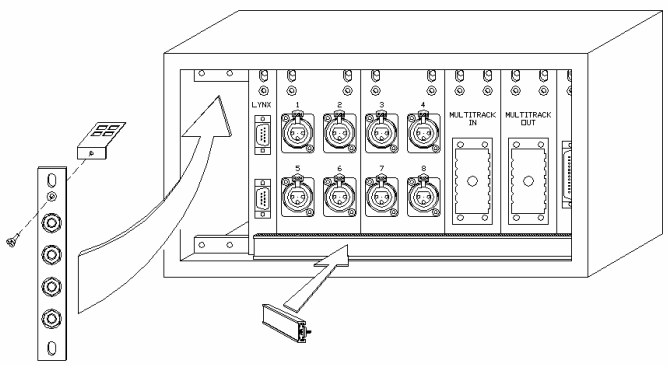
Product Description



Applications

- Broadcast television and radio facilities
- Recording studios
- Corporate media and audio video systems.
- Computer network systems.
- Anywhere a custom panel is required

We designed the Modular Panel System to simplify your installation work and to provide a system where it was easy to configure custom connector interfaces. We were often frustrated by last minute customer changes or forgotten connectors after hours of design time on custom panels. By going to a modular design, revisions became easy, just remove or add a section to the interface, and the rest of the work remained unchanged. This was an advantage not only during the design-build process, but our customers came to love the system for its continuing flexibility, allowing them to add and change connectivity functions as easily as they could change their rack-mounted equipment.

The Modular Panel System (MPS) was developed and refined over the course of many installations ranging from high profile facilities like Skywalker Sound to the home studios. The MPS system has been applied to such diverse projects as radio stations, home studios, television production facilities, network facilities and corporate offices with great success. Now, the Modular Panel System is available for your projects. We hope the ease of design, flexibility, and professional appearance of the system will enhance your ability to produce connector panels of unsurpassed quality for you and your clients.

How to Specify

Specification of the Modular Panel System involves these four primary tasks:

- Specify chase mounting method and size, and cable access and management.
- Select panels and blanks.
- Specify engraving if any.
- Specify tie bar.

Signal Transport offers custom capability for unlimited variations. Ask us for engineering assistance in installing MPS panels in any application. For example, it's easy to include panel chase in custom furniture.

Orders may be configured in two ways.

- Supply us with a list and/or drawing of the connector interface you need a quote.
- Use the MPS-CAD-LIB-09.dwg to create your own drawing files. Then send a copy of your files to us for a quote or to fill the order. We will extract the bill of materials and engraving information.

Please take a few minutes to read this guide before proceeding. A full understanding of the parts and accessories is necessary in order to get the full benefits of the system, and to ease the ordering process.

Consultants are welcome to insert their finished MPS chase layout drawings into their own title blocks for inclusion into specification sets.

General information

The basic unit of modular panel size is the ***Modular Unit (MU)***, which is 7/8 inches wide. Panels are denoted with letters indicating the number of Mod Units; i.e., an A-size panel is 1 MU (7/8") wide, a B panel is 2 MU (1 3/4") wide, a C panel is 3 MU (2 5/8") wide, etc. All panels are 6" high and mount with 10-32 screws to an extruded rails provided with all mounting solutions.

Mounting Screws

Rack Adapter: A set of 8 screws and plastic washers are our standard rack mounting hardware, (4) 1/2" 10-32 black oxide, pan head Phillips, black oxide, and black plastic washer + (4) 3/4" 10-32 black oxide, flat head Phillips with black plastic washers.

Panels: All panels are supplied with (2) 3/8" 6-32 flat head Phillips and knep nuts for Tie Bar attachment plus (4) 3/8" nickel pan head Phillips for panel attachment. "A" size panels use ½ the number of screws.

Tie Bar

A Tie Bar must be specified and ordered separately.

Tie Bar Mounting Screws

These screws are 3/8" 6-32 flat head Phillips, black oxide. Signal Transport offers pre-packaged bags of 100 screws in stock.

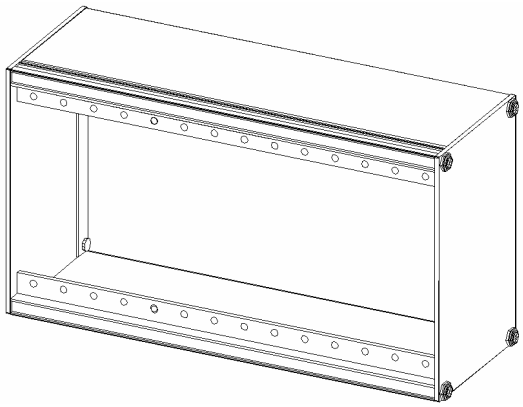
Panel Material

Panels are fabricated from 6061 aircraft-quality aluminum, 1/8" thick, vertical grain, brushed and anodized black.

Label Strip

A pair of label strips is provided with each Surface Mount Chase, Flush Mount Ring, and Rack Adapter, and provides a neat, seamless appearance to the finished assembly.

Surface Mount Chase



Part Number	*# Units*	*Dim H x W*
MPS-SMC-8MU	8	7” x 7.25”
MPS-SMC-16MU	16	7” x 14.25”
MPS-SMC-19MU	19	7” x 16.875”
MPS-SMC-28MU	28	7” x 24.75”
MPS-SMCM-32MU*	32	7” x 28.25”
MPS-SMCM-38MU*	38	7” x 33.50”

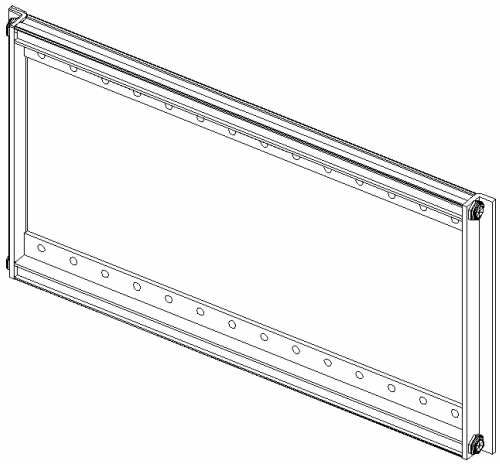
*Denote Modular Chases. Other sizes available by combining any of the standard back boxes).

Surface Mount Chases (SMC) are easy to install and are our most popular mounting method. They also are particularly well suited in studios or other sound-critical areas where it is important not to compromise the sound transmission loss characteristics of the wall by puncturing the membrane. A happy coincidence often exists in these situations, when acoustic absorption or diffusion materials build out the wall thickness beyond the sound shell. In this case the surface mount chase can be ducked into the sound treatment, thereby bringing the panel surface up to flush with the finish materials.

Surface Mount Chases are stocked in several sizes, and can be combined end-to-end or above one another for larger interfaces. The surface mount chase is the most popular way to mount modular panels due to its’ simplicity of installation. Most are supplied with multiple knockouts to accommodate various conduit sizes and wall boxes.

We are continually adding new items to the product line as we respond to customer input. Check our “*Integration Solutions”* for new additions. Dimensional and mounting details can be found in the *“Assembly and Installation”* section of this guide.

Flush Mount Rings



Part Number	*# Units*	*Dim H x W*
MPS-FMR-7MU	7	7” x 7.125”
MPS-FMR-16MU	16	7” x 15.00”
MPS-FMR-19MU	19	7” x 17.625”
MPS-FMR-28MU	28	7” x 25.5”
MPS-FMR-36MU	35	7” x 31.625”
MPS-FMR-55MU	55	7” x 49.125”

(FMR’s can be made to any length in increments of 7/8”)

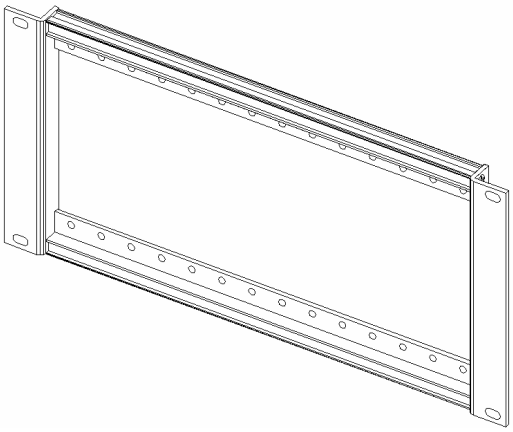
Flush mount rings (FMR) are essentially "cover plates" which adapt a standard electrical gutter box / raceway / screw cover wire-way to the Signal Transport modular system. Use FMR’s anywhere that a neat, finished appearance is desired and panels need to be flush with wall surface -- especially in standard stud walls.

FMR's are stocked in several sizes including a 16MU for our MPS-SMBB-16MU back box designed to fit between 16" centers studs. FMR’s can be made to any length in increments of 1MU / 7/8”

Recently we have added a **“Swing Down (-SD)”** version that allows for easier installation and future service behind the panels.

We are continually adding new items to the product line as we respond to customer input. Check our “*Integration Solutions”* for new additions. Dimensional and mounting details can be found in the *“Assembly and Installation”* section of this guide.

Rack Adapter



Part Number	*# Units*	*Dim H x W x D*
MPS-RACK1	19	7” x 19” x 1.25”

(Other lengths are available in increments of 1MU / 7/8”)

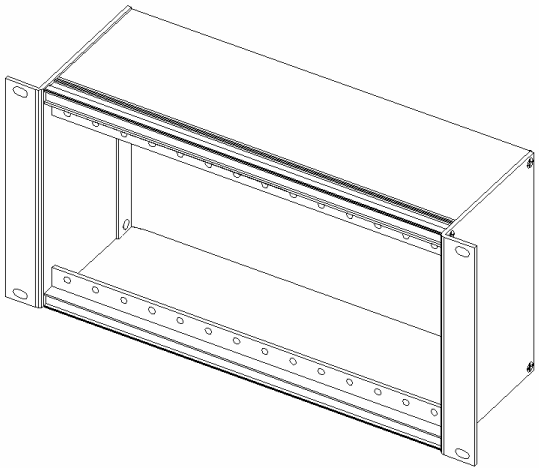
The rack adapter (RACK1) is our simplest mounting device, and allows consultants, contractors, and end users to utilize the Signal Transport modular panel system in standard 19" racks or to easily incorporate the modular panel system into custom wall or furniture systems. By providing wall, rack, and portable mounting configurations, a single inventory of maintenance spares can cover the changes in the entire facility!

Signal Transport's Modular Panel System rack adapters are 7" tall, requiring 4 rack units of rack space. Rack adapters are fabricated from folded 1/8" aluminum side ears and extruded top and bottom module mounting rails. Units are factory assembled and include Label Strips with mounting hardware.

We have added a ***"Swing Down (-SD)"*** version to allow easy access to the rear of the installed panels. This is simply accomplished by loosening 2 knurled screws, one at each end, and pivoting the adapter rack forward and down, exposing the back of the modules for installation and/or service.

Signal Transport 's Modular Panel System, with the Rack Adapter, gives you the tools you need to make custom rack panels which never become obsolete. Regardless of the amount of design time you can afford, with the Rack Adapter your finished product always has that polished, professional look and feel.

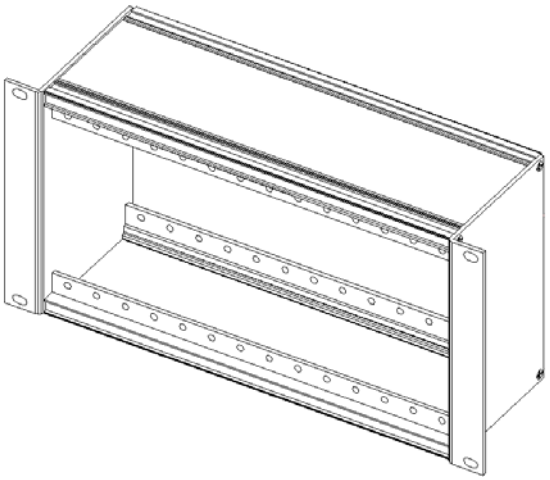
Single Sided Rack Mount Enclosure



Part Number	*# Units*	*Dim H x W x D*
MPS-RACK3	19	7" x 19" x 4.5"

The single sided rack mount enclosure is based on the rack adapter with the addition of a fully enclosed case for installations where protection for the rear of the connectors is required. Cable access or conduit connection holes may be punched in the rear of the box. The enclosure is constructed from 16 guage (.059") steel and finished with black powder coat paint. The ears are formed from 0.125" aluminum and are black powder coated to match.

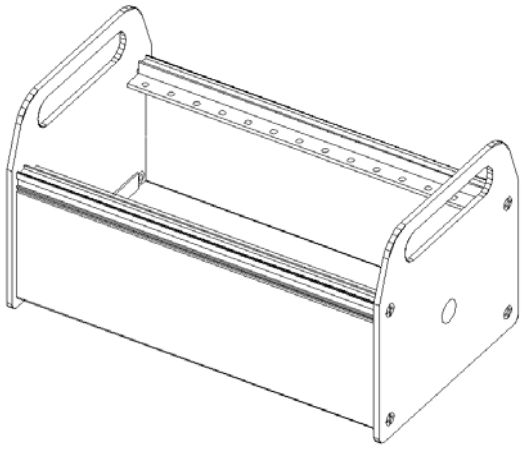
Double Sided Rack Mount Enclosure



Part Number	*# Units*	*Dim H x W x D*
MPS-RACK2	19+19	7” x 19” x 4.5”
MPS-RACK4	19+19	7” x 19” x 9”

These enclosures are for specialized applications requiring front and rear modular connector panels; for example, a breakout box with individual connectors on the front and a multi-pin connector on the rear. Also useful as a “project box”, available in two depyhs.

Portable Box (Stage Box)



Part Number	*# Units*	*Dim H x W*
MPS-SB-8MU	8	7” x 7.25”
MPS-SB-16MU	16	7” x 14.25”
MPS-SB-19MU	19	7” x 16.875”
MPS-SB-28MU	28	7” x 24.75”
*MPS-SBM-38MU	38	7” x 33.50”
*MPS-SBM-56MU	56	7” x 49.25”

(*denotes modular enclosures, other lengths can be created by joining standard back boxes together)

A low profile version of our 19MU stage box is available that is 2.50” deep versus our standard 4.50”. End plates are available plain or can be machined to accommodate whatever size hole(s) for Kellems type strain relief cable clamps or multi-pin connector(s) the space will allow. End caps have an integral handle.

Stage boxes are supplied fully assembled, and are provided with Label Strip and hardware. Each box has four heavy duty rubber feet screwed to the bottom of the box.

The Stage Box rounds out the Modular Panel System by providing the convenience of single - inventory design, fabrication, and replacement service in a portable enclosure for the first time.

These boxes are super heavy duty and are built to take abuse. They're great for custom projects!

Connector Panels

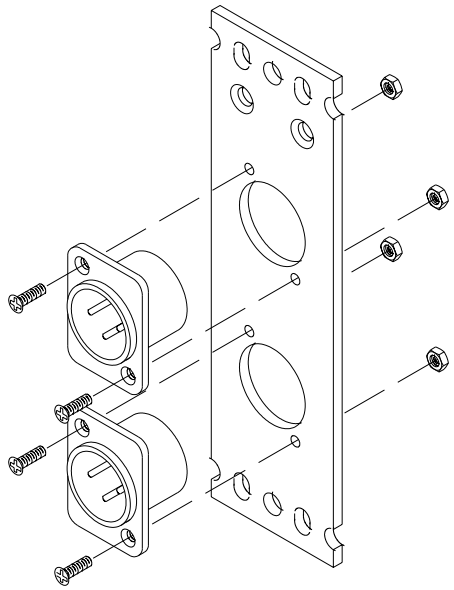


Illustration of a MPS-B7-CM with knep nuts, standard panels are threaded

We stock the panels with the most popular connector cutouts and can quickly machines "custom" panels to your specifications. Most applications can be accommodated by using a combination of stock panels together to make an assembly. For example, if you have 16 mics, use (4) C3 panels together or (4) B27 for a high density configuration.

For a complete listing of connector panels refer to sections *“A-Size Panels”, “B-Size Panels”* and *“C-Size Panels”* under *“MPS CAD LIB 2010”*. Since we are continually adding panels please refer to the current price list for the latest selection.

Blank panels are used for fillers and to create "custom" panels. By combining A, B, C, D, E, F, and L sizes, (1, 2, 3, 4, 5, 6, and 12 MU's), any length can be filled out.

If your connector requirements cannot be filled by a combination of standard Signal Transport machined panels, you can design your own custom units for us to fabricate from standard blank panels. Since we keep a large inventory of finished blanks, we can respond quickly to your custom needs. To specify your own custom panels see *“Creating Custom Panels”* under the *“MPS CAD”* section

Panel part numbers (A1, A8, etc) refer to library reference numbers in addition to physical parts. Gaps exist in the stock part number sequence due to the sequence of origination of the designs. The AutoCad library disk contains panel layout files for many panels not normally stock. When specifying panels, keep in mind that the only "stock" panels are the ones listed in the current price list.

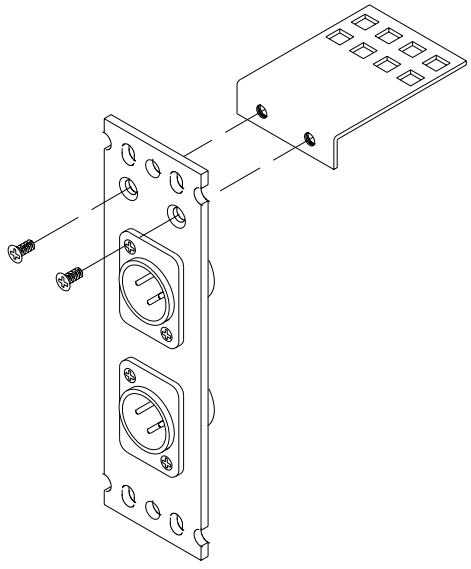
Design Tip: the most efficient use of blanks is to use A or B blanks to fill unused space, unless there is a lot to fill. The smaller blanks can be removed incrementally for addition of new panels without requiring new blank panel purchases. Also, for a uniform look, put dummy screws in the Tie-Bar mounting holes, just to keep them from looking empty.

Label Strip

Label strips adds the functionality of a re-legendable strip above and below the panel area. In many cases, this nearly 1/2" tall strip will provide room for all of the labeling necessary -- and additionally, being re-legendable, eliminates obsolescence. Like a patch bay label strip, Signal Transport's label strip will come with a clear plastic guard strip to protect labels. Typical applications may include grouping designators or individual connector labeling. In some cases, a combination of label strip nomenclature and panel engraving may be desirable.

Tie Bar

The tie bar is an important, although for the most part invisible, feature of the modular panel system. It provides two features: cable strain relief and management, and panel grouping. The tie bar is made from heavy L-shaped .93" thick aluminum, black anodized, with 6-32 tapped holes located on 7/8" centers on the short leg, and large holes for tie-raps on the back. It mounts to the countersunk hole at the top of all modular panels.



Using tie bars, panels may be grouped into "sub - panels", where a multi-conductor cable breaks out across multiple panels. Panel grouping is handy when combining panels for multi-channel applications. For example, we often provide tie line groupings of 8 channels to a location, with multiple appearances, say on both Elco and XLR. So, we would use 2 C3 panels (for the XLR's) and one B10 panel (for the

Elco), and tie them all together with an 8-MU (7") long piece of Tie Bar. One 8-pair cable is brought, tied off to the Bar, fanned out and terminated. The entire prefabricated assembly is then packed and sent out to the installation to be pulled and installed, without any onsite labor other than pulling the cable through and screwing down the panels.

Tie Bar is available in four lengths: A, B, C, and 17 inches. A, B, and C sizes are intended to mount to individual A, B, or C panels and provide cable tie points on a "one-cable-per-panel" basis. Or you can purchase a 17 inch length and cut off custom lengths for panel grouping or use across a 19MU adapter. There are always exceptions to any rule... so be aware that certain types of connectors and cables are not compatible with tie bar. Most notable is precision video cable such as Belden 8281. We have found that the best way to handle this is to use right-angle adapters on the rear of the BNC connector. This ensures that the cable can exit without exceeding the minimum bend radius.

Engraving

Signal Transport can supply custom engraving on panels to customer specifications. There are two ways to specify engraving.

One way is to supply us with your own unique drawing in whatever format / program is your preference.

The other way is to use our MPS-CAD-LIB-10.dwg to specify engraving legends directly on panel and chase drawings and then sending us a disk or file with the completed drawing(s), which we will then use to produce the correct panel legends..

Standard Engraving, when specified under either method, is 0.100" ~ 0.125” high, with width (kern) determined by available space, single stroke simplex characters, mechanically milled through the anodizing, and filled with white ink. Other heights and locations other than standard snaps may be specified, however the customer must provide *ALL* specifications in CAD or other dimensioned format. Complete specifications must include character height, compression factor, baseline, and centering of each word or phrase. Please discuss any variations with us before proceeding with specifications.