

## Appendix: Serial Port Settings

### Serial Port Settings (RS-232C)

The pin assignments for the serial cables (RS-232C cables) which can be used with this printer are shown in the table below. You can purchase the cables at an electronics store. Do not use cables exceeding 3 meters in length.

Brother QL-650TD side  
(D-sub female, lock screw #4-40 inch screw)

PC side  
(D-Sub9P female)

Signal Name	Pin Number	Pin Assignments	Pin Number	Signal Name
DCD	1		1	DCD
RXD	2		2	RXD
TXD	3		3	TXD
DTR	4		4	DTR
GND	5		5	GND
DSR	6		6	DSR
RTS	7		7	RTS
CTS	8		8	CTS
RI	9		9	RI

#### Avoiding cross-connections

If the USB cable is connected and the connected computer is turned on, the USB connection is activated, even if a serial cable is connected.

If a USB cable is not connected, or if a USB cable is connected, but the connected computer is not turned on, the serial connection is activated if a serial cable is connected.

	Case 1	Case 2	Case 3	Case 4
USB	Connected (The computer is turned on.)	Connected (The computer is turned on.)	Connected (The computer is turned off.)	
Serial	Connected		Connected	Connected
Activated Interface	USB	USB	Serial	Serial

\* "Connected" indicates that the cable is connected.

In order to print in ESC/P mode, the serial connection should be activated.

## HOW TO SET the Serial settings

Note: When sending a command directly to the COM port, the input/output settings of the computer and the P-touch must set correctly. The manufacturer's default settings for serial transmission with the P-touch are indicated below in **bold and underlined**.

Baud rate	<b><u>115.2k</u></b> , 57.6k, 9600
Busy	<b><u>DTR</u></b> , Xon/Xoff
Bit length	<b><u>8</u></b> , 7
Parity	<b><u>NONE</u></b> , ODD, EVEN
Stop bit	1 bit

### 1. Switching by operation on the machine : Setup mode

Get in the Setup mode on the machine

Press the ON/OFF button while at the same time holding both the Up arrow button and down arrow button with the power supply off. The printer is in the set up mode and you can change the serial settings.

1/5	Baud rate (bps)	<b><u>115.2k</u></b> , 57.6k, 38.4k, 31.25k, 28.8k, 19.2k, 14.4k, 9600, 4800, 2400, 1200, 600, 300
2/5	Bit Length Flow control	<b><u>8</u></b> , 7
3/5	Parity	<b><u>NONE</u></b> , ODD, EVEN
4/5	Busy	<b><u>DTR</u></b> , Xon/Xoff
5/5	Interface mode	<b><u>ESC/P(Standard)</u></b> :All ESC/P commands are available. ESC/P(Text): Only text data can be printed (High speed mode) Raster : for Printer drivers

### 2. Switching by using the ESC/P Command

List of ESC/P mode commands (RS232C settings)

	Command Code	Hexadecimal	Function
1	ESC i U B *	1B 69 55 42 *	Specify baud rate
2	ESC i U b *	1B 69 55 62 *	Specify bit length
3	ESC i U P *	1B 69 55 50 *	Specify parity
4	ESC i U C *	1B 69 55 43 *	Specify busy controls

ESC i U B	Specify baud rate	
	ASCII	ESC i U B
	Hexadecimal	1B 69 55 42
	Parameters	n (0 ≤ n ≤ 12)

[Description]

- As an RS232C communication setting, the baud rate is set as shown below.

If n=0, a baud rate of 300 bps is selected.

If n=1, a baud rate of 600 bps is selected.

If n=2, a baud rate of 1200 bps is selected.

If n=3, a baud rate of 2400 bps is selected.

If n=4, a baud rate of 4800 bps is selected.

If n=5, a baud rate of 9600 bps is selected.

- If n=6, a baud rate of 14400 bps is selected.
- If n=7, a baud rate of 19200 bps is selected.
- If n=8, a baud rate of 28800 bps is selected.
- If n=9, a baud rate of 31250 bps is selected.
- If n=10, a baud rate of 38400 bps is selected.
- If n=11, a baud rate of 57600 bps is selected.
- If n=12, a baud rate of 115200 bps is selected.

(The default setting is 115200 bps.)

- The setting is applied the next time that the P-touch is turned on.
- Printing from the printer driver is possible only at three communication speeds (115200 bps, 57600 bps and 9600 bps).

2

ESC i U b	Specify bit length	
	ASCII	ESC i U b
	Hexadecimal	1B 69 55 62
	Parameters	n ( $0 \leq n \leq 1$ )

[Description]

- As an RS232C communication setting, the bit length is set as shown below.
  - If n=0, a bit length of 7 bits is selected.
  - If n=1, a bit length of 8 bits is selected.

(The default setting is 8 bits.)
- The setting is applied the next time that the P-touch is turned on.

3

ESC i U P	Specify parity	
	ASCII	ESC i U P
	Hexadecimal	1B 69 55 50
	Parameters	n ( $0 \leq n \leq 2$ )

[Description]

- As an RS232C communication setting, the parity is set as shown below.
  - If n=0          None
  - If n=1          ODD
  - If n=2          EVEN

(The default setting is None.)
- The setting is applied the next time that the P-touch is turned on.

4

ESC i U C	Specify busy controls	
	ASCII	ESC i U C
	Hexadecimal	1B 69 55 43
	Parameters	n ( $0 \leq n \leq 1$ )

## [Description]

- As an RS232C communication setting, the busy control is set as shown below.

If n=0            Hardware (DTR)

If n=1            X-ON/X-OFF

(The default setting is Hardware (DTR).)

- The setting is applied the next time that the P-touch is turned on.

### 3. Switching by using the utility included with the Windows printer driver

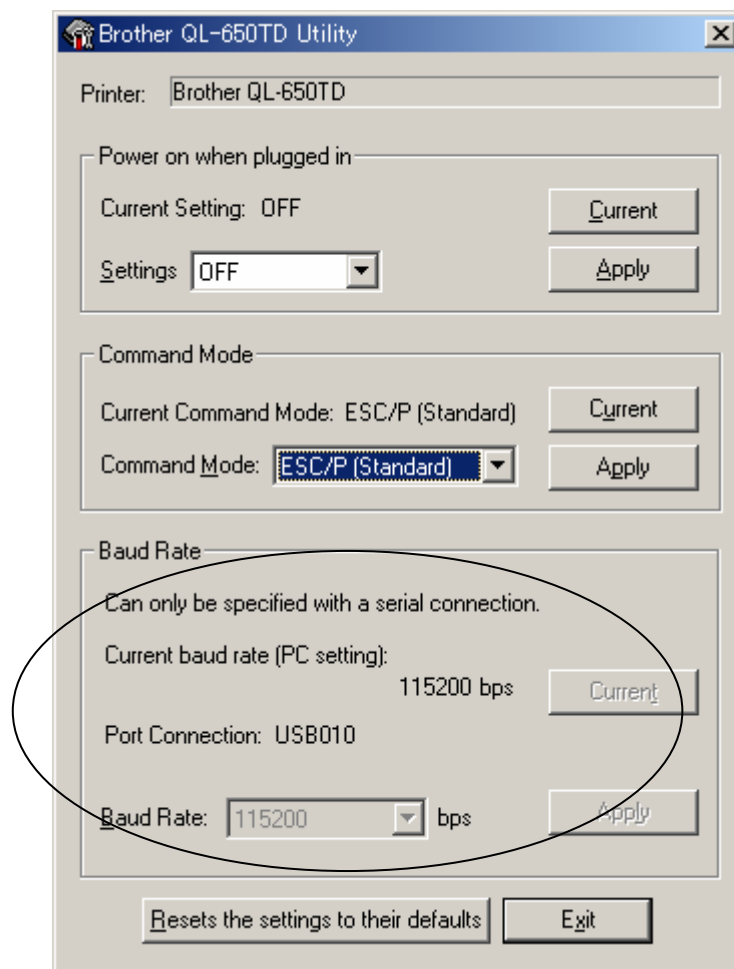
#### Procedure

(1) Install the printer driver. (Switching the mode is possible from either a serial or a USB connection.)

(2) From the Printers folder, display the properties for Brother QL-650TD.

On Windows 9x: Click the [Utility] button on the Advanced tab to start up the Brother QL-650TD Utility.

On Windows NT: Click the [Utility] button on the Device Settings tab, and then click the [Properties] button that appears to start up the Brother QL-650TD Utility.



The setting is made from the “Command Mode” box on the dialog box that appeared. In order to apply this setting, the P-touch must be turned off, then on again.

## Caution

If the printer driver is installed with a serial connection, the printer port is the COM port where the P-touch is connected. To print from the same computer using the ESC/P mode, use the utility to switch modes, and then change the printer port of the Brother QL-650TD to a different port, such as "FILE:", so that the COM port where the P-touch is connected is no longer being used.

If the P-touch is set to the Raster mode text output cannot be received by ASCII code. However, if the P-touch is set to the ESC/P mode, the printer driver automatically switches to raster mode to output the raster data.