Piker

solo piccolo

(or flute, or any appropriate wind instrument)

for margaret lancaster

Larry Polansky

Notes

Piker was written for Margaret Lancaster, for the Bonk Festival, March, 1998. It was composed between September, 1997, and January, 1998.

Practice tapes are available for all movements except *I Know You!*.

The order of pieces is determined by the performer, but *Daughter of Piker* should be last, *Piker* third, for example:

You're a Piker!
You're no Piker!
Piker
I Know You!
Daughter of Piker

or

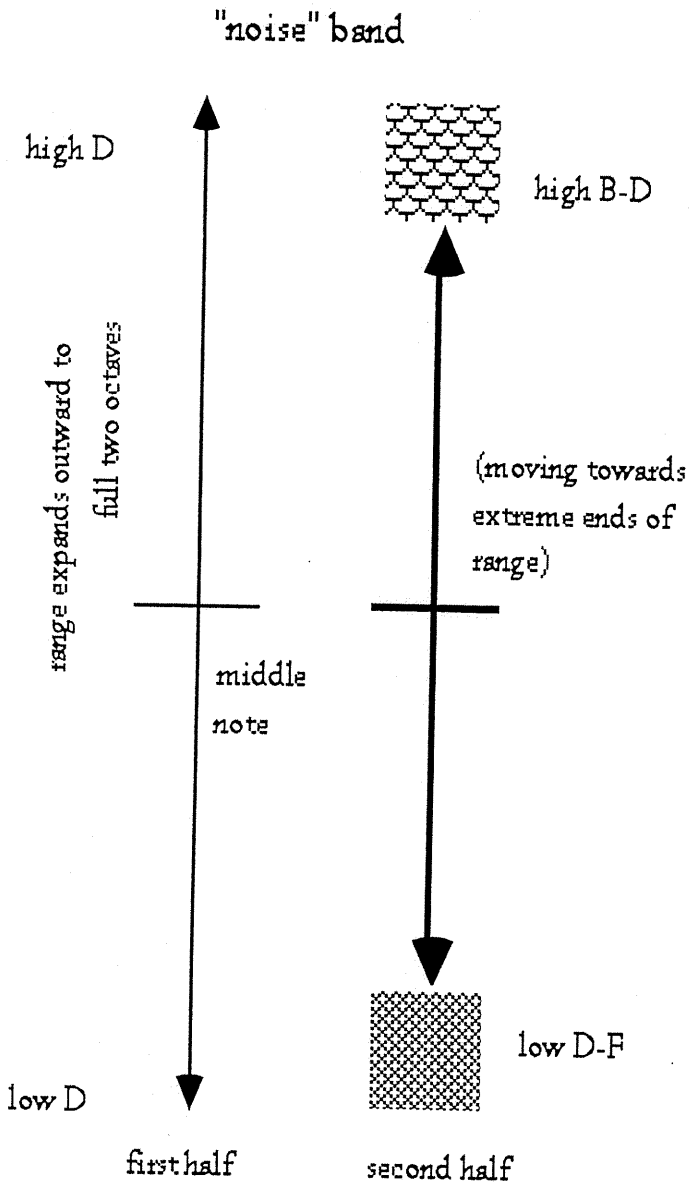
You're no Piker!
I Know You!
Piker
You're a Piker!
Daughter of Piker

You're No Piker!, *Piker* and *Daughter of Piker* are based on the harmonic series and (*You're a Piker* and *Piker*) its rhythmic structure. *You're a Piker!*, *I Know You!* and *Daughter of Piker* are based on Shaker songs.

Although written for piccolo originally, the piece, or individual movements may be played by flute, or any wind instrument with the appropriate range. Transpositions of entire movements may be made for this reason (the absolute pitch of movements is not important).

You're No Piker!
The intontation is from the harmonic series on D, harmonics 4-17. A practice tape is available from the composer. The pulse should be between mm. 85-120.

You're a Piker!
Based on the Shaker tune, "Hop Up and Jump Up," an experiment in melodic streaming. At the beginning of the piece, all notes are equally loud.The actual beats of the Shaker tune (marked in the score by arrows) are gradually accented, more and more, as the piece progresses. All other notes decrease in volume to quite soft at the end.



You're a Piker!
noise band evolution

1/3/98
Polansky

5 repeats of the tune,
with the probability
of a non-melody note
being silenced increasing
slightly over time

(Thanks to Philip Corner for advice.)

Piker

Accidentals only affect pitches they immediately precede (or are on top of). Intonations for all pitches are close as possible to those of the harmonic series on E. A simple approximation of this would be to play the Bb a quarter-tone flat, the C a quarter-tone sharp, the D's a sixth-tone flat, and the G#s a little flat.

The piece is loud, but should start out a bit softer and build up in both density and volume.

Piker uses the pitches 4-17 (E through high F) of a harmonic series on E. Each "line" (on the first two pages) is one "measure," or more precisely, each line should be exactly the same duration. This duration is determined by how fast the performer can play the final pattern — as fast as possible. The tempo should be somewhere between 4-10 seconds per line.

Each pitch is part of a "grupetto" whose value is related to its harmonic number. Although not notated as a set of grupetti (for visual reasons), the "feel" of the

piece is a gradual buildup of a 17:16:15:14 ... 8:7:6:5:4 rhythmic pattern. For most of the piece, while the pattern remains incomplete, the "even rhythmic feel" of each pitch should be brought out. For example, the Bbs should always sound as part of an even 11 against the duration of the line, and likewise for all other pitches/grupetti. A chart showing the rhythmic allignment of the pitches in the harmonic series (4-17) is given on the following page.

Each measure adds some new pitches to the overall rhythmic pattern. When a pitch enters, it is accented heavily. These accents are crucial. New pitches should be *much louder* than the other notes.

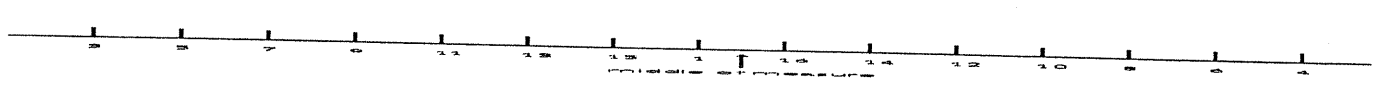
Rhythm and pitch entry

The grupetti relate to pitches (and harmonic series number) in the following way:

(low) E	4	Bb	11
(low) G#	5	(high) B	12
(low) B	6	C	13
(low) D	7	(high) D	14
(higher) E	8	D#	15
F#	9	(highest) E	16
(high) G#	10	F	17

The entry of the pitches into the pattern follows a few simple procedures. Pitches enter from the "midpoint" of the series outward starting with 11 (Bb), ending with 4 (E) and 17 (F)), and start from the middle of the measure or just before. That is, odd numbered gruppetti begin on their "beat" preceding the midpoint of the measure. For example, the C (13) begins on the 7th beat of the 13-tuplet (and begins 6/13ths of the way through the measure, as marked in the score). Since no pitches occur on the first beat (that would be a chord), there are, not taking into account simultaneites (see below), *n-1* beats for harmonic n.

Successive entries for each grupetto are made from the "outside in," starting at the end of the measure, and alternating back and forth until *n-1* pitches are present (where *n* is the number of the grupetto). This is shown below in the pattern for 17 (F):



Measures are indicated by measure numbers (above the clef, as usual), by which harmonic is beginning in that measure (to the left of the stave), and by which harmonic has completed its accumulation in that measure (at the end of the measure, below the staff).

When a new pitch enters on a beat a pitch is already present, the new pitch takes over. In this way, the final pattern does not contain every pitch of every grupetto (there would be chords on all common multiples). The first beat is a rest for each pitch: the final patterns start on the second of the 17-tuplet (note that there are 16 beats in the pattern for 17 above).

The pitch/rhythmic structure of *Piker* is directly analogous to the placement of natural harmonics on an open string, except that higher composite numbers are not necessarily, because of the order of entry, replaced by lower factors (that is, on a string, only two fourth harmonics are playable).

Optionally, some other instrument might mark the downbeat of each line (to help get the rhythmic regularity desired) by playing a chord composed of some subset of the pitches currently present, or just a low E. A resonant gong or soft tam-tam might also be appropriate, or something of the performer's own design.

The end: Once the pattern is complete, the performer freely alternates, for a short time, between that pattern and any one of the gruppetti. The grupetti are exactly the same length as the pattern, but isolate a given pitch and its rhythm from the combined pattern. This alternation should be done perhaps 5-10, times, and obviously, not all of the individual grupetti need to be played. The piece ends with the final pattern played once, loudly.

I Know You!
A morph between the two Shaker tunes, "O the Simple Gifts of God" and "Little Trumpet." Whenever possible, "...Simple Gifts..." should be legato, "...Trumpet" staccato. The final time through "...Simple Gifts..." should be soft, expressive, and the performer may decide the way of phrasing the different sections.

Daughter of Piker
Based on the Shaker tune "Love, More Love." Play the tune 4 times, each time using a different set of intonations for the melody. The intonations are indicated below the melody in terms of the degrees of the harmonic series on A, C#, and E (in the first score), and in cents deviations from 12-ET (on the second, "cents deviations" score). The final, fourth time through the melody is again in A.

The intonations are as follows, in terms of their deviations from tempered tuning:

melody note:	**A**	**B**	**C#**	**D**	**E**	**F#**	**G#**
on A:	0	+4	-14	+51	+2	-59	-12
on C#:	+27	-45	-14	-9	+73	+38	-12
on E:	+53	+4	-57	-29	+2	+6	-12

The harmonic series equivalents are:

melody note:	**A**	**B**	**C#**	**D**	**E**	**F#**	**G#**	
on A:	1	9	5	11	3	13	15	
on C# (5/4):	13	7	1	17	5	11	3	*(*5)*
on E (3/2):	11	3	13	7	1	9	5	*(*3)*

(e.g. The C# in the E series is computed as 13/8 above 3/2, or, brought to within one octave, 39/32, which is 57¢ flat of an equal-tempered major third on A).

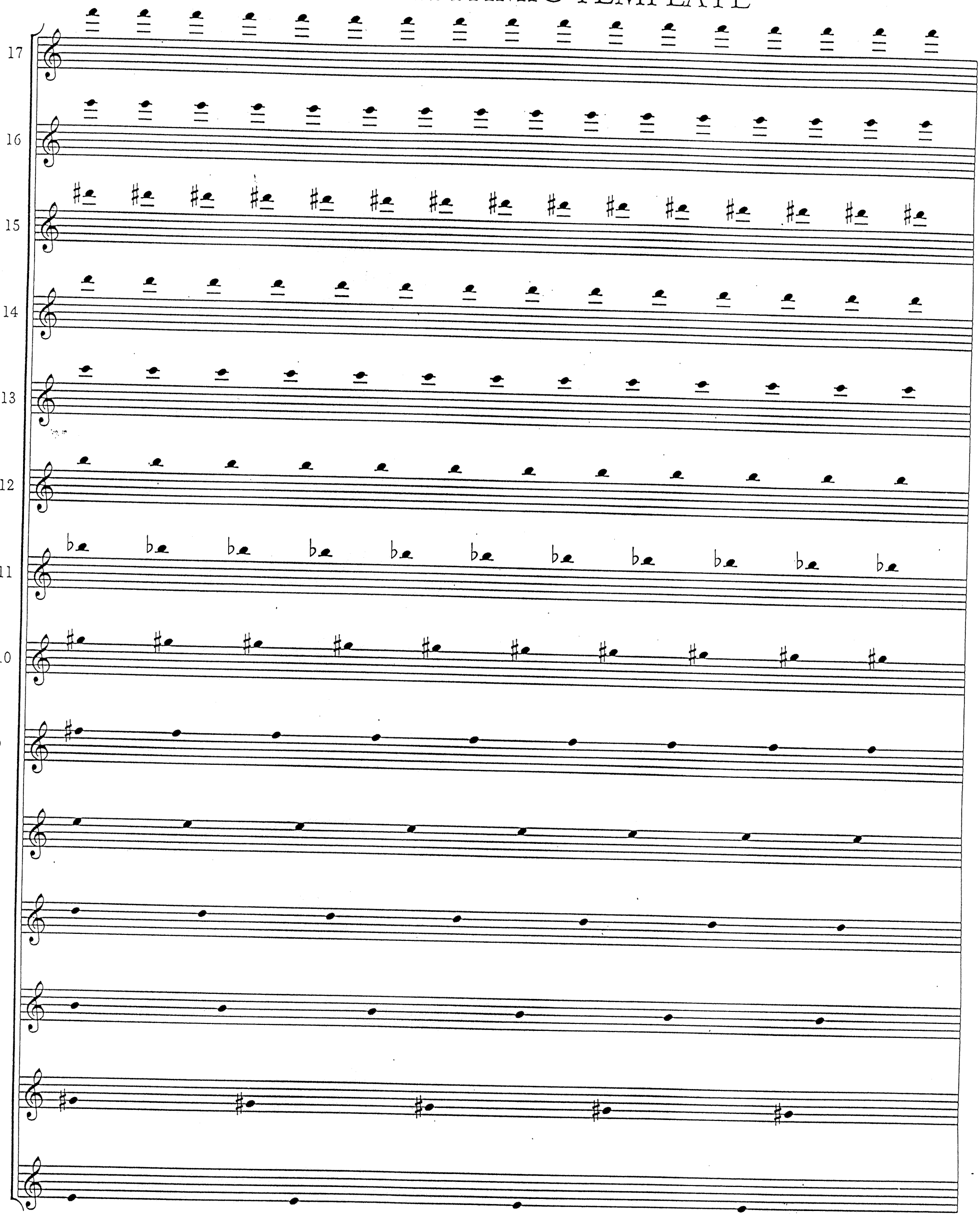
This retuning results in "modal" changes to the melody. For the A series, D# is closer to D. For the C# series, E is closer to D. For the E series, A is closer to A#, C# midway between C# and C. Note that all three modes "pivot" around one pitch, G# (15/8), which, because it is a only multiple of 5 and 3, is common to the three harmonic series.

Play the melody quietly, slowly and sweetly with liberty.

Thanks
Thanks to douglas repetto for tremendous help with the practice tapes and scores for *Piker* and *You're No Piker!*, David Fuqua typeset the scores for *Piker*, *I Know You!*, and *You're No Piker!*. Ted Runcie helped check *Piker*. Thanks to Sam Torrisi for finding some important typos in the notes on the tuning.

LP, Lebanon, January 15, 1998
(rev. March 19, 1998; July 3, 1998; Nov. 2, 1998; Feb. 15, 2000)

PIKER RHYTHMIC TEMPLATE



YOU'RE NO PIKER

Piccolo

Foot

fff *decresc.*

fff

foot constant loudness for whole piece

ff *(decresc.)* *f* *(decresc.)*

ff *f*

mf *(decresc.)*

mf

p *(decresc.)*

p

(pp)

brief silence

(pp)

(2-3x till end)

(each time louder, till as loud as possible)

You're a Piker!

("Hop up and jump up")

Very fast, strong

I.

1

4

7

10

13

II.

16

19

22

25

28

31

III.

34

37

40

43

46

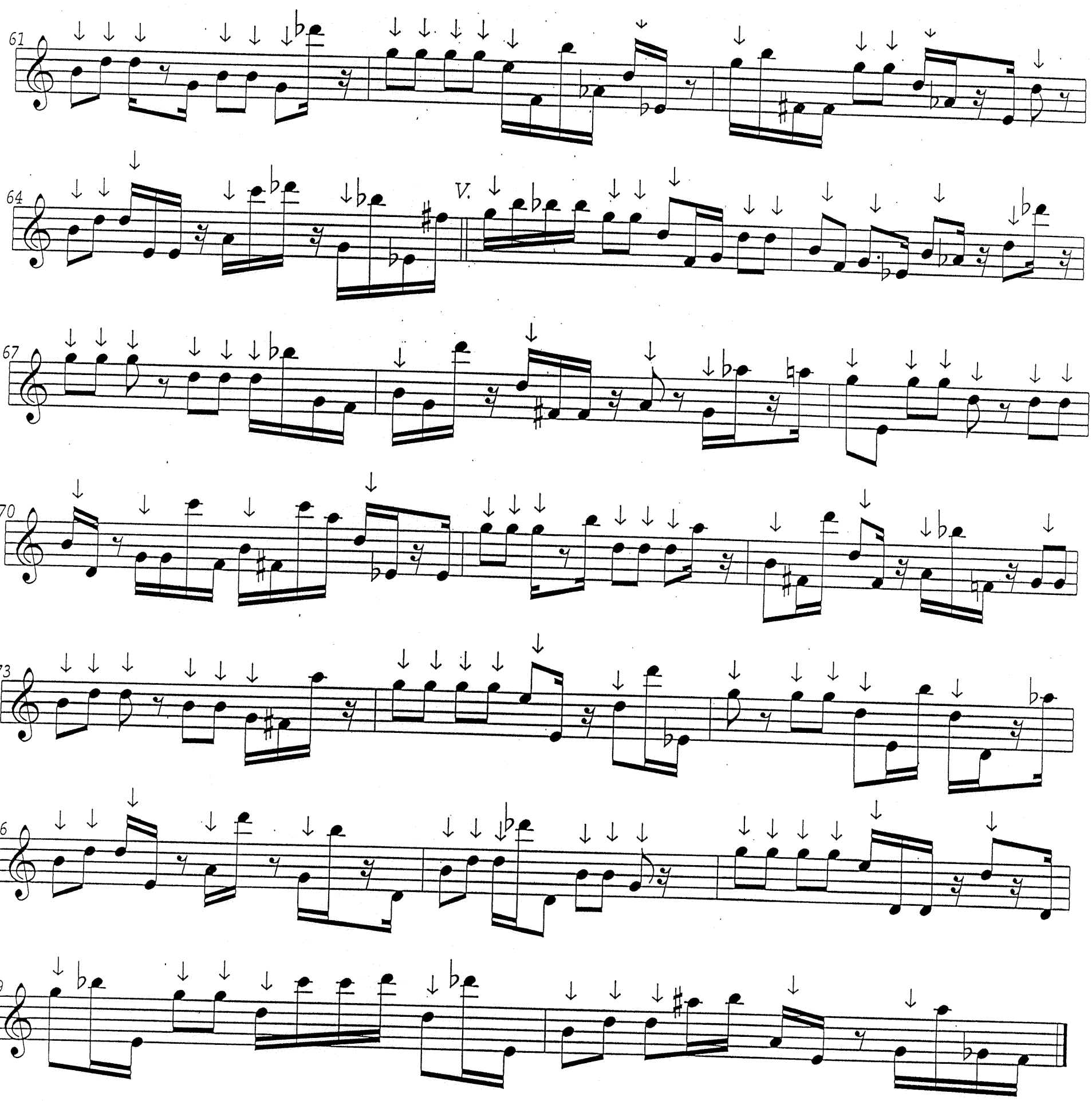
IV.

49

52

55

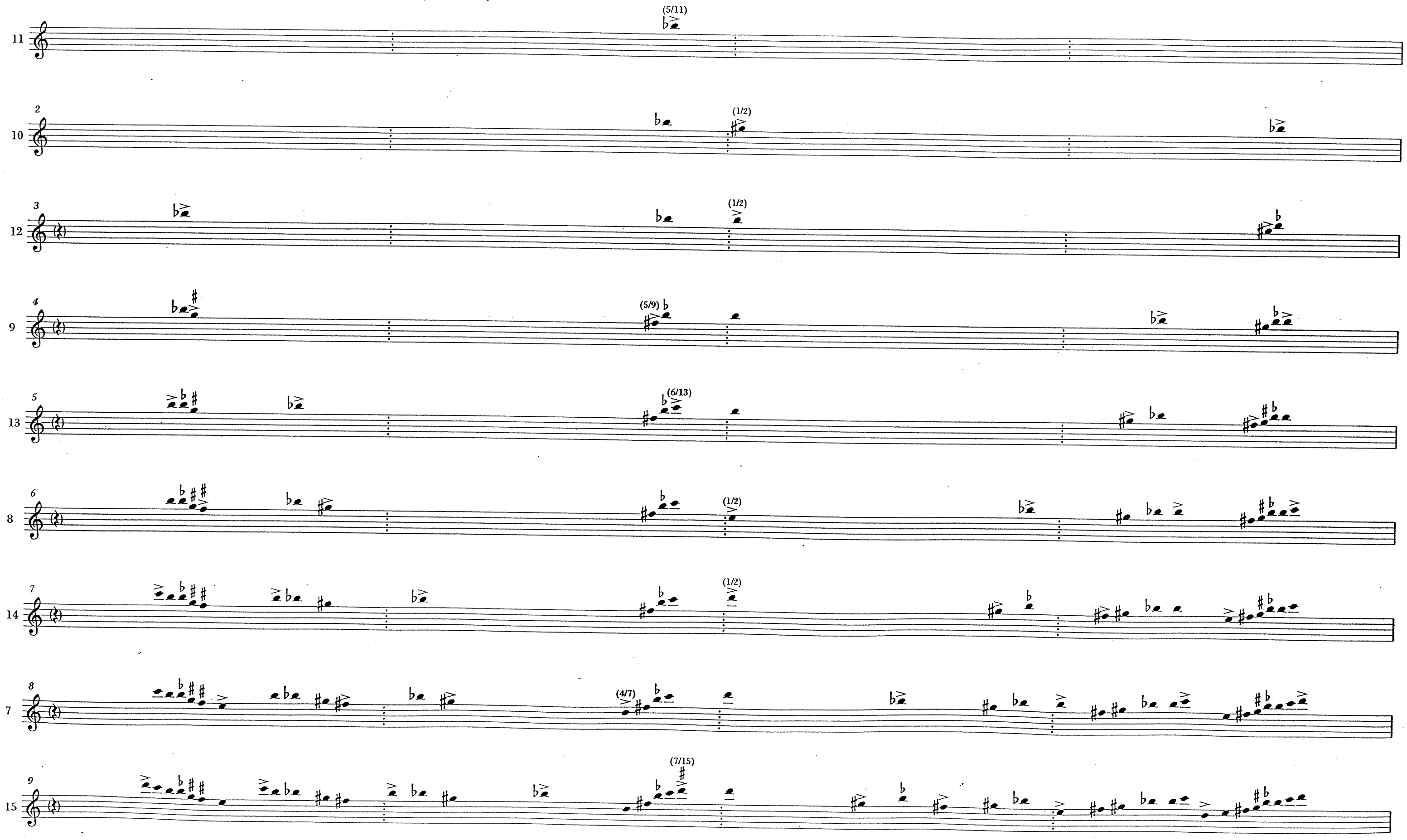
58



(LP, Lebanon, revision 1/28/98)

PIKER

Accidentals only affect those notes that they immediately precede or that they are directly above



10 (1/2)

6

10 done
11 done

11 (1/2)

16

9 done

12 (2/5)

5

13 (8/17)

17

12 done
7 done

14 (1/2)

4

6 done
8 done

15

16

4 done
13 done

17

18

19

14 done

20

21

22

15 done

23

24

25

16 done

26

27

28

17 done

29

(Complete)

17 13 11 14 7 15 10 5 9 12 6 16 8 4

I KNOW YOU!

Fast, with rhythmic and expressive liberty
Ornament freely, like a folksong

Source, I

II

(no pause)

III

like a slide

(no pause)

IV

Arrival

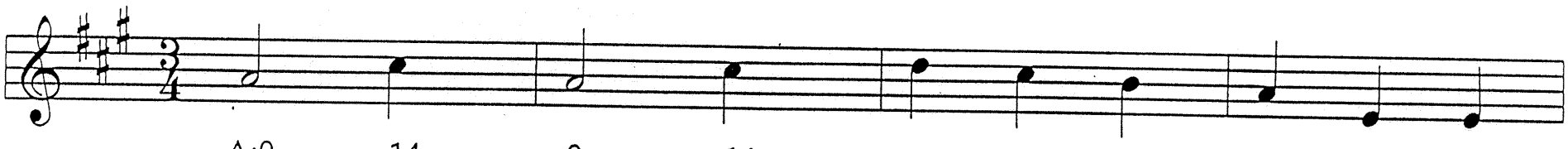
With liberty, legato

*On the beat grace note, almost like two eighths.
**Before the beat grace note.

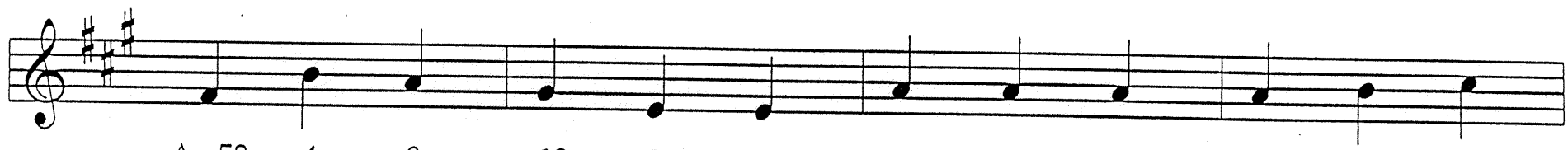
Daughter of Piker

("Love, More Love")

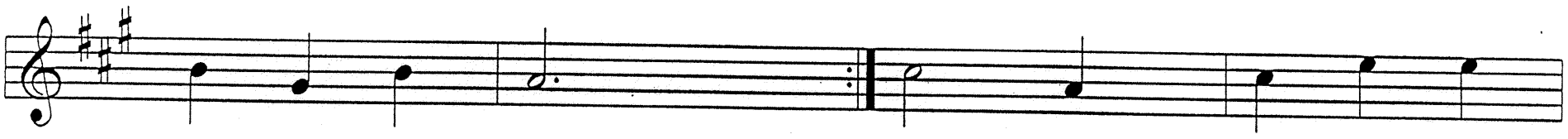
(cents deviation score)



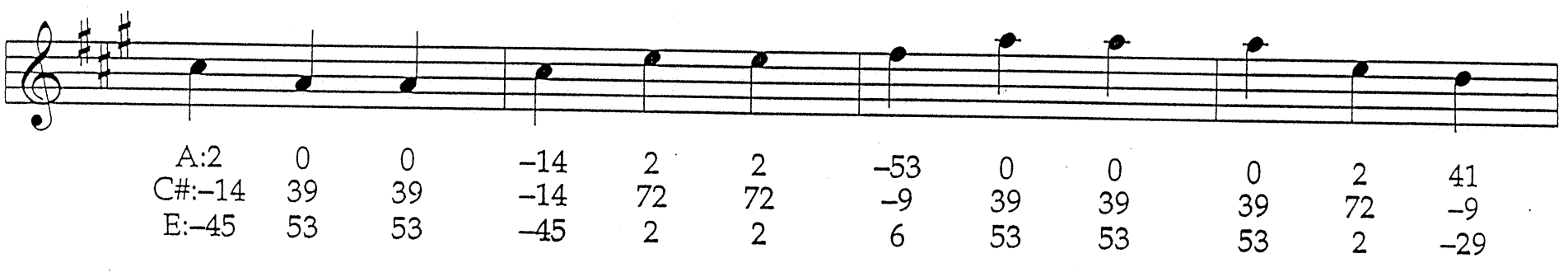
A:0	–14	0	–14	41	–14	4	0	2	2
C#:39	–14	39	–14	–9	–14	–43	39	72	72
E:53	–45	53	–45	–29	–45	4	53	2	2



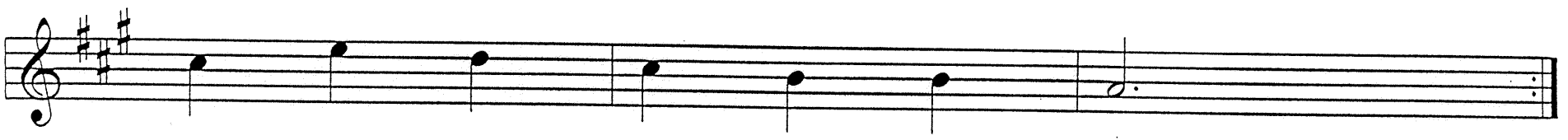
A:–53	4	0	–12	2	2	0	0	0	0	4	–14
C#:–9	–43	39	–12	72	72	39	39	39	39	–43	–14
E:6	4	53	–12	2	2	53	53	53	53	4	–45



A:4	–12	4	0	–14	0	–14	2	2
C#:–43	–12	–43	39	–14	39	–14	72	72
E:4	–12	4	53	–45	53	–45	2	2



A:2	0	0	–14	2	2	–53	0	0	0	2	41
C#:–14	39	39	–14	72	72	–9	39	39	39	72	–9
E:–45	53	53	–45	2	2	6	53	53	53	2	–29



A:–14	2	41	–14	4	4	0
C#:–14	72	–9	–14	–43	–43	39
E:–45	2	–29	–45	4	4	53

(rev. 2/5/98)