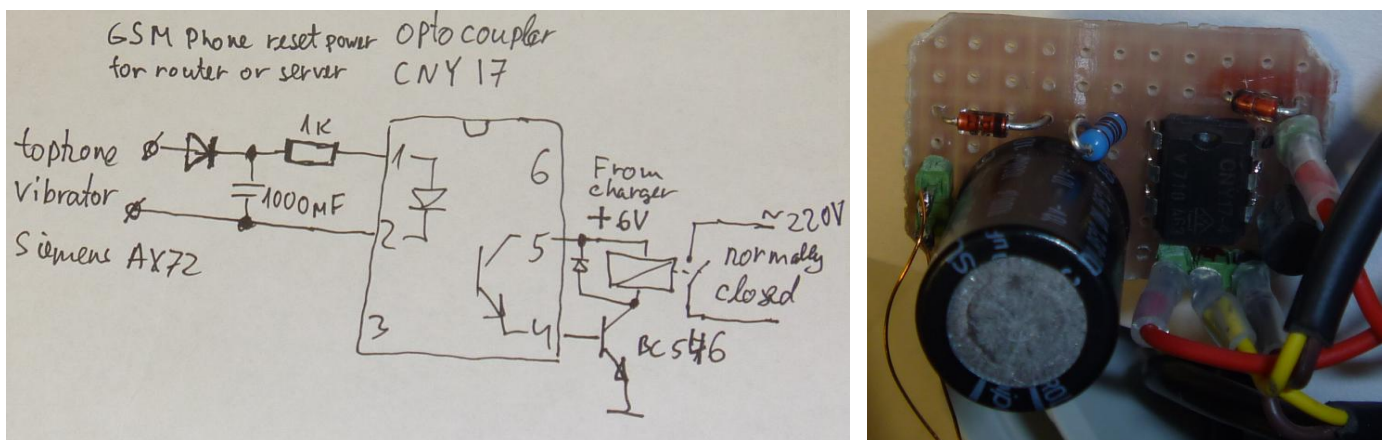


GSM phone controlled power outlet for router & webserver reset

If you are keeping computer at home running all the time as a web server it might happen that your internet connection needs restart . Restart can be quite easily done from anywhere in the world by a single call. Below is described how. GSM reset box that can be built using an old cell phone and simple circuit that detects ringing and disconnects power outlet during the ringing. A SIM card that has no credit left can be used as we only want to receive calls. Calls don't cost anything because the phone does not answer the incoming call.

First idea was to use photodiode to detect screen lights, but serious amplification was needed. Second idea was to solder wires to keypad LEDs, but it was not much place where to solder. Third solution was using vibrator motor connections. GSM phone was opened and thin wires soldered to its vibrator connector pads. Vibrator was removed. The pads are usually quite large and easy to solder to.

Unfortunately, signals for the phone that I used had to be floating, that is why an opto-coupler is used, because I wanted to use same phone charger also for driving relay. Relay is soldered so that without voltage applied it's contacts are closed and 220V pass through to the power outlet. Only during a call the relay disconnects power from external load. So it is very energy-efficient device. A 1000 uF capacitor and 1k resistor increases delay to ca 5s. Advisable is to add 100 ohm in series with diode to limit maximum current. Transistor following optocoupler boosts the current. 5V relay with 78 Ohm coil is used. Everything is packed into a plastic box. High voltage parts need to be well isolated.



During testing an unexpected bug appeared. When phone is charging, the vibrator is not working. Apparently developers thought that vibration makes no sense when phone is not in your pocket and only can fall on floor due to vibration. So had to find other solution. Next I soldered wires to the speaker. But speaker amplitude was too low to drive LED. Finally I choose the most microscopic option and soldered wires to the LEDs on the keyboard. This works fine.

The box is used to reset Internet router. Desktop PCs can be set up in BIOS to automatically boot when power is applied. eeePC netbook does not have such BIOS option. So GSM reset box does not work with eeePC.

