

How to make the screen brightness keys work again in KDE

How to make button for screen brightness work on your laptop in KDE

When I started using a newer kernel in openSUSE 13.2, I noticed the buttons for screen brightness were no longer functioning on my laptop. This is very annoying, so I decided to do something about it. I am using KDE. I will try to write the instructions as generic as possible, so that it will hopefully work in your situation too. This is a HP ELitebook 8570p.

find the right entry

First, we have to find the screen device, which is located somewhere in the `/sys/devices/pci0000:00` directory.

Somewhere in this directory is a file located with the name 'brightness'. Let's find it. So, as root:

```
# find /sys/devices/pci0000:00 -name "brightness"
/sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness
/sys/devices/pci0000:00/0000:00:1c.2/0000:24:00.1/leds/mmc0::/brightness
/sys/devices/pci0000:00/0000:00:1c.3/0000:25:00.0/leds/phy0-led/brightness
```

Remember, your output is probably different from what I got here.

I have a radeon card, so the first line contains the device we will be working with.

When you read the content of the 'file', you get the current brightness level:

```
# cat /sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness
```

The value lies somewhere between 0 and 255, it's a one byte value.

You can test if this work for you by writing (still as root) a different value to that file: (remember to substitute the file for your graphics card)

```
# echo 200 > /sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness
```

If this works, you should see the brightness change, and you can go to the next step.

edit: for samsung rv720: "echo 8 > /sys/class/backlight/samsung/brightness" to restore the brightness. edit2: newer kernel uses this: echo 100 > /sys/class/backlight/nv_backlight/brightness

create the scripts

I created a simple QAD(quick and Dirty) 3 line script to read that value and increase it.

I put the script in my home user's bin directory:

```
user> vi ~/bin/brp
```

```
br=$(cat /sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness)
br=$((br+10))
echo $br > /sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness
```

I called it 'brp' which is nice and short and stands for '**b**rightness **p**lus' Note that I increase the value by 10 otherwise it would not change enough. You can vary that value of course to get finer control or get faster adjustment.

I created a similar script called brm which decreases the value:

```
user> vi ~/bin/brm
```

And paste the content

```
br=$(cat /sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness)
br=$((br-10))
echo $br > /sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness
```

```
# chmod +x brm brp
```

Now, the problem is that this file

/sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness may only be written by root. Notice that all commands manipulating the file so far have been executed as root. But you should have created the 2 script files brp and brm as your normal user account.

To make the file world writeable:

```
# chmod 777 /sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness
```

This will make the 2 scripts which are executed as your useraccount able to write to this file.

configure KDE

Then, lastly, redefine the keys on your laptop for screen brightness to point to your script:

- go to KDE - configure desktop
- shortcuts and gestures
- custom shortcuts
- edit - new - global shortcut - command/URL
- name: br-down
- tab trigger: Shortcut - click on 'None'
- press the brightness down key on your keyboard. It should appear in the button.
- tab action: browse and point to your brm file (/home/\$user/bin/brm)
- click apply

Repeat this for the brightness up script file, so you end up with 2 shortcuts.

And that's it. This should work. Happy screening!

configure crontab

Oh, and after a reboot, the chmod 777 of the brightness file is needed again. So I did a dirty hack and added this to my crontab:

```
*/3 * * * * root chmod 777  
/sys/devices/pci0000:00/0000:00:01.0/0000:01:00.0/drm/card0/card0-LVDS-1/radeon_bl0/brightness
```

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