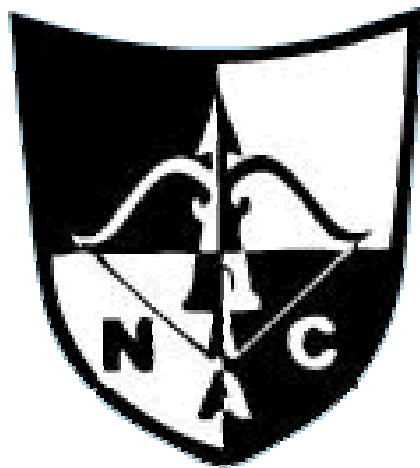


Getting Started In Archery



What do I need to know?

Now you have completed the Newcastle City Archers come and try program, you may be wondering about what you need to do if in the next few weeks you decide you want to take up the sport of archery. If you have you have a quite a few decisions to make. This guide is to help you through the pitfalls of buying your first set of archery equipment.

What bow do I want to shoot ?

There are three choices of bows that can be shot in target archery with Newcastle City Archers:

Recurve

The Olympic type of bow



Compound

A modern bow with Cams (also known as “wheels” or “pulleys”) and 2 “cables” in addition to the string



Longbow

The traditional English bow – a stick and a string



The little coloured bows you have shot are called a Genesis. It is a type of compound bow, but it is a hybrid more akin to a recurve. Archery is a diverse sport, and the choice is a personal one. What suits one archer will not necessarily suit another archer.

Longbow shooter are often more interested in history and tradition. If your goal is the Olympics, the recurve is the only bow allowed there. If you proposed to be a casual shooter only the ease of shooting a compound bow may be for you. Some of the factors that might influence your choice are set out below.

There are currently about the same number of recurves and compounds in the club. Currently there are no longbow shooters, though one member has one

on order which he intends to shoot for fun only. This may be a factor if you were considering a longbow. This pamphlet focuses on recurve and compound bows.

Recurve Bows

<i>Advantages</i>	<i>Disadvantages</i>
Simple single string bow that can be taken apart for travel.	Despite its simplicity it is generally more finicky and difficult to adjust and tune.
Generally cheaper than a compound bow at the bottom to mid levels of quality.	Requires excellent technique to shoot well. This requires considerable practice and time to master and unless you put in the effort you must expect reasonably slow progress up the competition ladder.
Restricted in terms of add on performance enhancing extras keeping initial costs down.	Draw weight cannot be easily adjusted other than by purchasing new limbs for the bow You will need to start off on low poundage limbs and upgrade once or twice in time to higher poundage limbs in order to reach competition distances.
The only bow currently allowed in competition at the Olympic Games.	As limb poundage increases you will also need to progress to stiffer arrows over time to maintain tune.

Compound Bows

<i>Advantages</i>	<i>Disadvantages</i>
The most popular competition bow and generally more entrants at tournaments.	Generally more expensive in the mid to upper levels of quality.
The bow has a let off in the range of 65% to 85%. This means at full draw you hold less weight than the pull it took for you to get it to full draw (eg a 60lb bow will have a holding weight at full draw in the range of about 20lbs to 12 lbs). Consequently less overall strength and stamina are required to shoot well.	There are almost no restrictions on bow design or accessories. This has in the past created a “technology arms race” adding to expense. This trend, other than the “bling factor” has almost ceased as the technology limits have been reached.
Draw weight is easily adjustable meaning you can buy say, a 60lb bow, let it off to 50lbs and then slowly wind it up as you get stronger	The bow cannot be disassembled for transport so a hard bow case is almost essential.
Generally more adjustable and easier to tune. The two main measurements in archery - your draw length and your draw weight can be easily adjusted to suit the individual archer.	The arrow is usually released with a trigger on a mechanical device called a release aid rather than using fingers creating an additional expense. However, you will usually keep the device for life..
Inherently more accurate with optical sights. This enables you to progress quickly with considerably less effort than a recurve. Of course, this is true for all compound archers so it is every bit as difficult to win as it is shooting a recurve bow.	You will be subject to endless jokes by recurve and longbow archers about “going to the dark side” or “shooting a bow with training wheels” - just answer “At least we can hit the target”

Whatever your choice, there is a reasonably strong second hand market and you can always change your archery career path in the future and recover some of the cost. While it is usual to start on recurve it is noteworthy that both the Sydney 2000 Gold medallist Simon Fairweather of Australia and the 2010, 2011 World Cup Champion and current World Champion Brady Ellison of the USA started as a compound archers and more than successfully changed to recurve a number of years into their careers.

I've decided my bow type – Now what do I need to know?

1. Draw Length

One size does not fit all. Archery gear must be customised to the archer. **Whatever you bow you choose you need to know your draw length before getting you own bow It is simply the most important measurement in archery - particularly if you shoot compound where ¼ of an inch adjustment can make major differences to accuracy.**

There are three ways to work out your draw length:

- 1 Place the nock of an arrow on your sternum and hold it between you fingertips with both arms stretched out in front of you and measure from the tip of you fingers back to the end of the nock. That is roughly your draw length.
2. Stand flat against a wall and stretch your arms and fingertips in each direction. Mark the wall at the end of your fingertips and measure the distance between the marks in inches. This is your wingspan. You draw length = (Wingspan – 15)/2, or
3. A more accurate method is to ask for it to be measured for you using the club's specially marked arrow.

NB. It is important you measure the draw length in inches – it is the measurement used internationally for draw length by bow manufacturers.

Write the answer here so you won't forget it.

My Draw length is

inches

If you decide the compound bow is for you should reduce the draw length by about ½ to ¾ inch when ordering a bow to allow for the extra length of the release aid in your hand and its attachment point on the string – the D Loop.

2. Left or Right Eye Dominant ?

You will have been assessed during the introductory sessions for eye dominance. If you are left eye dominant you must get a left handed bow **even if you are right handed**, and visa versa, or you will have aiming difficulties. When you buy second hand gear make sure you get the correct handed bow.

3. How do I know what to get ?

Firstly you need to work out how much you want to spend. The range in all bow types is enormous but its quality varies enormously as well. You should however be able to get good quality new recurve equipment for around \$900 and good new compound equipment for about \$1,600.

A few principles to remember:

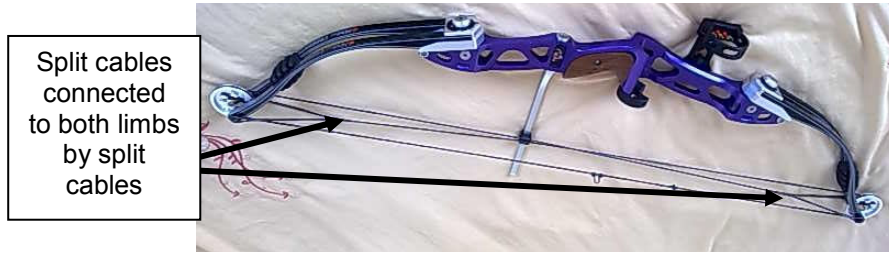
1. As in life in general – you get what you pay for. If you think you are going to be in the sport for some time there is a real difference in the “shootability” and accuracy of cheap bows and arrows and good bows and arrows.
2. Good gear will simplify for your learning experience, increase the speed of your progress in the sport and reduce frustration – so go for the best gear you can afford. Everyone we know has regretted buying cheap gear, and has either given up in frustration or been forced to upgrade very early in their careers.
3. Some items are expendable and will be replaced over you career. Arrows break and disappear into the grass when you miss, and recurve limbs get replaced as you get more experienced. So:
 - (a) **If you are choosing recurve** buy a good quality riser and sight as you can keep these for a long time. You beginner’s limbs you will discard as you increase your draw weight as you gain strength. So if cost is a major consideration start off with cheap limbs and only pay for the high quality limbs when you decide you have reached your full draw weight.
 - (b) Recurve bows range in length from 48 inches to 72 inches. Most target bows will average 66 or 68 inches in length. As a rough guide to choosing the length of a bow to suit you:

Draw Length	Bow Length
Up to 27” Draw length	64”
24-29”	66”
27-31”	68”
29” or over	70”

- (c) **If you choose compound**, buy the best sight and scope you can afford as you can take it from bow to bow as you progress. **Do not get a cheap scope as poor optics are very off-putting.** The next consideration is the release aid – buy a good one as it will affect your shot more than any other piece of equipment and will probably stay with you your entire career. Only then consider the bow and other accessories.
- (d) **If you choose a compound bow** you have a bewildering range of choices. There are a number of traps:
 - (i) The rules prohibit draw weights greater than 60lbs and they are enforced. There are lots of hunting bows out there that have 70lb and 80lb draw weights. **Do not buy by them.**
 - (ii) There are 4 different configurations – single cam bows, twin cam bows, binary cam bows and hybrid cam bows.
 - (iii) Single cam bows are asymmetrical with a single cable and a string rolling over a circular idler wheel on the top limb before connecting to the bottom cam. Sometimes called “Solocam” bows



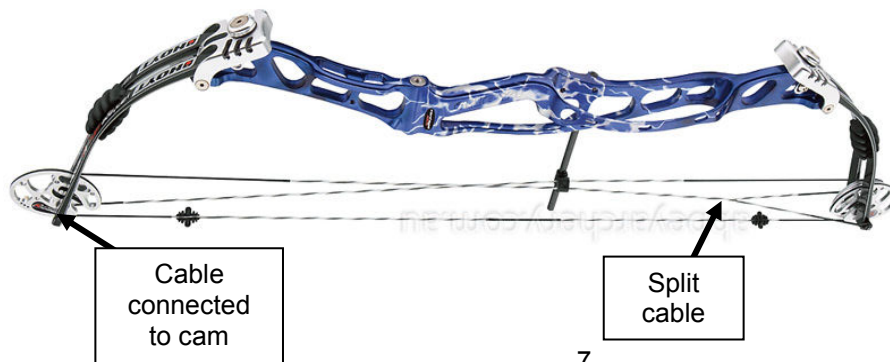
- (i) Twin cam bows are symmetrical from top to bottom and have 2 cables that are connected to each limb by a split in the cables at each limb and they join to the cam on the opposite limb.



- (ii) Binary cam bows are symmetrical from top to bottom but the cables do not connect to the limbs at all, but rather connect to the cam on the opposite limb.



- (iii) Finally the hybrid cam has one cable connected to the limb like a twin cam bow, while the other is connected to the opposite cam like a binary cam bow. Sometimes this is described as “cam and a half”



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- (iv) **So what's the difference ?:**

- a. With twin cam bows the 2 cams rotate independently of each other. For accuracy they must be synchronised. Cable stretch throws the cams out of synch. They are difficult to keep in tune.
 - b. Single cam bows are easier to keep in tune as there are not 2 cams to synchronise. However, they are sensitive to maintaining correct bottom cam rotation which affects accuracy. Mathews bows are the best of this type.
 - c. Binary cam bows have their cams connected to each other by the cables to ensure they rotate in synch. They hold their tune well. Bowtech and Elite are the best of this type
 - d. Hybrid cam bows offer the best of both single and binary cams and as they are vertically asymmetric they can be tuned to have good arrow rest clearance characteristics. Hoyt make the best hybrid cam bows
- (v) Generally speaking, **avoid twin cam bows for target archery. The top shooters generally choose single or hybrid cam bows, but binary cams are perfectly acceptable.** They are just tuned slightly differently.
- (vi) Bow speed is relatively unimportant in target archery. Any bow with an IBO speed rating of between 290 and 310 feet per second is fine. Anything faster than 320 fps IBO is generally unsuited to target archery.
- (vii) A bows brace height (distance from string to back edge of grip) is important for accuracy. **Do not select a bow with a brace height of less than 7 inches – longer is better.**

- (viii) Another factor to consider is the compound bows “axles to axle” (or “A2A”) length. This is the distance between the cam axles on top and bottom limbs. Generally speaking “long is good” for target archery – in the range of 37 to 40 inches – though in the last 2 years the new parallel limb short A2A bows have proven just as accurate. **Regardless, do not buy a bow with less than 35 inches A2A unless you have both short stature and short draw length (ie less than 27 inches).**
- (ix) The final factor with a compound bow is the purchase of a release aid which is a crucial choice. There are 2 primary types - hand held and wrist strap. Most top shooters use a hand held release. Hand held releases come in 3 types - trigger activated, hinge activated and tension activated. Wrist straps are also available in tension activated models. For beginners, triggers are more intuitive, but **the best advice is try as many as you can and pick the one that suits you.**

4 What are good brand names ?

If you are buying a **recurve** bow the best brands are:

<i>Low cost</i>	<i>Middle Range</i>	<i>Best</i>
KAP, Samick	Samick, Win & Win	Win & Win, Hoyt

If you are buying a **compound** bow the best brands are:

<i>Low cost</i>	<i>Middle Range</i>	<i>Best</i>
Martin, Rytera	Elite, Bowtech, PSE	PSE, Hoyt, Mathews

Do not buy Chinese imitations sold in gun and sports stores. They are poor quality, and in the long run not cheap.

5. What about arrows?

Arrow selection cannot be explained in a short space. It is a choice dictated by the type of bow, the draw length and the draw weight and there are endless brands and models. It is very important to match the “spine” or stiffness of the arrow (rated in numbers from about 900 (very flexible) to 380 (very stiff)) and the arrow manufacturers have tables for the purpose of selection.

Reputable brands, include (in descending order of quality) Easton, Carbon Express, Gold Tip and Cartel. **Please ask a club member for assistance, or be guided by the shop from which you purchase your bow.** However some useful tips are:

1. Arrows must be long enough for your draw length or they will be dangerous to shoot. Err on the side of too long – you can always shorten them.
2. Do not be fooled by anyone telling you that light weight arrows are good because they fly faster. Fast arrows are important for shooting unmarked distances in field and 3D archery. **Distances in target archery are always marked so speed means very little.** Light arrows drift further in the wind so you are looking for a heavier arrow for target archery.
3. Often shops will try to sell you a large diameter arrow. Generally speaking for target archery you are looking for the smallest diameter shaft you can afford so it will be less effected by wind drift.
4. Vanes for the arrows in target archery should be quite small – no more than 1.25 inches in length. Don't let the shop owner talk you into bigger vanes – they are for hunting.

6. What do I need to buy ?

If you are buying a new **recurve** you will need to buy:

1. A riser (KAP, Samick, Win & Win, Hoyt).
2. Limbs (about 28lb would be a good starting point for most adults).
3. A String.
4. A Sight - Toxonics, SureLoc and Shibuya are reputable brands.
5. An Arrow Rest - Cartel, Beiter, Shibuya are reputable brands.
6. A Button - Cartel and Beiter are reputable brands.
7. 12 Arrows and a Quiver.
8. A Stabiliser (and possibly V Bars) - Cartel, SOMA and Doinker are reputable names.
9. A Finger Tab and a Finger Sling.

10. Protective gear - An Arm Guard and a Chest Guard.
11. A bow stand.
12. A carry bag or case.

If you are buying a new compound you will need to buy:

1. A bow – Most adult males would chose a 60lb bow (reducible to 50lb), adult women / teenagers a 50lb bow (reducible to 40lb), and women/children a 40lb (reducible to 30lb).
2. A Sight - Toxonics, SureLoc and Shibuya are reputable brands.
3. A scope - Titan, Speciality Archery and Shibuya are reputable brands.
4. A peep - Speciality Archery is the best.
5. A release aid – Carter, Scott and Truball are reputable brands.
6. An arrow rest – Only one choice in our opinion – Trophy Taker 2 blade launcher.
7. 12 Arrows and a quiver.
8. A stabiliser - Cartel, SOMA and Doinker are reputable brands.
9. Finger or Wrist Sling.
- 10 You may need an arm guard and possibly a chest guard subject to bust size. You can leave these decisions to later.
12. A bow stand.
13. A hard carry case.

7. Where do I get new gear ?

Locally, almost any gear can be ordered though Graeme Mitchell at Lakeside Archery at 2 Quarry Rd, Teralba (phone 4958 3033). If you are buying a compound bow Graeme has a bow press for adjusting and tuning compounds and provides good after sales support.

It is a small shop. If you want to see a wide range of gear in stock to examine and choose from then a trip to Sydney is required to either

Benson Archery Warehouse
164 Parramatta Rd
Granville
Sydney, NSW, 2142
(02) 9682 3080
www.bensonarchery.com.au

Abbey Archery
Unit 10, 8 Victoria Avenue,
Castle Hill, NSW, 2154
Australia
02 8850-6400
www.abbeyarchery.com.au

Many if not most archers order their equipment on line. Good on-line stores include the above stores and:

Pats Archery www.pats-archery.com
Apollo Archery – www.apolloarchery.com.au
Archery Supplies - www.archeryshop.com.au
Urban Archery – www.urbanarchery.com.au

These stores often have beginner packages that contain all the gear you will need at reasonable quality and price thus making your choices simpler. The proprietors of Pats Archery (Pat Coghlan), Apollo Archery (Guy Phillips) are both world class compound archers and can give you expert advice when selecting equipment. Guy is an occasional visitor to the club. Similarly, the owner of Urban Archery Marcus Annear is a very experience archer.

The best advice we can give you is do not impulse buy. When you've considered your options, been to a store or worked out what you want, **show your wish list it to a club member** who will advise you whether you are getting a good deal or buying junk or equipment that you can't use.

8. Where do I get second hand gear ?

If you want to look for second hand gear there is a good classified section on the Australian archery internet forum www.archery-forum.com that contains good equipment used by competitive archers. **DO NOT BUY FROM EBAY WITHOUT ASKING A CLUB MEMBER ABOUT THE EQUIPMENT.** Ebay is generally full of Chinese junk.

9. Further Research

Scots Commonwealth Games archer and professional coach Alistair Whittingham has series of 30 free archery technique videos downloadable as podcasts from the iStore, for iPod, iPad or iPhone under the name "Performance Archery". They are also available on YouTube - search for "Performance Archery".

If you are buying a recurve bow you might like to skim over the free and expert publication “The Archers Reference” which can be downloaded at:

<http://www.archersreference.co.uk/download.html>

This publication contains all you will ever need to know about setting up and tuning a recurve bow and shooting it. **If you are buying a compound bow** a compound equivalent to the above excellent publication (though not as comprehensive) can be found at:

<http://oldsite.fca.ca/ex/MattClelland02.htm>

For either bow a bit of time spent browsing through the threads on Archery Forum at

<http://www.archery-forum.com>

or the threads at the UK forum Archery Interchange at

<http://www.archery-interchange.net/forum/>

is also a quick way to educate yourself on all archery issues as well as ask questions of fellow archers.

<p>If you have any questions about the purchasing of archery equipment please contact the club secretary by emailing secretary@nca.org.au or phone 0417 468 012</p>
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