

The GS Memory Board

Introduction

The GS Memory Board is a 1 to 4 Mb DMA compatible memory card with a twist. The twist is the piggyback connector on the back of the GS Memory Board that allows you to keep using your existing memory card as long as it was designed according to Apple's guidelines regarding memory expansion cards. The methods used by Applied Engineering to implement their memory products prevent any \AE memory card from being used in the piggyback connector of the GS Memory Board. The GS Memory Board is fully DMA compatible under all circumstances, even with another card installed in the piggyback connector. The GS Memory Board is usable in either model Apple IIs (ROM01 or ROM03) without modification. The GS Memory Board uses 1Mb x 1 DRAM memory chips. The memory chips must be rated for a speed of 12ns or faster.

The following is a list of the valid configurations for the GS Memory Board:

- By itself (nothing in the piggyback connector) as a 1 to 4 Mb memory card.
- With a full (1 Mb) Apple memory card installed in the piggyback connector giving 2 to 5 Mb of memory.
- With another 4 Mb memory card installed in the piggyback connector giving 5 to 8 Mb of memory.

Installing your GS Memory Board by itself

To use the GS Memory Board by itself just make sure that the memory chips and jumpers are installed according to the table below:

Total Memory	GS Memory Board Banks To Fill	Jumpers
1 Mb	Bank1	D + C
2 Mb	Bank1 + Bank2	D + B
3 Mb	Bank1 + Bank2 + Bank3	C + A
4 Mb	Bank1 + Bank2 + Bank3 + Bank4	C + B

Installing your GS Memory Board with another 4 Mb memory card

To use the GS Memory Board with another 4 Mb memory card (such as the Chinook 4000) the other memory card must be completely filled (4 Mb of memory installed) and the memory chips and DIP switches on the GS Memory Board must be installed according to the table below. If this condition is satisfied then the next step is to insert the other memory card into the piggyback connector of the GS Memory Board. After you have inserted the other memory card into the piggyback connector place the piece of cardboard that came with your GS Memory Board against the inside edge of the Apple IIs case and allow it to rest upright. Now insert the GS Memory Board into the memory expansion slot of your computer making sure that the cardboard is firmly held between the piggyback connector and the edge of the case. The cardboard divider is needed to keep the other memory card from coming into contact with the case of your computer and **MUST** be installed if you are installing a memory card into the piggyback connector. After this is completed replace the cover of your computer. Turn on the power switch. If nothing happens or you here a squealing sound from your computer turn the power off **IMMEDIATELY** and recheck that the cardboard divider is correctly installed. If you do not see anything wrong then call Tech Support and someone will be happy to help you complete the installation.

Total Memory	GS Memory Board Banks To Fill	Jumpers
5 Mb	Bank1	D + C
6 Mb	Bank1 + Bank2	D + B
7 Mb	Bank1 + Bank2 + Bank3	C + A
8 Mb	Bank1 + Bank2 + Bank3 + Bank4	C + B

Installing your GS Memory Board with the Apple memory card

To use the GS Memory Board with the Apple memory card it (the Apple memory card) must be completely filled (1 Mb of memory installed) and the memory chips and DIP switches on the GS Memory Board must be installed according to the table below. If this condition is satisfied then the next step is to insert the other memory card into the piggyback connector of the GS Memory Board. After you have inserted the other memory card into the piggyback connector place the piece of cardboard that came with your GS Memory Board against the inside edge of the Apple IIs case and allow it to rest upright. Now insert the GS Memory Board into the memory expansion slot of your computer making sure that the cardboard is firmly held between the piggyback connector and the edge of the case. The cardboard divider is needed to keep the other memory card from coming into contact with the case of your computer and **MUST** be installed if you are installing a memory card into the piggyback connector. After this is completed replace the cover of your computer. Turn on the power switch. If nothing happens or you here a squealing sound from your computer turn the power off **IMMEDIATELY** and recheck that the cardboard divider is correctly installed. If you do not see anything wrong then call Tech Support and someone will be happy to help you complete the installation.

Total Memory	GS Memory Board Banks To Fill	Jumpers
2 Mb	Bank1	D + B
3 Mb	Bank1 + Bank3	C + A
4 Mb	Bank1 + Bank3 + Bank4	C + B
5 Mb	Bank1 + Bank3 + Bank4 + Bank2	C + B