

---

# Windward Flutes

---

## Flute Care

*The living tone of a wooden flute enchants the listener. Our flutes are made to the highest standards and benefit from being lovingly “played-in” and maintained. We hope that the instructions below will help you to care for your flute with confidence.*

---

### Playing-in

---

Playing-in the flute in gradual increments will prepare it for a long life - *especially important for “wet” players!*

After Each Playing Period, Swab, Dry And Oil The Bore. Then Put The Flute In Its Case!

*and wait an at least one hour before you play the flute again!*

On days 1 and 2 play only	10 minutes each time	up to 8 times per day
On days 3 to 6 play only	15 minutes each time	up to 5 times per day
On days 7 to 10 play only	20 minutes each time	up to 6 times per day
Days 11 and 12 play only	25 minutes each time	up to 7 times per day
Days 13 and 14 play only	30 minutes each time	go for it...

**After each period of playing**, swab out the bore of each flute component from head to foot. Let it dry for a few minutes, oil the bore of each component and return flute to case. Because moisture travels slowly through the dense wood of the flute wall, timing the “play periods” and swabbing the flute after each time you play, allows the dense wood to absorb only measured amounts of moisture evenly. **Note: Especially in a dry environment, like Arizona’s climate, air conditioning or forced hot air heating, it helps to keep the moisture content consistent if you can keep the flute case in a sealed container between playing.**

**Hoop stress cracks** ~ It takes about two weeks of measured playing for the moisture in the bore to stabilize throughout the wood. If too much moisture all at once swells the interior wood layers, while the outer layers remain dry, *hoop stress cracks* can occur. The outer dry layers of the wood do not swell, they simply crack open to accommodate the movement of the inner layers. A hoop stress crack does not go straight through into the bore, only through the outer dry wood. Nevertheless this becomes a weak point in the flute, best to be avoided.

---

### Oiling & Bore Care

---

**Bore oil** resists condensation, and at the same time reduces desorption of the moisture content already in the wood, and regular application “polishes” the bore. Once the flute is played in, continue to oil the bore weekly for the next two months, and monthly thereafter. Swab the bore and allow it to dry before oiling, draw an oil-soaked cloth through the flute sections, and **wipe off oil left in the sockets** before reassembling the flute, as bore oil softens the windings wax on the tenon thread-wrap. Bore oil is NOT good for the polished waxed finish of our flutes, so wipe it off. We recommend a synthetic hypo-allergenic food safe bore oil by Alisyn, NOT a semi-hardening oil, like almond oil, which congeals and spoils.

**Swab and oil the head-joint bore.** Pull out the end-cap assembly, swab out the moisture in the head-joint, and oil the headjoint bore regularly, after all, it receives the most moisture! Grease cork lightly if needed and replace it. CHECK THE CORK PLACEMENT at 19mm from the middle of the embouchure as marked on cork stick. See *positioning the cork*.

**When oiling a keyed flute bore:** Wrap pads with plastic wrap to protect them. Use non-hardening synthetic oil, not almond which gums up the mechanism. Note: Leather or foam key-pads can be damaged by the oil.

---

## Tenons & Windings Care

---

The tenons on a Windward flute have combings and are designed for waxed silk thread windings, rather than cork. Thread windings strengthen the tenons, and can easily be adjusted to accommodate changes in the tightness of the socket due to changing relative humidity and wood moisture content. Windings wax holds the thread in place. Windings are applied clockwise (looking down on the tenon), the thread-end that you will need for adjusting the tenon/socket fit, can be found at the bottom of the windings, next to the tenon shoulder.

**Removing thread when “playing-in” the flute.** When the moisture increases from playing, and the socket/tenon joint expands and become tighter, remove or rearrange a few layers of thread, so that the tenon and socket fit comfortably. If the flute is not played, the tenon/socket joint will loosen, add (waxed-silk) thread (clockwise) around the tenon for a good fit. The added windings can be removed as needed, once the socket expands again with playing. Our the cork stick bobbin holds several meters of waxed-silk thread. If waxed silk is unobtainable, use polyester thread or dental floss (as an emergency fix) **NEVER cotton, linen, hemp or any other natural thread.** This can cause the socket could crack, if the flute is left assembled and unmonitored, after playing. **Never use teflon tape on a tenon, see end note**

**Windings wax:** Until the flute is fully played-in, apply windings wax to the the tenon several times each week, to secure the thread and provide a smooth fit and a good seal. Using your thumb, massage a lemon-pip size smidgeon of wax onto the windings, rubbing in the direction that the thread is wrapped around the tenon (clockwise, looking at the tenon from the open end) and support the thumb pressure with the your index finger in the tenon. Once the flute is played-in, apply windings wax when necessary. Wipe off excess wax from the tenon “shoulder”.

**Windings wax also helps protect the exterior finish.** Rub it on the external surfaces around the embouchure and toneholes and wherever perspiration and skin contact might wear at the finish. Friction softens the wax, so after rubbing it in vigorously, remove what is left by polishing the flute with a soft cotton cloth, until the flute shines.

---

## Headjoint Care

---

**The position of the cork governs the balance between the octaves, affects the basic tuning of the flute,** and should be checked each time the head-joint is cleaned, or whenever you question the tuning or octave balance. The normal position for the cork face is 19 mm from the centre of the embouchure, distance is marked on the cork stick, seen through the embouchure when the stick is in the head-joint touching the face of the cork. Adjust the cork’s position by twisting the endcap. **When cleaning the-head joint, grease the cork before you reset it,** and remove excess grease to avoid greasing the windings on the endcap.

**Slide Grease:** We supply two weights of slide grease in our care kit, regular cork and slide grease, and “Tribogel heavy” both from Alisyn. Our tuning slides are made of cupro-nickle. **Keep the slide well lubricated.** Without grease, the two metal tubes can gall against each other and may become inextricably stuck. Should this occur, contact Windward before subjecting the head and slide to heavy torque loads. and they should always be lubricated.

**Clean and lubricate the tuning-slide if it becomes stiff or gritty.** If the slide is dry or contaminated, gently twist and pull the tuning slide off of the head-joint, thoroughly wipe the *outside* of the head-joint metal slide tube, and the *inside* of the tuning slide tube. Rub slide grease sparingly **around the inside of the tuning slide metal tube.** Replace the tuning slide into the head joint, with a twisting motion. If slide is too loose, you can either use the heavy duty Tribogel (heavy slide grease) by itself, for a slightly tighter fit than with the regular cork and slide grease, or put a bit of each in the tuning slide, blend them and twist the slide in and out to mix well. This should tighten it up nicely.

*Always wipe out any excess grease where it gathers at bottom of the slide, the “entrance” to the centre-joint taper before the flute is reassembled.* Wipe it clean so that it does not interrupt the smooth airflow at the start of the taper bore; this will help to optimize good sound production. **Keep the grease off exterior finish.**

What to do about a loose or tight tenon/socket joint. *see windings*

*If a joint becomes loose*, chances are the flute has not been played for a while, and the wood has dried. Add or rearrange windings, apply windings wax to hold them in place. Then **play-in the flute over a few days**, and remove or rearrange excess windings when the joints tighten.

*If a joint seems too tight when fitting it together, do not force it together*, simply remove some of the windings, apply windings wax, and try again. When a joint seems to be jammed after playing for a while, carefully twist the tenon out of the socket, and remove some windings. If it cannot be taken apart immediately, disassemble the other socket joint, wipe out any moisture from the bore, and let the flute air dry for a few hours without playing it. The wood will probably contract enough for the joint to be separated, then remove some windings thread. If this does not loosen socket/tenon joint, or if the socket cracks because of the stress, contact Windward flutes.

---

## End notes

---



Never leave the instrument in a hot place!

Never leave the instrument in a hot place, like a car in the sun, a mantelpiece above a fireplace or a sunny window sill. This can lead to cracks in the wood, and it can also cause keypads to start leaking.



Never leave the instrument to freeze!

Once it is played-in, extreme cold can freeze the moisture within the wood, damage the wood fibers, and alter its tonal quality. Freezing a "played-in" flute can initiate cracks in the wood.



In dry environments, keep the flute in its case

In dry environments, keep the flute in its case, and the case in a plastic container to maintain the humidity at an appropriate level. Because excess moisture can cause mold, **do not place a humidifying device in the case.**



Never use teflon tape on the windings!

***Doing so invalidates our warranty!*** Teflon tape reduces friction, in the joint and it can make it extremely difficult to gauge the actual tightness of the fit. Teflon tape can thus make a joint feel like a correct fit, even as it stresses a joint to the point of cracking the socket.

*Carrying out these maintenance-related details will soon take you much less time than it originally took for you to read about them! We believe that you may also come to derive real satisfaction in caring for your distinctive and beautiful instrument.*

***If you would like to discuss any problem or question concerning the care of your new flute, please contact us.***

---

Windward Flutes

Shelburne, Nova Scotia, Canada

☎: 1.902.209.7783

✉: [info@windwardflutes.com](mailto:info@windwardflutes.com)

© 2016 Windward Flutes