# Sonorous Noise

## for SynthBeats

by Oliver Hickman

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# Concepts:

*Sonorous Noise* is based around the idea that tones can be filtered out of noise. In the piece, two kinds of noise is utilized: white noise realized by blowing air into a computer microphone and acoustic feedback often considered a kind of noise in most audio reinforcement circumstances.

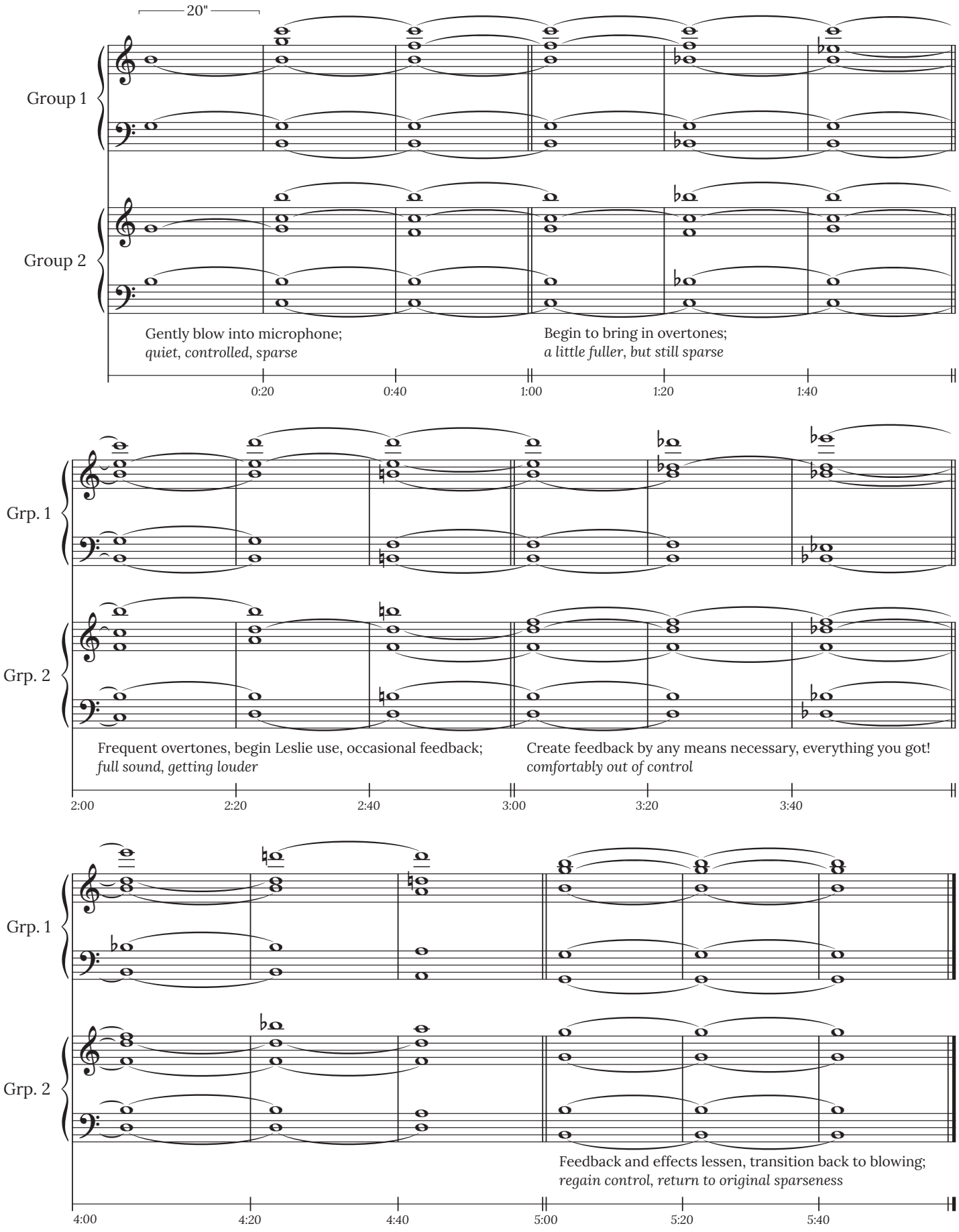
# Performance:

Players should be split into two groups and follow the “score” on the following page. After loading their respective preset, all notes will be prepared. They will need to coordinate the starting of the timer at the bottom of the patch and follow the instructions indicated on the bottom line of the score.

There are a few effects built into the patch: delay, a Leslie speaker emulator, and an overtone generator based on several bands of the resonator. Holding the spacebar engages the Leslie; holding the up-arrow key brings in the overtones. Hacking is encouraged! If a player wants to add effect or utility, they are more than welcome to integrate their own.

# Sonorous Noise

Oliver Hickman



# Presets:

Presets are stored in JSON files and are organized by cumulative second. Should changes be desired, the structure is:

```
“cumulativeSecond” : {
     “bankNumber” : {
          “amp” :
               “startStop: [starting amplitude value , stopping value],
               “rampTime”: time from startAmp to stopAmp in milliseconds
          },
          “freq”: frequency in Hz,
          “band”: bandwidth
     }
}
```

A visual representation of the data stored in the JSON is on the following page.

# Group 1

| | | 0 | 15 | 35 | 55 | 75 | 95 | 115 | 135 | 155 | 175 | 195 | 215 | 235 | 255 | 275 | 295 | 315 | 335 | 345 | 355 | 375 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0:00 | 0:15 | 0:35 | 0:55 | 1:15 | 1:35 | 1:55 | 2:15 | 2:35 | 2:55 | 3:15 | 3:35 | 3:55 | 4:15 | 4:35 | 4:55 | 5:15 | 5:35 | 5:45 | 5:55 | 6:00 |
| Bank 1 | Amp | | 0.05069 | | | | | | | 0.06964 | | | | | | 0.25944 | | | | | | |
| | Freq | | 123.471 | | | | | | | 123.47 | | | | | | 110 | | | | | | |
| | Band | | 4.28 | | | | | | | 4.09 | | | | | | 2.58 | | | | | | |
| Bank 2 | Amp | | | | | 0.20596 | | | | | | | 0.06864 | | | | 0.25944 | | | 0 | | |
| | Freq | | | | | 116.541 | | | | | | | 116.541 | | | | 97.999 | | | | | |
| | Band | | | | | 4.09 | | | | | | | 4.09 | | | | 2.58 | | | 2.58 | | |
| Bank 3 | Amp | 0.09525 | 0.09525 | | | 0.06864 | | | | | | | 0.10026 | | | 0.06476 | | | | | | |
| | Freq | 195.998 | | | | | | | | | | | 155.564 | | | 220 | | | | | | |
| | Band | 1.5 | 2.13 | | | 3.07 | | | | | | | 3.07 | | | 3.07 | | | | | | |
| Bank 4 | Amp | | | | | | | | | 0.10026 | | | | 0.04752 | | | 0.06476 | | | 0 | | |
| | Freq | | | | | | | | | 174.614 | | | | 233.082 | | | 195.998 | | | | | |
| | Band | | | | | | | | | 3.07 | | | | 3.07 | | | 3.07 | | | 3.07 | | |
| Bank 5 | Amp | 0.04752 | | | | | | | | 0.03124 | | | | | | 0.04752 | | | | | | |
| | Freq | 493.883 | | | | | | | | 493.883 | | | | | | 440 | | | | | | |
| | Band | 1.5 | 2.26 | | | | | | | 4.21 | | | | | | 2.57 | | | | | | |
| Bank 6 | Amp | | | | | 0.01919 | | | | | | | 0.07687 | | | | 0.04752 | | | 0 | | |
| | Freq | | | | | 466.164 | | | | | | | 466.164 | | | | 493.883 | | | | | |
| | Band | | | | | 2.95 | | | 3.58 | | | | 4.21 | | | | 2.57 | | | 2.57 | | |
| Bank 7 | Amp | | 0.03365 | | | | 0.01919 | | | 0.01072 | | | | | | 0.04159 | | | | | | |
| | Freq | | 783.991 | | | | 622.254 | | | | | | | | | 587.33 | | | | | | |
| | Band | | 3.81 | | | | 4.31 | | 3.31 | 3.87 | | | | | | 2.05 | | | | | | |
| Bank 8 | Amp | | | 0.02278 | | | | | | | | 0.03124 | | | | | 0.04159 | | | 0 | | |
| | Freq | | | 698.457 | | | | | | | | 554.365 | | | | | 783.991 | | | | | |
| | Band | | | 3.81 | | 3.43 | | | | | | 3.18 | | | | | 2.05 | | | 2.05 | | |
| Bank 9 | Amp | | 0.01254 | | | 0.01593 | | | | | | 0.01254 | | | 0.01419 | 0.01973 | | | | | | |
| | Freq | | 1046.502 | | | | | | | | | 1108.731 | | | 1174.659 | | | | | | | |
| | Band | | 4.66 | | | 4.66 | | | | | | 3.09 | | | 3.09 | 0.02473 | | | | | | |
| Bank 10 | Amp | | | | | | | | 0.00718 | 0.01254 | | | 0.01419 | | | | 0.01973 | | | 0 | | |
| | Freq | | | | | | | | 1174.659 | | | | 1244.508 | | | | 987.767 | | | | | |
| | Band | | | | | | | | 2.08 | 2.08 | | | 3.09 | | | | 3.09 | | | 3.09 | | |

# Group 2

| | | 0 | 15 | 35 | 55 | 75 | 95 | 115 | 135 | 155 | 175 | 195 | 215 | 235 | 255 | 275 | 295 | 315 | 335 | 345 | 355 | 375 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0:00 | 0:15 | 0:35 | 0:55 | 1:15 | 1:35 | 1:55 | 2:15 | 2:35 | 2:55 | 3:15 | 3:35 | 3:55 | 4:15 | 4:35 | 4:55 | 5:15 | 5:35 | 5:45 | 5:55 | 6:00 |
| Bank 1 | Amp | | 0.03881 | | | | | | | | | | 0.10026 | | | 0.05744 | | | | | | |
| | Freq | | 130.813 | | | | | | | | | | 138.591 | | | | | | | | | |
| | Band | | 2.26 | | | | | | | | | | 3.33 | | | 3.33 | | | | | | |
| Bank 2 | Amp | | | | | | | | 0.10026 | | | | | | | | 0.09041 | | | 0 | | |
| | Freq | | | | | | | | 146.832 | | | | | | | | 123.471 | | | | | |
| | Band | | | | | | | | 2.26 | | | | | | | | 3.33 | | | 3.33 | | |
| Bank 3 | Amp | 0.02869 | | | | | | | | 0.03881 | | | | | | 0.06864 | | | | | | |
| | Freq | 246.942 | | | | | | | | 246.942 | | | | | | 220 | | | | | | |
| | Band | 1.5 | 2.26 | | | | | | | 2.26 | | | | | | 2.82 | | | | | | |
| Bank 4 | Amp | | | | | 0.03881 | | | | | | | 0.08122 | | | | 0.09041 | | | 0 | | |
| | Freq | | | | | 233.082 | | | | | | | 233.082 | | | | 195.998 | | | | | |
| | Band | | | | | 2.26 | | | | | | | 2.82 | | | | 2.82 | | | 2.82 | | |
| Bank 5 | Amp | 0.02473 | | | 0.02473 | | 0.02679 | | 0.02473 | | | | | | | | 0.03365 | | | 0 | | |
| | Freq | 391.995 | | | 391.995 | | 391.995 | | 440 | | | | | | | | 391.995 | | | | | |
| | Band | 1.5 | | | 2.26 | | 2.26 | | 2.82 | | | | | | | | 2.82 | | | 2.82 | | |
| Bank 6 | Amp | | | 0.02473 | | 0.02679 | | 0.02679 | | 0.02473 | | | | | | | | | | | | |
| | Freq | | | 349.228 | | 349.228 | | 349.228 | | 349.228 | | | | | | | | | | | | |
| | Band | | | 2.26 | | 2.26 | | 2.26 | | 2.82 | | | | | | | | | | | | |
| Bank 7 | Amp | | 0.02093 | | | | | | | | | | 0.01754 | | | | | | | | | |
| | Freq | | 523.251 | | | | | | | | | | 554.365 | | | | | | | | | |
| | Band | | 3.37 | | | | | | | | | | 2.36 | | | | | | | | | |
| Bank 8 | Amp | | | | | | | | 0.03365 | | | | | | | | | | | | | |
| | Freq | | | | | | | | 587.33 | | | | | | | | | | | | | |
| | Band | | | | | | | | 2.36 | | | | | | | | | | | | | |
| Bank 9 | Amp | | 0.01318 | | | | | | | 0.02093 | | | | | 0.01318 | | 0.03124 | | | 0 | | |
| | Freq | | 987.767 | | | | | | | 987.767 | | | | | 932.328 | | 783.991 | | | | | |
| | Band | | 3.84 | | | | | | | 2.77 | | | | | 3.09 | | 3.09 | | | 3.09 | | |
| Bank 10 | Amp | | | | | 0.02093 | | | | | 0.01919 | | | | | 0.01318 | | | | | | |
| | Freq | | | | | 932.328 | | | | | 698.457 | | | | | 880 | | | | | | |
| | Band | | | | | 2.77 | | | | | 2.27 | | | | | 3.09 | | | | | | |