

Multiphonics for Moder German-System Bassoon Leslie Ross / August 2011

Classified by some audible internal frequencies

Tablature of multiphonic fingerings are notated in the following manner:

The large note ○ designates the base fingering (to be read in bass clef) which is used as foundation.

The small shaded ● note represents a tone-hole or key that is to be added to the base fingering.

The small empty ○ note represents a tone-hole or key that is to be removed from the base fingering.

Register and wing keys are noted by their key name above the staff (c#, a, c & d as are trill keys (c#^{tr} and Eb^{tr}))

Many of these multiphonics are closely related to tenor register notes but first register fingerings are maintained as reference in order to avoid any confusion caused by the plethora of upper register alternate fingerings.

In this fingering for example:

Low F is fingered; low C# added while E tone-hole and G key are removed.



This musical score is written for a bass instrument and consists of ten systems of notation. Each system typically includes a single bass staff with notes and accidentals, and a second staff with chord symbols. The notation is complex, featuring many accidentals (sharps, flats, naturals) and a wide variety of chord names, including triads, dyads, and extended chords (e.g., 1E1, 1E3, 1E4, 1E5, 1E8, 1E9, 1E10, 1E11, 1E12, 1E13, 1E14, 1E15, 1E16, 1E17, 1E18, 1E19, 1E20, 1E21, 1E22, 1E23, 1E24, 1E25, 1E26, 1E27, 1E28, 1E29, 1E30, 1E31, 1E32, 1E33, 1E34, 1E35, 1E36, 1E37, 1E38, 1E39, 1E40, 1E41, 1E42, 1E43, 1E44, 1E45, 1E46, 1E47, 1E48, 1E49, 1E50, 1E51, 1E52, 1E53, 1E54, 1E55, 1E56, 1E57, 1E58, 1E59, 1E60, 1E61, 1E62, 1E63, 1E64, 1E65, 1E66, 1E67, 1E68, 1E69, 1E70, 1E71, 1E72, 1E73, 1E74, 1E75, 1E76, 1E77, 1E78, 1E79, 1E80, 1E81, 1E82, 1E83, 1E84, 1E85, 1E86, 1E87, 1E88, 1E89, 1E90, 1E91, 1E92, 1E93, 1E94, 1E95, 1E96, 1E97, 1E98, 1E99, 1E100). The score also includes various articulation marks and dynamic markings. The key signature is primarily C major, with some sections in E minor (one flat) and F major (one sharp). The notation is dense and detailed, providing a comprehensive guide for the performer.

Sheet music for bass guitar, featuring a series of chords and melodic lines across multiple systems. The music is written in a key signature of one flat (B-flat major / D minor) and includes various chord voicings and melodic fragments.

System 1:

- Chords: 1Bb2, 1Bb6, 1Bb12, 1C#6, 1D1, Eb1, Eb6, Eb7, 1E1, 1E2, F6, F18, F#6, F#7, G2, G7, G8, Ab2, Ab4, Ab8, Ab12, Ab16
- Melody: D, c#, c#, a¹, a, c
- Accompanying notes: c#, c#, c, Ebtr, c, c+d, Ebtr, c+d, c+d, c+d

System 2:

- Chords: Ab25, Ab27, A14, B4, B8, C1, C8, D1, D9, D11, D12, D17, E5, F11, F15, F20, F#8, F#9a, G15, G16, Ab30, C3
- Melody: c#tr, (e1), c#, a¹, c#, a, c#, c#
- Accompanying notes: c#tr, (e1), c#, c#tr, c#

System 3:

- Chords: 1Bb5, 1Bb6, 1B6, 1B9, 1C6, 1C7, 1C#4, 1D3, Eb3, Eb5, Eb9, F9, F13, F#2, F#3, G9, G14, Ab12, Ab15, Ab19, Ab20, Ab22, Ab26
- Melody: a, c#, a, c#, c, c+d, c+d, c+d
- Accompanying notes: a, c#, a, c#, c, c+d, c+d, c+d

System 4:

- Chords: Ab29, A1, A4, A6, A13, Bb2, C4, C10, D1, E3, E4, E5, Eb8, 1E4, F11, G2, G17, G20, Ab5, Ab28, A3, A7, A15, Bb6, Bb8, C5, E7
- Melody: c#, c#, c#tr, c#, a, c#, c, a, c#, c#, c#
- Accompanying notes: c#, c#, c#tr, c#, a, c#, c, a, c#, c#, c#

System 5:

- Chords: 1Bb2, 1C1, 1C7, 1C#2, Eb10, Eb13, 1E2, F3, F4, F12, F18, F20, F#9, G3, Ab7, Ab13, Ab17, Ab23, Ab27, A9, A14
- Melody: a, c, c+d, c+d, c+d, c+d, c#, a, a, c, c+d
- Accompanying notes: a, c, c+d, c+d, c+d, c+d, c#, a, a, c, c+d

System 6:

- Chords: B7, C11, D3, D14, E4, E6, E8, 1D4, 1D7, F13, F15, F#1, G15, G23, Ab6, Ab25, Bb1, C12, D5, E3
- Melody: c#tr, a, c#, Ebtr, c#, a, c#
- Accompanying notes: c#tr, a, c#, Ebtr, c#, a, c#

System 7:

- Chords: 1B9, 1C2, 1C7, 1C#2, 1D1, 1D3, Eb1, Eb9, 1E4, F6, F7, F18, F#4, F#6, F#7, G11, G12, G16, G18, G20, Ab1, Ab14
- Melody: c, c#, c#, a, a, a, Ebtr, Ebtr, c+d
- Accompanying notes: c, c#, c#, a, a, a, Ebtr, Ebtr, c+d

System 8:

- Chords: Ab16, Ab20, Ab27, A8, A12, Bb3, Bb7, Bb8, C2, C5, C9, C13, D2, D6, D7, D17 (e1)
- Melody: c#tr, c#, a, c#, Ebtr, c#
- Accompanying notes: c#tr, c#, a, c#, Ebtr, c#

System 9:

- Chords: 1Bb3, 1Bb10, 1B4, 1C8, Eb7, 1E1, F12, F#5, F#10, F#11, G6, G14, Ab21, B3, B6, C1, C6, D10, c#
- Melody: c#, c+d, c, c#
- Accompanying notes: c#, c+d, c, c#

System 10:

- Chords: 1Bb5, 1Bb9, 1B5, 1B7, 1C3, 1D2, Eb4, Eb5, Eb6, Eb10, F1, F8, F20, F#2, F#3, G2, G5, G7, G10, G13, Ab2, Ab9
- Melody: Ab10, Ab11, Ab25, Ab28, Ab31, A10, A11, Bb6, B2, E2, E7, 1E6, 1E7, A12, Bb4, B8
- Accompanying notes: Ab10, Ab11, Ab25, Ab28, Ab31, A10, A11, Bb6, B2, E2, E7, 1E6, 1E7, A12, Bb4, B8

1C5 1D3 1D5 Eb2 Eb14 1E2 1E3 1E5 F2 F5 F16 F18 F#1 G1 G4 G8 Ab5 Ab8 A1 A8 A13 Bb3

c#tr c# Ebtr a c#

c+d c+d c# c

B4 E3 E5 E8 1B1 1Bb8 1Bb13 1C#3 1C#5 1D6 1E8 F3 F4 F13 Bb8 D13 E7

c# a c# c# c

F#6 G3 G25 G26 Ab15 Ab21 Ab22 Ab30 A3 A10 B5 D5

a c# c# c

1C4 1C#5 F#4 F#7 G12 Ab6 Ab7 Ab17 Ab26 A13 Bb1 Bb7 D1

a a c#tr c# a c# c# a c# a c# a Ebtr a c#

1Bb6 1Bb10 Eb7 Eb12 F6 F#10 G23 G24 Ab1 Ab3 Ab29 Ab33 A4 A11 A12 Bb5 Bb8 C3 C9 C10 C12 D9 D15

a' a c#tr a a c# a c# c c Ebtr c

1Bb12 1Bb11 1B2 1B6 1C#1 F7 F17 F#5 G9 G13 G22 Ab2 Ab4 Ab11 Ab12 Ab13 Bb3 Bb6 B7 C8 C13 D2 D3 D7

c Ebtr c c+d a c# a c# a c# c+d

D8 D10 1B3 1C4 F14 Ab14 Ab23 C4 E2

c# c# c c# a c# a

1Bb7 1Bb9 Eb6 Eb10 Eb11 1E1 1E6 1E8 F4 F8 F#7 G2 Ab5 Ab16 Ab19 A1 A6 Bb4 Bb7 B3 B5 B8 C2

a c+d c+d c+d c+d c# a c# a Ebtr c c+d

C11 D11 E3 E4 E8 1B5 1C1 Eb13 G5 G6 G7 A5 A15 C7 C9 D6 E5

c# a c# Ebtr c+d c+d c+d

1C4 Eb4 Eb5 1E4 F1 F5 G8 Ab6 Ab8 Ab9 Ab10 Ab30 A3 Bb1 Bb5 Bb6 B4 D12 D14 D17 (e1)

a' a c#tr a

1C2 1C#3 1D2 Eb7 Eb14 G9 G12 G22 Ab12 Ab29 B1 B6

This musical score is a complex arrangement for a double bass, consisting of multiple systems of staves. Each system typically includes a melodic line with notes and rests, and a harmonic line with chords and bass notes. The notation is dense, featuring a wide variety of chord symbols such as 1B4, 1C6, 1C#4, 1C#6, 1C#7, 1D1, 1D5, Eb2, 1E3, F6, F7, F10, F13, F17, F#1, F#7, G4, G10, Ab14, Ab15, Ab17, Ab26, A7, A9, C1, D4, D5, D11, D13, 1Bb3, 1Bb8, 1B8, F#5, Ab13, Bb2, B7, 1Bb9, 1Bb4, 1C3, F4, F8, F9, F10, F14, G1, G2, G3, G21, Ab32, B5, D17 (e1), E3, E6, Eb1, Eb3, Eb10, G5, A7, Bb5, C2, D4, 1C5, Eb4, Eb6, 1E1, 1E7, F5, F9, F#7, G7, G9, G12, G25, Ab2, Ab3, Ab4, Ab8, Ab12, Ab13, Ab14, Ab16, Ab17, Ab33, A14, B3, C8, C10, C11, D9, D11, Ebtr, c, c+d, Ab33, A14, B3, C8, C10, C11, D9, D11, F16, F18, F#9, G6, G13, G15, G16, G22, G23, Ab30, Bb4, Bb6, C3, C9, C12C13, 1Bb2, 1Bb6, 1D6, Eb4, Eb5, Eb9, 1E2, 1E5, F1, F11, F17, F20, F#8, G10, G11, Ab5, 1Bb9, 1B7, Ab15, Ab19, Ab20, Ab26, A5, A6, A15, B2, C4, D4, D17 (e1), E3, E4, E5, 1B9, 1Bb10, 1D7, Eb2, Eb14, 1E3, F4, F13, F15, F18, F#1, F#2, F#3, F#6, F#7, G15, G16, G17, G20, G24, Ab9, Ab10, Ab11, Ab28, A4, C5, D1, D5, D15, 1Bb5, 1Bb2, 1C1, 1C4, 1C7, 1C#1, 1C#5, 1D3, 1D5, Eb6, Eb8, Eb9, 1E4, F2, F3, G2, G4, G14, Ab7, Ab17, A3, Bb2, Bb7, B7, C1, C6, D2, D3, D13, D14, E6, E8, 1C5, F12, G1, G3, G20, G22, G26, Ab6, Ab8, Ab13, Ab20, Bb1, B1, D11.

This musical score is a complex arrangement for guitar, consisting of multiple systems of staves. Each system typically includes a bass staff and a treble staff, with various musical notations and chord diagrams. The notation includes notes, rests, and accidentals (sharps, flats, naturals, and double sharps). Above the staves, there are numerous chord names and symbols, such as 1C2, Eb3, 1E8, F5, F6, F7, F#4, F#5, F#9, F#11, G9, G17, Ab14, Ab16, Ab22, Ab28, C10, D6, D12, D17 (e1), Ebtr, C, c+d, c+d, c, c#tr, a, c#, c#, c#, Ebtr, a, c#, a, c#, c#, c, c+d, c, c#tr, c#, c, c+d, C8, D9, D10, E2, E7, 1Bb4, 1D3, F8, F10, G5, A8, A12, D5, E3, c#, c#, a, c#, c#, c#, 1C3, 1C#3, 1D5, Eb2, Eb4, Eb14, 1E2, 1E3, 1E5, 1E6, 1E8, G25, Ab8, Ab10, Ab19, Ab23, A1, A5, A6, A9, A10, Bb3, B4, a, c# c+d c+d c c+d, C9, E5, E6, E7, E8, 1B1, 1B8, 1C6, 1C#7, Eb12, F2, F3, F5, G8, Ab30, A11, A12, A13, A15, Bb4, B6, C12, E4, a, c# c# c c a, 1C5, 1C#4, 1D6, Eb1, 1E1, 1E4, 1E7, F#4, G12, Ab6, Ab15, Ab16, Ab17, Bb3, Bb7, B2, D1, a, c#tr, a, c# c# c#, F9, F#11, G24, Ab7, Ab33, A4, Bb1, Bb2, Bb4, Bb8, B1, B5, B7, B8, C3, D15, c# c# c#, 1Bb7, 1B4, 1C4, 1C#1, 1C#3, 1C#7, 1D1, 1D2, Eb5, 1E2, 1E3, F1, F4, F6, F7, F17, F19, F#1, F#5, F#10, G9, a, a, c, c, Ebtr, Ebtr, Ab4, Ab9, Ab12, A14, Bb6, Bb7, B4, C4, C13, D2, D3, D7, D10, a, c# c#, a, c#, 1Bb9, 1D4, Eb2, Eb13, Eb14, F14, G14, B6, C7, c# c#, 1Bb8, 1B8, 1C4, 1C#2, 1D5, Eb1, 1E2, 1E5, F2, F7, F11, F15, F18, F20, F#2, F#3, F#7, F#8, G4, G6, G11.

(Cont...)

Staff 1: *a* *c#* *a* *c#* *a* *c* *Ebtr* *c* *c+d* *c+d* *c+d* *c+d*

Chord labels: G15 G16 G26 Ab13 Ab19 Ab31 A5 A6 Bb7 B3 C2 C10 C11 D8 D10 D13 E3 E4 E5 E8

Staff 2: *c#*

Chord labels: 1Bb2 1B9 1C3 1D6 1D7 Eb6 Eb7 Eb9 Eb10 F8 F#6 G1 G3 G5 G13 Ab3 Ab8 Ab28 A1 C1

Staff 3: *c#* *c#* *c#*

Chord labels: 1B7 1Bb10 1Bb11 1C5 1C7 Eb3 Eb4 Ab2 Eb5 Eb8 Eb11 1E4 1E7 F16 F#4 F#9 F#10 F#11 G2 G7 G8 G10 G14

Staff 4: *c#* *c#* *a* *c#* *Ebtr* *c* *c+d*

Chord labels: G20 G25 Ab1 Ab4 Ab9 Ab10 Ab20 A3 Bb5 D10 D14

Staff 5: *c#tr* *a* *c#* *a* *c#* *c#* *a* *c#* *a* *c#* *c#* *a* *c#* *a* *a* *a* *a*

Chord labels: 1Bb12 1C8 1C#3 1D3 1E8 F14 G12 G17 Ab6 Ab13 Ab21 Ab24 Ab26 Ab27 Ab28 Ab31 Ab33 C5 C6 C7 C9 C10 C12

Staff 6: *c#* *c#* *a* *c#tr* *a* *c#*

Chord labels: 1Bb4 1B2 1B6 1C#5 1D5 Eb1 1E1 1E2 1E3 1E6 F2 F3 F4 F6 F#5 G4 G9 G24 Ab11 Ab12 Ab14

Staff 7: *a* *c#* *c* *c#* *a* *c#* *c#* *a* *c#* *a* *c#* *a* *c#* *a* *a* *a* *a* *a* *c* *Ebtr* *Ebtr* *c* *c+d*

Chord labels: Ab15 Ab16 Ab19 Ab25 Ab26 A4 A7 A9 A11 Bb5 B2 B3 C1 C2 C3 C4 C8 C11 C13 D1 D9 D10 D13 E3

Staff 8: *c#tr* *c#* *a* *c#tr* *a* *c*

Chord labels: 1Bb2 1C2 1Bb13 1C#1 1C#6 F10 F12 F17 G2 G10 G21 G22 G23 Ab17 Ab21 Ab22 B4

Staff 9: *a* *c#* *c#* *c#* *c#* *c#* *c* *c* *c*

Chord labels: 1D6 1E1 F1 F5 F8 F#4 F#11 G1 G3 G5 Ab5 Ab23 Ab29 Ab30 A1 A5 A7 A8 A14 A15 D2 D3 D8

Staff 10: *Ebtr* *a* *a* *c#* *c#* *c#* *c* *Ebtr* *Ebtr* *c* *c+d*

Chord labels: 1B1 1B8 1C1 1C3 1C4 1C5 1C6 1C#3 1D2 1D4 Eb1 Eb4 1E4 F9 F#1 G18 Ab8 Ab13 A3 Bb4 Bb5 D4 D6 D7 D14

Staff 11: *c#* *a* *c#* *c#* *c#*

Chord labels: 1Bb8 1B3 1D1 1D5 Eb2 Eb7 1E2 1E5 F2 F5 F16 F#3 F#6 G4 G6 G7 G8 G12 G15 G25 Ab6

Staff 12: *a* *c#* *c* *a* *c#* *a* *c#* *a* *c* *c* *Ebtr* *Ebtr* *c* *c+d* *Ebtr* *a* *c#*

Chord labels: Ab12 Ab7 Ab14 Ab16 A6 A10 A11 A12 A13 Bb1 Bb2 Bb3 B2 B3 B4 B7 C2 C10 C11 D4 D5 D9 D10 D11 D12 D15

(Cont...) c+d c+d c+d c+d c+d

D17 (e1) E2 E3 E4 E6 1B5 1B8 1C#7 Eb6 F6 F11 G13 G26 B1 C3 E7

1Bb9 1C#2 1C#5 1C#6 1D2 1D4 Eb3 Eb5 Eb12 F7 F#5 F#6 F#8 G2 G11 G14 G15 G16 Ab5 Ab15 Ab19 A1

A4 A5 A6 Bb3 Bb6 Bb7 Bb8 B3 B8 D1 E8 1Bb5 1B9 1B4 1C#4 1D7 F4 F15 F18 F20 F#2 F#3

G10 Ab1 Ab4 Ab7 Ab29 Bb4 B4 B6 E4 E5 Eb4 Eb8 Eb9 1E4 F3 F8 F10 F17 F19 F#6 F#10 G1 G4 G5 G6 G7 G8 G11 G13

G20 Ab2 Ab3 Ab6 Ab11 Ab17 Ab20 Ab22 Ab28 Ab31 A3 B2 C1 C5 C6 D2 D3 D13 D14 1Bb10 1B7 F1 F9 F12 G2 Ab27 A7 A9 C7 D5 D6

Eb1 Eb11 Eb13 Eb14 1E1 1E2 1E3 1E5 1E7 F2 F5 F16 F#1 F#4 F#5 F#11 G4 G12 G13 Ab5 Ab10 Ab11

Ab19 Ab21 Ab25 Ab30 Ab31 A5 B7 C6 D7 E2 1C2 1Bb3 1D3 F6 F7 Ab3 Ab9 Ab24 A14 A15 Bb1 Bb2

1Bb2 1Bb12 1B8 1C#6 1D1 1D2 1E1 F14 G24 Ab21 A8 D1 D15 G18 Ab2 Ab8 Ab23 Ab26 D3

Eb2 Eb4 F11 F#3 G8 G11 G15 G21 Ab4 Ab23 Ab24 A9 A10 A11 A13 Bb4 D7

1C#1 Eb9 F10 F15 G1 G9 G12 G23 Ab13 Ab14 Ab16 Ab33 A5 A12 Bb5 D9 D12