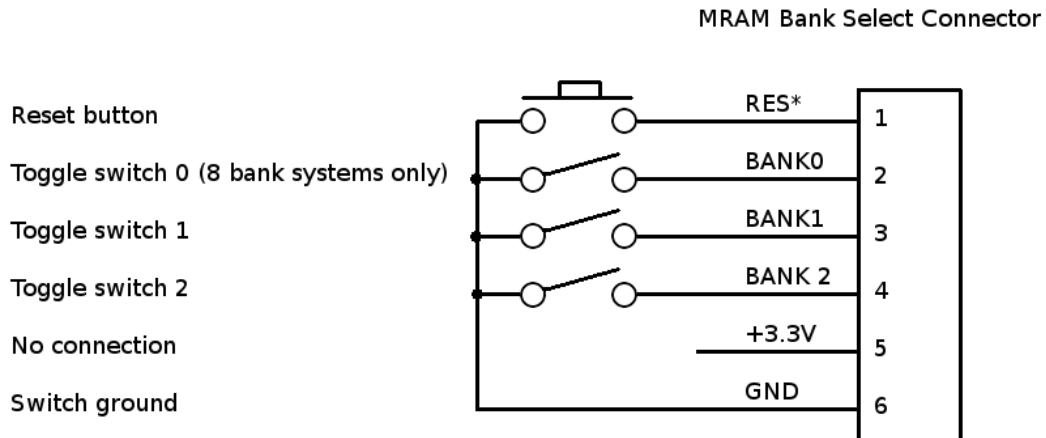# Electrongate
Magnetic RAM Bank Selection Option

The Electrongate Magnetic RAM (MRAM) board contains more than the original amount of memory used for the devices it is designed for. To make use of this extra memory, a bank select option allows switching between four or eight "banks" of memory, each completely independent from the others.

The standard bank select option consists of a switch and wire assembly that plugs into the connector on top of the MRAM board. Depending on whether your MRAM board supports four or eight banks, there will be two or three toggle switches, allowing binary selection of all possible banks. A momentary pushbutton switch allows resetting the device without needing to cycle the power off and on again.

Device	Banks
Oberheim DX	8
Oberheim DMX (original)	8
Oberheim DMX (with memory expansion or MIDI)	4
Oberheim DSX	4
Oberheim OB-X, OB-Xa or OB-8	8

You can make your own bank select switch assembly, or you can buy a pre-wired switch harness from Electrongate.

The mating connector is a Molex part number 22-01-2067-P (connector shell) which requires crimp pins part number 08-50-0113 for each wire connection (typically 5 pins). Any convenient SPST or SPDT toggle switches may be used for the bank select switches, and any momentary normally-open SPST pushbutton switch may be used for the reset button.

MRAM Bank Select Connector

Reset button	RES*	1
Toggle switch 0 (8 bank systems only)	BANK0	2
Toggle switch 1	BANK1	3
Toggle switch 2	BANK 2	4
No connection	+3.3V	5
Switch ground	GND	6

Installation
The toggle switches and pushbutton may be mounted in any convenient location by drilling holes in the case, or by mounting the switches internally.
When drilling holes in the case, make sure the unit is disconnected from its power source, and be sure to clean up all the debris when finished to avoid any potential short circuits.

When the switches are mounted, plug the cable into the MRAM board connector and make sure the MRAM board is seated securely in its own socket. The cable connector is keyed and should only go in one way. Make sure the connectors are not offset from each other.

Now you can power up the unit, set the toggle switches in any combination and press the reset button to cause the new switch setting to take effect.

The first time you select a new bank, the memory may contain random data. You may need to initialize a bank if this is the case. For the Oberheim DX or DMX, this consists of holding down the ERASE button while cycling the power (or momentarily pressing the reset button).

For further assistance, contact Electrongate by email (pjwhite@electrongate.com).