# COMPETITIVE PRACTICE 

Want to know your skill level? Put yourself through these tests.



DO YOU wonder how you stack up against other players? On the various pool-related Internet forums, players frequently ask, "How good am I?" This may take the form of asking how impressive a recent run is, how various league rating systems work, or whether a particular level of play qualifies as "advanced" or "shortstop." Let's look at some ways to calculate pecking order, including some practice routines that will not only rate you, but will also give you tools to improve.
Pool is best played between two players, and performance in a competitive environment is the gold standard of an accurate rating. Most of us will never appear on the top money winners' list, but local, regional and even national tournament participation is open to all. If you haven't tried the tourney scene yet, and you beat everybody you can lure down to your basement, it's time to get out into the larger world. If you finish in the top eighth of the field at one level, try the next.

If you don't yet feel ready to jump into an open tournament, consider a local league. Many of these give handicaps to beginners, and the handicap (or "skill level") will give you a direct indication of how well you do against others, as well as some measure of your improvement as your league rating rises.
There are many solo systems to gauge your level. The main drawback is that they have no component of safety play, although these methods usually provide an interesting way to practice that will help the offensive parts of your game.
One of the oldest of these systems is "Equal Offense," which was developed by Jerry Briesath and introduced in the 1977 BCA Rule Book. It starts with an open break of a 15 -ball rack. You then shoot any ball with the rules of 14.1 until you miss or run 20 balls. The total number of balls pocketed in 10 tries determines your score, with a maximum of 200. Around 1980, a national compe-
tition with cash prizes was organized, but it ended after a year or so. One major problem - shared with all solo games — is that the table can be a large factor in your score.
In the 1990s, a competition called Internet Equal Offense had 20 tournaments that involved teams from around the world. (The statistics from those events are still online at www.ieotour. com, including an analysis of how a given average ranks within those who

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played.) Quite a range of players participated, with 10 -inning scores ranging from a few balls to a record of 176 set by instructor Don "The Preacher" Feeney.
If you would like try EO, here are my suggested ratings according to your average score over several sessions on a 9 -foot table: 20 -plus, beginner; 50 -plus, intermediate; 80-plus, advanced; 100plus, top room player; 120-plus, top city player; 140-plus, semi-pro.
Allen Hopkins has developed a system he calls Q Skills, which is like Equal Offense except the final five balls of each rack are shot in rotation and there is no continuing break shot. (Detailed rules
and a table ranking possible scores are available at Joe Waldron's Web site at www.sunburstselect.com/PBReview/ Self_Assessment.htm)
Mike Page - whose new poolroom in Fargo, N.D., just won the $B D$ new room award - has added an interesting wrinkle to Q Skills, making a solo game he calls "Fargo," which I described in my May 2000 column. Instead of transitioning from straight pool to rotation after the 10th ball, you can start rotation at any time during each rack. This tests your judgment of your shot-making ability, and penalizes over-confidence. The rules and rating table are also available on Waldron's site.
A common way to rate players is to say how they "play against the ghost." The ghost is an imaginary player who never misses, so if you miss in a rack of 9-ball, you lose that rack, and the ghost gets a point. The ghost, being a good sport, spots everyone the break and ball in hand after the break. This also keeps him from actually having to shoot (which is awkward for ectoplasmic beings). Play as long a race as you like - the ghost never tires.
A much better test is to play "Progressive Ghost," in which you adjust the number of balls on the table to achieve an even match. For example, you could remove the lowest balls from the table after the break to leave only five. If you can win most of those games, you can beat the 5-ball ghost, and it's time to try six balls. An easy way to keep track of your level during a practice session is to mentally number the diamonds from 1 to 15 and place a coin under the cushion at the number you are working on. After each rack, move the coin a third of a diamond toward the next higher number if you win, and toward the next lower number if you lose. If you play the number of ghost that the coin is closest to, the level will automatically adjust to a fair game.
I've heard of someone beating the 13-
ball ghost, but I'd have to see it to believe it. If you can beat the 9-ball ghost, you should consider entering pro tournaments.
An alternative 9-ball rating drill that is a little simpler but still requires scoring is to play the standard ghost game, but you get one point per ball pocketed and two points for the 9 . (This is the same scoring that the APA league uses in its 9-ball sessions.) Dave Alciatore has a score sheet and rating table for this on his Web site (billiards.colostate.edu).
In Europe, a complete system for rating players has been developed by Ralph Eckert, Jorgen Sandman and Andreas Huber. The "Playing Ability Test" (or PAT) comes in three levels, which are suitable for every player, from beginner to world-class. There are three workbooks available for the three levels, and each volume includes drills and games with numerical grades according to shots successfully made. The shots include the general categories of speed, straightness, follow, draw and game situations. The diagrams explain exactly what has to be done on each kind of shot - for one drill, that's just shooting the cue ball up and down the table in a straight line - and how the shot is to be scored. An example drill from the beginning PAT-1 level is the "ring around the side" drill that you may know from Willie Mosconi's books: a semicircle of five balls by the side must be pocketed in order, typically using just draw and no cushions.
While you can use the PAT workout books effectively on your own, they are designed as tools for coaches to use during training sessions. The system has a number of recognized ability levels given as colors, like belts in martial arts training. To get an official rating, you must be tested by a trained PAT examiner. The workbooks are available from several retailers, and you can find out more about the system at www.pat-billiard.com. Be careful when you order, though, because the workbooks have both English and German versions.
Here is a brief test of your ability to draw the cue ball that you can use to approximate your position among the spectrum of pool players. It is in five levels of difficulty, so it should be able to rank just about everyone. For the first level, use the position shown in Diagram 1 (or the mirror image if you are left-handed). For

each shot, place the object ball as shown. Start with the cue ball at position I. The goal is to make the object ball and draw the cue ball back at least a diamond. If you do that, try the cue ball in position 2. Continue to increase the distance by a diamond until you fail to get a diamond of draw, and then decrease the distance by half a diamond. (Mark the present cue ball position with a coin and be sure to move the coin after each shot.) Continue to shoot the shot, changing the distance half a diamond at a time until you have shot a total of 10 shots. If you end up at position 3 or better, you get the title of "beginner."
For level two, the position is the same, but the goal is to draw the cue ball back at least to the point that you start from. Keep track with the coin again and shoot 10 shots. A position of 4 or higher earns you "advanced." Level 3 is nearly the same shot as 2 , but the cue ball must
not come back more than two diamonds extra. Score over 4 and you are "room champ."

Use Diagram 2 for levels 4 and 5. In both, the cue ball starts in hand behind the line. The object ball moves away from the cue ball to make the shot more difficult. In level 4, the cue ball must end up in the blue area within a diamond of the head cushion. Get the coin to 4 or better and you are officially a "shortstop." For the highest level, you must leave the cue ball in the smaller green box that is just a diamond on each side. Do that more than half the time when the object ball is at position 4 and you are a "pro."
Each of the tests above provides two important things: a way to measure your progress and a structured exercise to help you focus and improve. If you have a favorite structured drill, please send it in and it may appear in a future column.

# OLIE BUT A GOODIE 

English billiards will help you see angles after impact.


ENGLISH BILLIARDS is one of the great cue sports. For over 100 years, it was the dominant game in many parts of the world, and can be thought of as the parent of pool, snooker and carom billiards. While those other games have taken center stage, English billiards - or simply "billiards," as the English usually call it - still has a lot to show players at all levels. It emphasizes precise speed control of the cue ball and the object ball and specializes in teaching the natural angle of the cue ball off the obj ect ball. Give it a try if you want to polish those facets of your game and stretch your mind around the strategy and tactics of a "new" game.
Billiards is properly played on the same 12-by-6-foot table that is used for snooker, but for most new players, a pool table will work fine. Rather than go through a recitation of the rules, let's look at Diagram 1 for some scoring strategies.
In the situation in the diagram, there are three balls on the table, two cue balls (plain and spotted, as shown, or white and yellow), and a red ball. Three spots are used in the game, including the center spot and the foot spot, which the English call the "pyramid" spot. In addition, there is a "billiard" spot which on a pool table should allow four ball diameters between the cushion and a spotted ball.
You have just scratched ("gone in-off") and now have cue bail in hand. On a snooker table, that would be in the D , which is a D-shaped part of the kitchen


OCB or making a carom (or "cannon") by hitting both the other balls. If you foul, your opponent gets two points. It is a foul not to hit a ball, but there is no concept of "no rail after contact" in English billiards. Also, after a foul, the incoming player may request the red ball to go on the billiard spot, the OCB to go to the center spot and to get cue ball in hand. If you score in more than one way on a shot, you get all the corresponding points, so it is possible to score 10 points on one shot. That's a bad idea, though, because it includes pocketing OCB.
A typical game might be to 100 points (which is only about 40 successful shots) or to 200 points Spaces $\begin{aligned} & \text { or to } 200 \text { points } \\ & \text { once you and }\end{aligned}$ your opponent start getting 20 or 30 -point runs or 30-point runs
(or "breaks," as the English would say). The game begins with the seated with the seated the table, so it's a disadvantage to start.
a scratch for that location of the OCB is almost automatic with a half-ball hit. With the correct speed, the OCB will stop near the red ball (the 3), maybe at Y. Now with ball in hand, you can use the third way to score, which is to hit both the other balls with your cue ball. If you hit that shot softly, the red ball will be near the end rail and will be easy to pocket with the cue ball if it ends near Y after softly hitting the OCB. When pocketed, the red comes back to the billiard spot.
You get 3 points for pocketing or scratching off the red, and two points for pocketing or scratching off the
on an English table. For a pool table, use a "half-line" as shown, which is half the length of the headstring. Why are you shooting after a scratch? You get points for a scratch off one of the other two balls - two points off your opponent's cue ball and three off the red ball. From the position shown, you could pocket your opponent's cue ball (OCB), but that's generally bad strategy because it stays off the table until you fail to score and it's your opponent's turn to play.
So, a good play is to scratch again. If you set the cue ball in the right place, is only about 4

The facet of English billiards that is most immediately useful in pool is the half-ball in-off, as shown in Diagram 1. When you hit about half the object ball with a smoothly rolling cue ball, the path of the cue ball is very, very predictable. For example, in the standard spot position after a foul, if you know where to place the cue ball along the line, a scratch to the side pocket is automatic, and the right speed will result in good position. Serious players can both recognize the "in-off angle" in random positions and can modify the angle by playing with more speed. They also know key spots. If the cue ball is at X
on the cushion by the corner pocket, an in-off red to the other corner pocket is easy, and is much, much easier than trying to make (pot) the red ball.
There are some other rules to prevent repetitive scoring practices, such as shooting in the red ball off its spot many times in a row. Currently, if you shoot the red twice off its spot without some other score during the two shots, the red is spotted on the center spot. Before that rule was implemented - about 100 years ago - some of the top players specialized in repeated reds. William Peall pocketed about 1,000 reds in one record run of 3,304 points, and had over 600 consecutive reds from the spot.
To get some idea of the flow of the game, go to YouTube and search for videos of Walter Lindrum, who is generally considered to be the best English billiards player ever. In his prime, he had to give a head start of $30 \%$ in the championships to make the matches interesting. He also is on the short list of all-time best cuemen.
If you enjoy a taste of the game and

want more information, go to the Web site englishbilliards.org. This site has both a one-page summary of the rules and the complete official rules. The history of the game is well covered in a se-
ries of articles going back to the 1600s.
The site also has extensive instruction available for free, including videos. A new book, "The Snooker Player's Guide to English Billiards," which is an excellent complement to the online course, is available for sale. The authors, Martin Goodwill and Roger Morgan, explain in the intro that the book is also aimed at pool players who would like to try the game. They spend little time on the basics and get right into the techniques and strategy of the game, such as using side spin to slighly adjust the carom angle of the cue ball. Excellent illustrations include overhead views, player'seye views and diagrams of exactly how much ball to hit and spin to use. The price (£19.95) includes shipping anywhere in the world.
English billiards is one of the first games I learned, and I use parts of it every time I play. If you are lucky, you will have a snooker table available to play on, but I think you will enjoy the game even on a pool table. When you regularly run a hundred points, it will be time to upgrade to a real "billiards" table.

# BACK TO THE BASICS <br> Working on the fundaments of your stroke is always a good idea. 



DOU ever find yourself in a slump and unsure how to get out of it? Maybe your basic techniques have slipped and need to be reinforced. The following drills will help with this. They will even help if you're not playing poorly, but have some time to work on your game.

## Stroke Perfection

Drill 1 is deceptively simple at first. Place some object balls about eight inches from the end rail and cue them into the far pocket. No cue ball is involved. Here are some complications: Play the drill one-handed. Your bridge hand should be resting on the rail but not touching the cue stick. At the end of the forward stroke, do not pull your stick back. Rest for a moment in position.
On each shot, notice where the cue stick ends. This small act is nearly impossible for most players to accomplish initially because their eyes automatically follow the ball to the pocket. Instead, I'm asking you to look at your stick. Specifically, focus on the ferrule. Where does it end? Ideally, your stroke will finish straight toward the pocket. Whether the tip finishes high or low will tell you what your elbow has done. A high finish, with the tip well above the cloth, means you have dropped your el-
bow. If you don't drop your elbow, the tip will finish on the cloth, as your hand rises at the end of your stroke.
Why would you want to keep your elbow still? Because it makes the mechanics simpler. The simpler your mechanics, the less that can go wrong. Every good player I have ever watched closely has a "still elbow" stroke that they use for at
least some of their shots. They may have a more complicated stroke that gets more body parts into motion for power shots, but any shot that has less than two table lengths of power doesn't require any fancy stuff.
Try this drill until you can pocket 10 balls in a row with fair speed and a perfect finish.

## Exact Centering

The "over the spots drill," shown as Drill 2, is one of the oldest I know of. At

The stripe is useful for seeing whether you have added sidespin unintentionally. The ball may wobble a little, but let's call it good if it remains rolling on the color of the stripe. If you have trouble finding the center of the ball as you address the ball, note whether the tip is in the center of the stripe. II the number of the ball is in the stripe (in what is called the "eye"), rotate the ball so your tip can be centered in the eye, which gives you a tighter visual clue.


After you master this shot at slow speed - just hard enough to come back to your tip - pick up the pace. See how well you stay centered while hitting the far cushion twice. How about the near cushion twice? Of course, you will have to get your bridge out of the way for these shots once you get the ball coming straight back.
There are a lot of fundamentals to be working on while working on your centering. I'd argue that if you are not also working on them, you're wasting valuable practice time. How's your bridge? Is it as firm as it should be? Can you make both open and closed bridges? How is your grip? Is it firm but not tight? Does your stick finish straight ahead? Waiting for the ball to return to your tip should help you to stop standing

In Drill 3, the cue ball is on the head spot and the object ball is half way to a corner pocket. Get some donut-shaped paper reinforcements at the stationery store to put down temporary markers. Also, mark the center of the pocket with a donut to give you an exact target.
The first goal is to make the object ball and have the cue ball stop dead, without moving to the left or right, forward or back, and without sidespin. It may help to substitute a stripe for the cue ball to check for the sidespin. If this shot is too hard to do consistently with the present state of your mechanics, make it shorter.

## Precise Sidespin

You may have heard of players refer to "tips" of English to describe how much they are spinning the cue ball. Drill 4 is a different way to quantify sidespin. The start looks a lot like the over-the-spots drill, but this time you don't want the cue ball to come straight back. Instead, you want it to head toward one of the target balls on the cushion. Begin with


## Accurate Aiming

Finally, shots that require aiming! In Drill 5, the goal is simple: Pocket the object ball. Let's limit the number of angles to five, and mark each one with a donut. Also place a donut for the object ball and the
the 1 , which requires the least amount of side. For such little spin, it's useful to dilute the side with follow.
In terms of a clock face, the first spin shot would be at about 11:00 or even 11:30. Shoot until you contact the 1 ball three times in a row, then go on to the 2 ball. As you move up the numbers, move the contact point on the cue ball around the clock face. For the 5 ball, you will be about at 9:00, but you may find that you will also need to hit slightly below center, say at 8:00. The addition of draw concentrates or multiplies the sidespin.
As a final test, use cards or dice to select targets at random and see if you can control the spin without getting several chances to warm up on a particular intensity of rotation.
center of the pocket.
Play each shot as simply as possible, which means without much extra speed and with no sidespin. Just let the cue ball roll. Try to make each shot three times in a row, but with an added requirement: You must make the object ball go over the target in the pocket. If the ball enters the pocket but is well wide of the center, it doesn't count. Many players get lazy with their pocketing, and you see them often hit the side cushion before the pocket. This drill should gel you back on the straight and narrow.
While these drills may seem trivial, I think you will find them quite a challenge on the table. Try them the next time you're tired of shooting the same old way and making the same old mistakes.

# DIAMOND SYSTEMS 101 

Here are the basics when learning to handle multi-rail kicks.



0NE OF the most common technical pool questions I hear is, "How does the Diamond System work?" The questioner is likely motivated by having encountered situations like Diagram 1 from a game of 9-ball. Suppose you are already on one foul. There's no easy path to the 1 ball using just one cushion. With the 9 where it is, a foul that doesn't move any balls is certain to lose. The standard play of pocketing the 9 will lose to most players, as even Joe Mooch could play a perfect safe with ball in hand on the 1 ball.
If only you knew how to go two or three cushions out of the diagonally opposite corner, you might not only get the hit but achieve the hook as well. If you follow me for the next several columns, you'll have some maps and coordinates that will guide you through problems like this.
There are many diamond systems, so the questioner above started with a misapprehension. One of the most common is called the "corner-five," which is the one that will solve your problem in Diagram 1 , but there are literally dozens of others.
First, some basics. These may be as boring as learning how to chalk, but you will need them down the road.
Item 1: The first obvious thing: Diamonds are the evenly spaced marks on the tops of the rails - three on each rail section of a pool table. Besides the 18 that are visible and physical, you also need to fill in 10 others that are imaginary. Two obvious ones are in the side pockets; just imagine a mark in line with the others.
Not so obvious are the diamonds near the corner pockets. These are in line with other diamonds on their rail and even

yourself, "Well, that's pretty easy."
Item 3: You have to develop consistent spin and speed for each kind of shot. Because cushions are involved and because cushions react to changes in spin and speed with huge differences in rebound angle, you need to learn - mostly through practice - which shot parameters make the system most accurate.
For example, in Diagram 1, the standard spin for the corner-five shot is roughly equal parts of running English (in this case left) and follow. You should hit the cue ball at 10:30, if you think of it as a clock face.
Unfortunately, each system will have a different "best spin." Many require no spin and are referred to as dead-ball systems. Others require maximum spin. Still others, such as the modified corner-five by

to the diamond with the number that corresponds to the result of
 your calculations. One problem is that the number for each diamond is often different in each system. The numbering sometimes makes little sense at first glance; you will just have to memorize them or use flash cards.
This may already seem complicated and difficult, but the first time escape the layout in Diagram 1, you'll think to

Allen Gilbert and a very accurate one-rail system by Ron Shepard, require you to vary the spin according to the approach angle into the cushion. If a system you read about doesn't actually state the required spin, assume it is running follow until you learn (by trial and error) that it's something else.
Item 4: Contrary to Item 1, we have an infinite number of diamonds. By that I mean that you will often start from a ball location or choose an aiming point that is in between the physical diamonds.
For the example in Diagram 1, you may calculate that your aiming point is halfway between the second and third diamonds from the top left corner pocket, which for the corner-five system are numbered 2 and 3 , respectively. That would make your aiming point "2 $1 / 2$. ."
Some authors start with finer gradations, so those same two diamonds
would be numbered 20 and 30 and there would be 10 natural points between the two physical marks on the rail. In systems like that, you would say " 25 " instead of "2 1/2."
Item 5: The diamonds are not always where they appear. Suppose your calculation says to shoot to " 2, ," or the second diamond from the corner in Diagram 1. There are two standard ways of choosing the target to hit a particular diamond. The obvious one is the visible mark on the rail (or a spot that's some fraction between marks, if the numbers don't come out even). Aiming at that spot is called "aiming through" the diamond. This is the most obvious way to aim.
The alternative is "aiming opposite" the diamond, which means to shoot the cue ball so that when it touches the cushion, its center will be right by the diamond. These two techniques are shown in Diagram 3. Note that for the approach angle shown, there is a large difference in where the ball lands on the cushion, and presumably a significant difference in where it hits the next cushions.
Why use one or the other? The easier one to sight is "through." "Opposite" has
the large advantage of letting you know exactly where the cue ball will be when it hits the first cushion. Often players will do their calculations using "opposite" and then find the equivalent "through" location on the rail for aiming. One way to do this is to place your tip at the "opposite" cueball location, aim your stick back at the cue ball and note where your stick crosses the line of the diamonds. That gives you a physical aiming point. Raymond Ceulemans advocates "opposite" for most shots, but many systems have been developed using "through," so you will need to be able to deal with both.

That's enough of the basics for a start. Here is an aiming exercise. First, make a target like the one in Diagram 4. It should be the same diameter as a ball, with the added feature of a round hole cut out of the middle.
Set up a shot like Diagram 1. (Only the cue ball and 1 ball need to be on the table.) Place the target on the rail so its center is between the second and third diamond. The 1 ball should be a ball


Diacram 4
from the cushion and even with the second diamond from the corner. Try the shot at medium speed so that if you hit the 1 ball full after two or three cushions, it will be driven to the other end of the table. Adjust the target up and down the first cushion to find the whole range of contact points on the first rail that lead to hits on the 1 ball. While you may be able to extend this range by using radical spin, don't. For now, stick with the "standard" spin for this shot (high follow). By the end of the exercise, you should be able to get a good hit 10 out of 10 times, if you stick to the center of the target range and normal spin.
Also, get some practice with the "opposite" aiming method. For this, you can place the paper target on the surface of the table, where the cue ball will be when it hits the cushion. If you have a second target, you can place it on the rail for the equivalent "through" target.
Next month, we'll need to do some calculations, so bring a paper and pencil. Calculators are optional.

## DAMONDS REDUX

Get to know the comer-5 system for two-cushion kick shots.


AST IMONTH, I introduced some of the basics of using the diamonds to help with planning shots in which the cue ball hits one or more cushions before hitting the object ball. Usually, you'll be shooting these when your opponent (or your lack of position play) has left you no alternative.
A classic situation is in Diagram 1, where you can only hit the 1 ball by taking the cue ball two cushions out of the far corner. The solution is given by the classic diamond system called the "corner-5," so-named because the numbering of the diamonds assigns 5 to the corner near the cue ball's position.
There are three numbers involved with the system: the starting position of the cue ball (shown in red), the goal on the third cushion (in blue) and the target number on the first cushion (in green). The bad news is that you will need to memorize them. Fortunately, the numbering scheme is about as simple as it gets for diamond systems. The first and third rails are numbered in even diamonds, starting with zero at the far pockets. Remember to include 4 at the side pockets, even though there are no physical diamonds.
The numbering for the cue ball is a little trickier. The name of the system gives a huge clue to label the corner pocket as "5." Along the short rail next to that pocket, 6 and 7 are easy, and you will probably never use 8 , which is not marked on the diagram. Along the long rail, the numbering is more complicated, and the numbers only step by half for each diamond. A justification for this is that there are twice as many diamonds along the long rail, so each is only worth half a count.
Like most diamond systems, the corner5 requires you to do a little arithmetic. The formula is fairly easy, though: $\mathrm{CB}=$ first + third. In the diagram, the cue ball is "coming from" the 5 position (meaning your cue will pass directly over the
corner pocket. The cue ball needs to go toward diamond 3 on the final, third rail to hit the 1 ball. The solution to the formula is easy: 5 (cue ball) $=2$ (first rail) +3 (third rail), so the system tells us to shoot the cue ball toward the second diamond. Because you usually know the position of the target (the third-rail number) and the cue ball, you may want to restate the formula as its equivalent: first

roughly equal parts of follow and running English - in this case left - and a medium speed that is hard enough to knock the 1 ball to the bottom cushion if you hit it fully.

One of the basics covered last time is the exact position of the diamond as a target. The choices were to shoot "through" the diamond, which means to shoot the cue ball toward the actual spot on the rail, or to shoot "opposite" the diamond, so the cue ball lands at a point on the cushion even with the diamond. For the corner-5 system, for both the first and third rail the standard is to shoot through the first diamond and the cue ball will come off the second cushion to go through the diamond on the third cushion.

Take the first diagram and turn it around, so that you are looking from the cue ball's contact point on the second rail - about the middle of the end rail - on its way to the 1 ball. Toward which spot on the third rail do you want to shoot? If all you're trying to do is hit the 1 ball, it is effectively quite wide - maybe eight or nine inches, if you count hitting the third cushion before the 1 .

If you need to hit the ball before the cushion or the 1 ball is frozen to the cushion, you will have a much smaller target and your calculations will need to be more precise. Suppose you're going for a ball-first hit, and you come up with a third-cushion target of 3.2 diamonds (again, the blue numbers) rather than an even 3. How would your target change on the first cushion? It's OK to use a pencil and paper or even a calculator in practice, but in a match you need to come up with 1.8
rail $=$ cue ball - third rail. In the diagram, that would be first rail $=5-3$, which, as you can guess, is 2 .
As mentioned in last month's article, for any diamond system, consistent spin is a major factor (speed is also important but usually not to the same degree). Use
quickly, because 5 minus 3.2 equals 1.8 . So you would shoot the cue ball a little past diamond 2 on the first rail. As a hint, my fingers are conveniently each $1 / 20$ th of a diamond wide, so that would be four finger-widths.
The example in Diagram 1 is the sort
of hanger I give to beginning students to give them some initial success. The target is huge and the arithmetic is simple. But that's not the way real life works.
Diagram 2 is quite a bit harder.
First, it's hard to determine exactly where the cue ball is. The position of the cue ball is determined by where your stick will pass over the cushion when you're shooting. In Diagram 1, that was clearly very close to 5 . When the cue ball is out in the middle of the table and you don't yet know which way to shoot, it's really hard to tell where your stick is going to pass over the cushion.
When in doubt, guess. The "first guess" line in Diagram 2 is a fairly bad line, but let's see how we eventually get to shooting in the right direction.
By our guessed line, the cue ball is coming from 5 again. Now, on the third cushion, we want to aim roughly for 1.7 . Doing the arithmetic, we get a target on the first cushion of 5-1.7 = 3.3. But the "resulting path" is a huge correction to our initial guess. If you line up to shoot along that new direction, you will find your stick over a cue-ball location of about 3.7. Redoing the arithmetic gives

$3.7-1.7=2$ for the new target on the first cushion. That will turn your stick some more, and you will have to do the arithmetic again. Eventually you will get to the right line, but the process can be slow and tedious.
A faster way to get there is by "paralleling" your stick. The idea is to make a line that is correct to start with but doesn't have the cue ball on it. If we want to get to 1.7 , a simple line that would do that is from the cue ball (3.7) to the first rail (2.0) for a difference of 1.7 . Now, if you increase both of those numbers by the same amount, you can get a new pair that has the same difference (1.7) but is closer to the cue ball. Try adding a half diamond to each one to get the line 4.2 to 2.5 . Is the cue ball on that line? If so, that's the line you need.
Try a few other positions on the table to work on your arithmetic skills. Remember to find the target on the third rail by looking from the second. And for awkward positions like the second example, work on your "paralleling."
So far, this is only the surface of the corner-5 system. Next time we'll go quite a bit deeper.

# DIAMONDS, PART III 

Avoid blockers by knowing where you'll hit the second cushion.



|N MY last two columns, I covered some basic aspects of how to use the diamonds to send the cue ball two or three rails to hit an object ball with the corner- 5 system. These ideas can't be learned in your armchair; you will have to go to the table to see how they work in practice. If you haven't already spent some time with the system live, do so before reading further.
By now you should be able to hit the 1 ball 10 times out of 10 in the situation shown in Diagram 1 on a table that you're familiar with. Even on strange tables, the corner- 5 is remarkably accurate for third-rail landing spots.
Up until now, we've considered where the cue ball contacts the cushion on only the first and third cushions. The first gives us the aiming point and the third is the real target. Now, let's consider the second cushion.
Is the 2 ball in the way for the tworail kick on the 1 ? The system doesn't say anything directly about the cue ball's contact point on the second cushion, but we have to know for this shot. One simple technique is to stand by the cushion the 2 ball is near and sight toward the 1 ball, estimating the path of the cue ball from the second cushion to the third. When using this technique, be precise - for example, plan the shot for an exact half-ball hit on the cushion side of the 1 ball. You won't be that accurate at first, but if you set mediocre goals you're unlikely to achieve superb results.
The angle the cue ball takes from the second to the third cushions will be roughly 45 degrees for many corner- 5 shots. This is a simple angle to find on the table as you can simply join two diamonds that are equal distances from the pocket, as with the red line in Diagram 1. This will give you the correct angle but probably the wrong path, so just parallel over to the path you're interested in. It
looks like the cue ball is going to barely miss the 2 ball for the half-ball hit shown by the dotted-line arrow.
So much for theory; it's time to try the shot. You will need a marker like the one mentioned two columns ago: a paper disk with a 2.25 -inch diameter. Place this on the top of the second cushion, where you estimate the cue ball will land but back

just a little from the nose of the cushion, as shown.
Try the shot, and note where the cue ball touches the second cushion relative to the paper target and whether it goes on to hit the 1 ball. (Leave the 2 ball off the table if it interferes with the shot.)

Adjust the location of the target until it's in the right place when you get the hit you want on the 1 ball.
Now you can tell for yourself - on your table and with your stroke - how accurate the 45 -degree rule is for the angle from the second to the third cushion. To make it easy to judge, place the cue ball where it hits the second cushion and an object ball where the cue ball is landing on the 1 ball. Is a line through those two balls parallel with the 45 -degree line? For easy sighting, put your cue stick along the line and over both balls. If the angle is not 45 degrees, you can develop your own correction. Move your stick parallel to itself to a convenient spot such as the middle diamond on the end cushion. Note where the stick points on the side cushion, such as "four inches below the second diamond."

If you can remember this small adjustment, you will be able to quickly judge whether a ball like the 2 interferes with your kick.
This technique can also be used for judging blockers between the first and second cushions. From where you are aiming, you know the location of the cue ball when it hits the first cushion. You can now estimate the second-cushion contact point, so joining them with a straight line gives you a good estimate of the cue ball's path. There are two wrinkles to worry about, though. The first is that when you shoot "through" diamond 3 on the first cushion, for example, you can't get the cue ball's path by drawing a line from diamond 3 to the second cushion. You have to figure out where the cue ball will be when it hits the first cushion, which is about half a diamond away.
The second problem is more subtle. The cue ball does not follow a straight line between the cushions. Instead, it will curve back toward the cushion it just hit as shown in the diagram with a slide or
hook. This is due to the top spin the cue ball has before it hits the cushion. As it leaves the cushion, some spin remains along the same axis, but that is now masse rather than follow and the cue ball curves. This effect is far more visible when the cloth is new and slippery, as the cue ball doesn't lose as much spin on slippery cushions. The hook will also happen on the second and later cushions. For the most part, you can ignore the curvy path and treat it as straight, but if the potential obstruction is close to the path you want, the curve may decide whether it really is in the way.
That's probably enough to keep you busy until next time, but there is one more wrinkle in the corner-5 that we should straighten out before you go any further. For the cue ball's location in Diagram 2, where is 5? The name itself tells us it's in the corner, but what do we mean by that?
One standard for finding the starting position of the cue ball is to use the equivalent of "through" sighting, so if your cue stick is over diamond 6 - the physical spot on top of the rail - for ex-

ample, you are shooting from 6 . But if you use this method and work along the end rail to find 5 , you end up at a spot that is one diamond from the 6 spot and on the end cushion. On the other hand, if you work back from 4 and 4.5 on the long rail, you get a location for 5 that is on the other side of the corner pocket. So we have two 5 s! (If you use the "opposite" method of diamond location, which I described before, you get a similar but smaller discrepancy.)

The usual way of dealing with this is to put 5 in the middle of the corner pocket and call it close enough. I'm going to propose a more accurate and consistent approach that is still easy to use. For the cue-ball position only, use where the stick crosses the nose of the cushion. Diagram 2 shows an example of this. Marked on the noses are the spots for the locations around the corner pocket. The particular shot shown is a 5.5 . And spot 5 is exactly in the center of the corner pocket, just where it should be. Order has been restored to the universe.
If you do chose to use this cue-ball location technique, your corner-5 numbers will be a little different from those of other system users, but not by much. You will find that individual tables will vary more than this small change in numbering.
Practice your second-rail estimating - including along other lines - and deciding on go/no-go for interferers. Next time, we'll move on to cushion 4, now that we have an understanding of cushions 0 (where the cue ball starts), 1,2 and 3.

# THE RIGHT TRACK 

Set the right course when you're kicking four cushions.


|N MY last three columns, I covered the basics of diamond systems how to use the spots around the table to send the cue ball off cushions to hit a target - and a particular system called the "corner-5." By last month's installment, we had covered the numbering of the first four cushions involved, where "cushion 0 " is the place on the cushion that the cue ball is "coming from." Now it's time to consider where the cue ball contacts cushion No. 4, the fourth cushion it actually hits.
The path of the cue ball off the third cushion is referred to as the "return" or the "track." This concept is from threecushion billiards, where many shots involve banking the cue ball three or more rails to hit the object balls. The best discussion of the path of the cue ball toward the fourth cushion is in Robert Byrne's "New Standard Book of Pool and Billiards." Diagram 1 is how Byrne illustrates basic tracks.
Let's first consider Track 2. If you shoot from the corner (cue-ball origin 5 in this system) and shoot diagonally toward 3, the cue ball will go toward 2 (5 minus 3 ) on the third rail. From there, it should follow Track 2 and go to the corner opposite your starting point. If you needed to hit a ball that's almost in the pocket (on a pool table), that's the track you would seek.
To hit balls at other points, you need to try for other tracks. For example, if you needed to hit a ball on the short rail a diamond from the corner pocket, you would want perhaps Track 3.2. If the table is working exactly according to the system, you would then shoot to a first-rail number of 1.8 ( 5 minus 3.2).
Usually, though, a table will not work precisely according to the system, and you will have to adjust the numbers to match the equipment. The system was developed for carom tables that generally play "longer" than pool tables. That is, the cue ball will come off the third

cushion more parallel to the rail on a carom table, while on a pool table, it will tend to bounce off the cushion closer to perpendicular.
Practically, this means that the tracks are shifted on each table, and you will have to learn how much the table is playing "short" or "long." The best shot to use as a test for the return in the corner-5 system is the one illustrated: Shoot from one corner and see what it takes to get to the other corner. For example, if the table is playing "one diamond short" you would have to shoot from the corner to 2 on the opposite rail to get to 3 on the third rail and then go on to the opposite corner pocket.
Usually there's little variation between tables in where the cue ball hits the third cushion. That is, if you shoot from 5 to 2, the cue ball will go toward 3 for a wide variety of conditions. This is because if the first cushion plays a little short, and the cue ball bounces out straighter than average, a similar bounce on the second cushion will tend to compensate for the effect and you end up at the same place on the third rail.

Going from the third cushion to the fourth is not compensated in the same way, and that's why you need to calibrate the tracks for your particular conditions. On most pool tables, except with brand new cloth, the tracks go about one diamond short of the standard tracks. You may want to re-number the tracks in your personal system to match how your table usually plays.
A second factor that you need to consider is "track shifts." Where the cue ball goes after hitting the third cushion at a particular point is fairly constant for this system, but it does change a little. There are three different cue-ball origins in Diagram 2 - all going to the same position on the third cushion. It's perfectly reasonable that the different incoming angles to cushion 3 would produce different outbound angles and therefore different tracks. As it turns out, this does happen but not as much as you might expect.
To figure out how much adjustment you need to make according to where the cue ball starts, begin by making some measurements. Try the shots in Diagram 2 and note where the cue ball
"returns" relative to the track you get when you shoot with the cue ball starting from 5 (the corner). This will give you something like, "half a track for a two-diamond change in starting position," which would be a quarter track shift per count change away from the corner. See what it is on your table. For a lot more information on track shifts, see the discussion in Byrne's book.
All of the remarks above apply to using standard running English and a medium speed. If you vary from this, the angles will change. Again, the third-rail landing point will not change much, but the track on to the fourth cushion can change a lot. I find that a medium speed gives the longest and most consistent tracks. What's medium speed? If you play a three cushion kick along Track 3.5, the cue ball should continue on to about the middle of the table after hitting a total of five cushions.
For faster speeds, the cue ball tends to bounce straighter off the cushions because it doesn't have time to slide, and for softer shots, the cue ball seems to

slide less off the last cushion and therefore come in shorter.
Any system is nearly useless if you don't practice it. If you want to make the corner-5 part of your game, learn the track shifts on your table, then see how they change as you change the speed of the shot. Try draw instead of follow. For a really advanced study, see how the
system changes when you use either no sidespin or some reverse side on the shot. I think you will find that your percentage of good hits will drop when you add the funny stuff, but you will eventually find yourself in positions where you have to do something strange to avoid blockers. Learn the variations and ways to bend the system.

# POLISHING UP 

## Now you know corner-5, but do you have a real feel for It?

T:HIS IS the fifth in a series of columns on diamond systems, with emphasis on the corner-5 system, which guides you when in a situation such as Diagram 1, where you want to hit the 1 ball after two or three cushions. By now you should recognize the shot instantly, and be sure that if you send the cue ball from the corner toward the third diamond site on the opposite rail, you will hit the 1 ball 10 times in 10 shots. OK, maybe eight in 10 if the balls are not sitting where they make the calculation easy or you don't know the table.
The point of this column is to get you to work on the system enough that your success with such shots is well over 90 percent, which requires practice. I'll give you a choice of three methods.
The first method is, well, methodical. You will need pencil, paper and several of the ball-size paper targets 1 mentioned earlier in the series.
The general outline is to shoot a range of shots using the system and see exactly where the cue ball lands on each rail. This will show you how close the basic system is to being correct for your table, balls, stroke, spin, etc. Diagram 1 shows a good shot to start with; just remove all the object balls for now. You are shooting from 5 toward 3. If " 5 toward 3 " doesn't ring a bell, go back and review the first four articles in this series.
To make the alignment faster, put a paper target centered on diamond 3 as shown. If you have made the disk into a donut by cutting out a small hole, centering will be easy. Take a few shots to see in general where the cue ball goes. As you do so, place additional disks on the cushions even with where the cue ball touches the cushion. From before,
you know this will give the "opposite" location (or diamond count).
We want to record two numbers for each cushion, the "through" and the "opposite" numbers for where the cue ball contacts the cushion. For the shot shown, the through number is clearly 3 , because that's the diamond you are shooting toward. The opposite location is not so obvious, but you can find it by placing a spare ball on the cushion directly between the starting cue ball and diamond 3. That's called the "contact ghost" in the diagram. The opposite location will be about 3.6.
easily (see the red disk in the diagram). Within four shots, you should have a nearly full hit. This phase of the study will also show you how consistent you are in your stroke, since you will be shooting from the same place and along the same line.
Getting the through location on the second rail is done by placing disks at the contact points on the first and second cushions, and then a third disk on the second rail even with the diamonds and on the straight line joining the other two disks. Record the two locations for the second rail and move on to the third rail using the same technique. The fourth rail is next, which will give you the "return" or "track" number that was covered last month.
While measuring and recording the locations, don't think about what the arithmetic of the system says the numbers should be; try to make unbiased readings.
Time for a fun break. Place a ball where you

How accurate do we need to be in making the measurements? Since there are about five ball diameters per diamond, and we hope to get hits on the right side of the ball we're kicking at, quarter-ball accuracy (or $1 / 20$ th diamond) is not too much to ask for.
Predicting accurate landing spots on the subsequent cushions is harder. I like to do this in steps by placing a real ball at the location of the contact ghost and shooting the shot a few times. By adjusting the position of the ghost until I get a completely full hit, I get a very accurate reading. When using this technique, I put a target disk up on the cushion, sort of "kissing" the contact ghost, so I can adjust and repeat the placement
 land on the second cushion. Place an object ball frozen on the cushion almost touching that contact ghost. Remove the contact ghost and shoot the cue ball as usual. It should land in place of the ghost ball and knock the object ball into the corner pocket. On my table, I know that if the edge of the object ball is even with the middle diamond on the end rail, 5 to 3 makes the ball.
OK, back to work. You need to try other shots in the system. Try 5 to 2,5 to 1 , and from 3,4 and 6 to 1,2 and 3 , recording the two locations for each of the four cushions for each of the 12 cases. Yes, that's a lot of work, but the point is to build a real feel for where the cue ball is going. If you are overloaded, just shoot
toward 2 from 3,4 and 6, but do all the cases shooting from 5.
Once you've made your measurements, it's time to check the accuracy of the system. Simply add the second and third rail numbers for each case. They should add up to the cue-ball origin number. If there is a consistent error, such as always a half a diamond more than you should, then you can adjust the system. Add in that error on the first cushion sighting point, so a shot at 3 that should normally go to 2 from 5, adding a half (or 3.5 ) will go to 2 . The errors you find may not be so consistent, especially if you look across all possible cases. You may have to work out different adjustments when shooting from the end rail as opposed to the side rail, for example.
Here's a fun drill that will help you learn the corner-5. It can also be a competition to see who can pocket the ball in fewer shots. Place an object ball on the spot and take cue ball in hand.

immaterial in this game; the only goal is to make the 8 in the corner. I've seen this drill done in three shots, but that depends on the rack and getting a great break shot; 12 shots to make the 8 is a reasonable goal.
The most impressive example I've seen of this drill was in an exhibition by Alain Robidoux, the great Canadian snooker player, on a 6-by-12 snooker table.

Shoot the three-cushion shot in Diagram 2, trying to make the object ball into the corner pocket in as few shots as possible. If you hit the object ball but don't make it, leave it where it ends up and adjust your kick shot accordingly. Finesse beats power at this shot.
A similar drill is played starting with a full 8-ball rack. The goal is to make the 8 ball in the fewest shots, always kicking three cushions as in the single-ball drill. Remember that you get cue ball in hand for each shot. Stripes or solids are

He racked the black and 14 reds as for 8 -ball and then proceeded to throw (by hand) the cue ball around three cushions to make the black ball in the corner. He said he would need about 25 throws, and that's just what he took. The amazing part to me was that every shot improved the situation, either by moving the black closer to the pocket or getting reds out of the path. And snooker tables have no diamonds to guide the shooter - or thrower, in this case - so Alain did it all by feel.

# PROP-SHOT LESSONS 

Plenty can be leamed from seemingly impossible shots.



W7 HEN I was first learning to play, one of the most interesting parts of the process was the proposition shots that circulated frequently in the poolhall. They often had an underlying mechanism that was useful in play, or they got you to practice facets of the game that you might otherwise neglect.
I'm not talking about sly tricks, such as laying the bridge across the full width of the table and saying, "I bet I can roll the cue ball under the bridge without touching it." You then either roll the cue ball on the floor under the table (and the bridge) or just drop the cue ball into the ball return system (from the head of the table). That sort of play can get your thumbs rearranged. No, a good proposition bet will leave your client saying, "What a neat shot!" or at least scratching his head long enough for your retreat.
A little knowledge can be a dangerous thing. The goal in Diagram 1 is to shoot the cue ball from behind the head string and to hit each of the indicated rail sections in order without hitting any of the "boundary" balls. If you know just a little bit about the corner- 5 diamond system, you may think that there's no way to hit the rail on the far side of the 1 ball and then in sections B and C. The idea is to use spin that you would never use normally for those cushions. In this case, you need to use reverse draw (right sidespin) and hit just the other side of the first boundary ball. The shot works best with plenty of draw and just enough speed to keep the draw on the cue ball.
While the cue ball's path may seem dif-
ficult to predict, with a little practice on a specific table, this pattern can become quite useful. Grady Mathews often demonstrates it in exhibitions. To practice it, put an object ball in the corner pocket adjoining rails B and C , remove the 1 ball, and see how far down the table you can shoot and still get to the object ball. On new cloth, you can get quite an arc as the cue ball comes off the cushion.
Diagram 2 shows a gem from Willie Jopling, who passed away last Novem-
along the needed line. The cue ball, in the mean time, will move slightly to the left to avoid the kiss. Further study shows that you don't need a lot of right English on the cue ball to get the needed left spin on the object ball - half a tip is likely enough. You will need to adjust the distance between the cue ball and the object ball, so the cue ball is exactly on the cushion as the object ball passes it. You may find that no English at all is required on the cue ball, and just the small cut angle is enough to spin the object ball.
Next up is a proposition in the form of a game. Longtime BD subscribers may remember George Fels' description of it in the 1980s. 1 saw it in use about 20 years before that. The goal is for the shooter to make all six easy balls, but they have to be pocketed in the order given by the "caller." Of course, the caller waits until one shot is complete before he calls the next. The exact setup of the balls can greatly change the difficulty; as the balls move farther into the corner pockets, it's much harder to make them and get back to the center of the
ber. Willie, whose real name was Bill Marshall, was a longtime contributor to this magazine and a real connoisseur of the non-obvious shot.
The proposition is a seemingly impossible bank shot. The cue ball and object ball are both a ball's width off the side cushion. The shot is to bank the ball the long way. Basic pool knowledge says impossible, but deeper understanding says that, if you can get a little left sidespin on the object ball, you can shoot it away from the cushion and bring it back
table without hitting the short-rail point of the pocket. Also, the balls by the side pockets are exactly one ball off the line of the nose of the cushion so that the cue ball cannot fit through on its way to a far corner.
There is skill to be learned on both sides of the game. The shooter will be striving to return the cue ball to the middle of the table, while the caller will be looking for weaknesses in the shooter's position play.
In one long session at this game, I saw
a shooter lose 120 "units" even getting three-to-one money odds. He didn't shoot that badly, but he seemed incapable of learning, so he repeated the same mistakes for hours. Even champions will struggle with this on tables with deep shelves.
Diagram 4 shows a shot to test your banking knowledge. The goal is to bank the object ball one rail crossside, somehow avoiding the doublekiss. The difficulty of the shot is adjusted by moving the cue ball up or down the table. In the "easier" direction, you have several things that can help the shot. Shooting harder will force the object ball into the cushion, so the cue ball has more time to move to the side and avoid the kiss. Also, the cut will tend to put spin on the object ball that will help the angle. As the cue ball moves in the harder direction, it will be moving into the path of the object ball after the collision and avoiding the kiss becomes impossible. The test is to see who can make the shot from the most difficult position.


There is an interesting wrinkle to this shot that Eddie Taylor, the great bankpool player and Hall of Famer, demonstrated to onlookers at a BCA Expo. If the object ball is frozen on the rail in just the right place - which is with its edge about even with the pocket opening - you can cut the ball a lot more than you would think and still make the bank. The trick is that the ball sinks into the cushion as it is moving sideways toward the pocket. While in the cushion, it encounters the facing
of the side pocket. The facing is fairly hard and can redirect the ball by 20 or 30 degrees. From the position shown with the cue ball straight toward the other side pocket, most bankers would say it's impossible. Try hitting the ball half full and let the facing correct the angle. If you get a double-kiss, try hitting the ball thinner.
Do you have a proposition you like and wouldn't mind seeing in print? Send it in (jewett@sfbilliards.com) and it may be in a future column.

F YOU followed my recent series of columns on the Corner-5 System, you should have learned to apply it in the game where it was created: three-cushion billiards. Here's a brief introduction for those pool players who can handle the cue ball pretty well on a pocket table, but have no idea what to do when you can't sink a ball. Mostly what you'll do is perfect your cue-ball control.
indicated. If you are far from that, try placing a target for the red on the cushion as a training aid.
If you remember my diamond system columns, you can figure the path of the cue ball in the Corner-5 System. Finding the origin is a little tricky because the initial path is curved, but the straight section as it goes into the first cushion is "coming from" about 3.5 on
near your opponent's cue ball, and then play the cue ball along the same line as illustrated above - 3.5 to 0.5 - to hit the pair. The shot is easiest if the pair is separated, but not by enough to allow the cue ball to pass between them. At carom, this kind of shot is called a lag shot or a bank shot.
Diagram 2 shows some other shots that tend to surprise pool players when

The rules are fairly simple. Each player has his own cue ball. One of them is white and the other is either white with spots or yellow. The third ball is red. To score a point, you have to make your cue ball hit both the other balls, but it has to make at least three cushion contacts before it hits the second ball for the first time. Do that and you get one point and another shot. Make 15 or 25 points before your opponent does and you win the game.
Shown in Diagram 1 is the position for the opening shot - lag to see who breaks - which is required to be shot off the red ball. Play to hit about half of the red ball with left English and follow. You don't have to hit this shot hard on most carom tables. Turn your speed down to gain control and precision. The pattern is called a "natural" because the cue ball is running around the cushions always rubbing the "right way," which in this case is with left sidespin and in a counterclockwise cushion order.
Many pool players have a hard time hitting the correct fullness on the object ball when they have no pocket to aim to. Hit correctly, the red ball will follow roughly along the dotted line as
 they first see them. Once understood, they're very easy due to the short distance traveled compared to most three-cushion shots. Shot A is called a "double the rail" shot played with "reverse" English. Any other shot would be tough; the shot shown is a hanger. Just hit the end rail first with right sidespin. The spin doesn't take on the first cushion because you are going into it at a shallow angle. But the ball really bites on the second cushion, returning to the short cushion for the third cushion contact and then on to the two balls. Remember that the rules say three cushion contacts and not three different cushions. With a masse shot you could get all three cushion contacts on one cushion, but be careful if
the opposite long rail. Since it's headed toward diamond 0.5 by the corner, it will land at about 3.0 on the third cushion. On most tables, that's about where you want to hit to score the break shot.
The rules allow lots of other patterns and rail orders on scoring shots. You don't have to hit a ball first, so you could go for three cushions before either ball. Modify the break shot by putting the red the owner is watching.

Shot B is a very common pattern called a "ticky." The cue ball hits the long rail just before the first object ball, returns to the same cushion and then gets to the end cushion just before the second ball. In general, a ticky is easy when the first ball is about one ball's width from the cushion, although a ticky may still be possible when the ball is within an
inch or less of the cushion. It takes a good referee (or an honest opponent) to see two cushions in such situations.
In Shot C, you nearly have a ticky, but the far ball is too close to the cushion and it's tough to both get the rail and the ball. Instead, it's much easier to play one cushion to the far ball and then spin out of the corner. I think you'll find that reverse English (right sidespin in this case) helps the cue ball "turn the corner." This shot is called a "Schaefer" shot after Jake Schaefer Sr., a great early carom player. He was one of the few players in cue sports history who played so well the rules had to be changed to slow him down. More prosaically, the shot is called the "corner spin-out." It is particularly effective and not much harder when your cue ball is at the other end of the table.

Finally, Diagram 3 has a couple of fun shots that take a little work but will

place as for Shot A, but you play to hit nine cushions at spots A through I, while making two complete circuits of the table. This is pretty tough on a pool table, although it's in the official Artistic Pool program. (In that competition, the goal is to land on a dollar bill after the eighth rail.) Don't use much sidespin, and work to hit very close
amaze your uninitiated friends. In Shot A, the two object balls are frozen together and pointed from the corner to about the third diamond. The cue ball is played fairly thin off the first with right sidespin, taking the path shown, which is nearly automatic. The second object ball, in the meantime, crosses the table twice for a rendezvous with the cue ball in the far corner. This shot will help your ability to see what needs to be adjusted and to fix it accordingly.

Shot B is a simple nine-cushion lag shot. The cue ball starts in the same
to the second corner. On new cloth, it's possible - Mike Massey can do it easily - to hit 11 cushions with this pattern as you will hit I-H in the other order, continuing the natural order of rails and maintaining speed.

For more information about threecushion billiards, check out the second half of Robert Byrne's "New Standard Book of Pool and Billiards." A lot of videos are also available including on YouTube, the USBA website (streamed from USBA tournaments) and from Kozoom. com. Have fun with the bumpers.

## MORE THE MERRIER

## Multi-player games can really freshen up the poolroom.



SOME OF my fondest memories of learning to play pool are of the variety of multi-player games that were common at the rec center. Those games allowed the beginners to compete on a reasonable basis with the old hands and were as much social as instructional activities. I was reminded of the great fun of ring games on a recent visit to Mike Page's amazing Fargo (N.D.) Billiards, where I got to play with four to six other players at a time in a very entertaining format that I had not seen before. It was a great evening of shifting alliances, remarkable shots and some small profits.
There are at least a dozen games for three or more players. In this column, I'll go over some of the most common, as well as considerations that are special to ring games. If you have a favorite game that a group can play, please send in a description (the more complete, the better), and I'll pass on any gems in future columns.

The standard ring game at the rec center was 9 -ball. Once you get the gang together, draw for order. A shake bottle with numbered "peas" is traditional (an example is shown in the photo). You will also need a shake bottle for some other games I will describe later. If you have a small chalkboard near the table, use it to keep track of the order and the scores as necessary. Except as specified, assume that the rules are the same as the world standardized 9-ball rules (available at www.wpa-pool.com, the website of the World Pool-Billiard Association).
The game is different from two-player tournament 9-ball in several important ways:
You never get ball in handfor afoul. That would be a huge advantage for the incoming player, so the cue ball is played from where it lies. If the cue ball scratches, the incoming player gets ball in hand in the kitchen (where you break from). If the lowest object ball is behind
the line after a scratch, the shooter can have the ball spotted on the foot spot or can shoot out of the kitchen to come back and hit it.
All balls spot. That means that if a ball is pocketed on a foul or driven off the table, it is spotted on the foot spot. If several balls need to be spotted, they are spotted in numerical order on or behind the foot spot. A common alternative to this, which makes the game go faster, is to spot only "one before the money" which is usually the 8 ball, but see below about additional money balls. Personally, I used to practice spot shots, so I preferred to spot everything.


An example of a shake bottle and peas.
There is no safety play. You are expected to try to make a ball. This is also usually good strategy, because your good safety will force the next player to sell out to the player after that and that lucky recipient is not you. In a six-player game, you need to make the most of your chances, however slim they are. Of course, this is a gray area when you play a two-way shot that incorporates both offense and defense, but the strategic interplay will give you some insight to the character of your opponents - and them into yours.

## Afouler shoots again... maybe. After

 a foul, the incoming player can hand the shot back to the fouler, and makehim shoot again from the new position. This includes after a scratch, when the only shot might be a near-impossible spot shot. Sometimes this rule can lead to "earnest discussion" between the players when a fouler is told to shoot again by his best friend in a pretty makeable position. If that situation is frequent, you can implement the "pass around" rule: After a foul, each player can pass the shot to the next player, but the fouler has to shoot it if it comes back to him. That way, all the players have to agree that the shot is not worth shooting.
A typical difficult situation is shown in Diagram 1. By normal rules, you're in trouble, since there is no easy way to hit the 1 ball. And even if you do manage to make a legal hit, there is no obvious hope for a safe. In ring 9-ball, you have a chance to win. Do you see the shot? Using the corner-5 kicking system I've covered in recent months, play the cue off cushions A, B and C to hit the 1 ball. The cue ball should then proceed to cushions D and E for a hit on the 9 ball toward - and, hopefully, into - the top right corner pocket. This is not a shot to play like you're sewing doilies; instead, picture killing snakes with a machete. Poisonous snakes. Gusto pays. Give chance a chance. The 1-6-4 combination might go to the corner if you miss the 9 ball. Which corner? Who cares? And remember that if you fail to hit the 1 ball entirely, you might be rewarded with a second chance to shoot the shot. Just try to keep the cue ball on the table.

Change the order from time to time. It can be depressing and expensive to follow a player who has mastered twoway shots and you rarely see a shot any better than in the diagram. Any player may ask to shake for a new order, but a full game must be played after the request, and the winner of that game still gets to break. Also, at least a minimum number of games must be played
in each order, say five. For three-player 9 -ball, we used to change the order each game: If you sell out (shot before the winner), you rack and shoot second. If a player runs out from the break, you change rackers.
When a new player wants to join the fun, you don't need to change the order. If the players already in the game agree that he should be allowed in, he racks for the next game and shoots last.
If a runout is very rare for the players in your get-togethers, you can make the game more interesting by promoting the 5 ball to be worth half of the value of the 9 ball. Then you might refer to the game as "dollar-two" if a spectator, or potential revenue source, inquires about the stakes. Some groups go as far as to play "odd ball," in which half the balls are valuable.
There are many variations of rules for ring 9-ball. If you have a favorite rule set, please forward it to me, or at least note the differences from the rules above.
One variation that used to be popular

with the top players at Cochran's in San Francisco was "pink ball," which was played on a 6-by-12-foot snooker table. It was 6-ball rather than 9-ball, played with the red, yellow, green, brown, blue and pink balls (snooker values 1 through 6, respectively). Due to the difficulty of each shot, every ball was a pay ball, with double payment for the
pink. In addition, any runout paid double. The stakes could get quite high because, with seven players at just $\$ 10$ per point, a runout would be worth $\$ 840$ to the winner. (Six balls times seven players times $\$ 10$ per point is $\$ 420$, which is then doubled for a runout.)
Next time I'll cover some other good games for more than two.

