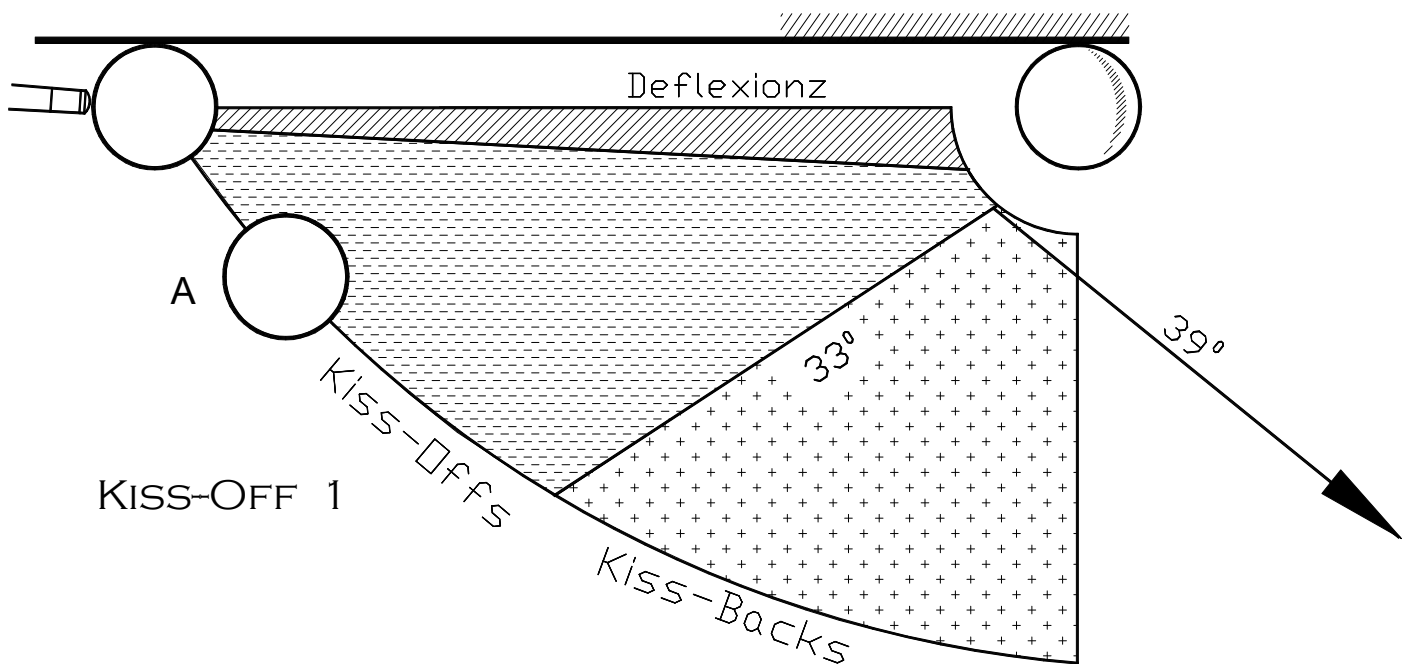


KISS-OFF ANGLZ



DOUBL-KISSEZ

The Deflexion Anglz mentioned in the previous chapter only apply if there iz no doubl-kiss. If the yellow iz on or near the cushion, az shown in Kiss-Off 1, then any doubl-kiss will giv the qball a wider deflexion angl.

DEFLEXIONZ ZONE

Doubl-kissez are not possibl when the qball iz very near the cushion & near the yellow -- ie in the Deflexionz Zone shown above -- from within thiz zone u alwayz get a standard Deflexion Angl. Az we all know, this angl dependz on the thickness of the contact -- from within the Deflexionz Zone a half-ball contact would giv the qball a trajectory az wide az the arrow, or wider. The drawing showz the qball at the limit of the zone, ie 6 ballz clear of yellow -- further away than 6 ballz & u will get som kiss-effect.

*If the qball iz in this zone, u neednt fear a doubl-kiss
Just play ya normal shot, az if the cush did not exiss.*

KISS-OFFS ZONE

If the qball iz in the Kiss-Offs Zone, then a doubl-kiss iz possibl (depending on contact & pace). A full doubl-kiss will allwayz giv the qball a trajectory of near'nuff 39° (arrow) for slowish strokes. U will get a full doubl-kiss if the contact iz thicker than 1/4 ball & thinner than 5/8th ball. This zone iz the subject for this chapter.

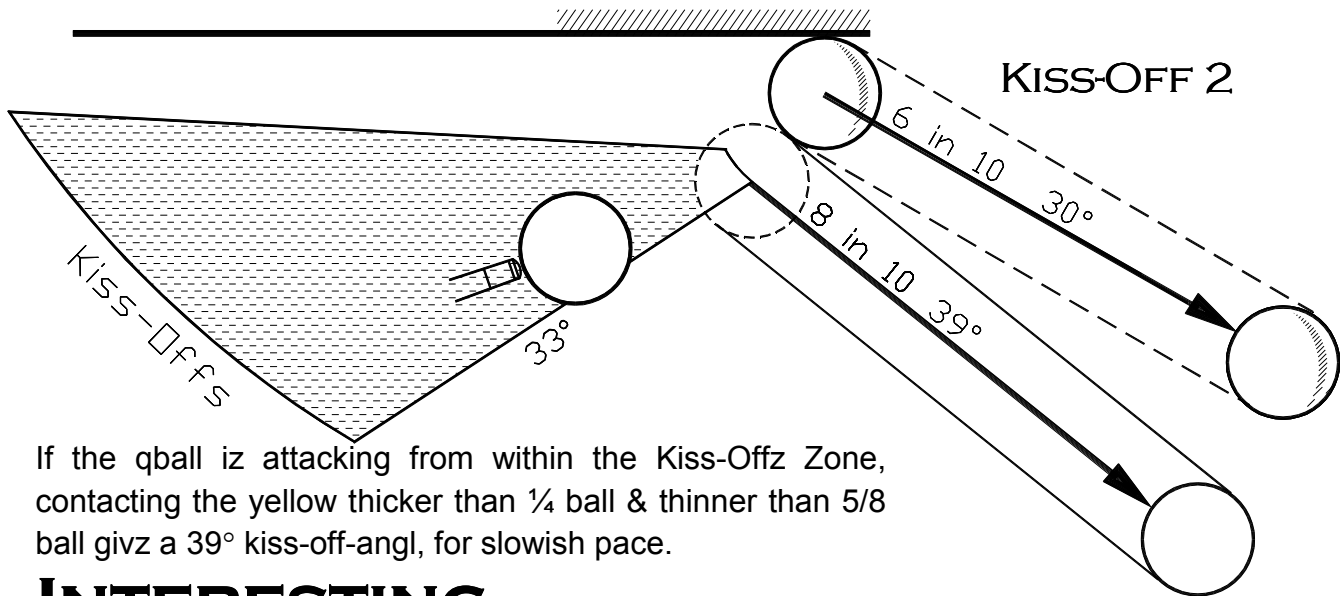
*If troubl raizes its ugly head, & leevz u in a lather
The reliabl & friendly Kiss-Off Angle, helps u play a fatter.*

ANOMOLY

Actually, the qball (A) iz drawn at the pozzly where there iz a slight anomaly. On about this attack-angl uken get a kiss-off-angl slightly wider than the 39° arrow. But perhaps this anomaly dependz on the nature of the ballz & cushion. Don't forget we are talking about slowish shots, & fullish kissez, & zero sidespin & zero stun.

KISS-BACKS ZONE

If the qball layz in the Kiss-Backs Zone, it iz possibl to get a kiss-back angl wider than the 39° arrow (see next chapter).



If the qb is attacking from within the Kiss-Off Zone, contacting the yellow thicker than $\frac{1}{4}$ ball & thinner than $\frac{5}{8}$ ball gives a 39° kiss-off-angle, for slowish pace.

INTERESTING Using left-hand-side (check-side) makes zero difference to the kiss-off-angle. Right-hand-side (running-side) increases the kiss-off-angle a bit.

VERY INTERESTING Moving the yellow a little (or a lot) off the cushion makes little difference to the 39° . As long as the kiss is a good one.

SUPER INTERESTING As shown, the yellow's rebound angle is always near enough 30° . Check-side decreases it very little -- running-side increases it a bit.

XTREMELY INTERESTING You get this 30° rebound-angle for any attack-angle up to say 120° -- i.e. from inside the kiss-back zone & from beyond the kiss-back zone. As long as the double-kiss is a full one -- the yellow's rebound angle is always 30° near enough.

ULTRA INTERESTING If the yellow is progressively moved away from the cushion -- the yellow's rebound angle progressively lessens -- it can fall to less than 20° .

STELLA INTERESTING If the yellow is hit much thicker than half-ball, it runs ahead of the qb -- $\frac{1}{2}$ ball, it's a dead heat -- less than $\frac{1}{2}$ ball the yellow trails behind.

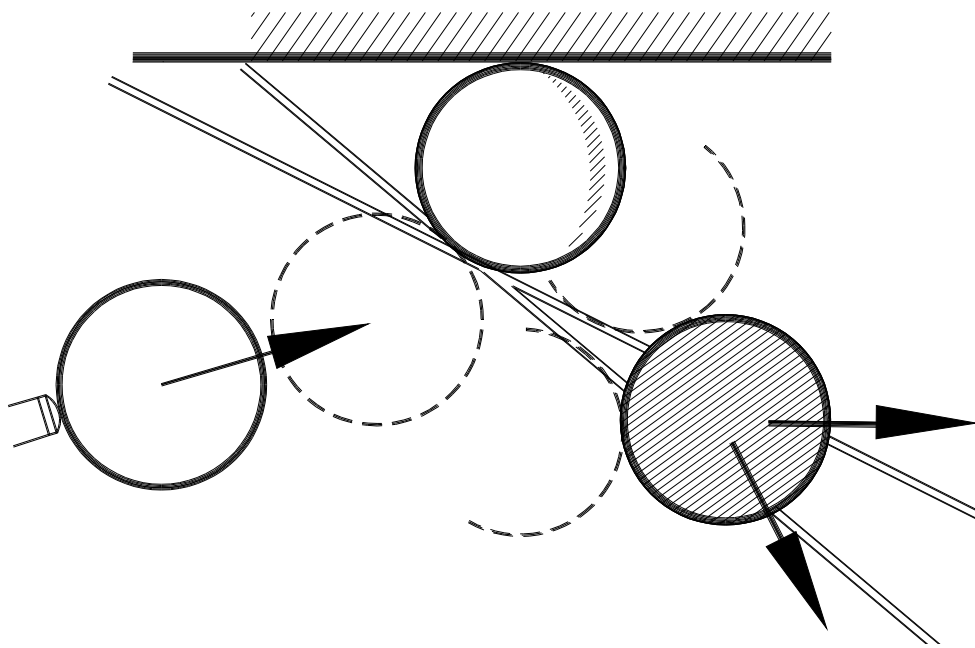
YELLOW'S PACE The contact on yellow only affects the pace of the yellow, i.e. whether the yellow runs ahead or trails behind the qb. The qb kiss-off-angle & the yellow rebound-angle are set in concrete -- unless you use some stun, or pique'. This inflexibility is good & bad -- at least you know what is going to happen, & what can't happen.

YELLOW'S ANGLE If you widen the qb kiss-off-angle using stun or pique', the yellow rebound-angle also widens -- but you will never get it to exceed say 45° .

BALONEY Contrary to what books say -- you needn't use sidespin to move the yellow along or to leave it behind. Any arrangement of the 3 balls that you can get with check-side or running-side you can get with zero side -- try it -- you will be amazed. Use your favourite sidespin if you wish -- but don't think that you have -- not in the kiss-off zone.

KISS-BACKS For attack-angles larger than 33° -- in the kiss-back zone -- you will naturally get (or can get) bigger double-kiss effects. Left-hand-side & right-hand-side will now have a drastic effect on kiss-off-angles, as will stun or screw. But stun/screw/side won't affect the yellow's rebound angle (for a full double-kiss). Anyhow, all of this is explored in the next chapter.

Anyhow, why not chalk a coupl of linez on your home tabl, az follows, based on the actual qball'z kiss-off-angl & the yellow'z rebound angl that u find on your own ballz&tabl, & xperiment to your heart's content. Here are some more items.



RACE

KISS-OFF 3

Here a half-ball contact on yellow will result in the qball & yellow having a dead heat in the race to the red. Now, u don't want the yellow to win (usually), coz it bumps red away from the cushion (see arrow).

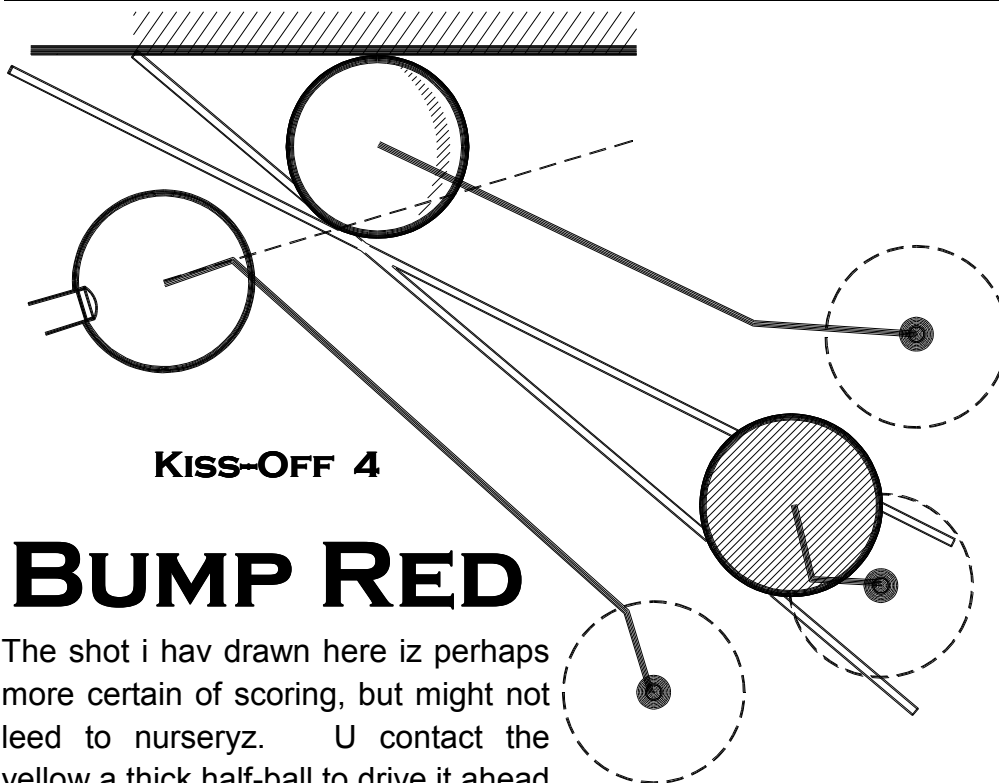
The qball bumps the red parallel to the cushion (see arrow) which is ok -- so make sure that the qball wins the race by here contacting yellow thinner than half-ball, say 7/16ths.

QBALL WINZ

For other qball attack-anglz the contact would need to be thicker or thinner for the qball to just win the race. Attack anglz & contacts are as follows.....

0° (6/16ths), 20° (as shown here -- 7/16ths), 30° (8/16ths), 40° (9/16ths), 50° (11/16ths).

Anyhow, there is a race between the qball & the yellow in every such kiss-cannon, & the player is always judging the shot so that the race result is a good one. It's one of those things that we hardly think about, but the race is just as important as the anglz etc that we do think & worry about.



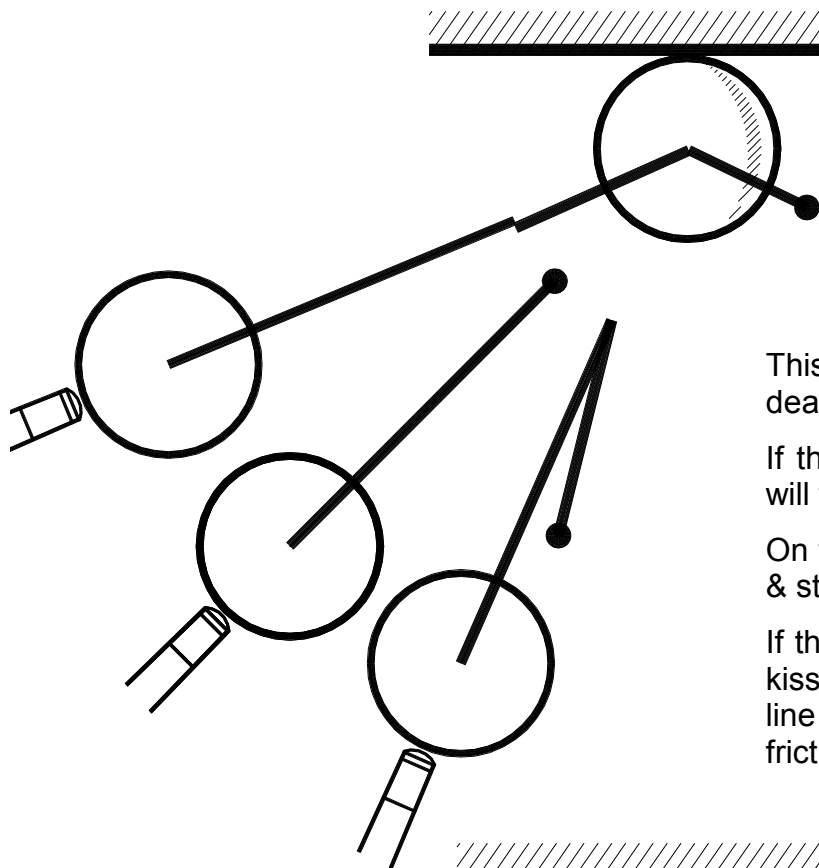
KISS-OFF 4

BUMP RED

The shot I have drawn here is perhaps more certain of scoring, but might not lead to nursery. You contact the yellow a thick half-ball to drive it ahead so that it bumps red into the path of the qball, as shown. Use as much top as you can.

COVER

Here your chalkline for a kiss-off-angle shows that it will land very thinly on red. Therefore, you should land softly to reduce the risk of the qball stopping behind the red & thusly getting a cover. And you also have to judge the contact on yellow to leave it behind, thusly to help prevent a cover. Here a half-ball contact on yellow will do the job. But this is not the stroke that I have drawn here in 4.



DEAD CENTER

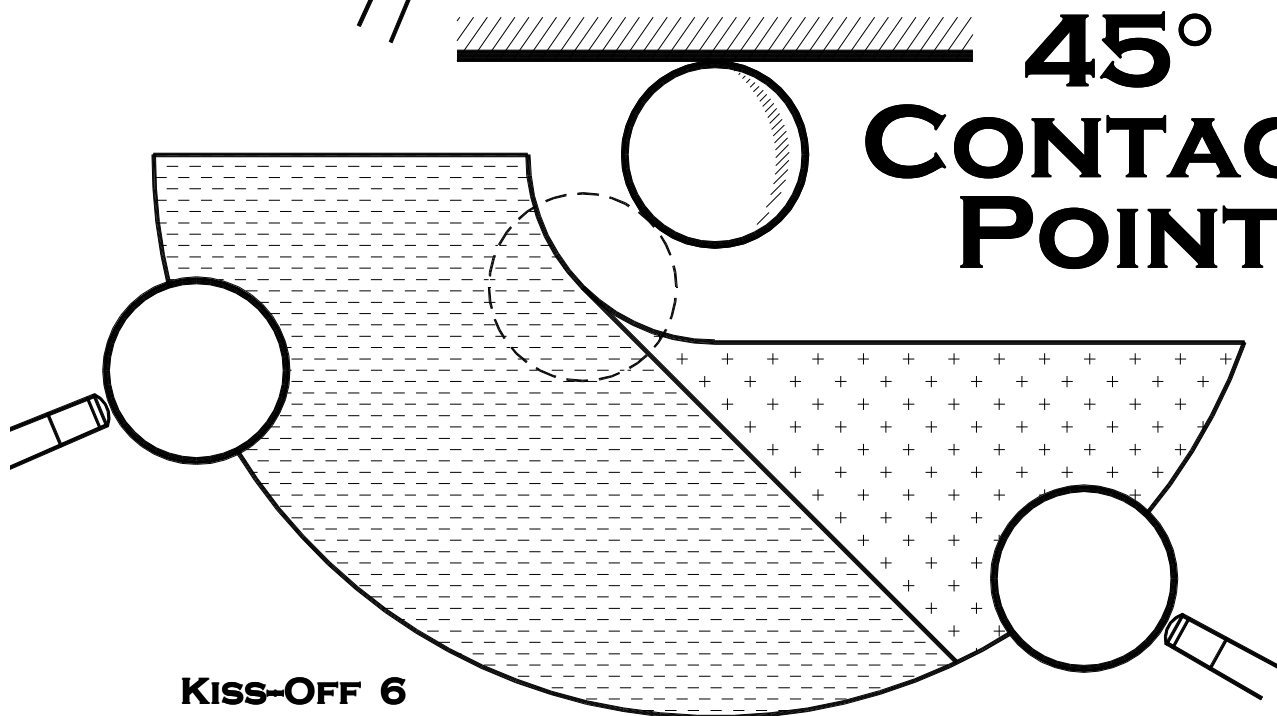
KISS-OFF 5

This showz what happenz if u hit the yellow dead center.

If the attack line iz less than 45°, the qball will follow throo, az shown.

On the 45 ° line, the qball gets a doubl-kiss, & stops dead. This iz for slowish shots.

If the attack line iz more than 45°, the qball kissez back. The kiss-back iz shown on a line a littl right of the attack line (due to friction).



45° CONTACT POINT

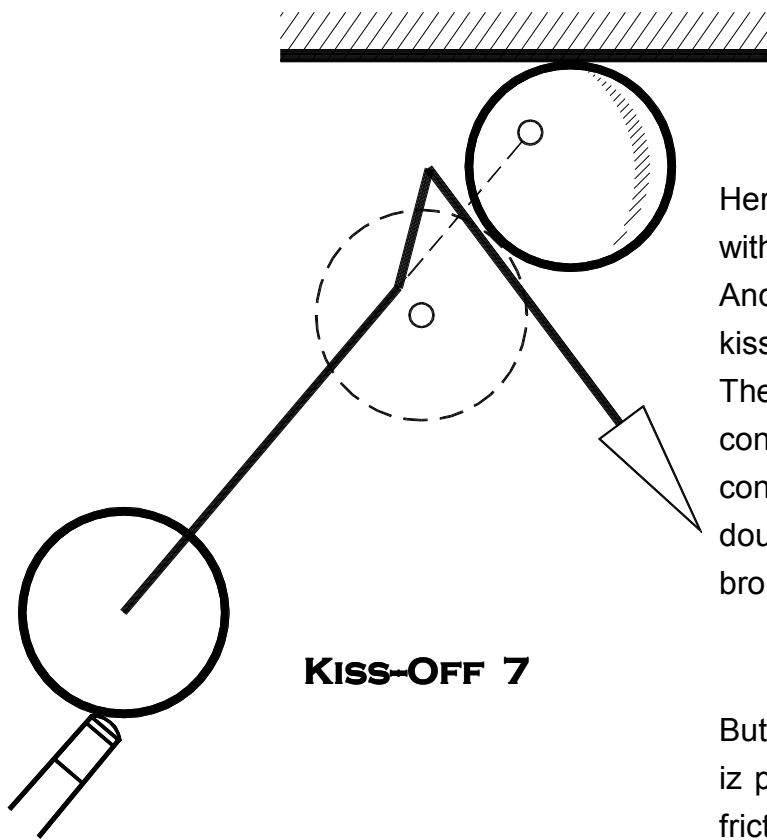
KISS-OFF 6

Aim Left The interesting thing iz that contacting the yellow left of the 45° contact point will not rezult in a doubl-kiss.

Aim Right And any contact right of the 45° contact point will not be abl to avoid a doubl-kiss (unless very very thin, or very thin & very fast.).

X-Hatch Zone This all meenz that it iz virtually impossibl to avoid a doubl-kiss if the qball lyz in the cross-hatch zone. This iz koz u karnt "see" the 45° contact point.

Broken Hatch Zone In the broken-hatch zone, a kiss-less impact iz possibl, depending on your aim-line (ie depending on the contact point), az already mentioned.



KISS-OFF 7

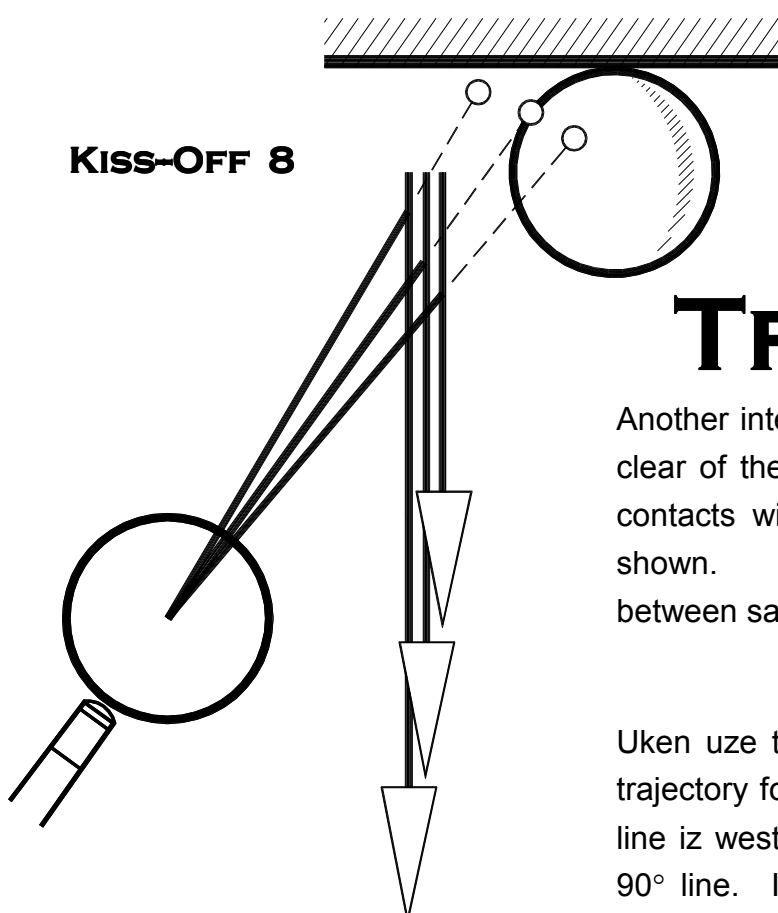
WORRY

Here we wish to aim three-quarter-ball on yellow, with right-hand-side, to run-throo az shown. And, we are worryd that we might get a doubl-kiss, which would spoil the run-throo.

There iz probably no need to worry, koz, the contact will be much narrower than the 45° contact (the broken ball). Earlyr we sed that a doubl-kiss iz impossibl, unless we aim right of the broken ball.

CHECK SIDE

But here we are uzing check-side, hence the limit iz possibly less than 40° (instead of 45°) due to friction & throw & tranzmitted side. In Kiss-Off 7 we will not get a double-kiss, but it iz a near thing.



KISS-OFF 8

90° TRAJECTORYZ

Another interesting thing iz that when the qball iz 2 ballz clear of the yellow, & on a 45° line from the yellow, all contacts will giv a 90° trajectory from the cushion, az shown. This iz for slowish strokes -- for contacts between say 1/4 ball & 3/4 ball & with zero side.

REFERENCE

Uken uze this 90° az a reference when calculating the trajectory for other attack anglz. If the qball-to-yellow line iz west of 45°, the qball will tend to run east of the 90° line. If the qball-to-yellow line iz east of 45°, the qball will tend to run west of the 90° line.

SIDE SPIN

So, in Kiss-Off 8, u might need running-side or check-side to get the trajectory u want. Otherwize u will allwayz get 90° ---hitting thinner or thicker duznt do the trick on its own. HmMMMMMM.

Some stuff from Billiardz Arithmetically Treated --- it might hav som reference to Chapter 74.

