



WARRANTY

All Aptius Instruments are covered by a Limited Lifetime Warranty to the original purchaser against defects in materials and workmanship.

Oliver Aptius, upon notice of any defect, will repair or replace, at his option, any defective part or material. The purchaser shall assume and pay the cost of all shipping or postage charges of the repair. The instrument must be accompanied by the original bill of sale, which must include the retailer's name, your name, the date of sale and the serial number of the instrument.

This warranty specifically excepts damage incurred by abuse, neglect, normal wear and tear or cracking of the wood or finish due to changes in temperature and/or humidity.

Remember, the best warranty is a careful owner. I take great pride in building instruments that will last for generations. If I build a problem into one of them, I want to take care of it, but I cannot be responsible for problems resulting from mistreatment or carelessness.

Oliver Aptius



Owner's Manual

Introduction

Congratulations on the purchase of a new Apitius mandolin! Rest assured knowing that this new instrument is made using only the finest materials and time tested, traditional construction techniques. The "Apitius sound" comes from over four decades of intense research and development which has, among other innovations, resulted in the patent pending "Apitius Arching". With some attention paid to proper care and maintenance, your Apitius mandolin will be cherished for generations.

Unpacking and set-up

IMPORTANT: If you notice any unusual damage to the shipping carton, it is a good idea to take photos, make notes and bring it to the attention of the courier driver.

Before unpacking the mandolin from the shipping carton, please take a moment to consider the following. If your mandolin has been shipped during the winter months, it is a good idea to let the carton warm up to room temperature in your home. The packing material will act as insulation and allow the contents to warm slowly. Suddenly exposing a cold mandolin to warm indoor temperatures could result in finish cracks and other problems. A one hour warm up should suffice.

The mandolin is always de-tuned to about half tension or less for shipping. This is to mitigate any damage that may occur if the carton was subjected to rough handling. Enough tension is left to hold the bridge in position but there is the possibility that it has moved during transit. Refer to page two for instructions on checking and setting proper bridge location.

Changing Strings

As strings age and get worn from playing, they lose their tone qualities and eventually, will not intonate properly. The exact time to change strings is a personal preference. When changing strings, it is highly recommended to change one string at a time. This keeps the tension on your mandolin as even and constant as possible and helps ensure that the bridge remains in its proper location. Do not cut strings while under tension, rather, loosen them off until they are slack enough to remove. Ideally, when the string is up to pitch, it should have 3 to 4 wraps around the string post to reduce string slippage and the resulting flattening of the pitch.

A Few Rules

NEVER leave your mandolin locked up in a car.
 NEVER let your instrument freeze. If it does happen, you can reduce the amount of damage by letting the instrument warm up slowly while still in its case. Set the case on a bed or sofa and cover it with blankets for insulation until it reaches room temperature. NEVER open the case of a frozen instrument in a warm room.
 NEVER get insect repellent on the finish of your mandolin.
 Avoid direct sunlight on the mandolin, in or out of the case.
 NEVER transport the mandolin in the trunk of a car.

Fine instruments require more care than their heavier built entry level counterparts. By following the simple rules of care described in this manual, your Apitius mandolin should provide generations of enjoyment. If you are comfortable in an environment, chances are that your mandolin is as well. The pleasures of playing a truly fine musical instrument are well worth the simple maintenance requirements.

Finish Care

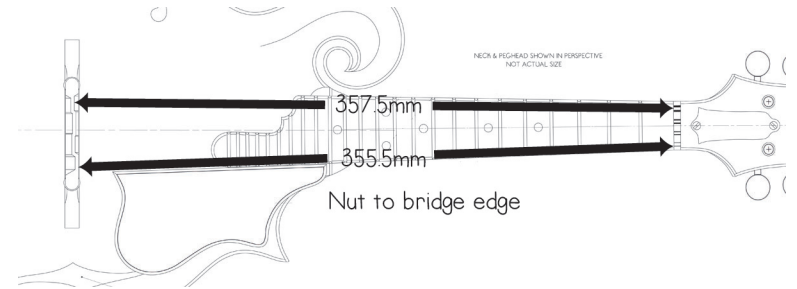
Your Apitius mandolin is finished with a French polished spirit varnish, which is more like the finish on a fine violin than the more common lacquered finish found on most fretted instruments. This finish is thin and supple, allowing the full voice of the "Apitius sound" to resonate openly. The trade-off for this acoustically superior finish, is that it is a bit more tender than nitrocellulose lacquer, which is actually an early form of plastic.

Care should be taken to avoid exposing the mandolin to high temperatures. If it is too hot for you, it is too hot for the mandolin. High temperatures can temporarily soften the finish, increasing the risk of damage to the finish.

Allowing liquids to come into contact with the finish should also be strictly avoided (especially alcoholic liquids). If you do get a spill on the finish, lightly blot up the liquid with an absorbent cloth immediately. This will greatly reduce the likelihood of any damage.

Another common cause of finish damage is from the use of "bug spray". The oily carriers of the active ingredients in insect repellent are extremely damaging to most finishes (including nitrocellulose lacquer).

You can add a slight measure of protection by an *occasional* application of a good instrument polish. I prefer "OZ Polish®" as an occasional cleaner and polish. It would be wise to let the finish on your Apitius mandolin "cure" for a period of 6 months before applying any products.



Unless otherwise ordered, Apitius mandolins use a string scale length of 355mm, meaning the mathematical length of the vibrating portion of the string is 355mm. In order for the strings to play in good tune a small amount of "compensation" must be added to allow for the stretching of the strings when fretted. The measurements in the above illustration will give good results for the string gauges that come standard on Apitius mandolins (see page 3). If you do not have a long enough rule, you can measure half the distance from the center of the twelfth fret (177.75mm for E strings and 178.75mm for G strings) to the bridge's leading edge.

If the bridge requires moving, do so only while the string tension is lowered. Grasp the bridge with both hands, in a manner that keeps the base and the top together in an upright orientation and using only as much force as required, move the bridge to the desired location.

To check for proper intonation when the mandolin is tuned to pitch, play the string while fretted at the 12th fret. It should sound exactly one octave above the open string (or like the harmonic played at the 12th fret). If the fretted note is flat, the bridge needs to come forward towards the nut. If the note is sharp, the bridge needs to be moved back. A small amount of bridge movement goes a long way.

String Gauges

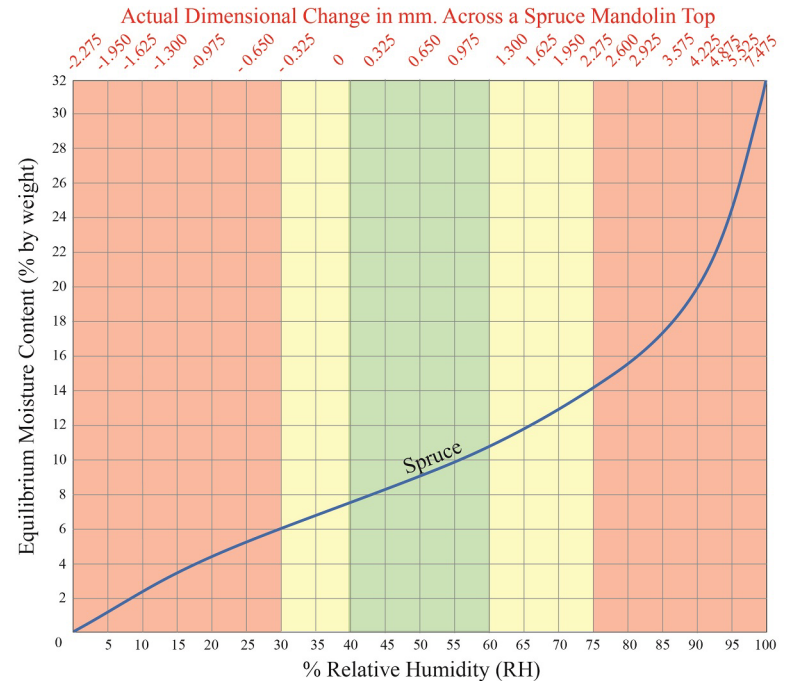
Apitius mandolins are designed for string sets that have a total combined string tension of 170 - 190lbs. String sets with gauges close to E=.011"/A=.015"/D=.026/G=.040" or slightly higher are recommended. The use of heavy strings may cause problems not covered under warranty.

Temperature & Humidity

Wood is a natural, organic material that will respond to changes in ambient humidity levels until it reaches an equilibrium moisture content with its environment. These changes in moisture content are accompanied by dimensional changes. This is the nature of wood.

Apitius instruments are assembled in a controlled environment of 40% relative humidity. This means that when the finished instrument is placed in an environment higher than 40%, it will begin to absorb moisture and swell from its original size and when in an environment below 40%, it will lose moisture and shrink in dimension. Because the rim of the instrument resists this movement, in the case of shrinkage, the top and back plates are put under tension and, if the tension becomes great enough, a crack will open up or a glue seam will fail. In the case of expansion, the top and back will bulge up, raising the playing action and putting stress on glue joints.

The way to avoid problems, caused by the nature of wood, is to guard against exposing your mandolin to extremes of temperature and humidity. Your mandolin is most "comfortable" in an environment between 40% and 60% relative humidity and at moderate temperatures (60° - 85°F). Exposure to a relative humidity beyond these limits increases the risk of structural problems associated with improper humidity levels. Extremes of temperature should also be strictly avoided.



The amount of bound water in wood is determined by the relative humidity (RH) of the surrounding atmosphere. When a balance is established between the RH and the moisture content of the wood, it is said to be at its "Equilibrium moisture content". When the surrounding RH changes the moisture content (MC) of the wood will also change until a new equilibrium is arrived at. Changes in MC, up or down, will cause a corresponding dimensional change in the wood. Typical quartersawn spruce will change dimensionally by a factor of .0013 per 1% change in MC

Compiled using data from "Understanding Wood" by Prof. Bruce Hoadley and the "Wood Movement Reference Guide" by Lee Valley Tools.

A larger, printable version of this handy chart is available on the blog page of the Apitius Mandolins website.