



Grandpa's Guide to Visual Pinball

Introduction

Welcome. If you know anything at all about Grandpa Gaming of Las Vegas, you know that I am the ultimate retro video game guru. However, not many people know that I also something of a Pinball Wizard. It's true, why ever since I was a young boy, I've played the silver ball. From Boston down to LA, I must have played them all.

Which is why I am excited to bring you Visual Pinball, the latest addition to the B.F.G. (Big Friggin' Grandpa), GGLV's top end Retro Box! Over 1000 realistic pinball games for you to play at home on your screen!

What is Visual Pinball

Simply put, Visual Pinball is an emulator, similar to the other video game emulators on your Retro Box. But, instead of emulating a console, or old computer, it is emulating pinball. And it emulates it well. Emphasis is on real world physics, so the tables look and play like the real thing. In fact, VP is so good, it will actually make you a better player of real life machines.

Now no video pinball game will ever match the actual experience of standing at a real machine, but I am guessing that most of you, unlike Grandpa, don't live in Las Vegas, 10 minutes away from the Pinball Hall of Fame, where you can play hundreds of real pinballs anytime you like. Plus, if you try playing the machines at the PHoF dressed in only a t-shirt and boxing shorts, they will ask you to leave. Don't ask me how i know this.

So, Grandpa to the rescue, providing the next best thing, providing, as I said, over 1000 awesome pinballs you can play at home, dressed in your PJs. Not to mention the 32,000 other awesome video games on the B.F.G. You're welcome.

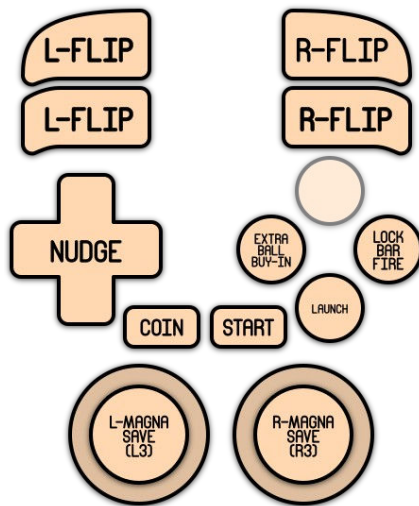
Now, most of the games in Visual pinball will be recreations of actual machines, all the way from the 1930s to the early 2000s. However, there are hundreds of original creations, based on your favorite bands, movies, and even Anime and video game characters. A number of original machines have have music, voiceovers, and even video clips from the source material to enhance the experience. Don't be afraid to explore, and try something new.

How to Play Visual Pinball Machines

Like every other game on the Retro Box, the pinball games are in a list you can browse. You can read descriptions of the games, see preview photos and videos, and even browse manuals in many of the games. Choose the game you want to play, and press the A button. After a few seconds the game will launch.

For the vast majority of games, the controls are thus:

- Select = Coin In. Some games require more than one coin for a credit. Others are set to Free Play and require no coins.
- Start = Start the game, or add a second, third, etc. player, if you have enough credits.
- A Button = Pull plunger/Launch the ball
- Left and Right Shoulder Buttons = Left and Right flippers.
- Up, Left and Right D-Pad = Nudge the table in that direction.
- Start + Select = Exit game



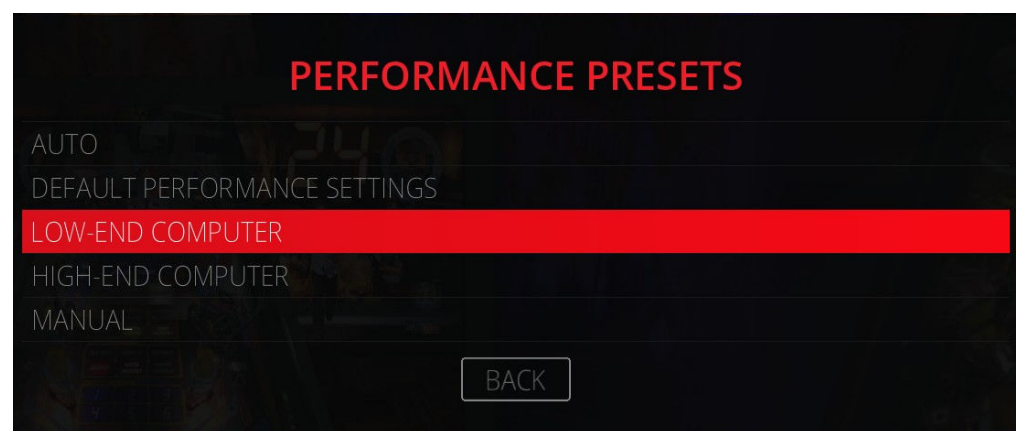
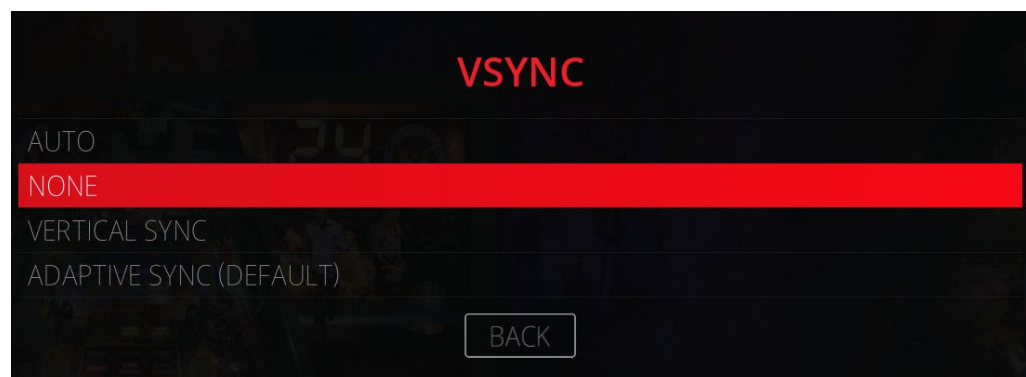
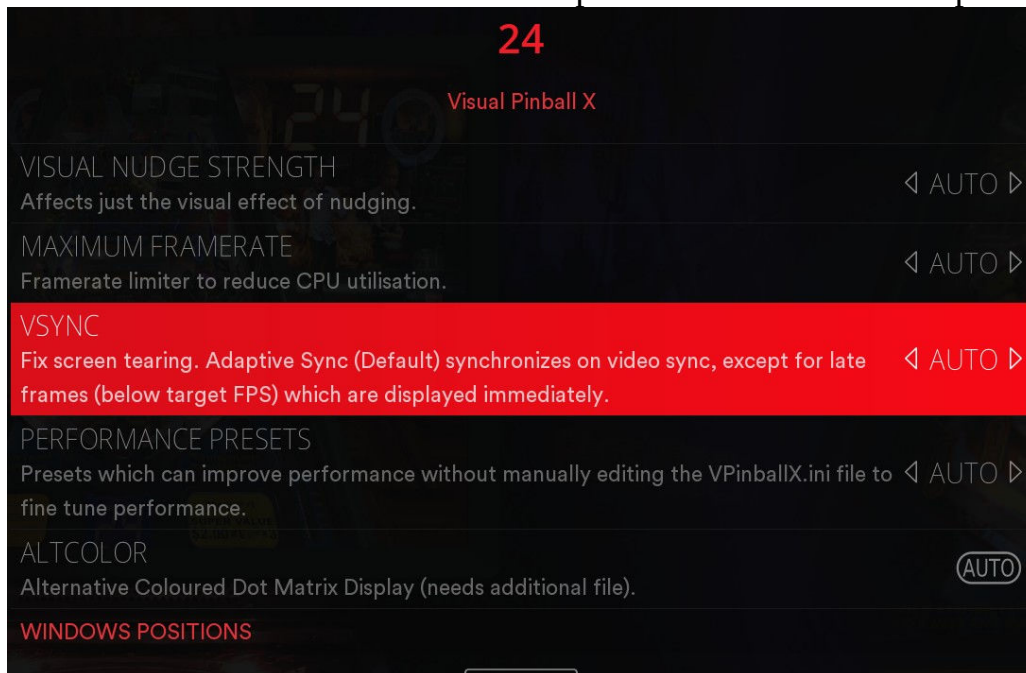
Things You Can Do

This section will cover various options that change the look and performance of the game.

Performance Options

For the vast majority of games, the performance will be fine. If, however, the ball animation is slow and sluggish, the music is off, or there are other performance issues, there are menu options to address this. Highlight the game, and press and hold the A

button until the launch menu comes up, and choose Advanced Game Options. The 2 options you want are Vsync, and Performance Presets. Set Vsync to None and Performance Presets to Low End Computer. Refer to the below pictures.



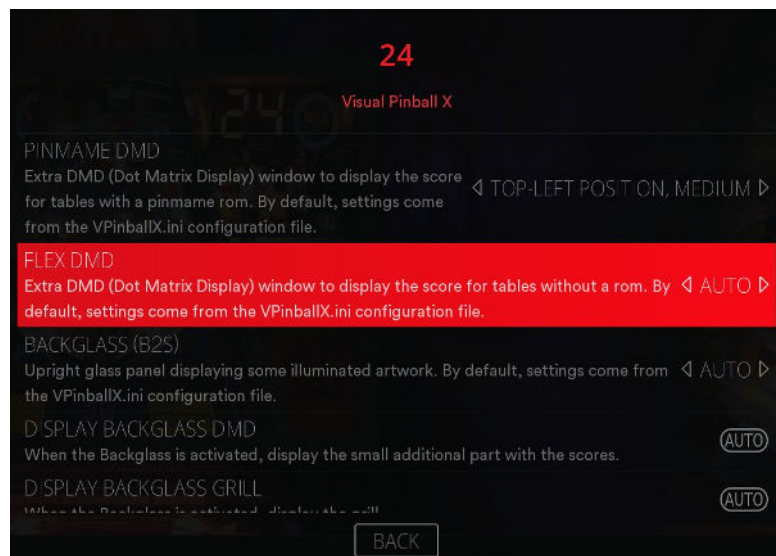
Score Options

For an actual pinball table, the actual game and the score are on two different pieces, the playfield and the backglass. A Visual Pinball table is designed the same way, with the assumption that the playfield and backglass are going to be on 2 separate monitors.

When you run the game on a single screen, sometimes there is nothing visible onscreen to show you the score. Fortunately, VP gives you ways to do this.

As with the above performance options, these are in the Advanced Game Options menu. There are 3 options, that do the same things but for different types of tables. The options are PinMame DMD, Flex DMD and Backglass.

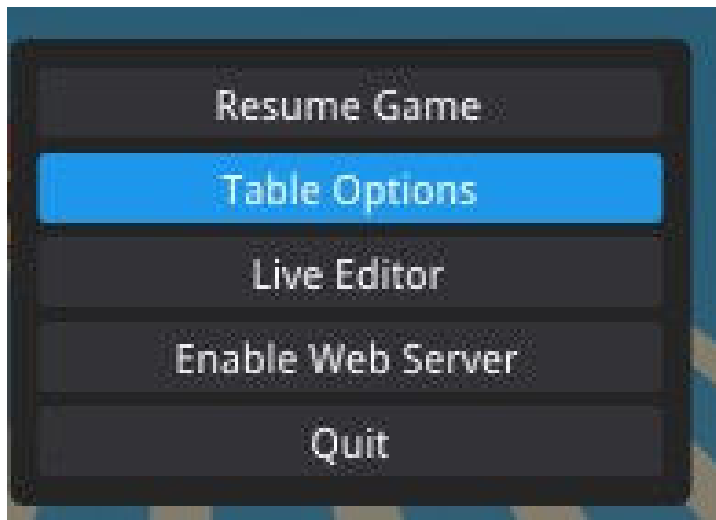
A Pinmame DMD is used in recreations of actual solid state machines from the late 1980s through early 2000s. A Flex DMD is used in original table designs designed to replicate the look and feel of those type of machines. A backglass is used in both original creations and reproductions of earlier, EM machines. In each case, there are 6 options, dealing with size and position. You can choose between small, medium, and large sizes, and Upper left or right corner of the screen. I have gone through all of the games and set the sizing and position to what I prefer, but feel free to change them to suit your tastes. Refer to the pictures below.



In Game Menus and Options

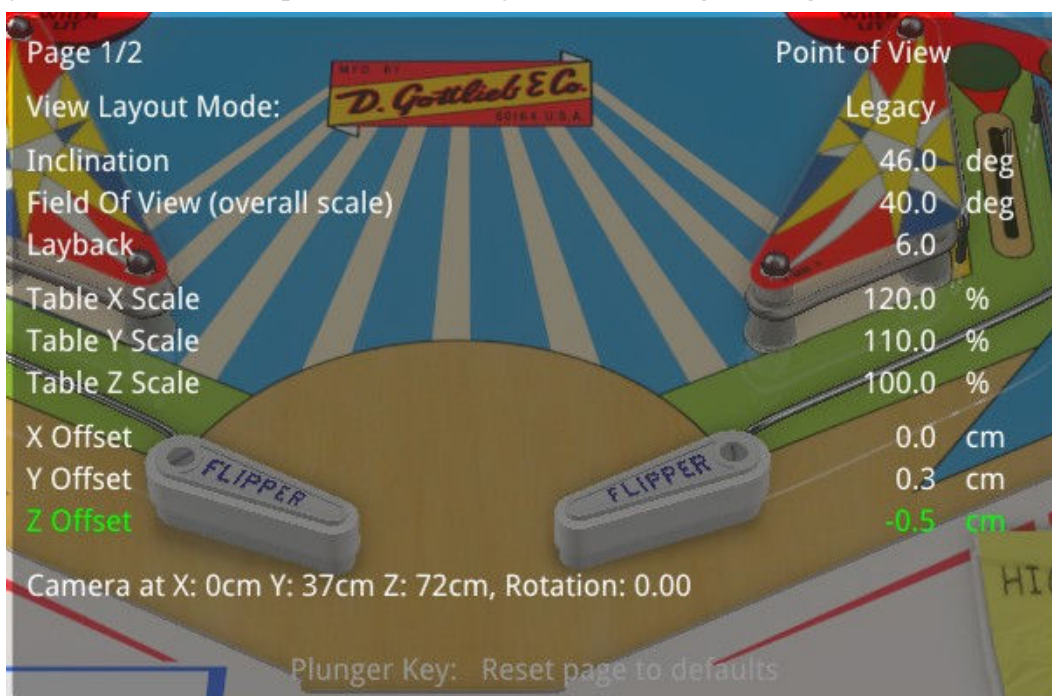
There are numerous options you can access while in-game, to change things like viewing angles, tilt and sizing. These menus are a pain in the butt to access and navigate, but they are quite useful. You will need both a controller AND a keyboard for these.

To access the in-game menu, plug in a keyboard, and press TAB. This will launch the in-game menu shown below. Navigate the options with the up and down arrows, and use ENTER to choose.



Once you get into the Table Options menu, you will need your game controller. There are 2-4 pages in the menu, depending, on the game, with several options per page. The option highlighted in green is the currently selected option. Use the L3 and R3 to cycle between the various options, and the left and right shoulder buttons, aka the flipper buttons, to change the value of that option. The first option on each page is the page number, when that is highlighted use the flipper buttons to go from one page to the next. When you are done making changes, press the Start button to save these changes to a file, so they will be permanent. Then use the ESC button on the keyboard, until you get to the above menu, then use the keyboard to Resume Game or Quit.

Below are some pictures of the most common menu options, and after that, a quick breakdown on what they do. Remember, you can make as many changes as you you want, but they will not be saved unless you press Start, so if you don't like the changes, just ESC out and quit, and when you start the game again, all will be as it was.



Page 2/2	Table Options
Day Night:	52.0 %
Tonemapper:	Reinhard
Difficulty:	20.0 %
Music Volume:	100 %
Sound Volume:	52 % **
Flipper keys: Adjust highlighted value	

- Inclination -- This indicates the degree to which the playfield is tilted. With real pinball, the operator has a great deal of leeway as to how much tilt to put on the game. A game with low tilt is easier to play, and balls tend to last longer. A steeper tilt means shots and ramps are harder to hit, and balls drain faster. If you find that the ball launch is not clearing the trench, that your ramp shots never go all the way up, or that the ball drains too fast, you can adjust the inclination downward to make the game easier. Conversely, if you decide you want more of a challenge, you can raise it.
- Field of View and Layback-- Deals with how the table is angled toward the player's point of view.
- Table X, Y and Z Scale -- These are generally adjusted as one. If the top or bottom of your screen is cutting off part of your playfield, you may want to adjust these, so that it fits better on the screen.
- Table X, Y and Z Offset -- Moves the table on the X axis (Left and Right), Y Axis (Up and Down), or Z Axis (Up and Down in the 3rd Dimension). use these in connection to the previous options to get the optimal table position and angle onscreen.
- Day Night -- I can only assume that this option is named thus, because whoever programmed it was a non-native English speaker, and was unaware of the word "Brightness". That's what this is.
- Tonemapper -- Deals with lighting elements like lamps, flashes and glares.
- Difficulty, Music and Sound Volume -- Do I really need to define these for you?

Things That Will Confuse You

As I said, the above instructions will work on the vast majority of games, especially in single player mode. But there are a lot of exceptions, things that aren't difficult, but aren't necessarily intuitive. I will cover them here.

Hey, Why is My Favorite Game Not Here?

Numerous reasons. Here are some:

- The most obvious is that no one has created a table for it.
- There may be a table, but it is in an older, incompatible version.
- It just doesn't work in Linux -- For most of its life, VP has been a Windows only thing. There are a number of tables I tested that just crashed to the desktop right after launch, some sort of Linux compatibility issue.
- It doesn't work in single screen mode -- A lot of VP tables are designed to be played on a multiple monitor setup: One for the playfield, one for the backglass, and in some cases even a third for the DMD. These tables don't translate well to single screen mode. Specifically, they don't give you a way to display your score onscreen. This is kind of a deal breaker. Unlike a lot of video games, there is no final objective in pinball, no rescuing the princess or defeating the final boss. In pinball the score is everything. Without a way to view it, the exercise is kind of pointless.

Multi-Player Games

Some pinball games are only single player machines. Most of them are from the 1940s through the 1960s, and are fairly obvious as they only have a single set of score reels, or bulbs (see Bulb Scoring in the glossary).

However almost all machines from the 1970s on have had the ability to do 2 or 4 player games. However, unlike older Arcade video games, a pinball game has only a single Start button.

The solution is simple. Press the start button multiple times. Now you have to have inserted enough coins to accumulate the necessary number of credits, else it won't work.

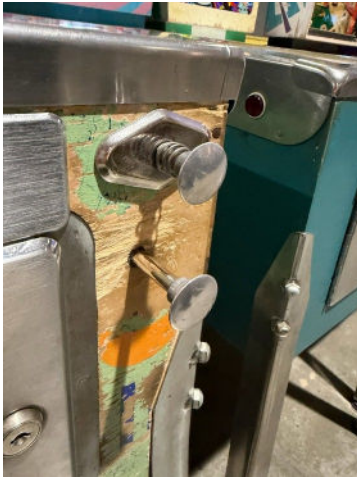
Example: Attack from Mars is 50 cents (2 coins) per player. For a 2 player AFM game, press Select 4 times to generate 2 credits, then press the Start button twice. Easy peasy.

Manual Ball Feed

Now for most of you who have played a pinball machine, it is pretty straightforward. Put in your coin(s), press Start, and a pinball appears as if by magic in the shooter lane. This was not always the case. Prior to about 1966, you had to feed the balls into the lane manually, using a lever just underneath the plunger, see the photo below for reference.

If you are playing an older EM game, and you hear a sound on pressing Start like several balls falling, but no ball appears in the lane, you are probably playing a game with a manual feed. There are some visual clues as well. If, at the bottom of the playfield, you see 5 balls lined up in a trench, that roll away when you press Start, that is a sign. Another is the triangle shaped hood where the ball is deposited into the lane. See pictures below.

Press Start to feed the ball into the lane. In a small handful of games, Start does not work, use R3 (pressing down on the right thumpad) on your controller instead.



Secondary Flippers

For decades, the flipper situation was simple. You had a left one and a right one, each with its own button. Then in the 70s, designers started getting clever, and started putting extra flippers in the middle of the playfield, and putting in targets that could only be hit by using these flippers. However, all flippers facing the same direction were still controlled by the same button, no problem.

Then, sometime in the 90s, a few designers started getting clever, and introduced a secondary set of flippers that were not controlled by the regular flipper buttons. Instead they used a second set of buttons that was on the side of the machines, next to the regular flipper buttons. I have no idea why anyone thought this was a good idea, but hey, it was the 90s. I personally blame the crack epidemic.

Fortunately this trend did not catch on, but if you encounter any of the machines in this collection that use this "feature", the L3 and R3 buttons on your controller control the secondary flippers.

Shuffle Bowlers

This type of game is pretty much what it sounds like. It is a cross between bowling and shuffleboard. You slide a metal puck down a lane, which slides over some rollover switches, and the "pins" you hit retract into the back of the machine. Lather, rinse and repeat for 10 frames.

When you start a game, you will see a disembodied hand sticking up from the bottom of the screen, sort of like Thing from the Addams Family (TV show, not movies). The hand grips the puck.

- Use the left and right shoulder buttons to move the hand left and right, until you get the lane position you want.
- Press and hold the A button. You will see the arm swing in an arc from left to right and back again.
- When the hand is facing the direction you want, release the A button, and the puck will slide down and "hit" the "pins".
- Note, you can still move the hand left and right with the flipper buttons while holding the A button down, but once you release the button, you are committed.

More About Visual Pinball

Now one of the things you will notice while playing the various VP tables, is that there isn't really any consistency in how the tables are presented to you, the player. Some have the perspective set very close up, others have it set as if you are 9 feet tall, and standing on a chair looking down. Some tables have really striking artwork on the sides, others may have minimalist art, or no artwork at all, just bare black or grey to the sides. There will be bugs and glitches here and there.

Try not to judge too harshly. Visual Pinball is not a professional product. It is strictly a free and open platform, run and maintained by people with an intense love of the game. Also, the people designing the tables are not professionals either. Though the tables may be from established companies like Bally and Stern, the designers are not. Again, they are hobbyists, driven by a love of pinball, and a desire to revisit the games of their youth, or see their favorite band/movie/anime etc. brought to life as a pinball game.

The version of VP running on Batocera is a stand-alone program designed strictly to play the various tables. The full VP suite also includes all the tools needed to edit

existing tables, and even build your own from scratch. This product, however, is Windows only, so you will need a Win 10 or greater PC to run it. If you're feeling ambitious enough to check it out, go to <https://github.com/vpinball/vpinball/releases>.

Lastly, unlike the various older video game systems on the B.F.G., which have been discontinued for years, Visual Pinball is still a very active thing. New tables are being released all the time. Two excellent resources are VP Forums and VP Universe. Check them out at <https://www.vpforums.org/> and <https://vpuniverse.com/>. If you want to expand your collection, you will need a clean USB drive and a keyboard. You will need to download tables for the current version, Visual Pinball X. Older version 8 and 9 tables are not compatible.

BTW, yes Grandpa is quite aware that various older game consoles have thriving homebrew scenes, and a number of small, garage companies still producing new cartridges. For the purposes of the Retro Box, I avoid these.

Glossary of Pinball Terms

Playfield. This one should be obvious. This is the part of the machine where you are looking down at, the part with the flippers, bumpers, and all the other doodads. The part where the game is actually played.

Backglass. The part behind the playfield, standing vertically. Has eye catching artwork to attract you to the machine. Was where information like player scores and ball number were displayed, prior to the adoption of DMDs.

DMD -- Dot Matrix Display. Started around 1990. A separate display, below the backglass, which displayed player scores, ball number, etc. was also capable of displaying simple animations when certain targets are hit, or goals achieved. Allowed you to enter your initials for high scores, and could even do simple mini-games like driving or shooting, controlled by the flippers. See below for an example of a video mode from Attack from Mars.

EM -- Electro-Mechanical. Refers to games from about the mid 1930s to the late 1970s. All game logic like scoring, keeping track of what ball you are on, etc. are controlled by simple electronic components like relays and leaf switches. Scores are displayed in the back glass, first by light bulbs (See bulb scoring), then by mechanical reels.

Solid State. The computer revolution came to pinball around 1979/1980. Scoring and other game logic were done by small computers and circuit boards. Scores switched from mechanical reels to simple LED displays, then eventually DMDs. The use of

computers allowed more complicated rules and goals, like "Hit this target 3 times for a bonus score."

Early Solid State. Games before the DMD era. Scores and other information were still displayed on the backglass, using simple LED numbers like old digital watches. SOunds were limited to simple beeps and boops, like first generation video games, and synthesized voices.

Later Solid State. Games from the DMD era on. Actual voices and music. The DMDs could display primitive animations, and even play simple games like shooting and driving, controlled by the flippers.

Shooter Lane. The vertical lane that the ball travels up after launching with the plunger of launch button. It leaves the lane, and goes into the playfield.

Conclusion

Visual Pinball is an awesome way to experience the game that dominated the arcade scene until video games showed up. I hope this guide provides you with all the information you need to get the most out of this feature. If anything is missing or unclear, or if you can think of anything that would make this guide better, please contact me at skgretrogaming@gmail.com.