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Multi-Media Distribution Enclosure (MDE)

Stock ID	Description
020-255-10	MDE-R-FR-15-S-N-N LW 15" MEDIA ENCL
020-257-10	MDE-R-FR-30-V-S-N-N LW 30" MEDIA ENCL

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INSTALLATION

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General

This installation guide provides instructions for preparation and installation of Multilink's Multi-Media Distribution Enclosure in several applications. This product is a ultra flexible, scalable/modular to accommodate wireless connectivity, Cat 6, VoIP, ONT's, gateways, battery backups and receptacle mounting.

1. Introduction

1.1 Product Description

Multilink's Multi-Media Distribution Enclosure (MDE) provides both wireless and wired connectivity in premise installations structured for residential MDU's, Business Applications, ONT, BB, Brownfield, Greenfield and FTTX requirements.

The Multi-Media Distribution Enclosure's patented stackable design allows for the removal of both end plates, also the expansion of the entire Multi-Media Distribution Enclosure. This allows the enclosure's height to be extended in increments of 15" till desired height.

1.2 Multi-Media Distribution Enclosure Dimensional Drawing

15.768

16.382

5.095

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INSTALLATION

2. Preparations

2.1 Installation Outline

The general procedure of the Multi-Media Distribution Enclosure installation includes:
- Locate stud position in wall and placement of Multi-Media Distribution Enclosure installation.
- Measure and mark on drywall using the template located on carton for correct measurements (if applicable).
- Sealing knockout holes with UL Classified Flame Retardant Foam (XHHW).
- Mounting the Multi-Media Distribution Enclosure between stud positions using supplied hardware.
- Before attaching door to frame install any door accessories including cam lock, latch, etc.
- Install Multi-Media Distribution Enclosure frame onto installed base using supplied hardware.

2.2 Multi-Media Distribution Enclosure Checklist

Each kit includes the following items:
- 1x Multi-Media Distribution Enclosure (including base and frame) (A)
- 1x Media Enclosure Hardware Kit (B)
- 1x Drywall Cutout Guide (located on shipping carton) (C)
- 1x Accessory Kit (if applicable)

2.3 Recommended Tools and Equipment

The Following list includes tools and equipment that you may need for a successful installation (these tools **ARE NOT INCLUDED with the product or accessories):**

- Safety Glasses
- Cut-Resistant Gloves
- Side Cutters/Diagonal Cutters
- Phillips Screw Driver (#2 driver)
- UL Classified Fire Retardant Fill

- Hex-Head Screw Driver (1/4" hex head driver)
- Tape Measure
- Scissors and/or Utility Knife
- Drywall Utility Saw or Equivalent

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3. General Warnings

3.1 Safety Glasses Warning

Use safety glasses while working is highly recommended to provide eye protection from accidental injury when handling chemicals, cables or working with fiber. Pieces of glass fiber are very sharp and have potential to damage the eye.

3.2 Electrical Shock Warning

Working with live circuits is very dangerous and can result in serious injury and/or death. It is recommended to shut off all power supplied to the Multi-Media Distribution Enclosure via circuit breaker, disconnect, fusing, etc.

Do not install electrical wiring, telecommunications equipment or work with telephone wiring during a lightning storm. Power and telephone lines can carry high voltages from lightening causing electrical shock resulting in severe injury and/or death.

3.3 Safety Code Warning

Before installation check local construction codes (building, electrical, etc). Not following these can cause direct damage to the Multi-Media Distribution Enclosure in return potentially damaging any telecommunications equipment and/or direct fiber in the enclosure causing safety issues. Multilink is not responsible for any damages and/or injury based on improper application usage, incorrect installation of product and/or disregarding any safety concerns listed.

INSTALLATION

4. Installation

Recess Greenfield Installation (New Drywall)

4.1 Supporting the Enclosure

Multilink recommends cutting 2 QTY support bars from 2" x 4" of wood to at least 14.5" in length to create support for the Multi-Media Distribution Enclosure (MDE). Position the support bar between the designated studs where the enclosure will be installed at the desired height. Install the support bar in between each stud. If the support bar appears to be loose or was undercut, attach using screws for additional support from the inside of the frame (support bars will be removed at a later time).

4.2 Framing the Area

Place the Multi-Media Distribution Enclosure on top of the support bar recessed into the wall between the studs. Take the 2nd support bar and place it directly above the MDE then mark bar location on stud. The inside dimension should be no more than 16" MAXIMUM for a 15" MDE installation and no more than 31" MAXIMUM for a 30" MDE installation. Remove the MDE and screw in the 2nd support bar from the inside frame (all support bars will be removed at a later time). You now have a framed area where the MDE will be installed after drywall installation.

4.3 Cable/Wire Preparation

Route and secure cables/wiring to the central location of where the MDE is going to be installed between the two support bars. Drill out a hole(s) if necessary in either support bar in order to route and slack cable/wires. Attach the slack storage to the back wall to prevent any damage to the cabling itself. Measure from the floor up to the center location of the frame to locate the cut out section after drywall installation.

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4.4 Drywall Installation & Cutting

Install drywall over framed MDE installation area. Once drywall is installed, use the framing formed by the studs and support bars to cut the exact size needed for the Multi-Media Distribution Enclosure to be installed. Maximum cut size for 15" MDE is 14.5" W x 16" H and 30" MDE is 14.5" W x 31" H (DO NOT EXTEND PAST THE SHOWN DIMENSIONS TO PREVENT EXPOSED OPENINGS). Once drywall section has been removed insert the MDE into the opening to check the opening size. If the MDE base is too snug remove the base and remove additional drywall to fit correctly. Otherwise remove both support bars previously installed along with any inserted cables/wires then continue to Step 4.7 to install MDE knockout accessories.
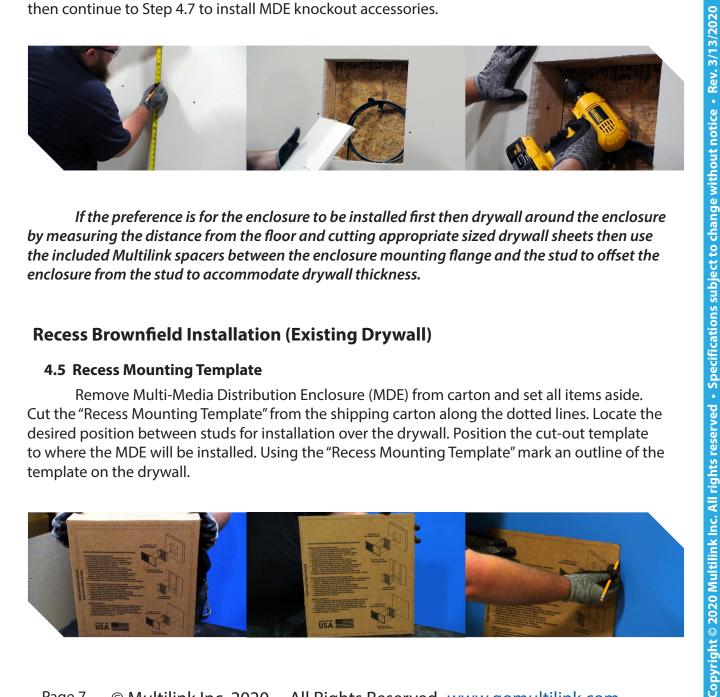

If the preference is for the enclosure to be installed first then drywall around the enclosure by measuring the distance from the floor and cutting appropriate sized drywall sheets then use the included Multilink spacers between the enclosure mounting flange and the stud to offset the enclosure from the stud to accommodate drywall thickness.

Recess Brownfield Installation (Existing Drywall)

4.5 Recess Mounting Template

Remove Multi-Media Distribution Enclosure (MDE) from carton and set all items aside. Cut the "Recess Mounting Template" from the shipping carton along the dotted lines. Locate the desired position between studs for installation over the drywall. Position the cut-out template to where the MDE will be installed. Using the "Recess Mounting Template" mark an outline of the template on the drywall.
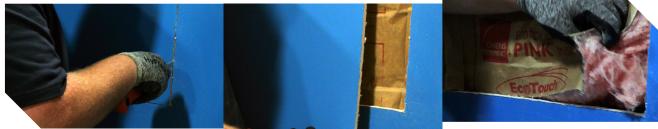
INSTALLATION

Installation (Cont.)

4.6 Cutting Drywall

Cut drywall carefully along the marked outline from the "Recess Mounting Template". Maximum cut size for 15" MDE is 14.5" W x 16" H and 30" MDE is 14.5" W x 31" H (DO NOT EXTEND PAST THE SHOWN DIMENSIONS TO PREVENT EXPOSED OPENINGS). Remove insulation (if any) behind the drywall opening *(*Note: This is essential for the MDE to be installed flush with the drywall)*. Place Multi-Media Distribution Enclosure into the opening to check the opening size. If the MDE base is too snug remove the base and remove additional drywall to fit correctly.

4.7 Install Knockout Accessories

Locate and remove the knockout(s) on either the top or bottom plate of the MDE using a flathead screw driver and/or utility knife. Install the appropriate accessory (conduit fitting, NPT compression fitting and/or electrical box outlet) and secure using the supplied hardware kit. If using a conduit or NPT fitting insert/install the appropriate cable(s) and/or wire(s) through the fitting into the MDE before inserting into the drywall opening.

4.7.1 Seal Remaining Openings with UL Classified Fire Retardant Fill.

4.8 Installing the MDE

Insert the Multi-Media Distribution Enclosure into the drywall opening. Secure base to the drywall using #8 x 1.5" hex head screws (included). Thread each screw through the drywall into the studs. Make sure that the MDE is not flexing or bowing when attached to the drywall. If MDE is forced out of shape it will prevent the frame from securing and from the door potentially closing.

*If painting the wall after base installation, trim the "Recess Mounting Template" from shipping carton to the "Base Paint Shield Outline". Insert paint shield into MDE base to prevent any contamination to the inside of the enclosure.

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4.9 MDE Frame Assembly

If you experience difficulty during frame installation with the doors attached then unsnap door(s) from Multi-Media Distribution Enclosure frame hinge to allow for an easier frame installation. Position the MDE door frame on to the recessed base. Attach the MDE frame to the base of the enclosure using the supplied #6 x 3/8" flat head screws. Before attaching the door to the frame install any additional hardware such as a latch (See 6.1) or cam lock kit (See 6.2). Finally attach the door(s) to the frame using the hinge system located on the left side of each door.

Surface Mounting Installation

4.10 Positioning the Enclosure

Position the Multi-Media Distribution Enclosure base on the wall in desired location. The MDE base is 14" wide which does not allow for mounting both sides to studs at 16" centers. It is recommended that the mounting holes are located over studs along one side of the enclosure. Wall anchors (not included) are recommended when installing the MDE directly to surface of the wall because the enclosure is less than 16" in width and only one side can be threaded into stud.

4.11 Install MDE to Drywall

Secure the Multi-Media Distribution Enclosure (MDE) base to the drywall using #8 x 1.5" hex head screws. Thread each screw through the mounting holes in back wall of base into one stud of the wall and wall anchors (not included).

4.12 MDE Frame Assembly

If you experience difficulty during frame installation with the doors attached then unsnap door(s) from Multi-Media Distribution Enclosure frame hinge to allow for an easier frame installation. Position the MDE door frame on to the surface mounted base. Attach the MDE frame to the base of the enclosure using the supplied #6 x 3/8" flat head screws. Before attaching the door to the frame install any additional hardware such as a latch (See 6.1) or cam lock kit (See 6.2). Finally attach the door(s) to the frame using the hinge system located on the left side of each door.

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Installation (Cont.)

Floor Stand Installation

4.13 Attach Floor Kit

Typical floor stand installation includes the MDE having a vented top to improve air flow ventilation within the enclosure. The standard top plate with knockouts will work with the floor stand configuration but replacing the knockout plate with the vented is suggested. Remove the standard top plate with knockouts from the Multi-Media Distribution Enclosure (MDE), only if the provided vented top is not already installed, and install the vented top plate provided in the floor stand kit. Place the floor mount stand on a flat surface as shown. Set the enclosure on top of the floor mount stand aligning the mounting holes on the bottom knockout plate. Attach the MDE base to the floor stand using the supplied #10 x 1/2" pan head screws.
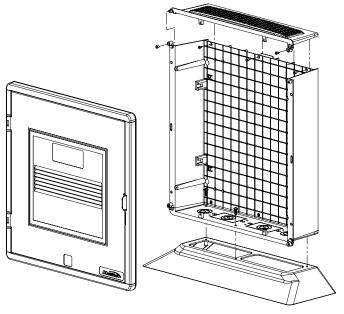
4.14 Positioning the Enclosure

Position the Multi-Media Distribution Enclosure base against the wall in desired location. It is recommended that any enclosure configuration over 15" in height should be mounted to a nearby wall to add stability and safety. It is also recommended that the mounting holes are located over studs on one side of the enclosure. Wall anchors (not included) are recommended when one side is not being threaded into stud.
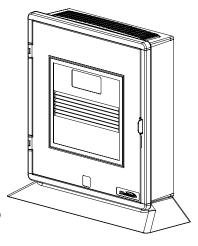
4.15 Install MDE to Drywall

If the 15" enclosure configuration is in a unstable, non-level area be sure to secure the MDE base to the drywall using #8 x 1.5" hex head screws. Make sure the floor kit is as level as possible before proceeding. Thread each screw through the mounting holes in back wall of base into one stud of the wall and wall anchors (not included).

4.16 MDE Frame Assembly

Remove door(s) from Multi-Media Distribution Enclosure frame to allow for an easier frame installation. Position the MDE door frame against the floor stand base. Attach the MDE frame to the base of the enclosure using the supplied #6 x 3/8" flat head screws. Before attaching the door to the frame install any additional hardware such as a latch (See 6.1) or cam lock kit (See 6.2). Finally attach the door(s) to the frame using the hinge system located on the left side of each door.

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5. Module Expansion

The Multi-Media Distribution Enclosure expandable design allows for the removal of both end plates to further expand the enclosure in increments of 15" in height. We suggest the maximum module height to be no more than 90" tall. This would be maximum size to fit in any residential or business location. When expanding a floor mounted enclosure over 15" we recommend attaching the entire base to a stud of a near by wall on at least one side of the enclosure. Secure the MDE in place with supplied #8 x 1.5" hex head screws along with wall anchors (not included) on the opposite side.

5.1 Module Increment of 15"

The Multi-Media Distribution Enclosure can be increased in 15" or 30" increments to pre-existing installed MDE's. Remove the MDE door frame from the installed enclosure. Disconnect and/or remove any necessary equipment inside the MDE and set aside to be connected/assembled at a later time. Determine the expansion direction the Multi-Media Distribution Enclosure is going to expand (top/upwards or bottom/downwards).

5.2 Base Addition

Before any work on expanding the base is done, it is highly recommended that the Installer locates any and all circuit protection devices and open the contact (turn off), verify that power has been cut to MDE with volt-meter. Once power has been turned off, remove door framework and set aside in safe location. Next, determine which way you would like to expand your MDE, keeping in mind that all wiring (electrical, fiber, coax, etc.) may hinder or pre-determine which side (top or bottom) you can add on to.

5.2.1 Remove Screws

Remove mounting screws from base so you can move the base freely from the wall and remove the top or bottom base flange of existing enclosure as well as the mating side of the new enclosure that corresponds to direction of expansion.

5.2.2 Mark New Opening

Use the provided "Recess Mounting Template" located on the shipping carton to mark a new cutout dimensions for expansion cavity.

5.2.3 Cut Drywall

Layout the cutout dimensions on wall and cut the drywall away with keyhole saw, Dremel, router, or any other cutting tool that you deem acceptable to remove drywall. (**Note**: Additional drywall can be removed as needed, so if unsure of cutout dimensions, it is better to cut too small and remove more as needed).

5.2.4 Proper Fitting

Once hole is cut in drywall, dry-fit the expansion MDE to check if fits with the new opening. If all fits well, it is time to secure the two bases to each other.
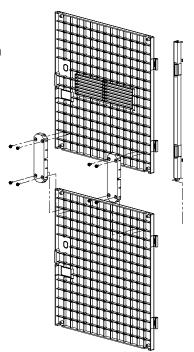
INSTALLATION

5.2.5 Base Assembly

In order to mate the two together, there are two stiffener tabs on the back of each base that will interlock when fit together. Once mated, use supplied base frame screws to secure both bases via interlock screw holes on the side flanges of each box.

5.2.6 Attach MDE to Drywall

Now that the bases are mated you can re-insert the expanded base into wall cavity and secure to wall with supplied wood screws.
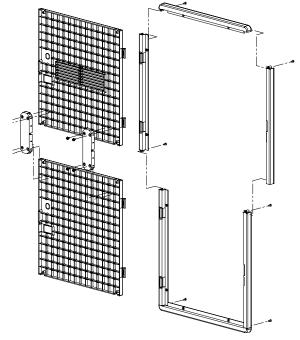
Installation Note: Be sure to make drywall cutout as small as possible while still allowing enough room to install bases. If hole is too big, you may have to patch and paint gaps so that no open space can be seen when door frame is attached.
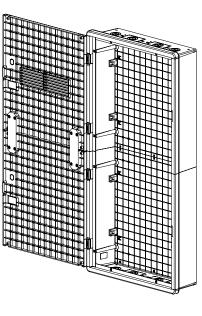
5.3 Frame Addition

As with the MDE Base, remove respective top and bottom flanges of the frames that are to be connected and feed interlock tabs into one another, secure pieces together with supplied frame screws. Place frame over base flanges and line up mounting holes, secure with supplied frame screws and test doors for functionality. Also included in expansion kit are brackets that connect the two doors together so they act as one, it is up to the customer/installer how they would like the doors to operate.
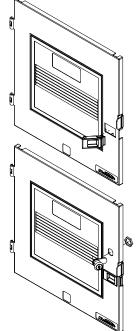
INSTALLATION

6. Deep Frame Retro-Fit Enclosure Kit

Follow 5.3 for instructions on the The Deep Frame Retro-Fit Kit.

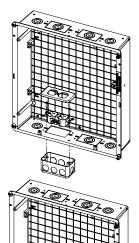## 7. Accessory Installation

7.1 Latch Installation

Using a utility knife cut carefully along the outside surface of the groves in the rectangular recess from the backside of the door. Then cut out another piece of material that's adjacent to the one that was just cut that's located on the doors flange. Cut out notch formed by the groove in the door's flange. Use a file to smooth out any rough edges. Finally install latch from the front side of the door making sure the lip of the latch faces to the outside of the door.

7.2 Cam Lock Installation

Using a utility knife cut carefully along the outside surface of the groves in the slotted recess from the backside of the door. Use a file to smooth out any rough edges. Remove the mounting nut and pull it out through the assembly. Insert the cam lock through the cut out and make sure the lock is facing the correct locking direction by checking with the key. Insert the mounting nut back through the lock assembly and tighten.

7.3 Power Outlet Installation

7.3.1 Duplex Outlet kit

For standard duplex installation first remove the outlet knock out in the location that the electrical outlet will be installed. Then place the handy box outside of the MDE and run electrical wires through the handy box and wire the receptacle which will be installed from the inside of the enclosure. Afterwards secure the handy box from outside and the receptacle from inside the MDE with two #6-32 screws. Finally install the cover to the receptacle.

7.3.2 Snap in Outlet Kit

For snap in receptacle installation first remove the outlet knock out in the location that the electrical outlet will be installed. Then place the handy box outside of the MDE and run electrical wires through the handy box and wire the snap in receptacle which will be installed from the inside of the enclosure. Afterwards secure the handy box from outside and the single outlet cover from inside the MDE with two #6-32 screws. Finally snap in the receptacle in desired orientation.

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Ordering Guide

Configure your enclosure at
gomultilink.com/categories/multi-media-enclosure

Multi-Media Distribution Enclosures		
Products	**Description**	**Stock ID**
	15" x 15" MDE Flame Retardant Plastic	020-256-10
	15" x 15" MDE Flame Retardant Plastic w/Latch	020-256-11
	15" x 15" MDE Flame Retardant Plastic w/Lock	020-256-12
	15" x 15" MDE Flame Retardant Plastic w/Latch & Lock	020-256-13

Accessories

Multi-Media Distribution Enclosure Accessories		
Products	**Description**	**Stock ID**
	Latch Kit	12025
	Cam Lock Kit	99534
	Floor Stand Kit	072-506-10
	Slack Storage Spool Kit	072-533-10
	FlexGrid Mounting Kit	072-534-10

INSTALLATION

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Multilink's Multi-Media Distribution Enclosure (MDE) supports various options of entry grommets accommodating vast cable diameters, additional accessories some of which are included with the MDE, and patch & splice options including field installable connector kits, and pigtails.

Multi-Media Distribution Enclosure Fiber Pigtails

Products	Description	Stock ID
	SC/APC 12 Fiber SM 3M Pigtail Spiral Wrapped	10-6418
	SC/UPC 12 Fiber SM 3M Pigtail Spiral Wrapped	10-6416
	LC/UPC 12 Fiber SM 3M Pigtail Spiral Wrapped	065-180-10
	SC/APC 12 Fiber SM 3M Pigtail Yellow Jacket	065-395-10
	SC/UPC 12 Fiber SM 3M Pigtail Yellow Jacket	065-371-10
	LC/APC 12 Fiber SM 3M Pigtail Yellow Jacket	065-437-10
	LC/UPC 12 Fiber SM 3M Pigtail Yellow Jacket	065-396-10
	SC/APC 4 Fiber SM 3M Pigtail Yellow Jacket	065-310-10
	SC/UPC 4 Fiber SM 3M Pigtail Yellow Jacket	066-493-10
	LC/APC 4 Fiber SM 3M Pigtail Yellow Jacket	066-494-10
	LC/UPC 4 Fiber SM 3M Pigtail Yellow Jacket	066-495-10
	SC/APC 1 Fiber SM 3M Pigtail Yellow Jacket	066-490-10
	SC/UPC 1 Fiber SM 3M Pigtail Yellow Jacket	065-286-10
	LC/APC 1 Fiber SM 3M Pigtail Yellow Jacket	066-491-10
	LC/UPC 1 Fiber SM 3M Pigtail Yellow Jacket	066-492-10

Multi-Media Distribution Enclosure Fiber Bulkhead Kits

Products	Description	Stock ID
	SC/APC Duplex Bulkhead Bracket Kit	072-451-10
	SC/UPC Duplex Bulkhead Bracket Kit	072-451-20
	LC/APC Quad Bulkhead Bracket Kit	072-451-30
	LC/UPC Quad Bulkhead Bracket Kit	072-451-40

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Accessories (Cont.)

Multi-Media Distribution Enclosure Field Installable Kits		
Products	**Description**	**Stock ID**
	SC/APC SM Field Installable Kit	066-025-10
	SC/UPC SM Field Installable Kit	066-024-10
	LC/APC SM Field Installable Kit	066-131-10
	LC/UPC SM Field Installable Kit	066-029-10

Multi-Media Distribution Enclosure Fiber Accessories		
Products	**Description**	**Stock ID**
	Velcro Strap 1/2 x 8"	651-030-10
	1120-SSTP Splice Tray Kit	072-059-10

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