CP/M 2.2.04 QUIKSTOR SYSTEM BUILD FOR H37/Z67-IDE

If you are reading this, you have the files on a disk. That's good for a starting point.

Please read these instruction all the way through before starting the installation. Make notes on the instructions. This will help with some details when you are performing the procedure.

If the QuikStor files are not on a Heath floppy disk, format a new floppy and copy the files to this new disk.

If the files are on your PC, use your modem program to copy the files to the newly formatted disk. If you do not have a modem program, you can download ZMP (Z-System Modem Program) in H8D format. Then use Les Bird's H8D transfer program to send the files to an H-17 disk.

I have prepared disks for ZMP. They are all boot-able – CP/M 2.2.04 for both H-17 and H-37 disks. The H-17 access is configured for a single drive so that those having only one H-17 drive can swap disks during the transfer process. If you have multiple H-17 drives, you can reconfigure the boot disk to take advantage of your hardware. If you have H-37 disks, you can copy the software to a soft-sectored disk.

There are four versions of ZMP available to use on either the standard modem port "A" (330Q) or the serial printer port "B" (340Q). Each disk is configured for port "B" and its maximum baud to allow using ZMP after using Les's program to send the files without having to re-cable to another port. The packages are:

ZMP2MP2.H8D -- H8/89/90, Z80 CPU, 2 MHz Clock, Max Z-modem rate = 2400 baud, port "A" (330Q) or port "B" (340Q) .

ZMP2MIP2.H8D -- H8/89/90, Z80 CPU, 2 MHz Clock, Interrupt driven I/O requiring Int-5 set on serial card for the modem port, max Z-modem rate = 4800 baud, port "A" (330Q), or port "B" (340Q).

ZMP4MP2.H8D -- H8/89/90, Z80 CPU, 4 MHz Clock, max Z-modem rate = 4800 baud, port "A" (330Q), or port "B" (340Q).

ZMP4MIP2.H8D -- H8/89/90, Z80 CPU, 4 MHz Clock, Interrupt driven I/O requiring Int-5 set on serial card for the modem port, max Z-modem rate = 9600 baud, port "A" (330Q), or port "B" (340Q).

If you can configure your serial port to use Interrupt Level 5 by setting the jumper pin on your serial card, you will get twice the communication speed by using the interrupt I/O packages. Download the appropriate version of ZMP for your hardware. All of the disk images will boot CP/M 2.2.04 for H-17 and H-37 drives. If you copy the programs to a soft-sectored H-37 disk, you will need to SYSGEN the disk to be able to use it for the rest of this procedure.

There are two sets of files to create the H37/Z67-IDE QuikStor system disk.
        -- QuikStor Files -- the OS and utilities for the Z67-IDE system
        -- NZCOM Files -- ZCPR 3.4 with file Date-Stamping

The QuikStor files are grouped into folders. All of the files will fit on an H-37 40 Track, 2 Sided, Double-Density disk. Before proceeding, format and label your floppy disk to receive the files.

If you downloaded the ZMPxxxxx.H8D to an H-17 disk and you will be building an H-37/Z67-IDE system, you will need to copy the ZMP program files to an H-37 disk and SYSGEN this disk.

Boot your Heath Communications program disk.
      IDE: Boot CC-0<cr>   (The MMS ROM auto completes just like the Heath ROM.)
          If you have multiple drives, you should reconfigure the boot disk to use them and use drive B: to receive the files.

On the Heath, start ZMPxxxxx.COM. (Name depends on your hardware and the file you downloaded.)

A. If you will be using the Modem Port (330Q) to transfer files, press **Esc**, **L** and then select option **< O >** to toggle to port "A". Exit with the **< Z >** option. Now, press **ESC**, **C** to open the configuration menu. Select option **< B >** for baud rate and then option **< Z >** to exit back to the configuration menu with **NO** changes. Select option **< Z >** to exit and respond **< Y >** when asked if you wish to make the configuration change permanent. Now the default port will be "A".

B. Press **ESC**, **F**, **L** and set the default drive to the target disk, probably **< B: >**. If you only have one floppy drive, set it to B: and swap disks when directed. (NOTE: **Only swap disks when directed by the computer!**)

C. Connect your H8/89/90 DTE port (330Q) or Serial Printer DCE Port (340Q) to your PC's com port. Start a modem program on your PC (HyperTerm will work). Set the PC modem program for 8 bits, no parity, one stop bit (8N1) and set the baud rate to the same rate as the Heath.

D. Verify communication between the PC and the Heath computer by typing on each keyboard and verifying that the text appears on the other computer's screen. You may need to synchronize the line settings on the PC to match the Heath's: baud, x-on, x-off, etc. When you have communication continue with the step below.

E. Send the files for the QuikStor System from your PC using Z-MODEM protocol to the Heath. Repeat step C above for NZCOM, if desired.

F. When all files have been sent to the Heath, exit ZMP with **Esc**, **Q**, **Y**.

In the following steps:
<cr> means press the Carriage Return key.
<text> means letters you type on the keyboard.
^C means while holding the CTRL key, type the C key.

Boot your system with a Heath CP/M boot disk. (The ZMP disk will work here.)

   IDE: Boot CC-0<cr> (if it is in drive A:)
 or
   IDE: Boot CC-1<cr> (if it is in drive B:)

      If you have multiple drives, you should reconfigure the boot disk to use them and use drive B:
      for the data disk.

      Single drive users will also set B: drive and swap disks when directed.

Type: **B:DDT B:CPM32.COM<cr>**   ; load 32K system into memory

When the program has loaded, immediately exit DDT with **G0<cr>** (G-Zero) or **^C**.

Type: **SYSGEN<cr>**
      Source Drive Name (or Return to skip): **<cr>**   ; work with memory image
      Destination Drive Name (or Return to Re-boot): **< B >**
      Destination on B, Then Type Return **<cr>**
      Function Complete
      Destination Drive Name (or return to Re-boot): **<cr>**

Reset the computer (Shift RESET).

Boot the QuikStor System Disk (the disk that you just SYSGENed).
      IDE: Boot CC-0<cr> (if it is in drive A:)
 or   **IDE: Boot CC-1<cr>** (if it is in drive B:)

Your screen should look like this:

```
| IDE: Boot CC-0
|
|
| 32K LLL/HEATH/ZENITH QUIKSTOR (C) CP/M 2.2.04  01/04/11
| FOR H37 SASI DISKS WITH OPTION(S) TIB
|
| A>
|
```

Type: **MOVCPM37 * A:<cr>**   ; maximize the memory of the system on drive A:

TYPE: **SYSGEN<cr>**
      Source Drive Name (or Return to skip): **<cr>**   ; use image in memory
      Destination Drive Name (or Return to Re-boot): **< A >**   ;   and write it to disk A:
      Destination on A, Then Type Return **<cr>**
      Function Complete
      Destination Drive Name (or return to Re-boot): **<cr>**

Type: **QSCONFIG<cr>**
      Standard System (Y or N): **< N >**
      Configure your system disk drive step rates and track densities (option B).
      Make any other changes to options A, B and C you desire.
      Select option D and toggle option A (auto command on boot) to **FALSE**.

Exit QSCONFIG with option **< Y >** -- exit updating memory and disk.

Now we are ready to set up the Z67-IDE drive. The Z67 card can run on port 78h (left side) or 7Ch (right side). The H-37 controller will be on the left, port 78h (P504), and the Z67 will be on right, port 7Ch (P506). Refer to the Z67 Card Configuration document to ensure your jumpers are properly set.

Please read the Z67-IDE manual on the use of SASIX and creating partitions. Have it handy as you perform the following.

Power off your Heath system.

Connect the Z67-IDE communications cable to the 3-pin plug on the Z67-IDE card.

Connect to the serial port on your PC.

Start your PC modem program and set it for 9600 baud, 8 bits, No parity, and 1 Stop bit (8N1).

Power on your Heath. The Z67-IDE card should send startup diagnostics to your PC. It should report both the master and slave device parameters that you have installed. If correct, record the data for the detected master and/or slave devices.

Boot the QS System Disk

Type: **SASIX<cr>**

Set: Function = **< 0 >**, Port = **< 7C >**, Drive = **< 0 >**

Press the BLUE function key to read the partition table.   (If this is a new device, the default table
should load.)

Set: Error Len = **< 2 >**,
    Heads = **< (from your recorded data) >**,
    Cylinders = **< (from your recorded data) >**,
    Seek Type = 4 (default)
    W Comp = **< same as cylinders >**
    W reduc = **< same as cylinders >**

Define your partitions:

#	Name	Cat	WP	Orig	Size
1	<part1 name>	2	0	2	125
2	<part2 name>	2	0	127	125
...					
15	<pt15 name>	2	0	1752	125

The Orig of the next partition will be the Orig of the previous partition plus 125. 125 blocks will set the maximum partition size of 8 MB.

When all partitions are defined, press **f1** (Write Track). If there is a problem with the partition definition, SASIX will print an error message and not exit.

If SASIX was satisfied with the entry, it will exit to the CP/M prompt.

Type: **AS 00:<cr>**

The partitions for Drive 00 should be listed. If not, repeat the SASIX setup to find your error.

Available Partitions for Unit 00:

Name	Size
0 1	8000K
0 2	8000K
0 3	8000K
... ...	
0 15	8000K

Type: **AS 00:<part1 name> to D:**   (I don't know what you will name it!)

AS should report <part1 name> on D:.

Type: **QSFORMAT<cr>**

     Enter Command: Format < **D:<cr>** >
     Place the disk to be formatted on D:
     Hit RETURN when ready, or CTL-C to Abort. **<cr>**

The device will format in approximately 5 seconds!

Media check: < **Y** > (This will take a few minutes, but will report and lock out any bad sectors.)

Do you have another diskette to format? < **N** >

Type: **DIR D:<cr>**

It should report 'NO FILE'

Type: **STAT D:<cr>**

It should report 7960 k-bytes (assuming an 8 MB partition).

If you will be using NZCOM with date-stamping:
Type: **PUTDS<cr>**
  Which drive < **D:** >
  Do you want the "!!!TIME&.DAT" file to be a SYStem file,
      one that will not be displayed by the DIRectory command (y/n) ==> < **YES** >
  Prepare another disk? < **NO** >

Type: **QSPUTSYS A:BIOS.SYS<cr>**
     Destination Drive Name or RETURN to quit: < **D** >
     Place Destination on D: and press return: **<cr>**
     Destination Drive Name or RETURN to quit: **<cr>**

Type: **PIP D:=A:*.*[V]<cr>**   ; This will copy all files on the QS System Disk to D:.

Reset the computer.

Type: **Boot SS-0<cr>**   --   This will boot the master device (Boot<cr> should also work.)
  or **Boot SS-1<cr>**   --   This will boot the slave device.

The computer should boot from your Z67-IDE device.

Type: **AS\<cr\>**
   AS should respond:

  Current Partition Assignments

  Drive   Unit/Name   Size

  A: 00:0 1   8000K
  B: Unassigned
  C: Unassigned
  D: Unassigned

================= Prepare Remaining Partitions for Use ====================

Now, you are ready to prepare the remaining partitions for use.

First, mount the partition:
   AS 00:\<part_name\> to B:

AS should respond:
   Current Partition Assignments

  Drive   Unit/Name   Size

  A: 00:0 1   8000K
  B: 00:0 2   8000K
  C: Unassigned
  D: Unassigned

Type: **QSFORMAT B:**   \<\<== Exercise caution that you do not format the boot partition.

   Media Check? **\< Y \>**

If you will be running NZCOM with date-stamping:
  Type: **PUTDS\<cr\>**
  Which drive **\< B: \>**
  Do you want the "!!!TIME&.DAT" file to be a SYStem file,
    one that will not be displayed by the DIRectory command (y/n) ==\> **\< YES \>**
  Prepare another disk? **\< NO \>**

When you finish with the partition,

> Type: **AS B:<cr>**   ; to dismount the partition.

Repeat this procedure for the remaining new partitions.
===================== All Partitions Formatted ============================

If you will be running NZCOM, continue with the steps below.

Type: **MKZCM<cr>**
     Make no changes and select option **< S >** for save and enter **< NZCOM >** for name.

Type: **NZCOM<cr>**   ; The system should boot ZCPR 3.4.

Type: **NZCPM<cr>**   ; This should return to original boot system (ZCPR2 and CP/M).

Type: **QSCONFIG<cr>**
     Standard System? **< N >**
     Select option **< D >** - Automatic Command Line.
     Select option **< C >** and type **< NZCOM<cr> >**
     Select option **< A >** and verify it is toggles to **TRUE**.

Exit QSCONFIG with option **< Y >** to update both memory and disk.

Reset the computer and re-boot the Z67-IDE.

The system should boot and automatically load ZCPR 3.4 and prompt for the date and time.

Type: **NZBLITZ ZCPR.COM<cr>**   ; This saves an image of the ZCPR 3.4 system as ZCPR.COM.

Type: **NZCPM<cr>**   ; to return to CP/M.

You can return to ZCPR 3.4 with Date-Stamping by typing <ZCPR<cr>>

NOTE: On cold boot, the system will boot, load ZCPR 3.4, load time-stamping and prompt you for the
          date and time. You can now exit back to CP/M to maximize TPA for some application and
          later return to ZCPR 3.4 with date-stamping by typing ZCPR. The time-stamp routine is in
          BIOS space and won't be over-written. Run TD S to set the date & time, if needed. Typing
          NZCOM will reload the system just like on cold boot.

Well, boys and girls, you now have a really nifty new toy! Its time to read some more in the manuals to
see what you can do with it. There's lots of ZCPR stuff on Norberto's site and documentation for
NZCOM and ZSDOS (ZDDOS). Have FUN!