

B-flat soprano (E-flat sopranino and A soprano) multiphonics—continued.

Musical notation for B-flat soprano multiphonics, showing eight measures with various articulations (2, 3, 4) and fingerings. Below the staff are eight diagrams showing the corresponding fingerings for the notes: E, G#, E, E, F, G#, E, and E.

Bass clarinet multiphonics.

Note: Category 4 is not applicable to bass clarinet.

Category 1 (all dynamics, flexible).

Musical notation for Category 1 bass clarinet multiphonics, showing eight measures with various articulations (8v, 8v, 8v, 8v, 8v, 8v, 8v, 8v). Below the staff are eight diagrams showing the corresponding fingerings for the notes: F, F#, E, F, G#, E, Bb tr, and F#.

Category 2 (soft attacks, crescendo to mf-f, more resistant).

Musical notation for Category 2 bass clarinet multiphonics, showing eight measures with various articulations (8v, 8v, 8v, 8v, 8v, 8v, 8v, 8v). Below the staff are eight diagrams showing the corresponding fingerings for the notes: E, E, C#, Bb tr, Bb tr, G#, G#, and G#.

Musical notation for Category 3 bass clarinet multiphonics, showing eight measures with various articulations (8v, 8v, 8v, 8v, 8v, 8v, 8v, 8v). Below the staff are eight diagrams showing the corresponding fingerings for the notes: F, G#, F#, F#, G#, F#, G#, and G# or E.

Bass clarinet multiphonics—continued.

*Category 3* (quiet, little or no crescendo).

Fingering diagrams for Category 3:

- 1. R, F#4, E#4, G#4
- 2. E#4
- 3. R, E#4
- 4. F#4
- 5. G#4
- 6. G#4
- 7. G#4
- 8. G#4
- 9. R, E#4

*Category 5* (dyads, soft).

Fingering diagrams for Category 5:

- 1. R, E#4
- 2. R, F#4, E#4
- 3. F#4
- 4. R
- 5. R
- 6. R, E#4
- 7. R, G#4
- 8. R
- 9. R, G#4

*Category 6* (variable in upper partials, shrill, two or more partials possible).

Fingering diagrams for Category 6:

- 1. B#4 tr
- 2. R
- 3. R
- 4. R
- 5. R
- 6. R, C#4
- 7. R, F
- 8. F#4
- 9. F

partials, shrill, two or more partials possible).

Fingering diagrams for Category 6:

- 1. F
- 2. F#4
- 3. C#4
- 4. R, F#4, E#4
- 5. G#4
- 6. F#4
- 7. R, F#4
- 8. R, G#4
- 9. R, G#4

The eighth measure of the exercise is shown with musical notation and fingering. The notation is a half note G#4 on a treble clef staff. Above the staff, there are seven '8v' markings, each with a bracket indicating a group of notes. Below the staff, there are seven fingering diagrams, each with a letter 'R' and a set of five circles representing the fingers. The fingering diagrams are: 1. Bb tr (left hand), 2. Bb tr (left hand), 3. G# (right hand), 4. F# (left hand), 5. G# (right hand), 6. C# (right hand), 7. C# (right hand).

Multiphonic sequences can work well as long as sufficient time is provided to allow the sonorities to sound. Extremely fast changes should be considered as essentially nonidiomatic. The Plain example (3.10) mixes types 1, 2, and 4 from the above categories.

There are literally hundreds of possibilities for trills, tremolos, and key vibratos with multiphonic sonorities. The Heininen example (3.11) illustrates a quarter tone trill which begins with the fundamental alone, moves to the full sonority, drops out the fundamental, and ends as it began. The last event is a normally fin-

### Multiple Sonorities

LIGHT c.15" →

*sf(pp)*

(change every 2" or 3")