

# D8B CPU MEMORY UPGRADE INSTRUCTIONS

## INTRODUCTION

To find out how much memory your D8B has, connect a video monitor and a keyboard, turn on the D8B CPU and quickly press PAUSE on the keyboard. The memory should show up as either 32 MB or 16 MB. Press ESC to continue the boot-up sequence.

If your D8B has 32 MB, then no memory upgrade is required.

If your D8B has 16 MB and you wish to install two or more UFX cards, you must first increase the memory to 32 MB in order to support the extra automation and graphics requirements. Follow the instructions below.

If you're an old hand at upgrading computers (there's a conventional PC motherboard at the heart of your D8B) then you probably already know what to do. If you're new to this, please take time to read through these instructions and follow them.

**WARNING:** Your new memory, as well as components inside the D8B CPU case, are sensitive to electrostatic discharge! Be sure that you are adequately grounded before touching static-sensitive components.

Memory is usually packaged in a bag that protects it from being zapped by static electricity. Do not open the bag until you are ready to install the memory. We strongly recommend that you wear a grounding wrist strap when working inside your CPU. These can be purchased at most computer stores or electronic parts shops. Some commercially packaged memory includes a disposable paper one. Use it. The lip along the top of the power supply or the bracket that supports the disk drives are good places to attach the grounding clip. If you're using the CPU chassis as an anti-static ground, be sure to leave the power cord attached and plugged in to a grounded (and turned off) outlet. This will connect the chassis to actual earth ground.

At minimum, touch a grounded object, like the grounded CPU case, immediately before handling electrostatic-sensitive components. Keep one hand grounded when handling electrostatic-sensitive components.

**IMPORTANT SAFETY WARNING:** Shut off power to the Digital 8•Bus's remote CPU before installing or removing memory.

## INSIDE THE CPU

Two different motherboards have been used in the D8B. If your D8B is from before November 1999, you probably have the first generation motherboard with two 8 MB SIMM memory modules. The later motherboard uses a single 16 or 32 MB DIMM memory module. We strongly recommend that existing memory below 32 MB be removed and replaced with a single 32 MB memory module. This is easier to obtain today (and often less expensive) than the older 16 or 8 MB modules. Since the older motherboard has sockets to accommodate both styles of memory, one size fits all.

If you insist, you can add two additional 8 MB SIMMs to the old motherboard, or one additional 16 MB DIMM to the new motherboard. It'll probably work, but if it doesn't, we can't promise to make it work for you. The two types of memory are incompatible, however, so you cannot upgrade an old motherboard by adding one 16 MB DIMM. If this is all gobbledygook to you, skip down to the next section and we'll tell you what to get that will definitely work.

While you may be tempted to install even more than 32 MB of memory, there is no advantage in doing so. We have tested the D8B with 64 MB of memory but this is not a supported configuration.

## WHAT YOU'LL NEED

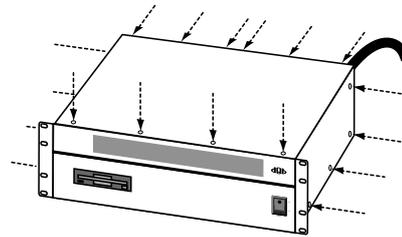
One 32 MB 100 MHz or faster, 168 pin, DIMM SDRAM memory module

A Phillips screwdriver

An electrostatic grounding wrist strap is strongly recommended.

## OPENING THE CPU CASE

First, turn off the power, but leave the power cord plugged in to the CPU and connected to a grounded electrical outlet. If it's plugged into a switched power strip, it's OK to switch off the power strip, as this does not disconnect the electrical safety ground. The power supply is covered so that you won't be exposed to high voltage, and the safety ground connection will provide a ground for safe electrostatic discharge.



**1.** Remove the four screws from each side of the bulletproof cover, the four screws from the top along the front, and the six screws from the rear lip. It is not necessary to remove the screws that secure the rack mounting "ears".

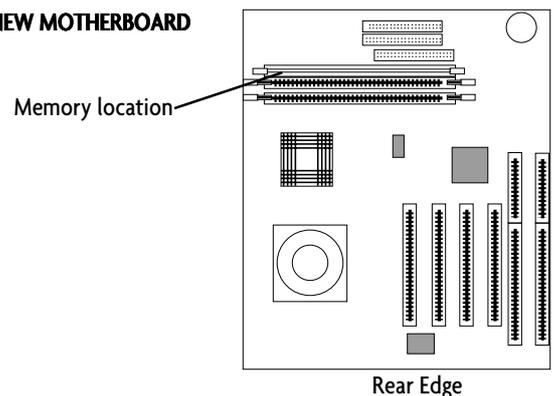
**2.** Slide the cover back and upward, and remove it.

## IDENTIFY YOUR MOTHERBOARD

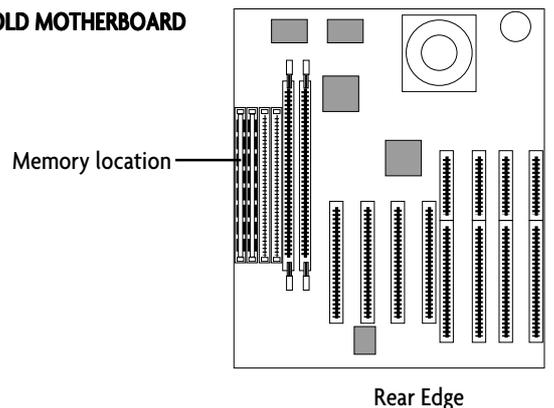
Look at the illustrations to determine which motherboard you have. The instructions for each board are shown on the next page.

Note: If you have the older motherboard, there is no need to upgrade to the new type, as the performance of the D8B is the same for either.

### NEW MOTHERBOARD



### OLD MOTHERBOARD

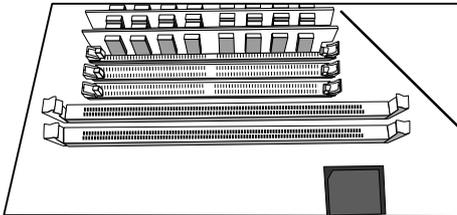


## OLD MOTHERBOARD

### Remove The Old Memory

Locate the memory sockets. You'll see two memory modules installed in white sockets parallel to the power supply. You can move the ribbon cables out of the way, but do not disconnect them.

**IS THE POWER OFF? ARE YOU GROUNDED?**



Using a fingernail or a small screwdriver, release the gold clip on each end of the memory module in the socket closest to the power supply. With both clips

released, tilt the memory module toward the power supply. It will come free of the socket. Lift it out and save it for possible donation to the Smithsonian. Now, remove the other memory module in the same way.

**NOTE: It might appear easier to remove the memory module closest to the center of the board first. It's not. The adjacent module will prevent it from tilting back far enough to release it from the socket.**

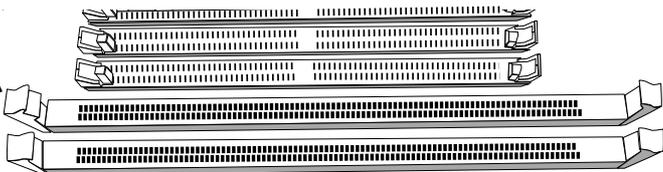
### Install The New Memory

**ARE YOU STILL GROUNDED? GOOD!** If you're not wearing a grounding wrist strap, touch the power supply case to discharge any static electricity from your body before opening the package containing the new memory module.

Remove the memory module from the package and note the notches on the bottom (connector) edge. Those notches are keyed to the socket so that you can't insert it the wrong way. The off-center notch goes toward the rear of the CPU.

There are two DIMM sockets adjacent to the group of four sockets from which you removed the old memory. The new memory module is installed in the DIMM socket nearest to the group of sockets from which you removed the old memory modules.

Flip the white latches at the ends of the DIMM socket outward so that they are out of the way. Ensure that the notches in the memory module line up with the keys in the socket. Using both hands, gently press the module all the way into the socket. This may take quite a bit of pressure. When the module is fully seated, the latching clips will snap into place. If the notches in the memory module don't line up with the keys in the socket, you have probably purchased the wrong type of memory.

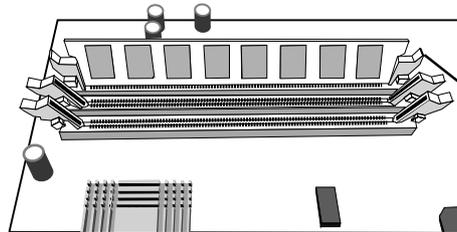


## NEW MOTHERBOARD

### Remove the Old Memory

Locate the memory sockets on the motherboard. This is the group of three sockets, perpendicular to the power supply, located near the front edge of the motherboard. One socket contains a 16 MB memory module, the other two will be empty.

**IS THE POWER OFF? ARE YOU GROUNDED?**



Remove the 16 MB memory module by flipping the retaining levers on both ends outward. The module will come free of the socket.

Remove it and save it. It might come in handy some day.

### Install the New Memory

**ARE YOU STILL GROUNDED? GOOD!** If you're not wearing a grounding wrist strap, touch the power supply case to discharge any static electricity from your body before opening the package containing the new memory module.

Remove the memory module from the package and note the notches on the bottom (connector) edge. Those notches are keyed to the socket so that you can't insert it the wrong way.

Flip the white latches at the ends of the socket outward so that they are out of the way. Ensure that the notches in the memory module line up with the keys in the socket. Using both hands, gently press the module all the way into the socket. This may take quite a bit of pressure. When the module is fully seated, the latching clips will snap into place. If the notches in the memory module don't line up with the keys in the socket, you have probably purchased the wrong type of memory.

## CHECK IT OUT

While the cover is still off, power up the D8B and be sure that it boots with the new memory. **Keep your fingers out of the works!** There are no settings to change, so if the module is installed properly and it's healthy, the console should start up normally. If you have a video monitor connected, it should show 32 MB just after turning on the D8B CPU.

If the console doesn't boot, chances are the new memory module isn't seated in the socket properly. Power it off, remove the module, and try again.

## BUTTON IT UP

When everything checks out, power off the console and replace the cover. Note that there are two lengths of screws. The long ones go on the sides, the short ones go into the top and rear lip.

That's it.

**MACKIE.**  
Digital Systems™