Getting Started with Wave Window Trigger on the DL850

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Introduction:

The Wave Window trigger is used frequently by UPS designers and with similar applications. It will trigger on any channel in response to noise, distortion, or sudden changes in phase angle. *The Wave Window trigger is intended only for waveforms that do not have fast-rising edges, such as a sine-wave.* This example uses a 60 Hertz sine-wave on CH1; always start with one channel and add subsequent channels *one at a time*.

Procedures:

1. CONNECT the probe on Ch1 using a sine wave signal source
2. Press SETUP (hard-button) & INITIALIZE (soft-menu item #6)
3. Select AUTO-SETUP (soft-menu item #3)
4. Press DISPLAY (hard-button) and set FORMAT to SINGLE (soft-menu item #1)
5. Turn OFF all un-used channels.
6. Adjust Time/Div to 10 ms/div.
7. Adjust V/Div for Ch1 if necessary.
8. *You should now have a stable waveform (and may proceed if you do).*
9. Press START/STOP to STOP (green LED goes dark).
10. Press MODE
11. Select NORMAL (soft menu, third button)
12. Press SIMPLE/ENHANCED
13. Adjust Setting to ENHANCED (soft-menu item #1)
14. Press TYPE (second soft button), select WAVE WINDOW
15. Press SET PATTERN (third soft button)
    - CH1=ON
    - CH1 Width = 1V or higher (up to 20V for a 120 VAC power line, width setting depends on the quality of your input waveform)
    - CH2 thru CH16=OFF
    - Cycle Freq = 60 Hz
    - Reference Cycle = 1
    - Sync Ch = Auto
16. Press ESC
17. Press START/STOP to START (green LED turns GREEN).
18. You should now have a stable waveform which will trigger occasionally on noise or distortion.
19. You may wish to view more closely the anomalies which are triggered upon; if so, press ZOOM and select Mode=Main&Z1.
20. See Example Screenshot below.

This example is designed to give you a basic understanding of Wave Window. Please see other documents for further insights to Wave Window, such as '*Wave Window FAQ.PDF*'.

Triggering Insights - If it is not triggering, reduce the WIDTH in step 15 - until you get it to trigger occasionally on noise or distortion. You may disconnect the probe at CH1 or to cause a trigger event and the DL850 will trigger. You may then re-connect the probe to cause a trigger condition as well.

MANUAL TRIGGER - Another way to force a trigger is to press the "MANUAL TRIG" button located just below the MODE button. If it is triggering too often - increase the WIDTH in step 15.

Other ideas for you - You can use ACTION-ON-TRIGGER or ACTION-ON-STOP to save each of these events to a binary file: SHIFT+MODE will take you to this menu.