TOSHIBA

TOSHIBA Bar Code Printer

Printer Driver for Linux

Operating Manual

1st Edition: Jun. 29, 2018
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TOSHIBA TEC CORPORATION

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Introduction

Thank you for purchasing the TOSHIBA bar code printer.
This documentation is for users of TOSHIBA TEC barcode printers with Linux-based systems. The supplied software is intended to be used in conjunction with a CUPS-compatible operating system.

System Requirements

- An i386 or x86-64 based computer
- A Linux-based operating system with CUPS v1.4 or higher

Tested Environment

- Ubuntu 14.04
- Fedora 26

Applicable Printers

Driver Name	Printer Model
TOSHIBA B-EX4T1-G	B-EX4T1-G
TOSHIBA B-EX4T1-T	B-EX4T1-T
TOSHIBA B-EX4T2-G	B-EX4T2-G, B-EX4D2-G
TOSHIBA B-EX4T2-T	B-EX4T2-T
TOSHIBA B-EX4T2-H	B-EX4T2-H
TOSHIBA B-EX6T1-G	B-EX6T1-G
TOSHIBA B-EX6T1-T	B-EX6T1-T
TOSHIBA B-EX6T3-G	B-EX6T3-G
TOSHIBA B-EX6T3-T	B-EX6T3-T
TOSHIBA BA400T-G	BA410T-G, BA420T-G
TOSHIBA BA400T-T	BA410T-T, BA420T-T

Connection Interface

USB
LAN (Socket / LPR)

Trademarks

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1. Installation

The installation procedure of this printer driver differs depending on the printer models and the connection methods. Follow the procedure for the appropriate condition to install the printer driver.

1.1 Installation for Debian based systems

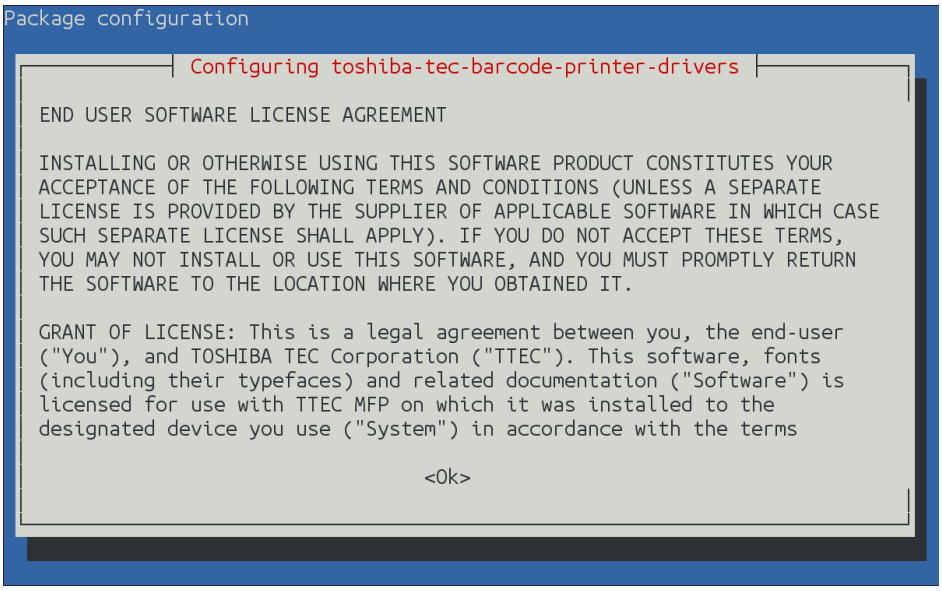
To install the TOSHIBA TEC barcode printer drivers on Debian-based systems (Debian, Ubuntu, Xandros, etc), the .deb package is used. Unless otherwise specified, all commands are to be run as root.

1. Copy the toshiba-tec-barcode-printer-drivers_2.xx_debian_yy.deb package to the target system, where **xx** is the version number of the package, and **yy** is the architecture. When installing the barcode printer driver package on a 32-bit OS, use the **i386** package, and when installing on a 64-bit OS, use the **amd64** package.

2. Run the following command in a terminal (change to the directory where the package was copied):

```
dpkg --install toshiba-tec-barcode-printer-drivers_2.xx_debian_i386.deb
```

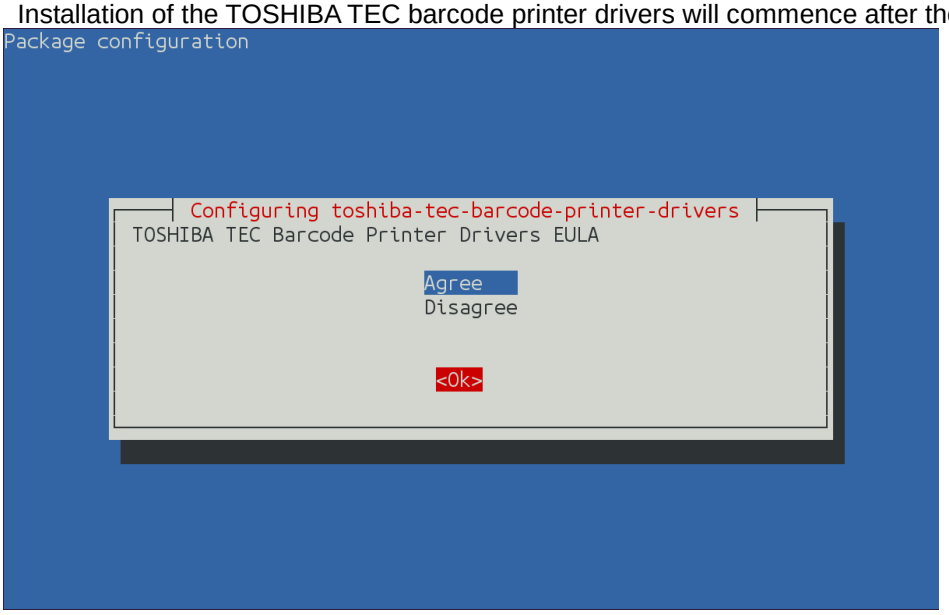
3. You will be prompted to read the EULA, which must be accepted before the installation can continue. Scroll through the EULA using the up and down arrow keys.



4. To progress to the next screen, highlight the "Ok" button by pressing the tab key, and dismiss the EULA by pressing the enter key.

5. To accept the EULA, highlight "Accept" using the up and down arrow keys, and then press the enter key. If "Accept" is not highlighted when.

6. Installation of the TOSHIBA TEC barcode printer drivers will commence after the EULA is accepted.



7. CUPS should restart automatically, however, in case it doesn't, it should be restarted manually. On systemd based systems, restart CUPS by running the following command:

systemctl restart cups.service

8. On init.d based systems, restart CUPS by running the following command:

sbin/service cups restart

1.2 Installation for Red Hat based systems

To install the TOSHIBA TEC barcode printer drivers on Red Hat-based systems (Red Hat, RHEL, Fedora, CentOS, etc), the .rpm package is used. Unless otherwise specified, all commands are to be run as root.

1. Copy the toshiba-tec-barcode-printer-drivers-2.xx-1.yy.rpm file to the target system, where **xx** is the version number of the package, and **yy** is the architecture. When installing the barcode printer driver package on a 32-bit OS, use the **i686** package, and when installing on a 64-bit OS, use the **x86_64** package. The **i686** package can also be installed on a 64-bit Red Hat based system as long as the following dependencies are also installed:
    1. glibc.i686
    2. libxml2.i686
    3. zlib.i686

2. If the target system uses yum package manager, run the following as root:

    yum install toshiba-tec-barcode-printer-drivers-2.xx-1.yy.rpm

    On newer Red Had-based systems that use the **DNF** package management system, use the following command (as root) instead:

    dnf install toshiba-tec-barcode-printer-drivers-2.xx-1.yy.rpm

3. CUPS should restart automatically, however, in case it doesn't, it should be restarted manually, On system based systems, restart CUPS using the following command:

    systemctl restart cups.service

    On init.d based systems, restart CUPS using the following command:

    /sbin/service cups restart

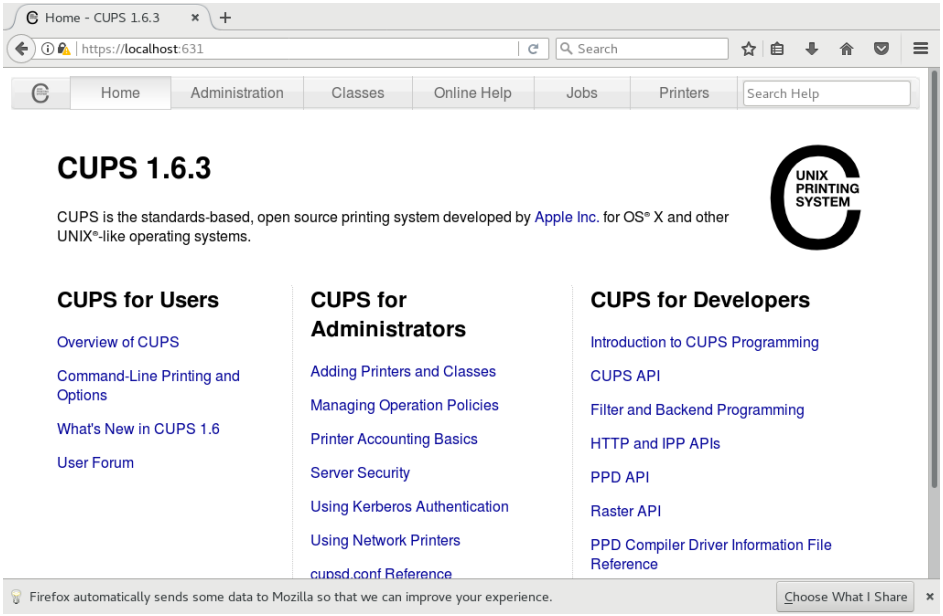
2. Setting up the TOSHIBA TEC Barcode Printer

Consult the documentation of the target operating system for specific instructions on how to set up a new printer. Different desktop environments provide different interfaces for adding and maintaining printers. Alternatively, most CUPS-compatible operating systems can be configured through a web interface.

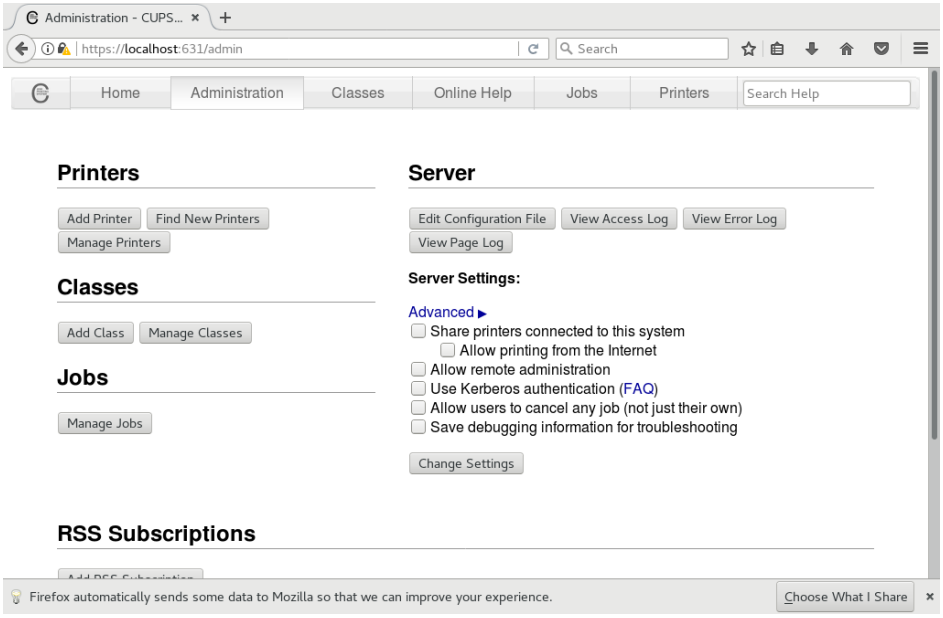
2.1 Using the CUPS web interface

1. Using a web browser on the target system, browse to https://localhost:631/ (be sure use **https** and not **http**).

Typically CUPS is installed and set up using a self-signed certificate, as such, most browsers will warn that the connection is not private. If such a warning is shown when navigating to the above URI, an exception must be made to allow the CUPS web interface to be used. How this exception is made depends on the browser. Consult the browser's documentation for more information on adding SSL certificate exceptions.

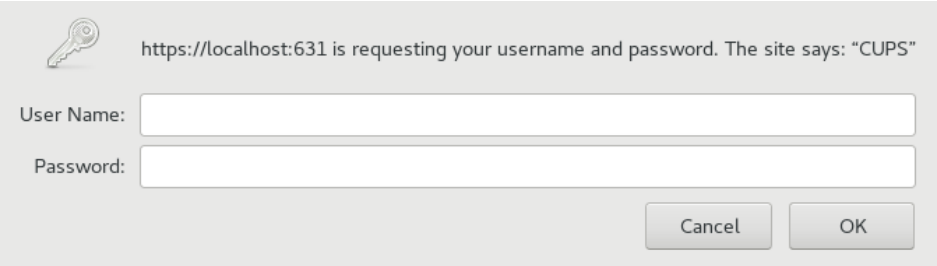


2. Once the CUPS web interface is loaded, click on "Administration" at the top of the page.



3. Under the "**Printers**" heading, click "Add Printer".

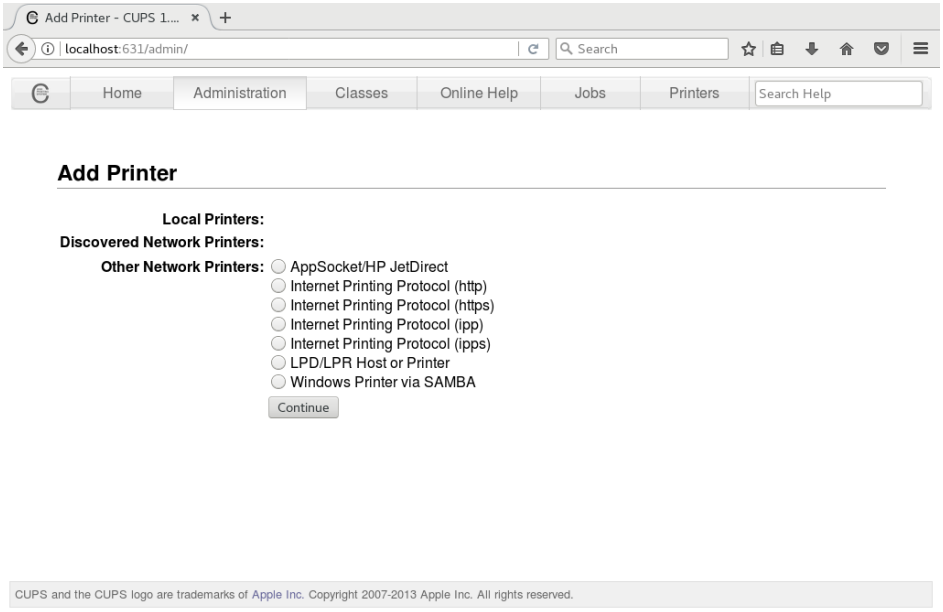
A prompt should appear requesting a username and password. If such a prompt appears, enter the root username and password.



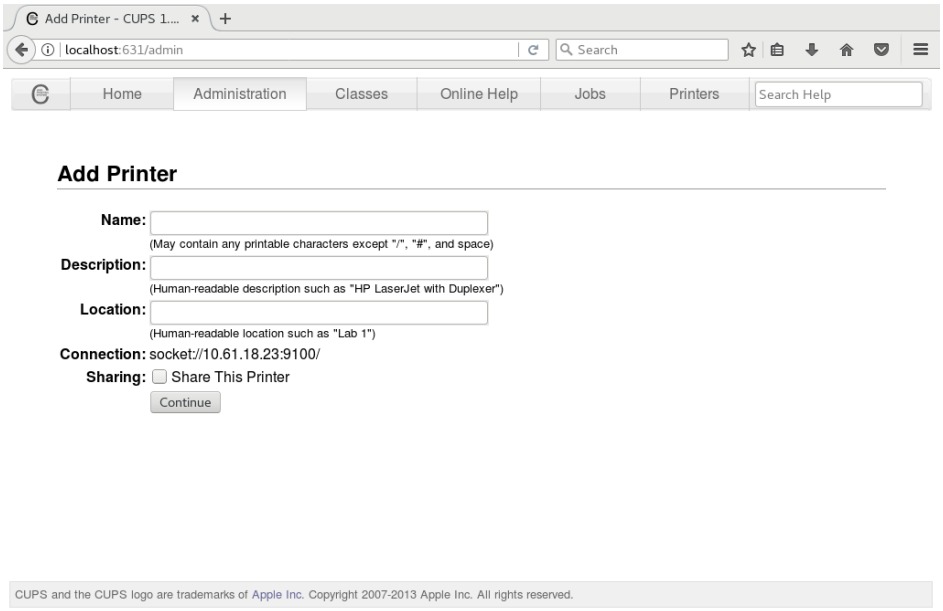
4. Choose the TOSHIBA TEC Barcode Printer amongst the local or discovered printers and click **Continue**. If the printer was not discovered but it is connected to the network, select **AppSocket/HP JetDirect** as the protocol. If the printer is connected by USB and does not show in the list of local printers, check the USB connection and try again from step 1.

If **AppSocket/HP JetDirect** was selected, enter the URI of the printer in the following format (where **ip-or-hostname** is the IPv4 address or hostname of the printer, and port is the **port** configured on the printer):

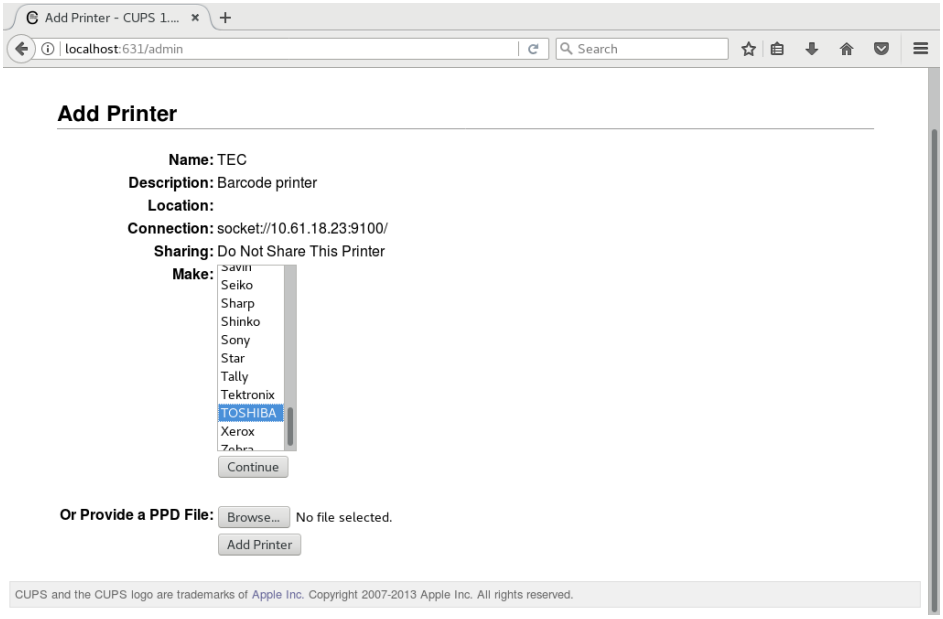
socket://ip-or-hostname:port/



5. On the next screen, select a name, description, and location for the printer, and click **Continue**.

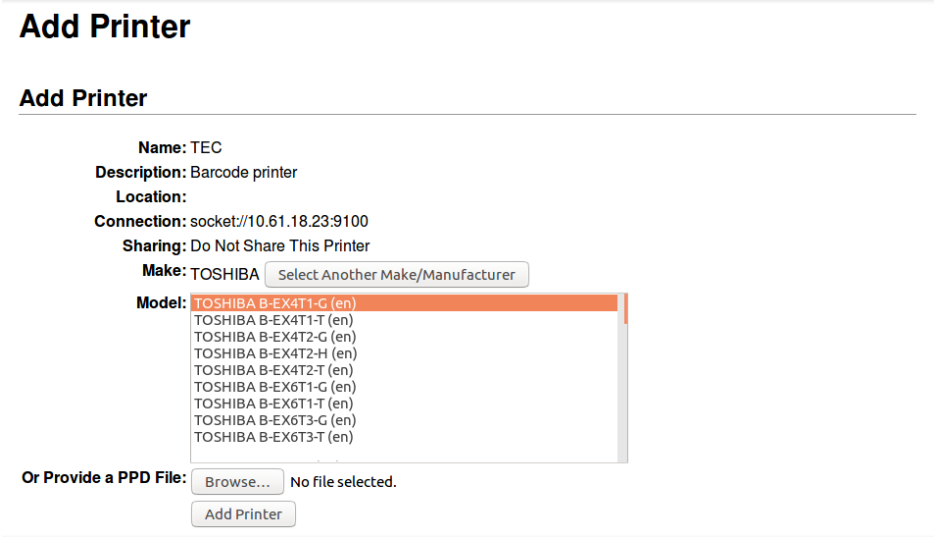


6. On the next screen, scroll down in the list of printer manufacturers and select **TOSHIBA**, and then click **Continue**.



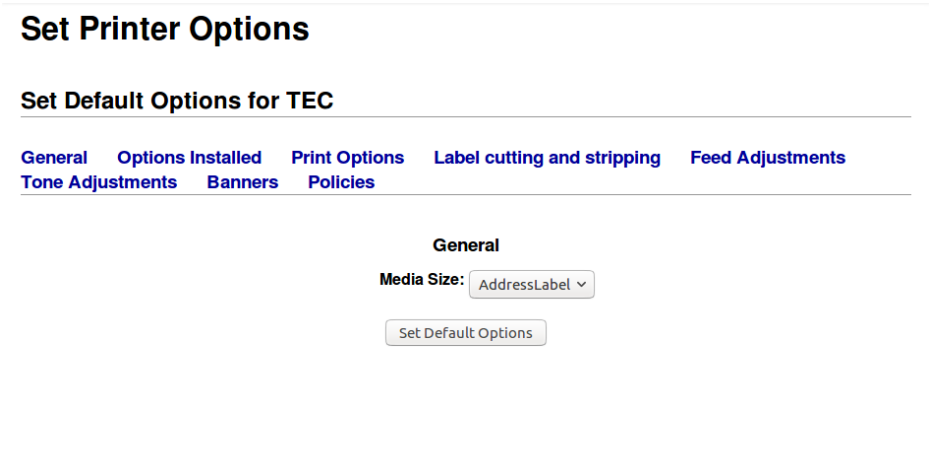
7. Select the TOSHIBA TEC Barcode Printer model from list and click **Continue**.

* "TOSHIBA DB-EA4D" is selectable, but it is not supported.



8. On the next screen, set up the default options for the printer, and click **Set Default Options**.

- Under "Options Installed", be sure to check that the label orientation is set correctly. If the shortest side of the label is ejected first (or the labels are square), choose "Labels are portrait oriented", otherwise choose "Labels are landscape oriented".
- Also, ensure that the Media Size is set correctly, choosing a custom size if necessary (if the label sizes are not listed).



3. Printing Documents

3.1 Printing from desktop applications

The TOSHIBA TEC barcode printer drivers can be used to print from most CUPS-compatible software, including LibreOffice, GNOME and KDE software. Various print options are available, but they are set using different methods, depending on the application that is used to print. Consult the documentation of the application or target operating system. Each individual application may provide a different method to set printing options.

3.2 Printing from command line

PDF files can be printed directly from the command line using the lp command line utility supplied by CUPS. This is convenient especially for scripting. The command line utility is invoked using the following format:

```
lp -d <printer> -o <options> file.pdf
```

Options are specified using a space-separated list of settings in the form key=value. Since the options are separated by space, the entire argument must be quoted. Option names and values are case-sensitive and do not contain spaces. For example:

```
lp -d TEC_B_EX4T1 -o "PrintSpeed=6 PrintMethod=DirectThermal StripLabel=True" file.pdf
```

TPCL Models

The following options are defined for all TPCL models (default values are underlined):

Option name	Values	Description
BackfeedAdjustment	-95 .. -5, None, 5 .. 95	Adjusts the amount of back feed, specified in 10ths of millimeters (in intervals of 5 only). Positive numbers indicate forward adjustments. To specify a custom adjustment, use the value "Custom.x" where x is a value in **millimetres** (not tenths of millimetres).
CommandCharacters	Readable	The TPCL data sent to the printer will use the readable characters, curly brackets and pipe (ASCII values 7Bh, 7Ch and 7Dh): **Readable command characters** { | } This is useful if print data is captured, it can be read more easily within a text editor.
	Unreadable	The TPCL data sent to the printer will use the unreadable characters, NUL, ESC and LF (ASCII values 00h, 1Bh, 0Ah). These characters have no visual representation and are unlikely to occur normally within the print data. This is useful if the print data does not need to be captured for any reason or the readable command characters are used in text.
Compression	None	Bitmap data is sent to the printer uncompressed.
	Auto	Bitmap data will be compressed only if the compressed size is smaller than the uncompressed size. In certain circumstances, compression methods may result in an increase in size rather than a decrease.
	TOPIX	TOPIX compression is used to send bitmap data to the printer. This compression method is best suited to bitmaps where each row is similar to the previous one.
CutInterval	None, 1	If this value is set to "1" then the printer will cut every label. In order to specify a custom cut interval, use the value "Custom.x" where x is the number of labels to issue before cutting.
CutStripAdjustment	-95 .. -5, None, 5 .. 95	Adjusts the value for the cut or strip position, specified in 10ths of millimetres (in intervals of 5 only). Positive numbers indicate forward adjustments. To specify a custom adjustment, use the value "Custom.x" where x is a value in **millimetres** (not tenths of millimetres).
FeedAdjustment	-95 .. -5, None, 5 .. 95	Adjusts the starting print position, specified in 10ths of millimetres (in intervals of 5 only). Positive numbers indicate forward adjustments. To specify a custom adjustment, use the value "Custom.x" where x is a value in **millimetres** (not tenths of millimetres).
LabelGap	20 .. 100	Specifies the the size of the gap between labels in 10ths of millimetres (in intervals of 10 only). To specify a custom adjustment, use the value "Custom.x" where x is a value in **millimetres** (not tenths of millimetres).

Option name	Values	Description
PageSize	1x1.FullBleed .. 4x4.FullBleed, 4x6.FullBleed	Specifies the size of the label. If the source document is of a different size to the size specified by this option, it is automatically scaled to fit (up or down). In some situations, custom page size information may not be honoured by the lp command. In such circumstances, supplying the following additional option may fix the issue, but will result in the document being automatically scaled to fit the destination page size: -o fit-to-page
	Custom.WxHin Custom.WxHcm Custom.WxHmm	If the label size is not specified directly by the PPD, the page size can be specified using the format shown. For example, a label that is 5.2in wide by 2.3in in height can be selected using: -o PageSize=Custom.5.2x2.3in Other supported units of measurements are centimeters (cm) and millimetres (mm). If no units are provided, the numbers provided are assumed to be represented as 72dpi. In some situations, custom page size information may not be honoured by the lp command. In such circumstances, supplying the following additional option may fix the issue, but will result in the document being automatically scaled to fit the destination page size: -o fit-to-page
PrintMethod	DirectThermal	Labels are printed using direct thermal. This is the default value for models that do not support thermal transfer.
	DirectThermalHeadUp	Labels are printed using direct thermal (head-up) where supported. If the head-up mechanism is not provided, this behaves the same as DirectThermal.
	ThermalTransfer	Uses thermal transfer to print the label. This is the default value for models that support thermal transfer.
	ThermalTransferRibbonSaving	Uses thermal transfer with ribbon saving enabled.
PrintSpeed	3, 5, 6, 8, 10, 12, 14	Sets the speed to print the document (in inches per second). Not all print speeds are available for all models, and some print speeds may not be used with certain resolutions or in conjunction with other options.
Sensor	None	Do not use a sensor to determine label boundaries.
	Reflective	Use the reflective sensor to detect black marks on the label substrate.
	Transmissive	Use the transmissive sensor to detect the gaps between the labels.
StripLabel	False	Labels are not stripped
	True	Labels are stripped (requires a model with a stripper module).

ToneAdjustment ThermalTransfer	None	Do not make any adjustments to the print density for thermal transfer print jobs.
	B-EX4 series: -20, -19, ..., -1, -0, 0, 1, ..., 9, 10 B-EX6 series: -20, -19, ..., -1, -0, 0, 1, ..., 19, 20 All other models: -10, -9, ..., -1, -0, 0, 1, ..., 9, 10	Adjust the print density for thermal transfer print jobs. Negative values will decrease the print density. Positive values will increase the print density.
ToneAdjustment DirectThermal	None	Do not make any adjustments to the print density for direct thermal print jobs.
	B-EX4 series: -20, -19, ..., -1, -0, 0, 1, ..., 9, 10 B-EX6 series: -20, -19, ..., -1, -0, 0, 1, ..., 19, 20 All other models: -10, -9, ..., -1, -0, 0, 1, ..., 9, 10	Adjust the print density for direct thermal print jobs. Negative values will decrease the print density. Positive values will increase the print density.

4. Limitations

- DB-EA4D printer is not supported.
- Even if set custom value to [Perform label cutting], it may not be possible to cut with the specified value.
- Even if set "Custom" to the following parameters, it cannot be set as default value.
  (If want to set as default value, please use “lpoptions” by command line.)
  [Label-to-label gap]
  [Feed adjustment]
  [Back feed adjustment]
  [Cut or strip adjustment]
- If set [Orientation], the printing result is as follows.
  Portrait --- Printing bottom first
  Landscape --- Printing top first
  Reverse landscape --- Printing bottom first
  Reverse Portrait --- Printing top first
- If set "Custom" to [Media Size], other settings are restored to default value.
  (If want to set "Custom" to [Media Size], please use “lpoptions” by command line.)
- Do not instruct printing to exceed the printer's receive buffer.
  The printer may occur error, or may not work properly.

5. Trouble shooting

- If cannot add printer via USB I/F,
  - Check if the host and printer are connected by USB cable.
  - Turn off the printer power switch and then turn on the printer power switch again.