

ZPL

Release Highlights



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ZPL

This Release Highlights document describes the new ZPL features and fixes for these ZEBRA printers using x.11 firmware:

- XiIII™
- PAX™
- Stripe™
- DA/T™
- Z-Metal™

These are the main sections:

- [Features on page 2](#)
- [Fixes on page 10](#)

Features

This table details the features in this release of ZPL:



Note • The typical structure for the details of each new feature is:

- Benefit
- Format Command
- Limitations

| Feature | Details |
|------------|---|
| ^B5 | <p>Benefit The new Planet Code bar code is supported in all printers as a resident bar code.</p> <p>Format Command = <code>^B5o,h,f,g</code></p> <p>o = orientation code</p> <ul style="list-style-type: none"> • n = normal default • r = rotated • i = inverted • b = bottom up <p>h = bar code height (in dots)</p> <ul style="list-style-type: none"> • current value of <code>^BY</code> = default • 1 - 9999 = Valid value <p>f = interpretation line</p> <ul style="list-style-type: none"> • n = no default • y = yes <p>g = determines if the interpretation line is printed above the bar code</p> <ul style="list-style-type: none"> • n = no default • y = yes <p>Limitations</p> <p>When command arguments are missing or out-of-specification, the parameter is defaulted.</p> |

| Feature | Details |
|-------------------|---|
| <p>^BT</p> | <p>Benefit The new TLC39 bar code is the new standard for the TCIFcan tag telecommunications equipment.</p> <p>The TCIF CLEI codes which is the Micro-PDF417 bar code, is always 4 columns. The firmware must determine what mode to use based on the number of characters to be encoded.</p> <p>Format Command = ^BT<code>o,w1, r1, h1, w2, h2</code></p> <p><code>o</code> = orientation code</p> <ul style="list-style-type: none"> • <code>n</code> = normal (default) • <code>r</code> = rotated • <code>i</code> = inverted • <code>b</code> = bottom up <p><code>w1</code> = width of the code 39 bar code</p> <ul style="list-style-type: none"> • 1 - 10 = values (in dots) • 4 = default on a 600 dpi printer • 2 = default on 200- and 300 dpi printers <p><code>r1</code> = wide to narrow bar width ratio the code 39 bar code</p> <ul style="list-style-type: none"> • 2.0-3.0 (increments of 0.1) = values • 2.0 = default <p><code>h1</code> = height of the code 39 bar code</p> <ul style="list-style-type: none"> • 1 - 9999 = value (in dots) • 120 = default on a 600 dpi printer • 60 = default on a 300 dpi printer • 40 = default on a 200 dpi printer <p><code>w2</code> = narrow bar width of the MicroPDF417 bar code</p> <ul style="list-style-type: none"> • 1 - 10 = value (in dots) • 4 = default on a 600 dpi printer • 2 = default on a 200 and 300 dpi printers |

| Feature | Details |
|---------|---------|
|---------|---------|

h2 = row height of the Micro-PDF417 bar code (in dots)

- 1 - 255 = values
- 8 = default on a 600 dpi printer
- 4 = default on a 200 and 300 dpi printer

Example • TLC39 Barcode

This is an example on how to print TLC39 barcode. The callouts identify the key components and are followed by a detailed description below:

Note • Use the command defaults to get results that are in compliance with TCIF industry standards; regardless of printhead density. For the result of this example, see [TLC39 Barcode Result on page 6](#).

```


^XA^FO100,100^BT^FD(23456)ABCD12345678901234
5551212,888999^FS^XZ
  
```

A—ECI number. If the seventh character is **Not** a comma, only code 39 prints. This means if more than 6 digits are present, code 39 prints for the first six digits (and no micropdf symbol is printed).

- Must be 6 digits.
- Firmware generates invalid character error if the firmware sees anything but 6 digits.
- This number is not padded.

B—Serial number. The serial number can contain up to 25 characters and is variable length. The serial number is stored in the microPDF symbol. If a comma follows the serial number, then additional data is used below.

- If present, must be alphanumeric (letters and numbers, no punctuation).
- This value is used if a comma follows the ECI number.

| Feature | Details |
|--|--|
| | <p>C—Additional data. If present, it is used for things such as a country code.</p> <p>Note—Data cannot exceed 150 bytes. This includes serial number comma's.</p> <ul style="list-style-type: none"> • Additional data is stored in the microPDF symbol and appended after the serial number. A comma must exist between each maximum of 25 characters in the additional fields. • Additional data fields can contain up to 25 alphanumeric characters per field. |
| <p>Example • TLC39 Barcode Result</p> | <p>This is the result of the TLC39 example:</p>  |
| <p>96 Xi/// tear-off position</p> | <p>Benefits The tear off position is increased +/- to 240 dots on the front panel. The labels are adjusted to compensate for smaller dot size on the printhead.</p> <p>Note The front panel and ZPL command range is +/- 120, but the step size doubles.</p> <p>~TA = Tear off position is at +/- 120 using the ZPL command</p> <p>Valid values are multiplied by 2.</p> |
| <p>Encrypted ZBI Files</p> | <p>Benefits The new .baz extension provides security for all ZBI executables. The .baz extension is created when the ZBI store command is used.</p> <p>^HZO = uploads .baz files to the printer</p> <p>Important For security purposes, users cannot:</p> <ul style="list-style-type: none"> • open .baz files • upload or download .baz files to .bas file format |

| Feature | Details |
|--------------------------------------|--|
| Example • Encrypted ZBI Files | <p>Limitations These commands do not work when loading a ZBI executable:</p> <ul style="list-style-type: none">• List• Trace• Debug <p>This is an example on how to generate a .baz file.</p> <ol style="list-style-type: none">1. Create basic program as in the single line program below.2. Type <code>10 print "ZPL".</code>3. Save the file with the filename: <code>Store E:ZEBRA1.BAZ</code>4. Recall the newly created file from the printer using the <code>^HZO</code> command, as follows: <code>^XA^HZO,E:ZEBRA1.BAZ^XZ</code>5. To use the new file, download the data received that follows the <code>^HZO</code> command to any printer. |

| Feature | Details |
|--|--|
| <p>New Web View Options (Applicator only)</p> | <p>Benefits This allows users that have the applicator option installed to control the port signals using the Web View interface.</p> <p>From the menu bar, select: View and Modify Printer Settings>Advanced Setup>Applicator</p> <p>These are the drop-down options: None The applicator port is off. Mode 1 Asserts the ~END_PRINT signal low while the print engine advances the label. Mode 2 Asserts the ~END_PRINT signal high while the print engine advances the label. Mode 3 Asserts the ~END_PRINT signal low for 20 milliseconds when a label is complete and in position. <i>Not asserted during continuous printing modes.</i> Mode 4 Asserts the ~END_PRINT signal high for 20 milliseconds when a label is complete and in position. <i>Not asserted during continuous printing modes.</i></p> |
| <p>Start Pulse Signal (Applicator only)</p> | <p>From the menu bar, select: View and Modify Printer Settings>Advanced Setup>Start Pulse Signal</p> <p>These are the drop-down options: Pulse Mode This mode prints labels when the signal transitions from HIGH to LOW. Level Mode This mode prints labels when the signal is asserted LOW.</p> |

| Feature | Details |
|----------------------------|---|
| Resync Mode | <p>To navigate to the new menu options, from the menu bar select: View and Modify Printer Settings>Advanced Setup>Resync Mode</p> <p>These are the drop-down options: Feed Mode When the label top is not where expected, the print engine feeds a blank label to find the label top position. Error Mode When the label top is not where expected, the print engine stops.</p> |
| Japanese | <p>The front panel of all printers support Japanese. To change the LCD display, you can do one of the following:</p> <ul style="list-style-type: none"> • In Web View, under General Setup Language. • ^KL command value 13. |
| Modify Head Warning | <p>Benefit There was concern from the persistent warning when operating in a cold environment. The modify head cold warning provides the ability to set the head cold warning indicator based on the operating environment.</p> <p>Format Command ^Mwγ</p> <p>γ = enable for head cold warning (n = disable)</p> <p>γ = enable cold warning (default on Xi///, Z-Metal, Stripe, and DA/T)</p> <p>n = disable (default on Pax)</p> |

Fixes

This table identifies the fixes made in x.11:

| Fixed | Description |
|--|---|
| ~HS not correctly reporting information | The labels remaining in the in the buffer field intermittently stayed at 1. This fix consistently clears the buffer field. |
| 96Xi/// Web View Home Page | The model number on the home page was 90Xi///. This fix shows the model number on the home page as 96Xi///. |
| Fast POST (Power on Self Test) | Powering up the printer was slow. The fix powers the printer up much faster. Note —To run through power up diagnostics: power up holding the Cancel>Calibrate buttons on the front panel. |
| Twinax/Coax display on config label | Twinax/Coax board was not displayed on the configuration label. The fix shows the Twinax/Coax board on the front panel and on the configuration label. |
| DTR enabled during XON/XOFF handshaking | Legacy cables were not compatible. The fix made legacy cables work. |

