Multifunction Analyzer

Tutorial for PG

Sohwa & Sophia Technologies

Version 1.01

Sohwa & Sophia Technologies

Contents

01. Introduction

This document describes the flow of how to operate the **Pattern Generator function** [the abbreviated title is **PG**] that is implemented in the **Multifunction Analyzer** [the abbreviated title is **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.

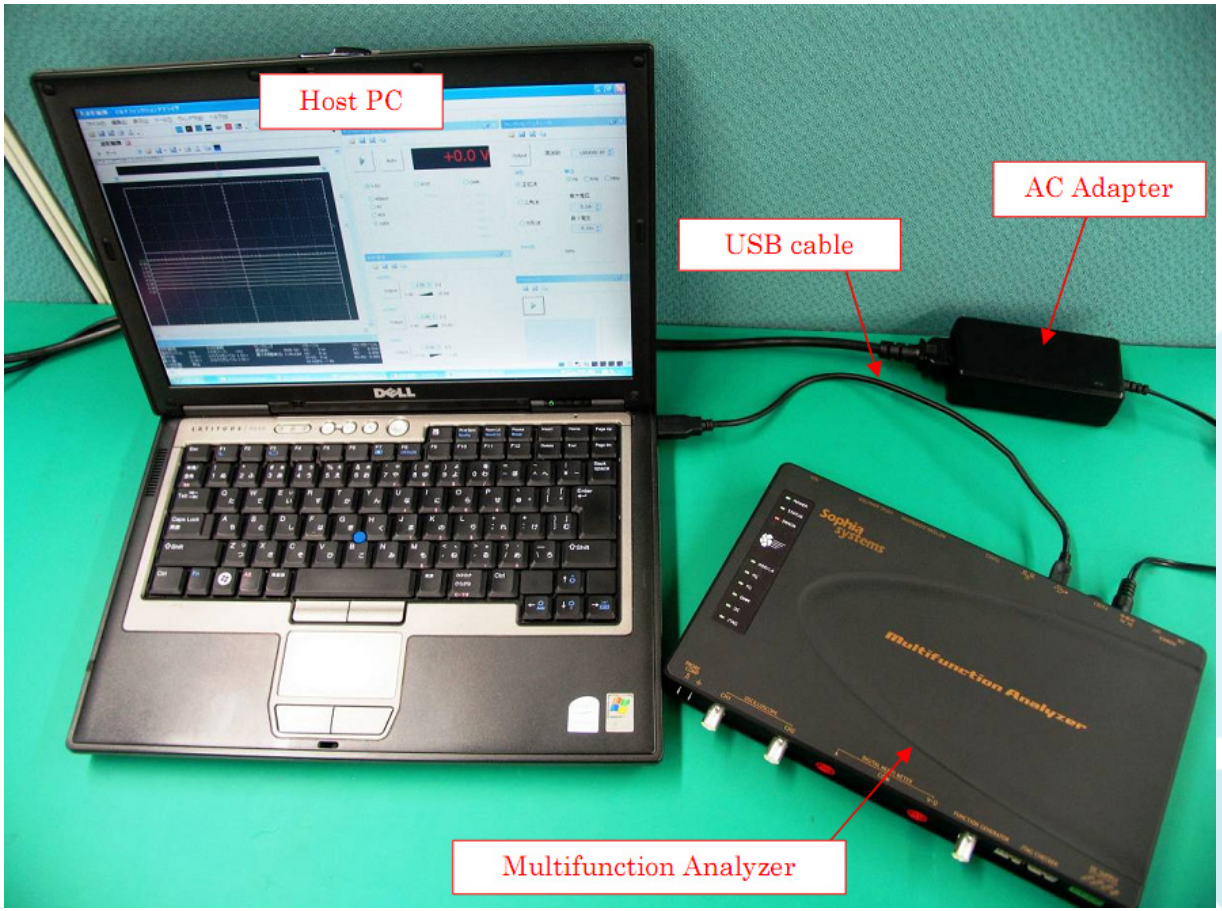
- **MFA** [Qty:1]
- **USB cable of type mini B** [Qty:1] [Sold separately]
- **AC adapter** and **AC cable** [Qty:1]
- **LA/PG cable** [Qty:1]
- **Grabber clips** [Qty:2]
- **PC** [with the **MFA application**] [Qty:1]

*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**.



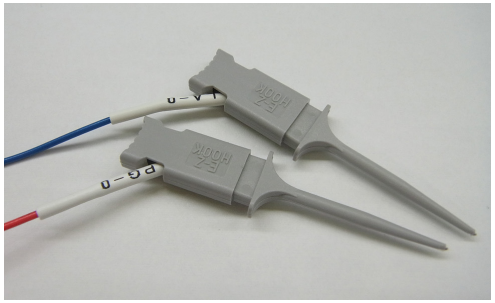
* For details about how to connect the **Host PC**, the **MFA's equipments** and about how to start the **MFA**, please refer to the **Hardware Users Manual**.

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

04. Connections

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

1. Connect the **LA/PG connector** to the **LA/PG cable**.
2. Connect the **Grabber clips** to the **LA/PG cable** [PG-0, LA-0].



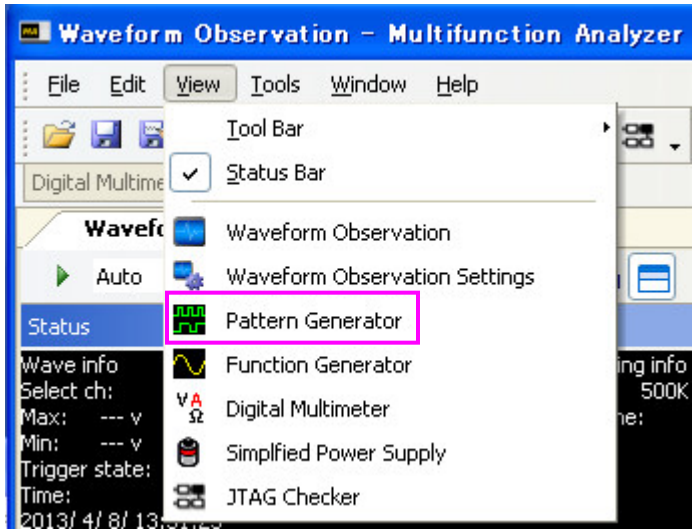
3. Connect the **PG-0** to the **LA-0**.

05. Starting the Setup Dialog

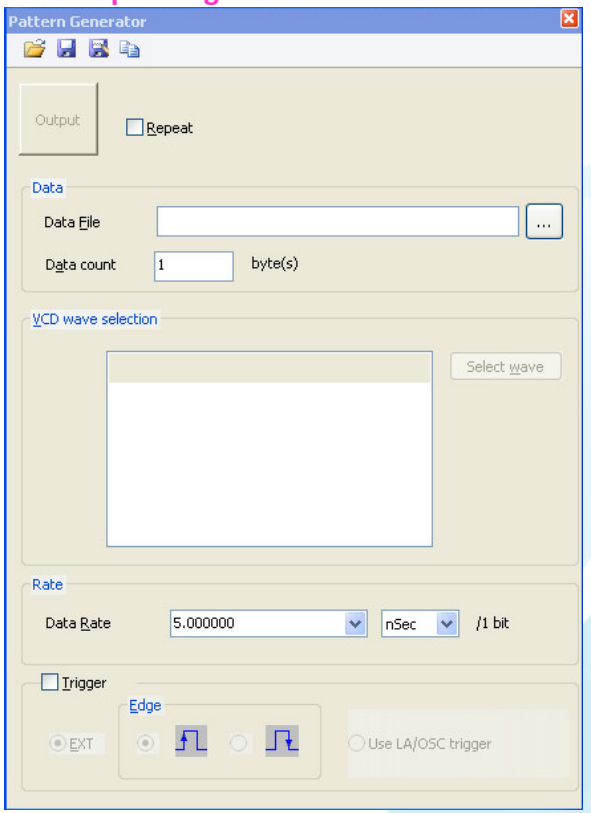
In this section, describes how to start the **PG setup dialog** of the **MFA application.**

Click **Pattern Generator**.

Click **Pattern Generator**



PG Setup Dialog



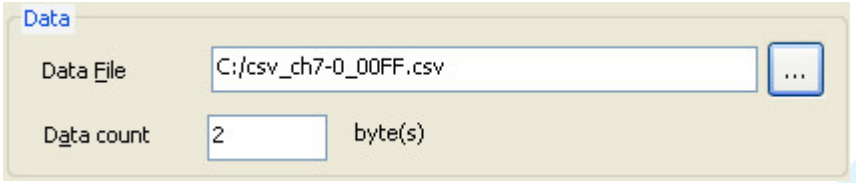
06. Setting the Data File

In this section, describes how to set the **sample pattern data file** [the abbreviated title is **data file**].

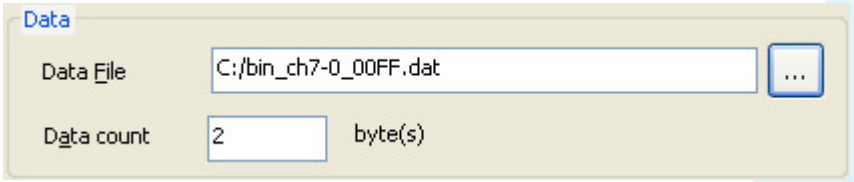
Set the **data file** [**CSV** or **BIN** or **VCD file**] in column of **Data File**.

When you set the **data file**, number of bytes appears in column of **Data count**.

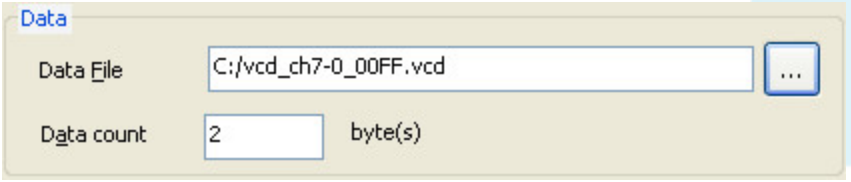
Setting the **CSV file**



Setting the **BIN file**



Setting the **VCD file**



* Pattern to be output is the same when you choose which **data files**.
* **Data files** are present in the hierarchy of the installation folder.

  [/MultifunctionAnalyzer/samples/PGFiles]

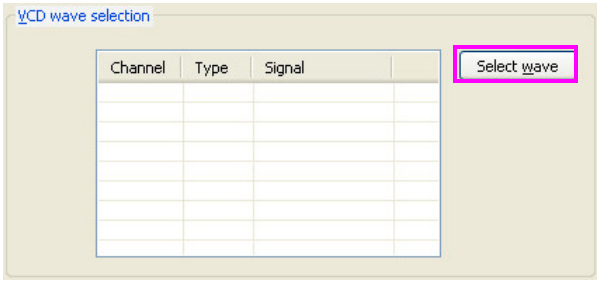
07. Setting the Data File [for the VCD File]

In this section, describes how to set the **VCD file**.

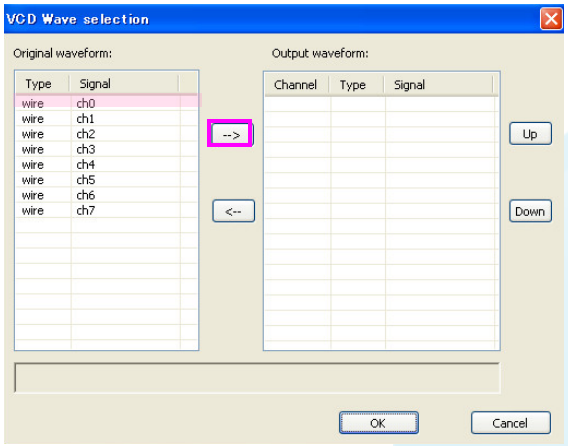
If you set the **VCD file**, you can select which one to use the signal.

Register the **VCD file Ch0 signal** to the **PG Ch0**.

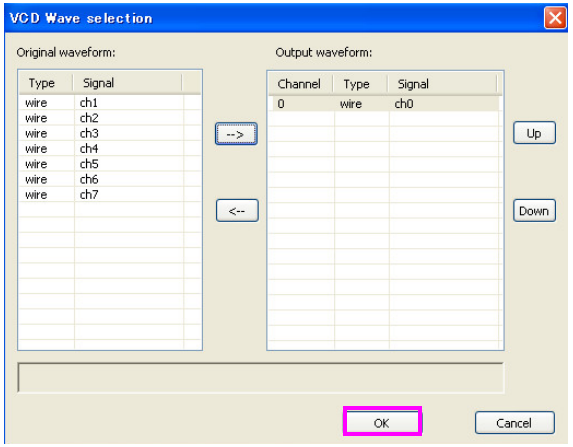
1. Click **Select wave**



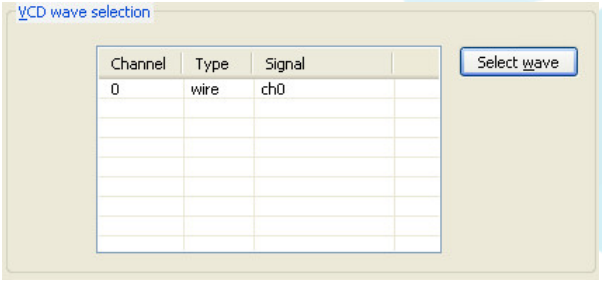
2. Select the **Original waveform Ch0**, then Click **-->**



3. Click **OK**



4. Completion of registration to the **VCD wave selection Channel0 [PG Ch0]**



08. Setting the Data Rate

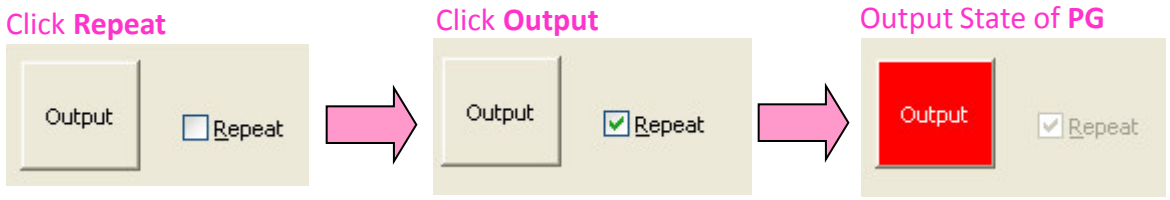
In this section, describes how to set the **Data Rate** of the **data file**.

Set **100uSec**.

09. Starting the PG Output

In this section, describes how to start the **PG output**.

1. Click **Repeat** [It will continue to output data file that has been set].
2. Click **Output**.



10. Starting the Waveform Observation

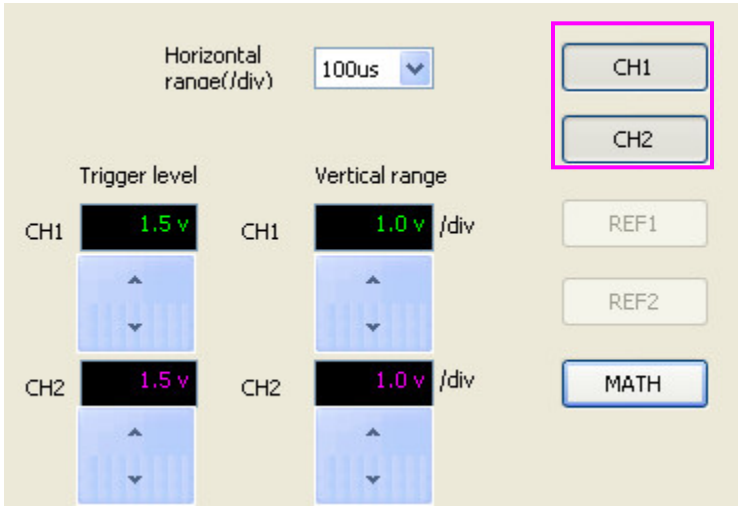
In this section, using the **LA CH0**, make the observation of the output waveform from the **PG CH0** .

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

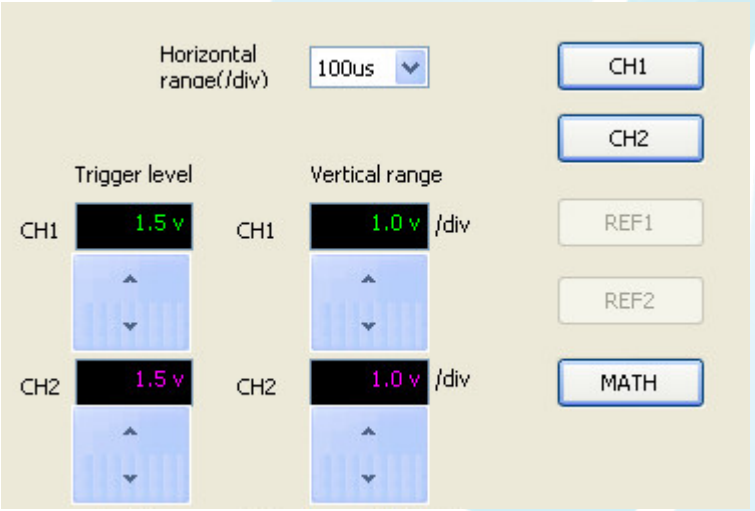
Click the **Waveform Observation Start Button**

2. The waveform will be observable in the **LA CH0**.
3. If you find it difficult to observe by **the waveform of DSO**, turn off the **DSO CH1** and **CH2**.

Click the **DSO CH1** and **CH2**



Off State of the **DSO CH1** and **CH2**



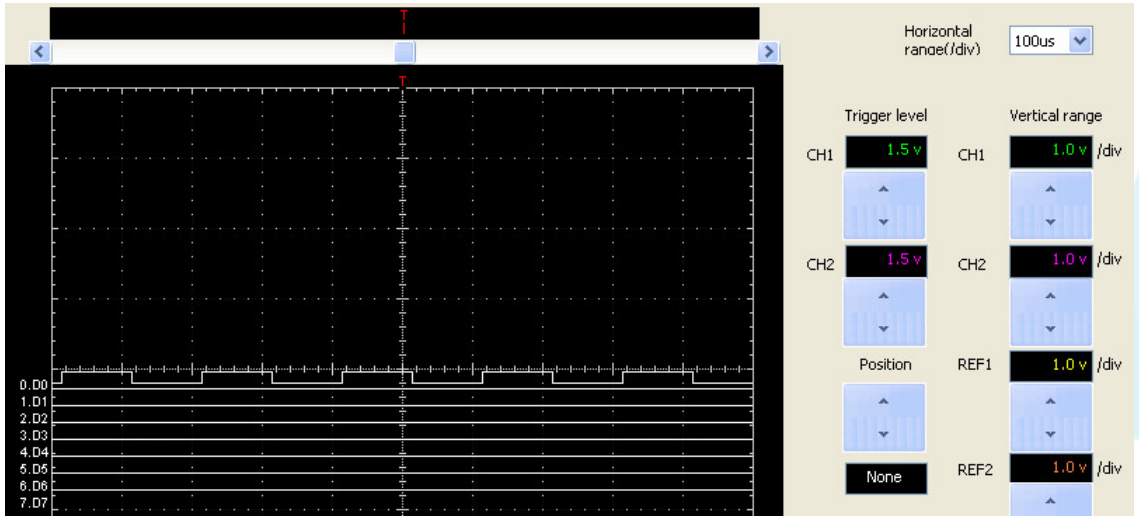
11. Stopping the Waveform Observation

In this section, describes how to stop **waveform observation**.

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

Click **Waveform Observation Stop Button**

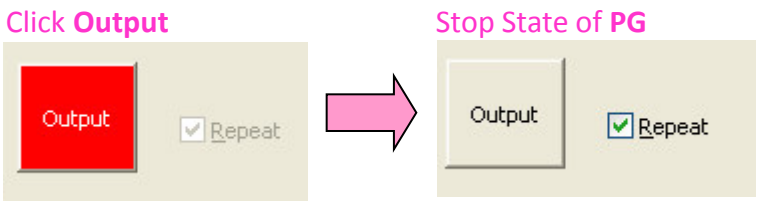
2. Waveform period of 200us will be observable in the **LA CH0**.



12. Stopping the PG Output

Finally, stop the **PG**.

Click **Output**.



This tutorial is completed.