



Installing and Stabilizing a Full Set of Arledge Optimized Strings

A companion video can be accessed from

www.pianostrings.com/install.htm



GENERAL NOTES:

The previous steps have prepared the piano for receiving a new set of Arledge Optimized strings. Go to www.pianostrings.com/review.htm for a review of the previous steps.

- Start by opening and inspecting the new string package.
- Never handle new strings with bare hands or dirty gloves.
- Verify the string set identification tag and take note and if it signifies PRE- CUT in green letters.
- Unfurl the string hanger wire to access the highest string.
- Make sure the strings do not accidentally slip off the hanger wire.
- Keep the strings clean and dry.
- It is best to remove the actions on both uprights and grands. Go to www.pianostrings.com/disassembly.htm
- For pianos that have wound strings in the tenor section, install the tenor strings first. And then install the bass section strings. As a rule, **start installation with the highest string.**



Install and Stabilize

1. Begin installation by orienting the highest string along its path in the piano.
2. For grands, insert the string under and through the correct side of the damper.
3. Continue running the string over, under or through its upper termination and then on towards the tuning pin.
4. If the identification tag does not signify "PRE CUT" with a green stamp, each string must be cut to the correct length before installing. Cut the string at a distance of about 3 inches past the tuning pin center with the string pulled taught along its path.
5. For pre-cut strings, skip the string cutting procedure and simply insert the string through the tuning pin becket hole until flush with the outside of the hole.
6. Use a string hook or fingers to hold pressure against the string at the point where it enters the tuning pin. While applying constant pressure, turn the tuning pin clockwise using the ratchet with star tuning tip.
7. Guide the string as it spirals down $2 \frac{1}{4}$ to $2 \frac{1}{2}$ turns forming a coil. The exact amount will allow the string to be loose enough to go over the hitch pin yet tight enough that it will stay.
8. Go to the other end of the string and rotate the loop if the sharp end, called the "barrel tang", is pointing downwards or towards the bass end. Only rotate it in the direction of the winding until the tang points upward or towards the treble end of the piano. This may seem counter intuitive but keep in mind that the tang will rotate down later during the stabilization process. There is no need for using additional twists or turns in the strings. Arledge strings are uniquely pre-twisted during the manufacturing process.
9. Install the remaining strings using the same procedure.
10. Next, gently tap the string loops down over the hitch pins until they are seated on the plate, except in the case of roll pin type hitch pins. For roll pin type hitch pins, adjust the string to the appropriate height on the pin.



Install and Stabilize

11. Return to the tuning pin end of the string.
12. Position a coil lifter or string hook under the string at the coil. Loosen the string if needed only enough that the coil will lift and tighten.
13. While holding the coil at this highest position, tighten the string only enough that the coil will stay put. Stop tightening when the becket is between the 2 to 3 o'clock position for grands or the 8 to 9 o'clock position for uprights. Use this same technique on the remaining coils. This will add only minimum tension to all the strings.
14. Next, use a becket tightener or soft annealed screwdriver to gently tap the coils down at the exit side of the becket holes. Tap them down until the top of the string coils are centered with the becket holes. This will level and tighten the coils.
15. Next, use compound needle nose pliers, small vise grips, or a becket tightener to snug the strings against the tuning pins as they turn into the becket holes.
16. *Check that all strings have minimal tension and the tuning pin coils are tight and level. If individual coils need adjusting this is the time to fix them.*
17. Continue with the stabilization process by returning the action and tuning groups of six strings to a pitch of 100 cents sharp or one semitone above normal pitch. Tune or chip in one continuous motion. This semi-tone above pitch of over tensioning should only be applied once.
18. While these six strings are at this high tension, go to the loop end of the strings. Using standard slip joint pliers, squeeze the braided portion of the loop with the pliers and rotate or wiggle, back and forth just enough to cause the string to drop 100 cents or near to pitch. If the pitch doesn't drop 100 cents, wiggle more.
19. Tune this same group of strings again, but this time only up to 50 cents sharp.



Install and Stabilize

20. Again wiggle the loop twist with the pliers until the pitch drops to about 5-15 cents sharp and stop.
21. Move to the next group of 6 strings and follow the same procedure of initially tuning up to 100 cents sharp and wiggling down to pitch, followed by another tuning up to 50 cents and wiggling down to between 5-15 cents sharp.
22. After all the strings are tuned and stretched in this manner use the string hook to exaggerate the bends on either side of the bridge pins. This will cause the strings to drop another few cents or near to pitch. Wait before exaggerating the upper termination points until later.
23. For further stabilization tune all the new strings up to 35 cents sharp.
24. Then, pound the keys repeatedly with hard blows for further stabilization. Retune to 35 cents sharp and pound again until all strings become stable at 35 cents sharp.
25. Now the strings must rest a minimum of 48 hours before returning for the final stabilization and fine tuning.

Go to the next video: www.pianostrings.com/tune.htm . This will demonstrate the third and final visit for upgrading to a set of Arledge Optimized Strings.