



Frequently Asked Questions “General Questions” Edition

This document is a searchable .pdf of general questions and answers about owning and operating a SkyShed POD-S (all models).

It is not broken down into chapters because many of the topics overlap. If you are curious about, or planning on owning a SkyShed POD-S, we HIGHLY recommend that you read the entire document.

Once you have read it, use it as a handy reference in the future. Utilize your .pdf reader's Search tool, to search for keywords or phrases contained in the questions and answers. Examples; door, dome, Bay, dimensions, etc.

We will be releasing a complimentary document soon. It contains a “deeper dive” into many of the key questions. Those who are on the POD-S “I’m Interested” List will be notified when that document is published, and provided with a download address.

Clear Skies!

Wayne Parker

February, 2023

Table of Contents:

- [HOW MUCH WILL THESE NEW MODELS COST, AND WHEN WILL THEY SHIP?](#)
- [WHAT ARE THE OVERALL DIMENSIONS OF POD-S?](#)
- [HOW HIGH IS THE DOORWAY WITH THE TALLER WALL OPTION?](#)
- [WHAT ARE THE SLOT OPENING DIMENSIONS OF POD-S?](#)
- [WHAT SIZE OF BASE DO I NEED?](#)
- [WHAT KIND OF BASE CAN I USE FOR A POD-S?](#)
- [CAN I PUT POD-S ON A ROOF OR TOWER?](#)
- [HOW MUCH DOES A POD-S WEIGH?](#)
- [HOW DO I ANCHOR THE WALL DOWN?](#)
- [DO I HAVE TO HAVE BAYS WITH THE POD-S DOME?](#)
- [WHAT SIZE TELESCOPE WILL FIT/OPERATE IN A POD-S W/ TALLER WALL?](#)
- [WHAT SIZE OF MOUNT WILL WORK A POD-S?](#)
- [HOW LOW IN THE SKY CAN I SEE WITH A POD-S?](#)
- [CAN I USE MY EXISTING SKYSHED POD PIER IN MY POD-S WITH THE NEW TALLER WALL/BAYS?](#)
- [CAN I MIX-AND-MATCH POD AND POD-S DOMES AND WALLS/BAYS?](#)
- [WHY DOES POD-S WITH TALLER WALL/BAYS SEEM SO MUCH LARGER INSIDE THAN THE ORIGINAL POD DOME AND WALL/BAYS?](#)
- [TELL ME MORE ABOUT THE MATERIAL USED TO MAKE POD AND POD-S](#)
- [CAN POD-S HANDLE HIGH WINDS?](#)
- [CAN I RE-USE MY POD COVER ON MY POD-S? WILL THERE BE A COVER AVAILABLE FOR POD-S?](#)
- [HOW MANY PEOPLE, AND HOW MUCH TIME DOES IT TAKE TO ASSEMBLE A POD-S?](#)
- [HOW MUCH A.C. POWER IS REQUIRED FOR THE MOTORIZED POD-S DOME SYSTEM?](#)
- [HOW DOES THE DOME MOTOR SYSTEM WORK?](#)
- [IS A COMPUTER REQUIRED TO OPERATE THE DOME W/ MOTORS?](#)
- [WHAT KIND OF COMPUTER DO I NEED?](#)
- [CAN I USE A NON-WINDOWS COMPUTER?](#)
- [CAN I USE MY ACME "HUB" / ALL-IN-ONE NIFTY GADGET WITH THE SHINY ANODIZED BLING BOX?](#)
- [CAN I OPERATE POD-S REMOTELY?](#)
- [CAN I USE THE DOME MANUALLY, W/O MOTOR SYSTEM?](#)

- CAN I MIX-AND-MATCH POD AND POD-S DOMES AND WALLS/BAYS?
- CAN I ADD THE NEW POD-S DOME AND MOTOR SYSTEM TO MY EXISTING POD WALL/BAYS?
- IS THE DOME OPENING CALLED A SLOT, A SHUTTER, OR A SLIT?
- CAN I RE-USE MY POD WHEELS WITH MY POD-S DOME?
- IS THE POD "HEAVIER WALL PANEL AND HEAVIER BAYS" OPTION AVAILABLE WITH THE POD-S MARK III AND MARK IV WALL/BAYS?
- CAN I LEAVE MY SCOPE IN POD-S YEAR ROUND?
- DO I NEED TO COVER MY SCOPE IN POD-S?
- HOW HOT CAN IT GET IN A POD-S?
- WHAT ABOUT DEALING WITH COLD TEMPS, ICE AND SNOW?
- DO DOME AND WALL COLORS AFFECT INTERNAL TEMPS?
- WHY DOES IT COST MORE TO SHIP A POD-S THAN A POD?
- WHY DO I HAVE TO PRE-PAY 100% WHEN CONFIRMING MY ORDER?
- WHY DOES IT TAKE MONTHS TO GET A POD-S?
- IS POD-S AVAILABLE OUTSIDE NORTH AMERICA?
- HOW DOES THE DELIVERY PROCESS WORK?
- WHAT KIND OF MANUALS AN INSTRUCTIONS ARE INCLUDED?
- IS THERE A FLOOR IN POD-S?
- HOW DO I GET ELECTRICAL INTO THE POD-S?
- I WANT TO SELL MY EXISTING POD WALL OR DOME TO GET THE NEW ONES. CAN YOU HELP ME WITH THAT?
- WHAT SECURITY MEASURES ARE AVAILABLE FOR THE POD-S DOME'S SLOT COVER & TALLER WALL?
- WHY IS THE PULL OUT SHELF WHICH IS AVAILABLE FOR THE ORIGINAL SHORTER WALL/BAYS, NOT AVAILABLE FOR THE NEW TALLER WALL/BAYS?
- FOR POD-S MANUAL DOME OPERATION, HOW HIGH WILL THE SLOT COVER HANDLE BE WHEN OPEN, AND HOW EASY WILL IT BE TO PULL IT ACROSS THE ZENITH BEFORE INITIATING THE DOWNWARD PULL?
- WILL THERE BE A VERSION AVAILABLE WITH METRIC TOOLS, SCREWS, BOLTS, NUTS ETC.?

FAQ Questions:

[How much will these new models cost, and when will they ship?](#)

The big questions!

When?

We're currently ramping up for production beginning in late-Spring '23. The first POD-S models will ship at that time. We will continue to roll-out units thru '23 and beyond. Production numbers will increase as we get our "production-feet" under us. As it did with the original SkyShed POD.

If you're really interested, [please get in line](#) if you want to receive a unit ASAP. Production spaces for '23 and '24 are filling up quickly.

Have no fear about putting down a deposit to get in line. This tells us you're serious about a POD-S, and it will help us forecast numbers for production. You can back-out at any time and we will return your deposit.

Prices?

As we ramp up for production we are defining and refining our costs and selling prices. We have a pretty good idea about prices now, and will publish complete numbers before production begins. Those in line can decide at that time whether they want to proceed or not.

We estimate that model prices will range from about \$5K US to 10K US, depending on which model, how many Bays are included, if the motor / control option is added, etc. So about the same price as a good scope mount these days.

Those in line will receive regular progress updates. Or check our [Updates page](#) from time to time over the Winter and Spring, as we post regular updates.

Shipping Costs?

With today's crazy shipping costs, we expect shipping to be in the range of \$1,500 – \$2,500 inside North America. Depending on how far you are from our factory in Southern Ontario.

Keep in mind that we are shipping a substantial building, sometimes thousands of miles. That's going to cost more than a little.

[What are the overall Dimensions of POD-S?](#)

POD-S has the same wall footprint as POD. Just under 8 feet in diameter. On purpose. So that POD owners who migrate to a POD-S can use the same base they're using now, and know that POD-S will only take up the same amount of space as a POD on your observatory base.

Using the same footprint/wall diameter with both POD and POD-S, is also so that the POD dome and POD-S dome will both fit on the same wall diameter, w/ original or taller wall panels.

*Note, without the taller wall option, POD-S is about 6" taller overall than POD in total height. About 7' 6" internally at Zenith.

Almost 2' taller than a POD at Zenith with the taller wall option added, or about 9', 4".

POD/POD-S Bays extend 2' out from POD wall. Meaning a POD or POD-S wall with 1 Bay added will extend 2' farther outwards than a POD or POD-S with no Bays. Bringing the minimum footprint up to 8' X 10'.

A POD-S with 5 Bays, and taller wall is going to be almost 12" in diameter, and just under 10' tall.

[How high is the doorway with the taller wall option?](#)

Just under 5' tall. Compared to original POD wall of about 3.5' height for the doorway opening.

This will make it easier for those with back/knee/hip problems, and taller people, to access POD and POD-S.

[What are the slot opening dimensions of POD-S?](#)

Slot Opening is 28" wide, and continues 10" past Zenith (10" unobstructed, 12" actual). Allowing for an approximately 15 degree view past Zenith, depending on scope type/size, mount, height of pier.

Distance from end of scope to opening, and FOV of the scope will make the opening a different "apparent size" as you get closer to it. Like walking toward a window. It gets "larger" as you walk toward it.

[What size of base do I need?](#)

8 X 8' minimum if you don't add any Bays.

Each Bay extends 24" out from the 8' wall. If you're adding one Bay or more, consider building a 12 X 12' base minimum. This provides a "walk up" to the door, and a little extra deck around the POD. Even with an XL5 model with 5 Bays.

Another reason for choosing 12' X 12' for a base if you're using wood or composite for your deck/riser – Wood comes in 12' lengths. This way if you make the base 12' X 12' there is

minimal cutting of the wood. Versus for example a 9' X 11' base. Wood doesn't come in those lengths, and you'll be cutting and throwing away a lot of wood.

A POD-S with 5 Bays, and taller wall is going to be almost 12' in diameter, and just under 10' tall.

[What kind of base can I use for a POD-S?](#)

As with POD, POD-S can be installed on just about any level surface. Be it gravel, your lawn, a wood or composite riser/deck, concrete pad, or reinforced roof.

We recommend a wood/composite base, for better water run-off and ventilation.

Concrete is also a great choice, but it does take a bit more planning to ensure that you accommodate:

Water run-off: High (approx. 1") in the center and sloped in all directions. Like a "pitcher's mound". POD-S doesn't leak, but rain/snow can be propelled sideways under high wind and, just like your house, moisture will be pushed under the base of the walls. Gravity will take care of this, as long as it can flow downhill.

Conduit. If you plan to run power and data cable to the telescope pier, you need to plan before you pour.

Vapor barrier (a heavy plastic sheet) is highly recommended regardless of material used. It will help to keep ground moisture from evaporating and entering the observatory from below. For raised decks, use some dirt/gravel to create a sloped "mound", lay the plastic sheet over the mound and place some gravel on top of the plastic to keep wind from blowing the plastic away.

*Note there is no floor in POD or POD-S. On purpose. It makes it a lot easier to run cables, and ventilate. There IS a "floor" in the Bays.

For more information and discussions about bases, join and ask questions in the friendly POD / POD-S discussion group.

[Can I put POD-S on a Roof or Tower?](#)

Theoretically yes, but you shouldn't. Why? Observatories are best placed on the ground, or close to it. With an isolated pier running up the center, or off-center.

Rule Number 1 is "Build the observatory close to the ground, away from heat-emitting structures".

Usually when people want to build towers or such, or want to place the ob on a roof, they're trying to avoid trees. None of us have a perfect horizon, but luckily the sky "rotates". You "use the sky you've got". Clear away some trees if you can. But keep the observatory "grounded".

Just about every astronomer has a dream of a "silo dome", or a tower, or building a dome into a roof or such. It's almost always a bad idea. Take a look at all the large professional observatories. Most are well planted on the ground.

We say, save yourself a lot of time and money. Build close to the ground.

[How Much Does a POD-S Weigh?](#)

Depending on which wall height and how many Bays, figure on 500 lbs – 1,000 lbs.

Full dome ready to lift onto the wall – 350 lbs. (Requires four people to lift onto the Wall).

*Other possible ways of lifting the dome onto the wall are discussed in our printed and associated video instructions.

Approx. Weight Per Wall Panel – Shorter Wall

There are always 6 wall panels, with one being the door. A Bay replaces a wall panel. Do the math. Depending on how many Bays you have vs. Wall Panels to make up the six panels.

POD Bay 33 lbs, POD Optional Heavy Bay 55 lbs

Door Panel 35 lbs

Wall Panel – 22 lbs , Optional Heavier Wall Panel 33 lbs

Approx. Weight Per Wall Panel – Taller Wall

There are always 6 wall panels, with one being the door. A Bay replaces a wall panel. Do the math. Depending on how many Bays you have vs. Wall Panels to make up the six panels.

Tall POD Bay 110 lbs

Door Panel 65 lbs

Wall Panel – 35 lbs

[How Do I Anchor the Wall Down?](#)

There are ½” anchor holes built in the inside-facing foot of every wall panel / door panel / Bay.

Twelve 12 anchor holes in the case of the shorter wall. Eighteen anchor holes in the case of the Taller wall.

You use 1/2” lag bolts and washers to anchor, if installing on a wood or composite deck. 3/8” sleeve anchors when installing on concrete.

More info about how it’s done in the instruction manual, and discussed in the POD-S discussion group.

It will take “catastrophic” winds or water to dislodge your POD-S from its base.

We say “If weather is so bad that you’re worried about your POD-S, forget about your POD-S and worry about your home and family”. Having said that, make sure to cover your gear and POD-S in your family or business insurance coverage.

[Do I have to have Bays with the POD-S Dome?](#)

No. But we recommend at least one Bay panel or more, if you want to include the POD-S Motor/Control system, house a Win 10 PC , and store/operate other electronics and other accessories.

POD owners will tell you “If the space needed isn’t a problem, get as many Bays (up to 5) which your budget will allow”. You WILL find ways to fill them over time.

[What size telescope will fit/operate in a POD-S W/ Taller Wall?](#)

- Up to a 14” SCT, CDK, or RASA type scope. Without piggy-backed scope.
- 11” SCT, or RASA type scope w/ small piggy-back (like an 80 mm scope)
- 12.5” CDK Type (Planewave)
- A Refractor type scope, up to about 4’ long.
- Up to a 10” Newtonian type scope.

Dobsonians are not recommended as long term scopes in mid-size observatories, due to their low pivot point. For temporary use, up to a 15” Dob.

Slotted domes are not suited for side-by-side scope setups. Unless they are small scopes. Like Redcats, or other small refractors. I.E. Two side-by-side 8” Celestrons or anything larger would not be well suited, if you want to use both scopes at the same time.

It is possible with the 28” slot opening to use either of two side-by-side mounted scopes at one time, but not both at the same time.

After 20 years of creating observatories we say “You build your rig to match/what works best in your observatory, not find an observatory that fits your rig.” The observatory dictates the gear, not the opposite. Some astronomers get frustrated because they build “around” their gear. Instead of building from the dome inward.

With today’s CMOS cameras and great optics in small scopes, you no longer need a huge rig to get great images.

[What size of mount will work a POD-S?](#)

Pretty well all well-known mounts will work in a POD-S. Celestrons, SkyWatchers, iOptron, 10Microns, Astro Physics, Bisque, Losmandy, Unistellar, Meade, Orion, and Explore Scientific, etc..

The large Planewave “L” Series mounts are not suited to POD-S when a wedge or latitude elbow is added to the pier. The footprint needed is too large for the POD-S internal wall diameter. A Planewave L-350 WILL work in a POD-S w/o the wedge or elbow adjustment in Alt-Az mode.

A Bisque ME II is a large mount for a POD-S as well. It will fit, but barely.

[How low in the sky can I see with a POD-S?](#)

It really depends on the height of your pier/mount/scope. POD-S is better suited for those who want to view/image targets from about 15-20 degrees above the horizon up to past Zenith.

If you want to view/image very low on the horizon, choose the lower wall option. Your scope set-up still has to be high enough to see over the wall and bottom end of dome slot opening.

[Can I use my existing SkyShed POD Pier in my POD-S with the new Taller Wall/Bays?](#)

Yes or no. You won't be able to see as far down in the sky. If you want to see as far down in the sky, add the new SkyShed Pier 12" Base Extension to your SkyShed Pier. If you don't have a SkyShed Pier, look for an extension made by your mount manufacture. Companies like Losmandy make bolt-on extensions for their mounts.

Keep in mind, you may or may not need a taller pier. You might use the same height for your pier in your POD Mark I with a 4' wall, as you do in your POD-S Mark IV with 5.5 foot Wall/Bays. Usually in the range of 30-44" from the floor to the bottom of the mount for the original 4 foot wall. You just won't be able to see as far down on the horizon as with the 4 foot wall.

Being on a lower pier is also good for better seeing near zenith with large scopes. Like a Celestron 14" Edge, or a 12.5" or 14" Planewave.

[Can I mix-and-match POD and POD-S domes and Walls/Bays?](#)

Yes. Both POD and POD-S domes work with the original POD wall, and the new taller Wall/Bays.

[Why does POD-S with Taller Wall/Bays seem so much larger inside than the original POD Dome and Wall/Bays?](#)

First of all there is no Secondary Dome to pivot inside the POD-S dome, as it does within the POD dome. This provides 3" more diameter on the inside of POD-S at the bottom of the dome/top of the wall.

Adding the taller Wall/Bays, moves the dome upwards, above you. Allowing you to walk right up to, and stand at the wall.

The taller Bay opening, which will come up to about shoulder height on most owners, "pushes" the overall wall diameter away from you, for a much larger feeling, and more total cubic space under the dome. POD owners will find that a POD-S dome with taller wall/Bays feels much larger than a POD with original height wall/Bays.

[Tell me more about the material used to make POD and POD-S](#)

LLDPE – Linear Low Density Polyethylene is amazing stuff. The factory that makes PODs has

been making agricultural and indoor/outdoor playground equipment for almost 5 decades. Many of those products are still in service!

It's really tough. Large hail bounces off. The panels don't get damaged if you drop a panel while assembling. It will support deep, heavy snow sitting on top of it.

Great for transporting because it's so tough.

POD (and POD-S) have a lifespan that is such, it has been known to "outlive" its owner.

LLDPE is "Earth friendly" in that it can be recycled up to 7 times. POD and POD-S are not "single use" plastic. *Check locally to see if this type of recycling is available in your area.

It's non-toxic. No toxic chemicals are used at our factory when making POD. Only electricity is used. LLDPE as used is in food service to carry and contain/store food products.

Super easy to maintain. Some soap and water once a year. Add some Armor-All if you want to "moisturize" it, and make it look new again. Year after year.

We use the highest, premium level of LLDPE. With the best UV filter/conditioners that manufacturers can make. It can take on high UV at high elevation locations, no problem.

It is NOT cheap resin plastic, which is used in low priced backyard furniture and other low priced backyard/outdoor products.

[Can POD-S handle high winds?](#)

POD-S will handle winds just as well as PODs have for 15 years. PODs have taken on Cat 5 Hurricanes and Cyclones. Near misses by tornadoes. History setting wind speeds in places that didn't get high winds speeds in the past. All parts are "locked on" and can't blow off.

We say "If you're worried about your POD (or POD-S) in a storm, forget about your POD and worry about your family and home".

* Note – Your POD or POD-S and base must be well anchored at all times. More info about anchorage in our instruction manuals and online discussion group. Adding anchorage is simple.

[Can I re-use my POD cover on my POD-S? Will there be a cover available for POD-S?](#)

No you can't. It will not fit, due to the higher slot cover/arches opening of POD-S. We will be offering a POD-S dome cover, to use when you're not using your POD-S for long periods and want to keep it covered.

Both POD and POD-S dome covers will work with the original wall height, and taller wall option. Keep in mind that with the taller wall you may need a short ladder to assist you in getting the dome cover over the higher dome.

[How many people, and how much time does it take to assemble a POD-S?](#)

Absolutely 2 people minimum for much of the assembly. The dome alone weighs over 300 lbs. You need at least 4 people for lifting the dome onto the wall.

We have POD and POD MAX owners who assemble all on their own and it “makes us crazy”. They use levers and fulcrums, and all manner of things patched together to assist them. Just get a friend or two to help you for a couple of days instead.

Don't have any local friends to assist you? Mention it online. In our POD or POD-S discussion groups. In FB groups, Cloudy Nights, on IG, on Astrobin. At your local astro club. Fellow astronomers are often very happy to assist for free.

If you have everything prepared, like your base and power, etc., expect 1-2 days to build a non-motorized POD-S.

Add 2-5 days to build, wire up, and calibrate a motorized POD-S. Maybe more, depending on how “handy” you are, your experience with electrical wiring, the tools you own, software, etc.

[How much AC power is required for the Motorized POD-S Dome System?](#)

Very little. Less than 350 watts, which is less than 3 amps @ 120VAC POD-S can even be run from battery (24V), but we expect most will choose AC power. The Slot System is run by battery and the motorized POD-S includes an AC-DC Power Supply that powers dome rotation and also charges the Slot Battery.

In most cases, a single 15 Amp AC circuit should suffice for common observatory equipment and perhaps some lighting/bar fridge/computer equipment. If you want to add climate control like Air Conditioning, Dehumidifier, or Heating, you will either have to:

Not operate them when your setup is running,

Or run them on a separate 15 -20 Amp circuit, depending on BTU size of AC

Consult a local electrician for specific advice. Local building code may require the use of a GFI circuit and ask your electrician if local code allows for that component to be installed inside of the observatory (not at the house). Quite often, they get installed at the house, but the extra long wire (resistance in the wire) running out to the observatory can cause the GFI to “trip” prematurely.

When the dome is Parked (not in use) POD-S uses a small amount of AC to recharge the 12V batteries which run the slot cover system. There must be power to the POD-S between operation sessions to charge those batteries.

The batteries will fully charge from 0% in about 8 hours. Very little of the battery power is needed each time you open and close the slot covers. You could go multiple nights of using the dome w/o charging the dome battery, but we recommend that you Park and charge the Dome batteries after each session. This way they will be fully charged when you begin your next session.

[How does the Dome Motor System work?](#)

For now, this is proprietary information. For now, what we can say is..... it is NOT a toy contraption. We utilize custom crafted, heavy gauge metals for transport mechanisms and enclosures, and the same motors and sensors you will find on multi-million dollar industrial equipment. You won't find any "toy parts" in a POD-S.

Shaft-Drive motors and electronics are powered by a 24VDC electrical system giving the system more than ample torque while keeping current (amps) at low levels. Off-grid (solar) owners will appreciate the option of using battery power, or the included AC-DC power supply to power the dome. "Wireless" power for raising/lowering the slot comes from a 24V battery that is automatically recharged when the dome is in PARK.

*Note – See also [How much AC power is required for the Motorized POD-S Dome System?](#)

[Is a computer required to operate the Dome w/ Motors?](#)

Yes and no. A Win 10 PC is required to set up and calibrate the dome system with our POD-S "Dome Commander" software. Information like "Home" and "Park" locations, slot covers "fully open and fully closed", information is defined in Dome Commander, then saved to the dome control system "brain".

If you're only going to be using the POD-S from inside it, and not have the dome track with the scope, you can use the system hand controller after the system has been calibrated with a Win 10 PC. If you want to have the dome move automatically when the scope moves (dome-tracks-with-scope) this requires a Win 10 PC and your favorite ASCOM dome control program, operating when the dome is operating. Examples; NINA, SGPro, The SkyX. We have created official ASCOM drivers for POD-S which have been released to those software companies. You will be able to download official ASCOM drivers from our website, and GitHub as well.

If you want to operate the dome remotely (like from your house nearby) we recommend 2 Win 10 PCs. One in the POD-S, and one in the house, operating the POD-S PC remotely. Using your favorite remote PC control software like Chrome Remote Desktop, Log Me In, Any Desk, Win 10 Remote PC, etc.

* Note - You can control the Windows 10 PC in the observatory with any computer/OS that is compatible with that remote control software. i.e. Microsoft has the "Microsoft Remote Desktop" app available on the macOS App Store. For simplicity, if you're not a Mac owner, we recommend two Win 10 PCs.

POD-S does not care which app you choose as long as it speaks ASCOM. Those apps perform a rather impressive math calculation that translates telescope pointing to an Azimuth position that the dome needs to rotate to. You can do several things without a computer:

A handheld controller, as well as a keypad on the electronics console, lets you manually rotate the dome and open the slot.

A semi-"auto-tracking" mode will periodically "nudge" the dome to help keep the object in sight. Think "clock-drive". The dome still won't know where the telescope is pointed, so you do need to

rotate the dome manually when you select a new target, and then the “auto-tracking mode” will periodically nudge the dome. It is smart enough to know which direction to “track”.

We'll cover a lot more info about this in our instruction manuals, videos, and online discussion group. For now, know that at the least you will need a Win 10 PC to calibrate the dome.

[What kind of computer do I need?](#)

Windows 10 or newer. Like it or not, astronomy is still a Windows world. The good news is it does NOT need to be a thoroughbred... a \$200.00-300.00 mini PC is all you need. We recommend the Professional version of Windows because it includes “Remote Desktop”.

The Observatory PC becomes the “conductor of the orchestra” and all of your astro gear will connect to it. The POD-S connection is a USB cable (as are telescope mounts).

Don't forget that this PC needs to be in-reach of all your USB devices. Some are up on top of the telescope, some are down below (mount/dome/weather station, etc). Powered USB Hubs make that easy, but our advice is the USB Hub goes up-top and the PC stays grounded.

[Can I use a non-Windows Computer?](#)

Someday, but you should plan on that being several years away. POD-S already accommodates Windows alternatives, but POD-S is not the only instrument in the orchestra. ALL of your equipment needs to function together, and non-windows equipment and apps aren't there yet.

We will (have) develop Alpaca/Indi drivers, but we won't be releasing them until POD-S has been on the market for a year or two. It will also depend on what other equipment and software companies do to support non-Windows environments. When that day comes, you will still need to find observatory control software, as well as a mount and other equipment (camera, focuser, etc) that can also speak “non-Windows”.

[Can I use my ACME “Hub” / All-In-One Nifty Gadget with the shiny anodized Bling Box?](#)

If it's a Windows computer inside... YES. If not, does it have an On-Board Dome Control function?...then YES. But most aren't Windows, and don't have Dome Control, and generally, you can't install new software apps on these units.

These are “general statements” and you should certainly ask the manufacturer of your “control box” for a definitive answer. Generally... we will provide Drivers (ASCOM/Alpaca/INDI) that work with any Operating System (within reason), but an ingredient that is lacking is an on-board Dome Control function. That function is normally built into your Planetarium Software App. (TheSkyX/NINA/etc). In fact, the most popular unit only works with equipment made by them (camera/focuser/etc.).

Consider that POD-S is just 1 of several instruments in an orchestra of equipment. There can be only 1-conductor of that orchestra and all of your equipment needs to be controlled by the one-and-only conductor. We will certainly reach-out to those manufacturers and ask them to add Dome Control support for POD-S, but that may take a few years. One other consideration is that some units that use Alpaca/INDI devices require that every piece of equipment be “network addressable”.

In other words, your camera/focuser/mount would also need to have a network (Wi-Fi/Ethernet) built-in and then you might need to hire a network guru to configure your network router to “reserve IP addresses” because every piece of computer-controlled gear will occupy an IP Address on the network.

[Can I Operate POD-S Remotely?](#)

YES. All you need to do is set-up your observatory computer with a Remote Desktop application. That PC is controlling all your equipment and all you are doing is interacting with that PC over a network. Even if you lose your network connection, the observatory PC is still running the show.

There are numerous remote PC applications (VNC/Team Viewer/etc.) but we find the Windows Remote Desktop (RDP) application is the easiest and most realistic experience for local network connections. All versions of Windows include the RDP Client, but only the PRO version includes the ability to “Host”. So, the observatory computer has “PRO” and any version of Windows can connect to it. There are even “RDP” apps that can allow you to connect with a smartphone or tablet (iOS/Android).

For most POD-S owners, you just want to operate your POD-S from the comfort of your living room. A local network connection means you don’t need to “go out to the internet” and the only network traffic is between the observatory computer and your home router.

For “long distance remote” - You will need an internet connection and quite often, your observatory PC will need a dedicated IP address to access from afar. For consideration:

Wired or Wireless? Wired is by far the most reliable choice. Chances are, you are running power out to the observatory and its easy to lay a CAT 6/7 cable while you’re at it. Once there, a network switch (think “power bar, but for Ethernet cables) connects the observatory PC as well as IP Cameras that can be your eyes when operating remotely. In fact, a POE (power over Ethernet) Network switch is how many IP cameras get power.

* Note - You can’t run an Ethernet line longer than 330 ft. without using additional equipment. Or use fiber optics instead with long runs. Search online for more info about running network connections by wire longer than 330 ft.

Both computers need to be on the same network. If you are planning to extend your home network out to the observatory:

Best option is Ethernet and then you just use a simple Network Switch.

If wireless, choose “Wireless Access Point”, NOT a “router”. An Access Point is not a “DHCP Server” and allows your home router to assign IP addresses and then your home computer and observatory computer are on the same network.

A common practice is to run CAT6 to a Network switch inside the observatory, and so you can still have WiFi, connect a “wireless access point” to that network switch, inside the observatory. That will give your phone/tablet internet access.

We are eager to help with tips-and-tricks, but beware that we are not a substitute for network a specialist. There are plenty of local “geeks” that can help you with setting up a network.

Long Distance Remote:

Our policy is..... “Remote Operation, but NOT unattended”. If you are operating from afar, you must have a way to monitor that the dome is behaving (is the slot really closed?) and IP cameras are an easy way to do that. And when something is not right, is there someone nearby who come to the rescue?

Notes on IP Cameras:

You do need illumination for IP cameras to see in the dark. Beware that IR “night vision” may interfere with imaging. Some models allow you to turn IR OFF. For example, Blue Iris software is one app that will control cameras and it can toggle IR cameras ON/OFF, but not all cameras support that feature.

For models that do NOT have IR control, it’s usually easy to access the IR bulb and disconnect it. Then you can use a “IR Illuminator” (a \$ 15.00 light with IR bulb) that can connect to a WiFi Switch to toggle on/off. There are several Windows software apps that can trigger WiFi switches giving you a simple way to turn off IR Illumination remotely.

Clouds Sensors and Remote Slot Cover / Dome Operation:

After researching the genre we rejected cheap rain sensors and opted for a professional cloud sensor. This one – <https://interactiveastronomy.com/skyalertindex.html>

You will want to choose their Ethernet model (which comes with a 9 Volt power supply, but they don’t mention that in their info), and you will have to determine where you are going to mount the sensor. Slightly away from the POD-S. So that the dome is not blocking the sky.

Plus (optionally) Interactive Astronomy offers different lengths of a combined power/Ethernet cable to go from the POD-S to your sensor. We will be discussing this further in the POD-S discussion group. Please join the discussion group to learn more.

We will not be offering the cloud sensor directly and will direct owners to Interactive Astronomy to purchase the sensor.

The reason for choosing a cloud sensor rather than a rain sensor is because we feel that if you use a rain sensor, it may already be too late for closing the slot covers in time, and your valuable equipment could get rained on.

To utilize the cloud sensor, you will be plugging into our control system and using your ASCOM sequence software (NINA, SG Pro) to create a sequence, which decides what happens when clouds are sensed. *Note The SkyX does not currently support this feature. MaximDL only works with Boltwood Cloud Sensors, which we’re not using.

Example; you might tell your sequencer to close the slot covers and wait for 10 minutes to check for clouds again. If it’s clear the slot covers will open and continue tracking. You will also

decide whether or not the dome keeps moving while closed, or lines up with your scope again when the covers are opened again.

These will be good discussions for the POD-S discussion group. To some degree, we will adapt our system control software to adapt to owners discussions about their use.

[Can I use the dome manually, w/o motor system?](#)

Absolutely! You can open and close, and rotate the dome by hand if you wish. More info about the process in our instruction manual / video. To be released with POD-S.

We have intentionally designed POD-S so that it functions with or w/o the motor system. You can start with manual dome operation and add the motor system later. It will cost more than getting them together at the same time as a "bundle".

[Can I Mix-and-Match POD and POD-S Domes and Walls/Bays?](#)

Yes. Both POD and POD-S domes work with the original POD wall, and the new taller Wall/Bays.

[Can I add the new POD-S dome and Motor system to my existing POD Wall/Bays?](#)

Yes. We have designed the POD-S dome and motor/control such that it works elegantly with the existing POD Wall/Bays. You may have to move a few things like lighting if they are in the way of the additional parts you'll be adding.

****Important!** You have to ensure the Internal Diameter at the top of your existing POD wall is within 79.5" – 81", when the wall is well circularized, to use the POD-S Dome. Please do not order a POD-S dome until you can confirm that you existing wall is 79.5" -81" internal diameter at the top of the wall.

Measure from wall join to wall join. 180 degrees across the floor (may require removing scope or mount) and make sure they are all within 79.5" – 81".

Have you made any modifications to the top of your existing POD wall? They could cause a problem. Please talk to us about it before ordering a POD-S dome if your wall isn't as described above. Or you have any other trepidations.

[Is the Dome Opening called a Slot, a Shutter, or a Slit?](#)

The dome opening appears to be called different things around the world. In the UK they'll say "Slit". Some in the U.S. will say "Shutters". We prefer Slot. The POD-S dome is a "slotted" dome. Hence the name POD-S.

We see shutters as the type of covers which open horizontally from the center, as with many very large observatories.

Slit sounds more like a crack to us. Not appropriate. Slot just sounds larger and more "on point" in this case.

[Can I re-use my POD wheels with my POD-S dome?](#)

No. Part of the cost for the POD-S dome alone (to go on an existing POD wall) will be the new “tougher” wheels. This is because with a POD, it’s really simple to replace the wheels if they wear out.

With POD-S you have to take the whole dome off to replace the wheels. So we sourced a more expensive, more industrial (cart) wheel, which we expect will last much longer than the lower priced inline skate wheels we use for the POD dome. We expect a full set of the tougher wheels will add about \$300 to the “POD-S Dome-Only” price.

[Is the POD “Heavier Wall Panel and Heavier Bays” Option available with the POD-S Mark III and Mark IV Wall/Bays?](#)

We’re already making the POD-S Mark IV taller Wall/Bays heavier and thicker. So that option is now a standard feature with POD-S Mark IV.

With the original height Wall/Bays of the Mark III, the heavier Wall/Bays option is now standard as well, and not an option.

[Can I leave my scope in POD-S year round?](#)

Absolutely. One of the big reasons to own a POD-S is for “instant access” to the sky, year round. You cover your scope with a light sheet or tarp when you leave for the night, mostly to keep dust from building up on it. More info and discussions about operating year round can be found in the POD and POD-S online discussion groups.

[Do I need to cover my scope in POD-S?](#)

Unless you’re using your POD-S from a great distance remotely, you always cover your scope when it’s not in use for more than a day or two. This is to cut down on dust build up, or due to pollen in the air, or both. Plus it helps against condensation in the morning when temps rise from overnight temps. The cover may be as simple as a cotton sheet. Or a light poly tarp. We’re not big fans of scope bags inside an ob, as they can collect moisture underneath. Cover and ventilation is what you want.

[How hot can it get in a POD-S?](#)

Like any structure or object sitting in Sun light, POD-S is going to get hotter inside than ambient temperature outside.

How much hotter? Generally 5-20 F hotter than outside. Depending on if the POD-S is sitting in full sunlight all day, partially shaded, if there’s any breeze or not, etc.

This will not hurt your equipment inside the POD-S. Thousands of PODs have scopes in them year ‘round in hot and cold places. Equipment does not get damaged, after years of use.

It's more about equalization of the scope to outside ambient temperature when in operation, for best object imaging. You open the POD-S dome 30-45 minutes before use on hot days, to equalize the temps inside and out, and allow the scope to equalize.

In some hot locations where temps are often above 100 F during the day, owners will add a tower A.C. in a Bay. Keeping the internal temperature lower, and lessening the time required to equalize the scope at dusk.

*Note – This is another topic that's discussed by owners each Spring (in North America) in our online discussion groups. Lots of good answers there each year.

*Note – See also [Do Dome and Wall colors affect internal temps?](#)

[What about dealing with cold temps, ice and snow?](#)

We have many years of experience with SkyShed's and cold weather. The material which POD-S is made from (LLDPE) is excellent for operation, and long-lasting in cold temps.

The shape of the dome is such that snow and ice won't stay on it for long if temps rise even the slightest above freezing. Most of the time you're not going out right after a snow / ice storm, so the snow or ice has time to slide off the dome. No "attention" from the owner is required.

Just as owners in hot places will add an A.C to lower temps, owners in cold places can add a 1500 Watt "cube type" heater to raise the internal temps inside the POD-S during the day after a storm. So that the dome will be free of ice of snow at night when you go to use it.

There have been discussions over the years in the POD discussion group about the best ways to cool and heat the observatory. To heat, normally we use a heater that is on a timer, a thermostat, or some owners use remotely control switches. As mentioned, run it during the day so that the dome is snow / ice free that night.

We will be discussing the same topic in the POD-S group as next Winter approaches.

The bottom line is; Just like your home or your car, where it's hot you might take steps to cool the interior. And where it's cold, you might do the opposite.

[Do Dome and Wall colors affect internal temps?](#)

Yes. Darker colours like Forest Green and Midnight Gray will get warmer than the lighter or medium pigment colors – Discovery White, Lunar Gray, and Desert Tan, Cobalt Blue. Choose lighter colors for locations which get hot much of the year.

*Note – LLDPE is slightly translucent. That's means a Discovery White POD-S will be bright inside when the Sun is up. It can actually get hotter inside than an all Desert Tan or all Lunar Gray POD-S. If you're in a really hot place, an "all white" POD-S might not be the best color choice for you. Consider the medium pigment colors like Desert Tan or Lunar Gray. Or a White dome with a Desert Tan or Lunar Gray Wall/Bay panels, if you'd really like to have a Discovery White dome.

The Green colors (Forest and Hunter), and Midnight Gray are better suited to places like Northern Europe or Scandinavia where temps don't generally get as hot as other locations where POD-S will be used.

Cobalt Blue temps are not bad in hot places, with a Lunar Gray or Discovery White dome.

[Why does it cost more to ship a POD-S than a POD?](#)

There are a few reasons. POD-S with the tall Wall/Bays weighs up to 100% more than more than a POD. Example; 450 lbs for POD w/ zero Bays, compared to 750 lbs. for a POD-S w/ no Bays.

Then add the taller wall option (more space on the truck), a motor/control system, and additional parts for the dome. Plus the POD dome is shipped as 4 quadrants, the POD-S dome is shipped as 2 half domes. This takes up more room on a truck. That means more cost to ship.

[Why do I have to pre-pay 100% when confirming my order?](#)

There are a few reasons for this. Each POD-S is tailor-made to your choices. By paying up front the factory knows that this order is "as serious as it gets", and they can work confidently for weeks in creating your POD-S.

This also helps us secure lower costs at the factory. As well for shipping rates. By booking trucks and working with logistics to ship many POD-S's, weeks in advance of shipping.

Keep in mind that if someone tells you that they'll charge your credit card when they ship, you're paying for that luxury, as that manufacturer carries more risk, and that risk is reflected in their prices.

Should your circumstances change and you need to cancel while you're waiting for your POD-S, no worries. We understand. Having said that, costs associated with Credit Card processors are not refunded. This is usually under \$200. We reserve the right to choose the form of refund. It may be PayPal (if you use PayPal), or check-by-mail, within 30 days of cancellation.

For conditions of cancellation during or after shipping, please see our Terms and Conditions page at – <https://skyshedpod.com/payments-refunds-returns/> (this link will take you to the SkyShed POD site in a new tab).

[Why does it take months to get a POD-S?](#)

With so many choices we can't keep models "on the shelf". It takes weeks of pre-production to set up to make a lot of PODs at the same time.

Every POD-S is created at a very busy factory, who also make products for other industries like agricultural and outdoor playgrounds. We share the factory production with these other industries in "production cycles".

Normal turn-around times from order confirmation to shipping is 3-4 months. *Once we begin full production of POD-S.

We update you often once we start getting close to shipping, then keep in contact until you're set up and running, or as needed.

Is POD-S available outside North America?

Not initially. We are working with friends in Australia and Europe, and other places, to export POD-S to those places ASAP. We expect it will be 2023 by the time we start exporting POD-S "en masse". We CAN get you a quote for 20' container, to ship a single POD-S to your location outside N.A.. Know that this will cost a LOT these days, with inflated shipping costs around the globe. But it can be done if you have a large enough budget.

How does the delivery process work?

You start to hear from us 3-4 weeks before we ship. Then you have access to our logistics supplier throughout the transport process, and we're here for you during assembly.

You'll know when your POD-S leaves the factory, and carriers are instructed to call you at the contact number associated with your order once your POD-S is "local", to arrange delivery.

Your POD-S shipment is large, it takes up about 15' in a truck. We ask that you have at least 2 able bodied people there to receive and unload the boxes and parts.

Carriers will deliver "to the curb" and you'll be responsible for moving your POD-S to your backyard, or to where you are going to assemble it. If necessary you can "break down" the boxes at the curb and carry individual parts from the curb to your backyard.

What kind of manuals and instructions are included?

If you know anything about SkyShed, you probably know that we are renowned for our in-depth instructions and support. We'll supply you with printed (and on online) step-by-step instructions, photos and videos. We're standing by for questions as you assemble. Plus we have our very friendly online discussion groups, where you can read tips and the experiences of other POD-S owners.

We consider your POD-S ownership as a "long term relationship". It's not rare for us to answer questions 10+ years after purchase. Your success is our success, and we want all POD-S owners to be highly successful in their astronomical journey.

Is there a Floor in POD-S?

No. This is on purpose. So that you have access to beneath the floor, for those assembling on a deck. This allows for access below the floor for running conduit, etc. Plan for lifting some of deck boards in future when you're planning your deck. Screw down some deck boards instead of nailing down. And lay out the deck boards in shorter lengths where the decking lies beneath the POD-S wall. This way you can unscrew and lift certain deck boards in the future for upgrading electrical, or running conduit, etc.

*Note There IS a Floor in all POD and POD-S Bays. But not in the center of the POD-S, inside the wall perimeter.

[How do I get electrical into the POD-S?](#)

We purposely did not design “access ports” or such to bring electricity into the POD. This is because no matter where we put them, they still might not be in the right place for you. Most owners bring power in up thru the floor, close to the wall or Bay.

A few owners drill a large hole in a wall panel of Bay, and use an electrical conduit port which are available from Home Depot or such. This is a good question for the POD/ POD-S group to see how other owners have brought electricity into their POD/POD-S.

[I want to sell my existing POD Wall or Dome to get the new ones. Can you help me with that?](#)

No. Unfortunately we are not in a position to assist with the selling of pre-owned units. There are plenty of places online for selling your existing POD wall or dome to raise funds for your new one. Examples – Astromart, Facebook, Kijiji, Craig’s List, Astro Buy & Sell, are set up for selling pre-owned astro equipment.

[What security measures are available for the POD-S dome's slot cover & taller wall?](#)

In manual mode, we have designed a simple locking mechanism which will make it very difficult to open the slot covers from outside. We’ll show you more about that soon.

In motorized mode, locks are built into the control system. The slot covers won’t open unless the system is powered and there is an internal (inside the dome) pull, which will release the covers in case of power failure.

Does the Taller Wall have the same type of key lock as in POD?

Yes. A standard garage door locking handle. On the inside of the door there are 3 locking rods/plates. Much like the original wall door panel, which has 2 locking rods/plates.

Security measures in general:

Like POD, POD-S locks up when you’re astro session is finished. By hand if you’re using the dome manually, or built into our control system when you’re using your POD-S in motorized mode.

As with most of your possessions, your home, your car, etc., there are many add-on security systems which you might add to enhance security if needed. Everything from low cost alarms with motion sensors, IP cameras with motion sensors. You may add to your Ring or other types of home security system to your POD-S.

This is a good topic for the POD-S discussion group. To find what other POD-S owners are adding to enhance their POD-S security, when they find it necessary.

Why is the pull out shelf which is available for the original shorter wall/Bays, not available for the new taller wall/Bays?

This is because the POD-S Bays are tall enough for you to can add a small “student” desk. Which are available at Staples, Wayfair, etc. With the original shorter wall/Bays it was harder to find a desk small enough to fit in the Bay, so we created the slide out shelf.

*Note – Max. size that your desk can be with the taller Bay is 32” wide, 24” deep, and 48” tall.

Also, with the original shorter wall the shelf helps because it slides out farther into the POD/ POD-S, so that you aren’t sitting with your nose up against the wall. With the taller wall, the dome/top of the Bay opening is now up above you and you can sit closer to the taller Bay.

For POD-S manual dome operation, how high will the slot cover handle be when open, and how easy will it be to pull it across the zenith before initiating the downward pull?

Even though there is a handlebar in the manual version of POD-S, and you can use it if you like, to open or close the upper slot cover, we figure it might be difficult to get above your scope to do that. So we added a thick, stainless “pull ring” on the rear of the top slot cover. We will provide a short pole with a hook at the end to pull the cover down, and push it up. Or to push it up (closed) you can just push it from the bottom, and let it “land” as it closes against the lower slot cover.

These approaches are very low tech. Low cost, and work great. Making opening and closing the upper slot cover manually, very easy and fast.

To open or close the lower slot cover, we provide a pivoting handle on that cover which makes it easy to open or close from inside the dome. Or you can just stand on the outside of the dome and either pull it down (open) or push it up (closed). Even though it’s light weight (about 12lbs), it’s very strong.

The slot covers lock closed in both manual and motorized mode.

Will there be a version available with metric tools, screws, bolts, nuts etc.?

Yes and No. POD-S needs only a few simple tools to assemble. Tools which most of us have in a basic tool box. Think “LEGO with bolts added”. There is a combination of SAE / Imperial and Metric hardware. 90% SAE. Most of those are Allen type bolts. We provide Allen wrenches in both SAE and Metric sizes as needed.

When a wrench is needed for SAE nuts, a Metric tool owner can use an adjustable wrench. When screws are used, they are Philips type heads which are ubiquitous.

The ½” anchor holes which are integrated into the base of the POD/POD-S, will accept ½” lag bolts (for decks) and 3/8” Sleeve Anchors (for concrete). The same holes will work with 12 mm Lag Bolts and 10 mm Sleeve Anchors.

So a metric tool owner will not have a problem assembling a POD-S with metric tools.

February, 2023