



# FLEXGUI TOOLBOX DEMO README

1<sup>st</sup> Edition

	<ul style="list-style-type: none"><li>■ Before attempting to operate the robot, please read through this document carefully, and comply with all the safety-related items and instructions.</li></ul>
	<ul style="list-style-type: none"><li>■ This document must be given without fail to the individuals who will be operating the robot using FlexGui</li></ul>
	<ul style="list-style-type: none"><li>■ Please direct any inquiries about parts of this document which may not be completely clear to PPM.</li></ul>

**NACHI-FUJIKOSHI CORP.**  
**PPM AS**

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# 1 Introduction

Thank you for downloading *FDonDesk for FlexGui*. This package holds a demo of *FDonDesk* as well as some example projects for *FlexGui Toolbox*.

This document serves as a quick guide on how to open and start the included Example projects in the package. There are three included examples, which will be further introduced later:

- Getting Started  
This project is featured in the "Getting Started" document included in the documentation folder. It is a very simple project that shows the most basic interactions with several fidgets and robot programs.
- NACHI Draw  
In this project, the operator can control aspects of a robotic drawing operation with FlexGui. This project is structurally simple, however it shows rich and intuitive usage of images for giving the operator feedback on the current progress of an operation.
- Pick And Place  
This project is the biggest of them. It shows two examples of Pick And Place operations;
  - A pick and place operation with interlocking depending on the current position of objects.
  - A pick and place operation where amounts and destinations of the objects can be customized.

This guide assumes that you have downloaded and installed the following:

- FlexGui Toolbox
- FD on Desk for FlexGui

We recommend that you take a look at the *Getting Started*-document as well as the *User Manual*, after playing around with these *FlexProjects*<sup>1</sup>. The documents can be found at *Start* → *Programs* → *PPM AS* → *Documentation* after installing *FlexGui Toolbox*.

**Disclaimer:** Please note that the included *FDonDesk* is just a Demo. To unlock more features and options, please contact your NACHI dealer.

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<sup>1</sup>FlexProject - FlexGui Project

## 2 Starting the Getting Started example

First, we have to start FlexGui Toolbox, which is the integrated development environment for FlexGui Projects. Go to *Start* → *Programs* → *PPM AS* → *FlexGui Toolbox*.

When FlexGui Toolbox starts, you will be met by the *Recent Projects*, which we have populated with our three examples<sup>2</sup> as depicted in figure 1.

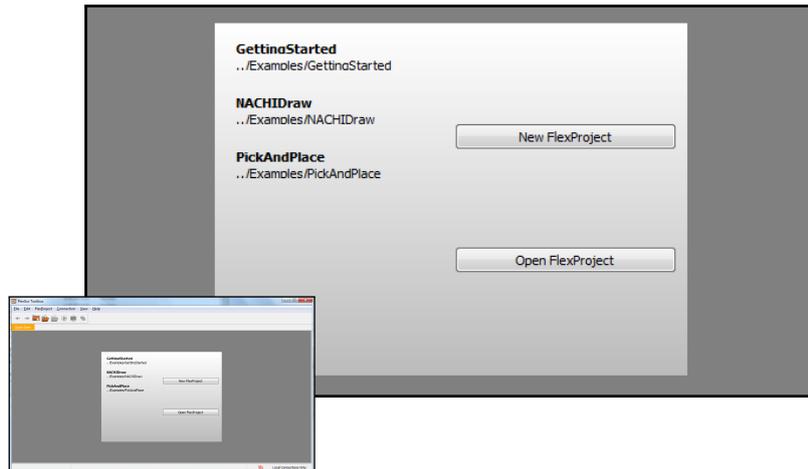


Figure 1: Recent projects of FlexGui Toolbox

Click and open the *GettingStarted*-project.

At this point you will see the Getting Started Project. The last thing needed for us to simulate this project on an FD-controller is to start *FDonDesk*.

To start FDonDesk, go to *File* → *Start FD on Desk* as depicted in figure 2.

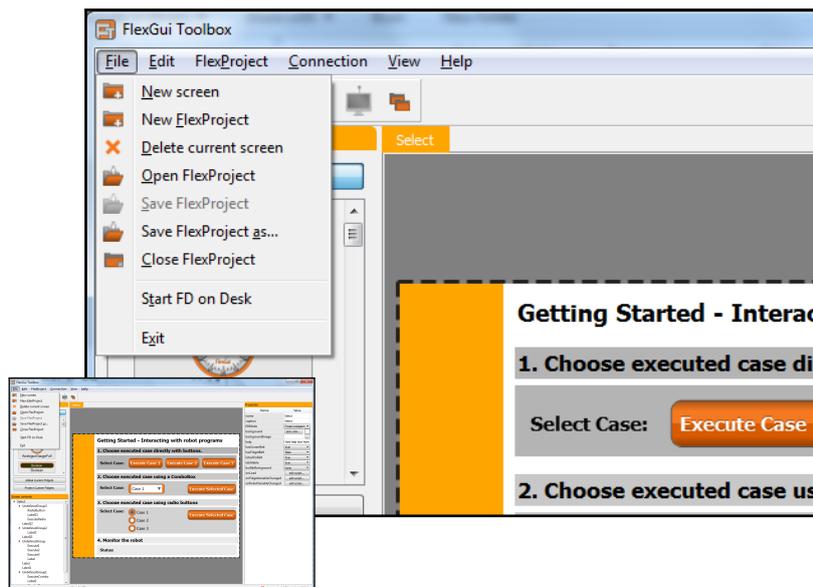


Figure 2: Starting FDonDesk from FlexGui Toolbox

The startup process will prompt you with "*license.dat file does not exist.*", which you must accept by clicking "OK".

<sup>2</sup>The files may also be found under Program Files/PPM AS/Examples

Please note: If the startup of FDonDesk gives an error regarding side-by-side configuration, you need to download and install the Microsoft Visual C++ 2005 SP1 Redistributable Package, which can be downloaded from [this direct link](#).

After starting FDonDesk, you will see, among others, the NRA window. In this window, you have to select **robot program 1**, which is associated with the *Getting Started* project. As depicted in figure 3, one has to click the "Program"-portion of the interface.

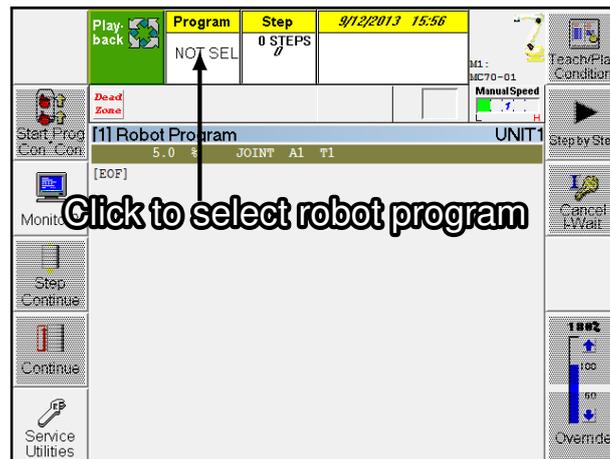


Figure 3: NRA window in FD on Desk.

This will open a dialog, where you have to set the *Designated Program* to 1 as depicted in figure 4 and press *Enter* on your keyboard.

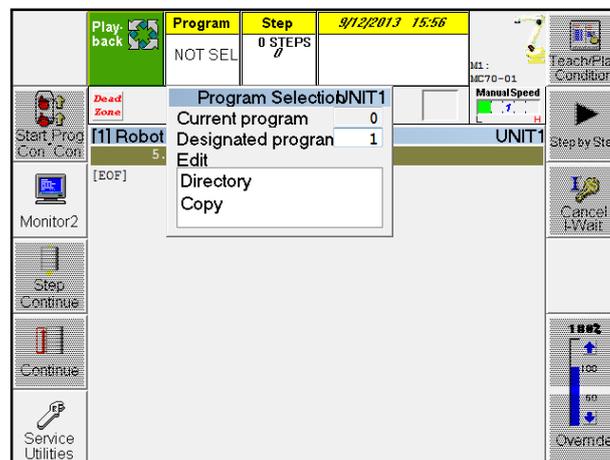


Figure 4: Robot program selection in NRA

Lastly we need to start the program, which is done by going to FD on Desks I/O window. In the I/O window, ensure that both the round switch buttons are in Playback, as depicted in figure 5.



Figure 5: FD on Desk's input panel.

You now only have to press the *Green* (motors on), followed by the white round (playback) button, and your robot program should be running. If it does not start at the first try, just repeat the process by clicking the green and white buttons again.

Now, return to FlexGui Toolbox, and start *Preview* by clicking the preview button (  ) at the top menubar.

The Preview window will now start, and before you can interact with the project, you need to click the "Connect to FDonDesk"-button at the top of the window as depicted in figure 6.

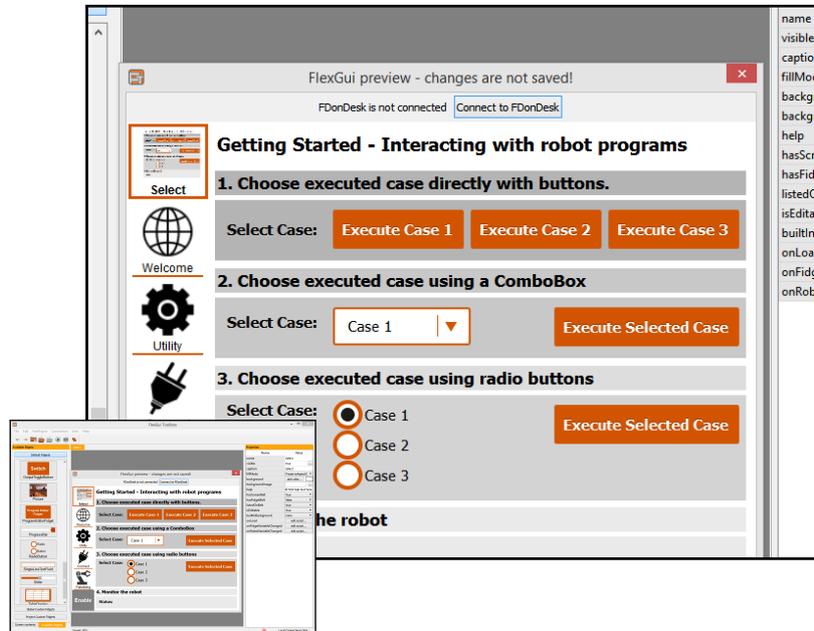


Figure 6: The Getting Started project in *Preview*

Congratulations, you are now controlling FDonDesks simulation with a FlexGui Project! You can see the movements of the robots in the *Virtual Robot*-window.

*Please Note:* After starting this example, we recommend that you read the *Getting Started*-document, where you can learn about the principles behind this *FlexProject*<sup>3</sup>. The document can be found at *Start* → *Programs* → *PPM AS* → *Documentation* → *Getting Started*.

<sup>3</sup>FlexProject - FlexGui Project

### 3 Starting the NACHI Draw example

For starting the NACHI Draw example, the same principles from section 2 apply. The only difference is that the this project should be started from **robot program 100**.

Therefore, in FlexGui Toolbox, you can close the current project by closing the *Preview*-window, and going to *File* → *Close FlexProject*.

In the *Recent Projects*-list, select the *NACHIDraw*-project. After this, stop FDonDesk's playback by pressing the red button in the I/O window as depicted in figure 7.



Figure 7: FDonDesk's input panel

From this point on, the process is the same as in section 2 with exception of the robot program number, which should be **100**.

### 4 Starting the Pick And Place example

*Please note:* This project is featured on our wiki. To get more information about how it works, please see our wiki article at: [http://wiki.flexgui.net/Getting-Started.ashx#Learning\\_more\\_3](http://wiki.flexgui.net/Getting-Started.ashx#Learning_more_3)

For starting the Pick And Place example, the same principles from section 2 apply. The only difference is that this project should be started from **robot program 800**.

Therefore, in FlexGui Toolbox, you can close the current project by closing the *Preview*-window, and going to *File* → *Close FlexProject*.

In the *Recent Projects*-list, select the *PickAndPlace*-project. After this, stop FDonDesk's playback by pressing the red button in the I/O window as depicted in figure 8.



Figure 8: FDonDesk's input panel

From this point on, the process is the same as in section 2 with exception of the robot program number, which should be **800**.

*Please note:* To get more information about how this project works, please see our wiki article featuring this project at: [http://wiki.flexgui.net/Getting-Started.ashx#Learning\\_more\\_3](http://wiki.flexgui.net/Getting-Started.ashx#Learning_more_3)