

HEXADECIMAL NOTATION

The binary patterns (instructions, addresses, data) used in Interdata machinery are invariably either 8 or 16 bits long. These patterns are conveniently represented as numbers to radix 16. This requires 16 different digits which are denoted in order by:-
0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F.

Although these digits are used to represent integer values it is rarely necessary to do arithmetic with them so they can be considered as abbreviations for the corresponding binary patterns.

hex digit	binary pattern
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001
A	1010
B	1011
C	1100
D	1101
E	1110
F	1111

Within source programs hexadecimal literals are denoted by e.g. X'AB12', X'38', X'7C0'. Within the handouts for the course giving details of machines numbers will almost always be assumed to be expressed in hexadecimal, especially if they are addresses or instructions.

50 SEQUENCE

THE INTERDATA 74 BOOTSTRAP

This is a short program which must be loaded into the Interdata 74 before any other program may be loaded. It occupies several different areas of memory. It is tabulated below in hexadecimal notation.

<u>location</u>	<u>value</u>
22	0
34	0
36	0050
50	D500
52	00CF
54	4300
56	0080
78	8880

The bootstrap should be started at location 50

N.B. All programs written by responsible programmers endeavour, as far as possible, to maintain this bootstrap intact in memory so that reloading from scratch can be quickly achieved. However, locations 34 and 36 play an important role in most programs and will almost inevitably be overwritten.