Tally
DASCOM

User Guide

5130P 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 both of the printer and the 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. Contacter 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 surriscal-da 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 a 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 sunstancias 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 apagdos 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 apro-priada.

- 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 işletime 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-teknisyenine 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 akım kablosunu sadece doğru gerilime sahip bir prize takın.

- Yazıcıyı şebeke ağından ayırmak istediğinizde, yazıcıyı kapatın ve ağ-fişini her zaman prizden çıkartın.

- Yazıcıyı ne yüksek ısılı 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 imâlatçınıza veya müşteri hizmetleri servisinize başvurun.

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1 Printer installation guide

1.1 Unpacking the printer

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 any accessories are missing, please contact your dealer.

Note:

Please keep the packaging material for future transportation.
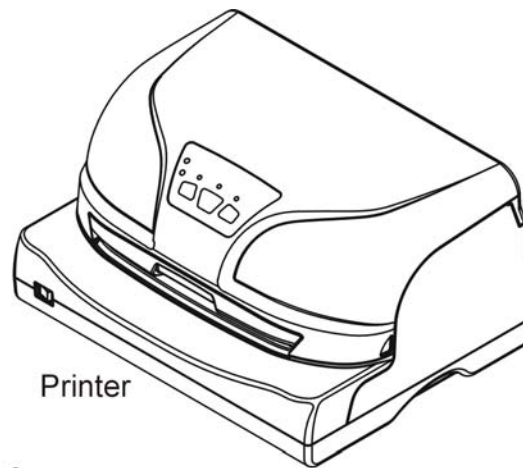
Printer
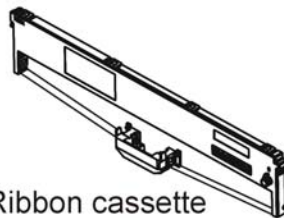
Ribbon cassette

Power cord

Installation Guide
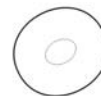
CD-Rom

Remove the packaging material from the printer as follows:

1-2: Remove all the visible tapes from the outside of the printer.

3: Open the printer front cover.

4: Remove the transparent cover.

5: Remove the cable ties from the left and right ends of the carriage shaft.

6: Remove the shipping cardboard from around the print head.

7-13: Remove the shipping foams from around the chassis.

14: Install back the transparent cover.

15: Remove the shipping cardboard from the rear of the printer.
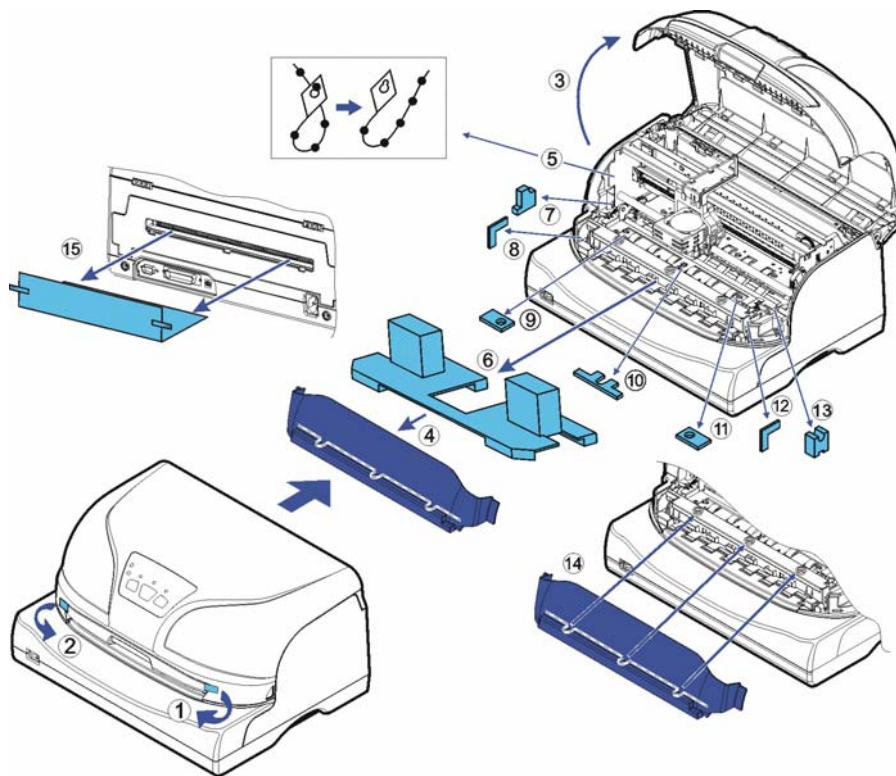
1.2 Placing the printer

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 or 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.

1.3 Printer components

Printer components and functions are shown as below:
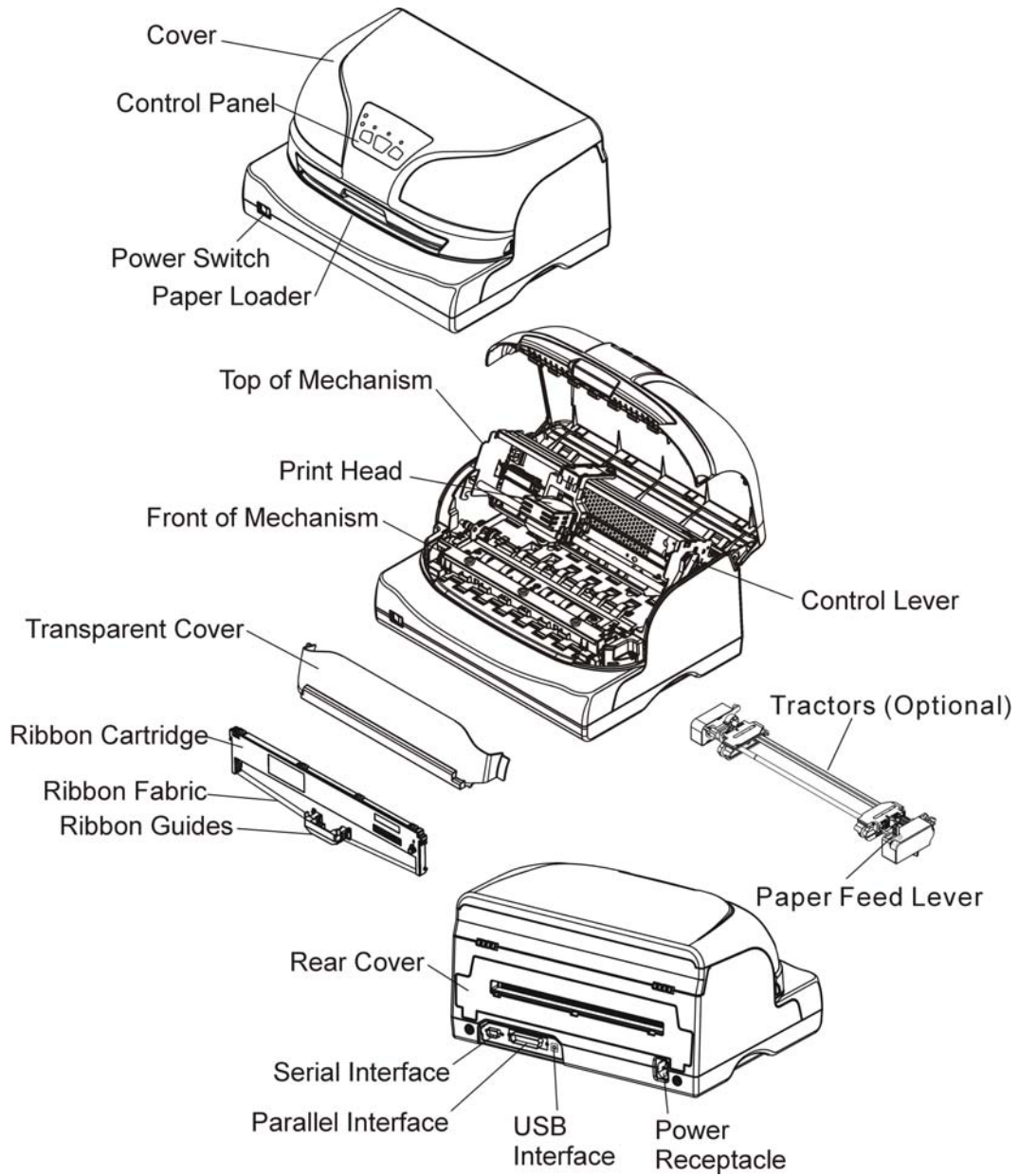
Component	Function
Cover	Protects print head and other components inside, and reduces noise.
Control panel	Shows printer status for printer function setup.
Power switch	Powers printer ON or OFF.
Paper loader	Paper feed path for single ply and bankbook/passport
Print head	24-pin printing mechanism
Control lever	Lifts up the top of mechanism to install ribbon cartridge.
Ribbon cartridge	Ribbon fabric is installed inside.
Ribbon guides	For guiding ribbon installation on print head.
Serial interface	Connects serial interface cable from the host.
Parallel interface	Connects parallel interface cable from the host.
USB interface	Connects USB interface cable from the host.
Power receptacle	Connects power cord to the printer.
Tractors with paper feed lever (option)	For feeding and adjustment of continuous forms.

1.4 Installing and removing ribbon cartridge

■ Installing ribbon cartridge

1. Ensure the printer is powered off.

2. Press the recesses of both sides to open the cover. Remove the transparent cover.
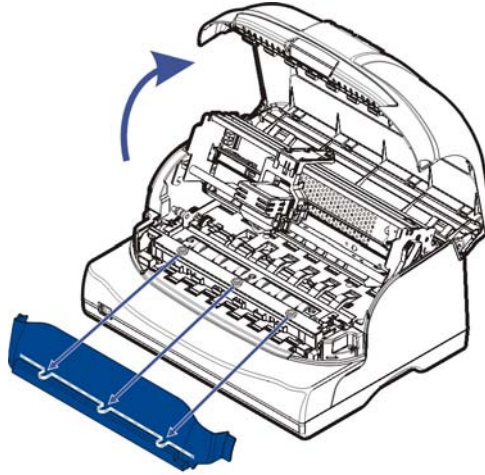
3. Push the control lever to lift up the top of mechanism, and make sure the control lever is set to the latched position.
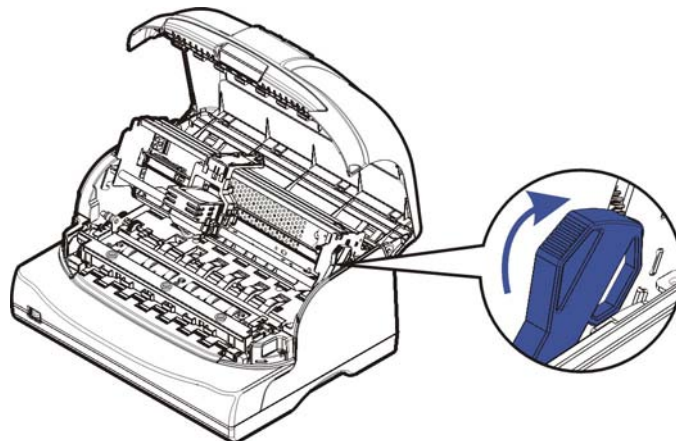
4. Move the print head to the center of the carriage.
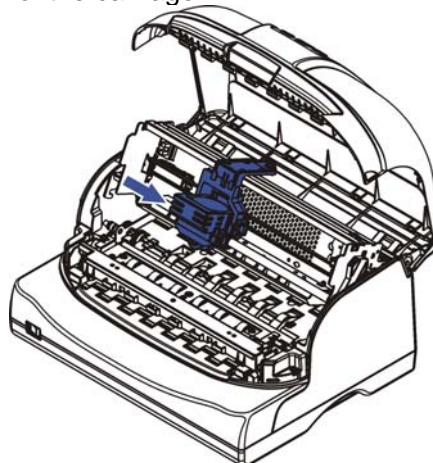
5. Install the recess positions on the ribbon cartridge into the printer mounting, and push both sides of the ribbon cartridge to ensure they click into position.
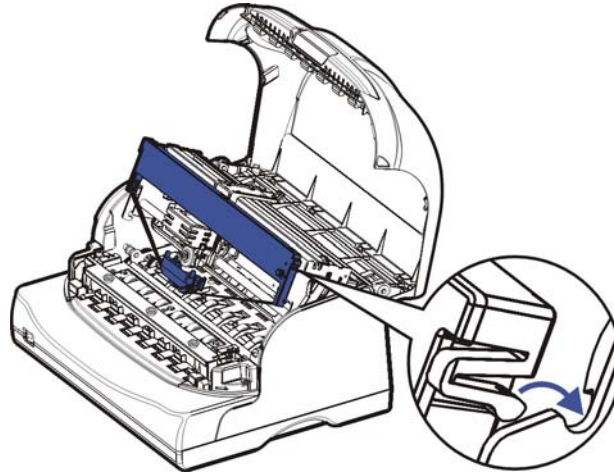
6. Press the ribbon guides onto the print head from underneath until it clicks into position.
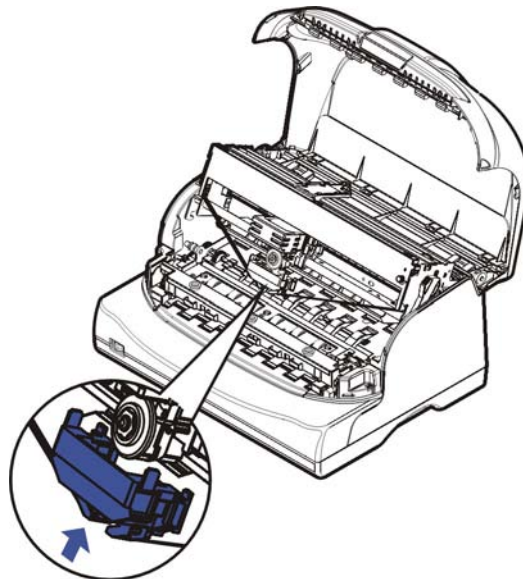
7. Turn the ribbon knob until the ribbon fabric is taut. Move the carriage left and right to ensure the carriage and ribbon fabric can move smoothly.
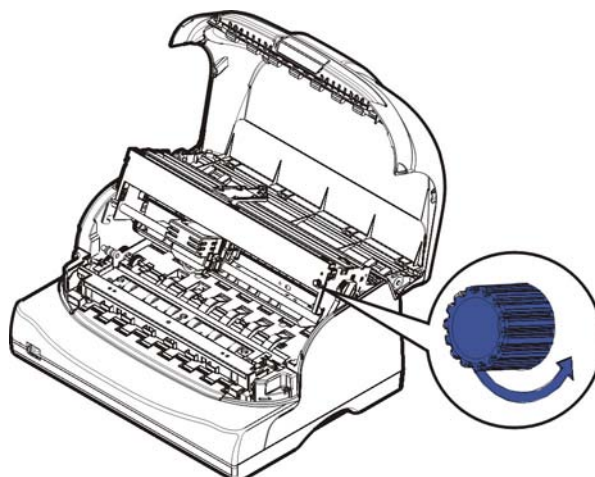
8. Pull down the control lever to set the top of mechanism to the original position, and make sure the control lever is fully latched.
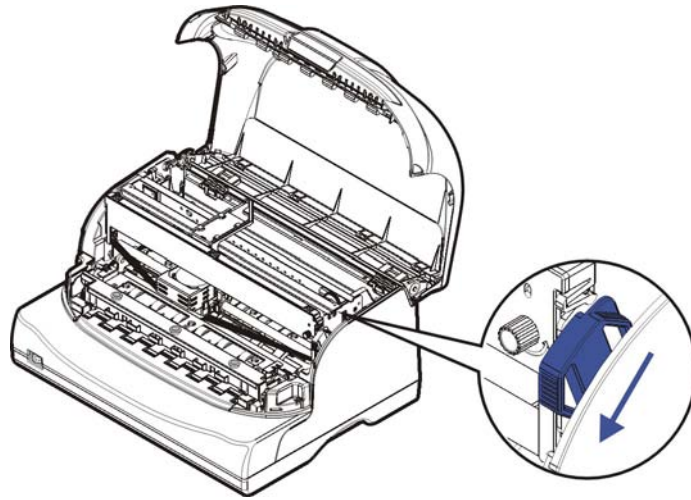
9. Install back the transparent cover to reduce noise.
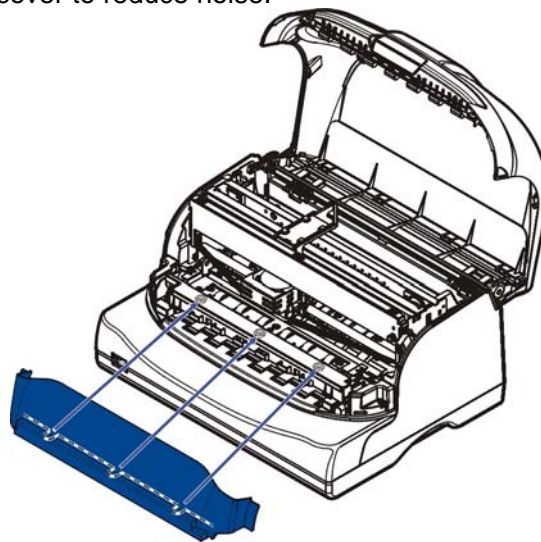
10. Close the cover carefully. When the printer is in operation, ensure the cover is closed to keep the dust away and minimize the noise level. Open the cover only for cleaning and ribbon cartridge replacement.
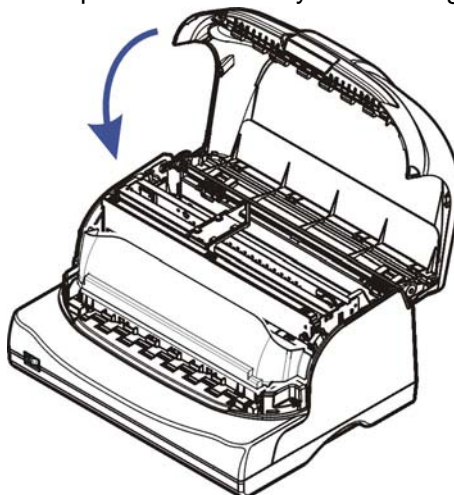
■ **Removing ribbon cartridge**

1. Eject any loaded paper in the printer and turn off the printer. To prevent electrical damage to the printer, do not replace the ribbon cartridge when the power is on.

2. Open the cover and 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.

3. Remove the ribbon guides from the print head, and use fingers to take hold of the ribbon cartridge firmly, then pull the cartridge towards you to unlatch it.

1.5 Connecting the interface cable

The parallel, serial and USB interface ports are located at the rear of the printer. Choose the interface which suits your system.
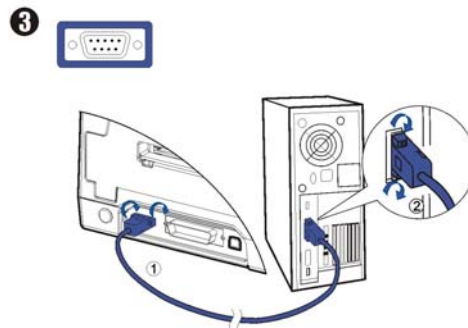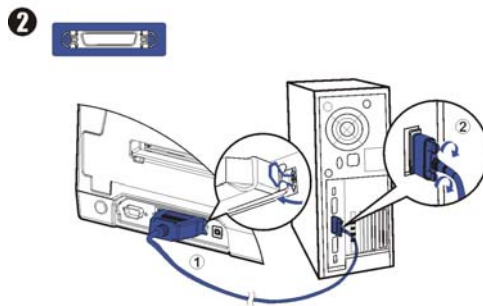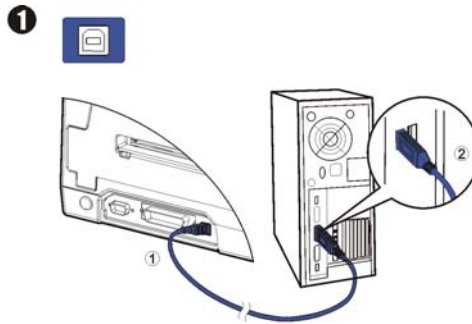
Note:

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.

1.6 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 rear 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.*

1. Make sure the printer and the computer are powered off.
2. Connect the power cord to the power receptacle at the rear of the printer, shown as below. Ensure the power cord is securely connected. Connect the power cord plug to a mains socket.

■ Power on and power off

1. Press the power switch to the "I" position to turn on the printer.

Upon power-on, all of the five LEDs light up briefly.

After initialization, only LED**"ON/PAPER"** retains ON in Olivetti emulation.

In Epson ESC/P2 and IBM emulation, LED**"USER1"** and LED**"OFFLINE"** retains ON while LED**"ON/PAPER"** blinks.

2. Press the power switch to the "O" position to turn off the printer.

Note:

1. After switching off the printer, wait at least 5 seconds before powering on again. Otherwise, it may cause damage to the printer.
2. Please disconnect the power cord if the printer will not be used for a long time.

1.7 Installing the printer driver

Installing the Windows Driver (Compatible with Windows 2000/2003/2008 Server/XP/Vista/7)

Note:
Power off the printer before running the printer driver setup.

1   Your printer CDROM comes with Windows drivers. Go to the Drivers folder and run the Installer
"DriverSetup.exe". After selecting the language, you will see the screen as below. Click "Next" to continue.

2   A list of ports available on your system will be displayed as shown as below. Choose the desired port
to use. Click "Next" to continue.
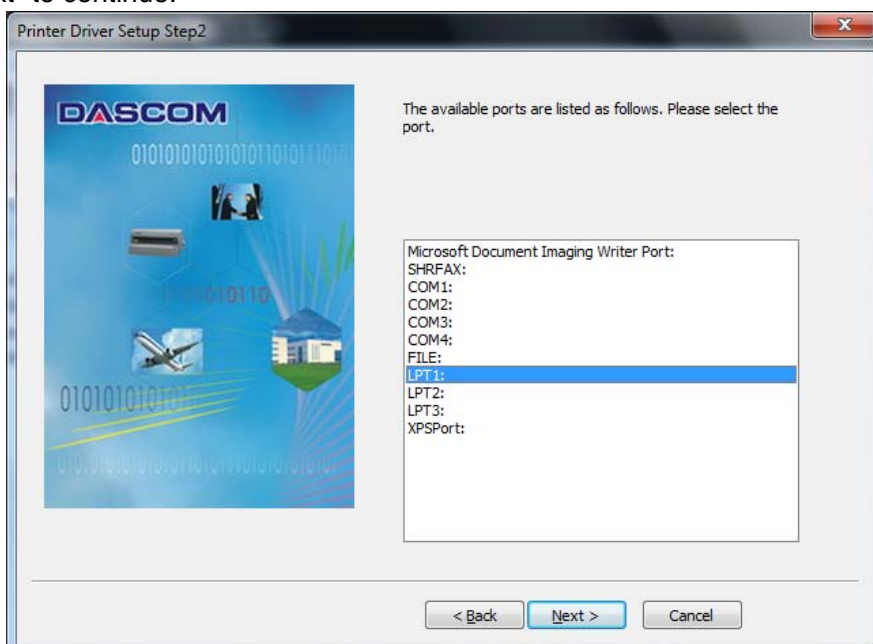
3   Select the desired printer model as shown as below. Click "Next" to continue.
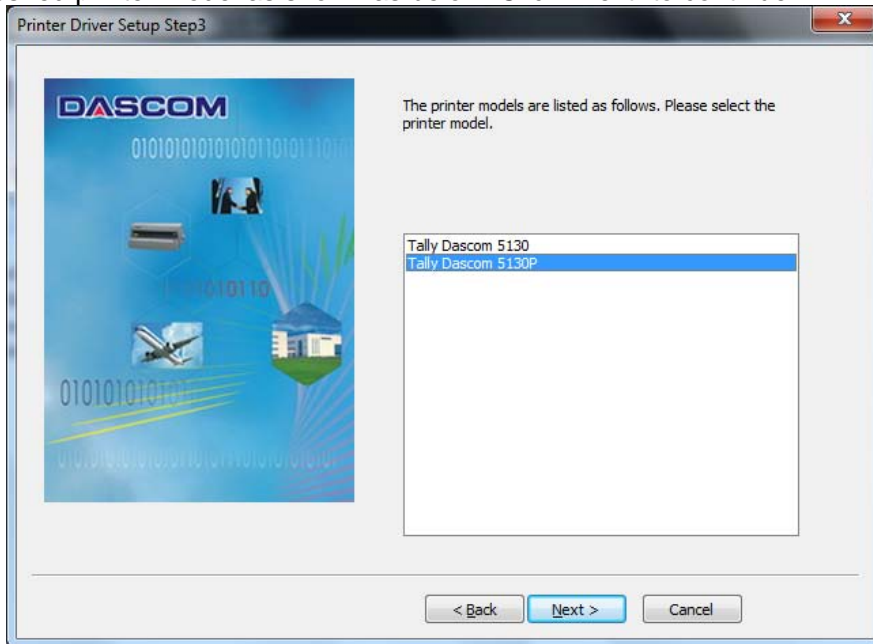
4   Here you can choose whether to set the driver as the system default driver, and whether you want to print the Test Page after installation is completed. If the driver had been installed before, it would be listed in the white box as below. Select the listed driver (if any) if you want to replace it; otherwise a copy of the driver will be installed. Click "Next" to continue.
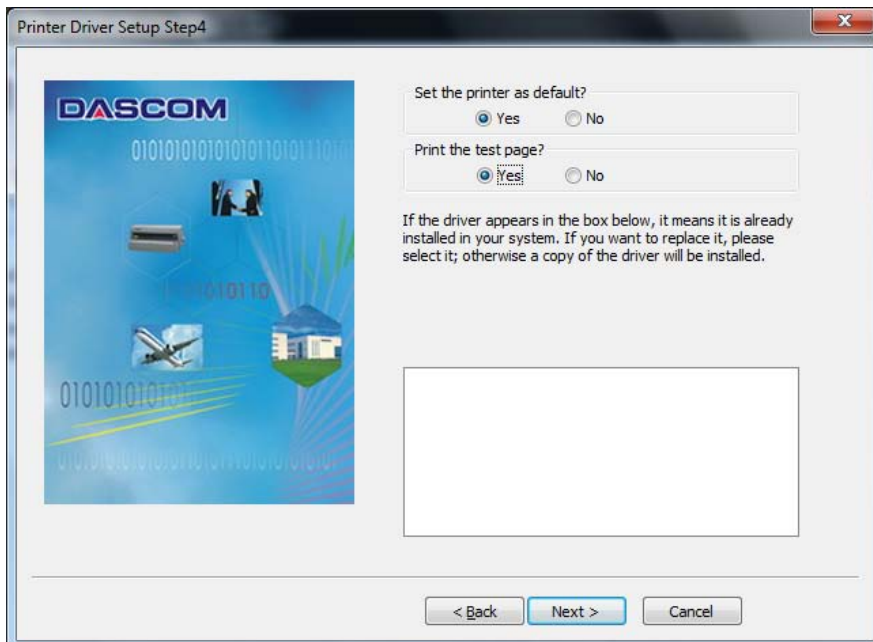
5   Click "Finish" to start the installation process.
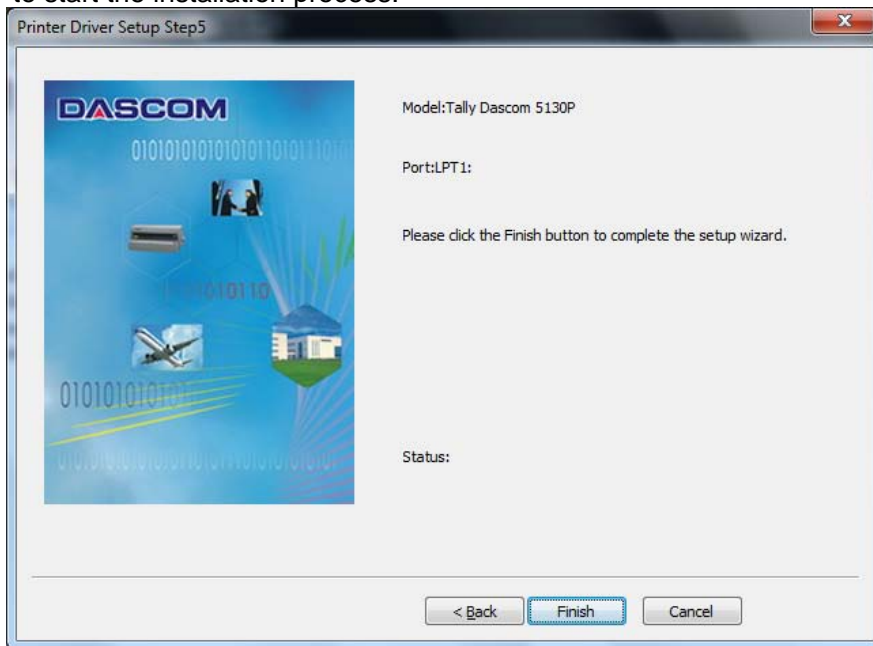
6   After installation is completed successfully, you will see the message as below.
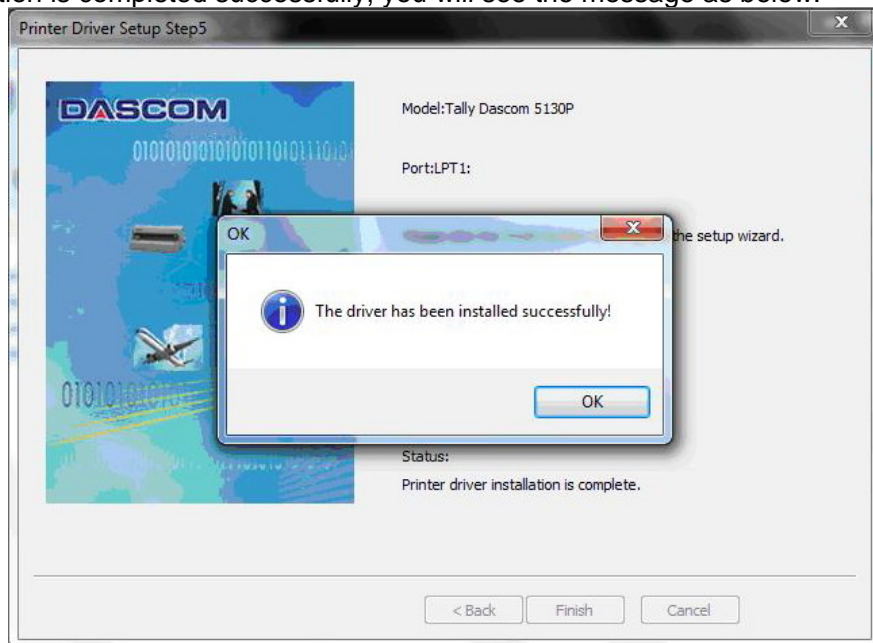
2 Paper installation guide

2.1 Paper and printable area specifications

The printer can handle following media:

1）single ply

2）multilayer paper, up to 1+4 copies

3）bankbook and passport

4）continuous paper, up to 1+4 copies (only for 5130P with tractors)

Note:

Please select the correct media in "System Setup" in Setup Menu mode, so as to prevent paper jam or damage to the print head.

Paper specifications:

	Single ply	Multilayer paper	Single continuous paper	Multilayer continuous paper
Width	60~245mm	60~245mm	101.6~241.3mm	101.6~241.3mm
Length	67~363.2mm	67~363.2mm	139.7mm~	139.7mm~
Thickness	0.06~0.19mm	0.12~0.35mm (2P) (5P)	0.08~0.12mm	0.12~0.35mm (2P) (5P)
Weight	52~157 g/m^2	40 g/m^2	64~100 g/m^2	40 g/m^2

	Bankbook-H (Horizontal-Binding)	Passport-H (Horizontal-Binding)
Width	105~241mm	150~241mm
Length	134~220mm	134~300mm
Thickness	0.2~2.0mm	0.2~6.0mm
Weight	95~116 g/m^2	95~116 g/m^2

Bankbook/passport thickness
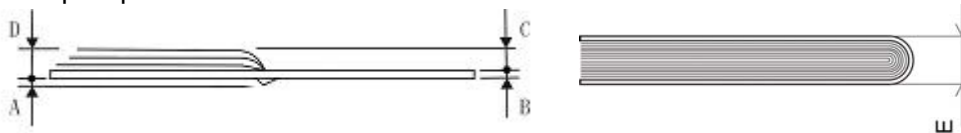
	A	B	C	D	E
Bankbook-H	≤0.6mm	≤0.5mm	≤1.5mm	≤2.0mm	≤2.0mm
Passport-H	≤1.5mm	≤0.5mm	≤4.5mm	≤5.0mm	≤6.0mm

Printable area specifications:

■ Single ply
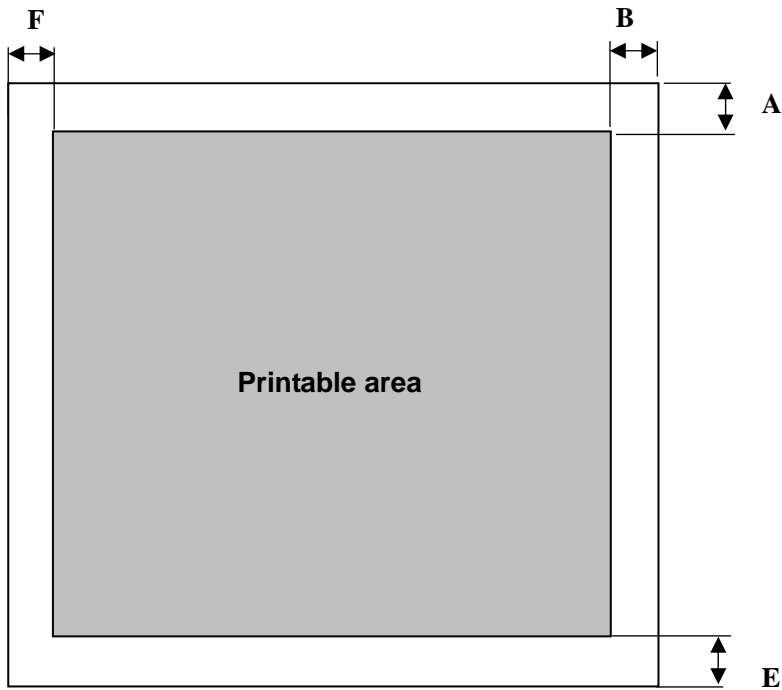
Printable area of single ply

Position	Dimension	Definition
A	Min. 4.23 mm	Top margin
B	Min. 3.12 mm	Right margin
E	Min. 5 mm	Bottom margin
F	Min. 3.12 mm	Left margin

■ **Bankbook / Passport**
Bankbook-H / Passport-H (Horizontal-Binding)
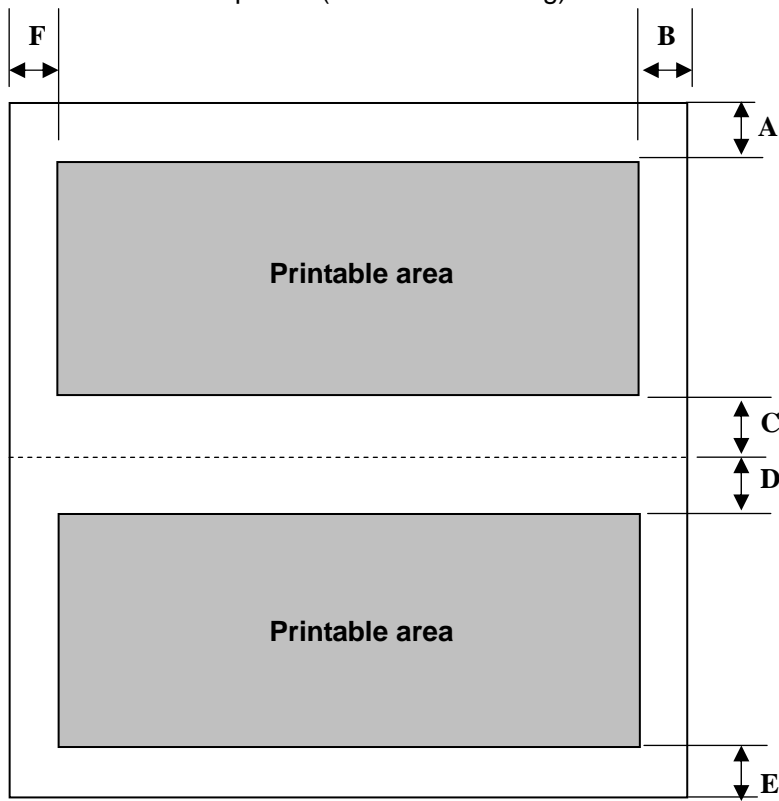
Printable area of bankbook-H / passport -H (Horizontal-Binding)

Position	Dimension	Definition
A	Min. 5 mm	Top margin
B	Min. 5 mm	Right margin
C	Min. 5 mm	Center margin
D	Min. 5 mm	Center margin
E	Min. 5 mm	Bottom margin
F	Min. 5 mm	Left margin

■ **Continuous paper (with optional tractors)**
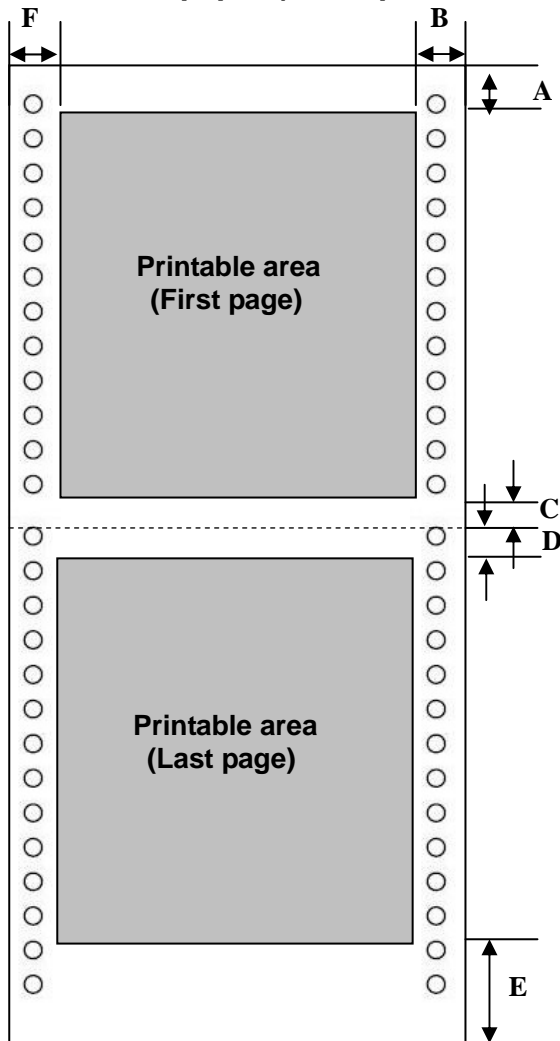
Printable area of continuous paper

Position	Dimension	Definition
A	Min. 3.2 mm	Top margin
B	Min. 25.4 mm	Right margin
C	Min. 6 mm	Center margin
D	Min. 6 mm	Center margin
E	Min. 165 mm	Bottom margin
F	Min. 25.4 mm	Left margin

Note:

（1）Make sure the cover is closed when operating, as there is a cover open detect sensor.

（2）Do not load media that is curled or folded.

（3）Do not use media that attaches any metal, such as staple.

（4）Do not load bankbook that is damaged, wrinkled or with loose center seam.

（5）Do not use bankbook that sticks glue water.

（6）Do not use bankbook in which inner pages are smaller than cover pages.

（7）Print on the inner pages of the bankbook only. Do not print on the cover pages.

（8）Flatten the bankbook before printing for better reliability.

2.2 Friction feed handling
■ **Inserting a single ply**

1. Upon power-on, all of the five LEDs turn on briefly. After initialization, only LED**"ON/PAPER"** retains on in Olivetti emulation. In Epson ESC/P2 and IBM emulation, LED**"USER1"** and LED**"OFFLINE"** retains on while LED**"ON/PAPER"** blinks.

2. With printable side upward, insert a paper into the paper loader until the edge of the paper engages snugly with the platen. The paper should advance automatically to the print position. Now the printer is ready to print, as shown below.
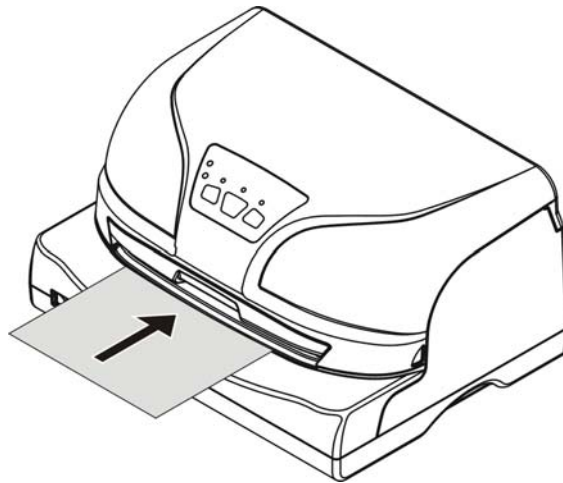
When using a single ply, the paper eject direction can be selected in the configuration setting. There are two directions: front and rear.

■ **Inserting a bankbook**

1. Upon power-on, all of the five LEDs turn on briefly. After initialization, only LED**"ON/PAPER"** retains on in Olivetti emulation. In Epson ESC/P2 and IBM emulation, LED**"USER1"** and LED**"OFFLINE"** retains on while LED**"ON/PAPER"** blinks.

2. While pressing the center seam and with printable side upward, insert a banksbook into the paper loader until the edge of the bankbook engages snugly with the platen. The bankbook should advance automatically to the print position. Now the printer is ready to print, as shown below.
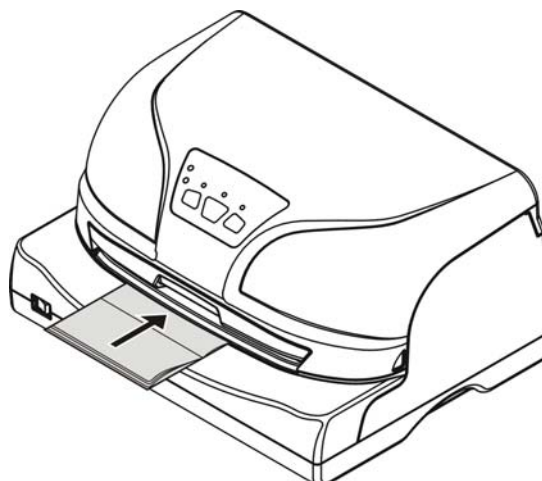
2.3 Tractor feed handling (optional, only for 5130P with tractors)

1. Upon power-on, all of the five LEDs turn on briefly. After initialization, only LED**"ON/PAPER"** retains on in Olivetti emulation. In Epson ESC/P2 and IBM emulation, LED**"USER1"** and LED**"OFFLINE"** retains on while LED**"ON/PAPER"** blinks.

2. Move the paper feed lever to "   for continuous paper position.

3. Raise the tractor doors and fit the first 3 paper holes onto the left tractor pins. Close the left tractor door. In the same way, install the paper on the right tractor.

4. Adjust the right tractor to the width of the paper until the paper is flat. Do not stretch the paper too taut. Push the tractor lock levers down to secure the tractors in place.

5. Press the【**LOAD/EJECT**】key to load the paper to the print position. LED**"OFFLINE"** turns off. Now the printer is ready to print, as shown below.

Left tractor door

Left lock lever
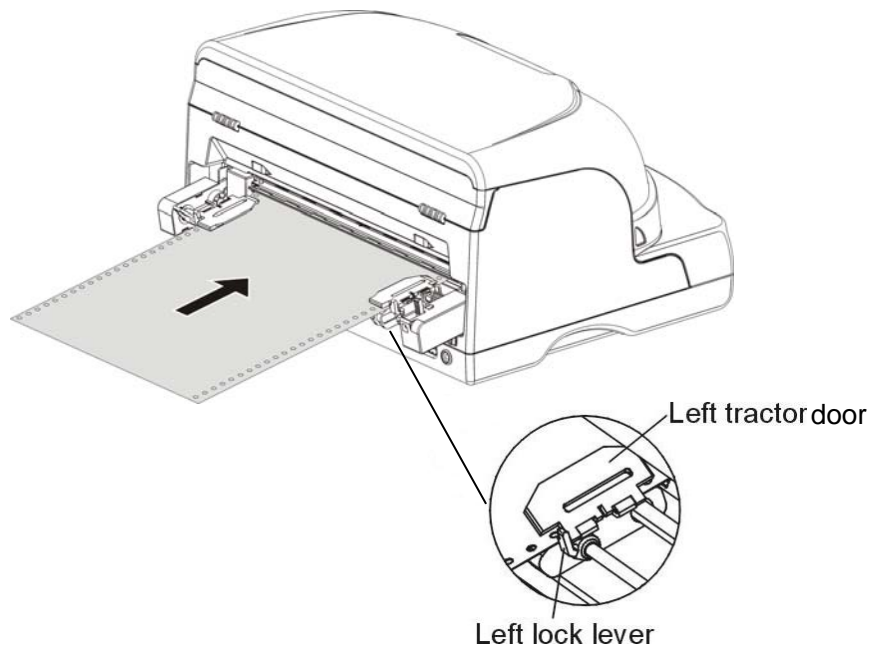
Note:

Please refer to "Tractors Installation Guide" on how to install this option.

3 Control panel operation

3.1 Keys and LEDs

There are three keys on the control panel:
【USER1】/【LOAD/EJECT】,【OFFLINE】and【USER2】/【TEAR   LF/FF】.

It consists of five LEDs: **DATA**, **ON/PAPER**, **USER1**, **OFFLINE** and **USER2**, with LED**"ON/PAPER"** in green and other 4 LEDs in orange.

Figure shown as below:
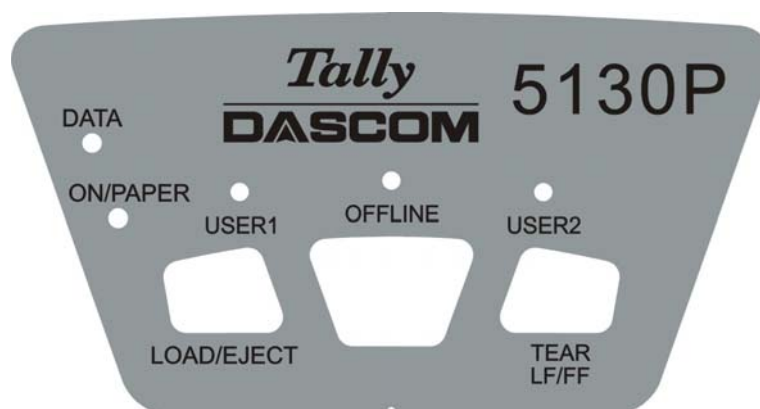
Upon power-on, five LEDs turn on briefly. After initialization, only LED**"ON/PAPER"** retains ON in Olivetti emulation. In Epson ESC/P2 and IBM emulation, LED**"USER1"** and LED**"OFFLINE"** retains ON while LED**"ON/PAPER"** blinks, if paper is not loaded.

In the operating state, the LED indications and key functions vary with Online/Offline modes and emulations.

The definition and application of each key and LED are described as below:

■ **LEDs**

	ON	**OFF**	**BLINK**
"ON/PAPER"	Power on	Power off	No paper
"OFFLINE"	Offline	Online	--

"DATA"	**ON**	**OFF**	**BLINK**
Epson ESC/P2 emulation	Data in the buffer	Buffer empty	--
IBM emulation	Data in the buffer	Buffer empty	--
Olivetti emulation	Data in the buffer	Buffer empty	Communicating with the host

"USER1"	**ON**	**OFF**	**BLINK**
Epson ESC/P2 emulation	Menu 1 is loaded.	Menu 1 is not loaded.	Printer receives data.
IBM emulation	Menu 1 is loaded.	Menu 1 is not loaded.	Printer receives data.
Olivetti emulation	Signals to press **USER1** as 5130P is granted to teller 1.	Auto assignment or assigned to teller 2.	--

"USER2"	**ON**	**OFF**	**BLINK**
Epson ESC/P2 emulation	Menu 2 is loaded.	Menu 2 is not loaded.	Printer receives data.
IBM emulation	Menu 2 is loaded.	Menu 2 is not loaded.	Printer receives data.
Olivetti emulation	Signals to press **USER2** as 5130P is granted to teller 2.	Auto assignment or assigned to teller 1.	--

■ **Keys**

	【USER1】/ 【LOAD/EJECT】	【USER2】/ 【TEAR LF/FF】	【OFFLINE】
Epson ESC/P2 Emulation **&** **IBM emulation**	Online Mode Friction feed path selected: - If paper is not loaded, pressing this key has no effect (since paper is automatically loaded if inserted). - If paper is loaded from the front, pressing this key will eject the paper in the direction set by the EJECT DIR setting. Tractor path selected: - If paper is not loaded, pressing this key will load paper from the tractor. - If paper is loaded from the tractor but not at TEAR position, pressing this key will park the paper. - If paper is at TEAR position, pressing this key has no effect. Offline Mode Friction feed path selected: - If paper is not loaded, pressing this key has no effect. - If paper is loaded from the front, pressing this key will eject the paper in the direction set by the EJECT DIR setting. Tractor path selected: - If paper is not loaded, pressing this key will load paper from the tractor. - If paper is loaded from the tractor but not at TEAR position, pressing this key will park the paper. - If paper is at TEAR position, pressing this key has no effect.	Online Mode Friction feed path selected: - Pressing this key has no effect. Tractor path selected: - If paper is not loaded, pressing this key has no effect. - If paper is loaded from the tractor and at PRINT position, pressing this key will move paper to TEAR position. - If paper is loaded from the tractor and at TEAR position, pressing this key will move paper to PRINT position. Offline Mode Friction feed path selected: - If paper is not loaded, pressing this key has no effect. - If paper is loaded from the front, a short key press will perform one line feed. If key is pressed down for more than one sec, printer will perform continuous line feeds, and then followed by a form feed to eject the paper in the direction set by the EJECT DIR setting. Tractor path selected: - If paper is not loaded, pressing this key has no effect. - If paper is loaded from the tractor, a short key press will perform one line feed. If key is pressed down for more than one sec, printer will perform continuous line feeds, and then followed by a form feed.	Toggles the printer between offline and online modes. Needs paper being loaded.

	【USER1】 / 【LOAD/EJECT】	【USER2】 / 【TEAR LF/FF】	【OFFLINE】
Olivetti emulation	Press once to response to operator assignment as indicated by LED**"USER1"**=On. No valid offline operation.	Press once to response to operator assignment as indicated by LED**"USER2"**=On. No valid offline operation.	1.Toggles online/offline, if empty buffer. 2.During printing, sets offline (LED**"OFFLINE"**=On) and clears the buffer, then returns to an error message.

Note:
In "Online Mode", LED**"OFFLINE"** is off.
In "Offline Mode", LED**"OFFLINE"** is on.

3.2 Power-on Functions

Holding down a key or a combination of keys while powering on the printer, some special functions can be implemented. Please note that power-on functions are not supported by optional tractor feed handling.

■ Self Test 1

Hold 【**USER1**】 while powering on till the printer resets to activate the self test and beeps. Load an A4 paper to start the self test printing. LED**"DATA"** and LED**"ON/PAPER"** light up.

Below is part of the printout of print font test page.

■ **Self Test 2**

Hold 【**OFFLINE**】 while powering on till the printer resets to activate the self test and beeps twice. Load an A4 paper to start the self test printing. LED**"DATA"** and LED**"ON/PAPER"** light up.

Below is part of the printout of endless running ASCII TREE.

■ **Self Test 3**

Hold 【**USER2**】 while powering on till the printer resets to activate the self test and beeps 3 times. Load an A4 paper to start the self test printing. LED**"DATA"** and LED**"ON/PAPER"** light up.

Below is part of the printout, includes Logo, model name, FW and Boot versions, CG ID, pin test and current configurations. Below is part of the printout of configuration list.

■ **Setup Menu**

Hold 【**USER1**】+【**USER2**】 while powering on till the printer resets to enter **Setup Menu** mode and beeps 3 times. This mode provides the following functions: Enable/Skip listing current settings, Language Selection, Restore Factory Defaults, Copy menu, Menu Change Mode and How to Change Current Configurations. For detailed description, please refer to chapter 4.

■ **Hex Dump**

The function is useful for programmers to determine whether the computer is sending the correct codes to the printer and whether the printer is executing the codes correctly, for some computer will revise the codes sent to the printer. In this mode, all the received data will be print out in hexadecimal format, and the control codes will not execute according to command codes. Enter the Hex Dump mode following the steps as below:

1）With the cover closed, hold 【USER1】+【OFFLINE】 while powering on the printer. LED **"ON/PAPER"** lights up while LED**"USER1"** and LED**"USER2"** blink. Press 【USER2】 and the printers resets. LED**"USER1"** and LED**"USER2"** turn off to indicate the activation of Hex Dump. Load an A4 paper.

2）Besides the line no., the data from the computer is printed out in two columns. The text in the left column is printed in hexadecimal format and in the right column is ASCII format.

3）To finish the printing, press 【OFFLINE】 to print out the remaining data in the last line.

Following QBASIC program is an example of this mode.

```
10  FOR I=0 TO 127
20  LPRINT CHR$(I);
30  NEXT
40  LPRINT
50  END
```

If the received codes have not been revised by your computer, below is a printout for your reference:

```
0000:   00 01 02 03 04 05 06 07   08 09 0A 0B 0C 0D 0A 0E   ........ ........
0010:   0F 10 11 12 13 14 15 16   17 18 19 1A 1B 1C 1D 1E   ........ ........
0020:   1F 20 21 22 23 24 25 26   27 28 29 2A 2B 2C 2D 2E   . !"#$%& '()*+,-.
0030:   2F 30 31 32 33 34 35 36   37 38 39 3A 3B 3C 3D 3E   /0123456 789:;<=>
0040:   3F 40 41 42 43 44 45 46   47 48 49 4A 4B 4C 4D 4E   ?@ABCDEF GHIJKLMN
0050:   4F 50 51 52 53 54 55 56   57 58 59 5A 5B 5C 5D 5E   OPQRSTUV WXYZ[\]^
0060:   5F 60 61 62 63 64 65 66   67 68 69 6A 6B 6C 6D 6E   _`abcdef ghijklmn
0070:   6F 70 71 72 73 74 75 76   77 78 79 7A 7B 7C 7D 7E   opqrstuv wxyz{|}~
0080:   7F 0D 0A                                            ...
```

4）Exit Hex Dump mode by switching off the printer.

■ **Firmware Update**

Sometimes it is necessary 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. Before upgrading firmware, it is strongly recommended to print the menu page to keep a record of the old settings.

Note:

Firmware update 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 following:

1. In DOS operation system

1) Connect the printer to PC with parallel cable.

2) With the cover open, hold 【USER1】+【OFFLINE】 while powering on the printer to enter **Firmware Update** mode. LED**"DATA"** and LED**"ON/PAPER"** blinks alternatively.

3) Go to DOS prompt window, type in "copy/b <file name> lpt1", and press enter to start.

During download, LED**"DATA"** and LED **"USER1"** blink, while other LEDs light up.

2. In Linux operation system
1) Connect the printer to PC with parallel cable or USB cable.
2) With the cover open, hold 【USER1】+【OFFLINE】 while powering on the printer to enter **Firmware Update** mode. LED**"DATA"** and LED**"ON/PAPER"** blinks alternatively.
3) Go to Linux terminal window. (Select from Taskbar: Application-> Accessory-> Terminal)
4) Type in the command to enter the file directory.
5) When using parallel interface, type in "sudo cp <file name> dev/lp0" and press enter to start.
   When using USB interface, type in "sudo cp <file name> dev/usb/lp0" and press enter to start.
   During download, LED**"DATA"** and LED **"USER1"** blink, while other LEDs light up.

3. Using the Configuration Tool (comes on the CD-ROM enclosed with the printer)
1) Run Configuration Tool to connect with the printer.
2) Click "Firmware Update" button to enter the download page, shown as below.

3) Click "Browse" button to select the firmware file.
4) Click "Start" button and confirm the firmware file again. LED**"DATA"** and LED **"ON/PAPER"** blinks alternatively.
   During download, LED**"DATA"** and LED **"USER1"** blink, while other LEDs light up.

It takes 1~3 minutes for completion. Then the printer resets. If some abnormity occurs during the process, please update again.

Note:
1) Do not switch off the printer or disconnect the cable during the update process.
2) The update process should be performed by authorized service person to prevent damage to the printer.

■ **Calibrations**

With the cover open, hold 【USER1】+【OFFLINE】+【USER2】 while powering on the printer. It beeps once after implementing the paper detection action, while LED**"DATA"** blinks and other LEDs light up, to indicate the activation of **Calibrations** mode. This mode provides the following functions: Print alignment, Setting TOF, Setting left margin and Setting tear-off position (for continuous forms only). For detailed description, please refer to chapter 5.

4 Setup Menu

With the cover closed, hold 【**USER1**】+【**USER2**】 while powering on till the printer resets to enter **Setup Menu** mode and beeps 3 times.

Note:

Setup Menu can be implemented easily with Configuration Tool which comes on the CD-ROM enclosed with the printer.

Setup Menu provides the following functions:
- Enable/Skip listing current settings
- Language Selection
- Restore Factory Defaults
- Copy Menu
- Menu Change Mode
- How to Change Current Configurations

4.1　Enable/Skip listing current settings

1) With the cover closed, hold 【**USER1**】+【**USER2**】 while powering on until the printer resets and beeps 3 times. LED**"DATA"** lights up and LED**"ON/PAPER"** blinks to indicate the activation of **Setup Menu** mode.

2) Load an A4 paper. The printer will automatically print as below.
   【USER1】prints the listing　【USER2】skips the listing

3) Press 【**USER1**】 to print out current settings. Continue to load A4 paper until all the setting items are listed out.

4) Then the printer will print:
   Current Setting:　　　Common Setup
   【USER1】=OK　【USER2】=Next　【OFFLINE】=Exit

5) Press 【**USER1**】 to enter "Common Setup" while pressing 【**USER2**】 to print out the next option "System Setup". Press 【**OFFLINE**】 to exit current setting.

4.2　Language Selection

1) With the cover closed, hold 【**USER1**】+【**USER2**】 while powering on until the printer resets and beeps 3 times. LED**"DATA"** lights up and LED**"ON/PAPER"** blinks to indicate the activation of **Setup Menu** mode.

2) Load an A4 paper. The printer will automatically print as below.
   【USER1】prints the listing　【USER2】skips the listing

3) Press【USER2】 to skip listing current settings. The printer will print as below:
   Current Setting:　　Common Setup
   【USER1】=OK　【USER2】=Next　【OFFLINE】=Exit

4) Press 【**USER1**】 to enter "Common Setup". Press 【**USER1**】 again, it prints out current language selection. Repeat to press 【**USER2**】 until the required language is printed out. Press 【**USER1**】 to confirm the selection. Once confirmed, subsequent dialogs will be printed in the selected language.

4.3　Restore Factory Defaults

1) With the cover closed, hold 【**USER1**】+【**USER2**】 while powering on until the printer resets and beeps 3 times. LED**"DATA"** lights up and LED**"ON/PAPER"** blinks to indicate the activation of **Setup Menu** mode.

2) Load an A4 paper. The printer will automatically print as below.
   【USER1】prints the listing　【USER2】skips the listing

3) Press【USER2】 to skip listing current settings. The printer will print as below:
   Current Setting:　　Common Setup
   【USER1】=OK　【USER2】=Next　【OFFLINE】=Exit

4) Press 【**USER1**】 to enter "Common Setup". Press 【**USER2**】 twice to print out "Default Set". Press 【**USER1**】 to select corresponding item to restore factory default.

4.4　Copy Menu

1) With the cover closed, hold 【**USER1**】+【**USER2**】 while powering on until the printer resets and beeps 3 times. LED**"DATA"** lights up and LED**"ON/PAPER"** blinks to indicate the activation of **Setup Menu** mode.

2) Load an A4 paper. The printer will automatically print as below.
   【USER1】prints the listing 　【USER2】skips the listing

3) Press【USER2】 to skip listing current settings. The printer will print as below:
   Current Setting:　　Common Setup
   【USER1】=OK 　【USER2】=Next 　【OFFLINE】=Exit

4) Press 【**USER1**】 to enter "Common Setup". Press 【**USER2**】 3 times to print out "Copy Menu". Press 【**USER1**】 to copy Menu 1 to Menu2 or copy Menu 2 to Menu1.

4.5　Menu Change Mode

1) With the cover closed, hold 【**USER1**】+【**USER2**】 while powering on until the printer resets and beeps 3 times. LED**"DATA"** lights up and LED**"ON/PAPER"** blinks to indicate the activation of **Setup Menu** mode.

2) Load an A4 paper. The printer will automatically print as below.
   【USER1】prints the listing 　【USER2】skips the listing

3) Press【USER2】 to skip listing current settings. The printer will print as below:
   Current Setting:　　Common Setup
   【USER1】=OK 　【USER2】=Next 　【OFFLINE】=Exit

4) Press 【**USER1**】 to enter "Common Setup". Press 【**USER2**】 4 times to print out "Share User". Press 【**USER1**】 to select "Auto" or "Manual".

4.6　How to Change Current Configurations

1) With the cover closed, hold 【**USER1**】+【**USER2**】 while powering on until the printer resets and beeps 3 times. LED**"DATA"** lights up and LED**"ON/PAPER"** blinks to indicate the activation of **Setup Menu** mode.

2) Load an A4 paper. The printer will automatically print as below.
   【USER1】prints the listing 　【USER2】skips the listing

3) Press【USER2】 to skip listing current settings. The printer will print as below:
   Current Setting:　　Common Setup
   【USER1】=OK 　【USER2】=Next 　【OFFLINE】=Exit

4) Press 【**USER1**】 to enter "Common Setup". Press 【**USER2**】 to print out "Change Menu". 　　Press 【**USER1**】 to select "Menu1" or "Menu 2".

The following section introduces and explains all the possible menu settings. The default setting is marked by an asterisk (*).

4.6.1 Common Setup

Parameter group	Parameter	Possible settings	Description
Common Setup	Language	English * Deutsch Россия Italiano Français Español Türkçe	Selects the menu language.
	Change Menu	Menu1 * Menu2	Defines if the parameter settings of Menu1 or of Menu2 are changed.
	Default Set	Off * All Menu1 Menu2	Sets all parameters to the default settings. Menu1 sets all parameters of Menu1 to the default settings. Menu2 sets all parameters of Menu2 to the default settings.
	Copy Menu	Menu1 to Menu2 * Menu2 to Menu1	Copies the settings of Menu1 to Menu2 and vice versa.
	Share User	Auto * Manual [(1)]	Selects the method to share this printer with multiple users. Auto: Printer handles print jobs for USER1 and USER2 automatically. Manual: After receiving a print job for USER1 or USER2 the respective USER1 or USER2 key must be pressed to start the printout. **Note:** This parameter is invalid for continuous forms (optional tractor feed handling).
	Time to Idle	1s * 10s 30s 60s	Selects the time in seconds to return to idle state after completion of all jobs and ejecting paper in order to change to another user in case of Auto mode. **Note:** This parameter is only valid if under Share User the setting "Auto" has been selected.
[(1)] Invalid in Olivetti emulation.			

4.6.2 System Setup

Parameter group	Parameter	Possible settings	Description
System Setup	Emulation	ESC/P2*(Menu1) Olivetti*(Menu2) IBM	Selects the emulation for the printer.
	T5023 Compatible[1]	No * Yes	Selects if the printer is compatible to the T5023 printer or not.
	Buzzer	No * Yes PE Off	Selects if the buzzer sounds on hardware errors or not. PE Off: only invalid for paper end alarm
	Line Wrap[1]	No * Yes	Specifies how to deal with the extra characters when the received characters exceed the printable columns per line. Yes: print the remaining characters in the next line No: ignore the remaining characters
	Media[1]	Single ply * Multi-part Thin Form Bankbook Passport	Specifies the media type. Single ply: prints with normal impact strength of the print head, at max. 400CPS print speed. Multi-part: prints with heavier impact strength of the print head, at max. 300CPS print speed. Thin Form: decrease the paper feed speed from 7ips to 5ips, so as to prevent paper jam Bankbook: max. thickness is 2mm, at max. 400CPS print speed. Passport: max. thickness is 6mm, at max. 300CPS print speed.
	Auto CR[2]	Yes No *	Switches the automatic carriage return on (Yes) or off (No) after receiving the signal Line Feed (LF). No: LF=LF, line feed only Yes: LF=LF+CR, carriage return and a line feed
	Auto LF[1]	Yes No *	Switches the automatic Line Feed on (Yes) or off (No) after receiving the signal Carriage Return (CR). No: CR=CR, carriage return only Yes: CR=CR+LF, carriage return and a line feed
	High Speed	Yes No *	Yes: prints 10cpi HS-Draft with 400CPS on max. 8.4inches width media, and prints graphics in 90x180 DPI. No: prints Draft speed only, and prints graphics in 180x180 DPI.
	Eject Dir[1]	Front * Rear	Selects the paper eject direction. Front: ejects paper to the front Rear: ejects paper to the rear
	Paper Eject[1]	Hold * Drop	Selects the paper position after paper ejection. Hold: The paper is not fully ejected but held by the transport rollers. Drop: The paper is fully released by the paper transport mechanism so it can fall in a basket.

[1] Invalid in Olivetti emulation.

(2) Invalid in Epson ESC/P2 emulation.

4.6.3 Page Setup

Parameter group	Parameter	Possible settings	Description
Page Setup	Line Space[1]	1/6" * 1/3" 1/4" 1/5" 1/7" 1/8"	Sets the line density in lines per inch. 1/6=6 lines per inch 1/3=3 lines per inch 1/4=4 lines per inch 1/5=5 lines per inch 1/7=7 lines per inch 1/8=8 lines per inch
	Form Length[1]	3" 3.5" 11/3" 4" 4.5" 5" 5.5" 6" 7" 8" 8.5" 11" * A4 12" 14" 17"	Sets the form length either via inches or the standard format A4. Please note that the adjustment in lines depends on the selected line space (see above).
	Top Margin (0~60/60")	0" I 10/60" * I 60/60"	Sets the position of the first printing line. The factory setting for the first printing position is 10/60"(4.23mm). This is equivalent to the second line from the top.
	Bottom Margin (0~30/60")[1]	0" I 10/60" * I 30/60"	Sets the distance between last printing line and bottom edge.
	Line Width	80 90 94 *	Sets the line length; unit is number of characters at a character density of 10 cpi. If 80 is chosen in Olivetti emulation, 90 is used for the line length instead of 80. **Note:** This parameter is invalid for continuous forms (optional tractor feed handling), with default setting "80".
	Left Margin (0~90/90")	0" * I 90/90"	Sets the left margin; unit is n/90 inch.
	Reference Edge	Left * Right	Sets the horizontal leading edge. Left: the left edge of the character matrix is aligned to the left

			edge of the document. Right: the right edge of the character matrix is aligned to the right edge of the document.
	Continuous Print[1]	Yes * No	Selects the handling of paper when the vertical position exceeds the form length.
	Auto Tear[1]	Manual * Tear 0.5s Tear 1s Tear 3s Tear 6s View 1s View 3s View 6s	Specifies the waiting time before feeding the page to tear-off position automatically. Manual: Auto tear mode is off. View1s, View3s, View6s: After printing is completed, the printer will feed the paper until the last printed line is at the tear-off position. **Note:** This parameter is valid for continuous forms (optional tractor feed handling) only.
[1] Invalid in Olivetti emulation.			

4.6.4 I/F Emulation

Parameter group	Parameter	Possible settings	Description
Interface Setup	Interface	Parallel Serial*(Menu2) USB*(Menu1)	Selects the interface. Printer can be configured either for serial, parallel or USB connection. Two interfaces can be used at the same time, one assigned to USER1 and one to USER2.
	If Serial is selected		
	Baud Rate	1200 2400 4800 9600 * 19200 38400	Selects the data transmission rate (baud rate) (baud=bit per second).
	Data Length	7 8 *	Selects the number of data bits per data byte.
	Parity	None * Odd Even	The parity test for received data bytes can be selected. None causes transmission in both directions without parity bit. If Even or Odd is selected, the bytes are checked to ensure they have even or odd parity.
	Stop bit	1 * 2	Selects if one or two stop bits are used per data byte.
	Protocol	READY/BUSY * Xon/Xoff	Selects the type of protocol, i.e. a certain set of rules and procedures for ensuring error-free data exchanges between computer and printer.
	CTS	Invalid *	Sets the signal CTS (Clear To Send) off. CTS is reserved for future enhancements.
	If Parallel is selected		
	I-PRIME	Yes * No	Selects receiving initial signal mode, if set to Yes, the printer resets when receiving initial signal, if No, the printer does not reset when receiving initial signal.
	CX-BiD	Yes * No	Sets the bidirectional data transfer (IEEE 1284): if set to Yes, ECP is supported, if No, only Nibble mode is supported.

4.6.5 Character Emulation

Parameter group	Parameter	Possible settings	Description
Character Setup	Font	Draft * Roman Sans Serif Courier Prestige Script OCR B OCR A Orator Gothic Souvenir	This parameter selects the character style. The fonts available depend on the installed character generator.
	Pitch(cpi)	10 * 12 15 16.6 17.1 20 24 PS	Sets the characters per inch (character pitch). The higher the parameter, the smaller the character spacing. If Proportional is selected, only the actually required space for the character width is used. Olivetti emulation does not support 20cpi and 24cpi. Therefore, 20cpi are replaced by 10cpi and 24cpi are replaced by 12cpi.
	Zero	0 * Ø	Selects slashed or no-slash zero.
	Code Page	Table_437 * Table_737,Table_850 Table_851,Table_852 Table_857,Table_858 Table_860,Table_861 Table_863,Table_864 Extended_864 Table_865,Table_866 Bulgaria_866 Table_1250,Table_1251 Table_1252,Table_1253 Table_1254,ISO_8859_1 ISO_8859_1SAP ISO_8859_2,ISO_8859_5 ISO_8859_7,ISO_8859_9 ISO_8859_15,BRASCII Abicomp,Roman_8 Coax_Twinax,New_437 New_Dig_850 Old_Code_860 Flarro_863,Hebrew_865 Table_1257,Ukraine_866 Kazakhst_866	Selects the character set. The character sets are not necessarily available for all fonts, if not available, change current font to Sans Serif.

| | | Kamenicky,Mazovia Baltic_775,CRO_ASCII Farsi,Urdu,Greek_DEC ELOT_928,UK_ASCII US_ASCII,Swedish German,Portuguese French,Italian,Norwegian Spanish,Siemens_Turkish DEC_Turkish | |

4.6.6 Epson ESC/P2 Emulation

Parameter group	Parameter	Possible settings	Description
ESC/P2 Emulation	Country	US-ASCII * France Germany Great Britain Denmark 1 Sweden Italy Spain 1 Japan Norway Denmark 2 Spain 2 Latin America Korea Legal	Selects the national character set in Epson emulation. The character sets are not necessarily available for all fonts.
	Character Table	Italic Graphic1 * Graphic 2	Only available for Epson emulation. Either the Epson character set Italics or the IBM graphics character set 1 or 2 can be activated in the code range form hex.A0 to hex.FE.
	15cpi Style	Small * Normal	Sets the height for 15 CPI character. Small: prints in 1/8" height Normal: prints in full height

4.6.7 IBM Emulation

Parameter group	Parameter	Possible settings	Description
IBM Emulation	AGM(X24)	Yes No *	Activates or deactivates the AGM (Alternative Graphics Mode) mode in IBM emulation.
	IBM Set1/2	1 * 2	Selects the character set with standard characters or extended characters in IBM emulation.

4.6.8   Olivetti Emulation

Parameter group	Parameter	Possible settings	Description
Olivetti Emulation	Sub-Emulation	PR2e * PR40+ PR54+ 2845	Selects the Olivetti sub emulation.
	PR40 TOF	Yes No *	Only valid for Emulation=PR40+. Sets to Yes, TOF=7mm, ignore TOF adjustment. Sets to No, TOF defaults to 4.23mm.
	Vertical Resolution	1/240" * 1/216"	Selects the vertical resolution (line spacing).

5 Calibrations

With the cover open, hold 【**USER1**】+【**OFFLINE**】+【**USER2**】 while powering on the printer. It beeps once after implementing the paper detection action, while LED**"DATA"** blinks and other LEDs light up, to indicate the activation of **Calibrations** mode.

Note:
Calibrations can be implemented easily with Configuration Tool which comes on the CD-ROM enclosed with the printer.

Calibrations provide the following functions:
- Print Alignment
- Setting TOF
- Setting Left margin
- Setting Tear-off position (for continuous forms only)

5.1 Print Alignment

This Alignment compensates mechanical variations causing bi-directional misalignment on printing at various resolutions. Carry out the below procedures to improve the alignments in the sequence of Paper, Thick Paper, Very Thick Paper, Carton.

1) With the cover open, hold 【USER1】+【OFFLINE】+【USER2】 while powering on the printer. It beeps once after implementing the paper detection action, while LED**"DATA"** blinks and other LEDs light up, to indicate the activation of **Calibrations** mode.

2) Close the cover, the printer resets. Press 【USER1】, the printer beeps once. Press 【USER2】, the printer beeps again, which indicates the **bidirectional test and vertical alignment** mode is activated.

3) Load an A4 paper. The printer will automatically print as below:
   V e r t i c a l   A l i g n m e n t
   【USER1】=OK   【USER2】=Next   【OFFLINE】=Exit
   Paper

4) Press 【USER2】 to scroll to setting items: Paper, Thick Paper, Very Thick Paper, Carton. Press 【USER1】 to enter the item you want to set. Press 【USER1】 to select corresponding DPI.

5) In each resolution, same patterns of "|"s are printed bi-directionally. Visually check the alignment of the 2 lines. Press 【USER1】 or 【USER2】 to fine tune the 2nd line by a step of 1/180 inch to the left or right, respectively, against the 1st line. Up to +30 to –30 adjustable steps are allowed.

6) When satisfied with the alignment, press 【OFFLINE】. It prints out: Save settings?   Yes. Press 【USER1】 to store the alignment settings.

7) Press 【OFFLINE】, the printer resets and switches to the **Calibration** menu.

8) Switch off the printer to exit from **Calibration** menu.

Note:
It is advised to adjust all the alignments but not just some of them, so as to achieve satisfying print quality.

5.2 Setting TOF

1) With the cover open, hold 【USER1】+【OFFLINE】+【USER2】 while powering on the printer. It beeps once after implementing the paper detection action, while LED**"DATA"** blinks and other LEDs light up, to indicate the activation of **Calibrations** mode.

2) Close the cover, the printer resets. Press 【**OFFLINE**】, the printer beeps once. All LEDs light up.

3) Press【**USER1**】, the printer beeps once. The **TOF setting** mode is activated. Load an A4 paper. A line of twenty one "—"s is printed and ejects the paper.

4) Now each press of 【**USER1**】 or 【**USER2**】 to reduce or increase the TOF, respectively, by one unit of 1/60 inch.(**Note:** Beeps 3 times when reaches the limits.)

5) Repeat 3 to 4.

6) When satisfied with the TOF setting, press 【**OFFLINE**】 to permanently store the TOF. Automatically, it switches to the **Calibration** menu.

7) Switch off the printer to exit from **Calibration** menu.

5.3   Setting Left margin

1) With the cover open, hold 【**USER1**】+【**OFFLINE**】+【**USER2**】 while powering on the printer. It beeps once after implementing the paper detection action, while LED**"DATA"** blinks and other LEDs light up, to indicate the activation of **Calibrations** mode.

2) Close the cover, the printer resets. Press 【**OFFLINE**】, the printer beeps once. All LEDs light up.

3) Press【**USER2**】, the printer beeps once. The **left margin setting** mode is activated. Load an A4 paper. 13 patterns of adjustment are printed and ejects the paper. An adjustment value "0" (7th pattern) is made into a center value.

4) Now each press of【**USER1**】 or【**USER2**】 to reduce or increase the left margin, respectively, by one unit of 1/120 inch.(**Note:** Beeps 3 times when reaches the limits.)

5) Repeat 3 to 4.

6) When satisfied with the left margin setting, press 【**OFFLINE**】 to permanently store the TOF. Automatically, it switches to the **Calibration** menu.

7) Switch off the printer to exit from **Calibration** menu.

5.4 Setting Tear-off position (optional, only for 5130P with tractors)

1) With the cover open, hold 【**USER1**】+【**OFFLINE**】+【**USER2**】 while powering on the printer. It beeps once after implementing the paper detection action, while LED**"DATA"** blinks and other LEDs light up, to indicate the activation of **Calibrations** mode.

2) Close the cover and press 【**USER2**】, the printer beeps once and LED**"DATA"** is off, while other LEDs light up.

3) Install the continuous paper in the tractors, and press 【**USER1**】 to load it. The printer will print as below:

> Adjust Tear-Off Position
> 【USER1】=-1, 【USER2】=+1, 【OFFLINE】=Exit & Save
> Each step is 0.5mm

4) Press 【**USER1**】 or 【**USER2**】 to reduce or increase the tear-off position, respectively, by one step of 0.5mm.

5) When satisfied with the setting, press 【**OFFLINE**】 to store it and reset the printer.

6) Switch off the printer to exit from **Calibration** menu.

6 Troubleshooting and maintenance

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 can not resolve, contact your dealer for assistance.

Read the following instructions before maintenance and avoid operating beyond your capacity, so as to prevent injury to you and damage to the printer.

6.1 Troubleshooting

Print Quality Problems and Solutions

Problem	Solution
Printing is too light or too dark.	• Make sure that the ribbon cartridge is properly installed and that the ribbon fabric moves smoothly. • Replace the ribbon cartridge if necessary.
Smears and stains appear on the page.	• Check for ribbon wear. Replace the ribbon cartridge if necessary. • Check whether the tip of the print head is dirty. Clean the head with a soft cloth if necessary. • The print head may need to be replaced.
Printing is erratic or the wrong characters are printed. Many "?" or unexpected characters are printed.	• Make sure that the interface cable is securely connected to both the printer and computer. • Make sure that the printer driver selected in your software is the same as the emulation selected on the printer. • Check the length of the interface cable. (Maximum Parallel & USB: 2 meters, Serial: 15 meters) • Try another interface cable.
The page is blank.	• Make sure that the ribbon cartridge is properly installed.
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.	• Check the application top margin setting. • Adjust the Top Margin setting in Page Setup menu if necessary.
Lines are double spaced instead of single spaced.	• Change the Auto LF setting in the System Setup menu to No.
The 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.	• Make sure that the paper covers the paper-out sensor. • For continuous forms (with optional tractors), make sure that the paper feed lever is located correctly.
Paper jams while loading.	• Turn off the printer and remove the jammed paper. Remove any obstruction from the paper path. • Make sure that the paper is not folded, creased, or torn. • For continuous forms (with optional tractors), make sure that the left and right tractors are set so that the continuous forms are stretched taut.
Paper jams while printing.	• Turn off the printer and remove the jammed paper. Remove any obstructions from the paper path. • For continuous forms (with optional tractors), make sure that the incoming and outgoing paper stacks are correctly placed. Paper should feed straight.
Paper slips off the forms tractors or the perforated holes of the paper tear during printing. (For optional tractors.)	• 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.

Operating Problems and Solutions

Problem	Solution
The power does not turn on.	• Check whether the mains voltage is correct. • Make sure that the power cord is securely connected to both the printer and the mains power outlet. • Make sure that the power outlet is functional. If not so, use other outlet. • Turn the power off. Wait a minute and then turn the printer on again. If the printer still has no power, contact your dealer.
The printer is on but it will not print.	• Make sure that the LED**"OFFLINE"** is off. • If you use the interface cable, make sure it is securely connected to both the printer and the computer. • If you use serial interface, make sure the settings are the same as PC communication port settings. • Make sure paper is loaded and the paper feed lever is set according to the used paper path (only valid with optional tractors). • Run the printer Status Page. If printing executes normally, the problem is caused by: the interface, the computer, incorrect printer settings, or incorrect software settings. • Make sure that the printer driver selected in your software is the same as the emulation selected on the printer.

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.

Diagnostic Functions

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

- Self test page: 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.

- Print 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 3 and 5.

Error Indications on LEDs

Error Description	Operation Status	DATA LED	ON LED	USER1 LED	OFFLINE LED	USER2 LED	Buzzer Sound
Paper out	Normal	No change	Flash	No change	On	No change	Once
Paper jammed	Suspend	Flash	Flash	Flash	Off	Off	Continuously
Print head hot	Normal	Off	On	Off	Flash	Off	--
Carriage initial position	Stop	Off	Off	On	Off	Flash	Continuously
Shutter initial position	Stop	Off	Flash	Flash	Flash	Flash	--
EEPROM	Normal	Flash	Off	On	Flash	Flash	--

Note:

When the buzzer beeps continuously, and no LED indication is changed, please close the cover firmly.

6.2 Care and 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 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.

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.
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.

Note:

1. The front of mechanism can be open to have a cleaning or clear a paper jam: pull the recesses of both sides and uplift the front of mechanism.
2. This operation should be performed by authorized service person or skilled user. Make sure the power is off before operating.
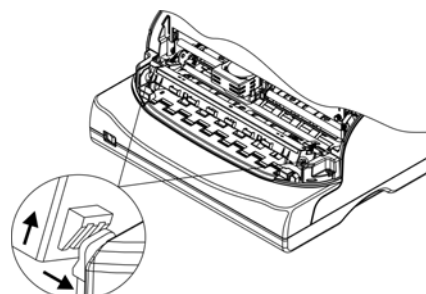
7 Specification

7.1 Printer specification

Print System	Mono-chrome serial impact dot matrix
Print Technology	Uni-/bi-directional logic seeking for text and graphics (software selectable)
Print Speed	<table><tr><td>Pitch</td><td>HS Draft</td><td>Draft</td><td>LQ</td></tr><tr><td>10 CPI[1]</td><td>400 CPS*[2]</td><td>300 CPS</td><td>100 CPS</td></tr><tr><td>12 CPI</td><td>360 CPS</td><td>360 CPS</td><td>120 CPS</td></tr><tr><td>15 CPI</td><td>450 CPS</td><td>450 CPS</td><td>150 CPS</td></tr><tr><td>16.6 CPI</td><td>250 CPS</td><td>250 CPS</td><td>167 CPS</td></tr><tr><td>17.1 CPI</td><td>513 CPS</td><td>513 CPS</td><td>171 CPS</td></tr><tr><td>20 CPI</td><td>600 CPS</td><td>600 CPS</td><td>200 CPS</td></tr><tr><td>24 CPI</td><td>360 CPS</td><td>360 CPS</td><td>360 CPS</td></tr></table> (*Available for max. 8.4inches[3] width media, single ply and bankbook only. At least 0.5inch width must be left for both sides of the paper loader.)
Font Matrix	<table><tr><td>Pitch</td><td>HS Draft</td><td>Draft</td><td>LQ</td></tr><tr><td>10 CPI</td><td>8x8/80H</td><td>12x24/120H</td><td>36x24/360H</td></tr><tr><td>12 CPI</td><td>10x24/120H</td><td>10x24/120H</td><td>30x24/360H</td></tr><tr><td>15 CPI</td><td>8x16/120H</td><td>8x16/120H</td><td>24x16/360H</td></tr><tr><td>16.6 CPI</td><td>12x24/240H</td><td>12x24/240H</td><td>36x24/360H</td></tr><tr><td>17.1 CPI</td><td>7x24/120H</td><td>7x24/120H</td><td>36x24/360H</td></tr><tr><td>20 CPI*</td><td>6x24/120H</td><td>6x24/120H</td><td>30x24/360H</td></tr><tr><td>24 CPI*</td><td>10x24/240H</td><td>10x24/240H</td><td>10x24/240H</td></tr><tr><td>Proportional</td><td>Nx24/360H</td><td>Nx24/360H</td><td>Nx24/360H</td></tr></table> (Matrix/DPI[4]) (* Not available for Olivetti emulation.)
Graphics	H. 1/60, 1/72, 1/80, 1/90, 1/120, 1/180,1/216, 1/360 V. 1/180, 1/360
Print Head	Number of pins: 24 pins/ 12x2 column Firing frequency: Normal mode: 1800 Hz Diameter of pin: 0.25 mm Life: 400 million strokes/pin
Paper Feed Speed	Friction feed: 15ips (inches per second) Continuous feed (optional): 5ips (inches per second) Line feed: 40ms/line (at 6lpi)
Printable Columns	Friction: Tractor: (optional) 10 CPI: 94 CPL[5] 10 CPI: 82 CPL 12 CPI: 112 CPL 12 CPI: 98 CPL 15 CPI: 141 CPL 15 CPI: 123 CPL 16.6 CPI: 156 CPL 16.6 CPI: 136 CPL 17.1 CPI: 161 CPL 17.1 CPI: 140 CPL 20 CPI: 188 CPL 20 CPI: 164 CPL 24 CPI: 225 CPL 24 CPI: 196 CPL

Fonts	For Epson ESC/P2 and IBM emulation: 1. Draft 10, 12, 15, 16.6, 17.1, 20, 24CPI 2. Roman 10, 12, 15, 17.1, 20CPI, Proportional 3. Sans Serif 10, 12, 15, 16.6, 17.1, 20CPI, Proportional 4. Courier 10, 12, 15, 16.6, 17.1, 20CPI, Proportional 5. Prestige 10, 12, 15, 16.6, 17.1, 20CPI 6. Script 10, 12, 15, 16.6, 17.1, 20CPI 7. OCR-B 10, 12, 16.6, 17.1, 20CPI 8. OCR-A 10, 12, 16.6, 17.1, 20CPI 9. Orator 10, 12, 15, 16.6, 17.1, 20CPI 10. GOTHIC 10, 12, 15, 16.6, 17.1, 20CPI 11. SOUVENIR 10, 12, 15, 16.6, 17.1, 20CPI For Olivetti emulation: 1. Draft 10, 12, 15, 16.6, 17.1CPI 2. Roman 10, 12, 15, 16.6, 17.1CPI, Proportional 3. Sans Serif 10, 12, 15, 16.6, 17.1CPI, Proportional 4. Courier 10, 12, 15, 16.6, 17.1CPI, Proportional 5. Prestige 10, 12, 15, 16.6, 17.1CPI 6. Script 10, 12, 15, 16.6, 17.1CPI 7. OCR-B 10, 12, 16.6, 17.1CPI 8. OCR-A 10, 12, 16.6, 17.1CPI 9. Orator 10, 12, 15, 16.6, 17.1CPI 10. GOTHIC 10, 12, 15, 16.6, 17.1CPI 11. SOUVENIR 10, 12, 15, 16.6, 17.1CPI
Code Pages	1. Table_437 2. Table_737 3. Table_850 4. Table_851 5. Table_852 6. Table_857 7. Table_858 8. Table_860 9. Table_861 10. Table_863 11. Table_864 12. Extended _864 13. Table_865 14. Table_866 15. Bulgaria _866 16. Table_1250 17. Table_1251 18. Table_1252 19. Table_1253 20. Table_1254 21. ISO_ 8859_1 22. ISO_ 8859_1SAP

	23. ISO_ 8859_2
	24. ISO_ 8859_5
	25. ISO_ 8859_7
	26. ISO_ 8859_9
	27. ISO_ 8859_15
	28. BRASCII
	29. Abicomp
	30. Roman_8
	31. Coax_Twinax
	32. New_437
	33. New_Dig_850
	34. Old_Code_860
	35. Flarro_863
	36. Hebrew_865
	37. Table_1257
	38. Ukraine_866
	39. Kazakhst_866
	40. Kamenicky
	41. Mazovia
	42. Baltic_775
	43. CRO_ASCII
	44. Farsi
	45. Urdu
	46. Greek_DEC
	47. ELOT_928
	48. UK_ASCII
	49. US_ASCII
	50. Swedish
	51. German
	52. Portuguese
	53. French
	54. Italian
	55. Norwegian
	56. Spanish
	57. Siemens_Turkish
	58. DEC_Turkish
Barcodes	1. EAN-13
	2. EAN-8
	3. Interleaved 2 of 5
	4. UPC-A
	5. UPC-E
	6. Code 39
	7. Code 128
	8. POSTNET
	9. Codabar
	10. Industrial 2 of 5

Epson International Character Sets	1. US_ASCII 2. France 3. Germany 4. Great Britain 5. Denmark 1 6. Sweden 7. Italy 8. Spain 1 9. Japan 10. Norway 11. Denmark 2 12. Spain 2 13. Latin America 14. Korea 15. Legal
Line Spacing	1/5", 1/6", 1/8", n/60", n/180", n/360"

Paper Specifications

	Single ply	Multilayer paper	Single continuous paper (optional)	Multilayer continuous paper (optional)
Width	60~245mm	60~245mm	101.6~241.3mm	101.6~241.3mm
Length	67~363.2mm	67~363.2mm	139.7mm~	139.7mm~
Thickness	0.06~0.19mm	0.12~0.35mm (2P) (5P)	0.08~0.12mm	0.12~0.35mm (2P) (5P)
Weight	52~157 g/m^2	40 g/m^2	64~100 g/m^2	40 g/m^2

	Bankbook-H (Horizontal-Binding)	Passport-H (Horizontal-Binding)
Width	105~241mm	150~241mm
Length	134~220mm	134~300mm
Thickness	0.2~2.0mm	0.2~6.0mm
Weight	95~116 g/m^2	95~116 g/m^2

Paper Handling	Feeding method: Friction and Tractors (optional) Paper path: Single ply, multilayer paper, bankbook, passport: front in, front out or front in, rear out Continuous forms (optional): rear in, front out
Copy Capability	Original +4 copies *to use carbonless forms*
Emulation	Epson ESC/P2, IBM 2390 X24e, Olivetti (PR2e, PR40, PR50, PR2845)
Ribbon Type	Cartridge; Monochrome; 7mm (W) x 20m (L)
Ribbon Life	More than 4 million characters (rolling Draft 10 CPI)
Memory	Input data buffer: 64 K byte
Interface	Parallel (Bi-directional IEEE-1284 nibble mode) USB 2.0 (B type connector) full speed Serial RS-232C (9-pin male)
Operation Panel	3 Keys 5 LEDs

Noise Level	Less than 55 dB(A) in 10CPI draft ASCII (Conforming to ISO7779 standard)		
Ambient Conditions	Temperature	Operating: +5 to +40 °C.	
		Storage: -20 to +60 °C	
	Relative humidity	Operating: 10 to 90%RH	
		(No condensation)	
		Storage: 5 to 95%RH	
		(No condensation)	
Dimensions	384 mm (W) x 313 mm (D) x 203 mm (H)		
Weight	9 kg		
Power Supply	Power cord:	Detachable	
	Voltage rating:	AC 230V(180V~264V) / 50Hz to60Hz	
		AC 110V/120V, 60Hz (factory option)	
	Stand by:	Less than 3.87W	
	ESD:	Comply with IEC801-2	
	Contact discharge:	4kV	
	Air discharge:	8kV	
Power consumption	32 W (Test pattern is specified in standard ISO/IEC 10561.)		
MTTR	Less than 20 minutes		
MTBF	10,000 P.O.H (At 25% duty cycle. The print head is excluded.)		
Certification	CCC, CB, CE, UL, FCC, ES, ISTA, RoHS, WEEE, REACH, ChemVerbotsV		

Remarks:

(1) CPI=Characters per Inch

(2) CPS=Characters per Second

(3) 1 Inch=25.4 mm

(4) DPI=Dots per Inch

(5) CPL=Characters per Line

7.2 Interfaces

Parallel interface, serial interface and USB interface are the standard interfaces for the printer.

The interface pin assignment is listed below. (The signal with overline indicates low true logic level.）

7.2.1 Parallel interface
Parallel interface pin assignment

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

$\overline{\text{STROBE}}$

Normally synchronous input signal is used to prompt that the data is sending to the port. Normal state is high logic level, while low logic level indicates DATA1～DATA8 will read the current data. The minimum pulse width is 0.5 microsecond.

DATA1~DATA8

Signals to receive data sent from host. Logic 1 is high level and the minimum pulse width is 1.5 microseconds. DATA1 is least significant bit while DATA8 is most significant bit.

$\overline{\text{ACK}}$

Signal to request sending data from host. ACK acts as the output signal when the printer is ready for receiving new data after previous data is read and saved in DATA 1～DATA8. Normal state is high logic level. After activating, it turns to low logic level. The pulse width is about 4 microseconds.

BUSY

Signal to indicate that the printer is not ready for receiving data. If the host ignores it and continues to send data, the data will be lost. The signal turns to high logic level in the following case:

- Buffer is full.
- Offline mode
- Error condition
- PRIME signal is activated.

The signal will be clear after INIT signal turns to high logic level and the printer initializes.

PE

Signal to indicate that the printer is out of paper. High logic level indicates paper out state.

SELECT

Signal to indicate online or offline state. High logic level indicates online state. If no mechanical defect and PE error, the signal turns to high logic level in the following case:

- Press 【**OFFLINE**】 if the printer is offline.
- The printer receives online command when it is set to offline by offline command.

The signal turns to low logic level in the following case:

- Press 【**OFFLINE**】 if the printer is online.
- The printer receives offline command.
- Defective condition
- Paper out

$\overline{AFXT}$（**Valid for Epson ESC/P2 emulation only**）

When the signal is set to low logic level and CR control code is implemented, LF command will be added.

GND

Signal to ground.

F-GND

Signal to connect to the base of the printer.

+5V

Signal to connect to +5V output. For maintenance only. Max. load (current) is 50mA.

$\overline{INIT}$

Reset signal to indicate the printer is initialized. Normal state is high logic level while low logic level is effective. The minimum pulse width is 50 microseconds. It is necessary for the printer to initialize all the

mechanical functions before this signal enters ready state, or it may cause damage to the printer.

$\overline{\text{FAULT}}$

Signal to indicate error condition. Low logic level is effective. The signal turns to low logic level in the following case:

- Paper out
- Error or defective condition

FUSE

Signal connect to +5V through 3.3KΩ resistance.

$\overline{\text{SLCTIN}}$ （**Valid for Epson ESC/P2 emulation only**）

When the signal is low logic level, no DC3 control code or DC1 control code is received.

Clock and signal logic level
Clock
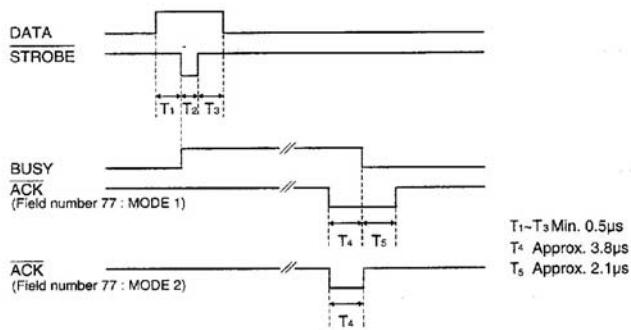
Signal logic level

Input: high logic level: 2～5V   low logic level: 0～0.8V

Output: high logic level: 2.4～5V   low logic level: 0～0.4V

Parallel interface connector diagram
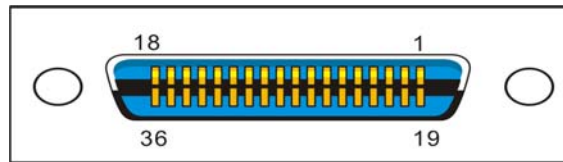
Note:

1. Use a standard parallel interface cable to connect the printer and the computer. The length should not exceed 2 meters. Connect the 25P plug to the computer, and connect the 36P plug to the printer.

2. Normally PR2-Olivetti emulation does not support parallel printing mode. Please use serial interface to print.

7.2.2 Serial interface
Serial interface pin assignment

Pin	Signal name	Description
1		
2	RXD	Receive data
3	TXD	Send data
4	DTR	Data terminal ready
5	SGND	Signal ground
6	DSR	Data set ready
7	RTS	Request to send
8	CTS	Clear to send
9		

Serial interface connector diagram
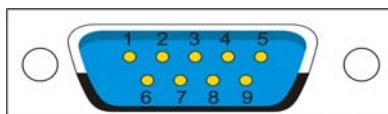
Serial interface wiring diagram
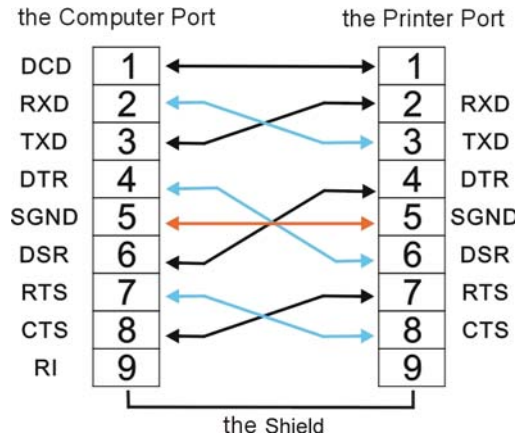
Note:

1. The serial cable length should not exceed 15 meters.

2. Make sure the "Interface Setup" selects serial interface and the settings are the same as PC communication port settings. Shown as below:
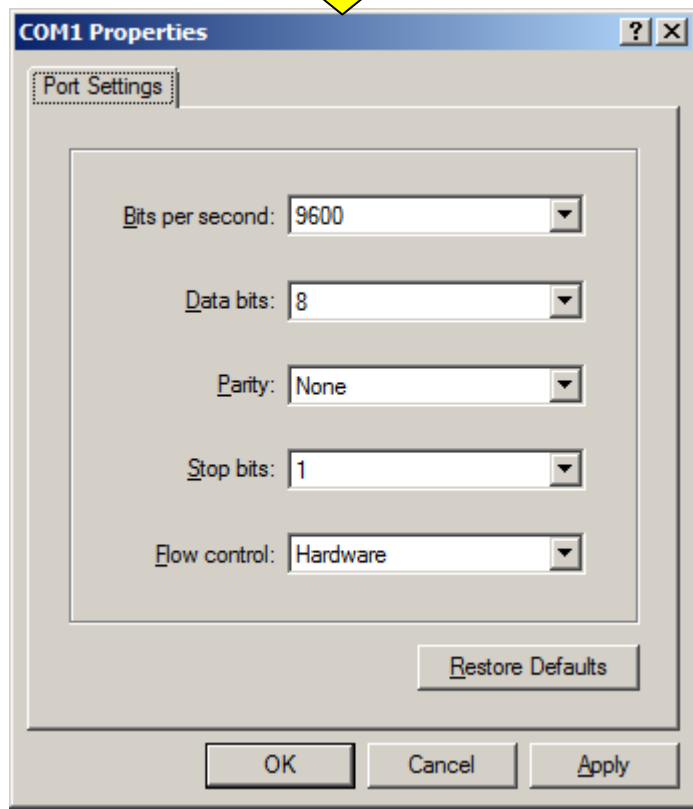
7.2.3 USB interface
USB interface pin assignment

Pin	Signal name	Description
1	VBUS	+5V power supply
2	D-	data
3	D+	data
4	S.GND	ground

USB interface connector diagram
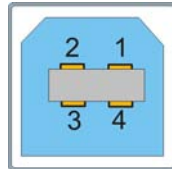
Note:

1. Use a standard USB interface cable to connect the printer and the computer.

2. Normally PR2-Olivetti emulation does not support USB printing mode. Please use serial interface to print.

8 Character sets and code pages

8.1 Character sets

Epson standard character table, italic

	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

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			ª	╢	╞	╓	µ	÷
7	BEL		'	7	G	W	g	w	BEL		º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	╕	╚	╪	Φ	°
9	HT		)	9	I	Y	i	y	HT		⌐	╣	╔	┘	Θ	•
A	LF		*	:	J	Z	j	z	LF		¬	║	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	╗	╦	█	δ	√
C	FF	FS	,	<	L	\	l	|	FF	FS	¼	╝	╠	▄	∞	n
D	CR		-	=	M	]	m	}	CR		¡	╜	=	▌	Ø	²
E	SO		.	>	N	^	n	~	SO		«	╛	╬	▐	ε	■
F	SI		/	?	O	_	o	⌂	SI		»	╕	±	▀	∩	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	ä	ö	ñ	┤	—	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	+	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	HT		)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	•
A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C	FF	FS	,	<	L	\	l	¦	î	£	¼	╝	╠	▄	∞	n
D	CR		-	=	M	]	m	}	ì	¥	¡	╜	=	▌	Ø	²
E	SO		.	>	N	^	n	~	Ä	Pt	«	╛	╬	▐	ε	■
F	SI		/	?	O	_	o	⌂	Å	ƒ	»	╕	±	▀	∩	SP

OCR-A character set 1

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

OCR-A character set 2

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

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

OCR-B character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Ø	►	SP	0	@	P	`	p								
1	☺	◄	!	1	A	Q	a	q								
2	☻	↕	"	2	B	R	b	r								
3	♥	‼	#	3	C	S	c	s								
4	♦	¶	$	4	D	T	d	t								
5	♣	§	%	5	E	U	e	u								
6	♠	_	&	6	F	V	f	v								
7	•	↨	'	7	G	W	g	w								
8	▫	↑	(	8	H	X	h	x								
9	o	↓	)	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	■								

8.2 International character set commands for Epson emulation

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）

8.3 International character sets for Epson emulation

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

8.4 Character tables for Epson emulation

Italic

	0	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0				0	@	P	`	p				0	@	P	`	p
1			!	1	A	Q	a	q			!	1	A	Q	a	q
2			"	2	B	R	b	r			"	2	B	R	b	r
3			#	3	C	S	c	s			#	3	C	S	c	s
4			$	4	D	T	d	t			$	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			'	7	G	W	g	w			'	7	G	W	g	w
8			(	8	H	X	h	x			(	8	H	X	h	x
9			)	9	I	Y	i	y			)	9	I	Y	i	y
A			*	:	J	Z	j	z			*	:	J	Z	j	z
B			+	;	K	[	k	{			+	;	K	[	k	{
C			,	<	L	\	l	|			,	<	L	\	l	|
D			-	=	M	]	m	}			-	=	M	]	m	}
E			.	>	N	^	n	~			.	>	N	^	n	~
F			/	?	O	_	o				/	?	O	_	o	

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	⊥	α	≡
1		DC1	!	1	A	Q	a	q	ü	æ	í	▓	⊥	╤	β	±
2		DC2	"	2	B	R	b	r	é	Æ	ó	▓	T	π	Γ	≥
3		DC3	#	3	C	S	c	s	â	ô	ú		├	Ⅱ	π	≤
4		DC4	$	4	D	T	d	t	ä	ö	ñ	┤	—	⊢	Σ	⌠
5			%	5	E	U	e	u	à	ò	Ñ	╡	+	F	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	⊢	π	μ	÷
7	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	‡	Φ	°
9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐	╣	╒	┘	θ	•
A	LF		*	:	J	Z	j	z	è	Ü	¬	‖	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╥	█	δ	√
C	FF	FS	,	<	L	\	l	|	î	£	¼	╝	╟	■	∞	ⁿ
D	CR		-	=	M	]	m	}	ì	¥	¡	╜	=	▌	φ	²
E	SO		.	>	N	^	n	~	Ä	₧	«	╛	╫	▐	ε	■
F	SI		/	?	O	_	o	DEL	Å	ƒ	»	╕	±	▀	∩	

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	⊥	α	≡
1		DC1	!	1	A	Q	a	q		DC1	í	▓	⊥	╤	β	±
2		DC2	"	2	B	R	b	r		DC2	ó	▓	T	π	Γ	≥
3		DC3	#	3	C	S	c	s		DC3	ú		├	Ⅱ	π	≤
4		DC4	$	4	D	T	d	t		DC4	ñ	┤	—	⊢	Σ	⌠
5			%	5	E	U	e	u			Ñ	╡	+	F	σ	⌡
6			&	6	F	V	f	v			ª	╢	⊢	π	μ	÷
7	BEL		'	7	G	W	g	w	BEL		º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	╕	╚	‡	Φ	°
9	HT	EM	)	9	I	Y	i	y	HT	EM	⌐	╣	╒	┘	θ	•
A	LF		*	:	J	Z	j	z	LF		¬	‖	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	╗	╥	█	δ	√
C	FF	FS	,	<	L	\	l	|	FF	FS	¼	╝	╟	■	∞	ⁿ
D	CR		-	=	M	]	m	}	CR		¡	╜	=	▌	φ	²
E	SO		.	>	N	^	n	~	SO		«	╛	╫	▐	ε	■
F	SI		/	?	O	_	o	DEL	SI		»	╕	±	▀	∩	

8.5   Code page commands for Epson emulation

Code Page	ESC R Parameter
ISO_ 8859-1	25
ISO_ 8859_1SAP	2B
ISO_ 8859_2	26
ISO_ 8859_5	2A
ISO_ 8859_7	2D
ISO_ 8859_9	2E
ISO_ 8859_15	2F
CRO_ASCII	3C
UK_ASCII	41
US_ASCII	42
Greek DEC	46
Swedish	48
German	4B
Portuguese	4C
Roman_8	4D
Coax_Twinax	4F
French	52
Italian	59
Spanish	5A
Norwegian	60
ELOT_928	6C
BRASCII	6D
Abicomp	6E
Table_1250	70
Table_1251	71
Table_1252	72
Table_1253	73
Table_1254	74
Table_437	80
NEW_437	81
Table_850	82
New_Dig_850	83
Table_860	84
Table_863	85
Table_865	86
Table_852	87
Table_851	88
Table_864	8C
Table_857	8D
Table_866	8E
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8.6   Code page tables for Epson, IBM and Olivetti emulations

Table_437

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 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	ñ	┤	─	╘	Σ	⌠
5			%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
c			,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	]	m	}	ì	¥	¡	╜	═	▌	ø	²
e			.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

Table_737

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	'	p	A	P	ι	▒	└	╨	ω	Ώ
1			!	1	A	Q	a	q	B	Σ	κ	▓	┴	╤	ά	±
2			"	2	B	R	b	r	Γ	T	λ	▓	┬	╥	έ	≥
3			#	3	C	S	c	s	Δ	Y	µ	│	├	╙	ή	≤
4			$	4	D	T	d	t	E	Φ	ν	┤	─	╘	ϊ	⌠
5			%	5	E	U	e	u	Z	X	ξ	╡	┼	╒	ί	⌡
6			&	6	F	V	f	v	H	Ψ	ο	╢	╞	╓	ó	÷
7			'	7	G	W	g	w	Θ	Ω	π	╖	╟	╫	ύ	≈
8			(	8	H	X	h	x	I	α	ρ	╕	╚	╪	ϋ	°
9			)	9	I	Y	i	y	K	β	σ	╣	╔	┘	ώ	£
a			*	:	J	Z	j	z	Λ	γ	ς	║	╩	┌	Ά	·
b			+	;	K	[	k	{	M	δ	τ	╗	╦	█	Έ	√
c			,	<	L	\	l	|	N	ε	υ	╝	╠	▄	Ή	ⁿ
d			-	=	M	]	m	}	Ξ	ζ	φ	╜	═	▌	Ί	²
e			.	>	N	^	n	~	O	η	χ	╛	╬	▐	Ό	■
f			/	?	O	_	o		Π	θ	ψ	┐	╧	▀	Ύ	

Table_850

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	`	p	Ç	É	á	▒	└	ð	Ó	-
1			!	1	A	Q	a	q	ü	æ	í	▓	┴	Ð	ß	±
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	Õ	§
6			&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7			'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8			(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	Þ	°
9			)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	·
b			+	;	K	[	k	{	ï	ø	½	╗	╦	█	Ù	¹
c			,	<	L	\	l	|	î	£	¼	╝	╠	■	ý	³
d			-	=	M	]	m	}	ì	Ø	¡	¢	=	¦	Ý	²
e			.	>	N	^	n	~	Ä	×	«	¥	╬	Ì	¯	■
f			/	?	O	_	o		Å	ƒ	»	┐	¤	■	´	

Table_851

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	`	p	Ç	Ī	ï	▒	└	Τ	ζ	-
1			!	1	A	Q	a	q	ü	æ	Ī	▓	┴	Υ	η	±
2			"	2	B	R	b	r	é	Ô	Ú	▓	┬	Φ	θ	υ
3			#	3	C	S	c	s	â	ô	Û	│	├	Χ	ι	φ
4			$	4	D	T	d	t	ä	ö	Α	┤	─	Ψ	κ	χ
5			%	5	E	U	e	u	à	Υ	Β	Κ	┼	Ω	λ	§
6			&	6	F	V	f	v	Ä	û	Γ	Λ	Π	α	µ	ψ
7			'	7	G	W	g	w	ç	ù	Δ	Μ	Ρ	β	ν	¸
8			(	8	H	X	h	x	ê	Ώ	Ε	Ν	╚	γ	ξ	°
9			)	9	I	Y	i	y	ë	ö	Ζ	╣	╔	┘	ο	¨
a			*	:	J	Z	j	z	è	Ü	Η	║	╩	┌	π	ω
b			+	;	K	[	k	{	Ϊ	ά	½	╗	╦	█	ρ	ü
c			,	<	L	\	l	|	î	£	θ	╝	╠	■	σ	Ū
d			-	=	M	]	m	}	Ε	é	Ι	Ξ	=	δ	ς	ώ
e			.	>	N	^	n	~	Χ	ή	«	Ο	╬	ε	τ	■
f			/	?	O	_	o		Η	ί	»	┐	Σ	■		

Table_852

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	▒	└	đ	Ó	─
1			!	1	A	Q	a	q	ü	Ĺ	í	▓	┴	Đ	ß	˝
2			"	2	B	R	b	r	é	ĺ	ó	▓	┬	Ď	Ô	˛
3			#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ń	ˇ
4			$	4	D	T	d	t	ä	ö	Ą	┤	─	ď	ń	˘
5			%	5	E	U	e	u	ů	Ľ	ą	Á	┼	Ň	ň	§
6			&	6	F	V	f	v	ć	ľ	Ž	Â	Ă	Í	Š	÷
7			'	7	G	W	g	w	ç	Ś	ž	Ě	ă	Î	š	¸
8			(	8	H	X	h	x	ł	ś	Ę	Ş	╚	ě	Ŕ	°
9			)	9	I	Y	i	y	ë	Ö	ę	╣	╔	┘	Ú	¨
a			*	:	J	Z	j	z	Ő	Ü	¬	║	╩	┌	ŕ	·
b			+	;	K	[	k	{	õ	Ť	ź	╗	╦	█	Ű	ű
c			,	<	L	\	l	¦	î	ť	Č	╝	╠	▄	ý	Ř
d			-	=	M	]	m	}	Ź	Ł	ş	Ż	=	┌	Ý	ř
e			.	>	N	^	n	~	Ä	×	«	ż	╫	Ů	ţ	■
f			/	?	O	_	o		Ć	č	»	┐	¤	▀	´	

Table_857

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	▒	└	º	Ó	─
1			!	1	A	Q	a	q	ü	æ	í	▓	┴	ª	ß	±
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	┼		Õ	§
6			&	6	F	V	f	v	â	û	Ğ	Â	ã	Í	µ	÷
7			'	7	G	W	g	w	ç	ù	ğ	À	Ă	Î		¸
8			(	8	H	X	h	x	ê	İ	¿	©	╚	Ï	×	°
9			)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	·
b			+	;	K	[	k	{	ï	ø	½	╗	╦	█	Ù	¹
c			,	<	L	\	l	¦	î	£	¼	╝	╠	▄	ì	³
d			-	=	M	]	m	}	ı	Ø	¡	¢	=	¦	ÿ	²
e			.	>	N	^	n	~	Ä	Ş	«	¥	╫	Ì	─	■
f			/	?	O	_	o		Å	ş	»	┐	¤	▀	´	

Table_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	Ç	É	á	▓	└	ð	Ó	
1			!	1	A	Q	a	q	ü	æ	í	▓	┴	Ð	ß	±
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	┼	€	Õ	§
6			&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7			'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8			(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	Þ	°
9			)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	·
b			+	;	K	[	k	{	ï	ø	½	╗	╦	█	Ù	¹
c			,	<	L	\	l	|	î	£	¼	╝	╠	■	ý	³
d			-	=	M	]	m	}	ì	Ø	¡	¢	═	¦	Ý	²
e			.	>	N	^	n	~	Ä	×	«	¥	╬	Ì	¯	■
f			/	?	O	_	o		Å	ƒ	»	┐	¤	■	´	

Table_860

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	À	í	▓	┴	╤	β	±
2			"	2	B	R	b	r	é	È	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4			$	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	Á	Ú	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	Ì	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	Ê	Õ	Ò	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	Í	¢	½	╗	╦	█	δ	√
c			,	<	L	\	l	|	Ô	£	¼	╝	╠	■	∞	ⁿ
d			-	=	M	]	m	}	ì	Ù	¡	╜	═	▌	ø	²
e			.	>	N	^	n	~	Ã	₧	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Â	Ó	»	┐	╧	■	∩	

Tally Dascom 5130P

Table_861

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	▓	┬	Π	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	å	û	Ó	╢	╞	╓	µ	÷
7		'	7	G	W	g	w	ç	Ý	Ú	╖	╟	╫	τ	≈
8		(	8	H	X	h	x	ê	ý	¿	╕	╚	╪	Φ	°
9		)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
a		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b		+	;	K	[	k	{	Ð	ø	½	╗	╦	█	δ	√
c		,	<	L	\	l	|	ð	£	¼	╝	╠	▄	∞	ⁿ
d		-	=	M	]	m	}	Þ	Ø	¡	╜	═	▌	φ	²
e		.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
f		/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

Table_863

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	▓	┬	Π	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	¸	╡	┼	╒	σ	⌡
6		&	6	F	V	f	v	¶	û	³	╢	╞	╓	µ	÷
7		'	7	G	W	g	w	ç	ù	¯	╖	╟	╫	τ	≈
8		(	8	H	X	h	x	ê	¤	Î	╕	╚	╪	Φ	°
9		)	9	I	Y	i	y	ë	Ô	⌐	╣	╔	┘	Θ	∙
a		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b		+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
c		,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
d		-	=	M	]	m	}	‗	Ù	¾	╜	═	▌	φ	²
e		.	>	N	^	n	~	À	Û	«	╛	╬	▐	ε	■
f		/	?	O	_	o		§	ƒ	»	┐	╧	▀	∩	

Table_864

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	'	p	פ	ß			·	¢	ڍ	─	≐
1			!	1	A	Q	a	q	·	∞	─	I	ﺱ	ﺝ	ﻁ	̈
2			"	2	B	R	b	r	•	φ	ﻝ	ﺭ	ﺡ	ﺩ	ﻅ	ﻭ
3			#	3	C	S	c	s	√	±	£	ﻡ	ﺵ	ﺽ	ﻉ	ﻩ
4			$	4	D	T	d	t	▓	½	¤	Ξ	ﺹ	ﺓ	ﻟ	ﻯ
5			%	5	E	U	e	u	─	¼	ﻥ	۵	ﺏ	ﻌ	ﻭ	ﺱ
6			&	6	F	V	f	v	│	≈		ﺭ	ﺕ	ﻬ	ﺙ	ﻑ
7			'	7	G	W	g	w	+	«		ﻙ	ﺍ	ﻁ	ﻍ	ﺺ
8			(	8	H	X	h	x	┤	»	ﻝ	ﻥ	ﻁ	ﺓ	ﻋ	ﻫ
9			)	9	I	Y	i	y	┬	ﻍ	ﻱ	ﻕ	ﺭ	ﺗ	ﻉ	ﻱ
a			*	:	J	Z	j	z	├	ﻳ	ﺽ	ﺽ	ﻟ	ﺗ	ﻃ	ﻱ
b			+	;	K	[	k	{	┴		ﺽ	ﺉ	ﺽ	¦	ﻬ	ﻝ
c			,	<	L	\	l			┐		٠	ﻢ	ﺥ	¬	ﺯ	ﻞ
d			─	=	M	]	m	}	┌	ﻱ	ﺽ	ﻼ	ﺽ	÷	ﺽ	ﻒ
e			.	>	N	^	n	~	┘	ﻥ	ﺽ	ﻡ	ﺽ	×	ﻉ	■
f			/	?	O	_	o		┘	ﺀ	ﺝ	ﺥ	ﺝ	ﻉ	ﻩ	

Extended_864

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	'	p	°	ﻼ			·	ﻣ	ﺙ	─	≐
1			!	1	A	Q	a	q	ﻉ	،	─	I	ﺱ	ﺝ	ﻁ	̈
2			"	2	B	R	b	r	ﻭ	ﻔ	ﻝ	ﺭ	ﺡ	ﺩ	ﻅ	ﻭ
3			#	3	C	S	c	s	ﻔ	ﻭ	£	ﻡ	ﺵ	ﺽ	ﻉ	ﻩ
4			$	4	D	T	d	t	▓	ﻼ	¤	Ξ	ﺹ	ﺓ	ﻟ	ﻯ
5			%	5	E	U	e	u	´	،	ﻥ	۵	ﺏ	ﻌ	ﻭ	ﺱ
6			&	6	F	V	f	v	ﻼ	ﻭ		ﺭ	ﺕ	ﻬ	ﺙ	ﻑ
7			'	7	G	W	g	w	ﻉ	«		ﻙ	ﺍ	ﻁ	ﻍ	ﺺ
8			(	8	H	X	h	x	ﻼ	»	ﻝ	ﻥ	ﻁ	ﺓ	ﻋ	ﻫ
9			)	9	I	Y	i	y	´	ﻍ	ﻱ	ﻕ	ﺭ	ﺗ	ﻉ	ﻱ
a			*	:	J	Z	j	z	ﻉ	ﻳ	ﺽ	ﺽ	ﻟ	ﺗ	ﻃ	ﻱ
b			+	;	K	[	k	{	'	ﺽ	ﺉ	ﺉ	ﺽ	¦	ﻬ	ﻝ
c			,	<	L	\	l			ﻉ	ﻱ	·	ﻢ	ﺥ	ﻉ	ﺯ	ﻞ
d			─	=	M	]	m	}	ﻻ	ﻱ	ﺽ	ﻼ	ﺽ	÷	ﺽ	ﻒ
e			.	>	N	^	n	~	ﻼ	ﻥ	ﺽ	ﻡ	ﺽ	×	ﻉ	■
f			/	?	O	_	o		ﻉ	ﺀ	ﺝ	ﺥ	ﺝ	ﻉ	ﻩ	

Table_865

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	ñ	┤	─	╘	Σ	⌠
5			%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	ï	ø	½	╗	╦	█	δ	√
c			,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	]	m	}	ì	Ø	¡	╜	═	▌	φ	²
e			.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	¤	┐	╧	▬	∩	

Table_866

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	░	└	╨	р	Ё
1			!	1	A	Q	a	q	Б	С	б	▒	┴	╤	с	ё
2			"	2	B	R	b	r	В	Т	в	▓	┬	╥	т	Є
3			#	3	C	S	c	s	Г	У	г	│	├	╙	у	є
4			$	4	D	T	d	t	Д	Ф	д	┤	─	╘	ф	Ї
5			%	5	E	U	e	u	Е	Х	е	╡	┼	╒	х	ї
6			&	6	F	V	f	v	Ж	Ц	ж	╢	╞	╓	ц	Ў
7			'	7	G	W	g	w	З	Ч	з	╖	╟	╫	ч	ў
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	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	

Bulgaria _866

hex \ dez	0 (0)	1 (16)	2 (32)	3 (48)	4 (64)	5 (80)	6 (96)	7 (112)	8 (128)	9 (144)	a (160)	b (176)	c (192)	d (208)	e (224)	f (240)
0				0	@	P	`	p	А	Р	а	р	└	░	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	╚	╝	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	╦	█	δ	√
c			,	<	L	\	l	¦	М	Ь	м	ь	╠	█	∞	^{n}
d			-	=	M	]	m	}	Н	Э	н	э	═	█	ø	^{2}
e			.	>	N	^	n	~	О	Ю	о	ю	╬	█	Є	■
f			/	?	O	_	o		П	Я	п	я	┐	█	∩	

Table_1250

hex \ dez	0 (0)	1 (16)	2 (32)	3 (48)	4 (64)	5 (80)	6 (96)	7 (112)	8 (128)	9 (144)	a (160)	b (176)	c (192)	d (208)	e (224)	f (240)
0				0	@	P	`	p	€			°	Ŕ	Đ	ŕ	đ
1			!	1	A	Q	a	q		'	ˇ	±	Á	Ń	á	ń
2			"	2	B	R	b	r	‚	'	˘	˛	Â	Ň	â	ň
3			#	3	C	S	c	s		"	Ł	ł	Ă	Ó	ă	ó
4			$	4	D	T	d	t	„	"	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	Ą	µ	Ĺ	Ő	ĺ	ő
6			&	6	F	V	f	v	†	–	¦	¶	Ć	Ö	ć	ö
7			'	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			¨	¸	Č	Ř	č	ř
9			)	9	I	Y	i	y	‰	™	©	ą	É	Ů	é	ů
a			*	:	J	Z	j	z	Š	š	Ş	ş	Ę	Ú	ę	ú
b			+	;	K	[	k	{	‹	›	«	»	Ë	Ű	ë	ű
c			,	<	L	\	l	|	Ś	ś	¬	Ľ	Ě	Ü	ě	ü
d			-	=	M	]	m	}	Ť	ť		˝	Í	Ý	í	ý
e			.	>	N	^	n	~	Ž	ž	®	ľ	Î	Ţ	î	ţ
f			/	?	O	_	o		Ź	ź	Ż	ż	Ď	ß	ď	˙

Table_1251

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	ħ	ђ		°	А	Р	а	р
1			!	1	A	Q	a	q	ѓ	'	Ў	±	Б	С	б	с
2			"	2	B	R	b	r	‚	'	ў	I	В	Т	в	т
3			#	3	C	S	c	s	ѓ	"	J	і	Г	У	г	у
4			$	4	D	T	d	t	„	"	¤	r	Д	Ф	д	ф
5			%	5	E	U	e	u	…	•	Ґ	µ	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	€		Ё	ё	И	Ш	и	ш
9			)	9	I	Y	i	y	‰	™	©	№	Й	Щ	й	щ
a			*	:	J	Z	j	z	Љ	љ	Є	е	К	Ъ	к	ъ
b			+	;	K	[	k	{	‹	›	«	»	Л	Ы	л	ы
c			,	<	L	\	l	|	Њ	њ	¬	ј	М	Ь	м	ь
d			-	=	M	]	m	}	Ќ	ќ		S	Н	Э	н	э
e			.	>	N	^	n	~	Ћ	ћ	®	s	О	Ю	о	ю
f			/	?	O	_	o		Џ	џ	Ї	ї	П	Я	п	я

Table_1252

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	ƒ	"	£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t	„	"	¤	'	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	–	¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	ˆ	˜	¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y	‰	™	©	¹	É	Ù	é	ù
a			*	:	J	Z	j	z	Š	š	ª	º	Ê	Ú	ê	ú
b			+	;	K	[	k	{	‹	›	«	»	Ë	Û	ë	û
c			,	<	L	\	l	|	Œ	œ	¬	¼	Ì	Ü	ì	ü
d			-	=	M	]	m	}				½	Í	Ý	í	ý
e			.	>	N	^	n	~			®	¾	Î	Þ	î	þ
f			/	?	O	_	o			Ÿ	¯	¿	Ï	ß	ï	ÿ

Table_1253

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	€			°	ΐ	Π	ΰ	π
1			!	1	A	Q	a	q		´		±	Α	Ρ	α	ρ
2			"	2	B	R	b	r	,	΅	Ά	²	Β		β	ς
3			#	3	C	S	c	s	ƒ	"	£	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	†	–	¦	¶	Ζ	Φ	ζ	φ
7			'	7	G	W	g	w	‡	—	§	·	Η	Χ	η	χ
8			(	8	H	X	h	x			¨	Έ	Θ	Ψ	θ	ψ
9			)	9	I	Y	i	y	‰	™	©	Ή	Ι	Ω	ι	ω
a			*	:	J	Z	j	z			¨	Ί	Κ	Ϊ	κ	ϊ
b			+	;	K	[	k	{	‹	›	«	»	Λ	Ϋ	λ	ϋ
c			,	<	L	\	l	|			¬	Ό	Μ	ά	μ	ό
d			-	=	M	]	m	}				½	Ν	έ	ν	ύ
e			.	>	N	^	n	~			®	Ύ	Ξ	ή	ξ	ώ
f			/	?	O	_	o				―	Ώ	Ο	ί	ο	

Table_1254

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		'	¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r	,	'	¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s	ƒ	"	£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t	„	"	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	–	¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	ˆ	˜	¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y	‰	™	©	¹	É	Ù	é	ù
a			*	:	J	Z	j	z	Š	š	ª	º	Ê	Ú	ê	ú
b			+	;	K	[	k	{	‹	›	«	»	Ë	Û	ë	û
c			,	<	L	\	l	|	Œ	œ	¬	¼	Ì	Ü	ì	ü
d			-	=	M	]	m	}				½	Í	İ	í	ı
e			.	>	N	^	n	~			®	¾	Î	Ş	î	ş
f			/	?	O	_	o			Ÿ	¯	¿	Ï	ß	ï	ÿ

IS0_8859_1

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	Ô	ä	ô
5			%	5	E	U	e	u	à	ò	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	å	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	Ö	©	¹	É	Ù	é	ù
a			*	:	J	Z	j	z	è	Ü	ª	º	Ê	Ú	ê	ú
b			+	;	K	[	k	{	ï	¢	«	»	Ë	Û	ë	û
c			,	<	L	\	l	|	î	£	¬	¼	Ì	Ü	ì	ü
d			–	=	M	]	m	}	ì	¥	–	½	Í	Ý	í	ý
e			.	>	N	^	n	~	Ä	℞	®	¾	Î	Þ	î	þ
f			/	?	O	_	o		Å	ƒ	—	¿	Ï	ß	ï	ÿ

ISO_8859_1SAP

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	─	¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r	é	│	¢	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	Ô	ä	ô
5			%	5	E	U	e	u	à	└	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	å	┘	¦	¶	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	┴	ª	º	Ê	Ú	ê	ú
b			+	;	K	[	k	{	ï		«	»	Ë	Û	ë	û
c			,	<	L	\	l	|	î		¬	¼	Ì	Ü	ì	ü
d			–	=	M	]	m	}	ì		–	½	Í	Ý	í	ý
e			.	>	N	^	n	~	Ä		®	¾	Î	Þ	î	þ
f			/	?	O	_	o		Å		—	¿	Ï	ß	ï	ÿ

Tally Dascom 5130P

ISO_8859_2

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	`	p	Ç	É		°	Ŕ	Đ	ŕ	đ
1			!	1	A	Q	a	q	ü	æ	Ą	ą	Á	Ń	á	ń
2			"	2	B	R	b	r	é	Æ	˘	˛	Â	Ň	â	ň
3			#	3	C	S	c	s	â	ô	Ł	ł	Ă	Ó	ă	ó
4			$	4	D	T	d	t	ä	ö	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	à	ò	Ľ	ľ	Ĺ	Ő	ĺ	ő
6			&	6	F	V	f	v	å	û	Ś	ś	Ć	Ö	ć	ö
7			'	7	G	W	g	w	ç	ù	§	ˇ	Ç	×	ç	÷
8			(	8	H	X	h	x	ê	ÿ	¨	¸	Č	Ř	č	ř
9			)	9	I	Y	i	y	ë	Ö	Š	š	É	Ů	é	ů
a			*	:	J	Z	j	z	è	Ü	Ş	ş	Ę	Ú	ę	ú
b			+	;	K	[	k	{	ï	¢	Ť	ť	Ë	Ű	ë	ű
c			,	<	L	\	l	|	î	£	Ź	ź	Ě	Ü	ě	ü
d			–	=	M	]	m	}	ì	¥	–	˝	Í	Ý	í	ý
e			.	>	N	^	n	~	Ä	Pt	Ž	ž	Î	Ţ	î	ţ
f			/	?	O	_	o		Å	ƒ	Ż	ż	Ď	ß	ď	˙

ISO_8859_5

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	`	p	Ç	É		А	Р	а	р	№
1			!	1	A	Q	a	q	ü	æ	Ё	Б	С	б	с	ё
2			"	2	B	R	b	r	é	Æ	Ђ	В	Т	в	т	ђ
3			#	3	C	S	c	s	â	ô	Ѓ	Г	У	г	у	ѓ
4			$	4	D	T	d	t	ä	ö	Є	Д	Ф	д	ф	є
5			%	5	E	U	e	u	à	ò	Ѕ	Е	Х	е	х	ѕ
6			&	6	F	V	f	v	å	û	І	Ж	Ц	ж	ц	і
7			'	7	G	W	g	w	ç	ù	Ї	З	Ч	з	ч	ї
8			(	8	H	X	h	x	ê	ÿ	Ј	И	Ш	и	ш	ј
9			)	9	I	Y	i	y	ë	Ö	Љ	Й	Щ	й	щ	љ
a			*	:	J	Z	j	z	è	Ü	Њ	К	Ъ	к	ъ	њ
b			+	;	K	[	k	{	ï	¢	Ћ	Л	Ы	л	ы	ћ
c			,	<	L	\	l	|	î	£	Ќ	М	Ь	м	ь	ќ
d			–	=	M	]	m	}	ì	¥	–	Н	Э	н	э	§
e			.	>	N	^	n	~	Ä	Pt	Ў	О	Ю	о	ю	ў
f			/	?	O	_	o		Å	ƒ	Џ	П	Я	п	я	џ

ISO_8859_7

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	`	p	Ç	É		°	Ï	Π	ΰ	π
1			!	1	A	Q	a	q	ü	æ	΄	±	Α	Ρ	α	ρ
2			"	2	B	R	b	r	é	Æ	΅	²	Β		β	ς
3			#	3	C	S	c	s	â	ô	£	³	Γ	Σ	γ	σ
4			$	4	D	T	d	t	ä	ö		΄	Δ	Τ	δ	τ
5			%	5	E	U	e	u	à	ò		»	Ε	Υ	ε	υ
6			&	6	F	V	f	v	å	û	¦	Ά	Ζ	Φ	ζ	φ
7			'	7	G	W	g	w	ç	ù	§	·	Η	Χ	η	χ
8			(	8	H	X	h	x	ê	ÿ	¨	Έ	Θ	Ψ	θ	ψ
9			)	9	I	Y	i	y	ë	Ö	©	Ή	Ι	Ω	ι	ω
a			*	:	J	Z	j	z	è	Ü		Ί	Κ	Ϊ	κ	ϊ
b			+	;	K	[	k	{	ï	¢	«	»	Λ	Ϋ	ã	ϋ
c			,	<	L	\	l			î	£	¬	Ό	Μ	ά	μ	ó
d			–	=	M	]	m	}	ì	¥	–	½	Ν	έ	ν	ú
e			.	>	N	^	n	~	Ä	₧		Ύ	Ξ	ή	ξ	ώ
f			/	?	O	_	o		Å	ƒ	―	Ώ	Ο	ί	o	

ISO_8859_9

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	`	p	Ç	É		°	À	Ğ	à	ğ
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	Ô	ä	ô
5			%	5	E	U	e	u	à	ò	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	å	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	Ö	©	¹	É	Ù	é	ù
a			*	:	J	Z	j	z	è	Ü	ª	º	Ê	Ú	ê	ú
b			+	;	K	[	k	{	ï	¢	«	»	Ë	Û	ë	û
c			,	<	L	\	l			î	£	¬	¼	Ì	Ü	ì	ü
d			–	=	M	]	m	}	ì	¥	–	½	Í	İ	í	ı
e			.	>	N	^	n	~	Ä	₧	®	¾	Î	Ş	î	ş
f			/	?	O	_	o		Å	ƒ	―	¿	Ï	ß	ï	ÿ

ISO_8859_15

| 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	€	Ž	Ä	Ô	ä	ô
5			%	5	E	U	e	u	à	ò	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	å	û	Š	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w	ç	ù	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	ê	ÿ	š	ž	È	Ø	è	ø
9			)	9	I	Y	i	y	ë	Ö	©	¹	É	Ù	é	ù
a			*	:	J	Z	j	z	è	Ü	ª	º	Ê	Ú	ê	ú
b			+	;	K	[	k	{	ï	¢	«	»	Ë	Û	ë	û
c			,	<	L	\	l	|	î	£	¬	Œ	Ì	Ü	ì	ü
d			-	=	M	]	m	}	ì	¥	-	œ	Í	Ý	í	ý
e			.	>	N	^	n	~	Ä	₧	®	Ÿ	Î	Þ	î	þ
f			/	?	O	_	o		Å	ƒ	‾	¿	Ï	ß	ï	ÿ

BRASCII

| 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	Ô	ä	ô
5			%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	Œ	ç	œ
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

Abicomp

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	¡	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	Œ	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	Ÿ	ë	ÿ		
b			+	;	K	[	k	{			Ì	¨	ì	ß		
c			,	<	L	\	l	|			Í	£	í	ª		
d			–	=	M	]	m	}			Î	·	î	º		
e			.	>	N	^	n	~			Ï	§	ï	¿		
f			/	?	O	_	o				Ñ	°	ñ	±		

Roman 8

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	Å	Á	Þ
1			!	1	A	Q	a	q			À	Ý	ê	î	Ã	þ
2			"	2	B	R	b	r			Â	ý	ô	Ø	ã	·
3			#	3	C	S	c	s			È	°	û	Æ	Ð	µ
4			$	4	D	T	d	t			Ê	Ç	á	å	ð	¶
5			%	5	E	U	e	u			Ë	ç	é	í	Í	¾
6			&	6	F	V	f	v			Î	Ñ	ó	ø	Ì	—
7			'	7	G	W	g	w			Ï	ñ	ú	æ	Ó	¼
8			(	8	H	X	h	x			´	¡	à	Ä	Ò	½
9			)	9	I	Y	i	y			`	¿	è	ì	Õ	ª
a			*	:	J	Z	j	z			^	¤	ò	Ö	õ	º
b			+	;	K	[	k	{			¨	£	ù	Ü	Š	«
c			,	<	L	\	l	|			~	¥	ä	É	š	■
d			–	=	M	]	m	}			Ù	§	ë	ï	Ú	»
e			.	>	N	^	n	~			Û	ƒ	ö	ß	Ÿ	±
f			/	?	O	_	o				£	¢	ü	Ô	ÿ	

Coax_Twinax

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	א	ﬥ	á	░	∟	╨	א	ﬥ
1			!	1	A	Q	a	q	ב	ט	í	▒	⊥	╤	ב	ט
2			"	2	B	R	b	r	ג	y	ó	▓	┬	╥	ג	y
3			#	3	C	S	c	s	ד	ﬧ	ú	│	├	╙	ד	ﬧ
4			$	4	D	T	d	t	ה	פ	ñ	┤	─	╘	ה	פ
5			%	5	E	U	e	u	ו	ץ	Ñ	╡	┼	╒	ו	ץ
6			&	6	F	V	f	v	ז	צ	ª	╢	╞	╓	ז	צ
7			'	7	G	W	g	w	ח	ק	Ω	╖	╟	╫	ח	ק
8			(	8	H	X	h	x	ט	ר	¿	╕	╚	╪	ט	ר
9			)	9	I	Y	i	y	י	ש	⌐	╣	╔	┘	י	ש
a			*	:	J	Z	j	z	ך	ת	¬	║	╩	┌	ך	ת
b			+	;	K	[	k	{	כ	¢	½	╗	╦	█	כ	√
c			,	<	L	\	l	¦	ל	£	¼	╝	╠	▄	ל	ⁿ
d			-	=	M	]	m	}	ם	¥	¡	╜	═	▌	ם	²
e			.	>	N	^	n	~	מ	₧	«	╛	╬	▐	מ	■
f			/	?	O	_	o		ן	ƒ	»	┐	╧	▀	ן	

New_437

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	א	ﬥ	á	░	∟	╨	α	≡
1			!	1	A	Q	a	q	ב	ט	í	▒	⊥	╤	β	±
2			"	2	B	R	b	r	ג	y	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	ד	ﬧ	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	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ח	ק	Ω	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ט	ר	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	י	ש	⌐	╣	╔	┘	θ	∙
a			*	:	J	Z	j	z	ך	ת	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	כ	¢	½	╗	╦	█	δ	√
c			,	<	L	\	l			ל	£	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	]	m	}	ם	¥	¡	╜	═	▌	ø	²
e			.	>	N	^	n	~	מ	₧	«	╛	╬	▐	∈	■
f			/	?	O	_	o		ן	ƒ	»	┐	╧	▀	∩	

New_Dig_850

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	א	נ	á	▓	∟	ð	א	נ
1			!	1	A	Q	a	q	ב	ט	í	▒	⊥	Ð	ב	ט
2			"	2	B	R	b	r	ג	י	ó	▓	┬	Ê	ג	י
3			#	3	C	S	c	s	ד	ך	ú	│	├	Ë	ד	ך
4			$	4	D	T	d	t	ה	כ	ñ	┤	─	È	ה	כ
5			%	5	E	U	e	u	ו	ל	Ñ	Á	┼	ı	ו	ל
6			&	6	F	V	f	v	ז	מ	ª	Â	ã	Í	ז	מ
7			'	7	G	W	g	w	ח	ם	º	À	Ã	Î	ח	ם
8			(	8	H	X	h	x	ט	ן	¿	©	╚	Ï	ט	ן
9			)	9	I	Y	i	y	י	ם	®	╣	╔	┘	י	ם
a			*	:	J	Z	j	z	ך	ן	¬	║	╩	┌	ך	ן
b			+	;	K	[	k	{	כ	ø	½	╗	╦	■	כ	¹
c			,	<	L	\	l	|	ל	£	¼	╝	╠	■	ל	³
d			-	=	M	]	m	}	ם	Ø	¡	¢	═	¦	ם	²
e			.	>	N	^	n	~	מ	×	«	¥	╬	Ì	מ	■
f			/	?	O	_	o		ן	ƒ	»	┐	¤	■	ן	

Old_Code_860

טור	0	1	2	3	4	5	6	7	8	9	ב	ג	ד	ה	ו	ז
חוה	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
0				0	@	P	א	נ	א	נ	á	▓	∟	╨	α	≡
1			!	1	A	Q	ב	ט	ב	À	í	▒	⊥	╤	β	±
2			"	2	B	R	ג	י	ג	È	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	ד	ך	ד	ך	ú	│	├	╙	π	≤
4			$	4	D	T	ה	כ	ã	õ	ñ	┤	─	╘	Σ	⌠
5			%	5	E	U	ו	ל	ו	ל	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	ז	מ	Á	Ú	ª	╢	╞	╓	µ	÷
7			'	7	G	W	ח	ם	ח	ם	º	╖	╟	╫	τ	≈
8			(	8	H	X	ט	ן	ט	Ì	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	י	ם	Ê	õ	ò	╣	╔	┘	θ	∙
ב			*	:	J	Z	ך	ן	ך	ן	¬	║	╩	┌	Ω	·
ג			+	;	K	[	כ	{	ƒ	¢	½	╗	╦	■	δ	√
ד			,	<	L	\	ל	|	Õ	£	¼	╝	╠	■	∞	ⁿ
ה			-	=	M	]	ם	}	í	Ù	¡	╜	═	▌	ø	²
ו			.	>	N	^	מ	~	Ã	Pt	«	┘	╬	▐	∈	■
ז			/	?	O	_	ן		Â	Ó	»	┐	╧	■	∩	

Flarro_863

ורטי חוה	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	ב 160	ג 176	ד 192	ה 208	ו 224	ז 240
0				0	@	‏ב‏	א	‏ב‏	א	‏ב‏	¦	░	└	╨	α	≡
1			!	1	‏ב‏	ט	‏ב‏	ט	‏ב‏	È	'	▒	┴	╤	β	±
2			"	2	ג	‏ע‏	ג	‏ע‏	ג	Ê	ó	▓	┬	╥	Γ	≥
3			#	3	ד	‏ף‏	ד	‏ף‏	ד	‏ף‏	ú	│	├	‏לל‏	π	≤
4			$	4	ה	‏כ‏	ה	פ	Â	Ë	¨	┤	─	╘	Σ	⌠
5			א	5	‏ו‏	‏ק‏	‏ו‏	‏ק‏	‏ו‏	ï	˛	╡	┼	╒	σ	⌡
6			א	6	‏ז‏	‏צ‏	‏ז‏	‏צ‏	¶	‏צ‏	³	╢	╞	╓	f	‏'‏
7			'	7	‏ח‏	‏ק‏	‏ח‏	‏ק‏	‏ח‏	‏ק‏	─	‏לל‏	╟	╫	τ	≈
8			(	8	‏ט‏	‏ר‏	‏ט‏	‏ר‏	‏ט‏	¤	‏ĵ‏	‏ל‏	╙	╪	Φ	°
9			)	9	‏י‏	‏ש‏	‏י‏	‏ש‏	‏י‏	Ô	‏ˬ‏	╣	╜	┘	θ	•
‏ב‏			*	:	‏ך‏	‏ת‏	‏ך‏	‏ת‏	‏ך‏	‏ת‏	¬	║	╩	┌	Ω	·
‏ג‏			+	;	כ	[	כ	{	כ	¢	½	‏ך‏	╦	■	δ	√
‏ד‏			,	<	‏ל‏	\	‏ל‏			‏ל‏	£	¼	‏ל‏	╠	■	∞	ⁿ
‏ה‏			-	=	ם	]	ם	}	=	Û	¾	‏ל‏	═	▌	ø	²
‏ו‏			.	>	מ	^	מ	~	À	Ò	«	‏ל‏	╬	▐	ϵ	■
‏ז‏			/	?	‏ן‏	_	‏ן‏		§	ƒ	»	‏ך‏	±	■	∩	

Hebrew_865

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	@	P	`	p	א	‏ב‏	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	‏ב‏	ט	í	▒	┴	╤	β	±
2			"	2	B	R	b	r	ג	‏ע‏	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	ד	‏ף‏	ú	│	├	‏לל‏	π	≤
4			$	4	D	T	d	t	ה	‏פ‏	ñ	┤	─	╘	Σ	⌠
5			%	5	E	U	e	u	‏ו‏	‏ק‏	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	‏ז‏	‏צ‏	a	╢	╞	╓	f	‏'‏
7			'	7	G	W	g	w	‏ח‏	‏ק‏	Ω	‏לל‏	╟	╫	τ	≈
8			(	8	H	X	h	x	‏ט‏	‏ר‏	¿	‏ל‏	╙	╪	Φ	°
9			)	9	I	Y	i	y	‏י‏	‏ש‏	‏ˬ‏	╣	╜	┘	θ	•
a			*	:	J	Z	j	z	‏ך‏	‏ת‏	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	כ	ø	½	‏ך‏	╦	■	δ	√
c			,	<	L	\	l			‏ל‏	£	¼	‏ל‏	╠	■	∞	ⁿ
d			-	=	M	]	m	}	ם	Ø	¡	‏ל‏	═	▌	ø	²
e			.	>	N	^	n	~	מ	₧	«	‏ל‏	╬	▐	ϵ	■
f			/	?	O	_	o		‏ן‏	ƒ	¤	‏ך‏	±	■	∩	

Table_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	€			°	Ą	Š	ą	š
1			!	1	A	Q	a	q		`		±	Į	Ń	į	ń
2			"	2	B	R	b	r	,	'	¢	²	Ā	Ņ	ā	ņ
3			#	3	C	S	c	s		"	£	³	Ć	Ó	ć	ó
4			$	4	D	T	d	t	„	"	¤		Ä	Ō	ä	ō
5			%	5	E	U	e	u	…	·		µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	–	¦	¶	Ę	Ö	ę	ö
7			'	7	G	W	g	w	‡	—	§	·	Ē	×	ē	÷
8			(	8	H	X	h	x			Ø	ø	Č	Ų	č	ų
9			)	9	I	Y	i	y	‰	™	©	¹	É	Ł	é	ł
a			*	:	J	Z	j	z			Ŗ	ŗ	Ź	Ś	ź	ś
b			+	;	K	[	k	{	‹	›	«	»	Ė	Ū	ė	ū
c			,	<	L	\	l	|			¬	¼	Ģ	Ü	ģ	ü
d			-	=	M	]	m	}				½	Ķ	Ż	ķ	ż
e			.	>	N	^	n	~			®	¾	Ī	Ž	ī	ž
f			/	?	O	_	o				Æ	æ	Ļ	ß	ļ	

Ukraine_866

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	░	└	╨	р	Ё
1			!	1	A	Q	a	q	Б	С	б	▒	┴	╤	с	ё
2			"	2	B	R	b	r	В	Т	в	▓	┬	╥	т	Ґ
3			#	3	C	S	c	s	Г	У	г	│	├	╙	у	ґ
4			$	4	D	T	d	t	Д	Ф	д	┤	─	╘	ф	Є
5			%	5	E	U	e	u	Е	Х	е	╡	┼	╒	х	є
6			&	6	F	V	f	v	Ж	Ц	ж	╢	╞	╓	ц	І
7			'	7	G	W	g	w	З	Ч	з	╖	╟	╫	ч	і
8			(	8	H	X	h	x	И	Ш	и	╕	╚	╪	ш	Ї
9			)	9	I	Y	i	y	Й	Щ	й	╣	╔	┘	щ	ї
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	

Kazakhst_866

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	▒	└	╨	р	ә
1			!	1	A	Q	a	q	Б	С	б	▓	┴	╤	с	Ғ
2			"	2	B	R	b	г	В	Т	в	▓	┬	╥	т	Қ
3			#	3	C	S	c	s	Г	У	г	│	├	╙	у	Ң
4			$	4	D	T	d	t	Д	Ф	д	┤	─	╞	ф	Ө
5			%	5	E	U	e	u	Е	Х	е	╡	┼	F	х	Ү
6			&	6	F	V	f	v	Ж	Ц	ж	╢	╟	╥	ц	Ұ
7			'	7	G	W	g	w	З	Ч	з	╖	╠	╫	ч	h
8			(	8	H	X	h	x	И	Ш	и	╕	╚	╪	ш	ə
9			)	9	I	Y	i	y	Й	Щ	й	╣	╔	┘	щ	ғ
a			*	:	J	Z	j	z	К	Ъ	к	║	╩	┌	ъ	қ
b			+	;	K	[	k	{	Л	Ы	л	╗	╦	█	ы	ң
c			,	<	L	\	l	¦	М	Ь	м	╝	╠	▄	ь	ө
d			-	=	M	]	m	}	Н	Э	н	╜	=	▐	э	ү
e			.	>	N	^	n	~	О	Ю	о	╛	╬	▌	ю	ұ
f			/	?	O	_	o		П	Я	п	┐	╧	▪	я	

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	▒	└	╨	α	≡
1			!	1	A	Q	a	q	ü	ž	í	▓	┴	╤	β	±
2			"	2	B	R	b	г	é	Ž	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	ď	ô	ú	│	├	╙	π	≤
4			$	4	D	T	d	t	ä	ö	ñ	┤	─	╞	Σ	⌠
5			%	5	E	U	e	u	Ď	Ó	Ñ	╡	┼	F	σ	⌡
6			&	6	F	V	f	v	Ť	ů	Ö	╢	╟	╥	µ	÷
7			'	7	G	W	g	w	č	Ú	Ö	╖	╠	╫	τ	≈
8			(	8	H	X	h	x	ě	ý	š	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	Ě	Ö	ř	╣	╔	┘	Θ	∙
a			*	:	J	Z	j	z	Ĺ	Ü	ŕ	║	╩	┌	Ω	·
b			+	;	K	[	k	{	Í	š	Ŕ	╗	╦	█	δ	√
c			,	<	L	\	l	¦	í	Ľ	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	]	m	}	ľ	ý	§	╜	=	▐	ø	²
e			.	>	N	^	n	~	Ä	Ř	«	╛	╬	▌	∈	■
f			/	?	O	_	o		Á	Ł	»	┐	╧	▪	∩	

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	Ź	▒	∟	╨	α	≡
1			!	1	A	Q	a	q	ü	ę	Ż	▓	⊥	╤	ß	±
2			"	2	B	R	b	r	é	ł	ó	▓	╥	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	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	ą	û	ź	╢	╞	╓	μ	÷
7			'	7	G	W	g	w	ç	ù	Ż	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	Ś	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ŏ	⌐	╣	╔	┘	Θ	∙
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
c			,	<	L	\	l	|	î	ł	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	]	m	}	ć	¥	¡	╜	═	▌	ø	²
e			.	>	N	^	n	~	Ä	Ś	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Ą	ƒ	»	┐	╧	▀	∩	

Baltic_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	▒	∟	ą	Ó	-
1			!	1	A	Q	a	q	ü	æ	Ī	▓	⊥	č	ß	±
2			"	2	B	R	b	r	é	Æ	ó	█	╥	ę	ō	"
3			#	3	C	S	c	s	ā	ō	Ż	│	├	ė	Ń	¾
4			$	4	D	T	d	t	ä	ö	ż	┤	─	į	õ	¶
5			%	5	E	U	e	u	ģ	Ģ	ź	Ą	┼	š	Õ	§
6			&	6	F	V	f	v	å	¢	"	Č	Ų	ų	µ	÷
7			'	7	G	W	g	w	ć	Ś	¸	Ę	Ū	ū	ń	„
8			(	8	H	X	h	x	ł	ś	©	Ė	╚	ž	Ķ	°
9			)	9	I	Y	i	y	ē	Ö	®	╣	╔	┘	ķ	∙
a			*	:	J	Z	j	z	Ŗ	Ü	¬	║	╩	┌	Ļ	·
b			+	;	K	[	k	{	ŗ	ø	½	╗	╦	█	ļ	¹
c			,	<	L	\	l	|	ī	£	¼	╝	╠	▄	ņ	³
d			-	=	M	]	m	}	Ź	Ø	Ł	Į	═	▌	Ē	²
e			.	>	N	^	n	~	Ä	×	«	š	╬	▐	Ņ	■
f			/	?	O	_	o		Å	¤	»	┐	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	Ž	P	ž	p	Ç	É	á	▒	L	╨	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	┤	─	╘	Σ	⌠
5			%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	Š	k	š	Ï	¢	½	╗	╦	■	δ	√
c			,	<	L	Đ	l	đ	î	£	¼	╝	╠	■	∞	ⁿ
d			-	=	M	Ć	m	ć	ì	¥	¡	╜	=	▌	ø	²
e			.	>	N	Č	n	č	Ä	Pt	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	±	■	∩	

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	~	ﻊ		٠	ﭖ	ﺯ	ـ	﹦
1			!	1	A	Q	a	q	◘	ﻋ	‐	١	ﺀ	ﺩ	ﻁ	ٔ
2			"	2	B	R	b	r	´	ﻌ	۲	٢	ﻕ	ﺭ	ﻅ	ﻭ
3			#	3	C	S	c	s	‹	ﻍ	±	٣	ﺉ	ﻤ	ﻩ	ﺓ
4			$	4	D	T	d	t	▓	ﻏ	ﺁ	٤	ﻉ	ﺃ	ﻝ	ﻉ
5			%	5	E	U	e	u	'	ﻑ	۱	٥	ﺏ	ﻣ	ﻭ	ﺵ
6			&	6	F	V	f	v	‑	ﻙ	ﹰ	٦	ﺯ	ﻅ	ﻝ	ﺹ
7			'	7	G	W	g	w	˘	«	ﻭ	U	ﺍ	ﻁ	ﺍ	ﺊ
8			(	8	H	X	h	x	´	»	ﻝ	ﻥ	ﺐ	ﻅ	ﻭ	ﺫ
9			)	9	I	Y	i	y	≤	ﻯ	ﺑ	٩	ﺀ	ﻉ	ﺙ	ﻯ
a			*	:	J	Z	j	z	،	ﻳ	ﺩ	ﻁ	ﺩ	ﺍ	ﺟ	ﻯ
b			+	;	K	[	k	{	ﻟ	ﻩ	ﺩ	۱	ﺩ	¦	ﺽ	ﻝ
c			,	<	L	\	l	¦	ﺟ	ﻙ	،	ﻣ	ﻭ	ﭗ	ﺙ	ﺩ
d			-	=	M	]	m	}	ﺟ	ﻙ	ﺙ	ﻣ	ﺩ	ﺍ	ﻩ	ﭻ
e			.	>	N	^	n	~	ﻤ	ﻯ	ﺙ	ﻣ	ﺩ	ﭗ	ﻉ	■
f			/	?	O	_	o		ﺩ	٬	ﺙ	ﻉ	ﺩ	ﻉ	ﭖ	

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	~	ڊ		٠	۲	ﺽ	ﻟ	ﻟ
1			!	1	A	Q	a	q	ﹻ	ﺁ	─	١	ﺀ	ﺝ	ﻃ	ّ
2			"	2	B	R	b	r	´	ﺑ	ﺀ	٢	٦	ﺩ	ﻇ	ﻭ
3			#	3	C	S	c	s	ﹽ	ﺕ	ﹷ	٣	٧	ﺫ	ﻉ	ﻩ
4			$	4	D	T	d	t	ﷺ	ﺙ	ﻴ	٤	ﻕ	ﺫ	ﻝ	ﻴ
5			%	5	E	U	e	u	'	ﺡ	١	٥	ﻙ	ﺻ	ﻉ	ﻯ
6			&	6	F	V	f	v	ﹹ	ﺥ	ﻀ	٦	ﺱ	ﺿ	ﻝ	ﻱ
7			'	7	G	W	g	w	ﹺ	«	ﻭ	٧	١	ﻃ	ﻉ	ﻳ
8			(	8	H	X	h	x	'	»	ﺉ	٨	ﻻ	ﻅ	ﻭ	ﻩ
9			)	9	I	Y	i	y	ﹼ	ﺩ	ﺏ	٩	ﺯ	ﻯ	ﻉ	ﻍ
a			*	:	J	Z	j	z	ﹾ	ﺭ	ﺭ	ﻮ	ﺯ	ﺥ	ﻳ	ﻯ
b			+	;	K	[	k	{	ﺀ	ﺱ	ﺯ	ﻑ	ﺯ	ﻇ	ﻩ	ﻝ
c			,	<	L	\	l	¦	ﺀ	ﺵ	'	ﻣ	ﺯ	ﺭ	ﻉ	ﻝ
d			─	=	M	]	m	}	ﺉ	ﺽ	ﺝ	ﻣ	ﺩ	ﻡ	ﻉ	ﻅ
e			.	>	N	^	n	~	ﺏ	ﻯ	ﺝ	ﻭ	ﺩ	ﻝ	ﻉ	■
f			/	?	O	_	o		ﺏ	ﺀ	ﺝ	٤	ﺩ	ﻍ	٩	

Greek_DEC

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	Ä	É	á	°	Ï		Ū	
1			!	1	A	Q	a	q	Ë	æ	í	±	A	Π	α	π
2			"	2	B	R	b	r	Ή	Æ	ó	²	B	P	β	ρ
3			#	3	C	S	c	s	Ϊ	õ	ú	³	Γ	Σ	γ	σ
4			$	4	D	T	d	t	ä	ö	ñ	┤	Δ	T	δ	τ
5			%	5	E	U	e	u	à	ò	¥	╡	E	Y	ε	υ
6			&	6	F	V	f	v	å	û	¦	╢	Z	Φ	ζ	φ
7			'	7	G	W	g	w	ç	ù	§	╖	H	X	η	χ
8			(	8	H	X	h	x	ê	Ö	¿	╕	Θ	Ψ	θ	ψ
9			)	9	I	Y	i	y	ë	Ý	©	╣	I	Ω	ι	ω
a			*	:	J	Z	j	z	è	Ώ	ª	║	K	ά	κ	ς
b			+	;	K	[	k	{	ï	¢	«	»	Λ	έ	ñ	ΰ
c			,	<	L	\	l	¦	î	£	¼	╜	M	ή	μ	ώ
d			─	=	M	]	m	}	ì	¥	¡	½	N	ί	ν	²
e			.	>	N	^	n	~	Ä	Pt	«	╛	Ξ		ξ	■
f			/	?	O	_	o		Å	ƒ	»	┐	O	ό	ο	

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	ΰ	π
1			!	1	A	Q	a	q			¯	±	Α	Ρ	α	ρ
2			"	2	B	R	b	r			ª		Β		ß	ς
3			#	3	C	S	c	s			³		Γ	Σ	γ	σ
4			$	4	D	T	d	t			¤	΄	Δ	Τ	δ	τ
5			%	5	E	U	e	u			¥		Ε	Υ	ε	υ
6			&	6	F	V	f	v			¦	Ά	Ζ	Φ	ζ	φ
7			'	7	G	W	g	w			§		Η	Χ	η	χ
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			ª	Ι	Κ	Ϊ	κ	ϊ
b			+	;	K	[	k	{			«	»	Λ	Ύ	ΰ	ϋ
c			,	<	L	\	l	|				Ό	Μ	ά	μ	ό
d			-	=	M	]	m	}			½	Ν	έ	ν	ύ	
e			.	>	N	^	n	~			Ύ	Ξ	ή	ξ	ώ	
f			/	?	O	_	o				Ώ	Ο	ί	ο		

UK_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	@	P	`	p	Ç	É	á	▒	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	ß	±
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	┤	─	╘	Σ	⌠
5			%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	∙
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
c			,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	]	m	}	ì	¥	¡	╜	=	▌	ø	²
e			.	>	N	^	n	‾	Ä	₧	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

Tally Dascom 5130P

US_ASCII

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 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	█	┬	π	Γ	≥
3			#	3	C	S	c	s	â	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	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	[	k	{	ï	¢	½	╗	╦	■	δ	√
c			,	<	L	\	l	|	î	£	¼	╝	╠	■	∞	ⁿ
d			-	=	M	]	m	}	ì	¥	¡	╜	=	▌	ø	²
e			.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	■	∩	

Swedish

hex dez	0 0	1 16	2 32	3 48	4 64	5 80	6 96	7 112	8 128	9 144	a 160	b 176	c 192	d 208	e 224	f 240
0				0	É	P	é	p	Ç	É	á	▒	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▓	⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	█	┬	π	Γ	≥
3			#	3	C	S	c	s	â	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	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	Ä	k	ä	ï	¢	½	╗	╦	■	δ	√
c			,	<	L	Ö	l	ö	î	£	¼	╝	╠	■	∞	ⁿ
d			-	=	M	Å	m	å	ì	¥	¡	╜	=	▌	ø	²
e			.	>	N	Ü	n	ü	Ä	₧	«	╛	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	■	∩	

German

| 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	▒	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	π	Γ	≥
3			#	3	C	S	c	s	â	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	å	û	ª	╢	╞	π	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	Ä	k	ä	ï	Ï	¢	½	╦	╥	δ	√
c			,	<	L	Ö	l	ö	î	£	¼	╗	╠	▄	∞	ⁿ
d			-	=	M	Ü	m	ü	ì	¥	¡	╜	═	█	φ	²
e			.	>	N	^	n	ß	Ä	₧	«	╛	╬	▐	ε	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

Portuguese

| 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	▒	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	π	Γ	≥
3			#	3	C	S	c	s	â	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	å	û	ª	╢	╞	π	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	Ã	k	ã	ï	Ï	¢	½	╦	╥	δ	√
c			,	<	L	Ç	l	ç	î	£	¼	╗	╠	▄	∞	ⁿ
d			-	=	M	Õ	m	õ	ì	¥	¡	╜	═	█	φ	²
e			.	>	N	^	n	°	Ä	₧	«	╛	╬	▐	ε	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

French

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	à	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	▓	┬	π	Γ	≥
3			£	3	C	S	c	s	â	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	å	û	ª	╢	╞	π	μ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	°	k	é	Ï	¢	½	╗	╦	█	δ	√
c			,	<	L	Ç	l	ù	î	£	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	§	m	è	ì	¥	¡	╜	=	▌	ø	²
e			.	>	N	^	n	¨	Ä	₧	«	┘	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	■	∩	

Italian

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	ù	p	Ç	É	á	▓	└	⊥	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	π	Γ	≥
3			£	3	C	S	c	s	â	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	å	û	ª	╢	╞	π	μ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	°	k	à	Ï	¢	½	╗	╦	█	δ	√
c			,	<	L	Ç	l	ò	î	£	¼	╝	╠	▄	∞	ⁿ
d			-	=	M	é	m	è	ì	¥	¡	╜	=	▌	ø	²
e			.	>	N	^	n	ì	Ä	₧	«	┘	╬	▐	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	■	∩	

Norwegian

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	▓	⊥	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	█	┬	π	Γ	≥
3			#	3	C	S	c	s	â	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	å	û	ª	╢	╞	╥	μ	÷
7			'	7	G	W	g	w	ç	ù	Ω	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	∙
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	Æ	k	æ	ï	¢	½	╗	╦	■	δ	√
c			,	<	L	Ø	l	ø	î	£	¼	╝	╠	■	∞	ⁿ
d			-	=	M	Å	m	å	ì	¥	¡	╜	=	■	ø	²
e			.	>	N	^	n	‾	Ä	₧	«	╛	╫	■	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	■	∩	

Spanish

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	▓	⊥	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	█	┬	π	Γ	≥
3			£	3	C	S	c	s	â	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	å	û	ª	╢	╞	╥	μ	÷
7			'	7	G	W	g	w	ç	ù	Ω	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	∙
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
b			+	;	K	¡	k	º	ï	¢	½	╗	╦	■	δ	√
c			,	<	L	Ñ	l	ñ	î	£	¼	╝	╠	■	∞	ⁿ
d			-	=	M	¿	m	ç	ì	¥	¡	╜	=	■	ø	²
e			.	>	N	^	n	~	Ä	₧	«	╛	╫	■	∈	■
f			/	?	O	_	o		Å	ƒ	»	┐	╧	■	∩	

Siemens_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	▒	└	ğ	α	ğ
1			!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	π	Γ	≥
3			#	3	C	S	c	s	â	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	å	û	ª	╢	╞	Ğ	μ	ö
7			'	7	G	W	g	w	ç	ù	º	╖	╫	Ç	ç	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╪	╚	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	Γ	Ω	·
b			+	;	K	[	k	{	ï	¢	½	╗	╦	■	δ	√
c			,	<	L	\	l			î	£	¼	╝	╠	Ü	∞	ü
d			–	=	M	]	m	}	ì	¥	¡	╜	=	İ	ø	¹
e			.	>	N	^	n	~	Ä	₧	«	╛	╫	Ş	∈	ş
f			/	?	O	_	o		Å	ƒ	»	┐	±	■	∩	ö

DEC_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	▒	└	ğ	α	ğ
1			!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	π	Γ	≥
3			#	3	C	S	c	s	â	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	å	û	ª	╢	╞	Ğ	μ	ö
7			'	7	G	W	g	w	ç	ù	º	╖	╫	Ç	ç	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╪	╚	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
a			*	:	J	Z	j	z	è	Ü	¬	║	╩	Γ	Ω	·
b			+	;	K	[	k	{	ï	¢	½	╗	╦	■	δ	√
c			,	<	L	\	l			î	£	¼	╝	╠	Ü	∞	ü
d			–	=	M	]	m	}	ì	¥	¡	╜	=	İ	ø	²
e			.	>	N	^	n	~	Ä	₧	İ	┐	╫	Ş	∈	ş
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9 Control codes summary

9.1 Epson ESC/P2 emulation command list

Command	Function
BEL	Beeper
BS	Backspace
HT	Horizontal Tab
LF	Line Feed
VT	Vertical Tab
FF	Form Feed
CR	Carriage Return
SO	Double-Wide Printing 1 Line
SI	Select Condensed Mode
DC2	Cancel Condensed Mode
DC4	Cancel Double-Wide Printing 1 Line
CAN	Cancel Line
ESC SO	Double-Wide Printing 1 Line
ESC SI	Select Condensed Mode
ESC SP	Set Inter Character Space
ESC !	Master Select
ESC #	Cancel MSB Control
ESC $	Set absolute horizontal print position
ESC %	Select user-defined set
ESC &	Define user-defined characters
ESC (-	Select line/score
ESC (B	Bar code setup and print
ESC (C	Set page length in define unit
ESC (G	Select graphics mode
ESC (U	Set unit
ESC (V	Set absolute vertical print position
ESC (^	Print data as characters
ESC (c	Set page format
ESC (t	Assign character table
ESC (v	Set relative vertical print position
ESC *	Select bit image
ESC +	Select n/360" Line Spacing
ESC -	Auto Underscore
ESC .	Print raster graphics
ESC 0	Select 1/8" Line Spacing
ESC 2	Select 1/6" Line Spacing
ESC 3	Set Graphics Line Spacing (n/180")
ESC 4	Select Italic Mode
ESC 5	Cancel Italic Mode
ESC 6	Enable Printable Characters
ESC 7	Enable Upper Control Codes

Command	Function
ESC :	Copy ROM to RAM
ESC <	Select Unidirectional Mode 1 Line
ESC =	Set MSB to 0
ESC >	Set MSB to 1
ESC ?	Reassign Graphics Mode
ESC @	Initialize Printer
ESC A	Set n/60" Line Spacing
ESC B	Set Vertical Tabs
ESC C	Set Page Length in Lines
ESC C 0	Set Page Length in Inches
ESC D	Set horizontal tabs
ESC E	Select Emphasized Mode
ESC F	Cancel Emphasized Mode
ESC G	Select Double-strike Mode
ESC H	Cancel Double-strike Mode
ESC J	Advance print position
ESC K	Select 60-dpi graphics
ESC L	Select 120-dpi graphics
ESC M	Select 12 cpi
ESC N	Set bottom margin
ESC O	Cancel bottom margin
ESC P	Select 10 cpi
ESC Q	Set right margin
ESC R	Select an international character set and code page
ESC S	Select Subscript or Superscript Printing
ESC T	Cancel Subscript or Superscript Printing
ESC U	Turn unidirectional mode on/off
ESC W	Turn Double-wide Mode On/Off
ESC Y	Select 120-dpi, double-speed graphics
ESC Z	Select 240-dpi graphics
ESC \	Set relative horizontal print position
ESC c	Set horizontal motion index(HMI)
ESC g	Select 15 cpi
ESC k	Select Typestyle Family
ESC l	Set left margin
ESC p	Turn Proportional Mode On/Off
ESC q	Select Character Style
ESC t	Select character table
ESC w	Turn Double-high Mode On/Off
ESC x	Select Letter Quality or Draft
ESC y	Select draft/super draft
ESC Y	Select High-speed Double-density Graphics Mode
DEL	Delete Character

9.2   IBM emulation command list

Command	Function
BS	Backspace
HT	Horizontal tab
CR	Carriage return
ESC BS	Backspace
ESC HT	Horizontal tab
ESC CR	Carriage return
ESC D	Set horizontal tabs
ESC X	Set horizontal margins
ESC d	Relative mode inline forward
LF	Line feed
VT	Vertical tab
FF	Form feed
ESC LF	Line feed
ESC VT	Vertical tab
ESC FF	Form feed
ESC 0	Select 1/8" line spacing
ESC 1	Select 7/72" line spacing
ESC 2	Start text line spacing
ESC 3	Set graphics line spacing
ESC 4	Set top of form
ESC 5	Automatic line feed
ESC A	Set text line spacing
ESC B	Set vertical tabs
ESC C	Set form length in lines
ESC C NUL	Set form length in inches
ESC J	Graphics variable line spacing
ESC N	Set automatic perforation skip
ESC O	Cancel automatic perforation skip
ESC [\	Set vertical units
ESC]	Reverse line feed
SO	Double-wide printing by line
SI	Condensed printing
DC2	Select 10 cpi
DC4	Cancel double-wide printing by line
ESC SO	Double-wide printing by line
ESC SI	Condensed printing
ESC DC2	Select 10 cpi
ESC DC4	Cancel double-wide printing by line
ESC -	Continuous underscore
ESC :	Select 12 cpi
ESC E	Select emphasized mode
ESC F	Cancel emphasized mode
ESC G	Select double strike mode
ESC H	Cancel double strike mode
ESC I	Set print mode
ESC P	Proportional space mode

Command	Function
ESC S	Start subscript or superscript printing
ESC T	Cancel subscript or superscript printing
ESC W	Continuous double-wide printing
ESC [-	Score select
ESC [@	Set presentation highlight
ESC [I	Set font global
ESC [T	Select code page
ESC [d	Set print quality
ESC _	Continuous over score
ESC 6	Select character set 2
ESC 7	Select character set 1
ESC ^	Print single character from all character chart
ESC K	Normal density bit image graphics
ESC L	Dual density bit image graphics
ESC Y	Dual density bit image graphics
ESC Z	High density bit image graphics
ESC [g	High resolution graphics
DC1	Select printer
DC3	Deselect printer
CAN	Cancel Data
ESC DC1	Select printer
ESC DC3	Deselect printer
ESC CAN	Cancel Data
ESC R	Set all tabs to power on settings
ESC U	Set print direction
ESC *	Select graphics mode
ESC 3 (AGM)	Set graphics line spacing(n/180")
ESC A (AGM)	Set text line spacing(n/60")
ESC J (AGM)	Graphics variable line spacing(n/180")

Note:
AGM stands for Advanced Graphic Mode.

9.3   Olivetti emulation command list

Command	Function
ESC Q nnn mmm ESC Z	Define document length
ESC J nnn	Define left margin
ESC T nnn	Define top of form " TOF"
ESC M nnn	Define bottom of form "BOF"
ESC & nn	Elementary vertical spacing
ESC <	Print pitch 10 cpi
ESC =	Print pitch 12 cpi
ESC >	Print pitch 16.6 cpi
ESC a n	Print pitch
ESC ?	Proportional spacing
ESC R nnn	Select graphic font
ESC 3	Double width
ESC 4	Cancel double width
ESC d	Double height and double width
ESC e	Cancel double height and double width
ESC ! W 1	Double height
ESC ! W 0	Cancel double height
ESC ! sp nnn	Add columns to the right of the character
ESC (	Bold face
ESC)	Cancel bold face
ESC * n	Underline
ESC +	Cancel underline
ESC ` n	Superscript - Subscript
ESC {	Cancel superscript-subscript
ESC S 5	Select printer device
LF	Line feed forward
FF	Form feed (ejection from rear)
CR	Carriage return
BS	Back Space
ESC 7	Line feed back
ESC H nnn	Set absolute horizontal position
ESC I nnn	Set relative vertical position
ESC L nnn	Set absolute vertical position
ESC O	Eject document
ESC ^ 0	Change emulation
ESC [nnn	Select code page
BEL	Bell
DEL	Clear print memory
ESC # n	Assign reference for ESC L nnn
ESC	A nnn	Define offset in elementary steps
ESC / m nnnn	Absolute vertical position in elementary steps
ESC -	Measure document length
ESC } -	Measure document width
ESC S nnnn	Measure document length or width : answer
ESC 1 p mmmm nnn	9 pin BIM print
ESC 1 P mmmm nnn	24 pin BIM print

ESC 2	Reset BIM mode
ESC X nnn	Set relative horizontal position
ESC h 0 n m d0 d1 d2 D1 D2Dm	9 pin DLL
ESC h 0 n m d0 d1 d2 D1 D2Dm	24 pin DLL
ESC : 000	Copy character generator into user memory
ESC m n 0	Select character generator
ESC Z	Request for primary ID
ESC / 7	Printer ID
ESC i	Request for basic machine configuration
ESC p x y z k	Printer configuration
ESC j	Status request
ESC r x	Synchronous basic machine status
ESC sp B	Request for Document Status
ESC B id m ESC Z	Synchronous Document Status
ESC sp b	Request for FW Release ID
ESC b idrel1;idver1; ... idreln;idvern ESC Z	FW Release ID
ESC sp a	Request for Set-Up configuration
ESC a byte1 byte2 byte3 byten ESC Z	Set-Up configuration
ESC l	Reset error
ESC n	Olivetti controlled selection
ESC 0	General reset
ESC U n	Book operator
ESC r x	Answer to book operator command
ESC	Select automatic operator booking
ESC _	Select manual operator booking
ESC ! G n	Select 9 or 24 pin graphics and DLL
ESC x mm; hh; zz; n ESC Z	Set Bar Code Print
ESC y dati ESC Z	Activate Bar Code Print

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 radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 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.

DASCOM REPRESENTATIVES

GERMANY
DASCOM EuropeGmbH
Heuweg 3
D-89079 Ulm
Deutschland
Tel.: +49 (0) 731 2075 0
Fax: +49 (0) 731 2075 100
www.dascom.com

UNITED KINGDOM
DASCOM GB Ltd
Hart House,Priestley Road,
Basingstoke, Hampshire
RG24 9PU, England
Phone: +44 (0) 1256 355130
Fax: +44 (0) 1256 481400
www.dascom.com

SINGAPORE (ASIA PACIFIC)
DASCOM AP Pte Ltd
21 Bukit Batok Crescent
#29-81,WCEGA Tower
Singapore 658065
Phone: +65 6760 8833
Fax: +65 6760 1066
www.dascom.com

AMERICAS
Dascom Americas Corporation
34 Lakeview Court
Verona, VA 24482
USA
Phone:+1 (877) 434 1377
Fax: +1 (540) 242 7221
www.dascom.com

FRANCE
DASCOM EuropeGmbH
117 Avenue VictorHugo
92100 Boulogne-Billancourt
France
Phone: +33 (1) 73 02 51 98
www.dascom.com

CHINA
JIANGMEN DASCOM COMPUTER
PERIPHERALS CO., LTD
No.399, jinxing Road,
Jianghai District Jiangmen,
P.R. China
www.dascom.com

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