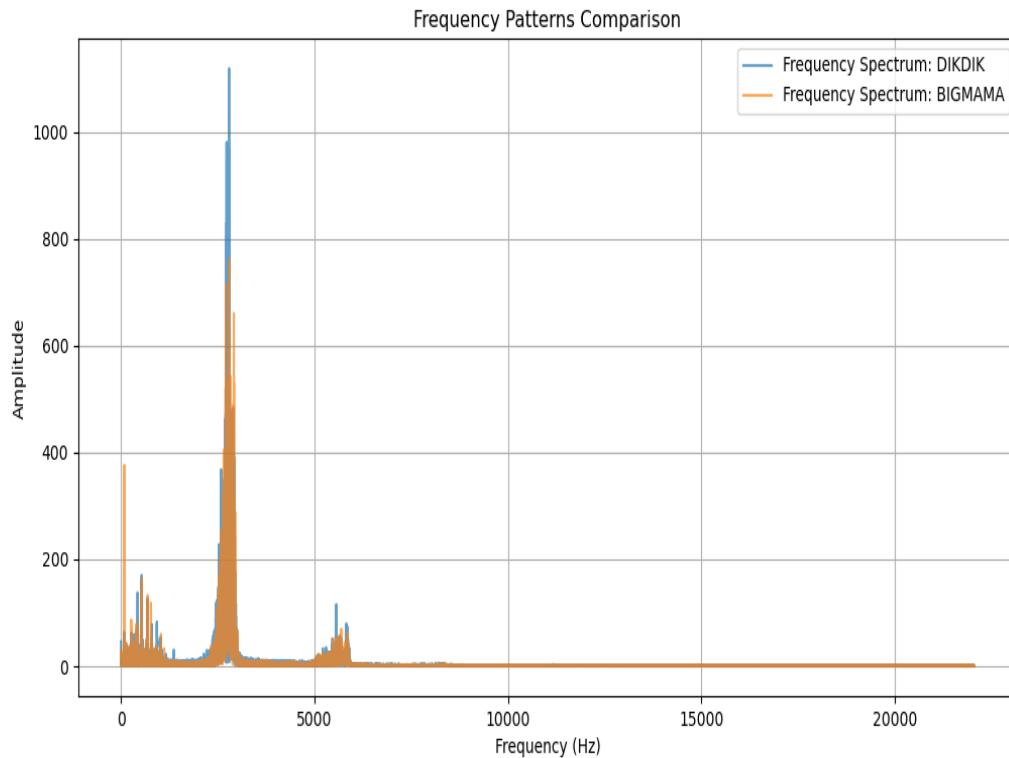


Frequency Spectrum Analysis and Interpretation



Observations:

1. Dominant Components:

- The spectrum shows a strong frequency component around **1000 Hz to 1500 Hz** for both audio files (**DIKDIK** and **BIGMAMA**).
- This indicates that the two signals share similarities within this frequency band.

2. Amplitude:

- The **DIKDIK** signal (in blue) exhibits a higher amplitude peak compared to **BIGMAMA** (in orange), suggesting that DIKDIK has a more dominant energy at this frequency.

3. Low Frequencies:

- Both spectra contain information in the **low frequencies (0 to 500 Hz)**, often associated with **fundamental or bass sounds**.

4. High Frequencies:

- There is a slight decrease in amplitude for frequencies above **5000 Hz**, indicating that the signal contains fewer high-frequency details, typical of low-timbre or filtered sounds.
-

Interpretation:

1. Presence of a Strong Fundamental Frequency:

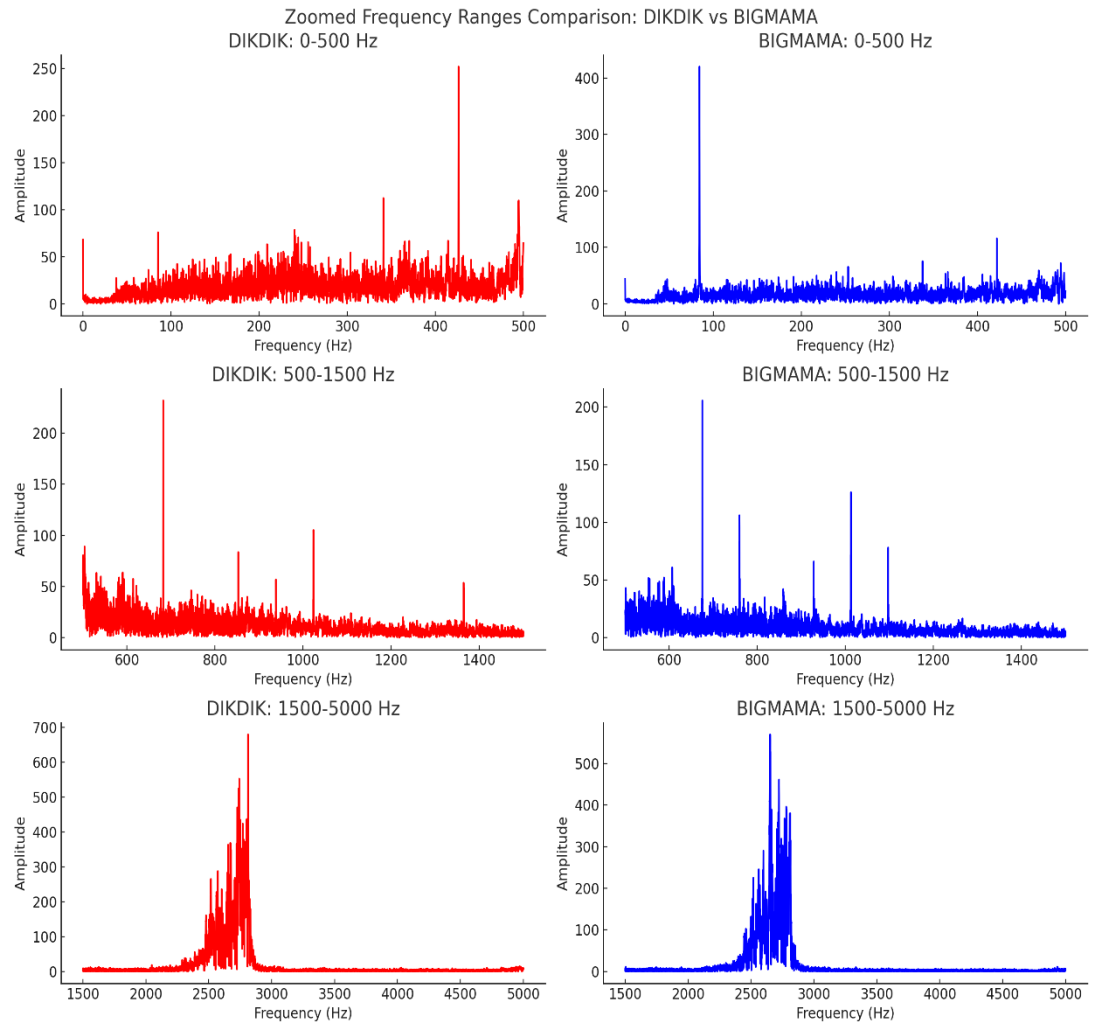
- The central peak indicates a **primary fundamental frequency**, typical of harmonic sounds or repetitive audio signals.

2. Amplitude Comparison:

- The difference in amplitude between the two spectra suggests that **DIKDIK** has a more intense signal or higher volume at certain frequencies.

3. Structural Similarities:

- Both spectra exhibit a similar structure, indicating that the two sounds share comparable frequency content but differ in intensity.



Zoomed Frequency Analysis

The comparison above focuses on specific frequency bands:

1. 0-500 Hz (Low Frequencies):

- Both signals contain dominant low-frequency components, particularly around **100-200 Hz**.
- BIGMAMA** has higher peaks compared to **DIKDIK** in this range.

2. 500-1500 Hz (Mid Frequencies):

- Both signals have prominent peaks, but **DIKDIK** shows stronger energy concentration near **800 Hz**.
- BIGMAMA has a slightly more distributed mid-frequency range.

3. 1500-5000 Hz (High Frequencies):

- Both files exhibit their dominant energy peaks in this range around **2500-3000 Hz**.

- **DIKDIK** has slightly higher amplitude peaks, suggesting stronger high-frequency content.

This detailed zoom reveals subtle differences between the two signals in their frequency distributions

Conclusion:

- **DIKDIK** is more dominant around **1000-1500 Hz**, while **BIGMAMA** has a lower amplitude but follows a similar spectral structure.
- The intensity differences may be due to variations in **sound levels, filtering effects, or the nature of the recordings**.