# Apple II
# Technical Notes
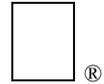
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Developer Technical Support

**GS/OS**
**#6:      Drivers and GS/OS Direct Page**

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This Technical Note corrects an error in the preliminary GS/OS documentation and provides an alternate suggestion for developers who are writing GS/OS drivers.

**Changes since July 1989:**  Updated the list of calls which do not require the GS/OS direct page and updated the documentation references.

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Preliminary GS/OS documentation, including the beta draft of *GS/OS Reference*, Volume 2, incorrectly states that locations $5A through $5F are available for device drivers, and that locations $66 through $6B are shared by device drivers and supervisory drivers (and may be corrupted by either a driver or supervisory driver call).

This is **not** correct.   The locations in question are used by GS/OS; destroying these locations can cause system failure and media corruption.

Drivers which require direct page space of their own should request it from the Memory Manager when they are started.  Upon receiving a call, a driver can save the value of the `D` register (containing the GS/OS direct page) and switch to its own direct page.  The driver may keep the value of its direct page inside the driver itself; no space on GS/OS direct page is

available for this purpose.  The driver must restore the `D` register to point to the GS/OS direct page before returning from the call, and it should also dispose of its direct page space when it shuts down.

The driver must also set the `D` register to point to the GS/OS direct page before making any system service call **other** than `SET_SPEED`, `DYN_SLOT_ARBITER`, `MOVE_INFO`, `SIGNAL`, and `INSTALL_DRIVER`.

**Note:**    The location of the GS/OS direct page is guaranteed to remain the same between `Driver_StartUp` and `Driver_ShutDown` calls.

## Further Reference

- *GS/OS Device Driver Reference*