

GT-SP user guide Part 1 (Introduction)

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1 Introduction.

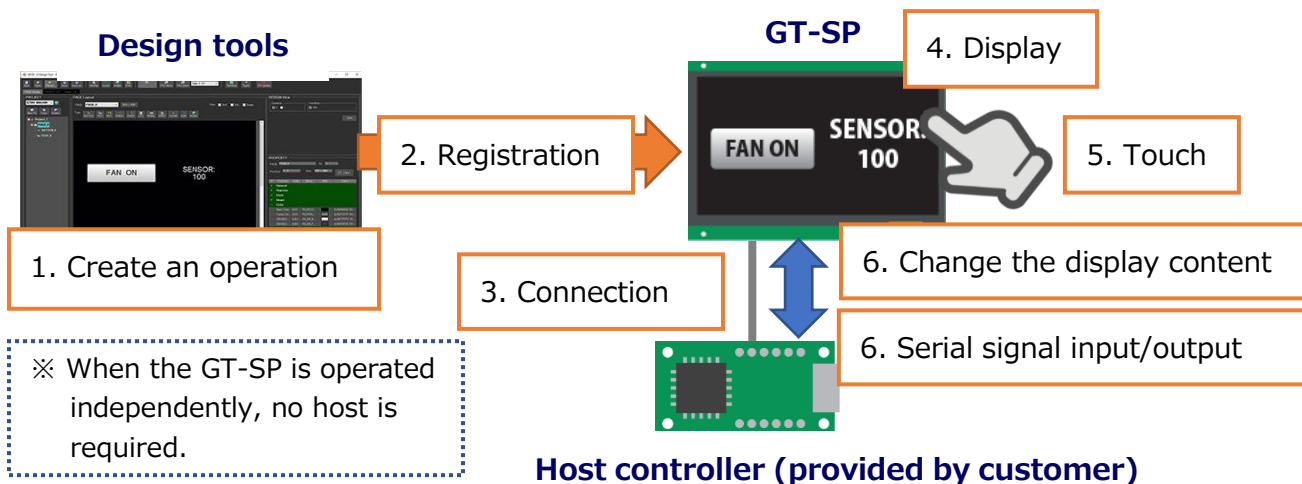
- ◆ **This introductory guide is for first-time developers of our GT-SP touch display**
(LCD Touch Screen Modules GUI-controlled type).

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2 GT-SP Overview

- ◆ The GT-SP is an embedded intelligent touch TFT LCD module with graphical user interface (GUI) object control functions. It is an easy-to-use display **allowing users to develop screens on a PC intuitively** and independently, **significantly reducing the control load on the host.**
- ◆ [Control Flow] Users can create an operation screen using **Noritake's design tool** and register their data in the GT-SP. The operation screen is automatically displayed when the GT-SP is connected to the host and the power is switched on. After that, **the GT-SP switches its display** according to the screen touch and **outputs serial signals to the host.** The display content can also be changed based on the signal input from the host.



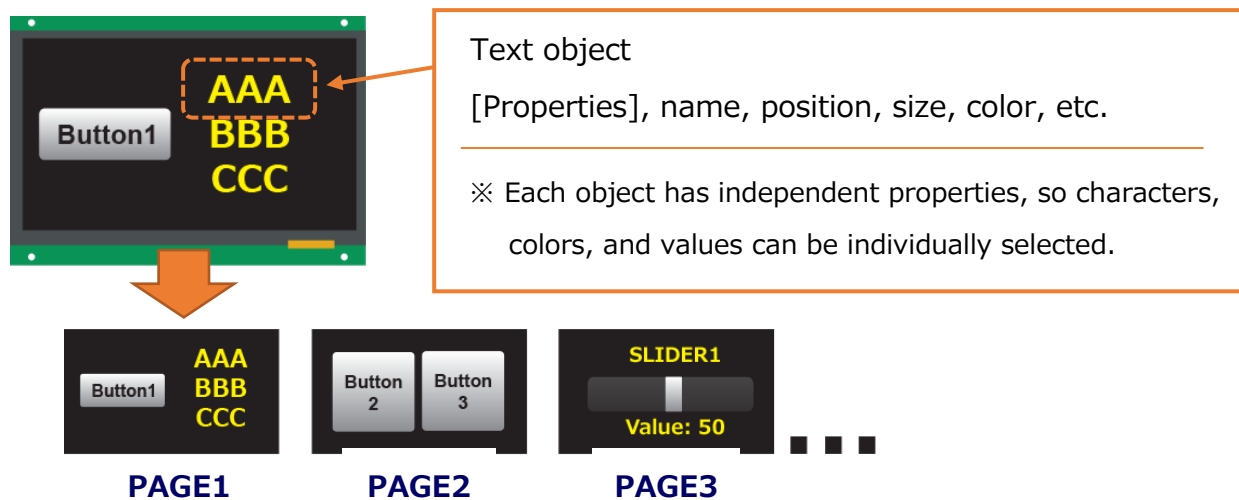
3 Development flow

- ◆ The development flow for the GT-SP is as follows:
 - 3.1 Development of operating screens
 - 3.2 Programming the host controller
 - 3.3 Mounting structure design and touch sensitivity adjustment
 - 3.4 Data registration for mass production

3.1 Development of operating screens

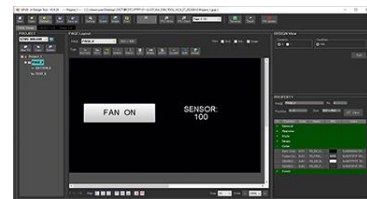
*For more detailed information, see [GT-SP user guide Part 2](#) (How to Use Design Tools).

- ◆ Use **Noritake's design tool "GT Design Studio"** to create operation screens by placing OBJECT (buttons, text, etc.) on each PAGE.

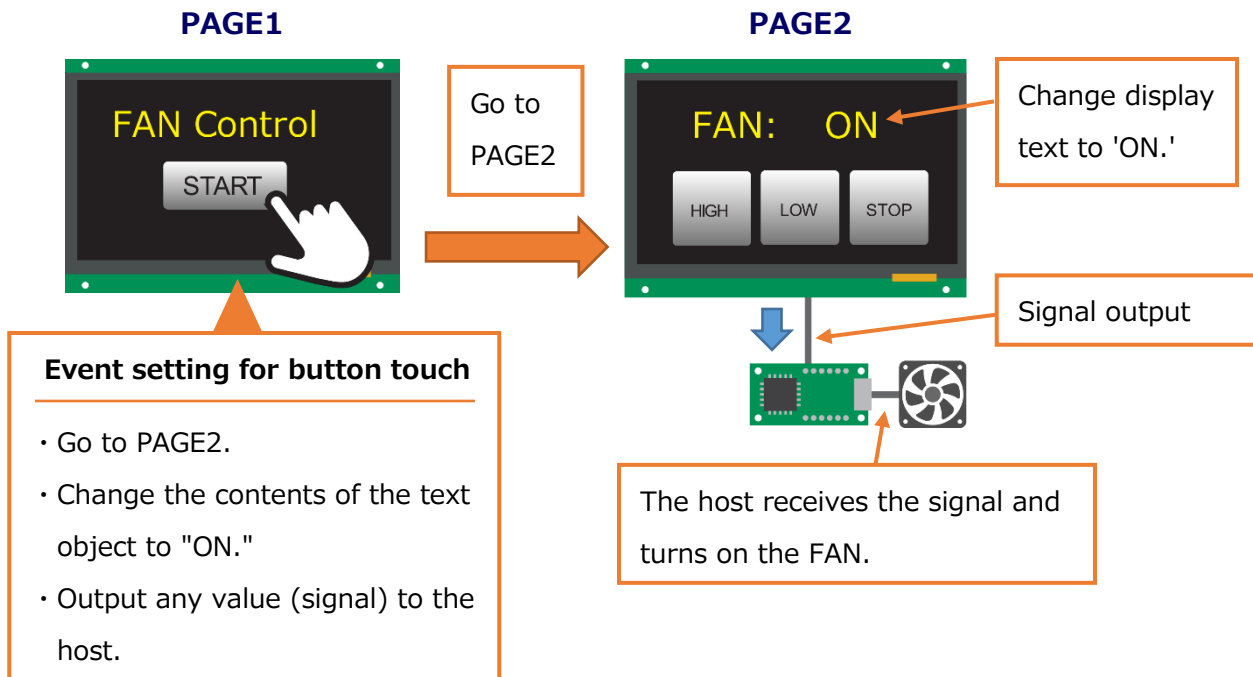


- ◆ Noritake's **GT Design Studio** design tool

A convenient and intuitive screen development design tool using simple drag-and-drop commands. No programming is required! It can be downloaded free of charge from our website.



- ◆ Touchable objects, like buttons or sliders, can be set to trigger **events** (action processing) when the screen is touched.
- ◆ Various actions can be set, such as "output values to the host controller," "change property values of other objects," "change display page," and the like. It is also possible to set **multiple actions for a single-touch event**.
- ◆ Combining those actions allows the following series of controls to be **performed at the touch of a button using only the GT-SP**.

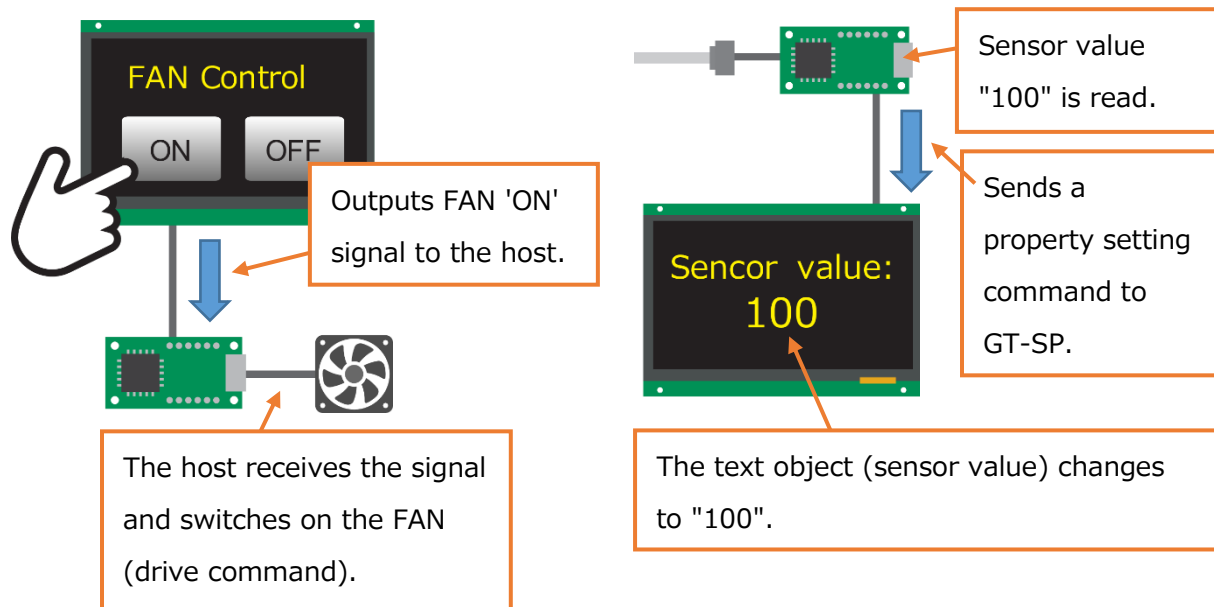


- ◆ Once the operation screen design and event settings are complete, register the project files in **FROM** (EFROM/FLASH ROM) in the GT-SP using the design tool.

3.2 Programming the host controller

*For more detailed information, see the [GT-SP user guide Part 3](#) (Host control section) and the [product specifications](#).

- ◆ Connecting the GT-SP to the host controller.
- ◆ An arbitrary value set by an event is output from the GT-SP when touched, and programming on the host controller side is performed according to the value.
- ◆ **Users can also directly control the screen** by sending "a property setting command" and/or "change the displayed page command" from the host to the GT-SP.



3.3 Mounting structure design and touch sensitivity adjustment

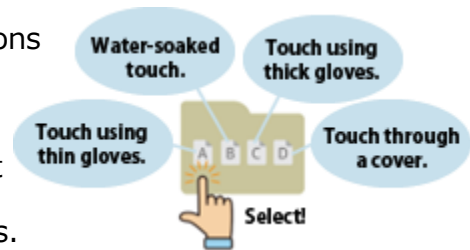
*For more detailed information, see the [GT-SP user guide Part 2](#) (How to Use Design Tools) and [Touch Screen Sensitivity Adjustment Guide \(APF820\)](#)

- ◆ Mounting structures should be designed according to the product specifications (mounting method, cover material/thickness, etc.) and confirm or adjust the touch sensitivity of the GT-SP.
- ◆ Touch sensitivity can be adjusted by adjusting the default settings or using a pre-adjusted **touch settings package** according to the mounting structure and installation.

◆ Noritake's development support data **Touch Settings Package**

A collection of sensitivity settings for various conditions can be downloaded free of charge from our website. Individual customization is required for each request when used in particular environments and conditions.

For more information, please get in touch with our support team.



- ◆ The touch sensitivity adjustment data is registered in the GT-SP.
- ◆ The GT-SP is equipped with a capacitive glass touch panel. We **recommend using a glass or plastic cover attachment** to protect the touch panel.

3.4 Data registration for mass production

- ◆ Once development is complete, the project file (including touch sensitivity adjustment data) must be registered in the GT-SP for mass production. The data can be registered in one of two ways.
 - 1) Using the tool provided by our company.
 - 2) The information is converted into binary data and registered through customer-side tools and production equipment.

4 Disclaimer and restrictions

- ◆ The information provided in this document does not guarantee it will work perfectly in all environments.
- ◆ The contents of this document may not be up-to-date due to ongoing development. Please check the website for the latest information.
- ◆ Tools provided in the form of installers may contain licensed programs. Do not reverse engineer for analysis, decompilation, or disassembly.
- ◆ All trademarks used in this guide are the property of their respective owners.

5 Contact information

Please contact us via the inquiry form if you have any questions or requests.

- ◆ [North America / EU] <https://www.noritake-elec.com/support/contact-us>
- ◆ [Asia / Other] <https://www.noritake-itron.jp/eng/contact/>