

Sonic 2 WR Progression

Early runs

20/11/05 - 23:14 - mike89 (no video on this one)

20/2/06 - 24:23 - Suzaku (if you prefer, you can start here) -

https://archive.org/details/Sonic2_SS_2423

Tricks used:

Oil Ocean 2 - When you go into the sphere cannons normally, the game gives you additional speed and jump height in order to make you shoot between them faster, and the last cannon in the sequence reverses these changes. If you get hit into one, however, you fall out of the cannon but still keep the effects, which looks quite strange in the stage.

Stanski era

19/11/06 - 20:02 - stanski - https://archive.org/details/Sonic2_SS_2002

25/2/07 - 18:54 - stanski - https://archive.org/details/Sonic2_1854

19/7/07 - 18:12 - stanski - https://archive.org/details/Sonic2_1812

New tricks:

Chemical Plant 2 - getting Tails hit at the start of the level, then dashing to the door. This input tricks Tails into coming at the door from the other side, opening it for Sonic. Then if you stand on the ramp, the game thinks you've come through from the top, letting you go down the ramp and skipping half of the stage. [First seen in the 20:02 run]

Hill Top 1 - Only the top of the lava has collision, so if you stand on the lava while invincible and have the platform fall in, you will be moved onto the platform and fall straight through the lava. If you correctly time a left press, you will zip to the right and skip much of the underground section. [First seen in the 20:02 run]

Screen wrap - Each of the three acts of Metropolis are too large vertically for the game to fit the entire map into the allocated space, so the programmers made the level wrap around itself vertically to create the illusion of more space. However, the way they did it introduced this bug. In these levels, the top of the screen is considered y-position 0. If you duck, scroll the screen all the way down, and then jump above the top of the screen, the game now considers your y-position to be negative. However, position co-ordinates are never meant to be negative, so the game treats them as unsigned integers. This means that your position is treated as, not negative, but a very large positive number. As a result, the camera thinks that the best way to find you is to scroll -down-, and it can take several seconds to reach you again. While it scrolls, any sprite objects that are in your direct line are unloaded in the game's memory, and this is used in Metropolis 1 and 3 to force the bolts to disappear, stand

where they would normally be, and then jump just as they are re-loaded to be pushed into the ground and save time. [First seen in the 18:12 run]

Barren period

No new runs, but a couple of significant new tricks:

Metropolis 2 - Similar concept to Hill Top 1, where you pass through the lava while invincible and then move around inside the walls for a bit. Then you push right inside a wall, release at the right time and you will go all the way to the end of the stage. We call this a level wrap, it's similar to the screen wrap but in the horizontal direction, and therefore much more useful when you can pull it off, since it puts you right at the end of the stage. The game places a 16 pixel buffer on the left edge of every stage to prevent you from doing this, but it's possible to get a higher speed than 16 pixels a frame by zipping. [First found around May 2009 - refer Sonic 2 IL table on SDA: <http://speeddemosarchive.com/Sonic2.html#Sonic2>]

Metropolis 3 - Another level wrap, this one much more difficult. This requires having both Sonic and Tails. The platform next to you at the start works like this: if either character moves off it, it will quickly drop away. So what you have to do is inch towards the edge of it very slowly, and have Tails move off the edge while Sonic remains on it. Then on the first two frames that it falls, press right to initiate a zip, then release right at the right time on the ramp and you can again level wrap to the end of the stage. [First found in October 2011 - <http://tasvideos.org/forum/viewtopic.php?p=292034#292034>]

Stanski goes down!

28/3/12 - 16:13 - mike89 - <https://www.youtube.com/watch?v=r7Kv8rvyRko>

I'd been working on this offline for a couple of months, so there are probably several times in between but I never kept any of them. This is the first public run to have both of those tricks above implemented.

Everything up to this point was submitted to SDA, after this it's mostly streaming content.

The hunt for 15

12/6/13 - 16:09 - mike89 - <https://www.twitch.tv/videos/50372651>

30/7/13 - 16:03 - TeeNTee314 - <https://www.youtube.com/watch?v=D6yZxuDFGG0>

31/10/13 - 16:01 - mike89 - <https://www.twitch.tv/videos/49449814>

15/11/13 - 15:48 - mike89 - <https://www.youtube.com/watch?v=KukwN8lxrqc>

(Also notable: 15/11/13 - 16:08 - TimpZ - <https://www.twitch.tv/videos/45529820>)

Here the three of us were all gunning for the first sub-16 at the same time, and we had all lost runs that really should have got there. Finally, I got there first and TimpZ very nearly followed the very same day! He did eventually get 15:56 a week later.

New tricks:

Wing Fortress - On the second-last zipline in the stage, if you spindash just after you land on it, the camera stays in place while the zipline dashes off to the right, and eventually it unloads itself and disappears. However, the game still thinks Sonic is standing on a sprite object, and this completely breaks collision detection. For as long as you don't stand on another sprite, the game completely mishandles slopes - hence the name "slope glitch". Normally when on regular ground the game constantly checks the slope of the ground you're standing on and adjusts your position accordingly - but since sprite objects are considered flat, the game never runs this check. So when you land on the slope, you just carry on at that angle, even if that angle sends you into a wall or floor. [First seen in TimpZ's 16:08]

In the ideal case, you can also use this to stand on the laser in the boss fight and charge a spindash to get all eight hits, which is much quicker than doing the fight normally. [First seen in my 15:18]

Optimisation fun

3/12/13 - 15:40 - mike89 - video of this one is busted :(

4/12/13 - 15:18 - mike89 - http://speeddemosarchive.com/demo.pl?Sonic2_1518

This run was my magnum opus, the best run I had ever done. It was so far ahead of anyone else that I didn't think I would ever have to come back and beat it.

It lasted six months.

The Challenger

3/6/14 - 15:08 - werster - https://www.youtube.com/watch?v=AnAgjTBH_R8

This run holds a rather interesting place in Sonic 2 history. Firstly, the run was obviously incredible, and did a few things I wasn't doing (Casino Night 2 and Death Egg are good examples), but it was eventually removed from the leaderboards - not because of anything werster did wrong, but a rule change we'd been meaning to make for a long time. Any runs on the Gens emulator were removed from the classic Sonic leaderboards some time in 2015 (or whenever it was that most games started migrating to speedrun.com). This emulator is known to be inaccurate and also has TASing capability, and at the time there were a number of people using this to claim times in Sonic 1 under false pretences. So we just banned it outright - and, in the interest of fairness, any prior runs done on it too.

So that left the record in a pretty weird spot. On speedrun.com it was 15:18, but many thousands of people had seen this 15:08 run and couldn't understand why it wasn't legitimate.

Eventually it caused me enough consternation that I just went and got it back.

Reunification

20/4/17 - 15:07 - mike89 - <https://www.youtube.com/watch?v=dF2KPFo11PA>

21/6/17 - 14:58 - mike89 - <https://www.youtube.com/watch?v=Z-q8d3xyIS0>

The 15:07 reunified the record, so the confusion no longer existed. Eventually I went and improved it to 14:58, which is the culmination of almost everything we know today. There are still some strategies that were considered too unsafe for this kind of run, so there may still be life in it yet in the future!

For some examples of strategies not used in current runs, see this playlist:

<https://www.youtube.com/playlist?list=PLzO4NtvTGZiEGRqRjRb6N3FBtt9bLNtGR>

Notables: Chemical Plant 1, Casino Night 2, Metropolis 1, Death Egg