Multifunction Analyzer Tutorial for Auto Report Generator





Contents

- 01. Introduction
- 02. Equipments
- 03. Starting Up
- 04. Connections
- 05. Starting the Setup Dialog
- 06. Automatic Execution Flow
- 07. Setting the Flow 1
- 08. Setting the Flow 2
- 09. Setting the Flow 3
- 10. Setting the Flow 4
- 11. Setting the Flow 5
- 12. Setting the Flow 6
- 13. Setting the Flow 7
- 14. Setting the Flow 8
- 15. Automatic Execution
- 16. Checking the Auto Report



01. Introduction

This document describes the flow of how to operate the **Auto Report Generator function** 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 **MFA** and the **Help** for the **MFA application**.





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]
- 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 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 **DSO measurement**.

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





erator Sohwa & Sophia Technologies

- 2. Connect the DSO probe to the DSO CH1 connector.
- 3. Connect the **DSO probe GND** to the **MFA PROBE GND connector**.
- 4. Connect the **DSO probe Signal** to the **MFA PROBE COMP connector**.







05. Start the Setup Dialog

In this section, describes how to start the Auto Report Creator Editor of the MFA application.

Click Automatic Report Creation .

Click Automatic Report Creation



Auto Report Creator Editor

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Waveform Observation		
Configuration file setting		
Internal trigger setting	_	
External trigger setting		
CH1 Trigger setting		
CH2 Trigger setting		
Threshold voltage setting		
Post trigger setting		
Start		
Stop		
Waveform Window]	
Pattern Generator		
Function Generator		
Digital Mutimeter		
Simplfied Power Supply		
JTAG Checker		
Execution Control		
Ready		STOP



06. Automatic Execution Flow

In this section, describes automatic execution flow for recording to the **Auto Report**.

In the flow shown in the figure below, record the DSO CH1 waveform to the Excel file. It's done a total of three times at 2-second intervals.







In this section, describes how to set the **flow**. The contents of the setting is the **All Stop** of the **Execution Control**.

- 1. To set the **flow** can be carried out by drag and drop.
- 2. As the setting for the beginning, then let all the stop function of the **MFA**.
- 3. Set All Stop.

Setting All Stop







In this section, describes how to set the **flow**. The contents of the setting is the **CH1 Trigger setting** of the **Waveform Observation**.

- 1. When set up the **CH1 trigger setting**, the dialog starts.
- 2. Set the Auto mode and the rising edge.
- 3. When click the **OK button** of the **CH1 Trigger Setting Dialog**, the setting is complete.

Setting the CH1 Trigger setting							
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Waveform Observation	1. [Execution Control] All Stop						
Configuration file setting	2. [Waveform Observation] CH1 Trigger setting						
Internal trigger setting	(Trigger mode: Auto, Edge: Rising)						
External trigger setting	1						
CH1 Trigger setting							
CH2 Trigger setting							
Waveform Window							
Pattern Generator							
Function Generator							
Digital Mutimeter							
Simplfied Power Supply							
JTAG Checker							
Execution Control							
Ready	STOP						

CH1 Trigger Setting Dialog

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CH1 Trigger Setting			
Trigger mode			
Auto 👻]		
• Edge	O Pulse		
₀ ♬	•	Relation condition	Pulse width (Number of samples)
0 1	0 🎹	=	1
		ОК	Cancel



In this section, describes how to set the **flow**. The contents of the setting is the **Start** of the **Waveform Observation**.

Set the Start.

Setting the Start







In this section, describes how to set the **flow**. The contents of the setting is the **Specify a report file** of the **Execution Control**.

- 1. When set up the **Specify a report file**, the dialog starts.
- 2. Click **Open a new sheet**, Set the **Excel file's name** and the **saving folder**.
- 3. When click the **OK button** of the **Specification of a Report File Dialog**, the setting is complete.

Setting the Specify a re	eport file	Specification of a Report File Dialog
🛋 Untitled - Multifunction Analyzer	Auto Report Creator Editor	Specification of a report file
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🗋 💕 🛃 🗢 🗕 🂠 🕨 🕨		File: C:/AutoReport_Test.xls Bowse
Waveform Observation	1. [Execution Control] All Stop	♥ Open a new sheet
Waveform Window	2 [Waveform Observation] CH1 Trigger setting	
Pattern Generator	(Trigger mode: Auto, Edge: Rising)	
Digital Mutimeter	3 [Waveform Observation] Start	OK Cancel
Simplfied Power Supply	4. [Evecution Control] Specify a report file	
JTAG Checker	4. (Execution control) specify a report life (C:/AutoReport Test.xls	
Execution Control	Open a new sheet)	
All Stop	57	
Repetition		
Specification of waiting time		
Specify a report file		
Ready	STOP	



In this section, describes how to set the **flow**. The contents of the setting is the **Snapshot** of the **Waveform Window**.

Set the Snapshot.

Setting the Snapshot







In this section, describes how to set the **flow**. The contents of the setting is the **Specification of waiting time** of the **Execution Control**.

- 1. When set up the **Specification of waiting time**, the dialog starts.
- 2. Set 2 seconds.
- 3. When click the **OK button** of the **Specification of Waiting Time Dialog**, the setting is complete.

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Waveform Observation	1. [Execution Control] All Stop					
Waveform Window	2 [Wayoform Observation] CH1 Trigger cotting					
Pattern Generator	(Trianer mode: Auto Edge: Rising)					
Function Generator						
Digital Mutimeter	3. [Waveform Observation] Start					
Simplfied Power Supply	4. [Execution Control] Specify a report file					
JTAG Checker	(C:/AutoReport_Test.xls					
Execution Control	Open a new sheet)					
All Stop	5. [Waveform Window] Snapshot					
Repetition	6. [Execution Control] Specification of waiting time					
Specification of waiting time	(Waiting time: 2 seconds)					
Specify a report file						
Ready	STOP 🤢					

Specification of Waiting Time Dialog
Specification of waiting time
⊙ Time 2 Seconds
O Waiting for a trigger
OK Cancel

Setting the **Specification of waiting time**



In this section, describes how to set the **flow**. The contents of the setting is the **Repetition** of the **Execution Control**.

- 1. When set up the **Repetition**, the dialog starts.
- 2. Set the Repetition 2 times and 4.[Execution Control] Specify a report file.
- 3. When click the **OK button** of the **Repetition Dialog**, the setting is complete.

Setting the Repetitio	n
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Waveform Observation	1. [Execution Control] All Stop
Waveform Window Pattern Generator	2. [Waveform Observation] CH1 Trigger setting
Function Generator	(Inggel mode: Adio, Edge: Kaing)
Digital Mutimeter	3. [Waveform Observation] Start
Simplfied Power Supply JTAG Checker	4. [Execution Control] Specify a report file (C:/AutoReport Test xis
Execution Control	Initial crosser Multifunction Analyzer Auto Report Creator Editor Edit Beport Help Waveform Observation Waveform Window Pattern Generator Function Generator Digital Mutimeter Simpfied Power Supply JTAG Checker Execution Control Stop veticitation of waiting time Execution Control Stop Lifexecution Control Stop Method Lifexecution Control Refly a report file Lifexecution Control Repetition (Number of a repetition: 2 The returning place: 4. [Execution Control] Specify a report file Life a repetition: 2 The returning place: 4. [Execution Control] Specify a report file
All Stop	5. [Waveform Window] Snapshot
Repetition	6. [Execution Control] Specification of waiting time
Specification of waiting time	(wannig nine: 2 seconds)
Specify a report file	 [Execution Control] Repetition (Number of a repetition: 2 The returning place: 4. [Execution Control] Specify a report file)
Ready	STOP .





In this section, describes how to set the **flow**. The contents of the setting is the **Stop** of the **Waveform Observation**.

Set the Stop.

Setting the **flow** is completed.

Setting the Stop

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Waveform Observation	1. [Execution Control] All Stop
CH1 Trigger setting	2. [Waveform Observation] CH1 Trigger setting
CH2 Trigger setting	(Trigger mode: Auto, Edge: Rising)
Threshold voltage setting	3. [Waveform Observation] Start
Post trigger setting	4. [Execution Control] Specify a report file (C:/AutoReport_Test.xls
Start	Open a new sheet)
Stop	5. [Waveform Window] Snapshot
Waveform Window	6. [Execution Control] Specification of waiting time (Waiting time: 2 seconds)
Pattern Generator Function Generator	7. [Execution Control] Repetition (Number of a repetition: 2 The returning place: 4. [Execution Control] Specify a report file)
Digital Mutimeter	8. [Waveform Observation] Stop
Simplfied Power Supply	
JTAG Checker	
Execution Control	
Ready	STOP





15. Automatic Execution

In this section, describes how to run the **flow**. Run the **flow** you have set, then create the Auto Report.

Click the Start button. 1.

Click the Start button



- After starting, the **Start button** changes to **Stop button**, running task is displayed in yellow. 2.
- The automatic execution is complete When it reaches to 8.[Waveform Observation] Stop. 3.

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Waveform Observation	1. [Execution Control] All Stop		Waveform Observation	1. [Execution Control] All Stop
Configuration file setting	2 [Waveform Observation] CH1 Trigger setting		Configuration file setting	2 Waveform Observation CH1 Trigger setting
Internal trigger setting	(Trigger mode: Auto, Edge: Rising)		Internal trigger setting	(Trigger mode: Auto, Edge: Rising)
External trigger setting	3. [Waveform Observation] Start		External trigger setting	3. [Waveform Observation] Start
Gti trager setting 4. Eixecution Controll Specify a report file (C/AufoReport_Test.xks Open a new Sheet)			CH1 Trigger setting	4. [Execution Control] Specify a report file (C:/AutoReport Test vis
			CH2 Trigger setting	Open a new sheet)
Threshold voltage setting	5. [Waveform Window] Snapshot		Threshold voltage setting	5. [Waveform Window] Snapshot
6. [Execution Control] Specification of waiting time (Waiting time: 2 seconds)		ľ	Waveform Window	6. [Execution Control] Specification of waiting time (Waiting time: 2 seconds)
Pattern Generator	7. [Execution Control] Repetition		Pattern Generator	7. [Execution Control] Repetition
Function Generator	(Number of a repetition: 2 The returning place: 4. [Execution Control] Specify a report file)		Function Generator	(Number of a repetition: 2 The returning place: 4. [Execution Control] Specify a report file
Digital Mutimeter	8. [Waveform Observation] Stop		Digital Mutimeter	8 Waveform Observation Stop
Simplfied Power Supply			Simplfied Power Supply	
JIAG Checker	-		JTAG Checker	
Execution Control			Execution Control	
Keady	RUN		Ready	STOP

Automatic execution running

Automatic execution is completed



16. Checking the Auto Report

Finally, check the Auto Report .

- 1. Check the saved folder of the Excel file.
- 2. Open the **Excel file**. Then, check that there is the **Sheet1-3**.
- 3. Check that the **waveform of DSO CH1** is recorded on all sheets.

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38		Trigger Mode	Auto	1			18			+
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44		PeakHold	off							
45		Persistence	off							
46		Interpolation	off		<u></u>					
47		Threshold voltage setting	5		_				_	
48		OH0 - OH7	[1.69v - 0.13v]					-	1	+
49		CH8 - CH15	[1.69v - 0.13v]		8		3			+
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51					2		2	-	-	+
52 I€	< ► H\	Sheet1 / Sheet2)	Sheet3 /	5	<		101			1

➢ In the setting flow 4, if you do not put a check in the open a new sheet.
The waveform will be recorded in a single sheet.

➢ In the setting flow 6, was set to 2 seconds. Also it can set by the minute or hour.

➤ In this **tutorial**, described using the only **DSO function**. It is possible to incorporate the auto execution also other functions [**LA**, **FG...PG**]. Try it.

This tutorial is completed.