Sigma's Guide to Jurassic Park

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Jurassic Park is surely a trademark of some sort for Universal and Amblin, and the game design itself is the property of Data East. I use the abbreviations "K" for a thousand points, "M" for a million points, and "B" for a billion points.

1. Important Things

This is a glossary of the shots and features that will be referred to during the discussion of the game.

Flippers: There are three of these: the usual two lower ones, and an upper right full-length flipper. The right flipper button can be used to control the right flippers independently, with the second stage of button action controlling the upper flipper. These are not the usual solid-state DE flippers; the new design is much less prone to getting loose and sloppy. However, it does appear to have difficulty with shots toward the tip of the flipper, or shots against very fast-moving balls.

Plunger: This is a gun handle, with a trigger for autolaunching balls into play, and a large thumb button for the Smart Missile. Balls are launched into the Turbo Bumpers through a small gate, if properly aligned.

Boat Dock: This is a saucer in the back right corner of the playfield, at the end of a half orbit that passes in front of the upper right flipper. Extra Ball and Two-Ball can be lit here.

Power Shed: This is a small rectangular sinkhole just above the upper right flipper. It returns balls to the Right Inlane. The Power Shed is also the S in CHAOS.

Ramp: The entrance to this ramp is just to the left of the Power Shed. The ramp runs across the back of the playfield, peaks in the back left corner, and can return to either Inlane by means of a diverter. The right return is a habitrail; the left return is molded plastic. Two consecutive Ramp shots will hold your Bonus over to the next ball. The ramp is also the O in CHAOS. The Ramp can light Mr. DNA, and supposedly increases the T-Rex Bounty value.

Raptor Pit: This is a narrow dead-end almost-vertical lane to the left of the Ramp. When a ball trips the rollover sensor in this lane, the ball is kicked towards the flippers at just under the speed of light. During normal single-ball play, a ball which drains immediately as a result of this will be given back. During Tri-Ball and Two-Ball, there is, quite reasonbly, no such kindness. The Danger light on the Raptor Pit indicates that the ball saver is active (and also makes the Pit worth more).

Egg: This is a captive ball to the left of the Raptor Pit. When it is hit hard enough to reach the top of its lane (not very difficult), it registers a hit on the Egg.

T-Rex Paddock: This is a slightly lowered triangular area of the playfield to the left of the Egg and just above the Loop. It is sunk into the playfield no more than 1/4 inch. Balls which go in here and don't bounce out will land in the T-Rex Saucer.

T-Rex Saucer: When the ball lands here, T-Rex is fed. The first time this Saucer is hit, the plastic T-Rex above the Paddock will come down and actually eat the ball, returning it to the Right Inlane. Later hits will only spot a letter in T-REX. Completing T-REX awards the Bounty value and causes T-Rex to eat the ball. T-Rex will also eat the ball if Tri-Ball is lit or Feed T-Rex is running.

Helicopter Pad: This loop is shot by the upper right flipper. The ball travels around the back of the game and feeds again to the upper right flipper. Two consecutive Helipad shots hold the current Raptor Pit value over to the next ball.

Species Targets: These small plastic targets are scattered across the playfield, around the Turbo Bumpers Gate, below the Bunker Scoop, and above the Right Outlane. Completing them progresses towards lighting Tri-Ball. Note that the Spitter Targets are in a bank directly beneath Hammond's

Bunker: these Targets are used specifically in a few sequences.

Turbo Bumpers Gate: This is a one-way gate through which the ball enters the Turbo Bumpers when launched from the plunger. The upper right flipper can also direct the ball into the Turbo Bumpers through this gate.

Turbo Bumpers: There are three of these in a normal triangular arrangement at the left side of the playfield, slightly more than halfway up. The Turbo Bumpers increase the Park Revenue value and change the currently flashing Computer Screen, unless none remain or the Control Room is currently lit.

Control Room: This is a wide rectangular scoop just below the Turbo Bumpers, to the right of the Visitor's Center shot, directly above the left flipper. It awards Computer Screens, which are grid items. Any ball entering here is ejected from Hammond's Bunker. The Control Room is also the A in CHAOS.

Visitor's Center: This is the left orbit, a shot which goes through the Turbo Bumpers and around the back of the game to the upper right flipper. The Helipad and Visitor's Center shots share the same path along the back of the game. The Visitor's Center is also the Advance X shot. It is also the H in CHAOS. Credit is given for the Visitor's Center shot simply for getting the ball halfway up the orbit, except for the Advance X. Credit is given for the H in CHAOS just for getting the ball into the Turbo Bumpers.

Hammond's Bunker: This is a rectangular scoop just below the Turbo Bumpers, to the left of the Visitor's Center shot, directly above the top of the left slingshot. When flashing, it awards Park Revenue. When lit, it awards Mr. DNA. Otherwise, it awards practically nothing. Hammond's Bunker is also the C in CHAOS.

Inlanes: Either Inlane lights (flashing) the Control Room for about five seconds (note that during that time, the Turbo Bumpers may still change the currently flashing Computer Screen). If you have already had one System Failure, the Inlanes will no longer light the Control Room. Note that both Ramp returns feed above the Inlane sensors, although the right return may cause the ball to jump over the sensor or to miss the Inlane entirely.

Left Inlane: This lights the Boat Dock for several seconds, during which time hitting the Boat Dock will spot a Species Target, if any remain.

Right Inlane: This lights Advance X on the Visitor's Center shot, which I have never purposely shot for. The Bonus Multiplier starts at 1X, and proceeds 3X, 6X, and 9X. It also lights Hammond's Bunker for the Park Revenue value.

Outlanes: There is no rubber on the lane dividers. However, the playfield is arranged to actually protect the ball from Outlane drains. With small nudges as the ball wanders towards the Outlanes, you should experience infrequent Outlane drains. If you still have the Smart Missile, Outlane drains (except during Tri-Ball, Two-Ball, or CHAOS) will disable it. A successful Death Save or Bang Back will then re-enable it. There are Special lights on the Outlanes; when Special is lit, both Outlanes will remain lit for the rest of the current ball.

Left Outlane: There is no kickback. Yes! Yes! Yes!

Computer Screens: These are twelve lights in the area directly above the flippers. They represent Control Room awards, and indicate progress towards System Failure. Computer Screens are also referred to as CRTs.

Playfield Lights: The playfield is littered with Species Lights on the Island Map, representing your progress towards lighting Tri-Ball. You can safely ignore these lights. There are also several lights for each of the three places to visit: Visitor's Center, Helicopter Pad, and Boat Dock. There is also a light for the Mosquito, which is placed unusually far from the actual Mosquito-in-amber piece in the far back center of the playfield.

Slingshots: There are the usual two above the flippers. They are not incredibly sensitive, so even a weak kickout from Hammond's Bunker may graze the Left Slingshot, but should come to the left flipper nonetheless.

2. Opening Animation

You can skip the lengthy opening animation by flipping both flippers. You will probably find yourself doing this after the first couple of games.

3. Skill Shot

The Skill Shot is a Video Mode. A dinosaur is walking back and forth in your sights. Pull the trigger to shoot the dinosaur. The trick is that the dinosaur sometimes (on all balls except the first) stop to look at you just before it enters your sights. Don't lead the shot too much, and you'll be OK. Because the shot is registered as soon as you fire, rather than when the ball hits something, this works pretty well. There are also small indicators in the lower corners of the screen, which say "FIRE!" when the dinosaur is in your sights.

Hitting the dinosaur is worth 2M on Ball 1, 3M on Ball 2, and 4M on Ball 3. Missing the dinosaur is worth 1/10 as much. A successful Skill Shot enables Super Pops and gives the quote "Thumper Ready!". Since the ball immediately goes into the Turbo Bumpers, this is worthwhile. Super Pops makes each Turbo Bumper worth 100K, and each third hit worth 1M, for a very short time (not indefinitely as in Rocky &Bullwinkle, for example).

I do not know what happens if you use the Smart Missile on the Skill Shot, but I would hope that it is disabled (novice players might be attempting to use the thumb button instead of the trigger, thereby wasting their Smart Missile).

The Data East rules say that you are shooting to "stun" the dinosaur, but it certainly looks like you hit him with a missile, and he kind of splats...

4. Computer Screens

There are eleven Computer Screens, which are collected from the Control Room when it is lit or flashing. The Control Room is lit at the beginning of each ball. It is indefinitely relit by shooting the Power Shed. It is lit for approximately five seconds by either Inlane. After you have completed System Failure, the Inlanes will no longer light the Control Room, making it more difficult to get a second System Failure.

The Computer Screens are: Stampede, Escape Isla Nubar, Raptor Two-Ball, Electric Fence, Spitter Attack, System Boot, Raptors' Rampage, Mosquito Millions Feed T-Rex, Bone Busting, Light Extra Ball, and System Failure.

At the beginning of the game, Stampede is always the currently lit Computer Screen. The Turbo Bumpers rotate the currently flashing Computer Screen when the Control Room is not lit (or is only flashing because of an Inlane). When the Control Room is lit, however, the currently flashing Computer Screen is "locked in". Therefore, the first Computer Screen awarded is *always* Stampede.

You can have any number of Computer Screen awards running at one time; you can relight the Control Room and collect new awards concurrently with awards that are already running. The animation and sound associated with the most recently awarded Computer Screen will take precedence over the others.

When all Screens have been collected, the Control Room is flashing (without relighting it) for System Failure.

I believe that starting System Failure effectively aborts any Computer Screen rounds which were already running, except that you may still collect a lit Extra Ball. These rounds do not restart after System Failure ends, although Two-Ball will remain lit if it was lit and uncollected before.

Hitting the Smart Missile in single ball play, with no Tri-Ball or Two-Ball lit on the playfield, will award the next Computer Screen, even if the Control Room is not lit.

Hitting the unlit Control Room gives an annoying quote from Nedry: "You didn't say the magic word!"

If the Control Room sensor is malfunctioning (not an uncommon problem, and one that your operator absolutely *must* be convinced to fix by replacing the faulty microswitch), shots to the Control Room will be registered as shots to Hammond's Bunker, you will not be able to collect Computer Screens except by Mr. DNA awards, and you will not be able to complete CHAOS except by using the Smart Missile.

4.1. Stampede

This Computer Screen starts an escalating Frenzy mode, which lasts for 20 seconds (?). Every switch scores 250K and increases that value by 10K. The points are awarded immediately. Also, all game features proceed as normal.

According to the Data East rules, there is a 5M award for shooting T-Rex or Galiminus during this round. I'm not even certain where the Galiminus target is (I would guess that it is the set of Species Targets above the Right Outlane), so I cannot verify this.

Using the Smart Missile in this mode credits a hit on every scoring switch in the machine, for a Stampede value of roughly 20M, leaving the Stampede switch value fairly high (600K or more?).

4.2. Escape Isla Nubar

This Computer Screen lights the Visitor's Center, the Helicopter Pad, and the Boat Dock for 20M, which counts down rather slowly, by millions. As best I can determine, hitting any of the three targets will award the current Escape value, add 10M to it, and start counting down again for the remaining targets. This is not very clearly described in the Data East rules, to say the least. To further confuse the issue, the DE rules indicate that the maximum total points available in this round are 66M.

The best strategy for this mode is to hit the ball up to the Boat Dock right away, then shoot for the Helicopter Pad with the upper right flipper.

Using the Smart Missile at the beginning of this round awards 10M, 20M, and then 30M, for a total of 60M. Confused yet? I sure am.

4.3. Raptor Two-Ball

This Computer Screen lights the Boat Dock for Two-Ball, which is Data East's equivalent of a Quick Multiball(TM). Two-Ball will remain lit until collected, across balls. When the Boat Dock is hit (and you are not already in Tri-Ball or CHAOS or Super Egg Mania), a second ball will be launched into play. Any ball which drains in roughly the first ten seconds of Two-Ball will be relaunched into play. (This allows for a few quick Jackpots.)

During Raptor Two-Ball, the Raptor Pit is lit for the Raptor Jackpot. The Data East rules indicate that these start at 3M and increase by 1M each time one is collected, but this has apparently been changed. Raptor Jackpots were typically 7M or so, but sometimes escalated to about 25M. I am not at all sure what causes the Raptor Jackpots to increase other than collecting them, but there may be some cause. Collecting a Raptor Jackpot increases the Jackpot Value by 2M.

There is no Danger feature (ball saver) active during Raptor Two-Ball, so be careful. Two-Ball ends, of course, when one or both balls drain.

Using the Smart Missile when Two-Ball is lit will start Two-Ball, unless Tri-Ball is also lit, in which case it takes precedence. Using the Smart Missile during Two-Ball will probably only collect a Raptor Jackpot, which is a genuine waste.

Check out the opening animation for Raptor Two-Ball.

4.4. Electric Fence

This Computer Screen starts a timed round during which cute little Timmy is foolishly climbing around on an Electric Fence, which is slowly charging. The display shows Timmy climbing, the number of hits needed to save him (apparently we have to shake the little idiot off the fence or something like that), and the power meter of the Fence.

Get Timmy off the Fence by getting 15 hits in the Turbo Bumpers and/or the Slingshots. You have 20 seconds in which to do this. If you succeed, you are awarded 30M. If you fail, Timmy is electrocuted, and we actually get to watch, unlike Nell's death in Rocky & Bullwinkle. Yea!

Using the Smart Missile in this round will save Timmy and award the 30M.

Let him fry, I say. It's more fun than 30M. On the other hand, this round is easier in newer ROMS; older ROMs required more hits, I believe.

4.5. Light Extra Ball

Lights the extra ball at the boat dock. Shoot the boat dock to collect it. In normal play, it should remain lit until collected; that is it does not disappear at the end of the current ball.

4.6. Spitter Attack

This Computer Screen starts a timed round during which the loathsome Nedry is being attacked by a Spitter dinosaur. The Spitter Targets are the vertical bank just below Hammond's Bunker, facing right. Hitting any of them counts as a "spit", and the Spitter will spit at Nedry. The Data East rules say that the first hit is 5M, the second 10M, and the third 15M, for a total of 30M. It seemed to me that each hit was 10M. The points are not displayed until the round ends or the ball drains.

Using the Smart Missile in this round awards 30M and ends the round.

4.7. System Boot

This Computer Screen starts a timed round during which the three scoops (Hammond's Bunker, Control Room, and Power Shed) are lit (green light). When a scoop is hit, it is no longer lit (for the purposes of this round). The Data East rules say that the first scoop is worth 5M, the second 10M, and the third 15M, for a total of 30M. Like the Spitter Attack, it seemed that each scoop was actually 10M.

Each scoop displays a fake computer bootstrap sequence, consisting of a DOS prompt and command:

C:\PARK> SYS. BOOT

Hitting the Power Shed to relight the Control Room normally gives a similar display.

Using the Smart Missile in this round awards each of the three scoops, for a total of 30M, ending the round.

4.8. Raptors' Rampage

This Computer Screen starts a timed round during which the Raptor Pit is lit for a varying amount. The display shows a Raptor moving back and forth in the kitchen, with the current value of the Raptor Pit beneath. The values are 5M, 6M, 7M, 8M, 9M, 10M, 9M, 8M, 7M, 6M, 5M. Hitting the Raptor Pit adds a small amount of time to the timer, so that the Rampage could potentially never end.

I am not sure what using the Smart Missile does in this round. It probably only awards the currently lit value, which is complicated by the fact that the Smart Missile does not *immediately* collect everything on the board. In any case, the Smart Missile should not end this round if used.

4.9. Mosquito Millions

This Computer Screen starts a timed round during which the Egg is worth 5M, with its value increasing by 1M each time it is hit (I believe the maximum value is 10M). This round lasts for 20 seconds.

I now believe that using the Smart Missile in this round will only award one value from the Egg, without ending the round.

4.10. Feed T-Rex

This Computer Screen starts a timed round during which T-Rex is waiting to be fed a live goat. The display shows T-Rex quietly waiting in front of the goat, as the ominous background music slowly increases in tempo. That music is a fantastic bass rumble. This round lasts for 30 seconds, and feeding T-Rex (yes, he actually eats on-screen) is worth 30M (the Data East rules say 25M, but this was apparently changed).

Using the Smart Missile in this round feeds T-Rex for 30M, ending the round. I sometimes prefer to just hold the ball and listen to the bass.

4.11. Bone Busting

This Computer Screen starts a timed round during which a raptor is trying to destroy a T-Rex skeleton. Three Ramp shots are needed to do this, which scores a disappointing 20M.

Using the Smart Missile in this round immediately destroys the skeleton for 20M, ending the round.

The award for completing Bone Busting may have been changed to 30M in newer ROMs. In any case, the Ramp is a difficult shot on most machines; this should certainly be worth at least 30M, or 10M per shot.

4.12. System Failure

When all Computer Screens have been collected, the Control Room and the Power Shed are immediately lit for System Failure. (Note: I do not recall ever starting System Failure by hitting the Power Shed, although it should work that way according to the Data East rules.) Hitting either will start System Failure.

System Failure is a Six-Ball mode which lasts for 45 seconds. Balls which drain are held for several seconds as a penalty, and then autolaunched. During System Failure, *all* switches score 1M, and no other features are active (except that you can still collect a lit Extra Ball, I believe). The total points awarded are tracked on-screen. When System Failure ends, the flippers, Slingshots, and Turbo Bumpers shut off until all six balls have returned to the trough. After a very brief pause, a ball is autolaunched and play resumes normally, with all Computer Screens again unlit.

Using the Smart Missile during System Failure is worth exactly 50M. Starting System Failure using the Smart Missile will also credit this 50M to your System Failure total. The System Failure total is not credited to your score until System Failure ends and all balls have returned to the trough.

After System Failure, the Inlanes will no longer light the Control Room for the next Computer Screen; only the Power Shed will do so. This makes it rather difficult to reach a second System Failure. However, immediately after System Failure, the Control Room is lit for Stampede.

System Failure was developed independently of the Lost In The Zone feature of Bally's Twilight Zone.

5. Victory Lap

As in many Data East games, Jurassic Park lights an additional feature whenever a replay value is reached. Unlike previous Data East releases, however, which typically lit a ramp or orbit for a single 25M award, there is more complexity to the Victory Lap in Jurassic Park.

When a replay is awarded, the ramp is lit for the Victory Lap for 30 seconds. The first five ramp shots are worth 5M, and the sixth is 25M. The maximum total that can be scored from the Victory Lap is 50M. This is made trickier by the fact that two consecutive ramp shots awards Bonus Held and returns the ball to the Right Inlane, interrupting the looping shot.

You may be able to use the Smart Missile to complete the entire Victory Lap for 50M. I have not yet verified this.

6. Shoot Out

At various random intervals during the game while the ball is in play, a Video Mode will begin, during which a dinosaur walks across the screen, in front of a machine gun. Fire the gun rapidly (four or five shots will suffice) to "stun" the dinosaur for 3M. There is enough of a grace period on this feature that it should be almost impossible to miss. If the Video Mode display has already ended, you can still grab the trigger and fire, and the Video Mode will restart! You can recognize that the Video Mode is beginning by the distinctive and familiar Lethal Weapon 3 sound.

You could probably use the Smart Missile to complete this Video Mode, but that would be a really stupid idea. Actually, it probably wouldn't work.

7. Raptor Pit

Shooting the Raptor Pit at any time during the game will award the current Raptor value, which starts at 3M at the beginning of every ball (unless it is held by two consecutive Helicopter Pad shots), and increases in an unusual fashion. Specifically, if the Danger light is not flashing, hitting the Raptor Pit increases the Raptor value by 250K and lights Danger briefly (which also represents the ball saver feature). If the Danger light is flashing, hitting the Raptor Pit increases the Raptor value by adding on the Raptor value as it was when Danger was first lit. This means that if the Raptor value is 5M, repeated hits should increase it to 5250K, 10250K, 15250K, etc., as best I can figure out.

8. T-Rex Bounty

There are four red lights above the rules card in the lower left corner of the machine, representing progress towards spelling T-REX. When T-REX is spelled (by repeatedly hitting T-Rex), the T-Rex Bounty, also known as the Paddock Jackpot, is awarded. The Data East rules indicate that the Bounty begins at 5M and increases by 100K for each ramp shot, but it appears to start at 7.5M and increase by slightly more.

Normally, the Bounty value is carried over between balls, players, and games. However, bugs in the software on some ROMs cause the value to be improperly displayed as values such as 78M!

9. Captive Ball

In normal play, shooting the Captive Ball contributes to cracking open a dinosaur Egg and hatching a baby dinosaur. The hits and awards are:

Egg Number	Number of Hits	Award
1	3	5M
2	4	10M (or EB)
3	5	15M
4	6	Extra Ball
5	6	20M
6	6	Mystery

The Mystery award can be a random point value, Extra Ball lit (at Boat Dock), or Special lit (at both Outlanes). Every cracked Egg after the sixth will score Super Egg Mania (also known as Power Egg Mania or just Super Egg).

Cracking an Egg is accompanied by a cute animation and a snippet of lullaby, which always cracked me up (pun intended).

You can also crack Eggs with a Mr. DNA award.

On newer ROMs, cracking the second Egg awards Extra Ball.

9.1. Super Egg Mania

The only reasonable way I've found to reach Super Egg Mania is to receive it as a random award from Mr. DNA. During Super Egg Mania, most game features are disabled, and you have 20 seconds to shoot the Egg for 5M. Hitting the Egg launches an additional ball into play. After this, I believe subsequent Egg hits are each 5M higher and launch another ball into play, presumably to a maximum of 30M per hit with six balls in play. Super Egg Mania should last as long as you have more than one ball in play, or only 20 seconds if you never hit the Egg in the first place.

10. Park Revenue

This is a small award in the tradition of Sarlacc Pit from Star Wars. It starts at exactly 500K, and is increased gradually by the Turbo Bumpers, cumulative over the course of the game (separately for each player). It is awarded by hitting Hammond's Bunker when lit by the Right Inlane. You can safely ignore this feature entirely, at least until you have completed one System Failure and need a shot from the Right Inlane feeds (by which time the Park Revenue may be well over 1M).

11. Mr. DNA

Mr. DNA is lit at Hammond's Bunker by the appropriate number of Ramp shots. It seemed that only three are required for the first Mr. DNA, five for the next, etc.

You can make progress towards lighting the next Mr. DNA while Mr. DNA is already lit (and ramp shots at _any_ time appear to count), but I am not sure if you can actually stack lit Mr. DNAs.

Mr. DNA offers you a choice between three selections, which are randomly selected from the following: Points (5M, 10M, 15M, or 20M),

Super Pops, Million Pops (?), Complete Egg, Light Special, Hurry Extra Ball (at the Boat Dock), Runaway Score (Hurry Up, 20M down to 5M), Runaway Two-Ball (Hurry Up, 10M down to 5M), Light Tri-Ball, Spitters Double Round (??), Advance Park Revenue 5M, Advance Raptors 5M, Raptor Pit Value Held, Award Lit CRT, Super Egg, Bonus Held.

As Mr. DNA points to each selection offered, flip or pull the trigger to select it. Doing this during the introductory animation may automatically award the first selection in the list. Be careful; the first selection is only focused briefly. It's best to wait until Mr. DNA makes a second pass through the list.

I presume that the Runaway Two-Ball is a Raptor Two-Ball at the Boat Dock, which will time out (it appears to have a point award associated with it).

I do not know what the Spitters Double Round is, but I hope and pray that it is not a Double Score mode.

In Tournament Mode, the same set of awards are always offered for the first Mr. DNA (5M, Complete Egg, Runaway Score), the second Mr. DNA, the third Mr. DNA, etc. That is to say, each subsequent Mr. DNA offers a different set, but for example, the second Mr. DNA always offers the same three items. I do know that the third Mr. DNA in Tournament Mode offers Light Special and Light Tri-Ball.

Check out the animations for Mr. DNA.

12. Tri-Ball

Tri-Ball is a significant goal in Jurassic Park, and a significant source of points. Tri-Ball is normally lit by hitting all of the Species Targets on the playfield (these can also be spotted by the lit Boat Dock). It can also be lit by a Mr. DNA award, or by using the Smart Missile in normal play, which will effectively hit all of the Species Targets for you. If you have not lit or started Tri-Ball by the beginning of your third ball (disregarding Extra Balls), it will automatically be lit for you.

When Tri-Ball is lit, start it by feeding T-Rex once or hitting the Raptor Pit several times (to "taunt" them). The first Tri-Ball will require 3 Raptor Pit shots to begin, the second will require 5, the third will require 7, and all subsequent Tri-Balls can only be started by feeding T-Rex (which is generally the easier option, anyhow). If Tri-Ball is lit because you are on your third ball and did not light or start Tri-Ball already, only one Raptor Pit shot will be required to start Tri-Ball.

Whenever Tri-Ball is lit, using the Smart Missile will start it.

12.1. Tri-Ball Step 1: Jackpot

When Tri-Ball is started, a total of three balls will be in play. For the first six to eight seconds of Tri-Ball, draining one or two balls will cause them to be relaunched into play (draining all three never seems to give back more than two - not that I would ever do this ;). As soon as Tri-Ball is started, even while there is only one ball still in play, there are two Jackpots lit. The Ramp is lit for the regular Jackpot value, while the Helicopter Pad is lit for a Double Jackpot. The base Jackpot value is 15M, and during Tri-Ball, all switches add their score to the base Jackpot value instead of to your score.

Collecting either Jackpot immediately begins the first CHAOS mode. Contrary to the Data East rules, you do not have to collect both the regular and the Double Jackpot in order to enter CHAOS (the rules were changed in order to better accomodate switch failures, I presume).

Using the Smart Missile will collect both the regular and the Double Jackpot. This is the only way to do so.

If you drain all but one ball while the Jackpots are still lit, Tri-Ball Restart will be lit for 15 seconds, starting immediately. You can then restart Tri-Ball by hitting the Raptor Pit once or feeding T-Rex. It is possible that no Tri-Ball Restart is offered for later Tri-Balls; I am not entirely sure.

Using the Smart Missile while Tri-Ball Restart is lit will restart Tri-Ball, but it's better to try for the Restart manually, and if you miss, the Smart Missile can be used to relight Tri-Ball indefinitely.

12.2. Tri-Ball Step 2: CHAOS

In the first CHAOS mode, the five CHAOS letters are lit and may be collected immediately. Each CHAOS letter is worth 10M, and according to the Data East rules, completing CHAOS is worth an additional 10M. You must complete CHAOS while at least two balls are still in play (or at least not yet registered in the trough). Using the Smart Missile at this point will complete the first CHAOS for 50M (or 60M?), leading to Six-Ball play.

12.3. Tri-Ball Step 3: 6-ball CHAOS

When CHAOS is completed, Six-Ball play begins. On older ROMs, while the six balls are being launched into play, CHAOS letters are not awarded. However, on newer ROMs, the second set of CHAOS letters can be awarded almost immediately, which makes it impossible to miss the H letter (it is credited for any Turbo Bumper hit). There is a relaunch period at the beginning of this mode, just as in the beginning of Tri-Ball. During Six-Ball play, you must spell CHAOS again, for 10M per letter, while keeping as many balls in play as possible (at least two, of course). Using the Smart Missile at this point will complete the second CHAOS for at least 50M, which lights the Feed T-Rex 50M.

12.4. Tri-Ball Step 4: Feed T-Rex

When the second CHAOS is completed, you must Feed T-Rex, while keeping at least two balls in play. Feeding T-Rex at this point awards 50M, and lights both the Ramp and the Helicopter Pad for twin Super Jackpots. Using the Smart Missile at this point will Feed T-Rex for 50M.

12.5. Tri-Ball Step 5: Super Jackpot

The Super Jackpot base value is 100M for each ball still in play. The Ramp is worth an additional base Jackpot value (restarting at 15M as in regular Tri-Ball), and the Helicopter Pad is worth an additional Double Jackpot value (minimum 30M). These values will increase as in regular Tri-Ball. The maximum value of the Super Jackpot is therefore 630M-plus-change for the Helicopter Pad. Collecting one Super Jackpot leaves the other lit. Using the Smart Missile at this point will collect *both* Super Jackpots.

Collecting both Super Jackpots returns to the 6-ball CHAOS mode, but without launching any new balls into play. As long as at least two balls remain in play, the sequence of second CHAOS, Feed T-Rex for 50M, and twin Super Jackpots will repeat indefinitely. This does not mean, however, that this is likely to happen. ;)

If there are balls missing in the machine, this is not counted against the Super Jackpot value. If there are only three balls in the machine, for example, the Super Jackpot will still start at 600M, decrease to 500M for one drain, and then end for the next drain.

13. Smart Missile

The Smart Missile is a fantastic idea, and the rules of Jurassic Park are really designed with the Smart Missile in mind. You are allowed one, only one, not zero, not two, Smart Missile per game. There is absolutely no way to get another Smart Missile in the course of a game. Use it wisely.

The Smart Missile collects everything that is lit on the playfield when it is used. This ranges from the very simple (Species Targets, Computer Screens) to the respectable (Jackpots, Feed T-Rex, Escape Isla Nubar) to the truly awe-inspiring (twin Super Jackpots, minimum award 445M, maximum 1245M-plus- change). At the very least, the Smart Missile should guarantee that you get to play Tri-Ball (Tri-Ball will be lit at the beginning of the third ball if you have not yet started it, and the Smart Missile can be used to start it).

Using the Smart Missile will collect any lit Extra Balls.

Outlane drains deactivate the Smart Missile, but a center drain isn't registered until the ball lands in the trough. A successful Death Save or Bang Back will re-enable the Smart Missile (assuming you still have it).

14. Death Saves and Bang Backs

A successful Death Save or Bang Back, which is defined by Jurassic Park as any time in single ball play when an Outlane sensor is tripped, followed by some other sensor before the ball lands in the trough, shows a picture of T-Rex and awards 3M (originally 5M, but lowered). This is actually a very cool animation which is almost impossible to see: a T-Rex skeleton morphs into a living T-Rex :-)

I believe that Slingshot sensors may be excluded from defining Death Saves, as these sensors are most likely to become flaky.

You cannot, of course, use the Smart Missile to receive credit for a Death Save. The Outlane sensors disable the Smart Missile.

15. End-Of-Ball Bonus

The End-Of-Ball Bonus is gradually increased by most targets during play. I believe it starts at a base of 100K. It is subject to the Bonus Multiplier, which progresses 1X, 3X, 6X, 9X. The Advance X shot is the Visitor's Center, which is lit for a while by the Right Inlane.

The End-Of-Ball Bonus, and likely the Bonus Multiplier as well, is held over between balls by two consecutive Ramp shots.

Unfortunately, there is a cap on the End-Of-Ball Bonus base value at 2M, for a maximum possible of 18M. This makes the Advance X shot less than tempting, especially since it is very difficult.

You can flip to accelerate the End-Of-Ball Bonus countdown, but it's blissfully short already.

During the End-Of-Ball Bonus countdown, the Tilt sensor is deactivated. This is a great time to slide the machine back into position, or whatever.

16. Miscellaneous Scoring

A few thousand here, a few thousand there. Pretty soon it doesn't add up to real points. So don't worry about it.

17. Cows

No, but there's a goat in Feed T-Rex, and plenty of dinosaurs, which are awfully cool, regardless.

18. Tips, Tricks, Strategies

There are two major goals in Jurassic Park, and it's quite reasonable to attempt both in any one game. One major goal is System Failure, and the other is the entire Tri-Ball and CHAOS sequence.

If you are concentrating on System Failure, there are a few Computer Screens which are probably best ignored. Among these are Bone Busting (the Ramp is not really as easy a shot as the game seems to think), Electric Fence (especially on older ROMs), and definitely Mosquito Millions. Payoffs from the other Screens are generally easier or more worthwhile.

For the first System Failure, it is easier to relight the Control Room with the Inlanes than by shooting for the Power Shed (it's a fairly tricky shot). The Ramp will always return to an Inlane - normally to the left, but two consecutive shots will return the second to the right, unless you are in Bone Busting mode - and the Control Room can be shot on the move from either flipper. The shot from the right flipper is straight and simple. The shot from the left flipper is very early - it is essential to master this shot!

During System Failure, it's to your advantage to keep as many balls actively in play (not trapped) as possible, because of the delay in relaunching them. The Turbo Bumpers are obviously the best place for the balls to be during System Failure, but the Species Targets and Slingshots are also significant. I suspect that half of a typical System Failure score comes from the Turbo Bumpers, and most of the rest from Species and Slingshots.

I recommend saving the Smart Missile for use with the Tri-Ball and CHAOS sequences, unless you start several lucrative modes such as Escape Isla Nubar (60M) or Electric Fence (30M), for which the Smart Missile would be worth enough to reach a replay, and for which you aren't likely to finish the mode otherwise.

I prefer to start Tri-Ball by taunting the Raptors, as this leaves a ball in play, with which I have a chance to immediately shoot a Jackpot before other balls get in the way. In Tri-Ball and the ensuing sequences, do not use the Smart Missile until it is absolutely too late to make progress in any other way. If you have not yet collected a Jackpot when all but one ball drain, it is wiser to save the Smart Missile and shoot for the Tri-Ball Restart instead. If you have only a couple of seconds remaining on the Tri-Ball Restart and aren't going to collect it, burn the Smart Missile right then, if you still want Tri-Ball without the trouble of relighting it. The only exception is for the second CHAOS.

You can begin spelling the first CHAOS immediately; you should definitely not burn the Smart Missile on this until you see at least one of the last two balls in play headed for the drain.

There is no point in working on spelling the second CHAOS until you see that CHAOS letters are being awarded (typically, this is obvious when balls that have been launched into the Turbo Bumpers are still bouncing around, and suddenly the H letter is awarded); concentrate instead on trapping balls. Balls which drain at the beginning of this mode will be relaunched, so don't waste too much effort on making saves.

In the second CHAOS, the hardest letter by far is the O on the Ramp. This is true because there are so many balls in play, making it very difficult to get a clean shot at the Ramp. Also, if you are trapping balls, it's very hard to shoot the Ramp with more than one ball on the lower left flipper at the time. Because of this and the fact that the subsequent Super Jackpot value is based entirely on the number of balls remaining in play, it is not a bad idea at all to use the Smart Missile to complete the second CHAOS, so that you can proceed immediately to Feed T-Rex and the Super Jackpots.

During CHAOS, you can briefly get rid of balls moving down the Right Inlane by shooting either the Control Room (letter A) or Hammond's Bunker (letter C). The Turbo Bumpers are a less pleasant alternative; the ball will come out unpredictably.

When you reach the Feed T-Rex stage of Six-Ball play, you have a difficult decision to make if you still have the Smart Missile. T-Rex is a very tricky shot to reach without losing trapped balls (each ball lost will significantly lower the Super Jackpot value), and you may prefer to use the Smart Missile to collect it, so that you can shoot for larger Super Jackpots than if you had drained a few balls while shooting for T-Rex. On the other hand, the Smart Missile can be used immediately after Feed T-Rex for an enormous payoff.

I have never shot to purposely light Tri-Ball, although it's a fairly reasonable idea. You should be able to collect a Jackpot in every Tri-Ball (particularly with the Tri-Ball Restart feature), and usually make good progress on the first CHAOS (at 10M per letter), even without the Smart Missile. And on newer ROMs, subsequent Tri-Balls will have the CHAOS letters in whatever state they were when the last CHAOS mode ended. The down side is that if a CHAOS letter sensor is malfunctioning, you won't be able to collect any additional CHAOS letters (at 10M each) in subsequent Tri-Balls.

Any ball which is shot to the Boat Dock is fed to the upper right flipper. Unless the Helicopter Pad is lit for something useful (only Escape Isla Nubar and Double Jackpot come to mind), I recommend shooting for T-Rex. This is always worth something, and when T-Rex actually eats the ball, it is fed to the Right Inlane for an easy shot at the Control Room or Hammond's Bunker.

On some machines, after a Helicopter Pad or Visitor's Center shot, you can simply hold up the upper right flipper and the ball will bounce neatly into the T-Rex Paddock. This depends on the table lean and speed.

A ball which is ejected from the T-Rex Paddock will typically hit the bottom post of the end of the plunger lane, and drop towards the left flipper. This may be different on your machine, so get used to how it behaves. If it is hitting this post, a small nudge can safely put the ball on either flipper, whichever you prefer. The worst possibility is that the ball will bounce into the Left Outlane.

I have only shot purposely for Hammond's Bunker when Mr. DNA is lit, or for the C letter in CHAOS. Park Revenue just never interested me. If you have the ball on the lower right flipper and neither scoop is lit, I recommend a simple flipper pass off the inside corner of the right Slingshot. From the left flipper, you can shoot the Raptor Pit (easier from a trapped ball), the Ramp, the Power Shed, or the Boat Dock. Note that you can also usually shoot the Raptor Pit from the right flipper (or bounce from the Egg into the T-Rex Paddock).

I have rarely purposely shot for the Raptor Pit, except when it will start Tri-Ball. Even with the Danger ball saver, it's possible for a ball to drain and roll up the side of the machine such that by the time it reaches the trough, the ball saver is no longer active. Also, the Raptor Pit is extremely dangerous during Tri-Ball play. On the other hand, it's the only useful target during Raptor Two-Ball. In any case, it is worth learning how to make shots at this target from either flipper (it's easier from the left). Also, on Hard settings, the Danger ball saver seems to be much briefer.

There are a variety of trick shots at the T-Rex Paddock from the lower playfield. Try aiming for the posts dividing all of the features which face the lower flippers, particularly the left post of the Raptor Pit. If you have time, however, it is better to pass the ball to the lower left flipper (if it is not already there), shoot the Boat Dock, and line up an easy shot at T-Rex after the eject. If you flip too early at the T-Rex Paddock from the upper right flipper, you will sometimes graze the Captive Ball and land in the Paddock anyhow, scoring one Egg hit in the process.

I've found that Electric Fence mode really isn't worth the trouble, on older ROMs at least. The Turbo Bumpers are not generally powerful enough to generate 20 hits just for getting the ball in their area, so there's a lot of work and risk in shooting to get the 30M in this mode. The best strategy for getting safely into the Turbo Bumpers may be to shoot the Raptor Pit and intentionally drain, letting the Danger ball saver fire the ball into the Turbo Bumpers for you.

The Spitter Attack mode is really the easiest 30M in the game, because the targets are easy to hit from the lower right flipper. However, the ball will ricochet towards the Right Outlane, which may make you nervous ;)

I have always ignored Mosquito Millions and Bone Busting, and usually done nothing with Raptors' Rampage (love that opening animation, though).

System Boot is a useful Computer Screen, because collecting points from it can be done while lighting and collecting the next Computer Screen.

Learn how the Hammond's Bunker kickout works on your machine. It is designed to be slow and easy; it may graze the left Slingshot, but it should not hit it hard enough to activate it. Try holding up the lower left flipper for a simple catch. I found that this would work about half the time, with the ball bouncing over to the right flipper the rest of the time. Because of the slow speed of the kickout, I would not recommend trying to let it bounce over to the lower right flipper. Depending on the condition of the flipper rubbers, you may be able to use a dead catch (drop as the ball hits the flipper).

Mr. DNA will be lit at least once in the course of a typical game, and he's quite worth shooting for on a machine that is not in Tournament Mode, as some of the awards are quite lucrative.

I wasn't shooting for the Captive Ball in tournament play, but I was usually choosing the Complete Egg award from Mr. DNA, in order to advance the Egg's value, if nothing else. Super Egg Mania is interesting but seems to usually not be worth the trouble.

Actually going all the way through the Visitor's Center left orbit is extremely difficult, for some reason. Luckily, completing the orbit is only necessary for the Advance X shot. For this reason, along with the generally low End-Of-Ball Bonus, I cannot recommend ever shooting for Advance X. At the very least, Hammond's Bunker will be lit at the same time for the Park Revenue value.

Death Saves are extremely easy on Jurassic Park, and should generate no more than one warning (sometimes none, if you're very gentle or your name is Dallas) on factory settings. This is one of the best machines on which to learn how to make Death Saves.

Note that the Outlanes on Jurassic Park are protected by posts above the entire Inlane/Outlane area. Use small nudges and slaps as the ball hits these posts to control it, directing it down towards your flippers instead of towards the Slingshots or the opposite Outlane. Jurassic Park is generally very tolerant of small nudges and slaps; these almost never add up to enough motion to register Tilt warnings (unlike many Williams/Bally games, which seem to build up momentum in the pendulum swing). On the other hand, the default settings for Jurassic Park include only _one_ Tilt warning, which I think is very unfair for such a (usually) sensitive machine.

Jurassic Park machines sometimes randomly Slam Tilt. I can't adequately explain this. There are also problems with the T-Rex motors (which can be helped by newer ROMs), the Control Room sensor (bad diode?), and balls getting stuck in the under-playfield ramp that feeds balls to the Super VUK that feeds to the Right Inlane. The solution to this under-playfield problem is to somehow tie the ramp to the underside of the playfield so that it no longer sags and provides a hiding place for balls.

Also, beware of the several seconds after Game Over when the machine goes dead. During this time, you may not receive proper credit for coins inserted.

19. The Movie

I've seen it. Liked it a lot. The machine follows the movie very closely.

20. The Book

Michael Crichton's book started the entire Jurassic Park affair, of course. I've read parts of it. It's pretty good.

21. High Scores!

Masaya Horiguchi of Data East Japan has completed the CHAOS sequences and collected both 600M+ Super Jackpots *without* using the Smart Missile!