User's Manual

FG410/FG420 Arbitrary/Function Generator Firmware Update Procedure

The FG410/FG420 Firmware Updater and Installer (hereafter referred to as the software) is for updating the firmware of the FG400 series Arbitrary/Function Generator (model name FG410/FG420) to a new version. This manual describes the steps to update the FG410/FG420. Be sure to follow the instructions in this manual when updating.

Disclaimers

This software has been thoroughly tested and inspected by Yokogawa Test & Measurement Corporation (hereafter referred to as Yokogawa) before being shipped. If you experience any problems, please contact us or your nearest Yokogawa dealer.

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Installation Procedure

Install this software on a PC, connect the FG410/FG420 to the PC via USB, and update the firmware of the FG410/FG420.

System Requirements

Before installing this software on a PC, make sure that the system requirements are met. When installing/uninstalling, log on to Windows with administrator privileges.

- OS: Microsoft Windows 10 (64bit), Windows 11
- Communication interface: USB
- Software component: Microsoft .NET Framework 4.0 SP1 or later

Installing the USB Driver

To communicate between the FG410/FG420 and the PC via USB, install the USB driver on the PC. The installation file can be downloaded from the NI-VISA products site. For details, see section 1.2 in FG410/FG420 Communication Interface User's Manual (IM FG410-17EN). If the VISA environment is set up on the PC, the USB driver is already installed.

> **Note**
> You can also access the NI-VISA products site from our website.
> https://tmi.yokogawa.com/library/documents-downloads/software/usb-drivers/
> Required driver: USB driver for FG400

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Installing the Firmware Updater

Sign in to Yokogawa Membership Site "Customer Portal" and download the software.

   https://myportal.yokogawa.com/

   Required data: FG400 firmware

> *Note*
>
> You can also access the software from FG410/FG420 products page on our website
> (https://www.yokogawa.com/ymi/).

1. When you unzip the downloaded file, and the <FG400_FirmwareUpdater_XXX*> folder contains the following contents. (*: XXX is the firmware version)

- <EN> folder: For English
- <JP> folder: For Japanese

2. You will find the following files in <EN> folder. Run setup.exe (the installer).

- FG400.FirmwareUpdate_En.msi
- setup.exe: Installer
- readme_en.txt: Read me first
- FG400FirmwareUpdateProcedure.pdf: This manual (Firmware Update Procedure)

> *Note*
>
> Readme_en.txt describes the version of the firmware to be updated and other information.

3. Follow the displayed instructions to install the software in the specified folder. When installation is finished, close the window.
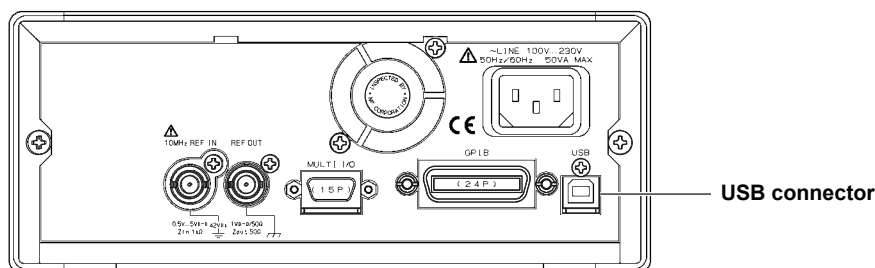
> *Note*
>
> - You will find the following files in the specified installation folder.
>   - FG400.FirmwareUpdater.exe: Firmware updater
>   - FG410_420.rom: Data file
>   - FG400.FirmwareUpdate.Configuration.xml: Setup file
>   - FG400.dll, NationalInstruments.VisaNS.dll: DLL files
> - Once you have updated the firmware, you cannot revert to the previous version.
> - When you update the firmware, the setting memory and data previously saved in the FG410/FG420 will remain, but the current settings will be lost. If necessary, back up the settings before updating. For details, see FG410/FG420 User's Manual Basic (IM FG410-01EN).

Firmware Update Procedure

FG410/FG420 Operation

1. Using a USB cable, connect the USB connector (Type-B) on the rear panel to the PC.
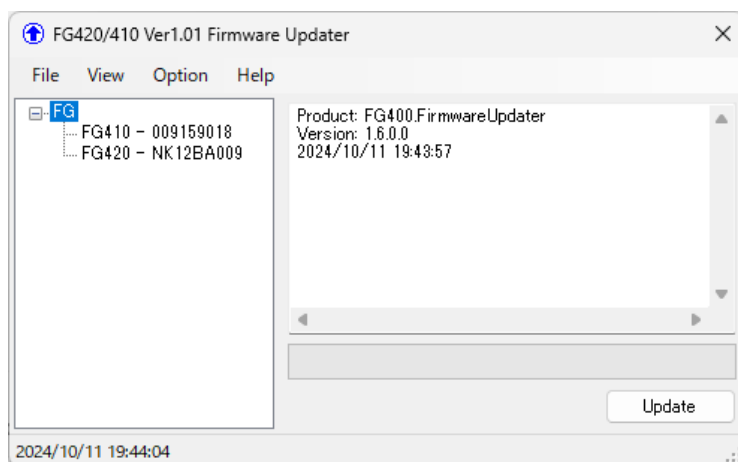
Rear panel (FG410 example)

USB connector

2. Turn the power on.

3. Set the remote interface to USB.

> *Note*
>
> For details, see FG410/FG420 Communication Interface User's Manual (IM FG410-17EN).

Firmware Updater Operation

4. On the PC, go to Start menu > YOKOGAWA > FG400.FirmwareUpdater (the updater).

   Firmware Updater window will open. The firmware version will be displayed in the title of the window.

5. Under "FG" in the tree view on the left, confirm that the connected model name (FG410 or FG420) and serial number are displayed.

Note

- The serial number is printed on the nameplate on the rear panel of the FG410/FG420. It is a number that starts with NK.

MODEL	FG410
SUFFIX	
No.	NK********

- You can re-search for connected FG410/FG420 using View-Refresh on the display menu. In addition, you can save the operation log to a text file and clear the contents using Option-Log.
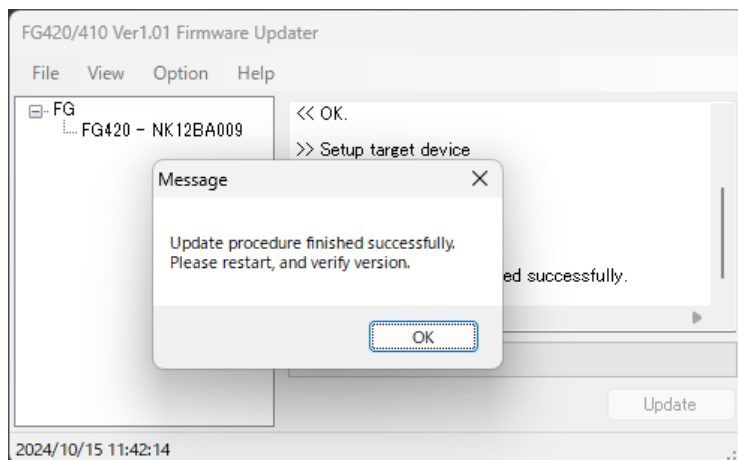
6. Select only one FG410/FG420 to update and click Update.

   The firmware updating will begin. Do not remove the USB cable or turn off the FG410/FG420 until updating is finished.

Note

- You can update the firmware on only one FG410/FG420 at a time.
- Before updating, remove any peripheral devices connected to the FG410/FG420. Also, close all Windows programs running on the PC.

Completing the Update and Restarting the FG410/FG420

7. When updating completes successfully, the following message will be displayed on the PC and the FG410/FG420 will automatically turn off. Click OK on the PC screen to close the window.

8. Turn on the FG410/FG420 to restart it.

Note
When you restart the FG410/FG420, the firmware version will be displayed for a moment.

Checking the FG410/FG420 Firmware Version

9. Press **MENU** on the FG410/FG420 to display the top menu window.

10. Select **Utility** and press **ENTER** to display the Utility screen.

11. Select **Information** (internal information display) and press **ENTER**.

12. The firmware version will be displayed, so confirm that the firmware has been updated.

Note
For details, see section 4.3.7 in FG410/FG420 User's Manual Basic (IM FG410-01EN) and section 8.6 in User's Manual Application (IM FG410-02EN).