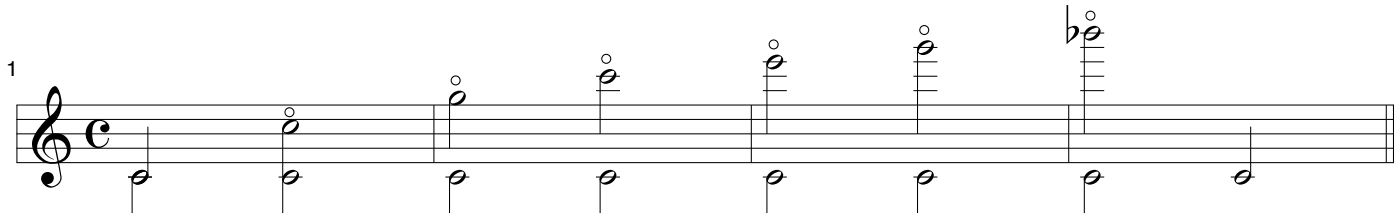


HARMONIC STUDY #1

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Employing harmonic studies offer one of the finest methods of developing true flexibility and embouchure control. Each fundamental note has built into it a series of higher notes or upper partials which are a part of that lower note. The timbre (tone quality) of every musical sound is shaped by the characteristics of the "harmonic series". On wind instruments these higher notes can be obtained by positioning the lips in a position to play the higher notes. The bugle is the instrument that most obviously uses this harmonic series to achieve its range of notes. String instruments obtain the "harmonic" sound by lightly touching certain split points on each string. The french horn is so difficult to play because all most of its notes are based on the upper partials of the harmonic series. On flutes and stringed instruments the harmonic sound is very ethereal and not particularly strong. Their illusive quality adds a wonderful color to the palette of all instruments.

The first four measures detail the harmonic series. Try to play a good strong fundamental note and then with slight forward lip movement and strong abdominal support, play each of the partials. (The 5th and 6th partials are VERY difficult on all flutes). Playing through the 4th partial is enough to give significant results.



In this exercise the small circle is the "harmonic" indication and Reg. indicates the normal fingering. Try to achieve two goals: (1) Make a confident approach to each slurred harmonic, hitting the note without "fluffing" it. (2) Strive to match the pitch between the harmonic and regular fingerings. This task is quite difficult and one must anticipate each note's particular flat or sharp tendencies. NOTE: The second partial (the note an octave and a fifth above the fundamental) is extremely hard to get. The "pocket" for that note is very small and requires a perfectly aimed airstream AND your lip position feels very forward and not at all comfortable or normal. I recommend creating a separate exercise by isolating the third measure in each key group. One of the main fringe benefits of this practice is a big improvement in playing soft and tapering notes well, especially in the high register.

5 $\text{♩} = 72-100$ *mf* Reg. , Reg. ,

9 Reg. , Reg. ,

13 Reg. , Reg. ,

17 Reg. , Reg. ,

21 Reg. , Reg. ,

25

Reg.

29

Reg.

33

Reg.

37

Reg.

41

Reg.

45

Reg.

49

Reg.

53

Reg.

57

Reg.

61

Reg.

65

Reg.

-2-

[illegible]

89 "TAPS"

97 "REVILLE"

101

The image displays three staves of musical notation. The first staff, labeled '89 "TAPS"', shows a melody in treble clef with a key signature of one flat (B-flat). The melody consists of eighth and sixteenth notes, with some notes beamed together. The second staff, labeled '97 "REVILLE"', continues the melody with similar rhythmic patterns. The third staff, labeled '101', shows the continuation of the 'REVILLE' section. The notation includes various note values, rests, and dynamic markings such as 'p' (piano) and 'f' (forte). The overall style is that of a formal musical score.