



# Tips to Optimize the Durability of Z-Band Direct® Thermal Wristbands

**Optimum scanning performance and image durability are important, especially when looking at the narrow 5 mil 128 Subset C bar codes that are printed on today's hospital wristbands.**

Zebra's Supplies R&D team tested the durability of images and text printed onto our Z-Band Direct and Z-Band QuickClip™ products and found that they can be optimized by:

- Increasing the darkness setting and lowering the print speed setting to the following recommended settings:
  - **ZPL® Printers:**
    - Darkness setting: 22
    - Print speed: 2 ips (inches per second)
  - **EPL™ Printers:**
    - Darkness setting: 13
    - Print speed: 2 ips (inches per second)

A fully saturated direct thermal image produced at these settings will resist fading significantly better than a less-saturated image printed at a lower darkness setting. This creates a more durable image and one that achieves better scanning performance. This is especially true in regards to the narrow 5 mil 128 Subset C bar codes that are printed on today's hospital wristbands

## Instructions for Changing the Darkness Setting and Print Speed

You have several options for changing these settings. If you choose to do it within your HIT software, you should use these ZPL commands:

- The ~SD command allows you to set the darkness of printing. The format is ~SD## where ## is a 2-digit desired darkness setting. The accepted values are 00 to 30. The default value is 10 on all ZPL printers.
- The ^PR command determines the media speed. The format is ^PR# where # is the parameter for print speed. The accepted values are 2 to 12 depending on the capabilities of the printer. The default value is 2 on all ZPL printers.

You can also make these changes via the print driver or through ZebraNet™ Bridge Enterprise.

In addition, when securing the wristband to a patient's wrist, we recommend:

- Leaving a gap of no more than 1 finger between the wristband and the wrist to lessen the chances of the wristband wrinkling and affecting the scanning performance.