

RS-232C Data Transfer Software

Instruction Manual

RTS-E for Windows



CAUTION

For your safety:

- **Be sure to read this instruction manual.**
- **After you finish reading, keep this manual at hand so that you can easily refer to it as needed.**

DATE Nov.21. 2000 (Ver.1.31)

Getting Started

Thank you for purchasing this product from Shinko Corporation.

- This instruction manual is mentioned about the precaution in use of the software and the way of operating it. Read this instruction manual to the end to make it use it under the good condition forever and ever.
- Keep this instruction manual carefully by the side of the body after you read it.
- Be sure to read it before you set up this software because there is a README.TXT file that a precaution · mentioned the latest information in the SETUP CD-ROM.

Caution

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- Approve it because it is hardly responsible for the influence of the result that this software and an instruction manual were employed at all though assurance is being expected about the contents of this product.
- Approve it as for the operation of this product because it can't cope with a question such as the operation, macrocosm of each application without relations.
- Make contact to our company if there are a doubtful point if and point which it notices.

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About the Software License Agreement

Read the following **Software License Agreement** well before using this software. Assent to the use of this software when you can have it agree on this contract. This product can't support it when it can't have it agree on this contract. And, return this software to the purchase agency or our company when you can't have it agrees on this contract.

Software License Agreement

Article 1 Use assent

The copyright of this software (Say a program disk and an instruction manual, the following "product".) and all the right belong to the Shinko Corporation (Say the following "our company".) To the guest, and assents to (the use right) which use "product" for in accordance with this regulation.

Article 2 Use limitation

It can't be used by more than one user again that a use limitation "product" is used with more than one computer at the same time.

Article 3 Prohibition such as reproduction

It can't change into the prohibition guest such as reproduction if he reproduces "all" the products or a part and it is analyzed so far as it isn't mentioned in the instruction manual.

As for the guest, a sale, a transfer, loan, and so on don't let the third party use "all the" products or a part for the one without our approval in advance.

Article 4 Warranty

It is exchanged gratis if "product" is received and it is within 90-day when there is a physical defect in the evidence "product".

Article 5 Immunity

Our company does no guarantee about "the product" except for the case that it is decided as the former passage, too. Or, our company isn't responsible for all damage to arise directly in indirect about the use of "the product". But, it is decided that our company provides the software and related information when modification software is published within one year after it is delivered to the guest.

Article 6 The extinction of the use right

The use right which it assents to by the first article lapses or when it was related to "product" by violating the statute of copyright law others and our copyright and other right were violated when the extinction guest of the use right violates this contract.

Contents

• Getting Started	[1]
• Caution [1]	
• About the trademark	[1]
• About the Software License Agreement	[2]
• Software License Agreement	[2]
1. Outline	1
2. For the basis 1	
(1) Use computer /Operating system	1
(2) RS-232C condition	1
(3) Contents of a package 2	
3. Setting up	2
4. Connection and operation	3
(1) Preparation/Connection	3
(2) Basic operation	3
The operation of the main screen	4
The operation of the RS setup screen	5
5. Others	8
(1) Precaution	8
(2) Setting up the output control	9
(3) Q&A	11
(4) User registration	12
(5) Address	12

1.Outline

Windows can take in the RS-232C output data of our company electronic balance by using this software with the general-purpose application. Data from the electronic balance are transferred with the keyboard image for the applicable application.

2.For the basis

(1)Use computer / Operating System

- The computer that the following OS moves by the PC/AT interchange machine, the PC-9800/PC-9821 series.
Windows95 + IE3.0
Windows98
- i486DX4 66MHz CPU loading model beyond the equivalent is recommended.
- The memory of 16MB and more, the display of the resolution 640×480 above is recommended.
- The vacancy of 20MB and more is necessary for the hard disk
- One RS-232C port (COM1-4) that can be occupied by this software is necessary.

Caution: When more than IE3.0 isn't being installed with Windows95, a part of the control (OCX) can't be installed normally.

All movements aren't assured though even Windows NT 4.0 (beyond SP3) works tentatively.

(2)The RS-232C condition of this software

It copes with our electronic balance. Set up a setup of output control of the electronic balance by the intake condition of the input data.

■ The condition which can be established

- COM port : 1 to 4
- Baud rate : 1200 / 2400 / 4800 / 9600 bps
- Format : standard / S (Difference is a P6 reference.)
- Additional data : Unit / Status / Date / Time / Item 1 / Item 2 / Item 3

■ Fixed condition

- Synchronous form : Asynchronous
- Communication form : Full duplex
- Start bit : 1 bit
- Data bit : 8 bit (Standard) / 7 bit (S)
- Parity bit : No (Standard) / Odd (S)
- Stop bit : 2 (Standard) / 1 bit (S)
- Protocol : Without a protocol
- Delimiter : CR•LF

Corresponding electronic balance

An electronic balance manufactured by our company.

A single direction or the installation of both directions RS-232C output is necessary.

Caution: When a RS-232C/USB change cable is used, electronic balance data can be taken in via the USB port. (Only Windows98 copes with it. With USB-RSA manufactured by I-O DATA®, movement confirmation.)

(3) Contents of a package

SETUP CD-ROM	1 set
Instruction Manual	1 copy
Connection cable	1 cable

Caution: The application (in such cases as Excel, Word) that becomes a forwarding address isn't contained.

Prepare separately.

3. Setting Up

- (1) Turn on your computer. Please check that Windows95/Windows98 operates normally. Close all programs, including any anti-virus programs.
- (2) Insert the SETUP CD-ROM into your CD-ROM drive.
- (3) Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Add/Remove Programs**.
- (4) On the **Install/Uninstall** tab, click **Install...**, and then follow the instructions that appear on the screen.
- (5) It confirms that "[]:\SETUP.EXE" is indicated on the command line of the **Run Installation Program**, and then click **Finish**. ([] is a CD-ROM drive name.)
- (6) After Setup initializes, **RTS-E for Windows Setup** begins. Follow the instructions that appear. It clicks on the **Setup** button without changing usually it because folder of the place of Setup is confirmed.
- (7) Setup is completion if a "RTS-E for Windows Setup was completed successfully." message comes out.

The above is fundamental contents of setting up.

Precaution

- During Setup, follow directions if the message that **Restart** is necessary for is indicate. Again, do Setup from the beginning.
- Stop Setup when the message of "*.DLL file is using it, ..." is indicated. When other applications (applications starting with start up) started, let all those applications finish. Again, do Setup from the beginning.
- Start a computer again after you remove a SETUP CD-ROM after setup.
- Confirm that the date/time of the computer is set up properly.

About uninstall

- Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Add/Remove Programs**.
- On the **Install/Uninstall** tab, click **RTS-E for Windows**, and then click **Add/Remove Programs**.
- Follow the instructions that appear on your screen.

4.Connection and operation

(1)Preparation/Connection

Prepare the computer which installed an electronic balance (with the RS-232C output) manufactured by our company and this software.

Connect the space of the RS-232C connector of the electronic balance and the computer with the attached connection cable under the condition that the power supply of each machine is cut off.

(2)Basic operation

Turn on the power in order of the electronic balance, the computer.

Make a setup of output control of the electronic balance the setup of the output (**o.c. 3**) once after the operation key push for the continuous output (**o.c. 1**) setup when a setup of an interval is **0** second when a setup of an interval of this software is more than **2** seconds. (Output control setup reference.) The operation of the computer explains mouse operation to the master. How to write mouse operation is shown in the following.

<u>Click</u>	Press and release the left mouse button once.
<u>Double-click</u>	Quickly press and release the left mouse button twice.
<u>Drug</u>	A mouse is moved with the left button of the mouse pushed.
<u>Select</u>	A mouse cursor is checked with the data position, and it clicks.

This software is started after the computer start.

Confirm that there is a COM port number to indicate in a COM port number to use with the computer, and the screen after you start this software.

Change a COM port number on the "the setup of RS" screen when it is different. After it is fitted to the electronic balance, it clicks on the "setup" button on other setup conditions as well "Do you change a setup file?" Click on "yes" in the question.

< The method which starts this software >

- Click the **Start** button and point to **Programs** -> **RTS-E** selected.
- Right-click the **Start** button -> Then click **Open** -> Then double-click **Program-** folder -> Then double-click **RTS-E** folder -> Copy the short cut of **RTS-E** on the desk-top computer. It double-clicks on the **RTS-E** short cut in made desk-top computer.

The fundamental way of operating it (In the case of the interval measurement)

- Make an electronic balance continuous output (**o.c.1**), and start the application of wanting to input data, and specify a data input position.
- This software is started, and a setup of an interval is made two-second .
- It clicks on the **Start** button of the main screen. Then, a main screen is made the smallest, and an icon goes on and off.
- It confirms that the applicable application of wanting to input data is active.
- Data on the electronic balance are inputted in the designated position of the applicable application in every interval time.
- Click on "RTS" of the task bar when you suspend a data transfer. A transfer is stopped, and a main screen is indicated.
- This software is finished when it clicks on the **Exit** button.

The operation of the main screen

When it starts, it becomes the following screen.

Even a keyboard can be operated except for the mouse operation. Underlined letter button can be operated with the **Alt** key + underlined letter key. Moreover, a button is chosen by the **Tab** key, and it can be carried out with the **Enter** key.

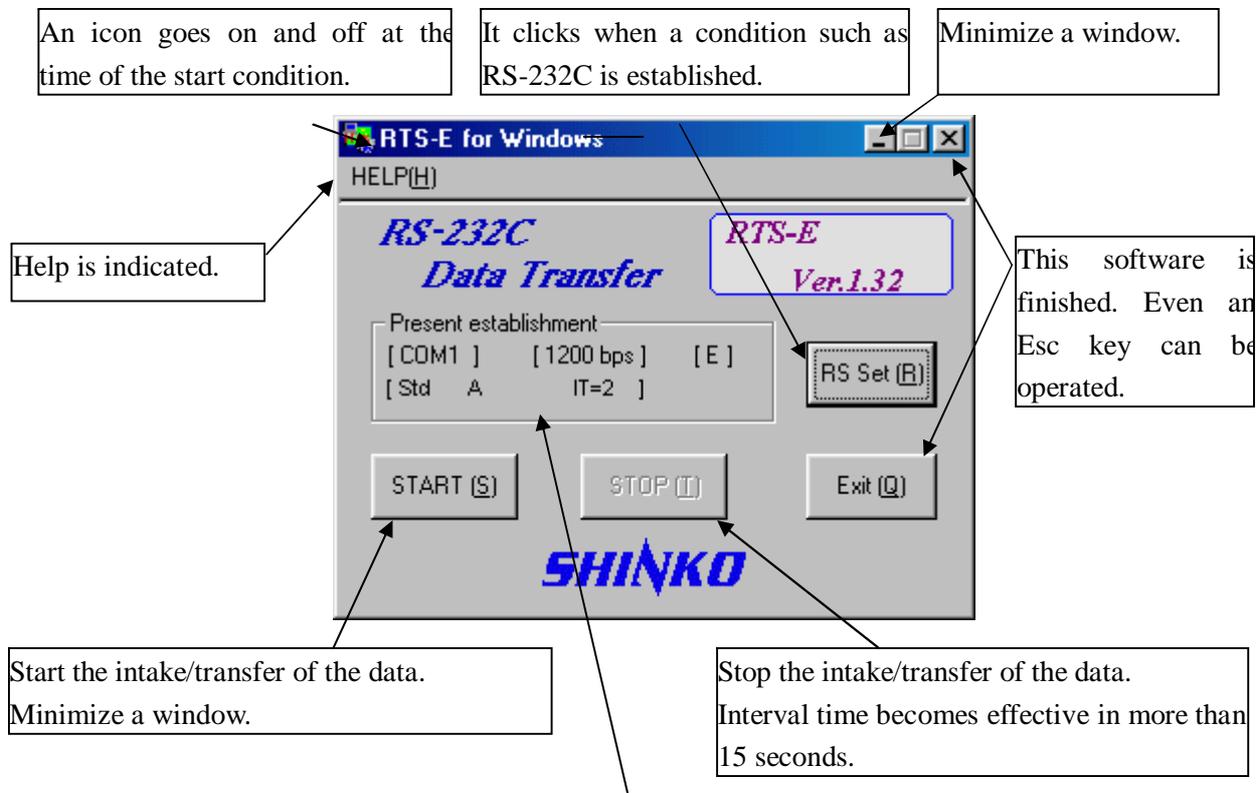
Click on the **RS set** button with the establishment such as a communication condition.

When interval time is more than 15 seconds, the one except for the communication condition of the setup screen can be changed as to the start condition. An establishment change in the start condition. --- Click when the indication of task bar is "*RTS*".

Be careful because it becomes stop condition when it clicks when the indication of the task bar is " RTS ". It becomes automatically the smallest when it was three seconds ago of the transfer even on the way to change a setup.

When interval time is 0 second, " RTS Wait " will be indicated in the task bar, and transfer time will be indicated at the time of the one except for it next time.

The contents of the following screen are setups at the time of standard shipping.



Present contents of a setup are indicated. Click on the **RS set** button when you change it.

[COM1] : COM Port selected value

[1200 bps] : Baud rate selected value

[E] : Enter selected value

E : Enter U : Up D : down L : Left R : Right

[Std AUSDT0 T1T2T3 IT=1800] : Format and Additional data selected value

A : Indicate it when a forwarding address is fixed

U : Indicate it when a unit is added

S : Indicate it when a distinction/status is added

D : Indicate it when a date is added

T : Indicate it when a time is added

O : Indicate it when a title output is added

T1 : Indicate it when a item 1 is added

T2 : Indicate it when a item 2 is added

T3 : Indicate it when a item 3 is added

IT= : Interval setting value indication

The operation of the RTS-E setup screen

A condition such as RS-232C is established. (Refer to the next page for the details.)

Even a keyboard can be operated except for the mouse operation. Underlined letter button can be operated with the **Alt** key + underlined letter key. Moreover, a button is chosen by the **Tab** key, and it can be carried out with the **Enter** key.

Each item of the "Baud rate", "format" inside can be chosen by the **Arrow** key. The item of the "Additional data" inside is chosen with the **Arrow** key, and on/off of the check is made of **Space** key in it.

Timer intake is possible. A balance is made a setup of continuous output at the time of use of an interval timer.
 0 : Continuous intake
 Except for 0, until 2-1800-second (30 minutes)

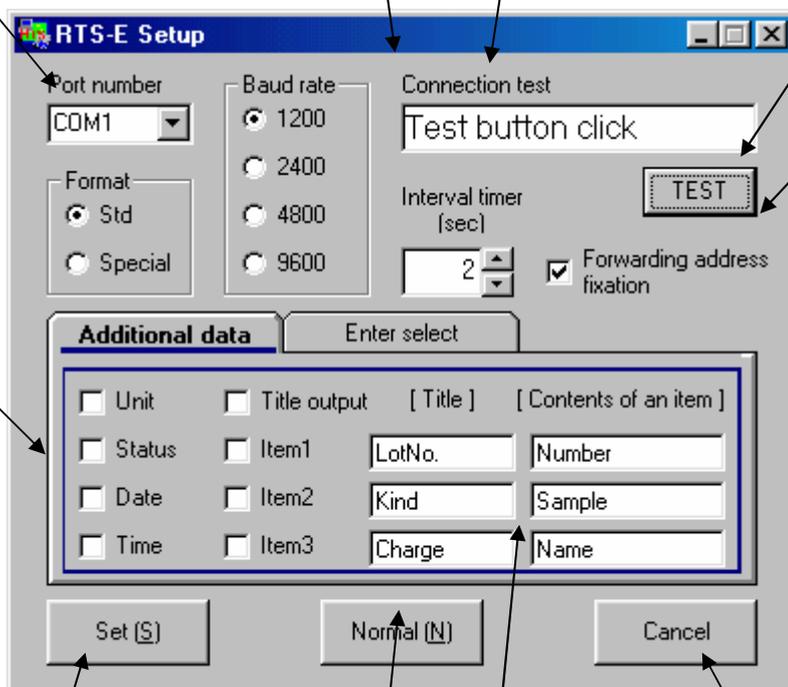
When a connection is normal, input data are indicated, and "OK" is indicated by green at the upper right.
 When data are wrong points, indication (Even a message box is indicated.) does an error message, and "Error" is indicated by red at the upper right.

The condition of RS-232C is established.
 COM port : COM1 - 4
 Format : Standard / S (Refer to P6)
 Baud rate : 1200/2400/4800/9600 bps

Input data can be confirmed by clicking on the **TEST** button.

Transfer data except for the measurement value can be established.

The forwarding address of the data can be fixed.



A setup is changed, and a setup screen is closed. "Do you change a initialize file?"
 Operation with this window becomes the following.
 Yes=Initialize file is changed
 No =Initialize file isn't changed
 Contents of a change are effective to the completion.

A setup screen is closed without changing contents of a setup. Even an Esc key can be operated.

It is the item that a user writes it down and which can be changed. The contents that it was written down here are transferred with the data. It can be inputted to an item 20-character each.

The contents (COM port is removed.) of the setup screen are returned to settlement of the following standard.
 Baud rate : 1200 bps Format : Std
 Additional data : No Enter select : Enter
 Interval timer : 2 seconds Forwarding address fixation : Yes
 Click on the **Set** button again to make settlement of a standard effective.

RTS-E setup screen operates it. (continuation)

The details of a setup of a condition such as RS-232C are explained.

■ Setup of a condition of RS-232C

Fit the setup of the balance to each item of format/Baud rate referring to that indication because the contents to establish with the balance when a mouse is put together are indicated.

Format Standard : It is chosen at the time of the standard electronic balance. (Except for the thing of the SH series and the same kind)

Format S : It is chosen at the time of the electronic balance of the kind which is the same as the SH series.

Distinguish 6 (**IF.1**) /7 (**IF.2**) digit of the data automatically when you choose a "**Standard**".
Distinguish 16 (**code: 721**) /22 (**code: 722**) character of the data automatically when you choose "**S**".

Set up Baud rate in **9600**bps only when using an **ARX series**.

■ Connection test with the balance

The normality/wrong point of the setup of RS-232C can be checked.

Click on the **TEST** button after you connect a computer and a balance with the attached connection cable and fit the setup of the balance to the setup of this RS setup screen. If it is normal, "**OK**" is indicated by green at the upper right, and data on the balance are indicated in the text box.

Remove an error cause referring to the message because "**Error**" is indicated by red at the upper right and an error message corresponding to those contents is indicated when there is a wrong point Click on the **TEST** button again when you change a setup.

■ Interval timer

When setup value is 0 second, data are taken in by the continuance. When it is set up in more than two seconds, the intake of the data is done in that setup second number interval. When the intake of the interval is done, a forwarding address is set up in the fixation automatically. A setup of a fixation can be canceled later, too. **Make the setup of the balance continuous output (o.c. 1)**. An interval is stopped when it clicks when the indication of the task bar is "RTS ". When the indication of the task bar is "*RTS*". (It is indicated when interval time is more than 15 seconds.) Contents of a setup can change an interval with going on when it clicks on.

■ The fixation of the forwarding address

A data forwarding address can be fixed by checking it.

In this case, it is fixed by the application of transferring data first.

Data are surely transferred for the forwarding address application even if application except for the forwarding address is being operated when a forwarding address is fixed. But, this function is to be careful by the condition of the application except that it is being started because it may not work normally. And, specify forwarding address application again when it starts again because forwarding address application isn't remembered when you finish this software.

■ **Additional data**

The item that a check was put in the data is added and outputted.

And, the “status” checks item establishes “distinction” and “status” data at the same time.

Output "Yes"/"No" can set up a title only in the beginning by **Title output** item at the time of the additional data output.

The title/data when it is completely set up become the followings.

(Example) : Transfer data become data on comma stop form.

(Title)

“Measurement value”, Unit, Distinction, Status, Date, Time, Lot NO., Kind, Charge

(Data)

" +00000.0", G,G,S,1999/03/05,10:49:02, Number, Sample, Name

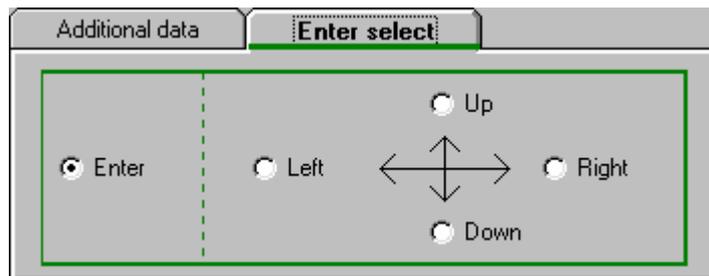
Use title output by the table calculation software and so on when an item name is necessary.

And, when there are no additional data, a title isn't outputted, and only measurement value is outputted in it.

A format is not in "the distinction" and the "status" data by the setup of "S" in the case of "It doesn't have a data ID code." (16 character). ("Only" becomes output even if a check is being put.) "A data ID code" is outputted in the part of the "status" data in the case of "data ID code addition" (22 character). (From the head of the data, the part of 6 character)

■ **Enter Select**

The Enter Select of the transfer data can be changed.



Choose "**Enter**" when you transfer data to the memo pad and Word as a textbook. Start a new paragraph in every transfer data of one time.

Choose "Up", "Down", "Left" or "Right" either by the table calculation software (in such cases as Excel) after you transfer data to each cell every direction which be cell direction move.

5.Others

(1)Precaution

- It doesn't work except for the electronic balance standard format manufactured by our company and the S format.
- [transfers data from now when a mouse is being clicked just before the data transfer. Don't operate it for a while.] Don't do the operation of the computer because a message is indicated. And, it is clicking on [at present with a mouse clicked at the time of the data transfer. Do you stop measurement?] Click on "**no**" when you don't stop "**yes**" when you stop it because a message is indicated.
- Make a setup of output control of the electronic balance the setup of (**o.c. 1,2,6**) except for the continuance when a setup of an interval timer is **0** second. When continuance is set up, a data transfer becomes continuance, and has the possibility that a mouse cursor stops moving. Do in this case as you click a mouse. A transfer can be stopped.
- Don't start application except for the forwarding address as much as possible during this software movement. And, don't do an imprudent mouse and key operation. Be careful because it unusually and sometimes works when data are transferred for other application.
- Set up an additional item as low as possible. When there are many items, it may operate faultily by the forwarding address application, the case that it is transferred in the interval time and that it can't be completed.
- "?????" is transferred in the measurement value when data aren't being outputted from the electronic balance in the ~~intel~~ setup time. "**RS ERROR**" is outputted at the time of the communication error. "**DATA ERROR**" is outputted at the time of the data error.
- The condition of "**Num Lock**" "**Caps Lock**" "**Scroll Lock**" of the keyboard may change at the time of the data transfer.
- This software can't start it in the plural.
- The operation of the electronic balance and control can't be done in this software.
- Approve it because it is hardly responsible for the influence of the result that this software and an instruction manual were employed at all though assurance is being expected about the contents of this product.

(2)Setting up the output control

- Make a setup of output control of the electronic balance manufactured by our company the following.

(Refer to the instruction manual of the electronic balance for the details.)

CAUTION: A corresponding electronic balance is an electronic balance manufactured by our company.

(A single direction or the installation of both directions RS-232C output is necessary.)

When the intake operation of the data is done on the electronic balance side, at the time of an interval timer setup = 0 second.

Series name of the electronic balance manufactured by our company	The setup of function	A setup of RS of this software
DJ	6. o.c. 3 Output by pressing Print key. 7. b.L. 1 1200 bps	Standard format 1200 bps
CG CG-K CG-KF	6. I.F. 1 6 digit format 61. o.c. 3 Output by pressing S key. 62. b.L. 1 1200 bps	Standard format 1200 bps
HG2 / HG PF2 / PF	8. I.F. 2 Seven-digit format 81. o.c. 3 Output by pressing S key. 82. b.L. 1 1200 bps 83. P.A. 0 No parity bit.	Standard format 1200 bps
GZ	5. I.F. 1 6 digit format 51. o.c. 3 Output by pressing Print key. 52. b.L. 1 1200 bps	Standard format 1200 bps
CUX1 / CUX2 CUX3 PCX2	8. I.F. 1 6 digit format 81. d.A. 1-7 Data kind choice 82. o.c. 3 Output by pressing * key. 83. b.L. 1 1200 bps	Standard format 1200 bps
ARX	It can't be used because it doesn't have a setup item.	-----
SH	Code 721 : No ID code. Code 612 : Output it once when you pressing P key at the time of the stability. Code 514 : 1200 bps (Others are setups at the time of shipping.)	S format 1200 bps

Push **Set** button, and register after it is based on the above table on the RS setup screen of this software by you and you establish Baud rate and a format.

Format Standard : It is chosen at the time of the standard electronic balance.

(Except for the thing of the SH series and the same kind)

Format S : It is chosen at the time of the electronic balance of the kind which is the same as the SH series.

And, the output control of the electronic balance is except for **o.c.3** of the upper table.

o. c. 4 Automatic output with a load after stabilization.

o. c. 5 One output when stabilized. (No output with unstable data)

o. c. 7 One output by pressing **S**, * or **Print** key after stabilization.

Don't make it a setup except for it.

When a setup of an interval timer is more than two seconds.

Series name of the electronic balance manufactured by our company	The setup of function	A setup of RS of this software
DJ	6. o.c. 1 Constant serial output 7. b.L. 1 1200 bps	Standard format 1200 bps
CG CG-K CG-KF	6. I.F. 1 6 digit format 61. o.c. 1 Constant serial output 62. b.L. 1 1200 bps	Standard format 1200 bps
CUX1 / CUX2 CUX3 PCX2	8. I.F. 2 7 digit format 81. o.c. 1 Constant serial output 82. b.L. 1 1200 bps 83. P.A. 0 No parity bit.	Standard format 1200 bps
CGX CGX-K	5. I.F. 1 6 digit format 51. o.c. 1 Constant serial output 52. b.L. 1 1200 bps	Standard format 1200 bps
	8. I.F. 1 6 digit format 81. d A. 1-4 Data kind choice (Note .1) 82. o.c. 1 Constant serial output 83. b.L. 1 1200 bps	Standard format 1200 bps
	4. I.F. 1 6 digit format 41. o.c. 1 Constant serial output 42. b.L. 1 1200 bps	Standard format 1200 bps
ARX	Communication mode 0 : CSP-16 format (Note .2)	Standard format 9600 bps
SH	Code 721 : No ID code. Code 614 : Constant auto output Code 514 : 1200 bps (Others are setups at the time of shipping.)	S format 1200 bps

Push **Set** button, and register after it is based on the above table on the RS setup screen of this software by you and you establish Baud rate and a format.

Format Standard : It is chosen at the time of the standard electronic balance.

(Except for the thing of the SH series and the same kind)

Format S : It is chosen at the time of the electronic balance of the kind which is the same as the SH series.

(Note.1) :Don't choose **81.d A. 5 - 7** in this case.

(Note.2) :An **ARX series** is to set up Baud rate of the RS setup screen of this software in **9600** bps because Baud rate is a **9600** bps fixation.

(3)Q&A

■ **About the relations between the input data and the transfer data?**

- Relations between the input data and the transfer data are shown in the following.
(Format : Standard)
(When it is added only in unit/status/date/time)

input data

numerical value unit distinction/status

P1 D1 D2 D3 D4 D5 D6 D7(D8) U1 U2 S1 S2 CR LF

(numerical value data 6 digit example)

+ 0 3 1 5 . 2 6 G G S CR LF

Transfer data

(only numerical value) : +0315.26(Enter)

(There are additional data.) : "+0315.26", G,G,S,1998/12/10,10:54:38(Enter)

Note : (Enter) are Enter key codes.

It is. And (D8) is added when numerical value data seven digits are established.

■ **Do you process comma stop data with Excel?**

- When additional data are established, they become comma stop data, and all data are inputted to one cell. The following operation is done to divide each data into each cell.

Operation with Excel

- All the data are chosen.
- **Data** Menu-> Stop position is selected.
- **Stop position designated wizard** -> **Comma and tab ---** is selected -> Click the "Next".
- Put a check in the "comma" in the "**Stop character of the line**". -> Click the "Next".
- "**The necessary data form of the line**" is selected, and it clicks on "**Complete**".

Data are divided into each cell in the above.

■ **Do you set up the cell movement direction of Excel?**

- When cell movement direction after input of data is set up on the Excel side. Make a **Enter Select** treatment of the **RTS-E Setup** window of this software a "**Enter**". -> Click the Excel **Tool** menu -> **Option** -> Specify a direction by the establishment item of "**Edit**" after putting a check in "**Move cell after the input.**"
- Choose "**Up**", "**Down**", "**Left**" or "**Right**" either of a setup of Enter Select of the RS setup screen when you set up a cell movement direction after input of data by this software. (As for the above Excel side setup, it can be moved independently.)

(4)User registration

Do user registration at once if you have this software purchased.

It is necessary to let me make contact with the user quickly when a program is upgraded. And, if it doesn't register, there is it that a question about this software and so on can't be asked to it.

Send FAX at once after you write it down in the attached user registration form.