

# Non-invasive BCI platform

NeuroComputing LAB,  
Korea Institute of Science and Technology

## **Non-invasive BCI platform**

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### User Manual

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## Installation

Under normal conditions, This Program does not impact on any programs already installed. However, only guarantees that programs will interact without problems if the programs concerned have been tested for compatibility. This applies to systems with the Microsoft operating system Windows® 10 or later, provided no modifications have been made to the provided operating system configuration (including official service packs and updates).

### System requirements

The following hardware and software requirements must be fulfilled:

- ✓ Operating system: Windows® 10 or later (It may work in lower versions, but we are not sure about that)
- ✓ Minimum configuration: Intel Core i5 or higher, 512 MB of RAM, 8 GB hard disk, graphics adapter with 64 MB of RAM
- ✓ We recommend that a monitor with a screen diagonal of at least 15 inch is used.
- ✓ You must have equipment to acquire brain waves. We provide LSL programs for Biosemi, BrainProduct(actiCHamp), Cognionix, and G.tec (gNeedaccess) equipment. If you use other equipment, please install and use a separate LSL(Lab streaming layer) link program required for that equipment.
- ✓ Since all devices acquire data through LSL, LSL must be available. For more information about LSL, see [Lab Streaming Layer](https://labstreaminglayer.org/#/) (<https://labstreaminglayer.org/#/>)

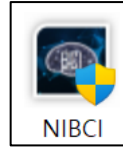
### 1. Installing program under Windows

Proceed as follows to install Analyzer under Windows

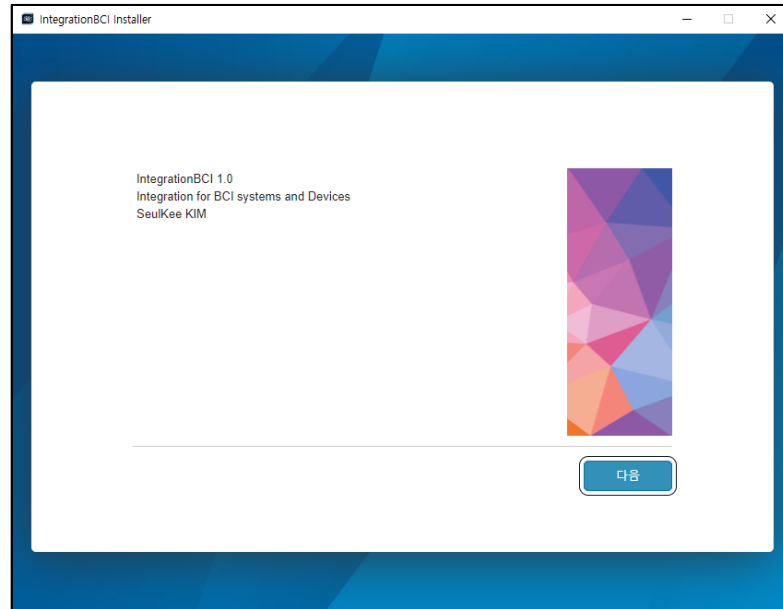
- 1 Start Windows
- 2 Download the program from the link here - [NIBCI/IntegrationBCI](https://github.com/NIBCI/IntegrationBCI) ([github.com](https://github.com)) (<https://github.com/NIBCI/IntegrationBCI>)

- 3 Open the folder and double click Integration.exe to run the program.  
(See Figure 1)

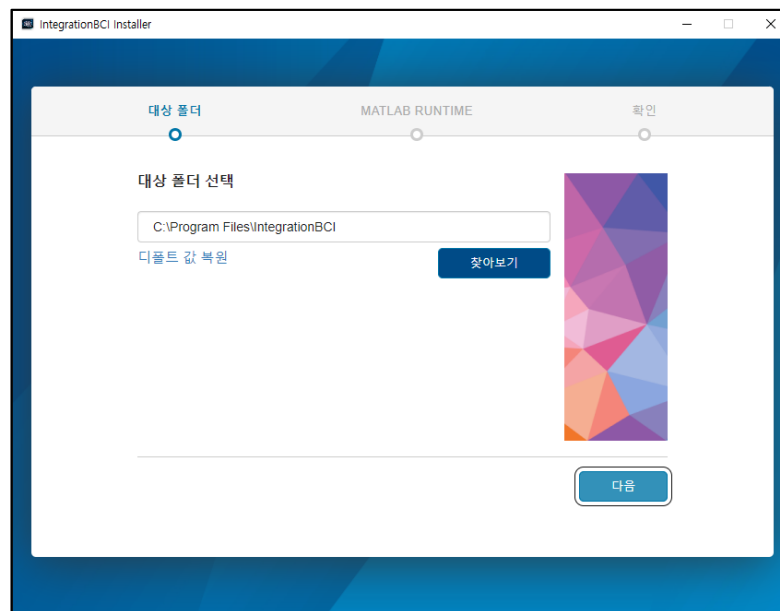
Figure 1. Run this .exe file



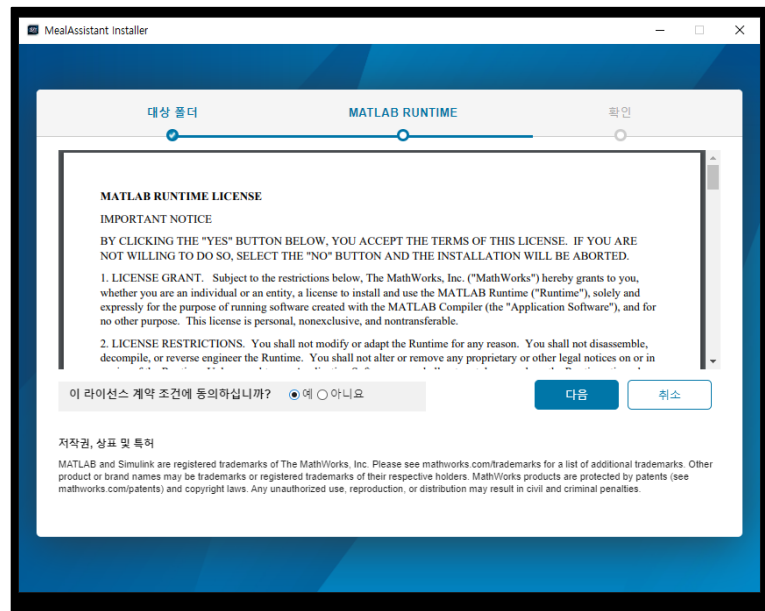
- 4 Click the Next.



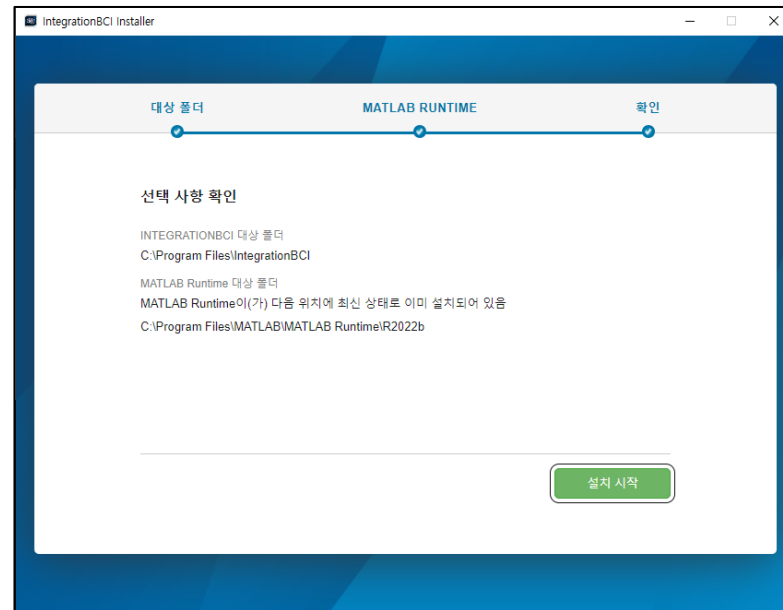
- 5 After checking the installation path, click Next.



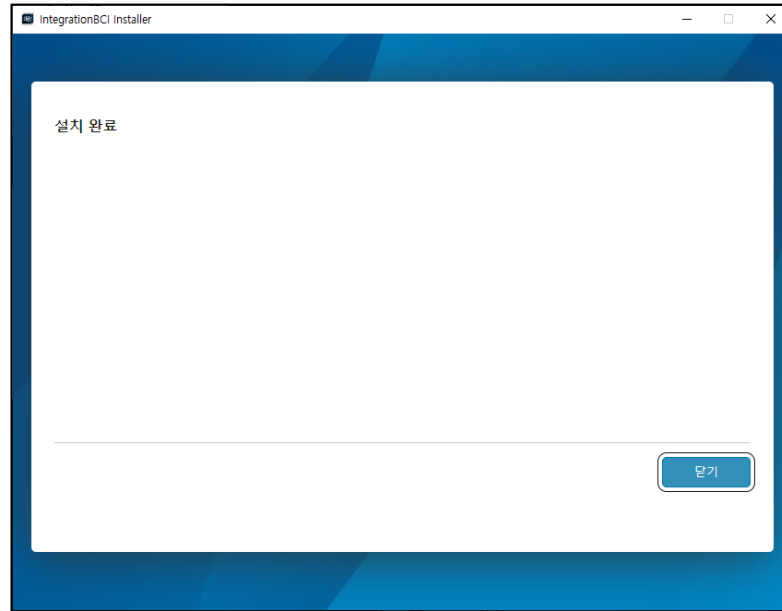
- 6 This program requires the runtime environment MATLAB. If MATLAB Runtime is not present on your system, then a message is displayed.



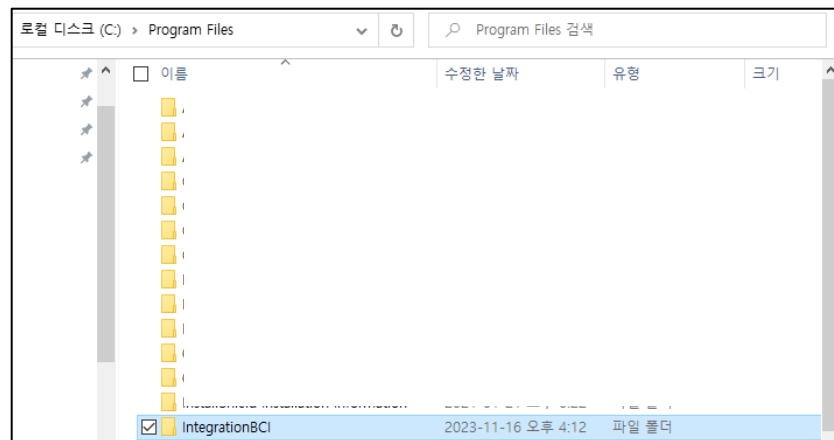
- 7 After checking the installation environment for MATLAB Runtime, click Start Installation.



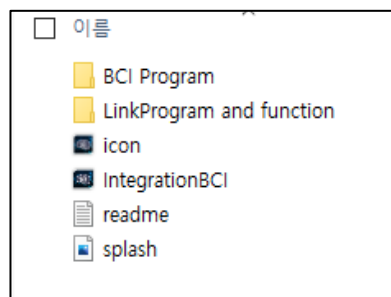
- 8 When installation is complete, click Close.



- 9 If you check the installation path, the **IntegrationBCI** folder has been created.



- 10 Enter the folder and enter the application. Find and run **IntegrationBCI.exe** in the Application folder.



11 The program startup background appears as shown below.



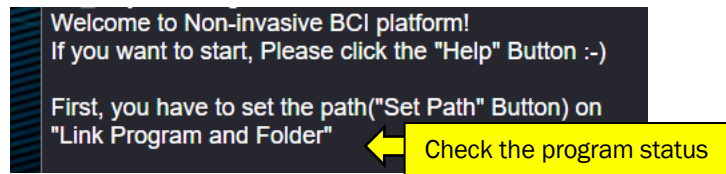
12 If the program runs as follows, you are ready to use Integration for BCI.



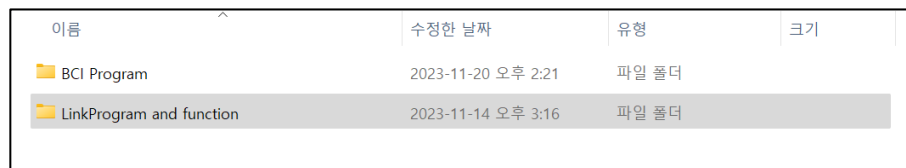


## 2. Running the program and how to use it

- 1 Check the program status window as shown below. You can get help on how to perform through the program status window.



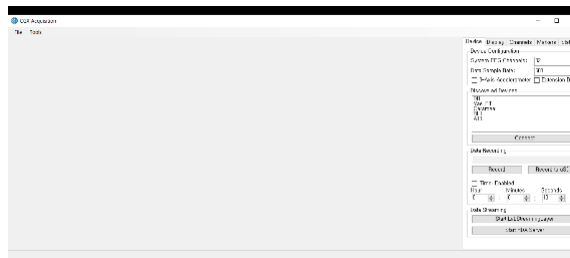
- 2 Click the “Set Path” button, and select the “Link Program and Function” folder.



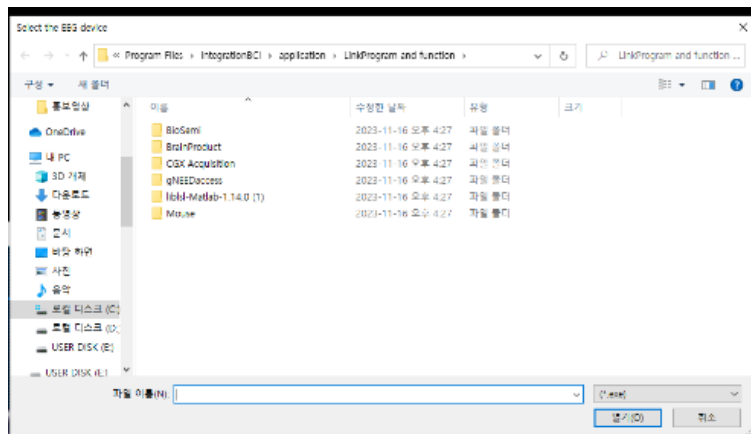
- 3 Open the EEG Device toggle and select the EEG device you want to use



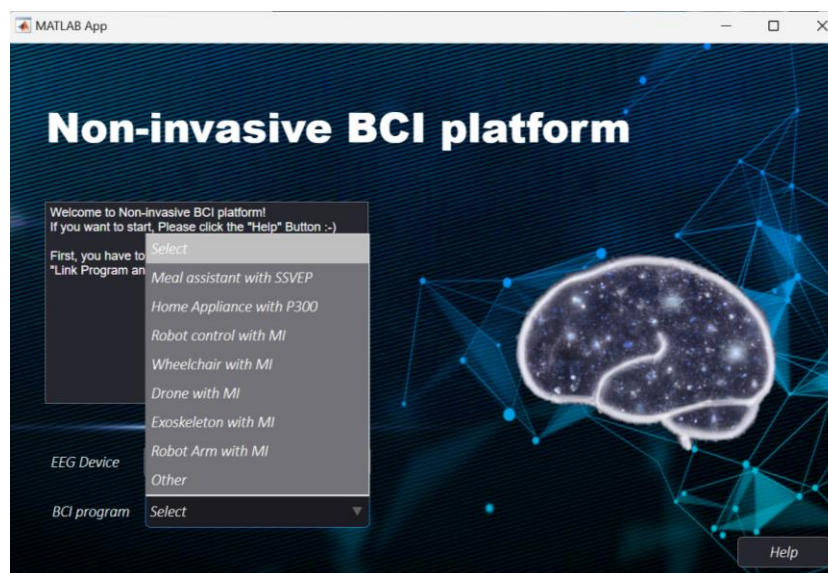
If you click on the device in the toggle list, the recording program is executed as shown below.



Or, if the EEG device you want to use is not in the toggle list, select "Other". Then, you can open the recording program of the device you want to use through file explorer.

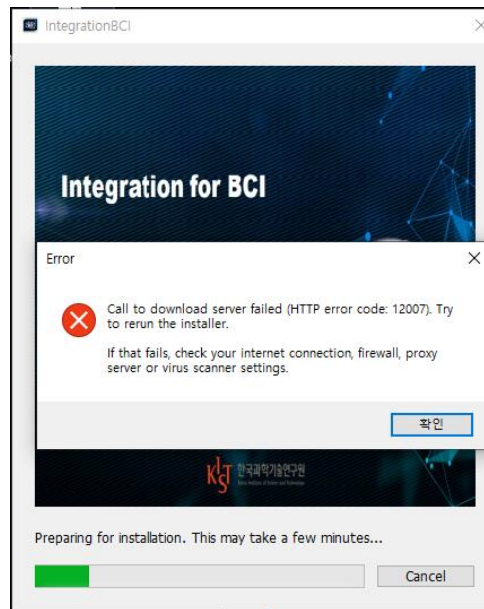


- 4 Open the BCI program toggle and select the BCI Program you want to use



### 3. If you have some problem with this program

**Case 1.** When installing an executable file, if the following message appears, check your Internet connection. An Internet connection may be required during initial installation.



**Case 2.** If you select the EEG device but it does not run, check whether you have set the LinkProgram and function folder through the Set path button.

Or, access the device folder you want to use through file explorer and double-click to run it.

**Case 3.** If you select the BCI Program but it does not run, check whether the program exists in the BCI program folder.

Or, access the program you want to use through file explorer and run it by double clicking.

For any other problems, please contact us through our website and we will respond as soon as possible.