

**Applications Note for the**  
**Tektronix TDS 3012 Two Channel Color Digital Oscilloscope**

You should do the following steps before using the TDS 3012 oscilloscope:

- 1) Turn on the oscilloscope by pressing the power button located in the lower left-hand corner. Wait for scope to boot-up. When a message shows up on the screen, press the **MENU OFF** button.
- 2) Connect the two special 10X high-impedance probes (available in the drawer of your bench) to the Channel 1 and Channel 2 BNC-connectors (indicated as CH 1 and CH 2). (Note: Always use these special high-impedance probes to connect to the oscilloscope. Never use the 50  $\Omega$  coaxial cables to connect to the oscilloscope.)
- 3) Press the **AUTOSET** button.
- 4) Turn off the DELAY feature by pressing the **DELAY** button so that the green light on the left side of the DELAY button is off.
- 5) Turn off the CURSOR feature by pressing the **CURSOR** button. When a menu shows up on the screen, press **OFF** on the right hand side of the menu. Then press **MENU OFF**.
- 6) Turn off the MEASURE feature by pressing the **MEASURE** button. When a menu shows up on the screen, press **Remove Measrmt.** Then press **All Measurements.** Then press **MENU OFF**.
- 7) Select Channel 1 by pressing the yellow **CH 1** button. Then press the **MENU** button underneath the VERTICAL column. Adjust your Ground by pressing **GND** on the right of the screen and positioning the yellow line in the middle of the screen (using the vertical position knob). Then select **AC Coupling** (or **DC Coupling**, if necessary), set **Bandwidth** to 20 MHz, and verify the Probe Setup is set to 10X (if it is not, see instructor). Then press **MENU OFF**.
- 8) Press **MENU** button underneath the TRIGGER column. Set Trigger Source to **Ch 1**. Then press **MENU OFF**.
- 9) Calibrate your Channel 1 probe by connecting it to the small metal +5V PROBE COMP calibration connector (to the right of the channel 2 connector). Verify that you get a 5V square wave. Note that you will probably need to turn down the SCALE button in the VERTICAL column, and turn up the SCALE button in the POSITION column.
- 10) If you don't get a 5V square wave, press the **MENU** button in the VERTICAL column and reset the Probe Setup setting to 1X.
- 11) Disconnect your Channel 1 probe from the metal PROBE COMP calibration connector.
- 12) Turn off the Channel 1 trace by pressing the yellow **CH 1** button, followed by pressing the **OFF** button in the VERTICAL column.
- 13) Repeat steps 7 through 12 for Channel 2 (the blue **CH 2** button and the blue **CH 2** trace, in this case).
- 14) Your oscilloscope is ready to use (in "internal trigger" mode). Note that if you need to use the scope in the "external trigger" mode (which will frequently be the case), please see instructor.