Oracle® MICROS Mobile Receipt Printer M31

Setup Guide

Release 1.0
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Oracle MICROS Mobile Receipt Printer M31 Setup Guide, Release 1.0

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1 Preface

Oracle and Bixolon have partnered to produce the Oracle MICROS Mobile Receipt Printer M31. It is a global printer that is compact, rugged, and ergonomic that includes Bluetooth, USB, and Serial connectivity options. The printer also has factory installed custom firmware that includes many foreign character font sets for local in-country character support.

Audience

This document is intended for those who will be setting up, installing, and operating the Oracle MICROS Mobile Receipt Printer M31. Additional information regarding integration with the POS system or other related software applications can be obtained from the respective application guides.

Important Information

The following product specifications and/or manual content may be changed without prior notice.

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to recreate
- Exact error message received and any associated log files
- Screenshots of each step you take

Documentation

Oracle Hospitality product documentation is available on the Oracle Help Center at:
http://docs.oracle.com/en/industries/food-beverage/

Bixolon Standard documentation is available from their global web site at:
http://bixolon.com

Revision History

Date	Description of Change
January 2019	Initial publication.
September 2019	Added European currency symbol printing information.

2 Additional Documentation

Bixolon offers additional documentation for the standard SPP-R310 mobile printer. Visit the Bixolon website (www.bixolon.com) to download the documentation, SDKs, and utilities for the SPP-R310 mobile printer.

1. **Windows CE Module Program Manual**

This manual provides information on the DLL files required for Microsoft Windows CE application program development.

2. **Windows Driver Manual**

This manual provides information on installation and main functions of the Microsoft Windows driver for this product.

3. **Unified Utility Manual**

This manual provides information on the software used to select functions of this product, modify operational settings, and load bitmap images.

- VMSM (Virtual Memory Switch Manager): A function that enables software-based virtual switches to set basic operational conditions of the product.
- NV Image Download Manager: Utility for downloading image files, such as logos, intended for repetitive printing.
- A function that updates the printer firmware **(Firmware Manager).**

4. **Bluetooth & Wireless Manual**

This manual describes how to connect terminals (PDAs, PCs, etc.) with Bluetooth functionality, and how to connect wireless LAN in infrastructure.

5. **Commands Manual**

This manual provides information on the protocol and functions of the control commands that can be used with this product.

6. **Code Pages Manual**

This manual provides information on each character code page that can be used with this product.

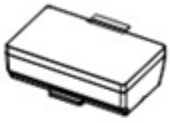
3

What's in the Box

The printer box contains the following items. The bundled Oracle P/N is 7120777.

Note: You must order the country-specific power cord separately.

M31 Mobile Printer



Battery Pack

Power Supply

Paper Roll

Belt Clip

USB Cable

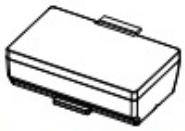
Documentation

Optional Accessories Available from Oracle

Single Battery Charging Cradle w/Power Supply Oracle P/N 7120781

Quad Battery Charging Cradle w/Power Supply Oracle P/N 7120782

Power Supply for Printer and Single Battery Charging Cradle Oracle P/N 7120779

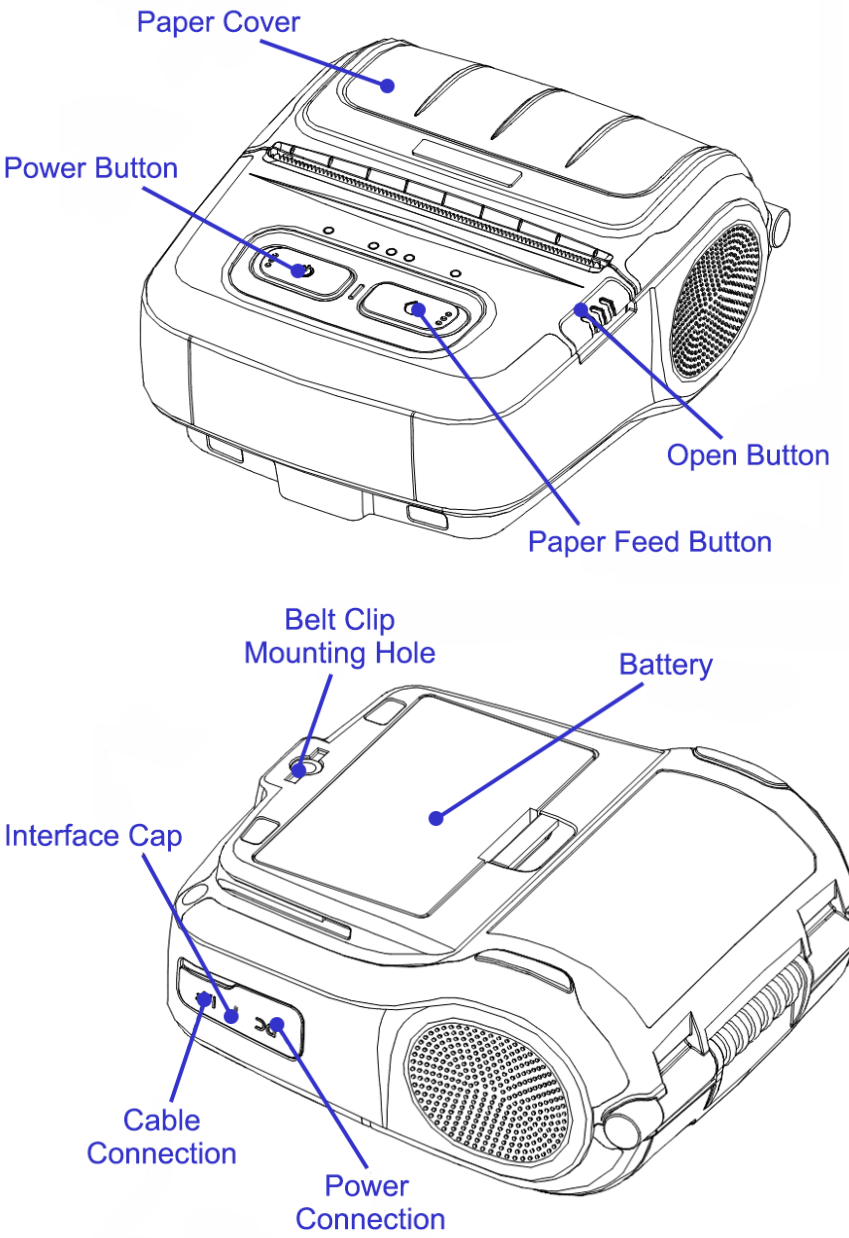


Spare Battery for Printer Oracle P/N 7120778

Power Supply for Quad Battery Charger Oracle P/N 7120780

Note: For a complete list of accessories, visit the Bixolon website.

Oracle MICROS M31 Mobile Printer Overview

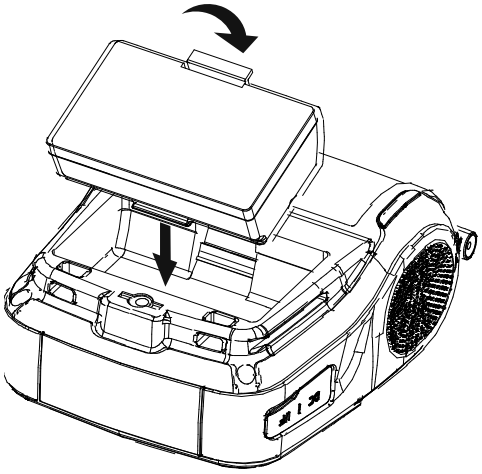


4

Installation and Usage

Installing the Battery

1. Insert the battery in the bottom of the printer. Ensure you align the battery hook.
2. Push the battery into the slot until it snaps into place.



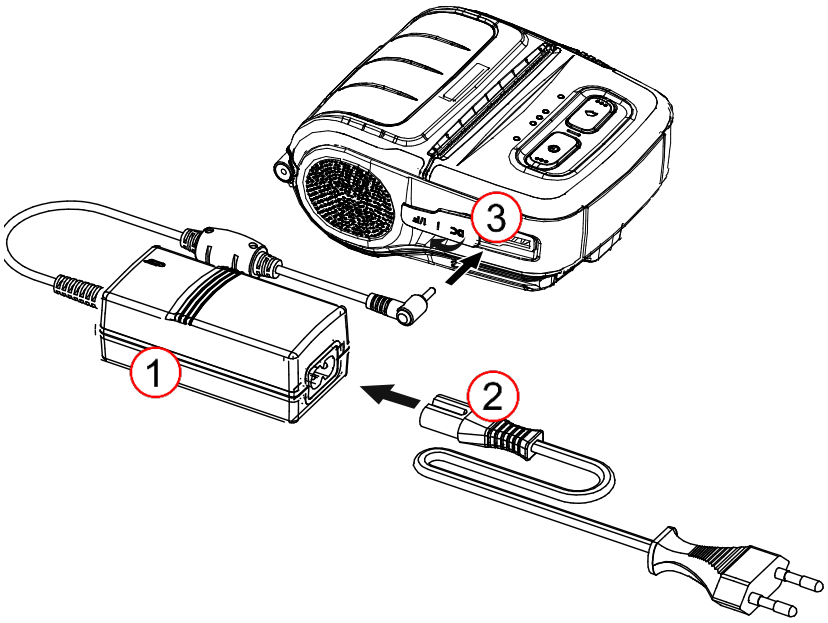
NOTE:

- The battery is partially charged at the time of purchase. Fully charge the battery using the battery charger or the optional Single Battery Charging Cradle/Quad Battery Charging Cradle prior to product use.

Using the Printer Power Supply

The printer power supply is used to charge the battery while it is installed.

1. Turn off the printer power.
2. Connect the power cord (2) to the power supply (1), and then connect AC power.
3. Open the external interface cap in the direction of (3).
4. Connect the power supply's barrel connector to the printer power connector.

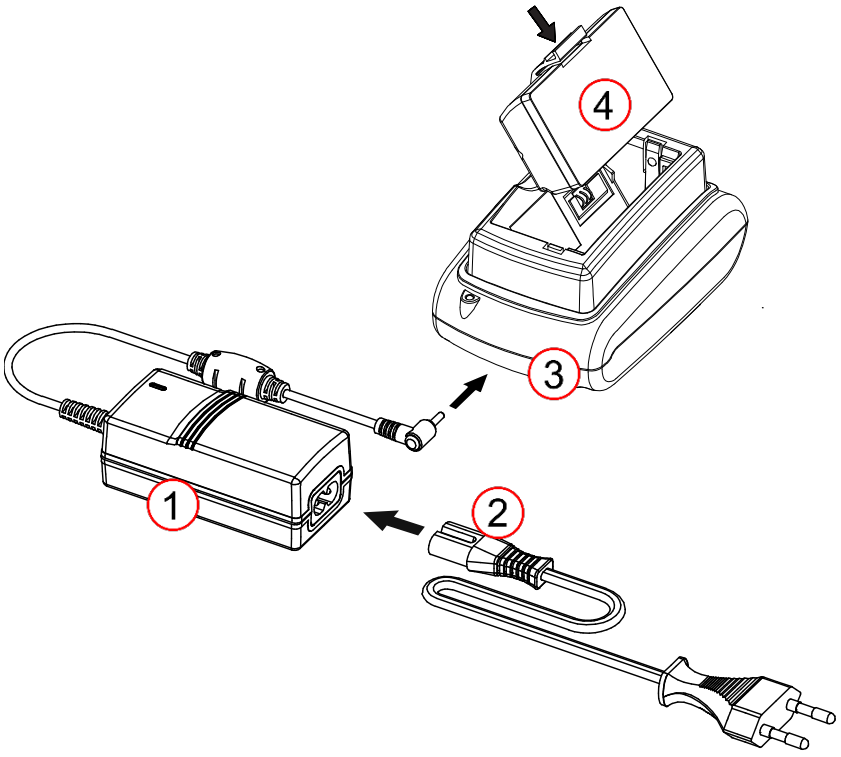


CAUTION:

Use only the Oracle MICROS-supplied power supply, or the printer may incur serious damage. Warranty does not cover this type of damage.

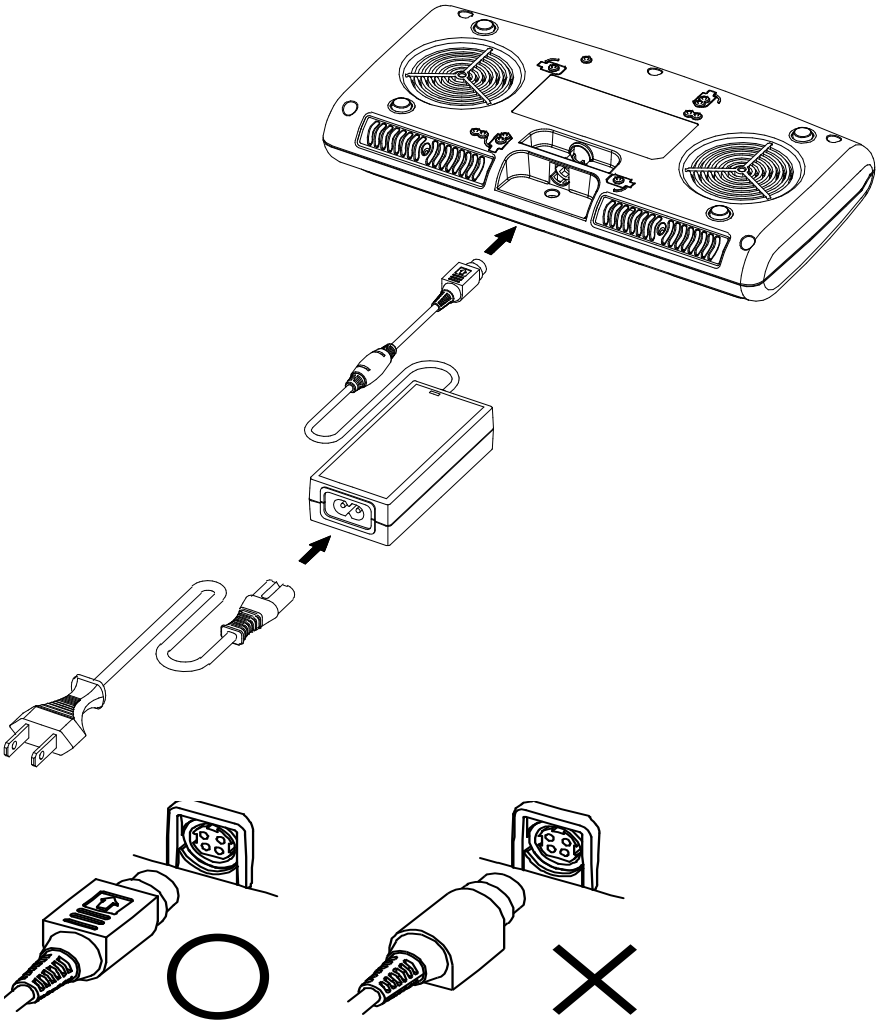
Using the Single Battery Charging Cradle (Optional)

1. Connect the power cord (2) to the power supply (1).
2. Connect the power supply's barrel connector (1) to the power connector of the Single Battery Charging Cradle (3).
3. Plug the power cord (2) into an electrical outlet.
4. Insert the battery (4) into the Single Battery Charging Cradle (3) until you hear a snapping sound.



Using the Quad Battery Charging Cradle (Optional)

1. Connect the power cord to the power adaptor, and connect the adaptor to the power connector of the Quad Battery Charging Cradle.
2. Plug the power cord into a power outlet. Input power is 100 ~ 240VAC, 50/60Hz, 1.0A.
3. When power is supplied, the yellow, green, and red LEDs appear for three seconds during the self-test.



⚠ WARNING:

Use only the designated power supply (12VDC, 3A).

Charging Batteries with the Quad Battery Charging Cradle

1. Insert the battery into the Quad Battery Charging Cradle.
2. Gently slide the battery until it reaches the bottom of the charger.
3. Charging starts as soon as the battery is completely inserted.
4. After charging, remove the battery from the Quad Battery Charging Cradle.

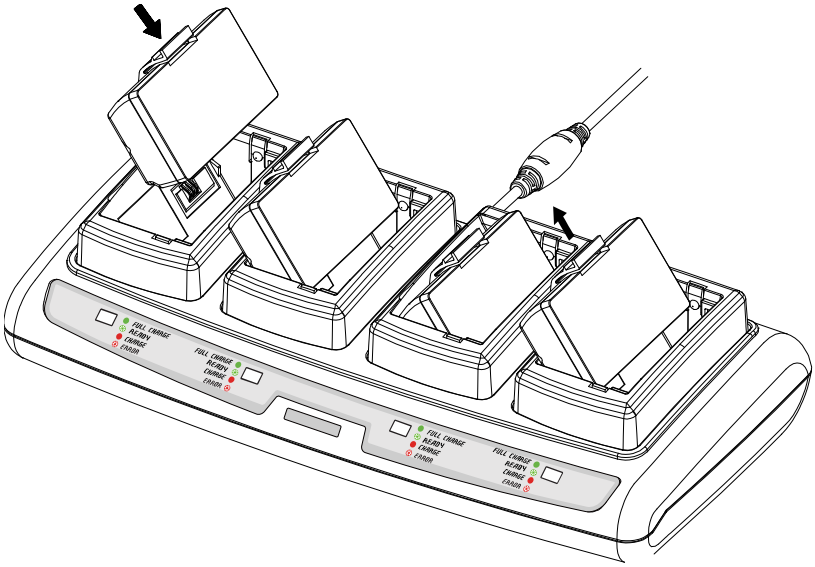


Table 4-1 Quad Battery Charging Cradle Status Indicators

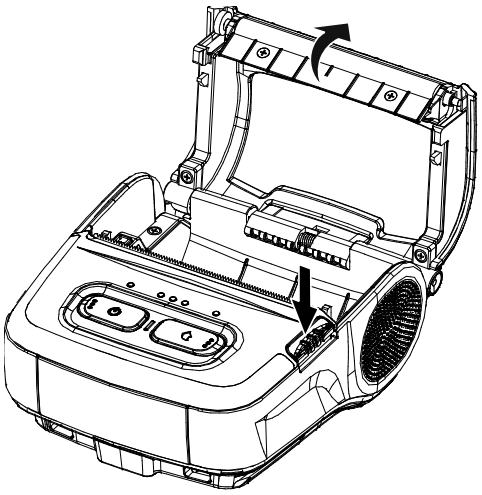
LED	Charge Status	Charge Time
Red LED On	Charging	2.5 hours
Green LED Blinking	Over 80% Charged	
Green LED On	Fully Charged	
Red LED Blinking	Error Replace	

CAUTION:

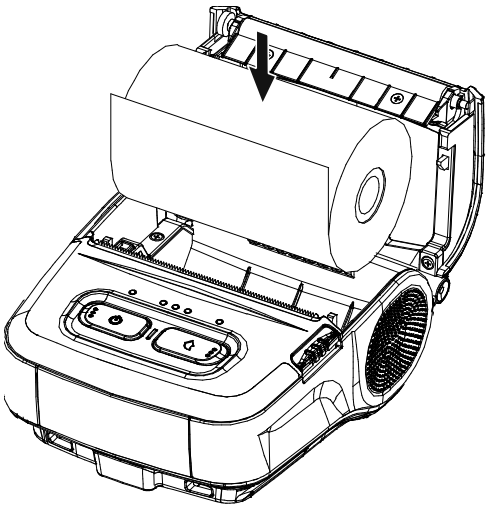
- If the red LED on the charger blinks, reseat the battery in the charger.
- If the red LED continues to blink despite several attempts (4 ~ 5 times) to reseat the battery, contact Oracle.
- Charging time may vary depending on the type of the charger or the ambient temperature.

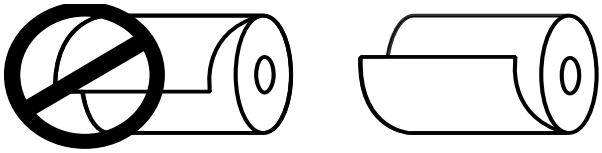
Installing Paper

1. Press the **Open** button to open the paper cover.

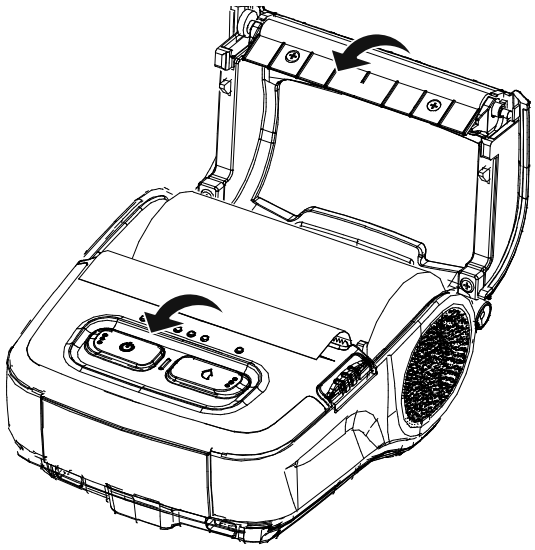


2. Insert the paper into the printer. Orient the paper so that it curls up from the bottom of the roll.

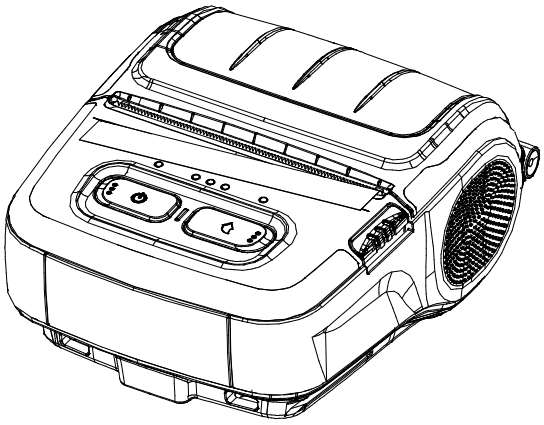




3. Pull out the paper and close the paper cover.

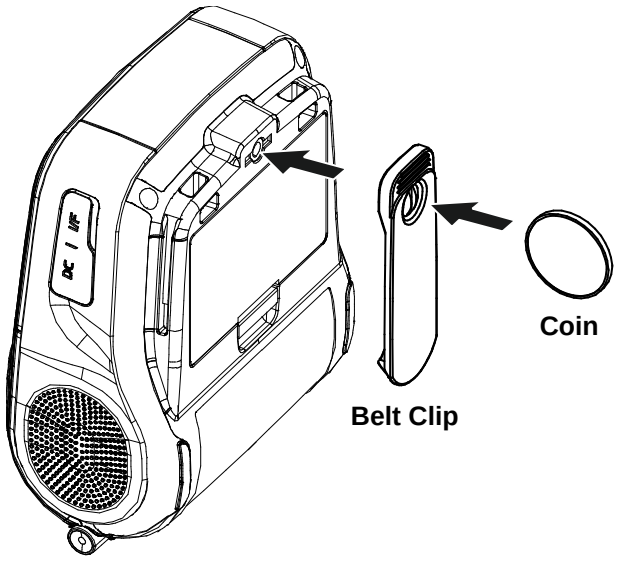


4. Tear off any excess paper toward the side of the printer.

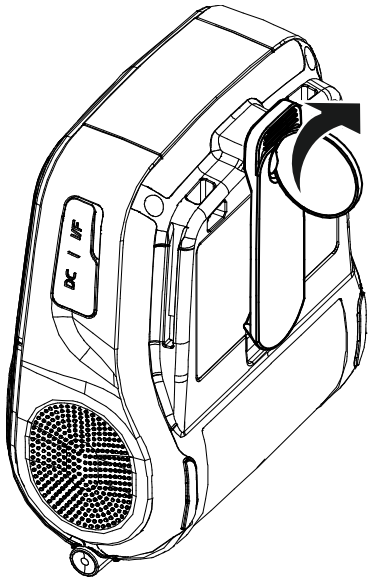


Using the Belt Clip

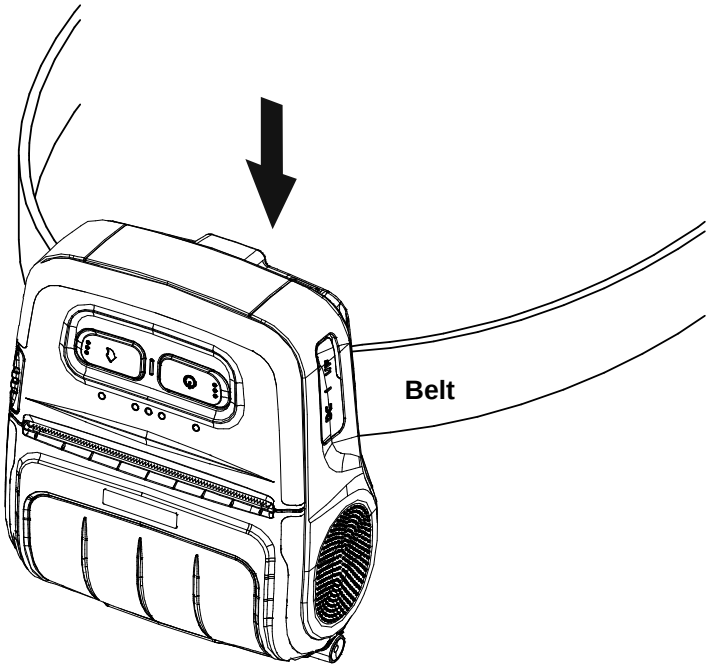
1. Insert the belt clip screw to the belt clip mounting hole.



2. Tighten the belt clip screw with a coin-like object.



3. Slide the clip over the belt.



Using the M31 Control Panel

Table 4-2 M31 Control Panel Features

Feature	Appearance	Description
Power Button		Turns the printer on and off. • When the printer is off, press and hold this button for approximately 2 seconds to turn on the power. • When the printer is on, press and hold this button for approximately 2 seconds to turn off the power.
Paper Feed Button		Feeds paper manually. Can also be used to perform a self-test on power up. See Self-Test Instructions described later in this manual.
Battery Status LEDs (Blue or Red)		Displays battery status/charge level. • Three blue LEDs indicate the battery is fully charged. • Two blue LEDs indicate the battery is half charged. • One blue LED indicates the battery is at the lowest charge level.
Error Red LED		Indicates there is a problem with the printer. • If the LED is on, the paper cover is open or the battery must be charged or replaced. • If the LED is blinking, either the paper has been fully used or the print head is overheated. (Replace the paper roll or turn off the printer for at least 10 minutes.) • If the LED continues to blink, it may indicate a more serious problem with the product. Call your authorized service dealer.
Bluetooth Status LED		Displays Bluetooth Status. • When using Bluetooth: If the printer is ready for wireless communication with any Bluetooth, the green LED and the battery status LED are turned on.

Feature	Appearance	Description
		• In power save mode, only the Status LED is lit. • Power saving mode is activated after the first communication, with a default time interval of 10 seconds.

Self-Test

Run the self-test when you want to check the setup of the printer or when you encounter a problem, and check the following:

- Operation
- Print Quality
- Firmware Version
- Memory Switch Settings

If no issue is found with the printer after running the self-test, examine the other devices/peripherals and software. This function is independent of such other devices and software.

Self-Test Instructions

1. Turn off the printer and close the printer paper cover.
2. Press and hold the paper feed button and the power button simultaneously to turn on the printer.
3. After printing begins, release the two buttons.
4. To view a printout of the ASCII pattern, press the paper feed button again.
5. After the ASCII pattern prints, the self-test is automatically terminated.

SELF TEST
Firmware version :
V01.05 ST0B1 ORACLE 102518
Buffer Capacity : 256K Bytes
USB 2.0 Interface
Serial Interface
- Baud rate : 115200 bps
- Data bits : 8 bits
- Parity : None
- Stop bit : 1 bit
- Handshaking : None
Print Density : 100%
Default Codepage : PC437
Print Speed : Max. 100mm/s
Double byte character mode: Off
Font : 12x24
Paper out Bell : Off
Low Battery Buzzer : On
Label mode : Off
- tear off position : 144 units
Power off time : 15 Min
Idle mode time : 10 Sec
MSR data including sentinel
character mode: None
MSR read mode : AUTO TRACK1/2/3
BATT NTC : OK
IOS mode enable
Serial NUM : ORACJKS18070006
Memory switch setup status
Memory S/W1
12345678
ON
OFF
Memory S/W2
12345678
ON
OFF
Memory S/W3
12345678
ON
OFF
Memory S/W4
12345678
ON
OFF
Memory S/W5
12345678
ON
OFF
Memory S/W6
12345678
ON
OFF
Memory S/W7
12345678
ON
OFF
Memory S/W8
12345678
ON
OFF
RF Interface
BT embedded
Bluetooth firmware version :
1.2.7
Bluetooth BD address :
74F07DEAB3FD
-SSP Mode: Just Works
-Connection Mode = 2
Not available WLAN
If you want to continue
SELF-TEST printing,
please press FEED button.
ASCII
PC437
*** Completed ***

5

Label Printing Function

Label paper and black mark paper can be used when the printer is in label mode.

Label Function Setting

1. Power on the printer.
2. Open the paper cover, and then press and hold the paper feed button for longer than two seconds.
3. After the buzzer tone alert, insert paper and close the cover.
4. Repeat the steps above to return to receipt mode.

Auto Calibration Function for Label Printing

The label printing function requires the recognition of label paper gaps and black mark paper black bar in order to print.

If label paper gaps are not properly recognized, use the auto calibration function.

Auto Calibration Instructions

1. Turn off the printer while in label print mode.
2. Press and hold down the paper feed button and then press the power button.
3. After the following printout is finished, press the power button to perform auto calibration.
   - Select the mode
   - Auto Calibration: Power Button
   - Self-Test: Feed Button
4. The auto calibration routine prints three pages of label paper.

6

Connecting Peripherals

This product can communicate with other devices via Bluetooth or serial USB cable. The pairing procedure establishes a secure connection between the two Bluetooth devices.

Bluetooth Pairing Modes

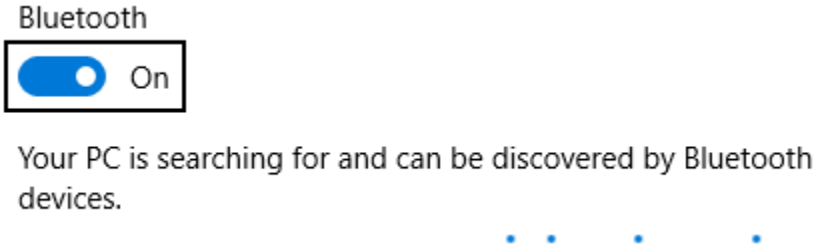
There are two pairing modes available to the M31 printer. The printer firmware has the default pairing mode for the M31 Bluetooth printer set to Secure Simple Pairing (SSP). This can be changed by running the Unified Mobile Utility described later in this manual.

1. Legacy Pairing or PIN Mode pairing
   - Bluetooth devices that implement the Bluetooth Core Specifications prior version 2.1 utilize Legacy Pairing.
   - The default PIN is 0000
2. Secure Simple Pairing (SSP)
   - Specified by Bluetooth Core Spec v2.1 and used for any device that implements v2.1 or greater.

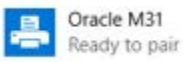
Connecting via Bluetooth

The printer can be connected to devices equipped with Bluetooth communication capacity (PDAs, PCs, etc.).

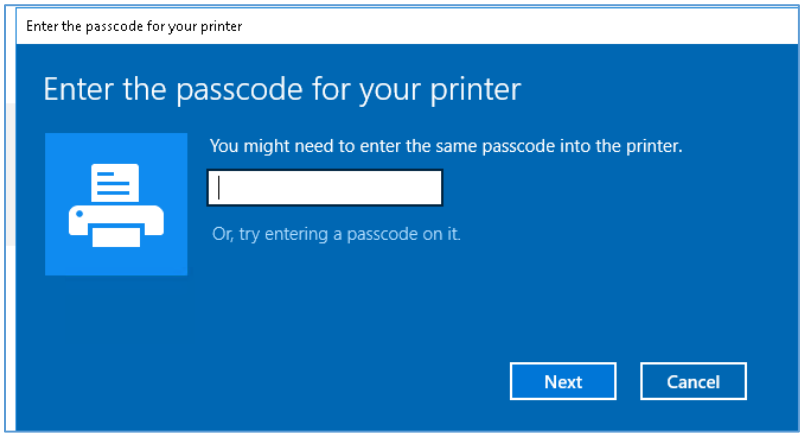
1. Click the Windows Button and search for Bluetooth to add a device. In some cases it may be shown as Manage Bluetooth Devices.
2. Ensure that Bluetooth is turned on and your PC or tablet is searching and discoverable by other Bluetooth devices.



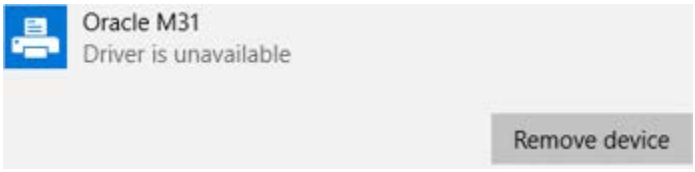
3. Select Oracle M31.



4. Once discovered, and if Legacy PIN Mode is enabled, you will be asked to enter the passcode. The default PIN is 0000. Otherwise, the printer will automatically pair and connect.



5. Once connected, the printer may display the message “Driver is unavailable.” This is normal.



6. The printer should now appear in Control Panel – Devices and Printers.

NOTE:

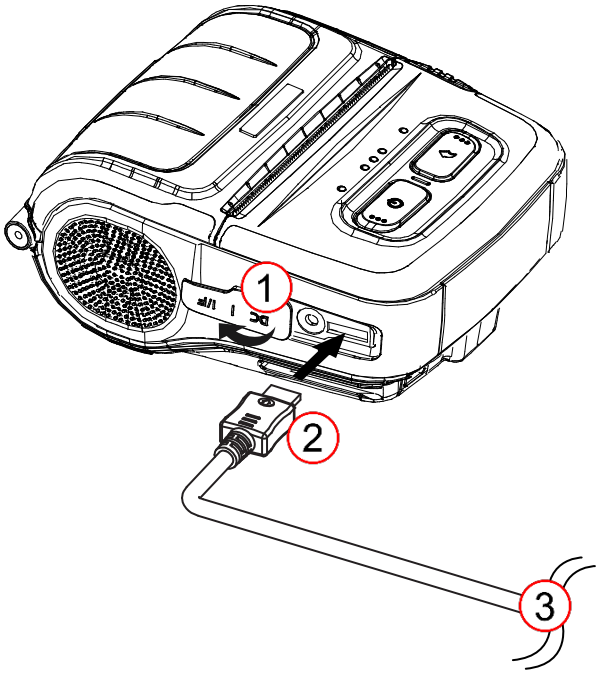
- This device supports NFC Auto Pairing typically found on Android devices.
- It may display a message that the device cannot be connected as NFC Auto Pairing and not supported. Therefore pairing the devices must be completed manually. This is considered normal.
- You can check the Bluetooth environment (authentication, encryption, connection mode) via the self-test page.
- To connect the printer with another device via Bluetooth, the devices must be within 10m of one another. The connection is broken if the distance between devices exceeds 10 meters (32.8 feet).
- The maximum separating distance may be shortened if transmission obstacles, such as cement walls, are present.
- Interference could occur from other devices that use the same frequency. Separate the printer and Bluetooth-enabled device from such interrupting devices by a distance of at least 5m (16.4 feet).

Connecting the Interface Cable

1. Open the Interface Cover (1).
2. Connect the external communication cable (2) to the cable connector of the printer.

> **NOTE:**
>
> - Use only the in-box USB cable provided by Oracle.

3. Connect the interface cable to the USB port (3) of the device (PDAs, PCs, etc.).



7

Changing the Default Language Setting

The factory default language is English. To change this setting, follow the steps below:

1. Use the Unified Mobile Utility - Virtual Memory Switch Manager to set the correct language.
2. Change the regional language setting in Microsoft Windows.
3. Restart the PC.
4. Check and change the default COM Port setting to 19200 baud.
5. Change the character-set/print language from OPOS.
6. Restart the printer.

8

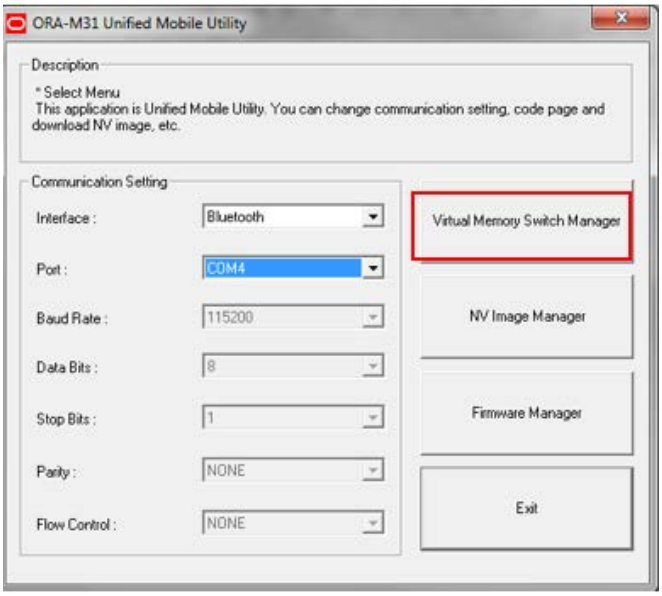
ORA-M31 Unified Mobile Utility

The Unified Mobile Utility lets you specify operational settings, add functions, and upload new firmware to the printer. It consists of the following main capabilities:

- A function that sets printer operation conditions via software-based virtual switches **(VMSM: Virtual Memory Switch Manager).** You will need to use this tool to enable the printing of double byte characters (Traditional Chinese, Simplified Chinese, Japanese, or Korean).
- A function that facilitates the downloading of image files, such as logos, intended for repetitive printing **(NV Image Download Manager).**
- A function that updates the printer firmware **(Firmware Manager).**

Virtual Memory Switch Manager Usage

1. Connect the printer and the PC via the USB interface cable. You can also perform this action over a Bluetooth connection.
2. Power on the printer.
3. Install the Unified Utility. The executable file can be found on My Oracle Support (MOS) https://support.oracle.com
4. A shortcut should be visible on the desktop for the **ORA-M31 Unified Mobile Utility** to launch the program.



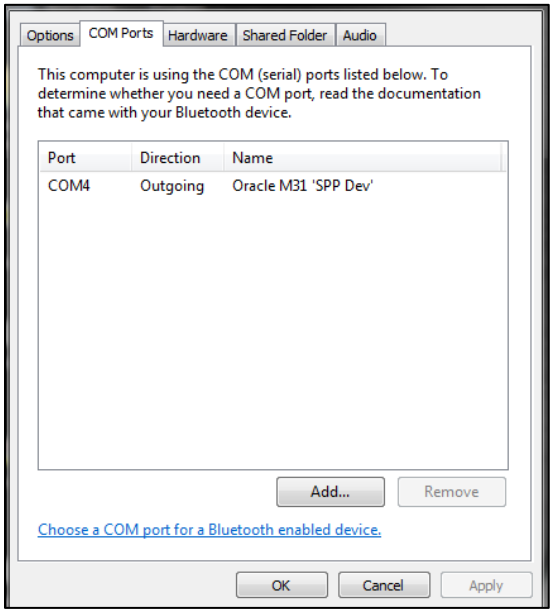
5. In the Communication Setting panel, select **USB** from the interface dropdown if connected to your PC via the USB interface cable, otherwise select Bluetooth if a mobile connection to the PC has been established.

a. If connected via Bluetooth you may need to determine the outgoing COM port before running the Virtual Memory Switch Manager.

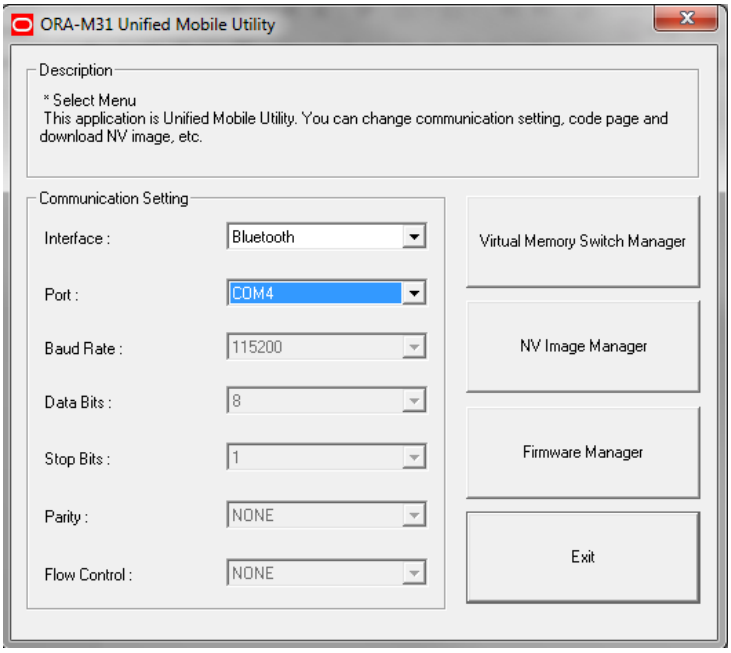
b. You can check to see if the printer is already assigned a COM port on the **COM Ports** tab of your Bluetooth settings window.

6. Open the Microsoft Windows Control Panel. In the Control Panel search box, type `Bluetooth`, and then tap **Change Bluetooth settings**.

7. In the Bluetooth Settings dialog box, tap the **COM Ports** tab, and allow the screen to refresh to show the active Outgoing COM port for the Oracle M31 printer



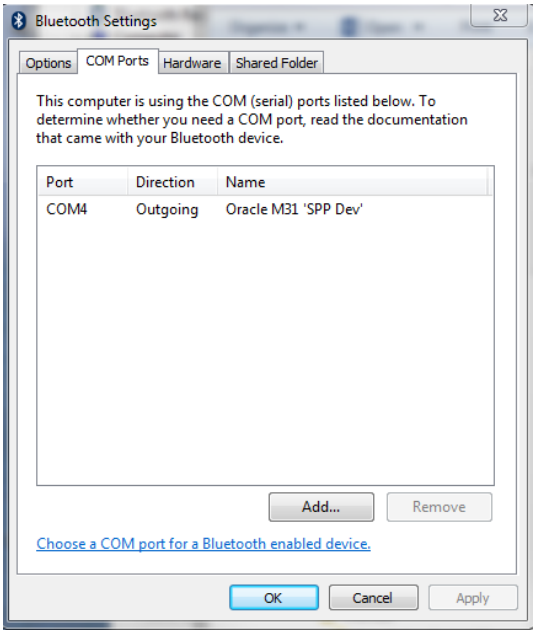
8. In the Unified Mobile Utility, tap the **Port** drop-down list and select the proper COM port. In the following example it is COM4.



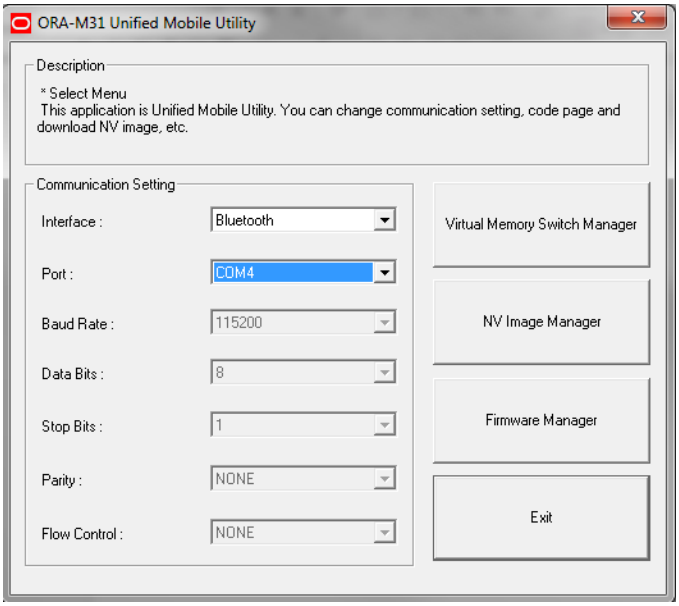
9. If no COM port is listed from step 7, then your Bluetooth printer doesn't have a COM port assigned therefore you will have to add one.
10. On the Microsoft Windows Bluetooth Settings dialog, tap **Add**, and then select **Outgoing**.
11. Tap **Browse**, and then locate and select **Oracle M31**.
12. Tap **OK**.

    To verify the COM port assignment:

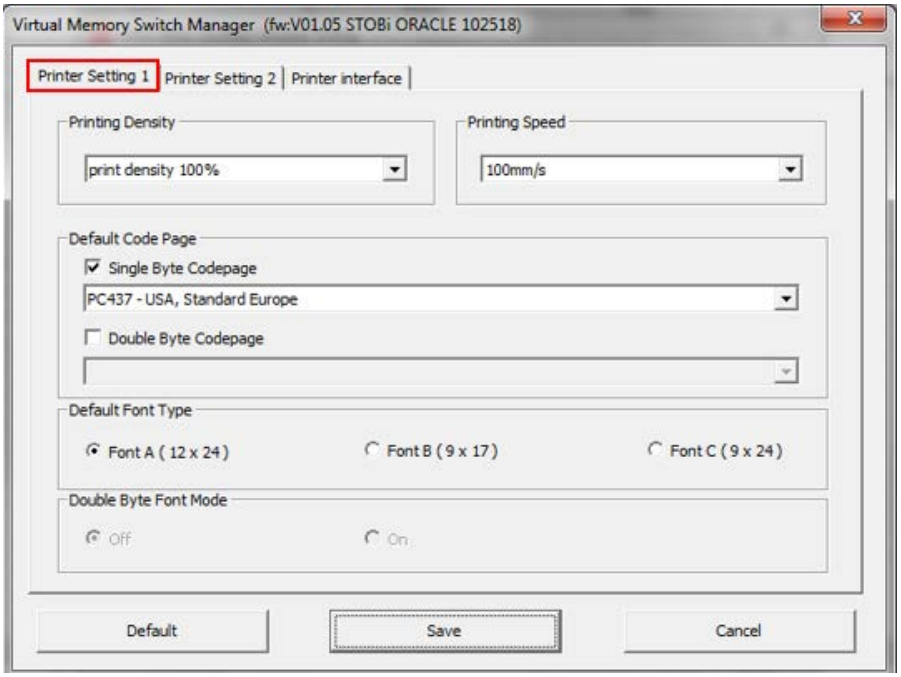
    From the Microsoft Windows Bluetooth Settings dialog, select the **COM Ports** tab, and then confirm the entry for the Oracle M31 printer.



13. In the Unified Mobile Utility, tap the **Port** drop-down list and select the proper COM port. In the following example it is COM4.

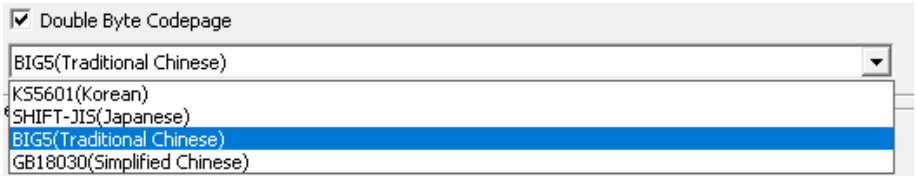


14. Tap the **Virtual Memory Switch Manager** button. The following dialog appears:



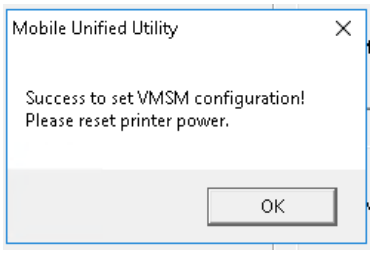
15. On the **Printer Setting 1** tab under *Default Code Page*, select a default for the desired country font set from the **Single Byte Codepage** or **Double Byte Codepage** drop-down list.

    a. For double byte printing, de-select the **Single Byte Codepage** check box, select the **Double Byte Codepage** check box, and then select a language from the drop-down list.

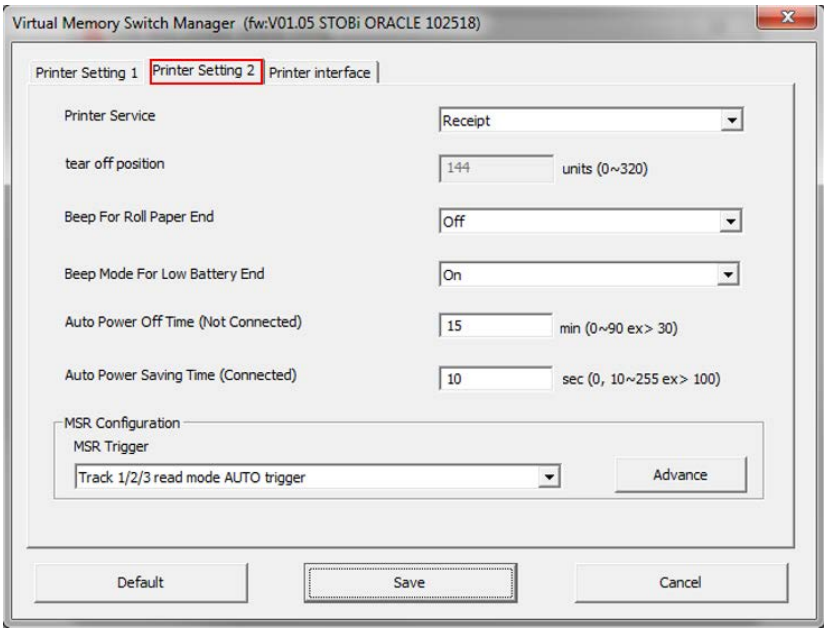


> **NOTE:**
>
> - Thai printing uses the single byte setting and the *PC437-USA Standard Europe* default code page.
> - To correctly print European currency and accented characters, use the single byte setting and the *WPC-1252 Latin I* default code page.

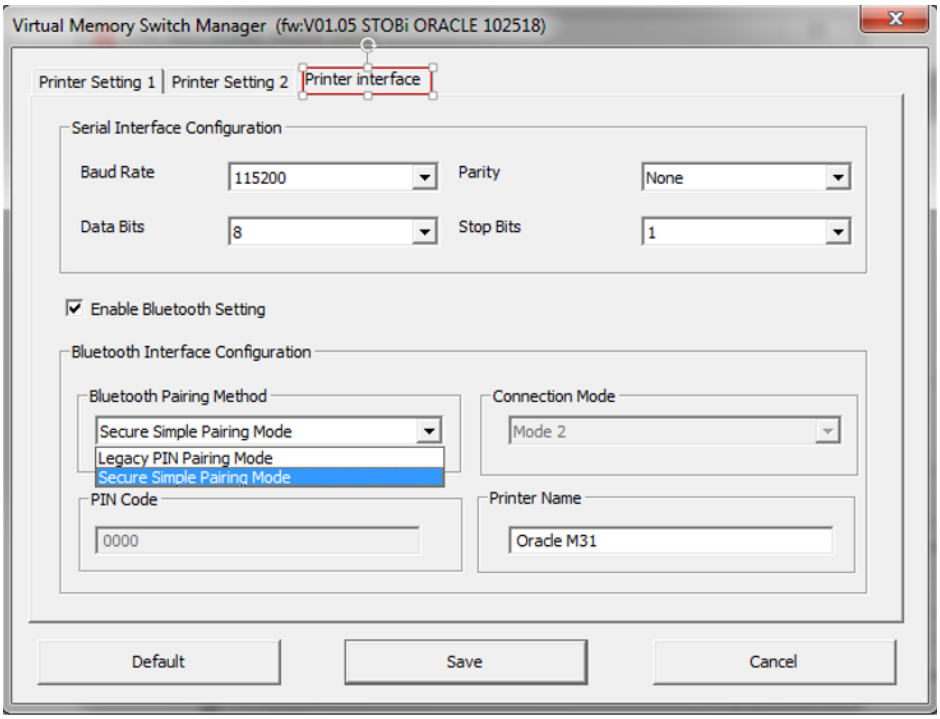
16. Tap **Save**, and then tap **OK** to confirm the change.



17. Select the **Printer Setting 2** tab, and then make any required changes.



18. Select the **Printer Interface** tab, and select the **Enable Bluetooth Setting** to change the current Bluetooth Pairing Method. If preferred, you have the option of selecting Legacy PIN Pairing Mode. This will also enable you set a user defined PIN Code and Connection Mode. Confirm the other attributes as required.



19. After setting the desired function(s), tap **Save**. The printer prints the current settings and prompts you to reset the printer power.

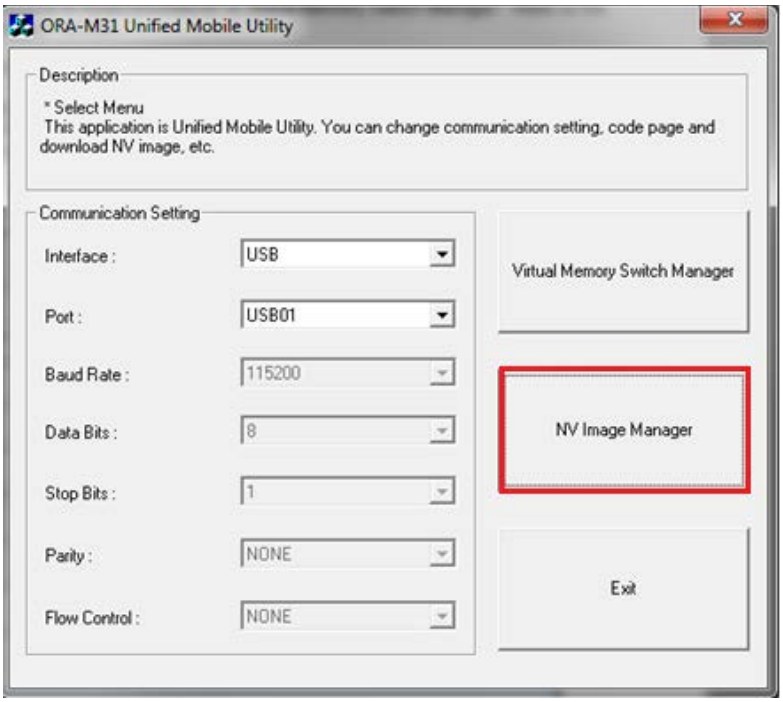
Table 8-1 M31 Printer Functions

Function	Description
Printing Density	Sets printing density Value range is 80~150%
Printing Speed	Sets printing speed Value range is 50 or 100 mm/s.
Printer Service	Printer Service change receipt mode or label mode.
Default Code Page	Sets the default code page (Refer to the Code Page Manual for more detailed information on the Code Pages supported.)
Default Font Type	Sets default font type and size.
Beeps for Low Battery	Sets beeping when reaching low battery capacity.
Beeps for Paper Roll End	Sets no beeping or beeping when reaching paper roll end.
Double Byte Character Mode	Sets double byte language usage mode.
Auto Power Off Time	Sets time interval between absence of printer use and automatic turning off of printer power.
Auto Power Saving Time	Sets time interval for automatic entering into power saving mode while the printer is in use.

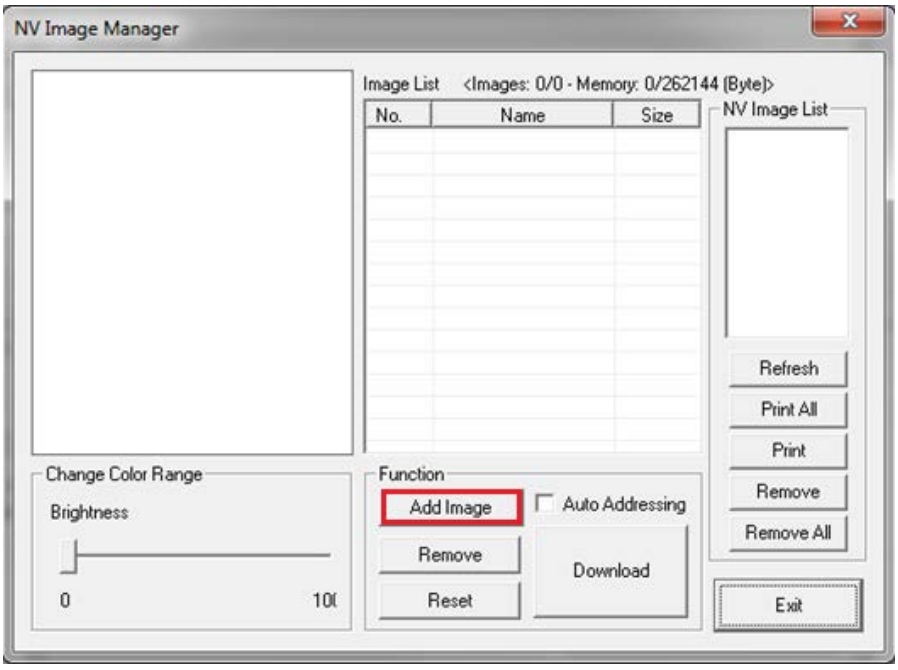
Function	Description
MSR Trigger (N/A for Oracle M31 Printer)	Sets MSR data scanning mode, 7 modes supported (Refer to "GS (E" in the Control Commands Manual.)
Serial Interface Configuration	Changes the serial Interface setting. * Printer must be reset for changes to take effect.
Bluetooth Pairing Method	**Secure Simple Pairing Mode**: (Default) Provides a simplified and secure connection as specified Bluetooth Core Spec v2.1 and greater. Connection is accomplished without a user PIN Code as utilized in the "Just Works" pairing mode. Encryption is used in this mode. **Legacy PIN Pairing Mode**: Used by legacy devices that do not support Bluetooth core Spec 2.1 and above. A user PIN Code can be entered. Connection mode setting is also enabled with this setting.
Connection Mode	Enabled with Legacy PIN Pairing Mode: • Mode1: connection possible only with the first device with which connection succeeds. • Mode2: connection with all Bluetooth enabled devices possible via use of a PIN Code. • Mode3: connection possible only with the first device with which connection succeeds and searching or use of connected device possible.
PIN Code	Enabled with Legacy PIN Pairing Mode. • Shows PIN Code required for Bluetooth connections (maximum 12 characters long) Default is 0000.
Printer Name	Shows the device name displayed when establishing a Bluetooth connection (maximum 12 characters long).

NV Image Download Manager Usage

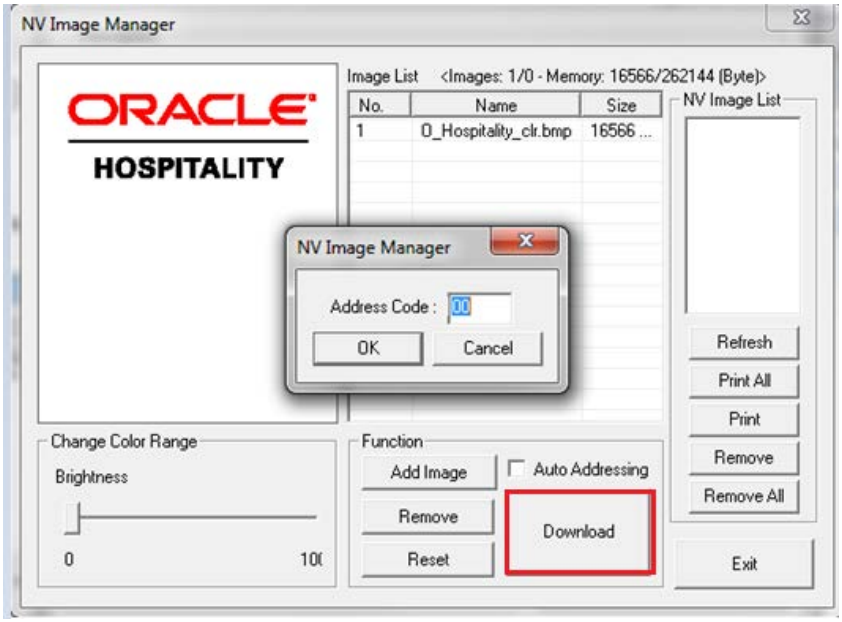
1. In Microsoft Windows, search for the *ORA-M31 Unified Mobile Utility* and launch the program. If not installed, follow the installation steps as outlined in the previous section.
2. Under *Communication Setting*, select the required **Interface**:
   a. Select **USB** if connected to your PC via the USB cable.
   b. Select **Bluetooth** if connected via Bluetooth.



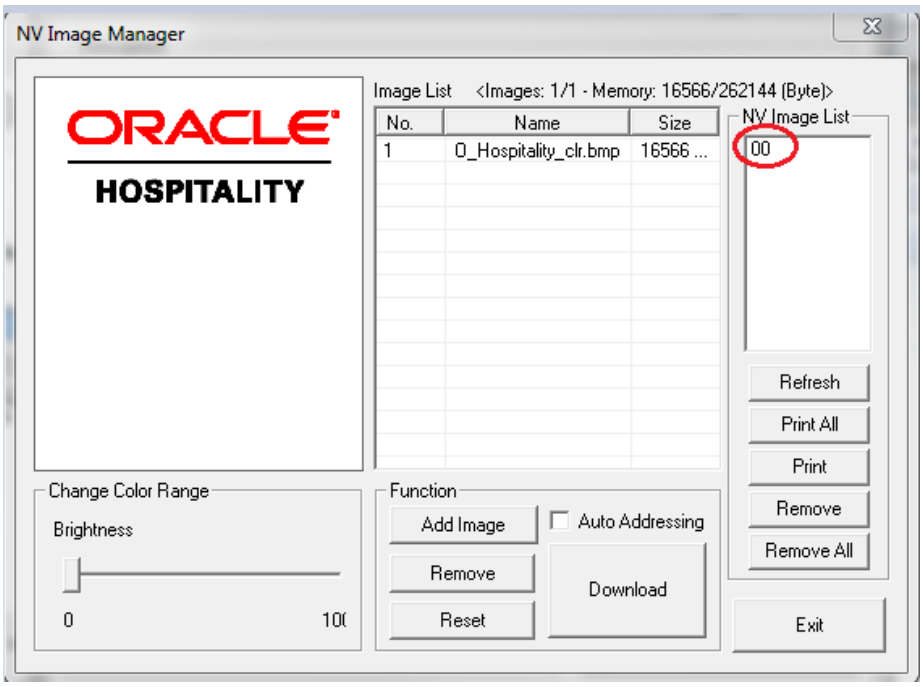
3. Tap the **NV Image Manager** button. The following dialog appears:



4. Tap **Add Image,** and then locate an image bit map file from your PC.
5. Tap **Download,** use the default Address Code, and then click **OK**.



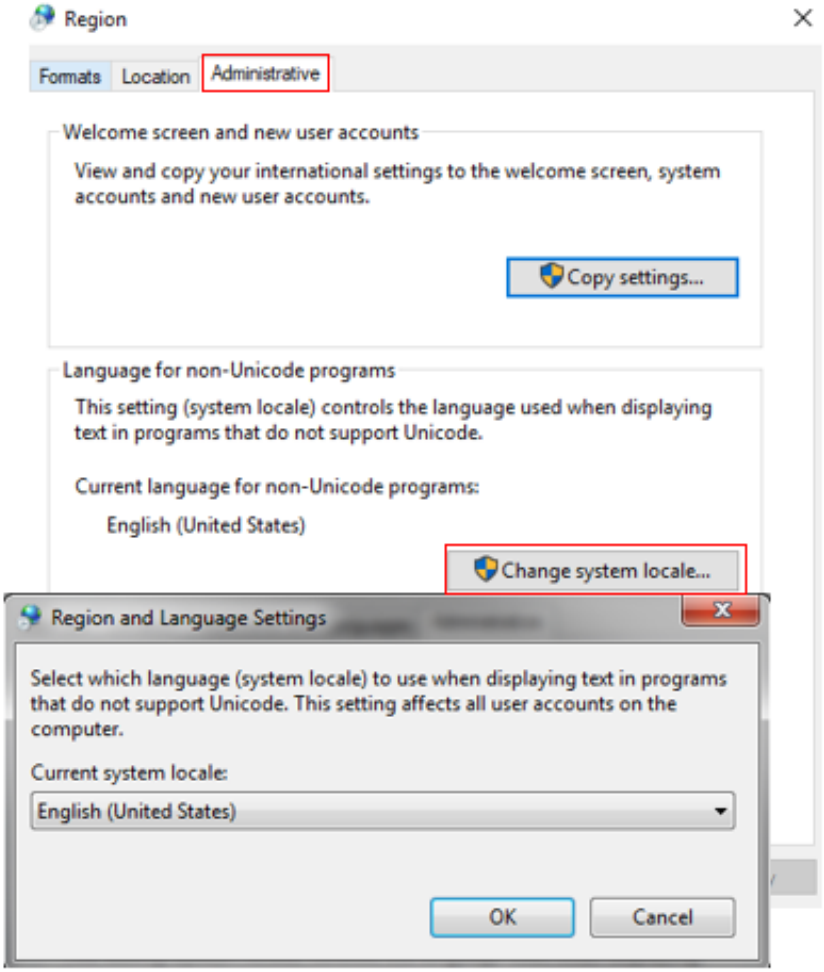
6. Once downloaded, it will appear in the *NV image List*.



9 Windows Regional Language Setting

If you want to print in a language other than the default English, you must change the regional language setting in Microsoft Windows.

1. In Microsoft Windows, search for and open the **Region** settings.
2. Select the **Administrative** tab.
3. Under the *Language for non-Unicode programs* panel, select a language for the printer. This should match the language selected in the OPOS settings.



- **Traditional Chinese** – Choose “Chinese (Traditional, Taiwan)”
- **Simplified Chinese** – Choose “Chinese (Simplified, China or Singapore)”
- **Japanese** – Choose “Japanese (Japan)”
- **Thai** – Choose “Thai (Thailand)”

- **Korean** – Choose “Korean (Korea)”

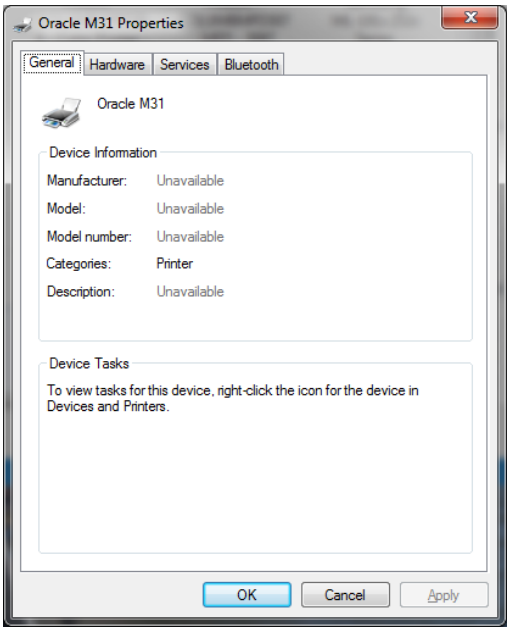
4. Restart the PC for the new language setting to take effect.

10

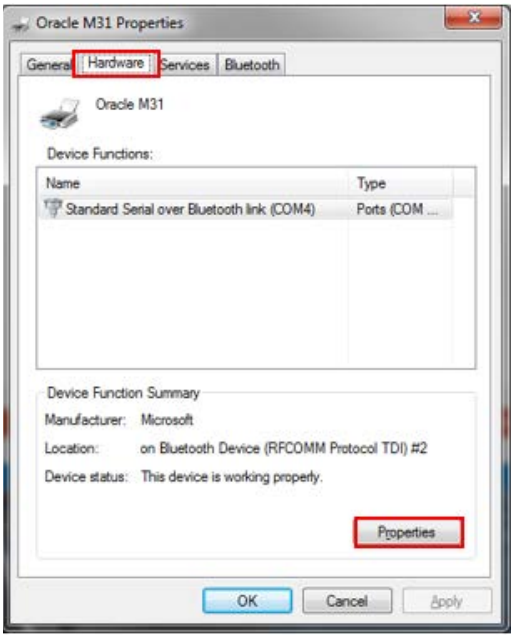
COM Port Setting – Baud Rate

To configure the printer for printing in a foreign character set through OPOS, you must change the default COM port setting to 19200 bps.

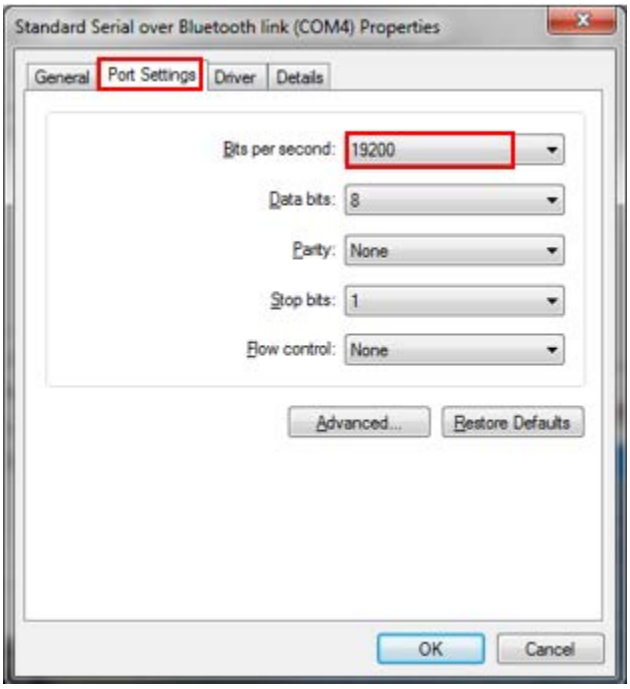
1. Navigate to the Microsoft Windows Control Panel - Devices and Printers, and then select the Oracle M31 printer icon to launch the Printer Properties.



2. Select the **Hardware** tab, and then tap **Properties**.



3. On the Properties dialog, select the **Port Settings** tab, and then set the **Bits per second** option to **19200**.



4. Click **OK** twice to save and exit.

11 OPOS Driver Installation and Setup

This section explains how to install and set up the Oracle OPOS DRIVER. It is mainly used with Oracle Simphony POS to enable foreign character (double byte) printing on the Oracle MICROS Mobile Printer M31.

This is a custom driver developed by Bixolon for Oracle's use. Custom firmware containing single and double byte fonts is factory loaded in the printer.

The OPOS driver referred to in this document can be obtained from My Oracle Support (MOS) at https://support.oracle.com.

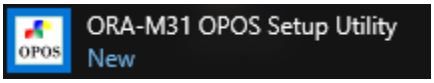
Installing OPOS

1. Run the OPOS Driver installation file:

   `ORA M31_OPOS_Driver_Setup_EN_V4.4.1.exe`

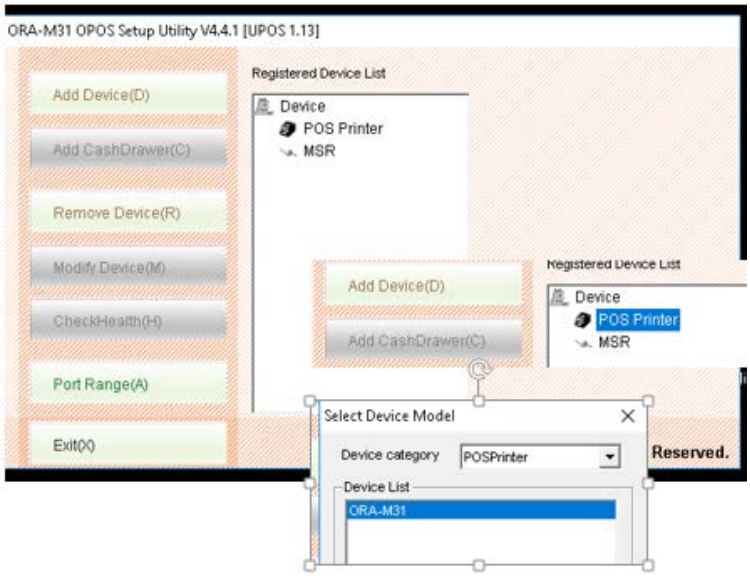
2. On the intro screen, tap **Next.**
3. On the License Agreement screen, accept the terms software license, and then tap **Next**.
4. On the Setup Type screen, select an installation type, and then tap **Next**. The default installation locations are:
   - 32bit OS: `C:\Program Files\OPOS\BIXOLON OPOS DRIVER\`
   - 64bit OS: `C:\Program Files (x86)\OPOS\BIXOLON OPOS DRIVER\`
5. Tap **Install** to install the OPS driver.

After installation, the OPOS Utility will appear in Microsoft Windows as the **ORA-M31 OPOS Setup Utility**, as shown below:



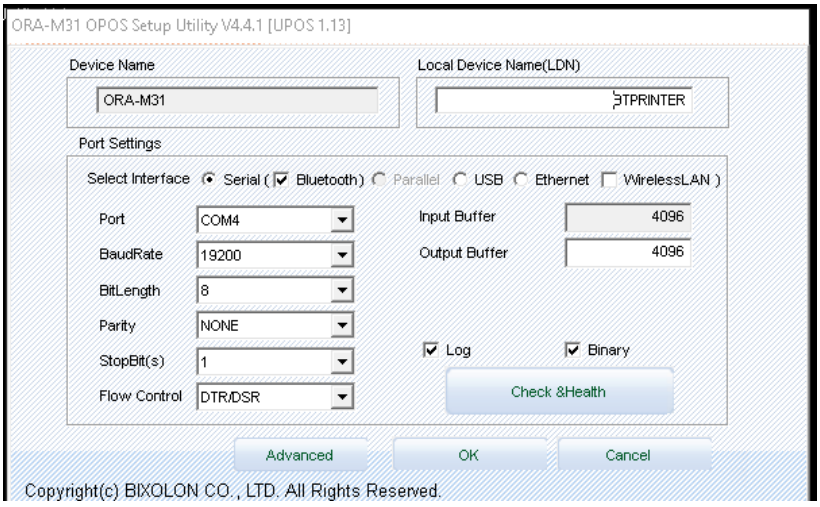
Setting Up OPOS

1. In Microsoft Windows, search for the **ORA-M31 OPOS Setup Utility**, and then run the program.
2. In the ORA-M31 OPOS Setup Utility, tap **Add Device**, select **ORA-M31** in the Device List under the POS Printer category, and then click **Next**.

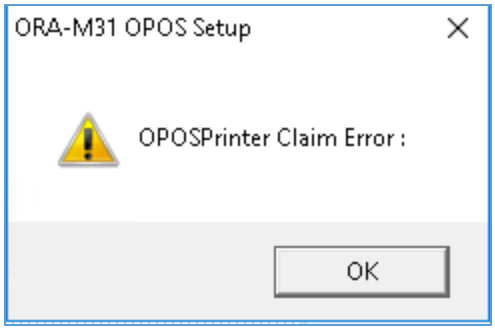


3. The Select Interface section should have **Serial** and **Bluetooth** checked. Ensure the desired COM port is unused. In this example, COM4 is selected.
4. Enter a **Logical Device Name (LDN)**. This will be the name used in Simphony EMC.
5. Set the **BaudRate** to 19200

   Other selections can be set as shown below.

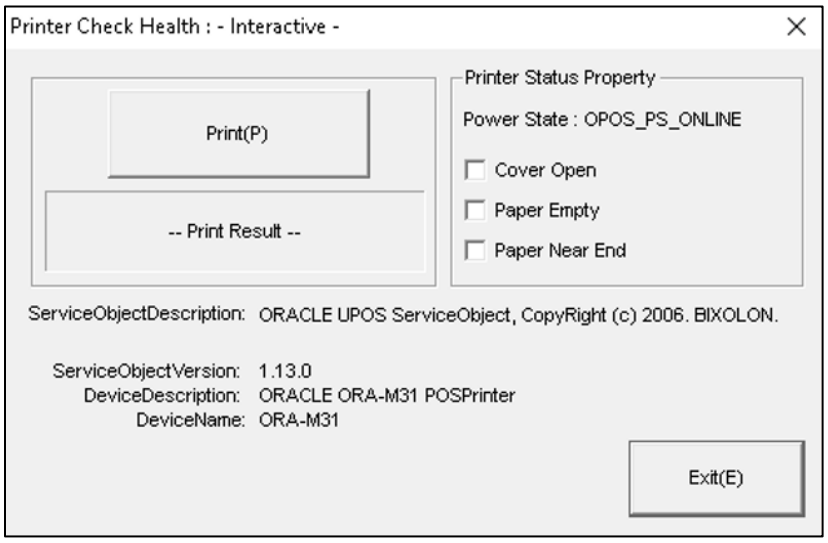


6. Ensure the printer is powered on, and then tap **Check & Health.**

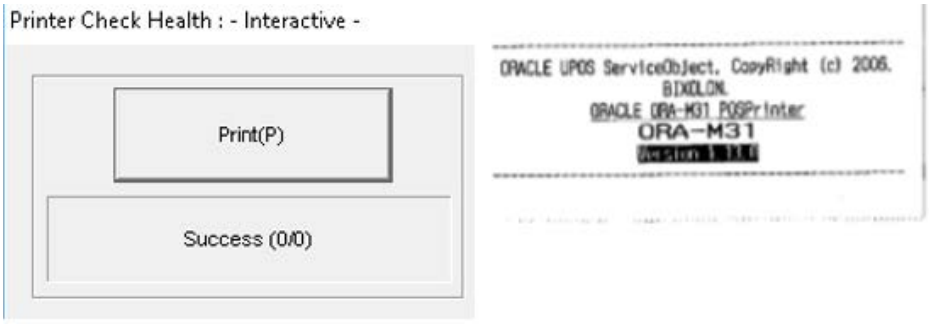


If you receive the above error, you must change to another COM port. The Bluetooth printer will likely use COM3 or COM4.

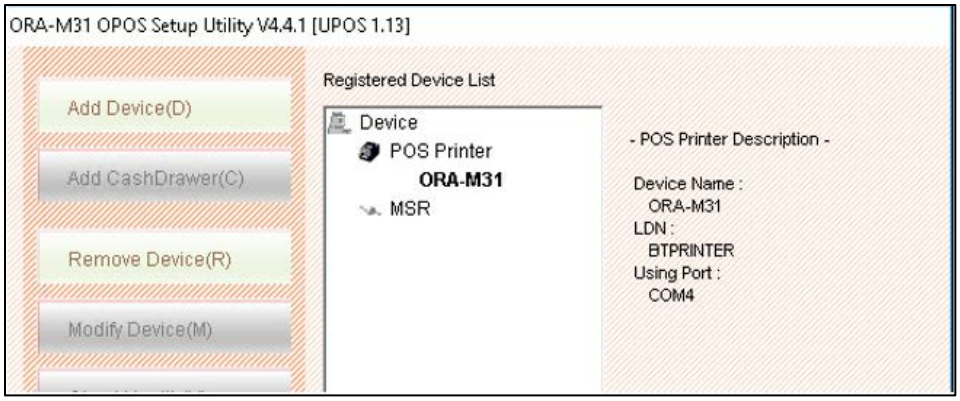
Successful connections appear as follows:



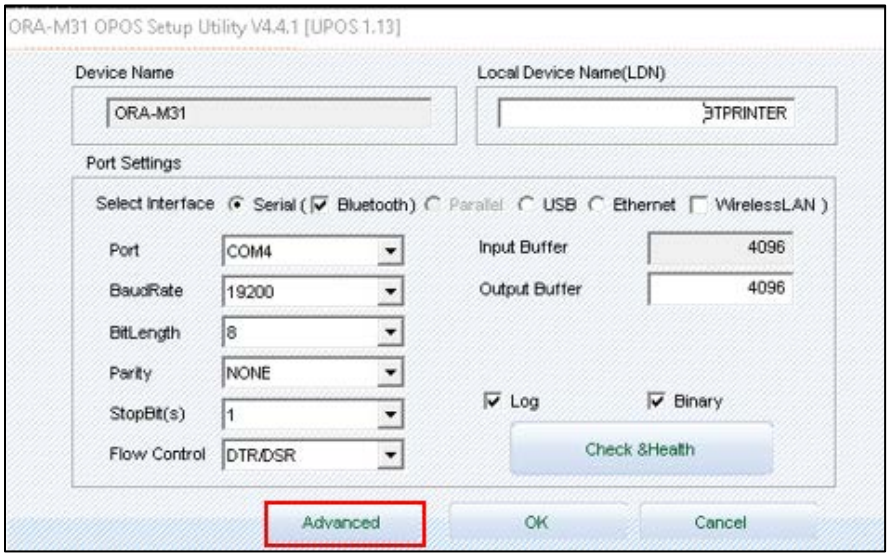
7. Tap **Print(P)** to display a success message and to print a message.

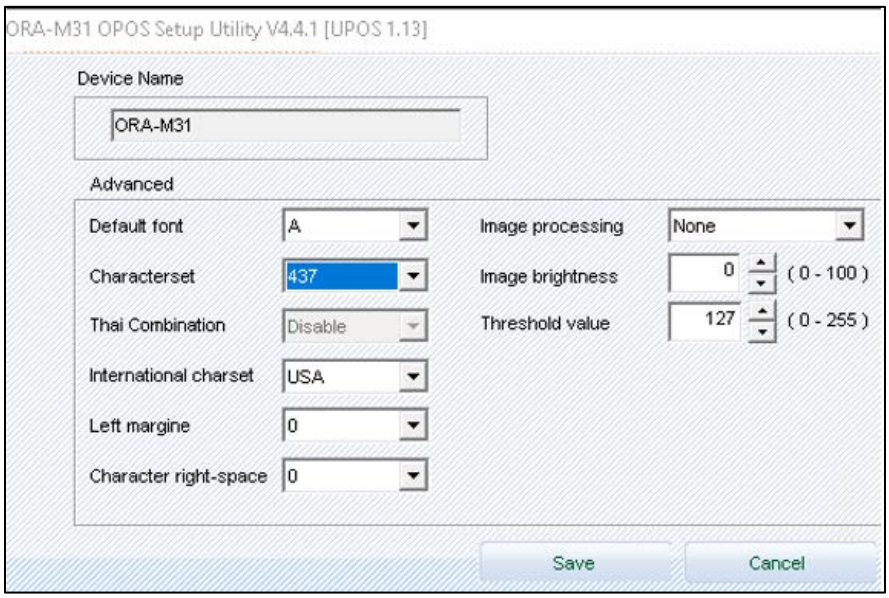


The following image shows the printer is successfully configured in OPOS.



8. On the ORA-M31 OPOS Setup Utility main screen, tap **Advanced** to select the required character set. The default is English





9. Select a character set from the **Characterset** list box.

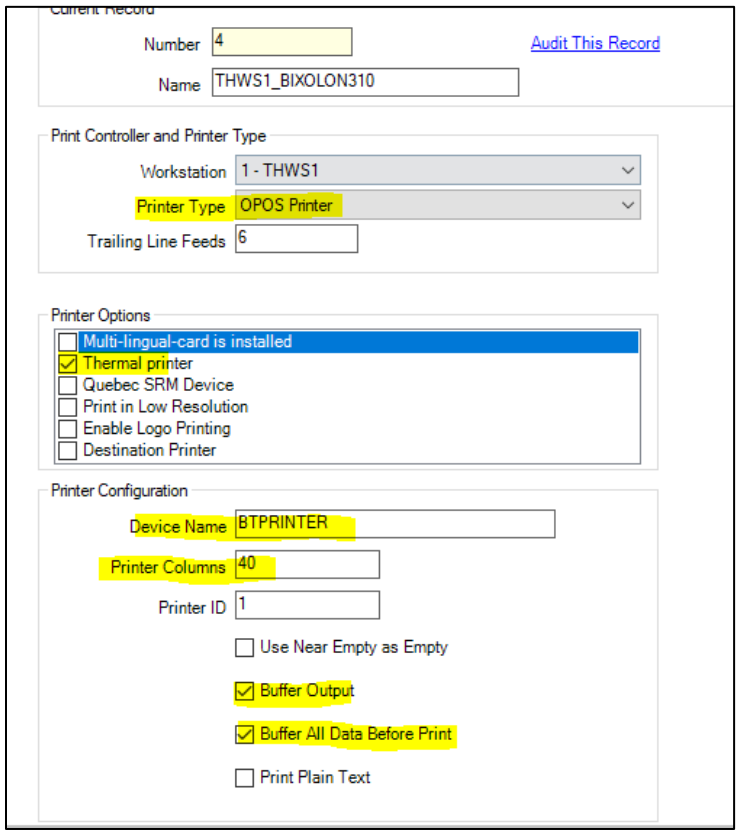
10. The Characterset ID refers to the Code Pages that are loaded to the printer. Shown below is a partial listing for reference purposes. Refer to Bixolon's *Code Pages Manual* for a complete listing of the SPP-R310 character code tables.

Language	Character set
English	437
Traditional Chinese	950
Simplified Chinese	936
Japanese	932
Thai	874
Korean	949
European Country	1252

11. Tap **Save**, then tap **OK** to finish OPOS configuration.

Setting Up an OPOS Printer in Simphony EMC

In Simphony EMC, configure the Bixolon 310 printer as an OPOS printer.



- **Printer Type** = OPOS Printer
- **Thermal Printer** = Enabled

- **Device Name** = Logical Device Name you configured in OPOS, which is “BTPRINTER” in this case.
- **Buffer Out** = Enabled
- **Buffer All Data Before Printer** = Enabled.

12

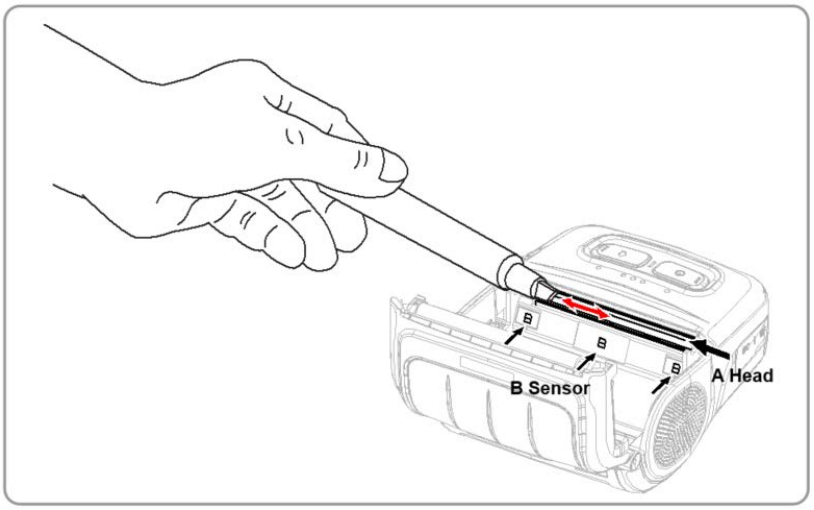
Maintenance

If the interior of the printer is dusty and the print quality has declined, you may find it helpful to clean the printer. A thermal printer cleaning pen can be purchased separately from various suppliers.

⚠ WARNING:

- Use only the linerless paper specified in the appendix. Use of other paper voids product warranty.
- Use a thermal printer cleaning pen (PCP-R200II) provided by BIXOLON for cleaning or equivalent.

Cleaning the Printer



1. Open the paper cover and remove the paper.
2. Clean the print head (A) using a cleaning pen. Apply the cleaning pen from the center to the edge of the print head (A) for cleaning.
3. Using the cleaning pen, remove the paper dust from the paper detection sensor (B). The sensor could be located in the middle or on left or on right.
4. Do not use the printer for one to two minutes after cleaning the print head (A) to allow the cleaning agent from the cleaning pen to completely evaporate and dry.
5. Insert the paper and close the paper cover.

CAUTION:

- Make sure the printer power is turned off before cleaning.
- Wait for two to three minutes after power-off before print head cleaning because it may be very hot.
- Do not to touch the hot area of the print head with your hand while cleaning it.
- Static electricity can damage the print head.
- Avoid scratching the print head.
- Clean the print head periodically if linerless paper is used. Recommended cleaning period is after consuming twenty rolls of linerless paper (100 meters), or approximately once a week. Print quality may be degraded or print head life may be shortened if it is not cleaned periodically.

13

Care and Handling

Use the following precautions when operating the Oracle MICROS Mobile Receipt Printer M31:

- Always exercise care when operating and handling the printer.
- Use a chamois or a clean, lint-free cloth to clean the printer surface. Do not use chemical, alcohol, or petroleum-based cleaners that are not recommended for plastics.
- Spilled liquids can cause damage to the circuits in the printer.
- Do not place equipment near food preparation areas, glass racks, or water stations.
- Avoid prolonged exposure of the printer to any strong heat source.
- Do not use any power supply other than the one recommended for use with each printer.
- Never attempt to disassemble the printer, as this will void any warranty.

The Oracle MICROS Hardware Site Preparation Guide contains additional environmental and placement considerations.

14

Safety Precautions for Lithium-Ion Batteries

CAUTION:

- Rechargeable Lithium Ion batteries are potentially hazardous and can present a serious FIRE HAZARD if damaged, defective, or improperly used.

Recommendation for Charging

- Batteries should be charged within 24 hours of a full discharge.
- Do not charge batteries outside of normal operating temperature (0-40 Deg C).
- Do not operate or charge a battery that has been damaged from dropping or from shipping damage.
- Do not use a charger other than the ones specified for use with the product.
- A healthy battery should only get slightly warm during charging. If the battery becomes hot, smokes, swells, or gives off an odor during charging, terminate charging immediately and contact Oracle. Note – the charger itself may get quite warm to the touch when charging a deeply discharged battery.

15

Appendix

Specifications

Item		Description
Printing	Printing Method	Thermal printing
	Print Speed	100 mm/sec (Receipt paper), 80 mm/sec (Linerless paper)
	Resolution	203 DPI
	Paper Supply Mode	Easy paper loading
	Character Size	Font A: 12 × 24 Font B: 9 × 17 Font C: 9 × 24
	Characters Per Line	Font A: 48 Font B/C: 64
	Character Set	English: 95 Expanded Graphics: 128 × 33 pages International: 32
	Barcode	1 Dimension: UPC-A, UPC-E, Code 39, Code 93, Code 128, EAN-8, EAN-13, ITF, Codabar 2 Dimension: PDF417, Data Matrix, MaxiCode, QR code, GS1 DataBar, Aztec Code
	Emulation	BXL/POS
	Driver	Windows XP(32/64bit) / WEPOS / 2003 Server(32/64bit) / VISTA(32/64bit) / 2008 Server(32/64bit) / 7(32/64bit) / 8(32/64bit) / 10(32/64bit)
	SDK	Windows XP / WEPOS / 2003 Server / VISTA / 2008 Server, Windows 7 / 8 / 10
	Sensor	Paper End, Paper Cover Open Switch
	Cutter Type	Tear-Bar
	Language	User language supported

Paper	Paper	Receipt	Linerless
	Paper Type	Thermal Paper	Thermal Paper
	Outer Diameter of Paper Roll	Max. Ø50 mm (1.97”)	Max. Ø49 mm (1.93”)
	Width	79.5 ± 0.5 mm (3.13” ± 0.2”)	79.5 ± 0.5 mm (3.13” ± 0.2”)
	Thickness	0.07 ± 0.005 mm	0.08 ± 0.01mm
Reliability	Printer	50 km (Receipt paper), 10 km (Linerless paper)	
	Battery	Rechargeable up to 500 full cycles	
Communications	Interface	Serial/USB Bluetooth Class2 V3.0 +EDR	
Battery Charger	Input	Voltage: 100 ~ 240 VAC Current: 0.5A (Max. at 110VA)	
	Output	Voltage: 8.4 VDC Current: 0.8A * Charging times depend on the type of charger used.	
Battery	Type	Lithium-ion	
	Output	Voltage: 7.4 VDC (Available 8.4 ~ 6.8VDC) Capacity: 2600 mAh	
	Charging Time	Within four hours	
Usage Conditions	Temperature	Printer: -15~50℃ (5~122℉) Battery: 0~40℃ (32~104℉) Battery discharge: -20~60℃ (-4~140℉)	
	Humidity	Printer: 10~80% RH (No condensation) Battery: 20~70% RH(Non-condensing, refer to the temperature conditions on page 8)	
Dimensions	Printer	105mm × 126mm × 58mm (4.14 in. × 4.97 in. × 2.29 in.)	
Weight	Printer	Printer: 285g (0.63lbs) Printer+Battery: 385g (0.85lbs) Printer+Battery+Paper: 528g (1.17lbs) Package: approx.1000g (2.21bs)	
Accessories	Basic Package	Battery Pack, Printer Power Supply, Belt Clip, Paper, USB Cable	

	Sold Separately	• Spare Printer Battery • Single Battery Charging Cradle w/Power Supply • Quad Battery Charging Cradle w/Power Supply, • Power Supply for Printer and Single Battery Cradle • Power Supply for Quad Battery Charging Cradle

Receipt Paper Specification

Model	Paper width	Outer diameter of paper roll	Thickness	Length of Paper
Oracle M31	79.5 ± 0.5 mm (3.13” ± 0.2”)	Max. Ø50 mm (Max. Ø1.97”)	0.07 ± 0.005 mm (0.0028” ± 0.0002”)	21m (68.89’)

Recommended Thermal Paper

PD 150R (Paper Thickness 75)m), New Oji Paper Mfg. Co., Ltd.

Label Paper Specification

Model	Paper Width	Outer Diameter of Paper Roll	Inner Diameter of Paper Core	Length of Paper (Reference)
Oracle	79.5 ± 0.5 mm (3.13” ± 0.2”)	Max. Ø49 mm (Max. Ø1.93”)	19mm	9.5m (31.16’)

Quantity of Label (Reference)

Model	Outer Diameter of Paper Roll	Length of Label					
		1″	2″	3″	4″	5″	6″
Oracle M31	Max. Ø49 mm (Max. Ø1.93”)	330	175	120	90	70	-

Linerless Paper Specification

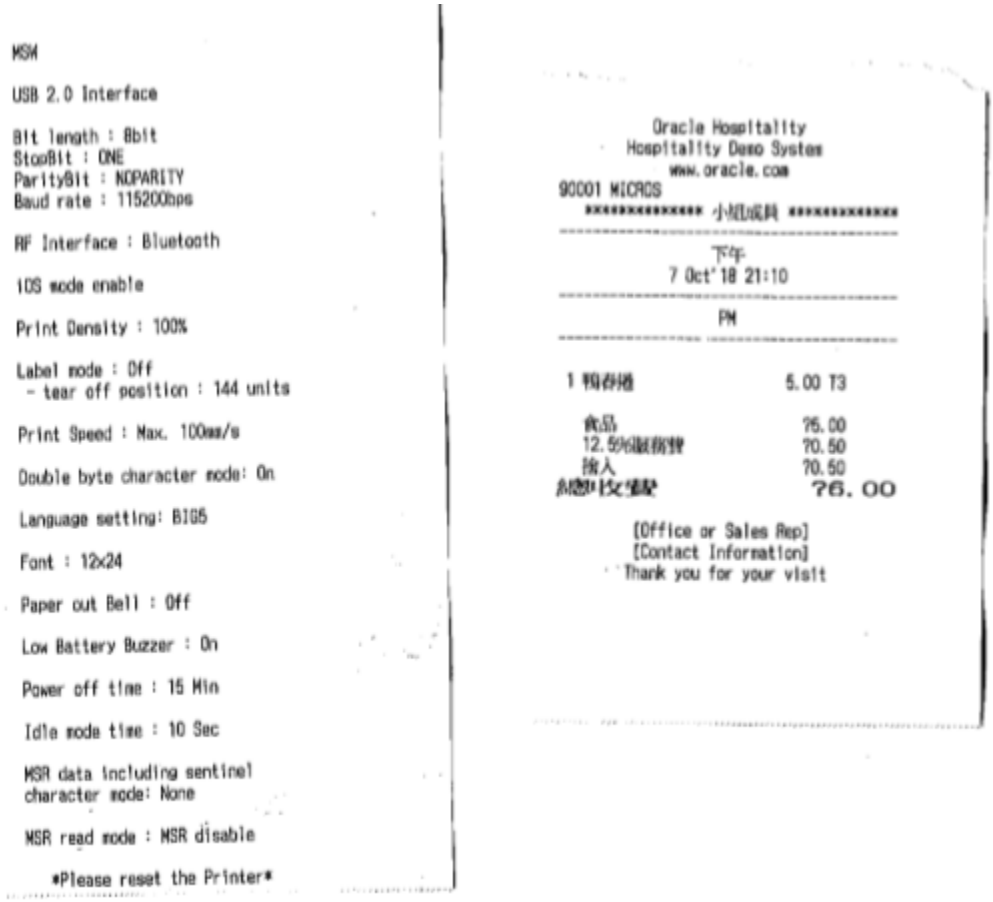
Model	Paper Width	Outer Diameter of Paper Roll	Thickness	Length of Paper (Reference)
Oracle M31	79.5 ± 0.5 mm (3.13" ± 0.2")	Max. Ø49 mm (Max. Ø1.93")	0.08 ± 0.01 mm (0.0032" ± 0.0004")	17m (55.77')

Recommended Linerless Paper

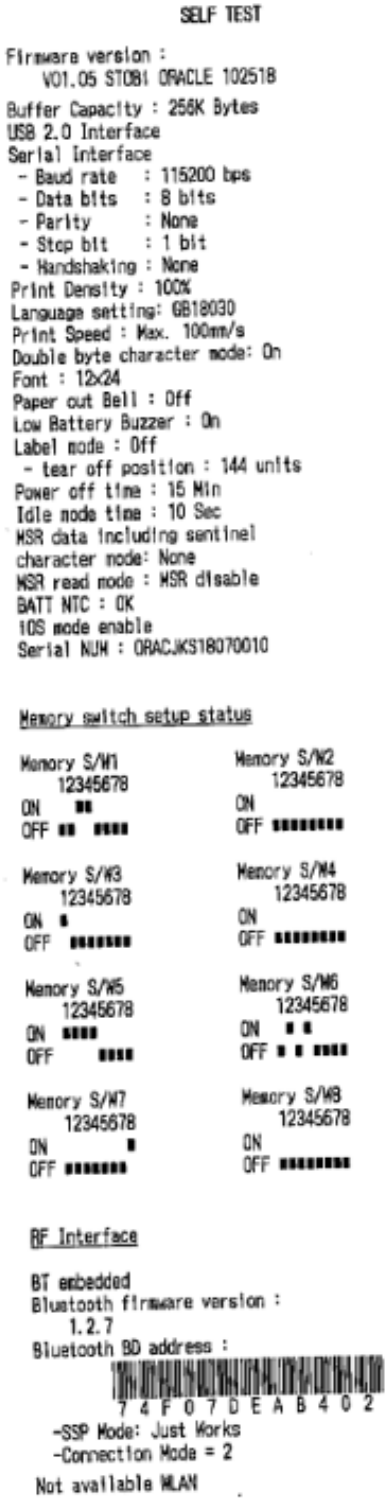
T6087 (Paper Thickness 76e)), Blumberg GmbH & Co. KG

Sample Printouts

Traditional Chinese:



Simplified Chinese:



SELF TEST

Firmware version :
V01.05 ST08I ORACLE 102518
Buffer Capacity : 256K Bytes
USB 2.0 Interface
Serial Interface
- Baud rate : 115200 bps
- Data bits : 8 bits
- Parity : None
- Stop bit : 1 bit
- Handshaking : None
Print Density : 100%
Language setting: GB18030
Print Speed : Max. 100mm/s
Double byte character mode: On
Font : 12x24
Paper out Bell : Off
Low Battery Buzzer : On
Label mode : Off
- tear off position : 144 units
Power off time : 15 Min
Idle mode time : 10 Sec
MSR data including sentinel character mode: None
MSR read mode : MSR disable
BATT NTC : OK
iOS mode enable
Serial NUM : ORACJKS18070010

Memory switch setup status

Memory S/W1
12345678
ON ■■
OFF ■■ ■■■■

Memory S/W2
12345678
ON
OFF ■■■■■■■■

Memory S/W3
12345678
ON ■
OFF ■■■■■■■

Memory S/W4
12345678
ON
OFF ■■■■■■■■

Memory S/W5
12345678
ON ■■■■
OFF ■■■■

Memory S/W6
12345678
ON ■ ■
OFF ■ ■ ■■■■

Memory S/W7
12345678
ON ■
OFF ■■■■■■■

Memory S/W8
12345678
ON
OFF ■■■■■■■■

RF Interface

BT embedded
Bluetooth firmware version :
1.2.7
Bluetooth BD address :
74F07DEAB402
-SSP Mode: Just Works
-Connection Mode = 2
Not available WLAN

Oracle Hospitality
Hospitality Demo System
www.oracle.com
90001 MICROS 6
********** 团队成员 **********

下午
29 Oct'18 9:42

AM

1 鸭春卷 5.00 T3
1 鱼肉酱 5.00 T3
1 Pork Shabu and Soft-Boiled Egg with Negi Sauce 159.00 T3
1 五花肉 20.00 T3

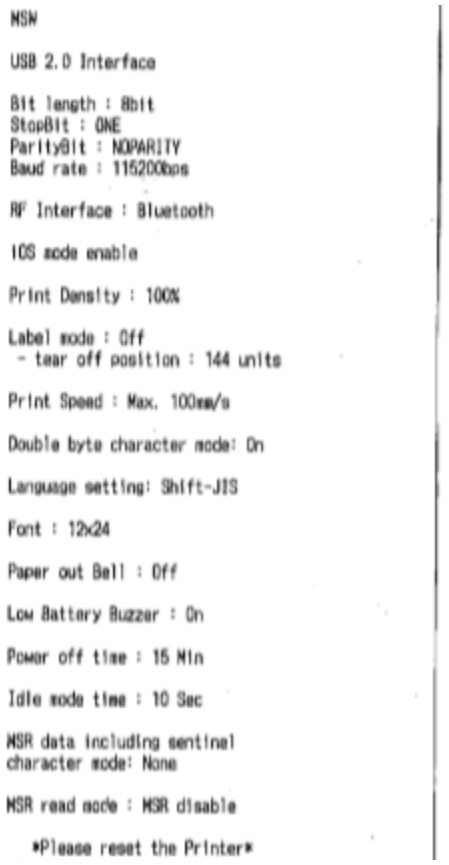
小计 ?189.00
12.5%服务费 ?3.00
付款 ?192.00
应付找零 ?0.00
现金 ?192.00
179.43 VAT-7% 12.57 A8

TAX INVOICE (ABB)181029-160-00011
TIN 1234567890123
RD No. XXXXXXXXXXXXXX9

---------- 已结账单 ----------
29 Oct'18 9:51

[Office or Sales Rep]
[Contact Information]
Thank you for your visit

Japanese:



```
MSW

USB 2.0 Interface

Bit length : 8bit
StopBit : ONE
ParityBit : NOPARITY
Baud rate : 115200bps

RF Interface : Bluetooth

iOS mode enable

Print Density : 100%

Label mode : Off
 - tear off position : 144 units

Print Speed : Max. 100mm/s

Double byte character mode: On

Language setting: Shift-JIS

Font : 12x24

Paper out Bell : Off

Low Battery Buzzer : On

Power off time : 15 Min

Idle mode time : 10 Sec

MSR data including sentinel
character mode: None

MSR read mode : MSR disable

   *Please reset the Printer*
```

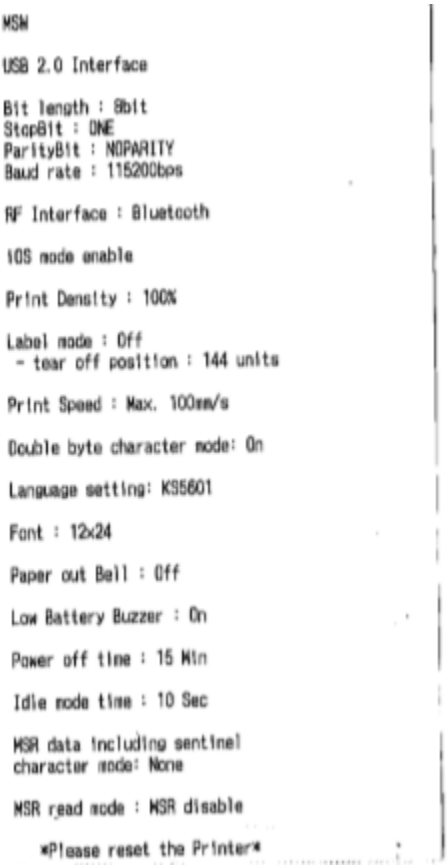
```
          Oracle Hospitality
        Hospitality Demo System
          www.oracle.com
90001 MICROS
                                  MS#: 1
-----------------------------------------
              CHK 1006
          11 Oct'18 18:37
-----------------------------------------
                  PM
-----------------------------------------

1 カモの春巻き              5.00 T3
1 パテ                      5.00 T3

  食品                      710.00
  12.5%のサービス料          71.00
[illegible]                 ?11.00

        [Office or Sales Rep]
        [Contact Information]
        Thank you for your visit
```

Korean:



MSW

USB 2.0 Interface

Bit length : 8bit
StopBit : ONE
ParityBit : NOPARITY
Baud rate : 115200bps

RF Interface : Bluetooth

iOS mode enable

Print Density : 100%

Label mode : Off
- tear off position : 144 units

Print Speed : Max. 100mm/s

Double byte character mode: On

Language setting: KS5601

Font : 12x24

Paper out Bell : Off

Low Battery Buzzer : On

Power off time : 15 Min

Idle mode time : 10 Sec

MSR data including sentinel
character mode: None

MSR read mode : MSR disable

Please reset the Printer

Oracle Hospitality
Hospitality Demo System
www.oracle.com
90001 MICROS
********** 팀 멤버 **********

오후
11 Oct'18 19:35 PM

PM

1 오리 스프링롤	5.00 T3
1 피쉬 테린	5.00 T3
1 링귀니	20.00 T3
소계	?30.00
10% Service Charge	?3.00
총 납입액	?33.00
미불 거스름돈	?0.00
Cash	?33.00
30.83 VAT-7%	2.17 AB

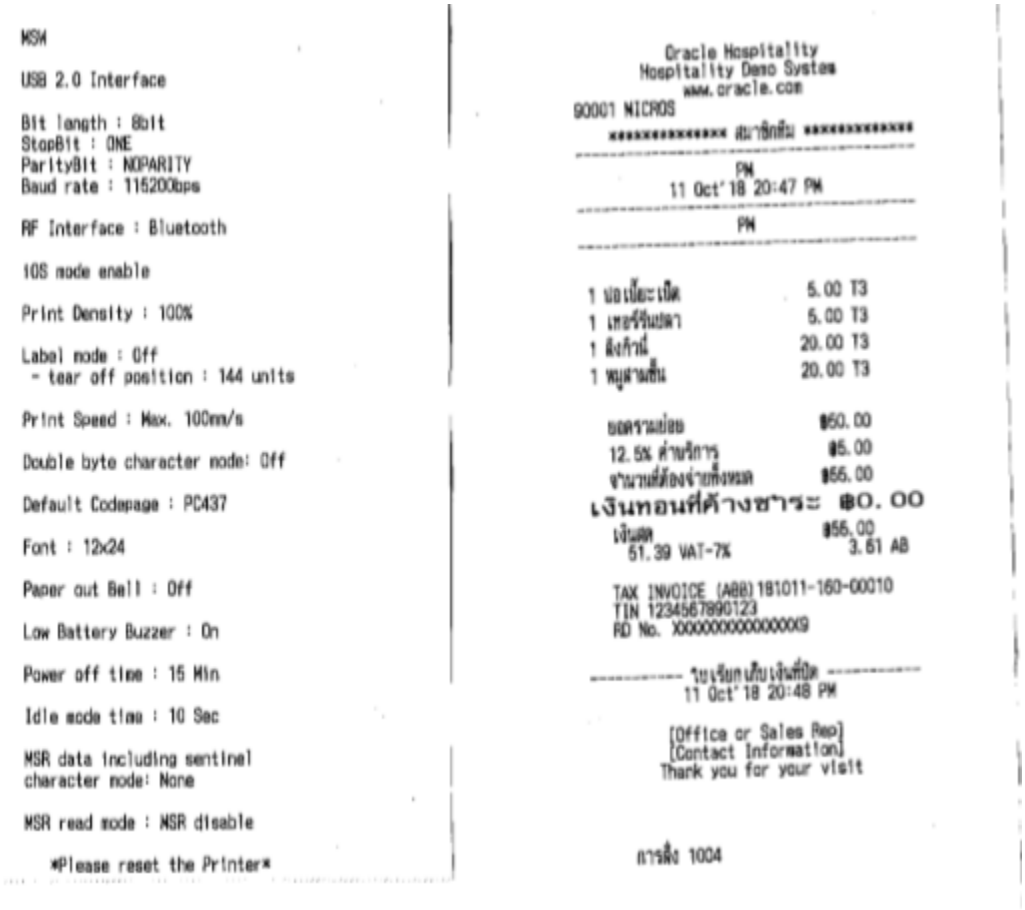
TAX INVOICE (ABB)181011-160-00008
TIN 1234567890123
RD No. XXXXXXXXXXXXXXX9

---------- 계산서 마감 ----------
11 Oct'18 19:35 PM

[Office or Sales Rep]
[Contact Information]
Thank you for your visit

주문 1000

Thai:



Certification

WEEE (Waste Electrical and Electric Equipment)

This mark shown on the product or its literature indicates that the corresponding item should not be discarded at the end of its working life with other household waste. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate marked items from other types of waste and recycle them responsibly to promote the sustained reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office for details on where and how they can conduct environmentally safe recycling of such items. Commercial users should contact their suppliers and check the terms and conditions of purchase contracts. This product should not be combined with other commercial waste for disposal.

Rating Label Symbol Information

DC (Direct current)

- This equipment is for indoor use and all of the communication wiring is limited to the inside of the building.
- The switch is the disconnecting device. Turn off switch from any hazard.

The following Bluetooth mark and Declaration ID D029148 is only applicable to models with the Bluetooth SIG qualification.

Instructions for the correct selection of a suitable Listed Class 2 Power Battery Charger (Adaptor) including “This product is intended to be supplied by a Listed Battery Charger (Adaptor) marked “Class 2” and rated output 8.4 V DC, 0.8 A.”

FCC Compliance Information

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Information to the User

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

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

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