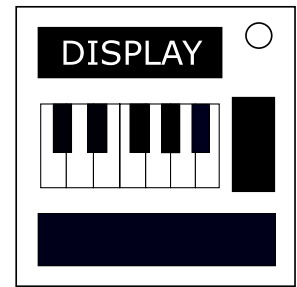


On the Subject of Musical Transposition

It's Piano Keys, but more time-consuming. Have fun!?



1. Start with the last digit in the Serial Number, then follow the steps below.

- If there is a vowel in the Serial Number, add 3.
- Subtract the amount of battery holders on the bomb.
- If there is 2 or more lit indicators, add 2.
 - Skip this step if there is a lit FRK label present.
- If there is 2 or more unlit indicators, subtract 2.
 - Skip this step if there is an unlit CAR label present.
- If there is at least one Stereo RCA port on the bomb, subtract 4.
- Finally, if there is a Serial port on the bomb, double this number.*

***Note** - If the number is less than 1, keep adding 5 until it is at least 1. If the number is more than 20, keep subtracting 5 until it is at most 20.

2. Using that number, follow the table below to find a transposition number.

3. On the screen on the right, one or two letters will come up. Refer to Musical Transposition : Appendix A for definitions. Transpose the set of notes given on the top screen using these.

4. Now, transpose the new notes up or down (or none) by the amount of semitones given by the table.

Another Notes:

- You can only give 6 notes to the module. Going past 6 notes will ignore the key inputs being given.
- You can reset the inputs by pressing the right display.
- You can submit your answer by pressing the **Submit** button. If you sent the wrong answer, the module will strike you and reset your input.

Table 1 – Transposition Number

Number	Last digit of serial number is even		Last digit of serial number is odd	
	Parallel port	Otherwise...	RJ-45 port	Otherwise...
1	+4	-1	-2	+4
2	+2	+3	-1	-1
3	-4	+4	-3	-2
4	+1	+2	0	+3
5	0	-3	-4	+1
6	+3	-2	-2	+1
7	-4	0	-3	+2
8	+3	-3	0	+1
9	-1	-1	-4	+2
10	0	+3	-1	+4
11	-3	+1	+2	+4
12	+2	+1	-4	-2
13	-1	0	-3	+4
14	+3	-1	-3	-3
15	-2	+3	-4	0
16	+1	+4	0	+2
17	+3	-2	-2	+4
18	-4	-1	+1	+2
19	+4	-1	+2	-3
20	+3	0	-4	+1

Appendix A: Musical Terms

To clarify, the note below a C would be a B, and similarly, the note after a B would be a C. The 12 tones on the piano essentially wrap around.

The Prime sequence (or 'P' for short), is the original or base form of the 12-tone row. No transformation takes place.

The Retrograde sequence (or 'R' for short), takes the Prime sequence, but executes it in reverse order. For example, the Retrograde of the Prime row A B C D E would be E D C B A.

The Inverse sequence (or 'I' for short), takes the Prime sequence, but the intervals between the notes are inverted. For example, take the interval from A to B; the interval is +2 semitones, as it takes you 2 semitones to get from A to B (A goes to A# then B). The inversion of this interval would be -2 semitones. Therefore, the inverted sequence would be A then G, as G is -2 semitones away from A (A goes to G# then G).

As an extended example, the Inversion of the Prime row A B C D E would be A G F# E D; the first note always remains the same, and all the other notes get inverted relative to that note.

The Retrograde Inverse sequence (or 'RI' for short), takes the Inverse sequence in Retrograde. For example, the Retrograde Inverse of the Prime row A B C D E would take the Inverse first (which is A G F# E D), and then the Retrograde of this Inverse would be D E F# G A.

Transpositions apply a translation of the tone row up or down by a given number of semitones. For example, the Prime row A B C D E transposed up by 1 semitone would be A# C C# D# F.

An Interval is the tonal distance between two distinct notes and is usually measured in semitones. For example, the interval from G to B is up 4 semitones.

Piano/Keyboard Reference

Use the following graphic as a reference to how tones are mapped onto a standard 12-note piano/keyboard.

