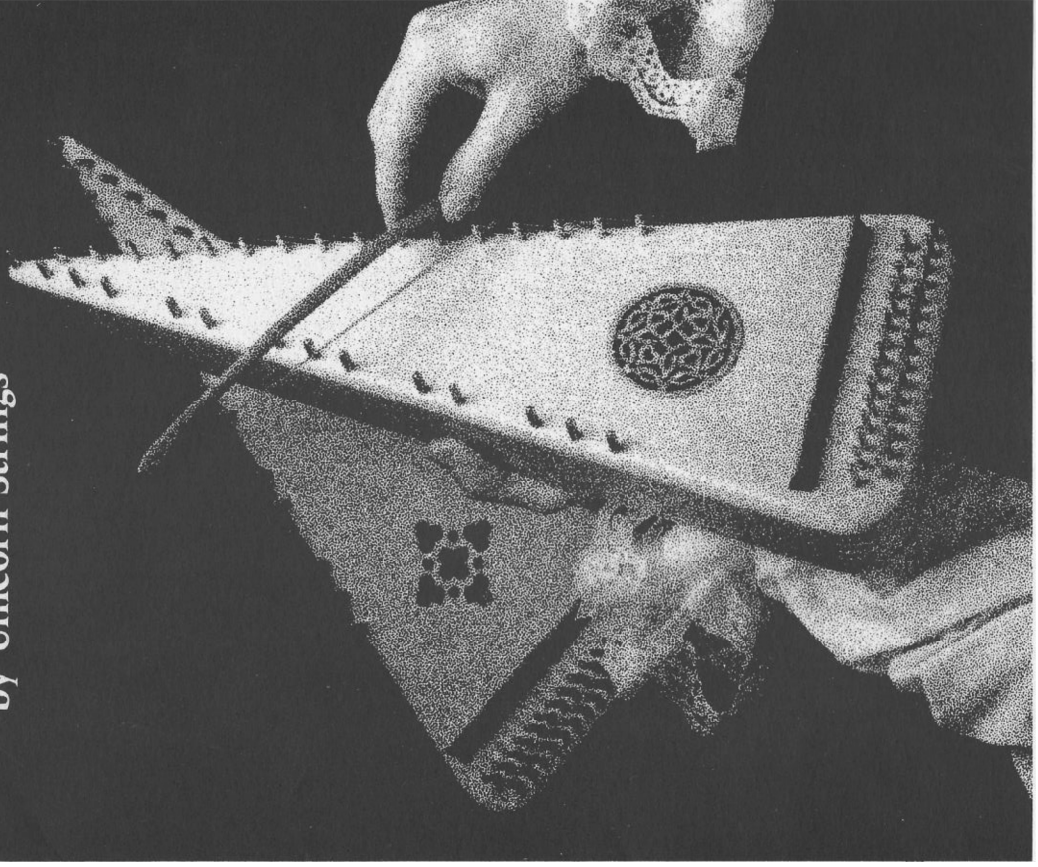


Bowed Psaltery

Instruction Book

by Unicorn Strings



Unicorn Strings Music Company
Rt. 1, Box 54-6
B1-ooker, Florida 32622
(904) 486-2640

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by David Beede, Gene Jaeger and Jessica Jaeger

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the notches on top of the hitch pins. Try to distribute the wire evenly between the two strings, and turn until they are taut.

11. **THERE!** The last step is to clip off the wire "tails" on the tuning pins, using your wire cutters. Cut them off as close to the pins as possible.

Now, of course, you have to tune the new strings. For the first tuning, [wash your hands to remove oils, then] press down several times on the strings with your finger to stretch them in, bring them up to pitch (see the "tuning" section), and then try stretching and tuning again to be sure they're holding the notes accurately. These strings will probably need tuning again soon; a "stretching in" period is normal, and is the reason why we tune our new psalteries twice, several days apart. We want your first experience with your psaltery to be playing it, not tuning it!

We wish you the best of luck and many hours of enjoyment from your psaltery. If you have any questions, please do not hesitate to contact us!

David, Gene and Jessica\

IMPORTANT

Here's a few tips to help you get started making music on your new bowed psaltery. We encourage you to read the instruction book at your earliest convenience, but you'll probably want to play first and read later! There are some things you should know right away, however:

- It's best **NOT TO TOUCH THE BOWHAIR**, because oil from your fingers leaves a "quiet" spot.
- **ROSIN THE BOW THOROUGHLY EACH TIME YOU PLAY**, or whenever the volume is low or the notes sound weak or scratchy. Try to cover the entire cake of rosin with firm bow strokes to transfer rosin to the bow hair.
- To play, **HOLD THE BOW** about 1/3 of the way from the bottom (the big end). Hold it firmly, using all your fingertips.
- **PLAY WITH FIRM STROKES**, producing clear pure notes - don't be afraid to press hard. Alternate the direction of your bow strokes - upon one note, down on the next.
- **IF YOU BREAK A BOWHAIR**, simply remove it and continue playing. If too many hairs break, just return the wooden bow to us in a mailing tube (no padded envelopes, please!) for replacement of the hairs.
- **YOUR INSTRUMENT HAS BEEN TUNED**, and is ready for you to enjoy. Our psalteries usually need tuning only once or twice a year.
- **LOW HUMIDITY CAN BE A PROBLEM**: if your house is excessively dry in the winter, we recommend a case humidifier, available for a few dollars at local music stores.

We hope you enjoy your psaltery. If you have any questions not covered in the book or on the tape, please write to us.

Happy bowing!
Gene and Jessica

CARE OF THE INSTRUMENT

We recommend that you purchase or construct a good case for your instrument, preferably a hard case of wood or cardboard, but at least a good padded cloth case. A case doesn't just prevent your instrument from being squished when your Great Aunt Thelma sits on it; it also insulates it from rapid changes in temperature and humidity. Don't ever leave it in a hot car or trunk. If it does get hot or very cold, don't snatch it out of the case to see if it's all right - leave it in the case until it comes to room temperature.

The Instrument: The finish is a hand-rubbed lacquer finish. It really requires little or no care; just wipe it with a soft cloth. If you must do something more, use a light coat of furniture wax.

The Bow: It's made of cherry. Keep the hair well rosined by rubbing it firmly back and forth against the cake of rosin (use a sweeping "X" pattern to avoid making a single deep groove in the rosin). The rosin is what provides the friction between bow and string; this friction is what makes the sound, not magic as you may have suspected. If you notice you aren't getting much sound out of the psaltery, the bow probably needs more rosin, or perhaps it needs cleaning.

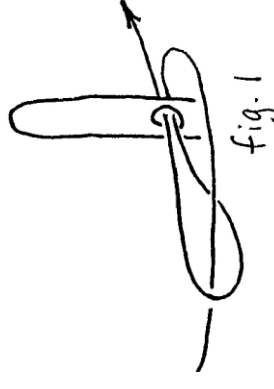
The main enemy of bow hair is oil. Though it's tempting to run your fingers through its hair, remember to restrain yourself (and your friends!). Oil from your fingers negates the friction, making a "dead" spot on the bow. You can easily clean it by wiping the hair with alcohol, lacquer thinner, or mineral spirits, then drying it thoroughly, and re-rosining.

Your bow is very tough, and you can expect it to last a long time with gentle use. However, if you have an accident and the hairs break, you'll want to have the hair replaced. (Some bowed psaltery builders will replace the hair for a nominal fee).

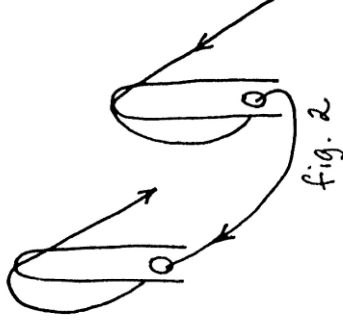
The Strings: Their worst enemy is rust, so keep them dry. Moisture from fingers is probably the main cause of rust, so the strings should be touched as little as possible. Keep the strings dusted, also, since

5. Determine which tuning pin corresponds to the shortest string to be replaced. Thread one end of the wire through the hole in this pin, from right to left. Pull about 5" of wire through the hole.

6. Bring the other end of the wire around the tuning pin on the side nearest you, overlapping the short end. Pick the short end up around the long end and feed it back through the hole from the left (fig. 1). Pull it tight. Turn the pin a half turn counter-clockwise to help "seat" the knot.



7. Now thread the long end through the two hitch pins, using figure 2 and the other strings as a guide. Pass the wire over the top of the first pin (the shortest string), down and through the hole from left to right, around on the inside and up to the next pin. Thread it through this second pin from right to left and then over the top. Keep the wire slack — you will tighten it later.



8. Bring the end down to its tuning pin, 5 on the side nearest you, and feed it through the hole from the right. Pull about 5" of wire through the hole.

9. Pass the end under the string, around and back through the hole from the left (fig. 1 again). Pull it tight.

10. Now tighten everything up with your wrench on the tuning pins. Turn counter-clockwise, keeping the windings as close to the instrument as possible (so they don't get in the way of the tuning wrench). Use your other hand to keep the wire in

REPLACING A STRING

The strings are steel music wire, and are all the same gauge — "tenthousandths" (.010 of an inch). Any music store will carry this gauge wire, as a guitar or banjo string, if you happen to break one. Except for breakage, though, they should last indefinitely if they're kept free of rust and oil (see "care" section).

Let's say, however, that your Great Aunt Thelma does accidentally sit on your psaltery, or, more likely, that you got a bit carried away tuning that high A#. FEAR NOT — replacing a broken string is relatively easy and requires only a pair of wire cutters, your tuning wrench and a little patience. Ready?

[Note: These instructions pertain to Unicorn Strings psalteries. If you have another brand, try to find the instructions for your brand. Otherwise, observe closely how the remaining strings are strung and try to repeat that.

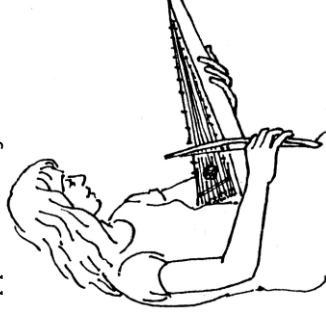
Also, one great enemy of psaltery strings is oil from your hands. As you perform the following steps, please make certain your hands are relatively free from oils, even if it means washing them more than once - PR]

1. Set yourself up on a smooth-surfaced table, covered with a cloth to protect the table and the psaltery. Place the psaltery on the table pointing to your left so you can hold it steady with your left arm while you work.
2. Notice that the strings are in sets of two — one wire is looped around the pins to make two strings. Remove the broken wire from both hitch pins and both tuning pins in the set by backing the wire through the holes.
3. Lower the tuning pins by turning them clockwise with your wrench until the holes are just above the top of the instrument, parallel to the strings.
4. Cut a piece of wire twice the length of the longest string to be replaced, plus about 10".

dust absorbs moisture and thus causes rust. Oil or grease of any kind (even from fingers!) will make the strings slippery. As a result, without the necessary friction, the bow will slide over the strings without making a sound. If this happens, you can clean the string where the bow touches with a cotton swab dipped in cleaning fluid or alcohol. Rust can be removed by polishing each string, including its underside, with a small wad of very fine steel wool.

PLAYING AND TECHNIQUES

We recommend you hold the psaltery in your left hand, at approximately waist level, as shown in the illustration.



Hold the bow in your right hand, approximately 6" from the heavy end or where it feels balanced; this facilitates rocking the bow from one side to the other when playing sharps and flats. The bow should be held at a slight angle, enough to keep from hitting more than one string at a time but not so much that it slows your changing sides of the

instrument. If you are left-handed, with a left handed instrument (the natural notes on the left and the sharps and flats on the right), Simply reverse these instructions if you do not have a left handed instrument, try holding the psaltery in both your right and left hand to determine which is easiest for you.

The optimum string vibration, and therefore the purest sound, occurs when the bow meets the string close to the pin. On most strings there is hardly any choice, since the space between pins is so small, but on the highest two notes where there are several inches of open string, it's important to play the note close to the pin. Be sure the bow is in motion both when you contact the string and leave the string, otherwise the string will stop vibrating, thus abruptly preventing sustain (you might possibly want to do this intentionally for effect).

You'll notice that if you alternate the direction of your bow travel

from string to string (sounding one note on the upstroke, the next note on the downstroke, etc.), the resulting melody will be much smoother than if you tried playing each note of a song by only pushing or only pulling the bow. The economy of motion achieved by alternating the direction of bow strokes contributes a flowing sound to your melodies.

There are a number of bow techniques that will alter the quality of the tone produced. With a little practice these should add great variety to your psaltery playing:

VIBRATO - This is a subtle wavering of the note produced by a slight trembling of the bow. Used indiscriminately this effect can greatly enhance a tune, however if overdone it could drive your loved ones crazy. If you particularly like this sound drinking copious quantities of coffee will produce it automatically.

GLISSANDO - This is the uninterrupted stringing together of notes, and on the psaltery can be done down the scale with adjacent notes. This is achieved by initiating a note on one string, then, hile the note is still sounding, moving the bow away from you in a way that allows the hair to slide over the hitch pin and fall onto the next string which then immediately begins sounding. Two or three notes in a row can be sounded quite clearly using this method; any more than that and one tends to "run out" of bow.

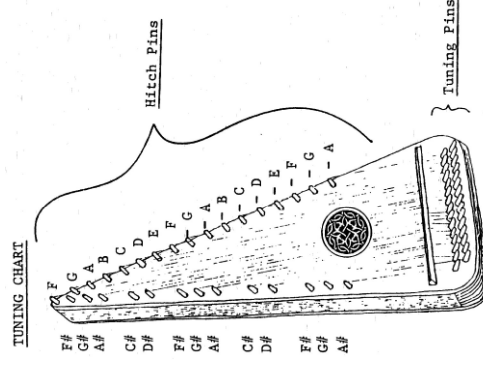
This technique is much easier to do than it is to describe, as it is simply a matter of sliding the bow over 2 or 3 strings in one continuous motion; with a little practice you can add this new dimension to tunes like "Amazing Grace" or "Joy to the World."

STACCATO - This is perhaps the opposite of the previous technique, and produces quick, short, almost raspy notes. This is easier to achieve with a tighter bow that is well rosined, which allows it to "bite" the string more quickly. The trick is a firm and rapid touch with the bow hand. Some folks hold their bows as close to the peg as possible and allow the bow to actually bounce a little on the string. Again, this is one of those techniques that must be used judiciously to avoid monotony.

NOTE: Many other brands go the opposite direction, so be certain you have a Unicorn Strings instrument before following these instructions exactly.

Most often when psalteries go out of tune they go flat, or down in pitch, so when you "tune up" one of our instruments the direction of turn forces the instrument into your lap rather than onto the floor. If this tuning position seems awkward to you, feel free to experiment with other positions, especially if you have a psaltery made by someone else whose pin direction is different from ours.

On the tuning tape, we take you first through all of the natural notes, played along the right side of your psaltery (corresponding with the white keys of a piano). To tune this half of the instrument, start with the lowest F (the longest string, stretching from the tip to the base) and work away from you (assuming you're holding the instrument as suggested above), in order. Next tune the sharps and flats (the black keys of a piano), found on the left side of the instrument. Start by placing the tuning wrench on the low F# tuning pin. (next to the low F pin) and work back towards yourself. If you are using another reference device, you may find it easier to tune all the F's, then all the G's, etc. Whatever method you use you can check yourself by playing a familiar tune or, for those with a music background, the series of notes in a chord (for example, C,E,G) to see if any offending notes jump out at you.



identical. It must be said that its helpfulness will depend on the quality of tape deck it is played on. Any variation in motor speed will cause the tape to play somewhat above or below concert pitch; however, if the motor speed is regular it will play in perfect relative tune to itself.

Tuning to the tape also allows you to play in tune with the melodies on the other side of the tape.

Numerous electronic devices are now available ranging from electronic "tuning forks" that generate all the pitches of the chromatic scale in several octaves to those that also have some kind of visual aid such as a moving needle, digital read out, or spinning lights. These latter "listen" electronically to the notes you play into them and tell you how close you are. The "hearing" of these machines is limited in that you must first have tuned the note fairly close to pitch before they can give you reliable information on it. Though prices are coming down they are still rather expensive, ranging from \$80-\$400. Still, many serious tuners, multistringed instrumentalists, and concert pitch fanatics are finding them a "sound" investment.

Once you have your wrench, instrument, and reference device of choice you are ready to tune. **FIRST!! The CARDINAL RULE of tuning is NEVER TIGHTEN OR LOOSEN A STRING UNLESS IT IS MAKING SOUND!!** This is not only a quick way to break a string, but you won't know how far to turn a tuning pin unless the sound of the string is giving you feedback.

We'll assume we haven't scared you into putting your wrench away.

If you're still with us, take your wrench in hand and your psaltery in lap and get comfortable. Try holding the instrument in your lap so it points to your left. Hold the tuning wrench in your right hand, positioning it squarely on the tuning pin (at the base of the instrument) while you pluck the corresponding string with one finger of your left hand (pluck the strings about at the level of the sound-hole, not along the edge of the instrument). You'll notice our instruments are strung so that turning the wrench clockwise loosens the string while counter-clockwise tightens it (raising the pitch).

"HAMERED PSALTERY" - This is a style recently shared with us which involves turning the bow over and tapping the strings lightly with the wooden side of the bow, hitting the strings between the pins where you normally would stroke the bow. The result is a very soft bell-like sound that is really very charming, sounding perhaps like an elf playing a tiny hammered dulcimer. It is so soft, however, that you would probably need a microphone to play it with other instruments publicly; it also takes some practice to avoid the "rim shots" (as drummers call them) that result from hitting the hitch pins instead of the strings.

DOUBLE BOW ~ The psaltery can also be played holding a bow in each hand so as to provide harmony with yourself. This of course necessitates holding the psaltery differently. Try balancing it on one leg as you sit with your legs crossed, or prop it against a table, giving both hands access to both sides of the instrument. You'll have to experiment to find out what feels most comfortable to you. One musician modified a microphone stand to hold his psaltery so he can play with two bows standing up.

The two basic approaches to this style of playing are parallel harmony, and a hand-over-hand technique. The first is achieved by keeping the bows an interval apart and then moving them simultaneously (i.e., playing a G with one bow and a B with the other, followed by playing an F with one bow and an A with the other). The other effect involves "pulling" the bows with each hand and leaping them over each other.

In this way one bow begins a note just as the other is ending one, producing a "legato" effect like that of the flute or Violin. An advantage of the hand-over-hand method is that, since each hand plays only every other note, you can play some fast songs that would be more difficult otherwise. You can combine these techniques by overlapping notes, sounding simultaneously any notes in a melody that sound harmonious together.

Although playing with two bows requires slightly more coordination than playing with one, it is once again much easier to do than it is to write about. If you're interested, just take your psaltery and a couple of bows, go off by yourself and have at it.

TUNES

This next section contains a well-rounded selection of tunes, including Christmas carols, classical, gospel, rounds, nursery rhymes and folk songs of several countries. Probably a majority of these tunes will be familiar to you, if not by title at least upon hearing.

We've included a few lesser-known ones just because they sound so beautiful played on the psaltery. All of the tunes can be heard on our psaltery instruction tape. Following the tunes section is a brief explanation of basic music principles. However, you'll soon see that you don't have to read music in order to play these tunes. The letter name of each note is printed underneath it in small case letters, including sharp signs (#) which indicate a note found on the left side of the instrument. You can refer to the tuning diagram to determine where notes are located. Several tunes can be played either on the low or high octave, depending on your preference (Twinkle, Twinkle Little Star, Good King Wenceslas and Scarborough Fair, for example).

The capital letters printed above the staff are chord names and are not necessarily related to the name of the note of the melody. These are provided in the event you have a friend who would like to accompany you on a guitar, autoharp or any other chordal instrument. For example, a "G" would indicate a G major chord and a "Dm" would indicate a D minor chord.

The first tune, "Twinkle, Twinkle Little Star," has a special feature to help you get used to alternating bow direction. The arrows under the notes indicate the direction of the bow (← means a push of the bow towards the left and → means a pull of the bow to your right).

The length of the arrow indicates the relative length of the bow stroke, so you'll remember to hold the note longer when appropriate.

This selection of tunes is only a sample of the wide variety of tunes that can be played on the psaltery. Feel free to look to other sources for tunes, including those you can pick out by ear. Feel free, also, to embellish or modify these tunes to suit yourself; some examples of Variations are on our instruction tape. There are no RULES about playing your psaltery - the only "rule" is to enjoy yourself!

4 or **C** time means 4 beats to a measure. used in most dance music, popular songs and ballads.

A dot after a note increases its value 50%. For instance, a dotted HALF NOTE (♩.) takes 3 beats.

Each note has its equivalent in SILENT value, like this: (called "rests")



Some notes are tied with marks like this ♩—, which means to hold the first note for the full time value of both notes.

TUNING

The gentler you are with your psaltery the less you'll have to tune it. However, changes in temperature, humidity and the passage of time will eventually necessitate tuning. Let your ear be the judge. (Or your friends' ears if you're deaf and they become hysterical begging you to tune it.) We've had psaltries stay in concert pitch four months or more, with good care.

To tune your psaltery you will need the wrench that came with your instrument and something to refer to while tuning. This source of reference could be a piano, a pitch pipe, the instruction tape available through us, or any of a number of electronic tuning devices if you have access to one. Each of these has its relative merits:

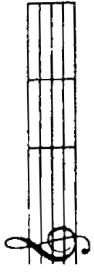
Pianos are fairly available (though not very portable) and will be helpful only to the extent they themselves are in tune. Pitch pipes can be obtained through your local music store for a few dollars. There are two main types, round and harmonica shaped. They are inexpensive, portable, and relatively accurate. Perhaps their only disadvantage is that some people find that the unique timbre or quality of a tone produced by their metal reeds is sometimes difficult to match to a note produced by a plucked metal string.

The tuning tape that we make available is convenient in that you are tuning your psaltery to another psaltery so the tone quality is

BASIC MUSIC PRINCIPLES

You don't have to read music to play the Bowed Psaltery – but certain elementary principles may be helpful. For example:

Music is divided into TIME UNITS



(measures) pictured on a STAFF (5 lines and 4 spaces) on which music notes are placed.

The illustration to the right is a STAFF. It opens with a CLEF sign. The vertical lines divide the staff into measures to impart regularity to the music.

Notes go through the lines or in the spaces. Some notes are below or above the limited compass of the Staff. Such notes are expressed by short lines added below or above the Staff, called "leger lines"

These are MUSIC NOTES

	Notes on the Lines	Notes in the Spaces	Leger Notes
Whole note (4 beats):			
Half note (2 beats):	E G B D F	F A C E	C D
Quarter note (1 beat):	Note the alphabetic sequence when we put these all together:		
Eight note (2 to a beat):			
Connected 8th notes:			

(We use "quarter notes" in illustrations.)

Notes illustrated are WHOLE TONES which can be lowered or raised to the next half-tone by means of FLATS (b) to lower a tone and SHARPS (#) to raise a tone. A sign like this (b) is called a NATURAL, which restores a flattened or sharped note to its basic tone.

The presence of one or more FLATS or SHARPS after the CLEF SIGN means that every note in the piece is flattened or sharped. For instance, a flat on the middle line (B) means that every B becomes Bb, a sharp on the top line (F) means that every F becomes F#.

Before each piece of music, you will see a "TIME SIGNATURE," like $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$, or C (same as $\frac{4}{4}$).

$\frac{2}{4}$ time means 2 beats to a measure, a popular tempo for polkas and one-steps.

$\frac{3}{4}$ time means 3 beats to a measure, used mainly for waltzes.

Twinkle, Twinkle Little Star

TWINKLE, TWINKLE LITTLE STAR

Cheerfully

Brahm's Lullaby

LULLABY (Brahms)*

Leisurely and peacefully

*This tune contains a triplet, which occupies the same time as a quarter note.

Silent Night

SILENT NIGHT

Reverently

g a g e
 d a b
 a c b a g e
 a c b a g e
 d f d b c
 c g e g f d c

Scarborough Fair

SCARBOROUGH FAIR

Slowly and longingly

a a a e
 e a g e
 a c d e
 a c d e
 e d c b g
 e d c b a g a

The Ash Grove

THE ASH GROVE

Sweetly and nostalgically

A Welsh Folk Song

a d f# a g f# d e g f# e d c# a
 d f# e d c# b a d c# d
 f# g a f# g a b a g f# g e f# g a g f# e
 d e f# g f# e a a b a

Tallis' Canon

TALLIS' CANON (a 4-part round)

Thomas Tallis (c1505 - 1585)

Slowly and evenly - especially beautiful with 4 parts

g g f# g g a a b
 g c c b b a a g
 d c a b b a a g
 d e f# g b a a g

Southwind

SOUTHWIND
Moderately, with a lilt
An Irish Air

Chords: D, G, A, A7

Parson's Farewell

PARSON'S FAREWELL
Stately
16th Century English

Chords: Em, D, G

Good King Wenceslas

GOOD KING WENCESLAS
With spirit

Chords: C, F, G7, F

Song of Joy

SONG OF JOY
Moderately and majestically
Beethoven's 9th Symphony

Chords: C, G7, G

Danny Boy (Londonderry Air)

DANNY BOY (Londonderry Air)*

Slowly, with a hint of sadness

An Irish Air

Musical score for Danny Boy (Londonderry Air) in G major, 4/4 time. The score consists of ten staves of music. The melody is written in treble clef. Chords are indicated by letters above the notes: C, F, G7, C, F, C, G7, C, F, C, G7, F, C, G7, F, C. The melody starts with a half note G4, followed by quarter notes A4, B4, C5, and a half note B4. The piece concludes with a fermata over the final note G4.

*This tune contains a "fermata" or hold (∩). You "hold" or sound the note until you "feel" it should be cut off.

Rose (a round)

ROSE (a round)

Moderately and evenly - beautiful in 4 parts

Musical score for Rose (a round) in G major, 4/4 time. The score is arranged for four parts: 1st part, 2nd part, 3rd part, and 4th part. The melody is written in treble clef. The notes for each part are: 1st part: G4, A4, B4, C5, B4, A4, G4; 2nd part: A4, B4, C5, B4, A4, G4; 3rd part: G4, A4, B4, C5, B4, A4; 4th part: F4, G4, A4, B4, C5, B4, A4, G4. The piece concludes with a fermata over the final note G4.

Star of the County Down

STAR OF THE COUNTY DOWN

An Irish Air

Wistfully

Musical score for Star of the County Down in D major, 4/4 time. The score consists of ten staves of music. The melody is written in treble clef. Chords are indicated by letters above the notes: Em, D, Em, D, Em, D, Em, D, Em, D. The melody starts with a half note D4, followed by quarter notes E4, F#4, G4, and a half note F#4. The piece concludes with a fermata over the final note D4.

Pretty Saro

Slowly and hauntingly

PRETTY SARO*

A folk tune from Kentucky

*This is a "pentatonic" tune containing only 5 notes of the scale. It contains "fermatas" (see DANNY BOY). The words are below:

Down in some lone valley / in a lonesome place
The wild birds do whistle / their notes do increase
Farewell pretty Saro / I bid you adieu
But I'll dream of pretty Saro / wherever I go.

My love she won't have me / so I understand
She wants a freeholder / who owns house and land
I cannot maintain her / with silver or gold
Or buy all the fine things / a big house can hold.

If I were a man of letters / and could write a fine hand
I'd write my love a letter / that she'd understand
I would write it by the river / where the waters do flow
And I'll dream of pretty Saro / wherever I go.

Jesu, Joy of Man's Desiring (J.S. Bach)

JESU, JOY OF MAN'S DESIRING (Bach)

Moderately and expressively

Bach Minuet

MINUET (Bach)

With dignity