

HexCheck

The Hexadecimal OCR output reader © 2008 By Leszek Chmielewski

Manual

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00. System requirements

HexCheck should work with any Windows and any PC capable to run Windows.

01. WTF is HexCheck?

HexCheck is a simple and small utility I made for cheating. If you got Hexadecimal "Type-in" from magazines, why not OCR them instead of typing it in? The problem is that after OCRing, there are many badly recognised characters. HexCheck can fix most of the problems.

I wrote this utility to re-enter all hex coder of "Sir Gawain" from Microhobby (spanish) magazine for Spectrum, after this title was not working correctly.

It works only with the standard Hex schema:

Each line consists of Line number starting with 1, step 1. Then ten bytes hex code follow (20 chars) and finally a checksum (decimal, all hex values added).

I think, this may be useful for Retro-Computing fans, who don't like to type up pages of Hexadecimal codes, finding out that there was a bug, months after starting to type (I'm talking about such monster programs like Giga CAD on C64).

Anyway, If this program saved you hours, days or weeks of typing, I would be happy. I would be even more happy if you donate me a small amount of \notin (Paypal to <u>retrozx@gmail.com</u>). You can write comments, request and anything else to this mail address too.

02. User interface

HexCheck 0.1 By LCD (c) 2008			×	
Project Menu				
🖆 😋 🛛 🔂 Toolbar				
1 0000200048B50208D800 511 2 50000115F0RE00F0RE10 946 3 00C8AF06486400540001 638 4 0700000000000000000000000000000000000	Hex Editor	 Line number by one 	Gadgets	
Statusbar (Messages)				

03. Usage

After you load or paste the Hex codes (with line number and Checksum), you can start checking using the second Toolbar icon or from project menu. If the program detects a not correctable error in a line, it will put a message in the status bar and highlight the questionable line:

Project 22 O210000048000253538E 624 23 0053RE2000C8BF064878 862 24 0058000107000000000 96 25 800168550320FEFF4000 107e 26 0342000000000600068 269 27 8402085800500001149C 535 28 RE009CRE100048850208 783 29 A8e0380015200AF0000 482 30 RF100068640208880038 677 31 00015200RF0000AF1000 449 32 4855020808050000114 580 33 9CRE009CRE1000C8RF05 1057 34 48800062000142000000 355 35 00008001685503200R00 507 36 400003420000000060 229 37 028530210280099002 432 38 5253AE10053AE200e2883 847 39 02103800900025253RE 559 40 0053RE20002853021078 646 41 00800025253RE053RE 734 42 200028B3021058009000 597	HexCheck 0.1 By LCD (c) 2008	×
Start checking here 22 02100004800025353RE 624 23 0053RE2000C8RF064878 862 24 0058000107000000000 96 25 800168550320FEFF4000 107e 26 034200000000600068 269 27 8402085800500001149C 535 28 RE009CRE100048850208 783 29 A8e0380015200AF0000 482 30 RF10006864020888038 677 31 00015200RF0000AF1000 449 32 48502080050000114 580 33 9CRE009CRE1000C8RF05 1057 34 4880006200014200000 355 35 0008001685503200R00 507 36 4000034200000000000 229 37 0028530210280990002 432 38 5253AE0053AE200e2883 847 39 02103800900025253RE 559 40 0053RE20002853021078 646 41 008800025253RE 559 42 200028B3021058009000 597	Project	
22 021000004800025353RE 624 23 0053RE2000C8RF064878 862 24 0058000107000000000 96 25 800168550320FEFF4000 107e 26 034200000000600068 269 27 8402085800500001149C 535 28 RE009CRE100048850208 783 29 A8e03800015200AF0000 482 30 RF10006864020888038 677 31 00015200RF0000AF1000 449 32 48550208080050000114 580 33 9CRE009CRE1000C8RF05 1057 34 4880006200014200000 355 35 00008001685503200R00 507 36 4000034200000000060 229 37 0028530210280099002 432 38 5253AE0053AE200e2883 847 39 021038009000025253RE 559 40 0053RE20002853021078 646 41 008800025253RE053RE 734 42 200028B3021058009000 597	🖻 🐃 🧹 Start checking here	
43 025253RE0053RE200028 670 44 53021008009900025253 717	Image: Product Start checking here 22 021000004800025353RE 624 23 0053RE2000C8RF064878 862 24 0058000107000000000 96 25 800168550320FEFF4000 107e 26 034200000000000000000000 82 27 8402085800500001149C 535 28 RE009CRE100048850208 783 29 A8e03800015200AF0000 482 30 RF100068640208880038 677 31 00015200RF0000AF1000 449 32 48550208080050000114 580 33 9CRE009CRE1000C8RF05 1057 34 48800062000142000000 355 35 00008001685503200R00 507 36 40000342000000000000000000000000000 229 37 00285302102800990002 432 38 5253AE0053AE200e2883 847 39 02103800900025253RE 559 40 0053RE20002853021078 646 41 008800025253RE0053RE 734 <	Bad line marked in a different colour
Bad Data or checksum in line 22 (is:432, should be: 624)	Bad Data or checksum in line 22 (is:432, should be: 62	24) Here is the error message!

Now you can compare the original source line:

22 0210C0004800025353AE 624

(Please notice that this scan was done at 150 DPI, as it was taken from already scanned magazine from a online archive), I recommend to use 200-300 DPI for less errors)

You can see: the 5th character was originally "C", but Omnipage confused it with Zero. This is a critical error because the program cannot really recognise itself which of the nine zeros could be in fact a "C". This is impossible since HexCheck has no own OCR routine (yet, who knows?), so such a error cannot be auto corrected.

Replace it and re-check the code (you can ignore the "R" as it will be auto corrected to A by Hexcheck itself. This is a error that can be easy auto corrected).

The next problems are found in line 25 ("R"'s in line 23 are not reported as error due to auto correcting them to "A", which saves a lot of time).

Now you got this:

HexCheck 0.1 By LCD (c) 2008	×
Project	
2	
	Line number by one
41 008800025253RE0053RE 734	
43 025253RE0053RE200028 670	
44 55021000009900025255 717 45 DE0052DE200060DE0220 702 Bad Data or checksum in line 25 (is:926, should be: 10	7)

Original:

25 B00168850320FEFF4000 1070

You must check always the checksum first. It should be 1070, but Omnipage reads it as "107e" (So the program confuses it with 107). There are more problems: "B" was changed to "8", the other "B" was changed to "5", these are not automatically correctable errors, so you must change it by hand. The program detects also missing lines and other errors.

After you corrected all the errors, you can save the CODE Block as TAP or TZX (in case you are a Spectrum user like I), or BIN, for all other Home Computers. This can be done from menu.

You must enter the in-TAP name, Start address and file size (if padded, refer to the magazine what to save).

04. Technology

Auto correction for Hexadecimal numbers (very simple, I know) was created by me already in 2005, but not used until now.

05. Credits

HexCheck was coded in PureBasic 4.30 Final by Leszek Daniel Chmielewski. It was planed to include it as a part of Retro-X.

Instruction written in OpenOffice 3.0.

Hex examples from "Hicrohobby" magazine game "Sir Gawain"