Manual

Dynaforce Demo Kit – Quick Start Guide

This quick start guide describes the installation of the *Dynaforce* environment and how to use the *DesignStudio* together with the demo board. For further details please refer to *Demo Kit – Reference Manual*.

Version: Company: Author:	2023-04-18 Algra tec AG Niederberger Thomas	
---------------------------------	---	--

History

Change Date	Author	Description
2019-02-21	NiT	Initial version
2019-03-07	NiT	Minor changes
2019-10-04	NiT	Additional comments for installation - Dynamic key added
2020-04-20	NiT	Additional item for installation - Virtual COM Port
2020-11-19	NiT	Additional comments for installation
2021-01-25	NiT	Improvements in Chapter 1 (installation procedure)
2023-04-18	NiT	Several changes regarding DesignStudio V3

Content

1.	Instal	lation	
	1.1	Installing DesignStudio	
	1.2	Updating DesignStudio	2
2.	Dynaf	force – DesignStudio	
	2.1	Connecting the demo board	
	2.2	RawData diagram	
	2.3	Channel diagram	
	2.4	Special charts	5
	2.5	Challenge – the playful side of force touch	6
	2.6	More	6

Trimada

electronic systems

1. Installation

The *Dynaforce DesignStudio* is based on LabVIEW. This chapter describes how to set up the environment.

1.1 Installing DesignStudio

🚚 setup

- 1. Start DesignStudio\setup.exe from the supplied USB stick
- 2. Follow the instructions.
- 3. The installation will take some minutes to complete...

J	DF_DesignStudio V2.15 – 🗆 🗙
	Destination Directory Select the installation directories.
	All software will be installed in the following locations. To install software into a different location, click the Browse button and select another directory.
	C:\Program Files (x86)\Algra\ Browse
	Directory for National Instruments products C:\Program Files (x85)\National Instruments\ Browse
	<< Back Next >> Cancel

After the installation you will be prompted to restart windows.

1.2 Updating DesignStudio

If there is a need for updating, you find the latest version of *DesignStudio* in the Dynaforce section of <u>www.algragroup.ch/downloads</u>.

Download the zip-File and follow the instructions as descripted in the previous chapter.

Trimada

electronic systems

2. Dynaforce – DesignStudio

With *Dynaforce – DesignStudio* you can access a *Dynaforce* board, upload and visualize raw data, establish the calibration and download parameters to the board. This chapter will introduce the basic functionality of the *DF001 – Demoboard*. For further details please refer to *Demo Kit – Reference Manual*.

2.1 Connecting the demo board

Use the supplied USB cable to connect the *DF001 – Demoboard* to your computer. After starting the *DesignStudio* you will be prompted to choose the appropriate COM port.

	DF_ComPortDialog.vi	
Com	Port	
	СОМ9	
	Connect Cancel	

2.2 RawData diagram



The *RawData diagram* shows the raw data of every key (channel). Each key is displayed in its own chart in auto scaling mode. You can choose the channel by using the list box (Ch00...) in the upper right corner.

With the button *Read RawData* you start acquiring the raw data. After stopping the data acquisition by releasing the *Read RawData button* you can use the zoom tool to have a close look at the data.



DF_DemoKit_QuickStartGuide.docx				Page 3/6
© Copyright 2024, Algra tec AG	ALGRA	gravuretec	connect tec	Trimada
	industrial technology	nrecision works	worldwide technologies	electronic systems

2.3 **Channel diagram**



In the Channel diagram all channels are displayed in the same graph. The lower diagram shows the output as a binary signal for every channel. In the box on the upper right corner you can select/deselect each channel. With the button Read RawData you start/stop the acquisition.

Adjustment of sensitivity – setting the threshold level – download to target

With *Threshold* [mN] you can set the level for detecting a pressed button. The recommended range is 500...3000mN. After setting the threshold just click on Download to send the new parameters to the board.



DF_{-}	_DemoKit_	_QuickStartGuide.docx
~ ~		

Trimada

electronic systems

2.4 **Special charts**

Intensity chart:

The intensity chart shows the force distribution across the surface as a color map.



Force chart:

The force chart shows the force at each sensor in a pillar diagram.



Slider chart:

In the *slider chart* the sensor signals are used to display a slider.



Dynamic key:

With Dynamic key you can preset a value. The value changes faster, if you press with more force...



DF_DemoKit_QuickStartGuide.docx				Page 5/6
© Copyright 2024, Algra tec AG	ALGRA	gravuretec	connect tec	Trimada
	industrial technology	precision works	worldwide technologies	electronic systems

2.5 Challenge – the playful side of force touch...

This game shows the use of force touch in a playful way. You lift the red ball by pressing on one of the keys. Just follow the instruction and don't forget to pump up the volume...



2.6 More

In the *More* section you find some possibilities to configure the board. For example, the LED or the haptic feedback can be activated/deactivated. Just try it out...

🛃 DF_DesignStudio.vi						- 🗆	×
DYNA ultra sensitive for RawData diagram	FORC proce touch techn rel diagram Special chart	s Challenge More			Dynaforce - De ALGRA	signStudio (GRO	/3.0.2 UP
Version / SerialNr Hardware DF001 Firmware 190503 SerialNr 111	Common PW-Update LED Dialog	DF001 Optic Acoustic Ony Haptic	/Off				
Connected to		Read RawData	Calibration	eshold [mN]	d		

DE Damalité Ossiali Otart Ossiala da av				
DF_Demokit_QuickStartGuide.docx			Page 6/6	
© Copyright 2024, Algra tec AG	ALGRA	gravuretec	connect tec	Τρίμαρα
	industrial technology	precision works	worldwide technologies	electronic systems