FARADAY ENCLOSURES SIZED FOR SCIENCEDESKS™

▶ **Shielding from Electromagnetic/Electrostatic Interference**

▶ **Does Not Interfere with Vibration Isolation System**

▶ **Fits 750 mm x 900 mm ScienceDesk**

Typical FAR01 Faraday Enclosure Setup
ScienceDesk and All Other Parts Available Separately,
Microscope Not Supplied

FAR01

OVERVIEW

Features

- Reduces Electromagnetic Interference from Common Laboratory Items
- Does Not Interfere with ScienceDesk Active or Passive Vibration Isolation
- Compatible with 750 mm x 900 mm ScienceDesks:
  - Fixed Height: 765 mm or 910 mm
  - Motorized, Adjustable Height: 782 mm to 1082 mm
- Compatible with Many of Our ScienceDesk Accessories*

Faraday Cage Shielding Effectiveness
Click to Enlarge
Click to Download Raw Data
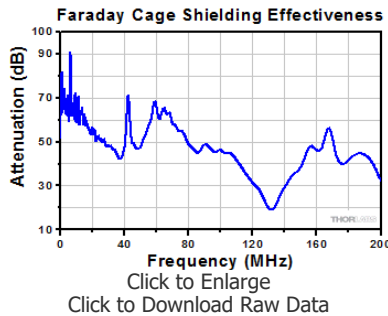
Click to Enlarge
[APPLIST]
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A Typical Faraday Enclosure Setup

Experiments in electrophysiology, confocal microscopy, and other sensitive applications often need to be shielded from external interference from electrostatic fields and electromagnetic waves generated by AM/FM radio, CRT oscilloscopes, fluorescent lights, and other common lab equipment. Thorlabs' ScienceDesk™ Faraday Enclosure consists of a taut copper mesh that protects against these external sources of interference.

This Faraday Enclosure fits onto our Fixed Height and Adjustable Height 750 mm x 900 mm ScienceDesk frames. Our ScienceDesk post-mounted accessories can be installed inside the enclosure, as shown to the right, providing a variety of shelving and equipment mounting options. Additionally, the adapters sold below allow the ScienceDesk Faraday enclosure to be used with the PSY350 side shelf, the PSY121 Monitor Mount, and our range of 25 mm construction rails and accessories.

Faraday Enclosures for ScienceDesk Frames

FAR01

- Removable Magnetic Panels Allow for Access to Setup
- Includes Two Port Holes in Rear Panel for Managing Cables
- Enclosure Design Tested by Independent Electromagnetic Compatibility (EMC) Consultants
- Designed to Fit 750 mm x 900 mm ScienceDesk Frames:
  - Fixed Height: 765 mm or 910 mm
  - Motorized, Adjustable Height: 782 mm to 1082 mm

Click to Enlarge
Magnets Hold Each Side Panel of the Enclosure in Place

Click to Enlarge
The FAR01 Faraday Enclosure mounts directly to our ScienceDesk Frames. Frame not included.

Faraday cages minimize the influence of external electromagnetic waves on objects placed within them. Waves that are significantly longer than the mesh spacing will be blocked. Our ScienceDesk Faraday Enclosure features a taut mesh made of Ø0.25 mm copper wire with 1.4 mm spacing and has been designed to fit our 750 mm x 900 mm ScienceDesk frames. For easy access to the enclosure's interior, each of the four side panels are held in place by magnets and can be quickly removed, as shown in the photo to the right. The base plate of the Faraday enclosure includes an M3-tapped hole for attaching a user-supplied strap to ground the enclosure.

This enclosure mounts directly onto the ScienceDesk frame, not the breadboard as with systems from other manufacturers, and therefore does not interfere with the vibration-isolated tabletop. To mount the enclosure, the breadboard and any accessories must first be removed from the frame. After the rubber pads from each corner of the frame are removed, the base tray of the enclosure can be placed on top of the frame. A hole in each corner of the tray allows contact between the breadboard and the isolators to be maintained.

For simplified cable management, this enclosure comes with two port holes in the rear panel, each with a clearance of Ø1.75" (Ø44.4 mm). Additional port holes can be added using the PSY405 Cable Port Kit (sold below). To help further organize your workspace, our Faraday enclosure is large enough to fit many of our ScienceDesk Accessories inside and is compatible with our 25 mm construction rails via the PSY404 Rail System Adapter Kit (sold below). Our ScienceDesk stainless steel posts can be installed inside the enclosure without any special adapters.

Please Note: The enclosure prevents the installation of our PSY100 Wrist Rest and our PSY250 and PSY251 Sample Preparation Shelves.

Item #	Shielding Effectiveness @ 10 MHz	Outer Dimensions, Including Handles (L x W x H)	Inner Dimensions (L x W x H)	Port Hole Clearance
FAR01	55 dB	1036 mm x 1186 mm x 1027 mm (40.8" x 46.7" x 40.4")	894 mm x 1044 mm x 894 mm (35.2" x 41.1" x 35.2")	Ø1.75" (Ø44.4 mm)

Part Number	Description	Price	Availability
FAR01	Faraday Enclosure to Fit 750 mm x 900 mm ScienceDesk Frame	$2,989.61	Lead Time

Cable Port Kit

PSY405

While our Faraday enclosure offers two cable ports on its rear panel, additional ports can be added to any Faraday enclosure panel using our PSY405 Cable Port Kit. Each cable port kit enables the creation of one additional port with a clearance of Ø1.75" (Ø44.4 mm).

To install a new port, place one plate on either side of the enclosure's copper mesh and bolt them together. Then use a sharp blade or scalpel to cut away the mesh from the center aperture. Finally, fit the included protective rubber ring to the hole. A manual with detailed instructions is included with each cable port kit.

Click to Enlarge
PSY405 Cable Port Fitted to Faraday Enclosure

Part Number	Description	Price	Availability
PSY405	Faraday Cage Cable Port Kit	$26.21	Today

Post and Side Shelf Adapter

PSY401

The PSY401 post and side shelf adapter maximizes the mounting capabilities when using a ScienceDesk™ with a Faraday enclosure. It offers seven through holes for ScienceDesk™ stainless steel posts and allows for use of our post-mounted ScienceDesk accessories. Additionally, this adapter allows the PSY350, PSY352, or PSY353 side shelf to be attached to a ScienceDesk frame equipped with an enclosure, thereby providing a large work surface separate from the isolated experiment, as shown in the photo to the right.
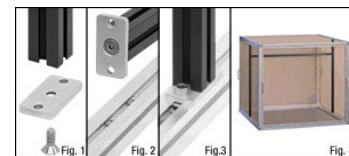

Click to Enlarge
PSY350 Side Shelf
Mounted via the
PSY401 Post and Side
Shelf Adapter

Part Number	Description	Price	Availability
PSY401	750 mm Faraday Enclosure Post and Side Shelf Adapter	$154.90	Today

25 mm Rail System Adapter Plate Kit

PSY404

The PSY404 Adapter Plate Kit allows our range of 25 mm construction rails and accessories to be attached to the inside edge of the Faraday enclosure frame, as shown in the photo to the right. This allows custom enclosure and shelving systems to be constructed. A common application of this adapter is to construct a custom mounting structure within the Faraday enclosure that does not disturb the vibration-isolated experiment.

Click to Enlarge
Steps to Secure a 25 mm Rail System Inside a
Faraday Enclosure

The adapter plate kit includes two adapter plates, two countersunk 1/4"-20 screws, and two countersunk M6 screws. Each kit allows the user to attach two 25 mm construction rails to the Faraday enclosure frame or to attach one 25 mm construction rail at both ends. The inclusion of imperial and metric screws permits both imperial and metric rail systems to be constructed.

For details on how to install the rails, please see the image to the right. In Figure 1, a countersunk 1/4"-20 screw from the kit is used to attach the adapter plate to one end of a 25 mm rail. Figure 2 shows two XE25T3 Low-Profile T-Nuts (our XE25T1 Drop-In T-Nuts can also be used) slipped into the frame. In Figure 3, the T-nuts allow the adapter plate to be attached to the rail using two user-supplied 1/4"-20, 3/8" long or M6 x 1.0, 10 mm long screws. One example of a possible final arrangement is shown in Figure 4.

Part Number	Description	Price	Availability
PSY404	Faraday Enclosure Adapter Plate Kit for 25 mm Construction Rails	$47.74	Today

Faraday Cage Shielding Effectiveness