Instructions for Ordering Single *Arledge* Optimized Piano Strings

A companion video can be viewed from

www.pianostrings.com/ordersingle.htm

Watch this video while reviewing these instructions:

GENERAL NOTES:

The Arledge method for ordering single string replacements works for any piano in any situation, even if the old string is missing. Our unique ordering method utilizes information from the piano, not from the old string. Measurements from the piano improve the quality and fit. With an Arledge tape measure and a smart phone the exact string can be specified and ordered on the spot. The Arledge Measure Kit contains this special tape measure. The kit also contains additional supplies which come in handy on location in the field for that unexpected broken string or full set order.
Go to **www.pianostrings.com/singlestring.htm** then click the **ORDER MEASURE KIT** button.

The old string can provide adequate but not exact information because of elongation and other factors. However, a replacement string can be ordered by shipping the old string to us. Another option requires measuring the old string and either mailing the "Single String Order Form" or submitting it on-line.
Go to **www.pianostrings.com/singlestring.htm** then click the **ON-LINE ORDER FORM** button.

SINGLE STRING ORDERING

To obtain the optimal ordering information basic piano case parts must be disassembled and removed in order to provide access to the inside of the piano.
Go to: **www.pianostrings.com/disassembly.htm**

Inside the piano, the strings follow a path. This path starts with a hitch pin on one end and ends with a tuning pin on the other. This length will be measured. Along this path are two points that terminate the sounding segment of the string. These termination points will be measured as well.

The alternative method of measuring the old string requires note name, length of tail, length of winding and diameters. A quality micrometer is needed to accurately measure diameters of the string. The preferred Arledge method does not require this step.

Begin by printing the "**Single Strings Order Form**" from the "PRINT ORDER FORMS" button found at *www.pianostrings.com* /ordersingle. Complete the form and mail us a copy or submit it instantly by transferring the information to our "ON-LINE ORDER FORM".

Understanding the following terms will help to properly complete the form:
Piano ID typically includes piano make, model, and serial number. Customer
        information can be included as well. This information will be transferred to the
        new string tag.

String Number is specified by counting each successive string starting with the lowest.

Key Number is specified by counting each successive key starting with the lowest.

Note Name is specified with a musical letter followed by an octave number. The seven
        octaves of a standard 88 note piano are numbered beginning with the lowest
        C to C octave. The lowest C note is named "C-1". Twelve different notes
        beginning with" C-1" are in octave "1". Note "C-2" is an octave above "C-1"
        and begins octave 2. Notes below "C-1" are designated octave "0" because
        this is not a full C to C octave. *For most pianos the lowest note is named"A-0".*

ARLEDGE MUSIC WIRE/2612 Winford Ave/ Nashville TN 37211/615-255-7818/Fax615-742-1903/www.pianostrings.com

SINGLE STRING ORDERING INSTRUCTIONS

String Type is determined by the number of strings sounded per note:
Uni-chords sound one string per note.
Bi-chords are designed as pairs sounding two strings in unison.
Tri-chords sound three strings in unison.
(Tri chord and bi chord strings almost always have different length measurements.)
(Unichords are wound with either one or two layers .)

Hitch to Lower Termination is the distance from the hitch pin anchor point to the bridge
pin center furthest from the hitch pin.

Hitch to Upper Termination is the distance from the hitch pin anchor point to the center
of the agraffe, capo d'astro bar, or bearing ridge with guide pins.
In all pianos there are precise points for these sounding terminations.

Hitch to Tuning Pin Distance is the measurement from the hitch pin anchor point to the
tuning pin top center.

Tuning Pin Size is the diameter of the threaded portion of the pin. This can be
stated in gauges from 1/0 -6/0. Or indicated in inches decimal to the
nearest 1/1000th of an inch or metric equivalent.

String Loop Type is either Standard or German type. Both types fit all hitch pins
including roll-pin and oversized hitch pins.

String Loop Length is either 3/8th of an inch for the extra short German type loop or
between 1 ½" and 2" for Standard type loops.

Winding Direction is either clockwise (CW) which is the eastern culture standard used in
most Asian pianos or counter-clockwise (CCW) which is the western
culture standard used in most American and European pianos.

Exposed Core is the length of steel wire showing between the end of windings and the
termination points. Ideally this is about one half inch on either end.

Core Diameter is the diameter of the steel wire accurate to the nearest 1/1000$^{th\ inch}$.

SINGLE STRING ORDERING INSTRUCTIONS

Overall Diameter is measured in the middle of the string length and includes copper winding and steel wire core. This diameter should be accurate to the nearest 1/1000th inch

Length of Tail is the distance from the string loop anchor point to the start of the copper winding.

Length of Winding is the length of the copper wound portion of the string.

The preferred units for measuring diameters is decimal inches to the nearest one thousandth of an inch.
The preferred length or distance measurements is millimeters. A short video demonstrating how to measure in millimeters and the reasons why can be found at:
www.pianostrings.com/measure.htm

To measure, pull a length of the Arledge tape measure in excess of the string being ordered and lock it. Start from the tuning pin end and thread the tape along the string path. Place the measuring tape ring terminal end over the hitch pin. For Accu-hitch roll pin type hitches, insert a sharpened pencil into the hollow pin to hold the tape securely. For uprights, the current version of the Arledge tape measure has a magnet on the terminal end which will help anchor the tape. With tape measure anchored around the hitch pin and running along the path of the string, measure the distance to the lower termination point. For standard bridge pin configurations this is the furthest bridge pin from the hitch pin. Measure and record the hitch pin to this lower termination point. Next, measure the distance from hitch pin to the upper termination point. This may be the center of an agraffe, capo d'astro bar, or a bearing ridge with guide pins. Finally, measure the distance from the hitch pin to the top center of the tuning pin.

It is recommended to replace all strings of bi-chords or tri-chords for tone and tunability.

After the form is completed the information can be transferred to our "ON-LINE ORDER FORM" to instantly place the order. The hardcopy will serve as backup.

There is no need to remove the old string until the new string replacement is in hand. The next video will demonstrate how to remove the old string.

www.pianostrings.com/installsingle.htm

ARLEDGE MUSIC WIRE/2612 Winford Ave/ Nashville TN 37211/615-255-7818/Fax615-742-1903/www.pianostrings.com

Single Strings / Order Form

Ship To:

Name

Street

City   State   Zip

E-mail

Pho#

Single strings are $20.00 each plus $7.95 for USPS Priority mail shipping.

Advance payment is required by check or credit card..

Payment

credit card #   -   -   -   exp /

Enter name and address on credit card if different than ship to information.

Name

Street /
PO. Box

City   State   Zip

Total number of strings being ordered =

Single String Order Form

Glossary:

<u>Uni-</u>, <u>Bi-</u> or <u>Tri-</u>chord is determined by the number of strings sounded per note:
  Uni-chords sound one string per note.
  Bi-chords are designed as pairs sounding two strings in unison yet often
            have differing tail measurements.
  Tri-chords sound three strings per note.

<u>Single or Double wrapped,</u> (S or D) = layers of copper wrap.

<u>Piano ID</u> information will be transferred and returned with new string on the string tag.

<u>String#</u> is specified by counting each successive string starting with the lowest.

<u>Note Name</u> is specified with a musical letter followed by an octave number. The seven
   octaves of a standard 88 note piano are numbered beginning with the lowest C to C
   octave. The lowest C note is named C-1. Twelve different notes beginning with C-
   1 are in octave one. Note C-2 is an octave above C-1 and begins octave two. Notes
   below C-1 are designated octave zero because this is not a full octave. For most
   pianos the lowest note is named "A-0".

<u>Key#</u> is specified by counting each successive key starting with the lowest.

<u>Lower Termination</u> is the speaking bridge pin on most pianos.

<u>Upper Termination is an</u> agraffe , capo d'astro bar, or bearing ridge with guide pins.

<u>Tuning pin</u> is the measurement from hitch pin to tuning pin top center.

<u>Loop Length</u> is optional between 1 3/4" and 2". Default to 1 7/8th"

<u>Loop Style</u> = J for the shortest Euro style loop. S for Standard twist loop

<u>Tuning Pin Size</u> = 1/0 -6/0 or decimal inch equivalent.

<u>Wind Direction</u>=CW(Clockwise) eastern(Asian)standard, CCW (Counter Clockwise)
  Western (American)standard for direction of winding.

<u>Exposed Core</u> is the distance of steel wire showing on each end near termination.
         Defaults to .5 inches.

<u>Core Diam./OD</u>=wire size and overall diameters are essential if using Alternative Method.

length of tail / length of winding

Single String
"Optimal method"

Choose Type of String being ordered.
<u>**Uni 1**</u> (1 wrap),<u>**Uni 2**</u> (2 wraps), <u>**Bi-**</u>chord or <u>**Tri-**</u>chord string?

String Type [ ]

| Piano ID [   ] | String # [   ] | Note Name [   ] | Key # [   ] |

| Hitch Pin to Lower Termination Center (speaking bridge pin) [   ] | Hitch Pin to Upper Termination Center (agraffe/guide pin/capo) [   ] | Hitch Pin to Tuning Pin Top Center [   ] |

Optional Information:

| Loop Length [ ] | Loop Style [ ] | Tuning Pin Size [ ] | Wind Direction [ ] | Exposed Core dist. lower [ ] | Exposed Core dist. upper [ ] | Core Diam. [ ] | OD [ ] |

Overall Diam.

"Alternative Method"
(Essential information If measuring string).

| LENGTH OF TAIL [ ] | :LENGTH OF WINDING [ ] | NOTE NAME [ ] | CORE DIAM [ ] | OD [ ] |

Make copies of this page for additional strings.

Single String Order Form

Single String
"Optimal method"

Choose Type of String being ordered.
Uni 1 (1 wrap), Uni 2 (2 wraps), Bi-chord or Tri-chord string?

String Type [ ]

Piano ID [ ]   String # [ ]   Note Name [ ]   Key # [ ]

Hitch Pin to Lower Termination Center (speaking bridge pin) [ ]   Hitch Pin to Upper Termination Center (agraffe/guide pin/capo) [ ]   Hitch Pin to Tuning Pin Top Center [ ]

Optional Information:
Loop Length [ ] Loop Style [ ] Tuning Pin Size [ ] Winding Direction [ ] Exposed Core dist. lower [ ] Exposed Core dist. upper [ ] Core Diam. [ ] OD [ ] Overall Diam.

"Alternative Method" (Essential information If measuring string).
LENGTH OF TAIL [ ] :LENGTH OF WINDING [ ] NOTE NAME [ ] CORE DIAM [ ] OD [ ]

Single String
"Optimal method"

Choose Type of String being ordered.
Uni 1 (1 wrap), Uni 2 (2 wraps), Bi-chord or Tri-chord string?

String Type [ ]

Piano ID [ ]   String # [ ]   Note Name [ ]   Key # [ ]

Hitch Pin to Lower Termination Center (speaking bridge pin) [ ]   Hitch Pin to Upper Termination Center (agraffe/guide pin/capo) [ ]   Hitch Pin to Tuning Pin Top Center [ ]

Optional Information:
Loop Length [ ] Loop Style [ ] Tuning Pin Size [ ] Winding Direction [ ] Exposed Core dist. lower [ ] Exposed Core dist. upper [ ] Core Diam. [ ] OD [ ] Overall Diam.

"Alternative Method" (Essential information If measuring string).
LENGTH OF TAIL [ ] :LENGTH OF WINDING [ ] NOTE NAME [ ] CORE DIAM [ ] OD [ ]

Single String
"Optimal method"

Choose Type of String being ordered.
Uni 1 (1 wrap), Uni 2 (2 wraps), Bi-chord or Tri-chord string?

String Type [ ]

Piano ID [ ]   String # [ ]   Note Name [ ]   Key # [ ]

Hitch Pin to Lower Termination Center (speaking bridge pin) [ ]   Hitch Pin to Upper Termination Center (agraffe/guide pin/capo) [ ]   Hitch Pin to Tuning Pin Top Center [ ]

Optional Information:
Loop Length [ ] Loop Style [ ] Tuning Pin Size [ ] Winding Direction [ ] Exposed Core dist. lower [ ] Exposed Core dist. upper [ ] Core Diam. [ ] OD [ ] Overall Diam.

"Alternative Method" (Essential information If measuring string).
LENGTH OF TAIL [ ] :LENGTH OF WINDING [ ] NOTE NAME [ ] CORE DIAM [ ] OD [ ]

Single String
"Optimal method"

Choose Type of String being ordered.
Uni 1 (1 wrap), Uni 2 (2 wraps), Bi-chord or Tri-chord string?

String Type [ ]

Piano ID [ ]   String # [ ]   Note Name [ ]   Key # [ ]

Hitch Pin to Lower Termination Center (speaking bridge pin) [ ]   Hitch Pin to Upper Termination Center (agraffe/guide pin/capo) [ ]   Hitch Pin to Tuning Pin Top Center [ ]

Optional Information:
Loop Length [ ] Loop Style [ ] Tuning Pin Size [ ] Winding Direction [ ] Exposed Core dist. lower [ ] Exposed Core dist. upper [ ] Core Diam. [ ] OD [ ] Overall Diam.

"Alternative Method" (Essential information If measuring string).
LENGTH OF TAIL [ ] :LENGTH OF WINDING [ ] NOTE NAME [ ] CORE DIAM [ ] OD [ ]