Multifunction Analyzer

Tutorial for LA

Sohwa & Sophia Technologies

Version 1.00

Sohwa & Sophia Technologies

Contents

01. Introduction

This document describes the flow of how to operate the **Logic Analyzer function** [the abbreviated title is **LA**] that is implemented in the **Multifunction Analyzer** [the abbreviated title is the **MFA**].

If you have any words you don't know, such as name, please refer to the **Hardware Users Manual** for the **MFA** and the **Help** for the **MFA application**.

Functions
Oscilloscope
Logic analyzer
Pattern generator
Function generator
Digital multi meter
Simple DC supply
JTAG checker

02. Equipments

Please prepare the following equipments.

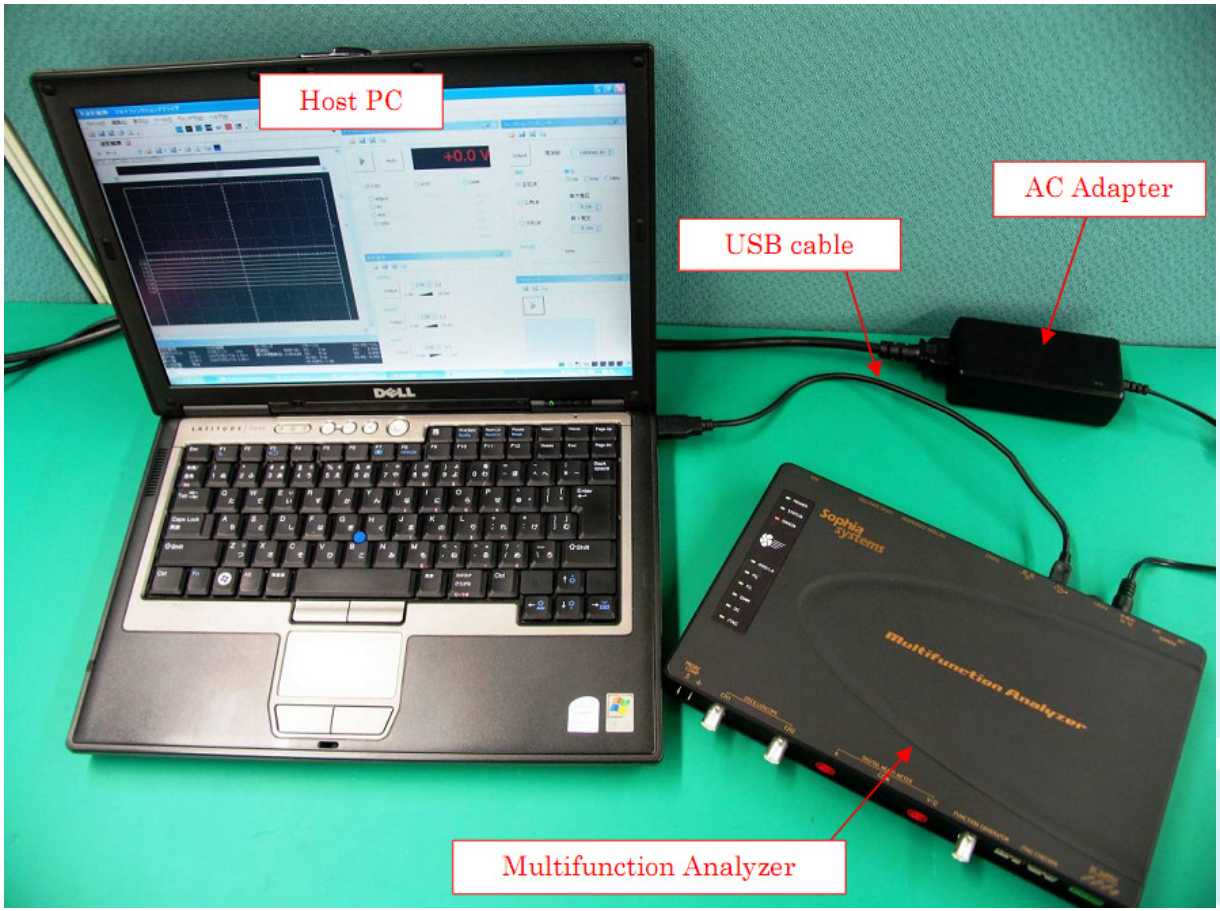
- **MFA** [Qty:1]
- **USB cable of type mini B** [Qty:1] [Sold separately]
- **AC adapter** and **AC cable** [Qty:1]
- **LA/PG cable** [Qty:1]
- **Grabber clips** [Qty:2]
- **PC** [with the **MFA application**] [Qty:1]

*Please refer to the **Installation Manual** for how to install of the **MFA application**.

03. Starting Up

Connect the **Host PC** and the **MFA's equipments**.

Then, turn on power to the **MFA** and start the **MFA application**.



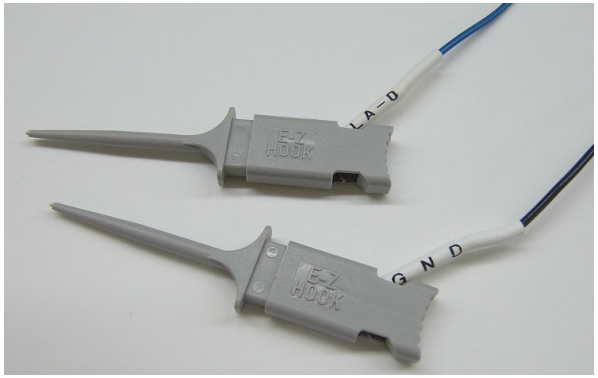
* For details about how to connect the **Host PC**, the **MFA's equipments** and about how to start the **MFA**, please refer to the **Hardware Users Manual**.

* For details about how to start the **MFA application**, please refer to the **Help**.

04. Connections

In this section, describes connections for performing **LA measurement**.

1. Connect the **LA/PG cable** to the **LA/PG connector**.
2. Connect the **Grabber clips** to the **LA/PG cable**.



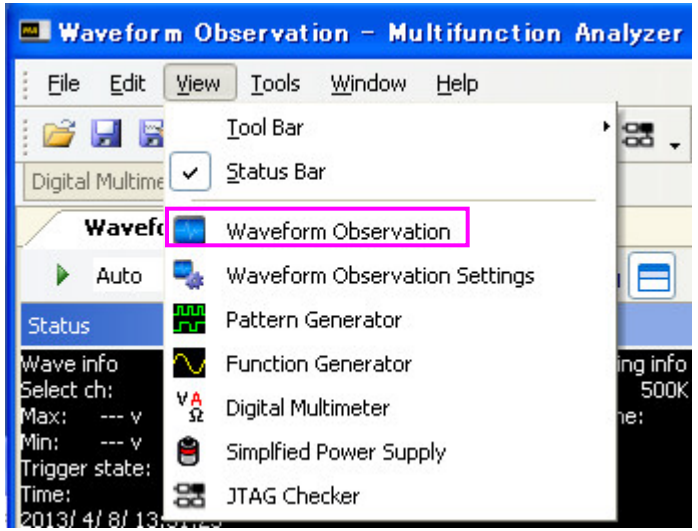
3. Connect the **LA/PG cable GND** to the **MFA PROBE COMP GND**.
4. Connect the **LA/PG cable LA-0** to the **MFA PROBE COMP Signal**.

05. Start the Setup Dialog

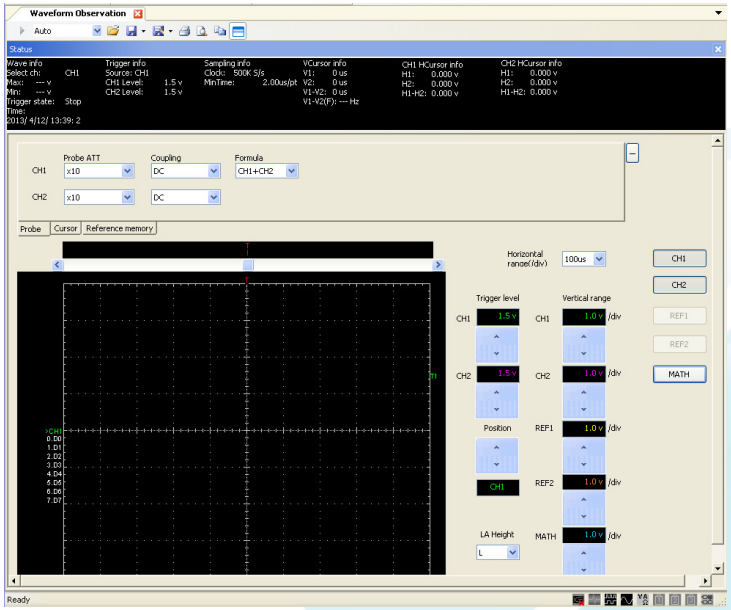
In this section, describes how to start the **Waveform Observation Setup Dialog** of the **MFA application.**

Click **Waveform Observation**.

Click Waveform Observation



Waveform Observation Setup Dialog



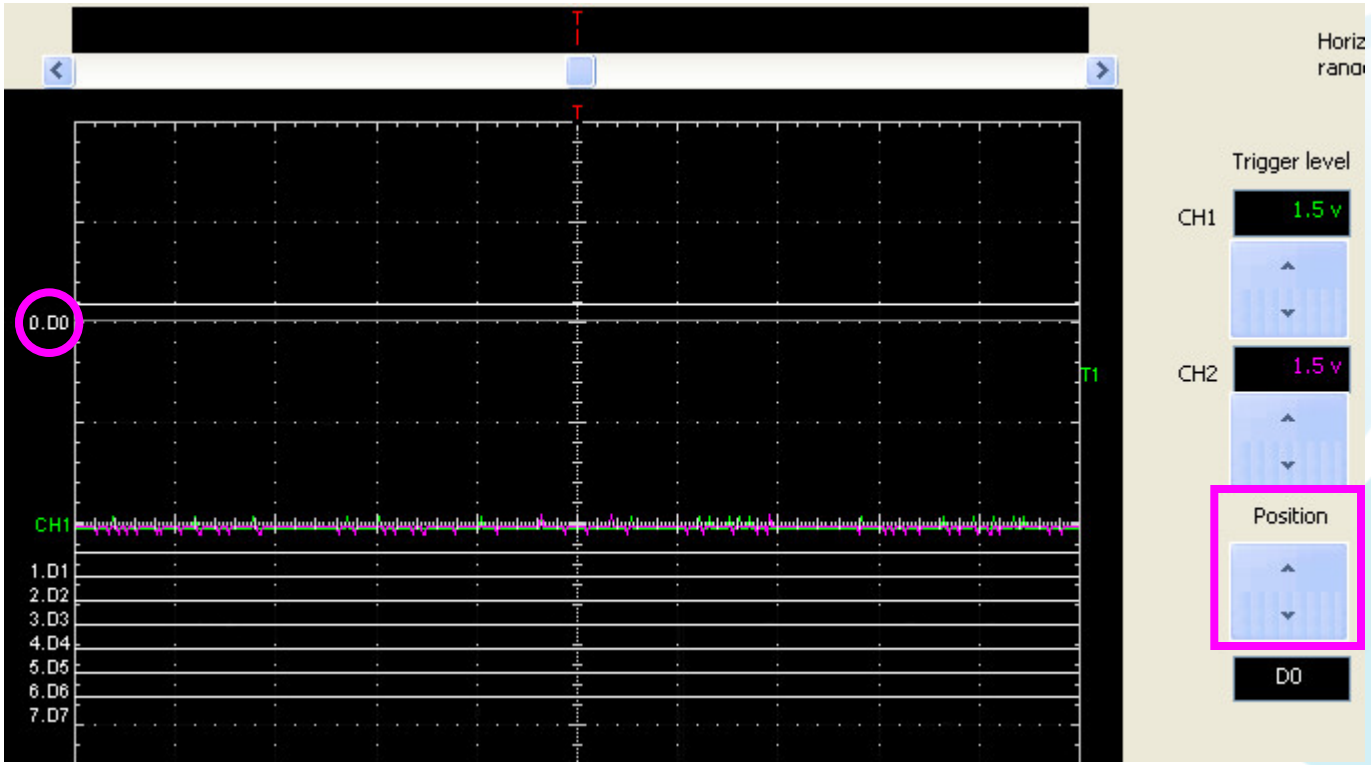
06. Setting the Position

In this section, describes how to move the **LA-D0 position**.

In order to observe the **LA CH0**, moving the **LA-D0 position**.

Move to the **LA-D0 position** shown in the figure below by **Drag and Drop** or the **up/down Button**.

Moving the LA-D0 [0.D0 mark] Position



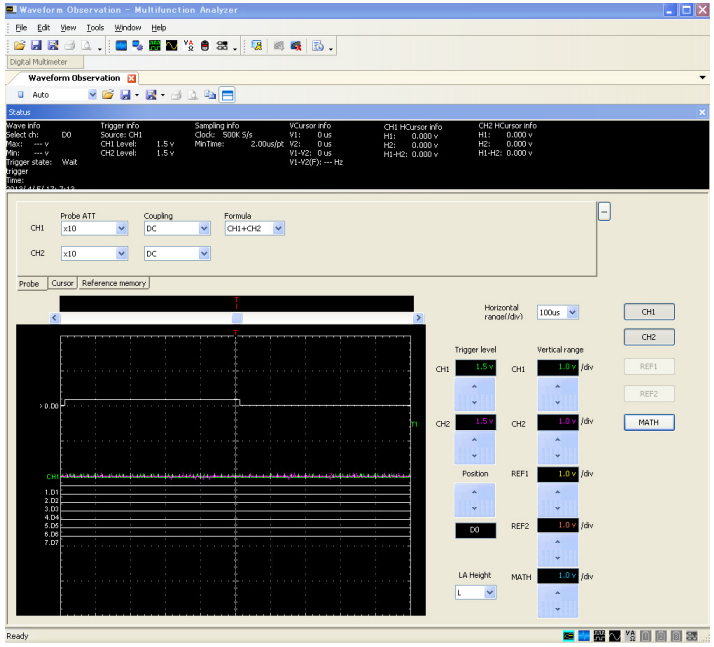
07. Starting the Waveform Observation

In this section, using **LA CH0**, make the observation of the output waveform from PG .

1. Click the **Waveform Observation Start Button** [It is also possible by pressing the **PLAY button** of **MFA**].

Click the **Waveform Observation Start Button**

2. The **square wave** will be observable in the **LA CH0**.

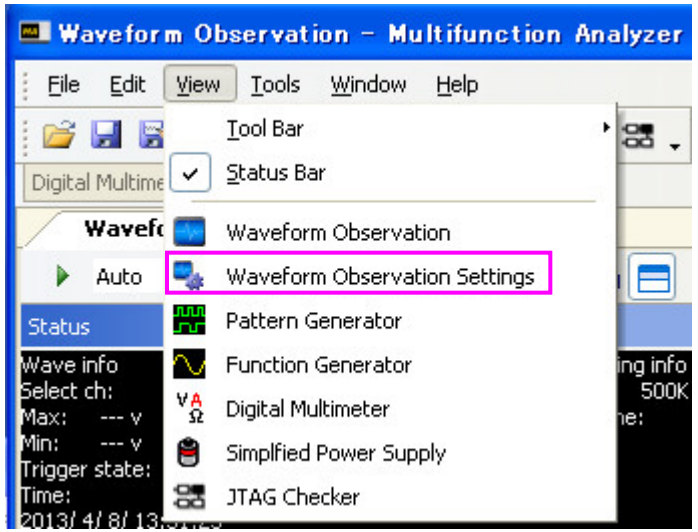


08. Start the Setup Dialog

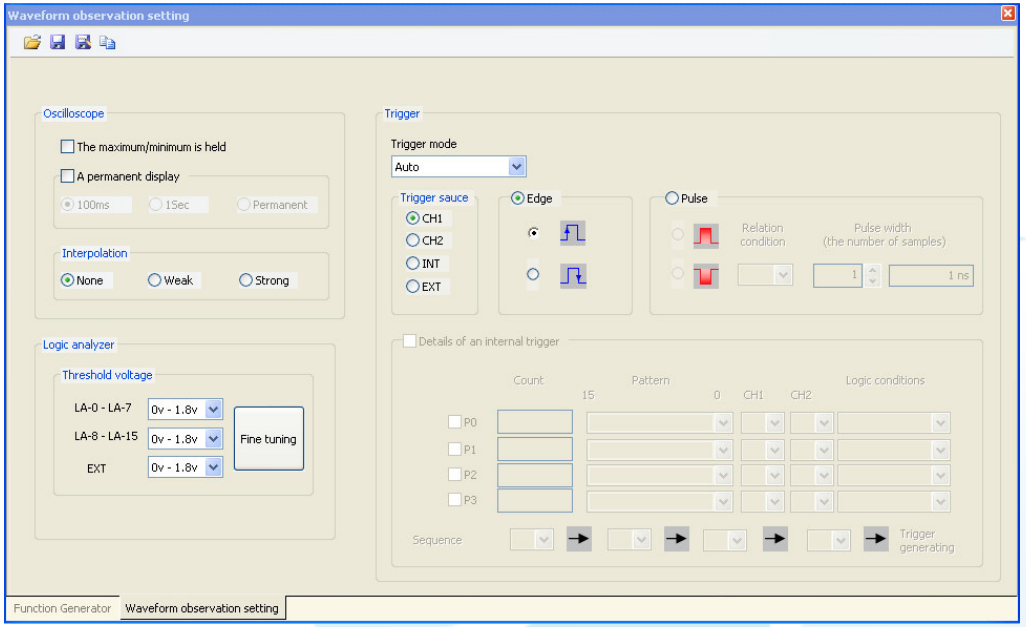
In this section, describes how to start the **Waveform Observation Settings dialog** of the **MFA application.**

Click **Waveform Observation Settings**.

Click Waveform Observation Settings



Waveform Observation Settings dialog

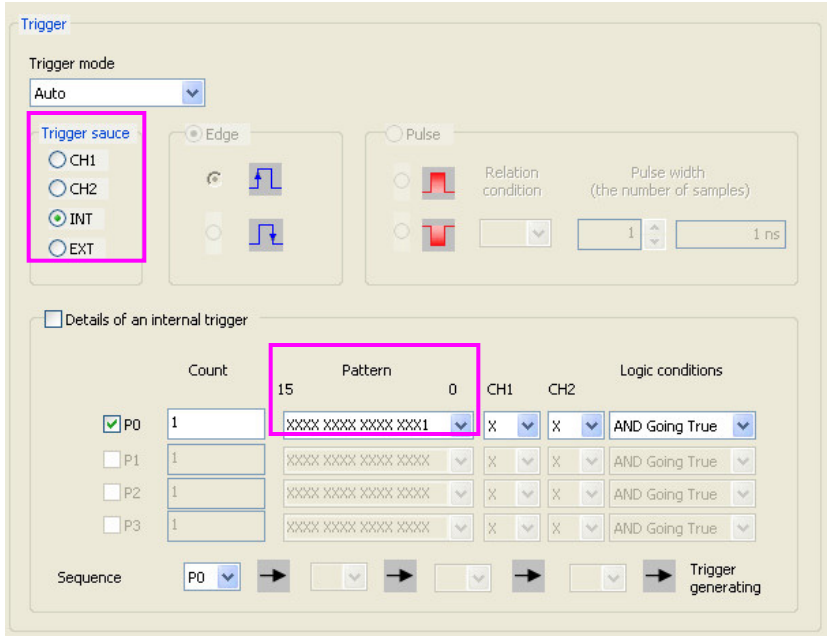


09. Setting the Trigger

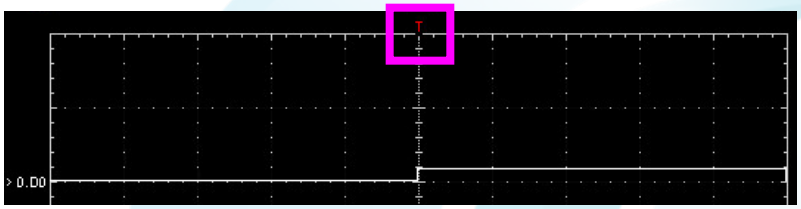
In this section, describes how to set the **Trigger**. Then, check the **waveform**.

1. Click **INT** in the **Trigger sauce**.
2. Set **“1”** in the **LA CH0 of Pattern**.
3. Check that there is the **rising edge of waveform** in the same position as the **trigger mark**.

Setting the Trigger



Check the Rising Edge of Waveform

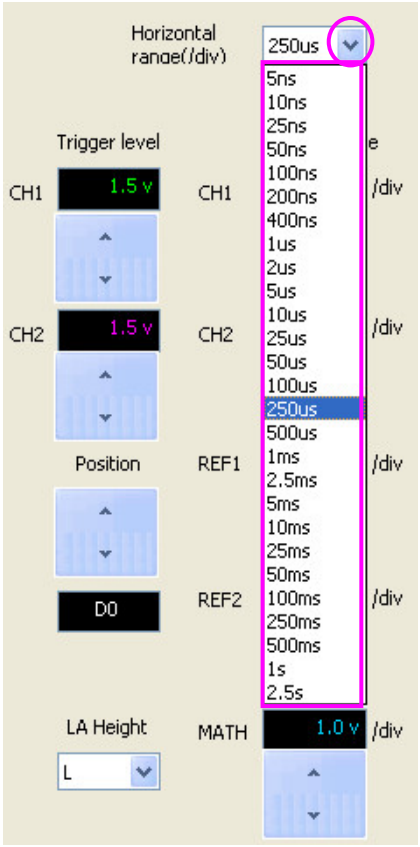


10. Setting the Horizontal Range

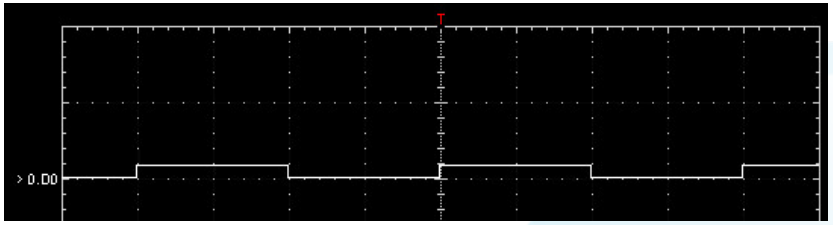
In this section, describes how to set the **Horizontal range**.

1. Select **250us** in the drop down list of the **Horizontal range**.
2. The **waveform of 1kHz** will be observable in the **LA CH0**.

Setting the Horizontal Range [250us/div]



Check the Waveform [1kHz]



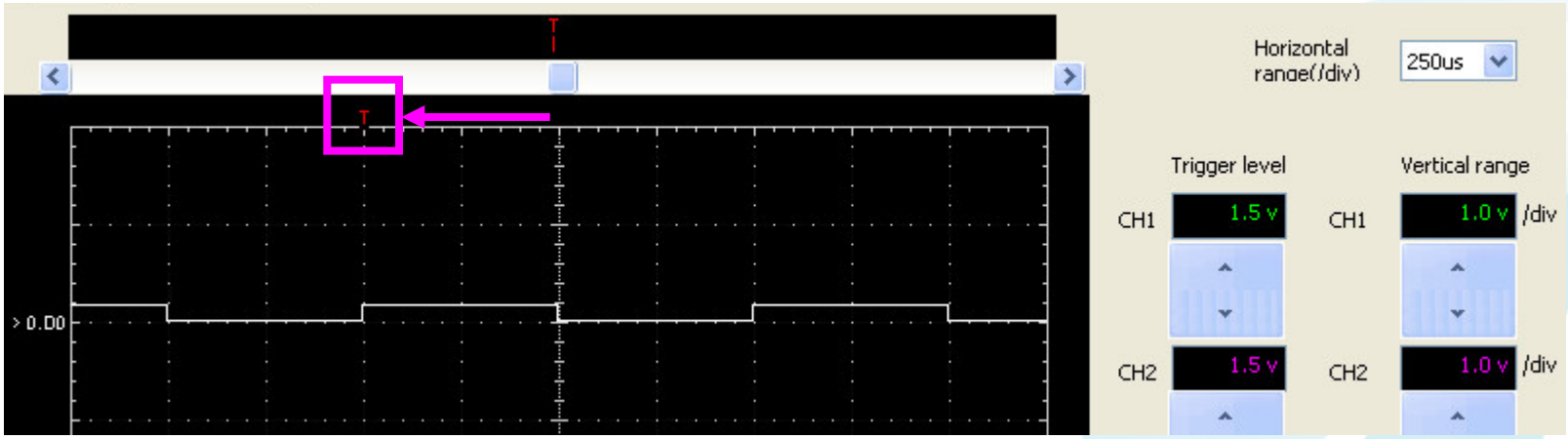
11. Setting the Post Trigger

In this section, describes how to set the **post trigger**.

Move to the **post trigger position** shown in the figure below by **Drag and Drop**.

In this case, it is possible to get more data after the trigger is hit.

Moving Post Trigger Position [T mark]



12. Stopping the Waveform Observation

Finally, stop the **Waveform Observation** [the use, for example, to check the waveform].

Click the **Waveform Observation Stop Button** [It is also possible by pressing the **PLAY button** of the **MFA**].

Click the **Waveform Observation Stop Button**

This tutorial is completed.