# **Owner's Manual**

NCR 7169 Multifunction Printer

Release 1.0





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## **Preface**

### **Audience**

This book is written for hardware installer/service personnel, system integrators, and field engineers.

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# Safety Requirements

## Important information to the user

To ensure compliance with the Product Safety, FCC and CE marking requirements, you must use the power supply, power cord, and interface cable which were shipped with this product or which meet the following parameters:

### Power supply

UL Listed (QQGQ), Class 2 power supply with SELV (Secondary Extra Low Voltage), non-energy hazard output, input rated 100–240 Vac, 1.5/0.8 A, 50/60 Hz, output rated 24 Vdc, 2.3 A. or 3.125 A.

Use of this product with a power supply other than the NCR power supply will require you to test this power supply and NCR printer for FCC and CE mark certification.

### Interface cable

A shielded (360 degree) interface cable must be used with this product. The shield must be connected to the frame or earth ground connection or earth ground reference at EACH end of the cable.

Use of a cable other than described here will require that you test this cable with the NCR printer and your system for FCC and CE mark certification.

#### Power cord

A UL listed, detachable power cord must be used for this product. For applications where the power supply module may be mounted on the floor, a power cord with Type SJT marking must be used. For applications outside the US, power cords which meet the particular country's certification and application requirements should be used.

Use of a power cord other than described here may result in a violation of safety certifications which are in force in the country of use.

## Wichtige Benutzerinformationen:

Um die Produktsicherheit und die FCC und CE-Markierungsanforderungen bei der Benutzung des Druckers sicherzustellen, müssen entweder das mitgesante Netzgerät, Netzanschlußkabel und Verbindungskabel verwendet werden oder folgende Anforderungen müssen erfüllt sein:

### Netzgerät:

Das Netzgerät muß ein UL verzeichnetes (QQGQ) Netzgerät der Klasse 2 mit SELV (Sekundärextraniederspannung), Nichtenergie Gefahrenausgang, begrenzter Energiequelle, einer Aufnahmeleistung von 100–240 VAC, 1.5/0.8 A und 50/60 Hz, und einer Leistungsabgabe von 24 VDC, 3.125 A.c sein.

Die Benutzung des Produktes mit einem Netzgerät, daß nicht von NCR mitgeliefert wurde erfordert das Testen des Netzgerätes mit dem NCR Drucker auf FCC und CE–Markierungs Befolgung.

### Verbindungskabel:

Bei der Benutzung dieses Produkts muß ein abgeschirmtes (360 Grad) Verbindungskabel benutzt werden. Die Abschirmleitung muß entweder mit dem Rahmens des Gerätes oder der Erde verbunden sein oder alternativ müssen alle Enden des Kabels geerdet werden.

Falls das Verbindungskabel nicht in der hier beschrieben Art benutzt wird, muessen das Kabel und der NCR Drucker auf die FCC und CE-Markierungs Befolgung überprüft werden.

### Netzanschlußkabel:

Für dieses Produkt muß ein in UL aufgelistete, abnehmbares Netzanschlußkabel benutzt werden. Falls das Netzgerät fest auf dem Boden montiert ist, muß ein Netzanschlußkabel mit der SJT Markierung benutzt werden. Für Anwendungen außerhalb der USA, sollte ein Netzanschlußkabel benutzt werden, daß der Zertifizierung und Bestimmung des jeweiligen Landes entspricht.

Das Abweichen der hier beschriebenen Benutzungsanleitung des Netzanschlußkabels kann gegen die gesetzlichen Sicherheitsbestimmungen des jeweiligen Landes verstoßen.

## 用户须知

为了确保产品安全和遵守中国电磁兼容(EMC)规定,必须使用随产品附带或符合下列参数的电源,电源线和接口电缆:

## 电源

中国强制性产品认证, 输入为:交流100~240伏, 1.5/0.8安倍, 50/60赫兹, 输出为: 直流24伏, 2.3或3.125安倍

如使用本产品与非NCR生产的电源产品,必须测试电源和NCR生产的打印机以符合产品安全和中国电磁兼容(EMC)规定

## 接口电缆

本产品必须使用屏蔽(360度)接口电缆。屏蔽层必须连接到金属框架或接地或接口电缆两端的接地参考

使用没有在这里描述的接口电缆将要求您必须测试接口电缆和NCR生产的打印机以符合产品安全和中国电磁兼容(EMC)规定

## 电源线

中国强制性产品认证, 可拆卸的电源线.

使用没有在这里描述的电源线可能导致在该国的安全证书失效

## 销售打印机的安全规定

## 安全注意事项

### 维修

注意:本产品不含有用户可自行更换的部件,如需更换,请联系有资质的技术人员。

## 保险丝的更换

注意:为防止失火只可用相同规格的保险丝进行更换,

# 안 전 주 의 사 항

### 서비스

주의 : 이 제품은 서비스 부품을 포함하지 않고 있습니다. 서비스는 자격이 있는 서비스 기술자에 의해 제공됩니다.

### 퓨즈교체

주의: 화재의 위험에 대한 계속적인 보호를 위해 같은 타입과 등급의 퓨즈로 교체해 야 합니다. 。

## 한국 업무용(A급 기기) 방송통신기자재

이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

## Federal Communications Commission (FCC) Radio Frequency Interference Statement



Warning: Changes or modifications to this unit 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 A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### Communication cables

Shielded communication cables must be used with this unit to ensure compliance with the Class A FCC limits.

### Information to user

This equipment must be installed and used in strict accordance with the manufacturer's instructions. However, there is no guarantee that interference to radio communications will not occur in a particular commercial installation. If this equipment does cause interference, which can be determined by turning the equipment off and on, the user is encouraged to contact NCR immediately.

The NCR Company is not responsible for any radio or television interference caused by unauthorized modification of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by NCR. The correction of interferences caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

# Industry Canada (IC) Radio Frequency Interference Statement

This Class A digital apparatus meets all requirements of the Canadian Interference—Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## Bundeskommunikationen Kommission (FCC) Hochfrequenz-Störungs Richtlinie.

**Warnung:** Änderungen oder Änderungen an der Maßeinheit, die nicht ausdrücklich von der Seite, die für die Befolgung verantwortlich ist, genehmigt ist, können zum Entzug der Benutzungsberechtigung dieses Gerätes führen.

Anmerkung: Dieses Gerät wurde getested und entspricht der zulässigem Richtlinien eines digitalen Gerätes der Klasse A, gemäß Abschitt 15 in den FCC Richtlinien. Diese Richtlinien sind dazu da, einen angemessenen Schutz gegen schädliche Störung bei der komerziellen Nutzung dieses Gerätes zu gewährleisten. Dieses Gerät erzeugt und benutzt Hochfrequenzenergie und kann Hochfrequenzenergie ausstrahlen. Wenn die Installierung und Benutzung dieses Gerätes nicht wie im Benutzer Handbuch beschrieben ist, durchgeführt wird, kann eine schädliche Störung von Funkverbindungen verursacht werden. Der Betrieb dieses Gerät in einem Wohngebiet kann schädliche Störung verursachen die auf Kosten des Benutzers behoben werden müssen.

### Kommunikationskabel:

Dieses Gerät muß in Uebereinstimmung mit Kategorie A FCC Richtlinien mit einem abgeshirmten Kabel betrieben werden.

### Benutzerinformationen:

Dieses Gerät muß wie in der Hersteller Anweisungen beschrieben installiert und benutzt werden. Jedoch gibt es keine Garantie dafür, daß Funkstörung nicht in bestimmten kommerziellen Installation auftritt. Für den Fall, daß das Gerät Funkstörungen verursacht, was durch das An und Abschalten des Gerätes festgestellt werden kann, wird der Benutzer aufgefordert sofort mit NCR Kontakt aufzunehmen.

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# Industrie-Kanada (IS) Hochfrequenz-Störungs Richtlinie:

Dieses digitale Gerät der Klasse A entspricht allen Anforderungen der kanadischen Störung-Verursachende Geräte Richtlinie.

# 无线电频率干扰声明

## 用户须知

本设备已经过测试,证明其符合A级数字设备的限定。这些限制旨在对设备在商业环境中运作时提供合理的保护,以防有害干扰。本设备产生,使用,并能发射无线电频率能量.因此如果不按照使用说明书安装和使用,可能对无线电通讯造成有害干扰.如果在住宅区使用本设备很可能造成干扰.用户将被要求自费纠正干扰。

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### 中国电磁兼容声明:

警告:在居住环境中,运行此设备可能会造成无线电干扰。

### Caution labels information



Hot Surface, Do not touch / Surface chaude, Ne pas toucher.



Hazardous Moving Parts, Keep Fingers and Other Body Parts Away/ Parties Mobiles Dangereuses Tenir Les Doigts Et Les Autres Parties Du Corps Éloignés.

# References

- NCR 7169 Multifunction Printer Service Manual (BCC5-0000-5350)
- NCR 7169 Multifunction Printer Parts Identification Manual (BCC5-0000-5351)
- NCR 7169 Multifunction Printer Migration Guide (BCC5-0000-5353)
- NCR 7169 Multifunction Printer Programmer's Guide (BCC5-0000-5352)

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## **Revision Record**

Issue	Date	Remarks
Α	Jun 2019	First Issue
В	Oct 2019	<ul> <li>Updated the images on the following topics:</li> <li>Set MICR Dual Pass</li> <li>Set Buzzer Tone</li> <li>Updated the steps on the following topics:</li> <li>Connecting the cables</li> <li>Software or hardware configuration</li> <li>Removed "Limited Energy Source" phrase from the <i>Power Supply</i> safety information</li> <li>Added the "Hazardous Moving Parts" caution</li> <li>Added the "Cleaning the slip station" topic</li> </ul>
С	Jan 2020	<ul> <li>Updated the "Replacing the Ribbon Cassette" procedures</li> <li>Added the "Clearing Paper Jams" procedures</li> </ul>
D	Jun 2020	Updated the Selecting Thermal Receipt Papers section
Е	Sep 2020	Updated the Paper Low LED color from Amber to Green
F	Jan 2022	Added Koehler Blue4est <sup>®</sup> paper
G	Apr 2022	Updated instructions for resetting the printer
Н	Oct 2022	<ul> <li>Updated the Printer Configuration Form</li> <li>Updated the Software or hardware configuration Main Menu</li> <li>Added CP855, CP1250, CP1251, and Unicode support (UTF-16) font configurations</li> <li>Updated the Radio Frequency Interference Statement for China</li> </ul>
I	Feb 2023	Added warnings in using and connecting the cash drawer

# Chapter 1: NCR 7169 Multifunction Printer

# General Description



The 7169 Multifunction printer is a fast, quiet, relatively small, and very reliable multiple–function printer. It prints receipts, validates and prints checks, and prints on a variety of single–part or multiple–part forms. There is no journal as it is kept electronically by the host computer.

The industry–standard USB communication interface allows the 7169 to be connected to any host computer that uses the USB communication interface. The printer is also available with an RS–232C or a LAN communication interface as option.

With thermal printing technology on the more frequently used receipt station, there is no ribbon cassette to change and paper loading is extremely simple. Printing on single-part or multiple-part forms, validating checks, and printing checks are also easy in the accommodating slip station. The 7169 features Magnetic Ink Character Recognition (MICR) check reader with parsing, which reads account numbers on checks for easy verification.

# Features and Options

The NCR 7169 Multifunction Printer comes with several features and options.



**Note:** All models of the 7167-XXXX-YYYY, 7168-XXXX-YYYY, 7169-XXXX-YYYY, 7197, 7198-XXXX-YYYY and 7199-XXXX-YYYY have the same electrical ratings (24V—, 3.125A) and are in the same product family.

## Receipt station

- Thermal printing
- Standard pitch (host selectable): 15.2 characters per inch, 44 columns
- Compressed pitch (host selectable): 19.0 characters per inch, 56 columns
- ECO feature
- Resident bar codes
  - Code 39
  - Code 93
  - Code 128
  - UPC-A
  - UPC-E
  - JAN8 (EAN)
  - JAN13 (EAN)
  - Interleaved 2 of 5
  - Codabar
  - PDF417
  - GS1 DataBar Omnidirectional
  - GS1 DataBar Truncated
  - GS1 DataBar Stacked
  - S1 DataBar Stacked Omnidirectional
  - GS1 DataBar Limited
  - GS1 DataBar Expanded
  - GS1 DataBar Expanded Stacked
  - QR Code
- Drop-in paper loading requiring no spindle or threading paper
- Paper low indicator
- Paper exhaust indicator

## Slip station

- Bi-directional, impact printing
- Standard pitch (host selectable): 13.9 characters per inch, 45 columns
- Compressed pitch (host selectable): 17.1 characters per inch, 55 columns
- Printing of forms up to five plies
  - Front insertion of forms with forms stop
  - Side insertion of forms with override of forms stop
  - Automatic and manual insertion of forms
- Form alignment sensors and Slip In LED indicator
- Horizontal flat-bed slip table
- Snap-on ribbon cassette
- Resident bar codes
  - Code 39
  - Code 93
  - Code 128
  - UPC-A
  - UPC-E
  - JAN8 (EAN)
  - JAN13 (EAN)
  - Interleaved 2 of 5
  - Codabar

## Receipt and Slip print stations

- Variety of print modes: double high (receipt station only), double strike (slip station only), double wide, upside down, and rotated
- 14 resident character language Code Pages:
  - PC Code Page 437 (US English)
  - PC Code Page 850 (Multilingual)
  - PC Code Page 852 (Slavic)
  - PC Code Page 858 (with Euro symbol)
  - PC Code Page 860 (Portuguese)
  - PC Code Page 862 (Hebrew)
  - PC Code Page 863 (French Canadian)
  - PC Code Page 864 (Arabic)
  - PC Code Page 865 (Nordic)
  - PC Code Page 866 (Cyrillic)
  - PC Code Page 874 (Thai)
  - PC Code Page 1252 (Windows Latin #1)
  - PC Code Page 1256
  - PC Code Page Katakana
  - CP932 (Japanese)
  - CP936 (Simplified Chinese)
  - CP949 (Korean)
  - CP950 (Traditional Chinese)
  - CP855 (IBM Cyrillic)
  - CP1250 (Windows Eastern European)
  - CP1251 (Windows Cyrillic)
  - Unicode support (UTF-16)

- Code Pages supported in Receipt Station only
  - Hungary
  - Romania
  - PC Code Page 737 (DOS Greek)
  - PC Code Page 928 (Greek)
  - PC Code Page 1255 (Hebrew)
  - HKSCS (Hong Kong Chinese)
- 64K Flash memory for downloaded character sets and 320K Flash memory for bitmapped graphics (such as logos)

### General features

- Knife
- Cover open sensors
- Industry standard USB communication interface
- One cash drawer connector (supports 2 cash drawers)
- History Flash ROM for custom settings
- Audible tone (controlled by application)



**Note:** The 7169 Printer does not have a paper journal. The journal is kept electronically by the host computer.

## **Options**

- Industry standard RS-232C communication interface
- LAN communication interface
- Remote power supply

## Impact print head

The bi-directional, impact print head is designed for a very long life, but it may be replaced if needed. Only a trained service technician may replace the impact print head. To determine if the print head needs to be replaced, refer to <u>Service Level Troubleshooting</u> on page 76.

## Thermal print head

The 7169 Multifunction Printer uses a thermal print head for printing receipts. It is extremely fast and quiet. Because it uses heat to print directly on paper, there is no cassette or ribbon to change, eliminating soiled fingers and paper dust.

The print head does not need to be regularly cleaned nor require a scheduled maintenance. However, if it appears dirty, wipe it with cotton swabs and rubbing alcohol. If spotty or light print problems persist after cleaning the print head, refer to *Service Level Troubleshooting* on page 76.

If the recommended paper is used, the print head does not need to be regularly cleaned. If a non–recommended paper has been used for an extended period of time, cleaning the print head would not be of much benefit. For more information, refer to <u>Ordering</u> <u>Paper and Supplies</u> on page 57.

The print head is designed to have a long life span, but it can be replaced overtime if needed. Only a trained service representative may replace the print head. To determine if the print head needs to be replaced, refer to <u>Service Level Troubleshooting</u> on page 76.

### Thermal head failure detection

The 7169 provides Thermal Head Failure Detection Function. This function detects the thermal head failure as earlier as possible and reports the failure dot count in the diagnostic form.

The following are two ways to enable this function:

 Power-on Detection—the printer must be configured through the 7169 resident firmware setup menu. Once configured, the printer executes the detection when it is turned on. The printer application needs to be modified to check the error status detected during the boot sequence.



**Note:** The printer application can get the result by either Real Time Status Transmission or Unsolicited Status Update.

 Manual Detection—the printer application can execute the thermal head failure detection by Execute Head Failure Detection command. The printer application needs to be modified to send the head failure detection command and check the error status.

## What is in the Box

The following items are packed in the shipping box:

- Printer enclosed in a plastic bag and foam pack
- Ribbon cassette
- Thermal receipt paper roll
- Cardboard restraint for carriage (behind the Slip front cover)

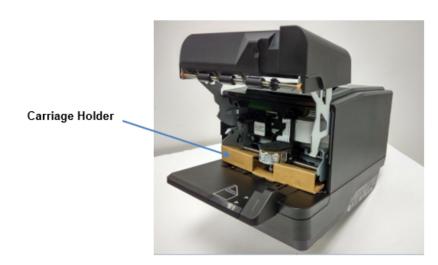
The following cables may be ordered from other equipment suppliers and are shipped separately. For more information, refer to <u>Ordering Paper and Supplies</u> on page 57.

- Communication cable (from host computer to printer)
- DC power cable
- Remote power supply
- USB plus power cables
- Cash drawer cables (may be ordered from other equipment suppliers)

## Removing the packing material

To remove the packing material, follow these steps:

- Remove the printer from the foam pack and plastic bag.
- 2. Open the front cover and remove the carriage holder.



- Remove the ribbon cassette, receipt paper roll, and cables from the foam packing material.
- 4. Save all packing materials for future storing, moving, or shipping of the printer.



**Caution:** Remove the carriage holder before using the printer.



**Caution:** Do not pick up the printer using the slip table as a handle.

## Repacking the printer

To repack the printer, follow these steps:

- 1. Place a receipt paper between the receipt cover and the print head for protection.
- 2. Remove the ribbon cassette, move the carriage to the corner, and place the cardboard restraint in the slip carriage area.
- 3. Place the cardboard support on the slip table.
- 4. Place the printer in the plastic bag and foam pack.
- 5. Place the packed printer in the box, and then secure the box with packing tape.



**Note:** If you are sending the printer to NCR for repair, call your NCR authorized service representative for instructions on where to send the printer. Be prepared to answer questions concerning shipping and billing.

# **Choosing a Location**

The 7169 Multifunction Printer takes up a relatively small counter space and may be set on or near the host computer. Make sure there is enough room to open the receipt cover to change the paper, or to open the front cover to change the ribbon cassette. The following illustration shows the actual dimensions of the printer, but leave several inches around the printer for connecting and accessing the cables.



**Note:** The Magnetic Ink Character Recognition (MICR) check reader feature is designed to operate under a normal operating environment with a host computer. However, additional devices, such as CRT monitors, or large metal surfaces that are near the printer, can affect the printer's magnetic field and cause intermittent reading errors when the MICR check reader is in operation. Relocating these devices may be required to prevent this interference.



# Connecting the Cables

There are three different types of cables that connect to the printer:

- Power supply cable supplying power from the host POS terminal or from an external power supply
- Communication cable (RS-232, USB, or LAN) connecting the printer to the host computer
- Cash drawer cable connecting the printer to one or two cash drawers



Warning: Do not use a cash drawer with an impedance of less than 24 ohms.



**Caution:** Disconnect the power before connecting the cables. Always connect the communication cable and cash drawer cables before connecting power to the power supply. Always disconnect power to the power supply before disconnecting the communication and cash drawer cables.

To connect the cables, follow these steps:



**Note:** Refer to the images in the next sections for more information.

- 1. Disconnect the power supply from its power source.
- 2. Connect the communication cable to the printer and to the host computer connector.



Warning: To avoid shorting cash drawer connector pins, be careful not to insert the USB connector into the cash drawer port. Do not connect the USB cable to the Cash Drawer connector.

3. Connect the cash drawer cable to the printer and to the cash drawer.



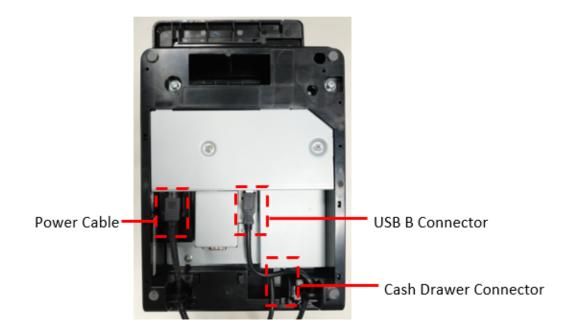
**Note:** The connector is a standard phone jack located at the rear of the printer.

- 4. Connect the power cable to the printer.
- 5. Route the cables through the cable strain relief feature on the bottom of the printer and through the two slots in the cable access cover.
- 6. Reconnect the power cable to a power source.
  - For remote power supply installation, connect the power cable to the power supply and connect the power supply to an AC outlet.
  - For host powered installation, connect the power cable to the POS terminal.



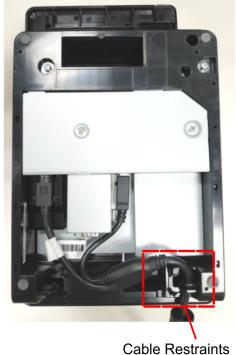
**Note:** At this point, the printer receives power from its power source. If the Online LED (green) is on, the printer is online; otherwise, the printer is not receiving power. Check to ensure that the host terminal or the power supply is on.

## **USB** cable connection

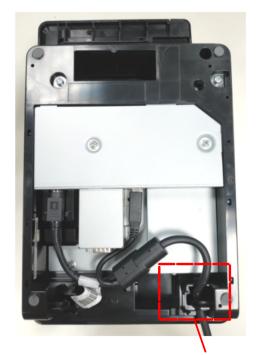


**BOTTOM OF PRINTER** 

## Different types of Y-cable routing method







Cable Restraints

### Y-Cable Type B

**ID Numbers:** 

1416-C640-0010

1416-C713-0010

1416-C881-0010

1432-C086-0010

1432-C088-0010

1432-C328-0040

1432-C402-0040

1432-C403-0040

1432-C404-0040

### Y-Cable Type C

ID Numbers:

1416-C640-0010

1416-C713-0010

1416-C881-0010

1432-C086-0010

1432-C088-0010

1432-C328-0040

1432-C402-0040

1432-C403-0040

1432-C404-0040

## RS-232 cable connection (Optional)

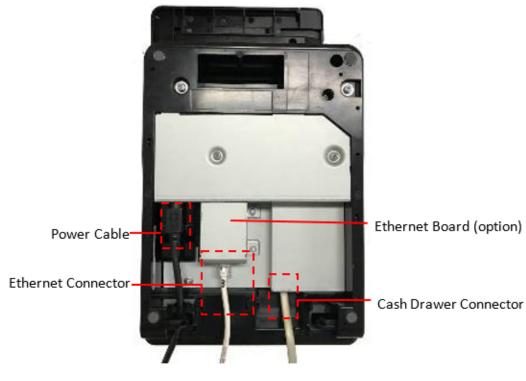


**BOTTOM OF PRINTER** 



**Note:** If the RS–232 serial cable has a ferrite bead on one side, connect the side without the ferrite bead to the printer.

# Ethernet cable connection (Optional)



**BOTTOM OF PRINTER** 

## About the Universal Serial Bus

The Universal Serial Bus (USB) is a peripheral bus for personal computers that was first released in January 1996. Since that time, virtually all Intel Architecture personal computers have the hardware to support USB, and a large number of computers exist that have both the hardware and software support required to interface with USB peripherals.

## Advantages of USB connections

USB has a number of advantages over legacy connection schemes, for example, the serial RS-232. These advantages include:

- High speed: up to 12 MB/second for high-speed devices.
- Plug and play: Devices are automatically recognized and configured at installation.
- Hot plug: Bus supports installation and removal of devices with the power applied.
- Up to 127 devices: One host can support up to 127 devices with the use of hubs.
- "Free ports": Most PC architecture machines contain two USB ports in the base hardware.

These advantages have become attractive to the POS industry for a couple of reasons.

### Additional POS devices

Some POS systems are required to host more peripherals than can be supported by two RS-232 ports typical in a platform. With the addition of one or two USB connectors, the platform can support the additional devices that had previously required a serial port expander card.

## Higher bandwidths

New devices coming into use have bandwidth requirements that are higher than the bandwidth that can be supported on legacy interfaces. As the speed and capability of POS printers increases, the performance of the printer in an application can become limited by the speed of the communications interface. USB provides ample bandwidth to support current and future POS printer requirements.

## Advantages of the NCR USB solution

NCR has eliminated any cost associated with porting applications to USB by implementing a USB solution that simulates standard serial communications in Windows 98 (SR2), NT 4.0 (Service Pack 3 or higher) and Windows 2000. Application developers need only redirect their software to the virtual serial ports created by the NCR USB solution to use the printer.

# Checking for USB Support on the Host Computer

USB interface communications is required and the host computer must be equipped and set up properly. With the required hardware in place, the Windows POSReady 2009 operating system natively supports plug–and–play USB with a built–in driver.



**Note:** You need an Internet access to download the USB drivers from the NCR Web site: <a href="http://www5.ncr.com/support/support\_drivers\_patches.asp">http://www5.ncr.com/support/support\_drivers\_patches.asp</a>.

## **Host configuration**

Verify that the proper hardware has been installed in the host PC.

The following steps are applicable to systems running on a Windows POSReady 7, a Windows 8, or a Windows 10 operating system:

- 1. Open the Control Panel.
- Select Device Manager.
- 3. In the Device Manager window, scroll down the list of installed hardware devices until you find an entry for **Universal serial bus controller**.

If this entry exists, your host computer is set up for USB operation. If this entry does not exist, consult your computer documentation to see if USB must be enabled in the BIOS setup.

# Configuring the Printer



Use the Configuration Menu to select functions or change various settings as indicated in the next sections. The Configuration Menu prints instructions and setting options interactively as the user goes through the configuration process.



**Caution:** Be extremely careful in changing any of the printer settings to avoid changing settings that might affect the performance of the printer.

To reset the printer, do any of the following:

- While opening and closing the slip cover door, press and hold the Paper Feed button.
- While disconnecting and reconnecting the power cable, press and hold the Paper Feed button.

The printer prints a configuration menu that can be navigated with presses of the feed button.

## Software or hardware configuration

To configure the software or hardware, follow these steps:



**Note:** Before configuring the printer, make sure that the printer is loaded with a paper roll.

- 1. To know the current settings, print the diagnostics form.
  - a. Turn on the printer.
  - b. Open the receipt cover.
  - c. While pressing down the paper feed button, close the receipt cover. The printer beeps and prints the diagnostics form.
- 2. Disconnect the power cable from the rear of the printer.
- 3. While pressing down the paper feed button, reconnect the power cable. The printer beeps and prints the Main Menu.

```
******* Main Menu ******
                           -> No click
Print Printer Config
                                                     This menu appears when
Emulation
                            -> 2 Clicks
Hardware
                            -> 3 Clicks
                                                     option interface card (RS232C
Reset to Default Setting
                            -> 4 Clicks
                                                     or Ethernet) is installed.
                              5 Clicks
Print Maintenance Info
Set Diagnostics Modes
Interface RS232C
                                Clicks
Interface Ethernet
                           -> 7 Clicks
  Enter code, and hold down a Key for 1 sec
```

4. Press the paper feed button according to the number of clicks presented in the main menu, and then hold the button down for at least one second to validate.

The following is an example of configuring the printer for Emulation.

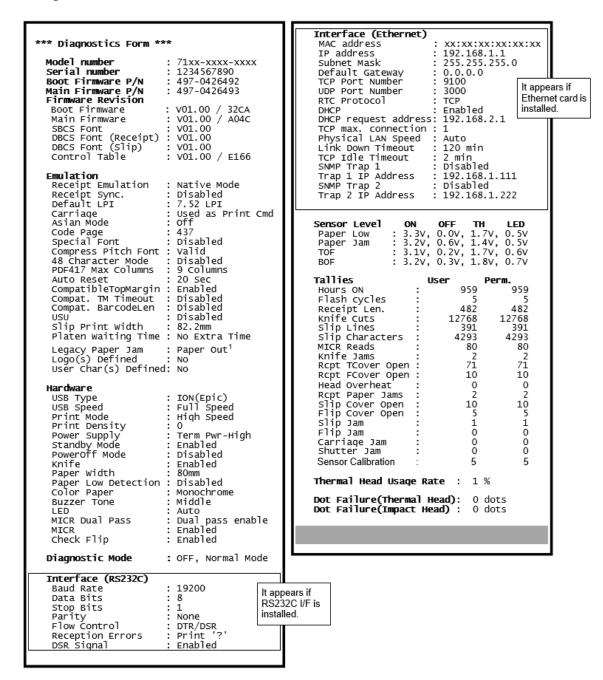
This option is to set Sync Mode, LPI, Carriage, Asian Mode, Code Page, Special Font, Compress Pitch Font, 48 Character Mode, PDF417 Max Columns, Auto Reset mode, Compatible Top Margin.

To enter into emulation mode, press the Paper Feed button twice as short click and do long press until a beep sound is generated.

By following the above steps, the sub menu will appear as follows:

******* EMULATION *******	
Receipt Sync	-> 1 Click
Default LPI	-> 2 Clicks
Carriage	-> 3 Clicks
Asian Mode	-> 4 Clicks
Code Page	-> 5 Clicks
Special Font	-> 6 Clicks
Compress Pitch Font	-> 7 Clicks
48 Character Mode	-> 8 Clicks
PDF417 Max Columns	-> 9 Clicks
Auto Reset	-> 10 Clicks
Compatible Top Margin	-> 11 Clicks
Emulation Mode	-> 12 Clicks
Slip Print Width	-> 13 Clicks
Platen Waiting Time	-> 14 Clicks
Compatible Barcode Length	-> 15 Clicks
Legacy Paper Jam	-> 16 Clicks
* Enter code, and hold down a Key for 1 sec	

Printer Configuration form indicates the printer individual information and configurations.

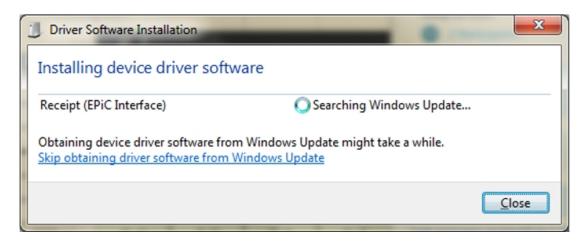


## Installing the USB Virtual COM port driver for printer

## Windows POSReady 7

To install the USB Virtual COM Port Driver for printer on a Windows POSReady 7 system, follow these steps:

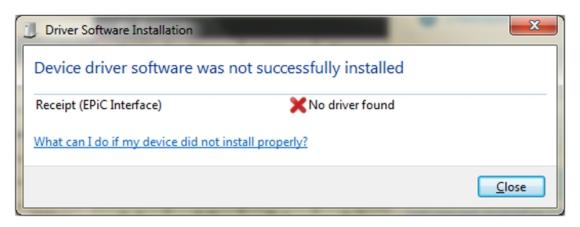
The printer beeps when it is plugged in to show the USB device is recognized. The
Driver Software Installation window is displayed. Select **Skip obtaining driver**software from Windows Update to skip getting driver software from Window
Update.



The following window is displayed.

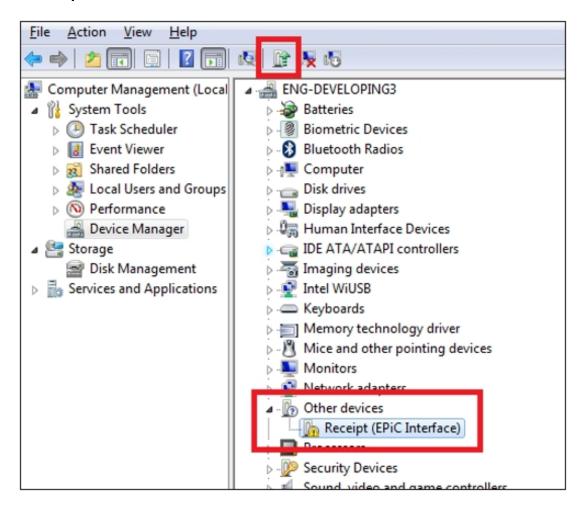


2. Select **Yes**. The following window is displayed.

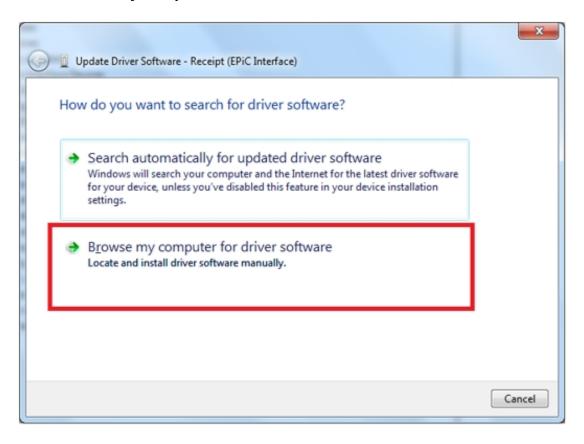


3. Open Device Manager, and then select **Receipt (EPiC Interface)**.

#### 4. Select **Update Driver Software**.

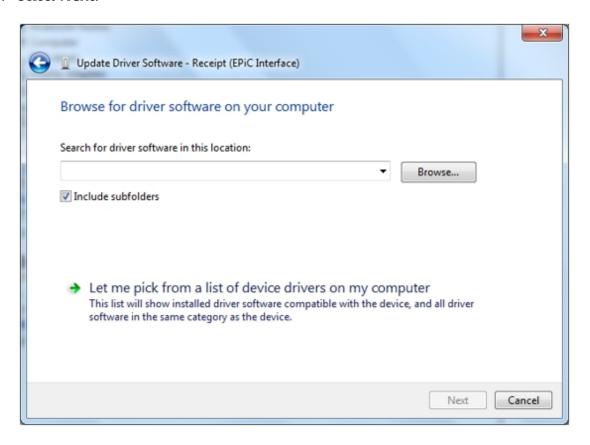


5. Select Browse my computer for driver software.

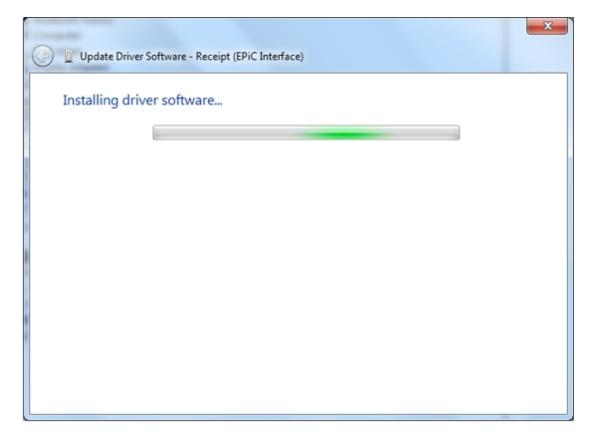


6. Select **Browse**, and then select the Edgeport Driver folder.

#### 7. Select **Next**.



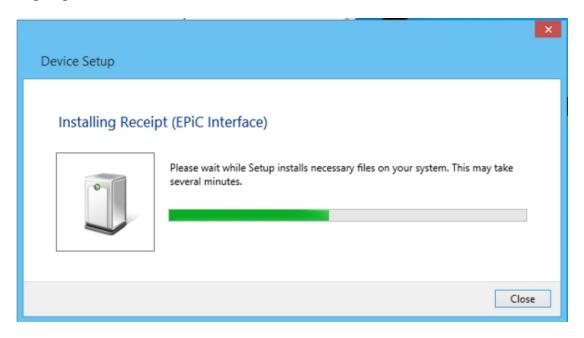
The system starts installing the printer driver.



#### Windows 8

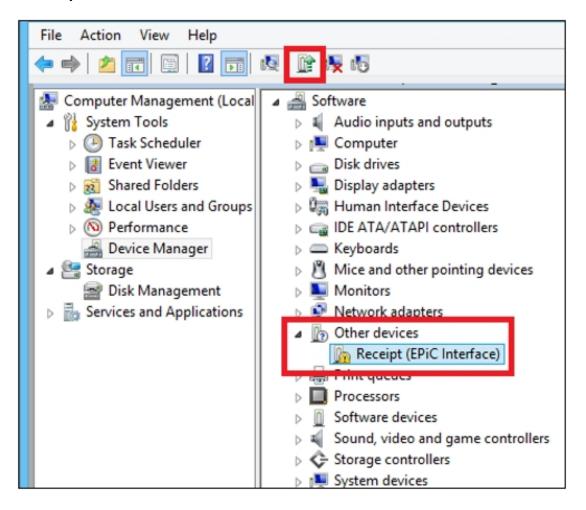
To install the USB Virtual COM port driver for printers on a Windows 8 system, follow these steps:

1. The printer beeps when it is plugged in to show the USB device is recognized. Device Setup window displays that the Installing Receipt (EPiC Interface) process is ongoing.

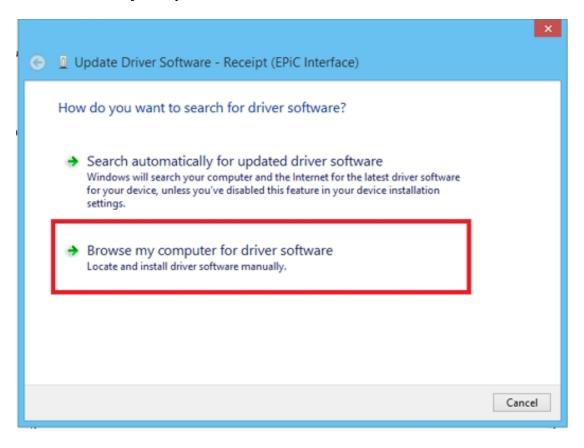


2. Open the Device Manager, and then select **Receipt (EPiC interface)**.

### 3. Select **Update Driver Software**.

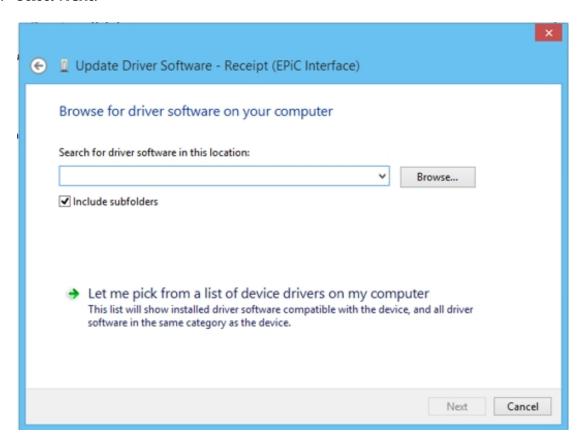


4. Select Browse my computer for driver software.

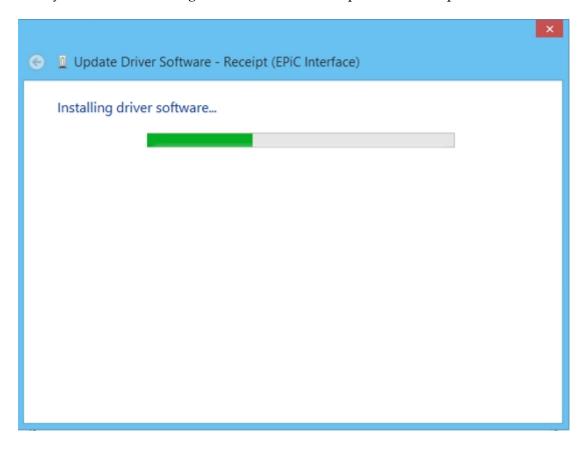


5. Select **Browse**, and then select the **Edgeport Driver** folder.

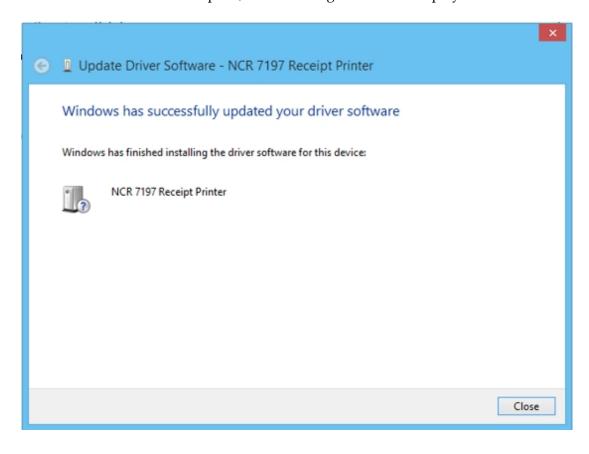
#### 6. Select **Next**.



The system starts installing the USB Virtual COM port driver for printers.



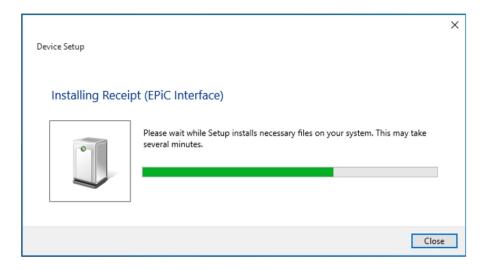
When the installation is complete, the following window is displayed.



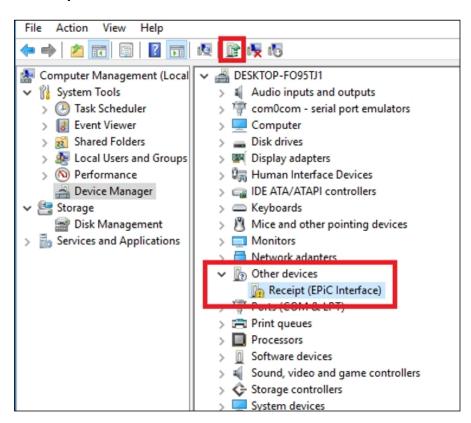
#### Windows 10

To install the USB Virtual COM Port Driver for Printer on a Windows 8 system, follow these steps:

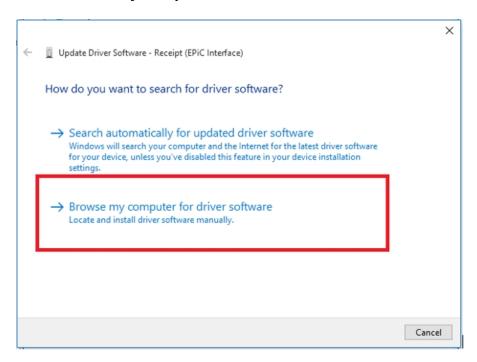
1. The printer beeps when it is plugged in to show the USB device is recognized. The Device Setup window displays that the Installing Receipt (EPiC Interface) process is ongoing.



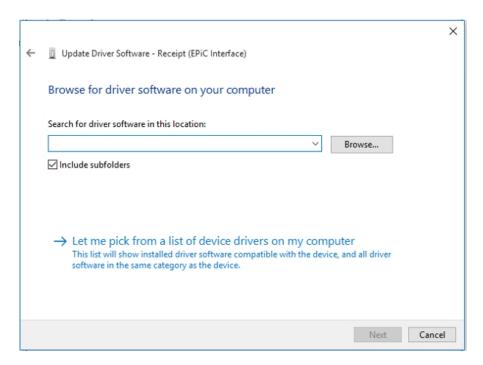
- 2. Open the Device Manager, and then select **Receipt (EPiC interface)**.
- 3. Select **Update Driver Software**.



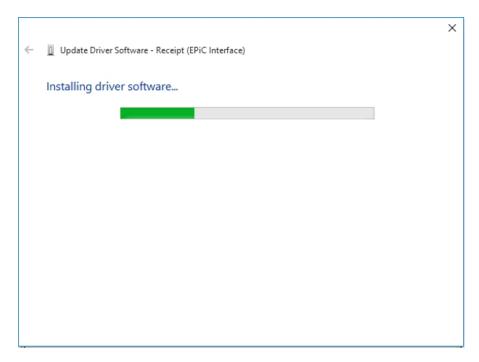
4. Select Browse my computer for driver software.



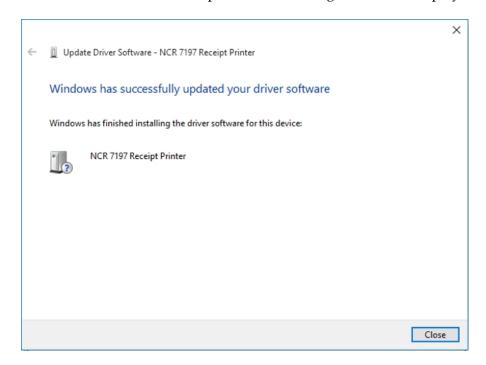
- 5. Select **Browse**, and then select the **Edgeport Driver** folder.
- 6. Select Next.



The system starts installing the printer driver.



When the installation is complete, the following window is displayed.



## Verifying the installation

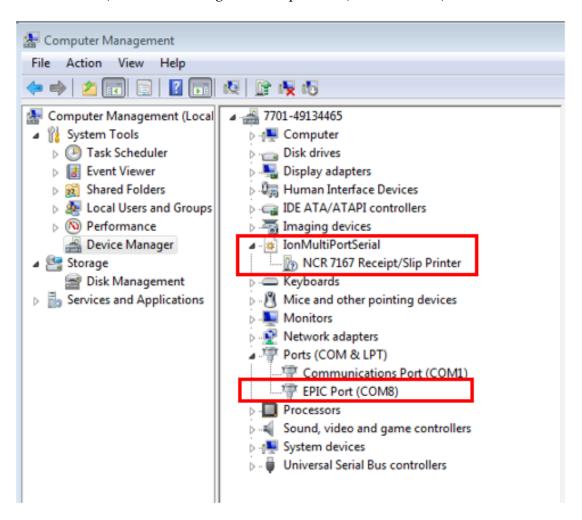
### Windows POSReady 7

To verify the installation of the driver on a Windows POSReady 7 system, follow these steps:

- 1. Open the Device Manager window.
- 2. Make sure that the NCR 7167 Receipt/Slip Printer and the EPIC Port are installed.



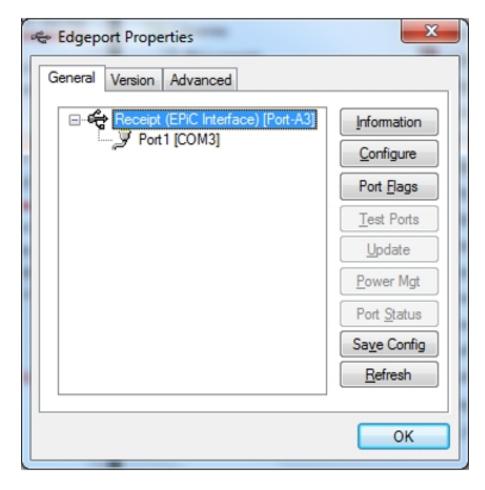
**Note:** The NCR 7167 Receipt/Slip Printer is the defined USB VID/PID (Vendor ID/Product ID) of the NCR Single Station printers (7167 and 7168).





**Note:** If this information is not listed, then the installation was not successful. You need to reinstall the drivers.

3. Open the Edgeport utility and make sure the Port is assigned.



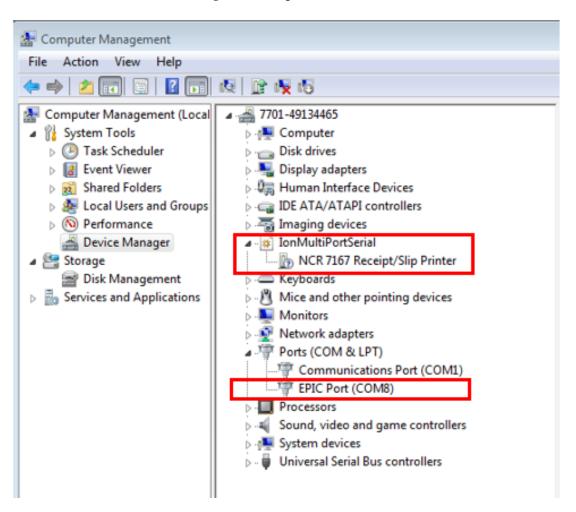
#### Windows 8

To verify the installation of the driver on a Windows 8 system, follow these steps:

- 1. Open the Device Manager window.
- 2. Make sure that the **NCR 7167 Receipt/Slip Printer** and the **EPIC Port** are installed.



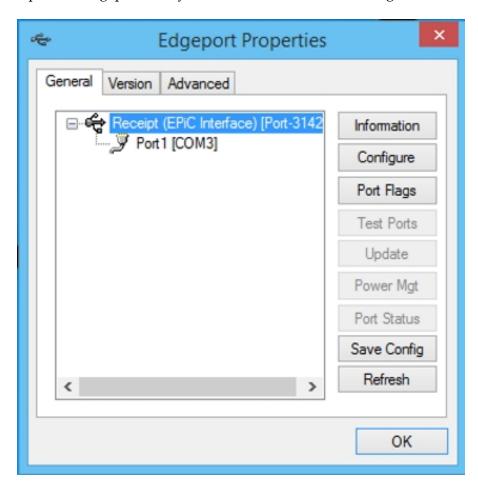
**Note:** The **NCR 7167 Receipt/Slip Printer** is the defined USB VID/PID (Vendor ID/Product ID) of the NCR Single Station printers (7167 and 7168).





**Note:** If this information is not listed, then the installation was not successful. You need to reinstall the drivers.

3. Open the Edgeport utility and make sure the Port is assigned.



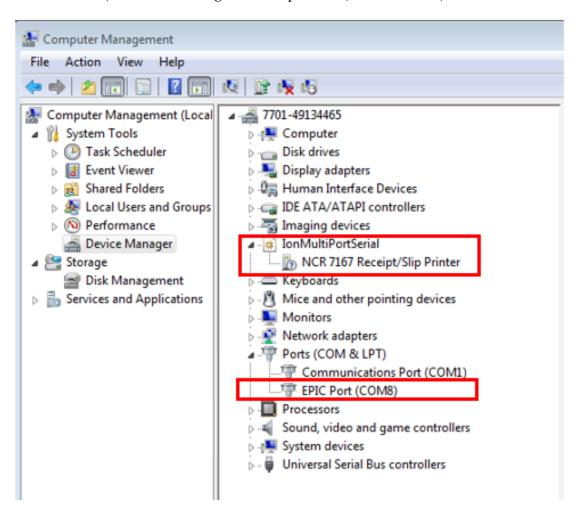
#### Windows 10

To verify the installation of the driver on a Windows 10 system, follow these steps:

- 1. Open the Device Manager window.
- 2. Make sure that the NCR 7167 Receipt/Slip Printer and the EPIC Port are installed.

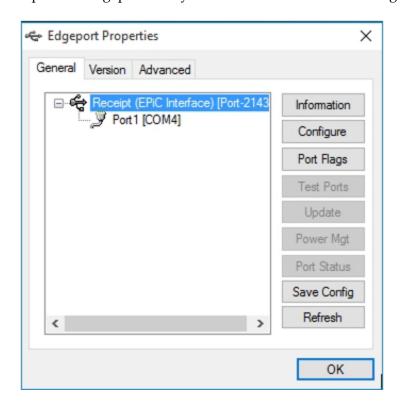


**Note:** The **NCR 7167 Receipt/Slip Printer** is the defined USB VID/PID (Vendor ID/Product ID) of the NCR Single Station printers (7167 and 7168).





**Note:** If this information is not listed, then the installation was not successful. You need to reinstall the drivers.



3. Open the Edgeport utility and make sure the Port is assigned.

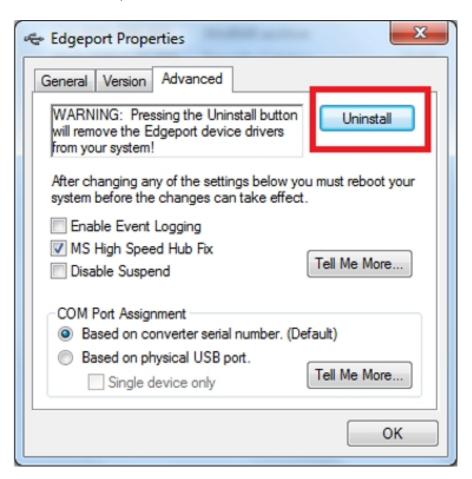
## Uninstalling the drivers

## Windows POSReady 7

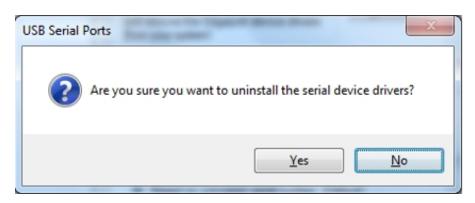
To uninstall the printer driver on a Windows POSReady 7 system, follow these steps:

- 1. Open the Edgeport utility.
- 2. Select the **Advanced** tab.

3. Select **Uninstall**, and then follow the on–screen instructions.



The following window is displayed.



4. Select **Yes**.

The system uninstalls the driver, and then displays the following window.

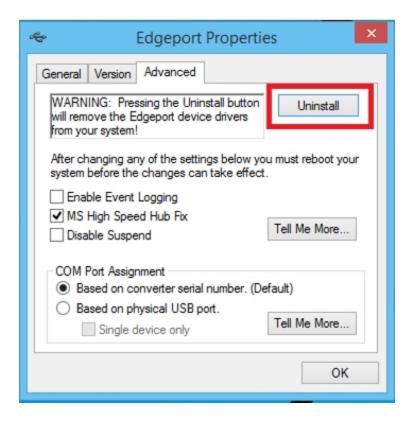


5. Select **Yes** to completely uninstall the driver and to restart the PC.

#### Windows 8

To uninstall the printer driver on a Windows 8 system, follow these steps:

- 1. Open the Edgeport utility.
- 2. Select the **Advanced** tab.
- 3. Select **Uninstall**, and then follow the on–screen instructions.

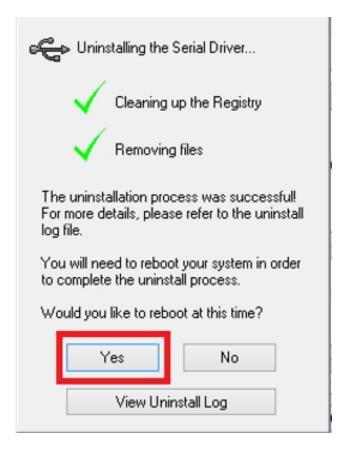


The following window is displayed.



#### 4. Select Yes.

The system uninstalls the driver, and then displays the following window.

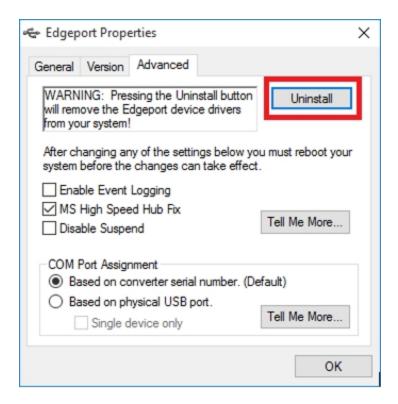


5. Select **Yes** to completely uninstall the driver and to restart the PC.

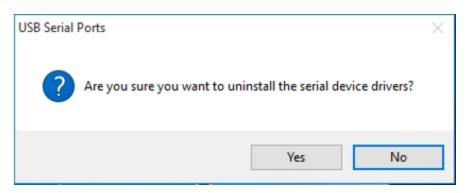
#### Windows 10

To uninstall the printer driver on a Windows 8 system, follow these steps:

- 1. Open the Edgeport utility.
- 2. Select the **Advanced** tab.
- 3. Select **Uninstall**, and then follow the on–screen instructions.



The following window is displayed.



4. Select Yes.



The system uninstalls the driver, and then displays the following window.

5. Select **Yes** to completely uninstall the driver and to restart the PC.

# Interface Description

## **Human interfaces**

- Top Cover/Printer Door—the printer does not print or operate if the cover is open.
- Cover Open Latch—the Top Cover/Printer Door can be opened by lifting the latch.
- Paper Feed button—located on the top–front side of the printer.
- USB I/F Connector—mounted on the PCB Board.
- Printer Status LED—has three colors: Green, Amber, and Red.
- Thermal Paper—placed inside the printer. For information on the recommended thermal paper, refer to the <u>Ordering Paper and Supplies</u> on page 57.

# Using the Printer

To use the printer, follow these steps:

- Connect the power supply to the printer and turn on the power source. The printer goes through a self–test routine to ensure everything is working properly, and then it beeps. After the printer has completed its startup cycle, it is ready to receive data. If the LED blinks or the host computer indicates that there is a problem, refer to <u>Troubleshooting Problems</u> on page 64 for more information.
- 2. To perform a Configuration check (optional), reset the printer while holding the Paper Feed button, or open the receipt door and, while pressing the Paper Feed button, close the receipt door. Let go of the Paper Feed button when the printing begins.





**Note:** The printer receives power when the power supply is on even if the printer is offline. To completely remove power, unplug the power supply from the outlet, or turn the POS terminal off.

# Loading and Changing the Receipt Printer

Change the paper when either of the following two conditions occurs:

Amber LED blinks (slow): the paper is low.

There are approximately  $1 \frac{1}{2}$  to  $7 \frac{1}{2}$  meters (5–25 feet) of paper remaining on the roll. Change the paper as soon as possible to avoid running out half way through a transaction. Depending on the application, the host computer may alert you when the paper is low.

• Amber LED blinks (fast): the paper is out.

Change the paper immediately or data may be lost.



**Caution:** Do not operate the printer or host computer if the printer runs out of paper. The printer will not operate without paper, but it may continue to accept data from the host computer. Because the printer cannot print any transactions, the data may be lost.

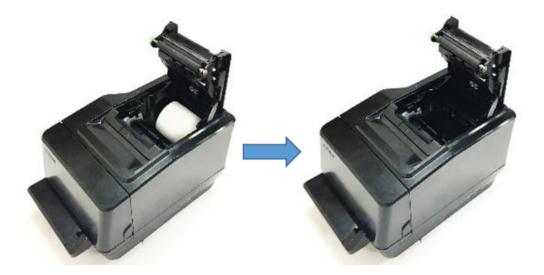
## Removing the paper roll

To remove the paper roll, follow these steps:

1. Open the receipt cover.



### 2. Remove the used roll.



## Loading the paper roll

To load the paper roll, follow these steps:

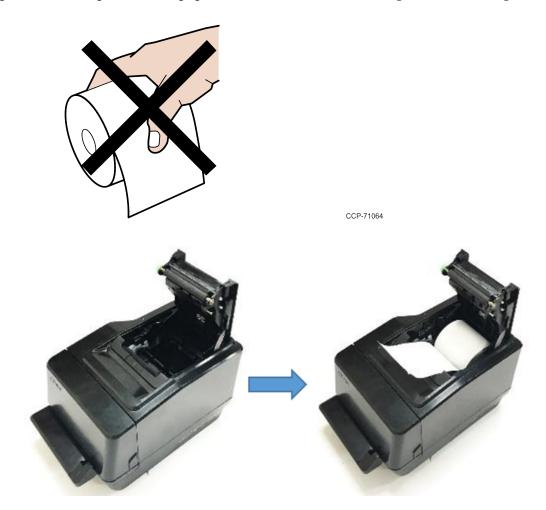


**Note:** Tear off the end of the new roll so that the edge is loose.

1. Place the new roll in the bin with a little extra paper extending over the front.



**Note:** Make sure that the paper unrolls from the bottom of the roll. Otherwise, the printer cannot print on the paper because the thermal coating is on the wrong side.



2. Close the receipt cover.



3. Remove the excess paper by tearing it against the tear-off blade.



## Advancing the paper

To advance the paper, follow these steps:

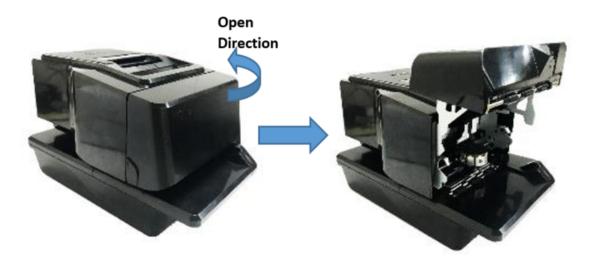
- 1. Press the Paper Feed button on the operator panel to advance the paper. The cover must be closed. To ensure print quality and proper alignment of the paper, advance about **30 cm** (12 in.) of paper.
- 2. Tear off the excess paper against the tear-off blade.

# Replacing the Ribbon Cassette

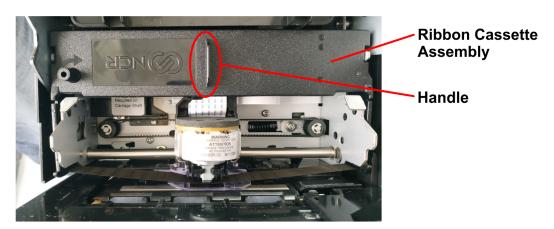
Change the ribbon cassette when the print is too light or the ribbon is frayed.

## Removing the ribbon cassette

1. Open the slip front cover.

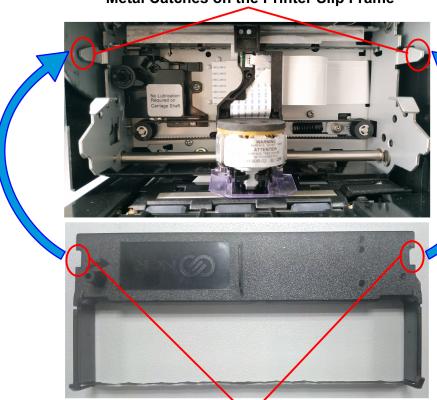


2. Using the handle on the cassette, pull the ribbon cassette assembly away from the printer.



## Installing the ribbon cassette

1. Using the slots on the left and right sides of the ribbon cassette as guides, mount the ribbon cassette assembly onto the metal catches on the printer slip frame, and then push the ribbon cassette assembly into place.



**Metal Catches on the Printer Slip Frame** 

**Slots on the Ribbon Cassette** 

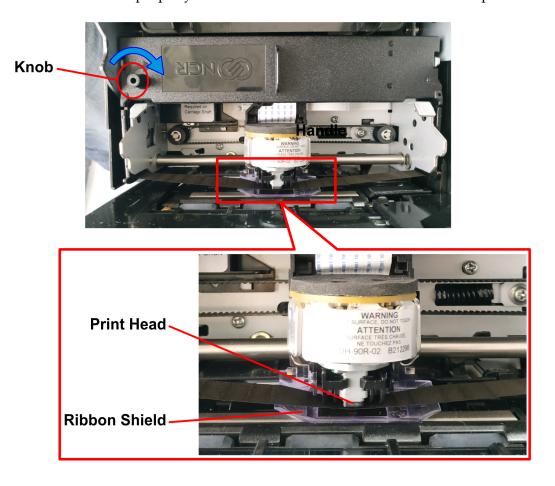


**Note:** At this point, the ribbon fabric may still be loose or askew, as shown in the following image.



Ribbon Cassette is askew

2. To tighten or correct the position of the ribbon fabric, rotate the knob clockwise until the ribbon fabric is properly inserted between the ribbon shield and the print head.



3. Close the front cover.



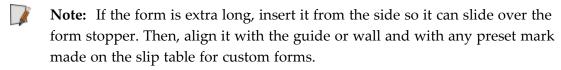
## Printing on Forms or Checks

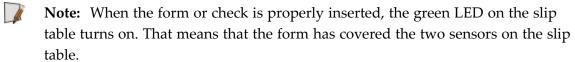
There are several types of transactions that require you to insert a form or check into the printer.

- Credit card transaction. Some credit card transactions may be printed on the receipt station and not require any forms.
- Multiple-part forms such as credit transactions or merchandise returns
- Electronic funds transfers
- Check printing, such as printing the date, payee, and amount on the check face
- Check endorsement

To print on forms or checks, follow these steps:

- 1. Position the form or check on the slip table.
  - a. Insert the top first, with the print side up.
  - b. Slide the form or check to the right until it aligns with the guide or wall, and then slide it toward the back until it touches the form stopper.









**Note:** Although the image above illustrates a check being inserted into the printer, the instructions apply to any type of form. The 7169 can print on forms up to fourparts thick. For more information about the type of forms that can be used, refer to *Ordering forms* on page 60.

- 2. Follow the instructions from the host computer. The printer then begins printing.
- 3. Remove the form or check after it has been fed back out.
- 4. Follow the instructions from the host computer to finish the transaction.

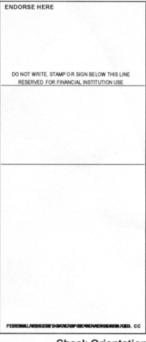
## Validating and Verifying Checks

If the MICR check reader feature is present, checks are verified and then validated.

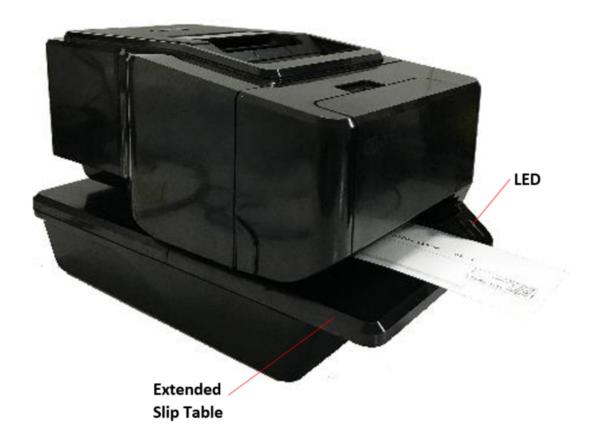
- 1. Position the check on the slip table.
  - a. Insert the check from the front and place it on the slip table face down, with the MICR characters to the right, as shown in the following illustration.
  - Slide the check to the right until it aligns with the guide or wall.
  - Slide the check toward the back until it touches the form stopper or align it with any preset mark made on the slip table.



**Note:** When the check is properly inserted, the green LED on the slip table turns on. That means that the check has covered the two sensors on the slip table.



**Check Orientation** 



2. Follow the instructions from the host computer.

If the MICR check reader feature is present, the check is fed in and out while the check numbers are read. If the check is verified as good, it is then validated. If the check is not verified as good, it is not validated.



**Note:** Do not hold or keep the check from moving during the MICR check reader transaction or the check numbers will not be read accurately

- 3. Remove the check after it has been fed all the way back out.
- 4. Follow the instructions from the host computer to finish the transaction.

## Ordering Paper and Supplies

### Selecting thermal receipt papers

NCR products are designed for the global market and are tested to determine performance parameters, such as thermal head and cutter life expectancy, against defined mill grade papers at the time of release. NCR printers require qualified thermal paper to ensure proper printer operation. This section provides guidelines in selecting a thermal receipt paper for NCR printers.

The paper rolls must meet the guidelines provided in this section, and the paper must not be attached at the core to avoid damaging the printer when the paper is exhausted.

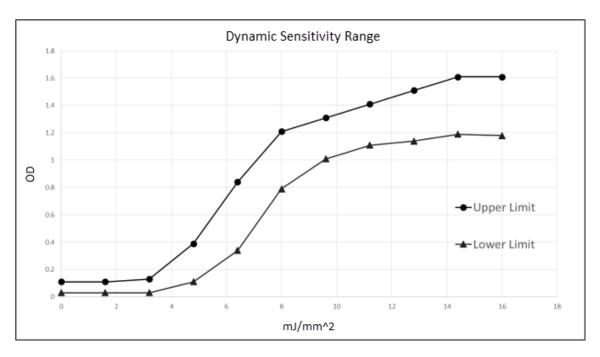
! Important: NCR does not test individual suppliers' papers. It is the responsibility of users of the printers to ensure that the paper they intend to use does not have a detrimental effect on the life of the printers. Use of such paper invalidates any warranty related to the performance of the printer.

The following table covers key considerations (but not necessarily all) for purchasing papers.

Requirement	Specification
Quality Control	The supplier must have processes and procedures in place to ensure that a consistent quality is always maintained. These processes and procedures should have mechanisms to stop and recall paper that is out of the agreed specification.
Pre–Printed Receipt paper	The addition of pre-printed artwork on either side the paper has the potential to cause increased wear to the printer.  Testing is required to determine if this has a detrimental effect. Retesting is also required if there are any changes in the paper design.
Image life	The paper is available with different life expectancy of the image. Ensure to specify a life expectancy that is suitable for the intended application.
End of Roll Indicator	As well as using the "paper low" warning capability of the printer, some users define a visual indication to assist the operator in knowing when to change the roll. Typically, this can be in the form of a pre-printed line at a set length before the end of the roll. It is important that the properties of this line are not detrimental to the printer's life expectancy.

Requirement	Specification
Product essential functionality and features that should be included in the customer's specification for receipt paper	<ul> <li>The following must be observed:</li> <li>The coating should not cause undue wear to the print head.</li> <li>The surface area of the paper should be smooth.</li> <li>All edges must be correctly cut and must be smooth.</li> <li>There should be no mottling or foreign body contamination. There should be no dust on the surface of the paper that could cause damage to the printer or to nearby equipment.</li> <li>There should be suitable coatings to protect the paper from UV light, water, oils, and other elements. Thermal coating residue should not transfer to the print head when heated.</li> <li>The paper must allow for crisp lines to be produced when the paper is heated.</li> <li>The paper should be sourced in accordance with health and safety, with environmental policies, and in adherence to any local regulations.</li> <li>The paper should be suitably packed and protected to avoid damage during transport.</li> </ul>
Chemical in Paper	The chemical elements of the paper, coating, and inks shall not exceed the following amount:  • Titanium dioxide, TiO <sub>2</sub> : 0 ppm (max)  • Silicon dioxide, SiO <sub>2</sub> : 0 ppm (max)  • Mullite, 3Al <sub>2</sub> O <sub>3</sub> 2SiO <sub>2</sub> : 0 ppm (max)  • Sodium, Na: 1050 ppm (max)  • Chloride, Cl: 500 ppm (max)  • Potassium, K: 250 ppm (max)  • Suflate, SO <sub>4</sub> : 800 ppm (max)  • Ammonium, NH <sub>4</sub> : 800 ppm (max)  The chemicals listed here are not exhaustive, and other chemicals may reduce the life expectancy of the printer, the print head, or both.
Roll Width	• 80 mm (+0.5 / -1.2mm) • 58 mm (+0 / -1.0 mm)
Roll Diameter	Maximum of 83 mm

Requirement	Specification
Roll Length	Approximately 88 m
Core Inner Diameter	12.7 mm (Typical)
Core Outer Diameter	18 mm (Typical)
Core Width	79 mm (Typical)
Core Material	Plastic or Chipboard
Paper weight	44~70 gsm
Paper caliper thickness	44~70 um
Paper Winding Direction	Thermal coating facing out
Smoothness	300 sec min (ISO 5627)
Dynamic sensitivity	Energy to be equal to or less than 11.2 mJ/mm <sup>2</sup> at 1.1 OD <b>Note:</b> For more details, refer to the <i>Dynamic Sensitivity Range</i> graph.
Brightness	Less than 85%



lack

Warning: Using an inferior grade of paper can affect the print quality, the life of printheads, and the printer mechanism.



**Note:** Take note of the following:

- Printer reliability and performance are directly related to the quality of supplies
  used by the customer. The published reliability information for printer performance
  is established using supplies that meet NCR specifications.
- Thermal paper with watermarks, coupons, or advertisements printed on its front or back are not covered by NCR specifications. Some inks and printing processes work acceptably, but others do not.
- Printer problems that are caused by supplies that do not meet NCR specifications may result in expensive resolutions.

The following table provides information on other thermal papers tested with the NCR 7169 printer.

Paper Manufacturer	Media Model	Notes	
Koehler	Blue4est <sup>®</sup>	For more information, refer to	
		https://www.koehlerpaper.com/en/products/Thermal- paper/Blue4est-thermal-paper.php	

### **Ordering forms**

The 7169 Printer prints on single-part or multiple-part forms in the slip station (up to five-part forms). Forms and slips must meet the following requirements:

Front insertion (minimum):

**51 mm** (2.0 inches) wide

**70 mm** (2.75 inches) long

• Side insertion (minimum):

**203 mm** (8.0 inches) wide

**51 mm** (2.0 inches) long

- Single-ply forms should be on paper that is greater than 15 pounds.
- Multiple-part forms (up to five parts) should be no thicker than 0.406 mm (0.016 inches).
- If multi-part forms are used, the cardstock must be the last ply of the form.



Note: To order forms, contact your sales representative.

## Ordering ribbon cassettes

Stock Numbers:

- (purple ribbon cassette—8 million characters) 127022
- (black ribbon cassette—5 million characters) 127035



Note: To order ribbon cassettes, contact your sales representative.

## Ordering other supplies

Contact your sales representative to order the supplies listed in the following table.

Item	Туре	Alias Number
External Power Supply	75W External Power Supply, No Power Cord	7167-K511
	75W External Power Supply with US Power Cord	7167-K510
	60W External Power Supply	7197-K510
AC Cables for External	US Power Cord (no plug)	1416-C325-0030
Power Supply	UK Power Cord	1416-C321-0030
	SEV Power Cord	1416-C320-0030
	Australian Power Cord	1416-C322-0030
	International Power Cord (with plug)	1416-C319-0030
	International Power Cord	1416-C323-0030
	Argentina Power Cord	1416-C009-0018
Non-Powered RS-232	1.0 meter	1416-C879-0010
(Serial) Interface	4.0 meters	1416-C879-0040
Non-Powered USB Cable	1.0 meter	1432-C083-0010
	4.0 meters	1432-C083-0040
Powered USB Cable	24V Powered USB Cable, 1.0 meter, Black	1432-C086-0010
	24V Powered USB Cable, 4.0 meters, Black	1432-C402-0040
Power Only USB Cable for	1.0 meter	1432-C092-0010
Serial Configuration	4.0 meters	1432-C092-0040

Item	Туре	Alias Number
Cash Drawer Cable	1.8 meters	1639-K044
		1639-K043
		1639-K213
	0.6 meter (Y-Cable)	1416-C372-0006
		1639-K045
	0.9 meter (Y-Cable)	1432-C516-0009
Narrow 58mm Width Paper Guide	58 mm	7199-K058
CAT 5E Ethernet Cable	8-wire	1432-C046-0030

## Cleaning the Printer

### Cleaning the cabinet

The external cabinet materials and finish are durable and resistant to these items:

- Cleaning solutions
- Lubricants
- Fuels
- Cooking oils
- Ultraviolet light

The 7169 Multifunction Printer does not require a scheduled maintenance. Clean the cabinet as needed to remove dust and finger prints. Use any household cleaner designed for plastics, but test it first on a small unseen area. If the receipt bucket is dirty, wipe it with a clean, damp cloth.

### Cleaning the thermal print head



**Caution:** Do not spray or try to clean the thermal print head or the inside of the printer with any kind of cleaner as this may damage the thermal print head and electronics.

If the thermal print head appears dirty, wipe it with cotton swabs and isopropyl alcohol.

If spotty or light printing problems persist after the thermal print head has been cleaned, refer to <u>Troubleshooting Problems</u> on page 64.

## Cleaning the slip station

The slip station does not require a scheduled maintenance. If needed, clean the Dot Matrix platen bar and roller with isopropyl alcohol to remove dust and ribbon ink.



**Caution:** Do not clean the carriage shaft of Dot Matrix print head. This may scratch the shaft and cause high friction for carriage movement.

#### MICR Read Head

If problems related to reading of checks are encountered, clean the MICR read head by wiping it with cotton swabs and isopropyl alcohol.

# Chapter 2: Troubleshooting Problems

### Overview

The NCR 7169 Multifunction Printer is a simple and generally trouble–free printer. The multi–colored LED lights provide users with visual feedback for error correction. For some problems, the printer communicates the information to the host computer and relies on the application to indicate the problem.

This section describes some problems that you may encounter with the printer. You may be able to fix some of the conditions or problems without calling for the assistance of a service representative. However, if a problem persists, contact a service representative. For more information, refer to <u>Contacting a Service Representative</u> on page 75.

## Red LED is Off or Printer Will Not Print

Cause	What to Do	Where to Go
Cables may not be connected properly	<ul> <li>Check all cable connections.</li> <li>Make sure that the host computer and power supply are both on, which means that the power supply is turned on and is plugged to an outlet.</li> </ul>	Refer to <u>Connecting the</u> <u>Cables</u> on  page 9.
Power supply may be defective	If the power supply is plugged in but does not come on, order a new power supply.	Refer to Ordering Paper and Supplies on page 57.

## Green LED is Blinking Slow

Cause	What to Do	Where to Go
Receipt paper is low	<ul> <li>Make sure there are about         4.5 ± 3 meters (15 ±10 feet) of paper left.     </li> <li>Change the paper soon to avoid running out of paper in the middle of a transaction.</li> </ul>	Refer to <u>Loading and Changing</u> the <u>Receipt Printer</u> on page 46.

# Amber LED is Blinking Fast

Cause	What to Do	Where to Go
Receipt paper is out	Change the paper now. Do not run a transaction without paper to avoid data loss.	Refer to <u>Loading and</u> <u>Changing the Receipt</u> <u>Printer</u> on page 46.
Receipt cover is open	Close the cover. The printer will not operate with the cover open.	(None)
Knife failure	<ul> <li>Open the receipt cover and check the knife.</li> <li>Clear any jammed paper.</li> <li>Tear off any excess paper against the tear-off blade.</li> </ul>	(None)
	Contact a service representative if the above steps do not solve the problem.	Refer to <u>Contacting a</u> <u>Service Representative</u> on page 75.
AC supply voltage is out of range	If paper is not low and no conditions indicate that the thermal print head is too hot, the power supply voltage is likely out of range.	(None)
	Contact a service representative if the above step does not solve the problem.	Refer to <u>Contacting a</u> <u>Service Representative</u> on page 75.

Cause	What to Do	Where to Go
Thermal print head temperature is out of range	<ul> <li>The print head may overheat when printing in a room where the temperature is above the recommended operating temperature or when printing high-density graphics continuously, regardless of the room temperature. In either case, the printer will shut off.</li> <li>If the temperature of the print head is too hot, adjust the room temperature or move the printer to a cooler location.</li> <li>If the print head is overheating because of printing high density graphics continuously, reduce the graphics print density.</li> </ul>	Refer to Physical and Operating Environment on page 152 for the recommended temperature range for operating the printer.
	If the printer continues to overheat, contact a service representative.	If the printer continues to overheat, refer to <u>Contacting a Service</u> <u>Representative</u> on page 75.
Power supply voltage is out of range	If paper is not low and no conditions indicate that the print head is too hot, the power supply voltage is out of range. Contact a service representative.	Refer to <u>Contacting a</u> <u>Service Representative</u> on page 75.

# Receipt Printing is Light or Spotty

Cause	What to Do	Where to Go
Thermal print head may be dirty	Open the receipt cover and clean the thermal print head with cotton swabs and isopropyl alcohol.  Note: Do not use the alcohol to clean other parts of the printer. Damage will occur.	Refer to <u>Cleaning the</u> <u>Printer</u> on page 63.
	Contact a service representative if this does not resolve the problem.	Refer to <u>Contacting a</u> <u>Service Representative</u> on page 75.



**Note:** The thermal print head does not normally require cleaning if the recommended paper grades are used. If a non–recommended paper has been used for an extended period of time, cleaning the print head with alcohol and cotton swabs will not clean it enough. For information on the recommended paper, refer to <u>Ordering Paper and Supplies</u> on page 57. For information on power consumption, refer to <u>Power Requirements</u> on page 151.

# Slip or Forms Printing is Light

Cause	What to Do	Where to Go
Ribbon cassette is worn	Replace the ribbon cassette.	Refer to <u>Replacing the Ribbon</u> <u>Cassette</u> on page 50.
	Contact a service representative if this does not solve the problem.	Refer to <u>Contacting a Service</u> <u>Representative</u> on page 75.

# LED (Slip Table) Does Not Come On

Cause	What to Do	Where to Go
Form or check not inserted properly	<ul> <li>For regular-sized forms: Slide the form or check to the right until it aligns with the guide or wall, and then slide it toward the back until it touches the form stopper.</li> <li>For long-sized forms: Insert the form or check from the side so it can slide over the form stopper. Then, align it with the guide or wall and with an preset mark made on the slip table for customer forms.</li> </ul>	Refer to <u>Printing on</u> <u>Forms or Checks</u> on page 53 or to <u>Validating and Verifying</u> <u>Checks</u> on page 55.
	Contact a service representative if the above step does not solve the problem.	Refer to <u>Contacting a</u> <u>Service Representative</u> on page 75.

## Forms Skew or Catch

Cause	What to Do	Where to Go
Form or check skewing or catching in slip station due to an obstruction or paper jam	<ul> <li>Open the front cover, then check for any paper jams or obstructions in the slip station.</li> <li>Clear the obstruction or jammed paper.</li> </ul>	(None)
	Contact a service representative if the above steps do not solve the problem.	Refer to <u>Contacting</u> <u>a Service</u> <u>Representative</u> on page 75.

# MICR Check Reader Not Reading Properly

Cause	What to Do	Where to Go
Magnetic Ink Character Recognition (MICR) check reader does not read or misreads checks	<ul> <li>Open the slip cover.</li> <li>Clean the MICR read head with cotton swabs and isopropyl alcohol.</li> </ul>	(None)
	Contact a service representative if the above steps do not resolve the problem.	Refer to <u>Contacting</u> <u>a Service</u> <u>Representative</u> on page 75.

## Stuck Cutter Blade

If a cutter blade is stuck in a fully extended position, do the following steps to fix it:

- 1. Open the front cover.
  - a. Unlatch the receipt front cover by pulling on the holes located on both sides of the front cover.



b. Flip to fully open the front cover.



2. Flip to open the top cover. The cutter blade is in the extended position.



3. Remove the jammed paper.



- **Note:** Ensure that there is no paper at the paper exit area.
  - 4. Close the top cover (A) and then the front cover (B).



When the printer detects that both covers are closed, the moving blade automatically retracts the exposed blade back to the cutter module.

Note: The printer does not operate if the front cover or the top cover is open.

# **Clearing Paper Jams**

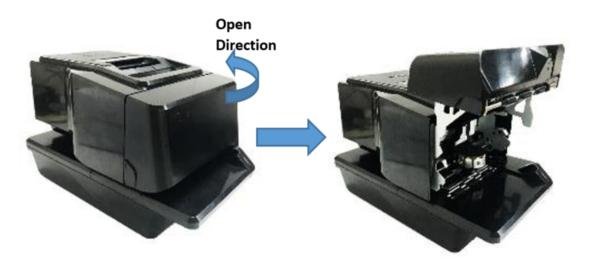
Paper jam may occur on any of the following printer areas:

- Slip printing area
- Flip mechanism area
- Thermal area

## Slip printing area

If the paper jam occurs on the slip printing area, do the following steps:

1. Open the slip front cover.



2. Remove the jammed paper and any paper debris.



3. Close the front cover.



## Flip mechanism area

If the paper jam occurs on the flip mechanism area, do the following steps:

1. Open the flip door cover.



2. Remove the jammed paper and any paper debris.



### 3. Close the flip door cover.



## Thermal area

If the paper jam occurs on the thermal area, refer to <u>Stuck Cutter Blade</u> on page 69 for procedures.

## Other Serious Problems

NCR recommends to fix the following problems with the assistance of a qualified service representative. For more information, refer to <u>Contacting a Service Representative</u> below.

- Printer will not cycle or stop when required
- Illegible characters
- Paper will not feed
- Knife will not cycle or cut
- Printer will not communicate with host

## Contacting a Service Representative

For serious problems, such as the printer not printing, not communicating with the host computer, or not turning on, contact an NCR-authorized service organization to arrange for a service call. In addition to the service guide listed below, other service-related materials may be available. Contact your NCR-authorized service representative to obtain these documents.

- NCR 7169 Multifunction Printer Parts Identification Manual (BCC5-0000-5351)
- NCR 7169 Multifunction Printer Service Guide (BCC5-0000-5350)

# Chapter 3: Service Level Troubleshooting

## **Diagnostics Overview**

The NCR 7169 Multifunction Printer performs four types of diagnostic tests to help troubleshoot problems and to change the printer configuration. Each of these is described in detail in the sections that follow.

- **Level 0 Diagnostics (Startup)**—the printer performs these tests during the startup cycle. For more information, refer to <u>Level 0 Diagnostics (Startup)</u> on the next page.
- **Level 1 Diagnostics (Printer Configuration)**—allows configuration of the printer using a Configuration Menu that is printed on a receipt. For more information, refer to *Level 1 Diagnostics (Printer Configuration)* on page 78.
- **Level 2 Diagnostics (Runtime)**—the printer checks the status during normal operation. For more information, refer to *Level 2 Diagnostics (Runtime)* on page 105.
- Level 3 Diagnostics (Remote)—the printer keeps track of counters during normal operation.
- **Vendor Adjustment**—the printer performs this task in off–line mode. This allows changing the mechanical settings and performing printer test. Modifications of these settings should be done by service personnel only.

## Level o Diagnostics (Startup)

The printer automatically performs startup diagnostics during the startup cycle when power is supplied or when the printer goes online. Startup diagnostics comprise the following actions:

- 1. Power off the printer.
- 2. Perform the following:
  - a. CRC check of the firmware ROM, read external RAM
  - b. EEPROM check



**Note:** Failure causes startup diagnostics to stop.

The Printer Status (Amber) LED then turns on when the above tests have been completed.

- Check if paper is present.
- 4. Return the knife to the home position.



**Note:** Failure causes a fault condition.

5. Check if printer Top Cover/Printer Door is closed.



**Note:** Failure causes turning on the Printer Status (Amber) LED until the Top Cover or Printer Door is closed.

6. Return the Dot Impact Head to home position.



**Note:** Failure causes turning on the Printer Status (Amber) LED until the Top Cover or Printer Door is closed.

When the last step is complete, the Paper Feed button is enabled and the printer is ready for normal operation. Information about the test is available in the communication interface through the commands.

If the printer has not been turned on, or a new EEPROM has been installed, the default values for the printer functions (set in Level 1 Diagnostics) are loaded into the EEPROM during startup diagnostics. For more information on printer settings, refer to <u>Level 1</u> <u>Diagnostics (Printer Configuration)</u> on the facing page. If the EEPROM load has failed, the Printer Status LED is turned on.

## Level 1 Diagnostics (Printer Configuration)

Level 1 diagnostics (setup mode) provides the functionality to change the settings for various printer functions.

Take note of the following information when changing the settings:

- The default options are set at the factory and are stored in the history non-volatile memory.
- After the settings are changed and stored in the non-volatile memory, the diagnostic setup is exited, which saves the settings.



**Caution:** If you are changing the printer settings, make sure to add the correct settings for that particular function or test to avoid accidentally changing the settings for another function or test. If the settings are accidentally changed, re–enter the setup mode, and then re–enter the correct settings. If you need assistance, contact a service representative. For more information, refer to *Contacting a Service Representative* on page 75.

## Configuring serial port number assignments

This section describes how the NCR USB solution assigns serial port numbers (for example, COMx) to the printer. The information that determines the assigned port number is stored in the host computer and not in the printer. This assignment is made in one of three ways. The first method is the default method that automatically assigns a serial port number to the printer. The other two methods require users to specify a port number. These methods are described more fully in the following section.

### Serial port configuration methods

#### Automatic (Default)

When the printer is plugged into the USB port of the host and the drivers are loaded, the printer will default to the next available serial port number. In many cases, this is exactly what is desired. You can check the assigned serial port by clicking the General tab in the Edgeport utility. You'll see an entry for the NCR printer. Expand the list to see which serial port has been assigned to the printer.

### Assigning a serial port to the printer

If the default assignment does not meet the requirements of the installation, you can assign a different serial port to the printer. From the General tab of the Edgeport utility, select the printer and press Configure. Follow the directions on the resulting form to assign a new port to the printer.

### Communication interface modes

Use the Configuration Menu to set the printer to use a USB communication.

To select a Communication Interface setting, press the Paper Feed button according to the number of clicks associated to the setting.



**Note:** Default settings are marked with asterisks (\*).

### RS-232C interface settings (Standard model)

If the user sets the printer to use an RS-232C serial interface, the Configuration Menu can be used to set the following RS-232C specific settings:

- Set a baud rate 115200, 57600, 38400, 19200, 9600 baud
- Set the number of data bits to seven or eight
- Set the number of stop bits to one or two
- Enable or disable parity
- Set the printer to ignore data errors or print a ? upon encountering an error



**Note:** The settings used depends on the software the operator is using and the capabilities of the host computer.

• To select a communication setting, press the Paper Feed button. Default settings are marked with an asterisk (\*).

#### \*\* Interface RS232C

```
Baud Rate
                               1 Click
Data Bits
                               2 Clicks
Stop Bits
                         \rightarrow
                              3 Clicks
                         \rightarrow
                               4 Clicks
Parity
                         \rightarrow
                              5 Clicks
Flow Control
Reception Errors
                        \rightarrow
                               6 Clicks
DSR Signal
                         \rightarrow
                               7 Clicks
```

#### \*\* BAUD RATE

115200 Baud	→ 1 Click
57600 Baud	→ 2 Clicks
38400 Baud	→ 3 Clicks
19200 Baud*	→ 4 Clicks
9600 Baud	→ 5 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* DATA BITS

8 Data Bits\* → 1 Click
7 Data Bits → 2 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* STOP BITS

1 Stop Bits\* → 1 Click
2 Stop Bits → 2 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* PARITY

No Parity\* → 1 Click

Even Parity → 2 Clicks

Odd Parity → 3 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* FLOW CONTROL

Software  $\rightarrow$  1 Click (XON/XOFF)

Hardware  $\rightarrow$  2 Clicks (DTR/DSR)\*

#### \*\* RECEPTION ERRORS

```
Ignore Errors → 1 Click
Print '?'* → 2 Clicks
```

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* DSR SIGNAL

```
Enable → 1 Click
Disable → 2 Clicks
```

Enter code, then hold Button DOWN. At least 1 second to validate.

### **USB** interface settings (Standard model)

To change the USB Interface setting, select **USB Type** in the hardware menu.

#### \*\* USB Type

```
ION (EpiC) → 1 Click
NonION (NHPI) * → 2 Clicks
NonION (PRTR) → 3 Clicks
```

Enter code, then hold Button DOWN. At least 1 second to validate.

### **Ethernet interface settings (Option)**

#### \*\* Interface Ethernet

```
Ethernet RTC Protocol → 1 Click

DHCP → 2 Clicks

TCP max. connection → 3 Clicks

Physical LAN Speed → 4 Clicks

Link Down Timeout → 5 Clicks

TCP idle Timeout → 6 Clicks

SNMP Trap 1 → 7 Clicks

SNMP Trap 2 → 8 Clicks
```

#### \*\* ERTC Protocol

TCP\* → 1 Click
UDP → 2 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* DHCP

Disable\* → 1 Click
Enable → 2 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* TCP max. Connection

1	client*	$\rightarrow$	1	Click
2	clients	$\rightarrow$	2	Clicks
3	clients	$\rightarrow$	3	Clicks
4	clients	$\rightarrow$	4	Clicks
5	clients	$\rightarrow$	5	Clicks
6	clients	$\rightarrow$	6	Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* Physical LAN Speed

Auto*	$\rightarrow$	1 Click
100 Mbps Full	$\rightarrow$	2 Clicks
100 Mbps Half	$\rightarrow$	3 Clicks
10 Mbps Full	$\rightarrow$	4 Clicks
10 Mbps Half	$\rightarrow$	5 Clicks

#### \*\*Link Down Timeout

No Time Out	$\rightarrow$	1 Click
1 min - 10 min	$\rightarrow$	2 Clicks
11 min - 20 min	$\rightarrow$	3 Clicks
21 min - 30 min	$\rightarrow$	4 Clicks
31 min - 40 min	$\rightarrow$	5 Clicks
41 min - 50 min	$\rightarrow$	6 Clicks
51 min - 60 min	$\rightarrow$	7 Clicks
61 min - 70 min	$\rightarrow$	8 Clicks
71 min - 80 min	$\rightarrow$	9 Clicks
81 min - 90 min	$\rightarrow$	10 Clicks
91 min - 100 min	$\rightarrow$	11 Clicks
101 min - 110 min	$\rightarrow$	12 Clicks
111 min - 120 min	$\rightarrow$	13 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\*TCP idle Timeout

No Time Out	$\rightarrow$	1 Click
1 min - 10 min	$\rightarrow$	2 Clicks
11 min - 20 min	$\rightarrow$	3 Clicks
21 min - 30 min	$\rightarrow$	4 Clicks
31 min - 40 min	$\rightarrow$	5 Clicks
41 min - 50 min	$\rightarrow$	6 Clicks
51 min - 60 min	$\rightarrow$	7 Clicks
61 min - 70 min	$\rightarrow$	8 Clicks
71 min - 80 min	$\rightarrow$	9 Clicks
81 min - 90 min	$\rightarrow$	10 Clicks
91 min - 100 min	$\rightarrow$	11 Clicks
101 min - 110 min	$\rightarrow$	12 Clicks
111 min - 120 min	$\rightarrow$	13 Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\* SNMP Trap 1

Disable*	$\rightarrow$	1	Click
Enable	$\rightarrow$	2	Clicks

```
** SNMP Trap 2

Disable* → 1 Click
Enable → 2 Clicks

Enter code, then hold Button DOWN.

At least 1 second to validate.
```

### Save parameters

This function allows to save the selected communication settings or return to the communication settings to select additional options.

Press the Paper Feed button for the option you want.

```
Save new parameters?
```

```
YES → Long Click
NO, MODIFY → Short Click
```

## **Emulation/Software options**

Use the Emulation/Software Menu to set the following:

- Receipt synchronization
- Default lines per inch
- Carriage return usage
- Asian mode
- Font type
- Compress pitch
- 48 Character mode
- PDF417 max column print
- Auto reset
- Compatibility top margin
- Emulation mode
- Slip print width option
- Platen wait time

To select the Emulation/Software setting, press the Paper Feed button according the number of clicks associated to the setting.



**Note:** Default settings are marked with asterisks (\*).

### Receipt synchronization

This function allows users to select whether to enable or disable receipt synchronization printing.

When Receipt Synchronization is enabled (Mode 1 or Mode2), the printer returns the status for the buffered status command after confirming the start of printing.

The following commands are the buffer status command:

```
1B 75 0 Transmit Peripheral Device Status

1B 76 Transmit Printer Status

1D 49 n Transmit Printer ID

1D 72 n Transmit Status
```

The command/status sequence is completely the same for Mode1 and Mode2. The only difference is the printing speed.

- Mode1—maximum of 12 ips (the same as the normal printing)
- Mode2—maximum of 4 ips (to prevent the clatter print in the synchronized line mode)

When Mode3 is selected, the following command will be available:

```
1F 0A n Get Print Completion
```

When Receipt Synchronization is disabled, the printer returns the status for buffered status command immediately after decoding the status command.

The Receipt Synchronization allows for increased print speed or provides the ability to check for the completion of each print line. When the Receipt Synchronization is enabled the highest print speed is achieved but the verification that the print line has been successfully completed occurs every 10 print lines.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

To select a receipt synchronization, press the Paper Feed button.

```
************************

Sync. Mode 
Disabled* 
Sync. Mode 1 
Sync. Mode 1 
Sync. Mode 3 
A Clicks

Enter code, then hold Button DOWN.

At least 1 second to validate.
```

### Save parameters

This function allows to save the selected communication settings or return to the communication settings to select additional options.

Press the Paper Feed button for the option you want.

```
Save new parameters?
```

```
YES → Long Click
NO, MODIFY → Short Click
```

### Default lines per Inch

This function allows the users to set the default lines per inch printed by the thermal printer to 6, 7.52, or 8.13.

To select a lines per inch option, press the Paper Feed button.

```
*********Default LPI******
 8.13 Lines per Inch ->
                                1 Click
7.52 Lines per Inch* →
                                2 Clicks
 6 Lines per Inch
                        \rightarrow
                                3 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
Save new parameters?
                         \rightarrow
 YES
                                 Long Click
                         \rightarrow
                                 Short Click
NO, MODIFY
```

### Carriage return usage

This function allows the printer to ignore or use the Carriage Return (hexadecimal OD) command depending on the application. Some applications expect the command to be ignored while others use the command as a print command.

To select a carriage return usage, press the Paper Feed button.

#### **Asian Mode**

This function allows the users to select an Asian character for the printer.

• To select an Asian Mode, press the Paper Feed button.

```
***************************
Asian Mode 932 On
                                 1 Click
Asian Mode Off*
                                 2 Clicks
Asian Mode 936 On
                                 3 Clicks
Asian Mode 949 On
                                 4 Clicks
Asian Mode 950 On
                         \rightarrow
                                 5 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
Save new parameters?
                          \rightarrow
YES
                                   Long Click
                          \rightarrow
NO, MODIFY
                                   Short Click
```

#### Set font type option

This function enable user to select the font type of the receipt printing as follows.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

• To select a font type, press the Paper Feed button.

#### \*\*\*\*\*\*\*\*\*\*\*SPECIALFONT\*\*\*\*\*\*\*\*\* $\rightarrow$ 1 Click Original Font\* Mode 1 CP473/856 Large $\rightarrow$ 2 Clicks ÷ Mode 2 866 Mini 3 Clicks ÷ Mode 3 Constructed 874 4 Clicks $\rightarrow$ Mode 4 Contextual 1256 5 Clicks $\rightarrow$ Mode 5 Context Fix 1256 6 Clicks Mode 6 Greek Font Map $\rightarrow$ 7 Clicks Enter code, then hold Button DOWN. At least 1 second to validate. Save new parameters? Long Click YES $\rightarrow$ Short Click NO, MODIFY

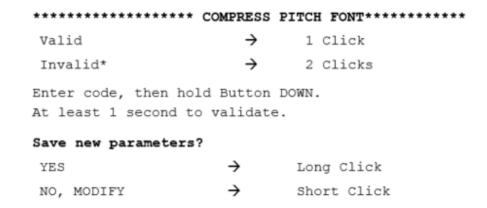
### **Set Compress Pitch option**

Set Compress Pitch command using the configuration menu.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

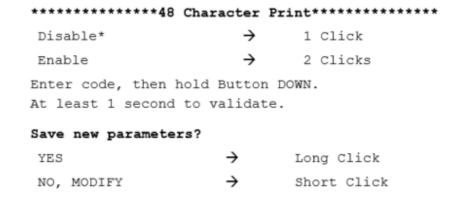
To set the compress pitch, press the Paper Feed button.



#### Set 48 Character mode

This function allows users to set the 48 Character printing. The selections are OFF or ON. The end result is to print 48 characters in one line.

• To select a Char 48 column print option, press the Paper Feed button.



# Set PDF417 Max Column print

This function allows the users to select the print columns for the PDF417 bar code printing. The selections are 9 or 14 columns. The end result is the height of the bar code printing. The default setting is 9 columns.

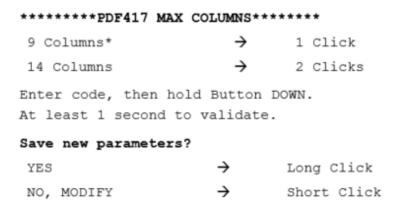


**Note:** RS485 does not support this function.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

• To select a PDF417 max column, press the Paper Feed button.



### **Set Auto Reset option**

Set Auto Reset using the configuration menu. Answer *No* to the questions printed on the receipt until you come to the instructions for Auto Reset.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

• To set the auto reset option, press the Paper Feed button.

**	SET AUTO	RESET	*****		
Di	sable*		$\rightarrow$	1	Click
10	Sec		$\rightarrow$	2	Clicks
20	Sec		$\rightarrow$	3	Clicks
30	Sec		$\rightarrow$	4	Clicks
40	Sec		$\rightarrow$	5	Clicks
50	Sec		$\rightarrow$	6	Clicks
60	Sec		$\rightarrow$	7	Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### 

## Set Compatibility Top Margin option

Set Compatibility Top Margin using the configuration menu. Answer *No* to the questions printed on the receipt until you come to the instructions for Compatibility Top Margin.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

To set the compatibility top margin, press the Paper Feed button.

## Set Emulation Mode option

Printer emulations determine the commands that are available to the printer.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

• To select an emulation, press the Paper Feed button.

## Set Slip Printing Width option

This function allows users to select the width of slip printing.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

• To select a slip printing width, press the Paper Feed Button.

```
**************

82.2mm*

1 Click

120.7mm

2 Clicks
```

## Set Platen Wait Time option

This function allows users to select the wait time that the paper uses for detection.

• To select a platen waiting time option, press the Paper Feed button.

### Set Compatible Bar Code length

This function allows users to set a compatible bar code length.

To select a bar code length option, press the Paper Feed button.

# **Hardware Options**

### Set USB Type

Set the USB type using the configuration menu. Select Hardware Options in the Configuration Menu.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

To select a USB type, press the Paper Feed button.

```
*****************************
 ION (Epic)
                                1 Click
 NonION (NHPI) *
                                2 Clicks
 NonION (PRTR)
                                3 Clicks
                                4 Clicks
 NonION (4610)
Enter code, then hold Button DOWN.
At least 1 second to validate.
Save new parameters?
                     →
                          Long Click
 YES
                    \rightarrow
                          Short Click
 NO, MODIFY
```

## Set USB Speed

Set the USB speed using the configuration menu. Select Hardware Options in the Configuration Menu.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

To select a USB speed, press the Paper Feed button.

#### Set Print mode

Set the receipt print mode using the configuration menu. Select Hardware Options in the Configuration Menu and answer the questions printed on the receipt.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

To select the receipt print mode, press the Paper Feed button.

```
High Speed Print* 

High Speed Print* 

1 Click

High Quality Print 

2 Clicks

Enter code, then hold Button DOWN.

At least 1 second to validate.

Save new parameters?

YES 

Long Click

NO, MODIFY 

Short Click
```

## **Print Density**

This function allows users to adjust the energy level of the print head to darken the printout. An adjustment should only be made when necessary. The factory setting is 100%.



Warning: Choose an energy level no higher than necessary to achieve a dark printout. Failure to observe this rule may result in a printer service call or voiding of the printer warranty. For more information, consult an NCR technical support specialist.

• To select the print density, press the Paper Feed button.

***** PRINT	DENSITY******		
-11 ~ -15	$\rightarrow$	1	Click
-6 ~ -10	$\rightarrow$	2	Clicks
-1 ~ -5	$\rightarrow$	3	Clicks
0*	$\rightarrow$	4	Clicks
+1 ~ +5	$\rightarrow$	5	Clicks
+6 ~ +10	$\rightarrow$	6	Clicks
+11 ~ +15	$\rightarrow$	7	Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.



**Note:** If *1 click* is selected, it is printed as follows:

-11	$\rightarrow$	1	Click
-12	$\rightarrow$	2	Clicks
-13	$\rightarrow$	3	Clicks
-14	$\rightarrow$	4	Clicks
-15	$\rightarrow$	5	Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### Save new parameters?

YES	$\rightarrow$	Long Click
NO, MODIFY	$\rightarrow$	Short Click

## **Power Supply**

This function allows users to set the maximum power for the printer to available modes.

To select an option, press the Paper Feed button.

```
Term Pwr-High*
                                    1 Click
 NCR 75W Ext Pwr
                                    2 Clicks
 Term Pwr-Low
                                    3 Clicks
                           \rightarrow
NCR 60W Ext Pwr
                                    4 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
Save new parameters?
                           \rightarrow
                                    Long Click
                          \rightarrow
NO, MODIFY
                                    Short Click
```

## Set Standby mode

Enable or disable the Standby Mode using the configuration menu. If the standby mode is enabled, the printer shifts to the standby mode in order to save power consumption in when the printer is in idle mode.

The printer goes to standby mode if no transaction data is received after the following conditions:

- 60 seconds after power on
- 1 second after one transaction

The printer exits from standby mode to normal mode in the following criteria:

- Printer receives any data
- Feed key is pressed
- Slip cover is opened or closed
- Receipt cover is opened or closed



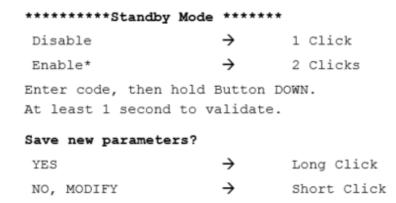
Note: Opening or closing the flip cover does not affect the standby mode.

If this function is disabled, the printer does not shift to standby mode. When going back from the standby mode, the response of the printer will be slightly delayed compared to the normal mode response.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

To select an option, press the Paper Feed button.



#### Set Power Off mode

This function allows users to set the time to Power off mode. This setting determines the time when the printer powers off after it goes to standby mode. Once the device enters the power off mode, all LED are turned off. If the feed key is pressed, the printer exits power off mode and enters normal mode.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

To select an option, press the Paper Feed button.

```
****** POWER OFF MODE*****
                                      1 Click
 Disable
 Enabled (60min)
                                      2 Clicks
 Enabled (12min)
                            \rightarrow
                                      3 Clicks
                            \rightarrow
 Enabled (180min)
                                      4 Clicks
 Enabled (240min)
                            \rightarrow
                                      5 Clicks
 Enabled (300min)
                            \rightarrow
                                      6 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
Save new parameters?
 YES
                            \rightarrow
                                      Long Click
                            \rightarrow
NO, MODIFY
                                      Short Click
```

### Set Knife option

This option allows users to set the Knife Option if it is installed in the printer. This setting should only be changed if the option is added or removed.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

• To select a knife option, press the Paper Feed button.

## Set Paper Width

This function allows users to set the default paper width for the receipt thermal printer to 58 mm or 80 mm.

To select the paper width option, press the Paper Feed button.

## **Set Paper Low Detection**

The Set Paper Low Detection enables or disables the paper low sensor for particular printer configurations.

To select an option, press the Paper Feed button.

```
****** PAPER LOW Detection*******
Enable (Remaining 40ft) * ->
                                  1 Click
                          \rightarrow
Disable
                                  2 Clicks
Enable (Remaining 30ft)
                                  3 Clicks
Enable (Remaining 20ft)* → 4 Clicks
Enable (Remaining 15ft) * → 5 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
Save new parameters?
YES
                          \rightarrow
                                Long Click
                          \rightarrow
NO, MODIFY
                                  Short Click
```

### **Set Color Paper option**

This function allows users to set the color paper for the receipt thermal printer to monochrome or color paper.

To select a color paper option, press the Paper Feed button.

```
****** SET COLOR PAPER ******
                             \rightarrow
                                  1 Click
Monochrome*
                             \rightarrow
Color Paper
                                      2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
Save new parameters?
                             \rightarrow
YES
                                    Long Click
                           \rightarrow
NO, MODIFY
                                      Short Click
```

## **Set Buzzer Tone**

This function allow users to set the buzzer tone to *low, middle,* or *high*.

• To select an option, press the Paper Feed button.

*****	SET	BUZZER	TONE	****	*****
Low*			$\rightarrow$	1	Click
Middle			$\rightarrow$	2	Clicks
High			$\rightarrow$	3	Clicks

Enter code, then hold Button DOWN. At least 1 second to validate.

#### Save new parameters?

YES	$\rightarrow$	Long Click
NO, MODIFY	$\rightarrow$	Short Click

#### Set Power LED Control

Set the power LED control using the configuration menu. Answer *No* to the questions printed on the receipt until you come to the instructions for power LED control.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

• To select an option, press the Paper Feed button.

#### Set MICR Dual Pass

This function allows users to enable or disable the MICR dual pass option.

To select an MICR dual pass option, press the Paper Feed button.

```
********* MICR DUAL PASS *******

Dual Pass disable* 

Dual Pass enable 

Dual Pass enable 

Calicks

Enter code, then hold Button DOWN.

At least 1 second to validate.

Save new parameters?

YES 

Long Click

NO, MODIFY 

Short Click
```

# Default Code page

This function makes it possible to select the default code page.

These are the code pages available for printing:

- Code page 437 (US English)
- Code page 850 (Multilingual)
- Code page 852 (Slavic)
- Code page 858 (with Euo symbol)
- Code page 860 (Portuguese)
- Code page 862 (Hebrew)
- Code page 863 (French Canadian)
- Code page 864 (Arabic)
- Code page 865 (Nordic)
- Code page 866 (Cyrillic)
- Code page 874 (Thai)
- Code page 1252 (Windows Latin #1)
- Code page 1256 (Windows Arabic)
- Code page Katakana
- Code Page 932 (Configurable on Asian Mode setting)
- Code Page 936 (Configurable on Asian Mode setting)
- Code Page 949 (Configurable on Asian Mode setting)
- Code Page 950 (Configurable on Asian Mode setting)
- Hungary
- Romania
- PC Code Page 737 (DOS Greek)
- PC Code Page 928 (Greek)
- PC Code Page 1255 (Hebrew)

For Asian code pages, code page 936, 949, or 950 replaces code page 932 in the above shown menu. Only one Asian code page (either 932, 936, 949, or 950) exists in the firmware.

To set the Code Page, emulation mode should be selected:

1. To enter into emulation mode from the main menu, press the Paper Feed button twice as short click and hold the button until a beep sound is generated.

The following sub-menu will be displayed.

*******************************				
Receipt Sync	$\rightarrow$	1 Click		
Default LPI	$\rightarrow$	2 Clicks		
Carriage	$\rightarrow$	3 Clicks		
Asian Mode	$\rightarrow$	4 Clicks		
Code Page	$\rightarrow$	5 Clicks		
Special Font	$\rightarrow$	6 Clicks		
Compress Pitch Font	$\rightarrow$	7 Clicks		
48 Character Mode	$\rightarrow$	8 Clicks		
PDF417 Max Columns	$\rightarrow$	9 Clicks		
Auto Reset	$\rightarrow$	10 Clicks		
Compatible Top Margin	$\rightarrow$	11 Clicks		
Emulation Mode	$\rightarrow$	12 Clicks		
Slip Print Width	$\rightarrow$	13 Clicks		
Platen Waiting Time	$\rightarrow$	14 Clicks		
Compatible Barcode Length	$\rightarrow$	15 Clicks		

2. To set code page, press the feed key 5 times as short click and hold the feed key until the beep sound is generated.

The following sub-menu will be displayed.

**CODE	PAGE	MENU				
Code	Page	437*		$\rightarrow$	1	Click
Code	Page	850		$\rightarrow$	2	Clicks
Code	Page	852		$\rightarrow$	3	Clicks
Code	Page	858		$\rightarrow$	4	Clicks
More	Optio	ns		$\rightarrow$	5	Clicks
Enter	code,	then	hold	Button	DOWN	ī

At least 1 second to validate

If more Options is selected, following sub menu will be displayed:

Code	Page	860	$\rightarrow$	1	Click
Code	Page	862	$\rightarrow$	2	Clicks
Code	Page	863	$\rightarrow$	3	Clicks
Code	Page	864	$\rightarrow$	4	Clicks
More	Optio	ons	$\rightarrow$	5	Clicks

Enter code, then hold Button DOWN At least 1 second to validate

Code	Page	865	$\rightarrow$	1	Click
Code	Page	866	$\rightarrow$	2	Clicks
Code	Page	874	$\rightarrow$	3	Clicks
Code	Page	1252	$\rightarrow$	4	Clicks
More	Optio	ons	$\rightarrow$	5	Clicks

Enter code, then hold Button DOWN At least 1 second to validate

```
Code Page 1256 → 1 Click

Code Page Katakana → 2 Clicks

Code Page Hungary → 3 Clicks

Code Page Romania → 4 Clicks
```

Enter code, then hold Button DOWN At least 1 second to validate

#### Save new parameters?

Save the Change	$\rightarrow$	Long Click
Cancel the Change	$\rightarrow$	Short Click

## **EEPROM to Default Settings**

This selection resets the configuration to the default settings.



**Caution:** Be extremely careful in changing any of the printer settings. This is to avoid inadvertently changing other settings that might affect the performance of the printer.

```
******* Reset EEPROM to DEFAULT VALUES ******

Save the change* 

Cancel the change 

Short Clicks

Enter code, then hold Button DOWN

At least 1 second to validate
```

# Level 2 Diagnostics (Runtime)

Runtime diagnostics occur during normal printer operation. When the following conditions occur, the printer automatically turns off the appropriate motors or devices and disables printing to prevent damage:

- Paper out
- Cover open
- Knife unable to home
- Thermal print head too hot
- Power supply voltage out of range

The Printer Status (Green) LED signals when these conditions occur and indicates the state or mode of the printer.

The Printer Status LED has 3 colors: green, amber, and red. LED indication for Printer Status LED is shown as below.

# Printer Status LED error blink pattern

Basic policy of blinking pattern for errors at Printer Status LED in Auto Mode is as follows:

- Red color is used for an unrecoverable error.
- Amber color is used for a recoverable error.
- Blink cycle is 2 Hz.
- Number of blink depends on the block where an error occurs.

## **Receipt station**

PCB	1 Blink
Thermal Head	2 Blinks
Cover	3 Blinks
Paper block	4 Blinks
Print block	5 Blinks
Cutter block	6 Blinks

In *User Mode* of Printer Status LED, a system controls LED by the *LED Control Request* pattern. LED pattern and the indication timing are specified by a system.

Errors	Color	Bezel LED
Memory Error	RED	1 Blink Pause 5 seconds
Thermal Head Disconnected	RED	2 Blink Pause 5 seconds
Thermal Head Abnormal Temperature	RED	2 Blink Pause 5 seconds
Cover Open	AMBER	3 Blink Pause 5 seconds
Paper End	AMBER	4 Blink Pause 5 seconds
Printer Jam	AMBER	5 Blink Pause 5 seconds
Cutter Error	AMBER	6 Blink Pause 5 seconds
Thermal head over heat	AMBER	2 Blink Pause 5 seconds

# Slip station

Flip block	1 Blink
Slip/Flip Cover	3 Blinks
Slip block	4 Blinks
Print block	5 Blinks
Shutter block	6 Blinks

In *User Mode* of Printer Status LED, a system controls LED by the *LED Control Request* pattern. LED pattern and the indication timing are specified by a system.

Errors	Color	Bezel LED
Flip Jam	AMBER	1 Blink Pause 5 seconds
Slip/Flip Cover Open	AMBER	3 Blink Pause 5 seconds
Slip Jam	AMBER	4 Blink Pause 5 seconds
Carrier Jam	AMBER	5 Blink Pause 5 seconds
Shutter Jam	AMBER	6 Blink Pause 5 seconds

# Level 3 Diagnostics (Remote)

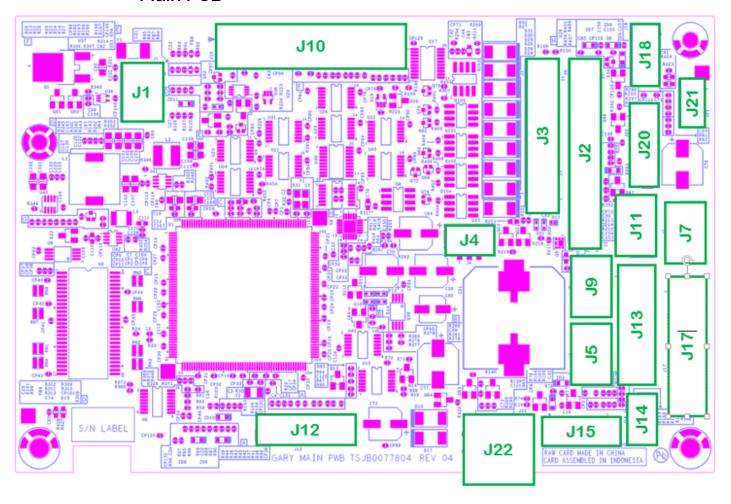
This option is used to check the quality control. This option is also used to determin the printer's operating condition, allowing for preventative maintenance or workload balancing before a printer encounters problems. Remote diagnostics keep track of the following tallies and print them on the receipt during the print test.

- Serial number
- Model number
- CRC number
- Number of receipt lines printed
- Number of knife cuts
- Number of slip lines
- Number of slip characters
- Number of MICR reads
- Number of hours printer is on
- Number of flash cycles
- Maximum temperature reached
- Number of cutter jams
- Number of times the door is open

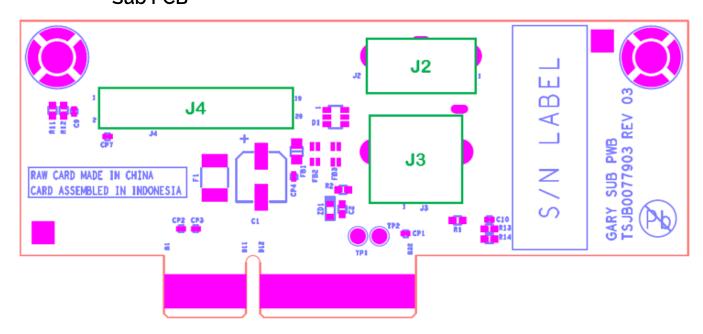
For more information, refer Level 1 Diagnostics (Printer Configuration) on page 78.

# PC Board connector locations and designations

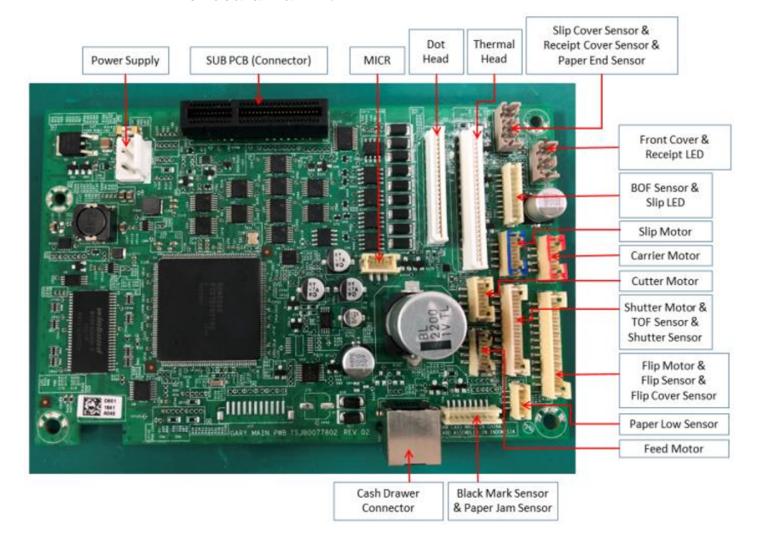
## Main PCB



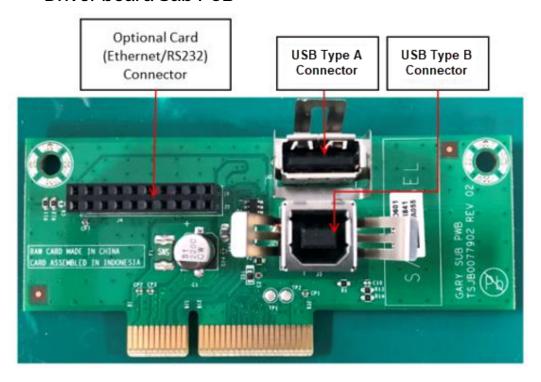
## Sub PCB



## **Driver board Main PCB**



## **Driver board Sub PCB**



# Fuse location and information





Location	Part description	Specifications
F1	25H5000G (skygate) or equivalent	125V / 5A
F2	25H3000G (skygate) or equivalent	
F3	25H3000G(skygate) or equicalent	125V / 3A

# Chapter 4: Communication

# **Communication Overview**

A program translates the data from the host computer to a language the printer can understand. This program must be in place so that the printer can print a receipt. It must tell the printer exactly how to print each character. This chapter describes how to create a program or modify an existing one.

## Interface

Set up a communication link so that the printer can communicate with the host. The 7169 model supports the industry standard USB communication interface. This interface has a protocol associated with it that the host computer must understand and adhere. The printer also supports RS–232C communications.

The host and printer can communicate only when the interface parameters are matched and the proper protocol is used. The 7169 ethernet model supports the ethernet communication interface.

# Sending commands

After the communication link is established, commands can be sent to the printer. This section describes how to send commands to the printer using DOS and BASIC.



**Note:** This section does not take into account the necessary protocol, but is meant as a general introduction to how the printer functions.

## Using BASIC to send commands

In BASIC, printer commands are sent as a string of characters preceded with the LPRINT command.

Example: LPRINT CHR\$ (&HOA)

This command sends the hexadecimal number OA to the printer. With the command, the printer prints the contents of its print buffer. Previously sent commands tell the printer exactly how the data should be printed on the paper.

Example: LPRINT CHR\$(&H12); "ABC"; CHR\$(&H0A)

This command sends the Hex numbers 12 41 42 43 0A to the printer. With the command, the printer then sets itself to double wide mode (12), loads the print buffer with "ABC" (41 42 43), and finally, prints (0A). The communication link that the BASIC program uses for the output must be matched with that of the printer's.

4-114 Communication

# **Communication Interface Modes**

The Configuration Menu gives the user the option of setting the printer to use a USB communication.

## RS-232C interface settings (Standard model)

If the user sets the printer to use an RS–232C serial interface, the Configuration Menu can be used to set the following RS–232C specific settings:

- Set a baud rate 115200, 57600, 38400, 19200, 9600 baud
- Set the number of data bits to seven or eight
- Set the number of stop bits to one or two
- Enable or disable parity
- Set the printer to ignore data errors or print a "?" upon encountering an error

The settings used will depend on the software the operator is using and the capabilities of the host computer.

Press the Paper Feed button for the communications settings you want.

Defaults are marked with asterisks (\*).

#### \*\* Interface RS232C

```
Baud Rate
                  -> 1 Click
                  -> 2 Clicks
Data Bits
                  -> 3 Clicks
Stop Bits
Parity
                  -> 4 Clicks
Flow Control
                  -> 5 Clicks
Reception Errors
                  -> 6 Clicks
DSR Signal
                  -> 7 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

#### \*\* BAUD RATE

```
115200 Baud -> 1 Click
57600 Baud -> 2 Clicks
38400 Baud -> 3 Clicks
19200 Baud* -> 4 Clicks
9600 Baud -> 5 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

Communication 4-115

#### \*\* DATA BITS

8 Data Bits\* -> 1 Click
7 Data Bits -> 2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.

#### \*\* STOP BITS

1 Stop Bits\* -> 1 Click
2 Stop Bits -> 2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.

#### \*\* PARITY

No Parity\* -> 1 Click
Even Parity -> 2 Clicks
Odd Parity -> 3 Clicks
Enter code, then hold Button DOWN.

#### \*\* RECEPTION ERRORS

Ignore Errors -> 1 Click
Print '?'\* -> 2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.

#### \*\* DSR Signal

Enable -> 1 Click
Disable -> 2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.

# USB interface settings (Standard model)

USB Interface setting can be changed by selecting USB Type in the Hardware menu.

#### \*\* USB Type

```
ION (EpiC) -> 1 Click
NonION (NHPI) * -> 2 Clicks
NonION (PRTR) -> 3 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

4-116 Communication

## **Ethernet Interface Settings (Option)**

Press the Paper Feed button for the communications settings you want.

#### \*\* Interface Ethernet

```
Ethernet RTC Protocol -> 1 Click

DHCP -> 2 Clicks

TCP max. connection -> 3 Clicks

Physical LAN Speed -> 4 Clicks

Link Down Timeout -> 5 Clicks

TCP idle Timeout -> 6 Clicks

SNMP Trap 1 -> 7 Clicks

SNMP Trap 2 -> 8 Clicks

Enter code, then hold Button DOWN.

At least 1 second to validate.
```

#### \*\* ERTC Protocol

```
TCP* -> 1 Click
UDP -> 2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

#### \*\* DHCP

```
Disable* -> 1 Clicks
Enable -> 2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

### \*\* TCP max. connection

```
1 client* -> 1 Click
2 clients -> 2 Clicks
3 clients -> 3 Clicks
4 clients -> 4 Clicks
5 clients -> 5 Clicks
6 clients -> 6 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

Communication 4-117

#### \*\* Physical LAN Speed

Auto\* -> 1 Clicks

100 Mbps Full -> 2 Clicks

100 Mbps Half -> 3 Clicks

10 Mbps Full -> 4 Clicks

10 Mbps Half -> 5 Clicks

Enter code, then hold Button DOWN.

At least 1 second to validate.

#### \*\*Link Down Timeout

No Time Out -> 1 Click 1 min - 10 min -> 2 Clicks 11 min - 20 min -> 3 Clicks 21 min - 30 min -> 4 Clicks 31 min - 40 min -> 5 Clicks 41 min - 50 min -> 6 Clicks 51 min - 60 min -> 7 Clicks 61 min - 70 min -> 8 Clicks 71 min - 80 min -> 9 Clicks 81 min - 90 min -> 10 Clicks 91 min - 100 min -> 11 Clicks 101 min - 110 min -> 12 Clicks 111 min - 120 min -> 13 Clicks Enter code, then hold Button DOWN. At least 1 second to validate.

#### \*\*TCP idle Timeout

-> 1 Click No Time Out 1 min - 10 min -> 2 Clicks 11 min - 20 min -> 3 Clicks 21 min - 30 min -> 4 Clicks 31 min - 40 min -> 5 Clicks 41 min - 50 min -> 6 Clicks 51 min - 60 min -> 7 Clicks 61 min - 70 min -> 8 Clicks 71 min - 80 min -> 9 Clicks 81 min - 90 min -> 10 Clicks 91 min - 100 min -> 11 Clicks 101 min - 110 min -> 12 Clicks 111 min - 120 min -> 13 Clicks Enter code, then hold Button DOWN. At least 1 second to validate.

4-118 Communication

#### \*\* SNMP Trap 1

```
Disable* -> 1 Click
Enable -> 2 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

## Save parameters

This function allows to save the selected communication settings or return to the communication settings to select additional options.

Press the Paper Feed button for the option you want.

#### Save new parameters?

```
YES -> Long Click
NO, MODIFY -> Short Click
```

Communication 4-119

# RS-232C Interface

The RS-232C version of the 7169 printer offers the standard options, which are selectable in the Diagnostic mode. For more information, refer to <u>Communication Interface Modes</u> on page 114.

# Print speed and timing

The fast speed of the printer requires its printer application to send data to the printer at least as fast as the data is printed. The application must also allow receipt lines to be buffered ahead at the printer, so the printer can print each line immediately after the preceding line, without stopping to wait for more data. Ideally, the application sends all the data for an entire receipt without pausing between characters or lines transmitted.

If the application sends data at 9600 baud and pauses between lines for as little as 50 milliseconds, the printer will not be able to print at full speed. But, if the application sends data at 19.2 kilobaud and does not pause between lines, the printer will be able to print at its full speed of 1020 lines/minute.

The following table shows that with a pause of 50 milliseconds after each line, the transmit time equals or exceeds the print time, which slows down the printer, regardless of the baud rate.

Char/Line	Lines/Receipt	Transmit Time: 9600 baud	Transmit Time: 19.2 kilobaud	Print Time
20	20	1.4 seconds	1.2 seconds	0.2 seconds
20	40	2.8 seconds	2.4 seconds	0.4 seconds
44	20	1.88 seconds	1.44 seconds	0.2 seconds
44	40	3.76 seconds	2.88 seconds	0.4 seconds

4-120 Communication

The following table shows that with no delay between lines, the transmit time is shorter than the print time, which allows the printer to print at full speed.

Char/Line	Lines/Receipt	Transmit Time: 9600 baud	Transmit Time: 19.2 kilobaud	Print Time
20	20	0.4 seconds	0.2 seconds	0.2 seconds
20	40	0.8 seconds	0.4 seconds	0.4 seconds
44	20	0.88 seconds	0.44 seconds	0.2 seconds
44	40	1.76 seconds	0.88 seconds	0.4 seconds

# RS-232C technical specifications

This section describes the pin settings for the connectors and the RS-232C interface parameters. The RS-232C parameters can be selected in the Diagnostic mode. The RS-232C parameters must match the host parameters.

# Setting extra RS-232C options

The following extra options are available for the RS-232C interface:

- Data errors
- Print ? for data errors (default)
- Ignore data errors

Communication 4-121

# **Ethernet Interface**

The Ethernet interface uses either 10BASE–t, 100BASE–TX protocol. The Ethernet version of the 7169 printer offers the web configuration, which configures the Ethernet settings through a Web browser. For more information, refer to the <u>Communication</u> <u>Interface Modes</u> on page 114.

#### **Protocol**

Application Layer	TCP Socket, UDP Socket, SNMP, DHCP, HTTP
Transport Layer	TCP, UDP
Network Layer	IP, ICMP, ARP
Data Link Layer	CSMA/CD
Physical Layer	10BASE-t, 100BASE-TX (IEEE802.3 Conforming) Auto negotiation 10/100Mbps Full/Half Duplex

## **TCP** socket

It transfers printing commands and data, several status commands and its responses through direct socket communications.

Port number	9100 (Default)
Maximum simultaneous sessions	1
Maximum simultaneous connections	6
Time out	120 seconds (Default)

## **UDP** socket

It transfers real time commands and its responses.

Port number 3000 (Default)
----------------------------

4-122 Communication

## Simple Network Management Protocol (SNMP)

The Simple Network Management Protocol (SNMP) manager uses the SNMP to obtain the printer information and status from the printer SNMP agent.

SNMP version	SNMP v1 (RFC1157) compliant
Transport protocol	UDP/IP
MIB support	Part of MIB-II (RFC1213) Part of HOST Resource MIB Part of Printer MIB
PDU support	Get Request Get Next Request Get Response Trap
Port number of Server	161
Port number for Trap transmit	162

## **Dynamic Host Configuration Protocol (DHCP)**

The Dynamic Host Configuration Protocol (DHCP) client of the printer uses DHCP to obtain the IP address, Subnet mask, and Gateway address from the DHCP server.

Transport protocol	UDP/IP
--------------------	--------

Communication 4-123

# Hypertext Transfer Protocol (HTTP)

Hypertext Transfer Protocol (HTTP) is used to configure the network setting through WEB Provision.

HTTP version	V1.1
Transport protocol	TCP/IP
Items to configure	• IP address
	Subnet mask
	<ul> <li>Default Gateway</li> </ul>
	• DHCP
	<ul> <li>DHCP address</li> </ul>
	TCP max. connection
	• Ethernet Physical LAN speed
	• LAN Real Time Command
	Protocol
	<ul> <li>Link down timeout</li> </ul>
	TCP idle timeout
	<ul> <li>TCP port number</li> </ul>
	UDP port number
	SNMP Trap 1
	SNMP Trap 2
	SNMP Community (R/W)
	SNMP Trap 1 Community
	SNMP Trap 2 Community
	SNMP Trap 1 IP Address
	SNMP Trap 2 IP Address

4-124 Communication

## Transmission Control Protocol (TCP) socket communication

The Transmission Control Protocol (TCP) socket is used to send commands and data related to printing. It is also used to send and receive the batch status commands and its statuses.

When the Ethernet RTC Protocol setting is TCP, it is used through sending and receiving of real time commands. The communication procedure is as follows:

- 1. Client PC connects to the TCP socket through the defined port number of the printer.
- 2. Client PC transmits the commands and the date of the printer.
- 3. When the printer receives the batch status command, the response is transmitted to client PC.

Communication 4-125

## User Datagram Protocol (UDP) socket communication

The User Datagram Protocol (UDP) socket is used through sending and receiving of a real time command. The communication is effective in UDP port 3000 and when the Ethernet RTC Protocol setting is UDP. The communication procedure is as follows:

- 1. Client PC connects to the UDP socket through the defined port number of the printer.
- 2. Client PC sends the status command and receives the status from the printer throughUDP socket.

### Multiple connection

It is possible to connect with multiple clients at the same time. However, if the transmission in the first connection is incomplete, the next connection cannot transmit data to the printer during its session.

The maximum possible number of connections is six. More than seven connections will be rejected.

4-126 Communication

## Connectors

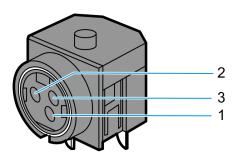
This section discusses the following NCR 7169 cable connectors:

- Power Cable Connector
- USB Cable Connector
- RS-232C Connector
- Ethernet Connector
- Cash Drawer Connector

## Power cable connector

The control cards received 24VDC  $\pm 10\%$  power through a 3-pin Mini-DIN plug, which mates with an integral shielded cable from the power supply unit.

The power connector is WIESON GA1009–3AT1N1, or equivalent, with the following pin out:



1	+ 24VDC
2	Power Ground
3	NC
Shell	Frame Ground

Communication 4-127

#### **USB** cable connector

USB I/F is mounted on main card as default. There are two USB ports. The first port is for the HOST function with Type A connector, and the second port is for the Device function with Type B connector. It does not support USB host port and device port at the same time.

#### **USB** version

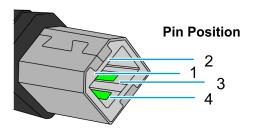
Version 2.0 High speed

### Connector pin assignment

The USB I/F connector is *B* Plug type for the Device function and *A* plug type for the Host function.

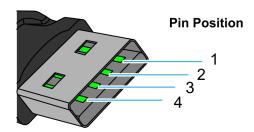
#### Type B connector

1	VBUS
2	D-
3	D+
4	GND
Shell	Shield



#### Type A connector

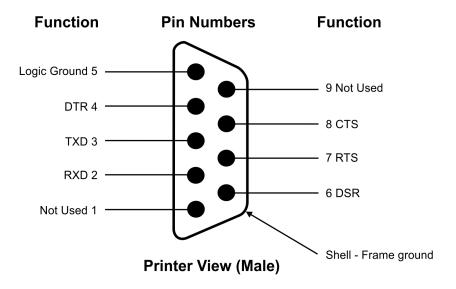
1	VBUS
2	D-
3	D+
4	GND
Shell	Shield



4-128 Communication

## RS-232C communication connector

The serial I/F connector is a 9-pin D–SUB Male type connector with the following pin assignments:



Communication 4-129

## **Ethernet connector**

The following specification is for the model equipped with ethernet connection.

#### **Standard**

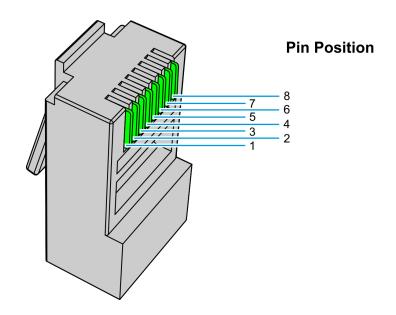
Fully integrated IEEE 802.3/802.3u-100 Base-TX/10 Base-T Physical Layer

#### Speed

Auto Negotiation: 10Mbps/100Mbps, Full/Half Duplex

### Connector pin assignment

The Ethernet I/F connector is an 8P8C modular connector (usually called RJ45) with the following pin assignments:

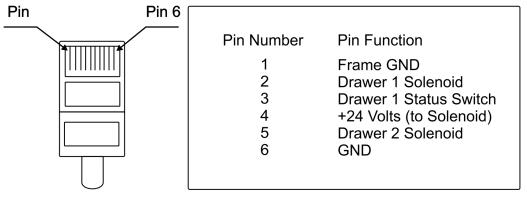


Pin Position	Signal Description
1	TX+
2	TX-
3	RX+
6	RX-

4-130 Communication

#### Cash drawer connector

The Cash drawer connector is located at the rear of the printer.It is a 6-pin modular type connector with the following pin assignments:



Communication 4-131

# Chapter 5: Command

## **Command Conventions**

The different features and functions provided by the printer are controlled by sending commands from the host computer to the printer. This chapter describes the commands that are supported by the printer. The printer commands are made up of one or more bytes of data starting with a command control code followed by its supporting parameters.

Commands control all operations and functions of the printer, including the following:

- Drawing by text, image, bar-code, and so forth.
- Controlling knife cut, cash drawer, and so forth.
- Retrieving the printer status and information.
- Configuring the printer to customize.

Unless otherwise noted, any of the commands may be used in any combination to communicate with the printer from a program in a host computer.

To allow the graceful handling of commands that may be available in other printers but are not available in this printer, some commands will be listed and described but identified as "not implemented". If the printer receives one of these "not implemented" commands, the command and its supporting operands will be discarded. Any other data bytes, including unrecognized commands, are sent to the print buffer as data, and the printer will attempt to print the data when it is instructed to print the buffer.

For more information and for the list of commands, refer to the NCR 7169 Multifunction Printer Programmer's Guide (BCC5-0000-5352).

# Chapter 6: Reflashing the Printer Firmware

# Flash Utility Information

The following instructions provide information on how to use the Flash Utilities provided for the NCR 7167 series, 7168 series, 7197 series, 7198 series, 740x-K59x series, 734X series, K8, 7649-F301, 7199, and 7169 printers. These instructions cover the utilities provided for Windows GUI and Windows Command Line.

The following files comprise the utilities:

- TseFlash.exe—Windows GUI version of the Flash Utility
- TseFlash.com—Windows Command Line Flash Utility

### File configurations

The following kinds of firmware loads can be sent to the printer:

- Boot Firmware
- Boot Firmware for Ethernet
- Main Firmware
- Single Byte Font/SBCS
- Two Byte Receipt Font/DBCS
- Two Byte Slip Font
- Table
- Printer Configuration Table

The Single Byte Font file has a file extension of .sfn. It is the font used for OEM Codepages such as 437, 850, 858, and so forth, which require only a single byte of data to define the character to be printed. The Two Byte Font files (Separately Defined for Slip & Receipt) have a file extension of .dfn. These are used to define the following Code Pages:

- 932—Japanese
- 936—Simplified Chinese
- 949-Korean
- 950—Traditional Chinese

It is very rare for the Single Byte Font to have to be updated. Since there is only enough memory in the printer for one of the Two Byte Fonts to be loaded at any time, the Two Byte Font will typically need to be loaded prior to installation in the appropriate country.



**Note:** The Font files, both Single and Two byte, should be loaded into the printer after the Boot and Main firmware have been loaded.

### Printer languages cross-reference

Font Type	Print Station	File Name
ANK	Receipt	7169_SBCS_V2101.sfn*
Arabic Font	Receipt	
Japanese CP932	Receipt	7169_DBCS_V2201.sfn*
Korean CP949	Receipt	
Simple Chinese CP936	Receipt	
Traditional Chinese CP950	Receipt	

The following items need to be noted:

- The noted font files are included on LPIN A370-0050-0000 or are available from the NCR web site under Retail Solution Specific Printer Firmware.
- The asterisk (\*) denotes that the printer is preloaded with these fonts from the factory.
- When Asian fonts are to be used, select the appropriate Asian Code Page in the diagnostic set and also enable the Asian Mode.
- The above file names are latest as of 10<sup>th</sup> Jan 2017. Based on the new modification, the filenames may change.
- 7169\_SBCS\_V2101.sfn is inclusive of ANK and Arabic Font.
- 7169\_DBCS\_V2201.dfn is inclusive of Japanese CP932, Korean CP949, Simple Chinese CP936, and Traditional Chinese CP950.

### Windows command line firmware update utility

/WIFI Wireless Interface.

The Windows Command Line version of the Flash Utility is provided to allow batch mode of operation in a Windows XP environment. If you issue a call to TseFlash.com with no parameter, you will get the following output that explains the parameters.



Note: This utility requires the TseFlash.exe to be in the same directory.

TseFlash.com is just a shell that sends the command line options to TseFlash.exe to process.

```
*** TseFlash.com Ver 4.2 ***
Thank you for using TseFlash Flash Memory Writer command line interface
utility!
TseFlash [model] [download type] [COM] [parameter] [file] [print(opt)]
[status(opt)] [ErrorTimeOut(opt)]
[model] --> Selections for the model:
[7169] [7169-X115] [7169-X035] [7169-5XX1/6XX1/7XX1] [7169-
8011-9001] [7168] [7168-23X3/22X3/1223] [7168-5XX3/6XX3]
[7197] [7197-5XX1/6XX1/7XX1/9XX1] [7198] [7649-F301] [K8]
[K590] [7401-K592] [7402-K592] [7342-F306] [7346-F306] [734X-F307/7125]
[734X-F309] [SSCO6-1ST/2ST] [7199]
[download type] --> Selections for the download type:
   /f - Download IMF program for [7168-23X3/22X3/1223], 7169-6321- 9001
   /m - Download firmware main program.
   /i - Download firmware IPL program.
   /1 - Download firmware IPL LAN program for 7197- 5XX1/6XX1/7XX1/9XX1.
   /a - Download ANK font or combined ANK & CP932 font
   for 7169, 7169-X115, 7169-X035, 7169-5XX1/6XX1/7XX1, 7169-8011-9001,
   7168, 7168-5xx3/6xx3, 7197, 7198, K590, 7401-K592, 7402-K592,7342-
   F306, 7346-F306
   /s - Download ASIAN font for 7197, K590, 7401-K592, 7402-K592, 7342-
   F306, 7346-F306
   /rs - Download Receipt ASIAN Font for 7169 & Receipt 2 Byte for 7168,
   7168-5XX3/6XX3, 7198, 7169-5xx1/6xx1/7xx1, 7169-8011-9001
   /ss - Download Slip ASIAN font for 7169 & Slip 2 Byte for 7168, 7168-
   5XX3/6XX3, 7169-5xx1/6xx1/7xx1, 7169-8011-9001
   /sb - Download SBCS font for 734X-F307/7125, 734X-F309, 7649- F301,
   7197-5XX1/6XX1/7XX1/9XX1, K8, SSCO6-1ST/2ST, 7199
   /db - Download DBCS font for 734X-F307/7125, 734X-F309, 7649- F301,
   7197-5XX1/6XX1/7XX1/9XX1, SSCO6-1ST/2ST, 7199
   /t - Download Table file for SSCO6-1ST/2ST, 7199
   /c - Printer Configuration Table file for 7199 (CPMI is not
   supported)
[com] --> Selections for the COM port, CPMI, IBMUSB, HID (Only K8) or
LAN:
   /COMX Where X is any valid integer within 1-50.
   /CPMI CPMI Interface.
   /IBMUSB 4690 USB(HID) Interface.
   /LAN Ethernet Interface.
```

```
/HID Only for K8 printers.
   /NHPI Only for 7199 printers.
   /PRTR Only for 7199 printers.
[parameter] --> Selections for interface parameter (Only for RS232 and
Ethernet interface):
For RS232 Only: Please key in the Baud Rate, Parity and Stop Bit
   - Baud Rate Selection:
  /[115200] | [57600] | [38400] | [19200] | [9600]
   - Parity Selection:
   /[none] | [even] | [odd]
   - Stop Bit Selection:
   /[1] | [2]
   For WiFi / Ethernet Only: Please key in the IP Address
   - IP Address Selection:
   /[xxx.xxx.xxx.xxx] - xxx is a number from 0 to 255
   For CPMI, IBMUSB and HID is ignore
[file] --> Selections for the filename:
   Any valid binary file with extension *.mfw | *.sfn |
   *.dfn | *.ipl | *.lan | *.bin (Only for K8) | *.tbl (Only for SSCO6-
   1ST/2ST and 7199) | *.cfg (Only for 7199)
[print(opt)] --> Selections for the print (Optional Parameter):
   /print (default) Print printer configuration form.
   /noprint Bypass printing printer configuration form.
[status(opt)] --> Optional for Return Status (Optional Parameter):
   /noretstat (default) Utility will not return status code.
   /retstat Utility will return status code.
[ErrorTimeOut(opt)] --> Failsafe: Max Time Allowed for Called Exe
(Optional Parameter):
   /ErrorTimeOut=xxx (minimum=420) xxx is number of Seconds - limit
   Information: Please use RS232 Interface, when switching from ION <=>
```

The following error message is displayed when correct parameters are not used:

```
Error: Too few / many command line parameters!
```

The following is an example of a command line:

```
TseFlash.com /7197-5X01/6X01 /m /COM1 /115200 /none /1 SP2M0609.MFW /noskip /print /retstat
```

This command displays the GUI interface and a progress bar indicator shown in the next section. The same GUI interface is displayed when the program is ran through the GUI Windows GUI Printer Firmware Update Utility.

The printer firmware can be updated from the host terminal, a laptop, or a PC by running the TSEFlash.exe utility. The three file formats for the flash firmware are the following:

- IPL—Boot Firmware
- LAN—Boot Firmware for LAN
- MFW—Main Firmware

Examples of the firmware are the following:

- 7198Rol V2001.ipl—7198 RoL Printer Boot Firmware
- 7198RoL\_V2001.lan—7198 RoL Printer Boot Firmware for LAN
- 7198Rol\_V5464.mfw—7198 RoL Printer Main Firmware



**Note:** These are examples only. The firmware version varies based on the printer and when updates are provided.

To reflash a firmware into the printer, unzip the flash utility and the flash files being used into a directory on the hard disk.

#### Using TseFlash.exe utility

On the host terminal or PC running Windows, run TSEFlash.exe\*\*\* to start the program. A window similar to the example below will appear on the screen.



**Note:** The flash utility shown is for demonstration purposes only. Visit NCR Support Site for the latest release.

# Chapter 7: Configuration Network

## Overview

The printer provides the Ethernet Network Configuration page in a Web page (respondent HTTP/1.0 and 1.1)

The Configuration page can be accessed by connecting the Host PC to the printer via the network and entering the printer's IP address in the Web browser address bar.

**Example:** http://192.168.1.1/main.html in the Web browser

The Host PC needs to be set with the correct network configuration (IP address, Subnet mask address, and so forth) to connect to the printer.

Format: http ://(IP address for the printer)/main.html

7-139 Configuration Network

# Display Format of Configuration Setting Page

This section discusses the display format of the Ethernet Network Configuration page.

## Top page

The Top page displays the Ethernet Configuration screen

To display the Ethernet Configuration setting page with the current configuration, select **Show Configuration**.



Configuration Network 7-140

### **Ethernet Configuration setting page**

Users can modify the ethernet configuration on the Ethernet Configuration setting page.

To change the ethernet configuration, follow these steps:

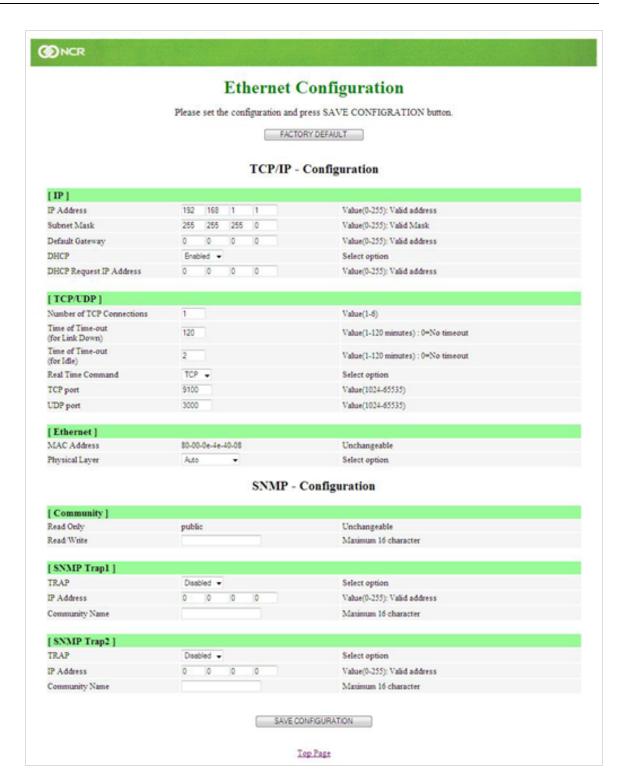
- 1. To change the configuration values, do one of the following:
  - Enter a value in the corresponding field.
  - Select an option from the drop-down list.
- 2. Select **SAVE CONFIGURATION** to save the new ethernet configuration in the printer ROM.

If all values are valid and the saving process is successful, the *Save Configuration Message* is then displayed. If any value is invalid, the new ethernet configuration is not saved and an error message is then displayed. To check and retry changing the values, select **Top Page**.



**Note:** To set the values to factory default, select **FACTORY DEFAULT**, and then select **SAVE CONFIGURATION**.

7-141 Configuration Network

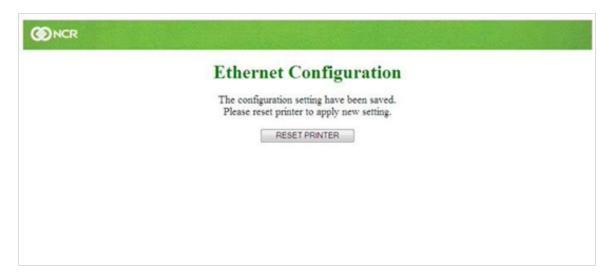


Configuration Network 7-142

### Save Configuration message page

When all input values are correct and saved, an information message is displayed.

To reset printer settings and apply a new ethernet configuration, select **RESET PRINTER** 



## Error Message page

When the Ethernet configuration values are invalid, the values entered are not saved. An error message and its details is displayed.

To check and retry changing values, select **Top Page**.



7-143 Configuration Network

# TCP/IP Setting

This section discusses configuration parameters and default values for the TCP/IP setting.

### IP setting



Items	Default value	Detail
IP Address	192.168.1.1	Sets the printer IP Address. <b>Note:</b> To manually enter the IP address, disable DHCP.
Subnet Mask	255.255.255.0	Sets the printer Subnet Mask. <b>Note:</b> To manually enter the Subnet Mask address, disable DHCP.
Default Gateway	0.0.0.0	Sets the Printer Default Gateway. <b>Note:</b> To manually enter the Default Gateway address, disable DHCP.
DHCP	Enabled	<ul> <li>Specifies how the IP address is assigned.</li> <li>Enabled—IP address is automatically assigned from the server.</li> <li>Disabled—IP address is manually entered in the fields.</li> </ul>
DHCP Request IP Address	0.0.0.0	Sets requesting specific IP address to DHCP server. <b>Note:</b> If the DHCP Request IP Address is set to 0.0.0.0, printer IP address is automatically assigned.



Note: IP addresses that cannot be set with Ethernet model printer are the following:

- 255.255.255.255 (Broad cast address)
- Local loopback address
  - 127.\*\*\*.\*\*\*—this is the IP Address to send to oneself and \*\*\* is any value from 0 to 255.

Configuration Network 7-144

## Obtaining IP address automatically

When DHCP is enabled, the printer automatically gets the IP address, the Subnet Mask, and the Default Gateway from a DHCP server. If the printer does not automatically get the IP address, it uses the same IP address as the Manual mode. The DHCP allocated IP address can be seen on the Diagnostics Form of the connected printer.

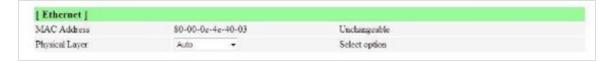
## TCP/UDP setting

[TCP/UDP]			
Number of TCP Connections	1	Value(1-6)	
Time of Time-out (for Link Down)	120	Value(1-120 minutes): 0=No timeout	
Time of Time-out (for Idle)	2	Value(1-120 minutes): 0=No timeout	
Real Time Command	TCP •	Select option	
TCP port	9100	Value(1024-65535)	
UDP port	3000	Value(1024-65535)	

Items	Default Value	Detail
Number of TCP Connections	1	Specifies the maximum number of hosts that can be connected. The maximum number of hosts that can be connected is 6.
Time of Time- out (for Link Down)	120 min	Specifies the Link Down time-out. The maximum Link Down time-out is 120 minutes. When the value is set to zero, time-out is disabled.
Time of Time- out (for Idle)	2 min	Specifies the Idle time-out. The maximum Idle time-out is 120 minutes. When the value is set to zero, time-out disabled.
Real Time Command	ТСР	Protocol options for Real Time command. The following options in the drop-down list are:  TCP UDP
TCP port	9100	Specifies the TCP RAW port number. The TCP port number ranges from 1024 to 65535.  When "Real Time Command" setting is TCP, it is used by sending and receiving of Real Time Command.
UDP port	3000	Specifies the UDP port number. The UDP port number ranges from 1024 to 65535. This is effective when "Real Time Command" setting is UDP.

7-145 Configuration Network

# Other ethernet setting



Items	Default value	Detail	
MAC Address		Displays the MAC address of the printer Ethernet interface. The MAC address for each Ethernet interface is unique and unchangeable.	
Physical Layer	Auto	Specifies the Speed and Duplex settings. The following options in the drop-down list are:  • Auto • 10 Mbps Half • 10 Mbps Full • 100 Mbps Half • 100 Mbps Full	

Configuration Network 7-146

# **SNMP Setting**

This section discusses configuration parameters and default values for the SNMP setting.



# SNMP community setting

Items	Default value	Detail
Read Only	public	Displays the SNMP community read-only name. The community name has a maximum length of 16 characters.
Read/Write		Specifies the SNMP community read-write name. The community name has a maximum length of 16 characters.

## **SNMP IP Trap1 setting**

Items	Default value	Detail
TRAP	Disable	Specifies the SNMP TRAP settings.  • Enable  • Disable
Address	0.0.0.0	Specifies the host address that receives SNMP TRAP.
Community Name		Specifies the SNMP TRAP community name. The community name has a maximum length of 16 characters.

7-147 Configuration Network

# SNMP IP Trap2 setting

Items	Default value	Detail
TRAP	Disable	Specifies the SNMP TRAP settings. Enable Disable
Address	0.0.0.0	Specifies the host address that receives SNMP TRAP.
Community Name		Specifies the SNMP TRAP community name. The community name has a maximum length of 16 characters.

# Appendix A: Printer Specifications

# **Printing Specifications**

	Thermal Receipt Station	Slip Station
Print head	<ul><li>Fixed</li><li>576 Print Elements</li><li>Direct Thermal</li><li>Fixed Head</li><li>Line of Dots</li></ul>	<ul><li>Bi-directional</li><li>Logic Seeking</li><li>Serial Dot Matrix</li><li>Ribbon cassettes</li><li>Forms Insertion</li></ul>
Character Cell	<ul><li>Standard: 13 x 24 Dots</li><li>Compressed: 10 x 24 Dots</li></ul>	<ul><li>Standard: 10 x 7 Dots</li><li>Compressed: 10 x 7 Dots</li></ul>
Character Size	0.0525-inch wide by 0.092-inch high	0.057-inch wide by 0.097-inch high
Character Spacing	15.25 characters per inch (horizontal)	
Character Pitch	<ul><li>15.6 characters per inch (Standard)</li><li>20.3 characters per inch (Compressed)</li></ul>	<ul><li>13.9 characters per inch (Standard)</li><li>17.1 characters per inch (Compressed)</li></ul>
Columns (maximum)	<ul> <li>For 80-mm paper:</li> <li>44 columns (Standard)</li> <li>56 columns (Compressed)</li> <li>For 58-mm paper:</li> <li>32 columns (Standard)</li> <li>42 columns (Compressed)</li> </ul>	<ul> <li>45 columns (Standard)</li> <li>55 columns (Compressed)</li> </ul>

A-149 Printer Specifications

	Thermal Receipt Station	Slip Station
Print Mode	<ul> <li>Standard</li> <li>Compressed</li> <li>Double High</li> <li>Double Wide</li> <li>Upside Down</li> <li>Rotated</li> <li>Underline</li> <li>Scalable</li> <li>Bold</li> <li>Superscript</li> <li>Italic</li> <li>Subscript</li> </ul>	<ul> <li>Standard</li> <li>Compressed</li> <li>Double Wide</li> <li>Upside Down</li> <li>Rotated</li> </ul>
Resident Fonts	Code Page 437, 850, 852, 860, 863, 865, 858, 866, 1252, 1256, Katakana, 874, 862, 864, and Space page	Code Page 437, 850, 852, 858, 860, 862, 863, 864, 865, 866, 874, 1252, Katakana and 932 (Option: 936, 949, 950)
Speed	355.6 millimeters per second <b>Note:</b> Speed is dependent on the Line Spacing.	300 characters per second at 13.9 CPI <b>Note:</b> Speed is dependent on the number of columns (40-column width).
Print Order	Descending	Descending
Line Spacing	<ul> <li>7.52 lines per inch (default)</li> <li>8.47, 8.13, 7.81, 7.25, 7.00,</li> <li>5.98 lines per inch and variable lines per inch.</li> </ul>	<ul> <li>7.2 lines per inch (default)</li> <li>10.3, 9.0, 8.0, 6.5, 6.0, lines per inch and variable lines per inch.</li> </ul>
Slew Speed	14 inches per second	5.7 lines per second at 17.1 characters per inch
Print Zone	2.83 inches maximum	3.23 inches maxmum
Noise	57 dBA Sound Pressure (ISO 7779)	62 dBA Sound Pressure (ISO 7779)
Graphics (Optional)	<ul><li>User-defined Graphics</li><li>Logo</li></ul>	User-defined Graphics
Other	No Reverse Paper Feed	<ul><li>Reverse Paper Feed</li><li>Two Form in Sensors</li></ul>

Printer Specifications A-150

	Thermal Receipt Station	Slip Station
Paper Diameter	80 millimeters maximum	Not applicable
Paper Length	83 meters (273 feet)	<ul> <li>Without Check Flip Option:</li> <li>2.67 inches (minimum)</li> <li>With Check Flip Option:</li> <li>3.15 inches (minimum),</li> <li>8.74 inches (maximum)</li> </ul>
Paper Width	<ul> <li>80 millimeters + 0.5 millimeters / -1.2 millimeters (3.15 inches + 0.02 inches/ -0.047 inches)</li> <li>58 millimeters + 0.5 millimeters / -1 millimeters (2.28 inches + 0.02 inches/ -0.039 inches)</li> </ul>	<ul> <li>Without Check Flip Option:         <ul> <li>2.00 inches (minimum),</li> <li>8.50 inches (maximum)</li> </ul> </li> <li>Note: Forms with width of more than 170 mm will be extended to the left outer side of the printer.</li> <li>With Check Flip Option:         <ul> <li>2.75 inches (minimum),</li> <li>3.74 inches (maximum)</li> </ul> </li> </ul>
Paper Thickness	Not applicable	<b>0.406 millimeters</b> (0.016 inches)
Printable Area	2.83 inches maximum	3.22 inches maximum

A-151 Printer Specifications

# Power Requirements

The printer receives power from the following:

- host system (integrated)
- in-line power supply (remote) which can be purchased separately

Models receiving power from a power supply use one cable for communication and a separate cable for power.

#### Power modes

Below are the available power modes of the printer:

- NCR Terminal Power-Low Mode (Term Pwr-Low): Maximum allowable <u>printing</u> power consumption is 55 watts.
- NCR Terminal Power-High Mode (Term Pwr-High): Maximum allowable printing cycle power consumption is 55 watts.
- NCR 60W Power Supply Mode (NCR 60W Ext Pwr: Maximum allowable <u>printing</u> <u>cycle</u> power consumption is 60 watts.
- NCR 75W Power Supply Mode (NCR 75 Ext Pwr): Maximum allowable <u>printing</u> cycle power consumption is 75 watts.

#### Power from host

The host computer must provide a +24-volt supply to the printer. Voltage variation in the 24-volt line may be within 21.6 volts - 26.4 volts.

! Important: Surge protection must be provided. To provide surge protection, place a 3.2-ampere time delay fuse on the +24-volt line.

### Power from external power supply

The external power supply must provide a +24-volt line of power to the printer. Surge protection must be provided.

- When NCR 75-watt external power supply is used, select (NCR 75W Ext Pwr) mode.
- When NCR 60-watt external power supply is used, select (NCR 60W Ext Pwr) mode.

Printer Specifications A-152

# Physical and Operating Environment

## Temperature and humidity

	Temperature	Humidity
Operating	5°Celsius to 50°Celsius (41°Farenheit to 122°Farenheit)	5% to 90%
Storage	-10°Celsius to 55°Celsius (14°Farenheit to 131°Farenheit)	10% to 90%
Transit	<b>-40°Celsius to 60°Celsius</b> (-40°Farenheit to 140°Farenheit)	5% to 95%
Condensation	Condensation may occur when the printer is moved from cold to warm areas after shipment. The printer's design permits operation after drying out and stabilizing at room temperature.	

## Reliability

The numbers in the table refer to the Mean Cycle Between Failure (MCBF) for the items indicated.



**Note:** Reliability statistics are based on averages exhibited under lab conditions and do not constitute a warranty.

Component	Reliability
Thermal Receipt Printer	60 million lines
Impact Slip Printer	30 million lines
Impact Print head	200 million characters
Electronics	1,100,000 on-time hours
Communications Card	25,000,000 on-time hours
Knife	2 million cuts
MICR Check Reader	500,000 reads
Flip	500,000 flips
Power Supply	200,000 on-time hours
Flip Mechanism	500,000 cycles

A-153 Printer Specifications

# Dimensions and weight

Height	178 millimeters (7.01 inches)	
Width	192 millimeters (7.56 inches)	
Depth	<b>304.5 millimeters</b> (11.99 inches)	
Weight	<ul> <li>Flip model—3.70 kilograms (8.2 pounds),</li> <li>Non-flip model—3.50 kilograms (7.7 pounds)</li> </ul>	

# Appendix B: Reflashing the Printer Firmware

Flash Utility is used to flash the firmware and font files to the printer.



**Note:** For the detailed procedure, refer to the *NCR Printer Flash Utility Owners Guide* from the NCR web site, *http://www5.ncr.com/support/support\_drivers\_patches.asp?Class=External\Peripherals\Printer\FlashUtility\display*.

# Appendix C: Lean Receipt Utility

Lean Receipt Utility is used to set the printer Eco setting from the utility.

For detailed procedure, refer to the Lean Receipt utility user manual from the NCR web site: <a href="http://www5.ncr.com/support/support\_drivers\_">http://www5.ncr.com/support/support\_drivers\_</a>
<a href="patches.asp?Class=External\Peripherals\Printer\LeanReceiptUtility\display.">http://www5.ncr.com/support/support\_drivers\_</a>
<a href="patches.asp?Class=External\Peripherals\Printer\LeanReceiptUtility\display.">http://www5.ncr.com/support/support\_drivers\_</a>
<a href="patches.asp?Class=External\Peripherals\Printer\LeanReceiptUtility\display.">http://www5.ncr.com/support/support\_drivers\_</a>
<a href="patches.asp?Class=External\Peripherals\Printer\LeanReceiptUtility\display.">http://www5.ncr.com/support/support\_drivers\_</a>
<a href="patches.asp?Class=External\Peripherals\Printer\LeanReceiptUtility\display.">http://www5.ncr.com/support/support\_drivers\_</a>

# Appendix D: Print Characteristics

### **Character Size**

This section shows the dot pattern for characters printed on the receipt station.

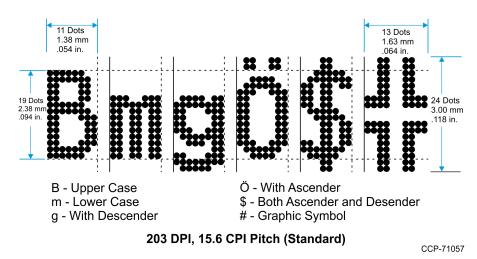
### **Receipt station**

The following two illustrations show the dot patterns of sample characters for standard pitch (15.6 CPI) and compressed pitch (20.3 CPI).

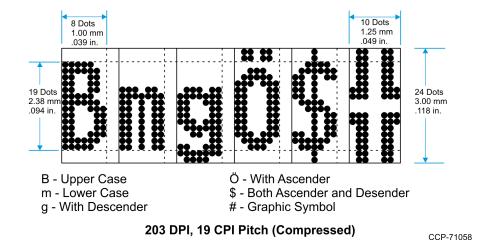


**Note:** Compressed pitch uses fewer dots horizontally than standard pitch.

#### Standard pitch



### Compressed pitch



D-157 Print Characteristics

### **Print Zones**

This section shows the printable area for the receipt station.

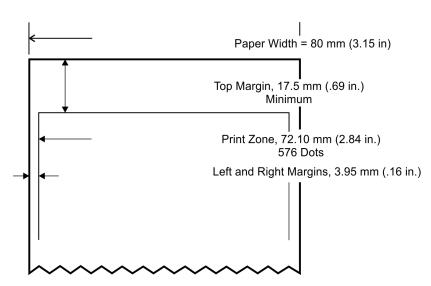
### Receipt station

#### For 80-mm paper

The receipt station centers characters (standard pitch and compressed pitch) and graphics on a receipt with a width of 27 dots or **80 mm** (3.15 inches).

- Standard pitch: 13 x 24 dots in character cell, 44 characters (columns) per line
- Compressed pitch: 10 x 24 dots in character cell, 56 characters (columns) per line
- Double byte character: 24 x 24 dots in character cell, 24 characters (columns) per line
- Graphics: 576 addressable bits

The minimum print line height is 24 dots for characters and 24 dots for graphics. The standard print line height is 27 dots or **3.38 mm** (0.133 inches) for characters (with three extra dot rows). Refer to the illustration below (not to scale).



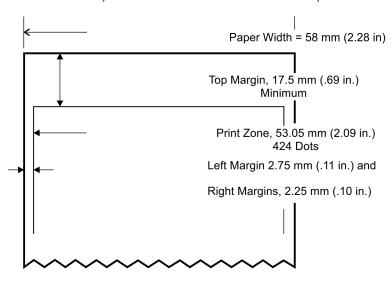
Print Characteristics D-158

#### For 58-mm paper

The receipt station centers characters (standard pitch and compressed pitch) and graphics on a receipt with a width of **58 mm** (2.28 inches).

- Standard pitch: 13 x 24 dots in character cell, 32 characters (columns) per line
- Compressed pitch: 10 x 24 dots in character cell, 42 characters (columns) per line
- Double byte character: 24 x 24 dots in character cell, 17 characters (columns) per line
- Graphics: 424 addressable bits

The minimum print line height is 24 dots for characters and 24 dots for graphics. The standard print line height is 27 dots or **3.38 mm** (0.133 inches) for characters (with three extra dot rows). Refer to the illustration below (not to scale).



# Appendix E: Thai Font Support

## **Outline**

The NCR 7169 Multifunction Printer supports printing of Thai characters. Code Page 874 (Thai) supports Thai characters, but some of their characters define only a part of one character. Actual Thai character is made up of a combination of some characters, with a maximum of four characters in Code Page 874, for one Thai character. The NCR 7169 Multifunction Printer supports the function which combines Thai characters with Code Page 874's characters.

# Validate Thai code page function

The Thai code page function is validated when the following conditions are selected:

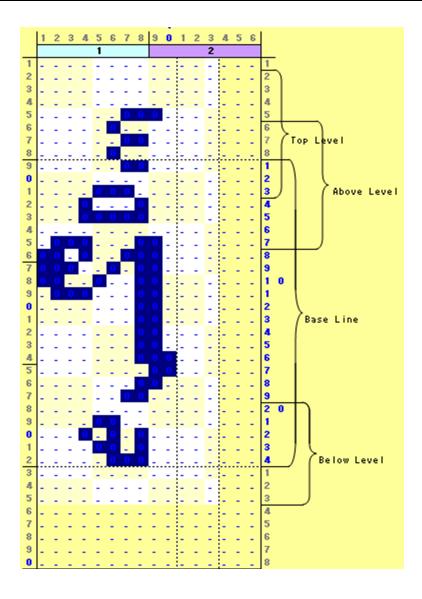
- Online mode
- Asian Mode=OFF
- Code Page=874

## Thai Character Configuration

Thai character consists of a maximum of four levels:

- **Top level**—only top or above level characters are allowed to be placed on the Top level, which is the highest layer.
- **Above level**—only topor above level characters are allowed to be placed on the Above level, which exists between the Top level and the Base line.
- **Base line**—only base line characters are allowed to be placed on the Base line, which exists between the Above level and the Below level.
- **Below level**—only below level characters are allowed to be placed on the Below level, which is the lowest layer.

E-160 Thai Font Support



Thai Font Support E-161

Each character type is explained below.



CCP-71043

## Base line characters

- Base line characters are the characters encircled in red, purple, and pink.
- The characters encircled in purple will not have below level characters, but they are rarely used.
- The characters encircled in pink will not have top level and above level. Only the w character is rarely used.
- Each character encircled in red and purple must have a top and below level.

## Top level/Above level characters

- Characters encircled in blue are Top level or Above level characters.
- Characters encircled in red and purple, and the w character can be both top and above level.
- The characters encircled in blue on the fifth line can be top level when above level character exists. The fourth line characters encircled in blue can be above level only. The fifth line characters encircled in blue can be both top and above level.

## Below level characters

- Characters encircled in green are Below level characters.
- Top, Above and Below characters cannot be in the same character.

E-162 Thai Font Support

## Thai Character Data Procedure

Thai character data string uses the following format:

Base character, <Below character >, <Above character>, <Top character>, Base character, ...

The procedure is as follows:

- 1. The printer checks whether the received character is the Base character. If the Top, Above, and Below characters are sent before the Base character, these characters are ignored.
- 2. After receiving the Base character, the printer checks the next character until it receives the next Base character.
- 3. If the next character is the Below character, the Above character, or the Top character, the printer checks whether these Thai characters are valid for the current Base character. If they are valid, it merges these characters' image with the Base character's image. If it is an invalid character, it will be ignored.

## Notes for this Function

This function supports standard pitch font and compressed pitch font. That character height is 34 dots. The following command functions change, and are different from other code pages.

SYN	Add <i>n</i> Extra Dot Rows.	When CP874 is selected, the line Pitch is 34 + <i>n</i> dot.
ESC 2	Set Line Spacing to 1/6 inch.	When CP874 is selected, this command is ignored.
ESC 3	Set Line Spacing.	When CP874 is selected, valid parameter value is >= 34.

The line pitch is changed by the following commands because the code page is changed.

ESC R	Select international character set.	
ESC t	Select character code table. <b>Note:</b> Same as ESC R.	
ESC %	Set or cancel the user-defined character set.	
ESC L	Set page mode.	
ESC S	Select standard mode.	
FF	Form Feed in page mode.	

Thai Font Support E-163

## Limitation

The unicode command is ignored under the Thai code page function. When the Asian mode = *ON*, the Thai character image is not combined, and each character is printed separately.

# Appendix F: Arabic Font Support

## Overview

The NCR 7169 Multifunction Printer supports the Arabic font (Code Page 1256). It prints each character one by one according to the code number specified. Each Arabic character changes its shape according to the context, which makes it difficult to interpret. The printer provides the functionality to automatically transform Arabic characters according to the context.

To enable this functionality, the printer has to be configured with the following settings:

- Code Page=1256
- Special Font=Mode 4 (Proportional Contextual 1256) or Mode 5 (Fixed Pitch Contextual 1256)

Based on these settings, the following transformation features are available for characters of code page 1256:

- Contextual forms
- Word ligatures
- Reverse the Arabic strings

These features can be used based on the proportional font and with the following conditions:

- Arabic Proportional font exists in the double-byte character set (DBCS) font area.
- Asian Mode is disabled.
- Code page 1256 is selected or Arabic characters (0600–06FF) are specified in Unicode mode.

If Arabic proportional font does not exist in the DBCS font area, the features will be unavailable, and Code page 1256 isolated characters are printed in fixed pitch.

## Contextual forms

Arabic letters have contextual forms, depending on the surrounding letters in a word. A typical three letter-word will start with a letter in initial form, followed by a letter in medial form and, finally, by a letter in final form. Curly writing is a way to write a word in connection to all the characters in that word. This feature is supported in contextual forms.

F-165 Arabic Font Support

## Word ligatures

**Arabic Presentation Forms-A** has few characters defined as *word ligatures* for terms frequently used in formulaic expressions in Arabic. For example, the common ampersand (**&**) represents the conjunctive word *and*. The ampersand symbol is a ligature.

## **Reverse the Arabic strings**

Arabic writing is from right to left, aligning with the right margin. The printer receives data that reverses the Arabic string and prints the data using the Arabic format, which is right to left.

## **Proportional font**

The printer has the following resident proportional characters for Arabic functions (Unicode base). These characters cover the characters of Code page 1256.

Lower characters	0020-007F
Arabic (Basic)	0600–06FF, 225 characters
Arabic Supplement	0750–077F, 48 characters
Arabic Extended-A	08A0–08FF, 39 characters
Arabic Presentation Forms-A	FB50–FDFF, 535 characters
Arabic Presentation Forms-B	FE70–FEFF, 140 characters

Arabic Font Support F-166

## Proportional font conversion handling of Arabic

Express a code as follows Uni Select Unicode Mode (ESC +): IN Proportional font code of Arabic: (Include Lower character) Uni Cancel Unicode Mode (ESC +): OUT Α Other codes: Receiving data е **PrintOut** A A A A A A A B E E E A A A A LF font generator (Image data) font generator (Image data) AAAAAAA e e e AAAA CCP-71055

## Limitations

Because of the features of Arabic font, there are several limitations in terms of the character attributes. For more information on the command description, refer to the *NCR 7169 Multifunction Printer Programmer's Guide (BCC5-0000-5352)*. Please see the command description of Print Characteristic Commands in detail.

## Invalid command list

The following table contains a list of commands that are not available if a new Arabic character is used.

Command	Command name	Remarks
ESC DC2	Select 90 degree counterclockwise rotated print	
ESC SYSN	Select pitch (Column width)	
ESC SP	Set character right-side spacing	
ESC!	Select print modes	Bit0, Bit3 Invalid
ESC %	Select or Cancel user-defined character set	
ESC & 3	Define user-defined characters	
ESC:	Copy character set from ROM to RAM	
ESC?	Cancel user-defined characters	
ESC E	Select or Cancel emphasized mode	
ESC G	Select double strike	

F-167 Arabic Font Support

Command	Command name	Remarks
ESC H	Cancel double strike	
ESC I	Select or Cancel italic print	
ESC V	Select or Cancel 90 degrees clockwise rotated print	
ESC {	Select or Cancel upside down printing mode	
US ENQ	Select Superscript or subscript modes	

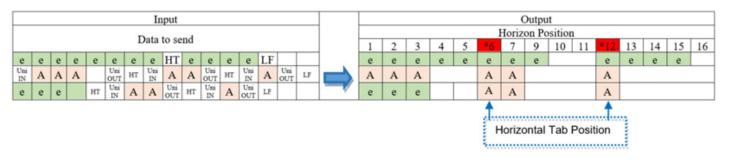
The following table contains a list of commands that are ignored if the command is sent in the middle of a line that includes an Arabic character.

Command	Command name	Remarks
DC2	Select double-wide characters	
ESC -	Select or Cancel underline mode	
ESC r	Select print color	
GS!	Select character size	
GS B	Select or Cancel white/black reverse printing mode	
ESC!	Select print modes	Bit4, Bit5 Invalid

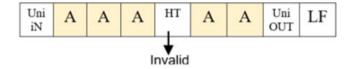
Arabic Font Support F-168

## Horizontal positioning commands

**Example:** HT Horizontal Tab (6,12,18)



## Invalid case for horizontal tab



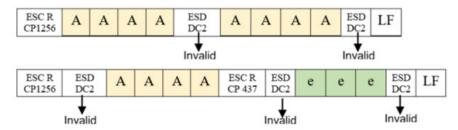
F-169 Arabic Font Support

## Invalid command (sample)

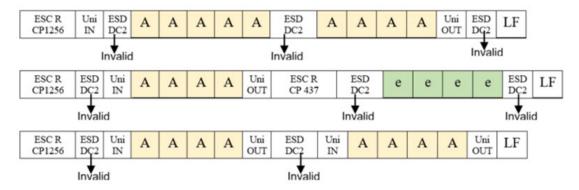
The example below shows the condition for an invalid command.

**Example:** ESC DC2—Select 90 degree counterclockwise rotated print

## Code Page1256:



## Unicode:



## Express a code as follows:

Proportional font code of Arabic (include Lower character)	Α
Font code for other Code Page	е

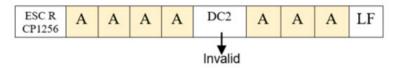
Arabic Font Support F-170

## Invalid command in middle of the line (example)

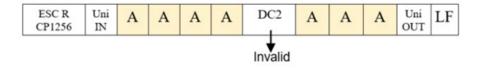
The following example shows the condition for an invalid command in the middle of the line.

**Example:** DC2—Select double-wide characters

## Code page 1256:



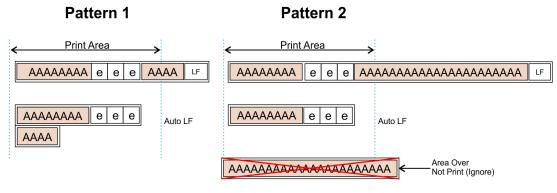
## Unicode:



F-171 Arabic Font Support

## Printing layout (Over the area)

If the Arabic character line exceeds printable area, it will be printed as follows:



CCP-71062

# Appendix G: Character Sets

## Overview

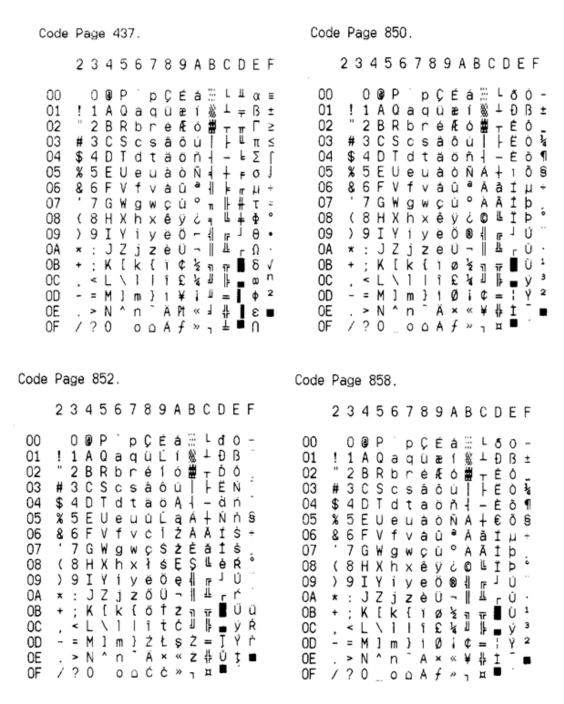
The following character sets are available in NCR 7169 printer:

- PC Code Page 437 (US English)
- PC Code Page 850 (Multilingual)
- PC Code Page 852 (Slavic)
- PC Code Page 860 (Portuguese)
- PC Code Page 862 (Hebrew)
- PC Code Page 863 (French Canadian)
- PC Code Page 864 (Arabic)
- PC Code Page 865 (Nordic)
- PC Code Page 866 (Cyrillic)
- PC Code Page 1252 (Windows Latin #1)
- PC Code Page 1256 (Arabic)-Contextual
- PC Code Page 1256 (Arabic)-Fixed
- PC Code Page Katakana
- Hungary
- PC Code Page 874 (Enhanced Thai)
- Code Page 737 (Greek)
- Code Page 855
- Code Page 928 (Greek)
- Code Page 932
- Code Page 936
- Code Page 949
- Code Page 950
- Code Page 1250

G-173 Character Sets

- Code Page 1251
- Romania

## Code pages 437, 850, 852, and 858



## Code pages 860, 862, 863, and 864

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Code Page 862
Code Page 860.
                                           23456789ABCDEF
     23456789ABCDEF
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                       1 + B ±
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                                                Rbrzyó
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        BRbréÈó
 02
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                  Ú
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     . > N ^ n
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     / ? 0 _ o a A Ó » ¬
                                      Code Page 864
Code Page 863.
                                           23456789ABCDEF
    23456789ABCDEF
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                  ; <u>;;</u> L # α ≡
             рÇÉ
                                       01
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G-175 Character Sets

## Code pages 865, 866, 874, and 1252

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Code Page 865.
                                     Code Page 866.
     23456789ABCDEF
                                          23456789ABCDEF
              pÇÉá ⊞ L L α ≡
                                                    рАРа∷⊥ ∟ ДрЁ
     ! 1 A Q a q ü æ í ‰ ⊥ = B ±
 01
                                             A Q a q b C 6 % ± = c ë
                                      01
                                          ! 1
        BRbré Æó#T
 02
                                            2
                                              BRbrB
                                                       Τ
                                      02
                                                         в#
     # 3
 03
                                          # 3
                                              CScs「
                                      03
                                                       Уг
     $ 4
        DIdtaoni
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 04
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& 6 F V f v %
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     86FVfvaû*1
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                                                      00001
                                     Code Page 1252.
Code Page 874.
                                          23456789ABCDEF
     23456789ABCDEF
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 00
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 80
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                    n M 1 B *
```

## Code page 1256 and Katakana





G-177 Character Sets

## Code page 932 (1 of 9)



## Code page 932 (2 of 9)

#### Code page 932-87 Code page 932-84 40 1234567891011213141516 40 АБВГДЕЁЖЗИЙКЛМНО 50 ПРСТУФХЦЧШЩЪЫЬЭЮ 50 キロサンドルグラトンスーラスドスマンひニドルキンジーネスジーmm 60 60 Я 70 cmkmmgkgccm<sup>1</sup> 70 абвгдеёжэийклмн ″″ KKTel企⊕予金包料病代聯拉爾 ≒≡∫∮Σ√⊥∠∟⊿∵∩∪ 80 80 опрстуфхцчшщъыьз 90 90 ю я Α0 A0 │ ┌┐ ┙ └ ├┰┤ <del>╵</del> ВO B0 ┝┯┫┻╋┠┯┨┷┿┝┰┥ C0 CO D0 D0 E0 E0 F0 F0

```
Code page 932-88
                       Code page 932-89
40
                       40
                          院陰隱韻吋右宇鳥羽迂雨卯鵜窺丑碓
50
                       50
                          臼渦噓唄欝蔚鰻姥厩浦瓜鸎噂云運雲
60
                       60
                          荏餌叡営嬰影映曳栄永泳洩瑛盈穎頴
70
                          英衛詠鋭液疫益駅悦謁越閱榎厭円
                       70
80
                          圍堰奄宴延恕掩援沿演炎焔煙燕猿釋
                       80
90
                          艷苑薗遠鉛鴛塩於汚甥凹央奥往応押
                       90
  唖娃阿哀愛挨姶逢葵茜穐悪握渥旭蔁
A0
                          旺横欧殴王翁襖鴬鴎黄岡沖荻億屋憶
                       Α0
  芦鰺梓圧斡扱宛姐虻飴絢綾鮎或粟袷
B0
                          臆桶牡乙俺卸恩温穏音下化仮何伽価
                       B0
  安庵按暗案闇鞍杏以伊位依偉囲夷委
CO
                       C0
                          佳加可嘉夏嫁家寡科暇果架歌河火珂
  威尉惟意慰易椅為畏異移維緯胃萎衣
D0
                       D0
                          禍禾稼箘花苛茄荷華菓蝦課嘩貨迦過
  謂違遺医井亥域育郁磯一壱溢逸稲茨
E0
                          霞蚊俄峨我牙面臥芽蛾賀雅餓駕介会
                       E0
  芋鰯允印咽員因姻引飲淫胤蔭
                          解回塊壞廽快怪悔恢懷戒拐改
```

G-179 Character Sets

## Code page 932 (3 of 9)

### Code page 932-8A

40 魁晦械海灰界皆絵芥蟹開階貝凱劾外 50 咳害崖慨概涯碍蓋街該鐵骸浬馨蛙境 60 柿蛎鈎劃嚇各廊拡撹格核殼獲確穫覚 70 角赫較郭閣隔革学岳楽額顎掛笠壁樫 80 檀梶鳅潟割喝恰括活渴滑葛福轄至且 90 叶椛梅鞄株兜電蒲釜鏡噹鴨石姦 90 叶桃梅鞄株兜電蒲釜鏡噹鴨石 80 寬干幹患感情憾換敢柑植棺款暂宫 80 潤潅環甘監看竿管簡緩缶輪肝盤裝 80 澗潅環甘監看竿管簡緩缶輪 80 減

嬉寄岐希幾忌揮机旗既期棋棄

### Code page 932-8B

機帰穀気汽畿祈季稀紀徽規記實起軌 輝飢騎鬼亀偽儀妓宜戲技擬欺犠疑祇 50 義蟻誼議掬菊鞠吉吃喫桔橘詰砧杵黍 60 却客脚虐逆丘久仇休及吸宫弓急救 70 朽求汲泣灸球究窮笈級糾給旧牛去居 80 90 巨拒拠举渠虚許距鋸漁禦魚亨享京供 侠僑兇竸共凶協匡卿叫喬境峡強彊怯 恐恭挟教構況狂狭矯胸脅興蒂鄉鏡響 襲驚仰凝尭晚業局曲極玉桐粁僅勤均 巾錦斤欣欽琴禁禽筋緊芹菌衿襟謹近 金吟銀九俱句区狗玖矩苦躯駆駈駒具 B0 CO D0 E0 愚虞喰空偶寓遇隅串櫛釧屑屈

### Code page 932-8C

掘窟沓靴轡窪熊隩粂栗縔桑鏉勲君蔂 訓群軍郡卦袈祁係傾刑兄啓圭珪型契 60 形径惠慶慧憩搗携敬景桂溪畦稽系経 継繫罫茎荊蛍計詣警軽頚鶏芸迎鯨 劇戰擊激隊桁傑欠決潔穴結血訣月件 80 倹傞健兼券剣喧闓堅嫌遠惷懸拳捲検 90 権牽犬献研硯絹県厲見謙賢軒遺鍵険 A0 顕験鹸元原厳幻弦減源玄現絃舷言諺 B0 限乎個古呼固姑孤己庫弧戸故枯湖狐 CO 糊袴股胡菰虎誇跨鈷雇顧鼓五互伍午 D0 呉吾娯後御悟梧檎瑚碁語誤護醐乞鯉 E0 交佼侯候倖光公功効勾厚口向

### Code page 932-8D

后喉坑垢好孔孝宏工巧巷幸広庚康弘 恒慌抗拘控攻昂晃更杭校梗構江洪浩 50 港溝甲皇硬稿糠紅紘絞緺耕考肯肱腔 60 靑航荒行衡議責購郊酵鉱砿鋼闍降 項香高鴻剛劫号合壕拷濠豪轟趨克刻 70 告国穀酷鵠黑獄瀌腰甑忽惚骨狛込此 頃今困坤墾婚恨懸昏昆根棞混痕紺艮 90 Α0 魂些佐叉唆嵯左差査沙瑳砂酢鎖裟坐 ВO 座挫債催再最哉蹇妻宰彩才採栽歳済 CO 災采屋砕砦祭斎細菜裁載際剤在材罪 財冴坂阪堺榊肴咲崎埼碕鷺作削咋搾 D0 E0 昨朔柵窄策索錯桜鮭笹匙冊刷

### Code page 932-8E

傘参山慘撒散桟燦珊産算纂蟸讚贊酸 60 餐斬暫残仕仔伺使刺司史嗣四士始姉 姿子屍市師志思指支孜斯施旨枝止 70 死氏獅祉私糸紙紫肢脂至視詞詩試誌 80 諮資賜雌飼歯事似侍児字寺慈持時次 90 滋治爾靈痔磁示而耳自蒔辞汐鹿式識 Α0 明空軸央學七中執失嫉室悉湿漆疾質 実蔀篠偲柴芝屡蕊縞舍写射捨赦斜煮 社紗者謝車遊蛇邪借勺尺杓灼爵酌釈 锡若寂弱至主取与手条粉符珠種腫構 B0 CO DO E0 酒首儒受呪寿授樹綬需以収筒

察拶摄擦札殺薩難臯鯖捌鐀鮫皿晒三

### Code page 932-8F

宗就州修愁拾洲秀秋終續習臭舟蒐衆 40 50 襲響蹴輯週酋酬集醜什住充十従戎柔 汁渋獸縦重銃叔夙宿淑祝編粛墊熟出 術述俊峻春瞬竣舜駿准循旬楯殉淳 60 70 準潤盾純巡導醇順処初所暑曙渚庶緒 80 署書籍諸助叙女序徐恕鋤除傷償勝 90 匠升召哨商唱當獎妾娼宵将小少尚庄 Α0 床廠彰承抄招掌捷昇昌昭晶松梢樟樵 沼消涉湘焼焦照症省硝礁祥称章笑粧 B0 C0 紹肖萬蒋蕉衝裳訟証詔詳象賞選鉦鍾 D0 鐘障鞘上丈丞乗冗剰城場壤嬢常情擾 E0 F0 条杖浄状畳穣蒸譲醸錠嘱埴飾

## Code page 932 (4 of 9)

### Code page 932-90

拭植殖燭織職色触食蝕辱尻伸信侵唇 娠寝審心憤振新晉森榛漫深申疹真神 秦紳臣芯薪親診身辛進針震人仁刃塵 壬尋甚尽臀訊迅陣靭笥頭須酢図厨 50 60 70 逗吹垂帥推水炊睡粋翠袞遂酔錐錘隨 瑞髓崇嵩数枢趨雜据杉椙菅頗雀裾澄 90 摺寸世瀬畝是凄制勢姓征性成政鑿墨 Α0 晴棲栖正清牲生盛精聖声製西誠營請 逝醒青静斉税脆隻席惜戚斥昔析石積 ВO CO D0 籍續脊責赤跡蹟碩切拙接摂折設窃節 説雪絶舌蝉仙先干占宣專尖川戦扇撲 E0

栓栴泉浅洗染潜煎烟旋穿箭線

### Code page 932-91

40 織羨腺舛船薦詮賎践選遷銭銑閃鮮前 50 養漸然全禅繙膳糧嘈豐岨措會會楚狙 60 疏疎礎祖租粗素組蘇訴阻避頭僧創双 70 叢倉喪壮奏爽宋層匝惣想捜掃揮掻 80 操早曹巣槍槽漕燥争痩相窓糟総綜職 90 草荘葬蒼藻装走送遭鎗霜騷像增憎嚴 80 族続卒袖其揃存孫尊損村遜他多太太耐 60 於婦女院 60 於婚顧代台大第醍題屬淹瀧卓啄 60 隊績顧代台大第醍題屬淹瀧中 60 报拓沢灌琢託鐸濁諾葉凧蛸只

### Code page 932-92

叩但達辰奪脱巽竪辿棚谷狸鱈樽誰丹 40 単嘆坦担探旦歎淡湛炭短端箪綻耽胆 50 蛋誕鍛団壇弾断暖檀段男談值知地弛 60 70 恥智池痴稚置致蜘遲馳築畜竹筑蓄 逐秩窒茶嫡着中仲宙忠抽昼柱注虫衷 80 註討鍚駐樗瀦猺苧著貯丁兆凋喋竉帖 帳庁弔張彲鰴懲挑轠朝潮牒町朓廰脹 90 Α0 腸蝶調諜超跳銚長頂鳥勅捗直朕沈珍 B0 賲鎮隩津墜椎槌追鎾痛通塚栂掴槻佃 濱柘迁萬綴錫椿濱坪臺螺紬爪吊釣鶴 亭低停偵剃貞呈堤定帝底庭廷弟悌抵 挺提梯汀碇禎程締艇訂諦蹄逓 D0 E0

### Code page 932-93

40 邸鄭釘鼎泥摘擢敵滴的笛適鏑瀕晢徹 撤轍迭鉄典墳天展店添纏甜貼転顛点 伝殿澱田電兎吐堵塗妬屠徒斗杜渡登 50 60 蒐賭途都鍍砥砺努度土奴怒倒党冬 70 凍刀唐塔塘套宕島嶋悼投搭東桃梼棟 80 盗淘湯涛灯燈当痘祷等答筒糖統到董 蕩藤討腊豆踏逃透鐙陶頭騰關働動同 90 AΟ 堂導幢撞洞瞳童胴蔔道銅峠鴇匿得德 B0 **涜特督禿篇毒独読栃橡凸突椴届鳶苫** CO D0 實西瀞嶼屯惇敦沌豚遁頓呑曇鈍奈那 内乍凪薙謎灘捺鍋楢馴縄畷南楠軟難 汝二尼弐迩匂賑肉虹廿日乳入 E0 F٥

### Code page 932-94

如尿韮任妊忍認濡禰祢窙葱猫熱年念 捻撚燃粘乃廼之埜嚢悩濃納能脳膿農 覗蚤巴把播覇杷波派琶破婆罵芭馬俳 50 60 廃拝排敗杯盃牌背肺輩配倍培媒梅 70 媒煤狽買売賠陪這蝇秤矧萩伯剥博拍 柏泊白箔粕舶薄迫曝漢爆縛英駁麦函 箱硲箸鐅鼊櫨幡加畑島八納溌発醗髮 80 90 ΑÛ 伐罰抜筏閥鳩噺塙蛤隼伴判半反叛帆 B0 搬斑板氾汎版犯班畔繁般藩販範釆煩 C0 頒飯挽晩番盤磐暮蛮匪卑否妃庇彼悲 罪批披斐比泌疲皮碑秘緋龗肥被酵費 D0 EΟ 避非飛極簸備尾徼枇毘琵眉美

### Code page 932-95

40 鼻柊稗匹疋髭彦膝菱肘弼必畢筆逼桧 姫媛紐百謬俵彪標氷漂瓢票表評豹廟 描病秒苗錨鋲蒜蛭鱧品彬斌浜瀕貧賓 50 60 70 頻敏瓶不付埠夫婦富富布府怖扶敷 斧普浮父符腐膚芙譜負賦赴阜附侮撫 80 武舞蘭蕪部封楓風葦蕗伏副復幅服福腹複覆淵弗払沸仏物鮒分吻噴墳憤扮 90 Α0 焚富粉糞紛雰文閒丙併兵塀幣平弊柄 B0 並蔽閉陛米頁僻壁癖碧別瞥蔑箆儞変 C0 片萬編辺返邇便勉娩弁鞭保舖舖圃揀 歩甫補輔穂募蕌慕戊暮母簿菩倣俸包 呆報奉宝峰峯崩庖抱捧放方朋 D0 E0

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### Code page 932-96

#### 法泡烹砲縫胞芳萌蓬蜂褒訪豐邦鋒飽 鳳鵬乏亡傍剖坊妨帽忘忙房暴望某棒 冒紡肪膨謀貌貿鉾防吠頬北僕卜墨撲 60

- 70 朴牧睦穆釦勃没殆堀幌奔本翻凡盆 摩磨魔麻埋妹昧枚每哩槙幕膜枕鯖柾 80
- 雙树亦俣又抹末沫迄侭繭麿万慢满漫 蔓味未魅巳箕岬密蜜湊蓑稔脈妙粍民 90 A0
- 眠務夢無牟矛霧鵡椋婿娘冥名命明盟 80 迷銘鳴姪牝滅免棉綿緬面麵摸模茂妄 CO
- 孟毛猛盲網耗蒙儲木黙目杢勿餅尤戻 籾貰問悶紋門勾也冶夜爺耶野弥矢厄 D0
- ΕÔ 役約薬訳躍靖柳藪鑓愉愈油癒

### Code page 932-97

- 諭輸唯佑優勇友宥幽悠憂揖有柚湧涌 40 猶猷由祐裕誘遊邑郵雄融夕予余与營 50
- 輿預傭幼妖容庸揚摇擁曜楊様洋溶熔 60 用窯羊耀葉蓉要謡踊遥陽養慾抑欲 70
- 沃浴翌翼淀羅螺裸来莱頼雷洛絡落酪 80
- 乱卵嵐欄濫藍蘭覧利吏閥李梨理璃廟 90
- 裏裡里離陸律率立葎掠略劃流溜琉留 Α0 B0 硫粒隆竜龍侶慮旅虞了亮僚両凌寮料
- CO 梁涼猟療瞭稜糧良諒遼量陵領力緑倫
- **厘林淋燐琳臨輪隣鱗麟瑠塁淚累類令** D0 伶例冷励嶺怜玲礼苓鈴隸零靈麗齢曆
- EΟ 歷列劣烈裂廉恋憐漣煉簾練聯

### Code page 932-98

#### 蓮連鍊呂魯櫓炉賂路露労婁廊弄朗楼 榔浪漏牢狼篭老聾蝋郎六騺裸肋録論 50 倭和話歪賄脇惑枠鷲亙亘鰐詫藁蕨椀 60 70 湾碗腕

### 80 90

丐丕个丱丶丼丿乂乖乘亂」豫亊舒式 Α0 于亞區一方京亳賈从仍仄仆仂仗仞仞 Βû 仟价优供估佛佝佗佇佶侈侏侘佻佩佰 CO **侑佯來侖儘俔俟俎俘俛俑俚俐俤俥倚** 倨倔倪倥倅伜俶倡倩倬俾俯們倆偃假 E0 會偕偐偈做偖偬偸傀傚傅傴傲

## Code page 932-99

**僉噻傳僂僖僞僥儧僣僮價僵儉懏儂儖** 儕儔儚倡儺儷儼儻儿兀兒兌兔兢竸兩 50 **俞兮其门间册冉冏胄冓冕冖冤寇冢**篡 60 冪ン决冱冲冰况冽凅凉凛几處凩凭 70 鳳山國刃利剌刎刼刪刮刳刹剏剄剋剌 80 剞剔剪剴剩剳剿剽劍劔劔釼鲷劗辨辧 90 A0 劬劭劼劵勁勍勗勞勣勦飭勠勳勵勸仁 匆匈甸匍匐匏七匚匣匯匱匳匸區卆卅

- B0 世卉卍準卞卩卮夘卻卷厂厖厠厦厥厮 CO
- **厰厶參篡雙叟曼燮叮叨叭叭吁吽呀听** DÛ
- 吭吼吮吶吩吝呎咏呵咎呟呱呷告咒呻 E0
- 咀呶咄咐咆哇咢咸咥咬哄哈咨 FΩ

### Code page 932-9A

#### 咫哂咤咾咼哘哥哦唏唔哽哮哭哺哢唹 40 啀啣啌售啜唓啖啗唸唳啝喙喀咯嘁喟 50 **舍啾喘唧單啼喃喩喇喨鳴嗅嗟嗄嘻嗤** 60 <u>嚊嘔嗷嘳嗾嗽嘛嗹懛器營嘴</u>蟖喇嘸 70 噫噤囇噬噪嚆嚀嚊嚠嚔嚵嚥櫊巊胅囂 80 喉囁嘰囀囈囎嘸囓口囮囹囝囿圄圉慝 90 國圍圓團團屬國以下址坎圻址坏坩埀 Α0 垈坡坿垉垓垠垳垤垪垰埃埆埔埒埓琧 B0

- 埖埣堋堙堝塲堡塢塋塰瑴塒堽塹墅墹 CO **塷墫墴壞墻墸墮籦壓**錽燨嫨灥壥壜墛 D0 型壯壺壹壻壺壽久久夏罗莎夥夬夭本 夸夾竒奕奐奎奚奘奢奠奥獎**햡** E0

### Code page 932-9B

- 40 奸妁妝佞侫妣妲姆姨姜妍姙姚娥娟娑 50 娜娉娚嬹婬婉娵婜婢嫯媚媼鑜嫋嫂媽
- 竬嫗嫦轍嫖燗孄蟜嬋鼜<u>嬲嫐嬪嬶</u>孏孂 60 70
- 孅孄孑孕孚孛拏孩孰孳孵擧斈孺宀 80
- 它宦宸寃寇 在 塞琛 霜實 寢 宴 寫 實 寶 敢將 專對 尔 勤 七 起 尸 尹 屁 屆 屎 屓 屐 屏 孱 圈 少 乢 屶 屹 岌 岑 岔 妛 岫 岻 岶 岼 岷 90
- A0
- B0 峅岾峇峙峩岟峺峭嶌峪崋崕崗嵜崟崛 崑崔崢崚崙嵢嵌凸峴嵋嵬嵳峢嶇蔪嶂 CO
- D0 嶢嶝巕嶮嶽嶐嶷嶼巉巍巓巒巖巛巫已
- EO 幣幇幵并幺麼广庠廁廂廈廐廏

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### Code page 932-9C

#### 廖廣廝廚廛廢廡廨廩廬廱廳廰廴廸廾 弃弉彝彝弋弑弖驽弭弸彁彈彌彎弯彑 **彖慧**彙 彡 彭 彳 彷 徃 徂 彿 徊 很 徑 徇 從 徙 70 徘徠徨徭徼忖忻忤忸忱忝惠忿怡恠

怙怐怩怎怱怚怕怫怦怏怺恚恁恪恷恟 恊恆恍恣恃恤恂恬惆恙悁悍惧悃悚悄 80 90 ΑÔ

慢悸惋悒悧悋惡悸惠惓悴忰慺惆悵惘 慍愕愆惶惷愀惴惺愃愡惻慍懯愎慇懪 愨愧慊愿愼覫愴博慂慄戄懭慻慙慚慫 B0 CO

慴慯慥慱懄慝慓惼蹇慭憇憬憔憚憊懘 D0 憫憮懧慺應懷懈懃懆憺戀罹懔檽懣懶 懺懴懿慛戄懾戀戈戉戍戍戔戛 E0

### Code page 932-9D

戞鼣截戮鼣戲戵扁扎扞扣扛扠扨扼抂 抉找抒抓抖拔抃抔拗拑抻拏拿拆擔拈 拜拌拊拂拇抛拉挌拮拱挧挂挈拯拵捐 60

挾捍搜捏掖掎掀掫捶揱掏掉掟掵捫 捩搸揩揀揆揣揉插揶揄搖搴搆搓耮搶 70

族擈揊猍祦痲渘擟鄁擨揊峷捀沒竵遈 攝搗搨搏嶊掔摶摎攪燍撓撥尞軂兣據 擒擅擇趮鬡擂擱擧轝櫅擡抬撏擯攬擶 擴擲摡孌擽攍攜攢攡搫彏攴攵攷收攸 90 Α0

B0 CO

政效敖敕敍敘敞敝敲數斂斃變斛斟斫 斷旃旆旁旄旌旒旛旙无旡旱杲昊昃旻 査昵昶昴昜晏晄晉晁晞畫晤晧晨晟晢 D0 ΕO

晰暃曅暎暉暄暘暝曁邏曉嘋暼

### Code page 932-9E

#### 曄暸瞹曚曠昿曦褩曰曵曷胐朖朞朦朧 霸术束杂权朸切杆杞杠杙杣杤枉杰枩 杼杪枌枋枦枡枅枷柯枂東枳柩栒柤柞 50 60

**标柢柮枹柎柆柧檜栞框栩桀桍栲桱** 70 80

梳栫桙档桷桿梟梏梭槴條梛梃檮梹桴 梵梠梺椏梎棞犉繤椈蕀槶椦棡椌棍棔 90

AΟ 棧棕椶椒椄棗棣椥棹棠棯椨椪椚椣椡 B0

稐褞蒈楜楋楫褉楾櫡樭楴椽楙桏楡楞 棟榁楪榲禜槐榿禞槓榾槎寨槊槝櫑褩 C0 D0

**榧樮槫榠榜榕榴槞槨灓樛槿櫙槹槲槧** 樅槵櫔槭樔槫**樊樒櫁檨樓橵樌橲樶橸** EΟ

欇檹櫕橦橈樸樢檐檍檠撽檢檣

### Code page 932-9F

**糪蘗儖櫃榏檸檳檬櫞櫑櫟檪櫚櫪櫻欅** 蘖檽欒欖鬱欟欸歀盜歀飮歇歃歉歋歙 50

歔歛歟歡歸歹歿殀殄殃殍殘殕殞殤殪 60 彈殯殲殲殳殷殼毆毋毓毟毬臺毳毯 70

魔氈氓气氛氤氣汞汕汢汪沂沍沚沁沛 汾汨汳沒沐泄泱泓沽泗泅泝沮沱沾沺 90

Α0

泛泯泙泪痍衍洶洫洽洸洙洵洳洒洌浇 涓浤浚浹淅涎涕濤浧淹渕渊涵淇淦涸 淆淬凇淌凈灢淅淺淙淤淕淪淮渭湮菏 ΒO C0

渙湲湟渾渣湫渫湶湍渟湃渺湎渤滿渝 D0 游溂溪濜滉潿滓溽溯滄溲滔滕溏溥滂 E0

溟顈漑灌灑滸滾漿滲漱滯漲滌

### Code page 932-E0

E0

#### 濝渪滷澆潺溍澁澀潯濳濳瀈澂潼潘澎 澑濓潦漊澣嬠凙牄濆濖濟濕濬濔濘濱 40 50 **溑濛瀉瀋濺瀑瀁瀏濾瀛瀭潴瀝瀘瀟瀰** 60 瀾瀲灑灣炙炒炯烱炬炸炳炮烟烋烝 70 烙焉塳焜婄煥煕熈煦煢煌煖焬熏燻熄 80 90 熕熨熬燗熹嬂燒燉燔燎熡燬熦燵燼燛 Α0 熠爍爐爛爨爭爬爰爲爻爼爿牀牆牋牘 牴牾犂揧犇犒肈犢犧犹犲狃狆狄狎狒 狢狠狡狭狷倏猗猊猜猖猝猴猯猩猥猾 B0 C0 獎獏默獗獪獨獰獸獙獻獺珈玳珎玻珀 D0

**坐瑰瑣瑪瑶瑾璋璞璧瓊瓏瓔珱** 

珥珮珞璢琅瑯琥珸琲琺瑕琿瑟瑙瑁瑜

### Code page 932-E1

**畫**畭畸當疆疇畴疊疊竪疗疚疝疥疣痂 60 70 疳痃疵疽疸疼疱痍痊痒痙痣痞痾癢 癎嫴痰痺痲痲瘋攍瘷瘟爈瘮癨癳瘤瘴 80 90 **瘭瘻撊癈澇鰧鳫癈賽癨顣癪癧廯癰躎 癶癸發**皀皃皈辠皎皖皓晳皚皰銊皸皹 Α0 麬盂齹盖盒盞盠盥盧璗蘯盻眈眇眄眩 眤眞眥眦眜謍眸睇睚睨睫睛睥噾麞暏 80 C0 瞎瞋瞑瞠瞞瞰瞶瞹鞰瞼瞽矑曚矍矗矏 D0 矜矣矮矼砌砒礦砠礪硅碎硴碆硼碚碌 E0 碣碵碪碯磑磆磋磔碾碼磅磊礊

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### Code page 932-E2

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### Code page 932-E3

40	紂紜紕紊絅絋紮紲紿紵絆舽絖絎絲絨
50	絮絏絣經繑絛綏絽綛綺綮綣綵纗綽綫
60	總繝綯緜綸綟綰縅縎緤毈敪緲鱪縅縊
70	縣縡縒縱縟縉縋鰧豂繦縻縵縹钀艛
80	<b>嫼縺繧繝橵繞繙橑縪繪繩繼繻纃緕穦</b>
90	辮繿襭纉穚纒纐纓纔纎穢纛欖缸趹謼
A0	嬰罍縠縒网罕罔罘罟罠菴草罧罸羂羆
ВO	薫躢羇羌羔羞羝羚羣羯羲羹羮羵寙蕀
CO	翅翠翊翕翙翡翦翩翳翹飜耆耄耋耒耘
D0	耙耜耡羇耿耻聊聆聒聘聚聟聢聨聳聲
ΕO	聰聶聹聽聿肄肄肅肛肓肚肭胃肬胛胥
F0	<b>昨</b> 氏會 环 胖 脉 陰 脒 脛 偹 叠 脯 胰

### Code page 932-E4

#### 隋腆脾腓朒胼腱腮腥腦腴膃膈膊膀鳍 膠膕膤膣腟膓膩膰膵膾膸膅臂臂鬳臉 50 **膪臑臙黱臈臚覹醟臧螷臻**臾舁舂舅與 60 70 舊舍舐舖舩舫舸舳艀艪艐艝艚艟艤 **舳艨艚艫舮艱艶艸艾芍芒芫芟匒**芬苡 苣荷苒苴苳苺蔫范苻莽苞茆葿茉苙茵 90 Α0 80 C0 D0 萵蓊葢氀蒚葝蓙齹藾蓧蘷菨蒝蔍篣梊 E0 蓿蓴蔗蔘蔬蔟蔕蔔蓼蕀蕣蕘蕈

## Code page 932-E5

	** ** ** ** ** ** ** ** ** ** ** **
40	蕁雞蕋蕕薀薤薈葼薊薨蘦薔嶭藪礆嶭
50	蕷齍薐藉薺藏薆藐藕嫯虊藜藹藲蕀蘋
60	藾藺蘆虌蘚蘰蘿虍乕虔號虧虱蚓蚣蚩
70	蚪蚒蚌蚶蚯蛄蛆蚰蛉鱱蚫蛔蛞蝨蛬
80	蛟蛛蛯蜒蜆蜈蜀虋蛻蜑蜉蜍蛹鯏鱪蜿
90	鎲蜻蜥蜩蜚蝠蝟蝸蝌蝸蝴蝗蝨蛦蠾蟓
Α0	蝣蝪蠅螢螟螂螯鏭姦蟤蟐雖蟼螜鐣繤
B0	蝧螻蟯蟲蟠蠏蠍蝊蝬蟷蠎蠎蠑蠂鑐穒
C0	蠡飝蠺賌櫜蠻衄衂衒衙衞衞衫袁衾袞
D0	<b>衵衽袵衲袂衫袒袮袙袢袍套袰袿袱裃</b>
E0	裄裔裘桾裝裹掛裼裴禆裲欜褌褊椺褻
F0	褞搙褪禠襁褢褻襌欀襌褝襠竷

### Code page 932-E6

```
襦襤襭櫗櫬橌襷襾箰覈覊傹覘覣覾覦
覬儬覲燢覽覠觀煈觜觗觧觴觸訃訖訐
訌訛齖訥酠詁詛詒詆鸒詼誱詬詢誅誂
50
60
   誄誨誠誑誥誦誚誣諄諍諂諚諌諳諧
70
   諤諱譴諠諢諷諞諛謌謇諡諡鍐謐鎊謠
   謳鞄綮謪謢謨諽譌禨誵證譄譛譂飸譟
90
   鼜譯讉飺謮讌雠讒譲讖蘿讚谺豁谿螘
Α0
   蜿豎豐豖犪豬豸豺鞀貉銝貊韠貎貔豼
貘戝貭貪貽貲薍貮貶賈賁賤夁賷賽賺
賻贄贅贊薋鸁膅鶗齎脠賍瞐臔楲緖赱
B0
CO
D0
   赳趁趙跂趾趺跏跚跖跌跛跋跪跫跟跣
E0
   跼踈踉跿踝踞践踟蹂踵蹹踴蹊
```

### Code page 932-E7

40	蹇蹉蹌蹐蹈贙蹤蹗踪蹣蹕蹶蹲蹼鐰躇	
50	躅躄躋踌躀膷躔躢躪躡躬躰軆躱躾軅	
60	軈軋軛軣軼軻軫軾輊鴼輕鮿輙輓輺輟	
70	輌輌鞪輳輻輹轅糓輾鸖轉螰轜鮾轠	
80	轢轣轤辜辟辣辭辯辷迚迥迢迧迯邇迴	
90	逅迹迺逑逕逡逍逞逖逋逧逶逵逹迸逿	
ΑO	遐邉逪逎遉逾遖遘遞遬避遶隨遲邂遽	
В0	邁譤邊邊邏邨邯邱邵郢郤麅郛鄂鄒鄙	
CO	鄻鄰酊酖酘酣酥酩酳酲醋醉醂醢 <b>韹</b> 醯	
D0	醦醎醴 <b>醷酿</b> 臋粙釋黀釖釟釡釛釼釵釶	
ΕO	鈞釿鈔鈬鈕鈑鉞鉗鉅鉉鉤鉈銕鈿鉋鉐	
F0	衜銖銓銛鉚鋏銹銷鋩錏鋺鍄錮	

## Code page 932 (8 of 9)

## Code page 932-E8

### 緇缕鋛錽錺錵韱鍜蝗鏚鈗鍖鎹鎬鏁穃 鎹鏖鏗鏨鏥鏅鏃鏝鎽縺鏤鐚鐔鏉鐃醟 鏮鑎鐫鐡鑯鍿鑁鼜鐈鑛纅鏓醟纑鈩鑇 鑳鑷饡鏆鑩鐅貜鐅門閛閊閔閖閛閜 閠闦閛閶閞蕳闦闒闣灛剘闦闎黬闦闎 關闆闧鬭阡阨阮阯陂陌陏陋陷陜陛陜 踄陦陲魥隓╚磒隗歋隧爜鷩隰膧隶韢 60 70 90 Α0 **佳雎雋雉雍襍雜霍雕雹霄霆霈霓霎霑 乔森美容潭积存于森森林亚亚线种和** CO 靤覛毊勒靫靱靹軮靻鞁靺鞆鞋鞪鞐鞜 鞨鞦鞣鞳鞴韃韆韉韋韜韭齏盬竟韶韵

九頁公員至頁 医真主员 計算 美國 美國 要要 無學 重要

### Code page 932-E9

40	顪顲顳颪颯颰踸颽颹譺銄飫餃銄錽鯆
50	鵌餡錺饞餤餠鍸篒鏕鰡饂鰠饅饐籋饡
60	鑇轐饕馗襒馥馭溤駇騽駛駝駘駌駭駇
70	駱駲駻騣騁騏騅騈騸騫騒驅驂驀驜
80	驃鱎驍驛驗驜臄驞驤驩飍龖骭骰觡餶
90	<b>艘觸膸膧髞髟髢髣鬕鬂鴑嫯鴑髱醟</b>
Α0	鬆鬕鬤鰀鰀鬗鬥闎閧鬩鬭鬫鬯鬲魄鬾
B0	<b>魏魍魎魒飋魧鮓鮃鮑鮖鮗鮟鮠鮨鮴縣</b>
C0	鯊鮹鯆鯏鯑鯆鯣鶃鼰鯔鯡鱌鯲艆鮱
D0	<b>航线 皇恕 始 轿 採集 東 飯 超 知 果果 新 雅 射神</b>
E0	<b>紮鱆縓鱚鱛鱑鱃魖鳧鳧鳰鴉鴈鳫鴃</b> 蟐
F0	<b>鴪鱉鰢鴣鴟鵛鴕鴮頝餶鴾鵆鴡</b>

### Code page 932-EA

E0

D0

E0

F0

40	发稿 形式 向机 局外 医内内 医皮肤
50	奚自益自體報的調整與點點點的關係的關係的關係
60	鵘鮲卥鹹鹽麁麈麋麌麒麕麌霨姿麩麩
70	麪麭靡黌黎贴黐黔黜點黝黠黥鴬黯
80	<u>徽鱀黷黹擏黼黽췁鼈皷鼕鼡</u> 鞄鼾齊齒
90	齔齣齟齠齢鶀齧鯃齪麣鱎齶鼁鱻椉蕘
A0	槇遙瑤凜熈
B0	
CO	

## Code page 932-ED

續褜鍈銈蓜俉炻昱棈鋹曻彅!仡仼伀 **停伹佖侒侊侚侔俍偀倢俿倞偆偰偂傔** 50 僴儆兊牆宜冾凮刕劜劦勀勛匀匇匤卲 厓鳫鈒雙咜咊咩哿趌坙坥垬埈埇绤 70 塚增墲夋奓奛奝奣妤妺孖栾甯寘寬尞 80 岦岺峵崧蕌﨑瘴嵭嶸嶹黭弡弴彧德<mark>忞</mark> 恝悅悊惞惕慍憛愑愷愰憘戓抦摓摠撝 90 Α0 B0 擎教昀昕昂昉昮昞昤皖晗晙晴晳睶暠 暲暿蓸朎剫杦枻枽柀栁桄棏槆楨搼榘 D0 **楢樗橫橆橳橾櫢櫤毖**氿汜沆汯泚洄涇 浯涖涬淏淸淲淼渹湜渧渼溿澈澵灢灐 滽瀨炅炫焏焄煜煅燂凞爜燾犱 E0

### Code page 932-EE

```
狄猤猪獷玽珉珖珣珒琇珵琦琪琩琮瑢
  璉璟甁畯皂皜皞皛皦盆睆劯砡硎硤硺
50
  羅亂神祥禔福禛竑竧靖竫箞精絈絜綷
70
  級緒繒罇羨羽茁荢荿菇藆葈蒴兿蔥
  蕫鳸穒穲蛀颽裵訒訷麐誧闦趧誵諨譩
譿賰賴贒赶赳軏汲逸遧鄓斱鄕鄼釚釗
80
90
  釞釭襞釤釥鈆鈐鈊鈺鉀鈼鉎鉙鉑鈹鉧
Α0
  銧鉷鉸鋧鋗鋙鋐鎽鋕鋠鋓錥錡鋻鏲錞
B0
  鋿錝錂鍰鍗鎤鏆鏞鏸鐱鏼鑈閒隆鴎隝
C0
D0
  隯饠霻靃靍靎靑靕顗顥魬餇餧館馞驜
ΕO
  髙羂魵魲鮏鮱鯜鰀鷼鵫鷯鷱罴
   ii lii iv v vi vii viii ix x 7 ¦ 7 77
```

### Code page 932-FA

40 50 蓜俉炻昱棈鋹曻彅丨仡仼伀伃伹佖侒 60 侊侚侔俍偀倢俿倞偆偰偂傔僴僘兊 牆冝冾凬刕劜劦勀勛匀匇匤卲厓鳫叝 雙陀咊咩哿喆坙坥垬埈埇焀塜增墲夋 奓奛奤奣妤妺孖寀甯寘寬尞岦岺峵崧 90 A0 嘉﨑禪嵭嶸嶹巐弡弴彧德忞恝悅悊惞 80 惕愠惲愑愷愰憘戓抦揵摠撝摮敎昀昕 CO 昂昉昮眪昤晥晗畯睔晳睶暠瞕瞦曺朎 閕杦枻桒柀桞桄棏椼楨搼榘櫿樰撗橆 D0 ΕO 橳橾樹櫛毖氿汜沆汯泚洄涇浯

G-185 Character Sets

# Code page 932 (9 of 9)

Code page 932-FB	Code page 932-FC
40	40 酮魵魲鮏鮱鮻鰀鵰鵫鶴鷱黑
50 賴炅炫焏焄煜煅煇凞燁燾犱犾猤猪獷	50
60 珀珉珖珣珒琇珵琦琪琩琮瑢璉璟甁畯	60
70 电偏皞皛皦益睆劯砡硎硤硺礰礼神	70
80 祥禔福禛竑竧靖竫箞精絈絜綷綠緖繒	80
90 罇羨羽茁荢荿菇菶葈蒴兿蕙蕫﨟薫菴	90
AO <u>姓蠇裵</u> 訒訷麐誧闦諟諸諶譓譿賰賴贒	A0
BO 赶起軌汲逸達郞都鄉鄧釚釗釞釭釮釤	B0
CO 釥鈆鈐鈊鈺鉀鲊鉎鉙鉑鈹鉧銧鉷鉸鋧	CO
DO 绢鋙鋐鋍鋕鋠鋓錥錡鋻緈錞鋿錝錂鰀	DO
E0 締錦鏆鏞鎴鐱鎌鐦閒隆隝隝隯霪靊龗	E0
F0 觀觀靑靕顗顥飯飼餧館馞驥高	F0

Capture screenshot.

## Code page 936 simple Chinese (1 of 12)

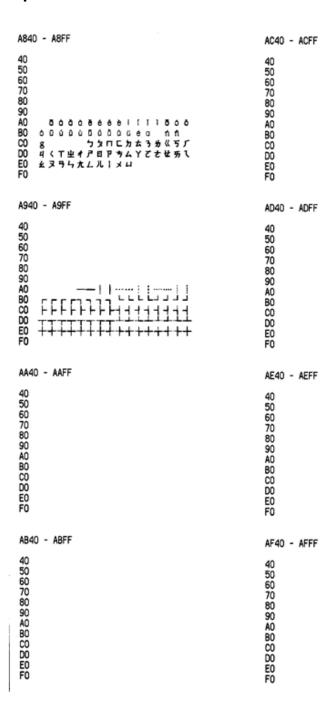
```
A440 - A4FF
                                                    40
                                                   50
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                                                   80
                                                   90
A0
B0
C0
D0
E0
                                                          ああいいううええおおかがきぎく
                                                       ぐけげこごきぎしじすずせぜそぞた
だちぢっつづてでとどなにぬねのは
                                                       ばばひびびふぶぶへべべほぼぼまみ
                                                       むめもややゆゆよよらりるれろわわ
                                                       ねみをん
A140 - A1FF
                                                   A540 - A5FF
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A0
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                BO
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BO
                                                          ァアイイウウエエオオカガキギク
                                                       グケゲコゴサザシジスズセゼソゾタ
                                                   CO
                                                       ダチヂッツヅテデトドナニヌネノハ
                                                       パパヒピピフププへべべホポポマミ
                                                       ムメモヤヤユユョヨラリルレロック
                                                       ヰヱヲンヴヵヶ
A240 - A2FF
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                                                   A640 - A6FF
                                                   40
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ΑO
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                                                   90
CO
    16. 17. 18. 19. 20. (1)(2)(3)(4)(5)(6)(7)(8)(9)(0)(1)
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CO
                                                          ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟ
DO
    (2)(3)(4)(5)(6)(7)(8)(9)(4)(1)(2)(3)(3)(6)(5)(6)(7)
                                                       ΠΡΣΤΙΦΧΨΩ
      E0
    3910
                                                       αβγδεξηθικλμνξο πρστυφχψω
                                                   D0
                                                   E0
F0
A340 - A3FF
                                                   A740 - A7FF
50
60
70
80
                                                   40
50
60
70
80
90
    ! "#¥%&' () *+, -. /
0 1 2 3 4 5 6 7 8 9;; <=>?
@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[\]^-
A0
                                                   90
                                                   ΑŌ
                                                         АБВГДЕЁЖЗИЙКЛМН
DO
EO
                                                   B0
                                                       ОПРСТУХФЦЧШШЪЫЬЭ
     'abcdefghijk1mno
                                                   CO
DO
EO
                                                       я о
   pqrstuvwxyz (|)
                                                          абвгдеёжзийклмн
                                                       опрстуфхцчшщъыьз
```

G-187 Character Sets

## Code page 936 simple Chinese (2 of 12)



# Code page 936 simple Chinese (3 of 12)

B040 - B0FF	B440 - B4FF
40 50 60 70 80 90 A0 啊阿埃挟哎唉哀皑艦邁矮艾碍爱隘 B0 鞍氨安俺接暗岸胺案肌昂查四数 K做奧模褒芭樹拉叭吧笆尺 E0 班搬扳领板版的白牌。 E0 班搬板领板版的诗德。 F0 梆榜勝绑棒磅蚌镑侉诱苞胞包裹剩	40 50 60 70 80 90 A0 磁储
B140 - B1FF	B540 - B5FF
40 50 60 70 80 90 A0 薄電保堡饱宝抱报暴約鲍爆杯碑悲 90 本北擊背贝钡倍承惫意始被奔苯本 单北擊背贝钡倍原多此醉笔使碧鹿蔽 50	40 50 60 70 80 80 90 A0 愈就担丹单郭掸胆旦氣但惮淡凝凝 90 80 查当挡党档四揭路等最少稻 1 查查德得部瞪灯振步等最低滴缩 1 查查德得高瞪灯底地倒角。 50 50 50 50 50 50 50 50 50 50 50 50 50
B240 - B2FF	B640 - B6FF
40 50 60 70 80 90 A0 網并玻液播接钵波博物搏铂箔伯帛 的的脖膊激泊驳捕卜哺补净布步簿套 位的接續教材才以於解於采彩整套 00 預侧侧限器維大 E0 例冊测层理插至全差款查ේ F0 拆柴材搀掺蝉馋谗缠铲产闸颠晶猖	40 50 60 70 80 90 可盯叮钉顶兼锭定订丢东冬董懂 80 90 可們所滿個完掉駐克亞 60 60 60 60 60 60 60 60 60 60 60 60 60
B340 - B3FF	B740 - B7FF
40 50 60 70 80 90 A0 场尝常长偿肠厂敝畅唱倡超抄钞朝 B0 嘲溯樂吵炒车扯撒黎彻澈郴臣辰尘晨 C0 忱沉陈趁衬撑称贼橙成呈乘程悠澄良 C0 承湿铸秤吃痴持匙池迟弛驰耻踌侈尽 E0 赤翅斥炽充冲虫崇宠抽酬畴踌稠愁筹 F0 仇绸瞅丑臭初出橱厨瞎锄雏滁除楚	40 50 60 70 80 90 A0 M

G-189 Character Sets

# Code page 936 simple Chinese (4 of 12)

B840 - B8FF	BC40 - BCFF
40 50 60 70 80 90 A0 浮音福献弗甫托輔俯釜斧脯腊府腐 B0 科噶丁斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯	40 50 60 70 80 90 A0 肌饥遼激讥鸡姬绩缉吉极棘辑籍集 80 及急疾逐即嫉级挤迁既骨族冀霉系统 CO 祭付家被守死被明明假像价量系统 00 夹生宝尖等间或兼肩艰奸嫉至 E0 监坚尖等间或脊槛鉴践败见健箭件
B940 - B9FF	BD40 - BDFF
40 50 60 70 80 90 M東東東東京 40 東京共和 40 東京共和 50 10 10 10 10 10 10 10 10 10 10 10 10 10	40 50 60 70 80 90 A0 健舰到线渐溅涧建僵姜将浆江疆蒋 80 柴排进后酱降脚较全無数较剩较添新较级 CO 嘴搜较矫矫的脚数较剩数形势较易 CO 叫客揭接皆秸件所截动节桔末届巾 EO 洁结解姐戒藉芥界借介于该届巾浸 FO 金今津襟紧锦仅谨进斯晋禁近烬浸
BA40 - BAFF	BE40 - BEFF
40 50 60 70 80 90 A0 骸孩海氨亥害骇酣憨邯韩含涵寒函 啄罕輸婚單旱媽禪坪汉夯杭航壕 医0 藏棄郝好耗過壽褐河獨有满核和何恨呼 医0 拿横衡恒聚哄烘虹湾流报银候猴 F0 吼厚侯后呼乎忽瑚壸瑚胡蝴狐糊湖	40 50 60 70 80 90 A0 尽効荆兢茎睛晶鲸京惊精梗经井警 多功荆棘茎睛晶鲸京惊精梗经井脊 受动荆棘茎睛晶鲸京惊精梗经井大 景颈静境敬镜径痉靖竟竟净熔积宏 4) 外组重保护的强调性的 50 50 50 50 50 50 50 50 50 50 50 50 50
BB40 - BBFF	BF40 - BFFF
40 50 60 70 80 90 A0 弧虎唬护互沪户花哗华猾滑画划化 80 话槐御区沪户花哗华猾滑画划化 被换流下东西望坐顺规是 60 烧换宽好挥墙够望则 使是 60 忧境会检证 60 大获或惠霍货祸击级基机畸稽 60 大获或惠霍货祸击级	40 50 60 70 80 90 A0 俊竣浚郡駿喀咖卡咯开揩揩凯 骶角 90 塔勒尔香康 排在 五流 为 50 大 不 50 大 50 大 不 50 大 不

# Code page 936 simple Chinese (5 of 12)

C040 - C0FF	C440 - C4FF
40 50 60 70 80 90 A0 馈槐渍坤昆捆困括扩廓阔垃拉喇蜡 B0 醋辣啦莱来赖蓝婪栏拦篮镧ڬ淌调缆 C0 览懒蜷路塔波椰绿雕雷翻展满子丰 B0 使线路格涝勒聚梨霉酱	40 50 60 70 80 90 A0 華磨模膜磨摩魔抹末莫墨默沫漢 90 簡谋 移 李 原
C140 - C1FF	C540 - C5FF
40 50 60 70 80 90 A0 痢立粒沥汞力璃哩俩联蓬连镀赚怜 80 读帝欽脸链恋炼练椋凉梁梁良两辆量 CO 晾亮谅擦聊僚疗缐奓辽潦了撂瞭廖科 0 列裂类萎龄铃为碳聚临邻鳞淋须另舍 EO 羚玲齿唬留刘瘤流柳六龙聋咙笼窿	40 50 60 70 80 90 A0 拧泞牛扭钮纽脓浓农弄奴努怒女鳗 80 增疟挪螨精谱喷欧路鞭薯潘盘繁恐怕的整拍排牌排湃驱罐潘盘繁恐的畔 CO 爬帕怕整拍排牌排源碰罐盘整的呼 EO 增衰路配侧沙底牵配时将烹膨影配 60 研遙膨朋鵬捧碰坯砒露批披劈琵毗
C240 - C2FF	C640 - C6FF
40 50 60 70 80 90 A0 隆至拢陇楼娄接篓濒陋芦户颅庐炉 B0 掳卤虏鲁麓碌露路赂鹿潞禄录陆至驴 已昌卵利乱旅略轮条仓轮纶码 家箩牙课被落路络络鸡 E0 喝埋买麦卖迈脉瞒慢蛮满鏊曼慢漫	40 50 60 70 80 90 A0 啤牌疲皮匹痞僻尾響篇偏片躺聚源 90 A0 啤牌疲皮匹痞僻尾響篇解片躺聚痕 野小 野小 野小 野小 野小 野小 野小 野小 野小 野小 野小 野小 野小
C340 - C3FF	C740 - C7FF
40 50 60 70 80 90 90 A0 谩芒芒盲氓忙莽猫茅锚毛矛铆卯茂 B0 實帽貌策公政校梅酶霧煤型锰锰矮蛋 C0 跌離嚴嚴迷迷弥米秘頭泌蜜密霧棉眼	40 50 60 70 80 90 A0 恰洽牽扦钎铅千迁签仟谦乾黔钱错 B0 前潜遣浅谴堑嵌欠歉枪呛腔羌塘蘅强 C0 抢橇镦敲悄桥瞧乔侨巧鞘撬榅峭倚窍

G-191 Character Sets

## Code page 936 simple Chinese (6 of 12)

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C840 - C8FF
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A0
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A0
B0
    取娶齲趣去團额权醛泉全痊攀犬券
劝缺炔瘸却鹊植确雀裙群然燃冉染瓤
壤攘嚷让饶扰绕惹热壬仁人忍韧任认
                                                         獭挞蹋踏胎苔拍台泰酞太态汰坍摊
                                                       CO
    刃妊纫扔仍日戎茸蓉荣融熔溶容绒冗
E0
    揉柔肉茹螨偏彌如唇乳汝入褥软阮蕊
    瑞锐闰润若弱撒酒萨腮鳃塞赛三叁
                                                       甜恬舔膜挑条迢眺娓贴铁帖厅听经
C940 - C9FF
                                                   CD40 - CDFF
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A0
B0
C0
                                                   40
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                                                       汀廷停事庭挺艇通桐朝體同铜形童
桶桶筒统痛偷投头透凸秃突图徒途涂
屠土吐兔湍团推想觀蜕褪退吞屯臀旋
托脱駝驼歌帶妥拓嘘挖哇競ь皖
东京原西
      伞散桑嗓丧搔騒扫嫂瑟色涩森憎莎
                                                   ΑO
    砂杀剥沙纱傻啥煞筛晒珊苫杉山删煽
                                                   B0
C0
   D0
                                                   E0
                                                        宛婉万腕汪王亡枉网往旺望忘妄威
CA40 - CAFF
                                                   CE40 - CEFF
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A0
B0
C0
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A0
    省盛剩胜圣师失狮施湿诗尸虱十石
拾时什食姓实识史矢使屎驶始式示士
世柿事拭誓斯势是嗜噬适任侍释饰氏
                                                       DÖ
    市特室视试收手首守寿授售受瘦兽蔬枢梳珠抒繪叔舒淑疏书赅孰熟薯暑曙
                                                   DO
E0
F0
                                                   E0
    署蜀黍鼠属术述树束戍竖蟴庶数澈
                                                        勿务悟误昔熙析西硒砂晰嘻吸锡酒
CB40 - CBFF
                                                   CF40 - CFFF
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A0
B0
C0
D0
F0
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                                                   90
A0
    恕刷要摔衰甩帅栓拴霜双爽谁水瞳
税吮瞬顺舜说硕朔烁斯撕嘶思私司丝
                                                       稀息希悉膝夕惜熄媂溪汐單檄袭席
习媳喜铣洗泵隙戏细瞎虾匣霞辖暇峡
侠狭下厦夏吓掀锨先仙鲜纤咸贤衔舷
                                                   B0
    死肆寺嗣四旬似似河已松景丛颂送宋
诵搜艘擞啾苏酥俗素速栗傈塑溯宿诉
肃酸蒜算風隋隨绥髓碎岁穗遂隧崇孙
                                                    CO
                                                   DO
                                                        闲逛弦嫌显险现献县康伯羡宪陷现故县康伯蒙帝省襄湘乡翔祥详想响事项巷
根爾镶香箱襄湘乡翔祥详想响事项巷
橡像向象萧硝霄削唪霧销消宵淆晓
                                                    E0
    损笋莪棱唆缩琐索锁所塌他 Cappure screenshot.
```

# Code page 936 simple Chinese (7 of 12)

D040 - D0FF	D440 - D4FF
40 50 60 70 80 90 A0 小孝校肖啸笑效楔些歇蝎鞋协挟携 80 邪斜肋谐写横卸蟹懈泄泻谢屑薪芯锌 C0 欣幸新浙行型 医髓髓 医缝 医 C0 秋 整章 本 性 姓 足 医 随 短 被 珍	40 50 60 70 80 90 A0 浴寫裕預繳馭額渊冤元垣衰原援報 B0 园屬機源緣远苑感知院妇约越聚朝 C0 岳等庫硬泉緣远苑感到院在空鐵粉钥 C0 子庫硬級裁決下 D0 子應硬泉數 E0 脏葬運槽數 E0 脏費 F0 责择则泽贼怎增懵曾赠扎嘎渣札轧
D140 - D1FF	D540 - D5FF
40 50 60 70 80 90 A0 选癣眩绚靴 蘇学穴雪血勋属循旬询 号别巡殉汛渊税业迅压押鸦鸭呀丫芽 CO 牙蚜崖街涯亚亚讶焉咽阉烟淹盐严 DO 研髮岩廷言颠阎炎沿奄掩眼衍演艳堰 EO 燕灰砚雁喑彦焰宴养鲜漆葱腰妖瑶	40 50 60 70 80 90 A0 钡闸眨栅桦咋乍炸炸摘斋宅窄债寨 80 瞻毡詹粘沾盏崭冁崭展蘸楼占战站 C0 经樟路溶胀罩兆 电子成 计重 D0 招表的影真甄砧等负抗接着 E0 锗糖胶波渐珍斟真甄砧等争位整拯正改 F0 震振镇阵蒸挣睁征狰争位整拯正改
D240 - D2FF	D640 - D6FF
40 50 60 70 80 90 据充遏窑谣姚咬舀药要懂椰喹耶爷 80 野伯伊衣顾夷遗移仪胰疑沂宜姨亲给它 传记乙矣以艺抑易邑近亿役隐逸案经 60 布斋意毅忆义益溢诣淫寅饮尹引隐	40 50 60 70 80 90 A0 帧症郑证芝枝支吱蜘知肢脂汁之织 90 A0 帧症郑证芝枝支吱蜘知肢脂汁之织 B0 职直植殖执值侄址指止趾只旨纸治治 C0 掷至致置识纬制智重使炙痔滞州消 P1 數面量骤珠株蛛朱猪诸 F0 逐竹烛煮拄嘴嘴主著柱助蛀贮铸筑
D340 - D3FF	D740 - D7FF
40 50 60 70 80 90 A0 印英樱婴鹰应缨莹莹营茨蝇迎赢盈 80 影板硬映呦拥佣腌痈青雍踊蛹咏泳涌 C0 永愿勇用幽优悠忧尤由部铀犹油游圆 D0 有友右佑精诱渔隅予娱雨与战遇零 E0 余命逾鱼物渝渔隅予娱雨与战勇音 F0 羽玉城芋郁吁遇喻峪御愈欲狱育普	40 50 60 70 80 90 A0 住注柷驻抓爪拽专砖转撰赚套桩庄 B0 装妆擅壮状椎锥追赘坠级穿掩捉拙孜 CO 桌琢苗酌啄着炒空搬穿姿溢别邻走 DO 仔籽等子自读字瓣标综宗综总别 EO 奏揍租足卒族祖诅阻组钻纂嘴醉最罪 FO 轉進昨左佐柞做作坐座

G-193 Character Sets

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D840 - D8FF
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    宁开兀丐廿卅丕亘丞鬲孬繼」禺」
宁无爻卮氏囟胤爐赖緊緊腦 國賴乜
七元平學書級仄ጆ潛爛緊緊緊
題
題題觀對劇劃門問个仃仇伪仨吃
例個化伢佤仵伥伧伉伫佞佧攸侠佝
                                                                  ÃO
BO
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CO
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DO
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ĒΟ
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                                                                  茑莭茆茔茕莨苕茜荑荛荜茈莒蕳莤
莛荞茯荏荇荃荟荀茗荠茭茺茳荦荥
D940 - D9FF
                                                            DD40 - DDFF
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     佟佗伲伽信佴侑侉侃侏悄伲侪佼依
侔俦俨燳俅悝俣倳俑俁俸倩偌俳倬倏
倮倭俥倜倌悾腒偾偃傰偈腲偬嵝傥籅
                                                                  轉莨荩梊荪釭薱伕摮酧莴莠摐畚槉
莅茶莶莩蓌获栨莘棾峎蟷莼蓸蒖菥菘
蘲絭蠜菝藙藟萜萸偅单艔苑萏萃菸菹
                                                             ÃÔ
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CO
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DO
EO
FO
     维祭僖徽僧谯僦僮儇儋仝永佘佥俎龠
                                                                 DO
     永余兮難黉誠冁夔勹匍匍匐凫夙兕
                                                            E0
     究毫衰衰衰离衰寒羸羸羸; 冱冽冼
DA40 - DAFF
                                                            DE40 - DEFF
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A0
     松一家冥; 评证讪讴讵讷洁词诋诏
诎诒诓谏诖诘诙诜诟诠诤浑诩诮谙诳
诶诹诼婑谀谂谄谇谌谏谑谒谔谕谖谙
                                                                 藻粒宿寥蔥軰嶡疄敡嶯傮嶜嶄
蘗薇薏薙퓷靕嚊鐆籋薒娤雧馻尢嫓
黀蘗豏賆竎夼奃耷寏髸娤睕尢尮橀
匤
抏眗抻拊拚撽詴挢拶挹揟撠揄腤椬
擶焵攑揦掊捩攋撔擽撎擸撽腀摍
摨猤掾摅垷擨搛搠搌썕褬摡牼╆
BO
                                                            BO
CO
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DO
EO
     谛誻谝漠谠瀴遊谧谪濵谮谯潏谳澹躈
卩甇阝阢阡阱阪阽阼跛陉陔陊隉瞮嶐
陴隈隆隗鵩邗邛邝邙鄥邡邴郅桏邺
DB40 - DBFF
                                                            DF40 - DFFF
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A0
B0
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A0
       邸邰郏郅邾郐郯郇郓郦郢郜郗郛郸
                                                                 摺擬撸搏擤擀擐擗擤攪擋驀灢弋忒
甙碱卟叱叽叩叨叻吒吖叱呋呒呓呔呖
呃吡呗呙吣吲啀咔呷呱呤咚咛咄呶呦
     DO
EO
FO
                                                                 遊哩店晒吱哒咧噢哓哔唬戏戏珍琳
鲙噪哜咩咪咾哝哏哞唛哧嘮哽唔嗦唢
噻嘚唑唧唓唛楉唶咻啾哵哅唿哰唼
     垧垴垓垠埕埘埚埙埒垸瑄埯埸墷埝
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## Code page 936 simple Chinese (9 of 12)

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E040 - E0FF
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A0
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      唷唊啵啶嚀唳哵啜喋嗒嘃喔喹啫喁
                                                             洹洧洌浃浈洇涸洙洎洫浍洮淌洚浏
                                                          計得加速清凍溫泥消漆洗清洗完洁清
漸散決逐浮通途淝淙淖涫禄湖漂澧澶
減搜湟嶽湓湖渲耀湄滟溱瀘滠漭澧淖
深海温瀾滗溪滏塘涝洱漬波清漤澶滹
    嘪啾喛暜含喽喽喾囇蟓嗪嗷嗉嘇嚂喛
崻嗼噄嗝喛噁暤嗲喛嗌嚩嗨嗵嗤辔嘞
B0
                                                      В0
D0
    嘈嘌嘁嘙嘣嗾峏咾嘇喴嚒嗼囇噍礇嚵
噡囋噔噧喍嵃嚾뿊隦啨喍嚧曊囗囝卥
                                                      DO
                                                      ΕÖ
E0
    囹圄囹圄圊圉圃帏帙帔帑帱帻帽
                                                           深漶潋漪漪漉漩漱澍澌潸潲潼潺滟
E140 - E1FF
                                                      E540 - E5FF
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A0
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                                                      80
                                                      90
       帷幄幔幛镤幡岌屺岍蚑妪蚜岘岙岑
                                                      ΑO
    機構一先者必有疾育等事務來事實養
審之近近過述塩还過延過近遙速適逐
遺巡逡遙遙這逐遭遭遇遊遊遊遙通適返
                                                      DO
ΕO
                                                      E0
F0
                                                           達遽避邀遼遼三彗彖義尻咫廢隣孱隄
腰羼弪弩弭艴鈏籣屮妁妃蚈妩妪妣
    狙狁狎狍拂绒狯狩狲狴狷猁狳猃狺
E240 - E2FF
                                                      E640 - E6FF
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A0
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C0
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    我猜课罗视给淬矫堋猹狠猬獼猱獐
獍獗镣腘鑳獾舛駹飸夤堥饣饧饨馍饪
饫饬饱饷饽馀馄憶馊馍馐懂馓饌馕庀
庑皮庖麻繂庹檴庾庫赓廒麠蠯廝縻庴
↑忉村杄怃饺怄忡忤忾枨怆忪忓
                                                          妗姊妫妞奷娰姐妯姍羐唌蛲媬嬜蛟
姘姹璭謣崭拥婱幯孋埛婸螦蓌蝎鋽鱆
胬蝹婹嵉媝韝嫃螕嬚娦嬧嬜媽媋螵縳
孎曕蛼懛髸鸋媙襹尕尜穻孯孹孒狏
                                                      ΑO
                                                      BO
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                                                      DO
ĒΟ
                                                      EΟ
                                                           狙驷驸驺释驽骀髡骅骈鰗骐臩睢骖鹭
    休怦怛快怍伲怫怊怿怡恸恹恻恺恂
                                                           鹭鸶骝骗骠骢赐骥骧纟纡纣纥纨纩
E340 - E3FF
                                                      E740 - E7FF
40
50
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70
80
                                                      40
                                                      50
                                                      60
70
80
90
A0
B0
C0
D0
                                                      90
    恪恽侼悚铿悝衚惿俤恀憔嗱恘惀惆
惆惚悴塭愦愕愣惴愀愎慷懞懭憹憹
戄欁矕沗雡幵闫儞閵Ι凤闳闼阃闻阉
飅阃颲鮼颲劂阒颾圗闎腏阚丬爿級

$4922
                                                          纭纰纡粓抴拔绉鉘鈯鈶銙洐跭綆錹
銻錂墑猅躸尡娷绶梤殗錧諨皣봬趧馿
缋缌艔毈鎚熸鐕鑜媷縞縭塧熑姟縹獿
                                                      A0
                                                      CO
                                                      DO
                                                           缥攀缫缬鐐绺缰缱缲蠼缵幺畿巛甾濹

    花记汉律沅沐沔沌汩汩汴汶沆沩灏泔
    ポ泷泸峡泗沲泠泖泺泫泮沱泓猴泾

                                                           玎玑玮玢玟珏珂珑钻玳珀珉珈珥珙顼
                                                      E0
                                                           鄂珩跳珞玺珲琏琪瑛琦就琨燚踪魄
```

G-195 Character Sets

## Code page 936 simple Chinese (10 of 12)

```
F040 - F0FF
                                                    F440
                                                         - F4FF
40
50
70
80
90
A0
B0
                                                    50
60
70
80
90
A0
    蕈簪簦簸籁籒猆舁舂舄臬衄舡舢舣
舭舯魬舫舸舻舳舴舾躸艉艋艄艚艫艨
                                                    BO
CO
DO
                                                        CO
DO
F140 - F1FF
                                                    F540 - F5FF
40
                                                    40
50
60
70
                                                    50
60
70
80
90
                                                    80
90
    魌廙緞熁撌癳瓙讆瘵膣穩熮廐毈癔
籔攠躿瓊泀竦穸宆窀窆窈窕窭窼窬窭
窭痲衤衱衲軠袊柍詊裆詥袼裩禠楈
裓褤裓禓禆觷棳褡禙椺檖摀樝禠楈髊
縺
縺
縺
縺
縺
縺
縺
A0
B0
C0
D0
                                                    A0
B0
C0
D0
                                                          酢酡酰酪酯酽鹼酲酴酹醌醅酶醍餔
                                                        髗矌鬖瞙醿醯齴醴鱴豖鹺趸聓跾爟蹩
趵靸趼趺跄跖鮹믉跞跎渹跛跆跬跷茻
                                                        跣跹鲚窽蹗跽踔踝踋騬쨞鞛踘躨牃踘
蹱蹫獽鎈鶰鰇蹑嫷豯錭媙窴蹫颷闧瑐
                                                        臨職躜躞豸貂貊貅藮雛斛觖鰩魟飺
    精椰糖畫耵聃聆聍聒聩嫯罩顸颀颃
F240 - F2FF
                                                    F640 - F6FF
40
50
60
70
80
90
A0
                                                   40
50
60
70
80
                                                    90
A0
      颉箣颕顡颔쮨穊颢懟豰颢糤鞤虍虔
                                                        BO
CO
DO
EO
FO
    虬虮虿虺虼虻蚨蚍蚋蚬蚝蚧蚣蚪蚓蚩
                                                    BO
                                                    CO
    鉗蛄鈳蜴蚰蚺蚱蚯蛉蛏蟧蛩妋蛲蛭蛳
                                                   DO
EO
    蚰蜒蛞蛴蛟蛘緈廢蜤蛸鋘蜊蜍娐蜣蜻
    娂馸蜮蠥蜾鞇蝪錍蛚螩蜿螂鯭媋媣蝻
蠝蟌蜎蝮妿蛫蝣蟧鍣鷎蝥螦螸螨蟒
                                                        鲟鲠鳚鲢鐅鲥鲦鯀鲨鲩鲫鲭鵔鲰鲱鲲
蜎崓鲵鲶鲗籅鲻鲼鲽鉧鳅鎫鳇鰝鳋
F340 - F3FF
                                                   F740 - F7FF
40
50
60
70
80
90
                                                   40
50
60
70
80
90
A0
B0
    嫯鳍鳎鋘鯆鏩饓鳍鰻蟼鑓嶥鳝鳟鰽
靻袂馻鞒馣甧靻鞂鞲豑馚瞉喖髇餦
鴼髁銉髈毊儹髌糫鯐鬾厱皷魖驙薖숓
賡饏婱韾郥髧髩髾鸗髺跜糇鬖褩鰑葽
戵麽麾縻麂麎麠癳鶀僿廦鱙쑱黜鳨鞊
慗馶聫鴐鄿黪黣朌眑鼦鼷錽鼽馯艂
ÃO
BO
CO
```

Capture screenshot.

## Code page 936 simple Chinese (11 of 12)

```
EC40 - ECFF
E840 - E8FF
                                       50
60
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50
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90
                                       ÃO
BO
ÃO
BO
                                            臁膦欤欷欹歔歆歙飐飒飔飕飙飚殳
     琛琚瑻睮瑷瑕碯瑷瑭瑾璜賿墔聦漿
                                           毂毂榖斐齑斓於旆旄旃旌旎旒旖炀炜
   璋璞璨璩璐璧瓒璺韪韫韬杌畃杞权杩
                                       CO
DO
                                           炖炝炻烰炷妶炱烨烊焐焓焖焯淼煳煜
CO
                                          煨煅煲媗煸煺熘熳烐熨煯燠嬏嬘熃爝
鐊灬憃煦熹戾戽扄扈皐礻祀祆祉袪祮
   栊柩軯栌柙枵怞枳柝槴袊栒栣槂柁柽
槫栳椏桡榁帧桄桤框栝桕榉桁桧橥秶
絭桉栩梵悎桴桷梓桫棂楮棼桋槧椫
E0
                                           被柞祢祇柯祯祧棋掸擙禚禧禳忑忐
                                       ED40 - EDFF
E940 - E9FF
                                       40
50
60
70
80
40
50
60
70
80
                                       90
90
A0
                                          怼恕恚恧恁恙恣悫愆愍爑憩쵨懋瀢
戆肀聿沓泶淼矶矸砀宭砗砘砑斫砭砜
     椤棰椋檸健棣椐楱椹楠楂楝榄楫榀
   BO
                                          砝砹砺砻砟砼砥砬砣砩硼硭硖硗砦碿
CO
                                       D0
DO
                                           硝铬硬磺碓碚碇碜碡礍碲碹鵇磔磙磉
                                       ĒΟ
                                          磐磲磝磴礓礯曚礴龛常黻糋盱眄眍盹
眇耽謍眢貽眭眦眵眸睐睑睇賐睚睨
   猷獒殁殂殇殄殒殓殍殚殛殡殪轫轭鞊
E0
   柯舻轵轶轸轷轹轺弑轾辁辂辄輦犅
                                       EE40 - EEFF
EA40 - EAFF
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70
                                       50
60
70
80
80
90
   桵福辏掳锋軎戋戗戛軟曔勘斀쌃敢
政庭瓴瓿艷甑艷攴旮旯旰狊昙杲昃盺
畇曻鶡昝鄖虫昶昵齹誛晔晁晏晖晡晗
硻睻聧憃賝竤驜矔樶竁贲贳貎
                                       ΑO
                                            睢睥睿瞍睽督瞌瞑矇瞠蹾贆瞽町畀
A0
                                          耿敬贩昣畲畹疃罘昰罟羀矍黑闍罹羁
罾盫盥蠲钅钆钇钋钊钌钍钏钐钔钗钕
В0
CO
                                          钚钛钜钣钤钫钪钭钬钯锰钲钴钶箍钸
钹钺钼钽钿铄铈铉铊铋铌铍铎铐铑铒
DO
ĒΟ
                                       E0
   咳赆赈赉赇赍赕赙觇詋现蚬覾觏覾齞
                                          铕铖铗铙铘铛铞铟铠铼铤铥铧铨铪
   牮轚牝牦牯犞牿犄犋犍摛犒挈挲掰
                                       EF40 - EFFF
EB40 - EBFF
                                       40
                                       50
50
60
70
80
90
                                       60
70
80
                                       90
ÃÔ
     掰攀耄毪蟊毽毵毹氅氌氆氍氕氘氙
                                            铩铫铮铯铳铴铵铷铹铼鋱铿锃锂锆
                                       BO
CO
                                          锇铿鈟铳锎锏锒锓锔锕锖鍩锛锝锞锟
   氚氧氫氤氪氳攵敹敫牍牒牖爰虦刖肟
                                          訵鍯餢锩餤锱孆餶諰锷餔擙锾锿鋑檊
镄镅镆镉鎸篺镏镒镓镔縓饄锓镙饆镞
CO
   形育肼朊肽肱肫肭肴肷胧胨胩胪胛胂
   胄胙胍駗胊胝胫胱胴胭脍脎賅胼朕脒
   豚脶睉艀腉驏腈腌騑腴腙腚翴斄腩腼
                                          镟镝镡镢镤镥镦镧镨镩镪镫镬镯镱镣
                                          镀锺矧矬雉秕秭秣秫稆嵇稃稂稞稔
   膃腭牏睉脧膈膂膑榺膣髂臌朦腬膻
```

G-197 Character Sets

# Code page 936 simple Chinese (12 of 12)

F840 - F8FF	FC40 - FCFF
40 50 60 70 80 90 A0 B0 C0 D0 E0 F0	40 50 60 70 80 90 A0 B0 C0 D0 E0 F0
F940 - F9FF	FD40 - FDFF
40 50 60 70 80 90 A0 B0 C0 D0 E0 F0	40 50 60 70 80 90 A0 B0 C0 D0 E0
FA40 - FAFF	FE40 - FEFF
40 50 60 70 80 90 A0 B0 C0 D0 E0	40 50 60 70 80 90 A0 B0 C0 D0 E0
FB40 - FBFF	FF40 - FFFF
40 50 60 70 80 90 A0 B0 C0 D0 E0	40 50 60 70 80 90 A0 B0 C0 D0 E0 F0

#### Code page 949 Korean (1 of 16)

```
40
                                       50
60
70
80
                                       90
                                          ""[] ⟨⟩ ⟨⟩ [] [] [] ±×

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∠1 ∂∇≡ = 6 ** Δ10 € 8 ₽
                                       A0
                                       BO
                                       CO
                                                ∂ ∇≡= § *☆★○●◎◇◆
                                       DO
                                          E0
                                       FO ∝∵∫∬∈∋⊆⊇C⊃UN∧∨¬
A240 - A2FF
                                       A340 - A3FF
40
50
60
70
80
                                       40
                                       50
                                       60
70
                                       80
90
                                       90
A0
     ⇒⇔∀∃
                                                #$%&'
                                       A0
                                                        () * + ,
    ;∮ΣΠ¤℉‱◁◀▷▶♤♠♡♥♧
B0
                                          0 1 2 3 4 5 6 7 8 9 : : <=>?
                                       B0
    CO
DO
EO
   TOICY ¶ † † $ / / \ \ b J ♪ 月 ®(谷)
                                          PQRSTUVWXYZ [₩] ^_
abcdefghijkļmno
                                       D0
   Na Ca TMampm Tel € ®
                                       E0
                                          pqrstuvwxyz {|}
A440 - A4FF
                                       A540 - A5FF
40
50
                                       50
60
70
80
60
70
80
90
                                       90
A0
     ᄀᄁᆪᆫᅜᅝᆮᄄᆯᆰᆱᆲᆳᆴᆵ
                                       A0
                                            i ii iii iv v vi vii viii ix x
ВO
   ᄚᄆᆸᄤᄡᄉᄊᄋᆽᄶᅕᆿᇀᄑᇹᅡ
                                      В0
                                          I II III IV V VI VII VIII X X
CO
   HFFI┦aaTTTTTT
                                            AB L A E Z H O I K V W N E O
DO
           ᄔᄕᇇᇈᇌᇎᇓᇗᇙᄜᇝ
                                         ΠΡΣΤΥΦΧΨΩ
E0
   ᇫᇝᆹᆳᇇᇇᇥᇦᇕᇧᇇᄯᇪᄶᇫ
                                            αβγδεζηθικλμνξο
Lo 000000요요요요요ㅠㅠ미녀네니 · 시
                                         πρστυφχψω
```

A140 - A1FF

G-199 Character Sets

### Code page 949 Korean (2 of 16)

```
A640 - A6FF
                                          A740 - A7FF
                                          40
50
70
80
90
A0
B0
C0
D0
                                          50
                                          60
                                          70
                                          80
                                          90
                                          A0
                                               ulmldl l klccmmcm mkmfmnmummmcm
                                          BO
                                             kmmmcmmkmhaµgmgkgktcalkaldBm/sm/sps
                                          CO
                                             nsusmspVnVuVmVkVMVpAnAuAmAkApWnW
                                          ĎÔ
                                             μWmWkWMWHzkHzMHzGHzTHzΩkΩMΩpFnFμFmal
E0
F0
                                          E0
F0
                                             cdradm%m%srPakPaMPaGPaWbImIxBqGySv%s
A840 - A8FF
                                          A940 - A9FF
                                          40
50
60
70
80
90
A0
B0
                                          50
60
70
80
                                          90
                  L·ŁØŒQÞŦb
                                          A0
                                                æđa ħı ij κ ŀłøœ ß ⊳ ŧ ŋ
   B<sub>0</sub>
                                              CO
                                          CO
                                             DO
                                          D0
                                              (d)(e)(f)(g)(h)(i)(j)(k)(i)(m)(n)(o)(p)(q)(r)(s)
E0
                                             (t)(u)(v)(w)(x)(y)(z)(1)(2)(3)(4)(5)(6)(7)(8)(9)
(10)(11)(12)(13)(14)(15)
                                          E0
AA40 - AAFF
                                          AB40 - ABFF
                                          40
50
60
                                          50
60
70
80
90
70
80
90
A0
    ぁあぃいぅうぇえぉおかがきぎく
ぐけげこごさざしじすずせぜそぞた
                                                   ィイゥウェエォオカガキギク
                                          A0
В0
                                             グケゲコゴサザシジスズセゼソゾタ
                                          B0
CO
    だちぢっつづてでとどなにぬねのは
                                             ダチヂッツヅテデトドナニヌネノハ
                                          CO
D0
    ばばひびびふぶぶへべべほぼぼまみ
                                          DO
                                             バパヒビビフブプへベベホポポマミ
E0
   むめもゃやゅゆょよらりるれろゎゎ
                                          E0
                                              ムメモャヤュユョヨラリルレロゥワ
    ゐゑをん
                                             ヰヱヲンヴヵヶ
```

# Code page 949 Korean (3 of 16)

AC40 - ACFF	AD40 - ADFF
40 50 60 70 80 90 AO ДБВГДЕЁЖЗИЙКЛМН BO ОПРСТУФХЦЧШЩЪЫЬЭ CO ЮЯ DO абвгдеёжзийклмн EO опрстуфхцчшщъыьз FO юя	40 50 60 70 80 90 AC BO CO DO EO
AE40 - AEFF	AF40 - AFFF
40 50 60 70 80 90 A0 B0 C0 D0 E0 F0	40 50 60 70 80 90 A0 B0 C0 D0 E0
B040 - B0FF	B140 - B1FF
40 50 60 70 80 90 A0 가각간간갈갉칾감갑값갓갔강갖갗 B0 같갚갛개객갠갤갬갭갯갰갱갸갹갼걅 C0 걋걍걔걘걜거걱건건걸걺검겁것겄검 D0 겆겉겊겧게겐겔겜겝겟겠겜겨격겪견 E0 겯결겸겹겻겼검곁계곈곝곕곗고곡곤 F0 곧골곪곬곯곰곱곳공곶과곽관괄괆	40 50 60 70 80 90 A0 팜팝괏광괘꽨꽬괩괬꽹괴괵끤긜굄 B0 굅굇굄교굔굘굡굣구국군굳굴쿩쿪굻 C0 금굽굿궁궂궈쿽권줠궜궝궤궷귀귁귄 D0 귈큄귑귓규균귤그극근글글긁금급긋 E0 궁긔기긱긴긛길긺김깁깃김깆깊까깍 F0 깎깐깔깖깜깝깟깠깡꺝깨깩꺤깰깸

G-201 Character Sets

# Code page 949 Korean (4 of 16)

B240 - B2FF	B340 - B3FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 깹깻깼깽꺄꺅꺌꺼꺽꺾건껄껌껍껏	A0 끝끼끽낀낄낌낍낏낑나낙낚난낟날
B0 껐껑께꿱껜껨껫껨껴껸꼍꼇꼈꼍꼐꼬	80 낡낢남납낫났당낮닻낱닿내낵낸낼냄
C0 꼭꼰꾢꽅꼶꾭꼿꽁꾲꿏꽈꽉꽐쾄꽘꽤	C0 냅냇냈냉냐냑댠냘냠당너넉덗던널덞
D0 꽥꽹꾀꾄꾈꾐꾑꾐꾜꾸꾹꾼꿀꿇꿈꿉	00 넓넘덥녓덨덩덯네덱덴녤녬뎹뎃뎄뎅
E0 꿋꿍꿏꿔꿜꿨꿩꿰꿱꿴꿽뀀퓁뀄뀌뀐	E0 녀뎍뎐뎔념뎝녔뎡뎤뎨뎬노녹논놀놂
F0 뀔뀜쓉뀨끄끅끈뀮꿑뀲뀷뀸끕걋뀽	F0 놈놉놋농높돟놔놘돨돴뇌뇐될뇜됩
B440 - B4FF	B540 - B5FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 뇟뇨뇩뇬뇰뇹뇻뇽누눅눈눋늘늠눕	A0 덧덩멏덮데덱덴델데뎁뎃뎄뎅뎌뎐
B0 눗눙눠눴눼뉘뷘뉱뒴뉩뉴뉵늘윰늅늉	B0 덜뎠뎡뎨도도독돈돌돌돎돐돔돌돗동
C0 느늑눈눌눍뉾늠늡늣능뇾눂늬뇐뷭니	C0 돛돌돠돤뢀돼됐되된됳됨됩됫됴두둑
D0 닉닌닐딞딤딥닛닝닢다닥닦단닫달닭	D0 둔돌돔돌돗동워뒀퉤퉹뒤튄월립튓륑
E0 닮닭닳담답닷돴당닺닻닿대댁댄댈댐	E0 듀뜐돌뜜동드독단돌됾둄흡돗동의
F0 댑댓댔댕댜더덕덖던덛얼덞멃덤덥	디딕딘딛딜딤딥딧딨딩딪따딱딴딸
B640 - B6FF	B740 - B7FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 땀땁땃땄땅땋때땍땐땙땜땝땟땠땡	A0 대백랜팰램랩랫랬랭랴략랸럇량러
B0 떠떡떤땙떪떫떰떱떳떴떵땧뗴떽뗀똁	B0 턱런뻘텀럽럿렀렁텋레렉텐텔렘렙렛
C0 뗌뗍뗏뗐뗑뗘똈또똑뚄뚈뚕똬똹뙈뙤	C0 렝려력런럴텀렵렷렀혐레롄렙롓로독
D0 뙨뚜뚝뚄뚈똟뚐뚕뛔뛰뛴쀹뜀쀱뜅뜨	D0 론홀몸콟묫픙롸롼뢍꽸릐뢴흴묌륑틧
E0 뜍뚄똩뜰뚬똡뚓띄뙨뙽쬠륍띠띤띭띰	E0 릠료론쿌믋픗룜푸폭운돌품급꼿픙뿨
F0 띱띳띵라락란빨람라랏캈랑랒랖랗	F0 뤘뤠뤼튁튄륍륍륏묑쿆룎륜蹇묨튭

### Code page 949 Korean (5 of 16)

```
B840 - B8FF
                                                                                                                 B940 - B9FF
 40
                                                                                                                 40
50
60
70
                                                                                                                 50
                                                                                                                 60
70
80
80
90
                                                                                                                 90
          큣롱르륵론쿨룖룝쿗쿙릇뿚뿦리릭
린릴림립릿링마막만않만말앍맒맘맙
맛망맞말맣매맥맨맬앰맵맷맸맹맺먀
먁먈먕머먹먼멀멂엄업멋멍멎멓메멕
멘멜멤멥뭿엤멩며멱면덜몃몄덍몇몌
모목몫문몰몲몵묩묫묭뫄뫈뫘뫔뫼
A0
B0
C0
D0
                                                                                                                          묀묄묍묏묑묘욘묠묩묫무뭌묶문문
물묽읆묿뮯믓믕뭍뤃뭐뭰뭘둽훳뭬뮈
뮌뒽뮤뮨뫁뮴뮷므믄물묨믓미믹민믿
밀밂밈밉밋밌밍및밑바박봒밗반받밡
밝밞밞뱜밥밧방밭배백뱬뺼뱀뱁뱃뱄
뱀벁뱌뱍뱐뱜버벅번벋벑벎범법벗
                                                                                                                 A0
                                                                                                                 BO
                                                                                                                 CO
E0
                                                                                                                ΕŎ
 BA40 - BAFF
                                                                                                                 BB40 - BBFF
 40
                                                                                                                 40
 50
60
70
80
                                                                                                                 50
60
70
80
 90
                                                                                                                 90
          벙벚베벡벤벧벭벰벱벳벴벵벼벽변
별볍볏뗬병볉볘볜보복몪뵨基붐볿븟
봉봐봔퇐봬뢨뵈뵉븬븰휨뷥뵤뵨부뵥
분분불뿕붊뵴뷻븟붕븉붚붜쀁붰붸뷔
튁븬뷭륑쀼뷴쁄븀큣뮹브북뵨뵬묨뵵
봇비빅빈빌렒빔빕빗빙힞빛뺘빡빱
                                                                                                                          빨點빰빱빳빴빵빻뻬빽뻰뻹뺌뻅
뻈뼹뺘뺙뺨뻐뻑뼌뻩벁뱸뻣삤뼝뼤!
뼈뼉뙘뼙뼛뼜뼝뽀뽁뽄뽍뽐똡뽕뾔!
쁑뿌뿍뿐뾸뿀쁏쁑쀼쁑쁘뾴뾽뿀뿁
뻭삔쁼뛤삡뻿삥사삭삯산삳삹삵샮:
삽삿샀상샅새색샌샓샘샙샛샜생샤
 A0
                                                                                                                 A0
 B0
C0
D0
                                                                                                                BO
CO
DO
EO
                                                                                                                                                                                                      뽀
                                                                                                                                                                                                 뿝삐
 ΕÖ
BC40 - BCFF
                                                                                                                 BD40 - BDFF
40
50
60
70
                                                                                                                 40
50
60
70
80
80
90
                                                                                                                 90
          샥샨샬샴샵샷샹섀섄섈섐섕서석섞
섟선섣설섦섦섬섭섯셨섬섶세섹센셀
셈쎕셋셌셍셔셕션셡셤셥셧솄셤쎼셴
쏄솅소속솎손솧솖솜솝솟송솥솨솪솬
솰솸쇄쇈쇝쇔뇃쇘쇠쇤쇭쇰쇱쇳쇼쇽
숀죨숌숌숏숑수숙순숟숥숨숩츳숭
                                                                                                                          춫슡숲숴쉈쉐쉑쉔쉩쉠쉥쉬쉭쉰슅
췸췸쉿쥥슈슉슡슘슛슝스슥슨슡슭숌
슙즛슝시식신싣실싫심십싯싱싶싸싹
싻싼쌀쌈쌉쌌쌍쌓쌔쌕쌘쌭쌤쌥쌨쌩
썅써쌕썬쎁썲썸썹썼쌩쎼쎈쎝쏀쏘쏙
쏜쫃쫕쏢쏡쫕쏭쏴쏵쫜쐈쐐쐤쐬쐰
AO
BO
CO
DO
                                                                                                                 A0
B0
C0
D0
E0
                                                                                                                 E0
```

G-203 Character Sets

# Code page 949 Korean (6 of 16)

BE40 - BEFF	BF40 - BFFF
40 50 60 70 80 90 A0 쑅쐼쐽쑈쑤쑥쑨쑽쑴쑵쑹쒀쒔쒜쒸 B0 쒼쓩쓰씈쓴쑽쑮쑳쏨쑵씌씐쑅씜씨씩 C0 씬쐴씸씹씻씽아막안앉않알앍맒앓암 D0 압맛았앙앝앞애액앤맽앱앤앴앵야 E0 약얀얄얇얌먑얏얌앝먛얘얜떝얩어억 F0 언얹얻얼얽얾엄헙없멋었엉헞엏엎	40 50 60 70 80 90 A0 에멕엔엘엠엔엣엥여역엮연열엶엷 80 염엽없엿였염뗱옆얳예옌옡옘옙옛옜 C0 오목몬울옭윪옰윯욤욥웃믕읓와왁완 D0 왈왐왑뫗왔왐왜왝뫤왬왯왬뫼왹왼읠 E0 믦욉묏읨묘묙묜옱묨욥욧묭우묙운물 F0 옭읆묾뭅믓믕뭐웍뭔웙웜웝웠웡웨
C040 - C0FF	C140 - C1FF
40 50 60 70 80 90 A0 웩웬웰웸웹웨위윅윈윌윔윕묏윙유 80 육윤뫁뮴윱뮷뮹뮻으목묜몵몶음읍믓 C0 몽욪몿몿읕옾읗의윈윌윔욋이익인일 D0 읽읾잃임입잇있임잊잎자작잔잖잗잝 E0 쟒잠잡잣잤장잦재잭잰쟅잼잽잿쟀쟁 F0 쟈쟉쟌쟎쟡쟘쟝쟤쟨쟬저적전절점	40 50 60 70 80 90 A0 점접젓정젖제젝젠젵젬쩹젯젱져젼 80 졑졈졉졌졍졔조족존졽졻졺죱좃죵좆 C0 쭃쭇좌좍좔좝좟좜좨퐸좽죄죈죝죕즵 D0 삇쵱죠죡죤죵주국준줉줅쥶줌쥽줏중 E0 줘퀐줴쥐퓍쥔쥩쥠즵쥣쥬쥰쥴쥼즈즉 F0 즌줄쥼즙즛증지직진짇질짊짐집짓
C240 - C2FF	C340 - C3FF
40 50 60 70 80 90 A0 징짖짙짚짜짝짠짢짵짧짬짭짯짰짱 B0 째짹짼쨑쨆쨉쨋쨌쨍쨔쨘쨩쩌쩍쩐쩥 C0 쩜쩝쩟쩠쩡쩨꼠쪄쪘쫀쯕쫀쫕쫑쫍쭛 D0 쯩쯫쫘쫙쫱쫬쫴쬈쯰쯴쬞쬠찁쭁쭈쭉 E0 쭌쫕쭘쯉쯩쭤쭸쮕쮜쮸쯔쯤쯧쯩찌찍 F0 찐찗찜찝찡씾찋차착찬찮찵참찹찻	40 50 60 70 80 90 A0

### Code page 949 Korean (7 of 16)

```
C440 - C4FF
                                                                        C540 - C5FF
40
                                                                        40
50
60
                                                                        50
                                                                        60
70
                                                                        70
80
                                                                        80
90
                                                                        90
      치식친칟칥칡침칩칫칭카칵칸칼캄
캅캇캄캐캑캔캩캠캡캣캤캥캬캭컁커
컥컨컽컬컴컵컷컸컹케켁뭰퓉퀨켑켓
켕켜켠켵켬켭켯컜켱켸고콕콘콭콤콞
콧콩콰확콴퐡쾀쾅쾌쾡쾨쾵교쿠국군
클줌쿱쿳쿵뿨륁뤝뤙풰뤵퀴쥑퀸큍
A0
                                                                              큄큅큇큉큐큔쿌큠크콕콘콜콤콥콩
키킥킨킽킴킽킷킹탸톽탼좥퇅탐탐퇏
퇐퇑턔턕럔퇱턤퇩퇫퇬퇭탸턍터텩턴
                                                                        A0
В0
                                                                        B0
CO
                                                                        CO
D0
                                                                               털럶텀텁텃렀텅테텍텐텥텝텝텟텡텨
텬렸톄뗸토톡톤톭룖礛툿쫑툪톽퇀퇘
                                                                        D0
E0
                                                                       E0
                                                                               퇴퇸틧릠툐푸툑쭌뚩쿰쭓툿뿡붜퉜
C640 - C6FF
                                                                       C740 - C7FF
40
                                                                       40
50
                                                                       50
60
60
70
                                                                       70
                                                                       80
90
80
90
      퉤튀튁튄륄륍륍튕툒쮼툘룜뮹트톡
론툳쿌틂룜룝뿃틔튄툍틤륍티텩틴틽
틤립틧뜅꽈팍짞판팙퐒퍔퍕팟꽜꽝팙
패꽥퍤꽬퍰팹팻팼퍵퍄퍅퍼퍽펀펉펕
펍펏펐펑페펰펜풸펨폡펫뗑펴편폁폄
폅폈평뎨폩폡폣포폭폰퓵푬폽픗퐁
                                                                              퐈퐝푀푄ᅭ푠푵푭푯푸푹쭌픋픁풂
푬풃픗쭝풔뭥퓌퓐퓔퓜퓟퓨퓬퓵퓸퓻
퓽프폰퓵푬퓹픗피픽핀핉핌핍핏핑하
학한활핥함합핫항해핵핸핼햄햅햿했
햄햐향허헠헌헕헒헙헙헛헝헤췍줸헱
렓헵헷헹쳥혁현혍혊협혓혰형뼤췐
A0
                                                                       A0
B0
                                                                       B0
CO
                                                                       CO
D0
                                                                       DO
E0
                                                                       E0
                                                                       F0
C840 - C8FF
                                                                        C940 - C9FF
40
                                                                        40
50
                                                                        50
60
                                                                        60
70
80
90
A0
B0
70
80
90
      헬혭호흑屯臺嘉高高克高高의확환
활환황패패패패패의리힌필립회의원호
호흡高克후 흑克嘉嘉高克흥內원월림
형훼택원웰행南南원필림휨刻刻京森
克嘉高克흥호 흑克茂克臺壽高高克高
嘉희린필朝립朝 리南河直南南河南
A0
B0
                                                                        CO
CO
D0
                                                                        DO
E0
                                                                        E0
                                                                        F0
```

G-205 Character Sets

# Code page 949 Korean (8 of 16)

CA40 - CAFF	CB40 - CBFF
40	40
50	50
60	60
70	70
80	80
90	90
A0 伽佳假價加可可哥嘉嫁家暇架伽柯	A0 厘岬甲胛鉀閘剛墹姜岡崗康强彊慷
B0 歌珂痂稼苛茄街袈訶賈跏軻迦駕刻却	B0 江臺疆糠絳綱羌腔紅薑襁講鋼降鱇介
C0 各恪整殼珏脚覺角閣侃刊墾奸姦干幹	C0 价個凱增愷愾慨改概溉疥皆盖箇芥蓋
D0 堯揀杆東桿潤癎看礪稈竿簡肝良艱諫	D0 豈鎧開喀客坑更粳萋醵倨去居巨拒据
E0 間乫喝易渴碭竭萬褐蝎鞨勘坎堪嵌感	E0 據擧渠炬祛距踞車遽鉅蜗乾件健巾建
F0 憾戡敢柑橄減甘疳監歐紺邯鏇鑒龕	F0 滋樓腱虔蹇鍵壽乞傑杰桀儉劍劒檢
CC40 - CCFF	CD40 - CDFF
40	40
50	50
60	60
70	70
80	80
90	90
A0 臉鈴黔劫怯迲偈類揭擊格檄激膈現	A0 整溪界癸磎稽系繁繼計誡谿階鷂古
80 隔擊牽犬甄絹繭盾見譴遣鵑抉決潔結	B0 叩告呱固姑孤尻庫拷攷故敲暠枯槁洁
CO 缺訣兼慊箝謙鉗鎌京僅倞傾儆勁勍卿	C0 瘤曍毒稿羔考股膏苦苽菰藁叠袴誥賈
DO 坰境庚徑慶憬離敬景暖更梗涇炅烱環	D0 專細腫顧高鼓哭斛曲梏穀谷饋困坤崑
EO 璥瓊痙硬警竟皷絅經耕耿脛莖警輕運	E0 昆梱棍滾現袞鯤汩滑骨供公共功孔工
FO 鏡頃頸驚鯨係魯堺契季屆悸戒桂棫	F0 恐恭拱控攻珙空蚣實鞏串寡戈果瓜
CE40 - CEFF	CF40 - CFFF
40	40
50	50
60	60
70	70
80	80
90	90
A0 科菓誇課跨過鍋顆廓槨藿郭串冠官	A0 區口句各嘔坵垢窓嶇廐懼拘歘枸柩
B0 寬慣棺款灌琯瓘管罐菅觀貫關館刮恝	B0 構歐殿毬求溝灸狗玖球瞿矩究樑者
C0 括适侊光匡壙廣曠洸炚狂珖籃胱鑛卦	C0 舅蓋荀衞驅購驅逑邱鈞銶駒驅鳩鷗龜
D0 掛罫乖傀塊壤怪愧拐槐魁宏紘肱轟交	C0 國局菊鞠鞫麴君審群裙軍郡堀屈掘窟
E0 僑咬喬嬌嶬巧攪敎校橘狡皎矯紋翹膠	E0 宮弓霉窮芎躬倦券勸卷圈拳捲權濼眷
F0 蕎蛟較轎郊餃驨鮫丘久九仇俱具勾	F0 厥源蕨蹶闕机櫃潰詭軌鏡句晷歸貴

# Code page 949 Korean (9 of 16)

D040 - D0FF	D140 - D1FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 鬼龜叫圭奎揆槻珪硅窺竅糾葵規赳	A0 養期杞棋棄機數氣汽沂淇玘琦琪基
80 遠圍勻均畇筠薗鈞龘橋克剋劇載棘極	80 機畸畿基機祁祇所祺箕紀綺羈香機肌
CO 除僅劤勤勲斤根槿瑾筋芹菫覲謹近蘳	C0 記機豈起錡錤飢鐖騎騏驥蘇緊信吉吉
DO 契今妗搞昤楠琴禁禽苓衾衿襟金錦伋	D0 桔金喫僟喇奈娜懦懶拏拿癩灩蘿螺標
EO 及急扱汲級給亘競矜肯企伎其冀嗜器	E0 遍那樂洛烙珞落諾酪駱亂卵暖欄煖爛
FO 圻基埼藝奇妓寄岐崎己幾忌技旗旣	F0 關難鸞捏捺南嵐枏楠湳濫男藍襤拉
D240 - D2FF	D340 - D3FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 納臘蠟衲囊娘廊朗浪狼郞乃來內奈	A0 丹夏但單團壇象斷旦檀段湍短端單
80 奈耐冷女年撚季念恬拈捻寧寗努勞奴	80 殺蛋祖耶鍛撻漣獺疽達啖坍憺擔曇淡
CO 琴怒據櫓爐瑙盧老蘆虜路露營魯鷺碌	CO 湛潭澹玻聃膽奪單談譚錟畓畓答踏遝
DO 祿綠袞錄鹿論豐弄濃籠擘膿農惱牢磊	DO 唐堂塘幢懸擅業當糖螳黨代垈地大對
EO 腦賭雷尿疊屬樓淚灟累緩随嫩訥杻紐	EO 岱帶待戴擡玳臺袋貸隊黛宅德惠倒刀
FO 勒肋凜凌稜綾能菱陵尼泥匿灣多茶	FO 到圖堵塗導層島嶋度徒悼挑掉搗桃
D440 - D4FF	D540 - D5FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 棒權淘渡滔濤賽盜賭禱稻萄観賭跳	A0 難螺裸羅樂洛烙珞絡落諾酪駱丹亂
80 路逃途道都鍵陶韜霽濱牘犢獨督禿篤	80 卵標藥測爛蘭鸞刺辣嵐車攬欖濫籃纜
CO 蠢讚墩惇敦旽暾沌焞燉豚磌乭突全冬	C0 藍襤覽拉臘蠟廓朗浪狼琅瑯螂郎來崍
D0 凍動同憶東桐棟洞潼疼睢畫胴蓋銅兜	D0 徠萊冷掠略亮偏兩凉梁樑粮梁糧良諒
E0 斗杜科痘竇莄讀豆逗頭屯臀芚運遞鈍	E0 輔量侶隱勵呂廬慮庚旅櫩濾礪藜蠣闆
F0 得瞪橙燈登等藤膾鄧騰喇懶拏癲驅	F0 鑿驥腰黎力曆歷瀝礫皪霾憐戀孿漣

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D640 - D6FF	D740 - D7FF
40 50 60 70 80 90 A0 煉璉練聯蓬擊連鍊冽列劣洌烈裂廉 B0 斂強瀌藨獵令伶囹寧岺嶺怜玲笭羚翎 C0 聆邊鈴零靈領齡例澧穯醴隸膋怒撈擄 D0 櫓潞瀘爐盧老蘆虞路輅露魯鷺鹵碌祿 E0 綠菉錄鹿麓論墾弄臘瀧瑜籠聾儡瀨牢 F0 磊賂賽賴雷了傣寮廖料燎療膝聊蓼	40 50 60 70 80 90 A0 速鬧龍星宴廣楼淚漏度累縷萋褸鏤 B0 陸劉旒柳榴流溜瀏琉瑠留瘤硫膠類六 C0 数陸侖倫崙淪綸輪律慄栗率隆勒肋凛 D0 凌楞稜稜菱陵俚利原吏唎履悧李梨浬 E0 犁狸理璃具痢籬曆鸁莉裏裡里釐離鯉 F0 吝潾燐璜藺躪隫鯑麟林淋琳臨霖砬
D840 - D8FF	D940 - D9FF
40 50 60 70 80 90 A0 立笠粒摩瑪痲碼磨馬魔麻実幕漢膜 80 莫邈万卍娩巒彎慢挽晚曼滿浸灣瞞萬 C0 夏蠻輓鋟鰻唜抹末沫襪滿珠亡妄忘忙 D0 望網屬芒茫莽輞邙埋妹媒寐昧枚梅每 E0 煤罵買賣邁魅脈貊陌驀麥孟氓猛盲盟 F0 萌幂覓免冕勉棉沔眄眠綿緬面麵滅	40 50 60 70 80 90 A0
DA40 - DAFF	DB40 - DBFF
40 50 60 70 80 90 A0 汶素紋閩蚊門雯勿沕物味媚尾帽彌 B0 微未梶楣湊湄盾米美薇謎迷靡黴岷悶 C0 愍憫敏旻旼民泯玟珉繙閔密蜜謐剝博 D0 拍搏撲朴樸泊珀璞箔粕縛膊舶薄迫電 E0 駁伴半反叛抨攁攀斑褩泮潘班畔嶽盤 F0 盼馨礧攀絆般蟠返頒飯勃拔撥渤潑	40 50 60 70 80 90 A0 發跋聯鉢髮魆倣傍坊妨尨幇彷鶊放 B0 方旁昉枋榜滂磅紡肪膀舫芳薄蚌訪膀 C0 邦防龐倍俳北培徘拜排杯湃焙盃背胚 D0 裴裵褙賠輩配陪伯佰帛柏栢白百魄幡 E0 獎煩燔番磻繁謇藩鰕伐筏罰閥凡帆梵 F0 氾汎泛犯範范法茲僻劈鐾擊棐鑒癖

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DC40 - DCFF	DD40 - DDFF
40	40
50	50
60	60
70	70
80	80
90	90
A0 碧蘇關驛便下弁變辨辯邊別瞥繁電	A0 字解富府復扶敷斧浮溥父符簿缶腐
BO 內倂兵屛幷時農柄梗炳甁病秉竝輔餅	B0 腑膚艀芙挙訃負賦賻赴趺部釜阜附駙
CO 財保堡報實普步狀深潛琉甫菩補褓譜	C0 鳧北分吩嘖墳奔電忿情扮昐汾焚盆粉
DO 輔伏僕匐卜宓復服福腹茯蔔複覆襲輻	D0 糞紛芬實雰不佛弗彿拂崩朋棚硼繃鵬
EO 馥麒本乶俸奉封峯峰捧棒烽燵琫縫蓬	E0 丕備匕匪卑妃婢庇悲憊靡批斐枇榧比
FO 蜂递鋒鳳不付俯傳剖副否咐埠夫婦	F0 毖毗毘沸泌琵舞砒碑秕秘粃緋嚞肥
DE40 - DEFF	DF40 - DFFF
40	40
50	50
60	60
70	70
80	80
90	90
A0 脾臂菲蜚裨誹瑟賽鄙非飛鼻頻嬪彬	A0 傘刪山散汕珊產疝算蒜酸霰乷撒殺
B0 媒核殯浜濱瀕牝玭貧賓頻憑氷聘騁乍	80 煞薩三參杉森滲芟蔘衫挿漩鈒颯上傷
C0 事些仕伺似使俟僖史司唆嗣四士奢娑	C0 像價商喪嘗嫻尙峠常床庠廂想桑橡湘
D0 寫寺射巳師徙思搶斜斯柶查梭死沙泗	D0 爽牀狀相祥箱翔裳鵤詳象賞霜塞鹽賽
E0 渣瀉獅砂社祀祠私篩紗絲肆舍莎蓑蛇	E0 審審穡案色牲生甥省笙墅壻嶼序庶徐
F0 裟詐詞謝賜赦辭邪詢駰麝削數朔索	F0 恕抒捿敍暑曙書栖棲犀瑞筮絮緒署
E040 - E0FF	E140 - E1FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 胥舒薯西誓逝鋤黍鼠夕奭席惜昔哲	A0 聖聲膃誠醒世勢歲洗稅笹細說賈召
80 析汐淅潟石碩蓆釋錫仙傳先善嬋宣扇	80 嘯塑宵小少巢所掃搔昭梳沼消溯瀟炤
CO 歡旋渲爛琁瑄璇璿癬禪線繕羨腺膳船	C0 燒甦疏疎癢笑篠簫素紹蔬蕭蘇訴追遡
D0 蘇蟬詵跣選銑鐥饍觧卨屑楔泄洩渫舌	00 邵銷韶騷俗屬束涑栗續謖贖速孫巽損
E0 薛褻設說雲齧剡邊殲纖蠕贍閃陜摄涉	E0 蓀遜飡率宋悚松凇訟誦送頌刷殺灑碎
F0 燮葉城姓宬性惺成星晟猩瑊盛省筬	F0 鎖表釗修受嗽囚垂壽媓守岫峀帥愁

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E240 - E2FF	E340 - E3FF
40 50 60 70 80 90 A0 戊手授搜收數樹殊水洙漱燧狩獸琇 80 建賽鹽秀穗堅粹級緩糧產備茱蒐蓚藪 CO 袖誰雙輸邌遼酬銖銹隋隧隨雖關須首 100 體體权塾夙孰宿淑瀛熟琡璹肅菽巡彻 E0 循恂旬枸桶榾殉洵淳珣盾瞬筍純脣舜 F0 荀專蕣詢諄醇錞順馴戍術述銚崇崧	40 50 60 70 80 90 A0 嵩瑟滕蟲濕拾習褶襲丞乘僧勝升承 B0 昇繩蠅陞侍匙嘶始媤尸屎屍市弑恃施 C0 是時枾柴猜矢示翅蒔薔視試詩諡豕豺 D0 填蹇式息拭植殖湜熄簑蝕讖軾食飾伸 E0 侏儒呻蟩廣愼新晨燼申神紳腎臣莘薪 F0 臺賽訊身辛辰迅失室實悉審專心沁
E440 - E4FF	E540 - E5FF
40 50 60 70 80 90 A0 沈深濬甚芯諶什十拾雙氏亞俄兒啞 80 娥峨我牙芽莪蛾衙訝阿雅餓鴉鵝臺岳 C0 嶽巘惡愕握樂滬鄂鍔顎鰐齷安岸按晏 D0 案眼雁鞍顏鮍斡謁軋關唵岩巖庵暗癌 E0 耄闍壓押狎鴨仰央快昂殃秧鴦厓哀埃 F0 崖愛暖涯碍艾隘靏厄扼掖液縫腋額	40 50 60 70 80 90 A0 楼閣鸞鸛也倻冶夜惹鄉椰爺耶若野 B0 輯掠略約若葯鷒藥躩亮佯兩凉壤壞恙 C0 揚攘數陽梁楊樣洋濱煬痒瘍襽穰糧羊 D0 良裹諒讓職陽量姜圖御於漁瘀樂語馭 E0 魚醋億憶抑檍熝偃堰彦爲言諺擘鼱俺 F0 儼嚴奄掩淹棄業円予余勵呂女如廬
E640 - E6FF	E740 - E7FF
40 50 60 70 80 90 A0 旅败汝濾璵礖礪與艅茹輿翚閭餘蠼 B0 麗黎亦力域役易曆歷疫繹譯鱳逆驨嚥 C0 堧姸娟寖年延憐戀捐挻撚椽沇沿涎涓 D0 淵濱漣烟然煙煉燩燕璡硏硯秊筳緣練 E0 緘聯衍軟鶦蓮遑鉛鍊鳶列劣咽悅湟烈 F0 熱裂說閱厭廉念捻染殮炎焰琰艷苒	40 50 60 70 80 90 A0 簾間髯鹽曄獵燁葉令囿塋寧嶽嶸影 90 A0 簾間髯鹽曄獵燁葉令囿塋寧嶽嶸影 90 時映暎楹榮永泳渶颍灤瀛灣煐營寶靈 50 50 61 61 61 61 61 61 61 61 61 61 61 61 61

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E840 - E8FF	E940 - E9FF
40 50 60 70 80 90 A0	40 50 60 70 80 90 A0 窈寐絲繞耀腰蓼蟯要謠遙遼邀鐃慾 80 欲浴縟褥辱俑傭冗勇埇壙容庸慂榕涌 C0 湧溶熔瑏用甬聳茸蓼踊鏳鏞龍于佑偶 D0 優又友右宇寓尤愚蔓旴牛玗瑀盂軲耦 E0 禹紆羽芋藕虞迂遇郵釪隅爾雩勖彧旭 F0 昱楠煜稶郁環云暈橒殞澐熉耘芸藝
EA40 - EAFF	EB40 - EBFF
40 50 60 70 80 90 A0 運隕雲韻蔚鬱亐熊雄元原員圓園垣 80 媛嫄寬怨愿接沅洹湲源爰猿瑗苑袁隸 C0 遠阮院顯鶩月越鉞位偉僞危圍委威尉 D0 慰暲渭爲瑋緯胃萎蔁薫蝟衛禕謂違韋 E0 魏乳侑儒兪劉唯喩孺宥幼幽庾悠惟愈 F0 愉揄攸有杻柔柚柳檎楢油洧流游淄	40 50 60 70 80 90 A0 滯猶獻琉球由留應硫紐維與莫裕誘 80 誤論除蹂遊逾遺酉和論類六堉戮毓內 CO 育陸倫允顯尹崙淪潤功胤實輸鈗閩律 原本章戎瀜絨融隆以恩慇殷闓銀隱 EO 乙吟淫蔭陰音飲揖泣邑凝應膺鷹依倚 FO 儀宜意懿擬椅毅疑矣義艤薏蟻衣置
EC40 - ECFF	ED40 - EDFF
40 50 60 70 80 90 A0 護醫二以伊利吏夷姨履已弛弄怡易 90 A0 護醫二以伊利吏夷姨履已弛弄怡易 90 E0 真裡貽貳還里離給餌匿淵濱益翊塑翼 CO 裏裡貽貳還里離給餌匿淵濱益翊塑翼 DO 證人仁刃印吝咽因姻寅引忍澶燐璘絪 EO 菌蘭蚓認隣勒靷鱗鰈一佚骨臺曰溢逸 FO 越配任壬妊姙恁林淋稔臨荏實入十二	40 50 60 70 80 90 A0 立笠粒仍剩孕芿仔刺容姉姿子字孜 80 恋慈滋炙煮茲瓷疵磁紫者自茨蔗藉路 C0 資雌作勺嚼斫昨灼炸虧綽芍酌雀鵲孱 D0 模殘馮豐岑暫潛箴簪蠶雜丈仗匠場墻 E0 壯獎將帳庄張掌暲杖樟懎欌漿牆狀獐 F0 璋載相腸臟滅莊彝蔣薔藏裝贓醬長

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EE40 - EEFF	EF40 - EFFF
40	40
50	50
60	60
70	70
80	80
90	90
A0 障再哉在宰才材栽梓溨滓災縡裁財	A0 煎碘田甸畑癩签箋箭篆纏詮輾轉鈿
80 戴齋寶爭等諍錄佇低儲呾姐底抵杵楮	80 銓錢鏡電顯顫錢切截折浙癤竊節絕占
C0 樗沮渚狙猪疽箸紵荢菹薔藷詛貯躇遺	C0 岾店漸点粘霑鮎點接擋蝶丁井亭停偵
D0 邸睢齟勣吊嫡寂牆敵濇狄炙的積笛籍	D0 呈姃定幀庭廷征情挺政整旌晶み柾楨
E0 績響荻謫賊赤跡蹟迪迹適鎬佃佺傳全	E0 檀正汀淀淨渟湞澥炡玎珽町睛碇積程
F0 典前剪填塼奠專廣廛悛戰栓殿氈澱	F0 穿精綎艇訂諪貞鄭酊釘鉦鋌錠霆靖
F040 - F0FF	F140 - F1FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 靜頂鼎制劑啼堤帝弟悌提梯濟祭第	A0 踪躍鐘鐘佐坐左座挫罪主住侏做姝
B0 臍轉製諸蹄硬除際賽題齊俎兆凋助嘲	90周嗾奏宙州廚畫朱柱株注州湊澍
C0 弔彫措操早見會曹朝條棗槽漕潮照燥	C0 炷珠疇籌紂紬網舟蛛註誅走躊輳週酎
D0 爪璪眺祖祚租稠窕粗糟組繰擊藻蛋詔	D0 酒鑄駐竹粥俊儁准埈寓峻晙樗浚港濬
E0 調趙躁造遭釣阻雕鳥族簇足鏃存奪卒	E0 焌畯竣蠢強遵雋駿茁中仲衆重卽櫛楫
F0 拙猝倧宗從惊滋棕淙琮種終綜縱腫	F0 汁養增僧曾拯烝飯症稽蒸證贈之只
F240 - F2FF	F340 - F3FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 促地址志持指擊支旨智枝枳止池沚	A0 鎌集徽懲澄且侘借叉嗟嵯差次此磋
80 濱知砥祉祗紙肢脂至芝芷蜘誌識贊趾	80 新菜蹉車遮捉搾着窄錯鑿齪撰澯燦璨
C0 遲直積種織職傳噴塵振播晉晉板榛殄	C0 費取簒集粲模讃贊鑚餐饌刹察擦札紮
D0 漳溱珍瑨雄畛疹盡眞膜秦縉縝臻蔯袗	D0 僧參塹慘慙懺斬站讒譏倉傊劇鳴娯廠
E0 診賬軫辰進鎮陣陳慶侄叱姪嫉帙柽瓆	E0 彰愴敞昌昶暢槍滄漲猖瘡窓脹艙菖着
F0 疾秩窒膣蛭質跌迭斟脵什執潗糧輯	F0 債垛栾寨彩採砦綵菜祭尖釵冊柵策

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F440 - F4FF	F540 - F5FF
40 50 60 70 80 90 A0 責凑賽懷處倜刺剔尺慽威拓擲斥滌 80 瘠臀蹠陟隻仟千喘天川擅泉淺玔穿舛 C0 薦賤踐遷釧闡阡驅凸哲喆徹撤澈綴輟 D0 轍鐵僉尖沾添甛膽簽籤麿諂堞妾帖捷 E0 牒疊睫諜貼輒廳晴淸聽菁請青鯖切剃 F0 替涕滯締諦遠遞體初剿哨憔抄招梢	40 50 60 70 80 90 A0 椒楚樵炒焦硝礁礎秒稍肖艸苕草蕉 80 紹超酢醋蘸促屬燭蠠蜀觸寸忖村邨叢 CO 塚寵悤憓摠總聰蔥銃撮催崔最墜抽推 DO 椎楸樞湫皺秋芻萩諏攳追鄭齒虣錐錘 EO 錢難騁鰍丑畜祝竺筑築稿警蹙蹴軸逐 FO 春椿瑃出朮黜充忠沖蟲衝衷悴膵萃
F640 - F6FF	F740 - F7FF
40 50 60 70 80 90 A0 贅取吹嘴娶就炊墅聚脆臭趣醉驟鷲 B0 側仄厠恻測層侈值嗤峙幟恥梔治淄熾 C0 痔痴癡稚穪緇緻置致蚩輜雉馳齒則勅 D0 飭親七柒漆僂寢枕沈浸琛砧針鍼蟄秤 E0 稱快他咤唾墮妥情打拖朶棈舵陀馱駝 F0 倬卓啄坼度托拓擢晫柝濁灌琢璋託	40 50 60 70 80 90 A0 编吞嘆坦彈憚歎灘炭綻誕奪脫探耽 B0 耽貪塔搭欄宕帑湯糖蕩兌台太怠態殆 C0 汰泰笞胎苔跆郃颱宅擇澤撑據兎吐土 D0 討慟桶洞痛簡統通堆槌腿禮退類偸套 E0 妬投透關惠特闡坡婆巴把播擺杷波派 F0 爬琶破罷芭跛顔判坂板版瓣販辦鈑
F840 - F8FF	F940 - F9FF
40 50 60 70 80 90 A0 阪八叭捌佩唄悖敗沛浿牌狽稗覇貝 80 彭澎烹膨愎便偏扁片鷹縅翩遍鞭縣貶 CO 坪平枰萍評吠嬖幣廢弊斃肺蔽閉陛佈 DO 包匍匏咆哺團布怖拋抱捕暴泡浦疱砲 EO 胞脯苞葡蒲袍褒逋鋪飽鮑幅暴曝瀑爆 FO 轉後剽彪懷杓標漂瓤票表豹飈飄驃	40 50 60 70 80 90 A0 品稟楓飄豐風馮彼披疲皮被避陂匹 80 弼必泌珌畢疋筆苾馝乏逼下何屢夏廋 C0 豐河瑕荷蝦賀遐霞鰕壑學虛謔鶴寒 C0 豐河環荷蝦賀遐霞鰕壑學虛謔鶴寒 D0 悍旱汗漢澣瀚罕輪閑閒限韓割轄函含 E0 咸唧喊檻涵緘艦銜陷鹹合哈盒蛤閱閩 F0 陝亢伉姮嫦巷恒抗杭桁沆港缸肛航

G-213 Character Sets

# Code page 949 Korean (16 of 16)

F440 - F4FF	F540 - F5FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 責凑賽懷處倜刺剔尺慽威拓擲斥滌	A0 椒楚樵炒焦硝礁礎秒稍肖艸苕草蕉
80 瘠臀蹠陟隻仟千喘天川擅泉淺玔穿舛	80 軺超酢醋蘸促幅燭矗蜀觸寸忖村邨.
C0 薦賤踐遷釧闡阡韁凸哲喆徹撤澈綴輟	50 塚寵惠憓摠總聰蔥銃撮催崔最墜抽推
D0 輸鐵僉尖沾添甛膽簽籤詹諂堞妾帖捷	00 椎椒樞湫轍秋芻萩諏趨追鄒齒醜錐錘
E0 牒疊睫諜貼輒廳晴淸聽菁請青鯖切剃	E0 鏈難關鰍丑畜祝竺筑築縮警噯蹴軸逐
F0 替涕滯締諦遠遞體初剿哨憔抄招梢	F0 春椿瑃出朮勵充忠沖蟲衝衷悴膵萃
F640 - F6FF	F740 - F7FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 贅取吹嘴娶就炊翠聚脆臭趣醉驟鷲	A0 鐸吞嘆坦彈憚歎灘炭綻誕奪脫探耽
B0 側仄厠恻測層侈值嗤峙幟恥梔治淄熾	80 耽貪塔搭榻宕帑湯糖藻兒台太怠態殆
C0 痔痴癡稚穪緇緻置致嶄輜雉馳齒則勅	CO 汰泰笞胎苔跆郃颱宅擇澤撑據兎吐土
D0 飭親七柒漆侵寢枕沈淒琛砧針鍼蟄秤	DO 討慟桶洞痛簡統通堆槌腿禮退類偸索
E0 稱快他咤唾墮妥情打拖朶棈舵陀馱駝	EO 妬投透關惠特闖坡婆巴把播擺杷波派
F0 倬卓啄坼度托拓擢晫柝濁灈琢璋託	FO 爬琶破罷芭跛顔判坂板版瓣販辦鈑
F840 - F8FF	F940 - F9FF
40	40
50	50
60	60
70	70
80	80
90	90
A0 阪八叭捌佩唄悖敗沛浿牌狽稗覇貝	A0 品稟楓飄豐風馮彼披疲皮被避陂四
80 彭澎烹膨愎便偏扁片篇編翩遍鞭縣貶	80 弼必泌恐暈疋筆苾馝乏逼下何屢夏廈
CO 坪平枰萍評吠嬖幣廢弊斃肺蔽閉陛佈	C0 豐河瑕荷蝦賀遐霞鰕壑學虐謔鶴寒恨
DO 包匍匏咆哺圓布怖抛抱捕暴泡浦疱砲	D0 悍旱汗漢澣瀚罕翰閑閒限韓割轄函含
EO 胞脯苞葡蒲袍麥逋鋪飽鮑幅暴曝湯爆	E0 咸啣喊檻涵緘艦銜陷鹹合哈盒蛤閣斷
FO 轉後剽彪慓杓標漂瓤票表豹飈飄顯	F0 陝亢伉姮嫦巷恒抗杭桁沆港缸肛航

### Code page 950 traditional Chinese (1 of 12)

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一乙丁七乃九了二人儿入八几刀刁力
ヒ十ト又三下丈上丫丸凡久么也乞于
亡兀刃句千叉口土士夕大女子孑孓寸
小九尸山川工己已已巾干升弋弓才
                                                           60
70
80
90
A0
B0
C0
D0
                                                               丑写不中丰丹之尹予云井互五亢仁
什仃仆仇仍今介仄元允內六兮公冗凶
分切刈与勾勿化匹午升卅卞厄友及反
壬天夫太夭孔少尤尺屯巴幻廿弔引心
戈戶手扎支交斗斤方日曰月木欠止歹
毋比毛氏水火爪父爻片牙牛犬王丙
                                                           ĒΟ
A140 - A1FF
                                                           A540 - A5FF
    世丕且丘主乍乏乎以付仔仕他仗代令
仙仞充兄冉册多凹出凸刊加功包匆北
匝仟半卉卡占卯卮去可古右召叮叩叨
50
                                                           50
60
                                                           60
                                                           70
                                                               叮司叵叫另只史叱台句叭叻四囚外
80
                                                           80
                                                           90
A0
B0
C0
D0
90
        ()()"""\"\"=\#&*
                                                               央失奴奶孕它尼巨巧左市布平幼弁
弘弗必戊打扔扒扑斥旦术本未末礼正
母民氐永汁汀氾犯玄玉瓜瓦甘生用甩
田由甲申疋白皮皿目矛矢石示禾穴立
丞丟乒乓乩亙交亦亥仿伉伙伊伕伍伐
休伏仲件任仰仳份企伋光兇兆先全
CO
     #70
-×÷±√<>=≤≥≠∞≒≡+-
DO
    ĒΟ
                                                           ĒΟ
A240 - A2FF
                                                           A640 - A6FF
    共再冰列刑划刎刖劣匈匡匠印危吉吏
闻吊吐吁吋各向名合吃后吆吒因回囝
圳地在圭圬圯圩夙多夷夸妄奸妃好她
                                                           50
60
70
                                                           60
                                                           70
                                                               如约字存字守宅安寺尖屹州帆并年
                                                           80
90
80
90
    式驰忙忖戎戍戍成扣扛托收早旨旬
旭曲曳有朽朴朱朵次此死鬼汝汗汙江
池汐汕污汧氿汎灰牟牝百竹米糸缶羊
                                                           AO
BO
CO
A0
B0
CO
                                                               羽老考而未耳聿肉肋肌臣自至臼舌舛
舟艮色艾虫血行衣西阡串亨位住佇佗
佞伴佛何估佐佑伽伺伸佃佔似但佣
D0
     hijklmnopqrstuv
                                                           A740 - A7FF
A340 - A3FF
     w x y z A B Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ
Ν Ξ Ο Π Ρ Σ Τ Τ Φ Χ Ψ Ω α β γ δ
                                                               作你伯低伶余佝佈佚兌克亞兵冶冷別
                                                           50
60
                                                               利利刪刨劫助努劬里即卵客吭吞吾否
呎吧呆呃吴星呂君吩告吹吻吸吮吵呐
50
     εζηθικλμνξοπροτυ
φχφωσχηστηλλοης
70
                                                           70
                                                               吠吼呀吱含吟听囡困匣囫坊坑址坍
                                                           80
80
                                                           90
90
                                                               均坎圾坐坏圻壯夾妝妒妨妞妣妙妖
妍妤妓妊妥孝孜孚字完宋宏尬局屁尿
尾岐岑岔发巫希序庇床廷弄弟彤形彷
役忘忌志忍忱快忸忪戒我抄抗抖技扶
抉扭把扼找批扳抒扯折扮投抓抑抆改
攻攸旱夏東李杏材村杜杖杞杉杆杠
                                                           ÃO
BO
A0
        リくT虫彳戸MPちムYでむせあ
BO
CO
     へ幺ヌラ与尤ムルーメロ・ ノンハ
                                                           CO
DO
DO
EO
FO
                                                           E0
        €
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A440 - A4FF

50

G-215 Character Sets

# Code page 950 traditional Chinese (2 of 12)

A840 - A8FF	AC40 - ACFF
40 杓宗步每求汞沙沁沈沉沅沛汪泱沐汰 50 沌汨沖沒汽沃汲汾汴沆汶冱沔沘沂灶 60 灼災灸牢牡牠狄狂玖甬甫男甸皂盯矣 70 私秀秃究系罕肖宵肝肘肛肚育良芒 80 90	40 拯括拾拴挑挂政故斫施既春昭映味是 50 星昨昱昤曷柿染柱柔某東架枯柵柩柯 60 柄柑树柚查枸柏柞柳枰柙柢柝柒歪殃 70 殆段毒毗氟泉洋洲洪流津洌洱洞洗 80
AO 芋芍見角雪谷豆豕貝赤走足身車辛 BO 辰迂迪迟迄巡邑邢邪邦那酉采里防阮 CO 阱阪院並乖乳事些亞享京佯依侍佳使 DO 佬供例來侃佰併侈佩然侖佾侏侑佺兔 EO 兒兒爾具其典冽函刻券刷刺到刮制剁 FO 劾動卒協卓卑卦卷卸卹取叔受味呵	A0 活治派洶洛泵洹洧洸洩洮洵洎洫坟 B0 爲炳矩炯炭炸炮炤爱牲钴抵狩狼狡玷 C0 珊玻玲珍珀玳基甭畏界吠畋疫疤疥疢 D0 疣癸皆皇皈盈盆盃盅省盹相澶看盾盼 E0 眇矜砂研砌砍祆祉所祇禹禺科秒秋穿 F0 突竿竽籽紂紅紀紉紇約紆缸美羿耄
A940 - A9FF	AD40 - ADFF
40 咖呸咕咀呻呷咄咒咆呼咐呱呶和咚呢 50 周咋命咎固垃坷坪坩坡坦坤坼夜奉奇 60 奈奄奔妾妻委妹妮姑姆姐姗始姓姊妯 70 妳姒幹孟孤季宗定官宜宙宛尚屈居 80 90	40 耐耍崙耶胖胥胚胃實背胡胛胎胞胤胝 50 致舢苧范茅苣苛苦茄若茂莱菁苗英茁 60 首苔苑苞苓苟苯茆唐虹虻虺衍衫要肋 70 計訂計貞負赴赳趴軍軌逃迎迢迪週 80 90
AO 屈岷岡岸岩岫岱岳帘蒂帖帕帛帑幸 BO 庚店府底庖延弦弧弩往征彿彼忝忠忽 CO 念念快怔怯忧怖怪怕怕性怩拂怛或戕 DO 房庚所承拉拌拄抿拂抹拒招披拓拔抛 EO 拈抨抽押拐拙拇拍抵拚抱拘拖拗拆抬 FO 拾放斧於旺昔易昌昆昂明昀香昕昊	A0 选迫迤迨郊郎郁郃酋酊重問限陋陌 B0 降面革韋非音頁風飛食首香乘毫信倍 C0 做俯倦倥俸倩倖俩值借倚倒們俺侵倔 D0 居俱倡個候倘俳修倭倪俾倫倉兼冤冥 E0 家凍凌准凋剖剜剔剛剝距鄭原厝叟哨 F0 唐咭唷哼哥哲唆哺唔哩哭員唉哮哪
AA40 - AAFF	AE40 - AEFF
40 昇服朋杭枋枕東果杳杷批枝林杯杰板 50 枉松析杵枚枓杼杪果欣武歧歿氓复泣 60 注泳沱泌泥河沽沾沼波沫法泓沸泄油 70 况沮泗泅浃沿治泡泛泊沫泯泜泖冷	40 哦唧唇哽唏圃圈埂埔埋埃埼夏套奘奚 50 娑娘娜娟娛娓姬嬷娣姝娥娌娉孫駐宰 60 奢家宴宮宵容腹射屑展稷峭峽峻峪峨 70 峰島崁峴差席師庫庭座弱徒徑徐恙 80 90
90 A0 炕炎炒炊炙爬爭爸版牧物狀狎狙狗 B0 狐玩狂玟玫玥甽疝疙疚的盂盲直知矽 C0 社配祁秉和空穹竺糾阉羌半者肺肥肢 D0 肱股肫肩者防肯臥臾舍芳芝美芭芽芟 E0 芹花芬芥芯芸芣芰芾芷虎虱初表軋迎 F0 返近邵邸邱邶采金長門阜陀阿阻附	A0
AB40 - ABFF	AF40 - AFFF
40 陂隹雨青非亟亭亮信侵侯便俠俑俏保 50 促侶俘侯俊俗侮俐俄係俚俎俞侷兗冒 60 青冠刹剃削前剌剋則勇勉勃勁匍南卻 70 厚叛咬哀咨哎哉咸咦咳哇哂咽咪品 80	40
90 A0 哄哈咯咫咱咻咩咧咿囿垂型垠垣垢 B0 城垮垓奕契奏奎奐姜姘姿姣姨娃姥姪	AO 砥砭砠砟砲祕祐祠祟祖神祝祗祚秤 BO 秣秧租秦秩秘窄窈站笆笑粉紡紗紋紊

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#### B440 - B4FF B040 - B0FF 40 婷媚婿媒媛媧孶孱寒富离寐奪蕁欶嵌 50 嵐嚴嵇興幅帽幀幃幾廊廁廂廄弻彭復 60 循徨惑惡悲悶惠悃愣惺愕情惻惴骸惱 70 復惶愉愀掲載霩掣掌描揀揩揉揆揍 度蚊蚪蚓蚤蚩蚌蚣蚜衰衷袁袂衽衹詑 計計紅訓訊託訓訖盱馳豈豺豹財實起 躬軒軔軏辱送逆迷退迺迴逃追逅进邕 60 70 郡郝郢酒配酌釘針釗釜針閃院陣陡 80 90 AO 插揣提握揖揭揮捶援揪換摒揚揹敞 BO 敦敢散斑斐斯普啉嘀晶景暑智晾基曾 CO 贊期朝棺棕棠棘棗椅橑惈森棧樘棒樓 陛陝除陘陞隻飢馬骨高鬥高鬼乾偺 僞停假偃偌做偉健偶偎偕貞側偷偏倏 A0 B0 CO **伎**偭兜冕墨剪副勒務勘動匐匏匙匿區 DO 棣棋棍植椒椎棉棚楮蒸款欺欽殘殖般 匾参曼商帕啦啄啞啡啃啊唱啖問喝唯 啤唸售啜唬洶咦啁啗圈圆圈域竪墓堆 DO E0 **经氨氯氩港游湔渡渲湧湊渠濯渣減湛** FO 湘渤湖澶渭渦湯渴湍渺測湃渝潭滋 埠埤基堂培執培夠奢娶婁婉嬬婪婀 B540 - B5FF B140 - B1FF 40 概渙湎潛溜涭湩湟焙焚焦焰無然煮堤 娼婢婚婆姨孰寇寅寄寂宿密尉專將屠 牌犄犘獪猥猴猩琺琪琳琢號琵琶琴瑄 琛琦琨甥甦畫番痢痛痣座痘痞痠登發 展原集控崎岖臺崢蛗鬅嵹崙崎救崗巢 常帶帳帷康庸庶庵庾張強彗彬彩彫得 徙從徘御來徇惠惠悉悠您惋悴惦悽 60 70 皖皓皴盜睏短硝硬硯稍釋程稅稀窘 80 90 90 情悻悵僣悼惘焬惆惟悸愡惇威戛扈 疨控綣掖探接攓鏲掘措涯痷掉掃掛捫 推掄授掙採掬猅掏掀焾摫涻捺歈敖救 教敗暋鄻歀敷敔紏斛斬族旋旋應畫晩 晤展晦稀曺縣ভ獔熪橧榟棾楻樠梕 A0 窗窖童竣等策筆筐簡答筍筋筏筑栗 A0 80 粥校結核紫紫絮絲絡給絢經絳善翔鑫 C0 畫聒肅施腔腋腑腎脹腆脾腌腓腴舒舜 D0 菩萃菸萍菠菅萋菁華菱菴著萊菰萌茵 瓦拉菲拉婆萄菜夏藤克虚蚊蛙蛭蚜蛛 BO DÔ E0 F0 蛤蛐蛞街教裂袱覃視註詠評詞証詁 梗械梃棄梭梆梅梔條梨梟梡梂欲殺 B640 - B6FF B240 - B2FF 40 紹胆詐獸訴診訶詖象紹貯貼貳贻責費 毫忿氫涎涼淳淙祣淡淌淤添淺凊淇淋 涯椒劚淞淹涸混淵淅賡湆硘淚淫淘瀹 深推淨滑淄涪淬滚淦烹焉焊烽烯爽牽 賀貴買貶貿貸越超趁芘距跋跚跑跌跛 鈶軻軸軼辜逮逵週逸進逶鄂郵鄉鄽酣 60 70 酥量鈔鈕鈣鈉鉤鈍鈐鈇鈑閱閩關開 70 犁猜猛猖猓狰率琅琊球理現琍瓤瓶 90 90 A0 間閒閔隊階階陽隔隆隍延隄雁雅雄 B0 集權要整韌項順須飧飪飯純飲飾馮取 C0 黄黍黑亂傭債繳傳僅傾催傷傻應繆剿 動剿募勦勤勢勣匯嗟啼嗓嘌啁瘏嗇嗑 E0 嗣嗤嗯嗚嗡嗔嗆嗥喋園圓塞塑塘塗塚 F0 塔填塌塭塊塢埼筌奧嫁嫉嫌媾媽媼 瓷甜產略畦畢異疏涛痕統痊實較茲 盒整眷眾眼眶眸眺硫硃研祥東祭移鐘 宛笠笨笛第符笙笞笮粒粗粕絆絃統紮 紹緣組細紳組累終繼紱缽羞羚望翎智 粗聊聆斓脖層脫脩脰賑春舵絃舶船莎 ΑO B0 E0 芜莘学荧莖莽莫莒莊莓莉莠荷荻茶 B740 - B7FF B340 - B3FF 40 媳嫂媲嵩嵯幌幹廉廈狱集勞徽愚意慈 50 感想愛惹愁愈慎慌溧慍僱愴愧駱愆愷 60 数取搓搾搞搪撘搽搬搏搜搔損搶搖搗 莆莧處彪蛇蛀蚶蛄蚵蛆蛋蚱蚯蛉術袞 袈被袒袖袍袋覓規訪訝訣訥許設訟訛 訢菆豚販賣賃賃貪賲赮赥肚镻軛軟遣 逍邁逗連速逝逐逕遅造透逢逖逛途 60 70 携数斟新暗暉暇量暖暄暘喝會榔業 70 80 90 90 **楚楷楠楔極椰槪楊楨楫枵楓楹榆**榛 部郭都酣野釵釦釣釧釭釩閉陪陵陳 陸<u>陰</u>陣陶陷爾雀雲奪章竟頂頃魚鳥鹵 A0 楣楛歇歲毀殿毓毽溢溯滓溶旁源溝瀵 滅檸瀍溼蟸簻凊犫橣譮佋澯潥潗欶堙 熕煤燣照煜懪煦爅煥燞煆槵煖銗艓猷 獅貗膋瑯瑚畷瑟瑞瑁琿瓅瑛瑜當輢瘀 痰滓痲痱瘒痿颒痳盞盟瞔睷睦睞督

G-217 Character Sets

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B840 - B8FF	BC40 - BCFF
40 睹墨採睜睥睨睢矮碎碰碗碘碌碉棚碑 50 碓硿祺祿禁萬禽稜稚稠稔稟稞窟窠筷 60 節筠筮筧粱粳粵經絹綑綁綏絛置罩罪 70 署義羨群聖聘歸肄腱腰腸腥腮腳腫 80 90	40 劇劈劉劍釗認厲嘮嘻噋嗍囇烤嘩啧壹 50 噗噴嘶嘯嘰墀墟增墳奎墮墩瑷爽塘網 60 嬋嫵嫣嬈寮寬審寫厝履嶝嶔憧敒膰廢 厨廟廝廣廠彈影德徽慶穗慮悪慕憂 80
AO 腹腺腦翼艇帶章落查葵牽胡葉弊為 BO 等高葡董葩葭葆虞廣號蛹蜓蜈蛍蜀蛾 CO 蛻鋒蟨鋧蜊衝娑窩裙補裘裝裡裹裕襄 DO 规解託該詳試詩話誇歌詣献話誅詭物 EO 詮話詹路響胶拳貊絡賊資賈賄貲質路 FO 賅跡跟跨路跳跺跪跤跦躲較載軾輊	A0
B940 - B9FF	BD40 - BDFF
40 辟農運遊道途達區違遐遇遇過過邊逾 50 遁漸郡酬酪酪釉結鉗紋結鉀鈾鉛飽夠 60 鉑鈴鉉鉍鉅鈹鈿鉚闡鍪隔隕豬嶲雉帷 70 雷電雹奪靖靴靶預頑頓頊頒頌飼飴 80 90	40
A0 飽飾馳馱馴髠鳩冤鼎鼓鼠僧僮僥僖 B0 僭僚僕像僑僱僎僩鋴凳劃劂匱厭嗾嘀 C0 職嘗嗽嘔嘆嘉嘍嘎嗷噴嘭嘈嘐嗶圓圖 D0 塵墊境基墊塹壁塽壽夥夢夤奪奩嫡娣 E0 缴嫗嫘婐嫣쫽寁寧婁麥實寨寢寤鍨對 F0 屢嶄嶇愇幣幕幗慢廓麥骅ध彰徹慇	A0
BA40 - BAFF	BE40 - BEFF
40 愿態慷慢慣斷慚慘孈截敝摘摔撤摸摟 50 裙捆摧牽掋摻馶斡旗頗鍚豎嗘橯楴榙 60 橋榮槓幬榱槯榻样榴槐愴樹鎚榦褩榣 70 歉歌氳漳濱滾漓滳漩灤漢濱漏漂漢 80 90 A0 滿滯漆漱漸漲漣漕漫潔澈漪滬漁滲 80 滌滷熔熙烟賴熄熒爾稿垒獄獐瑤瑣瑪	40 報適速邀遭遷鄰鄭鄧鄙醇醉醋醃鋅紼 50 銷鋪銬錋絽鈬銓鏲鉙鋰銲闆閱客霆籭 60 霉靠鞍鞋鞏頡頫頜蔥養餘餒餘駝駐駟 70 駛駑駕馰駙點髮髯鬧魅魄鈧魯縳鴉 80 90 A0 鴃麩麾黎墨齒傷儘傳價貸某髮劑 B0 劓勳噙噫噹豎嗏噸嬠器噥噱噯啵咦噶
CO 瑰瑭甄疑癨瘍瘋蕍瘓盡監瞄睽睿睡磁 DO 碟碧碳碩碣碵櫑禍種稱窪窩竭端管箕 EO 箋筵算箝箔箏箸簡簞粹粽精綻綰綜綽 FO 糭綠緊綴網綱綺繝綿綵綸雓緖緇綬	CO 壁壁壇壅蓄嬝嬴學賽導彊愙濦憩憊慎 DO 憶憾使懈戰擅擁擋撻撼據據擇橿提撿 EO 擒擔題整曆曉濹曄疊暸樽模樺橙橫橋 FO 樹橄楠椽橋橇樵機撓歙蹷鐅濂澱澡
BB40 - BBFF	BF40 - BFFF
40 罰聚鬅翟聞聚盤腐膀膏膈膊腿膂減臺 50 與舔雞経蓉蔥腐蓄蒙蒞積蒜蓋蒸蒸蓓 60 蒐蒼簑虄蜿蜜蜻絃蜥蜴蜘蝕蜷蜩簑褂 70 雯裹裸製裨褚視誦誌語誣駋誡矕鋘 80 90	40
AO 說話海馬莊鹊請豪貍貌賓賑賒蒇趙 BO 趕踢輔輒輕輓辣遠邊遜遭遙遞邊逻選 CO 鄙郬鄞孷酸酷酴絞銀銅銘銖鉻銓衡銨 DO 絣銑閱闡閩闂閱閽隱障際雌雒壽靵鞅 EO 韶頗領颯颱鮫餠餌鮈駁骵骬髼氉琠鳴	AO 嫌榮縛縣綫縝縉縐罹畿翰鄵翮穪譍 BO 腻膨臻與艘艙莵蔥蕈蕨蕩蕃蕉蕭蕪蕞 CO 螃螟螞螢融衡褪褲裲禠褡親覦腣鯵諌 DO 諱謀謋諧諮諾器謂諷騟諳諶鍐獤霚貓

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40 無線等認知論問題發演演者等等等實質 50 指數的影響與例如,可以與一個人工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工	CO4O - COFF	C440 - C4FF
AO 環連至配資建學情能與影響學的數數學數學的數數學與發展的 有機學演集學的主義學的主義學的主義學的主義學的主義學的主義學的主義學的主義學的主義學的主義	50 露較靜觀鞘頰頭頻頷頭頹頹夭館錢錕 60 鉛鎖酸騈輍骸骼馨髭萬鮑駝鴣鴦鴨鴣 70 駕默黔龍龜優僕儡儲勵嚎嚀嗒噣嫐 80	50 鵬麒豎篦麴勸嚨嚷嗘嚴嘝壌孋癳孽寶 60 巉懸懺攐攔捿曦膱椒閵瀰瀲燑歗瓏癢 70 癥礦ແ礊礫靌竸矃籃藸糥梴辦繽繼 80
40	AO 电接壓整填嬰債疲獳尷屨嶼鞼嶽嶸 BO 幫彌徽應懂懇懦懋戱戴擎擊擊擠擰擦 CO 擬擱擢擭斂斃曙曖曀檔櫢檢檜櫛懎橾 DO 檗檐檠獸殮毚氀濘濱濟濠濛濤濫濯逛 EO 濬灟濩濕溑濰嬘營燮澯嬠燭腶燴燠酹	AO 集基燿矑艦潹譲巕蕳藘蘋蘇蘊蠔蝿 BO 推覺觸議警警譯級譮巖曕躉躁臅躂醴 CO 釋鐘鐃鐬闑霰覭餴鼵警弿鵩騷騬蚆鍬 DO 誠麵黨鼲飷朆齝儷儸囁囀蒖葼黂麲懼 EO 僱攝攜孄雧櫻欄橪殱瀶燗犧瓖瀴癩矓
50 無級機能與機能機能與極端的學樣與與經過經 60 總級機能與極端的機學與與經過 60 總級機能與所有學學應能的確認學與新 60 薄音語畫整書莊依美則影經的經過 60 遊遊轉號與對應數數數 60 遊遊轉數數數數數數數 60 超級數數數數數數數數數 60 超級數數數數數數數數數 60 超級數數數數數數數數數數數 60 超級數數數數數數數數數數數數 60 超級數數數數數數數數數數數數數 60 超級數數數數數數數數數數數數 60 超級數數數數數數數數數數數 60 超級數數數數數數數數數數 60 超級數數數數數數數數數數 60 超級數數數數數數數數數數 60 超級數數數數數數數數數 60 超級數數數數數數數 60 超級數數數數數數數數 60 超級數數數數數數數數 60 超級數數數數數數數數 60 超級數數數數數數 60 超級數數數數數數 60 超級數數數數數數 60 超級數數數數數數 60 超級數數數數數數 60 超級數數數數數 60 超級數數數數數數 60 超級數數數數數 60 超級數數數數數 60 超級數數數數數 60 數數數數數數數數 60 數數數數數數數 60 數數數數數數數 60 數數數數數數數數 60 數數數數數數數數 60 數數數數數數數數 60 數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數 60 數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數數數 60 數數數數數數數數數數 60 數數數數數數數數數數數數 60 數數數數數數數數數數數 60 數數數數數數數數數數 60 數數數數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數數數數數數 60 數數數數數數數數數數數 60 數數數數數數數數數數 60 數數數數數數數數數 60 數數數數數數數 60 數數數數數數數數 60 數數數數數數數數 60 數數數數數數數數 60 數數數數數數數 60 數數數數數數 60 數數數數數數 60 數數數數數 60 數數數數數 60 數數數數數 60 數數數數數 60 數數數數 60 數數數數 60 數數數數 60 數數數數 60 數數數數 60 數數數數 60 數數數數 60 數數數數 60 數數數 60 數數數數 60 數數數數 60 數數數 60 數數數數 60 數數數 60 數數數數 60 數數數 60 數數數 60 數數數 60 數數數 60 數數數 60 數數數 60 數數數 60 數數 60 數數 60 數數 60 數數 60 數 60	C140 - C1FF	C540 - C5FF
A0 演首語董密書於後期和記與連述時間與與經過時間與經過時期與經過時期與經過時期與經過時期與經過時期的經過數學達得所可與經過經過的經過數學達得過過數學的發展發質的經過數學達得過過數學的發展發質的發展發質的發展發質的發展發質的發展發質的發展發質的發展發質的發展發	50 簌篠糠糜糞橂糟糨糝縮績繆縸繉繃纄 60 總縱繅繁緁縹褷纋槮縯罄駱鬕嫯蘻聰 70 聯聳瞎臃膺臂臀膿膽臉膾臨卛艱薪 80	50 関霸霹奪響顧頭婆驅鸌莃駅機魔魑 60 級鶯鷾鷂鶸麝黯鼙齜覰鞖儼儻囈奏囉 70 孿巔轡蠮葝攤椲歡灇濰獨퉹叠癬癬 80
1	A0 薄舊薛臺簽薯薛薇獎副虧蟀鏱螳蟒 B0 蟆螯螻螺蝘蟋褻褶裏褸褽鼰駫艕謙講 C0 謊搖謝膡謐豁谿羉賺賽購賸暷趨蹉蹋 D0 蹈蹊轄輾皾轅輿避遽還邁邂邀鄰醣醞 E0 醜鍍鎂鈶鐽鋉鍥鎶綞鑩鍁緞鍰鍚鎷闆	AO 液雜賴顰聽藏製機賴贖咬贋躑躓轡 BO 影鑄鑑鑒譽諡韃籊頭饕騎曉靜鬚繁鏈 CO 緩鰻鷓鶋鼷齬齪興哌巖爩摰攫攪噮欔 DO 瓚竊籤籣蘥纓絥繌膌藾蘿蟲嬱邐薖縤 EO 繞繼靨顯餥驚驆臉頶氇獨鳝鮹鳜鶭鰶
50 · 會樹墳壘培彝懣歡損攑獶攆擸撴襭斷 60 · 單键核樓櫃觝榟檶褠僿馻錦殯瀉瀋滄 70 · 潰潑溱澢爣壗蕀爥灢獵鐾琽甕灖濱 80	C240 - C2FF	C640 - C6FF
## 10	50 · 會嚮墳螶嫸彝懣瞉損弊獶攆擸擻擷斷 60 · 曜朦檳檬櫃檻檸櫙檮檯歟歸蕵瀉瀋濾 70 · 資潑瀑濧爣廅蕀燸獱纖鐾堷甕癖癘 80	50 鹼鹽鳘齸鰯廰欖凚痲籮憞飌猵釁鏔緰 60 額饞髖蟹瞏濼矏膹鏋韉黸ũ纜誡踺瞲 70 簽鎥鑼鰠鱋瀨豔鏧鷃爨醥鬱鸛囐顀 80
1	AO 恋瞽瞿瞻瞼礎禮穡穢機窳薂蕭簧簪 BO 簞簣衟糧織繕繞繚繢緖繙樿翹翻職蠠 CO 臍族舊藏嗑藍藐藉薫暋葟薦蟯蟬蟲蟠 DO 覆觀鰩謨謹謬謪豐贅蛏蹣蹦鏦蹪礋驅 EO 轉轍邇邃邈醫醬釐錊鎊鎖鐃鎳鎭鴔鎰	AO BO CO DO EO
50 聚號鰋魍鯊鯉鄉條鯀鵑鴉鷦點鼕睑儳 60 嚥壞壟爏竉龎廬懲倰懶懵騚攏嚝襮艕 70 積檔橹瀛瀟瀨瀭瀝瀕瀘爆纅賸獖獸 80 90 A0 頻靈復瓣畴膃瘍瘊贂碳膦穫穩簾簿 80 簽簽潛摍緊踱繹繩繪羅繳羶羮裹臘潛 C0 藝藪藕籐葉諸蟣蠅蜵躛蟾階礫蹼蹬路 C0 醋酸靛譚縣邊邊融酢鏡縃鐎鉄鏈錢變鑒 E0 銀裝輔辭爰邊融酢鏡鏡鑑鉄鏈錢變鑒 E0 複裝級編經繁階雖難緊霧露路錯	C340 - C3FF	C740 - C7FF
AO 頻靈瓊瓣疇疆傷瘊朦朦凝睛稜穩簾簿 BO 簽簽潛掖緊強繹絕繪羅繳瘦奠巖媵藩 CO 藝藪藕藤藥諸蟻蠅蠍蟹蟾襠榤襖騃瞱 BO DO 譜瞰證譚祗譏寤瞧贈贊贌躊躇蹶蹬蹺 EO 跋較輔鮮邊遠嚴離鏡鏡遙鏡鍵鐘鑒 FO 復裝総繕經緊緊隨難離覆霧廢路韻類 EO	50 鬆號鰋鳃鯊鯉鯽儵鯀鵑鳻鵖駎鼕鼬儳 60 嚥壞壟壢竉龎廬懲懷懶慻攀攡嚝矏櫉 70 棲櫃橹瀛瀟瀨瀭瀝瀕瀘爆潗賸積獸 80 90	50 60 70 80
	AO 類靈瓊瓣疇疆塲癡矇碳磷穫穩篻簿 BO 簽簽簷籀繋햃緷繩繪羅繖羶羮鸁朡溚 CO 藝藪藕藤藥藷螊蠅蠍籫蟾襠儝襖躾瞱 DO 譜識證譚瞲朡囍膲贈贊蹼踌躇蹶蹬蹺 EO 蹴轔轎辭邉邌醱醀鏡鏡遙鏃鏈鐣鏝鐜	AO BO CO DO

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C840 - C8FF	CC40 - CCFF
40 50 60 70 80 90	40 坨坽麥奅妵妹姏姎妲姌姁妶妼姃姖妱 50 婶妹姈妴姇孢拏宓宕屄届岮岤岠岵岯 60 岨岬岟蚼岭岢嵬岧岝岥岶岰岦帗帔帙 弨弢驸弤彔徂彾彽忞忥怭怦怙怲怋 80 90
AO BO CO DO EO FO	AO
C940 - C9FF	CD40 - CDFF
40	40
AO 永汎执为发轨平内胚防使优保仵侃 BO 伶依价化伝佈使伢怀伄仴伒冱刑划刑 CO 劦圆匠卍厊吇囡囟圮圪均夼改奼妅奻 DO 如奸炫孖尕拉屼屺屻屾巟幵庄异常行 EO 忕忔忏扜扞扤扡扦圪扙扠扚扥旯旮朾 FO 机材料机束朼机氘汆汒汜汏汊汔汋	AO
CA40 - CAFF	CE40 - CEFF
40	40 啊荷咪咪哞咶哅哆貴呰咼粤咾吡哞啕 50 垵垞垟垤埛垗垝垛覃垘垏垙垥垚垕壴
60	60 复套娝姑姮娀姱姝姺姽姼始姤姲姷婤 70 姩姳姵姠姾姴孌宨屌峐峘峌峗峋峛 80
70	60 复奓姡姞姮娀姱姝姺姽姼姶姤姲姷姛 70 姩姳姵姠姾姴姭宨鳫峐峘峌峗峋莂
70 知每直卲底厏吰咉吪呔呅叭吜吥吘 80 90 A0 吽叭呜咤吩呇囧囧团坁垮坌坉坋坒 备买蚌妘纳妗妎妢妐妧妡实笔尨尪 CO 听听明吸岉岭岊岆岓岕巠帊躭庋庉庌 DO 序序弅弝彸彶忒忑志忭忨忮忳忡忤忣 E0 忺忯悯忻怀怜戺拤抌抎抏圷抇投牧抵	60 复麥姑姑姮娀姱姝姺姽姼始姤姲姷姛 70 姩姳姵姠姾姴姭宨扁峐峘峌峗峋峛 80 90 A0 峞峚峉峇峊峖峓峔峏峈峆崀峟峸卺 B0 帡恰带틖幣庁摩匠庣庥弇弮彖忥怸 C0 您饺饼恞恅恓惺恛恌恀恟恟怤恄恘 D0 恂恮扂爲撉挍挋拵挎挃拫拹挏挌拸拶
70 知每直卲底厏吰咉吪呔呅叭吜吥吘 80 90 A0 吽呏呜吨吩呇囮囮团坁岭坌坉坋坒 备买蚌妘姊妗妎妢妐妏妧妡宎宒趤压 CO 岍岏岈岋岰岭岊岆岓岕巠帊钪庋庉庌 DO 库庐弅弝彸役忒忑忐忭忨忮忳忡忤忣 EO 忺低忷忻怀怜戺抃扰抎抏抔抇扱扻扺 FO 扰扰抈扷坉扲扴攷旰盱旳狊旵杅杇	60 复麥姑姑姐娍姱姝姺姽姼始姤姲姷姛 70 姩姳姵姠姾姴姭宨扁峐峘峌峗峋峛 80 90 A0 峞峚客峇岛岐峓峔峏峪峆峎峟峸登 B0 帡帢希阐帘序序座庇庥庥弇弮彖徆芯 C0 您饺恲恞恅恓恇恉恛恌恀ト饲包怎恰协 00 恦恮居局拏挍挋拵挎挃拫撬挏挌拸岁 板挓挔捒挕扳扺战败斪斿豝昡砩昵易 F0 弄昢昳昀昺备昴昹昮胐胊柁柲柈枺

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D040 - D0FF	D440 - D4FF
40 突竑竺笁籺积籹籿粀粁紃紈紁罘羑羍 50 狙奇耎耏耔耷胘胇胠职啟胂朏胅胞阼 60 胜朐附胉胏診胦胍臿舡芔苙苾苹茇苨 70 茀苕茺苫苖苴苬苡苲苵茌苻苶苰苪 80 90	40 酎酌釘釢釚陜陟隼釘影鬯乿偰偪偡偞 50 偠偓偋偝偲偈偍偁偛偶偢倕煄偟僙佚 60 偣僧偆偀偮偳偗鳫凐翸闏剬剞勯勯薍 70 厜啵啶唼啍啐唴唪啑竵唶唵唰啒噑 80
A0 苤莨苺苳苭虷虴虼虳衁衎衧衪衩斛 B0 旭訇鬾迣迡迮迠郱邽邿郕郅邾邭郋郈 C0 釔釓陔陏陑陓陊陎倞倅倇倓倢倰倛俵 D0 俴傳條倬俶俷倗倜倠倧倵倯倱倎筧冔 E0 壽凊賽凅凈凎剡剚剒剞剟剕剢勍匎屝 F0 咇哢啶唒哧哳噓唛哿唄嚜哫唑唅哱	A0
D140 - D1FF	D540 - D5FF
40 唊哻哷哸哠唎唃唋圁圂埌堲埕埓垺埆 50 堃垼垸埣垿诵埐坬埁夎奊娙娖娭娮娕 60 姑娗娊娞娳孬冟宭宬尃犘屔峬峿峮峱 70 峷嵔峹帩悅庨庮庪庬弳弰彧恝恚恧 80 90	40 崰崒崣崟崮帾帴庱庴庹庲犘弶弸徛徐 50 獨愁愁悆悾悰悺惓餤惏惤惙惀倮悱惛 60 悷惊悿惃惍惀掌捥掊掂捽掽掞掭掝掗 70 掫掎捯掇掐据掅搝掜捙揙捼掤挻掟 80 90
A0	A0
PO40 POEE	
D240 - D2FF	D640 - D6FF
40	40
40	40
40	40 温滤芳淽淗涸淣涻烺焼烷焗烴焌烰煮 50 烳焐烼烿焆焓焀燦娗焋焂焎牾牻徑捁 60 猝猗猇猑猘猊猈蜓猵猞欼珶珸珵琄琁 70 珽璓琀珺珼珿琌琋珴玶畤畣痎痒凊 80 90 A0
40	40 温滤芳淽淗涸淣涻烺煐烷焗熞埈烰煮 50 埔焐烼烿絧焓俗烸烶焋焂焎啎牻徑牿 60 猝猗猇猑猘猊獋蜓猏猞皴珶珸珵瘴 70 斑琇琀珺珼珿琌琋珴玶畤畣痎痒宥 80 90 A0 疾癎痑៌一等 50 有 60 有 60 有 60 有 60 有 60 有 60 有 60 有 6

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D840 - D8FF	DC40 - DCFF
40 釫釷釨釮镺閩閈陼陭陫陱陯焳靪頄飥 50 馗傛傗傔傞傋傣倲倜僝傣愮傒虒傇 60 無滄割匑厤頂喑喨喥喭啷鳴喢喓喈喏 70 喵喁喣咯喤啽喌喦啿喕喡喎圌堩堷 80 90	40 駅駅較前新転給駅移概套鞋舶這連達 50 郵郵郵庫郵票駅都都保鄉都配貼 60 酢酮鲂鈊鈥鈃鈚鈦鈏鈌鈀鈒紤釽鈆纠 70 纺鈂鉱鈤鈙鈗鈅鈖镻閍閱闖隇陾隈 80
A0 埋堞堧堣堨埵竪堥埬堛堳堿堶堮煄 B0 填堭堬堻臩嬀媔媟婺媢趧婸媦婼嬶媬 C0 媕媮娷媄媊媗媃媋媩婻觙媌媜媏媓嫯 D0 寫寍寋亳褄寊誷尌蔰崷嵃嵫嵁嵋崿崵 E0 嵑嵎嵕崳崺喦崽崱嵙嶐崹嵉頔崼崲崶 F0 嵀巌幄傾洜腵徥徫惉悹憗惢惎惄愔	AO 程除隨性在推學家軒凱對預影默影 BO 辦親凱查廉條德僧懷德區優隻頒悉探 CO 從價金城突准勢刺劇對嗎啡途喀唷噴 DO 嗝酚噴噴噴桑嗒唉嗒嚓嘔嗖嗈嘭嗍嗙 EO 喀圖塓塨塤塏贂增熘塕塎塝塙塥塛堽 FO 璗塱壼嫇嫄嫋嬓媨媱媵媰媿嫈媻嫆
D940 - D9FF	DD40 - DDFF
40 軍個售俸傑憑惸惼惾惁愃愹偃愐惿愄 50	40 婦嫌嫌娘嫌嫍媹婜濅寘寙尟撻嵱嵣蜧 50 嵘峓嵬嵞嵨嵧嵢巰幏幎幊幍幋廅牖廆 60 廋畜彀徯徭惷慉慊愫慅愶愲愮慆愯熐 70 愩溪酘龡戮戵戤揅掣鞪簎搒搉搠拴 80 90
A0	AO
D. 40 D.FF	DE40 - DEFF
DA40 - DAFF	DE40 - DEFF
40	40 託託懇流滾滴瀋潅溟澡溔溠溱滦滆滒 50 溽滁溞滉溷溰凒瀲쑯淁傀濷滜滘溙浪 60 溎溍馮溡溿溳滐滊溗鄁稐燂煔煒煣煠 70 煁煝嫈煲煸焓煡煂煘楏煋煴煟煐煓 80
40	40 託託惩流滾滴瀋海溟澡溔溠溱溹滆滒 50 溽滁溞滉溷溰凒潋쑪潌傀橤滜滘溙浪 60 溎溍馮溡溿溳滐滊溗鄁稐燀煔煒煣煠 70 煁煝嫈煲煸焓煡煂煘憡壥煰焨煐煓
40	40 純毷毸溛滖滈濇滀凕瓙溔溠溱溁滆滒 50 溽溣溞滉溷溰瀸微滏潌溾橤淎滘溙콿 60 溎濇溤滸溿溳滐滊潻鄁溣燀煔煒煣煠 70 煁煝羮煲煸熁煡煂煘楏壥煰煟煐煓 80 90 A0 煙煍燛騟鞬犌镆犐犎缚獂猻猺獍螥 B0 獉瑄瑊犨螁暽橃琘瘏溙痷痾痼痹痲瘐 C0 藍瓾簑螁暆畷榃痞湷瘶暙綗痼痹痲瘐 00 瘠痍痭痵痽齰皵盠睕睟畻睒睃睚睩睧 E0 睔睙矋矠聢餢碐磰碄磆碅籓櫏儶櫲硱
40	40   《託惡液液滴滴滴滴溪流送溱滨滆哥 50 海滁泾滉溷溰潢微滏澶溾渝溱滘溱漠 60 注潛滉游評演漢漁溪鄉緣燀煔煒煣煤 70

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E040 - E0FF	E440 - E4FF
40 絡營驾觜触洲匪註腳凱詢挑誄詵移餅 50 詴詺谼豋豊豥豤豦貆貄貅賌赨艴惄趌 60 趎趏趍趓趔榔趒跰跠跬跱跮跐跩跣眵 70 跧跲颪跴輆輧輁輀輍輇輈韏蠻漨逿	40
90 A0	AO 超跳绝參銗鈴蜘皺銎銂蛦銇鉽銈結 BO 號銆銌銙銧鉾銇銩銝銋鈭隞隡雿舿靽 CO 靺靼鞃鞀鞂靻鞄鞁勒韎戰頖鮼颴銛餀 DO 魺馝配駃馹馻駁駂馽駇骱髣髧鬾魠魠 EO 釣缸鳱鳲鳭麧僿儓儶僷偸儇僶僾儋缴 FO 僽儊劋劌勯勯噈噂喑嘵噁噊噉噃噘
E140 - E1FF	E540 - E5FF
40 馮劇劇勸勸匰厬嘧嘸嘌嘒暯嘏嚎嘁嘓 50 器嗺嘝嘄飸诓堶塲墐墘墆墁塿塴墋麈 60 墇墒墎塶墂墈墣墔墏耟奫媁嫮媽熮 70 嫚媁嫫嫳嫢嫠婜熫牗嫊嫙嫨嫟孷寠 80 90	40 哮噴噴彈暖彈嘸嘪嘺圓壿墝逧墠埃塩 50 墜達墡壿瘴嫴焿嫷嫶委嫸燉嫧嬁嬇燁 60 姆羅嶼嶗障巆졣蟠嶕嵣暬窽嶚嶞幩熚 70 幠帳縻蠯廞廡彉徲僽憃慹憱憍憢簓 80 90
AO 暗履嶂嶂嵽嶂嵺嶁嵷摧璀嶈嵾嵼嶍 BO 巍嵿懭僕幓廤儖廗廎廜隡蠯瘶廔彄礋 CO 影徹恕慤礟慞倳熞慒慓儯慬豂慴慔慺 DO 愮慥愻慪慡慖戩戧觨搫摍摛摝摴摶摲 EO 摄摽摵摦撦摎撂摞摜塅漨摠摐摿搿摬 FO 規鏈揚摷敳斢暡霱暟鍻朄朢檨榶槉	A0 「惲憓憯僚慄憒僩憡憰慦博歕摮摰擞 B0 撇瘶撗撜撏撋撊撌撣摲撣撱撘隞敼敹 C0 敻斲斳暯暰暤暄暤暪暯樀樆樗槥槸燉 D0 槱橽樠槿槬槢摎樝槾榝槲槮樔槷槧橀 E0 樈槦槻樍築槫樉樄憆樥樏槶樦樇櫖樖 F0 歑殯薀殢殦氁氀託犛潁漐潾澇濆澒
E240 - E2FF	E640 - E6FF
40 榠槎敷楮榱榼博榙榎慪榍榩楈榯愷慆 50 榽榤槔傂槊榚榱榳榓檽悚榞搷榗榐槂 60 楷榥槆歍歍歋殰殟殠毃毄馲滎瀒溛漃 70 漥滸鄕滻漮漉欳濘漚漧漘漻漒濹漊 80	E640 - E6FF  40 渤澉澌漬潏澅潚澖濕潬澉潕潲潒潐潗 50 澔澓濷漀滶漴潽湆澐潓滠潩湹澕潣潷 60 潪黍頭熯熛熰熘燡爈熇熝熥熞熞熡熪 70 熔熧缦犘犚獘獒獞獟潦獢獛獡獚獥 80
40 榠槎敷楮榱榼博榙榎慪榍榩楈榯愷慆 50 榽樣槔傂槊榚懩榳催檽悚榞搷榗榐槂 60 楷榥槆歍歍歋殰殟殠毃毄馲滎瀒溛漃 70 漥滸漷滻漮漉歒濘漚漧漘漻漒濹漊	40 渤澉澌漬滑達濟潤濕澤激湍稍滲潐濃 50 澔澓潝漀澉涨湆湆凜慮禐潩滙澕潣濅 60 潪渿頭熯熛熰熘縪爏焿熝嬹熞焢熡熪 70 熜熧熳犘堲嬜獒獞獟潦獢獛獡獚獥 80
40 榠槎較偖榬楏摶撘榎櫪榍脧梋榯愷惂 50 榽槏槔榹槊榚槏榳悦榪榡榞槙榗榐槂 60 檳榥槆歊歍歋殰殖殠毃毄馲氉瀒痥漃 70 漥滸漷滻漮漉欳濘溫漧漘襂旊濹漊 80 90 A0 漁潛滹滮淬濢漰凗漵滫漇漎滫漅滽 澎海漜浡漟膕澬凚溤惼熐熉熀熅熂 C0 薫塘熆熁熗牄牓犗犕犓鮲獍獑獌瑢递 D0 瑣瑵璯瑧瑮軧齀甃疃寋瘄寏鄕瘕痮瘊 E0 瘔皸瞁睼瞅瞂睮暓暋睾瞃碲穘礗碭碨	40 渤澉漸黃潏澅潚澖濕潬潵潕潲潒漁漢 50 澔複潝漀潄潫潽湆澐潓澴潩湹澕潣潷 60 潪潻頭爣墂熰熘燡爈煵熝嬹熞熞熡熪 70 熜熧熳犘犚獘獘獞獟潦獢獛獡獚獥 80 90 A0 獨璇璉璊璆璁瑽璅璥瑼瑹甈甇畕癚 80 瘞璇璤꺦獱速磎瞵魄磃蠔磉裩쨰磤発 60 硫礦礦啃遗磎镞塊磃矌磉裩쨰磤 60 稱繼積嵙實窳箷篋箾箬篎復箾漲衜緮 60 楈糌糋緷娛緪繈緗繙縟縕緦癁緞緰緮
40 榠槎較楷榱榼槫榙榎儮懶榩倄榯愷惂 50 榽樣槔慷槊榚榱榳榓榪榡糠槙橬棳棌 60 檳櫗楠歇歍歋殰殟殠軗毄馲桊瀒鶂漃 70 漥滸漷滻漮漉欳漙膒漧漘襂漒濹宴 80 90 A0 漶潛滹滮漭漯漰凗漵滫漇漎滫漅滽 撽渪漜滼爮漟溷熕凚傷熇塓熉熀熅熂 C0 薫塘熆熁牄牄牓犗犕犓獸獍獑獌瑢遜 D0 瓊瑵瑲瑧瑮軧齀甃疃寚瘄奱鄕瘕瘍瘊 E0 瘔皸瞁睼瞅瞂睮諬暋睾瞃碲碪碴碭碨 F0 硾碫鍲礪碠碬碢碤禘禊礷棌禕禔楊	40 渤澉漸漬潏澅湳澖潶滭潵潕潲潒潐潗 50 澔澓潝漀漖涨潽湆澐瘜澋潩湹澕瀩漌 60 潪猭覭熯熛熰熘燡爈熇熝嬹熞熞熡熪 70 熜熧熳犘犚獘獘獞獟潦獢獛獡獚獙 80 90 A0 獨璇璉璊璆玻瑽璅璬瑼瑹甈甇畾瘥 癦磍躿瘜瘣瘚瘨瘱皜皝暤鶝甇戵鲦 OO 磷巖積窲實廠箷篋箾箬篎徥葋葓嗧 頁0 稱繼種窲羰웳썚綑網繙粡縕穊糇緰複 F0 種霫羬羰羭翭翫猣罿翦罿聤聧膣膟

G-223 Character Sets

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期間関映 総経経 計務監督 対対結
鴙鴔 <u>麔</u> 緩僟勮 遊火 養 養 養 養 養 養 養 養 養 養 養 養 養 養 養 養 養 養
■氉濌澩 ■燱燨燲 寒璥璯甐 雪間瞶
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F040 - F0FF	F440 - F4FF
40 噴珊璵瓁璾瓂璻瓂瓤鑒癜檘瘷癐痲癗 50 瘡皦皵藍矂瞺磿釂礓礔櫢硻礣礑綫襘	40 · 嚵響壣域巆蠘廮穽忀忁懹搸撄墴撎旟 50 · 蠘曣曤樴榱櫪櫨櫹騝椻櫯瀼澢涻瀻瀴
60 秘寫勞博簠簞簪簝簽簨簢崙簰縛繐樕	60 瀏衡嫩潔養淪霜黴邁瀾燗犧犨獉飊璺
70 繣綫績繟繘夈繞繓羵羳鄇翸瞔臑臒	70 皫皪皼盭瞔矆矏鑋矲礥礣礘碞礚礩
80	80
90	90
AO 鷹種錵寧攀藀歘湬逵壽或與綦檗瞿	AO 禲穮癀穞竷籉籈籊籇籅糮縟繾纁纀
BO 華際前對蘊稿碼漂際商獻蟧壇蟢蟛蟫	BO 揣翻聹臚讌豎鮻膌蘢鐢癍頛蘛蘀整蘄
00 總鎖蟟蟳蟤蟔讗蟓蟭蟘蟣斔薔繠壍蟴	CO 養蘅萦藽蠙鑇蠑蠗蟓蝬襣檽賹觷朣譪
DO 整蝶襖樕襏襌嗼襐襑橌蹢謧謣謳踕謟	DO 距議論警議殿趮躆逖躄轙蟾轗轕轘豎
EO 跨禮誹謾謨恖謷髺謶謮麒謻饕謺繸燚 FO 貕檱繶藬暬賖暓蹜礦臃廰胇蹞囏蹪	EO 達酃鄭醷謔醸醳絹缴鏻鏳鋛鐔嬓鐕鐐
FO 貙貘貗賾贀贂贀蹜蹢蹠蹗睶蹞蹥蹧	FO 續證錢鏵續鏌鐇鐎繳鐒鎫鐉鏸鷃鏿
F140 - F1FF	F540 - F5FF
1140 - 1111	F340 - F3FF
40 蹄蹚蹡踨螚蹔鏕轇轈轋鄨鄛鄻鄾醏馡	40 鎌線鎌端鑿閥閒闎霮霯鞹韄韽韾顠頳
50 酯醯醪鎵鏮鎒鎷蝏鍩婸逍鎎鐭鎞媹繬	50 類類關鍵體語讀撰讀謀聯聚緊緊聯聯
60 差網級鍊鍍鎑鎲鎤鎨鎴鎣瀍闖闦闖隳	60 賄圾騸曭甋髊謣髼贙鬤鰋鰈髊鰑鳆鮗
70 翰鳌繼屬護雕賞戲巖鞬鞮韆鞨輡鳌鞪	70 繁媃鰎鰆魽皺鰉鶟鶙鷤鶌鴢讗鶐鐊
80	80
90	90
AO 業業算糧載業裝裝與頻頻歷證錄轉裝	AO 鵬鶏鶜鶪鸚鶍鵛鵎鵷髇鶌薽鷩髚鵵
BO 緊u與緊發斯胸難點關辨解 <b>發制問題</b>	80 夠裝擠實驗驗潔驗與與能配的動變
CO 魆魆魆鲩鯆鯃鮿鯁鮵鮫鯓鮶鯄鮹鮽鷋	CO 健憤剝劕啭嚽噹孈蝬鯑壋廐橏搲欂槸
DO 转轉燒鶏鴔鵙鵖鵌鴾鵒鵔鷕鵘鵚竇麌 EO 緊實證券數鮖鼪鼩鴤齍鮀僡懩劙勯蟨	DO 機學模選攝機灌涎基準原熵模灌筋積 EO 護確轉碟簐湊컕縷皷顓纋縘纍纍羻瘆
EO 緊電電發起距距跑路際能便燻劃勘壓 FO 啜嚭喔嚧嚪嚬壚壝壛獿嫨燘嬿巃幭	EO 電電響碟數溶標機類顯緩經氣雲遷覆 FO 嬴襄蘘蔬蘟蘣巈蘚速麖蘡洿薽蔹蓠
「〇 "欢酷"。 "国"则"强"。 "国"的	「0 原表與酚漆則明體建將受情與以兩
F240 - F2FF	F640 - F6FF
F240 - F2FF	
40 徿懻攇攐攍攉櫏娮斄废腤曞槠榳埐櫑	40 蝴蝴蝶蠠蠢攀蠫衊襭樍禓禎觺譹諹韼
40 徿慀瘆攐攍攉攊腟觮废腤曞槠櫠懓櫑 50 榼櫋擽櫜桑糵櫏懫樤歠殰氇漑膱滐瀖	40 蝴蝶蝶蠠鐎饕蠫幪襭襩禓槙羳譲軇韼 50 擬譻墬贔趩蹈躌轞鲋鱟酇酄鄛脪鎲謕
40 徿慀瘆攐攍攉攊腟觮废摍曞槠榳懓櫑 50 榼櫋擽櫜桑糵櫏懫樤歠殰氇撋膱滐瀖 60 瀫黋旜瀣瀩應瀤艥瀪擴燷爇爂爅犥摄	40 蝴蝶蝶蠠鐎警蠫幪襭襩禓槙羳踥諹韼 50 擬譻贃贔趩蹈躌轞尌雤酇酄鄥脪鴔鑢 60 鐶鏦鏈鐼鐰鑓鐪鐷鐬鍐鐱闧閺闣氀霺
40 徿懻攇攐攐攉擩攎觻废腤曞楷榳懓櫑 50 榼櫋樂櫜桑糵櫏橮樤歠殰氇撋櫳濼瀖 60 瀫穑瀢溋瀩瀗賡勴緊擴燷蘇燛爅攍摄 70 犤獀犡瓋瓅璷瓃鑍癠矉뺴矄瓁竵礛	40 蝴蝶蝶蠠鐎饕蠫嵰樉襩禓槙觺踥軇籎 50 擬譻脻贔趩躢躌軭鮹爘斵鄷鄥燸嬑線 60 繏緵鋛繢鐰鑓縭鰈싏緵鐱闥闎闛霵霺 70 鞁鋛顤颷飆毈饐鹼賹騽驆駣騇鷘騺
40 徿ز濱攐攐攉攉攎觮废摍曞楷榳懓櫑 50 榼櫋樂櫜桑糵櫏橮樤歠殰氇撋瀧濼瀖 60 瀫瀓瀢瀣繟癔嵏勴鰵爌燷爇燛爅攍摄 70 犤犣犡瓋瓅璷瓃鑍癠矉뺴矘瓁礝礛 80	40 蝴蝴蝶裏鐎饕蠫嵰襭摬禓槙觺蒜鋳躂 50 擬譻贐鸁趯蹈躌轞鲋Д鄞藅鄥燸嬑線 60 緝鏦縺繢緛鑓缡鏁싏緵鐱闧闠鬒蘣霺 70 鞁鲱頻颷飆竳睻餯騹騽驆毑驂鷔鷙 80
40 徿懻攇攐攐攉擩攎觻废摍曞楷榳懓櫑 50 榼櫋纅櫜桑糵櫏懫橼歠殰氇撋櫳滐憘 60 瀫穑瀢溋瀩癔賡勴緊擴燷蘇燛爅攍摄 70 犤犣犡瓋瓅璷瓃鑍癠矉矊矄瓁竵礛 80 90	40 蝴蝴蝶裏鑑饕蠫幪襭襩禓槙觺譲軇躂 50 擬譻贐贔趯蹋躌轞鲋鱟斵酄鄛胇嬑鏮 60 繏鏦鏈鏆鐰鑓緆鐷鐬饄鐱闧慔鷿氀濲 70 鞁鋛頻颷飆鞺햩餯騹騽驆鞉驂鷘騺 80 90
40 徿ز療 攐擴灌播爐 險废摍曞檔 櫠楼福 50 性楊樂囊桑簨櫏懫楊歌噴 追視 截淤 檻 60 激 積 遺 盜 瀬 應 褒 戲 溪 據 燕 熒 邊 擦 摄 70 編 復 獨 張 聚 墨 嬰 齊 曠 職 賺 漢 屬 鑑 80 90 A0	40 蝴蝴蝶裏鑑饕蠫幪襭襩禓槙觺踥軇韼 50 擬譻踕贔趯蹋躌轞鲋鱟斵酄鄥脪嬑線 60 繏鏦踕鐼鐰鑓緆鍱鐬鍐鐱闧慔鷿氀濲 70 鞁銉頻颷飆跑듙餯騹騽驆鞉驂鷘鷙 80 90 A0 驊蘵鬒氎篗鬖橳蝘鰫鰝鳒鵔鰰鰯觡
40 徿ز療療療權應協險废摍曞槠櫠懓福 50 橫掃樂囊桑簨櫏懫崵歠瓄毰覢ជ濼儅 60 瀫液逍瀣瀬應賡鵃緊擴縳爇燛爅撨摄 70 犤獀獳瓋瓅璷瓃鑍癠矉뺴矄瓁竵礛 80 90 A0 碡譽嚝曚ϊ橬穬簳篶篬簬簻糬棸繶 B0 縇縫嬠繷欀繺繲糪縺罋鋻罵羆羷翽翸	40 蝴蝴蝶嬴蠡警蠫幪襭襩襮槙羳踥諹韼 50 擬譻艛贔趪躢躌轞鲥薆酆鄶鄬餙嬑鰇 60 摄線鏈鐼鐛鏈鐪鍱鐰鍐鐱闧鶦鬒霵濲 70 鞁銉顤颷飆跇饐鹼騹騽驆駣骖鷔騺 80 90 A0 驊靝鬒鯸矍錖橳蝘鰫鵧鮧鵔鮹鰯觡 酚鹼鶕鶶鶫蠭糓鵰鷏鸋鷅鷃矟鵳鴮瞗
40 織ز療療療權極強險 施嗎 楷級 楼福 50 權	40 蝴蝴蝶區鐵營製碳減資導換營除鑄筵 50 擬智建員選開廣艦對變節都鄭儲總線 60 頻線建鎮線鏈錫鍱線段線闖関閩政際 70 級轉頻酸視蹤瞳鹼薩關釋學影驚驚 80 90 A0 時職質與愛黎縣螺鈴端線線紛紛絡 紡鹼額鶶熟減級馬鶇蛤飛發時服勢路 60 務島級賽貿易縣縣
40 織ز濱- 滚 - 在 - 在 - 在 - 在 - 在 - 在 - 在 - 在 - 在	40 蝴蝴蝶區鐵營製碳減液場換營該語 50 擬智建員建開廣轄對學鄧都鄭儲總線 60 銀線建鎮銀鏈錫鍱線緩緩隨質質監察 70 鞍線頻颷飆寬瞳鹼裝關學學影驚驚 80 90 A0 時龍質無愛都縣蛆將烏姨納與烏 新始語島縣為製馬烏姆 新始島縣養貿易原烏。 50 90 B0 新始島縣養貿易原 90 90 90 90 90 90 90 90 90 90 90 90 90
40 織ز濱- 滚 - 在 - 在 - 在 - 在 - 在 - 在 - 表 - 在 - 表 - 在 - 表 - 表	40 蝴蝴蝶區鐵營製碳減資得預驗語遊 50 擬智建員建開廣轄對量鄧都鄭儲總線 60 銀線建鎮銀鍋錫螺線緩緩緩關質質監察 70 級轉頻酸視難瞳鹼臟醫學聽際驚 80 90 A0 酶龍質緊愛鄱縣蛆鰫嶌練線斜錫 節論語轉點為製縣縣鹎幾騎縣鷂 60 號鶴號看貿易師氣傷姓憂輕點與緊緊 50 50 50 50 50 50 50 50 50 50
40 織ز濱- 滚 - 在 - 在 - 在 - 在 - 在 - 在 - 在 - 在 - 在	40 辦場獎靐鐎警蠫幪襫襩襮揀羳誴鑄躂 50 擬智建聶趯蹓躌轞傠肈鄧都鄥餙鴔鏮 60 鐶綫銉鐼鐰鍓鐪鍱鐬錽鐱闧慔閠鈱濲 70 鞁鋛顤颷飆翧睻餯騹騽驆鄸驂鷔鷩 80 90 A0 時藏鬒鯸篗鬖橳蝘鰫鰝鳒藙鮹鵢鮥 節齒鶷鯑騺鷋豰騳鷏蛑鐛霙聜點賗鬖朁 D0 鼚蹪籫銊齤袰螷喛辴囋槷嬻孌皥皧쯽 E0 繼縢攞攢欋欈櫢氍襱灖檖灒燨雐뿉獿
40 織ز濱- 滚 - 在 - 在 - 在 - 在 - 在 - 在 - 表 - 在 - 表 - 在 - 表 - 表	40 蝴蝴蝶區鐵營製碳減資得預驗語遊 50 擬智建員建開廣整對量節關鍵 60 銀線建鎮銀鍋錫螺線緩緩隨質質 70 級維頻酸視難瞳線 80 90 A0 時龍質緊愛都縣盟將烏 時能對 節論語轉類為影馬 50 50 50 50 50 50 50 50 50 50 50 50 50
40 織ز濱- 滚 - 在 - 在 - 在 - 在 - 在 - 在 - 表 - 在 - 表 - 在 - 表 - 表	40 蝴蝴蝶區鐵營製碳減資得預驗語遊 50 擬智建員建開廣整對量節關鍵 60 銀線建鎮銀鍋錫螺線緩緩隨質質 70 級維頻酸視難瞳線 80 90 A0 時龍質緊愛都縣盟將烏 時能對 節論語轉類為影馬 50 50 50 50 50 50 50 50 50 50 50 50 50
40 織ز療療 養養 整整 整 整 整 整 整 整 整 整 整 整 整 整 整 整 整 整	40 蝴蝴蝶嬴鐵警蠫幪襕襩襮槙羳諘鶷韼 50 擬響建聶趩蹈躌轞鲥灐鄞讏鄥餙嬑鏮 60 頻綠鏈鏡綠鏈縭鍱線娛鐱曥闎闣髸濲 70 執緈頻颷飆竳슡鹼騹騽鞸鞉驂鷔鷙 80 90 A0 蔣職實緊矍鬖縣螅鰫縞鮧敍鮹瘍絡 節齒鶷鶫鶷鵡殼鵙鷏螐瓎鷃鬅鶰鷄鶰 50 寶鼬寶鮁齤鷍亹嚘辴嚽奱嬻奱噻尀 60 擦擠擴볓櫊檔塘氍飛灖馊灒爞爠墍禐 60 增遷珊瓗癭峫蹫碖椄穱籗攑豩籡籚
40 織ز療療 (	40 蝴蝴蝶嬴鐵警蠫幪襕襩襮槙羳踥軇韼 50 擬智建員選蹈躌轞鲋灤酇鄶鄥餙嬑縁 60 頻級鏈鏡級鏈鐪鍱線娛鐱闧闅闏毲微 70 鞁鋛顤颷飆嬎睻鹼灩騽驆鞉驂鷩覧 80 90 A0 廢職鬒緊矍鬖樤蝘輍鵍鮧鮼鮹縣 新鹼髇鶶鷍鵡毃鵙鷏蛅鶫鮼鬅鵳銵鰞 60 充 10 養鼬寶鮁齤鷍亹嚘辴囋奱嬻奱熘 60 攤壞攞潢欕ভ噊碖瘊橬篧攑孶籛籚 60 挥壞攞潢獿ভ噊碖瘊橬篧攑孶籛籚 60 军獎纑矑羇膗攎蒦廠蘣葝菙蒇蝞瓙蠦
40 織ز濱- 滚	40 蝴蝴蝶區鐵營製礦減襩襮槙羳踥鑄筵 50 擬智建員選蹈쀍轞傠灐鄧都鄭儲嬑鏮 60 頻線鏈鏡鏡鏡鍼鍼線緩緩緩闖関閩藍微 70 執線轉頻颷飆翧睻饖灩騽驆毑驂鷔覧 80 90 A0 膵臟鬒鯸矍鬖橳蝘鰫鵍鯟쉟鮹鯣鮥 節鹼鶷鶶鶷鷃鷃鶃螐蛻鷃鶰餘ങ醫及 36 跨額數數數數 50 養腹質鮁份募亹嚘辴囋奱嬻툧樫シ F0 增遷環墻獿峫灀啨椈槢籗攑貕錗籚 F740 - F7FF 40 猩鱉纑曥羇臛뉂蘴廠蘳蘜墏蒇蠬埲謯 50 雙镫襱麲覾皪蘙疈鐼簥鞜艓贖踼蹮殟
40 織ز濱- 滚	40 蝴蝴蝶區鐵營製礦減襩襮噴彎휹鑄遊 50 擬智建員選蹈廣轞樹變鄧都鄭儲鏈線 60 銀線建鎮綠鏈鑄鍱線段線闖関閩政索 70 驗轉頻颷飆颬睻鹼騹騽驆毑驂鷔覧 80 90 A0 膵龍鬒鯸矍鬖橳蝘輍鵍銇鵔鮹 節論鶷鶶鶈級駅縣縣縣競鷃縣 60 強護獨被機構機能和潛模變變巕險 50 攤據擴潰惺檔檔機能和潛模淺邊뿉型 F740 - F7FF 40 灌鹽環域製經路驅瓊審路檢續 50 雙醬滿賴劉樂露驅瓊籌路遊遊邁 50 樂速隨質輻樂節蘋端緩鑒經濟
40 織ز濱- 滚	40 辦場埃區 新場 50 談學 50 談學 50 談學 50 談學 50 談學 50 數華 50 數華 50 數 50 br>50 數 50 50 50 50 50 50 50 50
40 織ز療 攐 擅 擅	40 蝴蝴蝶嬴鐵警蠫幪襕襩襮揀羳誴讅躂 50 擬響建聶趯蹈躌轞鲥薆酆鄶簓餙譩 60 頻綠鏈鐼繉鏈縭鐷線鍐鐱闧闅鬒霵濲 70 執銉劕颷飆跇햩鹼騹騽驆鞉驂鷘鷙 80 90 A0 聯職鬒鰀錽鬖橳蝘輍鵙鮧鮻鮹鰯觡 B0 癫幮鶶鶶鶨鵡騢鵙鷏鸋鷃鬅鶰鷃 B0 寶號響號傷髮囆嚈囋槷嬻槷孂幓 E0 攤擴擸撌欋儶櫢毷襱灖脧灒燺湰뿉駏 F740 - F7FF 40 蜜鰈縇謯羇臞瓐蘴篜蘣蕣墓蒇蠬嬦甅 50 變贂湽贕覾鳂鐴瞲穬쯈篧潷簭薉嬂墧薖 50 數雅 數獨賴網頸寶螦鞯趾
40 織ز療 摄 撞 擅 擅	40 蝴蝴蝶嬴鐵警蠫幪襕襩襮揀羳誴讅躂 50 擬響建聶趯蹈躌轞鲥薆酆龤鮷럞譩 60 頻綠鏈鐼繉鏈縭鐷線鍐鹼闧贒鬒霵濲 70 執銉頻颷飆跇햩鹼隓騽驆鞉驂鷘騺 80 90 A0 聯職鬒鰀錽錖樤蝘輍鵧鮧鵔鮹鰯觡 B0 癫幮鶷鶫鵡糓鵙鷏鸋鷅鷃鶰鶰翳 B0 難擴續數據 B0 難擴續數據 E0 攤撥攢欔櫊橵不 E0 攤撥攤攢欔쏂氍飛灖猣灒燺꼍麈獶 F740 - F7FF 40 蜜繁縇謯羇膿謯蘴篜蘣蕣疉蒇蠬嬦甅 医0 樂康隨實輻樂節頻淵緩鑒淨 50 雙醬滿賴劉轐鏴騉飸簥醕橃獭蹑躚 60 樂康隨覽輻縈緊張辮體單翡驏廢 60 樂康隨質輻樂節頻淵緩鑒婷銷幾網 70 數籍輯頗網鷄賽쁗縣體單翡驏廢降 80 90
40 織ز療 攐 擅 擅	40 蝴蝴蝶嬴鐵警戲幪襕襩襮揀羳膝巋醛 50 擬響建聶選蹈躌轞鲥薆酆龤鮷鏈 60 頻線鏈讀錄鏈縭鐷線超鹼闡貿監癥 70 執轉頻颷飆單햩鹼隓騽驆鞉驂鷘鷙 80 90 A0 聯職實驗愛錖樤蝘輍鵧羨鰟鮹鰯 50 育鶷ണ實驗 50 實驗實數 50 實驗 50 實驗 50 實驗 50 實驗 50 實驗 50 實驗 50 實驗 50 實驗 50 實驗 50 實際 50 50 50 50 50 50 50 50 50
40 織ز湊 摄 撞 極	40 蝴蝴蝶蠹蠡譽蠫幪襕襩襮揀羳誴讅躂 50 擬譻艛贔趩蹈躌轞鲥灐酇鄥鬬嬑鎍 級鍵縺謮鐰鏈鍽鐷鐰鍐鯸闧贒鬒鷘濲 70 鞁銉顤颷飆跇햩鹼騹騽驆鞉駼鷔鷙 80 90 A0 聯職鬢鯸髲錖樤蝘輍鵧鮧鮼鮹鰯鮥 10 育鶷鷌鸋鴰鶃鵙鷏鸋鷅鶰鶰鶰豑 10 育鶷鷌豑 10 育 10 沒 10 沒 10 沒 10 沒 10 沒 10 沒 10 沒 10 沒
40 織ز療療療養養養療療療療療療療療養養養養養養養養養養養養養養養養養養養養養養養	40 蝴蝴蝶叢鑑警蠫幪襫襩襮혂羳諘鶷韼 50 擬鍵鏈鏡級鏈鷞쬻鱢鯼፠欗懩襮蜟騚騗鑓 60 鏡縫鏈鏡級鏈鐪鍱鐰ຢ麬闧懻闛籖濲 70 執線轉頻颷飁覧矑饖灩騽驆駣驂鷔覧 80 90 A0 廢繭鶷鶶鶷鷃縣縣ష級縣縣錄錄緣 新鹼鶷鶇緩級縣縣或級縣縣錄緣 新鹼額縣看貿縣鄉鳴磯變聲變變塵 E0 擁護環境權ভ不確營準 F740 - F7FF 40 建獎檔域觀樂廢職不確營準 整數機變數 50 雙臉凝壞網線 50 雙臉凝壞網線 50 雙臉凝壞網線 50 數素釋賴網網 50 數素釋賴網網 50 數素釋賴網 50 數素釋賴網 50 數素釋賴網 50 數素釋賴 50 數數 50 數 50 數數 50 數 50 br>50 50 50 50 50 50 50
40 織ز療 接續撞播 [	40 辦場獎盃鑫警蠫幪襕襩襮揀羳誴諹蘕 50 蘇嬰腱聶趯蹈躌轞鲋薆鄻鄥閕嬑譹 60 摄綠鏈鐼鍊鏈鏞鰀趤鱌驨贒闣鷘滚 70 執緈賴颷飆鼆睻趤鱥騹騽鞸駣驂鷘騺 80 90 A0 聯稿售鶇鶨鵡騢鷏鷾螩鷞鷃鶷鮷鰯 節齒鶷鷈飺鯣躿鷍鵳鯥薒聜黮蟟鵔鮹鰯 50 寶鼬攢櫕欋帯罷灖嬳灒燨爜鐅 F0 瓘瓕環墻瘮噃霘樀藢橬篧瘄籙鑳籚 F740 - F7FF 40 獾糱瀘礹竵噊樀藢橬篧瘄籙蕸 50 鹽攤瀊曥駋皪鏴系 50 鹽攤隵鏂覾鱳糓音 50 鹽攤隵鏂級 50 鹽攤隵 50 鹽攤廠 50 鹽攤廠 50 鹽攤廠 50 鹽攤 又 50 鹽攤廠 50 鹽攤 又 50 鹽攤 又 50 鹽攤 又 50 鹽攤 又 50 鹽攤 又 50 鹽攤 又 50 鹽 與機 50 鹽 50 br>50 50 50 50 50 50 50 50 50
40 織ز療療療養養養療養療養療養療養療養養養養養養養養養養養養養養養養養養養養養養	40 蝴蝴蝶叢鑑警蠫幪襫襩襮혂羳諘鶷韼 50 擬鍵鏈鏡級鏈鷞쬻鱢鯼፠欗懩襮蜟騚騗鑓 60 鏡縫鏈鏡級鏈鐪鍱鐰ຢ麬闧懻闛籖濲 70 執線轉頻颷飁覧矑饖灩騽驆駣驂鷔覧 80 90 A0 廢繭鶷鶶鶷鷃縣縣ష級縣縣錄錄緣 新鹼鶷鶇緩級縣縣或級縣縣錄緣 新鹼額縣看貿縣鄉鳴磯變聲變變塵 E0 擁護環境權ভ不確營準 F740 - F7FF 40 建獎檔域觀樂廢職不確營準 整數機變數 50 雙臉凝壞網線 50 雙臉凝壞網線 50 雙臉凝壞網線 50 數素釋賴網網 50 數素釋賴網網 50 數素釋賴網 50 數素釋賴網 50 數素釋賴網 50 數素釋賴 50 數數 50 數 50 數數 50 數 50 br>50 50 50 50 50 50 50