



The evolution of designing, and refining gear within BASE is never ending. Buying your first rig can be very over whelming with the all the choices you have, and options within those choices. I've written this short article to educate new jumpers on a few things to help them be more informed when deciding to purchase gear for the first time.

The vast majority of new jumpers end up purchasing gear that their mentor, friends, or local crew has recommended to them. This can be a good idea as they know they lay of the land and they know what works/doesn't in their (soon to be your) environment, but it's also important to educate yourself on the reasons why. It won't do you any good to blindly follow anyones recommendations in this game. By all means consult the people above **but** BASE is built on **you** taking personal responsibility for **everything**. Starting your jumping career by doing a little homework on the gear you are going to trust with your life is probably a good idea.

The best advice I can give to someone looking to purchase gear for the first time is to do some research around the following questions:

- 1- What part of the world will you be doing **most** of your jumping in?
- 2- How long (on average) will your approach to an object be?
- 3- Will you **primarily** be doing slider up, or slider down/off jumps?
- 3- Are the jumps you are going to be doing **mostly** in places you are allowed to be?
- 4- How often are you realistically going to be jumping?

Contacting the local BASE jumpers in your area is always going to be the best way to get answers to these questions. Before you ever even consider taking a BASE course, or beginning a mentorship with someone I strongly recommend you are on friendly terms with the locals. Seeing as this article is about buying your first rig I'm not going to get into an ethics lecture here. For that I will refer you to: **The Great Book of BASE p73**

If you are reading this and are just thinking about getting into BASE then I strongly recommend you get yourself a copy of this book. Grab one [here](#)

I have no *dog in the race* so to speak. I am a dealer, and have good relationships with all the major manufacturers, and I like them all for different reasons. My goal is not to sway you towards any purchase in particular, more to state some facts on the design features of certain setups and why you may or may not want them on your first rig.

There are endless debates on certain topics in BASE with people violently arguing their points on both sides. Gear selection is no different. Some people will advise you towards something for a certain reason and someone else will turn around and tell you you are an idiot for the exact same reason. The truth is that there are benefits and drawbacks to most choices you make. Do your best to listen to both sides of everything, and make your own decision.

What I will do is recommend that for your first rig you ensure that each component was built by a major manufacturer. There are two main reasons for this.

1- When you decide to start BASE jumping you don't know how long you are going to stay in the sport. This is just the reality of it. I've seen a lot of people come in all excited and drop \$4,000 on brand new custom everything and then they decide after 50 jumps that BASE is not for them. If this happens to you, you are going to want to sell your gear and you will have a much easier time doing so if it was made by a major manufacturer as their products are typically higher in demand and will sell faster.

2- The big dogs have all been around for a while, have good reputations established, and good customer service. This makes things a lot easier if you ever do have an issue with anything.

It's extremely rare to come across someone who can give truly unbiased opinions on gear. Finding someone who has enough experience on different systems to give accurate comparisons can be very difficult. Most people selling gear either work for (or are sponsored by) a particular company and have a financial incentive in selling you their product.

For this reason I recommend you do your best to try a few different systems before you commit to buying something, or at least talk to people from the different camps so you can get some different perspectives.

New or Used?

You could potentially get a decent, used rig for around \$2,000 where as a brand new setup could set you back up to \$4,000.

If you are thinking *I just want to try out BASE and see where it goes* then you are best off getting something used and save yourself some cash. During your first 100 jumps or so you are also more likely to wreck your gear by landing in a tree, a river, or a sea of boulders. Having used gear during this time might be a better option for you.

Having said all that it largely depends on your budget. If you do buy a new rig and decide after 50-100 jumps that BASE is not for you then you will likely get most of your investment back on the resale.

Ok, lets get into it.

When looking to purchase a BASE rig there are three main components to consider:

- 1- Container
 - 2- Canopy
 - 3- Pilot Chutes
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1- Container

I recommend you get a two pin container from a major manufacturer. Every two pin container currently on the market can be used for all types of jumping but some are designed a little different to make them more specific, or adaptable for certain kinds of jumps. The subtlety in design is often something a new jumper would not even notice so don't stress yourself out too much around this. They are all good. All you really need to make sure of is that it fits you, and your canopy well, and you like how it looks. **Remember that your container is mostly a vessel to carry your canopy.**

Options:

Some manufactures have started making certain options a little easier to consider by simply removing them. You buy the container and it comes the way it was designed vs you being able to customize every piece of it. In most of these cases the manufacturers have done this by building the container with the options they feel are the best so it takes a lot of the stress on the customer out of the equation, which is nice.

Some of the more common options you will see are:

Risers - Integrated or 3-ring?

Having a 3-ring system on your rig allows you to cut the canopy away if you get hung up on something, land in fast moving water, or if you want to make transferring your canopy into another container a little easier.

Having integrated risers makes the rig a little lighter, more comfortable, gives you one less thing to check and maintain, is stronger than 3-rings, and removes the potential of accidentally cutting away at the wrong time.

This is one of those trade off situations. If you land in a tree, or water and you have integrated risers you might have to climb out of your harness which may be difficult, or cut your lines, or risers, to free yourself. This may be very difficult, and potentially very dangerous, depending on the situation you may find yourself in.

If you do choose integrated risers for your first rig make sure you have a hook knife and practice the mechanics of removing it and pretending to cut your lines/risers so you can build some muscle memory the same as you would your emergency procedures in skydiving.



Soft or Firm?

This refers to how the canopy fits into the container. I'm actually seeing this option less and less but it's worth mentioning anyways.

Typically a soft fit will make the container easier to close as the pack tray will be slightly larger than is required for the canopy. It will also give you the option to put a larger canopy (usually one size up) in the container if you ever decide to upsize.

A firm fit will have the container built to the exact size of a particular canopy, making it a little tighter and more difficult to close. It will also give you the option of putting a smaller canopy (usually one size down) into the container if you ever decide to downsize.

Through Loop:

A through loop is when the top closing loop is mounted to a floor plate inside the pack tray vs it being on the top flap. When a rig is closed with a through loop it gives the profile of the rig more of a tear drop shape. This makes the rig more aerodynamic, and also makes it more comfortable on your shoulders.

Some rigs have the option to remove the through loop (or just not use it) and use the standard closing loop installed on the top flap. We call these containers hybrids, meaning you can adjust them to make them more applicable to slider up or slider down.

Using a through loop for slider down jumps does not give any advantage as the airspeeds are low enough to not be a factor but lots of jumpers still use it because of the appearance and added comfort.

When using a through loop you will have to do your S-folds differently than when using the standard top flap loop so there will be a little bit of a learning curve but will become a non issue after some practice.



Bottomless Corners:

When the pack tray is open bottomless corners allow the container to lay flat vs have the corners sewn in. Bottomless corners were designed to prevent the canopy bumping the bottom of the container during the extraction process which could potentially distort the pack job and generate an off heading.

Bottomless corners originally became popular with Trackers, Wingsuiters, and Aerialists as they were often deploying in steep body positions vs a standard belly to earth orientation. As with the through loop there is a bit of a learning curve when



packing with bottomless corners to get the hang of where to do your folds.

Most manufacturers have started making their containers with bottomless corners as standard vs it being an option as there is no real disadvantage to having them.



Harness Type:

Articulated harnesses have a ring on your hip allowing you to have a little more mobility when climbing or just moving around in general.



Integrated harnesses are simple in design, and lighter.



Container Life

If you look after your container it will last a very, very long time. If you put hundreds of jumps on it you will have to do some maintenance here and there but the container itself will likely outlive you and several people after you.

Coming back to my first point - **Your container is mostly a vessel to carry your canopy.**

As long as it fits you and your canopy, and it was built by a major manufacturer you will be good to go.

Choosing your canopy is a much more involved decision.

2- Canopy

I like to say that canopies are like golf clubs. They **can** all be used to do the same thing, but some are much better for certain jobs than others.

If you pick a canopy that is awesome at one thing there is going to be a trade off in some other area. What you ultimately need to decide on is: What are you willing to compromise on?

A lot of companies market their canopies as 'all rounders' but in the real world it's extremely difficult to have one that does everything really well.

Some canopies pressurize faster, some are better for accuracy, some have better glide, some have better flare etc. Keep in mind that the words **faster**, and **better**, are relative. All BASE canopies currently on the market pressurize fast, are good for accuracy etc. Some are just **better** than others in those categories and at the end of the day most things come down to the pilot.

There are a lot of variables to consider when choosing a canopy so the answer to the question 'What should I get?' is always going to be 'It depends'. For this reason I'm not giving any specific recommendations as everyone's needs from a canopy will be different. What I will recommend is that you ask lots of questions and be very careful of people who recommend you get what they have just because they think it's awesome or because they work for a particular company.

Wing-loading / Size

The first thing to decide on when buying a canopy is the size.

Most manufacturers recommend loading somewhere in the range of .69 to .75 on their charts, so if you stay within those guidelines you'll probably be fine. If you are in doubt, talk to the manufacturers.

The altitude which you will be doing **most** of your jumps is also something to take into consideration. If you are jumping above 5000' elevation then consider a lighter wing loading. If you are going to be doing **most** of your jumps at sea level think about going with the standard manufacturers recommendations.

Equally, if you live in a city and your LZ's are going to be technical with steep approaches you will be better off with a lighter wing loading. If you live in the mountains and you have to fly in wind to make the LZ you will be better off with a heavier wing loading (again, depending on the altitude).

Once again, talking with the locals in your area and seeing what they recommend is important.

***If you are looking at buying a canopy from Atair**

(Troll, OSP, or Vision) it's important to note that they measure their canopies differently than the other major manufacturers. Apex, SQRL, Asylum, and Consolidated Rigging all use a system called PIA (Parachute Industry Standard) when measuring the size of their canopies. They basically measure the span x cord of the topskin whereas Atair measure the span x cord of the bottom skin.

The easiest way to look at this is to just scale down one size from what you want when looking at their canopies. An Atair 265 is a 'normal' (for lack of a better word) 280 and so on. Here's a chart for reference.

205 ft.2	= PIA spec 219
225 ft.2	= PIA spec 240
245 ft.2	= PIA spec 260
265 ft.2	= PIA spec 282
285 ft.2	= PIA spec 301
305 ft.2	= PIA spec 322

Standard Weight (F111) or Ultralight (PN9) ?

If you live in Europe and you plan on doing mostly slider up jumps with long approaches and your LZ's are big grassy fields, it's very different than if you live in MOAB where the approaches are typically shorter and you will be landing in sand, or rocks, and have lots of things to potentially snag your canopy on.

How often you are going to be jumping is also a factor here as well. PN9 fabric is easier to pack and much lighter than F1-11 so if you are jumping a lot you may want the added ease and less weight.

A lot of people recommend you do not get PN9 for your first canopy as new jumpers are typically harder on their gear but again it's all about what you are willing to compromise on.

PN9 is not as durable as F1-11 so it will not last as long but lots of people are willing to take this trade off for the ease of packing and less weight to deal with while hiking.

An important thing to note is that when I say 'will not last as long' that it will still last a very long time. The majority of people rarely push the service life of a canopy.

ZP Leading Edge

"ZP (Zero Porosity) fabric is F1-11 ripstop nylon with a grid weave that has been treated/impregnated with silicone."

In plain English that means it's slightly thicker than F1-11 and allows minimal air to pass through it.

Some manufacturers build their canopies with a ZP leading edge as standard, some have it as an option (which usually ends up costing more), and some build it without.

This is an area that manufacturers love to argue back and forth about but like I said earlier there are always benefits and drawbacks to your choices.

Benefits to having a ZP Leading Edge:

Most of your canopies lift is generated at the leading edge. As it ages the porosity of the fabric gradually starts to increase, allowing more air to pass through it on openings and when in flight. ZP is more durable to air friction than F1-11 so a canopy with a ZP leading edge will maintain its performance for longer. This means that over time it will glide better, flare better, and generally just last longer (especially if the rest of the canopy is Ultralight).

Canopies with ZP leading edges will also typically open faster because less air is allowed to pass through it on opening.

Drawbacks to having a ZP Leading Edge:

The drawback to a faster opening means it's also going to be harder.

ZP is quite slippery when new so packing it will be a little more challenging at first. It's also a little thicker than F1-11 so it will make your pack volume a little larger.

Vents

Almost all BASE canopies in production today come standard with built in mesh vents on the bottom skin. Vents help the canopy pressurize and take shape faster which is why a lot of people recommend having them if you intend of doing solid slider down/off jumps. Vents will also help keep the canopy inflated during a nose first object strike which will slow your decent rate, and potentially reduce how badly you will be injured. If you have a nose first object strike without vents the canopy could completely collapse.



Color

If you are going to be doing a lot of jumps at night in places you are not supposed to be, then get dark colors. If you are doing most of your jumps during the day in places you are allowed to be, then it doesn't matter. It's a really good idea to talk with the locals in your area before you go buying a florescent yellow canopy. One thing I'd strongly recommend is to have your center cell a different color than cells three and five as it will make packing much easier.

Canopy Life

Most manufacturers put a service life on their canopies of 500 jumps which works out to be \$4/jump on a \$2,000 canopy. They will last a lot longer than this. I think the number 500 is just put on them for liability more than anything as it's impossible to really say how long they will last as there are endless variables that go into it.

If you decide to buy a used canopy and the owner tells you it has 100 jumps be sure to ask what kind of jumps were done on it and where. 100 slider up jumps with long canopy flights will put significantly more wear on the fabric as the deployment speeds are higher and the canopy is in the air longer vs 100 slider down jumps with short canopy flights.

3- Pilot Chutes

Pilot chute design is another area that is constantly evolving. Your pilot chute is arguably your most important piece of gear as you are relying on it to get your pack tray open and to extract your canopy. If it doesn't work, you're screwed.

There are currently three main types of pilot chutes on the market.

This will be an extremely over simplified explanation of each. For a more detailed explanation check out [this playlist](#)

Unvented

Unvented pilot chutes have the highest pull force (and lowest hesitation rate) when compared to vented pilot chutes but they are also the least stable as air spills out the sides during inflation. In general jumpers primarily use unvented pilot chutes for go and throws where they can not afford to have a hesitation. This choice prioritizes opening altitude over heading performance. People will also often use them as a back up for a PCA/SL



Apex Vented

Apex vented pilot chutes have a mesh vent installed on the apex of the pilot chute (hence the name). During inflation this vent allows some air to escape which helps stability. This also means it will take slightly longer to inflate and begin extraction than a pilot chute with no vent or a ring vent.



Ring Vented

Ring vented pilot chutes have a vent installed around the middle of the pilot chute away from the apex. This makes them even more stable than those with an apex vent as the air that escapes during inflation is evenly distributed throughout vs it all spilling out the apex. Because less air is lost during inflation they will also begin inflating, and pulling sooner.



Ring vented pilot chutes are typically a lot more expensive than the others listed above as they require a lot more work to build.

Sizing

The size of the pilot chute you use for a jump is usually determined by the delay you plan on taking, not necessarily the height of the object although the two often go hand in hand.

Here is a general guideline for what the majority of jumpers use for certain applications:

For slider down jumps with delays of 0-1 second: 46" or 48" Unvented or Ring Vented

For slider down jumps with delays of 1-4 seconds: 42" Apex Vented or Ring Vented

For slider up jumps with delays of 5-9 seconds: 38" Apex Vented or Ring Vented

For slider up jumps with delays of 9+ seconds: 32", 34" or 36" Apex Vented or Ring Vented or Unvented

***If you weigh under 120lbs or over 200lbs I would completely disregard the guidelines above and get a more personalized recommendation.**

Your wingloading, and the size and weight of your canopy play an important role in PC choice so be very careful before you spend your money on something you are going to trust your life to.

PC Life

There are no hard numbers on PC life but it's something to be **VERY** aware of. I recommend that you keep track of how many jumps are made on your PC's and check them constantly for damage.

Prices range from \$90-\$230 depending on the size and style and I typically replace my own after approximately 100 jumps. Most of my friends run theirs for much longer but the way I look at it is why take the chance? Even at \$200 that's only \$2/jump. Think about looking after and upgrading your gear the same as you would your car. Do not bargain shop for PC's.

I hope all this info helps you out a little and simplifies the process for you to buy your first rig. I know that I could have gone into more/less detail in places but this is intended just to get you started and have some basic knowledge.

As you progress in BASE you will learn more and more that the answer to most questions is usually 'it depends' and the more you learn the more you will realize you don't know. Keep that in mind and take everything with a grain of salt. There are lots of people out there with lots of experience but not much knowledge, and vice versa. The earlier you start taking ownership of everything the better off you will be.

If anyone has any questions feel free to contact me directly: admin@basegear.net and I will do my best to help you out.