Machine Code

PRINT HL IN DECIMAL   J. Addey/R. Beal
===================

Mr. J. Addey has sent us a useful subroutine which prints HL in decimal. We have modified it for Nascom/Nas-Sys, and have also saved quite a few bytes by tidying it up and converting to full use of the Z80. Here it is complete with a little program which demonstrates the use of several Nas-Sys routines. Run the program at 0D00H and type in a value in HEXadecimal. Errors are trapped. This program is a good starting point for beginners to analyse.

ZEAP Z80 Assembler - Source Listing

```
                0010 ; DEMONSTRATION PROGRAM
0D00            0020 DEMO    ORG   0D00H
0D00 0063       0030 ZINLIN  EQU   63H
0D00 0079       0040 ZRLIN   EQU   79H
0D00 006B       0050 ZERRM   EQU   6BH
0D00 0060       0060 ZARGS   EQU   60H
0D00 006A       0070 ZCRLF   EQU   6AH
0D00 0C0B       0080 ARGN    EQU   0C0BH
0D00 DF63       0090         SCAL  ZINLIN ; Get the input line
0D02 DF79       0100         SCAL  ZRLIN ; Get the values from the line
0D04 3004       0110         JR    NC, CHK ; Check the values are Ok
0D06 DF6B       0120 ERR     SCAL  ZERRM ; Error message
0D08 18F6       0130         JR    DEMO
0D0A 3A0B0C     0140 CHK     LD    A, (ARGN) ; Check one value only entered
0D0D FE01       0150         CP    1
0D0F 20F5       0160         JR    NZ, ERR
0D11 DF60       0170 PRT     SCAL  ZARGS ; Get the value in HL
0D13 CD1A0D     0180         CALL  DEC5HL ; Call print routine
0D16 DF6A       0190         SCAL  ZCRLF ; Move to next line
0D18 18E6       0200         JR    DEMO ; Start again

                0220 ; Routine to print HL in decimal
                0230 ; Set HL to the value and call the routine
                0240 ; AF, DE, and C registers are modified
0D1A 0030       0250 ROUT    EQU   30H
0D1A 111027     0260 DEC5HL  LD    DE, 2710H ; 10,000 decimal
0D1D CD350D     0270         CALL  SUBR
0D20 11E803     0280 DEC4HL  LD    DE, 03E8H ; 1,000 decimal
0D23 CD350D     0290         CALL  SUBR
0D26 116400     0300 DEC3HL  LD    DE, 0064H ; 100 decimal
0D29 CD350D     0310         CALL  SUBR
0D2C 110A00     0320 DEC2HL  LD    DE, 000AH ; 10 decimal
0D2F CD350D     0330         CALL  SUBR
0D32 110100     0340 DEC1HL  LD    DE, 0001H ; 1 decimal
0D35 0E00       0350 SUBR    LD    C, 0 ; Count subtractions
0D37 0C         0360 SUB2    INC   C
0D38 B7         0370         OR    A
0D39 ED52       0380         SBC   HL,DE
0D3B 30FA       0390         JR    NC, SUB2
0D3D 0D         0400         DEC   C
0D3E 19         0410         ADD   HL, DE
0D3F 3E30       0420         LD    A, 30H ; Convert to ASCII
0D41 81         0430         ADD   A, C
0D42 F7         0440         RST   ROUT ; Output answer
0D43 C9         0450         RET
```