WinCT-UFC

Windows UFC Setting Tools

INSTRUCTION MANUAL

A&D Company, Ltd.

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"WinCT-UFC" can be downloaded from the A&D website (http://www.aandd.jp/).
To setup "WinCT-UFC", please refer to the WinCT-UFC_SetUp_EN file in the downloaded A&D WinCT-UFC folder.

Table of Contents

1. Software overview

This software, "Windows Communication Tools for UFC" ("WinCT-UFC"), serves as the Windows setting tools for editing on a PC the UFC Output Format output from an A&D weighing instrument equipped with the UFC function and for storing it on the weighing instrument.

1-1. About the Universal Flex Coms (UFC) function

<u>Abilities of the UFC function</u>

☐ A&D weighing instruments equipped with the UFC function can output weighing data in customized formats (UFC Output Format[*1]).
   Thus, the user can arrange the form of output data, the order to print, etc. when printing with a printer capable of dump printing. …(1)

☐ By editing UFC Output Format to output label printer control strings, the user can print one-dimensional or two-dimensional barcode labels to a label printer directly from the weighing instrument without going through a PC when outputting weighing data from the weighing instrument. …(2)

(1) Examples of dump printing

```
--------------------

2017/01/23  12:34:56

SAMPLE       ABC-123

WEIGHT   +3456.78 g

--------------------
```

```
NET

         +36.90 g

TARE

         +12.30 g

GROSS

         +49.20 g
```

Customized formats

Printer for balances/scales
AD-8127

UFC Output Format

Printing

Weighing instrument

UFC Output Format

Printing

Label printer
(compatible with Zebra Programming Language: ZPL®/ZPL II® [*2])

(2) Examples of 1D/2D barcode printing

SAMPLE   ABC-123

SAMPLE   ABC-123
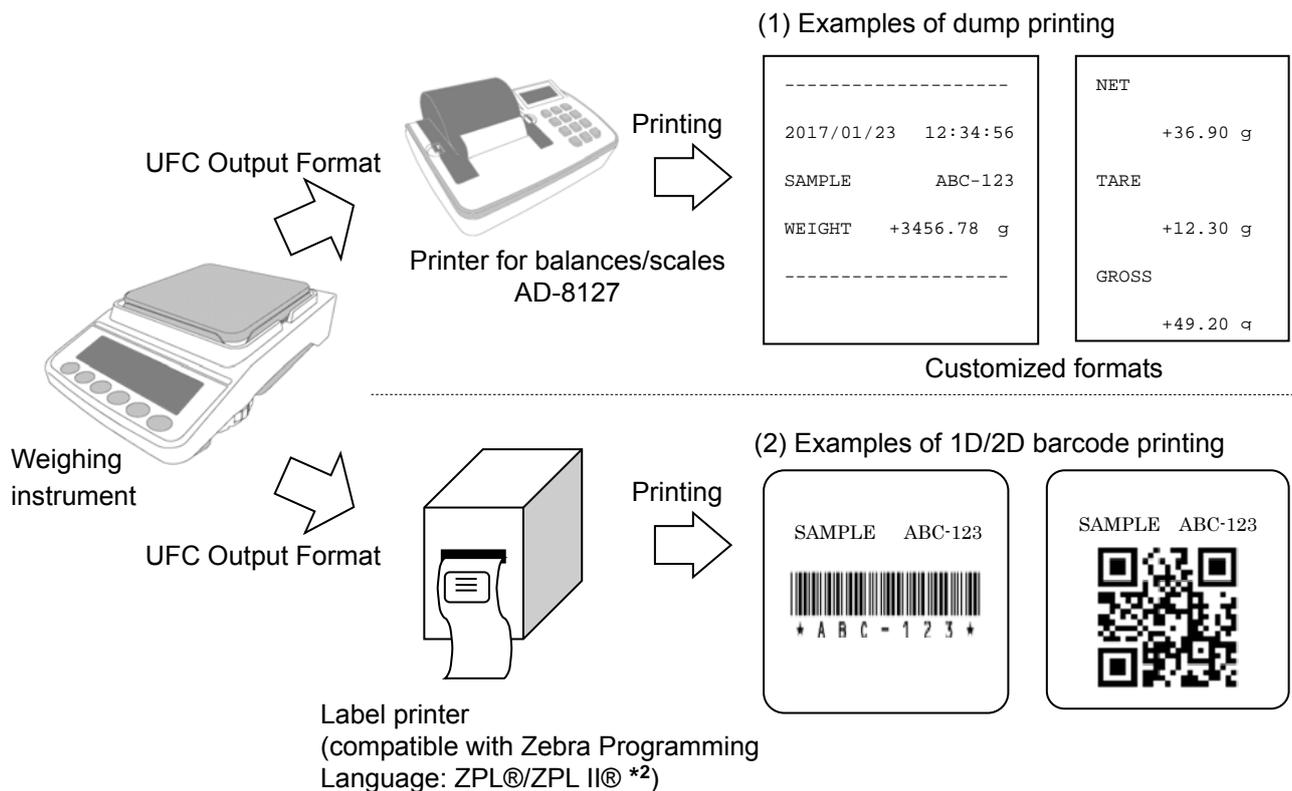
☐ With UFC Output Format, the following three can be output: Static text, variable data that a weighing instrument holds (such as weighing data) and the control code in ASCII. Each of them can be combined with the others to be output together.

How to use the UFC function

☐ To output data in UFC Output Format from the weighing instrument with the UFC function, the UFC output format settings must be already stored in the weighing instrument.

☐ To store the UFC output format settings in the weighing instrument, it is necessary to transmit particular commands (UFC Setting Commands*³) from a PC to the weighing instrument.

☐ WinCT-UFC is a program designed for editing UFC Output Format on a PC as well as for transmitting UFC Setting Commands to the weighing instrument.

WinCT-UFC

UFC Setting Commands:
PF,'SAMPLE'$WT...
SF1,DTTM..., etc.

Stores the settings

UFC Output Format

PC

Weighing instrument

Printer
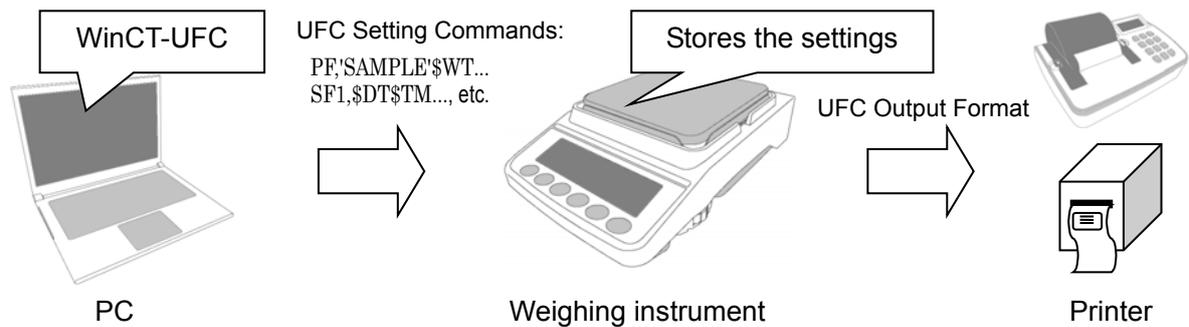
*1: **UFC Output Format may be referred to as "UFC format", "output format" or "format" in the instruction manual of the intended weighing instrument.**

*2: **ZPL® and ZPL II® are registered trademarks of ZIH Corp.**

***3**: **A UFC Setting Command may be referred to as "PF command", "UFC command" or "UFC program command" in the instruction manual of the intended weighing instrument.**

Note

・ UFC Setting Commands transmitted to the weighing instrument are saved even when the power is turned off.

・ The number of characters that can be stored, UFC Setting Command format and the cable/options required for connection to a PC will vary depending on the weighing instrument. For details, please refer to the instruction manual of the weighing instrument used.

1-2. Features of WinCT-UFC

☐ There are two kinds of modes that can be selected according to the type of printer connected to the weighing instrument: **Dump Print Mode** and **Barcode Label Print Mode**.

- ・ **Dump Print Mode** is for editing formats suitable for outputting to the printer for balances/scales (AD-8127) or a PC.

  (Note: When printing to an AD-8127 printer, set the printer to the dump printing mode.)

- ・ **Barcode Label Print Mode** is for editing commands for outputting barcode labels to a label printer compatible with Zebra Programming Language ZPL®/ZPL II®.

  Three types of one-dimensional/two-dimensional barcodes (QR code, Data Matrix code and Code 39) can be printed.

☐ UFC Output Format can be easily created by specifying desired data (weight values, date, etc.) and also by entering desired text (such as the name of an item) for printing.

☐ Editing and adjusting formats can be done effortlessly on a PC screen thanks to the **Preview Screen**, which displays the UFC Output Format to be output from the weighing instrument.

☐ UFC Setting Commands can be automatically generated from the edited format and can be transmitted to and stored on the weighing instrument. Data received from the weighing instrument can be displayed on the PC screen.

☐ The contents of the edited UFC Output Format, UFC Setting Commands and data received from the weighing instrument can be saved as and read to a CSV or TXT file. Printing to a printer from the PC is also possible.
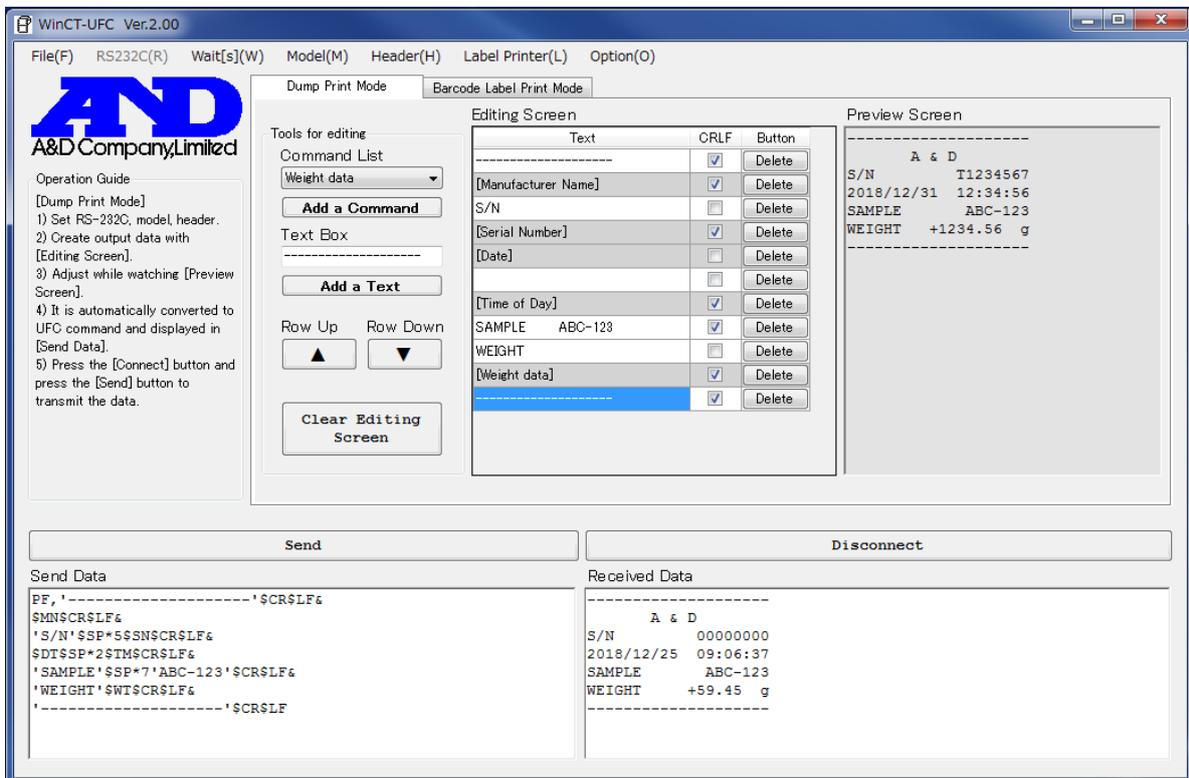
2. Compatible models

2-1. Compatible weighing instruments

WinCT-UFC can be used with the following A&D weighing instruments equipped with the UFC function.

As of November 2020

Weighing instrument	Model
Precision balances	BA series
	GX-AE/GX-A/GF-A series
	GX-M/GF-M series
Counting scales	FC-i/FC-Si series
	HC-i series
Digital platform scales	HV-C/CP and HW-C/CP series
Checkweighing scales	FS-i series

2-2. Compatible printers

□ **AD-8127**

The printer for balances/scales (AD-8127) can be used with **Dump Print Mode**.

Refer to "**6. Dump Print Mode**" for details about the mode.

□ **Label printer**

Label printers compatible with Zebra Programming Language ZPL®/ZPL II® can be used with **Barcode Label Print Mode**.

Refer to "**7. Barcode Label Print Mode**" for details about the mode.

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3. How to connect (GX-A/GF-A series precision balance)

3-1. Connecting the weighing instrument to a PC

☐ **If the PC is equipped with an RS-232C port:**

After checking the D-Sub 9-pin arrangement of the weighing instrument and the pin arrangement of the PC, connect with an appropriate RS-232C cable.

☐ **If the PC is not equipped with an RS-232C port, or if you want to use the PC's USB port:**

・ **Required cable**   AX-USB-9P, USB converter and cable set

(The USB driver must be installed.)

・ **Installing the driver**

(1) Connect the USB converter to the PC's USB port.

(2) Install the driver on the PC.

For installation, please refer to the instruction manual of the USB converter.

(3) Check the COM port name and number with Device Manager or the like.

GX-A/GF-A series   D-Sub 9- pin arrangement

Pin No.	Signal name	Direction	Meaning, remarks
1	-	-	N.C. (same potential as SG)
2	TXD	Output	Transmitted data
3	RXD	Input	Received data
4	-	-	N.C.
5	SG	-	Signal ground
6	DSR	Output	Data set ready
7	RTS	Input	Request to send
8	CTS	Output	Clear to send
9	-	Output	N.C. (12V output)

DTE signal names (except TXD and RXD).

Connection diagram (when connecting to a PC)

Inch screw #4-40 UNC
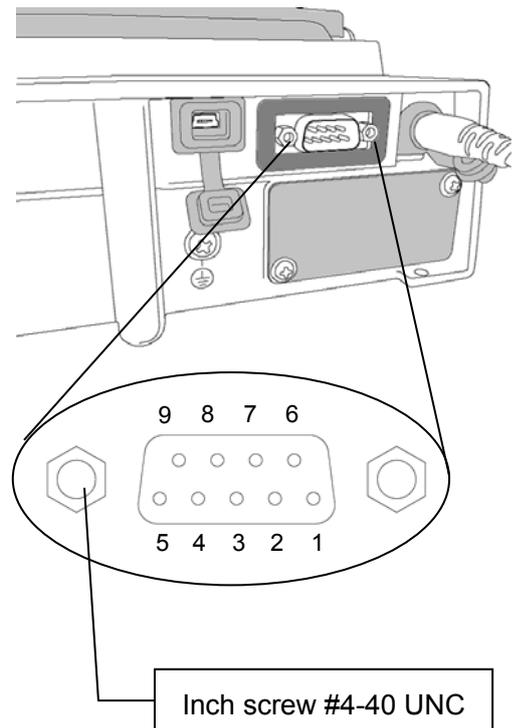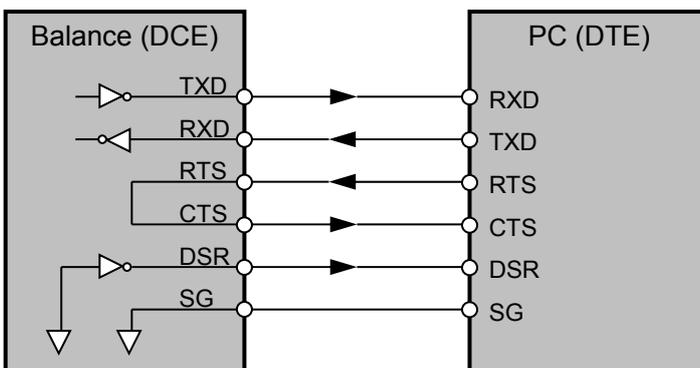
3-2. Connecting the weighing instrument to a printer

□ **To a printer for balances/scales (AD-8127):**

Connect with the cable provided with the printer.

When connecting to an AD-8127, set the printer to dump printing mode.

(For setting method, refer to "**6-3. Example (using Dump Print Mode to print from a weighing instrument to a printer)**".)

□ **To a label printer:**

When connecting to the balance's standard RS-232C port, do not connect pin No. 9 in the D-sub 9-pin connector. Use of an RS-232C cable AX-KO2466-200 sold separately and, if necessary, a commercially available gender changer are recommended.

When connecting via dedicated RS-232C isolated interface option GXA-03, use a commercially available RS-232C cable to connect.

Note

・ **For weighing instruments other than GX-A/GF-A series, please refer to the manual of the intended model.**

・ **Depending on the combination of the weighing instrument and the printer used, the D-sub 9-pin power pins may collide with each other, resulting in malfunction or failure. Make sure to check the pin arrangement carefully before connecting.**

Use of an RS-232C cable AX-KO2466-200, in which D-sub pin No. 9 is not connected, is recommended.

・ **Depending on the label printer used, a gender changer may be required.**

4. Sections of the software (common to both modes)

(2)

(1) File(F) RS232C(R) Wait[s](W) Model(M) Header(H) Label Printer(L) Option(O)

(3)

(4) Send / Disconnect

(5)
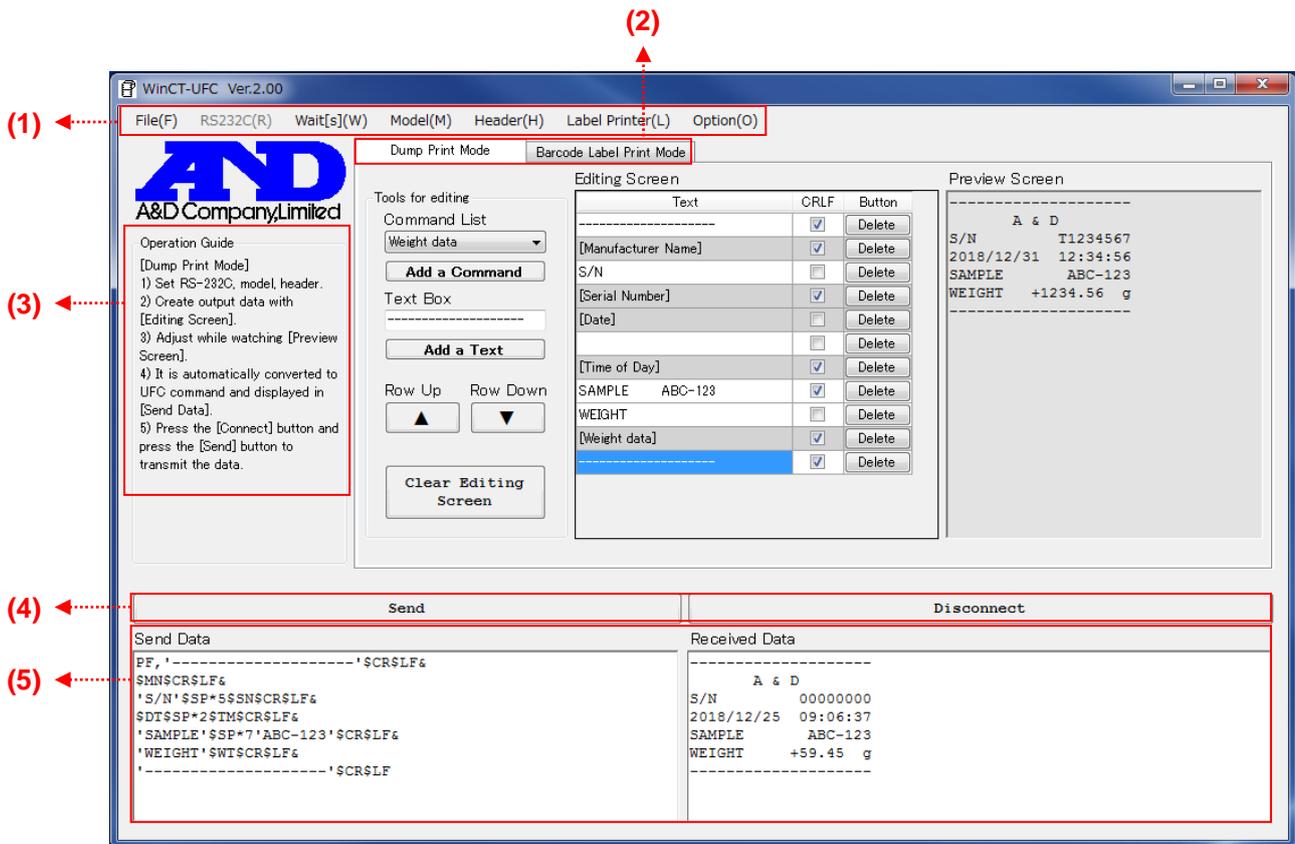
(1) Main Menus   (The " * " mark denotes the default setting.)

- **File(F):**   Operates files.

   Open: Reads files.

   Send Data: Transmitted data.

   Edit Data: Edited data.

   Barcode Data: Data edited in **Barcode Label Print Mode.**

   New: Clears data.

   Send Data: Transmitted data.

   Received Data: Received data.

   Edit Data: Edited data.

   Save: Saves data in files.

   Send Data: Saves data in the **Send Data** box in a TXT file.

   Received Data: Saves data in the **Received Data** box in a TXT file.

   Edit Data: Saves data on the **Editing Screen** in a CSV file.

   Barcode Data: Saves data edited in **Barcode Label Print Mode** in a CSV file.

   Print: Outputs to a printer.

   Send Data: Transmitted data.

   Received Data: Received data.

   End: Exits WinCT-UFC.

- **RS232C(R):** The RS-232C communication settings

    (The default values of communication settings are the same as the factory settings

    for A&D weighing instruments.)

    Com Port(C): Sets COM port (Displays the list of available ports.)

    Baud Rate(B): Sets baud rate

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

    Parity(P): Sets parity (* Even, Odd, None)

    Length(L): Sets data length (*7, 8 bits)

    Stop Bit(S): Sets stop bit (*1, 1.5, 2 bits)

    Terminator(T): Sets terminator (*CR/LF, CR)

- **Wait[s](W):** A transmission interval inserted between lines. Specify it according to the intended

    weighing instrument or conditions as it varies depending on the receive buffer size

    or the data processing time of the weighing instrument.

- **Model(M):** Specifies the weighing instrument (Displays the list of compatible models.)

- **Header(H):** Sets a UFC header command (Displays the list of applicable headers.)

- **Label Printer(L):** Settings for label printing (used only in **Barcode Label Print Mode**)

    Printer Resolution: Select the resolution of the label printer printhead.

    (203 dpi [8 dot/mm], 300 dpi [12 dot/mm], 406 dpi [16 dot/mm], 600 dpi [24 dot/mm])

    Label Length: Enter the label length. The unit is mm. (10 mm to 100 mm)

    Label Width: Enter the label width. The unit is mm. (10 mm to 100 mm)

    Print Sheets: Enter the number of sheets to print at one time. (1 sheet to 10 sheets)

- **Option(O):** Optional setting

    Language: Select a preferred language (Japanese/*English)

(2) Mode switching tabs

The mode can be switched between **Dump Print Mode** and **Barcode Label Print Mode**.

- **Dump Print Mode:** **Dump Print Mode** is the mode for printing the data sent from the weighing

    instrument as it is.

- **Barcode Label Print Mode:** **Barcode Label Print Mode** is the mode for printing the data sent

    from the weighing instrument as a barcode label.

(3) Operation Guide: Displays the operating procedures for WinCT-UFC.

(4) Connect/Send & **Clear Received Data/Disconnect** buttons

- **Connect** button**:** Starts communication with the weighing instrument. (When communication

    starts, **Connect** changes to **Send**.)

- **Send** button**:** Transmits the character strings in the **Send Data** box to the weighing instrument.

- **Disconnect** button**:** Ends communication with the weighing instrument. (When communication

    ends, **Disconnect** changes to **Clear Received Data**.)

- **Clear Received Data** button**:** Clears the **Received Data** box.

(5) **Send Data** & **Received Data** boxes

・ **Send Data** box**:** Displays UFC Setting Commands to transmit to the weighing instrument. The user can type text in here directly.

When a blank line (a line with just a terminator) is inserted, the blank line and following lines will not be transmitted. Remarks, output results, etc. put there will be useful for future reference.

・ **Received Data** box**:** Displays the character strings received from the weighing instrument. The user can type text in here directly.

Refer to "**6-1. Sections of the software (Dump Print Mode)**" or "**7-1. Sections of the software (Barcode Label Print Mode)**" for explanations of parts that are different in each mode.

5.   Operation (common to both modes)

Step 1   Starting the WinCT-UFC software

To begin, click the **Start** button on the PC.

Then**,** navigate to **All Programs** > **A&D WinCT-UFC** > **WinCT-UFC Ver.2.00** to start WinCT-UFC.

(The example below shows Windows 7.)
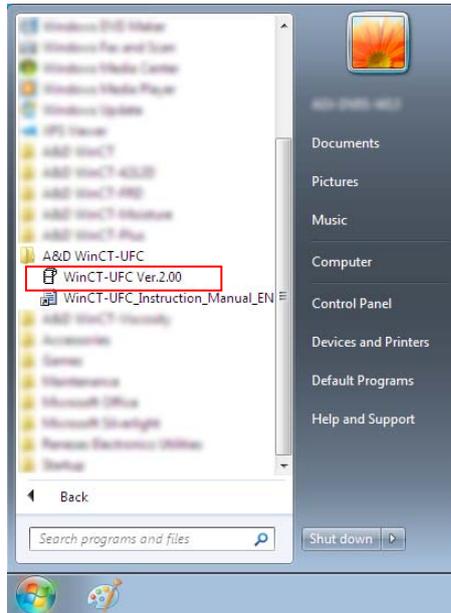
Step 2   Configuring the communication settings (**1** in **Operation Guide (3)**)

Click **RS232C(R) (1)** and select the COM port from **COM Port(C) (1)** to communicate with a weighing instrument (COM4 is selected in the example below). Make sure that the settings of RS-232C match the communication settings of the weighing instrument. For setting details, refer to **(1)** in "**4. Sections of the software (common to both modes)**".

(The initial values of WinCT-UFC's communication settings are the same as the factory settings of an A&D weighing instrument.)
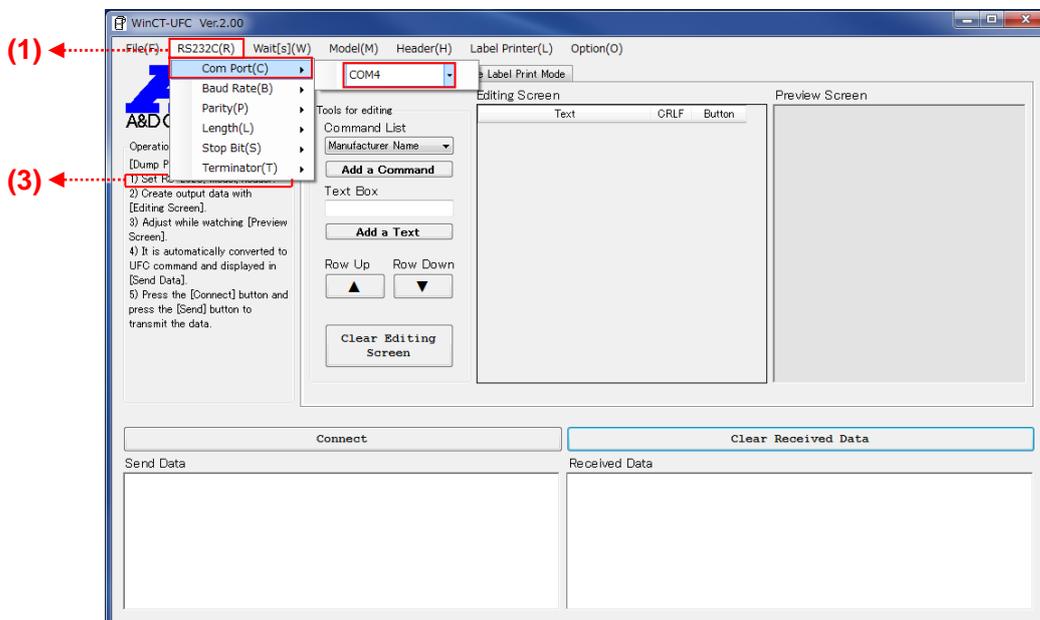
Step 3 Selecting the weighing instrument and the UFC command header (**1** in **Operation Guide (3)**)

Click **Model(M) (1)** and select the weighing instrument to use from the model list.
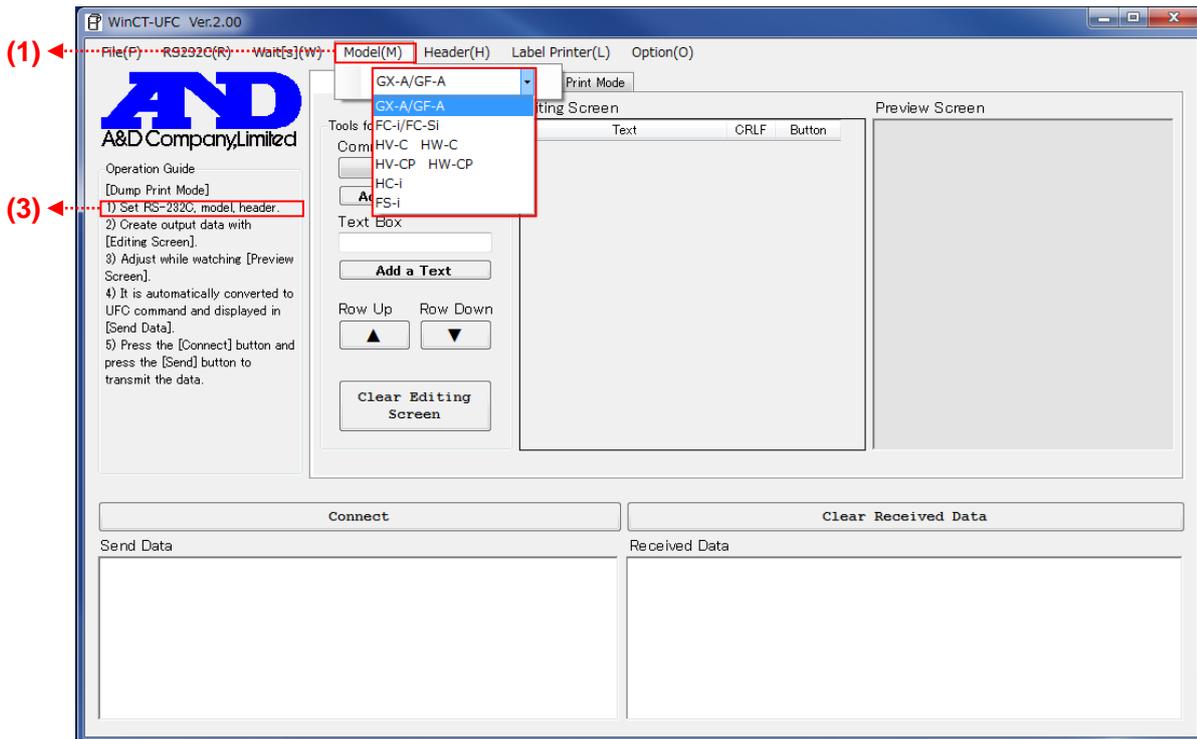
When the model is selected, the list of usable UFC command headers is shown in **Header(H) (1)**. Choose one according to the intended application.
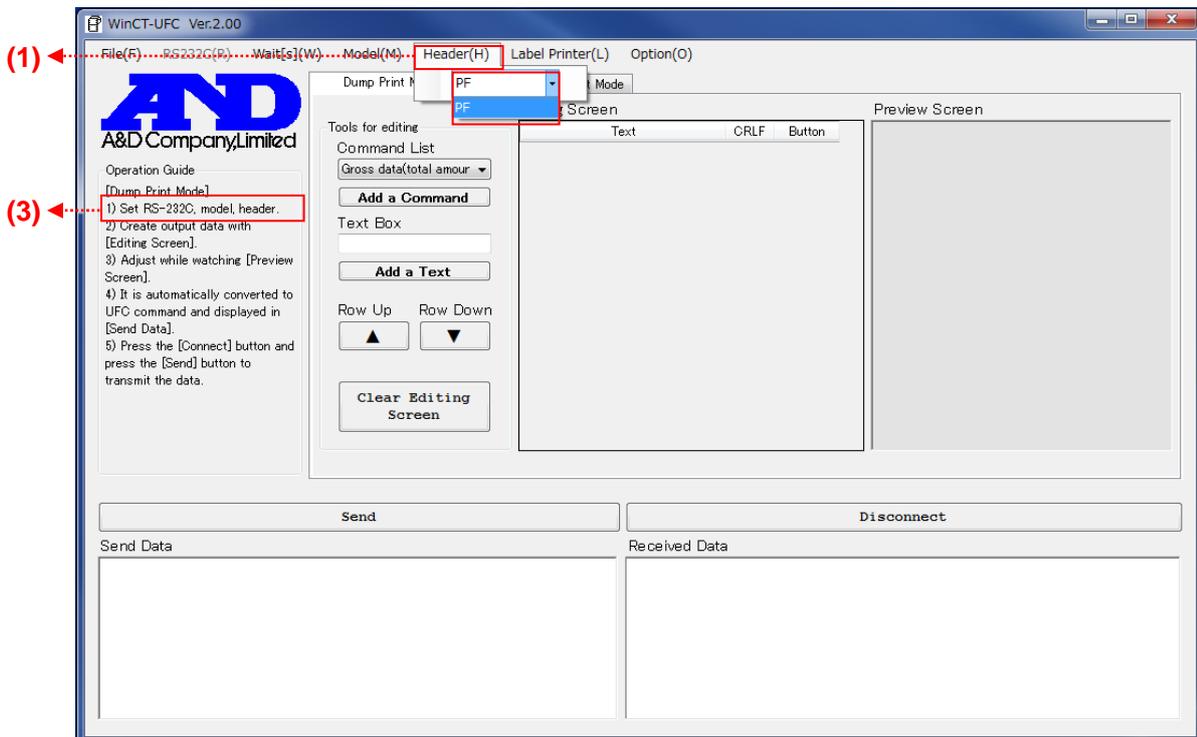
Step 4 Setting the weighing instrument

Make sure the data output mode of the weighing instrument is set to the UFC mode.

For setting instructions, please refer to the instruction manual of the weighing instrument.

The operations after Step 4 differ according to the mode.

□ For Dump Print Mode, refer to "**6. Dump Print Mode**".

□ For Barcode Label Print Mode, refer to "**7. Barcode Label Print Mode**".

6. Dump Print Mode

Dump Print Mode allows the user to create data formats in order to output them from a weighing instrument to a printer for balances/scales (AD-8127) or a PC. Combining desired text with the variable data such as weight values that the weighing instrument holds makes it possible to output data from the weighing instrument in formats suited to each application.
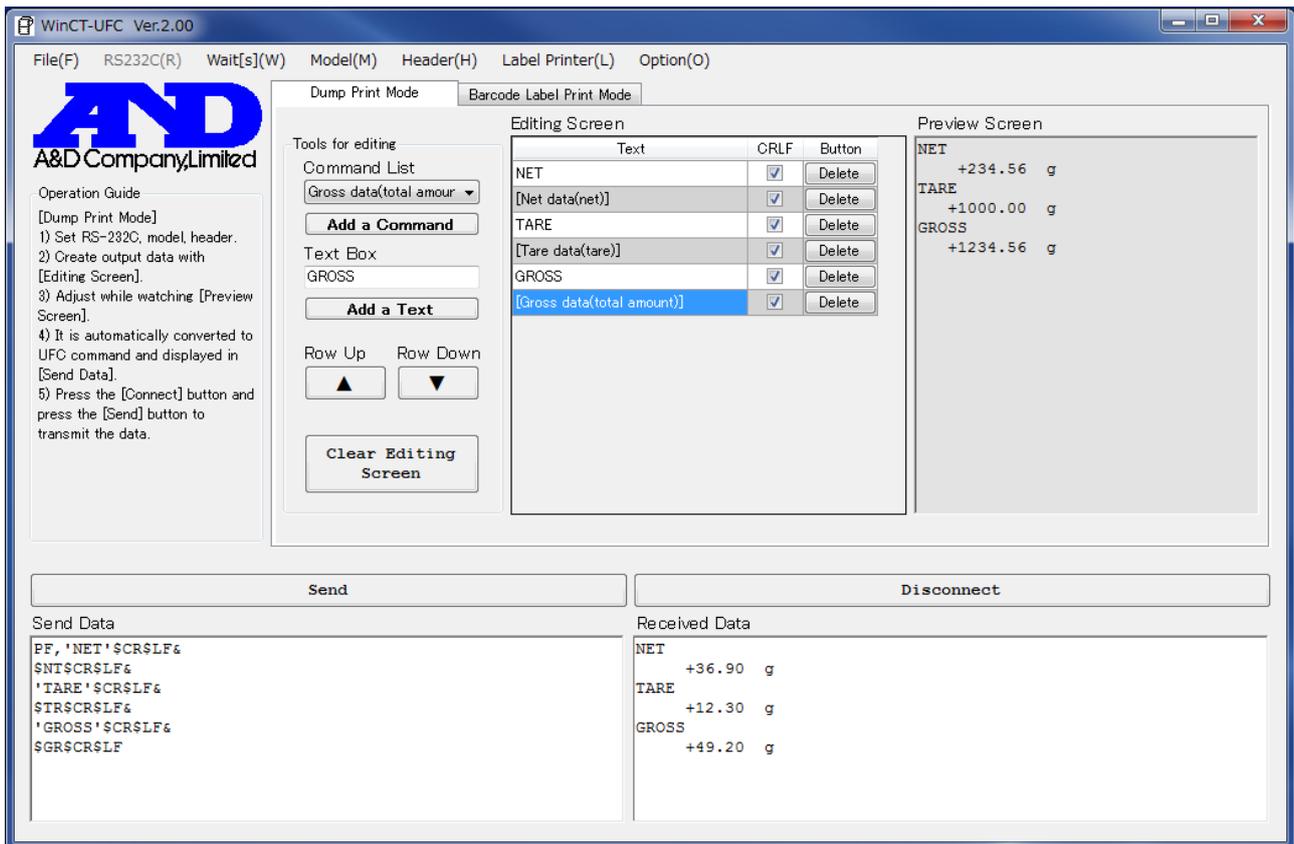
Example of output with GX-A/GF-A series
multi-functional precision balances

6-1.　　Sections of the software (Dump Print Mode)
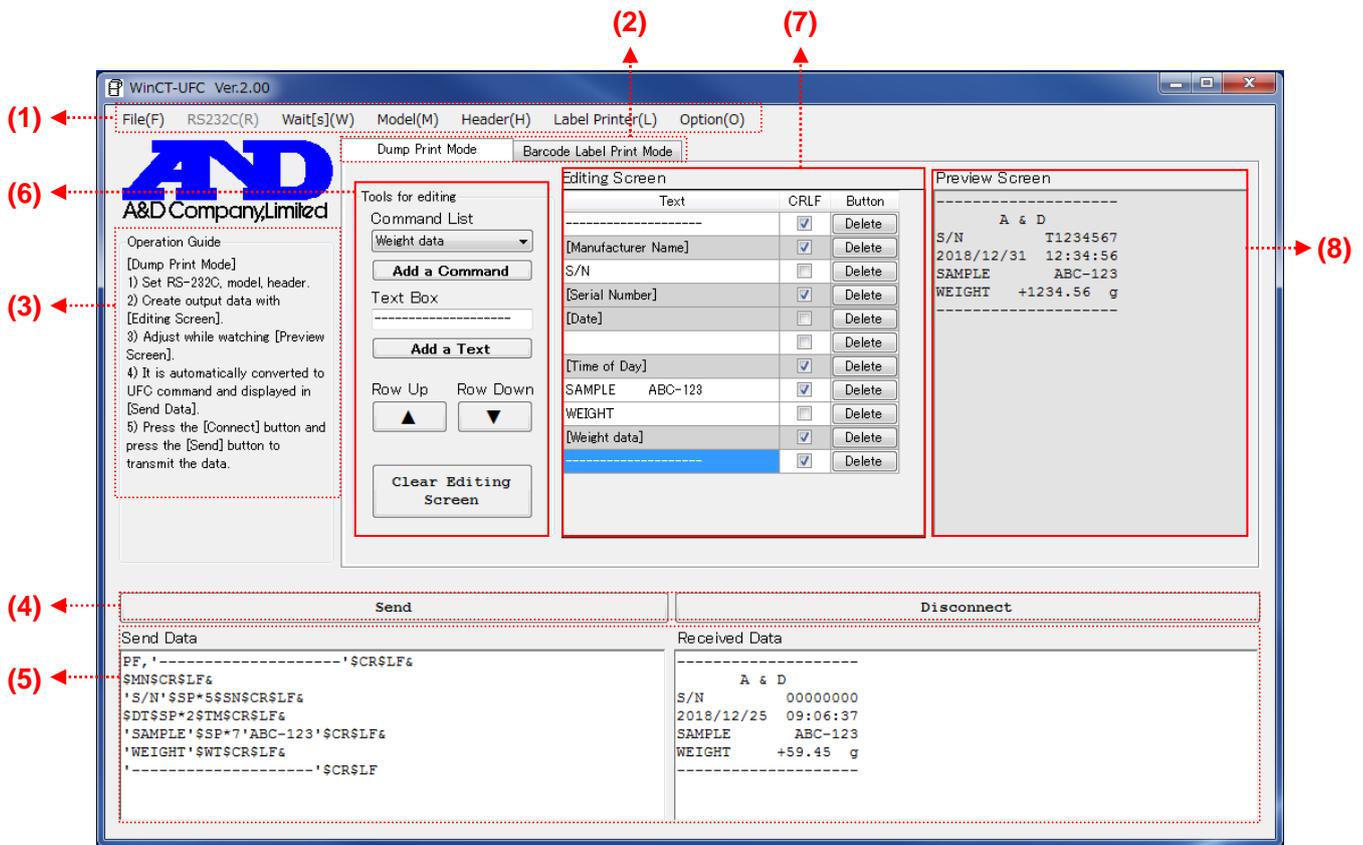
For the explanation of **(1)** to **(5)** shown above, refer to "**4. Sections of the software (common to both modes)**"

(6) Tools for editing: Output data can be edited with these tools.

- **Command List:** Displays the list of available variable data.
- **Add a Command** button: Adds the variable data selected in **Command List** to **Editing Screen**.
- **Text Box:** Text entered here is added to **Editing Screen** by pressing the Enter key. (A blank space can be also added.)
- **Add a Text** button: Adds the text displayed in **Text Box** to **Editing Screen**.
- **Row Up** button: Moves the row selected in **Editing Screen** (highlighted in blue) up one row.
- **Row Down** button: Moves the row selected in **Editing Screen** (highlighted in blue) down one row.
- **Clear Editing Screen** button: Clears the data listed in **Editing Screen**.

(7) Editing Screen: UFC Output Format can be edited on this screen.

- **Text** column: Lists the text/variable data added by the user.

  Text can be edited on this screen. Variable data is displayed with a gray background and cannot be edited.

・ **CRLF** column**:**   If the check box next to an item is checked, a line break code is added at the end of the line. If it is not checked, no line break code is added, so the line is connected with the next line.

・ **Button** column (the **Delete** buttons)**:**   Clicking the **Delete** button in a row deletes that row.

**(8) Preview Screen:**   A print preview is displayed on this screen.

Displays in UFC Output Format created from the data edited in **Editing Screen**. In this preview, the part corresponding to variable data is replaced by a sample form of data for the purpose of showing an example of the weighing instrument's output. This example is the same number of characters as actual data, although its content is not the same.

6-2. Operation (Dump Print Mode)

Step 1 to 4 Refer to "Step 1 Starting the WinCT-UFC software", "Step 2 Configuring the communication settings", "Step 3 Selecting the weighing instrument and the UFC command header" and "Step 4 Setting the weighing instrument" in "**5. Operation (common to both modes)**".

Step 5 **Creating UFC Output Format** (**2** to **4** of **Operation Guide (3)**)

To activate **Dump Print Mode**, click the **Dump Print Mode (2)** tab. Use the tools in **Tools for editing (6)** to add desired commands or text to **Editing Screen (7)**. When variable data/text is added to **Editing Screen (7)**, a print example appears in **Preview Screen (8)** (for variable data added from the command list, a data example appears instead of actual weighing instrument's output data). Edit the list on **Editing Screen (7)** while checking **Preview Screen (8)**. UFC Setting Commands to transmit to the weighing instrument will be automatically generated from the data and entered in the **Send Data (5)** box.
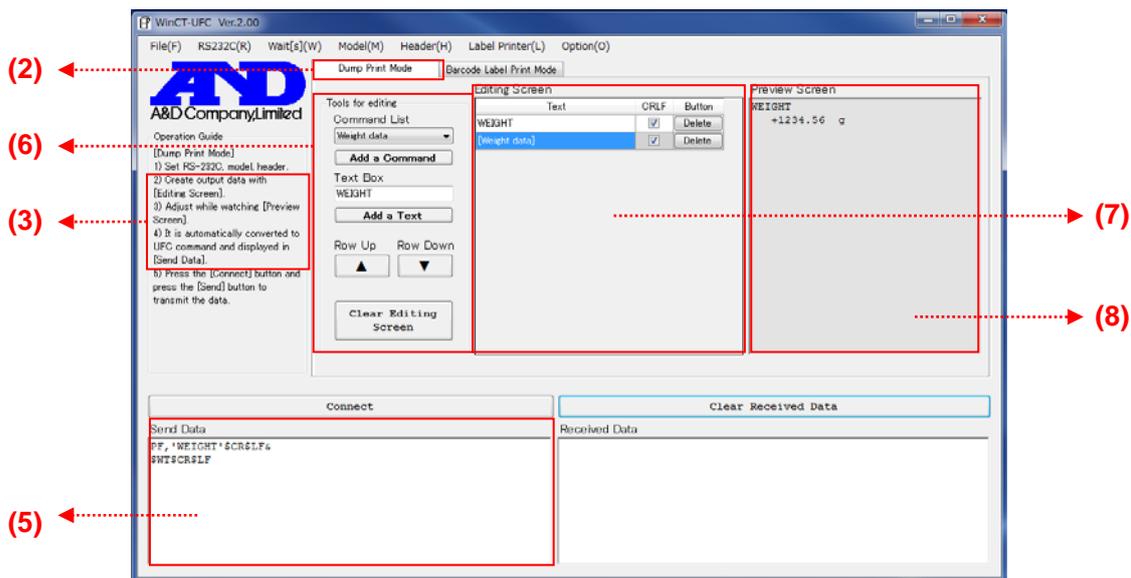

Step 6 **Sending UFC Setting Commands from the PC** (**5** in **Operation Guide (3)**)

To start communication with the weighing instrument, click the **Connect (4)** button, which will then change to the **Send (4)** button when communication starts (The **RS232C (1)** menu cannot be changed during communication). When you click the **Send (4)** button, the text displayed in the **Send Data (5)** box will be sent line by line to the weighing instrument. Between the lines, the time set in **Wait[s](W) (1)** will be inserted. Transmitted UFC Setting Commands are stored in the weighing instrument.
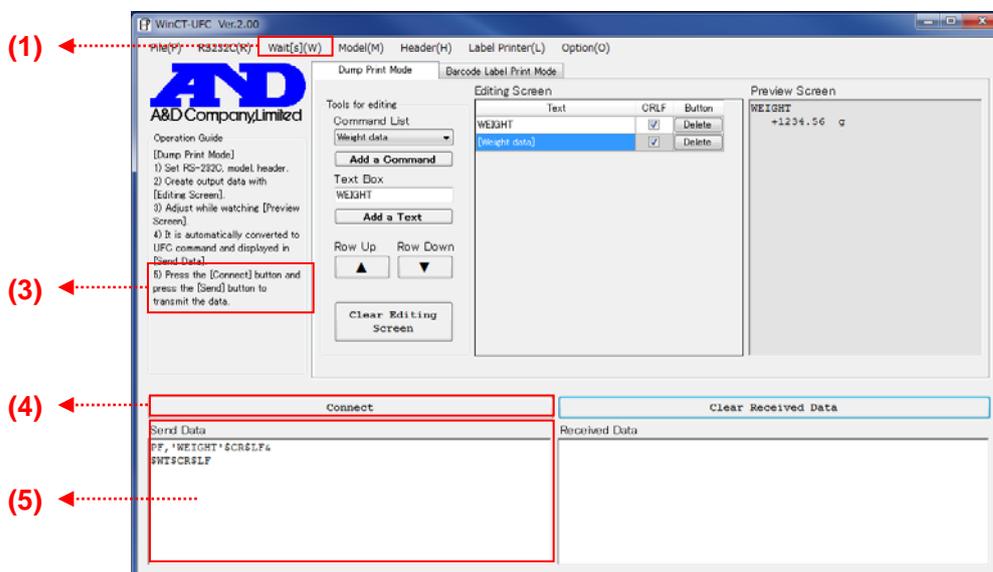
Step 7　Receiving data from the weighing instrument (**5** in **Operation Guide (3)**)

To output data, press the print key on the weighing instrument. For the print key, refer to the instruction manual of the individual weighing instrument. As UFC Output Format will be displayed in the **Received Data (5)** box, check that the contents of the format are correct.
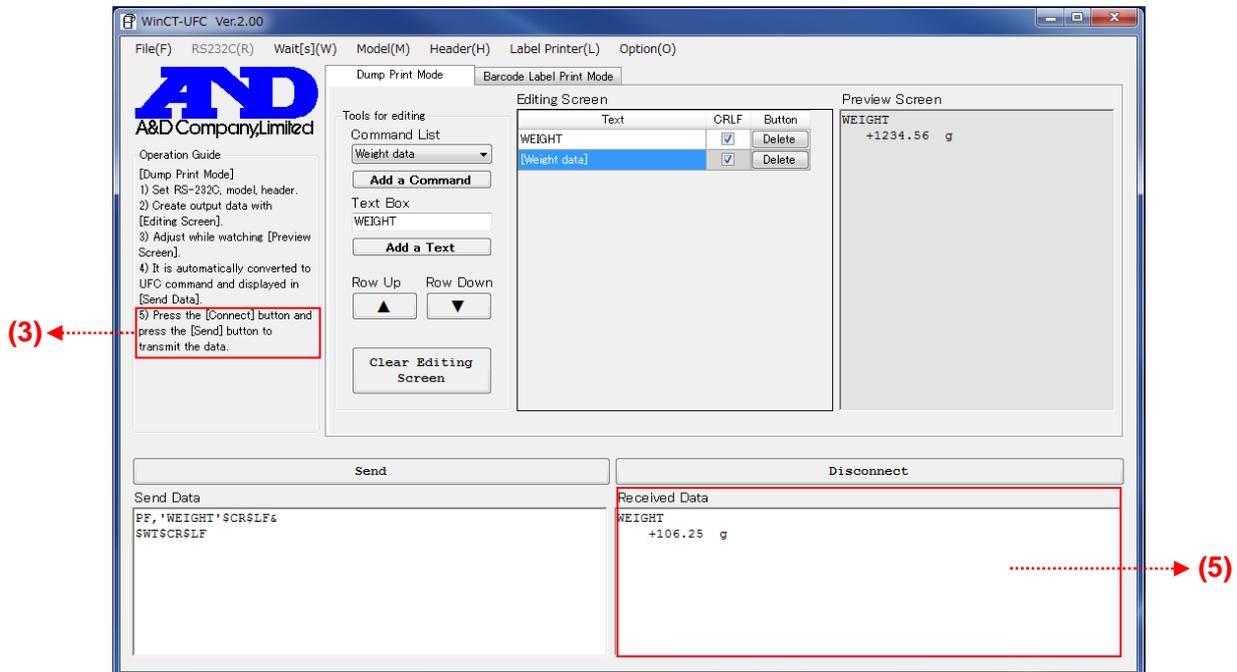
Step 8　Ending communication

Clicking the **Disconnect (4)** button ends communication and the button changes to the **Clear Received Data** button.
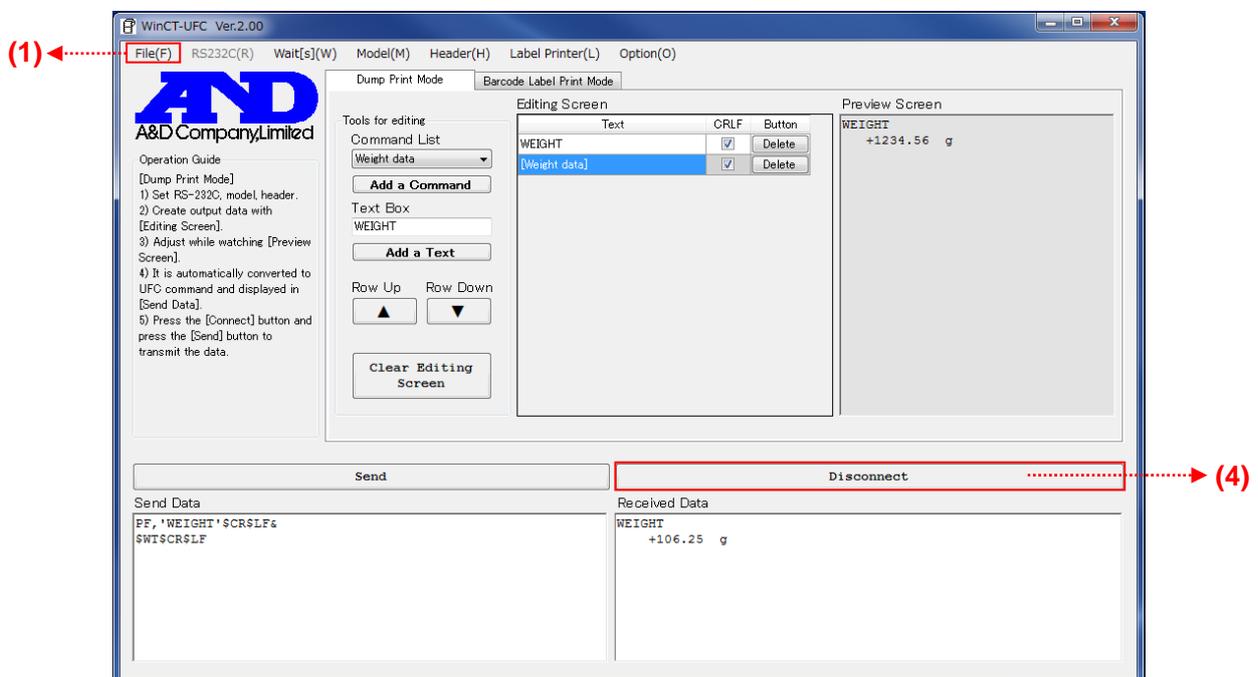
Step 9　Closing the WinCT-UFC window

To end WinCT-UFC, click **End** in the **File(F) (1)** menu or the X (close) button on the upper right corner of the window.

6-3. Example (using Dump Print Mode to print from a weighing instrument to a printer)

Below is an example of printing desired data to a printer using the UFC function of a weighing instrument.

Weighing instrument used: GX-A/GF-A series general-purpose balance
Printer used: AD-8127 multi-functional compact printer for balances/scales

Print result	Contents
------------------- 2017/01/23 12:34:56 SAMPLE ABC-123 WEIGHT +3456.78 g -------------------	· Dividing line · Date, Time · Sample name · Weight value · Dividing line

Step 1 Setting the weighing instrument to the UFC mode (With the GX-A/GF-A series)

1. Press and hold the SAMPLE key (for about 2 seconds) in the weighing mode until $bASFnc$ of the function table is displayed.
2. Press the SAMPLE key several times to display $dout$.
3. Press the PRINT key.
4. Press the SAMPLE key several times until UFC of the function table is displayed.
5. Press the RE-ZERO key to switch ON/OFF.
6. Display UFC ON.
7. Press the PRINT key to activate the UFC function.
8. Press the CAL key to return to the weighing mode.

Step 2 Connecting a PC and the weighing instrument.

To connect the weighing instrument and a PC, use an appropriate RS-232C cable.
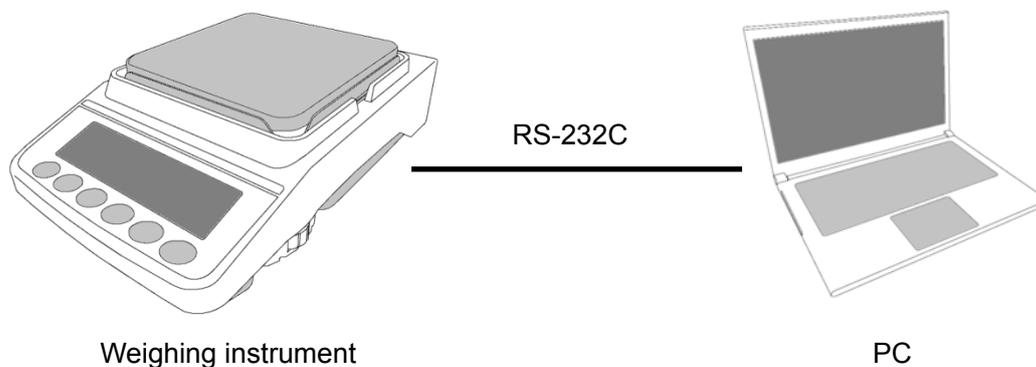
Weighing instrument   PC

Step 3 Creating UFC Output Format and transmitting UFC Setting Commands to the weighing instrument

Set up WinCT-UFC, create UFC Output Format and transmit UFC Setting Commands according to "**6-2. Operation (Dump Print Mode)**".
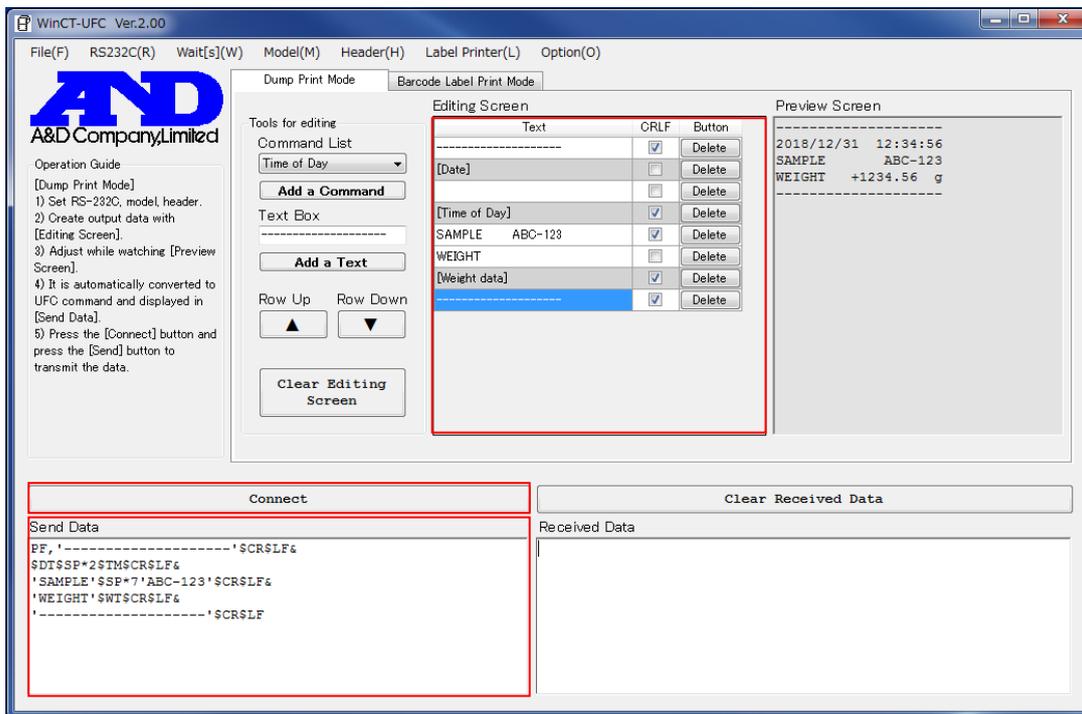
Step 4 Checking the data output

Press the PRINT key on the weighing instrument to output the data. If UFC Setting Commands have been received successfully, the data is displayed in the **Received Data (5)** box. Check whether the output data is correct or not.
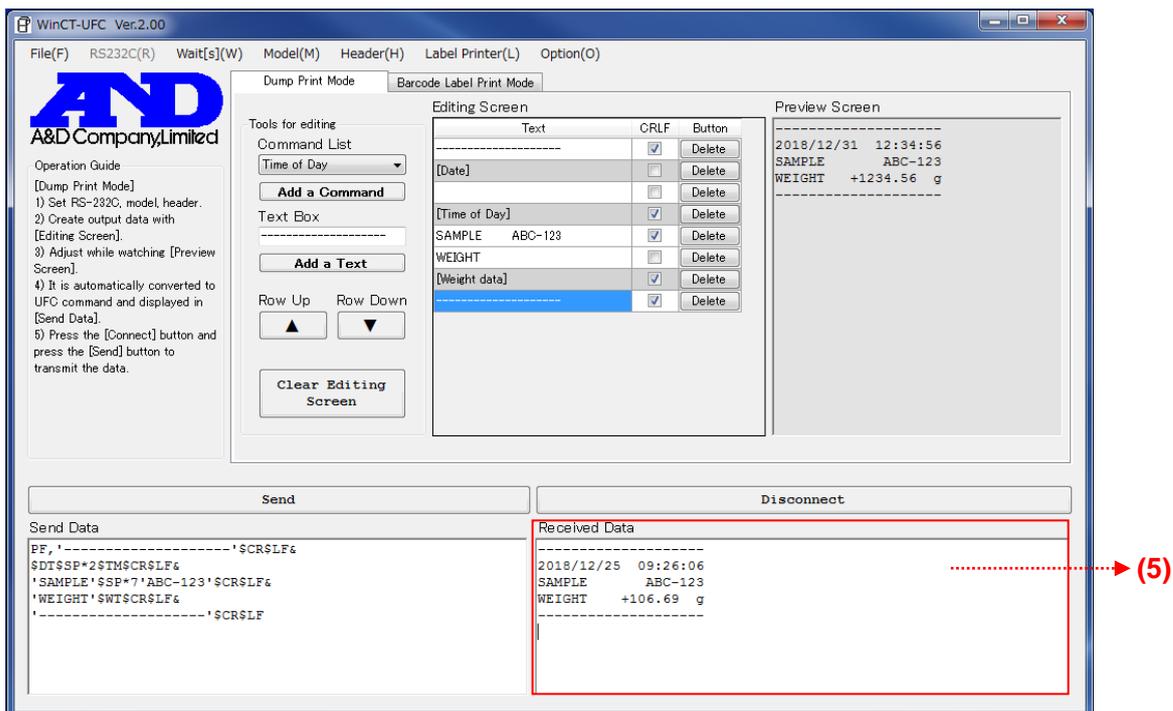
Step 5   Setting the printer to the dump printing mode (with AD-8127)

1. Turn off the printer with the power switch, on the right side of the unit.

2. While pressing and holding the $\boxed{\text{ESC}_{\text{MENU}}}$ key, turn on the printer.
   Keep holding down the $\boxed{\text{ESC}_{\text{MENU}}}$ key.

3. When $\boxed{\begin{array}{l}\text{ITEM SEL}\\\text{1=SERIAL}\end{array}}$ is displayed, release the $\boxed{\text{ESC}_{\text{MENU}}}$ key.

4. Press the $\boxed{\text{DEF } \textbf{3}_{\text{ MODE}}}$ key and select "Function setting".

5. Select $\boxed{\begin{array}{l}\text{PRN MODE}\\\text{DUMP}\end{array}}$ with $\boxed{\text{MNO } \textbf{6}_{\text{ ▲G-TOTAL}}}$, $\boxed{\text{WXY } \textbf{9}_{\text{ ▼TEST}}}$.

6. Press the $\boxed{\text{ENT}_{\text{SAVE}}}$ key to set to the dump printing mode.

7. After completing the above settings, turn off the printer again.

8. Finally, turn on the printer once again.

Step 6   Connecting the weighing instrument and the printer

After confirming that the data was successfully output from the weighing instrument, disconnect the weighing instrument and the PC, and then connect the weighing instrument and the printer with an RS-232C cable.


PC

RS-232C

Weighing instrument

Printer

RS-232C
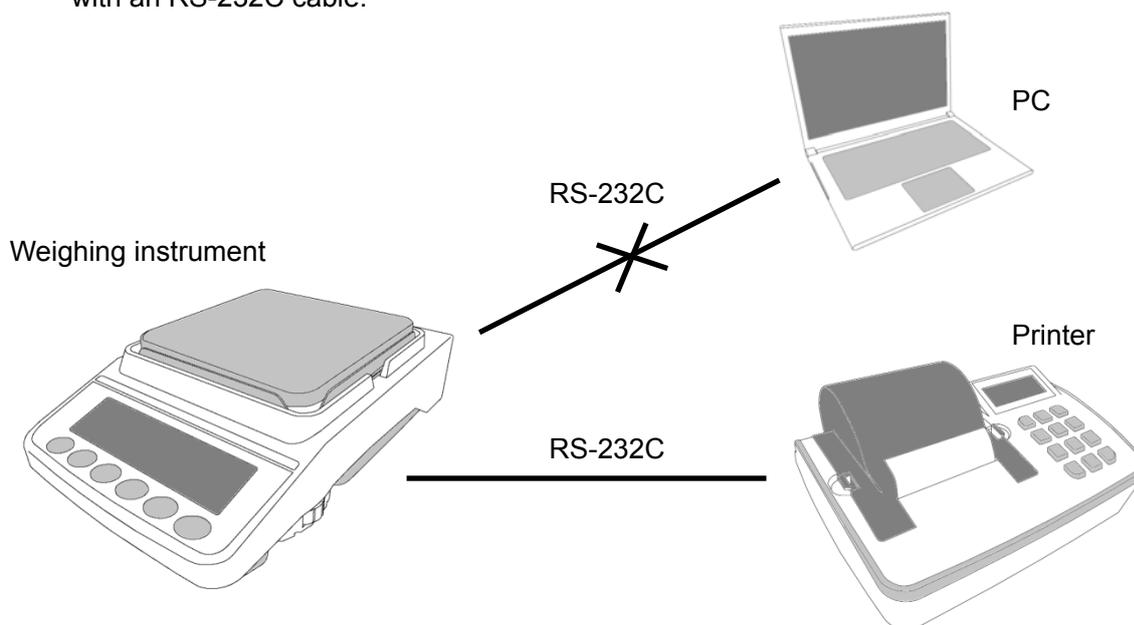
Step 7   Outputting data with the weighing instrument's $\boxed{\text{PRINT}}$ key

Make sure the printer is powered on. Press the $\boxed{\text{PRINT}}$ key of the weighing instrument to output the data. If the data is printed correctly, the operation is completed. (Note: Up to 24 characters/line can be printed with the AD-8127.)

```
--------------------
2017/01/23   12:34:56

SAMPLE          ABC-123

WEIGHT   +3456.78  g
--------------------
```

7.　　Barcode Label Print Mode


Barcode Label Print Mode allows users to create data to transmit to label printers for printing barcodes. It is possible to print barcodes in which data held by a weighing instrument, such as weight values, is embedded.
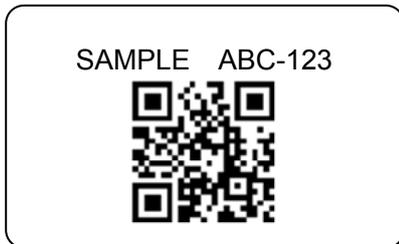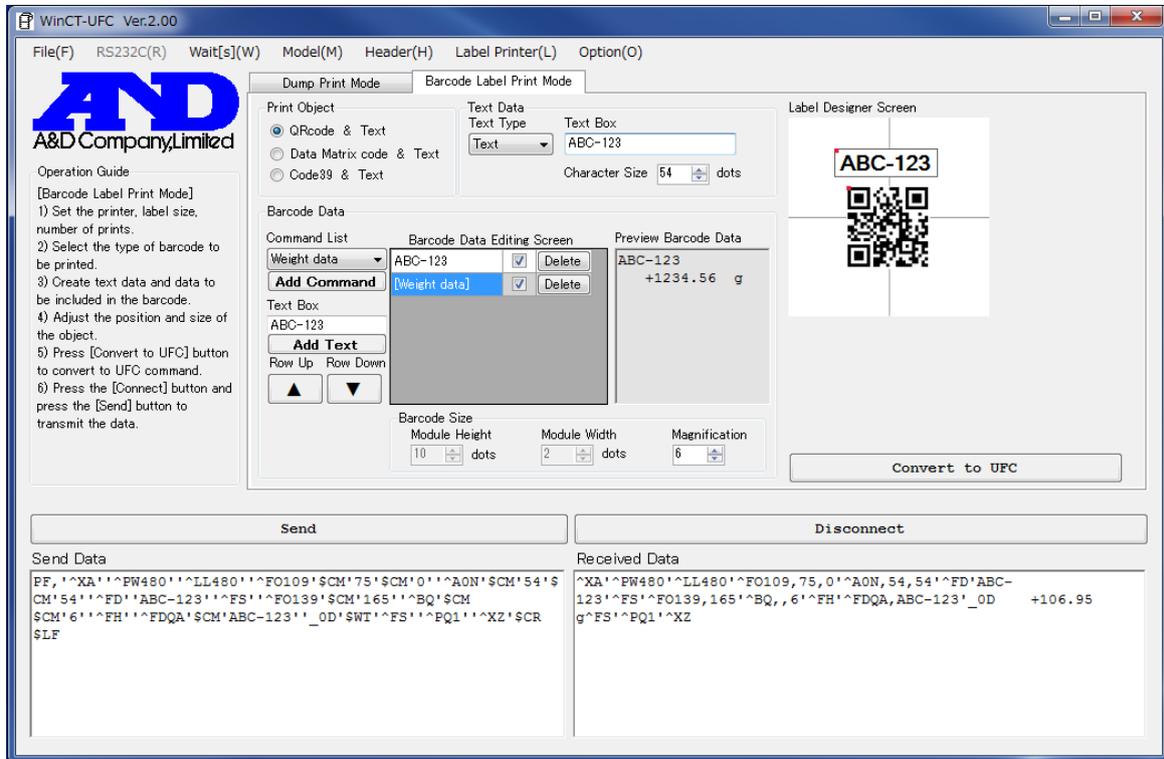

Example of
QR Code label
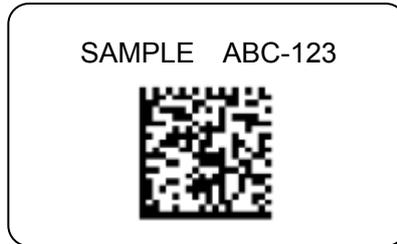
Example of
Data matrix code label
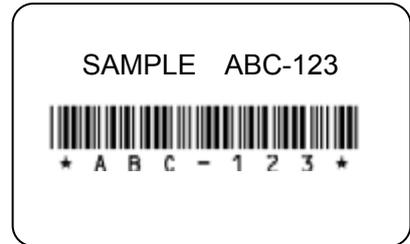
Example of Code 39
barcode label
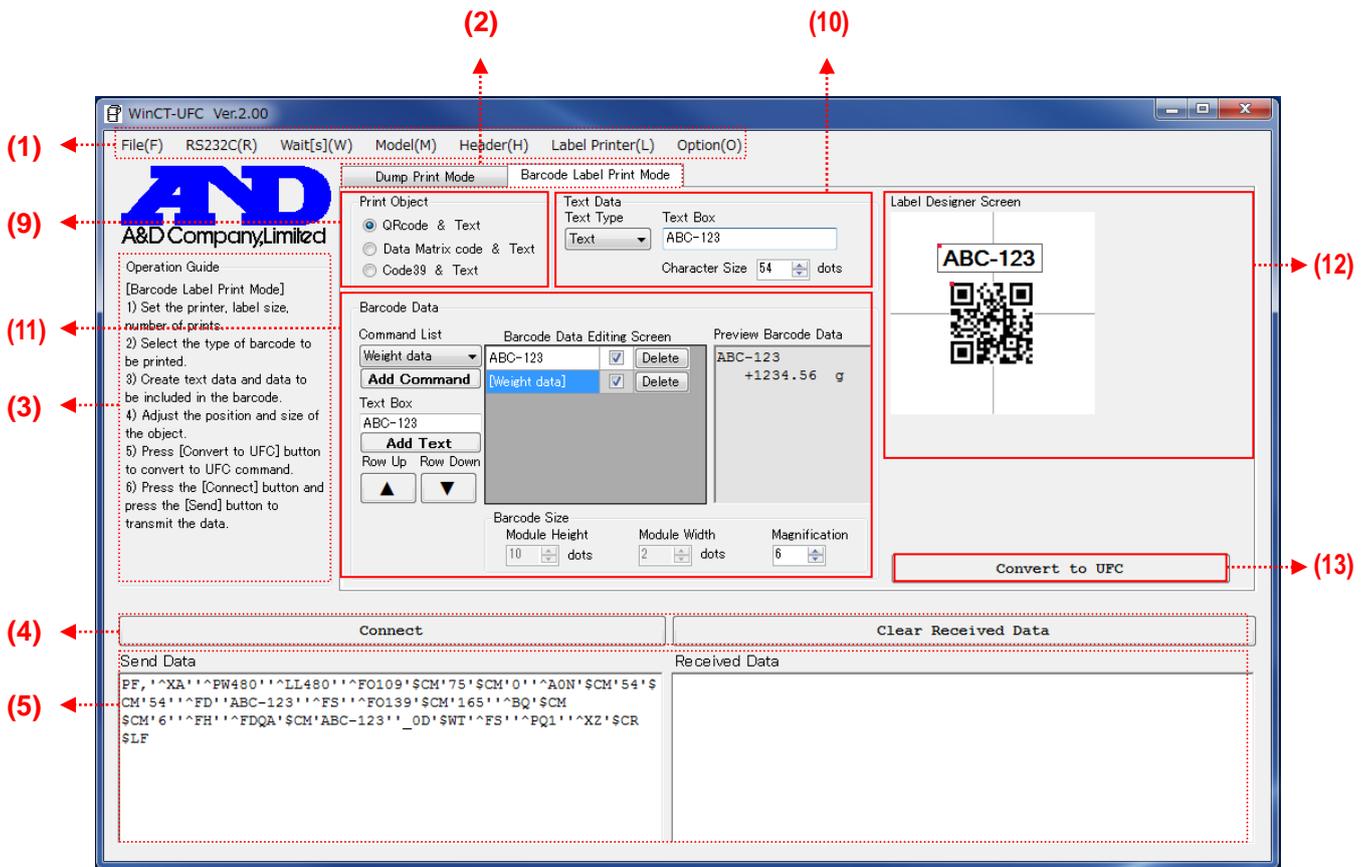
For **(1)** to **(5)** shown above, refer to "**4. Sections of the software (common to both modes)**"

(9) Print Object:　The type of barcode to print can be selected from the three options.

- **QRcode & Text:**　Prints QR code and text.
- **Data Matrix code & Text:**　Prints Data Matrix code and text.
- **Code 39 & Text:**　Prints Code 39 and text.

(10) Text Data:　Text data can be edited here.

- **Text Type:**　Variable data or text can be selected.
- **Text Box:**　The user can enter text here when "Text" is chosen in **Text Type**.
- **Character Size:**　The size of characters can be set. The unit is dots.

(11) Barcode Data: Barcode data can be edited here.

・ **Command List:**   Variable data to embed in the barcode can be selected.

・ **Add Command:**   Adds the variable data selected in **Command List** to **Barcode Data Editing Screen**.

・ **Text Box:**   A character string to embed in the barcode can be entered here. It is added to **Barcode Data Editing Screen** when the Enter key is pressed. (A blank space can be also set.)

・ **Add Text:**   Adds the text displayed in **Text Box** to **Barcode Data Editing Screen**.

・ **Barcode Data Editing Screen:**   Data to embed in the barcode can be added here.

- For a 2D barcode, data with a line break per line is inserted.

- For a 1D barcode, all the data is combined in one line.

・ **Text** column**:**   Lists the text/variable data items added by the user. Text can be edited in here as well. Variable data displayed with a gray background and cannot be edited.

・ **Delete** button**:**   Clicking the **Delete** button in each row deletes the row.

・ **Preview Barcode Data:**   Displays a print preview of the data listed in **Barcode Data Editing Screen**.

・ **Barcode Size:**   The size of the barcode can be set here.

・ **Module Height:**   Sets the height of the barcode (Data Matrix code and Code 39 only).

・ **Module Width:**   Sets the width of the barcode (Code 39 only).

・ **Magnification:**   Sets the magnification of the barcode (QR code only).

(12) Label Designer Screen: The print position of the objects can be adjusted.

Text object: The print position of text data is displayed. The position can be moved by dragging and dropping with the mouse.

- Text input in **Text Box** of **Text Data** is reflected to here.

- The red dot in the upper left corner of the object is the print position marker.

- Set the size of characters in **Character Size**.

Barcode object: The print position of the barcode is displayed. The position can be moved by dragging and dropping with the mouse.

- A barcode of sample data is displayed.

- Contents of the **Barcode Data Editing Screen** are not reflected here.

- The red dot in the upper left corner of the object is the print position marker.

- Set the size of the barcode with **Module Height**, **Module Width** and **Magnification**.

(13) Convert to UFC button**:**   Contents edited for label printing can be converted to UFC Setting Commands.

The converted data is displayed in the **Send Data** box.

7-2.   Operation (Barcode Label Print Mode)

For **Step 1 to 4**, refer to "Step 1 Starting the WinCT-UFC software", "Step 2 Configuring the communication settings", "Step 3 Selecting the weighing instrument and the UFC command header" and "Step 4 Setting the weighing instrument" in "**5. Operation (common to both modes)**".

Step 5   **Setting up the label printer**
Check the communication settings of the label printer. If the settings differ from those of the weighing instrument, adjust to the settings of either the weighing instrument or the label printer. When the communication settings of the weighing instrument are changed, change the settings of WinCT-UFC as well.

Step 6   **Setting the label printer printhead resolution, paper size, and number of prints**
Click the **Label Printer(L) (1)** menu and select the resolution of the label printer from **Printer Resolution**. Please refer to the specifications of the label printer to use.
Select the label length and width from **Label Length (mm)** and **Label Width (mm)**, respectively.
Set the number of sheets to print at one time in **Print Sheets**.
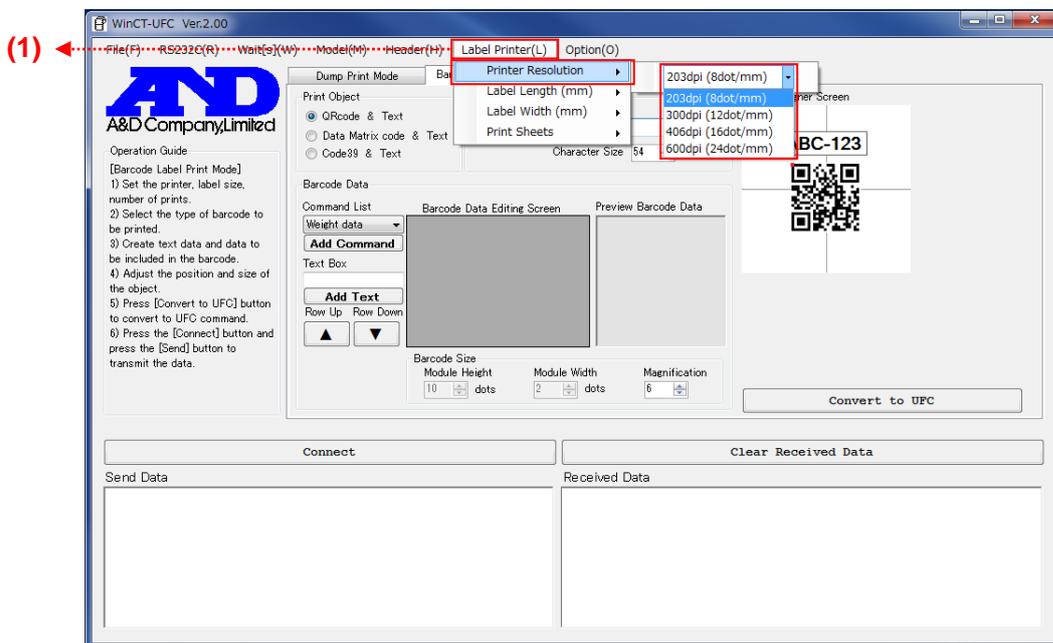
Step 7   Creating the UFC output data

To activate **Barcode Label Print Mode**, click the **Barcode Label Print Mode (2)** tab.

In **Print Object (9)**, choose the barcode type to print, which switches the object on **Label Designer Screen (12)**.

Create data to embed in the barcode using the **Text Data (10)** and **Barcode Data (11)** tools.

The approximate print position can be adjusted with the mouse by dragging and dropping the object on **Label Designer Screen (12)** (may be different from actual print position). Set the parameters of **Character Size** in **Text Data (10)** and **Module Height**/**Module Width**/**Magnification** in **Barcode Size** in **Barcode Data (11)** for the text and barcode sizes.

When data creation is complete, click the **Convert to UFC (13)** button to convert it to UFC Setting Commands transmission data.

The converted data is displayed in **Send Data (5)**.

**Step 8　Transmitting UFC Setting Commands from the PC (5 in Operation Guide (3))**

To start communication with the weighing instrument, click the **Connect (4)** button. Then the button changes to the **Send (4)** button when communication starts.

When the **Send (4)** button is clicked, the text displayed in the **Send Data (5)** box will be sent line by line to the weighing instrument, with an interval specified within **Wait[s](W) (1)** between lines. The transmitted UFC Setting Commands are stored in the weighing instrument.
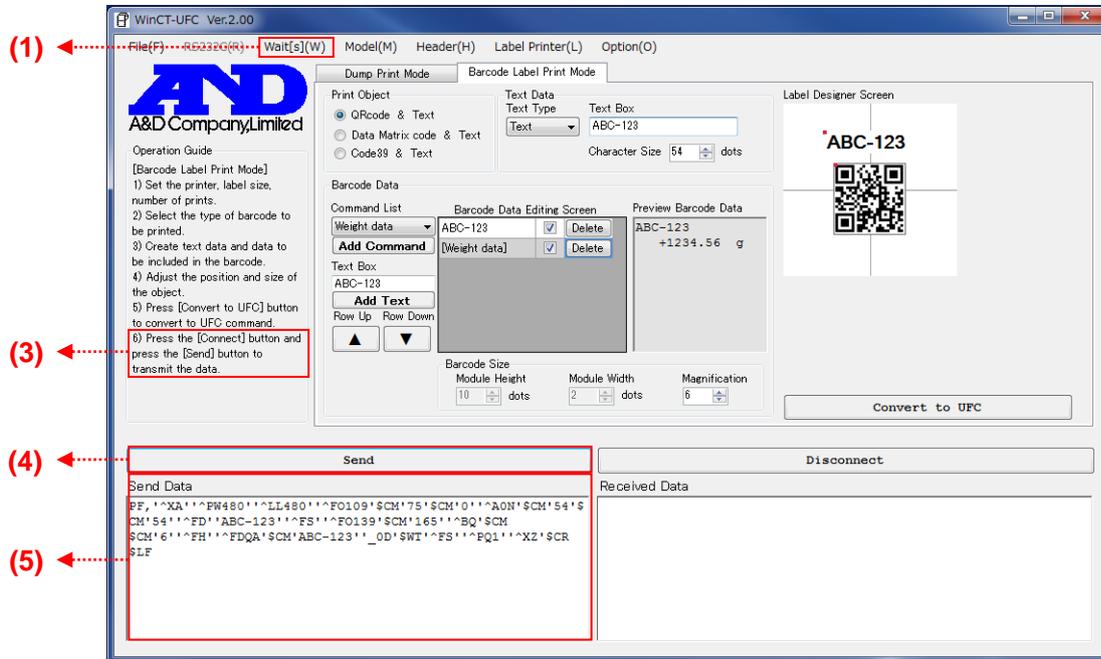
Step 9　Receiving from the weighing instrument

Press the PRINT key on the weighing instrument to output data. Check the contents of the output data displayed in the **Received Data (5)** box. *1
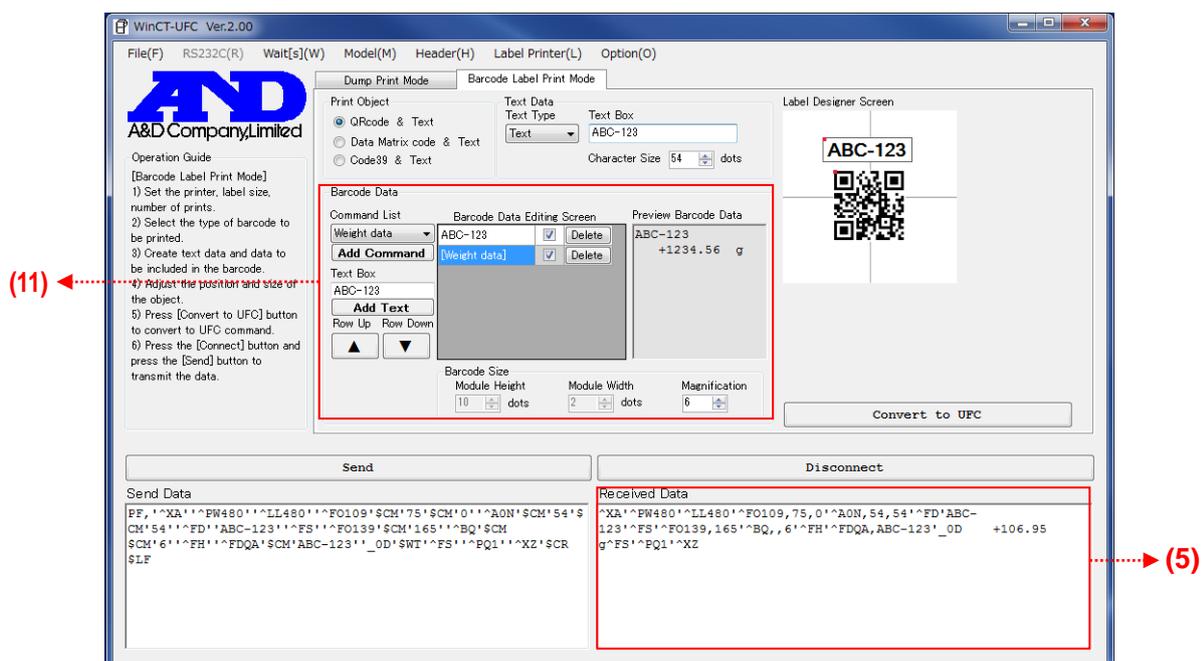
*1 : Check whether the data in **Received Data (5)** begins with "^XA" and terminates with "^XZ". If it is not terminated with "^XZ", there are too many data items, in that case, try to delete some of the data items in **Barcode Data (11)**.

Step 10   Ending communication

To end communication, click the **Disconnect (4)** button. The button changes to the **Clear Received Data (4)** button when communication is ended.
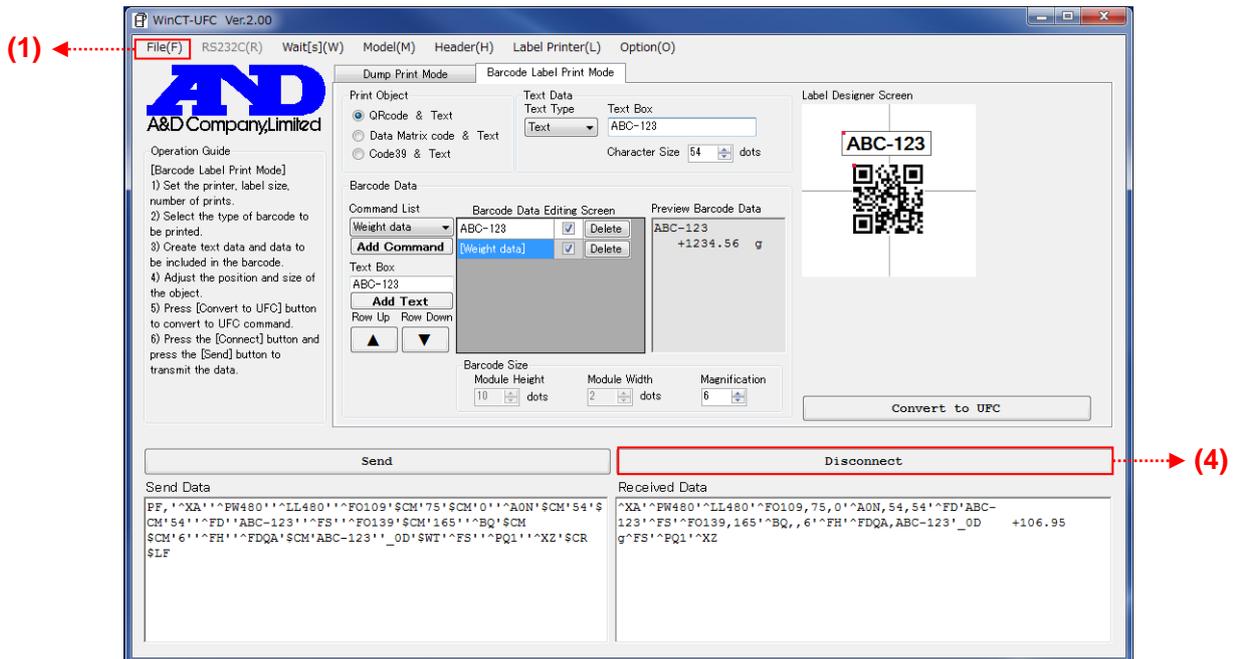
Step 11   Closing the WinCT-UFC window

To end WinCT-UFC, click **End** in the **File(F) (1)** menu or click the X (close) button at the upper right of the window.

7-3. Example (using Barcode Label Print Mode to print a QR code)

Below is an example of how to print a QR code to a label printer directly from a weighing instrument using its UFC function.

- ・ Weighing instrument used: GX-A/GF-A series general-purpose balance
- ・ Printer used: ZPL®/ZPLII®-compatible label printer

Print result | Contents

ABC-123

- Sample name
- QR code
  - Sample name
  - Date
  - Time
  - Weight value

Step 1 Enabling the UFC mode of the weighing instrument (with the GX-A/GF-A series)
1. Press and hold the SAMPLE key (for about 2 seconds) in the weighing mode until $bASFnc$ of the function table is displayed.
2. Press the SAMPLE key several times to display $dout$.
3. Press the PRINT key.
4. Press the SAMPLE key several times until UFC of the function table is displayed.
5. Press RE-ZERO key to switch ON/OFF.
6. Display $UFC\ ON$.
7. Press the PRINT key to enable the UFC function.
8. Press the CAL key to return to the weighing mode.

Step 2 Connecting the PC and the weighing instrument
Connect the PC and the weighing instrument with an RS-232C cable.
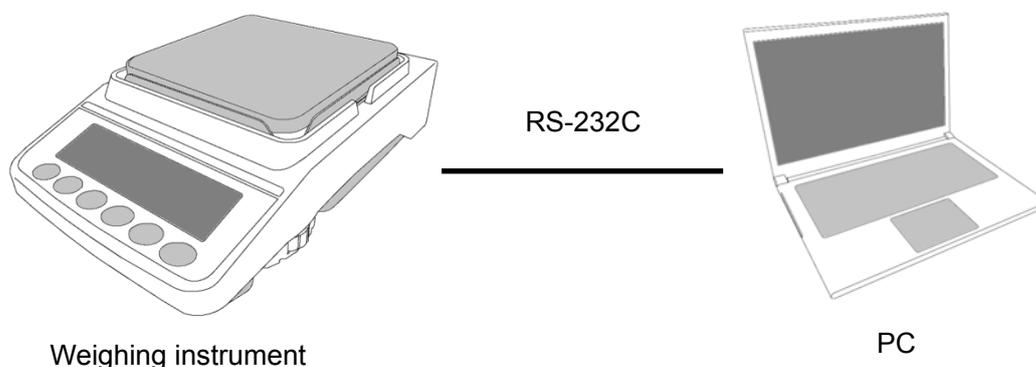
RS-232C

Weighing instrument

PC

Step 3 Creating UFC Output Format and transmitting UFC Setting Commands to the weighing instrument

Set WinCT-UFC, create commands and transmit the commands according to "**7-2. Operation (Barcode Label Printer Mode)**".
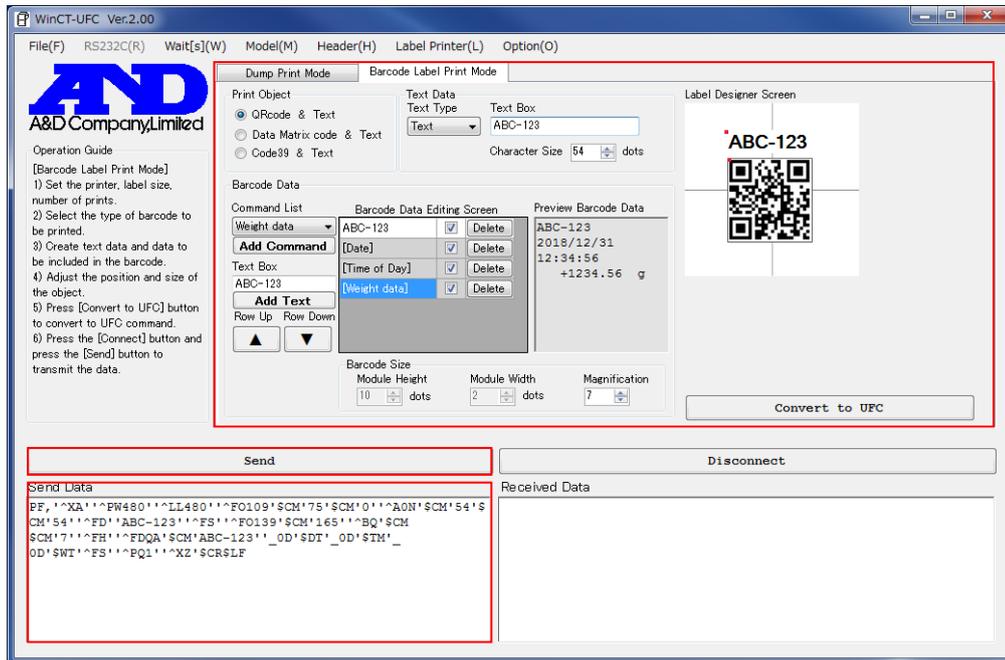
Step 4 Checking data output

To output data, press the PRINT key on the weighing instrument. If UFC Setting Commands are received correctly, the data is displayed in the **Received Data (5)** box. Check that the data has been output successfully. ***1**
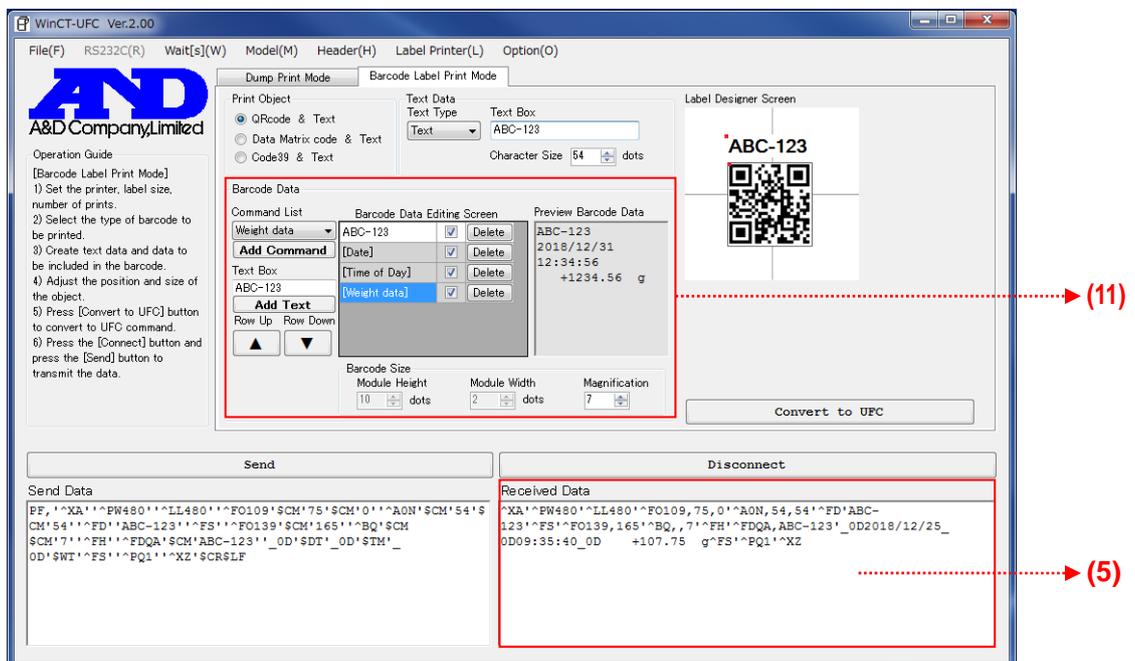

*1: Check whether the data in **Received Data (5)** begins with "^XA" and terminates with "^XZ". If it is not terminated with "^XZ", there are too many data items, in that case, try to delete some of the data items in **Barcode Data (11)**.

Step 5   Configuring communication settings of the label printer

Configure the communication settings of the label printer to the same settings as the weighing instrument. For details, please refer to the instruction manual of the label printer.

Step 6   Connecting the balance and the label printer

After confirming that the data was successfully output from the weighing instrument, disconnect the weighing instrument and the PC, and then connect the weighing instrument and the label printer with an RS-232C cable.

RS-232C

RS-232C ***2**

Weighing instrument
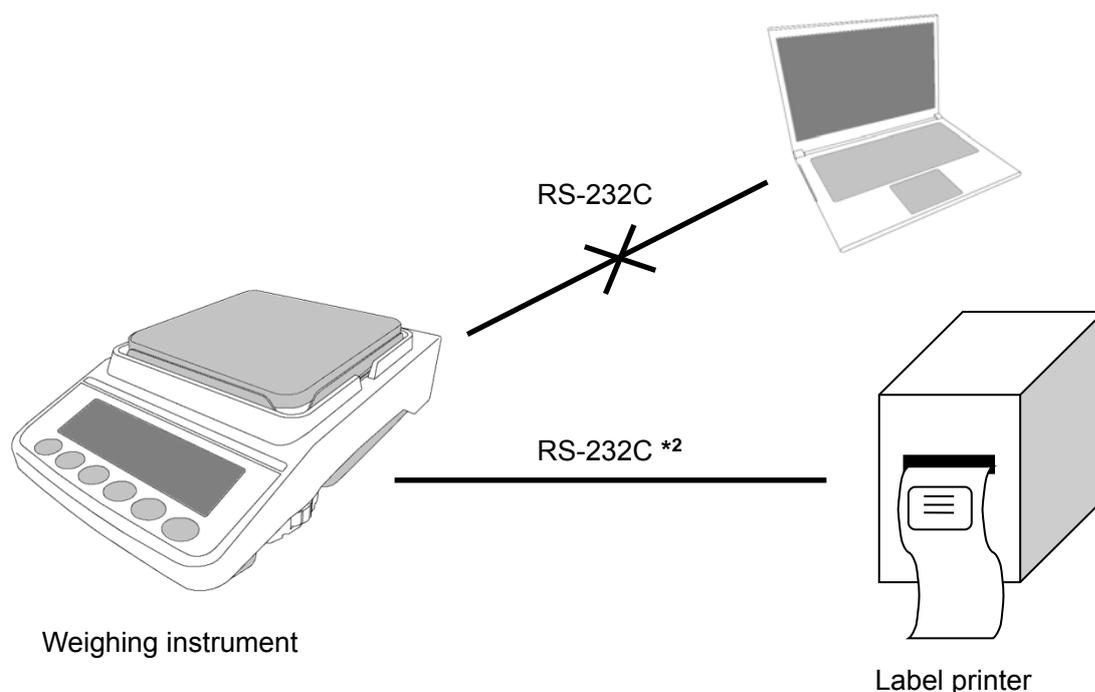
Label printer

Step 7   Press the PRINT key on the balance to print the barcode label

Make sure the printer is powered on. Press the PRINT key of the weighing instrument to output the data. If the data is printed correctly, the operation is completed.

ABC-123
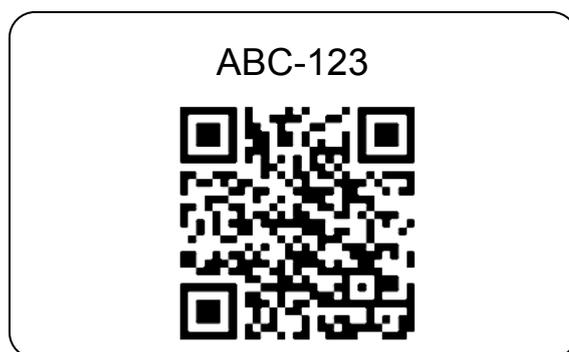
*2:   For connection between the GX-A/GF-A and the label printer, use a communication cable (such as AX-KO2466-200), in which D-sub pin No. 9 is not connected.