



User Guide

1125 Matrix Printer





## Important Safety Instructions (English)

Read the following instructions thoroughly before starting up your printer.

- Never carry out maintenance or repair work yourself. Always contact a qualified service technician.
- Keep this Operator's Manual in a place which is easily accessible at all times.
- Place the printer on a solid and even base so that it cannot fall.
- Never place the printer in the vicinity of inflammable gas or explosive substances.
- Ensure the printer is connected to a socket with the correct mains voltage.
- Always disconnect the printer from the mains before opening the device to perform maintenance work or remedy errors.
- Do not expose the printer to high temperatures, direct sunlight or dust.
- Keep all liquids away from the printer.
- Protect the printer from shock, impact and vibration.
- Make sure that the printer and computer are switched off before connecting the data cable.
- The print head will become very hot during printing; avoid contact with the print head after printing has finished.
- Do not perform any operation or action in any way other than those provided in this manual. When in doubt, contact your dealer or your customer support.

## Wichtige Sicherheitshinweise (German)

Lesen Sie bitte diese Sicherheitshinweise durch, bevor sie den Drucker in Betrieb nehmen.

- Führen Sie Wartungsarbeiten und Reparaturen keinesfalls selbst aus, sondern verständigen Sie immer einen qualifizierten Servicetechniker.
- Bewahren Sie diese Dokumentation an einem jederzeit zugänglichen Ort auf.
- Den Drucker auf stabilem und ebenem Untergrund so aufstellen, dass er nicht zu Boden fallen kann.
- Stellen Sie den Drucker keinesfalls in der Nähe von leicht entzündlichen Gasen oder explosiven Stoffen auf.
- Den Drucker nur an eine Steckdose mit der richtigen Spannung anschließen.
- Wenn Sie den Drucker vom Netz trennen wollen, den Drucker ausschalten und immer den Netzstecker an der Steckdose ziehen.
- Den Drucker weder hohen Temperaturen noch direktem Sonnenlicht und Staub aussetzen.
- Keine Flüssigkeiten mit dem Drucker in Berührung bringen.
- Den Drucker keinen Erschütterungen, Stößen oder Vibrationen aussetzen.
- Sicherstellen, dass der Drucker und der Computer ausgeschaltet sind, bevor das Datenkabel angeschlossen wird.
- Der Druckkopf wird während des Druckens heiß. Vor dem Berühren deshalb einige Zeit abkühlen lassen.
- Weichen Sie bei der Bedienung des Druckers nicht von den Anweisungen in der Dokumentation ab. Bei Unklarheiten wenden Sie sich bitte an Ihren Händler oder Ihren Kundendienst.

## Consignes importantes de sécurité(French)

Lire attentivement les instructions suivantes avant de mettre l'imprimante en service.

- Ne jamais effectuer soi-même les travaux d'entretien et de réparations. Contactez toujours un dépanneur qualifié.
- Placer l'imprimante sur un support stable de façon à ce qu'elle ne puisse pas tomber.
- Ne jamais placer l'imprimante à proximité de sources de gaz aisément inflammables ou de substances explosives.
- Ne connecter l'imprimante à une prise que lorsque la tension est correcte.
- Pour déconnecter l'imprimante de l'alimentation principale, mettre l'imprimante hors tension et toujours débrancher le connecteur secteur de la prise murale.
- Ne pas exposer l'imprimante à des températures élevées, à la lumière directe du soleil ou à la poussière.
- Ne pas mettre l'imprimante en contact avec des liquides.
- Ne pas exposer l'imprimante à des chocs, impacts ou vibrations.
- S'assurer que l'imprimante et l'ordinateur sont hors tension avant de connecter le câble de données.
- La tête d'impression est brûlante pendant l'impression. C'est pourquoi laissez-la refroidir quelques instants avant d'y toucher.
- N'exécutez aucune opération ni action d'une autre manière que celle indiquée dans ce manuel. En cas de doute, veuillez contacter votre distributeur ou service après-vente.

## Indicazioni di sicurezza importanti (Italian)

Prima di mettere in funzione la stampante, leggere attentamente le seguenti indicazioni.

Non eseguire mai da sé gli interventi di manutenzione e riparazione, ma rivolgersi sempre a un tecnico di assistenza qualificato.

- Conservare le presenti istruzioni per l'uso in un luogo sempre accessibile.
- Collocare la stampante su una superficie stabile, per evitare che cada a terra.
- Non collocare la stampante in prossimità di gas facilmente infiammabili o di sostanze esplosive.
- Collegare la stampante a una presa di corrente con tensione adeguata.
- Per scollegare la stampante dalla rete di alimentazione, spegnere la stampante e disinserire sempre il connettore di rete dalla presa.
- Non esporre la stampante ad elevate temperature né alla luce solare diretta e alla polvere.
- Evitare il contatto della stampante con liquidi.
- Non esporre la stampante a colpi, scosse o vibrazioni.
- Verificare che la stampante e il computer siano spenti prima di collegare il cavo di trasmissione dati.
- Durante la stampa, la testina si surriscalda notevolmente. Prima di toccarla, se necessario opportuno quindi lasciarla raffreddare qualche istante.
- Non eseguire alcuna operazione o azione se non nella maniera descritta nel presente manuale. In caso di dubbio, contattare il rivenditore o dalla società incaricata dell'assistenza.

## Instrucciones de seguridad importantes (Spanish)

Lea las siguientes instrucciones con esmero antes de poner la impresora en servicio.

Nunca lleve a cabo trabajos de mantenimiento o reparación Ud. mismo, sino consulte un técnico de servicio calificado.

- Guarde las presentes instrucciones de servicio en un lugar de fácil acceso en cualquier momento.
- Ponga la impresora sobre un base estable de manera que no pueda caer al suelo.
- Nunca coloque la impresora en la vecindad de gases de fácil inflamabilidad o sustancias explosivas.
- Asegure conectar la impresora sólo a un enchufe con un voltaje correcto.
- Cuando quiera desconectar la impresora de la red, apague la impresora y siempre tire la clavija de alimentación del enchufe.
- No exponga la impresora a temperaturas altas, a la luz solar directa y al polvo.
- No ponga la impresora en contacto con fluidos.
- Nunca exponga la impresora a sacudidas, choques o vibraciones.
- Asegúrese de que la impresora y el ordenador estén apagados antes de conectar el cable de datos.
- La cabeza de impresión se pone muy caliente durante la impresión. Por lo tanto, deje enfriarlo algún tiempo antes de tocarla.
- No permita que se realice cualquier operación o acción de una forma diferente a lo que se señala en el manual. En caso de duda, póngase en contacto con su comerciante o con su servicio post-venta.

## Правила по технике безопасности. (Russian)

Прочитайте, пожалуйста, инструкцию по технике безопасности перед включением в работу принтера.

- Не выполняйте технические работы и ремонт техники самостоятельно, но сообщайте о неисправностях квалифицированным сервисным техникам.
- Данная инструкция должна быть всегда доступна каждому пользователю.
- Установите принтер на ровном и стабильном месте так, чтобы он не смог упасть на пол.
- Ни в коем случае не ставьте принтер вблизи легко воспламеняющихся газов и взрывчатых веществ.
- Включайте принтер в розетку только с соответствующим напряжением.
- Если Вы хотите отключить принтер от напряжения, сначала выключите принтер сам и затем выньте штекер из розетки.
- Берегите принтер от нагревания, от попадания на него прямых солнечных лучей и пыли.
- Не допускайте попадания жидкости на принтер.
- Нельзя подвергать принтер тряске, ударам и вибрации.
- Убедитесь, что принтер и компьютер выключены, только после этого соедините принтер с компьютером.
- Печатающая головка нагревается во время работы принтера. Поэтому подождите какое-то время, прежде чем дотронуться до нее.
- Пользуйтесь принтером так, как это написано в документации. Если у Вас возникают неясности, обращайтесь с вопросами к Вашим продавцам или в сервисный центр.

## Instruções Importantes sobre Segurança (Portuguese)

Leia as instruções de segurança antes de usar a impressora.

- Consulte sempre um técnico qualificado para executar uma reparação .
- Coloque a impressora sobre uma base sólida e nivelada, para que ela não sofra quedas.
- Jamais instale a impressora nas proximidades de lugares onde haja gás inflamável ou substâncias explosivas.
- Assegure-se de conectar a impressora à tomada elétrica com a voltagem apropriada.
- Quando desligar a impressora da rede, desligue sempre a impressora e retire o cabo da tomada.
- Não exponha a impressora a temperaturas altas ou luz solar direta.
- Não aproxime substâncias líquidas da impressora.
- Proteja a impressora de choques, impactos e vibrações.
- Desligue a impressora e o computador antes de conectar o cabo da rede.
- A cabeça da impressora pode ficar muito quente . Portanto, espere algum tempo antes de tocá-la.
- Não faça nenhuma operação ou ação além das recomendadas neste manual. Em caso de dúvida, contate seu revendedor ou companhia de serviço.

## Önemli Güvenlik Talimatları (Turkish)

Lütfen, yazıcıyı işleme geçirmeden önce bu güvenlik talimatlarını bütünüyle dikkatle okuyun.

- Bakım ve tamir çalışmalarını kesinlikle ve hiçbir surette kendi başınıza yapmayın; her zaman kalifiye bir uzman servis-teknişyenine haber verin.
- Yazıcıyı, üzerinden yere düşmesi mümkün olmayacak sabit ve düz bir zemine yerleştirin.
- Yazıcıyı kesinlikle ve hiçbir surette kolayca yanabilecek gaz veya patlayıcı maddeler içeren nesnelerin yakınına koymayın.
- Yazıcı kablolarını sadece doğru gerilime sahip bir priz takın.
- Yazıcıyı şebeke ağından ayırmak istediğinizde, yazıcıyı kapatın ve ağ-fişini her zaman prizden çıkartın.
- Yazıcıyı ne yüksek ısı ne de doğrudan güneş ışığına ve toza mâruz kalan mekânlarda bulundurun.
- Yazıcı hiçbir sıvı maddeyle temasta olmamalıdır.
- Yazıcı hiçbir sarsıntıya, darbeye veya titreşime mâruz kalmamalıdır.
- Veri kablosu bağlanmadan önce hem yazıcının hem de bilgisayarın kapalı olduklarından emin olmalısınız.
- Yazıcının başı basma esnasında yüksek ısıya ulaşıyor. Bu yüzden lütfen dokunmadan önce kısa süre soğumasını bekleyin.
- Yazıcının işletimi ve kullanımında bu dokümantasyondaki talimatların hiç dışına çıkmayın. Sorunlu görünen hususlarda lütfen imalatçınıza veya müşteri hizmetleri servisimize başvurun.

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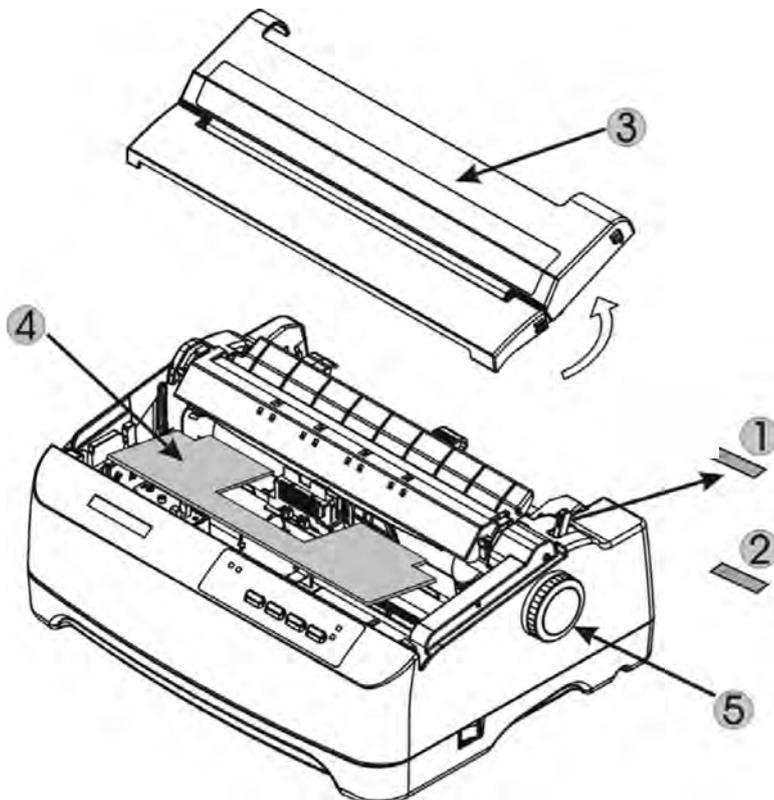
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# 1 Unpacking Guide

- Place your packaged printer on a solid base.
- Make sure that the "Up" symbols point in the correct direction.
- Open the packaging, lift the printer out of the cardboard box and remove the remaining packaging material.
- Check the printer for any visible transport damage and missing items. If you find any transport damage or if any accessories are missing, please contact your dealer. The following items should be included:
  - Printer
  - Paper feed knob
  - Paper feed tray
  - Power cord
  - Ribbon cartridge
  - CD-ROM
  - Installation Guide

Remove the packaging materials from the printer as follows:

1. Remove the tape on the paper feed lever.
2. Remove other visible tape on the printer.
3. Open and remove the top cover of the printer.
4. Remove the shipping cardboard from around the print head.
5. Install the paper feed knob.



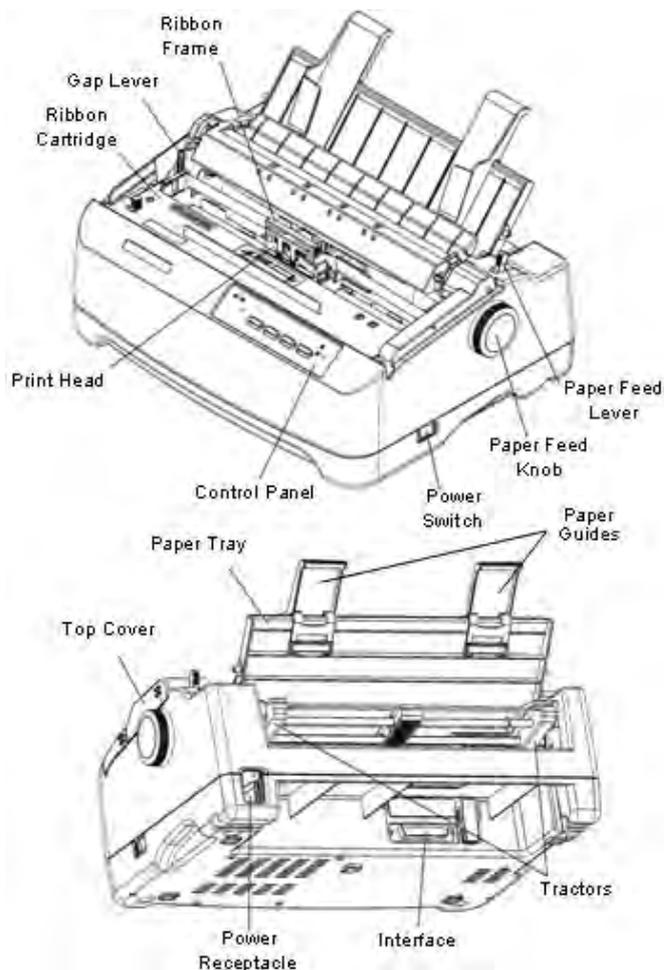
## Placing the Printer

Place the printer on a solid, flat, stable surface; ensuring that the printer is positioned in such a way that it cannot move, and that there is easy access to the control panel and paper input devices. Also ensure that there is enough space for sufficient ventilation and for the printed output.

When selecting the printer location, observe the following additional instructions:

- Never place the printer near to any flammable gas or explosive substances.
- Do not expose the printer to direct sunlight. If you cannot avoid placing the printer near a window, protect it from the sunlight with a curtain.
- When connecting a computer to the printer, make sure the maximum recommended cable length is not exceeded.
- Ensure sufficient distance between the printer and any heating devices/radiators.
- Avoid exposing the printer to extreme temperature or air humidity fluctuations. Avoid exposure to dusty environments.
- It is recommended the printer is installed in a position which reduces noise exposure to the work place during printing.

## Printer Components

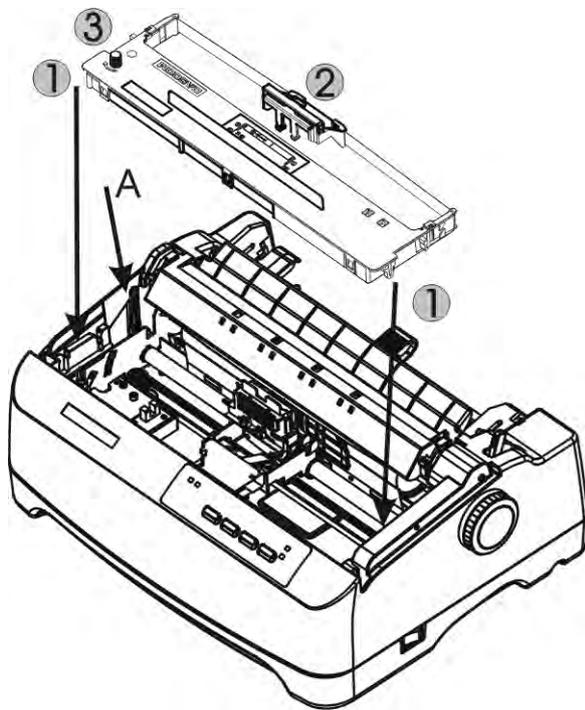


<b>Component</b>	<b>Function</b>
Gap Lever	Controls printing impactor density. Adjusts the print gap lever according to the thickness of paper.
Paper Guides	Adjusts positioning of single sheet paper.
Print Head	24-pin printing mechanism
Top Cover	Protects printhead and other components inside, and reduce noise.
Control Panel	Shows printer status, for printer setup.
Paper Feed Lever	Two positions:  = continuous forms;  = single sheet paper
Paper Feed Knob	Manual feed or vertical positioning of paper
Power Switch	Power printer ON or OFF
Ribbon Cartridge	Install ribbon in the printer.
Ribbon Frame	For guiding ribbon installation on print head.
Tractors	For feeding and adjustment of continuous forms.
Power Receptacle	Connects power cord to the printer.
Interface	Connects interface cables from the host.

## 2 SettingUp Printer

### InstallRibbon

1. Ensure the power to the printer is off and the print gap lever "A" is set to the furthest open position. Move the carriage to the centre of the print platen.
2. Install the recess positions **c** on the ribbon cassette into the printer mounting.
3. Press the ribbon frame **d** onto the print head.
4. Turn the ribbon knob **e** in clockwise direction until the ribbon fabric is taut. Move the carriage left and right to ensure the carriage and ribbon fabric can move smoothly.
5. Ensure the print gap lever "A" is set to the original position.
6. Close the printer's top cover. When printer is in operation, ensure the printer's top cover is closed to keep the noise level to a minimum.

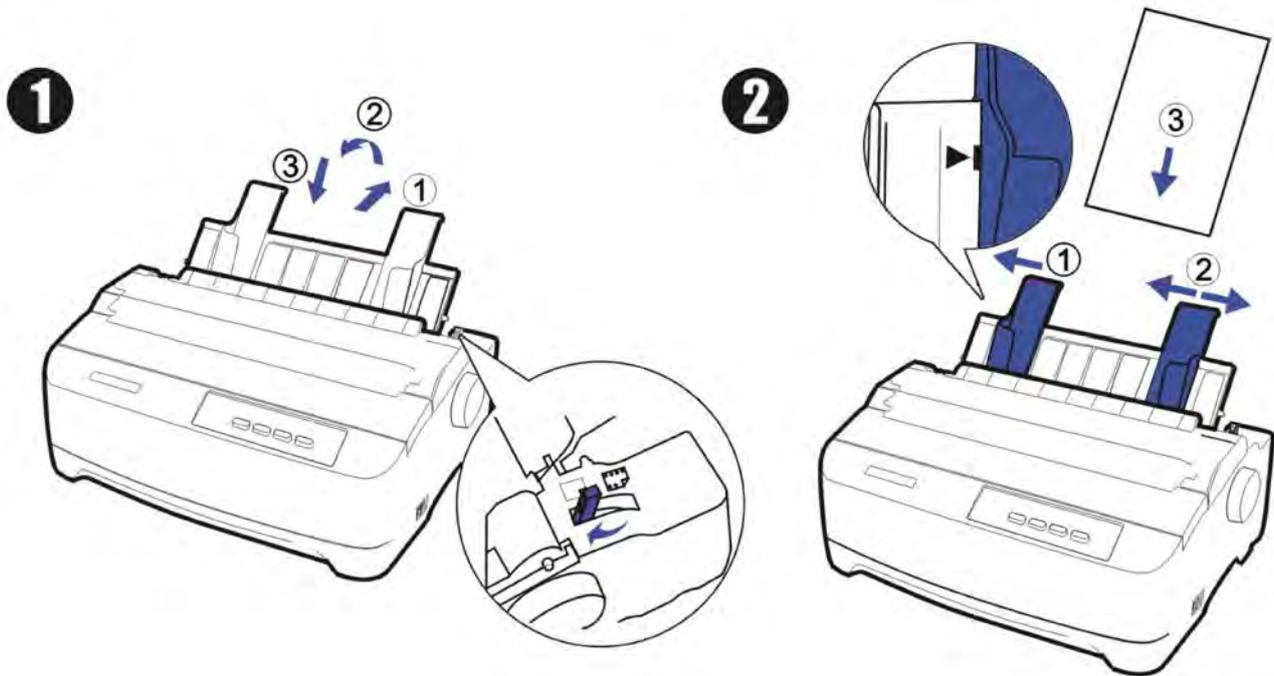


#### Notes on Ribbon Cartridge Removal:

1. Eject any paper loaded in the printer.
2. Turn off the printer power.
3. Open and remove the top cover.
4. Lift up the tear bar.
5. Set the gap lever to the most open position labeled "RIBBON".
6. Move the carriage to the middle. Be careful not to touch the print head if printing had just been performed, as the print head may be hot.
7. Remove the blue ribbon frame from the printhead.
8. Use fingers to take hold of the handle on the ribbon cartridge firmly, and lift the cartridge upward to unlatch it. Some force may be needed to unlatch the cartridge.

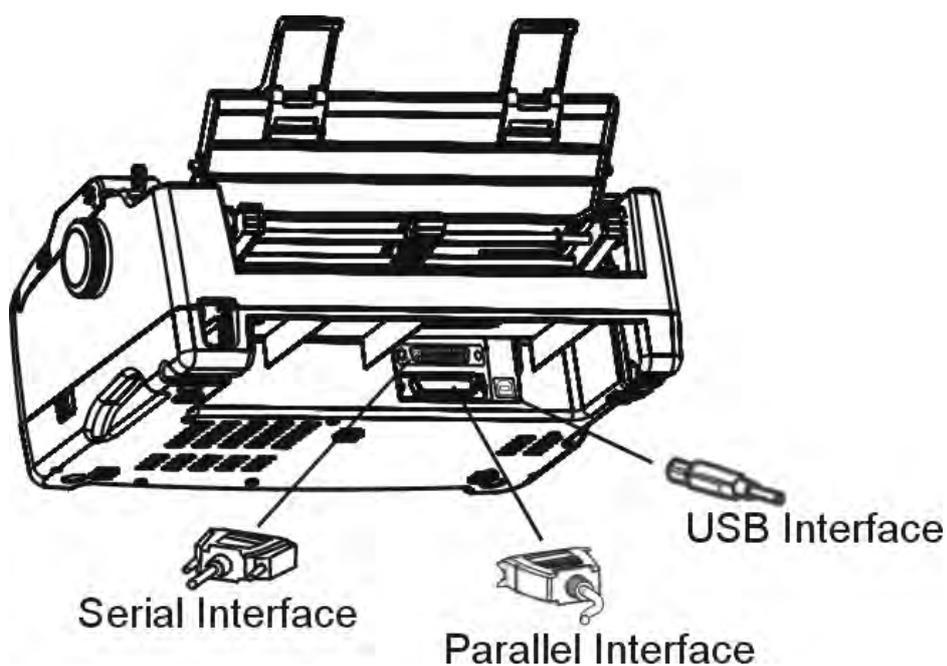
## Install the Single Sheet Feeder

Install the singlesheet feeder into the rear of the printer.



## Connecting the Interface Cable

The 36-pin Centronics parallel, 25-pin serial RS-232C and USB ports are located at the rear of the printer. **IMPORTANT:** Make sure the printer and the computer are switched off before connecting or disconnecting the interface cable to prevent electrical damage to the interface ports.



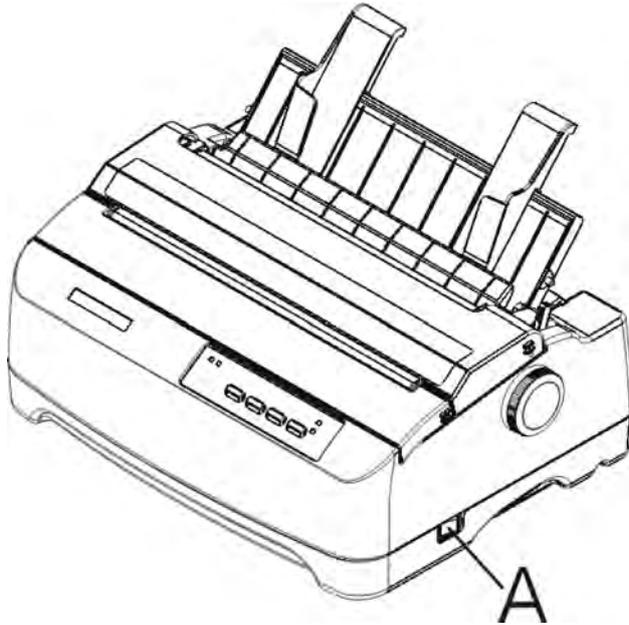
## Connecting the Mains Power

### Checking the printer voltage

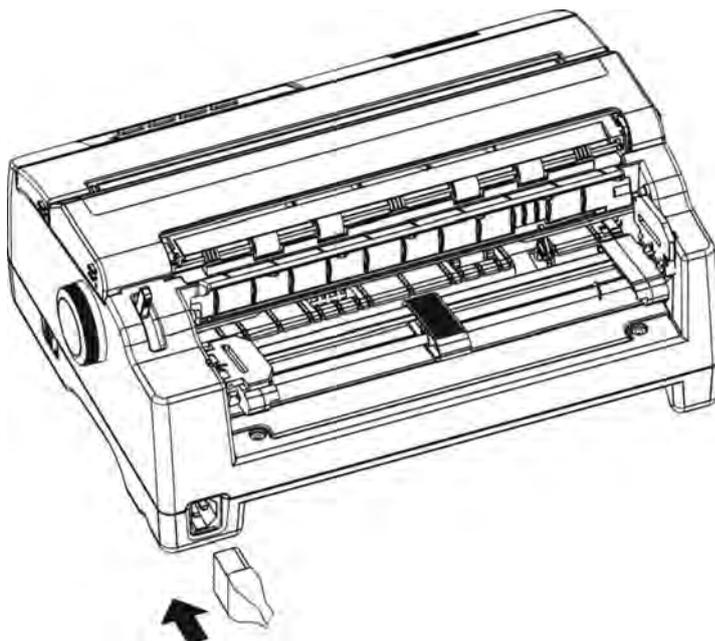
Make sure that the device has been set according to your country's power supply voltage. To do this, check the rating plate at the back of the printer. Contact your dealer if the setting is incorrect.



**Never switch on the printer if the voltage setting is incorrect; this may result in electrical damage to the printer.**



Make sure that the power switch "A", located to the right side of the printer, is in the "O" (off) position.



Connect the power cord to the power inlet of the printer. Connect the power cord plug to a mains socket. Switch on the printer.

## Installing the Windows Driver

(Windows 2000/2003/2008 Server/XP/Vista/7)

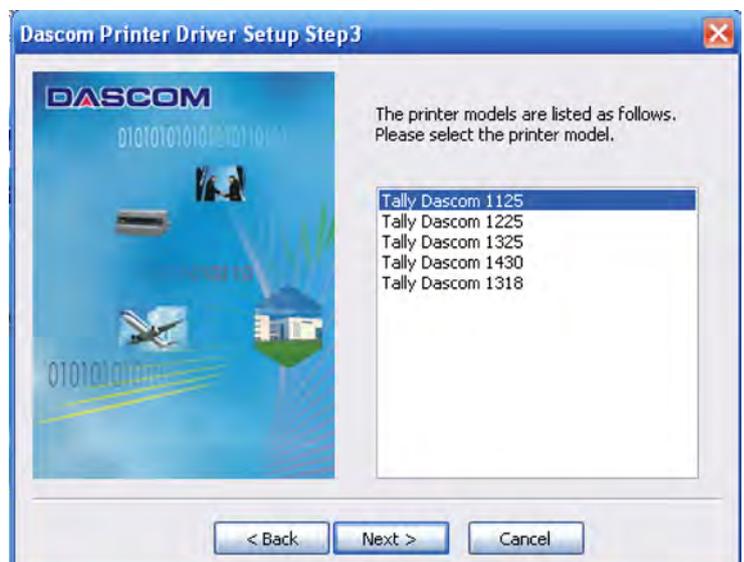
1. Your printer CDROM comes with Windows drivers. Go to the Drivers folder and run the Installer "DriverSetup.exe". You will see the screen on the right. Click "Next" to continue.



2. A list of ports available on your system will be displayed as shown on the right. Choose the desired port to use. Click "Next" to continue.



3. Select the desired printer model as shown on the right. Click "Next" to continue.



- Here you can choose whether to set the driver as the system default driver, and whether you want to print the Test Page after installation is completed. If the driver had been installed before, it would be listed in the white box on the right. Select the listed driver (if any) if you want to replace it; otherwise a copy of the driver will be installed. Click "Next" to continue.



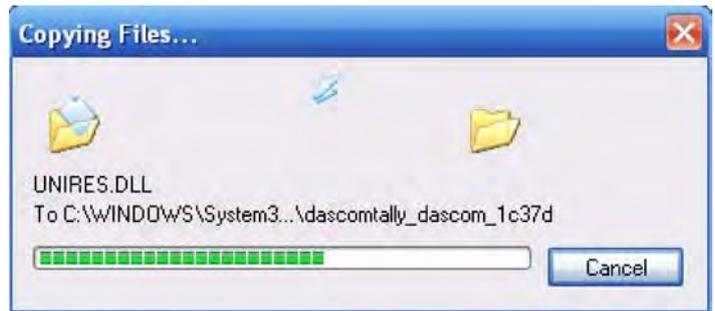
- Click "Finish" to start the installation process.



- If the driver is not yet Microsoft Certified, the message on the right would appear. Click "Continue Anyway". (As we continue to expand our product portfolio, not all of our drivers may be certified yet. Please check our website [www.dascom.com](http://www.dascom.com) for the latest certifieddrivers.)



7. Installation in progress.



8. After installation is completed successfully, you will see the message on the right.



## 3 Paper Installation Guide

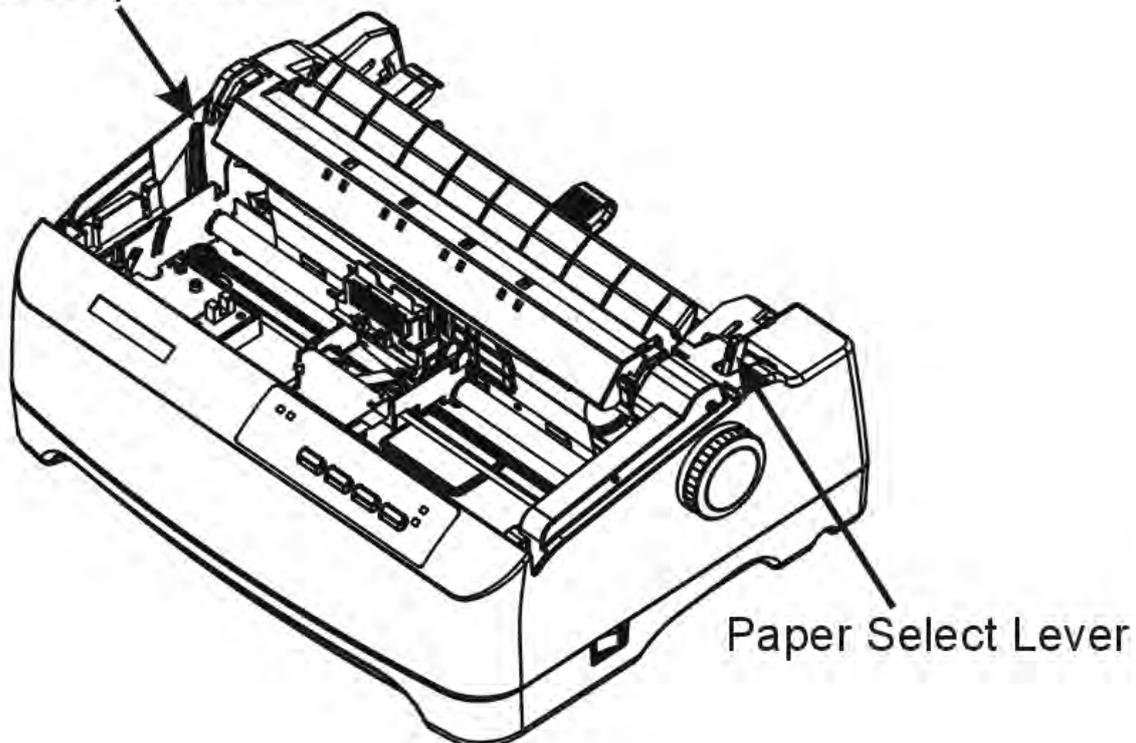
The printer can handle either single sheets or continuous forms. Single sheets, also called cut sheets, include envelopes and non-continuous, multipart forms. Continuous forms include labels and multipart forms fed into the printer using the forms tractors. The printer is able to print 1~5 plies multipart paper.

Do not load paper that has been folded or is damaged, wrinkled, or curled.

### Adjusting the Print Gap Lever

The print gap lever is on the left side of the printer inside the top cover. Take care to adjust the print gap lever to a suitable position whenever you change the number of copies being printed. Using the wrong print gap may cause printhead damage or paper jams.

#### Print Gap Lever

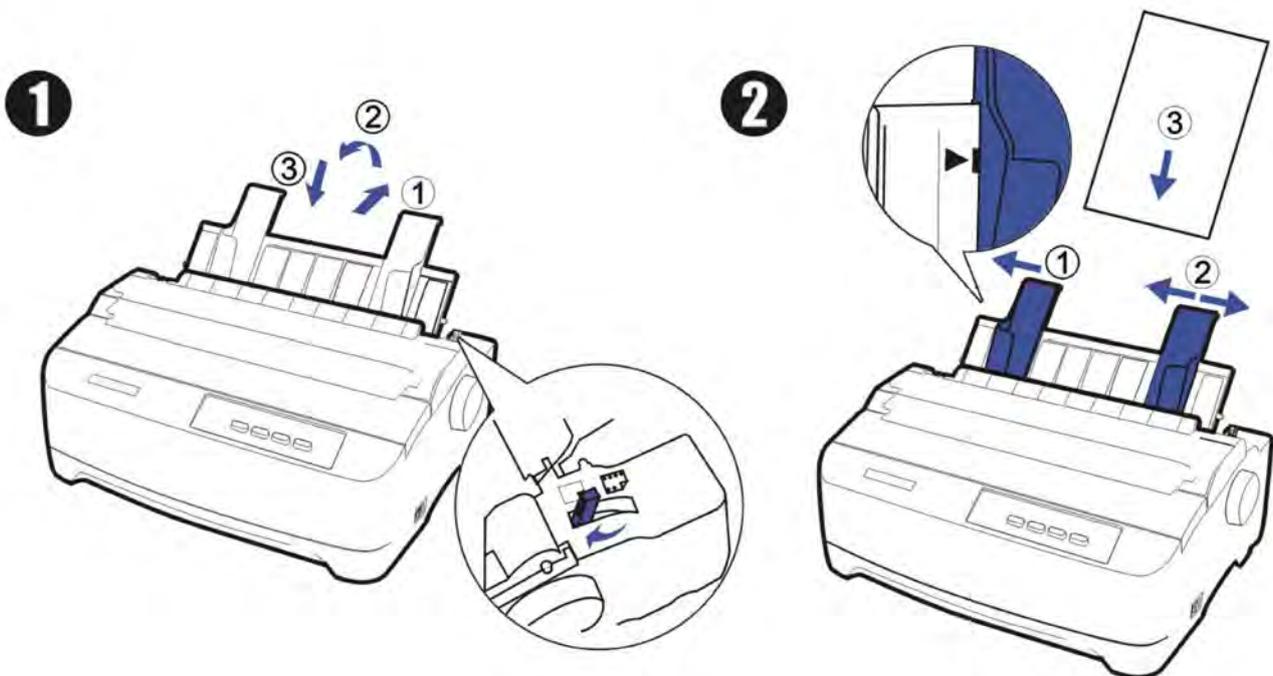


Paper type	Weight (g/m <sup>2</sup> ) / ply	Thickness (mm)	Gap lever position
Single sheet	52~100	0.06~0.12	1P~2P
2-ply	40~52	0.12~0.14	
3-ply	40~52	0.17~0.22	3P~4P
4-ply	40~52	0.23~0.27	
5-ply	40~52	0.28~0.33	5P
Changeribbon	---	Above0.45	

There are 2 paper feed modes: friction feed and tractor feed.

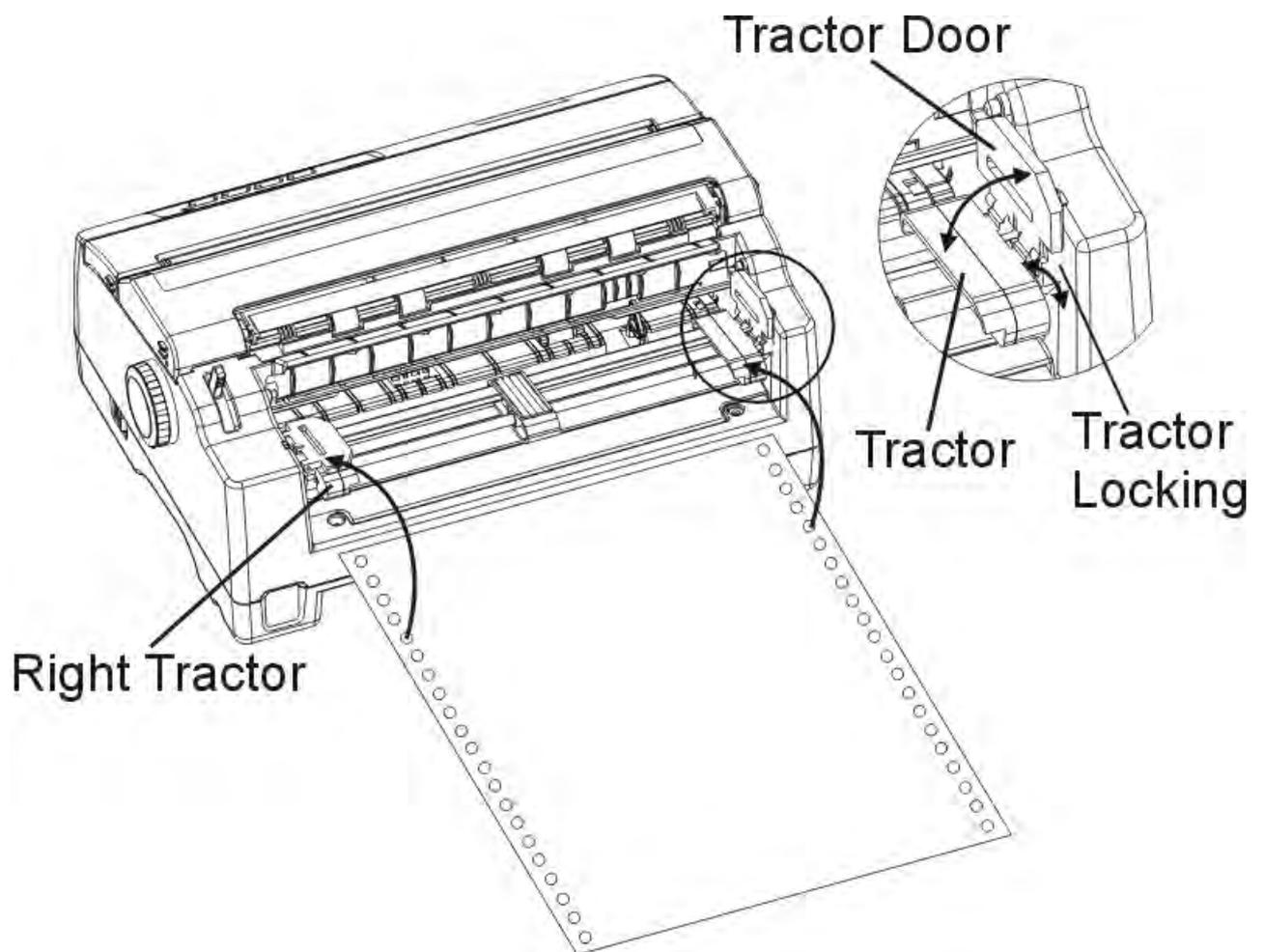
## Friction Feed Handling

1. Move the paper-feed lever forward to "  " for friction feed mode.
2. Adjust the print gap lever if necessary.
3. Raise the single sheet feeder until it locks into its mounting. Align the left paper guide with the mark on the left of the single sheet feeder. Adjust the right paper guide to the width of the paper used.
4. Insert a sheet of paper. Make sure that the bottom edge of the paper engages snugly with the platen.
5. The paper should advance automatically to the print position. The printer is now ready to print in the online state.



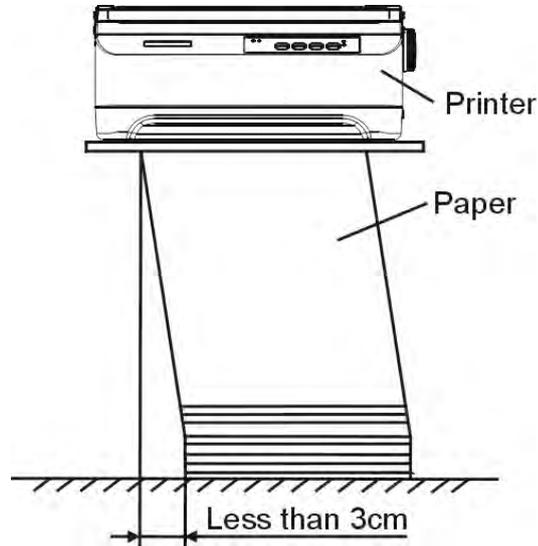
## Tractor Feed Handling

1. Move the paper-feed lever backward to "  " for continuous paperposition.
2. Adjustthe printgap lever if necessary.
3. Raise the tractordoors and fit the first 3 paperholesonto the left tractor pins. Close the left tractor door. In the same way, install the paper on the right tractor.
4. Adjustthe righttractorto the width of the paper untilthe paper is flat. Do not stretch the paper too taut. Push the rightlock lever down to secure the right tractorin place.
5. Press the **【Load/Eject】** key to loadthe paperto the starting printposition. The printer is now readyto print in the online state.

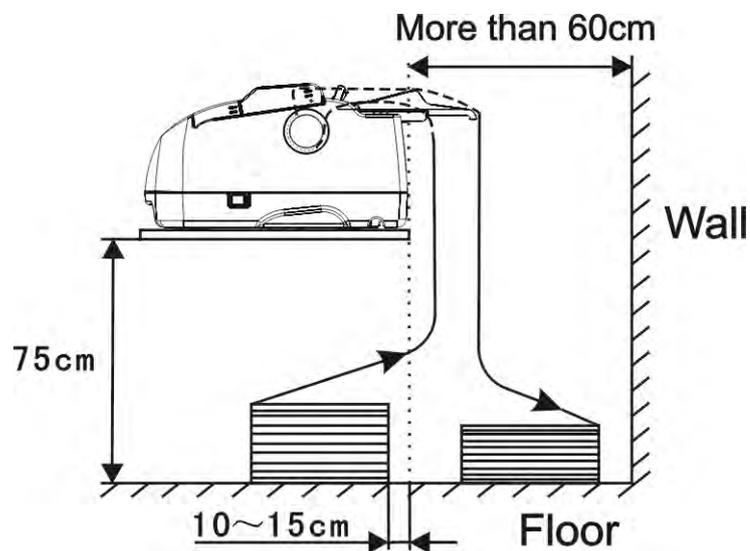


## Continuous Paper Placement

1. Place the printer on a solid base. The minimum suitable height of the solid base is 75 cm.
2. Left and right positioning: The direction of continuous paper should be parallel with the paper guide. The tolerance should be less than 3 cm.



3. Front and back positioning: The distance between the rear of printer and the wall should be more than 60 cm. To avoid paper jam, the distance between the continuous paper and the edge of desk should be 10~15 cm.



## 4 Control Panel Operation



There are 4 switches S1~S4 and 4 LEDs L1~L4. The meaning and application of each switch and LED are described below.

### LED Indicators

“Power/Paper Out” LED:

On: Power on

Flashing: Paper out

Flashing + buzzer: Paper jam

“Online” LED:

On: The printer is in online state and ready to receive data from the computer.

Off: The printer is in offline state and cannot receive data.

Flashing: The printer is in setup state and cannot receive data.

“Tear Off” LEDs:

Flashing: Indicates continuous paper is at tear-off position; otherwise it indicates the selected font.

### Control Panel Keys

“Online” Key:

This key switches the printer between online and offline states. Printing is stopped when the printer is switched to offline state. When printer is switched to online state again, printing will resume.

When printer is offline, pressing it for 3 seconds or longer will enter the setup state. This is indicated by a beep sound and the flashing Online LED. By pressing the Online key again will exit the setup state back to offline state.

“Load/Eject” Key:

When paper is loaded, pressing this key will eject the paper (single sheet mode) or park the paper (continuous paper mode). When paper is not loaded, pressing this key will load the paper to the starting print position. In the setup state, this key performs a forward microfeed.

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## “LF/FF” Key:

Pressing this key will feed paper one line forward. By holding down this key, the printer will initially feed a few lines, then perform a form feed (continuous paper mode) or eject the form (single sheet mode). In the setup state, this key performs a reverse microfeed.

## “Tear Off” Key:

When online, this key will move any loaded continuous paper to the tear-off position. When in setup state, this key is used to select the desired font.

Table4.1

<b>FontSelection Label</b>	<b>L1 State</b>	<b>L2 State</b>
Draft	Off	Off
Draft Condensed	Off	Flash
Roman	Off	On
SansSerif	On	Off
Courier	On	Flash
Prestige	On	On
Script	Flash	Off
Others (see Menu setting)	Flash	ON
Tear Off	Flash	Flash

Table4.2

<b>Switch</b>	<b>Top Label</b>	<b>Bottom Label</b>
S1	Tear Off	Font
S2	LF/FF	↓ Micro Feed
S3	Load/Eject	↑ Micro Feed
S4	Online	3sec

Table4.3

<b>LED</b>	<b>Label</b>
L3	Power/Paper Out
L4	Online

## Panel Operation

There are 3 states of operation: Online, Setup and Power On.

In the Online state, the keys provide the following functions: Go to Tear Off position, Line Feed/Form feed, Load/Eject, clear buffer and switch to offline state for access to Setup state.

In the Setup state, the keys provide font selection and microfeed functions.

To enter the Power On state, the user holds down a key or a combination of keys while powering up the printer. This state provides the following functions: Language Setup, Main Menu setup, Hex-dump, print Main Menu, access Service Menu, adjust page margins, restore factory defaults, and firmware update.

The followings describe the 3 states in details.

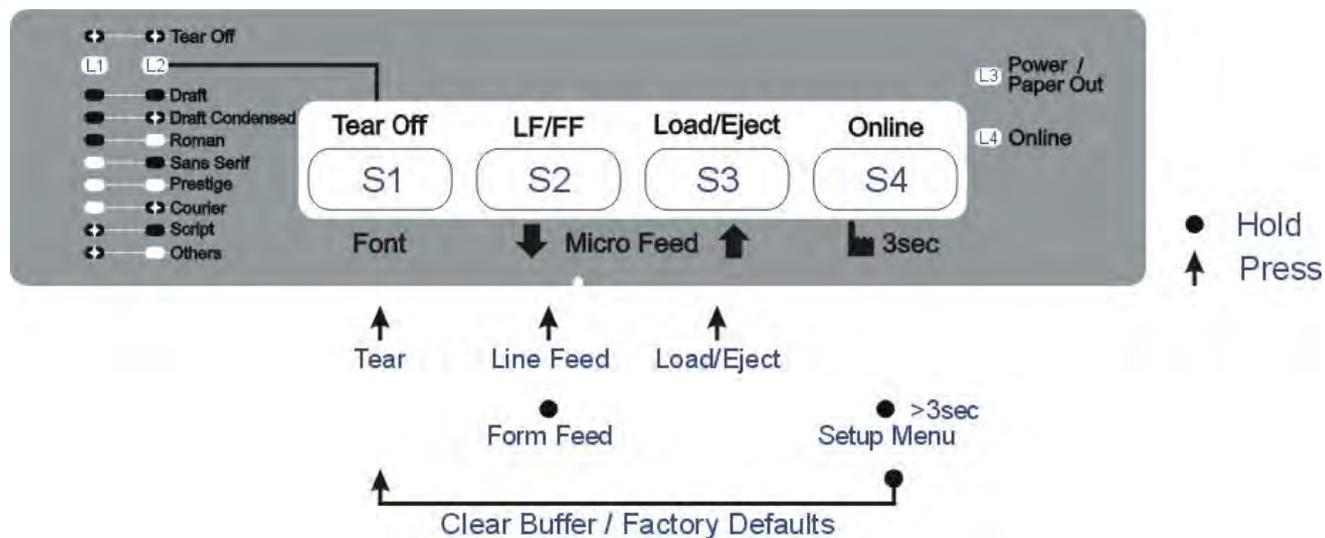
Legend:

[A] = press and hold switch A

{B} = press and then release switch B

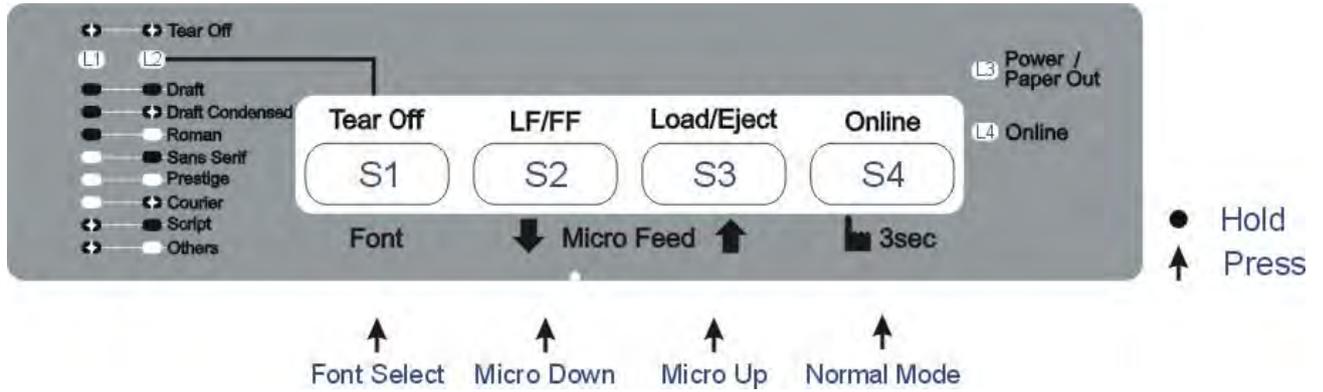
[A]+{B} = press switch B while holding A

## Online State



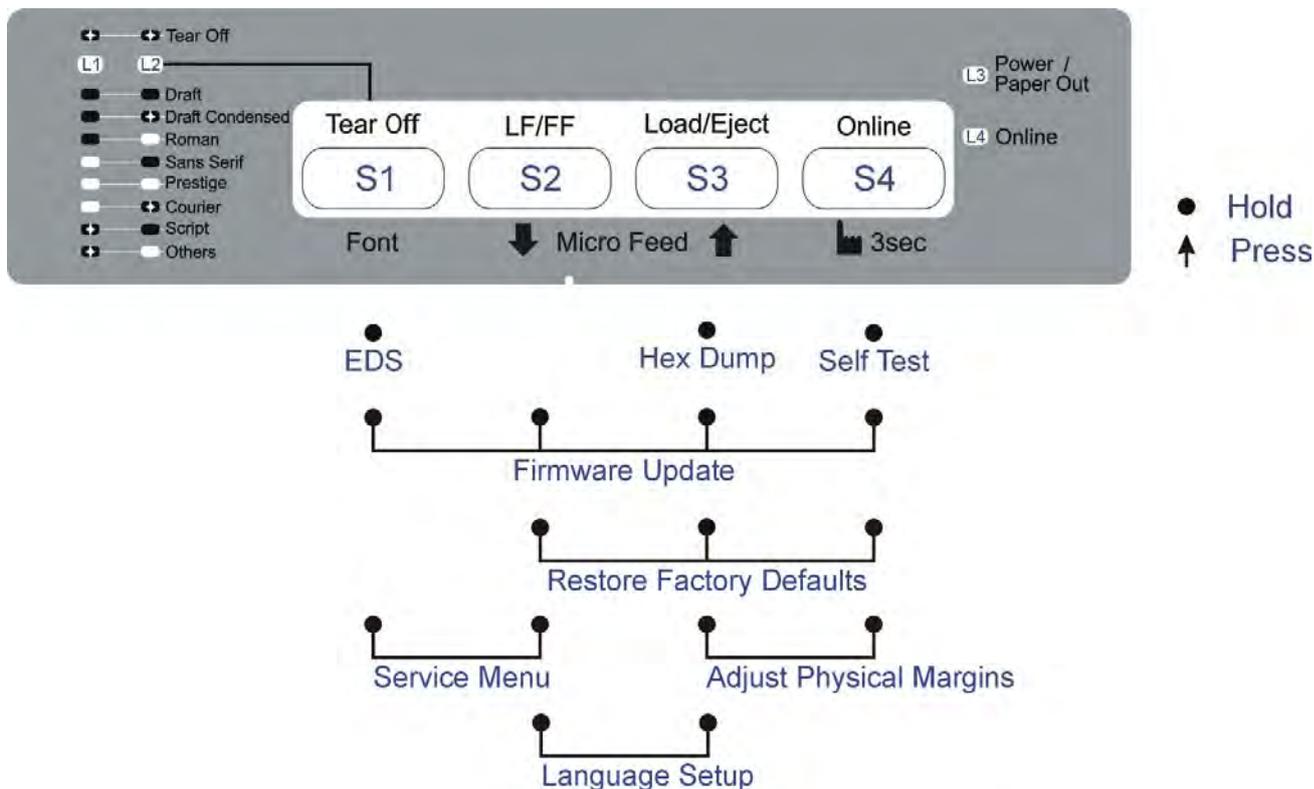
Function Name	Switch Operation	LED	Function Description
Tear Off	{S1}	L1, L2 flash	This is valid for tractor mode only. It feeds the form to the tear-off position. After tearing off the form, printing starts on the next TOF by: <ul style="list-style-type: none"> <li>pressing S1 once, or</li> <li>receiving print data from the host.</li> </ul>
LF	{S2}	-	Feeds a line with every press of S2.
FF	[S2]	-	By holding S2, the printer initially feeds a few lines; then feeds the form to the next TOF for rear tractor or ejects the form for cut sheets.
Load/Eject	{S3}	-	<ul style="list-style-type: none"> <li>Load: Automatically loads the paper (according to path selection) when no paper is on the platen.</li> <li>Eject: For rear tractor, it retracts the form from the platen to allow users to install cut sheets. (NOTE: Users have to toggle the path selection lever.) For cut sheets, it ejects the form on the platen.</li> </ul>
Setup state	[S4] > 3 secs	L4	Toggle to Setup state. Indicated by flashing L4.
Clear Buffer	[S4]+{S1}	-	Clears the print buffer and beeps once when completed.
Reset	[S4]+[S1] for longer time	-	Initializes the printer to the factory default settings. Beeps 3 times when completed.

## Setup State



Function Name	Switch Operation	LED	Function Description
Online state	{S4}	L4	Toggleing to the Online state will cause the printer to go into a ready-to-print state. Any changes made in Setup state will be saved permanently. Lighting up L4 indicates the Online state.
Micro Up	{S3}	-	Feeds up in 1/360" steps until the release of S3.
Micro Down	{S2}	-	Feeds down in 1/360" steps until the release of S2.
Font Select	{S1}	L1, L2	Refer to Table 4.1 for details.

## Power-On State



Function Name	Switch Operation	LED	Function Description
Status Page/ Self Test	[S4]	-	Prints the printer settings and self-test pattern. Pressing S1 can change the font.
Hex Dump	[S3]	L4	Beeps once to indicate going into hex dump mode: <ul style="list-style-type: none"> <li>• Prints data from host in hexadecimal representation.</li> <li>• Lights up L4.</li> <li>• Pressing S4 suspends the printing.</li> <li>• When the hex dump has finished, pressing S4 forces the printing of the last line of data, as any line termination control code from host has no function.</li> <li>• Pressing S1 can change the font.</li> <li>• Switch off the power to terminate the hex dump.</li> </ul>
Firmware Update	[S1]+[S2]+ [S3]+[S4]	L1, L2, L3, L4	<ul style="list-style-type: none"> <li>• Alternate flashing of L3 and L4 indicates printer is ready for firmware update. L1 and L2 are ON and OFF respectively.</li> <li>• When new firmware is being received, L3 and L4 are set to ON. L1 flashes a few times and then sets to ON. L2 flashing indicates downloading in progress.</li> <li>• When downloading is completed, the carriage returns to home position. Printer initializes normally.</li> </ul>

AdjustPhysical Margins	[S3]+[S4]		<ul style="list-style-type: none"> <li>• Flashing of L3.</li> <li>• Lights up L4.and L3.</li> <li>• Lights up L1 or L2 according to currentfonts.</li> <li>• Includes Adjust Fanfold Top Margin, Adjust Single Top Margin, Adjust Fanfold Left Margin, Adjust Single Left Margin and Adjust Tear-Off position</li> </ul>
ServiceMenu	[S1]+[S2]	L1, L2, L3, L4	<ul style="list-style-type: none"> <li>• Flashing of L3.</li> <li>• Lights up L4.and L3.</li> <li>• Lights up L1 or L2 according to currentfonts.</li> <li>• Functions are: Vertical Alignment, Change Pin, and Endless Self Test.</li> </ul>
Restore Factory Defaults	[S2]+[S3]+[S4]	L1, L2, L3, L4	<ul style="list-style-type: none"> <li>• Flashing of L3 then extinguish.</li> <li>• Lights up L4.</li> <li>• Lights up L1 or L2 according to currentfonts.</li> <li>• Restore Factory Defaults parameters except Change Pin, Vertical Alignment and Adjust Page Margin Parameters</li> </ul>
Menu Setup/ EDS	[S1]		Allows for Main Menu setting changes. Please read the instructions printed on how to change settings when this mode is activated. (EDS: Electronic DIP Switch)
Language Setup	[S2]+[S3]		Allows user to select one of the following languages: English, German, Russian, Italian, French, Spanish and Turkish. Factory default is English. Refer to Language Setup section below for details.

## Language Setup

The panel menu can display the following languages: English, German, Russian, Italian, French, Spanish and Turkish. Factory default setting is English. To change it to another language, hold down the **[LF/FF]** and **[Load/Eject]** keys on the panel and power-on. Upon exiting the Language Setup Menu, a listing of the current configuration is printed, and this is followed by Main Menu Setup.

Below is an example of changing from English to German language:

```

Panel switches in Language setup:
[Load/Eject] = Next language [Online] = Save & Exit
Funktion der Tasten im Sprachen Setup:
[Load/Eject] = Nächste Sprache [Online] = Speichern & Exit
ФУНКЦИЯ КЛАВИШ В МЕНЮ ЯЗЫКОВ:
[Load/Eject] = Следующий язык [Online] = Хранить & Выход
Pulsanti per impostazione Linguaggio
[Load/Eject] = Linguaggio Successivo [Online] = Salva & Esci
Fonctions des touches dans Configuration Langue:
[Load/Eject] = Prochaine Langue [Online] = Enregistrer & Quitter
Función de las teclas en el ajuste de Idioma
[Load/Eject] = Siguiente Idioma [Online] = Guardar y Salvar
Kumanda Paneli Dil Ayarı Konumunda:
[Load/Eject] = Sonraki Dil [Online] = Kaydet & Çık

English Deutsch
Deutsches Setup OK!

```

## 5 PrinterSettingChanges

To meet your own print requirements, the printer configurations may be changed as follows: Hold down the Tear Off key while powering on the printer, release the Tear Off key when the print head starts to move. The printer will print out the current settings and then enter Main Menu setup state. Follow the instructions printed on how to make setting changes. When a new setting is saved, it is retained after the printer has been powered off.

The Main Menu is grouped into 5 sub-menus: System Setup, Page Setup, Print Setup, Interface Setup and Advanced Setup. A detailed description of the sub-menus is given below. The settings in bold and italic refer to the default settings. The settings below are provided in the following order of languages: English, German, Russian, Italian, French, Spanish and Turkish.

### System Setup

System Setup	ValidSettings	Function
Emulation	<b>ESC/P2</b> , IBM 2390 Plus	Selects the printer emulation. This should be the same as the host printer driver.
Auto CR (IBM)	Yes, <b>No</b>	Yes: LF = LF+CR; No: LF = LF (Applies to IBM emulation only)
Auto LF	Yes, <b>No</b>	Yes: CR = CR+LF; No: CR = CR
Print Dir	<b>Bi-Dir</b> , Uni-Dir, Auto	Auto: Text & graphics in bi-direction; double height in uni-direction. Uni-Dir: Print everything in uni-direction. Bi-dir: Prints everything in bi-direction. Note: Top position print direction may be affected by Top Print Dir setting.
Top Print Dir	<b>Bi-Dir</b> , Uni-Dir	Bi-dir: Prints top position according to Print Dir setting. Uni-dir: Prints top position in uni-direction regardless of Print Dir setting.
Impact	<b>Normal</b> , Heavy	Heavy: Higher impact force for multipart printing
IBM AGM	Yes, <b>No</b>	Selects the IBM graphic mode. Applies to IBM emulation only

### Print Setup

Print Setup	ValidSettings	Function
Font (Others)	OCR-B, OCR-A, ORATOR, GOTHIC, <b>SOUVENIR</b>	The setting here will only be active when "Font" is set to "Others" on control panel,
Pitch	<b>10cpi</b> , 12cpi, 15cpi, 17cpi, 20cpi, PS	Controls the characters per inch setting.
Zero	<b>0,Ø</b>	Selects slashed or no-slash zero.

HS-Draft	<b>On</b> , Off	On: Prints High Speed Draft when Draft font is selected.
Graphic Speed	<b>Normal</b> , Fast, Ultra	When printing 180x180 DPI graphics: Normal – prints in 180x180 DPI, Fast – prints in 90x180 DPI, Ultra– prints in 60x180 DPI.
IBM Set 1/2	Set 1, <b>Set2</b>	Selects the IBM character set. 1: Normal; 2: Extended
Int'l Char Set	<b>USA</b> , France, Germany, UK, Denmark, Sweden, Italy, Spain, Japan, Norway, Denmark II, Spain II, Latin AM, Korea, Legal	14+1 international character set selections.
Code Page	<ol style="list-style-type: none"> <li>1. <b>CP 437</b></li> <li>2. CP 737</li> <li>3. CP 850</li> <li>4. CP 851</li> <li>5. CP 852</li> <li>6. CP 857</li> <li>7. CP 858</li> <li>8. CP 860</li> <li>9. CP 861</li> <li>10. CP 863</li> <li>11. CP 864</li> <li>12. CP 864 Extended</li> <li>13. CP 865</li> <li>14. CP 866 Cyrillic</li> <li>15. CP 866 Bulgaria</li> <li>16. CP 1250</li> <li>17. CP 1251</li> <li>18. CP 1252</li> <li>19. CP 1253</li> <li>20. CP 1254</li> <li>21. 8859-1</li> <li>22. 8859-1 (SAP)</li> <li>23. 8859-2</li> <li>24. 8859-5</li> <li>25. 8859-7</li> <li>26. 8859-9</li> <li>27. 8859-15</li> <li>28. BRASCII</li> <li>29. Abicomp</li> </ol>	National code page selections.

	30. Roman8 31. Coax/Twinax 32. New-437 33. New-Dig 850 34. Old-Code 860 35. Flarro 863 36. 865 Hebrew 37. CP 1257 38. 866 Ukraine 39. 866 Kazakhstan 40. Kamenicky 41. Mazovia 42. CP 775 43. CRO-ASCII 44. Arabic Farsi 45. Arabic Urdu 46. Greek DEC 47. Greek ELOT 928	
Character Table	<b>Graphic Table</b> , Italic Table	Character table type selection.

## Page Setup

Page Setup	Valid Settings	Function
Line Per Inch	1, 2, 3, 4, 5, <b>6</b> , 7, 8	Sets the linespacing
Fanfold Form Length	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"	Sets the page length for tractor mode
Fanfold Top Margin	0/60" ... <b>10/60"</b> ... 99/60"	Sets the top margin for tractor mode. Due to mechanical tolerance, 0/60" is not guaranteed.
Fanfold Bottom Margin	0/60" ... <b>10/60"</b> ... 30/60"	Sets the bottom margin for tractor mode. Due to mechanical tolerance, 0/60" is not guaranteed.
Single Form Length	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"	Sets the page length for friction mode
Single Top Margin	0/60" ... <b>10/60"</b> ... 99/60"	Sets the top margin for friction mode. Due to mechanical tolerance, 0/60" is not guaranteed.
Single Bottom Margin	0/60" ... <b>10/60"</b> ... 30/60"	Sets the bottom margin for friction mode. Due to mechanical tolerance, 0/60" is not guaranteed.
Roll Paper	Yes, <b>No</b>	In friction mode, [LF/FF] will not eject the paper and feed to next page. (Assume roll paper)
Perforation Skip	Yes, <b>No</b>	Skips printing on perforation area

AutoTear	<b>Manual</b> , 0.5s, 1s, 2s, 3s, 4s, 5s View1s, View2s, View3s	Specifies the waiting time before feeding the page to tear-off position automatically. Manual: Auto tear mode is off. View1s, View2s, View3s: After printing is completed, the printer will feed the paper until the last printed line is at the tear-off position. (Applies to tractor mode only)
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## Interface Setup

Interface Setup	Valid Settings	Function
Interface	<b>Auto</b> , Parallel, USB, Serial	For multi-host connection. Auto: First come first served; Parallel/USB/Serial: Serves the designated host only.
RAM Usage	<b>UserFont</b> , Buffer	User Font: Part of RAM is used for user download characters; Buffer: Disables user character download function; uses RAM for expanded buffer size up to 68KB.
I-PRIME	<b>Yes</b> , No	Yes: Host I-Prime signal resets the printer.
Protocol	<b>Xon/Xoff</b> , DTR	Serial RS-232C communication protocol selection.
Data Length	<b>8</b> , 7	Number of data bits per data byte selection.
Stop Bit	<b>1</b> , 2	Number of stop bits per data byte selection.
Parity	<b>None</b> , Odd, Even	Selects the parity check mode.
Baud Rate	9600, <b>19200</b> , 38400, 300, 600, 1200, 2400, 4800	Selects the baudrate (transmission speed).
Auto IF Delay	<b>10s</b> , 30s	Determines the waiting time before receiving data from another interface.
CX Bid	<b>Yes</b> , No	Yes: Sets the parallel interface of the printer to bidirectional mode (IEEE 1284, Nibble mode), e.g. for Windows Plug & Play. No: Sets the interface to compatibility mode in order to ensure reliable operation with special external boxes.

## Advanced Setup

Advanced Setup	Valid Settings	Function
Auto Load	Manual, 0.5s, 1s, <b>1.5s</b> , 2s	Specifies the waiting time before loading a cut sheet automatically. Manual: Auto load mode is off. (Applies to friction mode only.)
Paper Jam Prevention	<b>Yes</b> , No	Flattens paper edges by carriage movement before printing starts.
Paper End Detect	<b>Yes</b> , No	Yes: Detects paper out and halts printing; otherwise, ignores paper out and continues

		printing.
Form Length Ctrl	<b>Software</b> , Ignore	Ignore: Ignores form length commands
Pitch Ctrl	<b>Software</b> , Ignore	Ignore: Ignores CPI commands
Font Ctrl	<b>Software</b> , Ignore	Ignore: Ignores font select commands
Quality Ctrl	<b>Software</b> , Ignore	Ignore: Ignores print quality commands
Buzzer	<b>Yes</b> , No	Yes: Sounds buzzer on all hardware errors

German (Deutsch)

<b>System Setup</b>	<b>Valid Settings</b>
Emulation	<b>ESC/P2</b> , IBM 2390 Plus
Auto CR (IBM)	Ja, <b>Nein</b>
Auto LF	Ja, <b>Nein</b>
Druck Dir	<b>Bi-Dir</b> , Uni-Dir, Auto
Top Druck Dir	<b>Bi-Dir</b> , Uni-Dir
Anschlag	<b>Normal</b> , Stark
IBM AGM	Ja, <b>Nein</b>

<b>Druck Setup</b>	<b>Valid Settings</b>
Font (Andere)	OCR-B, OCR-A, ORATOR, GOTHIC, <b>SOUVENIR</b>
Zeichenteilung	<b>10cpi</b> , 12cpi, 15cpi, 17cpi, 20cpi, PS
Null	<b>0</b> , Ø
HS-Draft	<b>An</b> , Aus
Graphikgeschw.	<b>Normal</b> , Schnell, Ultra
IBM Set ½	Set 1, <b>Set2</b>
Land	<b>USA</b> , Frankreich, Deutschland, UK, Dänemark, Schweden, Italien, Spanien, Japan, Norwegen, Dänemark II, Spanien II, Latein-Amerika, Korea, Legal
Zeichensatz	<b>CP 437</b> , CP 857...
Zeichentabelle	<b>Graphik</b> , Italic

<b>Seiten Setup</b>	<b>Valid Settings</b>
Zeilen Pro Zoll	1, 2, 3, 4, 5, <b>6</b> , 7, 8
Endlos Formularlänge	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Endlos Oberer Rand	0/60" ... <b>10/60"</b> ...99/60"
Endlos Unterer Rand	0/60" ... <b>10/60"</b> ...30/60"
Einzel Formularlänge	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Einzel Oberer Rand	0/60" ... <b>10/60"</b> ...99/60"
Einzel Unterer Rand	0/60" ... <b>10/60"</b> ...30/60"
Rollenpapier	Ja, <b>Nein</b>

Perforationssprung	Ja, <b>Nein</b>
Abreißen	<b>Manuell</b> , 0.5s, 1s, 2s, 3s, 4s, 5s, view1s, view 2s, view 3s
<b>Schnittstellen Setup</b>	<b>ValidSettings</b>
Schnittstelle	<b>Auto</b> , Parallel, USB, Serial
I-PRIME	<b>Ja</b> , Nein
Protokoll	<b>Xon/Xoff</b> , DTR
Datenlänge	<b>8</b> , 7
StoppBit	<b>1</b> , 2
Parity	<b>None</b> , Odd, Even
Baud Rate	9600, <b>19200</b> , 38400, 300, 600, 1200, 2400, 4800
Auto IF Delay	<b>10s</b> , 30s
RAM Nutzung	<b>Ladbarer Font</b> , Puffer
CX Bid	<b>Ja</b> , Nein

<b>Erweitertes Setup</b>	<b>ValidSettings</b>
Auto Laden	Manuell, 0.5s, 1s, <b>1.5s</b> , 2s
Papierstau Vorbeugung	<b>Ja</b> , Nein
Papierende Detekt	<b>Ja</b> , Nein
Formularlänge Strg	<b>Software</b> , Ignoriere
Zeichenteilung Strg	<b>Software</b> , Ignoriere
Font Strg	<b>Software</b> , Ignoriere
Qualität Strg	<b>Software</b> , Ignoriere
Summer	<b>Ja</b> , Nein

## Russian (Россия)

<b>Системные установки</b>	<b>Valid Settings</b>
Эмуляция	<b>ESC/P2</b> , IBM 2390 Plus
Авто CR (IBM)	Да, <b>Нет</b>
Авто LF	Да, <b>Нет</b>
Направление печати	<b>Двунаправленная</b> , Однонаправленная, Авто
Направление печати загл. букв	<b>Двунаправленная</b> , Однонаправленная
Удар	<b>Нормальный</b> , Сильный
IBM AGM	Да, <b>Нет</b>

<b>Настройка печати</b>	<b>Valid Settings</b>
Дополнительный шрифт	OCR-B, OCR-A, ORATOR, GOTHIC, <b>SOUVENIR</b>
знаков/дюйм	<b>10cpi</b> , 12cpi, 15cpi, 17cpi, 20cpi, PS
Перечеркнутый ноль	<b>0</b> , Ø
Высокая скорость	<b>Вкл</b> , Выкл

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Скорость графики	<b>Нормальная</b> , Быстрая, Очень быстрая
Символы IBM 1/2	Уст. 1, <b>Уст. 2</b>
Набор знаков	<b>USA</b> , France, Germany, UK, Д а н и я , Sweden, Italy, Spain, Japan, Н о р в е г и я , Д а н и я II, Spain II, Л а т и н с к а я Америка, Korea, Legal
Кодовая таблица	<b>CP 437</b> , CP 857...
Таблица знаков	<b>Графика</b> , Курсив

Параметры страницы	Valid Settings
Строк на дюйм	1, 2, 3, 4, 5, <b>6</b> , 7, 8
Длина формы для непрерывной бумаги	3",3.5",11/3", 4", 5", 5.5" 6",7",8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Отступ сверху для непрерывной бумаги	0/60" ... <b>10/60"</b> ...99/60"
Отступ снизу для непрерывной бумаги	0/60"... <b>10/60"</b> ...30/60"
Длина формы для отдельных листов	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Отступ сверху для отдельных листов	0/60" ... <b>10/60"</b> ...99/60"
Отступ снизу для отдельных листов	0/60"... <b>10/60"</b> ...30/60"
Рулонная бумага	Да, <b>Нет</b>
Пропуск перфорации	Да, <b>Нет</b>
Авто прогон	<b>Ручной</b> , 0.5s, 1s, 2s, 3s, 4s, 5s, view1s, view 2s, view 3s

Установки интерфейса	Valid Settings
Интерфейс	<b>Авто</b> , Паралел, USB, RS-232
Паралел. порт	<b>Да</b> , Нет
Протокол RS-232	Хон/Хoff, <b>DTR</b>
Кол-во бит	<b>8</b> , 7
Стоп бит	<b>1</b> , 2
Четность	<b>Нет</b> , Чет, Нечет
Скорость передачи данных	9600, <b>19200</b> , 38400, 300, 600, 1200, 2400, 4800
Время ожидания	<b>10s</b> , 30s
Назначение RAM	<b>Пользов. шрифт</b> , Буфер
CX Bid	<b>Да</b> , Нет

Дополнительные установки	Valid Settings
Автозагрузка	Ручная, 0.5s, 1s, <b>1.5s</b> , 2s
Датчик движ. бумаги	<b>Да</b> , Нет
Датчик конца бумаги	<b>Да</b> , Нет

Контроль длины формы	<i>Програмный</i> , Игнор.
Контроль знаков/дюйм	<i>Програмный</i> , Игнор.
Контроль шрифта	<i>Програмный</i> , Игнор.
Контроль качества	<i>Програмный</i> , Игнор.
Звук	<i>Да</i> , Нет

## Italian (Italiano)

<b>MenuSistema</b>	<b>Valid Settings</b>
Emulazione	<b>ESC/P2</b> , IBM 2390 Plus
AutoCR (IBM)	Si, <b>No</b>
AutoLF	Si, <b>No</b>
Direz. Stampa	<b>Bi-Dir</b> , Uni-Dir, Auto
TopPrint Dir	<b>Bi-Dir</b> , Uni-Dir
Impatto	<b>Normale</b> , Pesante
IBM AGM	Si, <b>No</b>

<b>MenùStampa</b>	<b>ValidSettings</b>
Fonte (Altre)	OCR-B,OCR-A,ORATOR,GOTHIC, <b>SOUVENIR</b>
Spaziatura	<b>10cpi</b> , 12cpi, 15cpi, 17cpi, 20cpi, PS
Zero	<b>0</b> , Ø
HS-Bozza	<b>Si</b> , No
Veloc. Grafica	<b>Normale</b> , Veloce, Ultra
IBM Set 1/2	Set 1, <b>Set2</b>
Set Carat. Int.	<b>USA</b> ,Francia, Germania, Regno Unito, Danimarca, Svezia, Italia, Spagna, Giappone, Norvegia, Danimarca II, Spagna II, America Latina, Korea,Legal
Code Page	<b>CP 437</b> , CP 857...
Tab.Carattere	<b>Tab. Grafica</b> , Italico

<b>MenùPagina</b>	<b>ValidSettings</b>
Interlinea	1, 2, 3, 4, 5, <b>6</b> , 7, 8
Lungh.Mod. Continuo	3",3.5",11/3", 4", 5", 5.5",6",7",8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Margine Sup. Continuo	0/60" ... <b>10/60"</b> ...99/60"
Margine Inf. Continuo	0/60" ... <b>10/60"</b> ...30/60"
Lunghhezza Foglio	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Margine Sup. Foglio	0/60" ... <b>10/60"</b> ...99/60"
Margine Infer. Foglio	0/60" ... <b>10/60"</b> ...30/60"
RulloCarta	Si, <b>No</b>
SaltoPerforazione	Si, <b>No</b>
Autostrappo	<b>Manuale</b> , 0.5s, 1s, 2s, 3s, 4s, 5s, view1s, view 2s, view 3s

<b>MenùInterfacc.</b>	<b>ValidSettings</b>
Interfaccia	<b>Auto</b> , Parallela, USB, Seriale
I-PRIME	<b>Si</b> , No
Protocollo	<b>Xon/Xoff</b> , DTR
Lunghezza dati	<b>8</b> , 7
Stop Bit	<b>1</b> , 2
Parità	<b>No</b> , Dispari, Pari
Velocità	9600, <b>19200</b> , 38400, 300, 600, 1200, 2400, 4800
Ritardo Auto IF	<b>10s</b> , 30s
Uso RAM	<b>Fontiutente</b> , Memoria
CX Bid	<b>Si</b> , No

<b>MenùAvanzato</b>	<b>ValidSettings</b>
Autocaricamento	Manuale, 0.5s, 1s, <b>1.5s</b> , 2s
PrevieneInceppamento	<b>Si</b> , No
RilevaFine Carta	<b>Si</b> , No
Control. Lung. Carta	<b>Software</b> , Ignora
Control. Spaziatura	<b>Software</b> , Ignora
Controllo Fonti	<b>Software</b> , Ignora
Controllo Qualità	<b>Software</b> , Ignora
Cicalino	<b>Si</b> , No

## French (Français)

<b>Setup système</b>	<b>Valid Settings</b>
Emulation	<b>ESC/P2</b> , IBM 2390 Plus
RC-Auto(IBM)	Oui, <b>Non</b>
SL-Auto	Oui, <b>Non</b>
Dir Impr.	<b>Bidir</b> , Unidir, Auto
Sup. Dir Impr.	<b>Bidir</b> , Unidir
Frappe	<b>Normal</b> , Forte
IBM AGM	Oui, <b>Non</b>

<b>Setup impression</b>	<b>ValidSettings</b>
Polices (Autres)	OCR-B, OCR-A, ORATOR, GOTHIC, <b>SOUVENIR</b>
Densités caract.	<b>10cpi</b> , 12cpi, 15cpi, 17cpi, 20cpi, PS
Zéro	<b>0</b> , Ø
HS-Draft	<b>Oui</b> , Non
Vitesse graphiq.	<b>Normal</b> , Rapide, Ultra
IBM Set 1/2	Set 1, <b>Set2</b>
Pays	<b>USA</b> , France, Allemagne, Royaume-Uni, Denmark, Suède, Italie,

	Espagne, Japon, Norvège, Denmark II, Espagne II, Amerique latine, Korea, Legal
Jeu de caractèr.	<b>CP 437</b> , CP 857...
Tabl.de caract.	<b>Graphique</b> , Italique

Setup page	ValidSettings
Lignes par pouce	1, 2, 3, 4, 5, <b>6</b> , 7, 8
Papier continu Longueur formulaire	3", 3.5", 11/3", 4", 5", 5.5" 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Papier continu Bord supérieure	0/60" ... <b>10/60"</b> ...99/60"
Papier continu Bord inférieure	0/60" ... <b>10/60"</b> ...30/60"
Feuille à feuille Longueur formulaire	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Feuille à feuille Bord supérieur	0/60" ... <b>10/60"</b> ...99/60"
Feuille à feuille Bord inférieur	0/60" ... <b>10/60"</b> ...30/60"
Papier du rouleau	Oui, <b>Non</b>
Sauter la perforation	Oui, <b>Non</b>
Coupe Auto	<b>Manuel</b> , 0.5s, 1s, 2s, 3s, 4s, 5s, view 1s, view 2s, view 3s

Setup interface	ValidSettings
Interface	<b>Auto</b> , Parallel, USB, Serial
I-PRIME	<b>Oui</b> , Non
Protocole	<b>Xon/Xoff</b> , DTR
Long. de données	<b>8</b> , 7
Bits d'arrêt	<b>1</b> , 2
Parité	<b>None</b> , Odd, Even
Vitesse baud	9600, <b>19200</b> , 38400, 300, 600, 1200, 2400, 4800
Auto IF Delay	<b>10s</b> , 30s
Utilisation RAM	<b>UserFont</b> , Buffer
CX Bid	<b>Oui</b> , Non

Setup élargi	ValidSettings
Chargem. Autom.	Manuel, 0.5s, 1s, <b>1.5s</b> , 2s
Prévention bourrage	<b>Oui</b> , Non
Détec. fin de pap	<b>Oui</b> , Non
Long. formul. Strg	<b>Software</b> , Ignorer
Densi. caract. Strg	<b>Software</b> , Ignorer
Police Strg	<b>Software</b> , Ignorer
Qualité Strg	<b>Software</b> , Ignorer
Vibrateur	<b>Oui</b> , Non

Spanish (Español)

<b>System Setup</b>	<b>ValidSettings</b>
Emulación	<b>ESC/P2</b> , IBM 2390 Plus
AutoCR(IBM)	Si, <b>No</b>
AutoLF	Si, <b>No</b>
Modolmpresión	<b>Bi-Dir</b> , Uni-Dir, Auto
Modolmp.Borde	<b>Bi-Dir</b> , Uni-Dir
Impacto	<b>Normal</b> , Fuerte
IBM AGM	Si, <b>No</b>

<b>Print Setup</b>	<b>ValidSettings</b>
Fuente (Otros)	OCR-B,OCR-A,ORATOR,GOTHIC, <b>SOUVENIR</b>
Tamaño Letra	<b>10cpp</b> , 12cpp, 15cpp, 17cpp, 20cpp, PS
Cero	<b>0,Ø</b>
Alta Velocidad	<b>Activado</b> , Desactivado
Imp. Grafica	<b>Normal</b> , Rápido, Ultra
IBM Juego 1/2	Juego 1, <b>Juego 2</b>
CarácterLocal	<b>USA</b> ,Francia, Alemania, Reino Unido, Dinamarca, Suecia, Italia, España, Japón, Noruega, Dinamarca II, España II, AméricaLatina, Corea, Legal
Tabla Carácter	<b>CP 437</b> , CP 857...
TipoTabla	<b>Tabla Gráfica</b> , Italica

<b>Page Setup</b>	<b>ValidSettings</b>
LineasPor Pulgada	1, 2, 3, 4, 5, <b>6</b> , 7, 8
Tamaño Papel Continuo	3",3.5",11/3", 4", 5", 5.5" 6",7",8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
MargenSup. Pap Cont.	0/60" ... <b>10/60"</b> ...99/60"
MargenInf. Pap.Cont.	0/60" ... <b>10/60"</b> ...30/60"
Tamaño Hojas Sueltas	3", 3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
MargenSup. Folios	0/60" ... <b>10/60"</b> ...99/60"
MargenInf. Folios	0/60" ... <b>10/60"</b> ...30/60"
Rollode Papel	Si, <b>No</b>
Salto perforación	Si, <b>No</b>
Mover a PosiciónCorte	<b>Manual</b> , 0.5s, 1s, 2s, 3s, 4s, 5s, view1s, view 2s, view 3s

<b>Interface Setup</b>	<b>ValidSettings</b>
Interface	<b>Auto</b> , Paralelo, USB, Serie
I-Prime	<b>Si</b> , No

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Protocolo	<b>Xon/Xoff</b> , DTR
LongitudDatos	<b>8</b> , 7
Bit Parada	<b>1</b> , 2
Paridad	<b>Ninguna</b> , Impar, Par
Tasa Baudios	9600, <b>19200</b> , 38400, 300, 600, 1200, 2400, 4800
Auto retraso	<b>10s</b> , 30s
Uso de RAM	<b>FontUsuario</b> , Buffer
CX Bid	<b>Si</b> , No

<b>Advanced Setup</b>	<b>Valid Settings</b>
Auto Carga	Manual, 0.5s, 1s, <b>1.5s</b> , 2s
Prevención Atascos	<b>Si</b> , No
Detección Fin Papel	<b>Si</b> , No
Control Tamaño Papel	<b>Software</b> , Ignorar
Control Tamaño Letra	<b>Software</b> , Ignorar
Control Fuente	<b>Software</b> , Ignorar
Control Calidad	<b>Software</b> , Ignorar
Alarma	<b>Si</b> , No

### Turkish (Türkçe)

<b>Sistem Ayarı</b>	<b>Valid Settings</b>
Benzetim/Emulation	<b>ESC/P2</b> , IBM 2390 Plus
Otom. Satırbaş ı (IBM)	Evet, <b>Hayır</b>
Otom. Satırbesleme	Evet, <b>Hayır</b>
Yazdırma yönü	İ <b>ki-Yöne</b> , Tek-Yöne, Otom.
Üstte yazdırma yönü	İ <b>ki-Yöne</b> , Tek-Yöne
Vuruş	<b>Normal</b> , Güçlü
IBM AGM	Evet, <b>Hayır</b>

<b>Yazdırma Ayarları</b>	<b>Valid Settings</b>
Yazı Tipi (Diğ er)	OCR-B, OCR-A, ORATOR, GOTHIC, <b>SOUVENIR</b>
Karakter Sıklığı ı	<b>10cpi</b> , 12cpi, 15cpi, 17cpi, 20cpi, PS
Sıfır	<b>0</b> , Ø
Yük. Hız-Taslak	<b>On</b> , Off
Grafik Hızı	<b>Normal</b> , Hızlı, Ultra
IBM Karakter Seti 1/2	Set 1, <b>Set 2</b>
Uluslararası Kar. Seti	<b>Amerika Bir.Devleti</b> , Fransa, Almanya, İngiltere, Danimarka, İsveç, İtalya, İspanya, Japonya, Norveç, Danimarka II, İspanya II, Latin Amerika, Korea, Legal
Kod Sayfası	<b>CP 437</b> , CP 857...

KarakterTablosu	<b>Grafik Tablosu</b> , İ talik
-----------------	---------------------------------

<b>Sayfa Düzeni Ayarı</b>	<b>Valid Settings</b>
İ nç baş ina satır	1, 2, 3, 4, 5, <b>6</b> , 7, 8
Sürekli-kağ it Form Uzunluğ u	3",3.5",11/3", 4", 5", 5.5" 6",7",8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Sürekli-kağ it Üst kenar boş luğ u	0/60" ... <b>10/60"</b> ...99/60"
Sürekli-kağ it Alt kenar boş luğ u	0/60" ... <b>10/60"</b> ...30/60"
Tek-kağ it Formuzunluğ u	3",3.5", 11/3", 4", 5", 5.5", 6", 7", 8", 8.5", <b>11"</b> , 70/6", 12", 14", 17"
Tek-kağ it Üst kenar boş luğ u	0/60" ... <b>10/60"</b> ...99/60"
Tek-kağ it Alt kenar boş luğ u	0/60" ... <b>10/60"</b> ...30/60"
Rulo kağ it	Evet, <b>Hayır</b>
Delik atlama	Evet, <b>Hayır</b>
Otom. Koparma	<b>Elle/Manuel</b> , 0.5s, 1s, 2s, 3s, 4s, 5s, view1s, view 2s, view 3s

<b>Arabirim Ayarları</b>	<b>Valid Settings</b>
Arabirim	<b>Otom.</b> , Paralel, USB, Seri
I-Prime	<b>Evet</b> ,Hayır
İ letiş imKuralları	<b>Xon/Xoff</b> , DTR
Veri Uzunluğ u	<b>8</b> , 7
DurmaBiti	<b>1</b> ,2
Eş lik	<b>Yok</b> ,Çift, Tek
Baud Hızı	9600, <b>19200</b> , 38400, 300, 600, 1200, 2400, 4800
Otom. Arabirim gecikmesi	<b>10s</b> , 30s
RAM Kullanımı	<b>Kullanıcı Yazı Tipi</b> ,Arabellek
CX Bid	<b>Evet</b> ,Hayır

<b>Geliş tirilmiş Ayarlar</b>	<b>Valid Settings</b>
Otom. Yükleme	Elle/Manuel, 0.5s, 1s, <b>1.5s</b> , 2s
Kağ it Sıkış masını Önleme	<b>Evet</b> ,Hayır
Kağ it Sonunu Algılama	<b>Evet</b> ,Hayır
Form Uzunl.Kont.	<b>Yazılım</b> , Yoksay
Karak.Sıkl. Kont.	<b>Yazılım</b> , Yoksay
Yazı TipiKont.	<b>Yazılım</b> , Yoksay
KaliteKont.	<b>Yazılım</b> , Yoksay
Alarm Zili	<b>Evet</b> ,Hayır

## Vertical Alignment

The vertical alignment function is used to resolve any vertical line misalignments in bi-directional printing.

```
| This example shows how printing looks  
| when characters are vertically  
| misaligned. Note that the left  
| margin is not straight.
```

### Adjust Vertical Alignment Procedure:

1. Enter the Service Menu by holding down the **【Tear Off】** and **【LF/FF】** keys while powering up.
2. Load paper.
3. The printer will print as follows:

**Service Menu**

**【LF/FF】 = OK 【TearOff】 = Back 【Load/Eject】 = Next 【Online】 = Exit**

**Current Setting: Vertical Alignment**

4. Press **【LF/FF】** key to select the current setting. The printer will print as follows:

**Vertical Alignment**

**【LF/FF】 = OK 【TearOff】 = Back 【Load/Eject】 = Next 【Online】 = Exit**

**Please select Paper Type: Single Ply**

For single ply paper, press **【LF/FF】** key to select. For multipart paper, press **【Load/Eject】** key to go to "Multipart", then press **【LF/FF】** key to select.

5. If single ply is selected for paper type, the following will print:

**Single Ply**

**Current Print Mode: LQ**

Press **【Load/Eject】** key to scroll to other print modes if required.

6. If LQ is selected, the following will print:

**LQ**

**【LF/FF】 = lower ½ to left 【Load/Eject】 = lower ½ to right 【Online】 = Exit**

**LQ -2:**



Pressing **【LF/FF】** or **【Load/Eject】** key will allow you to adjust the alignment of the vertical lines

printed above.

7. Once the setting which gives the best alignment is found, press **【Online】** key to exit current level. Printer will print "Save settings? Yes". Press **【LF/FF】** key to save setting. Press **【Online】** key a few times until the printer exits the Service Menu.

## Change Pin Function

When printer has been used for a long time or the print volume is high, the frequently used print head pins may fail. The Change Pin function enables the user to continue using the printer for a while without compromise in print quality until a suitable print head replacement is available. This function will reduce the print speed if activated.

### Change Pin Procedure:

1. Enter the Service Menu by holding down the **【Tear Off】** and **【LF/FF】** keys while powering up.
2. Load paper.
3. The printer will print as below:

**Service Menu**

**【LF/FF】 = OK   【Tear Off】 = Back   【Load/Eject】 = Next   【Online】 = Exit**

**Current Menu: Vertical Alignment**

Press **【Load/Eject】** key to scroll to "**Change Pin**", then press **【LF/FF】** key to select. The status of each pin will be printed as follows:

Change Pin

1 ----- Is this pin OK? Yes / No

2 ----- Is this pin OK? Yes / No

3 ----- Is this pin OK? Yes / No

:

24 ----- Is this pin OK? Yes / No

Press **【Load/Eject】** key to choose whether the pin is **Yes** or **No**, then press **【LF/FF】** key to confirm selection.

4. When all the 24 pins are evaluated, press **【Online】**. The printer will print "**Save settings? Yes**". Press **【LF/FF】** key to confirm selection. Press **【Online】** key a few times until the printer exits the Service Menu.

## Adjust Physical Margins

Adjust Page Margins allows for adjustments of physical left, top margins and tear-off position. Warning: Once these settings are changed, resetting the printer to factory defaults will not initialize these settings back to the original settings; so it is not advisable to perform this adjustment unless it is absolutely necessary.

### Adjust Top Margin Procedure:

1. Enter the Adjust Page Margins function by holding down the **【Load/Eject】** and **【Online】** keys while powering up until the printer beeps twice.
2. Load paper.
3. The printer will print as below:

**Adjust Page Margins:**

**【LF/FF】 = OK   【TearOff】 = Back   【Load/Eject】 = Next   【Online】 = Exit**  
**Current Setting: Adjust Fanfold Top Margin**

Press **【LF/FF】** key to confirm selection if the paper used is fanfold type. The printer will print as follows:

**Procedure:**

**Install fanfold paper to tractors**

**【LF/FF】 = Add   【Load/Eject】 = Reduce   【Online】 = Exit**  
**Each step is 0.5 mm**

Function of keys:

**【Load/Eject】** key: Decrease 0.5mm

**【LF/FF】** key: Increase 0.5mm

4. Press **【Online】** key, printer will print **"Save settings? Yes"**. Press **【Load/Eject】** key to choose Yes or No, then press **【LF/FF】** key to confirm selection and exit "Adjust Page Margins" mode by pressing **【Online】**. The printhead moves to the left side and the printer beeps twice, then the print head moves to the middle position.

### Adjust Left Margin Procedure:

1. Enter the Adjust Page Margins function by holding down the **【Load/Eject】** and **【Online】** keys while powering up until the printer beeps twice.
2. Load paper.
3. The printer will print as below:

**Adjust Page Margins:**

**【LF/FF】 = OK   【TearOff】 = Back   【Load/Eject】 = Next   【Online】 = Exit**  
**Current Setting: Adjust Fanfold Top Margin**

4. Press **【Load/Eject】** key until the current setting is "Adjust Fanfold Left Margin". Press **【LF/FF】** key to confirm selection if the paper used is fanfold type. The printer will print as follows:

**Adjust Fanfold Left Margin 0**

5. Press **【Tear Off】** or **【Load/Eject】** to reduce or increase the left margin, respectively, by one unit of 1/60 inch.
6. When satisfied with the left margin setting, press **【Online】** key, printer will print **“Save settings? Yes”**. Press **【Load/Eject】** key to choose Yes or No, then press **【LF/FF】** key to confirm selection and exit “Adjust Page Margins” mode by pressing **【Online】**. The printhead moves to the left side and the printer beeps twice, then the printhead moves to the middle position.

## Adjust Tear-Off Position Procedure:

1. Enter the Adjust Page Margins function by holding down the **【Load/Eject】** and **【Online】** keys while powering up until the printer beeps twice.

2. Load fanfold paper.

3. The printer will print as below:

### **Adjust Page Margins:**

**【LF/FF】 = OK   【TearOff】 = Back   【Load/Eject】 = Next   【Online】 = Exit**

**Current Setting: Adjust Fanfold Top Margin**

4. Press **【Load/Eject】** key until the current setting is “Adjust Tear-Off Position”. Press **【LF/FF】** key to confirm selection. The printer will print as follows:

### **Procedure:**

#### **Install fanfold paper to tractors**

**【LF/FF】 = Add   【Load/Eject】 = Reduce   【Online】 = Exit**

**Each step is 0.5 mm**

Function of keys:

**【Load/Eject】** key: Decrease 0.5mm

**【LF/FF】** key: Increase 0.5mm

5. Press **【Online】** key, printer will print **“Save settings? Yes”**. Press **【Load/Eject】** key to choose Yes or No, then press **【LF/FF】** key to confirm selection and exit “Adjust Page Margins” mode by pressing **【Online】**. The printhead moves to the left side and the printer beeps twice, then the print head moves to the middle position.

### Dascom Printer Setup Tool

In the CDROM is a software utility called "Dascom Printer Setup". This application enables a convenient, simple and fast way to control your printer without touching any keys on the operation panel.

1. Start the tool installation by double clicking the "Dascom Printer Setup.exe".
2. Connect the printer to the system using USB cable
3. Power up the printer.
4. Load paper into the printer. (Note: The tool cannot get connected to the printer when the printer is offline.)
5. Run the tool from the Windows Start menu by selecting All Programs, then Dascom Printer Setup, and then Tally Dascom Printer Setup.
6. For more information on how to use the tool, go to the Help menu and select User Guide.

## 6 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 to determine whether lubrication may be necessary.



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

### 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.

### 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.
6. Remove the single sheet feeder and clean the form tractors and the surrounding areas.
7. Re-install the single sheet feeder.

### 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 paper feed knob.
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.

## 7 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.

### Print Quality Problems and Solutions

Problem	Solution
Printing is too light or too dark.	<ul style="list-style-type: none"> <li>• Make sure that the ribbon cartridge is properly installed and that the ribbon feeds smoothly.</li> <li>• Replace the ribbon if necessary.</li> <li>• Make sure that the print gap lever is set for the thickness of your paper.</li> </ul>
Smears and stains appear on the page.	<ul style="list-style-type: none"> <li>• Make sure that the print gap lever is set for the thickness of your paper.</li> <li>• Check for ribbon wear. Replace the ribbon if necessary.</li> <li>• Check whether the tip of the print head is dirty. Clean the head with a soft cloth if necessary.</li> <li>• The print head may need to be replaced.</li> </ul>
Printing is erratic or the wrong characters are printed. Many "?" or unexpected characters are printed.	<ul style="list-style-type: none"> <li>• Make sure that the interface cable is securely connected to both the printer and computer.</li> <li>• Make sure that the printer driver selected in your software is the same as the emulation selected on the printer.</li> <li>• Check the length of the interface cable. (Maximum Parallel &amp; USB: 2 meters, Serial: 15 meters)</li> <li>• Try another interface cable.</li> </ul>
The page is blank.	<ul style="list-style-type: none"> <li>• Make sure that the ribbon cartridge is properly installed.</li> <li>• Make sure the gap lever is set correctly.</li> </ul>
Printing is vertically misaligned (jagged).	Use the printer's vertical alignment function to check the vertical print alignment. If necessary, adjust the print alignment.
The top margin is wrong.	<ul style="list-style-type: none"> <li>• Check the application top margin setting.</li> <li>• Adjust the Top Margin setting in Page Setup menu if necessary.</li> </ul>
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.

## Paper Handling Problems and Solutions

Problem	Solution
Paper cannot be loaded or fed.	<ul style="list-style-type: none"> <li>• Make sure that the paper select lever located on the top right of the printer is set correctly. Move the lever to the front for single sheets or to the rear for continuous forms.</li> <li>• Make sure that the paper covers the paper-out sensor.</li> </ul>
Paper jams while loading.	<ul style="list-style-type: none"> <li>• Turn off the printer and remove the jammed paper. Remove any obstructions from the paper path.</li> <li>• Make sure that the Print Gap lever is set for the thickness of your paper.</li> <li>• Make sure that the paper is not folded, creased, or torn.</li> <li>• Make sure that the left and right tractors are set so that the continuous forms are stretched taut.</li> </ul>
Paper jams while printing.	<ul style="list-style-type: none"> <li>• Turn off the printer and remove the jammed paper. Remove any obstructions from the paper path.</li> <li>• Make sure that the Print Gap lever is set for the thickness of your paper.</li> <li>• For continuous forms, make sure that the incoming and outgoing paper stacks are correctly placed. Paper should feed straight.</li> </ul>
Paper slips off the forms tractors or the perforated holes of the paper tear during printing.	<p>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.</p>

## Operating Problems and Solutions

Problem	Solution
The power does not turn on.	<ul style="list-style-type: none"> <li>• Check whether the mains voltage is correct.</li> <li>• Make sure that the power cord is securely connected to both the printer and the mains power outlet.</li> <li>• Make sure that the power outlet is functional. If not so, use other outlet.</li> <li>• Turn the power off. Wait a minute and then turn the printer on again. If the printer still has no power, contact your dealer.</li> </ul>

<p>The printer is on but it will not print.</p>	<ul style="list-style-type: none"> <li>• Make sure that the Online indicator is lit.</li> <li>• If you use the interface cable, make sure it is securely connected to both the printer and the computer.</li> <li>• Make sure paper is loaded.</li> <li>• 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.</li> <li>• Make sure that the printer driver selected in your software is the same as the emulation selected on the printer.</li> </ul>
<p>Paper select lever error</p>	<p>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.</p>

## Printer Failures

A user cannot generally resolve a problem involving defective printer hardware. Power off and on again the printer to recover any fatal error. If the problem cannot be resolved, contact your dealer or service partner.

## Error Indications on LEDs

<b>Error Description</b>	<b>Operation Status</b>	<b>Paper Out LED</b>	<b>Online LED</b>	<b>Tear Off LED</b>	<b>Buzzer Sound</b>
Paper out	Normal	Flash	Off	No change	Once
Paper jammed	Suspend	Flash	Off	Flash	Continuously
Friction feed / Tractor feed	Suspend	On	Off	Flash	Continuously
Print head hot	Normal	On	Flash	No change	--
Carriage initial position	Stop	Off	Off	Flash	Once
Memory	Stop	Off	Off	Flash	--
EEPROM	Normal	Off	Flash	No change	Once
CMOS chip	Stop	Off	Flash	Flash	--

## Diagnostic Functions

The printer diagnostic functions are Self-Testpage, hex-dump mode and print alignment adjustment.

- **Self-Testpage:** Tells you whether the printer hardware is functioning correctly. If the printer hardware is functional, any problems you are having are probably caused by incorrect printer settings, incorrect software settings, the interface, or the computer.
- **HEX-DUMP MODE:** Allows you to determine whether the computer is sending the correct commands to the printer, and whether the printer is executing the commands correctly. This function is useful to programmers or others who understand how to interpret hex dumps.
- **PRINTING ALIGNMENT ADJUSTMENT:** Allows you to check and, if necessary, correct the printer's vertical line print alignment in bi-directional mode.

For details on using these functions, please refer to chapters 4 and 5.

## Firmware Update

Sometimes it is necessary to update the firmware to solve a problem. The latest firmware file may be obtained from your dealer or downloaded from our website [www.dascom.com](http://www.dascom.com). Before upgrading firmware, it is strongly recommended to print the Main Menu page to keep a record of the old settings.

Note: Firmware updates should only be performed by an authorized service person. We disclaim any responsibility for any damage caused if it is performed by any other person.

To load new firmware, proceed as follows:

1. Switch off the printer. Connect your PC to the **parallel port** on the printer.
2. Press and hold down all 4 keys (S1, S2, S3, S4) while powering on the printer.
3. Alternate flashing of L3 and L4 LEDs indicates printer is ready for firmware update. L1 and L2 LEDs are ON and OFF respectively.
4. Go to the DOS prompt window. Copy the firmware file (with extension .MOT) to your printer as follows:

```
COPY /B <filename>.mot PRN
```

5. When new firmware is being received, L3 and L4 LEDs are set to ON. L1 LED flashes a few times, then sets to ON. L2 LED flashing indicates downloading in progress.

Note: Do not interrupt the downloading process to prevent possible flash memory corruption.

6. When downloading is completed, the carriage returns to home position. Printer initializes normally.

Alternatively, you can use the Firmware Flash Tool version 3.5 or higher which is available in the CDROM and our website as well. Upon starting up the tool, choose the correct file and press "Update".

## 8 General Specifications

<b>Print System</b>	Mono-chrome serial impactdot matrix				
<b>Print Technology</b>	Uni-/bi-directional logicseeking for text and graphics				
<b>Print Speed</b>	Pitch	HS Draft	Draft	LQ	(CPS/DPI)
	10 CPI	375/80H	250/120H	83/360H	
	12 CPI	300/120H	300/120H	100/360H	
	15 CPI	375/120H	375/120H	125/360H	
	17.1 CPI	426/120H	426/120H	142/360H	
	20 CPI	498/120H	498/120H	166/360H	
<b>FontMatrix</b>	Pitch	HS Draft	Draft	LQ	(Matrix/DPI)
	10 CPI	8x24/80H	12x24/120H	36x24/360H	
	12 CPI	10x24/120H	10x24/120H	30x24/360H	
	15 CPI	8x16/120H	8x16/120H	24x16/360H	
	17.1 CPI	7x24/120H	7x24/120H	21x24/360H	
	20 CPI	6x24/120H	6x24/120H	18x24/360H	
	Proportional	Nx24/360H	Nx24/360H	Nx24/360H	
<b>Print Head</b>	Number of pins:	24 pins			
	Firing frequency:	Normal mode: 1500 Hz			
	Pin diameter:	0.2 mm			
	Life:	400 million strokes/pin@ Draft mode			
<b>Graphics</b>	8-bit mode: 8V x 60H, 80H, 90H, 120H, 240H (DPI)				
	24-bit mode: 24V x 60H, 90H, 120H, 180H, 360H (DPI)				
<b>Paper Feed Speed</b>	Continuous feed: 5.0 IPS (inches per second)				
<b>Resolution</b>	360 x 360 DPI maximum				
<b>Printable Columns</b>	Characters per line (CPL)				
	10 CPI:	80 CPL			
	12 CPI:	96 CPL			
	15 CPI:	120 CPL			
	17.1 CPI:	137 CPL			
	20 CPI:	160 CPL			

<p><b>Built-In Fonts</b></p>	<p>BitmapFonts:</p> <ol style="list-style-type: none"> <li>1. Draft 10, 12, 15, 17, 20 CPI</li> <li>2. Roman10, 12, 15, 17, 20 CPI, Proportional</li> <li>3. SansSerif10, 12, 15, 17, 20 CPI, Proportional</li> <li>4. Courier 10, 12, 15, 17, 20 CPI, Proportional</li> <li>5. Prestige 10, 12, 15, 17, 20 CPI</li> <li>6. OCR-B 10, 12, 17, 20 CPI</li> <li>7. OCR-A 10, 12, 17, 20 CPI</li> <li>8. Orator 10, 12, 15, 17, 20 CPI, Proportional</li> <li>9. SOUVENIR10, 12, 15, 17, 20 CPI, Proportional</li> <li>10. GOTHIC 10, 12, 15, 17, 20 CPI, Proportional</li> <li>11. Script10, 12, 15, 17, 20 CPI</li> </ol>
<p><b>Barcodes</b></p>	<ol style="list-style-type: none"> <li>1. EAN-13</li> <li>2. EAN-8</li> <li>3. Interleaved 2 of 5</li> <li>4. UPC-A</li> <li>5. UPC-E</li> <li>6. Code 39</li> <li>7. Code 128</li> <li>8. POSTNET</li> <li>9. Codabar</li> <li>10. Industrial 2 of 5</li> </ol>
<p><b>Code Pages</b></p>	<ol style="list-style-type: none"> <li>1. CP 437</li> <li>2. CP 737</li> <li>3. CP 850</li> <li>4. CP 851</li> <li>5. CP 852</li> <li>6. CP 857</li> <li>7. CP 858</li> <li>8. CP 860</li> <li>9. CP 861</li> <li>10. CP 863</li> <li>11. CP 864</li> <li>12. CP 864 Extended</li> <li>13. CP 865</li> <li>14. CP 866 Cyrillic</li> <li>15. CP 866 Bulgaria</li> <li>16. CP 1250</li> <li>17. CP 1251</li> <li>18. CP 1252</li> <li>19. CP 1253</li> <li>20. CP 1254</li> </ol>

<p><b>Code Pages</b></p>	<ol style="list-style-type: none"> <li>21. 8859-1</li> <li>22. 8859-1 (SAP)</li> <li>23. 8859-2</li> <li>24. 8859-5</li> <li>25. 8859-7</li> <li>26. 8859-9</li> <li>27. 8859-15</li> <li>28. BRASCII</li> <li>29. Abicomp</li> <li>30. Roman8</li> <li>31. Coax/Twinax</li> <li>32. New-437</li> <li>33. New-Dig 850</li> <li>34. Old-Code 860</li> <li>35. Flarro 863</li> <li>36. 865 Hebrew</li> <li>37. CP 1257</li> <li>38. 866 Ukraine</li> <li>39. 866 Kazakhstan</li> <li>40. Kamenicky</li> <li>41. Mazovia</li> <li>42. CP 775</li> <li>43. CRO-ASCII</li> <li>44. Arabic Farsi</li> <li>45. Arabic Urdu</li> <li>46. Greek DEC</li> <li>47. Greek ELOT 928</li> </ol>
<p><b>International Character Sets</b></p>	<ol style="list-style-type: none"> <li>1. USA</li> <li>2. France</li> <li>3. Germany</li> <li>4. UK</li> <li>5. DenmarkI</li> <li>6. Sweden</li> <li>7. Italy</li> <li>8. Spain I</li> <li>9. Japan</li> <li>10. Norway</li> <li>11. DenmarkII</li> <li>12. Spain II</li> <li>13. Latin America</li> <li>14. Korea</li> <li>15. Legal</li> </ol>

<b>Line Spacing</b>	1/6", 1/8", n/60", n/180", n/360"		
<b>Paper Specifications</b>	Cut Sheet	Fanfold Paper	
		Single ply	Multi-part
	Width: 76.2mm~256.5mm (3"~10.1")  Length: 101.6mm~363.2mm (3.9"~14.3")	Width: 76.2mm~254mm(3"~10")  Length: 101.6mm min (4" min)	
<b>Paper Specifications</b>	Weight: 52~100g/m <sup>2</sup> Thickness: 0.065~0.14mm (0.0026"~0.0055")	Weight: 52~100 g/m <sup>2</sup> Thickness: 0.065~0.14mm (0.0026"~0.0055")	Weight: 40~58g/m <sup>2</sup> Thickness: 0.45 mm max (0.0177" max)
<b>Paper Handling</b>	Feeding method: Friction and Tractor Paper path: Cut sheets: Top load and top out Fanfold: Rear in and top out		
<b>Copy Capability</b>	Original + 4 copies		
<b>Emulation</b>	ESC/P2, IBM 2390 Plus		
<b>Ribbon Type</b>	Cartridge; Monochrome		
<b>Ribbon Life</b>	7 million characters (rolling Draft 10 CPI)		
<b>Input Data Buffer</b>	Up to 68KB		
<b>Windows Drivers</b>	Windows Server 2000/2003/2008 Windows Vista Windows XP Windows 98 Windows 7		
<b>Interface</b>	Parallel (Bi-directional IEEE-1284 nibble mode) USB 2.0 (B type connector) Serial RS-232C		
<b>Operation Panel</b>	Switches: 4 pcs LED indicators: 4 pcs		
<b>Noise Level</b>	< 51 dBA in 10CPI draft ASCII (Conforming to ISO7779)		
<b>Ambient Conditions</b>	Temperature Operating: +5 to +40 °C. Stand-by: -20 to +55 °C Humidity Operating: 10 to 80%RH (No condensation) Stand-by: 5 to 85%RH (No condensation)		
<b>Dimensions</b>	359 mm (W) x 285 mm (D) x 159 mm (H)		



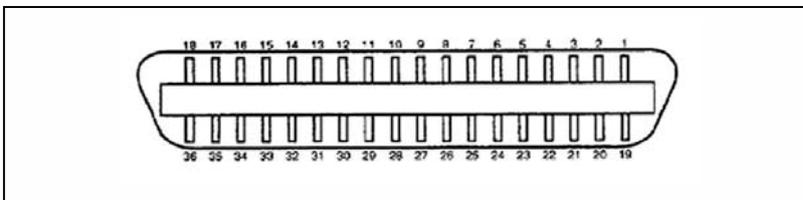
## 9 Interfaces

### Parallel Interface

#### Parallel Interface Pin Assignment

Pin	Signal Name	Signal Transmission
1	STROBE	Printer ← Computer
2~9	DATA	Printer ← Computer
10	ACK	Printer → Computer
11	BUSY	Printer → Computer
12	PE	Printer → Computer
13	SELECT	Printer → Computer
14	AFXT	Printer ← Computer
15	Unused	Unused
16	GND	Printer ↔ Computer
17	F-GND	Printer ↔ Computer
18	+5V	Printer → Computer
19~30	GND	Printer ↔ Computer
31	INIT	Printer ← Computer
32	FAULT	Printer → Computer
33	GND	Printer ↔ Computer
34	Unused	Unused
35	FUSE	Printer → Computer
36	SLCTIN	Printer ← Computer

#### Parallel Interface Connector Diagram



Note: Any external devices connected to the parallel port should not draw current exceeding 200 mA from pin 18; otherwise it may affect the printer operation.

## USB Interface

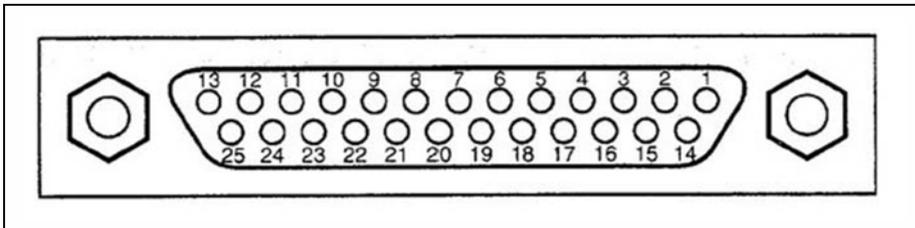
The USB interface conforms to the Universal Serial Bus 2.0 Specifications. It supports the Full Speed mode at 12 Mbps. It uses the "B" type USB connector.

## Serial Interface

### Serial RS-232C Interface Pin Assignment

Pin	Signal Symbol	Signal Name	Signal Transmission
1	CG	Chassis Ground	—
2	TXD	Send Data	OUT
3	RXD	Receive Data	IN
4	RTS	Request to Send	OUT
7	SG	Signal Ground	—
20	DTR	Data Terminal Ready	OUT
25	+5V	Power	—

### Serial RS-232 Connector Diagram



# 10 Character sets & Code Pages

## Character Sets

### Standard Character Set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	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		SP	0	@	P	¢	p	à	§		0	@	P	¢	p
1		DC1	!	1	A	Q	a	q	é	ß	!	1	A	Q	a	q
2		DC2	"	2	B	R	b	r	ù	£	"	2	B	R	b	r
3		DC3	#	3	C	S	c	s	ò	¤	#	3	C	S	c	s
4		DC4	\$	4	D	T	d	t	í	¥	\$	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	ì		'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x			(	8	H	X	h	x
9	HT		)	9	I	Y	i	y			)	9	I	Y	i	y
A	LF		*	:	J	Z	j	z			*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{			+	;	K	[	k	{
C	FF	FS	,	<	L	\	l				,	<	L	\	l	
D	CR		-	=	M	]	m	}			-	=	M	]	m	}
E	SO		.	>	N	^	n	~			.	>	N	^	n	~
F	SI		/	?	O	_	o			¡	/	?	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		SP	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			á	⊥	⊥	⊥	μ	+
7	BEL		'	7	G	W	g	w	BEL		ó	⊥	⊥	⊥	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	⊥	⊥	■	∞	◊
D	CR		.	=	M	]	m	}	CR		í	⊥	⊥	⊥	∅	∴
E	SO		.	>	N	^	n	~	SO		«	⊥	⊥	⊥	ε	■
F	SI		/	?	O	_	o		SI		»	⊥	⊥	⊥	∩	SP

IBM Character Set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	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	ã	õ	ñ	⊥	⊥	⊥	Σ	∫
5	✦	§	%	5	E	U	e	u	à	ò	Ñ	⊥	⊥	⊥	σ	∫
6	✦		&	6	F	V	f	v	â	ú	á	⊥	⊥	⊥	μ	+
7	BEL		'	7	G	W	g	w	ç	ù	ó	⊥	⊥	⊥	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	ø	½	⊥	⊥	■	δ	√
C	FF	FS	,	<	L	\	l		í	é	¼	⊥	⊥	■	∞	◊
D	CR		.	=	M	]	m	}	ì	¥	í	⊥	⊥	⊥	∅	∴
E	SO		.	>	N	^	n	~	Ä	Pt	«	⊥	⊥	⊥	ε	■
F	SI		/	?	O	_	o		Å	f	»	⊥	⊥	⊥	∩	SP

### International character sets

n	Set name	Dec Hex	35 23	36 24	64 40	91 5B	92 5C	93 5D	94 5E	96 60	123 7B	124 7C	125 7D	126 7E
0	USA	#	\$	@	[ \ ]	^	^	^	^	^	{   }	~		
1	France	#	\$	à	° ç	§	^	^	^	^	é ù è			
2	Germany	#	\$	§	Ä Ö	Ü	^	^	^	^	ä ö ü	ß		
3	UK	£	\$	@	[ \ ]	^	^	^	^	^	{   }	~		
4	Denmark I	#	\$	@	Æ Ø	Å	^	^	^	^	æ ø å	~		
5	Sweden	#	¤	É	Ä Ö	Å	Ü	é	é	é	ä ö å	ü		
6	Italy	#	\$	@	° \	é	^	^	^	^	à ò è	ì		
7	Spain I	Pt	\$	@	í Ñ	¿	^	^	^	^	ñ	}	~	
8	Japan (Eng)	#	\$	@	[ ¥ ]	^	^	^	^	^	{   }	~		
9	Norway	#	¤	É	Æ Ø	Å	Ü	é	é	é	æ ø å	ü		
10	Denmark II	#	\$	É	Æ Ø	Å	Ü	é	é	é	æ ø å	ü		
11	Spain II	#	\$	á	í Ñ	¿	é	é	é	é	í ñ ó	ú		
12	Lat America	#	\$	á	í Ñ	¿	é	é	é	é	í ñ ó	ú		
13	Korea	#	\$	@	[ ₩ ]	^	^	^	^	^	{   }	~		
64	Legal	#	\$	§	° ' " ¶	¶	¶	¶	¶	¶	© ® †	™		

### International Character Set Commands

Country	Command
USA	<ESC>"R"CHR\$ (0)
France	<ESC>"R"CHR\$ (1)
Germany	<ESC>"R"CHR\$ (2)
UK	<ESC>"R"CHR\$ (3)
Denmark1	<ESC>"R"CHR\$ (4)
Sweden	<ESC>"R"CHR\$ (5)
Italy	<ESC>"R"CHR\$ (6)
Spain1	<ESC>"R"CHR\$ (7)
Japan	<ESC>"R"CHR\$ (8)
Norway	<ESC>"R"CHR\$ (9)
Denmark2	<ESC>"R"CHR\$ (10)
Spain2	<ESC>"R"CHR\$ (11)
Lat America	<ESC>"R"CHR\$ (12)
Korea	<ESC>"R"CHR\$ (13)
Legal	<ESC>"R"CHR\$ (64)

Character Tables

Italic

	0	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0	<i>0</i>	<i>10</i>	<i>20</i>	<i>30</i>	<i>40</i>	<i>50</i>	<i>60</i>	<i>70</i>	<i>80</i>	<i>90</i>	<i>A0</i>	<i>B0</i>	<i>C0</i>	<i>D0</i>	<i>E0</i>	<i>F0</i>
1	<i>!</i>	<i>11</i>	<i>21</i>	<i>31</i>	<i>41</i>	<i>51</i>	<i>61</i>	<i>71</i>	<i>81</i>	<i>91</i>	<i>A1</i>	<i>B1</i>	<i>C1</i>	<i>D1</i>	<i>E1</i>	<i>F1</i>
2	<i>"</i>	<i>12</i>	<i>22</i>	<i>32</i>	<i>42</i>	<i>52</i>	<i>62</i>	<i>72</i>	<i>82</i>	<i>92</i>	<i>A2</i>	<i>B2</i>	<i>C2</i>	<i>D2</i>	<i>E2</i>	<i>F2</i>
3	<i>#</i>	<i>13</i>	<i>23</i>	<i>33</i>	<i>43</i>	<i>53</i>	<i>63</i>	<i>73</i>	<i>83</i>	<i>93</i>	<i>A3</i>	<i>B3</i>	<i>C3</i>	<i>D3</i>	<i>E3</i>	<i>F3</i>
4	<i>\$</i>	<i>14</i>	<i>24</i>	<i>34</i>	<i>44</i>	<i>54</i>	<i>64</i>	<i>74</i>	<i>84</i>	<i>94</i>	<i>A4</i>	<i>B4</i>	<i>C4</i>	<i>D4</i>	<i>E4</i>	<i>F4</i>
5	<i>%</i>	<i>15</i>	<i>25</i>	<i>35</i>	<i>45</i>	<i>55</i>	<i>65</i>	<i>75</i>	<i>85</i>	<i>95</i>	<i>A5</i>	<i>B5</i>	<i>C5</i>	<i>D5</i>	<i>E5</i>	<i>F5</i>
6	<i>&amp;</i>	<i>16</i>	<i>26</i>	<i>36</i>	<i>46</i>	<i>56</i>	<i>66</i>	<i>76</i>	<i>86</i>	<i>96</i>	<i>A6</i>	<i>B6</i>	<i>C6</i>	<i>D6</i>	<i>E6</i>	<i>F6</i>
7	<i>'</i>	<i>17</i>	<i>27</i>	<i>37</i>	<i>47</i>	<i>57</i>	<i>67</i>	<i>77</i>	<i>87</i>	<i>97</i>	<i>A7</i>	<i>B7</i>	<i>C7</i>	<i>D7</i>	<i>E7</i>	<i>F7</i>
8	<i>(</i>	<i>18</i>	<i>28</i>	<i>38</i>	<i>48</i>	<i>58</i>	<i>68</i>	<i>78</i>	<i>88</i>	<i>98</i>	<i>A8</i>	<i>B8</i>	<i>C8</i>	<i>D8</i>	<i>E8</i>	<i>F8</i>
9	<i>)</i>	<i>19</i>	<i>29</i>	<i>39</i>	<i>49</i>	<i>59</i>	<i>69</i>	<i>79</i>	<i>89</i>	<i>99</i>	<i>A9</i>	<i>B9</i>	<i>C9</i>	<i>D9</i>	<i>E9</i>	<i>F9</i>
A	<i>*</i>	<i>1A</i>	<i>2A</i>	<i>3A</i>	<i>4A</i>	<i>5A</i>	<i>6A</i>	<i>7A</i>	<i>8A</i>	<i>9A</i>	<i>AA</i>	<i>BA</i>	<i>CA</i>	<i>DA</i>	<i>EA</i>	<i>FA</i>
B	<i>+</i>	<i>1B</i>	<i>2B</i>	<i>3B</i>	<i>4B</i>	<i>5B</i>	<i>6B</i>	<i>7B</i>	<i>8B</i>	<i>9B</i>	<i>AB</i>	<i>BB</i>	<i>CB</i>	<i>DB</i>	<i>EB</i>	<i>FB</i>
C	<i>&lt;</i>	<i>1C</i>	<i>2C</i>	<i>3C</i>	<i>4C</i>	<i>5C</i>	<i>6C</i>	<i>7C</i>	<i>8C</i>	<i>9C</i>	<i>AC</i>	<i>BC</i>	<i>CC</i>	<i>DC</i>	<i>EC</i>	<i>FC</i>
D	<i>=</i>	<i>1D</i>	<i>2D</i>	<i>3D</i>	<i>4D</i>	<i>5D</i>	<i>6D</i>	<i>7D</i>	<i>8D</i>	<i>9D</i>	<i>AD</i>	<i>BD</i>	<i>CD</i>	<i>DD</i>	<i>ED</i>	<i>FD</i>
E	<i>&gt;</i>	<i>1E</i>	<i>2E</i>	<i>3E</i>	<i>4E</i>	<i>5E</i>	<i>6E</i>	<i>7E</i>	<i>8E</i>	<i>9E</i>	<i>AE</i>	<i>BE</i>	<i>CE</i>	<i>DE</i>	<i>EE</i>	<i>FE</i>
F	<i>/</i>	<i>1F</i>	<i>2F</i>	<i>3F</i>	<i>4F</i>	<i>5F</i>	<i>6F</i>	<i>7F</i>	<i>8F</i>	<i>9F</i>	<i>AF</i>	<i>BF</i>	<i>CF</i>	<i>DF</i>	<i>EF</i>	<i>FF</i>

Graphic 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			0	@	P	`	p	ç	é	á		L	ll	α	≡
1		DC1	!	1	A	Q	a	q	û	æ	í		⊥	τ	β	±
2		DC2	*	2	B	R	b	r	é	Æ	ó		τ	π	Γ	≥
3		DC3	#	3	C	S	c	s	â	ô	ú		†	ll	π	≤
4		DC4	\$	4	D	T	d	t	ä	ö	ñ	†	-	l	Σ	∫
5			%	5	E	U	e	u	à	ò	Ñ	†	†	F	σ	J
6			&	6	F	V	f	v	â	ô	æ		†	π	μ	÷
7	BEL		'	7	G	W	g	w	ç	û	ø	π			τ	≈
8	BS	CAN	(	8	H	X	h	x	â	ÿ	¿	¶	ll	†	Φ	°
9	HT	EM	)	9	I	Y	i	y	ë	Ö	¬		¶	J	θ	•
A	LF		*	:	J	Z	j	z	è	Û	¬		ll	Γ	Ω	•
B	VT	ESC	+	;	K	[	k	{	í	¢	½	¶	¶	■	δ	√
C	FF	FS	,	<	L	\	l		í	£	¼	¶		■	∞	∞
D	CR		-	=	M	]	m	}	í	¥	i	ll	=		φ	²
E	SO		.	>	N	^	n	~	Ä	℞	«	¶			ε	■
F	SI		/	?	O	_	o	DEL	À	f	*	¶	±	■	∩	

Graphic 2

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

## Code Page Commands

<b>Code Page</b>	<b>ESCR Parameter</b>
<b>CRO-ASCII</b>	3C
<b>Arabic Farsi</b>	96
<b>Arabic Urdu</b>	97
<b>Greek DEC</b>	46
<b>Greek ELOT928</b>	6C
<b>CP437 Latin US</b>	80
<b>CP737 Greek</b>	93
<b>CP850 Latin 1</b>	82
<b>CP851 Greek</b>	88
<b>CP852 Latin 2</b>	87
<b>CP857 Turkish</b>	8D
<b>CP858 (IBM with€)</b>	9E
<b>CP860 Portugal</b>	84
<b>CP861 Icelandic</b>	94
<b>CP863 French Canada</b>	85
<b>CP864 Arabic</b>	8C
<b>CP864 Arab. Extended</b>	95
<b>CP865 Nordic</b>	86
<b>CP866 Cyrillic</b>	8E
<b>CP866 Bulgaria</b>	9D
<b>Siemens Turkish</b>	9B
<b>DEC Turkish</b>	9C
<b>CP1250 Win Latin 2</b>	70
<b>CP1251 Win Cyrillic</b>	71
<b>CP1252 Win Latin 1</b>	72
<b>CP1253 Win Greek</b>	73
<b>CP1254 Win Turkish</b>	74
<b>8859-1 Latin 1</b>	25
<b>8859-1 Latin 1 (SAP)</b>	2B
<b>8859-2 Latin 2</b>	26
<b>8859-5 Cyrillic</b>	2A
<b>8859-7 Greek</b>	2D
<b>8859-9 Turkish</b>	2E
<b>8859-15 Latin 9 (Euro)</b>	2F
<b>BRASCII</b>	6D
<b>Abicomp</b>	6E
<b>Roman 8</b>	4D

<b>Coax/Twinax(Hebrew)</b>	4F
<b>New-437 (Hebrew)</b>	81
<b>New-DIG 850 (Hebr.)</b>	83
<b>Old-Code 860 (Hebr.)</b>	98
<b>Flarro 863 (Hebrew)</b>	99
<b>Table 865 (Hebrew)</b>	9A
<b>CP775 Baltic</b>	A6
<b>CP1257 Baltic</b>	77
<b>Mazovia (Poland)</b>	92
<b>Kamenicky (Czech)</b>	91
<b>CP866 Ukraine</b>	8F
<b>CP866 Kazakhstan</b>	90

Code Page Tables

CP 437 (US)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É	Á	☼	Ł	⌘	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	☼	±	⌘	β	±	
2		"	2	B	R	b	r	é	Æ	ó	☼	⌘	⌘	Γ	≥	
3		#	3	C	S	c	s	ã	ô	ú		⌘	⌘	π	≤	
4		\$	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	â	û	ä	⌘	⌘	⌘	μ	÷	
7		'	7	G	W	g	w	ç	ù	ó	⌘	⌘	⌘	τ	≈	
8		(	8	H	X	h	x	ê	ÿ	¿	⌘	⌘	⌘	Φ	*	
9		)	9	I	Y	i	y	ë	ÿ	ˆ	⌘	⌘	⌘	θ	.	
a		*	:	J	Z	j	z	è	Û	ˆ	⌘	⌘	⌘	Ω	.	
b		+	;	K	[	k	{	ï	φ	½	⌘	⌘	⌘	δ	√	
c		,	<	L	\	l		î	£	¼	⌘	⌘	⌘	ω	n	
d		-	=	M	]	m	}	ì	¥	ı	⌘	=	⌘	ø	²	
e		.	>	N	^	n	~	Ë	℞	«	⌘	⌘	⌘	ε	■	
f		/	?	O	_	o		À	f	»	⌘	±	⌘	ñ		

CP 737 Greek

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Α	Ρ	ι	☼	Ł	⌘	ω	Ω	
1		!	1	A	Q	a	q	Β	Σ	κ	☼	±	⌘	ά	±	
2		"	2	B	R	b	r	Γ	Τ	ñ	☼	⌘	⌘	έ	≥	
3		#	3	C	S	c	s	Δ	Υ	μ		⌘	⌘	ή	≤	
4		\$	4	D	T	d	t	Ε	Φ	ν	⌘	—	⌘	ϊ		
5		%	5	E	U	e	u	Ζ	Χ	ξ	⌘	⌘	⌘	ί	∫	
6		&	6	F	V	f	v	Η	Ψ	ο	⌘	⌘	⌘	ό	÷	
7		'	7	G	W	g	w	Θ	Ω	π	⌘	⌘	⌘	ύ	≈	
8		(	8	H	X	h	x	Ι	α	ρ	⌘	⌘	⌘	Û	.	
9		)	9	I	Y	i	y	Κ	β	σ	⌘	⌘	⌘	ώ	£	
a		*	:	J	Z	j	z	Λ	ϝ	ς	⌘	⌘	⌘	Α	.	
b		+	;	K	[	k	{	Μ	δ	τ	⌘	⌘	⌘	Ε	√	
c		,	<	L	\	l		Ν	ε	υ	⌘	⌘	⌘	Η	n	
d		-	=	M	]	m	}	Ξ	ζ	φ	⌘	=	⌘	Ι	²	
e		.	>	N	^	n	~	Ο	η	χ	⌘	⌘	⌘	Ο	■	
f		/	?	O	_	o		Π	θ	ψ	⌘	±	⌘	Υ		

CP 850 (Multilingual)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É	Á	☼	Ł	ø	ó	-	
1		!	1	A	Q	a	q	ü	æ	í	☼	±	Đ	β	±	
2		"	2	B	R	b	r	é	Æ	ó	☼	⌈	Ê	Ô	=	
3		#	3	C	S	c	s	â	ô	ú		⌈	Ë	ò	¾	
4		\$	4	D	T	d	t	ä	ö	ñ	⌈	-	È	õ	¶	
5		%	5	E	U	e	u	à	ò	Ñ	Á	⌈	ı	Ö	§	
6		&	6	F	V	f	v	â	û	ä	Å	ã	ı	μ	÷	
7		'	7	G	W	g	w	ç	ù	ó	À	Ã	ı	þ	¸	
8		(	8	H	X	h	x	ê	ÿ	ı	©	Ł	İ	Þ	°	
9		)	9	I	Y	i	y	ë	ÿ	©	⌈	⌈	ı	Ú	ˆ	
a		*	:	J	Z	j	z	è	Ü	ˆ		±	Γ	Ů	·	
b		+	;	K	[	k	{	ï	ø	½	⌈	⌈	■	Ù	ı	
c		,	<	L	\	l		î	ε	¼	⌈	⌈	■	Ý	³	
d		-	=	M	]	m	}	ì	Ø	ı	φ	=	!	Ÿ	²	
e		.	>	N	^	n	~	Ë	x	«	¥	⌈	İ	-	■	
f		/	?	O	_	o		À	f	»	γ	¤	■	'		

CP 851

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	İ	ÿ	☼	Ł	Ť	ç	-	
1		!	1	A	Q	a	q	Ü	æ	Ť	☼	±	Ÿ	η	±	
2		"	2	B	R	b	r	é	Đ	ú	☼	⌈	Φ	θ	υ	
3		#	3	C	S	c	s	â	ô	ú		⌈	X	ı	φ	
4		\$	4	D	T	d	t	ä	ö	À	⌈	-	Ψ	κ	x	
5		%	5	E	U	e	u	ä	Ÿ	B	K	⌈	Ō	ñ	§	
6		&	6	F	V	f	v	À	Ů	Γ	Λ	Π	α	μ	ψ	
7		'	7	G	W	g	w	ç	ù	Δ	M	P	β	v	¸	
8		(	8	H	X	h	x	ê	Đ	E	N	Ł	χ	ξ	°	
9		)	9	I	Y	i	y	ë	Ů	Z	⌈	⌈	ı	o	ˆ	
a		*	:	J	Z	j	z	è	Ů	H		±	Γ	π	ω	
b		+	;	K	[	k	{	ÿ	á	½	⌈	⌈	■	ρ	Û	
c		,	<	L	\	l		î	ε	θ	⌈	⌈	■	σ	Ů	
d		-	=	M	]	m	}	E	é	I	Ξ	=	ø	ς	ώ	
e		.	>	N	^	n	~	Ë	ñ	«	Ō	⌈	e	τ	■	
f		/	?	O	_	o		H	ı	»	γ	Σ	■			

## CP 852 (EasternEurope)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	ç	É	á	☼	Ł	đ	ó	-	
1	!	1	A	Q	a	q	ü	ł	í	☼	±	Đ	β	ˆ		
2	"	2	B	R	b	r	é	í	ó	☼	⌥	Đ	Ō	ˆ		
3	#	3	C	S	c	s	ā	ō	ú		⌥	Ě	Ń	ˆ		
4	\$	4	D	T	d	t	ä	ö	Ā	⌥	-	đ	ń	ˆ		
5	%	5	E	U	e	u	û	ł	a	Á	+	Ń	ň	š		
6	&	6	F	V	f	v	ć	ı	ž	Ā	Ā	í	š	÷		
7	'	7	G	W	g	w	ç	ś	ž	Ě	ă	ı	š	ˆ		
8	(	8	H	X	h	x	ł	ś	Ę	š	Ł	ě	Ř	°		
9	)	9	I	Y	i	y	ě	Ō	ę	ł	ł	ı	Ū	ˆ		
a	*	:	J	Z	j	z	ő	Ū	ˆ		±	ı	ř	ˆ		
b	+	;	K	[	k	{	ő	ı	ž	ł	ł	■	Ū	Ū		
c	,	<	L	\	l		ı	ł	č	ł	ł	■	ý	Ř		
d	-	=	M	]	m	}	ž	ł	š	ž	=	ı	Ÿ	ř		
e	.	>	N	^	n	~	Ā	x	«	ž	ł	Ū	ł	■		
f	/	?	O	_	o		č	č	»	ł	ł	■	'			

## CP 857 (Turkish)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	ç	É	á	☼	Ł	o	ó	-	
1	!	1	A	Q	a	q	ü	æ	í	☼	±	Ł	a	β	±	
2	"	2	B	R	b	r	é	Æ	ó	☼	⌥	Ě	Ō			
3	#	3	C	S	c	s	ā	ō	ú		⌥	Ě	Ō	¼		
4	\$	4	D	T	d	t	ä	ö	ñ	⌥	-	Ě	ö	¶		
5	%	5	E	U	e	u	à	ò	ñ	Á	+		Ō	š		
6	&	6	F	V	f	v	â	û	ö	Ā	ă	ı	μ	÷		
7	'	7	G	W	g	w	ç	ù	ğ	Ā	Ā	ı		ˆ		
8	(	8	H	X	h	x	ê	ı	ı	©	Ł	ı	x	°		
9	)	9	I	Y	i	y	ë	Ō	©	ł	ł	ı	Ū	ˆ		
a	*	:	J	Z	j	z	è	Ū	ˆ		±	ı	o	ˆ		
b	+	;	K	[	k	{	ı	ø	¼	ł	ł	■	Ū	ı		
c	,	<	L	\	l		ı	£	¼	ł	ł	■	ı	³		
d	-	=	M	]	m	}	ı	Ø	i	φ	=	ı	y	²		
e	.	>	N	^	n	~	Ā	š	«	¥	ł	ı	-	■		
f	/	?	O	_	o		Ā	š	»	ł	ł	■	'			

CP 858

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p				á	☼	L	ø	ó	-
1		!	1	A	Q	a	q				í	☼	⊥	Ð	β	±
2		"	2	B	R	b	r				ó	☼	T	Ê	Ö	=
3		#	3	C	S	c	s				ú		†	Ë	Ò	¼
4		\$	4	D	T	d	t				ñ	†	-	È	ö	¶
5		%	5	E	U	e	u				ñ	Á	†	€	Ö	§
6		&	6	F	V	f	v				ä	Â	ä	í	μ	÷
7		'	7	G	W	g	w				ö	À	À	î	þ	¸
8		(	8	H	X	h	x				¿	©	ℓ	Ï	þ	°
9		)	9	I	Y	i	y				©	‡	ℓ	¸	Ú	¨
a		*	:	J	Z	j	z				¬		≡	Γ	0	·
b		+	;	K	[	k	{				½	¶	¶	■	Ù	¹
c		,	<	L	\	l					¼	¶	¶	■	Ý	³
d		-	=	M	]	m	}				ı	¢	=	ı	Ÿ	²
e		.	>	N	^	n	~				«	¥	‡	ı	-	■
f		/	?	O	_	o					»	¬	¤	■	,	

CP 860 (Portugal)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É	Á	☼	L	⊥	α	≡	
1		!	1	A	Q	a	q	ü	À	í	☼	⊥	⊥	β	±	
2		"	2	B	R	b	r	é	È	ó	☼	T	π	Γ	≥	
3		#	3	C	S	c	s	â	ô	ú		†	ℓ	π	≤	
4		\$	4	D	T	d	t	ã	õ	ñ	†	-	ℓ	Σ	∫	
5		%	5	E	U	e	u	à	ò	Ñ	‡	†	†	σ	∫	
6		&	6	F	V	f	v	Á	Ú	ä	‡	†	¶	μ	÷	
7		'	7	G	W	g	w	ç	ù	ö	¶	¶	¶	τ	≈	
8		(	8	H	X	h	x	ê	ï	¿	¶	ℓ	¶	Φ	°	
9		)	9	I	Y	i	y	Ê	Õ	Ò	‡	ℓ	¸	θ	·	
a		*	:	J	Z	j	z	è	Û	¬		≡	Γ	Ω	·	
b		+	;	K	[	k	{	í	¢	½	¶	¶	■	δ	√	
c		,	<	L	\	l		ò	£	¼	¶	¶	■	ω	∞	
d		-	=	M	]	m	}	ì	ù	ı	¶	=	■	∅	²	
e		.	>	N	^	n	~	Ã	¤	«	‡	¶	■	ε	■	
f		/	?	O	_	o		Â	ó	»	¬	±	■	∩		

CP 861 (Iceland)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É	Á	☼	⊥	⊥	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	☼	⊥	⊥	β	±	
2		"	2	B	R	b	r	é	Æ	ó	☼	⊥	⊥	Γ	≥	
3		#	3	C	S	c	s	â	ô	ú			⊥	π	≤	
4		\$	4	D	T	d	t	ä	ö	Á	†	—	⊥	Σ	∫	
5		%	5	E	U	e	u	à	þ	í	‡	†	⊥	σ	∫	
6		&	6	F	V	f	v	á	ú	ó		†	⊥	μ	÷	
7		'	7	G	W	g	w	ç	ÿ	ú	⊥			τ	≈	
8		(	8	H	X	h	x	ê	ý	í	⊥	⊥	†	Φ	°	
9		)	9	I	Y	i	y	ë	ö	í		⊥	⊥	θ	.	
a		*	:	J	Z	j	z	è	Û	í		⊥	⊥	Ω	.	
b		+	;	K	[	k	{	Ð	ø	½	⊥	⊥	■	δ	√	
c		,	<	L	\	l		ð	£	¼	⊥		■	⊙	n	
d		-	=	M	]	m	}	Þ	Ø	í	⊥	=	■	∅	²	
e		.	>	N	^	n	~	Ǻ	⊥	«	⊥		■	ε	■	
f		/	?	O	_	o		Ǻ	f	»	⊥	⊥	■	∩		

CP 863 (French-Canadian)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É	!	☼	⊥	⊥	α	≡	
1		!	1	A	Q	a	q	ü	È	'	☼	⊥	⊥	β	±	
2		"	2	B	R	b	r	é	Ê	ó	☼	⊥	⊥	Γ	≥	
3		#	3	C	S	c	s	â	ô	ú			⊥	π	≤	
4		\$	4	D	T	d	t	Â	Ë	"	†	—	⊥	Σ	∫	
5		%	5	E	U	e	u	à	Ï	í	‡	†	⊥	σ	∫	
6		&	6	F	V	f	v	ŕ	û	³		†	⊥	μ	÷	
7		'	7	G	W	g	w	ç	ù	—	⊥			τ	≈	
8		(	8	H	X	h	x	ê	ï	í	⊥	⊥	†	Φ	°	
9		)	9	I	Y	i	y	ë	ô	í		⊥	⊥	θ	.	
a		*	:	J	Z	j	z	è	Û	í		⊥	⊥	Ω	.	
b		+	;	K	[	k	{	ï	¢	½	⊥	⊥	■	δ	√	
c		,	<	L	\	l		î	£	¼	⊥		■	⊙	n	
d		-	=	M	]	m	}	—	Ù	¾	⊥	=	■	∅	²	
e		.	>	N	^	n	~	À	Û	«	⊥		■	ε	■	
f		/	?	O	_	o		§	f	»	⊥	⊥	■	∩		

CP 864 Arabic

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0				0	@	P	'	p	9	ß		.	#	>	-	"
1		!	1	A	Q	a	q	.	∞	-	l	±	∫	∫	∫	'
2		"	2	B	R	b	r	.	φ	∫	∫	∫	∫	∫	∫	∫
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	+	«		U	∫	∫	∫	∫	∫
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		∫	∫	∫	∫	∫	∫	∫	∫	∫

CP 864 Arabic Extended

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0				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	∫	«		U	∫	∫	∫	∫	∫
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		∫	∫	∫	∫	∫	∫	∫	∫	∫

CP 865 (Norway)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É	á	☼	Ł	⌘	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	☼	⊥	⊟	β	±	
2		"	2	B	R	b	r	é	Æ	ó	☼	⊤	⊠	Γ	≥	
3		#	3	C	S	c	s	â	ô	ú		⊥	⌘	π	≤	
4		\$	4	D	T	d	t	ä	ö	ñ	⊥	—	Ł	Σ	∫	
5		%	5	E	U	e	u	à	ò	Ñ	⊥	⊥	⊥	σ	∫	
6		&	6	F	V	f	v	å	û	æ	⊥	⊥	⊥	μ	÷	
7		'	7	G	W	g	w	ç	ù	ó	⊥	⊥	⊥	τ	≈	
8		(	8	H	X	h	x	ê	ÿ	¿	⊥	Ł	⊥	ϕ	°	
9		)	9	I	Y	i	y	ë	ö	⌘	⊥	⊥	⊥	θ	·	
a		*	:	J	Z	j	z	è	Û	⌘	⊥	⊥	⊥	Ω	·	
b		+	;	K	[	k	{	ï	ø	½	⊥	⊥	■	δ	∫	
c		,	<	L	\	l		î	£	¼	⊥	⊥	■	ω	∞	n
d		-	=	M	]	m	}	ì	∅	;	⊥	=	■	∅	²	
e		.	>	N	^	n	~	Ë	æ	«	⊥	⊥	■	ε	■	
f		/	?	O	_	o		Å	f	⌘	⊥	⊥	■	∞		

CP 866 (Cyrillic)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	А	Р	а	☼	Ł	⌘	р	Ё	
1		!	1	А	Q	a	q	Б	С	б	☼	⊥	⊟	с	ё	
2		"	2	В	Р	b	r	В	Т	в	☼	⊤	⊠	т	ё	
3		#	3	С	С	c	s	Г	У	г		⊥	⊥	у	е	
4		\$	4	Д	Т	d	t	Д	Ф	д	⊥	—	Ł	ф	ї	
5		%	5	Е	U	e	u	Е	Х	е	⊥	⊥	⊥	х	Ѹ	
6		&	6	Ф	V	f	v	Ж	Ц	ж	⊥	⊥	⊥	ц	Ѹ	
7		'	7	Г	W	g	w	З	Ч	з	⊥	⊥	⊥	ч	Ѹ	
8		(	8	Н	X	h	x	И	Ш	и	⊥	Ł	⊥	ш	°	
9		)	9	И	Y	i	y	Й	Щ	й	⊥	⊥	⊥	щ	·	
a		*	:	J	Z	j	z	К	Ъ	к	⊥	⊥	⊥	ъ	·	
b		+	;	K	[	k	{	Л	Ы	л	⊥	⊥	■	ы	∫	
c		,	<	L	\	l		М	Ь	м	⊥	⊥	■	ь	№	
d		-	=	M	]	m	}	Н	Э	н	⊥	=	■	э	□	
e		.	>	N	^	n	~	О	Ю	о	⊥	⊥	■	ю	■	
f		/	?	O	_	o		П	Я	п	⊥	⊥	■	я		

CP 866 Bulgaria

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	A	P	a	p	L	⌘	α	≡	
1		!	1	A	Q	a	q	Б	С	б	с	±	⌘	β	±	
2		"	2	B	R	b	r	В	Т	в	т	⌘	⌘	Γ	≥	
3		#	3	C	S	c	s	Г	У	г	у	⌘	⌘	π	≤	
4		\$	4	D	T	d	t	Д	Ф	д	ф	—	⌘	Σ	∫	
5		%	5	E	U	e	u	Е	Х	е	х	†	№	σ	∫	
6		&	6	F	V	f	v	Ж	Ц	ж	ц	‡	§	μ	÷	
7		'	7	G	W	g	w	З	Ч	з	ч		¶	τ	≈	
8		(	8	H	X	h	x	И	Ш	и	ш	ℓ	⌘	φ	•	
9		)	9	I	Y	i	y	Й	Щ	й	щ	⌘	⌘	θ	•	
a		*	:	J	Z	j	z	К	Ъ	к	ъ	±	⌘	Ω	•	
b		+	;	K	[	k	{	Л	Ы	л	ы	⌘	⌘	ō	√	
c		,	<	L	\	l		М	Ь	м	ь	⌘	⌘	⊞	∞	
d		-	=	M	]	m	}	Н	Э	н	э	=	⌘	∅	²	
e		.	>	N	^	n	~	О	Ю	о	ю	‡	⌘	ε	■	
f		/	?	O	_	o		П	Я	п	я	⌘	⌘	∩		

CP 1250 Win Latin2

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	€			°	Ŕ	Đ	ŕ	đ	
1		!	1	A	Q	a	q		'	˘	±	Á	Ń	á	ń	
2		"	2	B	R	b	r	,	'	˘	˘	Ā	Ņ	ā	ņ	
3		#	3	C	S	c	s		"	ł	ł	Å	Ó	å	ó	
4		\$	4	D	T	d	t	„	"	œ	'	Å	Ô	ä	ô	
5		%	5	E	U	e	u	„	•	À	μ	Ł	Œ	í	ö	
6		&	6	F	V	f	v	†	-	!	¶	Č	Ů	č	ů	
7		'	7	G	W	g	w	‡	-	§	•	Ç	×	ç	÷	
8		(	8	H	X	h	x		"	˘	˘	Č	Ř	č	ř	
9		)	9	I	Y	i	y	‰	™	©	ª	É	Ů	é	ů	
a		*	:	J	Z	j	z	Š	š	Š	š	Ç	Ú	ę	ú	
b		+	;	K	[	k	{	<	>	«	»	È	Ů	è	ů	
c		,	<	L	\	l		Š	š	˘	˘	È	Ů	è	ů	
d		-	=	M	]	m	}	†	‡	-	˘	İ	Ÿ	ı	ÿ	
e		.	>	N	^	n	~	Ž	ž	®	™	İ	Ÿ	ı	ÿ	
f		/	?	O	_	o		Ž	ž	Ž	ž	Đ	ß	đ	•	

CP 1251 Win Cyrillic

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	ћ	ђ		°	А	Р	а	р	
1		!	1	А	Q	а	q	Г	'	Ў	±	Б	С	б	с	
2		"	2	В	Р	в	р	,	'	Ў	І	В	Т	в	т	
3		#	3	С	С	с	с	Г	'	Ј	і	Г	У	г	у	
4		\$	4	Д	Т	д	т	.	'	Ѡ	г	Д	Ф	д	ф	
5		%	5	Е	U	е	u	-	'	Г	μ	Е	Х	е	х	
6		&	6	Ф	У	ф	у	†	-		Ѡ	Ж	Ц	ж	ц	
7		'	7	Г	W	г	w	‡	-	§	+	З	Ч	з	ч	
8		(	8	Н	X	н	x	Є		Ѓ	е	И	Ш	и	ш	
9		)	9	І	Y	і	y	Ѡ	Ѡ	Ѡ	Ѡ	Й	Щ	й	щ	
a		*	:	Ј	Z	ј	z	Љ	Љ	Є	е	К	Ъ	к	ъ	
b		+	;	К	[	к	{	<	>	«	»	П	Ы	п	ы	
c		,	<	Л	\	l		Љ	Љ	~	ј	М	Ь	м	ь	
d		-	=	М	]	m	}	К	ќ	-	С	Н	Э	н	э	
e		.	>	Н	^	n	~	ћ	ђ	Ѡ	с	О	Ю	о	ю	
f		/	?	О	_	o		У	У	Ї	Ї	П	Я	п	я	

CP 1252 Win Latin1

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Є			°	À	Đ	à	đ	
1		!	1	А	Q	а	q		`	ı	±	Á	Ñ	á	ñ	
2		"	2	В	Р	в	р	,	'	є	²	Â	Ò	â	ò	
3		#	3	С	С	с	с	Г	'	£	³	Ã	Ó	ã	ó	
4		\$	4	Д	Т	д	т	.	'	¤	´	Ä	Ô	ä	ô	
5		%	5	Е	U	е	u	-	'	¥	μ	Å	Õ	å	õ	
6		&	6	Ф	У	ф	у	†	-		Ѡ	Æ	Ö	æ	ö	
7		'	7	Г	W	г	w	‡	-	§	•	Ç	×	ç	×	
8		(	8	Н	X	н	x	^	~	"	„	È	Ø	è	ø	
9		)	9	І	Y	і	y	‰	™	©	ˆ	É	Ù	é	ù	
a		*	:	Ј	Z	ј	z	Š	š	ª	º	Ê	Ú	ê	ú	
b		+	;	К	[	к	{	<	>	«	»	Ë	Û	ë	û	
c		,	<	Л	\	l		Œ	œ	˜	¼	Ì	Ü	ì	ü	
d		-	=	М	]	m	}			-	½	Í	Ý	í	ý	
e		.	>	Н	^	n	~			©	¾	İ	Þ	ı	þ	
f		/	?	О	_	o				ÿ	—	ı	İ	ß	ı	ÿ

# Tally Dascom 1125

## CP 1253 Win Greek

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p					°	τ	π	ū	π
1		!	1	A	Q	a	q		'	"	±	Α	Ρ	α	ρ	
2		"	2	B	R	b	r	,	'	Α	²	Β		β	σ	
3		#	3	C	S	c	s	f	'	£	³	Γ	Σ	γ	ς	
4		\$	4	D	T	d	t	„	'	¤	´	Δ	Τ	δ	τ	
5		%	5	E	U	e	u	-	•	¥	μ	Ε	Υ	ε	υ	
6		&	6	F	V	f	v	†	-	¦	¶	Z	Φ	ζ	φ	
7		'	7	G	W	g	w	‡	-	§	•	H	X	η	x	
8		(	8	H	X	h	x			"	Ε	Θ	Ψ	θ	ψ	
9		)	9	I	Y	i	y	‰	™	©	Η	Ι	Ω	ι	ω	
a		*	:	J	Z	j	z			"	Ι	Κ	Ι	κ	ϊ	
b		+	;	K	[	k	{	<	>	«	»	Λ	Υ	λ	υ	
c		,	<	L	\	l				¬	∅	Μ	ά	μ	ό	
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f		/	?	O	_	o				-	∅	Ο	ί	ο		

## CP 1254 Win Turkish

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	€				°	À	Ğ	à	ğ
1		!	1	A	Q	a	q		'	ı	±	Á	Ñ	á	ñ	
2		"	2	B	R	b	r	,	'	¢	²	Â	Ö	â	ö	
3		#	3	C	S	c	s	f	'	£	³	Ã	Ó	ã	ó	
4		\$	4	D	T	d	t	„	'	¤	´	Ä	Ö	ä	ö	
5		%	5	E	U	e	u	-	•	¥	μ	Å	Ö	å	ö	
6		&	6	F	V	f	v	†	-	¦	¶	Æ	Ö	æ	ö	
7		'	7	G	W	g	w	‡	-	§	•	Ç	×	ç	×	
8		(	8	H	X	h	x	^	~	"	ı	È	Ø	è	ø	
9		)	9	I	Y	i	y	‰	™	©	ı	É	Ü	é	ü	
a		*	:	J	Z	j	z	Š	š	à	ó	Ê	Ü	ê	ü	
b		+	;	K	[	k	{	<	>	«	»	Ë	Ö	ë	ö	
c		,	<	L	\	l		Œ	œ	¬	½	İ	Ü	ı	ü	
d		-	=	M	]	m	}			-	½	Í	İ	í	ı	
e		.	>	N	^	n	~			®	½	Î	Ş	î	ş	
f		/	?	O	_	o		Ÿ	-	ı	ı	İ	ß	ı	ÿ	

8859-1 Latin1

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É		°	À	Ð	à	ð	
1		!	1	A	Q	a	q	ü	æ	ı	±	Á	Ñ	á	ñ	
2		"	2	B	R	b	r	é	Æ	ç	²	Â	Ò	â	ò	
3		#	3	C	S	c	s	â	ô	£	³	Ã	Ó	ã	ó	
4		\$	4	D	T	d	t	ä	ö	¤	´	Ä	Ö	ä	ö	
5		%	5	E	U	e	u	à	ò	¥	µ	Å	Õ	å	õ	
6		&	6	F	V	f	v	ã	û	¦	¶	Æ	Ö	æ	ö	
7		'	7	G	W	g	w	ç	ù	§	·	Ç	×	ç	÷	
8		(	8	H	X	h	x	ê	ÿ	¨	¸	È	Ø	è	ø	
9		)	9	I	Y	i	y	ë	ÿ	©	¹	É	Ù	é	ù	
a	*	:	J	Z	j	z	è	Ü	ª	º	Ê	Ú	ê	ú		
b	+	;	K	[	k	{	ı	ç	«	»	Ë	Û	ë	û		
c	,	<	L	\	l		î	£	¬	¼	Ì	Ü	ì	ü		
d	-	=	M	]	m	}	ï	¥	-	½	Í	Ý	í	ý		
e	.	>	N	^	n	~	Ë	¤	©	¾	Î	Þ	î	þ		
f	/	?	O	_	o		À	f	-	¿	Ï	ß	ï	ÿ		

8859-1 Latin1 (SAP)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	†		°	À	Ð	à	ð	
1		!	1	A	Q	a	q	ü	—	ı	±	Á	Ñ	á	ñ	
2		"	2	B	R	b	r	é		ç	²	Â	Ò	â	ò	
3		#	3	C	S	c	s	â	┌	£	³	Ã	Ó	ã	ó	
4		\$	4	D	T	d	t	ä	┐	¤	´	Ä	Ö	ä	ö	
5		%	5	E	U	e	u	à	└	¥	µ	Å	Õ	å	õ	
6		&	6	F	V	f	v	ã	┘	¦	¶	Æ	Ö	æ	ö	
7		'	7	G	W	g	w	ç	┘	§	·	Ç	×	ç	÷	
8		(	8	H	X	h	x	ê	┘	¨	¸	È	Ø	è	ø	
9		)	9	I	Y	i	y	ë	┘	©	¹	É	Ù	é	ù	
a	*	:	J	Z	j	z	è	Ü	┘	ª	º	Ê	Ú	ê	ú	
b	+	;	K	[	k	{	ı	ç		«	»	Ë	Û	ë	û	
c	,	<	L	\	l		î	£		¬	¼	Ì	Ü	ì	ü	
d	-	=	M	]	m	}	ï	¥		-	½	Í	Ý	í	ý	
e	.	>	N	^	n	~	Ë	¤		©	¾	Î	Þ	î	þ	
f	/	?	O	_	o		À	f		-	¿	Ï	ß	ï	ÿ	

ISO 8859-2 (ISO Latin2)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É		°	Ř	Đ	ř	đ	
1		!	1	Á	Q	a	q	Ů	æ	À	á	Ā	Ń	ą	ń	
2		"	2	B	R	b	r	é	Æ	˘	˙	Ā	Ń	ā	ñ	
3		#	3	C	S	c	s	ā	ō	ł	ł	Ǻ	Ó	ǻ	ó	
4		\$	4	D	T	d	t	ä	ö	ı	'	Å	Ö	ä	ö	
5		%	5	E	U	e	u	à	ò	Ĺ	ł	Ł	Ő	í	ő	
6		&	6	F	V	f	v	ß	ü	š	š	Č	Ű	č	ű	
7		'	7	G	W	g	w	ç	û	š	˘	Ç	×	ç	÷	
8		(	8	H	X	h	x	ē	ÿ	˘	˙	Č	Ř	č	ř	
9		)	9	I	Y	i	y	ë	ÿ	š	š	É	Ű	é	ű	
a	*	:	J	Z	j	z	è	0	ş	ş	É	0	é	ú		
b	+	;	K	[	k	[	Y	ç	T	č	č	È	0	è	ü	
c	,	<	L	\	l	l	ı	£	ž	ž	È	0	è	ü		
d	-	=	M	]	m	]	ı	¥	-	˘	˙	I	Y	ı	ÿ	
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f	/	?	O	_	o		Ǻ	f	ž	ž	Đ	Đ	đ			

ISO 8859-5 Cyrillic

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É		À	Р	а	р	№	
1		!	1	А	Q	a	q	Ů	æ	Ě	Б	С	б	с	ě	
2		"	2	В	R	b	r	é	Æ	ћ	В	Т	в	т	ћ	
3		#	3	С	S	c	s	ā	ō	Г	У	г	у	Г		
4		\$	4	Д	T	d	t	ä	ö	Є	Д	Ф	д	ф	є	
5		%	5	Е	U	e	u	à	ò	С	Е	Х	е	х	с	
6		&	6	Ф	V	f	v	ß	ü	І	Ж	Ц	ж	ц	і	
7		'	7	Г	W	g	w	ç	û	І	З	Ч	з	ч	Ү	
8		(	8	Н	X	h	x	ē	ÿ	Ј	И	Ш	и	ш	ј	
9		)	9	І	Y	i	y	ë	ÿ	Љ	Й	Щ	й	щ	љ	
a	*	:	J	Z	j	z	è	0	ь	К	Ъ	к	ъ	ь		
b	+	;	K	[	k	[	Y	ç	ћ	Л	Ы	л	ы	ћ		
c	,	<	L	\	l	l	ı	£	Р	М	Ь	м	ь	ќ		
d	-	=	M	]	m	]	ı	¥	-	Н	Э	н	э	ѕ		
e	.	>	N	^	n	~	Ǻ	ŕ	У	О	Ю	о	ю	у		
f	/	?	O	_	o		Ǻ	f	У	П	Я	п	я	у		

# Tally Dascom 1125

## ISO 8859-7 (Latin/Greek)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	ç	é		°	ı	π	ū	π	
1		!	1	A	Q	a	q	ü	æ		±	A	P	α	ρ	
2		"	2	B	R	b	r	é	Æ		²	B		β	σ	
3		#	3	C	S	c	s	ā	ō	£	³	Γ	Σ	χ	ς	
4		\$	4	D	T	d	t	ä	ö		'	Δ	T	ō	τ	
5		%	5	E	U	e	u	â	ò		»	E	Υ	ε	υ	
6		&	6	F	V	f	v	ā	ū		A	Z	Φ	ζ	φ	
7		'	7	G	W	g	w	ç	û	§	•	H	X	η	χ	
8		(	8	H	X	h	x	ē	ÿ	"	E	θ	Ψ	θ	ψ	
9		)	9	I	Y	i	y	ë	ÿ	©	H	I	Ω	ι	ω	
a		*	:	J	Z	j	z	è	ü		I	K	İ	κ	ϊ	
b		+	;	K	[	k	{	ÿ	ϕ	«	»	Λ	Υ	ñ	ü	
c		,	<	L	\	l		î	£	¬	Ö	M	ά	μ	ó	
d		-	=	M	]	m	}	ï	¥	-	½	N	έ	ν	ύ	
e		.	>	N	^	n	~	Ä	ß		Υ	Ξ	ή	ξ	ώ	
f		/	?	O	_	o		Å	f	—	Ω	Ο	ι	ο		

## ISO 8859-9 (Turkish)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	ç	é		°	A	ğ	ä	ğ	
1		!	1	A	Q	a	q	ü	æ	ı	±	Á	ñ	á	ñ	
2		"	2	B	R	b	r	é	Æ	ϕ	²	Ä	ö	ä	ö	
3		#	3	C	S	c	s	ā	ō	£	³	Å	ó	ä	ó	
4		\$	4	D	T	d	t	ä	ö	¤	'	Å	ö	ä	ö	
5		%	5	E	U	e	u	â	ò	¥	μ	Ä	ö	ä	ö	
6		&	6	F	V	f	v	ā	ū		¶	Æ	ö	æ	ö	
7		'	7	G	W	g	w	ç	û	§	•	Ç	x	ç	÷	
8		(	8	H	X	h	x	ē	ÿ	"	¸	E	ø	è	ø	
9		)	9	I	Y	i	y	ë	ÿ	©	¹	É	ù	é	ù	
a		*	:	J	Z	j	z	è	ü	ª	º	Ê	ú	ê	ú	
b		+	;	K	[	k	{	ÿ	ϕ	«	»	Ë	ó	ë	ó	
c		,	<	L	\	l		î	£	¬	¼	İ	ü	ı	ü	
d		-	=	M	]	m	}	ï	¥	-	½	İ	ı	ı	ı	
e		.	>	N	^	n	~	Ä	ß	®	¾	İ	ş	ı	ş	
f		/	?	O	_	o		Å	f	—	¿	İ	ö	ı	ö	

ISO 8859-15 Euro (CodePage 923)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Ç	É		°	À	Ð	à	ð	
1		!	1	A	Q	a	q	ü	æ	;	±	Á	Ñ	á	ñ	
2		"	2	B	R	b	r	é	Æ	¢	²	Â	Ò	â	ò	
3		#	3	C	S	c	s	â	ô	£	³	Ã	Ó	ã	ó	
4		\$	4	D	T	d	t	ä	ö	€	¸	Ä	Ö	ä	ö	
5		%	5	E	U	e	u	à	ò	¥	µ	Å	Ö	å	ö	
6		&	6	F	V	f	v	á	û	Š	¶	Æ	Ö	æ	ö	
7		'	7	G	W	g	w	ç	ù	Š	·	Ç	×	ç	÷	
8		(	8	H	X	h	x	ê	ÿ	š	ž	È	Ø	è	ø	
9		)	9	I	Y	i	y	ë	ÿ	©	¹	É	Ù	é	ù	
a		*	:	J	Z	j	z	è	Û	ª	º	Ê	Ú	ê	ú	
b		+	;	K	[	k	{	ï	φ	«	»	Ë	Û	ë	û	
c		,	<	L	\	l		î	£	¬	¼	Ì	Ü	ì	ü	
d		-	=	M	]	m	}	ï	¥	-	½	Í	Ý	í	ý	
e		.	>	N	^	n	~	Ë	¶	©	¾	Î	Þ	î	þ	
f		/	?	O	_	o		À	f	-	¿	Ï	ß	ï	ÿ	

BRASCI

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p				°	À	Ð	à	ð	
1		!	1	A	Q	a	q				;	±	Á	Ñ	á	ñ
2		"	2	B	R	b	r				¢	²	Â	Ò	â	ò
3		#	3	C	S	c	s				£	³	Ã	Ó	ã	ó
4		\$	4	D	T	d	t				¤	¸	Ä	Ö	ä	ö
5		%	5	E	U	e	u				¥	µ	Å	Ö	å	ö
6		&	6	F	V	f	v				¦	¶	Æ	Ö	æ	ö
7		'	7	G	W	g	w				§	·	Ç	×	ç	÷
8		(	8	H	X	h	x				¨	¸	È	Ø	è	ø
9		)	9	I	Y	i	y				©	¹	É	Ù	é	ù
a		*	:	J	Z	j	z				ª	º	Ê	Ú	ê	ú
b		+	;	K	[	k	{				«	»	Ë	Û	ë	û
c		,	<	L	\	l					¬	¼	Ì	Ü	ì	ü
d		-	=	M	]	m	}				-	½	Í	Ý	í	ý
e		.	>	N	^	n	~				©	¾	Î	Þ	î	þ
f		/	?	O	_	o					-	¿	Ï	ß	ï	ÿ

Abicom

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p					ò	ì	ò		
1		!	1	A	Q	a	q				À	Ó	à	ó		
2		"	2	B	R	b	r				Á	Ô	á	ô		
3		#	3	C	S	c	s				Â	Õ	â	õ		
4		\$	4	D	T	d	t				Ã	Ö	ã	ö		
5		%	5	E	U	e	u				Ä	Ø	ä	œ		
6		&	6	F	V	f	v				Ç	Ù	ç	ù		
7		'	7	G	W	g	w				È	Ú	è	ú		
8		(	8	H	X	h	x				É	Û	é	û		
9		)	9	I	Y	i	y				Ê	Ü	ê	ü		
a		*	:	J	Z	j	z				Ë	Ý	ë	ÿ		
b		+	;	K	[	k	{				Ì	”	ì	ß		
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f		/	?	O	_	o					Ñ	°	ñ	±		

Roman8

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p					—	â	À	Á	þ
1		!	1	A	Q	a	q				À	ÿ	ê	î	Ã	Þ
2		"	2	B	R	b	r				Ã	ý	ô	Ø	ã	•
3		#	3	C	S	c	s				È	°	û	Æ	Ð	µ
4		\$	4	D	T	d	t				Ê	Ç	á	ã	ð	¶
5		%	5	E	U	e	u				Ë	ç	é	í	í	¾
6		&	6	F	V	f	v				Ï	Ñ	ó	ø	ì	—
7		'	7	G	W	g	w				Ï	ñ	ú	æ	ó	¼
8		(	8	H	X	h	x				'	;	à	Ã	ò	½
9		)	9	I	Y	i	y				'	;	è	ì	õ	¾
a		*	:	J	Z	j	z				^	¤	ò	ö	ö	¾
b		+	;	K	[	k	{				”	£	ù	Û	§	«
c		,	<	L	\	l					~	¥	ä	É	§	■
d		-	=	M	]	m	}				Ù	§	ë	í	Ú	»
e		.	>	N	^	n	~				Ù	f	ö	ß	ÿ	±
f		/	?	O	_	o					£	¢	ü	ô	ÿ	

Coax/Twinax (Hebrew)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	N	J	á	☼	L	⊥	⊥	⊥	⊥
1		!	1	A	Q	a	q	Ⓛ	Ⓟ	í	☼	⊥	⊥	⊥	⊥	⊥
2		"	2	B	R	b	r	λ	Ⓜ	ó	☼	⊥	⊥	⊥	⊥	⊥
3		#	3	C	S	c	s	Ⓣ	Ⓝ	ú			⊥	⊥	⊥	⊥
4		\$	4	D	T	d	t	Ⓝ	Ⓜ	ñ		-	⊥	⊥	⊥	⊥
5		%	5	E	U	e	u	Ⓛ	Ⓟ	Ñ	⊥	⊥	⊥	⊥	⊥	⊥
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		Ⓛ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	⊥	⊥

New-437 (Hebrew)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	N	J	á	☼	L	⊥	⊥	α	≡
1		!	1	A	Q	a	q	Ⓛ	Ⓟ	í	☼	⊥	⊥	⊥	β	±
2		"	2	B	R	b	r	λ	Ⓜ	ó	☼	⊥	⊥	⊥	Γ	≥
3		#	3	C	S	c	s	Ⓣ	Ⓝ	ú			⊥	⊥	π	≤
4		\$	4	D	T	d	t	Ⓝ	Ⓜ	ñ		-	⊥	⊥	Σ	∫
5		%	5	E	U	e	u	Ⓛ	Ⓟ	Ñ	⊥	⊥	⊥	⊥	σ	∫
6		&	6	F	V	f	v	Ⓝ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	∫	'
7		'	7	G	W	g	w	Ⓝ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	τ	≈
8		(	8	H	X	h	x	Ⓝ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	φ	•
9		)	9	I	Y	i	y	Ⓝ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	θ	•
a		*	:	J	Z	j	z	Ⓛ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	Ω	•
b		+	;	K	[	k	{	Ⓛ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	δ	∫
c		,	<	L	\	l	!	Ⓛ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	∞	n
d		-	=	M	]	m	}	Ⓛ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	∅	²
e		.	>	N	^	n	~	Ⓛ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	ε	■
f		/	?	O	_	o		Ⓛ	Ⓜ	Ⓜ	⊥	⊥	⊥	⊥	∅	n

New-Dig 850 (Hebrew)

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	W	J	á	☼	L	ø	M	J	
1		!	1	A	Q	a	q	U	U	í	☼	±	D	U	U	
2		"	2	B	R	b	r	λ	Y	ó	☼	T	E	λ	Y	
3		#	3	C	S	c	s	T	η	ú		†	E	T	η	
4		\$	4	D	T	d	t	η	ϕ	ñ	†	-	E	η	ϕ	
5		%	5	E	U	e	u	U	Y	Ñ	Á	+	U	U	Y	
6		&	6	F	V	f	v	Y	Y	a	Á	ã	í	Y	Y	
7		'	7	G	W	g	w	η	Q	Ω	λ	Á	í	η	Q	
8		(	8	H	X	h	x	U	γ	¿	©	±	í	U	γ	
9		)	9	I	Y	i	y	Y	©	‡	‡	‡	J	Y	©	
a		*	:	J	Z	j	z	γ	η	~		±	γ	γ	η	
b		+	;	K	[	k	{	Q	ø	½	‡	‡	■	Q	γ	
c		,	<	L	\	l		Q	£	½	‡	‡	■	Q	γ	
d		-	=	M	]	m	}	Q	ø	i	¢	=	!	Q	²	
e		.	>	N	^	n	~	h	x	«	Y	‡	ì	h	■	
f		/	?	O	_	o		U	f	»	γ	±	■	U		

Old-Code 860 (Hebrew)

רוט	0	1	2	3	4	5	6	7	8	9	ב	ג	ד	ה	ו	ז
תוה	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	W	J	W	J	á	☼	L	±	α	±	
1		!	1	A	Q	U	U	U	λ	í	☼	±	‡	β	±	
2		"	2	B	R	λ	Y	λ	E	ó	☼	T	π	Γ	≥	
3		#	3	C	S	T	η	T	η	ú		†	±	π	≤	
4		\$	4	D	T	η	ϕ	ã	ö	ñ	†	-	±	Σ		
5		%	5	E	U	U	Y	U	Y	Ñ	‡	+	‡	σ	J	
6		&	6	F	V	Y	Y	Á	ú	a	‡	†	‡	í	'	
7		'	7	G	W	η	Q	η	Q	Ω	η	‡	‡	τ	≈	
8		(	8	H	X	U	γ	U	¿	¿	‡	±	‡	ø	'	
9		)	9	I	Y	Y	©	E	ö	ò	‡	‡	J	θ	'	
ב		*	:	J	Z	γ	η	γ	η	~		±	γ	Ω	'	
ג		+	;	K	[	Q	{	í	¢	½	‡	‡	■	ø	í	
ד		,	<	L	\	Q		ö	£	½	‡	‡	■	ø	η	
ה		-	=	M	]	Q	}	í	ò	i	„	=	■	ø	²	
ו		.	>	N	^	h	~	Á	h	«	J	‡	■	ε	■	
ז		/	?	O	_	U		Á	ó	»	γ	±	■	U		

Flarro 863 (Hebrew)

רוט תרה	0	1	2	3	4	5	6	7	8	9	ב	ג	ד	ה	ו	ז
תרה	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	נ	מ	נ	מ	נ	!	☼	ל	⊥	α	≡	
1		!	1	ב	ו	ב	ו	ב	ו	'	☼	⊥	⊥	β	±	
2		"	2	ג	ע	ג	ע	ג	ו	ó	☼	⊥	⊥	Γ	≥	
3		#	3	ד	ף	ד	ף	ד	ף	ú		⊥	⊥	π	≤	
4		\$	4	ה	פ	ה	פ	À	È	"	⊥	—	⊥	Σ		
5		%	5	ו	ץ	ו	ץ	ו	י	ı	⊥	⊥	⊥	σ	↓	
6		^	6	ז	צ	ז	צ	⊥	צ	°	⊥	⊥	⊥	ı	'	
7		'	7	ח	ק	ח	ק	ח	ק	—	⊥	⊥	⊥	τ	≈	
8		(	8	ט	ך	ט	ך	ט	ח	ı	⊥	⊥	⊥	φ	*	
9		)	9	י	ש	י	ש	י	ó	ı	⊥	⊥	⊥	θ	.	
ב		*	:	ך	ת	ך	ת	ך	ת	ı	⊥	⊥	⊥	Ω	.	
ג		+	;	כ	[	כ	{	כ	⊥	½	⊥	⊥	⊥	δ	f	
ד		,	<	ל	\	ל		ל	⊥	¾	⊥	⊥	⊥	∞	n	
ה		-	=	ם	]	ם	}	=	û	¾	⊥	=	⊥	∅	²	
ו		.	>	נ	^	נ	~	λ	0	«	⊥	⊥	⊥	e	■	
ז		/	?	ו	_	ו		§	f	»	⊥	⊥	⊥	n		

865 Hebrew

hex dez	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	מ	נ	Á	☼	ל	⊥	α	≡	
1		!	1	A	Q	a	q	ל	ו	ı	☼	⊥	⊥	β	±	
2		"	2	B	R	b	r	ג	ע	ó	☼	⊥	⊥	Γ	≥	
3		#	3	C	S	c	s	ד	ף	ú		⊥	⊥	π	≤	
4		\$	4	D	T	d	t	ה	פ	ñ	⊥	—	⊥	Σ		
5		%	5	E	U	e	u	ו	ץ	Ñ	⊥	⊥	⊥	σ	↓	
6		&	6	F	V	f	v	ז	צ	⊥	⊥	⊥	⊥	ı	'	
7		'	7	G	W	g	w	ח	ק	Ω	⊥	⊥	⊥	τ	≈	
8		(	8	H	X	h	x	ט	ך	ı	⊥	⊥	⊥	φ	*	
9		)	9	I	Y	i	y	י	ש	ı	⊥	⊥	⊥	θ	.	
a		*	:	J	Z	j	z	ך	ת	ı	⊥	⊥	⊥	Ω	.	
b		+	;	K	[	k	{	כ	⊥	½	⊥	⊥	⊥	δ	f	
c		,	<	L	\	l		ל	⊥	¾	⊥	⊥	⊥	∞	n	
d		-	=	M	]	m	}	ם	∅	ı	⊥	=	⊥	∅	²	
e		.	>	N	^	n	~	נ	⊥	«	⊥	⊥	⊥	e	■	
f		/	?	O	_	o		ו	f	⊥	⊥	⊥	⊥	n		

CP 1257

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	`	p	€			°	Ř	Š	ř	š	
1	!	1	Ā	Q	a	q		`			±	ı	Ń	i	ń	
2	"	2	B	R	b	r	,	'	φ	²	Ā	Ń	ā	ř		
3	#	3	C	S	c	s		"	£	³	Ó	Ó	ó	ó		
4	\$	4	D	T	d	t	„	”	¤		Ä	Ö	ä	ö		
5	%	5	E	U	e	u	...	.		μ	Å	Ö	å	ö		
6	&	6	F	V	f	v	†	-	;	¶	Ë	Ö	ë	ö		
7	'	7	G	W	g	w	#	-	§	.	Ě	x	ě	÷		
8	(	8	H	X	h	x			ø	ø	Č	U	č	u		
9	)	9	I	Y	i	y	%	™	©	¹	É	L	é	˚		
a	*	:	J	Z	j	z			®	˚	Ž	š	ž	š		
b	+	;	K	[	k	{	<	>	«	»	É	Ū	é	ū		
c	,	<	L	\	l				¬	¼	Œ	Ü	œ	ü		
d	-	=	M	]	m	}			-	½	Ɔ	Ž	Ɔ	ž		
e	.	>	N	^	n	~			®	¾	Ī	Ž	ī	ž		
f	/	?	O	_	o				®	¾	Ł	B	ł	ß		

866 Ukraine

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	A	P	a	⋯	⋯	⋯	⋯	⋯	⋯
1	!	1	A	Q	a	q	Б	С	б	с	⋯	⋯	⋯	⋯	⋯	⋯
2	"	2	B	R	b	r	В	Т	в	т	⋯	⋯	⋯	⋯	⋯	⋯
3	#	3	C	S	c	s	Г	У	г	у	⋯	⋯	⋯	⋯	⋯	⋯
4	\$	4	D	T	d	t	Д	Ф	д	ф	⋯	⋯	⋯	⋯	⋯	⋯
5	%	5	E	U	e	u	Е	Х	е	х	⋯	⋯	⋯	⋯	⋯	⋯
6	&	6	F	V	f	v	Ж	Ц	ж	ц	⋯	⋯	⋯	⋯	⋯	⋯
7	'	7	G	W	g	w	З	Ч	з	ч	⋯	⋯	⋯	⋯	⋯	⋯
8	(	8	H	X	h	x	И	Ш	и	ш	⋯	⋯	⋯	⋯	⋯	⋯
9	)	9	I	Y	i	y	Й	Щ	й	щ	⋯	⋯	⋯	⋯	⋯	⋯
a	*	:	J	Z	j	z	К	Ь	к	ь	⋯	⋯	⋯	⋯	⋯	⋯
b	+	;	K	[	k	{	Л	Ы	л	ы	⋯	⋯	⋯	⋯	⋯	⋯
c	,	<	L	\	l		!	М	Ь	м	⋯	⋯	⋯	⋯	⋯	⋯
d	-	=	M	]	m	}	Н	Э	н	э	⋯	⋯	⋯	⋯	⋯	⋯
e	.	>	N	^	n	~	О	Ю	о	ю	⋯	⋯	⋯	⋯	⋯	⋯
f	/	?	O	_	o		П	Я	п	я	⋯	⋯	⋯	⋯	⋯	⋯

866 Kazakhstan

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	A	P	a	⌘	⌘	⌘	⌘	⌘	⌘
1		!	1	A	Q	a	q	Б	С	б	⌘	⌘	⌘	⌘	⌘	⌘
2		"	2	B	R	b	r	В	Т	в	⌘	⌘	⌘	⌘	⌘	⌘
3		#	3	C	S	c	s	Г	У	г	⌘	⌘	⌘	⌘	⌘	⌘
4		\$	4	D	T	d	t	Д	Ф	д	⌘	⌘	⌘	⌘	⌘	⌘
5		%	5	E	U	e	u	Е	Х	е	⌘	⌘	⌘	⌘	⌘	⌘
6		&	6	F	V	f	v	Ж	Ц	ж	⌘	⌘	⌘	⌘	⌘	⌘
7		'	7	G	W	g	w	З	Ч	э	⌘	⌘	⌘	⌘	⌘	⌘
8		(	8	H	X	h	x	И	Ш	и	⌘	⌘	⌘	⌘	⌘	⌘
9		)	9	I	Y	i	y	Й	Щ	й	⌘	⌘	⌘	⌘	⌘	⌘
a		*	:	J	Z	j	z	К	Ъ	к	⌘	⌘	⌘	⌘	⌘	⌘
b		+	;	K	[	k	{	Л	Ы	л	⌘	⌘	⌘	⌘	⌘	⌘
c		,	<	L	\	l	!	М	Ь	м	⌘	⌘	⌘	⌘	⌘	⌘
d		-	=	M	]	m	}	Н	Э	н	⌘	⌘	⌘	⌘	⌘	⌘
e		.	>	N	^	n	~	О	Ю	о	⌘	⌘	⌘	⌘	⌘	⌘
f		/	?	O	_	o		П	Я	п	⌘	⌘	⌘	⌘	⌘	⌘

Kamenicky

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Č	É	á	⌘	⌘	⌘	⌘	⌘	⌘
1		!	1	A	Q	a	q	ü	ž	í	⌘	⌘	⌘	⌘	⌘	⌘
2		"	2	B	R	b	r	é	ž	ó	⌘	⌘	⌘	⌘	⌘	⌘
3		#	3	C	S	c	s	ď	ô	ú	⌘	⌘	⌘	⌘	⌘	⌘
4		\$	4	D	T	d	t	ä	ö	ň	⌘	⌘	⌘	⌘	⌘	⌘
5		%	5	E	U	e	u	ď	ó	ň	⌘	⌘	⌘	⌘	⌘	⌘
6		&	6	F	V	f	v	ť	ů	ů	⌘	⌘	⌘	⌘	⌘	⌘
7		'	7	G	W	g	w	č	ů	ů	⌘	⌘	⌘	⌘	⌘	⌘
8		(	8	H	X	h	x	ě	ý	š	⌘	⌘	⌘	⌘	⌘	⌘
9		)	9	I	Y	i	y	ě	ř	ř	⌘	⌘	⌘	⌘	⌘	⌘
a		*	:	J	Z	j	z	č	ů	ý	⌘	⌘	⌘	⌘	⌘	⌘
b		+	;	K	[	k	{	ř	š	ř	⌘	⌘	⌘	⌘	⌘	⌘
c		,	<	L	\	l	!	ř	š	š	⌘	⌘	⌘	⌘	⌘	⌘
d		-	=	M	]	m	}	ř	ý	š	⌘	⌘	⌘	⌘	⌘	⌘
e		.	>	N	^	n	~	š	ř	«	⌘	⌘	⌘	⌘	⌘	⌘
f		/	?	O	_	o		š	ř	»	⌘	⌘	⌘	⌘	⌘	⌘

Mazovia

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	ç	ę	ż	☼	L	⌘	α	≡	
1	!	1	A	Q	a	q	ü	ę	ż	☼	⊥	⊟	β	±		
2	"	2	B	R	b	r	é	ł	ó	☼	⊥	⊟	Γ	≥		
3	#	3	C	S	c	s	ā	ō	Ó		⊥	⌘	π	≤		
4	\$	4	D	T	d	t	ä	ö	ń	†	—	⊥	Σ	∫		
5	%	5	E	U	e	u	à	ć	ń	†	†	⊥	σ	∫		
6	&	6	F	V	f	v	a	ū	ż		⊥	⊟	μ	÷		
7	'	7	G	W	g	w	ç	ū	ż	⊟	⊥	⊟	τ	≈		
8	(	8	H	X	h	x	ē	ś	ł	⊥	⊥	⊥	φ	°		
9	)	9	I	Y	i	y	ë	ö	ŕ		⊥	⊥	θ	·		
a	*	:	J	Z	j	z	è	ü	ŕ		⊥	⊥	Ω	·		
b	+	;	K	[	k	{	ÿ	ϕ	½	⊟	⊟	■	δ	√		
c	,	<	L	\	l		î	ł	ż	⊟	⊥	■	ω	∞		
d	-	=	M	]	m	}	ć	¥	i	⊟	=	■	∅	²		
e	.	>	N	^	n	~	Ä	ś	«	⊥	⊥	■	ε	■		
f	/	?	O	_	o		Å	f	»	⊥	⊥	■	∩			

CP 775

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	`	p	ć	é	ā	☼	L	ā	ó	-	
1	!	1	A	Q	a	q	ü	æ	ī	☼	⊥	č	β	±		
2	"	2	B	R	b	r	é	æ	ó	☼	⊥	ę	ō	"		
3	#	3	C	S	c	s	ā	ō	ž		⊥	è	ń	¼		
4	\$	4	D	T	d	t	ä	ö	ž	†	—	i	ō	¶		
5	%	5	E	U	e	u	á	ǵ	ž	Ǻ	†	š	ō	§		
6	&	6	F	V	f	v	ā	ϕ	"	č	⊥	⊥	μ	÷		
7	'	7	G	W	g	w	ć	ś	ı	ę	ū	ū	ń	„		
8	(	8	H	X	h	x	ı	ś	ø	i	⊥	ž	κ	°		
9	)	9	I	Y	i	y	ē	ö	ø		⊥	⊥	κ	·		
a	*	:	J	Z	j	z	ŕ	ü	ŕ		⊥	⊥	⊥	·		
b	+	;	K	[	k	{	ŕ	ø	½	⊟	⊟	■	l	1		
c	,	<	L	\	l		î	ε	¼	⊟	⊥	■	∅	³		
d	-	=	M	]	m	}	ž	ø	Ł	⊥	=	■	Ē	2		
e	.	>	N	^	n	~	Ä	x	«	š	⊥	■	N	■		
f	/	?	O	_	o		Å	π	»	⊥	ž	■	'			

CRO-ASCII

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	2	P	z	p	ç	é	á	☼	Ł	ł	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	☼	±	⊥	β	±	
2		"	2	B	R	b	r	é	Æ	ó	☼	⊥	⊥	Γ	≥	
3		#	3	C	S	c	s	ã	õ	ú			⊥	π	≤	
4		\$	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	ä	ü	æ	†	†	†	μ	+	
7		'	7	G	W	g	w	ç	ü	ö	†	†	†	τ	≈	
8		(	8	H	X	h	x	ë	ÿ	z	†	⊥	†	φ	°	
9		)	9	I	Y	i	y	ë	ü	ü	†	†	†	θ	·	
a		*	:	J	Z	j	z	è	ü	ü	†	⊥	†	Ω	·	
b		+	;	K	Š	k	š	ÿ	ç	z	†	†	■	δ	∫	
c		,	<	L	D	l	d	í	é	z	†	†	■	ω	n	
d		-	=	M	Ć	m	ć	í	¥	i	†	=	■	∅	ª	
e		.	>	N	Č	n	č	Ä	Pl	«	†	†	■	ε	■	
f		/	?	O	_	o		À	f	»	†	±	■	∩		

Arabic Farsi

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	~	⊙		·	ƒ	∃	-	≡	
1		!	1	A	Q	a	q	•	⊙	-	l	z	∃	∃	∃	∃
2		"	2	B	R	b	r	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
3		#	3	C	S	c	s	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
4		\$	4	D	T	d	t	∂	∂	∂	∂	∂	∂	∂	∂	∂
5		%	5	E	U	e	u	'	∂	∂	∂	∂	∂	∂	∂	∂
6		&	6	F	V	f	v	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
7		'	7	G	W	g	w	ˆ	«	∂	U	∂	∂	∂	∂	∂
8		(	8	H	X	h	x	'	»	∂	∂	∂	∂	∂	∂	∂
9		)	9	I	Y	i	y	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
a		*	:	J	Z	j	z	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
b		+	;	K	[	k	{	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
c		,	<	L	\	l		ˆ	∂	∂	∂	∂	∂	∂	∂	∂
d		-	=	M	]	m	}	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
e		.	>	N	^	n	~	ˆ	∂	∂	∂	∂	∂	∂	∂	∂
f		/	?	O	_	o		ˆ	∂	∂	∂	∂	∂	∂	∂	∂

Arabic Urdu

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	~	⊕		•	ƒ	>	⊥	⊥	
1		!	1	A	Q	a	q	ل	⊕	-	l	±	ج	ب	'	
2		"	2	B	R	b	r	/	٧	ل	Γ	1	ج	ب	⊕	
3		#	3	C	S	c	s	ل	ج	ف	ƒ	1	ا	ب	⊕	
4		\$	4	D	T	d	t	⊕	ج	٧	E	⊕	ب	ل	⊕	
5		%	5	E	U	e	u	•	٧	ل	⊕	⊕	⊕	⊕	⊕	
6		&	6	F	V	f	v	ل	ل	٧	Γ	ل	ب	ل	⊕	
7		'	7	G	W	g	w	/	«	⊕	U	1	ب	⊕	⊕	
8		(	8	H	X	h	x	'	»	ل	n	ل	⊕	⊕	⊕	
9		)	9	I	Y	i	y	ل	⊕	ل	٧	⊕	⊕	⊕	⊕	
a		*	:	J	Z	j	z	/	⊕	ل	٧	ل	⊕	ل	⊕	
b		+	;	K	[	k	{	ل	⊕	⊕	ل	ل	⊕	⊕	⊕	
c		,	<	L	\	l		ل	ل	•	٧	⊕	⊕	⊕	⊕	
d		-	=	M	]	m	}	ل	⊕	⊕	⊕	⊕	⊕	⊕	⊕	
e		.	>	N	^	n	~	٧	⊕	⊕	⊕	⊕	⊕	⊕	⊕	
f		/	?	O	_	o		⊕	ل	⊕	٧	⊕	⊕	⊕	⊕	

GreekDEC

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0			0	@	P	'	p	Α	Ε	ά	•	Υ			ϖ	
1		!	1	A	Q	a	q	Ε	æ	ί	±	Α	Π	α	π	
2		"	2	B	R	b	r	Η	Æ	ό	²	Β	Ρ	β	ρ	
3		#	3	C	S	c	s	Ι	ō	ύ	³	Γ	Σ	γ	σ	
4		\$	4	D	T	d	t	ä	ö	ñ	†	Δ	Τ	δ	τ	
5		%	5	E	U	e	u	à	ò	¥	‡	Ε	Υ	ε	υ	
6		&	6	F	V	f	v	ß	û	!		Z	Φ	ζ	φ	
7		'	7	G	W	g	w	ç	ù	ß	π	H	X	η	x	
8		(	8	H	X	h	x	ê	ò	¿	‡	Θ	Ψ	θ	ψ	
9		)	9	I	Y	i	y	ë	Υ	⊕	‡	Ι	Ω	ι	ω	
a		*	:	J	Z	j	z	è	Ω	⊕		K	ά	κ	ς	
b		+	;	K	[	k	{	Υ	⊕	«	»	Λ	έ	λ	ύ	
c		,	<	L	\	l		τ	ε	‡	‡	M	ή	μ	ώ	
d		-	=	M	]	m	}	ι	¥	‡	‡	N	ί	ν	²	
e		.	>	N	^	n	~	Α	ϖ	«	‡	Ξ		ξ	⊕	
f		/	?	O	_	o		Α	ƒ	»	‡	Ο	ό	ο		

Greek ELOT 928

hex	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
dez	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0				0	@	P	'	p				*		Π	ϖ	π
1		!	1	A	Q	a	q				"	±	A	P	α	ρ
2		"	2	B	R	b	r					²	B		β	σ
3		#	3	C	S	c	s					³	Γ	Σ	γ	ς
4		\$	4	D	T	d	t				Ω	'	Δ	T	δ	τ
5		%	5	E	U	e	u				¥		E	Υ	ε	υ
6		&	6	F	V	f	v				!	A	Z	Φ	ζ	φ
7		'	7	G	W	g	w				§		H	X	η	χ
8		(	8	H	X	h	x				¨	E	Θ	Ψ	θ	ψ
9		)	9	I	Y	i	y				©	H	I	Ω	ι	ω
a		*	:	J	Z	j	z				@	I	K	Υ	κ	ϊ
b		+	;	K	[	k	{				«	»	Λ	Υ	λ	υ
c		,	<	L	\	l						Ɔ	M	ά	μ	ό
d		-	=	M	]	m	}					½	N	έ	ν	ύ
e		.	>	N	^	n	~					Υ	Ξ	ή	ξ	ώ
f		/	?	O	_	o						Ɔ	O	ί	ο	

# 11 Control Codes Summary

## Epson Emulation Command List

<b>Command Sequence</b>	<b>Function</b>
BEL	Beeper
BS	Backspace
HT	Tab horizontally
LF	Line feed
VT	Tab vertically
FF	Form feed
CR	Carriage return
SO	Select double-width printing (one line)
SI	Select condensed mode
DC1	Online
DC2	Cancel condensed mode
DC3	Offline
DC4	Cancel double-wide mode (one line)
CAN	Cancel line
DEL	Delete character
ESC SO	Select double-width printing (one line)
ESC SI	Select condensed mode
ESC SP n	Set intercharacter space
ESC EM n	NA
ESC ! n	Print mode setup
ESC ( - n1 n2 m d1 d2	Choose character lineation
ESC \$ n1 n2	Select absolute horizontal print position
ESC   n	Set left margin
ESC % n	Select user-defined set
ESC &	Define user-defined set
ESC ( ^ n m d1 d2...	Print data in character style
ESC ( G NUL d	Select graphics mode
ESC * m n1 n2...	Select image mode
ESC . c v h m nL nH d1 d2...	Print raster graphics
ESC + n	Select n/360" line spacing
ESC - n	Underline on/off
ESC / n	Select vertical orientation channel
ESC ( C NUL n m	Set page length
ESC ( c NUL nt mt nb mb	Page setup
ESC ( U NUL n	Set unit
ESC 0	Set 1/8" line spacing
ESC 2	Set 1/6" line spacing
ESC 3 n	Set n/180" line spacing
ESC 4	Set Italic
ESC 5	Cancel Italic
ESC 6	Enable printable characters
ESC 7	Enable upper control characters

ESC :	Copy ROM to RAM
ESC <	Unidirectional mode(1 line)
ESC >	Set MSB to 1
ESC =	Set MSB to 0
ESC #	Cancel MSB control
ESC ? n m	Reassign graphics mode
ESC @	Initialize printer
ESC \ n1 n2	Set relative horizontal print position
ESC A n	Set n/60"line spacing
ESC B...NUL	Set/cancel vertical tabs
ESC C n	Set page length in lines
ESC D...NUL	Set/cancel horizontal tabs
ESC E	Select Bold
ESC F	Cancel Bold
ESC G	Select double-strike mode
ESC H	Cancel double-strike mode
ESC J n	Perform tactic n/180"line feed
ESC K n1 n2 ...	Select 8 pins single-density graphics
ESC L n1 n2 ...	Select 8 pins double-density graphics
ESC M	Select ELITE ( 12CPI)
ESC N n	Set bottom margin
ESC O	Cancel bottom margin
ESC P	Select PICA ( 10CPI)
ESC Q n	Set right margin
ESC R n	International character set
ESC S n	Select superscript/subscript
ESC T	Cancel superscript/subscript
ESC U n	Select unidirectional/bidirectional printing mode
ESC ( V NUL n m	Select absolute vertical print position
ESC W n	Turn Double-wide mode on/off
ESC X n1 n2	Select font by pitch and point
ESC Y n1 n2 ...	Select 8 pins, highspeed, double-density graphics
ESC Z n1 n2 ...	Select 8 pins, highspeed fourfold -density graphics
ESC a n	Select justification
ESC b n	Select vertical orientation channel
ESC c n m	Set horizontal intercharacter space
ESC g	Select 15CPI
ESC j n	Perform reverse n/180"line feed
ESC k n	Select typeface
ESC p n	Turn proportional mode on/off
ESC q n	Select character style
ESC r n	Select printing colour
ESC t n	Select character table
ESC ( t n L n H d1 d2 d3	Assign character table
ESC ( v NUL n m	Set relative vertical print position
ESC w n	Turn double-high mode on/off
ESC x n	Select print quality
ESC ( B n1 n2 k m s v1 v2 c	Barcode print

## IBM Emulation Command List

<b>Command Sequence</b>	<b>Function</b>
BEL	Beeper
BS	Backspace
HT	Tab horizontally
LF	Line feed
VT	Tab vertically
FF	Form feed
CR	Enter
SO	Select double-wide mode
SI	Select condensed mode
DC1	Online
DC2	Select 10CPI
DC3	Offline
DC4	Cancel double-wide mode(one line)
CAN	Cancel buffer
ESC BEL	Beeper
ESC BS	Backspace
ESC HT	Tab horizontally
ESC CR	Enter
ESC LF	Line feed
ESC SO	Select double-wide mode
ESC SI	Select condensed mode
ESC DC1	Online
ESC DC2	Select 10CPI
ESC DC3	Offline
ESC DC4	Cancel double-wide mode(one line)
ESC CAN	Cancel buffer
ESC FF	Form feed
ESC EM n	Automatically Feed Paper mode
ESC :	Set 12CPI
ESC VT	Tab vertically
ESC 0	Select 1/8" line spacing
ESC 1	Select 7/72" line spacing
ESC 2	Select 1/6" line spacing or activate ESC A n command
ESC 3 n	Select n/216" or 1/180" line spacing
ESC 4	Set top margin
ESC 5 n	Automatic Line Feed
ESC 6	Select character set 2
ESC 7	Select character set 1
ESC =	NA
ESC \	Print continuously from all character chart
ESC ^	Print single character from all character chart
ESC A n	Select n/72" or n/60" line spacing
ESC B n	Select Tab vertically
ESC C n	Set page length in lines

ESC C NUL n	Set page length in inches
ESC D	Select Tab horizontally
ESC E	Select bold
ESC F	Cancel bold
ESC G	Select double-strike mode
ESC H	Cancel double-strike mode
ESC I n	Select printing mode
ESC J n	Perform n/180" or n/216" single line feed
ESC K n1 n2 V1 V2 ... Vn	Normal density graphics
ESC L n1 n2 V1 V2 ... Vn	Dual-Density Bit Image Graphics (Half Speed)
ESC N n	Select bottom margin
ESC O	Cancel bottom margin
ESC P n	Set proportional intercharacter
ESC Q n	Offline
ESC R	Clear tab
ESC S n	Select superscript/subscript
ESC T	Cancel superscript/subscript
ESC U n	Select bidirectional printing on/off
ESC W n	Select double-wide printing mode (continuous)
ESC X n m	Set left and right margin
ESC Y n1 n2 V1 V2 ... Vn	Select double-density graphics
ESC Z n1 n2 V1 V2 ... Vn	Select fourfold-density graphics
ESC [- n1 n2 m1 m2	Select line
ESC [@ n1 n2 m1 m2 m3 m4	Select printing mode
ESC [I n1 n2 Hf Ls Hs Lf Sm NUL Hc Lc	Select font and pitch
ESC [K n1 n2 initid para1 para2 ... paran	Set initialization condition
ESC [T n1 n2 n3 n4 Hc Lc	Set code page
ESC [\	Set vertical unit
ESC [d	Select printing quality
ESC [f n1 n2 k m s v1 v2c	Set barcode parameters
ESC [g n1 n2 m	Select high-density graphics printing
ESC [p n1 n2	Set barcode data
ESC ]	Feed paper in reverse direction
ESC _ n	Print upper-line
ESC - n	Print underline
ESC d n m	Move the current printing position
ESC j	Stop printing
ESC r n	Select printing colour
ESC * m	Select graphic mode

If you need more details regarding the emulation commands, please contact us.

## FCC STATEMENT

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- a. This device may not cause harmful interference.
- b. This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radiofrequency 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:

- Re-orientate 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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