

## HOW TO ADJUST THE STEP-ZERO ON THE 575 CURVE TRACER

1. First, make sure that the Vertical and Horizontal displays are zeroed: Hold the calibration switch for each one at zero, and position the dot so it lies in the lower left corner of the graticule for NPN devices, and in the upper right corner of the graticule for PNP devices. This is best done with no transistor under test [TUT] connected, and with the PEAK VOLTS pot turned fully CCW.
2. Next, insert, for this example, an NPN device into the test socket, and set the Vertical gain for 0.5mA/DIV, and the Horizontal gain for 2V/DIV. Set the base current for 0.005 mA/STEP, set the switch to "Repetitive" and turn the STEP ZERO control fully CW.
3. Adjust the STEPS/FAMILY pot fully CCW, to 4 STEPS/FAMILY. You will actually see FIVE steps, the  $I_B = 0$  step, and then the 4 steps corresponding to  $I_B = .005$  mA, .010 mA, .015 mA, and .020 mA.
4. Once you have verified that there are five steps, now increase the base current step selector to 0.01 mA/STEP. The upper steps will disappear but it will be easier to view the 0<sup>th</sup> step.
5. Push up the ZERO CURRENT switch and note where the 0<sup>th</sup> step falls. Release the switch and adjust the STEP ZERO pot CCW until the 0<sup>th</sup> step just moves down to the bottom line on the graticule [ $I_C=0$ ,  $I_B=0$ ]. DO NOT TURN THE KNOB ANY FURTHER!. If you continue to turn the knob, the 0<sup>th</sup> step trace will not go any lower, but the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> traces etc will move downward and thus screw up the calibration. You may want to alternate pushing up and releasing the ZERO CURRENT switch while you turn the step zero knob.
6. You should not have to repeat this calibration unless you use a PNP transistor or someone else comes along and decides to do this adjustment improperly!
7. When you view the curves for JFET's on this curve tracer, be sure to connect the 1000 ohm resistor across the base emitter terminals to convert base mA to gate volts. Then, when you do the calibration procedure above, just be sure to set the switch to ZERO VOLTS during the calibration procedure.