

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26

SECTION IX  
MISCELLANEOUS UTILITIES

9.1      ADD816

Calling Sequence:

```
LD    A, VALUE
LD    HL, ADDRESS
CALL  ADD816
```

Description:

ADD816 adds an 8-bit signed number in accumulator to a 16-bit unsigned number pointed to by HL; returns with altered 16-bit number at the HL address.

Parameters:

VALUE                      8-bit signed number.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26

ADDRESS

Address pointing to a 16-bit  
unsigned number

Output:

Two-byte value at the address  
pointed to by the HL register  
pair.

Side Effects:

Destroys registers A, F and B.

1 9.2 DECLSN

2 Calling Sequence:

3  
4 LD HL, ADDRESS

5 CALL DECLSN

6  
7 Description:

8  
9 DECLSN decrements least significant nibble of a byte  
10 pointed to by HL without affecting most significant  
11 nibble or HL. Returns with altered 8-bit number at HL  
12 address. Sets Z-flag if 0, C-flag if -1.

13  
14 Parameters:

15  
16 ADDRESS Address pointing to an 8-bit  
17 unsigned number.

18  
19 Output: A one-byte value at the address  
20 pointed to by the HL register  
21 pair.

22  
23 Side Effects:

24 Destroys A and F.  
25  
26

1

2

9.3 DECMSN

3

4

Calling Sequence:

5

6

LD HL, ADDRESS

7

CALL DECMSN

8

9

Description:

10

11

DECMSN decrements the most significant nibble of byte pointed to by HL without affecting the least significant nibble or HL. Returns with altered 8-bit number at HL address. Sets Z-flag if 0, C-flag if -1.

12

13

14

15

16

Parameters:

17

18

ADDRESS

Address pointing to 8-bit unsigned number.

19

20

21

Output:

A one-byte value at the address pointed to by the HL register pair.

22

23

24

25

Side Effects:

26

Destroys A and F.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26

9.4 MSNTOLSN

Calling Sequence:

```
LD    HL, ADDRESS
CALL  MSNTOLSN
```

Description:

MSNTOLSN copies the most significant nibble of byte pointed to by HL to the least significant nibble of that byte. The routine returns the results at the location pointed to by HL.

Parameters:

ADDRESS                   Address pointing to an 8-bit unsigned number.

Output:                   A one-byte value pointed to by HL register pair.

Side Effects:

Destroys A, F and B.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26

9.5      RAND\_GEN

Calling Sequence:

CALL RAND\_GEN

Description:

RAND\_GEN is a 16-bit psuedo random number generator. It "exclusive OR's" the 15th and 8th bit together and then rotates the entire quantity to the left and inserts the "exclusive OR'ed" bit into the rightmost bit. Upon leaving, it stores the random number at global location RAND\_NUM.

Output:

The random number can be found in the HL register pair or RAND\_GEN because RAND\_GEN contains the value of L while RAND\_GEN + 1 has the value of H, or in the accumulator because A = L before RET.

Side Effects:

Destroys registers AF and HL (return values).

1 9.6 LOAD ASCII

2  
3 Calling Sequence:

4  
5 CALL LOAD\_ASCII

6  
7 Description:

8  
9 LOAD\_ASCII writes out the ASCII generator set to the  
10 pattern generator table. The ASCII table is located in  
11 Cartridge ROM starting at ASC\_TABLE. INIT\_TABLE must be  
12 called to set up the table addresses before using this  
13 routine.

14  
15 Side Effects:

16 Destroys AF, DE, HL and IY.

17  
18 Calls to other OS routines:

19 - PUT\_VRAM  
20  
21  
22  
23  
24  
25  
26