**Hack # 1: Reed switch activated 1btn**

1btn (one button) uses the internet to complete a task with the simple, satisfying click of a single button. It connects to the internet over Wi-Fi to trigger whatever action you have assigned to it using a simple, online interface. One click, one task. It’s that simple..

Unlike many other “Internet of Things” devices, 1btn does not maintain a continuous connection to the internet. Instead, it sleeps until pressed, and then it connects to the internet, performs the assigned task, tells you the outcome via its multi-colored LED, and then returns to rest.

But what if you don’t even want to press that single button! What if you want 1btn to respond and event and do the task. Well, that is what we will do now.

**What is the use case?**

Let’s say you have some pretty cool stuff stored in the study table’s drawer and you want to be alerted when someone opens the window or when the drawer gets opened. Or you want to be alerted when bedroom window is opened.

To do this, we will hack into modify 1btn hardware, modify it to trigger the device on an event and then configure it for an email alert. You will also see, how easy it is to modify existing 1btn hardware to suit your requirements quickly.

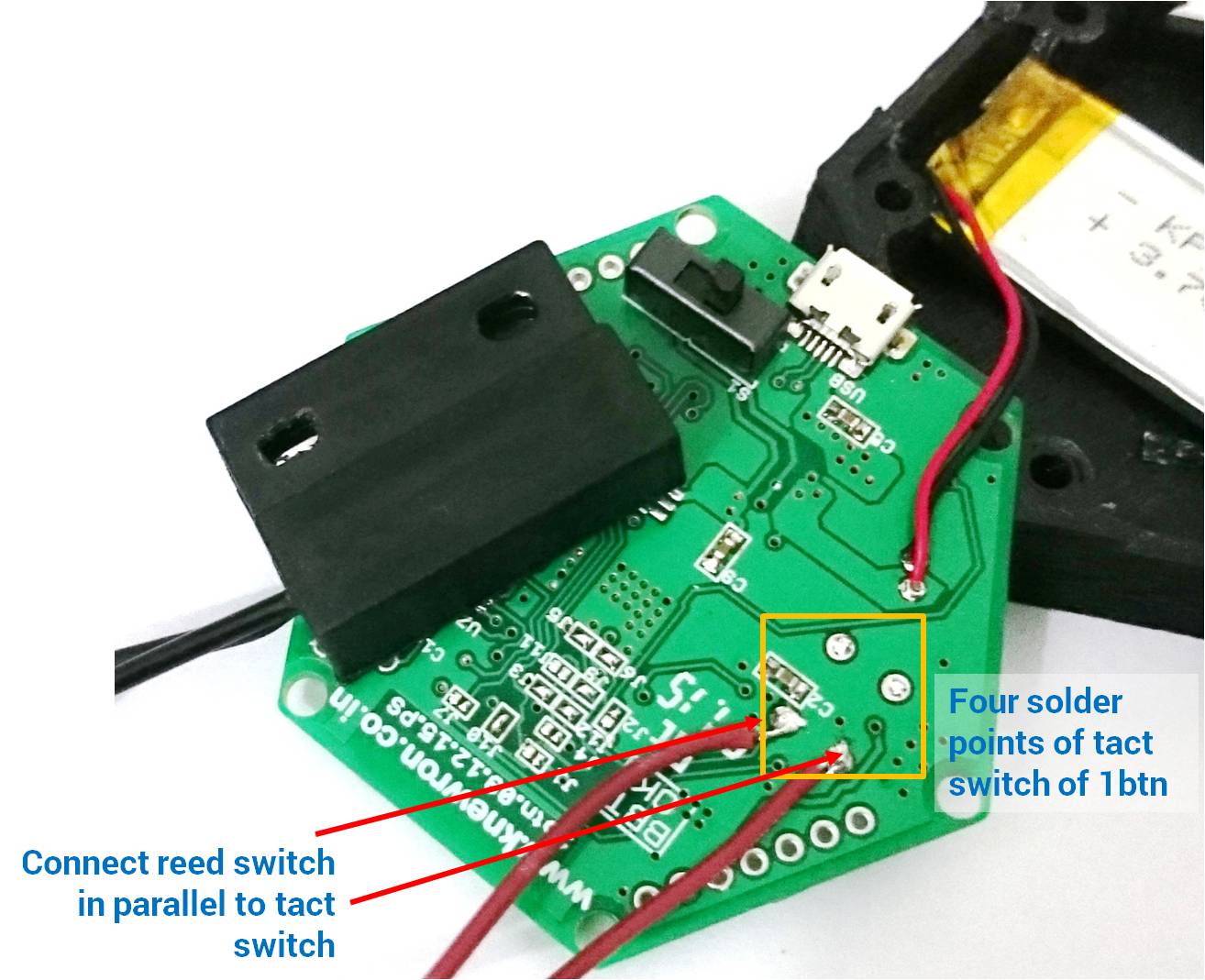
**What do we need to do the hack?**

To begin with, of course 1btn is a must and then we will need some kind of a sensor – say a reed switch. This reed switch will operate when the magnet is placed nearby it or taken away from it.

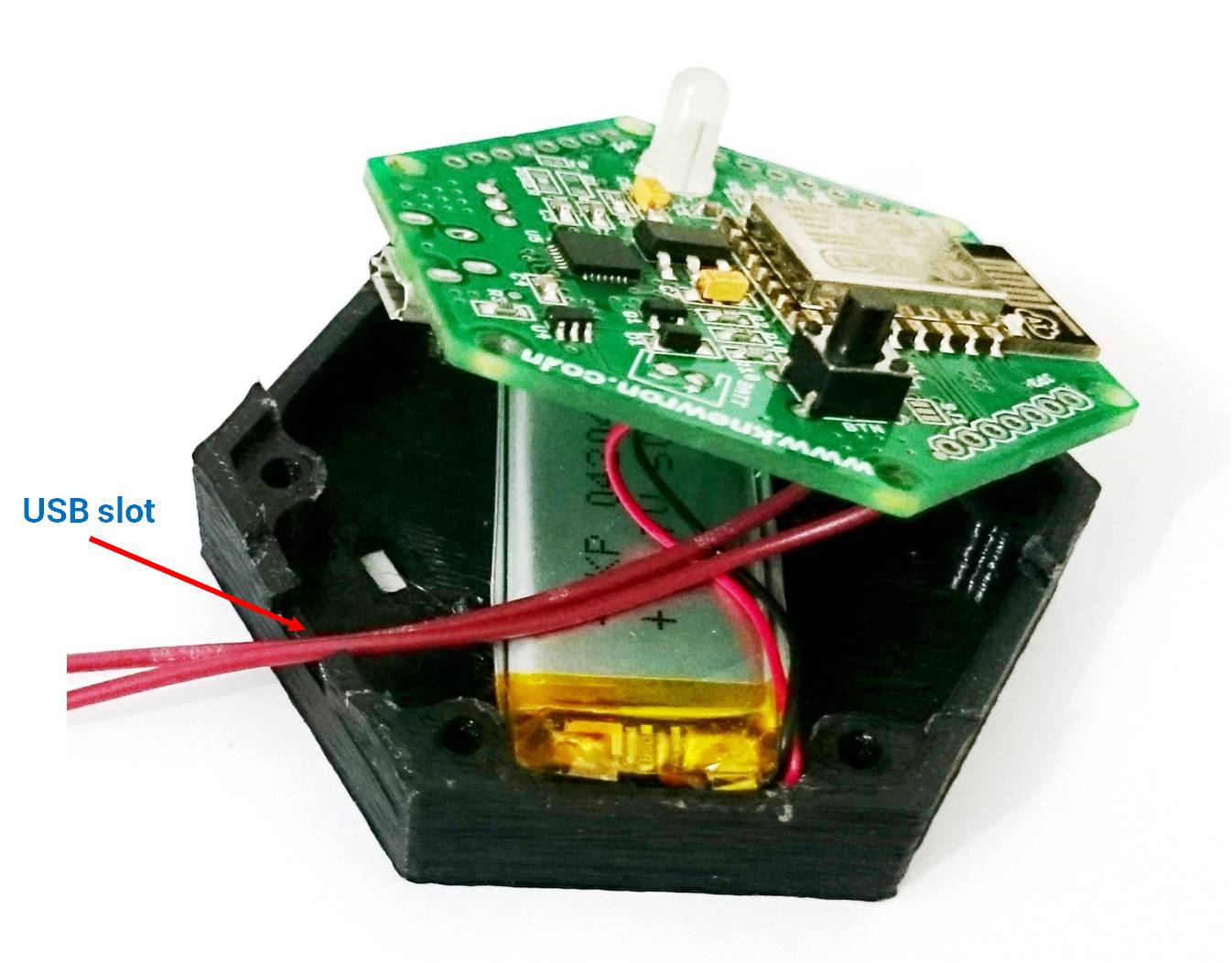
We will be using normally open (NO) type of reed switch which will be similar to the tact-switch operating our 1btn. This way we can connect them in parallel without removing existing switch and use both the functionalities. Along with reed switch, we also need a small magnet, and other hacking material like soldering iron, wires, etc.

**Step 1: open 1btn and attach reed switch**

Pry open your 1btn carefully and turn the PCB upside down. Solder two wires of reed switch over the pads of the button as shown in image 1. By doing this we are connecting reed switch in parallel to button of 1btn.



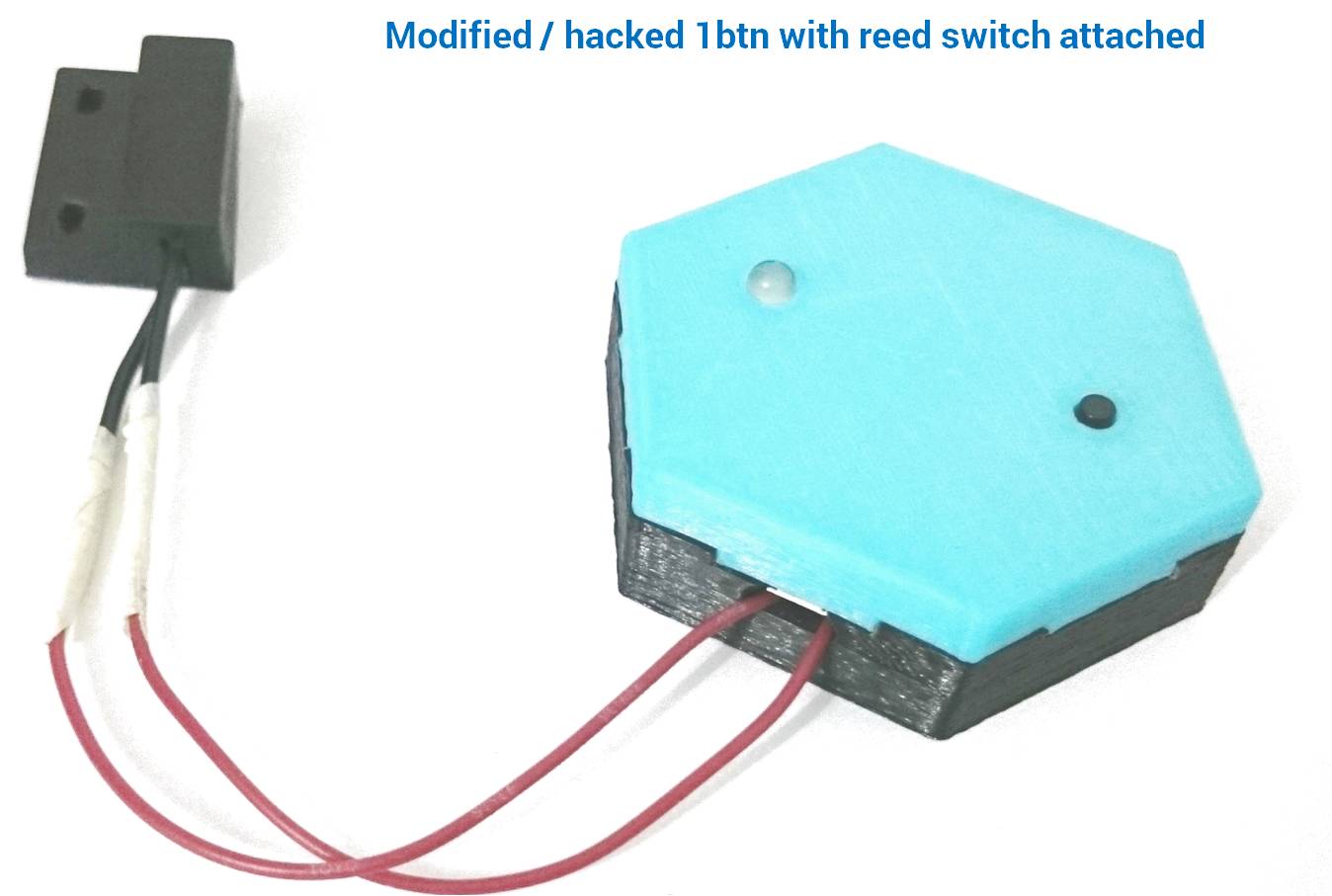
**Step 2: assemble it back**

Now that we have connected two extra wires, we need safe passage to take those wires out and close 1btn properly. We can take those two wires out from the USB connector’s opening as show in image 2. ****

Take these two wires out, position the PCB on supports and close the lid tightly, refer image 3.

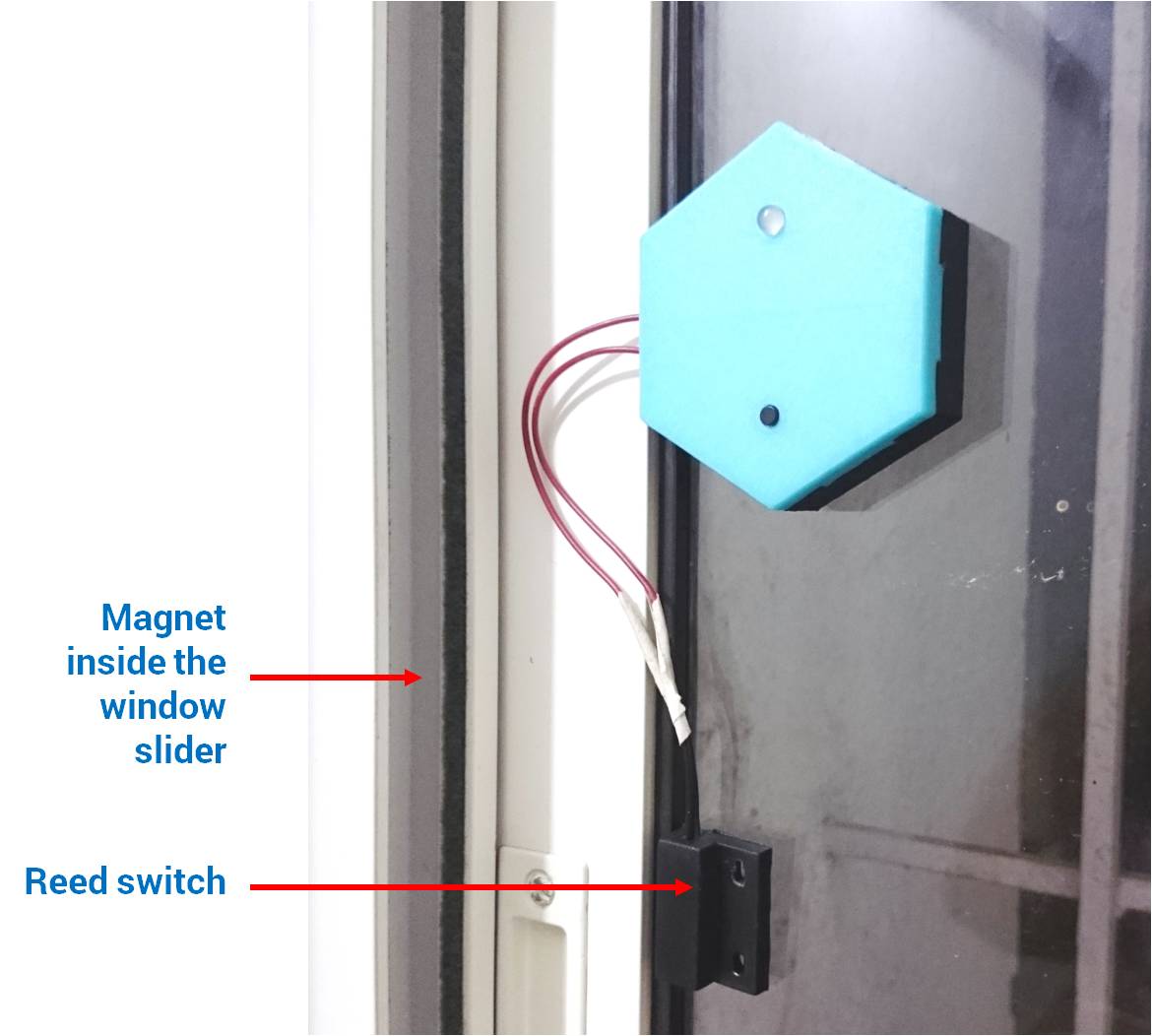


The resultant hacked 1btn would look something like this…



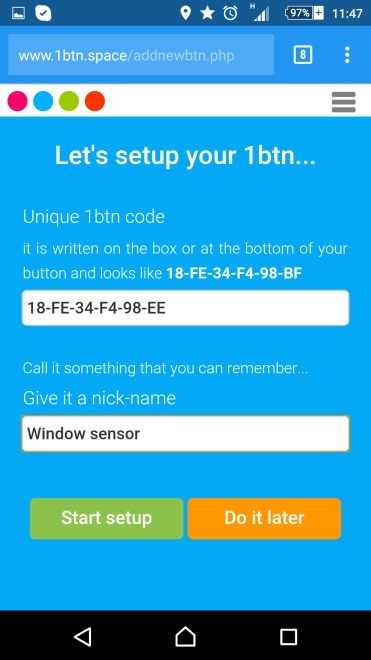
**Step 3: install modified 1btn**

By this stage, we will have our modified 1btn ready to be installed. This assembly has to be fixed properly on the window (or the drawer as needed) using double sided adhesive tape. The magnet should be fixed to non-moving end of the object; like window slider in this case.

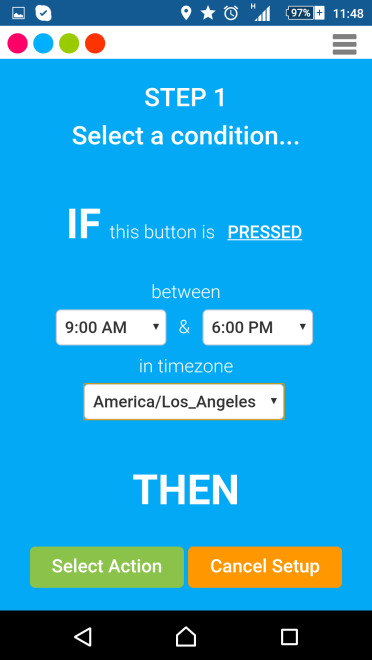


**Step 4: configure / modify button action on web-console**

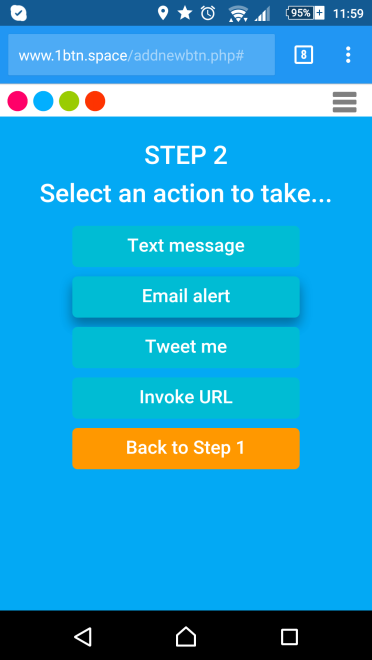
In order to get the alert upon window opening, we need to configure button action on web-console, if it is not done already. Set up the button (add new or modify existing) as per screen 1. Here we are giving a relevant nick name to 1btn which we can use in our email alert message. If you plan to have multiple such sensors, it is meaningful to call them as Window sensor # 1, sensor # 2 and likewise.



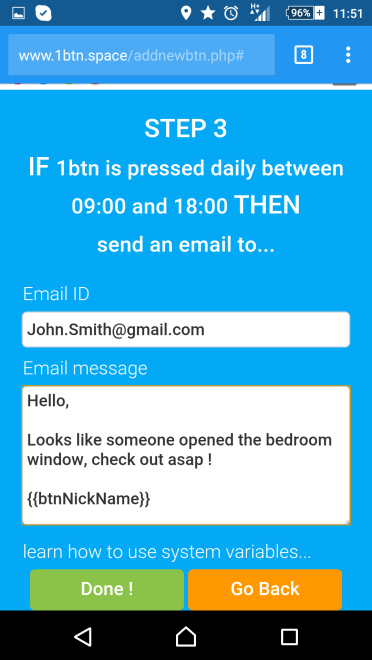
Now we setup the timing during which 1btn will be active in step 1 of configuration.



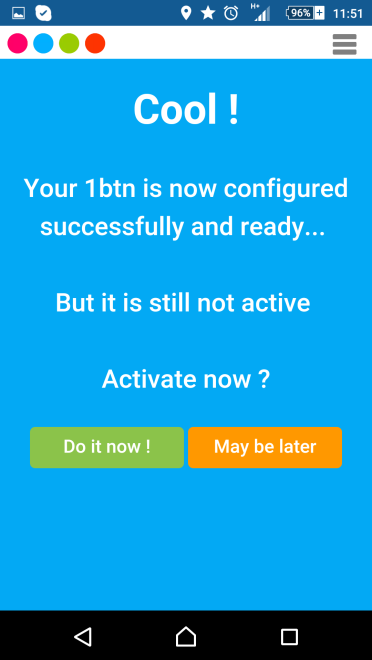
Select action to be taken as an Email Alert…



Now we give the email id to which alert will be sent along with the email message. Notice the closing signature in email message – **{{btnNickName}}**. This is a system variable and it will be replaced with nick name we have given in our first screen i.e. **“Window Sensor”** when actual email is being sent. You can use many other system variables in your message and the list can be found on 1btn web-portal.



Once setup is done, all we need to do is activate the button and we are good to go.



**Step 5: test and put it to use**

The final logical step is to test the working of modified 1btn and verify that everything is working as expected.

That’s it – our hacked 1btn is now operational and ready to help you in your daily life.

Happy making and hacking!