3M™ Clear Track Fiber Pathway
Installation Instructions

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1.0 System Overview

The 3M™ Clear Track Fiber Pathway is designed for use in FTTP (Fiber-to-the-Premise) networks within brownfield or greenfield Multi Dwelling Units (MDUs) and Single Family Units (SFUs). The 3M Clear Track Fiber Pathway is a surface-mount, tape adhesive-backed pathway solution designed for indoor use only. Delivery of voice, data and video services to tenants using the 3M Clear Track Fiber Pathway is a quick, reliable and aesthetically pleasing installation method.

3M warranty for the 3M Clear Track system is contingent upon:
- Installation completed by an appropriately trained installer
- Strict adherence to the instructions provided in this manual
- Product installation within 24 months of date of manufacture when stored between 40°F to 100°F (4°C to 38°C) and 0–95% relative humidity. The optimum storage conditions are 72°F (22°C) and 50% relative humidity.

3M’s warranty does not extend to products that have been subjected to misuse, neglect, accident or improper installation/alteration.

2.0 Components and Accessories

3M™ Clear Track Fiber Pathway (track only) 150 ft spool (80-6114-9750-6)
3M™ Clear Track Installation Tool (80-6114-8645-9)
3M™ 900 µm Clear Fiber 1 km spool* (80-6114-9805-8)
Scotch-Brite™ Easy Sweeper (XT005573271)

*Note: ITU-T G.657.B3 (5 mm bend radius)

3M™ One Pass Mini Surface-Mount Wall Outlet (80-6113-8213-8)
3M™ Clear Track Micro Point-of-Entry Wall Cover (80-6114-9807-4)
3M™ Clear Track Installation Kit (80-6114-8688-9)
3M™ Clear Track Wall Compatibility Test Strips (80-6114-8687-1)
3.0 Installation Tools

3.1 The installation tool and test strips are consumable items. The installation tool should be replaced on a bi-annual basis, or approximately every 500 installed units or as required.

3.2 Additional Recommended Tools (Not Included)

A. Drill
B. Splicer’s Knife
C. Fiber Snips
D. ScotchBlue™ Painter’s Tape
E. Level
F. Drill Bits — ⅛” (9.5 mm), ⅛” (13.0 mm)
G. Pen or pencil

4.0 Wall Surface Compatibility

The wall surface MUST be checked for compatibility with the tape adhesive-backed 3M™ Clear Track Fiber Pathway prior to installation.

This test must be conducted on the most challenging surface of the installation path (greasy, soiled, textured, etc.). Installing on multiple wall surfaces, all surfaces must be tested and all must pass.

Note: The most challenging surface(s) tested must be wiped clean as you would normally when installing 3M Clear Track Fiber Pathway.

Incompatible surfaces include:

- Highly textured walls
- Porous or unfinished/unpainted brick or concrete
- Fabric wall surfaces
- Surfaces with flaking/delaminating paint or wallpaper

Note: The 3M Clear Track Fiber Pathway should not be installed on the incompatible surface types listed above.
4.3 Hang weight from strip.

<table>
<thead>
<tr>
<th>Test Weight</th>
<th>Hang Time</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 60 seconds</td>
<td>PASS – Install</td>
<td></td>
</tr>
<tr>
<td>&lt; 60 seconds</td>
<td>FAIL – Do not install</td>
<td></td>
</tr>
</tbody>
</table>

4.4 Remove successful test strips by pulling on release tab.

5.0 Defining the Pathway Route

The path the track will follow MUST be clean and dry.

- Clean all surfaces along the installation route with Scotch-Brite™ Easy Sweeper or equivalent prior to installation.
- Greasy, slick or soiled surfaces must be cleaned with isopropyl alcohol or equivalent along the installation path prior to installation.
- Recommended track and air temperature for installation is 60°F–100°F (16°C–38°C).

*Note: Carefully follow safety, health and environmental information given on the container label or the Safety Data Sheet for the isopropyl alcohol.*

- The adhesive is permanent. Removing the track after installation may damage the installation surface.
- Do not move or reposition the track once installed. If for some reason the track needs to be moved, add a new section of 3M™ Clear Track Fiber Pathway.
- The best location is near the ceiling, baseboards and interior corners. Avoid running track across open areas or diagonally across walls.
- Do not remove liner from track until applying to installation surface including when handling it while applying to wall surface.
- Do not contaminate adhesive with dirt or oils. Do not allow the adhesive to come into contact with anything except the installation surface as you remove the liner.
- Route the track’s end through opening at top of the box with red liner on bottom as shown.

*Note: A loud scratching sound when pulling track out of box is indicative of misalignment while pulling track. The red liner should be in contact with box surface.*
The ends of the 3M™ Clear Track Fiber Pathway must be held down mechanically at the beginning and end. This is accomplished with the 3M™ Surface-Mount Wall Outlet box and the 3M™ Clear Track Micro Point-Of-Entry Wall Cover. If for any reason these accessories are not used at the beginning and end of the track run, use of a good adhesive tape or equivalent is required.

Avoid installing on or immediately above direct heat sources such as radiant heaters, steam pipes, stoves, etc.

Avoid installing in high humidity or water born environments such as shower stalls, sinks, etc. Area must be clean and dry at time of installation and minimum 72 hours following.

For best results, 3M recommends a curing time of 72 hours after installation of the 3M Clear Track Fiber Pathway before subjecting it to temperature extremes below 60°F (16°C) or above 100°F (38°C).

6.0 3M Clear Track Fiber Pathway Installation

6.1 Make a small mark approximately 1/8" from reference surface (interior corner or edge) where the 3M Clear Track Fiber Pathway will begin to be adhered.

6.2 Without touching the adhesive, remove approximately 6" of the red liner and cover the 1/8" mark, with the bottom edge of the 3M Clear Track Fiber Pathway.

6.3 Use your finger or thumb to apply the first 6" of the 3M Clear Track Fiber Pathway, or until you can use the installation tool.
Note: The installer should ensure sufficient pressure is used to activate the adhesive. Using a thumb or finger, this amounts to roughly 0.5 to 1 pound of pressure. In addition, 3M requires using the application tool at all times where possible. If there is a region other than the beginning that is too tight for the application tool to be used, the installer may use their thumb, finger or other tool with a smooth surface (e.g., the smooth side of a pen, etc. to protect your finger from abrasion) to apply firm pressure and slide along the top of the track. If the installer is pressing hard enough to deform the caps that grasp the fiber in the pathway, that portion of the pathway will need to be replaced.

6.4 Continue using the installation tool, removing liner and applying 3M™ Clear Track Fiber Pathway until you reach the pathway destination.

6.5 Roll the 3M™ Clear Track Installation Tool around exterior corners.

6.7 Roll the Installation Tool into and around interior corners.

Note: The diameter of the installation tool wheel is the correct bend radius for interior corners.

6.8 Planar corners are built with the end of one 3M Clear Track Fiber Pathway meeting the side of the end of another 3M Clear Track Fiber Pathway.
7.0 Optional Standard
3M™ Surface-Mount Point-of-Entry Wall Box Installation
(Recommend to use if larger hole occurs from blowout with masonry, etc.)

7.1 Remove the tab at the entry point as needed. Entry point #2 is shown below as an example.

7.2 Fasten the cover to the wall after the track is installed. The cover helps secure the end of the track to the wall and covers the drilled living unit access hole.

8.0 3M™ Micro Point-of-Entry (POE) Wall Cover

8.1 Description
The 3M™ Micro Point-of-Entry (POE) Cover is a small enclosure intended for indoor applications with 3M™ Clear Track Fiber Pathway or 3M™ One Pass Mini Fiber Pathway. When installed, the 3M POE box offers physical protection and bend radius control for 900 μm fiber during wall penetrations.

8.2 Kit Contents
a. 1 each - base
b. 1 each - cover
c. 2 each - #4 x ½” long screws

Note: Installer shall provide anchors if anchors are required for masonry, etc.

8.3 Tools Required (Not supplied)
a. Tape measure
b. Pencil or marker
c. ¼” diameter wood, masonry or metal bit
d. ⅜” diameter wood, masonry or metal bit
e. 12” min of fish tape or equivalent to use in pushing/pulling 900 μm through wall
f. Cleaning supplies for drilling debris
g. Small Phillips head screw driver
h. Drill or Hammer Drill
8.4 Installation

a. Select location for 3M™ Micro Point-of-Entry (POE) Wall Cover

*Note: Ensure that no electrical wiring, plumbing or other safety hazards are located behind selected drilling location and no wall studs or other supporting structures are located behind selected drilling location.*

b. Drill a $\frac{3}{8}"$ diameter hole approximately $\frac{1}{2}"$ above base board (shown), below crown molding/ceiling or away from an adjacent wall.

c. On the micro 3M POE cover side of the penetration use a $\frac{3}{8}"$ drill bit to make space for the funnel with cable tie.

d. “Dry” fit the 3M POE wall cover base into desired location.

e. Remove any caulk or other sealants at base board or crown molding that interfere with 3M POE wall cover installation.

f. Clean off any debris from the wall mounting surface.

g. Identify the desired exit location for the 900 μm fiber.

h. Break out the appropriate tabs and remove any rough surfaces created.

*Note: DO NOT overtighten screws as damage to the 3M Micro Point-of-Entry (POE) Wall Cover base can occur.*

*Note: DO NOT snap cover onto base until entire installation process is complete. The cover is designed to be tamper proof and will be difficult to remove.*
8.5 Using a rigid wire as a guide, pass the 900 μm fiber through the wall and pull slack into the interior space. 900 μm should be handled with care so the jacket or optical fiber does not get damaged.

*Note: Pull a length of 900 μm fiber sufficient to complete the installation process plus approximately 10 feet as a safety cushion.*

8.6 Carefully route the 900 μm fiber to the desired exit position and follow pathway system instructions in the next section to finish installation.

8.7 When all the fiber installation is completed for the dwelling unit, inspect transition points into and out of the 3M™ Micro Point-of-Entry (POE) Wall Cover for tight bends or other potential problems.

8.8 Once inspection is complete, snap the cover in place.

*Note: Ensure that fiber does not get pinched between base and cover.*

*Note: Align tab on cover with opening between mounting holes on 3M POE base.*

9.0 Fiber Installation into 3M™ Clear Track Fiber Pathway

9.1 Begin by securing enough clear fiber to allow for fiber termination and adequate slack storage.

9.2 Insert (approx. 6") of 3M™ 900 μm Clear Fiber by hand into the pathway previously installed, then place the 3M Clear Track Fiber Pathway Installation Tool where the fiber insertion began by hand and continue fiber insertion by rolling down the installed pathway to install clear 900 μm fiber.

*Note: Ensure that fiber does not get pinched between base and cover.*

*Note: Align tab on cover with opening between mounting holes on 3M POE base.*

9.3 Roll the 3M™ Clear Track Installation Tool around exterior corners to insert the clear 900 μm fiber.
9.4 Roll the 3M™ Clear Track Fiber Pathway Installation Tool into and around interior corners to insert the clear 900 µm fiber.

(Colored 900 µm fiber, as shown in the picture, used to increase the visibility of the installation technique.)

9.5 When inserting clear 900 µm fiber into planar corners use the tip of your index finger to create the bend radius.

**Note:** Bend radius cannot be less than 5 mm.

(Colored 900 µm fiber, as shown in the picture, used to increase the visibility of the installation technique.)

9.6 Complete the installation by securing enough clear 900 µm fiber to allow for fiber termination and adequate slack storage.

10.0 Single Fiber Connector Termination and Final Steps

3M recommends 3M™ One Pass Hallway Fiber Pathway for MDU applications.

10.1 Terminate the fiber using a 3M™ No Polish Connector or 3M™ Crimplok™+ Connector.

10.2 In buildings where the 3M One Pass Hallway Fiber Pathway is not the horizontal cable pathway solution, terminate the hallway distribution cable (once a penetration hole is drilled) inside the living unit in a 3M One Pass Point-of-Entry Wall Cover. Both the 3M 900 µm Clear Fiber and horizontal distribution cable will terminate here.

10.3 After completing installation of the entire run of 3M™ Clear Track Fiber Pathway and terminating the connector in the hallway box, route the 900 µm fiber and install the connector in the adapter, as shown.
11.0 Cover Installation

11.1 Align and press firmly to snap cover onto the 3M™ Clear Track Fiber Pathway. Cut covers with scissors or snips.

11.2 Leave a required ½” gap on internal and planar corners. No gap is required on outer corner.

Note: Adapter inserts from the bottom up with the locking tabs on top.

10.4 Attach the cover by aligning the bottom tabs to slots in the base of the box, and then snap the cover in place.
12.0 Preterminated Clear Drop Instructions

12.1 Indoor end; push/pull for cable entry

12.2 Place a push tube onto the end of the indoor end loop when needing to thread the cable through a wall with a 3/8" or greater drilled hole.

12.3 Push/Pull Sock: Remove after completing all wall pass through.

12.4 Expose fiber and install into 3M™ Clear Track Fiber Pathway. Expose fiber by peeling jacket away.

12.5 Thread SC/APC internal connector white connector with the dust cap in place into the green shell. Make sure that the orientation of the internal connector and the shell are the same so that the one way orientation is controlled.

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