

Figure 1. Chime 1 Sound Pressure Waterfall Plot

| Mode | Calculated (Hz) | Measured (Hz) | Musical Note |
|------|-----------------|---------------|--------------|
| 1    | 238             | 244           | B            |
| 2    | 657             | 663           | E            |
| 3    | 1288            | 1272          | D#           |
| 4    | 2127            | 2050          | C            |

The peak amplitude response occurs at the third natural frequency. The fundamental frequency has a much longer reverberation time, however.

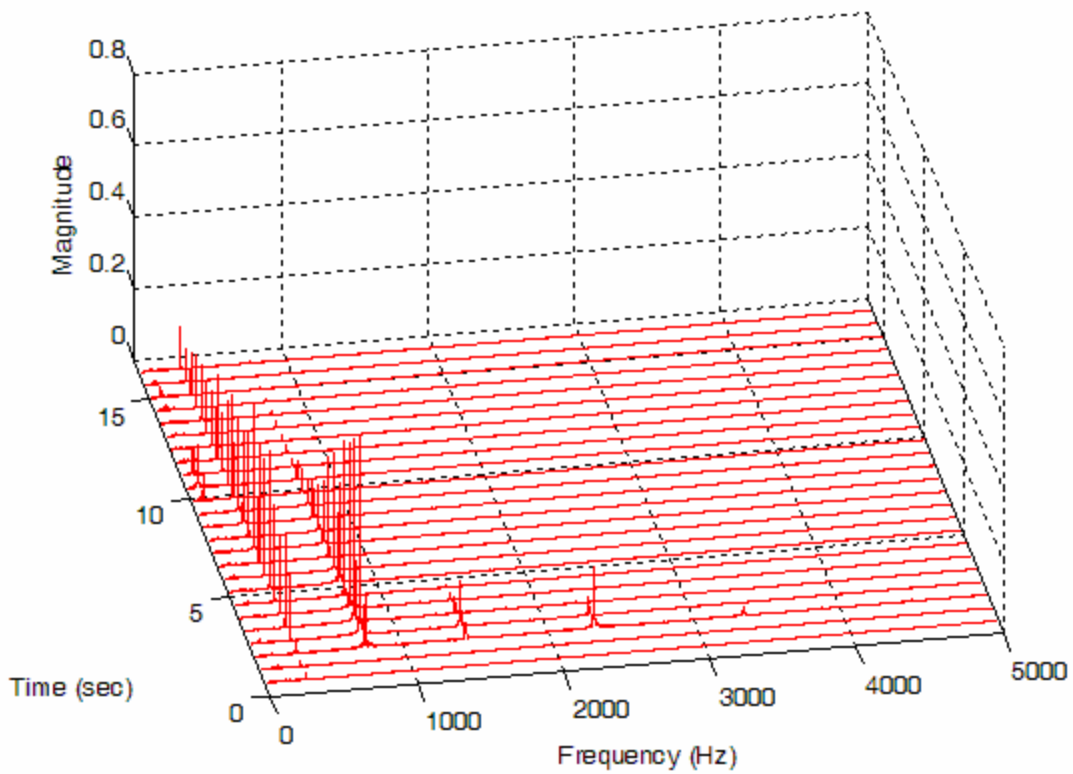


Figure 2. Chime 2 Sound Pressure Waterfall Plot

| Table 4. Chime 2 Natural Frequencies |                 |               |              |
|--------------------------------------|-----------------|---------------|--------------|
| Mode                                 | Calculated (Hz) | Measured (Hz) | Musical Note |
| 1                                    | 271             | 278           | C            |
| 2                                    | 746             | 753           | F#           |
| 3                                    | 1462            | 1441          | F#           |
| 4                                    | 2414            | 2314          | D            |

The first and second natural frequencies dominate the response.

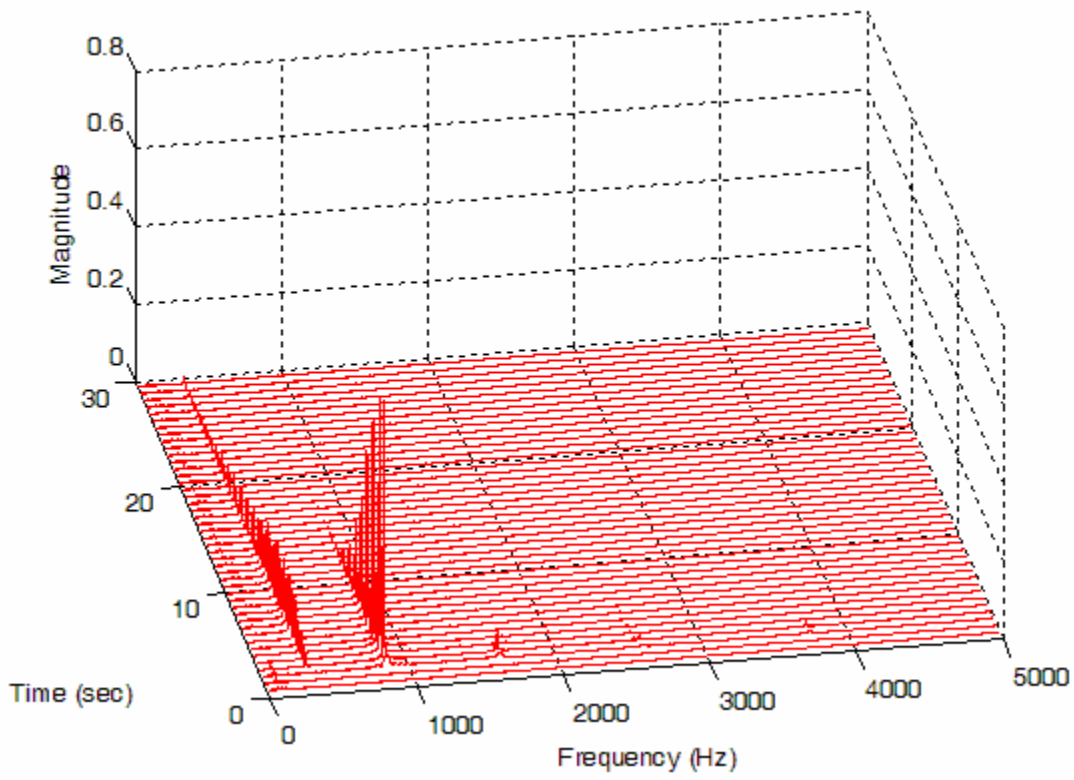


Figure 3. Chime 3 Sound Pressure Waterfall Plot

| Table 5. Chime 3 Natural Frequencies |                 |               |              |
|--------------------------------------|-----------------|---------------|--------------|
| Mode                                 | Calculated (Hz) | Measured (Hz) | Musical Note |
| 1                                    | 305             | 312           | D            |
| 2                                    | 840             | 850           | G#           |
| 3                                    | 1646            | 1625          | G#           |
| 4                                    | 2718            | 2600          | E            |

The second natural frequency clearly has the highest amplitude response.

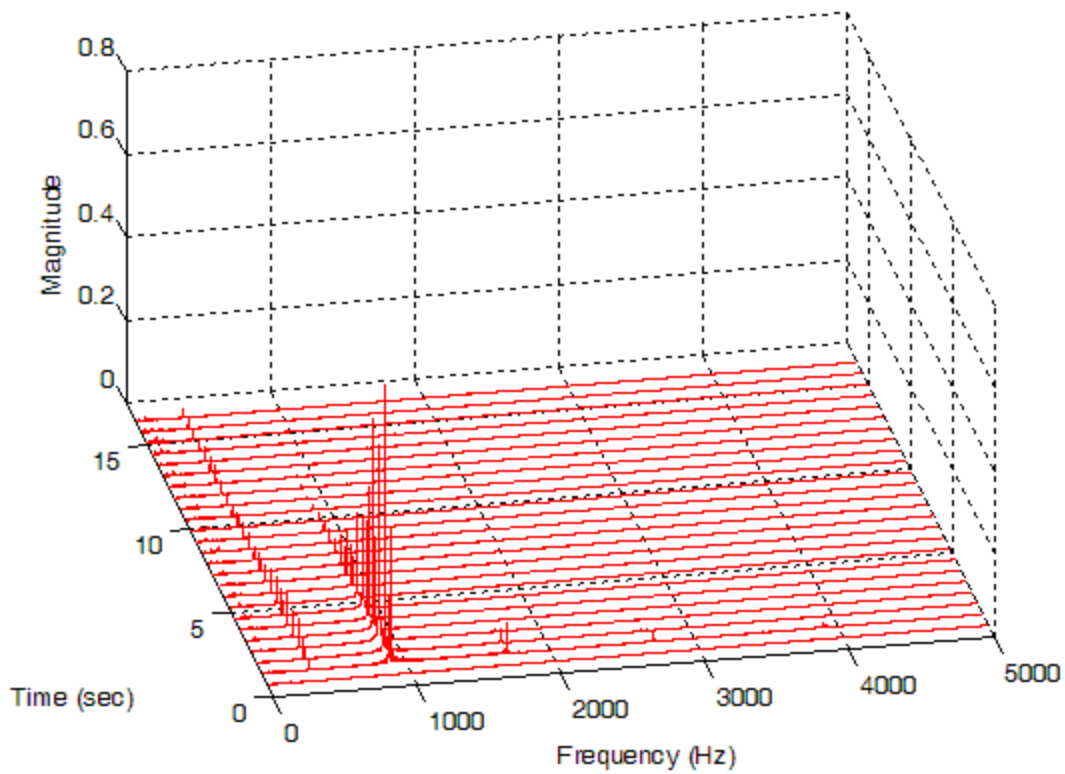


Figure 4. Chime 4 Sound Pressure Waterfall Plot

| Table 6. Chime 4 Natural Frequencies |                 |               |              |
|--------------------------------------|-----------------|---------------|--------------|
| Mode                                 | Calculated (Hz) | Measured (Hz) | Musical Note |
| 1                                    | 320             | 330           | E            |
| 2                                    | 882             | 890           | A            |
| 3                                    | 1729            | 1700          | G#           |
| 4                                    | 2855            | 2712          | D#           |

The second natural frequency clearly has the highest amplitude response.

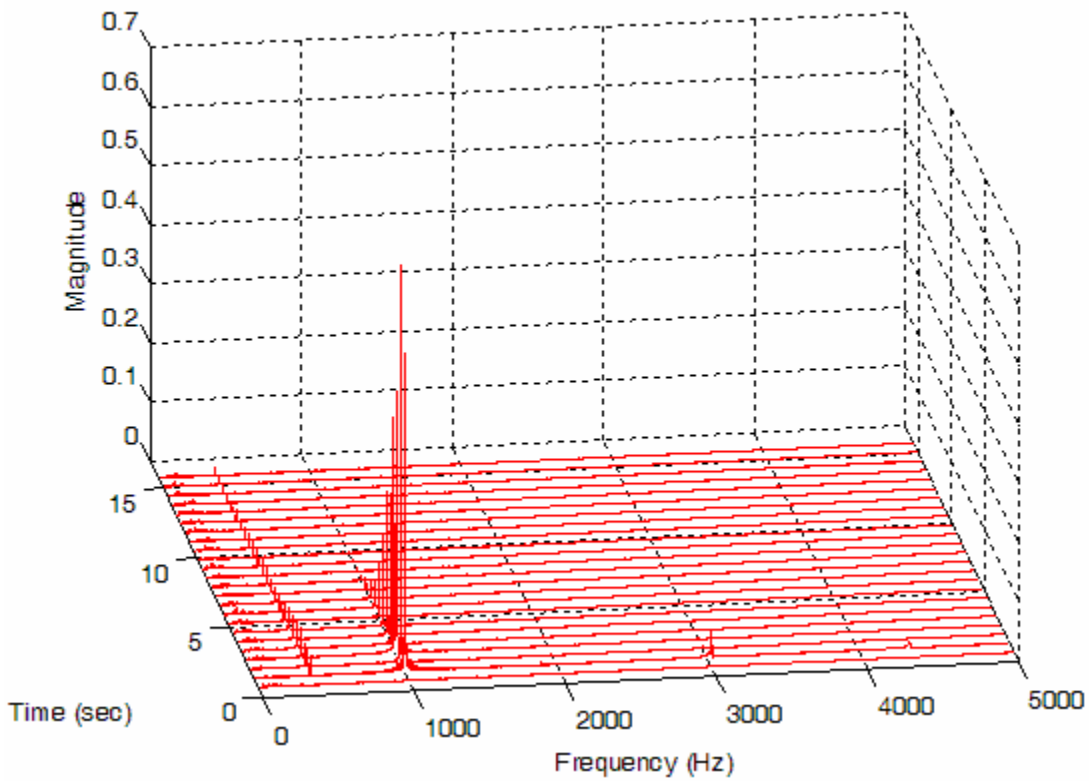


Figure 5. Chime 5 Sound Pressure Waterfall Plot

| Table 7. Chime 5 Natural Frequencies |                 |               |              |
|--------------------------------------|-----------------|---------------|--------------|
| Mode                                 | Calculated (Hz) | Measured (Hz) | Musical Note |
| 1                                    | 361             | 371           | F#           |
| 2                                    | 995             | 1000          | B            |
| 3                                    | 1950            | 3031          | F#           |
| 4                                    | 3221            | 4351          | C#           |

The second natural frequency clearly has the highest amplitude response, as was the case for the previous two chimes.