Megamon

Laurie Sinnett's monitor takes you places you've no right to see in your Amstrad.

Megamon is a sophisticated disassembler/monitor which will work on the complete range of Amstrad machines. Among its many features are an intelligent move memory facility, control over the lower Rom state, machine code trace, read or write object code to tape or disc, full memory dump to the printer, and a disassembly that will even understand all of the 102 undocumented Z-80 instructions. All of the controls are accessed through single key-presses so Megamon is easy to understand and simple to use.

Listing 1 is the short loader program for Megamon. Type this in and save it as the first thing on your tape as "MEGAMON". Listing 2 is the standard hex-loader program which pokes in the hex code from DATA statements. When all the bytes have been successfully entered then the loader program will prompt you to hit any key when ready to save the code. Ensure your tape is positioned after the megamon Basic loader.

To run the program rewind the tape and type RUN "MEGAMON"

When the program has loaded the little screen will appear and you will be asked for an address at which to load Megamon. this can be any address from 4000H up to 9000H. Obviously the monitor will not work if loaded underneath the lower Rom.

Once the address has been entered the object code for Megamon is loaded and you will be presented with Megamon's Front Panel screen display:

Z80 Registers — The top right of the screen shows the Z80 registers AF,BC,DE,HL,IX,IY together with the stack pointer (SP) and the program counter (PC). The register contents are shown (at start-up these are always zero) and then the contents of the memory location addressed by that register. there is also the register cursor (","), which points to AF on start-up. It's use will be discussed shortly.

Lower Rom State — Below the register display the state of the lower rom is shown, either Enabled or Disabled.

Memory Display — The memory display occupies the bottom of the screen and its purpose is to display the bytes around the memory pointer, indicated by ,. The bytes can be displayed either as hex or as ascii.

PC Instruction — The instruction at the Program Counter is contantly displayed above and to the left of the Memory Display.

List Display — The left of the screen above the Memory Display is taken up by the List Display. At start-up this display will be blank, but if you are eager to see it in action then for the moment press L followed by a full-stop. You will see the 14 instructions from address zero disassembled for your perusal.

Unfortunately, space does not permit a detailed discussion of the undocumented instructions, needless to say their use is becoming much more frequent in may of today's top games. Disassemblers that can cope with them are rare and the format for displaying them varies. For example, look at the instruction:

ADD A,IXL

This means "Add A to the low-byte of IX, the "L" tagged on to indicate the low-byte. Alternatively, you can use.

ADD A,IXH

This means 'Add A to the high bye of IXi.e. add A to I. Megamon would display the two instructions above as follows:

i) ADD A,iX

ii) ADD A,Ix

The letter in capitals indicates which byte of the register pair is being operated upon. The same applies to all undocumented instructions that use the IY register pair.

There now follows a list of the Megamon keys and a full explanation of their usage.

The Four Cursor Keys: The four cursor keys above the function pad are used to move the Memory Pointer ">" within the Memory Display in the appropriate direction, enabling you to step up or down through the memory, in steps of one or eight bytes at a time.

The Full Stop Key: Pressing the full stop will advance the Register Cursor >' onto the next register pair in the Register Display.

B — Return to Basic: Pressing this key will produce the prompt "Are you Sure?", In response to this press "Y" if you wish to leave Megamon and return to Basic. Any other key press will return you back to Megamon itself. When Megamon returns to Basic it restores the Roms to whatever they were at start-up.

C — Clear List Window: The List Window can be cleared at any time by pressing the "C" key.

D — Display Memory: This allows you to change the address around which the Memory Display works. You will be asked for a new address for the Memory Pointer — this must be entered as a hex number teminated by a Return. If, instead of a hex number, you

Listing 1.

```
10 MODE 1
20 LOCATE 9,1:PRINT"LAJ Proudly present"
30 LOCATE 14,3:PRINT"MEGAMON"
40 LOCATE 9,5:PRINT"Copyright LAJ 1985"
50 LOCATE 1,7:INPUT "Load address";m:OPENOUT"d"
70 MEMORY m-1
80 CLOSEOUT:LOCATE 1,9:PRINT"Please wait..loading MEGA
MON V. 1.2":LOAD "!MEGAMON.bin",M
100 CALL m
```

Listing 2.

```
100 REM **** HEX LOADER *****
110 ADDR=32768:LIN=1000:MEMORY ADDR-1
120 SUM=0:READ A$,CHECKSUM
130 IF A$="END" THEN 200
140 FOR N=1 TO LEN (A$)-1 STEP 2:X=VAL ("&"+MID$(A$,N,
2))
150 POKE ADDR,X:SUM =SUM+X:ADDR =ADDR+1
160 NEXT
170 IF SUM<>CHECKSUM THEN PRINT "ERROR IN ";LIN ELSE
LIN=LIN+10:GOTO 120
200 PRINT "DATA CORRECT";CHR$(13);"READY TAPE AND PRES
S A KEY"
210 SAVE "MEGAMON.BIN",B,32768,6127
220 END
 1000 DATA 3EC93200C0F3CD00C03B3BE1FB11F7FF19116614EB1
9E5DDE1DD6E00DD66017CB52818231 9E5FDE1FD6E00FD66, 5866
 1010 DATA 0119FD7500FD7401DD23DD2318DE3A920C8332920C3
2AB0CC60432B20C3EC31221530220100ED73E30E31AA16, 4014
 1020 DATA CDE50ECD65BCCD00B9328E14CD1008CD210FCD0BBC
D440CD377B0CD6B0FCD070ECD1C0BCD18BBCD9B003E03CD, 4882
 1030 DATA B4BBCD6CBBCD11BC3CF3E01CD0EBCCD100818C521B
500011700FE613802D620EDB1C0909095E2356D52A7E14, 4586
 1040 DATA C9424345D0D1D2D32E495258464D444C53544750484
14F57FF1360132D13F712AC12970F69107010FA00860DC8, 4362
 1050 DATA 0D190E460E4F0E740E7D0E8A0E8D0E950E900E9D0EA
B0EB40E3E0FCD630C5DDE13007C8DD2A8014180620004DD, 3665
 1060 DATA 2A7C14AF3288143E00CDB4BBCD6CBB060EDD228014C
D290110F7C9DDE5D1CD130C3A8814 3D2F2A3E09CD97020D, 4729
 1070 DATA E5C5CD921241DD7E00DD23CD4000C10F679FE042805 3
E09CD97023E20CD9702C1DDE110 05E08CD6FBB3E01328C, 4805
 1080 DATA 14C5AF3290 14DD7E00FEDD2005CD5304184 3FEFD200
A3E01329014CD53041835FECB2005CDD506182CFEED2005, 4557
 1090 DATA CDE3051823FE403809FE0300ACD170318 16CD0E031
811FEC030005CDE702180 8E607114303CD26033A8914B720, 3828
 1100 DATA 23CDC7027 8FE202811CDEA0179FE2028093E2CCD970
279CDEA013E0CD97023E0ACD9702DD23C1C9FE513821FE, 5016
 1110 DATA 592009C5ED4B9014 81C11810FE6028F3FE5B3808C5E
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press the full stop key then the Memory Pointer will be set to whatever address the Program Counter currently holds.

The address is displayed, along with its contents. You can either enter a new hex number for this location or press Esc to exit the memory change. When a new number is entered the memory pointer is advanced to the next location and your options are the same again. At any time during the input of a number you can press the Esc key to abort and leave the Memory Pointer unchanged.

E — Toggle Lower Rom State: Press the "E" key and the Lower Rom will be toggled between Enabled and Disabled.

F — Fill Memory: The prompt "Fill>" appears and the number entered here will be the start address for the program to use. You are then asked for the address at which the program will end its fill, and finally the byte to fill the memory with. For example, if you enter 8000 in reponse to "Fill >", 8100 in response to "To >", and FF in response to "With >", the memory between 8000 hex and 8100 hex will be filled with FF (255 decimal).

G — Go: This allows you to execute the object code currently under examination with the use of 'breakpoints, i.e., places at which the object code is stopped in its tracks and control returned to the monitor for you to examine the registers etc.

The address which you enter is response to 'Go>' will be the address at which the monitor starts execution of the object code. As usual with all prompts, if you press the Esc key then the operation will be aborted. You are then asked for an address — "To >" — at which control will be returned to Megamon i.e. the address at which you wish your breakpoint to be inserted.

When you have entered this address Megamon will go off and execute the code. When the breakpoint has been reached, assuming that the code has not caused a fatal crash, a small line will be displayed on the screen and this means that Megamon is wating for you to press any key before updating all of its displays.

H — Search For String: The prompt "Search For ">" is displayed. You can now enter a sequence of up to 255 bytes which will form the string which Megamon will search for. Each number should be entered by pressing Return and by pressing Return on its own you will terminate the string.

At this stage, assuming the sting can be found, Megamon will update the Memory Display and the Memory Pointer > will be pointing to the second byte of the input string. Also see the explanation of the next instruction, "A".

A — Find Next Occurence: Pressing the "A" key will tell Megamon to find the next occurence of a string you have searched for using H.

I — Toggle between Ascii and Hex: By pressing the "I" key you can toggle the Memory Display Memory so that it shows either Hex or the Ascii equivalents.

L — List: You can enter a new address from which the disassembler will list its 14 instructions. However, there are two other alternatives to entering a new address. If you press the full-stop key in response to List> then the disassembly will begin from the address currently held in the Program Counter.

Alternatively you can press Return in response to the prompt and the disassembly will continue from where it left off.

M — Move a Block of Memory: The prompt move > will be displayed and the address you enter will be the start of the memory block you wish to move, The prompt "End. ," asks you for the end address of the memory block and the prompt "To >" asks you for the destination address for this block. The routine is "intelligent" so that if your destination address lies within the limits of the block you wish to move Megamon takes this into account and performs the move correctly.

O — Read Object Code: This reads a block of object code from in from tape or disc, depending on which system is in use. You are prompted to enter a filename and then an address at which the code will be loaded. Needless to say, you should take care not to overwrite Megamon.

P — Printer Disassembly: With this option you can produce a disassembly of any length to your printer, you could even list the Amstrad Rom. Then first address you enter, in response to "Print ,", is the start address for the disassembly, and the second address is the end. Assuming the printer is connected a disassembly will now appear on the printer which can be aborted at any time by pressing the Esc key.

R — Change Register: By pressing the "R" key you can change the value of the register pair currently pointed to by the register cursor >,. The register pair will take on the value you enter at the keyboard.

S — Single Step: Megamon will execute the current instruction at the Program Counter when you press the "S" key, allowing you to examine the effects of the code upon the registers and memory. This function will aslo single-step through a Call isntruction.

T — Trace: If you press the "T" key Megamon will execute the instruction at the Program Counter in the same way as the "S" function above, except that using "T" allows you to execute a Call instruction automatically.

W — Write Object Code: This writes a block of code to tape or disc under a given filename. You are prompted to enter the filename and then the first and last (inclusive) addresses of the block you wish to write.

X — Toggle Alternative Registers: Pressing the "X" key will toggle the Register Display between AF,BC,DE, HL and the alternate registers AF',BC',DE',HE'. You are advised to leave the values in the alternate register set unchanged as these are in constant use by the firmware (for further details see the *Amstrad Firmware Specification* — Soft 158, Appendix XI).

If the sight of all those hex bytes is enough to put you off then copies of Megamon, recorded on quality blank tapes, are available a cost of £3.50 each, including postage, from Laurie Sinnett, 20 Autumn Street, Burley, Leeds LS3.

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D4B9Ø148181C1CD41ØFC9FE183ØØ6C61ECD41ØFC92Ø193A, 4978
 112Ø DATA 8C14A72ØØ77BC63ØCD97Ø2C9ØE2Ø3E23CD97Ø27BCD4
ØØCC9FE192ØØBØE2Ø3E23CD97Ø2CD13ØCC9FE1A2Ø133E28, 4Ø93
 113Ø DATA CD97Ø23E23CD97Ø2CD13ØC3E29CD97Ø2C9FE1B2Ø143
E28CD97Ø23E23CD97Ø27BCD4ØØC3E29CD97Ø2C9FE1C2Ø2Ø, 4371
 114Ø DATA 3E28CD97Ø23A9Ø14C659CD41ØF3E2BCD97Ø23E23CD9
7Ø27CCD4ØØC3E29CD97Ø2C9F53A88143D28Ø6F1CD5ABBA7, 4695
 115Ø DATA C9F1D55FC5CD2BBDF5E53E42CD1EBB2ØØ9E1F1C17B3
ØECD1A7C9AF32881431AA16C36ØØØE57DCD41ØF3A8814B7, 6Ø41
 116Ø DATA 2ØØ43EØF18ØC3D2ØØ73EØ9CD97Ø2E1C93EØ6CD6FBBE
1C9ØFØFØFE6Ø7C6396FDD7EØØCDF6Ø7DD7EØØFE9Ø3ØØ4Ø6, 4357
 117Ø DATA Ø718ØDFEAØ3ØØ6FE9838Ø218F241ØE2ØC9E6Ø711330
3CD26Ø3C9FE762E1ØØ12Ø2Ø28Ø52E11CDF6Ø7C9876F26ØØ, 3859
 118Ø DATA 197E23666FDD7EØØE9Ø8Ø7CBØ76EØ7BEØ7A5Ø7ADØ7B
1Ø7EAØ7Ø5Ø4D4Ø3ØFØ482Ø322Ø463Ø326Ø444Ø4ØDØ61BØ6, 2977
 119Ø DATA 2AØ639Ø653Ø65EØ67ØØ691Ø6CB5F2ØØC2E58CDØ2Ø87
8FEØBCØØ651C92E4EØ619DD5EØ1DD56Ø2DD23DD23C9FEC3, 4Ø67
 12ØØ DATA 2ØØF2E4DØ619DD5EØ1DD56Ø2DD23DD23C9FED32ØØ82
E53Ø61BØEØ718ØAFEDB2ØØC2E54Ø6Ø7ØE1BDD5EØ1DD23C9, 3735
 121Ø DATA FEE32ØØ72E55Ø6ØFØEØAC9FEEB2ØØ72E55Ø6Ø9ØEØAC
9Ø12Ø2ØFEF32ØØ32E56C92E57C9CB5F2ØØC2E5ØCDØ2Ø878, 3863
 122Ø DATA FEØBCØØ651C9FEC9Ø12Ø2Ø2ØØ32E4CC9FED92ØØ32E5
2C9FEE92ØØ52E4DØ6ØEC92E11Ø6ØBØEØAC92E4CCD63Ø778, 4184
 123Ø DATA C61Ø47C92E4DCD63Ø7ØE19DD5EØ1DD56Ø2DD23DD231
8E82E4E18EBØFØFØFE6Ø7C6396FØ6Ø7ØE18DD5EØ1DD23FE, 426Ø
 124Ø DATA 3B2ØØ441ØE2ØC9FE3DD818F7E6382E4F5FØ618ØE2Ø3
EØ1328C14C9DD7EØ1FECB2Ø2ØDD7EØ3E6Ø7FEØ6DD23C29F, 459Ø
 125Ø DATA Ø5DD23CDD5Ø63EØ6B92ØØ4ØE1C18Ø2Ø61CDD66FFC9F
E4ØD242Ø5DD23E6Ø7CA9FØ5FEØ7CA9FØ5FEØ12Ø1ADD7EØØ, 46ØØ
 126Ø DATA CDCBØ73EØAB928ØAB82ØØ9DD2BDD2BC39FØ5ØE59Ø65
9C9FEØ22Ø23DD7EØØFE222Ø11Ø61AØE592E11DD5EØ1DD56, 4Ø69
 127Ø DATA Ø2DD23DD23C9FE2AC29FØ5ØE1AØ65918E8FEØ32Ø17D
D7EØØFE232ØØ72E12Ø659ØE2ØC9FE2BC29FØ52E1318F2FE, 4393
 128Ø DATA Ø42Ø1EDD7EØØCDA5Ø778FEØ4DA9FØ5FEØ7CA9FØ5CDA
AØ578FE1CCØDD66Ø1DD23C9FEØ52ØØ8DD7EØØCDADØ718DC, 52Ø7
 129Ø DATA DD7EØØFE262ØØCØ65B2E11ØE18DD5EØ1DD23C9FE2E2
ØØ4Ø65C18EEFE36C29FØ5Ø61CDD23DD66ØØ18EØFE8Ø3Ø14, 4327
 13ØØ DATA DD7EØ1FE76DD23CA9FØ5CD17Ø3CDAAØ5DD66ØØC9FEC
Ø3ØØCDD23CDE7Ø2CDAAØ5DD66ØØC9DD23FEE12ØØ72E5ØØ6, 5487
 131Ø DATA 59ØE2ØC9FEE52ØØ42E5818F3FEE92ØØ62E4DØ66Ø18E
BFEE32ØØ72E55Ø6ØFØE59C9FEF92ØØ72E11Ø6ØBØE59C92E, 4213
 132Ø DATA 5FØ12Ø18DD2BDD5EØØC926ØØ79FEØ62ØØ5DD23ØE1CC
978FEØ62ØØ5Ø61CDD23C978FEØ438Ø9FEØ63ØØ5C6574726, 3945
 133Ø DATA Ø179FEØ438Ø9FEØ63ØØ5C6574F26Ø17CA7CØE1C39FØ
5DD23DD7EØØFE8Ø381321D4Ø6Ø11ØØØEDB9C29FØ579C662, 4753
 134Ø DATA 6FØ12Ø2ØC9FE4ØDA9FØ5E6Ø71153Ø3CD26Ø3C92E54C
DF6Ø7ØE7278FEØ6CØØ673C92E53CDF6Ø748Ø67279FEØ6CA, 4836
 135Ø DATA 9FØ5C92E3CCB5F28Ø22E3ACDØ2Ø848Ø6ØAC92E11CDØ
2ØØØE1ADD5EØ1DD56Ø2DDCBØØ5EDD23DD23CØ78414FC92E, 4Ø95
 136Ø DATA 74Ø12Ø2ØFE44C8C39FØ5Ø12Ø2ØFE452ØØ32E75C92E7
6FE4DC8C39FØ5AF328C14DD7EØØ2E77Ø12Ø181EØØFE46C8, 4411
 137Ø DATA 1CFE56C81CFE5EC83EØ1328C14C39FØ52E11ØEØ7FE4
72ØØ3Ø678C9FE4F2ØØ3Ø679C9Ø6Ø7FE572ØØ3ØE78C9FE5F, 4316
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1380 DATA 20030E79C9012020FE6720032E7AC9FE6FC29F052E7
BC9A0A1A2A3A8A9AAABB0B1B2B3B8B9BABBAF328C14DD7E, 5798
1390 DATA 01FE403013F0F0FE607C6416FDD7E01CDF607410E2
018122E49FE8038062CFEC038012CCDF607580618DD23C9, 4188
1400 DATA FE203819CD6307CB9078C61047DDE5E1DD7E01CD530
70E192E36DD23C9A720062E1D012020C9FE0820062E3701, 4292
1410 DATA 2020C9FE10200A2E38DD7E01CD530718082E36DD7E0
1CD53070619DD23C9C5E5C6024F179F47DDE5E109EBE1C1, 4880
1420 DATA C9F50F0F0FE60747F10E20C9FE202E113014CD02087
8C604DDCB005E2004470E07C94F0607C90607FE303002O6, 3752
1430 DATA 0A0E1ADD5E01DD5602DDCB005EDD23DD23C078414FC
92E12CDF6070E20C92E1318F62E11CDF6070E18DD5E01DD, 4562
1440 DATA 23C92E12CB5F28012CCD02080E20C92E11CB5F28092
E14CD02084806 0AC9CD02080E19DD5E01DD5602DD23DD23, 3516
1450 DATA C90F0F0FE607C6156F012020C9F5E6074FF10F0F0FE
60747C9F50F0F0F0FE603C600470E20F1C9DD214F000607, 4092
1460 DATA C5DD7E00CDB4BBDD6601DD6E02DD5603DD5E04CD66B
BDD7E05CD90BBDD7E06CD96BBDD7E07A72005CD7EBB1803, 5782
1470 DATA CD7BBB110000DD19C110C8C90000001C0D01000001 0
00F1C0F01000002051121160100000300182718010001 04, 1674
1480 DATA 1D022709010000051D0B270D01000061D00270901 0
000204C4F57455220524F4D0D0A0A002020454E41424C45, 1477
1490 DATA 4400204449534142 4C4544004146200D0A4243200D0
A44452 00D0A484C200041462 70D0A424327 0D0A4444527 0D, 1999
1500 DATA 0A484C27004958 0D0A4959 0D0A53500D0A504300417
26520796F7520737572652 03F0020202020200052656769, 2685
1510 DATA 7374657200466 96C6C00546F0057697468004D6F766
500456E6400446973706C6179004C6973740048414C5400, 3565
1520 DATA 4C44004 94E430044454300414444005 24C434100525
2434100524C410052524100444141004350 4C0053434600, 2446
1530 DATA 434346004E4F5000420043004400450048004C00284
84C29004100424300444500484C005350002842432900 28, 1988
1540 DATA 4445290028484C290028535029004E5A005A004E430
04300504F00504500500 04D004A52004558202020202041, 2124
1550 DATA 462C414627004444A4E5A00414444004144430053554
200534243004 14E4400584F52004F520043500 0524C4300, 2442
1560 DATA 525243005 24C00525200534C410053524100534C4C0
053524C00424954005245530053455400524554004A5000, 2565
1570 DATA 43414C4C005253540050 4F500041460045585800 4F5
55400494E00455800444900454900505553480049580049, 2545
1580 DATA 590049780069580049790069590044454642002849 5
829002849592 9004C4449004350490049 4E49004F555449, 2603
1590 DATA 004C44440043504400494E44004F555444004C44495
2004350495200494E4952004F544952004C444452004350, 2628
1600 DATA 4452004 94E4452004F54444520028432900 46004E454
7005245544E0052455449004 94D0049005200525244005 2, 2440
1610 DATA 4C4400476F00546F005072696E740053656172636 82
0666F72005468656E00203E004C6F616400537461727400, 3406
1620 DATA 53617665206672 6F6D0045786563757469 6F6E20616
4647265737 3004E616D65003E01CDB4BBCD6CBB3E023288, 4359
1630 DATA 14DD2A7C14CD6401C9F5C5D5E53E02CDB4BB21 0101C
D75BB2A7E1411F0FF197DE6F86FEB0606CD130C3E3ACD97, 5396
1640 DATA 02CD4E0B10F3CD610BE1D1C1F1C9F5C50608 3E20CD9
7021A13CD1E0C10F4C1F1C93A7E14E6074F8781C606672E, 5169
1650 DATA 03CD75BB3E3ECD9702C9F5C5D5E53E013286143E04C
DB4BB210101CD75BB3A8514C603CD410F210501CD75BB3E, 4835
1660 DATA 05CD410F216E143A8514A72803216614CDE70B3E053
28614217614CDE70BCDC00BE1D1C1F1C93A84143C6F2604, 4265
1670 DATA CD75BB3E3ECD9702C93E04CDB4BB3A8414E6073C6F2
604CD75BB3E20CD9702C90604EB3A86146F2605CD75BBEB, 5007
1680 DATA 5E235623D5CD130CEB3A86146F3C328614260ACD75B
BEBD11ACD1E0C10D7C9F57ACD400C7BCD400CF1C9F53A87, 5159
1690 DATA 14A72801AF1F5C50E2EFE203805FE7E30014F79CD970
23E20CD9702C1F1C9F1F5E6F00F0F0F0FFE0A3802C607C6, 5158
1700 DATA 30CD9702F1F5E60FFE0A3802C607C630CD9702F1C9F
53E03CDB4BBF1CD410F3E01CD410FCD78BB228214212020, 5387
1710 DATA 22ED0822EF0811ED08CD18BBCD1A0D20F8FE5F200B7
BFEED282F1B3E20121829FE0D2832FEFC3728664FFE2E20, 4530
1720 DATA 077BFEED200D618677BFEF179200C21EE0811ED08EDA
0EDA0EDA012132A8214CD75BB3E07CD410F18B33AED08FE, 5361
1730 DATA 20282E01000021ED087EFE20282FD630FE0A3802D60
71717171717CB11CB1017CB11CB1017CB11CB1017CB11CB, 3625
1740 DATA 102318D83EFFA737F5C5CD6CBBC1F1C93EFFA718F3A
F18F0E5C5FEFC280EFE613802D62021310D011300EDB1C1, 5960
1750 DATA E1C930313233343536373839414243444546 2E5F0D3
E06CDB4BB210101CD75BB3A8514A73A6E1428033A66144F, 3562
1760 DATA 0608218000D56CB113802162078FE062811FE04280D7
ACD9702783DC83E20CD97022310E1535A48564E433E0ECD, 3700
1770 DATA 630CC83004ED4B7E14ED437E14CD1C0B3E03CDB4BBC
D6CBBED5B7E14CD130C3E20CD97021ACD1E0C3E20CD9702, 4539
1780 DATA CD720C2A7E143003C838017123227E1418CE3E0CCD6
30CD8C0C53E0DCD630CDA440ECA440EC53E0ACD630CD1E1, 4382
1790 DATA D8C8AFE5ED5230079FE1EBA7E5ED52E3CD0A0E380A5
059C1EB09EB03EDB8C9EB5059C103EDB0C9E5A7ED42E1D8, 6870
1800 DATA EBE5A7ED42E1EB3FC93E09CD630CD8C8C53E0ACD630
C381C281AC53E0BCD630C381128 0F79E1D112A7ED52444D, 5114
1810 DATA 626B13EDB0C9C1C1C93A8514EE0132 8514C93E08CD6
30CD8216E143A8414FE04300 93A8514A728032166143A84, 4335
1820 DATA 14875F1600197123 70C93A8714EE0132 8714C9CDD00
B3A84143CE6073284 14C923180C2B180911F8FF18031108, 3669
1830 DATA 0019227E14C93A8D14EE01328D14CA09B9C306B93E0
0CDB4BBCD6CBBC93E03CDB4BB3E06CD410FCD81BBCD18BB, 5119
1840 DATA FE79280BFE592807CD84BBCD6CBBC93E01CD0EBC3A8
E14CD0CB9ED7BE30EC90000CD210F3E01CD0EBCAF328D14, 5044
1850 DATA CD09B9328E14216E14116F1401490136 00EDB0F308F
5E122661408D9ED436814ED536A14226C14D9FB2AE30E22, 4387
1860 DATA 7A14C9AF0604213D0FF5C5E54648CD32BCE1C1F13C2
310F10600 48CD38BCC9001200 00F5C5D5E5218708B7280A, 4943
1870 DATA 57AF01FFFFEDB11520F87EB7280CCD97022318F6E1D
1C1F137C9E1D1C1F1A7C93E01328D143E05CDB4BB210101, 5820
1880 DATA CD75BBAFCD410FCD06B9F5CD0CB9F1CB573E01CA410
FAF328D143E02C3410FED738C123E7CCD630C3007C8ED4B, 5192
1890 DATA 7C1418062004ED4B7C14C53E7DCD630C3009C1C8C5E
D4B7C1418062004ED4B7C146960E511661001 0300EDB0E1, 4198
1900 DATA 36CD0111102371237 0F3D9ED436410ED53621022601
0D908F5E1225E1008C1ED7B7A14C5ED737A14316614F1C1, 4886
1910 DATA D1E1D908F1C1D1E1DDE1FDE1ED7B7A14FBC9E32B2B2
B227C14C5D5116610EB010300EDB0D1C1E1F3ED737A1431, 6549
1920 DATA 7A14FDE5DDE5E5D5C5F5D9E5D5C5D908F508ED7B8C1
22A5E10E5F1082A6010ED5B6210ED4B6410D9FB3E5FCD97, 6445
1930 DATA 02CD18BBC9000000000000000000000000003E01328F141
804AF328F14F3D9C5D5E5D908F508CD8A1008F108D9E1D1, 4155
1940 DATA C1D9FBC9CD8E12ED5B7C14ED738C12213D11E506043
600231 0FBEBD10600EDB0227C14DD213D11DD7E00FE76CA, 5209
1950 DATA 5911215F120109 00EDB1CA5E1101 0900EDB1CAAA110
10900EDB1CA85110106 00EDB1CAD411010800EDB1CA2D12, 4118
1960 DATA FEE9CAC111FEDD200BDD7E01FEE9CAC611DD7E00FEF
D200BDD7E01FEE9CACB11DD7E00FEED2021DD7E01FE4520, 6429
1970 DATA 0BDD3600C9DD360100C38511FE4D200BDD3600C9DD3
60100C38511316614F1C1D1E1D908F1C1D1E1DDE1FDE1ED, 5872
1980 DATA 7B7A1400000000 0F3ED737A14317A14FDE5DDE5E5D5C
5F5D9E5D5C5D908F508ED7B8C12C93A8F14A7C22811CD49, 5979
1990 DATA 12228A12217411CD5012C32811E12A7C14E52A8A122
27C14ED737A1418D4DD7E00FEC92810F6C2E6FA219C11DD, 4880
2000 DATA 7700CD5012C32811ED7B7A14E1227C14ED737A1418A
FCD491222881221B911CD5012C328112A8812227C141898, 4096
2010 DATA 2A741418082A761418032A7814227C14C35911DD7E0
14F179F472A7C1409228812DD7E002A6E14E5FE10282CFE, 3497
2020 DATA 382810FE302812FE202814FE282816E1C3B911F138F
AC35911F130F4C35911F120EEC35911F128E8C35911ED4B, 5416
2030 DATA 7014F105F5E1226E14ED4370142 0D4C359112A7C14E
D7B7A14E5ED737A1421561241042310FD4EED437C14C359, 4724
2040 DATA 11DD6602DD6E01C9DD7402DD7501C9383028201810 0
800DCFCD4CDC4F4ECE4CCDAFAD2C3F2C2EAE2CAC9D8F8D0, 6819
2050 DATA C0F0E8E0C838302028181 0C7CFD7DFE7EFF7FF00000
0000000DD2A7C14DDE53E01328914CD6401C1C5DDE5E1A7, 5785
2060 DATA ED424DDDE1AF328914C93E7ECD630CC5DDE13007C8D
D2A801418062004DD2A7C143E7DCD630CD8C8DDE5E1ED42, 5592
2070 DATA 2801D0ED43F5123E01328814CD2901DDE5E1ED4BF51
2ED4228F238F03E0CCD2B8DAF328814C90000 3E7FCD630C, 5061
2080 DATA D8C8DD219214DD3600007932 8B143E01328A143E80C
D630C3003C8181428F4DD23DD71003A8A143C328A1420E6, 4133
2090 DATA 3D328A143A8A14B7C82A7E1401FFFF3A8B14EDB1C0C
5E5DD2193143A8A143D280C47DD7E00BE200BDD232310F5, 4769
2100 DATA E1C1227E14C9E1C118D83E82CD9F13D8C53E83CD630
CD13822282 0C521521442110 0A9CD77BCF5D47DBCF1E130, 5705
2110 DATA 11CD83BCF5D47DBCF13007CD7ABCCD6CBBC92100002
B7CB520FB18F2F53E03CDB4BBCD6CBBF1CD410F3E81CD41, 6122
2120 DATA 0F2152141600CD18BBFEFC2836FE0D2837FE2038F1F
E8030EDFE7F2017141528E52B153E08CD5ABB3E20CD5ABB, 4738
2130 DATA 3E08CD5ABB18D24F7AFE1428CC7179CD5ABB231418C
3CD6CBB37C9D5CD6CBBC1A7C93E84CD630CD8C8C53E7DCD, 6040
2140 DATA 630C383828 36C53E85CD630C382D282BC53E86CD9F1
338222152141100A9CD8CBC301B3E02C1E1D1D5A7ED52EB, 4629
2150 DATA E1CD98BC300ECD8FBCCD6CBBC9E1E1E1C9E1E1E1CD9
2BCCD6CBBC900000000000000000000000000000000000000, 4860
2160 DATA 000054005700 5A006600630069006F00720075007800
07B0081009600 9B00B100CF00D100D300D500D700D900DB, 3254
2170 DATA 00DD00DF00E100E300E500E700E900EB00ED00EF00F
100F300F500F700FC0006010E0112012001230 12C012F01, 3731
2180 DATA 37013D0146015201570166016B01750180 0183018C0
19501A201A701B001B701BA01BD01C301CB01D501D901DE, 3364
2190 DATA 01E301F40105020B0215021B0224022C0230023C023
F0249024E0251025602600265026902 6E0278027B028002, 1930
2200 DATA 85028A028E0293029802BE02C102C402C902CC02DB0
26903F2021003130322033203340336033803 3A033C033E, 2777
2210 DATA 0340034203440346034803 4A034C034E0350035203 5
403560358035A035C035E036003DA03070411046304680 4, 1878
2220 DATA 7C049204A104C704E404F204F804FD0400051405360
54D0550055305600563 05EC05F405010606 06090 60F061D, 2756
2230 DATA 0626063206 3B065B066D06710 68E06BF06D606EB06F
F060C071B0741074B077407A707B307C507D307DA071108, 2931
2240 DATA 150B180B2B0B390B3E0B410B460B540B590B610B730
B7D0B8B0B900B9B0B9E0BA10BA70BAA0BAF0BB20BB50BB8, 2906
2250 DATA 0BC00BCC0BD50BE30BEA0BF90BFD0B020C0D0C150C1
90C1F0C340C390C4F0C5E0C6A0C6F0C750C7B0C7E0C810C, 2926
2260 DATA 870CB60CB90CC40CCC0CD10CDB0C260D4F0D530D580
D5E0D720D7A0D880D8F0D930D960DA20DA50DAA0DAE0DB3, 3653
2270 DATA 0DB60DB90DC30DCA0DD20DD50DDE0DF30D1B0E230E2
D0E460E4B0E510E550E580E5F0E650E680E740E790E7D0E, 3133
2280 DATA 800E860E990E9D0EA20EBB0ED80EDF0EE50EEE0EF40
EF70EFA0E080F0E0F120F150F1A0F1D0F240F450F590F6D, 3304
2290 DATA 0F7C0F8B0F8F0F940F980F9D0FA40FAC0FB20FBB0FC
30FC90FD40FDE0FE20FE50FEC0FF20FF70FFA0F0C101510, 4204
2300 DATA 1A1028102B103F10421048104C105010571 06B10711
07D106A108E1092109510A610AA10B210B510BD10C510CD, 3111
2310 DATA 10D510DD10E210EE10FD1016112511 28113A1143114
6115A115E1162116511681 16B116E1171117511791 17C11, 3009
2320 DATA 8011901196119911 9D11A111A511AA11AD11B011B31
1B611B911BC11C111C611CB11CE11D111DB11DF11E511FE, 4619
2330 DATA 1104120A1210121612 1A12211225122A122D1231123
6123912431246128F1296129912A812AE12B812C012C512, 2306
2340 DATA D312D812DB12E212F112F912FF1207130C131113201
324132A132D13321338134113441358134D0050004F0411, 2746
2350 DATA 0B830480043B003F0042004700D800E0058B06CB00C
D0006213691372 13B113A913AE1301140914131 41D142014, 2699
2360 DATA 0000300200303001003 00E00303030303030303030303
0303030300200303001003 00C00303030303030303030 30, 1520
2370 DATA END.0
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