

THE ART OF BALLS



**AN ALTERNATIVE APPROACH
TO POOL BILLIARDS**

PART 5: PROGRESSIVE ROCK



HOW TO CHANGE THE PATH OF THE CUE BALL

SPIN



EQUATOR AND CLOCK SYSTEM

**There are two methods that are
widely used when applying side
spin.**

**Some people hit tips of right and
left on the equator of the cue ball.**

**Some people hit the cue ball
around the clock.**

I do both.

**And now I will
show you when
to do what and
why it is wise to
do so.**

YOU REMEMBER

You can either spin the cue ball by hitting it **on the equator** or by hitting it **at a clock position**.

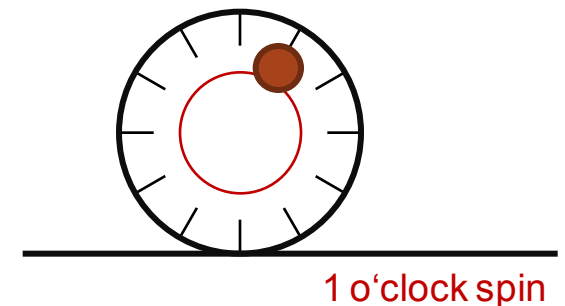
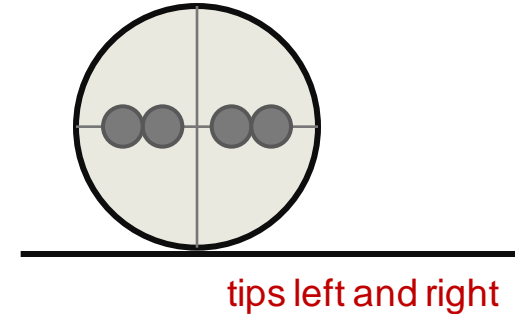
One tip right approximately does the same what hitting it at **one o'clock** does, two tips equal two o'clock, and so on.

But there are draw backs to hitting it on the equator. If you hit the cue ball level, **it will slide** forward the first couple of inches. Then it will fall over into its designated rolling axis and pick up roll.

That's an **indirect method**. You may or may not achieve the same axis each time. **It depends on the volume of your shot**. That creates the **illusion that louder shots produce more spin**. But once it rolls, it rolls. About an axis. No more or less spin possible, only a different axis.

So why not send it into this axis right away by hitting it at the appropriate clock position? **So for rolls, I'll always use the clock.**

For **Slides** the situation is different. Then the cue ball is supposed to slide. That's better done by hitting it at the equator, since hitting it high or low will cause **unwanted swerve** that will change the path of the cue ball. **So for Slides use tips left or right**. On rare occasions.



STANDARD PATHS

The Gods created side spin to change the path out from the cushion.

Make this your credo. There are a handful of other situations that come up (in pool) every once in a while where you need side spin, but that's what it's for.

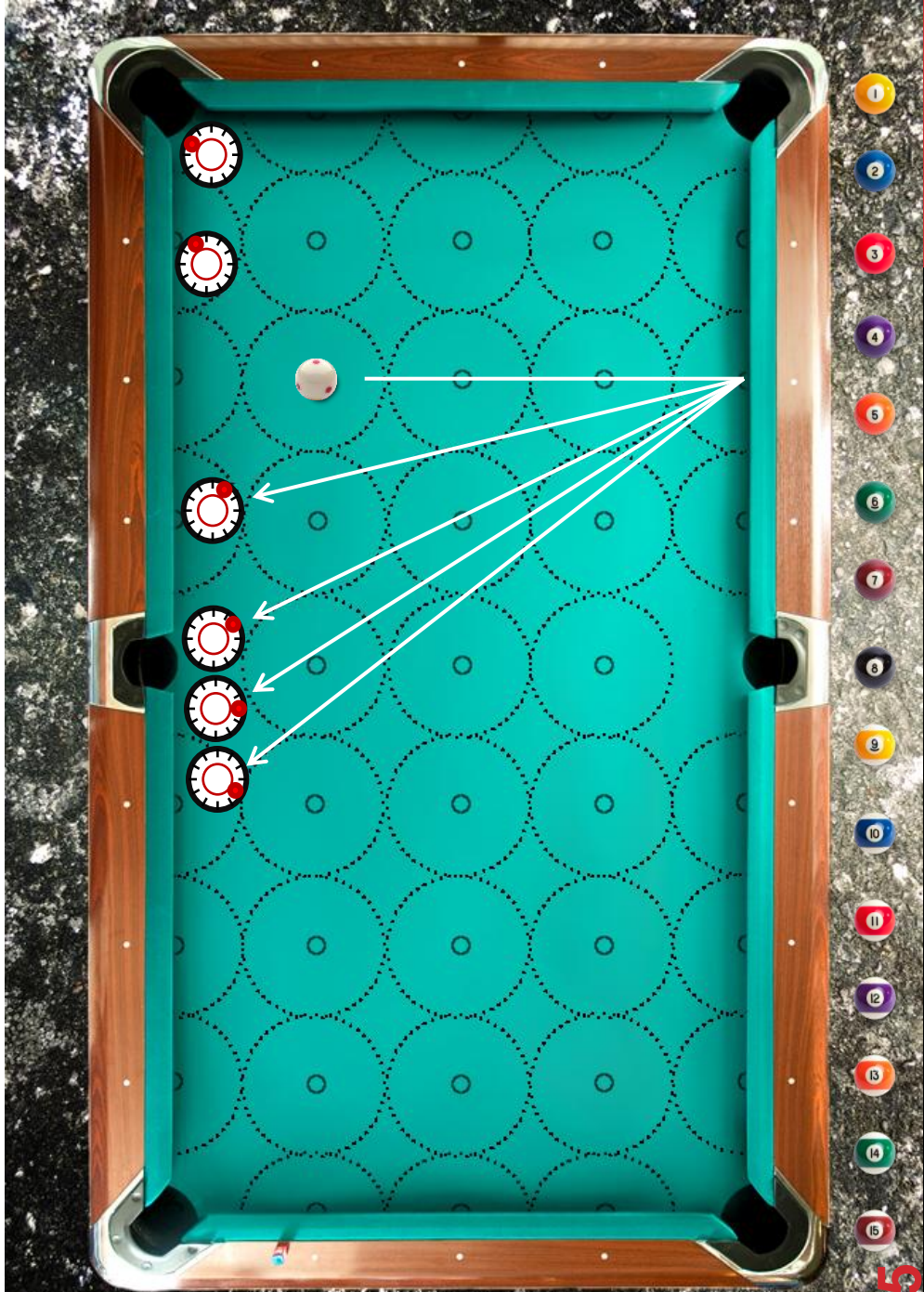
Let's go straight ahead first. As a rule of thumb:

One o'clock (we'll write **1h** from here) brings you **one diamond** right on **half a table** when you shoot straight into the cushion.

2h brings you **2D**.

3h brings you **2.5D**.

4h brings you **about 3D**.



MEAN PHYSICS

Why does this level out when we're approaching three o'clock?

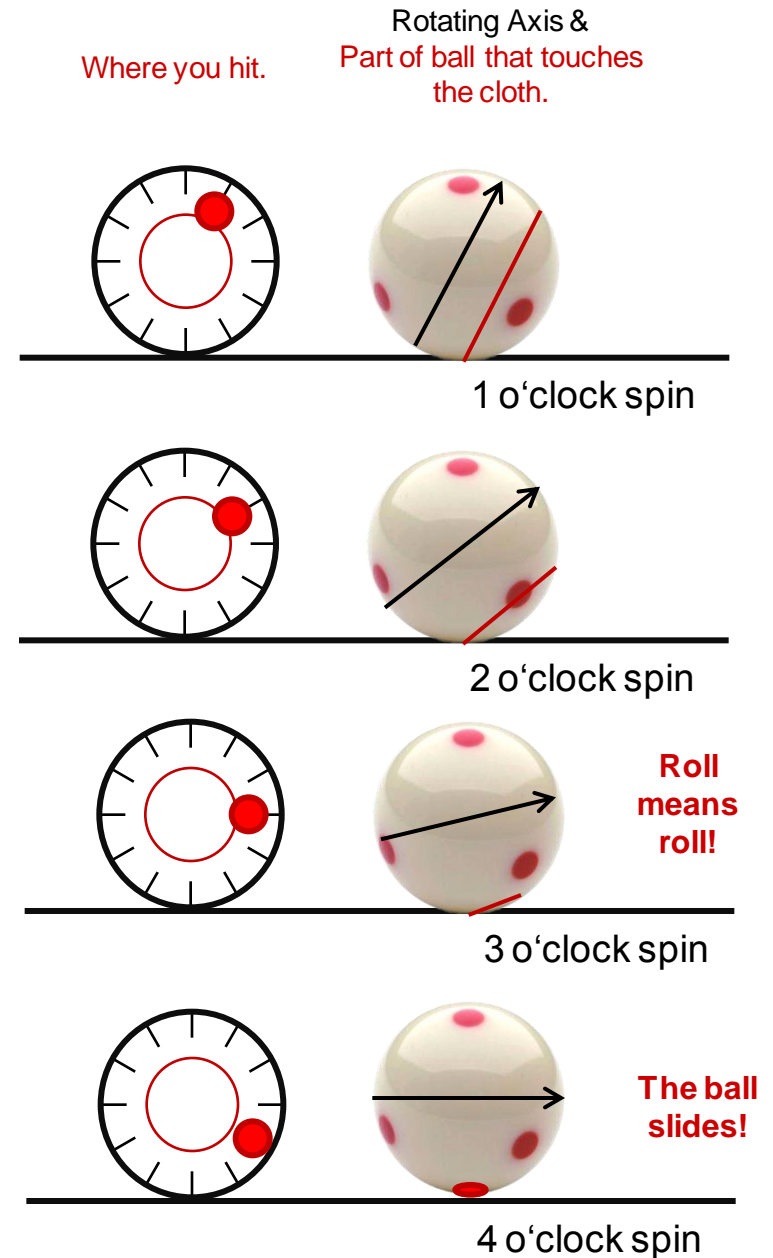
Let's have a look what the cue ball does while spinning.

When you hit the ball at 1h, it will approximately **rotate about that axis** (it's a tiny bit less, but ...). So the cue ball will **travel forward on its side** only touching the cloth with the **red marked part**.

When you apply **2h**, the rotation axis is more than 45°. The ball is heavily rolling on its side.

Now if you apply **3h**, you'd expect that the ball ... just **circles in its place**. But since we're hammering on it with a cue stick, we **push it forward**. We cannot spin it on place. Our cue stick **doesn't grip the cue ball 100%**. So side always is **a tad less** than the indicated clock position. **The effect becomes more obvious as we're approaching 3h.**

Hitting on **4 o'clock** we can use two tricks: One, hitting the ball below the equator makes us get **more mass behind the cue tip**, that **increases friction** a bit. We have more grip. Two, **The ball slides**. As long as it slides, it can literally **spin „in its place“**, as it is only **hovering forward** like a spinner travels over a table. If it only loses its slide in the moment it hits the cushion, that's the maximum path correction you can get.



BACKHAND ENGLISH PARALLEL SHD ENGLISH

**A
PRO
POS**

I had the best
laugh!

Some say use
this.

Some say use
that.

I do both. And will
tell you when and
why.

BACKHAND SPIN: USE FOR SLIDES

Backhand spin is cool and easy. You aim straight and just pivot your cue around your bridge to apply the spin. No guessing.

(If you play a low deflection cue go on guessing spin induced throw. I'm talking only solid wood here.)

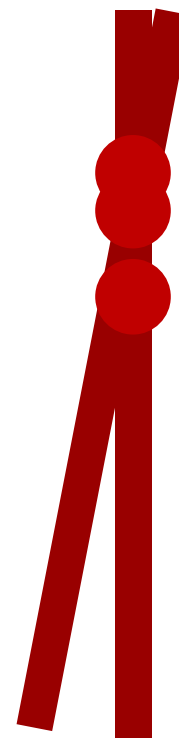
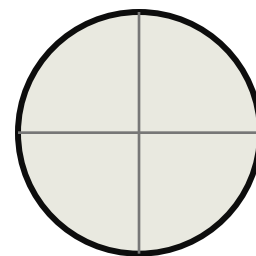
Cool and easy for a certain type of shot.

Basically for **mezzo staccatos**. That's what people play most and that's what they know their neutral pivot point for.

For every other shot that won't work, unless you adjust:

- For **draws** your pivot point **moves forward** (since you transfer less spin than with a stop shot).
- For **follows** your pivot point moves **backward** (since there is a ton of swerve which adds to your spin, and you need squirt to counter that).
- For **piano** shots your pivot point **moves backward** (since spin induced throw maximizes for piano shots, you need more squirt to counter that)
- For **forte** shots your pivot point **moves forward** (because there is less throw thus you need to compensate more squirt).

Where the mezzo staccato sits depends on your cue stick. The **thicker your cue tip, the more forward** sits your pivot point.



Forte or Draw
Mezzo Staccato
Piano or Follow

PARALLEL SPIN: USE FOR ROLLS

Backhand spin is cool and easy. But if you play those **slow rolling speeds** you'll hit every shot with outside spin **too thin**. That's because at those low speeds **paralleling** is the way to go.

As long as you stay **well below Slide volume** paralleling is awesome.

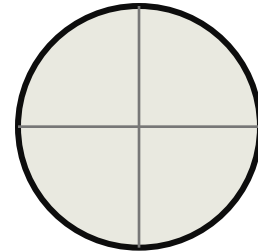
Of course, **tip size** matters. If you have some hugeish 13mm tip, chances are that you have to **parallel the first half, and then pivot the rest**. Since those woods just have so much squirt.

If you've got a **12mm tip**, you should be in heaven when paralleling for rolls.

In my humble opinion that's a reason to play 12mm since it **eliminates a ton of guesswork**.

And oh, if you're playing **from the rail** (where you apply top left or top right spin), then **paralleling the first half and pivoting the rest** is a very good idea, even with a 12mm tip.

And uh oh, if you're playing one of those **in between shots** which are **half roll and half slide**, then the mixture also does wonders.



A WORD ON LOW DEFLECTION CUES

AHEM

If you're playing something with as little deflection as a Z-shaft or similar:

Then you can parallel for stun shots (or pivot with an insane bridge length).

For slow rolls you will have to parallel and then pivot half the way back.

Or, for outside spin, just think of hitting up to a minor step fuller to compensate for the throw of the object ball, dependent on the type of shot.

SPIN FROM ABOVE

You see the familiar **angle-in-angle-out-path**.

However this path may **not be available**.
You can still make this shot.

You can shoot:

- with **1h** from **half a diamond** above.
- With **2h** from **one diamond** above.
- With **4h** from **1+1/2 diamonds** above.

You can even shoot with **10'** from **half a diamond below** (reverse won't grip as well at that angle, so you need more).

If it's **half a diamond below** you can also **play it low** (with no side) which will produce a slight **curve** out from the cushion.

Extremists may even manage the **7:30 path** at the bottom.



DOWN BELOW

If you're playing half a diamond below there are **even more options** you can do.

The simplest is: **Play it forte**. Usually **rail first shots are played mezzo**. That makes the cushion behave friendly. But **as volume increases the angle shortens**. On this half table bank playing forte will do the trick (if the cushion has been fitted properly).

But you can also **play it with draw** at 6 o'clock. That makes the cue ball **curve** out from the cushion (similar to the shot below).

You can of course **use left**, but at this angle you will probably need **10h** (instead of only 11h), since the counter at that angle will **not grip as well**. So you need more.

Doubling your counter spin is a good rule of thumb.

And if you're mad enough, you can combine low and counter and try to make the lower route. **One third** of the diamonds you go into the rail with is usually the **maximum**. So if you go into the cushion with 3D, you may manage to reach the opposite rail at 1D below **if you're good**.



IMAGINE A MEZZO HALF BALL PUNCH AT 4:30.

IMAGINE A PIANO QUARTER ROLL AT 1H.

IMAGINE TO DRAW A THREE QUART MEZZO HALF.

**BY THE
WAY**

**Now tell me any
other system that
can name shots as
precisely while
you know what to
do to produce
them.**

**NOW WE'LL LEARN HOW TO GET AROUND THE TABLE.
WITH SPIN. A TON MORE OPTIONS.**

STANDARD PATHS

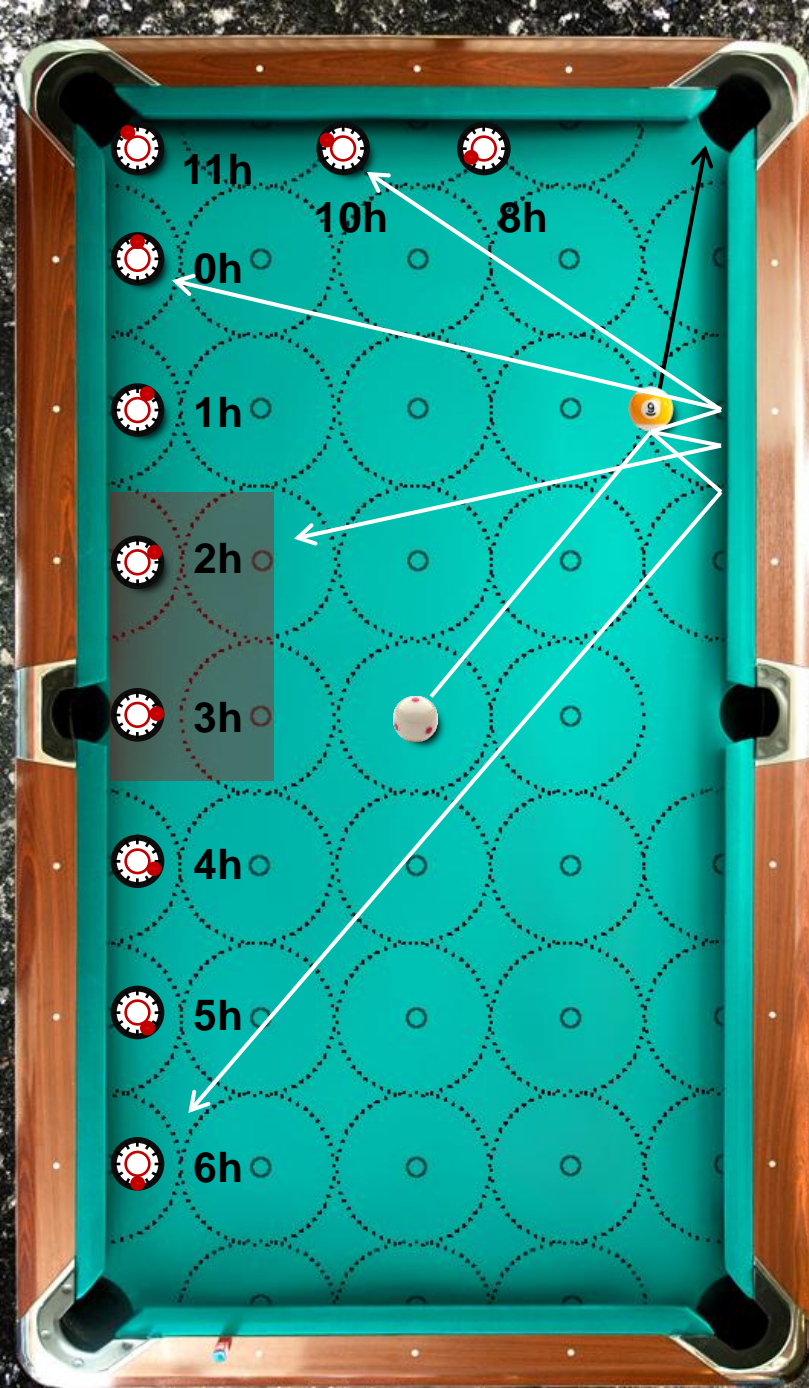
ROCK AROUND THE CLOCK

Credits to **Kid Delicious**.

A wonderful way to **rock around the table** on this half ball cut.

Note that the position closest to the corner pocket is available **without any side spin** by smoothly drawing the ball with mezzo speed. **Don't stun**, otherwise it will fly into the cushion at a steeper angle.

One caveat: On a **new cloth**, with fast cushions, which is the case for many tournament situations, **the 2h and 3h options are not available**. The rail simply **won't grip** the counter spin. They'll come out to the 1h position. So you'll need to **play a Punch** if you need that position.



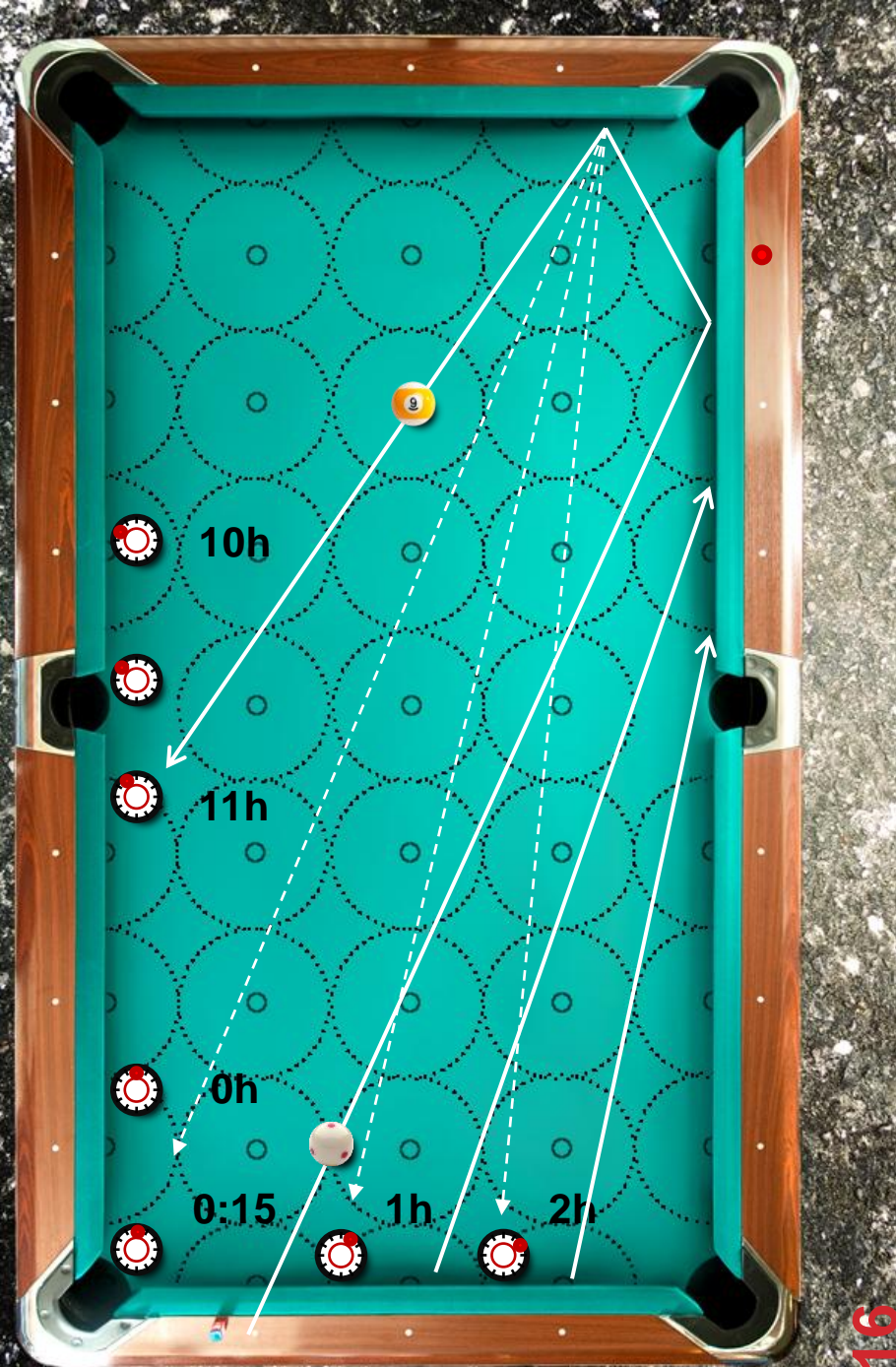
LITTLE JOE'S WATCH

You remember One-on-One Alongside from Part IV. I call this extension **Little Joe's Watch**, Because Little Joe Villalpano got me on the idea.

You play **from the first diamond into the first diamond**. Dependent on spin you will end up in different (very predictable) positions.

Note the **11h route** which is a very stable way to get a **good hit on a ball on the foot spot**. Highly useful for safe play since safes out there are awkward when you can't see the ball.

You can shift this approximately 1D by 1D, but you'll need to practice.



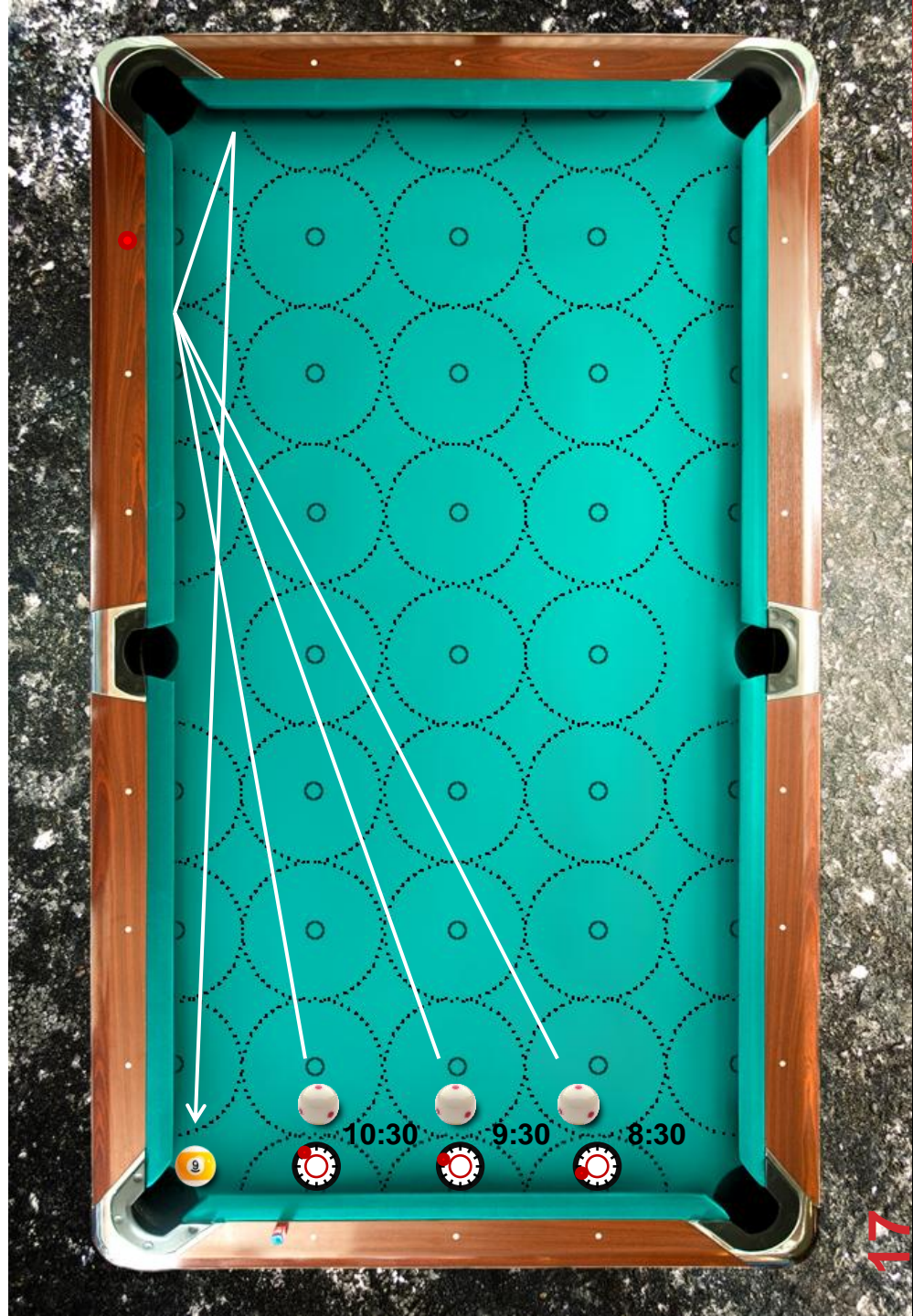
ASHBY'S REVERSE THE POOL

Originally called (George) Ashby's
Reverse The Rail.

Renamed it because when playing on a
pool table you cannot play that close
into the corner as Ashby wants you to
because there's a pocket in the way.

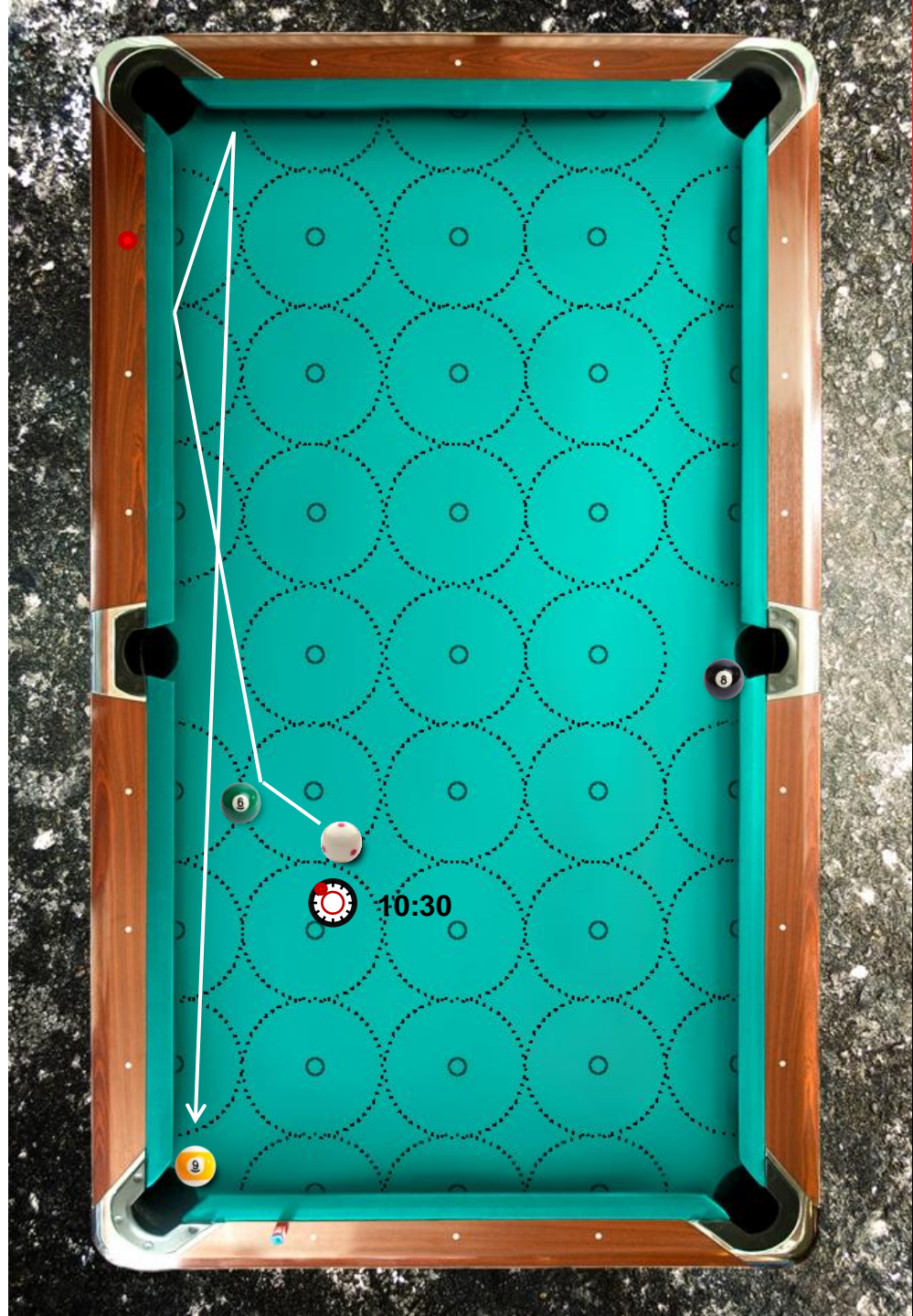
You play **into the first diamond** with the
indicated spin.

Useful shot for safety play.



OF COURSE

You could also ...

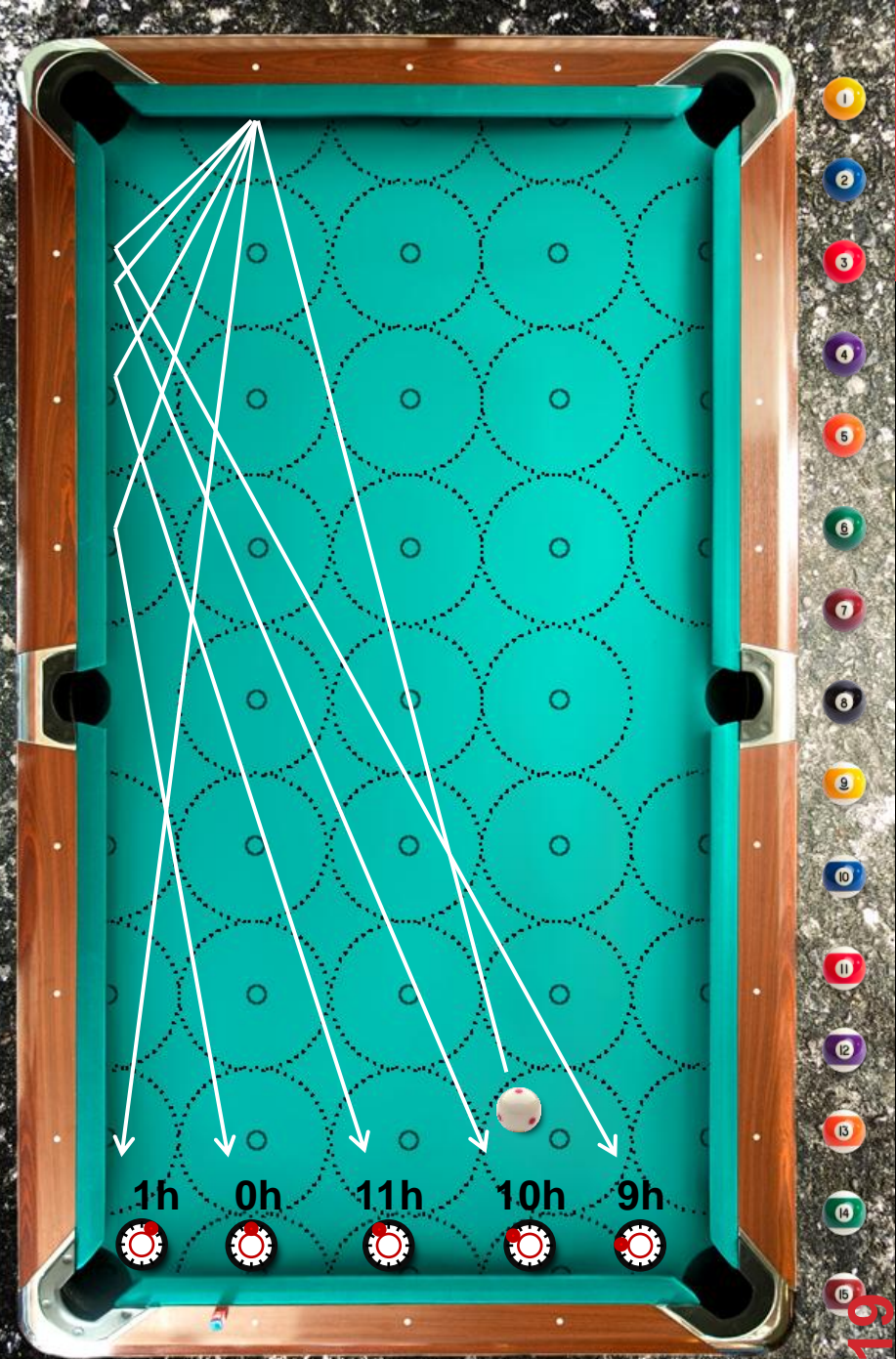


A PROPOS ONE-ON-ONE

You already know the 0h path.

There's more you can do.

You can systematically reach the
complete length of the short rail.



CLOCK SYSTEM

And Sid Banner thinks you can do that also while hitting a ball.

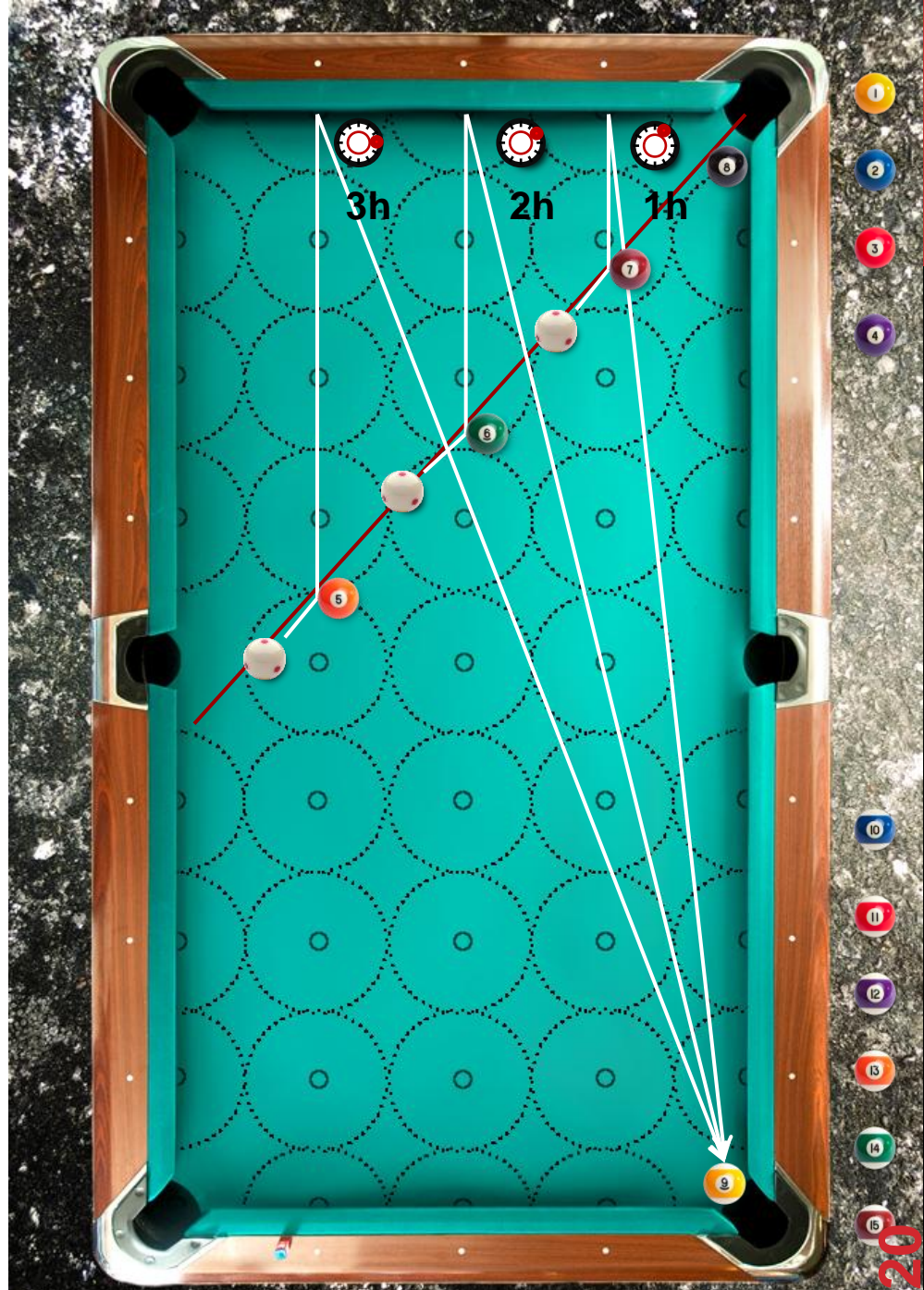
Unfortunately the eight ball is not an easy combination but **you have options**.

Plus you got a chance to **leave a difficult shot**.

If your cue ball is **above** that line through the fifth diamond you need more spin.

If your cue ball is **below** it, you can live with a little less.

That means: for **thinner hits** use a bit **less**.



TOKYO CONNECTION

This system is a real beauty. Even when the direct path is available.

Why? It is easy to calculate, whereas the geometric methods for reaching the short rail involve heavy cue stick pointing.

$$S * T = F$$

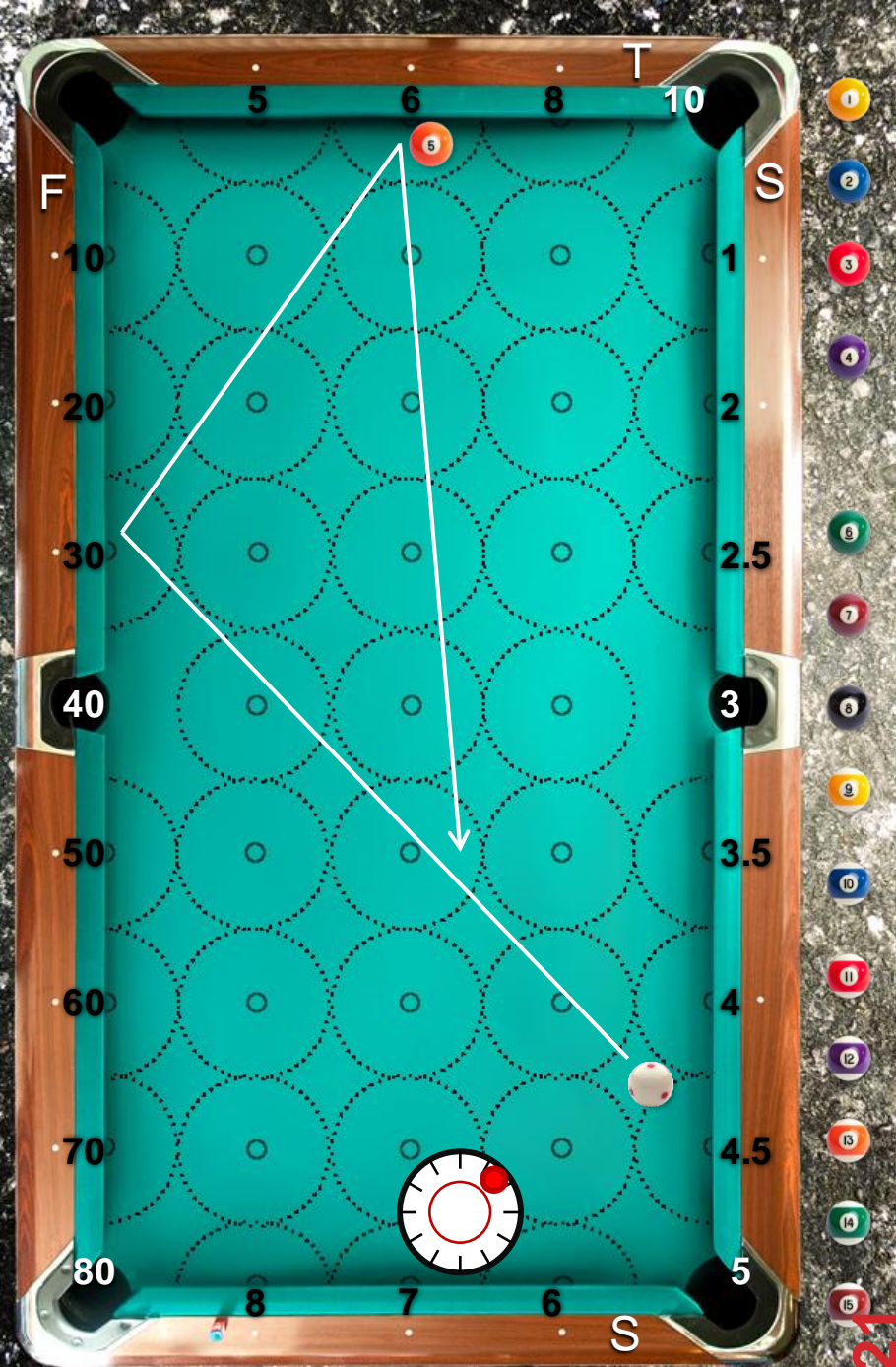
$$4.5 \times 6 = 27$$

The system is **surprisingly accurate** even on a pool table. The **target** positions are **across the diamond**, the **first rail** positions **through** the diamond. Play with regular running english (1:30 spin).

This system gives the object ball a good kick and usually the cue ball rolls back up table.

When playing out from source positions 6-8, the target range becomes compressed (6 becomes 7 and 10 becomes 9 for the higher source numbers).

But even from there you get **very good results**.



GRADY CROSS

The Tokyo Connection verifies what **Grady Matthews** told us **geometrically**: In the lower left corner you can shoot **45 degrees into the rail**, add some side spin, and that will take you to the **corner pocket**. But if you calculate, then we're a bit off.

$$5 \times 10 = 50$$

$$6 \times 9 = 54$$

$$7 \times 9 = 63$$

$$8 \times 9 = 72$$

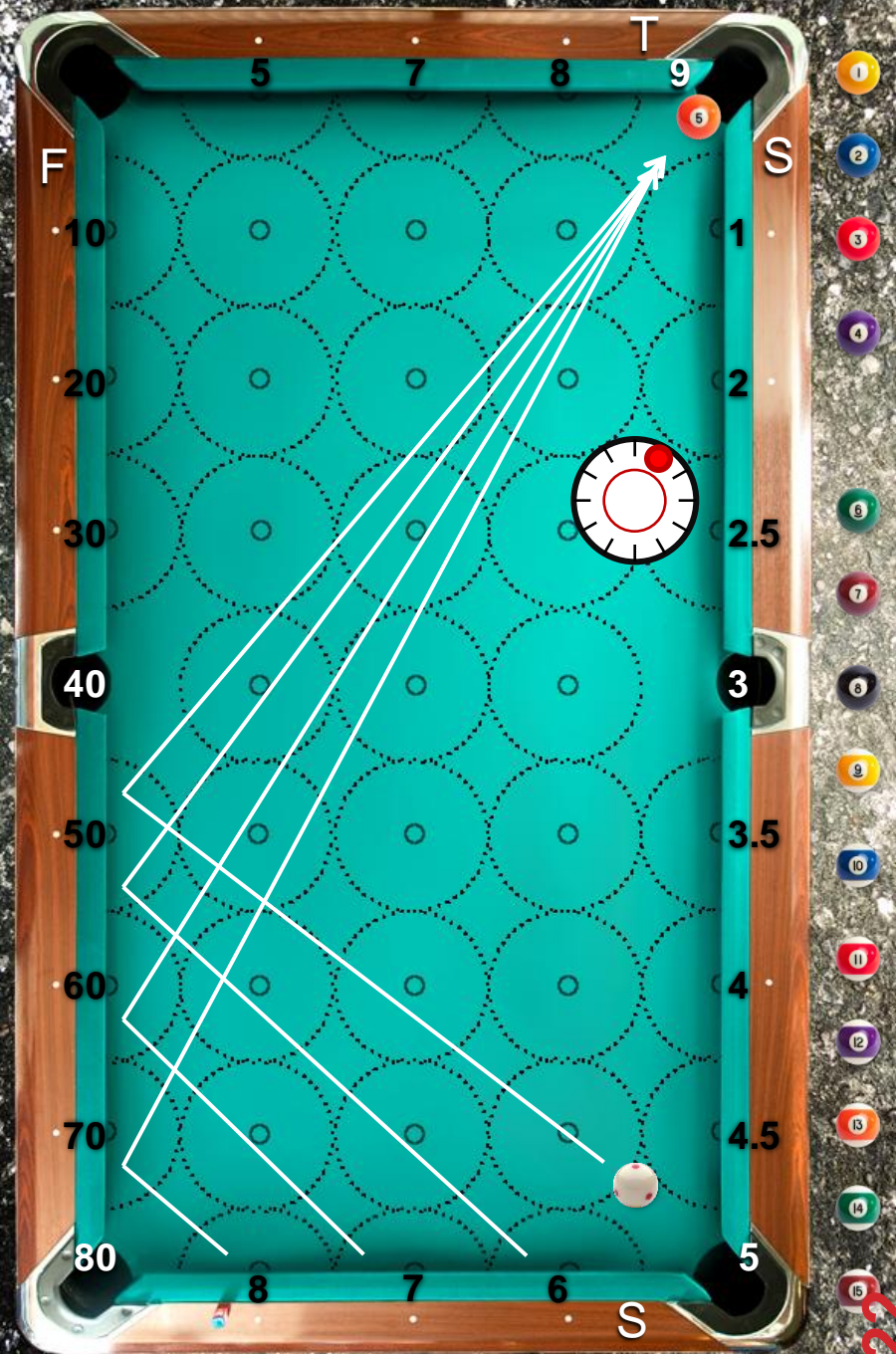
Now you're still fine, if you play the 6-8 positions across the diamond. But that's neither what Grady did, nor the way the Tokyo Connection works. Both play **through** the first rail diamonds.

The big difference: **Grady** uses **one o'clock** side spin. The **Tokyo Connection** works with **1:30**.

Never confuse the spin when playing those systems or you're in big trouble.

Grady Cross: 1:00

Tokyo Connection: 1:30



2RAILS 2CORNER

Let's stick with Grady Mathews for a minute. He has another neat two rails to the corner system that is surprisingly accurate.

This again is a **one o'clock** system.

You can also reach the rail to either side by varying the side spin.



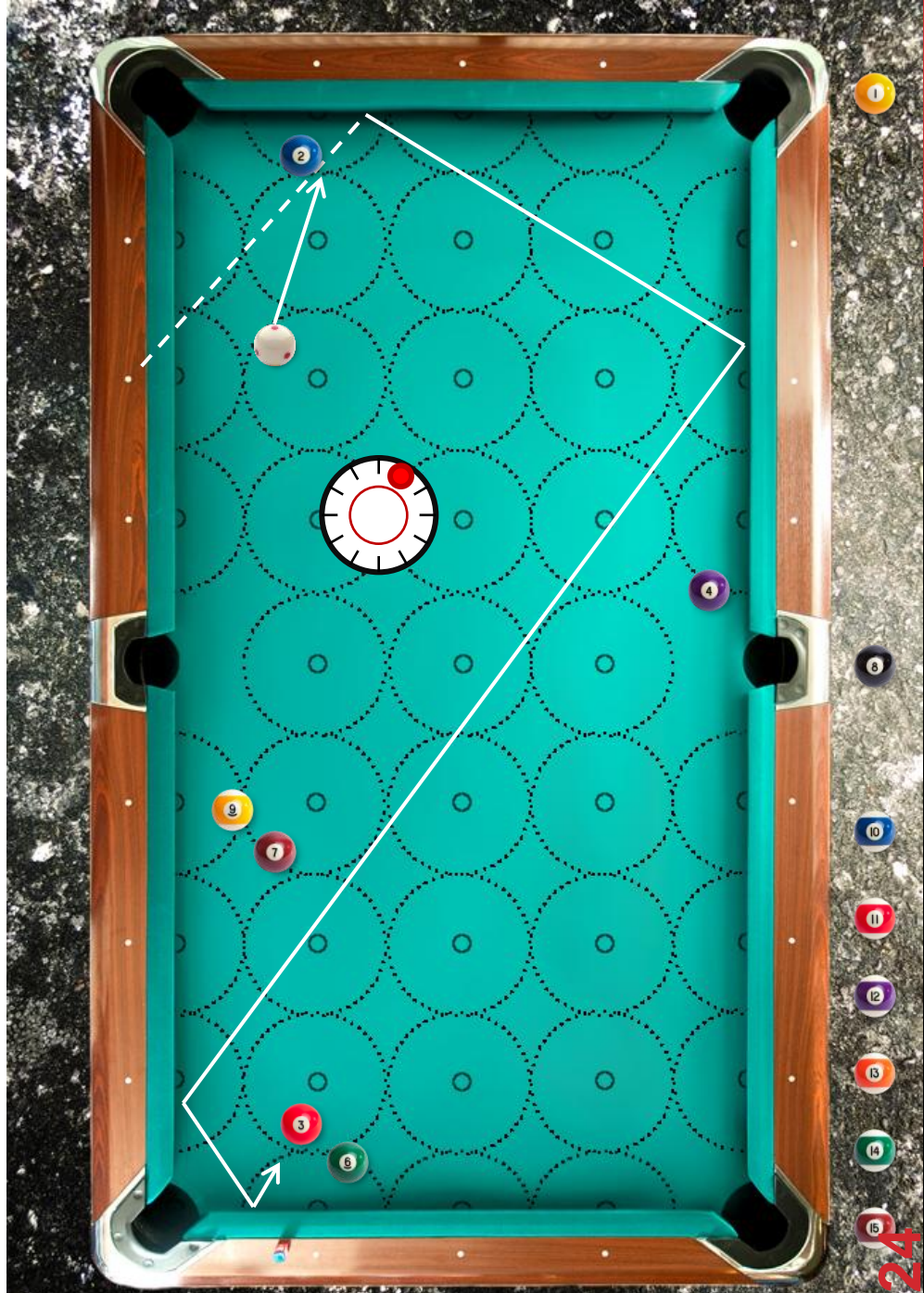
2RAILS 2CORNER

And of course this system works to plan **safeties**.

If you **check the path into the first rail** against Grady's 2Rails 2Corner system you have a **better estimate** whether you need **0h, 1h or 2h** to get behind this cluster for a safety.

Don't forget you'll have **0:30 cut induced spin for free** when playing this shot.

So in this case we'll make it because we **effectively** travel along the **1:30 route** when applying 1h.



A PROPOS GRADY MATHEWS

Here's an old polaroid.

Grady Mathews and
Ralph Eckert in the
90s.

So you also know what
the guy looked like.



R. Eckert, Grady Mathews

**ONLY THREE CORNERS &
THE VIEW IS EVEN MORE REWARDING**

**ALMOST
THERE**

WALT'S LONG ANGLE TRACKS

This will prepare you for the Corner Five system. But we're only playing out from the corner pocket for now.

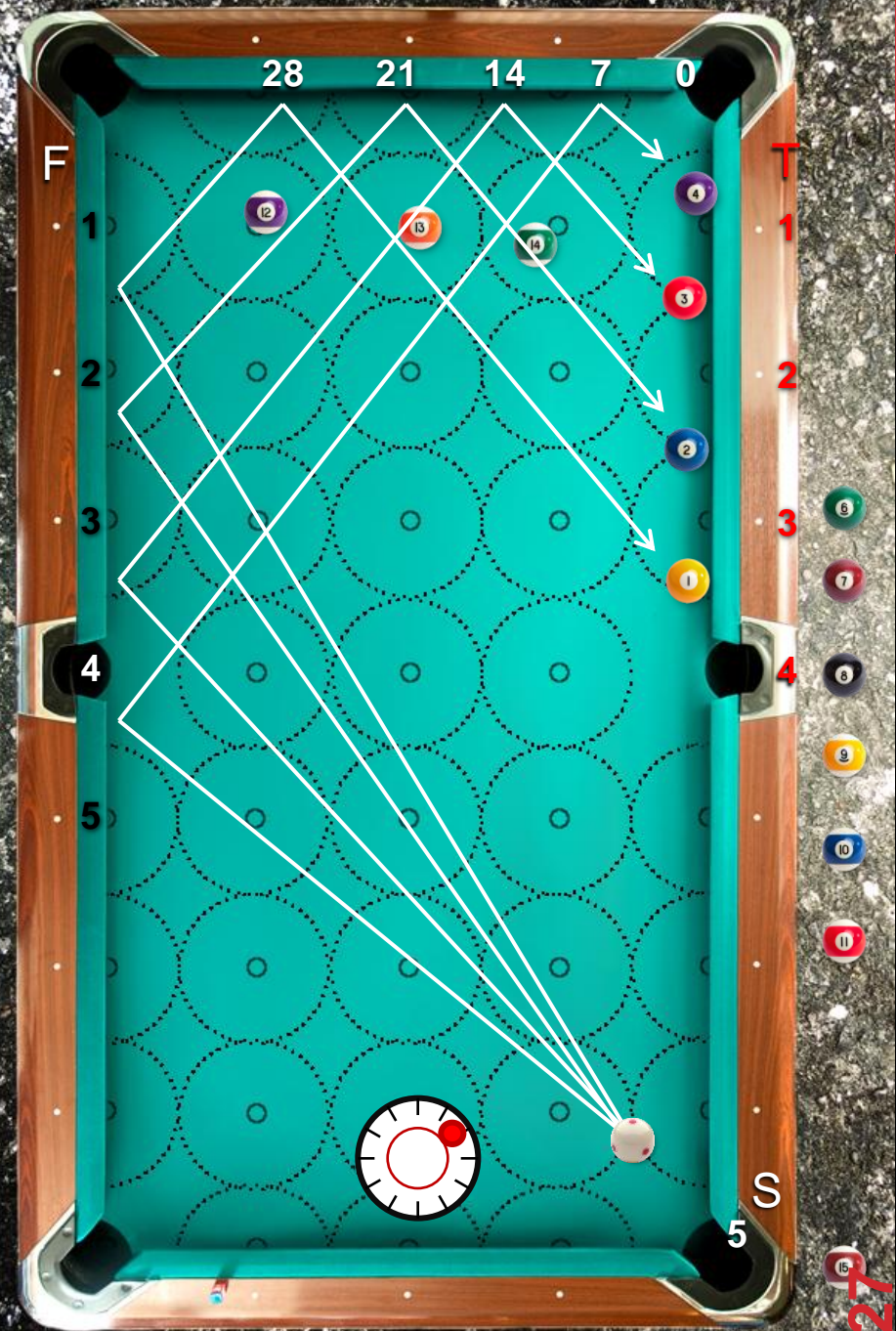
When playing **umbrella shots** (two rail running side spin shots) sometimes there are obstacles in the way. Now it would be good to have a **system** to figure if you pass such a ball or you don't.

Walt's long angle tracks are perfect for this. He says if you play from corner:

- From 5 to 1 across 28 into 4 ($5 - 1 = 4$)
- From 5 to 2 across 21 into 3 ($5 - 2 = 3$)
- From 5 to 3 across 14 into 2 ($5 - 3 = 2$)
- From 5 to 4 across 7 into 1 ($5 - 4 = 1$)

So when you're not sure whether you pass one of these obstacle balls, **just walk behind your target position** and check if those paths are free.

They're easy to remember, since they are multiples of 7 and your target.



CORNER 5 SYSTEM

The Corner 5 system is named Corner 5 system because the Source corner is numbered 5.

It's a **three rail system**. This is an idealistic path. On most pool tables, from **source corner five** you will have to play **into the second diamond on the first rail** to make the 3-railer.

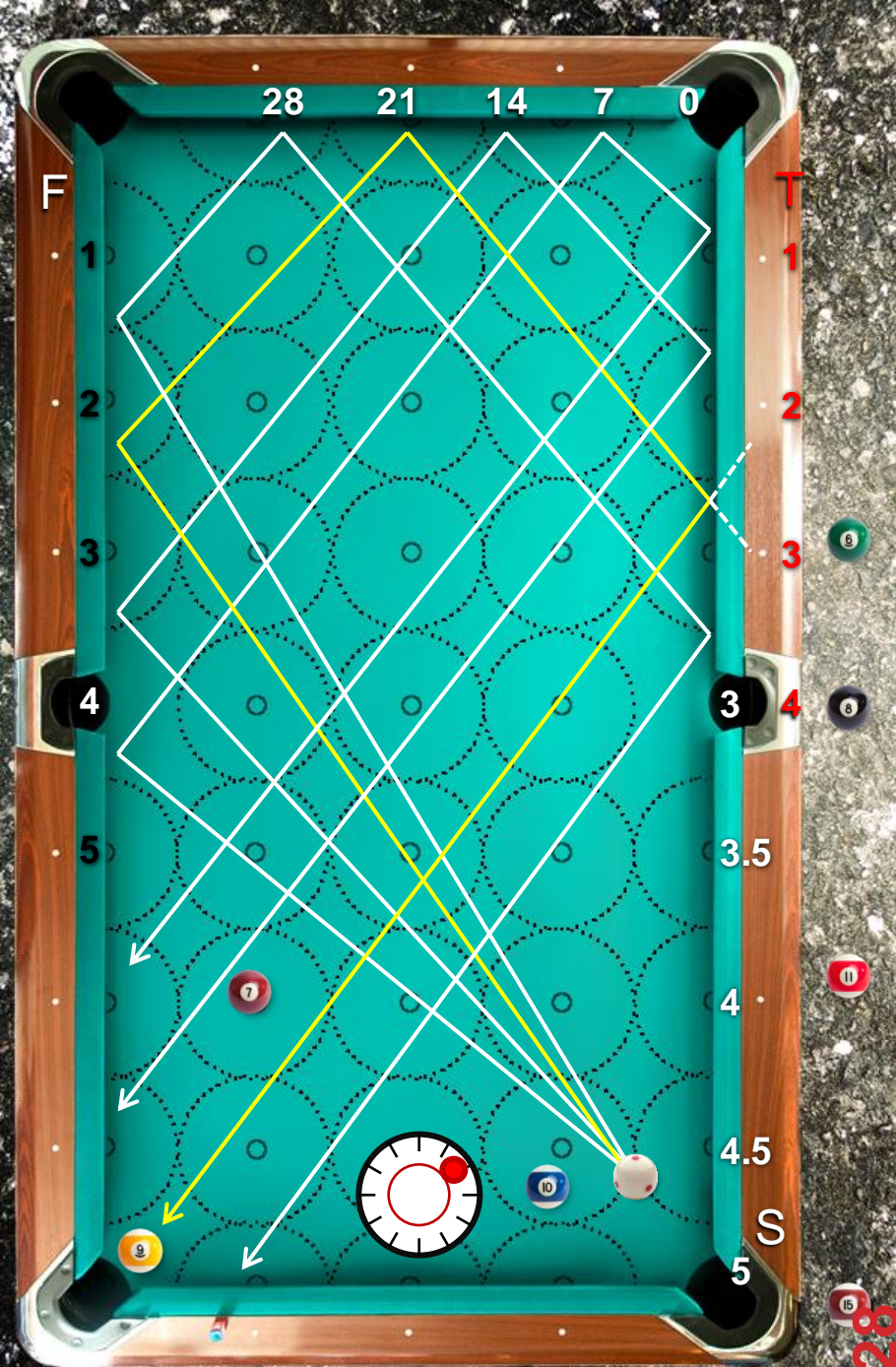
What's striking about this system is that the third rail positions (the red ones) are remarkably stable even across different conditions.

So it's a good plan to try to find out, **out from which position on the third rail** you can make the shot. In our example **out from Target 2** the ball will fall into the pocket.

That approximately equals **into target three**, don't mix that up ...

If it comes up long (reaches the short cushion) on your table, you need to go up to higher numbers on the first rail. Quite a couple of pool tables make this shot **out from the 2.5**. On a **carom table** you probably even need to shoot into third diamond on the first rail.

But that will come up short on most pool tables.



DONE ROLLING PART V

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