About this document

For all assembler-based applications, MPLAB is needed, that's only available for Windows (or Linux via Wine). But there is a solution, described below, with which you can compile asm code with MPASM, a tool that's available not only for Linux, but as well for Macs! Thanks to svens for sharing this!



Note: for Mac OS X this script is not working.
Please refer to this forum thread:
http://www.midibox.org/forum/index.php?topic=8275.msg57402#msg57402

There is a **Perl script** downloadable that does a batch conversion of these Macros. Changes are good it'll work with Linux, too. Though it won't probably work with all available ASM-coded applications (and is still in development).

Compiling MIOS on Linux

If you ever tried to compile the MIOS source with gpasm on Linux, you've probably got a lot of errormessages like:

```
svens@deprecated(1033)[0]:./src2$ gpasm main.asm
mios_isr.inc:76:Error [103] syntax error
mios_isr.inc:77:Error [103] syntax error
mios_isr.inc:78:Error [103] syntax error
mios_isr.inc:80:Error [103] syntax error
mios_isr.inc:81:Error [103] syntax error
mios_isr.inc:84:Error [103] syntax error
mios_isr.inc:133:Error [103] syntax error
mios_isr.inc:138:Error [103] syntax error
mios_isr.inc:174:Error [103] syntax error
mios_isr.inc:205:Error [103] syntax error
```

These errors are caused by a nice Feature from mpasm – you can pass instructions as Macro argument. Unfortunately, gpasm has (at least right now) no support for this, so i wrote a small quick&dirty script, that changes all these MACROs to the appropriate syntax. To use this script, copy the following files in your mios_v_1_x_src dir:

replace-macros.sed:

```
1i;hey emacs, this is -*- asm -*-
/^[ \t]*;/b #skip commented line
/^\s*\w*\s*MACRO/b #skip macro definitions
s/\<BIFSET\s*\([^,]*\)\s*,\s*\([^,]*\),\s*\([^,]*\)\s*,\s*\(.*\)/btfsc \1,
\2, \3\n\t\4/g
s/\<BIFCLR\s*\([^,]*\)\s*,\s*\([^,]*\),\s*\([^,]*\)\s*,\s*\(.*\)/btfss \1,
\2, \3\n\t\4/g
```

```
s/\<IFSET\s*\([^,]*\)\s*,\s*\([^,]*\),\s*\(.*\)/btfsc \1, \2\n\t\3/g
s/\<IFCLR\s*\([^,]*\)\s*,\s*\([^,]*\),\s*\(.*\)/btfss \1, \2\n\t\3/g
s/\<IFNEQ\s*\([^,]*\)\s*,\s*\([^,]*\),\s*\(.*\)/cpfseq \1, \2\n\t\3/g
s/\<IFLEQ\s*\([^,]*\)\s*,\s*\([^,]*\),\s*\(.*\)/cpfsgt \1, \2\n\t\3/g
s/\<IFGEQ\s*\([^,]*\)\s*,\s*\([^,]*\),\s*\(.*\)/cpfslt \1, \2\n\t\3/g
s/\<rgoto\>/bra/g
```

fix-gpasm.sh:

```
#!/bin/sh

for i in src/*.inc src/*.asm src/*.h;do
    tr -d '\r' < $i|sed -f replace-macros.sed >${i}_ && mv ${i}_ $i
done
```

Now you can run ./fix-gpasm.sh, which replaces all the problematic macros.

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