

# **Bow Tuning**

## **Tuning 2: Fine tuning**

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### **AIM:**

After the session you should:

- Be able to apply two fine tuning tests and adjust tuning accordingly
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### **OUTLINE:**

Introduction	5 min
Practical 1: Bare shaft planing	20 min
Practical 2: Variable distance tuning (Walk-back tuning)	30 min
Practical 3: Alternative fine tuning	15 min

### **EQUIPMENT:**

You will need:

- One or more bare (i.e. unfletched) shafts
- Pressure button adjustment tools (Allen keys)
- Nocking point adjustment equipment (e.g. pliers/nocking points for metal nocking points; sharp knife, twine/floss and glue for traditional twine nocking points)
- A notebook, to record measurements and changes

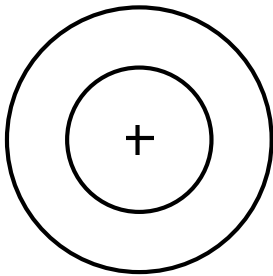
## Bow Tuning 2: Fine tuning tests

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The following exercises *demonstrate* some tests used in fine tuning the nocking point position and button position and tension. Any of the tests can be used as a quick check (setting up time plus 15 minutes), but to apply the tests and tune the bow will need additional time. To fine tune each parameter may take 30 minutes or more in addition to setting up targets etc.

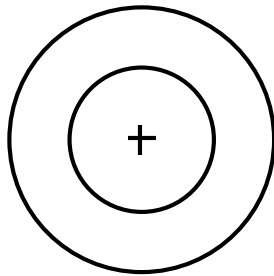
### 1 Bare shaft planing

Shoot bare and fletched shafts at an aiming mark. Note the relative positions of bare and fletched shafts (use the 'targets' below). Repeat to confirm. Shoot from the top of the nocking point; note the effect. Adjust button tension or position substantially; note the effect. How would you interpret the patterns?



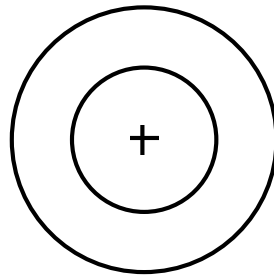
Setting: \_\_\_\_\_

\_\_\_\_\_



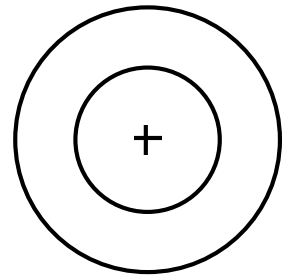
Setting: \_\_\_\_\_

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Setting: \_\_\_\_\_

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Setting: \_\_\_\_\_

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### 2 Variable distance tuning

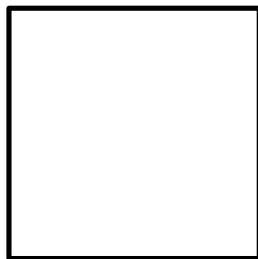
Using the worksheet overleaf, carry out a walk-back test with your normal button setting, the tension changed significantly (>2 turns) and the button position changed substantially (with the button tension re-set to normal).

Record what happened. What do you think is an ideal result?

### 3 "Paper tear" test

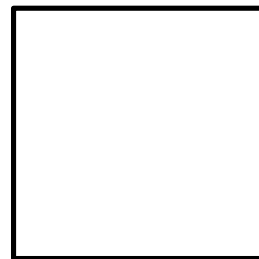
A paper tear test is a simple test, but requires some additional equipment. Using the set-up provided, you should carry out a paper tear test using at least two different settings (or your normal nocking point plus use of the top or bottom of the nocking point). Record the results below, by drawing the shape of the tear left by a **fletched** shaft in the paper.

#### Shaft pictures observed



Setting \_\_\_\_\_

\_\_\_\_\_



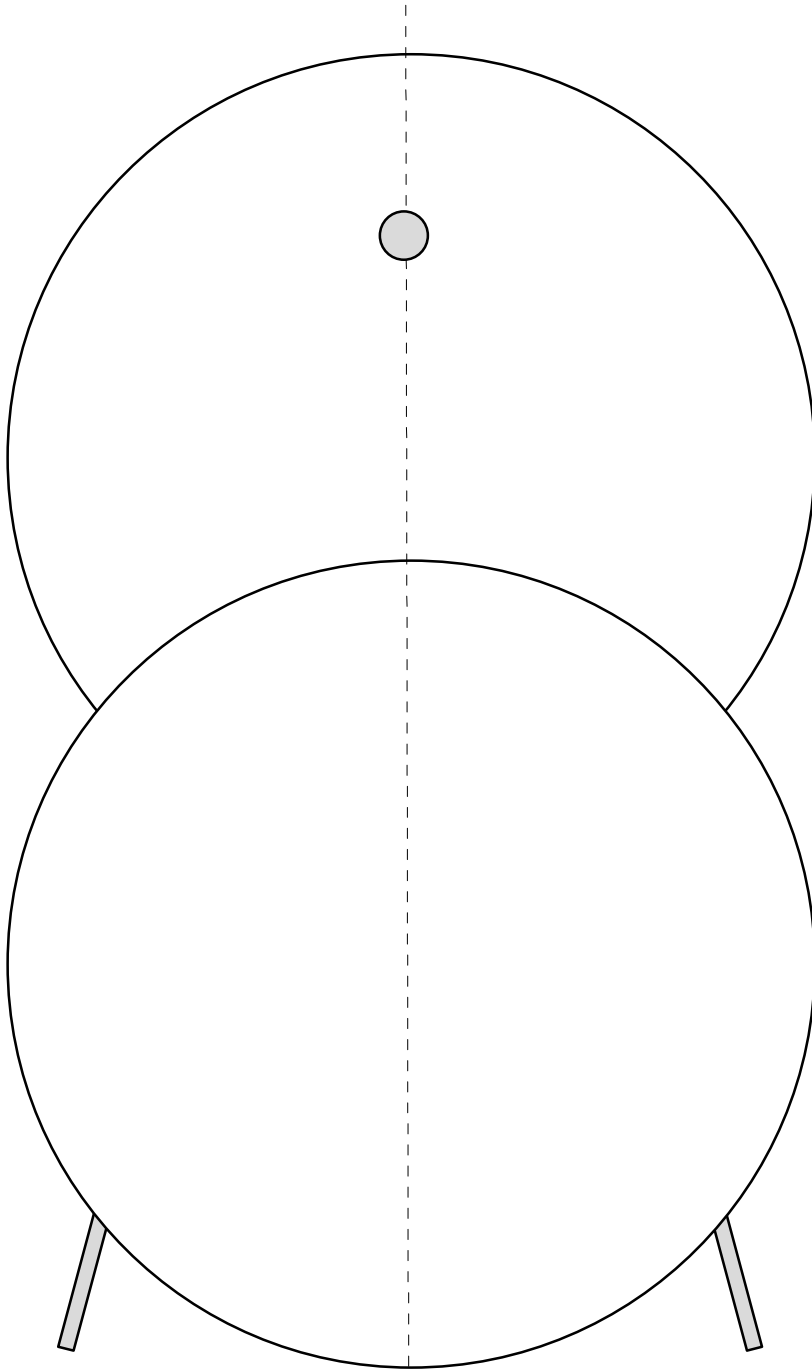
Setting \_\_\_\_\_

\_\_\_\_\_

Discuss the results.

# Walk-back tuning worksheet

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Draw in the position of the arrows shot in each 'walk back'. Make a note of the button position and tension below:

- × Position \_\_\_\_\_ Tension \_\_\_\_\_
- Position \_\_\_\_\_ Tension \_\_\_\_\_
- Position \_\_\_\_\_ Tension \_\_\_\_\_