

IPAD, DynaPro, DynaPro Mini, DynaPro Go

PIN ENTRY DEVICE SIMULATION SOFTWARE INSTRUCTION Document Number D998200168-40

1	About This Document.....	2
2	How to configure 802.11 Wireless Connection on DynaPro Go	2
3	How to connect to the PIN Entry Device.....	5
3.1	How to use the PIN Entry device via USB interface	5
3.2	How to use the PIN Entry device via TCP/IP interface	6
3.3	How to use the PIN Entry device via TLS 1.2 interface on DynaPro Go.....	7
3.4	How to use the PIN Entry device via Bluetooth LE interface	10
4	How to test EMV transactions.....	12

Table 1.1 - Revisions

Rev Number	Date	Notes
10	01/26/2017	Initial Release
20	08/22/2017	Added TLS 1.2 interface.
30	09/05/2018	Modify the instruction on how to connect to DynaPro Go via TLS
40	02/28/2019	Added Bluetooth LE interface.

1 About This Document

This document describes how to use PCI PED Host App Simulator software with a PIN Encryption Device to test EMV transactions on a MagTek PIN Entry Device connected to a host PC via USB, Ethernet, or TLS 1.2 interface.

2 How to configure 802.11 Wireless Connection on DynaPro Go

This section will show you how to configure DynaPro Go to connect to your own 802.11 wireless network.

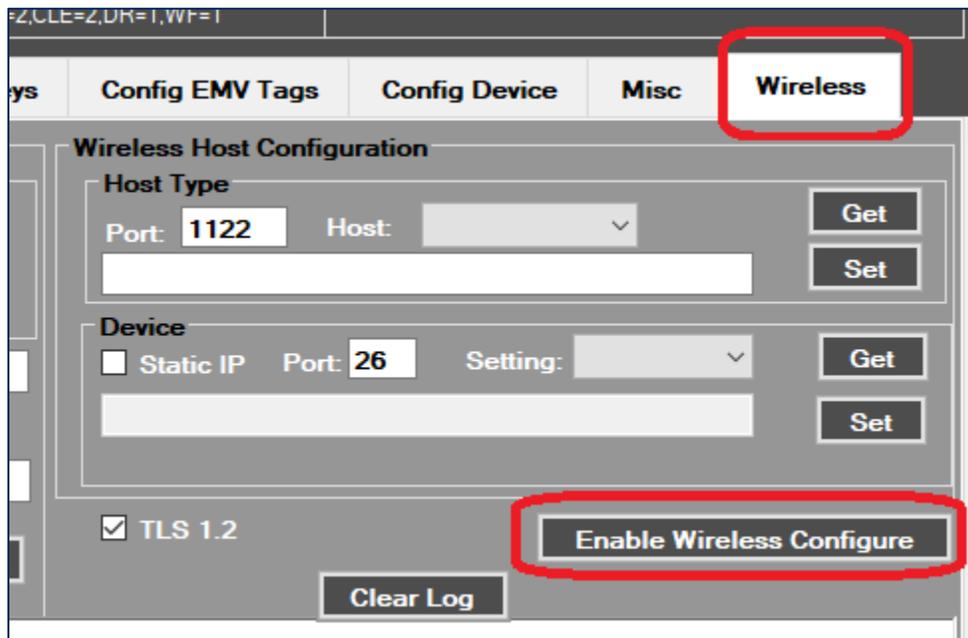
- 1) Connect the DynaPro Go via USB.
- 2) On the PCI PED Host App Simulator, select **USB** in the Device Connection method.



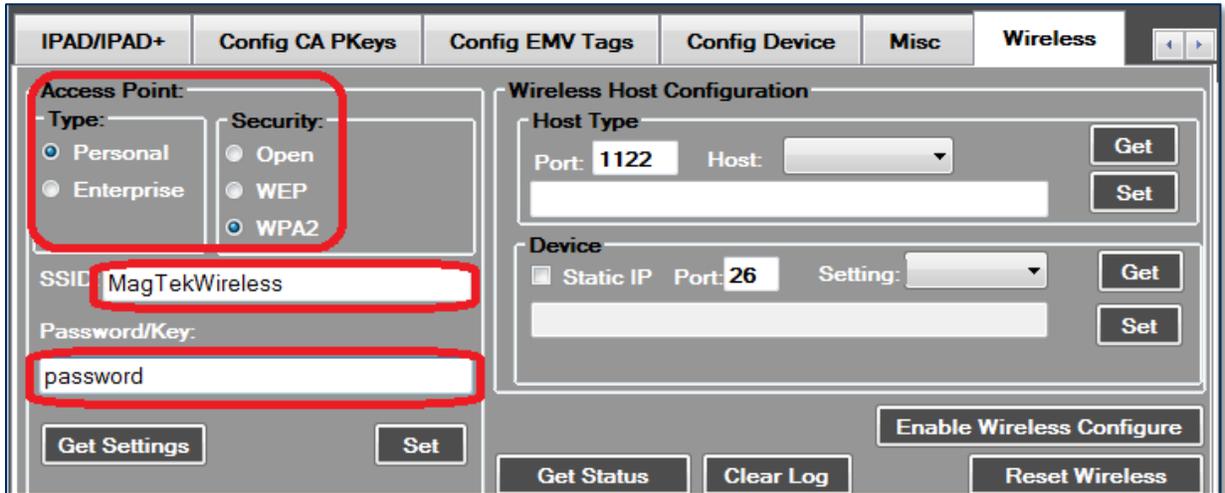
- 3) Select the DynaPro Go device in the list and press **Open** button



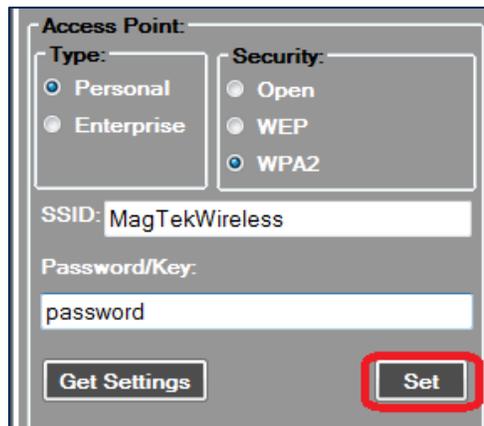
- 4) Select the **Wireless** tab, press the **Enable Wireless Configure** button.



- 5) When the device prompts **Enter Admin Passcode**, enter your admin password, by default the password is the keypad buttons: 1, 3, 9, 7, 2, 6, 8, 4, ENTER
- 6) Select appropriate Access Point and Security type, and put in the SSID and wireless password.



- 7) Press **Set** to save the setting to the DynaPro Go.



- 8) If you want the device to initiate connection to the host, you can specify the port (by default, the port 1026 is being used) and host type to either Host IP or Host Name under **Host Type**, then press **Set** button to apply the settings.

CLE=2,DR=1,Wf=1

Config EMV Tags | Config Device | Misc | **Wireless**

Wireless Host Configuration

Host Type

Port: 1026 Host: Host IP

10.57.20.63

Get

Set

Device

Static IP Port: 26 Setting: [v]

Get

Set

TLS 1.2

Enable Wireless Configure

Config EMV Tags | Config Device | Misc | **Wireless**

Wireless Host Configuration

Host Type

Port: 1026 Host: Host Name

MagTekPC

Get

Set

Device

Static IP Port: 26 Setting: [v]

Get

Set

TLS 1.2

Enable Wireless Configure

- 9) If you don't want to use TLS on the device, you can turn it off by unchecking the TLS 1.2 check box. The device will display message **TLS DISABLED!!!**

Wireless Host Configuration

Host Type

Port: 1026 Host: Host IP

MagTekPC

Get

Set

Device

Static IP Port: 26 Setting: [v]

Get

Set

TLS 1.2

Enable Wireless Configure

10) Please power reset the device for the wireless setting to take effect.

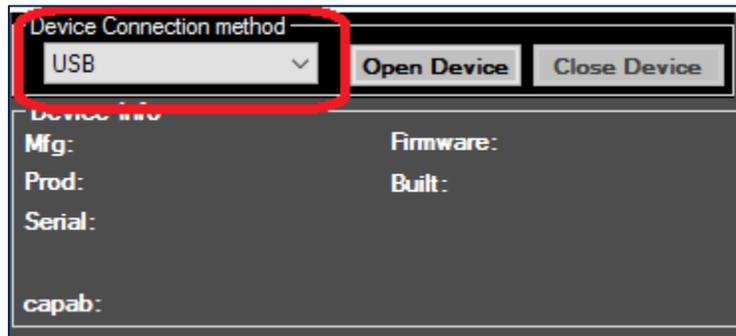
3 How to connect to the PIN Entry Device

This section will show you how to use the PCI PED Host App Simulator on a PIN Entry Device via USB, TCP/IP, or Transport Layer Security (TLS v1.2) interface. Please launch the PCI PED Host App Simulator (PCIPED_HASim.exe) located in the installation package. By default, the package is located in

C:\Program Files (x86)\MagTek\PCI PED Windows SDK\Sample Code\DotNET Host Simulator Demo\Object for 64-bit machine, or **C:\Program Files\MagTek\PCI PED Windows SDK\Sample Code\DotNET Host Simulator Demo\Object** for 32-bit machine.

3.1 How to use the PIN Entry device via USB interface

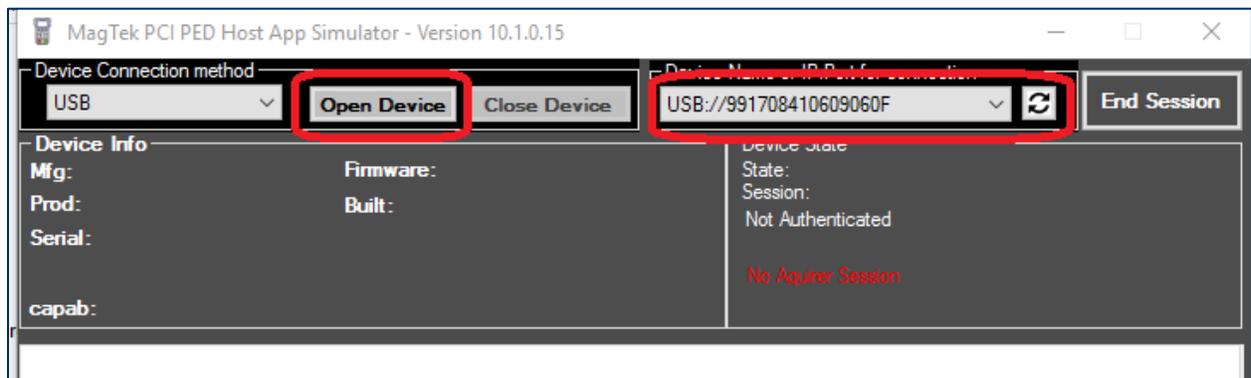
1) Select **USB** in the Device Connection method.



2) Connect the PIN Entry Device to the host PC via USB cable.

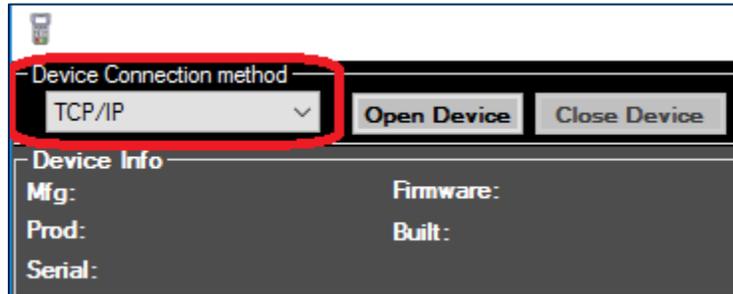
3) If the DynaPro Go is in Wireless mode, switch to USB mode by pressing the keypad buttons on the DynaPro Go in this order: Left function key, 4, 5, 6, Right function key. Then when prompted “Switch to USB Mode ?” select Yes.

4) Select the device in the list and press **Open Device** to connect

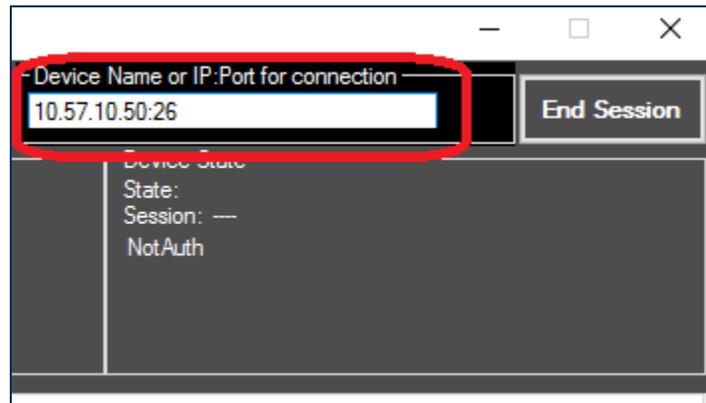


3.2 How to use the PIN Entry device via TCP/IP interface

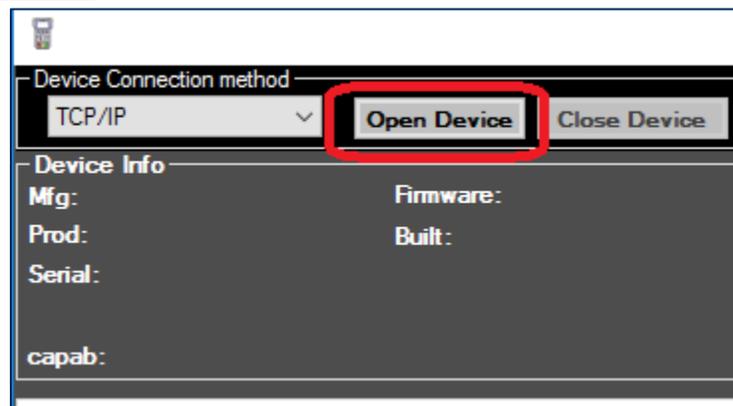
- 1) If you have a DynaPro Go and would like to configure the 802.11 wireless, please follow the instruction in the section **2. How to configure 802.11 Wireless Connection on DynaPro Go**
- 2) Select **TCP/IP** in the Device Connection method.



- 3) If the DynaPro Go is in USB mode, switch to Wireless mode by pressing the keypad buttons on the DynaPro Go in this order: Left function key, 4, 5, 6, Right function key. Then when prompted "Switch to Wireless Mode ?" select Yes.
- 4) Determine the device IP address on the LCD screen by pressing the keypad buttons in this order: Left function key, 4, 7, 2, Right function key.
- 5) Enter the Device's IP Address in the **IP Address** text box with the following format `DeviceIPAddress:PortNumber`, by default, the port number is 26



- 6) Press the **Open Device** button to connect to the device.



3.3 How to use the PIN Entry device via TLS 1.2 interface on DynaPro Go

- 1) Please configure the Client certificate before running the PCI PED Host App Simulator software by following these instructions.
 - a) Close any running instances of the PCI PED Host App Simulator software.
 - b) In the same folder as the app, open the configuration file: **PCIPED_HASim.exe.config**.
 - c) Change the value for TLS12ClientCertFile and TLS12ClientCertPassword to match your client certificate. Please refer to document D998200279 for instructions on how to obtain the client certificate for DynaPro Go.

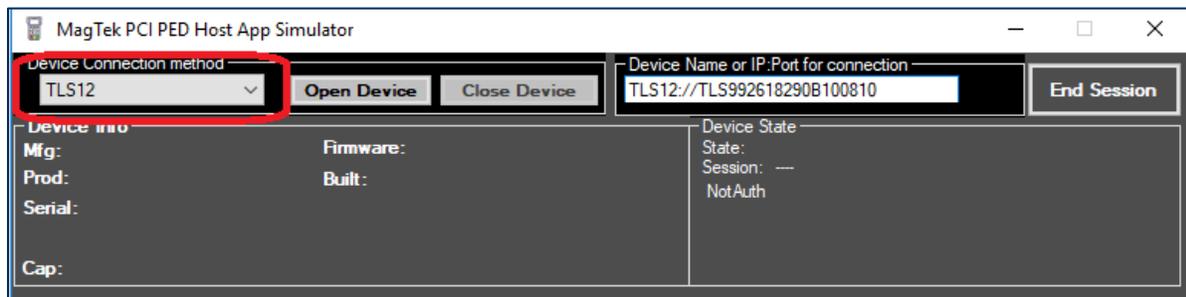
```
<userSettings>
  <PCIPED_HASim.Properties.Settings>
    <setting name="TLS12ClientCertFile" serializeAs="String">
      <value>client.p12</value>
    </setting>
    <setting name="TLS12ClientCertPassword" serializeAs="String">
      <value>password</value>
    </setting>
  </PCIPED_HASim.Properties.Settings>
</userSettings>
```

- d) Save the changes to **PCIPED_HASim.exe.config** and close the file.
- e) Run the PCI PED Host App Simulator software for the change to take effect.

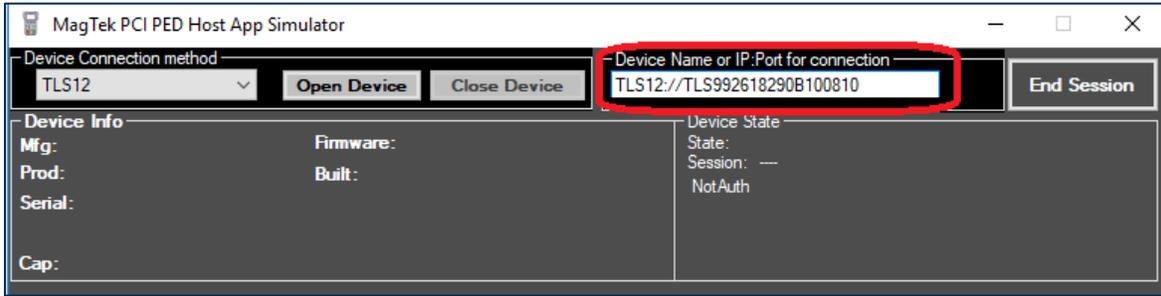
3.3.1 How to connect to the DynaPro Go via Always Listening Mode

This section is for testing a connection to a device when the device is configured for Always Listening mode.

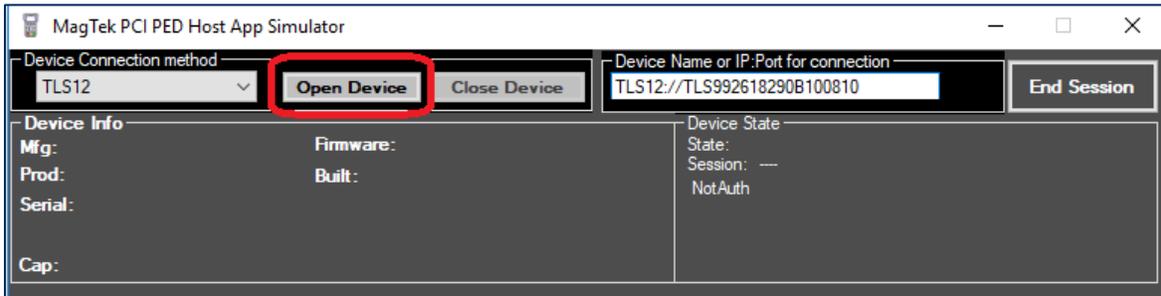
- 1) Detach the USB cable from the device.
 - 2) If the DynaPro Go is in USB mode, switch to Wireless mode by pressing the keypad buttons on the DynaPro Go in this order: Left function key, 4, 5, 6, Right function key. Then when prompted **Switch to Wireless Mode ?** select **Yes**.
 - 3) Wait till the device shows **Welcome** or **Offline**. Make sure the device is in Listening Mode by pressing the keypad in this order: Left function key, 4, 7, 2, Right function key. The device must show **Connection Mode Always Listening**. If not in **Always Listening**, then press the keypad in this order: Left function key, 4, 5, 9, Right function key to switch to **Always Listening** mode.
- 2) On the PCI PED Host App Simulator, select **TLS12** in the Device Connection method.



- 3) Enter the device's address: TLS12://TLS[serialnumber]
Example **TLS12://TLS992618290B100810**



- 4) Press the **Open Device** button to open the device.

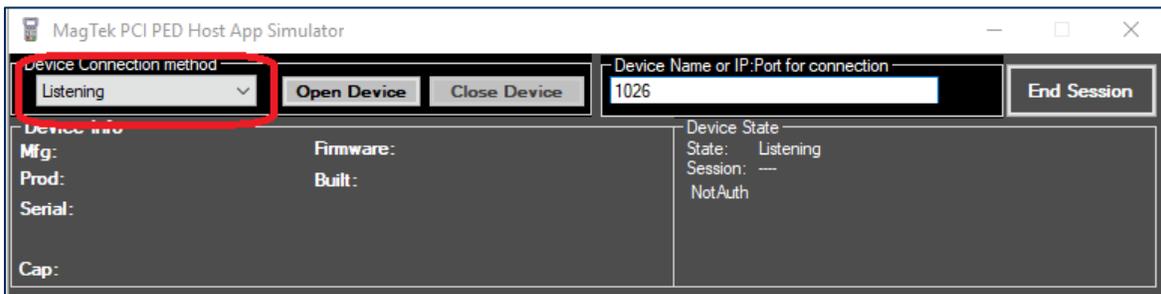


- 5) If the device does not connect, please power reset the device then press the **Connect Device** button again.

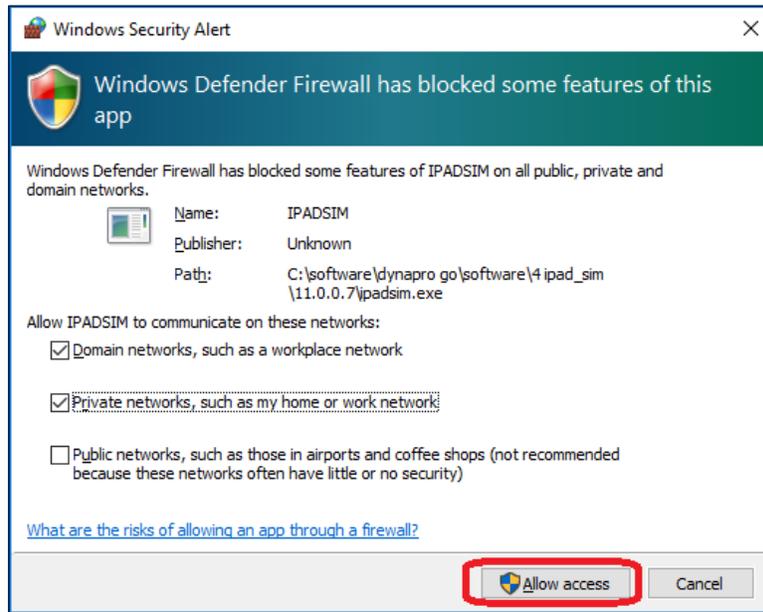
3.3.2 How to connect to the DynaPro Go via Device Initiated Mode

This section is for testing a connection to a device when the device is configured for Device Initiated mode.

- 1) Detach the USB cable from the device
- 2) If the DynaPro Go is in USB mode, switch to Wireless mode by pressing the keypad buttons on the DynaPro Go in this order: Left function key, 4, 5, 6, Right function key. Then when prompted **Switch to Wireless Mode ?** select **Yes**.
- 3) Wait till the device shows **Welcome** or **OFFLINE**. Make sure the device is in Device Initiated Mode by pressing the keypad in this order: Left function key, 4, 7, 2, Right function key. The device must show **Connection Mode Device Initiated**. If not in **Device Initiated**, then press the keypad in this order: Left function key, 4, 5, 9, Right function key to switch to **Device Initiated** mode.
- 4) On the PCI PED Host App Simulator, select **Listening** in the Device Connection method.



- 5) If prompted by **Windows Security Alert** to allow communication, check both **Domain networks** and **Private networks**, then press the **Allow access** button.



- 6) After the prompt, close and reopen the PCI PED Host App Simulator for allowing the firewall setting to take effect.
- 7) To initiate the connection, press the keypad sequence in this order: Left function key, 1, 2, 3, Right function key.
- 8) The software will listen for a connection from the device and automatically open the connection.
- 9) If the connection failed, select the **Listening** again, then restart the wireless initiation by pressing the keypad sequence in this order: Left function key, 1, 2, 3, Right function key.

3.4 How to use the PIN Entry device via Bluetooth LE interface

3.4.1 How to Pair DynaPro Go

To connect DynaPro Go to a host via the Bluetooth LE connection, follow these steps:

- 1) Make sure the host's hardware and operating system support **Bluetooth LE Secure Connections**, which were introduced in the *Bluetooth Core Specification version 4.2*.
- 2) Power on the device and make sure the battery is charged. Note that it is not always necessary to explicitly turn on the device before using it; if the device is not powered on, it will start powering on when a host establishes a connection.
- 3) Make sure the device's active connection is set to Bluetooth LE, using the steps by pressing the keypad buttons on the DynaPro Go in this order:
Left function key, 4, 5, 6, Right function key.
If prompted "Switch to Bluetooth mode?" select Yes.
If prompted "Switch to USB mode?" select No.
- 4) Press **Left Function Key 1 2 3 Right Function Key** to enable the device to accept Bluetooth LE pairing requests for up to three minutes. The device indicates it is accepting pairing requests, and displays the remaining time.



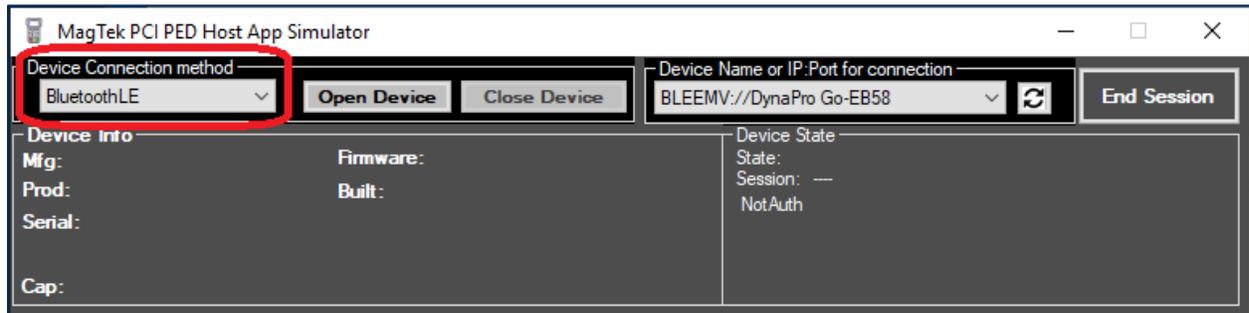
- 5) On the host, scan for Bluetooth devices, and select the device you want to pair to. Use the operating system's Bluetooth setup features.
- 6) The device responds to the pairing request by showing a 6-digit passcode on the display, and the host software should show a matching passcode. If the device does not show the passcode or the host fails to pair, make sure the host's operating system and Bluetooth hardware support **Bluetooth LE Secure Connections**, which were introduced in the *Bluetooth Core Specification version 4.2*.



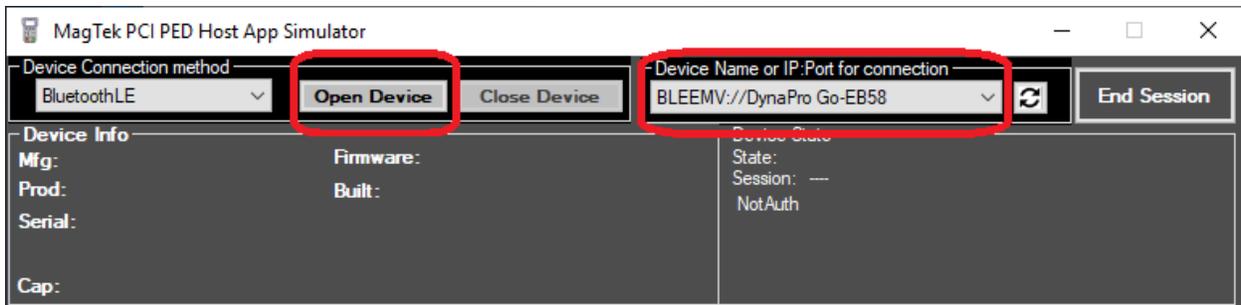
- 7) If the passcodes on the host and device match, press the function key below **Yes** to accept the pairing request, and perform any corresponding actions on the host. The device shows a confirmation screen for a short time to indicate the operator has accepted the request. If the passcodes do not match, press the function key below **No** and try again.
- 8) If pairing fails for any reason, the device will refuse pairing requests even if the countdown is still active. To attempt pairing again, repeat the steps above, starting with the key sequence to enable pairing.

3.4.2 How to connect

- 1) Select **BluetoothLE** in the Device Connection method.



- 2) Power on the PIN Entry Device.
- 3) If using a DynaPro Go, switch to Bluetooth LE mode by pressing the keypad buttons on the DynaPro Go in this order: Left function key, 4, 5, 6, Right function key.
If prompted “Switch to Bluetooth mode ?” select Yes.
If prompted “Switch to USB mode ?” select No.
- 4) Select the device in the list and press the **Open Device** button to connect.



4 How to test EMV transactions

After the device is open, you can now begin using the IPAD Sim application to test EMV transactions.

- 8) Select the **EMV** tab and the desired card type.

The screenshot shows the EMV configuration interface. The 'EMV' tab is selected and highlighted with a red box. The 'Card Type' section is also highlighted with a red box, showing 'Smart card' selected with a checkmark. Other visible fields include 'Wait (Sec)' for 'Present Card' and 'Enter PIN' both set to 25, 'TransType' set to '04 - Goods', and 'Send Amount' set to '\$9.99' and '\$0.00'. The 'Acquirer Decision' section shows 'Approve' selected. Buttons for 'Bypass PIN', 'Clear', 'Cancel', and 'Send' are visible at the bottom right.

- 3) Select the desired **Acquirer Decision** and enter the value for **Amt** and **Cash Back**.

The screenshot shows the EMV configuration interface. The 'Acquirer Decision' section is highlighted with a red box, showing 'Approve' selected. The 'Send Amount' section is also highlighted with a red box, showing 'Amt' set to '\$9.99' and 'Cash Back' set to '\$0.00'. Other fields and buttons are visible as in the previous screenshot.

- 4) Press the **Send** button to start the transaction.

The screenshot shows the EMV configuration interface. The 'Send' button is highlighted with a red box. All other fields and sections are visible as in the previous screenshots.

- 5) Follow the instructions on the PIN Entry Device to complete the transaction.
6) After the transaction is complete, select any of the tabs to view the transaction data.

EMV | IPAD/IPAD+ | Config CA PKeys | Config EMV Tags | Config Device | Misc

Wait (Sec)
Present Card: 25
Enter PIN: 25

TransType: 04 - Goods

QuickChip:
MAC ARPC:

Acquirer Decision:
 Approve
 Decline

Card Type:
 MSR
 Smart card
 Contactless

options:
 Forced Online
 Bypass Pin
 Beep On

Send Amount:
Amt: \$9.99 Cash Back: \$0.00

Bypass PIN | Clear | Cancel | Send

ARQC | Batch Data | Merchant Data | Reversal Data | MSR Data | Pin Data | Other

Grid View Acquirer Request

Tag	Length	Value
70	C9	DFDF5301005F200F5241544C4946
DFDF53	01	00
5F20	0F	5241544C4946462F434154485920
DFDF4D	27	3B34343437303030303930303031
DFDF52	01	05
F8	7E	DFDF59820060087040FEBA8DFF6
DFDF59	60	087040FEBA8DFF6CC3D6C466847

Text View Acquirer request Raw data

```
00F4F98200F0DFDF540A9500030000
00012005A6DFDF550182DFDF250898
D90C660E070F0EFA8200CD708200C
9DFDF5301005F200F5241544C49464
```

Text View Acquirer Response

```
70048A023030
```