M2X MOUNTAIN.VIEW Daughter Board: Notes for Builders (rev 01)

1. Circuit Philosophy. Nelson Pass wrote a famous article titled "Single-Ended Class A" which is available as a .pdf download on the passlabs.com website. It includes these passages:

> *… For reproducing music as naturally as possible, push-pull symmetric operation is not the best approach. Air is not symmetric and does not have a push-pull characteristic. … Only one linear circuit topology delivers the appropriate characteristic, and that is the single-ended amplifier. Single ended amplification only comes in pure class A, …*

Mountain View adheres to this philosophy. Its circuit design is a single ended follower operating in pure class A. The bias point is regulated (twice!), giving very stable class A bias currents, with excellent temperature stability and PSRR.

2. Transistor Orientation. Bipolar transistors Q1-Q3 are encased in medium power packages called TO-126. These three parts are marked on the PCBoard silkscreen as rectangles. Each rectangle has a double line along one of its four edges. That double line signifies the REAR of the transistor, i.e., the side where the part number does NOT appear. The FRONT of the transistor is the side where the part number DOES appear.

3. LED Orientation. The LED is marked on the board with a diode symbol, having a double line on the cathode. The flat spot on the otherwise round LED package, is its cathode. Or just test the LED using the "diode" setting of your multimeter as a double-check. Do not substitute any LED part number except the one stated in the Bill Of Materials. Notice the BOM says **do not substitute**. Mountain View was tested and characterized with this one (very widely available) LED part type; don't screw up your build by using the wrong LED, when you can buy the correct one from Mouser, DigiKey, Arrow, Element14, etc., for less than 75 cents.