

ST5520 Sample Application Manual

Overview

The ST5520 Sample Application (this application) can perform the following operations on the ST5520 and ST5520-01:

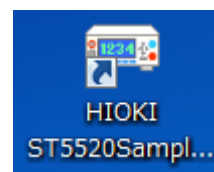
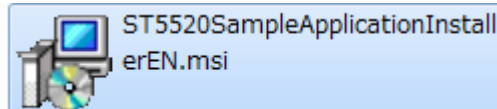
- Setting test conditions such as the measurement voltage and timer
- Setting upper and lower limit values for the comparator
- Acquiring measured values and judgment results, and saving them in CSV format
- Performing interval measurement
- Measure using EXT I/O or 9299 switched probe
- Saving and loading panels
- Testing communications command transmit/receive functionality
- Backing up and restoring instrument settings

System requirements

- CPU: Operating speed of 1 GHz or greater
 - RAM: 512 MB or greater
 - Operating system: Windows 10, Windows 8.1, Windows 8, or Windows 7 (32-bit/64-bit)
 - Microsoft .NET Framework 4.0
 - Interface: RS-232C
 - Monitor resolution: 1,024×768 or greater
 - Hard drive: Free space of 5 MB or greater (If .NET Framework 4.0 has not yet been installed, about 900 MB more free space will be required.)
- Additional free space for saving recorded data

Installing this application

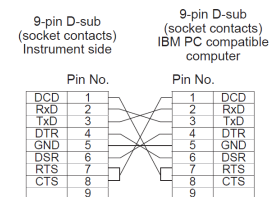
1. Double click the downloaded file “ST5520SampleApplicationInstallerENxxx.msi.”
2. Click **Next** every time when it appears.
3. The installation will be started. When it is completed, a shortcut, as shown in the right, will be created on the desktop.



Connecting the computer to the ST5520

- Connect the computer to the ST5520 with a D-sub 9-pin female to D-sub 9-pin female cross cable.
- Recommended cable: HIOKI 9637 RS-232C Cable (9pin-9pin/1.8m)

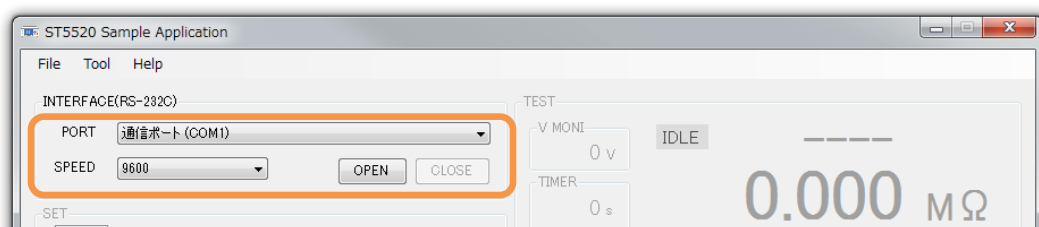
Crossover wiring



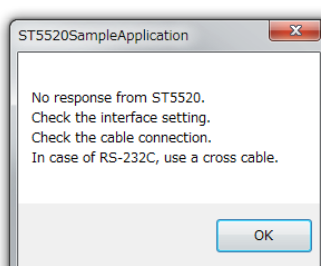
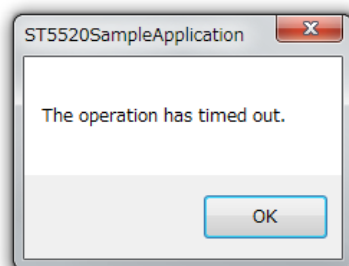
Recommended cable: Hioki 9637 RS-232C Cable (9pin-9pin/1.8 m)

Launching the application and connecting to the ST5520

1. Double-click the application's shortcut on the desktop. The measurement screen will be displayed.
2. Check the interface **PORT** and **SPEED** settings, and then click **OPEN**.



3. If an error message such as the following appears, verify that the proper port has been set and that the computer is using the same speed setting as the instrument.



Description of the main screen

Set test conditions here

Information such as measured values and judgment results is shown here.

Click to start testing.

Click to stop testing.

Configure interval measurement here.

Click to save measurement results in the CSV format.

Configure the comparator function here.
NOTE: Click **COMP SET** to apply the settings.

The interface shows the following details:

- TEST V MONI:** 0 V, 2.1 s
- MEASUREMENT STATUS:** IDLE, PASS, 15.15 MΩ
- MEASUREMENT SETTINGS:**
 - VOLTAGE: 25 V (25V-1000V)
 - RANGE: AUTO
 - SPEED: FAST
 - TIMER: OFF (0.045 s)
 - DELAY: AUTO (0.005 s)
 - COMP MODE: CONTINUE
 - COMP BEEP: FAIL
- COMPARATOR:**
 - UPPER: OFF (0.0 MΩ)
 - LOWER: ON (10.00 MΩ)
 - COMP SET button
- TEST RESULTS TABLE:**

No.	日付	時刻	絶縁抵抗 (ohm)	判定
1	15/03/30	15:29:39	15.15E+06	---
2	15/03/30	15:30:10	15.15E+06	PASS
3	15/03/30	15:30:13	15.15E+06	PASS
4	15/03/30	15:30:20	15.14E+06	UFAIL
5	15/03/30	15:30:22	15.16E+06	UFAIL
6	15/03/30	15:30:49	15.15E+06	UFAIL
7	15/03/30	15:30:59	15.15E+06	PASS
8	15/03/30	15:31:02	15.15E+06	PASS
9	15/03/30	15:31:11	15.14E+06	LFAIL
10	15/03/30	15:31:13	15.14E+06	LFAIL
11	15/03/30	15:31:25	15.15E+06	PASS
- CONTROL BUTTONS:** START, STOP, Interval (Enable, 1 s), SAVE, CLEAR

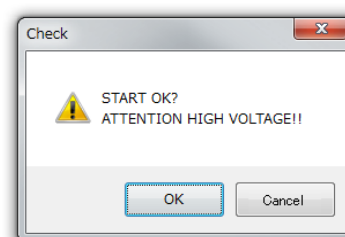
Test method

⚠ WARNING

Observe the following to avoid electric shock.

- When the TEST lamp is blinking, do not touch the equipment to be measured, the tip of the probe, and measurement terminals.
- The measurement terminals on the front panel and the corresponding ones on the rear panel are connected each other in the instrument. Do not touch the measurement terminals.
- Do not touch the equipment to be measured, the tip of the probes, and measurement terminals immediately after tests are completed. High voltage charge may cause electric shock.
- To avoid electric shock, use the discharge function on the instrument to release charge in pieces of equipmentS to be measured after tests. (p.54)

1. Set the test conditions.
2. If using the judgment function, set the comparator's upper and lower limit values.
3. Click **START**.
The confirmation screen on the right will be displayed.
4. Click **OK**.



The test will be started. While the test is in progress, measured values and judgment results will be displayed.

5. To stop the test, click **STOP**.
(If the timer has been enabled, the test will stop automatically.)
6. To save the test results in the CSV format, click **SAVE**.

You can disable display of the confirmation screen by accessing **Option** on the **Tool** menu.

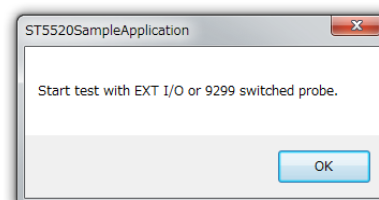
1. On the **Tool** menu, click **Option**.
The options dialog box will be displayed.
2. Select the **Disable the setting** checkbox.

Performing interval measurement

1. Select the **Enable** checkbox for interval measurement.
2. Set the interval time (valid setting range: 1 s to 9999 s).
3. Click **START**.
Interval measurement will be started. A measured value will be acquired each time the set interval time elapses, and the results will be displayed on the screen.
4. To stop the test, click **STOP**.
(If the timer has been enabled, the test will stop automatically.)
When performing measurement over an extended period of time, exercise care to ensure that the computer does not enter the sleep state while measurement is ongoing.

Measure using EXT I/O or 9299 switched probe

1. On the **Tool** menu, click **Option**.
The options dialog box will be displayed.
2. Select the **Start and stop operation from external** checkbox.
3. Click **START**.
The confirmation screen on the right will be displayed.
4. Click **OK**.
ST5520 waits for measurement start.
5. Start the test with EXT I/O or 9299 switched probe.
While the test is in progress, measured values and judgment results will be displayed.



6. Stop the test with EXT I/O or 9299 switched probe.
(If the timer has been enabled, the test will stop automatically.)
7. Click [STOP](#).
8. To save the test results in the CSV format, click [SAVE](#).

Saving and loading panels

The application can save and load panels (groups of settings). These operations are performed on the [PANEL](#) tab.

Click to load the panel.

Click to save the panel.

Click to rename the panel.
Single-byte alphanumeric characters and the underbar character can be used in panel names, which can be up to 10 characters in length.

Click to delete the panel.

Testing communications command transmit/receive functionality

The application can transmit and receive user-specified commands. This functionality can be accessed from [Command test](#) on the [Tool](#) menu. The command test screen will be displayed.

Enter the command here.

Click to transmit and receive command data.

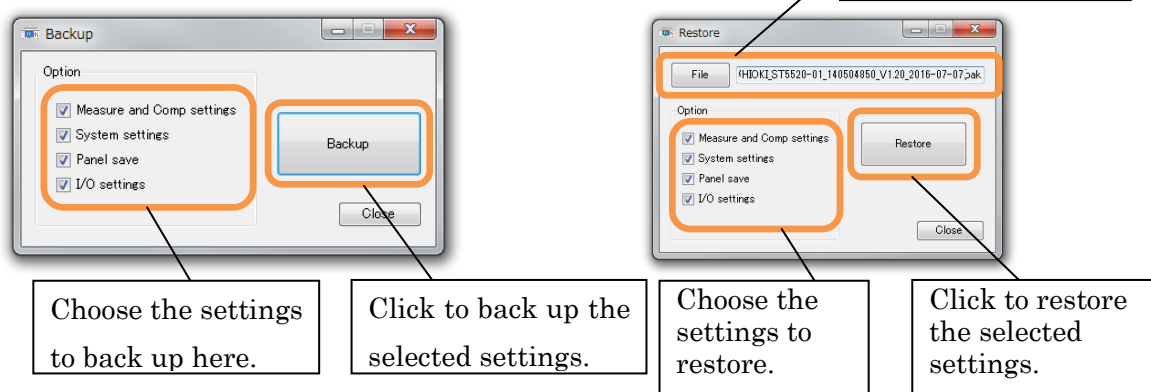
The results of the command are shown here.

Backing up and restoring instrument settings

The application can back up instrument settings as a settings file. Settings files have the extension “.bak.”

Backing up settings: On the **Tool** menu, click **Backup**.

Restoring settings: On the **Tool** menu, click **Restore**.



Disclaimer

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