

H8SPEED Speed Selection Utility v2.6 User Version

File: H8SPEED.ABS
For: HDOS Operating System
Date: 2013-02-07
Author: Stanley K. Webb

This program was written to support Norberto Collado's H8 Z80 Speed Module. It will report on and set the oscillator speed bits in the Speed Module control port.

2 MHz, 4 MHz, 8 MHz, 10 MHz and MAX MHz are speeds accepted by the program.

The speed parameter chosen by the user is set by the program, unless it conflicts with system speed limit imposed by switches on the module. If that occurs, the program will only set speeds up to the maximum permitted by the H8 speed module switches.

Examples:

```
=>H8SPEED HELP                ;Will display an abbreviated usage message:
                                Usage1:=>H8SPEED <speed in MHz> { 2,4,8,10, MAX }

=>H8SPEED                        ;will display usage
=>H8SPEED=                       ;will display port status and speed setting
=>H8SPEED 2                      ;will set speed to 2Mz (usage1)
=>H8SPEED 2 Mhz                 ;will be accepted also.
=>H8SPEED 4                      ;sets speed to 4 Mhz
=>H8SPEED=4
=>H8SPEED 4 ?                   ;gives status after attempting to set speed to 4 Mhz

=>H8SPEED 8                     ;will set the speed to 8 MHz unless prohibited
                                ;by the limit speed switches D5+D4 on speed module.

=>H8SPEED 10                    ;a special case, if module D6 switch is set speed
=>H8SPEED MAX                   ;will be maximum possible.
```

A trailing '?' will output additional debugging information.

* The default port number is located at 4200A (USERFWA) in the binary. It is a single binary byte with the port value. You could use a utility like PATCH to reconfigure this utility from its current value of 220Q.

This program is compatible with 8080A and Z80 CPUs.

H8SPEED Speed Selection Utility v2.6 Debugging Version

File: H8SPEEDX.ABS
For: HDOS Operating System
Date: 2013-01-30
Author: Stanley K. Webb

This program was written to support Norberto Collado's H8 Z80 Speed Module. It will report on and set the oscillator speed bits in the Speed Module control port.

2 MHz, 4 MHz, 8 MHz, 10 MHz and MAX MHz are speeds accepted by the program.

The speed parameter chosen by the user is set by the program, unless it conflicts with system speed limit imposed by switches on the module. If that occurs, the program will only set speeds up to the maximum permitted by the H8 speed module switches.

Examples:

```
=>H8SPEED HELP                ;Will display an abbreviated usage message:

Usage1:=>H8SPEED <speed in MHz> { 2,4,8,10, MAX }
Usage2:=>H8SPEED PORT= <octal> SPEED= <speed in MHz>
Usage3:=>H8SPEED { INPUT | OUTPUT <octal byte> }
Usage4:=>H8SPEED DEBUG=<octal> <usage1 | usage2 | usage3>
DEBUG syntax will initialize and use a simulated port.

=>H8SPEED                      ;will display usage
=>H8SPEED
=>H8SPEED 2                    ;will set speed to 2Mz (usage1)
=>H8SPEED 2 Mhz                ;will be accepted also.

=>H8SPEED 8                    ;will set the speed to 8 MHz unless prohibited
                               ;by the limit speed switches D5+D4 on speed module.

=>H8SPEED 10                   ;a special case, if module D6 switch is set speed
=>H8SPEED MAX                  ;will be maximum possible.

=>H8SPEED PORT                 ;will report the default port* and it's speed status

=>H8SPEED PORT <octal>        ;will report using the specified octal port
                               ;WARNING: user specified ports may not be on H8 Module.

=>H8SPEED PORT 220Q SPEED 8    ;will attempt to set 8 Mhz using port 220Q
=>H8SPEED PORT 220Q SPEED      ;will report apparent speed on port 220Q
                               ;without attempting to set speed bits.
```

A trailing '?' will output additional debugging information. Other reasonable syntax may be accepted. DEBUG may follow PORT and '?' placed between arguments will show port status as command is processed.

The program will display various error messages if you input say a decimal number for the port, or make other syntax errors.

* The default port number is located at 4200A (USERFWA) in the binary. It is a single binary byte with the port value. You could use a utility like PATCH to reconfigure this utility from its current value of 220Q.

This program is compatible with 8080A and Z80 CPUs.

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Additional examples of acceptable H8SPEED command syntax:

READING CURRENT SPEED

```
=>H8SPEED=  
=>H8SPEED SPEED  
=>H8SPEED SPEED=
```

SETTING SPEED

```
=>H8SPEED=2           Sets speed to 2 Mhz  
=>H8SPEED=4 MHZ  
=>H8SPEED 8  
=>H8SPEED 2?         displays port status after speed change to 2mhz  
=>H8SPEED ?10?       displays port status before and after speed change  
=>H8SPEED MAX         will set speed to maximum allowed by system
```

DEBUGGING PORTS

```
=>H8SPEED DEBUG=200Q PORT=220Q SPEED=10   Simulated PORT 220Q set to 10Mhz  
                                             with inital value of port = 200Q.  
  
=>H8SPEED PORT=220Q SPEED=10              Same command using real port.  
  
=>H8SPEED PORT 220Q SPEED 10              without optional '=' chars
```

INPUT AND OUTPUT TO PORTS

```
=>H8SPEED INPUT           Inputs byte from default port and displays its octal value  
=>H8SPEED OUTPUT 374Q?   outputs 374Q byte to default port  
  
=>H8SPEED PORT=200Q OUTPUT 377Q           Outputs 377Q to actual port 200Q  
=>H8SPEED DEBUG=000Q OUTPUT 377Q ?       Outputs 377Q to virtual default port and reports  
  
=>H8SPEED DEBUG=103Q PORT=220Q OUTPUT 277Q ?  
Outputs 277Q to simulated port having the inital value of 103Q and reports status of port after the  
operation.
```

In general commands need to be in this order:

```
=>H8SPEED DEBUG, PORT, INPUT or OUTPUT    or  
=>H8SPEED DEBUG, PORT, SPEED              where Default keyword need not appear. Thus  
=>H8SPEED 4                               uses the default port
```