RFID XML Printer
User Manual

System Name : Customized Special Specification
Model : CL408e RFID

Confirmed Specification

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5	2005.11.10	3	3	Storage Media Type default change to ROM from Card

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1 Outline

This specification gives explanation on the new RFID XML printer. Printer models are as follow:

Model Name	New Firmware Version	Based Firmware Version
CL408e RFID	05.98.01.00A	05.96.01.00F (Standard RFID), 05.97.00.00C (Alien XML), 05.98.00.00C (SAMSys XML), 05.99.00.00C (Standard XML)

About Special Specification

This special specification is about the consolidation of all currently available XML firmware (Alien, SAMSys and Standard) into the latest 2-in-1 RFID standard firmware. Hence, both Alien and SAMSys RFID user can now use the same firmware for XML data processing and printing while simply select their module type from the LCD option. Like the previous XML firmware, this new RFID XML firmware will also compile to the Oracle and SAP standard/requirements. This firmware has also been further enhanced with new 2D barcode support and selectable format no. deletion.

To simplify the usage of this newly consolidated RFID XML printer, the following shall looked into:

On XML

- New XML related LCD screen options
- Oracle and SAP compliance XML data streams that combine with stored LG format (inside the printer ROM/external card) for printing
- Label Gallery (LG) software for creating the XML format design
- Checking registered format procedures
- New 2D barcode XML support (i.e. to allow 2D barcode printing)

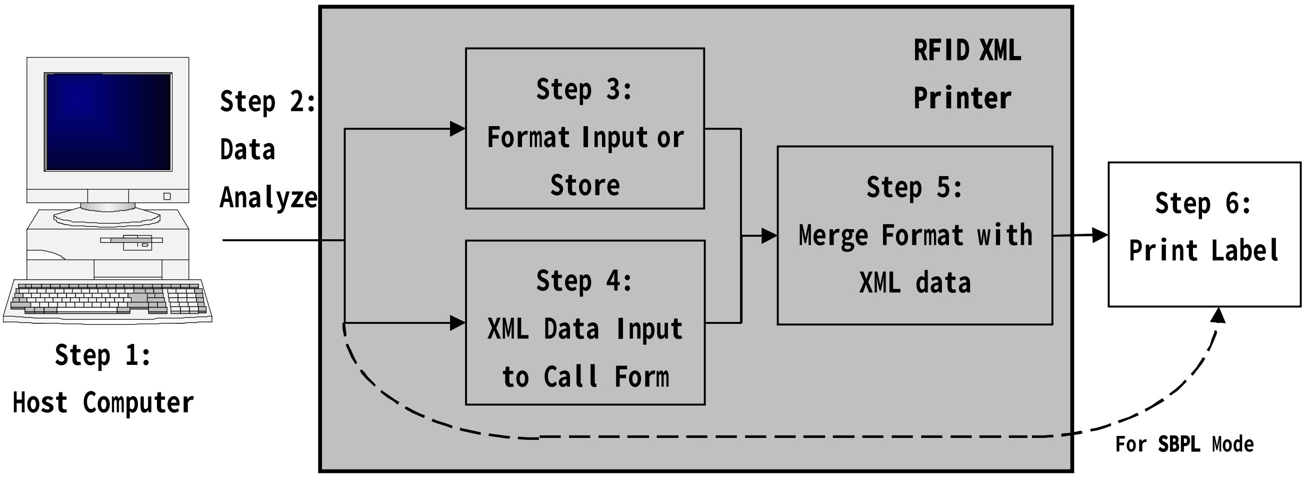
On RFID

- RFID commands used for data encoding

Note:

Due to combination of RFID module in this printer, user has to select their RFID module (Alien or SAMSys) under the new RFID Mode. More options like Data Type, Data Size, etc can also be selected from the new RFID Mode. Please kindly refer to combined RFID Specification for more information.

2 System Structure


RFID XML Printer
Step 1: Host Computer
Step 2: Data Analyze
Step 3: Format Input or Store
Step 4: XML Data Input to Call Form
Step 5: Merge Format with XML data
Step 6: Print Label
For SBPL Mode

2.1 Host Computer

Host computer is used to transfer Format and XML data stream to printer for printing or storage

2.2 Data Analyze

In Data Analyze, the data sent will be checked to identify whether it is SBPL or XML data. Only the matching data type set in the Mode Type (under Advance Mode) can be accepted. For example, if SBPL mode selected only SBPL data will be accepted and XML data will not have any effect to the printer.

2.3 Format (only in XML mode)

Under Format, all input formats will be stored either inside external SRAM card or printer internal Flash ROM selectable by the Storage Media type option (under Advance Mode).

2.4 XML (only in XML mode)

When the XML data stream follows the Document Type Definition (DTD) semantics, it contains a <labels> or <label> element with a _FORMAT attribute. The RFID XML printer parses the XML print job data stream for format attribute, label quantity, and variable field data.

2.5 Merge (only in XML mode)

When XML data stream been sent to request print, the printer will call the respective format from memory (either card or flash ROM) and match with the corresponding variables inside the XML data stream. Eventually, the merged data will be converted to SBPL data.

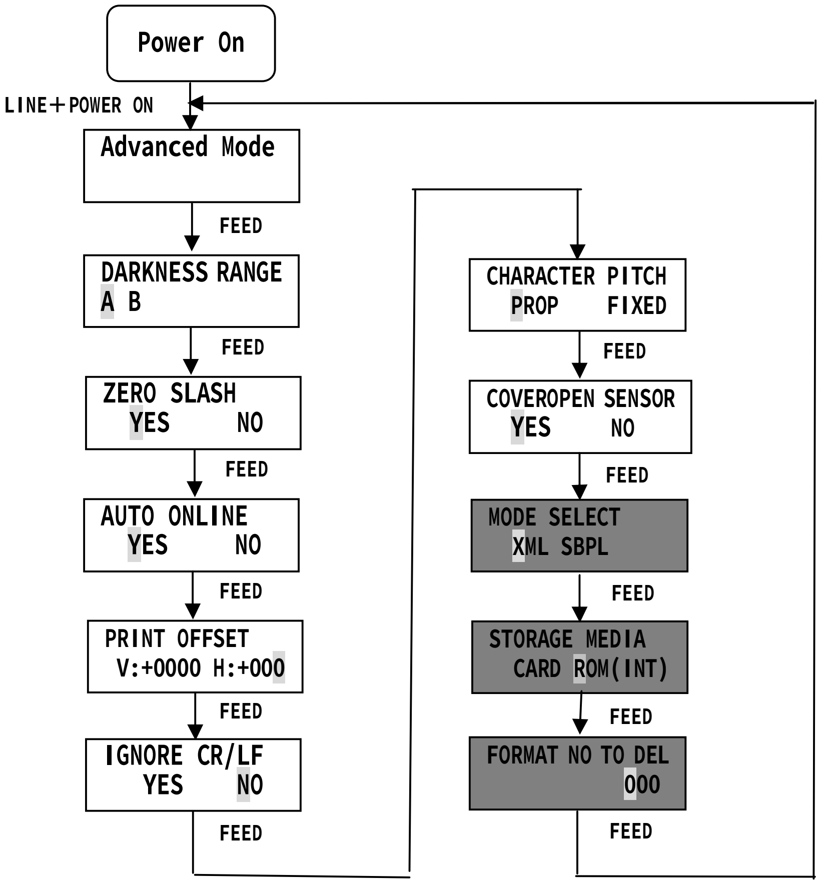
2.6 Print Label

Here the printer will process the input SBPL data for label printing

3 XML Related LCD Options

The figure below illustrated all of the XML related LCD options under the Advanced Mode (see shaded boxes).

- Mode Select - to select Printer Mode either XML or SBPL. (Default: XML mode)
- Storage Media - to select the storage media for XML formats storage. (Default: ROM)
- Format No to Del – to select Format No. for deletion. (Default: 000)



<u>Important:</u> Format Deletion will take some time to clear. Please kindly wait till the Format Delete Completed LCD message appears before power off printer.

4 XML Data Stream

4.1 Document Type Definition (DTD)

An XML DTD defines the XML tags' structure used in the XML file. The host system will generate the XML files according to this DTD. RFID XML printer will translate the XML according to this DTD (see example below). Here, the example defines the elements that are used in the XML data stream and a list of their attributes and the next level elements.

```
<!ELEMENT labels (label)*>
<!ATTLIST labels _FORMAT CDATA #IMPLIED>              Line 2
<!ATTLIST labels _JOBNAME CDATA #IMPLIED>
<!ATTLIST labels _QUANTITY CDATA #IMPLIED>
<!ATTLIST labels _DUPLICATES CDATA #IMPLIED>
<!ATTLIST labels _PAGES CDATA #IMPLIED>                  Line 4
<!ATTLIST labels _PRINTERNUMBER CDATA #IMPLIED>
<!ATTLIST labels _PRINTERNAME CDATA #IMPLIED>

<!ELEMENT label (variable)*>
<!ATTLIST label _FORMAT CDATA #IMPLIED>
<!ATTLIST label _JOBNAME CDATA #IMPLIED>
<!ATTLIST label _QUANTITY CDATA #IMPLIED>
<!ATTLIST label _DUPLICATES CDATA #IMPLIED>
<!ATTLIST label _PAGES CDATA #IMPLIED>
<!ATTLIST label _PRINTERNUMBER CDATA #IMPLIED>         Line 18
<!ATTLIST label _PRINTERNAME CDATA #IMPLIED>

<!ELEMENT variable (#PCDATA)>
<!ATTLIST variable name CDATA #IMPLIED>
```

Line 2 - If the XML data follows DTD semantics, it will contain the *<labels>* elements identifying the default attributes used by printer for label creation. The *_Format* attribute identifies the appropriate stored label format.

Line 4 -Other attributes can be processed as well; for instance, the *_QUANTITY* attribute can be used to set the print quantity of the particular label.

Line 18 – Here the <variable> elements with *name* attribute contains the variable name, it corresponds to the variable field in the label format. The <variable> element text contains the data that is placed in the variable field in the label format.

4.2 XML Data Stream Sample

General Information

Below is an Oracle XML data sample with its content lies between <labels> and </labels>. Hence, each <label> and </label> corresponds to the information needed to print each group of individual label like values of each variables (enclosed by <variable> and </variable>).

As for the default printer name, label format, and duplicate quantities, they are provided within the <labels> tag. Those default values can be overridden by each individual <label> tag for a specific printer name, label format, and/or duplicate quantities for that particular label print request. Without overriding tags, default parameters will be used throughout the whole XML data.

XML Data Stream Sample

```
<?xml version=”1.0” standalone=”no”?>
<!DOCTYPE labels SYSTEM “label.dtd”>
<labels _FORMAT=”Materiallabel” _QUANTITY=”1” _PRINTERNAME=”Printer1” _JOBNAME=”LBL101”>
<label>
<variable name= “ITEM”>AS5488</variable>
<variable name= “ITEMDESC”>Desktop</variable>
<variable name= “QTY”>2</variable>
<variable name= “UOM”>EA</variable>
</label>
<label _FORMAT=”LotLabel” _PRINTERNAME=”Printer2” >
<variable name= “ITEM”>AS12345</variable>
<variable name= “ITEMDESC”>Mouse</variable>
<variable name= “LOT”>10200</variable>
<variable name= “QTY”>10</variable>
<variable name= “UOM”>Bx</variable>
</label>
</labels>
```

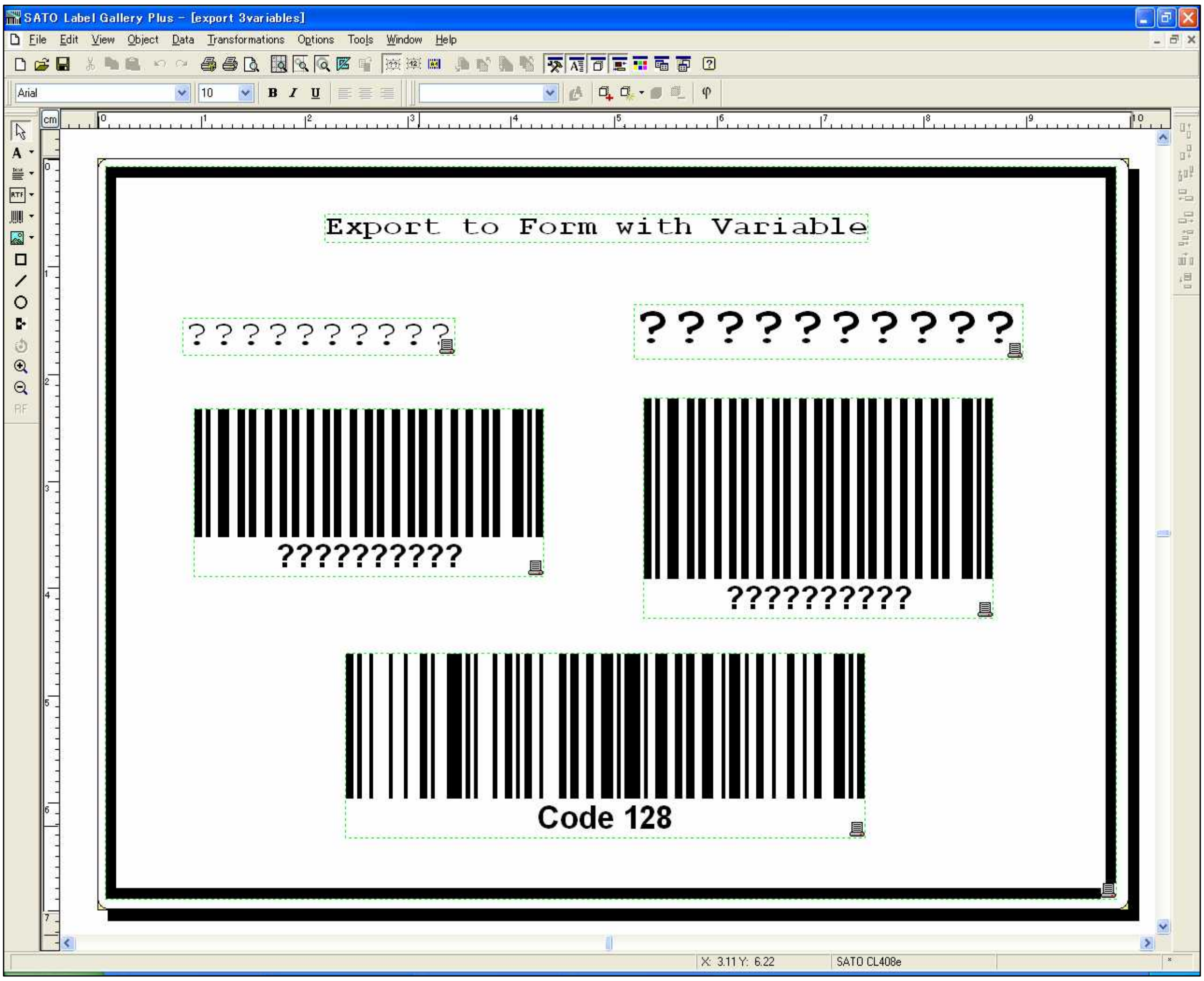
See Description Below

Description of the above sample

- Under <labels> element:
  _FORMAT element recalls the name of the stored XML-enabled format from printer memory
  _QUANTITY element determines the number of labels to be printed
- Under <label> element:
  LOT is one of variable data fields, and the value *10200*, are the variable data used by printer to match with the variables set inside the pre-stored format for printing

5 Label Gallery (LG) Plus Software

5.1 Creation of Label Format

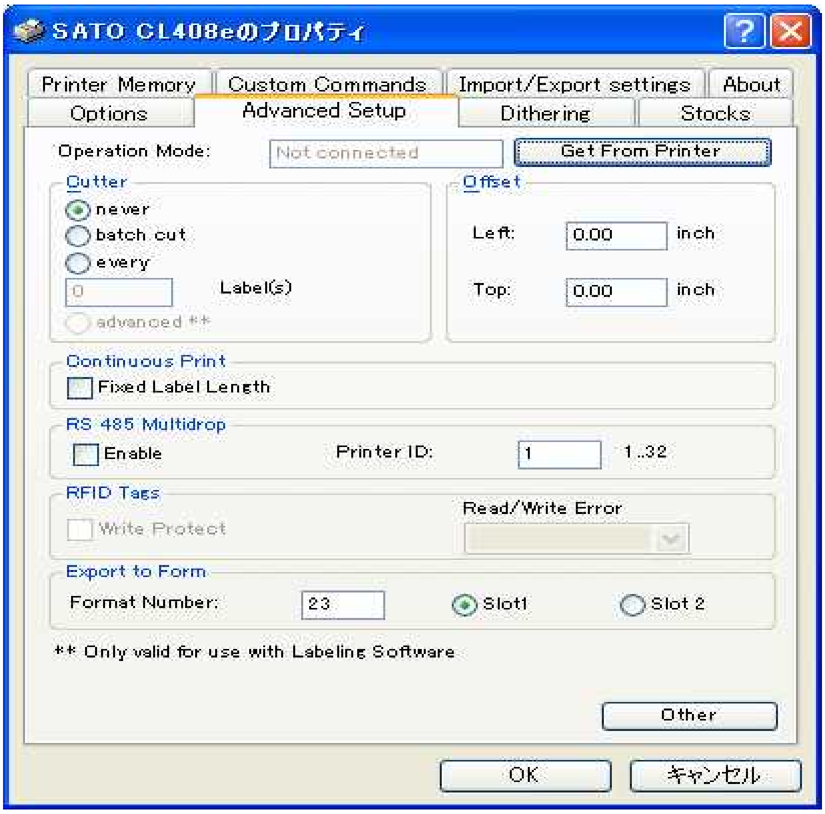

SATO Label Gallery Plus - [export 3variables]
File Edit View Object Data Transformations Options Tools Window Help
Arial
10
B I U
cm
Export to Form with Variable
??????????
??????????
??????????
??????????
Code 128
X: 3.11 Y: 6.22
SATO CL408e

As explained earlier, we need to send in a label format for data merging with XML data stream. This can be done easily by Label Gallery Plus software (see above).

Upon the completion of label design, the user is able to select an “Export to Form” option under the File option in which the Form along with its corresponding variables are sent to the printer and stored under a particular Format Number.

5.2 LG Printer Setting

In order to allow LG formats to be send into our RFID XML printer, below are some of the steps needed to set accordingly.



Operation Mode: Not connected

Cutter
- ● never
- ○ batch cut
- ○ every
- 0 Label(s)
- ○ advanced **

Offset
- Left: 0.00 inch
- Top: 0.00 inch

Continuous Print
- □ Fixed Label Length

RS 485 Multidrop
- □ Enable
- Printer ID: 1 1..32

RFID Tags
- □ Write Protect
- Read/Write Error

Export to Form
- Format Number: 23 ● Slot1 ○ Slot 2

** Only valid for use with Labeling Software

For example, if you like to set 23 as the Format Number used to store inside the RFID XML printer, please kindly enter 23 inside the Format Number box (under Advanced Setup inside Printer Settings option) as shown above.

Note: Selection of Slot 1 implies that Format 23 will be stored inside the memory card residing in the printer.

Important:

Maximum number of Formats allowed inside the memory card is 999. However, if the sizes of each format are larger, the maximum number of Formats might not be achievable.

5.3 Sample Format – Store

```
←A←CC1←YS,1←%0←H0025←V0019←FW0808V0120H0785←%0←H0077←V0053←L0306←P02←ULocation
Label←%0←H0031←V0166←L0304←P02←USub:←%0←H0032←V0248←L0303←P02←UDescription:←%0←H0036
←V0375←L0303←P02←USubStatus:←%0←H0036←V0513←L0305←P02←ULoc:←%0←H0036←V0599←L0303←P02
←ULoc Status:←%0←H0035←V0869←L0408←P02←UOracle Warehouse
Management←/X,01,99,organization←%0←H0482←V0059←L0304←P02←U←/X,02,99,subinventory_co
de←%0←H0170←V0170←L0303←P02←U←/X,03,99,subinventory_description←%0←H0033←V0308←L0303
←P02←U←/X,04,99,subinventory_status←%0←H0036←V0430←L0303←P02←U←/X,05,99,locator←%0←H
0174←V0521←L0303←P02←U←/X,06,99,locator_status←%0←H0036←V0657←L0303←P02←U←/X,07,99,b
arcodefield←%0←H0036←V0713←B101118←Z
```

The above table is a LG format sample used to store inside the printer memory. As we can see above, <ESC>/X command has been created to support Variable Name matching function (see Appendix A for more details on <ESC>/X command).

<u>Description of the above sample</u>

- <ESC>A command marks the start of code processing like SBPL.
- <ESC>CC command issued next to select either card or internal memory to call the desired LG Format. Note: CC1=Slot 1 (can be Card or Internal Memory depends on the LCD option selected under the Card Mode).
- <ESC>YS command issued to store the desired format into printer memory.
- <ESC>/X commands issued to specify field numbers, data length and **Variable Name** of each field inside the format. Note: Horizontal and vertical positions, rotation angle and font size are also set inside the <ESC>/X command.
- <ESC>Z command marks the end of code processing.
- '←' character implies the <ESC> character.

Important (only for XML mode):

1. A short beep will be heard when the format been successfully downloaded into the printer.

2. Maximum number of fields per format can be registered is 99.
This depends on the available memory size at the time of registration too.

5.4 Sample Format - Recall

```
←A←CC1←YR,1←Q1←Z
```

The above table shows a sample of data that is used to recall a Format residing in the printer’s memory.

<u>Description of the above sample</u>

- <ESC>A command marks the start of code processing.
- <ESC>CC command issued next to select either card or internal memory to retrieve the desired format.
- <ESC>YR command issued to tell the printer to recall the desired format from memory.
- <ESC>Q command issued to set labels quantity for printing.
- <ESC>Z command marks the end of code processing.
- ‘←’ character implies the <ESC> character.

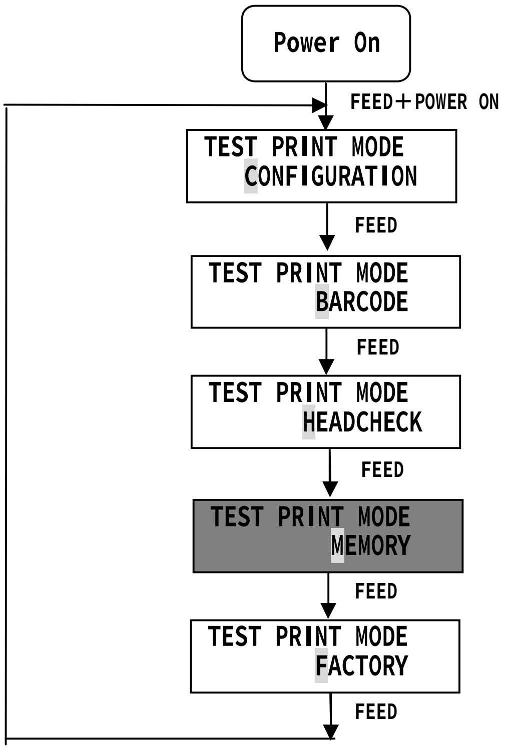
After the above format recall sent, RFID XML printer will convert the XML data into SBPL for printing.

6 Registered Formats Verification

6.1 Via Test Print Mode

LCD Options

As illustrated below is the LCD option (select Memory under Test Print Mode) used to print out a label (see below) indicating how many formats are registered in the memory.



Power On

FEED+POWER ON

TEST PRINT MODE
CONFIGURATION

FEED

TEST PRINT MODE
BARCODE

FEED

TEST PRINT MODE
HEADCHECK

FEED

TEST PRINT MODE
MEMORY

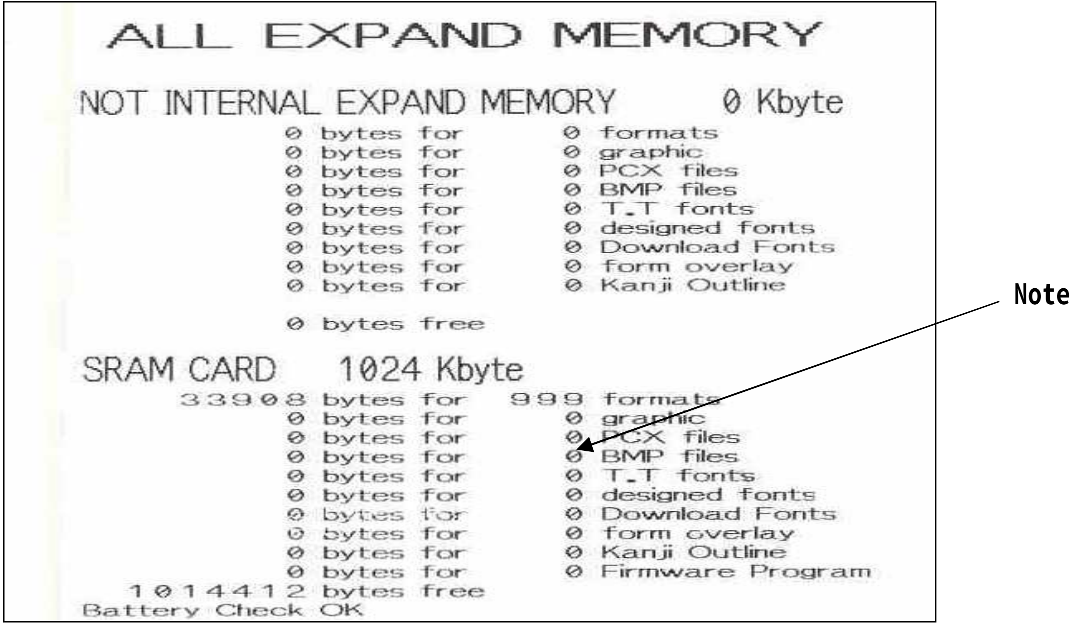
FEED

TEST PRINT MODE
FACTORY

FEED

Memory Test Print Label Sample

The sample below shows that there are 999 formats registered in the SRAM card.



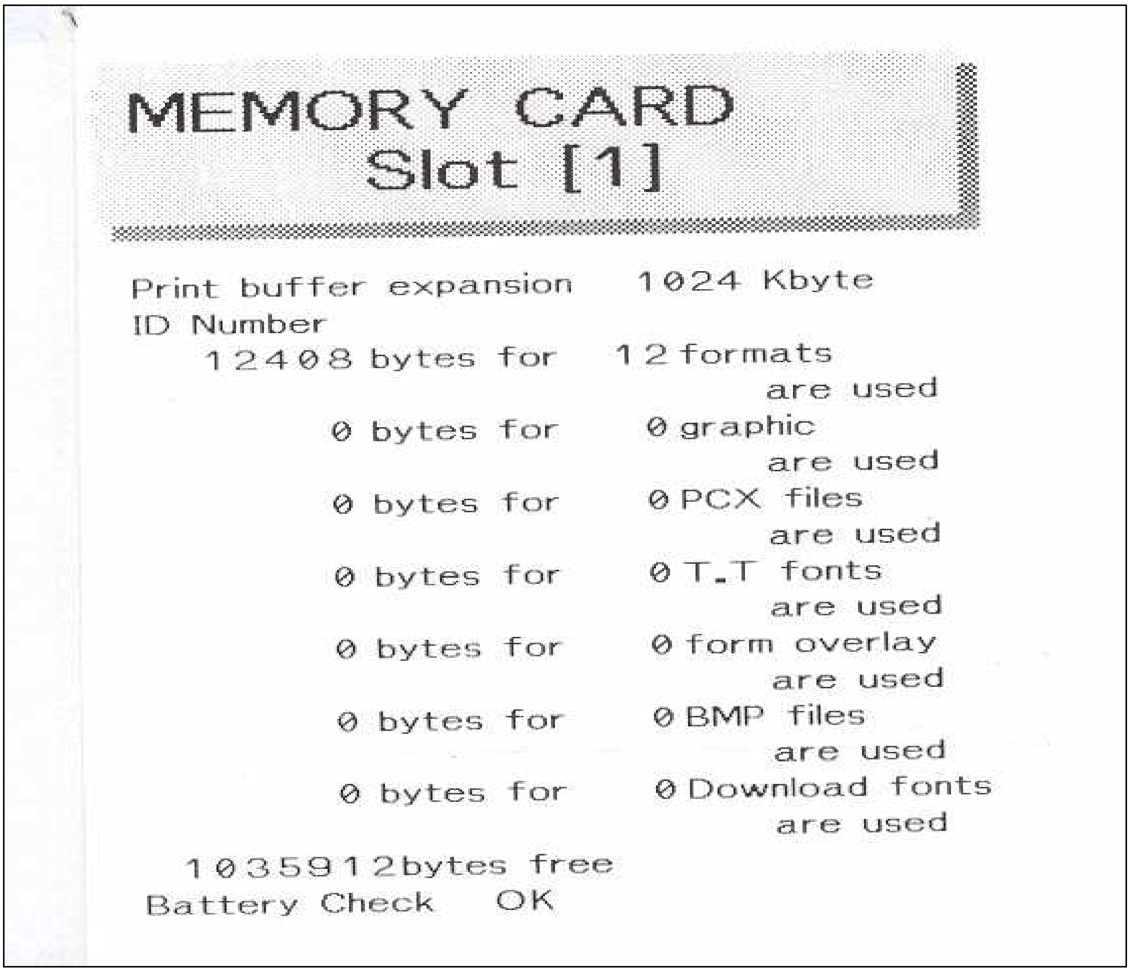
```
ALL EXPAND MEMORY

NOT INTERNAL EXPAND MEMORY        0 Kbyte
              0 bytes for        0 formats
              0 bytes for        0 graphic
              0 bytes for        0 PCX files
              0 bytes for        0 BMP files
              0 bytes for        0 T.T fonts
              0 bytes for        0 designed fonts
              0 bytes for        0 Download Fonts
              0 bytes for        0 form overlay
              0 bytes for        0 Kanji Outline

              0 bytes free

SRAM CARD    1024 Kbyte
          33908 bytes for      999 formats
              0 bytes for        0 graphic
              0 bytes for        0 PCX files
              0 bytes for        0 BMP files
              0 bytes for        0 T.T fonts
              0 bytes for        0 designed fonts
              0 bytes for        0 Download Fonts
              0 bytes for        0 form overlay
              0 bytes for        0 Kanji Outline
              0 bytes for        0 Firmware Program
        1014412 bytes free
Battery Check OK
```

6.2 Via <ESC>FP command (only in SBPL mode)

The user is able to check the number of Formats registered in memory by using the following method.

```
←A←CC1←FP←Q1←Z
```

The <ESC>FP command prints a label (see below) showing how many formats have been registered up to that point in time. This label also shows the number of graphics, PCX, True Type Fonts, Form Overlay, BMP and Download Fonts registered in the memory. Note: '←' character implies the <ESC> character.



```
MEMORY CARD
        Slot [1]

Print buffer expansion    1024 Kbyte
ID Number
    12408 bytes for   12 formats
                             are used
          0 bytes for    0 graphic
                             are used
          0 bytes for    0 PCX  files
                             are used
          0 bytes for    0 T.T  fonts
                             are used
          0 bytes for    0 form overlay
                             are used
          0 bytes for    0 BMP  files
                             are used
          0 bytes for    0 Download fonts
                             are used
  1035912bytes free
 Battery Check    OK
```

7 XML support for 2D Barcodes

Now, RFID XML printer can support variable data printing for most of the 1D/2D barcodes, depending on Label Gallery support. Please refer to SBPL Manual for more information.

7.1 Data Matrix

The SBPL command to define a Data Matrix barcode is <ESC>BX and the following code snippet is showing how the barcode is defined and stored in a Format.

```
<ESC>/X,01,99,barcode_field <ESC>V100 <ESC>H200 <ESC>BX01100202000000001 <DC>1234567890
```

As we can see from the code snippet above, The <ESC>BX command is used to define the various barcode parameters while the <ESC>DC command defines the initial data stream.

7.2 MAXI Code

The SBPL command to define a MAXI Code barcode is <ESC>BV and the following code snippet is showing how the barcode is defined and stored in a Format.

```
<ESC>/X,01,99,barcode_field <ESC>V100 <ESC>H200 <ESC>BV1,1,2,123456789,001,002,SAHTHA
```

As above, the <ESC>BV command defines, not only the various parameters that make up the barcode, but also the initial data too.

7.3 PDF417

The SBPL command to define a PDF417 barcode is <ESC>BK and the following code snippet is showing how the barcode is defined and stored in a Format.

```
<ESC>/X,01,99,barcode_field <ESC>V100 <ESC>H200 <ESC>BK0309303180010PDF1234567
```

As above, the <ESC>BK command defines, not only the various parameters that make up the barcode, but also the data count and initial data too.

7.4 QR Code (model 1)

The SBPL command to define a QR Code (model 1) barcode is <ESC>2D31 and the following code snippet is showing how the barcode is defined and stored in a Format.

```
<ESC>/X,01,99,barcode_field <ESC>V100 <ESC>H200 <ESC>2D31, L, 05, 1, 0 <ESC>DN6, 012345
```

As above, the <ESC>2D31 command defines the various parameters that make up the barcode whereas the <ESC>DS command defines the input mode and the data.

7.5 QR Code (model 2)

The SBPL command to define a QR Code (model 2) barcode is <ESC>2D31 and the following code snippet is showing how the barcode is defined and stored in a Format.

```
<ESC>/X,01,99,barcode_field <ESC>V100 <ESC>H200 <ESC>2D30, L, 05, 1, 0 <ESC>DN6, 012345
```

As above, the <ESC>2D30 command defines the various parameters that make up the barcode whereas the <ESC>DS command defines the input mode and the data.

7.6 QR Code (micro QR)

The SBPL command to define a QR Code (micro QR) barcode is <ESC>2D32 and the following code snippet is showing how the barcode is defined and stored in a Format.

```
<ESC>/X,01,99,barcode_field <ESC>V100 <ESC>H200 <ESC>2D32, L, 04 <ESC>DN6, 012345
```

As above, the <ESC>2D32 command defines the various parameters that make up the barcode whereas the <ESC>DS command defines the input mode and the data.

*Note 1: Once the parameters of a barcode command is fixed and downloaded to the printer, only the data can be updated or changed through the use of XML data file. There is no way to change the parameters of the barcode other than deleting the stored format and re-downloading the format with the new barcode parameters into the printer again.

*Note 2: Another thing to note is that if there is no XML data supplied to the barcode in the XML file, the default data registered initially in the Format is used instead.

8 RFID module commands

8.1 SAMsys module (UCODE only)

<ESC>IP0 command

RFID XML printer supports the <ESC>IP0 command of the SAMsys RFID module (UCODE only). The <ESC>IP0 command can now be exported and stored inside the printer memory as part of a particular format. This means that the <ESC>IP0 command can be recalled from memory to encode a RFID tag. The code snippet below shows the <ESC>IP0 command being exported by Label Gallery to the RFID XML printer for storage into a Format.

```
<ESC>/X,01,99,EPC <ESC>IP0,0,0
```

As we can see from the code snippet above, the variable name of the <ESC>/X command is "**EPC**" and the parameters of the <ESC>IP0 command are all set to zeroes when exported initially. Whenever a XML data is sent to the printer, it will get the data of the variable name that matches the one stored in the printer and in this case, the variable name is "**EPC**". The printer will then fill in the parameters of the <ESC>IP0 command based on the rules listed in the table below (Please refer to Appendix B for more information on the specifications of the IP0 command):

<ESC>IP0, X, Y, Z (X=Selection of EPC type, Y=Selection of number of characters, Z=data)

S/No	Item Description
1	➢ X is set to "**2**" when the first two characters of the data received is "**30**" (SGTIN-96) ➢ X is set to "**0**" when the first two characters of the data received is "**31**" (SSCC-96)
2	➢ Y is set to "**0**" when the length of the data is 28 digits ➢ Y is set to "**1**" when the length of the data is 24 digits ➢ Y is set to "**2**" when the length of the data is 18 digits
3	➢ Note that Z is the actual data to be encoded. The data can be 28, 24, or 18 digits long

With reference to the above table, two samples of the encoding scheme are shown below:

Sample #1 SGTIN-96 : <ESC>IP0, 2, 1, 30740C43FC162E8000000000

Sample #2 SSCC-96 : <ESC>IP0, 0, 1, 3194BEF97B65C0363E000000

<ESC>IP2 command

Besides the <ESC>IP0 command, the RFID XML printer also supports the use of <ESC>IP2 or Tag Lock command. The code snippet below shows the <ESC>IP0 and <ESC>IP2 commands being exported by Label Gallery to the printer for storage into a Format.

```
<ESC>/X,01,99,EPC <ESC>IP0,0,0<ESC>IP200
```

As seen above, the password to lock the Tag is set to "00" for the <ESC>IP2 command. Upon receiving an XML file, the printer will check for the correct variable name to extract the data and encode it onto the Tag. The Tag will then be locked with a password of "00".

8.2 Alien module

<ESC>IP0 command

The RFID XML printer supports the <ESC>IP0 command of the Alien RFID module. The <ESC>IP0 command can now be exported and stored inside the printer memory as part of a particular format. This means that the <ESC>IP0 command can be recalled from memory to encode a RFID tag. The code snippet below shows the <ESC>IP0 command being exported by Label Gallery to the printer for storage into a Format.

```
<ESC>/X,01,99,EPC <ESC>IP0
```

As above, the variable name of the <ESC>/X command is "**EPC**" and whenever a XML data is sent into the printer, it will get the data of the variable name that matches the one stored in the printer and in this case, the variable name is "**EPC**".

<ESC>IP2 command

Besides the <ESC>IP0 command, the printer supports the use of <ESC>IP2 or Tag Lock command. The code snippet below shows the <ESC>IP0 and <ESC>IP2 commands being exported by Label Gallery to the printer for storage into a Format.

```
<ESC>/X,01,99,EPC <ESC>IP0<ESC>IP200
```

As we can see from the above code snippet, the password to lock the Tag is set to "00" for the <ESC>IP2 command. Upon receiving an XML data, the printer will check for the correct variable name to extract the data and encode it onto the Tag. The Tag will then be locked with a password of "00".

9 Appendix A (<ESC>/X command)

Command Structure	**<ESC>/X,aa,bb,cc...c{.....}** aa = Field number to be stored (01 -99) bb = Length of field to be stored (01 -99) cc...c = Variable name to be stored (Maximum up to 60 characters) {.....} = Command stream describing the field to be stored Example: <ESC>YS,01<ESC>/X,01,99,organization Placement: Immediately after the <ESC>CC slot select command. Default: None.
Command Function	To store a format field description in the memory card
Printer Input	**<ESC>A** **<ESC>CC1** **<ESC>YS,01<ESC>/X,01,99,item**<ESC>V0100<ESC>H0100<ESC>XB1 **<ESC>/X,02,99,lot**<ESC>V0200<ESC>H0200<ESC>XB1 <ESC>Z
Printer Output	There is no printer output as a result of this command. The <ESC>YR Format recall command is used together with this command
Special Notes	a. This command requires the Memory Card option. b. This command is similar to the <ESC>/N command and the restrictions placed on <ESC>/N command are also applicable to the <ESC>/X command.

10 Appendix B (<ESC>IP0 command)

For SAMSys Module Only:

IP0,X,Y,Z

X = Selection of EPC type

0 : SSCC96 * Printer does mapping only

1 : SSCC64 * Printer does mapping only (Reserve)

2 : SGTIN96 * Printer does mapping only

3 : SGTIN64 * Printer does mapping only (Reserve)

a : EAN128 SSCC 96 * Printer does calculation ePC code to be sent to the printer from NVE and then mapping

b : EAN128 SSCC 64 * Printer does calculation ePC code to be sent to the printer from NVE and then mapping (Reserve)

c : EAN13 SGTIN 96 * Printer does calculation ePC code to be sent to the printer from EAN13 and then mapping

d : EAN13 SGTIN 64 * Printer does calculation ePC code to be sent to the printer from EAN13 and then mapping (Reserve)

Y = Selection of number of characters

0 : 28 digits (Encode data to addresses 02h -07h and 10h -17h)

1 : 24 digits (Encode data to addresses 02h -07h and 10h -15h)

2 : 18 digits (Encode data to addresses 02h -07h and 10h -17h

Z = data

*In the case of “X”= a

Z = (aa,bb,cd～d(17 digits or 18 digits))

aa = Number of digits of Company Prefix

(12 digits – 6 digits)

bb = Number of digits of Serial Reference

(5 digits - 11 digits)

c = Filter Value (0 - 7)

d – d = Data (Company Prefix + Serial Reference must be 17 digits)

Note : Company Prefix + Serial Reference must be 17digits, otherwise the printer makes error

*In the case of “X”= c

Z = (aa,bb,c,d -d,e -e)

aa = Number of digits of Company Prefix

(12 digits – 6 digits)

bb = Number of digits of Item Reference

(1 digits - 7 digits)

c = Filter Value (0 - 7)

d – d = Data (Company Prefix + Item Reference must be 13 digits)

e - e = Serial Number (Max. 12 digits)

We would have another parameter after “Z” for a selection of data type among ASCII, HEX and binary.

11 Appendix C (Oracle XML Data Stream Sample)

```
<?xml version=”1.0” standalone=”no”?>
<!DOCTYPE labels SYSTEM “label.dtd”>
<labels _FORMAT=”Materiallabel” _QUANTITY=”1” _PRINTERNAME=”Printer1” _JOBNAME=”LBL101”>
<label>
<variable name= “ITEM”>AS5488</variable>
<variable name= “ITEMDESC”>Desktop</variable>
<variable name= “QTY”>2</variable>
<variable name= “UOM”>EA</variable>
</label>
<label _FORMAT=”LotLabel” _PRINTERNAME=”Printer2” >
<variable name= “ITEM”>AS12345</variable>
<variable name= “ITEMDESC”>Mouse</variable>
<variable name= “LOT”>10200</variable>
<variable name= “QTY”>10</variable>
<variable name= “UOM”>Bx</variable>
</label>
</labels>
```

12 Appendix D (SAP XML Data Stream Sample)

```
<?xml version=”1.0” encoding=”UTF -8”?>
<Command xmlns:xsi=”http://www.w3.org/2001/XMLSchema -instance”
xsi:noNamespaceSchemaLocation=”Command.xsd”>
<WriteTagData readerID=”Writer_Device”>
<Item>
<FieldList format=”C:Label.PL” jobName=”Writer_Device20040929165746” quantity=”1”>
<Field name= “EPC”>3074024220403B8000000008</Field>
<Field name= “EPC_TYPE”>SGTIN -96</Field>
<Field name= “EPC_URN”>urn:autoid:tag:sgtin -96:3.5.0037000.065774.8</Field>
<Field name= “PRODUCT”>SGPROD</Field>
<Field name= “PRODUCT_DESCRIPTION”>Test product</Field>
</FieldList>
</Item>
</WriteTagData>
</Command>
```