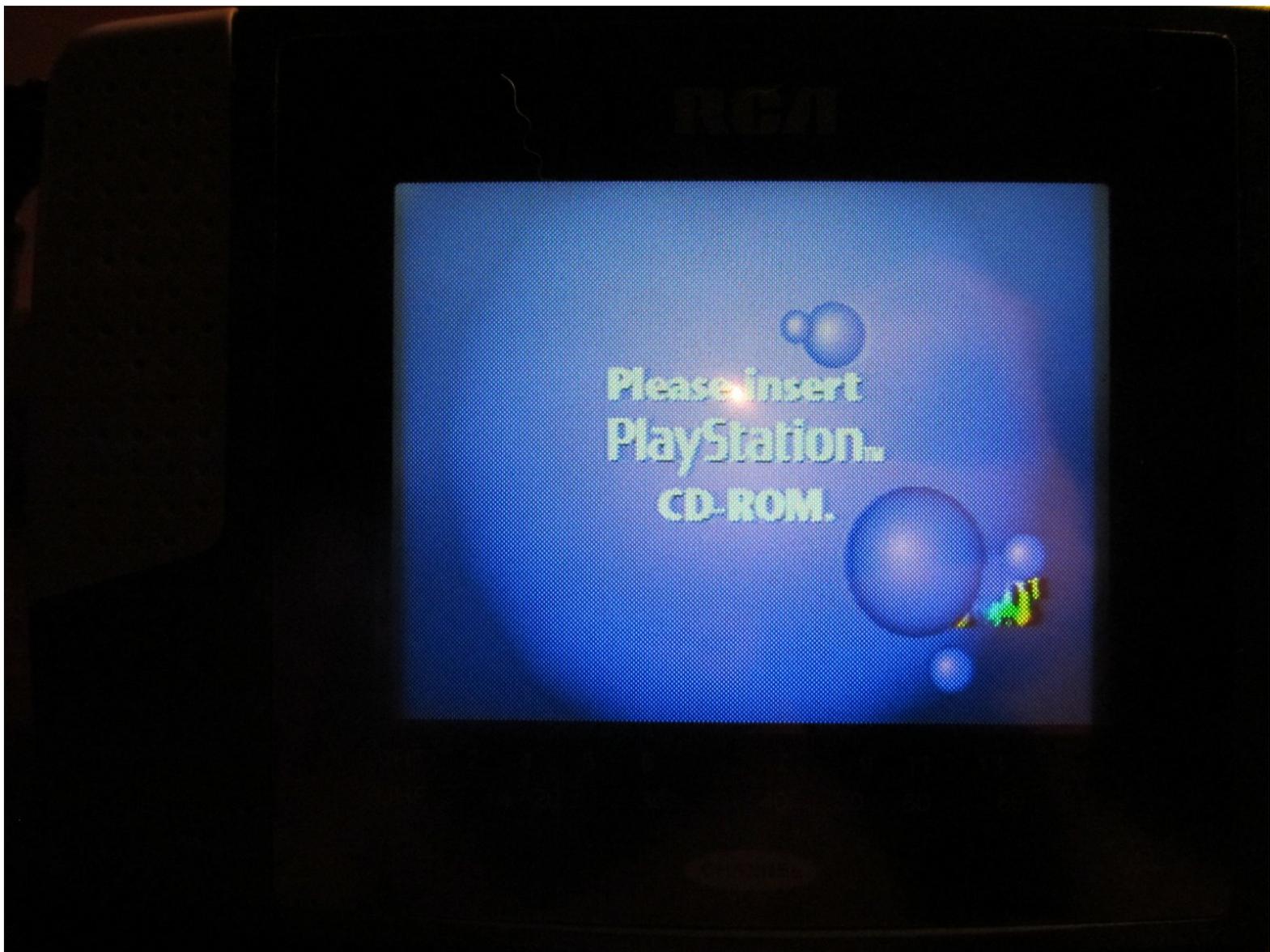# PlayStation SCPH-5501 Laser Trimpot Adjustment

Written By: Nick

INTRODUCTION

Is your PlayStation SCPH-550x having trouble reading games? This guide will show you how to extend the life of the existing laser you already have so you can either get another system or replace the laser in your current PlayStation. Laser assembly failure is a known issue in some of these older PlayStations.

<u>Guide notes</u>

- **This is best used as a temporary fix. While you may permanently repair the system, this is very unlikely to be anything more then a short term fix.**
- This fix will not repair the KSM-440AAM and ACM laser assemblies. These fail for different reasons (the optical block is plastic and the plastic wears out over time). These systems require a new laser.
- This guide is intended to be used on the KSM-440ADM laser. These use a magnesium optical block, so they do not wear down like the plastic one.
- If you have a issue with this laser beyond the ability to adjust it, the KSM-440BAM laser may work, depending on what model system you have. Since these are PSOne laser assemblies, spacers are required during installation. **Note: If you do this, you will need to adjust the system beyond what is coveref in this guide.**
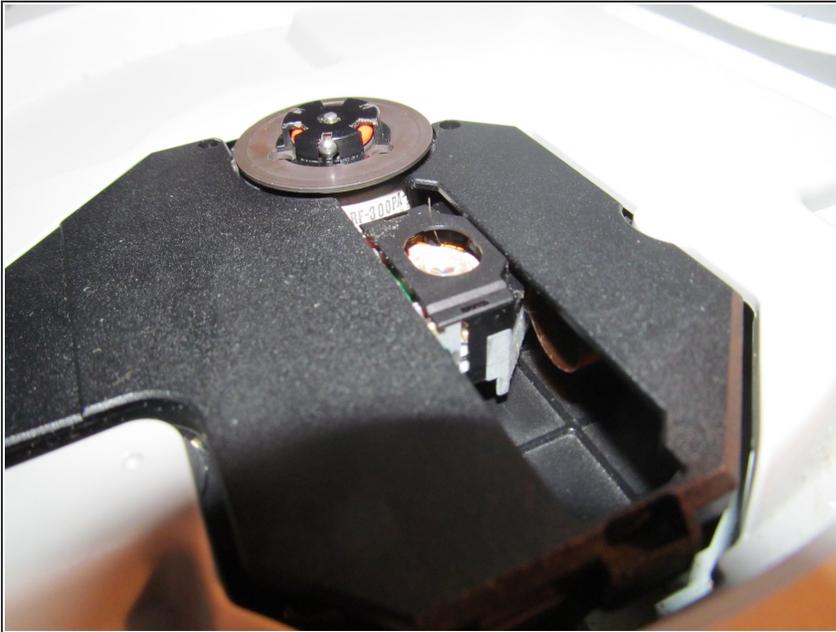
Note on adjustment specifics: I cannot provide an adjustment reference. Every system is going to be unique, while others will have to be deemed beyond repair. The system I used only recovered with a 50-60% read rate.

🔧 TOOLS:

- 64 Bit Driver Kit (1)
- Phillips #2 Screwdriver (1)

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Step 1 — Is your system recoverable?

- ⓘ Before starting the repair, make sure you have a die cast laser. Plastic lasers are non-recoverable. If your system has a die cast laser, it should look like this.

- If your laser is plastic: **Stop here and replace the laser**. The failure mode is uneven wear rather then a worn out laser.

- If you have a **Die cast laser**, this fix may work to recover the laser. These fail because of wear and tear most of the time, but in some cases, the laser may just need some adjustment work performed.

Step 2 — Opening the system

- Remove the 6 screws from the bottom of the PlayStation using a Phillips #2 screwdriver. Once you do this, remove the top of the system.

Step 3 — Disconnect the laser

- Disconnect the laser from the unit.

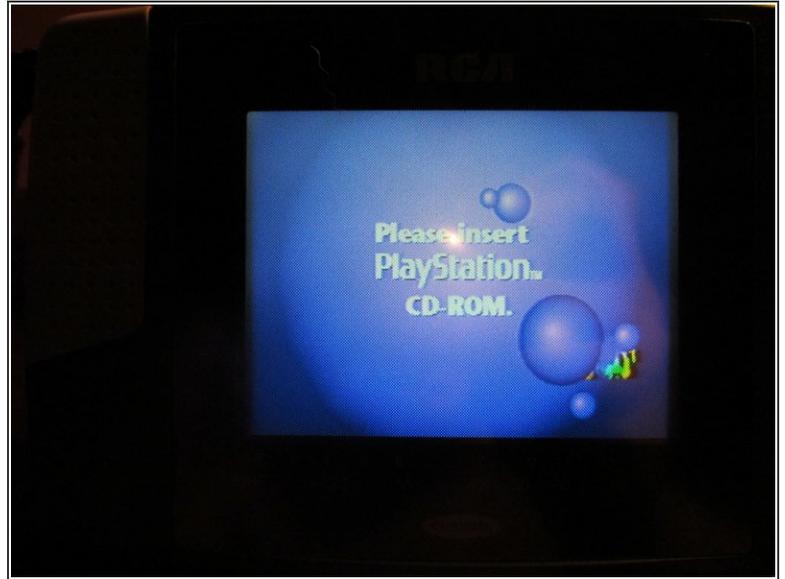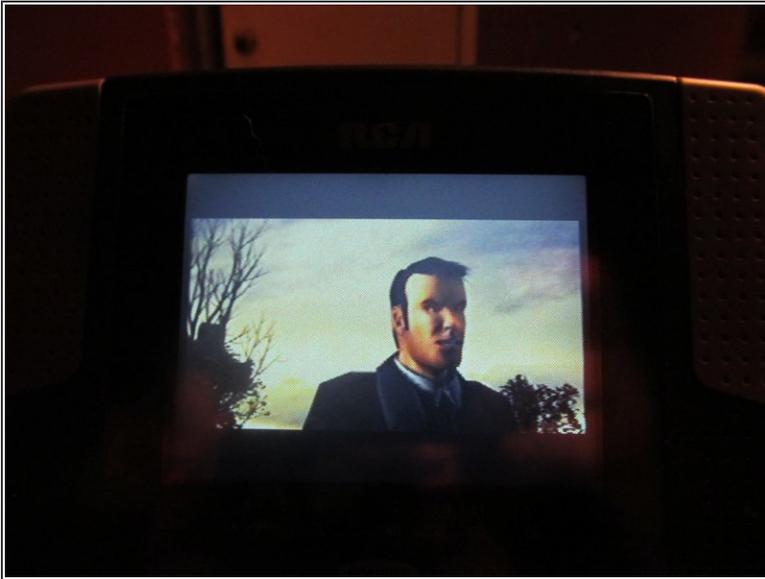## Step 4 — Checking for a die cast laser

- With the laser removed from the system, remove the 2 screws from the bottom of the laser. Use a **Phillips PH1** screwdriver. You need to do this to verify if your laser is die cast or plastic.

- With the cover off of the laser, look at the laser. The laser should look like the laser in the picture. If it doesn't, it is a plastic laser assembly. After this is verified, put the cover back on the bottom of the laser.

Step 5 — Adjusting the trimpot on the laser

⚠️ **Do not overadjust the laser. If you overdo this, you run the risk of burning games or burning the motor out prematurely. If you go too far, back off a little bit until you get it right.**

📌 Anything less then a 80% read rate should be considered a failure. This is because the laser probably does not have much life left in it and replacement is a better option. If you are dealing with one of these systems, its's best to find a good used laser that works, or a NOS one.

- **Before starting, take a picture of the laser and mark the original position before adjusting the laser.**

- Adjust the laser trimpot in small amounts at a time. Using a **Philips PH1** screwdriver, turn the trimpot a few times. Do this until you can confirm the laser reads games again, and test the average for the amount of games successfully read.

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## Step 6 — Testing the average game read percentage

- Reverse disassembly of the system. Once the system is reassembled, test a few games and see what the system does. If you adjusted it too much and the laser does not try, dial it back a little bit until it no longer happens. The ideal number is 80-90% of games read successfully.

- To test the read percentage, get a few known good games and put them in the system. I recommend a minimum of 5 test games or more. **Note: While performing a read test, do not do further adjustments until you have the results in hand and you are not satisfied with what you got.**

- If you can get the game to load, play each game on the system for a little bit and watch for any playback problems. If an issue comes up, take note of it. If this happens, make a note and make sure it isn't something with that game in your system, as this is sometimes the case with some model systems.

- **Improving the read percentage:** If you are not happy with the results, adjust the laser assembly further. Once this is done, try again. If you hit the point where the motor doesn't try and spin the game at the right speed, go up or dial it back a little bit more. Once you find the sweet spot, keep it there and do not adjust further.

- ⓘ If you see the **Insert PlayStation CD-ROM** screen, you are going too slow for the system to read the game. If you see this happen, you will need to increase the trimpot further.

- **Having a reference system:** If you have a second system on hand, use this to develop an average for how well your repaired system holds up against a working system that does not have a laser problem. You can also use this to gauge the success of the repair on your bad system a well.

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Step 7 — Control System
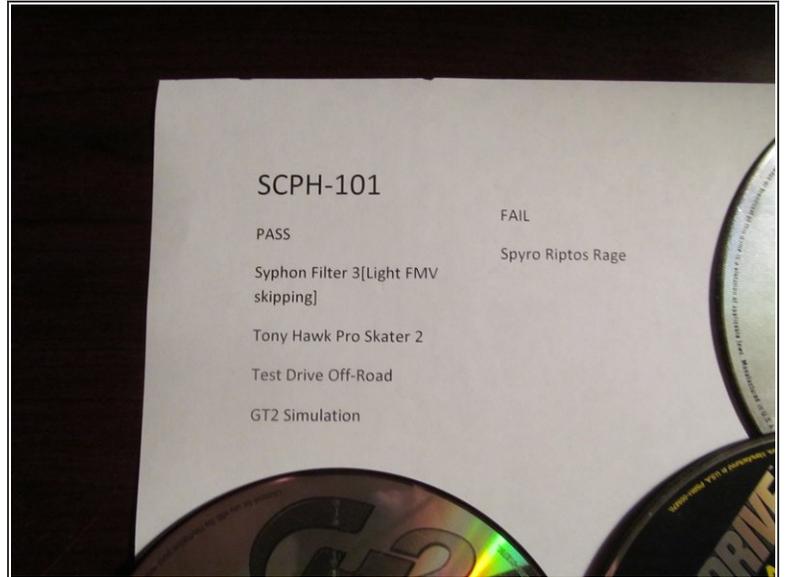
- From my Control system. SCPH-101

Step 8 — Repaired System
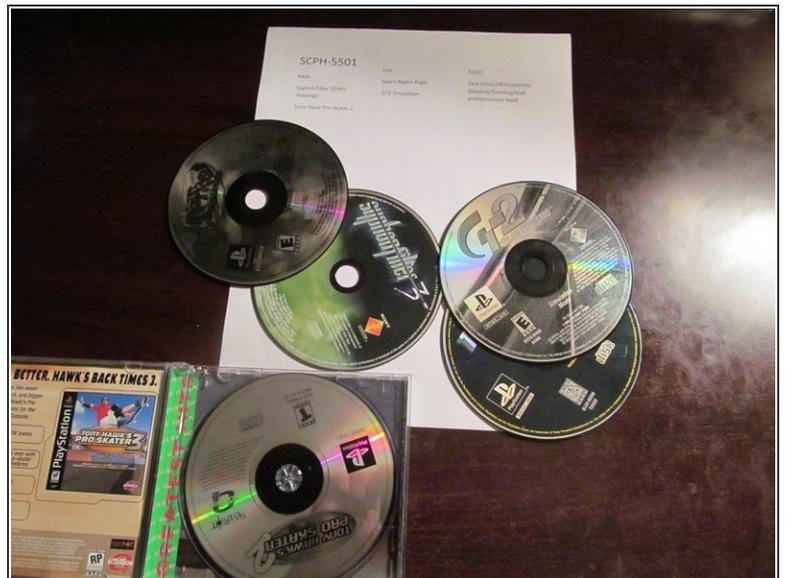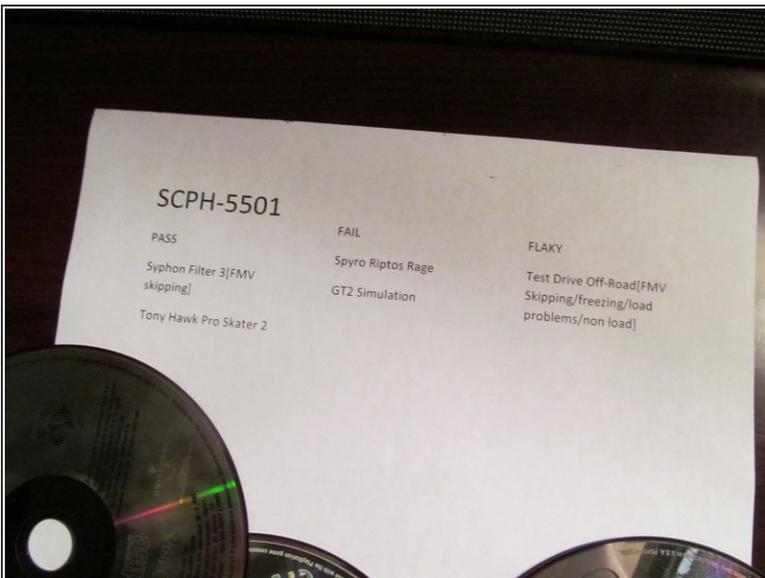
- Repaired SCPH-5501

To reassemble your device, follow these instructions in reverse order.

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