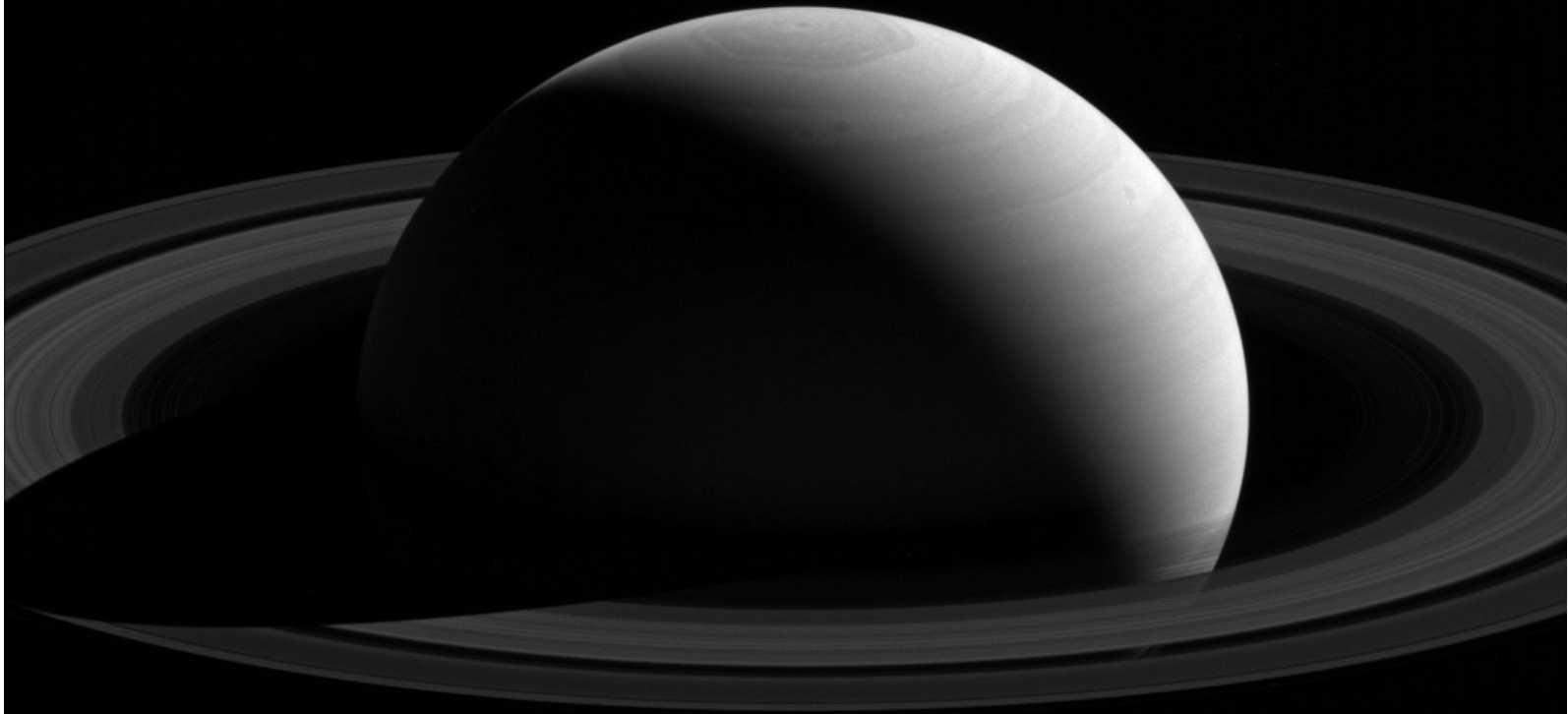


Logic Analyzer Use




EasySetup



The EasySetup wizard guides you through the basic steps that connect, configure, and run your logic analyzer to provide a first look at key signals on your target system.

By default, the wizard runs each time you start the application. You can change that by unchecking items in the Preferences box. You can also control automatic launching of the wizard through the Options selection in the System menu.

You can launch the wizard at any time by clicking the  button on the application tool bar, or by selecting the EasySetup Wizard item from the System menu.

Preferences

- Always run the EasySetup wizard at Start-Up
- Always show this dialog

Do you want to use the EasySetup wizard now to configure your logic analyzer for a simple acquisition?

Yes

No

EasySetup



Find the probe cable labeled A2 A3 CK0.

Plug it into the probe connector labeled CK0 A3 A2, as indicated by the arrow in the diagram.

The logic analyzer is preconfigured to acquire and display data for those channels.

Preferences

- Always run the EasySetup wizard at Start-Up
- Always show EasySetup wizard intro dialog

TLA5201 -- LA 1



CK3 C3 C2 CK0 A3 A2

< Back

Next >

Cancel

EasySetup



Connect the leads from the probe cable to the signals on your target system.

Use the probe head(s) labeled for CK0, A3, and A2. The white-labeled probe lead is for the CK0 signal. Connect it to your target system's clock. You can use it later as the acquisition clock.

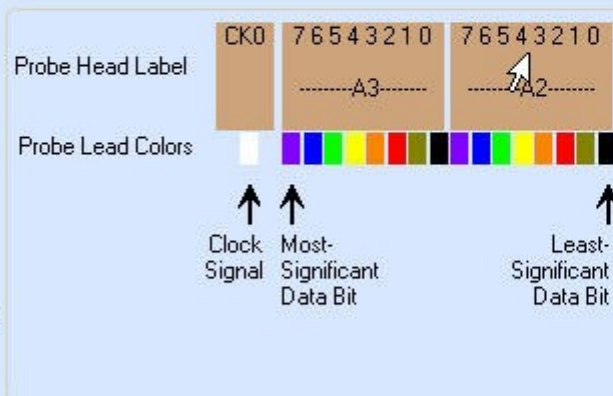
Bit 7 (purple probe lead) in A3 is the most-significant bit for connecting to a data bus. Bit 0 (black probe lead) in A2 is the least-significant.

Align each signal and ground lead correctly for your target system.

Ground may be labeled with GND, -, or be blank on the probe lead.

Preferences

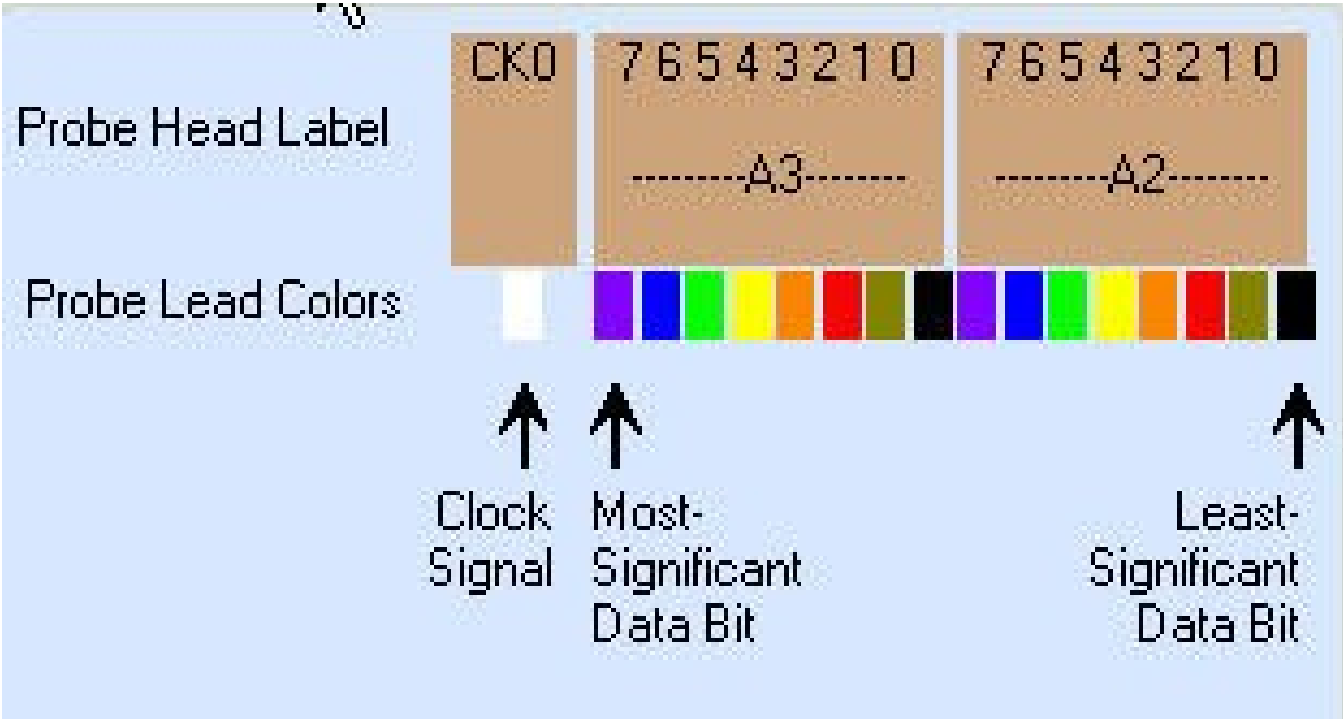
- Always run the EasySetup wizard at Start-Up
- Always show EasySetup wizard intro dialog



< Back

Next >

Cancel



EasySetup



The signal activity shown is for the currently selected voltage threshold.

Your target system must be running for the logic analyzer to detect signal activity.

The Signal Activity monitor will reflect changes you make to the voltage threshold.

Click the Autoset button to select a voltage automatically.

Preferences

- Always run the EasySetup wizard at Start-Up
- Always show EasySetup wizard intro dialog

Threshold: 1.5V

Signal Activity

CK

0



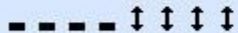
A3

7 6 5 4 3 2 1 0



A2

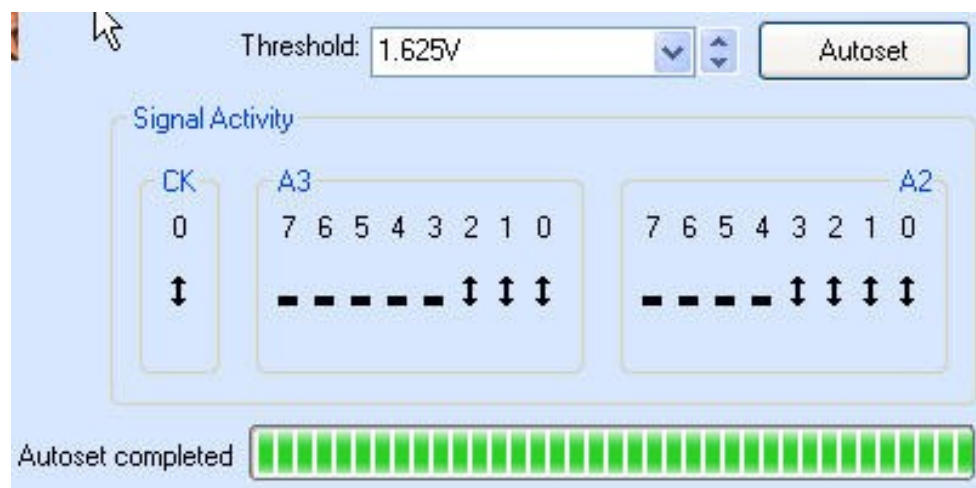
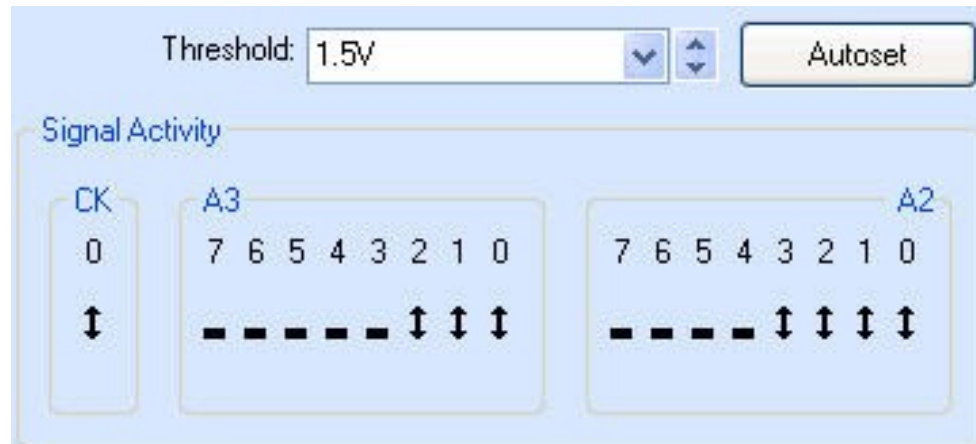
7 6 5 4 3 2 1 0



< Back

Next >

Cancel



The logic analyzer is ready. It is configured to do the following:

Acquire normal samples every 2 nanoseconds (500 MHz).

Acquire MagnVu samples every 125 picoseconds (8 GHz).

Trigger on the first sample acquired.

Store 32K samples.

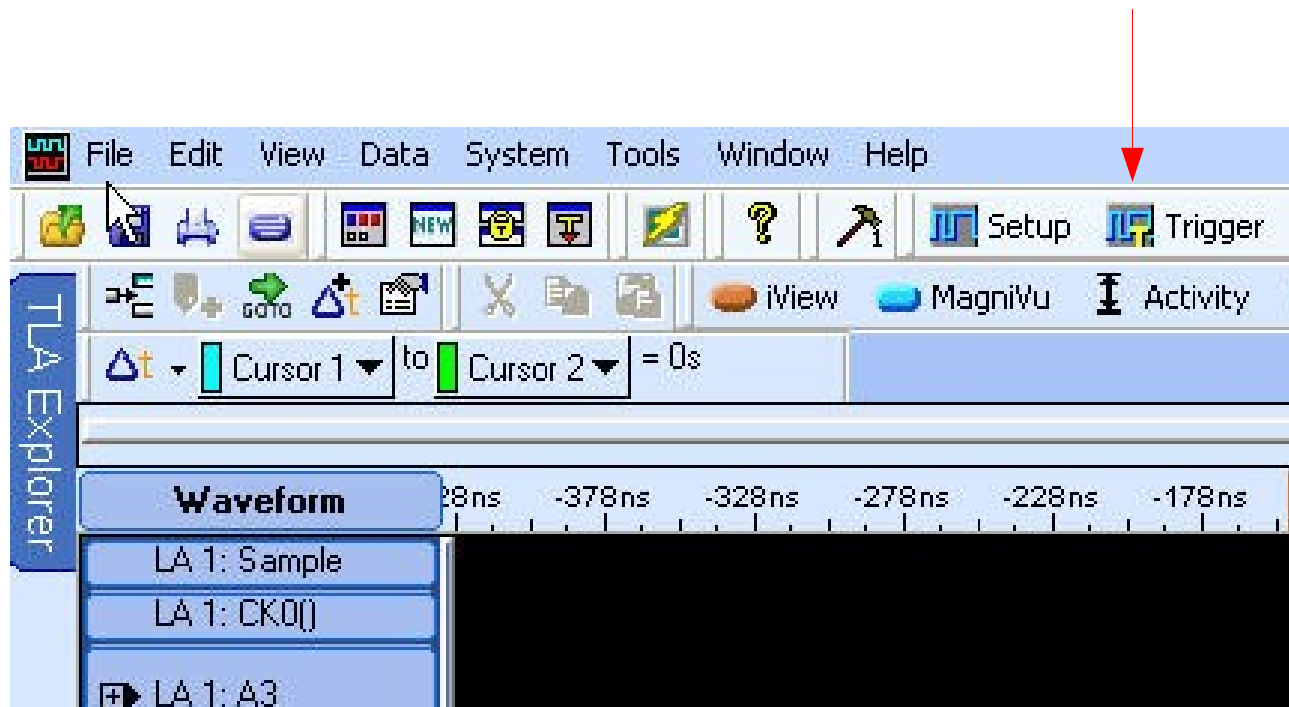
Open a data window to display the samples.

Click the  button on the data window tool bar to zoom out on the data.

Click the  button on the data window tool bar to zoom in on the data.

Click Finish to acquire and display data.

Select Trigger on the tool bar to open the trigger setup menu



Select easy trigger

Select the desired trigger type and the channel to trigger on

The screenshot shows the TLA Explorer software interface. At the top, there is a toolbar with various icons and a 'Storage' dropdown set to 'All'. Below the toolbar, there are two tabs: 'EasyTrigger' and 'PowerTrigger'. The 'EasyTrigger' tab is active. Underneath, there is a list of trigger types under the heading 'Simple Events'. The selected trigger type is 'Trigger on channel transition (edge)'. Below this, there is a section for configuring the trigger: 'Select the desired channel and the transition condition.' This section contains a 'Channel' dropdown menu set to 'A2(3)', a 'Goes' dropdown menu set to 'High', and a 'Select Channel...' button. Two red arrows point to the 'A2(3)' and 'High' dropdown menus.

TLA Explorer

MagniVu 125ps MagniVu Trigger Pos 50%

Force Main Prefill Trigger Pos 50%

EasyTrigger PowerTrigger

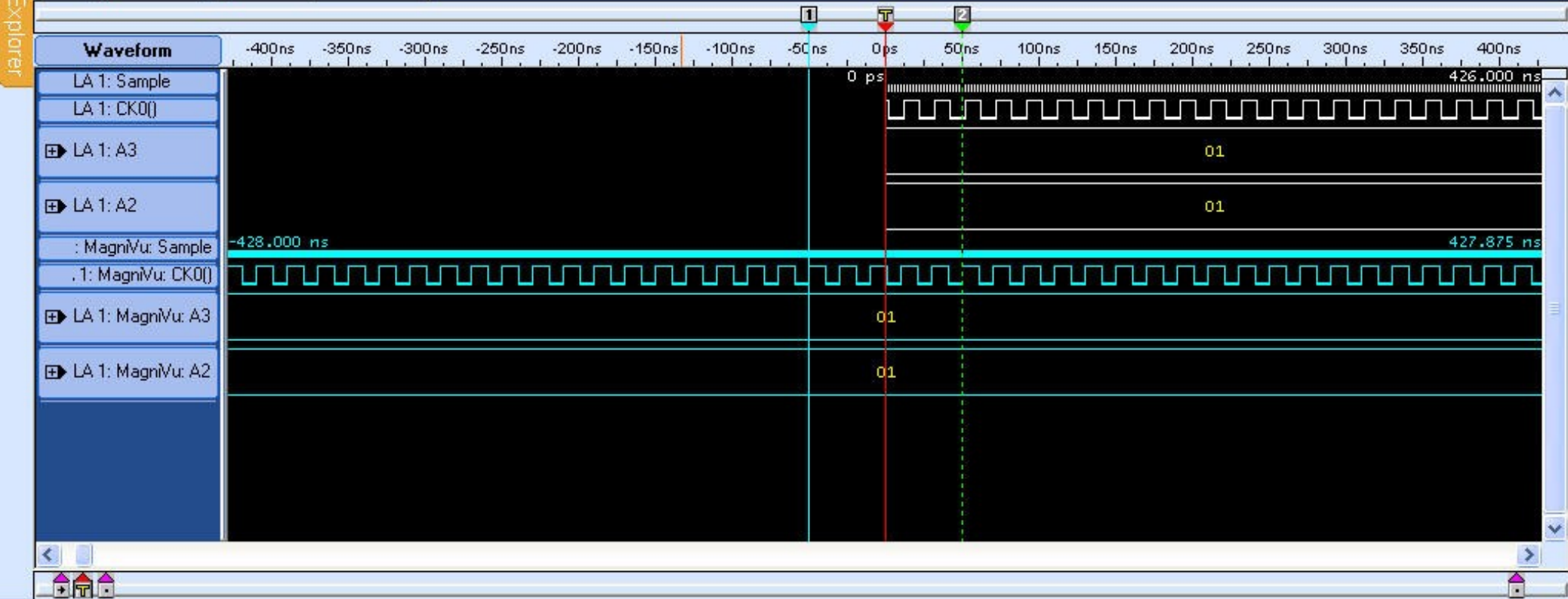
Standard Programs

- Simple Events
 - Trigger immediately
 - Wait for system trigger
 - Run until the Stop button is pressed
 - Trigger on channel low/high (level)
 - Trigger on channel transition (edge)**
 - Trigger on current sample using a snapshot
 - Trigger on 2X clocking group match
 - Trigger on 2X clocking channel match
 - Trigger on 4X clocking group match
 - Trigger on 4X clocking channel match
 - Trigger on glitch
 - Trigger on group setup/hold violation

Trigger on channel transition (edge).

Select the desired channel and the transition condition.

Channel A2(3) Goes High Select Channel...



Add Measurement (Drag and Drop)

- Period
- Frequency
- Positive Duty Cycle
- Negative Duty Cycle
- Positive Pulse Width
- Negative Pulse Width
- Channel to Channel Delay
- Pattern Match

Measurements

Enable	Name	Source	Gate	Value

Buttons: Enable All, Disable All, Delete All, Recalc

Accumulate Clear Values Help

Select the desired trigger position

The screenshot displays the TLA Explorer software interface. At the top, there is a toolbar with various icons and a 'Storage' dropdown menu. Below the toolbar, there are two tabs: 'EasyTrigger' and 'PowerTrigger'. The 'EasyTrigger' tab is selected. Underneath, there is a list of trigger options under the heading 'Simple Events'. The options are:

- Trigger immediately
- Wait for system trigger
- Run until the Stop button is pressed
- Trigger on channel low/high (level)
- Trigger on channel transition (edge)**
- Trigger on current sample using a snapshot
- Trigger on 2X clocking group match
- Trigger on 2X clocking channel match
- Trigger on 4X clocking group match
- Trigger on 4X clocking channel match
- Trigger on glitch
- Trigger on group setup/hold violation

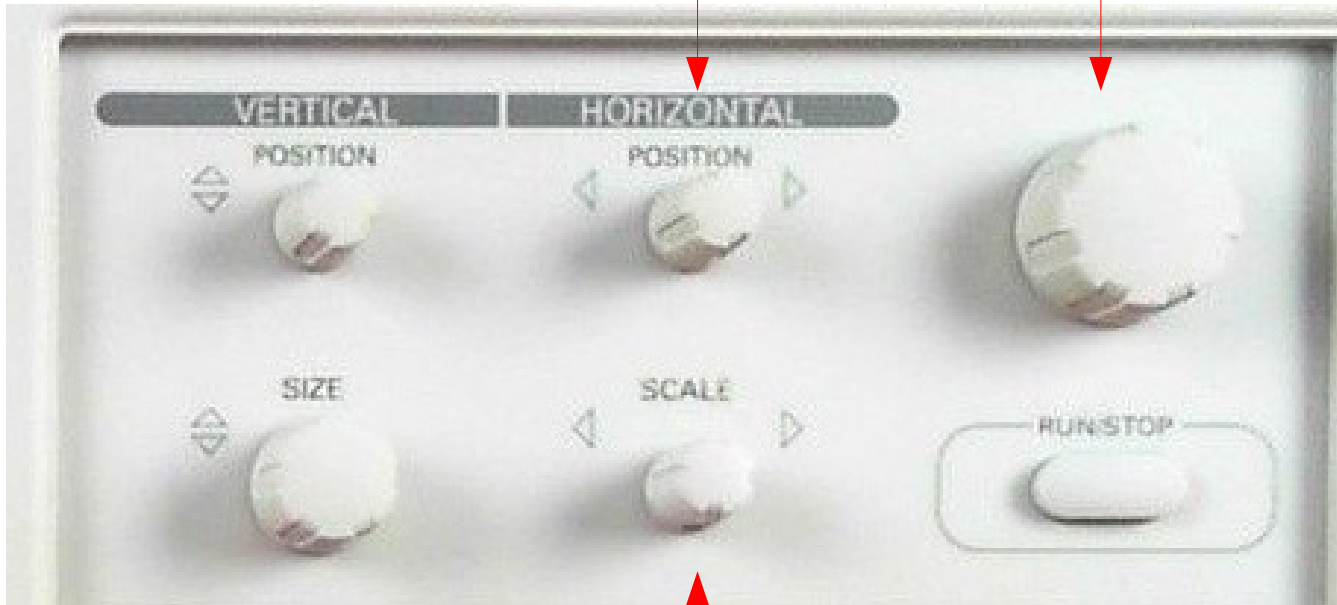
Below the list, the text 'Trigger on channel transition (edge).' is displayed. Underneath that, the instruction 'Select the desired channel and the transition condition.' is shown. At the bottom, there are four dropdown menus and a button:

- Channel: A2(3)
- Goes: High
- Select Channel...

Two red arrows point to the 'Storage' dropdown menu and the 'Trigger Pos' slider, which is set to 50%.

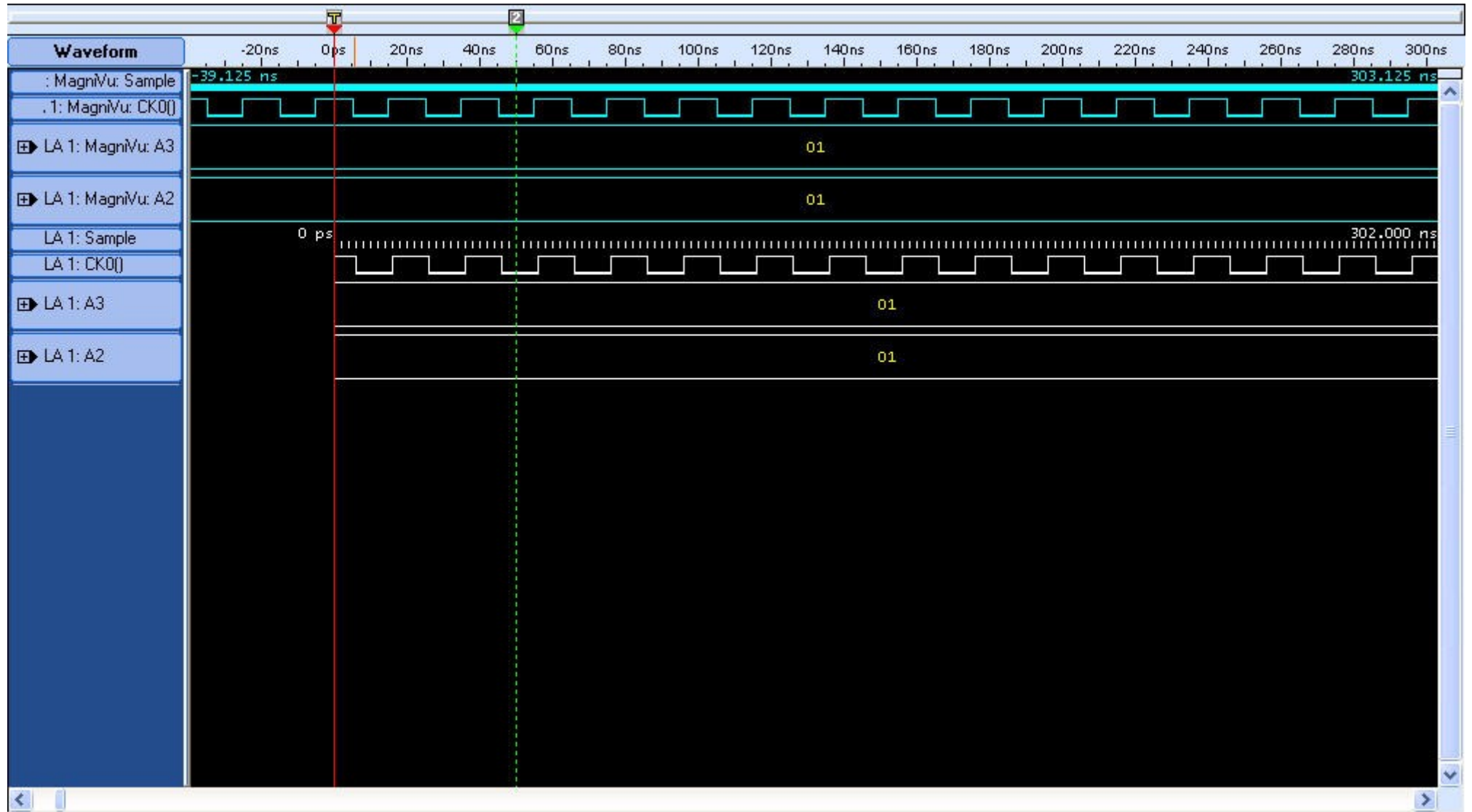
Move cursors left / right

Move waveform
Left or right on screen



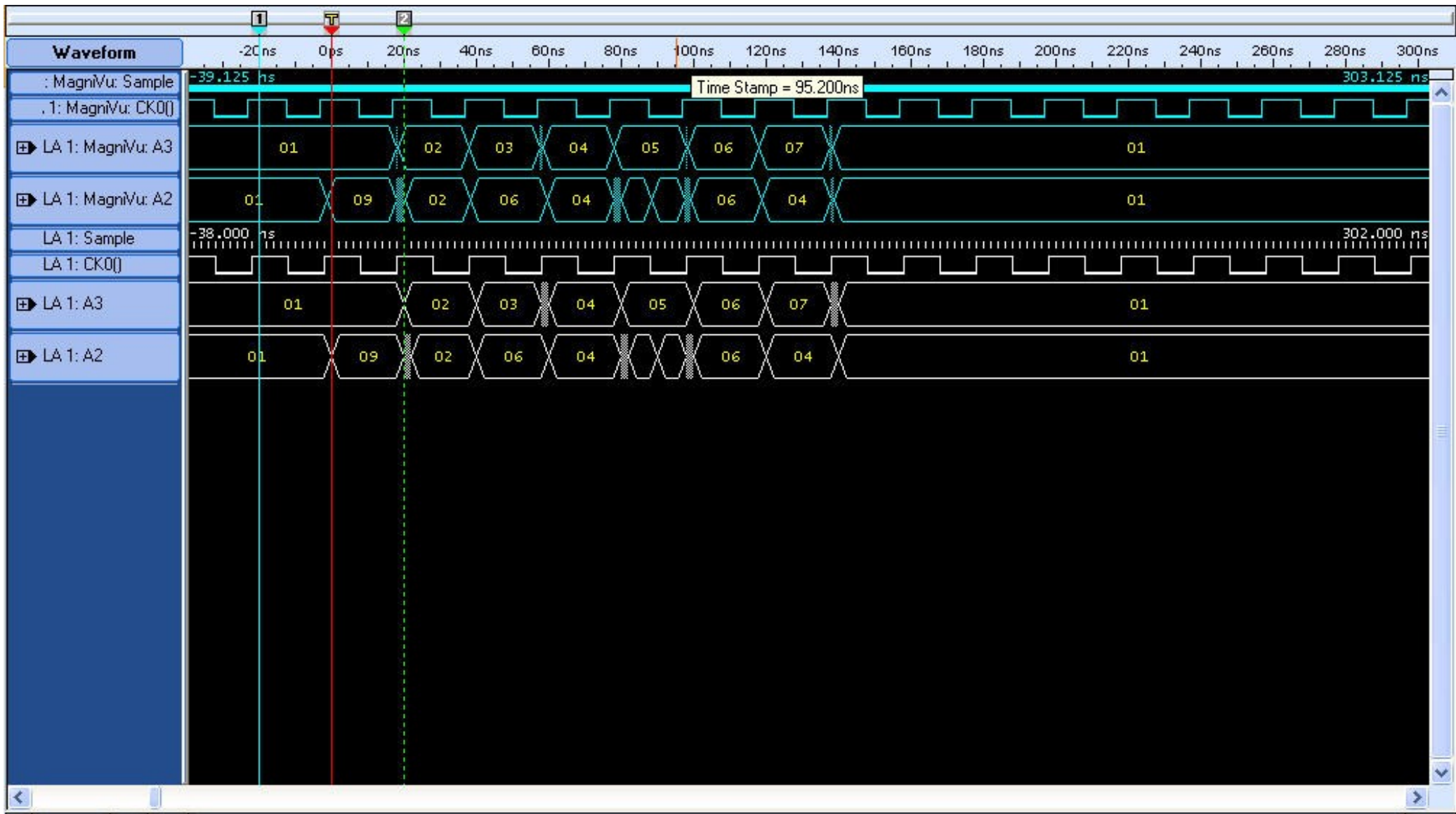
Change time scale

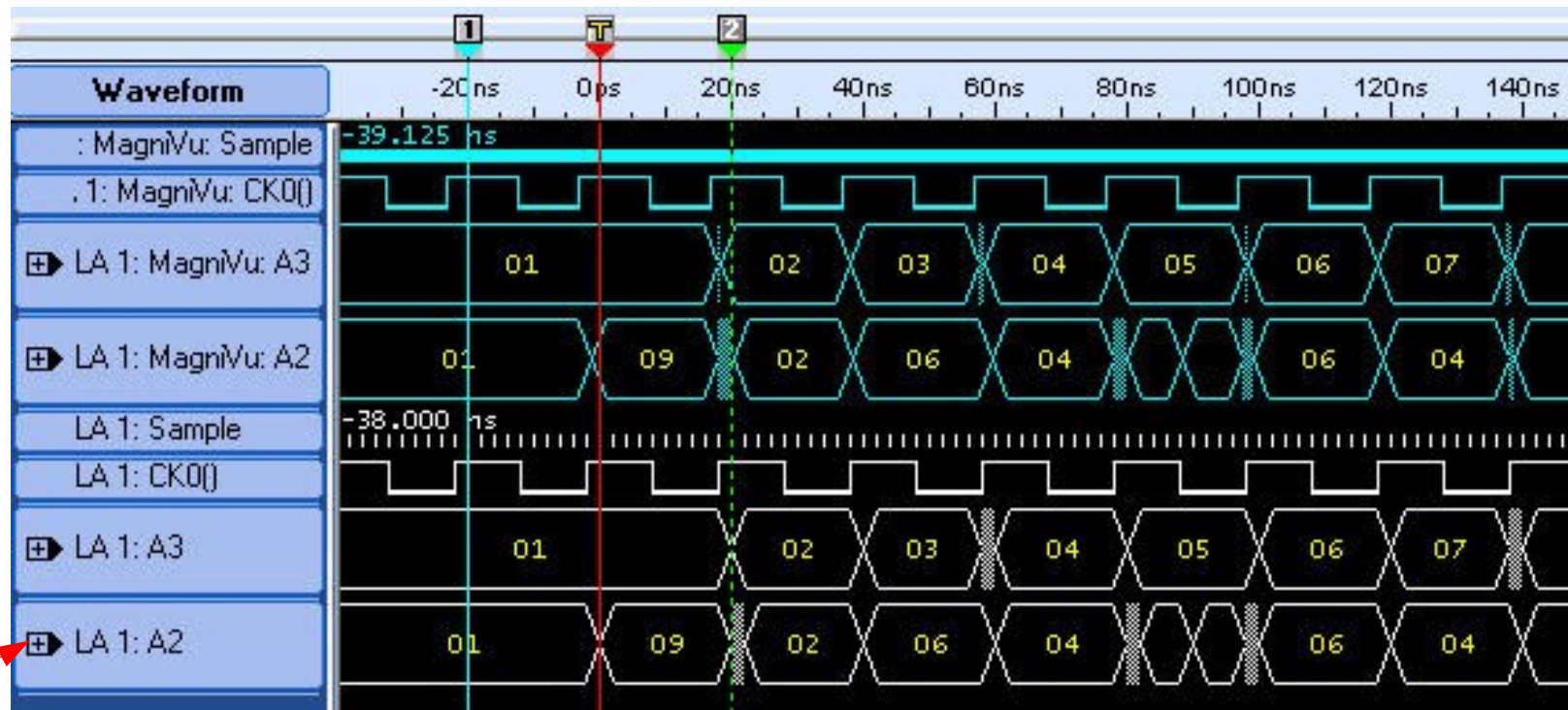
Display moved left on the screen



After setting up trigger source click run to capture a set of data

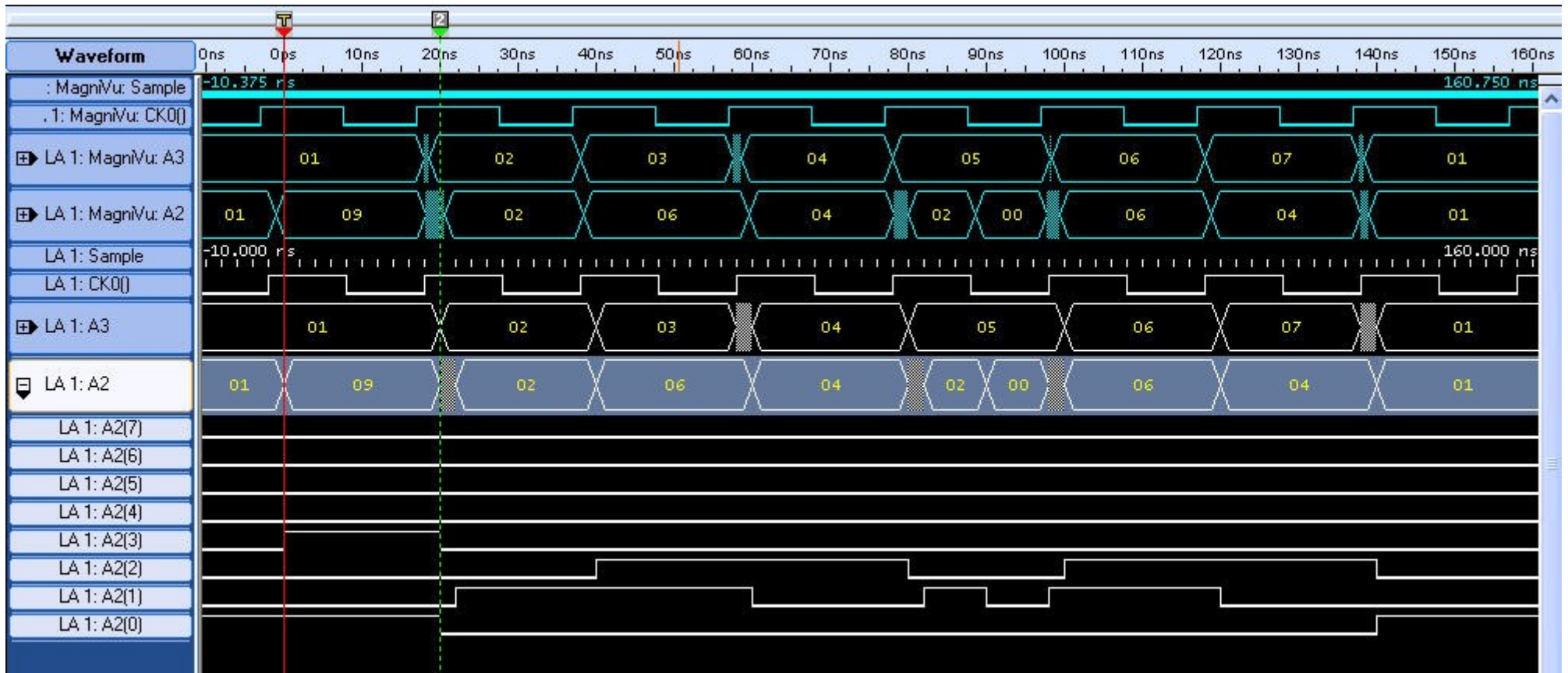






A2 probe has circuit output data

A3 probe shows state register contents (i.e. present state)

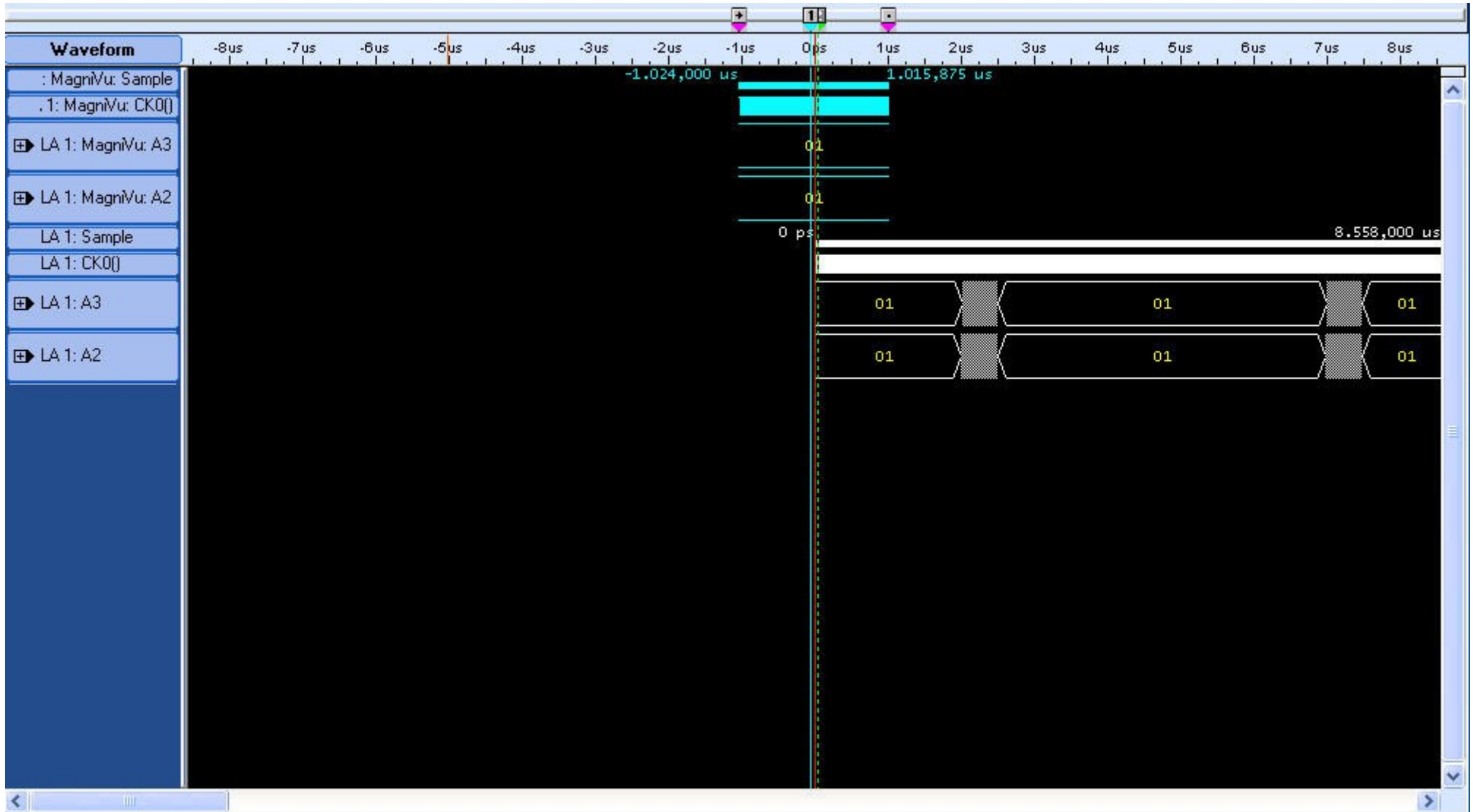


Adjust vertical size of a selected trace

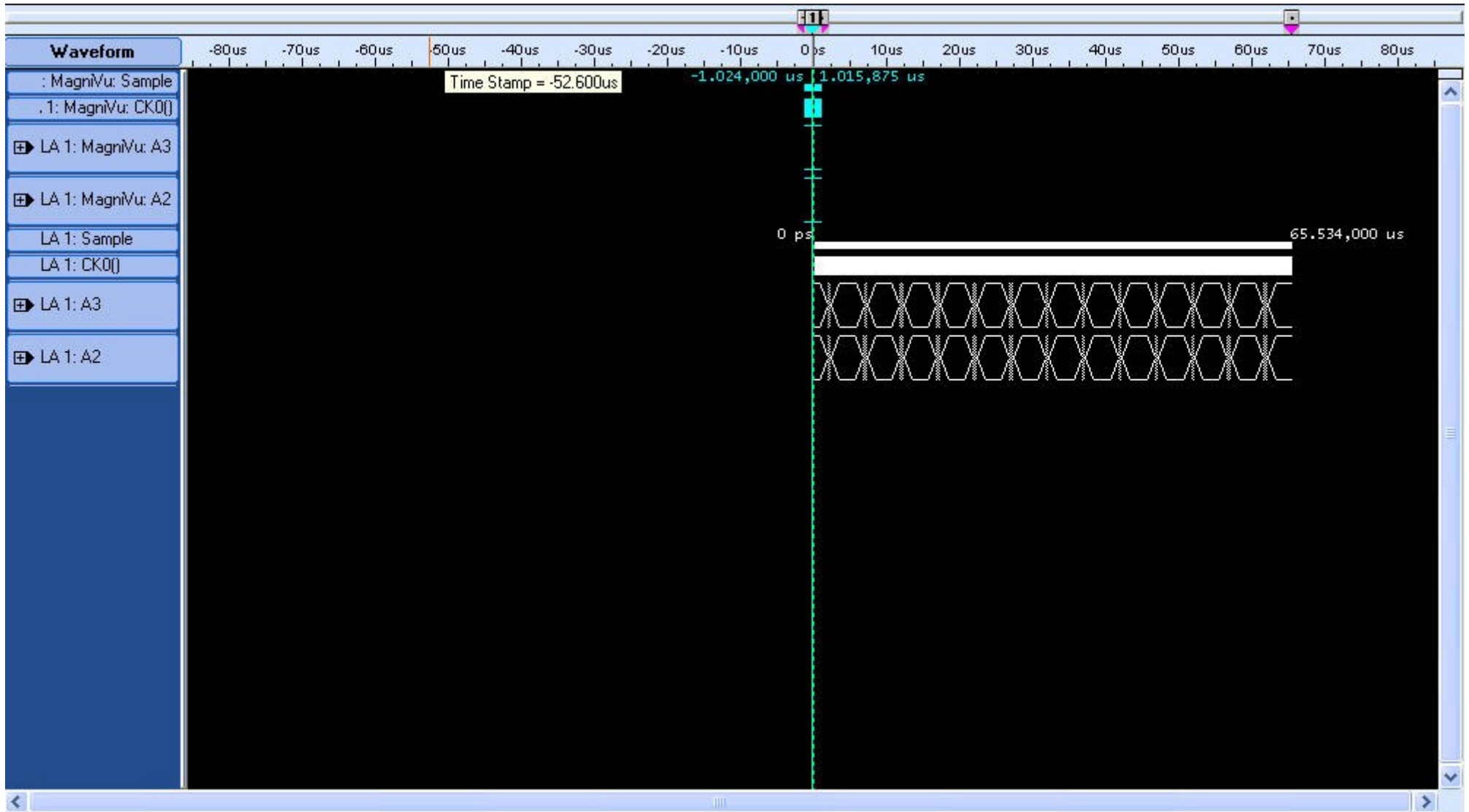


Note the relation of the MagniVue data to the regular data record (32k regular data pts)

Zoomed out using the Scale knob



Really zoomed out



Looking at the MagniVue data traces vs main data traces

