

## 21.18. Label printer hardware setup

We recommend **Zebra GK420t** label printer with a network port.

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.

### 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 on the printer itself. The default static address for the printer is 192.168.254.254.
    1. You can now log on to the printer using it's current IP address [http://printer\\_ip\\_address](http://printer_ip_address) where printer\_ip\_address is the current printer's ip address.
    2. Go to “Print Server Settings”, then click “Print Server” and log in
      - user: admin
      - pass: 1234
    3. 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)
    4. Set the IP Protocol to “Permanent”, and submit
    5. 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 menu on the printer itself that you access by holding down the Feed button.

With the printer power on and top cover closed, press and hold the Feed button for several seconds.

The green status LED on the printer will flash a number of times in sequence.

It will flash on and off 1 time

...then on and off twice

...on and off 3 times

...on and off 4 times

...on and off 5 times

...on and off 6 times

...on and off 7 times

You can select each of the below menu items by **releasing** the button after the light starts that specific number of flashes and before the next flash sequence starts.

1. Print a configuration status label
2. Auto Media calibration: use to make the printer detect the length of the labels you're using
3. Serial port config: not needed
4. Factory defaults: Sets everything back to default settings
5. Print width adjustment (above)
6. Print Darkness (Density) Adjustment
7. Manual media calibration (you most likely don't need this)

## GK420 Calibrating the printer

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.

## GK420 Setting the label width

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.

## GK420 - print out the configuration status

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.

## GK420 - status light descriptions

What is the Status light on my Zebra GK420 printer trying to tell me??? Info from [here](#) on the Zebra website.

LED status and colour	Printer Status	Details
<b>Off</b>	Off	Printer is not receiving power. 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.
<b>Solid Green</b>	On	The printer is on and in an idle state. No action necessary
<b>Solid Amber</b>	Stopped	<p><u>A. After you have been printing</u> There is a memory error. Turn the printer power off and on, and then resume printing.</p> <p><u>B. If this error continues</u> The printhead needs to cool down. Turn the printer power off for five minutes. If this persists the printer needs a service.</p> <p><u>C. Right after you turn on the printer</u> The printer has failed its power on self test (POST), contact an authorized reseller for assistance.</p> <p><i>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).</i></p>
<b>Flashing Green</b>	Normal Operation	4
<b>Flashing Red</b>	Stopped	5
<b>Double Flashing Green</b>	Paused	6
<b>Flashing Amber</b>	Paused	7
<b>Alternately Flashing Green and Red</b>	Needs Service	8
<b>Flashing Red, Red and Green</b>	Needs Service	9
<b>Flashing Red, Amber Green (Do NOT reset or turn off power!)</b>	Memory Defragmentation	10

## 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 thoroughly 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 electric.

- Take out the ribbon and label, cleaning the printer with small amount of Isopropyl swipes.
  - Wipe the print head.
  - Wipe the paper 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 and appearance 😊
- Leave for 20 minutes
- re-connect the ribbon and label.
- re-connect the printer to the mains.
- Go through the calibration mode.
- See if the printer behaves.

For further information specific to the Zebra GK420t label printer refer to the user guide:

[https://www.zebra.com/content/dam/zebra\\_new\\_ja/en-us/manuals/printers/desktop/legacy/gk420t/gk420t-ug-en.pdf](https://www.zebra.com/content/dam/zebra_new_ja/en-us/manuals/printers/desktop/legacy/gk420t/gk420t-ug-en.pdf).

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Last update: **2020/03/11 11:49**

