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# Guidelines for Shipping Container Labeling

FIRST PUBLISHED SEPTEMBER 2005

UPDATED MAY 2006

UPDATED MAY 2007

Published by  
the Book Industry Study Group, Inc.

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## Introduction

The DEIG Guidelines for Shipping Container Labeling (“DEIG Guidelines”) have been developed and revised through the work of the Book Industry Study Group’s Distribution Executives Interest Group (DEIG).

The guidelines represent the Book Industry Study Group’s best practices recommendations for the creation and placement of Shipping Labels, Product Labels and Carton Marking. By adhering to the recommendations in these guidelines the book industry will simplify the capturing of data at all stages of shipping, warehousing and receiving physical product between publishers, distributors and booksellers.

The DEIG Guidelines also serve to align the book industry with global trade generally.

The DEIG Guidelines conform to ANSI/UCC-6: Application Standard for Shipping Container Codes published by GS1 US and are to be used as a basis for more specific agreements on shipping container labeling between trading partners. To purchase the ANSI/UCC-6: Application Standard for Shipping Container Codes visit <http://productcatalog.gs1us.org/>.

It is expected that the DEIG Guidelines will be revised and updated as new standards are developed both within and outside of the book industry and to keep up with emerging technologies. Users of these guidelines are encouraged to provide feedback so that future updates can benefit from user experience.

## Compliance and Definition of Terms

Compliance with all standards developed by the Book Industry Study Group is voluntary and subject to agreement between participating trading partners.

The following terms are used throughout this document only in relation to compliance with the DEIG Guidelines. There is no intent to dictate or otherwise affect terms of trade between trading partners.

**Must** – Statements using the word “must” describe conditions that must be present for an action or practice to be in compliance with the DEIG Guidelines.

**Should** – Statements using the word “should” describe conditions that are recommended as good practice in the spirit of the DEIG Guidelines.

**May** – Statements using the word “may” describe options available within the DEIG Guidelines.

## Shipping Label

The Shipping Label contains information relevant to a specific shipment. BISG has adopted the most current standards of the GS1-128 label format as the basis for shipping label standards in the book industry. Updates to the DEIG Guidelines will be considered as changes are made to the GS1 standards.

### Shipping Label Layout

The layout of the GS1-128 label consists of different zones, each a separate building block. The size of the zones, with the exception of certain zones that have mandatory dimensions, can be adjusted to accommodate varying amounts of information. Even when zones are resized, however, the placement of information must remain consistent relative to the information in other zones. In other words, there is flexibility in placing the information within zones, but the sequence of zones must be preserved.

### Shipping Label Size

**Zone Height** – Each zone must measure 1.0" in height  $\pm$  0.2". However, a zone may be doubled in height to accommodate additional information. The height of the double-high zone is 2.0" in height  $\pm$  0.4". Please note that Zone H when present must always be 2.0"  $\pm$  0.4" to accommodate the SSCC-18 bar code.

**Zone Width** – The width of the zones is determined by the width of the label. In some cases, the label width can be divided to accommodate two zones side by side.

**Label Height** – The recommended minimum label height is 6.0". The height of the label can be taller if necessary to accommodate additional information. However, the sequence of zones must be preserved and the placement guidelines described below must be observed.

**Label Width** – The recommended minimum label width is 4.0". The label may be wider if necessary to accommodate additional information.

#### **Examples:**

The layouts shown in Appendix A are examples compliant with the DEIG Guidelines; they are not industry standards as such.

- Figure A-1 shows a sample of the zone layout of a 4.0" x 6.0" GS1-128 label with all fields being utilized and with Zones A through H at a 1.0" height and Zone I at its mandatory 2.0" height.
- Figure A-2 shows a sample of the zone layout of a 4.0" x 7.0" GS1-128 label again where Zones A through H are 1.0" in height, Zone I is at 2.0" in height and where Zones E and F are expanded to the full width of the label causing the label size to change to 7.0".
- Examples of Common Carrier (Truckload/LTL), "mark-for" and small parcel labels also appear in Appendix A.

Table D-1 in Appendix D defines the uses, sizes and mandatory or minimum requirements for the different zones on the shipping label. Whenever information located in Zones E through I on the shipping label is to be bar coded, it must be based on Code GS1-128 symbology. Symbology in Zones C and D must meet carrier requirements. Where there is no specific carrier requirements, Code GS1-128 symbology should be used as the symbology in

Zones C and D. Code GS1-128 is a variant of Code 128. Its use is exclusively licensed by GS1 US ([www.gs1us.org](http://www.gs1us.org)).

Experienced bar code vendors, including those identified at [http://www.bisg.org/barcoding/bc\\_suppliers.html](http://www.bisg.org/barcoding/bc_suppliers.html) are knowledgeable regarding these specifications.

## **Shipping Label Placement**

The original DEIG Guidelines for Shipping Container Labeling called for the Shipping Label to be placed on the top of the carton. The current GS1 US “Application Standards for Shipping Container Codes” calls for the placement of the Shipping Label on the side of the carton. To accommodate both top and side labeling, as well as provide guidelines for those that are transitioning from top to side or both, these revised DEIG Guidelines contain standards for each.

Ultimately, the placement of Shipping Labels will be agreed to by trading partners based on the needs and abilities of both the shipper and receiver. However, it is recommended that as enhancements to shipping or receiving operations are planned, the ability to utilize both side- and top-label be considered.

### **Top Labeling**

Shipping Labels placed on the top of the carton must adhere to the following general guidelines (examples are provided in Appendix B, Figure B-1):

- The Shipping Label must be placed so it does not cover the seam of the carton. If placed on the seam, the label could be damaged when the carton is opened or bar codes could be distorted by the seam.
- The Shipping Label must be placed in such a way that the tape used in sealing the carton does not cover any bar code or other critical information on the Shipping Label.
- Ideally, the Shipping Label should be placed so that no bar code, particularly that of the SSCC, appears any closer than 1¼” from any natural edge of the carton.

For small cartons where the top surface does not allow for all of the above guidelines to be followed, the exceptions below are allowed:

- The Shipping Label should be placed on top of any sealing tape.
- If the Shipping Label is placed in a manner in which the SSCC bar code will appear closer than 1¼” to the edge and side of the top of the carton, the label should be placed in such a way that the SSCC bar code is placed away from the short edge of the carton so that the quality of the bar code is not diminished if the corner of the carton is damaged.
- If the Shipping Label must be placed across the seam of the carton, care must be taken that no bar code or other critical information crosses the seam and could be lost when the carton is opened.

## **Side Labeling**

In keeping with the guidelines set forth by the GS1 US “Application Standards for Shipping Container Codes,” Shipping Labels placed on the side of the carton must meet the following criteria (examples are provided in Appendix B, Figure B-2):

- Shipping Labels must be placed on the long side of the carton with the bar codes in a vertical bar or “picket fence” orientation. In order to achieve this picket fence orientation, most labels will need to be placed straight up and down.
- Shipping Labels must be placed in such a way that the SSCC bar code appears no closer than 1¼” from the natural bottom of the carton.
- The Shipping Label must be placed so that the SSCC bar code appears no closer than 1¼” from the edge of the carton.
- If the Shipping Label is placed on the same side of the carton as a Product Label it must be placed to the left side of the Product Label so that it does not obscure any of the information on the Product Label and so that no bar code appears closer than 1¼” from the natural edge of the carton. (See example under Figure B-3 in Appendix B.)

For cartons where the height of the carton is less than that of the Shipping Label, one of the following must occur:

- The entire Shipping Label may be placed on the top of the carton following the guidelines for Top Labeling.
- OR**
- The shipping label may be placed on the side of the carton with the bottom of the bar code placed at least 1¼” from the natural bottom; and the excess portion of the top of the label should be folded over to the top of the carton. Care must be taken in these cases to not crease the Shipping Label on any bar codes or other critical information.

## **UPS Shipping Label Template**

In cooperation with the Book Industry Study Group, UPS has developed a template for a Shipping Label compliant with the UPS shipping label standards while leaving room to accommodate the information recommended in the DEIG Guidelines.

To allow for all of the information to appear on the shipping label, UPS has reduced their typically recommended height requirement for the Tracking Number bar code from 1.0” to 0.75”. Additionally, UPS has agreed to change many of the font sizes typically required. A sample of the UPS shipping label template can be found in Appendix A under Figure A-5. The specifications pertaining to fonts and bar code heights must be adhered to for acceptance by UPS.

In addition, BISG has developed two further templates that have been approved by UPS for use with a 4.0”x 6.0” and 4.0”x 7.0” Shipping Label where the *Ship To* and *Ship From* addresses appear side by side, more closely resembling the Shipping Label standards for other carriers. These templates can be found under Figures A-6 and A-7 in Appendix A. While these templates were developed for the industry as a whole, it remains the responsibility of each company using them to obtain appropriate certification from UPS.

Companies should reference the “BISG Layout” when corresponding with UPS during the certification process.

Whereas the general recommendation for bar coding the Shipping Label is based on GS1-128 symbology, Shipping Labels prepared for UPS must utilize Code-128 symbology for UPS specific bar codes. Bar codes appearing in Zones E through I must still be based on GS1-128 (UCC/EAN – 128) symbology. Please refer to the “UPS Guide for Labeling” (available from UPS representatives) for exact specifications.

Care must be taken to use the correct Application Identifier (AI) codes and data construction as outlined in Appendix D, Table D-3, of this document. Table D-4 defines font sizes and bar code heights specific to the BISG Layout for the UPS label. For information on the creation of the MaxiCode, Routing codes, bar code symbologies and other UPS-related information, the latest version of the “UPS Guide to Labeling” should be consulted.

## Returns

The recommendations outlined above for Shipping Labels can also be used for the shipment of returns back to the vendor. In these cases, the information contained in Zone E (Receiver/Customer Segment) would be information required by the receiver of the return. Additionally, Zone F (Shipper/Supplier Segment) would be reserved for internal information that the shipper of the returns may require.

There have been additional Application Identifiers (AIs) assigned specifically for use with returns; these can be found in Table D-3 in Appendix D.

An alpha code has been designated to identify the return product type; this information would be located in Zone E of the Shipping Label. Additional information on the use of this code can be found in Table D-1 in Appendix D.

Samples of Shipping Labels used for returns can be found in Appendix A under Figures A-8, A-9 and A-10.

## Product Label

The Product Label contains information relevant to the contents of the carton but not to the particular shipment. In an effort to minimize the duplication of information on the Shipping and Product Label, and to eliminate the need to print two labels at the time of shipment, the following standards must be used when labeling or marking product information on full carton packs only. It is impossible to generate a Product Label for a mixed carton pack.

GS1-128 (UCC/EAN-128) symbology must be used for all bar codes observing the correct Application Identifiers (AIs) as outlined in Table D-3 in Appendix D.

**Note:** With the emergence of new technology and the continued need for title marketing, it is understood that labeling may not be the only method for identifying the contents of a carton.

## Product Label Layout

The Product Label follows an approach similar to that of the Shipping Label and is composed of zones. The height of the zones can be adjusted to accommodate varying amounts of information. However, the sequence of the zone layout, the sequence of information within each zone, and the bar code minimum specifications must be preserved.

## Product Label Size

**Label Height** – The recommended minimum product label height is 4.0”.

**Label Width** – The recommended minimum product label width is 6.0”.

**Zone Height** – The recommended Zone Height for Zones 1 & 2 is 1.0” and for Zone 3 is 2.0” on a standard 4.0”x 6.0” label.

**Zone Width** – The width of the zones will be the width of the label less borders.

## Zoned Product Information

The following explains the various zones, or order, in which the product information must be placed on a Product Label. Table D-2 in Appendix D shows the various zones and a more detailed listing of some of the items that would be included in the various zones. The correct AI prefixes and data construction for bar coded information are contained in the list in Appendix D, Table D-3.

### **Zone 1**

This zone, the first block of information to appear on a Product Label, contains human readable non-bar coded information specific to the product. Typically, and to eliminate repeated information, this field includes information that is not otherwise bar coded on the carton.

All human readable information with the exception of the title must be printed at a minimum 12pt font. The title must be printed at a minimum 14pt Bold font.

Required information for Zone 1 includes:

- Title or Product Description
- Publisher



- Country of Origin

Optional information for Zone 1 includes:

- Author
- On-Sale Date -- The date before which a retailer may not offer the book for sale, often referred to as “strict on sale date”.
- Technical Information for Media Products -- Depending on the product this could be cassette, DVD, CD, etc.

In cases where bar coded information is not being directly printed on the carton but is on a separate label, text for bar coded information may also appear in this zone.

## **Zone 2**

The second zone, the middle block of information on a Product Label, is reserved for publisher-specific information, which may or may not be bar coded depending on the need of the publisher. This information could include the publisher purchase order, printing number and Cover 4 bar code designation.

When showing the Cover 4 bar code designation, the following abbreviations must be utilized: EAN, UPC or E/U if the title has both an EAN and UPC on Cover 4. Note, however, that dual bar codes are not compliant with BISG Policy Statement POL-0701 on products shipped March 31, 2008 or later.

See *BISG Policy Statement POL-0701* (<http://www.bisg.org/documents/policies.html>) for more information on the elimination of dual identifiers.

When placing a bar coded purchase order number in Zone 2, the proper AI (251) must be used and identified by either PPON (Publisher Purchase Order Number) or similar text. This approach is necessary in order to clearly identify the data as the publisher’s order number to the manufacturer and not the customer’s purchase order number to the publisher, which is located on the Shipping Label.

## **Zone 3**

The last zone, the bottom section of information on the Product Label, is reserved for bar coded product information that is equally useful to both the shipper and the receiver.

Required data elements for Zone 3, to be correctly encoded in the bar code symbology, are:

- ISBN -- See “Special Note on Bar Coding the ISBN in Zone 3” below for information on displaying the human readable ISBN.
- Carton Quantity
- Carton Weight
- Cover Price

The data elements listed above should appear in the order shown in the various examples in Appendix C.

Print quality of the bar codes used in Zone 3 must meet or exceed GS1 recommended minimums and all type fonts must be in compliance. See [www.gs1us.org](http://www.gs1us.org).

In cases where printing directly on the carton would not create acceptable bar codes, this information must be labeled at the bottom of the carton, taking care not to obstruct other information and maintaining a minimum distance from the bottom or edge of the carton of at least 1¼".

### **Special Note on the ISBN-13 Transition**

Since the ISBN has been officially redefined as a 13-digit identifier, the Product Label must parallel the standards recommended by the Book Industry Study Group's Machine Readable Coding Committee (MRC) and ISBN-13 Task Force in regard to the display of the ISBN on Cover 4 of books. Specifically, the ISBN displayed on the Product Label must match the ISBN displayed on Cover 4 of the book inside the carton.

In keeping with the redefinition of the ISBN on January 1, 2007, this means that the human-readable ISBN printed above the ISBN bar code must be in the 13-digit format.

Some publishers may find it necessary to carry both the ISBN-10 and the ISBN-13 for some time after the transition. In these cases the publisher may display the ISBNs in human readable form above the bar code in the sequence they prefer (ISBN-10 above the ISBN-13 as shown in Appendix C Figure C-2, or ISBN-13 above the ISBN-10 – not shown) so long as each is properly identified as ISBN-10 or ISBN-13.

Complete details regarding the transition to ISBN-13 can be found on the BISG website at [www.bisg.org](http://www.bisg.org).

### **Special Note on Bar Coding the ISBN in Zone 3**

Although the human readable ISBN printed above the bar code on a Product Label is shown in 13-digit format, it must continue to be encoded in the bar code as a 14-digit identifier utilizing GS1-128 (UCC/EAN-128) symbology. This bar code, commonly referred to as a GTIN-14, is prefixed by the Application Identifier "01" as described in Table D-3.

It is recommended that unless a publisher/supplier has specifically assigned package level identifiers, the unofficial general retailing convention of using "1" to indicate the case level packaging should be followed.

When the publisher/supplier has specifically assigned package level identifiers to various carton configurations, the identifier associated with a particular carton must conform to those assignments.

### **Product Label Placement**

Product Labels must be placed at least 1¼" from any carton edge or in such a manner that bar codes on the label do not appear closer than 1¼" from any carton edge. If using wrap-around labels, they must be printed and applied so the bar codes do not appear closer than 1¼" from the top and bottom or other edge of the carton.

Product Labels must appear on at least two sides of the carton, one of which must be the long side of the carton.

Product Label bar codes must be in a vertical bar or "picket fence" configuration.

## Carton Marking Recommendations

Rather than using a printed Product Label, a company may choose to mark their cartons using offset, flexographic or ink jet printing. In all instances, carton information must appear in the zoned layout as explained in the section on Product Label Recommendations and outlined in Table 2 of Appendix D.

When printing bar codes directly on the carton, all bar codes must be sized properly according to Table D-2 of Appendix D, spaced with appropriate quiet zones (in the case of Code GS1-128 symbology this means at least 0.25"), and must not be printed closer than 1¼" from any edge of the carton. In cases where symbols printed directly on the carton will not scan properly, the bar coded information must appear on a label placed on the carton.

## Additional Resources

The resources listed here are for informational purposes only. BISG does not endorse or recommend these or other vendors of such products and services.

### **GS1 US**

1009 Lenox Drive  
Suite 202  
Lawrenceville, NJ 08648

Phone: 609-620-0200  
Email: [info@gs1us.org](mailto:info@gs1us.org)  
Website: [www.gs1us.org](http://www.gs1us.org)

### **Online resource of BISG member bar code suppliers**

[http://www.bisg.org/barcoding/bc\\_suppliers.html](http://www.bisg.org/barcoding/bc_suppliers.html)

### **UPS WorldShip**

Technical Support Desk  
Phone: 888-553-1118

## Appendix A: Shipping Label Examples

All label and bar code examples in Appendix A are illustrative only. They must not be considered actual size and in many cases have been enlarged to show detail. Please refer to Table D-1 for actual Shipping Label and bar code sizes.

**Figure A – 1**  
**Sample 4.0" x 6.0" Shipping Label**

<b>Zone A</b> Ship From	<b>Zone B</b> Ship To	
<b>Zone C</b> Carrier Bar Code		<b>Zone D</b> Carrier
<b>Zone E</b> Receiver/Customer Segment	<b>Zone F</b> Shipper/Supplier Segment	
<b>Zone G</b> Final Destination Code		<b>Zone H</b> Mark for Text
<b>Zone I</b> SSCC Bar Code		

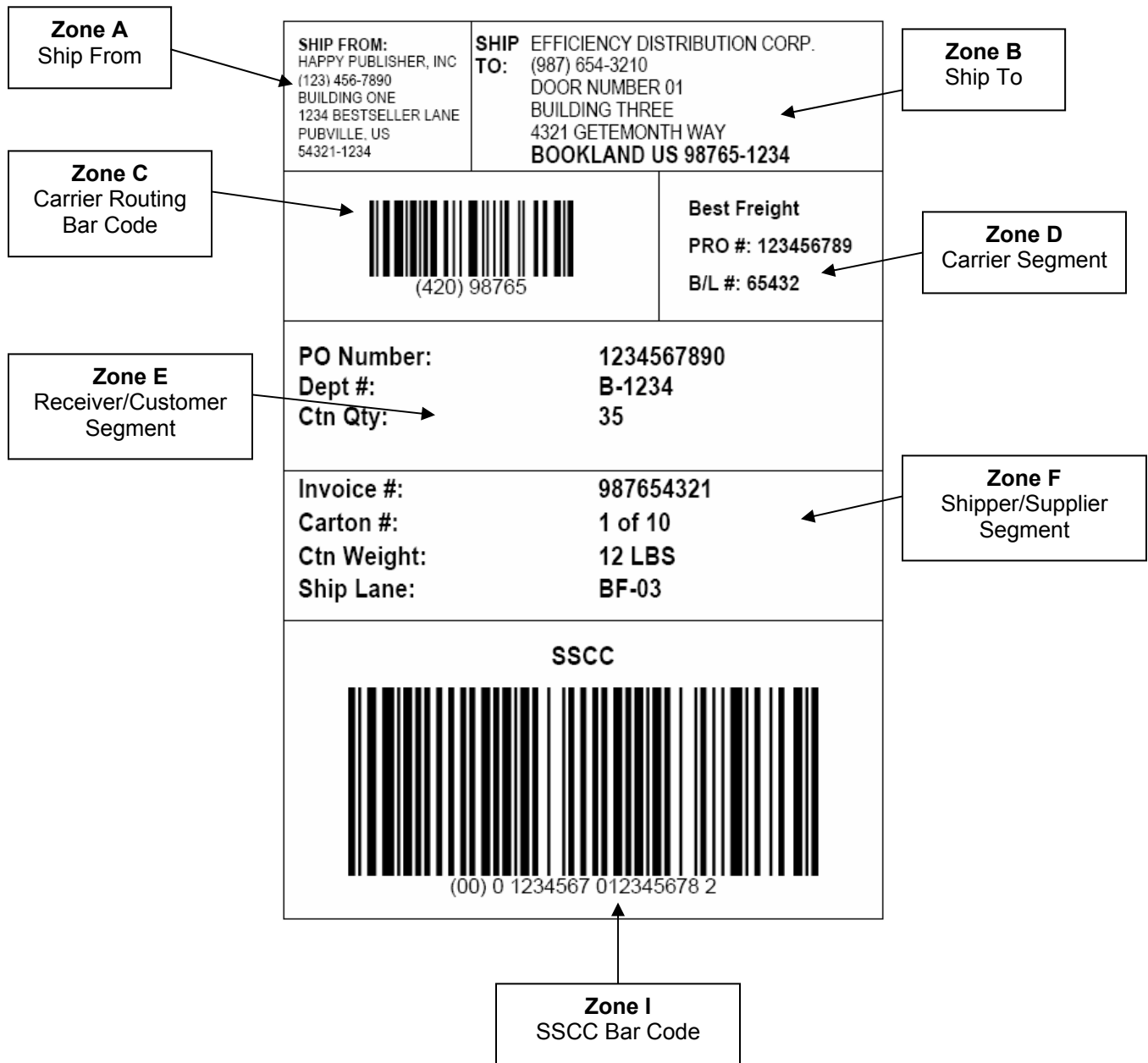
## APPENDIX A

**Figure A – 2**  
**Sample 4.0"x 7.0" Shipping Label**

<b>Zone A</b> Ship From	<b>Zone B</b> Ship To	
<b>Zone C</b> Carrier Bar Code		<b>Zone D</b> Carrier
<b>Zone E</b> Receiver/Customer Segment		
<b>Zone F</b> Shipper/Supplier Segment		
<b>Zone G</b> Final Destination Code	<b>Zone H</b> Mark for Text	
<b>Zone I</b> SSCC Bar Code		

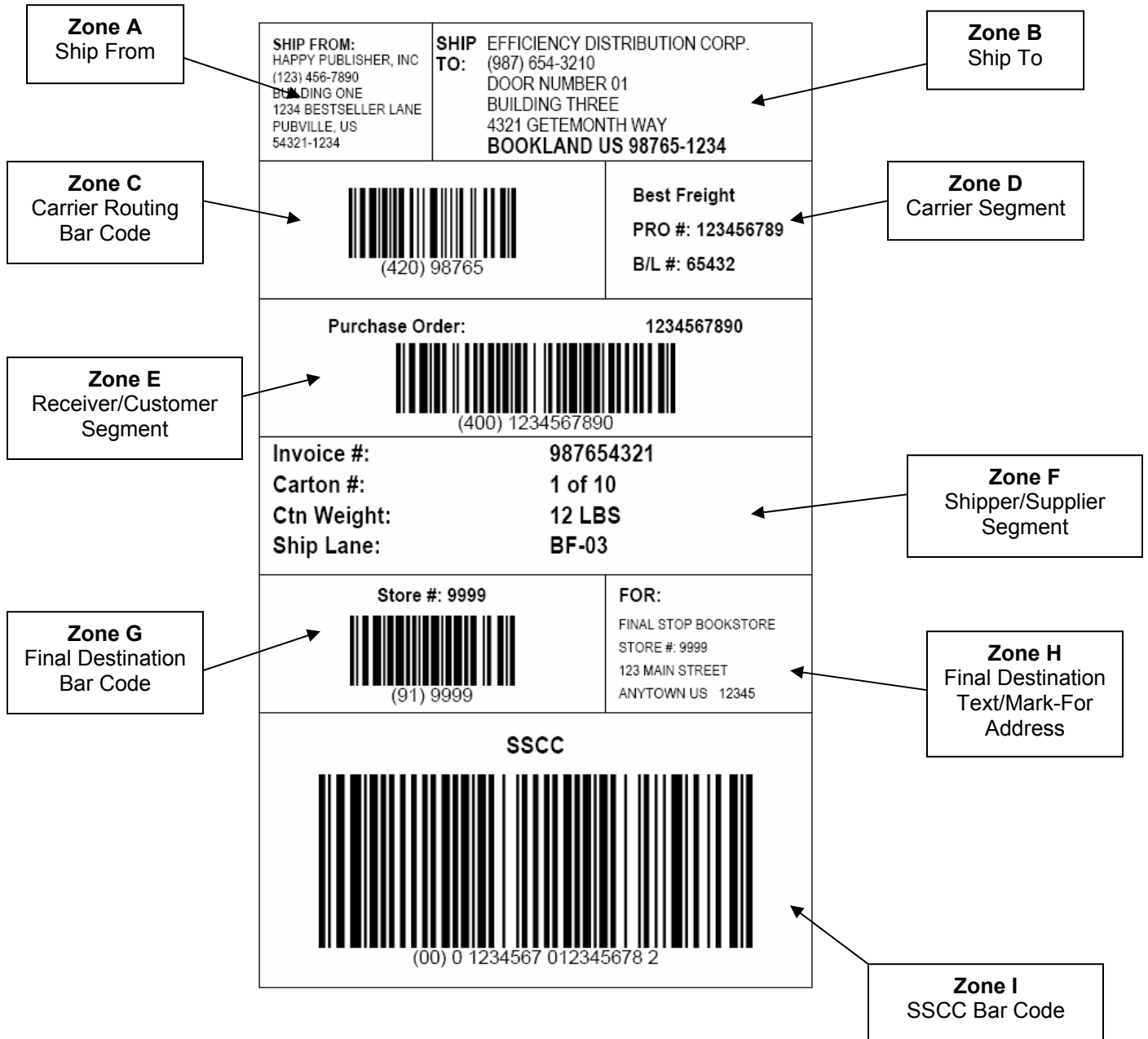
## APPENDIX A

**Figure A – 3**  
**Sample 4.0"x 6.0" Common Carrier Shipping Label**  
**(Truckload/LTL Carrier)**



# APPENDIX A

**Figure A – 4**  
**Sample 4.0"x 7.0" Mark For Shipping Label**  
**(Truckload/LTL Carrier)**





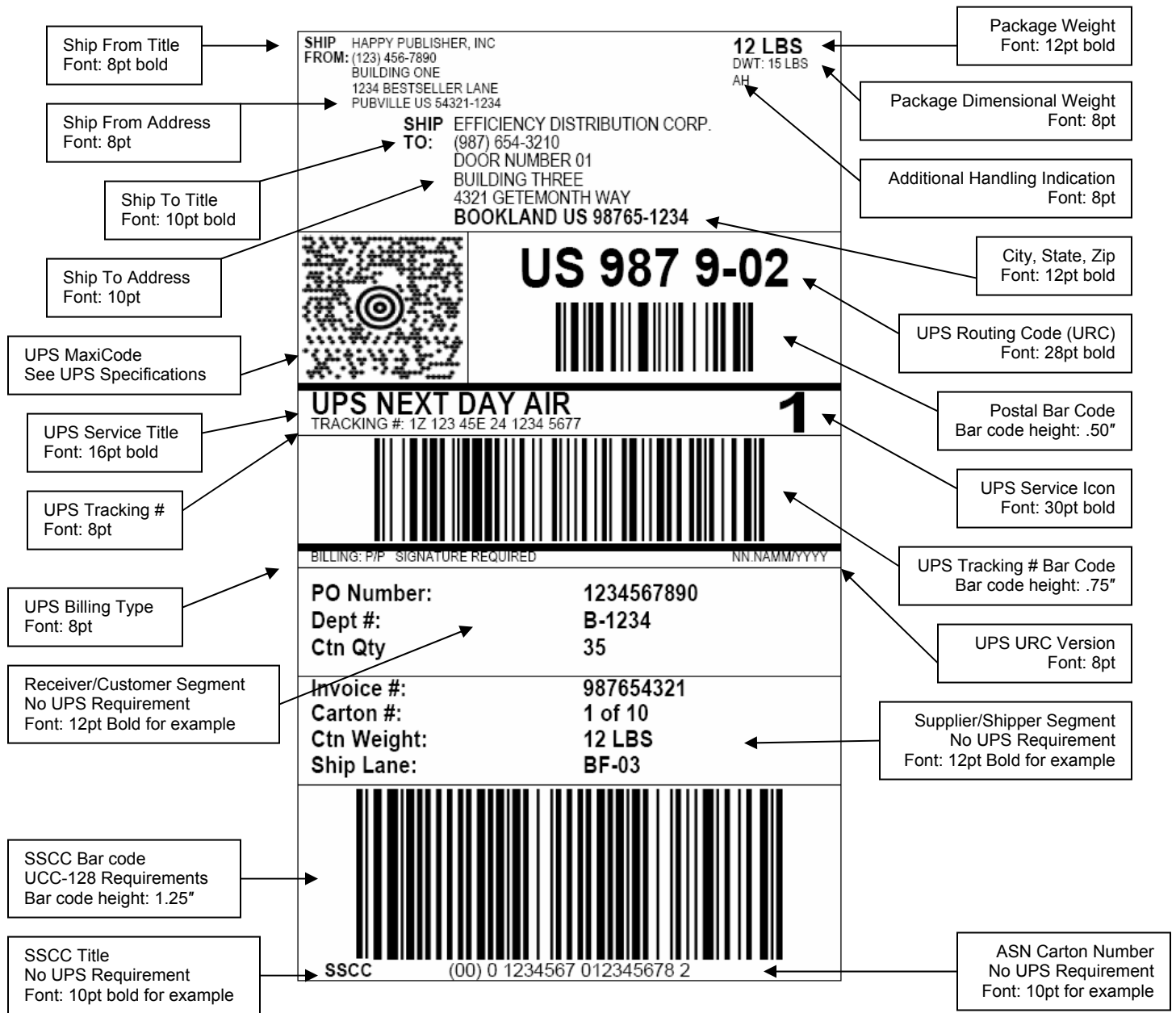
# APPENDIX A

Figure A – 5

## Sample UPS 4.0"x 7.0" UCC-128 Shipping Label

### BISG Layout with Font Sizes & Bar Code Heights

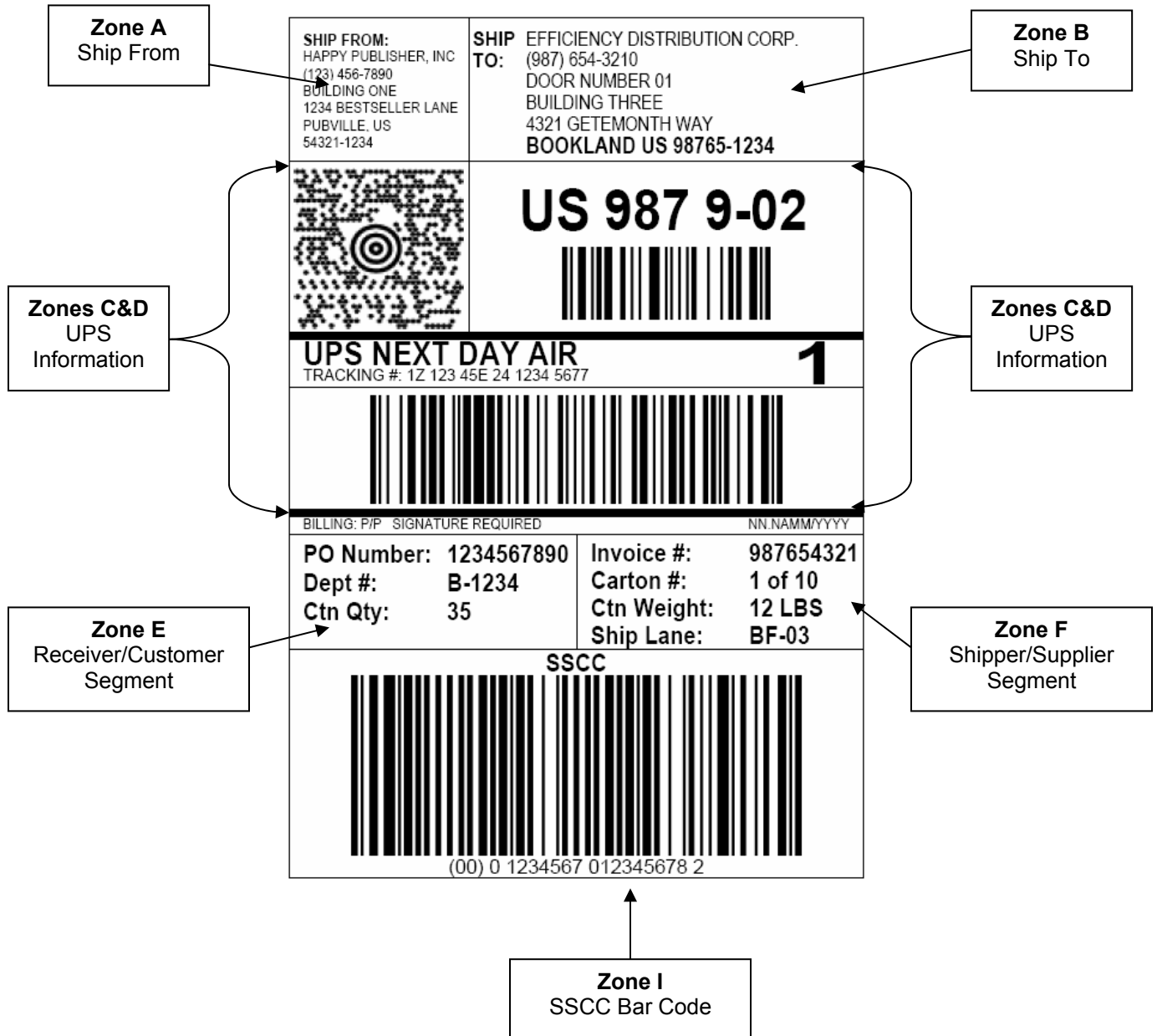
(Recommended Font for all text = Arial)



# APPENDIX A

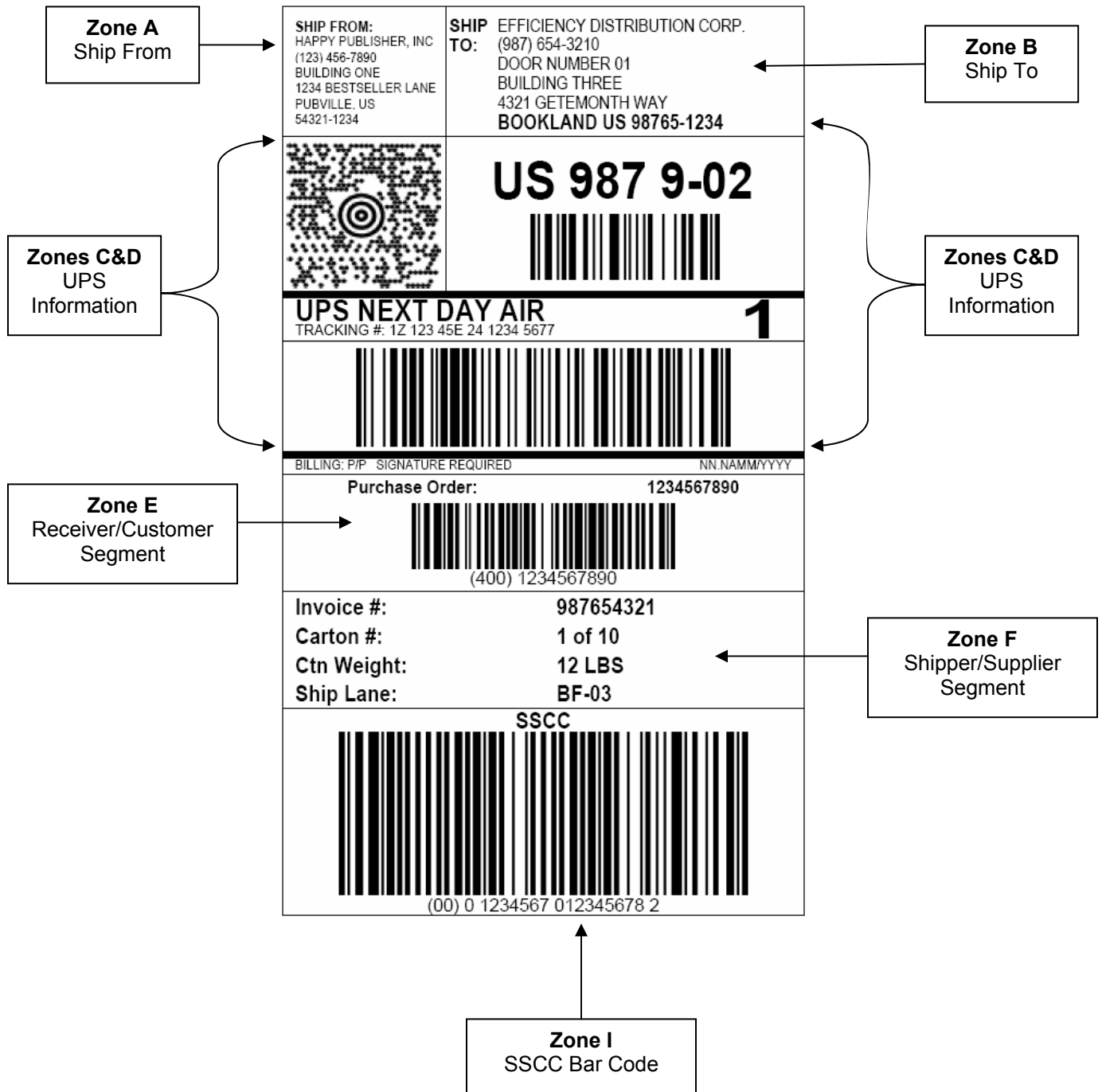
**Figure A – 6**  
**Sample UPS 4.0"x 6.0" Shipping Label**

**(No Bar Coded Zone E/Zone F Requirements)**



# APPENDIX A

**Figure A – 7**  
**Sample UPS 4.0"x 7.0" Shipping Label**

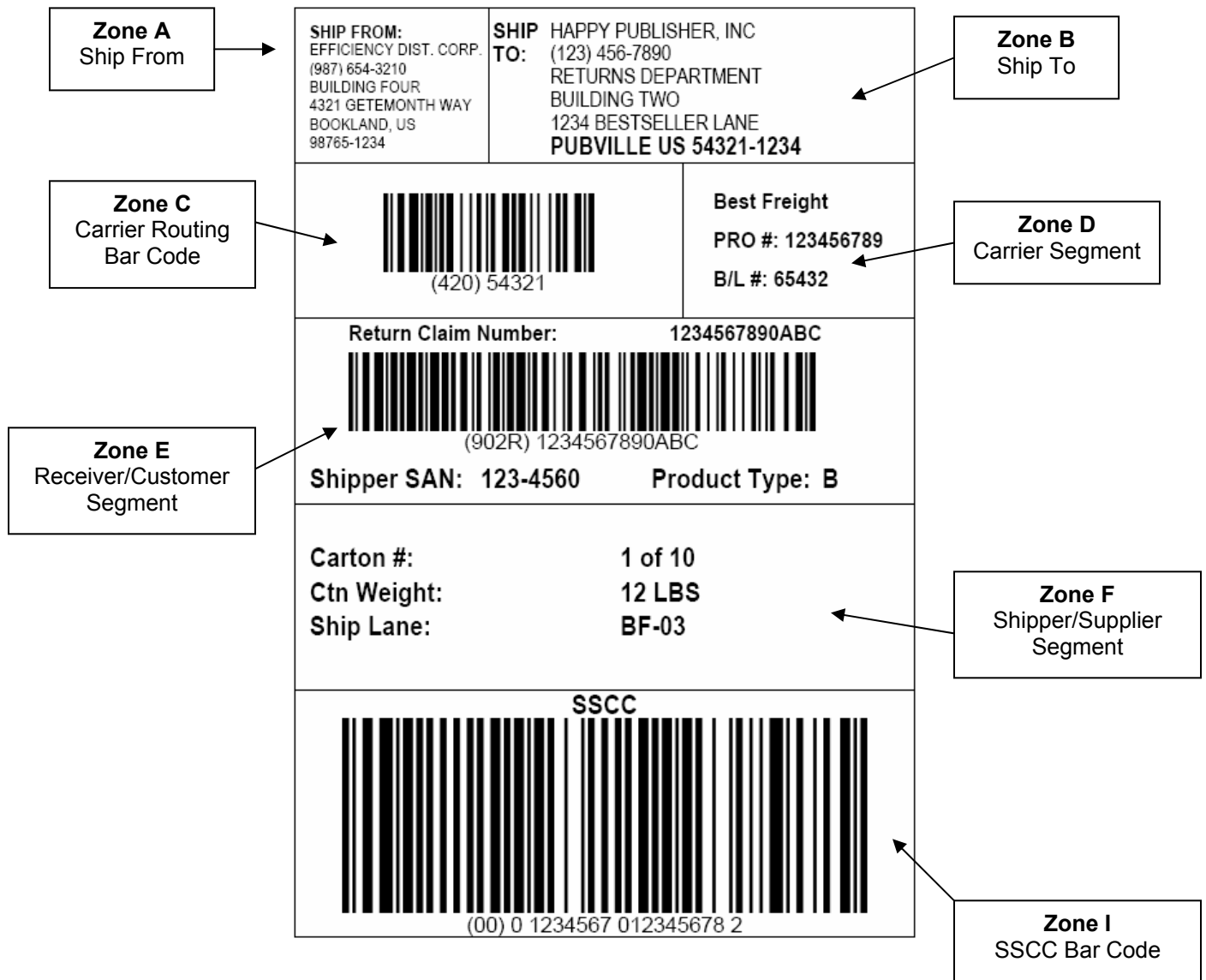


## APPENDIX A

**Figure A – 8**

**Sample 4.0"x 6.0" Common Carrier Returns Shipping Label**

**(Truckload/LTL Carrier with Partial Bar Code Requirements)**

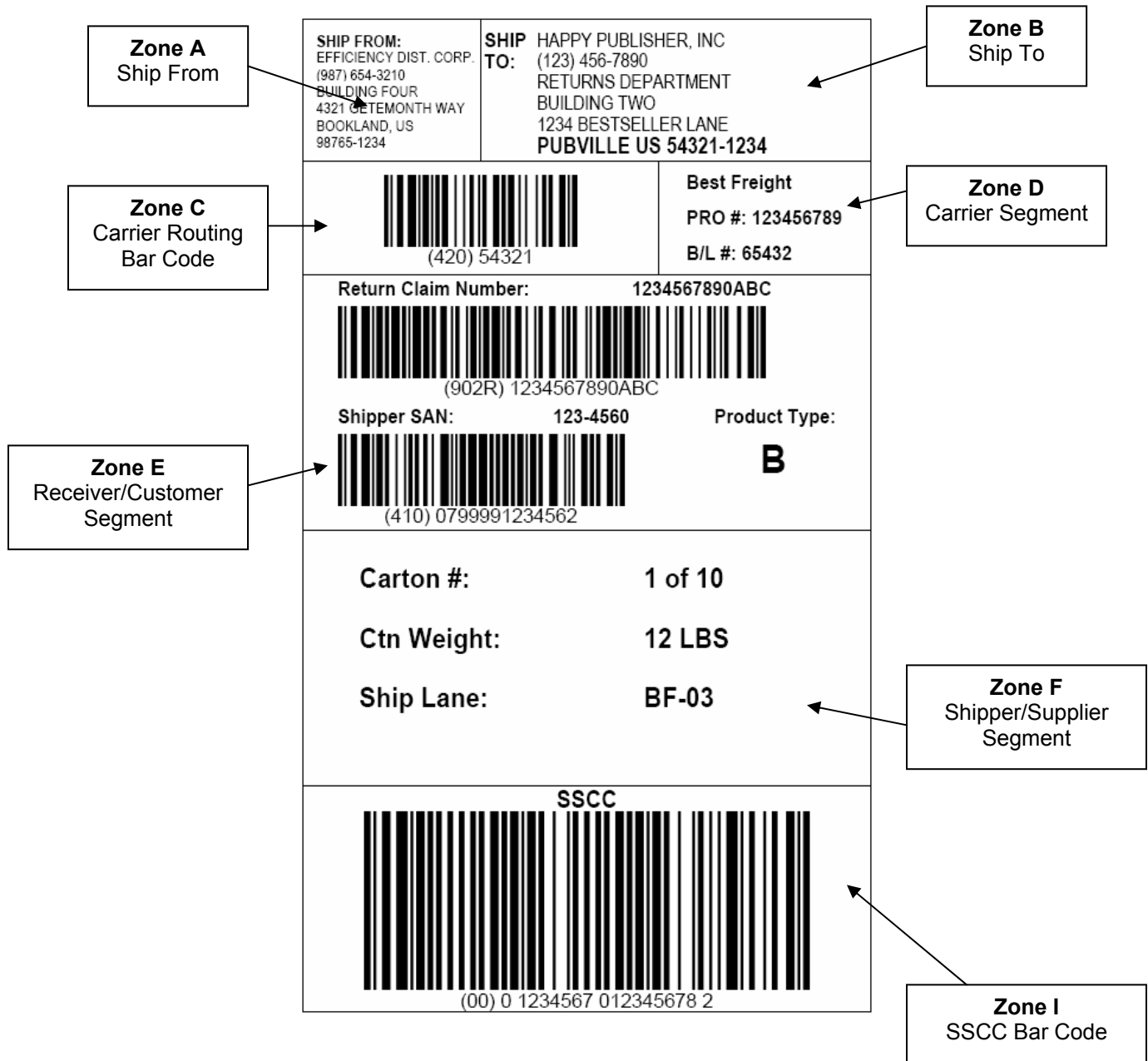


# APPENDIX A

Figure A - 9

## Sample 4.0"x 7.0" Common Carrier Returns Shipping Label

(Truckload/LTL Carrier with Additional Bar Code Requirements)

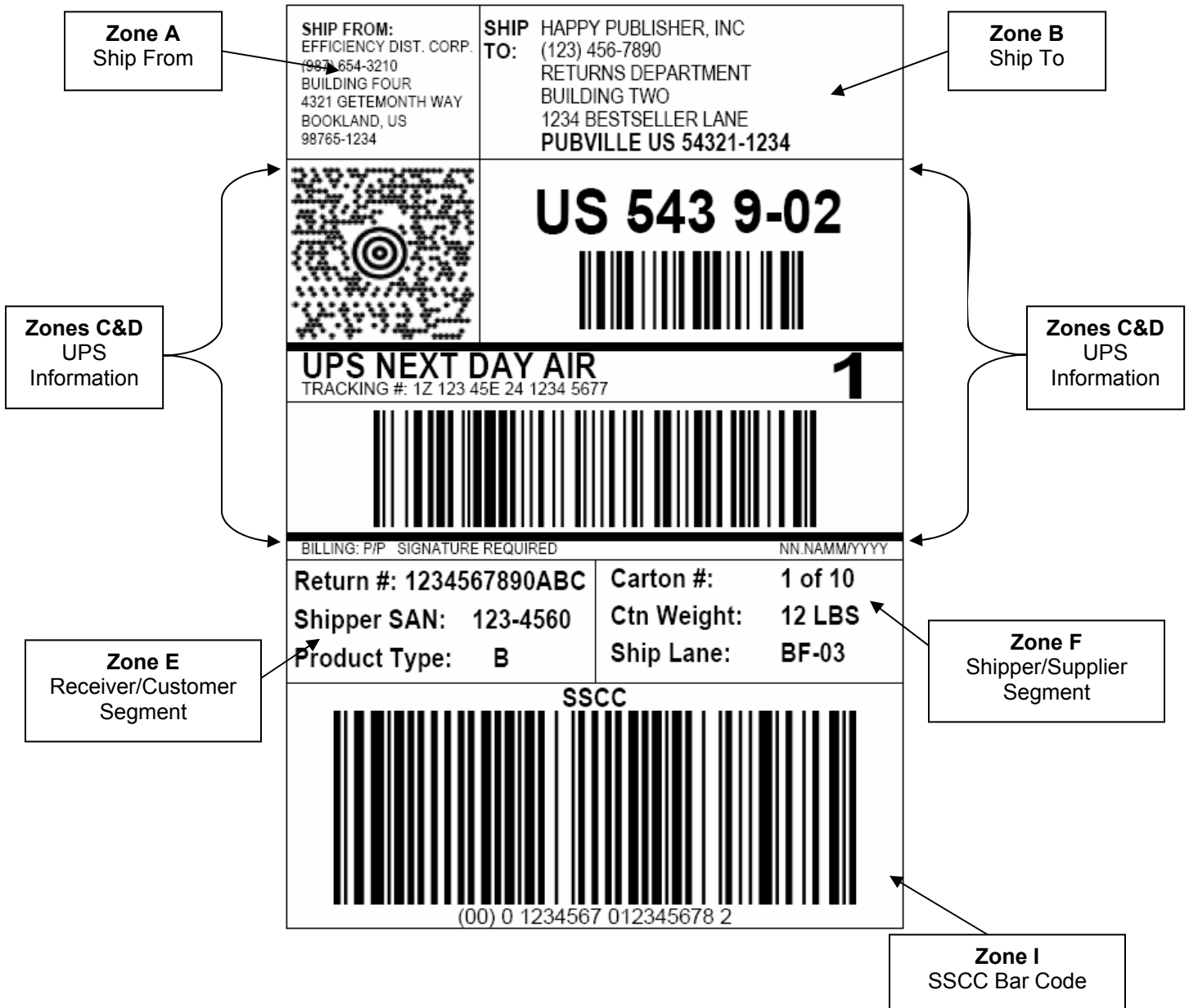


# APPENDIX A

Figure A – 10

## Sample UPS 4.0"x 6.0" Returns Shipping Label

(No Bar Coded Zone E/Zone F Requirements)



# Appendix B: Shipping Label Placement Examples

All label and bar code examples in Appendix B are illustrative only. They must not be considered actual size and in many cases have been enlarged to show detail.

## Figure B – 1 Top-Placed Shipping Label Examples

Figure B.1.1

Full-Sized Carton

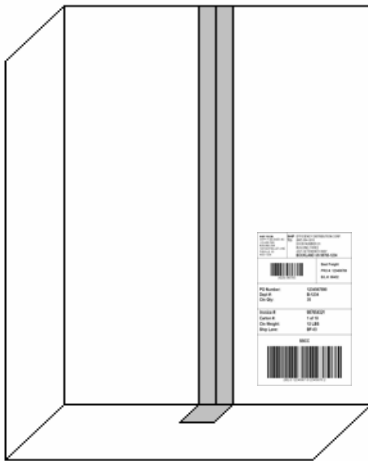


Figure B.1.2

Small Carton Option 1

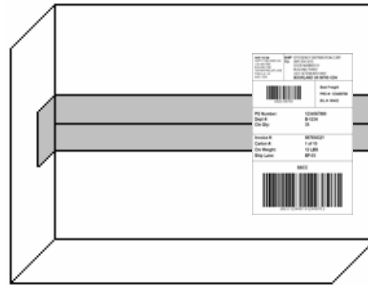
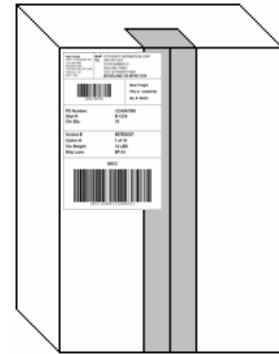


Figure B.1.3

Small Carton Option 2





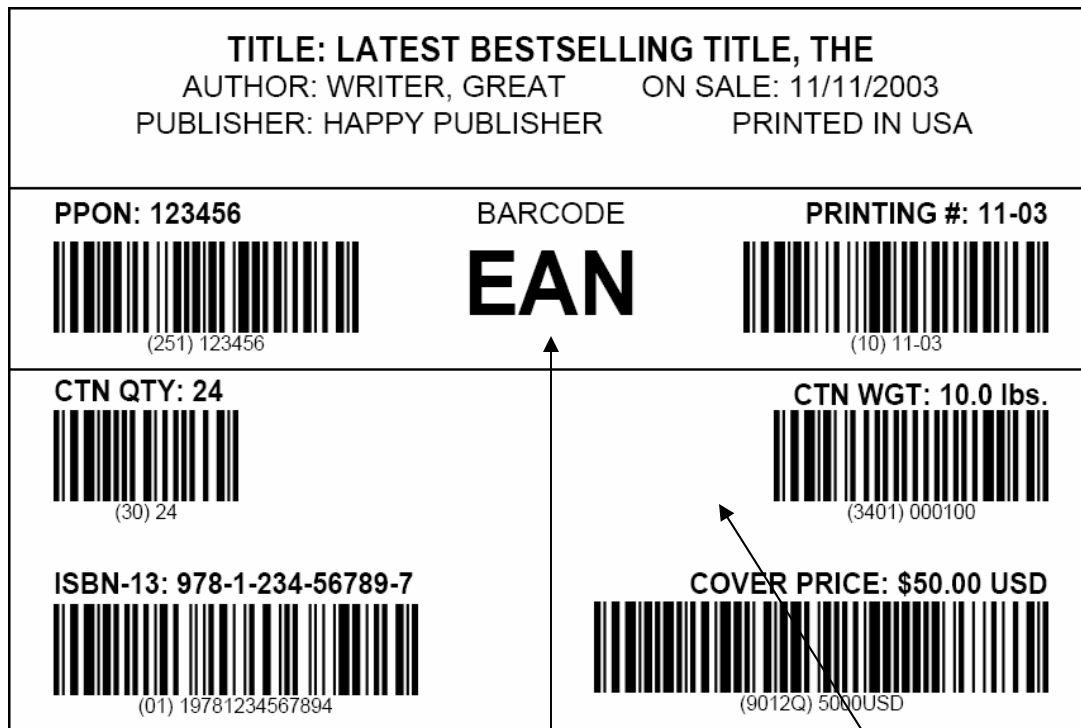


## Appendix C: Product Label Examples

All label and bar code examples in Appendix C are illustrative only. They must not be considered actual size and in many cases have been enlarged to show detail.

Most of the examples in Appendix C show only the 13-digit ISBN. However, both the ISBN-10 and ISBN-13 may be displayed as shown in Figure C-2 of Appendix C if needed.

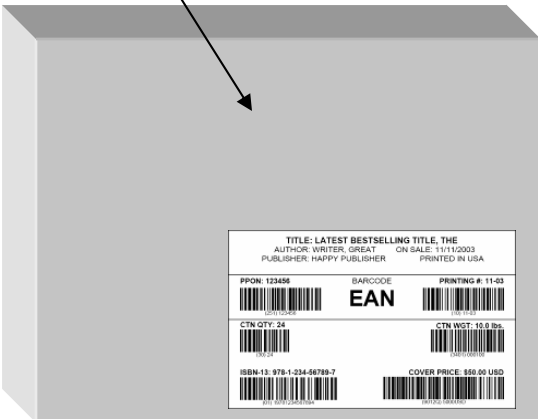
**Figure C – 1**  
**Sample 6.0" x 4.0" Product Label**



**NOTE:** Although the human readable ISBN above the bar code in Zone 3 is shown in 13-digit format, the ISBN is encoded as a GTIN-14 (14-digit Global Trade Item Number). The encoding is described on page 13. The human readable data below the bar code displays the complete encoded number.

This approach is in keeping with book industry precedence and GS1 standards for packaging and carton contents designation.




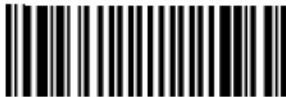


**NOTE:** The words “BARCODE EAN” indicate that the books inside the carton are marked with a Bookland EAN bar code on Cover 4. Alternatively, this could read either “BARCODE UPC” or “BARCODE E/U”. See page 8 for further information.

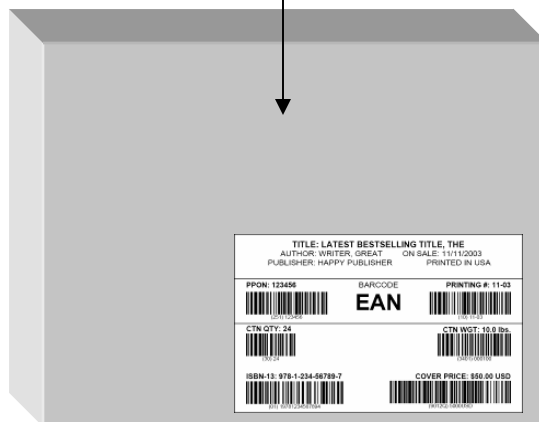


# APPENDIX C

Figure C – 2

Sample 6.0" x 4.0" Dual Numbered Product Label

<p><b>TITLE: LATEST BESTSELLING TITLE, THE</b>                  AUTHOR: WRITER, GREAT      ON SALE: 11/11/2003                  PUBLISHER: HAPPY PUBLISHER      PRINTED IN USA</p>		
<p><b>PPON: 123456</b></p>  <p>(251) 123456</p>	<p>BARCODE</p> <p><b>EAN</b></p>	<p><b>PRINTING #: 11-03</b></p>  <p>(10) 11-03</p>
<p><b>CTN QTY: 24</b></p>  <p>(30) 24</p>	<p><b>CTN WGT: 10.0 lbs.</b></p>  <p>(3401) 000100</p>	
<p><b>ISBN-10: 1-234-56789-X</b>  <b>ISBN-13: 978-1-234-56789-7</b></p>  <p>(01) 19781234567894</p>	<p><b>COVER PRICE: \$50.00 USD</b></p>  <p>(9012Q) 5000USD</p>	

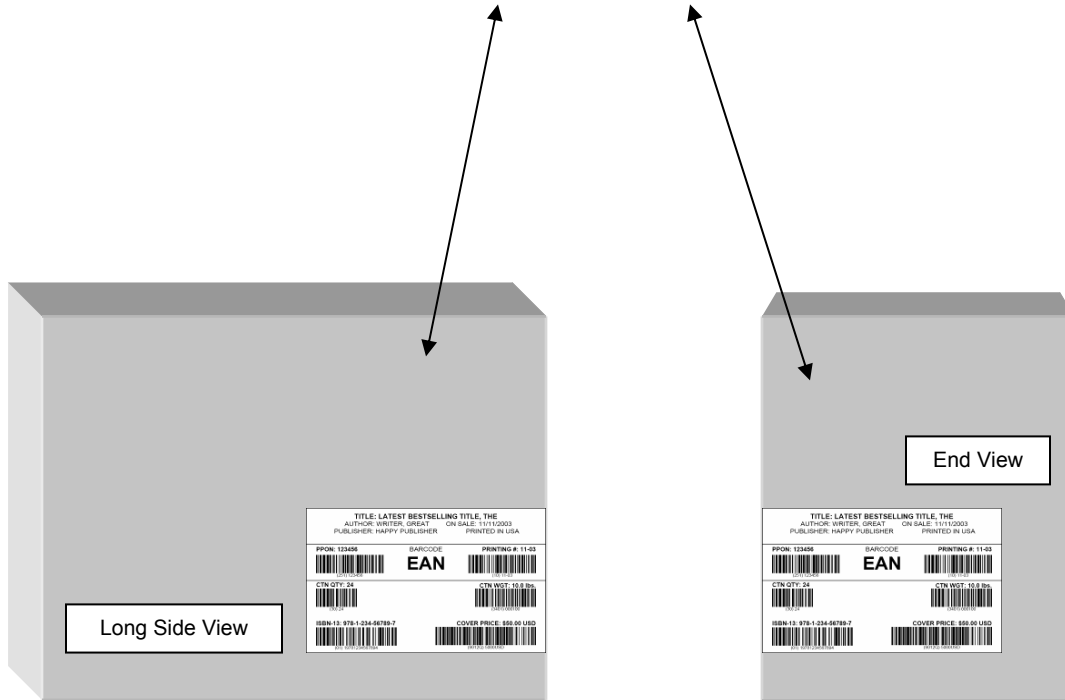


# APPENDIX C

Figure C – 3

Sample 12.0" x 4.0" Wrap-Around Product Label

TITLE: LATEST BESTSELLING TITLE, THE AUTHOR: WRITER, GREAT ON SALE: 11/11/2003 PUBLISHER: HAPPY PUBLISHER PRINTED IN USA			TITLE: LATEST BESTSELLING TITLE, THE AUTHOR: WRITER, GREAT ON SALE: 11/11/2003 PUBLISHER: HAPPY PUBLISHER PRINTED IN USA		
PPON: 123456  <small>(251) 123456</small>	BARCODE <b>EAN</b>	PRINTING #: 11-03  <small>(10) 11-03</small>	PPON: 123456  <small>(251) 123456</small>	BARCODE <b>EAN</b>	PRINTING #: 11-03  <small>(10) 11-03</small>
CTN QTY: 24  <small>(30) 24</small>	CTN WGT: 10.0 lbs.  <small>(3401) 000100</small>		CTN QTY: 24  <small>(30) 24</small>	CTN WGT: 10.0 lbs.  <small>(3401) 000100</small>	
ISBN-13: 978-1-234-56789-7  <small>(01) 19781234567894</small>	COVER PRICE: \$50.00 USD  <small>(9012Q) 5000USD</small>		ISBN-13: 978-1-234-56789-7  <small>(01) 19781234567894</small>	COVER PRICE: \$50.00 USD  <small>(9012Q) 5000USD</small>	



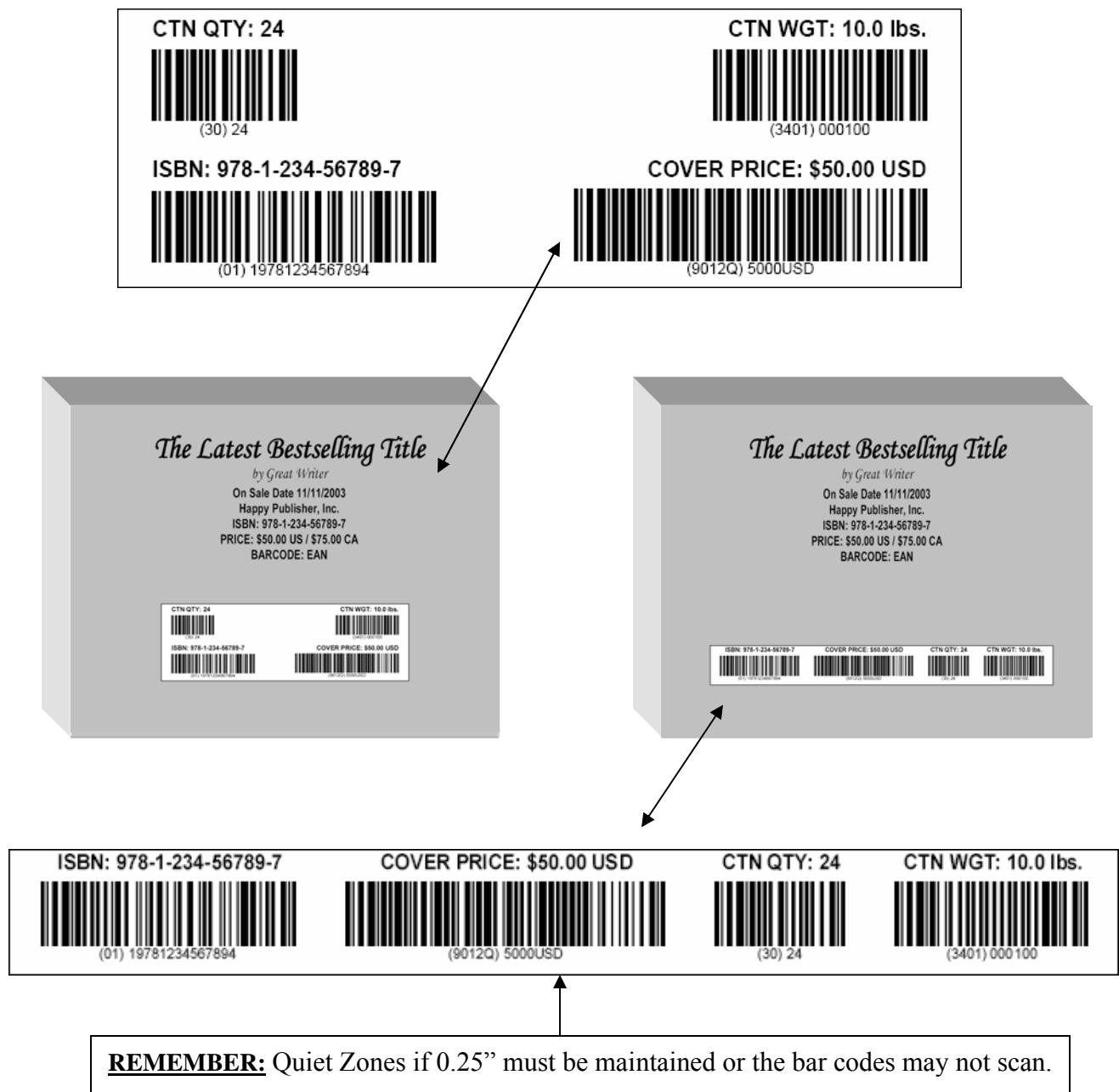
## APPENDIX C

Figure C – 4  
Offset Printing of Title Information



## APPENDIX C

**Figure C – 5**  
**Offset Printing with Labeled Bar Code Information**



## APPENDIX C

### Figure C – 6

#### Inkjet

#### Spray-on Labeling

**TITLE: LATEST BESTSELLING TITLE, THE**  
**AUTHOR: WRITER, GREAT**  
**PUBLISHER: HAPPY PUBLISHER**  
**BARCODE: EAN**

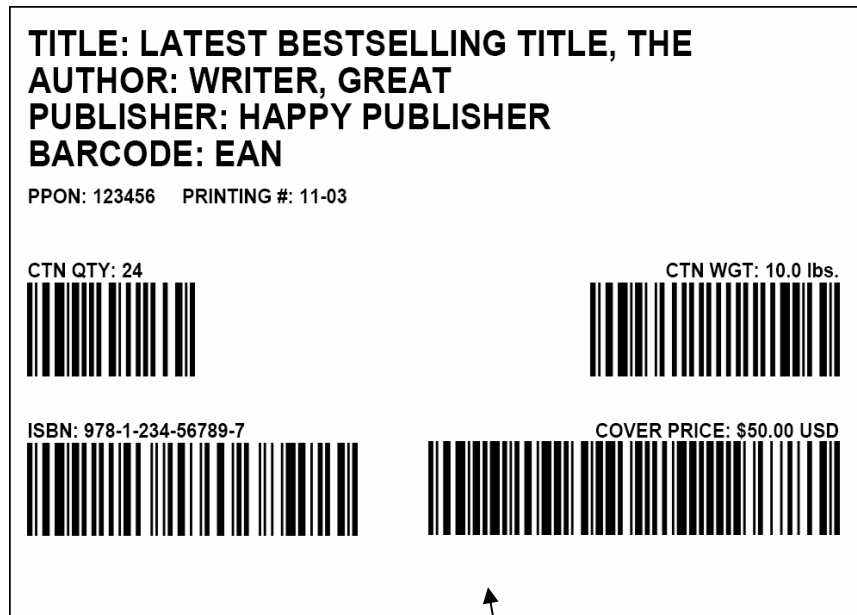
PPON: 123456 PRINTING #: 11-03

CTN QTY: 24

CTN WGT: 10.0 lbs.

ISBN: 978-1-234-56789-7

COVER PRICE: \$50.00 USD



## Appendix D: Data Definitions and Encoding

**Table D – 1**  
**Shipping Label Zones Defined**

Zone	Description	Information	Data Content Examples	Size	Mandatory?
A	Ship From	Always contains the name and address of the Shipper.	N/A	Height: 1.0" ± 0.2" Width: 1.25"	YES
B	Ship To	Always contains the name and address of the recipient. For Third Party or "Mark For" shipments, this zone would contain the address for the DC or consolidator, not the final destination.	N/A	Height: 1.0" ± 0.2" Width: 2.75"	YES
C	Carrier Routing Bar Code Segment	Bar-coded carrier information.	<ul style="list-style-type: none"> <li>- Postal bar code</li> <li>- Destination SAN</li> <li>- Carrier PRO number</li> </ul>	Height: 1.0" ± 0.2" Width: Minimum of 2.5", allowing for Zone D to appear next to Zone C or 4.0" to accommodate longer or multiple bar codes, moving Zone D directly below Zone C <u>BAR CODE SPECIFICATION</u> Height: 0.5" Minimum X-dimension: 0.015" Recommended (See Table D-4 for UPS Specifications)	Optional, exact requirements determined by the delivering carrier.
D	Carrier Text Segment	Information required by the carrier to deliver the shipment.	<ul style="list-style-type: none"> <li>- Carrier name</li> <li>- SCAC</li> <li>- PRO number</li> <li>- Trailer number</li> <li>- Class of service</li> </ul>	Height: 1.0" ± 0.2" Width: 1.5" when used on the same plane as Zone C or up to 4.0" when used below Zone C	Optional, exact requirements determined by the delivering carrier.
E	Receiver/ Customer Segment	Information required by the receiver of the shipment. May appear as either human readable or bar coded depending on available space and agreement	<ul style="list-style-type: none"> <li>- Department number</li> <li>- Carton quantity</li> <li>- Package identifiers</li> <li>- Purchase order numbers</li> </ul>	Height: 1.0" ± 0.2" Width: 2.0" if appearing on the same plane as Zone F or 4.0" if appearing above Zone F <u>BAR CODE SPECIFICATION</u>	Requirements determined by trading partners.

		between trading partners.	(In the event of multiple purchase orders packed in the same carton the text "MIXED POS" should appear.)  - Return claim numbers - Return product codes + C=Covers + B=Books + M=Mixed  - Shipper SAN (For returns only)	(if applicable) Height: .5" Minimum X-dimension: .015" Recommended	
F	Shipper/ Supplier Segment	Shipper-specific information required by the shipper to process the shipment.	- Waves - Deliveries - Dock floor spots - Carton counts - Weights	Height: 1.0" ± 0.2" Width: 2.0" if appearing on the same plane as Zone E or 4.0" if appearing below Zone E  <u>BAR CODE SPECIFICATION (if applicable)</u> Height: 0.5" Minimum X-dimension: 0.015" Recommended	Optional, exact requirements determined by supplier.
G	Final Destination Code	"Ship For" or "Mark For" information pertaining to the final destination of the shipment. Usually in bar-coded formats. Typically used to identify the final destination when shipping via a third party, DC or consolidator.	- Store numbers - Destination SAN	Height 1.0" ± 0.2" or 2.0" ± 0.4" to accommodate certain bar coded information (height of G must match height of H) Width: 2.5"  <u>BAR CODE SPECIFICATION</u> Height: 0.5" Minimum X-dimension: 0.015" Recommended	Required only if Zone H is being used.
H	Final Destination Text	"Ship For" or "Mark For" text when shipping via a third party, DC or consolidator.	- Final destination address	Height 1.0" ± 0.2" or 2.0" ± 0.4", depending on the height of Zone G Width: 1.5"	Required only if Zone G is being used.
I	SSCC Bar Code	Carton identifier for ASN bar coded in UCC/ EAN-128 format and with human readable text identified by SSCC text.	N/A	Height: 2.0" Width: 4.0"  <u>BAR CODE SPECIFICATION (if applicable)</u> Height: 1.25" Minimum X-dimension: 0.020" Minimum	YES



## APPENDIX D

**Table D – 2**

### Product Label & Carton Marking Zones Defined

Zone	Description	Data Content Examples	Font Recommendations (ARIAL should be used for all fonts unless otherwise indicated)	Bar Code Recommendations
1	Product Information Human Readable	<ul style="list-style-type: none"> <li>– Title</li> <li>– Author</li> <li>– Publisher</li> <li>– On-Sale Date</li> <li>– Country of Origin</li> </ul>	Title: 14pt Bold Other Information: 12pt	Height: 0.5" Minimum X-dimension: 0.015" Minimum
2	Publisher Information Human Readable and/or Bar Coded	<ul style="list-style-type: none"> <li>– Publisher Purchase Order</li> <li>– Printing Number</li> <li>– Job Number</li> <li>– Cover Four Bar Code Designation</li> </ul>	Bar Code Indicator: 36pt Bold	Height: 0.5" Minimum X-dimension: 0.015" Minimum
3	Product Information Bar Coded	<ul style="list-style-type: none"> <li>– ISBN</li> <li>– Carton Quantity</li> <li>– Cover Price</li> <li>– Carton Weight</li> </ul>	Text Above Bar Codes: 12pt Bold Text Below Bar Codes: 8pt	Height: 0.5" Minimum X-dimension: 0.015" Minimum

## APPENDIX D

### Table D – 3

#### Acceptable Application Identifiers & Their Uses

(UCC/EAN– 128 Symbology)

Shipping Label AIs				
Field Name	AI	Use	Format	Example
Customer Purchase Order Number	400	Identifies the customer's purchase order, to be used on the shipping label only in the Customer Segment (Zone E). Not to be used in carton markings or to identify any purchase orders other than that of the receiver at the ultimate destination.	n3 + an..13	1234567890 = 4001234567890
Mark For Store Number	91	To identify the final destination store number, typically used only in the Mark For (Zone G) of the shipping label.	n2 + n..6	1234 = 911234
SAN	410	To identify the SAN of either the consolidation point or final destination (depending on which zone it is used in). In the case of returns SAN can be used to identify the shipper of the return when used in Zone E.	N3 + n13  n13 = P + SAN + C  Where:  P = 079999 (UPC SAN Prefix)  SAN = First 6 digits of SAN  C = Check Digit	123-4560 = 4100799991234562
Ship To Postal Code	420	To identify the postal bar code of the ship to destination.	N3 + n..9	98765 = 42098765  or  98765-4321 = 420987654321
SSCC	00	To identify the Serial Shipping Container Code (SSCC) in a GS1-128 (UCC/EAN-128) bar code. Identifies the carton in ASN transmissions.	N2 + n18	012345670123456782 =  00012345670123456782

Product Label AIs				
Field Name	AI	Use	Format	Example
Carton Quantity	30	To identify the total number of units contained in the shipping container.	n2 + n..6	24 = 3024
Carton Weight	3401	To identify the weight of the shipping container in pounds. (Implies 1 decimal place.)	n4 + n6	10.0 lbs. = 3401000100
Cover Price	9012Q	To display the US cover price in a bar-coded format. Implies two decimal places. There is no upper limit to the representation of price. In the case of a non-US cover price, the appropriate ISO currency identifier should be used. Should match the bar-coded price on cover four of the actual book.	n4 + a1 + n..∞ + a3	\$50.00 USD = 9012Q5000USD  or \$75.00 CAD = 9012Q7500CAD
ISBN: GS1-128 Format	01	To identify the ISBN of the product in UCC/EAN – 128 format.	n2 + n14 n14 = P+978+ ISBN+C  Where: P=1 ISBN = first 9 nine digits of ISBN C = Check Digit	1-234-56789-0 = 0119781234567894
Printing Number	10	Used to identify the printing number for the publisher.	n2 + an..18	11-03 = 101103
Publisher Purchase Order	251	Used to identify the purchase order from the publisher to the binder. Used only in carton markings, not on shipping labels.	n3 + an..30	123456 = 251123456

## APPENDIX D

**Table D – 4**

### UPS Specification for Shipping Label

#### Font sizes and bar code heights for BISG Layout.

(Users should refer to the “UPS Guide to Labeling” for additional specifications.)

Zone	Section	Description	Font Size / Bar Code Height (ARIAL should be used for all fonts unless otherwise indicated)
A	Ship From	Ship From Title	Size: 8pt Bold
A	Ship From	Shipper Name and Address	Size: 8pt
B	Ship To	Ship To Title	Font: 10pt Bold
B	Ship To	Recipient Name and Street Address	Font: 10pt
B	Ship To	Recipient City, State and Zip	Font: 12pt Bold
C/D	Carrier Segment	UPS MaxiCode	Refer to “UPS Guide for Labeling” for MaxiCode specifications
C/D	Carrier Segment	UPS Routing Code	Font: 28pt Bold
C/D	Carrier Segment	Postal Bar Code	Bar Code Height: 0.50” Refer to “UPS Guide to Labeling” for other bar code specifications.
C/D	Carrier Segment	UPS Service Title	Font: 16pt Bold
C/D	Carrier Segment	UPS Tracking Number (Text)	Font: 8pt
C/D	Carrier Segment	UPS Service Icon	Font: 30pt Bold
C/D	Carrier Segment	UPS Tracking Number Bar Code	Bar Code Height: 0.75” Refer to “UPS Guide to Labeling” for other bar code specifications
C/D	Carrier Segment	UPS Billing Type & URC (UPS Routing Code) Version	Font: 8pt

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E	Receiver/Customer Segment	See Table D-1	See Table D-1
F	Shipper/Supplier Segment	See Table D-1	See Table D-1
G	Final Destination Code	See Table D-1	See Table D-1
H	Final Destination Text	See Table D-1	See Table D-1
I	SSCC Bar Code	See Table D-1	See Table D-1

## Appendix E: Calculations

### Calculation E – 1

#### Encoding ISBN in GTIN-14 format for Zone 3 of the Product Label

This section illustrates the computation to encode the ISBN as a GTIN-14 (14-digit Global Trade Item Number) for the product bar code in Zone 3 of the book product label.

This approach is in keeping with book industry precedence and GS1 standards for packaging and carton contents designation.

Given the ISBN: 978-1-234-56789-7

Prefix the ISBN with '1' (carton indicator)

Drop the check digit of '7' (the last digit)

Resulting Number: 1 978 123456789

Multiply alternate digits by 3 and 1 beginning at the right, with multipliers alternating to the left.

1	9	7	8	1	2	3	4	5	6	7	8	9
x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3
3	9	21	8	3	2	9	4	15	6	21	8	27

Sum the products:  $3 + 9 + 21 + 8 + 3 + 2 + 9 + 4 + 15 + 6 + 21 + 8 + 27 = 136$

Divide the sum by 10:  $136/10 = 13$ , remainder 6

Subtract the remainder from 10:  $10 - 6 = 4$

The check digit is 4 (If remainder = 0, check digit = 0)

**GTIN-14 = 19781234567894**

Using the Application Indicator of '01', data configured above, and check digit of 4:

**ISBN encoded as a GTIN-14 for the Product Label: 0119781234567894**

(Note that the Application Indicator of '01' is not a part of the GTIN-14 and is not used in the calculation.)

## APPENDIX E

### Calculation E-2

#### Constructing the SSCC for Zone I of the Shipping Label

This section illustrates two ways to construct the SSCC, the Serial Shipping Container Code or “License Plate Number.” This number is bar coded in Zone I of the Shipping Label and is to be used in connection with data from the Advance Ship Notice (ASN) to identify the carton and its contents. When an ASN is not sent, the wording “**ASN NOT SENT**” shall be displayed in Zone

#### SSCC Construction Using the GS1 Company Prefix

Publishers who have a GS1 Company Prefix should follow the following calculations. Publishers who do not have a GS1 Company Prefix should follow the computation on the next page using their ISBN prefix.

GS1 Company Prefix = 0614141 (example)

Carton Serial Number = 235 (235<sup>th</sup> carton shipped, for example)

Format = GS1 Company Prefix + Serial Number of Carton (Total of 16 digits)

Data = 0614141 000000235 (Total of 16 digits)

Compute the check digit for the data:

Multiply alternate digits by 3 and 1 beginning at the right, with multipliers alternating to the left:

0	6	1	4	1	4	1	0	0	0	0	0	0	2	3	5
x1	x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3
0	18	1	12	1	12	1	0	0	0	0	0	0	6	3	15

Sum the products:  $0 + 18 + 1 + 12 + 1 + 12 + 1 + 0 + 0 + 0 + 0 + 0 + 0 + 6 + 3 + 15 = 69$

Divide the sum by 10:  $69/10 = 6$ , remainder 9

Subtract the remainder from 10:  $10 - 9 = 1$

The check digit is 1 (If the remainder is 0, check digit is 0)

**SSCC = 006141410000002351**

Using the Application Indicator of ‘00’, ID Code of ‘0’, data computed above, and check digit:

**Encoded SSCC for the Shipping Label: 00006141410000002351**

(Note that the Application Indicator of ‘00’ was not used in the calculation of the check digit)

**SSCC Construction Using the ISBN Prefix**

When a publisher does not have a GS1 Company Prefix, the ISBN prefix may be used.

ISBN Prefix = 9781234

Carton Serial Number = 235 (235<sup>th</sup> carton shipped, for example)

Format = ISBN Prefix + Serial Number of Carton (Total of 16 digits)

Data = 9781234000000235 (Total of 16 digits)

Compute the check digit for the data:

Multiply alternate digits by 3 and 1 beginning at the right, with multipliers alternating to the left:

9	7	8	1	2	3	4	0	0	0	0	0	0	2	3	5
x1	x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3	x1	x3
9	21	8	3	2	9	4	0	0	0	0	0	0	6	3	15

Sum the products:  $9 + 21 + 8 + 3 + 2 + 9 + 4 + 0 + 0 + 0 + 0 + 0 + 0 + 6 + 3 + 15 = 69$

Divide the sum by 10:  $70/10 = 7$ , remainder 0

Subtract the remainder from 10:  $10 - 0 = 10$

The check digit is 0 (if the remainder is 0, check digit = 0)

**SSCC = 00097812340000002350**

Using the Application Indicator of '00,' ID Code of '0', data computed above, and Check Digit:

**Encoded SSCC for the Shipping Label: 00097812340000002350**

(Note that the Application Indicator of '00' was not used in the calculation of the check digit)