

THE MICROTONAL FLUGELHORN

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Introduction

The modern valved flugelhorn is descended from the hunting horn, keyed bugle and keyed flugelhorn. They exist with piston valves or, in Germany and Austria, with rotary valves.

The flugelhorn is the same length as the Bb trumpet, but has a conical rather than cylindrical bore. It has a much larger bell and a funnel-shaped mouthpiece. This gives the instrument its warm, mellow sound.

Whilst there are models with four valves (for instance those made by [Getzen](#)), most have three valves. The flugelhorn has the same alternative fingerings as the trumpet¹, although only a trigger on the third valve; that means that the trumpet's quarter and eighth-tone fingerings requiring the extension of the first valve slide (1VS) are not possible. Also like three valve trumpets, we have difficulties producing microtones on open notes and those using just the second valve.

The flugelhorn's funnel-shaped mouthpiece and conical bore also allow for more ease in lipping and changing the shape of the mouth to alter pitch. This makes it an ideal microtonal instrument provided that the ears are confident about the target pitch. This was how I initially performed the polymicrotonal piece [SOFT](#) by Donald Boustead, which uses a microtonal scale based on nine equal divisions of the 8:7 ratio (c.231 cents, with each step c.26 cents).

Specially adapted (or built) Instruments

As with the trumpet, in order to play microtones more accurately and faster, the flugelhorn requires a fourth valve. There are a number of players with four valve quarter-tone flugelhorns. Markus Stockhausen has a converted four valve quarter-tone Besson flugelhorn (in which the quarter-tone piston valve is operated by the right hand). This was the instrument Karlheinz Stockhausen wrote his 'Pieta' (from the LICHT Opera cycle) for. There is more information on this instrument in our book 'The Microtonal Trumpet'².

The Dutch firm, Van Laar looked at Markus Stockhausen's instrument when they began planning their own [quarter-tone flugelhorn](#). Marco Blaauw has such an instrument to perform Pieta on.

The Marcinkiewicz firm, also make a [quarter-tone flugelhorn](#).

¹ see 3-valve trumpet fingering chart in [The Microtonal Trumpet](#) FREE resources folder

² 'A Short History of the Microtonal Trumpet', p.36 of [The Microtonal Trumpet](#) by Stephen Altoft and Donald Boustead (2017)

Altoft prototype microtonal flugelhorn

My prototype microtonal flugelhorn, below, is a student model Jupiter converted ingeniously in 2019 by Sigmar Fischer of Musik Gillhaus, Freiburg, Germany.



View of right side of microtonal flugelhorn. Note the triggers on the first and third valve slides, and the fourth valve lever mechanism



Reverse view

It is unique in that, not only is the fourth valve a rotary valve (as in my microtonal trumpets), but I can remove it from the instrument by moving a slider (to the left) and opening a screw (to the right)

of the mechanism. Sigmar, himself a bass trombonist, got the idea from the screw which secures the bell section of a trombone with its slide. This enables me to put in a quarter-tone valve (with a fixed quarter-tone slide on it) or a 19-div valve (1/19th, as in the 19-div trumpet).



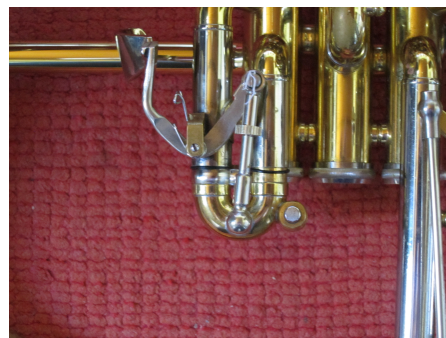
Microtonal Flugelhorn without the fourth rotary valve. Inset: the fourth rotary valve lever mechanism with slider (left) and screw (right) mechanism enabling the exchange of valve.

As with the 19-div trumpet, there is a shorter first valve slide (3/19ths), a longer second valve slide (2/19ths) and an extended third valve slide (5/19ths) using a 'Remember ring' (Sigmar Fischer). The fourth rotary valve is inserted into the main tube and operated by the middle finger of the left hand.

For the quarter-tone set-up of the Flugelhorn, I only need the quarter-tone valve with the 12-div slides set-up, and simply add the fourth valve to each 12-div fingering to lower it by a quarter-tone.



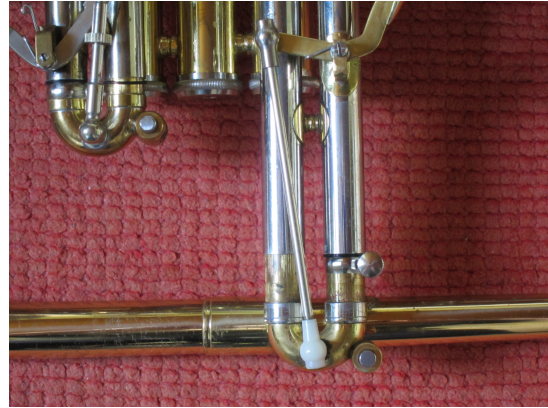
Rotary valve lever mechanism



Valve Block showing first valve slide with trigger



Comparing the 12-div second valve slide (above) and longer 19-div second valve slide (below)



Valve Block showing third valve slide in extended position using the 'Remember ring' (Sigmar Fischer)

The main tube (with the hole), can very easily be replaced with a full tube, to restore the instrument to a standard three-valve instrument set-up should I wish to sell the instrument.

All the custom-made valves, slides and triggers will be mounted onto a different, more professional model flugelhorn in the future.

Video Tutorials

Examples of Repertoire

Barrett, Richard *Aurora* (2005-11) flugelhorn and alto trombone

Bousted, Donald, *SOFT*, solo flugelhorn with backing track and video

Haas, Georg Friederich, *...einklang freier wesen...* (1995/6) solo qt tpt in Bb/C UE Wien, recorded on Bb Flugelhorn by Marco Blaaw ('Angels' CD, WERG0, 2013)

Johnson, Evan *Apostrophe 2 (pressing down on my sternum)* (2009) flugelhorn and alto trombone

Ralli, Eleni, *Sarabande?* (2020) for 19-div Flugelhorn

Stockhausen, Karlheinz, *Pieta* from *DIENSTAG aus LICHT* (1990), (quarter-tones) with or without Soprano and Electronics