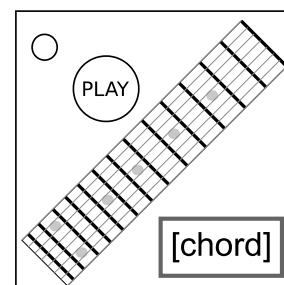# On the Subject of Broken Guitar Chords

You hum it, I'll play it. On a guitar with a broken string!

- The module consists of a guitar fretboard, a display and a Play button.

- Press a fret to select it. Press it again to deselect it. Press a button just above the fretboard to mute or unmute a string. Press the Play button to submit the chord.

- To defuse the module, enter any finger positions that result in the chord shown in the display.

  - All notes belonging to the chord must be played on at least one string, regardless of octave.

  - No notes that are not part of the chord may be played on any string.

  - No string can have more than one fret selected.

  - A muted string can't have any frets selected.

  - **One of the guitar strings is broken and cannot be used.**

- The semitones in an octave are: C, C♯/D♭, D, D♯/E♭, E, F, F♯/G♭, G, G♯/A♭, A, A♯/B♭, B. After B, the list wraps around back to C. "Transposing up" a number of semitones means moving forward in this list that many steps.

- A chord consists of a root note from the above list and a chord quality from the table on the right. The table shows the chords with C as their root note. Transpose the chords by a consistent number of semitones to obtain the chord demanded by the module.

- The strings are, from left to right: E, A, D, G, B, E. Selecting a fret on a string transposes that string's note up the relevant number of semitones.

PLAY

[chord]

Chords

C	C, E, G
Cm	C, E♭, G
C6	C, E, G, A
C7	C, E, G, B♭
C9	C, D, E, B♭
Cadd9	C, D, E, G
Cm6	C, E♭, G, A
Cm7	C, E♭, G, B♭
Cmaj7	C, E, G, B
Cdim	C, E♭, G♭
Cdim7	C, E♭, G♭, A
C+	C, E, G♯
Csus	C, F, G