Barcode Label Scale

RLS1000 Software User Manual

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Contents

1 Software user manual

1.1 Software installation

Firstly, put the CD into PC driver. Then, open the document, double click the installation package with the logo RLS1000_SETUP_V1.129 ,and then appear following image: Image 1.0：

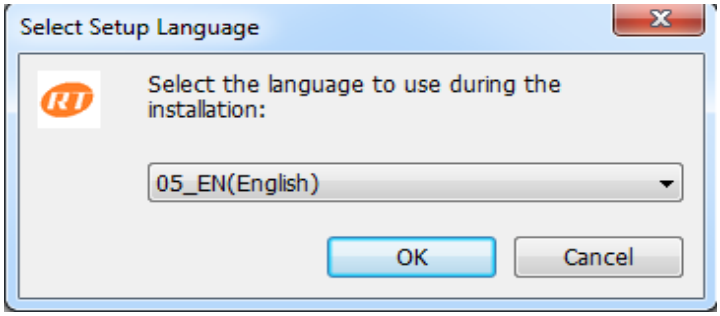


Image 1.0

Select the language to use during the installation, click the “OK” , and then appear following image: Image 1.1：

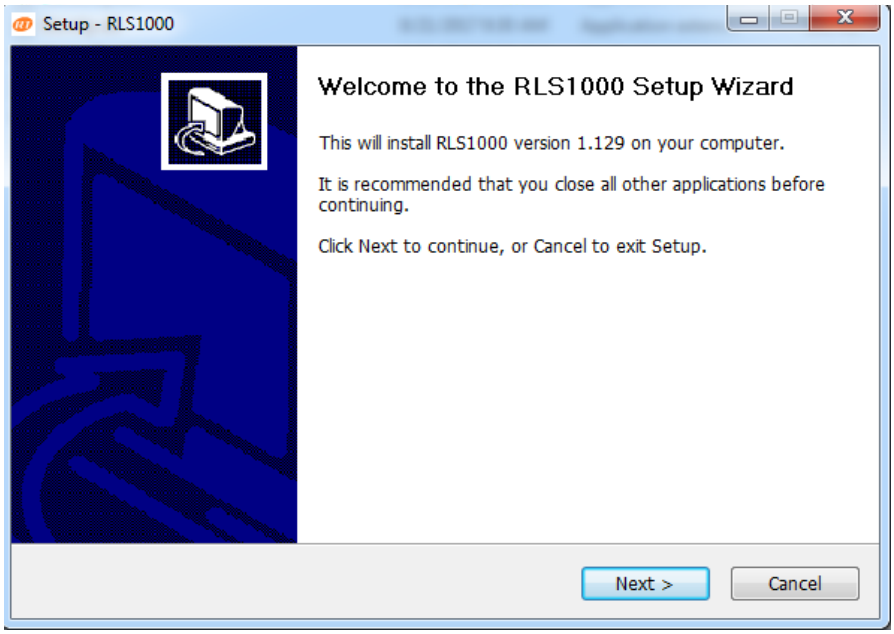


Image 1.1

Click “next” to select default installation path of program Files of C drive, or select “browse” to choose self-definition installation path. Such as installed to G drive, and then appear Image 1.2:

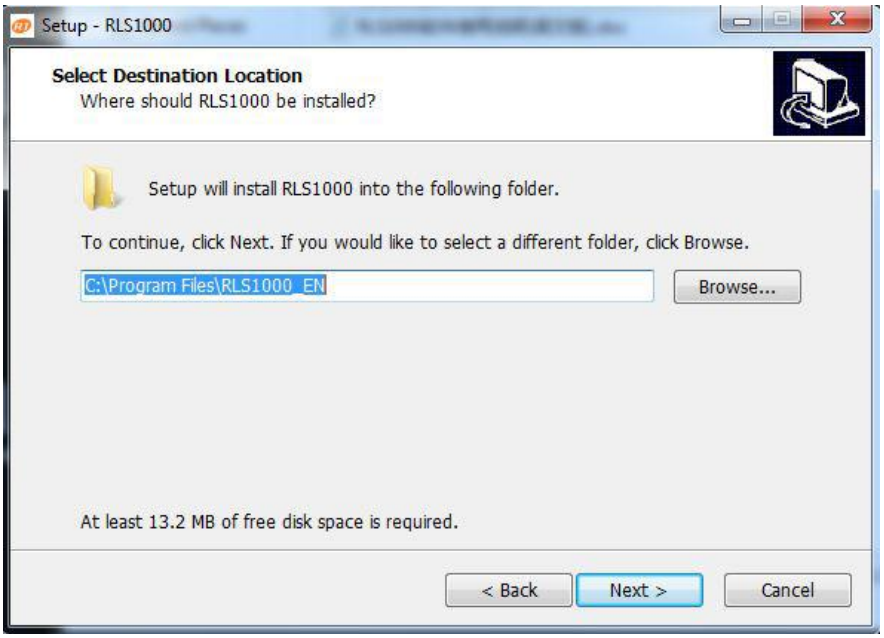


Image 1.2

Click “next”, and then appear Image 1.3:

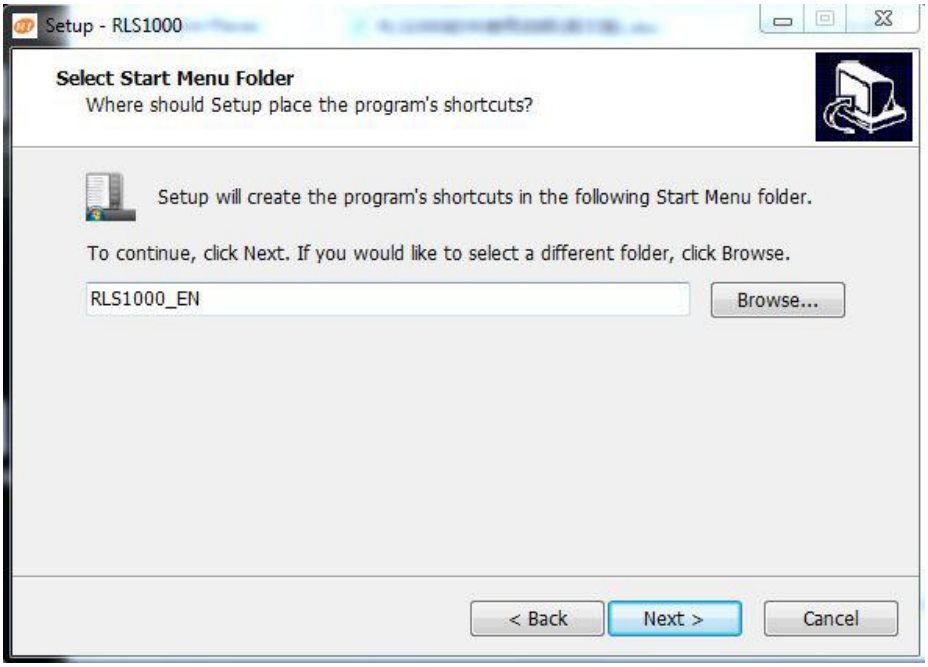


Image 1.3

Click “Next”, then appear Image 1.4:

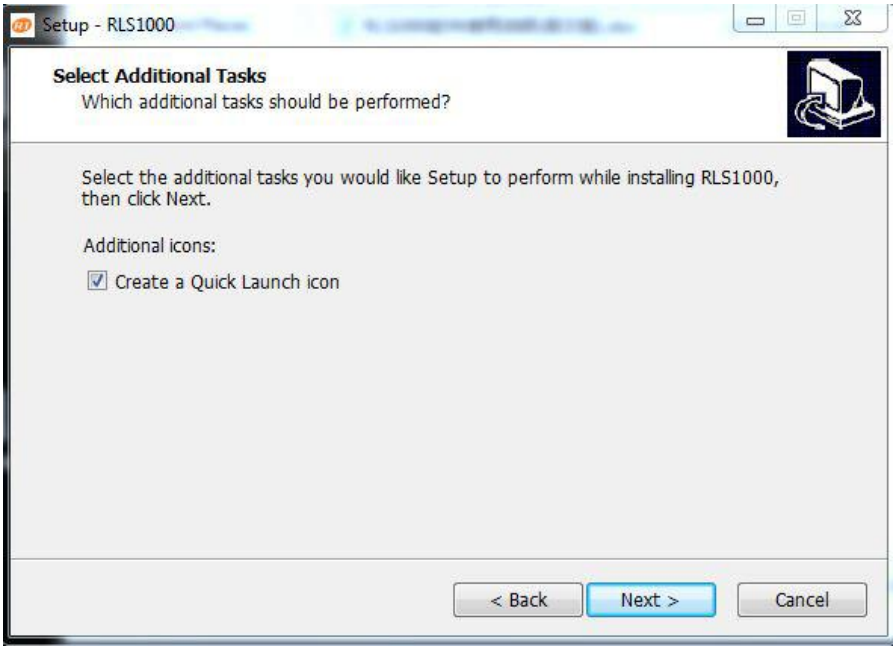


Image 1.4

Click “Next”, then appear Image 1.5:

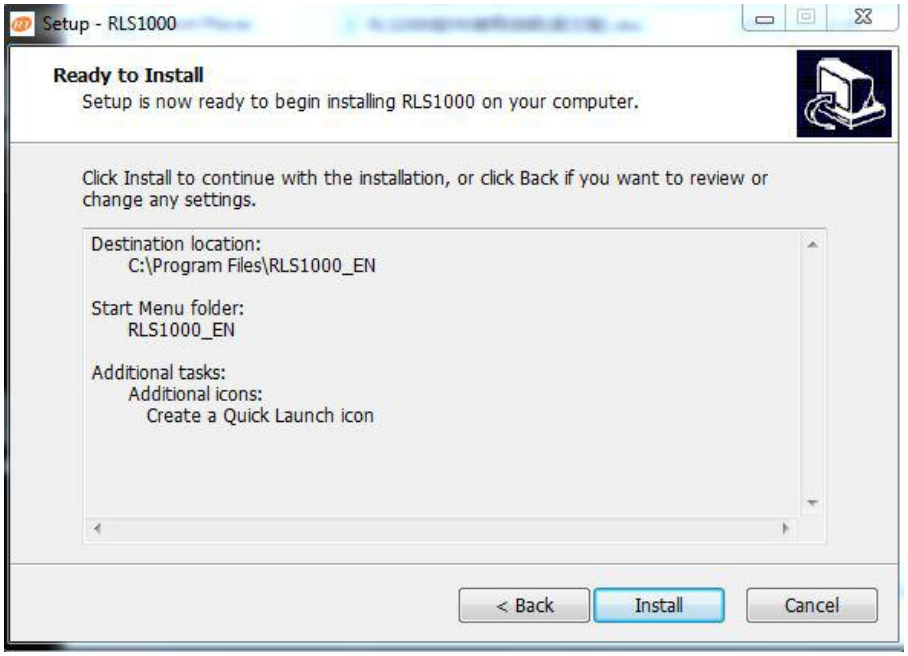


Image 1.5

click “Install” to continue next step, then start to install. the interface after finishing installation is as below:

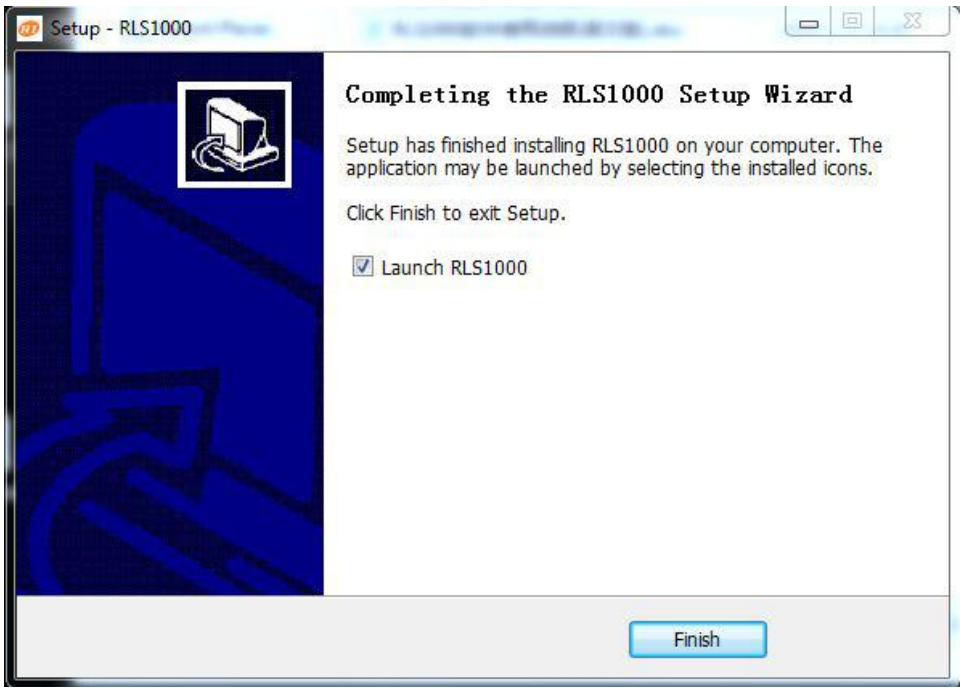
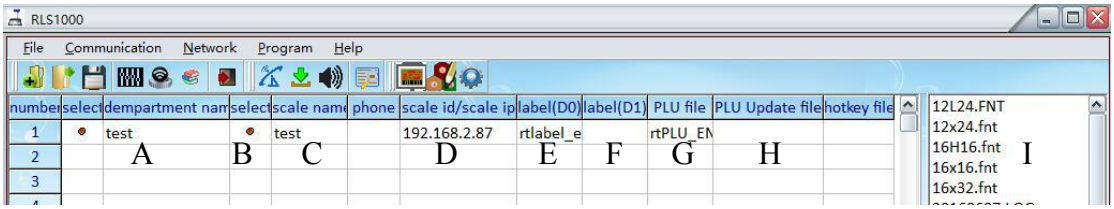


Image 1.6

After finishing, can choose to operate RLS1000 or not.

1.2 Use RLS1000

- RLS1000 Main function：
  a. Download program
  b. Download Character Font
  c. Download PLU
  d. Download Label
  e. Download hotkey
  f. Download function parameter
- Creat Connection



On above image：

A， input the name of label scale department

B， double click to select

C， input the name of Label scale

D， input the IP add. of label scale

E， Click D0 label column, double click to select label in I area.

F， Click D1 column,double click to select label in I area.

G， (*.TXP)click PLU column, double to select PLU in I area.

H， (*.TXU)click PLU updated column ,double click to select PLU in I area.

I， (*.KEY) click hotkey column, double click to select hotkey in I area.

operation process：

a，download program：

set up connection first, network ⇨ update software (choose *.hex file)

b，download Character Font ：

set up connection first, network ⇨ Download data, choose single byte character font and check box before double byte fresh common character font

c，PLU download PLU：

set up connection first, network ⇨ download PLU

d，download label：

set up connection first, network ⇨ Download data, choose D0, check box before D1,then confirm.

e， download hotkey：

set up connection first, network ⇨ Download hotkey.

f， download function parameter：

set up connection first, network ⇨ Download data, select check box on front of function set key, then set

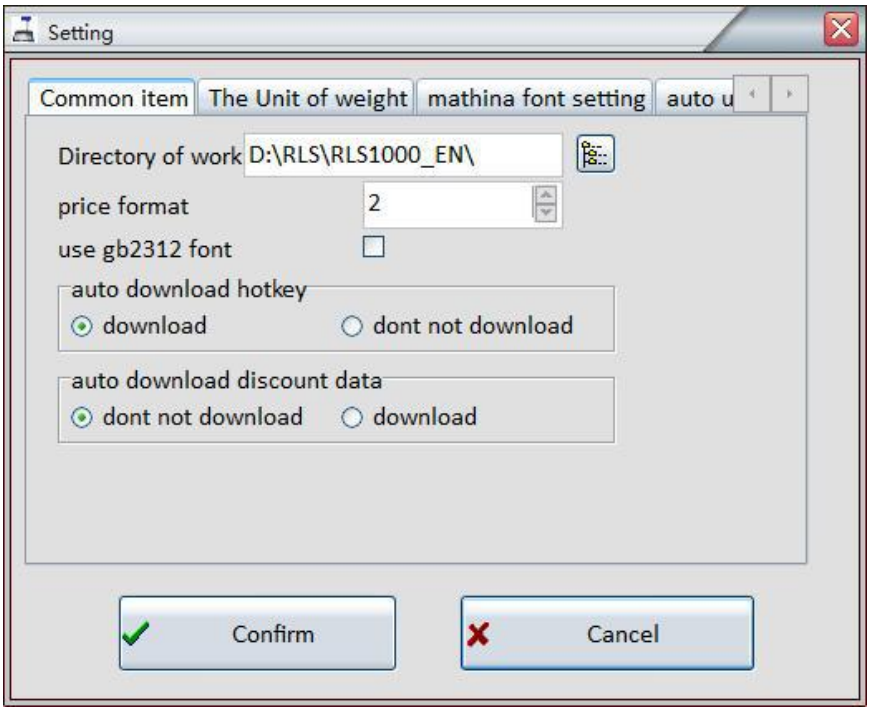
other：

update PLU： set up connection first, network ⇨ Update PLU

(F)File

New	new connection
Open F3	open existed connection
Save Ctrl+S	save
Asaves	build new file to save
FSetting	additional funciton set, as picture parameter option
set function F6	function parameter set , as picture set function
display change	change RLS1000 chartlet
Font	set font
Check the lfcode	Chenc the lf code
Print lfcode	Print lf code
XExit	exit RLS 1000

parameter option foundation set page



explanation：

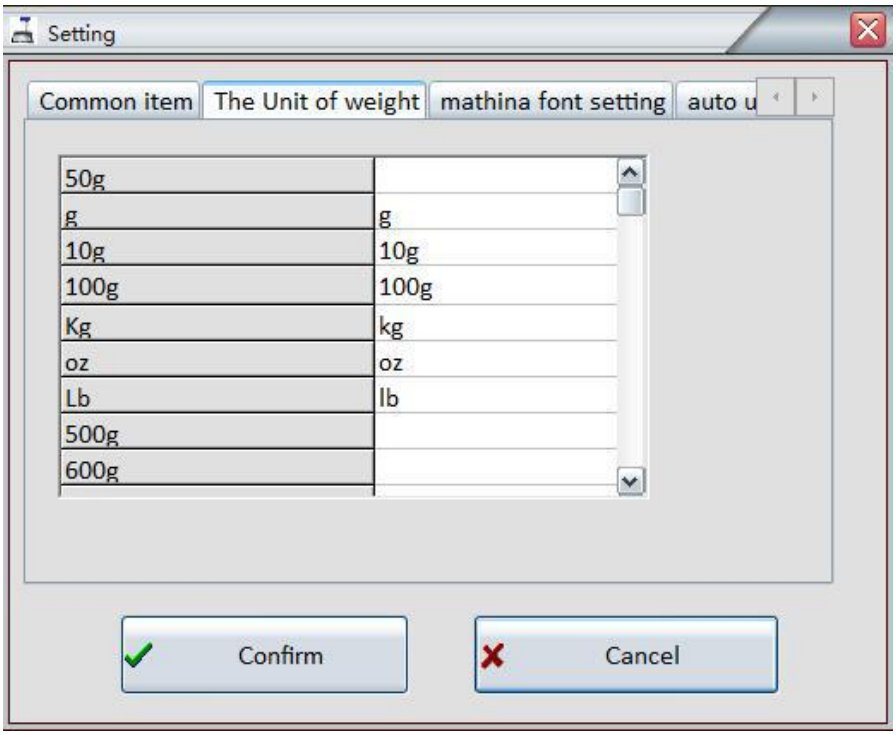
work directory： set default directory（influence area I）。

System decimal position：0，1，2。Set PLU decimal digit of PLU manger.

Auto download hotkey：download；Don't download

Auto download discount data: Don't download; download

- Image **[parameter option]**weighing unit page

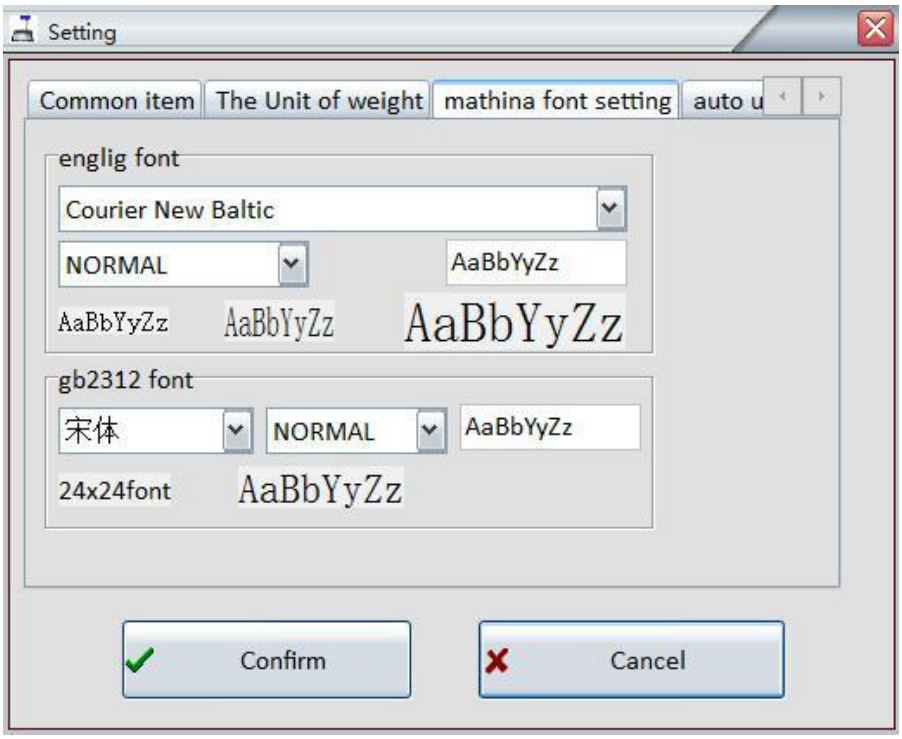


explanation：

self-definition;

The unit defined is corresponding with the unit in PLU manager.

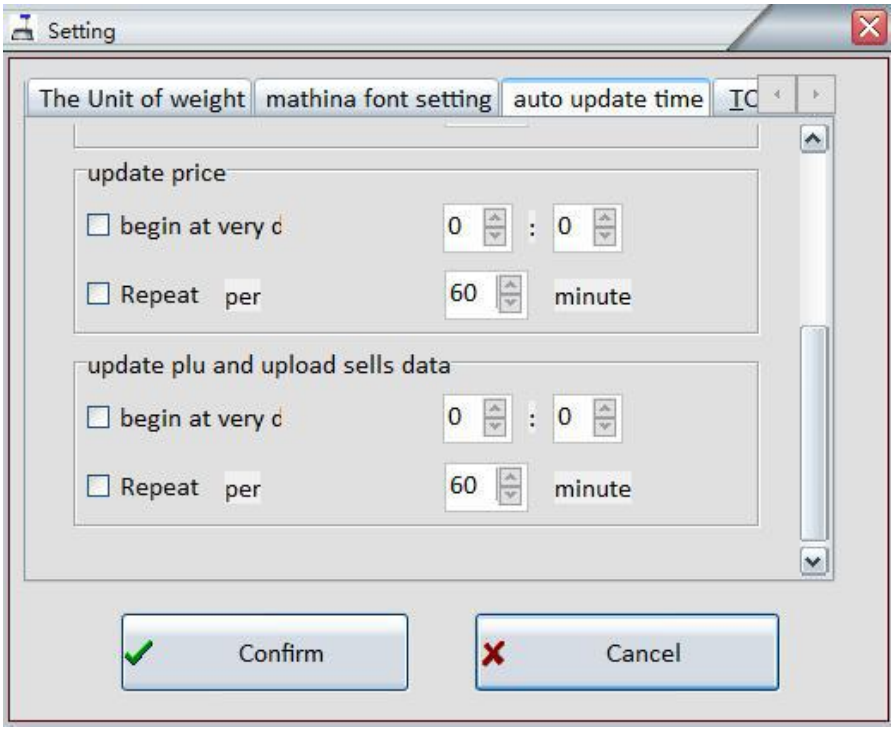
- Image (parameter)label scale font page



explanation：

Set the font of downloading to label scale

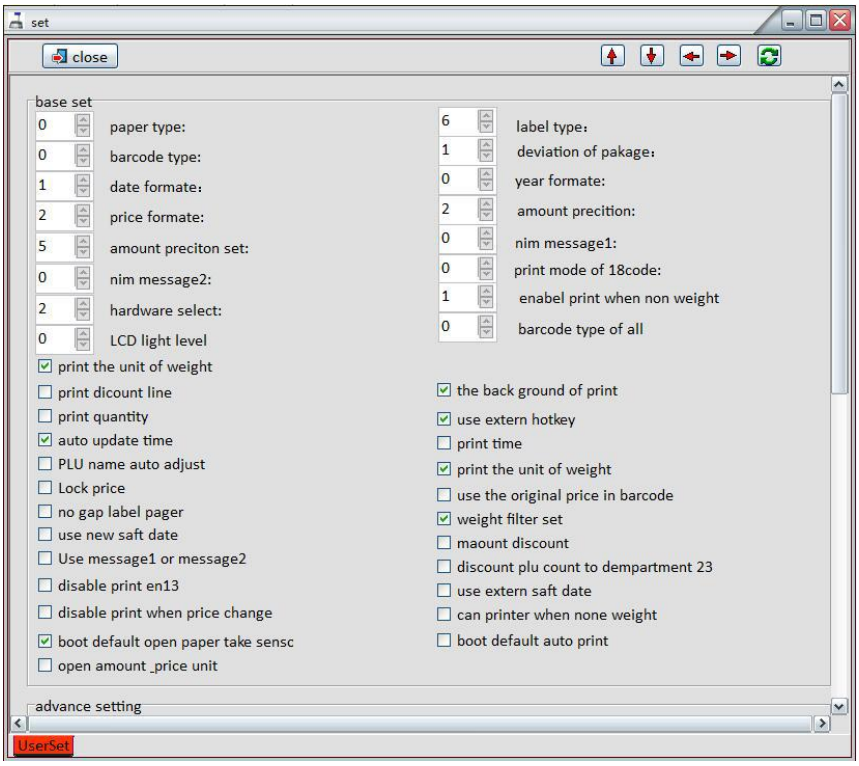
- Image (parameter option)product name update time



explanation：

set RLS1000 to download and update PLU(set G,H area first)

- Image**[Setting]** (part 1)



common functions：

paper type：0: label； 1: receipt； 2: no-rewinder。

barcode type：0~99(refer to barcode type table)。

date format：0:DDMMYY;1:MMDDYY;2:YYMMDD(D，date；M，month；Y， year)。

decimal position：0，1，2； set price decimal digit。

rounding： set round carry digit。

Message2：0~197 default message. If PLU data hasn't set message,this PLU data will be the default.

Display: Reserved.

Label type: 6:D0;7:D1;0~5: Reserved.

Package tolerance：1~20。.

Year format.：0：YY;1：YYYY。

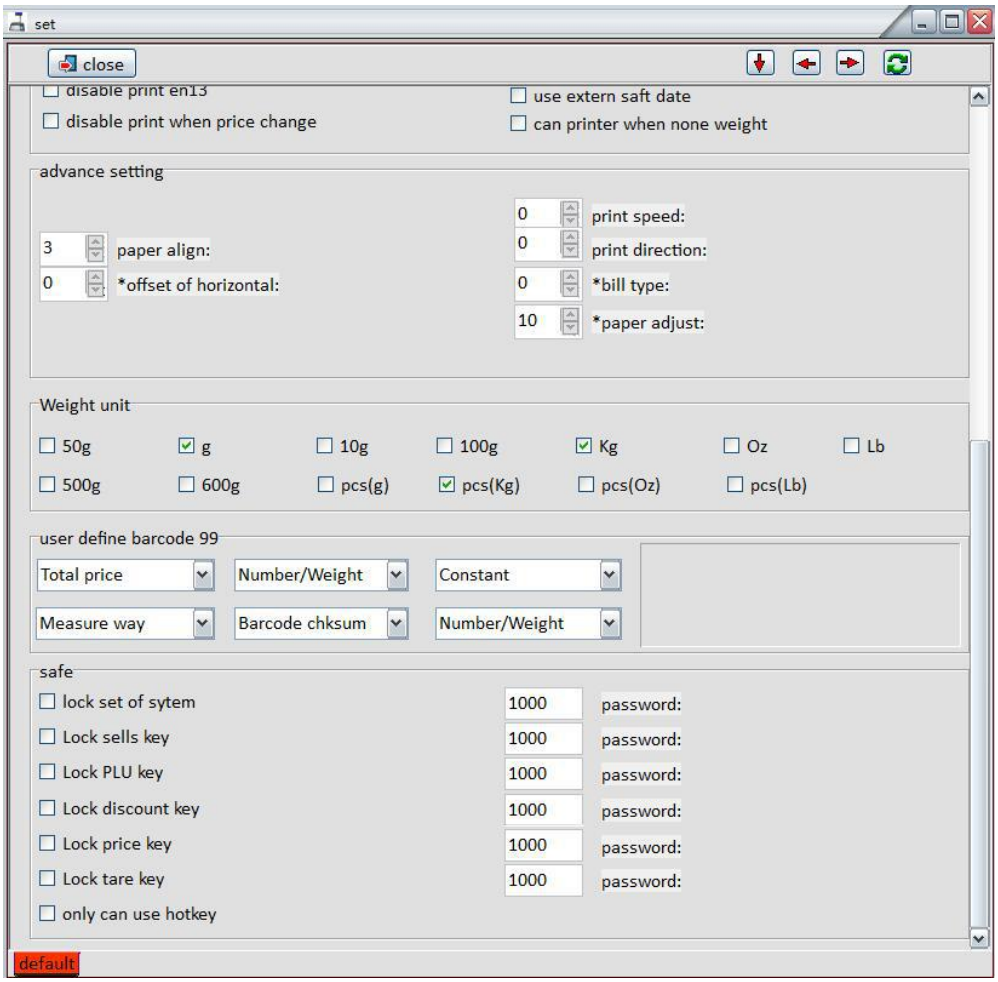
Total price precision：1,N.N0;2,N.NN;3,N.N。

message1：0~197 default message,if PLU data hasn't set message ,this PLU data will be the default.

barcode printing format : 0， standard grid2/5； 1， narrow grid 2/5

2，Ean128； 3，narrowEan128。

- Image**[Setting]**(part 2)



Directions:

Advanced function block:

Printing density: Retain

Paper fine tuning:　adjust print location deviation －8～＋8

Horizontal-shift:Retain

AD (full weight calibration):Retain

Back steps:Retain

Printing speed:0~7. 0 represents the fastest printing speed, while 7 represents the slowest printing speed. Printing performance is better in slow printing speed, but　lifespan of print head is shorter.

Account type:Remain

Correction(full weight calibration):Retain

Safety function blocks:

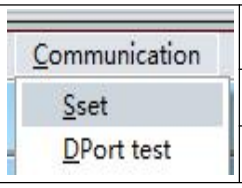
Set up function of lower machine to lock password

Weight unit

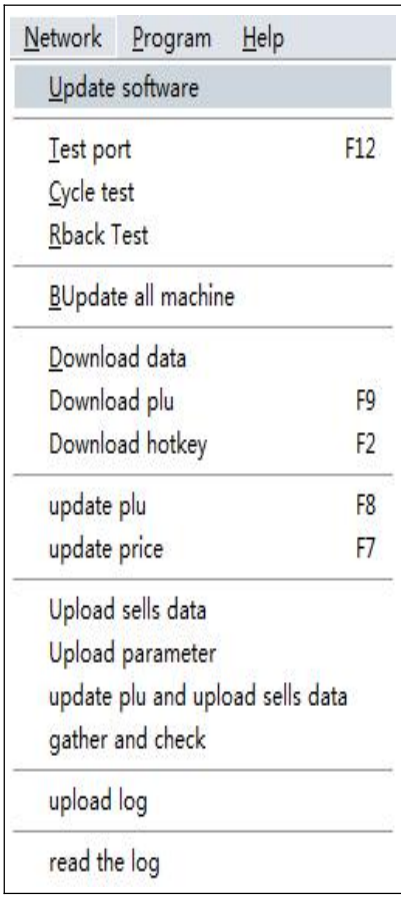
Select weight unit of lower machine

Custom barcode 99:

- Set up download function:
  Internet→download data→set up tick function, confirm

	
	Non-Ethernet scales retain
	Non-Ethernet scales retain

Internet menu.

	
	Update program to lower machine
	Test Connection
	Retain factory test
	Retain factory test
	Update program to all lower machine
	Download PLU, barcode, function parameters etc.
	Download PLU
	Download PLU hot keys.
	Update PLU
	Update price
	Retain
	Retain
	Retain
	Retain
	Save Security Log
	Check Security Log

Program menu:

Label editor; Start label editor

PLU management; Start PLU management

Note:

You can view the appropriate files once double click files' name in area of E，F，G，H，I.

Please do not use functions where there marks "retain". It means these functions are not allowed setting up or just for factory use.

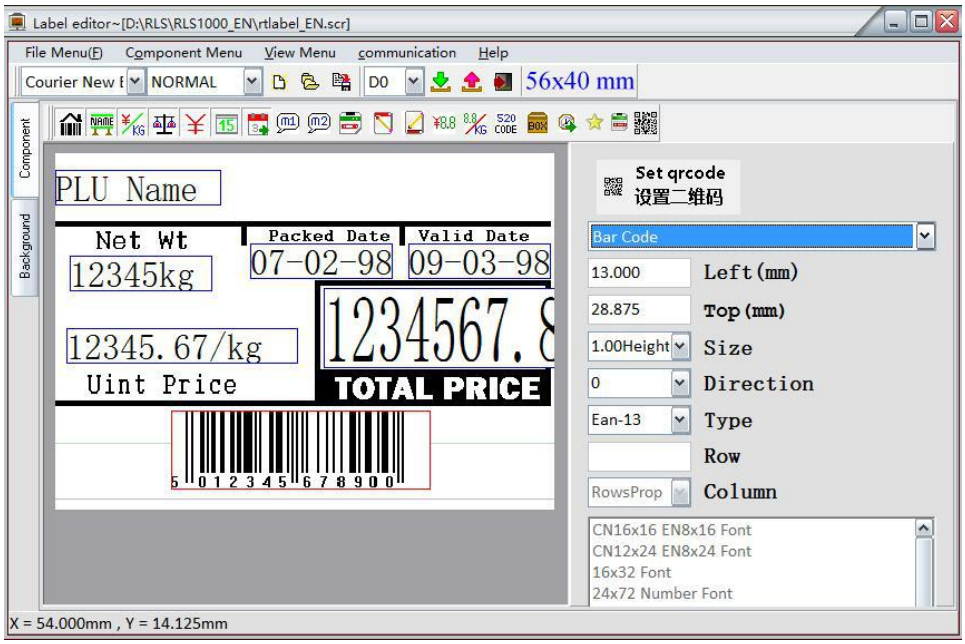
1.3 Create label

Open RTLabel.exe

Start→Program→RLS1000→RTlable

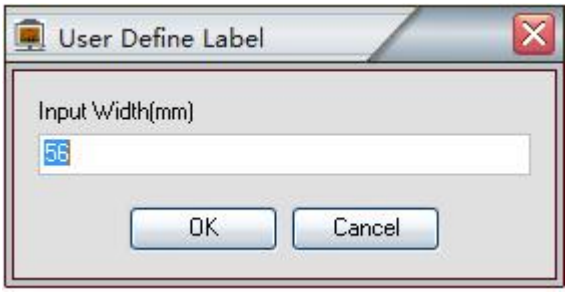
Or start from RLS1000 program menu→Label editor

After starting, the program automatically transfers to the default label, as below:



If you want to create a new label, operate as below:

files→new-built, then a tip box appears



Input paper width of label in millimeters, maximum width is 56mm. Then click OK button, another tip box appears.

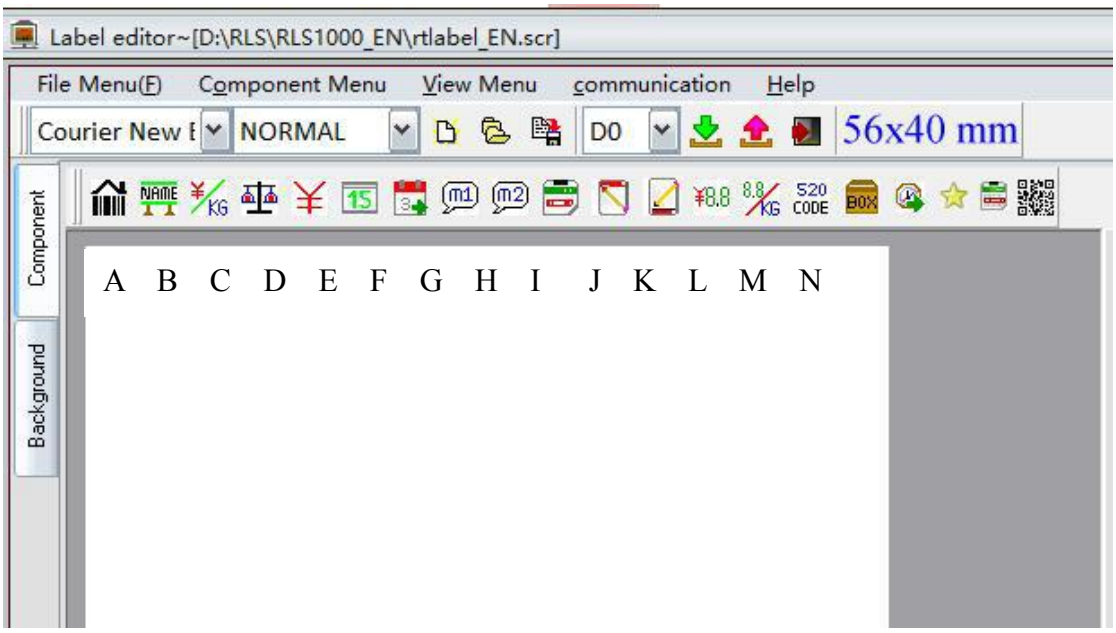
Input paper height of label in millimeters, then click OK.

***If you need to change the size of label, click files→modify label size, then follow the prompt to input width and height.

Filling label:

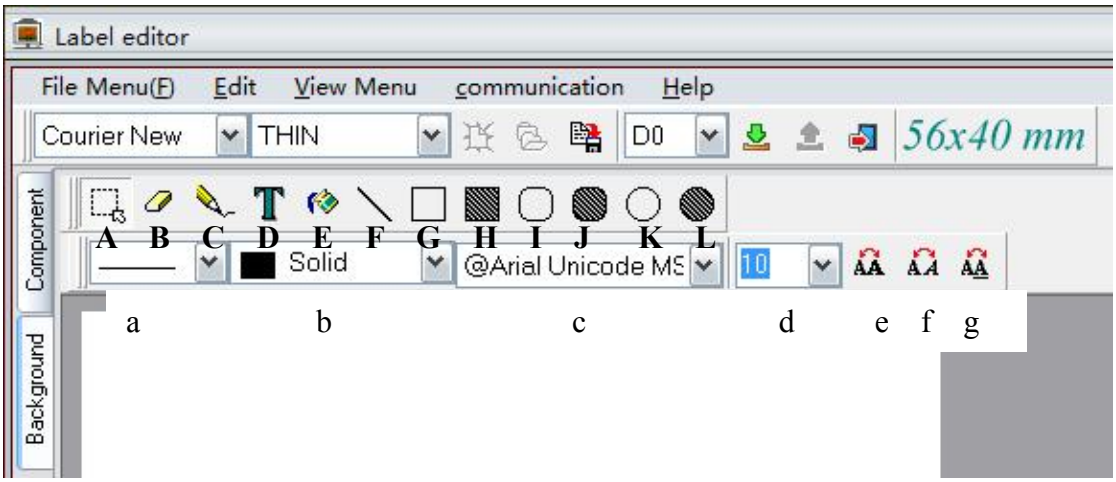
Click “place component” on the left, then component bar, after that click label again. It’s allowed to put the component on the label, click and hold component on the label, then it can be dragged to any position. Place tail information component, if tail information is blank (that is to say not setting tail information content), it will be replaced by machine number once label

print out. If tail information is not blank (that is to say tail information is being setting), then the setting
content will be printed out while printing label.



A，Barcode B，Nane C，Unit Price D，Weight E，Total price F， Period of validity G，Packaging date H，information 1 I,information2 J,Fresh Commodity Code K，Header information L，Tail information M，Total price discount
N，Unit price discount

Click “edit background” on the left, then function component bar, after that set up font etc. It’s allowed to edit character, line, background etc. As below:



A， Select B，Eraser C，Pencil D，Character E，Filling F， Straight lin G，Rectangle H，Filled rectangle I，Rounded-square J，Filled rounded-square
K，Circle L，Filled circle
a, Line thickness b,Fill Type c,Character font d,Character size c,Bold f,Italic g,Underline
Paste Custom BMP graphics

Edit→paste from, select BMP graphics, then “open”. After that the graphics can be dragged to any position

D0，D1：means label format stored in the machine, it needs to be selected upload or download. Save files.

Files→Save, input non-space name, then “save”

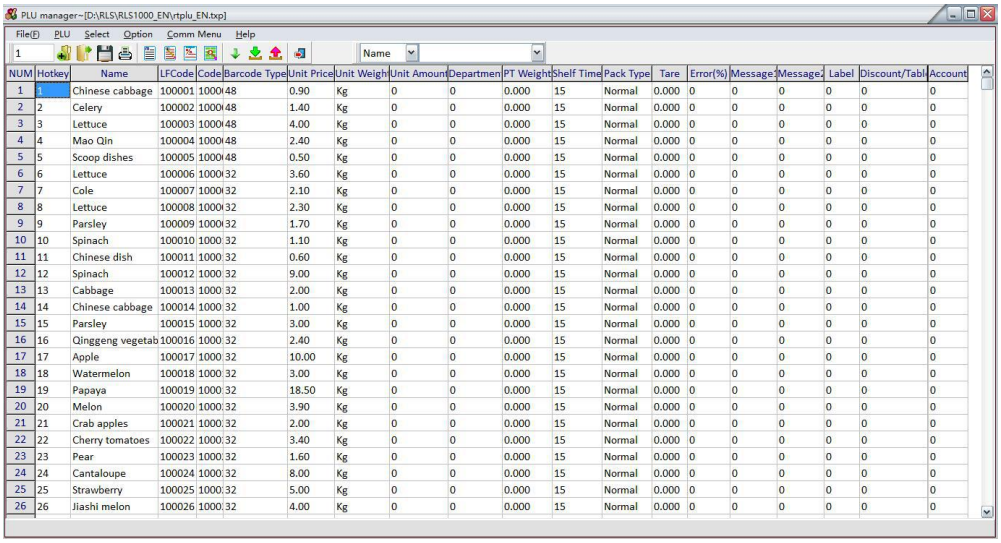
Remark: Image and character can be dragged to any position through using “select”. It will be saved as image format every time leaving location of character editing.

1.4 Create PLU data

Open PLU manager

Start→Program→RLS1000→RTPLU

Or start from RLS1000 program menu →PLU manager



NUM	Hotkey	Name	LFCode	Code	Barcode Type	Unit Price	Unit Weigh	Unit Amount	Departmen	PT Weight	Shelf Time	Pack Type	Tare	Error(%)	Message1	Message2	Label	Discount/Tabl	Account
1	1	Chinese cabbage	100001	1000	48	0.90	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
2	2	Celery	100002	1000	48	1.40	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
3	3	Lettuce	100003	1000	48	4.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
4	4	Mao Qin	100004	1000	48	2.40	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
5	5	Scoop dishes	100005	1000	48	0.50	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
6	6	Lettuce	100006	1000	32	3.60	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
7	7	Cole	100007	1000	32	2.10	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
8	8	Lettuce	100008	1000	32	2.30	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
9	9	Parsley	100009	1000	32	1.70	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
10	10	Spinach	100010	1000	32	1.10	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
11	11	Chinese dish	100011	1000	32	0.60	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
12	12	Spinach	100012	1000	32	9.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
13	13	Cabbage	100013	1000	32	2.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
14	14	Chinese cabbage	100014	1000	32	1.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
15	15	Parsley	100015	1000	32	3.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
16	16	Qinggeng vegetab	100016	1000	32	2.40	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
17	17	Apple	100017	1000	32	10.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
18	18	Watermelon	100018	1000	32	3.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
19	19	Papaya	100019	1000	32	18.50	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
20	20	Melon	100020	1000	32	3.90	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
21	21	Crab apples	100021	1000	32	2.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
22	22	Cherry tomatoes	100022	1000	32	3.40	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
23	23	Pear	100023	1000	32	1.60	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
24	24	Cantaloupe	100024	1000	32	8.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
25	25	Strawberry	100025	1000	32	5.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0
26	26	Jiashi melon	100026	1000	32	4.00	Kg	0	0	0.000	15	Normal	0.000	0	0	0	0	0	0

一、PLU table basic fields are explained as follows:

Hotkey→input hotkey（1-112*2）

PLU Name→input PLU name within 36 characters

Fresh Commodity Code→input number within 6-figure which means Fresh Commodity Code, do not repeat

PLU item no.（Code）→input number within 10-figure which means PLU item no.

Barcode Type→input barcode type(0-99)

Unit Price→input unit price

Weight Unit→press space, then select required weight unit

Quantity unit (PCS Type) →input unit of quantity(0-15), pls set the unit of quantity in RLS1000.

Department →Input a two-digit to represent department

Tare → Input tare weight, within 15kg after logic conversion.

Shelf time →Input shelf time (0~365)

Two ways for Shelf time unit, (0~365) means unit is day; (-365~0) means unit is hour.

Package Type → press space bar to select the packing type.

Package Weight →Input package weight, within 15kg after logic conversion.

Package Tolerance →Input package tolerance in percentage(0-20).

Message 1 →Input the selected message No. (0~197) use this message

Message2 →Input the selected message No. **(0~197)** use this message

Multi Label →Select label type, can choose variety of label type at the same time. A0: unable to modify the unit price on the label scales.

D0, D1: set the two user-defined labels in Label Editor.

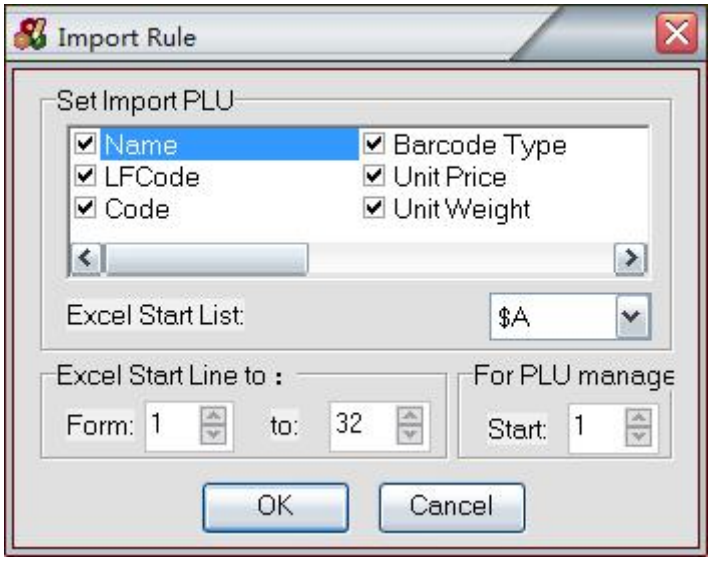
Discount →Input the discount rate. Range of discount （-10~125）：-1~-10 for model1~model 10 in discount schedule models. 0-125 for discount rate, such as 80 means 20% off. 120 means, 20% up.

Account → Account is the sales amount of the single item when uploading the PLU.

二、Explanation of file menu:

New	Establish PLU data, open new file
Open F3	Open PLU file
Save Ctrl+S	Save revised PLU file
Save As	save as revised PLU file
From Excel Input PLU	Import PLU data from excel file, refer to Picture **【Excel】** in below.
PLU Export to Excel	Export PLU data from Excel file, refer to Picture references.
Choose Parameter	Refer to Picture [Preferences]
Page Set	Refer to [page setting]
Print PLU	Refer to [Print PLU]
Font..	Refer to [font selection of label scales]
Preview Hotkey Card	Check hotkey sheet
Print Hotkey Card	Select to print hotkey p sheet
Exit	Exit PLU manager

- figure Excel



Explaination:

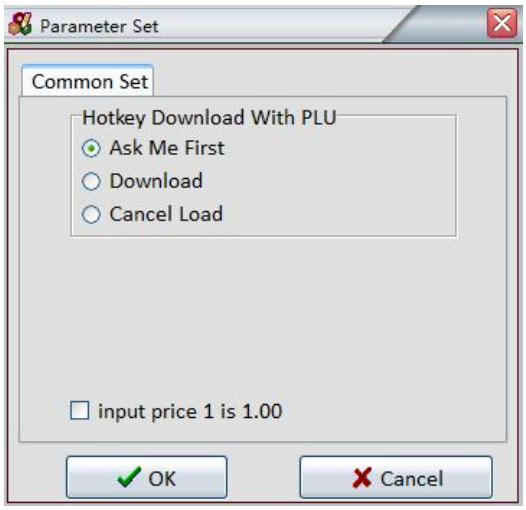
The following function requires Microsoft Excel 2000 or later to install and run.

Choose which fields to establish corresponding relationship to Excel column.

Choose which column to start from and which column to end in Ecxel

Choose the beginning of PLU manager.

- figure [preferences 1]



Auto download hotkey

ask me first. (When downloading, a prompt frame will appear.)

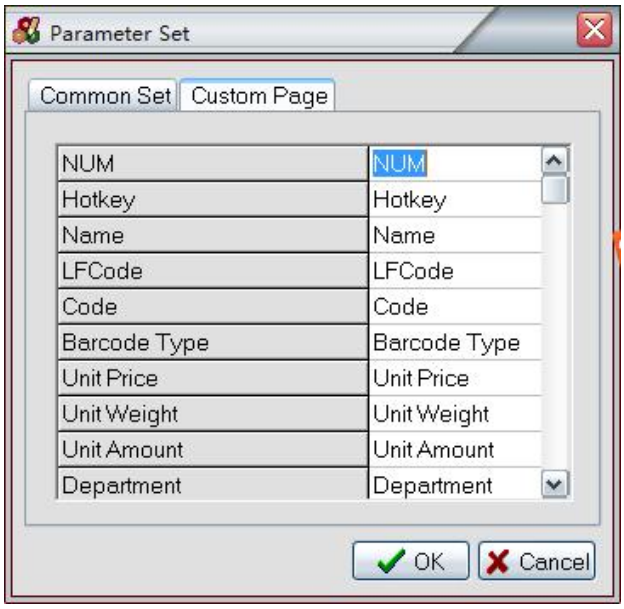
Always yes. (When downloading there is not prompt frame appear.)

No, thanks, Don't download hotkey

hotkey sheet type

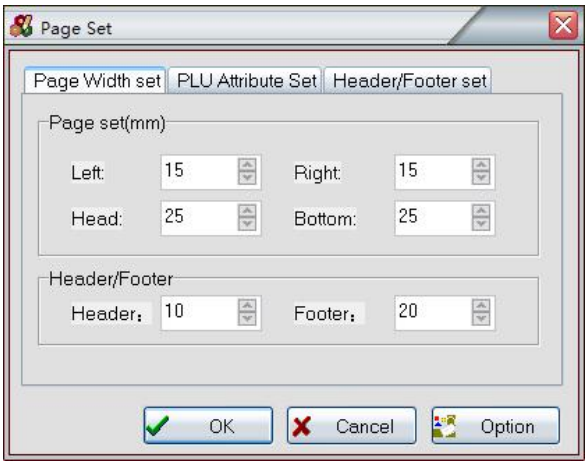
Pls choose 112*2

- figure [Preferences]



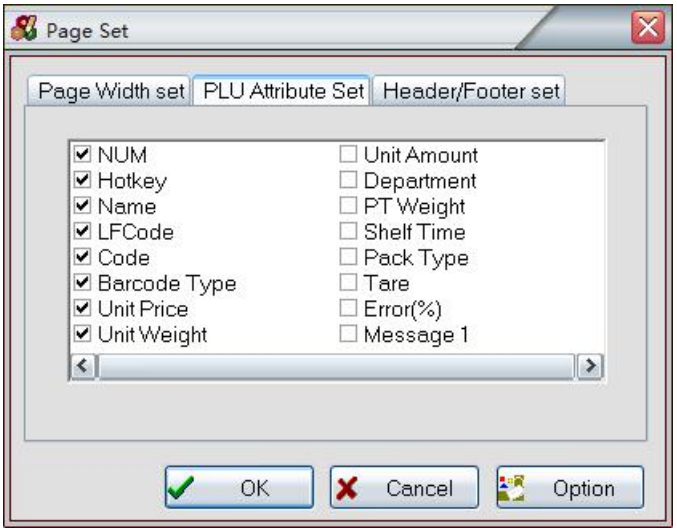
Explanation: Self-define PLU field name.

figure [page setting1]



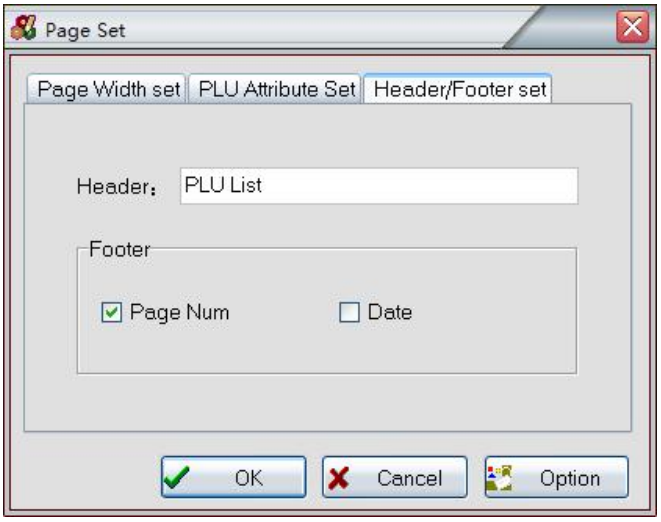
Explanation: PLU print-out page setting

figure [page setting2]



Explanation: choose to print the content of PLU file

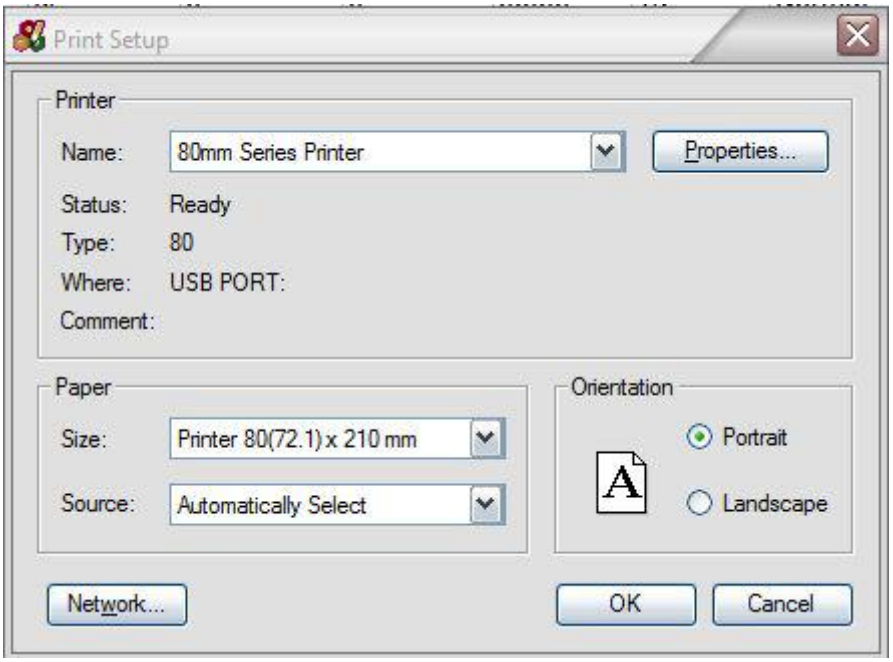
figure [Page setting3]



Explanation

PLU print-out header and footer setting

Figure [Page setting]



Explanation

Press Options to select Printer and Paper:

There are two levels of Fresh Commodity Codes on each hotkey. Two lines up and down.

Note:

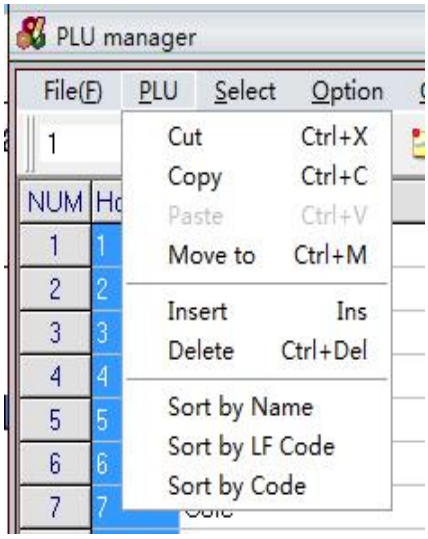
when use the second level on the hotkey table, the hotkey of 113-224 is below the horizontal line.

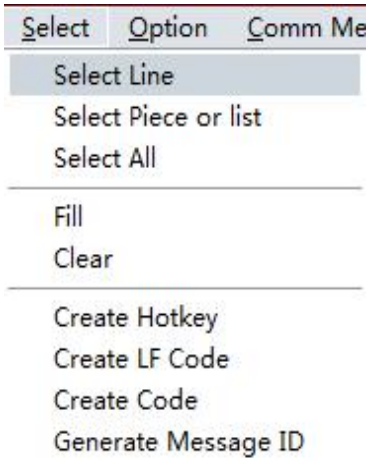
Fifure [hotkey sheet preview]

Explanation

Preview the hotkey sheet after seting, adjust the character’s font until it’s suitable.

PLU menu explanation:

	PLU manager Normal setting when edit PLU files Insert and Delet Sort by name Sort by LFCode Sort by item No.

	 choose single PLU file choose single column (eg. Hotkey cloumn choose all the files fill the same content in the single column clear the selected image. Incremental automatically generate hotkey .Select the hotkey then click New hotkey can “create hot key”. Same way to “create LF-code”, “create item number”.

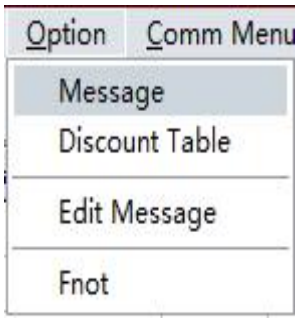
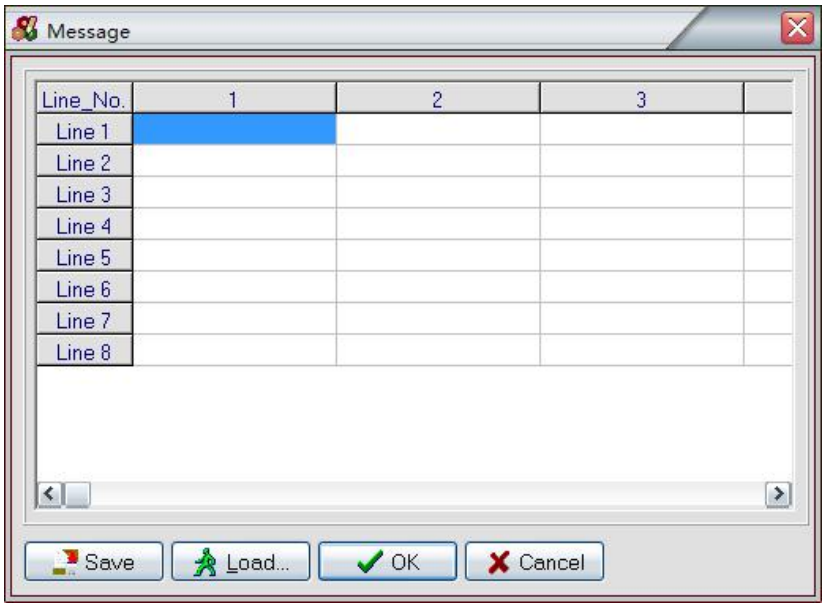
	 Edit the header and footer of the label. The label header is use as slogan on the LCD. Edit message. Refers to figure message Edit the discount schedule. Refers to the figure [schedule] Set the character’s font of PLU manager

Figure [edit message]



Explanation:

our hardware can support 197 kind of message(pls contact us if you need more capacity.)

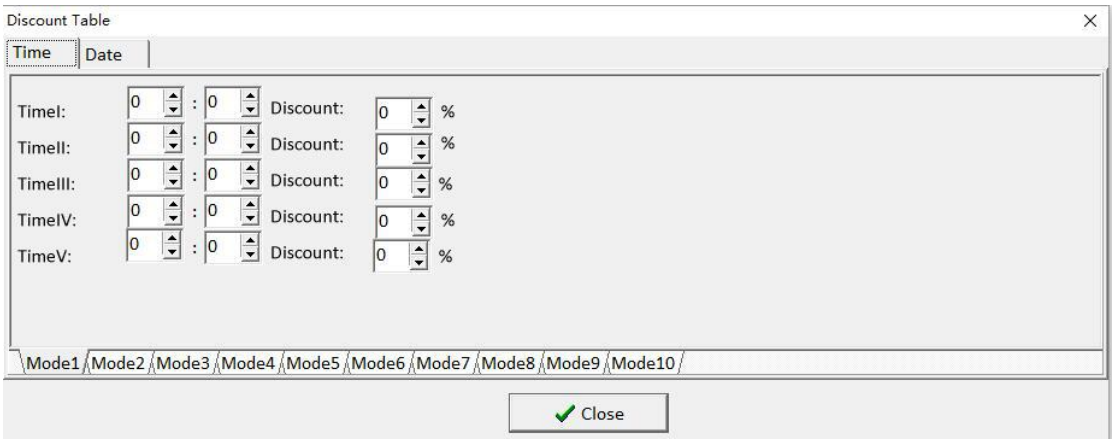
After editing the file, click save to automatic generation *MSG file.

Note:

Edit the message in MSG file, open the PLU can automatically transfer to it.

Message code is corresponding to the column; input the message in the message column.

figure discount schedule



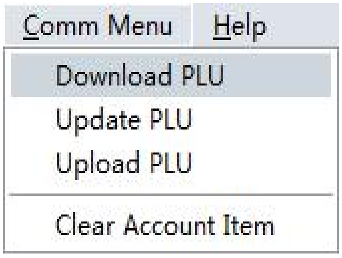
Explanation

10 kinds of discount models in total, five periods of each model, the label sales will automatically transfers to discount for sale.

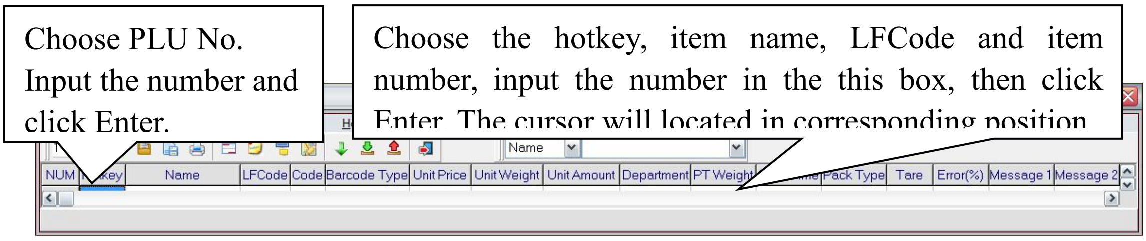
Note:

Input -1~-10 in PLU manage can corresponding to model 1~model 10.

Explanation of communication menu.

	
	Download PLU
	Update PLU
	Upload PLU
	Maintain the function

Explanation for the tooltip



2 Connection manual

2.1 RLS1000 suite interface overview:

1 what's daily tasks need to perform?

2, Adopt what way to activate a task?

3, use what means to exchange data with the supermarket management system?

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First: Daily tasks need to perform mainly as the following four:

1,Download PLU: download current PLU file to label scale, it is coverage scale operation, will cover original PLU data in label scale.

2,update PLU: Refer to the current changes in PLU file to change the date of label scale, including add, modify and delete, due to just need to download change PLU. It is fast to do this action.

3, update price: Refer to the current changes in PLU file to change label scale PLU price, provide a quick change price method, as only change price, speed is faster more than update PLU several times.

4,update PLU and upload laundry list: RLS1000 upload scale's laundry list first, then perform update PLU operation.

Second: Mainly activation tasks as below:

1, Manual activation: activate task by personal operating

2, Supermarket management system invoke RLS1000: Supermarket management system can invoke RLS1000, and through comment set and interaction to activate task. Advantage is management system can according to the need to activate task management system, also can be invoked directly by dynamic link library(DLL) to manage the PLU date download.

3, Scheduling : activate task can be set every time of every day and can set activate task repetition interval, once enter the time, system will activate task automatically.

Three: There are seven method to exchange data with supermarket management system:

1, sharing mode of working directory: RLS1000 can specify the working directory, namely PLU file data storage path (it could be a network image) , RLS1000 set PLU file for each scale relative to the working directory. For example, management system will generated PLU date in a directory. working directory of RLS1000 will be designed same as the directory. So once RLS1000 upload PLU file, it is the latest data of the management system.

2, invoke user programs: before activate a task, RLS1000 can invoke specified programs first, after completion of the program execution , can continue to perform task . such as： user wrote a background database procedures to generated PLU file.

Can be set to execute the procedures to create PLU date before activate a task. And then upload data to the label scale.

3, FTP mode: before activate a task, RLS1000 can grab PLU data file from backend via FTP(maybe other operating system, such as: UNIX), Then continue to perform a task.

4, TCP/IP mode: RLS1000 via TCP/IP protocol and management system interactive to this mode, this mode only suitable for update PLU file and upload the laundry list (may run on other platforms, such as UNIX)

5, Dynamic link libraries: We also provide a dynamic link library to carry out PLU data file transmission function, so the management system can realized management function of label scale, please see the details introduction as below.

6. Exchange data between Excel file: given the general user could easily transfer the background database to Excel table, we offer a crawling PLU data directly from Excel table function that crawling PLU data via dynamic data exchange (DDE) between PLU manager and Excel table, based on user defined reflection rules.

7. Text format on other scales: some users had use other brands label scales and have the program which generated the label scales' PLU. In this case, we can transfer the text format files to other scales (eg. Taihang, Yamato etc.) to minimize the workload for users. For the unsupported text format, they can be added at any time to meet user's need by us.

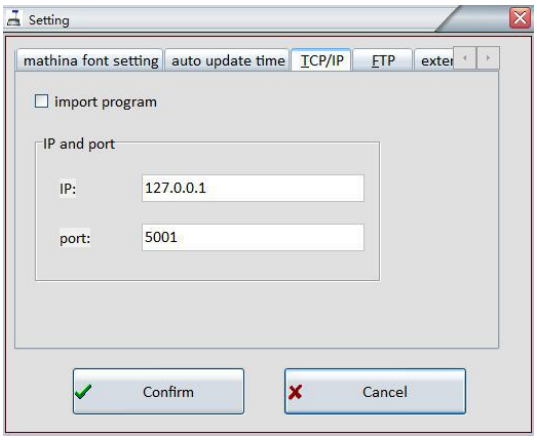
2.2 RLS1000 based on TCP / IP protocol interface specification

RLS1000 supports to exchange data with background via using the TCP/IP protocol, any background as long as compliance with the appended handshake protocol and command can realize the data exchange functions on RLS1000: upload running account, update the relate command explanation of PLU to RLS1000, and configuring RLS1000 to support TCP/IP protocol:

1. List all weighing scales in the label configuration table, configuring the relate updated files in scale array based on PLU update field: for example, label scale groups to be 20, then the corresponding updating file named 20.txu and then also mark a check-mark in the front of the relate label scale.

2. Most of commands under the Network menu perform operations corresponding to the scale which with a checked mark, in which the function of "Update PLU & upload account" is upload the selected sale running account of checked scale to current working directory then download the updated PLU data to the checked scale.

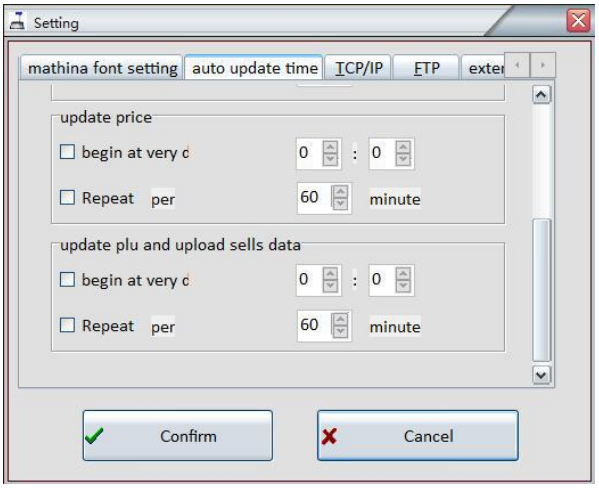
3. Configure TCP/IP to execute File>Options Menu command to enter RLS1000 option windows, then option TCP/IP tab to configure TCP/IP (as below):



←Mark tick for this option to activate the TCP/IP function
←Background computer IP address
← RLS1000 and background computer identify the service via this marks. ✍had better to over 1024 to avoid conflicts with other services.

After the completion of TCP/IP configuration, when execute "Network>update PLU and upload running account" command, RLS1000 will exchange data with background via TCP/IP protocol.

4. Activate schedule to achieve tasks automatically execution File>Options menu command to enter RLS1000 options window, select scheduling tab to update PLU and upload running account function to configure schedule:

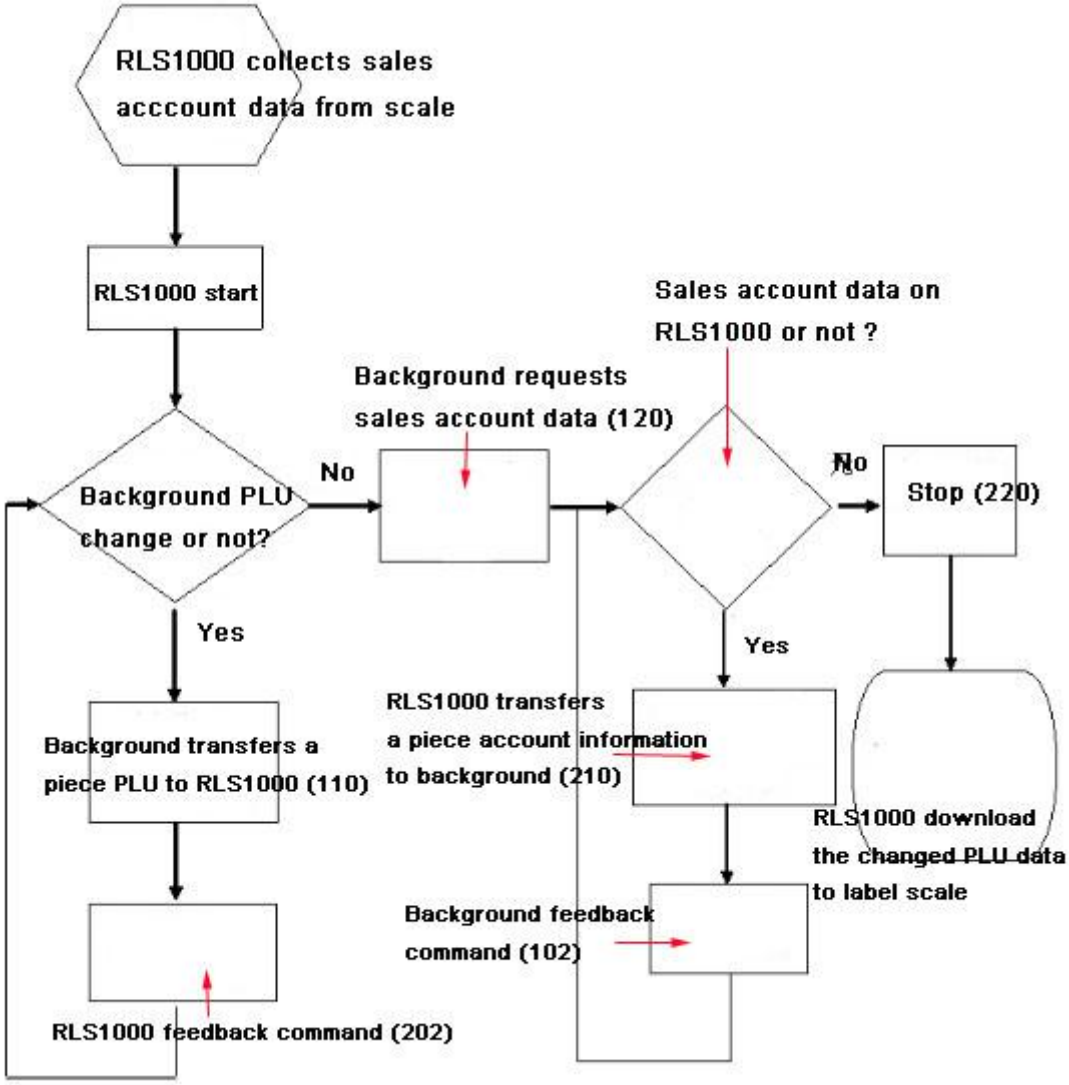


←Set the time for everyday starting the task and mark check-mark.
←Set the interval to repeat execution and then mark check-mark.

Upon completion schedule configuration, RLS1000 label scale will automatically execute to update PLU and upload running account command at the schedule set time everyday.

5. After all the configurations are correctly set, RLS1000 label scale at the daily schedule set time will automatically execute "update PLU and upload running account" command to transfer sales running account of the selected scale to background computer and then get the lastest PLU data from background computer to distribute to every selected scale.

2.3 Label scale and background handshake flowchart



2.4 Data packet format:

A data packet consists of there domains:

1. Packet length 4Byte
2. Command 4Byte
3. Data Length unlimited

For example:

Start command: 00080201

Packet Length: 0008

Command: 0201

Information: None

Response Command: 0022010202100000010000

Packet Length: 0022

Command: 0102

Information: 02100000010000

Checking command table: you can see the response command data domain consisted of contains three domains:

Command Code: 0210 indicates a response to 0210

Fresh code: 000001

Error code: 0000 indicates on error.

Command table:

RLS1000->background				
Code	Description	Type	Bytes	Remark
0201	Start command	Number	4	
0202	Response (ACK) command	Number	4	
	Command code	Number	4	
	Fresh code	Number	6	
	Error code	Number	4	
0210	RLS1000 transfers sales records command	Number	4	
	Scale No.	Number	8	
	User ID	Number	6	
	Fresh code	Number	6	
	Unit price	Number	8	No decimal mode
	Weighing unit	Number	1	hexadecimal (HEX)
	Total amount	Number	10	No decimal mode
	Weight	Number	6	Logic conversion within 15kg
	Date	Number	14	YYYYMMDDHH(24)NNSS
	Discount	Number	1	0:common,1: change unit price,2: change total amount
	Final online time	Number	14	YYYYMMDDHH(24)NNSS
0220	Sales records transfer end	Number	4	

Back stage->RLS1000				
Code	Desp	Type	Length	Remark
0102	Response for demand(ACK)	digit	4	
	Order code	digit	4	
	Fresh food code	digit	6	
	Error code	digit	4	
0110	PLU back stage sending	digit	4	
	Operate	digit	1	I: Update D: Delete
	Rank	digit	2	Rank No.
	Name	digit	36	
	Fresh food code	digit	6	
	Art. No.	digit	10	
	Barcode type	digit	2	Refer to barcode format
	Unit price	digit	8	Non-decimals pattern
	Weighing unit	digit	1	0:50g,1:g,2:10g,3:100g,4:kg,5:oz,6:lb, 7:500g,8:600g,9:PCS(g),A:PCS(kg), B:PCS(oz),C:PCS(lb)
	Dept.	digit	2	Refer to barcode format
	Tare weight	digit	6	Within 15kg after logic conversion
	Saving period	digit	3	0-365
	Packing type	digit	1	0: normal,1: fixed weight,2: fixed price,3: barcode printer
	Packing weight	digit	6	Within 15kg after logic conversion
	Packing error	digit	2	0-20, error for fixed weight or fixed price
	Message 1	digit	3	0-197
	Message 2	digit	3	0-197
	Multi-barcode	digit	3	0-255
	Discount	digit	3	0-99
	Sales mark	digit	1	
	Discount mark	digit	1	
0120	Request demand for sale record uploading	digit	4	

2.5 **Message mechanism interaction for RLS1000**

Hereinafter, it's using example of Delphi, and reference for other developing environment.
Activate RLS1000
Use WinExec function
WinExec('XX\bin\RLS1000.exe DEMO.L32', SW_SHOWNORMAL);
Thereinto：XX is the installing catalogue, DEMO.L32 is the RLS1000 file for customer using.
Completely covered way

Send "Download plu" demand to RLS1000 program (send F9).
Handle:=FindWindow('TRLS1000Form',0);
PostMessage(Handle,WM_KeyDown,VK_F9,1);

Change the downloading way

Send "Update plu" demand to RLS100program(send F8).
Handle:=FindWindow('TRLS1000Form',0);
PostMessage(Handle,WM_KeyDown,VK_F8,1);

Notification message

After command executed, RLS1000 program will send a message to all top windows.
Hereinafter, the executed statement of RLS1000
RLS1000Message:=RegisterWindowMessage('RLS1000'); register one message
PostMessage(HWND_BROADCAST,RLS1000Message,0,0); send this message to all top windows

For supermarket manage system, use below structure to intercept this message:
First, the register message
RLS1000Message:=RegisterWindowMessage('RLS1000');
Inject processing to the message

```
case RLS1000Message: begin
                        …
                     end
```

Appendix Ⅰ. TXP(TXU) file

TXP(TXU) is a PLU text file within RLS1000 software. They are totally same file format for different purpose with different extensions. TXP file contains all PLU information and supply cover and download for RLS1000. TXU file contain PLU edit information (add, modify and delete), and supply PLU updating for RLS1000. Every PLU contain below context:

Name	Width	Default	Data range & function description
PLU No.	4		Retain for compatibility, no meaning
Name	36		
LFCode	6		unique identification kind of fresh food, using for imputing PLU
Code	10		see detail in barcode format
Barcode Type	2		0~99, see detail in barcode format
Unit Price	8		Non-decimal pattern. e.g. 12.34 will show as 1234(=12.34*100)
Weight Unit	1		1:g, 2:10g, 3:100g, 4:kg, 5:oz, 6:lb, 7:500g, 8:600g, 9:PCS(g), A:PCS(kg), B:PCS(oz), C:PCS(lb)
Deptment	2		0~99, see detail in barcode format
Tare	6	0	Tare weight, within 15 kg after Logic conversion.
Shelf Time	3	15	0~365, when it appear to 364--- no printing validity period. 365--- no printing validity period & packing date.
Package Type	1	0	0: normal pattern (weight-linited pattern) 1: weight set packing, 2: price set packing, 3: barcode printing pattern
Package Weight	6	0	within 15 kg after Logic conversion
Package Tolerance	2	5	0~20, error range for weight set packing and price set packing
Message1	3	0	0~197, 0 for nonuse infromation
Message2	3	0	0~197
Account	10	0	Non-decimal pattern. See details in unit price explaination
Multi Label	3	0	0~255, one byte. 8 bit for 8 labels
Rebate	3	0	-10~100, -1~-10 for different discount pattern in different time.
PCS Type	2	0	0~15, for good counting via unit. There are 15 unit of quanlity in RLS1000. E.g. piece, bag and chunk etc.

- Type a space after very bit name. The paragraph is flush right.
- Type Enter (0xd) and line feed (0xa) after very PLU as separate
- e.g., demo.txp under Demos subdirectory after install, it can be open via notepad.exe

Appendix Ⅱ. Barcode coding table

Bar code type	depart ment	Item no.	Total price	weight	Check sum
00~09: Ean13code, the first two code are department code:					
00	DD(2)	IIIIIIIIII(10)	X	X	C
01	DD(2)	IIIIII(6)	PPPP(4)	X	C
02	DD(2)	IIIII(5)	PPPPP(5)	X	C
03	DD(2)	IIII(4)	PPPPPP(6)	X	C
04	DD(2)	III(3)	PPPPPPP(7)	X	C
05	DD(2)	IIIIII(6)	X	W.WWW(4)	C
06	DD(2)	IIIIII(6)	X	WW.WW(4)	C
07	DD(2)	IIIII(5)	X	WW.WWW(5)	C
08	DD(2)	IIIII(5)	X	WWWW.W(5)	C
09	DD(2)	IIIII(5)	X	WWWWW(5)	C
10~19: Ean13code,the first two code are fix code:					
10	20(2)	IIIIIIIII(10)	X	X	C
11	21(2)	IIIIII(6)	PPPP(4)	X	C
12	22(2)	IIIII(5)	PPPPP(5)	X	C
13	23(2)	IIII(4)	PPPPPP(6)	X	C
14	24(2)	III(3)	PPPPPPP(7)	X	C
15	25(2)	IIIIII(6)	X	W.WWW(4)	C
16	26(2)	IIIIII(6)	X	WW.WW(4)	C
17	27(2)	IIIII(5)	X	WW.WWW(5)	C
18	28(2)	IIIII(5)	X	WWWW.W(5)	C
19	29(2)	IIIII(5)	X	WWWWW(5)	C
20: without bar code					
21~29: Ean13code,the first code is department code:					
21	D(1)	IIIIII(7)	PPPP(4)	X	C
22	D(1)	IIIIII(6)	PPPPP(5)	X	C
23	D(1)	IIIII(5)	PPPPPP(6)	X	C
24	D(1)	IIII(4)	PPPPPPP(7)	X	C
25	D(1)	IIIIII(7)	X	W.WWW(4)	C
26	D(1)	IIIIII(7)	X	WW.WW(4)	C
27	D(1)	IIIIII(6)	X	WW.WWW(5)	C
28	D(1)	IIIIII(6)	X	WWWW.W(5)	C
29	D(1)	IIIIII(6)	X	WWWWW(5)	C
30~35,40~45: 18code, the first code is department code					
30&33	D(1)	IIIIII(6)	PPPPP(5)	WW.WWW(5)	C
31&34	D(1)	IIIIII(6)	PPPPP(5)	WWWW.W(5)	C
32&35	D(1)	IIIIII(6)	PPPPP(5)	WWWWW(5)	C
Bar code	departm	Item no.	Total price	weight	Check sum

type	ent				
39，46~49：18code					
39	DD(2)	IIIIII(6)	PPPPP(5)	WWWWW(5)	
46	DD(2)	IIIIII(6)	PPPPP(5)	WWWWW(5)	
47	DD(2)	IIIIII(6)	PPPPP(5)	WWWWW(5)	
48	DD(2)	IIIIII(6)	PPPPP(5)	WWWWW(5)	
49	DD(2)	IIIIII(6)	PPPPP(5)	WWWWW(5)	
50~55: 8code					
50	X	IIIIIII(7)	X	X	C
51	D(1)	IIIIII(6)	X	X	C
52	DD(2)	IIIII(5)	X	X	C
53	X	IIIIIIII(8)	X	X	X
54	D(1)	IIIIIII(7)	X	X	X
55	DD(2)	IIIIII(6)	X	X	X

Bar code type	depart ment	LFcode	Batch code	rebate	weight
36-38: 18code，the first code is department code，specialized for the LF code and batch code management					
36	D(1)	LLLLLL(6)	BBBB(4)	RR(2)	WW.WWW(5)
37	D(1)	LLLLLL(6)	BBBB(4)	RR(2)	WWWW.W(5)
38	D(1)	LLLLLL(6)	BBBB(4)	RR(2)	WWWWW(5)

Bar code type	departm ent	LF code	Batch code	rebate	weight	Check sum
66~68：18code，specialized for the LF code and batch code management						
66	D(1)	LLLLL(5)	BBBB(4)	RR(2)	WW.WWW(5)	C
67	D(1)	LLLLL(5)	BBBB(4)	RR(2)	WWWW.W(5)	C
68	D(1)	LLLLL(5)	BBBB(4)	RR(2)	WWWWW(5)	C

Bar code type	depart ment	Item no.	Total/unit price	weight	Check sum
60~65：ISBN code，one of 18 code					
60	D(1)	IIIIII(6)	PPPPP(5)	WW.WWW(5)	C
61	D(1)	IIIIII(6)	PPPPP(5)	WWWW.W(5)	C
62	D(1)	IIIIII(6)	PPPPP(5)	WWWWW(5)	C
63	D(1)	IIIIII(6)	UUUUU(5)	WW.WWW(5)	C
64	D(1)	IIIIII(6)	UUUUU(5)	WWWW.W(5)	C
65	D(1)	IIIIII(6)	UUUUU(5)	WWWWW(5)	C

Bar code type	departm ent	Item no.	Quantity/weigh t	Total price	Unit price	Check sum

90~95: 18code, the first two code are department code:						
90	DD(2)	IIIIII(6)	WW.WWW		UUUU(4)	C
91	DD(2)	IIIIII(6)	WWWW.W		UUUU(4)	C
Bar code type	department	Item no.	Quantity/weight	Total price	Unit price	Check sum
92	DD(2)	IIIIII(6)	WWWWW		UUUU(4)	C
93	D(1)	IIIIII(6)		PPP.PP(5)	UUU.UU(5)	C
94	DD(2)	IIIII(5)	WWW.WW	PPP.PP(5)		C
95	DD(2)	IIIIII(6)	WWWWW		UUUU(4)	C

Letter meaning in form are as follows：

C: CHECKSUM　　D: Department No.

2: fixed No.“2”　　I : PLU No.

L: LFcode　　P: Total price

U: Unit price　　R: Discount

W: Weight　　X: NA

- Ean13 code= DEPMENT+ CODE+ [TOTAL PRICE]+ [WEIGHT]+C　Among：take [] said without this in some encoding.
- For Ean13 code, if price barcode, barcode type often choose 2 or 22, but if weight barcode, barcode type often choose 7 or 27
- CHECKSUM is calculated by scale automatically，user don’t need to input in PLU manager
- The difference between 30-32 and 33-35 format is calculation method of CHECKSUM
- The difference between 40-45 and 30-35 format is in 30-35, price is total price, but in 40-45, price is unit price
- 36-38，66~68 barcode types can be used for fresh batch management，Batch No. write in PLU No. field，PLU No. write in LFcode field
- 60-65 are ISBN code
- The calculation method of check code Z in EAN13 code:
    1. （even digits sum* 3 ）+odd digits sum+ Z =10 multiple
    2. （barcode type：30-32，40-42）
- Two calculation methods of check code Z in EAN18 code:
    1. The same as EAN13 code
    2. （add digits sum*3）+even digits sum+ Z =10 multiple
       （barcode type：33-35，43-45）

Appendix Ⅲ. Fresh commodities batch management

The advantages of fresh batch management:

Tracking fresh commodities of each batch, check stock of each batch alone, use different discount based on different storage time within quality guarantee period, warned while commodities is about to expire(metamorphism and even corruption), it is convenient to find out expired batch and deal with timely.

The base process of fresh commodities batch management is as follows:

Generate a batch No. for fresh commodities with batch management, format: year(1) + which week(2) + which day in a week(1), total four digits, meanwhile, print out commodity name, No., batch No. , and put in this batch, then packing persons can recognize this commodity correctly. In following process, commodity No. + Batch No. is unique to recognize this commodity in this batch. So far, label printing scale has already performed batch management function, the method is to add three kinds of barcode type, if user call this type PLU, scale will remind him to input batch No., three kinds of barcode type are as follows:

Barcode type	Department	LFcode	Batch No.	Discount	Weight
36-38: 18 code，front code is department code, unique for fresh batch management					
36	D(1)	LLLLLL(6)	BBBB(4)	R(2)	WW.WWW(5)
37	D(1)	LLLLLL(6)	BBBB(4)	R(2)	WWWW.W(5)
38	D(1)	LLLLLL(6)	BBBB(4)	R(2)	WWWWW(5)

Barcode type	Department	LFcode	Batch No.	Discount	Weight	Checksum
66~68：18 code，unique for fresh batch management						
66	D(1)	LLLLL(5)	BBBB(4)	RR(2)	WW.WWW(5)	C
67	D(1)	LLLLL(5)	BBBB(4)	RR(2)	WWWW.W(5)	C
68	D(1)	LLLLL(5)	BBBB(4)	RR(2)	WWWWW(5)	C

Letter meaning in form are as follows:

D: Department No. P: Total price

I: PLU No. R: Discount

L: LFcode W: Weight

Note：

1. LFcode is corresponding to commodity code in backstage management system, PLU No. is corresponding to batch No. in backstage management system
2. Batch management is majorly for commodity packing in backstage, not real-time selling.
3. When cash register decode, how to distinguish batch or non-batch commodity, there are two methods:

(1) set different department No., for example: the department No. of commodity without

batch management is 2, and with batch management is 3

（2）because the position and length of LFcode in two kinds of 18 code is same, decode LFcode first, then distinguish batch commodity or not according to LFcode

Using method: Call PLU, screen will display to input batch No., input four digits code, put on weight, OK.

Appendix Ⅳ. Revised table of gravity acceleration in China's major cities

No.	Region	A/D revised value of gravity acceleration	No.	Region	A/D revised value of gravity acceleration
1	Mohe	72	38	Benghu	21
2	Hailar	60	39	Nanjing	20
3	Qiqihar	60	40	Pukou	20
4	Jiamusi	59	41	Tongguan	20
5	Harbin	55	42	Shanghai	19
6	Hohhot	55	43	Hefei	19
7	Mudanjiang	51	44	Xian	18
8	Changchun	50	45	Wuhu	18
9	Jilin	50	46	Wuhan	16
10	Shenyang	46	47	Hangzhou	16
11	Fuxin	45	48	Anqing	16
12	Jinzhou	44	49	Wuhan	16
13	Turfan	43	50	Baoji	15
14	Shanghaiguan	41	51	Yichang	15
15	Dandong	41	52	Lanzhou	13
16	Beijing	40	53	Jiujiang	13
17	Chengde	40	54	Yueyang	13
18	Urumqi	40	55	Nanchang	11
19	Tianjin	39	56	Wenzhou	10
20	Dalian	39	57	Chongqing	9
21	Hami	37	58	Chengdu	9
22	Baoding	36	59	Changsha	9
23	Zhangjiakou	35	60	Zhuzhou	9
24	Shijiazhuang	34	61	Xining	8
25	Dezhou	34	62	Mianyang	8
26	Yinchuan	34	63	Hengyang	7
27	Wulanliha	33	64	Fuzhou	2
28	Jinan	32	65	Shenzhen	0
29	Qingdao	31	66	Liuzhou	0
30	Baotou	31	67	Guangzhou	-1
31	Datong	30	68	Huiyang	-1
32	Taiyuan	26	69	Nanning	-2
33	Zhengzhou	25	70	Guiyang	-5
34	Kaifeng	25	71	Zhanjiang	-6
35	Xuzhou	25	72	Haikou	-7
36	Luoyang	23	73	Kunming	-15
37	Yanan	21	74	Lasha	-26

- The gravitational acceleration value listed above are belong to China's major cities, other cities interpolation conversion according to latitude
- Only RONGTA staff or distributor can adjust gravitational acceleration val