB to go way offline. Remember, always keep the cue as level as possible, especially on long shots or thin cuts where accuracy is critical.

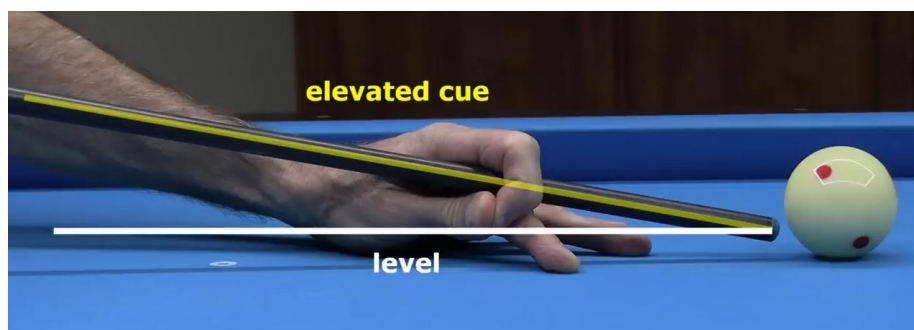


Image 4 Cue elevation with short, closed bridge

Generally, it is recommended to use a consistent bridge length, so your setup is the same for every shot. Then, you can just vary the stroke length to create the desired shot speed. It is just like putting or chipping in golf, where you bring the club back a short amount for a slow-speed shot, and a longer amount for a fast-speed shot. If you accelerate smoothly the same way on every shot, the stroke length totally determines the shot speed. This is a good way to create stroke speed accuracy and consistency.

As I demonstrate in the video, I divide my stroke length into quarters to help judge shot speed. I use a $\frac{1}{4}$ stroke for slow-speed shots, a $\frac{1}{2}$ stroke for medium speed shots, a $\frac{3}{4}$ stroke for fast speed shots, and a full stroke for power shots. For slow-speed shots, you have the option to use a shorter bridge, but you won't get the benefit of having a consistent setup and seeing more of the shaft for easier alignment. Also, with a shorter bridge, it is difficult to maintain stroke accuracy with fast-speed shots because the stroke will be short and punchy, which is difficult to control.

The main reason good players prefer a long bridge is it enables a smoothly accelerating stroke over different stroke lengths to create a wide range of speeds with as little effort as possible. The longer bridge is especially important for power shots. By smoothly accelerating over the entire bridge length, you can stay relaxed and easily generate the CB speed required. Obviously, this works only in you can maintain a straight stroke over the long bridge length. But this is not a problem for good players, especially the pros.

Image 5 shows a good game-situation example related to bridge and stroke length. What would you do in this 8-ball situation, shooting stripes against a good player, with the 8 hanging in front of the side pocket blocking the path of the 13 to the corner? Decide on what you would do before reading on. The good option here is a finesse safety (assuming you have this skill), attempting to lock the CB up between the 13 and cushion with a thin hit on the 13. For shots like this, it can help to use a very short bridge length and make the stroke as short, slow, and smooth as possible. As shown in the video, I spread my bridge fingers to get as close to the CB as I can. This helps put you in the right frame of mind and forces you to keep the stroke very short. You don't want to jab or poke at the CB. It is best to ignore the CB and just deliver the cue with a slow, smooth, and short motion. If you really bury the CB, you will block both 1 and 2-rail kicks, and the only reasonable option your opponent will have is a difficult massé kick. Even against a good player, your chances to win will be good.

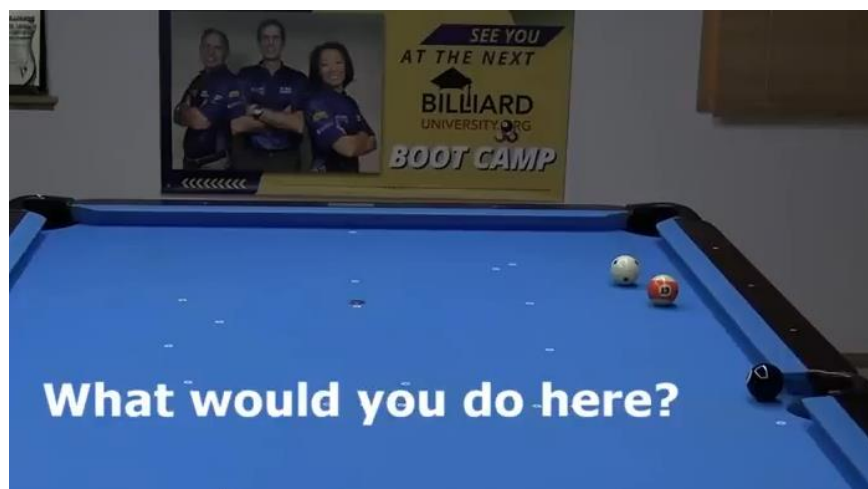


Image 5 Game-situation example

As shown in the video, for a power break shot, where the shot speed is very fast, it helps to have a break cue with a natural pivot length well matched to your preferred bridge length. See the “[natural pivot length](#)” resource page at billiards.colostate.edu for more information and demonstrations related to this topic. By bridging at the natural-pivot length, if your aim is true and your bridge is still during the stroke, even if the cue goes off line during the stroke, you will still get an accurate hit. In other words, an unintentional pivot or swipe during the stroke will cancel the resulting CB deflection. I know this might seem too good to be true, but it works. See the video for convincing demonstrations.

So what’s the best bridge length? Well, it depends on the person; but in general, 8-12 inches or 20-30 cm is a good starting point. Here’s a quick summary of the advantages of using a longer bridge:

- It allows for smoother and longer acceleration to create speed with less effort, potentially allowing for a straighter stroke.
- It allows you to see more of the shaft in front of you to make it easier to align to the shot more accurately.
- It makes it easier to get the cue more level, which can increase accuracy.
- It allows accurate and consistent speed control by varying the stroke length.

The one disadvantage is:

- Any stroking errors due to back-hand or bridge motion are exaggerated.

Each individual needs to determine which bridge length is the best compromise for them to balance these effects. Be sure to check out online video [NV L.55](#), which demonstrates everything in the article. I hope you find the video interesting and useful.

Good luck with your game,
Dr. Dave



NV L.55 – BRIDGE LENGTH Effects and Considerations

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 do not fully understand, please refer to the [online glossary](#) at billiards.colostate.edu.

Dr. Dave is a PBIA Master Instructor, Dean of the Billiard University, and author of the book: [The Illustrated Principles of Pool and Billiards](#) and numerous instructional DVD series, all available at: DrDaveBilliards.com.