
A (Mostly) Comprehensive Guide to Buying Your First Bow

By Jennifer Bresnick, Level 3 NTS Coach and Barebow Archer

Archers Artemis, Amesbury MA

Hello, toxophilites! Welcome to this action-packed guide to purchasing everything you need to continue your archery journey.

This guide will focus on youth archers and beginner/intermediate adult students looking to transition from rented equipment to their own setup. It is designed to give you an overview of some of the factors involved.

Most of us are shooting recurve bows in the **barebow style**. Some of us shoot in the **Olympic recurve style**. We also have a few **longbow** and other **traditional bow** archers! There are many things in common between these categories, but there are also a few major differences. We will discuss those as we move through the guide.

Something important to keep in mind: there is no such thing as “bad” archery equipment.

Everything you can buy on the market today is the result of thousands of hours of product design, testing, and refinement. It is engineered to the highest standards and more than adequate for your needs. Unless you are literally headed to Tokyo in 2021 (in which case, congrats!), you don’t need to drive yourself crazy with the nuances of technical design and engineering.

If you’re an archery nerd and you love that sort of thing, have fun! But please don’t overspend on top-of-the-line risers, limbs, and accessories because you think you have to have the latest and greatest kit in order to be a better archer.

To be completely honest, even our most basic equipment will outshoot us every day of the week. I know mine does.

Make sure your bow matches your current skill level and prepares you for continued growth. But remember: a thousand-dollar bow in the hands of an archer with improper physical form and a poor mental game won’t shoot much better than a stick with a string tied around it.

Building Your Bow

A bow comprises two major components: risers (the center part of the bow) and limbs (the flexible bits at the ends). Most modern recurve bows are designed to come apart in sections for easy transport and adjustment.

These components can fit together with proprietary limb attachments or with a standard method called the **ILF fitting**, which we'll talk about in a few moments.

At Archers Artemis, our range bows use proprietary fittings for the risers and limbs. That means that if you have a Ragim riser, you need to buy Ragim limbs that fit that specific model.

Many of entry-level youth-sized bows, such as the ones you might buy at Cabela's, LL Bean, or Dicks, will also use this method. There's nothing wrong or bad about this! It's often necessary for the design of smaller and low-poundage bows. But it does mean you will have less flexibility in your options when it's time to move up in length or weight.

In contrast, the **International Limb Fitting (ILF) standard** lets you mix and match risers and limbs from all the major manufacturers. This allows you to hold onto a riser you like and simply purchase new limbs when it's time to move up in draw weight or create a longer/shorter bow. A higher draw weight allows an archer to shoot their distances more easily and accurately, but draw weight should always be appropriate for the archer's height, age, build, and ability.

We will be focusing on ILF equipment in this guide, but if you or your child need a bow shorter than 62", you will want to consider the [Galaxy Bullseye line](#) available at Lancaster Archery.

The bows at Archers Artemis use our own numbering system. Please ask Coach Ricci about how your bow corresponds to standard draw length and poundage measurements before buying any equipment.

The basics of limbs

Limbs come in three different lengths: short, medium, and long. These are standard measurements across all brands. We'll talk more about limb length in a bit.

Limbs are marked in pounds and typically increase in 2# increments. The poundage is a measure of the force it takes to pull back the bow to a 28" draw length, which is what an average adult male archer would draw.

Your draw length is determined by your height/arm span. You need to know your draw length for a) creating the right size bow and b) ordering the correct size arrows.

Draw Length	Bow Length
14 to 16 inches	48 inches
17 to 20 inches	54 inches
20 to 22 inches	58 inches
22 to 24 inches	62 inches
24 to 26 inches	64 to 66 inches
26 to 28 inches	66 to 68 inches
28 to 30 inches	68 to 70 inches
31 inches plus	70 to 72 inches

Generally, you will subtract 2# of *real* weight for every inch less than a 28" draw length. For example, if you have 20# limbs and a 24" draw length, you would only really be holding approximately 12# on your fingers. The length of your riser and limbs also make a difference. A longer bow will feel lighter than a shorter bow of the same marked poundage.

When you are buying limbs with the ILF attachment, you can also play with the poundage a little to get more or less out of the limb, so that a limb marked 18# can actually be set anywhere from 16# to 20#, allowing you to find your own sweet spot and keep the same limbs for longer as you refine your needs.

Do not buy a limb that is marked more than 2# higher than your current limb! Adding any more weight without training can cause serious injury.

In terms of materials, most entry-level and youth limbs are made of wood and fiberglass (sometimes just called "glass"). The next level up usually adds a thin layer of carbon between the layers of wood. Higher-end limbs can be made of bamboo, carbon foam, or even solid carbon. Each type of material has a different "feel" during the shot, and it's largely a matter of personal preference as to which one is best for you.

Galaxy makes a line of limbs with progressively more advanced materials. The [Bronze Stars](#) are the entry level, made of the standard wood and fiberglass layers you'll find on almost all low-poundage offerings.

[Cartel Fantoms](#) are another reliable wood and fiberglass choice. [WNS Explorer](#) limbs are similar.

For the next level up, the Galaxy [Silver Star](#), [Black Star](#), and [Gold Star](#) limbs are very popular with lots of serious archers.

If you are looking for another intermediate/advanced option, I used the [Kaya K2 Classics](#) for years with great pleasure.

I'm also a huge fan of the [TradTech line](#) (made by Win&Win exclusively for Lancaster Archery), and I currently use the [RC Extreme Carbon/Foam limbs](#). TradTech was the "it" limb for most of the top barebow shooters in the country before Hoyt got aggressive with their sponsorship deals.

[Uukhas](#) are another cool choice. These are mostly or all carbon and have a very sharp curve at the tip, which offers more speed for the arrow without having to go up in poundage. They're also kind of spendy, but they have tons of loyal users. Coach Ricci uses these limbs and likes the speed of them.

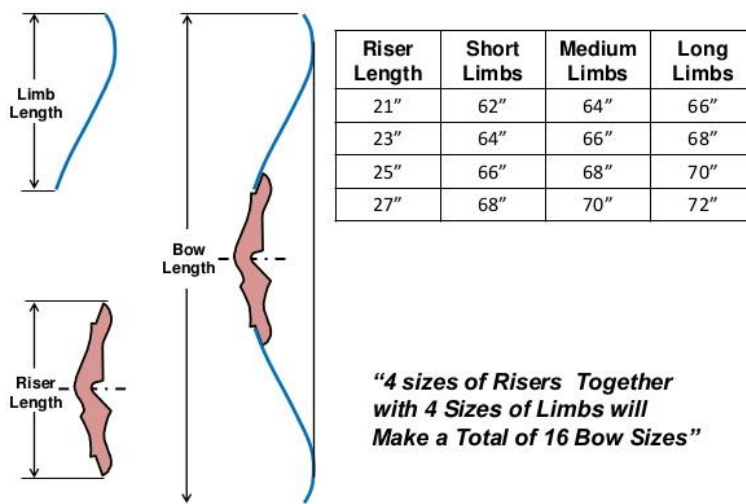
All about risers

Finding the right riser is just as important as buying good limbs. These days, top-of-the-line risers take advantage of the latest in aerospace engineering and materials technology to prevent vibrations, optimize the shot cycle, and look *really cool* while doing it.

Just like limbs, bow risers come in standard lengths, typically between 21" and 27". A 25" riser is generally appropriate for adults and most older youth archers, while 23" or 21" risers are good for shorter adults and kids who are likely to keep growing. ILF risers shorter than 21" are designed for hunting bows and may not be the best fit for recreational target archers.

The length of your riser, combined with the length of your limbs, equals the **AMO length** of your bow. AMO stands for the Archery Manufacturers Organization, which sets the rules. This will be important for ordering bowstrings.

Sizes of Limb and sizes of Riser



Note that there are several different ways to create the same AMO length of bow: you can have a 23" riser and medium limbs to make a 66" bow, or you can have a 25" riser and short limbs to make the same 66" length. You don't want to have very short limbs on a longer riser, because the limbs won't work to their highest potential. It's better to go for a shorter riser and longer limbs.

ILF risers are designed with bushings for lots of different accessories, including sights, stabilizers, clickers, and weights. If you are shooting barebow, you don't need to worry about most of these. If you are interested in Olympic recurve, you will need to start learning more about these additional pieces of equipment.

The biggest difference between our wooden range bows and an ILF riser is the need for a **plunger**, which is a piece of equipment that works with the arrow rest to align the arrow and make sure it flies straight. We will talk more about plungers in a minute.

21" risers are a bit hard to find, but here are two good options. Don't forget to pick a **right-handed or left-handed riser** based on how you shoot! Left-handed risers are often more difficult to find, unfortunately.

The [Galaxy Explorer](#) is a great starting point for youth archers who need a 21" riser. This one only comes in black, however.

The [WNS Explore DX](#) is another good 21" pick - and you get to choose your color (it's important to look good on the range). This model replaces the standby Axiom, which has been the entry-level riser of choice for a long time.

For 23" risers, there are a few more options ranging from entry-level to high-end. I use the Gillo GQ L on my indoor rig, for reference. Here is a [list of 23" risers available from Lancaster](#).

The [choices for 25" risers](#) are much more expansive. Gillo and Spigarelli are barebow specialist brands that are designed to be balanced without stabilizers. Coach Ricci uses a 25" Gillo G1, as do I on one of my bows. Hoyt also now makes a few different risers as they try to woo the growing barebow crowd.

However, almost all Olympic recurve risers can be adapted for barebow, and I've seen top-level shooters using Win&Win, MK Archery, and Mybo risers with great success.

For our very tall folks, Gillo now makes their flagship G1 in [a 27" version](#). Hoyt used to make the Formula Faktor in 27", but you'll have to find one on eBay nowadays (and be sure to buy Hoyt Formula limbs).

Completing Your Bow Setup

The riser and limbs are important, but you'll need a few more things before you can get shooting, including a plunger, arrow rest, and bowstring.

Plungers

We talked briefly about [plungers](#) earlier. Unless you are using one specific type of arrow rest, plungers are generally *not* optional on an ILF bow. This is because of the way risers are cut *past center* to create an arrow shelf that is a little deeper than most wooden bows. Why does this matter? Because we want the arrow to sit straight in line with the string, not to one side or another. Plungers let you adjust this alignment.

Plungers also help to reduce the wiggle of the arrow as it leaves the bow (the archer's paradox). A plunger contains a spring that absorbs some of the force and keeps your arrow flying straight.

The plunger screws into a hole through the riser and often through part of the arrow rest, too. Sometimes, the riser is too thick or thin for a specific model of plunger, so you need to be careful about buying very short or very long models.

This [Shibuya plunger](#) is a classic for entry-level bows.

For more advanced students, the [AAE Gold](#) is a top pick (I think Brady Ellison uses this one) as is the [classic Beiter](#). They may seem expensive, but the last thing you want to do is wrestle with a stubborn plunger when you're trying to make fine adjustments to your tune.

Arrow rests

You will also need an arrow rest. There are lots of different types, but a basic magnetic option like the [Cartel X-pert](#) or its equivalents in other brands will work well for almost everybody.

Lots of people (including Olympians) swear by the [Hoyt Super Rest](#) or its equivalents in other brands. Don't be fooled by its cheap price! It's a very good rest if you want to keep it simple.

Both Coach Ricci and I use the [Spigarelli ZT](#), another standby barebow pick. It's highly adjustable, which can be both a blessing and a curse!

Bowstrings

Ordering a string can be tricky. Some strings are sold by the length of the string itself. Others are marked by **AMO length**, which is the standardized length of the bow we discussed earlier.

For example, if you have a 21" riser and short limbs, you have created a 62" AMO length bow. If the string says to order by AMO length, pick 62". If the string says to order by string length, it will tell you whether the string is going to be 3" or 4" shorter than AMO length. Subtract accordingly.

Strings come in different materials. Most modern ILF limbs are designed to take FastFlight bowstrings, but please double check with very low-poundage limbs, non-ILF limbs, or anything you buy secondhand that is not currently in production. You may need a B-50 or Dacron string instead.

For a basic FastFlight string, [Bearpaw](#) is a good bet.

If you want to get a little fancier (or if your colors really matter to you), I order my strings from [60x Custom Strings](#). They're very fast and they're great quality.

Sights, stabilizers, and clickers

Olympic recurve archers and compound bow archers use a whole bunch of additional accessories to improve their accuracy and consistency. Just like limbs and risers, there are hundreds of options and combinations to help you create the perfect setup for your needs.

If you are planning to compete or earn pins in the barebow category, you cannot use any of these things!

[Recurve sights](#) use a bar and pin system to help you aim. More expensive versions have more adjustability for fine tuning. You will want to avoid the very flimsy camper sights, but anything above the \$30 mark should be adequate if you're getting into the Olympic style. Coach Ricci likes the [Shibuya Dual Click](#) sight. It is a mid-range sight and is used by many intermediate to advanced archers.

Stabilizers are long rods that extend outward from the bow and include weights at the ends. This provides counterbalance when you're holding the bow, resulting in less wiggle and a more stable shot. Some archers in the freestyle or youth categories only use one long stabilizer, while most Olympic style archers add V-bars that extend to the left and right of the bow.

If you are just getting started with stabilizers, start with a single, center rod and work your way up to V-bars. Even an ounce or two of added weight at the end of a stabilizer can feel extremely heavy until you get used to it.

Barebow category archers can't use stabilizer rods, but we *can* use [stabilizer weights](#) that are attached directly to the riser (as long as the riser can still fit through a 12.2 cm inspection ring).

Both stabilizer rods and weights come in different thread sizes for the screw that attaches to the riser – make sure to check which one you need, although there are simple adaptors available.

Clickers are another Olympic recurve-only tool to ensure that you're reaching full draw and maintaining a consistent expansion/release point. A clicker is basically just a thin, flexible piece of metal that sits over the point of the arrow. When you've expanded fully, the arrow moves backward a tiny bit and the strip of metal falls with a clicking noise, signaling it's time to release.

Gloves, tabs, guards, and finger slings

Everyone who has ever slapped their arm with a bowstring or shot for hours without a finger tab knows how important it is to have the right protective equipment.

Arm guards come in many different shapes, colors, and sizes, but they all do the same thing: protect your arm when releasing the bowstring.

Please avoid the very narrow plastic armguards [like these](#) – they're intended for extremely high level shooters who don't really hit themselves anymore. I would also pass on the slip-on sleeve armguards like [this one](#). They simply do not offer any protection.

Anything else is fair game! If you do not often hit your arm, you might not need a full-length guard that goes over your elbow, but it's better to be safe than sorry.

Gloves and tabs are also important. In most situations, finger tabs are better than gloves. Gloves tend to fit poorly and have too much material around the fingertips for a clean release. Unless you are buying a genuine leather option and are committed to molding and conditioning the material to fit like...well, a glove...I would suggest trying a finger tab instead.

All tabs must be trimmed to your hand shape. All tabs must be broken in before they start to feel good, so be patient!

For youth archers shooting three-under, something like the [Legacy Leather](#) tab would be a good starting point. If you are shooting split-finger, [Bateman](#) makes some solid entry-level options.

What happens if you sometimes switch between three-under and split-finger? Ideally, you would have a different tab for each. Using a split-finger tab when shooting three-under will change your finger alignment and make for a less accurate shot.

Adults and teens might prefer a more solid tab with a metal plate, like the AAE line in [full-face](#) and [split-finger](#). This is the tab I have used for years with no complaints (which is all you need from a tab!).

A [finger sling](#) is the last piece of equipment that goes on your hands, but it's certainly not the least! Finger slings are important for a clean, smooth release. They allow you to relax your bow hand when you're releasing the string to prevent torque and keep your arrow flying straight. Everyone should have one to start perfecting your grip.

You can [make one out of an old shoelace](#) (make sure it's a soft weave and not something that's going to cut off your circulation) or buy one that's got plastic adjusters for a good fit.

Please *don't* buy a wrist sling instead. Wrist slings are intended for compound shooters and hunters to stop them from dropping the bow, but they don't serve exactly the same function as a good finger sling.

Chest protectors are a common item for Olympic recurve shooters because of the angle of the string when they anchor. Often, the string will come in contact with the chest and may catch on shirt material, preventing a clean release. If your string does not contact your chest regularly, there is no need for this. Ladies, if this is an issue for you, please talk to us.

The Wonderful World of Arrows

Arrows are a whole universe unto themselves and buying arrows can be a complicated prospect.

There are four main factors to consider when buying arrows: the material, the length, the spine, and the weight.

The **material** of your arrow depends on what you're trying to achieve. Arrows are made from aluminum, carbon, or a carbon/aluminum blend. None of them is better than another. Professional archers use both aluminum and carbon depending on the circumstances.

Aluminum arrows are heavier, which makes them suitable for shorter distances (such as 18m indoor shooting) and youth archers who don't need to get out to 50 or 70 meters. Aluminum shafts are often wider in diameter than carbon, so indoor archers love using them for cutting the lines of the target and getting higher scores.

Carbon and carbon/aluminum arrows are lighter and usually thinner, making them perfect for reaching long-distance targets.

The **length** of your arrows is determined by your draw length. Arrows *must* be long enough for you to draw your bow completely without the arrow slipping backwards off the rest. Arrows are usually cut 2-3" longer than your fingertips when you hold both arms outstretched in front

of you and put the nock of the arrow in the hollow of your throat. It's better to have an arrow that's a little too long than one that's too short.

If you don't know your draw length or are not sure of your arrow length, ask Coach Ricci before ordering any arrows.

The **spine** of your arrow is a measure of how much the arrow flexes under a standardized amount of pressure. A *high number* indicates an arrow that will flex a lot, which is necessary for low-poundage shooters. A *low number* denotes a stiffer arrow that can withstand the forces of a high-poundage bow.

An incorrectly spined arrow will not fly out of your bow smoothly and will not hit the target where you expect it to.

There are a lot of charts and graphs out there talking about spine – be warned that *you cannot use the marked weight of your limbs* to choose the right spine for your arrows.

The spine you need is dependent on the *real poundage* you are holding on your fingers (remember way back in the limbs section when we talked about this?). You will need a **bow scale** to determine your actual poundage. Please ask one of the coaches/instructors how to do this.

Lastly, the **weight** of your arrow will make a difference. Weight is determined by the material, but also by the points, inserts, fletchings, and nocks that you choose. The weight of an arrow is measured in **grains** and must be [balanced correctly](#) across the length of the arrow.

When you are buying arrows, you'll need the arrow shaft, points (and inserts, for some types), nocks, and fletchings. Some arrows will come with inserts and/or points installed. Others will not.

Please buy at least 8 arrow shafts. We recommend you get a dozen.

Lancaster Archery will cut your arrows for you for a small additional fee. If you don't have a special arrow saw, this is very much worth it.

Note that the length of the shaft is different than the length of a fully assembled arrow. The nock and point will add length, so make sure you know exactly how long you need your shafts to be before you get them cut.

For youth archers, the [Easton Jazz](#) arrows are an excellent choice. These are the arrows we use most often at the range (the purple ones). The [Easton Tributes](#) and [Easton Eclipse](#) are also great.

For intermediate adults, I like the [Easton Platinum Plus](#) shaft for indoors. They are eminently reliable and durable (I've had the same set for 6 years). For outdoors, I use the [Victory VAP V6](#), which are thinner carbon arrows. Coach Ricci and many of our more advanced archers like the [Easton Carbon One](#) arrows.

Easton, GoldTip, CarbonExpress, Victory, and Black Eagle all make excellent thin carbon shafts. If you are looking to invest, the Easton [A/C/Cs, A/C/Gs, A/C/Es, or X10s](#) are used by pros around the world.

If you are confused about buying arrows, you can always talk to the folks at Lancaster Archery or the arrow manufacturer for helpful information. But check with us first so you have a good knowledge base before you speak with them.

The arrow shaft you choose will determine which points, inserts, and nocks you need.

There are two options for **fletchings**: feathers and plastic vanes. They are both perfectly fine, but I personally prefer feathers for aluminum arrows or indoor-specific arrows due to their more forgiving release off the rest. Plastic vanes are very durable, which is why we use them on our beginner arrows.

For thinner carbon arrows, [spin vanes](#) (also called spin wings, spider vanes, or curly vanes) will give you the speed and stabilization you need for long distances. Some people also use them indoors.

If you are getting feathers, start with a **3" length**. You can buy two different colors for the index feathers and the hen feathers, or you can go with just one color and use your nock alignment to highlight the index for you.

If you are a righty, choose the **right-wing** option. It's okay to choose right wing as a lefty if they don't have a left-wing version. You can pick [shield shape](#) or [parabolic/round](#) shape – the differences in flight are minimal.

You can Google these brands to check out what the different colors look like. If you find them cheaper on Amazon or elsewhere, go for it! Please buy enough to fletch all your arrows and have some spares left over for when they invariably come off.

For vanes on indoor/short distance arrows, you'll also want [a 3" option](#).

You can also find shield-cut vanes if you like. The little 1.5" Blazer vanes are more suited for compound bows, so I would avoid those for now.

If you need help fletching and assembling your arrows, please talk to Coach Ricci about pricing.

Targets and Home Range Equipment

Here are some extra bonus items if you're looking to set up a shooting range in your backyard, basement, or even a conveniently long hallway away from kids, pets, and antique vases.

[This target](#) is a good pick for younger or low-poundage archers. It can sit on the ground, on a chair/table, or you can buy or make a stand. I'd suggest the **28" square one** to give a little extra room for stray shots.

For adults with higher poundage bows, [Morrell targets](#) will stand up to anything. This one will just fit a 40cm target, so you better be confident in your shots!

You can buy [10-ring paper targets](#) in both 40cm and 60cm versions.

Last but not least, any [target pins](#) you fancy. You can also use masking tape, painter's tape, or some big spare nails to keep the paper up. They sell boxes of nails with the orange plastic circles at home improvement stores, as well.

Coach Ricci has provided additional information about setting up a safe home range [here](#).

If you have any concern about where stray arrows might land, do not shoot at home. Please consult with Coach Ricci about your home range before you start using it.

Tuning Your Bow

This guide does not discuss the next step of the process: tuning your bow. In order for all your bits and pieces to work together in harmony, you will need to make a number of different adjustments, from finding your ideal brace height to tweaking your nock position and calibrating your arrow rest.

Tuning takes time and experience, which is why we offer bow tuning as a service for our established students. See Coach Ricci for information about tuning so you can start shooting your best shots!

In Conclusion

If you haven't guessed by now, buying a bow can take a lot of work! There are so many things to think about that it's easy to get confused or overwhelmed.

For tips, you can turn to the wide world of the internet. Sites like archery360.com and worldarchery.com offer great resources and articles.

Hundreds of experienced, dedicated archers also share their experiences and tips on forums such as [TradTalk](#), [ArcheryTalk](#), and [Reddit](#). However, many of these recommendations are situation-specific, perhaps overly technical, occasionally misinformed, and based purely on the personal preference of the posters. They are also often geared toward the adult male shooter crowd, so they may be less applicable for youth and female archers.

You can always ask Coach Ricci, myself, or any of the other instructors about equipment issues. If we don't know the answers, we'll find someone who does!

Thank you for taking the time to read through this guide! I hope it was helpful for making decisions about taking the next step toward becoming a lifelong archer.