Appendix H - Increment Mode

Using the Increment System Mode

The System Increment modes are a pair of special modes, which allow the delay and width of each channel to be incremented at the end of a burst of pulses. Each channel is independent and each may be set with different initial values and different values for the step size for both the delay and the pulse width.

There are two incrementing modes,Increment and DC Increment. In the Increment mode, each start command or external trigger produces a burst of pulses. At the end of the burst the appropriate delays and pulse widths are incremented and the instrument is armed for the next start command. In the DC Increment (Duty Cycle) mode the output is starting as with the normal duty cycle mode. At the end of each cycle the delays and pulse widths are incremented. This continues for the number of cycles defined by the Cycles parameter. The modes are selected from the system mode menu. The step sizes are specified in the channel menus.

9520 SCPI Increment Command Summary

Keyword	Parameter	Std/ New	Comments
:PULSe[0]		Std	Subsystem. Contains commands to control the output pulse generation. Commands without suffix refer to the currently selected logical instrument. See INSTrument subsystem.
:MODe	BINCRement /	New	Sets the To mode. Added parameters for Burst Increment and Duty Cycle Increment mode.
:CYCLe	<numeric value>	New	Sets the number of cycles to generate in Duty Cycle Increment mode.
:IRESet	1	New	Resets the width and delay increment parameters on all channels.
:PULSe[1/2/n]		Std	Subsystem. Contains commands to control the output pulse generation. Valid suffix range depends on the number of channels (ChA-1, ChB-2, etc . . .). Command without suffix refers to the currently selected logical instrument. See INSTruments subsystem.
:IWIDth	<numeric value>	New	Sets the pulse width increment step size.
:IDELay	<numeric value>	New	Sets the delay increment step size.

Function-CLR Pressing the 'FUNCTION' key then 'CLR' initializes the increment parameters and resets the delays and pulse widths to their initial conditions. **This must be pressed after setting all the step parameters, but before generating any pulses.**

SPECIFICATIONS
Width Step Size -1.00s to 1.00s
Width Minimum Step 10ns (-10ns)
Width Step Resolution 250ps
Width Incremented Range 10,000s

Delay Step Size -100ms to 100ms
Delay Minimum Step 10ns (-10ns)
Delay Step Resolution 250ps
Delay Incremented Range 10,000s

Note: Any increment value between -10ns and 10ns will disable the increment function for that parameter.

Update Rate 10µs + 30µs per active channel
(1 Ch @ 25 kHz to 8 Ch @ 4 kHz)