In this playlist, I collect the stars in Super Mario 64 using as few presses of the A button as possible, in what's known as the A Button Challenge (ABC). I use an emulator and tool assistance in these videos. Consequently, they are NOT done in real time; I use save states and slow down to help me. Thus, these videos are not meant to show skillful playing, but rather the theoretical way of playing that uses the absolute minimum number of A presses.

Here's how the playlist works. I show all 7 stars for each of the 15 main courses (6 regular stars, and the 100 coin star). However, if you can also pair the 100 coin star with one of the regular stars such that the A presses for that pairing is LESS THAN the sum of the A presses for both stars alone, then I show that as well. For example, consider a situation in which a regular star takes 2 A presses and the 100 coin star takes 2 A presses. Also, if you collect the 100 coin star and THEN the regular star, it takes 3 A presses. That means that an A press can be saved by pairing these stars together. Were someone to make a 100% ABC run, then that pairing would be the optimal strategy.

I use a special notation that allows for "half A presses". You see, some stars require the A button to be PRESSED, while others only require it to be HELD. This is an important distinction to make. While pressing A allows Mario to execute several kinds of jumps, the holding of A allows Mario to swim in water, do little kicks up slopes, grab the owl, fall slowly while whirling, and fall slowly with the wing cap. So, if a star only requires the A button to be held, the pressing of the A button could have been done at some point in the past, and just held until that moment. For instance, let's say there are two stars: one that requires the A button to be pressed (x1 A Presses), and another that only requires the A button to be held (x0.5 A Presses). Individually, these stars would each require a full A press. But if these stars were collected one after the other, then the A button could be pressed during the former, and held all the way through to the next star to be used in the latter. In this manner, these stars together would only take 1 A press, whereas they would take 2 A presses if done individually.

Furthermore, some actions are classified as "terminating", denoted with a blue A press count. An action is considered terminating if the following condition holds: Requiring that the A button be held at the end of the action would necessarily increase its A press count to at least the next highest integer. In other words, trying to have the A button held at the end of the action would incur an additional A press. Thus, if one were attempting to hold A through several stars, this A press would *terminate* on the first terminating action, since otherwise it would incur an additional A press, which is undesirable. Strategies that require the A button to not be held (and would thus terminate a lingering A press) include the need to punch, to pick up heavy objects (i.e. chuckya, King Bob-omb), and to clone. For a half A press to successfully leech off of the previous A press, it's necessary that (1) the half A press is preceded by a full A press, and (2) there are no terminating actions between that full A press and the half A press. If these conditions are met (and I make sure to meet them in the routes), then the half A presses can be rounded down.

If you (as the viewer) have any suggestions, ideas, or theories of how to improve any of these records or can show a video that demonstrates a better strategy, feel free to comment or message me about it. I'll look into it and upload an improved video if it works.

As of now, I have made ABC videos for all 120 stars as well as the movement within the castle. Consequently, I have done the calculations for the minimum number of A presses to beat the game, both for a 120 Star Run and for an Any% Run (70 Stars). The A press counts for and descriptions of these routes can be found below. I continually update these routes as new strategies are discovered.

Also worth mentioning are several misconceptions about what requires an A press. Specifically, there are several things I do that people might *think* I'm pressing A to do, without realizing that an alternate button suffices. These include:

- Selecting a file to play — start can be used to do this
- Selecting a mission — start can be used to do this
- Scrolling through text — B can be used to do this
- Choosing whether to save after collecting a mission star — start can be used to do this
- Choosing whether to save after collecting a 100 coin star — B can be used to do this
- Choosing whether to save after collecting a castle secret star — B can be used to do this
- Choosing whether to save after activating a cap switch — B can be used to do this
- Choosing whether to start a penguin race or koopa race — B can be used to do this
- Performing a dive recover — B can be used to do this
- Talking to a toad or bob-omb buddy — B can be used to do this

Finally, I'd like to answer a question that I've been getting since the beginning, which is: Why? Why play the game with limited functionality? What's the point of executing these complicated techniques when a simple A press would accomplish the same thing? Well, the answer is because it's fun and interesting! Super Mario 64 has been a game that I've loved since my childhood, but over time the challenge of collecting the stars became too easy. So what's left to do in the game after that? Well, invent your own challenges! If collecting the stars is too easy, then why not impose restrictions to make it harder? People have devised several of these challenges, such as: not pressing A, not pressing B, not pressing Z, not pressing any buttons, not using the joystick, not opening any cannons, not activating any caps, not collecting any coins, not touching the ground, not leaving the ground, even not having Mario make a sound. By imposing a restriction, it forces you to think in new and creative ways in order to find workarounds. That star that's usually so trivial to collect? Now it requires an unintuitive and complex route that would have never been used otherwise. Out of all of the challenges, I find the A button challenge to be the most interesting, in that it has the most potential for creative workarounds. After all, the A button's primary purpose is to jump. Since the programmers intended for Mario to jump during every mission, this means nearly every star will require some workaround. Furthermore, jumping is such a simple maneuver that many things can function as a substitute depending on the situation, which allows for a great diversity in creative workarounds. Lastly, the desire to save A presses has been beneficial for SM64 as a whole. That's because in order to save A presses, new glitches have been discovered and certain game mechanics has been better understood, and these findings carry over to other areas of SM64 as well.

Here is the 120 Star ABC Route, done in 13 A Presses. The time estimate is 21 hours and 38 minutes, though the final video is expected to be around 5 hours 30 minutes since repetitive sequences will be fast forwarded.

Note that this route is calculated for Japanese N64 version of the game, as this is what allows for the fewest amount of A presses. Specifically, this version is chosen because it allows for spawning displacement, which saves 3 A presses.

In this route, I collect every star and beat the game using as few A presses as possible. This is by no means the most efficient route; it just shows one potential way to do it. All half A presses are rounded down in the truncated column, because they are all preceded by a full A press at some point, and so that previous A press can simply be held out to be made use of for the half A press. Where necessary, I combine the 100 coin star with a regular star if it saves any A presses. I also do this for Tick Tock Clock, because this means one fewer time having to enter the painting, which itself costs one A press. I also show each star's requirements, including which caps are required, which cannons are required, which Bowser keys are required, the number of stars required, and which course versions are required. To learn more about the course versions, see the last page.

Here is the Any% ABC Route, done in 0 A Presses. The time estimate is 73 hours, though the final video is expected to be around 2 hours 35 minutes since repetitive sequences will be fast forwarded.

Note that this route is calculated for Wii VC version of the game, as this is what allows for the fewest amount of A presses. Specifically, this version is chosen because it allows for platform raising in BitFS, which saves 1 A press.

In this route, I beat the game using as few A presses as possible. This is by no means the most efficient route; it just shows one potential way to do it. To formulate this route, I simply put together all 0x A Presses stars and the Bowser levels (without red coins, unless the red coins could be collected using no additional A presses). Note that I didn't include the red coin star for Bowser in the Sky, since that would necessary occur *after* we've achieved the 70 stars required to pass the endless stairs. In total, this added up to more than 70 stars, all of which are listed for convenience. During an actual run, however, only the fastest 70 of these stars would be collected.

Here are the course versions. You may have noticed that when you select certain stars, the courses vary slightly. For example, selecting the first star of BoB causes King Bob-omb to be on top of the hill, whereas he is not there in other stars. We denote these variations of the courses as different *versions* of the courses. Some versions of courses are required to collect stars using the optimal number of A presses. For example, Fall Onto the Caged Island must be collected during the star Chip Off Whomp's Block, since it requires launching off of King Whomp's head. Yet, which version you receive upon selecting a star is not entirely obvious. If there are any blue stars in the stage select, then the last version you can select is the first blue star. If you select a star to the right of the first blue star, then you will STILL receive the version for that first blue star. For example, let's say the first time I play in Whomp's Fortress, I collect the star Fall Onto the Caged Island. The next time I enter the course, I can select either Chip Off Whomp's Block (a blue star) or Fall Onto the Caged Island (a yellow star). However, since the first blue star is still Chip Off Whomp's Block, selecting Fall Onto the Caged would STILL yield the version with King Whomp in it. Understanding how this system works and recognizing which versions are required for which stars is crucial for understanding the ABC routes I have presented.