

aDynamo, uDynamo, Dynamag,
DynaMAX, eDynamo, mDynamo,
BulleT, tDynamo, DynaWave,
iDynamo 5 (Gen III)

**Secure Card Reader Authenticator
MagTek SCRA Demo and OEM Demo Manual (Android)**

June 2024

Manual Part Number:
D998200371-100

REGISTERED TO ISO 9001:2015

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Table 0.1 - Revisions

Rev Number	Date	Notes
10	February 5, 2020	Initial release
100	June 4, 2024	Added support for iDynamo 5 (Gen III) at sections 1, and 2.1.

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1 Introduction

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

- ***D99875728 DYNAMAG, DYNAMAX, EDYNAMO, UDYNAMO, ADYNAMO, BULLET, MDYNAMO, DYNAWAVE, TDYNAMO, IDYNAMO 6, DYNAGLASS, IDYNAMO 5 (GEN III) PROGRAMMER'S MANUAL (ANDROID)***

2 - How to use the MagTek SCRA Demo

2 How to use the MagTek SCRA Demo

This section describes how to use the MagTek SCRA Demo on an Android host. Some peripherals are not included in every MagTek SCRA device, so use each feature of the Demo accordingly.

2.1 Connecting via USB OTG

This section describes how to use the MagTek SCRA Demo with a SCRA Device such as Dynamag, DynaMAX, eDynamo, mDynamo, BulleT, uDynamo, tDynamo, and DynaWave, iDynamo 5 (Gen III) connected to an Android host via USB OTG cable. Please note that the Android host must have USB OTG support to use this connection type.

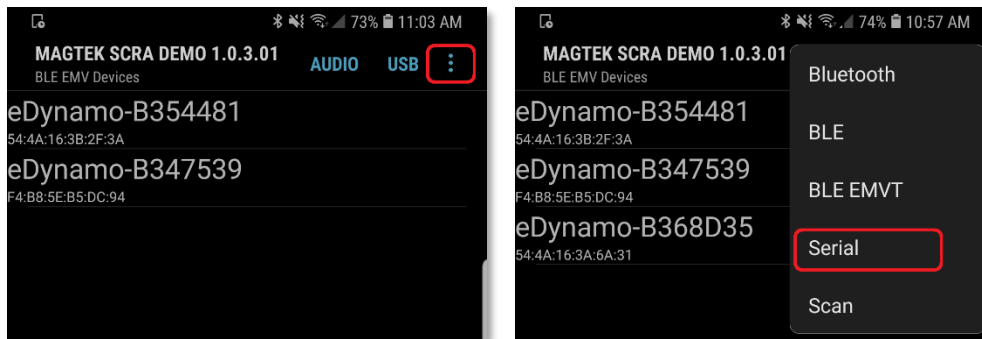
- 1) Connect the MagTek SCRA device to the Android host USB port using an OTG cable.
- 2) Press on **MagTek SCRA Demo** to launch the app.



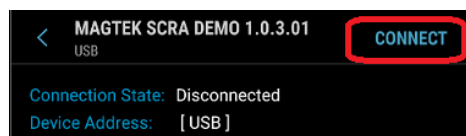
- 3) Connect a SCRA Device via USB OTG cable, then select USB in the menu.



- 4) If the device is Serial with a USB OTG cable, press on the device selector to the right of USB, then select **Serial**.

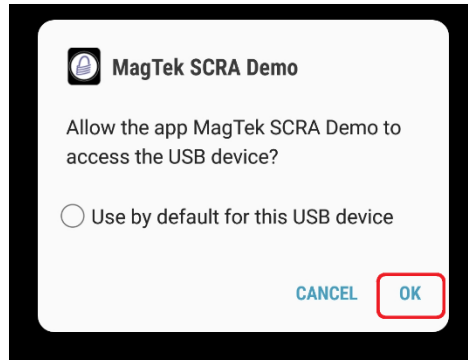


- 5) Press on **Connect**.

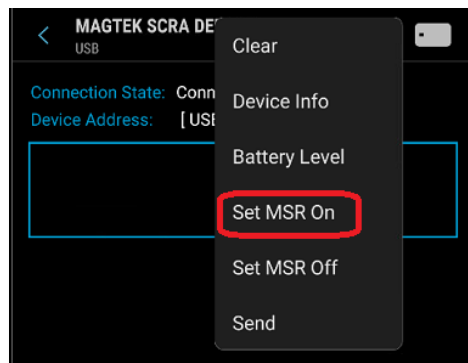


2 - How to use the MagTek SCRA Demo

- 6) Approve any prompts for allowing the app to access the USB device by pressing on **OK**.



- 7) If you have a tDynamo device, press the  icon and select **Set MSR On** to turn on the head.



- 8) Swipe a card to see the card data displays on the screen.
9) To disconnect the MagTek SCRA device, press the red **X** at the top of the app.

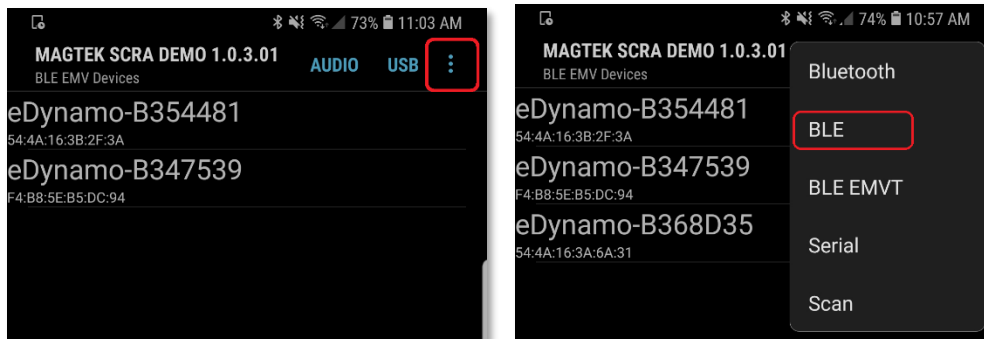


2 - How to use the MagTek SCRA Demo

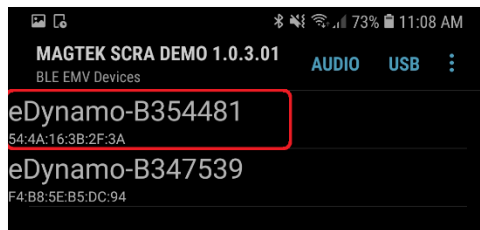
2.2 Connecting via Bluetooth

This section describes how to use the MagTek SCRA Demo with a SCRA Device such as Dynamag, DynaMAX, eDynamo, BulleT, and tDynamo connected to an Android host via USB OTG cable. Please note that the Android host must support Bluetooth and Bluetooth LE to use this connection type.

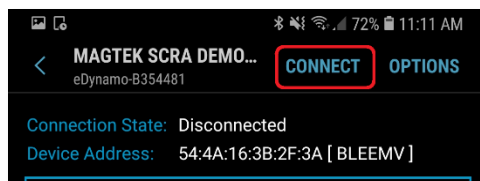
- 1) Connect the MagTek SCRA device to the Android host USB port using an OTG cable.
- 2) Press on the device selector and select either **Bluetooth**, **BLE**, **BLE EMVT** from the list.
Bluetooth for BulleT.
BLE for eDynamo and DynaMAX.
BLE EMVT for tDynamo



- 3) Select the intended device from the list. Example shown below.

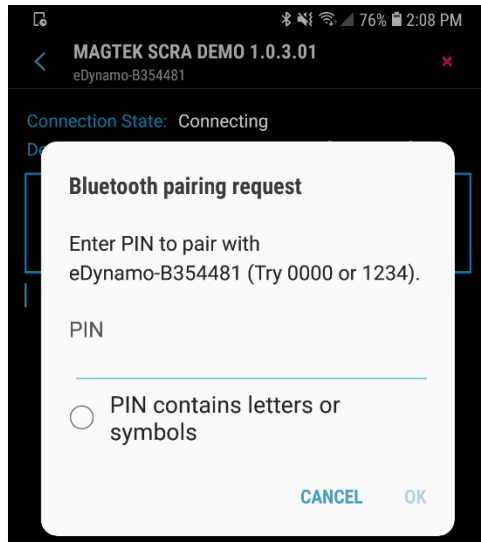


- 4) Press **CONNECT** to connect to the device.

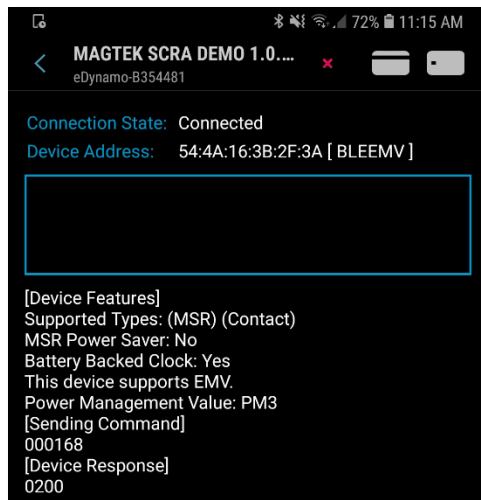


2 - How to use the MagTek SCRA Demo

- 5) The host will prompt to pair the device the first time the connection is established. Enter the pairing PIN and press **OK**.



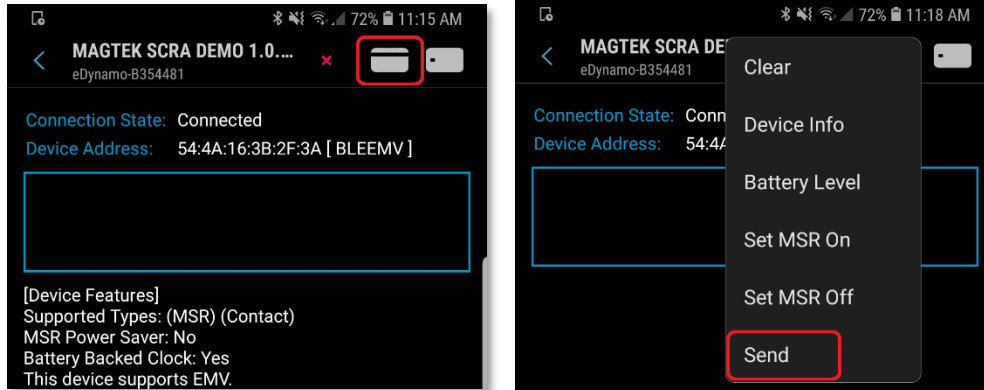
- 6) After the **Connection State** changes to **Connected**, the device is ready.



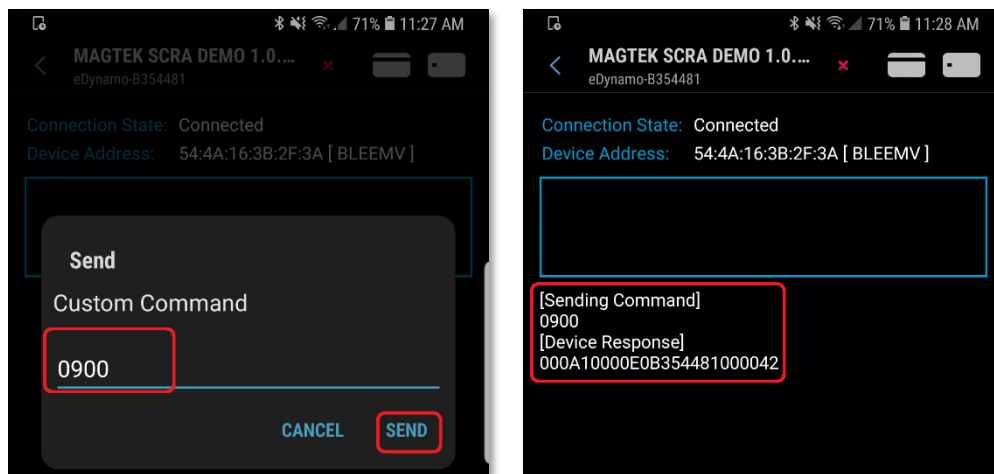
2 - How to use the MagTek SCRA Demo

2.3 Sending Commands

- 1) To begin the process of sending a command to the device, press on the magnetic stripe card icon at the top of the app, then select **SEND**.



- 2) Enter a command, then press on **SEND**. An example is shown below with the response.



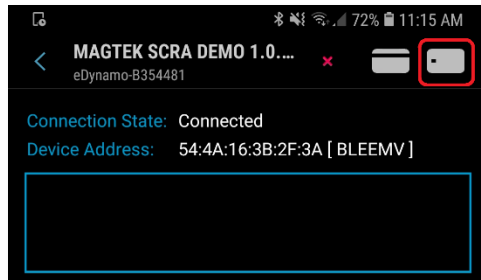
- 3) The selections other than SEND command are as follows.

Clear	Clears the screen.
Device Info	Returns information about the device.
Battery Level	Returns the battery level of the device.
Set MSR On	Powers on the MSR head while idle for devices that support this feature.
Set MSR Off	Powers off the MSR head while idle for devices that support this feature.

2 - How to use the MagTek SCRA Demo

2.4 EMV Transactions

- 1) To begin the process of starting an EMV transaction, press the chip card icon at the top of the app.



- 2) Select the transaction approval type:

Approved

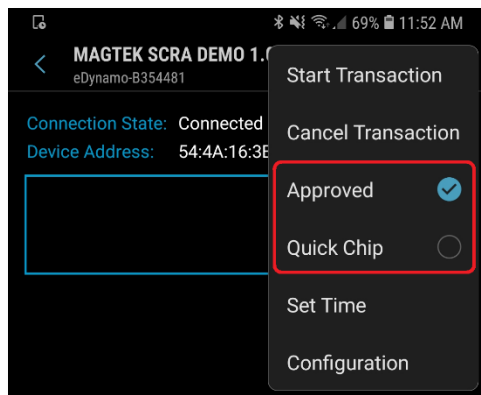
On for approval response code.

Off for decline response code.

Quick Chip

On to transact only an Acquirer Request Cryptogram (ARQC).

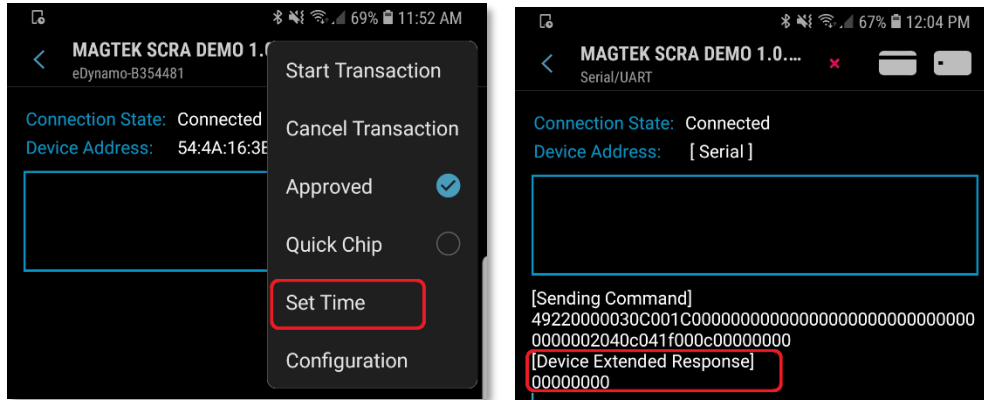
Off to transact both ARQC and Acquirer Response Code (ARPC).



- 3) For MagTek SCRA devices not equipped with batteries, the devices must have their time set after a power up from the host. This is needed only once until the next power cycle or reset.

Select **Set Time**. A response of all 0's means the time was set.

2 - How to use the MagTek SCRA Demo



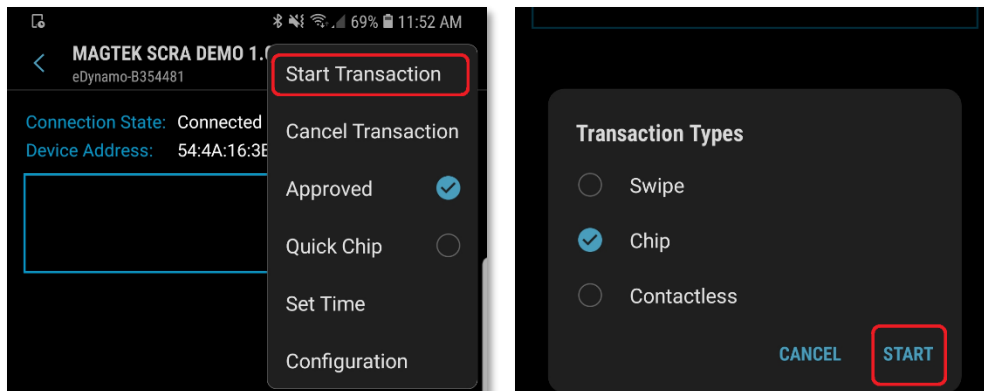
- 4) Select **Start Transaction** and select each **Transaction Types**. Transaction types may be combined.

Swipe for magnetic stripe.

Chip for chip.

Contactless for contactless.

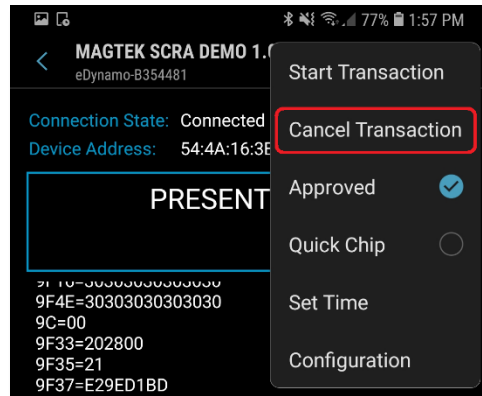
Press on **START** to start the transaction.



- 5) Present the card to the device and follow the prompts for selecting any languages and applications to complete the transaction. The result will be displayed similar as below.

2 - How to use the MagTek SCRA Demo

- 6) To cancel a transaction, press **EMV** at the top of the app and press **Cancel Transaction**. A transaction may only be canceled before a card is presented.



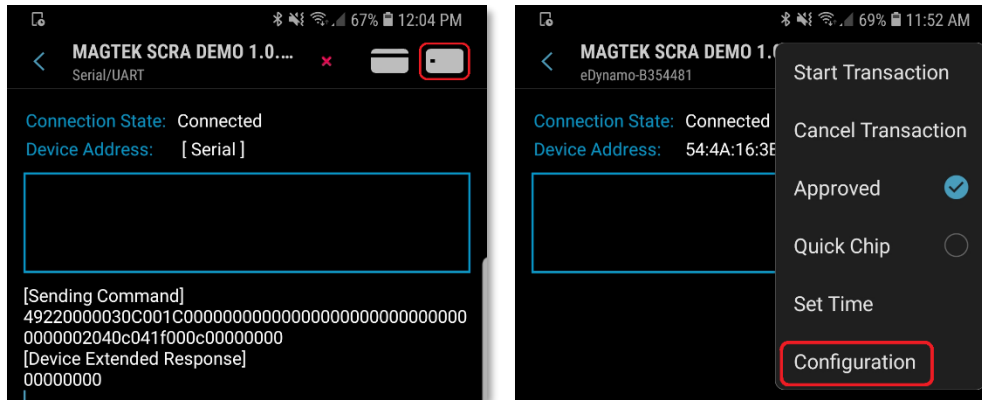
2 - How to use the MagTek SCRA Demo

2.5 Configuration

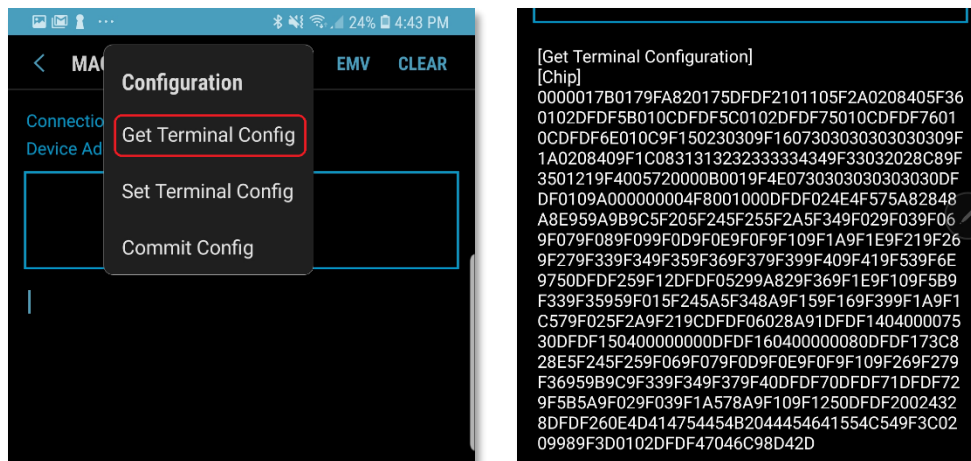
This section describes the get, set, and commit commands for terminal configuration on the device.

- Get – retrieves the terminal configuration.
- Set – sets the terminal configuration. Changes do not remain after device power cycle or reset.
- Commit – is used to store configuration changes to non-volatile memory to remain in place after a power cycle or reset.

- 1) To access the device's terminal configuration, press on the chip card icon at the top of the app and select **Configuration**.

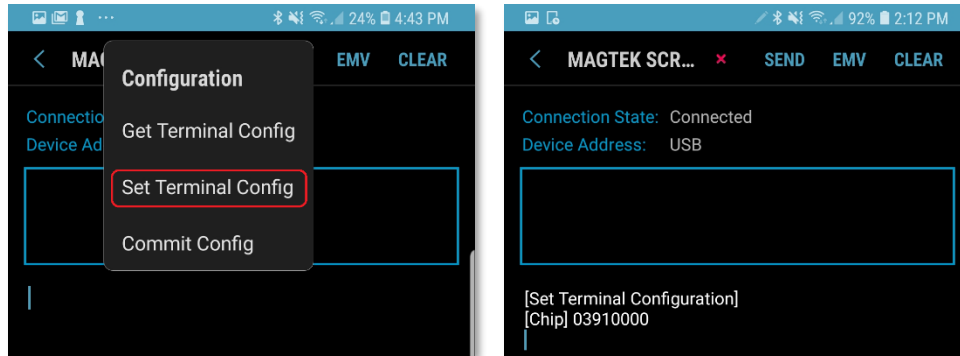


- 2) To get the devices terminal configuration, select **Get Terminal Config**. The value will be displayed similar as below.

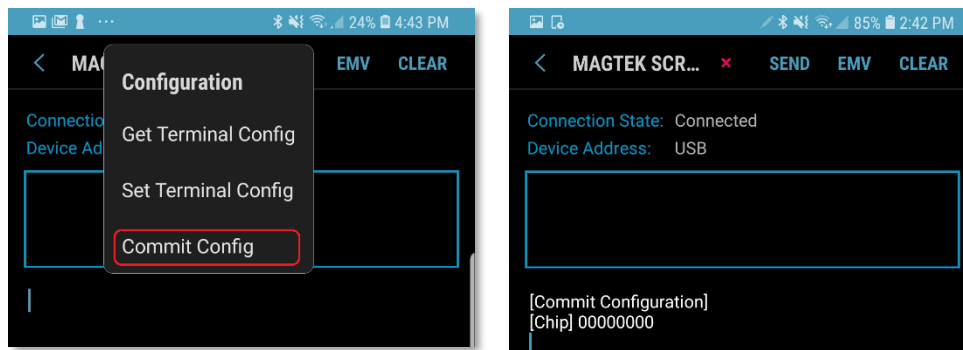


2 - How to use the MagTek SCRA Demo

- 3) To set the devices terminal configuration, select **Set Terminal Config**. The value will be displayed similar as below. Setting the Terminal Configuration requires an authenticated message unique to each device, so in the MagTek SCRA OEM Demo the response will indicate an invalid serial number or invalid MAC.



- 4) To commit the devices terminal configuration, select **Commit Config**. The value will be displayed similar as below.



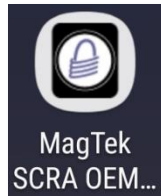
3 - How to use the MagTek SCRA OEM Demo

3 How to use the MagTek SCRA OEM Demo

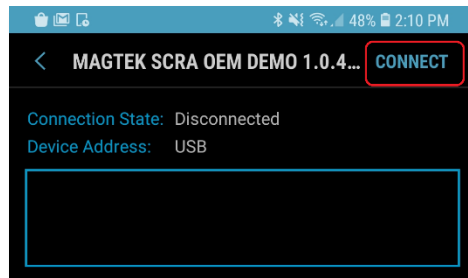
This section describes how to use the MagTek SCRA OEM Demo on an Android host. Some peripherals are not included in every MagTek OEM device. Use each feature of the Demo accordingly.

3.1 Connecting to a MagTek SCRA OEM Device

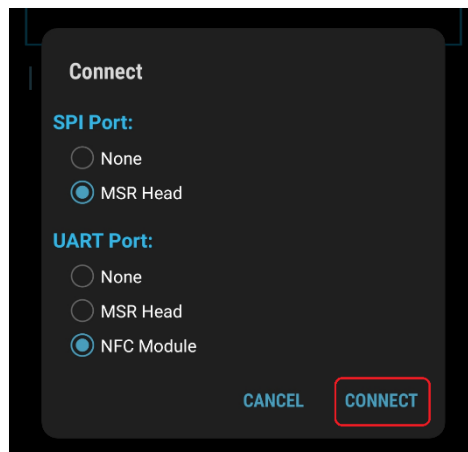
- 1) Connect the MagTek SCRA OEM device to the Android host USB port using an OTG cable.
- 2) Press on **MagTek SCRA OEM Demo** to launch the app.



- 3) To start the process of connecting, press on **Connect**.

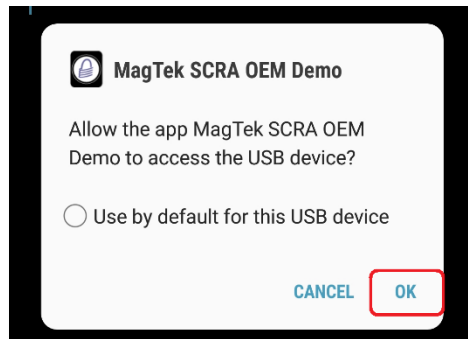


- 4) Select the appropriate peripheral connected to the MagTek SCRA OEM device's SPI Port and UART Port, and then press on **Connect**.

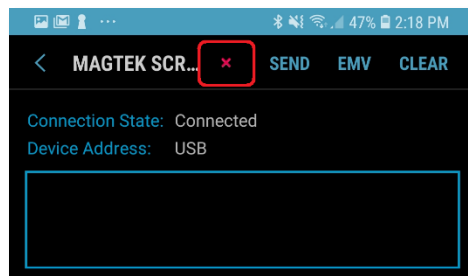


3 - How to use the MagTek SCRA OEM Demo

- 5) Approve any prompts for allowing the app to access the USB device by pressing on **OK**.



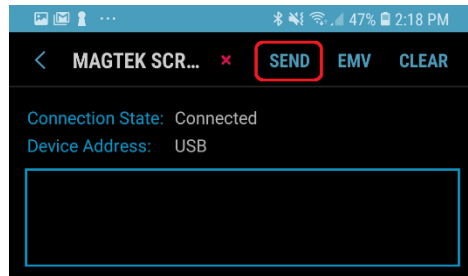
- 6) To disconnect the MagTek SCRA OEM device, press the red **X** at the top of the app.



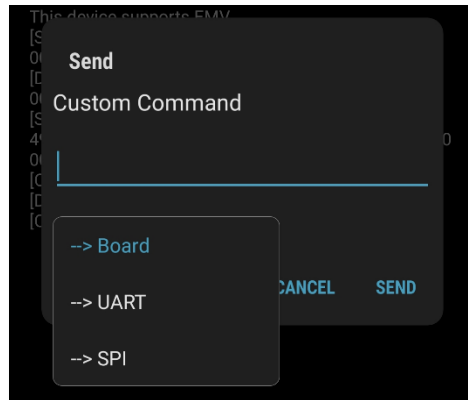
3 - How to use the MagTek SCRA OEM Demo

3.2 Sending Commands

- 1) To begin the process of sending a command to the device, press on **SEND** at the top of the app.

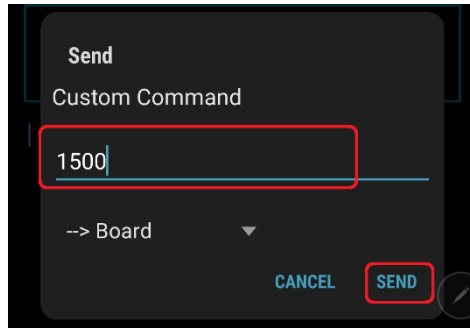


- 2) Select which interface the command is to be sent to:
 - Board** Commands to the main board chip peripheral.
 - UART** Commands to NFC contactless peripheral.
 - SPI** Commands to the MSR peripheral.

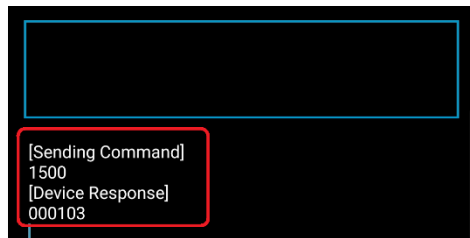


3 - How to use the MagTek SCRA OEM Demo

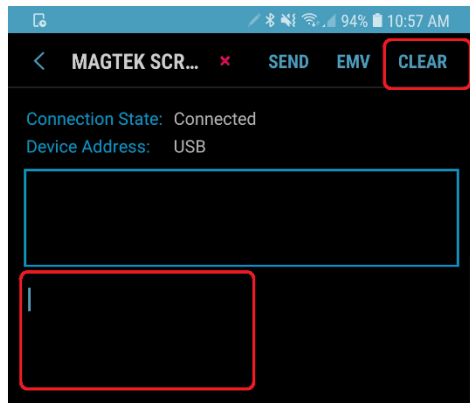
- 3) Enter the command under **Custom Command**, then press on **Send**.



- 4) Sent commands and device responses are displayed similarly as below.



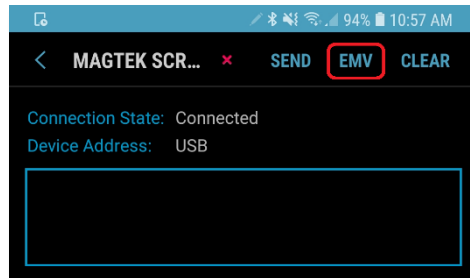
- 5) To clear the display, press on **CLEAR** at the top of the app.



3 - How to use the MagTek SCRA OEM Demo

3.3 EMV Transactions

- 1) To begin the process of starting an EMV transaction, press on **EMV** at the top of the app.



- 2) Select the transaction approval type:

Approved

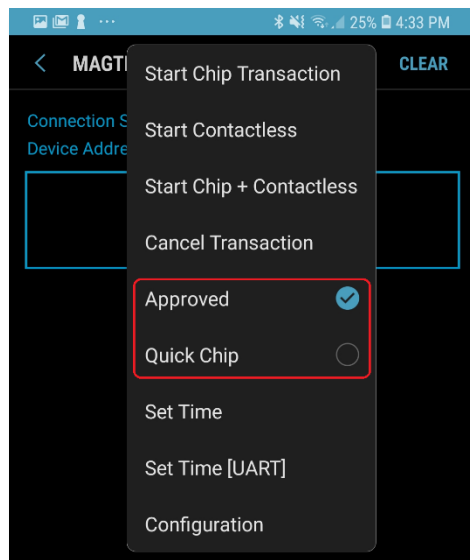
On for approval response code.

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On to transact only an Acquirer Request Cryptogram (ARQC).

Off to transact both ARQC and Acquirer Response Code (ARPC).

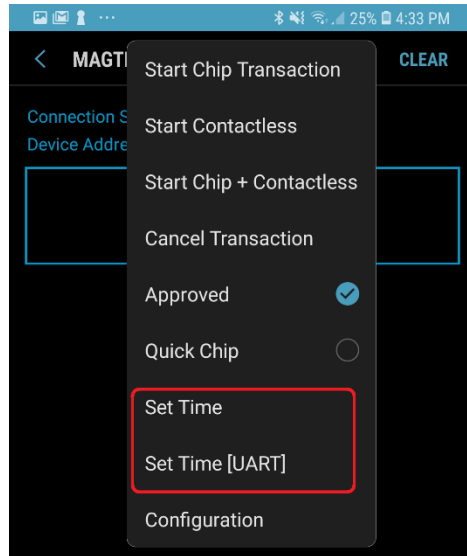


3 - How to use the MagTek SCRA OEM Demo

- 3) MagTek SCRA OEM devices and peripherals not equipped with batteries will need to have their time set on each USB connection to the Android host device. This step is needed only once until there is a power cycle or reset of the MagTek SCRA OEM device. Set the time according to which peripheral is to be used for the transaction:

Set Time For the main board chip transaction.

Set Time [UART] For NFC contactless transaction.

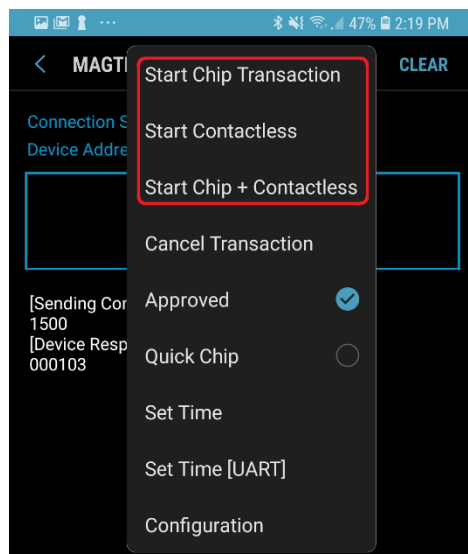


- 4) Select one of the card types for the transaction:

Start Chip Transaction for chip cards only.

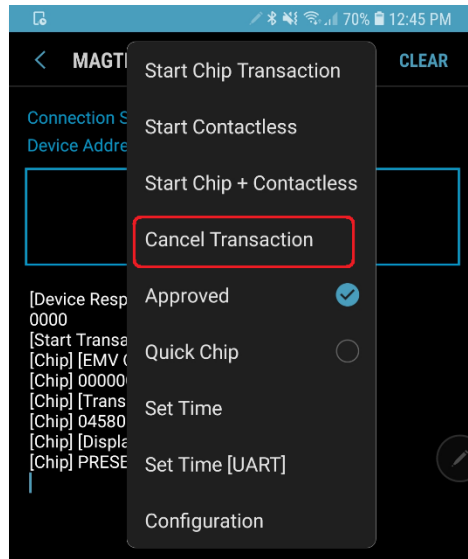
Start Contactless for contactless only.

Start Chip + Contactless for both chip and contactless.



3 - How to use the MagTek SCRA OEM Demo

- 7) To cancel a transaction, press **EMV** at the top of the app and press **Cancel Transaction**. A transaction may only be canceled before a card is presented.



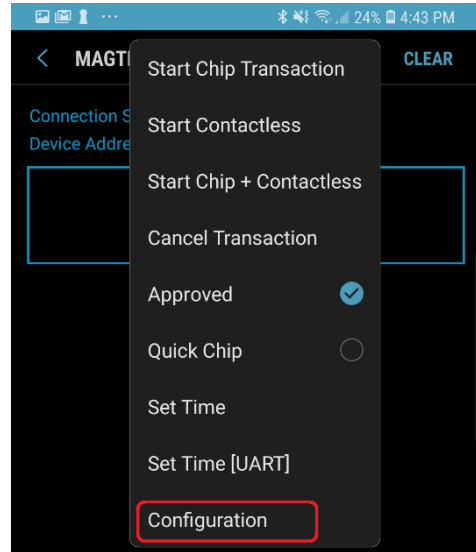
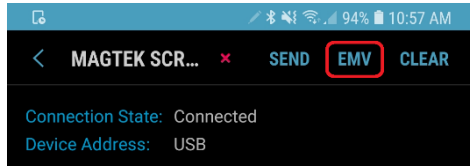
3 - How to use the MagTek SCRA OEM Demo

3.4 Configuration

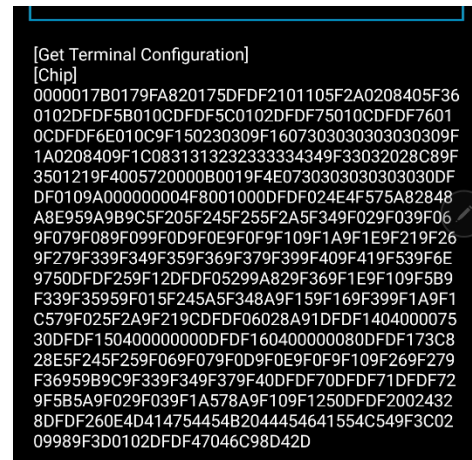
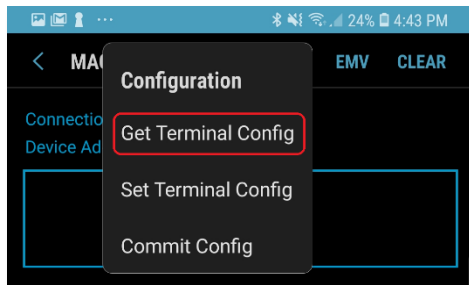
This section describes the get, set, and commit commands for terminal configuration on the device.

- Get – retrieves the terminal configuration.
- Set – sets the terminal configuration. Changes do not remain after device power cycle or reset.
- Commit – is used to store configuration changes to non-volatile memory to remain in place after a power cycle or reset.

- 1) To access the device's terminal configuration, press **EMV** at the top of the app and select **Configuration**.

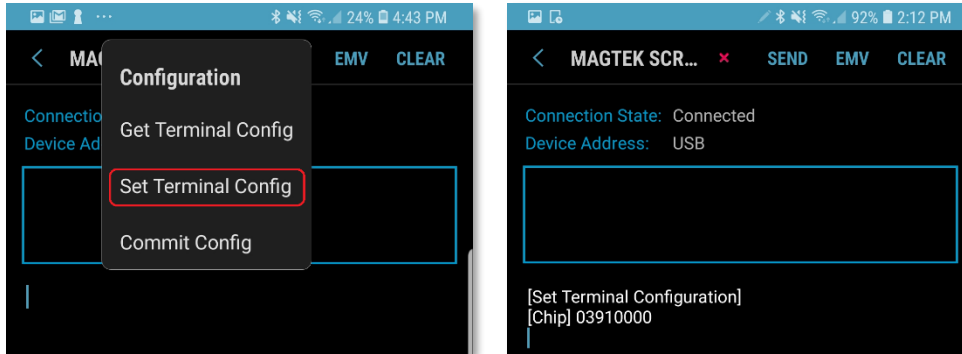


- 2) To get the devices terminal configuration, select **Get Terminal Config**. The value will be displayed similar as below.



3 - How to use the MagTek SCRA OEM Demo

- 3) To set the devices terminal configuration, select **Set Terminal Config**. The value will be displayed similar as below. Setting the Terminal Configuration requires an authenticated message unique to each device, so in the MagTek SCRA OEM Demo the response will indicate an invalid serial number or invalid MAC.



- 4) To commit the devices terminal configuration, select **Commit Config**. The value will be displayed similar as below.

