

## **APPENDIX I**

## BAR CODE SPECIFICATIONS

### BAR CODE SPECIFICATIONS APPLICABLE TO ALL CUSTOMS BAR CODE LABELS

#### 1. Bar Code Symbolologies

Either of the following bar code symbolologies may be selected:

(a) standard code 3 of 9, as defined in the AIM document USS-39 (USD-3), (AIM is the Automatic Identification Manufacturers, Inc.). Use of the optional code 3 of 9 Modulo 43 checksum is not acceptable. Code 3 of 9 bar code symbols may be printed with either a 2:1 or 3:1 wide to narrow bar width ratio, subject to meeting requirements in paragraph 15 of this Appendix; or

(b) Code 128 is defined in AIM document USS-128 (USD-6). A Modulo 103 checksum digit is a mandatory part of code 128.

**Note:** For cargo control numbers longer than 18 characters, it may not be possible to use code 3 of 9. The maximum length of 4.5 in. (11.43 cm) will be strictly enforced.

#### 2. Width of Narrow Bar

The minimum width of a narrow bar must be 0.009 in. (0.023 cm).

The maximum width of a narrow bar is dependent on the bar code symbology selected as follows:

Code 3 of 9 (2:1 ratio)	= 0.016 in. (0.04 cm)
Code 3 of 9 (3:1 ratio)	= 0.012 in. (0.03 cm)
Code 128 (no double density)	= 0.016 in. (0.04 cm)
Code 128 (double density)	= 0.024 in. (0.06 cm)

#### 3. Width of Wide Bar

For code 3 of 9, the wide bar must be no less than two and no more than three times that of a narrow bar, according to the narrow bar specifications in paragraph 2 of this Appendix.

For code 128, there are four different bar widths. These must be one to four times that of a narrow bar, where the maximum width of the narrow bar is as specified in paragraph 2 of this Appendix.

#### 4. Length of Quiet Zones

Both the leading and the trailing quiet zones must be a minimum of either 10 times the narrow bar width or 0.125 in. (0.3 cm), whichever is greater. Longer quiet zones will increase the readability of the code.

#### 5. Bar Code Symbol Height

The bar code symbol must be between 0.375 in. (0.95 cm) and 0.625 in. (1.60 cm) in height.

#### 6. Bar Code Symbol Length

The bar code symbol, including the leading and trailing quiet (blank) zones, as well as the human readability component, must totally reside within the delimited area as defined in paragraph 15 of this Appendix.

#### 7. Human Readable Format

(a) Human readable print (names or numbers) must always be below the bar code.

(b) The height of the human readable print must be at least 0.0984 in. (0.25 cm).

(c) The human readable number must begin on the left side of the bar code directly below the point where the bar code starts.

(d) The spacing between the bar code and the human readable format and any subsequent lines must be at least 0.03 in. (0.08 cm).

#### 8. Print Contrast Ratio

The print contrast ratio is the ratio of the difference of reflectivity between the bars and spaces, as follows:

$$\text{PCR} = \frac{\text{Reflectance of Spaces} - \text{Reflectance of Bars}}{\text{Reflectance of Spaces}}$$

Where reflectance is defined as a percentage figure, the print contrast ratio must be a minimum of 55% with an optimum value of 75%.

#### 9. Readability

The average first read rate for bar code symbols produced must be 95% (i.e., only 5 in 100 will require more than one scan). All bar codes produced through carbons must meet the same read rate as the original.

#### 10. Lifetime

The bar code symbol must be readable for a minimum of 8 months with a 95% first read rate.

#### 11. Print Type

The bar code symbol may be printed with either carbon or non-carbon ink.

#### 12. Label Size

If labels are used, the maximum length and width of the label is as defined in the delimited area of paragraph 15 of this Appendix. There should be no wording above the bar code itself and there should be 0.125 in. (0.3 cm) between the top of the bar code and the edge of the label. The label must be a self-adhesive, permanent label and must be smudge-proof.

## **BAR CODE SPECIFICATIONS SPECIFIC TO ACCOUNT SECURITY HOLDER TRANSACTION NUMBERS**

### **13. Code for Transaction Numbers**

The bar code symbol represents a 14-digit (transaction) code, where the first five digits are the account security number, the next eight digits are the importer/broker assigned number, and the last digit is the check digit.

The Modulo 10 checksum digit formula, as specified by customs (see Appendix F), must be used to calculate all check digits. The assigned number must not be repeated for a period of seven years plus three current months.

### **14. Human Readable Format**

Below each bar code symbol, the encoded data must be printed in a human readable format. The human readable number must be 14 digits long **not** including the dash or space which is found after the first 5 digits (account security number), i.e., 12345 000067897 or 12345-000067897. The bar code symbol should read only the 14 digits found in the human readable number and should not read the dash or space. The human readable transaction number must begin on the left side of the bar code directly below the point where the bar code starts. If a broker or importer's name is to be printed on the bar code label, it should be printed on the same line but must be separated by a blank character space, a slash, and another blank character space (e.g., 12345-123456781 / ABC customs brokers). If the broker's or importer's name is too long to fit on one line with the human readable number, it should be printed below and start at the left of the human readable number but should not start any further left than where the broker's or importer's name started on the line above (e.g., 12345-123456781 / Associated National – Customs Brokers of Canada).

Only names and not numbers are acceptable after the 14-digit transaction number.

The human readable print must be at least 0.0984 in. (0.25 cm) and the spacing between the bar code and the human readable format and any subsequent lines must be at least 0.03 in. (0.08 cm).

The CADEX indicator should not be printed on the bar code label. It should be printed on the release information card or on the release documentation itself as close to the bar-coded label as possible.

### **15. Delimited Area**

The bar-coded label must fit into a space that is 4 in. (10.2 cm) long by 1 in. (2.54 cm) high. The symbol itself can be no longer than 3.75 in. (9.5 cm) and no higher than 0.625 in. (1.60 cm).

### **16. Private Printing**

Bar codes must be printed privately and approval for quality control must be obtained in advance from customs. Requests for approval must be accompanied by sample bar-coded/human readable transaction numbers and should be submitted to:

CCS Systems Maintenance  
Systems Operations Division  
Canada Customs and Revenue Agency  
17th floor  
Sir Richard Scott Building  
Ottawa ON K1A 0L5