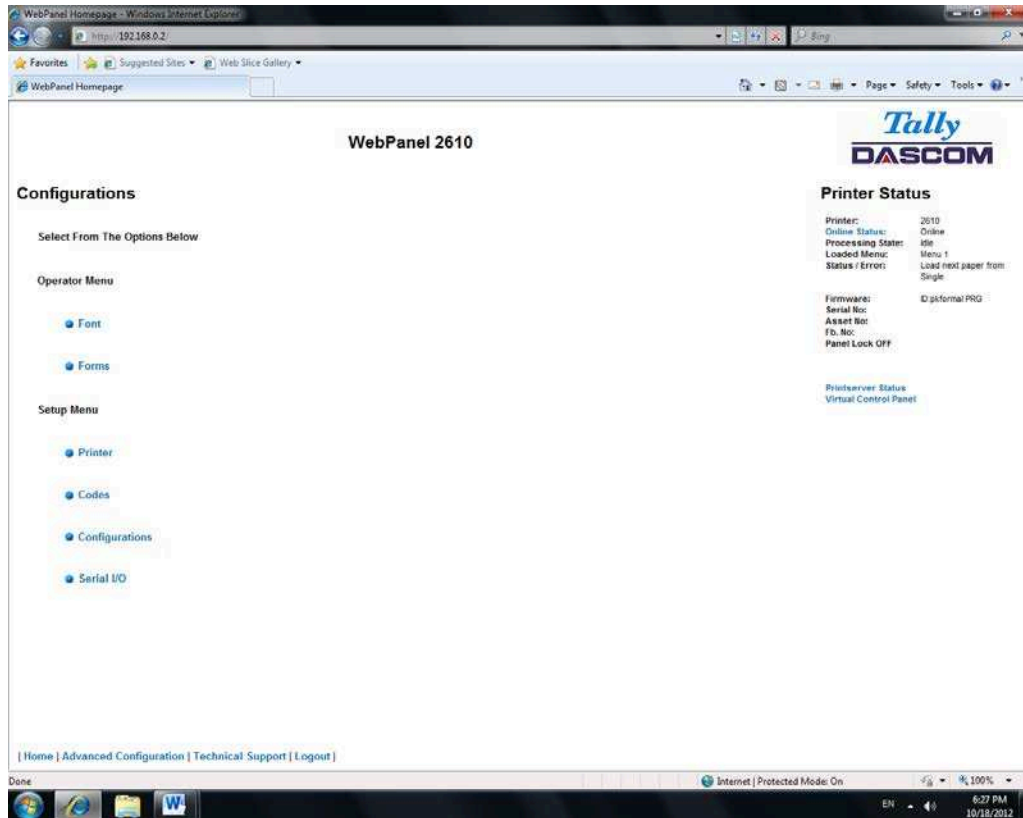### 6.3.5   Printer Configuration

Selecting this option allows you to configure specific parameters in the printer. When one of

these menu options is selected, a new page will load showing the options which can be viewed or modified.

Example 1

Changing the dropdown menu option.
In this example, we are modifying the selected font to a different font. Select "Font". A new page appears.
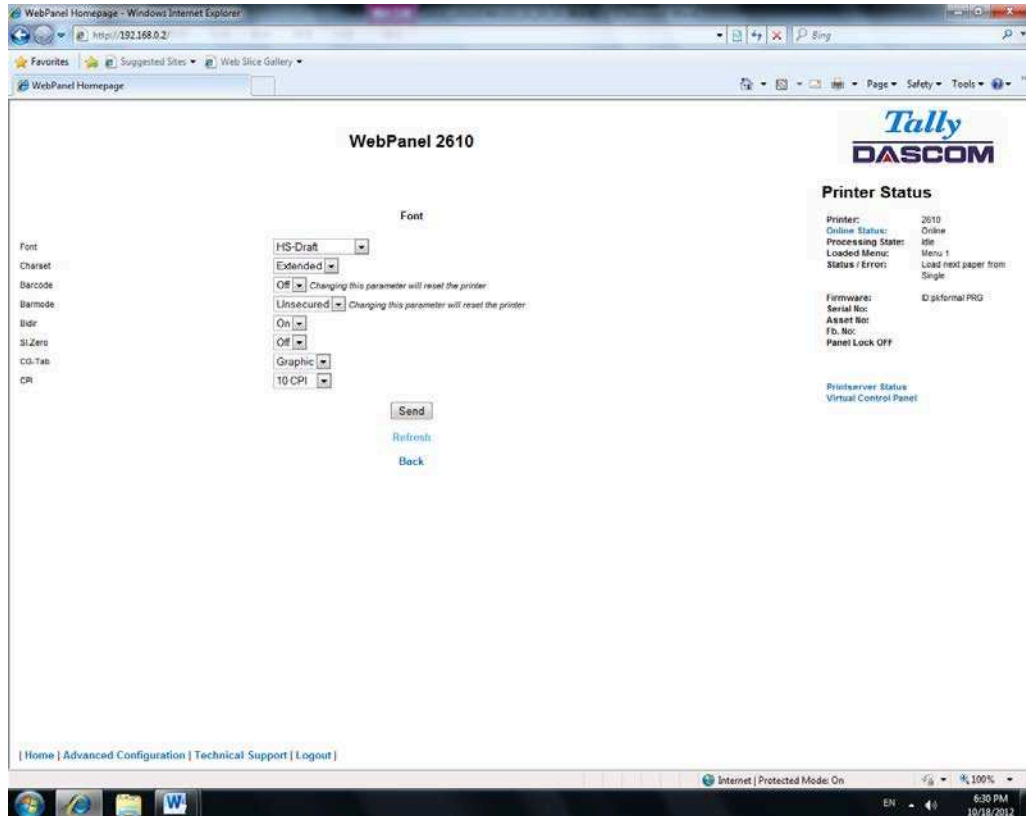
Select the Font dropdown menu and choose the new font. Select "Send".

1) Changes are not applied until "Send" is selected.
2) To reset the changed value to the prior value, select "Refresh" instead of "Send".
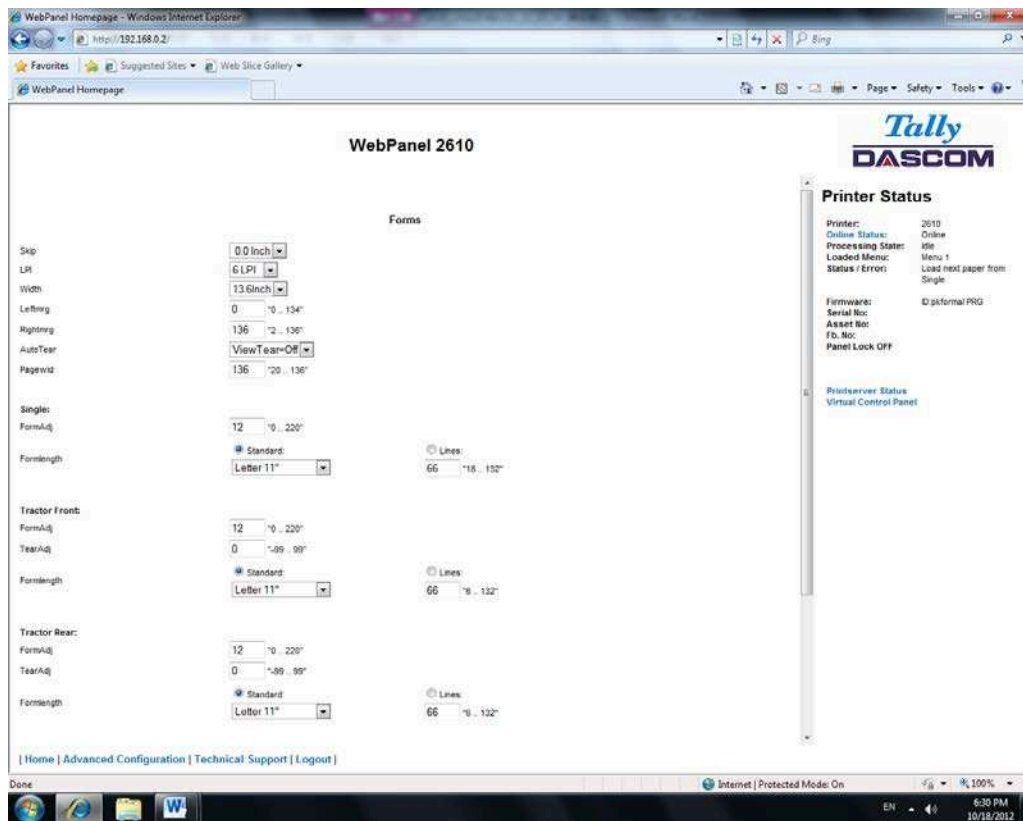3) To return to the prior page without applying the change, select "Back".

Example 2

Changing an entered value menu option.
In this example, we are modifying the selected form length to a different form length. Select
"Forms". A new page appears:

Select the Form Length field by highlighting the contents of the box and enter the new form length.
The acceptable parameters are listed to the right of the field. Select "Send".

1) Changes are not applied until "Send" is selected.
2) If the entered value is out of range of the acceptable parameters, the previous value will be re-instated.
3) To reset the changed value to the prior value, select "Refresh" instead of "Send". To return to the prior page without applying the change, select "Back".
4) The default name is "conf.cfg", but it can be renamed. Saving the file to disk. This will allow it to be transferred to other printers using the "Send Configuration To Printer" option on the actions web page.

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6.3.6   Printer Actions

Selecting the Printer Actions link will produce a page with a list of actions that can be performed on the printer.
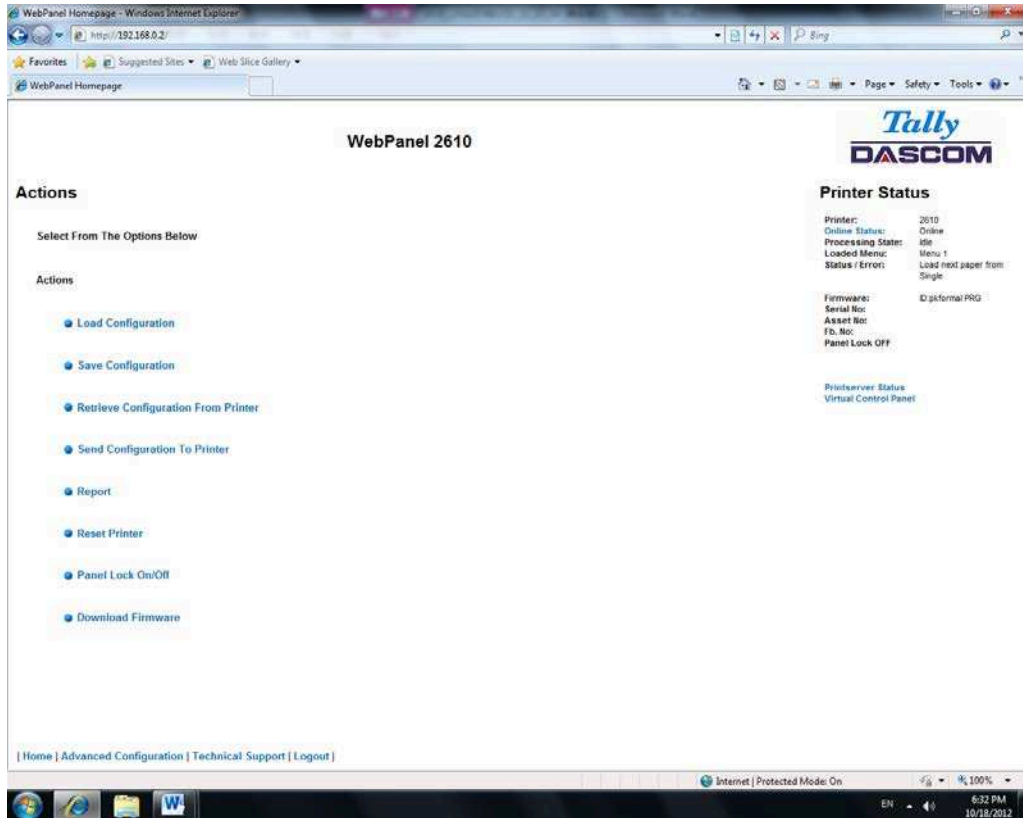
6.3.7 Load Configuration

Loads the settings stored in a menu into the printer as the current settings. When the Load Configuration link is selected, the following page will be displayed:
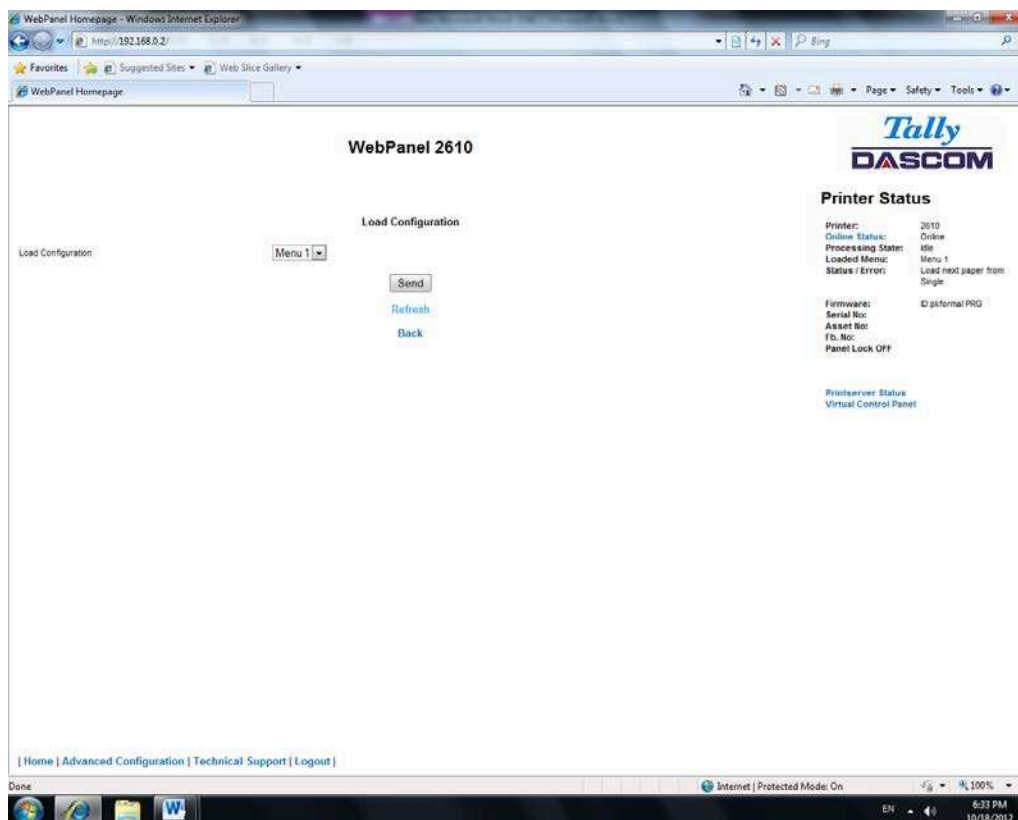
Select a menu and confirm your selection by selecting the Send button.

6.3.8   Save Configuration

You can save selected printer settings in up to 5 independent menus.
When the Save Configuration link is selected, the following page will be displayed:
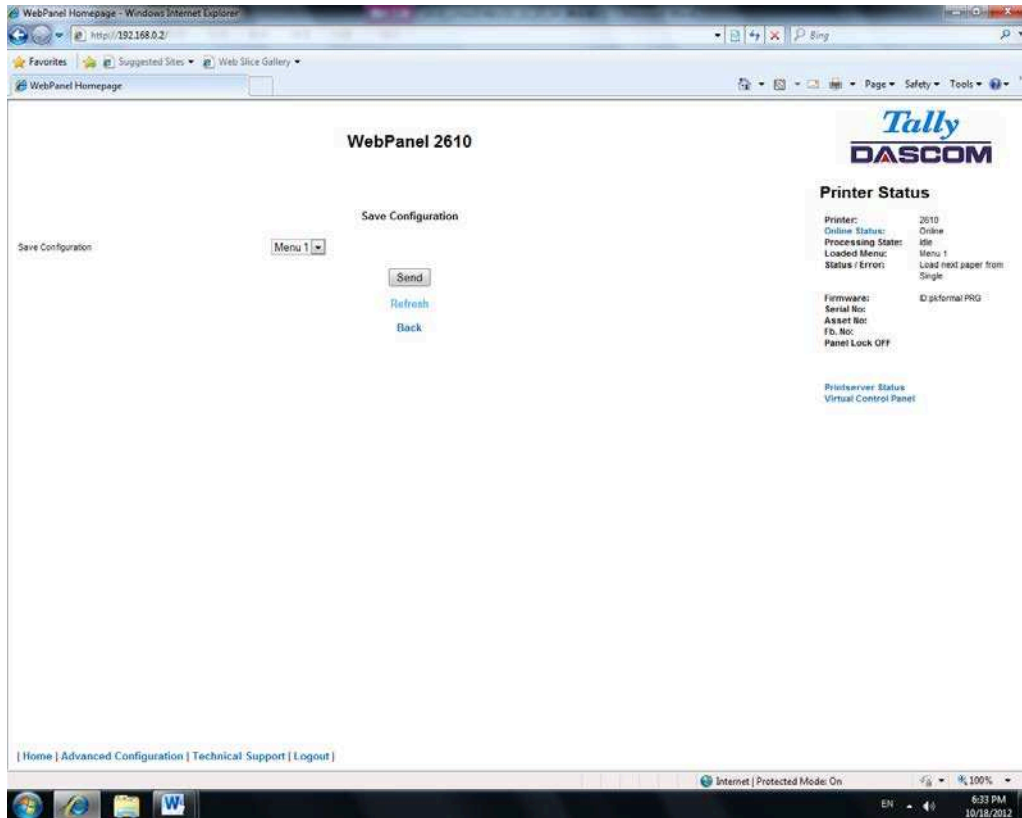
Select a menu. Select send.

6.3.9   Retrieve Configuration From Printer

Selecting this option will save all the printer settings of all menus in a file. Uploading this file to
other printers will clone the printer menu settings to the other printer.
When this option is selected, the following will appear (note that the actual image will be browser specific):
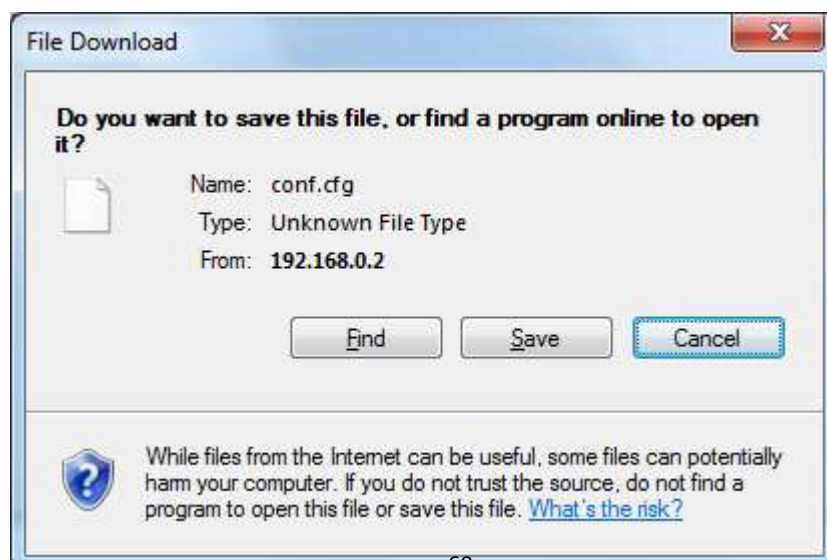
6.3.10   Send Configuration to Printer

Selecting this option will upload a Configuration File of another printer (see "Retrieve Configuration From Printer"). The complete configuration of this source printer will be transferred to your printer.

To upload the configuration file, first click "Send Configuration To Printer". The following page
will be displayed:
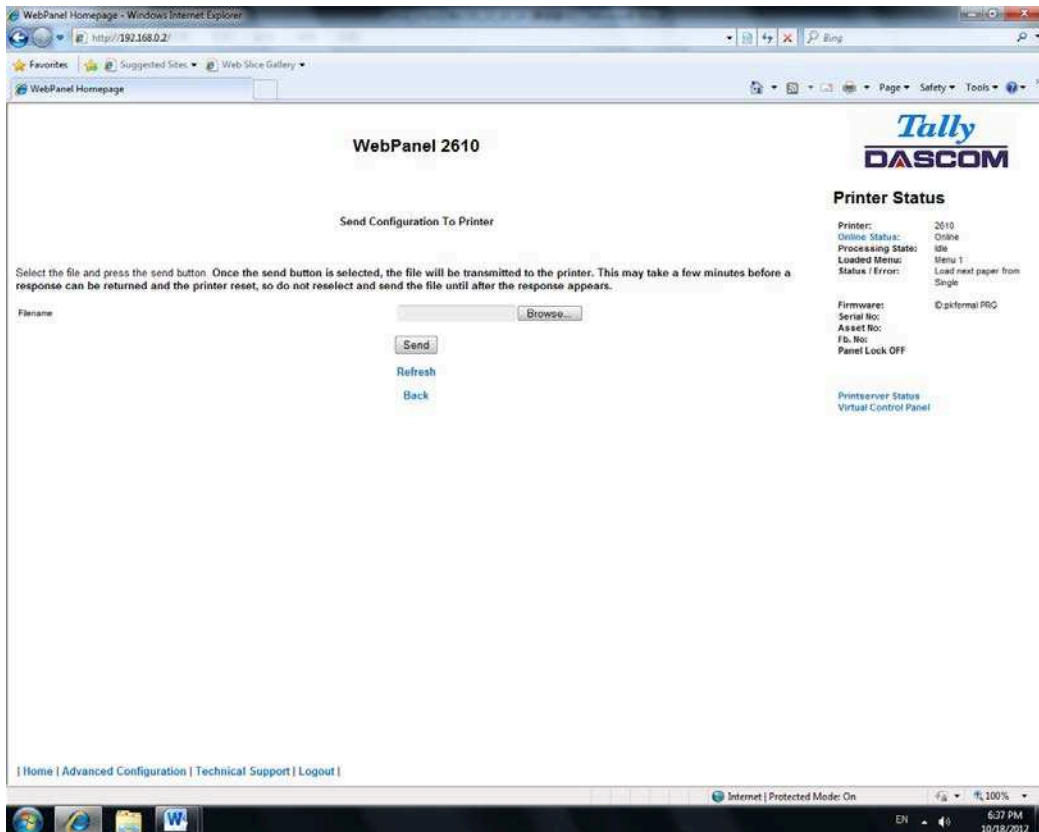
Use the "Browse" button to find the file to upload. Once the file is selected, click on the "Send" button. It is important to note the warning on this page. There is some delay while the file is transmitted so it is important not to resend or click on the "Send" button until the process is complete.
If the process is successful, the printer will reboot and the following page will be displayed:
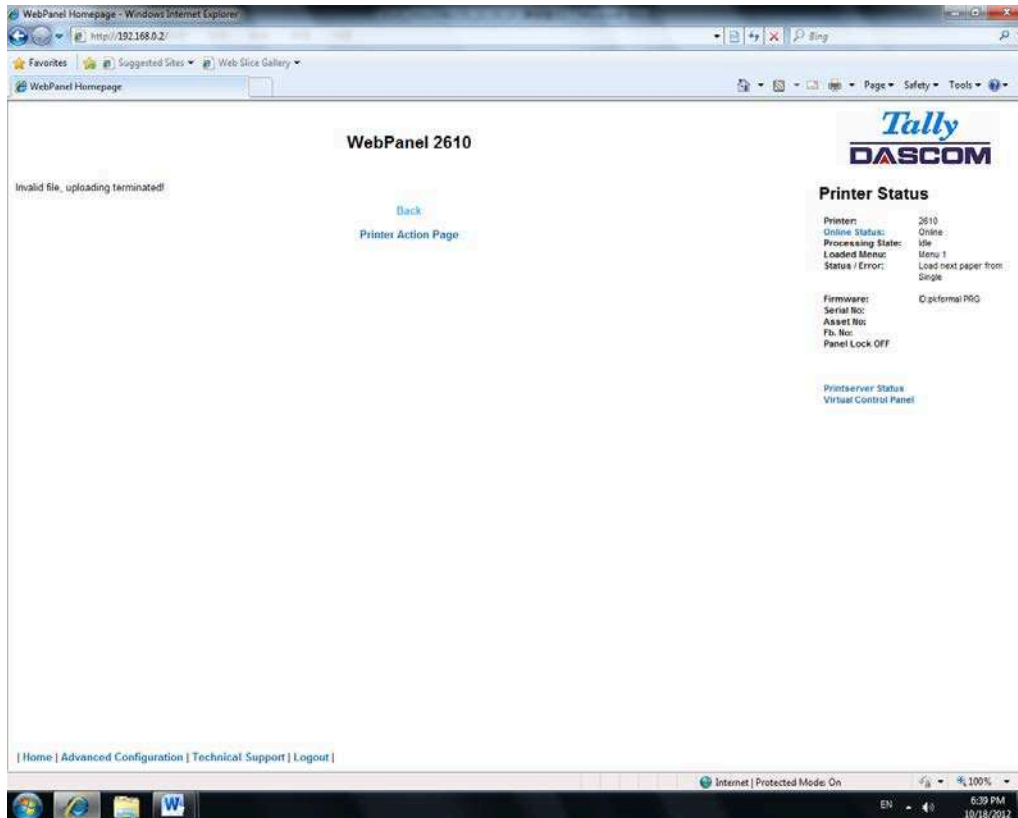
ℹ️ **Since the printer will reboot with successful completion of this action, the user will have to reconnect to the printer through the browser.**

6.3.11   Report

Selecting the report link will open up a separate browser window and a report of the printer settings will appear. This functionality is the same as pressing the "Print" option on the control panel of the printer.

6.3.12   Reset Printer

This link does a hard reset of the printer, similar to cycling power. There is no user feedback as to success since the printer is rebooting. Since the printer will reboot with successful completion of this action, the user will have to reconnect to the printer through the browser.

6.3.13   Panel Lock On/Off

This link toggles the panel lock feature of the printer. This option affects the physical control panel on the printer as well as the virtual panel in WebPanel. The state of the option is displayed in the printer status page on the right of the display.

6.3.14   Download Firmware

Through this link it is possible to download firmware updates to the printer. When this link is selected, the follow page will appear:
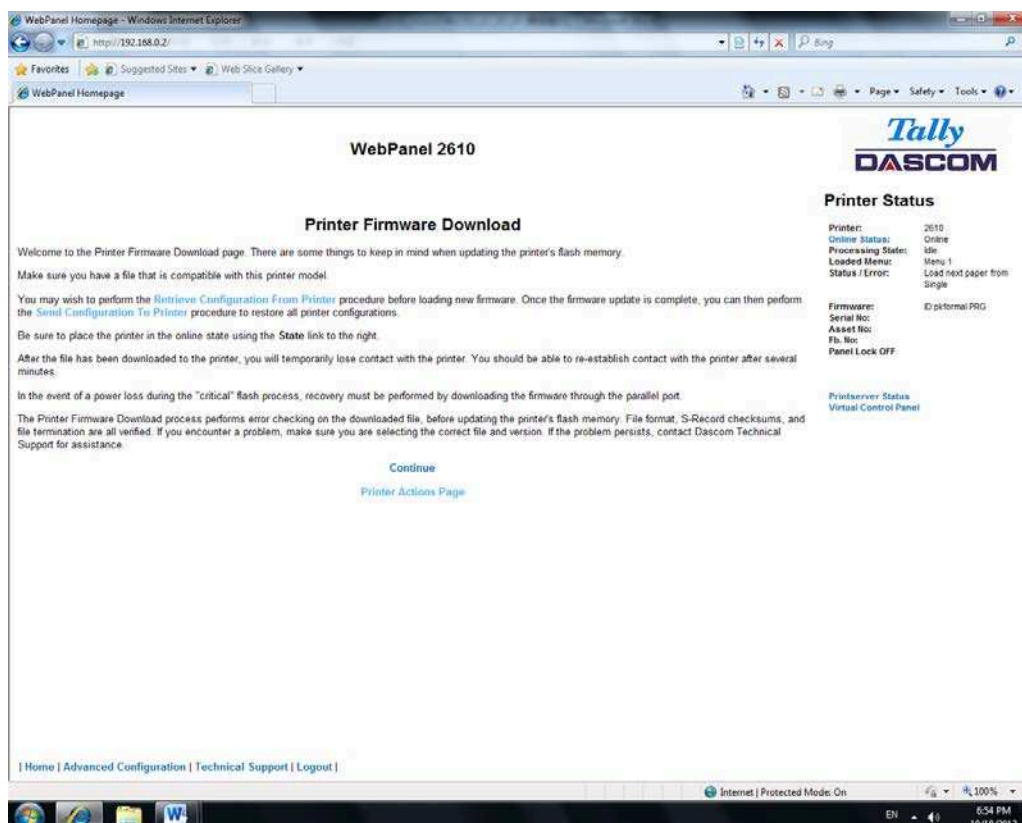
After following the directions on this page, select the "Continue" link and the following page
is displayed:
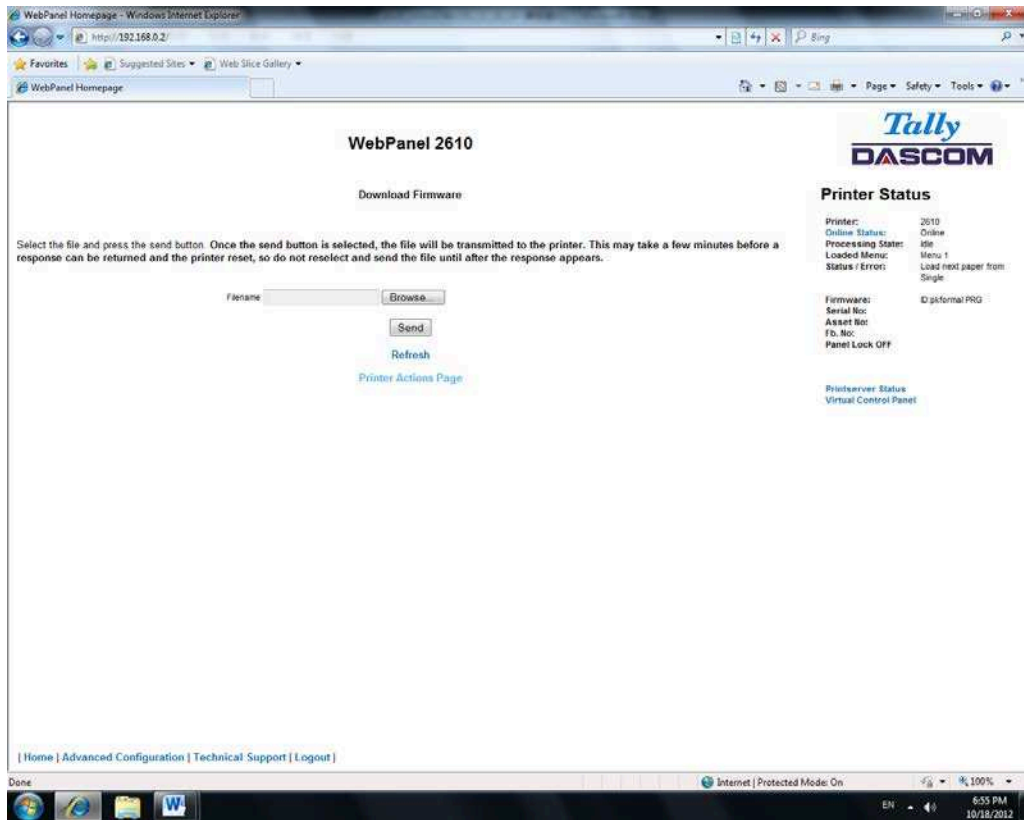
Using the "Browse" button, find the firmware file to download. Once the file is selected, click
on the "Send" button. It is important to note the warning on this page. There will be some
delay while the file is transmitted so it is important NOT to resend or click on the "Send" button until the process is complete.

If the process is successful, the printer will reboot and the following page will be displayed:
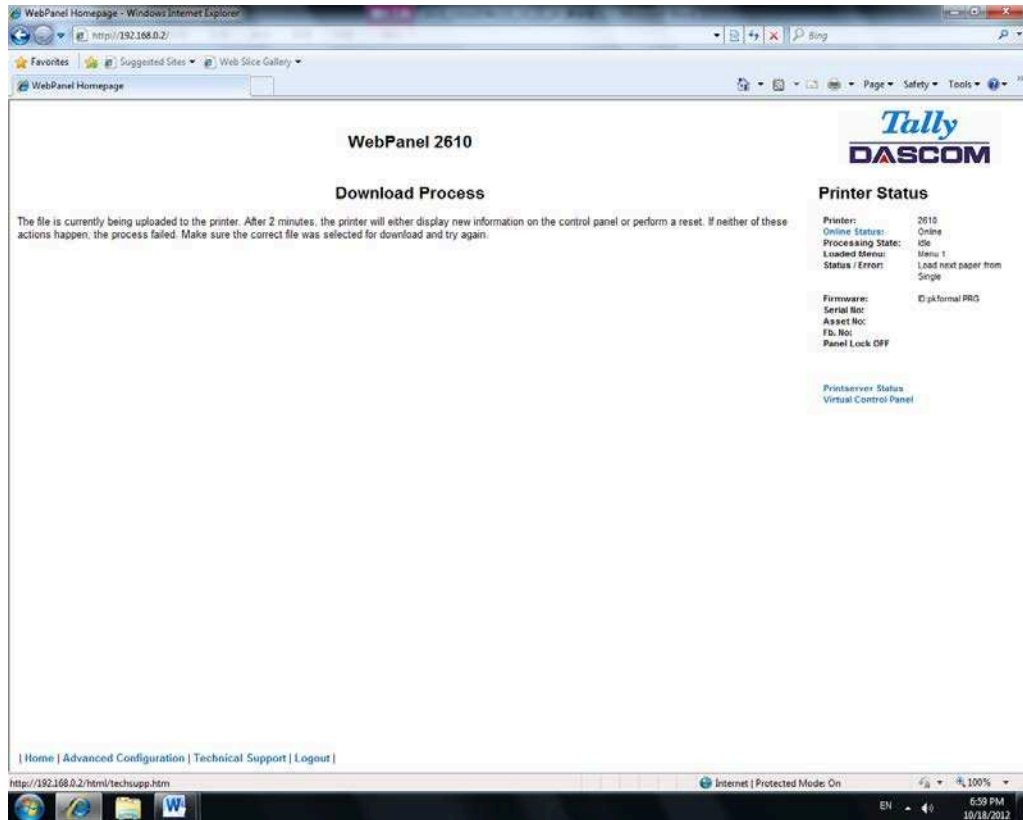
Since the printer will reboot with successful completion of this action, the user will have to
reconnect to the printer through the browser.

6.3.15   TallyCom Status

Selecting this link will replace the information in the Printer Status area with networking
information on the printer.
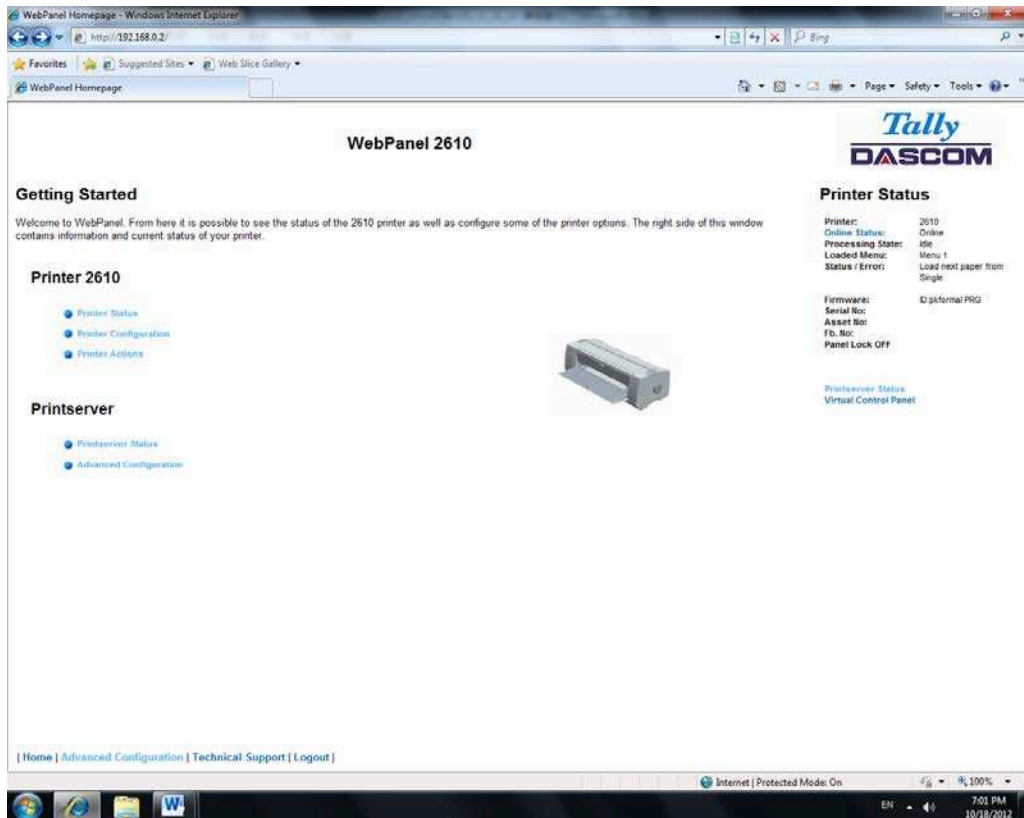
The Name, Contact and Location information is set up from the General link within the
Advanced Configuration page.

6.3.16   Advanced Configuration

The Advanced Configuration page allows the user to set up and modify network connectivity information as well as setting up the password, email notification and logical
printers. From this page it is also possible to Logout of TallyCom and restart TallyCom. The
Administration page looks like this:
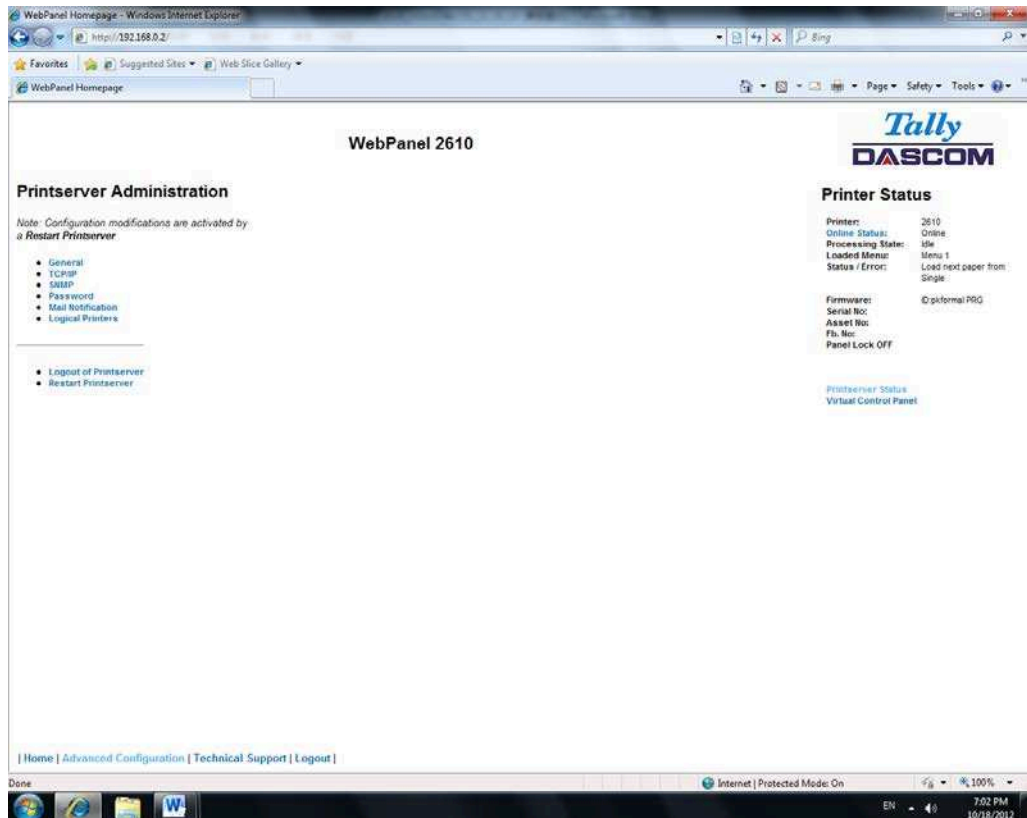
6.3.17   General

The General page sets up the timers and the labels for name, contact and location of the printer.
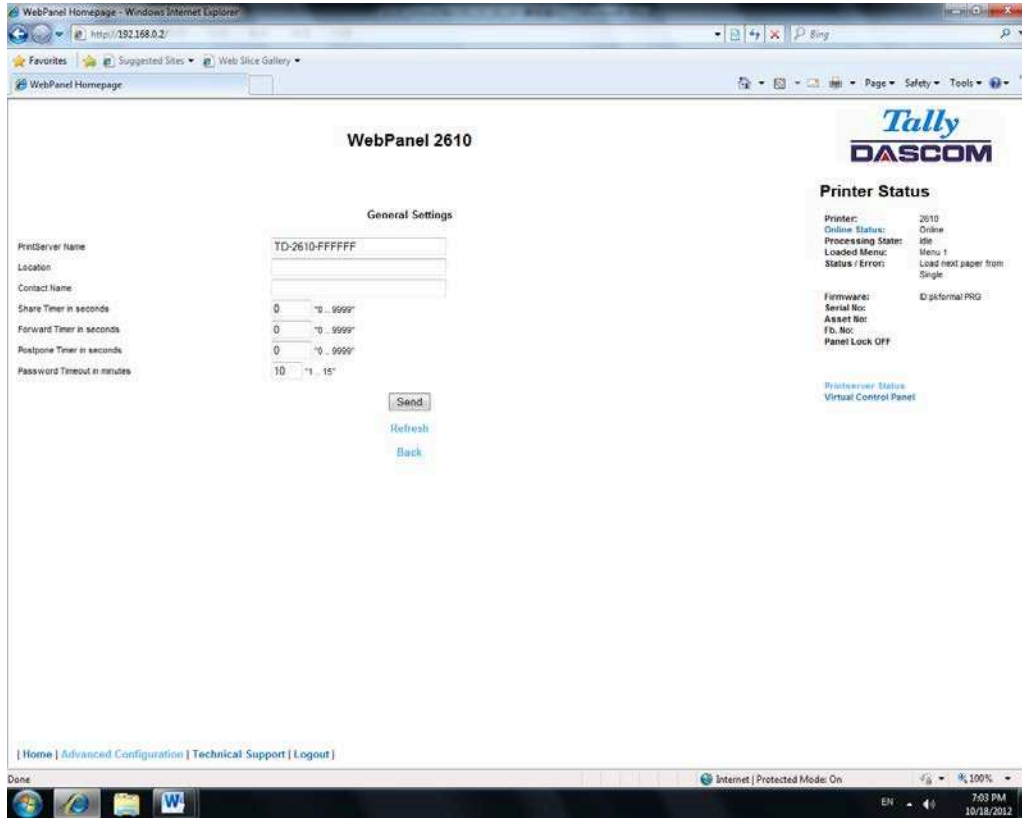
ℹ️ **The Print Server Name is by default and can be changed accordingly. This name   used for entering into Name Server (DNS/DHCP).**

6.3.18   TCP/IP

The TCP/IP Page allows the user to modify the existing TCP/IP information for the printer.

After changing the particular parameters, it is necessary to restart TallyCom from the Advanced Configuration page. If the IP Address is changed and the Send button selected

you will disconnect from the current session and will need to reconnect at the new IP Address.
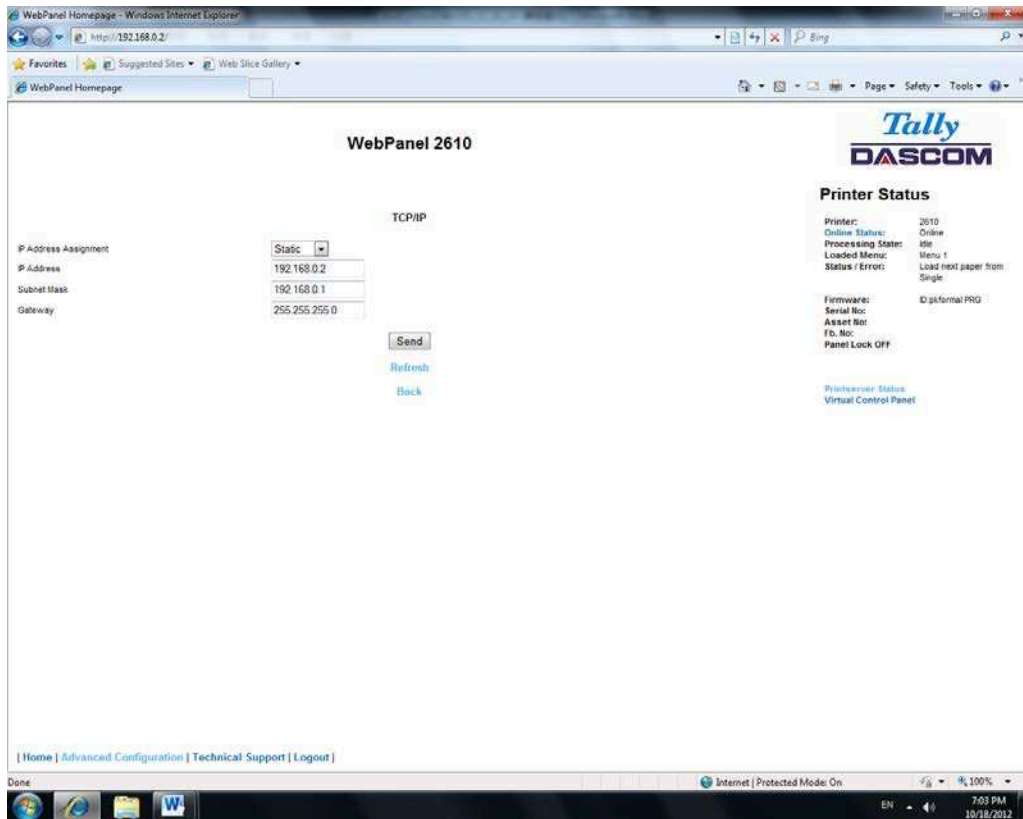
6.3.19   SNMP

The SNMP page allows the user to set the Community Name and the Access. The page looks like this:

6.3.20   Password

The Password page allows the user to set a password which would limit access to certain
configuration and action links in WebPanel. The maximum number of characters for the password is 7. The default password is no password at all ("null"). However, "adm" is also acceptable as the default password to be compatible with the external TallyCom Ⅲ pocket NICs (Options), which use this as the default password. If this or no password at all ("null") is set as the password, all of the web pages are accessible by everyone. If any other password is set, the first time a user accesses a password protected page, a window will open asking for verification with user and password information. Once the password has been successfully recognized, all password protected pages will be available. Once the password is recognized, a timer is set, based on the Password Timer value set in the General web page. If there is inactivity in the browser which lasts beyond the timer time, the password will have to be reentered to access the protected pages.
The password page looks like this:
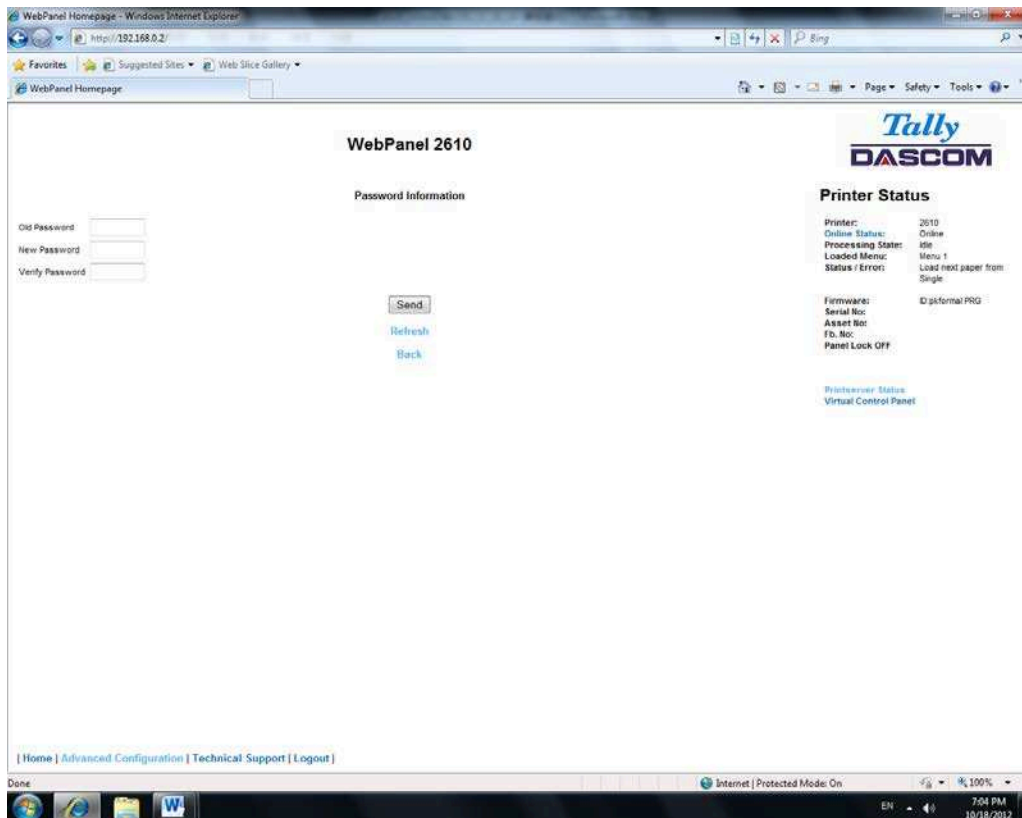
6.3.21   User Name

The default user name is "adm" and cannot be changed.

6.3.22   Resetting Password

In order to reset password the printer needs to be defaulted. See "*Loading Default*".

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6.3.23   Email Notification

With the email notification link the user will be able to set up and receive email notices for error and status conditions of the printer. Up to 4 email addresses can be set. The page looks like this:
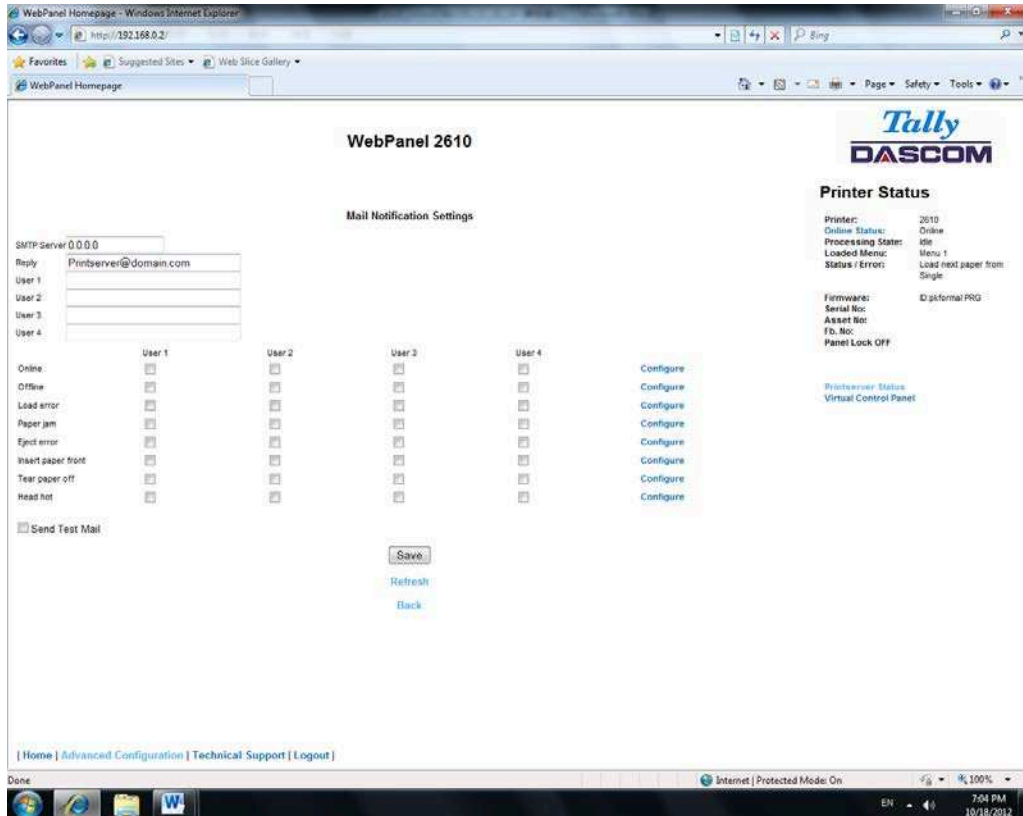
The user must set up the SMTP Mail Server as well as one or more users. The Reply address can be left as is unless there is reason to have to mail to the Reply address.

To activate the mail notification:

◆ Select which notifications are to be sent out.

◆ Click on the check box(es) on the right of the desired notification(s) for the particular
  user(s).

◆ Confirm your settings by clicking the Send button.

There is also a test mail option which sends a test email to "User 1" and is activated by checking the box and clicking on the "Save" button.

The "Configure" link at the end of each line of notification options allows the user to set
up the message information for the email as well as selecting other pertinent information to be added to the email. In addition, the timer can be set which determines when the email notification is sent out.
The page looks like this:
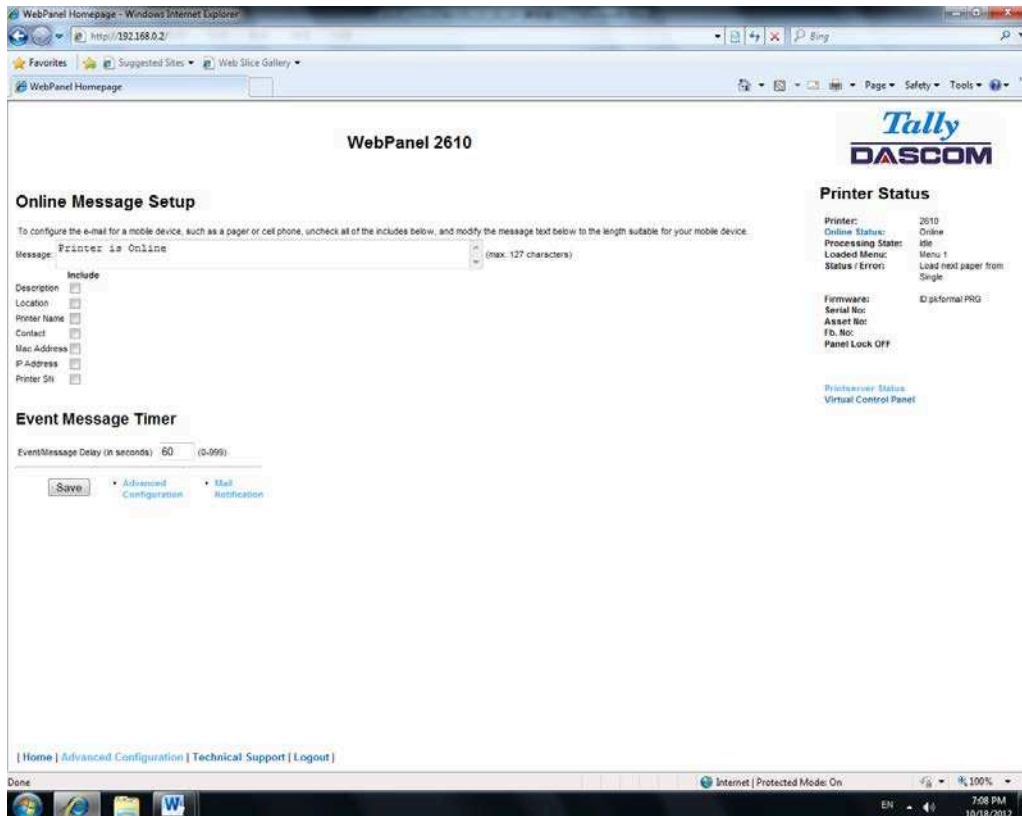
In this example, the Online message is set to "Printer is Online", and information on Description, Location, and Printer Name will be added to the email. In this example, the event timer is set for 10 seconds after the event occurs and will be sent only once, unless the printer is rebooted or the state changes. If the timer is set to 0, no email message will be sent, regardless of whether the user box has been selected. Selecting the "Save" button will set these values.

6.3.24   Logical Printers

The logical printers page will add text or commands to the beginning and ending of print jobs. This is done by pre and post strings, defined in each of the logical printers. For entering binary data in these strings, the backslash character is used followed by 2 hexadecimal digits.

Examples of this are \1b for an escape character, \0a for linefeed and \\ for backslash. Selecting the Logical Printers link gives the following page which lists seven possible logical printers plus Raw Port, which is port 9100:
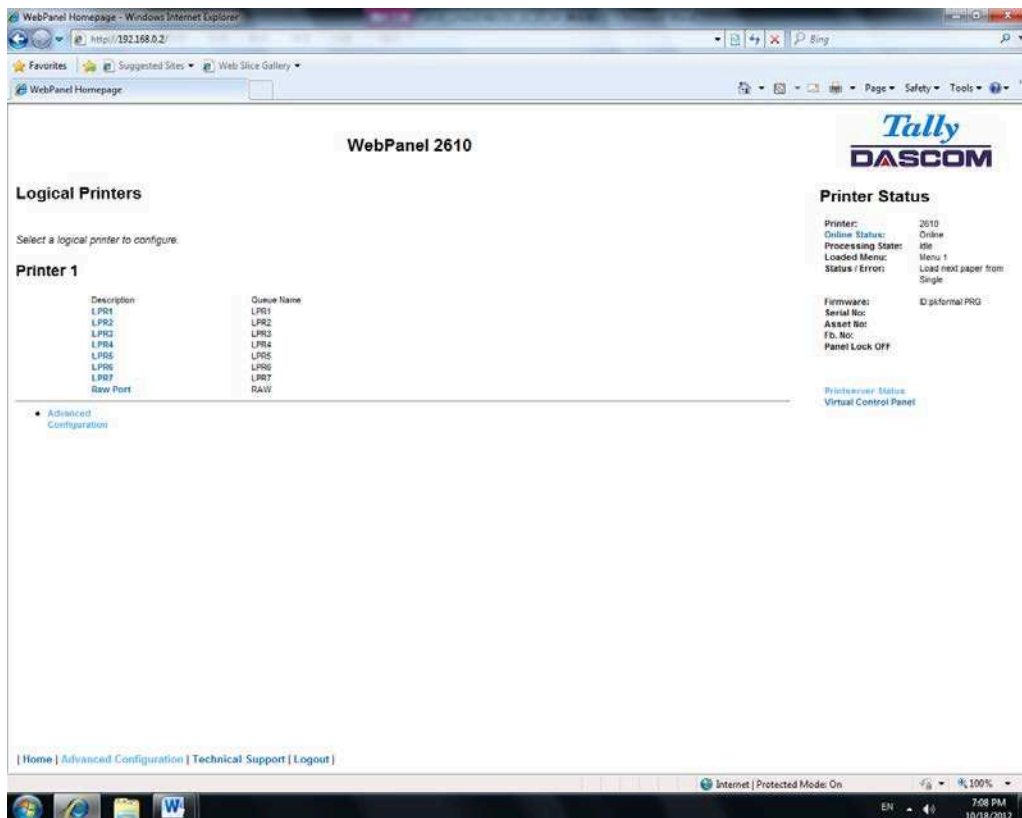
When selecting one of the logical printers under the Description column, the following page is
displayed:
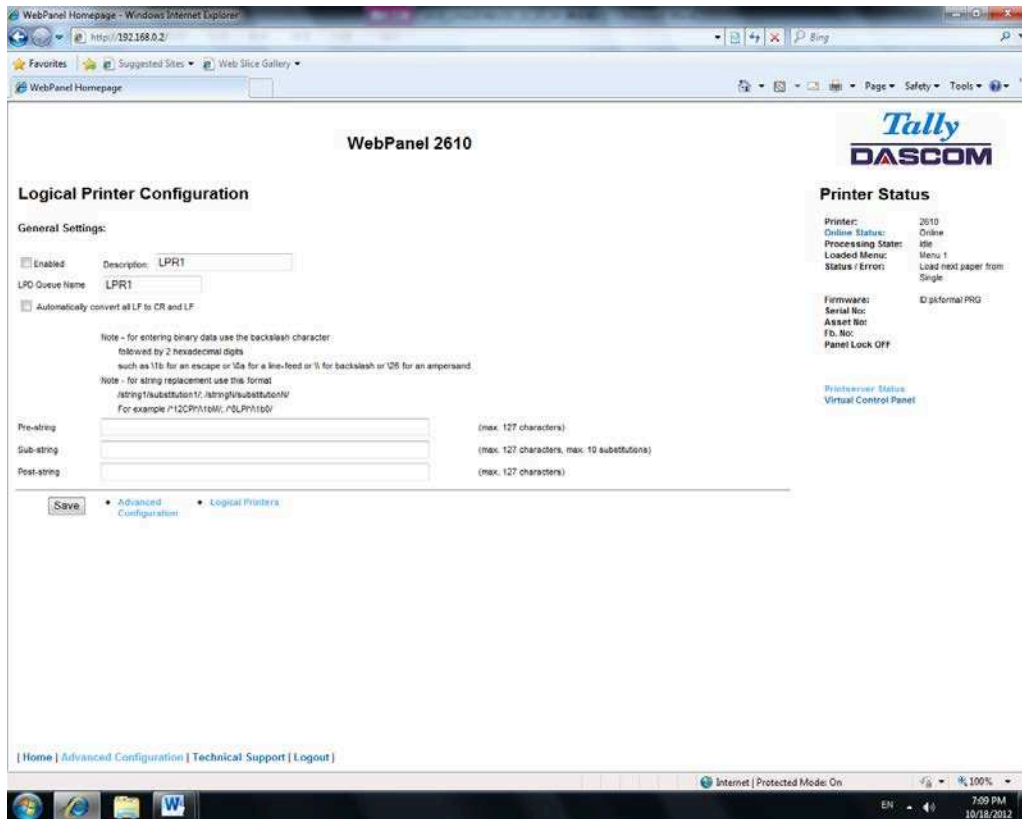
In this example if the Enable checkbox is checked, the pre-string of "Beginning to print job"
followed by a CR/LF will print at the beginning of every job sent to this LPR Queue. At the end of the print job, the message "End of job" with a formfeed will print.
Unchecking the Enable checkbox will not send the pre or post strings. The LPD Queue Name is the name of the print queue that comes from the host. The Description can be changed by the user and does not have to match the LPD Queue Name.

6.3.25   String Replacement Example Plain Text

Original Text / New Text

String Replacement Example Commands /\1B[8419t/\1B[4196t/
Control codes are entered with a back slash "\".
In this example the Formlength of A4 (8419"/720) represented by "1B[8419t" is being replaced by the string "1B[4196t" (4196"/720) which results in A5.
Multiple strings are separated by a semicolon ";".

6.3.25   Logout of TallyCom

The Logout link disconnects the browser session from the printer. Clicking on the "Home"
link reestablishes the connection.

6.3.26   Restart TallyCom

Selecting this link will reboot the printer and disconnect the current printer connection. It is
used to reset certain TCP/IP variables that were set in the General and TCP/IP pages.
Once TallyCom has restarted, those new setting will take effect. When this link is
selected, the follow page is displayed, giving the user the option to continue or not.
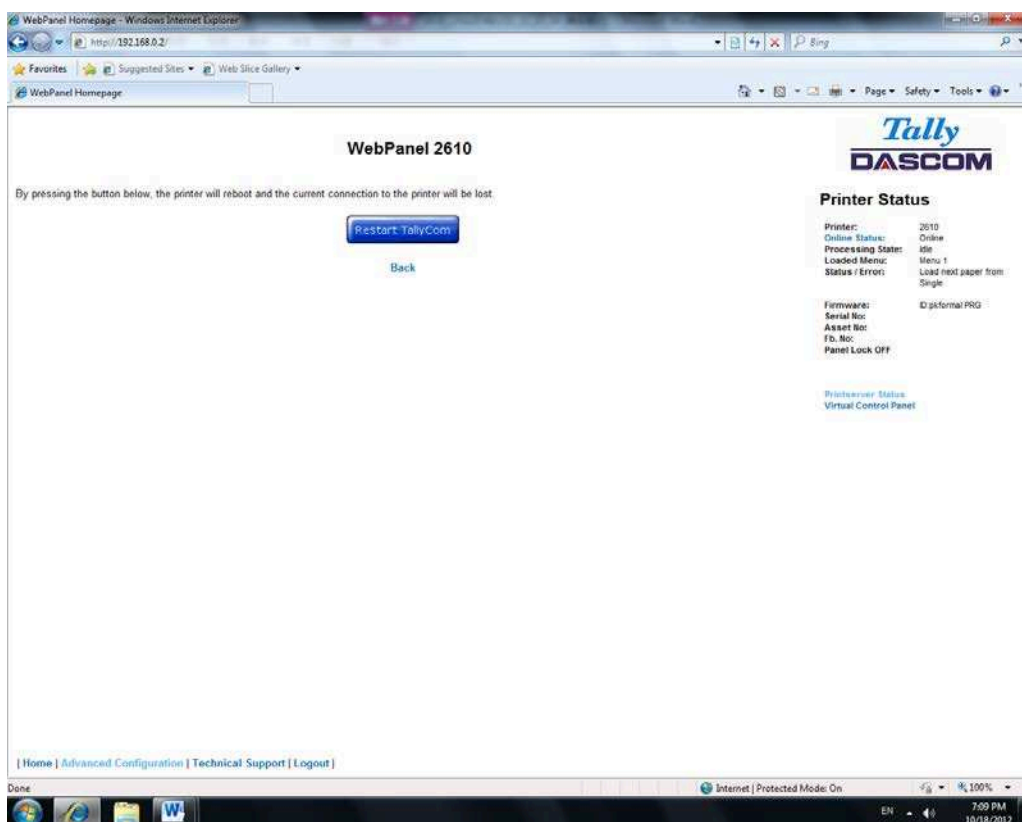
6.3.27   Virtual Control Panel

The Virtual Control Panel link is in the Printer Status area of the web page. This control panel is a visual representation of the actual control panel on the printer. It allows the user to remotely read and set panel information as if they were standing at the control panel. The functionality of the virtual panel is identical to the physical LCD panel.

Before using the virtual panel, it is important to configure the browser to allow popup windows from the printer, otherwise the panel will not display. Once the browser is configured, the page will look similar to this:
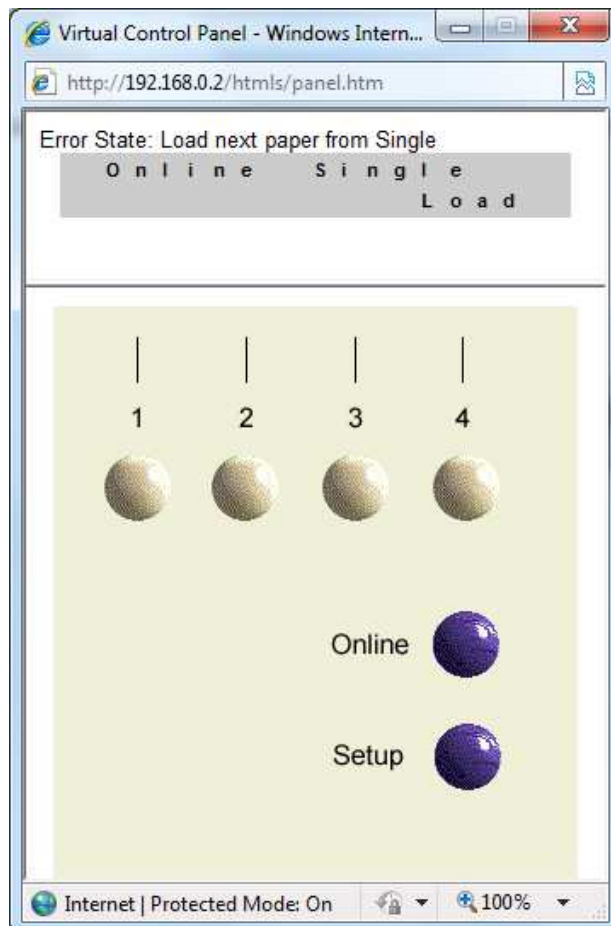
The Virtual Control Panel will be the active window. This window will show the current error state and display the contents of the printer's LCD display. Selecting the buttons on the display will behave the same as if selecting the buttons on the printer itself. The LCD information on the virtual panel refreshes every 15 seconds. The physical panel, virtual panel and Online Status in the Printer Status are all active, so there may be some synchronization delay issues if a user presses a button on the physical printer or the Online Status in the Printer Status area. The Panel Lock feature affects the virtual panel in the same way as the physical panel. The only functional difference between the physical and virtual panel is that in the virtual panel, the LF/FF option will always do a FF.

To close the virtual panel, click on the X in the upper right of the window.

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1) This feature needs the browser to allow pop ups.
2) The LED version unit does not support this function.

7   Addendum

7.1   Character Set

standard character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			0	@	P	´	p	NUL			0	@	P	·	p
1		DC1	!	1	A	Q	a	q		DC1	!	1	A	Q	a	q
2		DC2	"	2	B	R	b	r		DC2	"	2	B	R	b	r
3		DC3	#	3	C	S	c	s		DC3	#	3	C	S	c	s
4		DC4	$	4	D	T	d	t		DC4	$	4	D	T	d	t
5			%	5	E	U	e	u			%	5	E	U	e	u
6			&	6	F	V	f	v			&	6	F	V	f	v
7	BEL		'	7	G	W	g	w	BEL		'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x	BS	CAN	(	8	H	X	h	x
9	HT		)	9	I	Y	i	y	HT		)	9	I	Y	i	y
A	LF		*	:	J	Z	j	z	LF		*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{	VT	ESC	+	;	K	[	k	{
C	FF	FS	,	<	L	\	l	|	FF	FS	,	<	L	\	l	|
D	CR		-	=	M	]	m	}	CR		-	=	M	]	m	}
E	SO		.	>	N	^	n	~	SO		.	>	N	^	n	~
F	SI		/	?	O	_	o	|	SI		/	?	O	_	o	DEL

standard character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			0	@	P	´	p	à	$		0	@	P	·	p
1		DC1	!	1	A	Q	a	q	è	ß	!	1	A	Q	a	q
2		DC2	"	2	B	R	b	r	ù	Æ	"	2	B	R	b	r
3		DC3	#	3	C	S	c	s	ò	æ	#	3	C	S	c	s
4		DC4	$	4	D	T	d	t	ì	Ø	$	4	D	T	d	t
5			%	5	E	U	e	u	°	ø	%	5	E	U	e	u
6			&	6	F	V	f	v	£	¨	&	6	F	V	f	v
7	BEL		'	7	G	W	g	w	i	Å	'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x	¿	Ö	(	8	H	X	h	x
9	HT		)	9	I	Y	i	y	Ñ	Ü	)	9	I	Y	i	y
A	LF		*	:	J	Z	j	z	ñ	ä	*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{	¤	ö	+	;	K	[	k	{
C	FF	FS	,	<	L	\	l	|	₧	ü	,	<	L	\	l	|
D	CR		-	=	M	]	m	}	Å	É	-	=	M	]	m	}
E	SO		.	>	N	^	n	~	á	é	.	>	N	^	n	~
F	SI		/	?	O	_	o	|	Ç	¥	/	?	O	_	o	DEL

IBM character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			0	@	P	´	p	NUL		á	▦	└	┴	α	≡
1		DC1	!	1	A	Q	a	q		DC1	í	▒	┴	┬	β	±
2		DC2	"	2	B	R	b	r		DC2	ó	█	┬	┬	Γ	≥
3		DC3	#	3	C	S	c	s		DC3	ú	│	├	└	π	≤
4		DC4	$	4	D	T	d	t		DC4	ñ	┤	─	└	Σ	⌠
5			%	5	E	U	e	u			Ñ	┤	┼	┌	σ	⌡
6			&	6	F	V	f	v			ª	┤	├	┌	µ	÷
7	BEL		'	7	G	W	g	w	BEL		º	┐	├	┼	τ	≈
8	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	┐	└	┼	Φ	°
9	HT		)	9	I	Y	i	y	HT		⌐	┤	┌	┘	θ	·
A	LF		*	:	J	Z	j	z	LF		¬	│	┴	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	┐	┬	█	δ	√
C	FF	FS	,	<	L	\	l			FF	FS	¼	┘	├	▄	∞	ⁿ
D	CR		-	=	M	]	m	}	CR		¡	┘	─	█	ø	²
E	SO		.	>	N	^	n	~	SO		«	┘	┼	█	ε	■
F	SI		/	?	O	_	o			SI		»	┐	┴	▄	∩	

IBM character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			0	@	P	´	p	Ç	É	á	▦	└	┴	α	≡
1		DC1	!	1	A	Q	a	q	ü	æ	í	▒	┴	┬	β	±
2		DC2	"	2	B	R	b	r	é	Æ	ó	█	┬	┬	Γ	≥
3	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	└	π	≤
4	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	└	Σ	⌠
5	♣		%	5	E	U	e	u	à	ò	Ñ	┤	┼	┌	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	┤	├	┌	µ	÷
7	BEL		'	7	G	W	g	w	ç	ù	º	┐	├	┼	τ	≈
8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	┐	└	┼	Φ	°
9	HT		)	9	I	Y	i	y	ë	Ö	⌐	┤	┌	┘	θ	·
A	LF		*	:	J	Z	j	z	è	Ü	¬	│	┴	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	ï	¢	½	┐	┬	█	δ	√
C	FF	FS	,	<	L	\	l			î	£	¼	┘	├	▄	∞	ⁿ
D	CR		-	=	M	]	m	}	ì	¥	¡	┘	─	█	ø	²
E	SO		.	>	N	^	n	~	Ä	₧	«	┘	┼	█	ε	■
F	SI		/	?	O	_	o			Å	ƒ	»	┐	┴	▄	∩	

OCR-A character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			□	ꟼ	P	'	p	NUL							
1		DC1	Ψ	1	A	Q	a	q		DC1						
2		DC2	"	2	B	R	b	r		DC2						
3		DC3	♪	3	C	S	c	s		DC3						
4		DC4	$	4	D	T	d	t		DC4						
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7	BEL		'	7	G	W	g	w	BEL							
8	BS	CAN	{	8	H	X	h	x	BS	CAN						
9	HT		}	9	I	Y	i	y	HT							
A	LF		*	:	J	Z	j	z	LF							
B	VT	ESC	+	;	K	[	k	(	VT	ESC						
C	FF	FS	،	■	L	\	l	|	FF	FS						
D	CR		-	=	M	]	m	)	CR							
E	SO		.	■	N	^	n	~	SO							
F	SI		/	?	O	_	o	.	SI							

OCR-A character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Ø	►		□	ꟼ	P	'	p								
1	☺	◄	Ψ	1	A	Q	a	q								
2	☻	↕	"	2	B	R	b	r								
3	♥	‼	♪	3	C	S	c	s								
4	♦	¶	$	4	D	T	d	t								
5	♣	§	%	5	E	U	e	u								
6	♠	_	&	6	F	V	f	v								
7	•	↨	'	7	G	W	g	w								
8	�‣	↑	{	8	H	X	h	x								
9	○	↓	}	9	I	Y	i	y								
A	■	→	*	:	J	Z	j	z								
B	♂	←	+	;	K	[	k	(								
C	♀	∟	،	■	L	\	l	|								
D	♪	↔	-	=	M	]	m	)								
E	♫	▲	.	■	N	^	n	~								
F	☼	▼	/	?	O	_	o	.								

Tally Dascom 2600/2610/PRN-7

OCR-B character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			0	@	P	'	p	NUL							
1		DC1	!	1	A	Q	a	q		DC1						
2		DC2	"	2	B	R	b	r		DC2						
3		DC3	#	3	C	S	c	s		DC3						
4		DC4	$	4	D	T	d	t		DC4						
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7	BEL		'	7	G	W	g	w	BEL							
8	BS	CAN	(	8	H	X	h	x	BS	CAN						
9	HT		)	9	I	Y	i	y	HT							
A	LF		*	:	J	Z	j	z	LF							
B	VT	ESC	+	;	K	[	k	{	VT	ESC						
C	FF	FS	,	<	L	\	l	|	FF	FS						
D	CR		-	=	M	]	m	}	CR							
E	SO		.	>	N	^	n	~	SO							
F	SI		/	?	O	_	o	.	SI							

OCR-B character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	ø	►		0	@	P	'	p								
1	☺	◄	!	1	A	Q	a	q								
2	☻	↕	"	2	B	R	b	r								
3	♥	‼	#	3	C	S	c	s								
4	◆	¶	$	4	D	T	d	t								
5	♣	§	%	5	E	U	e	u								
6	♠	_	&	6	F	V	f	v								
7	•	↨	'	7	G	W	g	w								
8	▫	↑	(	8	H	X	h	x								
9	○	↓	)	9	I	Y	i	y								
A	■	→	*	:	J	Z	j	z								
B	♂	←	+	;	K	[	k	{								
C	♀	∟	,	<	L	\	l	|								
D	♪	↔	-	=	M	]	m	}								
E	♫	▲	.	>	N	^	n	~								
F	☼	▼	/	?	O	_	o	.								

International Character Set Commands

Country	Basic Command
USA	＜ESC＞"R"CHR＄（0）
FRANCE	＜ESC＞"R"CHR＄（1）
GERMANY	＜ESC＞"R"CHR＄（2）
UK	＜ESC＞"R"CHR＄（3）
DENMARK 1	＜ESC＞"R"CHR＄（4）
SWEDEN	＜ESC＞"R"CHR＄（5）
ITALY	＜ESC＞"R"CHR＄（6）
SPAIN 1	＜ESC＞"R"CHR＄（7）
JAPAN	＜ESC＞"R"CHR＄（8）
NORWAY	＜ESC＞"R"CHR＄（9）
DENMARK 2	＜ESC＞"R"CHR＄（10）
SPAIN 2	＜ESC＞"R"CHR＄（11）
LATINAMERICA	＜ESC＞"R"CHR＄（12）
DENMARK/NORWAY	＜ESC＞"R"CHR＄（13）
CHINA	＜ESC＞"R"CHR＄（16）

International character sets：

Character Set	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
0: U. S. A.	#	$	@	[	\	]	^	`	{	¦	}	~
1: FRANCE	#	$	à	°	ç	§	^	`	é	ù	è	¨
2: GERMANY	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
3: U. K.	£	$	@	[	\	]	^	`	{	¦	}	~
4: DENMARK 1	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
5: SWEDEN	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
6. ITALY	#	$	@	°	\	é	^	ù	à	ò	è	ì
7. SPAIN 1	Pt	$	@	¡	Ñ	¿	^	`	¨	ñ	}	~
8. JAPAN	#	$	@	[	¥	]	^	`	{	¦	}	~
9: NORWAY	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
10: DENMARK 2	#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
11: SPAIN 2	#	$	á	¡	Ñ	¿	é	`	í	ñ	ó	ú
12: LATIN AMERICA	#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú
13: DENMARK/NORWAY	#	$	@	[	\	]	^	`	{	¦	}	~
14: CHINA	#	¥	@	[	\	]	^	`	{	¦	}	~

7.2 Control Codes Summary

The following table shows sequences marked by a √ if they are available in the various emulations. The MTPL sequences can be used within all emulation modes. The corresponding sequences are marked by a *.

If you want to learn more about control codes, we recommend to download the Programmer's Application Manual from our internet support pages.

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
√	√		√	√	<BEL>	Signal tone
√	√	√	√	√	<BS>	Control character BS (Backspace)
			√	√	<CAN>	Deleting a data line
√	√	√	√	√	<CR>	Control character CR (Carriage return)
√					<CSI>	Start character for MTPL sequences, corr. ESC [
			√	√	<DC1>	Selecting the printer
			√	√	<DC2>	Condensed printing OFF (set by <SI> or <ESC><SI>)
			√	√	<DC3>	Deselecting the printer
			√	√	<DC4>	Double-wide printing OFF (set by <SO> or <ESC><SO>)
√	√	*	√	√	<DEL>	Delete line. Epson: Delete last character
√	√	√	√	√	<ESC>	Start character for programming sequence
	√	√	√	√	<ESC>!<n>	Print mode selection
	√	√	√	√	<ESC>#	Bit 8 = unchanged
			√	√	<ESC>$<n1><n2>	Perform absolute horizontal step
			√	√	<ESC>%<0><0>	Select ROM character generator
			√	√	<ESC>%<1><0>	Select download generator
√	*	*	*	*	<ESC>%1<n1><n2>	Graphics print with 180 dpi/HQ
√	*	*	*	*	<ESC>%2<n1><n2>	Graphics print with 360 dpi/HQ
√	*	*	*	*	<ESC>%3<n1> <n2>	Graphics print with 60 dpi
√	*	*	*	*	<ESC>%4<n1> <n2>	Graphics print with 120 dpi
√	*	*	*	*	<ESC>%5<n1> <n2>	Graphics print with 80 dpi
√	*	*	*	*	<ESC>%7<n1> <n2>	Graphics print with 240 dpi
√	*	*	*	*	<ESC>%8<n1> <n2>	Graphics print with 72 dpi
√	*	*	*	*	<ESC>%9<n1><n2>	Graphics print with 90 dpi
			√	√	<ESC>&<s><x><y>..	Define download character
√	*	*	*	*	<ESC>(&	Character set ISO 8859-2
√	*	*	*	*	<ESC>(*	Character set ISO 8859-5
√	*	*	*	*	<ESC>(+	Character set ISO 8859-1 SAP

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
✓	*	*	*	*	<ESC>(.	Character set ISO 8859-9
✓	*	*	*	*	<ESC>(/	Character set ISO 8859-15
✓	*	*	*	*	<ESC>(<	Character set Cro ASCII
				✓	<ESC>(c	Defining the page format
				✓	**<ESC>(v**	**Relative vertical printing position**
				✓	<ESC>(t	Assigning a character table
✓	*	*	*	*	<ESC>(m	Character set BRASCII
✓	*	*	*	*	<ESC>(n	Character set Abicomp
✓	*	*	*	*	<ESC>(p	Windows character set 1250 (Latin2)
✓	*	*	*	*	<ESC>(q	Windows character set 1251 (Cyrillic)
✓	*	*	*	*	<ESC>(r	Windows character set 1252 (Latin1)
✓	*	*	*	*	<ESC>(t	Windows character set 1254 (Turkish)
✓	*	*	*	*	<ESC>(`	Character set Norwegian
				✓	<ESC>(^<n1><n2><d1><dn>	Print data as characters
✓	*	*	*	*	<ESC>(A	Character set UK-ASCII
✓	*	*	*	*	<ESC>(B	Character set US-ASCII
				✓	<ESC>(B<n1>-<n8>	Barcode Setup and print
				✓	<ESC>(C	Defining the page length
✓	*	*	*	*	<ESC>(MI>F	Assign character set G0
				✓	<ESC>(G	Selecting graphics mode
✓	*	*	*	*	<ESC>(H	Character set Swedish-Finnish
✓	*	*	*	*	<ESC>(K	Character set German
✓	*	*	*	*	<ESC>(L	Character set Portuguese
✓	*	*	*	*	<ESC>(R	Character set French
				✓	<ESC>(U	Setting positioning units in n/3600 inch
				✓	<ESC>(V	Absolute vertical printing position
✓	*	*	*	*	<ESC>(Y	Character set Italian
✓	*	*	*	*	<ESC>(Z	Character set Spanish
✓	*	*	*	*	<ESC>)MI>F	Assign character set G1
		✓	✓	✓	<ESC>*<0><n1> <n2>	Set graphics print to 60 dpi
		✓	✓	✓	<ESC>*<1><n1> <n2>	Set graphics print to 120 dpi
		✓	✓	✓	<ESC>*<2><n1> <n2>	Set graphics print to 120 dpi
		✓	✓	✓	<ESC>*<3><n1> <n2>	Set graphics print to 240 dpi
		✓	✓	✓	<ESC>*<32><n1> <n2>	Set graphics print to 60 dpi
		✓	✓	✓	<ESC>*<33><n1> <n2>	Set graphics print to 120 dpi
		✓	✓	✓	<ESC>*<38><n1> <n2>	Set graphics print to 90 dpi
		✓	✓	✓	<ESC>*<39><n1> <n2>	Set graphics print to 180 dpi

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
		√	√	√	<ESC>*<4><n1> <n2>	Set graphics print to 80 dpi
		√	√	√	<ESC>*<40><n1> <n2>	Set graphics print to 360 dpi
√	*	*	*	*	<ESC>*MI>F	Assign character set G2
	√	√	√		<ESC>-<n>	Underlining ON/OFF
			√		<ESC>/<m>	Select vertical tab channels
				√	<ESC>.	Printing raster graphics
	√	√			<ESC>:	Condensed printing 12 cpi ON
			√	√	<ESC>:<0><n><m>	Copy ROM character set
			√	√	<ESC><	Unidirectional printing for 1 line
			√	√	<ESC>=	Set bit 8 = 0
	√	√			<ESC>=<C1><C2>...	Load font/character set
			√	√	<ESC>>	Set bit 8 = 1
			√	√	<ESC>?<s><n>	Reload a graphics mode
			√	√	<ESC>@	Initialize printer
√	*	*	*	*	<ESC>[	MTPL start character for programming sequence
√	*	*	*	*	<ESC>[:y	Right justification and centering OFF
√	*	*	*	*	<ESC>[=z	Bold ON
√	*	*	*	*	<ESC>[>z	Bold OFF
√	*	*	*	*	<ESC>[?1~	MTPL command set
√	*	*	*	*	<ESC>[?10~	Barcode interpretation OFF
√	*	*	*	*	<ESC>[?11~	Start barcode interpretation
√	*	*	*	*	<ESC>[?4~	MTPL + IBM Proprinter-24 command set
√	*	*	*	*	<ESC>[?50h	Selecting character sets with 256 characters
√	*	*	*	*	<ESC>[?50I	Selecting character sets with 94 characters
√	*		*	*	<ESC>[?51h	Proportional fonts automatic NLQ and LQ
√	*		*	*	<ESC>[?51I	Proportional fonts in draft mode possible
√	*	*	*	*	<ESC>[?52h	Font selection (ESC[10...19m]) possible only for NLQ and LQ
√	*	*	*	*	<ESC>[?52I	Font selection (ESC[10...19m]) Draft
√	*	*	*	*	<ESC>[?53h	Extended character set
√	*	*	*	*	<ESC>[?53I	Standard character set
√	*	*	*	*	<ESC>[?6~	MTPL + EPSON LQ-2550 command set
√	*	*	*	*	<ESC>[?8~	MTPL + EPSON LQ-2170 command set
√	*	*	*	*	<ESC>[?7h	Line overrun = CR + LF

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
√	*	*	*	*	<ESC>[?7l	Line overrun = Truncating data outside of the printing area
√	*	*	*	*	<ESC>[?<n>~	Change emulation
	√	√			<ESC>[@<n1> <n2>...	Set double height
	√	√			<ESC>[\<n1> <n2>...	Change vertical base units
√	*	*	*	*	<ESC>[0;;n{	Select single sheet operation
√	*	*	*	*	<ESC>[0;0r	Clear top and bottom margin
√	*	*	*	*	<ESC>[0;0s	Clear left and right margin
√	*	*	*	*	<ESC>[0g	Clear horizontal tab at the current print head position
√	*	*	*	*	<ESC>[0m	Clear all selected fonts
√	*	*	*	*	<ESC>[0m	Reset color (reserved)
√	*	*	*	*	<ESC>[0 SP I	Measuring unit decipoint
√	*	*	*	*	<ESC>[0 SP K	Set horizontal pitch to 10 cpi
√	*	*	*	*	<ESC>[0 SP L	Set vertical spacing to 6 lpi
√	*	*	*	*	<ESC>[0 SP X	LQ print quality
√	*	*	*	*	<ESC>[0w	Set 5 cpi
√	*	*	*	*	<ESC>[0y	Selecting Draft printing quality
√	*	*	*	*	<ESC>[0z	Superscript ON
√	*	*	*	*	<ESC>[10m	Font 0 Default: Draft
√	*	*	*	*	<ESC>[10y	Right and center adjustment OFF
√	*	*	*	*	<ESC>[10z	Microscript ON
√	*	*	*	*	<ESC>[11e	Set PUM (absolute measuring unit) to OFF
√	*	*	*	*	<ESC>[11h	Set PUM (absolute measuring unit) to ON
√	*	*	*	*	<ESC>[11m	Font 1 Default: Courier NLQ
√	*	*	*	*	<ESC>[11w	Set 20 cpi
√	*	*	*	*	<ESC>[11y	Select print quality HS-Draft
√	*	*	*	*	<ESC>[12m	Font 2 Default: Courier LQ
√	*	*	*	*	<ESC>[12 SP K	Set horizontal pitch to 12 cpi
√	*	*	*	*	<ESC>[12w	Set horizontal pitch to 10 cpi
√	*	*	*	*	<ESC>[12y	Select print quality LQ
√	*	*	*	*	<ESC>[12z	Double height ON (top portion)
√	*	*	*	*	<ESC>[13m	Font 3 Default: Sans Serif NLQ
√	*	*	*	*	<ESC>[13y	Select print quality LQ
√	*	*	*	*	<ESC>[13z	Double height ON (lower portion)
√	*	*	*	*	<ESC>[14m	Font 4 Default: Sans Serif LQ
√	*	*	*	*	<ESC>[15m	Font 5 Default: Roman LQ
√	*	*	*	*	<ESC>[15 SP K	Set horizontal pitch to 15 cpi

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
✓	*	*	*	*	<ESC>[16m	Font 6 Default: Script LQ
✓	*	*	*	*	<ESC>[17m	Font 7 Default: Prestige LQ
✓	*	*	*	*	<ESC>[18m	Font 8 Default: OCR-B LQ
✓	*	*	*	*	<ESC>[19m	Font 9 Default: OCR-A LQ
✓	*	*	*	*	<ESC>[1 g	Clear vertical tab at current position
✓	*	*	*	*	<ESC> [1 SP k	Printout in Royal Mail customer barcode
✓	*	*	*	*	<ESC>[1 SP L	Set vertical spacing to 4 lpi
✓	*	*	*	*	<ESC>[1 SP p	Initiate US Postnet Barcode
✓	*	*	*	*	<ESC>[1 SP X	Print quality NLQ
✓	*	*	*	*	<ESC>[1w	Set 6 cpi
✓	*	*	*	*	<ESC>[1y	Print quality NLQ
✓	*	*	*	*	<ESC>[1z	Subscript ON
✓	*	*	*	*	<ESC>[21{	ASF-1: Select feeder front
✓	*	*	*	*	<ESC>[22{	ASF-2: Select feeder rear
✓	*	*	*	*	<ESC>[21m	Double underlining
✓	*	*	*	*	<ESC>[23m	Italics OFF
✓	*	*	*	*	<ESC>[24m	Underline OFF
✓	*	*	*	*	<ESC>[26m	Proportional font ON
✓	*	*	*	*	<ESC>[2g	Clear all horizontal tabs in the current line
✓	*	*	*	*	<ESC>[2J	Print page
✓	*	*	*	*	<ESC>[2 SP l	Measuring unit decipoint
✓	*	*	*	*	<ESC> [2 SP k	Printout in Kix barcode
✓	*	*	*	*	<ESC>[2 SP L	Set vertical spacing to 3 lpi
✓	*	*	*	*	<ESC>[2 SP X	Print quality Draft
✓	*	*	*	*	<ESC>[2w	Set 7.5 cpi
✓	*	*	*	*	<ESC>[2y	Proportional font ON
✓	*	*	*	*	<ESC>[2z	Double height OFF
✓	*	*	*	*	<ESC>[2z	Superscript, subscript and microscript OFF
✓	*	*	*	*	<ESC>[30m	Black
✓	*	*	*	*	<ESC>[<n>m	Color; n = 31…36
✓	*	*	*	*	<ESC>[3g	Clear all horizontal tabs
✓	*	*	*	*	<ESC>[3m	Italics ON
✓	*	*	*	*	<ESC>[3 SP L	Set vertical spacing to 12 lpi
✓	*	*	*	*	<ESC>[3w	Set 8.6 cpi
✓	*	*	*	*	<ESC>[3z	Line density 6 lpi (= line spacing 1/6 inch)
✓	*	*	*	*	<ESC>[4g	Clear all vertical tabs

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
✓	*	*	*	*	<ESC>[4m	Underline ON
✓	*	*	*	*	<ESC>[4 SP L	Set vertical spacing to 8 lpi
✓	*	*	*	*	<ESC>[4w	Set 10 cpi
✓	*	*	*	*	<ESC>[4y	Selecting NLQ printing quality at 10 cpi
✓	*	*	*	*	<ESC>[4z	Line density 8 lpi (= line spacing 1/8 inch)
✓	*	*	*	*	<ESC>[5{	Select fanfold paper mode tractor 1
✓	*	*	*	*	<ESC>[6{	Select fanfold paper mode tractor 2
✓	*	*	*	*	<ESC>[50m	Proportional font OFF
✓	*	*	*	*	<ESC>[50{	Page at print position
✓	*	*	*	*	<ESC>[51{	Page at tear off position (perforation)
✓	*	*	*	*	<ESC>[52{	Page at view position
✓	*	*	*	*	<ESC>[53m	Overlining ON
✓	*	*	*	*	<ESC>[55m	Overlining OFF
✓	*	*	*	*	<ESC>[5n	Request status report
✓	*	*	*	*	<ESC>[5w	Set 12 cpi
✓	*	*	*	*	<ESC>[5y	NLQ with 12 cpi
✓	*	*	*	*	<ESC>[5z	Graphics normal
✓	*	*	*	*	<ESC>[6~	Initialize the printer
✓	*	*	*	*	<ESC>[6 SP K	Set horizontal pitch to 6 cpi
✓	*	*	*	*	<ESC>[6w	Set 15 cpi
✓	*	*	*	*	<ESC>[6z	Graphics inverted
✓	*	*	*	*	<ESC>[7w	Set 17.1 cpi
✓	*	*	*	*	<ESC>[7y	Proportional font OFF
✓	*	*	*	*	<ESC>[7z	Bit 8 = unchanged
✓	*	*	*	*	<ESC>[8w	Reset double stroke
✓	*	*	*	*	<ESC>[8y	Right justification ON
✓	*	*	*	*	<ESC>[8z	Set bit 8 = 0
✓	*	*	*	*	<ESC>[9 SP L	Set vertical spacing to 2 lpi
✓	*	*	*	*	<ESC>[9w	Set double stroke
✓	*	*	*	*	<ESC>[9y	Centering ON
✓	*	*	*	*	<ESC>[9z	Set bit 8 = 1
	✓				<ESC>[g<n1> <n2><0>	Set graphics print to 60 dpi
	✓				<ESC>[g<n1> <n2><1>	Set graphics print to 120 dpi
	✓				<ESC>[g<n1> <n2><11>	Set graphics print to 180 dpi
	✓				<ESC>[g<n1> <n2><12>	Set graphics print to 360 dpi

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
	√				<ESC>[g<n1> <n2><2>	Set graphics print to 120 dpi
	√				<ESC>[g<n1> <n2><3>	Set graphics print to 240 dpi
	√				<ESC>[g<n1> <n2><8>	Set graphics print to 60 dpi
	√				<ESC>[g<n1> <n2><9>	Set graphics print to 120 dpi
			√	√	<ESC>[j	Position paper back 1/180"
√	*	*	*	*	<ESC>[<n1> <n2>f	Set absolute horizontal and vertical position
√	*	*	*	*	<ESC>[<n>+w	Interface holding time n = 1 - 30 s
√	*	*	*	*	<ESC>[<n>+x	Head position horizontal in n/720", also paper load pos.
√	*	*	*	*	<ESC>[<n>SP q	Load menu
√	*	*	*	*	<ESC>[<n1>...<n5>+v	Paper handling options
√	*	*	*	*	<ESC>[<n1>...<n16>SP	Print transparent characters
√	*	*	*	*	<ESC>[<n1> <n2>f	Set absolute horizontal and vertical position
√	*	*	*	*	<ESC>[<n1> <n2>SP 0	Change character size
√	*	*	*	*	<ESC>[<n1> <n2>SP D	Select font
√	*	*	*	*	<ESC>[<n1> <n2>SP G	Set character/line spacing
√	*	*	*	*	<ESC>[<n1> <n2>r	Set top and bottom margin
√	*	*	*	*	<ESC>[<n1> <n2>s	Set left and right margin
√	*	*	*	*	<ESC>[<n> a	Set relative horizontal position
√	*	*	*	*	<ESC>[<n> d	Set absolute vertical position
√	*	*	*	*	<ESC>[<n> e	Set relative vertical position
√	*	*	*	*	<ESC>[<n> j	Relative horizontal position back (to the left)
√	*	*	*	*	<ESC>[<n> k	Relative vertical position back (to the top)
√	*	*	*	*	<ESC>[<n> p	Set HMI
√	*	*	*	*	<ESC>[<n> q	Set horizontal step
√	*	*	*	*	<ESC>[<n> SP \	Set additional spaces
√	*	*	*	*	<ESC>[<n> SP C	Select character size
√	*	*	*	*	<ESC>[<n> SP f	Set reduced spacing
√	*	*	*	*	<ESC>[<n> SP g	Set character spacing
√	*	*	*	*	<ESC>[<n> SP h	Line spacing
√	*	*	*	*	<ESC>[<n> SP s	Transmits the "n" character as an ASCII character (n= 0–255)
√	*	*	*	*	<ESC>[<n> SP U	Beginning of line (default value)
√	*	*	*	*	<ESC>[<n> SP V	End of line (default value)
√	*	*	*	*	<ESC>[<n> t	Set form length in lines
√	*	*	*	*	<ESC>[<n> u	Set horizontal tab

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
✓	*	*	*	*	<ESC>[<n> v	Set vertical tab
			✓	✓	<ESC>[\<n1><n2>	Perform relative horizontal step
	✓				<ESC>\<n1>;<n2>	Transparent mode for the characters following
	✓				<ESC>^	Transparent mode for the character following
	✓				<ESC>_<n>	Overline ON/OFF
	✓	✓	✓	✓	<ESC>0	Set line feed to 1/8 inch
	✓				<ESC>1	Set line feed to 7/72 inch
	✓	✓	✓	✓	<ESC>2	Set line feed to 1/6 inch
	✓				<ESC>2	Set line feed to n/72 inch
		✓	✓	✓	<ESC>3<n>	Set line feed to n/180 inch
	✓				<ESC>3>n>	Set line feed to n/216 inch
			✓	✓	<ESC>4	Italics ON
	✓	✓			<ESC>4	Set beginning of form
			✓	✓	<ESC>5	Italics OFF
	✓	✓			<ESC>5<n>	Autom. line feed ON/OFF
			✓	✓	<ESC>6	Print ASCII codes dec. 129 to dec. 159
	✓	✓			<ESC>6	PC character set 2 (expanded)
			✓	✓	<ESC>7	Suppress ASCII codes 129 to 159
	✓	✓			<ESC>7	PC character set 1 (standard)
			✓		<ESC>a<n>	Select orientation
	✓	✓	✓		<ESC>A<n>	Line spacing n/60 inch
	✓				<ESC>A<n>	Prepare line spacing n/72 inch
			✓		<ESC>b<m><0>	Clear all tabs
			✓		<ESC>b<m><n><0>	Set vertical tabs in channels
	✓	✓	✓	✓	<ESC>B<0>	Clear all vertical tabs
			✓	✓	<ESC>B<n1>...<n16><0>	Set vertical tabs
	✓	✓			<ESC>B<n1>...<n64><0>	Set vertical tabs
✓					<ESC>c	Reset to initialization status
				✓	<ESC>c	Setting the horizontal motion index (HMI)
	✓	✓	✓	✓	<ESC>C<0><n>	Set form length in inches
	✓	✓	✓	✓	<ESC>C<n>	Set form length in lines
	✓	✓		✓	<ESC>d<n1> <n2>	Perform relative horizontal step
	✓	✓	✓	✓	<ESC>D<0>	Clear all horizontal tabs
	✓	✓	✓	✓	<ESC>D<n1>...<n32><0>	Set horizontal tabs
	✓	✓			<ESC><DC2>	Condensed printing OFF
	✓	✓			<ESC><DC4>	Double-wide printing OFF (set with <SO> or <ESC><SO>)

MTPL	IBM XL24	IBM AGM	Epson LQ-2550	Epson LQ-2170	Code	Function
	✓	✓	✓	✓	<ESC><SO>	Double-wide printing ON
			✓	✓	<ESC><SP><n>	Set character spacing
			✓	✓	<ESC>t<n>	Select character set
	✓	✓	✓	✓	<ESC>T	Superscript or subscript OFF
	✓	✓	✓	✓	<ESC>U<n>	Unidirectional print ON/OFF
			✓	✓	<ESC>Un	Unidirectional print ON/OFF
	✓	✓	✓	✓	<ESC>W<n>	Continuous double width ON/OFF
			✓	✓	<ESC>w<n>	Double height print ON/OFF
			✓	✓	<ESC>x<n>	Set print quality (PQ)
			✓	✓	<ESC>x<0>	sets Draft or HS-Draft
			✓	✓	<ESC>x<1>	sets LQ or NLQ
				✓	<ESC>X	Font selection according to pitch and points
	✓	✓			<ESC>X<n><m>	Set left and right margin
	✓	✓	✓	✓	<ESC>Y<n1> <n2>	Set graphics print to 120 dpi
	✓	✓	✓	✓	<ESC>Z<n1> <n2>	Set graphics print to 240 dpi
✓	*	*	*	*	<ESC>+F	Assign character set G3
✓	*	*	*	*	<ESC>|	Character generator LS3R
✓	*	*	*	*	<ESC>}	Character generator LS2R
✓	*	*	*	*	<ESC>~	Character generator LS1R
✓	✓	✓	✓	✓	<FF>	Form feed
✓	✓	✓	✓	✓	<HT>	Horizontal tab jump
✓					<HTS>	Set tab stop at actual horizontal position
✓					<IND>	Line feed without CR
✓	✓	✓	✓	✓	<LF>	Line feed
✓					<NEL>	Line feed with CR
✓					<PLD>	Half step line feed
✓					<PLU>	Half step line feed back
✓					<RI>	Line feed without CR back
	✓	✓	✓	✓	<SI>	Condensed printing of 17.1 cpi ON
✓					<SI>	Switching the character generator (SS 3)
	✓	✓	✓	✓	<SO>	Double-wide printing ON
✓					<SO>	Switching the character generator (SS 2)
✓	✓	✓	✓	✓	<VT>	Vertical tab jump
✓					<VTS>	Set tab stop at current vertical position

7.2.1   PJL commands

These PJL commands can be used with internal Ethernet interface as well as with external
TallyCom III Pocket interface.

This functionality may be activated via the parameter **Jobcntl** in the Advanced Menu.

Sequence	Brief description
"ESC"%-12345X@PJL	Universal Exit Language (UEL)
@PJL ECHO	ECHO command
@PJL EOJ @PJL EOJ NAME=	EOJ (End of Job) commands
@PJL INFO STATUS	INFO (Information Request) command
@PJL INFO CONFIG	INFO of the printer configuration
@PJL INFO VARIABLES	INFO of variables which can be set by
@PJL INFO MEMORY	INFO about the memory of the printer
@PJL USTATUS DEVICE = ON @PJL USTATUS DEVICE = OFF @PJL USTATUS DEVICE = VERBOSE @PJL USTATUS JOB = ON @PJL USTATUS JOB = OFF @PJL USTATUS PAGE = ON	USTATUS (unsolicited status) commands
@PJL JOB NAME = @PJL JOB FILE = @PJL JOB START = @PJL JOB END = @PJL JOB COPY =	JOB (Start of Job) commands
@PJL ENTER LANGUAGE	Exit PJL and start normal parser
@PJL INFO USTATUS	List each type of unsolicited status
@PJL USTATUS TIMED	Enables timed unsolicited status

7.2.2   Barcode

Even the standard version of your printer has the possibility of using up to 23
different   MTPL barcode types.

ⓘ   **Barcode mode can be accessed within every emulation. The user can
decide whether barcode is activated permanently or activated
depending on the situation by means of an escape sequence.
The printer prints small barcode in 240 dpi and wider barcodes in 120
dpi.**

7.2.3   List of available MTPL barcodes

Type	Barcode	Type	Barcode
A*	2/5 Matrix (default)	N	UPC A (with HRI)
B*	2/5 Industrial	O	UPC A (without HRI)
C*	2/5 Interleaved	P	UPC E (with HRI)
D*	Code 11	Q	UPC E (without HRI)
E*	BCD Matrix	R*	Delta Distance (IBM)
F*	Code 39	S	Code 128
G*	Codabar	T	EAN 128
H	EAN 8 (with HRI)	1)	US-Postnet
I	EAN 8 (without HRI)	1)	KIX Barcode
K	EAN 13 (with HRI)	1)	Royal Mail Customer Barcode
L	EAN 13 (without HRI)	1)	USPS Intelligent Mail Barcode
M*	MSI/modified PLESSEY		

*These barcodes may be printed out horizontal and vertical, the unmarked only horizontal.

1) See description on following pages.
The barcode types K, L, N, O may be expanded by using Add-On Barcodes:
Add-On 2 and Add-On 5.
The information to be printed is transmitted in a "bracket" (DC4) A control sequence (Header) defines the parameters of the used barcode once (e.g. type, ratio, etc.). If no header is defined, the informaton in the "bracket" will be printed in Code 2/5 Matrix.

Please note that within the Barcode environment the barcode commands have priority in case of conflicts with the emulation.

Additional information is provided in the Barcode Programmer's Application Manual on this CD-ROM.

7.2.4   US Postnet barcode

Postnet is a special US-American type of barcode. Is printed in character size.
Numeric
values from 0 to 9 are printable.

After activating this barcode type, numeric characters from 0 (hex. 30) to 9 (hex. 39) are interpreted as barcode figures. All other characters terminate the Barcode mode.

Exception: the TAB function (hex. 09) is allowed within Barcode mode. The Postnet sequence is accessible in every emulation.

The character (e.g. CR = carriage return, hex. 0D), which terminates the barcode is not printed or carried out. US Postnet barcode does not require a barcode bracket.

Example:

ASCII	ESC	[	1	SP	P	1	2	3	4	5	CR

HEX	1B	5B	31	20	70	31	32	33	34	35	0D

The numbers 1 to 5 are printed as Postnet stripes.

7.2.5   Royal Mail Customer barcode

The Royal Mail Customer barcode is a special Mail type barcode. It is printed in character size. Numeric values from 0 to 9 and alpha- numeric values from A to Z are printable. After activating this barcode type, numeric characters from 0 (hex.30) to 9 (hex. 39) and alphanumeric values from A (hex. 41) to Z (hex. 5A) are interpreted as barcode figures. Lower cases from a (hex. 61) to z (hex. 7a) are automatically converted to capital characters. Control characters from hex. 0 (dec. 0) to hex.1F (dec. 31) terminates this barcode mode. All other characters are ignored. Exception: the TAB function (hex. 09) is allowed within Barcode mode. The Royal Mail Customer sequence is accessible in MTPL emulation. The printer prints barcode in LQ.

🛈 **The character (e.g. CR = carriage return, hex. 0D), which terminates the barcode is not printed or carried out.**
Royal mail customer barcode does not required barcode bracket.

Example:

ASCII	ESC	[	1	SP	k	S	O	3	6	X	Y	1	A	CR
HEX	1B	5B	31	20	6B	53	4F	33	36	58	59	31	41	0D

The characters "SO36XY1A" are printed as Royal Mail Customer stripes.

7.2.6   KIX barcode

The KIX barcode prints numeric values from 0 to 9 and alpha-numeric values from A to Z as barcode characters.

After activating this barcode type, numeric characters from 0 (hex. 30) to 9 (hex. 39) and alphanumeric values from A(hex. 41) to Z (hex. 5A) are interpreted as barcode figures. Lower cases from a (hex. 61) to z (hex. 7a) are automatically converted to capital characters. Control characters from hex. 0 (dec. 0) to hex.1F (dec. 31) terminates this barcode mode. All other characters are ignored. Exception: the TAB function (hex. 09) is allowed within Barcode mode. The KIX sequence is accessible in MTPL emulation. The printer prints barcode in LQ.

🛈 **The character (e.g. CR = carriage return, hex. 0D), which terminates the barcode is not printed or carried out. KIX barcode does not require a barcode bracket.**

Example:

ASCII	ESC	[	2	k	S	O	3	6	X	Y	1	A	CR
HEX	1B	5B	31	6B	53	4F	33	36	58	59	31	41	0D

The characters "SO36XY1A" are printed as KIX stripes.

7.2.7   USPS Intelligent Mail barcode

The USPS Intelligent Mail barcode is a 4-state barcode which works in MTPL, IBM and Epson   emulation. 4-state barcode data must be converted into only 0, 1, 2 or 3. Each number represents one of the four possible bars. Tabs (Hex 09) and spaces can separate either the bars or the barcodes horizontal, but every other character below Hex 20 will terminate barcode mode.

You can enter the barcode mode with the sequence ESC [? 11 ~, the sequence ESC [10 ~ exits the barcode mode.

Example:

ASCII	ESC	[	9	SP	K	<data>
HEX	1B	5B	39	02	6B	<data>

7.2.8   LC printing

Certain professional applications may require unusually Large character sizes. Therefore your printer has the possibility of scaling standard size characters up to factor 99 by means of control sequences (LCP*).

The Header sequence defines the parameters (e.g. height) once. This definition remains until the printer is switched off. The printable LCP* information is transmitted in an LCP "bracket" (SI).

The following character sets (with national characters) are available.

	ID	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
US ASCII	01	#	$	@	[	\	]	?	`	{	|	}	‾
GERMAN	02	#	$	§	Ä	*	Ü	?	`	ä	*	ü	ß

The character sets are selected via the following LCP sequence ESC "P" "L" "S" n ESC "\". The value of n may range between 01 and 02 (as ASCII characters) – see ID column in the above table.

To select e.g. the German character set, you must use the following data set:

ASCII	ESC	P	L	S	0	1	ESC	\
HEX	1B	50	4C	53	30	31	1B	5C
DEC	27	80	76	83	48	49*	27	92

The printout of LCP characters can be selected in all of the emulations. Prerequisite: Printer must be in Barcode mode.
Note that this printer supports some scalable fonts in the LQ-2170 emulation if a compatible driver is used.

7.2.9 List of additional control Codes

You can use both the ESC sequences and the control codes

Sequences	Control codes	Function
<ESC>[?10~	—	Barcode Off
<ESC>[?11~	—	Barcode On
<ESC> PSC 0 <ESC> \	—	Unsecured mode
<ESC> PSC 1 <ESC> \	—	Secured mode
<ESC> PLS <n> <ESC> \	—	LCP character set
<ESC>[<n><SP>s	—	Sends a character as ASCII character; n > 0–255 decimal
<ESC>[20<SP>s	<DC4>	Barcode bracket
<ESC>[16<SP>s	<DLE>	Start code LCP Header
<ESC>[25<SP>s	<EM>	Termination code
<ESC>[15<SP>s	<SI>	Header LCP bracket
<ESC>[26<SP>s	<SUB>	Start code
<ESC>[1 SP p	—	Barcode-Header
<ESC>[1 SP k	—	US-Postnet Barcode
<ESC>[2 SP k	—	Royal Mail Customer Bar- code
<ESC>[9 SP k	—	Kix-Barcode
		USPS Intelligent Mail

Header	Function
<DLE> [!] nn EM	LCP header [ ] = optional nn = factor
<SUB> [F] a [nn][;xyz][;p] EM	Barcode header [ ] = optional a = Barcode type p = 0: Barcode horizontal p = 9: Barcode vertical

Additional information is provided in the Barcode Programmer's Application Manual on this CD-ROM.

7.3 Interfaces Specifications

Your matrix printer offers connectivity via a parallel interface, USB and Ethernet interface. Serial I/O RS232C interface is an option. This appendix informs you about the parallel Interface, USB, Ethernet interface and optional serial interface RS232C, and describes the communication between your computer and the printer.

These interfaces are linked to form a called shared interface. Your printer can be configured to use only one interface or three alternately. When only one interface is used, it is monitored by the printer. If the printer is configured to use three interfaces simultaneously it monitors all interfaces for incoming data. As soon as the printer recognizes a signal, it switches to the respective interface and sends the BUSY signal to the other interface. After finishing the data transmission, the printer remains switched to the interface for a certain period of time (30 seconds). When this time has elapsed, the controller again enables all interfaces and the sequence described restarts. If incoming data is on the other interface and the current print position is not "Top of Form", a form feed is carried out.

7.3.1 Parallel I/O IEEE 1284

The bidirectional parallel interface offers the "nibble" mode of IEEE1284 interface. This enables installation in accordance with Windows "Plug & Play".

The standard parallel interface is able to transfer data at a speed of max. 30, 000 bytes per second. When the receiving buffer is full, the data input is blocked until the data buffer is empty.

Connector assignment

Connector no.	Direction Printer–PC	Signal
1	←	STROBE (active low)
2	←	DATA 1
3	←	DATA 2
4	←	DATA 3
5	←	DATA 4
6	←	DATA 5
7	←	DATA 6
8	←	DATA 7
9	←	DATA 8
10	→	ACK (active low)
11	↔	BUSY
12	↔	PAPER EMPTY (PE)
13	↔	SELECT
14	↔	AUTO FEED (active low)
15	- - -	not used
16	-	SIGNAL GROUND
17	←	CHASSIS GROUND
18	↔	5 V (Imax = 500 mA)
19–30	-	SIGNAL GROUND INIT
31		(active low) ERROR
32	←	(active low) SIGNAL
33		GROUND not used
34–35		SELECT IN
36		
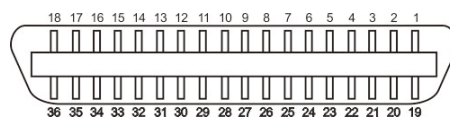
Transmission length: max. 2,0 m

7.3.2 Ethernet I/O 10/100 Mulitprotocol

The Ethernet interface enables the printer to connect to local area networks. Its attributes are:

Hardware	LAN/Ethernet: RJ45, Ethernet 100BaseTX with 100 Mbps (IEEE802.3u), 10Base-T with 10 Mbps (IEEE802.3) Speed: 100 Mbps / Full Duplex
Supported operating Systems	Windows XP, Windows Server 2003, Windows 2000, Windows NT, Windows 7, Windows Vista, Windows Server 2008, Windows Server 2013, Windows 8 Linux Unix Sun Solaris
Supported Protocols	SNMP SMTP TCP/IP FTP Ipr / Ipd Port 9100
Designation of IP Address	DHCP BOOTP Static (manually via the printer's control panel)
Configuration	HTTP TCP/IP
Status	SNMP TCP/IP SMTP PING
Management	Web Panel HP Web Jet Admin E-Mail notification with SMTP Pre-string, Post-String, String Replacement
Setup	Setup via the printer's control panel Web Panel (HTTP/HTML)

Ethernet TCP/IP

When using your printer in a local network with Ethernet connections and the TCP/IP protocol, you have to assign address information.

Address information for the Ethernet Port can only be made available by your network administrator, who has the necessary rights to install Printers on the network and/or make any changes.

Example of a Printer connected to a computer in an Network

◆ The assumed address space corresponds to the TCP/IP address, class C, 192.168.1.xxx.

◆ The subnet mask to be used is 255.255.255.0.

◆ The address of the router, or gateway, is 0.0.0.0, if not available.
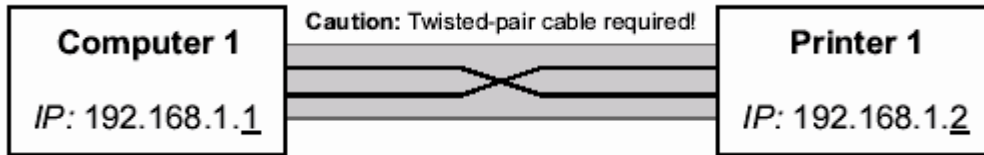
Example of several devices in an Ethernet
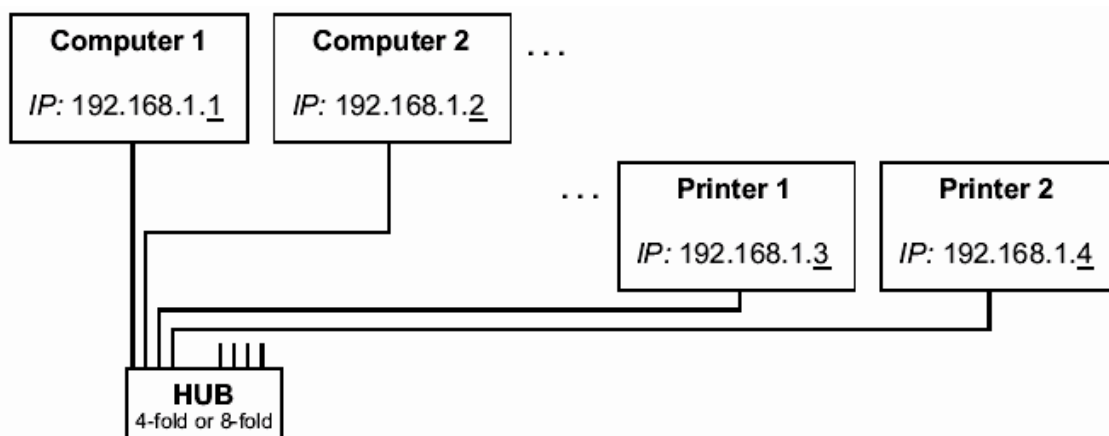
7.3.3 USB 2.0 I/O – Full Speed

The USB interface conforms to the Universal Serial Bus 2.0 Specifications. It supports the Full Speed mode at 12 Mbps. It uses the "B" type USB connector.

7.3.4   Optional Serial Interface RS232C

Your printer's serial interface supports the RS232C specification. The signals are received and transmitted by a 9 pin connector.
Basically 3 lines are enough for exchanging information between computer and printer (one receive line, one send line, one line for common grounding).

| Type	RS232C interface
Synchronization	Asynchronous
Transmission rate	600 Baud to 19200 Baud
Signal status	OFF (log.1) -3 V to -15 V ON (log. 0) +3 V to +15 V
Connection cable	up to 15 m length
Interface connections	ITT Cannon connector, series DB-9 S
Transmission protocol	XON/XOFF, ENQ/STX, READY/ BUSY, Robust XON/XOFF, ETX/ ACK, ACK/NAK
Capacity of data buffer	512Byte min. 256KByte max

Connector assignment

Connector no.	Direction Printer–PC	Signal
3	→	TxD
4	→	DTR
2	←	RxD
6	←	DSR
7	→	RTS
8	←	CTS
5	⊠	Signal Ground SG
Shield	⊠	Frame Ground FG

ℹ️
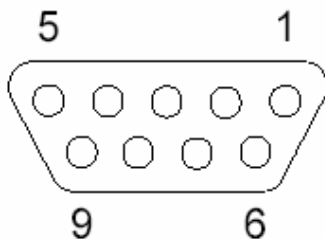
1) The serial cable length must not exceed 15 meters.
2) Make sure the "Interface Setup" selects serial interface and the settings are the same as PC communication port settings. See example below:
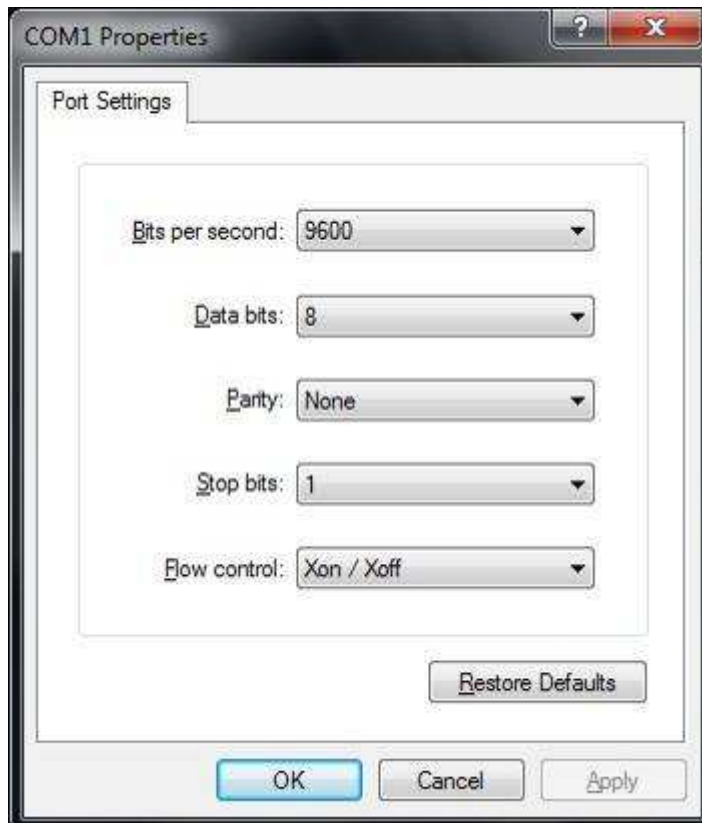
Interface cable (serial interface)

The cables used must be shielded. The cable shield must be connected to the connector shield on both ends.

```
┌─────────────────────────────────────────────────────────┐
│ PC/AT（9 Pin）                      Printer（9 Pin）       │
│ RxD   2 ──────────────────────── 3   TxD                 │
│ TxD   3 ──────────────────────── 2   RxD                 │
│ CTS   8 ──────────────────────── 4   DTR/RDY             │
│ SG    5 ──────────────────────── 5   SG                  │
│ DSR   6 ────────────┐                                    │
│ DTR   4 ────────────┘                                    │
└─────────────────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────────────────────────┐
│ PC/AT（25 Pin）                     Printer（9 Pin）       │
│ FG    1 ────────────────────────     FG                  │
│ TxD   2 ──────────────────────── 2  RxD                  │
│ RxD   3 ──────────────────────── 3  TxD                  │
│ CTS   5 ──────────────────────── 4  DTR/RDY              │
│ SG    7 ──────────────────────── 5  SG                   │
│ DSR   6 ────────────┐                                    │
│ DTR   20 ───────────┘                                    │
└─────────────────────────────────────────────────────────┘
```

ⓘ   **It depends on the menu setting whether DTR or RDY (Ready) is active at Pin 4.**

◆ **Input signals**

Signal	Function
CTS	Clear to Send
DSR	Data Set Ready
RxD	Receive Data

◆ **Output signals**

Signal	Function
DTR	Data Terminal Ready
RTS	Request to Send
READY	Ready to receive
TxD	data Transmit Data

Protocols

◆ Memory mode XON/XOFF

The received characters are stored in a FIFO buffer (first in/first out).
The characters are processed in this buffer.
The buffer capacity can be adjusted from 0 to 128 Kb.

If the buffer is full, the interface signals NOT READY (signal acknowledgement: Level 1, -12 V) and XOFF (hex. 13, dec. 19). This results in stopping the data transmission. When the FIFO buffer is empty again, the interface signals READY (level 0, +12 V) and XON (hex.11, dec. 17). Data transmission can be continued.

In addition, the READY signal is influenced by the status of the printer (On/Off Line). If the printer assumes an undefined state, the interface also signals NOT READY and XOFF.

◆ Memory mode Robust XON/XOFF

Robust XON/XOFF is similar to XON/XOFF. However, the state of the printer (XON or XOFF) is also periodically transmitted via the TxD line in the case of Robust XON/XOFF.

◆ Extended menu functions with the ENQ/STX and ETX/ACK protocols selected

1) This menu option is only displayed if either the ENQ/STX, Ack/NAK or the ETX/ACK protocol is activ.
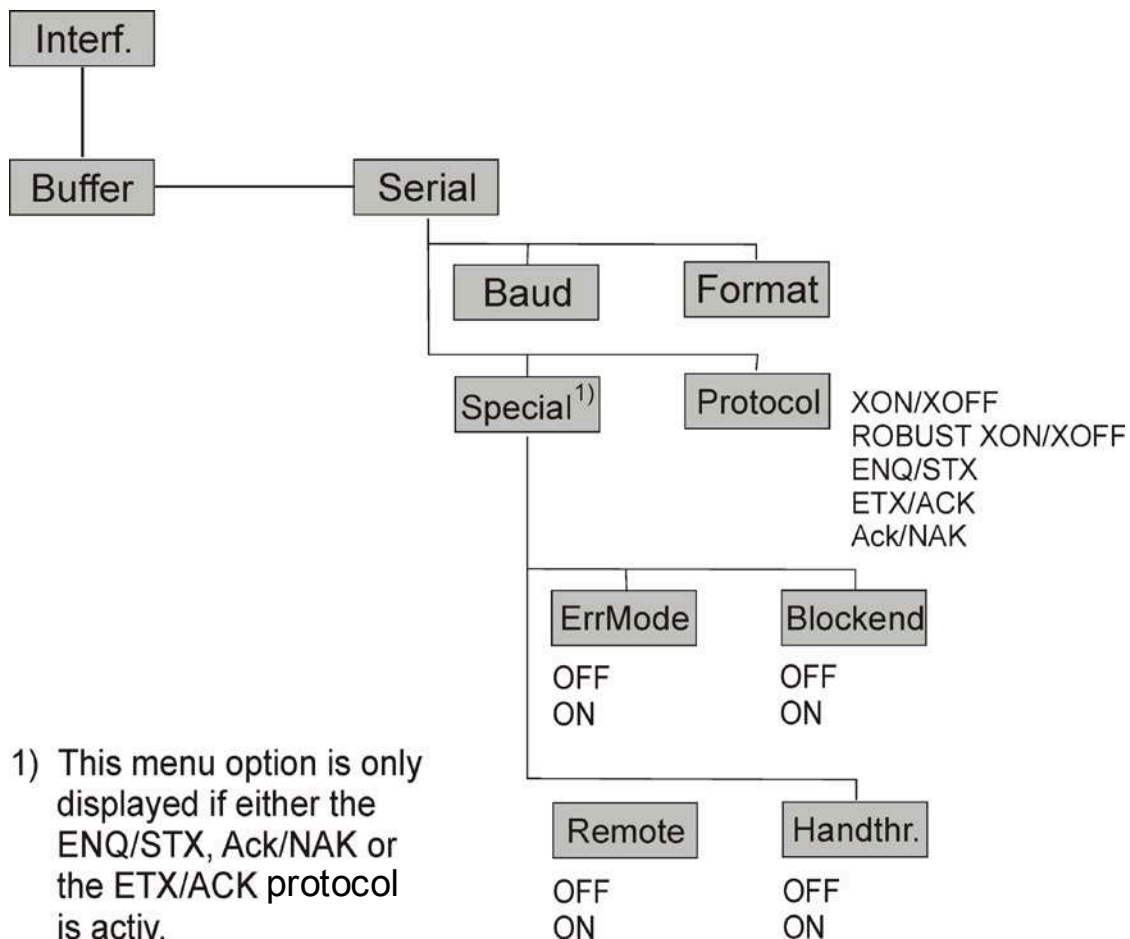
◆ ENQ/STX protocol

In addition to this XON/XOFF message, the possibility exists of requesting a status byte from the printer using the ENQ code (hex. 05, dec. 5). The STX code (hex 02, dec. 2) is used to clear any error messages (parity error, buffer overflow).

Status byte	Bit 0-1	BUSY
	Bit 1-1	Off Line
	Bit 2-0	Paper end
	Bit 3-1	Always 1
	Bit 4-1	Cover open
	Bit 5-1	Buffer overflow
	Bit 6-1	Parity or frame error
	Bit 7-0	Always 0

STX (hex02):

ENQ (hex05):

XON/XOF:

HandThr.= ON:

HandThr.= OFF:

Clears any previous parity or framing error as well as any buffer overflow error.

The current printer status is sent to the host.

This protocol is automatically used for data flow control and printer status handling.

The STX and ENQ characters are not filtered out of the data stream and control the interface in addition.

The STX and ENQ are filtered out of the data stream and handled immediately by the interface.

◆ ETX/ACK protocol

ETX (hex03):

XON/XOFF:

ACK (hex06):

HandThr.=ON:

HandThr. =OFF:

Acknowledgement informing the host that further data may be transmitted.

This protocol is used in addition to data flow control and printer status handling.

Block end character.

An ETX is not acknowledged by ACK before all previously arrived data have been printed.

When the printer receives an ETX, it returns an ACK to the host. Any previously sent data or blocks may still be present in the printer buffer.

◆ ACK/NAK protocol

The ACK/NAK Protocol is a so called block Protocol.

Normally the Blocks are starting with the Block Start Character (STX, dec 02, hex 02) and end with a Block End Character (ETX, dec 03, hex 03).

As soon as a Block is received by the printer it acknowledges it with the Acknowledge Character (ACK, dec 06, hex 06).

If there is an Error in the transmission a Not-Acknowledge-Character (NAK, dec 21, hex 15) is being sent back. As a block end character other codes are possible.

One can check the printer condition/status; During the transmission of graphic data or download character per se problems can come up within the block mode as in this data block end characters can be transmitted as normal graphic or other data.

8   Options and accessories

The following options can be ordered for your printer.

8.1   Options

Tractor Unit 2600

Name	Part no.
Second Tractor for push and pull position (rear, top and front installable).	99992

Tractor Unit 2610

Name	Part no.
Second Tractor for push and pull position (rear, top and front installable).	99993

Serial Interface 2600/2610

Name	Part no.
Serial Interface RS232C, 9pin female	99994

8.2 Consumables

Ribbons

Name	Part no.
Ribbon cassette monochrome black for narrow model	99061
Ribbon cassette monochrome black for wide	99071

Refill Kits

Name	Part no.
Refill Kit monochrome black fabric for narrow	99002
Refill Kit monochrome black fabric for wide model, on demand	99072

8.3 Accessories

Programming manuals
The following programming manuals are available. You can download the manuals from
our internet page.

Name	Part no.
Programmer's application manual MTPL (in English)	379 298
Programmer's application manual Barcode (in English)	379 300
Programmer's application manual Epson (in English)	379 302

9 General Specifications

9.1 Printer Specifications

Print System	**Mono-chrome serial impact dot matrix**
Print Technology	**Uni-/bi-directional logic seeking for text and graphics**
Print Head	**Number of pins: 24 pins (2 x 12; staggered)** **Firing frequency: Normal mode: 2 kHz** **Pin diameter: 0.25 mm** **Distance between pins: horizontal 1/20 inch, vertical 1/90 inch** **Life: 500 million strokes/pin @ Draft mode**
Print Speed	**Pitch HS Draft Draft NLQ LQ in CPS** **(characters per second)** **10 CPI 500 333 222 111** **12 CPI 500 400 267 133** **15 CPI *) 500 500 333 167** **15 CPI 500 500 167 167** **17.1 CPI 286 285 190 190** **20 CPI 333 333 222 222** **17.1 CPI **) 571 --- --- ---** **20 CPI **) 680 --- --- ---**
Character Pitch	5 / 6 / 7.5 / 8.6 / 10 / 12 / 15 / 17.1 / 20 CPI (characters per inch)
Print attributes in all character pitches	Double width / italics / right justification / shadowed / auto centered / double height / bold / proportionally spaced / underlined / overlined / superscript / subscript; Scalable with special LQ-2170 fonts
Character Size	Height: 3.32 mm (inclusive descenders) Width: max. 2.43 mm
Font Matrix	**Pitch HS Draft Draft NLQ LQ** **(Matrix/DPI)** **10 CPI 24x8/80H 24x12/120H 24x18/180H 24x36/360H** **12 CPI 24x8/96H 24x10/120H 24x15/180H 24x30/360H** **15 CPI *) 16x8/120H 16x8/120H 16x12/180H 16x24/360H** **15 CPI 24x8/120H 24x8/120H 24x18+6/360H 24x18+6/360H** **17.1 CPI 24x12+2/240H 24x12+2/240H 24x18+3/360H 24x18+3/360H** **20 CPI 24x10+2/240H 24x12+2/240H 24x15+3/360H 24x15+3/360H** **17.1 CPI **) 24x06+1/240H --- --- ---** **20 CPI **) 24x05+1/240H --- --- ---**
Paper Feed	**Feed speed: 5 ips (tractor and friction)** **Feed first line (6lpi): 43 ms** **View / Tear position: 5 ips** **Reverse motion: up to max form length of 14 inches**

*) Only with ESC/P (sub-/superscript, 15 CPI) and MTPL Micro-script

**) Reduced matrix, selectable by menu, named Ultra-Draft

Tab Speed	**50 ips**	
Graphic Densities	**Horizontal: 60 / 72 / 80 / 90 / 120 / 180 / 240 / 360 DPI (dot per inch)** **Vertical: 90 / 180 / 360 DPI**	
Print width	**Narrow version** **10 CPI: 80 CPL** **12 CPI: 96 CPL** **15 CPI: 120 CPL** **17.1 CPI: 137 CPL** **20 CPI: 160 CPL**	**Wide version** **136 CPL (characters per line)** **163 CPL** **204 CPL** **233 CPL** **272 CPL**
Fonts, resident	**Print qualities:** **Ultra-Draft, HS-Draft and Draft in Data Print Quality** **NLQ same as LQ with reduced matrix, LQ Roman, Roman PS, Sans Serif, Sans Serif PS, Courier, Courier (IBM®),Courier PS (IBM®), OCR A, OCR B, Prestige, Script, Orator, Gothic, Souvenir** **DLL Character Sets in EPSON® and IBM® format**	
Barcodes, resident	**Selectable via programming:** **Code 2/5 Industrial** **Code 2/5 Interleaved** **Code 39** **Code EAN-8 with HRI (human readable index)** **Code EAN-8 without HRI** **Code EAN-13 with HRI** **Code EAN-13 without HRI** **Code UPC-A with HRI** **Code UPC-A without HRI** **Code UPC-E with HRI** **Code UPC-E without HRI** **Code 128 EAN (also called EAN-128)** **Code 128** **U.S. Postnet (fix format, non-scalable)** **KIX Barcode** **Royal Mail Customer Barcode** **USPS Intelligent Mail Barcode**	
Emulation	**MTPL, EPSON® ESC P/2 (LQ2170), EPSON® ESC P (LQ 2550), IBM® PP XL 24e**	
Code Pages and National Character Sets	**See the list at the end of the Printer Specifications where Fonts, Code pages and** **available pitch sizes are given by corresponding relationships.**	
Line Spacing	**2 LPI / 3 LPI / 4 LPI / 6 LPI / 8 LPI / 12 LPI / 1/72" / 1/180" / 1/360 inches**	

Paper Handling	**Feeding method: Friction (Single) and Tractor (FF-front / FF-rear / FF-pull)** **Path selection: By selection lever located at the right device side** **Paper path: Cut sheets: Front in, front or top out** **Fanfold paper: Front or rear in, top out** **For details enter the Paper Specifications – _9.3_ below**
Ribbon Type	**Ribbon Cartridge, monochrome;** **Wide version: 470 x 93 x 39mm max, (WxDxH), fabric: 13mm height** **Narrow version: 330 x 93 x 39mm max, (WxDxH), fabric: 13mm height**
Ribbon Life	**Wide version: 12 million characters (rolling Draft 10 CPI)** **Narrow version: 6 million characters (rolling Draft 10 CPI)**
Windows Drivers	**Windows Server 2000 / 2003 / 2008 / 2012** **Windows 7 and Windows 8 (for 32 and 64bit versions)** **➔ covers Windows XP, Windows 2000 and Windows Vista.**
Interfaces	**Ethernet 10/100MHz** **Parallel (Bi-directional IEEE-1284 nibble mode)** **USB 2.0 (Full Speed 12 MHz, B type connector)** **For details enter the Interface Specifications – _7.3_ above**
Input Data Buffer	**Up to 256KB**
Operation Panel	**LED version: 4 keys and 5 indicator LEDs** **LCD version: 6 keys and LCD with 2 lines x 16 characters**
Self test	**Menu setting print out** **Rolling ASCⅡ 80 or 136** **Hex-Dump**
Noise Level	**Sound pressure level = ≤ 55 dB(A) in LQ**
Environmental Conditions	**Temperature Operating: +10 to +35°C.** **Storage: - 5 to +45°C** **Transport: - 40 to +70°C** **Humidity Operating: 16 to 73% RH (No condensation)** **Storage: 5 to 95% RH (No condensation)** **Transport: 5 to 95% RH (No condensation)**
Dimensions	**Wide version: 600 mm (W) x 267 mm (D) x 202 mm (H)** **Narrow version: 458 mm (W) x 267 mm (D) x 202 mm (H)**
Weight	**Wide version: 10.62 kg** **Narrow version: 8.1 kg**

Power Supply	**Unit type:** **Autosensing wide range power supply** **Power cord:** **Detachable** **Voltage rating:** **AC 100 to 240V / 47Hz to 63Hz** **Nominal power:** **30W** **ESD:** **Comply with IEC801-2;** **Contact discharge: 4kV** **Air discharge:** **8kV**
Fuse	**T6.3AH/250V**
MTTR	**< 15 minutes**
Continuous operation	**Throughput:** **422 p/h in Draft mode according IEC 10561:1999 (ECMA 132)** **MTBF:** **20.000 hours**
Certifications	**CE, UL, FCC, ICES, Energy Star,**

9.2 Non-Scalable Fonts, Code Pages and National Character Sets

	ID for ESC R/ESC (	High Speed Draft	Draft	Roman	Sans Serif	Courier (incl. Courier IBM)	OCR-B	OCR-A	Prestige	Script	Orator	Gothic	Souvenir
ISO USA	42	X	X	X	X	X	X	X	X	X	X	X	X
ISO UK	41	X	X	X	X	X	X	X	X	X	X	X	X
ISO France	52	X	X	X	X	X	X	X	X	X	X	X	X
ISO Germany	4B	X	X	X	X	X	X	X	X	X	X	X	X
ISO Italy	59	X	X	X	X	X	X	X	X	X	X	X	X
ISO Sweden	48	X	X	X	X	X	X	X	X	X	X	X	X
ISO Norway	60	X	X	X	X	X	X	X	X	X	X	X	X
ISO Spain	5A	X	X	X	X	X	X	X	X	X	X	X	X
ISO Portugal	4C	X	X	X	X	X	X	X	X	X	X	X	X
Epson USA	00	X	X	X	X	X	X	X	X	X	X	X	X
Epson France	01	X	X	X	X	X	X	X	X	X	X	X	X
Epson Germany	02	X	X	X	X	X	X	X	X	X	X	X	X
Epson UK	03	X	X	X	X	X	X	X	X	X	X	X	X
Epson Denmark I	04	X	X	X	X	X	X	X	X	X	X	X	X
Epson Sweden	05	X	X	X	X	X	X	X	X	X	X	X	X
Epson Italy	06	X	X	X	X	X	X	X	X	X	X	X	X
Epson Spain I	07	X	X	X	X	X	X	X	X	X	X	X	X
Epson Japan	08	X	X	X	X	X	X	X	X	X	X	X	X
Epson Norway	09	X	X	X	X	X	X	X	X	X	X	X	X
Epson Denmark II	0A	X	X	X	X	X	X	X	X	X	X	X	X
Epson Spain II	0B	X	X	X	X	X	X	X	X	X	X	X	X
Epson Latin America	0C	X	X	X	X	X	X	X	X	X	X	X	X
Epson Korea	0D	X	X	X	X	X	X	X	X	X	X	X	X
Epson Legal	40	X	X	X	X	X	X	X	X	X	X	X	X
CRO-ASCII	3C	X	X	-	X	X	-	-	-	-	-	-	-
Arabic Farsi	96	-	-	*1	*1	*1	*1	-	-	-	-	-	-
Arabic Urdu	97	-	-	*1	*1	*1	*1	-	-	-	-	-	-
Greek DEC	46	X	X	-	X	-	-	-	-	-	-	-	-
ELOT 928 (Greek)	6C	X	X	-	X	-	-	-	-	-	-	-	-
CP437 Latin US	80	X	X	X	X	X	X	X	X	X	X	X	X
CP737 Greek	93	X	X	-	X	-	-	-	-	-	-	-	-
CP775 Baltic	A6	X	X	-	X	X	-	-	-	-	-	-	-
CP850 Latin 1	82	X	X	X	X	X	X	X	X	X	X	X	X
CP851 Greek	88	X	X	-	X	-	-	-	-	-	-	-	-
CP852 Latin 2	87	X	X	-	X	X	-	-	-	-	-	-	-
CP857 Turkish	8D	X	X	-	X	X	-	-	-	-	-	-	-
CP858 (IBM with €)	9E	X	X	X	X	X	X	X	X	X	X	X	X
CP860 Portugal	84	X	X	X	X	X	X	X	X	X	X	X	X
CP861 Icelandic	94	X	X	X	X	X	X	X	-	-	-	-	-
CP863 French Canada	85	X	X	X	X	X	X	X	X	X	X	X	X
CP864 Arabic	8C	-	-	*1	*1	*1	*1	-	-	-	-	-	-
CP864 Arab. Extended	95	-	-	*1	*1	*1	*1	-	-	-	-	-	-

	ID for ESC R/ESC (	High Speed Draft	Draft	Roman	Sans Serif	Courier (incl. Courier IBM)	OCR-B	OCR-A	Prestige	Script	Orator	Gothic	Souvenir
CP865 Nordic	86	X	X	X	X	X	X	X	X	X	X	X	X
CP866 Cyrillic	8E	X	X	-	X	X	-	-	-	-	-	-	-
CP866 Bulgaria	9D	X	X	-	X	X	-	-	-	-	-	-	-
CP866 Ukraine	8F	X	X	-	X	X	-	-	-	-	-	-	-
CP866 Kazakhstan	90	X	X	-	X	X	-	-	-	-	-	-	-
Siemens Turkish	9B	X	X	-	X	X	-	-	-	-	-	-	-
DEC Turkish	9C	X	X	-	X	X	-	-	-	-	-	-	-
CP1250 Win Latin 2	70	X	X	-	X	X	-	-	-	-	-	-	-
CP1251 Win Cyrillic	71	X	X	-	X	X	-	-	-	-	-	-	-
CP1252 Win Latin 1	72	X	X	X	X	X	X	X	-	-	-	-	-
CP1253 Win Greek	73	X	X	-	X	-	-	-	-	-	-	-	-
CP1254 Win Turkish	74	X	X	-	X	X	-	-	-	-	-	-	-
CP1256 Arabic	76	-	-	*1	*1	*1	*1	-	-	-	-	-	-
CP1257 Baltic	77	X	X	-	X	X	-	-	-	-	-	-	-
8859-1 Latin 1	25	X	X	X	X	X	X	X	X	X	X	X	X
8859-1 Latin 1 (SAP)	2B	X	X	X	X	X	X	X	X	X	-	-	-
8859-2 Latin 2	26	X	X	-	X	X	-	-	-	-	-	-	-
8859-5 Cyrillic	2A	X	X	-	X	X	-	-	-	-	-	-	-
8859-6 Arabic	24	-	-	*1	*1	*1	*1	-	-	-	-	-	-
8859-7 Greek	2D	X	X	-	X	-	-	-	-	-	-	-	-
8859-9 Turkish	2E	X	X	-	X	X	-	-	-	-	-	-	-
8859-15 Latin 9 (Euro)	2F	X	X	X	X	X	X	X	X	X	-	-	-
BRASCII	6D	X	X	X	X	X	X	X	-	-	-	-	-
Abicomp	6E	X	X	X	X	X	X	X	-	-	-	-	-
Roman 8	4D	X	X	X	X	X	X	X	-	-	-	-	-
Coax/Twinax(Hebrew)	4F	X	X	X	X	*2	-	-	*3	*4	-	-	-
New-437 (Hebrew)	81	X	X	X	X	*2	-	-	*3	*4	-	-	-
New-DIG 850 (Hebr.)	83	X	X	X	X	*2	-	-	*3	*4	-	-	-
Old-Code 860 (Hebr.)	98	X	X	X	X	*2	-	-	*3	*4	-	-	-
Flarro 863 (Hebrew)	99	X	X	X	X	*2	-	-	*3	*4	-	-	-
Table 865 (Hebrew)	9A	X	X	X	X	*2	-	-	*3	*4	-	-	-
Mazovia (Poland)	92	X	X	-	X	X	-	-	-	-	-	-	-
Kamenicky (Czech)	91	X	X	-	X	X	-	-	-	-	-	-	-

*1: only in 10 and 12 cpi, *2 : same as Sans Serif, *3 : same as Roman, *4 : only in 10 cpi

9.3   Paper Specifications

### 9.3.1   Standard Tractor (Front, Rear and Pull position) – narrow and wide versions
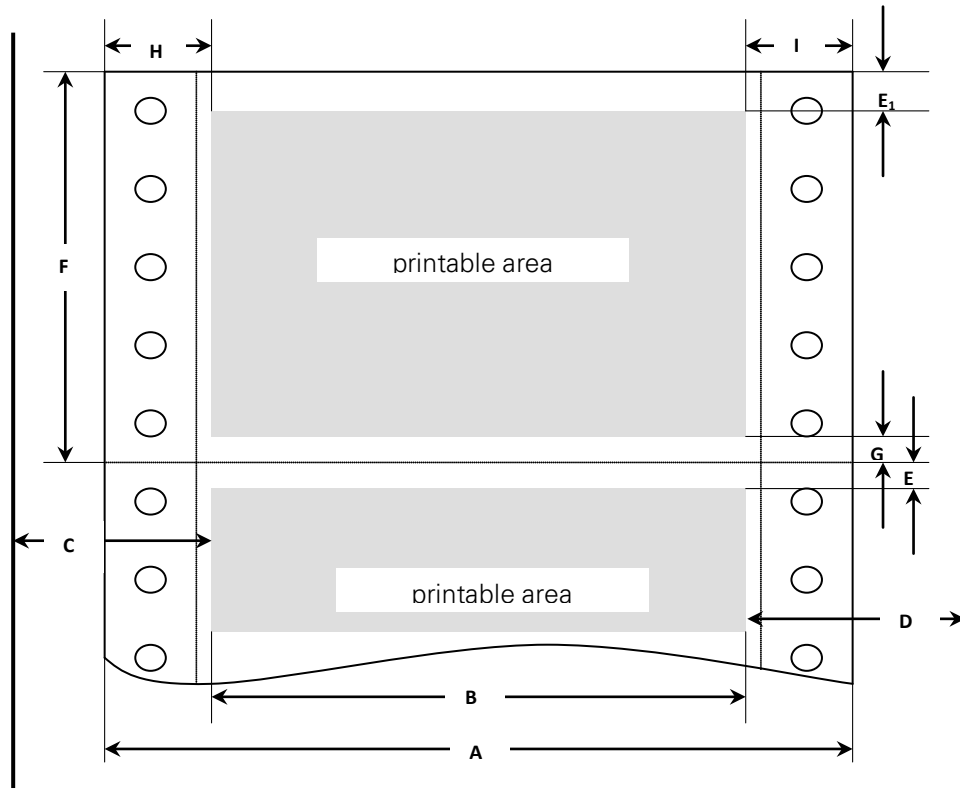
Usable figures of print area (dimensions in mm (inches))

Pos	Titel	Narrow model.		Wide.model	
		min	max	min	max
A	**paper width,**	76.2 (3″)	278 (11″)	76.2 (3″)	420 (16.5″)
B	printable line length		203.2 (8″)		345.44 (13.6″)
C	Max left tractor position to first printable character		38 (1.4″)		38 (1.4″)
D	Max right tractor position to first printable character		38 (1.4″)		38 (1.4″)
E	top margin [1]	0 (0/72″)	77.6 (220/72″)	0 (0/72″)	77.6 (220/72″)
E_1	top margin, default setting [1]		4.23 (12/72″)		4.23 (12/72″)
F	form length [1]	76,2 (3″)	559 (22″)	76.2 (3″)	559 (22″)
G	bottom margin	0	0	0	0
H	left margin, default setting "0" [1]	0	198.1 (78/10″)	0	340.4 (134/10″)
I	right margin, default setting "80" or "136/10" [1]	2	203.2 (80/10″)	2	345.44 (136/10″)
	reverse paper feed for front and rear tractor path		356 (14″)		356 (14″)

[1]   **Figure variable setting via interface or panel**

9.3.2 Front Feed / Manual Insertion – Narrow and wide versions
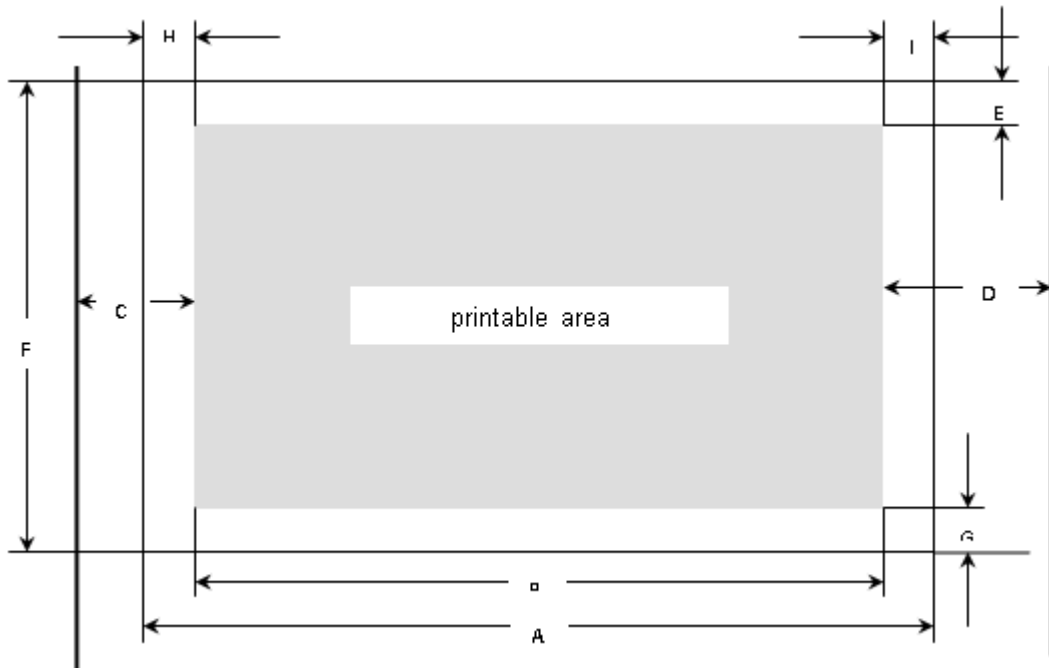
Usable figures of print area (dimensions in mm (inches))

Pos	Title	Narrow model		Wide model	
		min	max	min	max
A	paper width,	76 (3″)	278 (11″)	76 (3″)	420 (16.5″)
B	printable line length		203.2 (8″)		345.44 (13.6″)
C	Max left paper guide position to first printable character		38 (1.4″)		38 (1.4″)
D	Max right paper guide position to first printable character		38 (1.4″)		38 (1.4″)
E	top margin [1]	0 (0/72″)	77.6 (220/72″)	0 (0/72″)0	77.6 (220/72″)
E	top margin, default setting [1]		4.23 (12/72″)		4.23 (12/72″)
F	form length	148 (5.8″)	420 (16.5″)	148 (5.8″)	420 (16,5″)
G	bottom margin	0	0	0	0
H	left margin, default setting "0" [1]	0	198.1 (78/10″)	0	340.4 (134/10″)
I	right margin, default setting "80" or "136/10" [1]	2	203.2 (80/10″)	2	345.44 (136/10″)
	reverse paper feed (front ejection)		420 (16.5″)		420 (16,5″)

9.3.3 Paper Weights

	Narrow and wide
Single Part Forms	60 – 120g/m²
Number of copies	1 + 5
Multi Part Forms – original sheet	45 – 65g/m²
Multi Part Forms – copy sheets	45 – 56g/m²
Maximum thickness	0.50mm

[1] **Figure variable setting via interface or panel**

10   Maintenance

Your printer requires very little care. Occasional cleaning and replacement of the ribbon cartridge are all that is required. Cleaning is recommended approximately every 6 months or 300 hours of operation, whichever is sooner. Lubrication of the printer is not usually necessary. If the print head carriage does not move smoothly back and forth, clean the printer in the manner described in this chapter. If the problem continues, contact your dealer.

ⓘ   **Switch printer off and unplug the power cord from the mains before doing any maintenance work.**

10.1   Cleaning

The housing and the top cover of the printer help protect it against dust, dirt, and other contaminants. However, paper produces small particles that accumulate inside the printer. This section explains how to clean and vacuum the printer and how to clean the paper bail rollers. It is easier to clean the printer when the cover is open.

10.1.1   Cleaning and Vacuuming the Printer

If the print head carriage does not move smoothly back and forth or paper particles have accumulated in the printer, clean the printer.

To clean and vacuum the printer:

1) Remove any paper from the printer. Make sure that the power is off, and then disconnect the printer power cord.
2) Using a soft vacuum brush, vacuum the exterior of the printer. Also vacuum the cut sheet edge.
3) Use a soft, damp cloth to wipe the exterior of the printer, including the cover. A mild detergent may be used. Do not use solvents, kerosene, or abrasive cleaning materials that may damage the printer.
4) Open the cover of the printer and remove the ribbon cartridge. Using a soft vacuum brush, gently vacuum the platen, the print head carriage and shaft, and surrounding areas. You can easily slide the print head to the left or right when the power is off. Be careful not to press too hard on the flat head cable that extends from the print head carriage.
5) Re-install the ribbon cartridge.

10.1.2   Cleaning the Paper Rollers

Clean the platen and paper bail rollers occasionally or when stains or smudges appear on the paper. Use a mild detergent as appropriate. Do not use alcohol to clean the platen or the rollers. Alcohol may cause the rubber to harden.

To clean the rollers and the platen:

1) Apply a small amount of water to a soft cloth. Avoid spilling liquid inside the printer.
2) Place the cloth against the platen and manually rotate the hand wheel.
3) Repeat this procedure for each roller.
4) To dry the platen, place a dry cloth against the platen and the rollers and manually rotate the paper feed knob.

10.2   Troubleshooting

Your printer is extremely reliable, but occasionally problems may occur. This chapter provides information on some of the common problems you may encounter and how you may solve them. If you encounter problems that you cannot resolve, contact your dealer or service partner for assistance.

10.2.1   Print Quality Problems and Solutions

Problem	Solution
Printing is too light or too dark.	• Make sure that the ribbon cartridge is properly installed and that the ribbon feeds smoothly. • Replace the ribbon if necessary. • Make sure that the print gap lever is set for the thickness of your paper.
Smears and stains appear on the page.	• Make sure that the print gap lever is set for the thickness of your paper. • Check for ribbon wear. Replace the ribbon if necessary. • Check whether the tip of the print head is dirty. Clean the head with a soft cloth if necessary. • The print head may need to be replaced.
Printing is erratic or the wrong characters are printed. Many "?" or unexpected characters are printed.	• Make sure that the interface cable is securely connected to both the printer and computer. • Make sure that the printer driver selected in your software is the same as the emulation selected on the printer. • Check the length of the interface cable. (Maximum Parallel & USB: 2 meters, Serial: 15 meters) • Try another interface cable.
The page is blank.	• Make sure that the ribbon cartridge is properly installed. • Make sure the gap lever is set correctly.
The top margin is wrong.	• Check the application top margin setting. • Adjust the Top Margin setting in Page Setup menu if necessary.
Lines are double spaced instead of single spaced.	• Change the Auto LF setting in the System Setup menu to No.
The printer overprints on the same line.	• Change the Auto CR setting in the System Setup menu to No.
The next print line starts where the previous line ended instead of at the left margin.	• Change the Auto CR setting in the System Setup menu to Yes.

10.2.2   Paper Handling Problems and Solutions

Problem	Solution
Paper cannot be loaded or fed.	• Make sure that the paper select lever located on the top right of the printer is set correctly.
Paper jams while loading.	• Turn off the printer and remove the jammed paper. Remove any obstructions from the paper path. • Make sure that the Print Gap lever is set for the thickness of your paper. • Make sure that the paper is not folded, creased, or torn. • Make sure that the left and right tractors are set so that the continuous forms are stretched tightly.
Paper jams while printing.	• Turn off the printer and remove the jammed paper. Remove any obstructions from the paper path. • Make sure that the Print Gap lever is set for the thickness of your paper. • For continuous forms, make sure that the incoming and outgoing paper stacks are correctly placed. Paper should feed straight.
Paper slips off the forms tractors or the perforated holes of the paper tear during printing.	• Make sure that the forms tractors are positioned correctly for the width of your paper and that the perforated holes of the paper fit directly over the tractor pins.

10.2.3   Operating Problems and Solutions

Problem	Solution
The power does not turn on.	• Check whether the mains voltage is correct. • Make sure that the power cord is securely connected to both the printer and the mains power outlet. • Make sure that the power outlet is functional. If not , use other outlet. • Turn the power off. Wait a minute and then turn the printer on again. If the printer still has no power, contact your dealer.
The printer is on but it will not print.	• Make sure that the Online indicator is lit. • If you use the interface cable, make sure it is securely connected to both the printer and the computer. • Make sure paper is loaded. • Run the printer Status Page. If printing executes normally, the problem is caused by: the interface, the computer, incorrect printer settings, or incorrect software settings. • Make sure that the printer driver selected in your software is the same as the emulation selected on

	the printer.
Paper select lever error	• If paper is loaded and the paper select lever is moved to the incorrect position, the printer turns offline, and the buzzer sounds continuously. Switch the paper select lever back to its correct position.

FCC STATEMENT

MODIFICATION: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

NOTE: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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