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TM-P80 / TM-P60II
iOS Bluetooth Model

Technical Reference Guide

Connecting to iOS Devices

Describes how to connect iOS devices.

Application Development Information

Describes the development and distribution of iOS application.

Notes on Usage

Describes the precautions on using this printer and iOS devices.

Transmission Specifications

Describes the specifications on transmission.

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About this Manual

Aim of the Manual

- This manual aims to provide developers with operational information about functions for TM-P80 iOS Bluetooth models and TM-P60II iOS Bluetooth models.
- This manual describes additional items for the TM-P80 Bluetooth interface models or the TM-P60II Bluetooth interface models, and provides information on the differences between TM-P80 Bluetooth interface models, TM-P60II Bluetooth interface models, and iOS Bluetooth models.
- When this manual contains the same items as the manuals for the TM-P80 Bluetooth interface models or the TM-P60II Bluetooth interface models, priority is given to the contents of this manual.

Manual Content

The manual is made up of the following sections:

Contents

Connecting to iOS Devices

Supported Operating Systems and Devices

Supported OS

- iOS Ver.5.0.1 to 5.1.1
- iOS Ver.6.0 to 6.1.4
- iOS Ver.7.0 to 7.1.1

Supported devices

- iPhone 5s
- iPhone 5c
- iPhone 5
- iPhone 4s
- iPhone 4
- iPhone 3GS
- iPad Air
- iPad mini with Retina display
- iPad (4th generation)
- iPad mini
- iPad (3rd generation)
- iPad 2
- iPad
- iPod touch (5th generation)
- iPod touch (4th generation)

CAUTION	

Connecting from iOS Devices

Follow the steps below to establish a Bluetooth connection from an iOS device.

1 **On the "Settings" screen, tap [Bluetooth].**
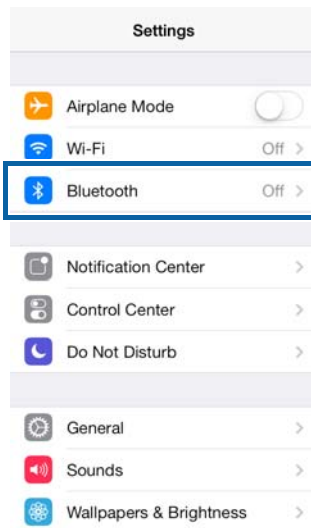
2 **Turn on the printer, and then on the iOS device, set Bluetooth to [On].**
The printer is displayed in the list of devices.
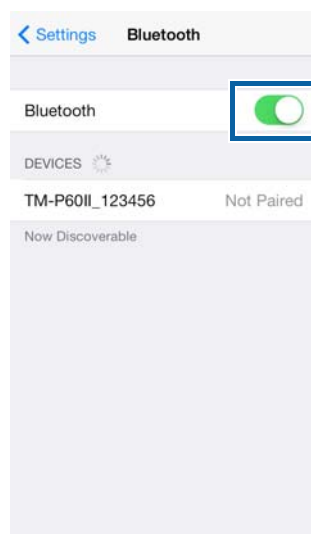
| NOTE | If the printer is connected to another computer, smart device, and so on, it may not be displayed in the list of devices. Disconnect the printer from the operating system of the device that is currently connected, and then try again. |

3   Tap the printer you want to use from the list of devices.

4   Check that the printer is connected to the iOS device.

Auto Reconnect

What is the Auto Reconnect Feature?

The auto reconnect feature allows the printer to automatically restore a connection if the Bluetooth connection to the iOS device is lost.

When this feature is enabled, in the following situations the printer automatically reconnects to the iOS device to which it was last connected.

- When the printer is turned on
- When the signal is dropped and then restored

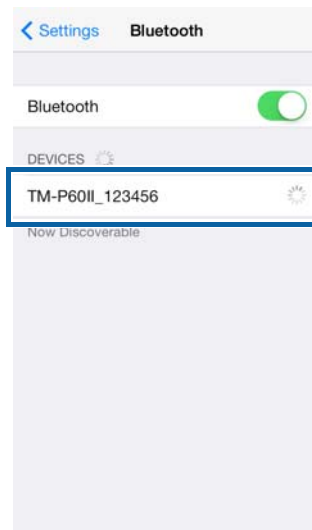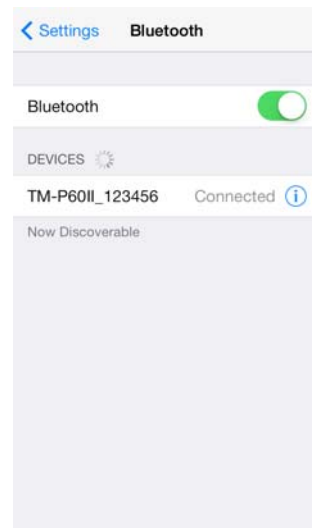When this feature is disabled, you need to reconnect from the Bluetooth settings screen on the iOS device every time.

Auto Reconnect Feature Settings	Usage	Feature
Enabled (Default)	This is the recommended setting when using a combination of one iOS device and the printer.	When the Bluetooth connection is lost, the printer runs the following reconnection sequence. **[Reconnection sequence]** 1. The printer tries to connect to the iOS device to which it was last connected. 2. When step 1 fails, the printer waits for connections from other iOS devices. 3. If connection is not established in step 2 after a fixed time has passed, the printer tries again to connect to the iOS device to which it last connected. Steps 2 and 3 are repeated until a connection is established.
Disabled	This is the recommended setting when sharing one printer with multiple iOS devices.	The printer waits for a connection from the iOS device.

∗ Disable this feature when using the printer from devices that are not running iOS. Otherwise, it may take some time to connect.

∗ In the following situations, even if the feature is enabled, the same operations are performed as when it is disabled.
  - When pairing is canceled from the connected iOS device.
  - When the last Bluetooth device connected was not an iOS device.
  - When wireless communication settings are initialized from the printer.

∗ For either setting, you need to turn off the Bluetooth setting on the connected iOS device to connect to another device.

∗ You can make auto reconnect settings in "Setting the Wireless Module Setup Mode" on the next page.

Setting the Auto Reconnect Feature

Setting the Wireless Module Setup Mode

1 **Load the roll paper, and then close the cover.**

2 **While pressing the Feed button, turn on the printer. (Keep pressing the button until the printer starts printing.)**
The printer starts printing the current status of the printer.

3 **After the printer status has been printed, press the Feed button. (Keep pressing the button until the printer starts printing.)**
The printer starts printing instructions.

4 **After the instructions have been printed, briefly press the Feed button four times.**

5 **Press the Feed button again. (Keep pressing the button until the printer starts printing.)**
The printer starts printing Wireless Module Setup instructions.

6 **Briefly press the Feed button twice.**

7 **Press the Feed button again. (Keep pressing the button until the printer starts printing.)**
The printer starts printing Bluetooth Setting instructions.

8 **Briefly press the Feed button once.**

9 **Press the Feed button again. (Keep pressing the button until the printer starts printing.)**
The printer starts printing Auto Re-Connect iOS instructions.

10 **<To enable> Press the Feed button once.**
<To disable> Press the Feed button twice.

When the following printer firmware versions are being used:
TM-P60II (5.12 ESC/POS or later), TM-P60II Peeler (6.12 ESC/POS or later), TM-P80 (1.01 ESC/POS or later)

11 **Press the Feed button again. (Keep pressing the button until the printer starts printing.)**
The selected setting value (Enable/Disable) is printed.

12 **The printer starts printing Wireless Module Setup instructions.**

Changing the settings is complete. You can turn off the printer.

When the following printer firmware versions are being used:
TM-P60II (5.11 ESC/POS or earlier), TM-P60II Peeler (6.11 ESC/POS or earlier), TM-P80 (1.00 ESC/POS or earlier)

11 **Press the Feed button again. (Keep pressing the button until the following message is printed.)**

"Please release the Feed button."

12 **The printer restarts.**

Initial Bluetooth Settings

Setting Contents	Setting Items	Initial Settings
Bluetooth communication settings	Bluetooth passkey	"0000"
	Bluetooth device name	TM-P80 : "TM-P80_xxxxxx" TM-P60II : "TM-P60II_xxxxxx" (Where xxxxxx is the last six digits in the serial number)
	Bundle Seed ID	"TXAEAV5RN4"
	Enable/Disable auto reconnect to iOS device	"1" (Enable)

Application Development Information

About ePOS-Print SDK

The ePOS-Print SDK for iOS Bluetooth is provided for application development.

Please contact us for the necessary kit.

Application Development and Distribution

Follow the steps below to distribute an iOS application that communicates with a printer over Bluetooth through Apple's App Store.

1 **Register with the Apple iOS Developer Program.**

2 **Obtain the Epson ePOS-Print SDK for iOS Bluetooth and the Application Information Sheet.**

3 **When the application has been developed, send the Application Information Sheet to Epson.**
Epson will provide Apple with the information on the application.
Once Apple has given their approval, Epson will send the Application Submitting Guide to you (the developer).

4 **Follow the steps in the Application Submitting Guide to register the application to the App Store.**

Notes on Usage

Disconnection Timing

Even when data communication has been completed from the host computer's application, data may remain in the Bluetooth module's buffer. Since data in the buffer may be lost when a connection is disconnected, use a status check and so on to confirm that transmitted data has definitely been printed before disconnecting.

Notes on Using the Printer with an iOS Device

Print data deletion and Bluetooth disconnections occur

Situation

Depending on the specifications of the iOS device, print data sent to the printer may be deleted. When this occurs, the Bluetooth connection between the printer and the iOS device is disconnected.

Conditions

This occurs when the printer is not ready to print, and 64 KB or more of print data is sent to the printer.

<Status in which the printer cannot print>

- When the roll paper cover is open
- When the paper is out
- When waiting for printed labels to detach (Peeler models only)

Solution

Do not send data to the printer if the printer is not ready to print.

For developers using the SDK from Epson, see the User's Manual - Chapter 3 Programming Guide - "Printing After Checking the Printer Status".

Since Bluetooth is disconnected when this occurs, if the auto reconnect feature is not enabled, you need to reconnect from the Bluetooth settings screen on the iOS device.

When using the SDK from Epson, this connection process is not necessary.

The iOS application receives the same data from the printer multiple times

Situation

Although the printer only sends data (such as the status) once to the iOS device, the application on the iOS device may receive the data multiple times.

Conditions

If no data is sent between the printer and the iOS device for at least 30 seconds during Bluetooth connection, the iOS device switches to power-saving mode. This problem occurs if the printer sends data to the iOS device while it is in power-saving mode.

The following are examples of when this occurs.

- When the printer performs status communication with a command (DLE EOT, GS I, and so on)
- When the printer sends an ASB

In the following situations, this does not occur.

- When the iOS device sends data to the printer
- When data is sent to the iOS device before it switches to power-saving mode (less than approx. 30 seconds) after the printer has received data from the iOS device
- When using the SDK from Epson (however, this may occur when receiving data from a printer using a command transmission/reception API)

Solution

If no data is sent between the printer and the iOS device for at least 30 seconds, use the following steps to send data.

1) Before sending data, send 100 bytes of dummy data to the printer. As long as it is not related to printing or commands, anything can be used as the dummy data, however we recommend using 00h.
2) Set a waiting time of 100 milliseconds.
3) Send the data.

The iOS application cannot receive the data sent from the printer

Situation

Although the printer sends data to the iOS device and the data is received by the iOS device, depending on the combination of the iOS version and the iOS device, the iOS application may not be able to receive the data.

Conditions

This may occur in combinations of the following conditions.

- iOS version: 7.1, 7.1.1

- iOS device: iPhone 5s, iPhone 5c, iPhone 5, iPad Air, iPad mini with Retina display, iPad (4th generation), iPad mini, iPod touch (5th generation), iPhone 4s, iPhone 4, iPad (3rd generation), iPad 2

- Printer firmware version: TM-P60II (5.11 ESC/POS or earlier), TM-P60II Peeler (6.11 ESC/POS or earlier)

- Application processing: If the Bluetooth port is closed and then reopened while the application is running.

Solution

The solution differs depending on the iOS device being used. See the following table.

iOS Device	Solution
iPhone 5s iPhone 5c iPhone 5 iPad Air iPad mini with Retina display iPad (4th generation) iPad mini iPod touch (5th generation)	This situation can be avoided by using one of the following methods. • Use a product with the following firmware. TM-P60II: 5.12 ESC/POS or later TM-P60II Peeler: 6.12 ESC/POS or later • Use the ePOS-Print SDK for iOS which is included in the ePOS-Print SDK Release 14.06.30E or later package. This problem does not occur in the TM-P80.
iPhone 4s iPhone 4 iPad (3rd generation) iPad 2	This situation can be avoided by using the ePOS-Print SDK for iOS which is included in the ePOS-Print SDK Release 14.06.30E or later package.

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- Conforms to Bluetooth Specification Version 2.1 + EDR
- Built-in Serial Port Profile (SPP)
- Built-in iAP protocol
- Bluetooth Power Class 2 specifications
- Built-in antenna