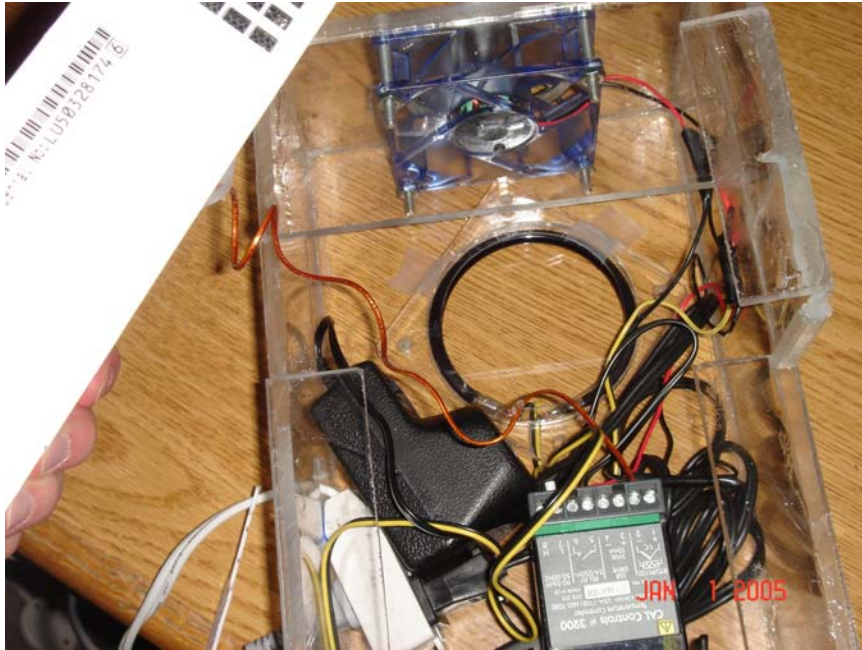


**Wii Cool Deck**  
**Erik George**



**Figure 1:** Inside project: Inside the box, temperature controller, power supply, light and fan.



**Figure 2:** Outside project: Wii on top of the Plexiglas box and temperature controller.

## Summary

What if you are at work, trying to earn an honest living and with that hard earned money you are lucky enough to purchase one of those hard to find Nintendo Wii's. You would want to make sure that nothing bad happens to it since you know how hard it is to find one. So with a few occurrences that the Wii can overheat while updating from the internet, this causes someone to create a cooling system designed to hit this problem head on. Designing a Wii Cool Deck, that will cool the Wii without moving a finger. The main problem with the Wii is when it is downloading updates for the system to upgrade its software, the system is on standby and the fan is not running. This causes the Wii's core processor to working without the fan, which if you know anything about computers can end up bad for the Wii. Since the fan does not run, I designed a pressured cooling system to cool the Wii while it is updating happens.

The design of the holder for the Wii is about as wide and long as the Wii itself, but a bit deeper due to holding all the equipment for the device to effectively cool the Wii. This is wide enough to fit the temperature controller, computer fan, light and the power supply for the fan and light. The Wii sits on top of the box which is made up of Plexiglas, so the light will show through to let you know the fan has turned on when it reaches a predetermined temperature. The temperature controller does this by when the Wii hits a certain temperature it will close a circuit allowing power to the fan to cool the Wii; no matter if you are using it, or you are at work and it is downloading some software updates.

Some important design requirements for this product include fitting snugly on the box, a digital temperature display, able to turn on and off on its own, have its own power supply separate from the Wii, and cool the Wii. These are just a few design requirements to meet the goal of creating a system that can cool the Wii on its own power, while being able to turn the fan on and off whenever a certain temperature is reached.

Some concepts considered were to have a box to hold all the equipment to start the system, but the Wii would stand vertically taking up less space horizontally. This would allow the box to become a bit smaller due to the less horizontal space needed to hold up the Wii. The second concept was to let the Wii lie flat on its side so the CD deck is just like all CD decks. This design would take up less space vertically, which could allow the system, and the Wii, to go into most stereo cabinets. These two concepts would use two fans to create an air flow through the Wii while it is on standby so that it could cool the core processor to prevent the Wii from overheating. The final design concept that was used for this design was a combination of the second concept and a twist. Having the Wii lay flat, but inside of using fans to blow in, the design would use a fan to blow air into the box cooling the ambient air from its surroundings to push the air into the air ports to cool the processor.

An experiment used to see if this actually cooled the Wii was during a two hour period of time; using the controller to read the temperature of the Wii's surface every five minutes for data and after the first hour turn the fan on and continue to record data every five minutes to see if this design actually cools the Wii. After conducting this experiment it can be concluded that the design does cool the Wii by 20 degrees Fahrenheit, which seemed like a significant difference, when the Wii on standby alone went up to nearly 100 degrees Fahrenheit.

