

NCR 7199 Series Thermal Receipt Station Printer

User Guide



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By NCR Voyix Corporation

Atlanta, Georgia, USA

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Preface

Audience

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

P Note

This document is NCR Voyix proprietary information and is not to be disclosed or reproduced without consent.

Safety Requirements

In order 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, Series i: 2.3 A or 3.125 A, Series ii: 2.5 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, einer Aufnahmeleistung von 100–240 VAC, 1.5/0.8 A und 50/60 Hz, und einer Leistungsabgabe von 24 VDC, Series i: 3.125 A.c sein, Series ii: 2.5 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,系列(一) 输出为:直流 24伏,2.3或3.125安倍;系列(二)输出为:直流 24伏,2.5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,

*警告:在居住环境中,运行此设备可能会造成无线电干扰。

안전주의사항

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한국 업무용(A급 기기) 방송통신기자재

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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.

P 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 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 Voyix immediately.

The NCR Voyix 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 Voyix. 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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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 7199 Series Thermal Receipt Station Printer Service Guide (BCC5-0000-5174)
- NCR 7199 Series Thermal Receipt Station Printer Parts Identification Manual (BCC5-0000-5173)
- NCR 7197 to 7199 Thermal Receipt Station Printer Migration Guide (BCC5-0000-5175)
- NCR 7199 Series i to 7199 Series ii Thermal Receipt Station Printer Migration Guide (BCC5-0000-5672)
- NCR 7199 Series Thermal Receipt Station Printer Programmer's Guide (BCC5-0000-5170)

Table of Contents

Introductio	n	1
General D	escription	1
Technical S	Specifications Comparison	2
Features a	nd Options	
Receipt	station	8
Thermal	print head	11
Ordering F	Paper and Supplies	
Selecting	g thermal receipt paper	12
Other Su	ıpplies	17
What is in	the Box	
Removin	g the packing material	
Repackir	ng the printer	
Choosing	the Mounting Configuration	21
Normal	able top	
Wall mo	unted	
Connecting	g the Cables	24
USB cab	le connection	
Different	types of Y–cable routing method	
RS-232	cable connection (option)	
Ethernet	cable connection (option)	
Checking	or USB Support on the Host Computer	
Host cor	figuration	
Changing	the USB Type setting	
Using the	e Feed button operation	

Setting the USB type to NHPI	
Setting the USB type to ION(EPiC)	
Setting the USB type to PRTR	
Using Offline mode	
Interface Description	
Human interfaces	
Using the Printer	40
Turning on the Printer	
Turning off the Printer	
Loading and Changing the Receipt Printer	
Removing the paper roll	
Loading the paper roll	
Advancing the paper	
Cleaning the Printer	
Cleaning the cabinet	
Cleaning the thermal print head	
Troubleshooting Printer Problems	
Printer Cannot Connect through USB	
LED is Off or Printer Will Not Print	
Green LED is Blinking	
Green LED is On but Printer Cannot Feed Paper or Print	
Amber LED is Blinking	
Red LED is Blinking	
Receipt Printing is Light or Spotty	
Clearing Stuck Cutter Blade	
Stuck Cutter Blade (Top Cover Cannot be Closed)	

Other Serious Problems	
Contacting a Service Representative	
Service Level Troubleshooting	
Diagnostics Overview	
Startup (Level 0) Diagnostics	
Printer Configuration (Level 1)	
Configuring the Printer	73
Software or hardware configuration	74
Installing the USB Virtual COM Port Driver for printer	
Windows POSReady 7	
Windows 8	83
Windows 10	
Verifying the installation	
Windows POSReady 7	
Windows 8	
Windows 10	
Uninstalling the drivers	
Windows POSReady 7	
Windows 8	
Windows 10	
Configuring Serial Port Number Assignments	
Serial port configuration methods	
Automatic (Default)	
Assigning a serial port to the printer	
Communication Interface Modes	
RS–232C Interface settings [Standard Model]	

JSB Interface settings [Standard Model]		
Ethernet Interface settings [Option]		
Save Parameters		
Emulation/Software options		
Receipt synchronization		
Save parameters		
Default Lines per Inch		
Carriage Return usage		
Asian mode		
Set Font Type option		
Set Compress Pitch option		
Set 48 CHARACTER mode		
Set PDF417 MAX COLUMN print		
Set Auto Reset option		
Set Compatibility Top Margin option		
Set Buffered Printing		
Set Legacy LF + CR		
Hardware options		
Set USB type		
Set USB speed		
Set print mode		
Print density		
Power supply		
Set standby mode		
Set power off mode		
Set knife option		

Paper width	
Set paper low detection	
Set color paper option	
Set buzzer tone	
Set power LED control	
Set Bit-Image Max Speed	
Set Paper Type	
Default code page	144
Configuring the Font Size and Logo Settings	
OPOS/JavaPOS Configuration	
Direct Write Configuration	
Printer Configuration Menu	
7199 Series/7169 Configuration Utility	
Runtime (Level 2) Diagnostics	
Printer Status LED error blink pattern	
PC Board connector locations and designations	
Series i	
Driver board	
Series ii	
Fuse location and information	
Series i	
Series ii	
Communication	
Interface	
Sending commands	
Using BASIC to send commands	

RS-232C Interface (Option)	
Print speed and timing	
RS-232C technical specifications	
Setting extra RS-232C options	
Ethernet Interface (Option)	
Protocol	
TCP socket	
UDP socket	
SNMP	
DHCP	
HTTP	
LPR Socket	
TCP socket communication	171
UDP socket communication	
Multiple connection	
Connectors	
Power cable connector	
USB cable connector	
RS–232C communication connector pin assignments	
Ethernet connector	
Cash drawer connector and pin assignments	
Command	
Command Conventions	
Flash Utility Information	
File configurations	
Printer languages cross-reference	

Windows Command Line Firmware Update Utility		
Configuration Network		
Overview		
Display Format of Configuration Setting Page		
Тор раде		
Ethernet Configuration setting page		
Save Configuration message page		
Error Message page		
TCP/IP Setting		
IP setting		
Obtaining IP address automatically		
TCP/UDP setting		
Other Ethernet setting		
SNMP Setting		
SNMP Community setting		
SNMP IP Trap1 setting		
SNMP IP Trap2 setting		
Printer Specifications		
Printing Specifications		
Power Requirements		
Power modes		
Power from host		
Power from external power supply		
Physical and Operating Environment		
Temperature and humidity		
Dimensions and weight		

Re-flashing the Printer Firmware	
Lean Receipt Utility	206
Print Characteristics	
Character Size	
Receipt station	
Print Zones	
Receipt station	
Character Sets	
Thai Code Page Function	
Outline	
Validate Thai Code Page function	
Arabic Font Support	
Contextual Forms	
Word Ligatures	
Reverse the Arabic Strings	
Proportional Font	
Proportional Font Conversion Handling of Arabic	
Limitations	
Horizontal positioning commands	
Invalid command list	
Invalid command (example)	
Invalid command in middle of the line (example)	
Printing layout (over the area)	
SBCS2, SBCS3 Font Support	
Paper End Detection	
Paper Low Detection	

Paper Low Detection Process		04
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Revision Record

lssue	Date	Remarks
A	Mar 2017	First Issue
В	Dec 2017	 Updated the contact information in the "Ordering Thermal Receipt Paper" section. Updated the table in the "Other Supplies" section. Added cable routing options in the "Connecting the Cables" section for power supply cables with a ferrite bead. Added the "Stuck Cutter Blade" section in Chapter 2.
с	Dec 2018	Added notes to the "Stuck Cutter Blade" section in Chapter 2
D	Jul 2019	 Added the 1432-C403-0040 Y-cable Updated the Ordering Paper and Supplies section
Ε	Sep 2019	 Updated the steps on the following topics: Connecting the cables Software or hardware configuration Removed "Limited Energy Source" phrase from the <i>Power Supply</i> safety information Added the "Hazardous Moving Parts" caution
F	Dec 2019	Added a warning for incorrect connection of USB cable
G	Jun 2020	Updated the Selecting Thermal Receipt Papers section
н	May 2021	Removed the "Black mark sensor as factory" option from the list of General Features

Issue	Date	Remarks
I	Aug 2021	 Updated procedure for Stuck Cutter Blade error Added procedure for Stuck Cutter Blade error for when the top cover cannot be closed Updated Troubleshooting tables for LED colors Updated the Printer Status LED error blink pattern Added the blown fuse error Added procedures for setting the font and logo Added a note in the Checking for USB Support on the Host Computer section Added the Receipt Direction note in the Choosing a Location section
J	Jan 2022	Added Koehler Blue4est [®] paper
к	Apr 2022	Updated instructions for resetting the printer
L	Oct 2022	Updated the Radio Frequency Interference Statement for China
м	Feb 2023	Updated programming informationAdded warnings in using and connecting the cash drawer
Ν	May 2023	Converted to Guild template
0	Sep 2023	Added NCR 7199 Series ii information
Р	Jan 2024	Updated screw specifications for wall mount
Q	May 2024	 Updated printer dimensions Updated paper thickness Added code 93 to the list of supported barcodes Added a table to compare 7199 Series i and Series ii specifications Added a radio interference warning to the Preface
R	Jul 2024	 Added "<u>Changing the USB Type setting</u>" on page 33 Added "<u>Printer Cannot Connect through USB</u>" on page 48 Converted to Voyix template

Issue	Date	Remarks
S	Oct 2024	Updated links
т	Jan 2025	Changed Cover Lock for 7199ii to optional in " <u>Technical Specifications</u> <u>Comparison</u> " on page 2

Introduction

General Description



The NCR 7199 Series Thermal Receipt Station Printer delivers high—performance receipt printing in a compact and flexible solution. This printer provides a solution that is designed for any environment that requires thermal receipt printing.

The printer's high—speed thermal printing capability and proven reliability can help reduce transaction time, increasing customer satisfaction, and throughput. It prints crisp text, at a rate of 355 mm (14 inches) per second for Series i and 406.4 mm (16 inches) per second for Series ii, and sharp graphics in 16 levels of grayscale. The printer can be wall mounted, integrated with an NCR RealPOS terminal, or placed on the countertop as a front or top exiting receipt printer. It is flexible enough to meet the customer's changing needs or space constraints.

The printer can be connected to any host computer that uses USB communication interface. The printer is also available with RS–232C or LAN communication interface.

Technical Specifications Comparison

The following table provides a comparison between NCR 7199 Series i and NCR 7199 Series ii printers.

Parameter	NCR 7199 Series i	NCR 7199 Series ii
Speed	355.6 mm (14 in.) per second	406.4 (16 in.) per second
Resolution	203 dpi	
Dimension (L x W x H)	163.5 x 132 x 131 mm (6.44 x 5.20 x 5.16 in.)	
Weight	1.1 kg (2.4 lb)	
Communication Interface	 USB/Power (Default) Serial (Optional) Ethernet (Optional) 	 USB/Power (Default) Serial (Optional, common with Series i) Ethernet (Optional, New)
Cash Drawer	Yes (up to 2)	
Reliability: Mean Cycles Between Failures (MCBF)	60 million lines	
Memory		
Flash	64 megabits (8 megabytes)	128 megabits (16 megabytes)

Parameter	NCR 7199 Series i	NCR 7199 Series ii
SDRAM (User-defined Buffer)/ Logo Buffer	 User-defined Logo Buffer: 256 kilobytes User-defined Character area: 64 kilobytes User-defined Data area: 64 kilobytes Macro area: 2 kilobytes 	
EEPROM	2 kilobits	
Thermal Head		
Thermal Print Head Life	200 km	
Thermal Head Failure Detection	Yes	
Thermal Head Position	Bottom	
Serviceability	No tools are required to replace the thermal head.The standard time is around 15 seconds.	
Cutter		
Cutter Life	2 million cuts (61 µm)	
Full Cut	No	
Partial Cut	Yes	
Media		
Loading	Easy drop	
Paper Thickness	55 to 65 um	48 to 82 um
Paper Width	 Default: 80 mm (+0.5 / -1.2 mm) Optional: 58 mm (+0.0 / -1.0 mm) 	
Paper Diameter	Up to 83 mm (3.27 in.)	
Thermal Layer Coating	Outward	

Parameter	NCR 7199 Series i	NCR 7199 Series ii
Panel		
Power Button	No	
	Note To remove power from the printer, disconnect it from the power source.	
Feed Button	Yes, with a tri–color LED	
	Note Holding the Feed Button while resetting the printer prints out the Configuration Menu.	
Printer Status Indicator		
LED Indicator	Tri–color: Green, Amber, Red	
Ready	Solid Green	
Paper Low	Flashing Green	
Paper Empty	Flashing Amber	
Error or Warning	Flashing Amber or Red	
Power	LED is on	
Printer Configuration		
Software Utility	NCR Configuration Utility Tools	
Offline	Diagnostic Menu	
Fonts, Graphics, Symbologies		
Font	• Font A: 13 x 24	
	• Font B: 10 x 24	
	• Kanji Font A: 24 x 24; 12 x 24	
	• Nanji Pont B: 20 x 24; 10 x 24	

Parameter	NCR 7199 Series i	NCR 7199 Series ii
Characters Sets	 95 Alphanumeric SBCS: CP437, CP850, CP852, CP858, CP860, CP862, CP863, CP864, CP865, CP866, CP874, CP928, CP737, CP1252, CP1256, Katakana, Hungary, Romania, CP855, CP1250, CP1251 DBCS: 932 (Japanese), 936 (Simplified Chinese), 949 (Korean), 950 (Traditional Chinese) Unicode support (UTF-16) 	 95 Alphanumeric SBCS: CP437, CP850, CP852, CP858, CP860, CP862, CP863, CP864, CP865, CP866, CP874, CP928, CP737, CP1252, CP1256, Katakana, Hungary, Romania, CP855, CP1250, CP1251, CP1254, CP1255 DBCS: 932 (Japanese), 936 (Simplified Chinese), 949 (Extended Korean), 950 (Traditional Chinese + Hong Kong Supplementary Character Set [HKSCS]) Unicode support (UTF-16)
Barcode	GS1 DataBar (Omnidirectional, Truncated, Limited, Expanded, Stacked), UPC-A, UPC-E, JAN-13 (EAN), JAN-8 (EAN), Code 39, Code 128, Interleaved 2 of 5, Codabar, Code 93, PDF 417, QR Code	GS1 DataBar (Omnidirectional, Truncated, Limited, Expanded, Stacked), UPC-A, UPC-E, JAN-13 (EAN), JAN-8 (EAN), Code 39, Code 128, Interleaved 2 of 5, Codabar, Code 93, PDF 417, QR Code, Datamatrix, Maxicode, Aztec Code, Composite Symbology
Environmental Requirements		
Operating	5 to 50°C (41 to 122°F), 5% to 90%	
Storage	–10 to 55°C (14 to 131°F), 10% to 90%	
Power Requirements		
Input Power	24VDC -/+5%, 2.3 A or 3.125 A	24VDC -/+5%, 2.5 A
Power Supply	Supports 75W and 60W power supply	Supports 60W power supply

Parameter	NCR 7199 Series i	NCR 7199 Series ii
Mechanical Features		
Mounting	 Horizontal desk mount Vertical desk mount Vertical wall mount (without kit) 	
Cover lock to prevent accidental opening when paper is pulled	No	Optional
Tear Bar	Front	Front and Back
Easy Cutter Jam Clearance	Yes (not required to turn the knob)	
Sensors	 Paper low, paper out, cover open, and jam detection Thermal print head failure detection Knife jam detection 	
Paper Settings		
Backfeed for Paper Saving	No Note The Top Margin is 12 mm.	Yes Note The Top Margin is 4 to 12 mm.
Paper near end setting for printer orientation	Yes, by changing the sensor setting.	Not required
Paper Parameter (Optimized setting for paper type)	No	Yes (Predefined and User-defined)
Driver and Utility	OPOS, JavaPOS™ for Windows and Linux and Windows Printer API, Virtual COM USB, PrintAssistant, 71xx Printer Diagnostics, Lean Receipt, Smart Maintenance Utility	

Parameter	NCR 7199 Series i	NCR 7199 Series ii
Emulation	Yes (TM-T88V)	Yes (TM-T88VII)
		New commands:
		Specify Batch Print
		• Specify the process ID response
		• Draw line
		Draw rectangle
		Select UTF-8 encoding
		 Set print position to the beginning of the print line
		Enable/Disable extended ASB
		• 2D code - Aztec Code
		• 2D code - Maxicode
		2D code - Composite Symbology
		• 2D code - Datamatrix
		Real-time retrieve sensor value
		Paper Type setting
		Buffered Printing
		 Top margin by backfeed
		 Legacy LF + CR

Features and Options

The NCR 7199 Series Thermal Receipt Station Printer comes with the proven features and functionality of the NCR 7197 along with several new features and options that enhance the printer's performance, serviceability, reliability, and versatility.

Receipt station

- Thermal printing
- Resident bar codes
 - ° For Series i and Series ii
 - Code 39
 - Code 93
 - Code 128
 - UPC-A
 - UPC-E
 - JAN-8 (EAN-8)
 - JAN-13 (EAN-13)
 - Interleaved 2 of 5
 - Codabar
 - PDF417
 - GS1 DataBar
 - QR
 - For Series ii only
 - Datamatrix
 - Composite Symbology
 - Aztec
 - Maxicode
- Drop-in paper loading

- Paper Jam Sensor (detecting initial jam of paper at platen roller)
- Paper exhaust indicator
- Support Vertical/ Wall mount (90 Deg)
- Paper low sensing: adjustable through firmware for 40ft, 30ft, 20ft, and 10ft
- Resident character language Code Pages
 - ° For Series i and Series ii
 - PC Code Page 437 (US English)
 - PC Code Page 737 (DOS Greek)
 - PC Code Page 850 (Multilingual)
 - PC Code Page 852 (Slavic)
 - PC Code Page 855 (IBM Cyrillic)
 - PC Code Page 858 (with Euro symbol)
 - PC Code Page 860 (DOS 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 (Enhanced Thai)
 - PC Code Page 932 (Windows-31J)
 - PC Code Page 936 (Simplified Chinese)
 - PC Code Page 949 (Korean)
 - PC Code Page 950 (Traditional Chinese)
 - PC Code Page 1250 (Windows Eastern European)
 - PC Code Page 1251 (Windows Cyrillic)
 - PC Code Page 1252 (Windows Latin #1)
 - PC Code Page 1256 (Arabic) Contextual
 - PC Code Page 1256 (Arabic) Fixed

- PC Code Page Hungary
- PC Code Page Katakana
- PC Code Page Romania
- Unicode support (UTF-16)
- For Series ii only
 - PC Code Page 1254 (Windows Turkish)
 - PC Code Page 1255 (Windows Hebrew)
 - PC Code Page 950 (HKSCS)
- Auto knife cut
- Cover open sensors
- Industry standard USB communication interface
- Variant of Print Mode: High speed print mode, High quality print mode and Eco print mode
- Thermal Head Failure Detection
- One cash drawer connector (supports 2 cash drawers)
- Top and front exit receipt
- Multi-color LED
- Watermark and grayscale support

P Note

The NCR 7199 Series Thermal Receipt Station Printer does not use a paper journal.

Thermal print head

The NCR 7199 Series Thermal Receipt Station 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 and no regularly scheduled maintenance is required if the recommended paper is used. For more information, refer to **"Ordering Paper and Supplies"** on the next page.

If you notice spotty or light print, the thermal head could be dirty. Wipe the head with cotton swabs and rubbing alcohol. If spotty or light printing problems persist after the thermal print head has been cleaned, the print head could be damaged beyond repair.

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.
Ordering Paper and Supplies

Selecting thermal receipt paper

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 of the paper has a 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.

Requirement	Specification
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.
Product essential functionality and features that should be included in the customer's specification for receipt paper	 The following must be observed: The coating should not cause undue wear to the print head. The surface area of the paper should be smooth. All edges must be correctly cut and must be smooth. 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. 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. The paper must allow for crisp lines to be produced when the paper is heated. The paper should be suitably packed and protected to avoid damage during transport.
Chemical in Paper	The chemical elements of the paper, coating, and inks shall not exceed the following amount: • Titanium dioxide, TiO ₂ : 0 ppm (max) • Silicon dioxide, SiO ₂ : 0 ppm (max) • Mullite, 3Al ₂ O ₃ 2SiO ₂ : 0 ppm (max) • Sodium, Na: 1050 ppm (max) • Chloride, Cl: 500 ppm (max) • Potassium, K: 250 ppm (max) • Suflate, SO ₄ : 800 ppm (max) • Ammonium, NH ₄ : 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.

Requirement	Specification
Roll Wid t h	• 80 mm (+0.5 / -1.2mm)
	• 58 mm (+0 / -1.0 mm)
Roll Diameter	Maximum of 83 mm
Roll Length	Approximately 88 m
Core Inner Diameter	• Series i: 8 to 15 mm, 12.7 mm (Typical). See note below this table.
	• Series ii: 8 to 21 mm, 12.7 mm (Typical). See note below this table.
Core Outer Diameter	15 to 25 mm, 18 mm (Typical). See note below this table.
Core Width	Maximum of 79 mm
Core Material	Plastic or Chipboard
Paper weight	• Series i: 44 to 70 gsm
	Series ii: 42 to 75 gsm
Paper caliper thickness	• Series i: 44 to 70 um
	Series ii: 48 to 82 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 ² at 1.1 OD
	Note For more details, refer to the <i>Dynamic Sensitivity Range</i> graph below.
Brightness	Less than 85%

P Note

Coreless paper is not supported due to the tendency of the paper roll to collapse and increase the load placed on the printer as it attempts to feed the oblong roll.



🛕 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 7199 Series printer.

Paper Manufacturer	Media Model	Notes
Koehler	Blue4est [®]	For more information, refer to
	KT 90 FA	https://www.koehlerpaper.com/en/products/Thermal-paper/
	KT 48 PF	

Other Supplies

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

ltem	Туре	Alias Number
External Power Supply (Series i)	75W External Power Supply, No Power Cord	7167-K510
	75W External Power Supply with US Power Cord	7167-K511
	60W External Power Supply, No Power Cord	7197-K510
External Power Supply for (Series ii)	60W External Power Supply, No Power Cord	7197-K510
AC Cables for External Power Supply	US Power Cord	1416-C325-0030
	UK Power Cord	1416-C321-0030
	SEV Power Cord	1416-C320-0030
	Australian Power Cord	1416-C322-0030
	International Power Cord	1416-C323-0030
	Argentina Power Cord	1416-C009-0018
Non-Powered RS-232 (Serial) Interface	1.0 meter	1416-C879-0010
	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 Serial	1.0 meter	1432-C092-0010
Contiguration	4.0 meters	1432-C092-0040

ltem	Туре	Alias Number
Cash Drawer Cable	1.8 meters	1639-K044
		1639-КО43
		1639-K213
	0.6 meter (Y-Cable)	1416-C372-0006
		1639-K045
Narrow 58mm Width Paper Guide	Release 1.0	7199-K058
Ethernet Cable	8–wire	1432-C046-0030
Integrated Terminal Filler Plate	-	7607-K324
Rear Cable Cover	-	7199-K200
Under Counter Mounting Bracket	-	7199-K100
Serial Interface Module	-	7199-КОО1
Ethernet Interface Module (Series i)	-	7199-K002
Ethernet Interface Module (Series ii)	-	7199-K004

What is in the Box

The following items are packed in the shipping box:

• Printer and paper starter roll enclosed in a plastic bag and foam pack

These items may be ordered as options from NCR:

- Communication cable (from host computer to printer)
- Cash drawer cables

These cables may be ordered from other equipment suppliers. For more information, refer to "Ordering Paper and Supplies" on page 12.

- DC Power cable
- External Power Supply
- USB plus Power cables

Removing the packing material

To remove the packing material, follow these steps:

- 1. Remove the printer from the foam pack.
- 2. Remove the plastic bag from the printer.
- 3. Save all packing materials for future storing, moving, or shipping of the printer.



CCP-83537

Repacking the printer

To repack the printer, follow these steps:

- 1. Place the printer in the plastic bag and in the foam pack.
- 2. Place the packed printer in the box.
- 3. Secure the box with packing tape.

Choosing the Mounting Configuration

Important

For proper Paper Low detection, set the Receipt Direction option to match the physical orientation of the printer with either Front Exit (default) or Top Exit. If using OPOS/JavaPOS, there is a Profile setting that controls this configuration. If not using OPOS/JavaPOS, configure it at the printer firmware.

Normal table top

The NCR 7199 Series Thermal Receipt Station 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. The following illustration shows the actual dimensions of the printer, but leave several inches around the printer for connecting and accessing the cables.



Wall mounted

The NCR 7199 Series Thermal Receipt Station Printer may be mounted on a vertical wall. Make sure there is enough room to open the receipt cover to change the paper. Mount the screws on the wall using the following recommended mount dimensions. Use a #8 wood screw (Ø 3.5mm flat head metallic tapping screw or equivalent), which is to be securely fastened to a wall stud, or use a "Molly" fastener (not provided).



Print the following template to use as a guide for the wall screw position.



Connecting the Cables

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

- Power supply cable supplying power from the power supply
- Communication cable (USB) 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.

A 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.

P Note

For the RS–232 communication cable, ensure to screw the cable to the 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.



The connector is a standard RJ12 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 external 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.

USB cable connection







- Cash Drawer Port

USB Cable

Warning:

Do not connect the USB Cable to the Cash Drawer Port. Incorrect connection may cause the fuse to blow, resulting in a damaged printer. The cash drawer connectors may also be damaged, preventing the proper function of the cash drawer.

CCP-78499

Different types of Y-cable routing method



CCP-83542

BOTTOM OF PRINTER

The following cable part numbers can be used for the Y-cable:

- 1432-C086-0010
- 1432-C402-0040

RS-232 cable connection (option) 8 **Cash Drawer Connector** n Power Cable **RS232 Serial Interface** Module (Option) Communication Connector **BOTTOM OF PRINTER**

CCP-71023

P Note

If the RS-232 serial cable has a ferrite bead on one side, connect the side without the ferrite bead to the printer.



CCP-74101

P Note

If the power supply cable has a ferrite bead, route the cable under the communication connector and cash drawer cable, and then to the cable restraints. Do the same for the Ethernet Cable Connection.



CCP-74102

Ethernet cable connection (option)



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 POS Ready 2009 operating system natively supports plug-and-play USB with a built-in driver.

🗗 Note

USB drivers are only required if using Virtual COM Port (EPiC) over USB. If using NHPI, the Operating System in-box drivers for USB HID are used. For Linux, the Virtual COM Port (EPiC) is embedded in the Kernel. Some Linux distributions require additional USB HID libraries.

The USB drivers can be downloaded from the NCR Voyix website: https://www5.ncr.com/support/support_drivers_patches.asp.

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.
- 2. Click the 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.

Changing the USB Type setting

NCR 7199 printers has the following default factory settings for the USB Type:

- NCR 7199 Series i ION(Epic) mode
- NCR 7199 Series ii NHPI mode

P Note

NHPI is the mode recommended by NCR Voyix moving forward.

Important

The mode selected on the printer must match the mode configured in the POS application's OPOS/JavaPOS printer profile.

To change the printer USB Type setting to match with the software interface configuration, refer to the following options:

- "Using the Feed button operation" on the next page (for Series ii only)
- "Using Offline mode" on page 36

Using the Feed button operation

Opening the printer cover, and then continuously pressing the feed button for 5 or 15 seconds trigger the printer application to process USB Type setting change. This process repeats if the feed button is released and then pressed again while the printer cover is still open. Closing the printer cover triggers the printer application to print the diagnostic form and reboot the printer to apply the new USB Type setting.

P Note

These procedures are applicable to NCR 7199 Series ii only.

Setting the USB type to NHPI

If the current USB Type setting is PRTR or ION(EPiC), follow these steps to change it to NHPI:

- 1. Open the receipt printer cover.
- 2. Press and hold the feed button for 5 seconds. The printer emits one beep to indicate that the setting is changed to NHPI.
- 3. Close the printer cover. The printer prints the configuration form.
- 4. Under the Hardware section of the configuration form, verify that the USB Type is successfully set to NHPI.

Setting the USB type to ION(EPiC)

If the current USB Type setting is NHPI, follow these steps to change it to ION(EPiC):

- 1. Open the receipt printer cover.
- 2. Press and hold the feed button for 5 seconds. The printer emits two beeps to indicate that the setting is changed to ION(EPiC).
- 3. Close the printer cover. The printer prints the configuration form.
- 4. Under the Hardware section of the configuration form, verify that the USB Type is successfully set to ION(EPiC).

Setting the USB type to PRTR

If the current USB Type setting is NHPI or ION(Epic), follow these steps to change it to PRTR:

- 1. Open the receipt printer cover.
- 2. Press and hold the feed button for 5 seconds. When the printer emits two beeps, do not release the feed button.
- 3. Continue to press and hold the feed button for another 10 seconds until the printer emits three beeps. This indicates that the setting is changed to PRTR.
- 4. Close the printer cover. The printer prints the configuration form.
- 5. Under the Hardware section of the configuration form, verify that the USB Type is successfully set to PRTR.

Using Offline mode

Note

This procedure is applicable to both NCR 7199 Series i and Series ii printers.

To change the printer USB Type setting, follow these steps:

- 1. Disconnect the power cable from the rear of the printer.
- 2. While pressing down the paper feed button, reconnect the power cable. The printer beeps and prints the Main Menu.

```
*** Offline Printer Configuration ***
 This menu allows you to set general
 printer parameters by Form Feed Key. The
 Short Click: It's mainly used to enter
              code of each Sub Menu. Press
              and release a key quickly
 Long Press : It's mainly used to
              determine settings changed.
              Hold down a key for 1 second
 ****** Main Menu *******
                               -> No Click
 EXIT
 Print Printer Config
                               -> 1 Click
                               -> 2 Clicks
 Emulation
                               -> 3 Clicks
 Hardware
 Reset to Default Setting
                               -> 4 Clicks
 Printer Maintenance Info
                               -> 5 Clicks
 Interface (Ethernet or RS232) -> 6 Clicks
*Enter code, and hold down a Key for 1 sec
```

3. Press the paper feed button three times, and then hold the button down for at least one second to validate. The printer prints the Hardware submenu.

For Series i:

********** HARDWARE *****	****
USB Type	-> 1 Click
USB Speed	-> 2 Clicks
Print Mode	-> 3 Clicks
Print Density	-> 4 Clicks
Power Supply	-> 5 Clicks
Standby Mode	-> 6 Clicks
Power Off Mode	-> 7 Clicks
Knife	-> 8 Clicks
Paper Width	-> 9 Clicks
Paper Low Detection	-> 10 Clicks
Color Paper	-> 11 Clicks
Buzzer Tone	-> 12 Clicks
LED	-> 13 Clicks
Receipt Direction	-> 14 Clicks
BitImage Max Speed	-> 15 Clicks
* Enter code, and hold dow	n a Key for 1 sec

For Series ii:

********** HARDWARE *****	****
USB Type	-> 1 Click
USB Speed	-> 2 Clicks
Print Mode	-> 3 Clicks
Print Density	-> 4 Clicks
Power Supply	-> 5 Clicks
Standby Mode	-> 6 Clicks
Power Off Mode	-> 7 Clicks
Knife	-> 8 Clicks
Paper Width	-> 9 Clicks
Paper Low Detection	-> 10 Clicks
Color Paper	-> 11 Clicks
Buzzer Tone	-> 12 Clicks
LED	-> 13 Clicks
BitImage Max Speed	-> 14 Clicks
Paper Type	-> 15 Clicks
* Enter code, and hold dow	n a Key for 1 sec

4. Press the paper feed button once, and then hold the button down for at least one second to validate. The printer prints the USB Type options.

```
** USB TYPE
ION (EpiC) -> 1 Click
NonION (NHPI)* -> 2 Clicks
NonION (PRTR) -> 3 Clicks
*Enter code, and hold down a Key for 1 sec
```

- 5. Press the paper feed button according to the number of clicks presented in the USB Type options, and then hold the button down for at least one second to validate. The printer prints the configuration form.
- 6. Under the Hardware section of the configuration form, verify that the USB Type is successfully set to the correct option.
- 7. Press and hold the feed button to confirm and access the offline diagnostic menu.
- 8. In the diagnostic menu, press and hold the feed button to exit and switch to printer online mode.

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 "Ordering Paper and Supplies" on page 12.

Using the Printer



Turning on the Printer

 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 start-up cycle, it is ready to receive data.

R Note

If the LED blinks, or the host computer indicates that there is a problem, refer to "Troubleshooting Printer Problems" on page 47.

- 2. (Optional) Perform a Configuration check.
 - a. Do any of the following:
 - Reset the printer while pressing the Paper Feed button.
 - Open the receipt top cover, press and hold the Paper Feed button, and then close the top cover while pressing the Paper Feed button.
 - b. Release the Paper Feed button when printing begins.

Turning off the Printer

The printer receives power when the power supply is on even if the printer is offline. To completely remove power, disconnect 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 occur.

Printer LED	Definition
Green LED blinking (4 Blinks, Pause 5 seconds)	The paper is low. There are approximately 4.5 ± 3 meters , (15 ±10 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 blinking (4 Blinks, Pause 5 seconds)	The paper is out. Change the paper immediately or data may be lost.

A 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.

Important

For proper Paper Low detection, set the Receipt Direction option to match the physical orientation of the printer with either Front Exit (default) or Top Exit. If using OPOS/JavaPOS, there is a Profile setting that controls this configuration. If not using OPOS/JavaPOS, configure it at the printer firmware.

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:

- 1. Tear off the end of the new roll so that the edge is loose.
- 2. Place the new roll in the bin with a little extra paper extending over the front. 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.



3. Close the receipt cover.



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



Advancing the paper

To advance the paper, follow these steps:

- 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 inches) of paper.
- 2. Tear off the excess paper against the tear-off blade.

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 NCR 7199 Series Thermal Receipt Station Printer does not require a scheduled maintenance. Clean the cabinet as needed to remove dust and fingerprints. 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

A 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 "Troubleshooting Printer Problems" on the next page.

Troubleshooting Printer Problems

The NCR 7199 Series Thermal Receipt Station Printer is a simple, generally trouble-free printer, but from time to time, minor problems may occur. The multi-colored LED lights provide associates 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 what the problem is.

This section describes some problems that may be encountered while using the printer. Some can be easily fixed, while others require contacting a service representative. To contact a service representative, refer to "<u>Contacting a Service Representative</u>" on page 68.
Printer Cannot Connect through USB

Cause	What to Do	Where to Go
USB Type setting may be mismatched with the software interface configuration	 Print the configuration form and check the USB Type setting under the Hardware section. USB Type: NHPI — indicates that the printer is configured for USB HID Interface. USB Type: EPiC — indicates that the printer is configured for Virtual COM Port. To validate the assigned Port number, run Edgeport.exe. If needed, change the USB Type setting. 	Refer to " <u>Changing the</u> <u>USB Type setting</u> " on page 33.
Virtual COM Port driver is not installed	Install the Virtual COM Port driver, and then verify if it was properly installed.	Refer to the following sections: " <u>Installing the</u> <u>USB Virtual COM</u> <u>Port Driver for</u> <u>printer</u> " on page 78 " <u>Verifying the</u> <u>installation</u> " on page 93

LED is Off or Printer Will Not Print

Cause	What to Do	Where to Go
Cables may not be connected properly	Check all cable connections. Check that the host computer and power supply are both on.	Refer to " <u>Connecting the</u> <u>Cables</u> " on page 24.
	Note The power supply is turned on by connecting it to an outlet.	
Power supply may be defective	If the power supply is connected but does not turn on, order a new power supply.	Refer to " <u>Ordering Paper and</u> <u>Supplies</u> " on page 12.

Green LED is Blinking

Bezel LED	Cause	What to Do	Where to Go
1 Blink, Pause 5 seconds	Warning for PCB	Contact a service representative if the warning continues.	Refer to " <u>Contacting a</u> <u>Service</u> <u>Representative</u> " on page 68.
4 Blinks, Pause 5 seconds	Receipt paper is low	There are about 4.5 ± 3 meters , (15 ±10 feet) of paper left. Change the paper soon to avoid running out of paper part way through a transaction.	Refer to " <u>Loading</u> and Changing the <u>Receipt Printer</u> " on page 42.
		Important For proper Paper Low detection, set the Receipt Direction option to match the physical orientation of the printer with either Front Exit (default) or Top Exit. If using OPOS/JavaPOS, there is a Profile setting that controls this configuration. If not using OPOS/JavaPOS, configure it at the printer firmware.	

Green LED is On but Printer Cannot Feed Paper or Print

Bezel LED	Cause	What to Do	Where to Go		
Solid	Blown Fuse	Contact a service representative.	Refer to		
		Note When the fuse is blown, the paper does not advance when pressing the Paper Feed button and a black line appears on the paper when attempting to print. The Amber LED also starts blinking (refer to " <u>Amber LED is</u> <u>Blinking</u> " on the next page).	Service Representative" on page 68.		

Amber LED is Blinking

Bezel LED	Cause	What to Do	Where to Go
2 Blinks, Pause 5 seconds	Thermal print head temperature is too hot	 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. If the temperature of the print head is too hot, adjust the room temperature or move the printer to a cooler location. If the print head is overheating because of printing high density graphics print density. 	Refer to "Physical and Operating Environment" on page 203 for the recommended temperature range for operating the printer.
		Contact a service representative if the printer continues to overheat.	Refer to " <u>Contacting a</u> <u>Service</u> <u>Representative</u> " on page 68.
3 Blink, Pause 5 seconds	Receipt cover is open	Close the cover. The printer will not operate with the cover open.	
4 Blinks, Pause 5 seconds	Receipt paper is out	Change the paper now. Do not run a transaction without paper as the data may be lost.	Refer to "Loading and Changing the Receipt Printer" on page 42.
5 Blinks, Pause 5 seconds	Paper is jammed	Open the receipt cover and clear any jammed paper. Tear off any excess paper against the tear–off blade.	Refer to "Loading and Changing the Receipt Printer" on page 42.

Bezel LED	Cause	What to Do	Where to Go
6 Blinks, Pause 5 seconds	Cutter blade failure	Open the receipt cover and check the cutter blade. Clear any jammed paper. Tear off any excess paper against the tear—off blade.	Refer to the following: • " <u>Clearing</u> <u>Stuck Cutter</u> <u>Blade</u> " on page 56 • " <u>Stuck Cutter</u> <u>Blade (Top</u> <u>Cover Cannot</u> <u>be Closed)</u> " on page 61
		Contact a service representative if the above action does not resolve the problem.	Refer to " <u>Contacting a</u> <u>Service</u> <u>Representative</u> " on page 68.
	Blown fuse	When the fuse is blown, the paper does not advance when pressing the Paper Feed button and a black line appears on the paper when attempting to print. Contact a service representative.	Refer to " <u>Contacting a</u> <u>Service</u> <u>Representative</u> " on page 68.
N/A	AC or DC supply voltage is out of range	If paper is not low and no conditions indicate that the thermal print head is too hot, then it is likely that the power supply voltage is out of range. Contact a service representative	Refer to " <u>Contacting a</u> <u>Service</u> <u>Representative</u> " on page 68.

Red LED is Blinking

Bezel LED	Cause	What to Do	Where to Go
1 Blink, Pause 5 seconds	Error in Memory	Contact a service representative.	Refer to " <u>Contacting a Service</u> <u>Representative</u> " on page 68.
2 Blinks, Pause 5 seconds	Thermal print head temperature is abnormal	The print head temperature may not be able to reach the required range or the print head may be disconnected. Contact a service representative.	Refer to" <u>Physical and</u> <u>Operating Environment</u> " on page 203 for the recommended temperature range for operating the printer. Refer to " <u>Contacting a Service</u> <u>Representative</u> " on page 68.

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.	Refer to " <u>Cleaning the Printer</u> " on page 46.
	Warning Do not use alcohol to clean other parts of the printer. Damage will occur.	
	Contact a service representative if this does not resolve the problem.	Refer to " <u>Contacting a Service</u> <u>Representative</u> " on page 68.

P 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 be of much benefit. For information on the recommended paper, refer to "<u>Selecting</u> thermal receipt paper" on page 12. For information on power consumption, refer to "<u>Power Requirements</u>" on page 201.

Clearing Stuck Cutter Blade

To view a tutorial video for clearing the **Stuck Cutter Blade** error, go to:

https://onlinehelp.ncrvoyix.com/Retail/Printers/7199/HTML/Topics/Troubleshootin g/StuckCutterBlade.htm

F Note

Depending on the firmware version of the printer, leaving the printer ON while performing the steps below allows the printer to automatically retract the cutter blade after the operator closes the top cover and the front cover.

If the cutter blade is stuck in a fully extended position and the top cover cannot be opened, follow these steps to fix the issue:

- 1. Open the front cover.
 - a. Unlatch the front cover by pulling on the holes located on both sides of the front cover. This will take some force.



b. Flip to fully open the front cover.



CCP-74104

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



CCP-74105

3. Remove the jammed paper and ensure that there is no paper at the exit area.



4. Close the top cover (A) and then the front cover (B).



- For Series i:
 - For printers with firmware version V99.16 or higher, when the printer detects that both covers are closed, the moving blade automatically retracts the exposed blade back to the cutter module.
 - For printers with firmware version V99.15 or lower, after closing the front cover, turn the printer OFF and then ON again to retract the exposed blade back to the cutter module.
- For Series ii:
 - For printers with any firmware version, 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 either the front cover or the top cover is not properly closed.

5. Open the top cover, pull the end of the paper out so a little extra paper is extending over the front, and then close the top cover.



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



- 7. Print a test receipt or a printer diagnostics form.
 - a. Open the top cover.
 - b. While pressing down the paper feed button, close the top cover. The printer beeps and prints the diagnostics form.

P Note

Paper may jam at first. In this case, clear the jam and try printing again.

Stuck Cutter Blade (Top Cover Cannot be Closed)



CCP-80930

Note

Depending on the firmware version of the printer, leaving the printer ON while performing the steps below allows the printer to automatically retract the cutter blade after the operator closes the top cover and the front cover.

If the cutter blade is stuck in a fully extended position and the top cover cannot be closed, follow these steps to fix the issue:

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



CCP-80933

- 2. Open the front cover.
 - a. Unlatch the front cover by pulling on the holes located on both sides of the front cover. This will take some force.



CCP-80931

b. Flip to fully open the front cover.



3. Remove the jammed paper and ensure that there is no paper at the exit area.



4. Close the top cover (A) and then the front cover (B).



CCP-80935

- For Series i:
 - For printers with firmware version V99.16 or higher, when the printer detects that both covers are closed, the moving blade automatically retracts the exposed blade back to the cutter module.
 - For printers with firmware version V99.15 or lower, after closing the front cover, turn the printer OFF and then ON again to retract the exposed blade back to the cutter module.
- For Series ii:
 - For printers with any firmware version, 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 either the front cover or the top cover is not properly closed.

5. Open the top cover, pull the end of the paper out so a little extra paper is extending over the front, and then close the top cover.



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



- 7. Print a test receipt or a printer diagnostics form.
 - a. Open the top cover.
 - b. While pressing down the paper feed button, close the top cover. The printer beeps and prints the diagnostics form.

P Note

Paper may jam at first. In this case, clear the jam and try printing again.

Other Serious Problems

The following problems all need to be corrected by a qualified service representative. For more information, refer to "<u>Contacting a Service Representative</u>" on the next page.

- 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 your 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 7199 Series Thermal Receipt Station Printer Parts Identification Manual (BCC5-0000-5173)
- NCR 7199 Series Thermal Receipt Station Printer Service Guide (BCC5-0000-5174)

Service Level Troubleshooting

Diagnostics Overview

The NCR 7199 Series Thermal Receipt Station 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.

- Startup (Level 0) Diagnostics—the printer performs these tests during the startup cycle. For more information, refer to "<u>Startup (Level 0) Diagnostics</u>" on the next page.
- Printer Configuration (Level 1)—allows configuration of the printer using a Configuration Menu that is printed on a receipt. For more information, refer to "Printer Configuration (Level 1)" on page 72.
- Runtime (Level 2) Diagnostics—the printer checks the status during normal operation. For more information, refer to "<u>Runtime (Level 2) Diagnostics</u>" on page 155.
- **Remote (Level 3) Diagnostics**—the printer keeps track of counters during normal operation.

Startup (Level 0) Diagnostics

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 CRC check of the firmware ROM, read external RAM.

	Failure causes startup diagnostics to stop.				
3.	EEPROM check				
	Failure causes startup diagnostics to stop.				
4.	Printer Status (Amber) LED is turned on.				
5.	Check if paper is present.				
6.	Return the knife to the home position.				
	Failure causes a fault condition.				
7.	Check if printer Top Cover/Printer Door is closed.				

P Note

Failure causes turning on the Printer Status (Amber) LED until the Top Cover/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 the printer settings, refer to "<u>Printer</u> <u>Configuration (Level 1)</u>" on the next page. If the EEPROM load has failed, the Printer Status LED is turned on.

Printer Configuration (Level 1)

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.

A 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 68.

Configuring the Printer



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

A 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 the following:

• 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

P Note

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

To configure the software or hardware, follow these steps:

- 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.

```
*** Offline Printer Configuration ***
 This menu allows you to set general
 printer parameters by Form Feed Key. The
 Short Click: It's mainly used to enter
              code of each Sub Menu. Press
              and release a key quickly
 Long Press : It's mainly used to
              determine settings changed.
              Hold down a key for 1 second
 ******* Main Menu *******
 EXIT
                               -> No Click
 Print Printer Config
                               -> 1 Click
 Emulation
                               -> 2 Clicks
                               -> 3 Clicks
 Hardware
                               -> 4 Clicks
 Reset to Default Setting
 Printer Maintenance Info -> 5 Clicks
 Interface (Ethernet or RS232) -> 6 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 submenu 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
Compatible Barcode Length	-> 13 Clicks
Legacy Paper Jam	-> 14 Clicks
Buffered Printing	-> 15 Clicks
Legacy LF + CR	-> 16 Clicks
*Enter code, and hold down a	Key for 1 sec

Note

Buffered Printing & Legacy LF + CR are supported in Series ii only.

Printer Configuration form indicates the printer individual information and configurations, as shown in the following examples.

For Series i:

*** Diagnostics Form ***			
*** Diagnostics Form *** Model number Serial number Boot Firmware P/N Main Firmware P/N Firmware Revision Boot Firmware Main Firmware SBCS Font DBCS Font Control Table Emulation Receipt Sync. Default LPI	: 71xx-xxxx-xxxx : 1234567890 : 497-0426492 : 497-0426493 : V01.00 / 32CA : V01.00 / A04C : V01.00 : V01.00 : V01.00 : V01.00 : NCR 7199 : Disabled : 7.52 LPI	Interface (RS232C) Baud Rate : 19200 Data Bits : 8 Stop Bits : 1 Parity : None Flow Control : DTR/DSR Reception Errors : Print '?' DSR Signal : Enabled Interface (Ethernet) MAC address : xxxxxxxxxxx IP address : 192.168.1.1 Subnet Mask : 255.255.255 Default Gataway : 0.0.0	It is shown if RS232C I/F is installed.
Carriage Asian Mode Code Page	: Used as Print Cmd : Off : 437	TCP Port Number : 9100 UDP Port Number : 3000 RTC Protocol : TCP	It is shown if Ethernet card is installed.
Compress Pitch Font 48 Character Mode PDF417 Max Columns Auto Reset CompatibleTopMargin Compat. TM Timeout Compat. BarcodeLen USU Legacy Paper Jam Logo(s) Defined User Char(s) Defined	: Valid : Disabled : 9 Columns : 20 Sec : Enabled : Disabled : Disabled : Disabled : Paper Out : No : No	DHCP request address : 192.168.2.1 TCP max. connection : 1 Physical LAN Speed : Auto Link Down Timeout : 120 min TCP Idle Timeout : 2 min SNMP Trap 1 : Disabled Trap 1 IP Address : 192.168.1.11 SNMP Trap 2 : Disabled Trap 2 IP Address : 192.168.1.22	11
Hardware USB Type USB Speed Print Mode Print Density Power Supply Standby Mode PowerOff Mode Knife Paper Width Paper Low Detection Color Paper Buzzer Tone LED Receipt Direction Thermal head type BitImage Max Speed	: NonION(NHPI) : Full Speed : High Speed : 0 : Term Pwr-High : Enabled : Enabled : Enabled : Bomm : Disabled : Monochrome : Middle : Auto : Front Exit : Type 1 : 4 IPS	Sensor LevelONOFFTHLEIPaper Low: 3.3V, 0.0V, 1.7V, 0.5VPaper Jam: 3.2V, 0.6V, 1.4V, 0.5VTalliesUserPerm.Hours ON:9599Flash cycles:5Receipt Len.:482Head Overheat:3Knife Cuts:12768Knife Jams:2Cover Open:71Paper Jams:2Sensor Calibration:5Thermal Head Usage Rate:11 %Dot Failure:0 de	59 5 82 3 68 2 71 2 5 5 ts

Rote

Take note of the following for Legacy Paper Jam:

- Paper Out option is caused by Paper Jam with Paper Exhaust.
- Knife Jam option is caused by Paper Jam with Cutter Error.
- For more information, refer to the 1F 11 command table.

For Series ii:

*** Diagnostics Form ***		Interface (RS232C)	
Model number	: 71xx-xxxx-xxxx	Data Bits : 8	
Serial number	: 1234567890	Stop Bits : 1	
Boot Firmware P/N	: 497-0426492	Parity : None It is	shown if
Main Firmware P/N	: 497-0426493	Flow Control : DTR/DSR RS2	232C I/F
Firmware Revision	104 00 10004	Reception Errors : Print '?' is in	stalled
Boot Firmware	: V01.00 / 32CA	DSR Signal : Enabled	
SBCS Foot	: V01.00 / A04C		
DBCS Font	· V01.00		
Control Table	· V01.00	Interface (Ethernet)	
Control Public		MAC address : xx:xx:xx:xx:xx:xx	
Emulation	: NCR 7199	IP address 192.100.1.1 Subpot Maak 255 255 255 0	
Receipt Sync.	: Disabled	Default Gateway : 0.0.0.0	
Default LPI	: 7.52 LPI	TCP Port Number 9100	
Carriage	: Used as Print Cmd	UDP Port Number : 3000	
Asian Mode	: Off	RTC Protocol : TCP It is	shown if
Code Page	: 437	DHCP : Enabled Eth	ernet card
Special Font	: Disabled	DHCP request address : 192.168.2.1 is in	stalled
Compress Pitch Font	: Valid	TCP max. connection : 1	
46 Character Mode	: Disabled	Physical LAN Speed : Auto	
Auto Reset	· 20 Sec	Link Down Timeout : 120 min	
CompatibleTopMargin	· Enabled	I CP Idle Timeout : 2 min	
Compat. TM Timeout	: Disabled	SINIP Trap 1 UISabled	
Compat. BarcodeLen	: Disabled	Trap T IP Address : 192.166.1.111 SNMD Trap 2 : Dischlad	
USU	: Disabled	Tran 2 IP Address 192 168 1 222	
Legacy Paper Jam	: Paper Out ¹	11ap 2 11 Address . 132.100.1.222	
Buffered Printing	: Disabled		
Legacy LF + CR	: 1 LF	Sensor Level ON OFF TH LED	
Logo(s) Defined	: No	Paper Low : 3.3V, 0.0V, 1.7V, 0.5V	
User Char(s) Defined	: No	Paper Jam : 3.2V, 0.6V, 1.4V, 0.5V	
Hardware		Tallies User Perm.	
USB Type	: NonION(NHPI) ²	Hours ON : 959 959	
USB Speed	: Full Speed	Flash cycles : 5 5	
Print Mode	: High Speed	Receipt Len. : 482 482	
Print Density	: U : Tarra Dur Linh	Head Overheat : 3 3	
Standby Mode	: Term Pwr-High : Enabled	Knife Cuts : 12/66 12/66	
PowerOff Mode	· Disabled	Cover Open 71 71	
Knife	· Enabled	Paper Jams 2 2	
Paper Width	: 80mm	Sensor Calibration : 5 5	
Paper Low Detection	: Disabled		
Color Paper	: Monochrome	Thermal Head Usage Rate : 1 %	
Buzzer Tone	: Middle	Dot Failure : 0 dots	
LED	: Auto		
Thermal head type	: Type 1	T I I I	
Bitimage. Max Speed	: 16 IPS	To change usb type:	
Top Margin(Back FD)	: 12.0mm*	1. Open printer cover	
Paper Type	. 10 IPS : Type 1	2. Press feed key for 5 seconds	
raper type	. Type T		

Installing the USB Virtual COM Port Driver for printer

To install the USB Virtual COM Port Driver, refer to the following sections:

- "Windows POSReady 7" on the next page
- "Windows 8" on page 83
- "Windows 10" on page 88

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 the **Update Driver Software** button.



5. Select Browse my computer for driver software.



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

7. Select Next.

G Dydate Driver Software - Receipt (EPiC Interface)	×
Browse for driver software on your computer	
Search for driver software in this location:	
✓ Include subfolders	
Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.	
Next	Cancel

The system starts installing the printer driver.

🕞 👔 Update Driver Software - Receipt (EPiC Interface)	×
Installing driver software	

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.

Device Setup	×
Installing Receipt (EPiC Interface) Image: Description of the second s	n. This may take
	Close

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



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.

🕞 🎍 Update Driver Software -	Receipt (EPiC Interface)
Installing driver software	

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:

 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.

Device Setup		×
Installing Recei	pt (EPiC Interface)	
	Please wait while Setup installs necessary files on your system. This may take several minutes.	
	Clos	e

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

3. Select the Update Driver Software button.



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.

÷	Update Driver Software - Receipt (EPiC Interface)	×
	Installing driver software	

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



Verifying the installation

To verify that the device drivers were correctly installed, refer to the following sections:

- "Windows POSReady 7" on the next page
- "Windows 8" on page 96
- "Windows 10" on page 98

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 7197 Receipt Printer and the EPIC Port are installed.

Note

- The NCR 7197 Receipt Printer is the defined USB VID/PID (Vendor ID/Product ID) of the NCR Single Station printers (7197, 7198, 7199).
- 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.

🚓 Edgeport Properties	×
General Version Advanced	
Receipt (EPiC Interface) [Port-A3]	Information
Port1 [COM3]	Configure
	Port <u>F</u> lags
	Test Ports
	Update
	Power Mgt
	Port <u>S</u> tatus
	Sa <u>v</u> e Config
	<u>R</u> efresh
	,
	ОК

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 7197 Receipt Printer and the EPIC Port are installed.

Ref Note

- The NCR 7197 Receipt Printer is the defined USB VID/PID (Vendor ID/Product ID) of the NCR Single Station printers (7197, 7198, 7199).
- If this information is not listed, then the installation was not successful. You need to reinstall the drivers.

<u>*</u>	Compu
File Action View Help	
🗢 🌳 🖄 📰 🖼 📰	R 🕅 🕅 😽 👘
 Computer Management (Local System Tools Task Scheduler Event Viewer Shared Folders Local Users and Groups Performance Device Manager Storage Disk Management Services and Applications 	 Software Audio inputs and outputs Computer Disk drives Display adapters Display adapters Human Interface Devices IDE ATA (ATADI controllers IOE ATA (ATADI controllers IOE ATA (ATADI controllers IOE ATA (ATADI controllers NCR 7197 Receipt Printer NCR 7197 Receipt Printer Network adapters Monitors Network adapters Ports (COM & LPT) EPIC Port (COM3) Processors Software devices Software devices Software devices Storage controllers System devices

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

🗢 Edgeport Properties	×
General Version Advanced	
Receipt (EPiC Interface) [Port-3142	Information
····· S Port I [COM3]	Configure
	Port Flags
	Test Ports
	Update
	Power Mgt
	Port Status
	Save Config
< >	Refresh
	ОК

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 7197 Receipt Printer and the EPIC Port are installed.

Note

- The NCR 7197 Receipt Printer is the defined USB VID/PID (Vendor ID/Product ID) of the NCR Single Station printers (7197, 7198, 7199).
- 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.

🚓 Edgeport Properties	×				
General Version Advanced					
Receipt (EPiC Interface) [Port-2143 Information					
Port I [COM4]	Configure				
	Port Flags				
	Test Ports				
	Update				
	Power Mgt				
	Port Status				
	Save Config				
< >	Refresh				
	OK				

Uninstalling the drivers

To uninstall the printer driver, refer to the following sections:

- "Windows POSReady 7" on the next page
- "<u>Windows 8</u>" on page 103
- "<u>Windows 10</u>" on page 105

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 the **Uninstall** button, and then follow the on-screen instructions.



The following window is displayed.

USB Serial Ports	X
Are you sure y	you want to uninstall the serial device drivers?
	Yes No

4. Select Yes.

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

C Uninstalling the Serial Driver				
Cleaning up the Registry				
Removing files				
The uninstallation process was successful! For more details, please refer to the uninstall log file.				
You will need to reboot your system in order to complete the uninstall process.				
Would you like to reboot at this time?				
Yes No				
View Uninstall Log				

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 the **Uninstall** button, 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.

Contract Uninstalling the Serial Driver						
🗸 Cleaning	Cleaning up the Registry					
Removing files						
The uninstallation pro For more details, plea log file.	The uninstallation process was successful! For more details, please refer to the uninstall log file.					
You will need to reboo to complete the unins	ot your system in order tall process.					
Would you like to reboot at this time?						
Yes No						
View Uninstall Log						

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 the **Uninstall** button, 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.

Contract Con					
Cleaning up the Registry					
\checkmark	Removing files				
The uninstallation process was successful For more details, please refer to the uninstall log file.					
You will nee to complete	You will need to reboot your system in order to complete the uninstall process.				
Would you I	iike to reboot	at this time?			
Yes No					
View Uninstall Log					

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

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 the user 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

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 to select the communications settings.

*** Inte	erface	(RS232C) ****				
Bai	id Rate		->	1 C	lick		
Dat	ta Bits		->	2 C	licks		
Sto	op Bits		->	3 C.	licks		
Par	rity		->	4 C	licks		
Flo	ow Cont	rol	->	5 C	licks		
Red	ception	Errors	->	6 C.	licks		
DSI	R Signa	1	->	7 C	licks		
*Enter (code, a	nd hold	down a	Кеу	for 1	l sec	
** BAUD	RATE						
115200	Baud	->	1 Click	2			
57600	Baud	->	2 Click	s			
38400	Baud	->	3 Click	s			
19200	Baud*	->	4 Click	s			
9600	Baud	->	5 Click	s			
*Enter	code.	and ho	ld down	аŀ	Kev fo	r 1	sec

** DATA BITS

8 Data Bits* -> 1 Click
7 Data Bits -> 2 Clicks
*Enter code, and hold down a Key for 1 sec

** STOP BITS

1 Stop Bits* -> 1 Click 2 Stop Bits -> 2 Clicks *Enter code, and hold down a Key for 1 sec

** PARITY

No Parity* -> 1 Click Even Parity -> 2 Clicks Odd Parity -> 3 Clicks *Enter code, and hold down a Key for 1 sec

** FLOW CONTROLS

Software(XON/XOFF) -> 1 Click Hardware(DTR/DSR)* -> 2 Clicks *Enter code, and hold down a Key for 1 sec

**** RECEPTION ERRORS**

Ignore Errors -> 1 Click Print `?'* -> 2 Clicks *Enter code, and hold down a Key for 1 sec

Series i

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

Series ii

```
** DSR SIGNAL
DSR Enable* -> 1 Click
DSR Disable -> 2 Clicks
*Enter code, and hold down a Key for 1 sec
```

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, and hold down a Key for 1 sec

Ethernet Interface settings [Option]

Press the Paper Feed button to select the communications settings.

```
*** Interface (Ethernet)
RTC Protocol
                    -> 1 Click
                    -> 2 Clicks
DHCP
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, and hold down a Key for 1 sec
** RTC Protocol
TCP*
          -> 1 Click
          -> 2 Clicks
UDP
*Enter code, and hold down a Key for 1 sec
Series i
** DHCP
Disable*
          -> 1 Clicks
Enable
          -> 2 Clicks
```

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

Series ii

```
** DHCP
Disable -> 1 Click
Enable*
        -> 2 Clicks
*Enter code, and hold down a Key for 1 sec
** 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, and hold down a Key for 1 sec
```

** Physical LAN Speed

```
Auto* -> 1 Click

100 Mbps Full -> 2 Clicks

100 Mbps Half -> 3 Clicks

10 Mbps Full -> 4 Clicks

10 Mbps Half -> 5 Clicks

*Enter code, and hold down a Key for 1 sec
```

Series i

**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 he	old Button DOWN.
At least 1 second t	to validate.

Series ii

**Link Down Timeout

No Ti	ime o	ut	->	1	Click			
1 n	nin -	10 min	->	2	Clicks			
11 n	nin -	20 min	->	3	Clicks			
21 n	nin -	30 min	->	4	Clicks			
31 n	nin -	40 min	->	5	Clicks			
41 n	nin -	50 min	->	6	Clicks			
51 n	nin -	60 min	->	7	Clicks			
61 n	nin -	70 min	->	8	Clicks			
71 n	nin -	80 min	->	9	Clicks			
81 n	nin -	90 min	->	10	Clicks			
91 n	nin -	100 min	->	11	Clicks			
101 n	nin -	110 min	->	12	Clicks			
111 n	nin -	120 min*	->	13	Clicks			
*Ente	er co	de, and hol	ld d	lowr	n a Key	for	1	sec

ı.

Series i

**TCP idle 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 h	old Button DOWN.
At least 1 second	to validate.

Series ii

```
** TCP Idle 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
                    -> 6 Clicks
 41 min - 50 min
 51 min - 60 min
                       7 Clicks
                    ->
 61 min - 70 min
                    -> 8 Clicks
 71 min - 80 min
                    ->
                        9 Clicks
 81 min - 90 min
                    -> 10 Clicks
                    -> 11 Clicks
 91 min - 100 min
101 min - 110 min
                    -> 12 Clicks
111 min - 120 min* -> 13 Clicks
*Enter code, and hold down a Key for 1 sec
```

Series i

** SNMP Trap 1

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

Series ii

```
** SNMP Trap 1
Disable* -> 1 Click
Enable -> 2 Clicks
*Enter code, and hold down a Key for 1 sec
```

** SNMP Trap 2

Disable	÷*	->	> 1 Cl	lick					
Enable		->	> 2 C]	licks					
*Enter	code,	and	hold	down	a	Кеу	for	1	sec

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 to select an option.

Save new parameters? Save the change -> Long Press Cancel the change -> Short Click

Emulation/Software options

Receipt synchronization

This function makes it possible for the user to select whether to enable or to disable receipt synchronization printing.

When "Receipt synchronization" is enabled (Mode1 or Mode2), printer returns the status for buffered status command after completion of the print operation.

The following commands are the buffered 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

Regarding Mode1 and Mode2, the command/status sequence is completely the same. The only difference is the printing speed. The printing speed of Mode1 is the same as in normal printing (max. 12ips).

Whereas, the printing speed of Mode2 is 4ips (max) in order to prevent the clatter print in the synchronized line mode.

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

1F OA n Get Print Completion

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

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

```
***** Receipt Sync *****

Sync. Mode 2 -> 1 Click

Disable* -> 2 Clicks

Sync. Mode 1 -> 3 Clicks

Sync. Mode 3 -> 4 Clicks

Legacy -> 5 Clicks

*Enter code, and hold down a Key for 1 sec
```

Save parameters

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

Press the Paper Feed button to select an option.

Save new parameters? Save the change -> Long Press Cancel the change -> Short Click

Default Lines per Inch

This function allows the user to set the default lines per inch printed by the thermal printer to

6, 7.52, or 8.13.

Press the Paper Feed button to select an option.

```
***** Default LPI *****
8.13 Lines per Inch -> 1 Click
7.52 Lines per Inch* -> 2 Clicks
6 lines per Inch -> 3 Clicks
*Enter code, and hold down a Key for 1 sec
```

```
Save new parameters?
```

Save the change -> Long Press Cancel the change -> Short Click

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.

Press the Paper Feed button to select an option.

```
***** Carriage *****
Ignore CR -> 1 Click
Use CR as Print Cmd* -> 2 Clicks
*Enter code, and hold down a Key for 1 sec
Save new parameters?
```

Save the change -> Long Press Cancel the change -> Short Click

Asian mode

This function makes it possible for the user to select an Asian character for the printer.

Press the Paper Feed button to select an option.

```
***** ASIAN MODE *****
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 -> 5 Clicks
*Enter code, and hold down a Key for 1 sec
```

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Set Font Type option

Set Font Type using the Emulation submenu.

Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

Series i

*****SPECIALFONT********

Original Font *	->	1	Click				
Mode 1 CP437/858 Large	->	2	Clicks				
Mode 2 866 Mini	->	3	Clicks				
Mode 3 Constructed 874	->	4	Clicks				
Mode 4 Contextual 1256 (Proportional Pitch)	->	5	Clicks				
Mode 5 Contextual 1256 (Fixed Pitch)	->	б	Clicks				
Mode 6 Greek	->	7	Clicks				
SBCS2	->	8	Clicks				
SBCS3	->	9	Clicks				
Enter code, then hold Button DOWN.							
At least 1 second to validate.							

Series ii

***** SPECIAL FONT *****						
Origi	na	al Font*	->	1	Click	
Mode	1	CP437/858 Large	->	2	Clicks	
Mode	2	866 Mini	->	3	Clicks	
Mode	3	Constructed 874	->	4	Clicks	
Mode	4	Context Prop 1256	->	5	Clicks	
Mode	5	Context Fix 1256	->	6	Clicks	
Mode	6	Greek Font Map	->	7	Clicks	
Mode	7	Constructed 874 LF	->	8	Clicks	
Mode	8	850 Mini	->	9	Clicks	
SBCS2			->	10	Clicks	
SBCS3			->	11	Clicks	
*Ente	r	code, and hold down	ıa	Key	for 1	sec
Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Set Compress Pitch option

Set Compress Pitch command using the configuration menu.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

Series ii

***** Compress Pitch Font *****
Valid* -> 1 Click
Invalid -> 2 Clicks
*Enter code, and hold down a Key for 1 sec

Save new parameters?

Save	the	ch	lange	->	Long	Press
Cance	el ti	ne	change	->	Short	: Click

Set 48 CHARACTER mode

This option is to set 48 Character printing. The selections are enable or disable. The end result is to print 48 characters in one line.

Press the Paper Feed button to select an option.

***** 48 Character Mode *****

Disable* -> 1 Click Enable -> 2 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Set PDF417 MAX COLUMN print

This function makes it possible for the user 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.

RS485 doesn't support this function.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

```
***** PDF417 Max Columns *****
9 Columns* -> 1 Click
14 Columns -> 2 Clicks
Auto Column -> 3 Clicks
*Enter code, and hold down a Key for 1 sec
```

Save new parameters? Save the change -> Long Press Cancel the change -> Short Click

Set Auto Reset option

Set Auto Reset using the configuration menu. Answer No to the questions printed on the receipt until Auto Reset options are displayed.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

Series i

**	SET AUT) RESET *****
Dis	sable*	-> 1 Click
10	Sec	-> 2 Clicks
20	Sec	-> 3 Clicks
30	Sec	-> 4 Clicks
40	Sec	-> 5 Clicks
50	Sec	-> 6 Clicks
60	Sec	-> 7 Clicks
Ent	cer code	then hold Button DOWN.
At	least 1	second to validate.

Series ii

***** Auto Reset *****

Dis	able	1	->	- 1	C]	lick					
10	Sec		->	2	C]	licks					
20	Sec*		->	× 3	C]	licks					
30	Sec		->	- 4	C]	licks					
40	Sec		->	× 5	CJ	licks					
50	Sec		->	6	C]	licks					
60	Sec		->	- 7	C]	licks					
*Er	nter	code,	and	hol	Ld	down	a	Кеу	for	1	sec

Save new parameters?

Save	the	cł	nange	-	·>	Long	Press
Cance	el ti	he	change	-	·>	Short	Click

Set Compatibility Top Margin option

Set Compatibility Top Margin using the configuration menu. Answer No to the questions printed on the receipt until Compatibility Barcode Length options are displayed.

A Caution

Be extremely careful in changin any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

***** Compatible Top Margin ***** Disable -> 1 Click Enable* -> 2 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters? Save the change -> Long Press Cancel the change -> Short Click

Set Buffered Printing

P Note

This setting is supported in Series ii only.

Set the Buffered Printing using the Emulation sub-configuration menu. This setting sets printer to Batch print mode where printing will trigger only under certain conditions like after 80 lines processed, cut command, generate a pulse. and so forth.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

```
***** Buffered printing *****
Disable* -> 1 Click
Normal -> 2 Clicks
Upside Down -> 3 Clicks
*Enter code, and hold down a Key for 1 sec
```

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Set Legacy LF + CR

🗗 Note

This setting is supported in Series ii only.

Set the Legacy LF + CR using the Emulation sub-configuration menu. This setting is used to set the number of feed commands to execute when we use feed command with the carriage return command.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

```
***** Legacy LF + CR *****
1 Feed* -> 1 Click
2 Feed -> 2 Clicks
*Enter code, and hold down a Key for 1 sec
```

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Hardware options

Set USB type

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

Configuration Menu.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

****** USB Type ***** ION (Epic) -> 1 Click NonION (NHPI)* -> 2 Clicks NonION (PRTR) -> 3 Clicks Fixed ION (Epic) -> 4 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Set USB speed

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

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

***** USB Speed *****

Full Speed* -> 1 Click High Speed -> 2 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Set print mode

Set the Receipt Print Mode using the configuration menu. Select Hardware Options in the Configuration Menu.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

***** Print Mode ***** High Speed Print* -> 1 Click High Quality Print -> 2 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters?

Save	th	e cl	nange	->	Long	Press
Cance	el	the	change	->	Short	: Click

Print density

This function makes it possible 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%.

A 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. Consult an NCR technical support specialist for any questions.

Press the Paper Feed button to select an option.

*****	Print	Density *****		
-11 ~ -	-15	-> 1 Click		
-6~-	-10	-> 2 Clicks		
-1 ~ -	-5	-> 3 Clicks		
0		-> 4 Clicks		
+1 ~ +	⊦5	-> 5 Clicks		
+6 ~ +	⊦10	-> 6 Clicks		
+11 ~ +	+15	-> 7 Clicks		
*Enter	code,	and hold down a Key for	1	sec

Selecting Option 1 displays the following submenu.

-11		->	1	Cli	lck					
-12		->	2	Cli	lcks					
-13		->	3	Cli	lcks					
-14		->	4	Cli	lcks					
-15		->	5	Cli	lcks					
*Enter	code,	and	hc	old	down	a	Кеу	for	1	sec

Selecting Option 2 displays the following submenu.

-6		->	1	Cli	lck					
-7		->	2	Cli	lcks					
-8		->	3	Cli	lcks					
-9		->	4	Cli	lcks					
-10		->	5	Cli	lcks					
*Enter	code,	and	ho	old	down	a	Кеу	for	1	sec

Selecting Option 3 displays the following submenu.

-1		-> 1	Clio	ck					
-2		-> 2	Clio	cks					
-3		-> 3	Clic	cks					
-4		-> 4	Clio	cks					
-5		-> 5	Clic	cks					
*Enter	code,	and [hold	down	a	Кеу	for	1	sec

Selecting Option 5 displays the following submenu.

+1		-> 1	Clic	:k					
+2		-> 2	Clio	ks					
+3		-> 3	Clic	cks					
+4		-> 4	Clio	ks					
+5		-> 5	Clic	cks					
*Enter	code,	and 1	hold	down	a	Кеу	for	1	sec

Selecting Option 6 displays the following submenu.

+6		->	1	Cli	.ck					
+7		->	2	Cli	.cks					
+8		->	3	Cli	cks					
+9		->	4	Cli	cks					
+10		->	5	Cli	.cks					
*Enter	code,	and	ho	ld	down	a	Кеу	for	1	sec

Selecting Option 7 option displays the following submenu.

+11		->	1	Cli	lck					
+12		->	2	Cli	lcks					
+13		->	3	Cli	lcks					
+14		->	4	Cli	lcks					
+15		->	5	Cli	lcks					
*Enter	code,	and	hc	old	down	a	Кеу	for	1	sec

Save new parameters?

Save	the	cha	ange	->	Long	Press
Cance	el ti	he d	change	->	Short	: Click

Power supply

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

Press the Paper Feed button to select an option.

Series i

```
Term Pwr-High* -> 1 Click
NCR 75W Ext Pwr -> 2 Clicks
Term Pwr-Low -> 3 Clicks
NCR 60W Ext Pwr -> 4 Clicks
Enter code, then hold Button DOWN.
At least 1 second to validate.
```

Series ii

***** Power Supply ***** Term Pwr-High* -> 1 Click NCR Ext Pwr -> 2 Clicks Term Pwr-Low -> 3 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters?

Save	th	e cl	nange	->	Long	Press
Cance	21	the	change	->	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 the power consumption in the idle mode when the printer is in the idle mode.

Printer will exit from standby mode to normal mode in below criteria:

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

After power–on, it will go to standby mode if it does not receive any transaction data in 60 seconds.

After one transaction, it will go to standby mode if it does not receive any transaction data in 1 second.

In disable setting, the printer does not shift to the standby mode. During going back from the standby mode, the response of the printer will be slightly delayed compared to the normal mode response.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

****** Standby Mode ******

Disable -> 1 Click Enable* -> 2 Clicks *Enter code, and hold down a Key for 1 sec

```
Save new parameters?
Save the change -> Long Press
Cancel the change -> Short Click
```

Set power off mode

Set the Shift Time to Power Off using the configuration menu. If the printer is in standby mode for the time that is defined by this setting, printer automatically power off. Once enter power off mode, all LED are turned off. If feed key is pressed, printer exit from power off mode and enter normal mode.

Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select a Shift Time to Power Off option.

***** Power Off Mode *****

```
Disable* -> 1 Click
Enable (60min) -> 2 Clicks
Enable (120min) -> 3 Clicks
Enable (180min) -> 4 Clicks
Enable (240min) -> 5 Clicks
Enable (300min) -> 6 Clicks
*Enter code, and hold down a Key for 1 sec
```

Save new parameters?

```
Save the change -> Long Press
Cancel the change -> Short Click
```

Set knife option

Set the Knife option using the configuration menu. Answer No to the questions printed on the receipt until the knife options are displayed.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

```
***** Knife *****
```

```
Enable Knife* -> 1 Click
Disable Knife -> 2 Clicks
Enable Knife with Buzzer(Low) -> 3 Clicks
Enable Knife with Buzzer(High) -> 4 Clicks
*Enter code, and hold down a Key for 1 sec
```

Save new parameters? Save the change -> Long Press Cancel the change -> Short Click

Paper width

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

Press the Paper Feed button to select an option.

```
***** Paper Width *****
```

Paper Width = 80 mm* -> 1 Click Paper Width = 58 mm -> 2 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters? Save the change -> Long Press

Cancel the change -> Short Click

Set paper low detection

Paper Low Sensor makes it possible to enable or disable the paper low sensor for particular printer configurations.

Press the Paper Feed button to select an option.

****** Paper Low Detection ******

```
Enable (Remaining 40ft) -> 1 Click

Disable -> 2 Clicks

Enable (Remaining 30ft) -> 3 Clicks

Enable (Remaining 20ft) -> 4 Clicks

Enable (Remaining 15ft)* -> 5 Clicks

*Enter code, and hold down a Key for 1 sec
```

Save new parameters?

Save	th	e c	hange	->	Long	Press
Cance	el	the	change	->	Short	Click

Set color paper option

This function allows the user to set the color paper option to Monochrome or Color Paper.

Press the Paper Feed button to select an option.

```
***** Color Paper *****
Monochrome* -> 1 Click
Color paper -> 2 Clicks
*Enter code, and hold down a Key for 1 sec
```

Save new parameters? Save the change -> Long Press Cancel the change -> Short Click

Set buzzer tone

This function allows the user to set the Buzzer Tone to Low, Middle, and High.

Press the Paper Feed button to select an option.

****** Buzzer Tone ******

Low	-> 1 Click		
Middle*	-> 2 Clicks		
High	-> 3 Clicks		
*Enter code,	and hold down a	Key fo	or 1 sec

Save new parameters?

Save the change -> Long Press Cancel the change -> 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 the power LED control options are displayed.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

```
******** LED *******
```

Auto Mode* -> 1 Click User Mode -> 2 Clicks *Enter code, and hold down a Key for 1 sec

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Set Bit-Image Max Speed

P Note

This setting is supported in Series ii only.

Set the Bit Image max speed using the hardware sub configuration menu. This bit image max speed set the speed of bit images and grey image printing. The speed of printing varies from 2IPS to 16IPS.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

```
***** BitImage Max Speed *****
               -> 1 Click
14IPS
               -> 2 Clicks
12IPS
               -> 3 Clicks
10IPS
8IPS
               -> 4 Clicks
6IPS
               -> 5 Clicks
4IPS
               -> 6 Clicks
2IPS
               -> 7 Clicks
               -> 8 Clicks
16IPS*
*Enter code, and hold down a Key for 1 sec
```

Save new parameters?

Save	th	e cl	nange	->	Long	Press
Cance	el	the	change	->	Short	: Click

Set Paper Type

P Note

This setting is supported in Series ii only.

Set the Paper type using the hardware sub configuration menu. This option sets paper type with optimum parameter values in the thermal print control.

A Caution

Be extremely careful in changing any of the printer settings to avoid inadvertently changing other settings that might affect the performance of the printer.

Press the Paper Feed button to select an option.

******* Paper Type *******

Predefine 1			->	1	Click			
Predefine 2			->	2	Clicks	;		
Predefine 3*			->	3	Clicks	;		
Predefine 4			->	4	Clicks	;		
User-defined	1		->	5	Clicks	;		
User-defined	2		->	6	Clicks	;		
*Enter code,	and	hold	dov	vn	а Кеу	for	1	sec

P Note

User-defined 1 and User-defined 2 are only available in paper type setting when they are defined or stored in the flash memory

Save new parameters?

Save the change -> Long Press Cancel the change -> Short Click

Default code page

This function makes it possible to select the default code page. The following are the code pages available for printing.

For Series i and Series ii

- PC Code Page 437 (US English)
- PC Code Page 737 (DOS Greek)
- PC Code Page 850 (Multilingual)
- PC Code Page 852 (Slavic)
- PC Code Page 855 (IBM Cyrillic)
- PC Code Page 858 (with Euro symbol)
- PC Code Page 860 (DOS 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 (Enhanced Thai)
- PC Code Page 932 (Windows-31J)
- PC Code Page 936 (Simplified Chinese)
- PC Code Page 949 (Korean)
- PC Code Page 950 (Traditional Chinese)
- PC Code Page 1250 (Windows Eastern European)
- PC Code Page 1251 (Windows Cyrillic)
- PC Code Page 1252 (Windows Latin #1)
- PC Code Page 1256 (Arabic) Contextual
- PC Code Page 1256 (Arabic) Fixed

- PC Code Page Hungary
- PC Code Page Katakana
- PC Code Page Romania
- Unicode support (UTF-16)

For Series ii only

- PC Code Page 1254 (Windows Turkish)
- PC Code Page 1255 (Windows Hebrew)
- PC Code Page 950 (HKSCS)

P Note

For Asian code pages, code page 936, 949, or 950 replaces code page 932 in the above menu depending on the Asian Mode setting.

To set the Code Page, do the following:

 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 submenu is displayed.

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

🗗 Note

Buffered Printing & Legacy LF + CR are supported in Series ii only.

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

```
** Code Page **
```

```
Code Page 437* -> 1 Click
Code Page 850 -> 2 Clicks
Code Page 852 -> 3 Clicks
Code Page 858 -> 4 Clicks
More -> 5 Clicks
*Enter code, and hold down a Key for 1 sec
```

Selecting **More** displays the following submenu.

Code Page 860 -> 1 Click Code Page 862 -> 2 Clicks Code Page 863 -> 3 Clicks Code Page 864 -> 4 Clicks -> 5 Clicks More *Enter code, and hold down a Key for 1 sec Code Page 865 -> 1 Click Code Page 866 -> 2 Clicks Code Page 874 -> 3 Clicks Code Page 1252 -> 4 Clicks -> 5 Clicks More *Enter code, and hold down a Key for 1 sec -> 1 Click Code Page 1256 Code Page Katakana -> 2 Clicks Code Page Hungary -> 3 Clicks Code Page Romania -> 4 Clicks More -> 5 Clicks *Enter code, and hold down a Key for 1 sec Code Page 928 -> 1 Click Code Page 737 -> 2 Clicks -> 3 Clicks Code Page 855 -> 4 Clicks Code Page 1250 -> 5 Clicks More *Enter code, and hold down a Key for 1 sec Code Page 1251 -> 1 Click -> 2 Clicks Code Page 1254 Code Page 1255 -> 3 Clicks *Enter code, and hold down a Key for 1 sec Save new parameters? Save the change -> Long Press

Cancel the change -> Short Click

Configuring the Font Size and Logo Settings

Configuring the font size and logo settings for NCR 7199 Series printer may be done using any of the options:

- "OPOS/JavaPOS Configuration" on the next page
- "Direct Write Configuration" on page 151

The following table provides information on parameters that can be used to configure the font size and logo settings.

Parameter	Description
Compatible Top Margin	 When disabled, the physical distance between the thermal head position and the cut position (12.12 mm) becomes the top margin of each receipt. When enabled, the top margin is set to 16.8 mm and the printers always holds 37 raster in the print buffer. The raster images held in the printer buffer are pushed out by the cut command.
	Note By default, this parameter is set to Disable .
Compatible Top Margin Timeout	When Compatible Top Margin is enabled, the user also needs to set the value (0.1 to 25.5 seconds) for the Compatible Top Margin Timeout. This parameter sets the number of seconds before the printer pushes out the data held for Compatible Top Margin. Instead of waiting for the cut command to print the held data, the printer prints the held data after the set timeout value has lapsed.
	Note By default, this parameter is set to Disable .

Parameter	Description
Special Font	This parameter provides the following options:
	• CP437/858 Large — the character size of CP437 and CP858 are large, though the font cell is same as original font. In other code pages, it is the same as the original font.
	 866 Mini — the size of CP866 Font B is 10(W) x 14(H) dots.
	 Constructed 874 (refer to "<u>Thai Code Page Function</u>" on page 283)
	 Contextual 1256 Proportional Pitch (refer to "<u>Arabic Font Support</u>" on page 289)
	 Contextual 1256 Fixed Pitch (refer to "<u>Arabic Font Support</u>" on page 289)
	 Greek — CP850 (DOS Latin 1) maps to CP928 (Greek), and CP874 (ISO Thai) maps to CP737 (DOS Greek)
	 SBCS2 (refer to "<u>SBCS2, SBCS3 Font Support</u>" on page 299)
	 SBCS3 (refer to "<u>SBCS2, SBCS3 Font Support</u>" on page 299)
	Note By default, this parameter is set to Disable (Original font).

OPOS/JavaPOS Configuration

For OPOS/JavaPOS configuration, settings are configured using the RSM LE configuration tool. The following images show an example of the Compatible Top Margin, Compatible Top Margin Timeout, and Special Font parameter settings.



Tretan oyatena manager		
POS Printer		
Buzzer Tone	Middle	
LED Mode	Auto Mode	
Compatible Top Margin	Enabled	
Compatible Top Margin Timeout(1-255)	10	
PDF417 Width	Auto	
Auto Column Low Threshold Value(0-255)	100	
Auto Column High Threshold Value(0-10)	0	
Enable GrayScale Bitmap Printing	Disabled	
Enable Watermark Printing	Disabled	
Watermark Image Path		
Watermark Alignment	Center Alignment	
Printer Maintenance Log File Path		
Special Font	Mode 1 (CP473/858 Large)	
	Disquesting	Delet
	Diagnostics	Delet
	POS Printer POS JavaPOS Buzzer Tone LED Mode Compatible Top Margin Compatible Top Margin Timeout(1-255) PDF417 Width Auto Column Low Threshold Value(0-255) Auto Column High Threshold Value(0-10) Enable GrayScale Bitmap Printing Enable Watermark Printing Matermark Image Path Watermark Alignment Printer Maintenance Log File Path Special Font	POS Printer JavaPOS Buzzer Tone Middle LED Mode Auto Mode Compatible Top Margin Enabled Compatible Top Margin Timeout(1-255) 10 PDF417 Width Auto Auto Column Low Threshold Value(0-255) 100 Auto Column High Threshold Value(0-10) 0 Enable GrayScale Bitmap Printing Disabled Matermark Image Path Watermark Image Path Watermark Alignment Center Alignment Printer Maintenance Log File Path Special Font Diagnostics Creeter

For more information, refer to NCR Retail Controls 3.x UPOS User's Guide for Windows

(B005-0000-1619). To download the configuration tool, go to

https://www5.ncr.com/support/support_drivers_

patches.asp?Class=External/SelfServPlatform\display.

Direct Write Configuration

For Direct Write configuration, settings are configured at the printer in non-volatile memory. It can be done either through the offline printer configuration menu using the Paper Feed button on the printer or through the 7199 Series/7169 Configuration Utility.

Printer Configuration Menu

The Configuration Menu provides instructions and setting options interactively as the user goes through the configuration process. The user presses the Paper Feed button according to the number of clicks presented in the menu. For more information on the printer configuration menu, refer to "<u>Configuring the Printer</u>" on page 73.

To configure the printer, select **Emulation** from the main menu, and then configure the Compatible Top Margin, Compatible Top Margin Timeout, and Special Font parameters. For more information, refer to "<u>Emulation/Software options</u>" on page 115.

7199 Series/7169 Configuration Utility

The NCR Configuration Utility is used to view and modify settings of the connected printer, to print diagnostic forms, to reset all printer settings to default, and other tasks.

The following image shows an example of the Compatible Top Margin, Compatible Top Margin Timeout, and Special Font parameter settings.

Hardware RS23	2 E	thernet Slip Double Side Paper Para	Printer Model
			7199-7x03/7x04
Default lines per	1	7.52 lines per inch* v	Connection
Carriage return usage	1	Use CR as Print cmd* $\qquad \checkmark$	© <u>U</u> SB
Asian mode	:	Asian mode Off* $\qquad \lor$	O <u>R</u> 5232
Receipt synchronization	5	Disabled*	○ Ether <u>n</u> et
PDF417 Print	:	9 Columns* V	Connect
Auto Reset timeout	:	20 Sec* ~	
Special Font	:	Disable: Original font* $\qquad \lor$	
48 Character Print	:	Disable* ~	Print Diagnostic Form
Default code page	:	437* ~	Reset All Setting
Compatible Top Margin	:	Enable* ~	to Default
Auto Column Threshold	:	100	Save
Compress Pitch Font (Font B)	:	Valid* ~	Configuration File
Compatible Top Margin Timeout	:	Disable* ~	Load Configuration File
Compatibility Barcode Length	:	Disable* ~	
Legacy Paper Jam	:	Paper Out*	Sec. 1
Emulation	:	NCR 7199* ~	
Buffered Printing	:	Disabled* ~	
Get		Set	
		Default Setting	

To configure the printer, connect it to a terminal (through USB, RS-232, or Ethernet connection), and then configure the Compatible Top Margin, Compatible Top Margin Timeout, and Special Font parameters.

For more information on the 7199 Series/7169 Configuration Utility, refer to NCR Printer Utilities User Documentations (BCC5-0000-5382) at https://onlinehelp.ncrvoyix.com.

To download the configuration utility, go to https://www5.ncr.com/support_support_ drivers_patches.asp?Class=External/Peripherals\Printer\7199\display.

Runtime (Level 2) Diagnostics

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

- Paper out
- Cover open
- Knife unable to home
- 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 2Hz.
- Number of blinks depends on the block where an error occurs.

РСВ	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 "LED Control Request", LED pattern and the indication timing are specified by a system.

Errors	Color	Bezel LED
PCB Error	GREEN	1 Blink Pause 5 seconds
Paper Low	GREEN	4 Blinks Pause 5 seconds
Thermal Head Overheat	AMBER	2 Blinks Pause 5 seconds
Cover Open	AMBER	3 Blinks Pause 5 seconds
Paper End	AMBER	4 Blinks Pause 5 seconds
Printer Jam	AMBER	5 Blinks Pause 5 seconds
Cutter Error	AMBER	6 Blinks Pause 5 seconds

Errors	Color	Bezel LED
Blown Fuse	AMBER	6 Blinks Pause 5 seconds
Memory Error	RED	1 Blink Pause 5 seconds
Thermal Head Disconnected	RED	2 Blinks Pause 5 seconds
Thermal Head Abnormal Temperature	RED	2 Blinks Pause 5 seconds

PC Board connector locations and designations

Series i



CCP-71039

Driver board



CCP-71040

Series ii



Fuse location and information

Series i



Series ii



Refer to the following table for more information:

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

Communication

In order for a receipt to be printed, a program must be in place that translates the data from the host computer into a language that the printer can understand. This program must tell the printer exactly how to print each character. This chapter describes how to create such a program or modify an existing one.

Interface

For the printer to communicate with the host, a communication link must be set up. The NCR 7199 Series 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.

Only when the interface parameters are matched and the proper protocol is used will the host and the printer be able to communicate.

The NCR 7199 Series Ethernet Model supports the Ethernet communication interface.

Sending commands

Once 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. 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 by the LPRINT command.



This sends the hexadecimal number OA to the printer, which causes the printer to print the contents of its print buffer. Previously sent commands tell the printer exactly how this data should appear on the paper.

🖍 Example

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

This sends the Hex numbers 12 41 42 43 0A to the printer. This causes the printer to set itself to double wide mode (12), load the print buffer with "ABC" (41 42 43), and finally, print (0A). The communication link that the BASIC program outputs to must be matched to that of the printer.

RS-232C Interface (Option)

The RS-232C version of the NCR 7199 Series printer offers the standard options which are selectable in the Diagnostic mode. For more information, refer to "<u>Communication</u> Interface Modes" on page 108.

Print speed and timing

The fast speed of the printer requires the application to send data to the printer at least as fast as it is printed. This 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 will send 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 never be able to print at full speed. But if the application sends data at 19.2 K baud 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, slowing down the printer, regardless of the baud rate.

Char./Line	Lines/Receipt	Transmit Time: (9600 Baud)	Transmit Time: (19.2 KBaud)	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

The following table shows that with no delay between lines, the transmit time is much less than the print time, allowing the printer to print at full speed.

Char./Line	Lines/Receipt	Transmit Time: (9600 Baud)	Transmit Time: (19.2 KBaud)	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

Ethernet Interface (Option)

The Ethernet interface uses either 10BASE-t, 100BASE-TX protocol. The Ethernet version of the NCR 7199 Series printer offers the web configuration, which configure the Ethernet settings through a Web browser. For more information, refer to the "<u>Communication</u> <u>Interface Modes</u>" on page 108.

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 those responses by 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 those responses.

Port number	3000 (Default)

SNMP

SNMP is used by the SNMP manager to acquire the printer information and status from SNMP agent (Printer).

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

DHCP

DHCP is used by the DHCP client (Printer) to acquire IP address, Subnet mask, and Gateway address from the DHCP server.

)P/IP
2

HTTP

HTTP is used to configure the network setting by WEB Provision.

HTTP version	V1.1
Transport protocol	TCP/IP
Items to be able to configure	IP address
	Subnet mask
	Default Gateway
	DHCP
	DHCP address
	TCP max. connection
	Ethernet Physical LAN Speed
	LAN Real Time Command Protocol
	Link Down Timeout
	TCP idle Timeout
	TCP Port number
	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

LPR Socket

LPR Socket is TCP Communication port by LPR.

Port number	515
Maximum simultaneous sessions	1
Maximum simultaneous connections	1
Time out	6 seconds



The LPR socket settings is available in NCR 7199 Series ii only.

TCP socket communication

The communication procedure is designed as follows.

The TCP socket is used to send commands and data related to printing. And, it is also used to send and receive the batch status commands and its statuses.

When "Ethernet RTC Protocol" setting is TCP, it is used by sending and receiving of Real Time command,

- 1. Client PC connects to the TCP socket via 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.

UDP socket communication

The UDP socket is used by sending and receiving of Real Time Command.

This is effective in UDP port 3000 when "Ethernet RTC Protocol" setting is UDP.

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

Multiple connection

It is possible to connect with multiple clients at the same time. However, more than 7 connections will be rejected.

Connectors

This section provides information on the following NCR 7199 Series cable connectors:

- Power Cable
 - "Power cable connector" on the next page
- USB Cable
 - "USB cable connector" on page 174
 - "Connector pin assignment" on page 174
- RS-232C
 - "RS-232C communication connector pin assignments" on page 175
- Ethernet
 - "Ethernet connector" on page 176
 - "Connector pin assignment" on page 176
- Cash Drawer
 - "Cash drawer connector and pin assignments" on page 177

Power cable connector

The control cards received 24VDC +-10% power via 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:



USB cable connector

USB I/F is mounted on main card as default. There are 2 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.



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



Type A connector







CCP-71041

RS-232C communication connector pin assignments

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



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:



Cash drawer connector and pin assignments

The Cash drawer connector is located at the rear of the printer.

The Cash drawer connector is a 6-pin modular type connector with the following pin assignments:



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 7199 Series Thermal Receipt Station Printer Programmer's Guide (BCC5-0000-5170).

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, 7649–F301, and 7199 series 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
- Two Byte Receipt Font
- Two Byte Slip Font

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 .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.

P 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

Series i

Font Type	Print Station	File Name
ANK	Receipt	7199_SBCS_V2113.sfn*
Arabic Font	Receipt	
Japanese CP932	Receipt	7199_DBCS_V2206.sfn*
Korean CP949	Receipt	
Simple Chinese CP936	Receipt	
Traditional Chinese CP950	Receipt	

Series ii

Font Type	Print Station	File Name
ANK	Receipt	7199ii_SBCS_V3101.sfn*
Arabic Font	Receipt	
Japanese CP932	Receipt	7199ii_DBCS_V3201.sfn*
Extended Korean CP949	Receipt	
Simple Chinese CP936	Receipt	
Traditional Chinese + Hong Kong Supplementary Character Set [HKSCS] - CP950	Receipt	

P Note

- The noted font files are included on LPIN A370-0050-0000 or are available from the NCR website 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 10th Jan 2017. Based on the new modification, the filenames may change.
- 7199_SBCS_V2113.sfn and 7199ii_SBCS_V3101.sfn are inclusive of ANK and Arabic Font.
- 7199_DBCS_V2201.dfn and 7199ii_SBCS_V3201 are inclusive of Japanese CP932, Korean CP949, Simple Chinese CP936, and Traditional Chinese CP950.

Windows Command Line Firmware Update Utility

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.

P 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 3.1 ***

Thank you for using TseFlash Flash Memory Writer command line interface utility!

TseFlash [model] [download type] [COM] [parameter] [file] [check model(opt)] [pr int(opt)] [status(opt)] [ErrorTimeOut(opt)]

[model]--> Selections for the model:

[7167] [7167-x115] [7167-x035] [7167-5xx1/6xx1/7xx1] [7167-8011-9001] [7168] [7168-23x3/22x3/1223] [7168-5xx3/6xx3] [7197] [7197-5xx1/6xx1/7xx1/9xx1] [7198] [7649-F301] [K8] [K590] [7401-K592] [7402-K592] [7346-F306] [734x-F307/7125] [734X-F309] [SSC06-1ST/2st] [7199]

[download type] --> Selections for the download type:

/f - Download IMF program for [7168-23X3/22X3/1223], 7167-6321-9001.

/m - Download firmware main program.

/i - Download firmware IPL program.

/l - Download firmware IPL LAN program for 7197-5xx1/6xx1/7xx1/9xx1.

/a - Download ANK font or combined ANK & CP932 font

for 7167, 7167-X115, 7167-X035, 7167-5XX1/6XX1/7XX1, 7167-8011-9001, 7168, 7168-5XX3/6XX3, 7197, 7198, K590, 7402-

K592, 7342-F306.

/s - Download ASIAN font for 7197, K590, 7401-K592, 7402-K592, 7342-F306, 7346-F306.

/rs - Download Receipt ASIAN Font for 7167 & Receipt 2 Byte for 7168, 7168-5XX3/6XX3, 7198, 7167-5XX1/6XX1/7XX1, 7167-

8011-9001

/ss - Download Slip ASIAN font for 7167 & Slip 2 Byte for 7168, 71618-5xx3/6xx3, 7167-51/6xx1/7xx1, 7167-8011-9001

/sb - Download SBCS font for 734X-F307/7125, 734X-F309, 7649-F301, 7197-5XX1/6XX1/7XX1/9XX1, K8, SSC06-1ST/2ST, 7199

/db - Download DBCS font for 734X-F307/7125, 734X-F309, 7649-F301, 7197-5XX1/6XX1/7XX1/9XX1, SSC06-1ST/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. /WIFIWireless 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 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

SSC06-1ST/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):

(ONLY USED BY TseFlash.COM

/ErrorTimeOut=xxx (minimum=420) xxx is number of Seconds - limit 3600.

Information : Please use RS232 Interface, when switching

from ION <=> NON ION

If you fail to use the correct parameters, an error message will be displayed similar to the following error:

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 invokes the GUI interface shown in the next section and displays a progress bar indicator. The same is seen if you run the program 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

P Note

These are examples only. The firmware version varies based on the printer and as updates are provided.

To re-flash 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, execute the utility TSEFlash.ex*** to start the program. A window similar to the example below will appear on the screen.

P Note

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

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 inputting 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)/

Display Format of Configuration Setting Page

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

Top page

On the Top page, the *Show Configuration* button is displayed. when it is selected, the Ethernet Configuration setting page is displayed with the current configuration.

ONCR	
	Ethernet Configuration
	Please press below button to show current Ethernet Configuration.
	Show Configuration

Ethernet Configuration setting page

On Ethernet Configuration setting page, users can view or change the Ethernet configuration.

To change the Ethernet configuration, do the following:

- 1. Change the values by doing any of the following:
 - Enter a value in the corresponding text box.
 - Select an option from the drop-down list.
- 2. Select **SAVE CONFIGURATION** to save the new Ethernet configuration in the printer ROM.

Note

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

	Ethernet (Configuration
	Please set the configuration and	press SAVE CONFIGRATION button.
	FACTO	
	TCP/IP -	Configuration
	i ci /ii	configuration
[IP]		
IP Address	192 168 1 1	Value(0-255): Valid address
Subnet Mask	255 255 255 0	Value(0-255): Valid Mask
Default Gateway	0 0 0 0	Value(0-255): Valid address
DHCP	Enabled 👻	Select option
DHCP Request IP Address	0 0 0 0	Value(0-255): Valid address
[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)
[Ethernet]		
MAC Address	80-00-0e-4e-40-08	Unchangeable
Physical Layer	Auto 👻	Select option
	SNMP -	Configuration
[Community]		
Read Only	public	Unchangeable
Read/Write		Maximum 16 character
[SNMP Trap1]		
TRAP	Disabled 👻	Select option
IP Address	0 0 0 0	Value(0-255): Valid address
		Maximum 16 character
Community Name		
Community Name [SNMP Trap2]		
Community Name [SNMP Trap2] TRAP	Disabled 👻	Select option
Community Name [SNMP Trap2] TRAP IP Address	Disabled → 0 0 0 0	Select option Value(0-255): Valid address
Save Configuration message page

On the Save Configuration Message page, users are informed that the new Ethernet configuration is successfully saved. To apply the new configuration to the printer, select **RESET PRINTER**.

Ø NCR		
	Ethernet Configuration The configuration setting have been saved. Please reset printer to apply new setting. RESET PRINTER	Reset printer

Error Message page

On the Error Message page, users are informed that the new Ethernet configuration is not saved. Error details are also displayed. To check and retry changing values, select Top Page.

@NCR		
	Ethernet Configuration	
	Error : Invalid input value	
	The configuration saving is failed. Please check the input value.	
	Error : IP Address	
	Top Page A	

TCP/IP Setting

This section provides information on configuration parameters and default values for the

TCP/IP setting.

IP setting

[IP]					
IP Address	192	168	1	1	Value(0-255): Valid address
Subnet Mask	255	255	255	0	Value(0-255): Valid Mask
Default Gateway	0	0	0	0	Value(0-255): Valid address
DHCP	Enab	oled 👻			Select option
DHCP Request IP Address	0	0	0	0	Value(0-255): Valid address

Items	Default value	Detail
IP Address	192.168.1.1	Set Printer IP Address. This IP Address is effective when Get IP Address is Manual.
Subnet Mask	255.255.255.0	Set Printer Subnet Mask. This Subnet Mask Address is effective when Get IP Address is Manual.
Default Gateway	0.0.0.0	Set Printer Default Gateway. This Subnet Mask Address is effective when Get IP Address is Manual.
Get IP Address	Manual	Select method of acquiring IP Address. Selectable method is Manual or DHCP base on the Printer Dip Switch Setting. If Printer Dip Switch 1 OFF and Dip Switch 2 OFF, Manual mode is selected. If Printer Dip Switch 1 ON and Dip Switch 2 ON, DHCP mode is selected.
DHCP IP Address	0.0.0.0	Set requesting specific IP address to DHCP server. If set 0.0.0.0, DHCP sever allocates printer IP address automatically.



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.

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 fails to 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)

ltems	Default Value	Detail	
Number of TCP Connections	1	Select the maximum number hosts that can be connected. (1–6)	
Time of Time–out (for Link Down)	120 min	Set time of time–out for link down. (0–120 min). When this value is 0, Time–out disables.	
Time of Time—out (for Idle)	2 min	Set time of time–out for Idle. (0–120 min). When this value is 0, Time–out disables.	
Real Time Command	ТСР	Select protocol of Real Time command. (TCP/UDP)	
TCP port	9100	Set port number of TCP RAW. This port number range is 1024 to 65535. When "Real Time Command" setting is TCP, it is used by sending and receiving of Real Time Command.	
UDP port	3000	Set port number of UDP command. This port number range is 1024 to 65535. This is effective when "Real Time Command" setting is UDP.	

Other Ethernet setting

[Ethernet]			
MAC Address	80-00-0e-4e-40-03	Unchangeable	
Physical Layer	Auto	Select option	

ltems	Default value	Detail
MAC Address		Show MAC Address of the printer Ethernet interface. This is the unique value for each Ethernet interface and show only.
Physical Layer	Auto	Select connection Speed and Duplex. (Auto / 10Mbps Half/10 Mbps Full / 100Mbps Half/ 100Mbps Full)

SNMP Setting

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

			5	SNMP	- Configuration
[Community]					
Read Only	publi	с			Unchangeable
Read/Write					Maximum 16 character
[SNMP Trap1]					
TRAP	Dis	abled 🔻			Select option
IP Address	0	0	0	0	Value(0-255): Valid address
Community Name					Maximum 16 character
[SNMP Trap2]					
TRAP	Dis	abled 🔻			Select option
IP Address	0	0	0	0	Value(0-255): Valid address
Community Name					Maximum 16 character
				SAV	CONFIGURATION
			_		

SNMP Community setting

ltems	Default value	Detail
Read Only	public	Show SNMP community read only name. Maximum length is 16 characters.
Read/Write		Set SNMP community read-write name. Maximum length is 16 characters.

SNMP IP Trap1 setting

Items	Default value	Detail
TRAP	Disable	Select whether SNMP TRAP is "Enable" or "Disable".
Address	0.0.0.0	Set address of host that receives SNMP TRAP.
Community Name		Set SNMP TRAP community name. Maximum length is 16 characters.

SNMP IP Trap2 setting

ltems	Default value	Detail
TRAP	Disable	Select whether SNMP TRAP is "Enable" or "Disable".
Address	0.0.0.0	Set address of host that receives SNMP TRAP.
Community Name		Set SNMP TRAP community name. Maximum length is 16 characters.

Printing Specifications

Print head	 Fixed 576 Print Elements Direct Thermal Fixed Head Line of Dots
Character Cell	 Standard: 13 x 24 Dots Compressed: 10 x 24 Dots
Character Size	0.0525-inch wide by 0.092-inch high
Character Spacing	15.25 characters per inch (horizontal)
Character Pitch	15.6 characters per inch (Standard)20.3 characters per inch (Compressed)
Columns (maximum)	 For 80-mm paper: 44 Columns (Standard) 56 Columns (Compressed) For 58-mm paper: 32 Columns (Standard) 42 Columns (Compressed)
Print Mode	Standard, Compressed, Double High, Double Wide, Upside Down, Rotated, Underline, Scalable, Bold, Superscript, Italic, Subscript

Resident Fonts	 For Series i and Series ii: Code Page 437, 850, 852, 860, 863, 865, 858, 866, 1252, 1256, Katakana *Unicode support (UTF–16) For Series ii only: Code Page 855, 862, 864, 874, 928, 737, 1250, 1251, 1254, 1255, Hungary, Romania, 932, 936, 949, 950
Speed	 Series i: 355.6 mm/sec Series ii: 406 mm/sec
Print Order	Descending
Line Spacing	 7.52 lines per inch (default) 8.47, 8.13, 7.81, 7.25, 7.00, 5.98 lines per inch and variable lines per inch.
Print Zone	2.83 inches maximum
Noise	57 dBA Sound Pressure (ISO 7779)
ECO	Paper reduction, Power reduction
Other	No Reverse Paper Feed

Power Requirements

The printer receives power either from a host system (integrated) or from a separate 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

For Series i only:

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

For Series ii only:

- NCR Terminal Power–Low Mode (Term Pwr–Low): Maximum allowable printing cycle power consumption is 55W.
- NCR Terminal Power-High Mode (Term Pwr-High): Maximum allowable printing cycle power consumption is 55W.
- NCR External Power Supply Mode (NCR 60W Ext Pwr): Maximum allowable printing cycle power consumption is 60W.

Power from host

The host computer must provide a +24V supply to the printer. Voltage variation in the 24V line may be within 21.6 and 26.4 volts. Surge protection must be provided. To do this, place a 3.2 Ampere time delay fuse on the +24V line.

Power from external power supply

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

For Series i:

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

For Series ii:

• When NCR external power supply is used, select (NCR Ext Pwr) mode.

Physical and Operating Environment

Temperature and humidity

	Temperature	Humidity				
Operating	5 to 50°C (41 to 122°F)	5% to 90%				
Storage	–10 to 55°C (14 to 131°F)	10% to 90%				
Transit	−40 to 60°C (−40 to 140°F)	5% to 95%				
Condensation	Condensation may occur when the printe shipment. The printer's design permits op room temperature.	r is moved from cold to warm areas after peration after drying out and stabilizing at				

Dimensions and weight



CCP-83544

Length	163.5 mm (6.44 in.)
Width	132.0 mm (5.20 in.)
Height	131.0 mm (5.16 in.)
Weight	1.1 kg (2.42 lb)

Weight (Including paper roll)	1.56 kg (2.53 lb)
Weight (Including option interface and paper roll)	1.60 kg (3.53 lb)

Re—flashing the Printer Firmware

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

P Note

For the detailed procedure, refer to the NCR Printer Flash Utility Owners Guide from the NCR website, https://www5.ncr.com/support/support_drivers_ patches.asp?Class=External\Peripherals\Printer\FlashUtility\display.

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 website: <u>https://www5.ncr.com/support/support_drivers_</u> <u>patches.asp?Class=External\Peripherals\Printer\LeanReceiptUtility\display.</u>

Print Characteristics

This section provides the following information:

- "Character Size" on the next page
- "Print Zones" on page 210

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).



Compressed pitch uses fewer dots horizontally than standard pitch.

Standard pitch





CCP-71057

Compressed pitch



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).



CCP-71054

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).



CCP-71053

Character Sets

The following pages show the character sets.

- For Series i and Series ii:
 - PC Code Page 437 (US English)
 - ° PC Code Page 737 (DOS Greek)
 - PC Code Page 850 (Multilingual)
 - ° PC Code Page 852 (Slavic)
 - PC Code Page 855 (IBM Cyrillic)
 - PC Code Page 858 (with Euro symbol)
 - PC Code Page 860 (DOS 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 (Enhanced Thai)
 - PC Code Page 932 (Windows-31J)
 - PC Code Page 936 (Simplified Chinese)
 - PC Code Page 949 (Korean)
 - ° PC Code Page 950 (Traditional Chinese)
 - ° PC Code Page 1250 (Windows Eastern European)
 - PC Code Page 1251 (Windows Cyrillic)
 - PC Code Page 1252 (Windows Latin #1)
 - PC Code Page 1256 (Arabic) Contextual
 - PC Code Page 1256 (Arabic) Fixed

- ° PC Code Page Hungary
- ° PC Code Page Katakana
- PC Code Page Romania
- For Series ii only:
 - PC Code Page 1254 (Windows Turkish)
 - ° PC Code Page 1255 (Windows Hebrew)
 - ° PC Code Page 950 (HKSCS)

Code Page 437, 850, 852, and 858

Code Page 437.

Code Page 850.

23456789ABCDEF 2 3 4 5 6 7 8 9 A B C D E F 00 Ц 00 0 pC É á - L & O -0 р рÇ É á L α ≡ 8 Ρ 1 ŝ, 01 A Q í 8 Ŧ Ð B± 01 A T B± ! 1 ü æ 0 ü æ í ₹ a q ļ a q 11 ... 2 В В Æ # 02 2 R r Æ Ê 02 R b r ė Ó т Γ ≥ b é Ó # т Ô π 3 C Ë 3 С # S ô ł 03 # S С å ô L π ≤ 03 C s â ú ŀ 0 s ú ł D D \$ 4 \$ 4 Т 04 T Σ 04 t ă È õ 1 d t ä Ö ñ -F d Ö ñ -EF % 5 Ε 05 % 5 Ñ 05 Ñ U Ò Õĝ U à Ò Ø e à Á ŧ 1 е u 4 F J u 6 6 F 8 a 06 8 ٧ f V à û a ╢ 06 ۷ f ٧ â û Å à Í μ÷ k H ÷ π İ ٠ 7 07 7 G 0 G 0 Ã 07 W ŀ # W ù À þ g W ç ů τ 2 g W ç n ۰ Н L Ϊ 08 (8 Н Xh ê ÿ Ċ L ŧ φ 08 (8 Xh х ê ÿ Ċ ٥ Þ х ۹ Ι 9 Ι γ 09 9 Y ٦ 09) Ö ł J θ) í Ö ۱ 4 Ú i ë ٠ У e У -IF. 0A : J Z j è Ü 1 4 Ω 0A × : J Ζ j z e U I ĩ × z -. Ū r [Κ 支 δ Κ [Ù 1 0B + k { ï ¢ 0B ł ¥ : ٩Ì 1 ÷ ; k 1 ø ĩ ĩř L 1 I î £ 4 1 ŀ n 00 L 1 î £ 1 00 / I ł < ω < / ý , 1 11 ¥ 2 0D 2 OD Ξ М] m } 1 L φ = Μ 1 } 1 Ø i ¢ ł Ý -= m = > N ٨ Ă Pt « 4 4 0E > N ٨ Ä # Ì 0E n ı n × ĸ ¥ 8 . f O D A Ŧ 0F ? 0 ODA 0F / ? 0 >> ٦ • 0 1 f 22 ٦ п Code Page 852. Code Page 858. 23456789ABCDEF 23456789ABCDEF 00 É ----L 0 Ρ Ç á đ 0 р 00 0 Ρ рÇ ----8 É á L 50 -1 Ŧ Ð 01 A Q Ĺ í B ! a qû 01 1 А Q * ۲ 1 T ĐB± a q ü æ 2 В R 1 # Ď • b r é Ó 2 02 Ô 02 BRb Æ т é # É r Ó Ô -1 3 C Ŝ Ë S Ħ á Ń 3 03 CS Ô ú ŀ 03 # С С S á Ô ú Ë Ò 4 D Т á 04 \$ A 4 ń 4 DEF d t ä Ö -04 \$ Т 1 d t a ö ñ 4 È õ -Ε 5 ąż 05 % Ų е ů Ĺ A ÷ Ńńŝ 05 % 5 u U е à Ò Ň € ð § u A ÷ 8 6 F i 6 ۷ Å f ć Å Í Ś 06 V ÷ 06 8 ٧ f ٧ â û a Å ã Í H ÷ Ė 07 7 G ₩ g W ç Ś Ż ă İ Ś 7 G W 0 07 İ g C ù À Ã w þ Ę è Ş L è 8 Н ł Ś Ŕ 08 (Х h х 8 08 (н Х h ê ÿ ċ Û L Ï Þ х 9 Ι Y ٦ 09) i ë Ö ę Ú У 9 I Y ٦ P 09) i 1 У e Ö 8 Ú F J jző Ü ł Щ ŕ Ζ -0A : × г 0A J Ζ j × : z è Ü 1 Ш Ů ź ŨŨ Κ [t 0B ; k { Ő īī Ε + ĩ . 0B Κ 1 + k { ï ø 之 Ù จ īř t J 1 î Ċ ŀ ý 0C L 1 Ŕ < / . 00 L 1 1 £ 4 1 **|**⊧ з < / 1 Ý Ź M 1 Ł ş Ż Ýř = } Ţ 1 2 0D m = 0D = М -m } 1 Ø i ¢ Ý = 1 # • Ä Ů ۸ **x** « ż ţ . 0E > N n > N ۸ İ 0E n A × 46 ¥ 4 .

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Code Page 860, 862, 863, and 864

Code Page 860.

Code Page 862

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Code page 932-87

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Code page 932-8A

Code page 932-88



Code page 932-8C

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Code page 932-8D

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匠升召哨商唱賞奨妾娼宵将小

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沼消涉湘焼魚照症省硝礁祥称章笑粧

紹肖菖蒂蕉衝裳訟証詔詳象賞醤鉦錉

鐘障鞘上丈丞乗冗剰城場壤娘常情擾

 40 加度會和普通服閥架果棘梁政照有高 50 訓群軍郡卦袈祁係傾刑兄啓圭珪型契 60 形径惠慶慧憩揭携敬景桂溪畦稽系経 70 継戰野茎荊蛍計詣警軽預鶏芸迎鯨 80 劇戰擊激隊桁傑欠決潔穴結血訣月件 90 儉倦健兼券剣喧團堅嫌違憲懸拳捲檢 40 権牽犬献研硯編県肩見謙賢軒這纏険 80 顕験鹸元原厳幻弦減源玄現絃舷言諺 60 限乎個古呼固姑孤己庫弧戸故枯湖孤 80 糊袴股胡菰虎誇踌鈷雇顧鼓五互伍午 60 具吾娯後御悟梧檎瑚碁語誤護颱乞鯹 70 交佼侯侯倖光公功効勾厚口向 	 后喉坑垢好孔孝宏上巧巷莘仏庚康弘 恒慌抗拘控攻昂晃更杭校梗構江洪浩 灌溝甲聖硬稿糠紅紘紋綱耕考肯脑腔 育航荒行衛講貢購郊醇鉱砿鋼閣降 項香高鴻剛劫号合埲持濠豪麗麹克刻 告国穀酷鵠黑獄瀌腰甑忽惚骨狛込此 40 頃今困坤墾婚恨懸香昆根檑混痕紺良 魂些佐叉唆嵯左差查沙邊砂詐鎖裟坐 0 逐裡價碎皆奈斎細菜裁截際剤在材罪 10 財冴坂阪堺榊肴咲崎埼磅鷺作削咋擔 10 時朔柵窄策索錯桜鮭笹匙冊刷
Code page 932-8E	Code page 932-8F
 察拶摄擦札殺薩難阜鯖捌錆鮫皿晒三 傘参山惨撒散桟燦珊産算纂蚕讚賛酸 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 死氏腳祉私糸紙紫肢脂至視詞詩試誌 	40 宗就州修愁拾洲秀秋終續習臭舟蒐索 50 襲響蹴輯週首酬集龍什住充十従戎柔 60 汁渋獣縦重銃叔夙宿淑祝編黨塾熟出 70 術述俊峻春曉竣舜駿准循旬櫃殉淳 80 準潤盾純巡導醇順処初所暑曙渚庶絹 90 零書章薛諾助叙女序後船猢除價僅變

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Code page 932-90

Code page 932-91



Code page 932-92

Code page 932-93

40 50 60 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	叩但達辰奪脱巽竪辿樃谷狸鱈槫誰丹 単嘆坦抯探旦歎淡湛炭短端簞綻耽胆 蛋誕鍛団壇弾断喛憻段男談値知地弛 恥智池痴稚置致蜘遲馳築畜竹筑蓄 逐秩窒茶媠着中仲宙忠抽昼柱注虫衷 註酎鋳駐樗瀦猪荢著貯丁兆凋喋竉帖 帳庁弔張彫徵懲挑轠朝潮榺町聎聽脹 腸螇諌津墜椎槌追鑓痛通塜栂掴槻佃 濆柘辻蔦綴鍔椿潰坪壼嬬紬爪吊約鷧 亭低停偵剃貞呈堤定帝底庭廷弟悌抵 坍堤桳汀硡禉釋綷軧訂跨磅溤	40 50 60 70 80 90 80 80 00 00 00	邸鄭釘鼎泥摘擢敵滴的笛通鎬湖哲衛 撤散迭鉄典墳天展店添纏甜貼転蘔点 伝殿澱田電兎吐堵塗妬屠徒斗杜渡登 蒐賭途都皶砥砺努度土奴怒倒党冬 凍刀唐塔塘套宕島嶋愼投搭東桃梼棟 盗淘湯濟灯燈当痘祷等答簡糖統到重 黨藤討謄豆踏逃透鐙陶頭騰關働動同 堂導憧撞洞瞳童胴葡道鋼峠鴇匶得德 涜特督禿篤鶱独読栃橡凸突椴届鳶苔 育酉瀞噸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鬀 汝二 尼弐迩忥瞩肉虹廿日乳入
FO	挺提梯汀碇禎程締艇訂諦蹄逓	FO	汝二尼弐迩匂賑肉虹廿日乳入

Code page 932-94

Code page 932-95

40	如尿韮任妊忍認濡禰祢寧葱猫熱年念	40	鼻柊稗匹疋髭彦膝菱肘弼必畢筆逼桧
50	捻撚燃粘乃廼之埜嚢悩濃納能脳膿農	50	姬媛紐百謬俵彪標氷漂瓢票表評豹廟
60	覗蚤巴把播覇 杷波派琶破婆罵芭馬俳	60	描病秒苗貓鋲蒜蛭鰭品彬斌浜瀨貧賓
70	廃拝排敗杯盃牌背肺輩配倍培媒梅	70	頻敏瓶不付埠夫婦富富布府怖扶敷
80	뵊煤狽買売賠隌遦蝿秤矧萩伯剥博拍	80	斧普浮父符腐屬芙譜負賦赴阜附侮撫
90	柏泊白箔粕舶薄迫曝漠爆縛莫駁麦函	90	武舞葡蕪部封楓風蕢蕗伏副復幅服福
AO	箱硲箸肇筈植幡肌畑畠八鉢溌発醗髪	AO	腹裡覆淵弗払沸仏物鮒分吻噴墳憤扮
B0	伐罰抜筏閥鳩噺塙蛤隼伴判半反叛帆	B0	焚富粉黄紛雰文閒丙併兵塀幣平弊柄
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Code page 932-96

Code page 932-97



Code page 932-98

Code page 932-99

50 60 70	湦湦鍒叾簤懎炉觡蹎鳻艻捿郮竎朙憣 榔浪漏牢狼篭老璧蝋郎六鷺禄肋録讑 倭和話歪賄脇惑枠鶑亙亘鮳詫藁蕨椀 湾碗腕	40 50 60 70	贫優傳僂僖僞徺惛惜僅價價儉儉傷儂態 旝儔儚倡儺똋儲儻儿兀兒兌兔鼓競兩 兪兮貧冂囘册冉冏宥冓冕「冤冦家惡 幕>決冱冲冰况冽涸凉凛几處凩凭
90 A0 B0 C0 D0 E0 F0	弌 丐丕个丱丶丼丿乂乖乘亂」豫事舒式 于亞亟一元京毫置从仍仄仆仂仗仞仭 仟价伉佚估佛向佗佇佶侈侏侘佻佩佰 侑佯來侖儘俔俟俎俘悗俑俚俐俤庫倚 倨倔倪倥倅伜俶倡倩俥侓俯們倆愝假 會偕偐偈做偖愡偸傀傚傅傴憿	80 90 A0 B0 C0 D0 E0 F0	凰凵凾刄刋刾刎刧刪刮刳刹剏剄剋剌 剞剔剪削劋剳剿剽劍劔劒剱劈劑辨部 劬劭劼券勁勍勗勞動勤飭勤勳勵勤 匆匈甸匍匐匏七匚匣匯匱匳匚區卆卅 丗卉卍準卞卩卮夘卻卷厂厖厠厚厥厮 厰厶參篡雙曼曼燮叮叨叭叺吁吽呀听 吭吼吮吶吩咅呡哧呵咎呟呱呷呰咒呷 咀呶咄咐咆哇髣咸咥咬哄哈咨

Code page 932-9A

Code page 932-9B



Code page 932-9C

Code page 932-9D

40	廖廣廝廚廛廢廡廨廩虛廱蹗應廴廸廾	40	憂戡截戳戰載戰贏扎扞扣扛扠扨扼抂
50	弃弉彝彝七弑弖弩弭弸彁彈彊骨弯旦	50	抉找抒抓抖拔拤抔拗拑抻 撃拿拆擔 拈
60	彖彗 彙彡彭彳彷徃徂彿徊很徑徇從徙	60	拜拌拊拂拇抛拉挌拮拱挧挂挈拯拵捐
70	徘徕徨徭徼付忻忤忸忱忝惠忿怡恠	70	抰捍搜捏掖掎掀 掫捶掣掏掉掟掵捫
80	怙恂怩怎怱怚怕怫怦快怺恚恁恪恷恟	80	捩搸擶揀揆揣揉插揶揄揕搴搆搓攔搷
90	協恆恍恣恃恤恂恬烱恙悁悍惧悃悚悄	90	灄搗搨搏摧鞪摶摎攪燍撓撥撩赟讈 攗
AO	悛悖悗悒悧悋惡悸惠惓悴忰懤惆悵惘	AO	擒擅擇攎擘擋擱擧舉擠擡抬搹擯攬擫
B0	慍愕愆惶惷愀惴惺愃惚惻惱憨愎慗愾	B0	擴擲攝攀擽攘攜攢攤攣攫攴攵攷收攸
CO	慹愧慊愿愼覫愴博 慂憟戄戂慻慙慚慫	CO	畋效敖敕 敍敘敝敝敝敼數數整變射斟斫
DO	闣慯 慥慱懄 慝慓慵惷慭憇憬憔憚憊懘	DO	斷旃旆旁旄旌旒旛旙无旡旱杲昊昃旻
E0	憦憮慞愯應懁懈勊懆憺戀罹 憘燸 懣 慃	E0	杳昵昶昴昜昙晄晉雿睎罿晤晧륝晟晢
F0	懺懴懿懽懼懾戀戈戉戍戌戔戛	FO	晰暃曐暎暉暄畼暝曁讍曉暾睯

Code page 932-9E

Code page 932-9F

40	瞱暸瞹囄矌昿蓭姭曰曵曷胐朖朞朦朧	40	檗糵檻櫃櫂檸樍懞櫞櫑檪檪櫊櫪櫻 欅
50	霸术束杂权朸朷杆杞杠杙杣杤枉杰枩	50	糵橊欒欖懞欟欬欷盜欹飮歇歃歉歐歗
60	杼杪枌枋枦枡枅枷柯枂柬枳柩栒柤柞	60	歔歛歟歡歸歹歿殀殄殃殍殘殕殞殤殪
70	标柢柮枹柎柆柧檜栞框栩桀桍栲桎	70	殫殯殲殱殳殷殼毆毋毓毟毬臺毳毯
80	梳栫桙档桷桿梟梏梭梔條梛梃構梹桴	80	塵氈氓气氛氤氣汞汕汢汪沂沍沚沁沛
90	梵梠梺椏梎桾椁棊椈棘椢椦棡椌棍棔	90	汾汨汳沒沐泄泱泓沽泗泅泝沮沱沾沺
AO	嶘棕椶椒椄螷棣椥棹筙棯椨椪椚椣椡	AO	泛泯泙泪洟衍洶洫浛洸洙洵洳洒洌浣
B0	棆楹眥楜楸橨楔楾楮樭楴桻楙椰楡楞	BO	涓浤浚浹浙涎涕濤涅淹渕渊涵淇淦涸
CO	楝榁楪榲 榮槐榿禞槓榾槎寨槊槝櫑槃	CO	淆 淬淞淌淨淒淅淺淙淤淕淪淮渭湮渮
DO	榧樮 槫榠榜榕榴槞槨樂橬槿橲椲槲槧	DO	渙湲湟渾渣湫渫湶湍渟湃渺湎渤滿渝
E0	樅櫰 櫮槭樔槫樊樒櫁檨樓敿樌橲樶橸	EO	游溂溪溘滉潿滓溽溯滄溲滔滕溏漙滂
FO	橘 橢 怚 橦橈模樢憈檍檠橵檢檣	F0	瀷顡凞灌灛滸滾漿湪潄滯 漲滌

Code page 932-E0

Code page 932-E1

<u>溴涺潸澁澀潯濳潛潭澂</u>; 40 清; 50 湿滑混 60 濾濾油清滞濾過 70 炙炒炯烱炬炸炳炮烟烋剂 80 焙炝熙熙煦煢煌煖煬熹 煝 90 煝 愘燗稁嬂爙燩壒爎燡朡爟熢 AO 爐爛器爭爬爰爲爻爼爿牀牆 爆發 管播犹豺狃狆狄狎狒 B0 狙撃 CO 狡狭狷体猗猊癗狷猝猴猯猩猥猾 貉 DO 题项 犬**獗猞獨獰獸獵獻獺珈**玳珎玻珀 E0 <u>珇폛珞璢謉瑯琥珸琲琺瑕</u>琿瑟**璫**瑁瑜 FO

40 瓠瓣肚瓩釜瓲瓰瓱瓸瓷甄甃甅甌 50 些角**甼畄畍畊畉畛畆**畚畩畤 60 龗疇畴叠疉鋻疔疚疝疥疣痂 70 疳 疱痍痊痒瘅痣痞痾 泪缘 80 **鋖痳瘇摥瘷**盨攎脊熽瘢籒彈 邇 90 癙痰海癜運瀉浸漆輝積瘰癬癰癰 運力 AO B0 鞁 顤*虘濐蘯跲*眈眇眄眩 CO 眼 〔皆趾昧拳眸睇睚睨睫睛瞑〗 8 Bi DO 瞎 (寛晔蹣醶庸曖瞿憸瞽瞻康髪晶辉 矜矣矮矼砌砒礦砠礪硅碎硴碆硼碚磉 E0 **碣碵碪礷磑磆磋磔碾碼磅舙礊** F0

Code page 932-E2

Code page 932-E3

40	磧磚磽磴礇礒礑礙攀礫祀祠祗崇祚祕	40	紂紜紕紊絅絋紥紲紿紵絆舽絖紤絲絨
50	祓祺滌楔禝蘠齋襌禮獽禹禺秉 秕秧秬	50	絮絏絣緾綉 慵綏絽綛綺綮綣綵纗綽綫
60	秡秣稈稍稘稙稠稟禀稱稻稾稷穃穗穉	60	總綱綯緜稐綟綰縅曟緤緞殾緲鱪縅縊
70	穑穢穩槞穬穹穽窈窗窕窘篟窩竈窰	70	縣縡縒縱縟縎縋黱繆繦縻縵縹緿縷
80	賽竅頭窿邃寶竊竍竏竕竓站竚竝竡竢	80	綶縺繧鵗糤 繞繙耫縪繪繩纎癵艩緕纃
90	竦竭竰笂笏笊笆笳笘笙答笵笨笶筺筺	90	辬繿橗耫穦纒纐纓穞纎纎蘣軉 缸鈌謼
AO	笄筍笋筌筅筵筥筴筧筰莜荿筵箝闔箟	AO	罌盝趢 讙网罕罔罘罟買菴罩罧罸羂羆
B0	箍箜箚箋箒箏筝箙簠篂傼篏臧餈檃 韴	BO	靁羂 覉芜羔羞羝羚羣羯羲羹羮羵鼁虀
CO	簔簔篦篥籠簧籏簓篳蓬簗篓篶簀青	CO	翅翆翊翕翔翡翦翩韜翹髃耆耄耋耒耘
DO	簞藂簘簽等藍數旗擋朦朧賴韱戱畣巃	DO	耙耜耡羇耿耻聊聆聒聘獶聟聢聨瑩聲
EO	籵粃粐臱粭粢粫粡粨稪 粲粱根桦粽杹	EO	贃櫜聹聽聿肄蕼肅肛肓肚肭冐肬胛胥
FÓ	糅糂糘橌糜糢霌糥櫔糴鞰糺紆	FO	胙貾寈胚牉脉鴅胱脛脩脣脯膔

Code page 932-E4

Code page 932-E5

40	啃屄屑胏肦肦肦臒瘩腄礛阦膃胇腸熮省 謽瞯燯篎哰볕铽暛魌踚藸脻뢯躄產臉	40	兿繠歮獊澅驵會蠞魝臰瀮醟觪敳檢辟 鴶蒂萪苝葃濋齌菗鴶蓻奫酟詴蕏萚琏
60	膅臑臙黱臈臚膱毊臧鐜臻臾舁舂舅與	60	湏藚棭 茾 肙喴韲岲耣嵡枽箥鴲榲檽覣 蕔蘛藘藣蘚蕛蘔虍乕虔號嶎虱蚓蚣訔
70	舊舍舐餔舩舫舸舳艀艙朡艝艚艙艤	70	蚪蚋蚌魽蚯蛄蛆蚰蛉鳙蚫蛔蛞蝵蛬
80	艬靡艢艠舮齦訵艸艾芍芒芫芟犒 芬以 苦苔蒼苔茗茶葉芬芬芬芬芬芬芬芬芬	80	蛟銖蛯蜒蜆蜈蜀優蛻蜑蜉蜍鲬鯏鰑蜿
AO	自同再且多母母儿何平包卯自末立因 商基茲英葡茄麦茶茯芬麦菇菇蔬麦香	90	竞喌獙鴠`蚯씲猏渆喌霘 꽸 埕銊蕿鴙臹 峼崰碯繿岹絾籺婇蚉娒媘踓憼艶鹷茟
80	荚莖茣莎莇莊荼莵荳荵蔳莉莨菴萓菫	BO	<i>뛗쪠쪠콭쟀뀄옱和둸杵졞ય툍</i> 퓔迼춓 턪螻蜺퀉썤뻀嬓혏뼗蟷蠎蟒鍐蠵蝑룿
CO	菎菽萃菘齹莦菷萇菠菲萍萢萠莽萸薓	CO	食桑蠶素素變紐如何衙衛衛衫袁衾衰
DO	林設科咢뫜冠軍胡勇段帝皅保局約施 芨茖芙菩菪苮茨砻葫莜葿菫蒔蔷莱药	DO	祖衽袵衲袂谷祖称柏祥袍委袭桂袱裃
FO	向翡翠末高均度首請作安架係起方示 若董茂基菲菇芬葡萄菇整整義董	EO	忊蕑 炃 悋阪褁忊偙秗恽僀懹仹儞恘漀 澞溤蝐媥澏窼窽遻繣漝湽遌礕
		10	

Code page 932-E6 Code page 932-E7 40 襙襤襭襪襯襴襷襾罺覈覊覓覘覡鋧鋧 40 蹇蹉蹌蹐饀蹙鏦蹠踪蹣蹕镢鑏蹼鐰躇 50 剴覾覲**爂覽**覿飌觚觜觝觧觴觸訃訖訐 50 **遌燲躋踳躀躑躔躢躏**灄躬躰軆躱躾軅 訂批設訪詞訪詛詒詆豐該詭詬詢誅誂 60 60 軈軋軛燛軼軻軫軾輊輅輕輒輙輓輜輟 70 誄韸揻誑誥誦誚妪諄諍諂諚諌譮諧 70 轥輌騺轃轀鞺轅糓輾謵轉轆轆躵轠 80 諤諱謔誼渾諷講談調臺論諡讒讒謗謠 80 **轢轣蠦搴辟辣좖辮辷迚迥迢迪迯遦**迴 90 謳靮鏧謪謢謨譁蟕譏譎證譄譛睅誜譟 90 A0 **뫟譯譃譽讀讌懺讒讓讖讙讚**谺豁谿豈 AO 遐遑道道道逾速温滤遨避逸随遲邂遽 B0 <u>豌豎藚</u>豕籇藸豸豺貂貉貅貃**奲**駾貔豼 80 邁遨邊邊運邨邯邸邵郢郤扈郛鄂鄒鄙 CO 貘眬貭貪貽貲薍貮貶藚筫賤夁虋賽賺 CO ^鄻獜靣酖酘魽酥酩酳酲醋醉醂醢**醫**醯 DO **賻贄贅贊薋颪膅鶗齌脠賍瞐臔**赮赭赱 DO **醦稶醴醺靍繠粙釋釐**釖釟釡釛釼釵釶 E0 赳趁趙跂趾趺跏跚跖跌跛跋跪踅跟跣 E0 鈞釿鈔鈬鈕鈑鉞鉗鉅鉉鉤旕銕鈿鉋鉐 FO 衜絑絟絬鉫鋏銹鋿鋩錏鋺鍄錭

F0 踢陳踉跿踝踞踐踟蹂踵踰踴蹊

Code page 932-E8

Code page 932-E9



Code page 932-EA

Code page 932-ED

40	发息"武法"角鸟目鸟巫鸟目鸟世鸟鸟鸟来鸟来鸟来鸟在鸟鸟鸟飞流"的鸟	40	續變鍈銈蓜俉炻昱棈鋹曻彅丨仡仼伀
50	奚烏之烏 最烏祿烏 清烏黃烏真烏孟烏 致於 白烏 戴烏 美烏 蓋烏 發舟 ()號 裂鳥	50	纾伹佖侒侊侚侔俍偀倢俿倞偆偰偂傔
60	鸛 憱卥鹹蠞麁麆 <mark>櫜</mark> 鑗獻麕 贀 麝麥麮麸	60	個做充兤宜洽凬刕劜劦勀勛匀匇匤卲
70	麪麭靡黌黎黏黐黔黜點黝黠騡黨黯	70	厓鳫叝蓃咜咊咩哿喆坙坥垬埈埇绤
80	鰴黶黷黹黺黼黽鼇躨皷撀鼡鴲鼾賨苖	80	塜增墲夋奓奛奤奣妤妺孖寀甯寘寬寮
90	齔齣齟齠齡魌齧誥齪鯹譑鼮龕錱龠堯	90	岦岺峵崧嵓﨑攆嵭嶸嶹巐弡弴彧德忞
AO	槇돏瑤凜煕	AO	恝悅悊惞慯慍憛愲愷愰憘戓抦揵摠攂
B0		BO	擎教昀昕昂昉昮昞昤睆晗晙睛皙睶暠
C0		CO	瞕瞦曺朎鈅杦枻桒柀栁桄棏榯楨橕榘
DO		DO	槢樰橫橆橳橾櫢櫤毖氿汜沆汯泚洄涇
E0		E0	浯涖涬淏淸淲淼渹湜渧渼溿澈漸濵瀅
F0		F0	滽蘔炅炫焏焄煜煅煇凞燁燾犱

Code page 932-EE	Code page 932-FA
40 犹猤猪獷玽珉珖珣珒琇珵琦琪琩琮瑢	40 i ii iii iv > vi vii viii ix x ∨ ∨
50 璉璟甁畯皂嵪皞皛皦益睆劯砡硎硤磉	50 V V X X - V ▼▼ #No.Tel : 精製鍈銈
60 礰亂神祥禔褔禛竑竧靖竫簥精絈絮綷	60 蓜倍炻昱棈鋹曻彅 仡仼伀伃伹佖侒
70 綠緒檜藭羨羽茁茡荿菇菶葈蓢兿蕙	70 侊侚侔俍偀偐俿倞偆偰偂傔僩僘兊
80 董薦薰蘵蛀蟔裵訒訷詹誧闍趧諸諶譓	80 酱宜冾凬刕劜劦勀勛匀匇匤卲厓鳫级
90 謎賰賴鬒赶赳軏辸逸遑郞都鄉鄧釚剑	90 登咜咊咩哿趌巠坥垬埈埇绤塜增墲夋
A0 釞釭髮釤釥鈆鈐鈊鈺鉀鈼鉎鉙鉑鈹鉧	A0 奓奛奝奣妤妹孖栾甯寘寬亲岦岺峵崧
80 銧鉷鉸鋧鋗鋙鋐踍鋕誫鋓錥錡鋻鏲錞	80 嵓﨑穰嵭嶸嬦竆弡弴彧德忞恝悅悊惞
60 媧錝錂鍰鍗鎤鏆鏞鏸鐱鑀鐗閒墬鴎隭	C0 惕愠惲愑愯愰慒戓抦揵摠撝鞪教昀昕
80 属臔寷龗靍靏靑靕顗顥飯飼餧館馞驖	D0 昂昉昮昞昤晥晗晙晴暂暙暠暲暿夁朎
60 高髜魵魲鮏鮱鯪鱫鵰鵫窇蟡罴	E0 朗杦枻桒柀柳桄棏槆楨榉榘槢樰橫橆
60 ⅡⅢⅣ > Ⅵ Ⅶ Ⅲ IX × ¬ ↓ ▼▼	F0 欂橾樹璇氿氾沆汯泚洄涇浯

Code page 932-FB

Code page 932-FC

50

60

70

80

90

AO

B0

CO

DO

E0

F0

涖涬淏淸淲淼渹湜渧渼溿澈澵濵瀅瀇 40 50 瀨炅炫焏霮煜燬燂凞燁燾犱犾猤猪獖 玽珉珖珣瑋琇珵琦琪琩琮瑢璉璟甁畯 60 70 皂皜皞蠯皦益睆劯砡硎硤碽礰礼神 祥禔福禛竑竧靖竫箞精絈絜綷縿緖繒 80 鎼羨羽茁荢荿菇菶葈蒴兿蕙蕫﨟穒蘒 90 裵訒訷麐誧闦趧諸譪譓譿賗 則皆 AO 蚪蝢 赶赳軏返逸達郞都鄉鄧釚釗釞釭釮釤 B0 釥舩鈐鈊鈺鉀鈼鉎鉙鉑鈹鉧銧鉷鉸鋧 CO 鵗鋙綋鏲鋕鋠鋓錥錡鋻緈罉鋿徖錂鑢 DO 鍗鎤鐀鏞鎴鐱馦鑈閜隆隝隝隭霳寷龗 E0 靍靍靑靕顗顥飯飼鯘館馞騹髙 FO

40 薪紛魚戶難鮱艘鰀鵰嶋鶴鶴縣黑

Code Page 936 Simple Chinese






B840 - B8FF	BC40 - BCFF
40 50 60 70 80 90 A0 浮音穩賦复傳村學父膽贪富讣附妇輝 80 赴副覆赋复傳村學父膽贪富讣附妇輝 C0 咐噶嘎该改预例劉缸肛纲凶港杠篙皋高 E0 膏羔糕搞镉稿告哥歇搁发鸽胳疙割革 F0 葛格始阁隔格个各给根跟耕更废奠	 40 50 60 70 80 90 A0 肌饥逐激讥鸡姬绩缉吉极棘髯籍集 B0 及急疾汲即嫉殺挤几脊己菊技歶奏伽 B0 灰奈剂悸济寄频节甲钾假稼价架驾峰升 B0 夹佳家加英频管甲钾假橡依处果皱碎 E0 监坚尖笺间煎兼肩虱虷线茧检束锁验 F0 拣捡简俭剪减荐槛鉴践贱见健箭件
B940 - B9FF	BD40 - BDFF
40 50 60 70 80 90 A0 埋耿梗工攻功恭龚供躬公宫弓巩汞 80 拱贯共钩勾沟苟狗垢构购够事茜咕蕷 C0 估沽孤姑散方蛊骨谷股放颜圈瘤缩质 D0 剐寡挂撒乖猊怪相关官冠观管馆缱裰 E0 灌贯光广逛魂规圭硅归龟阉轨惯 F0 桂柜跪贵剑辗滚棍锅郭国果裹过哈	40 50 60 70 80 90 A0 健舰剑线渐溅涧建僵姜将浆江疆蒋 80 桨奖讲匠皆降蕉椒礁魚胶交郊浇轿娇 00 叫客揭按皆秸街阶截劫节桔杰搅罐竭 E0 洁结解姐戒藉芥界借介疥诫届巾舫斤 F0 金今津襟紧锦仅谨进靳晋禁近烬漫
BA40 - BAFF	BE40 - BEFF
40 50 60 70 80 90 A0 較孩海氣亥害發酣整邯轉含涵寒函 90 A0 酸孩海氣友害發酣整邯轉含涵寒函 92 輸遊揮旱濾埋彈汗汉夯杭航達嚎 產產都與河淵譜轉對四噶荷清枝禾和何合 0 盒絡與河澗譜轉動弯嘿黑痕很限哼哼 60 亨情衡恒素哄烘虹鸿洪宏弘紅喉侯猴 F0 吼厚侯后呼乎忽瑚壶萌胡蝴狐糊湖	40 50 60 70 80 90 A0 尽劲荆鼓茎睛晶鲸京惊精梗经井警 80 景颈静境散镜径痉靖竟竞净烔窄揪究 80 纠获韭久灸九道厩救阳臼舅咎就疾鞫 00 拘组疽居驹菊渴咀矩举泪聚拒据巨具 60 距蹦锯俱句惧炬剧捐隖娟倦甞卷绡猴 60 握脚锯俱句惧炬剧捐隖娟倦甞卷绡猴
BB40 - BBFF	BF40 - BFFF
40 50 60 70 80 90 40 弧虎唬护互沪户花哔华滑滑画划化 80 结槐溜怀淮坏欢璜麹簧坐凰包火 60 烧浪应幻荒辉傲傍想回毁悔慧卉惠嗨贿 60 烧流灰挥耀谢绘翠昏婚魂浑混豁活伏 60 火获或惑霍货祸击极基机畸稽积箕	40 50 60 70 80 90 A0 俊峻沒都骏喀嘛卡咯开指楷凯派刊 80 堪勘坎砍看康康棣九抗亢炕有烤烤靠 C0 坷苛勘炊棵龝颗科壳咳可渴克刻客课肯 00 靖墨恳坑吭空恐孔控抠口和寇枯哭愈 E0 苦酷库祷夸垮挎跨腾块装侩快宽数匡 F0 筐狂框矿眶旷况亏盔焇窥葵奎魁傀



C840 - C8FF	CC40 - CCFF
40 50 60 70 80 90 A0 取娶誘趁去圈额权醛泉全痉攀犬券 80 劝缺炔瘸却躺樯确雀裙群然燃冉染瓠 C0 壤攘嚷让饶扰绕惹热壬仁人忍韧任认 00 刃妊纫扔仍日戎茸蓉荣融熔溶容娀冗 E0 揉柔肉茹螨嫣满如厚乳汝入褥软阮蕊 F0 珃悦闻润若弱撒洒萨愿鳃塞赛三叠	40 50 60 70 80 90 A0 康雄瑞坛灌潭谈坦毯祖蒙拟太态汰坍摊 80 贪瘫滩坛檀漆潭潭谈坦毯祖蒙探叭英滔 00 缘萄桃逃淘陶讨套特藤腾疼曾梯剔踢 E0 锑提题蹄啼体替嚏惕涕劓雇天漆填田 F0 甜恬録膜挑条迢眺跳贴铁帖厅听烃
C940 - C9FF	CD40 - CDFF
40 50 60 70 80 90 A0	40 50 60 70 80 90 A0 71 60 17 80 10
CA40 - CAFF	CE40 - CEFF
40 50 60 70 80 90 A0 省盛刺胜圣师失狮施湿诗尸虱十石 80 拾时什食蚀实识史矢使屎驶始式示士 世柿事拭誓逝势是嗜噬适仕侍释饰氏 00 市特室视试收手首守寿授售受瘦兽蔬 60 枢杭殊抒输叔舒淑疏书嫘孰熟薯暑曙 60 署署泰鼠属术述树束皮竖墅度数澈	40 50 60 70 80 90 A0 歲微危韦违龍圈唯惟为濰維苇萎萎 80 伴仍尾纬未蔚强圈唯惟为濰維苇萎萎 80 伴仍尾纬未蔚强圈唯惟为濰维苇萎萎 80 化痘温蚊文闻纹吻稳紊问嘴着能过弱 00 涡窝我斡卧握沃巫鸣钨鸟圬成雾暗物 80 栖吾吴毋武五梧午舞伍傍坞戊雾暗物 60 勿务悟误昔熙折西硒砂晰喀吸锡牺
CB40 - CBFF	CF40 - CFFF
40 50 60 70 80 90 A0 恕剛要摔衰甩帅拴拴霜双爽谁水睡 80 税吮瞬顺舜说硕朔烁斯撕嘶思私司丝 70 死肆寺嗣四伺似恂已松耸怂颂送宋讼 00 诵搜艘撤啾苏酥俗素遮栗僳塑湖宿诉 60 肃酸蒜算虽隋随缓髓碎岁穗遂陵崇孙 F0 损笋蓑桉唆缩琐索锁所塌他它她塔	40 50 60 70 80 90 A0 稀息希悉膝夕惜熄婦溪汐單叢袭席 80 刁媳喜铁洗系隙戏细罐虾匣霞箱 80 刁媳喜铁洗系隙戏地罐虾匣霞着 80 刁媳喜铁洗系隙戏地罐虾便酸粉 80 何凝弦嫌显险现献县腺馅袭宪陷限线 80 相厢镶香箱襄湘乡翔祥详想响事项巷 60 橡像向象萧硝霄削啤嚣销消肓清晓

D040 - D0FF D440 - D4FF 40 50 60 70 80 90 80 90 80 00 00 40 50 60 70 80 90 A0 80 小孝校肖啸芙效偰烾歇朅鞋协挟携 邪斜胁谐写线卸蟹懈泄泻谢肩薪芯锋 欣辛新忻心信蛘星臞握懂兴刑型形邢 行釀锈秀袖绣遮戊需虔嘘须徐许蕾酗 叙旭序畜恤絜媚绪续轩喧宣悬旋玄 浴窩裕预豫収鸳洲冤元垣袁原援辕 國员圆猿源缘远苑愿怨院曰约越获钥 岳粤月悦阅転云郎匀陨允运蕴酝晕韵 CO DO 孕匝 礰杂栽哉 灾宰載 再在咱攒智赞 赃 賍葬遭糟凿藻枣早澡 蚤躁噪造皂灶燥 E0 FO FÕ 责择则泽贼怎增憎曾赠扎喳渣札轧 D140 - D1FF D540 - D5FF 40 50 60 70 80 90 A0 B0 C0 D0 40 50 60 70 80 90 钡闸眨栅榨咋乍炸诈摘斋宅窄债寨 聽毡詹粘沾盏斩辗崭展麟栈占战站 錠樟章彰漳张掌涨杖丈帐账仗胀瘒障 招昭找沼赵照單兆筆召逮折哲蛰辙者 謝亷这浙珍斟真甄砧臻贞针侦枕瘆诊 震振鎮阵鰲挣錚征狰争怔整拯正政 选癣眩剑靴 薛学穴雪血勋重 循旬询 寻朝巡殉汛训讯逊迅压押鸦鸭呀丫芽 A0 B0 牙蚜崖衙涯雅哑亚讶焉咽阉烟淹盐 CO 研髮岩延言顧圖炎沿奄掩眼衍演艳堰 撒厌砚雁嘻彦焰宴遽验殃央鹭秧杨扬 DO E0 EO 伴島羊洋阳氟仰痒养样漾邈腰妖瑶 F₀ FO D240 - D2FF D640 - D6FF 40 50 60 70 80 90 A0 B0 40 摇秃遥窑谣姚咬舀药要耀椰噇耶爷 野冶也页壳遗移仪胰凝沂宜姨奏 依伊衣顾壳遗移仪胰凝近宜姨奏增蚊 倚已乙矣以艺抑易邑蛇亿役臆逸肄疫 亦裔意毅忆义益溢诣议谊译异翼翌绎 茵荫因殷音阴烟吟银淫寅饮尹引隐 帧症郑证芝枝支吱蜘知肢脂汁之织 职直植殖执值侄址指止趾只旨纸志擎 C0 D0 E0 F0 D340 - D3FF D740 - D7FF 40 50 60 70 80 90 印英樱婴鹰应缨莹萤营荧蝇迎赢 住注祝驻抓爪拽专砖转摸赚篆桩庄 装妆撞壮状椎锥追赘坠鞖谆准捉拙卓 桌琢茁酌啄着灼浊兹咨资姿滋海孜紫 仔籽滓子自溃字禜椋踪宗综总纵邹走 奏揍租足卒族祖诅阻组钻纂嘴醉最罪 尊遵昨左佐柞做作坐座 AO ^{中尖}玻愛屬应接重重當火現型戰溫 影影勇用幽优悠忧尤由都轴犹油游茜 有友右佑釉诱又幼迂淤于盂榆虞愚與 余俞逾鱼愉渝漁隔予娛雨与屿禹宇语 羽玉城芋都吁遤喻峪御愈欲狱育誉 BO CO DO E0 F0









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



A640 - A6FF	A740 - A7FF
40 50 60 70 80 90 A0 9 A0 9 A0 9 4 5 5 50 4 5 5 5 5 5 5 5 5 5 5 5 5 5	40 50 60 70 80 90 A0 μℓmℓdℓℓkℓccmicnimikmifmnmummmcm kmmmicnimikmihaµgmgkgktcalkaldB™%™%ps 00 nsµsmspVnVµVmVkVMVpAnAµAmAkApWnW µWmWkWMHHzkHzHzGHzTHzΩkΩMΩpFnFµFmol cdmd™%™%jsrPakPaMPaGPaWbImIxBqGySv%p F0
A840 - A8FF	A940 - A9FF
40 50 60 70 80 90 A0 ÆÐ≦Ħ IJ ĿŁØŒ♀Þ∓b B0 ¬∟€2@₿A0X&9€£€?? C0 ₩€2®₩A0X&9€₽®®®DC D0 @@f9b11k1mn00@rs E0 tUVWXY2123456789 F0 1011219416½%%%%%%%%	40 50 60 70 80 90 A0 æð a ħıijĸl:łøœßьtŋ n(¬)(⊥)(⊏)(2)(□)(U)(A)(O)(⊼)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅) C0 (⊥)(ℂ)(2)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅)(𝔅
AA40 - AAFF	AB40 - ABFF
40 50 60 70 80 90 A0 ぁぁぃいぅうぇえぉおかがきぎく 80 ぐけげこごさざしじすずせぜそぞた C0 だちぢっつづてでとどなにぬねのは D0 ばばひびびふぶぷへべべほぼまみ E0 むめもゃやゅゆょよらりるれろゎわ F0 ゐゑもん	40 50 60 70 80 90 A0 ァアィイゥウェエォオカガキギク 80 グケゲコゴサザシジスズセゼソゾタ C0 ダチヂッツヅテデトドナニヌネノハ D0 パパヒビピフブプヘベホボホマミ E0 ムメモャヤュユョヨラリルレロッワ F0 ヰヱヲンヴヵヶ

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AC40 - ACFF	AD40 - ADFF
40 50 60 70 80 90 A0 АБВГДЕЁЖЗИЙКЛМН 80 ОПРСТУФХЦЧШЩЪЫЬЭ C0 ЮЯ D0 абвгдеёжзийклмн E0 опрстуфхцчшщъыьз F0 юя	40 50 60 70 80 90 A0 80 C0 D0 E0 F0
AE40 - AEFF	AF40 - AFFF
40 50 60 70 80 90 A0 80 CO D0 E0 F0	40 50 60 70 80 90 A0 80 90 A0 80 C0 D0 E0 F0
B040 - B0FF	B140 - B1FF
40 50 60 70 80 90 A0 가각간간같갉갊감갑값깃갔강갖갖 B0 같갚갛개객갠갤갬갭갯갰갱갸갹갼걅 C0 걋걍걔걘걭거걱건건걸걺검겁것겄경 D0 컺걸겊겋게겐겔겜겝곗겠겜겨격겪견 E0 겯걸겸겹켯겼경걸계첸궬곕곗고곽곤 F0 곧골곪곬꼻곰곱곳공곶과곽관콸괆	40 50 60 70 80 90 A0 람괍괏광괘꽨괠괩괬 80 굅핏끵교굔굘급·가각 60 금굽굿궁궂궈ㅋ권 결권 00 굴귐귑귓규 균귤그극근 60 중기기긱긴긷길긻김깁 50 깎깐깔깖깜깝깟깠깓깔

B240 - B2FF	B340 - B3FF
40 50 60 70 80 90 A0 깹깻깼깽꺄꺅꺌꺼꺽꺾껀껕껌껍껏 80 껐껑께꿱꿴껨쩻껭껴껸꼍꼇꼈꼍꼐꼬 4~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	40 50 60 70 80 90 A0 끝끼끽낀낄낌낍낏낑나낙낚난낟날 80 낡낢남납낫났낭낮낯낱놯내낵낸낼냄 C0 냅냇냈냉냐냑냔날남냥너넉넋넌널넒 D0 넓넘넙넛넜넝넣네넥넨녤넴넵넷넸넹 E0 녀녁년녈녑녑녔넝녛녜뎬노놐돈놑놂 F0 놈돕놋농돞놓놔놘놜놨뇌뇐뇔뇜뉨
B440 - B4FF	B540 - B5FF
40 50 60 70 80 90 A0 <u>뇟뇨뇩뇬뇰뵵뇻뇽누눅눈눋늘</u> 늠눕 80 <u>놋눙뉘뇠눼뉘뉜뉠뉨뉩뉴뉵늘븀늄</u> 80 <u>늣능누늘큵뉾늠늡늣능늊늎</u> 늬늰뉟닐니 90 닉닌닐닖님넙닛닝닢다닥닦단닫달닭 80 닭닯닱담답닷닸당닺닻닿대댁댄댈댐 F0 댑댓댔댕댜더먹먺먼덛멀멂멃면업	40 50 60 70 80 90 A0 멋덩멏덮데뎩멘델뎀뎹뎃뎄댕뎌뎐 80 뎔뎠뎡뎨도도독돈됼돝돏돐듐돝돗동 00 물들둄듛틧듷퉈퉜뒈뒣뒤퀸됱뒵됫룅 60 듀듄들듐듕드륵뜬됻듩듦둄틉틋둉듸 60 디딕딘딭딜딤딥딧딨딩딪따딱딴딸
B640 - B6FF	B740 - B7FF
40 50 60 70 80 90 A0 땁땁땃땄땅땋때땍땐땔땓땝땟땠떙 B0 떠떡뗜땔띎뗣떰떱떳떴떵땧뗴뗵뗀뗼 C0 뗌뗍폣뗐뗑뗘뗬또뚁뚄뚈뚕똬뽵뙈뙤 D0 뙨뚜뚝쭏똘똟뚐뚕뛔쀠쮠쀨뿸뷥쬥뜨 E0 뚁뚄똩띃뚬뚭뚓띄뙨죌삄죕띠띤띨띰 F0 띱띳띵라락란뢀람랇쾃랐랑랒랖퇗	40 50 60 70 80 90 A0 대랙랜땔랩랩랫랬랭랴랴랸럇량러 80 턱런털텀컵럿렀렁텋레렉텐텔렘렙헷 C0 렝려력련렬렴켭렷혔렴례롄롑롓로록 D0 론틀름홃릇릉톽롼뢍뫴릐뢴릘릠룁릣 E0 룅툐론들톹룻틍두됵문들묾둛믓픙릒 F0 퉜뤠뤼뤽륀륄튑륏됭쿆픅큔튤믐훕

B840 - B8FF		B940) - B9FF
40 50 60 70 80 90 A0 륫릉르륵흔클 80 린릴림립릿림마 C0 맛망맞말맣매맥 D0 먁먈망머먹먼멀 E0 멘델멤멥멧멨뎅 F0 모목몫믄믈믊몰	룜룝룻륭롲뿉륲리릭 막만많맏말맑맒먐맙 맨맬맴맵맷맸맹먲먀 멂엄업멋멍멎멓뎨몍 며뎍면멸몃몄명볓몌 묩못묭뫄뫇뫘뫔뵈	40 50 60 70 80 90 A0 80 00 E0 F0	욈묄묍묏묌묘욛묠묩묫무뮥뮦문물 묠믉욻묿뮵믓믕뭍륳뭐뭔둴둽훳뭬뮈 묀뒬뮤뮨욭뮵뮷므믄뮽믐믓미믹민믿 밀밂밈밉밋밌밍및밑바박봒밗뱐뱓발 밝봚봚뱜뱝뱟뱡밭뱨뱩뱬벁밺뱹뱻뱄 뱽뵅뱌뱍뱐뱜버벅번볃벑벎볌법벗
BA40 - BAFF		BB40	- BBFF
40 50 60 70 80 90 A0 범벚베벡벤벨 B0 별볌볏볐병볉볘 C0 봉부분뢌봬뵀뵈 D0 분분불욹붊븜븗 E0 뷕븬뷜륑뷰뷴뷸 F0 봇비빅빈빌빎빔	벭벰벱벳벴벵벼벽변 볜보 복 볶뵨볼븜뵯븟 복븬븰븳뷥뵤뵨부봌 븟븡묱붚붜뤌붰붸뷔 튭륫뮹브뵥뵨뵬븀뵵 빕빗빙빚빛뺘빡뽭	40 50 60 70 80 90 A0 B0 C0 E0 F0	뽤빪빰빱빳빴빵꽣쎽빽뺸뺉뺅뻅뻇 뺐ø뺘뺙뺨뻐뻑삔삗뵅먬먯뱄퍵뻬뼹 뼈뺵뼘뼙뼛삤뼝뽀뽁뽄뽍뽐뽑뽕뾔뾰 뿅뿌뿍뿐쁄뿀뿟뿡쀼쁑쁘뾴쁋쁌뿝쁴 벸삔쁼뼴뼵볫삥사샄삯산삳삹삵삶삼 삷삿샀상쇁새색샌샡섐샙샛샜생샤
BC40 - BCFF		BD40	- BDFF
40 50 60 70 80 90 A0 40 <td>샹섀섑섈섐생서석쉮 섭섯섰성섶세섹센셸 셤셭셤셥셧셨셤쎼셴 졺촘솝솟송좉솨촥솬 횄쇠쇤쇨쇰쇱쇳슜쇽 숙순숟술숨숩숫숭</td> <td>40 50 60 70 80 90 A0 B0 C0 E0 F0</td> <td>슟슡숲숴쉈쉐쉑쉔쉩쉠쉥쉬쉭쉰슅 췸숨쉿슁슈슉슡슘슟슝스슥슨슽숡슘 슙즛슝시식신실실싫심십싯싱싶싺싹 쏷쌈쌀쑴쌉쌌쌍짷썌썍썐썔쌢썝쌨쌩 썅쎠섁쎤쎁썲쎰썹쓌썽쎼쏀쎌쏀쏘쏙 쏜쏰쏱쏢쏨쫕쏭쏴쏵쐼쐈쐐쬈쐬쐰</td>	샹섀섑섈섐생서석쉮 섭섯섰성섶세섹센셸 셤셭셤셥셧셨셤쎼셴 졺촘솝솟송좉솨촥솬 횄쇠쇤쇨쇰쇱쇳슜쇽 숙순 숟술숨숩숫숭	40 50 60 70 80 90 A0 B0 C0 E0 F0	슟슡숲숴쉈쉐쉑쉔쉩쉠쉥쉬쉭쉰슅 췸숨쉿슁슈슉슡슘슟슝스슥슨슽숡슘 슙즛슝시식신실실싫심십싯싱싶싺싹 쏷쌈쌀쑴쌉쌌쌍짷썌썍썐썔쌢썝쌨쌩 썅쎠섁쎤쎁썲쎰썹쓌썽쎼쏀쎌쏀쏘쏙 쏜쏰쏱쏢쏨쫕쏭쏴쏵쐼쐈쐐쬈쐬쐰

BE40 - BEFF	BF40 - BFFF
40 50 60 70 80 90 A0 쐴쐼쐽쑈쑤쑥쑨쑬쑴쑵쑹쒀쒔쒜쒸 80 쒼쓩쓰쑥쓴쑬쑮쓣쑴쑵씌씐쐴쐼씨쎅 C0 씬쐴씸씹쎗씽아막만얁닪말먉맒먏맘 D0 맙맛았당말맢애맥앤맽맴앱괫맸맹야 E0 약얀댤얇얌댭얏양먙먛얘먠먵얩어먹 F0 먼럱먿멑덝얾덛멉멊덧겄엉엊덕엎	40 50 60 70 80 90 A0 에멕엔엘멥멥엣멩여역엮연열엶엷 90 A0 예멕엔엘멥멥엣멩여역엮연열엶엷 90 A0 열엽엾혓였염열옆옇예옌옐옘옙옛옜 2옥온몰읅읆옰읋음읍읏용읓와왁완 D0 물뢉뫕뢋뫘왕왜뢕뢘퐴뢧뢩외왹왼믵 E0 믥욻욾읉읏용워웍원월웜웝웠웡웨
C040 - C0FF	C140 - C1FF
40 50 60 70 80 90 A0 웩웬뭴웹웹퀭위읙윈윌욈윕윗뮝유 80 육윤물윰율윷융윷으윽묜욜옲음읍읏 0 믕윷믗읔윹믚윻의윈윌윔읫이믹인일 00 읽읾잃밍입밋있밍잊잎자작잔쟎잗잩 E0 잚잠잡잣잤장쟞재잭잰잴잼잽잿쟀쟁 F0 쟈쟉쟌쟎쟐쟘챵쟤쟨쟬저적전절젊	40 50 60 70 80 90 A0 점접첫정젖제젝첸젤젬젭젯젱져젼 90 A0 점접젻졍졔조족죤졸졺줌촙좃종좆 00 柔暮죠젻졍졔조족죤졸졺줌촙좃종좆 00 予哥죠죡죤죻주죽준줄줆쥼춥좃종 50 쥐퉜췌쥐뤽쥔퓔쥠췹쥣쥬쥰쥴쥼즈 50 주중
C240 - C2FF	C340 - C3FF
40 50 60 70 80 90 A0 질짖짙짚짜짝짠짢깔잷짬짭짯짰짱 80 째짹짼쨑쨈쨉쌧쩄쨍쨔쨘쨩쩌쩍쩐쪝 0 점쩝썻쩠쨍쩨쪵쪄쪘쪼쪽쫀쫕쫕쫕쫏 00 쫑쯫쫘뽝쫠쐈쫴쬈쯰좬쮤쬠쬡쭁쭈쭉 60 쭌쭐쯈쭙쯩뿨뿼쭹쮜쮸쯔쑴쯧쯩찌쮝 F0 찐찔찜찝찡뀢쥏차착찬찮찵참찹찻	40 50 60 70 80 90 A0

C440 - C4FF	C540 - C5FF
40 50 60 70 80 90 A0 시칙친칠칠칡침칩칫칭카칵칸칼캄 80 캅캇캉캐쾍캠캘캠캡캣캤캥캬캭캉커 0 켑켜켠켤켬켬켯켰켱켸코콕쫀콭콤콤 E0 콧콩콰콱콴콸쾀쾅쾌뢩쾨쿁쿄쿠족준 F0 콜쿰쿱룻쿵쿼퀸퀄줭퀘뤵퀴쥑퀸퀼	40 50 60 70 80 90 A0 립큅큇큉큐큔클큠크콕콘클콤콥킁 80 키킥킨킬킼킬킷킹타탁탄탈탉탐탐탓 00 탔퇑태택뢘탵탬탭탯탰탬탸턍터턱턴 00 털뻚텀텁텃렀텀테텍텐텙템텝뛧텡텨 E0 텬렸톄휀토톡톤똝톸톹톳客툪톼롼퇘 F0 퇴퇸룃틩툐루톡툳툴뭅퉃퉁퉈퉜
C640 - C6FF	C740 - C7FF
40 50 60 70 80 90 A0 퉤튀퇴륀뒬휨튑툉튜듄콜륨튱트록 80 톤콜콜톪틈틉룟틔퇸툍틤튑티릭틴띝 C0 팀팁킛힝파팍뀪판팙팖팜팝팟팠팡팙 D0 패팩팬팰팸팹팻뫴팽퍄퍅퍼퍽펀펉펍 E0 펍펏펐펑폐펙펜펠펩펫펄쿅푠픑푬폽픗퐁	40 50 60 70 80 90 A0 포동푀푄표폰 플롭푯푸둑꾼폰 플풂 80 80 90 A0 포동푀푄표폰 플롭풋 등 특히 핏 문 플 플 플 풋 등 특히 핏 한 하 핵 한 할 할 함 함 한 한 하 핵 한 핵 행 핵 한 한 한 한 한 한 한 하 핵 한 한 한 한 한 한 한 하 핵 한 한 한 하 핵 한 한 한 한
C840 - C8FF	C940 - C9FF
40 50 60 70 80 90 A0 헬혭호흑흔흘흝흠흠烹흥흩희확환 80 90 A0 헬혭호흑흔흘흝흠흠烹흥흩희확환 80 활황황화패택팬횃황희획획환일 환경 환경 환경 환경 환 환 환 환 환 환 환 환 환 환 환 환 환	40 50 60 70 80 90 A0 80 C0 D0 E0 F0

Code Page 949 Korean – Series i and Series ii









E240 - E2FF

E340 - E3FF









EE40 - EEFF	EF40 - EFFF
40 50 60 70 80 90 A0 障再哉在宰才材栽梓溨滓災縡裁財 80 戴齋齎爭等靜錚佇低儲咀姐底抵杵楮 60 樗沮渚狙猪痘箸紵苧菹蓍藷詛貯躇這 D0 邸睢齟勣吊确寂摘敵滴狄炙的積笛藉 E0 續鑿荻蹢贼赤跡賾迪迹適鎬佃佺傳全 F0 典前剪填塼奠專廣廛悛戰栓殿氈澱	40 50 60 70 80 90 A0 煎碘田甸畑癫筌箋箭篆纏詮輾轉細 80 銓錢鏡電顛顏錢切截折浙癰竊節絶占 60 岾店漸点粘霮鮎點接擇藥丁井亭停值 90 星娅定幀庭廷征情挺政整旌晶母桠枝 60 瞿正汀淀淨渟濱瀞炡玎珽町睛碇轅程 F0 穿精紙艇訂評貞鄭酊釘鉦鋌錠霆靖
F040 - F0FF	F140 - F1FF
40 50 60 70 80 90 A0 靜頂鼎制劑啼堤帝弟悌提梯濟祭第 80 腈薺製諸蹄醌除際霽題齊俎兆凋助嘲 60 弔彫措操早晃曺曹朝條棄權澶潮照燥 10 爪璪跳祖祚租稠窕粗糟組繰肇藻蛋詔 60 調趙躁遣遭釣阻雕鳥族簇足難存尊卒 F0 拙猝倧宗從悰懲棕淙琮種終綜縱腫	40 50 60 70 80 90 A0 踪踵鍾鐘儘住坐左座挫罪主住朱做姝 90 A0 窮呪周嗾奏宙州廚畫朱柱株注洲湊澍 00 酒鑄駐竹粥俊儁准埈窩峻晙樽浚澕濬 60 焌陵竣露逡漄為發茁中仲衆重卽櫛楫 60 汁葺增信曾拯烝甑症稽蒸證赠之只
F240 - F2FF	F340 - F3FF
40 50 60 70 80 90 A0 足地址志持指擊支旨智枝枳止池沚 80 濱知砥祉祗紙肢脂至芝芷蜘誌識贊趾 C0 還直種種纖識售噴塵振摺晉晉板榛殄 00 津溱珍瑨瓐昣瘆盡眞誤素縉縝臻蒝袗 E0 診賬軫辰進鎮陣陳雲侄叱姪嫉帙桎瑣 F0 疾秩窗朣蛭質跌迭斟朕什執潗積輯	40 50 60 70 80 90 A0 鎌集徽懲澄且侘借叉嗟嵯差次此磋 80 箚茶蹉車遮捉撺着窄錯瑿齪撰澯燦璨 C0 瓚宜簒纂粲纉讚贊鑽餐饌刹察擦札紮 D0 僭參塹慘慙懴斬站讒讖倉偮齓唱嬠廠 E0 彰愴敝昌昶暢槍滄漲鴉瘡窓脹艙菖蒼 F0 債埰栾寨彩採砦綵菜蔡朵釵冊柵策



FA40 - FAFF	FB40 - FBFF
40 50 60 70 80 90 A0 行降項亥偕咳咳奚孩害懈楷海避鐾 80 解該諸選緊該劾核倖幸杏荇行享向嚮 60 珦鄉審餉豐香嘘壚虛許憲檯獻軒歌險 80 聽突爀赫革俔峴弦懸晛泫炫玄玹現眩 80 睍絃絢縣舷街見賢鉉顕子穴血頁嫌俠 F0 協夾峡挟浹狭骨脇莢鋏頰亨兄刑型	40 50 60 70 80 90 A0 形洞榮潛濯炯熒珩瑩荊瑩衡適邢瑩 80 藝兮彗惠慧暳蕙蹊醯鞋乎互呼壕壺好 60 城瑚瓠皓軲糊縞胡芦葫蒿虎號蝴謨豪 60 鎬頀顥憨或酷婚香混渾琿魂忽惚笏哄 60 弘汞泓洪烘紅虹缸鴻化和嬅樺火畫
FC40 - FCFF	FD40 - FDFF
40 50 60 70 80 90 A0 祸禾花華話譁貨靴廓擴攫確碼積丸 80 喚奧富幻愚換歡晥桓渙煥環絨這難解 C0 活滑猾諮關鳳幌徨恍惶愰慌晃晄榥況 D0 違滉潢煌璜鼻篁養荒蝗違隍黃匯回廻 E0 個版悔懷晦會檜淮澮灰獪繪膾薗鮂誨	40 50 60 70 80 90 A0 爻者醇曉侯候厚后吼喉嗅帿後朽煦 80 珝逅動動塤壎煮熏燻蕭訓暈薨喧暄煊 60 董卉嚎毀彙獵揮暉煇諱耀麾休携烋畦 80 虧恤譎鷸兇凶匈洶胸黑昕欣炘痕吃屹 80 乾訖欠欽敏吸恰洽翕興僖凞喜噫囍姬

Code Page 949 Extended Korean – Series ii



Code Page 949 Extended Korean – Series ii (Continuation)

A840 - A8FF	AC40 - ACEE
40 쒉쓆쓃쓌쒏월월월월월월월월, 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이 아이	40
A940 - A9FF	AD40 - ADFF
40	40 친 친 친 친 친 친 친 친 친 친 친 친 친 친 한 한 한 한 한 한
AA40 - AAFF	AE40 - AEFF
40 留型や秋衣を計畫書記載載載載載載 50 私参型参判報刊授福裡割額 60 翻訳書記載載載載載載載載載 70 私を計畫書記載載載載載載載 80 大教教教教書登記参加補助 90 型置割載置置置置置置置置置置置置置置置置置置置置置置置置置置置置	40 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫 첫
AB40 - ABFF	AF40 - AFFF
40 葡萄菜菜和放花包封装到就設設 50 菊畝支菜菊香菜花和放花包封装到就設設 60 包包割割割割割割割割割加加支減 70 型包有和数技能包含對計 80 動設設設設計 80 動設設設計 90 整体和机数技能包含 90 整体和机数投稿包含 90 整体和机数投稿包含 90 整体和机数包括包含 90 整体和机数包括 90 整体和机数包括 90 整体和机数包括 90 整体机机数 90 整体机和数 90 整体机和数 90 整体机和数 90 参加制数 90 参加制数 91 デアイ 92 参加制数 93 数数 94 10 95 10 96 10 97 10 98 10 99<	40 순승승승승수수수수승승수수수 이 이 이 신 신 신 신 인 이 인 이 인 이 이 이 이 이 이 이 이

Code Page 949 Extended Korean – Series ii (Continuation)

B040 - B0FF	8440 - 84FF
40 湖갧겠갩갪캖캢캦갯객캩쟆⊽칶챣 50 환감감값같같다. 50 환감감값? 60 환감감값? 60 환감감값? 70 챇캔캕캖캗苔갥請盐값菜 80 碧粱렘캡캢갯캤캥캦캧객캩캪" 80 碧粱렘캡甜캢"캤艿艿艾艾감? 80 碧粱렘캡캢" 80 碧粱렘캡캢" 80 碧粱렘캡캢" 80 김값 레컵ズ艿艿 80 김값 레컵ズ艿 80 김값 레컵ズ艿 81 김武茂 黃式 82 王子子子小 " 83 王子子子子子子子子子子子子子子子子子子子子子子子子子子子子子子子子子子子子	40 뒷짓ୁ 월 월 원 형 취 ጚ 킩 킩 킩 킨 키 킹 킹 킹 50 및 킹 킹 큈 릿 킷 킹 킬 킹 킹 50 및 킹 킹 큈 릿 킷 킹 킬 킹 킹 60 독류 큐 큐 큐 큐 큐 큐 큐 큐 큐 큐 큐 큐 큐 70 듯 큐 큠 큣 클 클 클 클 클 클 클 클 클 클 클 클 클 클 클 80 콤 클 클 클 릭 홈 및 킹 킹 킹 킹 80 클 클 클 클 릭 홈 및 킹 킹 킹 킹 킹 80 누 등 나 늘 뉴 뉴 뉴 카 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴 뉴
B140 - B1FF	8540 - 85FF
40 쳮켃켅켆켿켉刮刮刮刮刮刮刮刮刮刮 50 켗칰철원칭격취컧켰횓 60 켥켦氦컰걸횓컳び켲켳획질환경격 70 켺켃켼켅켾쳳칠켉刮刮刮 80 겗刮悶刮刮剂켓계칭켓刻질질질질 90 졲종준윦≥돍紊紊똜뫑롦紊롮콨奏支 A0 콬괌괍까광····································	40 渴渴渴리집큀킛큈픵킺긫릐긜쾬킇 50 킦긳깄킪킫킭킳킯킯킯 60 킳킶킸깃깃킼킬킬킯록닦탃탅닪탇딺 70 발랐訴닳핧닰닺닺탘탈판 80 당팪밳랝段삗렑왦즯뜂뫭밺됋뜂뱆 90 탯랰밸탶뢍뺙띾탃탼탅빦탇할앍팖말 80 달덧덩뎌미인도독도등동한말람앍팖말 80 달덧덩뎌미인도록도등물통氛등들도두등 80 달덧덩뎌미인도록도등목局권물됨됭핏되다두둑 80 달덧덩뎌미인도록도등되는 등등 90 뜻물들들률듯등등 특준등 뒷,제 행동되었다. 80 도 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등
B240 - B2FF	8640 - 86FF
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8340 - 83FF	8740 - 87FF
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Code Page 949 Extended Korean – Series ii (Continuation)

8840 - 88FF	
	BC40 - BCFF
40 있장옷옷칰걸렆겋컥위컧됀켅캖삗 50 쭬죍죎휪킔쾶쾶쾶죔뾘쮠	40 弱 퓛퓘퓙퓛평평협쟶콋폤퍵폊컣롘
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8940 - 89FF	8040 - 8055
40 ****	BD40 - BDFF
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80 원칭췯췋쥙둸퓛큀딇쾶딇죔풥큀됫	70 관산않받철헑춼찳삸찵찵 80 랋봄봡돬돳돴돶돶돸퇕돶돶패픽펚
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70 튨튧튪튫튮둤뵹뵻춫킄븉 80 특뤽룅쥥릐룅룅룅룅룅룅룅룅	00 지정옷ୁ릭을 한 방식 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다
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Code Page 949 Extended Korean – Series ii (Continuation)

CO40 - COFF	C440 - C4FF
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C140 - C1FF	C540 - C5FF
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Code Page 950 Traditional Chinese

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A440 - A4FF

一乙丁七乃九了二人儿入八几刀刁力 七十下又三下丈上丫丸凡久么也乞于 亡兀刃与千叉口土士夕大女子孑孓寸 小龙尸山川工己已已巾干升弋弓才 40 丑丐不中丰丹之尹予云井亘五亢仁 什仃仆仇仍今介仄元允內大兮公冗凶 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 戈戶手扎支文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 A140 - A1FF A540 - A5FF : 世丕且丘主乍乏乎以付仔仕他仗代令 仙仞充兄冉冊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 叼司叵叫另只史叱台句叭叻四囚外 ? 1 : ?! ٠ ; 40 1 ļ : ş : 50 60 70 80 90 A0 80 00 80 00 00 E0 1 央失奴奶孕它尼亘巧左市布平幼弁 弘弗必戊打扔扒扑斥旦术本未末札正 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至 ---.. .. 1 } ٢ ¥ § **B**% : \$ \$ + ±√<>=≤≥≠∞≒≡+ -× <>=~∩U⊥∠L⊿login \$... ₽\$⊕⊙†↓↔→\//\||// F0 A240 - A2FF A640 - A6FF 共再冰列刑划刎刖劣匈匡匠印危吉吏 同吊吐吁时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 如妗字存字守宅安寺尖屹州帆并年 \/\\$¥〒¢£%@℃°F\$% 8 mil mmcmkmKMmingkgcc。 <u>対</u>妊態鏡短短響 40 50 60 70 80 90 A0 80 00 E0 F0 الاوجد 瓩糧 1 ----式弛忙忖戎戌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 池汐汕污汛氿汎灰牟牝百竹米糸缶羊 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 hijklmnopqrstuv A740 - A7FF A340 - A3FF wxyzABΓΔΕΖΗΘΙΚΛΜ ΝΞΟΠΡΣΤΤΦΧΨΩαβγδ εζηθικλμυξοπρστυ φχφωσφητρτότου 40 作你伯低伶余佝佈佚兌克覣兵冶冷別 50 判利刪刨劫助勞劬匣即卵客吭吞喜否 呎吧呆呃吴呈呂君吩告吹吻吸吮吵呐 吠吼呀吱含吟听囱困围圆坊坑址坍 60 70 80 90 A0 B0 C0 D0 均坎圾坐坏圻壯夾妝妒妨妞妣妙妖 妍妤妓妊妥孝孜孚李完宋宏尬局屁尿 尾岐岑岔发巫希序庇床廷弄弟彤形彷 役忘忌志忍忧快忸忪戒我抄抗抖技扶 抉扭把扼找批扳抒扯折扮投抓抑拉改 攻攸旱夏東李杏材村杜杖杞杉杆杠 ↓く丁里オ戸日下ちムYでさせあ へ幺又弓ら七ムルーメロ・ / ∨へ

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Code Page 950 Traditional Chinese (Continuation)

A840 - A8FF

AC40 - ACFF

40 50 60 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	杓杗步每求汞沙沁沈沉沅沛汪決沐汰 沌汨沖沒汽沃汲汾汴沆汶沍沔沘沂灶 灼災灸牢社牠狄狂玖甬甫男旬皂盯矣 私秀秃究系罕肖育肝肘肛肚育良芒 芋芍見角貫谷豆豕貝赤走足身車辛 辰迂遮远並乖乳事些亞享京倖依侍佺兔 見兕隣具其典冽函刻券刷刺到刮制制 劾勁卒協卓卑卦卷卸動取叔受味呵	40 50 70 80 90 A0 80 00 E0 F0	经括拾拴挑挂政故斫施既春昭映味是 星昨星時冕柿染柱柔某東架枯柵柩柯 柄柑揭袖查枸柏柞柳桦柙板柝染歪殃 殆段毒毗氟泉洋洲洪流津冽洱澗洗 活洽派淘洛泵洹清洸洩洮洵洎洫垃 焉炳炬均逆昨戒返爱牲枯斑狩狼狡玷 珊玻玲珍皇坂盈盆盃盅省盹相眉看盾盼 眇矜砂研砌砍祆耻新興禺禺秒秋穿 突竿学籽紂紅紀紉紇約紆缸美羿耄		
A940	0 - A9FF	AD4	AD40 - ADFF		
40 50 60 70 80	咖呸咕咀呻呷咄咒咆呼咐呱呶和咚呢 周咋命咎固垃坷坪坩坡坦坤坼夜奉奇 奈奄奔妾妻委妹妮姑姆姐姗始姓姊妯 妳姒姅孟孤季宗定官宜宙宛尙屈居	40 50 60 70 80 90	耐耍崙耶胖胥胚胃胃背胡胛胎胞齓貾 致舢苧范茅苣苛苦茄若茂莱善苗英茁 首苔苑苞苓苟苯茆膚虹虻虺衍衫要觔 計訂訃貞負赴赳趴軍軌述迦迢迪迥		
90 A0 B0 C0 D0 E0 F0	厬岷岡岸岩蚰岱岳帘蒂帖帕帛帑幸 庚店府底庖延弦弧弩往征彿彼忝忠忽 念忿快怔怯怵怖怪怕怡性怩怫怛或戕 房興所承拉絆拄抿拂抹拒招披拓拔抛 拈抨抽押拐拙拇拍抵拚抱拘拖拗拆拍 揜放斧於旺昔易昌昆昴明畇昏昕昊	A0 B0 C0 E0 F0	迭迫迤迨郊翧郁邰畲酊重鬥限陋陷 降面革韋非音頁風飛食首香乘毫信倍 做俯倦倥儜倩倖備值借倚倒們俺倀倔 倨俱倡個候尙俳修倭倪俾倫倉兼冤冥 衺凍凌准凋剖剜剔剛剝匪鄭原厝豎哨 唐唁唷哼哥哲唆哺唔哩哭員唉哮哪		
AA40 - AAFF AE		AE4	AE40 - AEFF		
40 50 60 70 80	昇服朋杭枋枕東果杳杷枇枝林杯杰板 在松析杵枚科杼杪果欣武歧歿氓氛泣 注泳沱泌泥河沽沾沼波沫法泓沸泄油 況沮泗泅泱沿治泡泛泊沫泯逝泖泠	40 50 60 70 80	哦喞唇喓唏圃畺埂埥埋埃塉夏套奘奚 娑娘娜媠娛娓姬娠娣娩娥娌娉孫屘峷 寈家宴宮宵容莀射屑展屐峭峽峻峈峨 峰島崁峴萐席師肁庭座弱徒徑徐恙		
90 A0 B0 C0 E0 F0	炕炎炒炊炙爬爭爸版牧物狀狎狙狗 狐玩玨玟玫玥甽疝疙疚的盂盲直知矽 社祀祁秉和空穹竺糾罔羌半者肺肥肢 肱股肫肩者防肯臥臾舍芳芝芙芭芽芟 芹花芬芥芯芸芣芰芾芷虎虱初表軋迎 返近邵邸邱邶朵金長鬥阜陀阿阻附	AO BO CO DO EO FO	恣恥恐恕恭恩息悄悟悚悍傷悌悅悖 屬拳擊拿指挾振捕捂捆捏捉挺捐挽挪 挫挨捍捌效敉料旁旅時晉晏晃晒時咀 晃書朔朕朗校核案框楦根桂桔栩梳栗 桌桑裁柴桐桀格桃株桅栓栘桁殊殉殷 氣氧氨氨氨泰溃涕消涇浦浸海浙涓		
AB4	0 - ABFF	AF4	40 - AFFF		
40 50 60 70 80	陂隹雨青非亟亭亮信侵侯便俠俑俏保 促侶俘侯俊俗侮俐俄係俚俎斎侷兗冒 育冠刹剃削前剌剋則勇勉勃勁匍南卻 厚叛咬哀咨哎哉咸咦咳哇哂咽咪品	40 50 60 70 80 90	浬涉浫浚浴浩涌涩浹浬渨涔烊烘烤烙 烈鳥参特狼狹狽運鴉玆班弶珮珠珪珞 眫軟畜畚留疾病症疲疳疽疼疹痂痘皋 皰益盍盎眩真眠眨矩砰砧砸砝破砷		
90 A0 B0 C0 D0 E0 F0	呹哈咯咫咱咻咩咧咿圊垂型垠垣垢 城垮垓奕髨奏奎奐姜姘姿姣姨娃姥姪 姚姦威姻孩宣宦室客宥封煕屛屍屋峙 峒巷帝帥帟幽庠度遽弈弭彥很待個律 徇後徉怒思怠惫怎怨恍恰恨恢恆恃恬 惆恪恤扁拜控按拼拭持拮拽指拱拷	A0 B0 C0 D0 E0 F0	砥砭砠砟砲祕酤祠祡砠胂祝骶祚秤 秣秧租櫜秩秘窄窈站笆笑粉紡紗紋紊 훍窝純紐紕級紜納紙紛缺罟羔翅鎉蕾 耘耕耙軞耽耿脁脂膓脅胭肩隐胸胳脈 能脊胼胯臭臭舀舐航舫舨般努茫荒荔 荆茸荐草茵茴荏茲茹茶茗荀茱茨荃		

Code Page 950 Traditional Chinese (Continuation)

8040 - BOFF

B440 - B4FF

40 50 60 70 80 80 80 80 80 80 80 80 80 80 80 80 80	虔蚊蚪蚓蚤螀蛘蚣釾衺滖袁袂衽衹記 訐討訌訕訊馲鼿訖骬肔溰荮約財貢起 躬軒軔鼿尋送逆迷退迺迴逃追逅送邕 郡鄰鄄酒配酌釘針釗釜外閃院陣陡	40 50 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	蝏孎媦媒媛媧孶霠愙畗畗寐尊蕁訦眹 蛗崴嵇巽幅慒幀槹幾廊廁廂窚弻彭復 衟徨惑惡悲悶悥筃愣爠偔懀懙偳儱惱 躗懛惀愀欘軷彞鞤掌描揀揩揉揆揍 插揣提握揖揭揮捶援湫換摒鶍揹欰 暬葝靷椬悿枼棘櫜倚梀惈殔裬噑犦慺 椂垷棍櫙樕槯棉焩櫡蒅歀歁龡婱瓐瞉 왢氦氯氥灆湤湔渡淔澙禓淃꼕洅灡凙滋
B14	0 - B1FF	B54	0 - B5FF
40 50 60 70 80 90	媼婢婚婆婊孰寇寅寄寂宿密尉專將屠 屜屝樂崆崎崛崖崢崑艄嶊崙崤崧崗巢 常帶幔帷康奝庶麾庾張強彗彬彩彫得 徙從徘御徠徇恿患悉悠您倇悴惦悽	40 50 60 70 80 90	漑渙澑濳漝涭湩湟婄焚熂嫍無然煮熀 牌褅擪獊忁猴缊琺琪晽塜琥琵琶丵琯 瑮璯琨侽甦蟗斱姰鴍痣庢痘庮痿登發 皖峼麬盜睏爼硝硬硯稍稈程稅耣窘
A0 B0 C0 D0 E0 F0	懤倖愄懎噑憍愓憴倠悸愡惇戚戛匶 掠控掩掖探接蓵撪掘措挜痯掉掃掛捫 推鴘授掙採掬排掏掀捻提捨捺敝敖救 教败啓鄻敘敕敢斜斛斬族旋旌龍畫晩 矒晨暤晞曹勗望采梯梢梓梵桿桶栶梄 榎械梴棄梭槨梅槴條梨櫐梡梂欲殺	A0 B0 C0 D0 E0 F0	骝窖童婈等茦茟筺筒答筍筋筏茨粟 粥絞結絨鴜紫絮絲絡給綯緸絳齹翔 樖 蠢聒肅腕腔腋腑腎脹腆脾腌腓胦魣舜 萻牶菸萍液首葁靑華菱蒮著萊菰萌菌 瓬菲菊萸萎萄菜茣萠莬虗妏蛙蛭蛔蛛 蛤蛐蛞街教裂袱匰覛軴豽軯瞷訌酟
B24	0 - B2FF	B64	0 - B6FF
40 50 60 70 80	鼁毬氳涎涼澊渿液淡淌淤添淺凊淇淋 涯諔灁淞滝涸混淵淅賡渚涵淚淫淘瀹 澯溎凈禙崰涪祽滚淦烹傿焊烽烯奭牽 犁猜猛猖猓膋率琅琊球理現琍瓤瓶	40 50 60 70 80 90	袑腽詐赾訴駗訶詖洜貂羜貼貳貽貵貵 頖僓買貶賀貟毠趦趛跎距跋跚飑胅踜 畄軻軸軼辜逮逵漞逸進鍙铘郵鄕鄽酣 酥量鈔銋鈣鈉夠鈍鈐紎鈒閌闧隬闎
A0 B0 C0 D0 E0 F0	鐜甜產略畦畢異疏痔痕疵痊痍咬盔 盒盛善眾眼眶跱眺硫硃铏祥栗祭移窒 窕笠笨笛第符笙笞笮粒粗粕絆絃統紮 絽紼紪細綽組累終紲紱缽羞券望翎智 耜聊聆脯脖脣脫脩脰腏春舵舷舶船莎 芜莘荸荧莖莽莫莒莊莓莉莠荷荻茶	A0 B0 C0 D0 E0 F0	閐閒閿隙階隋陽隔隆隍陲隄雁雅雄 集曆雯雲訒湏暊須飧飪飯齨釱飭馮馭 蕡黍黑齓傭僓慠傳壒幊催傷傻侇偧剿 剶剽募勦勤勢勣匯嗟噅嗓嗦嗎瘏嗇嗑 鴚嗤喨嗚嵧嗼墖噑嗉圎廮塞蛵湱塗塚 塔塡壧塭塊塢ș辁奧嫁槉獩媾嫘媼
B34	0 - B3FF	B74	0 - B7FF
40 50 60 70 80 90	莆萈處彪蛇蛀蚶蛣蚵姐蛋鈼蚯蛉衚裦 袈披柦袖袍袋覓規訪訝訣訥許設訟靴 訢豉豚販賣貫貨貪貧榝赦趾镻鈪軚逪 逪通逗連遖逝逐逕塣迼遷邊逖逛途	40 50 60 70 80 90	婂孆揵嵩嵯幌龫康廈弒솣徬徾愚意蕮 瘹想愛薏愁愈愼慌塛慍愾愴愧愍愆溰 歏戝搓搾搞搪撘搽躮搏搜搔損搶搖搗 擕敿斢新暗暺暇量喛碹啺嘠畣榔祡
A0 B0 C0 D0 E0 F0	部郭都酗野釵鈤釣釽釭釠閕陪陵陳 陸陸陣陶陷跋雀酃奪章竟頂頃魚鳥鹵 廚麥麻像傍傳備傑傀偉傘傚最凱創剴 創則勞勝動博厥宮喀喧啼噘喝喘喂喜 燛喔喇喋喃喧單唷唾啪喚喻斋喠啾喚 喫喙圍堯볺揭堤塓報傒媧塳書舂韋	A0 B0 C0 D0 E0 F0	莌楷樆楔極梛槪欈幩侱梬楓榲碖檪 欘楛歜歳毇殿駴貗溢灁淎溶滂濵溝瀵 滅竱濜蘯鬸溫滑準溜凔漝溪渜溴歕煄 燌煤燣照爅爥喣煌煥歀縀孆煖諙觻歖 鐗獽猎瑯瑚睱瑟瑞瑁暺暺碤瑜葍畸瘀 痰涬痲灖瘒捿瘹痳衋盟瞶踕睦誺鬙

Code Page 950 Traditional Chinese (Continuation)

B840 - B8FF

BC40 - BCFF

40 50 60 70 80 90 A0 80 00 00 E0	膡罿婇睜睅晲維矮碎碰碗碘碌碽傝碑 磪硿腜醁禁嶌禽稜稚穪棯茣稞窟窼楱 節筠筮筧粱粳粵樫緺趐綁趗傃罿罩罪 署義羨辥銐聘鱌肄塍犪腸腛腮鄕隀 腹腺孂翼艇蒂蕇落躗蒆薏鴰葉粦葛 ඉ藒鲝銆蕄葔秶膐褿襰葌娦螚籔蛻 糓絾解亁該蓒試輢諳蔏譀鯂馘話恭詭狥 跧詬穞鰫鬠詨籇藰鴼貱賨藚陏贙筫陷	40 50 60 70 80 90 A0 80 00 00 00	剚劈劉劍劊勰厲嘮暿唻嘲囇嘴嘩ս曀 噗噴嘶嚝薎墿嬧墸壙窐螴墽塯죶攎焹 嬋嫲孈婰훛寛碆寪篖履嵦嶔犝蟙幡蕟 罻鼿玂廔畩彈彲德燩彥蓫廰麡慕憂 慼鬿憼慾馌撛憫潧懞憚僋憔穒黆犘 藆摹撎獛捞捿摨橃捖鴜揼漧撗撍撫繎 斒涬禫渁駇敳盭譥髱櫐璒橠椲熌樁櫙 熛璯沯宯湙秶礯楉眔汖爜鈒颬섗
FO	胶跡跟跨路跳踩跪跤跌躲較載軾輊	FO	腰溝濱潟熟熱熱熨牖葉獎源臺瑋璃
894	U ~ B9FF	BD4	40 - BDFF
40 50 60 70 80 90	辟農運遊道途達逼達遐遇邊過邁達逾 灗鄪藯酬酪酪釉銡鉗鈸鈽鉀鈾鉛鉇鉤 鉑鉿玆鉍鉭皶鈿鉚閳隘隔隕雍雋雉雊 雷電雹羃淸靴靶預碽頓瑻頒頌餇鈶	40 50 60 70 80 90	瓂獕畿眘愘薀瘤廀潱濲暟齩盤睶謎譠 猽嫨遌磅釄舙嗫潱曘緖穚榢糓穃稪稻 鯬竆葥羭範瘶蒃鷕篂盬葔樃褅娻椲敿 絾糆閪楄緣躼榝徦綞椫鯋趧鶑罷薎
A0 B0 C0 D0 E0 F0	訽鉓靤馱駠髠鳰焭鼑鈘囶儅徸绵僖 傄僚僕像僪傴僎憪鋴ุ큌覅灠匱馺嗾嘀 噰萺嗽嚧嗼嘉嘳嘠嗷嘳喐嘃嘐嗶潿圕 麔整境墓墊塹髽娨夀夥夢夤奪奩爒嫦 瀐孂嫖爄嫣쫽茣嵉寡寥寊獉朡窹簽對 寠韒崰愇幤幕锢幔雺寥龏瑿彰徾慇	A0 B0 C0 D0 E0 F0	鄿鵫韑瞙脨豂庯牃蔴欳嶎遧蔬蒣葁 蒑祽蒣췹遳葱篃蓤螂蛡蝾蝹縀鳻蝨媥 蝹挮堬衞愩褐椱夌棌褕禲誼諒꽚鋍甋 藭驖薎蕟誻譋醀讑魻辥誹騻聦豎豴賠 蒖驖薎睼暏寳妟闎簤藔橗趉鍯踫퉎檃 踼睯婇踙墬踞鮵暺輛鞖쭣쓓耣轀輞
BA4	0 - BAFF	BE4	10 - BEFF
40 50 60 70 80 90	愿態懅慢賃懄峏鏒孈截獙滳摔撽摸捿 揊摾嶊藆掋襂敽鮛旊媠鵗曁嗘橯恗桰 槞筞愩懤搸檶欘椫愊橷愇傠毡榦梷榣 歗歌氳瀈溑洝渪滳旇კ茣撌潳墂茣	40 50 60 70 80	輐遖蒁遬邅遷郲螂鄼鄮馡馡菗醷絴紼 錹鋪銙鐗鈻鈗辁鏲蛽鋰繟閶閿霄鬔蘪 藆葊裬鞋줓頢顃緽戅貵鼣鈠餘亁靯鮂 駛鴑鴐駨駙秥髸鬊闣葂魄魷魯縳瑦
A0 B0 C0 D0 E0 F0	瀒滯渿漵澵蘯漣褿漫瀿濲獟灛漁窙 鵧攎熔熙爜艄熄棾躀禞牶獄獐瑤琑瑪 璄蕏甊疑瘒灜瀌濸痶衋監睰聧雸є禌 菋礜磀碽礋幊矖偳穜稱窪窰竭媏謍簨 菚筵算箝箈蔘箺笝萆椊棕糄綻綰綜綽 繌秼 緊 綴網繑絧縞絧紻綵耣雓緖緇橮	A0 B0 C0 D0 E0 F0	鵌麩麾黎嵳鍣儞儘儔僋焪鵥羃凝劕 鼼動嗿噫噹韰喍嚽嗓器嬳嚺燰竤嗼噶 朢鎜壦壅奮媴嬴旲奒導彏齹洒麶懲搷 燱攟傸煝斁撎獟擋揵澸壉撔撍攌嬠皳 擒癠遉整朁嗴塣曄疉曢椲橂樺僜樍樁 樹掫幱榡檽橇燋橯獟龡歴鞤瀌猳澯
884	0 - BBFF	BF4	10 - BFFF
40 50 60 70 80 90	罰翆鶨鼅闅豛瑿隖肳眘膈膊蹆窅臧臺 與舔雞掹蓉雟藛萻蘷蒞滽恭蓋鷔茲僐 萈鴍袲蘃埦躗蜻迼狾鍻侞렖竳蝞萇啩 妴褢捰製榟陼襉誧鋕語誣認誠奮鋘	40 50 60 70 80	禯瀈瀥遌洟滶澹潌լ浌澠瞏樕樕垗墝涭 燕螷爎燙爓繎颌魙靖璣珃瓙璞鼿甋镸 癨癕璑靁塑蹚蹣矋睝廍碠暬礗旟橨鞼 穆鉌嘐窺筙簔筡库藭簊葃篦糕榶縊
A0 B0 C0 D0 E0 F0	誽艁踇蜏銋誚誧櫜鎠覙寊睙畭旑趤 攳檃輔輒鱏輐铼澺擃瀶遭遙遞逿瀥濵 鄙郬鄞斄輘酭蒢鉸鍡錭銘絑鉻絟衘鈘 鉼銑驖閶閺闂閐閤漮瞕脎雌雓覉靵軮 韶頞領颯颫蔎餠衈鵨駁髚殾髱魹瘣嚋 鴍鳯廀臱窏燱燨偋偅儹僟徻憸儅潗	A0 B0 C0 D0 E0 F0	熑榮縛縣獇鑜榗媰罹斔鰫翶郮艜矒 膩彲鵛興艘牄筄簄莗颇濗萫嶣蕭蕪薣 蝷嫇蝺螢勈衠慩愇椦祪撘粯鋧赩餯脨 謒誀톬諙蓜趧謂諷睮諳鎐謏獤濲獈 蝐蹄澞蹎蹂鴖螴輻驑崳朄觪紨濾邉鼝 躩澺遦鄛匷鋎錶縃鯭鐠錢絧鯞銯鋢
C440 - C4FF

癔磧礍寚磼贀竸鑻蠞籍檽椻錌絯徾

嚞騴爠譃鈭潹鍱曫懳蔖薠鉌莥缍缡 湰覺燰譈謍箁譂颕譮驘瞺惷躁灠躂體 韗纑婰攭贒綟煭皢쇖韾萕瀳瓹睙蚭絥 戫兣蓔韼訵訽齝儠僟囆嚋蒖蔙夣婗꾙 匬拪揂瀷嘦檓儹橪殱蒮燗褑瑻孾鋷瞷

籐纏續З奜蠥藓蠇素会態復視覽證

羧謍隇溸瀈訲雥灷醘焿漝놏獔嬕媀鳼 闎靏퀡霠螷駺顝姕駋腜霯聣棱覐魖緍 婇鴜鶕鵗酳漘輡鞤魮鉙籊偒鵀囄嚢碯

李旗巒雪彭樂禮歌漢繼强影叠審審

滖巃羧**鬇**鴖瀫됮凞婈捘阦賮遯贒吿 鄞紼鈭鑋瘔鑩鏈礰顉贙聫暁顜贙瀪畽 皹鯘謪趪鉇鷌踀銆釲鷌嚝夎忩宯摚涭礥嬞 菮飝篏瓉菕孆橼繌灒輡蕐皨憆遌媼紼 鐱嬟鼞闏羐騺飅矝馩怚僠繕螒蚔釯齞 儎喛瓃擈瀫痲旟庎暺鸅鬗奯衜娻潨

CO40 - COFF 頥鼿翜綅饚鷘駠敯誴蝹鲓錭鶁鵭鶙 鴡貮蝁筻麪勯嚾퍝嗼鯘嘝壌爄嫧孶簤 嚵愻韱攐攅捿谦濉樃灁襧瀲燺弎撠庚 40 維綿錡鎤錭鑡闣嚺濻潒雕窭膤罧蒮萖 露靛靜覴睮頝頭頝頿頭頹頣夭錧楱餛 鈶錹薂騈鞛該詻醔氎髸魦鴕鴶鴦鵇鴶 駌歝霒巃雥獶僋鑞餹斸嚎嚀嚿曘齾 40 50 50 60 60 70 70 80 90 A0 B0 C0 D0 80 90 A0 B0 C0 嚔搸軖盭壋嬰嬪姲渪鴜屨嶼禯敳嶫 鴽獼燩悳圗懖檽慦歏歕鐜瑿霴摬挬攐 擬燸糮擭舣笰嚋贒梪憘樕檢椲橵噾橾 糪櫓棸歜飱皨氃滜淔ր蒃縤夀耊溄埿 湷羺濩潶稧澔嬘謍躗澯嬠熶腶嬒煷睅 蘠獰獛壉瑻琝ς瘚尞滖逿曈睻跐睤 DO E0 E0 FO FO C540 - C5FF C140 - C1FF 40 40 50 蘝籡熑麎糞犑褿稓捀絗嫧熮貗嫇棩緟 緿縱樔鰵缏墂橽槾椧繽罊駽質嫯謍聴 聠謍鵙蹗膺甧髾膿牄旇譮瀶卛糓崭 50 60 70 80 90 A0 80 C0 D0 E0 60 70 80 90 A0 80 00 E0 F0 澊蒥蕼蓳韾籉嶭嶶顤酊虧繂媁螳嫾 塻鄨貗嫇蝞蜏簐祻棸褄褽煭謎耪譧讗 谎謠嶎濳諩豁谿嚻獉賽躊黂暷憃蹉踻 跒蹼輤蜫歏鎱洖瘀濜瀥瀳濄遬剱馦醞 鶶鋑嵄緢鑓鋉嫇銗綞鑎絥毇鋖僟鵎閐 関鶦鶦闣隠褖雖瑁霞睕椲頛棸鼳鹗 FO

C240 - C2FF	C640 - C6FF
40 酸鮮較鮪鮭鴻鴿麋點點點黝黛鼾齋费	40 識點鏡釀這空空話種報味餐覧餐
50 嚕讏墳壘媋彝懣歡摸攀獶撵攤撒擷斷	50 動空電鐵網總復當框讓全觀選集
60 曜朦禎使櫃檻檸懽榫檯欺歸殯瀉瀋濾	60 氯氯寬寬驚異类環讀過讓麵酸增讓
70 潰漲瀑濁爣燼燾燸濵獵璧璿壅癖寫	70 波盜過題讓發點堅踢與碳鬱調當
80	80
90	90
40 亦聲驅踚贻礎禮薙稳寫窮蔷蘩題	A0
B0 軍賽管理總維總續續總指揮和翻雨品	80
C0 防波害激進整範續業营業開繞彈蟲輻	C0
D0 覆數態讓這膠滴發黃來強節蹤頭彈輻	D0
E0 轉載選塞證醫醫醫的續續總續講經	E0
F0 編組建聞鬧覺開離雜雙聽雜習鞣軟	F0
C340 - C3FF	C740 - C7FF
40 鞭蟲有類題類相應給設的架設時採業	40
50 聚鏡體想減輕輸倫鮮時時時時都總	50
60 嚥壞整理難產營復預營等推續長個	60
70 積懼情瀛漸満漸遊測這爆潗積積默	70
80	80
90	90
A0 須靈瓊瓣疇橿傷瘊矇碳藬棱穩篻薄	A0
B0 跋簽簷籀繁随緷繩繪羅繳痯奠嗭孍藩	B0
C0 藝藪藕猻獘諸幾蠅蠍复塢澢偨摤騻瞱	C0
D0 錯識證揮践機譆譙贈贊蹼琠磰蹠證蹺	D0
E0 跋輐轙辭邊遗醶醮鏡鏡遙挑鏈饄没臺	E0
F0 猽鍒蒶緀繿鏨限隴難黿霧跮髱饙覢	F0

C840 - C8FF

CC40 - CCFF

40 50 60 70 80 90 A0 80 00 E0 F0		40 50 60 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	坨培麦爺娃妹蚶殃姐娉妈炫妼娅姫嫍 婶妹媂發姇孢孥淧宕层脑岮岤岠岵岯 岨岬峡岣峥岢鼻当海废岶岰岦怴帔帙 强弢驸瑟彔徂彾彽忞忥怭怦怙怲怋 悢躗贉抗搅拑挂拣疾拊抮搅抯抻艚换 抸攽斨斻貥赃旼畈昁睅妟昃萫昍昅旽耹 盼箵朊枅杬枎枒杶杻枘枆构杴枍枌杺 枟枑槴枃杽极杸杹柃欥殀歾毞氡畓泬 泫洠泙沶泔沭泧沷泐浻沺洵泆泭泲
C94	0 - C9FF	CD4	0 - CDFF
40 50 60 70 80 90	乂也山匚厂万丌乇亍口兀屮彳丏冇与 丮亓仂仉仉尤句叩茲比多夫公市无殳 毌气并非并仨在佔仡全企利置卅订圣 夗夯宁宄尒尻男屳钉庀庂忉戊扐氕	40 50 60 70 80	狐派诊 然林 桥泞河 泡 体加石温泚注泑 快炘灵抖纹纽床炖必敢 这 牲犹须狘狉 狜狒犯狙狌猞珜玡玭玦玢玠琾玝虞瓨 甿畀甾寁疘皯盳盱盰盵矸矼矶矻矺
A0 B0 C0 D0 E0 F0	永叭氿边女犰王内肊防使优保仵伉 伶伀价伈伝佈伅伢不伄仴伒冱刓刉刑 劦圆置卍呀呼囡囟圮圪均夼改奼虹效 如纤尨开尕担屼屺屻屾巟幵庄异希符 伏忔忏扜扞扤牠扦挖杖扠扚羌見旮朾 机材料机束牝机氘汆汒汜沃汊汔汋	40 80 00 00 00 00 00 00 00	
CA4	0 - CAFF	CE4	0 - CEFF
40 50 60 70 80 90	训切物犴犵玎角癿空网艸艼艿艽艿虍 西邙邗邘邛邔阢阤贶吃佖倅但佉体佤 伾佧侠侈佁余伭伳伿佡阎汝劓剆刡劭 劮匉卣卲甅厏吰咉吪呔呅吙吜吥吘	40 50 60 70 80	嘪茍祧咮哖咶哅哆咠呰咼咢咾吡哞咰 攱垞垟垤墹垗垝垛垔垘槹垙垥垚垕壴 复奓姡娮姮皴姱姝姺嫓姼婄姤姲姷姛 姩姳姵姠姾姴姭宨屌峐峘峌峗峋峛
A0 B0 C0 D0 E0 F0	些呏响吨吩咨囵囲团坁坅坌坉坋坒 备买蚌妘纳妗妎妢松姣妧妡实笔尨尪 岍岏岈岋岉岒岊岆岓岕巠帊帎庋庵序 庈庍弅豝彸彶忒忑忐忭忨庋伅忡忤忣 忺忯忷忻怀忴戺拤抌抎抏抔抇扱扻扺 扰扰抈扷扽扲扴攷盰盱旳狊旵杅杇	90 A0 B0 C0 D0 E0 F0	峞崟峉峇峊峖峓峔峏峈峆峎峟峸巹 椕峆帣帠帤庰庤庢庛庣庥搻弮彖徆怷 怹佼倂侇恅恓愝恉恛恌恀侚恟愆祮恘 恦恮晑畼拏挍挋栫扲挃拫拹掆挌拸拶 挀挓挔拺挕揼袵敁敃斪斿豘昡砩眤昜 昦昢呹咰昺昝昦昹昮胐胊柁柲柈枺
CB4	0 - CBFF	CF4	0 - CFFF
40 50 60 70 80 90	杙杕杌杈杝杍杚杋毐氙氚汸洴汫沄沋 沏沷汯汩沚汭沇沕沜浜汳汥汼沎灴炮 牣犿犽狃狆狁犺狅玕玗玓玔玒町粤疔 疕卑刕耴肕肙肐肒肜苄芏芅茑芑芓	40 50 60 70 80 90	柜枻柸柘柀枷柅梻柤柟杩柍枳棿椢柮 柣柂枹柎柧夽롲柼柆柭柌枮柦柛枴柉 柊柃柪柋欨殂殄殶毖毘毠氥氡洨洴诓 洟洼洿洒洊泚沕洄洙洺洚洑洀洝浂
A0 B0 C0 D0 E0 F0	芊芃芄豸迉辿加加加和和那批肥肥 於弗侘佼侅佽侀侇佶佴侉侄佷佌倜個 恂佹侁佸侐侜侔侞侒侂侕佫佮采冼冾 刵刲刳剫韧劼匆匎匼厒厪咇呿咁咑咂 咈呫喝咀咈呬咰呦咍呯呡呠咘唖呧呤 囷困坯境坭坫姎牁姆垀坵坻坳坴坢	A0 B0 C0 D0 E0 F0	迼涄洷洃洏浀洇洠澋洈洢洉洐妵炟 炾煑炰炡炴垑炩胊牉牊牬牰牳牮狊狤 狨狫狟狪狦狣竗珌玽珈珅玹琗垖聓珗 玿珇玾珃珆玸瑘瓬爰僒畮畈疷疧癹盄 貥眃眄眅眊眗盻盺矧矨砆砑砒砅砐砏 砎臱砃砓肪妕軗訞祄秕种秏秖秎窀

0040 - DOFF

D440 - D4FF

40 50 70 80 90 A0 B0 D0 E0 F0	穾鈜笀笁籺粎籹籿粀粁紃紈紁罘羑羍 狐萮耎耏耔耷胘胇胠胑鼣訷胐胅瀶詐 貹胊胕胉胏駗胦胍臿訌芔苙苾萃茇苨 羛苕茺苫苖苴苬苡苲苵茌苻苶苰苪 苤莨莓苳苭飦虴虼蚐衁衎衧衪衩鼼 熩訇赲迣遤迮迠郱邽郀郕郅郲鎃郋郈 釔釠陔陏憰偧陦唋偀煷倓倢倰倛俵 儯倳倿俥煾儮倗儞倠愮倵倯倱倎覚冔 嚛哢喠唒哧喐嗹閿唄嚜哫唑唅啍	40 50 60 70 80 90 A0 80 00 E0 F0	酎酏釘釢釚陜陟隼飣髟禥糺偰偪偡偞 偠爧偋偝侽偈偍偁偛偶煍倕偅僿偩偫 偣偤偆偀偮偳偗偑凐濧彲剬劅勫勓匭 厜啵啶唼啍啐唴唪啑嘃唶唵哵媹啅 埶荎瓐堀捸壔瑐埢媩埳垤蘲垗竨埲埥 埬埡堎裿墔埧堁壃埱埩堔境垷猆娮婘 嬑嬦婞娸鋷姪婐婟婥婬翣孎紭婃婝婒 婄弶婈媎嘊綺娹欨婰婩婇婑婖婂婜孲 渿寁栥屙嶀鬡崝廀崠嵁矆崍嵼嶂崏
D14	0 - D1FF	D54	0 - D5FF
40 50 60 70 80 90	唊哻唏唼哠唎唃唋圁圂埌堲埕埓垺埆 垽垼垸垶垿埇埐垹埁夎奊姪娖娭娮娕 媩娗娊娞娳孬宧宭庡尃屖屔峬崰峮拹 峷嵔峹帩梲庨庮庪瘎弳弰彧恝恚恧	40 50 60 70 80	鰸峷崣崟爩帾帴庱庴庹湅庫弶弸衑徖 徟惁恏悆悾徖悺僐慡惏惤惙悑惈俳惛 悷谅悿惃惍惀挲捥掊掂捽掽掞挀掝掗 掫渏捯掇掐据掅搝捖捙ู擉捼掤挻掟
A0 B0 C0 D0 E0 F0	恁悢悈悀慍悁悝悃悕捘憢悇悜恄戙 鼳藆挐捖挬拺搹揭捃揤挹枍捊挼挩捁 挴掕捔蘀挭捇摼捚捑挸捗捀捈敊敆旆 旃施旂眰晸晇鼌跠ミ栟栚椄梬粩铽槜 桏梄栱栜栵栫栭栯桎桄栴栝咰糓棩栜 椢桍栺栥栠欬欯欭欱欫歭肂殈毦毥	A0 B0 C0 D0 E0 F0	捸掅掁掑掍搮鈫隖晥晡晛畯齃晢朘 檓梇蒮杴桭桮槞梫蝍榲茻梬梩娐梈梲 栫鵂梒桼桫桲梪梀桱桾梛梖梋梠梉梤 稐桻梑梌梊桽欶欳歚歘殑殏殍殎殌氪 淀涫涴涳獹淎淩淢溒浨淔渀淈淠淟湋 滀湪淜淝淛淧淊襎淭淰涺淕淂淏漅
D24	0 - D2FF	D64	0 - D6FF
40 50 60 70 80	毨電毢毧氥浺梡浤浶洍浡涒浘浢獿浯 涷涍湷浿涆浞浧꾦涗浰溾橵涂涘糓浨 涋浾涀涄洖涃襉浽浵珴烜烓烑飝烋缹 炖姟烒烞焴燗姺烅烆烇烚烎烡牂牸	40 50 60 70 80	淐淲淓淽淗渪淣涻焿爀煷煱熞焌烰穒 烳熸烼烿焆焓焀烸烻焋笅焎揊牻挳祰 猝猗猇頾猘猊猈鋋猏猞絭珶珸珵琄琁 斑璓璯璢珼珿琌琋珴琈畤畣痃簅痡
A0 B0 C0 D0 E0 F0	辁拳妙獳狴魸狶狳誜猁旼珙珥珖玼 珧珣绗洋瑋靖珔珝珚珗碲给康虞瓴瓵 芸畛夏佳店供痄疴亮疶疺皊盉眝誄眐 眓訷眣眑眕眙眚眢眧砣砬砢砵砯砨硻 砫砡砩砳砪硆詂祛袥祜柭慆祑秫秬柸 秮柹秪秜秞秝疺窉窅窋笷窊窇竘笐	A0 B0 C0 D0 E0 F0	痋癎痑庮皏皉盓眹脒晆眱眲眴眳眽 眥瞱眵硈硒硉硍磈硌砦晆碿粷祱祩祪 棭秴祡嵔秺稖蒅秷烰裦窐笵笻笴笥岪 篾笤笳笘笡箘笱羦岺笯笲笸笚笣粔粘 粖粣紵紽葒紶紺綗紬秼絁絇紾栬絊綊 紨罿羕羜羝彚翊翋翍翐翑猨翏翃耟
D34	0 - D3FF	D74	0 - D7FF
40 50 60 70 80 90	筓笓笅笏笅笊笎笉笒銢紦娦粌粈枆粅 樕紝紑紎絋粌紓岒紒紏紌罜弝罞檃罝 霮羧羒翃翂翀耖耾耹踜胲胹腟駣胻賮 舁舯舥茳夌奒夌荑茥荖戓荁茦莤茢	40 50 60 70 80 90	耞耛聇畘劅脘脥脙脛脭脟脬脞誔脕脧 涥踇舑舸舳舺舴舯赩莐莣萈莍荺莄莤 荴莏蒧莕鲝荵莔拲蒆莃莌莝莛蓘莋荾 莥莯莈莗莰莀莦葝莮嗒莚虙皥蛵蚷
A0 B0 C0 D0 E0 F0	弿莖莨茪茈僃荍茖茤茠茷茯茩荇莟 荌荓蓖茬荋茧荈虓胇蚢蚨蚖蚍鈘蚞鈬 蚗蚆鈉蚚蚅蚥蚙鈖蚧蚕鈂鈤眊鉤蚔衃 衄衭衵衶衲袧秡袊衯鋄袲衴枝訒訌豗 豻毑貣赶輼跔盵趶釱軓迾迵适迿迻逹 迼迶郖郠郙郚郣郲郥郘郛郩鄫郤酐	A0 B0 C0 D0 E0 F0	銰蛁蛅鏄蚰蛈鉜蚳蚸鈲蚴蚻蚼鈵蚽 皷衒袉袕袨袢袪妆祒榯祑袘袧袙捳紾 袲寠裛袓袎夒觖觙觕霕駀訬訞旈谻豜 豝豽貥赽赻赹趼肗趹鈒跁軘軞軧軜軗 軖軡逤遱逑逜謯逡郯酄郰郴郲郳郔郫 郬鄻酖酘酚孴毷釬釴釱釳釸釤鈘釪

D840 - D8FF

DC40 - DCFF

40 50 60 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	釫釷釪釮镺閠閛陼陭陫陱陯隿靪頄飥 尵傛僃傔傞傋傣僄偑僋朂偨傜徯俿傇 鉣謒匒匑膎厧喑喨喥喭囐噅喢喓竲喏 喵啺喣喒塦嚊喌喦啿喕喡噊圕堩堷 爠潗堧堣堨堹鱁堥堜堛壛堿堶摴堹 墂爞堬鎥奡嬀娷贌媝増趮嬧煟蹃媥秶 嬦寙嚺墴媶嫃澲鏲媩嫞翪鎑嫧媏皥媝 寪寍寋疺濅寊寎尌蔰緧嵃嵫嵁嵋嶀崵 髩矋嵈崳黋喦患萴嵙봍崹嵉崸崼嶐崶 嵀戭孋幱洜徦徥徫惉寭慦惢惎憗偣	40 50 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	軹軦輐軥軵軧魿锣軫瓡耊軴軩逭逴逯 鄿酁鄄爴郼鄈郹郻郩苭哵鄊鄃蓜酟酟 酢酠鈁鈊歀鈃鈚鈦鈏鈌鈀鈒紤釽鈆奜 鋴鈂鈜鈤鈙鈗鈅鈖酜閍閠闟鏚陾孾 隉陯隀雂雈雃雱雺蓒靰靮頇颷訞鳦 椦亃亄蟗傽傿僆褿倮熎傴倿僂傰僁儏 傱僋僉媙笶凗騯剚剻劉嗂嘄塧噾嗋嘳 啺毄嵮遦嗩喿瑎喍嗏竵嗢嗼嗈嘇囒嗙 嗂圔塓埢塤塏꾪焴塯堬塎塝遦堛塛堽 灅朢壼嫇婇鏚嬂媸鴂踜媰媿錗媝嵱
D94	10 - D9FF	DD4	0 - DDFF
40 50 60 70 80 90	憛湢ľ傗愅偞愓惸惼惾惁愃愹愝懎溠侽 愋閯掔彛鮩揎揥揨揯擶鴙揳揊揠揤揕 擛摙摡掅褖揝揜牏揘獇迼撱揌搌揈揰 揗斒碐敧醊敤敜敨敥淢斝斞齗旐篪	40 50 60 70 80 90	媷嫀媟媴媶嫍媹婜稪厧窚尟迼嵱榶嫀 嵄奊覐尙嵧嵢戅幏榠幊옘幋廅噟廆 賔廇嘋熯榣憃懎僙溸懛愲慉僴慅爙 愩慀戝酨麲戵戤揅靪摮摿搒撞搠捦
80 00 00 00 00 00 00	晀哰裺甠啋啺岟岲睝椌徣椄傢恎暙 裧椲梪檓娰裓橏棶僁椐棳棝椇棌椈柍 轞幥棯棆犣棸臩萻棼棸锿椊椗棎棈棝 橊瘄礉雂蒛靏軓歘湆湇渟捁濲渼渽溒 澑澲潹湁潧湳渜爼違湙湑渻渃渮溑	80 60 00 E0 F0	瘄瑻濧漥瘄渪搷撌漑플鞩愩灛筂瀶 搯搊搚鵧鵍擫搌揧熑搮搸搎駇鳮旓暆 磢暞喡睯嘪暙弲疉痯楟榶樿榰楱橏 楅僷櫙榁睷楙楺愶楉榝襊楆綞樕 椵椱欘偱欘藑蒅繂褣楴毊櫮楋楲懙諈柣 椱梎裫楻椼歊歅歄歂歊歁蓙嗀軞毼
DA4	IO - DAFF	DE4	0 - DEFF
40 50 60 70 80	凕湜渪渱渨湠槝承渹凮渰湓湙渧湸瀶 湷貗湹澋濹湽渶湚焠焞媁烻焮婒焣娔 焢焲焟焻焺焛樈牚裺犉犆犅犋猒蒅擙 猢猱猳猧猲猭盨猣獼猌琮琬裧璹璄	40 50 60 70 80	毻氀毢溛溒滳禬瀒凕枽溔遳溱湙滆滒 漘稐彏滉溷逪懎兪滏쮣溾緰滜滘溙溒 溎濐溤鸸溿傊澲癛渘閷棆燡煔虗煣熯 煁煝亴煲煸熷煡煂煘潅塭煰煟绬煓
AO BO CO DO EO FO	琚琡琭琱埩琣琝琩琠琲觗甯睖畲痧 瘒痡氌燆俼緸墑皕峨盚睕睇睄睍睅睄 睎酜葴齌嘊鼀碤噅礰꺝磘礉碖硰硩硨 硞硢葴顅誛穯栧穖稃蒣稜窧媡遾荌蚢 筄筶菳筎筀筘笎粢粞粨粡絘姟絣絓絖 綗栶栧絭鯬 枀 絒粨絩絑絟絎缾缿藚	A0 B0 C0 D0 E0 F0	燑垘燛牏橽徦昗犐犎嫮獂泺猺雭滄 獉邅瑊瑋鶡瑑瓁鳿瑏珈緖璛壃瑍璄軧 蔎瓾篗甝暆畷榃篃瘄瘶曔痾夁畁瘷庾 瀒痶痭淎痽蜤蔎盠睕睟羳醈踜琧睩睶 踚睼瞷稓聢殕倵猎碄碕碅讅磼碃殟碙 碀碖硻屧礀綷裪稑稘檶橊粺稕铽稓
DB4	0 - DBFF	DF4	IO - DFFF
40 50 60 70 80 90	翆猌羠檨翗聑聏聐戱裪腃諎腢腏腇脽 腍踤臦臮臷臸臹舃舼綘舿艵茻菏菹潱 羗蛬棾酨毊菼藆躄龁荭葟菣筣菐菝菥 豾藰蓾菋菎蕌菵菉萉萏菞雈单菂菳	40 50 60 70 80 90	稛稐 窂宖 謵坢羗嵔筭熧箘暜筥筳夜筰 筡箄雈筣椞粴粯絾缏綀綍絿綅緺艇赩 姢緧鋊綔梡絽綒쮌綤賝雤袰羦熞羧倄 奦勫腤腠蝁腜蹪躣鴊腲熋腞腏濪瞃
AO BO CO DO	菕譍銡磂菪鴜菃汮奱菄秼莥羗兾梈 菾蛘蛢蛦臷蛣挒睝婽缋蛜蛬蛩蛗筠鉡 衈衖衟袺裗袹褅祵祩袶袼祫袽袲褁裉 覕覕覸觝觚觛ᄠ瞛歊跋胋誷韷眣矝耛	A0 B0 C0 D0	雘鴖霋艉鮹艀螼艅蓱緧葖茡兡蒏鶾 蔪薱括媝葧菄蕌葽茖椬敧薂蟵榳蔃萷 萺萴蔶昨葸蓌篞粎錉胊萯葂瀮篂箯鷠 箻葌荰赩涜瀓萻夈韾懞틪滺胙榰倰葔

E040 - E0FF

E440 - E4FF

40 50 60 70 80 90 A0 80 00 E0 F0	觡膋觢觜触駲睚胿肕訿眮駣銇駪夦辥 詴詺谼豋僼豥豤豦貆貄貅賌蝕赩恷鎑 麮趏趍趓륀壛甝跰跠晆跱臸跐跩跣跢 跧跲跫酾輆崊輁輀輅辁輈輂騺溰逿 鈽鈺鉦筣紪鋮莸鈮嫍煔鉭鉬鉏紻鉧鉯 鈶鉡錭鈱鉔鍂鉐鉲鉎鉓鉌鉹鈲闂閐闎 闎敶躨臉隗睢雺孶雸茣馸靷靸靲幊嫧 頎颬鮅飹馯馲耹馵骭骩劎鳪鴊鳧鼁晅 憱愇僗僓厡僛僪傿僤僓僬椘僯偤僠	40 50 60 70 80 80 80 80 80 80 80 80 80 80 80 80 80	禐掕棩覝現覟覞觩觫觨瓹鋞誋族誏詊 谽稰豩賕賏瞱趬朖踂跿辪跽踊踘踇踜 躗篂踀踄輐輑蜟輍郬鄺鄻鄟鄟鄝郻颰 酁鄛靧霳酻馩蘝銤釽絬顉錈銔媠筳 颬銑銫鉹銗鈶銣絾鋈絒婰銯鉽絓銡 鋮銆銌銙銧緈銇铥銝鈓鈭敶隡雿舿靽 鞐鞺鞃鞀鞂靻軳鞁勬韎銰頖颭黤餂餀 銄誔駃蚎馻馺駂圔駇骱髣髧盭鬿虴 岒妅鳱鳱鳽麧僿匩戃凚僘儇僶僾傖憿 僽儊劋勴勯勯喴唓噌嘄嘐噊噉噾瘚
E14	0 - E1FF	E54	0 - E5FF
40 50 60 70 80 90	凘劀뻸黆勫薀厬嘧嘕嚑嚹嗼嘏嘜喴嚪 嘂嗺嘝磼嗿嚺媠竱壒蛖墆埐捿塧墋塺 墥墑墎塶墂糤塻褞曁耟甮媁摴嫥兣嵺 嫚媁嫫嬜嫢餧婜嫬嫞娻嫙嫨嫟孷寠	40 50 60 70 80 90	嚗嗘嘳喗√喗嘸嘪嘺圚埓垗琞塻넟 墬迼鳺焪燑檃焥嫷嫶嫢嫸潫嫧溰燌嬕 嬠履嫾嵭喡辝楱鍲嫶嶜斔藔嶞僋幝 幠貇穈廅窽廡彉徲悐憃梎憱憰襓憉
A0 B0 C0 D0 E0 F0	寣殌皥竴崹嶆蟉嶁嵷嶊嶉嶈嵾嵼謵 嵹嵿愩螑犈畗廅廗隫麘噰廙嶡寠彊彃 彯徶愬怒厬傽楟熞慒戃慲筺豂慴慔捿 慉蔙愻傴慡闣瞉戱戫搫摍摛摝摴攐摲 揊癛揻摦撯摎撂搷摜摋趮摅摐摿搿摬 摫璭搹摷敳斢聮霱暟鍻輠朢檨榶槉	A0 B0 C0 D0 E0 F0	憛憓憣憭憟憒憪憡僠慦皹歕嫯摰撽 撪瘶撗撜竱撋撋撔攑諅摨撱撘敶좞敹 敻斵斳噧暰獂暲暷暪暯樀樆樰槥槸樕 橶櫣樠櫙槬槢摎檶槾榝槲槮鬞槷氀橀 樈槦槻橨築橭綊樄憆瓂樏稛樦樇櫙樖 歑殥殣殢鳽毸氀氃馣濵躷獜膋濆澒
E24	0 - E2FF	E64	0 - E6FF
40 50 60 70 80	榠檚糓愭榬懛慱悋椱懡憜帹愲榯怈槄 榽檪橭傂螇榚榡榳怟檽傃獂橨棞榐槂 瀯滸漷灜瀤漉樕漙漚漧漘漻漒滭漊	40 50 60 70 80	濧澉澵撗嶶澅潹閍浧瀈凇潕澔潨潐潗 澔澓攭漀滶풌澘潧邍僡澋厧湩澕涭葏 潪潻頣熯燣熅焻澕熩頝癋璭熞焢熡熪 熜熧埐犘犚椘媝獞徺奫簼獛獡獖敾
AO BO CO DO EO FO	漶穯滹滮渀潀漰漼漵穬漇漎潃漅滽 滶渪漜춨湙漟漍涭淿漡燽凕熉垷熅熂 穒墻燑熁凔謯牓犗犕裪歚洜獑獶珻璴 璸璳鳿鵊瑮敽甊飶鬙睯寠瞷碲磘礗 瓂碬碞磌碠磤硫嵄褅傸榓腜椲碮鵗	A0 B0 C0 D0 E0 F0	狦虣璭瓗嘐璤珱璅懘竱瑹甈뚶畾癦 癦螷癝瘜焿濵懘嵪皝皞皨瞍瞏瞉瞈 蓎礗瘨磌曀熧磼磈磃蕏礆褍蓭磤枀鵗 醎觢贛窲敻竀蓪篋쒸簎莏箯歬葓謍檪 梋犈糋緷緛緪嶘緗襎縃繦緦纀絾緰複 藴譻羰祡羭翭翫翪騺虉翨聤褜朣膟
E34			
	0 - E3FF	E74	0 - E7FF
40 50 60 70 80 90	0 - E3FF 應庫嗪緩橊骶稰袯稱樟窖或寄嫖箔箜 菸籆箸箖箍箌箛箎箅勯刟箙箤箂榐惈 鬁粺縳椊裧棬綪緁緀棷椕緎絽蝹緋緌 綯糌縦縪綟蜝綮綂綜裲罳翢翣馫翞	E74 40 50 60 70 80 90	0 - E7FF 薄舊瞜膙漄鍽艏緓艒쉕揘艑蔤麧裔氋 蔩蔎蔉蓖胿煂椲蔎蓻篶鎱枽葒蓴蔪蕌 蔕虇邌蓳韾飬蓪蓩潱葾蓎蔝蓾菒曓葽 壦鈠嶌蓧蓨蓗蓯犻嵾蔠蔰波蔙ς餆

E840 - E8FF

EC40 - ECFF

50 50 70 80 80 80 80 80 80 80 80 80 80 80 80 80	譁踜踘踓踜踗 踚輬輤輘巀艓輣輖軦 虃邌遧遬酄餰鄟鄪鄮鄊鄮齨睖醊餯醂 勫鎨綋鈬鋖鋀碞銶綊鉽趪鋘鋩絧縍鋌 蘬鋂鎱鋊鍌鋎鎉鋍葃鋉鋠鋞鋧旇纲 臱銡蘯錖镼闐閶閮憪蹪隢穛奞廗殜 觏鞊覸鈶鮯韏薠頝頦頩獖饙顉颵婱 鬗孷鷠酲齂蔎駳駍駏魀豠駎駧矝駘鞱 駗鴐黺鯹髱繴繴髱鍯鬾魧蚄絚魦魶鮒 嶡黓濿捹儜傗儗僗儑凞匴訍噰瓐嘪	40 50 70 80 90 A0 B0 C0 E0 F0	銏鋂錉錀瑿錖閯閐茛閐閺閺閺閺 黊霋霒萢鞼熦褩韰辪暊頖頲餤鋖餧該 辪欶駬駥駤騆駫駪駩鹛敋餠骴桍髸鬙 檏謍廜鮀鮅銇魼魾魻鮂鮓鮒鮯魺鮕 勯鴥鴗鴠殘鴔鴂鴗樢鑜儢忁瀸矖勴 嚽嚌嚍噧嚄嚺噾嚂墿窧攂溸壏壒媦嫤 騝夑嬦燨嬳憀齹寱葼疑褠橖僘徻憅 騜慗榢懠懥懤懨懞挗擩掅揻搸欼駇敮 斶旚曒梎橽搷檥躗樌櫏襗檞槸礟檎
E94	D - E9FF	ED4	0 - EDFF
40 50 60 70 80 90 A0	噳磤噣噭噲噞噷飁圛壈墽壉墿墝堥堅 疉燑燑嬛燰甝嫐礆嬖嬨嬳缲嬞蔏嵮嶹 嶬曎曞蝍噞嶪嵤晑嶭鈠囨幧憁幦囐鳸 軎廯廨庴彋鰴慗慗憗懅憴僺懁懌僋 鵆惀魡牃擛墰擏墿墽棸鳺遾媏捒礣	40 50 60 70 80 90	棸檃檨檤橊橿檦檚楡檌鶭欰殭鯸濌毇 濴爥濣澅蔖濧傿,曟戱菾濢濨燡燱爜燲 燤燰燢獁猦灙璗曃璫聎琠璭逫曔璯蝂 甑鰄瑿暽癨癥窧癓噃盭瞵睴瞲瞯瞔
80 C0 D0 E0 F0	斁敼斢曀敶曀賮曋銞暽喥譂曌朣裺徸 橩偖樲樍櫙憛楟僘浱橑熞橸橨樿衑橪 椝槖橏犜僗橩橠樼樬橖苺櫩橎橆歕歖 歖殧潱贉毈毇氎氃睈滻濋촦瀒澼瀃澉 碆濄澽澞濊遬쾨澥禬燱澬嗧懘凚感	BO CO DO EO FO	_{曘曄嗼橝} 瓄哠磰窧媡铼嘋幝侓喛嘾 朡犝穛檓穘萯檼詨躀韄簅簓蒮葊簺鵉 簎蓤蒕曅簺彊穋蓗嵾痭嶜澔氠簐蒕檓 羬嫙堻罯劅翍斣稪朣葏躈榺閪鵋諹臩 捿艚紼薃薀蔤葇贌薠薋鼔蕻翋蘒薞
EA4	D - EAFF	EE4	0 - EEFF
40	And the set of the set		
50 60 70 80 90	鳱∝偊潻湙熑꺥媝嘾焴瀯揨煂箻瑵灒 裻燇燏燌焹熉爈荻燛禃襒獫獦摷獬濧 獫獪瑿硽琘琽璒鳿瓐甊疀瘯瀮瘱瘽窙 賔澯꺑燷皼盫靧瞝瞡矏瞛萻瞣瞕瞨	40 50 60 70 80 90	預蕼繠芔戝逫蕟俴逿奒齓雂庴嶤뵦敫 萻薅虇弿藡蘹薟虨蛦ଜ搽嫬爈鏪鏩謤 螼螮蟉蟃錪幒麠鳌暬蟊꺌齀蟘螸錱蠞 媗禞褳褼褾惤徶褷襂覭覾覮觲糓縖
50 60 70 80 90 A0 80 C0 E0 F0	^{鳱雗偊浝秶燣} 꺥醈嘾焴濳稕燇龝璤灒 奦燇燡薠焹熼燰荻燛瓐粄蘷癋濵癅瘽窙 寠灖溛亰皼盫靧瞝瞡暥瞛萻瞣瞕瞨 鴡礉磩磌磪磞碒磛硡硋磭礯櫖櫉櫒 麜豂霯鵉鵹騘遧篣籊羃鑉菐籈蒅峉 嫨篪蔩蒅藆蒭篟繢楿糗梬嵶縒緈橠縌 罻罼罺颒鬗縍耩聮躈膦膔謮膵脨譒膬 膴膲韊睻臲縍艖艗茣凗藑蕍 蚻 萯萒	40 50 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	預蕼繠芔戝逫臵徺迳奒齓雂庴嶤뵦敹 萻嬅虇薥藡蕧蘝虨嫧տ冻嫬爈鏪鏩謜 嬞坲嚺暥掶蟌麠螯蟄葐蠞螶墯鋚螽蠞 媗槗褳褼褾榓徶č襂覸氟覮鯞糓騗 蔛禝謑譪搩瞨獀醕諕眘謍謈騚綤謑 誻瓙殾豲豱豯鏷癋隘榶踑諁鬸膌嬒憃 蘬鎐鐠絾鎙鍜蹮鍉鋖緮癦鯸嬤鍌鐜簺蔮 鍗鍕鍒鍏鏼薶踼顉嫃媨卥鎀鑎鍌闍闂 閶闑爴閷隫隝闎庰孨渪穚蒕菐豘耻輽
50 60 70 80 90 A0 B0 C0 D0 E0 F0		40 50 60 70 80 80 80 80 80 80 80 80 80 80 80 80 80	預離業內戰選發機邊窒亂難疳美样敫 薈薅蕹奪蓬蘹薟虨謓貐絑嫬爈鰽螹謤 嬞绋蟉蟃錪媤麠螯謺蟊瓕螶墯螸螽蠞 媗篟褳褼褾榓襒褷襂珼觏覮觲糓鶁 酀襃謑鶷揳獛瓝醕搋眘謍謈聬猰鶀 誸擛殾簶豱豯鏿痣睑榶躀謑鬸蹐嬒蹇 轃轀淔遾鄸醈醢醛酸蕫翑醷醶詤鎃鎁 銿鍖鐠絾鍘縀鍶鍉鋖鍑媹銤錃鍌貖 饡闑闅閷隫隝嘨霠瀮穚寍菐鞚耻輽
50 60 70 80 90 A0 80 C0 D0 E0 F0 EB4(40 50 60 70 80 90 60 70 80 90 60 70 80 90 60 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	通確偶虛凜濃液或覆資層準準準準準 愛達環境環境及受控 電機構築 電力 電子 電 電子 電子 電子 電子 電子 電子 電 電 電 電子 電子 電子 電 電子 電 電子 電 電子 電子 電 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電子 電 電子 電 電子 電 電子 電 電子 電 電子 電子 電	40 50 60 70 80 90 80 80 80 80 80 80 80 80 80 80 80 80 80	預離鱉內戰邏發機邊愛亂難疳类样敫 薈薅蕹薯蓮蘹薟虨螾嫧冻嫬濾鰽螹謤 嬞咈蟉蟃蛦蟌藘螯蟄攭蠞螶墯螸螽蠞 媗樠禥褼褾榏徶褷襂聑氟覮觲糓騗 ppp 誻蠂殾豲豱豯緤癋賹榶踑嚻蹓溿旇櫜 輢暚壴薀鄸醈魖蓙醙醟翑醝춾鎡颕鎁 錉簊撯絾鐗鍜燛趧鋖緮繬鮳躗鍌鐢鎑 鑇鍕鍒鍏鍱鍷踼鏈嫧迼贂鑎鍌鐢 閠闑闅閷隫隝闎焺孨鵉穚靁菐諬靯輽 0 - EFFF 隦軪韕軶鏉頝頢顊顃顜顃繠餫鮒緛鶝 鬝餯餭韺餰龡馣馡騂駺駇駣駹駸鶍駻 駽駾驗軙竷鬌髽鬁髼魀鮚鮨뻬鮛粡艞 絡鮤鮆絑蛫鮯鳷鵁樢鴶鴮鷼覢鴸鴰

F440 - F4FF

- 現代市

鞖駯褏騔 鮼鬗艛鯼

F040 - F0FF

40 50 60 70 80 90 A0 80 00 00 E0 F0	璸墂璵瓁瑻蘯璻蕫鼿雴瘷ڀ瀮廥瘷篃 癚嫐籔盬矂瞺磿礥礰睩樕觷噮礑綅襘 檺縤樍譂鬳粂紣纝燌羳熌翸瞔譳嬳 膧龓莸荢藆苵赥湬迬夀戜茣莃黊雚 蘯蘔捬趘缆蟔嫧螦嫶蟘娞詇謍缋躗蜤 瑿蟝椣嫙杸樿襥棯襑榠謪諊謣諨踕謵 豱貘貗瞔贀贂贀嘂陭蹠踕聕藇鏈瓄	40 50 60 70 80 90 80 90 80 00 80 50 80 50	嚵鬠壣繎壗隵廮蘣綟豂欀攗 瞮嚋瀖僘楱歴攎櫢櫱橿擫瀼 灁溿棠鼔盭瞔矎矈婜瑘礥禯嚍 鳽翸聹朣滖혌嫓琧藗籊籇藇糮 蔳翸茡擛藽焿鐹嬠遻螦贒鵫 遱酃彲鷼踕鵳醰嬟瘶聟蠂遻螦贒憳 遧靋鈒蝳ู搝繂嬟瘶贙
F140) - F1FF	F54	0 - F5FF
40 50 60 70 80 90	閕隚跰踨躗踅螰轇帺謰鄨鄸鄻豖醗餫 踸醢豂鋑掶絧鴘妽絬猵巤緮楰蓗鏥讅 趮錭縔祡鎱鎑撹猐鎨鎴飬鍌閠閺闏猽 螒雚ළ嶉臒醀賔饓蘣睷礰褼輡銴鞪	40 50 60 70 80 90	絥叇鏶銟鼜颬哬閠鷕鋻翶鞻 頳蹞飁翨饘饎謮繏顀蔝驆騕 甈膒駲鶑楀േ絟 秚鬠鬕 斄鋖絑 鯬鰇緾鰆媩絾樜鳼鶎鸀鶝鴢
A0 B0 C0 D0 E0 F0	苿쒂韗魐粏輁韺靫娍瞙ይ鎑鍒歭頴 辌鞰騍驠馷糄雗駋飵赮礛縏鬜閠鬗 魌鍖봷輐鯆銆顉綆鮵鯐蛶錩鯄鮹鮽鷋 鴩薎鵁鵋鵋鵙鵖鵌鴾鴔軙鴐裫鵚婱麌 夦鼁鼀鼖鼤緪鼪貤瞛藔詑儴熑劖黺厴 喛蓜嚜嚧嚁嚬墥壝濯獿嫨孄嬿巃幭	A0 B0 D0 E0 F0	駣鶔翑鶢鶢鵋鋿鶕鶮 鴺覈舂鋷黥黤寙耞鼰趆齛齨 儱儹劉劗噡嚽囆孈埐榺壃竉 樻嚁礱銤籔瀒櫔襩瓡櫇纋緟 鬳蘘嶳藛燷蘣商鴼塦絭梷薓
F240	0 - F2FF	F64	0 - F6FF
40 50 60 70 80	徿謑捙攐攍撎揊熍斄溛腤噧艡櫠懓襎 櫁棏櫟櫜喿獛褼懫梻歠瓄毰浌竉滐瀖 瀔瀢獹瀶凚怘廀勴瀪膭燷蒳燢濹羺襮 犤犣犡瓋瓅溙瓃竪癠矉뺴矄遳礝礛	40 50 60 70 80	摪钃璤蠠馫鬠蠫嵰襭偩濝袧 斄譻墬瞐瓂漝躌轞弣螊蠞鄶 撔樧鏈鑧鐰趒鐪鍱绿緵婰驨 駺韚顤瞙磌毣鍹諕騹騽驆駣
A0 B0 C0 D0 E0 F0	硣礕瓁灇濿栜愪錊襣嗧踣簻橎椝繐 檯樧紻繷檈繎繲糪絾豂罊鵀軐羷甝翸 賰灠蕌藣蒆莄藰萰愸藞藢嫧蟺鸁痖蟷 爦摷婑孒蝵蟼瑿嫊竮迼繸橾襗襡禬襘 襝襙窽悡鶃觲輫躈睌摗鏸醦蹞鋷譕	AO BO CO DO EO FO	瞱竀鬕贆篗鬖夦鍟綷鴘銇 鏩临鵗鶈鶔迼豰鷒騗絲鶆鵐 鵢鷂駥賌貿縣额鵢鶅鏳櫜黫 韄譝寠齥僗蕌垔喠騆嚽猆嫨 擸攠攦摬欋欈懎毷痽蹸煡濽 壦瓕瓙瓅瀴嵺碿碖榱鬰籊撶
F34	0 - F3FF	F74	0 - F7FF
40 50 60 70 80 90	馣譂譒譗歄潱獖繟贆薋譂趬趪趭趪譇 殝獤飸蹯踜輈幩슣鱊螑襎馺郲鄟醰皢 牅縼鐟瓂縅襂徳紼茣磪晲繎銴痶槺鏣 螰嫥銲鏀鏒瑿廰闎闦黊範譻茣蔛霷	40 50 60 70 80 90	瓐櫱纑譃龗瀖撎蒦滖蘣鋂銺 籫籫偗剱覾皪鏋瞲逳寈褅榺 躒蓤璒躗幆偨乺娦渀夎鑋妽 嬍糦輢颇顩鵋叜鑗鞐隌驔聙
A0 B0 C0 D0 E0 F0	鞱퉆鐢韝鯭蝆顜顡熌娦矆泒颻檃繎 饇鏷謢鼅駧糭騥聎鞖馻腵騣駴敽黤騜 駳榙輤箺軵鬠毄赺熌烣紼鎤輡舮訦鑡 苿藛椄鯄鎑峸錌鯚咰鶁臇馡鶈鶈絾磞 鳺鶕鵋磌鳼鴔鵈灜鶮髇軭閠軲鴐鵿 鴹鵨寚躗窉糋睌軖軩齍魣齗齝琧韗	A0 B0 C0 D0 E0 F0	驉驒獓赩鬙퓘袃瓡閸葃葝 鱁蠗螩黴鰲嬒娦鷒鵇殎鵋鴹 鶭魀鵹鵋虠騗蓪謓逤誔鼲 僺勴壨壧奲壉讆嶡涭橳淽慀 橮灓欘毊潪灚麍寚漝獶榳讗 藲虀瀤蓖珴蠎嶶猠漝縎娞欳

Code Page 950 Traditional Chinese + HKSCS – Series ii



AC40 - ACFF

A840 - A8FF	40 扬扬抬拴挑挂政故斫施既春昭映味是 50 星昨县钟冕柿染柱柔某束架枯槁枢柯 60 杨柏根检查传柏柏柳杆楔机疾染空狭 70 杨母春春度,这些出来。
	80
40 行来步華求求沙心沈沉沉沛汪決沐汰 50 沌泪冲沒汽沃汲汾汴沆沈冱沔洸沂灶 60 灼災灸牢壮牠狄狂玖甬甫男甸鬼盯矣 70 私秀禿完系罕肖盲肝討肛肚育良芒 80	90 A0 活治液海洛泵湿有洗液浅海泊油位 B0 踢汽炬相炭炸发招爱牲拮抵狩狠狡玷 C0 珊玻玲珍珀玳基薄畏界軟败疫巴疥衣 D0 抚婆皆墨吸杂盆套害省鸭相胃雪眉盼
40 芋芍見角貫谷豆豕貝赤走足身車辛 80 茭芍見角貫谷豆豕貝赤走足身車辛 80 既短短光透過開邪邪邦那酉米里防阮	E0 影響的始始软軟型而能產業科學軟芽 F0 突革等科紅紀初始約紆紅美异畫
CD 所取机业率扎备些显享原件依待佳使 DD 他供例來侃信件修偶條商佾休侑佺兔 ED 見思國員並曲測面刻聲曲刺到到對到到	AD40 - ADFF
F0 前助卒協車單封卷師師取叔受味同	40 耐要場耶許胥胚胃實背胡胛胎胞漸胝 50 致動亭范茅茴苛苦茄若茂莱善苗英茁 60 苜苣苑苞苓芍茎弥膚虹虹胞衍衫要動
A940 - A9FF	70 計訂計廣資北起新軍机巡迴超過因 80
40 咖亞咕咀呻呷咄咒啥呼咐呱嗷和咚呢 50 周咋命音固垃河坪坩坡坦坤拆夜奉奇 60 奈奄奔妾妻委妹妮姑姆姐姗始姓娇妯 70 妳似蛘孟孤季亲定官宜宙亮尙屈居 80 90	90 A0 迭迫巡迫郊郎郁部台訂重門限陋陌 B0 陸面革業非音変風発食首香殘毫信倍 C0 做倍後往像傳体病值借倚倒們復任但 D0 個俱倡信候術俳優後倪傳倫意義英冥 E0 家凍凌准測前别剛剝歷鄉原層聖哨
A0 圆岷圆岸岩岫岱岳帘带帖帕帛帑幸 B0 庚店府底庖延弦弧弩往征彿彼忝忠忽 C0 念忿按怔怯怵怖怪怕怡性怩佛但或說	F0 唐咭唷哼哥哲唆哺语嘿哭員笑哮荡
00 房 尺 所承拉拌挂脱拂抹拒招被拓拔抛 E0 拈抨抽押拐拙拇拍抵拚抱拘拖拗拆拍 F0 拎放斧於旺昔易昌昆昂明岣香听吴	40 吹車帶使所重至使減埋決清夏套裝妥 50 安坡挪捕與保姆鄉納總統還續孫駐率
AA40 - AAFF	60 害家宴宮官容底射層展獲峭坡峻站峨 70 峰島莰峴澄常師軍庭座弱徒徑徐慈 80
40 昇服期杭枋枕東果香杷枇枝林杯杰板 50 柱松析杵枚科杼柃杲欣武波發氓累泣 60 注冰沱泌泥河沽沾沼波沫法泓沸泄油 70 况沮洒泅浃沿治池泛泊沫泯近泖泠 80 90 抗炎妙炊炙爬垂卷版牧物狀狎狙狗	90 A0 态现恐怨恭恩息悄悟悚悍傷倦悅悖 B0 嚴筆單拿捐決振捕插雷捏提ы捐決勝 C0 挫挨捍困效校科旁說時晉晏晃晒响逛 D0 晁書朔發前校核案檔槓機桂枯樹梳栗 E0 桌桑栽柴桐菜格栎株췁栓移桁殊残殷 F0 氣氣氣氣氣泰淡涕消湿滴浸海断滴
B0 狐玩狂玟玟玥甽疝吃疚的盂盲直知矽 C0 社紀那樂和空穹兰糾問羌草者肺肥肢 D0 肱股施屬者肪肯臥與會芳芝美芭芽花	AF40 - AFFF
E0 芹花芬芥芯芸芣芰芾芷虎虽初表軋迎 F0 返近邵邸邱都采金長門阜陀阿阻附	40 温涉浮波浴浩浦泥灰涅港海洋烘烤烙 50 列岛兼装饰饰如圆圆挂石砖围饰并弦
AB40 - ABFF	50 胖軟畜著留疾病症彼溶道逐步面值率 70 燃益重整球真职贬坦砰品磕砝破砷 80
40 缺住雨青非至亭亮信便使便依倚悄保 50 促侣俘使使俗傷俐俄係俚组耐傷充置 60 實冠利制前前刺蚁則勇勉勃勁動南卻 70 厚板咬哀苦咬敌咳咦咳哇晒咽咪品 80 90	90 A0 低亞但作扱能站得樂祖帥祝抵作样 80 株秧租業秩振增弱站笆笑粉紡紗紋紊 C0 案实純紙紙板紙約被習羔塑動著 D0 标钟和韩耽耿於脂實餐園詞識詞語服 E0 能容拼跨奧奧首紙軌動板較獨茫荒荔
A0 哄哈咯咫响哧咩咧咿圈垂型根垣垢 B0 城垮该突契奏奎奠萎姘姿姣姨娃姥姪 C0 姚鑫敏姻孩宣宦室客宥封屎屏屍屋時	F0 刑算存草菌面任鼓茹杀者如朱茨董
D0 明巷帝帥帝幽庠度建弈弭產很待個律 E0 徇後祥怒思怠惫怎怨恍恰恨恢恆恃恬 F0 恫恪恤扁拜挖按拼拭持拮拽指拱拷	

8440 - 84FF

8040 - 80FF 40 康蚊針姆蛋黃針蛇好赛废素決衽祇記 50 計對訂趾訊託創訖計熱豈豺狗財實起 60 將軒初凱聯送逆迷退透還透透通迷過 70 都希鄧ீ看記酌釘針創蓋外閃洗陣徒 80 90 A0 陸狹除墜陸隻飢喝者高門馬鬼蛇傷 60 僅使服儀依像律健偶個偷偷優長 60 舊參曼應啪啦哧嗒啦哧淌咧着咬問吻唯 60 噴地魯聚虎咖喱嘎哈變國團城堅堅地 60 埠達基堂省軌培夠着娶賽城鄉發詞	40 婷媚獨謀媛操琴赛寒富高寐尊尋就嵌 50 崖敏枪翼幅增幀体樂直圓潤廢勁影復 60 價僅感惡悲怨罵意因污懂勻肻侚悄依惱 70 復 懂 偷 怅 傷 就 難擊掌 描 揀 描 揉 掛 揉 換 90 A0 预散 對 個 怅 最 就 難 筆 描 揀 描 揉 換 換 90 A0 预散 對 相 惊 氣 如 香 香 歌 易 曾 歌 易 曾 C0 替 期 朝 相 惊 氣 致 改 香 香 歌 易 曾 歌 易 曾 C0 替 期 朝 相 惊 氣 致 衣 侍 傑 傑 香 懷 C0 替 期 朝 相 惊 氣 致 衣 侍 傑 傑 香 懷 C0 替 則 朝 相 惊 氣 致 衣 侍 傑 傑 香 懷 C0 替 別 朝 相 惊 氣 致 衣 侍 傑 傑 香 懷 C0 替 別 朝 相 惊 氣 致 衣 侍 傑 伊 香 愛 C0 哲 凯 朝 相 你 氣 致 衣 侍 傑 伊 香 愛 C0 哲 凯 朝 相 你 氣 致 衣 侍 愛 伊 香 潭 透 B540 - B5FF 40 本 法 示 选 观 通 演 道 你 女 女 女
B140 - B1FF 40 编述资格获款宽度资源资源资源标准	50 牌後學盪張架運茲東球球透楚醫華增 60 菜۰%現錫數畫臺漸漸速虛這這些產至数 70 吨結鼓盜晒短硝硬硯稍稈程稅稀窘 80
50 准錄原地吃喝畫定是只服會理核高業 60 常帶裝唱康廣度進突張強囂彬彩影勝 70 從從徘御來能應患悉悠恋愉忰恬悽 80 90 60 情倖長惜悼悄惕偈價惟淨憶傳或戛罵 80 掠控捲液探接達捧狙措證掩掉勝對捫 60 推論授彈採掏排掏掀法操摘接款教教	A0 聖容重坡等策筆塗篱答筍筋筏災票 B0 粥校結叔絕紫繁絲絡柏術程棒帶耳森 C0 畫聒虛腕腔腋膀腎脹腆脾陳脖胺舒聲 D0 著翠慈萍波雷拳帶華數碰著來煮肉菌 E0 莜莽黃英萎酯菜其蘑黃虛姣娃髮蝴妹 F0 站蚰蛞街很裂状單視註熱評詞証點
DD 款收容敏於吸設評新新決旋族應畫院 ED 语晨晦诵曹勗望采梯悄梓梵榉楠恓梧 FD 梗械艇棄梭彬梅姬條梨巢椀核欲殺	8640 - 86FF
B240 - B2FF 40 毫兌氯產涼淳涼救淡流溢添邊清淇淋 50 建取劑基產僅是與浙道治源浸清減減 60 深僅淨滑道消淬成塗烹烯焊緣烤爽素 70 犁猜猛攝渠淨率琅琊球理現明観意	40 新紅作品訴参問故樂紛毀點或給實費 50 賀貴買影實後超極診距說開始就設設 60 胎軒軸軼專這達選邊進筆鄂節鄉美點 70 訴量鈔紐約約的約約於飯閒閒開 80 80 80 間閒間除脂清陽陽強強感應應種推進 80 樂羅堅實範項頂須飧紅虧純軟虧渴取 20 黃豪濕亂備數數得運得這個優優德創 90 副某影響像數會運送在一些事件
A0	EO 耐暖喷高磁喷油噻嗪菌 <u>黄素资</u> 清量源 FO 塔壤磁运汽场场整高熔装漆煤磁 B740 - B7FF
8340 - 83FF	40 媳婦處當絕視幹表直就拿傍做愚意慈 50 感想愛惹愁念情情便僅僅僅愧態認懂 60 跟我送得達播結終般搏擾擾損搶搖馬 20 連款影響經過是這個這個
40 莆葉處熱蛇駐蚶結銅組蛋節近輪衝突 50 裂被植袖袍袋翼與訪锣訣動許設訟靴 60 新坡豚販賣實貨禽貧酸放趾跌軛軟這 70 逍通這連速逝逐還還遭遭建逐躍塗 80	80 90 A0 並楷模楔極把板構模模視徑做槍模 80 個信軟微疑擬就確這測掉溶房演算 C0 減厚速潛漏這清增溜這治浴漢處或煙 D0 煤煤煉開燈爆造這漸的爆炸的譯書
A0 部界都起野釵如約創紅凱閉陪後陳 B0 陸陸陣海站致後留琴章寬頂環魚鳥處 C0 處影流像傍傳傳傑爆倉氣像最前割割 D0 創劇傍勝動傳號當喀道啼城場喃嘆喜 E0 賽程湖環喃遠單層運動陳渝豪臺運隊陳	E0 部旗滑調湖服整洲增運環球全當時所 F0 派萍航荷庫漆而麻畫盟情捷建除督

BC40 - BCFF

8840 - 88FF	40 素問筆創自會認真等有來考示其等等這者 50 際資店清凍環境增增整整新還存讓詞 60 煤集建集會官商其管理用於建築還存
40 諸睪踩睜陣兒進矮碎磕碗碘碌碍硼碑 50 碰徑試錄蒸萬禽梭種穩珍囊釋蜜蜜筷 60 節振音當發舞團網網網線結響開留	70 新闻新宴般洋影德密慶慧連團專臺 80 90
70 署義校群聖時錄罅腱接腸握認蹈圖 80 90	A0 松敷送泡貸券價貸賃貸賃債施設率 B0 摯摹這樂撈券授撥將來沒撤援撥換流 C0 编编運搬於数數事暫暴應樣權學樁框
A0 腹隙壓翼紙帶當落當及重刮集都寫 B0 等落創董師時來虞庸號繞紙變宜蜀娘 C0 起蜂覆銀網衝娑廢裙補改裝裡藝裕哀 D0 規解能該詳試許訪詢該指該話殊說胸	DD 標槽模檯笑葉築楔保留探索軟運設影響 ED 溫澄澄液演測電潛荷測澎爆潰程度滑 FD 滕溥演调熱軟熱影濃難獎課量環
E0	BD40 - BDFF
8940 - 89FF	40 運播號滑店這瘤度演奏電駛型等認識 50 陳虞德磅確晶碟建碼轉獲律數層便相 60 黨隊新箱範範筆篇篇籤機將將總載
40 辟農運遊道途達逼達還透透透過遙逾 50 遺都範圍點該計該計量給給約 50 遺都範圍點該計算結合給約	70 減緩緩緩緩終級緩緩样態提罵罷発 80 90
00 此时3380纪歌曲新闻运用其推动地理 70 留電電幣時和把預項項項項貸創動 80	A0 範規證課該墜膚漂面密射違款猛蔓 B0 蔑称教育蓬莱增後統胡婆絕紛發發調 C0 组织绘图 使化增多程油
A0 約約約11月死為死術設具借值條信 B0 悟依保衛備保備設置數面面就該 C0 或要求這事業事業者才能考定要素素	00 請補課該協調推論將許許款除整新班 E0 賞試曉班階質實易質皮補維鄉這幾課 F0 踢踏訴即推測能準轄報望黛輪輻射
D0 應整境基整型堅決專非參食奪室機構 E0 微磁娛媒獨際軍事專審實臺度擁有對 F0 屢虧唱律幣募獲後素審弊隨影激點	BE40 - BEFF
RA40 - RAFF	40 經速速速遭遷起影節部部群酷險绊結 50 纳纳時局起就經鋒便趕與國際實際
40 图题惊慢惯衡衡设值载谢治接撤摸接	60 審算教駐堂領領領開實訊設新肥旺相 70 駛棄駕影射佔從轉開動炮於魯鴻鴉 80
20 招搖推拳巡游軟杵旗隊勝登洪桥相后 60 接榮槓傳樂信借律個槐搶樹結餘擊搖 70 款取氢律資源演漫淡漾漠潰淵原漢	90 A0 脉動電影學設備儘傳信何其某是向 90 影動電力開始地路及這個演算
80 90 40 派海法谢新英语演漫演演会演奏会	00 年1月1月月1日日本市家市市市港市港市市市市市市市市市市市市市市市市市市市市市市市市市市市市市
BO 線這培明場相違受買得華歌彈落頂得 CO 建增塑築建築進高廣書點目沒書這畫 DO 建增塑築建築建築建築的保護	ED 減增過整型導盪導量環傳模模型價质 FD 街微備總模攝機機總訂歷ZI廣張澡
ED 達趁算許洁等著筆筆牌称精結相結構 FD 複株緊線網網結構結構結構結構	BF40 - BFFF
8840 - 88FF	40 濃澤浸浸渍水溶渣預過環境浓濃流空 50 燕臺液浸燃然能運貨獲環環範範受 60 由空中的地球運動的高速建築
40 罰聚聯証開聚肇宾勝膏勝膊態皆國臺 50 回新興轻微業業業等等等許許考察局	00 漢洲洲產品這時間會治時發展新使用 70 穆新學現業衰榮無銷基時篦棕積益 80
60 蒐蓋賽賽網蜜靖茲新婚約數極頻製排 70 與賽探製律褚德請訪問堅認該管與	90 A0 機榮總斯總續招揚彈截輸創副網譜 B0 國際隨機檢放黨實際運營重要
90 A0 說點錄錄在對論產程於實際除於想	CO 夠媒調量產後總備傳統搭規說時態款 DO 譯某某情格諾諾爾諷納語基礎操服語 FO 時间等時間
B0 唑週朝輒輕輕辣遠邊遊這遙速通還還 C0 影素都静静静於於斜斜站許路能微磁 D0 供他間間間開閉閉邊總維維緊影影	F0 運速遺解體皖鉄網錳巒鏡網錫錄錚
E0 韶頤領諷勵設計餌動設就設載點現場	

CO40 - COFF

C440 - C4FF

40 維綿綺銀銀貓閭隧隨險雕霎窈霖霍霓 50 霧底靜觀糊頰頸頸顏顏頭顏顏又 60 始鱗較騈駱骸絡醫髭剛鮑駝鴣羞鴨鴿 第默點龍龜優賞儡儲勵嚎嚀嗒嘴嚇 80 A0 噻壞壓堅型爆嬰嬪燈落爐隱嶼嶺敏藥 繁鑽微應懂懸懦戀數軟擎擊擊擠摔擦 擬擺擢複數類躇覽覽擅檔檢檢檜櫛檯橾 00 檗檐檠歅殮羹氈濘濱濟濛濛濤濫濯澀 60 譯漆獲璩環璦漆癆寮癌盪暄瞪歡瞬	40 期期開始越貧陽極於結結何病為時時 50 期期開始或動物率来突長等凍堪演年支 東急能源浸法或脂化浸潤点這式脂疾 20 毫後不安實読書並希標種辦核型 50 萬勢增速種高為等官意預許這達調 20 萬勢增速種高為等官意預許這達調 20 萬勢增速種高為等官意預許這達調 20 萬勢增速種高為等官意預許這達調 20 個級態業期組約的價價得通轉貫達層強化 20 個級態業期組約的價價得通轉貫達層強化 20 個級態業期組約的價價得通轉貫達層強化 20 個級態業期組約的價價得通轉貫達層強化 20 個級態業期組約的價價得通轉貫達層強化
C140 - C1FF	C540 - C5FF
40 熊瞭矮磷磺磴磤礁醕禪穗窿族簍廃蓬 50 新葆稜蹤其模糟糙糁縮績繆縷縲繝縫 60 總縱樔繁縴縲썚槾紛縯罄鬅翼螯贙聴 70 聯聳臆随膺臂臀脹膾臉朣臨舉艱薪 80	40 變營碱清溫資產許臨續這樣這樣經學總結 50 國際部寫書觀新麦福原臺際建定這些 60 然業銷為預期幫獻則當做黨署基礎 70 學與哲學影變權當於漫漸遍最一個第 80 90
A0 薄替薛薹畜薯薛赦薨創虧幸蟑螳蟒 B0 蟆鱉淒螺蟈蟋褻褶裏褸製銀愁誇祿講 C0 謊謠謝謄謐豁谿窗賺賽購賸聘殘蹉踽 D0 蹈蹊轄輾毂瘕輿避遽還邁避邀黎醣膃 E0 臨踱羨錯鍵鍒鍥鍋錘鑎鍬鍛鋟鷃鍔II F0 闋膩膩膩隱誄雖霜霞豞韓顡歷餦騁	A0 液龍積響聽線築現境遭遭漆淡告 B0 那線遙聽層霜碰優顫髮賬前殼紫結 C0 編變結點讓創影算蜜髮戀掌提覺懷愛 D0 環喉嵌發面膠微線發育藉藉晶雯邁遲總 E0 線維藝期聚算際驗發證最結綻版氣的 F0 徽署還提邀案案直谱購罵數委讓表
C240 - C2FF	C640 - C6FF
40 酸鮮較鮪鮭鴻鴿霙點點點黝黛軒齋幾 10 醫衛績壘嬉彝懣瀓撲擲擾撑擺數搗斷 10 躍隊橫檬櫃懂檸懂檮檯歐歸殯瀉瀋濾 20 濱潑瀑澍燻燼亷燸瀇獵壁璿壅癖濱 20 遼瞽瞿瞻瞼礎體奞穢穠窩竅爢簧饕 20 遼寶簡糧織譜绕線繡繙耀輕點腳職聶 20 腹胲蔷鯊隆藍菇藉薰潛畫鷹繞蟬蟲蝠 20 履製態膜蓋謬臍驚驚殘痛崩蹤頭谭驅 20 屢軟邇邃遠醫醬營濟鎊鎖媯鎢鎮鎮繞於 20 編鎚鎗闡闖闖關難雜雙難雞쫍鍒瞅	40 減勤救傷違整整務経要務委定省違就 50 熱理距差結約償還維進金副議營預始 60 氢換稅質營營準總濟道確建現復建度係 70 資富遵絕維積動整器錄解攝密觀查額 80 90 A0 ①②③④⑤⑥⑦⑧⑨⑪(1)(2)(3)(4)(6) 80 (8)(7)(8)(8)(9)(9) 1 日田 IV V VI VII VII X X C0 J J 十 □ 一 ? 勹 □ □ ム 久 一 ((())(3)(4)(5)) 80 (8)(7)(8)(9)(9) 1 日田 IV V VI VII VII X X C0 J J 十 □ 一 ? 勹 □ □ ム 久 一 (())(4)(5) E0 マ / ○ - [] * a あいいううええお F0 おかがきざくぐけげこごさざしじ
0340 - 03FF	C740 - C7FF
40 鞭艎額顏題顎賴鼆餾鉂魄餮馥驗髁鬃 50 鬆魏魎魌鯊鯉蝍愮鯀鴅鴉鵖點鼕跪儀 60 嚥壞鐆瀝巃龐蘆鄨懷懶潧藆攏噴暥櫉 70 樍【售瀛潇瀨緰瀝瀕瀘爆煉牘飬 80	40 すずせぜそぞただちぢっつづてでと 50 どなにぬねのはばばひびびふぶぶへ 60 べべほぼぼまみむめもゃやゅゆよよ 70 らりるれろゎわゐゑをんァアィイ 80 90
90 A0 須靈瓊證疇僅屬痰腺凝禱獲穩黨薄 B0 簽疫蒼指緊薩揮維倫羅樕蓬奠贏激落 C0 藝藪竊藤藥諸蟻颯蝓鬚嬒襠襟棲皺 D0 譜敵證譯處愚點燈覽跨降諸販證曉 E0 蹠続轉影邊還跟隨鏡旋續遙幾建質曼 E0 羅螺綿纏鄉繁閱藏難澤舊露蹈韻類	A0 ゥウェエォオカガキギクグケゲコ B0 ゴサザシジスズセゼソゾタダチデッ C0 ツヅテデトドナニヌネノハババヒビ D0 ピフブブヘベホポポマミムメモャ E0 ヤュユョヨラリルレロワワキヱヲン F0 ヴヵヶAFBFIEE出ЗИИК

CC40 - CCFF

C840 - C8FF	CC40 - CCFF
40 ЛМНОПРСТУФХЦЧШШЪ 50 ЫЬЭЮЯаовгдеёжзий 60 клмнопрстуФХЦЧШЩ 70 ЪЫБЭЮЯФ\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	40 坨培麦夼娃妹蚶姎姐姌竘兹妼妊姮妇 50 婢妹姶嫢姇孢拏宓宕屄眉岮岤啶岠岻 60 岨岬峡岣岭岢巢岧淮岥岶崄竖钹帔帙 70 貂婆谢瑟条徂彾彽忞氡佖怦恄恓慌 80 90 A0
C940 - C9FF	CD40 - CDFF
40 乂乜口匚厂万丌乇亍口兀屮彳丏有与 50 丮亓仂仉伙冘知卬厹圠み夹尐市旡殳 60 毌气爿丱丼仨仁仩仡全企刌匜卅圢圣 70 宛夯宁宄尒尻劣屳帄庀庂忉戉扐氕 80	40 温沃诊愁林桥泞河泡洋油石温油注动 50 块炘炅料炆炄休炖炂耿贫牲犹狋狘还 60 独狒犯狙独领玤玡玭玦玢玠珊玝跑面 70 贮畀甾耄症皯虻盱盱盵矸矼矶矻矺 80 90
90 A0 承扒氿氻艾犰王内肊肋伎优保仵们 B0 侍從价伈伝俌伅伢伓伄仴伒冱刓刉刑 C0 劦圆置卍厚吁囡囟圮圪坞夼改奼虹效 D0 奾奷尨芹尕赹屼屺屻屾巟幵庄异常约 E0 忕忔忏抙扞扤扡扦扢扙扠抣扥旯旮朾 F0 朹朸料机束朼朳氘汆汒汜汏汊汔袀	 A0 好祂的托罗字竻籵钉耵踚肮肣肸折 B0 肋韧支艽壳苞芘荸荚芧肉芼苞芙芴支 C0 芡苓苂芤麦芶芢钉纠切虮豕远运逐地 D0 达注达感邴郎邳邰陆贴阼陆隅俱俅僅 E0 價佰俋俁俔傳桶兌侳俛俇俖侺俀侹仫 F0 剄剉勉勂蜜魂摩邏庫厘喧咡咭咥喂
CA40 - CAFF	CE40 - CEFF
40 测切物犴农玎角癿空网艸芋劳艽艿虍 50 西邙邗环邔邓随晚既吃佖倅佢佉体佤 60 任代侠侈佁亲依催伿佡阎泼劓刞刡劭 70 劫幇卣卲匪厏吰咉吪呔呚唊吜呯吘 80	40 明初咣味哞咕响哆量皆品粤咾吡哞响 50 按坨垟连圳垗塊垛坙垘垏垙拾垚墬壴 60 复麥姡姑姐娀姆姝洗媳够始姤姲猜娴 70 姩姳姵姠姾娶叠疕屟歧峘峌峗峋峛 80
90 A0 吽呏响吨阶咨圈圈固坁坅坌坉坋坒 B0 曅奀蚌妘纳妗妎妢鈆妏妧妡実宒趌尪 C0 岍航岈畈岰岭置岆昕岕巠帊帎庋庵阵 D0 庤庍弅弝彸彶忒忑志忭忨忮忳忡忤极 E0 忺忯悃忻怀忴戺拤抌抎抏抔抇扱扻扺 F0 扰抁抈扷扽扲扴攷旰旴旳狊旵杅杇	A0 光墨客皆是岐嶼嵯峨峪峆崀着碱叠 80 崇給帶用帶序序室底底床拿卷彖循恋 C0 您佼饼恞佬恓惺恉慆恌恀恂恂怤恄恘 D0 恦恮扂屒鼙狡挋拵挎挃拫拹拥挌拸拶 E0 振挓技揀挕扳拰敁敃斪脖和昡昲昵易 F0 弄昢呋昫昺睝界昹昮趾胸柁柲柈袜
C840 - C8FF	CF40 - CFFF
40 杙杕杌杈枹杍杚杋毒氙氚汸洴汫沄沈 50 湖沃汯汩沚汭沇沕沜浜汳汥汻沎灴灺 60 牣犿犽狃狆狁犺狂玕玗玓玔玒町粤疔 70 疟卓礽耴肕肙肐肒肜苄芏芅芎芑芋 80 90	40 柜世抷柘被枷棍拂租柟揭袂枳柷橊柮 50 枝拖柜村城藻葉杭粒树桐枯相神楞泛 60 核椅枷续軟强骖段竖毘髽戴象洨洴溜 70 演進洿酒溶泚洳涸洙洺洚洑洀洝没 80 90 A0 洁洘湮洃滴浀洇洠漂流滑沥行娃烟
40 千凡丸為北迴印加加和邓加加配肥 80 阮弗侘佼该次佣傅信佰倚侄很优伺信 C0 備億侁佸值併侔如安侂価格倍采洗洽 10 則封動則期訪匆知置屈置咇呿咁叮喱 E0 哪呫喝咀時咖啡呦哈呼喔呠哧噔呸啥 F0 图圈还坲坭站块垌姆浮坵坻坳耋垟	B0 烷度熱症炔终始詞絆脳抹袖標單具結 C0 號差須須續挑妙珌珂珈珅弦玶钳環境 D0 玿珇玾珃珀跑珋瓬金葡畸畈底疣姿盘 E0 耽眠眄眅眊胸盼盺矧妖砆砑砒砅砚份 F0 价書研發訪絆般狀阶稅种耗秖粉電

D040 - D0FF

D440 - D4FF

40 突竑芒芏挖积牧村粀秆紃紈叙罘羑羍 20 狙寄耎影籽耷眩胇胠职肢肿脑肤脑詐 20 胜朐肘脑肺診肤胍臿紅蟲苙苾萃茨炮 薄苕茺苫苗苴苬苡苲类茌苻茶竑两 20 茎苠莓茎苭針虴蛇妁衁衎杅衪衩鼼 20 氢釓胲陏陑陓陊陎倞倅倇倓倢倰倛倰 20 俴倳徕俥縀俷倗傿倠倧倵倯倱倎党冔 20 翰凊麦凅津渣剡剚颧剟剟剕剢勍匑厞 20 唦哢唗唒哧哳噓喽哿唭唱哫唑唅哹	40 耐酷釘釢釚陝陟隼訂髟裡糺笶偪偡侯 50 優堡俱倚偲偈偍偁偛偑偢僠偅偟偩桍 60 倍偕偆偀偮偳偖偑凐剫剬剬剮勫勓匭 70 厜嘧啶唼啍啐唴唪啑喃喑噫唰啒噑 80 40 呧唲唅啎唹唻唭唻啀啋圕圙埻探埢 80 埶埜楦堌捸摕擉场堋埳抸蓳埮埣埲埥 C0 堜垤嫧埼堐埧捰瑻埱埩堔堍垷猆熍煡 00 婕婧婞娸鋷姪婐婟竨姾婓婤婗婃婝婒 E0 嫎婛婈媋娾婖娹婽婰婩棌婑婖姌婜孲 F0 孮寁栥闠崞瞱皘倰崠嶇崨崍崦崥崏
D140 - D1FF	D540 - D5FF
40 咳嗶哷咳咭唎唃唋圁图埌堲埕埓垺埆 50 垽垡绕垶垿埇埐墎埁夎奊婹娖娭娮媡 60 媳姙娊娞娳孬宦宭宬尃屖屔峬峿耜峱 70 峷嵬峹帩悅庨庮腹鹰彊弲彧恝恚愿 80	40 編毕娄崟崖储陵废唐度床庫弶强倚棕 50 覆然愁愈悾悰官惨倏惏惤惙惀倮悱惛 60 候惊悿惃惍鴍挲捥掊掂捽掽换緍掝拉 70 掫掎捯掇掐据掅掑掜捭攂捼掤挺拢 80 90
90 A0 恁悢悈悀悒愪悝悃悕悽怆馀悜悎嘅 B0 展摹掣捖捊浗捕搅捃揤挹浖捊挼挩捁 C0 海接捔捙挭赫坚揾捑挸掺捀抺敊敆旆 D0 旃陈旃晊뤙晇晑胰朓栟栚桉栲栳栻核 E0 椰楂栱楝栵栫栭栯桎桄栴栝栒梨栦栨 F0 椢桍栺粢栠貁欯欼欱欰歭肂殈毦迶	A0 律猜损其提採效筛院哺晛唆異暫股 80 根構整核振石燭楼仰桯梣槫梩桜桴稅 C0 桔槁桔桼桫桲梪楝樫桾娜梖梋梠秕梤 D0 稀棒愀梌蝶桽欬歔欷歘殑殔殍狹弳氪 E0 淀涫鹓涳渣涬淩淢涷猍淔渀淜淠淟淖 F0 渣漛弸淝猘淴淊矠灖淰涺淕淂淏涞
D240 - D2FF	D0640 - D6FF
40 毯電額鐵氯沖洗法沖泡沖溜泥湿漂 50 凍澤清損浙泥湿湯洗剤洗液液決算洗 60 決添混沸浸涸滴浸沥浓煊娃炖蒸焦魚 70 炖该炕烞烠烔烷值烆烃焙菱貨胖牸 80	40 温滤涝淀淘滴況涻腹綿烷焗煙发焊煮 50 埔宿塚烿焗焙焓爆艇发烫焎梧氆裡掊 60 猝猗號混劓猊猈鍰俱猞球瑞珸珵琄琁 70 斑琇琀珺現珿琌琋珴琈時畣痎痒痏 80 90
90 A0 栓拳狮猫挫折狒狳狻猁珓珙珥珖琐 B0 珠珣珩珜瑋珛珔珝璢珗琦珨胲麇瓴瓵 C0 姓畛曼疰结疻作商瘭疮疺皊盉眝眛証 D0 眬眒肤眑眕眙眚眢蹈砣砬砢砵砯碅砮 E0 硅砡砩砳砪碖袝砝祏贴뉪鞀祑秫秬秠 F0 秮秭秪秜秞秝定傍窅窋笷窊窇竘笐	A0
0240 - 03FF	D740 - D7FF
40 笄芘宴笏笈笊筦萄等板粑柴树粈粍物 50 枕赶杯款紘杨舒約約料就里罡罞翼買 60 眾投羒超翂狲秒取聆胺胲胹胵眺胻香 70 昇舯舥茳茭荄茙荑茥荖荒晝茦茜茢 80	40 加約距時勤院族就經經歸將推艇說趁 50 脖海舑舸舳舺舴舲赩抚惹莨莍荺荳酋 60 获莎莁莕莙荵莔芩姿莃芟莝鉒表莋茭 70 莥莯莈莗莰荿莦莇莮嗒莚虙虖玆蚷 80 90
90 A0 考生莫充莊尚政者著休伎伕后荇苔 B0 菱荓菌茬南茧菇滤胱坑蚨蚖蚍豉蚞蚇 C0 缺細約妡蛔蚁勞紛蚧蚕虻朝毛約蚔杯 D0 衄衭柏种衲枸粄衿扮袈衾枕枝詞豇落 E0 新胞貢赶過約匙野軟軌透調活泡邊逢 F0 這須頭鄧鄭郡都郊卿認鄧都部郤針	AU 双斑钻明细头刺起外和如蓝的射处 BO 皱旋袉袕袨袢祛被招祷狭袖拘袖毯袗 CO 麦赛赛祖物题积般得韩就脸肤脸就和研 DO 豝豽既起趁趋肝肢跌跟肥軋軞耗纳载 EO 虹舲逆通速通道逡炮鄄耶棉郏卯娜郫 FO 都和就設励查能针犹款纥釸彭釹釪

D840 - D8FF

DC40 - DCFF

40 釫釷釪釮镺闆閈陼陭陫陱陯隿靪頄飥 50 馗傛傕傔僐傋像僷傌傊傝偨傜傒餦偖 60 鉄滄匒粡厤濵喑喨嚔喭啷噅唔喓喈喏 70 喵喁喣嗌喤啽喌喦嘒喕喡喎匶堩堷 80 90	40 朝紀映朝射紙給總給紅輦鞋舶這連塗 50 軍軍軍軍部軍軍都軍軍部軍軍部軍軍部軍軍部軍軍部軍軍部軍軍部軍軍部軍軍部軍軍部軍軍
 10 還來與獲過運整整味 當 增減增增重 80 還邊榆 墜專 媽麵 媒 髮 增 媞 蝸 備 婼 編 / 20 嫁 續 埵 嫫 嘯 道 蝚 ∲ 翊 婻 娘 嫂 姑 嬪 / 20 竊 密 寒 寒 凄 資 納 對 運 嶠 嵃 峨 嵯 嵋 崿 嶋 20 區 喝 噚 崚 輸 通 西 惠 前 料 懂 嵱 嵉 頉 崼 嶋 封 50 程 厳 耀 慎 逸 很 徥 律 涼 惠 窓 恣 惎 怒 倍 	RU 程增進指血症劳芬针机約有吸起影影 BD 帶氮重查律碼健會價僅僅僅僅僅僅僅僅僅 CD 從值会威快准勢刺謝對嗪素哈喀滑噴 DD 嗝酚填嗄噴鼻嗒嗽冻嘚區嗖温噻喃嗙 ED 喀圖採堵塤豈塍增溜場均均填填採還 FD 運型置鎮線端微強遙陵衛號委藝塔
D940 - D9FF	DD40 - DDFF
40 軍福進革傑場學偏優悊宣客優個提供 50 援履緊為辦道培持拖損揭挨捂獲鄉進 60 搽鏈瓶擠掺當擠漸遑纖讀擠想換讀 70 插揚破鼓歌駛敛啟鼓斌學與斷旅旋 80	40 娛樂建娘增鉛姬要沒實窳趁這培總乘 50 噪嗅鬼念嶋瘤槍號除候慣帕格廅腐虎 60 度瘤較徯搖惷慉慊愫慅愲骨恪慆愯熐 70 慣傒戰截效戰鼓擎擊擊搐搒撞搠趁 80
A0	A0 搭損街抽播損損播減損減損損損減 B0 拍擾滑調拍攝減擊兼探換採散爆滑號 C0 咳嗽障當暫項者喻是裝楦棒攜權檔棱樁 C0 磁機構植機或聚格榜核種樹板糊種核 E0 擬棲機循幅震聚格榜核種樹板糊種核 F0 橰楒柵楻椼歊歅歃歡歃歡歡歡歡
DA40 - DAFF	DE40 - DEFF
40 裡是满直,很拔清澈淘濁,清溢,深滯浇施 50 春建運滑,星溢茨亂,淬厚焯還,服發照烧 60 焢城堵,塌焊関)陵寨艳特 增插,指款突测 70 朔揉澱鴉渴缘壅發漏就琮琬琰琫逐 80	40 託託包沒滾滴清渣淇療流浸漆清酒 50 滯澈漲洗润潤渣液做這浸液滴注浸漆清酒 60 溎潘漂涛醉賀漠漠凜潦御擒爆贴違揉煤 70 爐煸裝煲煸熾煡煂煘埵爠処爛筷煳 80 90
40 琚琅珠调理培理瑁瑣琲額甯酸畲族 B0 庫續唐應備座瘤皕峨盜腕腳崩睍睅胴 C0 賭號脫漸煙碾砍臨徑硭碅硪确當硩硨 D0 硒碌腻廠硬酷積梯程除稜寧竦弦筊筇 E0 瓷售筌茹筀筘亮栾梧粨桐栨核絣絓絖 F0 網結機樂繁紮絒粨純株絵絎缾缿罥	A0 煤冰煲胎礁视视科繁厚源涨蒸缓油 B0 發電玻璃爆發環積穿地增積環境琼 C0 瓶氮类燃喷器 首店 瘙來應商應 >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
DB40 - DBFF	DF40 - DFFF
40 學就残後翔聑聏聐愈崗膝腊腦服腇胜 50 胎辞亞原數狂絨舄供絳綺胞茻菏菹差 60 苑要苑鑑卷茨峯差載拉重鼓莉萁按桥 70 菘劉菡碟崑書書表胞萏粉萑弊菂莶	40
A0 斎荷菇協菪堂症溶產業 未 插苑 其 門 B0 茶 詳 拼 頻 載 站 弱 蛪 吸 地 蛇 並 童 童 哲 鲜 C0 餌 (所 術 袺 流 佰 袴 酒 袜 桂 裕 袷 袍 裹 長 祝 D0 親 現 現 配 紅 和 但 距 記 款 助 訳 酌 點 E0 響 訖 許 計 助 親 於 和 取 匹 實 世 貴 超 差 趙 F0 座 時 計 號 既 距 節 助 訂 即 診 對 既 幹 戰 朝	A0 應局舉稅納評條除穿活獎掌施當為 B0 前新務藝物萊基要甚相談鼓動戲藝前 C0 曾前董菲蔥差這灰藝約黃麵裏並在 D0 產業紅药流該普萊賽南裏並作普及英 E0 與蓋號振鈴號妳媳婦奶頭詞評妳將於 F0 鋪橛裡福裡視裏從挾禍動跟觟魠絶

E040 - E0FF

40 4

E440 - E4FF

 40 胎資為角型計畫註部計劃更決認移計 50 腈陷供至豐該和嚴潔類參資食施施趁着 60 些結逐鏈想超熱許讓建時至趾與跳多 62 許這證麵較耕執統格輪輸葷葷違盪 80 90 40 濃遠差都緊壓衝擊鄔螂總額間備記註 80 90 40 濃遠差都緊壓衝擊部壓腳間備記註 80 90 40 濃遠差都緊壓衝擊部壓腳間備記註 80 90 40 濃遠差都緊壓衝擊部緊部間備記註 90 40 濃遠差都緊壓衝擊部緊部間備認許 90 40 濃遠差都緊壓衝擊部緊部間備認許 41 約 42 約 43 約 44 例 值 傑做 優 僅 值 佛 笑 得 替 価 	40
E140 - E1FF	E540 - E5FF
40 (斯劇制)動動團屬嘧隔嘌嘧嗅感咳咳喝 50 諾催納嗪噴速博導僅地增慢壞膨珍產 60 埠境氛壞環勘填增性更渝線傳傳感感 70 嫚嫦娛擊嬰嫠娶熫嫞嫌旋嫨煙弊寠 80 90	40 噚噴嘳喗嗫嘾嘸嘪嘎圚埠塊萓垾埃宜 50 墬墥墡壿澅嫴焥撱嫶嬃嫸嫩嫹逽嬇嬅 60 嫚屟嶢嵭蝳巆皢嶝嫶嶬嶜嶡寮嶞礗樿 70 幠哏敶蠯廞廡彉僳惣憃魀僦憰襓憉 80
AO 脂层嶂鸣峋嶂嵺嶁嵷嶊墔嶈襂嵯嶍 BO 磁鎖債镆帴處盧廗厧廜廕廄废廔薀彈 CO 影徹愿戀麼律傳慳情慓慲僅镠偕慔僂 DD 临慥恐慪傸慖骮戧戫搫摍嶈摝摴摲 EO 摇摆揻摦撦摎撂熼摜摋攂摠摐摿搿摬 FO 损揵搗摷敳斠暡鬵暟朅朄朢榱榶槉	90 A0 「軍德悟僚慄債閒慊懷愁傳敵擊擊摗 B0 操振黃擢得擱慣攢擇満擺擔搭敵嚴救 C0 童勁新嘆蹤源障專碼嗅緒疼傳襟橡核 D0 槱應橫僅恆槢摎憈槾椴將摉槇檠契檯 E0 樈情視債築傳俠機楦檯嫘骸潾滂潰澒
E240 - E2FF	F640 - F6FF
40 榠槎較榰榬榼槫榙榎極僩虔愲榯愷槄 50 榠檪隼榹槊榚槺懥썹樗樕傆傎憯椵砾 60 焟榥槆歏歍歋預强殠糓毄氀梷滵溛漃 70 漥滸漷滻漮漉漵漙溫漧灒潛漒澕漊 80	40 澍遊斯橫濱臺續潤濕澤激漸漸漆漁漢 50 為復擒聚激素澘渚潔潓環濕灌滯預灌 60 潪漆領填煉熰熠爗爛燒燒婦熞煜熡熪 70 熄熧熳犘犁獘獒徸獇獠湊獛獨獚豼 80
AD 港澤滹澎萍眾漸准漵滫漇淡滌漢滴 BD 激漲 型 液液 還流 演演 [漢] 激漲 型 液 流 型 液 滴 / 違 添 通 型 液 滴 / 違 滑 加 滴 / 違 滑 加 滴 / 違 滑 加 滴 / 違 滑 加 滴 / 違 / 滴 滴 / 微 / 微 / 微 / 微 / 微 / 微 / 微 / 微 /	90 AD 漢璇璉璊罩璾瑽環璬竱瑹甈螢蟲應 80 壅瘙瘭瘜瘨癒瘨癒镐銳皞畠膄瞏瞉瞞 CO 磰礦礒礡儙磎磷磈瓍礂磉禚聼颵禜鬝 DO 耐鴜橫窲寘跽揓籄箾箬淧箯箹篊箵糅 ED 稍棺粓緷緓揯櫩緗襎橁続緦椱緱檎緮 F0 繣蒥嫉羰羭翭翫禐罿驞簋聤段朣膟
E340 - E3FF	E740 - E7FF
40 肥庫隊废福板積積積容認寄與箔築 50 菸筆實統證刻紅箎算簡割廢空萊根粿 60 累種導粹談戀精捷棲縱綝絨絕總耕稜 70 編絡縦緯線萎紫統線網蔥期變畫源 80	40 時國腹險睢絢績詳擬擬艎與常栽南部 50 黄蔎救菌族痒彗茲茲無蘇東軟專斬黨 60 帶箍菠蘆藝素這務遭渤醫師邀業專業 70 確發萬條債徒從做蔘移蔰激选陳続 80 90
AU 程标型运荡曲理题附有软洗洗洗了22 B0 芙蕾某莺葡萄茉莉蓉葱放 C0 翻除時著蔓菇植删/香蕈擊药甜葱菇蒸 D0 幹赦莊敲處譯蜣蟻着練絨拭錯戀網綴 E0 蜬蝁螺鋅媚蝼鉤諂蜡蜒婗娉蜩蝂蜦螟 F0 蜸蜤蜚羀蜑袖裧裱襦裺裍褞禓拂袋	A0 這游蛐婷踢蝳運蜡螺旋娛蝚婿媚變 B0 疉環蝹鐔堟嫂變碼隻鎖髽蝏續螸領领 C0 氫酯褅渾褔裸褗禕걖浸禒禐發複覢麲 D0 熨烏緒紀爾誤戱薩琴飯読諧誌冒絆諅 E0 歲熱紊記點盜萍貄醉順順賣寶緊賬趨 F0 歲進輪腕路踐碎話踕陸錯試頭跨波

E840 - E8FF

EC40 - ECFF

40 陰陸陸陸陸陸陸陸陸部 50 遭退達邀都部都衛軍軍軍軍軍的 60 陸陸越線後近領部軍軍軍軍軍的 60 陸陸越線後近領部軍軍軍軍軍 60 陸陸越線後近朝部訪太子 60 陸時蒙茲地國國國國國旗俱和 60 總計蒙茲地國國國國國旗和 60 總計蒙茲地國國國國國旗和 60 總計蒙茲地國國國國國旗和 60 總計蒙茲地國國國國國旗和 60 國際主要軍軍 60 國際主要軍 60 國際主要軍軍 60 國際主要軍 60 國際主要軍 60 國際主要軍 60 國際主要軍 60 國際主要軍 60 國際主要軍 60 國際主要軍 60 國際主要 60 國際主要軍 60 國際主要 60 國國王 60 國國王 60 國國王 60 國國王 60 國王 60 國王	40 經總結論整空閉單間單圓圍閉間間 50 證藝許氣辭住乾益錄單段證數輕約 60 詐較則就腔屈熱熱點點例對對約約 70 架暫慮能認為點至評認許對約約約 80 90 A0 對約款為為低價價值優優優數 80 壅要透數就玩粉高軌值價值優優優數 80 輕噴這嘴嗄徑當羞喋喋得撒羞道媚喔 20 懸淨埔場擁獲著產漢漢樂講樣上資的 20 懸字情常懷懷懷漢博講派資源教政 50 履旗數億從樣模整復悉揮娜提極後
E940 - E9FF	ED40 - EDFF
40 嘎啵喝嗷喑啵嗷置圈嘎嗷逮犟ь怨整 50 坐壇嬸環燰燃激強發磁爆綠罐商碼喝 60 嶩嶧嶍鄉嶮嶪嵤將薛設ろ煥皬幣帕寘 70 瀋源解廥預激憨憨愁懅隱懆懁燡僋 80	40 緊葉樣穩信僅準楼線熠駕愈運影動受 50 漆濁料濾渣消濁溝撒黃譯湛厚這機壞 60 燤愛受蕩減濃盪球璫璐瓅運眾喻電配 70 飯販髮聯確澄庫殘幡整瞬暉暖間讀 80
AD 徽位於排獲價級還激擊濃僅漸接通 BD 数数斟電軟噴噴運爆碳噴硼器膻徹 CD 機檔媒積協厚傳敝板依傑爆儘積標樹燃 DD 與業播徵樹桄核爆總煤樓欄個數飲獻 ED 數徵渣薄驗毀動籃邊濟港漸邊濟基徵 FD 潞過漆澞濊澨漸漸澮遼濟澤憑券悉	90 A0 油陣噴增增強磕碰得硬做彈彈機彈 B0 跟種機機模橫使說頭蹤遙應錄實算算 C0 預遂基載篮徑移植參開殖的漸較蓄較蓄機 D0 減級非導風視得積緩系級接於愛繁繁 E0 總螃豐晉影號影裡這該臉疑處熟歸 F0 縷欄帶漢︰惹美美演賞數該茲蓬蓬美
EA40 - EAFF	EE40 - EEFF
40 當該溝澤滨漢油鼓環賃營構彈準地層 50 桑薄燒漬價損賃該受擅情發邁漢將素 60 強增整硬環理理瑞國副總應應應 70 實際液煉數盒嗩嗪現噻啶普唑庫暯 80 90	40 預藤歲基載臨路後邊營東殘蒼萬解較 50 薈薄霜奪蓮後斎家續鏡張總遭漸讓 60 遙涛娜媛樂速憲整整設遷騷嫧整蟲繁 70 缩橫槤欄標檢敝從後親戰覺購載碼 80 90
A0 鳴徹磁碟碰磞辝磛面硬價礞碹ıı間標 B0 糜夅寠憗寪陚鄉淔勞籕弊蓋氣窗除亳 C0 黃篪黃茶筆等筒撒板模樽腦縒檸稜經 D0 綽點詞滑橫絕絕錄絕致將榜續後接等 E0 罻罼翼類爱榜構琢黃謨曉讀醉涼譜識 F0 腺腺際這熱膀歷經漢漢董茶藝責発	AO 再覆貨捕獎搜控敘號會營臺聯頭旗 BO 註葉較標經稅稅慈陰請選適濟論臺 CO 轉幅這這學歷歷歷歷營 的歷歷些最新 DO 結結錯鍼則假想幾後復總級鉴素銷 EO 跨運鉄線線鐘送鏡鎖網貨態備鉴簡陽 FO 暨 区 配喷藻國客旗覆整葉砼転結
EB40 - EBFF	EF40 - EFFF
40 蘇軟旋尊蒼間間單奏葵稿倚漸落液蓋 50 蕧繁節資商稍僅蘇溦哉就諾紙諾紙 60 頻遞增皚竭媒腠想塢溴螺鯽鏈蟹點 70 褞褦裹裛袋裝寬裏穀溶꺠係潘屬誼 80	40 等時時享載板就須買頭原做單類菜會單規約結 50 總修整整候約該施納時期就除取加種獨聯 60 期時稅除發更聲鑑素考整就結結新於期純 70 絡至減減餘統給效時內用為傳備均易為為語 80 90
A0 厚望試練簡據問提認證題這種證題 B0 建极粉物增費庫降敗積板煤建降臨諾 C0 課證理過源別約數數輸業報報報報報 D0 達還遵這環哪舉會透開簡開開始穿絕 E0 該續經緒結該讓錄緩網提們網給操紙錄 F0 締結器透識錄線錄過網記錄給錄	AD 為為時時至至至陽島棠延要終赶對 BO 飲產的試影能會運搬還要運等等實會 CO 奏須屬蒙嵌購密意宜優優優價情 DO 情況這棵撒黃滾音設溜漆頂薄價條 ED 情態使惰憫懷便徹默整能演演這黃燈 FO 表達運臺灣建築突徹面還短偉意

F040 - F0FF

F440 - F4FF

A should be a should be a set of a second	
40 項播與集項這環道凱號戰衝激淪漸當 50 藩墩數監映台層循運聯墩譽議當淫襘 60 経導勞博意實容簽签覽閱漸陣總總 70 禮綫續繹橋桑繰巖預潛朝鄧遺團獲 80 90	40 嚵響聯续增鐵聚蘇復優攘擾援撤控 50 磁速電機使徑爐橫櫱檯修讓漢港廣 60 混倒浙溪邊淪湾載溝覆環境變 70 嘧崃數藍順瓊時雙尾預碳溫魯環復 80
A0 III / / / / / / / / / / / / / / / / /	90 A0 碼應復借裝量範蠶菱與栏網繡縲纓 B0 端都等躍語覺線按載霍盤賴請種整新 C0 養衡常現績妳始證環邊傳補胞層這趨 D0 興脹驗醫護服為速動營輔輕感感讓戰 E0 違認影應陳腈醇緣依辨譜辨彈鐵鉛鍄 F0 續證羨婦績淚繙進繳紛級綱總編就
F140 - F1FF	F540 - F5FF
40 蹄漥跰蹝Σ堑轆轇幧铑筺鄪鄻豟廐醥 50 醘橀醪繂銇鋝鎷鏄錇獝븶鑖鎲勰鏥鏞 60 差娴鍒鏿缞紶犹鍉缮鎴釡鍌躀閵闑隳 70 軸銺巂嶌臒獕寳巚竁鞬硟聪勒鋫鞪 80	40 鉄途維維墜現閒寬霮霯聯導韽韾顠蒩 50 減預關壓續續旗旗續採聯脹緊發殼聯 60 戰驅腦寬候整件 暫貨 繫應蘇鏈與炭 70 鱀鰇雌鹼靛就驗殤皗鷤鶝鵠碼鵋調 80
A0 祥幹華壁壁結幹嵌戰頑限認結練縛騏 B0 际起尿肢标胺脏動酸幹基點紫頻開業 C0 敏敏電動局師便便起於易針於育除構 D0 將機偽踢過時能能能能的於實的像体動的解 F0 吸藍噬電咽噴這這環要媒環鎖縮值等	90 A0 調為夠夠時時時時時時時間當驚驚驚 B0 列臺賽賽觀則無當能問時間當麼的的獎 C0 個價圓對喘賓增進授詳僅握當麼像做 D0 檯舉模遵派満灌證基證都倫接基為叠度優 E0 這個醫碟數溶標橫就碰接基為叠度優 F0 贏裏數意應直時看達需要接當或高
F240 - F2FF	E640 - E6EE
40 微慎接讓搞摆調這鼓旋拾碼閣接優攝 50 檔構操變桑獎種價機歡預建測截淤灌 60 激烈這這盜燈應懷點實深為喪漫漂漲 70 擺催爆魂瓅漸這堅擠讀時讓递端電 80 90	40 辦攝護區藏葉凝機被復後導快醫萊講經 50 誕誓應過理附與能對變暫藝掌標總續 60 很發鋒鏡染語續課總證給單單影繁 70 ₩釋意說就碰照這該隨階階肥診驚驚 80 90
AU 博發演隊網代頂軒擇當台通信未能 BO 禮燈機機模燃機緊維醫緊黨戰強範 CO 瓊腹濃緩緩續度或窮祕速素質差積 DO 豬蔥藠難裝蓋當摩熬慕苍頭這氯感落 EO 環環或臺盤整整練媒้僅撥機擇衝撞 FO 被操要觀戰解轉激跳即應勝調網顯	A0 肺氣質恢复都陽短的結果於時間結 B0 新始接熱釋為影陽熱等為發為時時時 C0 防熱感質試驗筋時循丝彈發點解整發 D0 發展質試驗筋時循丝彈發出增發 E0 擁沒握貸慣慢慢電影演演提及這些發展 F0 這還環境要密流論積密管導姦護堂
F340 - F3FF	F740 - F7FF
40 將禪諧諮淤證该算驗資環總送述穩證 50 贿粮遺證課證機軟幣採督觀漸鄭鄮 60 建磁維緩緩總總建緩緩紛縱盜鎮纖統 70 纖傳導維修整瞭膩朢踏範舊算新寫 80 90	40 端檗績減經經證績菱廠最產產或這場違 50 雙燈檔戲刻樂蒸晶波書溶聯陳透這理 60 陳運還寬幅樂節疾病缓鑒婷旋條網盛 70 動着戰歲劍踏甕錄聯聯羅關磷聯聯 80 90
A0 諾芬堡塗轉転線等期較抗和的機械激展就 B0 編結使產溫期聚聚就酸較就服裝服就設預給 C0 服然軟化動劑電廠就能較為將能給稅給結 D0 兼案該該該該該該將務將應為務總點總是的 ED 來商路證碼傳想是購讀通過簡結因總就 FD 素品總 要 遊遊前能起起,對當新計會「圖字單	A0 验羅铁袖暫詳繁結號除好績等控結 B0 经超條徵繁請原動物強器動動動置 C0 電動電器調達動踏減的與影響動動力 D0 負動關環經過常數層動的運行並遵循 E0 使樂爆轉還使解業繁優素購這遵遵優捷 E0 應弊應的非確激得容測等增增地

F840 - F8FF

FC40 - FCFF

40 読售響 記撒梦園濾經應該違領導容還獲 50 與應軟體繁輕繁變「歸歸總錢總總總總總 60 終號期的期顧藝與時結時期互強驚勢 70 時間時期或點點緊和至德感感無嚴容 70 時間影響或影繁和至德感感無嚴容 70 前新新記者前意識不能當一個 70 前新新記者的是一個 70 前新新記者的是一個 70 前指於記者的是一個 70 前指述。 70 前指於記者的是一個 70 前指述。 70 前述。 70 前指述。 70 前述。 70 前述 70 前述。 70 前述 70 前 70 前 70 前 70 前 70 前 70 前 70 前 70 前	FC40 - FCFF 40 迫迴廻迺奕鑲式何強映壇地强彌弦 50 奏ジ棘紫影錚銅徧蔽滅蹊厳骸俗釖с 60 乾忽地變意狹些空優視特煩 應廢珍 80 乾速慮靖愈蛮懣慈基德壳咈翅宪濤 90 40 愁懷重點隋恋意怎怎整羅挑兵担始 80 挖攢游琴掉搂揸爆產 灌攝頭湖極 80 蒙攀邊撒携後該激電鳌裝數敷執結斷發終 80 跨電燈无飯忟枚勞唠音洸谷旭晉嚎時 80 騎雪 宣暢運晓曙曜僵騷昜煽嘲薔驟 60 喃 杧杢杰霜柏枝栢柏鈼柳柒裱栴
40 後數編使發動道道這個進展建設的	FD40 - FDFF
50 時環涂環球決定費數範層層於原始時 60 彩驗案響踏整整數數響響測測數運動 70 實環議後錄線違態照像解實際響測數運動 80 90	40 壳模. 通線 体型 化 不 如 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	90 A0 查绪習啥評潛等影样滴落薄粒浜泡 B0 灌玻漸萬薄靖松 箭蝶 將環霜床 C0 濃填散產塘滴應恣臺誇蓬繃撒潜滴 D0 解剖凜灑濃濃溝濡濃構 E0 鷹文炮炁妳取数烟洇燧熴熖焚烤煅螺 F0 煊 电隙煏鍢 易爆燈環導增鏈뎄燦
FA40 - FAFF	5540 - 5555
40 有歸決灌動轨 建次 其 珍 歸 京 存 插 油 经 50 杆拟 戰 卸 併 茫 儘 接 後 依 信 簡 楷 雅 律 60 優 健 傑 傑 溜 像 佛 佛 戴 勵 於 莧 現 免 兆 70 不 愈 吭 帽 備 個 貿 題 學 宂 蝽 沕 泳 冲 半 80	40 續變燮羅爛鍁爪隐牀誌梽應讀壅牵性 50 澡犂 猫猴就武武澄就珏玲咣航珉谮 60 泊诊珍珍姆斯風證或建使發英酒鑒 70 遼瑠隔瓊琉瑙莹靈燦籔鍵德蓬羅 80
80 利利胡勞劉錫効動範疇動蓋充 鐵琳 C0 湮湮湮遭遭 叶济妄格路船补影妖儀 D0 茚叩却却鄂 烟焦焕匡線圓數斷玩稅 E0 毗恐叁条汉义堅叙載數叠邊邊掛叶喀吓 F0 凭唫暗洁呭莅喻唎咏咤遙媜鍲哆哲	90 A0 溝壁線爆響環球а載 音隔電雪際 B0 錄聆時時署喝碗還正陳瑝湾向痘應癢癢 C0 壇內訳最真峰臺集崗導數經蓋蓋宣言 D0 喧阗毗着潜當實瞬戰舒舒夠可 整理 E0 萘磯硫碰燈橄霭磚礦碱仍迈祆顪縛何 F0 裨祺椽寨碼裡讀礼禩渦蘸弘秆穀秔
FB40 - FBFF	
40 銷信商碼启琗喆喻 濾濤載爆間確準 50 噻噻噻噻嗪磷酸晒否囫囯园鍰圓圯 60 坎沟沟炋坂姙痒塊熞堃叠煌增登壞整 70 叡爤攝壬靖寿沅鷦熘誌咳够梦絜读 80	LORADARACERATICS OF
A0 类裝容實簡結啦竟竟矮妊竭姆藤辰 B0 娣妖姥颈婕娜揪亞 菱瑛逗虛嚴強律 C0 變遷如広勐華李檗脘蜜範借寧撒率寐 D0 冠寶宝蘭尅慰尓珎尔雕芝脛鄙板表峯 E0 鳴嵬唭峴輪嵍颯岑孍苼臸窈巽樓芇飢 F0 槽樹樹 幺覈嗻厦廉 厨奶粉廴延	

Thai Code Page Function

Outline

The printer supports Thai font (Code Page 874). It prints each character one by one according to the code number specified. However, Thai character basically consists of the combination of multiple characters.

The printer provides the functionality to automatically construct Thai character according to the order of specified Thai character.

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

- Code Page = 874
- Special Font = Mode 3 (Constructed 874) or Mode 7 (Constructed 874 Large Font or 874 LF)

Based on this setting, characters of code page 874 are constructed according to the character order sent.

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

The character cell of Thai character is made up of a maximum 4 parts—Top level, Above level, Base line and Below level.)

- **Top Level**—places the Top level characters only. Top level character is placed on the Above characters.
- **Above Level**—places the Above level characters only. The Above level character is placed on the Base line characters.
- **Base Line**—places the Base level characters and Low code characters.
- **Below Level** –places the Below level characters. The Below level character is placed under the Base line character.



Below mentions about each character type.



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.
- Every 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/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. It is impossible that the top, above and below characters are in one character.

Thai character data procedure

Thai character data string uses the following format:

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

The printer checks whether the received character is the Base character. If the Top, Above, Below characters are sent before the Base character, these characters are ignored.

After receiving the Base character, the printer checks the next character until it receives the next Base character.

If next character is the Below character, the Above character or Top character, the NCR 7199 Series printer checks whether these Thai characters are valid for the current Base character. If

valid, the NCR 7199 Series printer merges the characters images on the Base character image. If invalid, the characters are ignored.

Notes for this Function

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

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

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

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

Limitation

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

Arabic Font Support

The printer supports the Arabic font (Code Page 1256). It prints each character one by one according to the code number specified. However, each individual Arabic character does not make sense as it changes its shape according to the context.

The printer provides the functionality to automatically transform Arabic character according to the context.

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

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

Based on this setting, following transformations are available for characters of code page 1256:

- Contextual forms
- Word ligatures
- Reverse the Arabic strings

These features can be achieved based on the proportional font and they are available according to the following conditions:

- Arabic Proportional font exist in DBCS font area.
- Asian Mode is disabled.
- Codepage 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 above-mentioned features are not available, and Codepage 1256 isolated characters are printed in fixed pitch.

Contextual Forms

Arabic letters have contextual forms, depending on surrounding letters in the same 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 with connection to all the characters in that word. This feature is supported in contextual forms.

Word Ligatures

Arabic Presentation Forms-A has a few characters defined as *word ligatures* for terms frequently used in formulaic expressions in Arabic. By way of 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 by aligning right margin. The data received by the printer will reverse the Arabic string and print as per the Arabic format, which is right to left.

Proportional Font

The printer has the following resident proportional characters for Arabic functions (Unicode base).

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

The characters of Codepage 1256 are covered by the above-mentioned characters.

Proportional Font Conversion Handling of Arabic

Express a code as follows:

Proportional font code of Arabic (include Lower character)	Α
Other codes	е
Select Unicode Mode (ESC +)	Uni IN
Cancel Unicode Mode (ESC +)	Uni OUT

Receiving data:

AAAA	AA	A	A e	e	e	Α	Α	Α	Α	LF
font gen (Image	erator data)]		X		fon (I	t ger mage	nerat e dat	or a)	
ΑΑΑΑΑΑΑ	e	e e	AA	AA						

Limitations

Due to 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 7199 Series Thermal Receipt Station Printer Programmer's Guide (BCC5-0000-5170)*. Please see the command description of Print Characteristic Commands in detail.

Horizontal positioning commands

🖍 Example

HT Horizontal Tab (6,12,18)



Invalid case for Horizontal Tab



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 Counter-Clockwise Rotated Print	
ESC SYSN	Select Pitch (Column Width)	
ESC SP	Set Character Right-Side Spacing	
ESC !	Select Print Modes	BitO, 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	

Command	Command name	Remarks
ESC E	Select or Cancel Emphasized Mode	
ESC G	Select Double Strike	
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	Selects Superscript or Subscript Modes	

The following table contains a list of commands which 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

Invalid command (example)

Below is the example to show the condition for invalid command.



Invalid command in middle of the line (example)

Below is the example to show the condition for invalid command in the middle of the line.



Printing layout (over the area)

If the Arabic character line exceeds printable area, it will be printed as below.



SBCS2, SBCS3 Font Support

There is the functionality to print the different size of SBCS font named SBCS2, SBCS3 for ESC/POS emulation.

To activate this functionality, SBCS2/SBCS3 font set has to be registered as the printer resident font. In addition to this, the printer has to be configured to SBCS2/SBCS3 font mode in Special Font setting. If SBCS2/SBCS3 font set are not registered in SBCS font data, SBCS2/SBCS3 font mode cannot be configured in Special Font setting.

Font cell size height is different between Font A and Font B in SBCS2, but it is the same in SBCS3.

P Note

48 Character Mode is not available when SBCS2, SBCS3 font is selected.

	Font Cell Size			Printable Area						
	Dots		mm		CPL		Dots		mm	
	w	н	W	н	80mm	58mm	80mm	58mm	80mm	58mm
SBCS Font A	13	24	1.63	3.00	44	32	572	416	71.57	52.05
SBCS Font B	10	24	1.25	3.00	56	42	560	420	70.07	52.55

SBCS1 Font Size
SBCS2 Font Size

	Font Cell Size			Printable Area						
	Dots		mm		CPL		Dots		mm	
	w	н	w	н	80mm	58mm	80mm	58mm	80mm	58mm
SBCS2 Font A	13	28	1.63	3.50	42	30	546	390	68.32	48.80
SBCS2 Font B	10	20	1.25	2.50	56	40	560	400	70.07	50.05

SBCS3 Font Size

	Font Cell Size				Printable Area					
	Dots		mm		CPL		Dots		mm	
	w	н	w	н	80mm	58mm	80mm	58mm	80mm	58mm
SBCS3 Font A	13	28	1.63	3.50	42	30	546	390	68.32	48.80
SBCS3 Font B	10	28	1.25	3.50	56	40	560	400	70.07	50.05

Paper End Detection

To immediately detect paper end, the printer automatically switches to Sync. Mode 1. The printer is also set to send the batch command responses after the physical knife cut.

P Note

This feature is not related to the paper low detection condition setting. Regardless of the paper low detection setting (enabled or disabled), Sync Mode 1 switching will happen.

Sync Mode	Batch Commands Response vs Knife Cut	Sync Mode 1 Switching Internally at last 10 ft
Sync. Mode Disable	Batch command, which is coming after knife cut, are sent after the physical knife cut. Other batch commands will reply immediately.	When the paper is at 10 ft, the printer automatically switches to Sync. Mode 1 to immediately detect paper end.
Sync. Mode Legacy	Batch commands will reply Immediately	N/A

Paper Low Detection

The Paper Low Sensor detects when the remaining paper length is only 40 ft. Depending on the diagnostic form setting, the firmware counts the paper length to report the Paper low warning status.

- **Paper low sensor status**—updated based on the paper low sensor detection when the remaining paper length is 40 ft.
- **Paper low warning status**—updated based on the "Paper Low Detection" setting in the Diagnostic form.

Receipt Direction	Paper Low Detection (Remaining ft)	Firmware count (Sensor level – Diag setting)	Paper low warning update in Power Off/On state
Front Exit	40 ft	0	Immediate
	30 ft	10 ft	Not immediate
	20 ft	20 ft	Not immediate
	15 ft (default)	25 ft (40 to 15 ft)	Not immediate
Top Exit	40 ft	0	Not immediate
	30 ft	0	Not immediate
	20 ft	10 ft	Not immediate
	15 ft (default)	15 ft (30 to 15 ft)	Not immediate

Series i

Series ii

Paper Low Detection (Remaining ft)	Firmware count (Sensor level – Diag setting)	Paper low warning update in Power Off/On state
40 ft	0	Immediate
30 ft	10 ft	Not immediate
20 ft	20 ft	Not immediate
15 ft (default)	25 ft (40 to 15 ft)	Not immediate

Note

Receipt direction setting is not applicable for Series ii. Both receipt top exit and front exit are using common criteria as above table.

Note

Take note of the following:

- When the printer is in power off/on or receipt cover open/close state and if the loaded paper does not cover the paper low sensor, the printer immediately detects paper low warning as it starts printing.
- For Series ii, printer does not support receipt direction setting. Refer to firmware count conditions of "Front Exit" only for horizontal or vertical mount.
- In the Top Exit receipt direction, the paper low sensor can detect when there is only 30 ft of paper remaining. This means that the paper low detection length is the same (at 30 ft) for both "Enable (Remaining 40ft)" and "Enable (Remaining 30ft)". After paper low sensor detection, the printer needs to print a minimum of 3 ft to detect the stable paper low. The same logic applies to printer power off and on condition that if a small paper roll is loaded and it does not cover the paper low sensor, the printer cannot immediately detect paper low warning. The printer need to print a minimum of 3 ft to detect paper low.

Paper Low Detection Process

The following table provides the process of detecting paper low in different printer settings.

Store	Paper Low Detection Setting					
этер	Remaining 15ft (default), 20ft, 30ft	Remaining 40ft				
1	The user load a full paper roll in receipt station and starts printing. Note The paper roll should cover the paper low	The user load a full paper roll in receipt station and starts printing. Note The paper roll should cover the paper low				
	sensor.	sensor.				
2	When the firmware detects paper low at 40 ft, the firmware saves this in the Flash ROM.	When the firmware detects paper low at 40 ft, the firmware saves this in the Flash ROM and the printer status is set as paper low.				
3	The printer prints the receipt, and the firmware start to count the paper feed length.	The printer prints the receipt, and the firmware start to count the paper feed length.				
4	When the paper feed reaches the next 5 ft (that is, remaining 35 ft, 30 ft, 25 ft, 20 ft, 15 ft), the firmware saves this in the Flash ROM.	When the paper feed reaches the next 5 ft (that is, remaining 35 ft, 30 ft, 25 ft, 20 ft, 15 ft), the firmware saves this in the Flash ROM.				
	Note If the printer is turned off and then on, the firmware does not retrieve the latest stored value. For example, if the printer is turned off after printing 2 ft of paper, the 2-ft count is lost after the printer is turned back on again.	Note If the printer is turned off and then on, the firmware does not retrieve the latest stored value. For example, if the printer is turned off after printing 2 ft of paper, the 2-ft count is lost after the printer is turned back on again.				
	 Steps 3 and 4 continue until the configured paper low detection setting is reached. At 15 ft remaining, the printer status is set as paper low. At 10 ft remaining, the printer switches to Receipt Sync Mode 1 for effective paper end detection. 	 Steps 3 and 4 continue until the remaining 10 ft is reached. At 10 ft remaining, the printer switches to Receipt Sync Mode 1 for effective paper end detection. 				

P Note

Receipt Sync Mode 1 is effective both in Paper low detection enable and disable. To check functionality related to paper low, use the larger paper roll that covers the paper roll sensor.