

High frequencies Attempts 7
Robot Communication

16.06.2019

[DFT Index.xlsx](#)

Note: Even if these sounds/frequencies are not tone of the C-sharp scale anymore
I decided to keep the name A,B,C, D... just as a convenient way to designate them

Note2: I keep the number of 14 sounds : this was a bit the limit I can use for the wav sounds converted
to be still manageable for the robot (the .s file already take roughly 50% of the storage of the robot)

Key idea

HF attempts 1: with HF seems better, but still annoying overlap
Relying on Fdft formula from Nemec et al(2017) p4
Plus : measurements made till now (always same values coming back)
While taking into account top limit aroun 3400
New attempts

Après HF2

Nettement mieux!!! mais encore répétition avec trois premières notes -> je veux les enlever et en ajouter 3 autres vers le hauts en suivant DFT Index

Leds can be activated or not

Sample_length 1440
(except last)

| Frequ (Hz) | Tone | fct | leds | Seg | seg start | seg end | length |
|------------|------|------|-------|-----|-----------|---------|--------|
| 1664 | F | f0() | 4 & b | 0 | 0 | 1439 | 1440 |
| 1792 | G | g0() | 5 & b | 1 | 1440 | 2879 | " |
| 2176 | A | a0() | 6 & b | 2 | 2880 | 4319 | " |
| 2304** | B | b0() | 7 & b | 3 | 4320 | 5759 | " |
| 2432 | C | c() | 1 | 4 | 5760 | 7199 | " |
| 2560 | D | d() | 2 | 5 | 7200 | 8639 | " |
| 2688 | E | e() | 3 | 6 | 8640 | 10079 | " |
| 2816 | F | f() | 4 | 7 | 10080 | 11519 | " |
| 2944 | G | g() | 5 | 8 | 11520 | 12959 | " |
| 3072 | A | a() | 6 | 9 | 12960 | 14399 | " |
| 3200 | B | b() | 7 | 10 | 14400 | 15839 | " |
| 3328 | C | c1() | 1 & f | 11 | 15840 | 17279 | " |
| 3456 | D | d1() | 2 & f | 12 | 17280 | 18719 | " |
| 3584* | E | e1() | 3 & f | 13 | 18720 | 20160 | " |

| | | | | | | | | | | | | |
|------|---------|------|------|------|---------|----------|-------|-------|-------|-------|-------|----------|
| 1675 | 5027 | | | 8378 | | .(10054) | 11730 | | | | 15082 | |
| 1804 | 5414 | | | | 9023 | | | 12632 | | | | .(16242) |
| 2191 | | 6574 | | | | 10957 | | | | | 15339 | |
| | | 6960 | | | .(9281) | | 11601 | | 13921 | | | 16242 |
| | | | 7347 | | | | | 12246 | | | 15855 | |
| 2578 | 5156 | | 7734 | | | 10312 | | 12890 | | | | |
| | | | | 8121 | | 10828 | | | 13535 | | | |
| 2835 | | | | 8507 | | | | | | 14179 | | |
| 2964 | | | | 8894 | | | | | | 14824 | | |
| 3093 | | | | | 9281 | | | | | | 15468 | |
| 3222 | | | | | 9667 | | | | | | | 16113 |
| 3351 | .(3322) | | | | 9925 | 10054 | | | | | | |
| 3480 | .(3351) | | | | | | | | | | | |
| 3609 | .(3351) | | | | | | | | | | | |

*Very low volume
only for close communication

**

.. : sometimes problematic with HP 1.3
to see