DURA Rhythm®

Operator's Manual

Windows95/98/Me
WindowsNT4.0/2000/XP

NITTO DENKO CORPORATION
www.nitto.com/bc/

What is DURA Rhythm?

DURA Rhythm is a general purpose software which makes it possible to print out barcodes or characters with any one of "**DURA PRINTER** series" made by NITTO DENKO. What you can do with **DURA Rhythm** is shown below.

(1) You can make barcodes and texts as Images, and, by joining them together, you can generate the design (format) of the label.
The Data to be printed out are inputted when Images are generated (or when the label is printed out).

(2) You can store the label design (format) in the memory card of the printer.

DURA Rhythm does not have such functions as checking, storing, and deleting the data.
As for what can be printed with **DURA Rhythm**, refer to the reference manual and the operation manual for each printer.
When you print out a label shown below, designate part 1, part 2, and part 3 separately.
With **DURA Rhythm**, you can designate up to 100 parts.

- **Important**

Be sure to read the packed the license document. This software can be utilized only under a licensing agreement.

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1. System Requirements

1-1 Hardware & Software

Machine type

Machines with CPU equal or superior to Pentium 166 MHz.

Memory

At least 16 MB memory is needed.

Hard Drive

Hard drive with free space more than 10MB

Mouse

A mouse intended for Microsoft Windows is needed.

Operating System

The following version Japanese, English, and Chinese Windows

Microsoft Windows 95 OSR2 or later (Ver 4.00.950B or later)

Microsoft Windows 98

Microsoft Windows NT 4.0 (applied SP3 or later)

Microsoft Windows 2000 (applied SP1 or later)

Microsoft Windows Me

Microsoft Windows XP

* It is necessary to install Windows 2000/XP as Administrator.

Printer

DURA PRINTER SR
DURA PRINTER SRS
DURA PRINTER R
DURA PRINTER SG
DURA PRINTER S
DURA PRINTER LSP5300(LSP5310)
DURA PRINTER LP5320
KP4300
KP3000
IP6500
DURA PRINTER SR(RSS Version)
DURA PRINTER SRS(RSS Version)

Note : When you print RSS symbol barcodes on DURA PRINTER SR(RSS) or SRS(RSS), you need a specific printer firmware (ROM must be replaced.). See "Appendix Q" for further infor mation. With this firmware, you can't print the fonts listed below.

Dot Font alphanumeric No.3

Dot Font alphanumeric No.4

Dot Font alphanumeric No.5

Dot Font alphanumeric NA1

Dot Font alphanumeric NA2

1-2 Communication Cable for DURA Printer

When data are sent to DURA Printer with serial communication cable (RS-232C cable), the connector must be wired according to the example below.

[When the printer has 25-pin female socket]

9-pin female connector (personal computer)		25-pin male connector (printer)
Ground	———	Ground
2	———	2
3	———	3
4	———	6
5	———	7
6	———	20
7	———	5
8	———	4

[When the printer has 9-pin male socket]

9-pin female connector (personal computer)		25-pin female connector (printer)
Ground	———	Ground
2	———	3
3	———	2
4	———	6
5	———	5
6	———	4
7	———	8
8	———	7

(InterLink Cable)

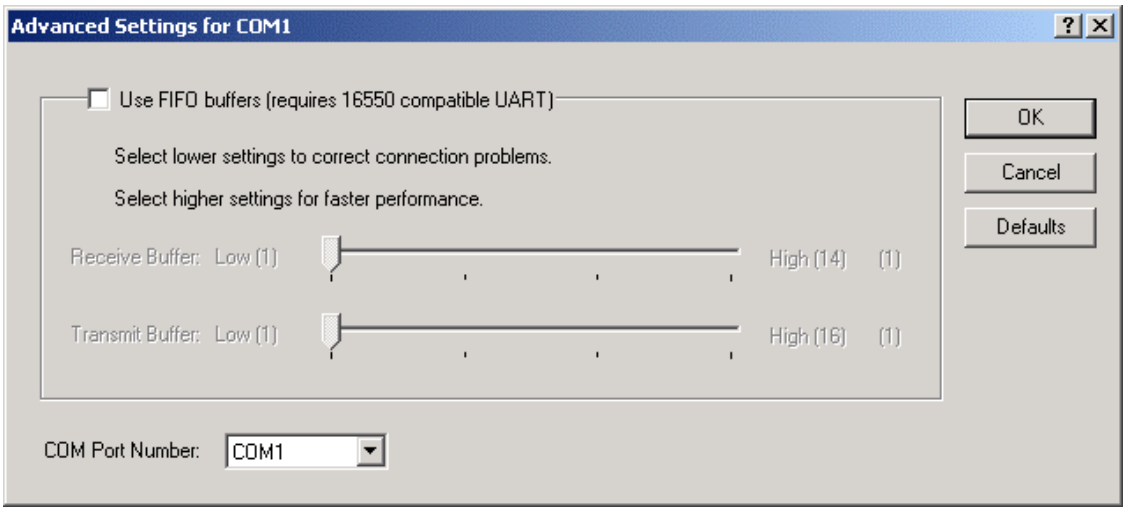
Printer error may occur when a lot of data are continuously sent unless correctly wired cable is used.

1-3 Advanced Settings of Communication Port

Under a certain system configuration, a communication error between the personal computer and the printer may occur when large data such as a logo are sent and COM (serial communication) is selected as the printer communication port (especially when you use LP5320).

In such a case, follow the procedure shown below.

(1) On the Advanced dialog box of Windows communication port (COM), remove the checkmark on "use FIFO buffer" and reboot the personal computer.



(Windows98 : Control Panel > System > Device Manager > Port > Communication Port > Settings > Advanced)

(Windows2000 : Control Panel > System > Hardware > Device Manager > Port > Communication Port > Settings > Advanced)

(2) When you use LP5320, check to see that the Printer ROM (a firmware) version is 01.16 or later. You can see the version by clicking INFO on Print.
If the version is earlier than 01.16, contact your distributor.

(3) Save the logo as a picture Image in the memory card. Lower the communication speed.

1-4 Printable Outline Font

Some printers that come with the outline font can't print the following special characters.

Printer	1st, 2nd level kanji	special characters
DURA PRINTER SR *1)	○	○
DURA PRINTER SRS	○	○
DURA PRINTER SG	○	○
DURA PRINTER LSP5300 (normal)	○	×
DURA PRINTER LSP5300 (Change outline font bord) *2)	○	○
DURA PRINTER LSP5310	○	○
DURA PRINTER LP5320	○	○
KP4300	○	×
KP3000	○	×
IP6500	○	×

*1) DURA PRINTER SR has the outline font as an option.

*2) DURA PRINTER LSP5300 (standard) with a replaced outline font board

・Special Characters

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳

ミリ キロ センチ メートル グラム トン アール ヘクタール リットル ワット カロリー ドル セント パーセント ミリバール ページ

㎜ ㎝ ㎞ ㎎ ㎏ ㏄ ㎡

㍻ 〃 〃 No. ㏍ ℡ ㊤ ㊥ ㊦ ㊧ ㊨

㈱ ㈲ ㈹ ㍾ ㍽ ㍼

≒ 刧 ϕ Σ √ ⊥ ∠ ∟ ⊿ ∵ ∩ ∪

The provided outline font is "RICOH SCF font gothic B."

2. Installation Procedure

Installation to Hard Disk

1) Start the installer

Installation with CD-ROM

Insert the DURA Rhythm installation CD-ROM to the CD-ROM drive.

Usually, the installation process is automatically started on Windows system.

When the installation is not started automatically, follow the procedures shown below.

a. Insert CD-ROM to the CD-ROM drive.

b. Open the "Start" menu and select "Run".

c. Type "CD-ROM drive name:DURARhythm¥DURARhythmSetup.EXE".
(Set to "CD-ROM drive name" the letter assigned to the drive you use (d, e, f, etc.).)

d. Click "OK" to start the installation.

Installation with FDs

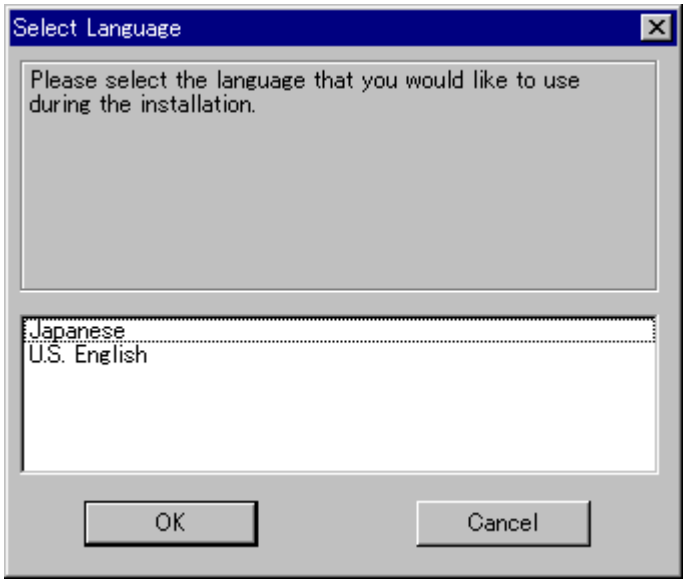
a. Insert the 1st system disk of this software to the floppy disk drive.

b. Open the "Start" menu and select "Run".

c. Type "FD drive name:¥DURARhythmSetup.EXE". (Set to "FD drive name" the letter assigned to the FD drive you use (usually, a).)

d. Click "OK" to start the installation.

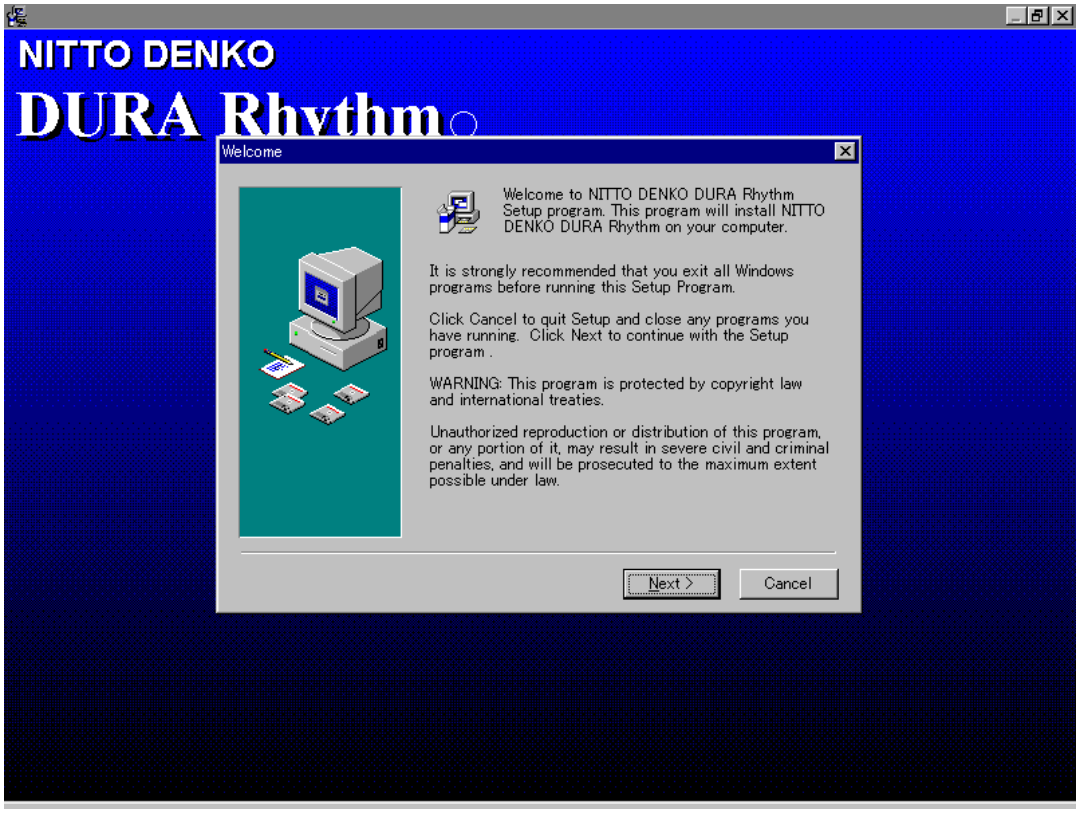
2) When the installation is started, the dialog box shown below appears



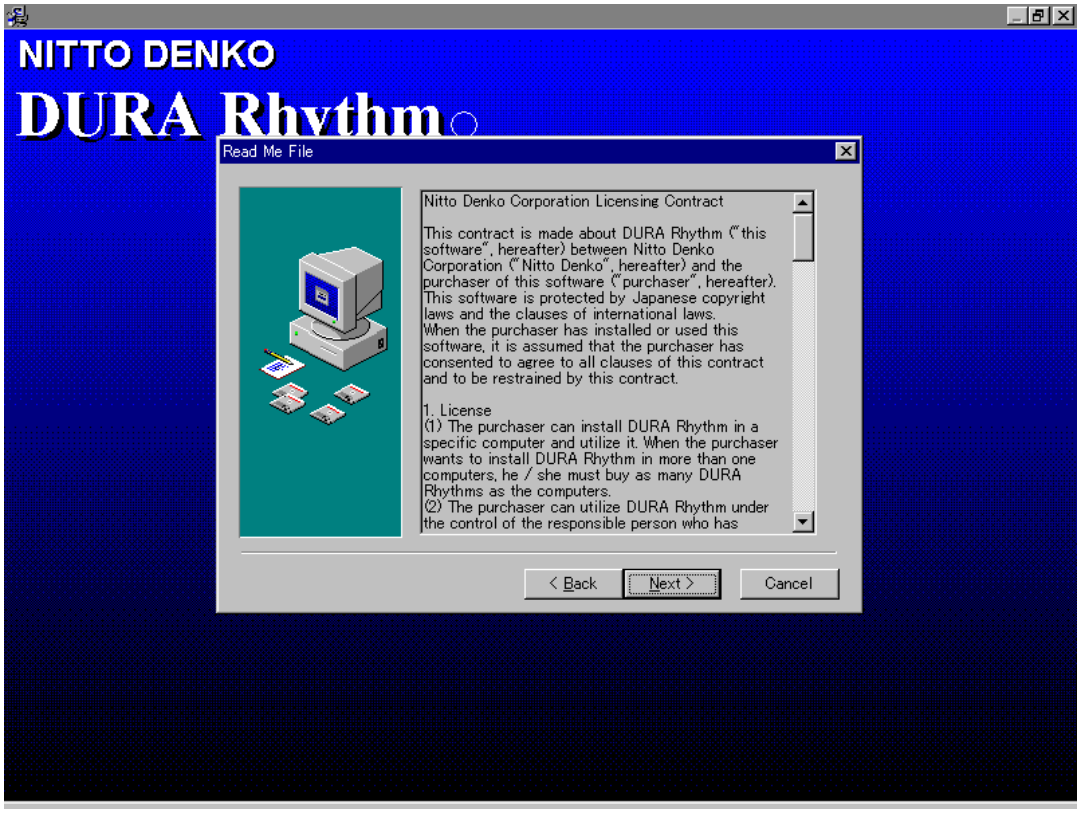
3) Select Japanese or US. English here. You can change the language after installation is completed.

Please select English mode (US.English) for Chinese Windows.

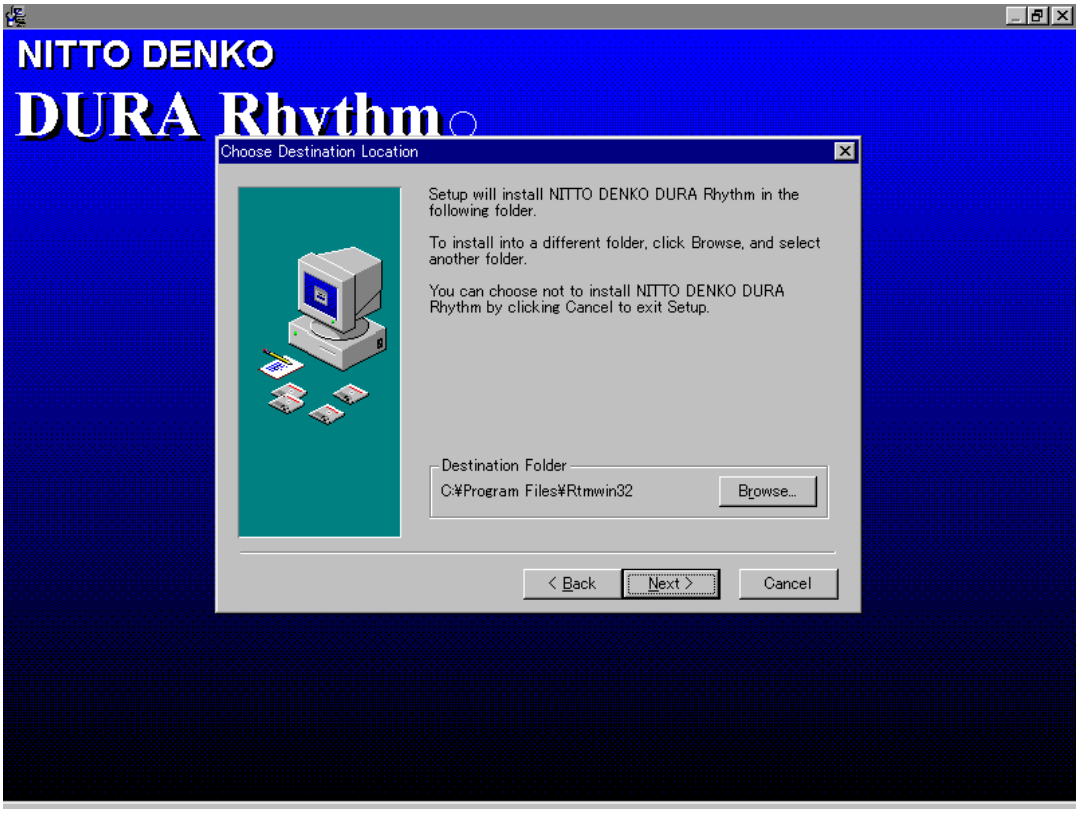
4) Click "OK" and the screen shown in the following page appears.



5) When other applications are running, click "Cancel". After ending the other applications, start the installation again. Click "Next", and then the installation is carried on and the screen shown in the following page appears.

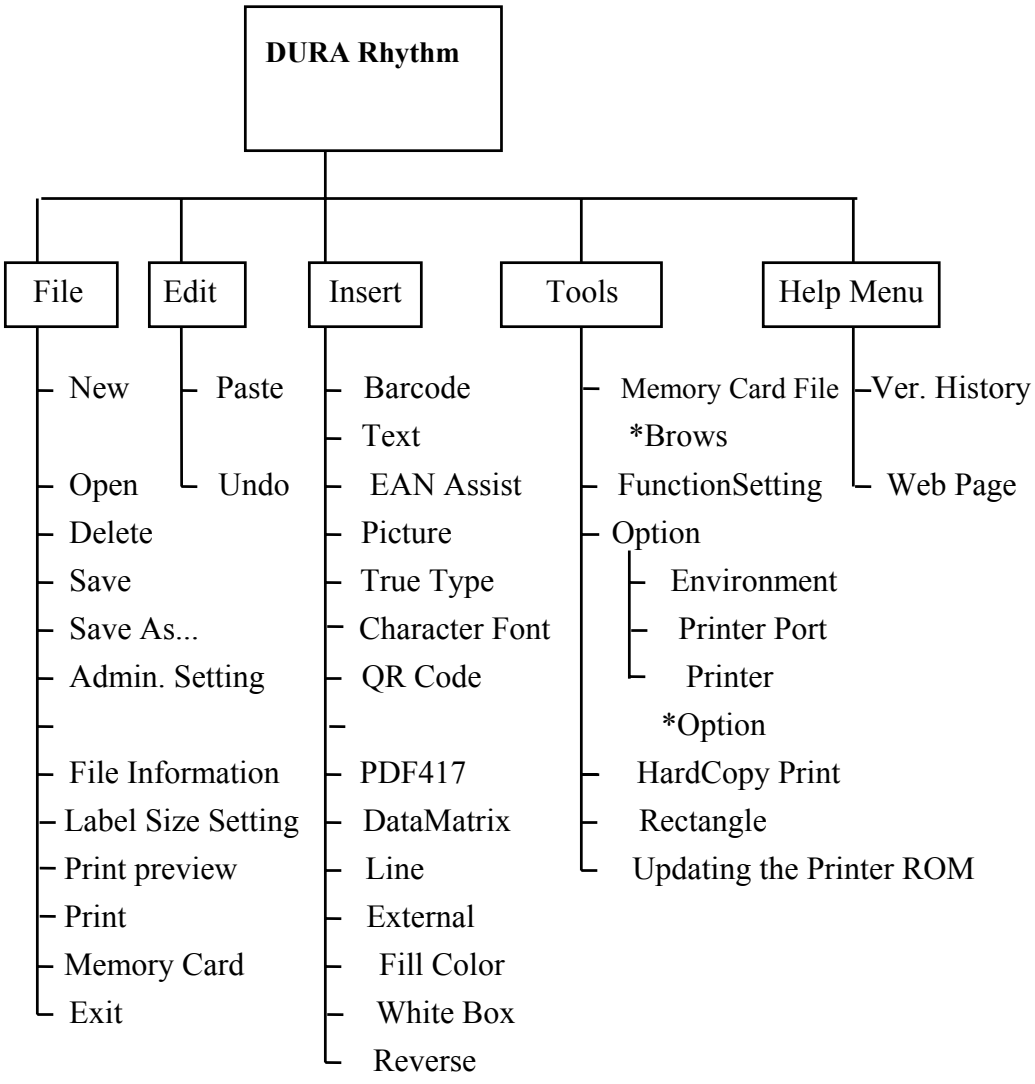


6) The licensing conditions of this software are displayed. Read the conditions carefully and, only when you agree to the conditions, click "Next" to carry on the installation process. With "Next", the screen shown in the following page appears.



7) Click "Next" to carry on with the installation. In the case shown above, the software is installed in the directory "C:¥Program Files¥Rtmwin32".
   Click "Browse" to change the directory.
   Click "Cancel" to cancel the installation.
8) Carry on the installation with "Next" after changing the directory with "Browse", if necessary.
9) When the installation is completed normally, the completion message is displayed and **DURA Rhythm for Windows** group is created in the "Start" menu.

3. Drop-Down Menus

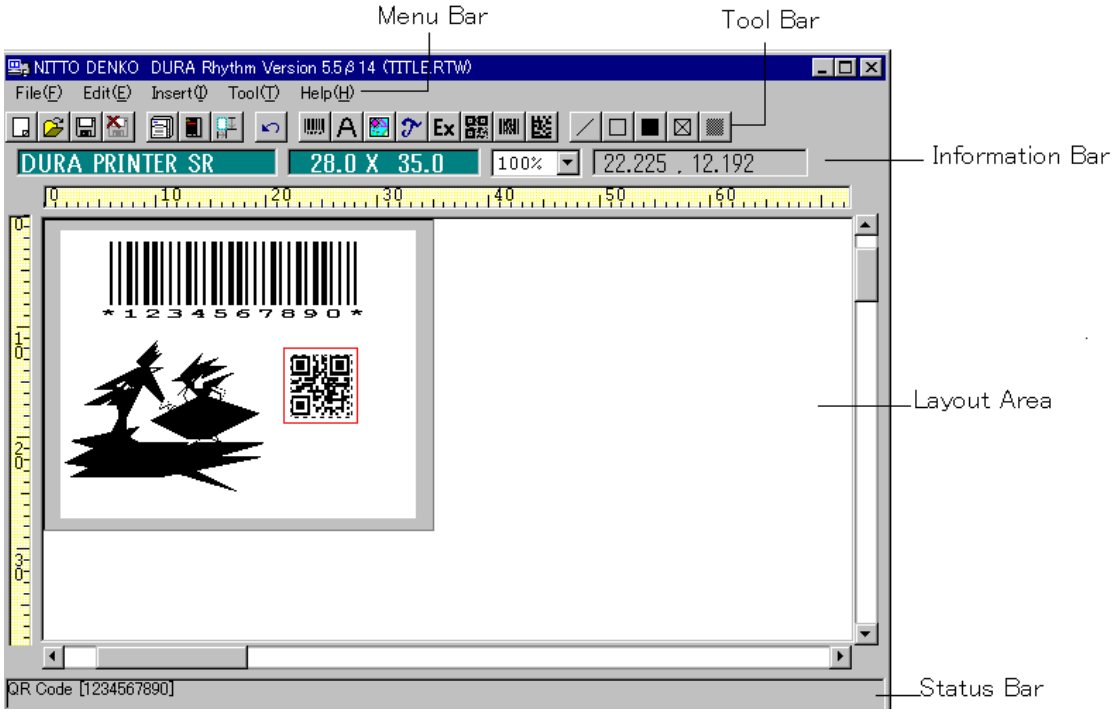


4. Each Function

The detailed explanation of each operation described in Chapter 3 is shown below.

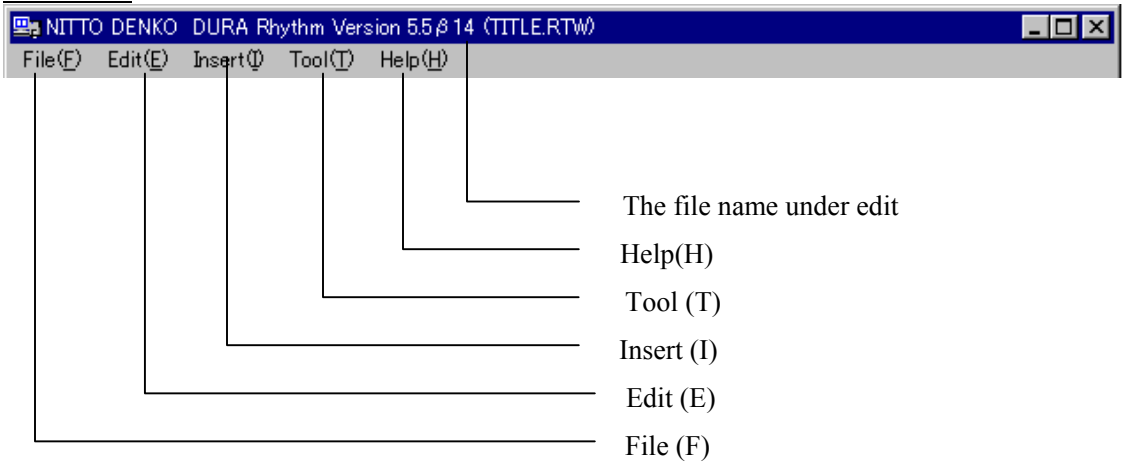
4-1 Main

The Main Screen of **DURA Rhythm** is shown below.



The explanation of each area is shown below.

Menu Bar



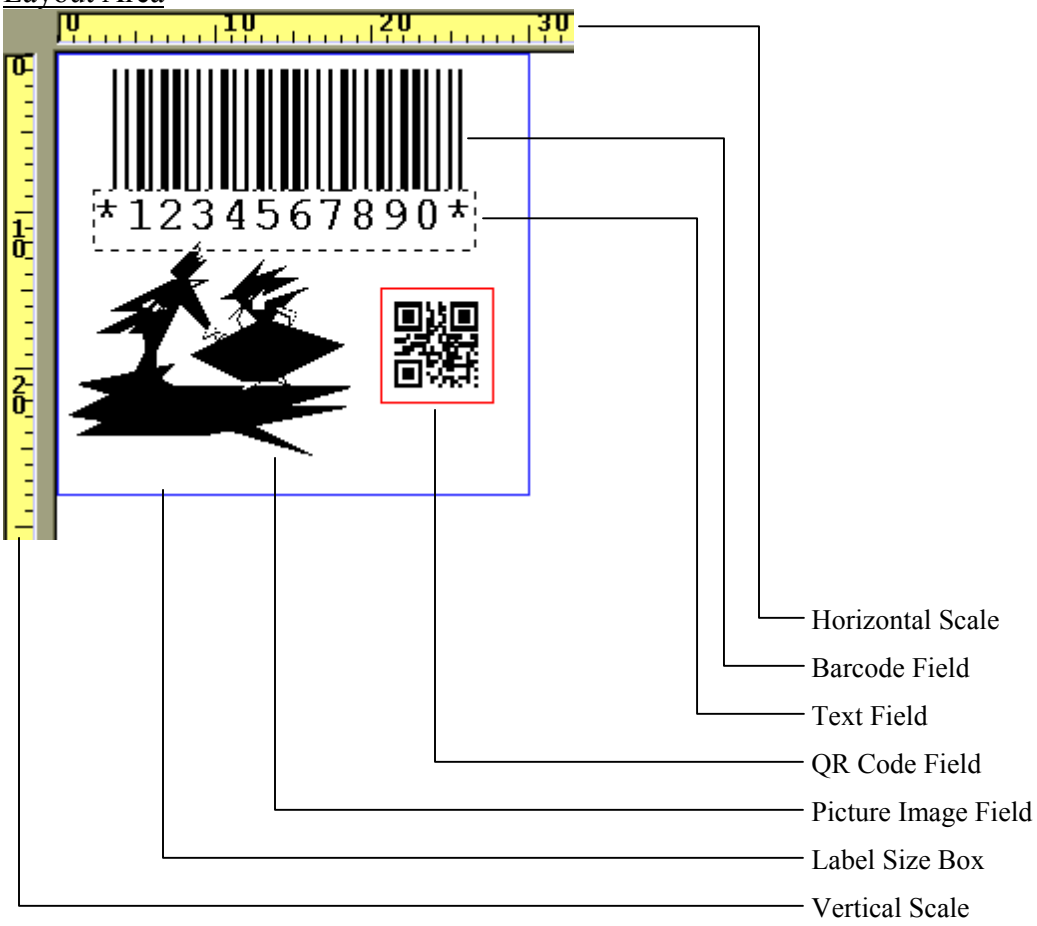
Tool Bar

ReverseBox Insert Button
White Box Insert Button
Fill Color Insert Button
Rectangle Insert Button
Line Insert Button
DataMatrix Insert Button
PDF417 Insert Button
QR Code Insert Button
External Character Font
TrueType Insert Button
Picture Image Insert Button
Text Insert Button
Barcode Insert Button
Undo Button
Label Size Change Button
Write Memory Card Button
Print Button
File Delete Button
Overwrite Button
File Open Button
New Generation Button

Information Bar

Start coordinates of a selection part (X, Y)
Display Magnification Selection List
Page Size (Height, Width)
Printer Name

Layout Area



Status Bar

The information of the selected field and Messages are displayed.

4-2 File Menu

In the file menu, the file management processes, including the way to closing **DURA Rhythm**, are contained. Choose "File" on Menu Bar, and then a pull down menu including the processes shown below is displayed. Pick up from the items in the pull menu the process you want.

1) New
2) Open
3) Delete
4) Save
5) Save As...
6) Setting by Administrator
7) Label Size Setting
8) File Information
9) Print
10) Memory Card
11) About
12) Exit

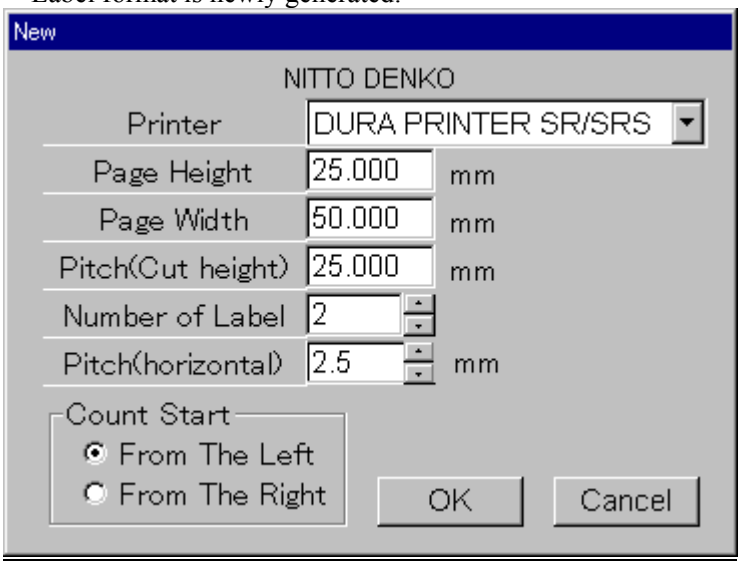
The detailed explanation of each process is in the following pages.

4-2-1 New

Menu : "File" -> "New" or  button

Function

Label format is newly generated.



Operation Procedure

1) Select a printer from the selection list.
2) Input numeric values in Page Height/Width and Pitch.
3) Set Number of Label.
4) Set Pitch (horizontal).
5) Check either option button, "From The Left" or "From The Right" for Count Start. (When "Number of Label" is more than 2.)
6) Press "OK" button.
   When "Cancel" is pressed, this process is canceled.

Note 1 : "When "New" is selected,"

The data currently edited is cleared. Store the data beforehand if the data may be possibly needed in the future.

Note 2 : "Pitch"

Pitch means the interval between the leading edge of a label and that of the next one. The label pitch must be greater than the page height to print out labels correctly.

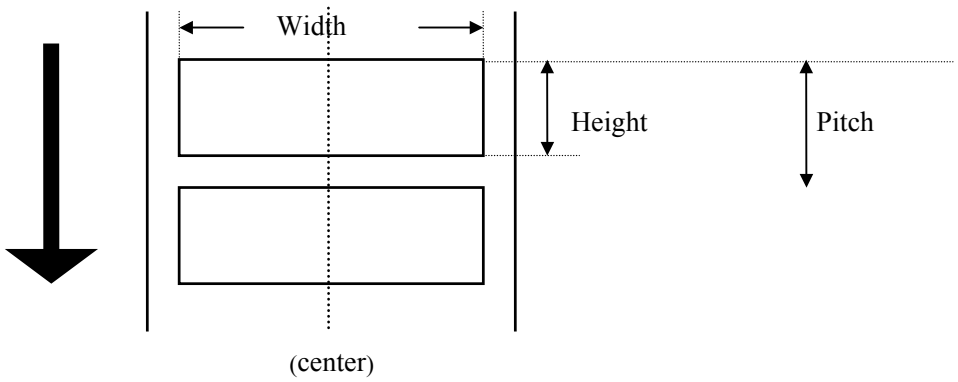
Note 3 : "Multi-Printing"

Multi-printing is to print same size labels (width * height) on one sheet, lining up horizontally. Set up "Number of Label" for labels to line up horizontally, and Pitch (horizontal) to fix distance between left label and right. Choose either "From The Left " or "From The Right" for "Count Start". (The default value is "From The Left".) When "From The Left" was chosen, the very left side label is count as the first one, and virtuously, when "From The Right" was chosen, the very right side one is count as the first one. Setting up parts is organized within one label size (width * Height). (With **DURA Rhythm**, parts are placed horizontally as the number of label is set up.)

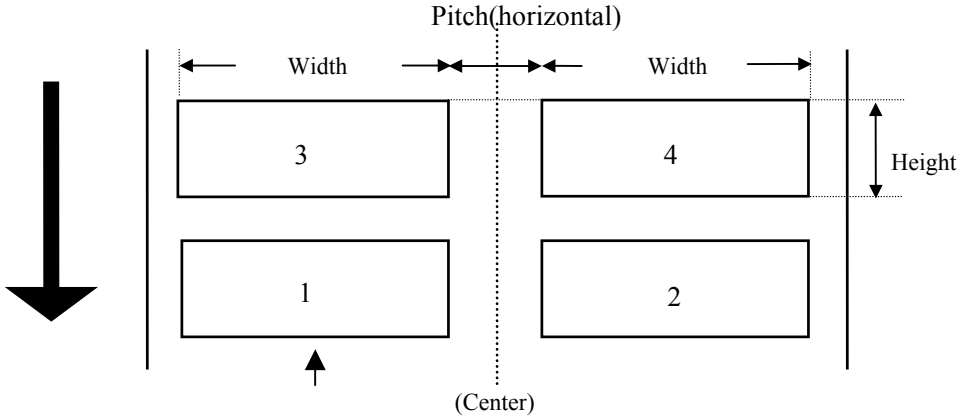
The followings are the restrictions:

- All Label size, Width, and Height are same size.
- "Pitch (Horizontal) has all same value label"
- Numbers of parts limitation (within 100 parts) are including labels that will be printed out horizontally.
  (For example, if "Number of Label" is 5, Numbers of parts limitation is 20 (100/5).)
- Multi-printing cannot write label format on memory card.
  (Logo parts could be written.)

Not using Multi-Printing ("Number of Label" is 1)

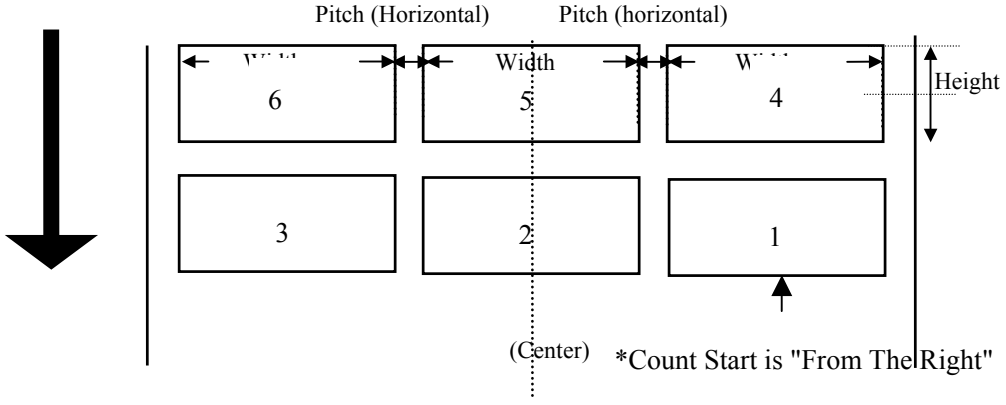


Multi-Printing ("Number of Label" is 2, Count Start is "From The Left")



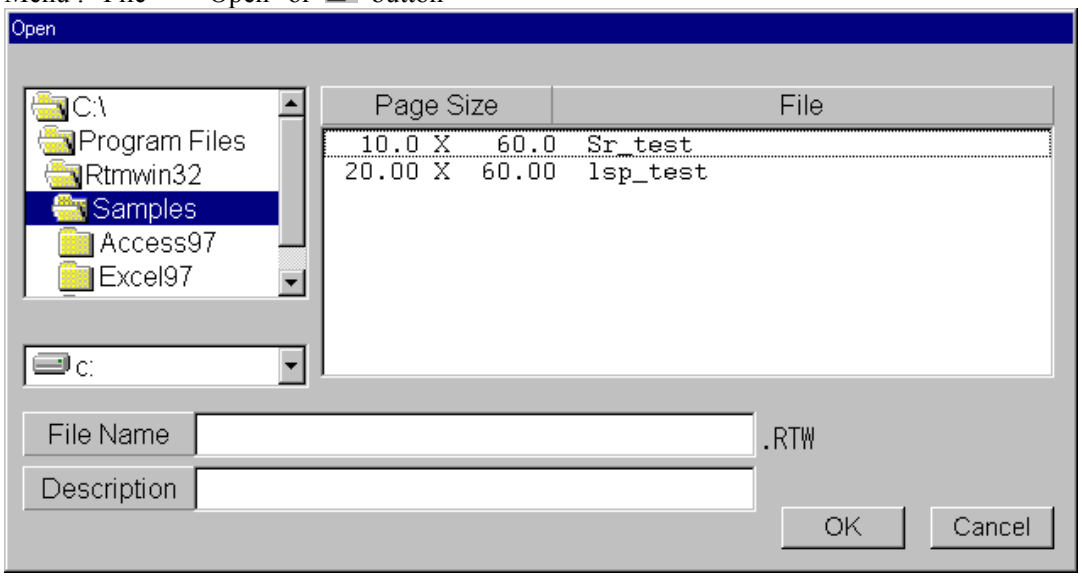
* Count Start is "From The Left"

(Number of Label (Horizontal) is 3, Count Start is "From The Right")



4-2-2 Open

Menu : "File" -> "Open" or button



Function

The stored label format of **DURA Rhythm** is read.

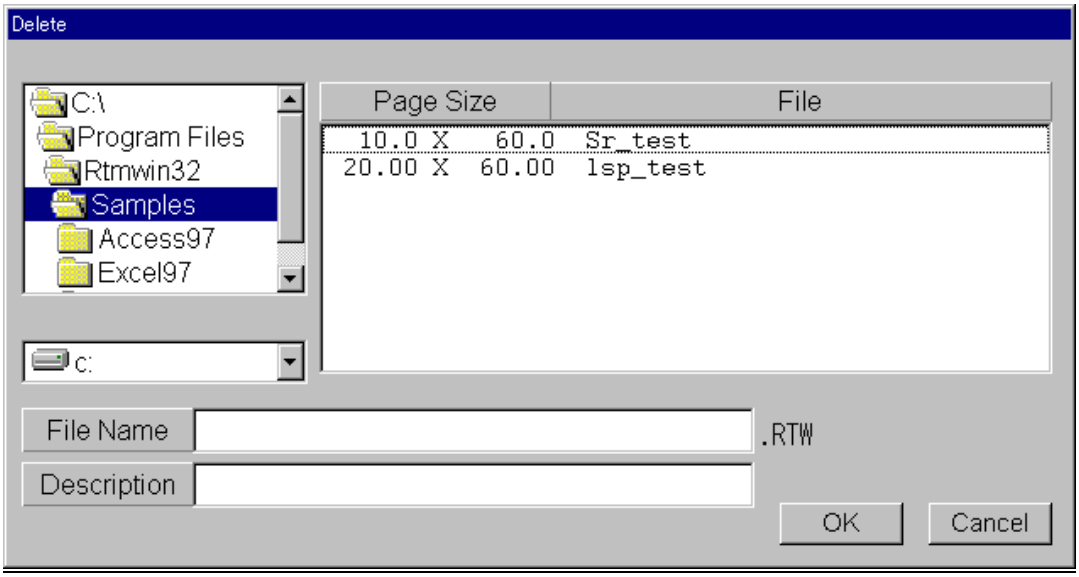
Operation Procedure

1) From the selection list on the lower left side of the screen, select the drive where the label format is stored.
2) From the selection list on the upper left side of the screen, select the directory where the label format is stored.
3) From the file list (the selection list on the right side of the screen), select the label format and press "OK" button.
   With "Cancel" button, this process is canceled.

Note : Inputing the file name Input the file name without the extension. For example, when the file name is "ABC.RTW", input "ABC" as the file name.

4-2-3 Delete

Menu : "File" -> "Delete" or button



Function

The stored label format of **DURA Rhythm** is deleted.

Operation Procedure

1) From the selection list on the lower left side of the screen, select the drive where the label format is stored.
2) From the selection list on the upper left side of the screen, select the directory where the label format is stored.
3) From file list (the selection list on the right side of the screen), select the label format and press "OK" button.
   With "Cancel" button, this process is canceled.

4-2-4 Save

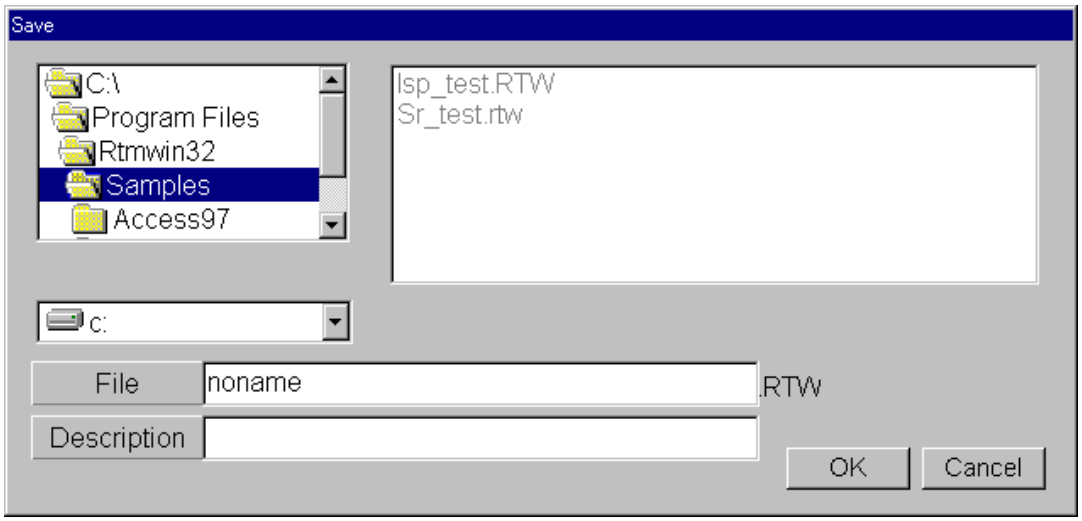
Menu : "File" -> "Save" or button

Function

The currently edited label format is saved.

4-2-5 Save As...

Menu : "File" -> "Save As..."



Function

The currently edited label format is stored on the disk. The data once stored can be read again and utilized.

Operation Procedure

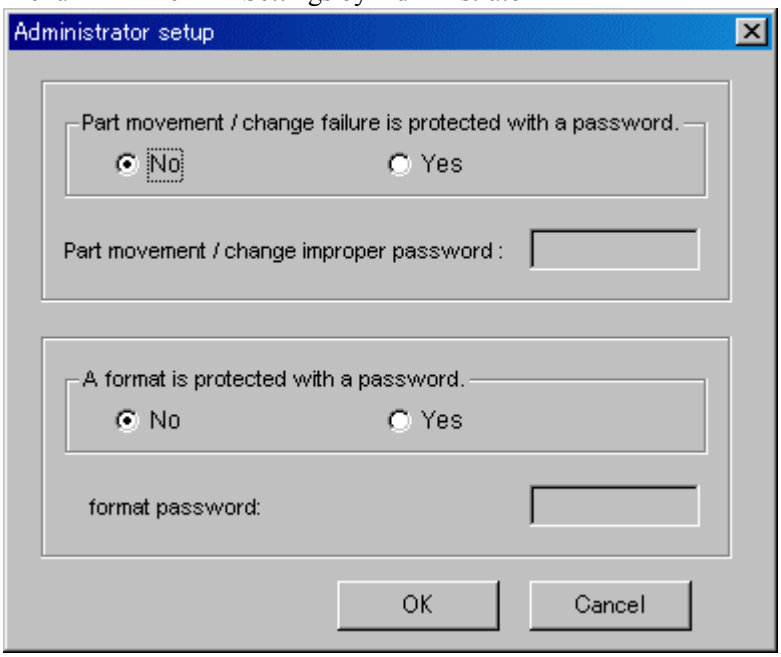
1) From the selection list in the center on the left side of the screen, select the drive where the label format is to be stored.
2) From the selection list on the upper left side of the screen, select the directory where the label format is to be stored.
3) Input file name (up to eight alphanumeric characters) to the File column or select the file name from the file list on the right side of the screen.
4) The comment used to identify the file can be saved in the Description column (If not necessary, you do not have to input it.).
5) Press "OK" button.
   With "Cancel" button, this process is canceled.

Note : "Overwrite OK?"

If the name of the file currently edited is identical with that of another file in the disk, the message discribed above is displayed. Select "OK" if the file on the disk may be ovewritten. If not, select "Cancel" and rename one of the two files.

4-2-6 Settings by Administrator

Menu : "File" -> "Settings by Administrator"



Function

You can password-protect Images from being moved or modified. You can also password-protect the format.

Each password must include one or more alphanumeric characters up to ten.

Operation Procedure

1) Select whether you password-protect the movement and the modification of Images or not. Place a check mark either on "ON" or "OFF".
2) Select whether you password-protect the format. Place a check mark either on "ON" or "OFF".

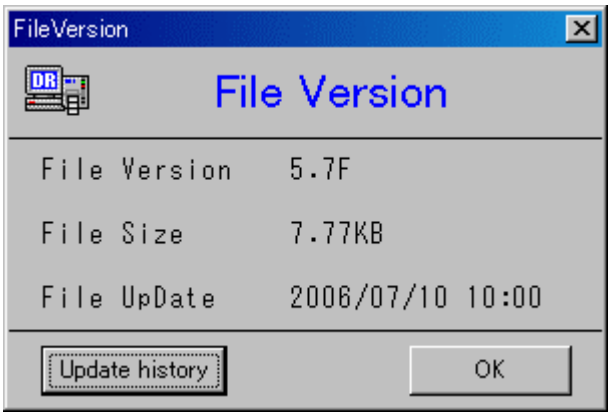
3) Input a password where you have placed a check mark on "ON".

4) If you want to cancel the password-protection of a file, input the password and then click "OK".

5) Select "ON", click "OK", and then the Password box appears for reaffirmation. Click cancel to cancel the process.

4-2-7 File Version

Menu : "File" -> "File Version"



Function

The information of the saved file is displayed.

The last-saved DURA Rhythm version is displayed in "File Version".

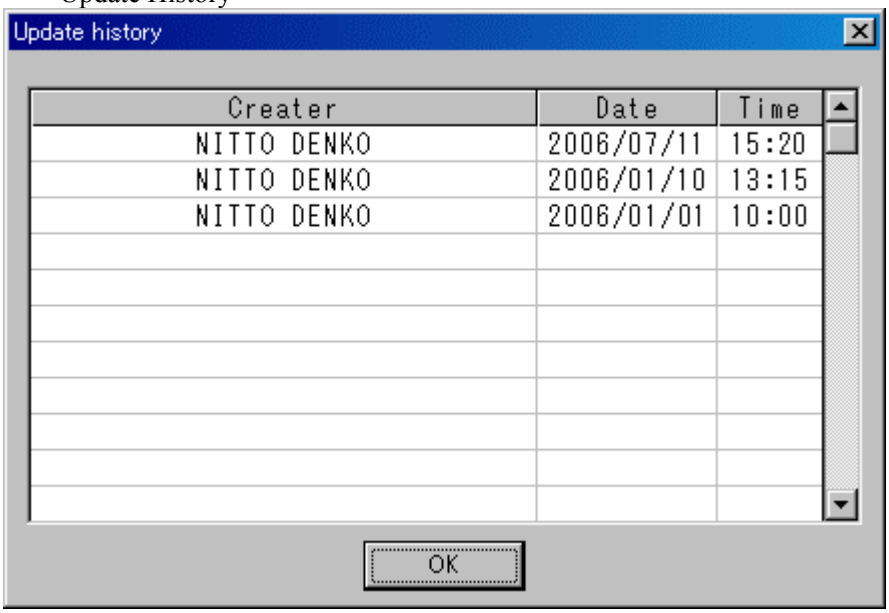
The file capacity is displayed in "File Size".

The last-saved date of the file is displayed in "File UpDate".

Operation Procedure

Click "Update history", and then the update history of the file is displayed.

Update History



Function

The update history of the file created and saved with DURA Rhythm Ver. 5.7 and later appears.

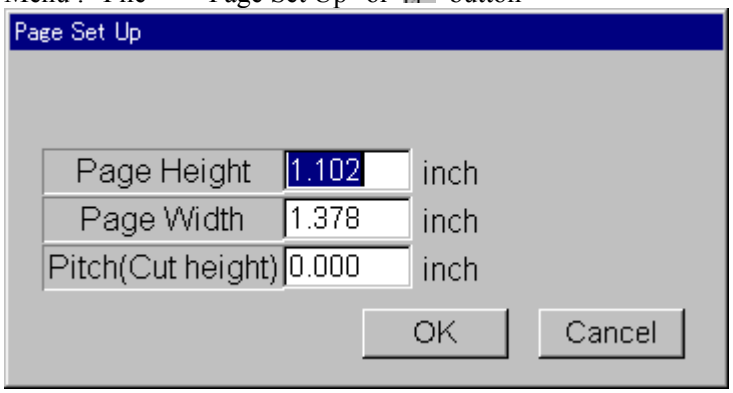
The names of those who ever updated the file are displayed in "Creator".

The dates the file was ever updated are displayed in "Date".

The times the file was ever updated are displayed in "Time".

4-2-8 Label Size Setting

Menu : "File" -> "Page Set Up" or button



Function

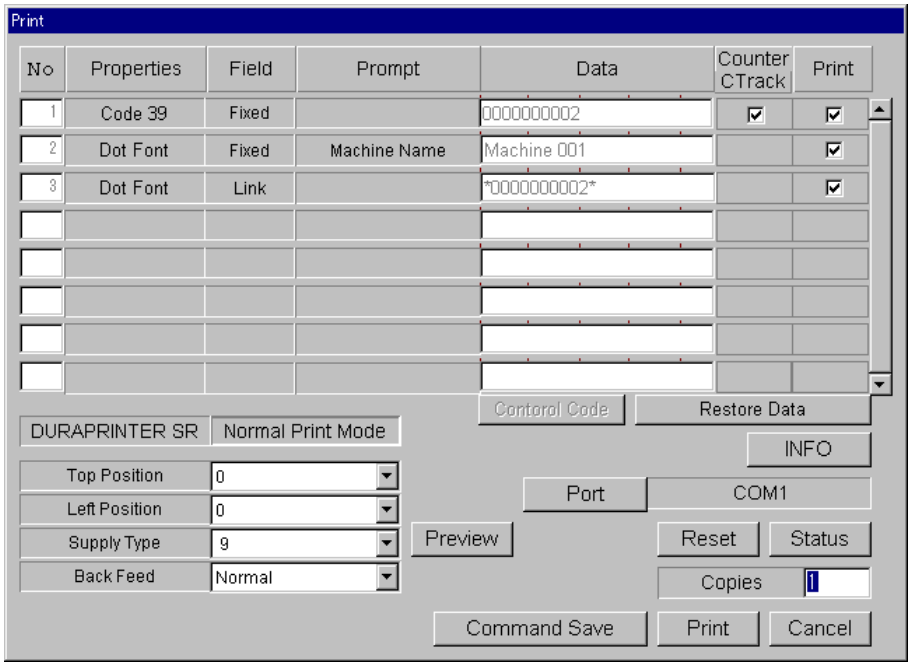
The label size defined in New process is changed.

Operation Procedure

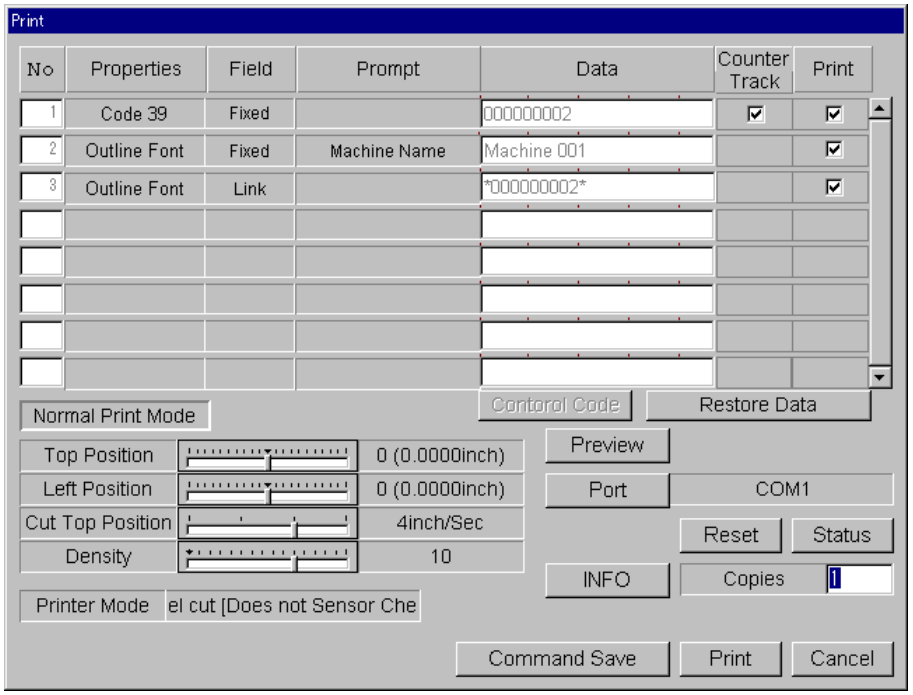
1) Input numeric values to Page Height/Width and Pitch.
2) Set up "Number of Label".
3) Set up "Pitch (horizontal)". (When "Number of Label" is more than 2.)
4) Choose either "From The Left" or "From The Right" for Count Start. (When "Number of Label" is more than 2.)
5) Press "OK" button.
   With "Cancel" button, this process is canceled.

4-2-9 Print

Menu : "File" -> "Print" or  button



<DURA PRINTER-SR/SRS>



< DURA PRINTER-LSP5300>

Function

1) Labels are printed with a **DURA PRINTER**.
2) The print commands transmitted to the printer can be stored in the file.

Operation Procedure

1) If the "Origin" of an Image is designated to be "Keyboard" in "Data..." screen, input data to "Data" column here. If "Constant / Counter", the "Data" can not be changed in this screen.
2) If the "Origin" of an Image is designated to be "Keyboard" in "Data..." screen, and control codes are avairable, you can input control code data to "Data" column by pressing "control code" button.
3) You can change the value of "No" of the Property of the Image whose "Origin" is designated to be "Keyboard" in "Data..." screen. By changing "No", you can change the order of inputting data.
4) Counter Track check box is displayed on the right of the "data" column for the Image which is designated to use the Counter (numeric, alphabetic, or alphanumeric). When this check box is on, "Data" are automatically updated when the print process is closed.
5) You can designate "print" or "not print" by the Image in the print check box on the right side of the screen. The data are printed when this check box is on, and not printed when the check box is off.
6) With "Communicattion Port" button, you can change the output port.
7) When you use **DURA PRINTER-SR(SRS)/SG/LSP5300**, a part of the function settings is displayed on the lower left side of the screen. You can change the desplayed settings here.
8) Input the value to "Copies" and press "Print" button, then print process starts.
   With "Cancel" button, this process is canceled.
   With "Command Save" button, the commands are stored in the file.
9) When **DURA PRINTER-SRS/R/SG/LSP5300** is used and the "Cutter" of Printer Option is designated "Batch Cut", the batch cut quantity input column is displayed on this screen. Designate the batch cut quantity.
10) With "Reset", the printer is reset.
11) With "Status", the present condition of the printer is displayed (This button is available only when the output port is other than LPT.).
12) With "Return", the data modified on this screen are all cleared and the data which were first displayed here reappear.

Note 1 : "When Counter Track check box is on"

With **DURA Rhythm**, though "Data" is updated when the print process is ended, the data is not stored in the file. Store the data in the file ("Save" or "Save as..."), if necessary. With **DURA Rhythm Light**, data is stored in the file automatically when the print process is ended.

With **DURA Rhythm**, the transmitted data is considered to be printed normally on the printer in calculating the value of the Counter. If the data is not printed correctly on the printer, when, for example, the printer is turned off during the print process, the data to be printed next may not be correct. In this case, change the data to the correct value.

Note 2 : "When the printer does not print"

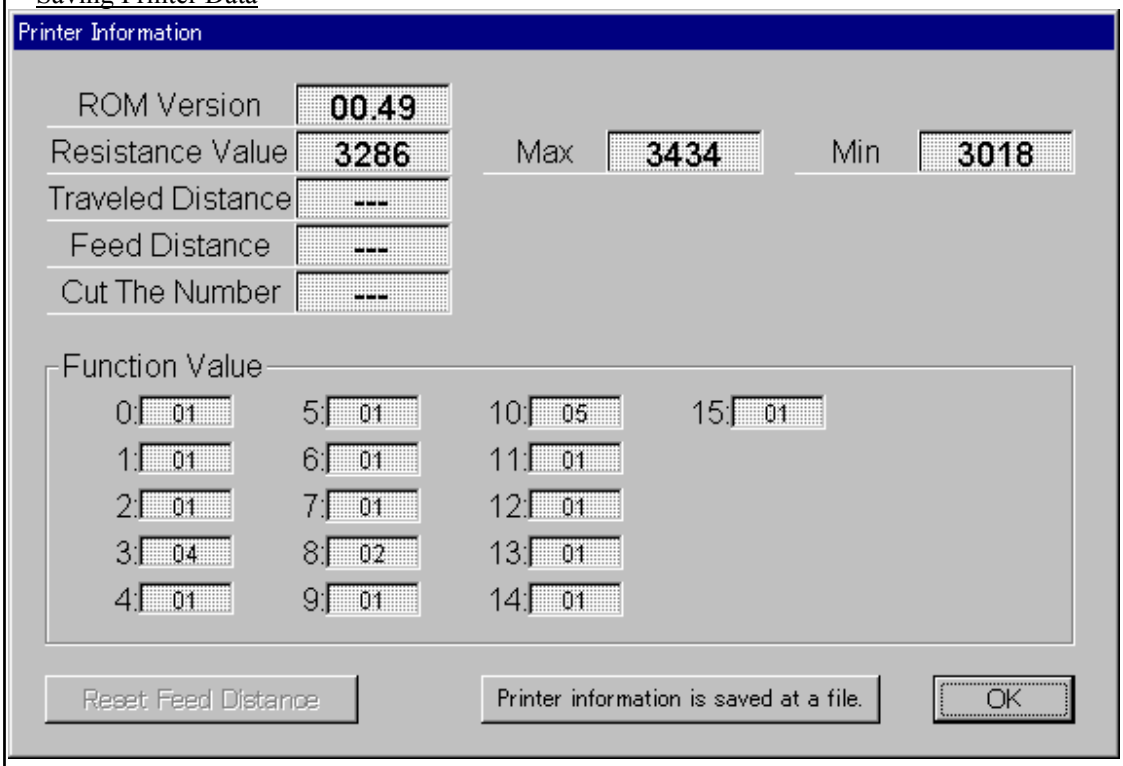
Check up if the printer is connected with the machine correctly (the connection of COM, LPT port or the designation of RS-232C). When the printer makes an error noise, check up if it is a data error such as an error on the ratio of the narrow bar to the wide bar are contained.

Command Save

When labels are printed on **DURA PRINTER**, the special commands are transmitted by **DURA Rhythm** to the COM (RS-232C) port or LPT (centronics) port of the personal computer. "Command Save" is used to store the commands in the text file.

Transmit the commands to the printer with another application, and then labels can be printed equally with **DURA Rhythm**.

Saving Printer Data



<For DURA PRINTER-SRS>

You can save the printer data obtained from the printer.

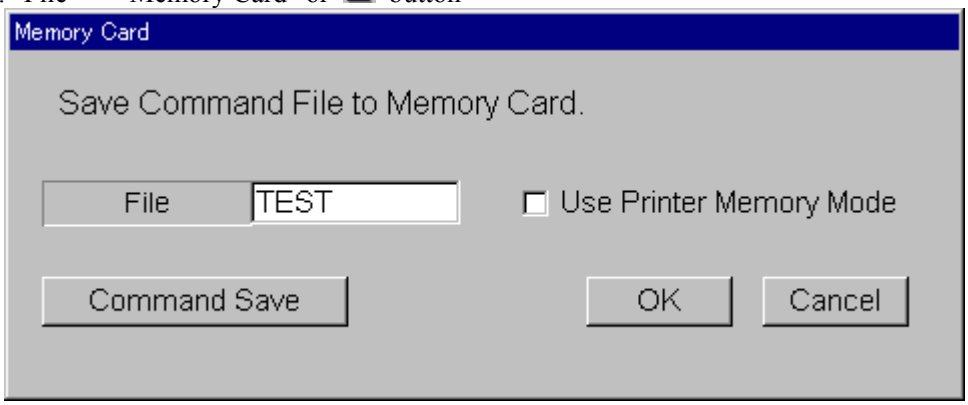
Click "Save printer data" button and input the file name on the displayed dialog box.

Click "OK" to save the printer data. All displayed data, including the date,

the version and the file name of DURA Rhythm, and the printer name, are saved.

4-2-10 Memory Card

Menu : "File" -> "Memory Card" or button



Function

1) When the memory card (option) is provided on the **DURA PRINTER**, the format can be written in the memory card. (However, with Multi-Printing (when "Number of Label" is more than 2), the format cannot be written in the memory card.)
2) Commands to be used to write to the memory card can be stored in the file. (However, this could not be performed for Multi-Printing.)
3) Check the box for "Printer Memory", if you want to use the printer memory. (Refer to "Note 4" for further information.)

Operation Procedure

1) With "OK" button, label format is written to the memory card.
   With "Cancel" button, this process is canceled.
   With "Store Command in File" button, commands are stored in the file.

Note 1 : "When data is written to memory card"

With **DURA Rhythm**, the memory card in **DURA PRINTER R/R4/(S)** can contain only one file. The file in the memory card is deleted when a new file is stored. The memory card in **DURA PRINTER SR/SG** can contain up to 128 files. (The number of files depends on the quantity of the data and the capacity of the memory card. When the quantity of the data is more than the capacity, the memory card error occurs. When the file whose name is identical with the name of currently stored file exists in the momory card, the former is overwritten.

Note 2 : "When the format with Picture Image is stored in memory card"

When the format with Picture Image is stored in the memory card, the Picture Image size is limited unless each Picture Image is entered in the memory card as a Picture Image file. In this case, download each Picture Image as a Picture Image file and then store the whole format in the memory card.

Note 3 : You can use only alphanumerics (A~Z, 0~9) as the file name written in Memory Card. The length must be up to 8 characters.

Note 4 : "Printer Memory"

When the check box is on, the print process is executed according to the label format stored in the memory card. The process is executed with high speed, because the data sent to the printer are only the file name and the data of the images inputted from the keyboard. Those data modified after storage are not printed. When you use counter, choose "Keyboard" in "Data..." screen (if you choose "Constant/Counter", the counter data are not updated.).

4-2-11 Exit

Menu : "File" -> "Exit"

Function

DURA Rhythm is closed.

Operation Procedure

With "OK" button, **DURA Rhythm** is closed.

With "Cancel" button, the closing process is canceled.

When a label format is now being edited, the screen shown below is displayed.

With "YES" button, **DURA Rhythm** is ended after the label format now being edited is stored.

With "NO" button, **DURA Rhythm** is ended without storing the label format now being edited.

With "Cancel" button, the closing process is canceled.

4-3 Edit Menu

Choose "Edit" on Menu Bar, and then the pull down menu including the item shown below is displayed. Pick up the process in the pull down menu you want.

1) Undo
2) Paste

The detailed explanation of the process is in the following page.

4-3-1 Undo

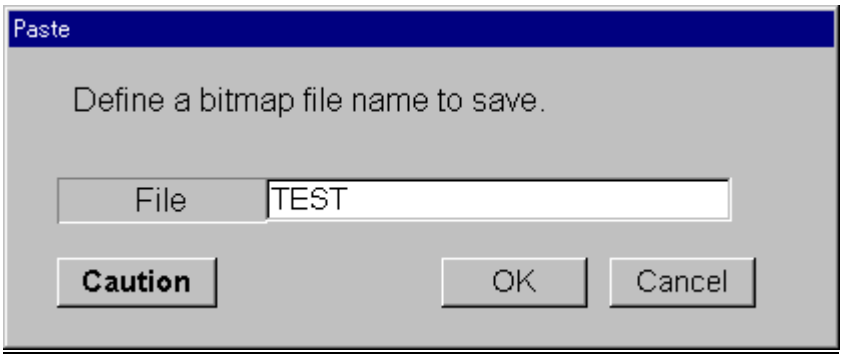
Menu: "Edit" → "Undo" or button

Function

The last action applied to the Image is undone.

4-3-2 Paste

Menu : "Edit" -> "Paste"



Function

When the graphical data is on the clipboard, the data is taken as the Picture Image for **DURA Rhythm**. The Picture Image can be downloaded to the memory card.

Operation Procedure

1) Input the bitmap file name to be stored to the "File" column.
   With "OK" button, the graphic data is taken.
   With "Cancel" button, this process is canceled.

Note 1 : "Graphic data on the clipboard"

Only the monochromic graphic data (black and white bitmap) is supported by **DURA Rhythm**. Though color graphic data with not more than 256 colors can be read, in some cases the graphic data can not be converted correctly. In these cases, store the data with some drawing-type graphic software (Paintbrush, Paint, etc.) as a black-and-white bitmap file and then read the Picture Image.

Note 2 : "The taken bitmap file"

Though the graphic data taken from the clipboard is stored as a Picture Image, its bitmap file, different from other Picture Images, does not exist. The bitmap file name displayed in the Properties of the Picture Image is used for the identification by **DURA Rhythm**.

If the Picture Image may be possibly changed in the future, store the bitmap file by the graphic software which generated the Image.

4-4 Insert Menu

Insert Menu is utilized when each Image is designated.

Choose "Insert" on Menu Bar, and then the pull down menu including the type of field shown below is displayed. Pick up from the items in the pull down menu the type of field you want.

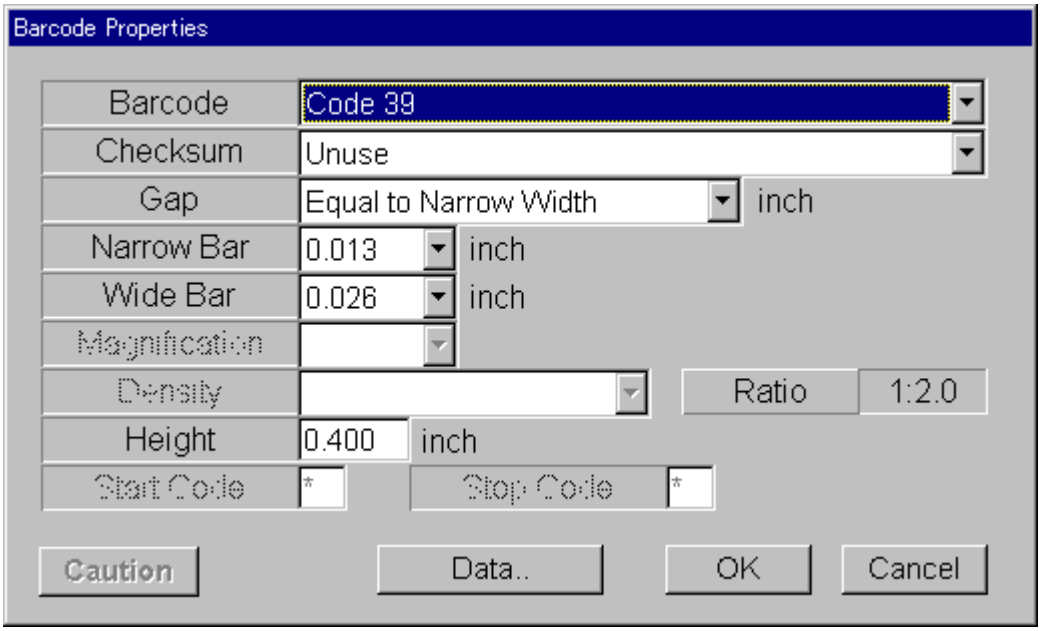
The same pull down menu is displayed when you click the right button of the mouse in the layout area.

1) Barcode
2) Text
3) EAN128 Assist
4) Picture
5) TrueType
6) External Character Font
7) QR Code
8) PDF417
9) DataMatrix
10) Line
11) Rectangle
12) Fill Color
13) White Box
14) Reverse Box

The detailed explanation of each process is in the following pages.

4-4-1 Barcode

Menu : "Insert" -> "Barcode" or button



Function

Parameters for the barcode are displayed.

Operation Procedure

1) Select barcode type out of the 12 types shown below.

* Code39
* ITF (I2of5)
* UPC-A
* UPC-E
* EAN (JAN) 13 characters
* EAN (JAN) 8 characters
* Codabar (NW7)
* Code93
* Code 128 Subset A
* Code 128 Subset B
* Code 128 Subset C
* EAN-128 (SSCC-18, Casecode128)
* Code 128 Subset A Only
* Code 128 Subset B Only
* Code 128 Subset C Only

* J-Postal Code
* UPC-A (without human-readable characters)
* UPC-E (without human-readable characters)
* EAN (JAN) 13 digits (without human-readable characters)
* EAN (JAN) 8 digits (without human-readable characters)
* EAN (JAN) 13 digits (without check digit count)
* EAN (JAN) 8 digits (without check digit count)
* EAN-128 Subset A
* EAN-128 Subset B
* EAN-128 Subset C
* EAN-128 Subset A Only
* EAN-128 Subset B Only
* EAN-128 Subset C Only
* Code 128 (AUTO)
* EAN-128 (AUTO)
* RSS-14
* RSS-14 Truncated
* RSS-14 Stacked
* RSS-14 Stacked Omnidirectional
* RSS Limited
* RSS Expanded
* RSS-14 (Composite [CC-A])
* RSS-14 Truncated (Composite [CC-A])
* RSS-14 Stacked (Composite［CC-A］)
* RSS-14 Stacked Omnidirectional (Composite [CC-A])
* RSS Limited (Composite [CC-A])
* RSS Expanded (Composite [CC-A])

The required parameters depend on the barcode type. The barcode type being selected, the titles of the required parameters (Checksum, Gap, etc.) are displayed in black, and others in gray. Those gray parameters are protected and you can not input any data to them.

2) Select the value for **Checksum** from the selection list.
3) Select the value for **Gap** from the selection list (Normally, designate Equal to Narrow Width.).
4) Select the value for **Narrow Bar** from the selection list.
5) Select the value for **Wide Bar** from the selection list.

6) Select the value for **Magnification** from the selection list.
7) Select the value for **Density** from the selection list.
8) Select the value for **Height of Composite** from the selection list.
9) Select the value for **Segment Count** from the selection list.
10) Input the value for **Height**.
11) Input values for **Start Code / Stop Code**.

Ratio

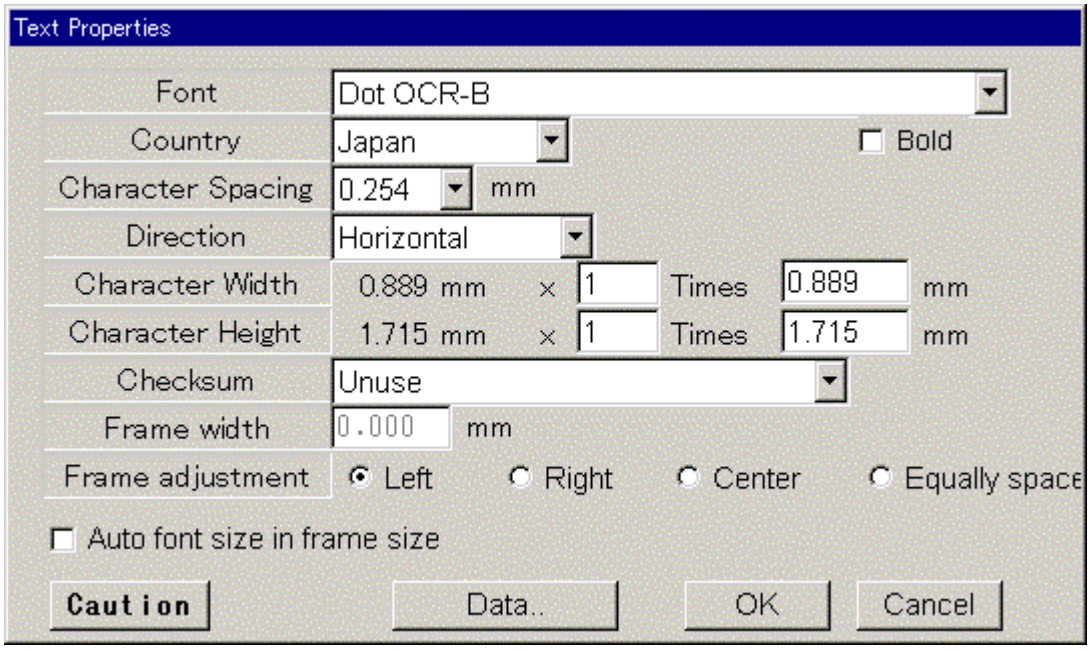
The ratio of Narrow Bar to Wide Bar is displayed. When Narrow Bar or Wide Bar is modified, the ratio is also modified and displayed.

10) With "OK" button, the barcode data is stored as an Image.
With "Cancel", this process is canceled.
With "Data ...", the Data Input screen (See 4-4-5) is displayed.

Note 1 : "Start Code / Stop Code"
Only in Codabar(NW7), the Start Code and Stop Code can be modified. The default value for each is "A", and you can select one from "A" through "D".
Note 2 : "Narrow Bar / Wide Bar"
In Code39 and ITF, the ratio of the width of Narrow Bar to Wide Bar must be between 2:1~3:1.
When the width of Narrow Bar is 0.125(0.127)mm, the quality of the barcode is not guaranteed.
Note 3 : "Verifier"
With a verifier on **DURA PRINTER R**, not less than 4mm(0.16 inch) wide space (quiet zone) is needed on both sides of the barcode.
With a verifier on **DURA PRINTER SR**, not less than 3mm(0.12 inch) wide space (quiet zone) is needed on both sides of the barcode.
*Up to 15 barcodes for one format can be verified.
Note 4 : "CODE128"
Refer to "Appendix E CODE128".

4-4-2 Text

Menu : "Insert" -> "Text" or A button



Function

Text parameters are set.

Operation Procedure

1) Select the font type out of the 14 types shown below (with **DURA PRINTER SR**).

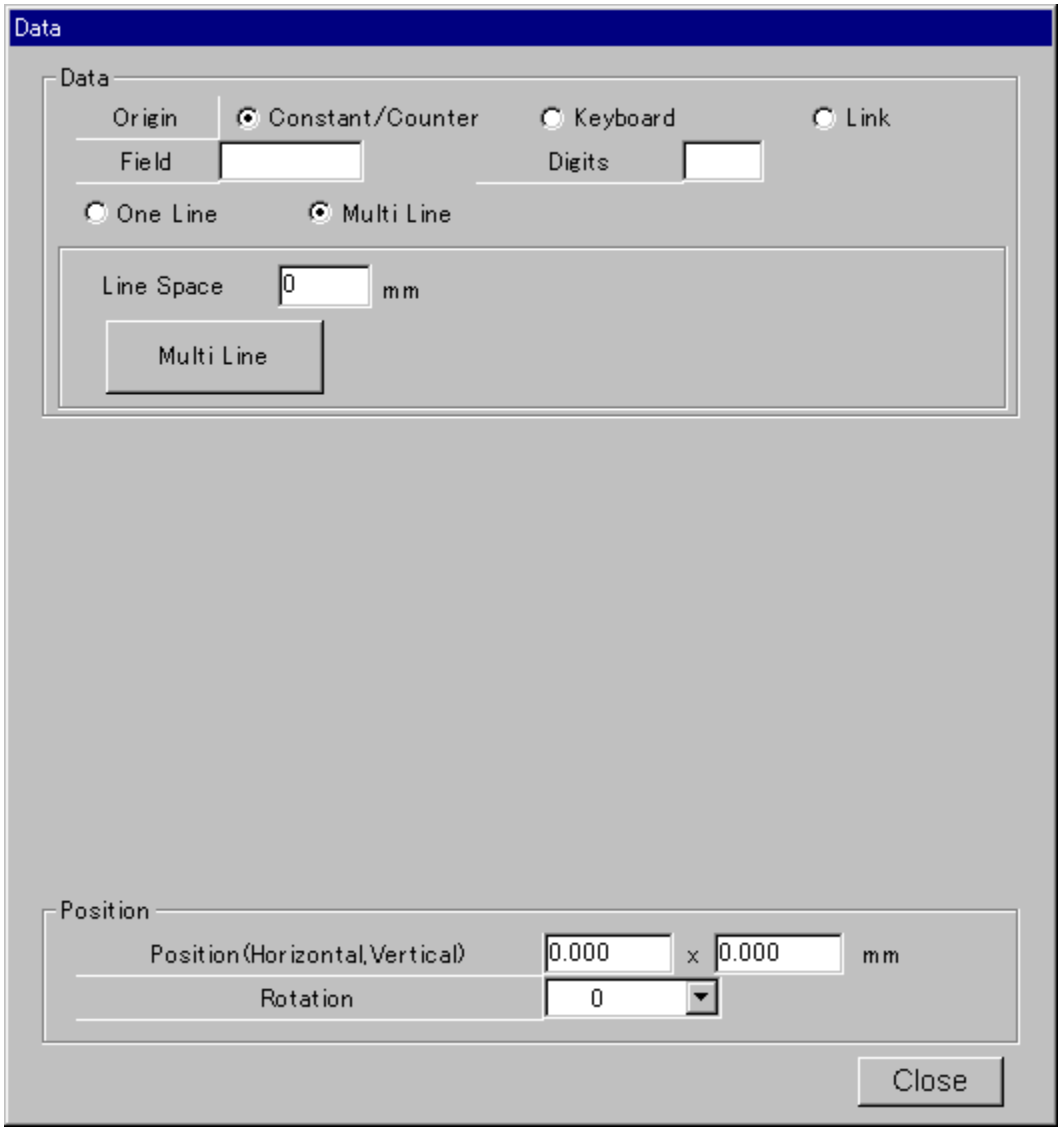
* Dot Font OCR-B
* Dot Font alphanumeric SS
* Dot Font alphanumeric M
* Dot Font alphanumeric B
* Dot Font alphanumeric N2
* Vector Font Modulo10
* Vector Font Modulo43
* Dot Font alphanumeric NO1
* Dot Font alphanumeric NO3
* Dot Font alphanumeric NO5
* Dot Font alphanumeric NA2
* Dot Font alphanumeric XS
* Dot Font alphanumeric S
* Dot Font alphanumeric L
* Dot Font alphanumeric N1
* Vector Font rotatable
* Vector Font Modulo10
* Outline Font ASCII (Option)
* Dot Font alphanumeric NO2
* Dot Font alphanumeric NO4
* Dot Font alphanumeric NA1

* The standard font of **DURA PRINTER SRS**, **SG**, and **LSP** series is the outline font.

The required parameters depend on the font type. The font type being selected, the titles of the required parameters (Country, Character Spacing, etc.) are displayed in black and others in gray. Those gray items are protected and you can not input any data to them.

2) Select the value for "Country" out of the selection list.
3) Select the value for "Character Spacing" out of the selection list.
4) Select the value for "Position" out of the selection list.
5) To input values to "Character Width" and "Character Height", you can input the numeric values with the keyboard to either "Magnification" or "Unit" (millimter or inch). If you input the value to "Magnification", the size is an integral multiple of the smallest size of the font you selected.
6) Select one for the horizontal alignment. When you choose other than "align left", you can input the value to "Area Size (Width)". The positions of the characters are decided according to the inputted value.
7) When you place the check mark on "Automatic adjustment of character width/height to area size", and then you can input the height and the width of the area. The font size is automatically adjusted according to the area size.
8) Click "OK", and then the text data are stored as an Image.
   Click "Cancel" to cancel this process.
   Click "Data…" to display the Data dialog box (See 4-4-10).
   Click "Notes" to display the notes on text data.

9) If you want to input data that spread more than one line, place the check mark on "More than one line" on Data dialog box and click the "More than one line" button.



Note 1 : "Recommended Font"

Characters may become blurred with some types of dot font and some types of materials. We recommend OCR-B, alphanumericN1, alphanumericN2 and Vector rotatable Font. Use another font when characters become blurred.

Note 2 : "Thick Font"

A character is printed twice, moved horizontally by 0.127mm to make up a thick font. When the Character Spacing is too small, the font may overlap the next one.

Note 3 : About a right and left adjustment

The character justifies it at the center in the left justification, and the character justifies at the center in the right justification and the character is justified at the center when justifying it at the center when making it to the right justification if it sets it to the left justification.

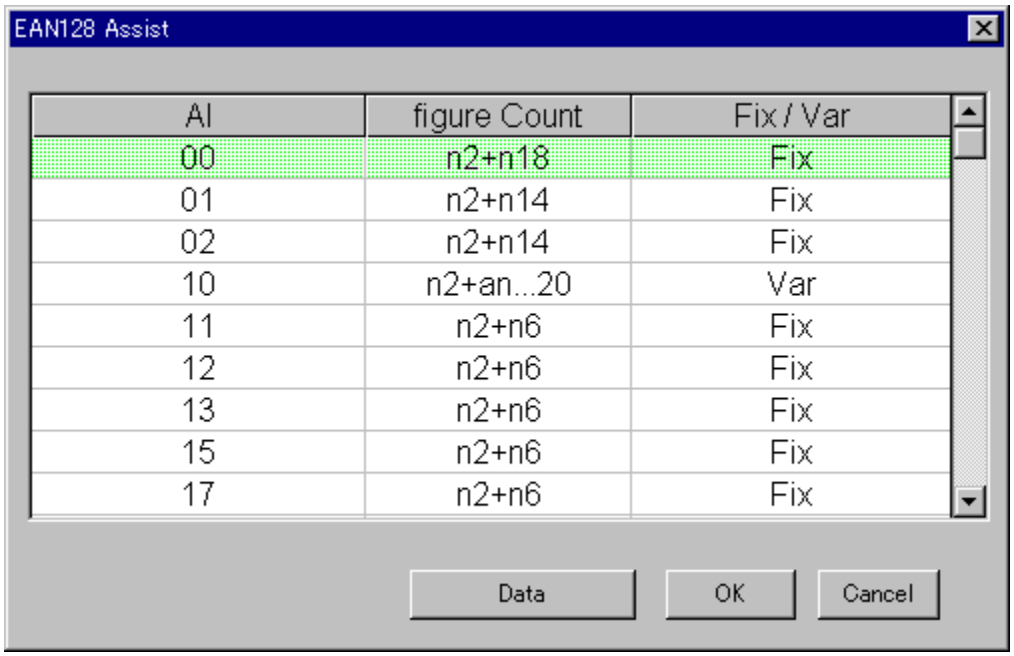
It is printed at the position corresponding to the frame by setting the size of the frame at the right justification and center justification.

Note 4: "Automatic adjustment of character width/height to area size"

The optimal font size for the inputted area size is selected. Note that the character size may not be identical with the area size as it is decided in dots.

4-4-3 EAN128 Assist

Menu: "Insert"->"EAN Assist" or  button



Functions

EAN128 assist Images are saved.

Operation Procedure

1) EAN128 assist Images are used to make up an Image for each application identifier (AI).
2) Select the application identifier (AI) first. The character type and the number of the lines vary depending on the AI.

Length

symbol	meaning
n	numerics
a	alphabets
an	alphanumerics
n20	numerics of the fixed length
n…20	numerics of variable length (up to 20digits)
an…20	alphanumerics of variable length (up to 20digits)

- fixed length: The length of the data is fixed. For example, "n20" means that you must input a 20-digit number.
- variable length: The length of the data is not fixed. When the data length is less than the maximum value, "FNC1" is inserted automatically. For example, "n…20" means that you can

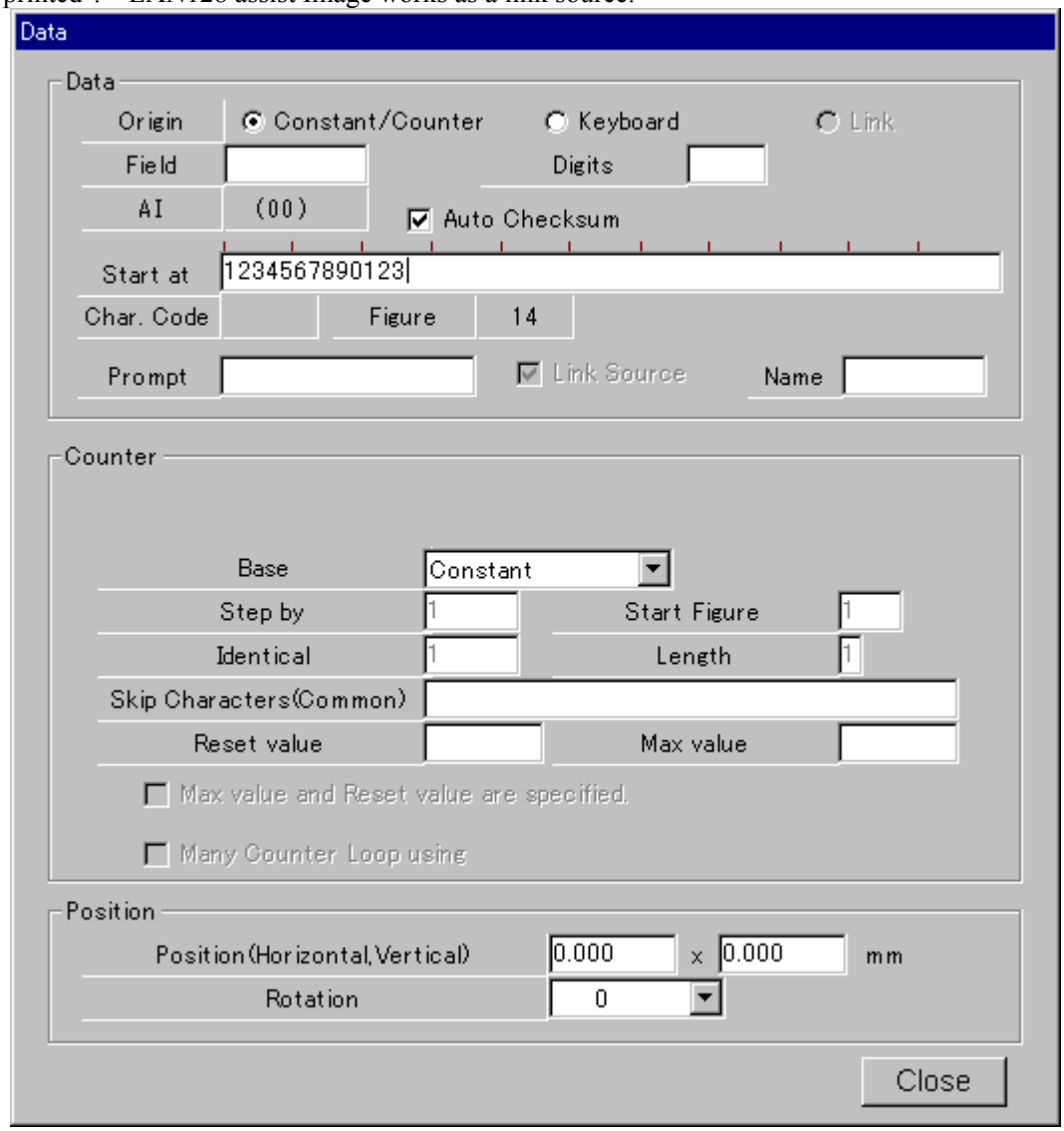
input the numeric data of 20 digits or less.

3) Click "Data…", and then the "Data" dialog box appears.

4) Click "OK" to save the text data as an Image.

Click "Cancel" to cancel this process.

5) As EAN128 assist Images are not printed, the check mark is placed on "This Image is not printed". EAN128 assist Image works as a link source.



Generation of EAN128 Using an EAN Assist Image

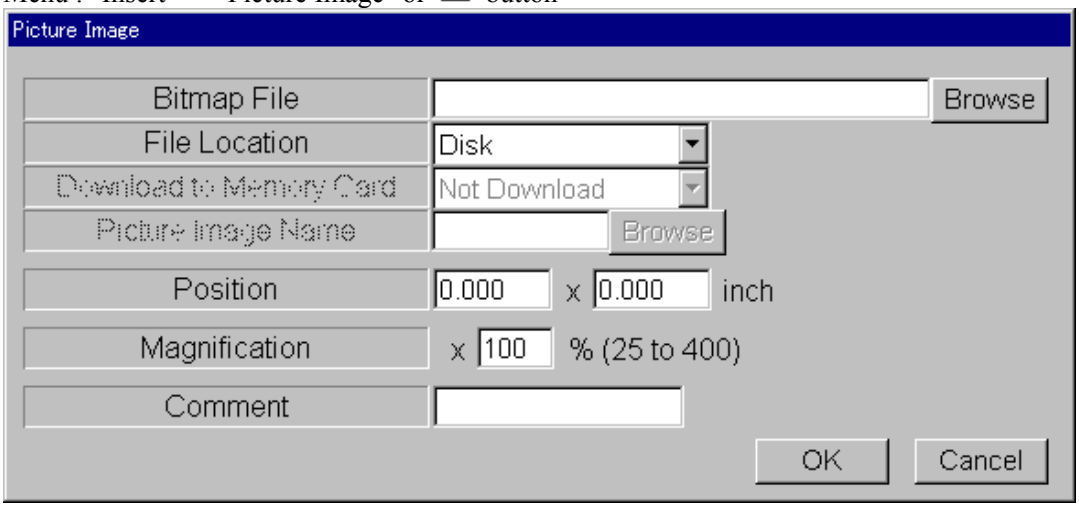
Generation of "(11)123456 (21) 1234567890" in EAN128 method

1) Select "EAN128 assist".
2) Select "11" for application identifier.
3) Click "Data…" and input data to "Data" text box. Input 6-digit number as the number of the digits for the application identifier "11" is "n2+n6".

4) Input the link source name to "Link Source" text box.
   *EAN128 assist Images are link sources without exception.
5) Click "Close" and "OK" to close the dialog box. The EAN128 assist Image is displayed in gray.
6) Select "21" for the application identifier similarly.
7) The number of the digits for the application identifier "21" is "n2+an…20". Here in this case, input "1234567890", the 10-digit number.
8) Generate the EAN assist Image in an analogous fashion.
9) Select "Insert"->"Barcode" to display "Barcode" dialog box.
10) Select "EAN128(AUTO)" for "Barcode", input data to the necessary parameters, and then click "Data…" button.
11) Select "Link" as "Origin" and click "Link Setting" button.
12) Place the check mark on "Combination of Link Sources" and select the link source name inputted in step (4).
13) Select the tag No.2 and select the other link source name.
14) Click "Close"->"Close"->"OK". The barcode Image has been generated.
15) When you are going to generate a text Image, select "Insert"->"Text" and follow the same steps.

4-4-4 Picture Image

Menu : "Insert" -> "Picture Image" or button



Function

The parameters for picture images are designated. The write process of the picture image file to the memory card is executed here, too.

Operation Procedure

1) Input the bitmap file name. You can also pick the bitmap file from the file list displayed by pressing the button on the right side of Bitmap File column.
2) Designate Location of the Picture Image File. The picture image file is assigned to the disk or to the memory card (You can choose Memory Card only when **DURA PRINTER SR(SRS)/SG/LSP5300** is used.).
3) Select "download" or "not download" for "Download to Memory Card". The executed process differs, depending on the Location of the Picture Image File. See the table below.

	File Location "Disk"	File Location "Memory Card"
"Download"	———————————	When "OK" is pressed, the data of the picture image is written to the Memory Card. As the data is not downloaded to the printer when they are printed out, the print process is executed with high speed. This is the normal designation.
"Not Download"	The data of the picture image is downloaded as it is printed out.	The picture image data already in the Memory Card is used. The data of the picture image is not downloaded.

4) Input Picture Image Name when the File Location is designated to be Memory Card (up to eight alphanumeric characters). With the button on the right side of the "Picture Image Name" column, the Picture Image list is displayed and you can select the name from the list (This Picture Image list is available only when the communication port is COM.).

Note 1 : Bitmap File

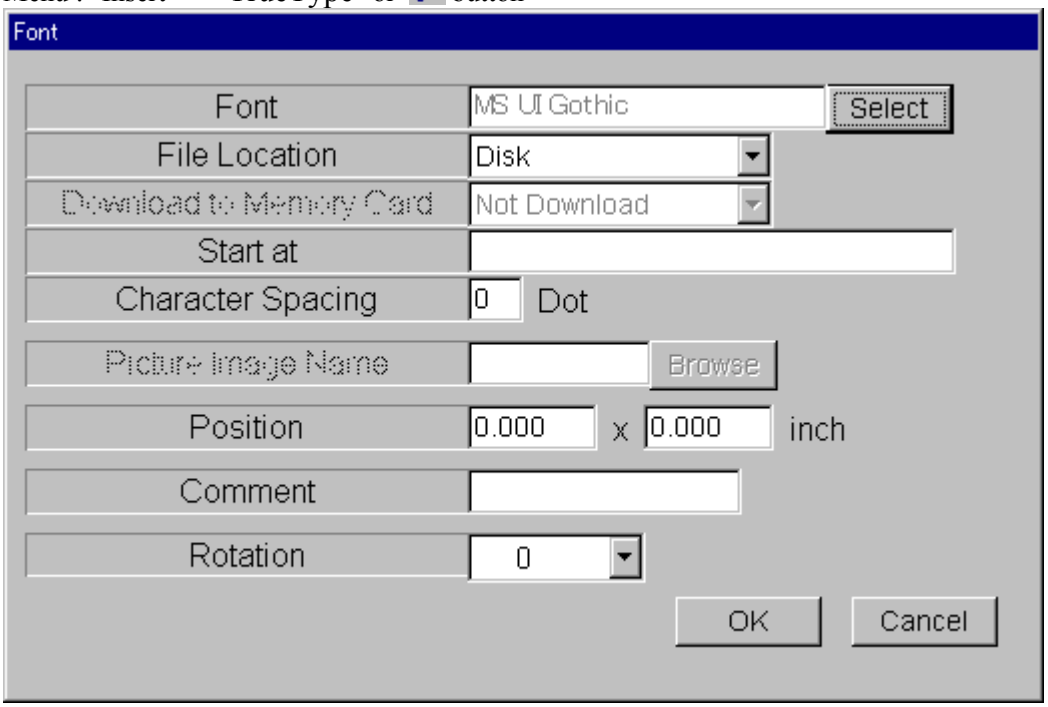
Only the monochromic graphic data (black and white bitmap) is supported by **DURA Rhythm**. Though color graphic data with not more than 256 colors can be read, in some cases the graphic data can not be converted correctly.

Note 2 : Start Position of Picture Image

The start position of Picture Image is decided in 0.508mm increments on DURA PRINTER SR (SRS). On LSP5300, the start position is decided in 0.666mm increments. This may cause the error with the start position designated within DURA Rhythm. DURA Rhythm decides the start position of the Picture Image in increments of 8 dots, calculating from the left upper point.

4-4-5 TrueType

Menu : "Insert" -> "TrueType" or button



Function

Parameters to store the True Type font data as a Picture Image are designated.

Operation Procedure

1) Parameters other than Font Name, Data, Space are identical with those for Picture Image (See "Picture Image" on the preceding pages.).
2) With "Select", the dialog for font select is displayed. Designate the type or style/size for the font.
3) Input the print data in the form of the character string to "Start at".
   *If you press the Enter key when the cursor is on the data, "More than one line" dialog box is displayed and you can enter data that spread more than one line.
4) Input to the "Character Spacing" the space size between characters in dots.
5) Input the line space size by dot in "Line Space".
6) As for "Rotation", select one out of 0/ 90/ 180/270

Note1: Start Position of True Type

DURA Rhythm changes the True Type data into the Picture Image.

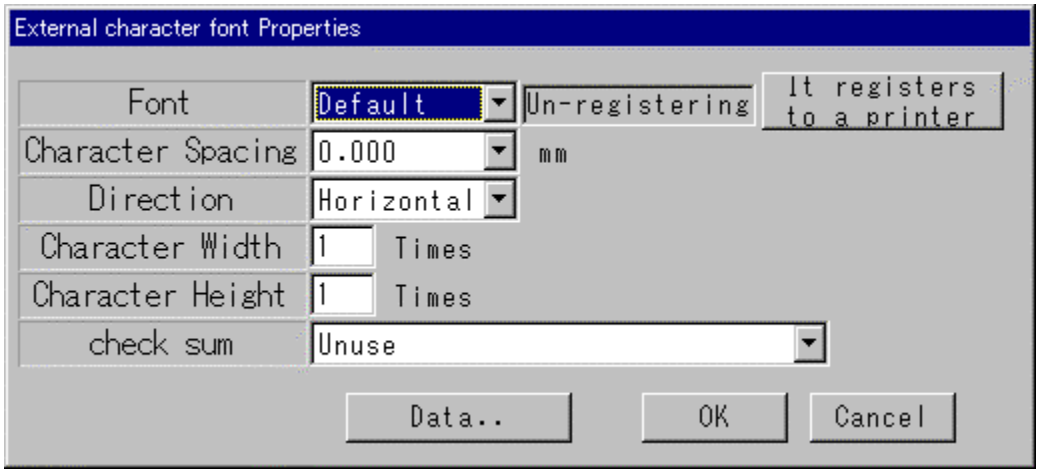
The start position of True Type Image is decided in the same way as that of Picture Image (See "Note2" of Picture Image).

Note2: Font Size of True Type

There could be a slight difference with letter size, depending on version of Windows OS, service pack, and IME. For example, opening a file, which is made by Windows 95, with Windows 98, and clicking OK on "Font" screen, letters size will be changed, referring to the environment. As a result, there could be a size difference with letters. This is OS specification.

4-4-6 External Character Font

Menu : "Insert" -> "External Character" or Ex button



Functions

The external character font is stored as an Image.

Storing the external character font in the memory card of DURA PRINTER SR (SRS) (option) or in the printer memory of LSP5300, you can print external characters in the same way as the dot fonts.

Operation Procedure

1) Select the external character font. The selectable fonts are those that are generated with DURA Font (with the extension "dft") and stored in C:¥ProgramFiles¥NittoFont folder. When the selected font is not stored in the memory card of the printer, click "Store in Printer" button to store it in the memory card.
2) Select character spacing from the list.
3) Select direction from the list.
4) Input numbers to Character Size Width / Height. The value must be the integral multiple of the smallest size of the selected font.
5) If you want to add the check digit to the last of the character, select one from the list.
6) Click "OK" to store the character data as an Image.
   Click "Cancel" to cancel this process.
   With "Data ..." button, the Data Input screen (See 4-4-10) is displayed.

Note1:

The external character font is stored in the memory card (with LSP5300, in the printer memory). As the data are read from the memory card and printed on an as-needed basis, the speed of processing the external character font data is slower than the dot font data.

Note2:

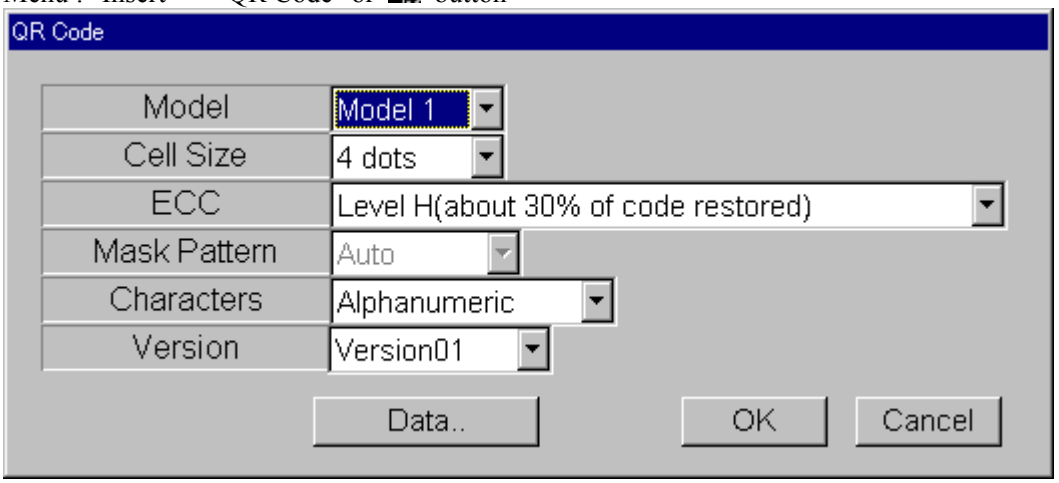
When the external character font designated in the format file is not found in the designated folder, it is considered to be the default one. The default font is not printed on the printer.

Note3:

You can not print the external character font on DURA PRINTER R / R4.

4-4-7 QR Code

Menu : "Insert" -> "QR Code" or button



The QR Code Image that appears on the screen is an imaginary product.

Function

Parameters for QR Code are designated.

Operation Procedure

1) Select Model (Model 1, 2 or Micro QR).
2) Select Cell Size (1~16 dots for Model 1, and 1~32 dots for Model 2 or Micro QR) from the selection list. Be sure to select more than 2 dots to avoid an error print.
3) Designate the value for "AQL", picking up from the selection list (level L/M/H/Q). Level Q is available only with Model 2. Select Level H or Q, if possible.
4) Select "Auto" as "Mask Pattern". You can not change the value with this version.
5) Designate the value for "Character", picking from the selection list (Numeric / Alphanumeric / 8 bit byte / Ascii / text).
6) Designate the value for "Version", picking from the selection list (1~22 in the case of Model 1, 1~40 in the case of Model 2, and M1~M4 in the case of Micro QR).
7) With "OK" button, the QR Code is stored as an Image. (Unnecessary at the time of ASCII and a text)

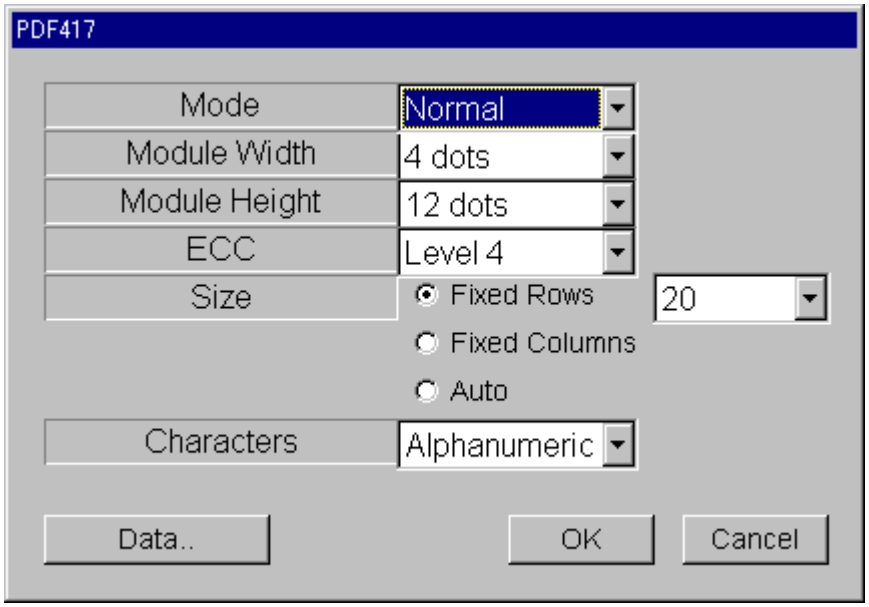
   With "Cancel" button, the process is canceled.

   With "Data ..." button, the Data Input screen (See 4-4-10) is displayed.

   With "Caution" button, the cautions about QR Code are displayed.

4-4-8 PDF417

Menu : "Insert" ->"PDF417" or button.



The PDF417 Image that appears on the screen is an imaginary product.

Function

Parameters for PDF417 are designated.

Operation Procedure

1) Select PDF417 mode(Standard or Trancate).
2) Select Module Width (1~32 dots) from the selection list. Be sure to select more than 3 dots to avoid an error print.
3) Select Module Height (3~96 dots) from the selection list. Usually, select the value three times as large as the width.
4) Designate the value for "ECC", picking up from the selection list (0~8).
5) Select "Size" (Line Number / Column Number / Auto).
6) Select "Input Mode" from the selection list. **DURA Rhythm** executes the validity check.

- Numeric :numeric characters (0 ~ 9)
- Alphanumeric : numeric characters (0 ~ 9), capital alphabets, symbols and control codes (CR / LF)
- Binary :8 bit characters, 16 bit characters

7) With "OK" button, the PDF417 data are stored as an Image.
With "Cancel" button, the process is canceled.
With "Data ..." button, the Data Input screen (See 4-4-10) is displayed.

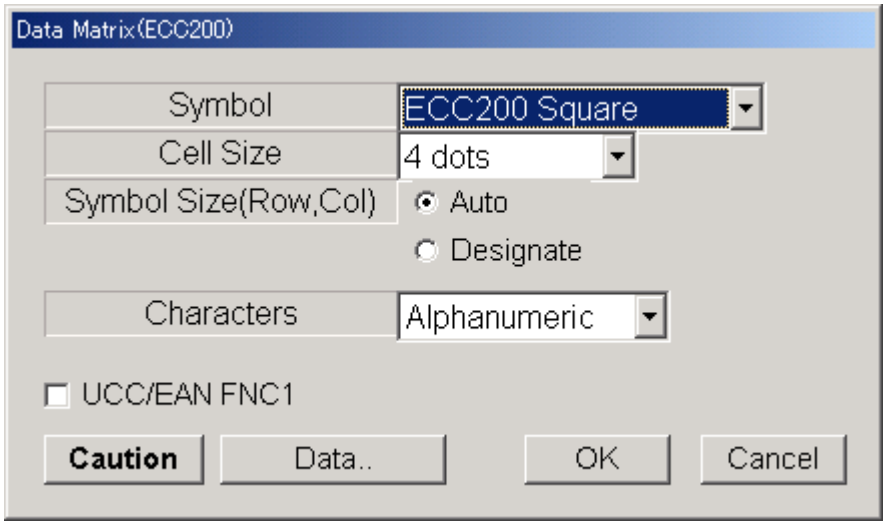
Note 1 : "Size"

You can select"Line Number", "Column Number", or "Auto".

- If you choose "Line Number", the selection list is displayed on the right side. Select the line number from the list (3 ~ 90). The column number is automatically decided according to the data.
- If you choose "Column Number Fixed", the selection list is displayed on the right side. Select the column number from the list (1 ~ 30). The line number is automatically decided according to the data.
- If you choose "Auto", both line and column numbers are automatically decided.

4-4-9 DataMatrix (ECC200)

Menu : "Insert" ->"DataMatrix" or  button.



The DataMatrix Image that appears on the screen is an imaginary product.

Function

Parameters for DataMatrix are designated.

Operation Procedure

1) Select the value for "Symbol" ("Square" or "Rectangle").
2) Select the value for "Cell Size" from the selection list (1 ~ 32 dots). Be sure to select more than 3 dots to avoid an error print.
3) Select the value for "Symbol Size (Row, Col)" (Automatic / Set). When you choose "Set", designate the value for the symbol size, picking from the selection list that appears on the screen.
4) Designate the value for "Character", picking from the selection list (Numeric / Alphanumeric / 8 bit byte).

   The software checks the inputted character.

   *Numeric : 0 ~ 9

   *Alphanumeric : 0 ~ 9, capital letters, symbols, and control codes

   *8 bit byte : Half Size (8 bit) Full Size(16 bit)

5) When you check "UCC / EAN FNC1", the FNC1 code is added to the initial position of the data.

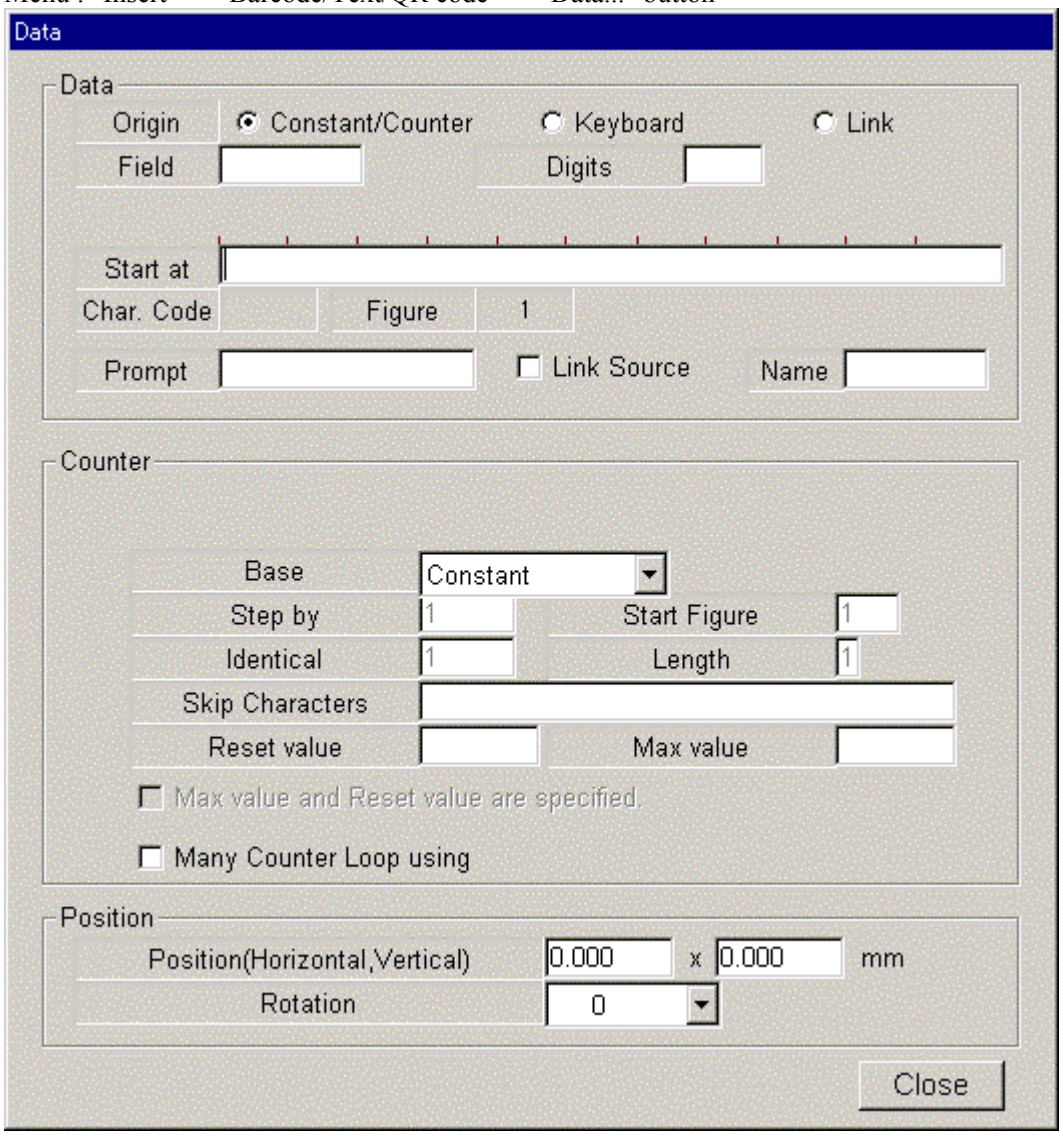
6) With "OK" button the DataMatrix data are stored as an Image.

With "Cancel" button, the process is canceled.

With "Data ..." button, the Data Input screen (See 4-4-10) is displayed.

4-4-10 Data Input

Menu : "Insert" -> "Barcode/Text/QR code" -> "Data..." button



Function

Print Data are defined for Barcode / Text /External Character Font/ QR Code / VeriCode / PDF417 / DataMatrix.

Operation Procedure

1) Press "Data ..." button during the Barcode / Text / QR Code / VeriCode / PDF417 / DataMatrix defining process, and then the screen shown above is displayed.

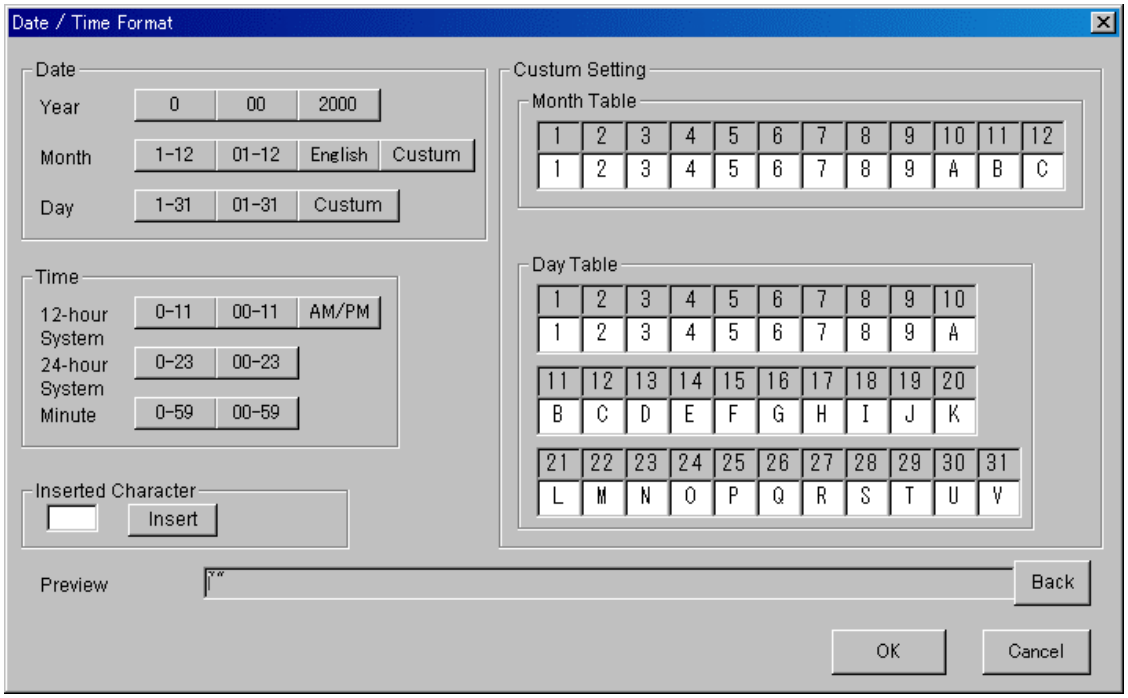
2) Select "Constant/Counter", "Keyboard" or "Link" as "Origin or "Date / Time". When you select "Constant/Counter", input Data (the data actually printed) here. When you select "Keyboard", input "Field" and "Digits" here, and the actual printed data in Print Screen. When you select "Link", the actually printed data are identical with the Link Source data (See Appendix H "Image Linking Function".).

   "Date / Time" button appears when you select "Date / Tim".

   *You can set "Date / Time" data only when you are defining a text Image.

3) When you designate the Image as the Link Source, turn on the Link Source check box and input the name. The length of the name is up to 8 characters. (When you designate more than 1 Link Source, you must use the different name for each.).
4) When the "Origin" is "Keyboard", input the field name to "Field". The field name must consist only of alphanumerics, and its length is up to 8 characters.
5) When "Origin" is "Keyboard", input in the character count of the Data to "Digits column".
6) You can input any comments to the "Prompt" column (The comment is displayed in the Print Screen.).
7) "Constant", "Numbers", "Letters", "Alphanumeric" or "Custom" can be selected as "Base". When you select other than "Constant", input values to the following columns, that is, "Step by", "Identical", "Start Figure" and "Length". If necessary, input the value also to "Skip Characters" (Only when you use **DURA PRINTER SR/SG/LSP5300**.). By designating "Skip Characters", you can make some specific character in the Counter unprinted. The Skip Characters must be among 0~9 and A~Z. In some cases, depending on the Counter type (Numbers / Letters / Alphanumeric) designated beforehand, you can not designate the "Skip Characters".
8) Position (Vertical x Horizontal) indicates the position in the label where the Image is printed out. The upper left corner of the label is assumed to be the base point when the position is decided. In the cases of Dot Font, Outline Font, QR Code and Picture Image, the starting point of each Image is the upper left point of the Image, and in the cases of Vector Font and Barcode, the lower left point.
9) As for "Rotation", select one out of 0 / 90 / 180 /270 (For QR Code or VeriCode, you can select only 0 .).

10) Select the format of date and time in “Date / Time”.



You can specify an arbitrary character for each date on “Custom”.

Input characters on “Inserted characters”.

The print data are displayed in “Preview”.

The previous data come back with “Restore”.

Note 1: "Skip Characters"

- You can designate "Skip Characters" in the Data Input Screen for each Image, and the same "Skip Characters" are commonly used by every Image (when Counter is used.). That is, you can not designate "1" in the Barcode and "2" in the Text. When you change the value of "Skip Characters" in an Image, the value of "Skip Characters" in every other Image is also changed.
- Do not designate "Skip Characters" to the data in the Counter.
  (Ex. The two from the 1st character of "1234" are designated to be Counter, do not designate "1" and "2" as "Skip Characters".

Note 2: Print data length

Up to 1000 characters can be inputted as print data.

Note 3 : "Bytes (Fixed)"

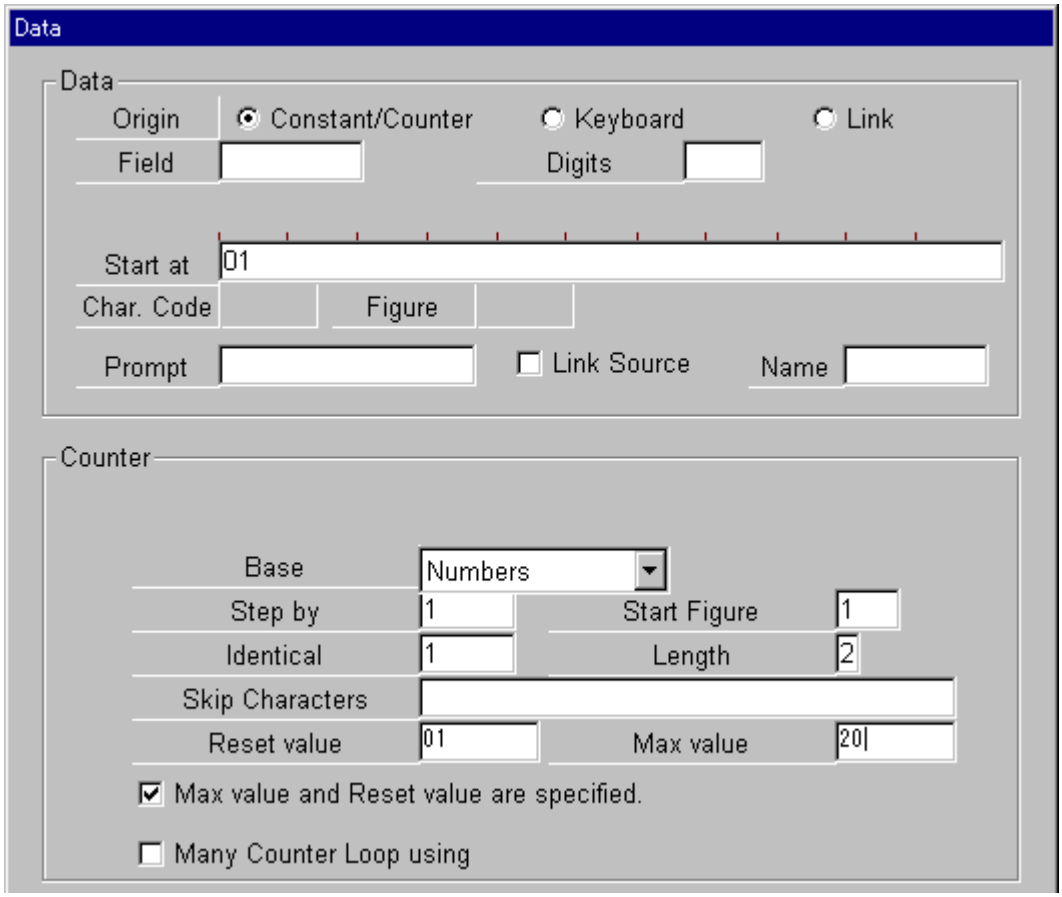
You can designate the value here when the "Origin" of the data is "Keyboard". When this parameter is checked, the length of the data is fixed to the number set to the "Bytes" parameter. When the length of the data you inputted in the "Print" screen is not identical with the length set to the "Bytes" parameter, the character string is considered to be an error. This setting is not valid when you print data with OLE.

Note 4.maximum..value..reset..value..specify..attach.

The maximum value and the reset value (reset value after it reaches the maximum value) of the set Counter can be specified.

For instance, 99 : the Counter for the figure of two digits as a Counter function of the printer though it is the maximum value and the reset value is 00. It is possible to change as a function of the software of Durarizm by checking "The maximum value and the reset value are specified".

Attention: The processing speed of the printer slows because it doesn't use the Counter function of the printer when the maximum value and the reset value are specified.



(When the maximum value is made in 20 in the setting of two figure digits and the reset value is adjusted to 01.)

Note 5.plural Counter loop is used.

If "Plural Counter loop is used" is checks

First Count Loop set up Count of a characters is ends. And Second Count Loop set up Count of a characters is becomes (Second Count use of Count Loop set up).

The same Second Count Loop set up Count of a characters is ends. And Third Count Loop set up Count.

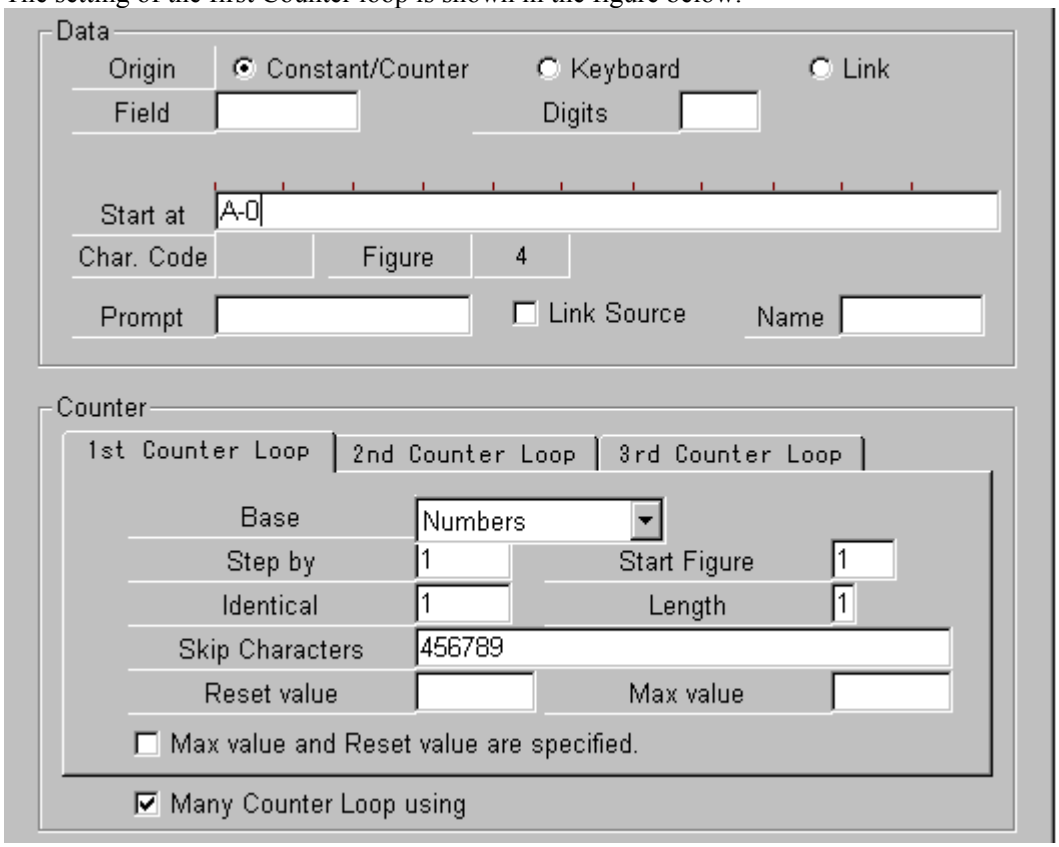
For instance," ■-● "

0-3Counter

When you want to do the Counter for the data of ■ with A-Z at the time of each digit going up of the data of ●

(That is, " A-0 " -> " A-1 " -> " A-2 " -> " A-3 " -> " B-0 " -> " B-1 " -> " B-3 ")

The setting of the first Counter loop is shown in the figure below.

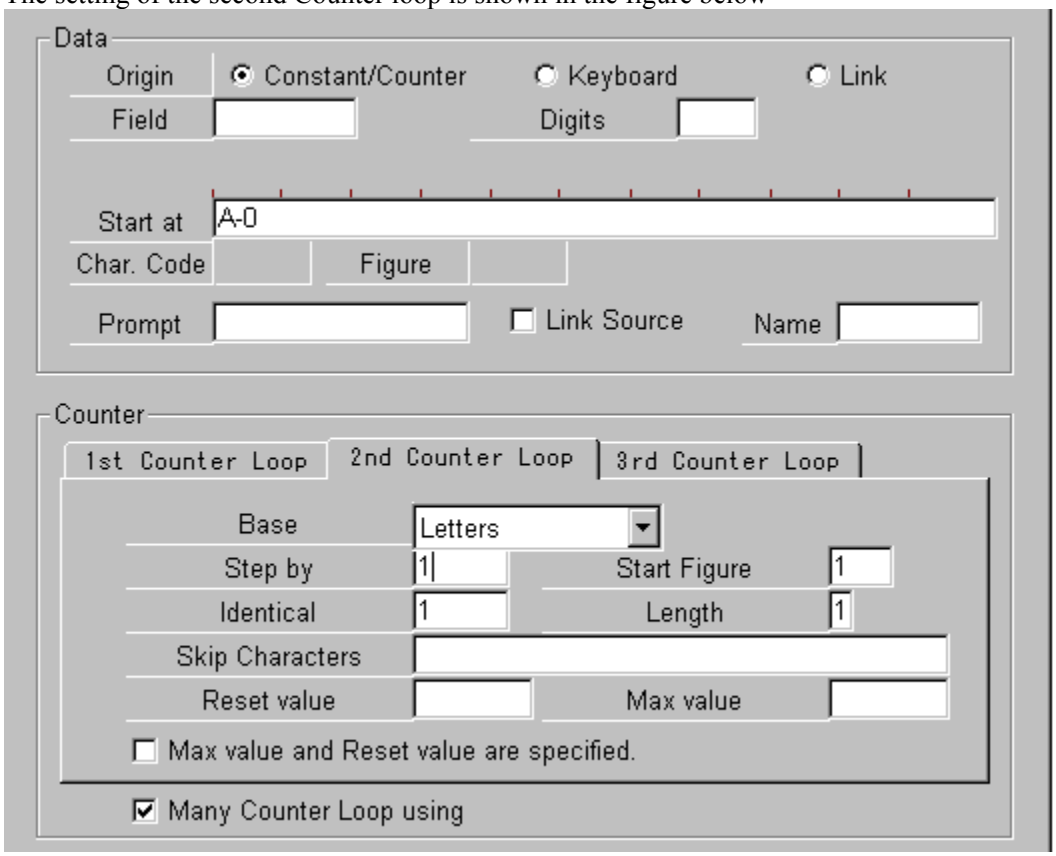


Setting of the first Counter loop

"■-● "

Making from treble to figure Counter for 1 character because it is Counter for 0-3 and skip setting of "4, 5, 6, 7, 8, and 9"

The setting of the second Counter loop is shown in the figure below

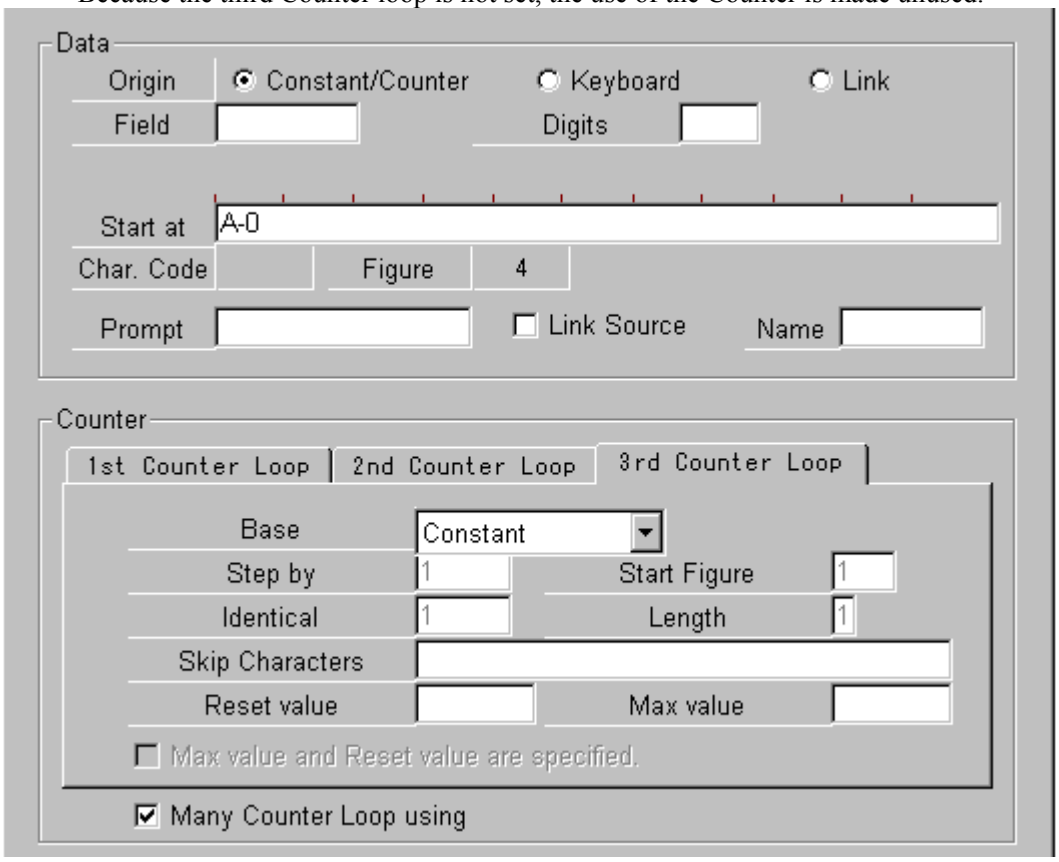


Setting of the second Counter loop

"■ - ●"

Because it is a Counter for A-Z, the alphabet Counter from 1 to 1 character is set.

Because the third Counter loop is not set, the use of the Counter is made unused.



4-4-11 Line

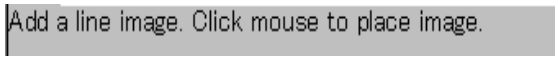
Menu : "Insert" -> "Line"

Function

Lines are drawn.

Operation Procedure

1) When you select "Line", the following message is displayed on the status bar.



2) Set the mouse cursor to the start point of the line in the layout area and click the left button. The starting point is decided.
3) Drag the mouse to the end point and release the button.
4) During you are pressing the mouse button, you can scroll the screen by pressing the up, down, left or right key.

4-4-12 Rectangle

Menu : "Insert" -> "Rectangle"

Function

Rectangles are drawn.

Operation Procedure

1) When you select "Rectangle", the following message is displayed on the status bar.

2) Set the mouse cursor to the start point of the Rectangle in the layout area and click the left button. The starting point is decided.
3) Drag the mouse to the end point and release the button.
4) During you are pressing the mouse button, you can scroll the screen by pressing the up, down, left or right key.

4-4-13 Fill Color

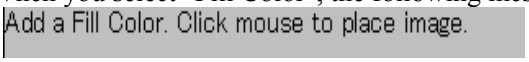
Menu : "Insert" -> "Fill Color"

Function

The designated rectangle is painted over.

Operation Procedure

1) When you select "Fill Color", the following message is displayed on the status bar.



2) Set the mouse cursor to the start point of the painted rectangle in the layout area and click the left button. The starting point is decided.
3) Drag the mouse to the end point and release the button.
4) During you are pressing the mouse button, you can scroll the screen by pressing the up, down, left or right key.

4-4-14 White Box

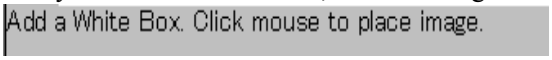
Menu : "Insert" -> "White Box"

Function

The White Box is drawn.

Operation Procedure

1) When you select "White Box", the following message is displayed on the status bar.



2) Set the mouse cursor to the start point of the White Box in the layout area and click the left button. The starting point is decided.
3) Drag the mouse to the end point and release the button.
4) During you are pressing the mouse button, you can scroll the screen by pressing the up, down, left or right key.

4-4-15 Reverse Box

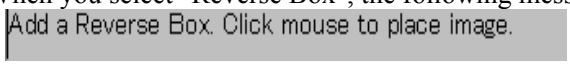
Menu : "Insert" -> "Reverse"

Function

The Reverse Box is drawn.

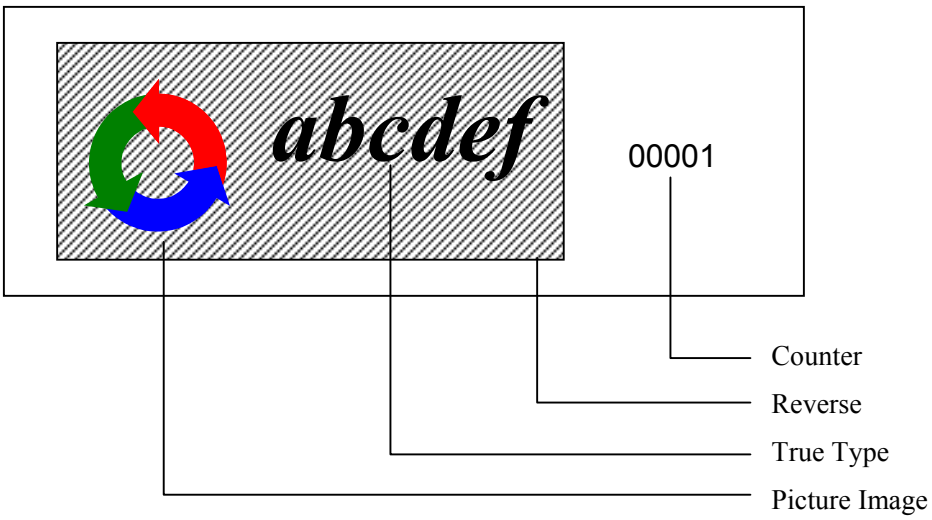
Operation Procedure

1) When you select "Reverse Box", the following message is displayed on the status bar.



2) Set the mouse cursor to the start point of the Reverse Box in the layout area and click the left button. The starting point is decided.
3) Drag the mouse to the end point and release the button.
4) During you are pressing the mouse button, you can scroll the screen by pressing the up, down, left or right key.

Notes



When a Picture Image (True Type) is included in the designated reversed area, the reverse process can not be executed correctly, if counter data exist in the other area. In the example above, the Picture Image and True Type are not printed. In such a case, use the already reversed Picture Image.

4-4-16 Edit

Movement of an Image

When you move the position of the image designated in Insert Menu (Barcode, Text, Picture Image, QR Code, Line, etc.), follow the procedure shown below.

1) Set the mouse cursor on the Image and click the left button of the mouse. The dot line is displayed, enclosing the Image.
2) Drag the mouse to the position you want.
3) The Image moves to the point where you released the button.

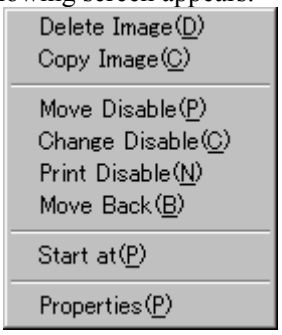
Movement of Images (as a package)

1) Press the left button of the mouse in the layout area (where no image exists), move the mouse with the left button still pressed, and release the button. All the Images inside the area from the point you pressed the button to the point you released it are selected and displayed in red.
2) Click the left button of the mouse on one of the Images displayed in red, and then the dot line is displayed, enclosing the Image.
3) Drag the mouse to the position you want.
4) The Image moves to the point where you release the button.

Edit Images

When you delete or copy an Image (Barcode, Text, Picture Image, QR Code, Line, etc.), and when you modify the parameters of the Image, follow the procedure shown below.

1) Click the right button of the mouse with the cursor on the Image to be edited. The Image is displayed in red and the following screen appears.



2) When you select "Delete Image" on the screen above, the Image displayed in red is deleted.
3) When you select "Copy Image" on the screen above, another Image which has the parameters identical with those of the Image displayed in red is generated.

4) When you select "Fixation" on the screen above, you can make it impossible to move the Image with mouse. With "Fixation" again, you can cancel the setting.

5) By clicking "Move Disable" (see the menu above), you can place or remove the check mark on it, which toggles "Move Disable" of the Image on and off.

6) By clicking "Print Disable" (see the menu above), you can place or remove the check mark on it, which toggles "Print Disable" of the Image on and off.

7) When you select "Background" (available only when the Image is Barcode, Text, Picture Image, QR Code, or True Type) on the screen above, the priority of the Image becomes the lowest. When you select the area where more than one Image are contained, the Image with the highest priotiry is selected first.

8) When you select "Data in the Image" on the screen above, you can edit the data of the Image (Barcode, Text, QR Code, VeriCode). This function is available only when the "Origin" is "Constant".

9) When you select "Properties" on the screen above, the Edit Screen for each Image is displayed.

(1)When the Image in red is a Barcode, the displayed screen is identical with the screen which appears when you select "Insert" -> "Barcode".

(2)When the Image in red is a Text, the displayed screen is identical with the screen which appears when you select "Insert" -> "Text".

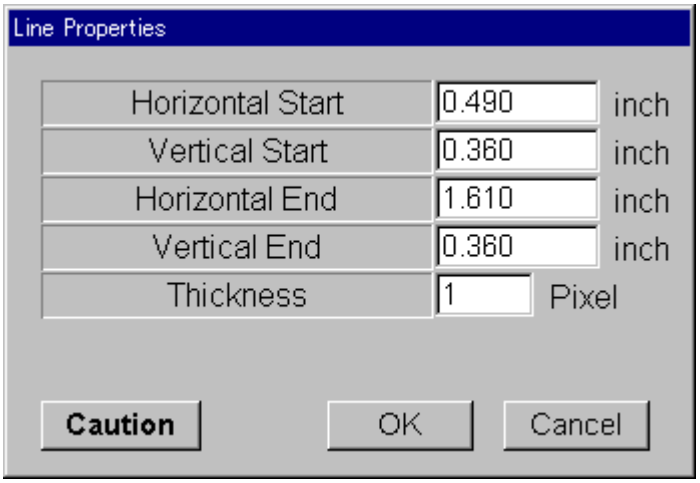
(3)When the Image in red is a Picture Image, the displayed screen is identical with the screen which appears when you select "Insert" -> "Picture Image".

(4) When the Image in red is a True type one, the screen identical with the one that appears when you click “Insert” → “TrueType” is displayed.

(5)When the Image in red is a QR Code, the displayed screen is identical with the screen which appears when you select "Insert" -> "QR Code".

(6) When the Image in red is a PDF417 one, the screen identical with the one that appears when you click “Insert” → “PDF417” is displayed.

(7)When the Image in red is a Line, the screen below is displayed.



"Horizontal Start" indicates the starting horizontal coordinate of the line.

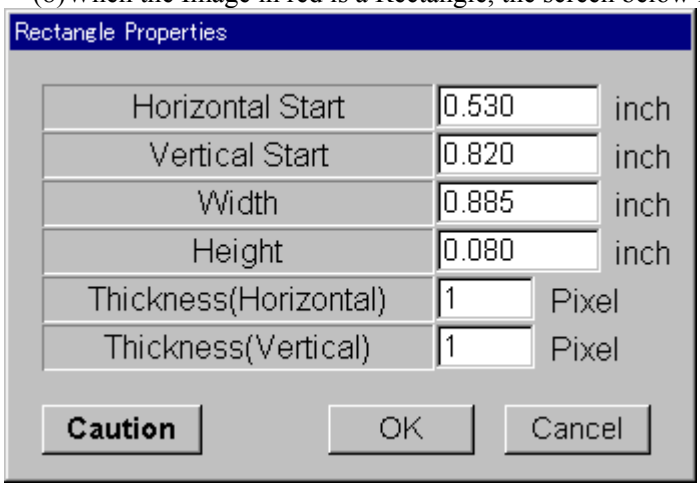
"Vertical Start" indicates the starting vertical coordinate of the line.

"Horizontal End" indicates the end horizontal coordinate of the line.

"Vertical End" indicates the end vertical coordinate of the line.

"Thickness" indicates the width of the line. Designate the width in Pixel when the line is horizontal or vertical. The width of slanting lines is fixed and you can not define it.

(8)When the Image in red is a Rectangle, the screen below is displayed.



"Horizontal Start" indicates the starting horizontal coordinate of the rectangle.

"Vertical Start" indicates the starting vertical coordinate of the rectangle.

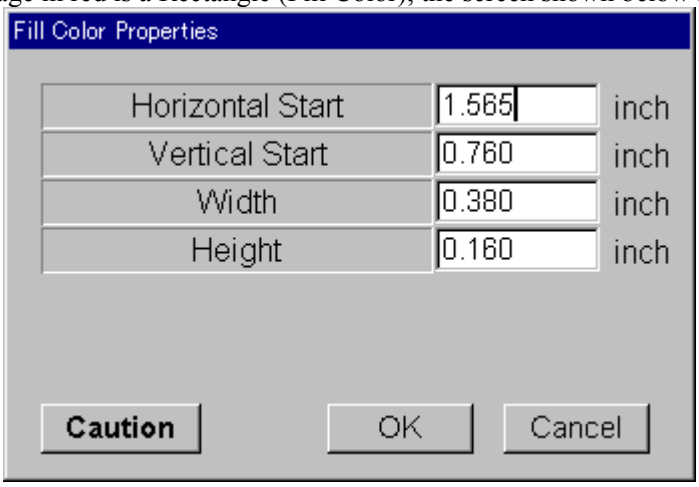
"Width" indicates the width of the rectangle.

"Height" indicates the height of the rectangle.

"Thickness (Horizontal)" indicates the thickness of the horizontal line of the rectangle. Designate the thickness in Pixel (1 Pixel for horizontal lines = 0.254mm).

"Thickness (Vertical)" indicates the thickness of the vertical line of the rectangle. Designate the thickness in Pixel (1 Pixel for vertical lines = 0.127mm).

(9)When the image in red is a Rectangle (Fill Color), the screen shown below is displayed.



"Horizontal Start" indicates the starting horizontal coordinate of the Rectangle (Fill Color).
"Vertical Start" indicates the starting vertical coordinate of the Rectangle (Fill Color).
"Width" indicates the width of the Rectangle (Fill Color).
"Height" indicates the height of the Rectangle (Fill Color).

(10)When the Image in red is a White Box, the screen almost equal to that for the Rectangle (Fill Color) shown above is displayed.

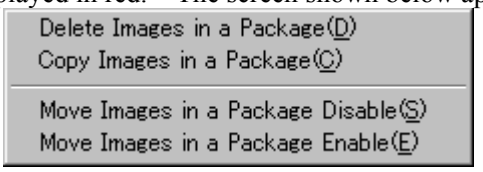
(11)When the Image in red is a Reverse Box, the screen almost equal to that for the Rectangle (Fill Color) shown above is displayed.

Note 1 : "Pixel Size"
The size of Horizontal Pixel (Vertical Line) is 0.127mm and that of Vertical Pixel (Horizontal Line) is 0.254mm. When you designate the Vertical Line Width to be 2 Pixel and the Horizontal to be 1 Pixel, the width of each line is 0.254mm.

Note 2 : "Rectangle (Fill Color) and Thick Line"
Rectangle (Fill Color) and a thick line may cause the deterioration in printing, such as uneven depth of the ink, collapsed characters,etc.

Edit Images (as a package)

1) Choose more than one Image and click the right button of the mouse on one of the Images displayed in red. The screen shown below appears.



2) When you select "Delete Images in a Package" on the screen above, the Images displayed in red are deleted.
3) When you select "Copy Images in a Package" on the screen above, another pack of the Images is generated whose parameters are identical with those of the Images displayed in red.
4) When you select "Move Images in a Package Disable" on the screen above, the Images displayed in red becomes unmovable.

When you select "Move Images in a Package Possible" on the screen above, the Images displayed in red becomes movable.

4-5 Tools

"Tools" is utilized to designate the environment, etc.

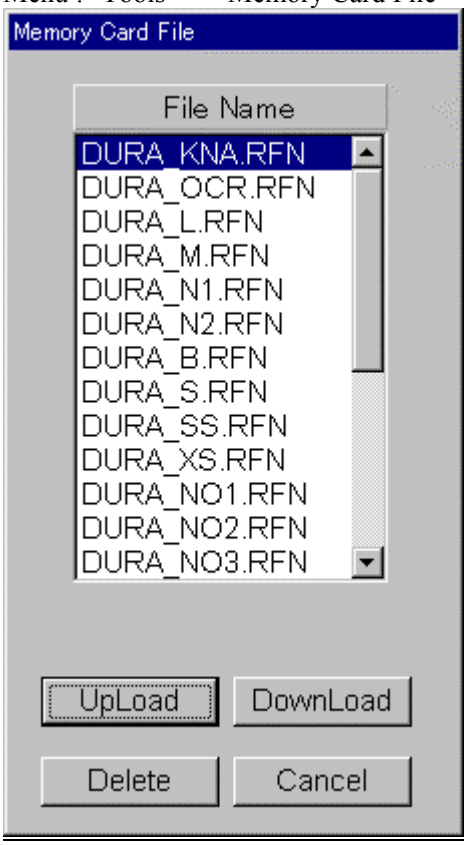
Choose "Tools" on Menu Bar, and then the pull down menu including the field type shown below are displayed. Pick from the items in the pull down menu the process you want.

1) Memory Card File
2) Function Setting
3) Option (View)
4) Option (Printer Port)
5) Option (Printer)
6) HardCopy Print
7) Associate
8) Updating the Printer ROM

The detailed explanation of each process is in the following pages.

4-5-1 Memory Card File

Menu : "Tools" -> "Memory Card File"



Function

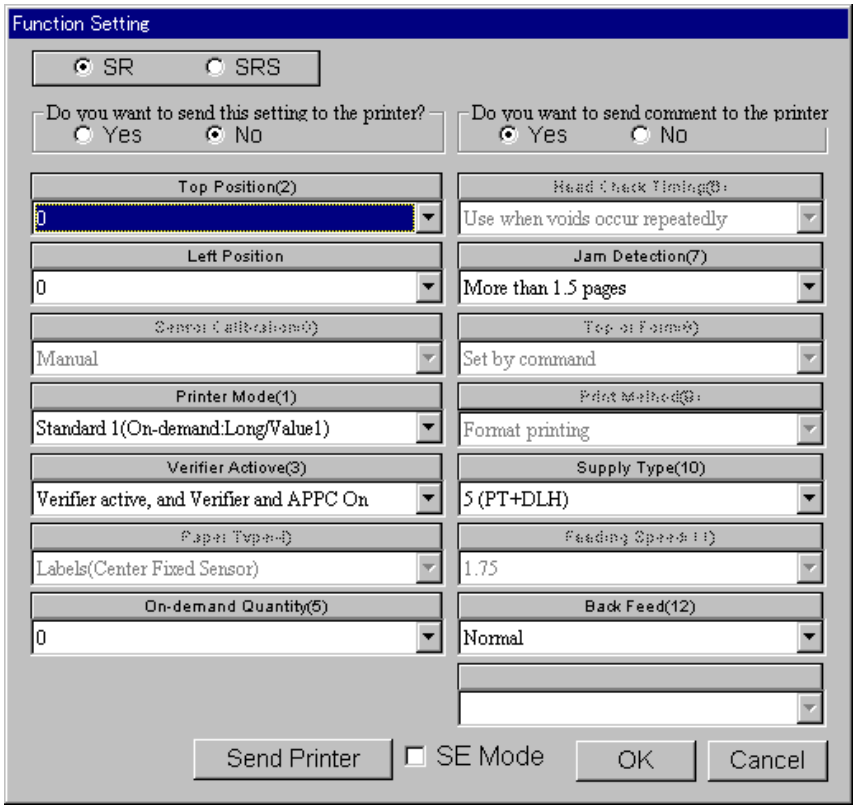
When the memory card (option) is ready on a DURA PRINTER (LSP5300 has the internal printer memory that has the same function as the memory card.), you can refer the data in the file stored in the memory card (printer memory), if the designated communication port is other than LPT port. With DURA PRINTER SR (SRS) / SG / LSP5300, you can upload, down load, and delete the file.

Operation Procedure

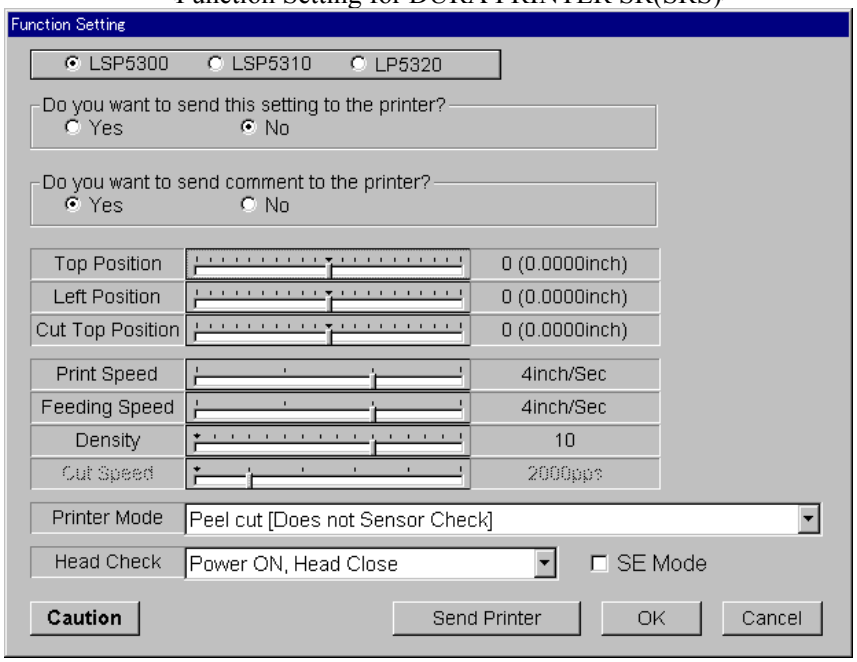
1) Select "Memory Card File" and then the dialog box shown above appears.
2) Select the file name you want to upload and click "UpLoad".
   The folder select dialog box appears.
   Select the folder where you want to store the file.
3) Click "DownLoad" and then the file select dialog box appears.
   Select the file you want to store in the printer from the displayed list.
4) Select the file name you want to delete and click "Delete".
5) Click "Cancel" to close this dialog box.

4-5-2 Function Setting

Menu : "Tools" -> "Function"



<Function Setting for DURA PRINTER SR(SRS)>



<Function Setting for DURA PRINTER LSP5300>

Function

The functions of **DURA PRINTER SR(SRS)/SG/LSP5300** are designated.

You can designate only the items displayed in black. You can designate all items when "SE Mode" is on (Normally, keep "SE Mode" off.).

When you use **DURA PRINTER SR/SRS**, select on this screen your printer.

Operation Procedure

1) Select "YES" or "NO" in "Do you want to send this setting to the printer?".
2) Select "YES" or "NO" in "Do you want to send comment to the printer?".
3) Turn "SE Mode" on when you designate all items.
4) Select the value from Selection List for each designatable item.
5) With "Send to Printer", data is transmitted to the printer and the printer is reset.
   With "OK", the designated data is recorded and the function data is transmitted during the print process when you have selected "YES" in "Do you want to send this setting to the printer?".
   With "Cancel", this process is canceled.

Complement

1) Refer to "SR Operation Manual" and "SR System Introduction Guide" for more information when you use **DURA PRINTER SR**.
   The modifiable items with **DURA Rhythm** in the usual state (when "SE Mode" is off) are shown below.
   (1)Function No. 2 "Print Starting Position"
   (2)Function No. 3 "Verifier Active"
   (3)Function No. 5 "On-demand Quantity"
   (4)Function No. 10 "Supply Type"
   (5)Function No. 12 "Back Feed"
   Others are fixed to the data on the display.

* Function No. 1 "Printer Configuration"

"Standard 1 (On-demand : Long) (Set Value 1)" : The label is fed to the remotest peeling position (On-demand) after print.

"Standard 2 (On-demand :Short) (Set Value 8)" : The label is fed after print to the position past the verifier.

"Standard 3 (On-demand :Medium) (Set Value 9)" : The label is fed to the nearest peeling position (On-demand) after print.

"Manual (Without Sensor Check) (Set Value 5)" : Select this value when the peeling sensor is utilized on the Model with the peeler.

"Manual (With Sensor Check) (Set Value 5)" : Select this value when the peeling sensor is utilized on the Model with the peeler and the label existance is checked before sending data.

Turn off the Printer after you modify any one of the value.

* Function No. 10 "Supply Type" (Print Energy Set)

The combination of the label (DURA Tack) and the ink (DURA Ink) decides print energy setting of the printer.

The set values for each supply type are shown in the table below.

DURATACK / DURAINK	PH (Polyamide)	PN (Polyolefin)	PO (Polyolefin)	PON (Polyolefin)	PT (Polyester)	G (Paper)	PF (Fluoride)	S40H (Silicon) C40FH (Ceramic)
H	9	-	-	-	1 or 5	-	-	-
PN	-	1	-	5 or 8	-	-	-	-
PO	-	-	9	5 or 8	-	-	-	-
DLH	-	-	-	-	5 or 9	-	-	-
G	-	-	-	-	-	1	-	-
PF	-	-	-	-	-	-	9	-
DWH	-	-	--	-	-	-	-	8

2) The Function No. for **DURA PRINTER SRS** are different from those of **SR** in the points shown below.

(1)Function No. 1 "Printer Configuration"

(2)Function No. 3 You can not set the value as **SRS** does not have the verifier.

(3)Function No. 7 You can not set the value as **SRS** does not have the verifier.

(4)Function No.10 "Supply Type"

(5)Function No.11 "Feeding Speed"

(6)Function No.13 "Printer Mode-Manual, Delay Time"

・ Function No. 1 "Printer Configuration"

"Label Feeding after Print (Set Value 1)" : The label is fed to the peeling position after print.

"No Label Feeding (Set Value 2)" : The label is not fed to the peeling position after print.

"Continuous Cut (Set Value 3)" : Cutting and the print of the next label are executed at the same time. As the print process is suspended when the label is cut, the horizontal white line may appear on the label (only on the cutter model).

"Label Feeding after Cut (Set Value 4) : The cut process is executed after the label is fed to the cutting position.

"Manual (Set Value 5) : Select this value when the peeling sensor is utilized on the Model with the peeler.

Turn off the Printer when you modify the designation.

Select either "Individual" or "Batch" as the cut mode in the "Printer Option" if you want to use the cutter. When you select " Individual", one label is cut off at one time. When you select "Batch",the number of the labels cut at one time corresponds to the value you designated on the Print screen.

* Function No. 10 "Supply Type" (Print Energy Set)

The combination of the label (DURA Tack) and the ink (DURA Ink) decides print energy setting of the printer.

The set values for each supply type are shown in the table below.

DURATACK / DURAINK	PH (Polyamide)	PN (Polyolefin)	PO (Polyolefin)	PON (Polyolefin)	PT (Polyester)	G (Paper)	PF (Fluoride)	S40H (Silicon) C40FH (Ceramic)
H	6	-	-	-	4 or 5	-	-	-
PN	-	1 or 4	-	5 or 8	-	-	-	-
PO	-	-	6	5 or 8	-	-	-	-
DLH	-	-	-	-	5 or 6	-	-	-
G	-	-	-	-	-	1 or 4	-	-
PF	-	-	-	-	-	-	6	-
DWH	-	-	-	-	-	-	-	8

3) Refer to "SG Operation Manual" for more information when you use **DURA PRINTER SG**.

The modifiable items with **DURA Rhythm** in the normal state (when "SE Mode" is off) are shown below.

(1)Function No. 0 "Print Speed"

(2)Function No. 1 "Unprinted Area Feeding Speed"

(3)Function No. 2 "Paper Type"

(4)Function No. 3 "Paper Sensor Type"

(5)Function No. 4 "Print Starting Position"

(6)Function No. 5 "Cut Position"

(7)Function No. 6 "Cutter Active"

(8)Function No. 8 "Head Check Timing"

(9)Function No. 9 "Top of Form Setting Mode"

(10)Function No.11 "Printer Mode-Manual, Delay Time"

(11)Function No.12 "Back Feed"

Others are fixed to the data on the display.

* Function No. 0 "Print Speed"

The maximum print speed may be restricted to guarantee the normal print result, depending on the used supply used(label, tag, ink). When a format including a ladder barcode, the lower the print speed is, the more clearly the edges of the barcode can be printed, and the higher success rate in barcode reading can be expected.

* Function No. 6 "Cutter Active"

"No Cutter, Label Feeding after Print"	The label is fed to the peeling position after print. The label is not cut.
"No Cutter, No Label Feeding"	The label is not fed to the peeling position after print. The label is not cut.
"Continuous Cut"	Cutting and the print of the next label are executed at the same time. As the print process is suspended when the label is cut, the white horizontal line may appear on the label.
"Label Feeding after Cut"	The cut process is executed after the label is fed to the cutting position.
"Manual (Without Sensor Check) (Set Value 5)"	Select this value when the peeling sensor is utilized on the Model with the peeler. Designate "Automatic" for Form Length Setting Mode.
"Manual (With Sensor Check) (Set Value 5)"	The same process is executed as the above but the label existance is checked before sending data.

When you modify the designation, turn off the printer. Select either "Individual" or "Batch" as the cut mode in "Printer Option". When you select "Individual", one label is cut off at one time. When you select "Batch", the number of the labels cut at one time is the value designated to "Number of Print" in Print Screen.

4) As for **LSP5300**, see "LSP5300 Operator's Manual" for more detailed information.

Normally, you can designate arbitrarily the following functions with **DURA Rhythm**.

(1)Function No. 0 "Print Speed"

(2)Function No. 1 "Feeding Speed"

(3)Function No. 2 "Density"

(4)Function No. 3 "Vertical Alignment of Printer Configuration"

(5)Function No. 4 "Vertical Alignment of Print Starting Position"

(6)Function No. 5 "Cut Position"

(7)Function No. 6 "Head Check"

(8)Function No. 9 "Cut Speed"

* Function No. 3 "Printer Configuration"

"No Cutter, On-demand" : The label is fed to the peeling position after print. The label is not cut.

"No Cutter, No On-demand" : The label is not fed to the peeling position after print. The label is not cut.

"Continuous Cut" : Cutting and the print of the next label are executed at the same time. As the print process is suspended when the label is cut, the white horizontal line may appear on the label. The peeling sensor is not utilized.

"On-demand Cut" : Labels are cut after they are fed to the cutting position. The peeling sensor is not utilized.

"Peeling Cut (Without Sensor Check)"

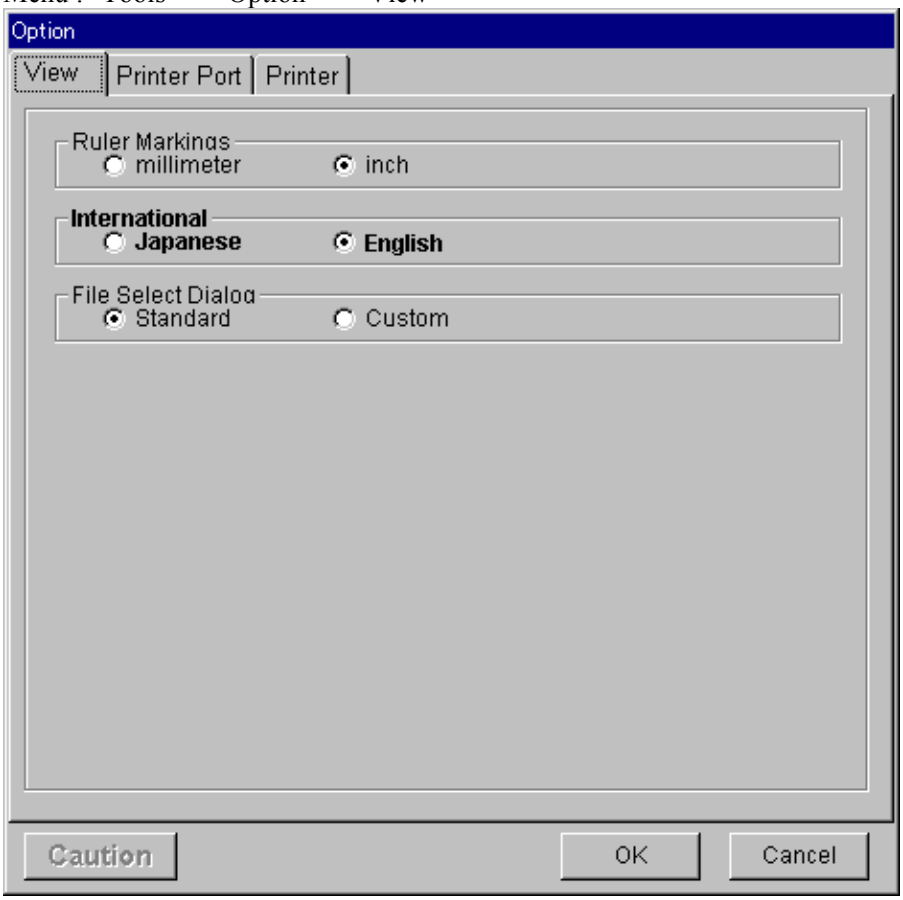
: Labels are cut after they are fed to the cutting position. The peeling sensor is utilized. After it is detected by the sensor that the label is peeled off, the next data, if exist, are to be printed out.

"Peeling Cut (With Sensor Check)"

:The same process is executed as the above but the label existance is checked before sending data.

4-5-3 Option (View)

Menu : "Tools" -> "Option" -> "View"



Function

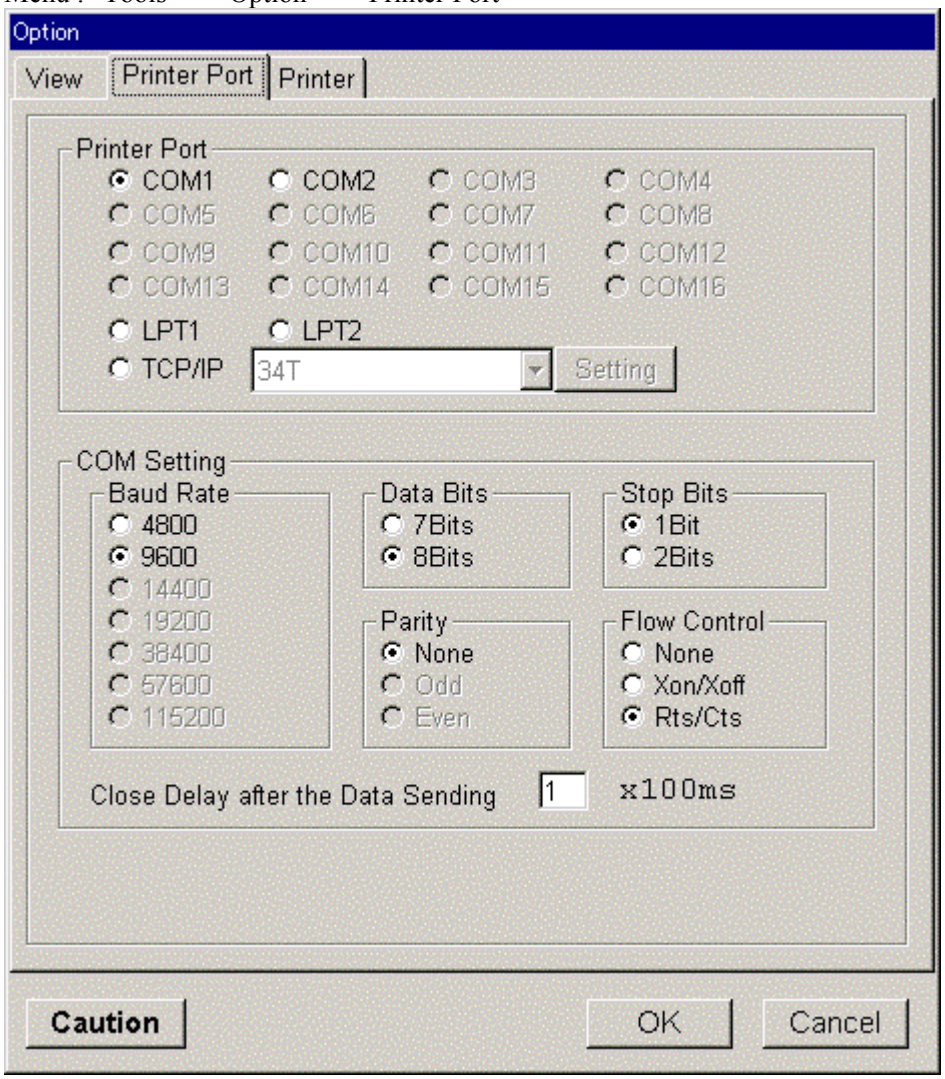
1) Select the unit for "Ruler Markings". The alternatives are millimeter and inch.
2) Select the language for "International". The alternatives are Japanese and English.
3) Designate "File Select Dialog" (screens of "Open", "Save As ...", etc.). When you select "Standard", the standard file selection screen of **Windows** is displayed and with "Custom", the usual file selection screen of **DURA Rhythm** (File Name, Label Size, Description) is displayed.

Operation Procedure

1) Select "Scale".
2) Select "International".
3) With "OK", the designated environment is stored.
   With "Cancel", this process is canceled.

4-5-4 Option (Printer Port)

Menu : "Tools" -> "Option" -> "Printer Port"



Function

The printer port is designated to connect with **DURA PRINTER**.

Operation Procedure

1) Select the printer port (COM1~COM4 are serial (RS-232C) ports, LPT1~LPT2 are parallel (printer) ports, and TCP/IP is RS-232C port via network.).
2) When you select one of the COM ports or TCP/IP port, designate "COM Setting".
3) With "OK", the designated data is stored.
   With "Cancel", this process is canceled.

Note 1 : "Printer Port"

DURA PRINTERS are intended only for the COM port.

Note 2 : "COM Setting"

The specified modes of "COM Setting" and used **DURA PRINTER** must be identical with each other.

Note 3 : "Wait Time for Closing after Data Transportation"

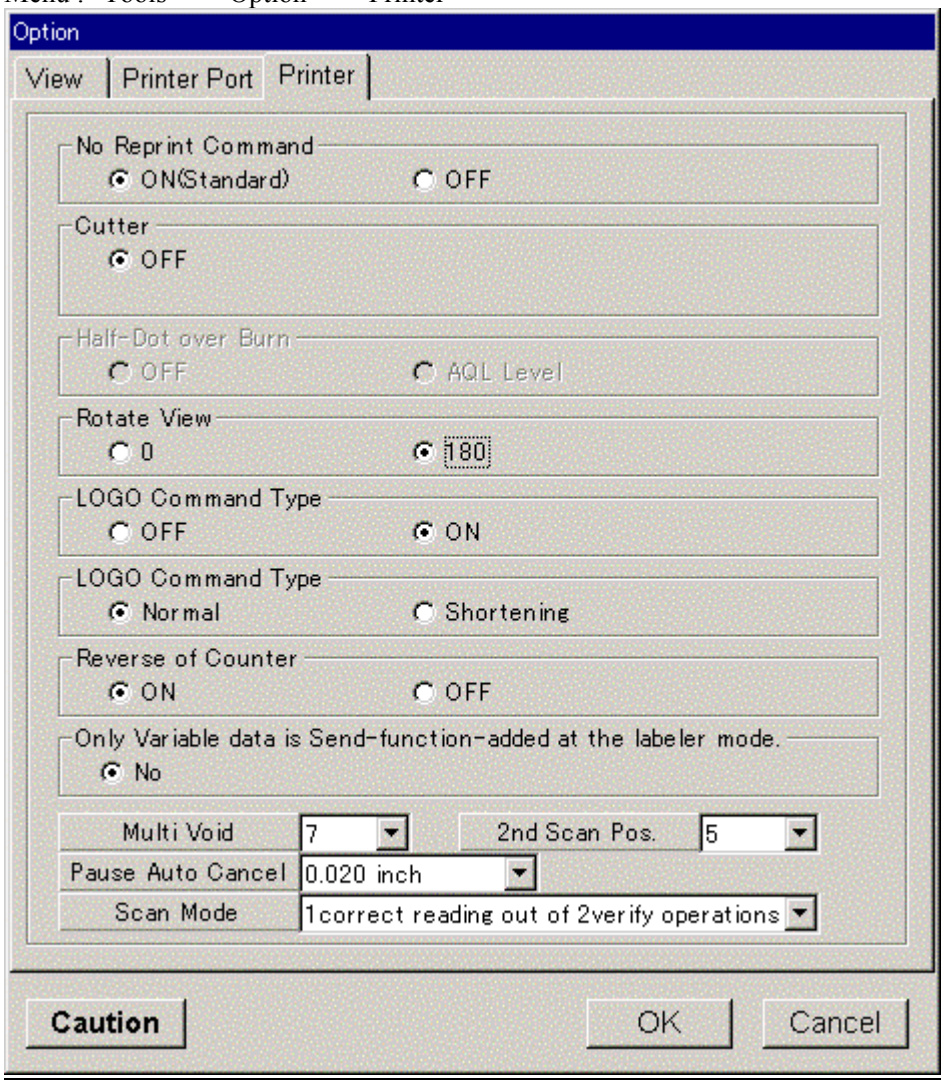
Designate the wait time for closing the port after sending data in the unit of 100 ms. This designation is necessary to avoid such an error that the last letter of the data is transformed to another one with some RS-232C expansion board. When you use the standard COM port built in the personal computer, you can set "0" to "Wait Time" because it does not cause such an error.

Note 4 : "Generic/Text Only"

See “Appendix R Output to Generic/Text Only Printer” for how to print data with Generic/Text Only.

4-5-5 Option (Printer)

Menu : "Tools" -> "Option" -> "Printer"



Function

Parameters for **DURA PRINTERS** are designated.

Operation Procedure

1) When you use **DURA PRINTER SR/R**, select "OFF" or "ON" for "NORP Comment". When you select "OFF", the labels not printed correctly owing to the supply error are reprinted.
2) Designate "Cutter".
3) When you use **DURA PRINTER R**, select "OFF" or "ON" for "Half-Dot over Burn".

4) Select "0 " or "180 " for "Rotate View". Select "0 " normally. In some cases the image is not turned reversely, though you select "180 " here. In such a case, reverse each Image individually (Re-generate the Picture Image in the rotated figure with the application with which it was generated.)
5) Select "No" or "Yes" for "Pause Auto-Cancel". When you select "Yes", the printer which is not ready becomes ready automatically and the print process is started.
6) When you use **DURA PRINTER SR**, designate "AQL Level". "AQL Level" determines the tolerance in verifying barcodes (The standard value is 7.).
7) When you use **DURA PRINTER SR**, input the void count in the "Multi void" column Verification mode. When the count of the successively appeared void marks becomes equal to the designated void count, the printer is stopped.
8) In labeler mode, designate whether you want to send only variable data or not.
   In the case of "variable data only", only the variable data are sent to the printer in OLE printing process.
9) When you use **DURA PRINTER SR/SRS/LSP5300, 5310/LSP5320/KP4300/KP3000/IP6500**, select “ON” or "OFF" on "input all control codes". (When QR code 8-bit-byte is selected as the input mode, you can select neither "all control codes".)
   *If you change the setting on "all control codes", all Images are cleared
10) With "OK" button, the designated parameters are stored.
    With "Cancel, this process is canceled.

Note1 : "NORP Command" (with **DURA PRINTER R/SR**)

When the print process is started after a supply error (Label Jam, no label, or no ink) has occurred, sometimes the label already printed is printed again. When there exists a label which has been printed but not verified (the unverified label), the label is reprinted, considered not to be printed.

Throw the former label away in such a case. In order not to print the same label when the print process is restarted, select "ON" in designating "No Reprint Command". The data which was being printed when the error occurred is skipped and the next label is to be printed first when the print process is restarted (Missing data may happen.).

Note2 : "Print all control codes"

To print all control codes, you have to use the printer firmware of the version appropriate to you r printer.

See the list below.

SR : 00.46 and later

SRS : 10.22 and later

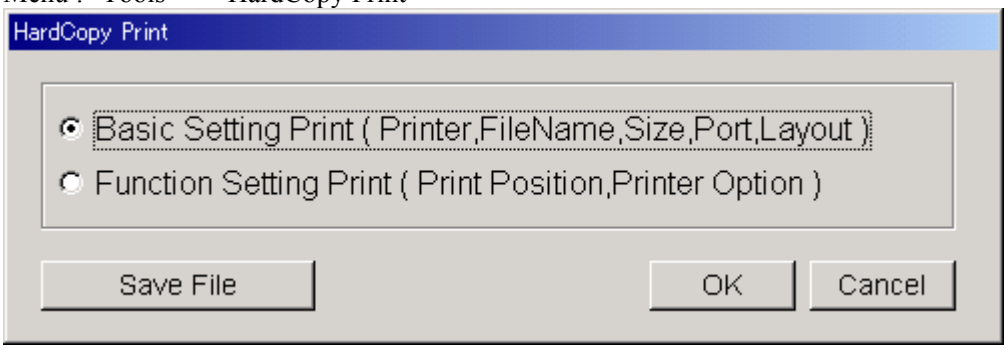
LSP5300, 5320 : 11.19 and later

LSP5320 : 01.13 and later

KP4300/KP3000/IP6500 : any version

4-5-6 HardCopy Print

Menu : "Tools" -> "HardCopy Print"



Function

Various data can be printed out with the default printer (the Windows-ready printer).

The printed data can be stored in the form of graphical data file (JPEG file).

Operation Procedure

1) Select either "Basic Settings" or "Function Settings".

2) Click "OK" to print data.

Click "Cancel" to cancel this process.

Click "Save" to store the data in the graphical data file.

4-5-7 Association

Menu : "Tools" -> "Association"

Function

Designate the application to be started when you double-click the file with ".RTW".

When you check **DURA Rhythm** on the screen above, **DURA Rhythm** is started automatically when you double-click the file with ".RTW." from the Explorer,etc.

When you check **DURA Rhythm Light**, **DURA Rhythm Light** is started.

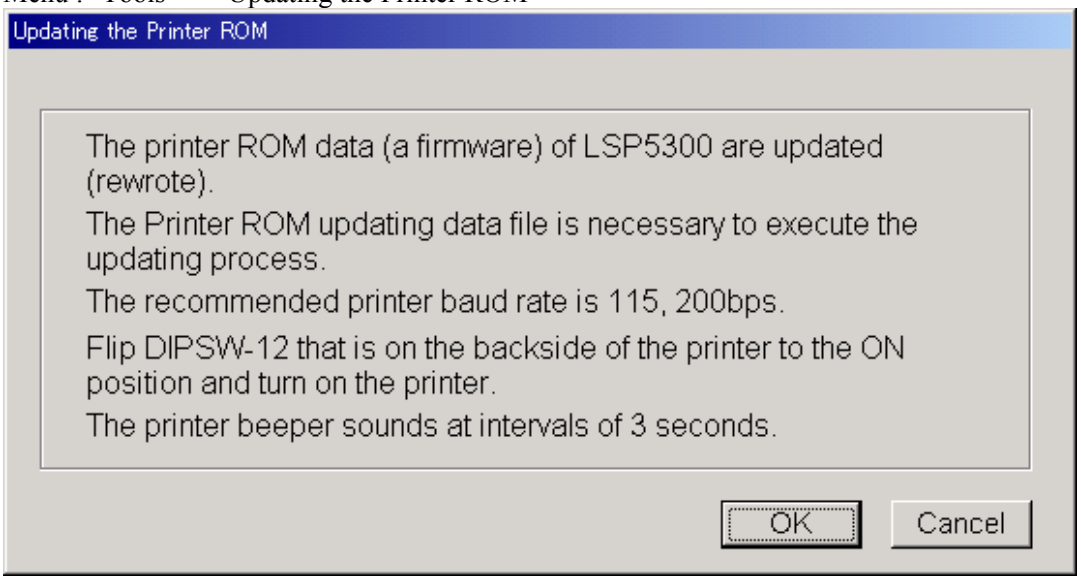
Operation Procedure

1)Select the application.

2)With "OK", the designated application is associated with files with ".RTW".
With "Cancel", this process is canceled.

4-5-8 Updating the Printer ROM

Menu : "Tools" -> "Updating the Printer ROM"



Screen 1

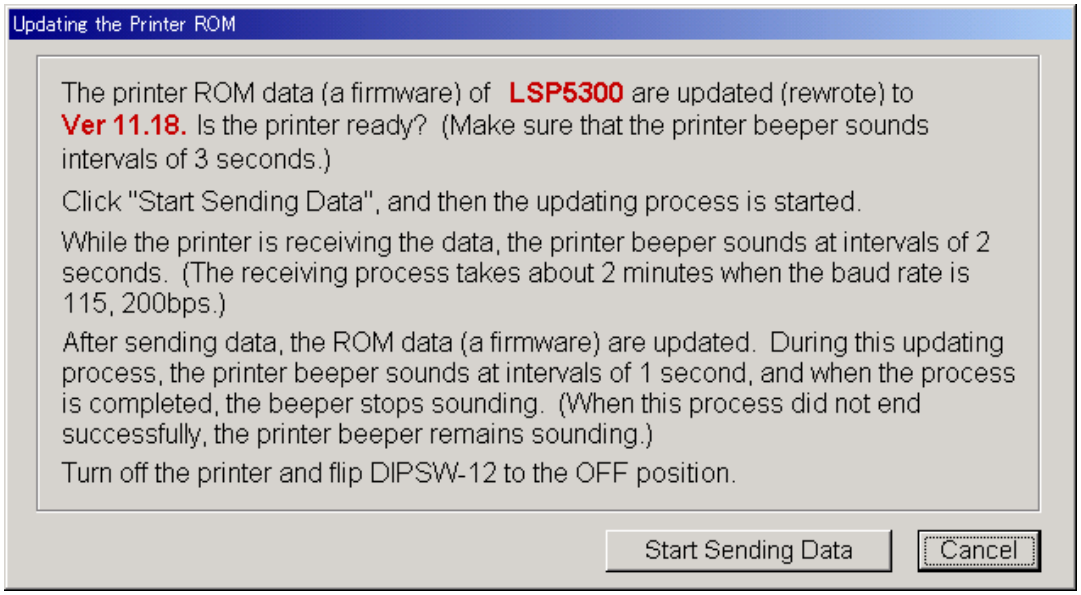
Function

The printer ROM data (a firmware) of LSP5300, LSP5310, and LP5320 are updated. (The Printer ROM updating data file is required.)

Only RS-232C communication can be utilized. The recommended printer baud rate is 115, 200 bps.

Operation Procedure

1) Click "OK" to update (rewrite) the printer ROM data (a firmware).
2) Select the printer ROM updating data file from the list displayed in the File Selection dialog box.
3) The Screen 2 shown in the next page appears when you select the updating data file.
4) Click "Start Sending Data" to execute the updating process.
   Click "Cancel" to cancel this process.



Screen 2

Printer ROM Updating Data File

1) for LSP5300 (5310)

Ver11xx.wpf

2) for LP5320

Ver01xx.wpf

In examples above, "xx" stands for the version No.

For instance, the file Ver1118.wpf is the ROM (firmware) of LSP5300 Ver11.18.

ROM of the same type can be used both on LSP5300 and on LSP5310.

* "12.xx" may be displayed as the version for the printer. That is the firmware identical with Ver11.xx. When the firmware of Ver11.xx is downloaded to the printer, it may remain to be Ver11.xx unchanged or may be changed into Ver12.xx, depending on the printer condition.

With Ver11.xx, the outline font is generated with the soft generator.

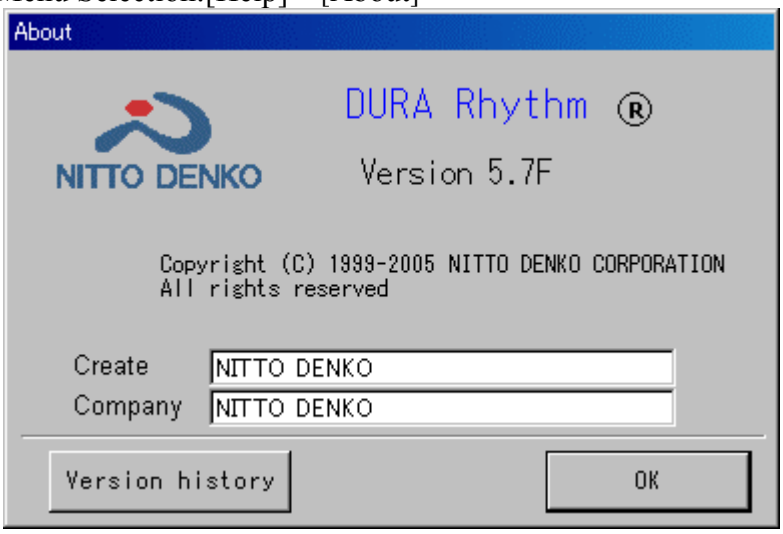
With Ver12.xx, the outline font is generated with the hard generator.

Note : This function is provided for our servicemen.

4-6 Help Menu

4-6-1 About

Menu Selection:[Help] ->[About]



Function

The version information of DURA Rhythm is displayed.

The creator of the file appears in “Create”.

The owner of the computer appears in “Company”.

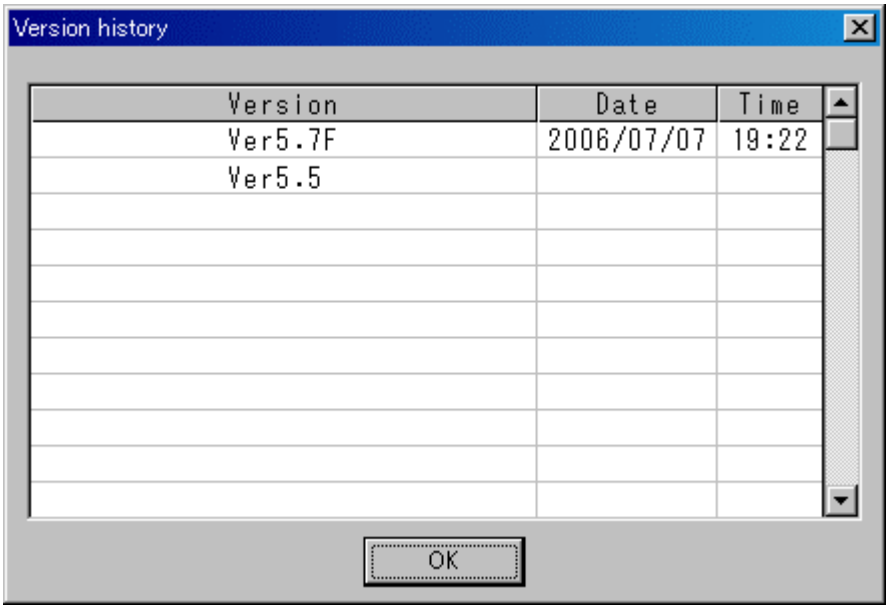
Input a name of up to 15 characters to each.

Operation Procedure

Click “Version history”, and then the version history dialog box appears.

Click “OK” to close the dialog box.

Install History



Function

The version history of DURA Rhythm (Ver.5.7 and later) is displayed.

As for a version of DURA Rhythm earlier than Ver.5.7, nothing is displayed in “Version”.

The versions of DURA Rhythm ever installed are displayed in “Version”.

The installation dates of all versions of DURA Rhythm ever installed are displayed in “Date”.

The installation times of all versions of DURA Rhythm ever installed are displayed in “Time”.

4-6-2 WebPage

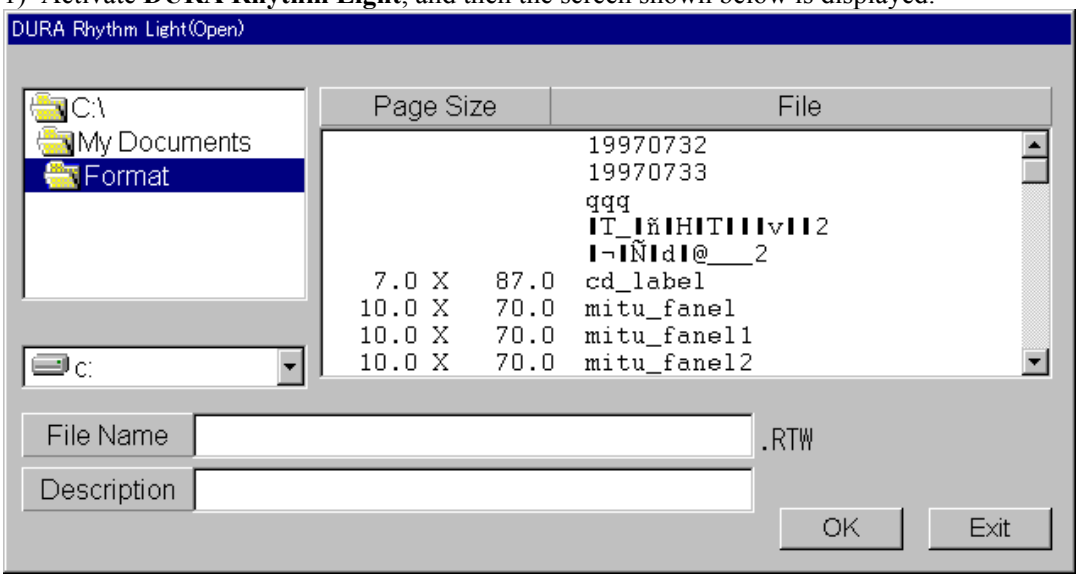
Menu Selection:[Help] ->[Web Page]

It links with the Web page of the bar code system of NITTO DENKO.

5. DURA Rhythm Light (Simplified Label-Printing Software)

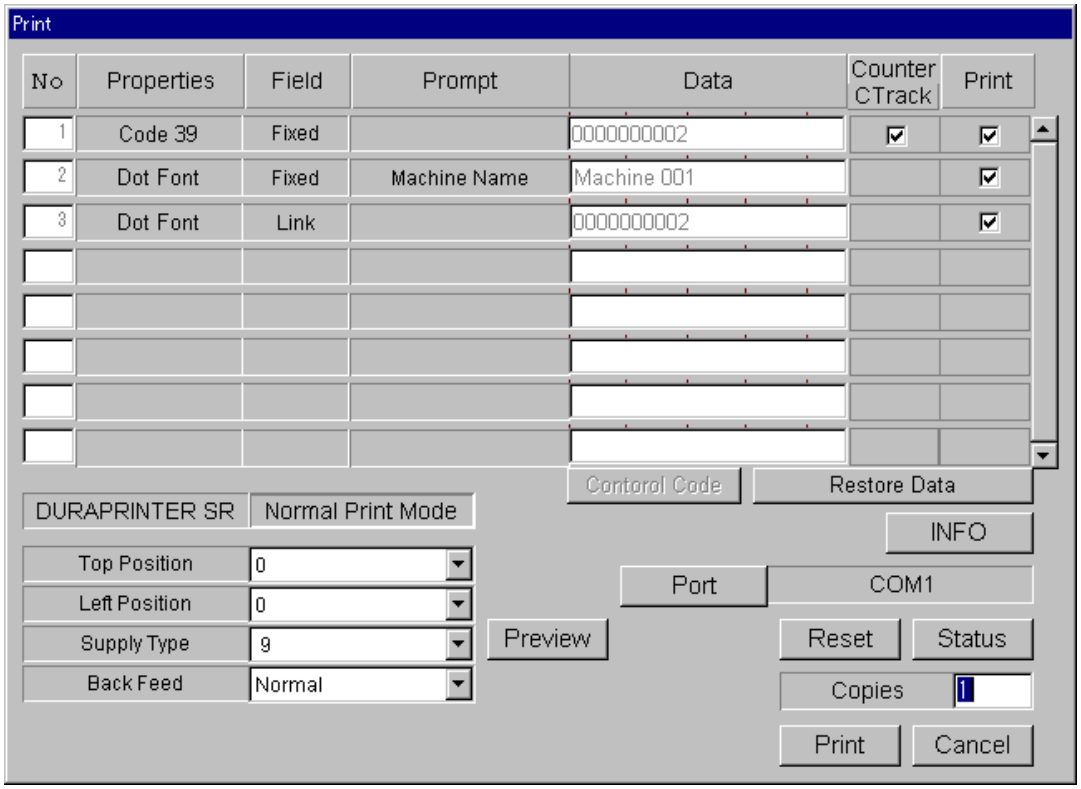
DURA Rhythm Light is a software with which you can print labels based on the label format generated with **DURA Rhythm** Basically, the "Open" (Format File List and File Selection) screen and "Print" screen of **DURA Rhythm** are put together to construct **DURA Rhythm Light**.

1) Activate **DURA Rhythm Light**, and then the screen shown below is displayed.



2) With "Exit", **DURA Rhythm Light** is ended.

3) Select the format file with the same procedure in 4-2-2 Open, and the screen shown in the next page is displayed.



4) Basically, the print process is executed with the same way as in 4-2-7 "Print".

Different from "Print" screen of **DURA Rhythm**, this screen does not have "Command Save" function.

With "Printer Port", the "Printer Port" screen shown in 4-5-5 is displayed. You can modify the values if necessary.

6. Troubles and Settlements

1) You can not select COM port.

It may occur that all parameters in COM Settings area is displayed in gray in the "Printer Port" screen and you can not select anything, though COM port is available with the personal computer. In **DURA Rhythm**, **PDQComm** is used to utilize COM port. When **PDQComm** of another version is already instlled before the installation of **DURA Rhythm**, COM port can not be utilized in **DURA Rhythm** because of the mismatch of the versions. In such a case, uninstall **PDQComm** first and then install **DURA Rhythm**. When **DURA Rhythm** is already installed, uninstall it first of all.

Uninstallation of **PDQComm**

(1) Call **WINDOWS¥SYSTEM** folder from **DOS** prompt.

Ex. : **CD C:¥WINDOWS¥SYSTEM**

(2) Delete **PDQComm** from the registry.

REGSVR32 /U PDQCOM32.OCX

(3) Delete **PDQComm** file.

DEL PDQCOM32.OCX

Reinstall **DURA Rhythm** after the processes shown above.

2) You can not start **DURA Rhythm** on a **FM/V-BIBLIO** model.

When you start **DURA Rhythm** on some **FM/V-BIBLIO** model, **DURA Rhythm** may end with an abnormal process, because of the errors in display driver of the model. You can avoid such an abnormal end by updating the display driver to the newest version.

See Home Page, etc. of Fujitsu Co., Ltd. for detailed information.

3) You can not use common using file correctly.

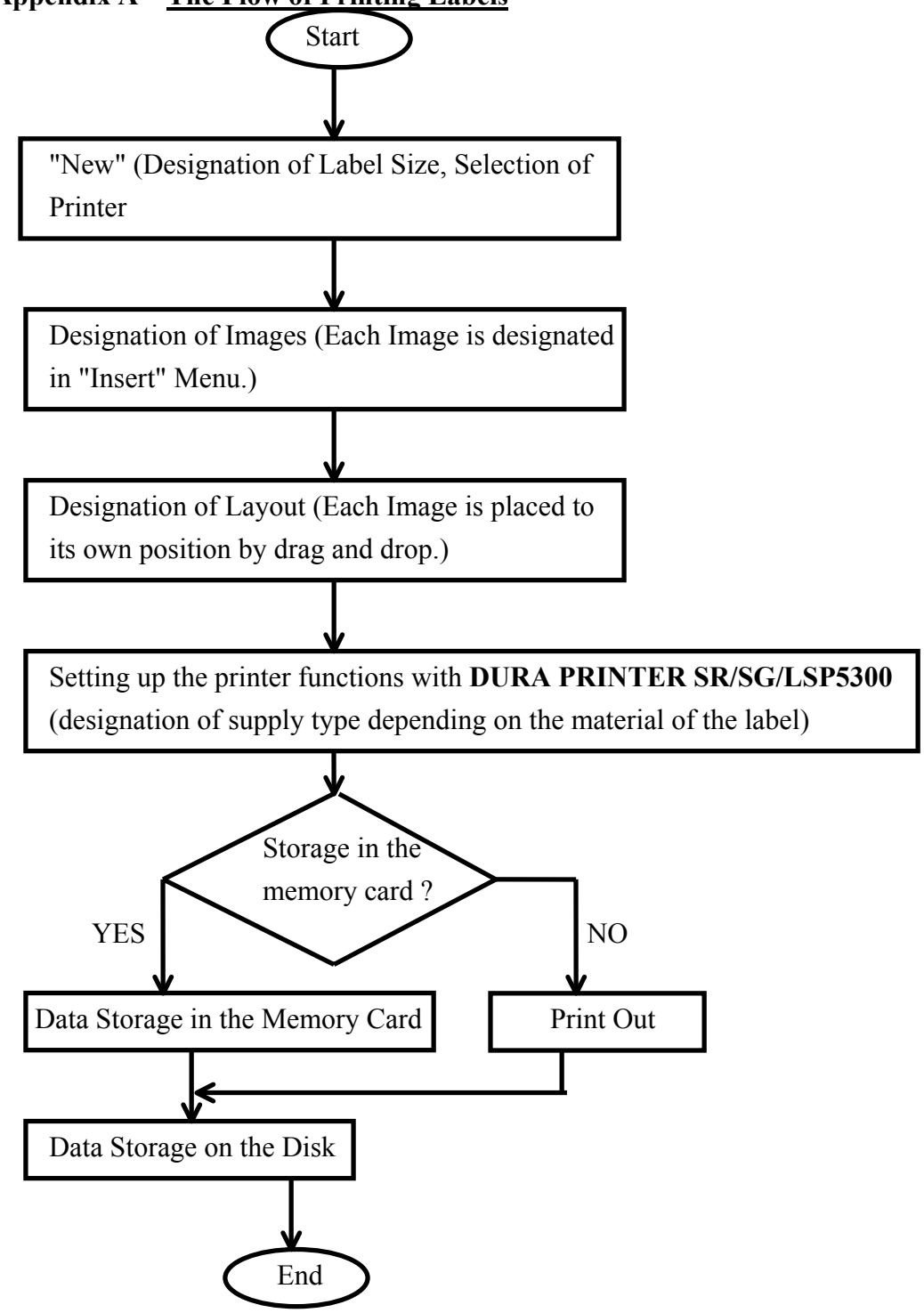
When you store a file with **DURA Rhythm**, "Common using file error" may occur. There are two reasons for it.

(1)You try to save a file with **DURA Rhythm**, while the file is being used by a custom application (Label Printing Software utilizing the OLE automation of **DURA Rhythm**.). End the custom application first and then you can save the file with **DURA Rhythm**.

(2)The custom application does not release the DURA Rhythm object.

Release the object in closing the custom application by modifying the program, and, with explorer, etc., delete "OLEProc.STS", the control file of DURA Rhythm. "OLEProc.STS" is stored in the folder where DURA Rhythm is installed (ordinarily, C:¥Program Files¥Rtmwin32).

Appendix A The Flow of Printing Labels



Appendix B Paper Feeding Direction

In the **DURA Rhythm** process, labels are designed with the image shown in Fig. B-1.

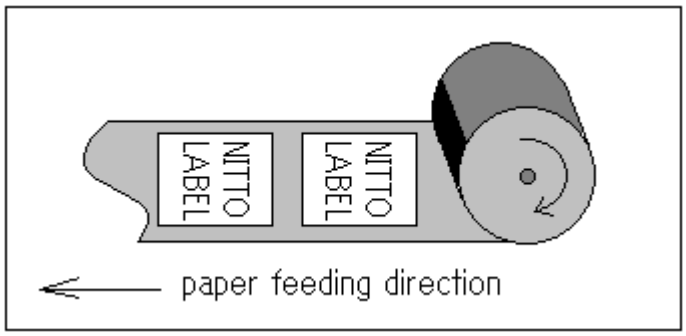


Fig. B-1

When the label shown in Fig. B-2 is printed out, the direction is to be designated to 90 or 270. The Picture Image must be generated in the rotated figure with the graphic software and be called by **DURA Rhythm**.

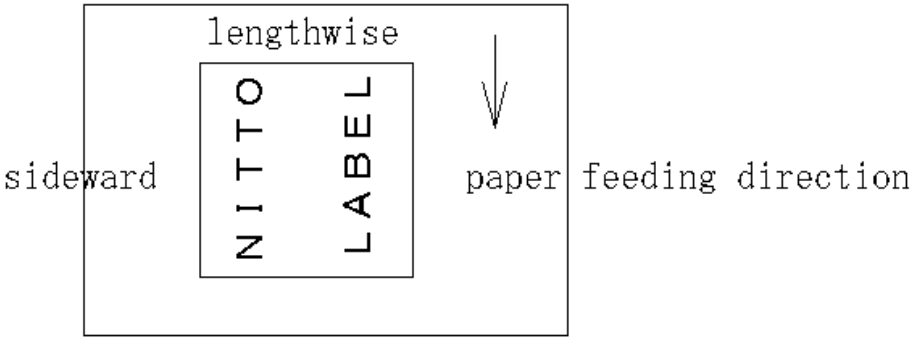


Fig. B-2

Appendix C Counter

When a part of the character string is changed orderly (seen in the case of that with the lot number, for example), set the parameters for Counter to print out such character strings.

The Counter can be set to both barcodes and texts.

With **DURA Rhythm**, you can designate three kinds of Counter : Numeric Counter (Numbers), Alpha Counter (Letters), Alphanumeric Counter and the Custom Counter

1. Numeric Counter (Numbers)

Only the numeric data are increased or decreased.

Ex.1

[the value for each parameter]		[result]
Counter	use	AB0008-11 (the initial value)
CounterType	numbers	AB0009-11
Step by	1	AB0010-11
Identical Label	1	AB0011-11
Start Figure	3	AB0012-11
Length	4	:

Explanation on the Parameters

Step by	When the value is increased, set a positive number to this parameter such as 1,2,3. When decreased, set a negative number such as -1, -2, -3.
Identical Label	Designate the number of identical labels before number (character) is changed.
Start Figure	Designate figure from the start of the character string Counter begins.
Length	Designate how many characters are to be changed. A counter can contain up to 128 characters. You can not store in the memory card the counter whose size is bigger than 100 bytes (See "Note 3" in "Appendix D Using the Memory Card".).

Ex.2

[the value for each parameter]		[result]
Counter	use	AB0008-11 (the initial value)
Counter Type	numbers	AB0008-11
Step by	-2	AB0008-11
Identical Label	3	AB0008-09
Start Figure	8	AB0008-09
Length	2	AB0008-09
		AB0008-07
		AB0008-07
		AB0008-07
		:
		:

Ex.3

an error example

[the value for each parameter]		[result]
Counter	use	999A98 (the initial value)
Counter Type	numbers	999A00 ("A" can not be included in
Step by	2	999A02 the numeric Counter.)
Identical Label	1	
Start Figure	4	
Length	3	

2. Alpha Counter (Letters)

Only capital letters can exist in the Alpha Counter. Small letters are accepted.

The letter of the smallest quantity is "A", and that of the largest quantity is "Z".

When the alphabet goes as far as "Z", a figure is taken up.

Ex.4

[the value for each parameter]		[result]
Counter	use	ZZZZZX (the initial value)
Counter Type	letters	ZZZZZZ
Step by	2	ZZZAAB
Identical Label	1	ZZZAAD
Start Figure	4	ZZZAAF
Length	3	

Ex.5

an error example

[the value for each parameter]		[result]
Counter	use	ZZZ3ZX (the initial value)
Counter Type	letters	ZZZ3ZZ ("3" can not be included in
Step by	2	ZZZ3AB the Alpha Counter.)
Identical Label	1	
Start Figure	4	
Length	3	

3.Alphanumeric Counter

Both numbers (from 0 through 9) and the alpha characters (capital letters only) appear in the Alphanumeric Counter.

Here, too, the small letters are accepted.

The order of the characters from the smallest to the largest is shown below.

0123456789AABCDEFGHIJKLMNOPQRSTUVWXYZ

Ex.6

[the value for each parameter]		[result]
Counter	use	ZZZ0Z96 (the initial value)
Counter Type	alphanumeric	ZZZ0ZA8
Step by	12	ZZZ0ZBA
Identical Label	1	ZZZ0ZCC
Start Figure	4	
Length	4	

Ex.7

an error example

[the value for each parameter]		[result]
Counter	use	ZZZ0Z9b (the initial value)
Counter Type	alphanumeric	ZZZ0Z9b (can not count up owing to "b")
Step by	12	ZZZ0Z9b
Identical Label	1	
Start Figure	4	
Length	4	

4.Custom

The Counter character can be freely set for the character parts from among the following table.

If it is a character where each part can be printed and a character in the following table, it is possible to set it to the ream turn character for the bar code parts and two dimension code parts.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2		!	"	#	$	%	&	'	(	)	*	+	'	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	^	_
6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	

Attention: The processing speed of the printer slows because it doesn't use the custom Counter by the Counter function of the printer.

If the Counter character is input for instance, "Abcdefg", the ream is watched based on this.

Ex.8

an error example

[the value for each parameter]		[result]
Counter	use	ZZZagfe
Counter Type	Custom	ZZZagfe
Step by	1	ZZZagfe
Identical Label	1	
Start Figure	4	
Length	4	
Counter character	abcdefg	

Ex.9

an error example

[the value for each parameter]		[result]
Counter	use	ZZZagge
Counter Type	Custom	ZZZagge
Step by	1	ZZZagge
Identical Label	1	
Start Figure	4	
Length	4	
Counter character	abcdefg	

Ex.10

an error example

[the value for each parameter]		[result]
Counter	use	ZZZagg1(The Counter stops by
Counter Type	Custom	ZZZagg1 haracter other than the
Step by	2	ZZZagg1 Counter character...)
Identical Label	1	ZZZbaa1
Start Figure	4	
Length	4	
Counter character	abcdefg	

Appendix D Using the Memory Card

If you store the format in the memory card, you do not have to download the data from the computer.

```
~^" SAMPLE" ; 1 ; 0 ; 24 ; 403 ;
  SPB;UTOF;354;
  BSYM;1;1;
  BNEW;2;BWEW;6;BICG;2;
  DDF;11;10;DFM;2;2;DFS;3;DFO;1;1;
MRK:
  HBR;0;VBR;0;DWBX;0;0;394;24;NUM;
  BCLC;1;BCID;1;
  IDF;1;
  HBR;33;VBR;12;BCSH;18;
  BCST;"*ABCDE01234500";BSAL;2;"*";
  BSTP;
HBR;66;VBR;13;
      "*ABCDE1234500";SAL;2;"*";
RET;
TRM;¥
```

Fig. D-1 (in the case of **DURA PRINTER R**)

In the case shown in the Fig. D-1, designating the file name to be SAMPLE, the variable name (field name) of the barcode data to be DATA1, and that of the text data to be DATA2 beforehand, you can print out labels by transmitting the text shown below from the computer to the printer.

```
*SAMPLE<CR>
/DATA1=ABCDE01234500<CR>
/DATA2=ABCDE01234500<CR>
!10<CR>
```

("10!" indicates the number of the labels to be printed out. "<CR>" is the carriage return code.) Select "Keyboard" for "Origin" in the "Data..." screen, and transmit the required data (i.e. the number of characters, variable names (DATA1, DATA2)) to the memory card.

After closing **DURA Rhythm**, transmit the text shown above from the computer to the printer.

The labels are printed out in the same way as the case shown in Fig. D-1.

Note 1 : "The Memory Card is Powered by the Battery."

The data in the memory card may disappear if the battery of the printer is cut off for a long time. You can not store the data in the memory card of **DURA PRINTER S**. The model of the memory card for **DURA PRINTER R/R4/S** is different from that for **DURA PRINTER SR**. When you insert or pull out the memory card, be sure that the power is off.

Note 2 : "Picture Image Division"

With **DURA PRINTER SR/SG**, up to eight Picture Image files can be stored in one memory card file. Therefore, when the number of Picture Image files is 8 ~ 16, the files must be divided into two groups of files and when the number is 17 ~ 24, into three. With **DURA Rhythm**, this file dividing process is executed automatically. When File Dividing Process is executed, the devided file names are displayed on the screen after the writing-memory-card process. When the print-out process is executed with another application, the file names must be recorded.

If you use DURA PRINTER LSP5300, you can store up to 15 Picture Image files (and external character font files) in one file.

Ex.1)Files are devided into two.

(Define a field name in the last file after division.)

```
*SAMPLE1<CR>
!10<CR>
*SAMPLE2<CR>
/DATA1=ABCDE01234500<CR>
!10<CR>
```

Ex.2)Files are devided into three.

```
*SAMPLE1<CR>
!10<CR>
*SAMPLE2<CR>
!10<CR>
*SAMPLE3<CR>
/DATA1=ABCDE01234500<CR>
!10<CR>
```

Note : 3

"You can't save data bigger than 100 bytes in the memory card with one variable name".

If you want to save data bigger than 100 bytes, you must divide the data by 100-byte basis and save them with different variable names.

You can't divide a counter. So you must save a counter with one variable name. That is, you can't use a counter longer than 100 bytes when you use the memory card.

DURA Rhythm automatically performs this data-dividing process.

(If you use **DURA PRINTER R/R4**, data are divided by 50 bytes, not 100 bytes.)

The variable names used when data are divided and saved in the memory card appear on the screen.

Keep these variable names since they are necessary when you print data using another application.

Appendix E Code 128

With **DURA PRINTER**, Subsets A, B and C of CODE 128 can be utilized. The following list shows Subsets A and B which can be keyed in with **DURA Rhythm**. Be sure to use small letters to input control characters. The keyed control characters are replaced by the equivalent control characters on the printer side.

Subset A	Subset B	Control Char.
SP	SP	
!	!	
"	"	
#	#	
$	$	
%	%	
&	&	
‘	‘	
(	(	
)	)	
*	*	
+	+	
,	,	
-	-	
.	.	
/	/	
0	0	
1	1	
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	
:	:	
;	;	
<	<	
=	=	
>	>	
?	?	
A	A	
B	B	
C	C	

Subset A	Subset B	Char.
D	D	
E	E	
F	F	
G	G	
H	H	
I	I	
J	J	
K	K	
L	L	
M	M	
N	N	
O	O	
P	P	
Q	Q	
R	R	
S	S	
T	T	
U	U	
V	V	
W	W	
X	X	
Y	Y	
Z	Z	
[	[	
¥	¥	
]	]	
^	^	
	_	
SOH	a	01
STX	b	02
ETX	c	03
EOT	d	04
ENQ	e	05
ACK	f	06
BEL	g	07

Subset A	Subset B	Control Char.
BS	h	08
HT	i	09
LF	j	0A
VT	k	0B
FF	l	0C
CR	m	0D
SO	n	0E
SI	o	0F
DLE	p	10
DC1	q	11
DC2	r	12
DC3	s	13
DC4	t	14
NAK	u	15
SYN	v	16
ETB	w	17
CAN	x	18
EM	y	19
SUB	z	1A
ESC	{	1B
FS	|	1C
GS	}	1D

*SP means space.

With Subset C, you can input numeric characters (The digit count must be even.).

The following nine combinations of Subsets are available with **DURA Rhythm** (**Ver3.02** or later).

(1)Subset A only
(2)Subset B only
(3)Subset C only
(4)Subset A + Subset B (@E)
(5)Subset A + Subset C (@D)
(6)Subset B + Subset A (@F)
(7)Subset B + Subset C (@D)
(8)Subset C + Subset A (@F)
(9)Subset C + Subset B (@E)
(10)AUTO setting(since version 5.5)

(1) Subset A only :Barcode Type. "Data" is input with **CODE 128** (Subset A).

(2) Subset B only :Barcode Type. "Data" is input with **CODE 128** (Subset B).

(3) Subset C only :Barcode Type. "Data" is input with **CODE 128** (Subset C).

(4) Subset A + Subset B :Barcode Type. " Data" is input with **CODE 128** (Subset A), and input @E before Subset B.
Ex) "Data" : TEST@Eabc

(5) Subset A + Subset C :Barcode Type. "Data" is input with **CODE 128** (Subset A), and input @D before Subset C.
Ex) "Data" : TEST@D123

(6) Subset B + Subset A :Barcode Type. "Data" is input with **CODE 128** (Subset B), and input @F before Subset A.
Ex) "Data" : abc@FTEST

(7) Subset B + Subset C :Barcode Type. "Data" is input with

CODE 128 (Subset B), and input @D before Subset C.

Ex) "Data" : abc@1234

(8) Subset C + Subset A :Barcode Type. "Data" is input with **CODE 128** (Subset C), and input @F before Subset A.

Ex) "Data" : 123@FTEST

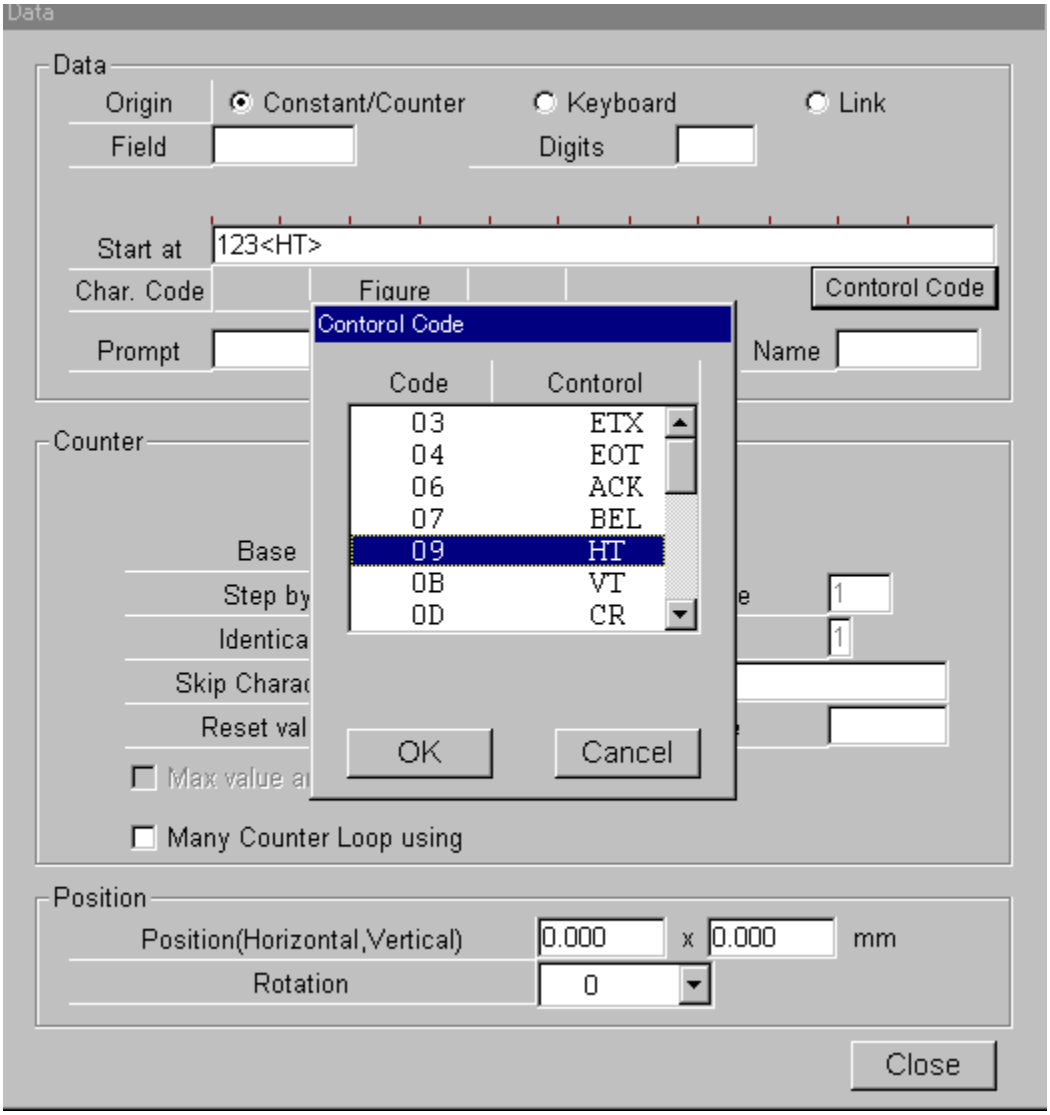
(9) Subset C + Subset B :Barcode Type. "Data" is input with **CODE 128** (Subset C), and input @E before Subset B.

Ex) "Data" : 1234@Eabc

(10) AUTO setting : To minimize the width of the bar code according to the input printed data, an automatic subset is switched and printed.

"Data" : TESTabc1234

Please input the control code pushing the control code when you set AUTO.



*Counter

When you use two Subsets, you must take the change code (@ and the following character) into consideration in deciding the value of "Start Figure", though the code is not printed out in the label.

Ex) "Data" : TEST@D1234

When you designate "1234" to be a Counter, input "7" to "Start Figure" and "4" to "Length". The change cord can not exist in a Counter.

EAN-128

CODE128 is the standard name as the barcode symbol.

"EAN-128" is the code name that is used when data are printed in the standard form established by International EAN Association with the CODE128 barcode symbol.

When you utilize EAN-128, it is required to add FNC1 to the initial position of the data. With DURA Rhythm, FNC1 is automatically added to its right position.

When you insert FNC1 in the midst of the data as the field separator, input "@G".

The EAN-128 data are displayed as the combination of the application identifier (AI) and the corresponding data.

The application identifier (AI) is the numeric code of 2 ~ 4 digit long. Each AI has its own data of fixed or variable length.

Ex.

Application Identifier (AI may appear in the parentheses.)

The barcode data are 0105……2005. The parentheses are not included.

EAN-128 (SSCC-18 (Standard Carton ID))

International EAN Association defines that the code whose application identifier (AI) is "00" is called "SSCC-18", which is called "Standard Carton ID" in Japan.

00049012341234567892

AI= "00" check digit (Mod 10)

number of 19 figures

Input the number of 19 figures with **DURA Rhythm**. (DURA Printer automatically put the check digit (Mod 10) as the 20th figure that is required when you use EAN-128 (SSCC-18).)

About the Counter specification

The character following @ and it is added to the number of digits of digits how many for the combination of subsets and it does.

Example) "Data" : TEST@D1234 of print

Appendix F Combination use of subset A, and B with EAN-128

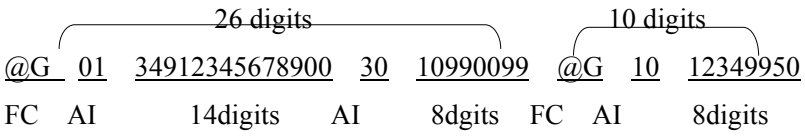
1. At first

Subset C with EAN-128: When the number of set digits of data becomes odd, it is necessary to combine subset A, and B, and make it to even. Also, when "@G" is entered as a field separator in the middle of data input, make number of set digits to even for each.

(When EAN-128AUTO is selected, it is automatically set on the Durarizm side.)

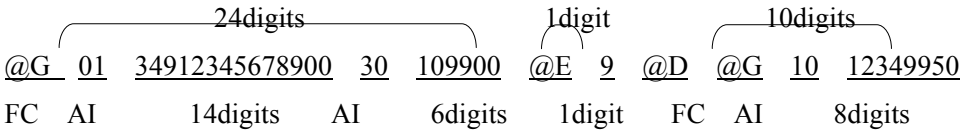
2. Set up examples with DURA Rhythm

2-1. Set up of even number of set digits (usual): Only for subset C



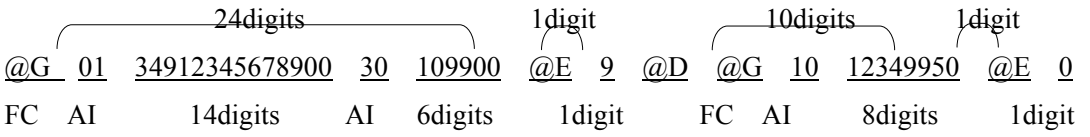
*Each of number of set digits of print data are set as even before and after of function code.

2-2. Set up of odd number of set digits (example 1): subset C->subset B->subset C



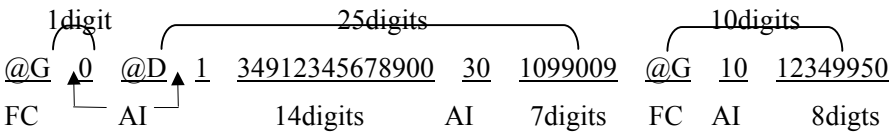
*The number of set digits are set as odd (25 set digits) before the function code. Therefore, change it to subset B (@E) once, leaving a last digit before the function code. Entering a last digit (Here it is "9"), once again, change it to subset C (@D).

2-3. Set up of odd number of set digits (example 2): subset C->subset B->subset C->subset B



*It is same with set up 2-2 before the function code. There are odd number of set digits (9 digits) after the function code, change it to subset B (@E) once, leaving a last digit, and add last one digit (Here it is "0").

2-4. Set up with odd number of set digits (example 3): subset B->subset C



*With 2-2, subset C was changes to B right before the function code. However, here, subset is changes to B at the beginning of the data, so, select subset B beforehand. It is necessary to use subset B for the first digit of AI, (Here it is "0"), then, change it to C (@D).

3. Set up of DURA Rhythm

With DURA Rhythm ver5.4 or later, subset could be changed as many times as it is necessary, being able to entering "@---" several times. If there are any sets up mistakes as they were shown before, the following message will come up, so please check the input data again.

Appendix G QR Code

(1) With **DURA PRINTER SR** (ROM Ver 00.22 or later), QR Codes can be printed (both Model 1 and 2). QR Code Model 2 can be printed with **DURA PRINTER SR** ROM Ver 00.30 or later. For micro QR. It is possible to print it since ROM Ver 00.38 of DURA PRINTER SR. In DURA PRINTER SG (since ROM Ver SG01.14) and DURA PRINTER SRS/LSP5300, QR code model 1/model 2/micro QR can be printed.

Input Mode	Available Characters	Example
Numeric Mode	decimal numbers	0 ~ 9
Alphanumeric Mode	10 numeric characters 26 alphabets 9 symbols	0 ~ 9 A ~ Z $, %, *, +, -, ., /, : and space
Chinese character mode	It is data in the shifted JIS code including the Chinese character.	
8-bit byte	JIS 8 bit code See Table F-1.	
ASCII	A number, an alphanumeric character, a 8-bit byte are automatically switched with the firmware software of a printer.	DURA PRINTER SR (After ROM Ver 00.46) DURA PRINTER SRS (After ROM Ver 10.22) DURA PRINTER LSP5300,LSP5310 (After ROM Ver 10.19) DURA PRINTER LP5320 (After ROM Ver 10.22)
Text	A number, an alphanumeric character, a Chinese character, and a 8-bit byte are automatically switched with the firmware software of a printer.	DURA PRINTER SR (After ROM Ver 00.46) DURA PRINTER SRS (After ROM Ver 10.22) DURA PRINTER LSP5300,LSP5310 (After ROM Ver 10.19) DURA PRINTER LP5320 (After ROM Ver 10.22)

*A mixture of input modes and the binary mode is not provided.

Available 8-bit byte characters (Table F-1)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p				-				
1		DC1	!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3	ETX	DC3	#	3	C	S	c	s								
4	EOT		$	4	D	T	d	t								
5		NAK	%	5	E	U	e	u			*					
6	ACK	SYN	&	6	F	V	f	v								
7	BEL	ETB	‘	7	G	W	g	w								
8			(	8	H	X	h	x								
9	HT	EM	)	9	I	Y	I	y								
A	LF	SUB	*	:	J	Z	j	z								
B	VT	ESC	+	;	K	[	k	{								
C		FS	,	<	L	¥	l	|								
D	CR	GS	-	=	M	]	m	}								
E	SO		.	>	N	^	n	~								
F	SI		/	?	O	_	o	DEL								

(2) The maximum character count and the symbol size depend on the cell size, QR Code version and the input mode. The typical examples are shown in the table below.

Cell Size	Dot No.	QR Code Ver.	Maximum Character Count						Symbol Size (mm)	Top & Bottom Margin (mm)
			Numeric			Alphanumeric				
			Level1	Level2	Level3	Level1	Level2	Level3		
0.191	3	1	40	33	16	24	20	10	4.01	0.76
0.191	3	2	81	66	33	49	40	20	4.78	0.76
0.254	4	1	40	33	16	24	20	10	5.33	1.02
0.254	4	2	81	66	33	49	40	20	6.35	1.02
0.318	5	1	40	33	16	24	20	10	6.68	1.27
0.318	5	2	81	66	33	49	40	20	7.95	1.27
0.381	6	1	40	33	16	24	20	10	8.00	1.52
0.381	6	2	81	66	33	49	40	20	9.53	1.52

* For example, when alphanumeric mode is used with Level 2, you can input up to 20 characters. When the cell size is 3 dots, the symbol size is 4.01mm and the 0.76mm top, bottom, left and right margins are needed. Still another margin of 1 ~ 1.5mm is needed on each side (top, bottom, left, right) of the label.

*The human readable characters corresponding to the print data must be also printed.

(3) QR Joint could be printed with DURA Printer SR (ROM Ver 00.49 or later) and DURA PRINTER SRS (ROM Ver 10.27 or later).

When **DURA Printer SR** and **SRS** are selected with two joints, **DURA Rhythm** (Ver 5.2 or later) is compatible.

However, Please be careful with the following:

*Only one pair of QR code joint could be formed in one label format.

*Both of QR joint (1/2) and QR joint (2/2) are necessary.

Cell-size, designate the value for "AQL", "character", and "version" are set up with QR joint (1/2), and it cannot be changed after data registration of QR joint (2/2).

(When it needs to be changed, delete the parts of QR joint (2/2))

- Numeric and Alpha numeric number mode are used in Enter mode.

Attention!

*Please make sure if QR code Reader you have is compatible with QR joint.

Appendix H Image Linking Function

(1) Function

DURA Rhythm Ver 3.15 or later supports Image Linking Function, with which you can correlate the data of an Image with that of the other Image. For example, first you generate a CODE-39 Image with the data [1234567890] and store it; and then you generate the OCR-B Image and designate "Link" as the "Origin" instead of inputting data. After these processes, the CODE-39 barcode representing [1234567890] and the OCR-B characters [1234567890] are printed out on the label. In the example above, the CODE-39 Image (the Image to which data are designated) is the Link Source and the OCR-B Image (the Image to which "Link" is designated and the data of other Image are assigned) is the Link Destination. When the Link Source data are modified, the pninted data of the Link Destination are also modified automatically. The Counter data are, when utilized, also updated after the print process.

The example of designating Link is shown below.

Link Source Input

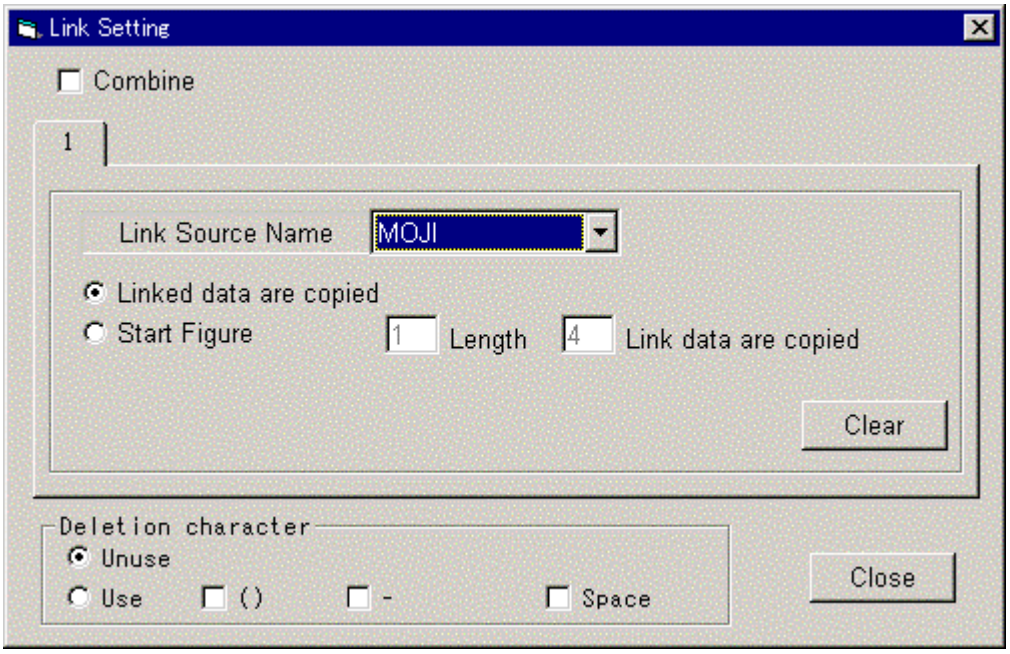
(1) Designate the parameters for the barcode in the "Insert" screen.
(2) Designate the parameters for CODE-39 and display "Data ..." screen.
(3) Select "Constant/Counter" or "Keyboard" as "Origin".
(4) When you select "Constant/Counter", input the print data. When you select "Keyboard", input the data in the "Print" screen.
(5) Turn ON the Link Source check box (x appears.).
(6) Input the Link Source Name (When you designate more than one Link Source Image, you must use the different name for each.).
(7) Designate Counter data, if necessary.

Link Destination Input

(1) Designate the parameters for the text in "Insert" screen.
(2) Designate the parameters for OCR-B and display "Data ..." screen.
(3) Select "Link" as "Origin", and the Counter Designation part in the screen changes to the "Link Parameters" (See next page.).

(4) Select Link Source Name, and designate the way of copying data (the start digit and the

number of copied characters). When the link source is CODE-39 or Codabar Image, designate whether Start/Stop Codes are copied or not.



(2) Notes

(1) The Image whose character is of 1-byte-type can not be linked with the Image of 2-byte-type.

(2) When the Link Source is a text Image, only a text Image can be the Link Destination.

(3) When the Link Source is a barcode Image, only a text Image or a barcode Image of the same type can be the Link Destination.

(4) When the Link Source is a 2D Code Image, only a text Image or a 2D Code Image of the same type can be the Link Destination.

(5) When Counter is used in the Link Source, you can not designate a part of the counter to be copied to the Link Destination.

(6) When you delete a Link Source, the Link Destination related to the Link Source is also deleted at the same time.

(3) About the deletion character

When linking, parts other than the character can set the deletion character.

There are three kinds of characters that can be deleted about "Parentheses ()" hyphen "Space". Only other characters can be linked without linking characters set to set the deletion character when linking.

(However, "Parentheses ()" is deleted without fail for EAN128(AUTO).)

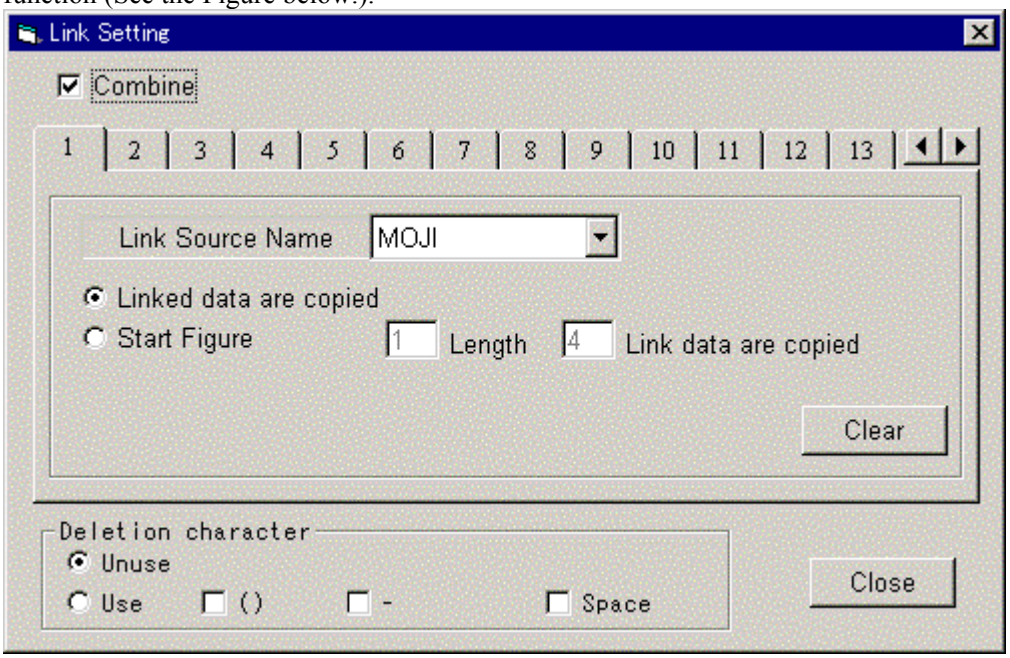
Appendix I Combination of Link Source

(1) Function

The Combination of Link Source is the program extension with which you can generate an Image by combining more than one link source.

Basic functions and restrictions are same as those of the Image Linking Function.

Mark the check box of "Combination of Link Source" in "Link Set Up" to utilize this function (See the Figure below.).



In the Figure above, the tabs (1 ~ 13) are displayed. Click the tab and set the link source to be combined and the data copy mode.

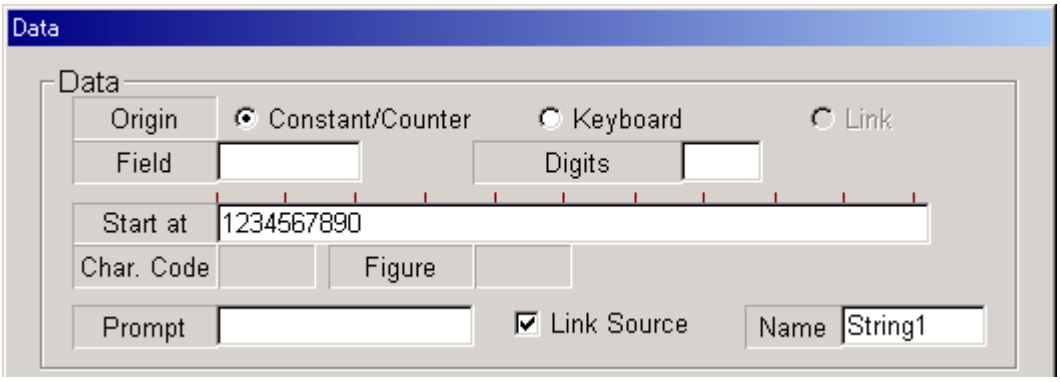
Click the arrows shown on the right of tabs to display other tabs. You can combine up to 50 link source.

The link sauce data are arranged in order of tab number from small to large and combined to generate an Image.

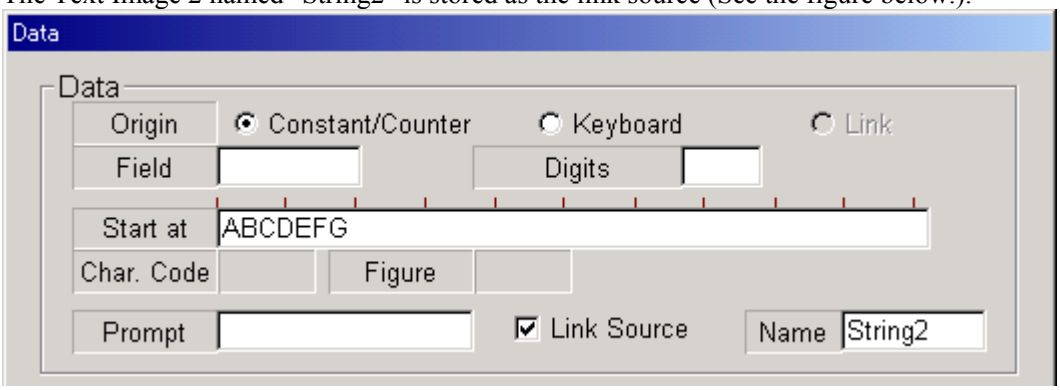
(2) Example

In the example described in the following pages, two Text Images are designated to be the link source and combined.

The Text Image 1 named "String1" is stored as the link source (See the figure below.).

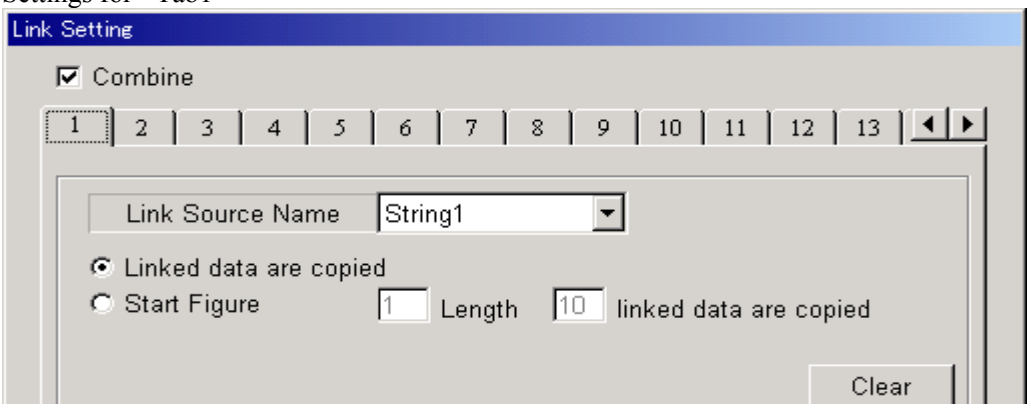


The Text Image 2 named "String2" is stored as the link source (See the figure below.).

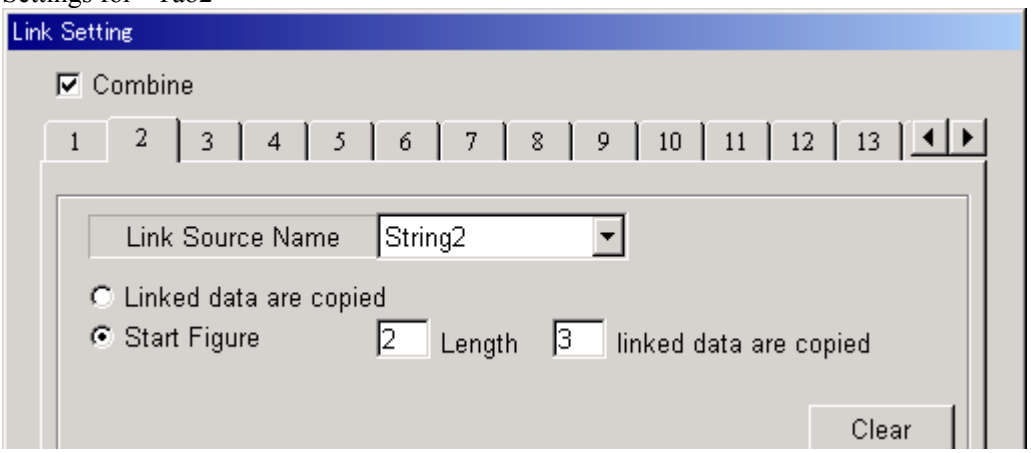


The Image is generated by the combination of the two link source. Here in this example, generate a Barcode Image newly, select "Link" as "Origin", and click "Link Set Up". Check "Combination of Link Source" in "Link Set Up" screen and set such parameters for Tab1 and Tab2 as are shown below.

Settings for <Tab1>



Settings for <Tab2>



In the example above, all data of "String1" and the 3 figures from the second of "String2" are combined together and a combined Image is generated.

The barcode data generated with the settings above are:

"1234567890BCD".

Appendix J LPT (Centronics) Port

With Windows, you can not output data directly from the application to LPT (Centronics) port. When you want to output data to LPT port, you must create the printer driver. However, as every printer driver for Windows sends data in the form of a bit map image, DURA Printer can not display its full efficiency. DURA Rhythm supports the function to send commands directly to LPT port.

Note : Environment for LPT Port

It is not confirmed that LPT Port operates correctly in every Windows environment. When LPT port does not operate correctly, use RS-232C port as the printer.

Appendix K　Utilizing DURA Rhythm Under TCP / IP

(1) Summary

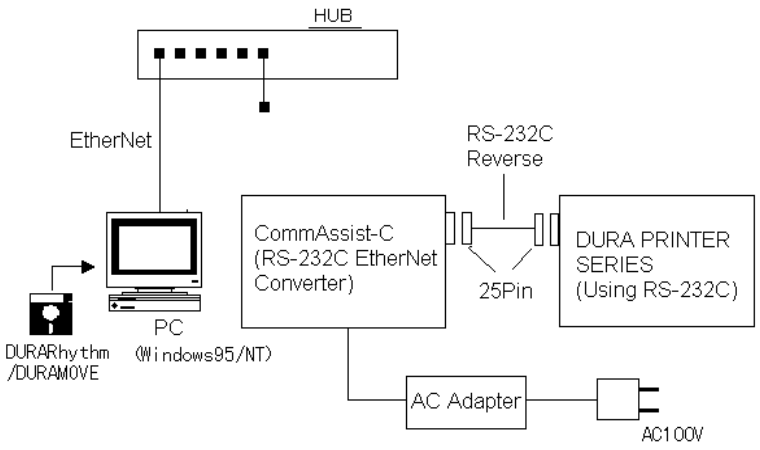
You can print labels on **DURA PRINTER** connected to the TCP / IP network, by sending data from the personal computer (with **Windows95**/**NT**) in which **DURA Rhythm** is installed, if the personal computer is also connected to the same network.

Important

*When you utilize TCP / IP network, consult with a network manager.

*CommAssist-C is sold only inside Japan.

(2) Configuration



(3) Specifications

Network	: Ethernet　(in accordance with IEEE802.3)
CommAssist-C　power supply	: AC100V +-10%
Protocol	: TCP / IC
Operation Mode	: Command Mode

Note

DURA Rhythm supports only Command Mode of TCP/IP.

(4) Initial Settings for CommAssist-C

You can designate the initial settings for CommAssist-C either "with RS-232C" or "with Network".**DURA Rhythm** provides the tool for the initial settings for CommAssist-C "with RS-232C". For CommAssist-CX, designate the initial settings with the attached utility.

Important

It must be the network manager that designates the initial settings for CommAssist-C.

(4-1)The Initial Settings for CommAssist-C Using "Setting CommAssist"

(1) Decide IP address assigned to CommAssist-C on the network.

Note

*When you use DHCP server, the address must be such that can not be assigned with DHCP. CommAssist-C does not support DHCP.

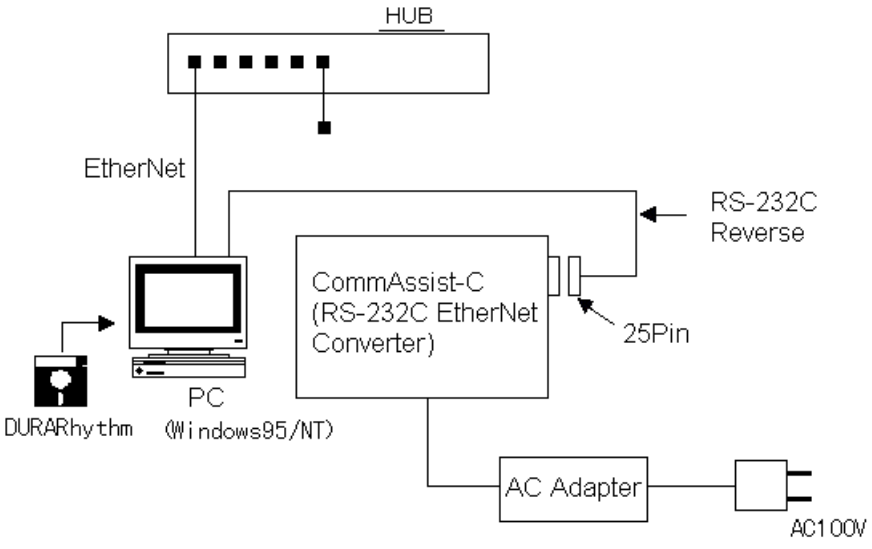
*Be sure not to use IP address already used on the network.

*The network of the personal computer and that of CommAssist-C must be identical with each other. Gateway system is not supported.

(2) Connect CommAssist-C to the personal computer with the cross cable for RS-232C. Be careful about the points shown below.

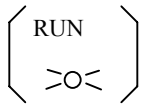
*Do not connect CommAssist-C to the network with 10BASE-T cable.

*You can modify the settings for CommAssist-C while the green RUN lamp is flashing (When the lamp is on but not flashing, turn off CommAssist-C and on again.).



Note

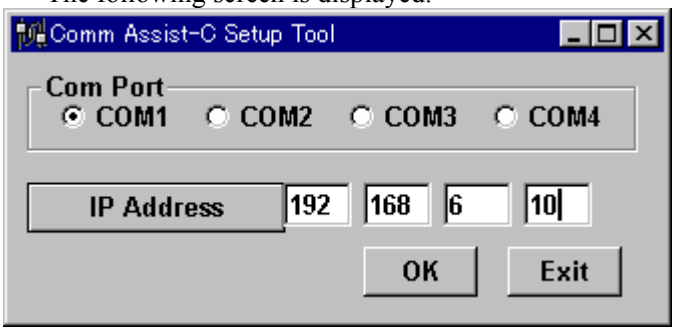
*Check that RUN lamp is flashing.



*Use the cross cable for RS-232C to connect CommAssist-C with the personal computer. Each personal computer has its own connector shape.

(3) Start "Setting CommAssist".

The following screen is displayed.



(4) Designate necessary parameters shown in the screen above.

*Com Port	Select the Com port to which CommAssist-C is connected.
*Ethernet Address	Input Ethernet Address (physical address) for CommAssist-C. The first 3 byte of Ethernet Address for CommAssist-C (00806D) is "H". The last 3 byte is written on the label sticked on the back side of CommAssist-C as the product No.
*IP Address	Input the IP Address.

(5) After checking that LED lamp on CommAssist-C is flashing in green, press "OK".

(6) When the settings are appropriate, the message "Setup Complete" is displayed.

(7) Connect CommAssist-C with 10BASE-T cable to the network. Turn off CommAssist-C and then turn it on again.

(8) Check that CommAssist-C is connected with network correctly, using "ping" command from the personal computer on the network.

If OK, connect CommAssist-C with **DURA PRINTER**, using the cross cable for RS-232C (25P-25P).

Important

*Do not use ARP command when you designate the initial settings for CommAssist-C (the initial settings with RS-232C) with the tool provided by **DURA Rhythm**.

*Be sure to check that CommAssist-C is connected to the network correctly, using "ping" command.

（4-2）Initial Settings of **CommAssist-CX** with **CommAssist-CX** Utility (an utility for **IP** Settings)

(1) Connect **10BASE-T** cable to **CommAssist-CX**. Be sure to follow the indications shown below.

・Make sure every dip switch on **CommAssist-CX** is in the operation position ("**OFF**" position).

・You can change settings of **CommAssist-CX** when the **NET** light is lit in green after the power is tuned on (When **CommAssist-CX** is in factory-shipped configuration, **NET** light flashes in orange for a while and then turns to green after a few seconds.).

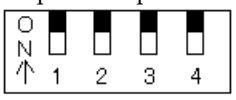
How to reset **CommAssist-CX** to the factory-shipped configuration

・ Turn off **CommAssist-CX** and turn all the dip switches on **CommAssist-CX** to "**ON**" positions to bring back the factory-shipped configuration.

・ The **NET** light flashes in orange for five seconds after you turn on **CommAssist-CX**. Turn off the power after the **NET** light goes out, and then turn the dip switches to the operation positions ("**OFF**" positions.)

・position to restore

・operation position



(2) Start **CommAssist-CX** utility (**IP** set-up utility).

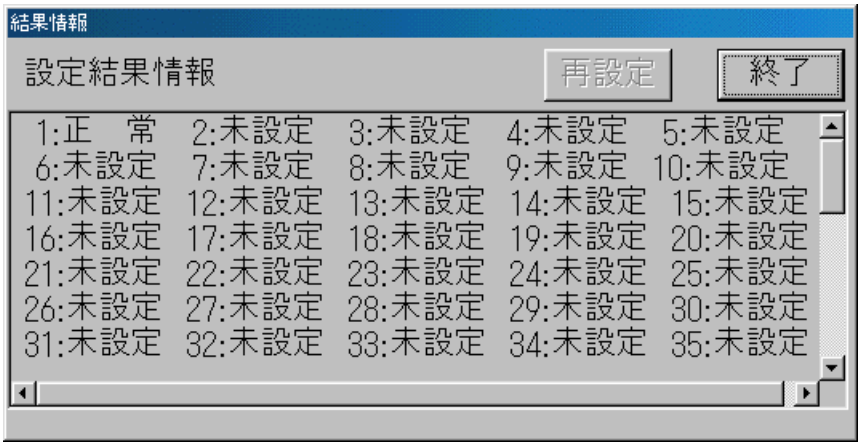
The dialog box shown below appears.

(3) Input necessary data.

- Product No. … **CommAssist-CX** has its own Product No. at the rear.
- **IP** address … Input the **IP** address.

(4) Click "Set-up".

(5) When set-up process ends, the following dialog box appears and shows you the result.



(6) When set-up is completed correctly, "normal" is displayed at the No. where you inputted data in □ above.

(7) When an error occurs, make a retry.

(4-3) **CommAssist** Connection Check

(1) See to it that **CommAssist** is appropriately networked by executing **ping** command on a networked personal computer.

(2) Connect **CommAssist** to DURA printer with a crossing cable (**25P** male - **25P** male) for **RS-232C**.

Important!

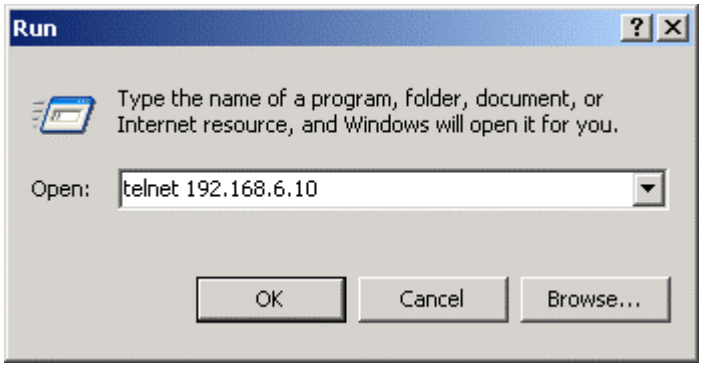
1. When you have made the initial settings of **CommAssist-C** (initial settings with **RS-232C**) with a tool provided by **DURA Rhythm**, do not execute **ARP** command.
2. Be sure to execute **ping** command to check whether **CommAssist** is appropriately n etworked.

(4-4) Settings of **CommAssist-CX** with **Telnet**

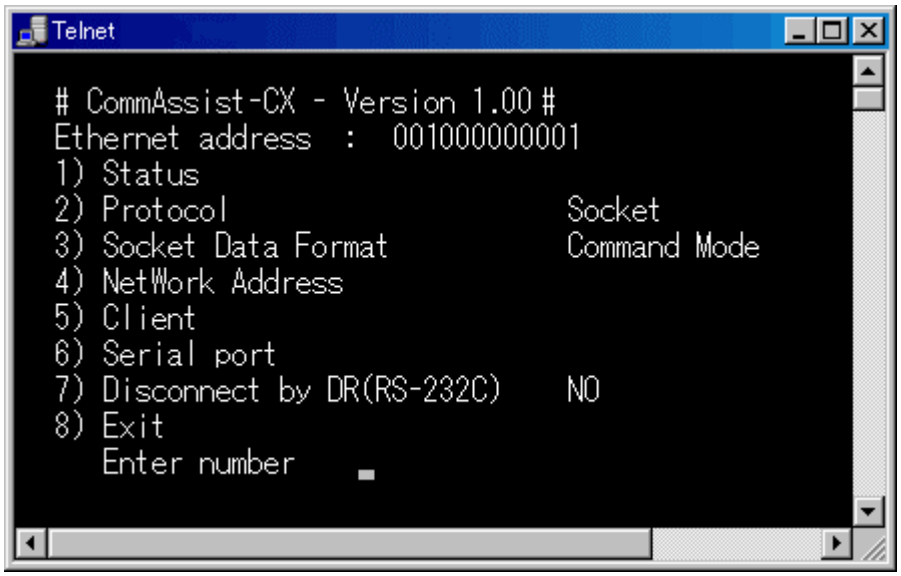
You can change the settings for **CommAssist CX** such as data communication mode settings (**CommandMode**/**Transparent Mode**) and **flow control** settings from your personal computer by using **Telnet**.

(1) Click **"Run"** on the Start menu.

(2) Input **'telnet"IP address of CommAssist CX"'**.



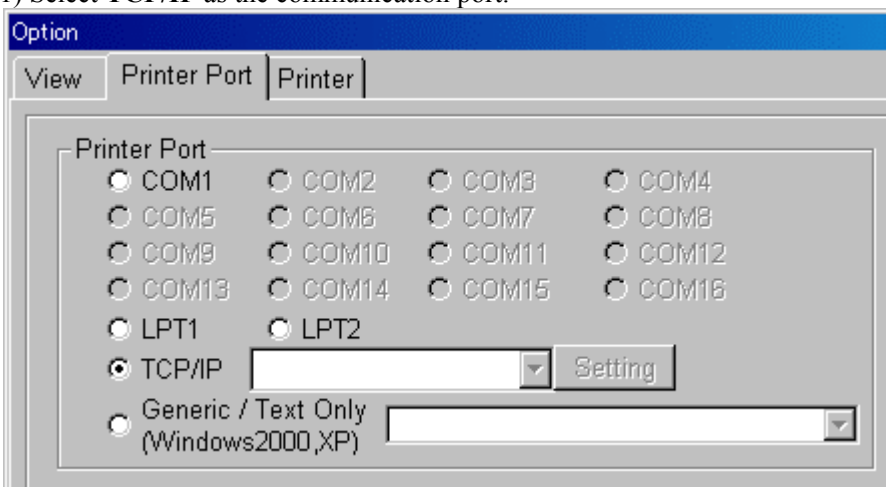
(3) When connected to **CommAssist CX**, the main menu appears.
Input the No. of the parameter you want to change from the keyboard.
Select "**8)Exit**" to end the session.



(5) TCP/IP under **DURA Rhythm**

> Important : The settings for **TCP/IP** must be made by a network manager.
> An error in settings may interfere with the network.

(1) Select **TCP/IP** as the communication port.



(2) Click "Settings", and then **TCP/IP** dialog box appears.

(3) Input the necessary data.

Printer : Input the printer name.
DURA Rhythm uses the printer name to control the **TCP/IP** information

IP address : Input the **IP** address for **Comm Assist-C/CX**.

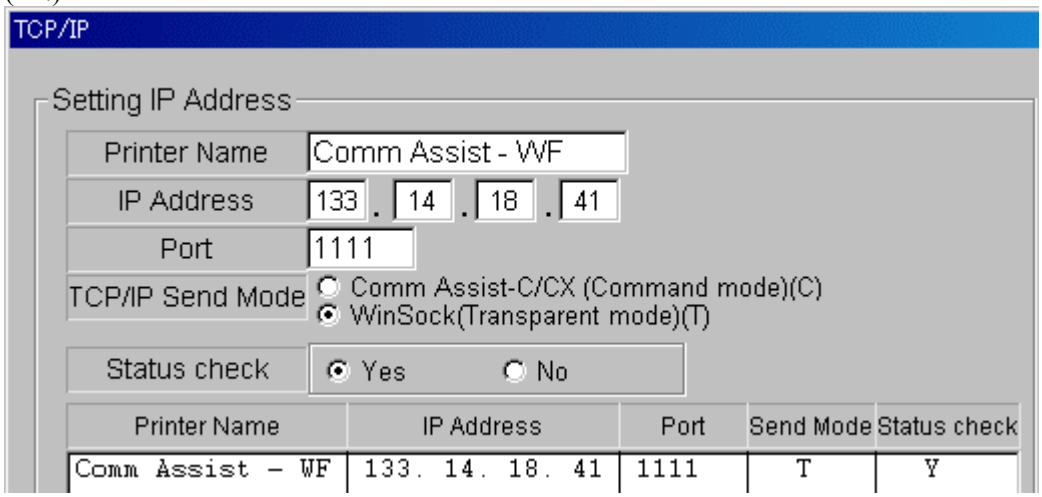
Port No. : Input the port No. for **Comm Assist-C/CX**.
(The default value for **Comm Assist- C/CX** is '1111').

TCP/IP transmission mode : Select '**Winsock** (transparent mode)'.

Status Check : Select either "**ON**" or "**OFF**".

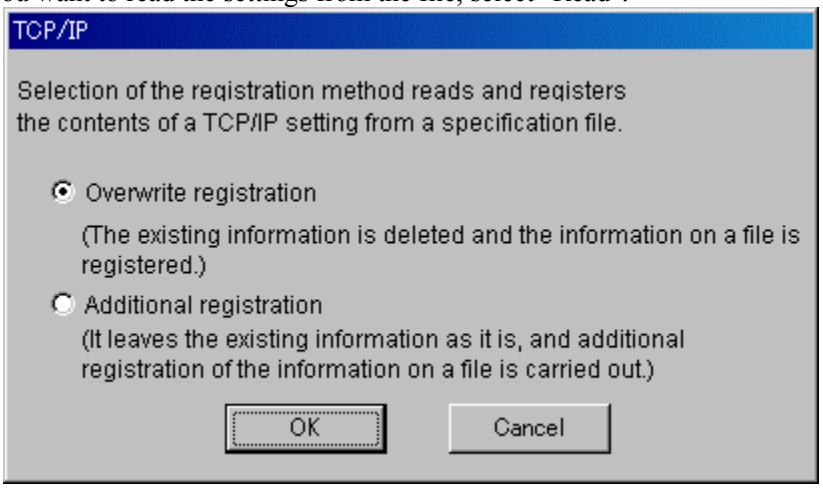
(4) Click "add / update", and then the settings you have inputted are registered.

(Ex.)



(5) If you want to save the registered settings in the file, select "Save".

(6) If you want to read the settings from the file, select "Read".

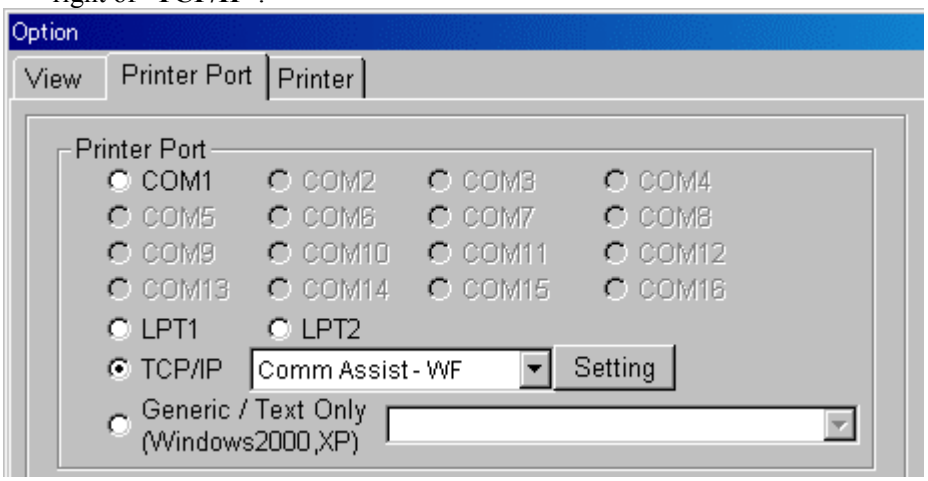


Overwrite : The file information is registered after deleting the existing information.

Add : The file information is registered, added to the existing information.

(7) Click "**OK**" to close **TCP/IP** dialog box and return to communication port dialog box.

(8) Select the printer name you have registered at □ above from the list box shown on the right of "**TCP/IP**".



(9) Click "**OK**" to close communication port dialog box.

The set-up process has been completed.

Appendix L　Utilizing DURA Rhythm Under TCP/IP II

(Using Comm Assist-WF)

（1） General

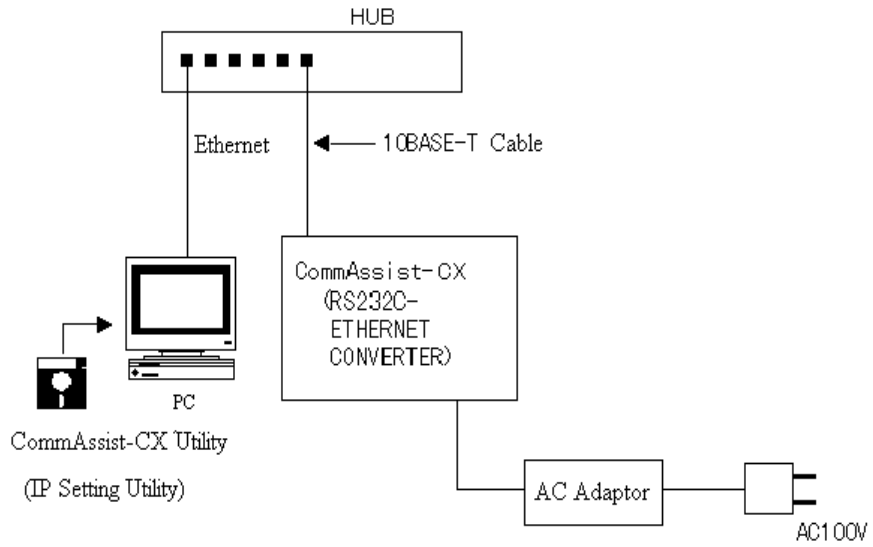
Using "**Comm Assist-WF**", a wireless **LAN-ETHERNET** converter, you can connect your personal computer with **DURA Rhythm** in it to **TCP/IP** network and can print labels on DURA printer.

How to use "**Comm Assist-WF**" in the infrastructure mode by way of wireless **LAN** access points is described here in this document.

Important!

- Use **Comm Assist-WF** under **TCP/IP**, obeying the directions of the network manager.
- **Comm Assist-WF** is on sale inside Japan only.

（2） Configuration



***1)** 9-pin (female) connector is used depending on the printer.

（3） Specification

Network	:	ETHERNET (based on IEEE802.3)
Power Source for **CommAssist-WF**	:	AC100V±10%
Protocol	:	**TCP/IP**
Operation Mode	:	Transparent Mode (Winsock)

Note：Use **TCP/IP** transparent mode (Winsock) when you utilize **CommAssist-WF**.

（4） Initial Settings of Comm Assist-WF

See the user's manual of the product for information about initial settings of **CommAssist-WF**.

Important! :

The initial settings of **CommAssist-WF** must be made by a network manager.

Specify the following parameters as described below.

IP address : An **IP** address not used on the network

Wireless **LAN** Communication Mode : 'infrastructure'

Protocol : 'socket'

Data Format : 'transparent'

Clear **RS232C** Receiving Buffer when connection established

（5） Comm Assist-WF Connection Check

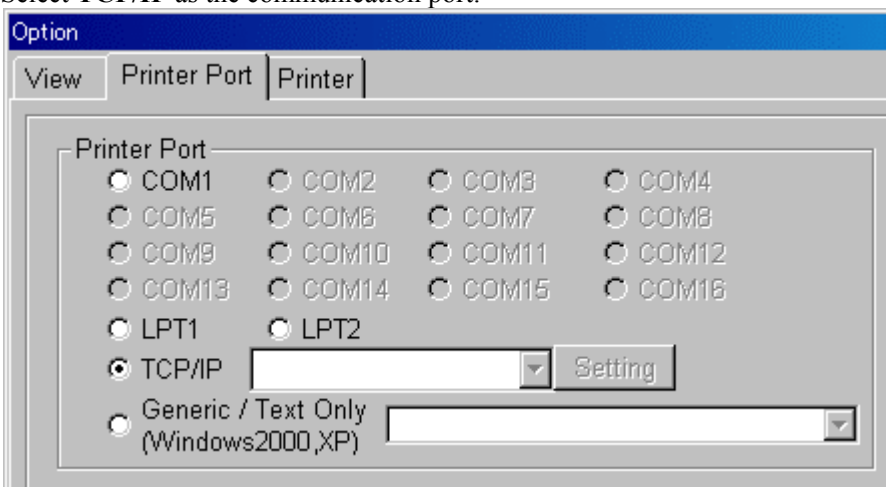
(1) See to it that **Comm Assist-WF** is appropriately networked by executing **ping** command from a networked personal computer.

(2) Connect **Comm Assist-WF** to DURA printer with a straight cable (**9P** female - **25P** male***1)**) for **RS-232C**. ***1)** 9-pin (female) connector is used depending on the printer.

（6） **TCP/IP** under **DURA Rhythm**

> Important! : The settings of **TCP/IP** must be made by a network manager.
>
> An error in settings may interfere with the network.

(1) Select **TCP/IP** as the communication port.



(2) Click "Settings", and then **TCP/IP** dialog box appears.

(3) Input necessary data.

Printer Name : Input the printer name.

DURA Rhythm uses the printer name to control the **TCP/IP** information.

IP address : Input the **IP** address for **Comm Assist- WF**.

Port No. : Input the port No. for **Comm Assist- WF**.

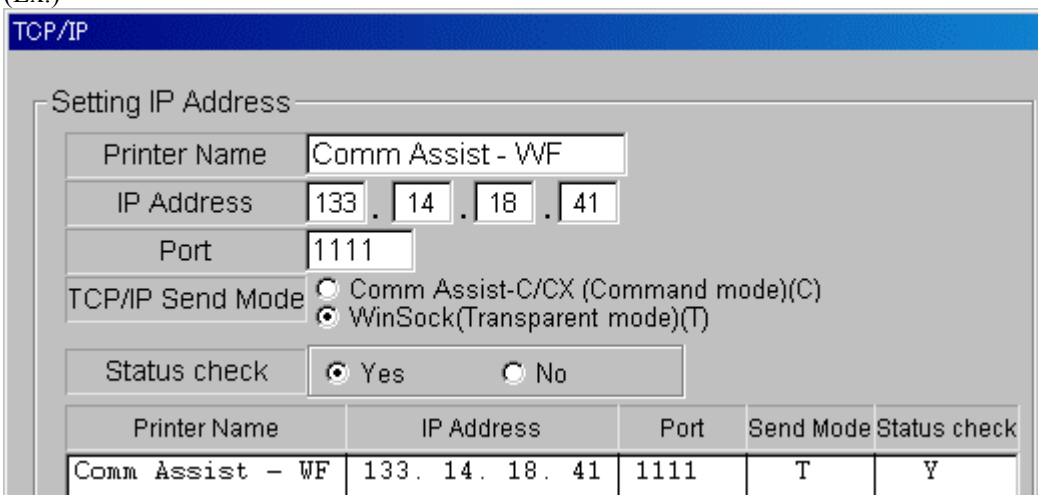
(The default value for **Comm Assist- WF** is ‘1111’.)

TCP/IP transmission mode : Select ‘**Winsock** (transparent mode)’.

Status Check : Select either "**ON**" or "**OFF**".

(4) Click "add / update", and then the settings you have inputted are registered.

(Ex.)



(5) If you want to save the registered settings in the file, select "Save".

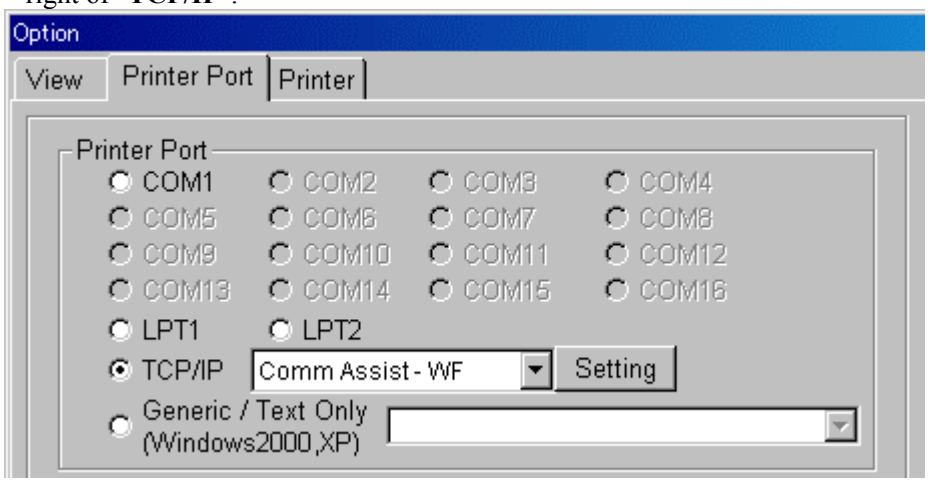
(6) If you want to read the settings from the file, select "Read".

Overwrite : The file information is registered after deleting the existing information.

Add : The file information is registered, added to the existing information.

(7) Click "**OK**" to close **TCP/IP** dialog box and return to communication port dialog box.

(8) Select the printer name you have registered at □ above from the list box shown on the right of "**TCP/IP**".



(9) Click "**OK**" to close communication port box.

The setting process has been completed.

Appendix M ITF Mod 11

DURA Rhythm Ver4.08 and later support the use of Mod 11 shown below as the barcode check digit for **ITF** (**Interleaved 2 of 5**).

The calculation of the value of Mod 11 is executed by **DURA Rhythm**.

(1) The Way of Calculating Mod 11 [Wait 13, 17, 19, 23]

The calculating procedure of Mod 11 check digit value when ITF numeric characters (0~9) are changed to barcode is shown below.

(1) It is checked if the digit number of the characters is an odd number.

(2) The first number of the character string from the right is multiplied by 13, the second by 17, the third by 19, the forth by 23, then by 13 again, and the process is continued in the same way till the end of the character string. After the process above, the products are summed up.

(3) The sum is devided by 11 and the remainder is obtained.

(4) When the remainder is "0" or "1", 0 is set to the check digit . In other cases, the value obtained with the calculation 11 minus the remainder is set to the check digit.

(2) Ex.) Barcode data "980401362"

(1) The number of the digits is "9", an odd number.

(2) Sum = (13 x 2)+(17 x 6)+(19 x 3)+(23 x 1)+(13 x 0)
+(17 x 4)+(19 x 0)+(23 x 8)+(13 x 9)=577

(3) The sum is devided by 11 and the remainder is obtained.
Remainder = 577 Mod 11 = 5

(4) As the remainder is neither "0" nor "1", the value of the check digit is obtained with the calculation below:
11 - 5 = 6
The printed barcode data turns out to be "9804013626".

(3) Print of Counter

The value of **ITF** MOD11 [Wait 13,17,19,23] of a Counter is calculated with **DURA Rhythm** and transmitted to the printer each time the label is printed.

Appendix N To add a Check digit

DURA Rhythm Ver.5.2 and later support the following Check digit with Character parts.

* MOD10 wait2
* Loons
* X Check DR (X is either 7,8,9, or 10)
* X Check DSR (X is either 7,8,9, or 10)

DURA Rhythm Ver.5.8B and later support the following Check digit with Character parts.

* X Check DR_X (X is either 7,8 or 9)
* X Check DSR_X (X is either 7,8 or 9)

All the characters you can use as data is the numbers from 0-9.

(1) MOD10 wait2

* The Calculation procedure of MOD10 wait2 is shown below.

1. The numbers are placed from the right digit to the left.
2. Multiple 2 to the odd number, and 1 to the even. Then, sum all of them.
3. 10 divide the sum, and the remainder is obtained.
4. Subtract the remainder from 10, and get the difference. This value is set to the a check digit. (When the remainder is 0, then a check digit is 0)

(2) Loons

* The calculation procedure of Loons is shown below.

1. The numbers are placed from the right digit to the left.
2. Multiple 2 to the odd digit, and 1 to the even.
3. If the result of the procedure number 2 comes up in two digit, then sum each digit (1st digit, and 10th).s
4. 10 divide the sum, and the remainder is obtained.
5. Subtract the remainder from 10, and get the difference. This value is considered as a check digit.
   (When the remainder is 0, then a check digit is 0)

(3) X CheckDR (DR: Divide Remains; X is either 7,8,9, or 10)

* The calculation procedure of the Check digit with CheckDR is shown below.

1. Sum all the value of the data character.
2. X divides the sum, and the remainder is obtained. This remainder is considered as a

check digit.

(When the remainder is 0, then a check digit is 0)

(4) X CheckDSR (DSR: Divide Supply Remains; X is either 7,8,9, or 10)

The calculation procedure of the Check digit with CheckDSR is shown below.

1. Sum all the value of the data character.
2. 10 divide the sum, and the remainder is obtained.
3. Subtract the remainder from X, and get the difference. This value is considered as a Check digit.

   (When the remainder is 0, then a check digit is 0)

(5) X CheckDR_X (DR: Divide Remains; X is either 7,8 or 9)

* The calculation procedure of the Check digit with CheckDR is shown below.

1. Sum all the value of the data character.
2. X divides the sum, and the remainder is obtained. This remainder is considered as a check digit.

   (When the remainder is 0, then a check digit is X)

(6) X CheckDSR _X(DSR: Divide Supply Remains; X is either 7,8 or 9)

The calculation procedure of the Check digit with CheckDSR is shown below.

1. Sum all the value of the data character.
2. 10 divide the sum, and the remainder is obtained.
3. Subtract the remainder from X, and get the difference. This value is considered as a Check digit.

   (When the remainder is 0, then a check digit is X)

(7) Example

The value "980401362" with Loons

1. Multiple 2 to the odd digit and 1 to the even.

   Numbers → 9 8 7 6 5 4 3 2 1

   Data → 9 8 0 4 0 1 3 6 2

   x x x x x x x x x

   Weight → 2 1 2 1 2 1 2 1 2

   ---

   18 8 0 4 0 1 6 6 4

2. The digit of the number 9 becomes 18. Separate 18 into the 2 digit, 1and 8 (1^{st}, and 10^{th} digit) and sum each number.
   1+8+8+0+4+0+1+6+6+4 = 38

3. 10 divide the sum, and the remainder is obtained.
   The remainder = 38 Mod 10 = 8

4. Subtract the remainder from 10, and get the difference.
   10 – 8 = 2
   Therefore, the Check digit is 2.

* The value "980401362" with 10CheckDR
   1. Sum all the values of the data.
      Sum = 9 + 8 + 0 + 4 + 0 + 1 + 3 + 6 + 2 = 33
   2. The sum is divided by 10, and gets the remainder.
      Remainder = 33 Mod 10 = 3

   Therefore, the Check digit is 3.

* The value "980401362" with 7CheckDSR
   1. Sum all the values of the data.
      Sum = 9 + 8 + 0 + 4 + 0 + 1 + 3 + 6 + 2 = 33
   2. 7 divide the sum, and the remainder is obtained.
      Remainder = 33 Mod 7 = 5
   3. Subtract the remainder from 7, and get the difference.
      7 – 5 = 2

   Therefore, the Check digit is 2.

(8) Counter

A Counter of these check digit of is calculated with **DURA Rhythm** and transited to the printer each time the label is printed.

Appendix O Customer Barcode

You can print customer barcodes with **DURA Rhythm Ver4.41** and later.

(1) General

The Ministry of Posts and Telecommunications of Japan has introduced the barcode system to increase the efficiency of postal service. The sender can print a barcode (a customer barcode) on each postal matter before posting.

The sender does not always have to print the customer barcode; the postal charge is discounted when the customer barcode is printed.

See the document issued by the Ministry of Posts and Telecommunications for further information about the regulations on customer barcode.

(2) Customer Barcode Format

The customer barcode format is shown below.

start code (1 digit)	new zip code (7 digits)	address No. (13 digits)	check digit (1 digit)	stop code (1 digit)

	Available Characters
new zip code	numeric (0-9)
address No.	numeric (0-9), capital alphabet (A-Z), －

(1) Though a new zip code is usually hyphenated between the 3rd and 4th numbers, the hyphen is omitted in customer barcode.

(2) When the last two numbers (the 6th and the 7th numbers) of a new zip code is '00', which means the key zip code, the customer barcode is not printed. However, **DURA Rhythm** does not check whether the numbers are '00' or not.

The hyphen is omitted that connect the new zip code and the address No. An alphabet I s expressed by the combination of a control code and a number code and treated as two di gits in the barcode.

(3) When the address No. is shorter than 13 digits, codes are added at the end. When the address No. is longer than 13 digits, the 14th and later digits are removed (When the 13th digit is the control code for an alphabet, the code and the following number code are included in the data.).

(4) **DURA Rhythm** automatically adds the check digit.

(5) A quiet zone of 2mm or more width is necessary around the customer barcode.

Appendix P DataMatrix (ECC200)

(1) You can print DataMatrix data with **DURA PRINTER SR** (ROM Version 00.30 or later) / **SRS** / **LSP5300 (5310)** / **LP5320**. There are two types of DataMatrix (ECC200) symbols: the square type and the rectangle type.

With **DURA PRINTER SR** (ROM Version 00.44 or later) and **SRS** (ROM Version 10.21 or later), you can fix the symbol size of the square type, which is the newly added function. **LSP5300 (5310)** and **LP5320** do not support this function.

* Square Type

The same number of cells are arranged both lengthwise and crossword. The number of cells varies from 10 to 144 (24 types).

* Rectangle Type

The number of cells is fixed. There are 6 types of rectangles. See the table below.

Number of Cells (height) x Number of Cells(width)
8 x 18
8 x 32
12 x 26
12 x 36
16 x 36
16 x 48

The characters **DURA Rhythm** supports are shown in the table below.

There is no distinction among numeric, alphanumeric and 8-bit byte code in the specifications of DataMatrix (ECC200).

Characters	Remarks
Numeric	0 ~ 9
Alphanumeric	0 ~ 9, capital letters, symbols, control codes See Table N-1, for the values that can be inputted.
8-bit byte	JIS 8 Unit Code See Table N-2, for the values that can be inputted. Full Size Shift JIS

Available Alphanumeric Mode characters (Table N-1)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`									
1		DC1	!	1	A	Q										
2			"	2	B	R										
3	ETX	DC3	#	3	C	S										
4	EOT		$	4	D	T										
5		NAK	%	5	E	U										
6	ACK	SYN	&	6	F	V										
7	BEL	ETB	‘	7	G	W										
8			(	8	H	X										
9	HT	EM	)	9	I	Y										
A	LF	SUB	*	:	J	Z										
B	VT	ESC	+	;	K	[										
C		FS	,	<	L	¥										
D	CR	GS	-	=	M	]										
E	SO		.	>	N	^										
F	SI		/	?	O	_										

Available 8-bit byte Mode characters (Table N-2)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p								
1		DC1	!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3	ETX	DC3	#	3	C	S	c	s								
4	EOT		$	4	D	T	d	t								
5		NAK	%	5	E	U	e	u								
6	ACK	SYN	&	6	F	V	f	v								
7	BEL	ETB	‘	7	G	W	g	w								
8			(	8	H	X	h	x								
9	HT	EM	)	9	I	Y	i	y								
A	LF	SUB	*	:	J	Z	j	z								
B	VT	ESC	+	;	K	[	k	{								
C		FS	,	<	L	¥	l	|								
D	CR	GS	-	=	M	]	m	}								
E	SO		.	>	N	^	n	~								
F	SI		/	?	O	_	o	DEL								

(2) The matrix size is , compressed automatically, decided according to the combination of the inputted data types. The general relation between matrix size and the number of characters are shown in the table below.

[Square Type]

Matrix Size Cell(height) x Cell(width)	The number of input characters		
	Num-eric	Alpha-numeric	8-bit byte
10 x 10	6	3	1
12 x 12	10	6	3
14 x 14	16	10	6
16 x 16	24	16	10
18 x 18	36	25	16
20 x 20	44	31	20
22 x 22	60	43	28
24 x 24	72	52	34
26 x 26	88	64	42
32 x 32	124	91	60
36 x 36	172	127	84
40 x 40	228	169	112
44 x 44	288	214	142
48 x 48	348	259	172
52 x 52	408	304	202
64 x 64	560	418	278
72 x 72	736	550	366
80 x 80	912	682	454
88 x 88	1152	862	574
96 x 96	1392	1042	694
104 x 104	1632	1222	814
120 x 120	2100	1573	1048
132 x 132	2608	1954	1302
144 x 144	3116	2335	1556

[Rectangle Type]

Matrix Size Cell(height) x Cell (width)	The number of input characters		
	Num-eric	Alpha-numeric	8-bit byte
8 x 18	10	6	3
8 x 32	20	13	8
12 x 26	32	22	14
12 x 36	44	31	20
16 x 36	64	46	30
16 x 48	98	72	47

* Up to 2000 characters can be printed with **DURA Rhythm**.
* Numeric : When only numeric data are included in the data, the number of characters is just the same as the number shown in the table above.

* Alphanumeric : When symbols or control codes are included in the data, the number of characters may become smaller than that shown in the table above. When numeric data are included in the data, the number of characters may become larger than that shown in the table above. When only English capital letters (A ~ Z) are included in the data, the number of character is just the same as the number shown in the table above.

* 8 bit byte : When numeric data are included in the data, the number of characters may become larger than that shown in the table above.

Appendix Q RSS Symbols

RSS (Reduced Space Symbology)

DURA Rhythm covers the **RSS** symbols listed below.

RSS-14
RSS-14 Trancated
RSS-14 Stackd
RSS-14 Stackd Omnidirectional
RSS-Limited
RSS-Expanded

These are 1-D barcodes. You can create Composite [CC-A] barcodes by combining an RSS symbol and a 2-D barcode (PDF417).

RSS-14

RSS-14 is a standard space-saving symbol and "01", the application identifier (AI), is internally and automatically added.
You can input numbers (0-9) of 13 digits long (fixed) as the data. The check digit is also added automatically. The bar height must be at least more than 33 times larger than the width of the narrow line.

Note :

DURA Rhythm does not add human readable characters automatically. Creat e them as a text Image (common to all types of RSS symbols).

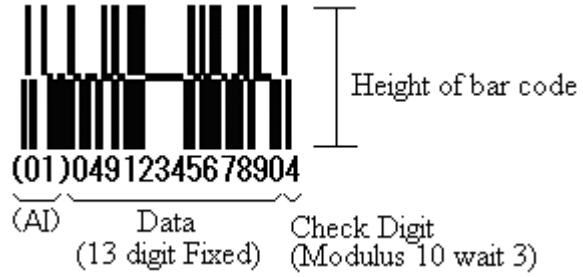
When you input data less than 13 digits, 0s are added at the head (exc ept RSS-Expanded).

RSS-14 Trancated

The data RSS-14 Trancated carries are identical with those of RSS-14 except that the bar height must be at least 13 times larger than the width of the narrow line.

RSS-14 Stackd

RSS-14 Stackd is a double-layer barcode to meet the need when only a small print space can be provided. It carries the data identical with those of RSS-14. The bar height must be at least 13 times larger than the module width.



RSS-14 Stackd Omnidirectional

RSS-14 Stackd Omnidirectional is a barcode created so that it can be used with an omnidirectional scanner, based on RSS-14 Stackd.

It carries the data identical with those of RSS-14.

The bar height must be at least 69 times larger than the module width.

RSS-Limited

RSS-Limited is the smallest **RSS symbol**.

It carries the data identical with those of RSS-14 except that the value of the first digit of the data is limited to 0 and 1. The bar height must be at least 10 times larger than the module width.

RSS-Expanded

RSS-Expanded is an **RSS symbol** that can have an (AI) other than (01).

The application identifier (AI) and the barcode data are combined together and treated as a group of data, as in the case of **EAN128**.

You can input numeric data of up to 74 digits, or alphabets of up to 41 digits.

- numeric 0-9
- capital alphabet A-Z
- small alphabet a-z
- space
- 20 marks (!"%&'()*+,-./:;<=>?_)
- function character (FUNC1)

You must input AI, too, as a part of data when you use RSS-Expanded.

RSS + Composite [CC-A]

When you want to use Composite barcodes, input "|" (a vertical bar) behind the 1-D barcode of RSS and then input 2-D data. Now you can print RSS+Composite [CC-A].

(Ex) When "(01)1234567890123" and Composite ABCDE are the data,

DURA PRINTER SR(RSS),SRS(RSS),IP6500 covers RSS symbols.

Appendix R Output to Generic/Text Only Printer Driver

DURA Rhythm Ver5.7F and later cover the output to Generic/Text Only printer driver, the communication port.

(1) OS

Microsoft Windows 2000（applied SP3 or later）

Microsoft Windows XP （applied SP1 or later）

(2) Installation of Generic/Text Only Printer Driver

You must install Generic/Text Only printer driver.

(3) Restriction

- Since Generic/Text Only printer driver does not cover the two-way communication, you can't utilize such functions as checking the printer status and referring to the file in the memory card.
- When you select serial port for Generic/Text Only printer driver, you can't use the port with other programs since the port is taken up by the printer driver.

(4) How to install Generic/Text Only Printer Driver on Windows XP based Personal Computer

(1) Go into the printer folder and double-click "Add Printer" icon to start "Printer Add Wizard".

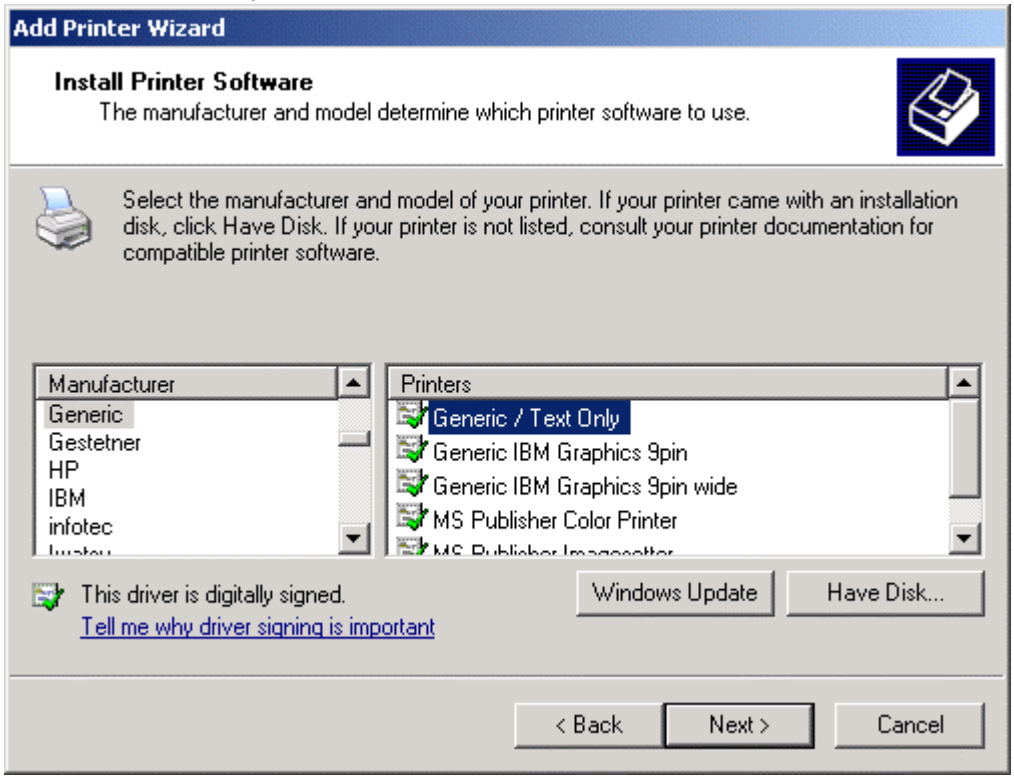
(2) Click "Next" on "Printer Add Wizard".

(3) Select the printer type.
Select "Local printer connected to this computer".
Remove the check mark on "automatically detect the plug-and-play printer".
If you are not the administrator, select "network printer" or "printer connected to another personal computer".

(4) Select the port you are going to connect the printer.

(5) Select Generic/Text Only printer.

Select "Generic" for "Manufacturer" and "Generic/Text Only printer" for "Printer", and click "Next".



(6) Select "No" on "Do you want this printer to act as the default printer for your system?".

lote 1

: We have not conducted evaluation in all configurations. We do not inte nd in this document to assure the display function in Japanese by **DURA R hythm** on **Windows XP** English version.

lote 2

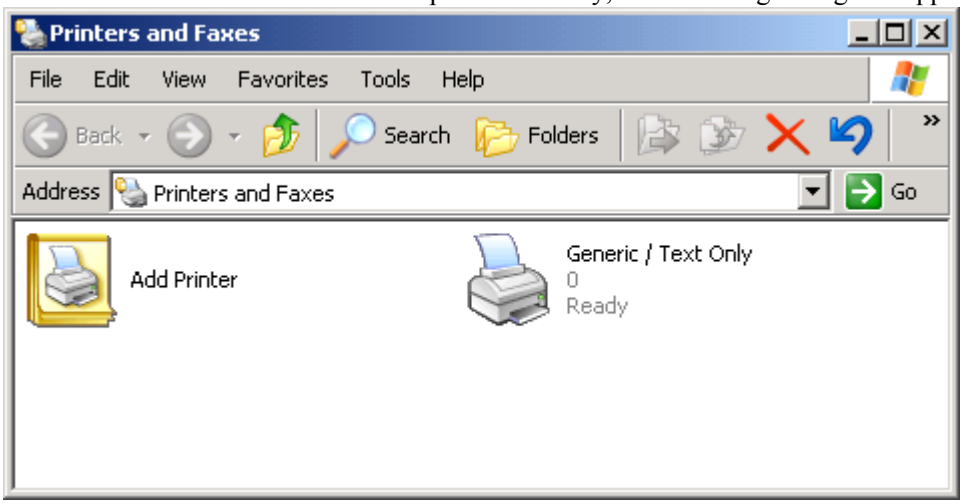
(7) Select "No" on "Do you want to print test page?".

(8) Click "Finish". File copy starts.

When a message requesting "TXTONLY.DLL" is displayed, set Windows XP CD-ROM and resume the process.

(9) Generic/Text Only printer driver has been installed.

When the installation completed correctly, the following dialog box appears.



Appendix S How to Display DURA Rhythm in Japanese on Windows XP English Version Based Personal Computer

How to make settings to display **DURA Rhythm** in Japanese on a **Windows XP** English version based personal computer is described here for your information.

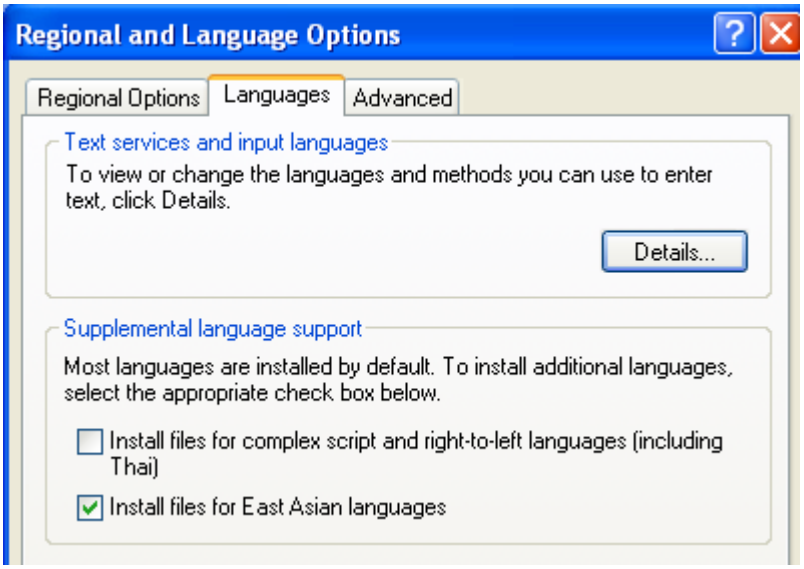
(1) Click "**Start**" and then click "**Control Panel**".

(2) Click "**Date, Time, Language, and Regional Options**".

(3) Click "**Regional and Language Options**".

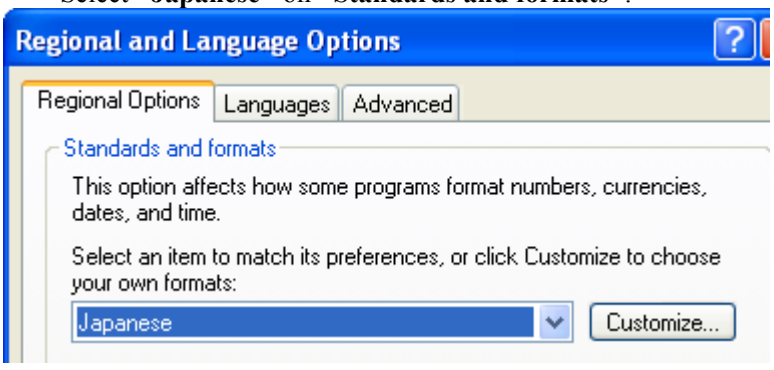
Click "**Language**" tab on the displayed dialog box and place a check mark on **"Install files for East Asian languages"** at the bottom.

"Install Supplemental Language Support" message appears. Click "**OK**".



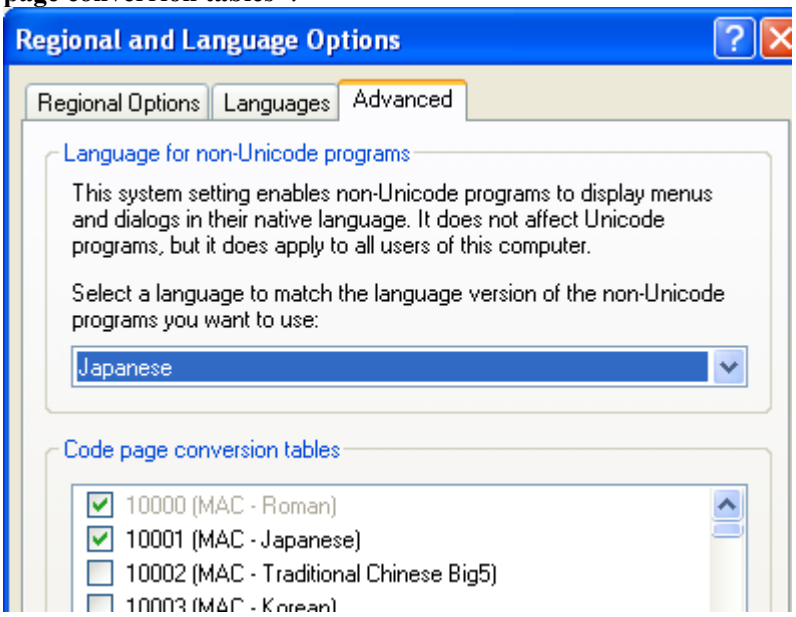
(4) Click "**Regional Options**" tab.

Select **"Japanese"** on **"Standards and formats"**.



(5) Click "**Advanced**" tab.

Change the setting of **"Language for non-Unicode Programs"** to **"Japanese"** and place a check mark on **[10001 (MAC - Japanese)]** in **"Code page converrion tables"**.



(6) Click "**OK**", and then the file copy starts.

Insert CDs or reboot the personal computer when prompted.