

Soundstation project

I love listening to music and I have quite a few CDs.

Some time ago (almost two years back now) I thought that it would be very nice to have a kind of PC that memorizes all my music and displays a list where I could select the songs that I would like to listen to - this way I wouldn't need to search each time for the CDs that contain the songs I want to listen to and I would be able to make playlists. I tried to search the net for such a machine, which in the end is some kind of jukebox, but unluckily I didn't find much.

Philips created such a thing, but unluckily I didn't like very much how it looked like, the screen was very small, the capacity was quite limited and it isn't cheap. I found as well some other offers, but they looked like to be even more expensive. After a short period of disappointment I thought that I could try to build such a machine using a PC and started therefore thinking about the requirements and how to implement them. I started about 6 months ago, and I'm still not done with it, so this article will be for a while under construction.

This is quite a long story, so I divided it into the following chapters:

- [Chapter 1 - Theory & hardware](#)
- [Chapter 2 - Initial setup](#)
- [Chapter 3 - Jukebox music setup](#)
- [Chapter 4 - CPU throttling & Co.](#)
- [Chapter 5 - Watch movies](#)

Here the resolutions for some of the problems I had:

- After issuing the command `shutdown -h now`, the system was going down but without turning off the power - the last message displayed was `System halted`.

Add the option `acpi=force` to the boot line of your boot manager (e.g. `grub.conf`). This may, on the other side, lead to undesired behaviour of some components reported by `/proc/acpi/thermal_zone/THRM/temperature`, like a CPU temperature of `-266 C...`

- After issuing the commands `echo shutdown > /sys/power/disk; echo disk > /sys/power/state` to suspend the PC using `swsusp`, the screen becomes black with only a cursor blinking and it doesn't suspend nor shutdowns.

Make sure that in the kernel, under *Power management options (ACPI, APM) => ACPI (Advanced Configuration and Power Interface) Support*, the options look like this, especially the *Sleep States* has to be inactive:

```
[*] ACPI Support [ ] Sleep States <*> AC Adapter <*> Battery <*> Button <*>
Video < > Generic Hotkey (EXPERIMENTAL) <*> Fan < > Dock <*> Processor <*>
Thermal Zone < > ASUS/Medion Laptop Extras < > IBM ThinkPad Laptop Extras < >
Toshiba Laptop Extras (0) Disable ACPI for systems before Jan 1st this year [*]
Debug Statements < > ACPI0004,PNP0A05 and PNP0A06 Container Driver
(EXPERIMENTAL) < > Smart Battery System (EXPERIMENTAL)
```

If, after setting the options as shown above, the system complains about `lirc` during suspend with a message similar to `echo: write error: Device or resource busy` and you see in your `/var/log/messages` something like...

```
Jun 14 14:26:08 VIA Stopping tasks:
```

```
page_breakpage_breakpage_breakpage_breakpage_break=== Jun 14 14:26:08 VIA
stopping tasks timed out after 20 seconds (1 tasks remaining): Jun 14 14:26:08
```

VIA lirc_dev Jun 14 14:26:08 VIA Restarting tasks...<6> Strange, lirc_dev not stopped

... try to manually shutdown the lirc devices before suspending the system. Do this with:
`/etc/init.d/lircd stop modprobe -r lirc_i2c modprobe -r lirc_dev`