


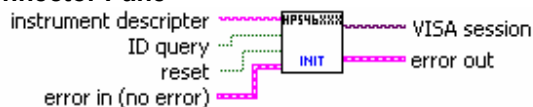
HP54600/54657- Driver per LabVIEW 6

- Aquest document conté les descripcions d'algunes funcions d'ús habitual del Driver
- Les descripcions s'han simplificat i particularitzat pel l'ús al laboratori d'Instrumentació Electrònica
- Les variables **error_in** i **error_out**  només es descriuen per la funció de inicialització
- Per una referència completa de cada funció cal imprimir la documentació de la funció des de LabVIEW


HP546XXX Initialize.vi


This VI loads the addressing information about the instrument into the Open VXI Instrument VI and returns the instrument ID. You can reset the instrument by setting the front panel reset control. You must run this VI before using any of the instrument driver VIs for this instrument.

Connector Pane





Controls and Indicators


 **reset** Selects whether or not to reset the instrument.
T=reset; F=no reset.

 **ID query** Selects whether or not to check the instrument's ID and Device Type registers to be sure the instrument is the type expected.
T= check; F= don't check.

 **error in (no error)**

 **status** status is TRUE if an error occurred before this VI was called, or FALSE if not. If status is TRUE, code is a non-zero error code. If status is FALSE, code can be zero or a warning code.

 **code** code is the number identifying an error or warning. If status is TRUE, code is a non-zero error code. If status is FALSE, code can be zero or a warning code. Use the error handler VIs to look up the meaning of this code and to display the corresponding error message.


 **source** source is a string that indicates the origin of the error, if any. Usually source is the name of the VI in which the error occurred.

 **instrument descriptor**


GPIB::1::INSTR

 **VISA session**

 **error out**

 **status** The status boolean is either TRUE (X) for an error, or FALSE (checkmark) for no error or a warning.

The pop-up option Explain Error (or Explain Warning) gives more information about the error displayed.

 **code** The code input identifies the error or warning.

The pop-up option Explain Error (or Explain Warning) gives more information about the error displayed.

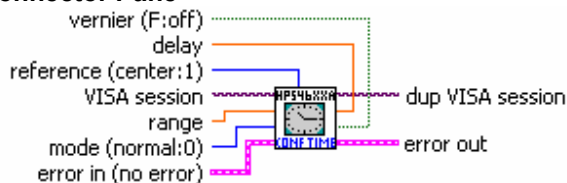
 **source** The source string describes the origin of the error or warning.

The pop-up option Explain Error (or Explain Warning) gives more information about the error displayed.


HP546XXA Timebase Config.vi


This VI configures the horizontal or timebase divisions.

Connector Pane




Controls and Indicators

 **delay** This is the internal time between the trigger event and the onscreen delay reference point.


 **range** Sets the full-scale horizontal time in seconds. It is ten times the time per division. When the delay timebase is selected, the RANGE command will set the full-scale horizontal time of the delayed timebase.

 **mode (normal:0)** This command sets the time base mode:

- 0 - normal: the main timebase, also the default timebase.
- 1 - delayed: the range and delay commands set the values in the delayed timebase instead of the main timebase. No waveform data is available through the bus.
- 2 - XY: Range, Delay, and Reference commands not available.

 **reference (center:1)** This sets the display reference to one division to the left side of the screen or to the center of the screen.

- 0 - left
- 1 - center

 **vernier (F:off)** The vernier switch enables the vernier for the time/div control knob. It only affects the user of the knob, not the timebase range command.

T - on
F - off

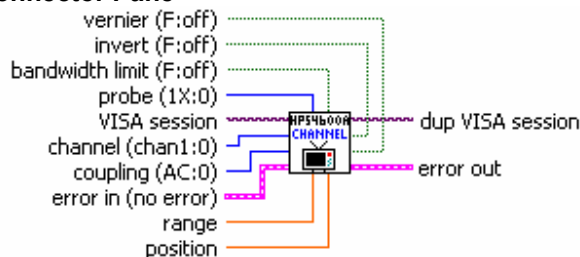
 **VISA session**

 **dup VISA session**


HP54600A Channel Config.vi

The Channel Config VI configures the selected channel (1 or 2) to the specified settings. It controls the channel display and vertical or Y-axis of the oscilloscope. Channels are independently programmable for all offset, probe, coupling, and range selectors.


Connector Pane




Controls and Indicators

 **channel (chan1:0)** The channel selector selects the channel to configure.


0 - channel 1
1 - channel 2

 **probe (1X:0)** The probe selector specifies the probe attenuation factor for the selected channel.

0 - 1X probe
1 - 10X probe
2 - 100X probe

 **coupling (AC:0)** The coupling selector selects the input coupling for the specified channel.

0 - AC
1 - DC
2 - ground

 **bandwidth limit (F:off)** If selected, the bandwidth switch turns on the internal low-pass filter.

T - on
F - off

 **invert (F:off)** The invert switch selects the input inversion for the specified channel.

T - on
F - off

EXT **range** The range selector defines the full-scale vertical axis of the selected channel. It can be set to any value from 16mV to 40V when using 1:1 probe. If the probe value is changed, the range is multiplied by the attenuation factor.

EXT **position** The position selector sets the voltage that is represented at the center screen for the selected channel. The range of the possible values varies with the RANGE command. If the position value is set outside of the Range, then it is automatically set to the nearest legal value.

TF **vernier (F:off)** The vernier switch selects the vernier mode on the volts/div control on the panel. The command affects only the user control knob and not the range command.

T - on
F - off

I/O **VISA session**

I/O **dup VISA session**

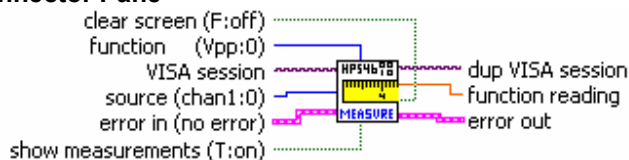
HP54600A/610B Measurements.vi

The measurements VI measures a variety of voltage and time values.

A value of +9.9E+37 is returned on any given value which cannot be made. For example:

- period or frequency must have atleast one complete cycle displayed
- the pulse width measurement must have the entire pulse displayed
- the rise time measurement must have the leading edge of the waveform displayed
- the fall time must have the trailing edge of the waveform displayed

Connector Pane



Controls and Indicators

U16 **source (chan1:0)** This switch selects source of the signal to be measured. Selecting a source that has no signal is a run time error.

0 - channel 1
1 - channel 2

U16 **function (Vpp:0)** The volts measurements ring selects the desired voltage measurement to be taken.

- 0 - V p-p
- 1 - V average
- 2 - V rms
- 3 - V max
- 4 - V min
- 5 - V top
- 6 - V base
- 7 - frequency
- 8 - period
- 9 - duty cycle
- 10 - positive width
- 11 - negative width
- 12 - rise time
- 13 - fall time

TF **show measurements (T:on)** The show measurement selector controls the measurement markers on the active display.

- T - show measurements
- F - no measurements shown

TF **clear screen (F:off)** This switch clears the measurement cursors off the screen.

- T - clear screen
- F - cursors displayed

I/O **VISA session**

EXT **function reading** The function indicator reads back the selected measurement. A +9.9E+37 is returned if the measurement cannot be made.

I/O **dup VISA session**

HP54657A Measurements.vi

The Measurements VI allows the user to read back the selected measurements available with the HP 54657A Measurement/Storage Module; delay, phase, amplitude, overshoot, and preshoot.

The Delay & Threshold VI and the Cursor VI can be used to set up the parameters needed to take these measurements.

Connector Pane



Controls and Indicators

U16 **function (delay:0)** This control selects the type of measurement desired.

DELAY: Places the instrument in the continuous measurement mode and starts a delay measurement. Delay measurement parameters are defined in the Delay & Threshold VI. This function measures the delay between channels one and two. The delay reading is in seconds.

PHASE: Places the instrument in the continuous measurement mode and starts a phase measurement. It outputs the phase between channels 1 and 2. The measurement is made from the first rising edge of the signal connected to input 1, to the first rising edge of the signal connected to input 2. The result is in degrees.

AMPLITUDE: Outputs the voltage amplitude of the first waveform on the screen. The result is in volts.

OVERSHOOT: Outputs the overshoot of the first edge displayed on the screen. The result is a percentage.

PRESHOOT: Outputs the preshoot of the first edge displayed on the screen. The result is a percentage.



VISA session



function reading This indicator displays the returned function reading.

A value of 9.9E+37 will be returned if the reading could not be made.



dup VISA session