## Explanation of the Diamond Systems

In this billiard program, we are operating with two well-known systems. One of them is called the " 50 System" which takes its starting point from the short and long cushion, with arrival points being on long cushion. The other system is called the "Plus System" and takes its starting point from the short and long cushion, with arrival points being on the short cushion. Be aware that you in both systems put your billiard cue through the diamond (the starting point) and point into the diamond (the aiming point). Likewise, you shoot the ball into the diamond point. The point of arrival, however, is always based on the actual diamond point. This system allows the user to learn the " 50 System" and the "Plus System" in a new visual way.

Billiard tables are different and you cannot expect that the balls always react and run in the same way. Some tables will be shorter than expected by the system, while others might be too long for the system. We recommend you test this in practice by testing some different shots with the " 50 System", for example by checking the arrival point of a four-cushion shot. A starting point with 50 is usually a good point to read the result from the table's response if the effect and speed are correctly performed.
As we experience several different cloths on the billiard tables and that their reactions impact the way the balls hit the cushions, it is also possible that this will affect how effectively the system will predict the shot. This will also be experienced according to the expected (forecasted) and realized lines.

I have made the expected drawn lines from the average of a billiard table according to my perspective. Therefore, it is very important to note that this system is used as a tool and guide to the user. The cue ball does not always follow the drawn lines. Furthermore, it is very important how the ball is shot, in relation to how much speed you are shooting with (read the section about shooting technique below). The amount of english predicted by the english indicator, must also be considered as an approximate indication. As most billiard tables react slightly different with regard to receiving power you must consider the effect of the shot on the first cushion (aiming point).

I many situations where your ball (ball 1) is in contact with ball 2 before contact with the first cushion, you must expect that the ball will get a smaller curve which changes your starting point. The forecast and the realized line of the ball will show this, and it is up to you to judge the results based on the position. In many cases it will be between 2 and up to 10 points from the original starting point, and in both plus and minus direction.

When you use the " 50 System" you will experience, if the speed and effect are correct, that the system is extremely accurate according to the arrival point on the 3rd cushion. The 50 system is based on the corner (starting point 50). If you move up along the long cushion, the angle changes according to arrival on the 4th cushion, thus the arrival number will not match (negative direction). Moving the que by a short-distance will change the arrival number on the 4th cushion as well but in a positive direction. If the system is used from short cushion with arrival at minimum 4 cushions you can use these starting points instead.

CUSHIONS


Starting points "50 System"

In some situations, depending on the position of the balls, playing with less effect may be an advantage, as it sometimes can be an easier way to change your aiming point.


A shot indicated by the system that has a difficult angle


A shot where the english was adjusted to compensate fot the difficult angle

Remember to consider this as a guideline. It is very important that you always use your feel and your intuition when you use the system. There will be a lot of ball positions where you might prefer to choose a different option to play than the one indicated by the system. Below you find some example of this: (See illustrations bellow)



The actual shot chosen by the player

## Shooting techniques

## Introduction

The following description is according to a right-handed player. If you are left-handed, all should of course be mirrored.

Be aware that there must be room for adding your own personal technique. This is a very "old school" description, and is intended as a helping hand if you feel your technique needs a brush-up.

## Posture and cue lead

It is very important that you stand correctly and are relaxed, but at the same time in balance when you stand in front of the table. If you stand wrong, you tend to concentrate on your position and might be overthinking that instead of focusing on the shot. If you stand correctly, on the other hand, you can use all your energy and concentration on the actual shoot. The position described below fits most players:

1. You place your backhand $10-40 \mathrm{~cm}$ from the back end of the que. This is different according to the persons height. You hold your arm down towards your body with the cue at 90 degrees from your body, and at the same height as the table.
2. You stand in front of the cue ball in the direction of the shot with the right foot in front of the cue ball.
3. Distance between the legs should be approx. $40-50 \mathrm{~cm}$. The $40-50 \mathrm{~cm}$ are indicative and highly depends on how high the person is.
4. To achieve the correct distance to the cue ball, place the tip of the cue as close to the cue ball as possible. The arm should still be held along the body while taking a step forward with the left foot.
5. The feet should have a 45 degree rotation according to the shooting direction.
6. There are some rules that can be used as benchmarks. If these rules are fulfilled you are standing correctly:

- The backhand should be positioned so that a straight line can be drawn from the right foot to the rear hand.
- The upper arm and que form a straight line and your nose is just above the cue so that one eye is on each side of the que.

7. Remember it is about balancing and thereby adjust your position so you feel relaxed and balanced. This is a more "old school" description.

## Front hand

The following describes how to make a center shot by front hand:

1. Start by putting your forehand flat on the table.
2. You now form the loop where the que should slide through, by bending your index finger so it is in touch with the inside of the thumb.
3. Finally bend your middle finger so that the thumb will rest on its inner end. To get the best support you can spread your ring finger and little finger.


Example of a front hand shot

The following describes how to use the front hand for a pull-shoot:
1: Lay your front hand flat on the table, raise the thumb slightly, and let the que rest on your thumb.
2: Take your forefinger and move it to the upper part of the thumb.
3: I take my middle finger and put it on my thumb (next to my index finger). This will create better stability in your front hand.

## Backhand

1. You hold the queue with either the thumb and the middle finger or the thumb, middle finger and ring finger. The queue must be in finger joint number 2.
2. The grip must be relaxed and there must be air between the queue and the rear hand.
3. By having a correct backhand grip you will find that your knuckles are parallel to the queue.

The following describes how to use the front hand for a follow shot:
The procedure is the same as before. The only difference is that the front hand must be placed higher. To do this, push the ring finger under the middle finger, thus adjusting the height of the bridge that is formed.

As said before, it is very important that your front hand is in balance. It is very individual what it takes to get your front hand in balance. You can add your own touch to this.

The accomplished shot:
The execution of the shots (the movements preceding the actual shoot) must have a smooth and unbroken rhythm. The movements which must be executed, can be described as the following: They must be light, relaxed, solid and authoritarian.
The actual shot (the way you go about your shot or the way you deliver your shot) can be described in the following way. You must deliver your shot in an easy and relaxed way, but still in an authoritative and solid way. You must give the balls the "message" of where they are heading.

1. It is important that you shoot straight ahead. This means that the line goes straight through the ball.
2. The tip should pass approx. $10-15 \mathrm{~cm}$ through the ball in a straight and unbroken line.
3. It's important that you keep your stance during the shot no matter what. You can only change your position when the balls are in motion

BILLIARD SYSTEM


An example of the tip passing approx. $10-15 \mathrm{~cm}$ through the ball in a straight and unbroken line

