

AUTOMATIC CALIBRATION CONSTANTS, HORIZONTAL AND VERTICAL GAIN, CENTERING, AND TRANSIENT RESPONSE ADJUSTMENTS

NOTE

Within the following procedure, the calibration constants for timing, vertical gain and trigger level are generated by the system microprocessor and are stored in nonvolatile memory. The adjustments in CAL 01, 02, 03, and 04 should be performed in numerical sequence; i.e., CAL 01 should be done before CAL 02, CAL 02 should be done before CAL 03, etc. Performing partial procedures (i.e., only one or two of the CAL steps) is not recommended and should only be done if the calibration constants that would have been set in the preceding steps are known to be correct.

The CAL functions are available only if the CAL/NO CAL jumper (P501 on the Control Board) is in the CAL position (between pins 1 and 2) when power is turned on. When the automatic calibration procedures are completed, return the jumper to the NO CAL position to prevent entry into the calibration routines.

Equipment Required (see Table 4-1)

Calibration Generator (Item 3)

Time-Mark Generator (Item 6)

Oscilloscope (Item 7)

50 Ω BNC Cable (Item 10)

5X Attenuator (Item 17)

Digital Multimeter (DMM) (Item 19)

Alignment Tool (Item 20)

Tunnel Diode Pulser (Item 23)

See **ADJUSTMENT LOCATIONS 4**

at the back of this manual for test point and adjustment locations.

INITIAL CONTROL SETTINGS

CAL/NO CAL jumper CAL position (between pins 1 and 2) prior to turning on power

NOTE

When performing the automatic CAL steps, the initial setup of front-panel controls is not required.

b. CHECK—Top line of the readout display says: "DIAGNOSTIC. PUSH A/B TRIG TO EXIT".

NOTE

The "menu" of calibration, test, and exercise routines is in a loop that may be scrolled through in single steps, either forward or backward. Pressing the upper or lower TRIGGER MODE switch and releasing it respectively increments or decrements the menu position by one. As each routine is selected, its name appears in the lower left corner of the readout display.

When performing a calibration step, touch only the specific control or controls called out in the procedure. Movement of other controls may cause erroneous calibration results.

CAL 01—HORIZONTAL

1. Check/Adjust Horizontal Timing, X1 Gain (R860), X10 Gain (R850), Hrz Ctr (R801), and Trans Resp (R802).

a. Simultaneously press in and hold the Δt and the ΔV push buttons, then press and hold the SLOPE switch. Hold all three switches in for approximately one second, then release them.

c. Scroll to CAL 01.