Multifunction Analyzer

Tutorial for FG

**Sohwa & Sophia Technologies**

Contents

01. Introduction

This document describes the flow of how to operate the **Function Generator function** [the abbreviated title is **FG**] 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**.

FG

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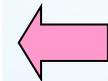
02. Equipments

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]

・ **FG cable** [Qty:1]
[Sold separately: CS2892 [TLBNWA-1.5D2V-PPRG-1 Maker: Misumi]]

・ **DSO probe** [Qty:1]

[Sold separately: CS2891 [HP-9250 Maker: Misumi]

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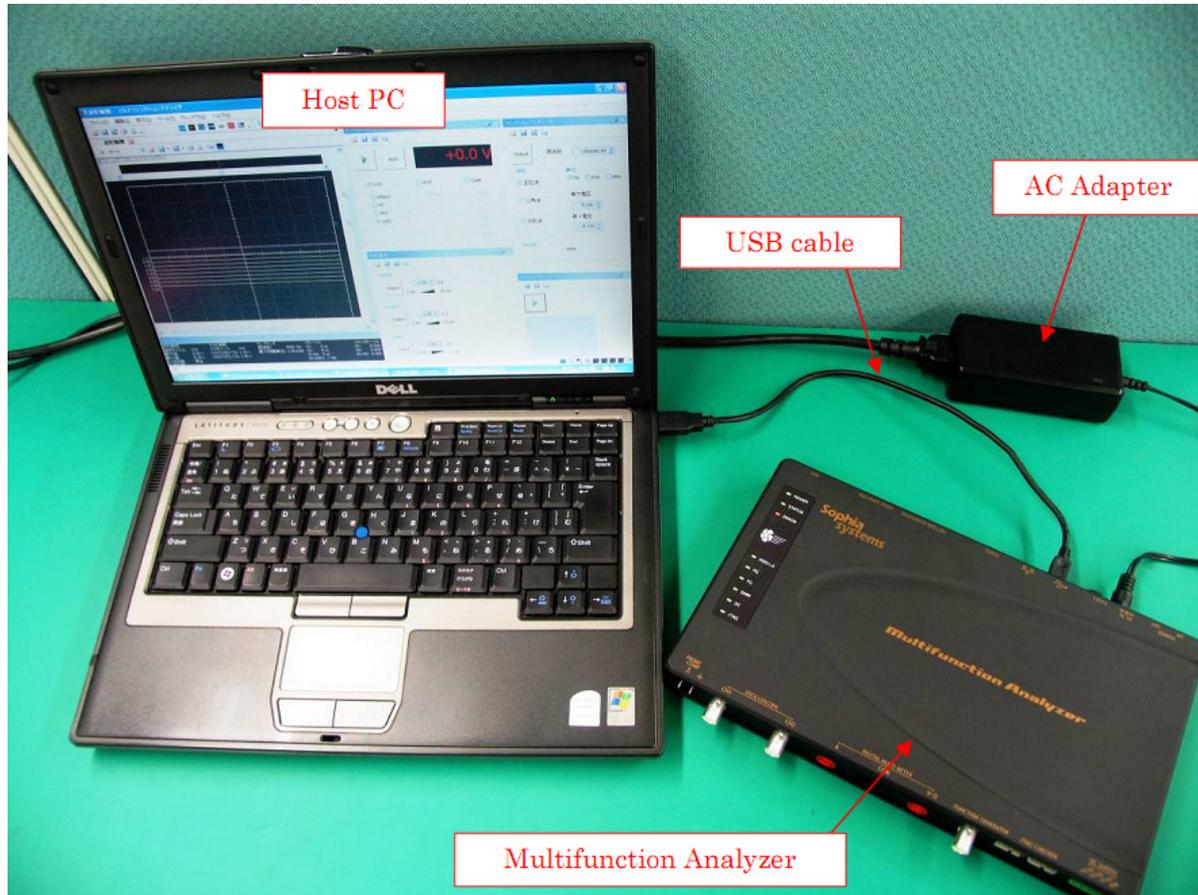
* For details about how to connect the **Host PC**, the **MFA's equipments** and about how to start the **MFA**, please refer to the **Hardware Users Manual**.

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

04. Connections

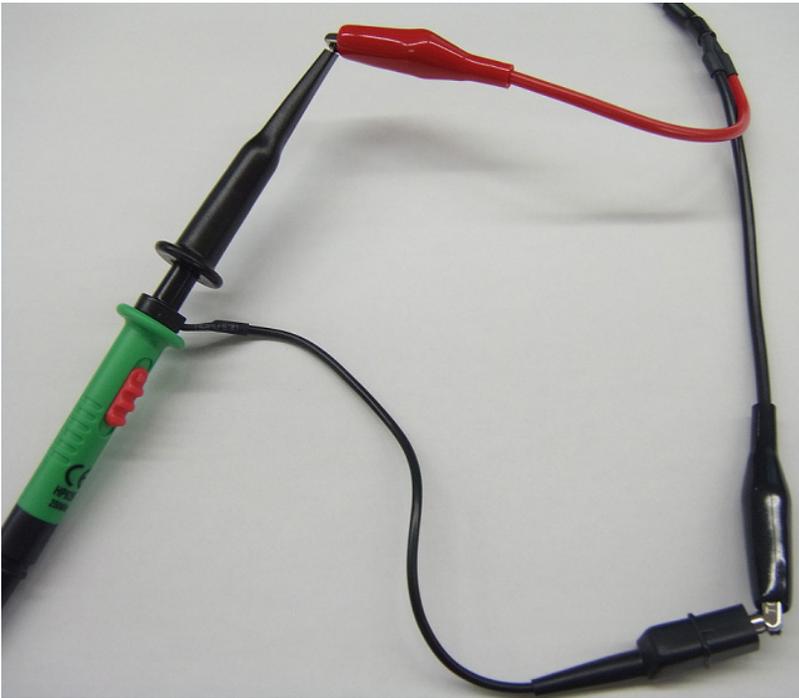In this section, describes connections for performing **FG measurement**.

1. Connect the **FG cable** to the **FG connector**.

2. Set the **DSO probe** to **x10**.

3. Connect the **DSO probe** to the **DSO Ch1 connector**.

4. Connect the **DSO probe GND** to the **FG cable GND** [**black**].

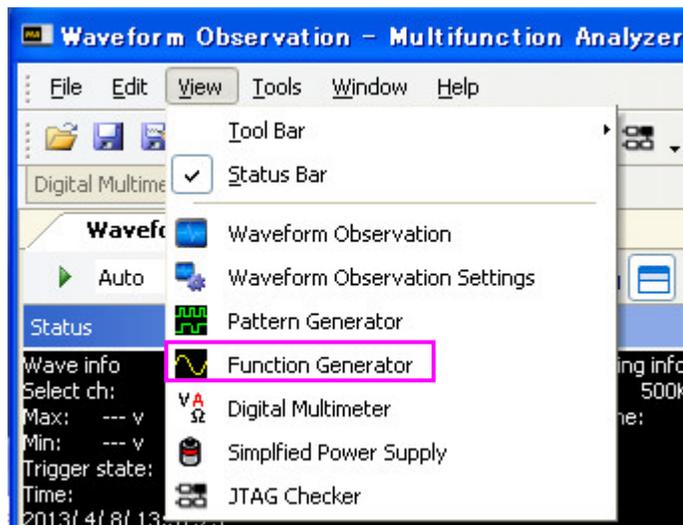5. Connect the **DSO probe PIN** to the **FG cable signal** [**red**].
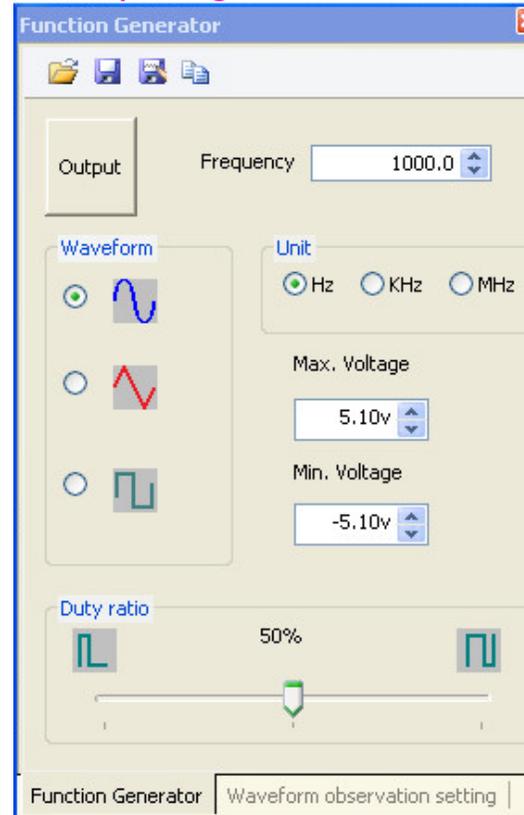
05. Starting the Setup Dialog

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

Click **Function Generator**.

Click Function Generator
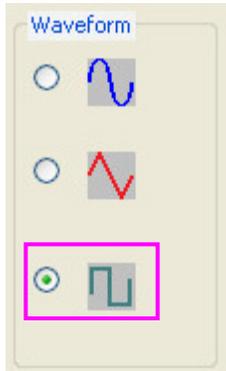
FG Setup Dialog

06. Setting the Waveform

In this section, describes how to set the **Waveform**.
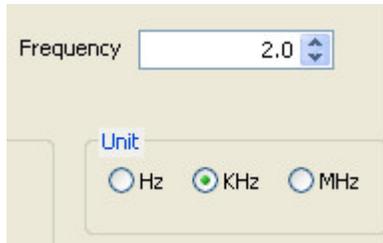
Click the **square wave** .

Click the **square wave**

07. Setting the Frequency

In this section, describes how to set the **Frequency**.

Set **2kHz[**see the diagram below].

Setting **2kHz**

08. Setting the Voltage

In this section, describes how to set the **Voltage**.

Set **Max Voltage 2.00v** and **Min Voltage -2.00v** .

Setting the **Voltage**

Max. Voltage

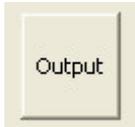2.00v

Min. Voltage

-2.00v

09. Starting the FG Output

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

Click **Output**.

Click **Output**   Output State of FG

10. Starting the Waveform Observation

In this section, using the **DSO CH1**, make the observation of the output waveform from the **FG** .

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

Waveform Observation ❌

▶ Auto   ⌄ 📂 💾 ▾   Click the **Waveform Observation Start Button**

2. Set **0V** to the **trigger position** of the **DSO CH1**.

3. The **Square wave of 200kHz ±2V** will be observable in the **DSO CH1**.
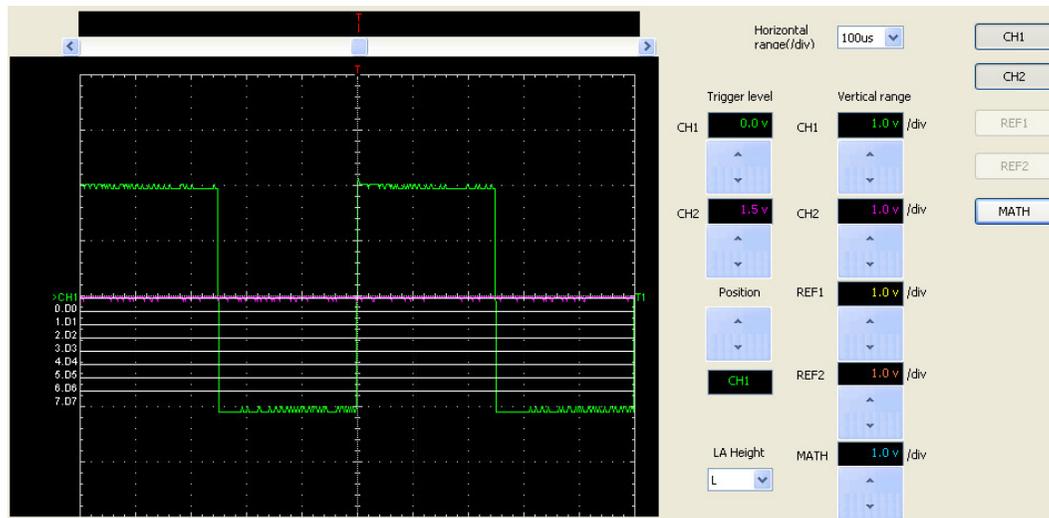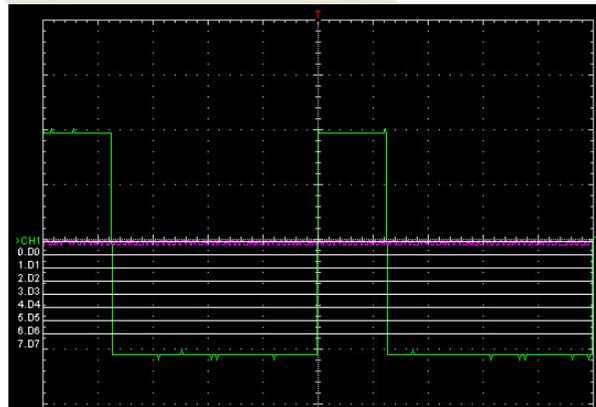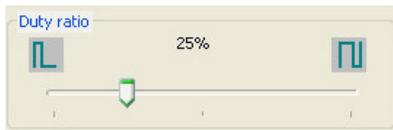

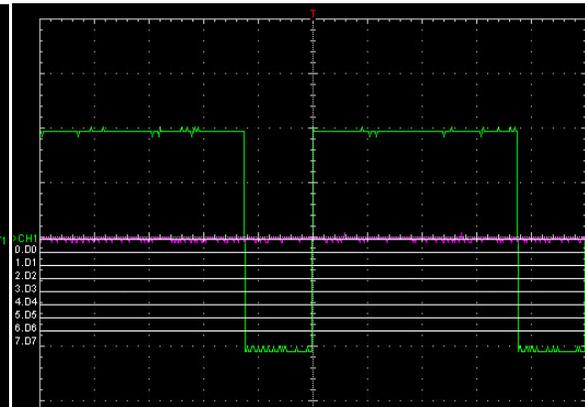*When it seems **waveform** is distorted, please refer to the **Tutorial for DSO**, then adjust the **DSO probe**.
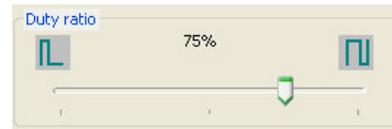
11. Setting the Duty Ratio

In this section, describes how to set the duty ratio.

Set **Duty ratio 25% and 75%**.
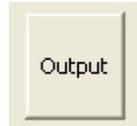

25%

75%

12. Stopping the FG Output

Finally, stop **FG**.

Click **Output**.

Click Output   **The Stop State of the FG**

This tutorial is completed.