



# INSTRUCTION MANUAL

Smart logger operating application

[ S2A-Pro ]

## Geotechnical & Structural Instrumentation

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1-1 General details

Introduction to the application

S2A-Pro, a dedicated operating application for Smart Logger, uses the Bluetooth function built into an Android smart phone to wirelessly connect the RS232C port of Smart Logger (ADL-200A) to a Bluetooth converter or RS232 to C-Type cable, and then connect and control the Smart Logger (ADL-200A) and the smart phone.

**The S2A-Pro application is designed to control the minimum functions required in the field, such as channel setting, time setting and measurement value confirmation, and is designed so that users can easily operate and set it with a smart phone or tablet, making it very useful for on-site installation.**

Installation

The S2A-Pro application is a dedicated Android app that can be searched and installed from the Google Play Store.

Executable file

The application executable file is [S2A-Pro], as shown in the figure below.



**Reference**

When using the S2A-Pro application, data is not saved on the smart phone, so data saved in the Smart Logger can't be downloaded..

1-2 Connecting the equipment

Connect via Bluetooth

Connect the Bluetooth converter to the RS232C port of the equipment, then search for the Bluetooth of the equipment through the Bluetooth function built into the Android smart phone and register it on the smart phone to use it.



**[Bluetooth converter]**

RS232 to C-type  
Connect via cable

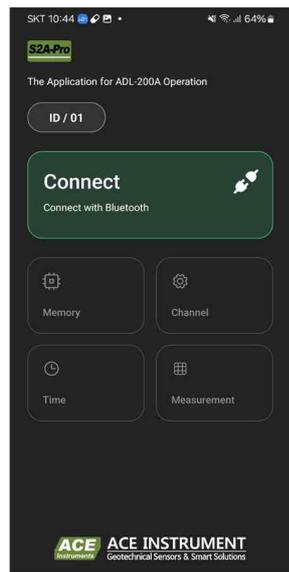
Connect the RS232C port of the device and the RS232 to C-type cable to the smart phone to use it.



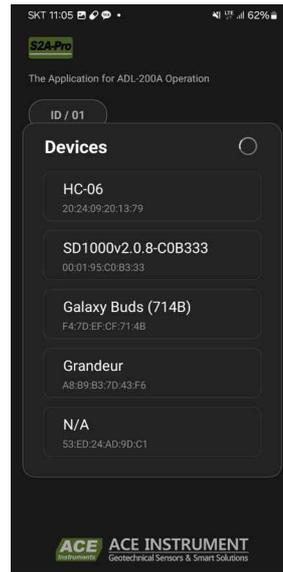
**[RS232 to C-type cable]**

## 2-1 Connecting the equipment to application

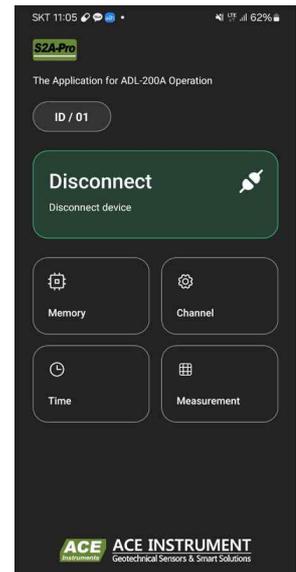
This is a function used when connecting to equipment and application. When you touch [Connect], the Bluetooth numbers registered on the smart phone are displayed as a list. Select the number of the Bluetooth converter connected to the equipment and connect to use it.



[Connect]



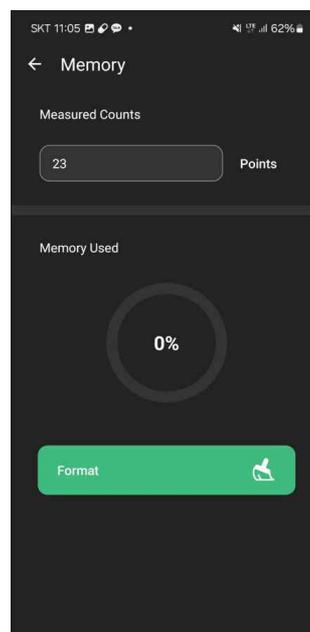
[Bluetooth list]



[Status after connection]

## 2-2 Data memory

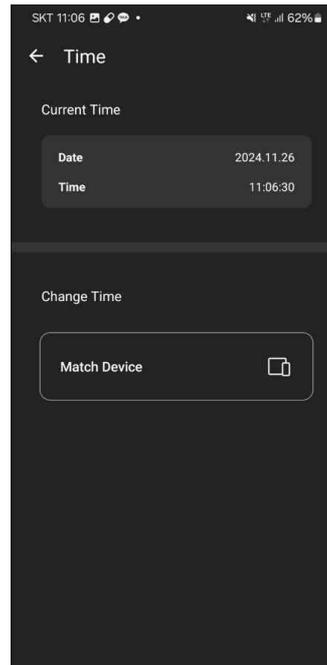
Check the amount of data and rate stored in the smart logger.



Format You can delete all data stored in the equipment using the Format button.

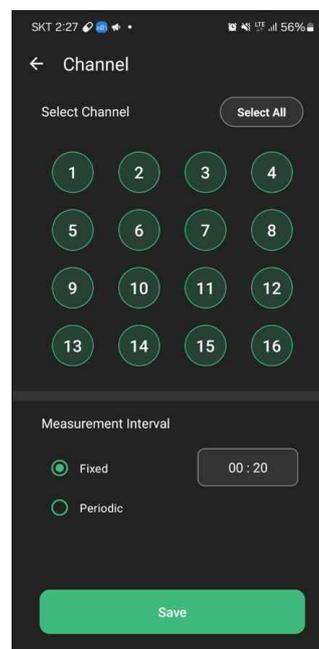
## 2-3 Setting time

You can check the current date/time of the equipment and use the Match Device button to set the same date/time as your smart phone.



## 2-4 Setting channel

You can set the channel of the equipment. Select the desired channel to activate it and if you want to set the detailed channel, press and hold the button of the desired channel and the detailed setting screen will appear.

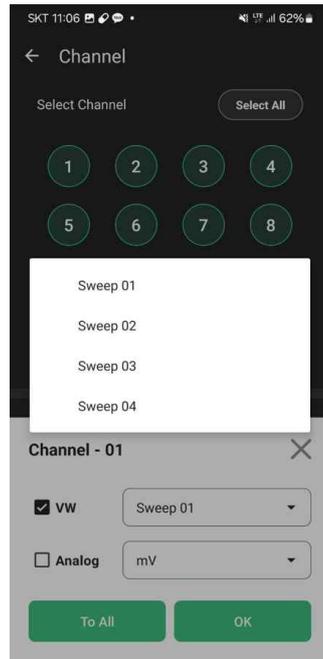


VW channel settings

The equipment is divided into VW channels and Analog channels and the descriptions of the VW channels and Analog channels are as follows.

There are 4 types of options in the VW line and the measurement unit is frequency.

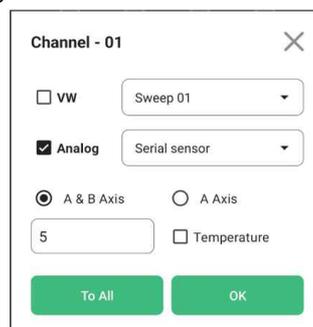
- Sweep 01 : vibrating wire sensor measurement frequency range 450~1200Hz
- Sweep 02 : vibrating wire sensor measurement frequency range 800~2000Hz
- Sweep 03 : vibrating wire sensor measurement frequency range 1400~3500Hz
- Sweep 04 : vibrating wire sensor measurement frequency range 2400~6000Hz



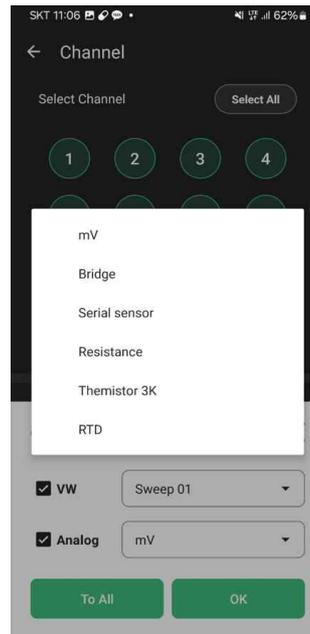
Analog channel settings

There are 6 options in the Analog line that can set the measurement analog sensor type and the descriptions of each are as follows.

- mV : 2-wire single-ended voltage measurement option for analog channels, and the measurement unit is mV. The measurement voltage range is -4999mV ~ +4999mV.
- Bridge : 4-wire (Full bridge) 350Ω Foil in Wheatstone Bridge format Strain Gage type sensor measurement option, and the measurement unit is  $\mu\text{V/V}$ , and the input/output voltage (Excitation Voltage) is +/-2V.
- Serial sensor: When you select a serial sensor, a setting window is created as shown below, and you can select whether to output biaxial, uniaxial, or temperature sensors, and enter the number of installed sensors in Sensor count. Both biaxial and uniaxial sensors are recognized as 1 sensor.

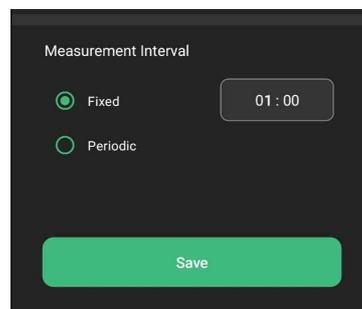


- Resistance : Measures a 2-wire resistance sensor on an analog channel.  
The resolution is 1Ω and the measurement unit is Ω.
- Themistor 3K : Measures a 2-wire Thermistor temperature sensor on an analog channel. The measurement unit is °C and the resolution is 0.1°C.
- RTD : Measures a 2-wire RTD temperature sensor (20°C, 2kΩ) on an analog channel.  
The resolution is 0.1°C and the measurement unit is °C.



## 2-5 Setting measurement and save interval

Measurement interval can set the equipment measurement cycle, and the time can be set from 1 ~ 24 hours and the minute from 0 ~ 59 minutes. The measurement options are divided into Fixed and Periodic, and the explanations are as follows.



- Fixed: Measures at the time interval set based on 00:00.
- Periodic: Measures at the time interval set based on the current time.

ex) If the measurement cycle is set at 30-minute intervals at 2:25,

Fixed : 2:30, 3:00, 3:30.....

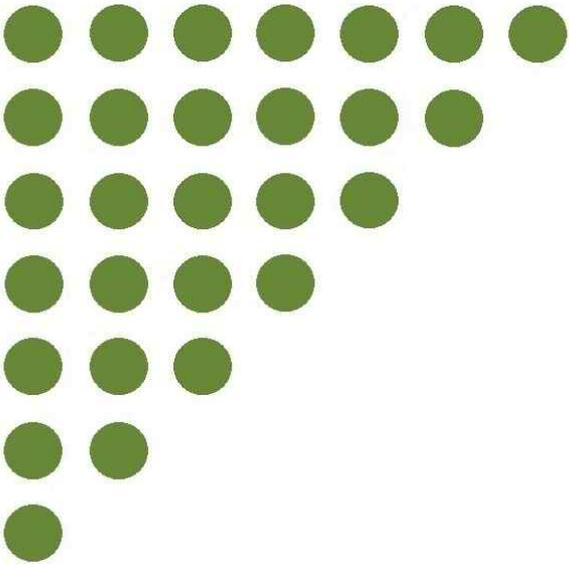
Periodic : Measure at 2:55, 3:25, 3:55.....

## 2-6 Data measurement

If you click Measure on the upper right of the measurement screen, you will measure according to the channel settings. The horizontal (column) indicates the measurement time, and the vertical (row) indicates the activated channel.

The screenshot shows a mobile application interface titled "Measurement". At the top left is a back arrow and the date "2024.11.26". At the top right is a green "MEASURE" button. Below this is a table with 10 rows and 5 columns. The first column is labeled "CH" and lists channels from 2A to 10B. The next four columns are labeled with timestamps: 11:06:42, 11:07:24, 11:07:53, and 11:08:33. A red box highlights the first row (2A) and the first four columns. A red arrow points to the timestamp headers with the label "Measurement time". Another red arrow points to the "CH" header with the label "Channel".

CH	11:06:42	11:07:24	11:07:53	11:08:33
2A	2510.24	2510.49	2510.91	2510.91
2B	16.52	16.53	16.53	16.53
3A	2402.42	2402.15	2402.47	2402.47
3B	16.02	16.02	16.02	16.02
4A	2419.54	2419.27	2419.20	2419.20
4B	15.76	15.76	15.76	15.76
5A	2414.47	2415.07	2415.02	2415.02
5B	15.87	15.87	15.88	15.88
6A	2441.44	2441.58	2441.53	2441.53
6B	14.77	14.78	14.79	14.79
7B	76.00	75.90	76.10	75.90
8B	1684.90	1685.40	1684.60	1684.60
9B	333.10	332.60	332.90	333.10
10B	558.10	558.80	558.50	558.50



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