



## **EPSON OPOS ADK MANUAL**

# **User's Manual** **(SetupPOS, TMUSB)**

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# Section 1. Introduction

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This manual contains an outline of the EPSON OPOS ADK program, and provides installation and setup instructions for the OPOS Setup program.

EPSON OPOS ADK contains software with API functions that can be used easily through ActiveX controls supported by Visual Basic on the using OS platforms. Application developers without any concern for attached peripherals type or protocol, can develop real-time, multitasking, GUI-based, POS applications with lots of functionality.

Section 2, Development Outline, describes the requirements and uses of EPSON OPOS ADK, and lists what is included in the package.

Section 3, SetupPOS Utility, shows you how to use the program to record information about OPOS devices in the system registry.

Section 4, Epson TM USB Driver, provides details on how to install the USB driver and the device names.

Section 5, Warnings, describes the matters that demand attention.

The "UPOS Specification", created by the OPOS committee, describes API functions in detail. The Application Development Guide describes application development. Please refer to these manuals for information on these subjects.

## Section 2. Development Outline

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This section describes development outline for the EPSON OPOS ADK.

### 2.1. Features

EPSON OPOS ADK offers standardized API functions that interface with peripherals used in POS systems through ActiveX controls that can be run in Visual Basic, operating on the using OS platforms. Through these standardized API functions, you can develop powerful, open POS systems easily.

### 2.2. Operating Environment

The EPSON OPOS ADK operates under the following environment.

- Computer Hardware
  - IBM PC/AT or compatible
  - \* Please follow the specifications recommended by your OS for system requirements (CPU, RAM, etc.).
  - \* At least 20M bytes hard disk capacity is needed except for recommended blank capacity of using OS.
- Operating Systems
  - For details, please refer to "Relnote.txt".
- Accessible Serial Ports
  - COM1, COM2, COM3, COM4 (extended port functions allow use of COM5 though COM10)
- Accessible Parallel Ports
  - LPT1, LPT2, LPT3 (operation is unverified in LPT3)
- Accessible USB ports
  - USB equipment must be connected to the IBM PC/AT compatible machines that are equipped with USB connectors or use USB expansion

cards.

- Accessible Network

Ethernet and IEEE802.11 support applies to TCP/IP compliant networks.  
The setup of a compliant network should be handled by a qualified network administrator.

- Accessible Bluetooth

When using a Bluetooth connection, please use the standard Windows Bluetooth stack.  
The printer will not function normally if a different stack is used.

## Section 3. SetupPOS Utility

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SetupPOS is a setup utility for registering, modifying, or deleting devices and port environments of EPSON OPOS ADK to the system registry.

Depending on the permissions of the user, the user may only be able to view the settings but does not have the ability to register or modify the settings without a few exceptions.

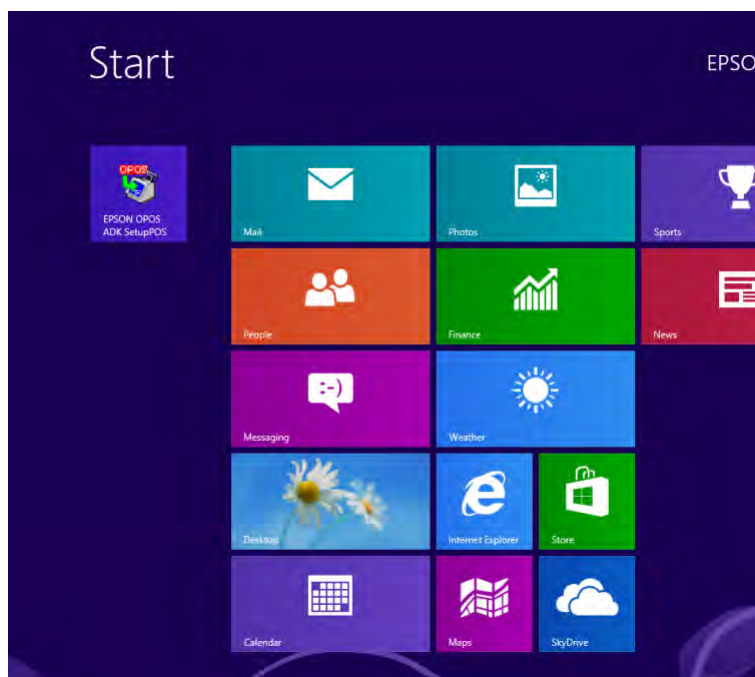
### 3.1. Starting

#### 3.1.1. Starting SetupPOS

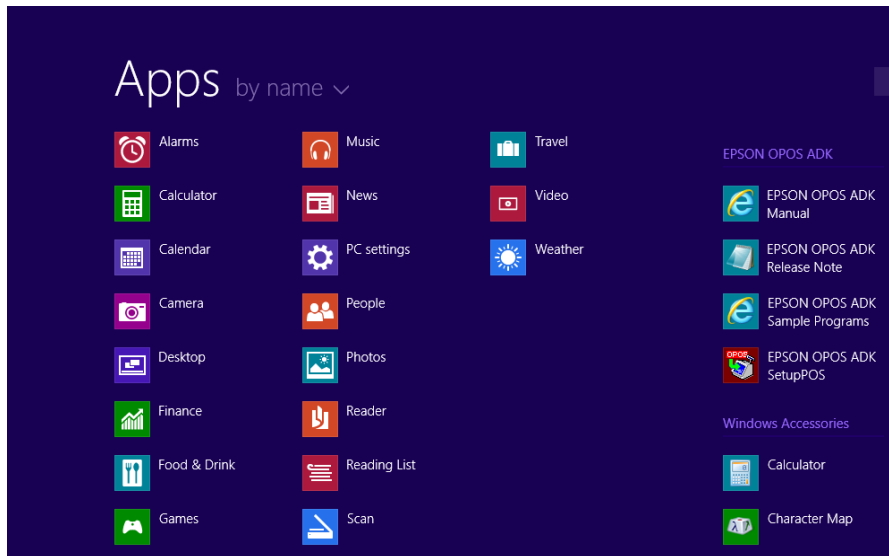
At the end of the installation, continue and use this utility.

Or, after installation, click the [Start] button, point to Programs, and then select [Epson OPOS ADK]. Finally, select [SetupPOS] to start the utility.

\* In the case of Windows 8, start from the shortcut on the Start screen.



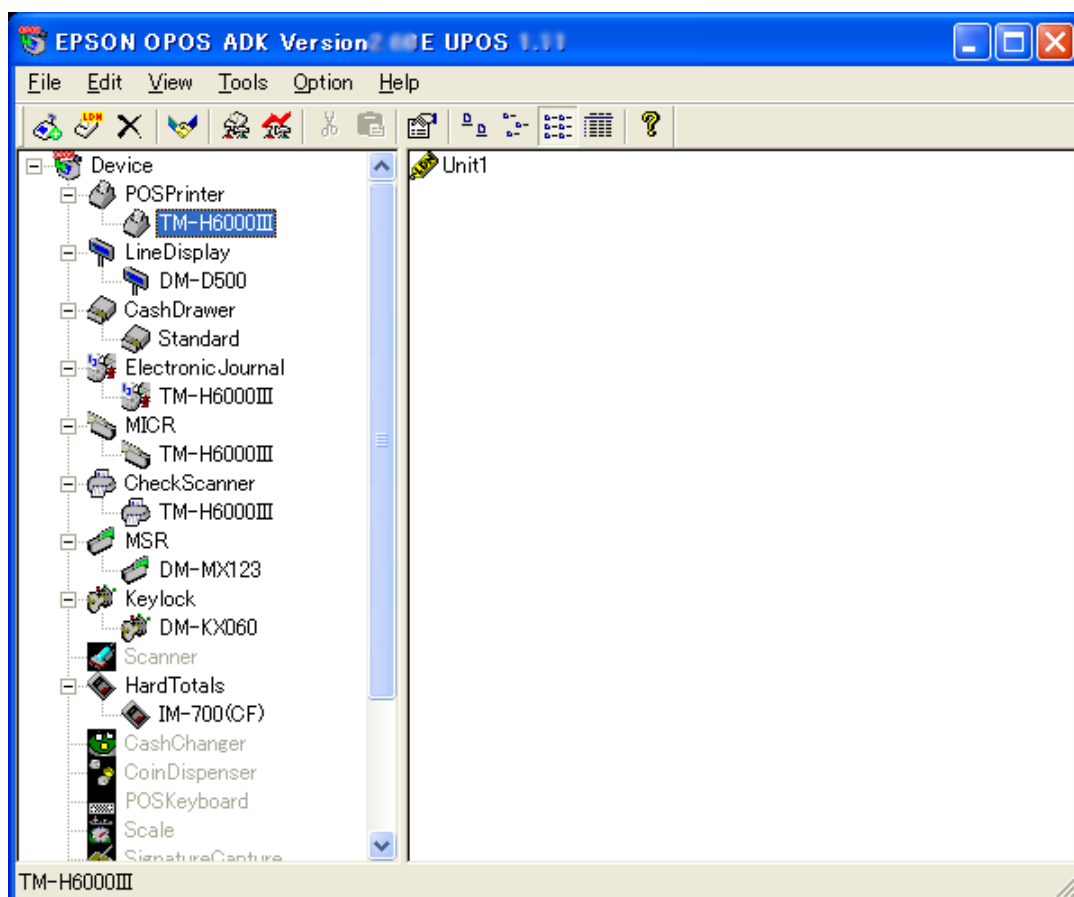
\* In the case of Windows 8.1, start from the shortcut on the Start screen.





### 3.2. About the Basic Operations (MAIN WINDOW)

When SetupPOS runs, its main window appears as shown below. In this window, it is possible to add or delete devices, and make the settings by the explorer-like operations. This window consists of a menu bar, tool bars, and device settings panes.



The following sections describe the various components of the SetupPOS main window.

#### 3.2.1. Menu

##### 1. File

Use the File menu to display properties and exit SetupPOS.

##### i. Property

Use this menu command to display properties of the item selected in the

left or right pane. The properties can only be viewed but not modified. Depending on the item selected, the properties that can be displayed are as follows:

**Device class/device class name**

This gives information about EPSON OPOS ADK, CO, or version of SetupPOS.

**Device name key**

This gives information about the device's detail, communication settings, trace settings, message handling, sleep time settings and DeviceStatistics settings.

**Port connection**

This gives information about the range of port.

**Serial port (COM) or parallel port (LPT)**

This gives information about the range of port.

**USB/Network/Wireless/Bluetooth/(None)**

No property is displayed.

ii. Exit

This menu command exits SetupPOS.

2. Edit

This menu contains commands for setting and editing devices.

i. Cut

This menu command prepares a selected device for moving, and is valid only when "Port Connection View" is selected. Use this command, for example, when moving a device to another port. Usually, this command is used with the Paste command. Cutting and pasting the other device, or drag-and-drop of the other device cancel the Cut command to the device which has been prepared for moving (or cut). After cutting the device, using the Paste command appropriately moves a port.

Example: Moving device from COM1 to COM2, from USB2 to USB1, or from LTP2 to "None".

This operation becomes disabled if at "Port Connection View" the device

name key is not selected.

**To cut a device**

Select the device name key and select Cut from the Edit menu, in tool bar, or from a pop-up menu, which is brought up by right-click.

The user must have the administrative permissions in order to use this function.

ii. Copy

This function cannot be used.

iii. Paste

This function cannot be used.

iv. Select All

Use this menu command to select all items displayed in the right pane.

v. Invert Selection

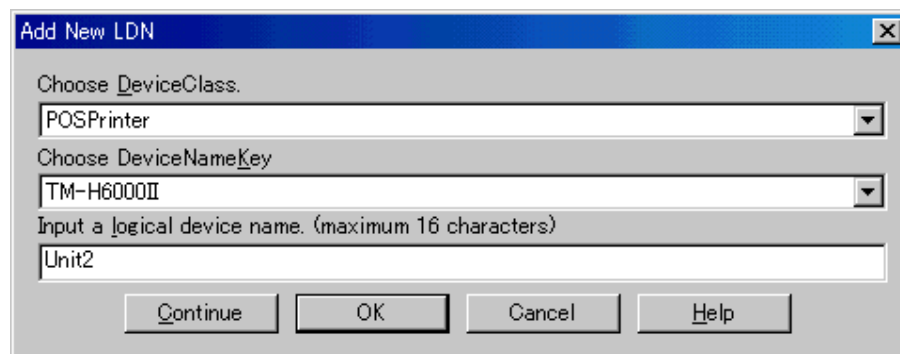
Use this menu command to invert the state of the selection of all items displayed in the right pane.

vi. Add New Device

Use this menu command to display the Add New Device wizard and add a new device to the device class. The device class displayed here refers to devices prepared by the install program. For details, see the Section 5. "5.3.1. Using the Add New Device wizard" of this manual. The user must have the administrative permissions in order to use this function.

vii. Add New LDN

Use this menu command to display the "Add New LDN" dialog box and add a logical device name to a device.



A logical device name that has already been used by the same device class cannot be specified. When re-specifying a logical device name that has been used and then deleted the corresponded device, a confirmation message appears that is whether to replace the old logical device name with the new one. The user must have the administrative permissions in order to use this function.

#### **<About the dialog box for adding logical device name>**

##### **"Choose DeviceClass." combo box:**

Select a device class for adding the logical device name. If the device class has already been selected in the window, then it appears in the combo box by default; otherwise the device classes appear in standard way or by name. Also, only device classes which the control objects (CO) supporting the device is installed are listed in the combo box.

##### **"Choose DeviceNameKey" combo box:**

Select a device name key for adding the logical device name. If the device name key has already been selected in the window, then it appears in the combo box by default; otherwise the device names appear by ascending order. If no device exists for the device class, then the combo box becomes empty.

##### **"Input a logical device name. (maximum 16 characters)" edit field**

Enter a logical device name to be added. The name can be up to 16 characters, but it cannot contain the "\" character. If the logical device name is invalid or is already registered, then the Continue or the [OK] button becomes disabled.

##### **[Continue] button**

Use this button to set up the logical device name and then continue to add more logical device names.

**[OK] button**

Use this button to set up the logical device name.

**[Cancel] button**

Use this button to cancel the setting and close the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

**Adding a logical device name**

In the window, select a device name key for adding the logical device. From the Edit menu, select "Add New LDN" and then enter the logical device name. Another method is to select a device name key for adding the logical device and right-click it. From the pop-up menu, select "Add New LDN" and then enter the logical device name.

viii. Delete

Use this menu command to delete a device selected in the current window. Before deleting, a confirmation message box appears; when clicking the [Yes] button, the device is deleted.

When deleting a master device of Hydra connection, a confirmation message box appears that is whether to delete the slave devices as well. It is possible to select to delete the master device only or all including the slave devices.

**Delete of ElectronicJournal device**

If an Electronic Journal device is deleted, a data file confirmation message is displayed. If "Yes" is selected, the Electronic Journal data files are deleted. If "No" is selected and the data files are not deleted, it is possible that the files will not be able to be deleted using EPSON OPOS ADK.

If no device name key or logical device name is selected, then this operation becomes disabled. The user must have the administrative permissions in order to use this function.

**To delete a device, use one of the following methods:**

1) In the main window, select a device name key or the LDN to be

deleted. From the Edit menu, select Delete.

Or, in the main window, select a device name key or the LDN to be deleted. Right-click to bring up a pop-up menu and select Delete.

2) In the main window, select a device or the LDN to be deleted, and then press the Delete key.

3) In the main window, select a device or the LDN to be deleted, and then click the [Delete] icon in the tool bar.

#### ix. Rename LDN

This menu command renames the logical device currently selected in the window. The name can be up to 16 characters, but it cannot contain the "\" character. Also, the same logical device name cannot be used again in the same device class.

A confirmation message box appears before the name change takes effect. If no logical device name is selected, then this operation becomes disabled. The user must have the administrative permissions in order to use this function.

#### **To rename a logical device:**

While in the main window, select a device name. From the Edit menu, select "Rename LDN". The name is ready for editing now. Change the device's name and then press the Enter key. When a confirmation message appears, click the [Yes] button and the logical device name is changed.

#### x. Communication Settings

Use this menu command to display the "Communication Settings" dialog box and change the communication settings of the selected device. This command works only on the following devices: COM, LPT, USB, Ethernet, Wireless(IEEE802.11), or devices using the keyboard interface (such as Printer, LineDisplay, CashDrawer, MICR, CheckScanner, ElectronicJournal).

Communication Settings of slave devices with Hydra connection cannot be modified. Also, Communication Settings of device with Hydra connection can only be performed from the master device. When the master device is changed, settings of all of its slave devices are

changed as well.

The user must have the administrative permissions in order to use this function.

**<Communication Settings dialog box>**

**COM/LPT/USB/Network/Wireless interface:**

**Communication Settings**

USB Port Setting

USB1

Auto Setting

Port is being used by

(None)

Setup of details of the port.

BaudRate

BitLength

Parity

StopBit

Handshake

InputBuf

OutputBuf

Output Interval Time

2500 msec

Input Sleep Time

msec

Master device to:

(None)

CheckHealth Interactive

Device Specific Settings

OK

Cancel

Help

## Port settings

### "Port number" combo box

Use this combo box to display the port name of the selected device, as follows:

- For serial port: "COM Port settings" combo box
- For parallel port: "LPT Port settings" combo box
- For USB port: "USB port settings" combo box
- For network: "Network Setting" edit box
- For wireless: "Network Setting" edit box

Use this combo box to select a serial, parallel, or USB port number. For network and wireless, set the IP address and the host name. The network settings set the input value by pushing the [Update] button. When selecting "None", the registry's port information "(Port)" is deleted. The setting ranges for serial, parallel port number can modify in the "Port Range Setting" dialog box. For USB port, the ports, which can be connected by the USB driver when the "Communication Settings" dialog box appears, become the selectable range. If the device, which has



been set is on the port to be set, depending on the capability of the device and the selected device, a message not to set the device to the port appears. In this case, the port setting is invalid. Please select other available port.

#### **[Auto Setting] button**

This command becomes disabled if a non-USB port is selected. When clicking this button, the "USB Auto Setting" wizard is displayed and it is possible to retrieve a USB port number automatically. For details, refer to the Section 5. "5.3.2. Using the USB Auto Setting wizard" of this manual.

#### **[Update] button**

Use this button to update the IP address or host name. The [update] button works only when the IP address or host name entered into the edit field is different from the existing one. If a device already exists at the IP address or host name entered into the edit field, then depending on the device or the capability of the selected device, a message appears to indicate that the IP address or host name cannot be used. When continuing and adding the device, the IP address or host name of that device becomes invalid. Please select other IP address or host name.

#### **"Port is being used by" combo box**

This combo box contains a list of devices already set up for the port number selected.

#### **Setup of Details of the port**

The settings from "BaudRate" to "Handshake" apply to the serial port. Change these settings to match the printer's settings. If the detailed settings of a master device in Hydra connection are changed, then the settings of its slave devices are also changed automatically. Also, as mentioned above, the detailed settings of the slave devices cannot be changed directly.

#### **"BaudRate" combo box**

Use this combo box to display or set the communication speed of the serial port. The values that can be used depend on the device information file (INF file). For information on the communication speed,

refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the speed is displayed but cannot be modified.

#### **"BitLength" combo box**

Use this combo box to display or set the data bit length of the serial port. The values that can be used depend on the device information file (INF file). For information on data bit length of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

#### **"Parity" combo box**

Use this combo box to display or set the parity bit length of the serial port. The values that can be used depend on the device information file (INF file). For information on parity bit of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

#### **"StopBit" combo box**

Use this combo box to display or set the stop bit of the serial port. The values that can be used depend on the device information file (INF file). For information on stop bit of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

#### **"Handshake" combo box**

Use this combo box to display or set the handshake of the serial port. The values that can be used depend on the device information file (INF file). For information on handshake of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, or "None", then this setting cannot be set or changed. For a slave device in Hydra

connection, the value is displayed but cannot be modified.

#### **"InputBuf" edit field**

This edit field supports only Version 1.xx devices.

Use this edit field to display or set the input buffer size of the serial port.

The range of acceptable values is 32 to 8192.

If the selected port is parallel, USB, network, wireless port, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the information is displayed but cannot be modified. Also, the default value has been optimized to allow for normal operation.

#### **"OutputBuf" edit field**

Use this edit field to display or set the size of the output buffer size of the serial, parallel, network, or wireless port. The range of acceptable values is usually 32 to 1024. For some devices, the range is modified by settings of the device information file (INF).

If the selected port is USB or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified. In addition, the default value has been optimized to allow for normal operation.

#### **"Output Interval Time" edit field**

Use this edit field for set the retry time to use when output fails. For details of output interval time, please refer to the ["5.8 Glossary"](#) of this manual. The range of acceptable values is 0 to 9999. This setting is valid for COM, LPT, USB, network, and wireless port.

If the selected port is "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified. Also, the default value has been optimized to allow for normal operation.

#### **"Input SleepTime" edit field**

This edit field supports only Version 1.xx devices.

Use this edit field to display or set the sleep time at the location where API is processed, during input from the port. The range of acceptable values is 0 to 99.

If the selected port is USB or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified. Also, the default value has been optimized to allow for normal operation.

**"Master device of the following device(Master device to:)" edit field**

If the selected device is a master device connected to Hydra, then the slave device is displayed; if the device is slave, then the master device is displayed.

**[CheckHealth Interactive] button**

Use this button to execute the CheckHealth method using Level = OPOS\_CH\_INTERACTIVE for the device. If the port setting is "None", then this button is disabled. For details, refer to the manual of the device.

**[Device Specific Settings] button**

Use this button to display the "Device Specific Settings" dialog box and change the device specific settings for the selected device. If the selected device does not support device specific settings, then this button is disabled. For details, refer to the manual of the device.

**[OK] button**

Use this button to close the dialog box and save the device's communication settings to the registry.

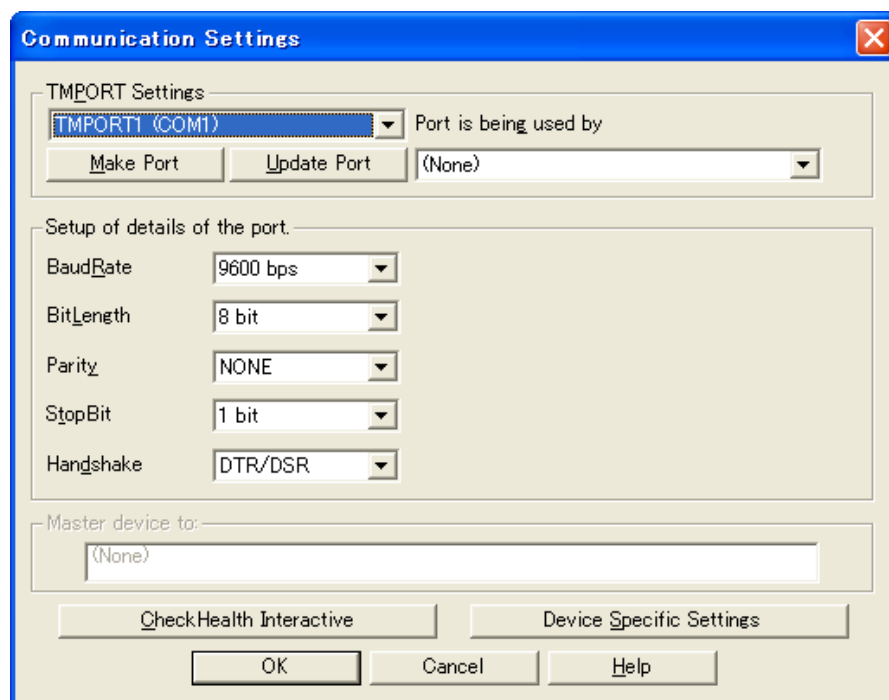
**[Cancel] button**

Use this button to cancel the changes and close the dialog box. Any changes in the settings will not be saved to the registry.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

**TMPORT interface:**



The Communication Settings dialog box enables to modify the TMPORT settings.

Note:

In the case without Port Communication Service, create the port with [Make Port] and select the port from the TMPORT Settings combo box.

#### **"TMPORT Settings" combo box**

Selects a port of the TMPORT for connect.

#### **[Make Port] button**

Displays the [TMPORT making] dialog box.

#### **[Update Port] button**

The connectable port is updated.

#### **"Port is being used by" combo box**

This combo box contains a list of devices already set up for the port number selected.

**Setup of Details of the port**

The settings from "BaudRate" to "Handshake" apply to the serial port. Change these settings to match the printer's settings. If the detailed settings of a master device in Hydra connection are changed, then the settings of its slave devices are also changed automatically. Also, as mentioned above, the detailed settings of the slave devices cannot be changed directly.

**"BaudRate" combo box**

Use this combo box to display or set the communication speed of the serial port. The values that can be used depend on the device information file (INF file). For information on the communication speed, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the speed is displayed but cannot be modified.

**"BitLength" combo box**

Use this combo box to display or set the data bit length of the serial port. The values that can be used depend on the device information file (INF file). For information on data bit length of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

**"Parity" combo box**

Use this combo box to display or set the parity bit length of the serial port. The values that can be used depend on the device information file (INF file). For information on parity bit of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

**"StopBit" combo box**

Use this combo box to display or set the stop bit of the serial port. The values that can be used depend on the device information file (INF file). For information on stop bit of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

#### **"Handshake" combo box**

Use this combo box to display or set the handshake of the serial port. The values that can be used depend on the device information file (INF file). For information on handshake of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

#### **"Master device of the following device(Master device to:)" edit field**

If the selected device is a master device connected to Hydra, then the slave device is displayed; if the device is slave, then the master device is displayed.

#### **[CheckHealth Interactive] button**

Use this button to execute the CheckHealth method using Level = OPOS\_CH\_INTERACTIVE for the device. If the port setting is "None", then this button is disabled. For details, refer to the manual of the device.

#### **[Device Specific Settings] button**

Use this button to display the "Device Specific Settings" dialog box and change the device specific settings for the selected device. If the selected device does not support device specific settings, then this button is disabled. For details, refer to the manual of the device.

#### **[OK] button**

Use this button to close the dialog box and save the device's communication settings to the registry.

#### **[Cancel] button**

Use this button to cancel the changes and close the dialog box. Any changes in the settings will not be saved to the registry.

#### **[Help] button**

Use this button to display the help on the dialog box by clicking this button.

### 3. View

Use this menu to control display of the main window.

#### i. Tool Bar

Use this menu command to hide or display the tool bar.

If the command comes with a check mark : the tool bar is displayed.

If the command comes with no check mark : the tool bar is hidden.

Once changed, the setting remains effective even when restarting the system. As the default, the tool bar is displayed.

##### **What is the tool bar?**

The tool bar appears below the menu bar of the main window and contains a list of frequently used menu commands. Clicking a button easily run a menu command associated with the button.

#### ii. Status Bar

Use this menu command to hide or display the status bar.

If the command comes with a check mark: the status bar is displayed.

If the command comes with no check mark: the status bar is hidden.

Once changed, the setting remains effective even when restarting the system. As the default, the status bar is displayed.

##### **What is the status bar?**

The status bar displays various information of the main window. For example, when a menu bar item is displayed, its description appears on the status bar.

#### iii. Large Icon

Use this menu command to display items in the right pane in large icons.

It is possible to display information using one of the following menu commands: [Large Icon], [Small Icon], [List], or [Details]. When selecting [Large Icon], a check mark appears together with the command. Once selected, the setting remains effective even when restarting the system.

#### iv. Small Icon

Use this menu command to display items in the right pane in small icons.

It is possible to display information using one of the following menu commands: [Large Icon], [Small Icon], [List], or [Details]. When selecting



[Small Icon], a check mark appears together with the command. Once selected, the setting remains effective even when restarting the system.

v. List

Use this menu command to display items in the right pane as a list. It is possible to display information using one of the following menu commands: [Large Icon], [Small Icon], [List], or [Details]. When selecting [List], a check mark appears together with the command. Once selected, the setting remains effective even when restarting the system. As the default, items in the right pane are displayed as a list.

vi. Details

Use this menu command to display items in the right pane as a detailed list. It is possible to display information using one of the following menu commands: [Large Icon], [Small Icon], [List], or [Details]. When selecting [Details], a check mark appears together with the command. Once selected, the setting remains effective even when restarting the system. In the Details view, "Device Description" and "Connection condition" are displayed. For "Connection condition", it can be Stand alone, Hydra, master, or slave. Once set, the setting remains effective even when restarting the system.

vii. Device Class View

This view displays devices in the left pane for each device class. "Device Class View" and "Port Connection View" form a group. When selecting "Device Class View", a check mark appears together with the command. Once set, the setting remains effective even when restarting the system. As the default, "Device Class View" is selected.

viii. Port Connection View

This view displays devices in the left pane for each port. "Device Class View" and "Port Connection View" form a group. When selecting "Port Connection View", a check mark appears together with the command. Once set, the setting remains effective even when restarting the system.

ix. Device Class Ordering

Use this menu command to change the sort order of the device classes in "Device Class View", either "by Standard" or "by Name". If "by Standard" is selected, then device classes supported by EPSON have the priority in the display. If "by Name" is selected, then device classes are sorted alphabetically. Once set, the setting remains effective even when restarting the system.

**What is "by Standard"?**

With this view, device classes are displayed in the following order.

1. POSPrinter
2. LineDisplay
3. CashDrawer
4. ElectronicJournal
5. MICR
6. CheckScanner
7. MSR
8. Keylock
9. Scanner
10. HardTotals
11. CashChanger
12. CoinDispenser
13. POSKeyboard
14. Scale
15. SignatureCapture
16. ToneIndicator
17. BumpBar
18. FiscalPrinter
19. PINPad
20. RemoteOrderDisplay

**What is "by Name"?**

With this view, device classes are displayed in the alphabetical order.

**x. All View**

Use this menu command to expand the view of the left pane. After selecting "All View", all device information is not always displayed, but right after "All View" is selected. Using this menu command enables to

check the details of the device currently set.

#### 4. Tools

Use this menu to display items for supplementary tools of devices.

##### i. CheckHealth Interactive

This menu command calls the CheckHealth method using Level = OPOS\_CH\_INTERACTIVE for the device (key of the device name) currently selected in the window. If the call succeeds, the result is displayed in CheckHealthText. If error occurs during the call, then an error API is called, and ResultCode and ResultCodeExtended are displayed.

This menu command becomes disabled if no device name key is selected in the window.

##### **What is "CheckHealth Interactive (OPOS\_CH\_INTERACTIVE)"?**

CheckHealth Interactive executes an interactive test with device. The supported service object usually provides a dialog box to display the test options as well as test results.

##### ii. Device Specific Settings

Use this menu command to perform device specific settings for the device currently selected in the window. If no device name key is selected in the window, then this operation becomes disabled. Also, if the selected device does not support device specific settings, then this operation becomes disabled.

The user must have the administrative permissions in order to use this function.

##### iii. Validate

Use this menu command to validate the registry settings. When a check mark appears on the menu command, the validation is carried out. When the validation is valid, after device settings are changed, the OPOS registry settings is checked if they are correctly set. If conflict exists in the registry settings, a "Warning" dialog box appears to indicate the conflict. We recommend turning on this function (that is, command with the check mark).

If automatic validation is not required, turn off the command (check mark cleared). However, in this case the user must take the responsibility to make sure the OPOS registry settings are correctly adjusted. After turning off the function, if the function is turned on again, registry validation starts from that moment. Once set, the setting remains effective even when restarting the system. For details on this function, see the description of "Warning" dialog boxes.

#### iv. Export Registry

Use this menu command to display the "Export Registry" dialog box and export the current OPOS registry settings to a registry data file. The saved file can then be used to recover, copy, or install the OPOS environment.

In the "Save As" dialog box, specify a file name to export the registry. If the file already exists, then a message box appears to confirm to overwrite the existing file. Select the [Yes] button to overwrite, or the [No] button to append. If the existing file is overwritten, then all existing registry data is deleted; if the existing file is appended, then the new settings are appended to the end of the file. It is possible to specify the extent of the export from the following options: Register All, Selecting Object, and Hydra.

#### **<Export registry dialog box>**

##### **[All] button**

Use this button to export all OPOS registry settings to a registry data file. All settings below the ADK configuration key of the registry are always saved.

##### **[Selecting] button**

Use this button to export only the OPOS registry settings for the item currently selected in the window, to a registry data file. If multiple items are selected, then multiple registry settings are exported. This button becomes disabled if no item with registry settings is selected in the window.

##### **[Hydra] button**

This button becomes enabled if the device currently selected in the window is a Hydra device, and then the Hydra-related settings of the

device are exported. This button becomes disabled if the device currently selected in the window is not a Hydra device.

**[Cancel] button**

Use this button to cancel the changes and close the dialog box. Any changes in the settings will not be saved to the registry.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

5. Option

This menu contains commands for maintenance.

i. Confirm the Hydra Settings closely

When a check mark appears, this menu command is turned on and a stringent check will be carried out to confirm the validity of the registry in version 1.xx. If the command is turned off, then only the minimum check will be carried out. With this command, it is possible to add devices of the same device class to the same port, or create multiple Hydra configurations.

The user must have the administrative permissions in order to use this function.

ii. Port range setting

Use this menu command to display the "Port Range Settings" dialog box and set the maximum numbers of the serial or parallel ports according to the hardware configuration. Usually, as long as the port configuration is not changed, it is not necessary to use this dialog box. The default range depends on the PC, but the acceptable range are as follows:

COM port : 10

LPT port : 3

The user must have the administrative permissions in order to use this function.

**<Port range dialog box>**

**"Maximum COM ports" edit field with spin buttons**

Set the largest number of serial (COM) ports that can be used. The range

that can be chosen is 1 to 10. However, it is impossible to select a number which is smaller than the maximum number of COM ports currently in use.

**"System default" button**

Use this button to set the suitable value for the current system as the largest number of serial ports (COM). Before using this function, use the control panel of the OS to make sure the system has been configured correctly.

**"Maximum LPT ports" edit field**

Set the largest number of parallel (LPT) ports that can be used. The range that can be chosen is 1 to 3. However, it is impossible to select a number which is smaller than the maximum number of LPT ports currently in use.

**[System default] button**

Use this button to set the suitable value for the current system as the largest number of serial ports (LPT). Before using this function, use the control panel of the OS to make sure the system has been configured correctly.

**[OK] button**

Close the dialog box and set the port range to the registry.

**[Cancel] button**

Use this button to cancel the setting and close the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

**<Port property dialog box>**

**"Port Name" edit field (read only)**

Displays the name of port.

**"Port Type" edit field (read only)**

Displays the type of port.

The strings that are displayed are as follows:

COMn (n= 1, 2 ...)

LPTn (n= 1, 2 ...)

USB

NET:XXX.XXX.XXX.XXX (XXX.XXX.XXX.XXX = IP address)

**"Connected Device" edit field (read only)**

The name of the currently or previously physically connected device is displayed.

**[OK] button**

Closes the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

iii. OPOS API Trace Setting

Use this menu command to display the "OPOS API trace settings" dialog box and set the trace settings of OPOS ADK. Note that for version 1.xx, the trace function can be used only if an EPSON OPOS ADK supporting trace is installed.

The trace (log) function provides support for application development. Usually this function is used only for debugging OPOS applications; it is not used for other purposes.

The user must have the administrative permissions in order to use this function.

When EPSON CO is used, the log of all devices can be taken. When CCO is used, only the log of POSPrinter, LineDisplay, CashDrawer, MICR, CheckScanner and ElectronicJournal can be taken.

**<OPOS API Trace setting dialog box>**

**"DeviceName" combo box**

Use this combo box to select a device name for enabling the OPOS API trace function.

The device is the target to use when "Private Trace" is selected.

If a device name is currently selected in the window, the device appears as the default name in the combo box.

If the currently selected device's settings have been changed, changing the settings of another device displays a message box to confirm to save the settings. Select the [Yes] button to save the settings to the registry. Even if the [Cancel] button is selected to close the dialog box, the settings are not abandoned.

**"Tracing mode" radio buttons**

Select a tracing mode from the following options:

- "No Trace" : Disable the OPOS API trace function.  
This option is selected as the default.
- "Global Trace" : Trace all OPOS devices (EPSON devices only).
- "Private Trace" : Trace only the specified valid device.

Usually, select "No Trace".

When the OPOS API trace is turned on, all OPOS API calls (all property access and all method calls) are traced, with the trace result recorded in the trace log file. Note that the "Global Trace" option takes priority over the "Private Trace" option, but when the "Private Trace" option is used, the "Global Trace" settings are deleted. For example, if "Global Trace" has been set to the POS printer and the user uses the line display to set trace to "Private Trace", the POS printer will be excluded from the target of trace.

To avoid this problem, use the "Private Trace" option for the device to trace.

When CCO is registered, the device that can be traced is limited. Even when [Global Trace] is selected, only the device that can be traced is traced.

.

#### **"Use specific trace log file" check box**

Select this check box when using a specific trace log file.

When selected, it is possible to change the trace log file name. When cleared, the trace log file name is automatically set.

If the name of log file is set the same name as the other log file (even error log file of POSPrinter), log information of the following device don't be recorded. To avoid this problem, please don't use the same name as the other log file.

If a special trace log file is specified, please be careful of the access privileges for both the specified file, and for the save location.

If there is an insufficient access privilege for the specified location, the trace log file will not be created.

#### **"Notify when trace log file becomes full. " check box**

In order to receive notification when the trace log file has exceeded the



maximum size limit, check this checkbox.

**[OK] button**

Close the dialog box and save the current settings.

**[Cancel] button**

Use this button to cancel the setting and close the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

iv. Message Handling

Use this menu command to display the "Message handling" dialog box and set up message handling for the registered devices.

The user must have the administrative permissions in order to use this function.

**What is message handling?**

Some application needs to extract a message while a method requiring much time is being processed. In this case, use this command. If "Message is processed during synchronous" is selected, then OPOS methods or properties are not executed while an OPOS method requiring much time is being processed.

(For example, during synchronization, if the Close method is executed, this may result in fatal errors such as causing the PC to hang.)

**<Message handling dialog box>**

**"Message is not processed during synchronous" radio button**

Use this radio button to disable message handling.

**"Message is processed during synchronous" radio button**

Use this radio button to enable message handling.

When this button is selected, a warning message box appears; when choosing the [Yes] button, the "Message is processed during synchronous" radio button is then selected and message handling will be performed.

**[OK] button**

Close the dialog box and save the current settings.

**[Cancel] button**

Use this button to cancel the setting and close the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

#### v. Setting Sleep Time

Use this menu command to display the "Setting Sleep Time" dialog box and set the Sleep time of Win32 API.

In the programs for waiting for input from device inside the driver or long processing programs, to keep the CPU time use exclusively, EPSON OPOS ADK calls Sleep (a WIN32 API) and specifies the time to pass control to other programs.

By using this dialog box, it is possible to set the length of the Sleep time for processing long programs.

By modifying the sleep time, it is possible to change the ratio of the CPU time used by a particular device. For the sleep time of input-waiting programs, refer to the port details of the device to learn to how to change it. Because the settings have been optimized, usually it is not necessary to modify them.

The user must have the administrative permissions in order to use this function.

#### **<Setting Sleep Time dialog box>**

##### **"DeviceName" combo box**

Use this combo box to select a device for setting the sleep time.

If a device name is currently selected in the window, the device appears as the default name in the combo box.

To change the sleep time of the other device, select the device name from the list.

If the currently selected device's settings have been changed, changing the settings of another device display a message box to confirm to save the settings.

If the [Yes] button is selected, then the even if the [Cancel] button is selected to close the dialog box, the settings are not abandoned.

##### **"Setting Individual Device" check box**

To set the sleep time for each device, select this check box.

Usually, this check box is selected so that the sleep time value applies only to the device selected in the "DeviceName" combo box.

If this check box is cleared, then the sleep time value applies to all

devices and the value set to each device becomes ignored.

However, the individual sleep time values are stored in the OPOS registry even if the check mark is cleared, when selecting the check box again, the individual sleep time values will be used again.

**"Setting Value (msec)" edit field**

Use the edit field to specify the sleep time for the Sleep API. The acceptable range is 0 to 999.

**[OK] button**

Close the dialog box and save the sleep time to the registry.

**[Cancel] button**

Use this button to cancel the setting and close the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

vi. **DeviceStatistics Settings**

The "DeviceStatistics Settings" dialog box is displayed.

The device statistics information file is the file that SO uses to provide the DeviceStatistics functions.

**<DeviceStatistics Settings dialog box>**

**"DeviceStatistics information files preservation folder." edit box**

Shows the path to a folder where DeviceStatistics information is to be saved.

**[OK] button**

Close the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

vii. **Version Compatibility**

Use this menu command to display the "Version compatibility" dialog box and ensure version compatibility in terms of the differing specifications among versions of OPOS ADK.

The user must have the administrative permissions in order to use this function.

**<Version compatibility dialog box>****"Common" radio button**

Use the radio buttons to specify the sending conditions of DataEvent when AutoDisable = TRUE.

This button is available only when using EPSON OPOS ADK version 1.xx.

For "Open, Claim&Enable" (default):

Immediately after SO receives the data notified as DataEvent, DeviceEnabled is set to FALSE.

At this moment, DataEvent is not sent. Afterwards, when DeviceEnabled is set to TRUE, DataEvent is sent.

(AutoDisable UPOS specifications)

For "Open, Claim":

Immediately after SO receives the data notified as DataEvent, DeviceEnabled is set to FALSE.

At this moment, DataEvent is sent (EPSON specific specifications).

Usually, select "Open, Claim&Enable" (recommended).

To upgrade OPOS ADK from version 1.5x or earlier and enable the existing applications to run in the new version without any modification, use "Open, Claim".

The specifications for operations are different in pre-Ver2.60 and Ver2.60. Select which specification. These are settable only for the EPSON OPOS ADK of the starting from Ver2.60.

(1) When the specification starting from OPOS Ver2.60:

The specifications for the initialization, devices with hydra connection, and Error Event are operated in compliance with UPOS1.11. (UPOS Specification)

(2) When the specifications prior to OPOS Ver2.60:

The specifications for the initialization, devices with hydra connection, and Error Event are operated in compliance with the specifications Pre-Ver2.60. (EPSON Specification)

The default setting is different by the condition.

Condition	Default setting
-----------	-----------------

Without the installation of EPSON OPOS ADK in advance	Ver2.60 specification
When the prior to Version 2.60 of EPSON OPOS ADK already has been installed	Pre-Ver2.60 specification

The target categories are as follows:

<Initialization processing>

POSPrinter

LineDisplay

CashDrawer

(ElectronicJournal)

<Switch-over of Hydra error code>

LineDisplay

CashDrawer

### **"POS Printer [Prior to Ver2.0]" check box**

This check box is available only when using EPSON OPOS ADK version 1.xx.

Use this check box to specify the operation of BeginInserion/EndInserion of slip.

If the check box is selected (default):

BeginInserion only waits for insertion of Slip, and the printer has not yet entered into the slip selection state. When EndInserion selects slip after the slip insertion is confirmed. The printer goes into the slip selection state and slip printing becomes possible.

If the check box is cleared:

BeginInserion/EndInserion of OPOS ADK version 1.5x or earlier works.

Usually, select this check box (recommended).

To upgrade OPOS ADK from version 1.5x or earlier and enable the existing applications to run in the new version without any modification, clear this check box.

### **[OK] button**

Close the dialog box and save the version compatibility settings to the registry.

### **[Cancel] button**

Use this button to cancel the setting and close the dialog box.

### **[Help] button**

Use this button to display the help on the dialog box by clicking this button.

viii. Communication compatibility

The communication compatibility dialog box is displayed to allow enabling or disabling of compatibility between different communication types.

Only users with administrator authority can use this function.

**<Communication compatibility dialog box>**

"Use operations in serial connection for USB connection." **check box**  
Enables/disables compatibility of USB connection and serial connection communication. If this checkbox is selected when a device is connected by USB, operation will be equivalent to a serial connection. When a device that has been used in a serial connection is changed to a USB connection, this allows you to use the device without changing the application.

Checked: Enables USB and serial compatibility.  
Operation is equivalent to a serial connection.  
Unchecked: Disables USB and serial compatibility.  
Normal USB operation.

Default is "Unchecked".

**[OK] button**

Close the dialog box and save the version compatibility settings to the registry.

**[Cancel] button**

Use this button to cancel the setting and close the dialog box.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

## 6. Help

This menu contains commands on help.

### i. Help Topics

Use this menu command to search help by topic and keyword.

### ii. About EPSON SetupPOS

Use this menu command to display the version information dialog box and view the EPSON OPOS ADK, control object information (CO) as well as the version information of SetupPOS.

#### **<About EPSON SetupPOS dialog box>**

##### **\* EPSON OPOS ADK Version Information**

###### **"EPSON OPOS ADK Version" edit field**

The version of EPSON OPOS ADK appears in the edit field.

If a Service Pack is installed, then "SPxx" appears after the version information.

##### **\* Control Object Information**

If multiple CO exists, then the version information of the CO found first is displayed.

###### **"Device Class" combo box**

Use this combo box to select a device class for display of the version information of a control object.

###### **"Control Object Version" edit field**

The version information of a control object appears in the format of "X.Y.Z".

If no appropriate control object is installed in the system, then "(Not available)" appears instead.

###### **"Control Object Description" edit field**

Description of the control object appears in the edit field.

If no appropriate control object is installed in the system, then "(Not available)" appears instead.

##### **\*"SetupPOS Version Information"**

It displays the version of the SetupPOS and copyright information.

##### **[OK] button**

Close the dialog box and return to the main window.

**[Help] button**















Use this button to display the help on the dialog box by clicking this button.

**3.2.2. Tool Bar**

It is possible to operate the main function of the menu bar by clicking a button.

The following tool bar buttons are available:

For the function, refer to the appropriate explanation of the menu bar.

1.  Add New Device
2.  Add New LDN
3.  Delete
4.  CheckHealth Interactive
5.  Device Specific Settings
6.  Communication Settings
7.  Cut
8.  Paste
9.  Properties
10.  Large Icons
11.  Small Icons
12.  List
13.  Details
14.  Help

**3.2.3. Left Pane**

The left pane of the window displays a tree structure of devices.

- From the View menu, it is possible to select "Device Class View" or "Port Connection View" to change the way devices are displayed.
- Menu commands can be applied to a selected item on the tree structure.
- For a device, its port can be modified using the drag-and-drop method.
- The pop-up menu can be used with each item.
- The user must have the administrative permissions in order to modify the settings.

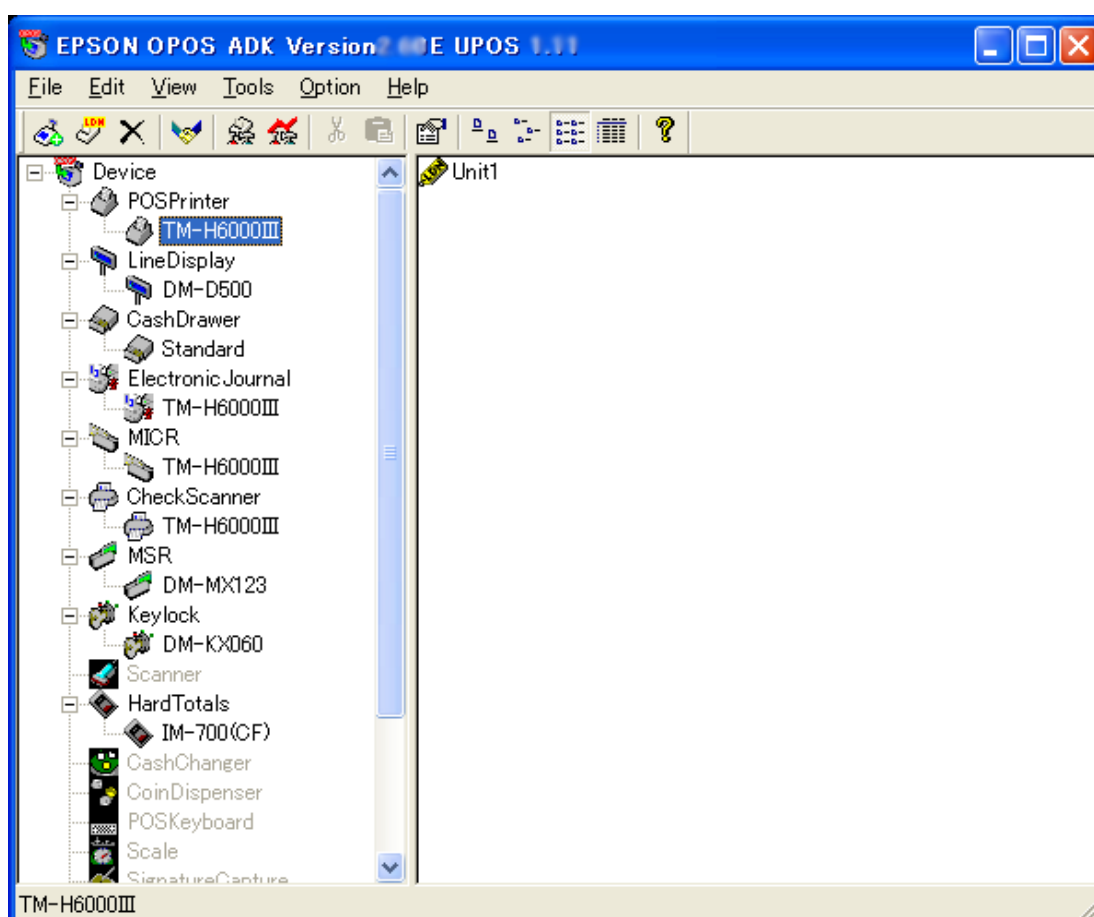


### 3.2.4. Right Pane

The right window displays the detailed information on the selected item in the left window.

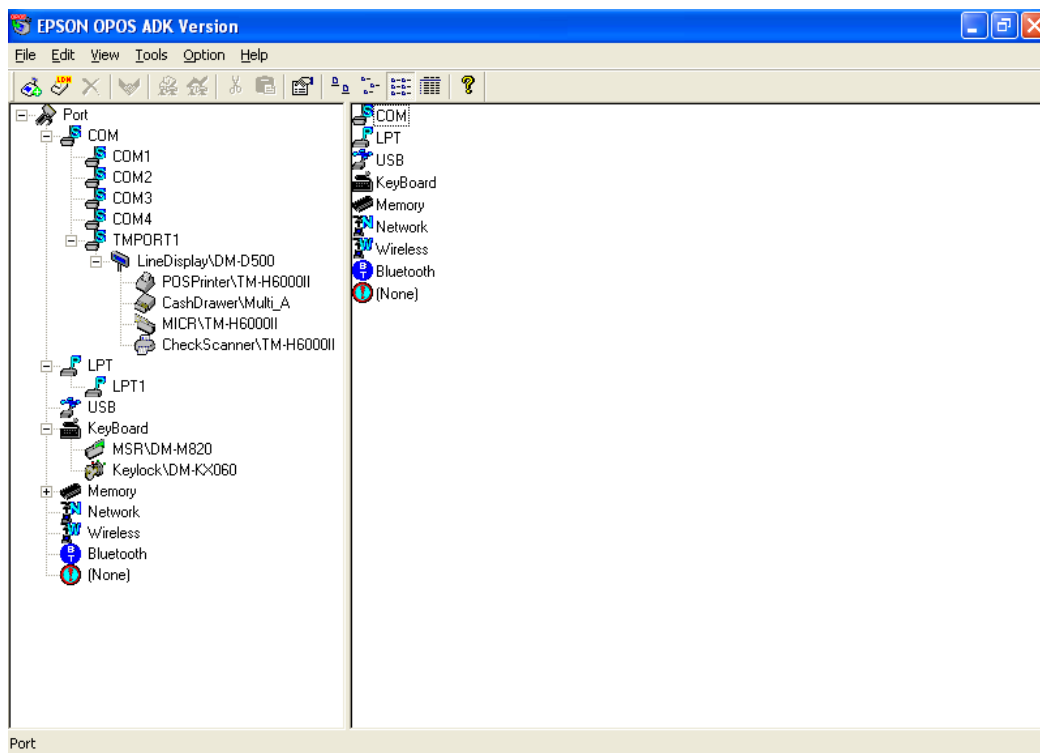
#### (1). "Device Class View"

- Device class exists below "Device".
- Device name key for each device exists beneath the device.
- When selecting a device name key in the left pane, the logical device name which belongs to that device appears in the right pane. Note that logical device names always appear in the right pane; they never appear in the left pane.
- A device class is also displayed even if any corresponding device is registered.  
However, icons of installed devices not from EPSON are dimmed.



#### (2). "Port Connection View"

- The port type appears below "Port".
- Below the port type, port names (only those which can be set) are displayed.
- Below the port name, the corresponding "Device Class" and device name key are displayed.  
For Hydra connection, the displayed device indicates the master device.
- For Hydra connection, slave devices appear below the master device.



### What is COM?

It indicates a serial port.

Devices appearing below this port are serial port devices only.

### What is LPT?

It indicates a parallel port.

Devices appearing below this port are parallel port devices only.

### What is USB?

It indicates a USB port.

Devices appearing below this port are USB port devices only.

### What is Network?

It indicates a Ethernet.

Devices appearing below this port are network devices only.

**What is Wireless?**

It indicates a IEEE802.11.

Devices appearing below this port are wireless devices only.

**What is Bluetooth?**

It indicates a Bluetooth.

Devices appearing below this port are Bluetooth devices only.

**What is "(None)"**

It indicates that the port settings are not defined yet.

Devices appearing below it are devices with their ports not defined yet.

- COM and LPT appear according to the range set in "Port Range Setting".
- USB appears according to the port range where the USB driver is created.
- Network appears according to the network devices which are connected.
- Wireless appears according to the wireless devices which are connected.
- Bluetooth appears according to the Bluetooth devices which are connected.

**3.2.5. Pop-up Menus**

Items in the left and right panes of the window support pop-up menus.

The user must have the administrative permissions in order to use this function.

**What is a pop-up menu?**

When clicking an item and then right-clicking the mouse, a menu appears. This menu is a pop-up menu.

The following pop-up menus are available to items selected in the window.

Selected Item	Pop-up Menu	Description
Device	Add New Device	Use this menu command to display the "Add New Device" wizard.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Property	Use this menu command to display "About EPSON SetupPOS" dialog box.
	Help	Use this menu command to display appropriate help to a device.
Device class name	Add New Device	Use this menu command to display the "Add New Device" wizard.

	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Property	Use this menu command to display "About EPSON SetupPOS" dialog box.
	Help	Use this menu command to display appropriate help to a device class.

Selected Item	Pop-up Menu	Description
Device name key	CheckHealth Interactive	Use this menu command to start interactive CheckHealth.
	Device Specific Settings	Use this menu command to display the "Device Specific Settings" dialog box. If the selected device does not support device specific settings, then this command is disabled.
	Add New LDN	Use this menu command to display the "Add new logical device name" dialog box. The key of the selected device name appears as the default.
	Communication Settings	Use this menu command to display the "Communication Settings" dialog box. If the selected device is not from EPSON, then this command is disabled.
	Delete	Use this menu command to delete a device.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Property	Use this menu command to display the following setting tabs: "Details of device", "Communication Settings" <sup>*1</sup> , "Trace Settings", "Message Handling", "Sleep Time Settings" and "DeviceStatistics settings". <sup>*1</sup> It becomes key hook driver in case of the MSR and Keylock.
	Help	Use this menu command to display appropriate help to a device name key.
Logical device name	Delete	Use this menu command to delete the logical device name.
	Rename LDN	Use this menu command to change the mode to the edit mode for modifying the logical device name.
	Help	Use this menu command to display appropriate help to a logical device name.

Selected Item	Pop-up Menu	Description
Port	Add New Device	Use this menu command to display the "Add New Device" wizard.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Property	Use this menu command to display the "Port range" dialog box.
	Help	Use this menu command to display appropriate help to the connected port.
COM/LPT	Add New Device	Use this menu command to display the "Add New Device" wizard.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Property	Use this menu command to display the "Port range" dialog box.
	Help	Use this menu command to display appropriate help to the connected port (COM or LPT).
COM1/LPT1/ TMPORT1	Add New Device	Use this menu command to display the "Add New Device" wizard.
	Paste	Use this menu command to paste a device that has been prepared for moving (or cut) to a port specified. This command is disabled if there is no port that can be set, or no device has been prepared for moving yet.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Property	Others: Use this menu command to display the "Port range" dialog box. TMPORT: Use this menu command to display the "Port property" dialog box.
	Help	Use this menu command to display appropriate help to the connected port (COM or LPT).
USB/ Network/ Wireless	Add New Device	Use this menu command to display the "Add New Device" wizard.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Help	Use this menu command to display appropriate help to the connected port (USB/ NETWORK/ WIRELESS).

Selected Item	Pop-up Menu	Description
USB1/Network/ Wireless	Add New Device	Use this menu command to display the "Add New Device" wizard.
	Paste	Use this menu command to paste a device that has been prepared for moving (or cut) to a port specified. This command is disabled if there is no port that can be set, or no device has been prepared for moving yet.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Help	Use this menu command to display appropriate help to the connected port (USB).
IP address or Host name	Add New Device	Use this menu command to display the "Add New Device" wizard.
	Paste	Use this menu command to paste a device that has been prepared for moving (or cut) to a port specified. This command is disabled if there is no port that can be set, or no device has been prepared for moving yet.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Help	Use this menu command to display appropriate help to the connected port.
(None)	Paste	Use this menu command to paste a device that has been prepared for moving (or cut) to a port specified. This command is disabled if there is no port that can be set, or no device has been prepared for moving yet.
	Help	Use this menu command to display appropriate help to the connected port.

Selected Item	Pop-up Menu	Description
Device name key (display for each port only)	Add New Device	Use this menu command to display the "Add New Device" wizard.
	CheckHealth Interactive	Use this menu command to start CheckHealth Interactive.
	Device Specific Settings	Use this menu command to display the "Device Specific Settings" dialog box. If the selected device does not support device specific settings, then this command is disabled.
	Add New LDN	Use this menu command to display the "Add new logical device" dialog box. The key of the selected device name appears as the default.
	Communication Setting	Use this menu command to display the "Communication Setting" dialog box. If the selected device is not from EPSON, then this command is disabled.
	Delete	Use this menu command to cut and then delete the device.
	Cut	Use this menu command to cut the device to prepare it for moving.
	Export Registry	Use this menu command to display the "Export registry" dialog box.
	Property	Use this menu command to display the following setting tabs: "Details of device", "Communication Settings", "Trace Settings", "Message Handling", and "Sleep Time Settings" and "DeviceStatistics Settings". *1 It becomes key hook driver in case of the MSR and Keylock.
	Help	Use this menu command to display appropriate help to the device name key.

### 3.2.6. Drag-and-drop

The drag-and-drop method moves a device to another port.

The user must have the administrative permissions in order to use this function.

#### What is drag-and-drop?

Drag-and-drop is a mouse operation. Place the mouse pointer over an object, hold down the mouse button and move it (drag) to a desired location, then release the mouse (drop) and the object is "dropped" to the new location.

#### Hydra connection and drag-and-drop

When the master device of a port with Hydra connection is moved:

Both the master and the slave devices are all moved.

When a slave device of a port with Hydra connection is moved:

Only the slave devices are moved.

In addition, by dragging an individual device that allows Hydra connection to a port connected to a device that also allows Hydra connection, it is possible to perform the Hydra connection.

If the drag operation results in having the device added to the port with Hydra connection set up, a conformation message appears. Follow the instructions in the message.

- It is possible to use the drag-and-drop operation between the right and left panes.
- It is impossible to drag an item which does not allow the drag operation.
- The items which can be dragged are the device name key displayed in each port (COM, LPT, USB, Network, Wireless or Bluetooth) only. It is impossible to drop an item onto an object which does not allow the drop operation.  
For drag-and-drop, the following operations are available.
- Moving from COM1 to LPT is not allowed (drop).
- It is impossible to drag-and-drop devices between the physical port and the TMPORT port.

(Example)

- Moving the port settings of the LineDisplay on COM1 to (none) is allowed.
- Moving a drawer with its port setting as (None) to COM3 is allowed.
- Moving a series of devices with Hydra established on COM1 to COM2 is allowed.

### **3.3. Using Wizards**

#### **3.3.1. Using the Add New Device wizard**

This wizard adds devices and performs communication settings. Follow the instructions on the screen to perform the operations.

##### **3.3.1.1. Device Class Selection Screen**

In this screen, select a device class to be added.





If a device class has been already selected in the main window before starting this wizard, this screen does not appear; instead the next screen will appear.

#### **"Device Class" list box**

Use this list box to display a list of device classes to be selected. Click to select the device class of a device to be added.

Note that the list displays only device classes that are installed control object (CO) that supports the device.

If the necessary device classes are not listed in the list, re-install OPOS ADK, or update it to the appropriate version.

#### **[Next] button**

Use this button to move to the device selection screen.

#### **[Cancel] button**

Use this button to cancel the settings and return to the main window.

#### **[Help] button**

Use this button to display the help on the dialog box by clicking this button.

### **3.3.1.2. Device Selection Screen**

In this screen, set the details of the device to add.

### "Select Device Name" combo box

Use this combo box to display a list of selectable devices and select a device from the list.

If there are multiple types of devices (type of ports, etc) for the selected device, use the "Select detailed model." combo box on the right to specify the type of the device.

If no appropriate devices are provided, then this list becomes empty.

### "Select detailed model." combo box

Use this combo box to specify a type for the device, if the device has multiple types.

While the choices vary according to the information file (INF file) of the selected device, if the device comes with multiple ports, select one from the following: serial, parallel, USB, network, or wireless port.

If the selected device does not have multiple device types, then the combo box display only that port.

When the TMPORT is displayed in "Used Port" edit field:

\*If "TM-T88V" is selected from the "Select Device Name" combo box, the "Select detailed model" combo box displays TM-T88V only.

When the ports other than TMPort are displayed in "Used Port" edit field:

\*If "TM-T88IV" is selected from the "Select Device Name" combo box, the "Select detailed model." combo box displays the following: TM-T88IV, TM-T88IVP, TM-T88IVU and TM-T88IVE Select one of them.

#### **"Used Port" edit field**

This edit field displays the port for the device selected in the "Select detailed model." combo box.

Character Strings to be indicated and their meanings are as follows:

"COM": Serial Port.  
 "LPT": Parallel Port.  
 "USB": USB Port.  
 "NET": Ethernet Port.  
 "WIR": IEEE802.11 Port.  
 "TMPort":TMPort Port.

#### **"Device Description" edit field**

This edit field displays description of the device selected in the "Select Device Name" combo box.

If the device comes with multiple types, then description of the selected port appears.

#### **"Add New LDN" edit field**

Enter a logical device name for the selected device.

The name can be up to 16 characters, but it cannot contain the "\" character.

In addition, the same logical device name cannot be used again in the same device class.

If the logical device name is invalid, then the [Next] button appears dimmed and it is impossible to proceed to the next step.

#### **"CheckHealth Interactive" button**

Use this button to call the CheckHealth method for the selected device using Level = OPOS\_CH\_INTERACTIVE.

If the selected device is not HardTotals, then it is not displayed.

#### **"Device Specific Settings" button**

Use this button to display the "Device Specific Settings" dialog box and change the device specific settings for the selected device.

If the selected device is not HardTotals, then it is not displayed.

Even for HardTotals device, if it does not support device specific settings, it appears dimmed.

**[Back] button**

Use this button to go back to the previous screen.

**[Next] button**

Use this button to go to the next screen, the communication setting screen. If the selected device is HardTotals, then this button becomes the [Finish] button.

**[Finish] button**

Use this button to save the current settings to the registry and close the “Add New Device” wizard.

If the selected device is not HardTotals, then this button becomes the [Next] button.

**[Cancel] button**

Use this button to cancel the settings and return to the main window.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

**3.3.1.3. Communication Settings Screen (for serial, parallel, or USB)**

In this screen, set a port to connect as well as its details.

**The addition of device. [Port Details]**

COM Port Setting

COM1 Port used by (None)

A setup of details of the port.

BaudRate 9600 bps InputBuf 1024

BitLength 8 bit OutputBuf 1024

Parity NONE Output Interval Time 2500 msec

StopBit 1 bit Input SleepTime 10 msec

Handshake DTR/DSR

Interactive CheckHealth Device Specific Settings

< Back Finish Cancel Help

This screen appears if a device of the serial, parallel, or USB port is selected in the add device screen.

### **"A setup of the port" combo box**

Depending on the type of port of the selected device, the following combo boxes are available.

For serial port : "COM Port Settings" combo box

For parallel port: "LPT Port Settings" combo box

For USB port : "USB Port Settings" combo box

From the combo box, select a port number for the serial, parallel, or USB port.

If "None" is selected, then the port settings will be deleted.

For serial and parallel ports, it is possible to use the port range dialog box to change their port ranges.

For USB port, when the communication settings screen appears, all of the USB driver's connectable ports become the selectable range.

### **"Port is being used by" combo box**

Use this combo box to display a list of devices that has been already set up for the selected port number.

### **"Auto Setting" button**

Use this button to start the setting wizard to search and set the USB port numbers automatically.

If a port that is not USB is selected, then this button does not appear.

### **"Baudrate" combo box**

Use this combo box to display and select the communication speed for the serial port.

The values that can be used depend on the device information file (INF file).

For details, refer to the hardware manual of the device.

If the port selection is parallel, USB, or "None", then this combo box cannot be used to change the setting.

### **"BitLength" combo box**

Use this combo box to display and select the data bit length of the serial port.

The values that can be used depend on the device information file (INF file).

For details, refer to the hardware manual of the device.

If the port selection is parallel, USB, or "None", then this combo box cannot be used to change the setting.

### **"Parity" combo box**

Use this combo box to display and select the parity bit of the serial port.

The values that can be used depend on the device information file (INF file).

For details, refer to the hardware manual of the device.

If the port selection is parallel, USB, or "None", then this combo box cannot be used to change the setting.

### **"StopBit" combo box**

Use this combo box to display and select the stop bit of the serial port.

The values that can be used depend on the device information file (INF file).

For details, refer to the hardware manual of the device.

If the port selection is parallel, USB, or "None", then this combo box cannot be used to change the setting.

### **"Handshake" combo box**

Use this combo box to display and select the handshake type of the serial port.

The values that can be used depend on the device information file (INF file).

For details, refer to the hardware manual of the device.

If the port selection is parallel, USB, or "None", then this combo box cannot be used to change the setting.

### **"InputBuf" edit field**

This edit field supports only Version 1.xx devices.

Use this edit field to display and set the input buffer size of the serial port.

The acceptable range is 32 to 8192.

For details, refer to the hardware manual of the device.

If the port selection is parallel, USB, or "None", then this edit field cannot be used to change the setting.

#### **"OutputBuf" edit field**

Use this edit field to display and set the output buffer size of the serial or parallel port.

The acceptable range is 32 to 1024, but restrictions apply to some devices depending on the device information file (INF).

This setting is valid for parallel port, and it is possible to specify the size of data to output.

For details, refer to the hardware manual of the device.

If the port selection is USB or "None", then this edit field cannot be used to change the setting.

#### **"Output Interval Time" edit field**

Use this edit field for set the retry time to use when output fails. For details of output interval time, please refer to the "[5.8 Glossary](#)" of this manual. The acceptable range is 0 to 9999. For details, refer to the hardware manual of the device.

If the port setting is "None", this field cannot be used to change the setting.

#### **"Input SleepTime" edit field**

This edit field supports only Version 1.xx devices.

Use this edit field to display and set the sleep time to use by the Sleep API in input.

The acceptable range is 0 to 99.

For details, refer to the hardware manual of the device.

If the port selection is USB or "None", then this edit field cannot be used to change the setting.

#### **[CheckHealth Interactive] button**

Use this button to call the CheckHealth method for the selected device using Level = OPOS\_CH\_INTERACTIVE.

If the port setting is "None", then this button is disabled and afterwards interactive CheckHealth is not executed.

#### **[Device Specific Settings] button**

Use this button to display the "Device Specific Settings" dialog box and change the device specific settings for the selected device.

If the port setting is "None" or the selected device does not support device specific settings, then this button becomes dimmed and disabled.

**[Back] button**

Use this button to go back to the device selection screen.

**[Finish] button**

Use this button to save the current settings to the registry and close the "Add New Device" wizard.

**[Cancel] button**

Use this button to cancel the settings and return to the main window.

**[Help] button**

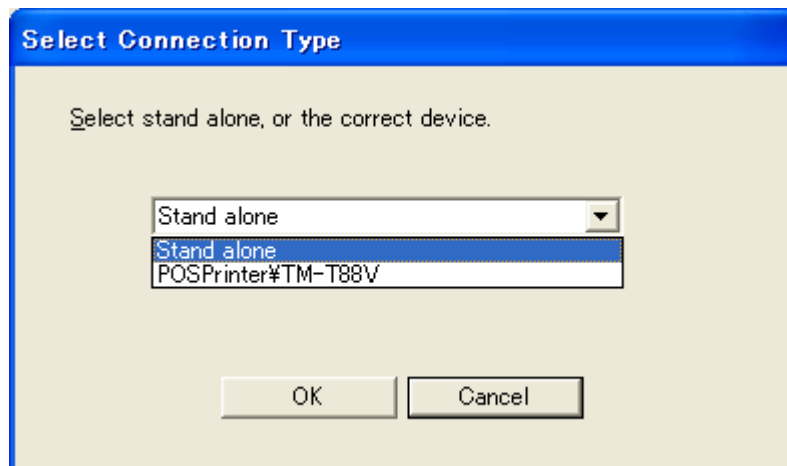
Use this button to display the help on the dialog box by clicking this button.



#### 3.3.1.4. Select Connection Type Screen (for LineDisplay and CashDrawer device)

In this screen, select the connection condition and connection device.

The connection type and/or connected device must be selected when registering a LineDisplay or Cashdrawer.



#### “Select Stand alone, or the correct Master device.” combo box

Available connection types or devices are displayed for the device selected on the "Add New Device [Select DeviceNameKey]" screen.

### 3.3.1.5. Communication Settings Screen (for network or wireless device)

In this screen, set a port to connect as well as its details.

This screen appears if the network or wireless device is selected in the add device screen.

#### “IP address/Host name” edit box

Use the edit field to specify a network or a wireless device's IP address or host name.

If an IP address or host name is already set up, the address or name appears in the edit field.

The network settings set the input value by pushing the [Update] button.

If the device that has been set is on the port to be set, depending on the capability of the device and selected device, a message not to set the device to the port appears. In this case, the port setting is invalid.

#### [Update] button

Use this button to save the entered IP address or host name to the registry.

If a device already exists at the IP address or host name entered into the edit field, then a message appears and the change is not accepted.

### **"Port is being used by" combo box**

Use this combo box to display a list of devices that has been already set up for the selected IP address or host name.

### **From "Baudrate" to "Handshake" combo boxes**

These settings are for the serial port. The network device does not need this setting.

### **"InputBuf" edit field**

The network device does not need this setting.

### **"OutputBuf" edit field**

Use this edit field to display and set the output buffer size of the network.

The acceptable range is 32 to 1024, but restrictions apply to some devices depending on the device information file (INF).

For details, refer to the hardware manual of the device.

If the port selection is "None", then this edit field cannot be used to change the setting.

### **"Output Interval Time" edit field**

Use this edit field for set the retry time to use when output fails. For details of output interval time, please refer to the "[5.8 Glossary](#)" of this manual. The acceptable range is 0 to 9999.

For details, refer to the hardware manual of the device.

If the port setting is "None", this field cannot be modified.

### **"Input SleepTime" edit field**

This edit field supports only Version 1.xx devices.

Use this edit field to display and set the sleep time to use by the Sleep API in input.

The acceptable range is 0 to 99.

For details, refer to the hardware manual of the device.

If the port selection is "None", then this edit field cannot be used to change the setting.

### **[CheckHealth Interactive] button**

Use this button to call the CheckHealth method for the selected device using Level = OPOS\_CH\_INTERACTIVE.

If the port setting is "None", then this button is disabled and afterwards interactive CheckHealth is not executed.

### **[Device Specific Settings] button**

Use this button to display the "Device Specific Settings" dialog box and change

the device specific settings for the selected device.

If the port setting is "None" or the selected device does not support device specific settings, then this button becomes dimmed and disabled.

**[Back] button**

Use this button to go back to the device selection screen.

**[Finish] button**

Use this button to save the current settings to the registry and close the "Add New Device" wizard.

**[Cancel] button**

Use this button to cancel the settings and return to the main window.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

### 3.3.1.6. Communication Settings Screen (for TMPORT device)

In this screen, set a port to connect as well as its details.

This screen appears if a device of the TMPORT is selected in Select DeviceName Key screen.

**Add New Device [Communication Settings]**

TMPORT Settings

TMPORT1 (COM1) Port is being used by (None)

Make Port Update Port

Setup of details of the port.

BaudRate 9600 bps

BitLength 8 bit

Parity NONE

StopBit 1 bit

Handshake DTR/DSR

CheckHealth Interactive Device Specific Settings

< Back Finish Cancel Help

**"TMPORT Settings" combo box**

Selects a port of TMPORT for connect.

**[Make Port] button**

Displays the [TMPORT making] dialog box.

**[Update Port] button**

Updates the TMPORT that is able to connected.

**"Port is being used by" combo box**

Use this combo box to display a list of devices that has been already set up for the selected port number. When Hydra connected device is set, confirm the displayed device.

**Setup of Details of the port**

**"BaudRate" combo box**

Use this combo box to display or set the communication speed of the serial port. The values that can be used depend on the device information file (INF file). For information on the communication speed, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the speed is displayed but cannot be modified.

**"BitLength" combo box**

Use this combo box to display or set the data bit length of the serial port. The values that can be used depend on the device information file (INF file). For information on data bit length of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

**"Parity" combo box**

Use this combo box to display or set the parity bit length of the serial port. The values that can be used depend on the device information file (INF file). For information on parity bit of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

**"StopBit" combo box**

Use this combo box to display or set the stop bit of the serial port. The values that can be used depend on the device information file (INF file). For information on stop bit of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

**"Handshake" combo box**

Use this combo box to display or set the handshake of the serial port. The values that can be used depend on the device information file (INF file). For information on handshake of the device, refer to the hardware manual of the device.

If the selected port is parallel, USB, network, wireless port, Bluetooth, or "None", then this setting cannot be set or changed. For a slave device in Hydra connection, the value is displayed but cannot be modified.

**[CheckHealth Interactive] button**

Use this button to execute the CheckHealth method using Level = OPOS\_CH\_INTERACTIVE for the device. If the port setting is "None", then this button is disabled. For details, refer to the manual of the device.

**[Device Specific Settings] button**

Use this button to display the "Device Specific Settings" dialog box and change the device specific settings for the selected device. If the selected device does not support device specific settings, then this button is disabled. For details, refer to the manual of the device.

**[Back] button**

Use this button to go back to the previous screen.

**[Finish] button**

Use this button to save the current settings to the registry and close the "Add New Device" wizard.

**[Cancel] button**

Use this button to cancel the changes and close the dialog box. Any changes in the settings will not be saved to the registry.

**[Help] button**

Use this button to display the help on the dialog box by clicking this button.

### 3.3.1.7. TMPORT Making

In this screen, creates a port of TMPORT.

#### "Port Type" combo box

Displays a port type that can be created.

When the "COM", "LPT", or "Bluetooth" is selected:

Chooses a port in the "Physical Port (Only COM, LPT, and Bluetooth)" combo box.

When the "USB" is selected:

Chooses a device in the "Connect Device" combo box.

When the "NET" is selected:

Inputs an IP address in the "Physical Port (Only NET)" combo box.

#### "Physical Port (Only COM, LPT, and Bluetooth)" combo box

This setting only becomes effective when you select COM, LPT or Bluetooth in the "Port Type" combo box. Only the port recognized by the system is displayed.

You cannot create a new port at the physical port which has already registered in TMPORT.

When using a Bluetooth device, select the COM port of the Bluetooth device.

Before registering a Bluetooth-connected device in SetupPOS, configure the COM port of the Bluetooth device. Refer to the "Product Manual" for instructions. When using the "TM Bluetooth connector Utility," select "COMx."

#### **"Physical Port (Only NET)" edit field**

This setting only becomes effective when you select NET in the "Port Type" combo box. As the default, "0.0.0.0" is displayed.

You cannot create a new port at the IP address which has already registered in TMPort.

You cannot specify the host name.

#### **"Connect Device (Only USB)" combo box**

This setting only becomes effective when you select USB in the "Port Type" combo box. The connectable ports are displayed.

#### **"Make Port Name" edit field**

Displays the name of port that is created.

#### **[OK] button**

Creates a port of TMPort according to the type of port selected.

#### **[Cancel] button**

Use this button to cancel the operation and return to the previous window.

#### **[Help] button**

Use this button to display the help on the dialog box by clicking this button.

### **3.3.2. Using the USB AutoSetup Wizard**

In the communication settings screen, if the [Auto Setting] button is selected, then a message appears.

If the [OK] button is selected, then the "USB AutoSetup" wizard starts and searches an appropriate USB port number to the selected devices.

#### **3.3.2.1. Screen for the User to Select a Model**

This screen appears if it is possible that the selected device is a slave device with Hydra connection (specifically, a device other than POSPrinter).

#### **"Master Device" combo box (POSPrinter)**

Use this combo box to select the master device of a device to be searched.

#### **[Browse] button**

Use this button to open the file open common dialog box and select a master device's INF file from a location other than the specified folder.



**[OK] button**

Use this button to start searching for the USB port number according to the information of the selected master device.

**[Cancel] button**

Use this button to cancel the operation, and then return to the device communication settings wizard of the "Add New Device" wizard or the "Communication settings" dialog box.

When the search is complete, one of the screens from (1) to (3) appears.

**(1) If only one search target device is found:****"The number has been searched below." edit field**

A port number in the search result appears.

**[OK] button**

Use this button to end the "USB AutoSetup" wizard, and set the port number (found in the search) to "USB Port Setting" of the communication setting.

**[Search] button**

Use this button to search the port number again.

**[Cancel] button**

Use this button to cancel the operation, then return to the device communication settings wizard of the "Add New Device" wizard or the "Communication settings" dialog box.

**(2) If multiple search target devices are found:****"The number has been searched below." edit field**

Multiple port numbers in the search result appear. To set the port number manually, click the [OK] button after selecting the port number.

To narrow the port number choice, press the [Search] button again.

**[OK] button**

Use this button to end the "USB AutoSetup" wizard, and set the port number (found in the search) to "USB Port Setting" of the communication setting.

**[Search] button**

Use this button to search the port number again. Usually, use this button to narrow the port number choice from the multiple port numbers. Before searching again, open the cover of the POSPrinter not to be included in the search target so that communication becomes not possible.

**[Cancel] button**

Use this button to cancel the operation, then return to the device

communication settings wizard of the “Add New Device” wizard or the “Communication settings” dialog box.

**(3) If no search target device is found:**

**[Search] button**

Use this button to search the port number again.

Before searching again, make sure the target devices are correctly stated and are connected.

**[Cancel] button**

Use this button to cancel the operation, then return to the device communication settings wizard of the “Add New Device” wizard or the “Communication settings” dialog box.

### **3.4. About the Warning Dialog Box**

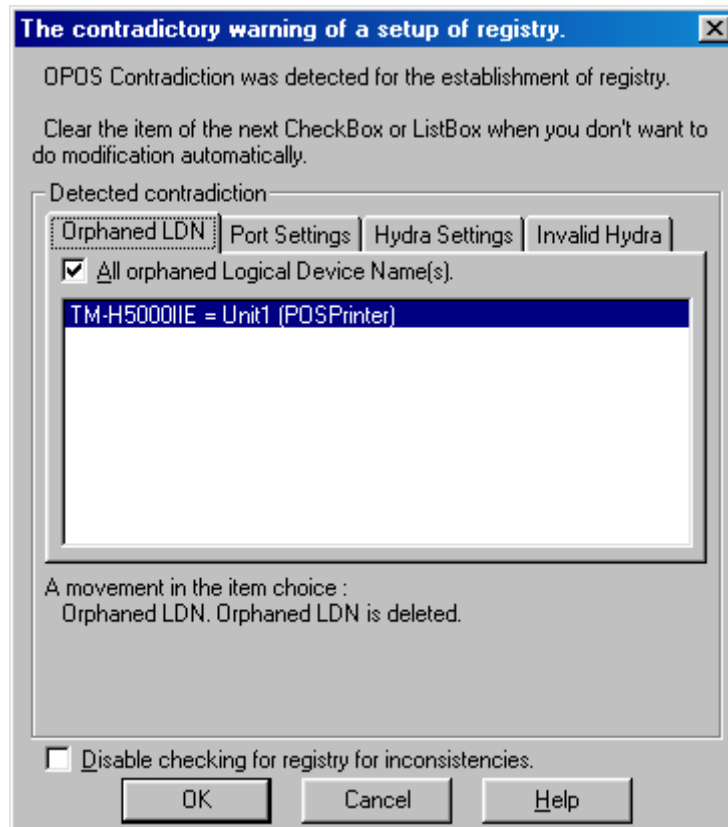
#### **3.4.1. The Contradictory Warning of a Setup of Registry**

If inconsistency is found in the OPOS registry settings when the Setup program starts, or after devices are registered or settings modified, this dialog box appears. The detected inconsistency is listed in the list box of the appropriate tab of the dialog box. If multiple inconsistencies occur, they are listed in the list boxes of the respective tabs.

Four types of inconsistencies can be detected, as listed below:

- (1) Logical device inconsistency
- (2) Port settings inconsistency
- (3) Hydra settings inconsistency
- (4) Invalid Hydra inconsistency

It is possible to correct the registry inconsistency automatically for the selected item by clicking the [OK] button. Usually, use this method to correct the problem. However, this approach may result in losing all of the settings. To avoid some automatic corrections, clear the selected items in the list box, or click the [Cancel] button. By clicking the [Cancel] button, the registry inconsistencies listed in the list boxes are ignored and the operation continues. On the other hand, to perform the correction for each list, select the desired tabs and then select or clear items in the list boxes.



### 1. "Orphaned LDN" tab

The "Orphaned LDN" (logical device name) tab contains the following fields.

#### "All orphaned Logical Device Name(s)." check box

Select or clear multiple item in the list box, and this check box indicates the type of the selection, as follows:

- If all items are selected : this check box is selected.
- If only some items are selected : this check box is in an undetermined state.
- If all items are cleared : this check box is cleared.

#### "Orphaned LDN" list box

This list box displays a list of orphaned logical device names.

An orphaned logical device name is a logical device name, which has been used, but its device has been deleted.

Logical device names selected in this list box will be deleted.

Not to delete them, clear their selections from the list box.

### 2. "Port Settings" tab

The "Port Settings" tab contains the following fields.

#### "All inconsistent port setting for hydra device(s)." check box

Select or clear multiple item in the list box, and this check box indicates the type of the selection, as follows:

- If all items are selected : this check box is selected.
- If only some items are selected : this check box is in an undetermined state.
- If all items are cleared : this check box is cleared.

#### "Port Settings" list box

All devices with Hydra connection must have the same communication settings.

If there are slave devices with different communication settings, they are listed in the list box, and they will be corrected so as to have the same communication settings as their master devices.

To continue using different communication settings despite the warning, just clear the selections from the list box.

### 3. "Hydra Settings" tab

The "Hydra Settings" tab contains the following fields.

#### "All hydra device settings." check box

Select or clear multiple item in the list box, and this check box indicates

the type of the selection, as follows:

- If all items are selected : this check box is selected.
- If only some items are selected : this check box is in an undetermined state.
- If all items are cleared : this check box is cleared.

#### **"Incorrect Hydra mark(s):" list box**

This list box indicates inconsistency in the Hydra information set in the registry.

It first shows the correct setting (ON or OFF).

This problem only occurs in Hydra settings for version 1.xx of the application.

It occurs when there is inconsistency in the Hydra or Shydra registry setting, which indicates Hydra.

#### **"Bad uses:" list box**

This list box indicates inconsistency in Hydra's master device information set in the registry.

The registry of each Hydra-related device must have information of the master device (Uses).

If this information is illegal, the inconsistency in the master device is listed, and then the correct master device is installed.

Hydra settings selected here will be automatically corrected.

To continue using the illegal Hydra settings despite the warning, just clear the selections from the list box.

Usually, the SetupPOS program automatically registers normal Hydras to the registry.

The Hydra settings inconsistency may occur when the OPOS registry is modified directly.

Therefore, do not use a utility such as REGEDIT to change the OPOS registry directly.

#### **4. "Invalid Hydra" tab**

The "Invalid Hydra" tab contains the following fields.

##### **"All invalid Hydra settings." check box**

Select or clear multiple item in the list box, and this check box indicates the type of the selection, as follows:

- If all items are selected : this check box is selected.
- If only some items are selected : this check box is in an

undetermined state.

- If all items are cleared : this check box is cleared.

#### **" Invalid Hydra" list box**

This list box displays a list of invalid Hydras.

Depending on the capability of the device, the Hydra connection's range is determined.

If a device on a port exceeds its capability, a list of its related devices (inconsistency) appears in the list box.

Inconsistent devices selected in the list are automatically corrected.

In other words, settings of ports such as COM1 become undefined ("None").

Not to have the port setting become undefined, clear the selection of the device from the list box.

#### **"Disable checking for registry for inconsistencies." check box**

To stop validating Hydra inconsistency from now on, select this check box.

This check box setting is reflected in the "Validate" check box in the main window.

To restart registry validation, select the "Validate" check box again in the main window.

We recommend clearing this check box. When automatic validation is not required, clear this check box.

In this case, the user must make sure the OPOS registry is correctly set.

#### **[OK] button**

Use this button to enable automatic correction on the selected items and return to the main window.

#### **[Cancel] button**

Use this button to cancel the settings and return to the main window.

#### **[Help] button**

Use this button to display the help on the dialog box by clicking this button.

### 3.5. Messages

When performing operations or settings from a dialog box, some messages may appear.

This section explains the various messages.

#### 3.5.1. Messages Explanations

##### 1. Adding a logical device name

- (1) When specifying a LDN which has been used (logical device name for a deleted device), the following message appears:

"Logical Device Name "LogicalDeviceName" was used to refer to "DeviceNameKey". Do you want to update it ?"

This operation will change an old device name key for an existing logical device name to a device name key to be added.

##### 2. Deleting a logical device name

- (1) When deleting a logical device name, the following message appears:

"Logical Device Name "Unit 1" is used to refer to "TM-T88IVM". Do you want to remove it ?"

This operation will delete the selected logical device name.

##### 3. Deleting a device

- (1) When deleting a device name key, the following message appears:

"Are you sure you want to delete all setting information about device (TM-T88IVM)?"

This operation will delete the selected logical device.

- (2) When the device to be deleted is a master device with Hydra connection, the following message appears:

"Hydra connection with the device. Delete the device simultaneously."

##### 4. Modifying logical device name

- (1) When changing the name of a logical device from "Unit1" to "Unit2", the following message appears:

"If you change the LDN from "Unit1" to "Unit2", it may affect some application settings. Do you want to rename it ?"

- (2) When trying to change the name of an existing logical device, the following message appears:

"If you change the LDN from "Unit1" to "Unit2", it may affect some application settings. Do you want to rename it ?"

If selecting the [Yes] button, then the following message appears:

"Logical Device Name "Unit 1" is used to refer to "TM-T88IVM". Do you want to replace it ?"

5. When changing a port causes an inconsistent Hydra state, the following message appears:

"Device will not be set as COMn."

6. When trying to connect a device (slave device), which requires a master device, to a port by itself only, the following message appears:

"No master device detected. You must set/add a proper master device for this device."

7. When changing the port of a master device with Hydra setting, the following message appears:

"This device has been set as a master device. Hydra settings must be changed accordingly."

8. When trying to connect a new device to a port with Hydra configuration or which is connected to devices, if the new device is neither alone nor Hydra, then the following message appears:

"Hydra connection detected for 'device name'. If the device is to be stand alone, select [No]. Do you want to set it to be a slave device ?"

9. When trying to connect a new device to a port connected to Hydra-configurable devices, if the devices which has limit of device which can connect and the device to fall outside the limit exist, then the following message appears:

"The master device and the slave device combination is not proper. You must use this device under proper device combination. The changes to the serial port setting will be canceled."

10. The range of Hydra connection depends on the capability of the master device. When trying to add a new device to a port so that this operation exceeds the capability of the port, the following message appears:

"Improper Hydra device(s) detected: Device will not be set as COMn."

Note: The location of COMn, depending on the specified port, becomes LPTn, USBn or IP address/Host name.

#### <CheckHealth Interactive>

- (1) When running the interactive CheckHealth,  
Its execution result appears.



## &lt;Export registry dialog box&gt;

- (1) When exporting the registry, the following message appears:  
 " OPOS registry is kept as registry data file. To keep registry data file, the backup copy of "OPOS ADK Disk-1" is made, it, drive A : Insert it. The same OPOS environment can be reproduced by using "OPOS ADK Disk-1" that it is renewed on this more than one target machine. "

All : Register all information.  
 Selecting : Register selected items' information.  
 Hydra : Register all information about Hydra connection.

- (2) When overwriting a file, the following message appears:  
 " (A file name) already exists! Do you want to replace them? ([Yes]=Replace. [No]=Append.) "

## &lt;Port range dialog box&gt;

- (1) When specifying a number small than the maximum number of COM ports used by devices, the following message appears:  
 "Currently using a COM port that is higher than the specified maximum value. Cannot set COM Port maximum."
- (2) When specifying a number small than the maximum number of LPT ports used by devices, the following message appears:  
 "Currently using a LPT port that is higher than the specified maximum value. Cannot set LPT Port maximum."

## &lt;Trace settings dialog box&gt;

- (1) When changing the trace settings for TM-T88IVM and selecting an another device, the following message appears:  
 "Trace settings for POSPrinter\TM-T88IVM have been changed. Do you want to save the change(s) ?"

## &lt;Message handling dialog box&gt;

- (1) During synchronization, if message handling is selected, the following message appears:  
 " Do not execute OPOS methods/properties when the OPOS method is executed during synchronous. Otherwise, it is possible that the program may unexpectedly hang. Do you want to change it ?"

## &lt;Sleep time settings dialog box&gt;

- (1) When changing the sleep time settings for TM-T88IVM and selecting an another device, the following message appears:  
 "POSPrinter\TM-T88IVM has been changed. Do you want to save the

change?"

<Change of component dialog box>

- (1) If the installer does not exist in the specified folder, the following message appears:

" Fails to start up Setup.exe."

<Add New Device wizard>

- (1) For browsing INF files, when specifying an illegal INF file, the following message appears:

"Select a correct device class INF file."

- (2) When the combination of master and slave devices is illegal, the following message appears:

"The master device and the slave device combination is not proper.

You must use this device under proper device combination. The port setting for this device will be UNDEFINED."

- (3) When the combination with Hydra is improper, the following message appears:

"Improper Hydra device(s) detected: Device will not be set as COMn. It will leave the port setting UNDEFINED."

- (4) When specifying an illegal Hydra connection, the following message appears:

"This setting may cause a port conflict if the device is not setup properly. "

- (5) When trying to connect a device, which requires a master device, to a port by itself, and the master device cannot be found, then the following message appears:

"No master device and the slave device combination is not proper. You must use this device under proper device combination. The changes to the serial port setting will be canceled. "

- (6) When addition of a device causes its combination with the master device to become improper, the following message appears:

"The master device and the slave device combination is not proper. You must use this device under proper device combination. The port setting for this device will be UNDEFINED."

Note: The location of COMn, depending on the specified port, becomes LPT, USB, Ethernet, or IEEE802.11.

## &lt;CCO registration&gt;

When a file does not exist at the specified location, the following message appears:

"Specified file cannot be found."

## &lt;Sharing with non-EPSON CO and SO&gt;

## (1) Sharing with non-EPSON CO

When accessing CO where non-EPSON CO is registered, the following message appears:

"Another company's CO registered. Cannot use this function."

## (2) Sharing with non-EPSON SO

When accessing SO where non-EPSON SO is registered, the following message appears:


"Another company's SO registered. Cannot use this function."

### 3.6. Using Devices

This section explains how to set up or delete a device, using POSPrinter TM-T88IVM as an example.

#### 3.6.1. Setting up a Device

To set up POSPrinter TM-T88IVM as a device, use the "Add New Device" wizard of SetupPOS.

Start the wizard either by selecting "Add New Device" from the Edit view, or clicking the  [Add New Device] button on the tool bar.

Or, select the POSPrinter in the left pane of the main window, and then right-click to bring up a pop-up menu and select Add New Device. (In this case the step starts from **<Select device screen>**.)

Following the instructions in each screen of the wizard, set up the device as described in the following procedure.

(Operations in each screen)

[Next] button : Click this button to accept the changes in the current screen and then proceed to the next screen.

[Back] button : Click this button to clear the current settings and go back to the previous screen.

[Cancel] button : Click this button to cancel the operation.

[Help] button : Click this button to display appropriate help.

Perform these operations as required in each screen.

**<Device class selection screen>**

For device class: Select POSPrinter and then click the [Next] button.

**<Device selection screen>**

Select Device Name : Select "TM-T88IVM."

Select detailed model : Select "TM-T88IVM."

Used Port : "COM" is displayed.

Device Description : "EPSON TM-T88IVM POS Printer" is displayed.

INF File Name : INF file name of TM-T88IVM is displayed.

[Browse] button : Not used for this time.  
(Use this button when selecting a different INF file of TM-T88IVM which exists other than the folder where EPSON OPOS ADK is installed.)

Add New LDN : If necessary, enter "Unit1."  
(It is possible to enter this information after the wizard ends. From the Edit menu, select "Add New LDN."  
Another method is to select a device name key and right-click it. From the pop-up menu, select "Add New LDN.")

Click the [Next] button.

**<Communication settings screen>**

"COM Port Setting" \* Select the following items.

Port setting : "COM1"

[Auto Setting] button : In this example, it is not displayed.  
(It appears when setting a device using the USB port.)

"Port is being used by":  
It does not appear if there is no device in use. If the port is already used in another device, then the name of the device appears here.

"Setup of details of the port." \* Set the following items.

BaudRate : 19200  
 Bit length : 8 bits  
 Parity : NONE  
 Stop bit : 1 bit  
 Handshake : DTR/DSR  
 Output buffer length : 1024  
 Output interval time interval : 1000

[CheckHealth Interactive] button:

Click this button and make sure this setting allows for normal communication and printing.

[Device Specific Settings] button:


If necessary, click this button to change the device specific settings.

Click the [Finish] button

The window displays the settings of TM-T88IVM.

### 3.6.2. Removing a Device

Delete a device using one of the following three methods.

- (1) In the main window, select the device name key to be deleted (in this case TM-T88IVM). From the Edit menu, select Delete. When a confirmation message box appears, select Yes to delete the device.
- (2) Select the device name key to be deleted (in this case TM-T88IVM). Right-click to bring up a pop-up menu and select Delete. When a confirmation message box appears, select Yes to delete the device.
- (3) In the main window, select the key of the device name to be deleted (in this case TM-T88IVM). Then click the [Delete]  icon on the tool bar. When a confirmation message box appears, select Yes to delete the device.

### 3.7. Glossary

INF file	Each model comes with one information file. During installation, the information files are copied to the same folder where EPSON OPOS ADK is installed. These files are used to configure devices.
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Device Class	In the Device Class view of the main window, device class is the device type displayed below Device. Device classes used in EPSON OPOS ADK are as follows: CashDrawer, HardTotals, Keylock, LineDisplay, MICR, MSR, CheckScanner, POSPrinter and ElectronicJournal. For detailed explanations of the devices available, refer to the "OPOS Registry Usage" section of the "OPOS Application Programmer's Guide".
Device Name Key	When a device is added, it appears in the Device Class view of the main window below device class. If no device is set for the selected device class, then this information is not displayed. For example, the device name key of POSPrinter's TM-295 is "POSPrinter¥TM295."
Logical Device Name (LDN)	An another name used to identify a device. Each device can have a logical device name. However, a logical device name which is already being used by the same device class cannot be specified. For example, if a logical device name "Unit1" is already assigned to a device called TM-295 of POSPrinter, then "Unit1" cannot be used again as a logical device name for TM-88IV in the same device class (POSPrinter). Using the logical device names does not need to specify the device name key directly and so makes application development versatile.
Registry	OPOS uses the system registry to store and reference device information. Although it is possible to view the information using the REGEDIT utility, do not change the SetupPOS program. For details, refer to the "OPOS Registry Usage" section of the "OPOS Application Programmer's Guide".
Input buffer length	It sets the size of the input buffer (unit in bytes; a area in the PC's memory for temporarily storing input data). Because this preset value has been optimized, usually it is not necessary to modify it. If this value is changed smaller than the preset one, the input response may deteriorate. On the other hand, if the new value is larger than the preset one, input response for large amount of data input would improve. Therefore, adjust this value if the input response is bad.
Output buffer length	It sets the size of the output buffer (unit in bytes; a area in the PC's memory for temporarily storing output data). Because this preset value has been optimized, usually it is not necessary to modify it. If this value is changed larger than the preset one, data loss may occur. On the other hand, if the new value is smaller than the preset one, the output performance may deteriorate. Therefore, unless there is a necessary, do not change the preset value.
Output Interval Time	Time interval for retry in the case output fails. If not even 1 byte is output for the set time, the Timeout error occurs. While this preset value has been optimized, modify it (usually by increasing it rather than decreasing it) if the Timeout error frequently occurs during printing at your environment. On the other hand, timeout errors which occur when communication is not possible due to physical problems such as cover being opened are normal. Change this value for cases where timeout error occurs during printing even though printing is possible.

Input Sleep Time	During the waiting for input, EPSON OPOS ADK can call Sleep (a WIN32 API). The input sleep time is the value (msec) to pass to the Sleep function. This preset value has been optimized and usually it does not need to be changed. Input processing (ReadFile) uses the CPU exclusively. When input process is performed while there is no input data in particular, because data event does not occur, the application looks like it is not running (hangs). To solve this problem, use the Sleep function between input processes so that control (of CPU) can be passed to other applications as much as possible. (Executing the Sleep function passes to other processes.) Try to use the preset input sleep time value, because if changing the value decreases the input response. To change the input sleep time value by all means, change it in a way that strikes a balance between input response and application performance.
Port	EPSON OPOS ADK uses the following types of ports: serial(COM), parallel(LPT), USB, Ethernet, IEEE802.11., and Bluetooth
Trace	The trace (log) function provides support for application development. Usually this function is used only for debugging OPOS applications; it is not used for other purposes. To change the trace settings, use the "OPOS API trace settings" dialog box. Note that for version 1.xx, the trace function can be used only if an EPSON OPOS ADK supporting trace is installed.
Message handling	Depending on the application, some methods may require a lot of time to process. If the application needs to extract a message during the method processing duration, the message handling function is used. Do not use this function.
Sleep time	In the programs for waiting for input from device inside the driver or long programs which keep the CPU time use exclusively, EPSON OPOS ADK can call Sleep (a WIN32 API) to pass control to other programs. The input sleep time is the value (msec) to pass to the Sleep function. Changing the sleep time changes the ratio of CPU time used by a particular device. To change the sleep time for input wait programs, use the port detail settings of each device.
Log file	A file for recording the execution result of the trace.
Master Device	The device for Hydra connection, the host device will be referred to as "Master Device". When the Hydra connection: POSPrinter When the Pass-through connection: LineDisplay
Slave Device	The device for Hydra connection, the destination device will be referred to as "Slave Device". When the Hydra connection: MICR, CheckScanner, ElectronicJournal, LineDisplay, CashDrawer When the Pass-through connection: POSPrinter, MICR, CheckScanner, ElectronicJournal, CashDrawer
TMPORT	Ports created by OPOS and virtual ports are called TMPORT.

## Section 4. EPSON™ USB Driver

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The methods for installing the USB driver are explained below.

### 4.1. Installation

The installation can be done only by authorized users of the PC installation. Please request the authorized users for help.

- (1) The "Found New Hardware" Wizard is displayed when the EPSON UB-U01II/02II is detected.
- (2) Select "Locate and install driver software (recommended) ", then click on the [Next] button.
- (3) Select "Browse my computer for driver software (advanced)" Check "Include subfolders", and specify the location, and then click the [Next] button. (The driver files are copied to the OPOS destination folder).
- (4) After completed the installation of the driver, click on the [Finish] button to complete the installation.

#### 4.1.1. Precautions

- When UB-U01II/02II is being used, it is indicated with EPSON UB-U01II/02II.
- Ensure that USB equipment is installed in accordance with USB standards. Certain parts of these standards are listed below. There are several conditions in effect when creating a tree consisting of hubs that can accept multiple connections of USB mice, keyboards and other devices (known as nodes.)
  - A maximum of 127 nodes and hubs can be connected.
  - Only a single tree for USB hosts and route hubs exists.
  - A maximum of six branch levels are possible with the hubs. As this includes the PC route hub, only five will appear to actually exist.
  - The maximum length of the cable connecting hubs with hubs or nodes must be within five meters (under normal conditions.)
- If the following drivers are installed later when the EPSON TMFLogo Utility is being installed, the version of TMUSB driver is affected by those drivers. In such case, please update the TMUSB driver. For details of update ways, please refer to the "6.2 Updating an old version of the USB device driver" of



this section.

- - EPSON Advance Printer Driver
- - EPSON TM-J9000/J9100 Driver
- - EPSON OPOS ADK for .NET
- - EPSON JavaPOS ADK

## 4.2. Naming Devices

### 4.2.1. Device Names in the Registry

A “device name” is required for OPOS and other applications to access devices such as the TM printer. The device name for the USB to be used by the EPSON OPOS ADK is automatically added by the setup utility (hereafter SetupPOS) and the TM Flash log setup (hereafter TMFlogo) utility based on the information generated by the USB device driver. This device name is retained in the registry.

The following describes how to name USB devices.

When the port numbers are displayed by SetupPOS and TMFlogo, the device names to be used by EPSON OPOS ADK are assigned to each of the USB interface ports (hereafter “port”) following reference to the registry information generated by the USB device driver. These device names are assigned in the order of “TMUSB000”, “TMUSB001”, “TMUSB002”, etc., and assigned according to the following method. Once a device name has been assigned to a port, the same device name will always be used even if the device is disconnected from the PC and then reconnected again (same when the PC is reset). This is owing to the fact that the device names are managed as the ID numbers of ports. Accordingly, the device name assigned to the ID number of a given port is not assigned to a port having another ID number.

An example is shown below.

Operations when a TM printer has never been connected to the PC.

1. TM printer “A” connected (Port ID number “1”)      => TMUSB000
2. TM printer “B” connected (Port ID number “2”)      => TMUSB001
3. TM printer “C” connected (Port ID number “3”)      => TMUSB002
4. TM printer “A” disconnected (Port ID number “1”)
5. TM printer “A” connected (Port ID number “1”)      => TMUSB000  
(because TMUSB000 has been assigned to Port ID number “1”)
6. TM printer “B” disconnected (Port ID number “2”)
7. TM printer “D” connected (Port ID number “2”)      => TMUSB001

(because TMUSB001 has been assigned to the port ID number “2”, regardless of the TM printer)

\*As device names are assigned to the port ID numbers, the USB tree structure for connected printers can be located anywhere.

#### 4.3. Port Names on OPOS

The USB port names used with EPSON OPOS ADK will be assigned as follows in accordance with the device names set in the registry.

Registry	Port name (SetupPOS, TMFlogo, etc.)
TMUSB000	=> USB1
TMUSB001	=> USB2
TMUSB002	=> USB3
TMUSB003	=> USB4
...	
TMUSB010	=> USB11
TMUSB100	=> USB101

## Section 5. Warnings

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### 5.1. Precautions for Connecting with USB I/F

- When connecting a new device, turn on the device before running the “Add New Device” wizard. The disconnected or power-off devices are not recognized.
- If the port number of the device is not indicated on the Port Connection View screen during the connection, select the corresponding device on the Main View, or select [Auto Setting] button on the “Communication Settings” dialog box. The connected devices are recognized.
- When the same type of devices are registered already and some of the devices are turned off, there is a possibility that the turned off device's USB port number is replaced with the new one. Therefore, beware of registering multiple numbers of the same devices.
- Please note the following points when re-assigning USB ports:
  - Turn on the applicable device when doing automatic USB port setting.
  - If using several devices of the same model on different USB ports, only do automatic setting for one device.
  - Editing the registry during automatic USB port setting is not supported.

### 5.2. Other precautions

- If an installation is not completed successfully and reinstallation also fails, please do the following steps:
  - (1) Uninstall OPOS.
  - (2) Install OPOS version which is originally installed prior to installing this version.
  - (3) Install this version.
- **Version 2.80 or older cannot overwrite Version 3.00 or newer.**