The *Three Rivers Pinball Association's* Guide to Improving your Pinball Skills

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The *Three Rivers Pinball Association's Guide to Improving your Pinball Skills* is based on the playing tips document in the *rec.-games.pinball* archive, which was compiled by Dave Hollinsworth. There are several sections from those tips which have been copied verbatim; however, there are also several major differences between this guide and the playing tips document, including the organization and the addition of several new sections.

The contributors to the rec.games.pinball playing tips document are numerous, including Andrew Arensburger, Andrew M. Boardman, Tom Capek, David D. Clark, Jonathan N. Deitch, Adrian Donati, Jerry Duffy, Brent Earl, Slender Fungus, Brian Hindenburg, Dave Hollinsworth, Keith Johnson, Stephen Jonke, Mike Kahler, Kamchatka Charlie, Kevin Martin, Dallas Overturf, Tad Perry, Daina Pettit, Mark Phaedrus, rON, Lyman F. Sheats Jr., Joe Schwartz, Dave Stewart, Erik Wesselak, Matt Wilding, and John Yeates.

1. Definitions

Catch or *Trap*: when the ball is held in the V formed by an upraised flipper and the lower part of the inlane.

To Drain: the act of losing a ball.

Habitrail: this is the *rec.games.pinball* given name for the wire guides that are used above the playfield to move the ball somewhere.

Inlane: the two lanes near the bottom of the machine that return the ball to the flippers. Also called a "return lane.

Outhole: the area below the flippers where lost balls go.

Outlane: the two lanes near the bottom of the machine that lead to the drain area.

SDTM: acronym for *Straight Down The Middle*.

Slingshot: the two triangular things located immediately above the flippers. Hitting one ricochets the ball off in the opposite direction.

Solenoid: a coil, with another coil or magnet inside, used in flippers and kickers and such. When the coil(s) are energized, the opposing magnetic fields cause the inner piece to move.

Tilt: what happens when you shake too hard. There are three mechanisms that are used to detect machine abuse; the first is simply a conical pendulum suspended inside a metal ring. As the machine is nudged, the pendulum will swing, and if it ever touches the ring, TILT. All new machines can be set to give one or more *Tilt Warnings* before actually tilting, and tilting in this fashion causes immediate loss of both the ball in play and your accumulated bonus for that ball. The second mechanism is the *ball roll* tilt; it's a pinball sitting in a metal track. The track has a shallow slope in the same direction as the playfield, so the ball usually rests in the bottom of the track; at the top of the track is a sensor. If you physically lift the front of the machine too far, the ball rolls up the track and contacts the sensor. At the very least, this is an automatic tilt; no warnings. On the vast majority of machines, it's a *slam tilt*. Finally, there are usually one or more impact sensors, placed in places likely to be the subject of player abuse, such as the coin door and the playfield glass. Banging on one of these places hard enough to trigger one of these sensors will cause a slam tilt. A tilt results in losing your ball. A slam tilt results in the end of the game for all players. On older machines, credits were lost as well; but on newer machines only games in progress are loss.

2. Etiquette

- Don't touch another player's cabinet.
- Give other players plenty of space.
- Shut up. It's usually OK to tell someone things that they couldn't have seen (such as how big the jackpot was), but people usually don't like it when you point out the obvious to them. Same goes for trying to engage in idle chatter while someone is playing: unless the player is a good friend of yours, this is usually frowned upon.
- If you walk away from a machine, you forfeit any credits on it (so don't ask someone to watch the machine while you go to the bathroom, unless he's a really good friend; if you come back and find him playing your credits, don't be surprised).
- If you want to play a game that someone else is playing, ask the person *between balls*. In many places, it is customary to plunk down a quarter on the glass, on top of the rules sheet (caveat: be careful that your quarter doesn't slide down below the lockdown bar and get eaten); just make sure that you do this between balls. If you do either of these while a person has a ball in play, it could interfere with his concentration, which could make him interfere with your life. :-)
- If there are people standing around watching you and/or waiting to play your game, don't add any more money yourself before you offer the opportunity to join in. As long as you have credits on the machine, you are entitled to play them out, but when there are zero credits on the machine you should move aside or offer to play doubles. (It's up to you...some people really don't play doubles well but for the most part, it makes you look better if you're not a machine hog. And besides, when you are playing well, it's so much more fun to have people watching when you get a good game. :-))
- If you are really good at a particular game, you may want to ask if anyone wants to join in before you start any new game, even if you have credits left (with them adding money, of course, unless you're feeling generous today). If they don't join in, then they can't complain that you're taking too long. Sometimes people say that they'll wait till you are finished, in which case you can politely tell them that you plan on racking up replays for a little while longer, so they should join in now.
- Keep an eye on any small children in the immediate area. A lot of games have ended because of kids deciding that your start button would be a fascinating plaything. If the kids are yours, don't let them run around near pinball machines.

3. General Tips

- If you want to get better, make sure you have the time and the money to play. As you get better, playing pinball will get much cheaper; but until then, be ready to put in several dollars at a time practising.
- Watch other people play.
- Playing regularly is more important than playing a lot; playing for five hours consecutively once a month is worse than playing for half an hour twice a week.

- Play a varied selection of games, since this will give you a better feel for games in general. Playing one game all the time will of course improve your ability on that game, but then you will find that you're not as good at making a similar shot on another game.
- Make sure you are well rested when you play. It doesn't matter if you are stressed out, as pinball is a great stress reliever; however, if you are tired, then sleep is better for you. Play pinball after you've rested.

Those are general tips. Now into more specific things that can be done to improve your skill level.

4. Stance

Every person will adopt their own stance; it should be whatever they are comfortable with. But what if you are not comfortable, how can you improve the comfort? Here are a few tips:

- Wear comfortable clothing.
- Try to put your weight more on your feet then your hands. This way, your shaking will have more impact, and you run less risk of hurting yourself. Some players find themselves more balanced by putting all their weight on one leg, while others split the weight evenly on both legs. Either way is fine, as long as you are comfortable.
- Choose some comfortable position for your wrists. They will get tired if they aren't held properly. About waist level is about right for most people, depending on height of the person and the machine.
- The higher you hold your head, the better you'll be able to see the ball's position. The lower you hold it, the better you'll be able to judge its direction (e.g., while trying to decide whether or not to let it bounce off the center post); find a good compromise.

5. Flipper Control

5.1. Backhand shots

This refers to any shot made with the flipper that wouldn't be normally used. (Example: using the right flipper to hit the right ramp in a game.) These type of shots are usually made from the edge of the flipper closest to the slingshots, and are usually not as powerful or accurate as forehand shots. However, being able to use them effectively can increase scores. Some games are more friendly towards backhand shots than others; experiment a little. Note that games with short flippers are harder to backhand on.

Short backhand shots can be set up from a flipper-trapped ball. If you have a ball trapped beneath the target or lane you want to hit, make a very quick and tiny flip, and hold the flipper up. The ball should roll up the inlane a bit, gaining enough velocity to roll up the upraised flipper a little. When it is at the right position and has the right velocity (usually none or just as it's starting to go back down), flip quickly and hard. You can often slap the ball up parallel to the slingshot and wherever you wanted. Of course, there is a danger that it may just go over the slingshot and into the outlane.

5.2. Trapping the Ball

Beginning players tend to just flail randomly at everything that comes near a flipper. Intermediates tend to just hold the flipper up and keep it there. This works for some cases, but in others the ball will bounce randomly back up into play, or roll up the inlane and right back down the outlane, or any of a number of uncontrollable things. Here are some of the most important techniques to improving your pinball skill. Learn all of them, then use the ones that you are most comfortable with!

Dead Trap (aka the *Drop Catch*): when the ball is moving toward a flipper, hold that flipper up, and immediately before the ball hits the flipper, let it drop. This will absorb almost all of the ball's energy, and you'll wind up with the ball just sitting on the lowered flipper. It's easier said than done, and usually takes a lot of practice to master. But it's well worth it. (This works best with Williams flippers, but then again, what doesn't? :-)) Be aware that the ball may still have a lot of spin--it may bounce slightly, come down, and accelerate towards the center drain at about Warp Factor 9. Be ready to flip.

Delayed Dead Trap / Drop Catch" this is very similar to the technique above, but you release the flipper exactly as the ball hits it, or just slightly afterward. After the flipper comes to a rest, the ball will actually roll slightly back up the flipper, possibly into the inlane for a catch or immediate shot. Note that both variations of this technique are easier when the ball is moving fast, since in order for this to work the ball must be moving faster then the flipper. The faster it's going, the less likely you will release the flipper too early, and the ball is more likely to catch up with the flipper before it reaches its rest position.

Live Trap: basically, this is the opposite of the Dead Trap. Instead of holding the flipper up, time your flip so the flipper will be all the way up at the instant the ball hits it. If done properly, the ball will then roll down into the standard catch position.

Bounce: if a ball is heading toward a flipper, and you really wish the ball was heading toward the other flipper so you can catch it, just keep the flipper down and let it bounce off the flipper rubber and over to the other flipper. This won't work very well if the game you are playing has loose, dirty, or torn flipper rubbers. A nudge at the moment of contact can be helpful.

Roll: Note that for the bounce to work, it must hit the rubber of the flipper, if the ball hits farther up the inlane, where there is usually metal instead of rubber, the ball will not bounce; it will instead suddenly roll STDM. If the ball is going to hit that metal portion, hold the flipper up. The ball will roll up the flipper after hitting the metal piece, and over to the other flipper.

Learn these trapping techniques; practice all of them! It is not possible to be in total control of a game until you can master trapping the ball.

5.3. Flipper Passing

These are techniques designed to move the ball from one flipper to the other. Note that the "Bounce," given above, also applies here.

Ramp pass: If the ball is caught on one flipper and you wish it were on the other flipper, many times there is a playfield feature (such as a ramp) which can be hit from one flipper and returns the ball to the other. (The ramps on T2, for example.)

Speed Pass: If a ball is coming down an inlane at a fairly high speed (usually by a ramp shot or other shot that involves habitrails), you can sometimes just hold the flipper on that side up, and let the ball "ramp" over to the other flipper. Sometimes a small forward push on the machine when the ball nears the center space can help the ball make it across. (An extension to this: with a little practice, you can learn to raise the other flipper at just the right time so the ball will roll gently down into a catch position. It's very similar to the "Live Trap," given above.)

Trap Pass: with a flipper up and the ball caught on that flipper, just release the flipper and very, very, very quickly give it a tap back to the up position. The ball should hit the lower corner of the slingshot, hit the flipper (or the bottom part of the return lane), and move over to the other flipper. It's actually pretty easy to do; all it takes is a little practice. And it's better to flip too soon than too late for this one--too soon will usually just make the ball bounce around without leaving the flipper area, or roll back up the inlane, while too late will often bounce the ball unpredictably back up into the center of the playfield. This is one of the easiest to learn and least risky type of flipper pass when a ball is trapped; therefore this is the technique to practice and master first!

Tap Pass: with a caught ball, release the flipper and then very gently and quickly tap the flipper button just enough to move the ball to the other flipper. Technically the ball does not have to be trapped on the flipper to use this technique. It can be moving or not; it depends on how refined your control of the flippers is. Trapping it to start is the easiest way, but it can be used while the ball is moving, where the trap pass is not possible to do. This tends to work better with the "old" Williams flippers than with solid- state ones. Note: the difference between this and the "trap pass" is that you do not bank the ball off the slingshot or anything else. It is a pass from flipper to flipper that when done correctly touches nothing but the two flippers. Also, in the case of the "trap pass," the flipper noticeably moves, but in the case of the "tap pass" the flipper normally moves no more than .25 inches.

Lane Pass: this is much more risky. Basically, you want to shoot the ball across the opposite flipper and up through the opposite return lane. With the ball in the same position as above, just let the flipper down, so the ball starts rolling down the flipper toward the center drain. Hit the flipper button just as the ball reaches the end of the flipper. The ball should shoot just over the opposite flipper and up the opposite return lane. Be careful not to shoot too fast, though, or the ball may go all the way up the inlane and drop neatly into the outlane.

Touch Pass: With the ball in the catch position, lower the flipper and let the ball roll to about halfway down the flipper. Then, tap the flipper button extremely lightly (do not push it all the way in). The ball will bounce over to the opposite flipper. Strength required depends on the condition of the flippers. Flipper button switches must be in good shape for this to work, but it works on more machines than you might at first imagine.

6. Shaking and Nudging

Shaking the machine is one of the things that MUST be practiced in order to get right. The timing will become more apparent as it is practiced more. The art of nudging is not an easy thing to describe in words, but here's an attempt anyway. :-)

Machines are usually much more sensitive to side-to-side shaking than to forward-to-back. Shake this way whenever possible. However, there are situations where side-to-side shaking is necessary to save the ball.

Forward-to-back shaking is effective for the entire playfield, while side-to-side shaking is really only effective for the lower part of the playfield.

Don't be shy about using body english: although, of course, it's much more impressive if you manage to get a high score without ever nudging the machine.

One area of the playfield where nudging is absolutely vital is around the slingshots. A ball that is moving horizontally is much more likely to drain, especially on newer machines. Knowing how to nudge the machine, both when the ball first hits the slingshots and when it leaves them, will greatly decrease the number of outlane drains. Generally, if a ball is going to hit the lower half of a slingshot (i.e. closest to the flippers), nudge forward just as the ball makes contact with the slingshot rubber. If a ball is going to hit the upper half of a slingshot, nudge forward just after the ball ricochets, to force it further up the playfield and away from the outlanes.

7. Preventing Center Drains

The ball is headed down the middle, there's nothing I can do about it. Or is there? The answer is yes, there are some things that you can do; they don't always work, but the better you get at them, the better chance of them working! So practice, practice, and practice!

Sliding the machine: some machines will put up with side- to-side sliding without tilting because there is very little jarring of the machine involved. If the ball is heading toward the center drain, slide the machine to move one of the flippers into the path of the ball as it is coming down. The ball basically moves along the same line in space whether you slide or not. This technique takes advantage of this fact to ensure the ball always hits a flipper. If you get really good at this technique, you will hardly ever suffer center drains on machines that easily allow sliding. Note: Sliding is easier on some machines than others due to total weight, weight distribution, playfield height, the floor surface friction, and of course, tilt sensitivity. Try to get behind your push as much as possible to avoid hurting yourself.

Slap saving: the object of a slap save is to brush the ball with one flipper just enough to knock it onto the other flipper. From there, it can either be hit back into play, or knocked back onto the first flipper. Basically, if a ball is going to go down the center, choose (quickly) which flipper you think the ball will come closer to. Wait until the ball is a few inches above that flipper, and then wind up and slap both the flipper button and the side of the machine. Hard. If you do this with the right timing, the ball will hit the tip of the upraised flipper. Usually the ball gets hit just enough to be reached by the opposite flipper, so you'll probably want to follow up the first slap with a lighter one on the other flipper button. If you get enough of the ball, you can either catch it or hit it back into play from there. Otherwise, you will have to do a secondary slap save to hit the ball back to the first flipper. This, however, requires that the first flipper be returned to the down position by this time. You'll probably find that on a badly maintained machine, the flippers take their sweet time returning to the down position, making this move impossible. (This is also the case if the player is so thrilled that he actually saved the ball that he forgets to lower the original flipper. :-)) However, if you are lucky enough to be playing on a pin with quick flippers, you can perform this "three-point" slap save.

7.1. Center Posts

Some machines have a center post, which is a steel post with a rubber band on it, between and slightly below the flippers. If a ball is coming straight down the middle, one option is to let it bounce off the center posts. Here are some tips for games that have center posts.

Center posts are a little more tricky, since you have to decide whether to use the flippers or whether to let the post do the work for you. On a game without a post, you always go for the slap save, but on a game with a post, there's that additional split-second decision that you have to make that makes games with posts a little more challenging (although they look easier).

It takes practice to develop the nerves to just let a ball bounce off of the center post. Generally, the ball will only bounce back into play if it is heading *straight* down the middle towards the post. Also, the ball needs to be moving fairly fast in order to bounce high enough. Some people prefer to always go for a slap save whenever possible, and to only let the ball bounce if it is heading exactly between the two flippers.

If you do decide to let the ball bounce, *don't flip*. If you use the flippers and the ball hits the post, most of the time the ball will just hit the underside of a raised flipper and drain. (A group of players in

Detroit calls this not flipping "The Chill Maneuver," since you have to use a lot of restraint.) Also, try to nudge the game in such a way so that the ball will hit the post as squarely as possible. This will help to put the ball back in play, as it can counteract any spin that the ball has picked up.

8. Preventing Outlane Drains

Although it may sound obvious, the best way to save a ball from an outlane is not to let it get near one in the first place. The next two tips are based on that little piece of wisdom:

Nudge the machine forward as the ball strikes the slingshot bumpers or heads for the outlane area, to force the ball back up the playfield. See Section 5 for a little more detail.

If the ball is heading toward an outlane, try to bump it out of the way before it gets to the top of the outlane (e.g., try to bump it against a slingshot). Once it gets to the post that divides the inlane from the outlane, it's much harder to save it. If the ball does get to that post, use nudging and rubber in that area to save the ball.

If the ball stops on the divider between the outlane and inlane, move the machine sharply toward the inlane, then as quickly as possible toward the outlane. Balls tend to pick up more velocity on the first movement, so most will fall on the inlane side of the divider.

9. Saving a Ball AFTER it drains

When playing pinball, we of course try as hard to avoid draining, so that we can keep playing on the same quarters and create nightmares for operators trying to control ball time. However, what can you do after the ball drains? Do you just give up hope and swear at the machine? There are some techniques for saving a ball AFTER it drains. That is, after the ball goes down an outlane or center drain, it is sometimes possible to get the ball back in play. In fact, some games (notably DE's Rocky&Bullwinkle and Jurassic Park) even give you extra points for successfully getting the ball back in play, not to mention all the extra points from your last second 'extra ball' :-). The various techniques I know of for saving a ball after a drain are given below.

I know that some people call bang backs 'death saves', and vice versa. The terminology I use in this post is the terminology I have heard partly on rec.games.pinball, and it is the terminology that was primarily used when talking to others at the PAPA and AMOA tournaments.

Technique 1: The Death Save

This technique is used to save a ball after a right outlane drain (and on Gottlieb machines a left outlane drain also). Death saves are usually easiest on Data East games, although they are sometimes possible on other manufacturers games when the Tilt setting is not very sensitive. If you are just learning the technique, then definitely practice on a DE game before trying it on other games.

There are a few variations to this technique, but they all have the same basic concept. Immediately below the flippers, there is a piece of metal facing up and to the right. It is designed to help balls roll into the ball through (which is where balls are stored and fed to the plunger). When the ball drains down the right outlane, it will collide head on with that plate. By pushing the machine forward (and possibly to the right, see variations below) really hard as the ball collides, the ball can bounce back into the playfield through the space between the flippers. The variations with this technique deal with how you move the machine and what to do with your flippers.

Variation 1: With this variation, don't hold either flipper while the ball travels down the outlane. As the ball hits the metal plate, bump the machine on both sides equally. The ball will travel straight up the playfield a few inches, going passed the flippers. Since your timing is never absolutely perfect and the ball often has a spin, it will actually travel up slightly to the right or left, enough so that after the ball has gone a bit passed the flippers, you can then flip the flipper that is closest to the ball to send the ball up the playfield. This variation is the one that tolerate a more sensitive tilt mechanism then the other variations, but is not always as successful.

Variation 2: With this variation, hold the left flipper up. As the ball hits the metal place, move the machine hard forward and to the right (therefore you will be placing more force with your left hand then with your right hand). As with variation 1, the ball goes up passed the flippers; but because you are also pushing the machine to the right, the ball always heads towards the right flipper. Holding up the left flipper is done so that the ball doesn't hit it then head back towards the drain. This technique is usually more successful then variation 1, but because the machine has both forward and sideways motion, there is more possibility to tilt the machine.

Variation 3: This is just like variation 2, except that it can be used on games with practically no tilt or insensitive tilt settings. Instead of just using your arms to move the machine, use your body. That is, you hip check the machine to get more force. If you use this technique, make sure you don't hit the coin box or you'll slam tilt the machine. Also, make sure there is no bar across the front of the machine (operators often put bars to make it more difficult to break into the coin box), as that can really hurt!

Variation 4: The "Gottlieb Death Save". Many recent Gottlieb machines have a plastic post on the right hand side of the ball through. As a result, that post can be used to do a death save of a ball coming down the left outlane. Use the technique from one of the previous variations, and time it such that you hit the machine as the ball hits the plastic post. The biggest problem is that recently Gottlieb's have had very sensitive tilts, and so you are much more prone to tilting.

In all cases above, it is not how far forward you hit the machine, but how quickly you accelerate it. Sometimes even on machines with only moderate tilt settings, you can get away with a single 'danger' warning, and therefore do two death saves per ball (most games tilt after 2 warnings).

If you are going to attempt death saves, pull the machine away from the wall, otherwise your efforts will be futile. The exception is on games where the legs are not very tight, and the game bounces around without the base of the legs moving. I've actually been more successful in getting death saves on those 'bouncy' machines then on sturdy machines that I have to pull away from a wall.

Technique 3: The Bang Back

This technique involves bumping the ball back into play after it goes down the left or right outlane. I would have never thought that this would work from word descriptions, until Rick Stetta showed be how to do it. I then spent a month practicing it continuously until I got by first one. Now I can get them consistently on some machines, and not at all on others. I still have not figured out what characteristics of a machine allow you to do bang backs. I get them very consistently on a Twilight Zone (TZ) at one local bar, but can't get them at all on a TZ at a different local bar, and only sometimes on yet another TZ. All these games are set against the wall, and tilt settings seem to be about the same.

Anyhow, for the technique: If the ball is heading down the right outlane, hold up the right flipper. When the ball is below the flipper, hit the metal lockdown bar quickly, hard, slightly upward, and slightly to the left, immediately below where the ball is. The ball which was travelling towards the drain will change directions from the hit, and travel diagonally upwards instead, towards the playfield above the left flipper. Once the ball is above the left flipper, you flip, and the ball is back in play. Since you want to hit towards the left, it is often easier (at least for me) to cross your hands: hold the right flipper with your left hand, and hit the bar with your right hand. On TZ, which is a wide body, you can also hit a little below the lockdown bar right on the wooden cabinet between the coin-box door and the plunger. On regular width games, there really isn't any room there, so you must hit the lockdown bar. You don't want to hit the coin door, because 1) you may slam tilt, and 2) it hurts like hell!

The trick to the bang back is not to hit as hard as you can. The timing, direction of the hit, and force acceleration are the most important. You must hit the ball at just the right time. You must make sure you hit up and to the left. And you want to hit the machine 'quickly', not 'hard', so that the force is 'instantaneous' instead of being spread out over a quarter second or so. When I started doing the bang backs, I kept tilting the machine and never succeeded. As I've gotten better, I never tilt that same machine (not even a warning) and I've got over 75% success on balls going down the right outlane. And just to show that you don't have to hit hard: one time I did hit really hard, and yeah, I saved the ball, it went all the way up the left inlane and back down the left outlane.

A bang back also works for balls coming down the left outlane. In this case, hold up the left flipper (optionally cross hands to do so), and hit upwards and to the right, so that the ball travels onto the right flipper.

Bang backs are also possible on center drains.You can get a draining ball to travel towards the left or right outlane if the ball catches the tip of the flipper. As long as the ball goes a little beyond the flipper, it will have to roll back down to the through, and hence you can perform a bang back as it rolls back down. I have (surprisingly) found that the slower the ball is moving, the easier it is to do the bang back. Mainly a slower moving ball gives me more time to cross my hands and better chance at getting the timing just right.

On twilight zone, bang backs are much easier from the right outlane, because the right outlane is much narrower than the left outlane. However, bang backs are still possible from the left outlane; you just have to have your timing that much more accurate, and you must hit a little harder.

Yes, I have hurt my hand doing bang backs, but in each case where I did hurt myself I did not hit the machine at the right place (e.g. caught the edge of the coin-box door), and did not succeed in getting the bang back. When I did succeed, there was no pain at all (although I guess that because I succeeded even if there was pain I wouldn't notice it :-)).

Before you attempt any bang backs, look over that machine closely. For example, I was used to doing the bang back on TZ. I tried one on The Addams Family, but because it is not a wide body, the plunger is closer to the center. Around the plunger is a square steel plate that is protruding, and I caught the corner of that; OUCH!!!! So if you are going to try bang backs, look at the game closely beforehand so you know exactly where you will hit the game.

9.1. Summary on Saving Outlane Drains

Different techniques work better on different games. If you play a new game, just try the various techniques and see which one works for you.

I hope this helps. I know I was never able to do any of these saves until I saw someone else do it first (maybe it was only psychological :-)). But even if you aren't able to do them yourself, hopefully you will have a better understanding of the different techniques in case other r.g.p.netters talk about them.

10. Multiball Play

On most new games, a significant percentage of the points are awarded during the various multiball modes. This section gives various techniques for playing in multiball. Of course, most of the tips in other sections are still valid. :-)

Note that "Multiball" (or "Multi-Ball") is a Williams/Bally trademark. Data East ran afoul of Williams lawyers, and for a few games (Lethal Weapon 3 through Jurassic Park) called their multiple- ball play "Tri-Ball." In Last Action Hero, it was called "M-Ball." Then, Data East settled their suit with Williams, and was able to license the use of the word. So, starting with Tales From the Crypt, they can use the word "Multiball" (even though it still says "M-Ball" in some of the displays). Gottlieb has always used the word "Multiball" without a problem...wonder why?

Although this may seem obvious, try to manage things so that you only have to worry about one ball at a time. Several balls bouncing wildly near the flippers usually means a quick drain for at least one of them. Some solutions are to trap one on a flipper (a temporary solution, as Murphy's Law dictates that the other ball(s) will soon arrive at the same flipper), or "park" one ball somewhere on the table where it can occupy itself for several seconds. Bumpers, ramps, and eject holes are good for this.

Multiball is the one time when flailing at the balls is an acceptable method of play. Just make sure that it's constructive flailing, not random flailing. :-) That is, although you are just hitting the balls as they hit your flippers, still keep in mind which shot you want to make, and try to send one of the balls in that direction.

In multiball, it is often impossible to watch a ball through the entire operation of the flipper; try to "zoom out" and look at the entire playfield, not just one ball. Then you can "zoom in" on a particular shot that must be made. Having a good "feel" for the flippers helps a lot here, too. (Twilight Zone is a GREAT machine for practicing this tip, because it will stop the ball and play the Zone theme ("Do Doo Do Du"...you know what I mean) before a Jackpot or Camera shot. Just "zoom out" until you hear that music, and then look up and "zoom in" on the upcoming big point shot.)

Most games with upper-playfield flippers have jackpot shots that are meant to be shot from this flipper. On these games be aware of when a ball is coming to this flipper. Sometimes it's better to ignore the lower balls for a second, even if one of them drains, in exchange for getting a jackpot. Also, look for shots that will feed a ball to the upper flipper (for example, the Hidden Hallway on Funhouse, or Thing on TAF).

If you have one ball on or coming to a flipper while another is about to center drain, just aim and hit the second ball with the first. A bit unpredictable, but it will work.

11. Becoming a Pinball Wizard

It is possible to play for years and see very little improvement in your scores. It is also possible to get better such that your average scores doubles every month or two. Here are some hints

The biggest difference between a novice and an average player is that the novice just hits the ball anytime it comes near the flippers, while the average player does try to aim for various shots. Most novices will eventually reach the level of an average player with enough play. However, it happens all too often that an average player remains average all their life. So what is the difference between the average player and the pinball wizard? The answer that most people give is *consistency*! But that doesn't really tell you anything. How do you become more consistent? The answer to that question is the same as the answer to "How do you become a wizard?".

The keys to becoming a wizard and improving your consistency are control, aim, and concentration. It is necessary to practice and practice and practice until you have mastered these three key components.

11.1. Control

Most drains are a result of missing a shot. If you make the shot you are aiming for, then usually it results in a nice feed to a flipper for another shot. If you miss your shot, and hit, say, the post between two shots, then the ball bounces around, and possibly comes STDM or straight to an outlane. However, before you can even think about aiming your shots, you have to be in control!

When you are in control of the ball, then you can do anything you want with it. The way you get control is to learn how to catch the ball. Anytime the ball is trapped, you are in control of your next shot. If the ball is randomly bouncing around, you are not in control.

What makes the biggest difference between the wizard and average player is how quickly they can gain control. A wizard may recover control within a second, while average players may take 30 seconds to gain control, if they don't drain first. The various techniques for trapping the ball described in Section 5.2 are the key to gaining control. Learning to nudge and shake the machine effectively also helps significantly in regaining control of a ball quickly.

Once you have the ball under control, you can then go on to the next step, which is aiming.

11.2. Aiming

Depending on which game you are playing, there could be anywhere from 3 to 8 different shots that can be made from each lower flipper, and 1 to 3 shots from any upper flipper. Each successful shot is made from a different position on the flipper.

The position of the ball on the flipper when you should flip depends on the speed and spin on the ball. Therefore one major objective is to only take shots when the ball is travelling at a known speed. If you take a shot and you just miss, then you can adjust your shot to hit a little sooner or a little later depending on which side of the target you missed. However, this only works if the next time the ball is going the same speed. So the question is then, how can you get the ball to always go the same speed, so that your aim can improve? Here are a few ways:

- When you catch the ball, wait for the ball to come to a complete stop. When you let go of the flipper, it will always roll down the flipper at the same speed. You can therefore learn where each shot is on the flipper, and thus start making your shots consistently.
- Whenever you shoot a ramp or hole that feeds an inlane which then feeds a flipper, the ball is generally going the same speed. Therefore don't try trapping a ball that is rolling down the inlane. Instead, learn to make those moving shots, and keep in mind that the ball is generally moving at the same speed.
- Some games have eject holes which send the ball to a flipper; for example the chair and swamp in TAF, or the slot machine in TZ. On games like this, the speed of the ball ejected is generally the same, and therefore you can learn to hit these shots. Many of these ejects are actually a little more random, but not completely. That is, they tend to not always send the ball in the exact same direction. Learn to watch the direction of the ball as it is ejected, and react accordingly. For example, sometimes the eject shoots the ball towards the end of the flipper, while other times it shoots it towards the inside part of the flipper. You may then develop two aiming strategies, depending on where the ball is headed.
- Take your time! Many of today's games have count-down timers for various modes. This is one of the pinball industries greatest marketing strategies for getting more of your money. The count-down timers cause you to hurry up to make a shot, and in hurrying you increase your chances of missing the shot, and hence draining, and hence putting more money into the machine so the pinball company makes more money. DON'T LET THE TIMERS HURRY UP YOUR SHOT! You are much better off taking your time, and sacrificing a few points because you took the time to aim your shot, then you are hurrying your shot to try and get most points, but instead you miss the shot and get no points at all and lose your ball! So again, don't hurry any shot regardless of the timers. The key to playing with these timers is that as you get better, you will need less time to aim your shots, and only then is when you will be able to take advantage of the full points offered by the timed modes.
- Don't try aiming a ball that is coming straight down to the flippers. The ball is moving at a random speed in a random direction with a random spin. If you make a shot, you were lucky. The only time you should flip with such balls is when the ball is near the tip of the flipper and a slap save is required; otherwise, you should be able to use one of the catch techniques to get the ball under control. Once the ball is under control, then aim for the shot you want to make.

If a wizard seems to be much more consistent then you, it is probably because they are always making sure that the shots they take are well aimed shots. If the ball is always travelling at the same speed, and you hit it at the same time, then it will go into the same place.

11.3. Concentration

The third key component to significantly improving your play is concentration. But what does that really mean? You can concentrate on just about anything; so what you must learn is what to concentrate on when you are playing a game. This section describes the mental skills that are needed to accompany your physical play in order to get those high scores consistently.

Detach yourself from your surroundings: whenever you play pinball, there will always be some kind of distractions around you. It could be people talking, people watching you, music that is too loud, someone nearby smoking, people walking by, or even people accidentally hitting you as you are playing. In order to improve your concentration, you must learn that these distractions will always exist, and thus no matter what the distraction is, don't get upset about it; instead, live with it! Once you learn to stop blaming everything around you for your poor play, you will be able to play much better.

Don't talk to others when you are playing: if you are talking, then you obviously don't have 100% concentration on your game. Of course, talking is OK if the socializing is more important then the game; but if you want to get a high score, then play and shut up!

Use your peripheral vision to keep an eye on the entire playfield and display: it is OK to concentrate on where the ball is going, but never forget to keep an eye out for blinking lights, or messages on the dot matrix display for what to shoot for, etc. If you use your peripheral vision wisely, you will always know what is going on the playfield. Not only will that help you in planning which shots to make, but it will also prevent your peripheral vision from catching distractions that are off the playfield, as you'll be busy watching what is on the playfield.

Get into the game: Most games have the sound loud enough that you can hear it. Use the different sounds from a game to psyche you up and prepare you for the shots that follow. For example, when the TAF multiball sequence starts, it revs up then yells

SHOWTIME! Get into those quotes; say them out loud or to yourself, it doesn't matter, but say them. You will then develop the habit that whenever you say SHOWTIME, your mind automatically goes into multiball mode and knows which shots to make. This allows your subconscious mind to take over part of the duties of knowing what is going on in the game, which in turn will increase your ability to do what is required during those modes.

Learn the way the ball bounces: even if a ball is bouncing around out of control, learn the way it bounces, as you may be able to predict where it will eventually land, and hence either nudge or trap the ball back into control.

Adapt as you play: As you play a game, keep learning and adapting to it. If you miss a shot, quickly analyze why you missed it (e.g. shot too early; shot too late; didn't let the ball come to a complete stop) and adjust your play accordingly so the next time you've got to make the same shot in the game you don't make the same mistake. Sometimes various solenoids change as you play more; this is an electromechanical properly, where pieces work smoother when they warm up, in the same way that your car operates much better after it has warmed up a bit then when it was cold. Because solenoids do exert this behavior, it is possible that things like flipper strength and kickout vary slightly as the game progresses; when you notice such changes, adjust accordingly.

Plan a strategy: keep planning and adjusting your strategy as the game progresses. Not only is this important for making the right shots, but it ensures that your mind is on the game you are playing, and not on anything else.

Control and Aim: Any time you are just flailing away and just aren't hitting anything, remember these two most important basic components, and get back to them. First get the ball back under control, which means trap it! Then take a deep breath and hold the ball for a few seconds. Remind yourself how you must keep control of the ball at all times, and only when you are ready, then aim and shoot the ball.

Learning to concentrate on your game is not hard as long as you recognize what it means to concentrate.

12. Playing Pinball vs. Practicing Pinball

What is the difference between practicing pinball and playing pinball?

The answer is that when you are playing pinball, the score on the display indicates how well you are doing. When you are practicing pinball, the score on the display is meaningless; instead you rate yourself based on the success of the techniques you are practicing.

So here is how you practice pinball. This will cost you lots of quarters. Or if you are ever lucky to play on a machine that is set for free play, then take advantage of that and practice instead of playing it!

- Pick a technique that you want to learn. Only pick one technique at a time. First, read the technique in this guide. Then watch a player who uses the technique, and try to understand when and why they are using the technique.
- Go to a machine which you can practice on alone. It is very difficult to practice when you are in a 2 or more player game. You are better off using one of the less popular games to practice then you are the most recent game that everyone wants to play, because you'll be able to practice as long as you like. However, in selecting a game to practice on, don't practice on a machine that has weak flippers until you have successfully done the technique several times on a game with good flippers. This is because weak flippers tend to do weird things with some of the techniques, something you'll have to learn for yourself.
- If you keep trying a technique but you are still having trouble, then ask a person who knows the technique to demonstrate it. In some cases, change to a different machine, because different techniques work better on different machines.
- If you are practicing flipper passing, then just keep passing the ball back and forth between the flippers. Don't worry if you get really low scores, because obviously you won't be hitting anything. Just count how often you are successful vs. how often you miss, and that will give you an idea on how you are improving with that particular skill. TZ, TAF, and IJ are possibly your best bets for practicing flipper passing.
- If you are practicing aiming, select one shot, and only shoot that shot until you can shoot it five times in a row without missing. After that, select a different shot, and keep shooting it until you aim for it and hit it five times in a row without missing. Now randomly alternate between those two shots, until you can hit anyone whenever desired. Then add a third shot, practice only that shot, then practice it in conjunction with others. Street Fighter II is probably your best bet for practising your aim, since there are only 8 shots in the game, and all 8 shots always return the ball to the flippers in the same way. FT, T2, IJ, and any other game where you can repeatedly shoot ramps are also good for practicing your aim.
- If you are practicing slap saving, then pick a machine that seems to always be draining down the middle for you. Your best bet would be a machine with insensitive tilt, as you can learn how you can actually slide the machine to improve the effectiveness of the slap save. Once you've learned the technique, then try it on machines that have more sensitive tilt; learn how much you can get away with, and how much you have to hold back on the technique to prevent tilting.
- If you are practicing nudging, then pick a machine in which there are rubber posts separating the inlanes and outlanes, and doesn't have a left lane kickback. Also make sure that the machine doesn't have too sensitive of a tilt. FT and IJ are your best bets for practicing nudging.

13. Strategy

Ever notice how one player might have a ball in play for 2 minutes, and accumulate 30M points, while another player plays for 30 seconds and already has a score over 100M. Once you've learned to aim and hit your shots, you can then start concentrating on maximizing the value of those shots. Here are a few tips on planning your strategy:

- Read the rules sheet for the game. Make sure you know how many points every shot scores. It usually helps to watch other people play, so that you can watch the score and get the machine's hints for what to shoot for. It is very difficult to watch the score when you are playing yourself.
- Learn the shots, or sequences of shots, that are worth the most points.
- Recognize which shots on a game you make most consistently; concentrate on what you must do to maximize the points using those shots. For example, say your easiest shot in TZ was the gumball machine. Then learn to light the gumball machine, so that each shot there is worth as much as 25M, instead of only 250K.
- Most of today's games have modes (e.g. Mansion rooms in TAF, doors in TZ, etc.). When you are learning a game, figure out how many points you can get per shot with each mode. For example, in TAF, you can start "Hit Cousin It", which scores 200+K per hit, plus 1M for hitting cousin it. To hit cousin it, you would shoot THING, then use the top flipper to hit Cousin It; then have to regain control of the ball to make another shot.

This would result in a bonus of about 10M to 15M. However, if you instead used that flipper to hit the left ramp, you would score 1M, 2M, and each shot would spot another letter in THING, and sets you up for a 5x graveyard shot, and you would have never lost control of the ball if you made all your shots. You may have only gotten about 5M for Hit Cousin It, but by changing the selection of which 6 or 7 shots you made while the mode was running, you may have accumulate as much as 20 or 30M in points from other features. The moral is that a mode like Hit Cousin It should be ignored. On the other hand, look at the tunnel hunt. You can get 30M with just 3 shots. It is worth trying to make those shots. And if your aim has become really good, then that won't be a problem.

- Learn which modes run concurrently with Multiball, and which get interrupted or cancelled when multiball starts. Don't always start multiball immediately when it is lit. Instead, try to get one of the other modes running, then start multiball. Using TAF as an example again, suppose you light quick multiball. Don't shoot it yet. Wait until you start another mode, like Mamushka or Hit Cousin It. Once you start that mode, then the first shot you make is to start multiball. Now the same shots you make in multiball are worth more points than normal because of the mode that is running at the same time. In TZ, the GREED, clock chaos, clock millions, slot machine, spiral and town square madness are all good modes to have going when you start multiball.
- Get the most for your shot: i.e. 2 for the price of 1. Many shots serve multiple purposes, where one shot scores more than one thing. For example, when the gumball on TZ is lit, it is worth up to 25M. If you shoot it, you get that many points. However, suppose you don't shoot it yet, but then you start the spiral; then shoot the gumball machine. You'll get the 25M for the gumball plus the 10M for the spiral. So for one shot, you scored twice. Since with every shot you take you have a risk of missing the shot and draining, you can maximize your score by selecting the shots that score more than one thing at a time. As another example, don't just shoot warp factors in STTNG. You could, and each warp factor will get you points, but you are not maximizing your score. Instead, shoot warp factors during a mode. For example, start the time-rift mode, where every shot is worth 10M. Once that is lit, then shoot for your warp factors. So not only are you getting the warp factors, but you are also getting at least another 10M per shot. As another example on STTNG, suppose you want to work your way towards multiball. You shoot the right orbit to light the lock, then again to lock the ball. However, if you just shoot the orbit, you only do one thing. Again, if you do it in a mode, say in the Asteroid mode, you would not only light the lock, but also get some points. Contrast this to shooting the center hole in the Asteroid mode, where all you get is the asteroid point value, and nothing else (unless, say, the EB was lit). So to repeat, go for the 2-for-1 deals!
- Learn which shots are drain shots, and avoid them. A drain shot is one that if you just miss, or even if you succeed, then you will almost surely lose your ball. For example, the Dead End shot on TZ: if you just miss, you hit the post at the entrance and the ball goes flying to the right outlane or STDM. In FT, the captive ball is a drain shot; even if you succeed in making the shot, the ball comes flying back towards the middle. With other shots, even if you miss, it is still relatively easy to regain control. Avoid the drain shots, and only shoot them whenever necessary. Drain shots should only be made when they are sufficiently valuable to justify the risk of shooting for them.
- In league and tournament play, you don't necessarily need to get the highest score; all you need is enough to beat your opponents. In such a case, adjust your strategy to get the quick points immediately. In contrast, when you are going for high scores, then you go for the shots that don't necessarily payoff very big now, but they set you up for something big, like and EB or multiball. For example, if you are playing TZ to get a high score, you'll go after LITZ. If the gumball machine is lit, you pretty much ignore it, since during your game you'll eventually collect it. However, if you are in a match against another team, then you are often better off to shoot the gumball machine immediately, because those 15 to 25M points might be the difference between winning and losing, and it is a really easy shot to do. Don't waste your time setting up for big points if you don't need those big points to win.

14. A Final Word

How many times have you caught yourself saying "Damn, if only I hadn't missed that ramp" or "Too slow, needed to slap save there?" Remember when you had that incredible Billion point game--everything "went right." Well, remember how you played that game, and look at the above listed methods. Sure, the best players get a break every now and again; we all do. But that wasn't why you did well. Didn't you find yourself saying "Wow! did you see that shot--went straight in" or "What a save--barely made it!" The good players do that on a steady and consistent basis. In short--learn the techniques. Practice them. Use them. That is how one becomes a *pinball wizard*.