

Forum:[Hack Forums](#)

Thread: [Nine - a finetuned, difficult and impressive Commodore 64 demo with "9 sprites"](#)

Hackers - February 5, 2025, 8:07 am

<https://linusakesson.net/scene/nine/index.php>

Video:

<https://www.youtube.com/watch?v=Ws4twUyt-MY>

It may seem like nothing if you aren't looking into the technical details.
This is very impressive and well tuned.

Specifically, C64 only supports 8 sprites. This is why it's awesome that they were able to generate not just the animated wizard in the middle, but 9 numbers flying/animated around. This is something that has been done before with some simple sprite splitting/splicing where 1 original sprite asset could represent two different items/characters/graphics on the screen. However, the reason 9 is impressive is because they don't follow normal sprite cutting methods. You can see this in action when they not only show the horizontal display, but a vertical display, and proceed to animate the sprites in a variety of ways.

Debugging notes:

<https://github.com/martinpiiper/DebuggingDetails/blob/main/Nine%20-%20LFT.txt>

<https://youtu.be/lk1vsMM2EuY?t=1509>

<https://www.linusakesson.net/scene/lunatico/misc.php>

Quote:For better understanding: The demo starts with a magician character drawn in the center of the screen, announcing the trick in text (some of this is big text achieved by overlaying sprites). Then, 9 sprites, each in the form of a colored number from 1 to 9, exit the magician's hat to rotate around him (in the notes screen #1), then, the screen gradually widens horizontally beyond the usual borders and the circle of the 9 apparent sprites spreads out over the entire screen (screen #2). (At this point, the display of the magician, which was clearly drawn by PETSCII characters, before, shouldn't be viable anymore.) The swirling numbers transition to a narrow ellipse near the top of the screen (screen #3), which then transition to the very top of the screen, above the normal display area, a zone, which is available for sprites only, showing the sprites in a linear rotation (screen #4). Meaning, these must be sprites and these 9 apparent sprites are drawn at the same scan-lines. (So there is no way this could have been achieved by conventional, vertical multiplexing. This is the highlight, the big trick of the magician's show.) At the end, the sprites return to their initial circling motion and vanish, one by one, into the magician's hat.

The demo is a combination of various tricks and artful timing, which enables perfect transitions between them.

Similar impressive feat: Generating a song with only 256 bytes of code

<https://www.youtube.com/watch?v=sWblpsLZ-O8>