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Linking MIX Module Front Panels and Ejector Handles

1.1 Introduction

All of Pentek's VMEbus MIX Baseboards can be configured with up to Three MIX-compatible expansion modules. MIX module stack assembly procedures can be found in the MIX Tutorial Manual (Pentek part number 800.00001). When the modules are initially attached to the baseboard, the front panels of the modules 'float' until they are secured by their captive screws to the VMEbus card cage. Also, the ejector handle on the Baseboard (or the module nested on the Baseboard) is the only mechanism for removing the MIX stack from the card cage.

In order to provide a more secure mechanical assembly when the stack is removed from the card cage, a pair of 'panel links' is provided with your Baseboard. These links may be used to tie all front panels in the stack together. Use of these links is optional, but strongly recommended if the stack will be removed from the card cage frequently.

Additionally, card cage ejector handles may be installed on all MIX module front panels. These ejectors must be physically secured to the ejectors on the Baseboard front panel, to assure equal pressure is applied along the card cage ejector plate during the ejection process. Installation of ejectors on the module panels is especially recommended if your stack includes any full-depth modules that engage the VME backplane, such as the Model 4270, the Model 6102, or the Models 4271 or 4272, with Option 012.

For the sturdiest configuration possible, the panel links and module ejector handles can be used together. This assembly method provides for both physical links between all module panels and improved ease of system ejection from the card cage. Procedures for the installation of the panel links and module ejector handle links are provided below. Note that, as a general rule, Pentek does not ship MIX modules with ejector handles installed, but the handles are included with the module. The installation procedure for the ejector handles can be found in Section 1.11, on Page 1-22 of the MIX Tutorial Manual (Pentek P/N 800.00001). If you wish to use both panel and ejector handle links, the ejector handles should be installed on the MIX modules **BEFORE** the panel links.

1.2 Panel Links

The panel links are machined aluminum bars that may be snapped off to accommodate 2, 3 or 4 front panels in the MIX stack. Two links are required for each stack assembly: one for the top of the panels and one for the bottom. The top and bottom links are symmetrical, but not identical. The silver link bracket is used at the top of the panel, and the gold link bracket is used at the bottom. The links are installed behind the front panels, using the screws that hold the plastic Panel Mounting Brackets to the front panel.

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1.2 Panel Links (continued)

Configuring the links for the number of modules in the stack is achieved by snapping the links at the molded indentations, as shown in Figure 1-1, on the next page. Grasp the link on either side of the indentation with two pliers and bend the link to snap it to length.

To use the links to join the front panels of the MIX modules, first assemble the MIX stack, using the MIX connectors as described in the assembly instructions in the preceding sections of this document. If ejector handles will be used on the modules, install them next, as described in Section 1.11 of the MIX Tutorial Manual. Then, follow the steps listed on the next page.

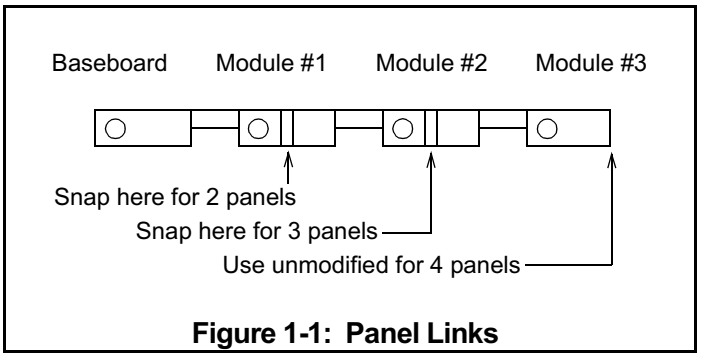


Figure 1-1: Panel Links

1) Remove the two cover plates from the ejector handles of the MIX baseboard by sliding them sideways. Lay the MIX stack flat on a work surface with the baseboard on the bottom.

2) Insert a #0 Philips screwdriver through the hollow center of the baseboard ejectors and loosen the 10 mm long, raised flat-head Philips screws (2.5 mm diam. x 0.45 pitch), located directly behind the two ejectors. Remove the nuts from the plastic brackets behind the front panel. Save these nuts for possible future use. (We suggest that you use the zip lock bag the links came in.)

3) Loosen these same screws on each of the MIX modules and remove the nuts from their brackets.

4) Place the links behind the top and bottom plastic brackets such that the holes in the links are aligned with the screw holes on the appropriate panels, as indicated by the caption above the link drawing in Figure 1-1, above. Again, use the silver bracket at the tops of the panels, and the gold bracket at the bottoms.

5) Gradually tighten all screws in rotation, a few turns at a time, making sure that the panels are aligned at the top and bottom.

6) If you will **NOT** be using module ejectors, replace the two cover plates in the baseboard ejectors. The MIX stack may now be installed in the card cage, without the module ejectors.

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1.3 Linked Module Ejector Handles

As mentioned in the introductory remarks of this section, ejector handles installed on MIX module front panels must be physically coupled to the ejector handles on the MIX Baseboard. Beginning around October 1994, all VMEbus ejector handles shipped by Pentek have had small holes drilled in their sides. Ejectors on each unit may be coupled to those on adjacent units by passing rods through these holes. If you have an older MIX Baseboard or module and wish to use linked ejectors, contact the factory at the phone number shown on this manual's title page, and a set of modified ejector handles will be sent to you.

The parts listed below are supplied with each Pentek VMEbus MIX Baseboard to support this feature. Figure 1-2, at the top of the next page, will help you identify each part.

Quantity	Items	Pentek Part Number
2	ID Plate: VME 2 Slots w/ Logo	305.00031
2	ID Plate: VME 3 Slots w/ Logo	305.00033
2	ID Plate: VME 4 Slots w/ Logo	305.00035
2	Metal Bar Shaft: VME Ejector 2 Slots	384.00020
2	Metal Bar Shaft: VME Ejector 3 Slots	384.00030
2	Metal Bar Shaft: VME Ejector 4 Slots	384.00040
6	Retaining Ring: (E) 0.093 Shaft	388.20000
1	Full Size Bottom Panel Link (Gold)	303.00145
1	Full Size Top Panel Link (Silver)	303.00143

The assembly procedures beginning below assume that you have already installed a pair of handles on each module, the MIX module stack is fully assembled, and the ID (or blank aluminum) face plates are NOT inserted in the ejector handles.

1) Select a pair of shafts, based on the number of VME card cage slots your MIX stack will occupy.

2) Align the top and bottom rows of Ejector Handles and insert a shaft through each row. Shafts should be inserted such that the ends with two inscribed slots rest inside the Ejector Handles of the Baseboard (or the module nested on the Baseboard).

3) Install two pairs of retaining 'E' rings on the Shafts inside the Baseboard Ejector Handles. One ring is inserted in each of the two slots on the shafts in the top and bottom Ejector Handles. These rings prevent the shafts from sliding by anchoring the shafts inside the Ejector Handles of the Baseboard (or nested module). Figure 1-3, page after next, shows an installed shaft with the retaining rings properly positioned.

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1.3 Linked Module Ejector Handles (continued)

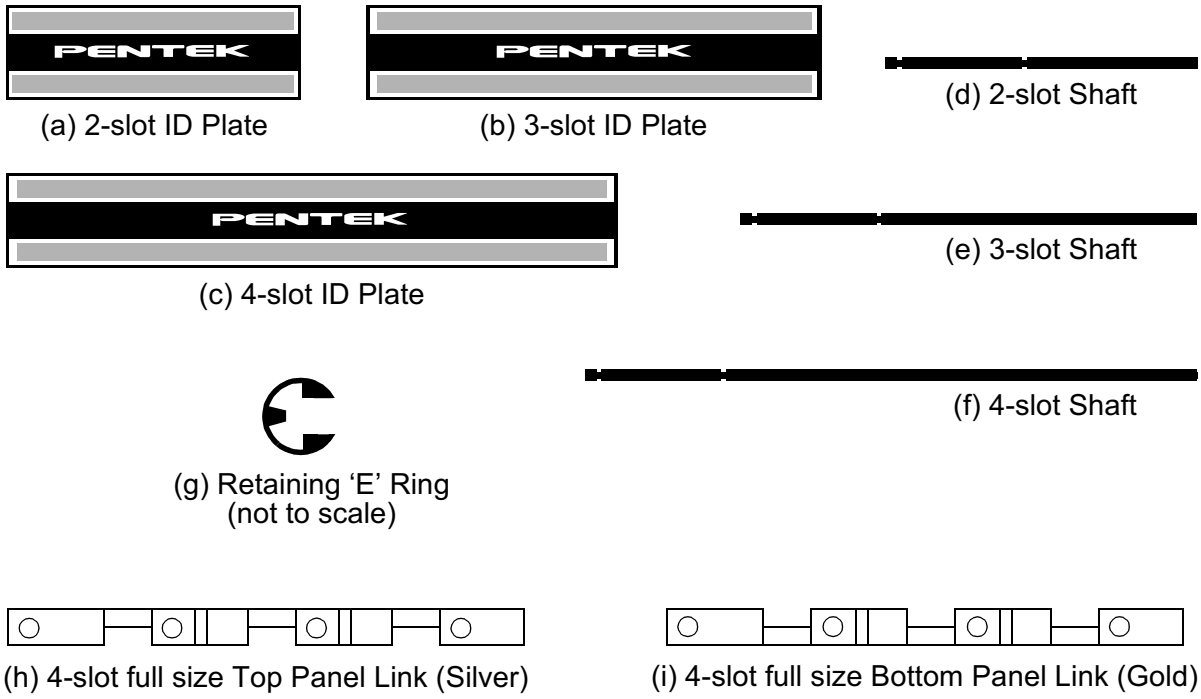


Figure 1-2: Linked Module Ejector Parts

4) Select a pair of ID plates (again, based on the number of VME card cage slots your MIX stack will occupy), and install one plate in each row of ejector handles. To install the plates, you may either slide them sideways through all the handles in the row, or position them over the handles and snap them in.

5) The MIX stack may now be installed in the card cage.

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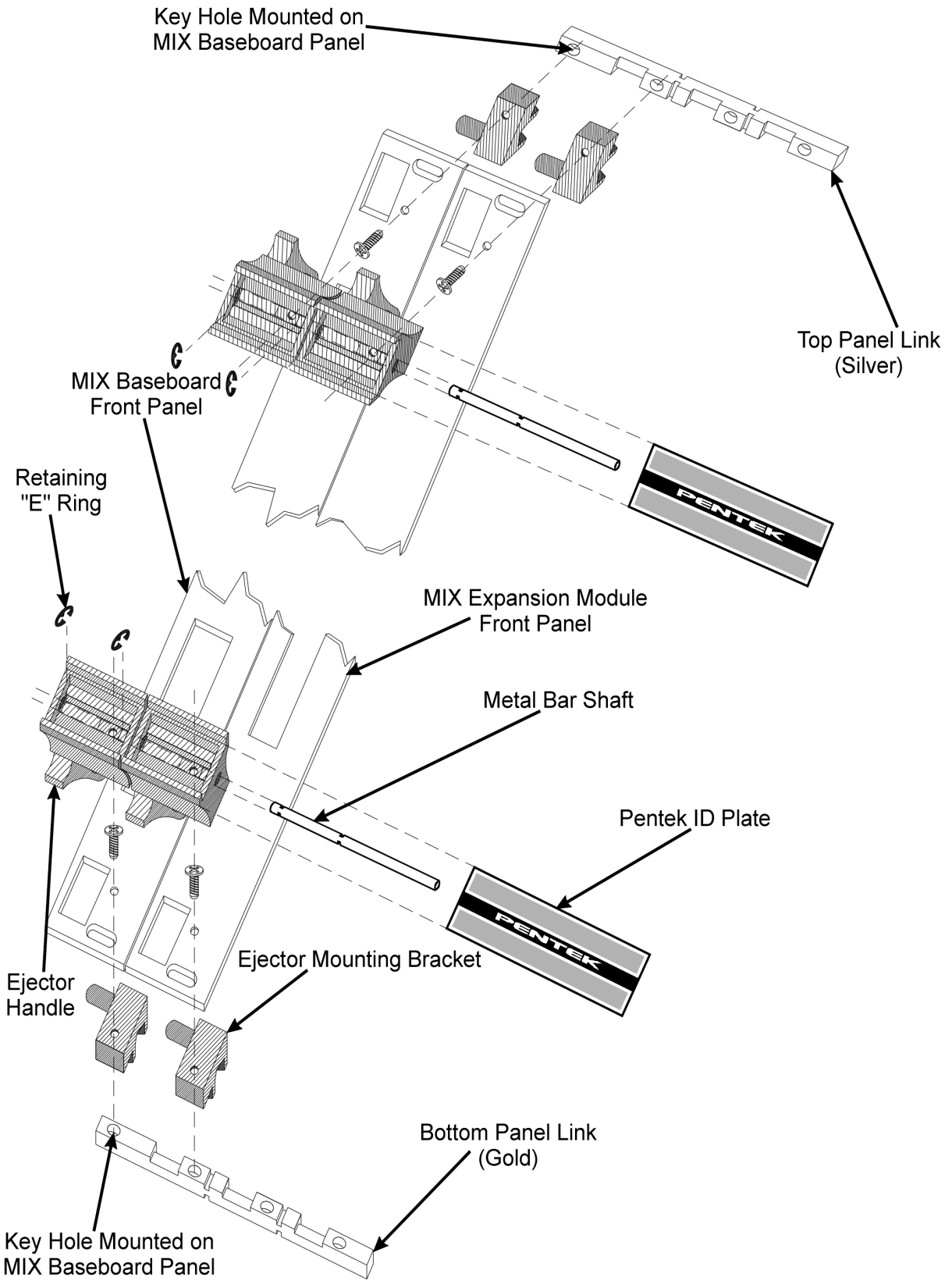


Figure 1-3: MIX Panels with Linked Module Ejectors

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