Preface

This instruction sheet covers the installation of the Fiber Optic 100A3 Interconnection Unit, which includes LaserWave Applications.

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General Notes

▪ For a cross-connection module arrangement, follow Steps 1 through 6.
▪ For an interconnection module arrangement, follow Steps 1, 5, 7, and 8.
▪ A Designation Label (Comcode 847 060 845) and a Notice Label are provided with the 100A3 Lightguide Interconnection Unit (LIU).
Step 1 – Label Installation

Figure 1. Label Installation

1. The Designation Label decal may be installed on the outside or inside of the cover, as shown in the above figure.

2. If a laser based transmission system is in use, open the 100A3 LIU and install the Notice Label decal as shown.
Step 2 – Installation of Cable Entry Details and Fiber Rings

1. Open the cover of the 100A3 LIU and install the Cable Entry Details (consisting of the plastic panels and grommets) by sliding the panels into the grooves at the top and bottom of the LIU.

2. Snap the plastic fiber rings into the positions shown, making sure the ring openings are to the outside.

Figure 2. Installation of Cable Entry Details and Fiber Rings
Step 3 – Install 100A3 LIU, 1A4 Trough, and 1A6 Trough

1. Using the four sheet-metal/wood screws included with each 100A3 LIU, mount the module to the backboard, as shown, with a 1A6 trough below the bottommost module. (Two sheet-metal/wood screws are included with the 1A6 trough.)

2. Install the 1A4 trough next to the 100A3 LIU, as shown, using the two sheet-metal/wood screws provided with the trough.
Step 4 – Reserve Space Allocation

**NOTE:**

The type of growth sequence shown above is not recommended and must be avoided. The 1A6 trough must be aligned with other 1A6 troughs at the bottom of each column.

1. Reserve space allocation in the mounting area to allow for future growth. For example, with the space allocation shown above, fiber optic cross-connection modules may be stacked to a column of 6 modules high and 3 columns wide with the top of the uppermost module placed not more than 68 inches (1727 mm) from the floor. The ultimate space allocation for a cross-connection field of 12 columns wide and 6 modules per column is 56 inches (1422 mm) high by 11 feet 6 inches (3.5 m) wide.
Figure 5.  Reserve Space Allocation – (continued)

2. Mount the first 100A3 LIU in the upper-left portion of the reserved space.
3. Mount a 1A4 trough next to the 100A3 LIUs, aligning them so that no space is wasted.
4. Finish up each column with 1A4 troughs and 1A6 troughs as shown in the figure above, regardless of having less than 6 modules per column.
Step 5 – Prepare Fiber Optic Cable

Figure 6. Preparing Fiber Optic Cables

1. Prepare the fiber optic cable as shown.
2. Install the appropriate connectors on the buffered fibers for the type of coupling panel and couplings to be used.
### Coupling Panels, Couplings, and Connectors

#### Table 1. Coupling Panels, Couplings, and Cable Connectors

<table>
<thead>
<tr>
<th>Coupling Panels</th>
<th>Couplings</th>
<th>Cable Connectors</th>
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</thead>
<tbody>
<tr>
<td>10A C-3000A ST Series Coupling</td>
<td>P-3000A ST Series</td>
<td></td>
</tr>
<tr>
<td>10A SM &amp; MM ST Coupling/Buildout Attenuators</td>
<td>P-2000A &amp; C ST Series &amp; P-3000A ST Series</td>
<td></td>
</tr>
<tr>
<td>11A 1007A Data Link Coupling</td>
<td>1005B Biconic</td>
<td></td>
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<tr>
<td>12A 401-,501-, 601-, and 701-Series Buildout</td>
<td>1006A Biconic</td>
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</tr>
<tr>
<td>10SC1 C6000A-4 SC Coupling</td>
<td>P2424 MM SC Simplex &amp; P3424 SM SC Simplex</td>
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</tr>
<tr>
<td>F86AK8612 Blank Panel - No Coupling</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>F86AK8557 SMA Coupling</td>
<td>SMA Connector</td>
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<tr>
<td>F87AK8657 IBM ESCON Coupling</td>
<td>IBM ESCON Connector</td>
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<tr>
<td>F87AK8574 FC/D4 Coupling</td>
<td>FC/D4 Connector</td>
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<tr>
<td>F89AK8554 FDDI Coupling</td>
<td>FDDI Connector</td>
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#### Table 2. Coupling Panels and Couplings for LaserWave Applications

<table>
<thead>
<tr>
<th>Coupling Panels</th>
<th>Couplings (included with Panels)</th>
<th>COMCODE</th>
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<tbody>
<tr>
<td>PNL 100/200 EW MM/C12LC AQUA</td>
<td>MM LC 12-PACK-GANGED</td>
<td>109 171 900</td>
</tr>
<tr>
<td>PNL 100/200 EW MM/C6SC AQUA</td>
<td>MM SC 6-PACK-GANGED</td>
<td>109 171 918</td>
</tr>
<tr>
<td>PNL 100/200 EW MM/C6ST AQUA</td>
<td>MM ST 6-PACK-GANGED</td>
<td>109 171 926</td>
</tr>
<tr>
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<td>MM LC 12-PACK-GANGED</td>
<td>109 171 843</td>
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<td>PNL 100/200 EW MM/C6SC BEIGE</td>
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<td>MM ST 6-PACK-GANGED</td>
<td>109 171 868</td>
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<td>PNL 100/200 EW SM/C12LC BLUE</td>
<td>SM LC 12-PACK-GANGED</td>
<td>109 171 876</td>
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<tr>
<td>PNL 100/200 EW SM/C6SC BLUE</td>
<td>SM SC 6-PACK-GANGED</td>
<td>109 171 884</td>
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<tr>
<td>PNL 100/200 EW SM/C6ST BLUE</td>
<td>SM ST 6-PACK-GANGED</td>
<td>109 171 892</td>
</tr>
</tbody>
</table>
Step 6 – Choose Bottom Feed or Top Feed Cross-Connection Module Cable Feed Arrangement

Recommended for Bottom-Feed Cable Application

Figure 7. Arrangement for Bottom-feed Cable Applications

1. Install the fiber optic buildouts or couplings in the coupling panel; then, install the coupling panel in the cross-connection module.

**NOTE:**
Determine which type of coupling panels, couplings and connectors will be used. For more information, see Table 1 or Table 2.

2. Using a cable tie, secure the terminating fiber optic cable to the side of the mounting flange closest to the coupling panels.

**NOTE:**
Only express cables feeding upper modules are secured in the express cable retaining rings.

3. Carefully insert the fibers into the plastic ring holders, starting with the bottom ring, making not less than a 1-1/2 inch (38 mm) radius bend in the fibers.

4. Install the fiber connectors into the couplings on the coupling panel.
1. Install the fiber optic buildouts or couplings in the coupling panel; then, install the coupling panel in the cross-connection module.

**NOTE:**
Determine which type of coupling panels, couplings and connectors will be used. For more information, see Table 1 or Table 2.

2. Using a cable tie, secure the terminating fiber optic cable to the side of the mounting flange closest to the coupling panels.

**NOTE:**
Only express cables feeding lower modules are secured in the express cable retaining rings.

3. Carefully insert the fibers into the plastic ring holders, starting with the top ring, making not less than a 1-1/2 inch (38 mm) radius bend in the fibers.

4. Install the fiber connectors into the couplings on the coupling panel.
Step 7 – Assemble Fiber Optic Interconnection Module Arrangement

Figure 9. Fiber Optic Interconnection Module Arrangement

1. Two 100A3 LIUs are required to create a 12-fiber interconnection module arrangement. Using the four sheet-metal/wood screws included with the unit, mount the first module on a plywood backboard with the top not higher than 68 inches (1727 mm) above the floor.

2. Install the coupling panels in this module.

3. With a pair of pliers, break off the eight coupling panel mounting tabs on the second 100A3 LIU. Use a file to remove any burrs.
4. Using the four sheet-metal/wood screws included with the unit, mount the second 100A3 LIU on the plywood backboard next to the first, aligning the windows of the two modules.

5. Place decals on the 100A3 LIU covers.

NOTE:
For a larger capacity interconnection arrangement, additional modules can be placed under these.

Step 8 – Terminate Interconnection
Module Cable Feed Arrangement

Figure 10. Interconnection Module Cable Feed Arrangement

1. Using a cable tie, secure the termination fiber optic cable to the coupling panel side of the terminating cable mounting flange.

NOTE:
Only fiber optic express cables to upper or lower modules are secured in the express cable retaining rings.

2. Carefully insert the fibers into the plastic ring holders (one fiber at a time), with as much slack as possible, making not less than a 1-1/2 inch (38 mm) radius bend in the fibers.

3. Connect the fiber connectors to the couplings on the coupling panels.