**Step 1: Determine the operation frequency of the device**

Operation Frequency: *433.94M*

Screenshot of Captured Signal:

*A screenshot of a computer

Description automatically generated*

**Step 2: Capture the signal**

Tool(s) Used: *hackrf\_transfer, sox  
hackrf\_transfer -r button\_5M\_2Msps\_8bit.raw -f 433500000 -s 2000000 -g 20*

*To convert file: sox -r 2000000 -e signed-integer -b 8 -c 1 button\_5M\_2Msps\_8bit.raw button\_5M\_2Msps\_8bit.wav*

***N.B.*** Compress and Upload the file containing the signal

**Step 3: Determine the sequence of the transmitted signal**

Audacity/URH/Tool Screenshot:

*A screenshot of a computer

Description automatically generated*

Transmitter Sequence for Wireless Doorbell

Number of symbols/bits in sequence: *25*

Sequence/Pattern:

*0000110011010101111111000*

**Bonus**

36-bit pattern **[1 pt]**

*(write answer here)*

Temperature value **[0.5 pt]**

*(write answer here)*

Humidity value **[0.5 pt]**

*(write answer here)*