

Setting up Labsafe barcode printer

Prerequisites:

- A recent Java 8 or above
- TSC driver and Diagnostic Tool (DiagTool), <https://usca.tscprinters.com/en/downloads>
- Labsafe to printer connector, <https://durham.labsafe.org/docs/printer-software/Labsafe2Printer.zip>

Installation steps

1. Install the printer driver
2. Unzip Labsafe to printer connector to a folder, copy DiagTool to the same location
3. Edit run-test.bat file and update the following fields:

JAVA_PATH – location of the Java

PRINTER – printer name as in listed Windows 'Printers & scanners'

URL – the Labsafe endpoint

QUEUE¹ – the printing queue to fetch barcode labels from

ACCOUNT – any valid Labsafe account (login name use to log into Labsafe). Note that if the account gets deactivated – this value must get updated!

QPWD – printing queue password

Settings up the printer

To set up the correct paper size and calibrate the printer sensor – run the DiagTool. The software has four buttons (see Figure 1) that allow to read current configuration from the printer – 'Get' (#4), apply current setting – 'Set' (#3) and to save and load settings from a file – 'Savr' (#2) and 'Load' (#1)².

The default barcode used at Durham University are 25mm wide and 15mm high (you can switch the measurement units at the top of the DiagTool window). If the values differ significantly – type these values in and press the 'Set' button. The next step is to calibrate the sensor. Press the 'Calibrate Sensor' button at the left top. Window, shown in Figure 2, will appear. Press the 'Calibrate' button on the left in the 'Auto Calibration' section. This will print 3 empty barcode. Press the 'Feed' button on the printer to make sure that it stops at the correct position.

You should be able to print barcodes from Labsafe now. If barcodes are not centred after the calibration – make sure the sensor is dust-free and repeat the calibration.

¹ Look at the Managing Labsafe printing queues section for more details

² Note that you need to use 'Set' after loading setting from a file

Diagnostic Tool 1.63

Language: English Unit: ☒ inch ☐ mm Interface: USB Setup

Printer Configuration | File Manager | Bitmap Font Manager | Command Tool

Printer Function

Calibrate Sensor

Ethernet Setup

RTC Setup

Factory Default

Reset Printer

Print Test Page

Configuration Page

Dump Text

Ignore AUTO.BAS

Exit Line Mode

Password Setup

Printer Status

Get Status

Printer Configuration

Printer Information

Version: Cutting Counter: 0 0

Serial No: Mileage: Km

Check Sum:

Common | Z | D | RS-232 | Wireless

Speed Ribbon

Density Ribbon Sensor

Paper Width inch Ribbon Encoder Err.

Paper Height inch Code Page

Media Sensor Country Code

Gap inch Head-up Sensor

Gap Offset inch Reprint After Error

Post-Print Action Maximum Length inch

Cut Piece Gap Inten.

Reference Bline Inten.

Direction Continuous Inten.

Offset Threshold Detection

Shift X

Shift Y

Clear 1 Load 2 Save 3 Set 4 Get

LPT1 COM1 9600,N,8,1 RTS 27/10/2025 20:45:18

Figure 1. View of the DiagTool window

Calibrate Sensor

Auto Calibration

Paper Height inch

Gap inch

Calibrate

Manual Setup

Sensor Intensity Reading Intensity 3

Threshold Value Current Reading

Set Calibrate

Media Type

☐ GAP

☐ Black Mark

☒ Continuous

☐ Auto Selection

Cancel

Figure 2. Sensor calibration window

Managing Labsafe printing queues

Administrative setup

Any department administrator can create and manage printing queues. The list of the department printing queues can be accessed through System Administration/Departments/Actions/View printing queues.

To add a new printing queue – press the ‘+’ button in the left top corner. The Name and Password here correspond to ‘QUEUE’ and ‘QPWD’ entries in the bat file mentioned on page 1.

Making queue as a default in the browser allows to override user settings for a particular PC (like a shared PC with the barcode printer attached to it). So, any barcode printed from that browser will get sent to this queue.

To allow users to use printing queues – they need to be added to their account (System Administration/Users/Actions/Edit). Note that all printing queues available to a group leader are automatically available to the group members – so there is no need to update every account.

User setup

Users need to set their default printing queue before that can send any barcode into it. This is done under ‘Logged in as...’/Settings in the right top corner. Once this has been done – barcodes can be sent to the printer.