Arpology

A 4-voice arpeggiating synth, with an auto-improvisation feature. With a nod to musical heroes Brian Eno and J.S. Bach.

How to use:

1) Press a piano key and Arpolgy will play a 4-voice appegiating pattern based on what note you are pressing.

2) To shift the keyboard up an octave   *Tap* the right button.
   To shift the keyboard down an octave *Tap* the left button.

3) Arpology uses two separate User Interface (U/I) "frames." A U/I frame determines which parameters are controlled by the onboard pots. The two U/I frames for Arpology are:

        1) The Envelope Frame (BLUE LED is on)

            Top   Pot controls envelope attack
            Bottom Pot controls envelope decay/sustain.

        2) The Arpeggiator Frame (RED LED is on)

            Top   Pot selects arpeggiation pattern.
            Bottom Pot controls arpeggiation rate.

4) To switch between U/I frames, *Press* the left or right buttons.
   Pressing the right button selects the Envelope Frame.
   Pressing the left button selects the Arpeggiator Frame.

5) To activate the automatic improvisor *Double-Tap* the left button. Arpology now "plays itself" (and never repeats!) using Bach-like modulation. The LED for the current frame will begin flashing, indicating that the auto-improvisor is on. While the auto-improvisor is on, Arpology will not respond to key presses, but it will respond to adjustments to the two knobs (and you can also control if the two knobs control envelope or arpeggio). To turn off the auto-improviser *Double-Tap* the left button again.
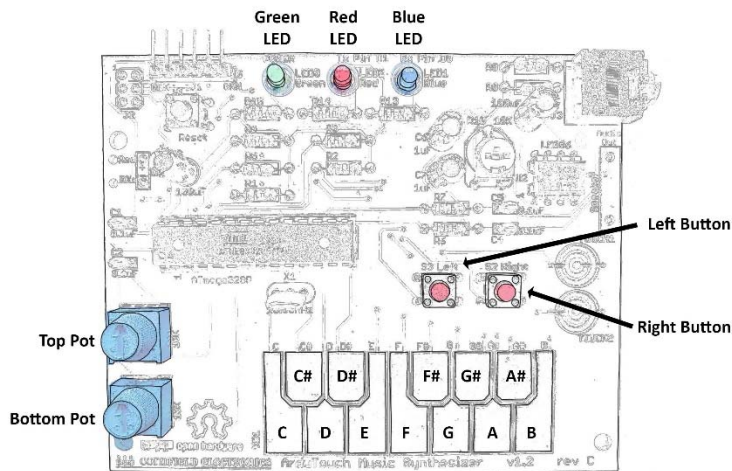
Note: A list of all types of button presses this synth uses, including "Tap", "*Press*" and "*Double-Tapping*" can be seen on page 2 of this document.

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6)  There are 10 presets for Arpology.  These can be selected by
    Double-Tapping the right button and then pressing one of the
    following piano keys:

        C  (0)  - turn off all vibrato and panning effects
        C# (1)  - add vibrato to high voices
        D  (2)  - use a slow panning effect
        D# (3)  - use a medium-speed panning effect
        E  (4)  - use a fast panning effect
        F  (5)  - play "Ambia", a slow moving improv
        F# (6)  - use a major tonality
        G  (7)  - play "Streaker", a fast moving improv
        G# (8)  - use a minor tonality
        A  (9)  - reset Arpology to its initial state
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Types of button presses:

Tap: quickly tap a button
Press: long-press a button
Double-Tap: quickly double-tap a button

Programming Notes:

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1)  Arpology is meant to be compiled using the "Stand-alone" runtime
    model.  Otherwise, the LEDs will not operate. This runtime model
    can be set by uncommenting the "#define __STNDLONE__" statement
    in Model.h of the ArduTouch library.
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