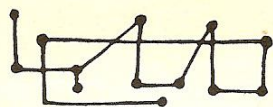


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# CONTEMPORARY NOTATION FOR THE SHAKUHACHI: A PRIMER FOR COMPOSERS



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## INTRODUCTION

AS THE SHAKUHACHI (traditional Japanese bamboo flute) becomes more familiar in the West, the primary problem the Western composer confronts in attempting to explore the instrument's capabilities is notation. Traditional shakuhachi notation, which is unique to the instrument, uses a combination of tablature, verbal instruction, and idiosyncratic graphic symbols that differ from school to school. Despite the apparent precision of much of this notation, most traditional shakuhachi music must still be learned by rote (both *honkyoku*, esoteric Buddhist music, and *sankyoku*, ensemble music of the Edo period).

In the recent past, composers such as Tōru Takemitsu, Minoru Miki, and earlier even Henry Cowell have attempted to notate new music for shakuhachi using standard Western notation. While each attempt has its merits, each one also differs greatly from the others and more often than not produces greatly differing results in the hands of different performers.

The present author is a performer and composer. The following notational system is offered in the spirit of simplifying and standardizing shakuhachi notation for use in contemporary scores. The techniques discussed represent the bulk of traditional playing practices as well as a number of recent innovations.

#### THE SHAKUHACHI

The instrument itself consists simply of a hollow bamboo tube with an angular cut at the mouthpiece. Four holes are bored in the front and one in back. The player grips the instrument, which is held upright, between the thumbs and middle fingers. The thumb of the upper hand articulates the one hole on the back. The instrument rests on the lower chin and the performer produces sound by blowing “backwards” into the bamboo tube.

While the shakuhachi can certainly be considered a member of the flute family, new music composed for it will be far more effective—or at the very least more idiomatic—if the composer divorces himself from analogies to Western-style flutes. Actually, many shakuhachi techniques have a lot more in common with string techniques—but more on that later. If the composer understands a few fundamental differences between the shakuhachi and other, Western, flutes, then idiomatic writing can indeed be realized, even by those who have never heard the instrument.

The shakuhachi generally does not make use of a tongued articulation for a reiterated pitch, but rather makes use of a system of grace-note articulations. The performer makes no use of a diaphragmatic vibrato; instead the head shakes from side to side to create a variety of subtle vibrato effects. In addition, although the closed-hole pitches of the instrument match those of equal temperament, the absence of a fixed key or valve system makes microtonal inflection of any pitch a simple matter. It follows that glissandi can be employed rather freely.

The headings below should facilitate using this primer while composing. A number of techniques can be considered to fall equally well under more than one category, so if a particular technique can't be located under an assumed heading it can probably be found under another:

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The headings below should facilitate using this primer while composing. A number of techniques can be considered to fall equally well under more than one category, so if a particular technique can't be located under an assumed heading it can probably be found under another:

1. Range
2. Articulation
3. Vibrato
4. Pitch Inflection
5. Trills/Tremolos
6. Special Timbral Effects
7. Scales and Runs
8. Other Techniques
9. Tuning/Ensemble Writing
10. Selected Recordings

#### I. RANGE

Shakuhachi come in a variety of lengths, some more commonly available than others. Because all shakuhachi players play the 1.8 *shaku* length (one *shaku* = .994 ft.), this is referred to as standard length. All of the techniques described below can be performed more-or-less equally successfully on any of the available lengths.

The next most common length would be the "2.0" (*ni shaku*) which sounds a fourth lower than the standard length, followed by the "1.6" which sounds a whole step higher. Shakuhachi with six and seven holes exist but fingerings vary.

Table A shows the range of the instrument. Note that the resulting sound will be one octave lower than notated, though the presence of a strong first overtone can be deceptive. The open note-heads indicate the "basic" pitches. These pitches are realized by simply covering or uncovering the five holes of the shakuhachi in sequence. All other pitches ("altered" pitches) result from combinations of partially covered holes and/or raising or lowering the chin. The second octave results from overblowing the first. All basic pitches are available at all times. They can be freely approached from any interval and possess a greater dynamic range than altered pitches.

Although somewhat more problematic than basic pitches (generally because of the time needed to adjust the position of the chin or because of difficulty in tuning a particular pitch), most altered pitches can also be used freely. More specific guidelines for this will be given under the heading "Scales and Runs." With these considerations in mind, all chromatic

itches from the lowest C to the uppermost E can be considered available at all times (note that while F#/G/G# are possible above the highest E, F cannot be produced).

## 2. ARTICULATION

### TONGUING

As mentioned above, the shakuhachi player does not generally articulate a tone by tonguing it. Tongued attacks are certainly possible and even appear as a special effect in a small number of traditional pieces. The tongued attack gives the shakuhachi a more flute-like sound, which might be desirable at some point in a composition. Tongued attacks can also be most effective in loud or percussive figures. A small, inverted and darkened triangle will be understood by all players to represent a tongued attack. To avoid confusion with the *staccatissimo* accent, an explanatory footnote should be provided.

Unfortunately, because of the many conventions attached to various schools and styles of playing, a soft attack cannot be assumed if not otherwise notated. To produce consistent attacks, include something like the following in a set of explanatory notes: "Unless otherwise notated, all pitches are to be plainly articulated (soft attack)" (Example 1).



EXAMPLE 1: MIYAGI: *Haru no Umi* (TRANSCRIBED)

### EXPLOSIVE BREATH (*MURA-IKI*)

Another means of articulation, generally thought of as a special effect but nonetheless useable and effective, is the explosive breath attack (*mura-iki* refers to breathy playing). Notate it by placing a solid diamond above the desired note. An explanation must be provided for this symbol. While a *sforzando* or strong accent alone might produce the desired effect, the addition of this symbol will make the composer's intentions clear. Note that, depending on the dynamic level, the attack may contain little or no resonance of the notated pitch.

This technique sounds particularly effective in the lower octave when it precedes a sustained pitch in the upper register. It can be used with equal effectiveness to articulate the end of a sounding pitch, in which case it should be tied to the principle note and notated either as a short duration or as a grace note, depending on the desired rhythmic specificity (Example 2).



EXAMPLE 2: TÖRU TAKEMITSU: *November Steps*

#### STACCATO BREATH (*KOMI-BUKI*)

Another technique, called *komi-buki* (staccato breath), consists of a series of reiterated pitches produced by a kind of panting into the instrument. This technique differs from a simple series of staccato reiterations in that there is less of a break between reiterations. *Komi-buki* articulations work equally well at all dynamic levels and should be notated as a slurred series of staccato noteheads (stemmed or stemless, depending on whether they are to be played freely or evenly pulsed), or, after an initial pitched articulation, as a series of stems which may follow a glissando or pitch-bend curve. *Komi-buki* is combined with *mura-iki* playing and pitch bending to create the dazzling effect heard in the honkyoku, *Shika no Tone* (Example 3).



EXAMPLE 3: *Shirabe* (HONKYOKU: TRANSCRIBED)

#### KITTE

*Kitte* (from a verb meaning "to cut") is a final articulation. For *kitte*, the performer cuts off the flow of air abruptly without nuance. It traditionally appears at the end of a sustained tone, or with a grace note or sudden

downward pitch-bend following a sustained tone. The word *kitte* is placed above the score at the appropriate location.

#### GRACE-NOTE ARTICULATIONS (*ATARI*)

Tonguing, *mura-iki*, and *komi-buki* appear infrequently in traditional shakuhachi compositions. A special set of grace notes articulates most initial phrase articulations and repetitions of notes. These grace notes (*atari*), performed quite rapidly, sound more like blips than well-defined pitches. Every pitch has its own repertoire of possible *atari* fingerings. It must be noted that due to the fingerings used for these special grace notes, a good many do not match equal temperament. However, as mentioned above, because of the speed at which they occur, the listener generally perceives these articulations merely as occurring above or below the principal note.

Fortunately, all pitches have standard *atari* fingerings. These consist of quickly opening and closing an already closed hole or vice versa (*atari* literally means "strike"). The number of the hole to be articulated should be placed above (or above and slightly to the left of) the desired note. Because only the effect—and not the exact pitch—of these special grace notes will generally be perceived, I recommend that the assumed fingerings be used most of the time. Alternate fingerings, however, may be used for the sake of variety, particularly when reiterating the same pitch or to create a figure with a unique articulation. Table B shows all standard *atari* fingerings as well as a selection of alternate fingerings. *Atari* may be doubled and even tripled (by placing each reiteration of an *atari* indication over a separate grace note) to produce an effect similar to double or triple tonguing (Example 4).



EXAMPLE 4: TOSHIZAWA: *Chidori* (TRANSCRIBED)

#### OTHER GRACE NOTES (CONVENTIONAL)

Conventional grace notes may also be used, in which case the actual notated pitch will be separately fingered and clearly perceived. It will be assumed that a conventional grace note will be more clearly articulated than the *atari* articulations discussed under the previous heading.



## SPECIAL GRACE-NOTE FIGURES

The grace-note figures illustrated in Table C appear so frequently in traditional shakuhachi compositions that they are listed here as a separate technique. Most of them make use of alternate fingerings and can be performed rapidly and with ease. They differ slightly in timbre from the same figures performed with standard fingerings. The figures which contain microtonal indications are frequently used by players as "fudged" substitutions for their equal-tempered counterparts. Use of these figures provides a trouble-free way to add idiomatic virtuosity and timbral spice to a passage.

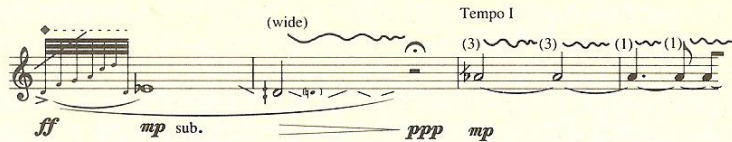
## 3. VIBRATO

## NORMAL VIBRATO

The unusual method of performing vibrato on the shakuhachi provides a wide range of strikingly different vibrato techniques and thus a great expressive range on even a single sustained pitch. Where other instruments demonstrate it through fingering dexterity, the shakuhachi demonstrates true virtuosity in the areas of vibrato and pitch inflection. As mentioned in the introduction, the performer creates a vibrato not diaphragmatically as on other woodwinds, but rather by shaking the head from side to side. The overall effect, in fact, sounds closer to a string vibrato than a woodwind one. The composer may request that the performer apply normal amounts of vibrato where deemed appropriate, or else indicate, for example, "all pitches played without vibrato unless otherwise notated."

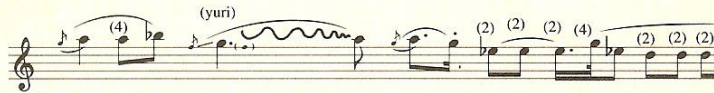
Notate an expressive vibrato by wavy lines above the staff. To truly appreciate the full range of vibrati possible on the instrument, I suggest listening to a recording of traditional Buddhist shakuhachi music (*honkyoku*) for ideas. A sustained tone, for example, will generally be performed as a *sasa-buki*, or bamboo-leaf shape, which refers both to the envelope shape of the dynamics and to the relative width of the vibrato. Note that various widths as well as various speeds are possible and all can be applied to a single sustained tone. The composer may wish to indicate the speed of a vibrato graphically or simply affix the words "fast," "slow," and so forth, to the existing wavy line (Example 5).

Playing without vibrato appears frequently in traditional styles and should not be overlooked. In the lower range, such playing produces a distinctive and beautifully "artless" sound, while playing pitches in the upper range without vibrato produces almost pure sine waves.

EXAMPLE 5: LEPENDORF: *Stream*

## YURI

An erratically wild and somewhat improvisatory vibrato called a *yuri* can sometimes produce a vibrato so wide that it might better be called a tremolo. Note that while the player's head shakes from side to side to create a vibrato, it moves up and down to inflect a pitch—the two are combined to create a true *yuri*. *Yuri* tend either to begin fast and erratic, slowing down to a controlled vibrato, or vice-versa. *Yuri* are best notated as a sustained pitch with a graphic representation of the figure appearing above or within the staff along with the word *yuri*. The lower (and/or upper) pitch of the *yuri* may be indicated by a small note-head in parenthesis (Example 6).

EXAMPLE 6: KIKUOKA: *Fume no Yume* (TRANSCRIBED)

## 4. PITCH INFLECTION

## BENDING

The shakuhachi possesses great flexibility in its ability to chromatically inflect pitches. This permits not only the use of expressive glissandi from pitch to pitch and unusual uneven vibrato effects, but also allows for a tantalizing variety of pitches even within an equal-tempered environment. As mentioned earlier, pitches are inflected in two ways: either by raising/lowering the head, or by partially shading an open hole. Frequently a combination of the two will be used (at the player's discretion).

The barlines in Table A delineate all playable equal-tempered chromatic

itches possible on the instrument and the basic pitches they associate with. The player's head remains upright for each of these basic pitches (indicated by whole notes). The head is lowered and/or the fingering slightly altered to realize the pitches indicated by small note-heads. All microtonal pitches falling between can be just as easily executed. Note also that a number of pitches can be played as both basic pitches and as inflected ones (more will be said about this under "alternate fingerings"). Pitch inflections are easily notated as bending lines placed within the staff. Specific terminal pitches, both microtonal and equal-tempered, may be indicated with small note-heads; or alternately, a simple bending line, perhaps with a flat or sharp above. Finally, I should point out that although the head is held upright for basic pitches it can still be raised slightly to raise the pitch, though generally less than a semitone (Example 7).



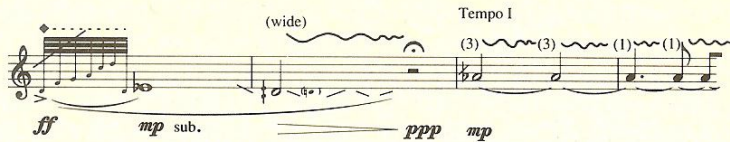
EXAMPLE 7: *Hon Shirabe* (HONKYOKU: TRANSCRIBED)

#### FURI

*Furi* consists of a rapid down-and-up head movement. It can be thought of simply as an ornament, or as a substitution for an *atari* articulation of a reiterated pitch. The lower part of the *furi* can be rhythmically strong or weak (this aspect of the figure may or may not be notated explicitly). The placement of the *furi* is indicated by an arrow placed above the staff. It may either precede a tied note or be placed directly above it to show rhythmic placement and accentuation, or the exact placement may be left up to the performer. Any number of *furi* can appear within a single sustained tone (Example 8).



EXAMPLE 8: *Takiuchi* (HONKYOKU: TRANSCRIBED)

EXAMPLE 5: LEPENDORF: *Stream*

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EXAMPLE 6: KIKUOKA: *Fune no Yume* (TRANSCRIBED)

## 4. PITCH INFLECTION

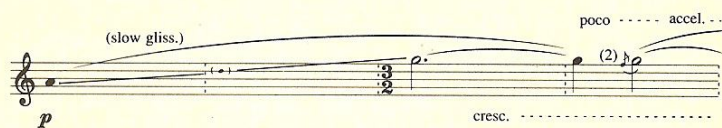
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The barlines in Table A delineate all playable equal-tempered chromatic

## GLISSANDI

Glissandi and pitch inflection differ in two ways: first, pitch inflection suggests a movement of the head (and therefore a slight change in timbre), whereas glissando suggests a change of fingering; second, pitch inflections tend to be the result of bending down a basic pitch, while glissandi tend to ascend and also tend to cover a greater intervallic span. Smooth, genuine glissandi are possible from the lowest C $\sharp$  to the top D $\sharp$  of the first octave, and from the first D $\sharp$  of the second octave to the highest D $\sharp$ . Glissandi above the highest D $\sharp$  can be faked rather convincingly while those across the break between the first and second octave are more difficult to perform smoothly and without a significant change in timbre. A very rapid glissando (perhaps I should say “rip” here) can be convincingly and effectively realized across the break. Note that *yuri* and other vibrato effects can be executed simultaneously with any glissando (Example 9).



EXAMPLE 9: TANN: *Llef* (FOR CELLO AND SHAKUHACHI: CELLO NOT SHOWN)

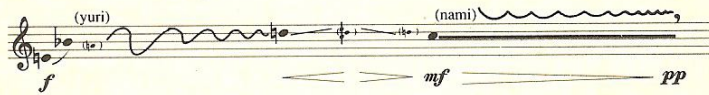
## NAYASHI

*Nayashi* appear frequently in traditional pieces as initial articulations. A *nayashi* is a short glissando (usually about a semitone or slightly larger) leading up to a basic pitch and should simply be notated that way (see “glissandi”). It occurs frequently in traditional playing, particularly to reiterate a pitch. Long series of *nayashi*, often shaped by an overall dynamic envelope, appear frequently in honkyoku. Notate this figure as a slurred series of *nayashi*. The ornamental pitch, which may change throughout the figure and which need not be equally tempered, may be notated as a small note-head in parentheses. If the precise rhythm of the figure is left to the performer but the composer wishes to specify the emphasis, a simple verbal instruction, such as “emphasize lower pitch,” will suffice. In a metrical context, the rhythmic placement of the figure can be indicated by placing the short glissando before or after the stronger metrical position (Example 10).

EXAMPLE 10: MATSUZAKI: *Sakura Gawa* (TRANSCRIBED)

## NAMI

A series of *furi* creates a sound pattern looking graphically something like a child's drawing of an ocean wave—hence the name, *nami*, or “wave.” The *furi* typically occur closer together, faster, and quieter as the figure proceeds, toward silence or to a quietly sustained pitch. Place the word *nami* and a notation conveniently borrowed from traditional shakuhachi notation above the sustained pitch. Conventional dynamic markings will take care of the overall shape of the figure (Example 11).

EXAMPLE 11: LEPENDORF: *Yuki*

## 5. TRILLS/TREMOLOS

## CONVENTIONAL TRILLS/TREMOLOS

Conventional fingered trills can be played only on a limited number of pitches, the reason for this being the pentatonic arrangement of the open holes. A traditional trill may be performed on any basic pitch, in which case the ornamental pitch will be the next available basic pitch. Because of this, a number of shakuhachi trill figures can perhaps better be described as tremolos. The head may be lowered one half-step “notch” on any of these figures (making D–F into C#–E; F–G into E–F#, and so on, thus increasing the availability of conventional trill/tremolos. As far as actual tremolo figures go, only one rule need be kept in mind: each of the pitches of the figure must use the same head position. In other words: basic pitch to basic pitch, altered pitch to altered pitch (e.g. a tremolo using E $\flat$  and G $\sharp$  would be quite awkward). Tremolos across the break should be avoided unless they are to be performed slowly. Table E shows a number of common trills

and how they are notated; other trill figures should be indicated in the usual manner with small noteheads indicating the ornamental pitches. Note that most of these amount (simply) to reiterated grace-note fingerings. These figures may be combined effectively with pitch bending.

#### VIBRATO-TRILL

An easily available means of creating a trill on any pitch is to bend the pitch up and down by bobbing the head. A vibrato-trill may be indicated as a kind of *yuri* or spelled out partially with small glissandi and a wavy continuation line graphically depicting the desired figure (Example 12).



EXAMPLE 12: *Futaiken Sanya* (HONKYOKU: TRANSCRIBED)

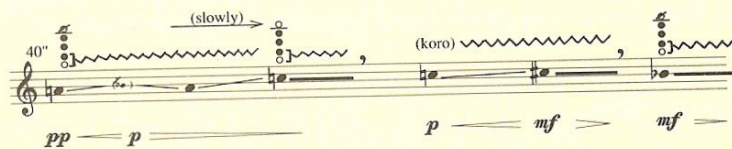
#### KARA-KARA (BEATING)

A number of interesting timbral (microtonal) trills are possible on the shakuhachi. In *kara-kara* (beating) the first hole of the instrument is struck repeatedly, changing the actual pitch only fractionally. *Kara-kara* is frequently perceived more as a beat. *Kara-kara* may be performed on all pitches not using the first hole on the instrument, i.e. D $\sharp$  and its alterations. Also, above the highest E $\flat$  the effect becomes practically inaudible. It may be notated as "tr1" (followed by the standard trill indication), indicating that the first finger will be used (see Table E). If the figure will appear over a series of tied notes or noteheads to show the exact number and placement of each stroke of the first finger, indicate each one as a separate *atari* fingering.

#### KORO-KORO/GORO-GORO

Another type of timbral trill, one unique to the shakuhachi, called *koro-koro* (or *goro-goro*) can best be described as a pitched gurgle. In *koro-koro* two holes are alternated in such a way that a multiphonic blip occurs with each alternation. Table D shows where *koro-koro* occur. Note that the fingerings must be indicated. A zig-zag line indicates a continuation of the figure. As in *kara-kara*, a single blip can appear as well and should be notated with just

the fingering indication; the word *koro* will suffice for subsequent reiterations (Example 13).



EXAMPLE 13: LEPENDORF: *Night Pond*

#### OIWAKE-KORONE

*Oiwake-korone*, a tremolo technique from folk playing, resembles *koro-koro* in fingering but does not produce a multiphonic effect. It is available on A–G (or Ab–Gb) and on F–D (or Fb–Db) in both octaves. *Oiwake-korone* should be notated explicitly along with a fingering indication (Example 14). The figure may be continued ad lib. by use of the same zig-zag line used for *koro-koro*. The blip will occur with each articulation of the lower pitch (Example 14).



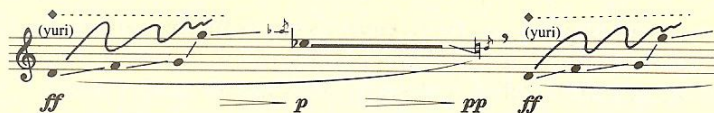
EXAMPLE 14: TRADITIONAL FOLK STYLE

## 6. SPECIAL TIMBRAL EFFECTS

#### MURA-IKI/SORA-IKI

*Mura-iki*, as was mentioned earlier, refers to playing with the breath. It may be indicated in general with a dashed line placed over the staff; *sora-iki*, which means “all breath” can be indicated by writing “all-breath” over the dashed line. Both these techniques are usually associated with loud dynamic levels (Example 15).

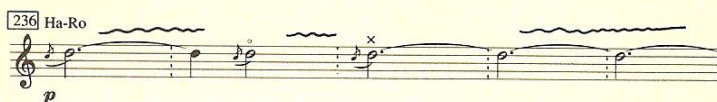


EXAMPLE 15: *Shika no Tone* (HONKYOKU: TRANSCRIBED)

## ALTERNATE FINGERINGS

Table F provides a number of alternate fingerings (as well as subjective descriptions) used for timbral variety. The particular merits of each of these fingerings is indicated in the table (Example 16).

Basic pitches F/G/C may be played respectively as G/A/D bent down a whole step. These alternate fingerings require a small amount of preparation time. Because of the extreme change in head position used to produce them they have a distinctive weak sound which is particularly striking when used in combination with the standard fingering. Indicate these with a double-flat and a verbal indication (e.g. "finger G").

EXAMPLE 16: TANN: *Llef* (CELLO PART NOT SHOWN)

## 7. SCALES AND RUNS

The shakuhachi seems best suited for playing sustained passages, but various scales and runs are certainly possible. However, because the shakuhachi lacks keys or valves some care must be taken in constructing them. For example, a chromatic scale, though possible on the shakuhachi, is difficult to perform without it sounding like a glissando. Remembering one simple rule will make the construction of idiomatic runs fairly elementary: referring to Table A, idiomatic passages are best constructed by limiting runs to one pitch per measure of the chart (i.e. one basic pitch or one of its alterations). I offer this rule as a guide; it may be broken and still produce a playable and even idiomatic run, but certainly also a run much more difficult to play. Remember that *atari* grace notes will help to articulate the pitches of a highly chromatic passage. Dazzling examples of passage work can be heard in many sankyoku compositions. It should also be pointed

## SIMULTANEOUS SINGING AND PLAYING

It is possible for the performer to sing while playing any of the lower-octave pitches. This technique is notated as for a flute ( and provides the same difficulties).

THROAT-FLUTTER (*TAMANE*)

Due to the width of the angular cut which acts as a reed, a flutter-tongue cannot be effectively realized on the shakuhachi. The shakuhachi does, however, have a similar effect called *tamane*, which is actually a throat-flutter. The instruction *tamane* will be sufficient. Unfortunately, *tamane* cannot be executed by all players; it should only be used optionally or if writing for a particular player.

## 9. TUNING/ENSEMBLE WRITING

The shakuhachi has changed little in construction from its folk origins. Shakuhachi tend to differ from each another in subtle, quirky ways more than, say, violins. Bamboo is a very temperamental material, highly sensitive to changes in temperature and humidity. A good player can compensate for most of these difficulties, but the composer should be aware of the difficulties in tuning the instrument, bearing in mind that the shakuhachi lacks a fixed pitch system. The composer need not worry about tuning, though, if a bit of common sense (and a bit of compassion for the musician) are exercised. Overall, one should not expect a shakuhachi player to tune intervals (equal-tempered or otherwise) that a singer would not be expected to tune.

The greatest tuning challenges for the performer result when combining the shakuhachi (a traditionally non-equal-tempered instrument) with Western instruments fixed in equal temperament. If the shakuhachi part is limited to equal temperament, particular care must be taken in constructing idiomatic passages and in providing places to tune to other parts (as one would provide for a singer). One solution is to contrast the shakuhachi's ability to play outside of any one fixed-pitch system with instruments that have fixed-pitch systems. Another obvious solution is to combine the shakuhachi with instruments such as strings or electronics where a greater pitch spectrum is possible.

Aside from the obvious problems of tuning the shakuhachi with Western instruments, care must also be taken when considering dynamic balance.

As a bamboo instrument, the shakuhachi is easily overpowered by many Western instruments. Careful choice of instrumentation (marimba and harp come to mind as good choices), judiciously lean counterpoint, and amplification are three possible solutions to this problem.

#### 10. SELECTED RECORDINGS

##### HONKYOKU:

*ZEN: Katsuya Yokoyama Plays Classical Shakuhachi Masterworks.* Wergo SM 1033/34.

*A Bell Ringing in the Empty Sky:* Goro Yamaguchi, shakuhachi. Nonesuch H-72025.

*Shakuhachi:* Judo Notomi and Goro Yamaguchi, shakuhachi. Auvidis AV 6508S.

*Ki-sui-an Honkyoku*, vols. I-IV: Ronnie Nyogetsu Seldin, shakuhachi. Hogaku Society Records HS 201, 202, 203, 204, cassette tapes (Traditional Japanese Music Society, c/o Henry Burnett, The Aaron Copland School of Music, Queens College, Flushing, NY 11367-0904).

*The Distant Cry of Deer:* Masyuki Koga, shakuhachi. Fortuna Records (P.O. Box 1116 Novata, CA 94947).

##### SANKYOKU:

*Japanese Koto Music* (with shamisen and shakuhachi). Lyrichord LLCT 7131.

*18th Century Traditional Music of Japan: Koto music of the Edo Period* (with shamisen and shakuhachi). Everest 3306.

*Kyomono Series, Vol. I: Works of Matsuura Kengyo.* Hogaku Society Records HS 101 (Traditional Japanese Music Society, c/o Henry Burnett, The Aaron Copland School of Music, Queens College, Flushing, NY 11367-0904).

##### CONTEMPORARY:

Tōru Takemitsu: *November Steps.* Kinshi Tsuruta, biwa; Katsuya

Yokoyama, shakuhachi; Toronto Symphony Orchestra; Seiji Ozawa, cond. RCA LSC-7051 [1968].


\_\_\_\_\_. *November Steps*. Kinshi Tsuruta, biwa; Katsuya Yokoyama, shakuhachi; Amsterdam Concertgebouw Orchestra; Bernard Haitink, cond. Philips 6500 086.

TABLE A: RANGE

"First Octave"

"Second Octave"

"Third Octave"

N.B. Sounds one octave lower: tenor clef (  ) may be used to avoid confusion

- X "closed hole" fingering
- o "open hole" fingering
- ( ) only *pp*
- difficult to control

TABLE B: ATARI FINGERINGS

Numbers are placed directly above or slightly above and to the left of the principal note.  
 First number given indicates most common fingering.  
 First number given should be used for most initial articulations.  
 A dot below indicates that the grace-note sounds below the principal note.

TABLE C: COMMON GRACE-NOTE FIGURES

N.B. Notate fully as above.  
 ♭ indicates less than one half-step flat.

TABLE D: KORO-KORO

N.B. Fingering charts do not indicate head position - pitches are tuned by player.  
 Whole note indicates where multiphonic effect is most prominent.  
 ] indicates holes to be alternated for koro-koro.

TABLE E: TRILLS/TREMOLOS

N.B. ♭ indicates less than one half-step flat, † : less than one half-step sharp

TABLE F: ALTERNATE FINGERINGS

N.B. If fingering charts for X and O fingerings are provided in a set of notes, X and O will be sufficient in the score  
 "Ta" and "Ha" may be used without any other description