

## Instruction Manual

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### 1. Summary

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Windows Communication Tools (WinCT) is a program for transmitting the weighing data from an A&D balance to a computer. WinCT consists of three applications: RsCom and RsKey and RsWeight.

#### RsCom:

This window can transmit the weighing data to the computer using a text file format, and can transmit "commands" to control the balance.

#### RsKey:

The weighing data is directly pasted into an application such as Excel or Word, but this application cannot use "commands" to control the balance.

#### RsWeight:

The weighing data can be retrieved from the balance and displayed in graph form on the monitor screen in real-time. Maximum, minimum, average, standard deviation and coefficient of variation values of data can be calculated and displayed.

Caution:

- WinCT is a program for balances that use the A&D format. A&D does not guarantee performance or compatibility when other manufacturers' balances are used with WinCT.
- Back up your important data in the computer just in case.
- If you have problems or questions about compatibility with third party software, contact the manufactures for information.

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## 2. License Agreement and Limited Warranty

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- WinCT is subject to change without notice and does not represent a commitment by A&D to support earlier versions or to make changes to support non standard computers.
- WinCT is intended for the transmission of the weighing data from an A&D balance to a PC, and command transmission for controlling the balance.
- Under copyright laws, the WinCT program may not be copied, in whole or part, without the consent of A&D, except as specified in the license agreement.
- WinCT should only be installed on the hard disk or peripheral storage devices of a computer connected to an A&D balance.
- A&D bears no liability for direct, indirect, special, incidental, or consequential damages resulting from any defect in the WinCT program or the readme file, even when advised of the possibility of such damage.
- A&D is not responsible or liable for the loss of any programs and/or data stored in the computer on which WinCT was installed, including the costs of recovering said lost programs or data.

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A&D Company, Limited

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### 3. System Requirements

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#### 3.1 A&D Balance (with RS-232C or USB port\*1)

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The balance must be equipped with an RS-232C interface.

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#### 3.2 Computer

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OS Microsoft Windows 11 / Windows 10

Port differs depending on the connection method.

Connection method	Port
RS-232C cable	RS-232C port (COM port)*2
USB cable	USB port
Bluetooth (AD-8529PC-W)	USB port

\*2 If the computer has no COM port, a Serial/USB converter is available as an accessory to add a COM port to the computer. A cable is also attached for connecting the balance.

Product, Accessory

	Balance has 25 pin RS-232C	Balance has 9 pin RS- 232C
Using Serial/USB converter	AX-USB-25	AX-USB-9P
Using Bluetooth converter	AD-8529PC-W AX-K05363-30	AD-8529PC-W

Caution:

- Use an English version of Windows to assure performance of WinCT.
- If WinCT is operated on Windows except for an English version, the computer may show incorrect characters of data which is already stored before installing WinCT.

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### 3.3 Third Party Software/Applications

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If RsKey is used, an application to write/edit the data is required (for example: Microsoft "Excel").

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### 3.4 Cable

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Refer to each instruction manual for a cable to connect the balance and the computer.

These cables are included in the Serial/USB converters AX-USB-25P/9P.

#### Example 1

Balance	BM, GH, HR-i, HR-AZ/A, FZ/FX-i, EK-I series (D-sub 9 pin)
Computer	(D-sub 9 pin)
Cable	Straight type, D-sub 9 pin (pin module), D-sub 9 pin (socket module)

#### Example 2

Balance	GR, GX/GF, GX-K/GF-K, GP series (D-sub 25 pin module)
Computer	(D-sub 9 pin, socket module)
Cable	Straight type, D-sub 25 pin (pin module), D-sub 9 pin (socket module)

#### Example 3

Balance	BA-T/BA, GX/GF-A, GX/GF-M, GX/GF-L (USB) *1
Computer	(USB port)
Cable	USB cable

\*1 Bidirectional communication mode

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#### 4. Interface Preparation

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##### 4.1 Connecting the RS-232C cable between an A&D balance and a computer.

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Step 1 Turn off the computer.

Connect the cable to appropriate COM port of the computer.  
(e.g. COM1 of the computer)

Step 2 Connect the cable to the RS-232C terminal of the balance.

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##### 4.2 Specifying parameters of an A&D balance

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Refer to the balance's instruction manual for the "Data output mode", "Data format" and RS-232C interface parameters. The following parameters are the factory settings for A&D's balances.

RS-232C	Factory settings
Baud rate	2400 bps
Parity	EVEN
Data length	7 bits
Stop bit	1bit
Terminator	CR / LF

Mode and format	Factory settings
Data format	A&D standard format
Data output mode	Key mode

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## 5. RsCom

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### 5.1 Use and Function of RsCom

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This window is used to transmit the weighing data to a computer, using a text file format. This window can also be used to transmit "commands" to control an A&D balance. Software version 6.01.

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### 5.2 RsCom Features

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- This window is able to transmit "commands" to control an A&D balance.
- This window communicates data bi-directionally between the balance and the computer.
- Data is transmitted in ASCII text format and is used for display on a monitor. It can also be sent to a printer without modification.
- Multiple windows can be opened at the same time, depending on the available number of connecting COM ports, when multiple balances are connected.
- Other applications can be run at the same time as WinCT.
- This window is able to receive GLP data from an A&D balance.
- Interface parameters are stored in this window.

#### Caution:

- Use "A&D standard format" for the data communication with an A&D balance.
  - Other formats can not be used with RsCom.
- Do not specify the same COM port for multiple windows.

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### 5.3 RsCom Operation

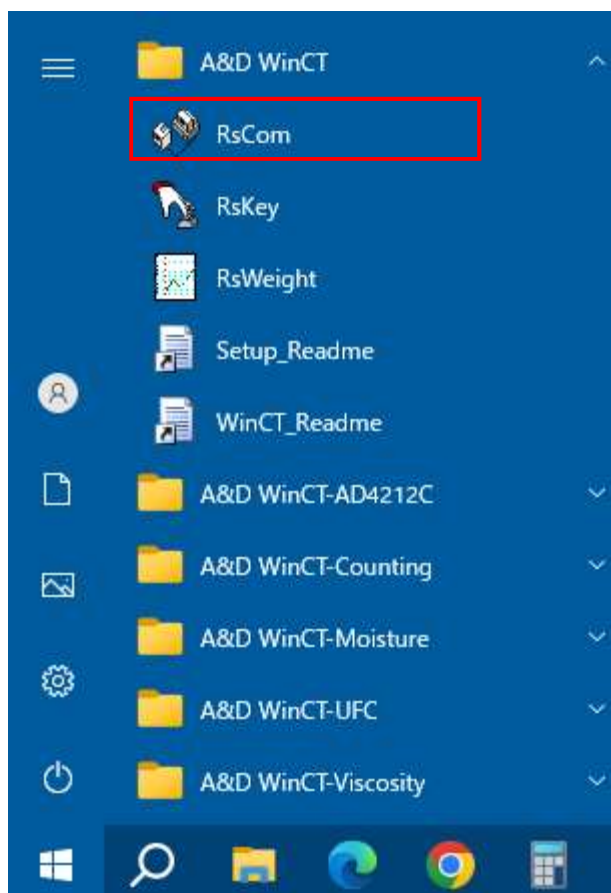
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Below is an example of how to operate RsCom.

#### Step 1 Starting the RsCom Window

Run the "RsCom" menu.

Default menu address is [Start] - [Program] - [A&D WinCT] - [RsCom].



## Step 2 Setup for RS-232C

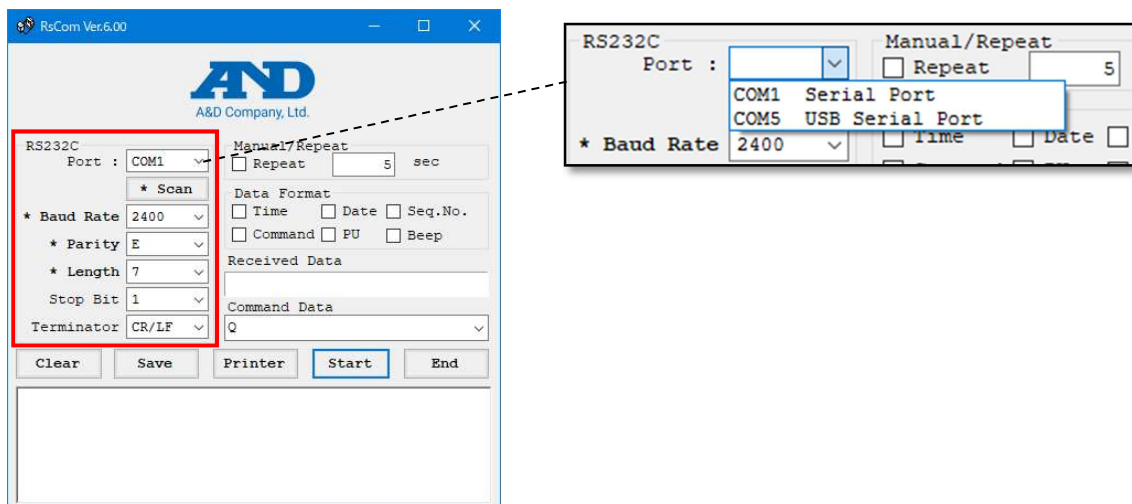
Set the computer's RS-232C interface parameters as follows to adjust to the balance's parameters. Refer to "5.4 RsCom Functions [RS-232C]" regarding details of parameters.

The default settings for RsCom communication parameters are the same as the factory settings for A&D's balances.

Select a COM port in [Port :] and click [\* Scan]. WinCT automatically searches for the balance's parameters and sets [\* Baud Rate], [\* Parity] and [\* Length].

If an error occurs, check the following:

- The COM port selected in [Port :] is correct.
- The cable used is appropriate.
- The balance's display is in weighing mode.



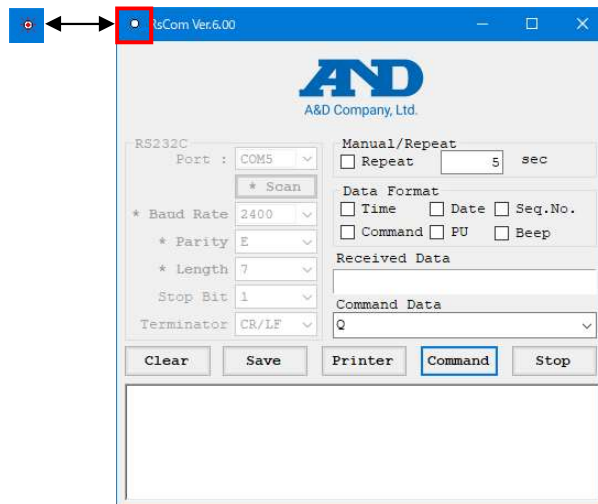
[Port:]	COM port to which the cable is connected on the computer.
[* Baud Rate]	Baud rate
[* Parity]	Parity
[* Length]	Data length
[Stop Bit]	Stop bit
[Terminator]	Terminator



**Step 3 Starting Communication**

Select (click) the [Start] key in the RsCom window.

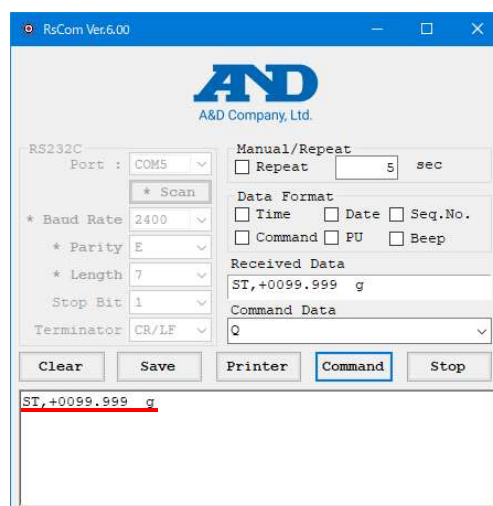
The "o" mark starts blinking on the window and indicates that RsCom is ready to communicate.



**Step 4** When the stability mark of a balance is displayed and the [Print] key of a balance is pressed, the current data is transmitted to a computer.

**Step 5** Check the weighing data at [Received Data] in the RsCom window.

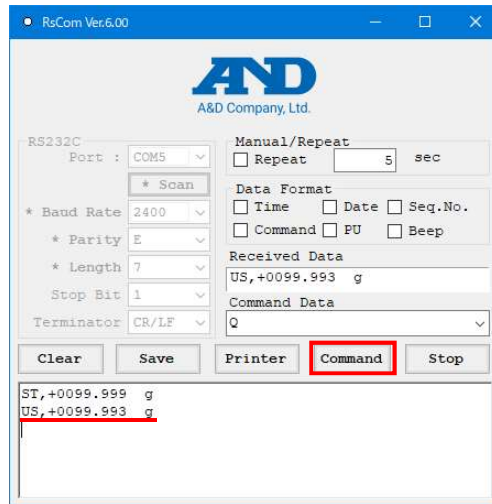
If the data is not displayed on the computer monitor, refer to section "8. Troubleshooting".



## Step 6 Controlling the Balance

Select a command on [Command Data] in the RsCom window.

Select (click) the [Command] key. Then the command is sent to the balance.



## Step 7 Stopping Current Communication

Select (click) the [Stop] key in the RsCom Window. The "o" mark stops blinking on the window.

## Step 8 Exiting (Closing) the RsCom Window.

Select (click) the [End] key in the RsCom window.

### Caution:

- Data is in text format and can be edited on the monitor.
- Use "A&D standard format" for the data communication with an A&D balance.  
Other formats cannot be used with RsCom.
- Do not specify the same COM port for multiple windows.

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## 5.4 RsCom Functions

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### [Start / Command] key

- [Start] key      Opens the RS-232C port.
- [Command] key    Transmits commands to the balance.

### [End / Stop] key

- [End] key        Closes the RsCom Window.
- [Stop] key       Stops the communication data flow.

### [Clear] key

Deletes all data displayed in the RsCom window.

### [Save] key

Stores data displayed in the RsCom window to a file.

### [Printer] key

Sends data to the attached printer.

### [RS-232C]

- Specifies the following parameter of RS-232C interface so as to adjust to a balance's parameters.  
[Port:], [**\*** Baud Rate], [**\*** Parity], [**\*** Length], [Stop Bit], [Terminator]
- The "\*" is the default parameter settings.  
(The default settings for RsCom communication parameters are the same as the factory settings for A&D's balances.)

### [Port:]

COM port connecting a cable on the computer.  
COM ports recognized by the computer are listed.  
COM ports not on the list have not been recognized correctly by the computer.

### [**\*** Scan] key

After selecting a COM port in [Port :], when this key is clicked, WinCT automatically searches for the balance's parameters and sets [**\*** Baud Rate], [**\*** Parity] and [**\*** Length].

[★ Baud Rate]

600, 1200, \*2400, 4800, 9600, 14400, 19200, 28800, 38400 bps

[★ Parity]

\*E (Even), O (Odd), N (None)

[★ Length]

Data length

\*7, 8 bits

[Stop Bit]

\*1, 1.5, 2 bits

[Terminator]

\*CR/LF, CR

CR: ASCII code 0Dh

LF: ASCII code 0Ah

[Manual / Repeat]

Toggles between manual and automatic operations

- When the Repeat mark is checked, commands are transmitted periodically.

Periodic time can be set in seconds. Use values of 1 second or more.

Caution:

-Due to internal processing, data cannot be acquired correctly at intervals less than 1 second.

To acquire data at intervals less than 1 second, we recommend setting the data output setting of the balance to Stream Mode and acquiring data as the display is refreshed.

- When the Repeat mark is not checked, commands are transmitted each time the Command key is clicked.

[Data Format]

Selects items to output with weighing data.

[Time]

[Date]

[Seq. No.] Sequence number.

[Command]

[PU] Utility software for A&D printers.

[Beep] Beep when receiving data.

Depending on your computer there may not be sound.

[Received Data]

Displays current data transmitted from the balance.

[Command Data]

Selects a command from popup list.

Refer to the balance manual for command selections.

[CAL] Calibration command.

[P] The same as the [ON/OFF] key of a balance.  
Display ON/OFF command.

[PRT] The same as the [PRINT] key of a balance.

[Q] Query command for weighing data.

[R] The same as the [RE-ZERO] key of a balance.  
RE-ZERO command.

[RNG] The same as the [RANGE] key of a balance.

[SMP] The same as the [SAMPLE] key of a balance.

[U] The same as the [MODE] key of a balance.  
Unit command.

[Z] The same as the [ZERO] key of a balance.  
Zero command.

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## 6. RsKey

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### 6.1 Use and Function of RsKey

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The weighing data is directly pasted into an application, such as Excel or Word. (NOTE: this mode can not be used to send "commands" to the balance) Software version 6.01.

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### 6.2 RsKey Features

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- The weighing data is directly pasted into an application such as Excel or Word.
- The RsKey mode can paste data transmitted from a balance, as if data is entered by a keyboard.
- The RsKey mode can be used with applications such as Excel, Word and Text Editor, etc.
- This window is able to receive GLP data from a balance.
- Interface parameters are stored in this mode.

#### Caution

- Turn the Caps Lock off. If the Caps Lock is on, upper-case and lower-case letters of the alphabet will toggle.

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### 6.3 RsKey Operation

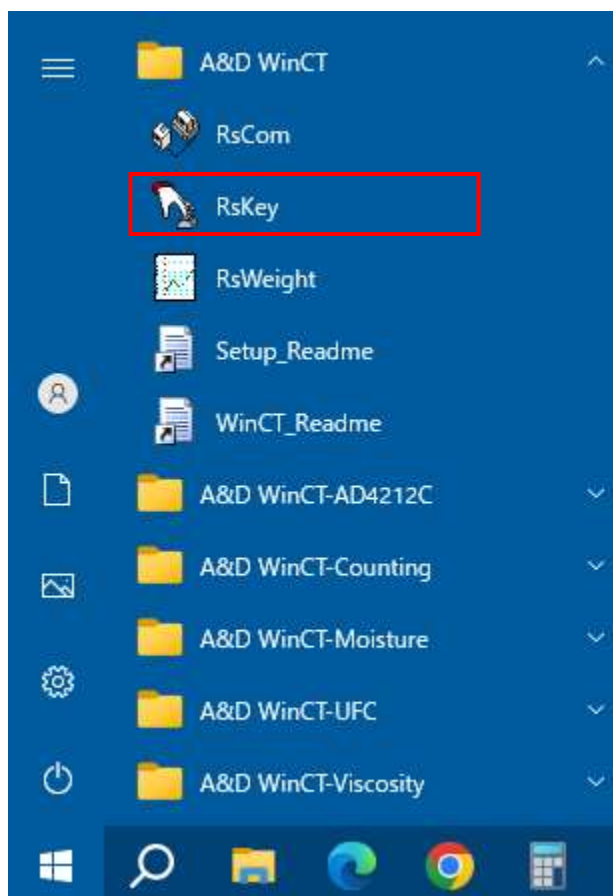
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This is an example of an RsKey operation.

Step 1 Start the RsKey window

Run the "RsKey" menu.

Default menu address is [Start] - [Program] - [A&D WinCT] - [RsKey].



## Step 2 RS-232C Setup

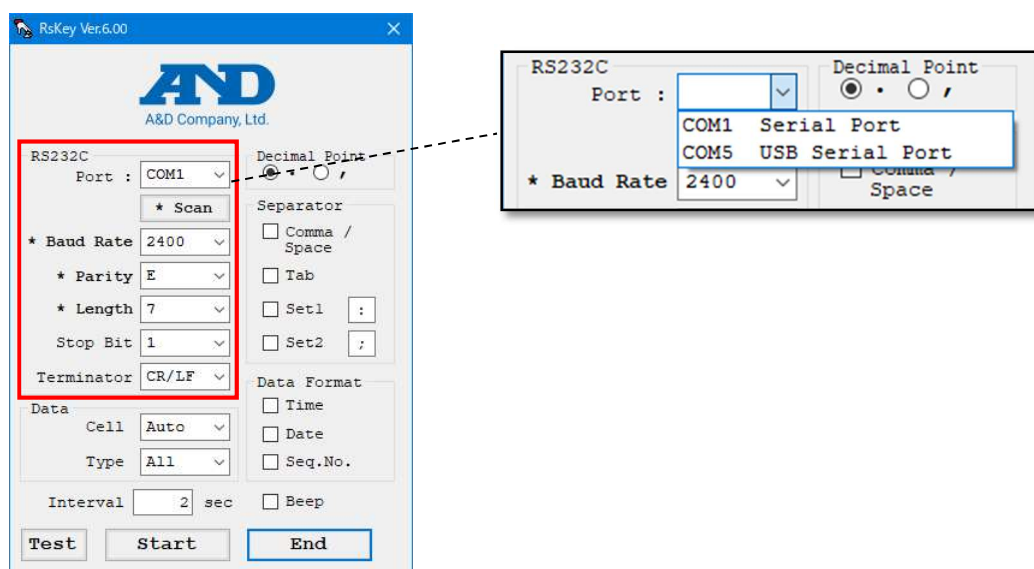
Use the following RS-232C parameters in the computer to match the balance's parameters. Refer to "6.4 RsKey Functions [RS-232C]" regarding details of parameters.

The default settings for RsKey communication parameters are the same as the factory settings for A&D's balances.

Select a COM port in [Port :] and click [\* Scan]. WinCT automatically searches for the balance's parameters and sets [\* Baud Rate], [\* Parity] and [\* Length].

If an error occurs, check the following:

- The COM port selected in [Port :] is appropriate.
- The cable used is appropriate.
- The balance's display is in weighing mode.



[Port:]	Connect cable to appropriate COM port on the computer.
[* Baud Rate]	Baud rate
[* Parity]	Parity
[* Length]	Data length
[Stop Bit]	Stop bit
[Terminator]	Terminator



Step 3 Test

Select (click) the [Test] key.

Step 4 When the balance displays the stability indicator, press the balance's [Print] key.

Check weighing data in the window.

If the data is not displayed on the computer monitor, refer to section "8. Troubleshooting".



Step 5 Select (click) the [ x ] icon in the window to close the test mode.

Step 6 Collecting Data

Start the importing application such as Excel to enter data.

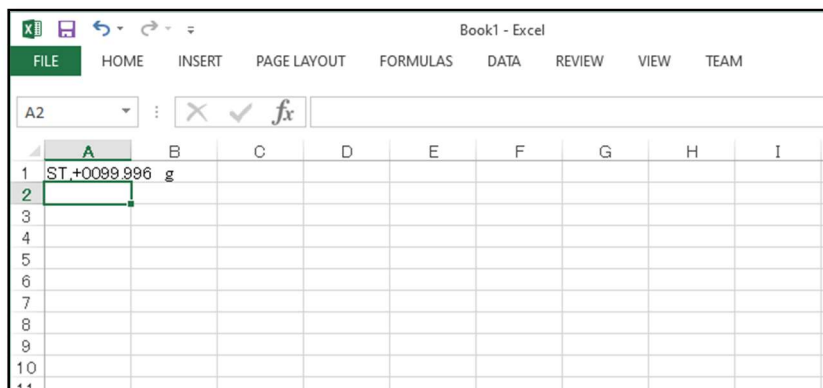
Step 7 Place the cursor in the importing application where data is to be entered.

Step 8 Select (click) the [Start] key in the RsKey window.

The RsKey window is minimized, [RsKey Com#] is displayed on the task bar, and RsKey is ready to receive and display. The blinking sign "o" means that RsKey is ready to receive data.



Step 9 When the balance displays the stability indicator and the [Print] key of a balance is pressed, the data is entered at the cursor's position.



Step 10 Select (click) the [RsKey Com#] on the task bar to stop communication. The display will return to the RsKey window.

Step 11 Select (click) the [End] key in the RsKey window to exit (close) RsKey.

Caution:

- Use "A&D standard format" for data communication with an A&D balance. Other formats cannot be used with "RsKey."
- Do not move the cursor during communication while in RsKey mode. If the cursor is moved during communication, an error may occur.
- If you have questions about the importing application (Word, Excel, etc.), contact the manufacture.
- You do not need to start up RsKey before starting the importing application (Word, Excel, etc.).
- Perform RsKey minimization after placing the cursor where data is pasted.
- When the mouse or key freezes, turn off the balance, stop receiving data and refresh the [Interval].
- The status of the Caps Lock key and Num Lock key may be changed by the "RsKey".
- When inputting data and plotting a graph in Excel in real time, the software may not operate correctly because Excel requires time to process large information.

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## 6.4 RsKey Functions

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The "\*" is default settings.

### [Start] key

- When the [Start] key is selected (clicked), the RsKey window is minimized and is ready to receive data.  
When the data is received, it is entered into an application, such as Excel.
- To stop the RsKey mode, click the [RsKey Com#] on the task bar and the RsKey window returns to the display.

### [End] key

The RsKey mode is closed and exited.

### [Test] key

- Verifies readiness to receive.  
The right condition is that when data is received from a balance it is displayed on the computer.
- The display format changes according to header type from the balance.  
The "o" (stability) mark is displayed with a stable header (ex. "ST").  
The "o" (stability) mark is not displayed with an unstable header (ex. "US").
- If the balance is set for "stream mode," clicking this [Test] key will display the data (i.e. on the computer monitor).

[RS-232C]

- Set the computer's RS-232C interface parameter as to adjust to the balance's parameters.

[Port:], [**\*** Baud Rate], [**\*** Parity], [**\*** Length], [Stop Bit], [Terminator]

- The "\*" is default parameter settings.

(The default settings for RsKey communication parameters are the same as the factory settings for A&D's balances.)

[Port:]

COM port to which the cable is connected on the computer.

COM ports recognized by the computer are listed.

COM ports not on the list have not been recognized correctly by the computer.

[**\*** Scan] key

After selecting a COM port in [Port :], when this key is clicked, WinCT automatically searches for the balance's parameters and sets [**\*** Baud Rate], [**\*** Parity] and [**\*** Length].

[**\*** Baud Rate]

600, 1200, \*2400, 4800, 9600, 14400, 19200, 28800, 38400 bps

[**\*** Length]

Data length

\*7, 8 bits

[**\*** Parity]

\*E (Even), O (Odd), N (None)

[Stop Bit]

\*1, 1.5, 2 bits

[Terminator]

\*CR/LF, CR

CR : ASCII code 0Dh

LF : ASCII code 0Ah

[Data]

Selecting the way to paste data with the [Cell] and [Type].

[Cell]

Selects an action (operation) after each data is entered.

\*Enter (same operation as the enter key of a computer), Right, Down, Auto (Right or Down)

[Type]

Selects the type of input data.

\*All (All data), Number (only numerical data)

[Separator]

Selects a separator to place in the data, when the [Type] of [Data] is "All". Set1 and Set2 can set arbitrary characters.

[Comma / Space] "Comma" or "Space" are selected as separator.

[Tab]

[Set1]

[Set2]

[Data Format]

Selects items with weighing data to display on the monitor window.

[Time]

[Date]

[Seq. No.]            Sequence number.

[Interval]

Interval is used for periodic data transmission. Set the balance to Stream Mode.

This setting is used when computer processing is slow or data is periodically required.

The interval can be set in seconds. The default is 2 seconds. Use values of 2 seconds or more.

If the interval is set to zero seconds, all data is transmitted from the balance to the application.

(Please use 0 seconds only in TEST mode)

Caution:

-Due to internal processing, data cannot be acquired correctly at intervals less than 2 seconds.

[Beep]

Beep when receiving data.

Depending on your computer there may not be sound.

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## 7. RsWeight

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### 7.1 Use and Function of RsWeight

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This application can produce a graph in real-time of the data transmitted from an A&D balance via RS-232C. Software version 6.01.

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### 7.2 RsWeight Features

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- The weighing data transmitted from the balance can be displayed in graph form on the monitor in real-time.
- The axis scale of a graph automatically alters according to the data. It can be also changed manually.
- The graph can be printed out using a printer.
- The recorded data can be saved in CSV format.
- Maximum, minimum, average, standard deviation and coefficient of variation values can be calculated and displayed on the monitor.

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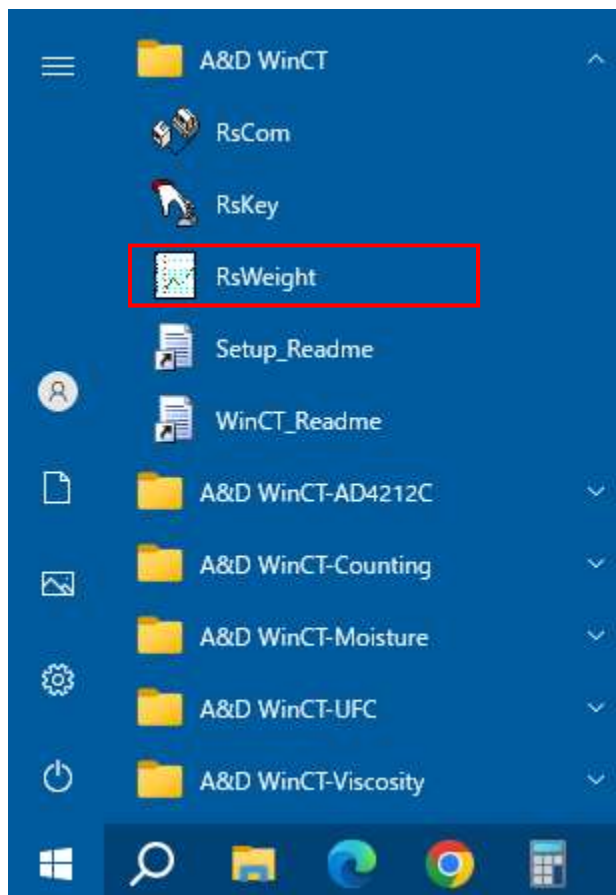
### 7.3 RsWeight Operation

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#### Step 1 Start the RsWeight Window

Run the "RsWeight" menu.

Default menu address is [Start] - [Program] - [A&D WinCT] - [RsWeight].



## Step 2 RS-232C Setup

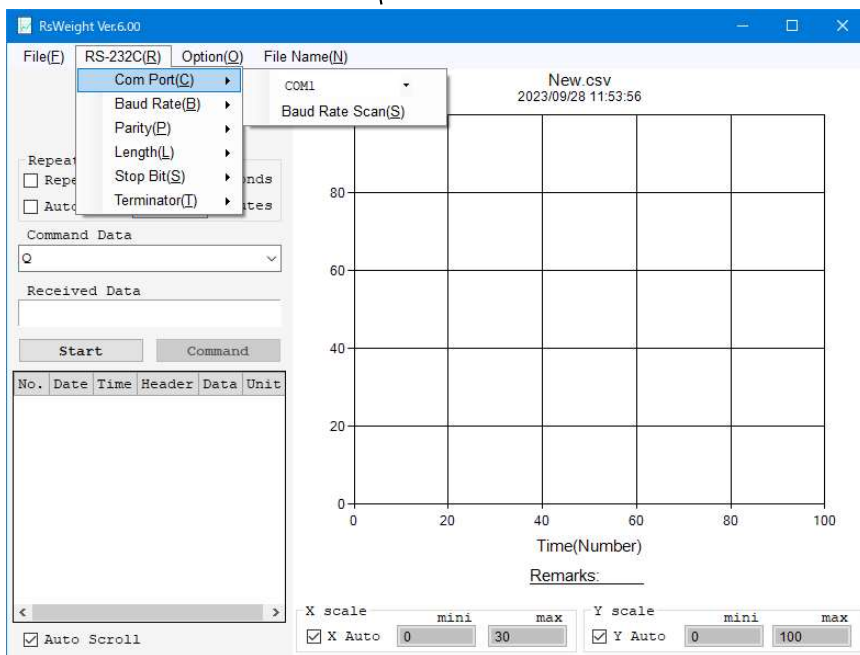
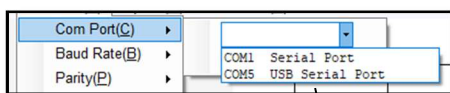
Use the RS-232C parameters that match the balance's parameters. Refer to "7.4 RsWeight Functions [RS-232C]" for details of parameters.

(The default settings for RsWeight communication parameters are the same as the factory settings for A&D's balances.)

Select a COM port in [Com Port] and click [Baud Rate Scan]. WinCT automatically searches for the balance's parameters and sets [Baud Rate], [Parity] and [Length].

If an error occurs, check the following:

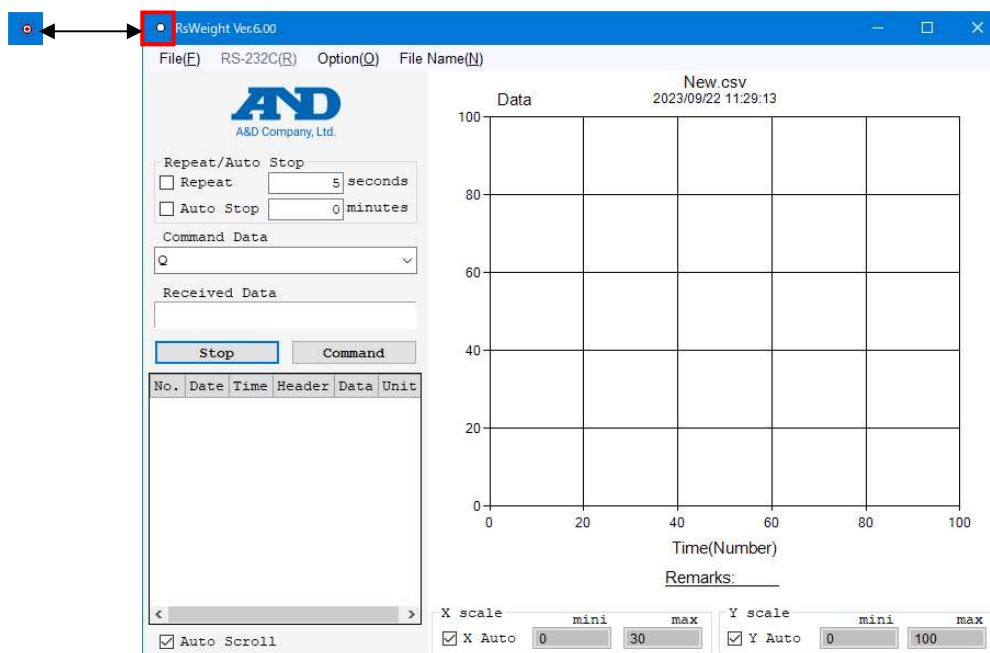
- The COM port selected in [Com Port] is correct.
- The cable used is appropriate.
- The balance's display is in weighing mode.





### Step 3 Starting Transmission

Select the [Start] key. The "o" mark starts blinking on the window and indicates that RsWeight is ready to start data transmission.

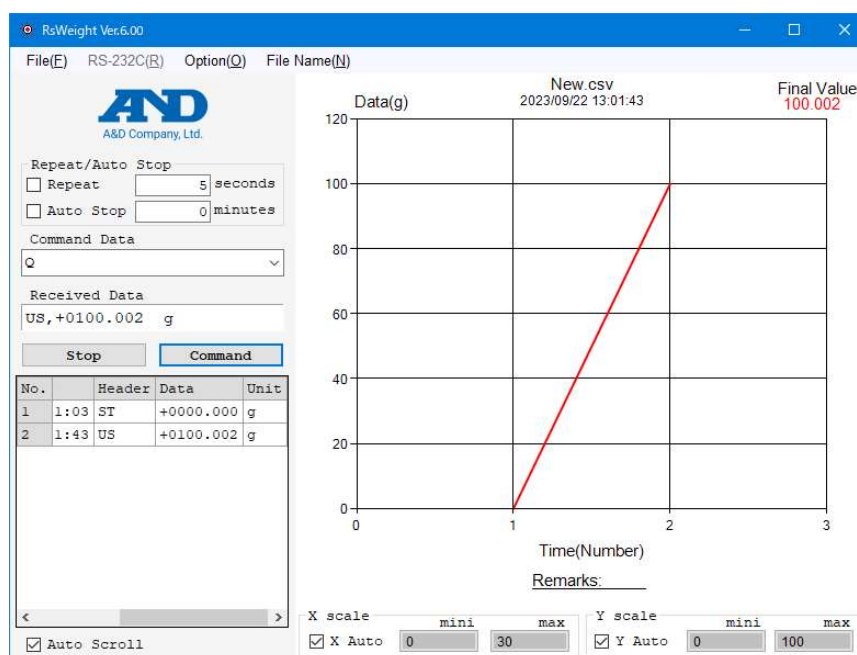


### Step 4 Communicating with the Balance

When the indicator showing stability of the balance is displayed and the balance [Print] key is pressed, the current data is transmitted to the computer.

Select [Command Data] in the RsWeight window. Select the [Command] key.

Then the command is sent to the balance.



Step 5 Stopping a Measurement

Select the [Stop] key to terminate the measurement.

Note : Do not change units during a measurement since statistical operation error may occur.

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## 7.4. RsWeight Functions

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### [Table]

Records transmitted data.

[Time] Time of measurement

[Data] Double-click the table to change the title and value.

### [Graph]

- Creates a graph showing transmitted data
- If X Auto, Y Auto are checked, the scales of the axes are automatically changed to suit the scale of the data.
- When the values for X scale (X mini, X max), Y scale (Y mini, Y max) are clicked, the minimum or maximum values for each axis can be changed.
- The title of the graph (New.csv) can be changed by the "File Name" option in the menu.
- Remarks can be edited by clicking "Remarks: \_\_\_\_\_".  
(It is advisable to type a sample name, measurement condition, etc. here.)
- Final value is shown on the right side of the graph.

[Scale] The minimum value on the axis scale can be changed.

[X auto], [Y auto]

The scales of checked axes (X Auto, Y Auto) are automatically changed to match the data(auto scaling function)

X scale

[X mini] The minimum value on the X-axis (time).

[X max] The maximum value on the X-axis (time).

Y scale

[Y mini] The minimum value on the Y-axis (weighing value).

[Y max] The maximum value on the Y-axis (weighing value).

※mini > max values cannot be inputted.

#### [Repeat/Auto Stop]

When the Repeat mark is checked, commands are transmitted periodically.

Periodic time can be set in seconds. Use values of 1 second or more.

Caution:

-Due to internal processing, data cannot be acquired correctly at intervals less than 1 second.

To acquire data at intervals less than 1 second, we recommend setting the data output setting of the balance to Stream Mode and acquiring data as the display is refreshed.

When the Repeat mark is not checked, commands are transmitted each time the Command key is clicked.

When both "Repeat" and "Auto Stop" are checked, the measurement terminates automatically in a set period (set in units of minute). (For one set period, data should not exceed 10,000 in total.)

#### [Start] key

Starts a measurement (Opens the RS-232C port) .

#### [Stop/End] key

[End] key Closes the RsCom Window.

[Stop] key Stops the communication data flow.

#### [Command] key

Transmits a command.

#### [Received Data]

Displays received data on the monitor.

#### [Command Data]

Sets a command to transmit.

For a data query, select "Q."

#### **【Auto Scroll】**

When **【Auto Scroll】** is checked, the data grid display automatically scrolls to the bottom so the most recent data can be viewed at all times.

[Menu] (The "\*" mark means a default setting.)

[File] File operation

[New] Clears the data.

[Open] Opens the file.

[Save]

[Data Save]

Table data is saved in a file. File type can be chosen from CSV or TXT.

Choosing the sample material or conditions as the file name is the simplest method. Please note that when the file name is entered here it is automatically populated in the graph title at the top of the graph.

[Chart Save]

The graph can be saved as an image file.

File type can be chosen from JPEG or BMP.

[Print] Outputs to a printer.

[Statistics] Displays statistical results.

Prints or pastes to the clipboard of the operating system software.

N: Number of samples

TOTAL: Total value

Maximum: Maximum value

Minimum: Minimum value

R: Maximum value - Minimum value

Average: Average value

Std Dev: Standard deviation

CV(%) : Coefficient of variation

$CV = (\text{standard deviation} / \text{average value}) \times 100(\%)$

[End] Shut down the software

[RS-232C] RS-232C interface parameters

(The default setting for communication parameters are the same as the factory settings for A&D's balances.)

[Com Port] Com port (\*1 to 32)

[Baud Rate Scan]

After selecting a COM port in [Com Port], when this key is clicked, WinCT automatically searches for the balance's parameters and sets [Baud Rate], [Parity] and [Length].

[Baud Rate] Baud Rate

(600, 1200, \*2400, 4800, 9600, 14400, 19200, 28800, 38400)

[Parity] Parity (None, Odd, \*Even)

[Length] Data length (\*7, 8)

[Stop Bit] Stop bit (\*1, 1.5, 2)

[Terminator] Terminator (\*CR/LF, CR)

[Option] Various settings

[Line] Sets the line thickness on the graph.

(1: Standard, \*2: Heavy line)

[Marker] Sets the marker on the graph (\*0: No, 1: Yes)

[Decimal Point] Sets decimal point. (\*Dot, Comma)

[X-Axis] Sets time axis unit. (Second, Minute, Hour, \*Number)

[Y-Axis] Sets the item of Y-Axis.

(Header, \*Data, Unit)

[Beep] Beep when receiving data.

Depending on your computer there may not be sound.

[File Name] File name settings

Sets the file name for saving data (sets by pressing the Enter key).

The graph title changes as well at this time.

※When measuring in stream mode on the balance, all data may not be able to be imported, depending on the baud rate. Also, when there are many measurement data entries, the graph display may take some time to update (about 1 second each time the display is changed).

When you wish to import all measurement data in stream mode, please use RsCom.

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## 8. Troubleshooting

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If the setup and procedure is correct, when the balance's [Print] key is pressed, data is displayed on the computer monitor. If data is not transmitted from the balance to the computer using RsCom or RsKey or RsWeight, check the following:

Check 1 Is the correct cable used?

Is a straight type cable used?

Is the correct connector used?

Check 2 Is the cable connected to the right COM port on the computer?

Sometimes COM port is misunderstood as printer port.

Check 3 Are the RS-232C interface parameters, "Data format" and "Data output mode" for a balance correct?

Check 4 Are the RS-232C computer settings correct?

- Is the cable connected to the correct [Port:]?

- Do the computer's [Baud Rate], [Parity], [Length], [Stop Bit] and [Terminator] correspond to balance's?

Check 5 Exit all other applications.

Check 6 When the balance's [Print] key is pressed, is the stability indicator on the balance displayed?

Check 7 Try a different COM port. (Some computer may not be able to use COM1 if an internal modem is used).

Check 8 Are you using an A&D balance?

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## 9. Examples

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The following example assumes the use of an A&D balance, such as the GH , GR, GX, GF, GP, FX-i, EK-i series, WinCT and Microsoft Excel. Refer to the appropriate manual for operating instructions.

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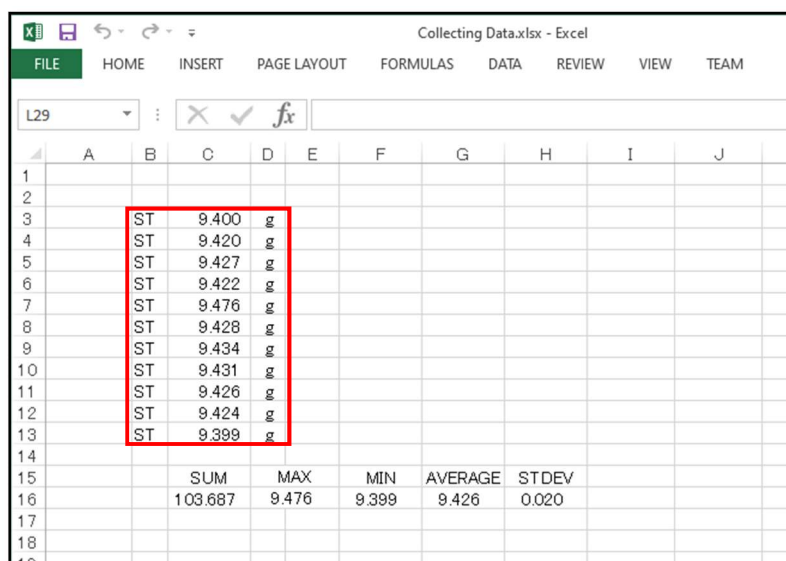
### 9.1 Basic Operation

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#### 9.1.1 Collecting data

Data is transmitted using the balance's [Print] key and is entered into "Excel". The functions: average, standard deviation, maximum and minimum can be used in "Excel".

Balance status	Key mode (factory settings)
Mode of WinCT	RsKey
Application	Excel



The screenshot shows an Excel spreadsheet titled "Collecting Data.xlsx". The data is organized as follows:

	A	B	C	D	E	F	G	H	I	J
1										
2										
3		ST	9.400	g						
4		ST	9.420	g						
5		ST	9.427	g						
6		ST	9.422	g						
7		ST	9.476	g						
8		ST	9.428	g						
9		ST	9.434	g						
10		ST	9.431	g						
11		ST	9.426	g						
12		ST	9.424	g						
13		ST	9.399	g						
14										
15			SUM	MAX	MIN	AVERAGE	STDEV			
16			103.687	9.476	9.399	9.426	0.020			
17										
18										
19										

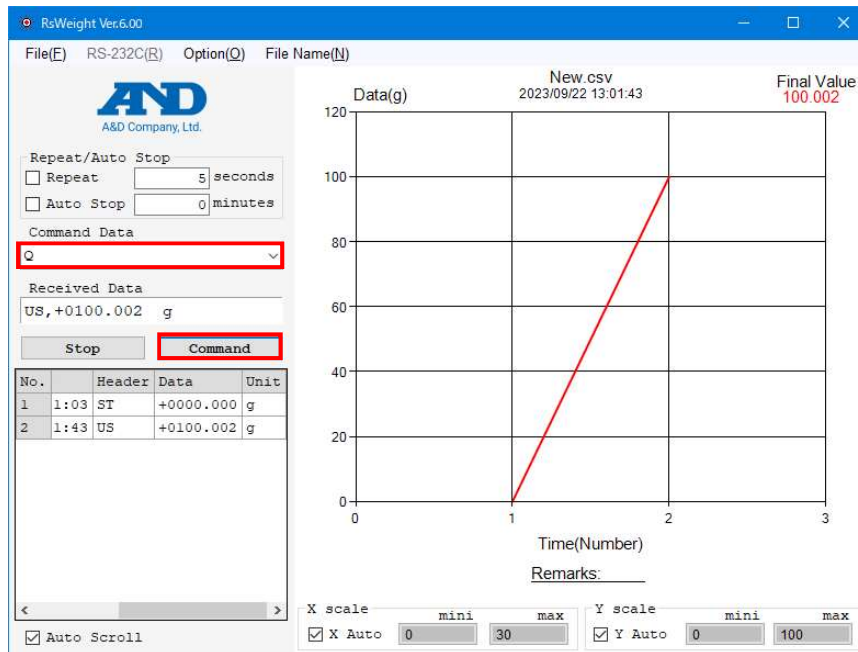
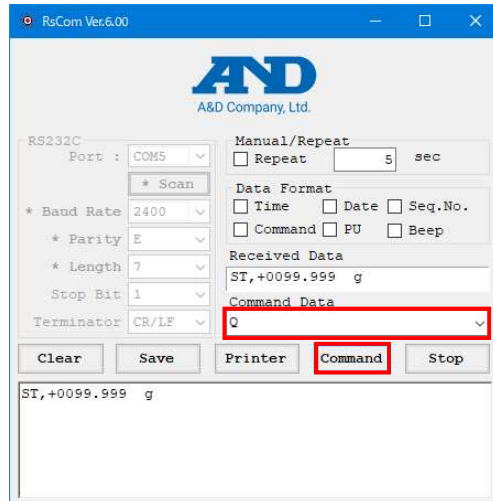


### 9.1.2 Controlling a balance

An A&D balance can be controlled using "command" from a computer.

There are "commands" of "re-zero (making zero display)", "requesting data", etc.

- Balance status            Key mode (factory settings)
- Mode of WinCT            RsCom, RsWeight
- Application                Unnecessary



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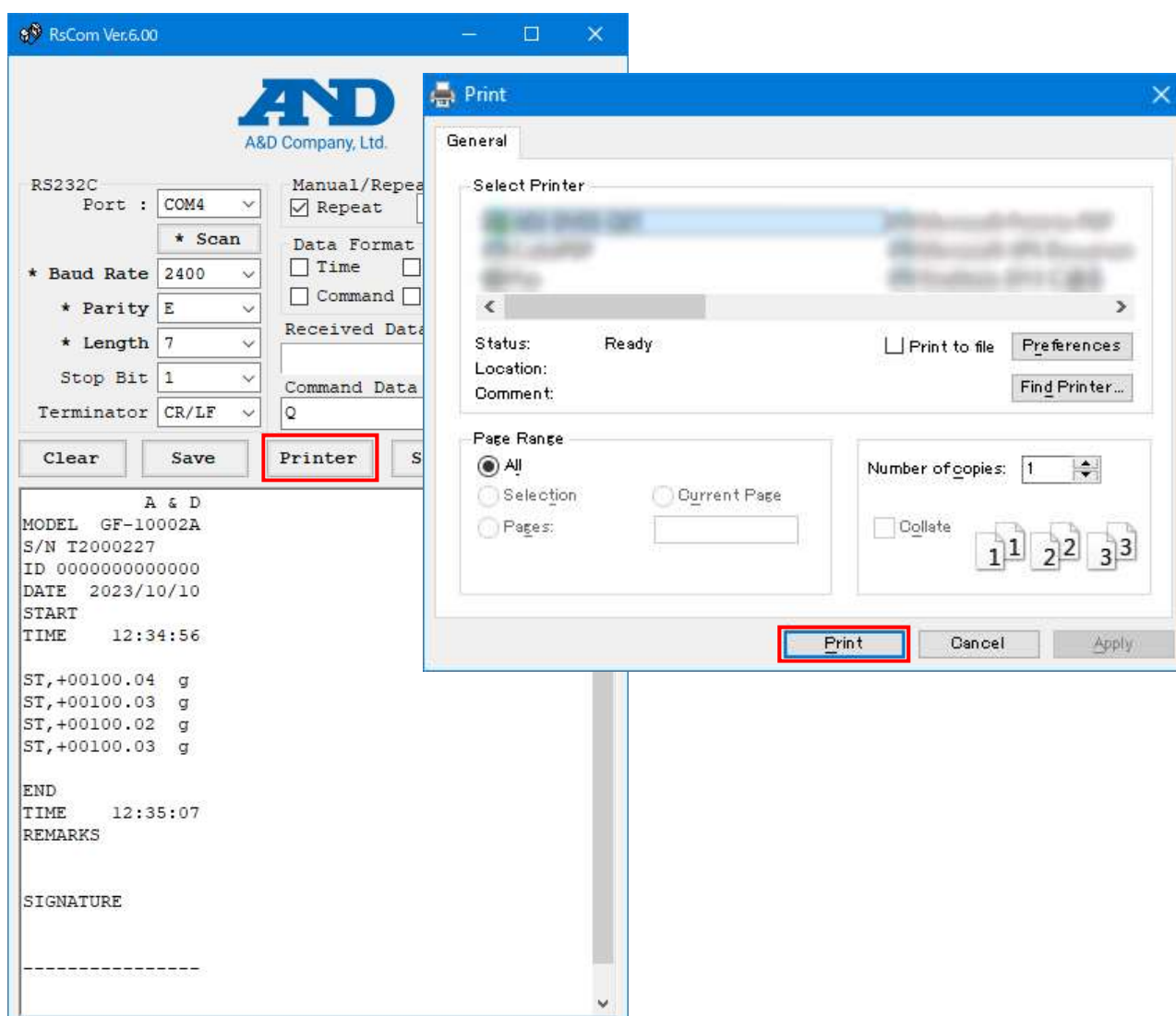
## 9.2 Using the Balance's Functions

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### 9.2.1 Printing and recording GLP data with your printer

If the GLP data output function of the balance is used, this GLP data can be sent to a printer connected to a computer. It is possible to print weighing data and printing/recording GLP data.

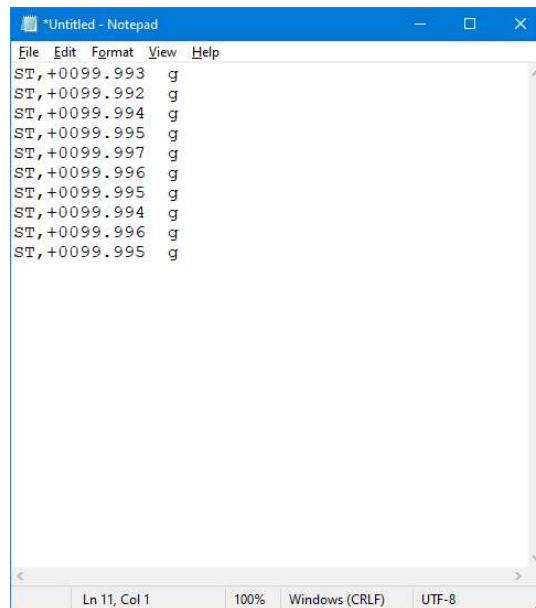
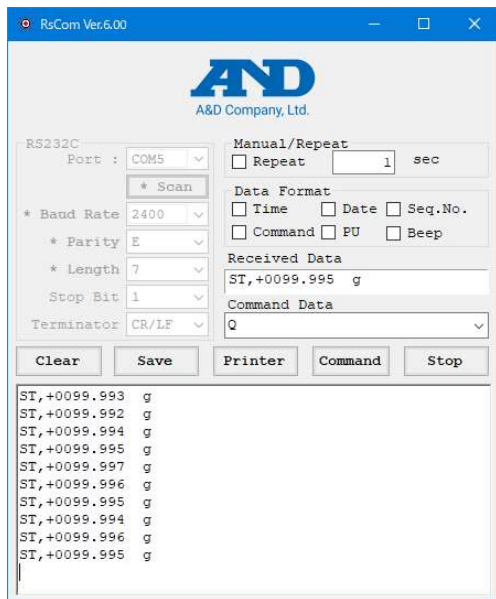
Balance status	GLP output mode
Mode of WinCT	RsCom
Application	Unnecessary



### 9.2.2 Using "data memory function"

Some A&D balances, such as the GR Balance, can store multiple weighing data into the balance's memory. The stored data is then transmitted in a bundle to the computer.

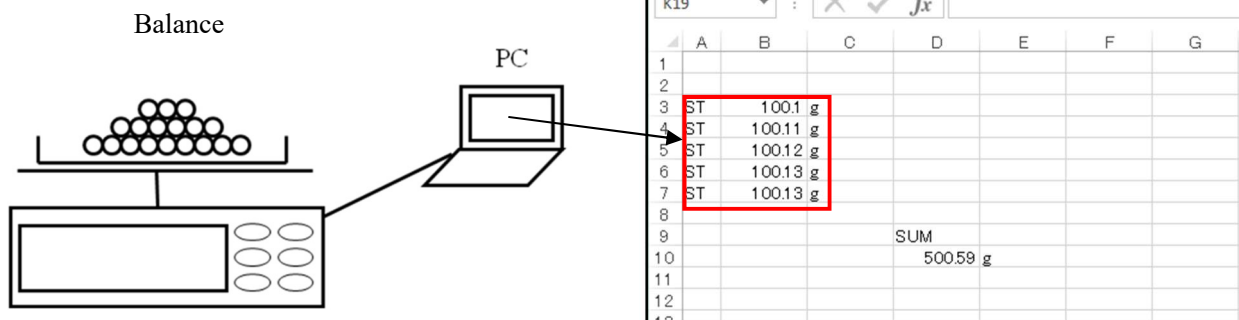
- Balance status            Data memory function
- Mode of WinCT            RsCom, RsWeight
- Application                Unnecessary



### 9.2.3 Weighing tablets

If the balance's "auto-print mode" is used, each tablet can be automatically weighed and the data is transmitted to the computer.

- Balance status            Auto-print mode, Auto-rezero mode
- Mode of WinCT            RsKey
- Application                Excel



### 9.2.4 Using a computer as External Indicator

When using the "test mode" of RsKey, the stream mode data is displayed on a computer monitor, which works as an external indicator for the balance.

Balance status	Stream mode
Mode of WinCT	RsKey (with interval)
Application	Unnecessary

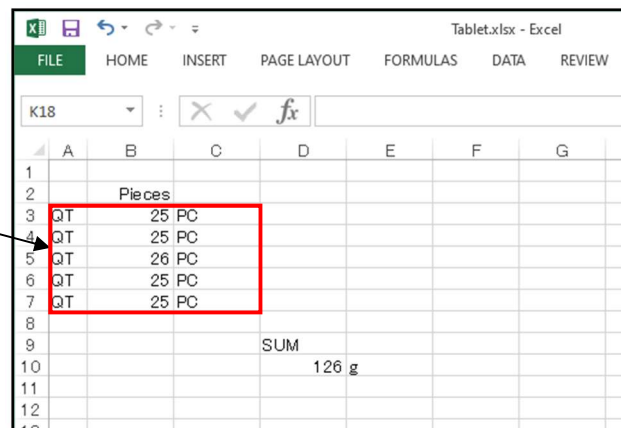
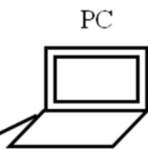
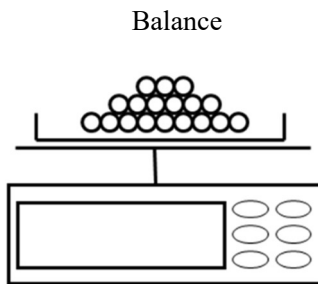


### 9.2.5 Counting parts

When using the balance's "counting mode", the parts are counted.

The counting data is transmitted to a computer and totaled.

Balance status	Counting mode
Mode of WinCT	RsKey
Application	Excel

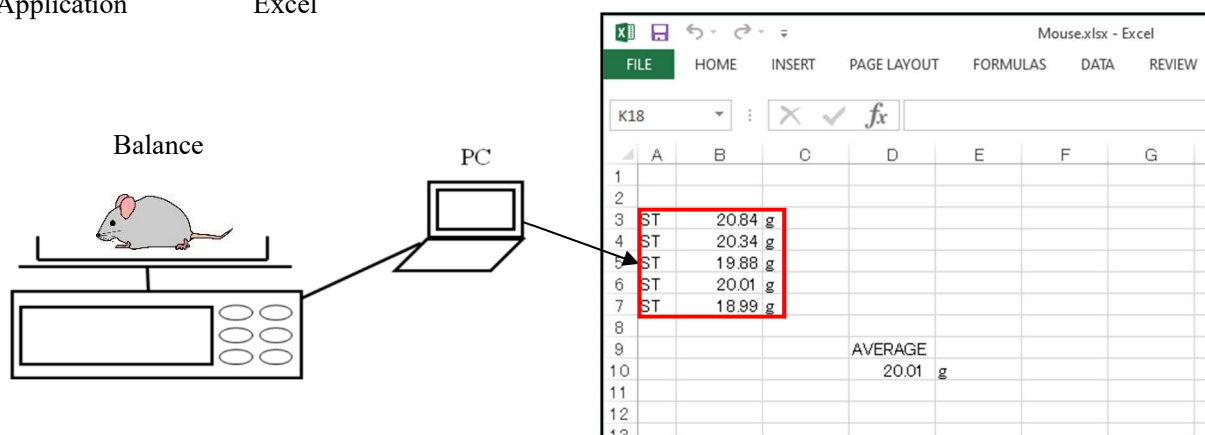


## 9.2.6 Weighing animals

When using the balance's "animal mode", animals are automatically weighed.

The data is transmitted to a computer.

Balance status	Animal mode
Mode of WinCT	RsKey
Application	Excel



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End of Readme file

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