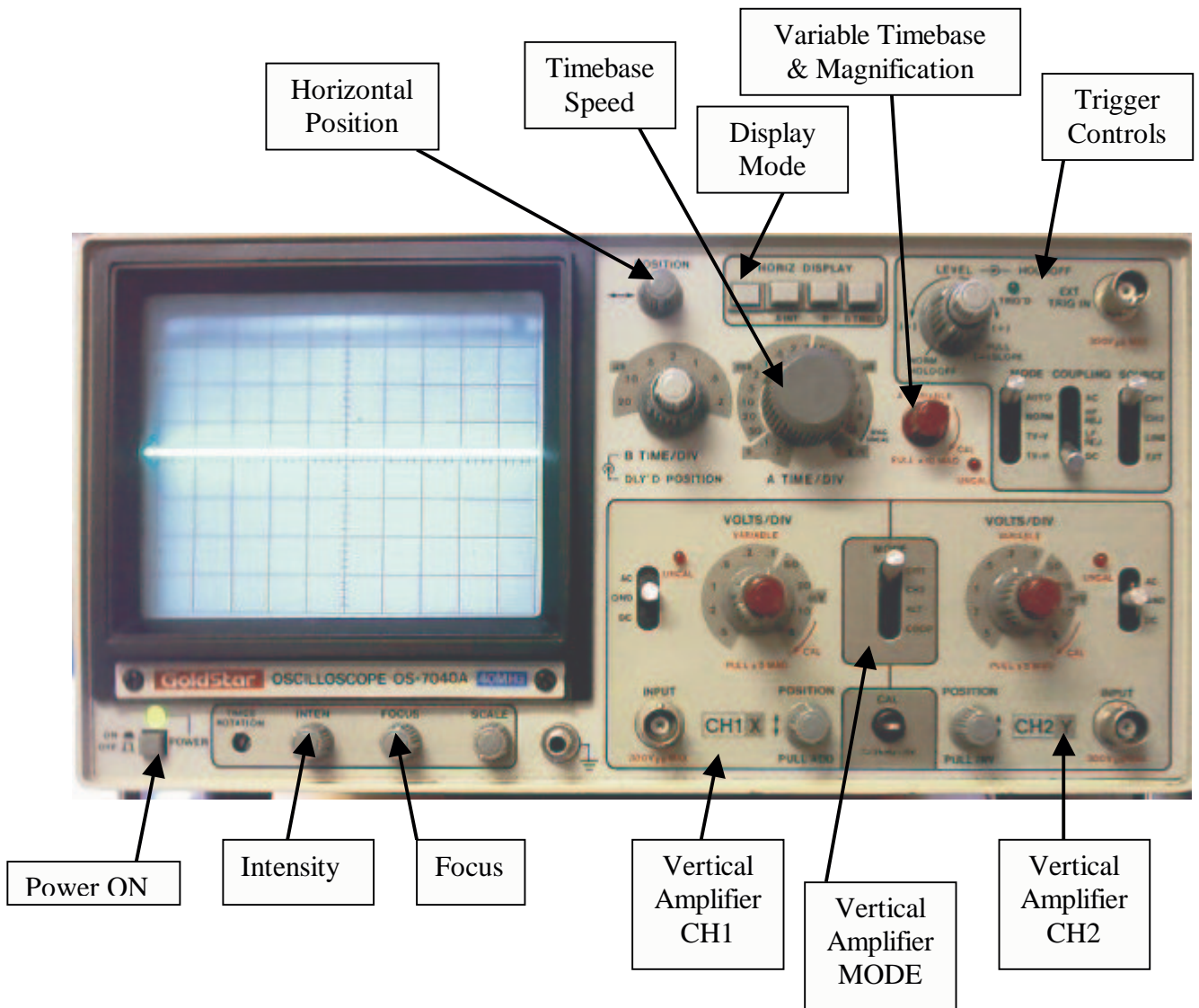


Basic Oscilloscope Setup

This document describes the very basics of obtaining a display on the laboratory oscilloscopes.

The picture shows the oscilloscope front panel and the main controls.



To setup the oscilloscope to at least get a basic trace which is visible on the screen, the picture is a good guide to the switch and knob positions required to achieve this.

A procedure is as described below.

1. Turn the power ON
2. Set the "Horizontal position" to a central position.
3. Set the timebase speed to 1ms/division
4. Set "Variable Timebase & Magnification" to Cal and push knob in.
5. Trigger Controls
 - a. "Level / Holdoff" set holdoff (outer knob) to Norm and trigger level to centre position.
 - b. "Mode" switch to AUTO
 - c. "Coupling" switch to DC
 - d. "Source switch to CH1
6. Vertical Amplifiers
 - a. set the Vertical amplifier MODE to "Chop". (This displays both CH1 & CH2 simultaneously.)
 - b. set "AC, Gnd, DC" switch to Gnd for both CH1 and CH2
 - c. set position knob to central position for both CH1 and CH2
 - d. set Volts/Div knob to 5V/Div (outer knob) for both CH1 and CH2
 - e. set the variable Volts/div (inner knob) to Cal and push knob **in**.
7. Set the intensity level control so that a trace is visible but not too intense. (A very intense trace will burn the phosphor of the screen.)
8. You should now have two horizontal lines across the center of the screen. (They may be one on top of the other.)
9. Adjust the focus control for a sharp display.

You are now ready to connect an input signal to the oscilloscope.

1. Connect the output of a signal generator to the input to the oscilloscope, remember that the black lead is earth for both the signal generator and the oscilloscope and so these should be connected together. Connect the active output of the signal generator (red lead) to the input active input to CH1 (red lead).
2. Set the frequency of the signal generator to 1kHz.
3. Set the shape of the waveform to sine wave.
4. Set the amplitude of the signal generator to a moderately high value.
5. Set the vertical amplifier of the oscilloscope "AC, Gnd, DC" switch to DC for CH1.
6. You should now be able to see a sine wave on the oscilloscope.
7. Adjust the Volts/div and the timebase settings to achieve a display which fills the screen without going off the screen.
8. Try adjusting the trigger level and see the effect on the waveform display.