

Why are the Windows chassis hardware button hotkeys so strange?



Raymond Chen

Someone asked the shell team, “Why did you pick **Power** + **VolumeDown** as the hotkey to take a screen shot? Why not something simpler?”

Set the time machine to 2010. Windows 8’s tablet-focused user interface is being designed, along with tablet hardware devices to showcase it. Since one of the signature characteristics of tablets is that they don’t have a keyboard, non-keyboard affordances have to be invented for various operations. Many of them could be triggered by various types of touch gestures, but the hardware buttons themselves were also pressed into use:

| Button | Action in Windows 8 |
|------------------------------------|---------------------------------------|
| Power | Turn screen on and off |
| Windows | Go to Start screen |
| VolumeUp | Increase volume |
| VolumeDown | Decrease volume |
| Power (hold) | Shut down |
| Power (long hold) | Emergency power-off |
| Windows + VolumeUp | Open/close screen reader |
| Windows + VolumeDown | Screen shot |
| Windows + Power | Ctrl + Alt + Del |

In Windows 10, the requirement that tablets provide a Windows button on the chassis was removed, which means that the actions previously assigned to the Windows key were lost, and the ones deemed most important were reassigned.¹

| Button | Action in Windows 10 |
|----------------------------------|---------------------------------------|
| Power | Turn screen on and off |
| VolumeUp | Increase volume |
| VolumeDown | Decrease volume |
| Power (hold) | Shut down |
| Power (long hold) | Emergency power-off |
| Power + VolumeUp | Screen shot |
| Power + VolumeDown | Ctrl + Alt + Del |

Given that you can count on only three buttons (power, volume up, and volume down), the set of available combinations is rather limited, and it’s hard to claim that any of them are “intuitive” beyond the power button actions.

Bonus chatter: If you employ the “long hold” emergency power-off hotkey, the system tries to capture diagnostic information before the BIOS kills the power. These dump files are used by the Windows team to identify and fix the root causes for system lock-ups.

Windows recognizes a long power button hold at seven seconds, and the UEFI forces a power-off at ten seconds. Windows therefore has three seconds to collect whatever information it can before the UEFI pulls the plug. If you get a message from Windows acknowledging your emergency power-off request but asking you to release the power button, please do so if you can. This gives the kernel more time to capture the diagnostic information. Once the information is gathered, the kernel will turn off the system power.

¹ If you compare the two tables, you’ll find that the lost chassis hotkeys are “Open the Start menu” and “Open screen reader.” These two access points were moved to on-screen affordances and no longer need special hotkeys. The taskbar Start button opens the Start menu, and the lock screen Accessibility button lets you turn on the screen reader when signing in. (For opening the screen reader after signing in, you can use the Ease of Access / Accessibility section of the Settings app.)