

oDynamo

SCRA OEM Devices
MTCMSNET Demo Guide



May 2018

Manual Part Number:
D998200166-10

REGISTERED TO ISO 9001:2008

Information in this publication is subject to change without notice and may contain technical inaccuracies or graphical discrepancies. Changes or improvements made to this product will be updated in the next publication release. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of MagTek, Inc.

MagTek® is a registered trademark of MagTek, Inc.

oDynamo™ is a trademarks of MagTek, Inc.

Microsoft® and Windows® are registered trademarks of Microsoft Corporation.

All other system names and product names are the property of their respective owners.

Table 0.1 – Revisions

Rev Number	Date	Notes
10	May 21, 2018	Initial release

SOFTWARE LICENSE AGREEMENT

IMPORTANT: YOU SHOULD CAREFULLY READ ALL THE TERMS, CONDITIONS AND RESTRICTIONS OF THIS LICENSE AGREEMENT BEFORE INSTALLING THE SOFTWARE PACKAGE. YOUR INSTALLATION OF THE SOFTWARE PACKAGE PRESUMES YOUR ACCEPTANCE OF THE TERMS, CONDITIONS, AND RESTRICTIONS CONTAINED IN THIS AGREEMENT. IF YOU DO NOT AGREE WITH THESE TERMS, CONDITIONS, AND RESTRICTIONS, PROMPTLY RETURN THE SOFTWARE PACKAGE AND ASSOCIATED DOCUMENTATION TO THE ADDRESS ON THE FRONT PAGE OF THIS DOCUMENT, ATTENTION: CUSTOMER SUPPORT.

TERMS, CONDITIONS, AND RESTRICTIONS

MagTek, Incorporated (the "Licensor") owns and has the right to distribute the described software and documentation, collectively referred to as the "Software."

LICENSE: Licensor grants you (the "Licensee") the right to use the Software in conjunction with MagTek products. LICENSEE MAY NOT COPY, MODIFY, OR TRANSFER THE SOFTWARE IN WHOLE OR IN PART EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT. Licensee may not decompile, disassemble, or in any other manner attempt to reverse engineer the Software. Licensee shall not tamper with, bypass, or alter any security features of the software or attempt to do so.

TRANSFER: Licensee may not transfer the Software or license to the Software to another party without the prior written authorization of the Licensor. If Licensee transfers the Software without authorization, all rights granted under this Agreement are automatically terminated.

COPYRIGHT: The Software is copyrighted. Licensee may not copy the Software except for archival purposes or to load for execution purposes. All other copies of the Software are in violation of this Agreement.

TERM: This Agreement is in effect as long as Licensee continues the use of the Software. The Licensor also reserves the right to terminate this Agreement if Licensee fails to comply with any of the terms, conditions, or restrictions contained herein. Should Licensor terminate this Agreement due to Licensee's failure to comply, Licensee agrees to return the Software to Licensor. Receipt of returned Software by the Licensor shall mark the termination.

LIMITED WARRANTY: Licensor warrants to the Licensee that the disk(s) or other media on which the Software is recorded are free from defects in material or workmanship under normal use.

THE SOFTWARE IS PROVIDED AS IS. LICENSOR MAKES NO OTHER WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Because of the diversity of conditions and PC hardware under which the Software may be used, Licensor does not warrant that the Software will meet Licensee specifications or that the operation of the Software will be uninterrupted or free of errors.

IN NO EVENT WILL LICENSOR BE LIABLE FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE, OR INABILITY TO USE, THE SOFTWARE. Licensee's sole remedy in the event of a defect in material or workmanship is expressly limited to replacement of the Software disk(s) if applicable.

GOVERNING LAW: If any provision of this Agreement is found to be unlawful, void, or unenforceable, that provision shall be removed from consideration under this Agreement and will not affect the enforceability of any of the remaining provisions. This Agreement shall be governed by the laws of the State of California and shall inure to the benefit of MagTek, Incorporated, its successors or assigns.

ACKNOWLEDGMENT: LICENSEE ACKNOWLEDGES THAT HE HAS READ THIS AGREEMENT, UNDERSTANDS ALL OF ITS TERMS, CONDITIONS, AND RESTRICTIONS, AND AGREES TO BE BOUND BY THEM. LICENSEE ALSO AGREES THAT THIS AGREEMENT SUPERSEDES ANY AND ALL VERBAL AND WRITTEN COMMUNICATIONS BETWEEN LICENSOR AND LICENSEE OR THEIR ASSIGNS RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.

QUESTIONS REGARDING THIS AGREEMENT SHOULD BE ADDRESSED IN WRITING TO MAGTEK, INCORPORATED, ATTENTION: CUSTOMER SUPPORT, AT THE ADDRESS LISTED IN THIS DOCUMENT, OR E-MAILED TO SUPPORT@MAGTEK.COM.

Table of Contents

Table of Contents	5
1 Introduction	6
2 How to Connect with the MTCMS .NET Demo	7
2.1 Connect via USB Interface	7
2.2 Connect via Ethernet Interface	8
2.3 Connect via Serial Interface	9
3 How to Use the MTCMS .NET Demo.....	11
3.1 Send Command	11
3.2 Message Subscription	11
3.3 MSR Auto	13
3.4 MSR Manual	14
3.5 Request PAN.....	15
3.6 EMV Transaction.....	16
3.7 Device Info	17
3.8 Latch/Unlatch.....	20

1 Introduction

This document provides the instructions to use the MTCMSNET Demo. It is part of a larger library of documents designed to assist oDynamo implementers, which includes the following documents available from MagTek:

- ***D998200160 ODYNAMO PROGRAMMER'S REFERENCE MANUAL (MICROSOFT .NET)***

2 - How to Connect with the MTCMS .NET Demo

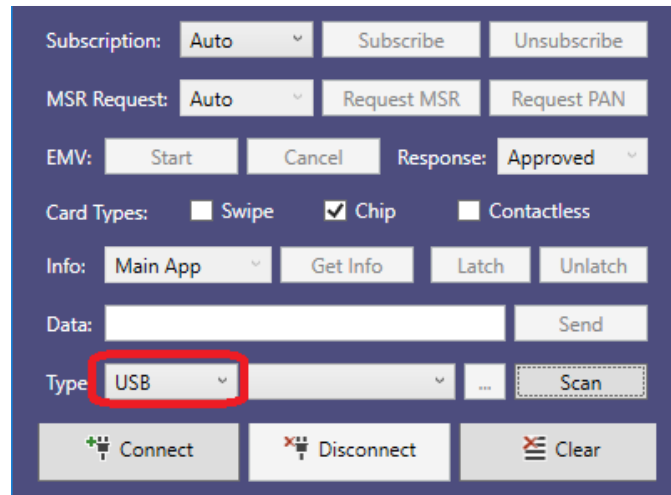
2 How to Connect with the MTCMS .NET Demo

To connect to the oDynamo, follow these steps.

2.1 Connect via USB Interface

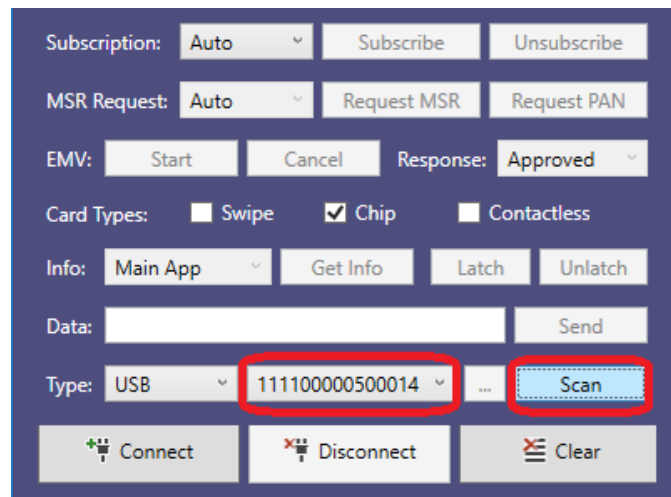
To set up the USB interface with oDynamo on Windows PC, follow these steps:

- 1) Connect the oDynamo to the USB port of the Windows PC. Connect the power cable to the oDynamo and wait 1 minute for the device to fully boot up.
- 2) Launch the MTCMSNET Demo and select **USB** as the device type in the **Type** list box.



The screenshot shows the MTCMSNET Demo interface. The 'Type' dropdown menu is set to 'USB' and is highlighted with a red rectangle. Other visible elements include 'Subscription: Auto', 'MSR Request: Auto', 'EMV: Start', 'Cancel', 'Response: Approved', 'Card Types: Swipe, Chip, Contactless', 'Info: Main App', 'Get Info', 'Latch', 'Unlatch', 'Data: [text box]', 'Send', 'Connect', 'Disconnect', and 'Clear' buttons.

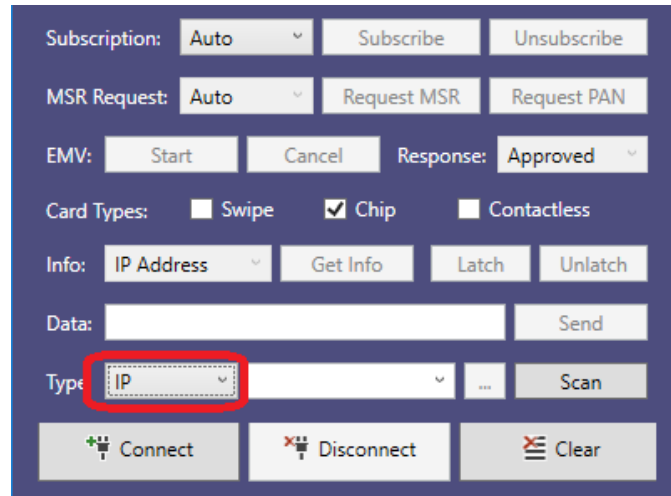
- 3) Press the **Scan** button to scan for connected USB devices.



The screenshot shows the MTCMSNET Demo interface. The 'Type' dropdown menu is set to 'USB' and is highlighted with a red rectangle. The 'Scan' button is also highlighted with a red rectangle. Other visible elements include 'Subscription: Auto', 'MSR Request: Auto', 'EMV: Start', 'Cancel', 'Response: Approved', 'Card Types: Swipe, Chip, Contactless', 'Info: Main App', 'Get Info', 'Latch', 'Unlatch', 'Data: [text box]', 'Send', 'Connect', 'Disconnect', and 'Clear' buttons.

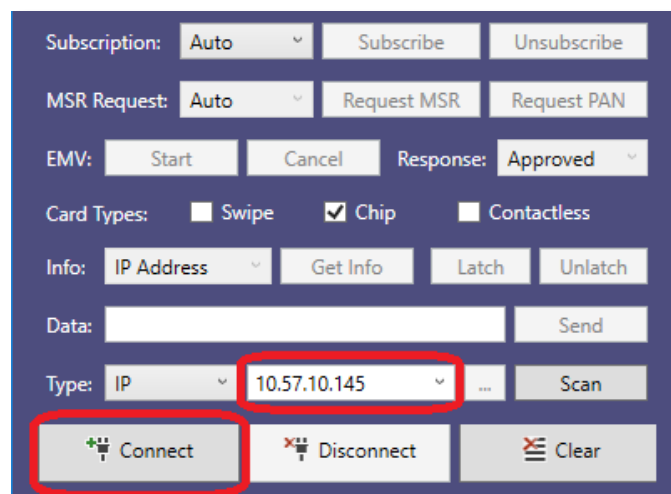
[illegible]

2 - How to Connect with the MTCMS .NET Demo



The screenshot shows the MTCMS .NET Demo interface. The 'Type' dropdown menu is highlighted with a red box, showing 'IP' as the selected option. Other visible elements include 'Subscription: Auto', 'MSR Request: Auto', 'EMV: Start', 'Cancel', 'Response: Approved', 'Card Types: Swipe, Chip, Contactless', 'Info: IP Address', 'Get Info', 'Latch', 'Unlatch', 'Data: Send', and 'Connect', 'Disconnect', 'Clear' buttons.

- 3) Enter the IP address attained from the last step from connection via USB Interface section 2.1, then press the **Connect** button to open the device. The MTCMS NET Demo may take up to 30 seconds before disconnecting if the device cannot be connected.



The screenshot shows the MTCMS .NET Demo interface. The 'Type' dropdown menu is highlighted with a red box, showing 'IP' as the selected option. The 'Connect' button is also highlighted with a red box. Other visible elements include 'Subscription: Auto', 'MSR Request: Auto', 'EMV: Start', 'Cancel', 'Response: Approved', 'Card Types: Swipe, Chip, Contactless', 'Info: IP Address', 'Get Info', 'Latch', 'Unlatch', 'Data: Send', and 'Disconnect', 'Clear' buttons.

2.3 Connect via Serial Interface

To set up the Serial interface with oDynamo on Windows PC, follow these steps:

- 1) Connect the oDynamo to the Serial port, connect the power cable to the oDynamo and wait 1 minute for the device to fully boot up.
- 2) Launch the MTCMSNET Demo and select **Serial** as the device in the **Type** list box.

2 - How to Connect with the MTCMS .NET Demo

Subscription: Auto Subscribe Unsubscribe
MSR Request: Auto Request MSR Request PAN
EMV: Start Cancel Response: Approved
Card Types: ☐ Swipe ☒ Chip ☐ Contactless
Info: IP Address Get Info Latch Unlatch
Data: Send
Type: Serial COM3 Scan
Connect Disconnect Clear

- 3) Select the **COM** number the device is attached to and press the **Connect** button to open the device.

[Connecting...]
[Device Information]
Name=COM3
Address=COM3
[Connected]
[Subscribe] = True
Sending to device: [C00101C10101C20150C4020100]
Send result=0
[Device Data]
C00102C10101C20150C30100
[Device Response]
Subscription: Auto Subscribe Unsubscribe
MSR Request: Auto Request MSR Request PAN
EMV: Start Cancel Response: Approved
Card Types: ☐ Swipe ☒ Chip ☐ Contactless
Info: IP Address Get Info Latch Unlatch
Data: Send
Type: Serial COM3 Scan
Connect Disconnect Clear

3 - How to Use the MTCMS .NET Demo

3 How to Use the MTCMS .NET Demo

To use the MTCMS .NET Demo, follow these steps.

3.1 Send Command

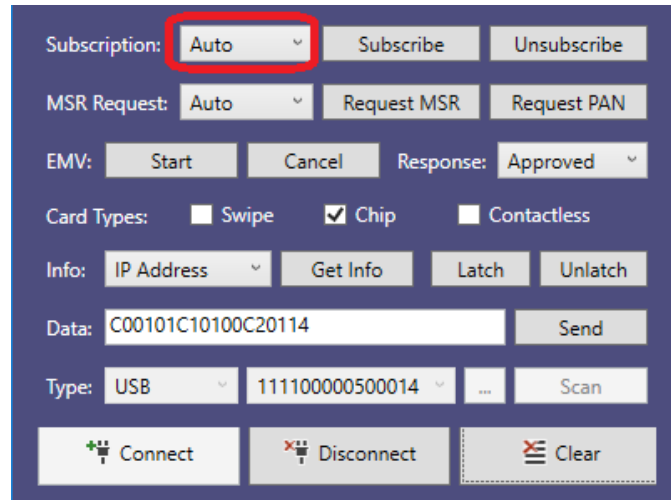
- 1) To send a command to the device, enter the command in the command text box and press the **Send** button.

The screenshot displays the MTCMS .NET Demo application window. At the top, a text area shows the following data: [Sending Data] C00101C10100C20114, [Device Data] C00102C10100C20114C30100C4076F44796E616D6F00, and [Device Response] Device Info Application Response CommandID=0x14, ResultCode=0x00, Data=[6F44796E616D6F]. Below this, the Product Name is listed as oDynamo. The interface includes several control sections: Subscription (Auto selected, with Subscribe and Unsubscribe buttons), MSR Request (Auto selected, with Request MSR and Request PAN buttons), EMV (Start and Cancel buttons, and Response: Approved selected), Card Types (Swipe, Chip selected, and Contactless), Info (IP Address selected, with Get Info, Latch, and Unlatch buttons), and a Data field containing C00101C10100C20114 with a Send button highlighted by a red rectangle. At the bottom, there are Type (USB selected), a field with 111100000500014, a Scan button, and a footer with Connect, Disconnect, and Clear buttons.

3.2 Message Subscription

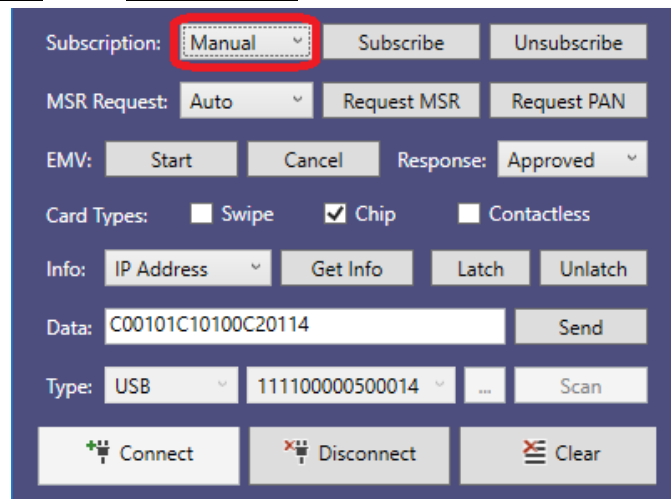
- 1) To enable the MTCMS .NET Demo to receive message notifications, the Demo needs to first subscribe to messages. Select **Auto** in the **Subscription** list box to enable the Demo to Subscribe after connecting to the device.

3 - How to Use the MTCMS .NET Demo



The screenshot shows the MTCMS .NET Demo interface. The 'Subscription' dropdown menu is highlighted with a red box and is currently set to 'Auto'. Other visible elements include the 'MSR Request' dropdown set to 'Auto', 'EMV' buttons for 'Start' and 'Cancel', a 'Response' dropdown set to 'Approved', 'Card Types' checkboxes for 'Swipe', 'Chip' (checked), and 'Contactless', an 'Info' dropdown set to 'IP Address', and buttons for 'Get Info', 'Latch', and 'Unlatch'. The 'Data' field contains 'C00101C10100C20114' with a 'Send' button. The 'Type' dropdown is set to 'USB' with a value of '111100000500014' and a 'Scan' button. At the bottom are 'Connect', 'Disconnect', and 'Clear' buttons.

- 2) To stop the Demo from automatically subscribing to message notifications after connecting to a device, select **Manual** in the **Subscription** list box.



The screenshot shows the MTCMS .NET Demo interface with the 'Subscription' dropdown menu highlighted by a red box and set to 'Manual'. All other interface elements, including the 'MSR Request' dropdown, 'EMV' buttons, 'Card Types' checkboxes, 'Info' dropdown, 'Data' field, 'Type' dropdown, and bottom buttons, remain the same as in the previous screenshot.

- 3) To disable the MTCMS .NET Demo from receiving message notifications from the currently connected device, first connect to the device and then press the **Unsubscribe** button.

3 - How to Use the MTCMS .NET Demo

The screenshot shows the MTCMS .NET Demo interface. The 'Subscription' section has a dropdown menu set to 'Auto', a 'Subscribe' button, and an 'Unsubscribe' button which is highlighted with a red dashed box. Below this, the 'MSR Request' section has a dropdown menu set to 'Auto', a 'Request MSR' button, and a 'Request PAN' button. The 'EMV' section has 'Start' and 'Cancel' buttons, and a 'Response' dropdown menu set to 'Approved'. The 'Card Types' section has three checkboxes: 'Swipe' (unchecked), 'Chip' (checked), and 'Contactless' (unchecked). The 'Info' section has a dropdown menu set to 'IP Address', a 'Get Info' button, and 'Latch' and 'Unlatch' buttons. The 'Data' section has a text input field containing 'C00101C10100C20114' and a 'Send' button. The 'Type' section has a dropdown menu set to 'USB', a text input field containing '111100000500014', a 'Scan' button, and an ellipsis button. At the bottom, there are three buttons: 'Connect' (with a green plus icon), 'Disconnect' (with a red minus icon), and 'Clear' (with a red X icon).

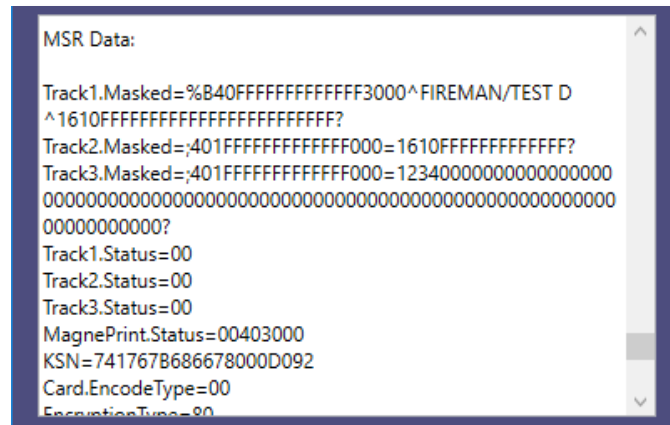
3.3 MSR Auto

- 1) To automatically display magnetic stripe data after a card swipe, select **Auto** in the **MSR Request** list box. This step needs only be done once on the currently connected device.

The screenshot shows the MTCMS .NET Demo interface. The 'Subscription' section has a dropdown menu set to 'Auto', a 'Subscribe' button, and an 'Unsubscribe' button. Below this, the 'MSR Request' section has a dropdown menu set to 'Auto', which is highlighted with a red dashed box, a 'Request MSR' button, and a 'Request PAN' button. The 'EMV' section has 'Start' and 'Cancel' buttons, and a 'Response' dropdown menu set to 'Approved'. The 'Card Types' section has three checkboxes: 'Swipe' (unchecked), 'Chip' (checked), and 'Contactless' (unchecked). The 'Info' section has a dropdown menu set to 'IP Address', a 'Get Info' button, and 'Latch' and 'Unlatch' buttons. The 'Data' section has a text input field containing 'C00101C10100C20114' and a 'Send' button. The 'Type' section has a dropdown menu set to 'USB', a text input field containing '111100000500014', a 'Scan' button, and an ellipsis button. At the bottom, there are three buttons: 'Connect' (with a green plus icon), 'Disconnect' (with a red minus icon), and 'Clear' (with a red X icon).

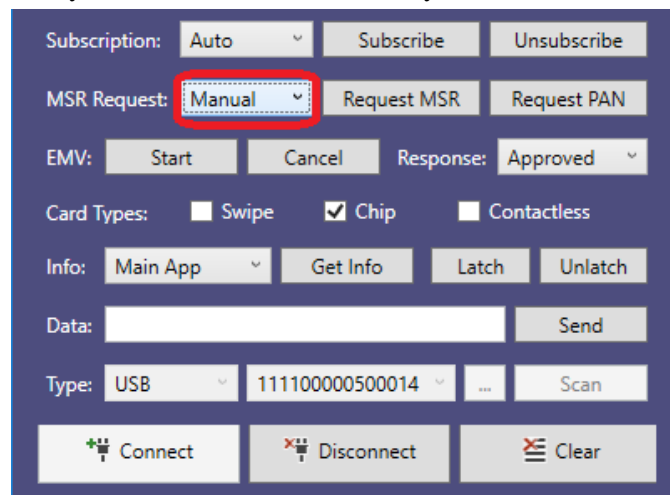
- 2) Insert and remove a card from the device. The magnetic stripe data will be displayed in the status box.

3 - How to Use the MTCMS .NET Demo

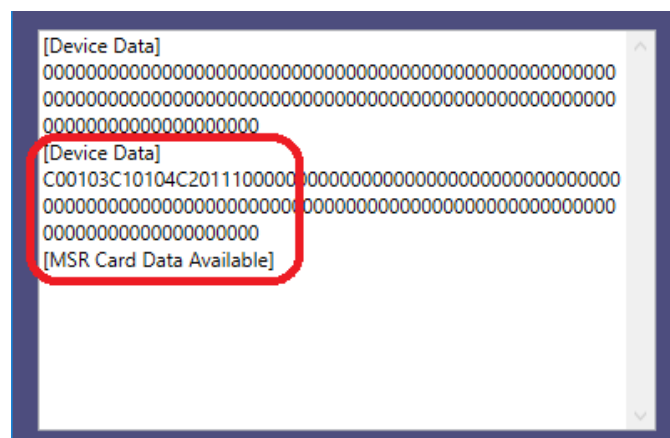


3.4 MSR Manual

- 1) To manually display magnetic stripe data after a card swipe, select **Manual** in the **MSR Request** list box. This step needs only be done once on the currently connected device.



- 2) Insert then remove a magnetic stripe card from the device. A notification will inform that MSR card data is available.



- MSR Data

MSR Data:

Track1.Masked=%B4010000007000000000^FIREMAN/TEST D
^1610000000000000000000000000000000?
Track2.Masked=;4010000007000000000=16100000000000000?
Track3.Masked=;4010000007000000000=123400000000000000
000
0000000000000?
Track1.Status=00
Track2.Status=00
Track3.Status=00
MagnePrint.Status=61403000
KSN=950003000000001200007
Card.EncodeType=01
EncryptionType=80

Subscription:

Auto

Subscribe

Unsubscribe

MSR Request:

Manual

Request MSR

Request PAN

EMV:

Start

Cancel

Response:

Approved

Card Types:

☐ Swipe

☒ Chip

☐ Contactless

Info:

Main App

Get Info

Latch

Unlatch

Data:

Send

Type:

USB

11110000500014

...

Scan

Connect

Disconnect

Clear

- has no magnetic stripe data.

[illegible]

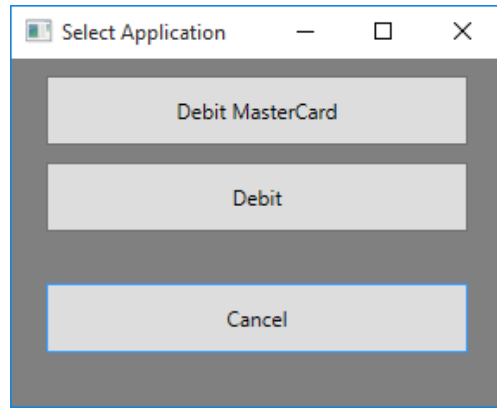
3.5 Request PAN

- MSR

- [illegible]

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

3 - How to Use the MTCMS .NET Demo



- 3) After the transaction, the status will be displayed.



- 4) To cancel the EMV transaction, press the **Cancel** button. Please note that the cancel feature will only work before the card is inserted (Not supported at this time).

3.7 Device Info

- 1) To view the device information, select the desired information from the **Info** list box, then press the **Get Info** button. An example of requesting Firmware information is shown below.

3 - How to Use the MTCMS .NET Demo

The screenshot displays the MTCMS .NET Demo application interface. At the top, a log window shows the following text:

```
Sending to device: [C00101C10100C20116]  
Send result=0  
[Device Data]  
C00102C10100C20116C30100C411313030303030343139332D42  
322D5453540000000000000000000000000000000000000000  
000000000000000000000000  
[Device Response]  
Device Info Application Response CommandID=0x16,  
ResultCode=0x00, Data=  
[313030303030343139332D42322D545354]  
  
Firmware Number: 1000004193-B2-TST
```

Below the log, the interface includes several control sections:

- Subscription:** A dropdown menu set to "Auto", with "Subscribe" and "Unsubscribe" buttons.
- MSR Request:** A dropdown menu set to "Auto", with "Request MSR" and "Request PAN" buttons.
- EMV:** "Start" and "Cancel" buttons, followed by a "Response:" label and a dropdown menu set to "Approved".
- Card Types:** Three checkboxes: "Swipe" (unchecked), "Chip" (checked), and "Contactless" (unchecked).
- Info:** A dropdown menu set to "Firmware", a "Get Info" button (highlighted with a red dashed border), and "Latch" and "Unlatch" buttons.
- Data:** A text input field and a "Send" button.
- Type:** A dropdown menu set to "USB", a text input field containing "11110000500014", an ellipsis button "...", and a "Scan" button.
- Bottom Bar:** Three buttons: "Connect" (with a green USB icon), "Disconnect" (with a red USB icon), and "Clear" (with a red X icon).

- 2) To clear the screen, press the **Clear** button.

3 - How to Use the MTCMS .NET Demo

The screenshot displays the MTCMS .NET Demo interface. At the top is a large empty white rectangular area. Below this are several control sections: 'Subscription' with a dropdown set to 'Auto' and buttons for 'Subscribe' and 'Unsubscribe'; 'MSR Request' with a dropdown set to 'Auto' and buttons for 'Request MSR' and 'Request PAN'; 'EMV' with 'Start' and 'Cancel' buttons and a 'Response' dropdown set to 'Approved'; 'Card Types' with checkboxes for 'Swipe' (unchecked), 'Chip' (checked), and 'Contactless' (unchecked); 'Info' with a dropdown set to 'Firmware' and buttons for 'Get Info', 'Latch', and 'Unlatch'; a 'Data' input field with a 'Send' button; and 'Type' with a dropdown set to 'USB', a text field containing '111100000500014', an ellipsis button, and a 'Scan' button. At the bottom are three buttons: 'Connect' (with a green plug icon), 'Disconnect' (with a red plug icon), and 'Clear' (with a red 'X' icon). The 'Clear' button is highlighted with a red rectangular box.

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

3 - How to Use the MTCMS .NET Demo

The screenshot shows the MTCMS .NET Demo interface. At the top, a status window displays "[Disconnecting....]" and "[Disconnected]". Below this, the interface includes several control sections: "Subscription" with a dropdown set to "Auto" and buttons for "Subscribe" and "Unsubscribe"; "MSR Request" with a dropdown set to "Auto" and buttons for "Request MSR" and "Request PAN"; "EMV" with "Start" and "Cancel" buttons and a "Response" dropdown set to "Approved"; "Card Types" with checkboxes for "Swipe", "Chip" (checked), and "Contactless"; "Info" with a dropdown set to "Firmware" and buttons for "Get Info", "Latch", and "Unlatch"; a "Data" input field with a "Send" button; "Type" with a dropdown set to "USB", a card number field containing "111100000500014", and a "Scan" button. At the bottom, there are three buttons: "Connect" (with a USB icon), "Disconnect" (with a USB icon and a red 'X'), and "Clear" (with a list icon). The "Disconnect" button is highlighted with a red rectangular box.

3.8 Latch/Unlatch

- 1) To demonstrate card Latch and Unlatch, press the **Latch** button and listen for an audible click. Now press the **Unlatch** button and listen for an audible click.

This screenshot shows the same MTCMS .NET Demo interface as the previous one, but with the "Latch" button in the "Info" section highlighted with a red rectangular box. All other elements, including the status window, dropdown menus, and other buttons, remain the same.

3 - How to Use the MTCMS .NET Demo

The screenshot displays the MTCMS .NET Demo interface, which is a dark-themed control panel. It features several sections of controls:

- Subscription:** A dropdown menu set to "Auto", and two buttons: "Subscribe" and "Unsubscribe".
- MSR Request:** A dropdown menu set to "Auto", and two buttons: "Request MSR" and "Request PAN".
- EMV:** Two buttons, "Start" and "Cancel", followed by a "Response:" label and a dropdown menu set to "Approved".
- Card Types:** Three checkboxes: "Swipe" (unchecked), "Chip" (checked), and "Contactless" (unchecked).
- Info:** A dropdown menu set to "Firmware", and three buttons: "Get Info", "Latch", and "Unlatch". The "Unlatch" button is highlighted with a red dashed border.
- Data:** A text input field and a "Send" button.
- Type:** A dropdown menu set to "USB", a text input field containing "111100000500014", an ellipsis button "...", and a "Scan" button.
- Bottom Row:** Three large buttons: "Connect" (with a green plus icon), "Disconnect" (with a red minus icon), and "Clear" (with a red X icon).