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With a foreword by Marc Laidlaw



HACK

#68

Speedrun Your Way Through Metroid Prime

Don't have time to stop and smell the roses? Excellent—you'll like speedrunning.

Speedrunning, trying to complete a video game in the fastest time possible, is almost as old as gaming itself. At least, it's almost as old as games that have a definite end point or staging points, because speedrunning a game with infinitely repeating levels is Sisyphean. That's good fun until the novelty wears off.

Speedrunning needs boundaries. Start with a game that you can finish or a game with lots of individual levels with their own ending points. Then try to complete them in the fastest possible time.

It seems so easy. First, you find a nice path or a little trick to cut a corner. You practice for a while until you have a great time. Then, as you're preparing to claim your bragging rights on the Internet, you find out that other people have done the same thing, only faster. If you're drawn to finding out their secrets and beating their times, you have what it takes to be a speedrunner.

Speedrunning Basics

What's involved in speedrunning a game? On a technical level, there are three main points: route planning, sequence breaking (“Sequence-Break Quake” [Hack #69]), and tricks. On a personal level, there's determination, persistence, skill, practice, and time.

Why do it? Possibly for peer respect. There are certainly bragging rights attached to being the first person to demonstrate a route or trick. For money and power? Unlikely. I'm not aware of a single millionaire who made his fortune speedrunning games. Maybe you want to get the most out of your game. The practice and persistence needed to perform runs certainly adds to the replay value and helps you wring every cent of value out of your investment.

I don't think these are the main motivational forces that drive people to truly master a game. Most importantly, it's fun, at least for the kind of people who find fun in doing the same thing over and over again until they achieve as much perfection as possible. We call these gallant people speedrunners. Speedrunners play a game, level, or section tens or hundreds of times trying to save a second or two. They examine the playing area in minute detail to ensure they haven't missed any potential shortcuts and test the limits of the game engine to find ways to go faster or gain some advantage.

A second group of people don't have the skill and mindset to perform breathtaking runs but enjoy watching demos of speedruns. We call these

Speedrun Your Way Through Metroid Prime

people *viewers*. Viewers form a very important part of the speedrunning community. First, they often contribute feedback, ideas, and even new tricks for the speedrunners to use in their next runs. Second, they form an audience for the speedrunners to perform for. After all, there's no point bragging about how great your run is if there's no one there to brag to.



A third group of people does nothing of note, ever, until the announcement of a new speedrun. They then rush to post remarks such as: “Pfff. Why are people still playing this game? Why doesn’t this person get a life? Haven’t they got anything better to do?” (except that they have worse spelling). The civilized world calls these people losers. I won’t mention them again.

Earlier, I broke the technical aspects of speedrunning into three separate techniques: route planning, sequence breaking, and tricks. Ideally, you will combine all three into one beautiful, seamless whole by planning a route that uses tricks to sequence-break to best effect. Until you have those chops, we’ll consider each technique separately before exploring some example speedruns.

Route Planning

Route planning is the most fundamental part of speedrunning. No matter how good your tricks, running through a game in a foolish order will produce a bad time. Whether you are going for a straight run (finishing in the fastest time possible), a 100% run (finishing with all kills, secrets, items, and whatever else you want to measure), or some other variation, route planning is the key to improving your time.

In some games, such as *The Legend of Zelda: A Link to the Past* (<http://planetquake.com/sda/other/lttp.html>) or *Prince of Persia: The Sands of Time* (<http://planetquake.com/sda/other/popsot.html>), there are no real sequence-breaking tricks; route planning and game skill are everything. The order in which you choose to do things, your item usage, and your ability are the main speedrunning criteria. (Speed Demo Archive, <http://planetquake.com/sda>, has demo speedruns for both games.)

Speeding as Metroid’s Samus

This is the fun stuff: abusing game physics and exploiting bugs to allow you to perform stunts that should not be possible. Explaining all the available tricks could fill a book in itself. Let’s limit the tricks to a few from the Metroid series (the 2D Metroids and Metroid Prime).

Metroid. The world of a 2D platform game, such as the Metroid series, is a much simpler place. Generally, this means that there aren't as many tricks available in an engine with simpler, probably less exploitable physics, but speedrunners will always find a way.

The most basic and the most useful of all Metroid speed tricks is the wall jump, introduced in Super Metroid (<http://speeddemosarchive.com/hack/walljump.html>). Somersault towards a wall, and jump again in the opposite direction at the moment you make contact. If you have done it correctly, you will be jumping the opposite direction of your first jump a fair distance off the ground. You can repeat the procedure while you're still in the air, as long as you have walls to scale. With practice and some nifty thumb work, you'll soon ascend vertical walls in no time at all. The difficulty of this trick varies with the version of Metroid you are playing.

Metroid Zero Mission had its own special trick, the ability to do “infinite bomb jumps” while in the morph ball. No matter the height at which a bomb explodes against you while you're in a ball, it will always push you upwards the same amount. If you lay a bomb and then lay another bomb just after the first bomb has bounced you into the air, the second explosion will propel you higher than did the first explosion. If you had the foresight to lay a third bomb just after the second bomb boosted you upwards, you will find yourself even higher still, and so on until you hit the roof.

An even faster variation, the so-called double bomb jump, requires very precise timing to lay bombs at the top *and* bottom of each alternate boost. That probably doesn't make much sense unless you watch an example (<http://speeddemosarchive.com/hack/bombjump.html>).

The Metroid games also have a built-in speed hack, the beautifully named *shinespark*. It's not needed to complete the games, but is the key to many secret areas and can be the speedrunner's best friend. To perform a shinespark, you need the Speed Booster powerup.

While merrily boosting along, tap down. Samus will crouch and continue flashing, indicating that you've charged the shinespark. You now have a short time to move into position and release it, sending Samus hurtling off like a glowing missile.

If you hit a slope while 'sparking, you will start running at boosted speed again, which allows you to charge another shinespark and start the process again. Using this approach, you can chain together sequences of shinesparks to reach the most inaccessible of secret areas and cover large distances in very little time. See Metroid 2002 (<http://www.metroid2002.com/>) for useful time-savers in Metroid Fusion and Zero Mission that use the shinespark.

Speedrun Your Way Through Metroid Prime

If you're looking for more information on speedrunning for diverse titles over diverse consoles and the PC, the SDA Other site (<http://planetquake.com/sda/other/>) announces all the new speedruns. If you want to know how to accomplish new tricks, either watch the runs in question or go to specific FAQ sites, such as Metroid 2002 for the Metroid series.

Metroid Prime. Poor old Samus Aran seems hampered in her movement in her first 3D sojourn. It takes forever for her to turn around, her running is not up to the speed we expect from the blonde battle-machine, and her jumps are a little labored. It only seems fair that the world's speedrunners have uncovered ways to return her to her athletic glory.

The L-Lock-spring jump lets you gain some extra distance. Use the R button to look down, lock the view with the L button, run off a platform and jump, then release the lock right away to gain extra distance. To gain even greater horizontal distance but little vertical height, use the dash jump: acquire a lock somewhere convenient, point your analog stick in the direction you wish to hurdle, tap the jump button, then release all keys right away. You should find yourself flying in the direction you pressed.