



Barcodes For A Walmart Bill of Lading

Summary: Walmart has mandated the use of UCC/EAN-128 barcodes in their bills of lading as defined by *Bill of Lading_vics_bol_2004.doc*. Azalea Software's C128Tools barcode font package can be used to create these barcodes from within Crystal Reports.

Walmart now requires that bills of lading contain a UCC/EAN-128 barcode (*Bill of Lading_vics_bol_2004.doc*, www.vics.org/standards/bol/, p 10-12). C128Tools makes UCC/EAN-128 barcodes but Walmart wants a specific format. Following the instructions below, Crystal Reports users can make these symbols with Azalea Software's C128Tools barcode font package.

The desired barcode begins with the Function 1 character and a "402" application identifier (AI). Your company prefix assigned by GS1 is followed by your unique shipment ID. A mod 10 check digit is applied over the company prefix and shipment ID. Therefore, the complete symbol begins with start C, FNC 1, "402", company prefix, unique shipment ID, mod 10 check digit, mod 103 Code 128 check digit, and the stop bar. If you don't have a company prefix assigned to you by GS1, see page 11 of the VICS specification.

The VICS spec requires a 17-digit number be used to create the barcode, not including the AI (402). Because company prefixes can be of varying length, your unique shipment number must be padded with leading zeros so that the company prefix + shipment number = 16 digits. For example, if your company prefix is "09123456", your first package number would be "00000001", then "00000002", etc. The mod 10 check digit, described on page 11 of the VICS spec, is added to the company prefix and shipment number which makes a 17-digit number.

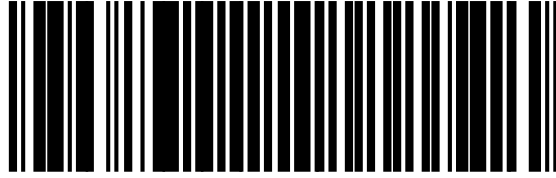
For example, given a "09123456" company prefix and a "00000001" shipment number the barcode would be:

start C start bar + FNC1 + "402" + "09123456" + "00000001" + "9" + mod 103 checkdigit + stop bar

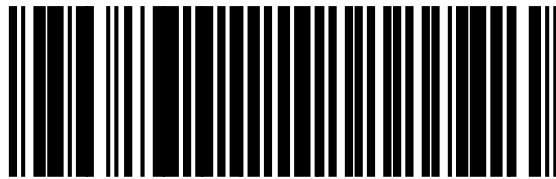
This barcode can be created in Crystal Reports using the User Function Library (UFL) that ships with C128Tools. If the company prefix and shipping number are in a field called BOLnumber:

`Barcode128Auto(Chr(238) + "402" + {BOLnumber})`

The result will be `·IH4{7M\m3mÄ` which when formatted in one of the Azalea Code128 fonts will look like this:



The human-readable digits are printed under the barcode itself. The AI is enclosed in parentheses and is followed by a space. Only the mod 10 check digit is printed.



(402) 09123456000000019

Mod 10 check digit calculation:

```
Function CheckDigit(SourceNumber As String) As String
    Dim i as Number
    Dim size as Number
    Dim total as Number
    total = 0
    size = len(SourceNumber)
    For i = 2 To size Step 2
        total = total + ToNumber(SourceNumber(i))
    Next i
    total = total * 3
    For i = 1 To size Step 2
        total = total + ToNumber(SourceNumber(i))
    Next i
    CheckDigit = CStr(Int((10 - (total mod 10)) mod 10))
End Function
```

The above information is current and accurate to the best of our knowledge. *This document is not a substitute for Walmart specifications; in the case of any discrepancy please refer to current Walmart requirements.* If you have corrections, additions, or better ways to skin the cat, please contact us at *technicalsupport at azalea dot com*