

DynaMag, DynaMAX, eDynamo,
uDynamo, aDynamo, Bullet,
mDyamo, Dynawave, tDynamo,
iDynamo 6, DynaDip, iDynamo 5
(Gen III)

SCRA Devices

MTNET Demo and MNET OEM Demo Manual

June 4, 2024

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Table 0.1 - Revisions

Rev Number	Date	Notes
10	January 5, 2017	Initial release
11	May 24, 2018	Added support for tDynamo and DynaWave.
12	January 30, 2019	Updated to correctly reference Bluetooth LE. Added device feature detection during connection and MSR head power control. Added battery level.
13	November 19, 2020	Added support for iDynamo 6.
14	February 11, 2021	Updated MTNET OEM Demo instructions. Added DynaDip in the supported device list.
100	June 4, 2024	Added iDynamo 5 (Gen III) in the supported device list at section 1.

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1 Introduction

This document provides instructions to use the MTNET Demo. It is part of a larger library of documents designed to assist uDynamo, Dynamag, DynaMAX, eDynamo, mDynamo, Insert, tDynamo, DynaWave, DynaDip, iDynamo 6, iDynamo 5 (GEN III), and Secure Card Readers implementers, which includes the following documents available from MagTek:

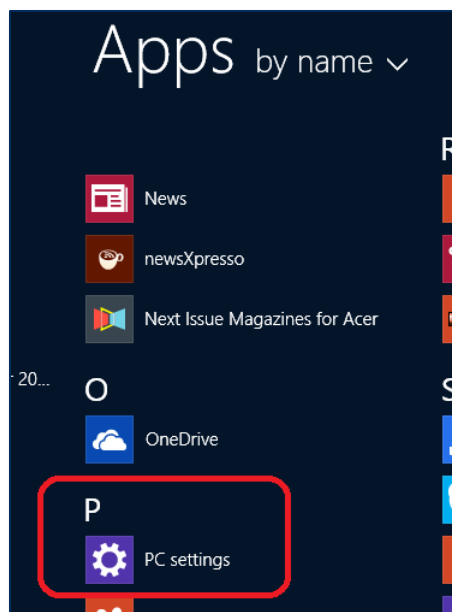
- ***D99875723 UDYNAMO, DYNAMAG, DYNAMAX, EDYNAMO, MDYNAMO, INSERT, DYNAWAVE, IDYNAMO 6, IDYNAMO 5 (GEN III) PROGRAMMER'S MANUAL (.NET / UNIVERSAL WINDOWS)***

2 - How to Connect Bluetooth LE devices to a Windows Host

2 How to Connect Bluetooth LE devices to a Windows Host

To connect DynaMAX or eDynamo to a host with Windows 8.1 or higher and Bluetooth 4.0 hardware that supports Bluetooth LE, follow these steps:

- 1) If you are using an external Bluetooth adapter, install any required drivers and connect it to the host.
- 2) On the host, install and configure the software you intend to use with DynaMAX or eDynamo:
 - a) Make sure the host software is configured to look for the device on the proper connection.
 - b) Make sure the host software knows which device(s) it should interface with.
 - c) Make sure the host software is configured to properly interpret incoming data from the device. This depends on whether the device is configured to transmit data in GATT format or streaming format emulating a keyboard.
- 3) Make sure the DynaMAX's batteries are installed and have adequate charge. If using eDynamo, make sure the device has an adequate charge.
- 4) Test the batteries by powering on the DynaMAX or eDynamo device. Provided the device is not already paired, the Bluetooth Status LED will flash blue every two seconds for up to 60 seconds until pairing is complete. If the Bluetooth Status LED is solid blue, the device is already paired with a host. Unpair from the host it is already paired with before continuing.
- 5) Enter app mode, scroll down to **Apps by name**, and launch the Windows **PC Settings** app.

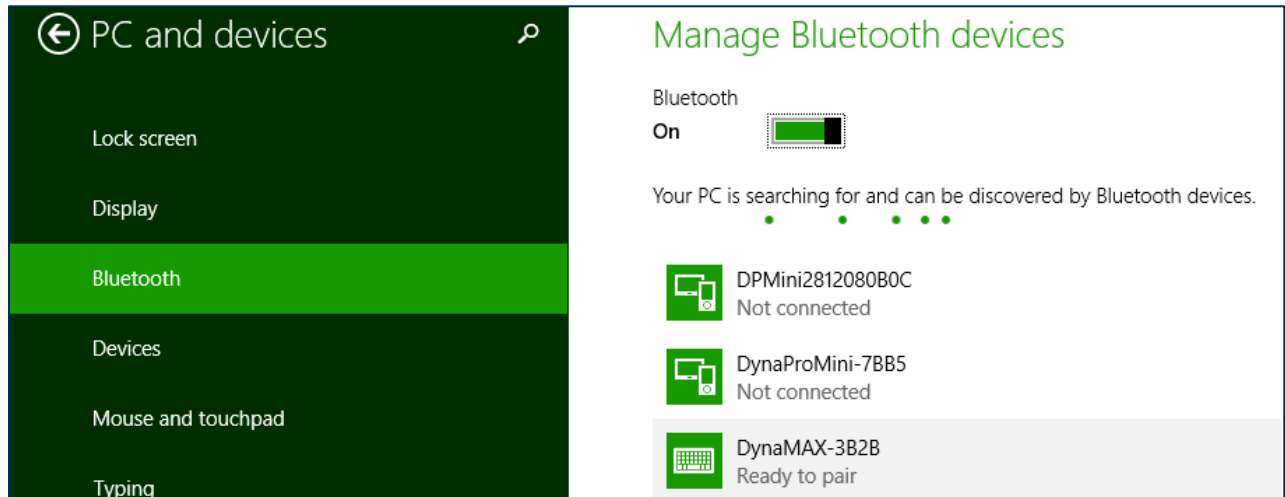


- 6) In the left side navigator, select **PC and devices** > **Bluetooth**.
- 7) Make sure Bluetooth is turned on and close the **PC and devices** app.
- 8) Launch the Windows **Manage Bluetooth Devices** app by following these steps:
 - a) Enter desktop mode by swiping in from the left side of the touchscreen.
 - b) Touch the Bluetooth icon in the system tray and select **Add a Bluetooth Device** (see Error! Reference source not found.).

2 - How to Connect Bluetooth LE devices to a Windows Host



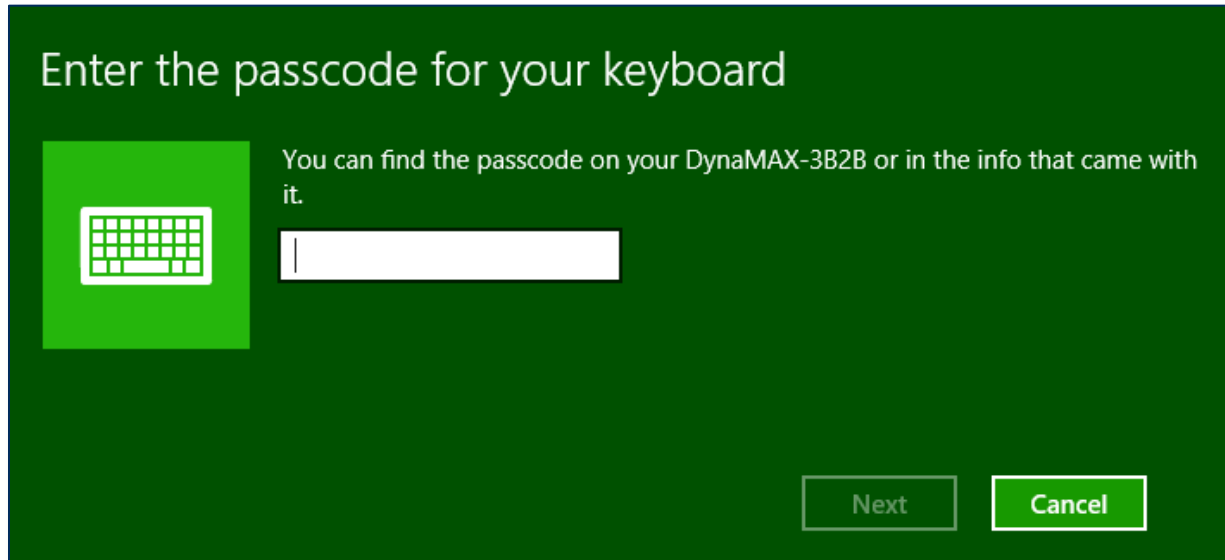
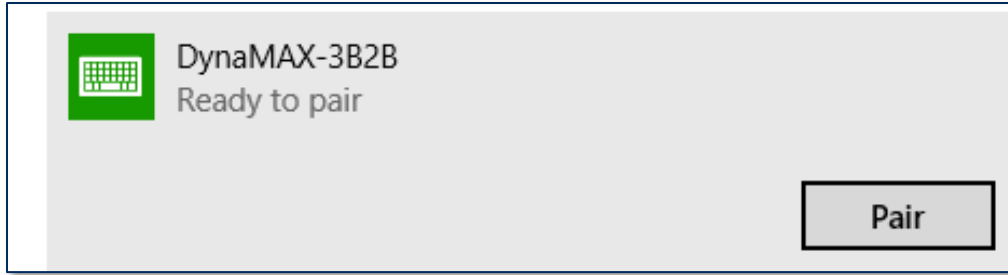
Launch Manage Bluetooth Devices App from Desktop Mode



Windows 8 Manage Bluetooth Devices App

- 9) Locate the serial number on the label on the bottom of the device. Note the final four digits.
- 10) Read through the list of pairable devices and locate the device called **DynaMAX-nnnn** or **eDynamo-nnnn**, where nnnn is the last four digits of the device's serial number (if the device does not show in the list, power it off then power it back on). Below the device name you should see the text **Ready to pair**.
- 11) Select the device and press the **Pair** button. If the device is configured to run in KB mode, Windows will prompt you **Enter the passcode for your keyboard**.

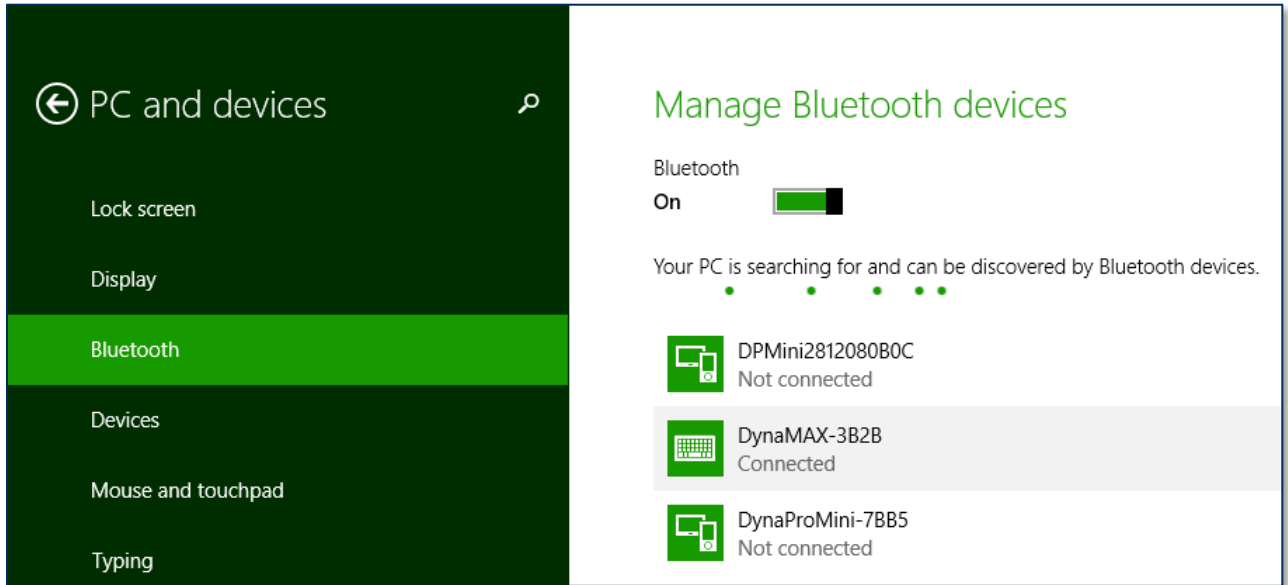
2 - How to Connect Bluetooth LE devices to a Windows Host



- 12) Enter default passcode **000000** (or the device's actual password if it has been configured differently), then press the **Next** button. Windows will return you to the **Manage Bluetooth devices** page. After a short period of time, you will see the text **Connected** below the device you are pairing with.

2 - How to Connect Bluetooth LE devices to a Windows Host

After a few seconds, the device will disconnect, which is normal power-saving behavior.



- 13) Use the host software to test swiping a card. If you do not yet have host software and the device is configured to run in KB mode, open any text editor and swipe a card. The card contents should appear in the text editor.
- 14) The device consumes very little power when not transmitting card data, so it is not necessary to power off the device to conserve power. If the device appears as **Not connected** in the Windows list of Bluetooth devices, swiping a card should cause the device to reconnect briefly, transmit the card data, then disconnect.
- 15) Remember to change the default password. See the DynaMAX Programmer's Reference documents for details.

To unpair from the device:

- 1) Locate the device in the **Manage Bluetooth devices** window.
- 2) Press the **Remove device** button.

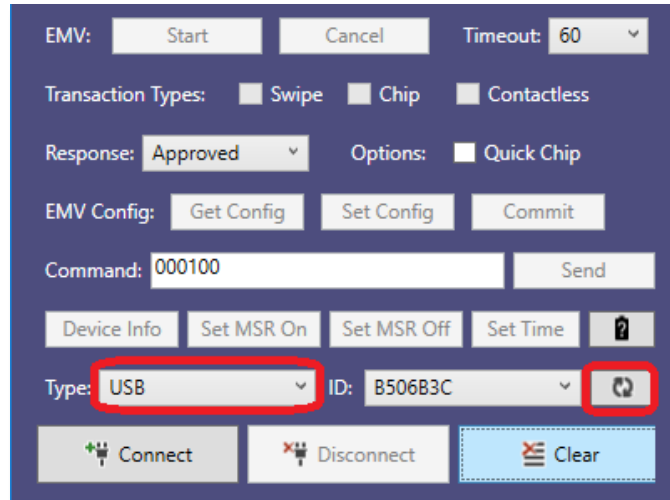
3 - How to Connect to MTNET Demo

3 How to Connect to MTNET Demo

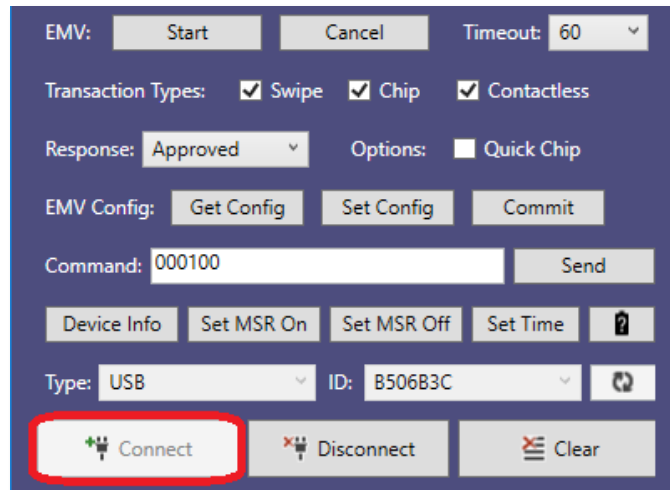
To connect via an interface listed in the Type box follow these steps:

3.1 Connect via USB Interface

- 1) Connect the device to the USB port of the Windows PC.
- 2) Launch the MTNET Demo, select **USB** as the device type in the **Type** list box, and press the **Scan** button to display a list of available devices.



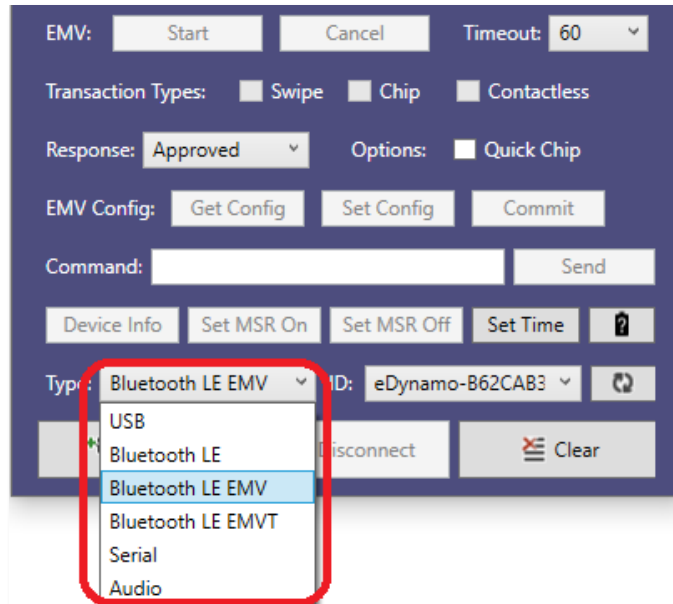
- 3) Select the Device ID and press the **Connect** button to open the device.



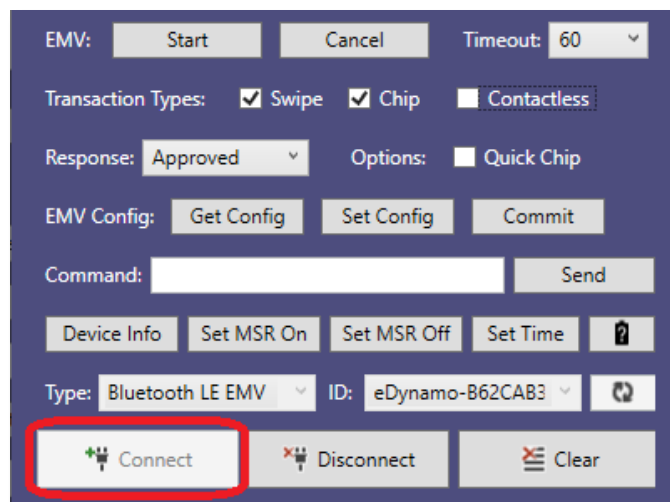
3 - How to Connect to MTNET Demo

3.2 Connect via Bluetooth LE / LE EMV / LE EMVT Interface

- 1) Pair the device to the Windows PC.
- 2) Launch the MTNET Demo and select either **Bluetooth LE**, **Bluetooth LE EMV**, or **Bluetooth LE EMVT** as the device type in the **Type** list box, press the **Scan** button to display a list of available devices.



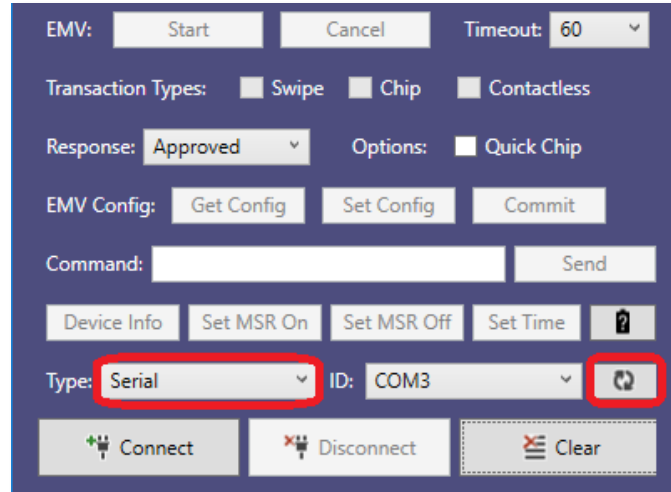
- 3) Select the Device ID and press the **Connect** button to open the device.



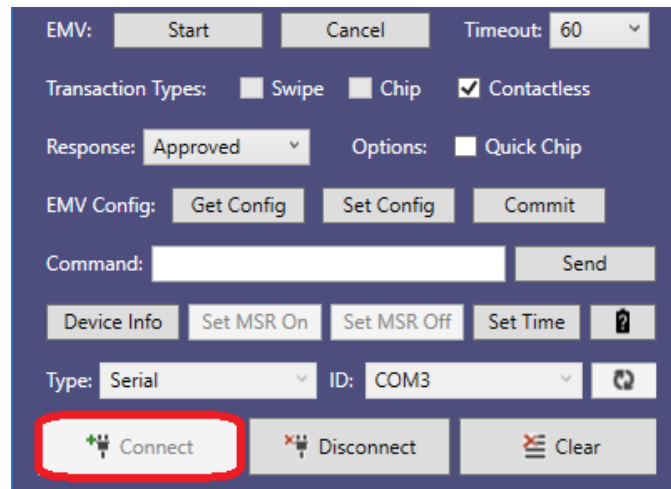
3 - How to Connect to MTNET Demo

3.3 Connect via Serial Interface

- 1) Pair the device to the Windows PC.
- 2) Launch the MTNET Demo and select **Serial** as the device type in the **Type** list box, press the **Scan** button to display a list of available Ports.



- 3) Select the Device ID and press the **Connect** button to open the device.



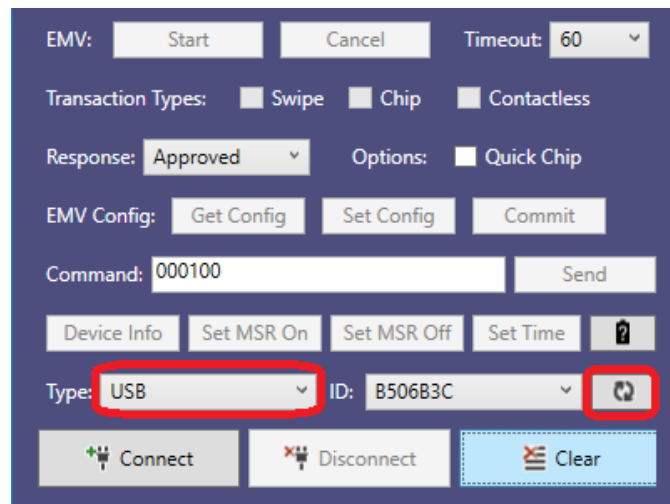
4 - How to use the MTNET Demo

4 How to use the MTNET Demo

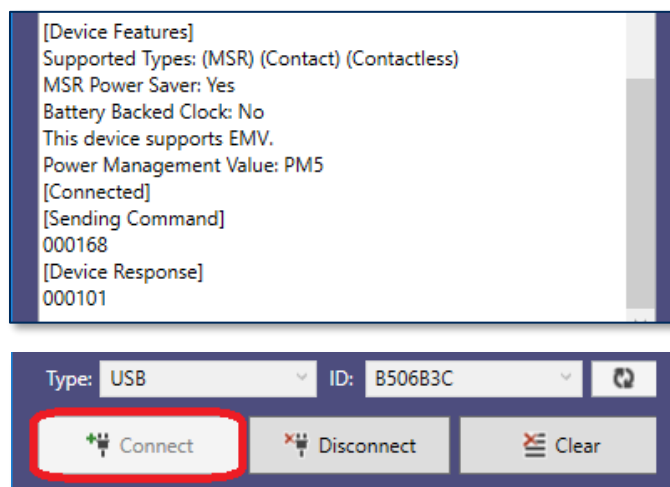
The following instructions detail how to use the MTNET Demo on Windows PC via USB interface. Same instructions apply to the other interface types.

MTNET Demo queries for device features upon connecting. Some demo features are disabled based on what is supported on the device. MTNET Demo does not automatically set MSR power or set Time.

- 1) Connect the device to the USB port of the Windows PC.
- 2) Launch the MTNET Demo, select **USB** as the device type in the **Type** list box, and press the **Scan** button to display a list of available devices.

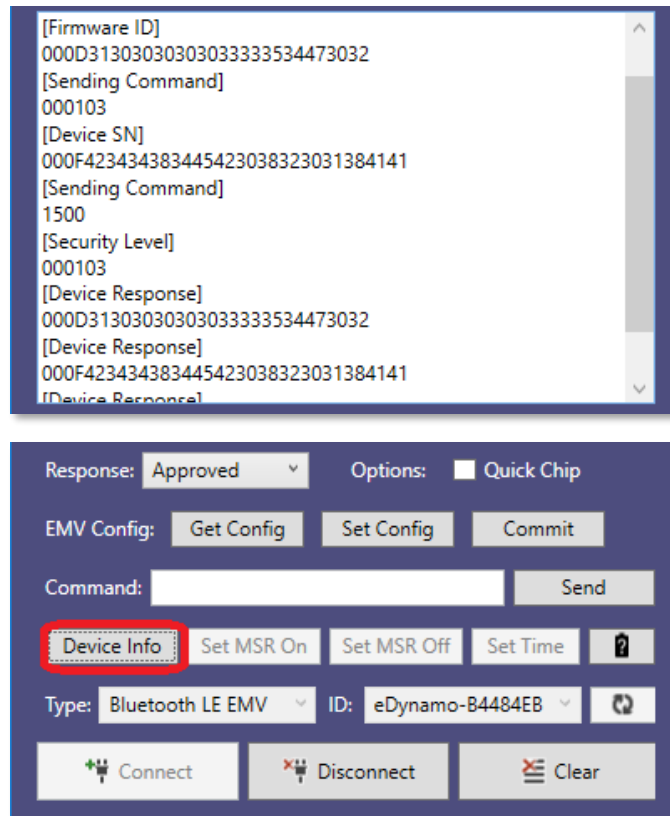


- 3) Select the Device ID and press the **Connect** button to open the device.

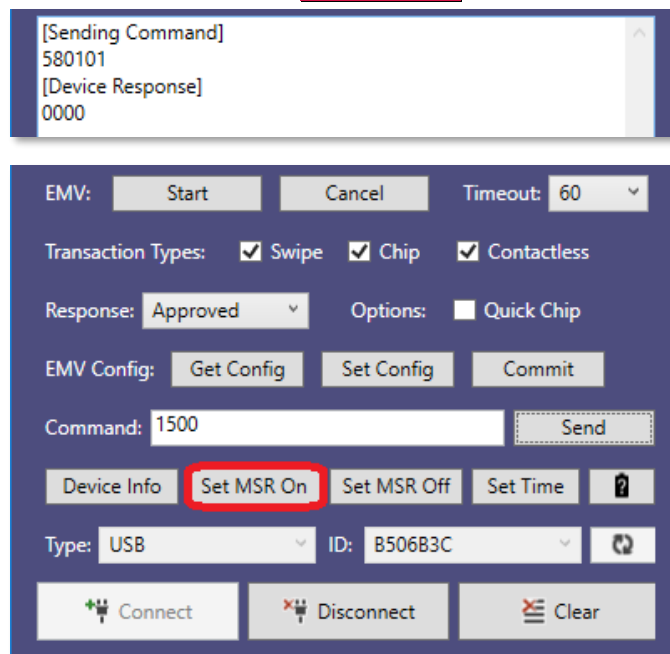


4 - How to use the MTNET Demo

- 6) To retrieve device information, press the **Device Info** button.



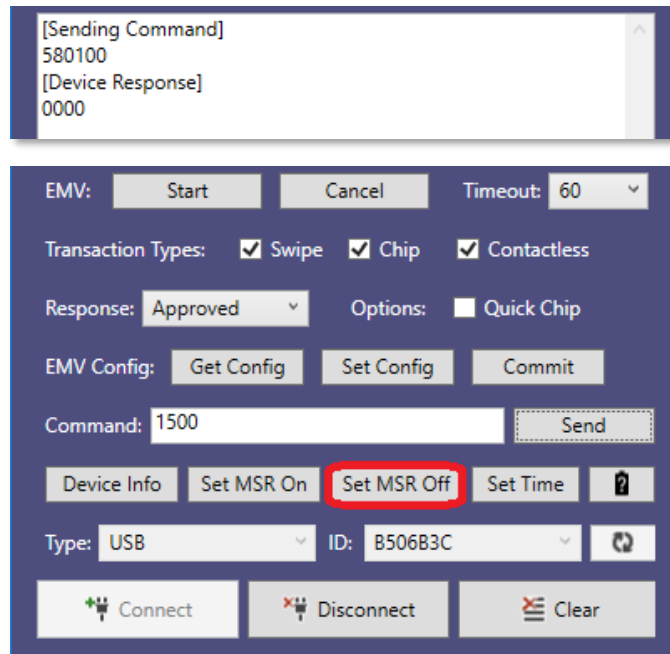
- 7) To set the MSR On for the device, press the **Set MSR On** button.



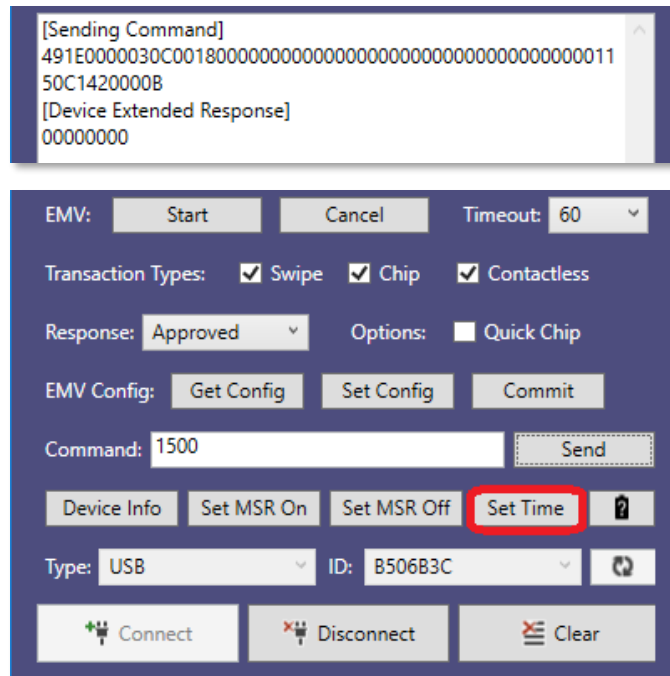
4 - How to use the MTNET Demo

- 8) To set the MSR Off for the device, press the **Set MSR Off** button.

Device will not send card data after swiping a magnetic stripe card but will during an EMV transaction.



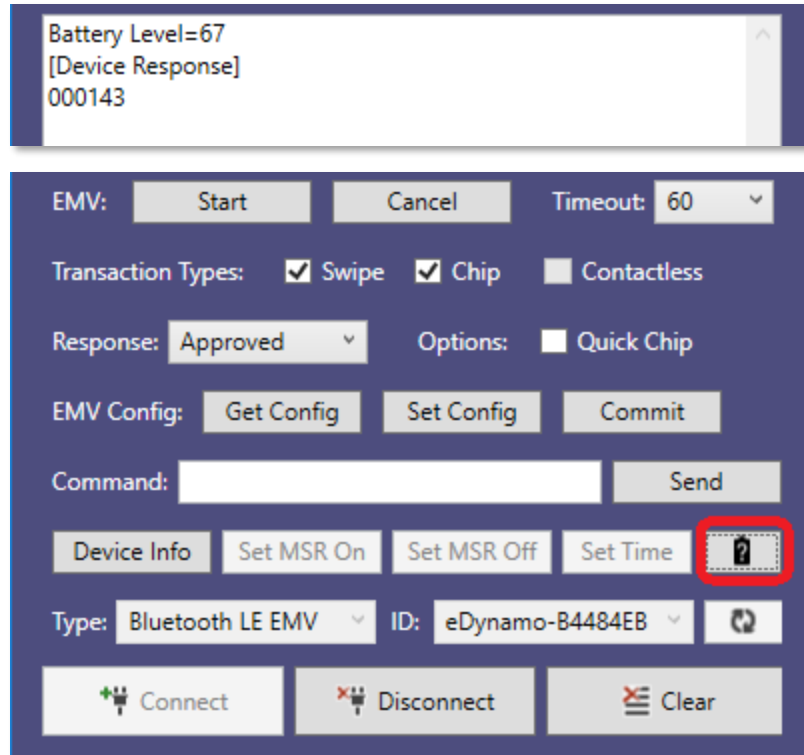
- 9) To configure the current PC date and time in devices which require a Date/Time be set after power up, press the **Set Time** button before performing an EMV transaction.



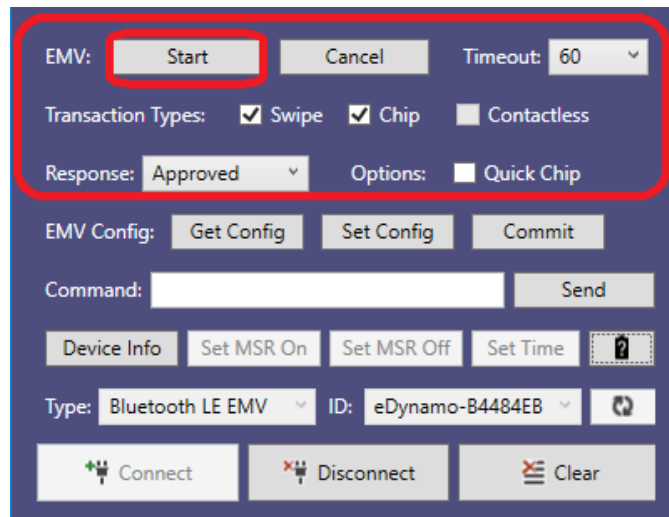
4 - How to use the MTNET Demo

10) To retrieve the battery level of the device, press the Battery button.

Note: When powered by USB, the level returns as 100%.

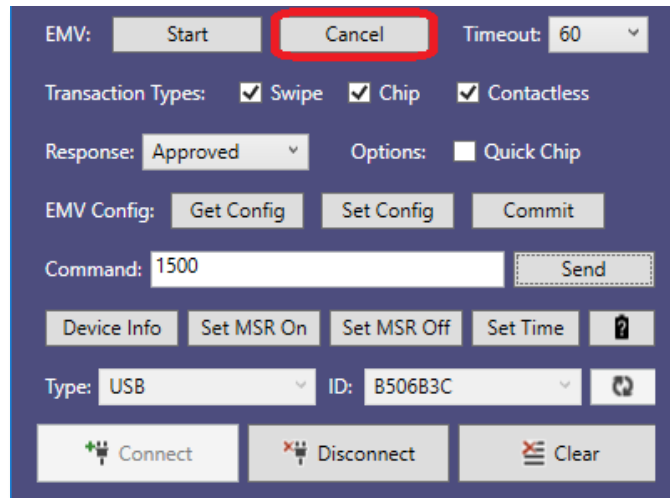


11) If you have an EMV device and want to read a chip card, select from the **Transaction Types**, **Response**, **Options**, **Timeout**, and then press the **Start** button to begin an EMV transaction.

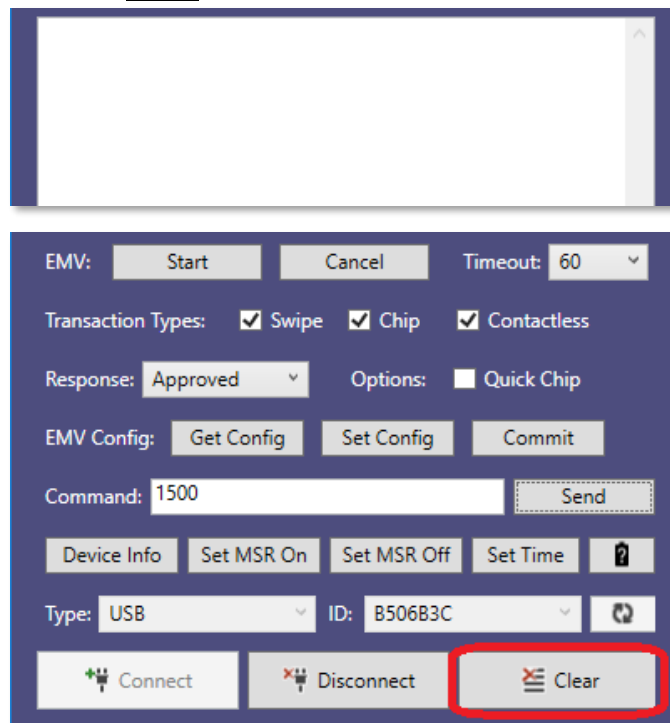


4 - How to use the MTNET Demo

12) If you want to cancel the EMV transaction, press the **Cancel** button. Note, the cancel feature will only work before the card is presented.

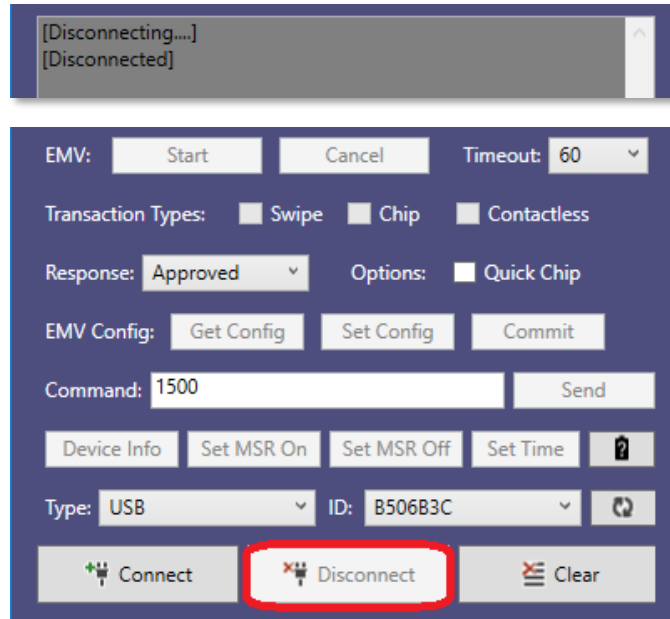


13) To clear the screen, press the **Clear** button.



4 - How to use the MTNET Demo

14) To close the device, press the **Disconnect** button.



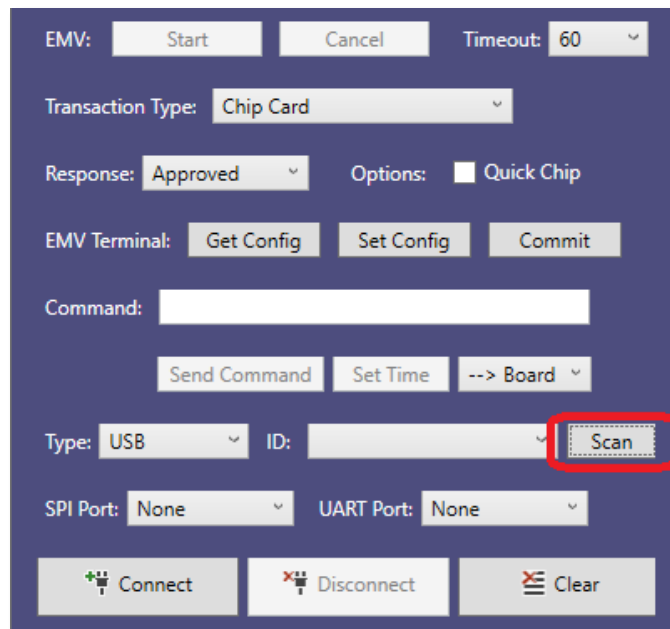
5 - How to use the MTNET OEM Demo via USB Interface

5 How to use the MTNET OEM Demo via USB Interface

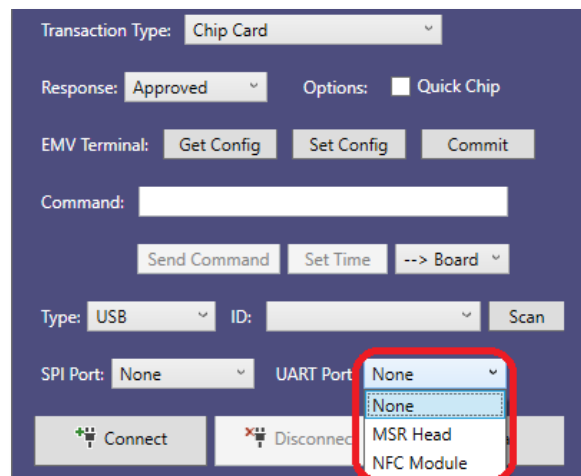
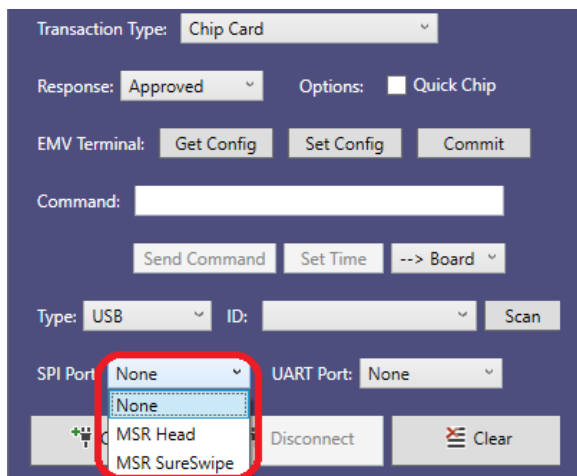
The following instructions detail how to use the MTNET OEM Demo with mDynamo or DynaDip on Windows PC via USB interface.

MTNET OEM Demo queries for device features upon connecting. Some demo features are disabled based on what is supported on the device. MTNET OEM Demo does not automatically set Time.

- 1) Connect the device to the USB port of the Windows PC.
- 2) Launch the MTNET OEM Demo and press the **Scan** button to scan for connected USB devices.

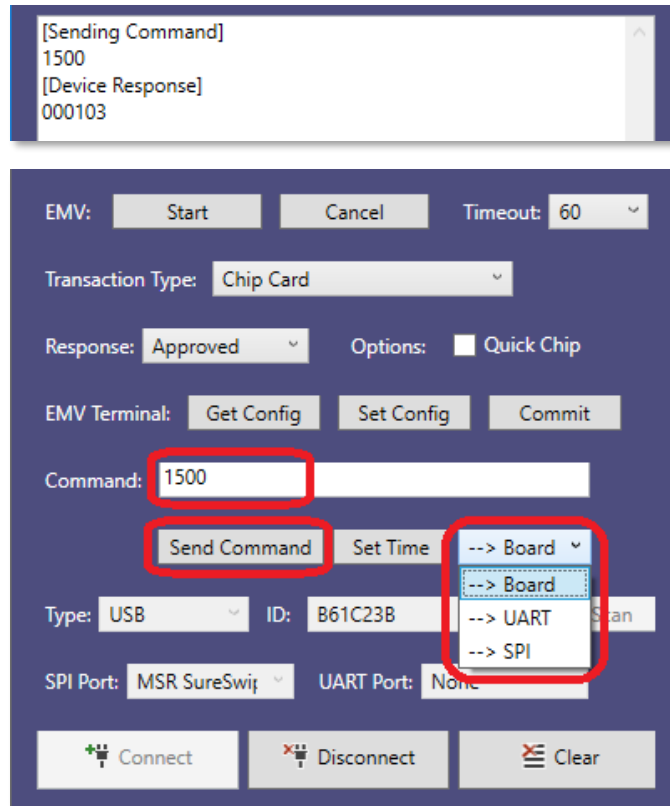


- 3) If your device has an additionally attached device to its SPI or UART port, select the appropriate device type in the list for SPI port and UART Port before connecting.



5 - How to use the MTNET OEM Demo via USB Interface

- 6) To send a command to the device, enter the command in the command text box, select the appropriate device to send to and press the **Send Command** button.



5 - How to use the MTNET OEM Demo via USB Interface

- 7) To read a chip card, press the **Set Time** button and send to the Board. If you have an attached NFC module connected to the UART port, press the **Set Time** button, and send to the UART before reading a contactless card.

```
[Sending Command]
491E000030C001800000000000000000000000000000000000000000000010
40907330009
[Device Extended Response]
00000000
```

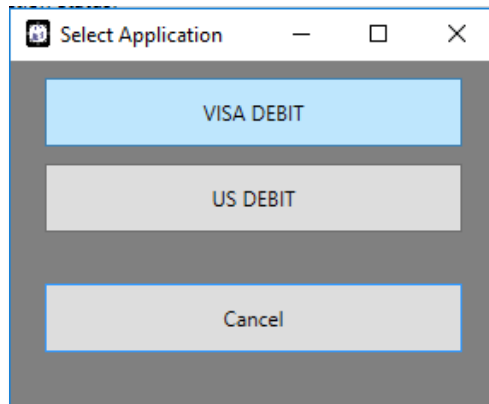
The image shows two side-by-side screenshots of the MTNET OEM Demo interface. Both screenshots show the 'EMV' section with the following fields: 'Start', 'Cancel', 'Timeout: 60', 'Transaction Type: Chip Card', 'Response: Approved', 'Options: Quick Chip', 'EMV Terminal: Get Config, Set Config, Commit', 'Command: [text input]', 'Send Command', 'Set Time', and '--> Board' (left) or '--> UART' (right). Below these are 'Type: USB', 'ID: B61C23B', 'Scan', 'SPI Port: None', and 'UART Port: None'. At the bottom are 'Connect', 'Disconnect', and 'Clear' buttons. In both screenshots, the 'Set Time' button is highlighted with a red box. In the left screenshot, the '--> Board' dropdown is also highlighted with a red box. In the right screenshot, the '--> UART' dropdown is highlighted with a red box.

- 8) To begin an EMV transaction, select desired **Transaction Type** and **Response**, press the **Start** button, and then present the appropriate card when the **Present Card** message appears.

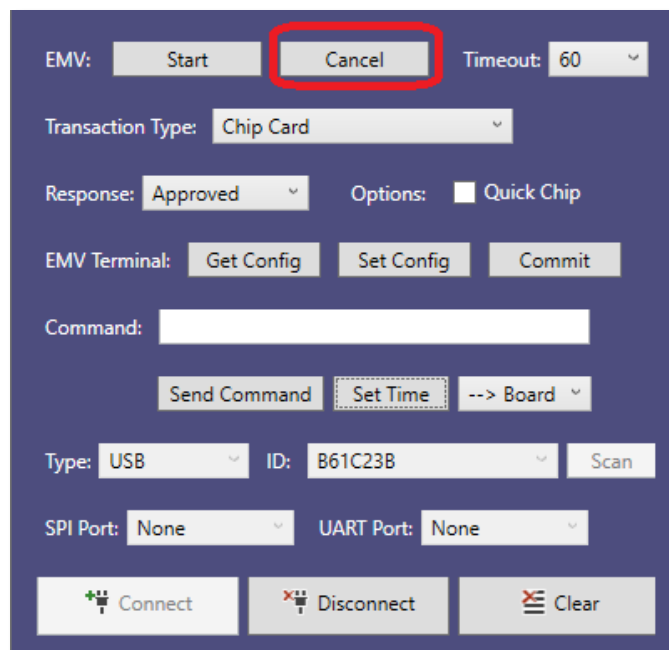
The image shows a screenshot of the MTNET OEM Demo interface. The 'EMV' section has the following fields: 'Start', 'Cancel', 'Timeout: 60', 'Transaction Type: Chip Card', 'Response: Approved', 'Options: Quick Chip', 'EMV Terminal: Get Config, Set Config, Commit', 'Command: [text input]', 'Send Command', 'Set Time', and '--> Board'. Below these are 'Type: USB', 'ID: B61C23B', 'Scan', 'SPI Port: None', and 'UART Port: None'. At the bottom are 'Connect', 'Disconnect', and 'Clear' buttons. In this screenshot, the 'Start' button, 'Transaction Type', 'Response', and 'Options' fields are highlighted with red boxes.

5 - How to use the MTNET OEM Demo via USB Interface

9) Select an Application in the **Select Application** window.

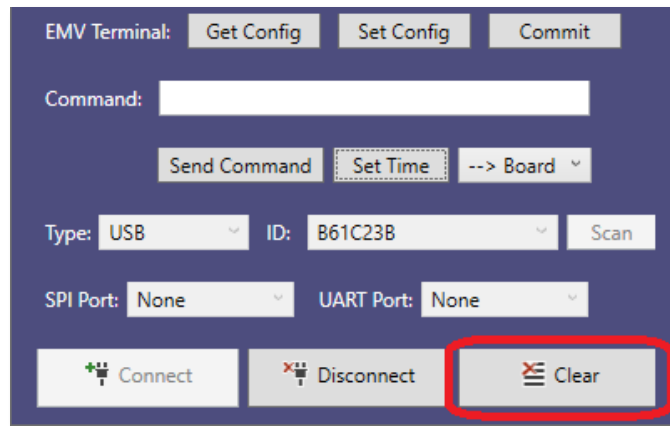


10) If you want to cancel the EMV transaction, press the **Cancel** button. Please note that the cancel feature will only work before the card is inserted.



5 - How to use the MTNET OEM Demo via USB Interface

11) To clear the screen, press the **Clear** button.



12) To close the device, press the **Disconnect** button.

