ROM only files

There are some cartridge images that are ROM-only images (i.e. TURBOFORTH and fbFORTH). Those and similarly constructed cartridge images can the loaded into one of the HSGPL banks with a little bit of effort. **It should be noted that all of the files must be in non-inverted order.** You can use one of the many tools to put them into the correct order.

1) Copy the first file in the series to a new disk (this is your working copy).
2) Zero out the code from the last menu choice text entry to a total length of 256 bytes (>0100) or 512 bytes (>0200) if a longer file is needed. Any Hex editor will do the job nicely and save the truncated, altered file to the disk under a unique name. This will be the eventual last file in the series.
3) Starting at the beginning of the file, note the address where the code execution starts. It will be the word immediately **before** the length byte of the menu choice text. This is the **>xxxx** noted below**.**
4) The validation byte **>AA** is the first byte in the file and is a **>6000.** Go to the address in the file where the program execution starts and type in **>BF00, >xxxx, >0FF0** over the zeroed out code.
5) Repeat for each menu choice.
6) Using your hex editor, insert the 4-byte HSGPL header at the beginning of the files by typing **>6000** (no more files to load) and either **>0100** or **>0200** depending on which you chose for the file length of the shortened file.
7) Save this file as the last file in the series.
8) Insert the four byte header for each ROM file and length byte for each (i.e, 1st ROM **>6003 >2000** 2nd ROM **>6005 >2000** 3rd ROM **>6007 >2000** 4th ROM **>6008 >2000.** There is a four ROM is the limit **>6008** indicates that there are no more ROMs to load). The HSGPL loader doesn't like an odd number of ROMs so if you have one ROM it will be copied into ROMs 1 and 2. If you have three ROMs, you will have to add a dummy ROM (attached).
9) Insert **>6000 >0100** to the shortened file. The shortened file has now become a GROM header for your application. If you have done everything correctly, the application files will load followed by the shortened file which will appear in GROM3. If you get a strange acting screen when you select the application, you have likely miscalculated the entry point address.

GROM/ROM files

OK, that was the most difficult conversion simply because it involved some computation, etc. Loading a GROM/ROM combo is much easier. Recent GROM/ROM cartridge files come in two parts – filenameG.bin and filename.bin. The "G" file contains the GROM files and the "C file contains the ROM files. Once again the files must be **non-inverted.** For an example,

we'll use RICHXB. The first thing you need to do is split the "G" file into 8K chunks. You can do that with a hex editor. In the case of RICHXB, we will save the 40K "G" file as RXB1 ->RXB5. Then, we just need to insert the proper HSGPL header for each one.

RXB1 is >6001 >2000

RXB2 is >8001 >2000

RXB3 is >A001 >2000

RXB4 is >C001 >2000

RXB5 is >E001 >2000

Now, we split the ROM files into 8K chunks. In RICHXB there are only three ROMs in the current version. We save those files as RXB6->8. Now we have to insert the HSGPL headers.

RXB6 is >6003 >2000 First ROM

RXB7 is >6005 >2000 Second ROM

RXB8 is >6007 >2000 Third ROM

At this point, we save the dummy ROM as ROM4 and name it **RXB9.** It already has the correct HSGPL header on it (**>6008 >2000).**

Load the files into a vacant HSGPL bank and you are "good to go".

Converting GRAMKRACKER files

There are a hundred or more GRAMKRACKER cartridge files floating around in the community. SNUG supplied a utility program specifically designed for this task. **GKRAK1** (attached) will do the conversion for you. That is the easiest way to use your GRAMKRACKER files in the HSGPL.

I hope this has been of some help to those of you who use the HSGPL card.