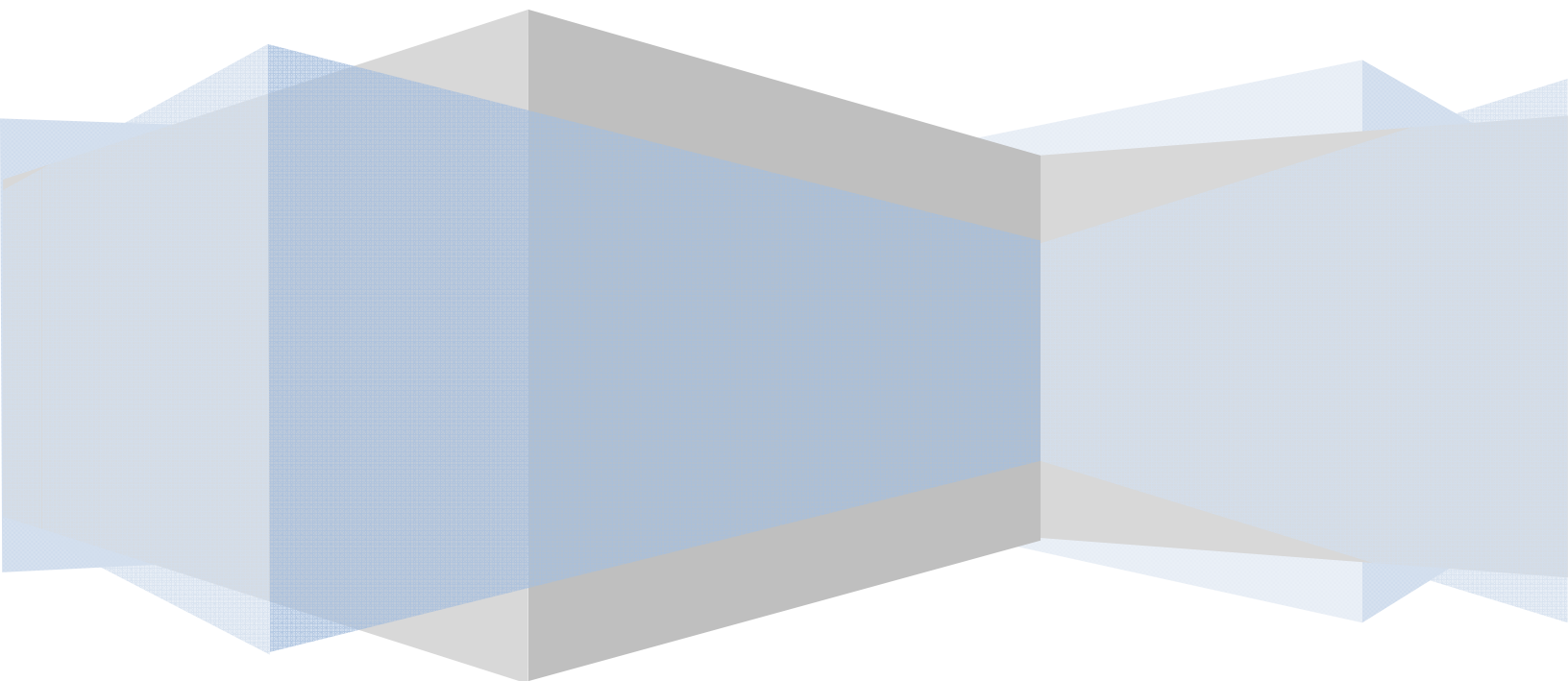


# Visual Pinball

**Version 9.0 Release Notes**

**NanoTech Entertainment, Inc.**



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## General Overview

The Visual Pinball version 9 release has been born out of work that was done by several people while consulting for UltraCade Technologies on the UltraPin project. As promised, the updates to the Visual Pinball engine were licensed back to Randy Davis for inclusion in future public releases of Visual Pinball. NanoTech Entertainment has once again licensed the Visual Pinball engine from Randy, and will be offering updates to the public release of Visual Pinball including support for full screen, rotated setups (homebrew cabinets) and the Pinball Wizard desktop Pinball Controller. Releases and updates will be offered via the [www.nanotechent.com](http://www.nanotechent.com) website as well as the [www.vpforums.org](http://www.vpforums.org) website. Discussion threads for help and issues will be hosted by [www.vpforums.org](http://www.vpforums.org).

## VP 9 Features

- optimized for vpm
  - lotr runs close to full speed with emulated sound
  - ball blurring/stutters/etc have been greatly reduced.
    - This still has lag/issues with 26 balls in play on Johnny Mnemonic)
- translate locked triggers
- Plunger and all other objects can be locked in the editor
- sound/graphic exporter/table unlocker
- dual display span mode support so vp has full control over the backbox display as well as table
- table rotation - 360 degrees possible
- full physics options for slope, oblique correction, flipper settings, ball dampening, scatter angle, friction, gravity
- table scaling support X+Y
- table bottom height - set the bottom of the table lower than the playfield surface for realistic holes
- scriptable exit table to desktop method
- updated for DirectX9 0 full hardware rendering
- reduced engine crashes
- support for Pinball Wizard Input Controller

## Flipper Updates

- separate return strength setting
- separate return speed setting
- 5 different power law variations
- oblique correction and scatter angle
- rubber offset setting for thinner height rubbers/thicker height rubbers
- different height flippers
  - have a short halfheight flipper, a 10th height flipper, or a really high flipper, etc
- 3 table difficulty settings
  - adjusts flipper lengths and table settings based on difficulty.
- Ball Through Flipper fixed
  - part of the new Buen Diseno physics engine solved many of the problems with the ball embedding into objects and/or passing through solid objects. One of the most noticeable areas was the ball passing through the flippers which has been eliminated.

## Gate Updates

- map images to gate sides
  - transparency is supported
- animation frames
  - Updated Medieval Madness shows this feature, animated the drawbridge using a single image for a gate, slowing down the animation
- supports can be disabled
- gates can be invisible
- updated gate open and close angles
- gates can have friction
  - affects the speed at which the gate moves when hit
- collidable
- scriptable

## Wall Updates

- flipbook animation 0 makes droppable walls not render when dropped
  - completely invisible, and allows for droppable walls to mask the ball correctly when not dropped
- friction, scatter angle, collidable
  - scriptable
- animate slingshot
  - have a slingshot on a wall, but don't render the slingshot animation
  - allows you to run a replacement dropwall animation or other device to make your own slingshot as you desire
  
- Triggers

- Hit height adjustable - have a trigger under a shooter lane ramp with a height of 200 or so
- any ball passing over it triggers the hit event
- useful for Indiana Jones path of adventure holes - shouldn't miss a switch hit that way, also, for controlling balls from flying off ramps if necessary

## Plunger Updates

- Stroke Length is adjustable for a longer or shorter pull rod
- scatter velocity
  - plunger randomization option
- manual plunger options exist such as break over velocity
  - means if the plunger moved faster than the BOV it reacts as if it was pulled all the way and released
  - full plunge
- Autoplunger checkbox -
  - Supposed to pull the plunger back automatically and fire it
  - use The vpmsoautoplugner script in the vbs files or use activeball or impulse plunger which perform more reliably

## Light Updates

- Custom Lights can have an image mapped to them for the on and off state
  - full table image required for each
  - gives added effect of a minimalist fade effect when state changes
  - If you use this feature and delete the image used for a light the table will crash
  - so be sure to set the image to NONE if you are removing an image that is in use, or reimport a new one over the old one.

## Kickers Updates

- Hit Height and scatter angle
- New kicker type - Invisible
  - corrects render errors when using kicker "hidden" Invisible kickers are not rendered whatsoever

## Bumper Updates

- cast shadow box
- visible=top visible
- side visible

## Spinner Updates

- Show/render supports
- visible (invisible spinners are possible)
- angle max/min for use as a gate or hanging switch
- animation frames setting
- elasticity

## Ramp Updates

- support transparency
- acrylic feature
  - gives a plastic effect/wireframe if no image
- can be set to invisible
- can be changed to collidable / uncollidable from script
- friction and scatter angle can be applied

## Known Issues & Info

- EMReels and textboxes can not be rotated. You can export your emreel image, rotate it externally, per frame, and reimport it again. It works, just is a bit of 'work'.
- Press B during a game to show you where all balls are on the table
- More information with F10 or F11 for physics calculations.
- Two key declarations added to the default VP key options - RMagnaSave and LMagnaSave.
- Keycodes for exit game, and red aux buttons on cabinet are scriptable.
- antialias ball is a new table feature in video options - can be disabled.
- Updated Buen Diseno Physics engine.

## MISSING FEATURES

These will be implemented in future releases of VP9

- User-specified slingshot colors
- overlapping EMReels

## nVidia Display Drivers & 16:9 full screen, multi-monitor setup

nVidia has several variations of drivers available. I did try out the 175 beta drivers, the 169 official current drivers, and the 84.21 drivers. The drivers that default on the machine do NOT display emreels correctly for the 16-9 format games I work on. The 169 and 175 drivers generating annoying flickering in the main playfield display on my machines.

The 84.21 drivers provided the best results for compatibility and speed.

So if you have already done this before, there is no need to do it again unless you change video drivers or reimage the machine.

Before creating or changing display profiles, I'd recommend loading the 84.21 forceware drivers.

- Right click the desktop on the large main display and left click on Properties.
- Left Click the Settings Tab
- The Primary display should be set to 1360x768 32Bit
- The Seondary display should be set to 1280x1024 32bit
- The Secondary display should have the box checked to "Extend the Windows Desktop onto this monitor"
  
- Click on the Advanced Button
- Click GeForce7600GS Tab
- Click nView display settings
- Make sure the nview display mode is set to "Dual View"
  
- Click the + to the left of desktop management
- Click profiles
- Click New
- Name this profile "Original" without quotes. This name is case sensitive.
- Click Save
  
- Now go back to nview display settings
- For the nview display mode, select VERTICAL SPAN
- Click OK
- One display will now be 1360x1536 32bit
- The other display will be 1280x1024 32bit

If the resolutions for the displays AREN'T the above - 1360x1536 and 1280x1024 then you need to add a custom resolution.

To add a custom resolution with the 84.21 drivers... (different driver revisions will do this differently)

- Click Screen Resolutions & Refresh Rates
- Click Add
- from top to bottom, type in
- 1360
- 1536
- 32bit
- 60hz
- Click Add
- Click OK

If it says the display resolution can't be added, do it again until you don't get the error message. If there is a box that says "hide resolutions that monitor can't support" uncheck it. Then you should be able to drag the resolution slider to the far right to 1360x1536

- Click ok

Allow all changes and click ok and yes to all dialog boxes

- Right click the desktop on the large main display and left click on Properties.
- Left Click the Settings Tab
- Click Advanced
- Click GeForce 7600GS Tab
- Click the + to the left of Desktop Management
- Click Profiles
- Click New
- Name this profile "16-9" without quotes
- Click save
- Click OK
- Click OK

Note - To get better frame rate if needed, you can make the DMD smaller. The DMD is about half as big. It is consistent, but I personally prefer the larger DMD.



## Individual Game Settings

You can change the size for their games individually if you would like.

- Click Start
- Click Run
- Type in "Regedit" without quotes
- Click Ok
- Click on the + to the left of HKey Current User
- Click on the + to the left of Software
- Click on the + to the left of Freeware
- Click on the + to the left of Visual PinMame
- Click on the desired Romset name to change.

### To make the DMD full size:

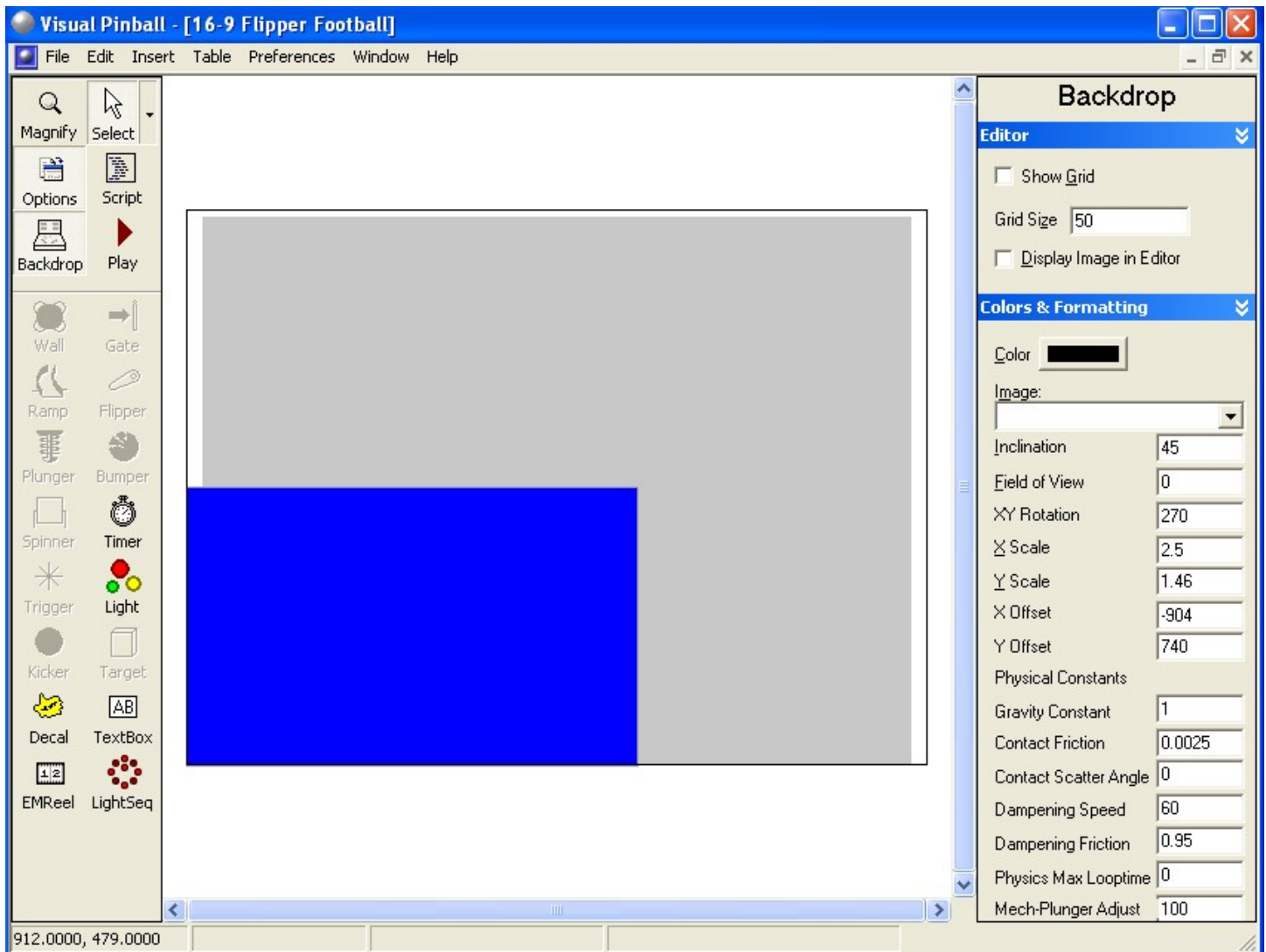
- Right-Click on ddraw
- Left click Modify
- Type 1 and click OK
- Right Click on Direct3D
- Left click Modify
- Type 0 and click OK

### To make the DMD halfsize:

- Right-Click on ddraw
- Left click Modify
- Type 0 and click OK
- Right Click on Direct3D
- Left click Modify
- Type 1 and click OK
- Click the X in the top right corner to close the Registry Editor when all changes are complete

## Editing Tables for Full Screen / Rotation

VP 9 supports full screen displays with rotation of the display. The feature allows users to recreate an actual pinball simulation by filling up a display with the entire playfield much like an UltraPin or MultiPin digital pinball machine. The settings for the table rotation. Every setup will require tuning of the table settings for personal preferences. To start with, open the table, click on the backdrop button and options button to display the Colors & Formatting section. Change the Inclination to 45, Field of View to 0, and XY Rotation to 270 (or 90). X, Y Scale and Offset can be adjusted after running the table.

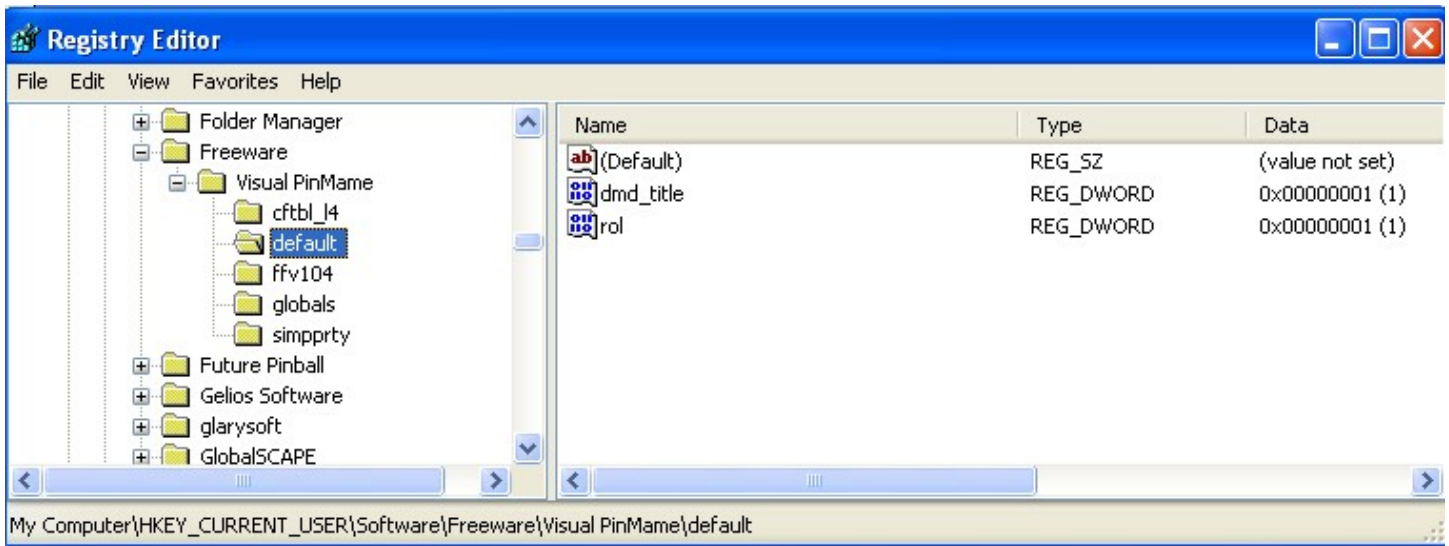


To rotate the DMD, open the table script, and add a line to adjust the rol variable in the DMD settings to 1.

```
= Sub Table1_Init
=   With Controller
      .GameName = "ffv104"
      .Games("ffv104").Settings.Value("dmd_pos_x")=1200
      .Games("ffv104").Settings.Value("dmd_pos_y")=550
      .Games("ffv104").Settings.Value("dmd_width")=200
      .Games("ffv104").Settings.Value("dmd_height")=300
      .Games("ffv104").Settings.Value("rol")=1
```

You can also set up the default settings for VPM DMD rotation in your registry. Run REGEDIT, and change My Computer\HKEY\_CURRENT\_USER\Software\Freeware\Visual PinMame\default

Add a DWORD rol with a value of 1. Any tables that have not yet been run, will use this value in the future the first time they are run.



## Pinball Wizard Controller Support

The VP9 engine has built in support for the Pinball Wizard desktop controller. When you plug in the Pinball Wizard, it will automatically detect and support inputs from the device into the table, in parallel with the keyboard commands.

## Credits

Visual Pinball V9 Notes for 16:9 usage with nVidia Cards and Dual Displays by Brian Smith (Destruk), edited by David R. Foley, NanoTech Entertainment

## Special Thanks

We wanted to take a moment to thank several people that have helped with this project including:

- Brian (Destruk) Smith – Table Editing, Engine Updates, 16:9 Table Enhancements, UltraPin support, VPM Support
- Rolle Cruz (Buen Diseno) – Physics Engine, Pinball Wizard Support
- Jim Hernandez – UltraPin Support, Pinball Wizard Support, Table Art, Engine Testing
- Randy Davis & Chris (Black) Leathley – Visual Pinball Engine
- Phoenixx – VP Installer Updates