Linux can be simpler or harder than other platforms.

Install the binaries (AKA the easy version

In it's easiest form depending on what type of PIC you programming, you may only have to issue the following commands.

```
# apt-get install sdcc
# apt-get install gputils
```

Then all you need to do from there is issue the make command while in the folder with the .asm's.

```
# make
```

Compile GPUtils (AKA the harder version)

However, if you're compiling a SID firmware and you have Debian Etch or earlier, you probably have gpasm-0.13.4 which does not have the ability to compile code for the PIC 18f4685. You can check what version you're using by issuing the below command.

```
# gpasm --version
```

If your version is too old you probably can't just install a newer version, as the newer version is only available for Lenny and is not compatible with the older Etch (or what have you). I used gpasm-0.13.6 and it successfully built the newest Midibox SID code without a hitch. This means that what we must do is compile and install from the source code. Follow the link below and follow the link for the most recent version. As of this writing the most current version was for “Lenny” and is 0.13.6. Go to the page and on the right you will see a link for the source under the heading “Download Source Package gputils:” Download the “gputils_0.13.6.orig.tar.gz” and not the other two, as they are un-needed.

http://packages.debian.org/search?keywords=gputils

Once you have the package on your Linux system issue the command to unpack the source code, move into the new directory and build the package. Then you'll be presented with a new .deb package ready for installing on your system.

```
# tar -xf gputils_0.13.6.orig.tar
# cd gputils_0.13.6
# dpkg-buildpackage -rfakeroot -b
# cd ..
# dpkg -i gputils_0.13.6-1_i386.deb
```

Now just go to your mios folder and issue the make command as usual.

Note: The biggest issues you'll have with this HowTo is that there are certain dependencies in building these sorts of things that you will have to install. Sometimes it will say that it can't without something specific like “bison”, which you can easily install using “apt-get install bison”; but other times it only references a binary inside a package of a DIFFERENT name. This means that you'll have to search

around a bit, maybe using “apt-cache search foo” or maybe also on the internet to figure out what package you need to install.

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