

Chapter 36 - The HOST Command

HOST is the BASIC verb for whole-machine service actions. It can open the network configuration screen, update installed system packages, reboot the appliance, power it off, or print help.

HOST is a statement form, not an expression. It must begin a statement. In expressions and explicit LET assignments, the same letters may still be used as an ordinary variable name.

36.1 Subverbs

Form	What it does
HOST NET	Opens the network configuration screen.
HOST UPDATE	Updates the installed system packages.
HOST REBOOT	Reboots the appliance.
HOST POWEROFF	Powers off the appliance.
HOST HELP	Prints the list of HOST subverbs.

HOST on its own is the same as HOST HELP. HOST: is also the help form, so it can start a colon-separated line.

Any other word after HOST is a syntax error. The statement stops before a service action is requested.

36.2 Typed Help Example

This is the safe first example. It does not touch the service-action registers.

```
10 HOST HELP
20 PRINT "AFTER HELP"
```

Expected output begins like this:

```
HOST commands:
HOST NET - configure WiFi
HOST UPDATE - update system packages
HOST REBOOT
HOST POWEROFF
HOST HELP
AFTER HELP
```

HOST HELP returns to BASIC, so line 20 still runs. It is safe to type because it only prints the built-in help text. It does not write the service-action MMIO trigger.

36.3 What Each Subverb Does

36.3.1 HOST NET

Opens the network configuration screen. BASIC resumes at the next statement after the screen closes. If the user cancels, BASIC treats that as a clean return rather than an error.

36.3.2 HOST UPDATE

Updates installed system packages. The appliance asks for confirmation before the update is applied. If the user cancels, BASIC continues with the next statement.

36.3.3 HOST REBOOT

Reboots the appliance. The running program stops. BASIC returns only after the boot sequence has completed, so statements after HOST REBOOT on the same run are not reached.

36.3.4 HOST POWEROFF

Powers the appliance off. The running program does not return. The next BASIC session starts after a manual power-on.

36.3.5 HOST HELP

Prints the fixed help text shown above. The help text is stored with BASIC and is not configurable.

36.4 Register Block

HOST uses a four-register MMIO block at \$F1400. Registers are 32-bit when read or written with PEEK32 and POKE32. The command, trigger, and status values use the low byte; the exit register is a full 32-bit value.

Address	Name	R/W	Meaning
\$F1400	command	W/R	Subverb enum: 1 NET, 2 UPDATE, 3 REBOOT, 4 POWEROFF, 0 none.
\$F1404	trigger	W	Write a non-zero value to start the selected command.
\$F1408	status	R	Current state of the command.
\$F140C	exit	R	Exit code from the action, valid after a terminal status.

Status values:

Value	State	Terminal?
0	running	no
1	OK	yes
2	error	yes
3	cancelled by user	yes
4	disabled	yes
5	idle	yes

Exit-code values used by the built-in actions:

Value	Meaning
0	OK
2	Bad command input
10	Network password failed
11	No network signal
12	Unsupported network authentication
13	Network timeout
20	Package update step failed
21	Package upgrade step failed

36.5 Read The Status Register

This direct MMIO example is safe: it only reads the current status. Before a command has been fired, the status is normally 5.

```
10 PRINT "HOST STATUS ";PEEK32(&H000F1408)
```

Expected result before a command:

```
HOST STATUS 5
```

If a command is already running, the value may be 0. After a completed command it will be one of the terminal values in the table above.

This listing reads the same status register that the real HOST subverbs poll after firing a command. It is a read-only check, so it is the right example to type before experimenting with HOST NET, HOST UPDATE, HOST REBOOT, or HOST POWEROFF.

36.6 BASIC Protocol

The BASIC verb performs this sequence:

1. Write the subverb enum to \$F1400.
2. Write 1 to \$F1404.
3. Poll \$F1408 while it reads 0.
4. Treat status 1 and status 3 as clean returns to BASIC.
5. Treat status 2, 4, or an unexpected 5 as ?FC ERROR.

State 4 means service actions are disabled. From BASIC this appears as ?FC ERROR after a requested action.

36.7 Direct Register Use

IE64, IE32, M68K, and x86 programs can reach \$F1400 directly. They drive the block the same way BASIC does: write the command enum, write the trigger, poll status, then read the exit code.

The 6502 and Z80 do not have a direct route to this block. Their small-address MMIO apertures reach the \$F0000 page, not the \$F1xxx service-action page. Code running on those CPUs should ask a larger CPU through the coprocessor

channel, or use the BASIC HOST verb.

Do not trigger HOST REBOOT or HOST POWEROFF from a test program unless the power action is the result you want.

36.8 Limits

HOST does not expose a command shell. It does not run arbitrary commands, read files, write files, or send network packets from a BASIC program. File work goes through Chapter 35. Keyboard and terminal traffic go through Chapters 37 and 38.