

# New Technical Notes

Macintosh



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Developer Support

## MaxApplZone and MoveHHi from Assembly Language Memory M.ME.MaxApplZone&MoveHHiASM

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When calling `MaxApplZone` and `MoveHHi` from assembly language, be sure to get the correct code.

`MaxApplZone` and `MoveHHi` were marked [Not in ROM] in *Inside Macintosh, Volumes I-III*. They are ROM calls in the 128K ROM. Since they are not in the 64K ROM, if you want your program to work on 64K ROM routines it is necessary to call the routines by a JSR to a glue (library) routine instead of using the actual trap macro. The glue calls the ROM routines if they are available, or executes its copy of them (linked into your program) if not.

### How to do it:

Whenever you need to use these calls, just call the library routine. It will check ROM85 to determine which ROMs are running, and do the appropriate thing.

For MDS, include the `Memory.Rel` library in your link file and use:

```
XREF MoveHHi      ; we need to use this 'ROM' routine
...
JSR MoveHHi      ; jump to the glue routine that will check ROM85 for us
```

For MPW link with `Interface.o` and use:

```
IMPORT MoveHHi   ; we need to use this
...
JSR MoveHHi     ; jump to the glue routine that will check ROM85 for us
```

**Avoid** calling `_MaxApplZone` or `_MoveHHi` directly if you want your software to work on the 64K ROMs, since that will assemble to an actual trap, not to a JSR to the library.

If your program is going to be run **only** on machines with the 128K ROM or newer, you can call the traps directly. Be sure to check for the 64K ROMs, and report an error to the user. You can check for old ROMs using the `SysEnviroms` trap as described in Technical Note #129.

**Further Reference:**

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- Using Assembly Language
- The Memory Manager
- Technical Note M.FL.SysEnvirons —  
Gestalt and SysEnvirons: a Never Ending Story