

Barcode Labels, RFID Tags, and Electronic Forms Software for IBM System i Intermediate Concepts – Database Field Selection

K Field 1 ORDER# 2 PDPRD# PDUPC# PO# PVSLTP	Length 5, 0 7, 0 12, 0 15	Type Descri S Order S Produc S UPC Nu A Purcha	ption Number t Number mber se Order Nu	mber		~
PDTYPE	Choose A	Field				~
PDDESC	Key	Name	Length	Decimals	Description	-
PDWGHT		ORDER#	51	J	Order Number	
		PDPRD#	10	J	Product Number	-11
F3=E×it		PDUPC#	120	]	UPC Number	-11
		PO#	15		Purchase Order Number	-11
		PKSLIP	6		Picking Slip Number	-1.
		PDTYPE	1		Product Type	-17
		PDDESC	25		Product Description	-11
		PDWGHT	7	2	Weight	-11
		PDQTY	5 (	D	Quantity	-11
		CSKEY	5 (	D	Customer Key	
		CSCODE	1		Customer Code	
		CSSTOR	4 (	D	Store Number	
		CSDEPT	4 (	0	Dept Number	
		CSNAME	25		Customer Name	-
			00000			

# Welcome

Welcome to Part 2A of the MarkMagic and JMagic combined tutorials. This tutorial will introduce variable text and barcode fields that use information retrieved from a database. As with the first tutorial, the steps are split up and in different colors so you can focus only on the MarkMagic or JMagic steps separately.

## Before we begin we are assuming:

- 1. You have completed the "Basic Concepts" tutorial and understand what was introduced. (You will be making use of the format that you created and also utilize many commands and methods that were introduced.)
- 2. You have a Hewlett Packard PCL compatible Laser Printer available at your location that is configured for printing on the System i server. (If not, you can use our PDF option to produce your output.)

## In this tutorial, you will learn:

- 1. How to copy a format and why you would want to copy a format.
- 2. How to delete a field from a format.
- 3. How to add variable "non-\*LINK" fields.
- 4. What a MarkMagic Data field is.
- 5. How to add Data fields defined from a database.
- 6. What a MarkMagic \*LINK field is.
- 7. How to add text and barcodes that are "linked" to the variable data fields via \*LINK.
- 8. What a MarkMagic label file is and how to create and copy sample data to one.
- 9. How to view the records in a label file.
- 10. How to print with data from your label file.

# **Copying a Format**

In this tutorial, you *could* make changes to your existing **HPPCL5/LEARNXXX** format, but you do not want to lose your original work. (It will be used again in future tutorials.) Therefore, it's best to make a copy of your original format and use the new copy during this tutorial.

*MarkMagic* Start MarkMagic and make sure you are at the main menu. Press "F" for Format and then "C" for Copy. The Copy a format dialogue box will appear. You need to specify the source format device and name in the first two fields. *From device* will be **HPPCL5** and *From format* will be **LEARNXXX**. (Replacing XXX with your initials.) Now you must specify the new format device and name. Since this will still be an HPPCL5 format, *To device* will be HPPCL5. Now, specify a new name for the copied format. It cannot be the same name as your original. For this tutorial, you will add a "2" at the end. Type **LEARNXXX2** for *To format*. Leave *To User Library* as **\*USRLIB** (keep the copy within the same user library) and press ENTER.

Version .	: 7.2 MarkMagic Mod lvl: 100118
E	
Format	Print Utilities
<u>C</u>	
New	User library : <u>MRKMAGDTA</u>
Open	
Сору	
Rename	
Edit	Copy a format
Delete	
Generate.	From Device <u>HPPCL5</u> Name, F4 for list
eXit	From Format <u>LEARNXXX</u> Name, F4 for list
	To Device <u>HPPCL5</u> Name, F4 for list
F12=Cance	To Format <u>LEARNXXX2</u> Name
	To User Library <u>*USRLIB</u> Name, F4 for list
	F3=Exit F4=Prompt F5=Refresh F12=Cancel
Enterprise	
Edition	
F3=Exit F	4=Prompt F9=Cmd line F10=List View

You should eventually see a message stating that the copy completed successfully.



When you start making changes, open your new LEARNXXX2 format instead of your original LEARNXXX format.

## *JMagic*

Start JMagic and open the format that we made in the first tutorial by going to *Format* and then *Open*. Or you can simply click the *Open Format* button.



On the *Choose a Format* window, click **HPPCL5** and then choose your existing **LEARNXXX** format to open it. We will use the new "Save As" feature in JMagic to save your original format with a new name. This will result

in a new version of the format that we can modify in this tutorial leaving the original intact. With your original format open, click Format and then Save As. Type **LEARNXXX2** as the new name and click Ok.

JMagic	
Format Edit View Fields Utilities	PrintTransformer Help
D New ← Open	
Close	
E Save	
🗄 Save As	LEARNXXX2
🗅 Сору	<sup>0k</sup> Aark Magie Tutorial
Rename	
D∕ Edit	
💼 Delete	
Change User Library	
Generate Label File Description	MarkMagic tutorial line one.
Create Label File	
Work with Label Files	MarkMagic tutor Save Complete
Copy To Label File	ouve complete
📥 Preview	
A Print	You have successfully saved Format: LEARNXXX2
X Exit System	
1	OK
7	

You will get a message stating the save was complete. You will also notice that the format name has changed in the information bar at the bottom of the format. Any changes you make from here will be made on your new **LEARNXXX2** format.

				1	
•				/	46
MRKMAGDTA	192.168.4.112	HPPCL5	LEARNXX2	Description of your fi x, y: 0.00, 0.00	

# **Deleting a Field**

You will be using the space between the two lines on your format to add new variable text and barcode fields. There is a large barcode in the way though, so you are going to delete it to make way for your new field.

## MarkMagic

Start MarkMagic and open your newly copied **HPPCL5/LEARNXXX2** format. Press the *PageUp* and/or *PageDown* keys to scroll the format up and down. Locate the barcode on your format. (Remember, to view left or right, you can Press **F19** or **F20**.)

Dev	ice:	HPPCL5	Design	a Format		Format:	LEARNXXX2
Forma	t	fielDs	Option	5	Print	Util	ities
	2 00	2 50	3 00	3 50	4 00	4 50	5 00
	1	±			1 +		
					ana <mark>nanav</mark> an		
6 70							
0.70					1		
6.60							
6.50			lutorial	Barcode			
6.40					>		
6.30							
6.20							
6.10							
6.00							
5.90							
5.80							
5.70							
5 60							
5.00							
5.50							
5.40							
E2=Edit		E3=Evit	E4=Re	vert	E5=Undo	E6=0	reste
E7-Conu		E8-Doloto	E11-M		E12=Capael	E24-	Mono kour
-r-copy		ro-Delete	LTT-M	love	Fiz-Cancel	F24-	more keys

Place your cursor anywhere inside of the box that represents the barcode and press F8. You will be told that the field is about to be deleted. Press ENTER to delete the field.

Confirm Delete of Bar Code Field
Device : HPPCL5
Format : LEARNXXX2 Length: 11.00" Width: 8.50" Rotation: 0
Field # : 001
Field name *HEADING
Description : Tutorial Barcode
Length
Decimals
Variable length : Y
Row / Column : 5.00 3.00
Bar code type : 22 Code 128 (auto-switch)
Height
Narrow bar (module) width . : 3
Wide to narrow bar ratio . : .0
More
This record is about to be deleted.
Press Enter to confirm, or F12 to cancel.

#### **JMagic**

Using your mouse, click on the barcode field to select it. You should see the red selection handles in the corners of the barcode field. To delete the field, simply press the Delete key on your keyboard. You will be asked if you are sure you want to delete the field. Click **Yes** to accept. The barcode field is removed from the canvas.



*NOTE:* When editing in MarkMagic (green screen), changes are saved immediately when deleting/editing fields, but in JMagic they are not. You must click the Save icon at the top for the changes to be saved back to your System i.



You will be designing the format seen on the following page. All of the fields that you see in between the horizontal lines contain variable data retrieved from a database. You will be using a sample database file included with MarkMagic called "SHIPFILE" which is located in library MMEXAMPLES. Once again, the steps are numbered so you can skip ahead to the explanations if you wish.

*NOTE:* Once in the MarkMagic design screen, you may not be able to view your entire format on the screen. You can scroll the format up and down with the PageUp and PageDown keys. You can scroll the format left and right using F19 (Shift+F7) and F20 (Shift+F8).

**NOTE:** When adding fields, MarkMagic provides coordinate, length and height values, etc. based off where you had your cursor on the screen at the time. You can override these values in most of the steps in this tutorial to ensure that lines, text fields, etc are placed exactly where you want.

JMagic takes it once step further and provides a "WYSIWYG" (What you see is what you get.) view. This lets you see what the format will look like before you print it.

# My MarkMagic Tutorial

MarkMagic Tutorial line one.

MarkMagic Tutorial line one.



# Made By: Your Name

# #1 – Variable Text Fields: Non-\*LINK

There are two basic ways to display variable data on your format. This section describes how to pass data directly to a text field. There is nothing wrong with using this method in your designs, but you will discover that using \*LINK fields along with Data fields (next section) is much easier and keeps things neat and organized.

### *MarkMagic*

Place your cursor on the green design screen in the general area where the first letter of the company name would be. Press **F6** and add a text field. Previously, you left the *Field Name* as \**HEADING*, but now you must prompt (**F4**) this field. You will be shown the *List Field Options* window.

List Fields Optic	ons
Field type <u>1</u>	1=Database fields 2=Format fields 3=Spooled File
Database file <u>SHIPFILM</u> Library <u>MMEXAMP</u>	EName, F4 for list LESName, *USRLIB, *LIBL, F4 for list
F3=Exit F4=Prompt F	5=Refresh F12=Cancel

This is the window you use to tell MarkMagic the type and location of the file you want to retrieve field names and lengths from. Type 1 for *Database fields*. Next, type **SHIPFILE** for *Database file* and **MMEXAMPLES** for *Library*. Press ENTER to accept. You will be shown a list of fields found in the SHIPFILE file.

( <sup>1</sup>			
			File : SHIPFILE
Select a	Database F	ield	Library . : MMEXAMPLES
_ K Field	Length	Type	Description
PDQTY	5, 0	S	Quantity
CSKEY	5, 0	S	Customer Key
CSCODE	1	A	Customer Code
CSSTOR	4, 0	S	Store Number
CSDEPT	4, 0	S	Dept Number
CSNAME	25	A	Customer Name 🔶 🗕
CSADDR	25	A	Address
CSCITY	20	A	City
			More
F3=Exit	F12=Cancel		

Page down and place your cursor on **CSNAME** and press ENTER. You will notice that *Field name*, *Description* and *Length* have been brought into MarkMagic. (Field name is not \*HEADING anymore.) All you have left to do is type over the *Row / Column* values with **7.00** and **1.00** respectively so your field is placed exactly where you want it. (We will leave the *Font* and *Points* at their default values for now.)

Work with Text Field Device . . . : HPPCL5 Format . . . : LEARNXXX2 Length: 11.00" Width: 8.50" Rotation: 0 Field # . . : 005 Type choices, press Enter. Field name . . . . . . . . <u>CSNAME</u> Name, \*HEADING, \*DATE, \*TIME, \*LINK, F4 for fields list Description . . . . . . . <u>Customer Name</u> 1 - 132 Decimals . . . . . . . . . . Variable length . . . . . . . <u>Y</u> Y=Yes, N=No Row / Column . . . . . . . . . <u>7.00</u> <u>1.00</u> .01 - 11.00 / .01 - 8.50 Font . . . . . . . . . . . . 20 F4 for list of fonts Points . . . . . . . . . . . . <u>12</u> 1 - 999 More... F3=Exit F5=Refresh F12=Cancel F4=Prompt

Once your text field settings match the screenshot above, press ENTER twice to create the field. You will see the field placed on to your format with the name =CSNAME. The "=" lets you know that the field is a variable field.



The street address will be added in exactly the same fashion. Place the cursor just below the **=CSNAME** field and press **F6** and add a new text field. Prompt Field name and you will notice that MarkMagic remembers the database information. Press ENTER to view the list of fields again. Page down and place your cursor on **CSADDR** and press ENTER.

-			
			File : SHIPFILE
Select a	Database Fi	eld	Library . : MMEXAMPLES
K Field	Length 1	ype	Description
PDQTY	5, 0	S	Quantity
CSKEY	5, 0	S	Customer Key
CSCODE	1	A	Customer Code
CSSTOR	4, 0	S	Store Number
CSDEPT	4, 0	S	Dept Number
CSNAME	25	A	Customer Name
CSADDR	25	A	Address 🔶
CSCITY	20	A	City
			More
F3=Exit	F12=Cancel		

Once again, *Field name, Description* and *Length* are automatically brought into MarkMagic. Change *Row / Column* values to **6.80** and **1.00** so the address is placed .2 inches below the Customer Name. Press ENTER twice to create your second variable text field.

	Work with Text Fig	eld	
Device : HPPCL5 Format : LEARNXXX2	Length: 11.00"	Width: 8.50" Rotation: 0	
Field # : 009			
Type choices, press Ente	r.		
Field name	<u>CSADDR</u>	Name, *HEADING, *DATE, *TIME, *LINK. F4 for fields list	
Description	<u>Address</u>		
Length	<u>25</u>	1 - 132	
Decimals	i ita in <u> </u>	0 - 9	
Variable length	· · · · <u>Y</u>	Y=Yes, N=No	
Row / Column	<u>6.80</u> <u>1.00</u>	.01 - 11.00 / .01 - 8.50	
Font	<u>20</u>	F4 for list of fonts	
Points	<u>12</u>	1 - 999 More	
F3=Exit F4=Prompt	F5=Refresh F12=Canc	el	



## **JMagic**

Click the *Create a Text Field* button at the top and then click on your form in the general location of the customer's name. You will be presented with the familiar *Create a New Text Field* window. Previously, you created constant text fields by leaving the *Field Name* as **\*HEADING**. Now you must click the *Browse* button.

🎂 Create A New Text Field		
Name HPPCL5 Description .5 & Compatible	Format Name LEARNXXX2 Description Description of your format	Length 11.0" Width 8.5" Rotation A o
Properties     Font     Display       Name and Description     Field Name     *HEADING       Field Name     *HEADING     •       Description	Browse Field # 5	
Row     7.14     Column     1.1       Attributes       Length     1       Decimals       Variable Length     Yes     No	<u>17</u>	
Font 20 Times   Point 12		
Copyright; CYBRA Corporation; 2009; All Right	nts Reserved	OK Cancel Help

The *Select a Field* window will be shown. This is the window you use to tell JMagic the type and location of the file you want to retrieve information from. Click on the *Database Field* tab. Next, type **MMEXAMPLES** for *Library* and **SHIPFILE** for *File*. Click the *Browse* button next to *Field*.

Format	Database Field	Spooled File			
Library [	MMEXAMPLES	B	rowse		
File	BHIPFILE		rowse		
Field			rowse 🔸	-	

You are shown a list of fields found in the **SHIPFILE** database file. Scroll down and click on **CSNAME**. Click OK to select the field.

V	Inditio	Length	Decimals	Description
The charter of the ch	ORDER#	50	1	Order Number
V	PDPRD#	7 0	)	Product Number
PDUPC#		120	)	UPC Number
		15		Purchase Order Number
	PKSLIP	6		Picking Slip Number
	PDTYPE	1		Product Type
	PDDESC	25		Product Description
	PDWGHT	7 2	2	Weight
	PDQTY	50	1	Quantity
	CSKEY	50	)	Customer Key
	CSCODE	1		Customer Code
	CSSTOR	40	1	Store Number
	CSDEPT	40	)	Dept Number
	CSNAME	25		Customer Name
	CSADDR	25		Address
	CSCITY	20		City
	CSST	2		State
	CSZIP	50	)	Zip Code
	CSZIP4	4 0	1	Zip + 4
	SHPVCD	30	)	Ship Via Code
	SHPVIA	20		Ship Via Descrptn

You will be brought back to the *Select a Field* screen. This time with the correct field name filled in for you. Alternatively, if you know the database field name already, you can type it in without browsing for it fist.

Format	Database Field Spooled Fi	ile	
Library	MMEXAMPLES	Browse	
File	SHIPFILE	Browse	
Field	CSNAME	Browse	

Click OK to accept your field settings and you will be returned to the *Create a Text Field* window. You will notice that *Field Name, Description* and *Length* are automatically brought into JMagic for you. To place the field exactly where you want it, change *Row* to **7.0** and *Column* to **1.0**.

b Create	A New Text Field		
Ē	Device	Format	
ABC	Name HPPCL5	Name LEARNXXX2	Length 11.0" Width 8.5"
	Description .5 & Compatible	Description Description of your format	Rotation 🗛 °
Properti	es Font Display		
Name and	I Description		
Field N	lame CSNAME 💌	Browse Field # 5	
Descrip	otion Customer Name		
Positionin	g Properties		
Pour [	Z 0" Column	4.0"	
NUW	Column		
Attributes			
Length	25		
Decima	als		
Variabl	e Length 🖲 Yes 🔾 No		
Font			
Font 2	0 Times 💌		
Point	12		
Usage			
Usage	00 NONE	▼	
@ Copyrig	ht: CYBRA Corporation: 2009: All Rid	ints Reserved	

Click OK to create your new variable text field. Notice the grey box with the label **CSNAME**. The grey box represents the approximate length of the field if all 25 spaces were filled with text. The box also serves as an indicator to you that the field is a variable field.

JMagic				
Format E	dit View	Fields	Utilities	PrintTransformer Help
1	<mark>}</mark>			
10 				My MarkMagic Tutorial
 9 <sup></sup>				MarkMagic tutorial line one.
				MarkMagic tutorial line two.
<u>8</u> - - -				
	C	CSNAN	Œ	

The street address field will be added in exactly the same fashion. Add a new text field just below the **CSNAME** field. Click the *Browse* button next to *Field Name* to select a new database field. Notice how JMagic remembers the names from your last selection. All you must do this time is click *Browse* next to the *Field* parameter. Choose **CSADDR** and click OK. Click OK on the *Select a Field* window.

Format	Database Field Spoole	d File
Library	MMEXAMPLES	Browse
File	SHIPFILE	Browse
Field	CSNAME	Browse

Key	Name	Length	Decimals	Description	
2	ORDER#	5	0	Order Number	
~	PDPRD#	7	0	Product Number	
	PDUPC#	12	0	UPC Number	
	PO#	15	5	Purchase Order Number	
	PKSLIP	6		Picking Slip Number	
	PDTYPE	1	2	Product Type	
	PDDESC	25	8	Product Description	
	PDWGHT	. 7	2	Weight	
	PDQTY	5	0	Quantity	
	CSKEY	5	0	Customer Key	
	CSCODE	1		Customer Code	
-	CSSTOR	. 4	0	Store Number	
	CSDEPT	4	0	Dept Number	
	CSNAME	25		Customer Name	
	CSADDR	25		Address	
	CSCITY	20		City	
	CSST	2		State	
	CSZIP	5	0	Zip Code	
	CSZIP4	4	0	Zip + 4	
	SHPVCD	3	0	Ship Via Code	
	SHPVIA	20		Ship Via Descrptn	
riaht: C'	(BRA Corporation		-		

Once again, *Field Name, Description* and *Length* are automatically brought into JMagic. To place the address field .2 inches below the name, simply change *Row* to **6.8** and *Column* to **1.0**.

👙 Create A New Text Field		
Device	Format	
Name HPPCL5	Name LEARNXXX2	Length 11.0" Width 8.5"
Bassription 5.8 Compatible	Description Description of your format	Potation A of
Description .5 & Compatible	Description Description of your format	Kotation A
Properties Font Display		
Name and Description		
Field Name CSADDR	Browse Field # 6	
Description Address		
Positioning Properties		
Dem Carlo and Colored	oul	
	.0	
Attributes		1
Length 25		
Decimals		
Variable Length 🔘 Yes 🔾 No		
Font		
Font 20 Times 💌		
Point 12		
Usage		
Usage 00 NONE	-	
© Copyright; CYBRA Corporation; 2009; All Righ	its Reserved	OK Cancol Hole
		UN Cancel Help

Click OK to add your second variable text field. You should see it just below the first field you created.



# #2 - Variable Text Fields: \*LINK Fields

In many design scenarios, you would want to display the same bit of information more than once on a format and in more than one fashion (i.e.: a barcode with human readable text below it.). Using the method explained in Step #1, you would end up needing to create two fields each with different field names, but you would have to pass the same variable data twice during print time. Obviously, this creates unnecessary extra work and you shouldn't need to pass the same data twice to a label.

MarkMagic \*LINK fields extend MarkMagic formatting options by adding the capability to define a variable field *once*, and have that same data appear in multiple fields on a format, each edited and formatted differently if need be. You can link a text field to another text field for example, but the preferred method is to use *Data* fields.

A MarkMagic Data field is a placeholder — a "bucket" to put information in at print time for further processing. A Data field is a *non-printing* field that can have any of these MarkMagic special field names: \*HEADING, \*DATE, or \*TIME, or an OS/400 database fieldname. Just like a Text field or a Bar code field, a MarkMagic Data field can contain constant or variable data. A \*LINK field can be composed of portions of different fields and can merge information from multiple bar code, data, or text fields. \*LINK fields enable printing of one bar code or text field from multiple sources of data.

The City, State and Zip code line is actually one text field made up of 4 different data fields "\*LINKed" together. 3 of which are variable data retrieved from the SHIPFILE. Let's see how it's done.

### MarkMagic

First, you must add your Data fields. You can add them just like any other field. Since they are non-printing it doesn't matter where your cursor is when you add them, so place your cursor somewhere on the design area and press F6 and then D for data. You will be presented with the *Work with Data Field* screen.

Work with Data	Field
Device : HPPCL5 Format : LEARNXXX2 Length: 11.00"	Width: 8.50" Rotation: O
Field # : 007	
Type choices, press Enter.	
Field name <u>*HEADING</u>	Name, *HEADING, *DATE, *TIME, F4 for list of fields
Description	
Length	1 - 3000
Increment type <u>1</u> Increment value <u> </u>	l=Incr, D=Decr, *=Seq reference 0 - 999
F3=Exit F4=Prompt F5=Refresh F12=Can	More

Since it is non-printing, you'll notice that there are no coordinate values or fonts to choose. You just need to specify a field name and length. Do this just like you did with the variable text field. Prompt the *Field name* and **SHIPFILE** should still be there. Press ENTER and then page down to place your cursor on **CSCITY**. Press ENTER to accept. MarkMagic automatically brings in the *Field Name* and *Length*.

Work with Data	Field
Device : HPPCL5 Format : LEARNXXX2 Length: 11.00"	Width: 8.50" Rotation: 0
Field # : 007	
Type choices, press Enter.	
Field name <u>CSCITY</u>	Name, *HEADING, *DATE, *TIME, F4 for list of fields
Description <u>City</u>	
Length	1 - 3000 0 - 9
Increment type <u>I</u> Increment value	I=Incr, D=Decr, *=Seq reference 0 - 999
F3=Exit F4=Prompt F5=Refresh F12=Can	More

Press ENTER twice to accept your new data field. You should now see a +DATA in the top left hand corner. This flag lets you know that your format contains Data fields. Data fields are not visible anywhere on the canvas, that is why we use this flag to inform the user that the format contains Data fields.

De	vice:	HPPCL5		Γ
				-
Form	at	fiel	.Ds	(
+Data		0.50	1.	00
	+ .	!	+	<b>+</b> ,
11.00				
10.90				
10.80				
10.70				
10.60				

Create two more Data fields following the same steps used to create **CSCITY**. The two fields that you should add from **SHIPFILE** are **CSST** and **CSZIP**. Since these three new Data fields are non-printing fields, you might want to know where they really are since you cannot see them on the canvas. Press **F10** to toggle between "*Design View*" and "*List View*".

Device: H	HPPCL5	Design a Form	at F	Format: LEARNXXX2
Format +Data 7.50	fielDs 0.50 1 !+	Options 1.00 1.50	Print 2.00 2.50 . +!	Utilities 3.00 3.50 .+ +!
7.40 7.30 7.20 7.10 7.00 6.90 6.80 6.70 6.60 6.50 6.40 6.30 6.20 6.10		=CSNAME =CSADDR		
<mark>F9</mark> =Cmd line <mark>F15</mark> =Zoom in	F10=List F16=Zoom	View <mark>F13</mark> =Group out F24=More k	<mark>F14</mark> =Rot eys	tate
Device Format	V : HPPCL5 : LEARNXXX2	Vork with Format Fie Length: 11.00"	lds - List View Width: 8.50	)" Rotation: O
Position to ty	ype	··· _ Posit	ion to field # .	
Type option, µ 1=Create	press Enter 2=Change	3=Copy 4=Delete	5=Display	
Opt Type Fld	Name	Description	Leng	gth Row Column
<ul> <li>Data 001</li> <li>Data 002</li> <li>Data 003</li> <li>Text 001</li> <li>Text 002</li> <li>Text 003</li> <li>Text 003</li> <li>Text 004</li> <li>Text 005</li> <li>Text 006</li> </ul>	CSCITY CSST CSZIP *HEADING *HEADING *HEADING CSNAME CSADDR	City State Zip Code My MarkMagic Tutori MarkMagic tutorial MarkMagic tutorial Made by: Your Name Customer Name Address	al 22 Jine one. 28 Jine two. 28 18 29 29	V V V 0 0 0 0 0 0 0 0 0 0 0 0 0
F3=Exit F12=Cancel	<mark>F6</mark> =Create <mark>F18</mark> =Full	screen F10=Des screen F21=Pri (c) C	ign View nt layout opyright CYBRA C	11=Quick edit 24=More keys Corp. 1991, 2010

Here in "*List View*" you get a listing of all fields on the format grouped by field type. Data fields are listed first and here you can see the three Data fields that you created in the previous steps. You can also Page Up and Page Down to scroll through the list of all fields on the format. You will see all Text fields grouped together, then the Line and Box fields. Yu can still create fields while in "*List View*".

Let's add a "special" Data field; one that will be used more than once in the City/State/Zip text line. Since the database does not contain a comma or spaces, you must devise a way to create your own. Press **F6** and add another Data field, but this time leave it as **\*HEADING**. Remember when using Text fields that anything in the

description line prints when the *Field name* is **\*HEADING**. Yes, this data field does not print, but when it is used in a \*LINK field, information entered in the Description will be what is linked to. Type a comma in the description line, but as an important step, also make the length 2. This will allow us to link to a "space character" when we need to link in spaces in our city/state/zip text field.



Create the field as shown above and press ENTER twice to accept your new Data field. You will see the new Data field added to the list of fields. Now it is time to create the \*LINK field containing these data fields that you made.

	Work with Format Fields	- List View			
Format : LEARNXXX2	Length: 11.00"	Width: 8.50"	Rotation: 0		
Position to type Position to field #					
Type option, press Enter 1=Create 2=Change	3=Copy 4=Delete	5=Display			
Opt Type Fld Name	Description	Length	Row Column		
Data 001 CSCITY Data 002 CSST Data 003 CSZIP Data 004 *HEADING Text 001 *HEADING Text 002 *HEADING Text 003 *HEADING Text 003 *HEADING Text 004 *HEADING Text 005 CSNAME	City State Zip Code , My MarkMagic Tutorial MarkMagic tutorial line MarkMagic tutorial line Made by: Your Name Customer Name	20 v 2 v 5,0v 2 v 22 22 28 28 28 28 18 25 v	10.00" 2.75" 9.00" 3.00" 8.50" 3.00" 2.00" 4.50" 7.00" 1.00" More		
F3=Exit F6=Create F12=Cancel F18=Full	e <mark>F10</mark> =Design screen <mark>F21</mark> =Print 1	View F11=Q ayout F24=M	uick edit ore keys		

Press **F10** to toggle back to the "*Design View*". Place your cursor just below the **CSADDR** address line you made earlier in the tutorial. Add a new Text field. This time make the field name **\*LINK**. Doing this will unlock the *Work with \*LINK Source Fields* screen. You must Page Down 3 times to get to it.



Press **F6** to add a Source field (this is how you pick the fields that this new text field will be linked to). You will be presented with a list of fields that have already been added to your format. The Data fields should be listed at the top. You will add the Source fields in the order you want the text to appear. Place your cursor on **CSCITY** and press ENTER. You will be brought to the *Add a Source Field* screen.

Se	lect a Field	
Position to type . Position to field #		
TypeFldNameData001CSCITYData002CSSTData003CSZIPData004*HEADINGText001*HEADINGText002*HEADINGText003*HEADINGText004*HEADINGText004*HEADINGText004*HEADINGF3=ExitF4=Prompt	Description City State Zip Code My MarkMagic Tutorial MarkMagic tutorial line one. MarkMagic tutorial line two. Made by: Your Name F12=Cancel F21=Select r	Length 20 v 2 v 5,0v 2 v 22 28 28 18 More range

Add a Source Field						
Device : HPPCL5 Format : LEARNXXX2 Length: 11.	00" Width: 8.50" Rotation: 0					
Link field . : Text 010 Descriptio	n :					
Link to: Field type / number : Data Field name : CSCIT Description : City Length	001 'Y					
Start positionLengthVariable lengthEdit codeCheck digitF3=ExitF4=PromptF5=Refresh	<u>1</u> Number <u>20</u> Number <u>N</u> Y=Yes, N=No <u>F4 for list</u> <u>0</u> F4 for list F12=Cancel					

At this screen, you decide whether you want to link the whole source field or just a segment of it. You would like to see the whole city name print, therefore set the *Start position* to **1** and *Length* to **20**. (These values should already be present; MarkMagic always starts by linking the whole field.) Press ENTER twice to accept your settings. You will see your new source field added to the list.

		Work with *L	INK Source F	ields	
Device Format	. : HPPCL5 . : LEARNXXX	2 Length	ר: 11.00"	Width: 8.50"	Rotation: 0
Link field	. : Text 0	10 Descr	ription :		
Type option 2=Change	, press Ente 4=Delet	r. e 5=Dig	splay		
Opt Order = <u>10</u>	Type Fld Data 001	Name CSCITY	Description City		Start Length 1 20
F3=Exit	F5=Refresh	F6=Add	F10=View 2	2 F12=Cancel	Bottom

From here, you "build" the \*LINK text field by adding new source fields to link to. You could simply add in the State and Zip code, but there would not be a comma or any spaces. The field would print as just

"CITYSTATEZIPCODE". This is where your "special" data field comes in. Press **F6** to add another source field. Place your cursor on the \*HEADING data field that you made and press ENTER. You want a comma and one space, so you will want a *Start position* of **1** for a *Length* of **2**. This will pull in the comma and that one extra space from the Data field (you made the field length 2 so there would be that extra space after the comma). Press ENTER. You will see the source field added to the list.

		Work with *L	INK Source Fi	lelds	
Device Format	. : HPPCL5 . : LEARNXX)	2 Length	n: 11.00"	Width: 8.50"	Rotation: O
Link field	.:Text 0	)10 Descr	ription :		
Type option 2=Change	n, press Ente 4=Delet	er. :e 5=Dig	splay		
Opt Order	Type Fld	Name	Description		Start Length
10	Data 001	CSCITY	City		1 20
	Data 004	*HEADING			1 2
F3=Exit	F5=Refresh	F6=Add	F10=View 2	2 F12=Cancel	Bottom

Next, it is time to link in the State. Press F6 and add in CSST. Leave the default Start position and Length.

		Work with *	LINK Source F	ields	
Device . Format .	: HPPCL! : LEARN)	5 XXX2 Lengt	th: 11.00"	Width: 8.50"	Rotation: 0
Link fiel	d . : Text	010 Desc	ription :		
Type opti 2=Chang	on, press En e 4=De <sup>-</sup>	nter. lete 5=Di	splay		
Opt Orde 2 3	r Type F O Data O( O Data O( O Data O(	ld Name 91 CSCITY 94 *HEADING 92 CSST	Description City , State		Start Length 1 20 1 2 1 2
F3=Exit	F5=Refre	sh F6=Add	F10=View	2 F12=Cancel	Bottom

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Now, you want to add in one space between the state and zip code. Press **F6** and choose that same "special" Data field again (you can link to the same field as many times as you need to). This time set the *Start position* to **2** (you do not need the comma) and Length of **1**. This will pull in the space character at the end of the Data field Description. Press ENTER twice to accept and you'll see the source field added to the list.



One last source field needs to be added and that is the Zip code. Press F6 again and choose the full length of CSZIP. Your final source field list should look like this:

Work with *LINK Source Fields						
Device Format	. : HPPCL5 . : LEARNXXX	2 Length	: 11.00" Width: 8.50"	Rotation: 0		
Link field	. : Text 0	07 Descr	iption : Zip Code			
Type option 2=Change	i, press Ente 4=Delet	r. e 5=Dis	play			
Opt         Order          10        00          30        00          30        00          50        00	Type Fld Data 001 Data 004 Data 002 Data 004 Data 003	Name CSCITY *HEADING CSST *HEADING CSZIP	Description City State Żip Code	Start Length 1 20 1 2 1 2 1 2 2 1 1 5		
<mark>F3</mark> =Exit	<mark>F5</mark> =Refresh	F6 <mark>=</mark> Add	F10=View 2 F12=Cancel	Bottom		

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Page back up to *Work with Text Field* and change the *Row / Column* to **6.60** and **1.00**. This will put the last line of the address in the correct spot. You can also provide a description for the field. Note, the description will not print, it is just for informational purposes at this point. Press ENTER twice to create your \*LINK field.





### **JMagic**

First you will add the data fields. Click the *Create a Data Field* button. The *Create a New Data Field* window will appear. Since it is non-printing, you'll notice that there are no coordinate values or fonts to choose. You just need to tell JMagic that this is going to be a variable data field by providing a field name and length. Do this just like you did with the variable text field. Press the *Browse* button next to *Field Name*.



👙 Create A New Data Field		
Device	Format	
Name HPPCL5	Name LEARNXXX2	Length 11.0" Width 8.5"
Description .5 & Compatible	Description Description of your format	Rotation A
Properties Settings	/	
Name and Description       Field Name       *HEADING       Description       Attributes       Length     1	Browse Field # 5	
Field Increment Increment Type  Ascending  Des Increment Value 0	sending 🔿 Sequence Reference	
© Copyright; CYBRA Corporation; 2009; All Righ	ts Reserved	OK Cancel Help

JMagic remembers the SHIPFILE that you used before. You need to select a different field though. Press *Browse* next to *Field* and scroll down to **CSCITY**. Select it and press OK. Press OK again on the *Select a Field* window and on the *Create a New Data Field* window to create the Data field.

Key	Name	Length	Decimals	Description
V	ORDER#	5	0	Order Number
V	PDPRD#	7	0	Product Number
	PDUPC#	12	0	UPC Number
	PO#	15		Purchase Order Number
	PKSLIP	6		Picking Slip Number
	PDTYPE	1		Product Type
	PDDESC	25		Product Description
	PDWGHT	7	2	Weight
	PDQTY	5	0	Quantity
	CSKEY	5	0	Customer Key
	CSCODE	1		Customer Code
	CSSTOR	4	0	Store Number
	CSDEPT	4	0	Dept Number
	CSNAME	25		Customer Name
and the second	CSADDR	25		Address
-	CSCITY	20		City
	CSST	2		State
	CSZIP	5	0	Zip Code
	CSZIP4	4	0	Zip + 4
	SHPVCD	3	0	Ship Via Code
	SHPVIA	20		Ship Via Descrptn

Create two more Data fields following the same steps used to create **CSCITY**. The two fields that you should add from **SHIPFILE** are **CSST** and **CSZIP**. Since these three new Data fields are non-printing fields, you might want to know where they really are since you cannot see them on the canvas. To view the Data fields you created, you can turn on the field list by clicking the *"Turn On Field List"* button at the top. This button can be used to toggle on and off the field list.





Turning on the JMagic "*List View*" you can get a listing of all fields on the format grouped by field type. Data fields are listed first and here you can see the three Data fields that you created in the previous steps. You will also see all Text fields grouped together, then the Line and Box fields. *Tip: You can directly edit fields by double clicking them in the list.* 

Let's add a "special" Data field; one that will be used more than once in the City/State/Zip text line. Since the database does not contain a comma or spaces, you must devise a way to create your own. Create another Data field, but this time leave it as **\*HEADING**. Remember when using Text fields that anything in the description line prints when the *Field name* is **\*HEADING**. Yes, this data field does not print, but when it is used in a **\*LINK** field, information entered in the Description will be what is linked to. Type a comma in the description line, but as an extra step, also make the length **2**. This will allow us to link to a "space character" when we need to link in spaces in our city/state/zip text field.

👙 Edit A Data Field	The second s	
Device	Format	
Name HPPCL5	Name LEARNXXX2	Length 11.0" Width 8.5"
Description .5 & Compatible	Description Description of your format	Rotation A °
Properties Settings		
Name and Description Field Name *HEADING Description , Attributes Length 2 Decimals	Browse Field # 4	
Field Increment Increment Type  Ascending  Des Increment Value 0	sending 🔿 Sequence Reference	
Copyright; CYBRA Corporation; 2009; All Right	ts Reserved	OK Cancel Help

You are now ready to create the \*LINK text field that will contain the new data fields that you made. Add a new text field just below the address field you made earlier. You need to tell JMagic that this is going to be a \*LINK field. Use the *Field Name* drop the menu and select \*LINK.

👙 Create A New Text Field						
Device	Format					
Name HPPCL5	Name	LEARNXXX2	Length	11.0"	Width	8.5"
Description .5 & Compatible	Description	Description of your forma	t Rotation	n 🖪 or		
Properties Font Display	1637					
Name and Description						
Field Name *HEADING	Browse	Field # 7				
*HEADING						
Description *LINK	-					
Positioning Prop						
*CALC						
Row 6.52" Column 0.9	99"					
Attributes						
Length						
Decimals						
W-2-14-1						
Vallable Length 🖲 tes 🕓 Nu						
Font						
Font 20 Times 💌						
Copyright; CYBRA Corporation; 2009; All Right	hts Reserved			ОК	Cancel	Heln
				UN	Cancer	neih

You should see a new tab appear next to the "Display" tab. Click the new \*LINK tab to reveal the JMagic \*LINK interface.

b Create A New Text Field				- • ×
Properties Font Displa	Device Name HPPCL5 Description .5 & Compatible	Format Name LEARNXXX2 Description of your format	Length 11.0" Width 8.5" Rotation A or	
Current Field				
Link Field	Field #         Length         Field Nam           7         *LINK	e Description		
Link Properties				
Options       Text 1 'HE.         OFF       Text 2 'HE.         Sort       Text 3 'HE.         Search       Text 5 CSN.         Text 6 CSA       Data 1 CSC.         Data 3 CSZ       Data 4 'HE.	lds: 10 Field(s) IDING My MarkMagic Tutorial IDING MarkMagic tutorial line one. IDING MarkMagic tutorial line two. IDING Made by: Your Name AME Customer Name DDR Address ITY City T State IP Zip Code ADING ,	▲ Insert Remove Move Up Move Down Details	Linked To Fields: 0 Field(s)	
Link To Field Type Field Name Description Length Decimal	#			
Copyright; CYBRA Corporation;	2009; All Rights Reserved		ОК	Cancel Help

The window on the left displays all of the fields currently added to your format. You "build" the text string by inserting fields from the left into the right window pane. You will add source fields in the order you want the text to appear. Select Data **CSCITY** and click the *Insert* button. This will add the **CSCITY** field to the list on the right.

👙 Create A New Text Field				
Device           Name         HPPCL5           Description         .5 & Compatible	Format Name LEARNXXX Description Description	2 n of your format	Length 11.0 Rotation 🗛 °*	" Width 8.5"
Properties Font Display 🖉 Link Fie	lds			
Current Field Type Field # Len 7	gth Field Name 1 *LINK	Description		]
Link Properties				
Options       Text 1 *HEADING My MarkM         OFF       Sort         Sort       Text 3 *HEADING MarkMagin         Text 4 *HEADING MarkMagin       Text 3 *HEADING MarkMagin         Text 5 CSNAME Customer N       Text 6 CSADDR Address         Data 2 CSST State       Data 3 CSZIP Zip Code         Data 4 *HEADING ,       Text 4 *HEADING ,	agic Tutorial c tutorial line one. c tutorial line two. four Name lame	Insert Remove Move Up Move Down Details	inked To Fields: O Field(s	
Link To Field Type Data Field # 1 Name CSCITY Description City Length 20 Decimals				
© Copyright; CYBRA Corporation; 2009; All Rights Re	served		O	K Cancel Help

At this point you can decide whether to link the whole source field or just a segment of it. You would like to see the whole city name print; therefore you should set a *Start position* of **1** for a *Length* of **20**. (These values should already be present; JMagic always starts by linking to the entire field.)

🎂 Create A New	Text Field					
	Device	Format				
ABC	Name HPPCL5	Name LEARNX	XX2	Length	11.0" Width	8.5"
	Description .5 & Compatible	Description Descript	ion of your format	Rotation A	D.	
Properties F	ont Display 🖉 Link Fields					
Current Field						
Link Field	Type Field # Length	i Field Name 1 *LINK	Description			
Link Properties						
	Source Fields: 10 Field(s)			Linked	To Fields: 1 Field(s)	
Options	Text 1 *HEADING My MarkMagi	c Tutorial	<b>A</b>	nsert	anwany 🦕	<b></b>
OFF	Text 2 *HEADING MarkMagic tu Text 3 *HEADING MarkMagic tu	itorial line one. Itorial line two				
○ Sort	Text 4 *HEADING Markinagic to	r Name		Remove		·
O Search	Text 5 CSNAME Customer Nan	1e		Aove Up		
	Text 6 CSADDR Address					
	Data 2 CSST State			dove Down		
	Data 3 CSZIP Zip Code			Details		
	Data 4 "HEADING,		-			-
Link To Field	2					
				<b>•</b>		
Type Data	Field # 1		Starting Position	1 Length 20	j	
Name CSCITY			Variable Length	🖲 Yes 🛛 No		
Description Cit	V		Edit Code	No edit code	÷	
			Check Digit	00 No check digit added	-	
Length 2	0 Decimals					
© Copyright; CYBR	A Corporation; 2009; All Rights Reser	ved			OK Ca	incel Help

You could simply add in the State and Zip code Data fields, but there would not be a comma or any spaces when you print. Just "CITYSTATEZIPCODE". This is where the "special" data field comes in. On the left, click on the Data \*HEADING, and click the Insert button to add it to the list. You want a comma and one space, so you will want a *Start position* of **1** for a *Length* of **2**. This will pull in the comma and one space from the data field. Make sure that the option for *Variable Length* just below that is set to **No.** This will stop MarkMagic from suppressing spaces at the end of that individual source field. (We want the space.)

👙 Create A New Te	xt Field					
-D LABC	evice Name HPPCL5	Format Name LEARNXX	X2	Length	11.0" Width	8.5"
Properties Fon	Description       .5 & Compatible         t       Display       Ø Link Fields	Description Description	on of your format	Rotation A	0"	
Current Field		•				11
Link Field	pe Field # Length 7	Field Name 1 *LINK	Description			
Link Properties	Source Fields: 10 Field(s)			Linker	1 To Fields: 2 Field(s	)
Options OFF	Text 1 *HEADING My MarkMagic Text 2 *HEADING MarkMagic tuto Text 3 *HEADING MarkMagic tuto	Tutorial prial line one. prial line two.		nsert Data C	SCITY City	
© Search	Text 4 *HEADING Made by: Your I Text 5 CSNAME Customer Name Text 6 CSADDR Address	Name !		Aove Up		
	Data 1 CSCITY City Data 2 CSST State Data 3 CSZIP Zip Code Data 4 "HEADING			Aove Down Details		
Link To Field	er der se fan gener i staffer gener fan ser fan de fan					<b></b>
Type Data	Field # 4		Starting Position	1 Length	2]	
Name *HEADING			Variable Length Edit Code	○ Yes	-	
Length 2	Decimals		Check Digit	00 No check digit addeo	1	
© Copyright; CYBRA (	Corporation; 2009; All Rights Reserve	ed			ок	Cancel Help

Next, click on Data CSST and insert that to the list, making no changes to the Start position or Length.

Device       Format         Name       HPPCL5         Description       5.8. Compatible         Description       Escription         Description       Field         Type       Field         Text       Text         Properties       Source Fields: 10 Field(s)         Define       Text         Text       Text         Data       Costner         Text       Text         Data       Costner         Data	Create A New	Text Field						×
Properties Font Display Properties Font Display Properties Field Link Field Type Field # Length Field Name Description Link Field Field # Length Field Name Description Link Field Field # Length Field Name Description Text 1 "HEADING MarkMagic Tutorial Ine one. Text 2 "HEADING MarkMagic tutorial line one. Text 3 "HEADING MarkMagic tutorial line one. Text 3 "HEADING MarkMagic tutorial line one. Text 3 "HEADING MarkMagic tutorial line two. Text 4 "HEADING MarkMagic tutorial line two. Text 5 CSADDR Address Data 1 CSCITY City Data 2 CSST State Data 3 CSZIP Zip Code Data 4 "HEADING, Data 4 "HEADING, Link To Field Type Data Field # 2 Starting Position 1 Length 2 Variable Length • Yes No Edit Code No edit code Check Digit 00 No check digit added	ABC	Device Name HPPCL5 Description .5 & Compatible	Format Name LEAR! Description Descr	NXXX2	Length 11 Rotation A 0*	.0" Width	8.5"	
Jink Propetties         Options         Text 1 'HEADING My MarkMagic Tutorial         Text 2 'HEADING MarkMagic tutorial line one.         Text 3 'HEADING MarkMagic tutorial line two.         Text 4 'HEADING MarkMagic tutorial line two.         Text 5 CSNAME Customer Name         Text 6 CSADDR Address         Data 1 CSCITY City         Data 3 CSCIP Zip Code         Variable Length       @ Yes \no         Variable Length       @ Yes \no         Length       2 Decimals	Properties F Current Field Link Field	ont Display 🖉 Link Fields Type Field # Length 7	Field Name	Description	1			
Type Data Field # 2   Name CSST Starting Position 1   Description State Variable Length Yes   Length 2 Decimals	Unk Properties Options OFF Sort Search	Source Fields: 10 Field(s) Text 1 *HEADING My MarkMagic Text 2 *HEADING MarkMagic tu Text 3 *HEADING MarkMagic tu Text 3 *HEADING Made by: Your Text 4 *HEADING Made by: Your Text 5 CSNAME Customer Nam Text 6 CSADDR Address Data 1 CSCITY City Data 2 CSST State Data 3 CSZIP Zip Code Data 4 *HEADING ,	: Tutorial torial line one. torial line two. Name e	In Re M De	sert Data CSCI Data *HEA emove ove Up ove Down	Fields: 3 Field( TY City DING ,	s)	
	Link To Field Type Data Name CSST Description Sta Length	Field # 2 ate 2 Decimals		Starting Position Variable Length Edit Code Check Digit 0	1 Length 2 9 Yes 0 No 10 edit code 0 No check digit added	<b>v</b>		

Now, you want to add in one spaces between the state and zip code. On the left, click on Data \*HEADING, and Insert it one more time. This time set the *Start position* to **2** (you do not need the comma this time) and *Length* of **1**. This will pull in the space character at the end of the data field description. As before, make sure *Variable Length* is set to **No** (preserve all trailing spaces).

b Create A New	Text Field						
EABC	Device Name HPPCL Description .5 & Cor	5 mpatible	Format Name LEAR Description Desc	NXXX2 ription of your format	Length Rotation A	11.0" Width	8.5"
Properties F	ont Display 💋 L	ink Fields					
Current Field Link Field	Type Field #	Length	Field Name 1 *LINK	Description			
Options OPTIONS OFF Sort Search	Source Fields: 10 Fit Text 1 'HEADING My Text 2 'HEADING Mar Text 3 'HEADING Mar Text 3 'HEADING Mar Text 5 CSNAME Cust Text 6 CSADDR Addr Data 1 CSCITY City Data 2 CSST State Data 3 CSZIP Zip Cod Data 4 'HEADING,	eld(s) MarkMagic T kMagic tutoi kMagic Tutoi	utorial ial line one. ial line two. ame		Linke nsert Data C Data 4 Remove Move Up Move Up Move Down Details	d To Fields: 4 Field(s CSCITY City HEADING, CSST State	
Link To Field Type Data Name *HEADIN Description , Length	Field #	4		Starting Position Variable Length Edit Code Check Digit	2 Length Yes No No edit code O0 No check digit adde	1 d	
® Copyright; CYBR	A Corporation; 2009; All Ri	ghts Reserved	1			ок	Cancel Help

One last source field needs to be added to the list. On the left, select Data field **CSZIP** and insert it. Your final list, on the right, should look like this:

	Linked To Fields: 5 Field(s)	
Insert	Data CSCITY City	
	Data CSST State	
move	Data *HEADING ,	
love Up	Data CSZIP Zip Code	
love Down	]	
Details		

Now, click back on the *Properties*. Change *Row* to **6.6** and change *Column* to **1.0**. This will place the text field directly below the address line where it needs to be. You can also provide a description for the field. Note, the description will not print, it is just for informational purposes at this point. Press OK to create your \*LINK field.

살 Edit A Text Field		
Device	Format	
Name HPPCL5	Name LEARNXXX2	Length 11.0" Width 8.5"
Description .5 & Compatible	Description Description of your format	Rotation A
Properties Font Display 🖉 Link	k Fields	
Name and Description		
Field Name *LINK 👻	Browse Field # 7	
Description City State Zip		
Positioning Properties           Row         6.6"         Column         1	.0"	
Attributes		
Length 30		
Decimals		
Variable Length 🖲 Yes 🔾 No		
Font		
Font 20 Times 💌		
Point 12		
Copyright; CYBRA Corporation; 2009; All Right	ts Reserved	OK Cancel Help

Click OK to add your new \*LINK text field to your format. JMagic displays it as a grey box with the name of \*L: City State Zip. (The description shows in the grey box.)



#3 – Variable Barcode Field:

You are now going to add a variable data barcode to your format. It will contain the PO# number from the SHIPFILE. You will be using the method described in Step #2. (Linking to a data field.)

# MarkMagic

Place your cursor anywhere in your design area and press F6 and add a new Data field. Prompt the Field name parameter and MarkMagic should still remember the SHIPFILE database. Find PO# in the list.

-			
			File : SHIPFILE
Select a	a Database F	ield	Library . : MRKMAGDTA
_			
K Field	Length	Type	Description
1 ORDER#	5, 0	S	Order Number
2 PDPRD#	7, 0	S	Product Number
PDUPC#	12, 0	S	UPC Number
->P0#	15	A	Purchase Order Number <del>&lt; –</del>
PKSLIP	6	A	Picking Slip Number
PDTYPE	1	A	Product Type
PDDESC	25	A	Product Description
PDWGHT	7, 2	S	Weight
			More
F3=Exit	F12=Cancel		F21=Select All

Place your cursor on PO# and press ENTER. MarkMagic will bring in the required information as shown below:

Work with Data Field
Device : HPPCL5 Format : LEARNXXX2 Length: 11.00" Width: 8.50" Rotation: 0
Field # : 007
Type choices, press Enter.
Field name <u>PO#</u> Name, *HEADING, *DATE, *TIME, E4 for list of fields
Description <u>Purchase Order Number</u>
Length
Increment type <u>I</u> I=Incr, D=Decr, *=Seq reference Increment value <u> </u> 0 - 999
More F3=Exit F4=Prompt F5=Refresh F12=Cancel

Press ENTER twice to create your new data field. Next, navigate to the area where the barcode will be placed. Press F6, then B for *Barcode*, and then S for *Standard*. Remember, it will ask you to move the cursor up to provide the height of the barcode. Move up about an inch and press ENTER.

Now, you are going to link the barcode to the data field that you just made. Name the field \*LINK. Next, PageDown 3 times to the *Work with \*LINK Source Fields* screen. Press **F6** to add a new source field and select the Data field that you just created.

04										
	Select a Field									
Position to type										
Positi	Position to field #									
Type	Fld Name	Description	Length							
Data	001 CSCITY	City	20 v							
Data	002 CSST	State	2 v							
Data	003 CSZIP	Zip Code	5,0v							
Data	004 *HEADING	, ,	5 v							
Data	006 PO#	Purchase Order Number	15 v							
Text	001 *HEADING	i My MarkMagic Tutorial	21							
Text	002 *HEADING	MarkMagic Tutorial line one.	28							
Text	003 *HEADING	MarkMagic Tutorial line one.	28							
			More							
F3=Exi	t F4=Prom	pt F12=Cancel F21=Select r	ange							

You do not need to make any changes to the *Start position* or *Length*, so press ENTER twice to add the new source field.

Type choice	s, press	Enter	<b>.</b>					
Start pos	ition .						1	Number
Length .							15	Number
Variable	length .						N	Y=Yes, N=No
Edit code							_	F4 for list
Check dig	jit						<u> </u>	F4 for list
F3=Exit	F4=Promp	ot	F5	=Re1	fresł	۱	F12=Ca	ncel

#### Tutorial 2A: Intermediate Concepts – Database Field Selection Pg. 43

Work with \*LINK Source Fields Device . . . : HPPCL5 Format . . . : LEARNXXX2 Length: 11.00" Width: 8.50" Rotation: Θ Link field . : BarCd 002 Description . . : Type option, press Enter. 2=Change 4=Delete 5=Display Opt Order Type Fld Name Description Start Length <u>10</u> Data 006 PO# Purchase Order Number Bottom F3=Exit F5=Refresh F6=Add F10=View 2 F12=Cancel

Your final Work with \*LINK Source Fields screen should look like this:

Page back up to the *Work with Bar Code Field* screen. You need to make some changes here so the barcode print correctly. Change the *Row / Column* to **4.50** and **3.00**. This will place the barcode more towards the middle of the page. Set *Barcode Type* to **22**. This value represents Code 128 auto-switch. The PO# has letters and numbers in it, so you must select a barcode that is capable of encoding all of the data. Set the Barcode height to 1.50. Lastly, set the *Narrow Bar Module width* to **4.0**. This will make the barcode print a little wider. For a visual, the following screenshot shows all of these settings:

Work with Bar Code Field Device . . . : HPPCL5 Format . . . : LEARNXXX2 Length: 11.00" Rotation: 0 Width: 8.50" Field # . . : 001 Type choices, press Enter. Field name \*LINK Name, \*HEADING, \*LINK, \*CALC, \*SEQ, F4 for list of fields Description . . 15 1 - 50Length 0 - 9 Decimals Variable length Y Y=Yes, N=No <u>3.27</u>.01 - 11.00 .01 - 8.50Row / Column 4.47 22 F4 for list .10 - 2.00 1 - 30 Bar code type 1.50 Height Narrow bar (module) width 4 2.0 - 4.0Wide to narrow bar ratio More... F3=Exit F4=Prompt F5=Refresh F12=Cancel

Press ENTER twice to accept your new barcode field.

#### **JMagic**

Click the *Create a Data Field* button at the top and click *Browse* next to the *Field name*. JMagic should still remember the SHIPFILE that you have been using. Next to *Field*, click *Browse* and select the **PO#** field.

Key	Name	Length	Decimals		Description	
~	ORDER#	50	)	Order N	lumber	
V	PDPRD#	70	)	Product	t Number	
1990	PDUPC#	12 (	)	UPC N	umber	
	PO#	15		Purcha	se Order Numb	er
	PKSLIP	6		Picking	Slip Number	
	PDTYPE	1		Product	t Type	
	PDDESC	25		Product	t Description	
	PDWGHT	72	2	Weight		
	PDQTY	5 (	)	Quantit	/	
	CSKEY	5 (	)	Custom	ner Key	
1.00	CSCODE	1		Custom	ner Code	
1.00	CSSTOR	4 (	)	Store N	umber	
1				1		
right; CY	BRA Corporation			ок	Cancel	Help

Click OK three times to create your new data field. Now it is time to add the barcode. Click the *Create a Barcode* button at the top and add the barcode in the middle of the format canvas. The *Choose a Barcode Type* window appears. Pull the menu down, choose **Code 128 (auto-switch)** and then Click OK.



Just like the previous text field you created, you need to tell JMagic that it will be a \*LINK field. Pull the menu down next to *Field Name* and select \*LINK. You will see the \*LINK tab appear.

Greate A Nev	w Bar Code Field							
Device	i i i i i i i i i i i i i i i i i i i	Format						- 1
Name	e HPPCL5	Name	LEARNXXX2		Length	11.0"	Width	8.5"
Desc	ription .5 & Compatible	Description	Description of yo	our format	Rotation	[ <b>A</b> ] ∘·		
Properties	Display Settings	Link Fields						
Name and Descr	iption		K					
Field Name	*LINK 👻	Browse	Field #	1				
	*HEADING			-				
Description								
Positioning Properties          Row       4.09"       Column       2.36"         Attributes         Length       1         Decimals								
© Copyright; CYE	BRA Corporation; 2009; All Right	s Reserved				ок	Cancel	Help

On the left, click on Data PO# and insert the Data field to the list of Linked to Fields.

	Source Fields: 11 Field(s)		Insert	Linked To Fields: 1 Field(s)	
Options	Text 4 *HEADING Made by: Your Name			Data PO# Purchase Order Number	
OFF	Text 5 CSNAME Customer Name		Remove		
0.0.1	Text 6 CSADDR Address				
Sort	Data 1 CSCITY City		Move Up		
Search	Data 2 CSST State				
	Data 3 CSZIP Zip Code 🥢 🥢		Move Down		
	Data 4 *HEADING ,				
	Data 5 PO# Purchase Order Number	-	Details		-

Next, click back to the *Properties* tab and type **4.5** for the *Row* and **3.0** for *Column*. Since the PO# field contains numbers and letters, you must select a barcode type that is capable of encoding all of the data. That is why we chose Code 128 (auto-switch) when we initially created the bar code. Two final settings for the barcode must be set on the *Display* tab. Set the *Height* to **1.5** and set the *Narrow Bar Width* to **4.0**.

Click OK to create your new barcode.

👙 Edit A Bar Code Field	
Device	
Name HPPCL5 Name LEARNXXX2 Length 11.0"	Width 8.5"
Description .5 & Compatible Description Description of your format Rotation	
Appearance	
Human Readable 00 No human readable characters 💌	
Alignment L Left	
Rotation	
Rotation A 0 0 0 0° 90° 180° 270°	
Attributes	
Height	
Narrow Bar Width 4	
Number of Columns 0	
Number of Mils 13.3	
Spooled Data Position	
Spool Line0 Spool Column0	
Fields Linking to this Field	
0 Field(s)	
CSADDR	
*L:City State Zip	

#4 – Variable Text Field: Barcode Human Readable Text

The last field to be added to this format is a text field placed directly below the barcode. The text will contain the same information that is encoded in the barcode. You will create a text field that is linked to the *same* **PO**# Data field that the barcode is linked to. This is the benefit of using Data fields + \*LINK fields. You are able to define the variable field once and use it in multiple places on the format.

### *MarkMagic*

Navigate to an area just below your new barcode. Add a new Text field and name it \*LINK as before. Page down 3 times to the *Work with \*LINK Source Fields* screen. Press **F6** and add the same **PO#** Data field as a source field that you used for the barcode. This will be the only source field you will need.

Page back up to the *Work with Text Field* screen. Change *Row / Column* to **4** and **3**. That will place the text exactly below the barcode. Change the *Font* to **36** (Arial) and the *Points* to **20**.

Work with Text Field Device . . . : HPPCL5 Format . . . : LEARNXXX2 Length: 11.00" Width: 8.50" Rotation: Field # . . : 008 Type choices, press Enter. Field name . . . . . . . . . . . . . . . Name, \*HEADING, \*DATE, \*TIME, \*LINK, F4 for fields list Description . . . . . . . \_ Length . . . . . . . . . . . 0 - 9 Decimals . . . . . . . . . Y=Yes, N=No Variable length . . . . . . . <u>Y</u> Row / Column . . . . . . . . <u>4.00</u> <u>3.00</u> .01 - 11.00 / .01 - 8.50 F4 for list of fonts Font . . . . . . . . . . . . <u>36</u> 1 - 999 More... F3=Exit F4=Prompt F12=Cancel F5=Refresh

Let's get daring and make this text italic. Page down once and change *Style* to **I**. Press ENTER twice to create your new barcode human readable text field.

## *JMagic*

Add a new text field below the barcode you just created. This will be a \*LINK field, so pull the menu down next to *Field name* and select \*LINK. The *Link Fields* tab appears. Insert the Data **PO#** to the *Linked to Fields* list.

Click back on to the *Properties* tab. Change the *Row* to **4** and change the *Column* to **3**. This will place the text field just below your barcode. Pull the menu down for *Font* and choose **36** Arial. Set the *Point* to **20**.

👙 Edit A Text Field		
Device	Format	
Name HPPCL5	Name LEARNXXX2	Length 11.0" Width 8.5"
Description .5 & Compatible	Description Description of your format	Rotation A or
Properties Font Display Ø Li	nk Fields	
Name and Description		
Field Name *LINK 💌	Browse Field # 8	
Barrai di an Barrada Ukuran Barrakak		
Description Barcode Human Readable	3	
Positioning Properties		
Row 4.0" Column	3.0"	
Attributes		
Length 15		
Decimals		
Variable Length 🔘 Yes 🔾 No		
Font		
Font 36 Arial		
Point 20		
Copyright; CYBRA Corporation; 2009; All Rig	hts Reserved	OK Cancel Help

Click the *Font* tab and change the *Style* to I (Italic). Click OK to create your new barcode human readable text field. It is "linked" to the same Data field as the barcode, so whatever information is encoded in the barcode will be printed in this text field. Make sure to click the "Save" icon at the top to save all of your changes back to the System i.

Color	B Black	•	Alignme	ent L Left -	
Style	l Italic		-	Character Gap (Dots)	0

# MarkMagic Label Files and Printing Variable Data

A MarkMagic label file is a physical file created by MarkMagic that contains fields that correspond to the variable fields found within a MarkMagic format. The recommended way to create this "work file" is to use the MarkMagic **CRTLBLF** (*Create a Label File*) command to create the OS/400 physical file for you. The command can also be setup to copy in records of data from an existing database file. You will use this extra functionality to add records of data to the file that will be used to print.

## MarkMagic

At the MarkMagic main menu, type **F** for *Format*, **G** for *Generate* and then **C** for *Create File*. You will immediately be asked which format you want to base the label file off of. Type **HPPCL5** for *Device*, and **LEARNXXX2** for the *Format*.

Choose a format	
Device <u>HPPCL5</u> Name Format <u>LEARNXXX2</u> Name	e, F4 for list e, F4 for list
F3=Exit F4=Prompt F5=Refres	sh F12=Cancel

Pressing ENTER will bring you to the *Create a Label File* command screen. The Format name is already specified. Name the *label file* **LEARNXXX2** and create it in *library* **MRKMAGDTA**. (It's ok that the database name be the same as the format.) Since you referenced the **SHIPFILE** database while creating the format fields, take this opportunity to copy the data you need from **SHIPFILE** to your new label file. Type **SHIPFILE** for *Copy data from file* and for library, type **MMEXAMPLES**.

Create a Label File	(CRTLBLF)
Type choices, press Enter.	
Format name LEARNXXX2 Label file	Name, *FILE, F4 for list Name, *LBLFMT A Name, *USRLIB Name, *FIRST Name, F4 for list  ES Name, *LIBL Name, *FIRST Number, *START, *LAST Number, *END
<mark>F3</mark> =Exit <mark>F4</mark> =Prompt <mark>F5</mark> =Refresh F12=Cance F24=More keys	More F13=How to use this display

The rest of the parameters can be left at the default values. After pressing ENTER, MarkMagic will create the new label file and also copy data from the SHIPFILE, but only filling in the fields that you referenced when creating the format. You should be brought back to the MarkMagic main menu after the process is complete.

If you want to view the data in the label file, you can use the MarkMagic file editor by going to U for *Utilities*, **D** for *Data* and **E** for *Edit label file*. You will be asked which format you will be using (should already be filled in) and then you will be asked which label file you want to view. Type the name and library of your label file.

Select a Label File	
Database file <u>LEARNXXX2</u> Library <u>MRKMAGDTA</u> Member <u>*FIRST</u>	Name, F4 for list Name, *LIBL, F4 for list Name, *FIRST, F4 for list
F3=Exit F4=Prompt F5=Re	efresh F12=Cancel

After choosing your label file, you will be brought to the *Edit a Label File* screen. Make sure *Clear* is set to **\*NO** (might need to press F10 to see all parameters) and press ENTER. You will see the data that has been copied into your label file.

Edit a L	abel File (EDT.	LBLF)	
Type choices, press Enter.			
Format name	LEARNXXX2 LEARNXXX2 MRKMAGDTA *FIRST	Name, *FILE, Name Name, *LIBL Name, *FIRST	F4 for list
Additic	onal Parameters		
Clear	<u>* *NO</u>	*NO, *YES	
			Detter
F3=Exit F4=Prompt F5=Refresh F13=How to use this display	F10=Additiona F24=More keys	l parameters	Bottom F12=Cancel

			Work with Data			
Posi	tion to		12. <sub>1. 1</sub>			
Type	option,	press Enter.				
2=	Change	3=Copy 4=Delet	e 5=Display			
		Purchase				
	Record	Order			Zip	
Opt	Number	Number	Citu	State	Code	Customer Name
	1.	A-54621 12324 S	New York	NY	10015	Windows on th
_	2.	A-890 84393 FD	Los Angeles	CA	12321	Windows to th
_	з.	A-424 1565 56	Los Angeles	CA	10232	No Pane No Ga
	4.	A-789 897 789	Chicago	IL	54320	Windows on Ti
	5.	X-80234 8932 0	New York	NY	10012	Windows for L
	6.	X-2873 782979	New York	NY	10015	We do Windows
	7.	B-8271 782 973	Brooklyn	NY	11454	Winnie's Wind
	8.	A-9038 890890-0	Richmond	NY	11653	Sally's Sills
	9.	A-45646 546464	New York	NY	10012	World of Wind
	10.	A-08320984	New York	NY	10120	Window Broker
	11.	C-972983-78-9	Riverdale	NY	10471	Window Breake
						More
F3=E:	xit	F5=Refresh F6	=Add F12=Cancel			
			(c) Copyrigh	nt CYBRA	Corp.	1991, 2005

You can actually add or modify records at this screen, but the data that was copied in during the CRTLBLF process is all that is needed for the purpose of the tutorial. Now that you understand what a label file is and how the SHIPFILE data is retrieved and inserted into your "work file" label file, it is time to print these records with your new format.

We will assume that you successfully printed in the last tutorial and know how to print a format layout to your laser printer whether it is an AS400 device description or a remote out queue. From the MarkMagic main menu, press **P** for *Print*, and, this time, **L** for *Label File*. You will be brought to the *Print a Label File* command screen.

Print a La	abel File (PRTLBLF	)
Type choices, press Enter.		
Label file	LEARNXXX2 H Nam <u>MRKMAGDTA</u> Nam *FIRST Nam LEARNXXX2 Nam Nam *STD Cha *YES *YE *FMT Cha *DEFAULT 1-9 HPPCL5 Nam	e, *NONE, *DTAQ e, *LIBL e, *FIRST e, *FILE, F4 for list e, F4 for list racter value, *STD S, *NO racter value, *PRTF, *FMT 999, *DEFAULT e, F4 for printer list
Additio	al Parameters	
Print from record number > Print to record number > Number of records to print > F3=Exit F4=Prompt F5=Refresh F13=How to use this display	000001 H Num 000003 Num *END Num F10=Additional pa F24=More keys	ber, *START, *LAST ber, *END ber, *END More rameters F12=Cancel

Now that you have a label file with some sample records of data inside of it, you can specify its name and library in the first two parameters. (Previously you had this value set to **\*LAYOUT.**) Make sure *Format name* is **LEARNXXX2**. If your laser printer is setup as an AS400 device, type the name in *Printer device*. Also make sure *Printer type* is **HPPCL5**.

Each record in the label file will result in one page being printed on your printer. So we don't waste paper by printing 17 pages (17 records in the label file), let's set *From Record* to 1 and *To Record* to 3. (You may need to press F10 to see these additional parameters.) Lastly, if you use a remote out queue to print, remember to type this information in the *Spooled Output Queue* parameter. Press ENTER to execute this print command. You should receive 3 pages each with different data in the middle corresponding to the first 3 records in your label file.

## **JMagic**

With your LEARNXXX2 format open, click *Format* and then *Create Label File*.



You will be shown the *Create a Label File* screen. Make sure *Format name* is **LEARNXXX2**. Name the label file **LEARNXXX2** and create it in library **MRKMAGDTA**. (It's ok that the database name be the same as the format.) Since you referenced the **SHIPFILE** database while creating the format fields, take this opportunity to copy the data you need from **SHIPFILE** to your new label file. Type **SHIPFILE** for *Copy data from file* and for library, type **MMEXAMPLES**.

Create a Label File (CRTLBLF	9	
File Edit View Help		
Format name:	LEARNXXX2	Name 🔺
Label file:	LEARNXXX2	Name
Library:	MRKMAGDTA -	Name
Label file member:	*FIRST	· Name
Key field:		Add
		Remove
		Move up
		Move down
Printer type:	HPPCL5	Name, F4 for printer list
Copy data from file:	SHIPFILE	Name
Library:	MMEXAMPLES -	Name
Copy from member:	*FIRST	· Name
Copy from record number:	*START	Number
Copy to record number:	*END •	Number
Copy from record key value:		1
		Remove
		Move up
		Move down
Advanced		OK Cancel Help ?

Click OK to create your label file. JMagic will create the new label file directly on the System i server and copy in data from SHIPFILE, but only filling in the fields that you referenced when creating the format.

If you want to view the data in the label file, you can use the new JMagic file editor by going to *Format* and then *Work With Label Files*. It will bring up a list of files currently found in MRKMAGDTA library. Choose the LEARNXXX2 file using the menu on the right and click *Edit*.

MRK	MAGDTA	-	LEARNXXX2	-
WIEW	MMAODTA	6.6	LEARMAAAZ	

You will be presented with the JMagic database file viewer / editor:

Quantity Print	Separate Cut Repetition Mode	Batch CSCITY	CSST	CSZIP	PO#	CSNAME	CSADDR
0	0	New York	NY	10015	A-54621 12324 S	Windows on the World	2 Main Street
0	0	Los Angeles	CA	12321	A-890 84393 FD	Windows to the Future	Telkowsky Street
0	0	Los Angeles	CA	10232	A-424 1565 56	No Pane No Gain	34-22-36 Jackla Lane
0	0	Chicago	IL	54320	A-789 897 789	Windows on Time	45 Domino Lane
0	0	New York	NY	10012	X-80234 8932 0	Windows for Less	167 Orchard Street
0	0	New York	NY	10015	X-2873 782979	We do Windows	13 Scaffold Lane
0	0	Brooklyn	NY	11454	B-8271 782 973	Winnie's Windows	3 Glass Street
0	0	Richmond	NY	11653	A-9038 890890-0	Sally's Sills	166 Jonas Ledge
0	0	New York	NY	10012	A-45646 546464	World of Windows	з WTC
0	0	New York	NY	10120	A-08320984	Window Brokers	40 Wall Street
0	0	Riverdale	NY	10471	C-972983-78-9	Window Breakers	803 East 260th Street
0	0	Venice	CA	81321	U-9-21-90-21	Leading Blinds	12 Vertical Lane
0	0	Los Angeles	CA	85430	D-82108 8092 30	Shades of Shades	Upper Shadow Park
•		4. O.51					•
			1	Add			
		MPKMACDT					
		MINIMAODIA	•	LEAP			

You can actually add or modify records at this screen, but the data that was copied in during the CRTLBLF process is all that is needed for the purpose of the tutorial. Now that you understand what a label file is and how the SHIPFILE data is retrieved and inserted into your "work file" label file, it is time to print these records with your new format.

We will assume that you successfully printed in the last tutorial and know how to print a format layout to your laser printer whether it is an AS400 device description or a remote out queue. Click *Format* and then *Print* and then *Print Label File*. Now that you have a label file with some sample records of data inside of it, you can specify its name and library in the first two parameters. (Previously you had this value set to **\*LAYOUT.**) Make sure *Format name* is **LEARNXXX2**. If your laser printer is setup as an AS400 device, type the name in *Printer device*. Also make sure *Printer type* is **HPPCL5**. See the screenshot on the next page for the exact parameters that you need to use:

file Edit View Help				
Label file: Librarv:	LEARNXXX2 MRKMAGDTA	<ul> <li>Name</li> <li>Name</li> </ul>		
Label file member:	*FIRST	▼ Name		
Format name:	LEARNXXX2	▼ Name		
Printer device:	LASERDEV	▼ Name		
Form type:	*STD	<ul> <li>Character value</li> </ul>		
Spooled printer output:	💿 *YES 🔊 *	*NO		
Spooled file name:	*FMT	✓ Character value		
Quantity:	*DEFAULT	▼ 1-9999		
Printer type:	HPPCL5   Name, F4 for printer list			
,	Advanced Paramete	rs		
Print from record number:	1.	✓ Number		
Print to record number:	3	▼ Number		
Spooled output queue:	OUTQNAME	▼ Name		
Library:	LIBRARY	▼ Name		
Jser library name:	MRKMAGDTA	▼ Name		

Each record in the label file will result in one page being printed on your printer. So we don't waste paper by printing 17 pages (17 records in the label file), let's set *From Record* to **1** and *To Record* to **3**. (You may need to click the *Advanced* button to see these additional parameters.) Lastly, if you use a remote out queue to print, remember to type this information in the *Spooled Output Queue* parameter. Click OK to print your format. You should receive 3 pages each with different data in the middle corresponding to the first 3 records in your label file.

Congratulations! If all went well, you should have three nice looking pages of variable data. Let's review what was covered in this "Intermediate Database Concepts":

Topics Covered:

- 11. How to copy a format and why you would want to copy a format.
- 12. How to delete a field from a format.
- 13. How to add variable "non-\*LINK" fields.
- 14. What a MarkMagic Data field is.
- 15. How to add Data fields defined from a database.
- 16. What a MarkMagic \*LINK field is.
- 17. How to add text and barcodes that are "linked" to the variable data fields via \*LINK.
- 18. What a MarkMagic label file is and how to create and copy sample data to one.
- 19. How to view the records in a label file.
- 20. How to print with data from your label file.

This tutorial only covered methods of printing information from a database. If you are looking for a tutorial that covers printing data retrieved from a spooled file, please see tutorial 2B: "Intermediate Forms Concepts".