ABSTRACT: NIGHTHAWK - Paul Gallagher

Nighthawk, for large wind orchestra is in two movements with a total duration of approximately 18 minutes. The orchestra is divided into three spatially separated groups.

The harmonic system reflects an overtone series with C as the fundamental tone and modal variants of this series based on G,E,B♭, and D (the third, fifth, seventh and ninth partials). This departure from the usual equal tempered scale necessitates the use of some additional accidentals. The full range of intonation from most flat to most sharp reads as follows: 𝄫 𝄭 𝄮 𝄯 𝄰 𝄱 𝄲 𝄳.

A single sequence of partials - 6-7-8-9-7-6// 5-3-2 - governs both pitch and duration on several levels. The mode of each of the nine sections (six in mvmt. I, three in mvmt. II) has as its fundamental the corresponding partial from the original sequence yielding a broad tonal plan of G-B♭-C-D-B♭-G// E-G-C. Within each section, this tonal structure is carried out to various additional levels of hierarchy. The duration of each section is determined by the ratio between consecutive partials in inverse proportion, and proportional or inversely proportional ratios also determine durational relationships at the level of the subsection as well as even smaller units. This system generates a one to one correspondence between pitch and durational proportions at each successive level of hierarchy. Melodic and textural patterns are produced by sequence at two or more levels, or by periodic repetition within a range determined by two transpositions of the sequence.

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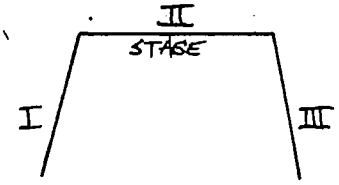
Nighthawk , for large wind orchestra is in two movements with a total duration of approximately 18 minutes. The orchestra is divided into 3 spatially separated groups. Group II occupies the main stage and groups I and III are positioned between 1/2 and 3/4 the distance from the stage to the back of the hall on the left and right sides respectively:



The full orchestra consists of 4 fl. (1,2 and 4 alt. picc.), 3 ob., E♭ cl., 3 B♭ cl. and B♭ bass cl., 2 bsn. and c-bsn., alto sax and 2 ten. saxes, 6 tpts. (in C), 4 hns., 2 tbns. and bass tbn., 3 tubas, double-bass (string) and 4 perc. The percussion section consists of 6 timp., bass dr., 15 toms (no roto-toms), 3 tamtams and 3 suspended cymbals. Groups I and II each contain picc./fl., ob., cl., ten. sax., 2 tpt., hn.,tbn., tuba, perc.; group II contains 2 fl., ob., E♭ cl., cl., bass cl., alt. sax., 2 bsn, c-bsn., 2 tpts., 2 hns., bass tbn., tuba, d-b and 2 perc.

The harmonic system reflects an overtone series with C as the fundamental tone and modal variants of this series based on G, E. B♭↓ and D (the third, fifth, seventh, and ninth partials). This departure from the usual equal tempered scale necessitates the use of some additional accidentals. The full range of intonation from most flat to most sharp reads as follows: ♭↓ ♭ ♩↓ ♮↑ ♯ # . The symbols ♩ ♩♯ ♯ can be interpreted as approximately 1/4 flat and 1/4 sharp respectively, and ↓♩♯↑ indicate smaller microtonal inflections. Since a scale of just ratios produces whole and half steps of different sizes, some pitches notated as ♮ ,# or ♭ deviate slightly from their equal tempered equivalents, but these small adjustments can be made easily in performance by listening for the most consonant sonority (the least beating between intervals). An adjustable strobe tuner may be helpful in finding some of the most crucial pitches: C♯ = C# .25 flat; E♩ = E .30 flat; F↓ = F .15 flat; F♯ = F# .25 flat; G♯ =G# .15 flat; A♩ = A .30 flat; B♭↓ = B♭ .15 flat.

A single sequence of partials - 6-7-8-9-7-6//5-3-2 - governs both pitch and duration on several levels. The work is divided into 9 sections based on the successive partials with 6 sections in movement I and 3 in movement II. The mode of each section has as its fundamental the corresponding partial from the original sequence yielding a broad tonal plan of G-B♭↓-C-D-B♭↓-G//E-G-C. The tonal plan within each section is determined in a similar manner, but the sequence of partials, or some transposition of it, is reckoned from G-B♭↓-C-D etc. In some sections this procedure is carried out to additional levels of hierarchy. The duration of the various sections is determined by the ratio between consecutive partials in inverse proportion. Section 4 (9th partial) is then the shortest, and section 9 (2nd partial) the longest. Proportional or inversely proportional ratios determine durational relationships at the level of the subsection as well as even smaller units. This system generates a one to one correspondence between pitch and durational proportions at each successive level of hierarchy. Melodic and textural patterns are produced by sequence at two or more levels, by periodic repetition of proportional pitches and durations or a combination of the two, whereby two transpositions of the sequence determine the range within which periodic repetition may occur.