NEW SOUNDS FOR FLUTE

- ON FLUTE TECHNIQUES FROM THE 20TH CENTURY

Version 3.1e, October 2005
Downloaded from www.sforzando.se/flutetech

A. Changes of pitch

1. Glissandi (it. sliding) represent

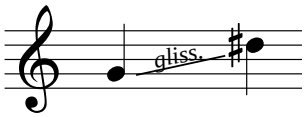
a. filling up an interval by playing a scale

b. a continuous slide from a pitch to another

Is played

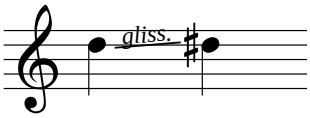
a:

1. by filling up the interval mainly with semi-tones, or bigger intervals, depending on tempo and the distance between the first and last notes of the glissando
2. possibly by filling up the interval with quarter-tones



b:

1. with embouchure, in combination with turning the flute inwards or outwards
2. on flutes with ring keys; by gradually opening or closing the rings
3. on flutes with pads in bad condition; by closing or opening the keys slowly
4. by bending the spindle on which the keys are mounted, as to make the keys not cover perfectly



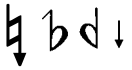
2. Micro-intervals Intervals less than a semi-tone, i.e. less than 100 cents.

a. quarter-tones (50 cents), played

1. on flutes without ring keys, primarily with new fingerings, on flutes with ring keys with new fingerings or by using holes only partially open (the new fingerings will also change tone-colour)
2. by changing the embouchure and turning the flute in- or outwards (not very precise, but does not change the tone-colour as much as 1.)

Written:

 1/4 note up

 1/4 note down

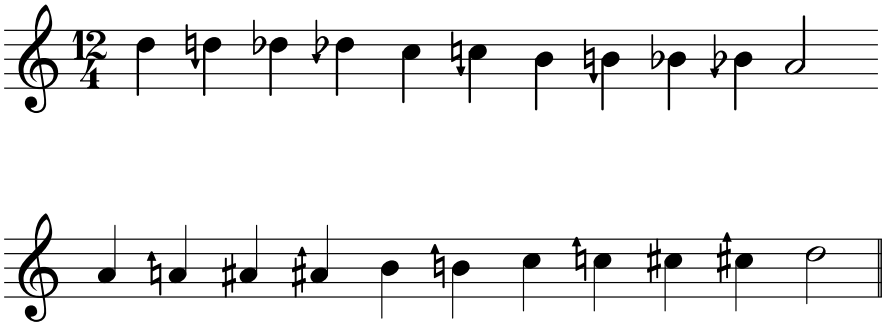
 3/4 notes up (sharpened semi-tone+sharpened quarter-tone)

 sharpened one semi-tone+flattened one quarter-tone

 flattened one semi-tone+sharpened one quarter-tone

 3/4 tones down (flattened one semi-tone+flattened one quarter-tone)

A scale with quarter-tones downwards - and upwards - may be written like this:



b. 1/5-tones, 1/8-tones etc.

Played with new fingerings and/or changing of embouchure. The notation often differs from one piece to another.

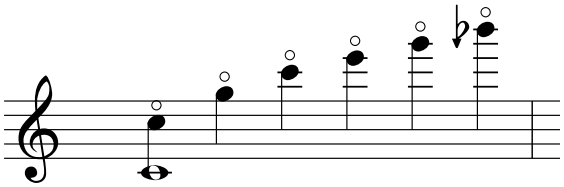
c. micro-tone trills

Played with fingerings which are mostly printed in the piece. Compare with tone-colour trills which may also be micro-tone trills.

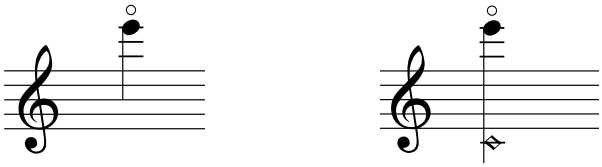
B. Changes of timbre

1. Harmonics

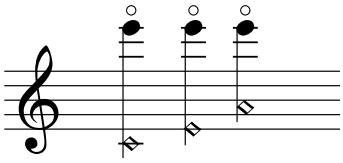
Harmonics from c1:



Notated as it sounds, or together with the fundamental note from which the harmonic is produced:



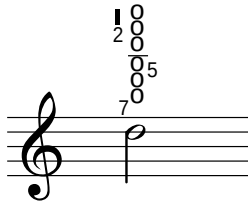
It is possible to play the same harmonic from different fundamental notes:



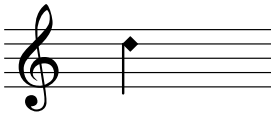
2. Alternative fingerings

Alternative fingerings will change tone-colour. You may also use a micro-tone fingering, and then play at correct pitch, so as to create a new tone-colour. Named “bisbigliando” or “Hollow tone”.

Most often written with fingering:

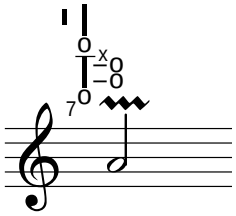


but occasionally:



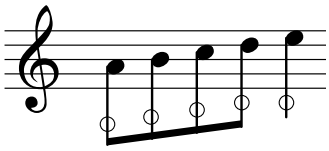
3. Tone-colour trills

Rapid change between the normal fingering and a fingering changing the tone-colour. These trills most often also change the pitch.
Written with fingering:



4. With voice

By singing the same tone as played, the tone-colour will change. The effect is most obvious when you sing in the same octave as you play.
May be written:



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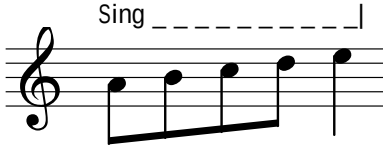
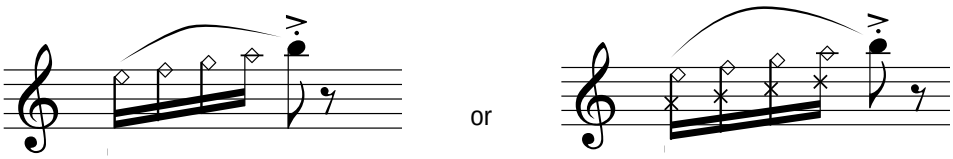


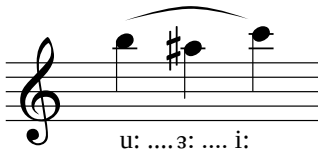
5. Changes in the "tone developer"

Changings of embouchure, form of the oral cavity, velocity and pressure of the air stream etc. may also change the tone-colour.

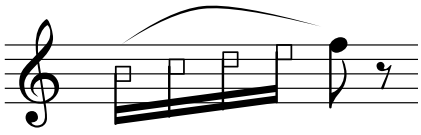
a. different embouchures, from maximum tone quality to only air. Also named "Aeolian sounds" or "Soffiata" (it.), "Souffle" (fr). Most often written:



b. different vowels in the oral cavity. Written phonetically, for instance:



c. velocity, force and turbulence of the air stream. Increased air pressure, as when using the very last air in an exhalation, will create a more hollow tone-colour. You may also create this effect by "disturbing" the air stream with the tongue. May be written:

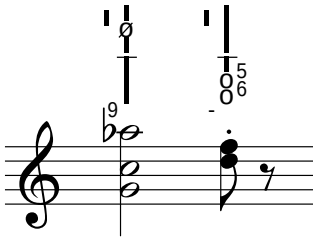


C. Polyphony

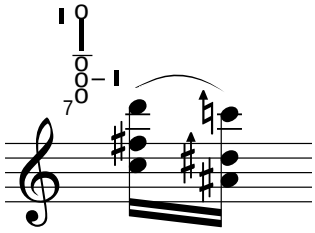
1. Multiphonics

Two or more tones sounding at the same time (chord).

Performed (most often) with alternative fingering, combinated with changing of the embouchure, increased or reduced air pressure and possibly turbulence of the air stream. Most often written with chord and fingering:



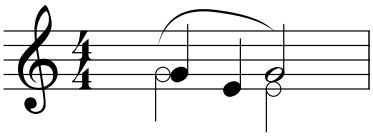
It is also possible to trill in or between multiphonics:

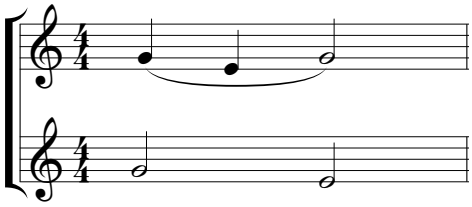


2. With voice

Singing a different pitch from the one played;
a. singing a descant, or
b. singing different notes and playing a descant, or
c. the two parts in counterpoint

Written in one or two systems:





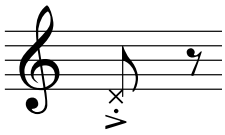
D. Attack and influence on the air stream

1. Key percussion

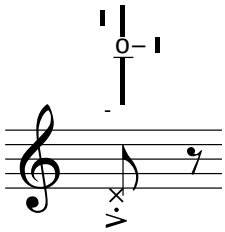
Closing a key with force, without air stream, will produce a note as well as a mechanical noise. The effect is called “keyclick”.

There are two kind of keyclicks - with open mouthpiece position, and with closed. You may combine keyclicks with normally produced tones, and even use the “closed” keys on the flute (g#, d#).

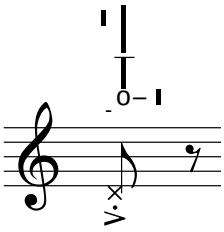
a. Keyclick with open mouthpiece, written



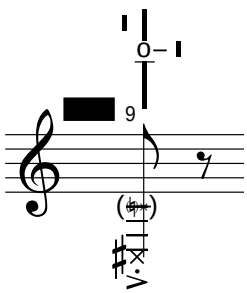
It is not necessary to hit the key of the desired pitch. In fact the keyclick will sound louder if you hit a key “above” (closer to the mouthpiece) the normal hole.
For instance, the fingering



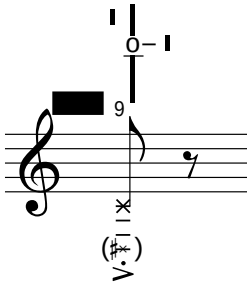
will create a louder keyclick than



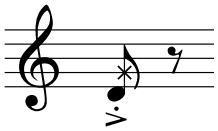
b. Keyclick with closed mouthpiece. By closing the mouthpiece with the tongue, it will be possible to play keyclicks which will sound below the lowest notes of the instrument. With a closed mouthpiece the keyclicks sound a major seventh down. A closed mouthpiece with tongue is notated ■ (not to be mixed up with ▭, indicating a mouthpiece blocked by the lips or the mouth).
Keyclick with closed mouthpiece is most often notated with fingering and sounding pitch, as well as the tone which is fingered:



or



c. Keyclick and normally produced note, written



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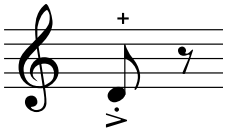
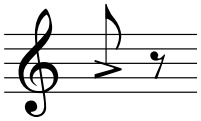
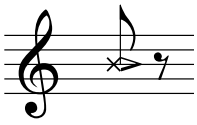


2. Slap tongue

Slap tongue is a flute technique which sounds very close to the pizzicato of string instruments. It is produced by puffing short tones with the tongue, without any air pressure from the lungs.
a. normal slap tongue, written

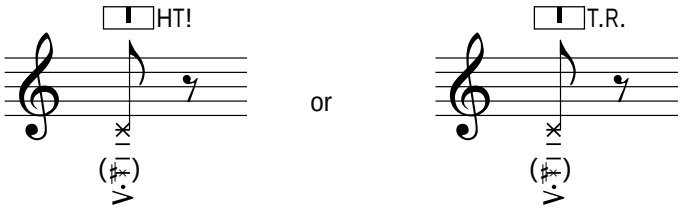


b. combined with keycklick:



3. Tongue ram

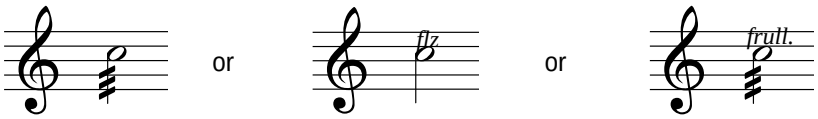
Tongue ram is created by closing the mouthpiece with the whole mouth, and then making a big and very rapid movement with the tongue, against the teeth.
The easiest way is to say “HOT!” or “HT!”. The tone which is produced will sound a major seventh below the fingered one.



4. Flatterzunge

With the tongue flitting like a flag in the oral cavity, an intermittent stream of air is created, sounding like the tremolo of a bowed instrument. It is important that the tongue is very loose during the fluttertonguing.

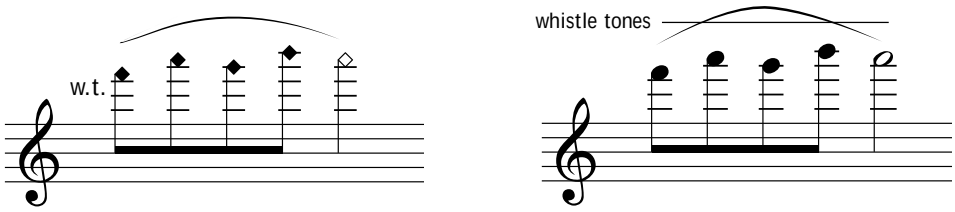
Written



E. New technique of tone development

1. Whistle tones

With an open but at the same time controlled embouchure and a very low air pressure it is possible to play Whistle tones. Sometimes you obtain this sound when you decrease the air pressure playing a low note on the flute. Whistle notes are easiest to control in the third octave, where you use the original fingerings.
Many different notations are used, for instance:



2. Trumpet sound

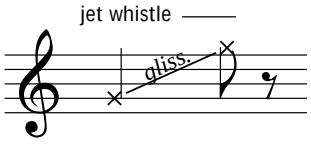
With compressed lips, as playing a brass instrument, it is possible to play

a. in the hole of the mouthpiece
b. in the flute, removing the mouthpiece

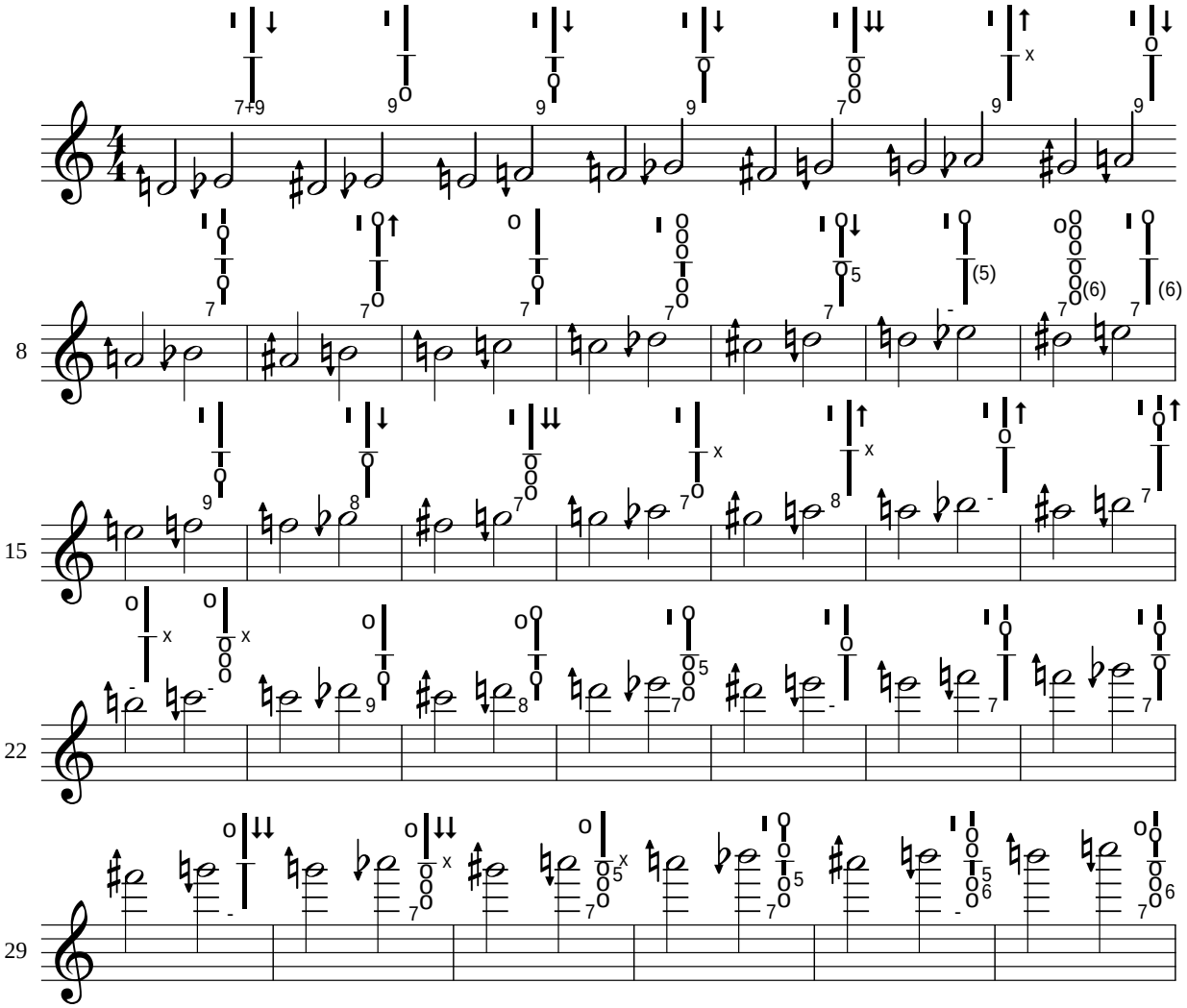
Written T

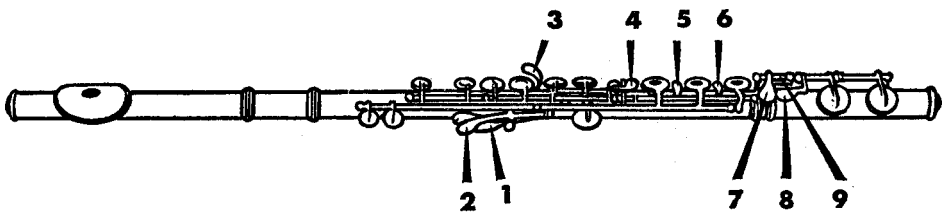
3.Strong air stream

By closing the whole mouthpiece with the mouth and blowing with great force directly and without tone into the instrument, you will obtain a sound similar to “aeolian sounds”, but louder and with a more whistling character.
The sound is also called “Jet Whistle”, according to the work for flute and violoncello by Villa-Lobos. The effect may also be combined with an inhalation through the flute. It is often used together with scale movements, and is then written:



F. Appendix:
Fingering tablature for quarter-tones, for flutes without ring keys





Two cds with Mats Möller, using the extended techniques

SOLO PER FLAUTO (SFZ 2001, 2000) 154' (2 cds)

An exposé through the world of 20th century music for flute alone, focusing on Swedish music - from Debussy (Syrinx, 1913) to Deák (Fuvola, 2000). Cantilenas and subtleness, as well as virtuosity and new techniques for the instrument, developed from the 70's and on.

Mats Möller plays music by Debussy, Varèse, Jolivet, Bäck, Scelsi, Berio, Rosenberg, Ferneyhough, Takemitsu, Tiensuu, Morthenson, Grims-land, Nilsson, Welin, Eliasson, Sagvik, Karkoff, Maros, Möller and Deák.

More information at www.sforzando.se/2001

DUO 2XM (SFZ 1007, 2003) 64'08

Duo 2xm presents some of the most famous works for flute and guitar written during the last decades, together with two new Swedish compositions.

– In our time all music styles are present at the same time, and this has a great influence also on Western art music, says the young guitarist and composer Johannes Möller.

On this cd you will find Indian raga together with Russian avant-garde (Shankar and Denisov), music from the djungles of Puerto Rico and beautiful melodies inspired by Erik Satie as well as by popular music (Sierra and Agdur).

More information at www.sforzando.se/1007

The cds are distributed by CDA, Sweden (www.cda.se) and are also sold at www.swedishmusicshop.com.

Contact: office@sfzrecords.com