

Making the Z67-IDE work on My Computer

Some complain that 8-bit Heath computers are limited. I have found that for the simple tasks, it is much quicker and easier to boot the Heath, do the job and shut it all down in less than the time to boot current production machines. This is especially true for a Heath equipped with Norberto's Z67-IDE system.

Norberto has asked that I help with the distribution of the software to put the equipment into service. The installation is not very complicated and only takes a few minutes. The biggest problem that most will face is getting the software from the Internet to the Heath. I am assuming that most of us have some form of current production computer that we use to access the Internet and that you can download the files to this computer. That part is pretty easy. The tough part is getting it from your PC to the Heath.

Those who were active on-line prior to the Internet probably have some sort of modem program that they can use to transfer files from the PC to their Heath. Late arrivals to the 8-bit world may not. I started using the Z-system (ZCPR) from almost the beginning, starting with ZCPR2 and upgrading with each release up to ZCPR 3.4 better know as NZCOM. If you are running a hard disk on an 8-bit computer, it is so much easier if you are running ZCPR. NZCOM was released into the public domain several years ago, so it is available for download and use on your new Z67-IDE.

One application for the Z-system was a very good modem program – ZMP (Z-system Modem Program). This application will run on standard CP/M and will allow placing the transferred files on any disk and any user area of that disk without having ZCPR installed. For those who need a modem program, I have prepared a disk images of a bootable ZMP system and packaged them in Les Bird's H8D form. Les's program runs on a PC and will send the H8D file to the Heath using the PC serial port to the serial printer port (340 Octal on the Heath) and will write the files to an H-17 disk on the Heath. So, the first step is to download Les Bird's application and set up the proper cables to get communication via the Heath's printer port. You should do this in advance of installing the Z67-IDE and get familiar with the ZMP program operation.

My serial cables are shown below:

Female = >pin#-----Pin#---- = Male

Standard PC cable:

DB-9	DB-9
>1-----	1----
>2-----	2----
>3-----	3----
>4-----	4----
>5-----	5----
>6-----	6----
>7-----	7----
>8-----	8----
>9-----	9----

Null Modem Cable for PC

DB-9	DB-9
>1-----	4<
>2-----	3<
>3-----	2<
>4-----	1<
>5-----	5<
>6-----	4<
>7-----	8<
>8-----	7<
>9-----	9<

Serial for PC – DB-9 to DB-25

Heath Null-Modem Cable for H-89 to H-89

DB-9	DB-25
>1-----	8---
>2-----	3---
>3-----	2---
>4-----	20--
>5-----	7---
>6-----	6---
>7-----	4---
>8-----	5---
>9-----	22--

DB-25	DB-25
>1-----	1<
>2-----	3<
>3-----	2<
>4-----	5<
>5-----	4<
>6-----	20<
>7-----	7<
>20-----	6<

Serial Extension Cable – DB 25

DB25	DB25
---1-----	1<
---2-----	2<
\ \ all lines straight through \ \	
---24-----	24<
---25-----	25<

To use the serial communication line on the Z67-IDE board, use the standard PC DB9 to DB9 connected to the 3 wire serial cable connected to the Z67-IDE.

For PC to Heath communication using ZMP on the Heath, I use the DB9 to DB25 connected to the Heath Null Modem Cable to the DCE port on the Heath.

To use Les Bird's H8D application, I use the PC DB9 to DB25 with a DB25 Extension Cable connected to the serial printer port (340 Octal on the Heath).

I have prepared four 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.

The four packages are:

ZMP2MHZ.H8D -- H8/89/90, Z80 CPU, 2 MHz Clock, Max Z-modem rate = 2400 baud.

ZMP2MINT.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.

ZMP4MHZ.H8D -- H8/89/90, Z80 CPU, 4 MHz Clock, max Z-modem rate = 4800 baud.

ZMP4MINT.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.

If you can configure your DCE port to use interrupt number five by setting the jumper pin on you serial card, you will get twice the communication speed by using the interrupt I/O packages. Use the package that best matches your hardware.

The Z67-IDE software will be packaged in a similar manner – Less than 90k of files so that it will fit on a single-sided H-17 disk. If you have greater capacity drives, you may copy more than one package to a disk.

There are two sets of Z67-IDE software – a set for H17 & Z67 disks and a set for H37 & Z67 disks.

With each installation there is a read-me file containing instructions for installation. I have tested these on my H-89 and believe that it will work for you if you follow the procedure precisely. I recommend that you print these instructions and read them all the way through before beginning. I would also recommend using a high-lighter to make file names and key points easier to find during the install.

Norberto has done us a great service by developing the Z67-IDE system and making it available to us. Couple the Z67-IDE with ZCPR and you have a Heath that is fast and fun to use.

I am active on the Google-Groups SEBHC site and will be glad to answer questions for any having problems getting the system loaded.

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