

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.

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2	ADDRESS	Address pointing to a 16-bit
3		unsigned number
4		
5	Output:	Two-byte value at the address
6		pointed to by the HL register
7		pair.
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9	Side Effects:	
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11		Destroys registers A, F and B.
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1 9.2 DECLSN

2 Calling Sequence:

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4 LD HL, ADDRESS

5 CALL DECLSN

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7 Description:

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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.

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14 Parameters:

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

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

22 Side Effects:

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24 Destroys A and F.
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9.3 DECMSN

Calling Sequence:

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LD    HL, ADDRESS
CALL  DECMSN
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Description:

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.

Parameters:

ADDRESS Address pointing to 8-bit unsigned number.

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

Side Effects:

Destroys A and F.

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9.4 MSNTOLSN

Calling Sequence:

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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.

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2 9.5 RAND_GEN

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4 Calling Sequence:

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6 CALL RAND_GEN

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8 Description:

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10 RAND_GEN is a 16-bit psuedo random number generator. It
11 "exclusive OR's" the 15th and 8th bit together and then
12 rotates the entire quantity to the left and inserts the
13 "exclusive OR'ed" bit into the rightmost bit. Upon
14 leaving, it stores the random number at global location
15 RAND_NUM.

16
17 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 accumu-
lator because A = L before RET.

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22 Side Effects:

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24 Destroys registers AF and HL (return values).
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1 9.6 LOAD ASCII

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Calling Sequence:

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CALL LOAD_ASCII

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Description:

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LOAD_ASCII writes out the ASCII generator set to the
pattern generator table. The ASCII table is located in
Cartridge ROM starting at ASC_TABLE. INIT_TABLE must be
called to set up the table addresses before using this
routine.

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Side Effects:

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Destroys AF, DE, HL and IY.

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Calls to other OS routines:

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- PUT_VRAM

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