

Trigger SOURCE Switch

The trigger SOURCE switch (CH 1, CH 2, etc.) Select the signal to be used as the sync trigger.

1. If the SOURCE switch is set to CH 1 (or CH 2) the channel 1 (or channel 2) signal becomes the trigger source regardless of the VERTICAL MODE selection. CH 1, or CH2 are often used as the trigger source for phase or timing comparison measurements.
2. By setting the SOURCE switch to ALT (same as CH1) and PULL ALT TRIG pulled, alternating triggering mode is activated. In this mode, the trigger source alternates between CH 1 and CH 2 with each sweep. This is convenient for checking amplitudes, wave shape, or waveform period measurements, and even permits simultaneous observation of two waveforms which are not related in frequency or period. However, this setting is not suitable for phase or timing comparison measurements. For such measurements, both traces must be triggered by the same sync signal. Alternate triggering can only be used in dual-trace mode (VERT MODE set to DUAL), and with alternate sweep only (PULL CHOP not engaged).
3. In the LINE position, triggering is derived from the input line voltage (50/60 Hz) and the trigger SOURCE switch is disabled. This is useful for measurements that are related to line frequency.
4. In the EXT position, the signal applied to the EXT TRIG jack becomes the trigger source. This signal must have a timing relationship to the displayed waveforms for a synchronized display.

TRIG LEVEL/PULL (—)SLOPE Control?

(Refer to Fig. 1)

A sweep trigger is developed when the trigger source signal crosses a preset threshold level. Rotation of the TRIG LEVEL control varies the threshold level. In the + direction (clockwise), the triggering threshold shifts to a more positive value, and in the - direction (counterclockwise), the triggering threshold shifts to a more negative value. When

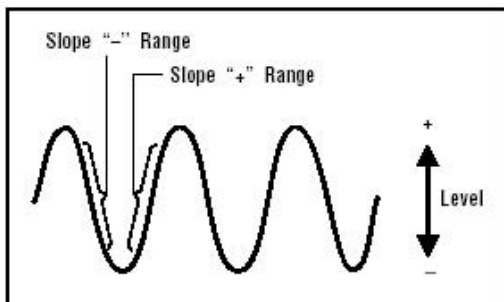


Fig-1

the control is centered, the threshold level is set at the approximate average of the signal used as the triggering source. Proper adjustment of this control usually synchronizes the display.

The TRIG LEVEL control adjusts the start of the sweep to almost any desired point on a waveform. On sine wave signals, the phase at which sweep begins is variable. Note that if the TRIG LEVEL control is rotated toward its extreme + or - setting, no sweep will be developed in the normal trigger mode because the triggering threshold exceeds the peak amplitude of the sync signal.

When the PULL (—)SLOPE control is set to the +("in") position, the sweep is developed from the trigger source waveform as it crosses a threshold level in a positive-going direction. When the PULL (—)SLOPE control is set to the -("out") position, a sweep trigger is developed from the trigger source waveform as it crosses the threshold level in a negative-going direction.

MAIN TIME BASE Control

Set the Main Time Base TIME/DIV control to display the desired number of cycles of the waveform. If there are too many cycles displayed for good resolution, switch to a faster sweep time. If only a line is displayed, try a slower sweep time. When the sweep time is faster than the waveform being observed, only part of it will be displayed, which may appear as a straight line for a square wave or pulse waveform.

HOLDOFF Control

(Refer to Fig. 2)

A "holdoff" period occurs immediately after the completion of each sweep, and is a period during which triggering of the next sweep is inhibited. The normal holdoff period varies with sweep rate, but is adequate to assure complete retrace and stabilization before the next sweep trigger is permitted. The HOLDOFF control allows this period to be extended by a variable amount if desired.

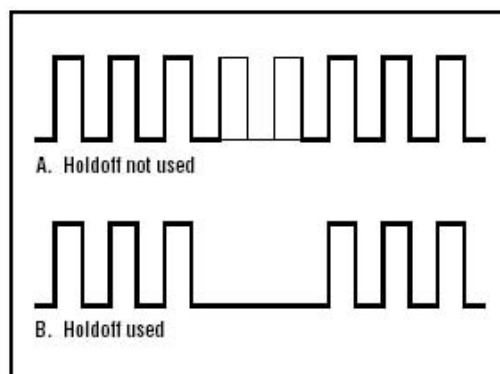


Fig-2