



S6 USER MANUAL

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S6 RECEIVER TABLETOP CONFIGURATION

PART # 310 122 100 / 310 113 447

The standard S6 receiver is a stand-alone tabletop unit that can be mounted directly to any horizontal surface. Additionally, we offer two S6 receivers with a 15" or 20" platform with four rubber feet that can safely sit on top of any surface. The rubber feet can be removed to enable a permanent tabletop mount.

TOOLS REQUIRED

- Drill
- Hardware Kit, VPC Part # 310 113 447 (#8-32 Hardware, ⁹/₆₄ Allen Wrench)

RECEIVER MOUNTING

1. Drill four thru holes in a mounting surface for a #8 screw at the locations shown in **Figure A**.

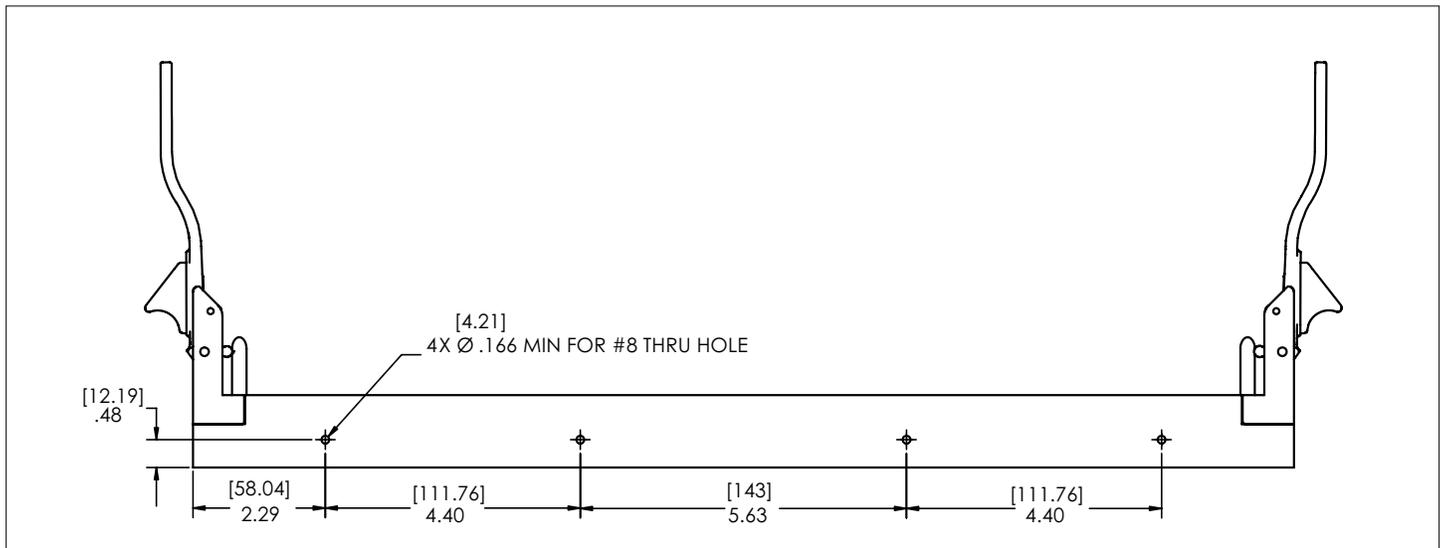


Figure A. Locations for drill holes.

2. Attach the S6 receiver to the tabletop with #8-32 screws and washers. Hardware is included with the rear cover, Part # 310 113 431. See **Table 1** to determine the proper screw length for your table.

Table 1. Measure the table thickness and use the table to choose the correct screw

SCREW	TABLE MAX	TABLE MIN
2" *	1 5/8"	1 1/2"
1 3/4"	1 3/8"	1 1/4"
1 1/2"	1 1/8"	1"
1 1/4"	7/8"	3/4"
1" *	5/8"	1/2"
3/4"	3/8"	1/4"
1/2" *	1/8"	0"

Dimensions shown: [millimeters]
inches

*Screw included in hardware kit, Part # 310 113 447

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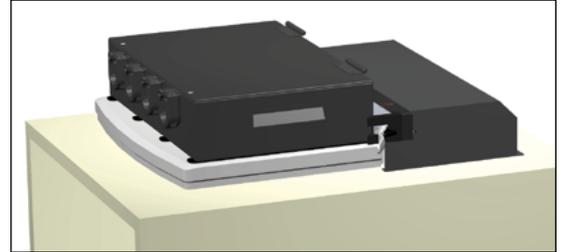
S6 RECEIVER, WITH PLATFORM, TABLETOP CONFIGURATION

PART # 310 122 110 / 310 122 111 / 310 113 444 / 310 113 446

TOOLS REQUIRED

Drill

Hardware Kit, VPC Part # 310 113 446 (1/4-20 Hardware, 3/16 Allen Wrench)

**RECEIVER WITH PLATFORM MOUNTING**

1. Prepare the mounting surface using the dimensions provided in **Figure A** and drill 0.257" [6.53 mm] minimum thru holes.

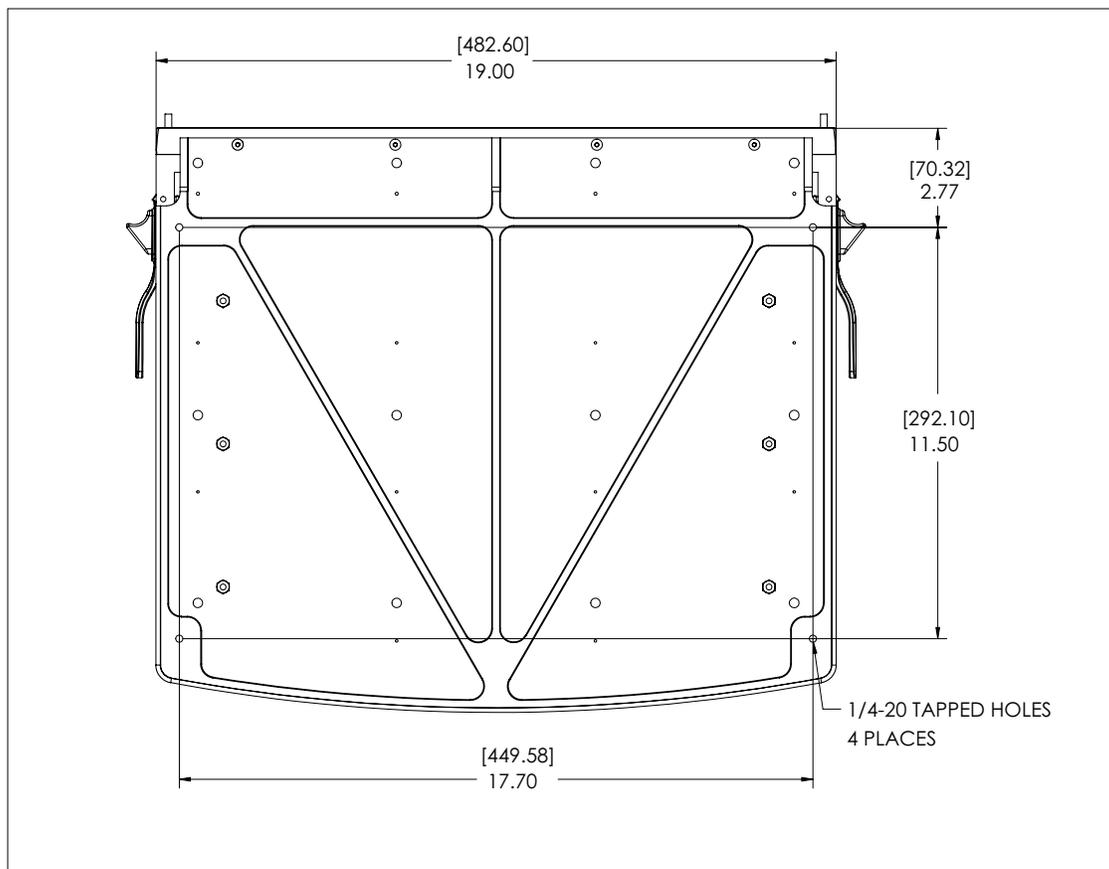


Figure A. Locations for drill holes.

2. Secure the receiver with platform to the tabletop with 1/4-20 screws and washers. The hardware kit supplied in the rear cover, Part # 310 113 444, will accommodate table thicknesses between 1/8" and 1 3/8".

Dimensions shown: [millimeters]
inches

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TABLETOP CONFIGURATION ACCESSORIES

REAR COVER, S6, RECEIVER MOUNT • PART # 310 113 431

REAR COVER, S6, PLATFORM MOUNT • PART # 310 113 444

Rear covers are used to protect the wiring from the tabletop mounted receiver to the instruments. Rear covers are available in two heights based on your tabletop mounting configuration and include necessary hardware to attach the S6 receiver to the tabletop.



TOOLS REQUIRED

$\frac{3}{32}$ Allen Wrench

REAR COVER INSTALLATION

1. Use the provided #8-32 screws and washers to attach the rear cover to the S6 receiver (**Figure A**).

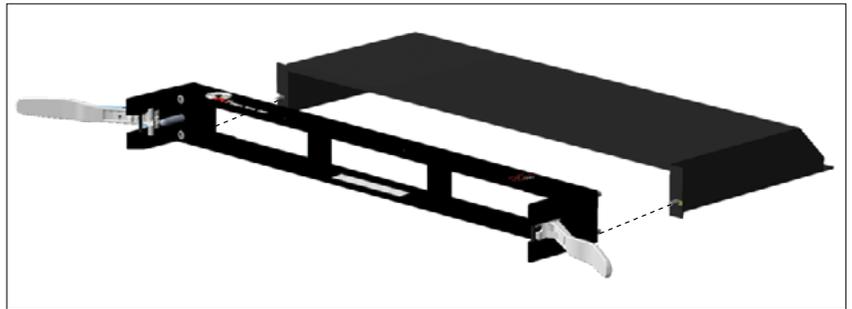


Figure A. Rear cover, Part # 310 113 431, is designed to attach to the S6 receiver, Part # 310 122 100.

OPTIONAL INSTALLATION

1. Rear covers can be permanently mounted to the tabletop using the dimensions provided in **Figure B**. Hardware is not included.

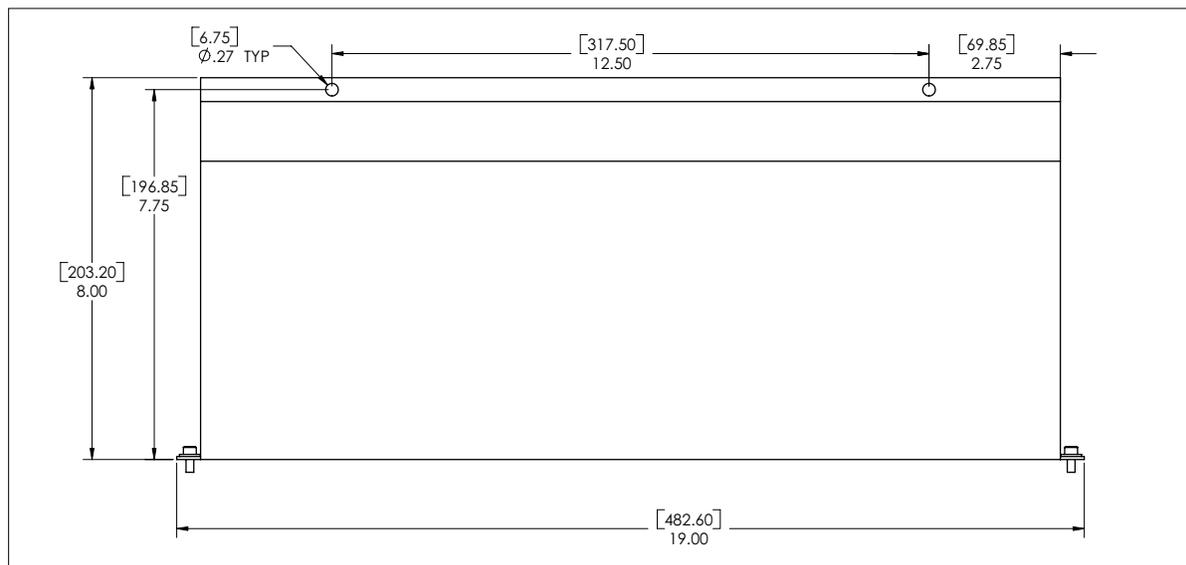


Figure B. The mounting dimensions are the same for both versions of the rear cover.

SLIDE CONFIGURATION

- 20" SLIDE KIT (FITS 18" – 22" DEEP RACKS [508 - 558.8]) • PART # 310 113 409
- 24" SLIDE KIT (FITS 22" – 26" DEEP RACKS [609.6 - 660.4]) • PART # 310 113 410
- 28" SLIDE KIT (FITS 26" - 30" DEEP RACKS [711.2 - 762]) • PART # 310 113 451
- 30" SLIDE KIT (FITS 28" – 32" DEEP RACKS [762 - 812.8]) • PART # 310 113 411
- 36" SLIDE KIT (FITS 34" – 38" DEEP RACKS [863.6 - 965.2]) • PART # 310 113 500

Slides can be used with the S6 receiver with 15" or 20" platform (Part # 310 122 101/108). Choose your slide kit based on the distance from rail to rail and verify that the slides will not interfere with the rack enclosure. Each kit will support 180 lbs.

TOOLS REQUIRED

Phillips Head Screwdriver
Flat Head Screwdriver
³/₃₂ Allen Wrench

DETERMINE YOUR SLIDE KIT

- Measure dimension A as shown in **Figure A** to determine the proper slide kit.
NOTE: Make sure the slide length does not exceed dimensions A plus B.

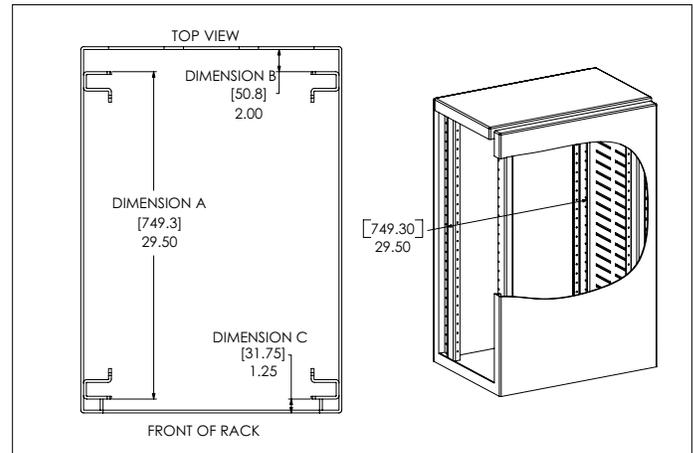
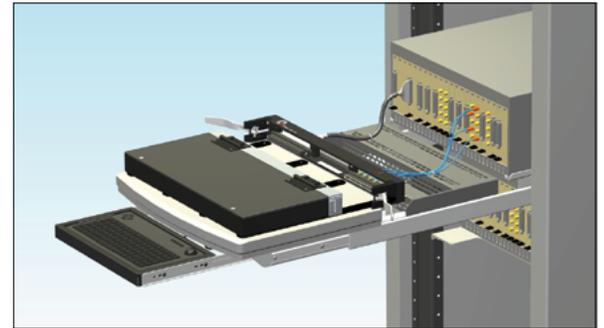


Figure A. If dimension C exceeds 1" use the Rack Extender Kit, Part # 310 113 430.

INSTALLATION

- Install slides using manufacturer's instructions. A hard copy is included with the slide kit.
(www accuride.com/Resources/pdf/3507-r4-0309.pdf)
- Attach platform mounting brackets to slides (**Figure B**).
NOTE: The screws will overhang the bracket holes by 3/8". These screws will also be used to mount an optional keyboard tray kit, Part # 310 113 439.

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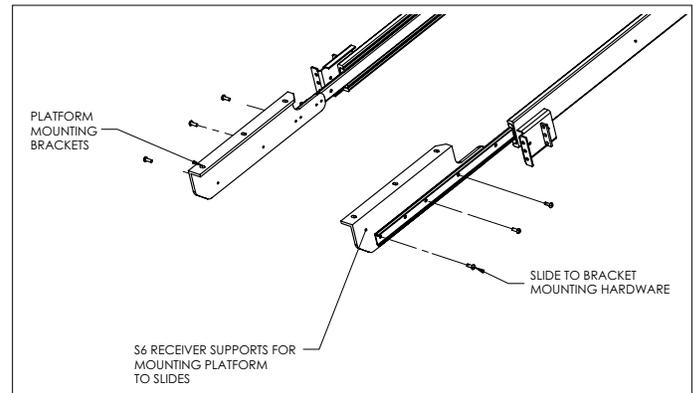


Figure B. The platform mounting brackets are threaded, washers and nuts will not need to be locked.

SLIDE CONFIGURATION

- 20" SLIDE KIT (FITS 18" – 22" DEEP RACKS [508 - 558.8]) • PART # 310 113 409
- 24" SLIDE KIT (FITS 22" – 26" DEEP RACKS [609.6 - 660.4]) • PART # 310 113 410
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3. Remove the rubber feet.
4. Attach the S6 platform to the platform mounting brackets (**Figure C**).
NOTE: If you are installing a cable tray or instrument brackets, do not attach the platform until those accessories are installed.
5. Pull the receiver out as far as possible. The slides will lock in position. Push the blue tabs located on the middle section of the slides (**Figure D**). Apply pressure to push the receiver back in toward the rack. The smaller inner slides move into the middle section, which should not move. Push receiver until it backs into the rack. The mounting screws can now be used.

ALWAYS SUPPORT THE RECEIVER AND PLATFORM WITH THE MOST ROBUST (MIDDLE) SECTION OF THE SLIDES.



To ensure proper support when extending the receiver and table away from the rack, stop the receiver and platform at around 6" from the rack. Reach around to the rear of the receiver to the slides underneath on both sides. Manually extend the middle section of the slides forward until fully underneath the platform. The receiver and platform may then be extended while holding this middle slide in place. If completed properly the middle section of the slides will remain underneath the platform and offer the strongest support.

6. Secure receiver to rack. See Rack Mount Configuration section for rotation block removal.

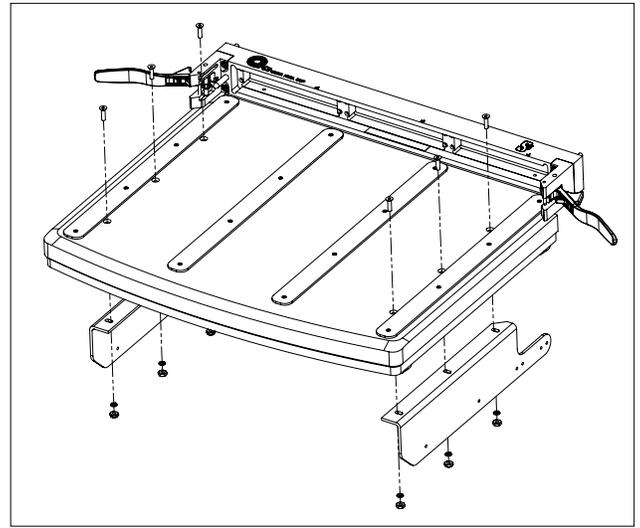


Figure C. Use the existing #8-32 flat head screws, washers, and hex nuts to secure the platform to the brackets.

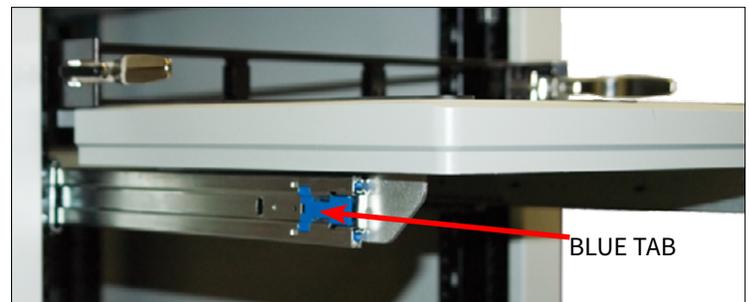


Figure D. The slides will support 180 pounds, however VPC recommends removing the ITA/Fixture when extending the slides for wiring access and maintenance.

SLIDE CONFIGURATION ACCESSORIES

RACK EXTENDER KIT, G12, 4" DEEP • PART # 310 113 430

The S6 is designed to easily fit 19" standard racks when used in the slide configuration. Although mounting rail dimensions are standardized, there may be variances in the rack enclosure design. VPC offers a rack extender kit for rails that are recessed more than 1". The Rack Extender Kit has a maximum depth of 4".



TOOLS REQUIRED

$\frac{5}{32}$ Allen Wrench
Phillips Head Screwdriver

INSTALLATION

1. To determine if a Rack Extender Kit is needed, verify that the distance between the front of the rack enclosure and the rail is between 1" and 4" (**Figure A**).
2. Attach the mounting rack mating surface on the extender brackets to the recessed rail with the cap screws. Do not fully tighten until the cover plate is attached.
3. Attach the cover to the brackets with the flat head screws.
4. With the extender kit in place, secure the S6 receiver to the mating surface on the extender brackets with #10-32 cap screws.
NOTE: The #10-32 cap screws are provided with the S6 receiver.

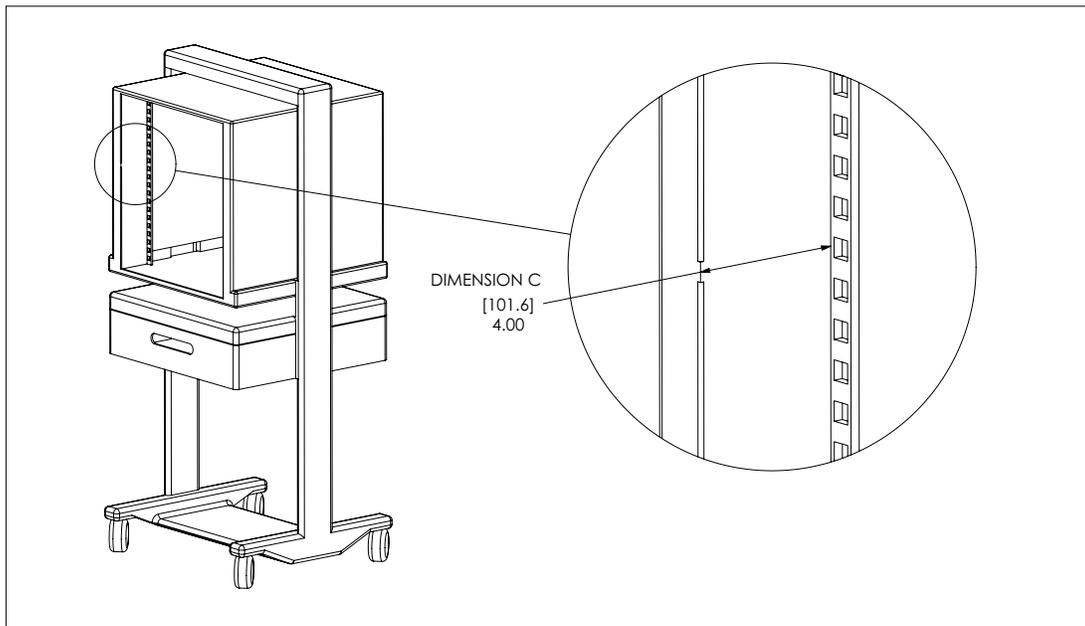


Figure A. Rack Extender Kits are used when the rails are recessed more than 1".

Dimensions shown: [millimeters]
inches

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SLIDE CONFIGURATION ACCESSORIES

INSTRUMENT BRACKET KIT • PART # 310 113 453

The instrument brackets mount to the inner slide and provide maintenance access to the chassis and the instruments.

NOTE: This instrument bracket kit does not work with the 20" or 24" slide kits.

TOOLS REQUIRED

$\frac{5}{32}$ Allen Wrench
Phillips Head Screwdriver

INSTALLATION

1. Depress the blue tab on the inner slide and remove.
2. Attach one of the brackets to the slide using three #8-32 button head screws. The left bracket assembly is shown in **Figure A**.
3. Attach the remaining bracket to the other inner slide. If you are also installing a cable tray, do so before reinstalling the slides and attaching the plate. See Cable Tray Installation instructions in this section.

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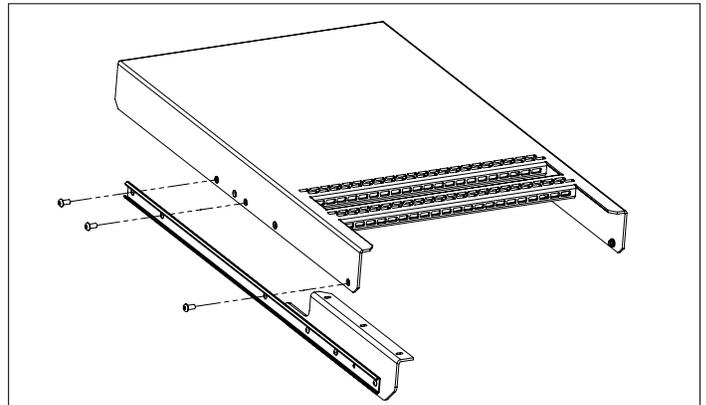


Figure A. The brackets are identical parts and only the front two holes on each bracket are designed to line up with the slides.

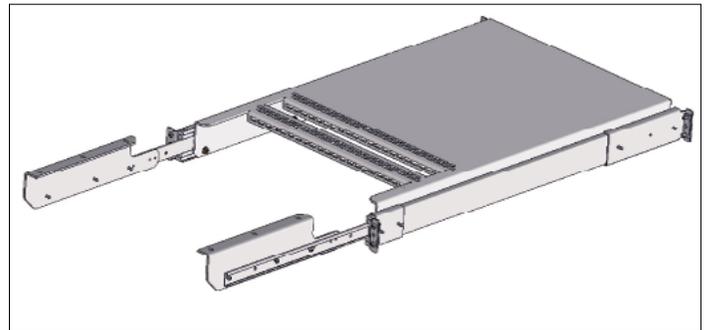


Figure B. The slots on the instrument brackets are designed to accept a strap should you want to secure your chassis.

SLIDE CONFIGURATION ACCESSORIES

INSTRUMENT BRACKET KIT • PART # 310 113 453

5. Reinstall the inner slides.
 - Slide the left mid-section of the slide all the way out, you will feel it lock into position.
 - Feed the matching inner slide into position and ensure the inner section rides into place with the roller bearings seated into the groove.
 - Push the inner slide in about 6-8 inches and then pull out the right side. Slide the track of the mid-section over the right side of the inner slide.
 - Pull the slide out until the position matches the left side.
 - Reach to the back of the middle slides and release the spring locking mechanism (**Figure C**).

NOTE: At this time, both sides should be partially installed when it will no longer proceed into the rack because the support tab on the instrument brackets will hit the slide mounting bracket.

6. Rotate both instrument brackets inward so the support tabs can pass the mounting brackets. Continue to push (install slides simultaneously) into position. Remember to push the blue tabs to allow the inner slide to continue to travel into the middle slide section.

NOTE: The middle section will not go into the outer section until the inner section has been fully installed into the middle section.

7. Tighten the slide mounting screws.

MAKE SURE ALL SCREW HEADS HAVE BEEN SECURELY TIGHTENED. ONLY USE 8-32 BUTTON HEAD SCREWS.

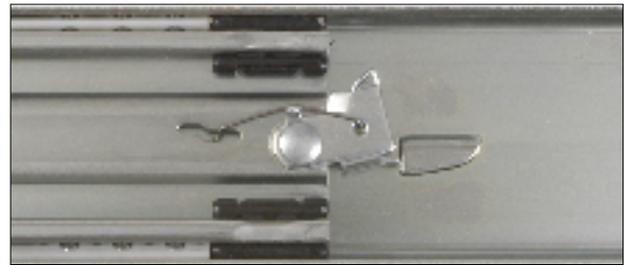


Figure C. Spring-locking mechanism.

SLIDE CONFIGURATION ACCESSORIES

CABLE TRAY ASSEMBLY • PART # 310 113 424

The cable tray is used for strain relief and cable management. The horizontal and vertical flanges provide tie down options that allow you to bend and route your cables as needed and also present a secure and reliable way to protect your investment.

NOTE: The cable tray kit does not work with the 20" or 24" slide kits.



TOOLS REQUIRED

³/₃₂ Allen Wrench

CABLE TRAY INSTALLATION

1. Loosen the slide mounting screws by one turn.
2. Depress the blue tab and remove the inner slides.
3. Attach the cable tray to the slides with #8-32 screws as shown in **Figure A**.

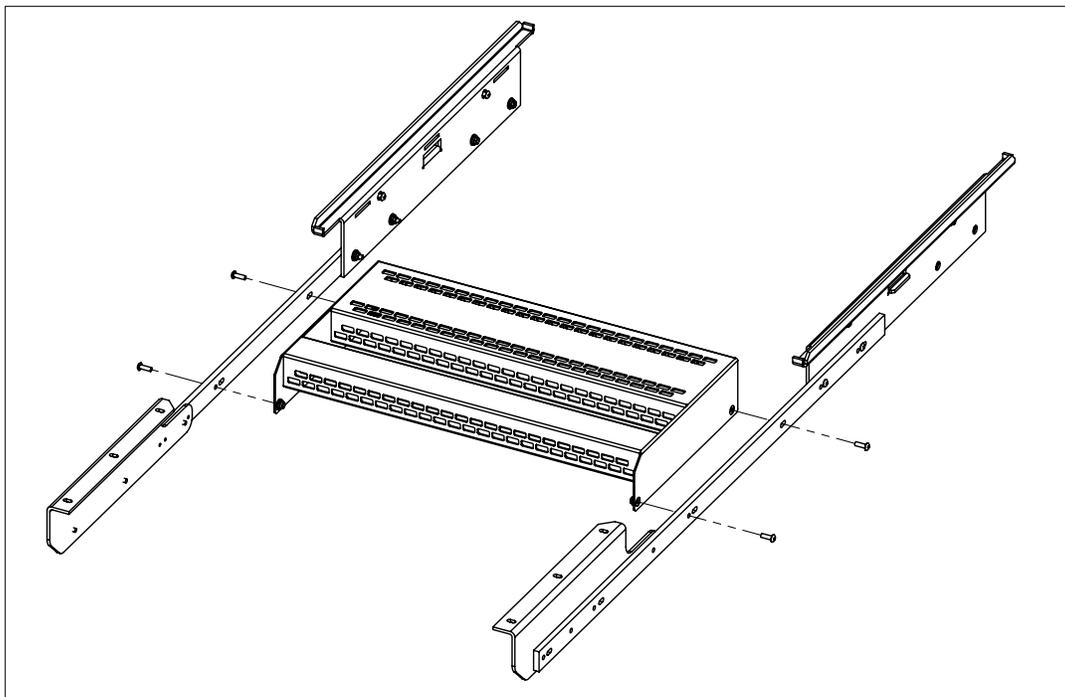


Figure A. The angled side of the cable tray should face the S6 receiver, and with shorter slide kits the cable tray will sit below the lip of the instrument brackets.

4. Install the inner slides and cable tray assembly into the rack. See Instrument Bracket Installation instructions in this section for more detail.
5. Tighten the slide mounting screws.

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SLIDE CONFIGURATION ACCESSORIES

KEYBOARD TRAY KIT • PART # 310 113 439

The Keyboard Tray Kit mounts below the 15" platform on the slide-mounted S6 receiver. The kit includes a keyboard with touchpad and 58" long USB connector, keyboard tray, and 12" slides.



TOOLS REQUIRED

$\frac{3}{32}$ Allen wrench

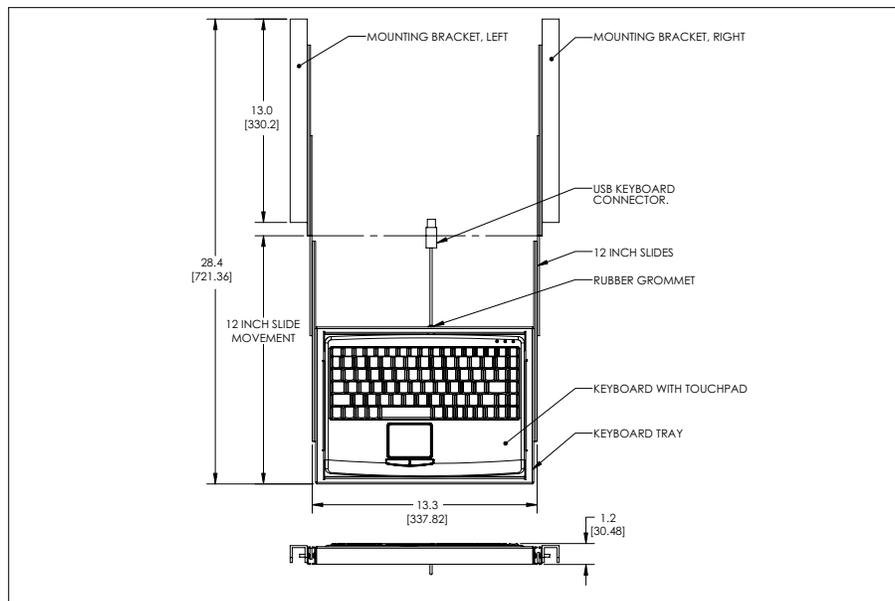


Figure A. Keyboard Tray Kit, Part # 310 113 439, includes components listed above and mounting hardware.

INSTALLATION

1. Attach the keyboard mounting brackets to the existing platform mounting brackets. Use the #8-32 nuts and lock washers to secure the keyboard mounting brackets to the three screws extending from the platform mounting brackets (**Figure B**).

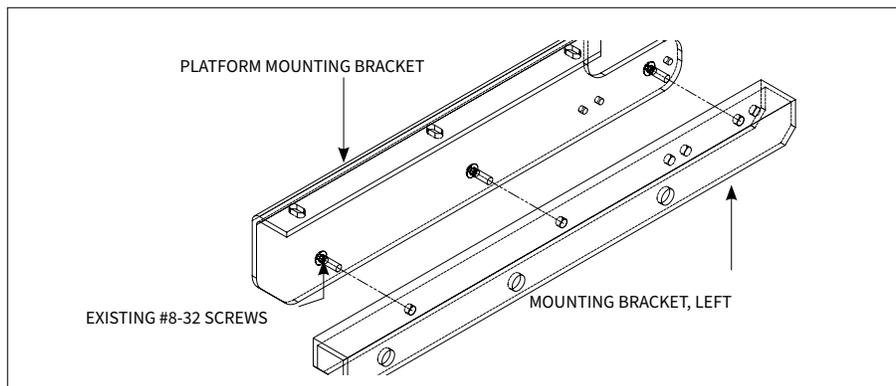


Figure B. Orient the keyboard mounting brackets to align with the three screws that extend beyond the platform mounting bracket.

SLIDE CONFIGURATION ACCESSORIES

KEYBOARD TRAY KIT • PART # 310 113 439

- Use the #8-32 button head screws to attach the 12" slides to the inner side of the keyboard brackets. The manufacturer stamped identification on the slides should be placed toward the rack. Adjust the position of the slides to access the hole locations. Hole locations are shown in **Figure C**.

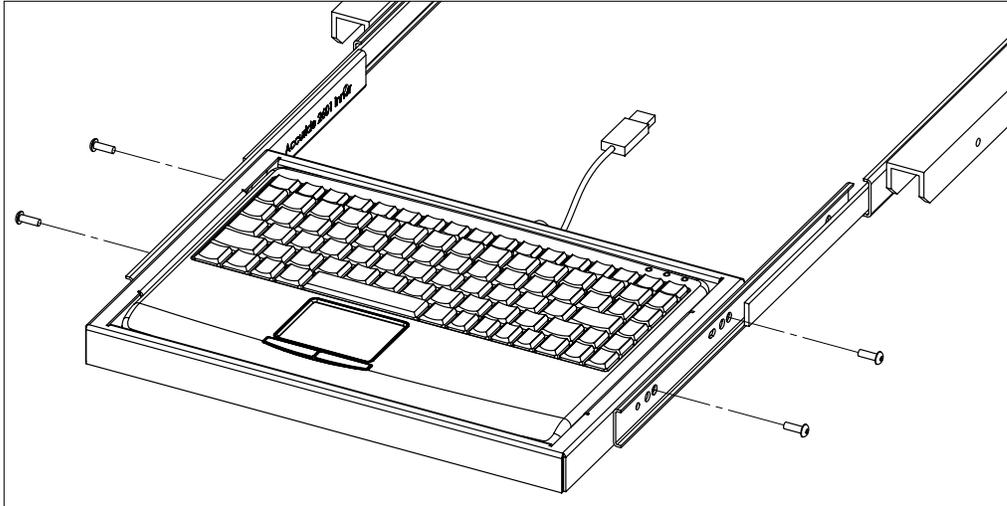


Figure C. There are floating, self-locking fasteners in the keyboard mounting brackets which prevent the screws from backing out. You will notice the snug fit when tightening the screws.

- Insert the keyboard into the keyboard tray. Wrap the plastic strain relief around the cable near the back of the keyboard and press into the hole provided on the keyboard tray.
- Fully extend the 12" slides and mount the keyboard tray (**Figure D**). The different hole patterns allow for variations in the overall extension of the keyboard tray.

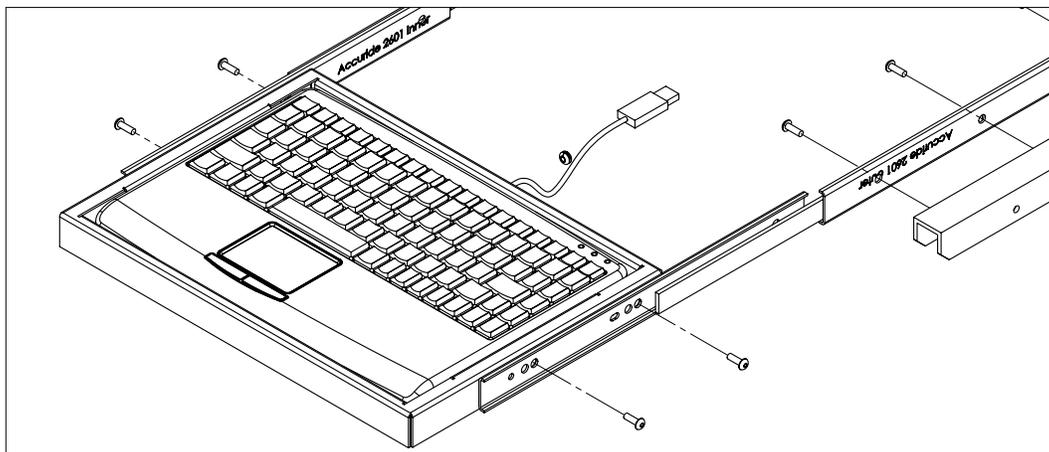


Figure D. The remaining four #8-32 button head screws are used to attach the keyboard tray to the slides.

RACK MOUNT CONFIGURATION

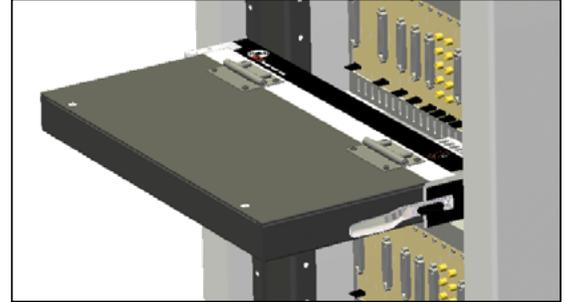
RECEIVER, S6, 6 MODULE • PART # 310 122 100

The S6 receiver is ideal for consolidating multiple test instruments while only occupying 1U of rack space. To mount the S6 receiver to a 19" rack, the rotation blocks must be removed to access the rack mounting holes. The S6 receiver will support ITA/fixture weight of 50 lbs at 6".

NOTE: Always remove left and right rotation blocks prior to shipping.

TOOLS REQUIRED

$\frac{5}{32}$ Allen Wrench



INSTALLATION

1. Remove the four #10-32 screws and then remove the rotation blocks (**Figure A**).

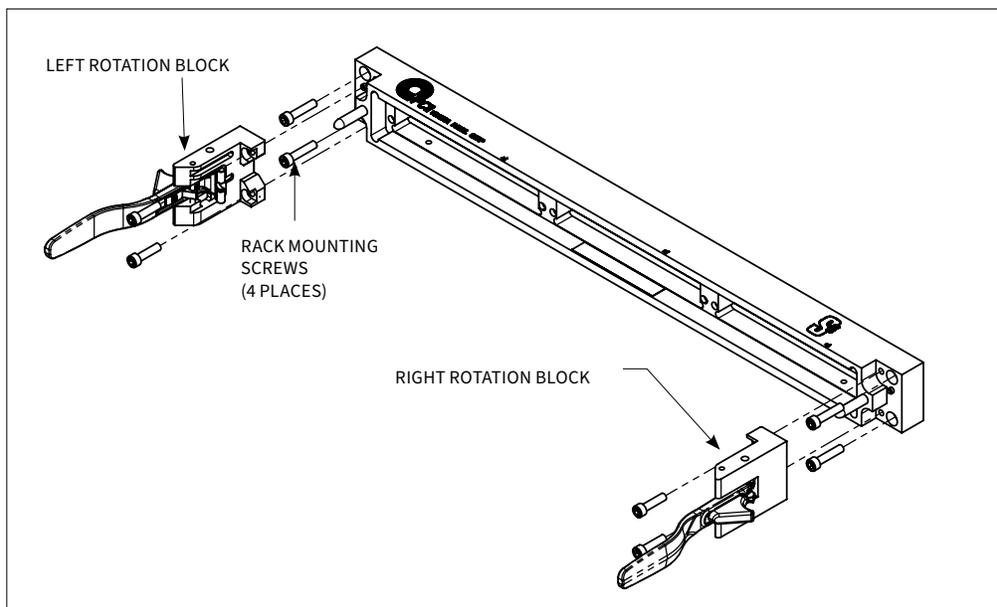


Figure A. If the rails in your rack are not tapped you will need to purchase #10-32 cage nuts. **NOTE:** If you use metric hardware you may replace the provided #10-32 screws with M5 screws.

2. Insert the rack mounting screws in the four holes provided (**Figure A**).
3. Reinstall the rotation blocks. **Figure B** shows a keying feature that ensures proper replacement of the rotation blocks.



Figure B. The rotation blocks were also designed with a tongue and groove feature to prevent placing the ITA in upside down.

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RACK MOUNT CONFIGURATION ACCESSORIES

RACK EXTENDER KIT, S6 • PART # 310 113 430

The S6 is designed to easily mount to 19" standard racks. Although mounting rail dimensions are standardized, there are variances in the rack enclosure design that are not subject to standardization. Because of this we offer a rack extender kit for cases where the rail is recessed more than 1".

TOOLS REQUIRED

$\frac{5}{32}$ Allen Wrench
Phillips Head Screwdriver
Flat Head Screwdriver

INSTALLATION

1. Verify the distance from the front of the rack enclosure to the rail is between 1" and 4" (**Figure A**).
2. Attach the mounting rack mating surface on the extender brackets (**Figure B**), to the recessed rail with the cap screws. Do not fully tighten until the cover plate is attached.
3. Attach the cover to the brackets with the flat head screws.
4. With the extender kit in place, secure the S6 receiver to the S6 receiver mating surface on the extender brackets with #10-32 cap screws. *NOTE: The #10-32 cap screws are provided with the S6 receiver.*

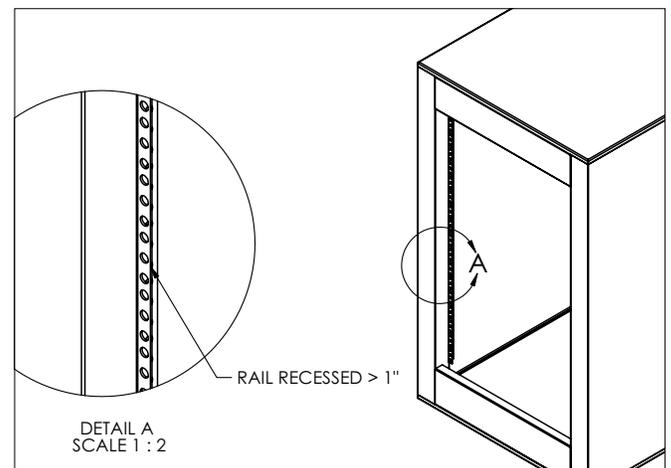
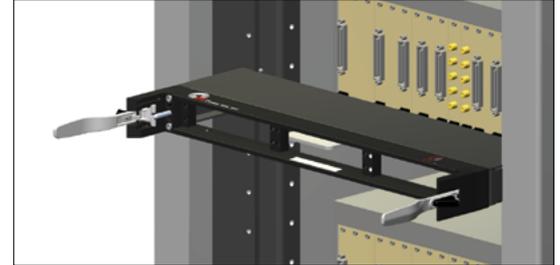


Figure A. The extender kit will add 4" from the mounting rail to accommodate for variations in the rack enclosure.

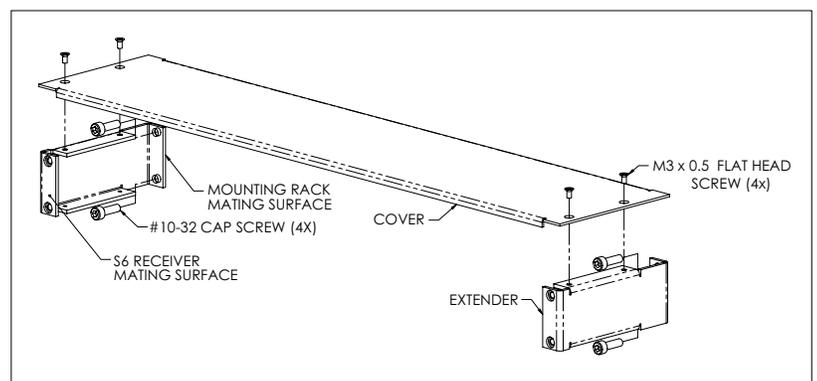


Figure B. Once the extender bracket is installed, the cover plate will need to be removed in order to extend the slides.

ITA ENCLOSURES

ENCLOSURE, S6, 1.75x18x8 • PART # 410 112 701

ENCLOSURE, S6, 4x18x12 • PART # 410 112 703

ENCLOSURE, S6, 1.75x18x8 FOR DISCRETE WIRING • PART # 410 112 702

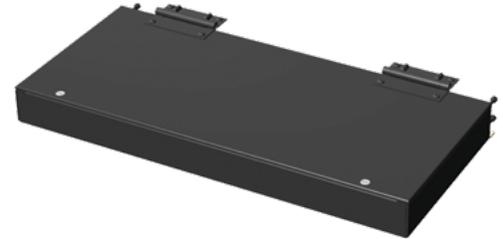
ENCLOSURE, S6, 4x18x12 FOR DISCRETE WIRING • PART # 410 112 712

The front mounting S6 enclosures are available in varying sizes to meet your needs. Enclosures for discretely wired systems include four access points with cable clamps to streamline your wiring.

TOOLS REQUIRED

3 mm Allen Wrench

Phillips Head Screwdriver



INSTALLATION

1. Attach the provided M4 screws as shown in **Figure A**.

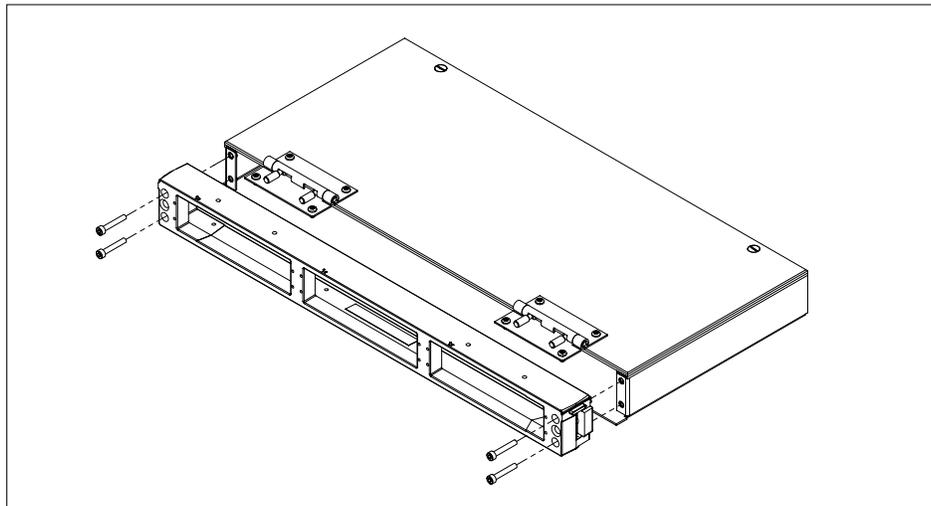


Figure A. Use the 3mm Allen wrench to tighten the front screws.

2. Secure the bottom of the enclosure to the bottom of the ITA with the four M3 screws (**Figure B**).
3. Finish the assembly by installing the remaining 4 screws through the hinge into the top of the ITA (**Figure C**).

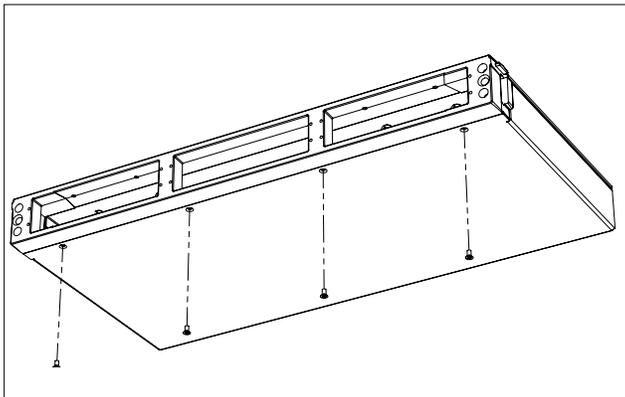


Figure B. Use a small Phillips head screwdriver to tighten the bottom screws.

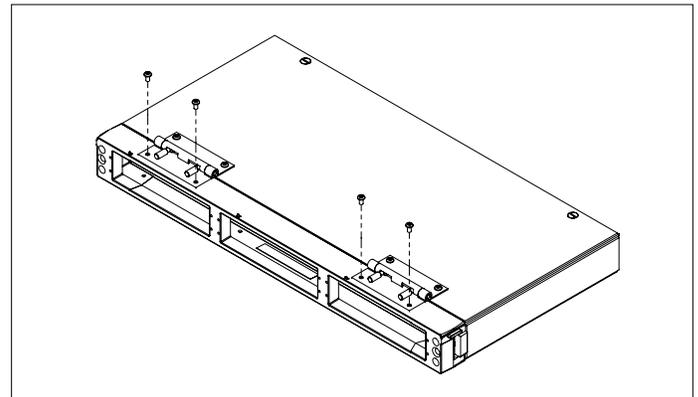


Figure C. Omit this step for enclosures taller than 1.75".

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PLATFORM REMOVAL

15" PLATFORM KIT, S6 • PART # 310 113 435

20" PLATFORM KIT, S6 • PART # 310 113 525

The S6 platform is removable for transport purposes. The platform is secured to the receiver by four screws located on the underside of the unit. A Platform Kit is also available to update your S6 receiver to an S6 receiver with 15" or 20" Platform.



TOOLS REQUIRED

$\frac{3}{32}$ Allen Wrench

$\frac{11}{32}$ Wrench

REMOVAL

1. Remove the six mounting brackets screws (**Figure A**).

NOTE: This step is only necessary if the S6 receiver is mounted to the slides.

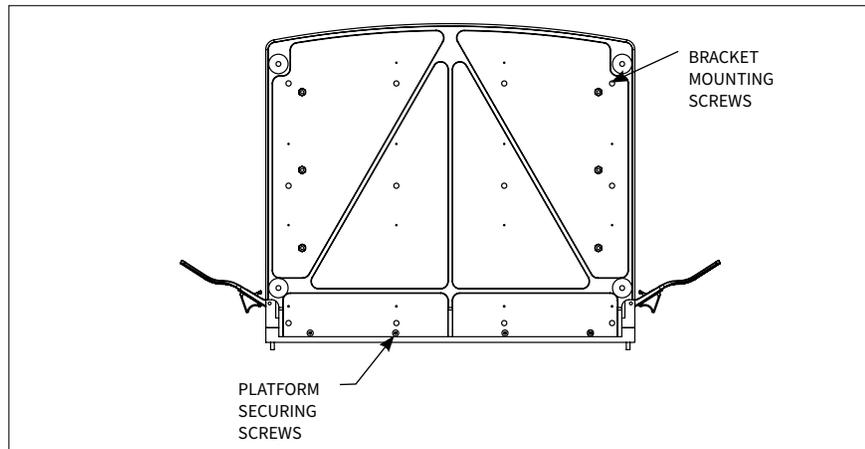


Figure A. Support the platform when removing the screws to prevent accidental dropping of the platform.

2. Loosen the platform securing screws, shown in **Figure B**. Be careful not to lose the spacer between the platform and receiver.

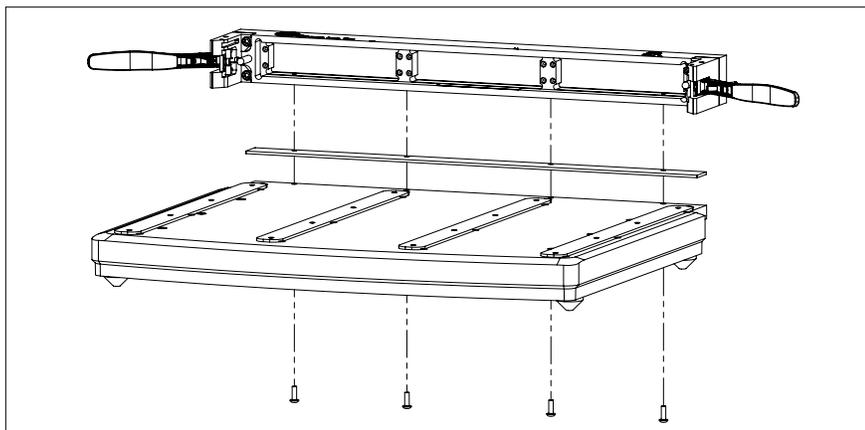


Figure B. Platform installation is the reverse of the removal.

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ITA & RECEIVER ENGAGEMENT

Prior to engaging an ITA with the receiver for the first time, ensure all modules (ITA and receiver) are properly installed. This involves inspection of modules to ensure proper mounting and to verify module positioning. Module positions are shown in **Figure A**. Modules must be installed such that Pin 1 of each respective mating receiver and ITA module pair are adjacent. VPC recommends that Pin 1 always be positioned to the left in the receiver and ITA frames. All ITA Modules must match the respective receiver Modules. It is crucial for all modules to be installed properly.

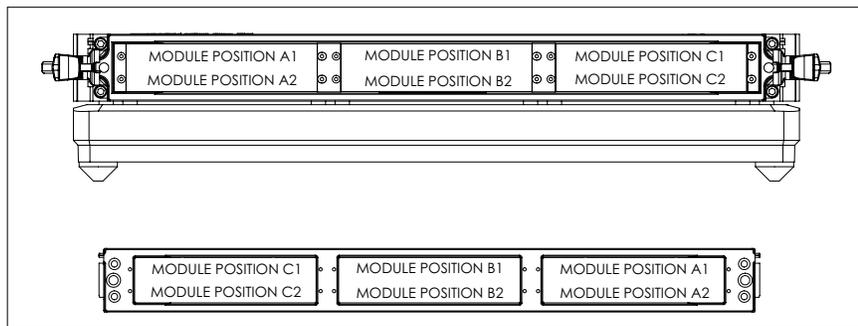


Figure A. Screening on top of the S6 receiver and ITA also indicate these module positions.

1. The receiver should be checked for any foreign objects that may interfere with engagement.
2. After inspection, the ITA is ready for engagement with the receiver. The ITA should be properly positioned relative to the receiver guide pins. Ensure that the tongue and groove style features on the sides of the receiver are aligned properly. Push the ITA into the receiver evenly. Do not push the ITA in at an angle.
3. Carefully rotate the handles inward toward the ITA to actuate the receiver engagement mechanisms, which will draw the ITA into engagement position with the receiver. Once the handles reach a positive stop at the end of their travel the modules are engaged. Do not rotate the handles independently to avoid engaging the ITA at an angle.
4. Upon completing use of the ITA, push in slightly on handles and then pull the trigger style latches on the handles and rotate the receiver handles to the open position and remove the ITA. Reinstall the receiver protective cover and rotate the handles to the closed position.
5. Always protect the contacts when the system is not in use. The receiver contacts are protected when either the ITA or receiver protective cover is engaged. VPC recommends use of both receiver and ITA protective covers to avoid potential contact damage.



IMPROPER INSTALLATION WILL DAMAGE THE MODULES, AND POSSIBLY THE ITA AND/OR RECEIVER.

IN THE EVENT OF COMPLICATIONS, A TRAINED TECHNICIAN SHOULD BE NOTIFIED IMMEDIATELY TO AVOID ANY DAMAGE TO THE SYSTEM. THIS APPLIES TO ANY DIFFICULTIES THAT MAY BE EXPERIENCED DURING ENGAGEMENT.

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TROUBLESHOOTING

ITA Frame is not lined up when in the process of engagement with receiver

- This may indicate that the ITA is out of alignment or that a module is not mating with its intended module.
- Remove and inspect the ITA for alignment
- Check for foreign objects/tools.
- Inspect the matching of modules - power ITA module to mate with power receiver module, etc.

Excessive force is needed to engage the Handles

- This may indicate that the ITA is out of alignment or that a module is not mating with its intended module.
- Remove and inspect the ITA for alignment. Contact Virginia Panel Corporation – unauthorized user adjustments to system will void the warranty.
- Check for foreign objects/tools.
- Contact damage may provide enough resistance to notice. Upon replacing a contact in the ITA, the mating contact on the receiver side should also be inspected and replaced if necessary.
- Verify the orientation of the receiver and ITA Modules.
- Inspect the matching modules - Power ITA module to mate with power receiver module, etc.

ITA will not engage with the receiver after diagnosing the above problems

- Contact Virginia Panel Corporation – unauthorized user adjustments to the system will void the warranty.

No continuity upon engagement

- When replacing an ITA contact, the mating contact on the receiver side should also be inspected and replaced if necessary.
- Check wiring - replace if necessary.
- Contact not secured in module.
- A contact may be damaged. Visually check all contacts for damage to potentially isolate damaged pin prior to checking for continuity with a multi-meter.

A “short ” in the wiring upon engagement

- A damaged contact(s) may cause high resistance. Upon replacing a contact in the ITA, the mating contact on the receiver side should also be inspected and replaced if necessary.
- Check wiring - replace if necessary.

Receiver and ITA will not disengage

- This may indicate that the engagement mechanism within the receiver is faulty -contact Virginia Panel Corporation immediately- user adjustments to system, unless authorized, will void the warranty.



FORCEFUL ENGAGEMENT OF THE RECEIVER AND THE ITA WILL RESULT IN SERIOUS DAMAGE TO MULTIPLE PARTS OF THE SYSTEM (MODULES, RECEIVER, ITA AND CONTACTS)!

PRECAUTIONARY NOTES

The following is a listing of precautionary notes found within this manual and otherwise. They should be noted and followed for the equipment to operate at an optimum state.

- Never probe a contact without using a mating patchcord as a test lead.
- Never forcefully engage a system if there is an excessive amount of resistance on the handles.
- Never allow an ITA to drop as this may cause misaligned engagement and/or irreparable damage.
- Always insert and extract a contact insertion/extraction tool in line with the contact. Never apply pressure to the side as this may break either contact or tool. This also applies to forming and enlarging tools.
- It is advisable that power to the Interface System be disconnected prior to handling and maintenance.
- Caution should always be used when engaging, making sure that all foreign objects are removed from the system.
- The foremost precautionary step that needs to be taken is to protect the interface system from damage caused by people (bumping into the receiver/ ITA assembly with a box, chair or electronic equipment for example). To prevent this, VPC recommends engaging either the ITA or the receiver protective cover to the receiver when not in use.