# 25.18. Label printer hardware setup

We recommend **Zebra ZD421t 203dpi** (which has replaced the Zebra GK420t which we recommended previously) label printer with a network port.

It is very important to order the **203dpi model** of the ZD421t, as the 300dpi model will not work correctly with our code.

You may use other printers that support the ZPL printing language (or EPL if using mSupply 3.2 or earlier), but we cannot provide much support for these models as we have not used them ourselves.

## ZD421

We now recommend the Zebra ZD421 model

ZD421 User guide

### Setup

1. Load the printer with ribbon and labels
2. Turn on
3. Plug in network cable

### Print out the configuration status ZD421

To print the IP address - and other config details - hold the **Feed** & **Cancel** buttons at the same time until they flash once

### Change settings of ZD421 via the http interface

Once you know the IP address (see above) you can connect to the ZD421 via a browser, by entering the IP address directly in the url bar

The default credentials are:
Username : Admin Password : 1234

Settings that may need changing:

- **Darkness** (if labels are printing faintly then you can increase this number. However, be careful with this setting as increasing too high can cause the print head to burn out faster)
- **Print speed** (we have found that for some labels (such as particularly glossy labels) the print speed needs to be reduced so the ink is applied properly

- **Print width** (the print width for mSupply labels is around 690 for a 203dpi printer)

# GK420 (discontinued model)

## Setup

1. Load the printer with ribbon and labels
2. Turn on
3. Plug in network cable
4. By default the printer is set to obtain an address by DHCP. Assuming you have a DHCP server on your network: press the button on the front and hold until it flashes once, then release the button. A configuration label will print. Note the IP address. If the printout is the wrong width and unreadable, see “Setting label width” below
    1. You may also be able to get the IP address from the list of DHCP leases when logged in to your router (e.g. for pFsense: Status > DHCP )
5. There are now 2 options for setting a static address
    1. (Preferred method): Configure your DHCP server to assign a static address to the printer. Note that after doing this, you may have to turn the printer off and back on to get the new address from the DHCP server.
    2. Alternative: Assign a static address to the printer.
        1. The default static address for the printer is 192.168.254.254.
        2. If you are connecting to that address, you must assign your own computer a 192.168.254.X address so it can connect to the printer. You can then log on to the printer using it's current IP address http://printer_ip_address where `printer_ip_address` is the current printer's ip address (So, out of the box: http://192.168.254.254 )
        3. Go to “Print Server Settings”, then click “Print Server” and log in
            - user: admin
            - pass: 1234
        4. Go to “TCP/IP Configuration” and set an IP address that is not within a range controlled by DHCP (Ping it to ensure it is not already assigned)
        5. Set the IP Protocol to “Permanent”, and submit
        6. Reset the printer (you can do this from the web interface)
6. Ping the IP address you have set to ensure the printer has the right address
7. Finally, tell mSupply about the printer: see 10.08. Label printing preferences for instructions on doing that.

## GK420 Flash sequences

This is a feature on the printer itself that you access by holding down the Feed button. Refer here for full documentation: https://support.zebra.com/cpws/docs/gseries/gseries_button_modes.pdf

## Calibrating the printer GK420

For various reasons the printer may need to be re-calibrated. The act of “calibrating” is essentially to allow the printer to work out the size of label that is being used.

There are many levels of Calibration but we will try the basic one.

- Switch on the printer.
- Press and continue pressing the Feed button until the light :
    - flashes once
    - flashes twice »> then let go of the button.
- The printer will print one to four labels while calibrating.

## Setting the label width GK420

Note that you **do not** have to do this to get the right width when printing from mSupply.

This is only for printing a configuration status label from the printer before using mSupply:

- Hold down the feed button - the light will flash once, then twice, then three times, then four times, then five times: immediately release the button when it flashes 5 times.
- It will print a succession of boxes starting at the minimum print width and ending in the printer’s maximum print width in 4mm increments. Press the Feed button once when the box has reached your desired maximum print width.

## Print out the configuration status GK420

You can print out a configuration status label with the IP address and other information once you have the printer detecting the label width correctly.

- Hold down the feed button - the light will flash once: immediately release the button when it flashes once.

## Cleaning the printer

Over time, the printer will fail to perform due to collection of dust. We imagine sweat particles will cause friction on the moving parts of the printer and this hinders performance. So in many cases throughly cleaning the printer ends up reviving a printer that seems broken. Please follow the steps below to clean :

- Take the printer off the mains... So un-plug the electricity.
- Take out the ribbon and label roll. If you have been printing let the print head cool for a minute. Clean the printer with a small amount of Isopropyl wipes:
    - Wipe the print head
    - Wipe the label roll holder
    - Wipe the track that the paper travels on
    - The last black roller : Turn the roll and wipe.
    - Lastly clean the outside of the printer.

- Leave the printer for 20 minutes.
- Reload the ribbon and label roll.
- Plug in the power cord and turn the printer on.
- Go through the calibration process.
- See if the printer behaves.

See the **Zebra GK420t Label Printer User Guide** for further information and diagrams.

## Status light descriptions GK420t

What is the Status light on my Zebra GK420 printer trying to tell me???!!!
Info given here on the Zebra website.

| LED status and colour | Printer Status | Details |
|---|---|---|
| **Off** | Off | Printer not receiving power<br>Check power connections from the wall outlet to the power supply, and from the power supply to the printer. Disconnect the printer from the wall outlet for 30 seconds and then reconnect the printer to the wall outlet. |
| **Solid Green** | On | The printer is on and in an idle state<br>No action necessary |
| **Solid Amber** | Stopped | A. After you have been printing<br>There is a memory error. Turn the printer power off and on, and then resume printing.<br>B. If this error continues<br>The printhead needs to cool down. Turn the printer power off for five minutes. If this persists the printer needs a service.<br>C. Right after you turn on the printer<br>The printer has failed its power on self test (POST), contact an authorized reseller for assistance.<br>*When the printer is operating normally after power up the status light will be amber for about 10 seconds before turning green (solid or blinking).* |
| **Flashing Green** | Normal Operation | The printer is receiving data<br>As soon as all of the data has been received, the status LED will turn green and the printer will automatically resume operation. |
| **Flashing Red** | Stopped | A. The printer has run out of labels<br>B. The printer ribbon ha run out<br>C. The printer is open |
| **Double Flashing Green** | Paused | The printer is paused<br>Press the Feed button to resume printing. |
| **Flashing Amber** | Paused | The printhead is over temperature<br>Printing will stop until the printhead cools to an acceptable printing temperature. When it does, the printer will automatically resume operation. |
| **Alternately Flashing Green and Red** | Needs Service | FLASH memory is not programmed<br>Return the printer to an authorized reseller. |

| LED status and colour | Printer Status | Details |
|---|---|---|
| **Flashing Red, Red and Green** | Needs Service | The printhead or motor has had a critical failure<br>Return the printer to an authorized reseller. |
| **Flashing Red, Amber Green** | Memory Defragmentation | The printer is running a defragmentation* process<br>**Do NOT reset or turn off the power!** |

NOTE: **Defragmentation** is a normal operation of the GK420t printer. The printer will defragment its memory both after a factory default and when the printer detects that a defragment is required. When the printer is in this condition, allow it to finish defragmenting. If this warning occurs frequently then refer to the printer user guide as some label format changes could resolve this.

## Zebra TLP 2844

You may have an old label printer : Zebra TLP 2844

Click to download the user guide for

Zebra TLP 2844

On page 48 the manual has a guide on how to manually calibrate the printer.

// Previous: **25.17. License management** | Next: **25.19. The system log** //

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