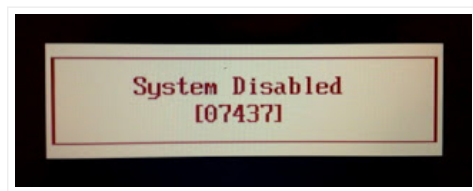


When a laptop is locked with password, a checksum of that password is stored to a so-called FlashROM - this is a chip on the mainboard of the device which also contains the BIOS code and other settings, e.g. memory timings.

For most brands, this checksum is displayed after entering an invalid password for the third time:



The dramatic 'System Disabled' message is just scare tactics: when you remove all power from the laptop and reboot it, it will work just as before. From such a checksum (also called "hash"), valid passwords can be found by means of brute-forcing.

The bypass mechanisms of other vendors work by showing a number to the user from which a master password can be derived. This password is usually a sequence of numbers generated randomly.

Some vendors resort to storing the password in plain text onto the FlashROM, and instead of printing out just a checksum, an encrypted version of the password is shown.

Other vendors just derive the master password from the serial number. Either way, my scripts can be used to get valid passwords.

A few vendors have implemented obfuscation measures to hide the hash from the end user - for instance, some FSI laptops require you to enter three special passwords for the hash to show up (e.g. "*3hqgo3jqw5340qww294e*", "enable master password" shifted one up/left on the keyboard). Some HP/Compaq laptops only show the hash if the F2 or F12 key has been pressed prior to entering an invalid password for the last time.

Depending on the "format" of the number code/hash (e.g. whether only numbers or both numbers and letters are used, whether it contains dashes, etc.), you need to choose the right script - it is mostly just a matter of trying all of them and finding the one that fits your laptop.

**It does not matter on what machine the script are executed, i.e. there is no reason to**

run them on the locked laptop.

This is an overview of the algorithms that I looked at so far:

Vendor	Hash Encoding	Example of Hash Code/Serial	Scripts
Compaq	5 decimal digits	12345	<a href="#">pwgen-5dec.py</a> Windows binary
Dell	serial number	1234567-595B 1234567-D35B 1234567-2A7B	<a href="#">Windows binary&amp;source</a>
Fujitsu-Siemens	5 decimal digits	12345	<a href="#">pwgen-5dec.py</a> Windows binary
Fujitsu-Siemens	8 hexadecimal digits	DEADBEEF	<a href="#">pwgen-fsi-hex.py</a> Windows binary
Fujitsu-Siemens	5x4 hexadecimal digits	AAAA-BBBB-CCCC-DEAD-BEEF	<a href="#">pwgen-fsi-hex.py</a> Windows binary
Fujitsu-Siemens	5x4 decimal digits	1234-4321-1234-4321-1234	<a href="#">pwgen-fsi-5x4dec.py</a> Windows binary
Hewlett-Packard	5 decimal digits	12345	<a href="#">pwgen-5dec.py</a> Windows binary
Hewlett-Packard/Compaq Netbooks	10 characters	CNU1234ABC	<a href="#">pwgen-hpmini.py</a> Windows binary
Insyde H20 (generic)	8 decimal digits	03133610	<a href="#">pwgen-insyde.py</a> Windows binary
Phoenix (generic)	5 decimal digits	12345	<a href="#">pwgen-5dec.py</a> Windows binary
Sony	7 digit serial number	1234567	<a href="#">pwgen-sony-serial.py</a> Windows binary
Samsung	12 hexadecimal digits	07088120410C0000	<a href="#">pwgen-samsung.py</a> Windows binary

The .NET runtime libraries are required for running the Windows binary files (extension .exe). If the binary files (.exe) don't work out for you, install [Python 2.6](#) (not 3.x) and run the .py script directly by double-clicking them. ***Make sure that you correctly read each letter (e.g. number '1' vs letter 'l').***

Вячеслав Бачеригов has also converted my scripts to javascript so you can calculate the passwords with your browser: <http://bios-pw.org/> (sources).

Please leave a comment below on what make/model the scripts work. Also, be aware that some vendors use different schemes for master passwords that require hardware to be reset - among them are e.g. IBM/Lenovo. If you find that your laptop does not display a hash or the scripts do not work for you for whatever reason, try to:

- use a USB keyboard for entering the password for avoiding potential defects of the built-in keyboard,
- run [CmosPwd](#) to remove the password if you can still boot the machine,
- overwrite the BIOS using the emergency recovery procedures. Usually, the emergency flash code is activated by pressing a certain key combination while powering on the machine. You also need a specially prepared USB memory stick containing the BIOS binary. The details are very much dependent on your particular model. Also, be aware that this can potentially brick your device and should only be done as a last measure.
- Some dell service tags are missing the suffix - just try the passwords for all suffices by adding -595B, -2A7B and -D35B to your service tags.
- The passwords for some HP laptops are breakable with [this script](#).
- Unlocking methods for some Toshiba laptops are described [here](#).
- Some older laptop models have service manuals that specify a location of a jumper / solder bridge that can be set for removing the password.

**If none of the generators/methods above works, please use the vendor support.** Please understand that my motivation for reverse-engineering comes purely from a personal interest. I will not accept offers to look at the specifics of certain models.

Posted by [dogbert](#) at 8:33 AM 

Labels: [2a7b](#), [595b](#), [acer](#), [advent](#), [backdoor](#), [bios](#), [bypass](#), [circumvent](#), [compaq](#), [dell](#), [fjs](#), [fsi](#), [fujitsu siemens](#), [hp](#), [key generator](#), [keygen](#), [override](#), [password](#), [recovery](#), [samsung](#)

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Hi, just to say thank you, I can