

TI PROPRIETARY INFORMATION - INTERNAL DATA	TEXAS INSTRUMENTS RFID SYSTEMS SPECIFICATION	Originator : C. Bohren
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Subco/Mfg Spec.

User Guide Test Control Software

S4110 MFR Evaluation Kit

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1. Purpose

The purpose of this document is to demonstrate the Test Control software for the S4110 MFR Evaluation Kit.

2. Hardware Set up

2.1 S4110 MFR Evaluation Kit Hardware supplied

- 1) S4110 MFR Evaluation Kit Black Box Reader
- 2) S4110 MFR Evaluation Kit Software Development Kit (SDK) Reader
- 3) Power Supply, 9.0 Vdc 1.0 A, Globtek Part Number: TR9CD1700LCP-Y
Globtek Model Number: GT-21089-1509-T3

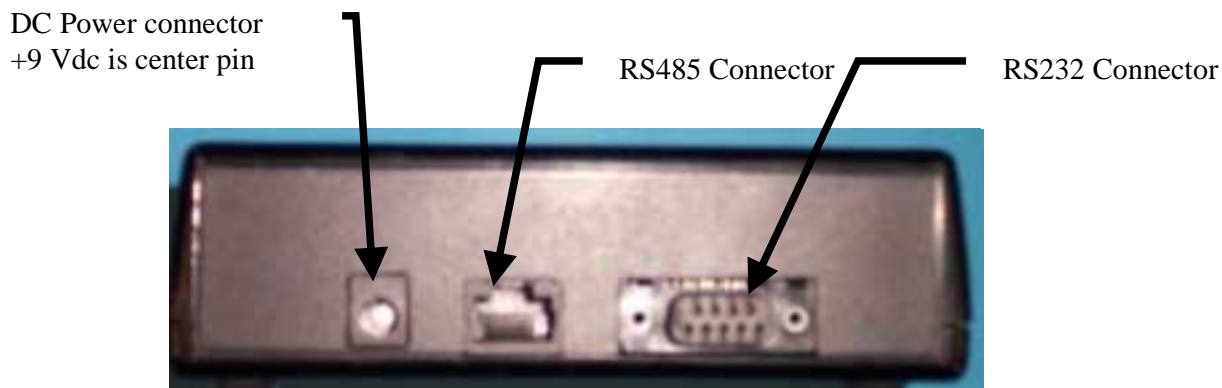
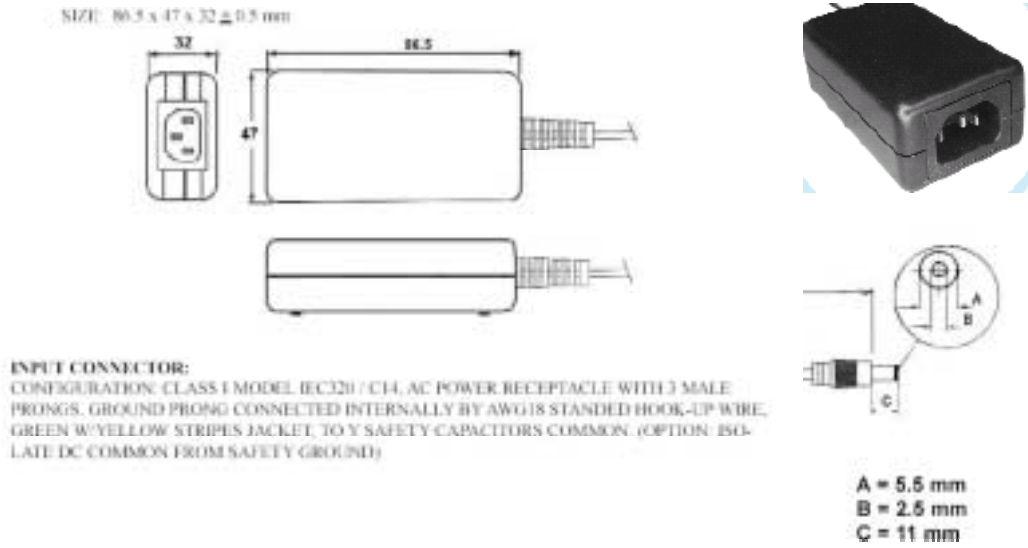


Figure 1: Back Panel MFR Evaluation Kit Black Box Reader



Figure 2: Software Development Kit (SDK)

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**Figure 3: Globtek Power Supply Model Number: GT-21089-1509-T3
Globtek Part Number: TR9CD1700CP-Y**

2.2 Hardware Set Up

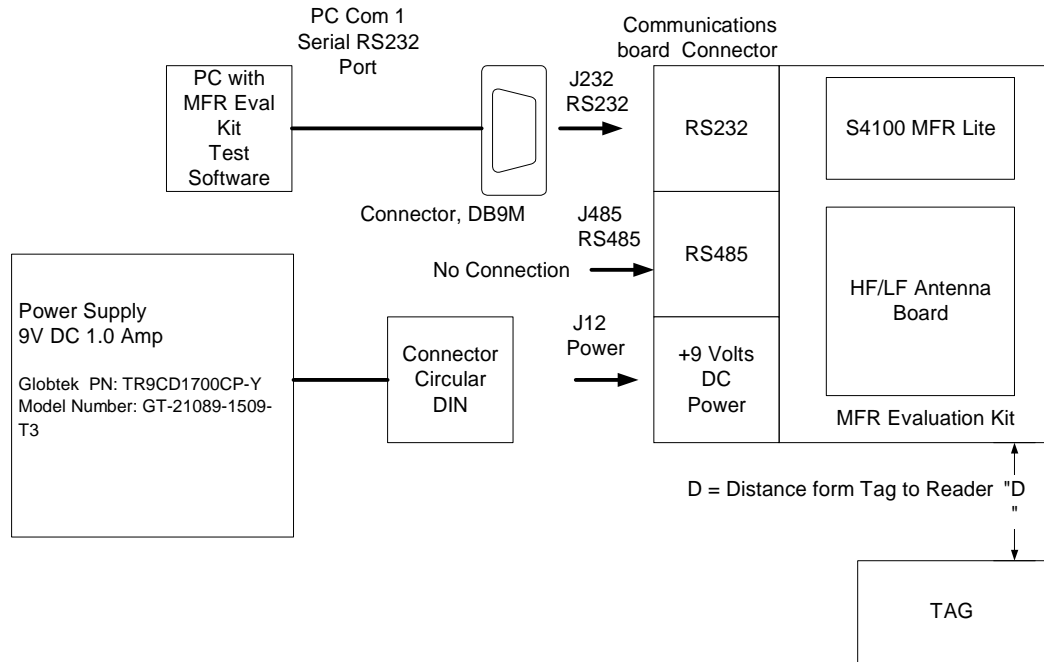


Figure 4: Hardware Set Up MFR Evaluation Kit

3. Test Software

3.1 Initial Start Screen

- 1) After double clicking the MFR Demo software icon the software screen below will appear.
- 2) Double click desired application folder tab to select application.

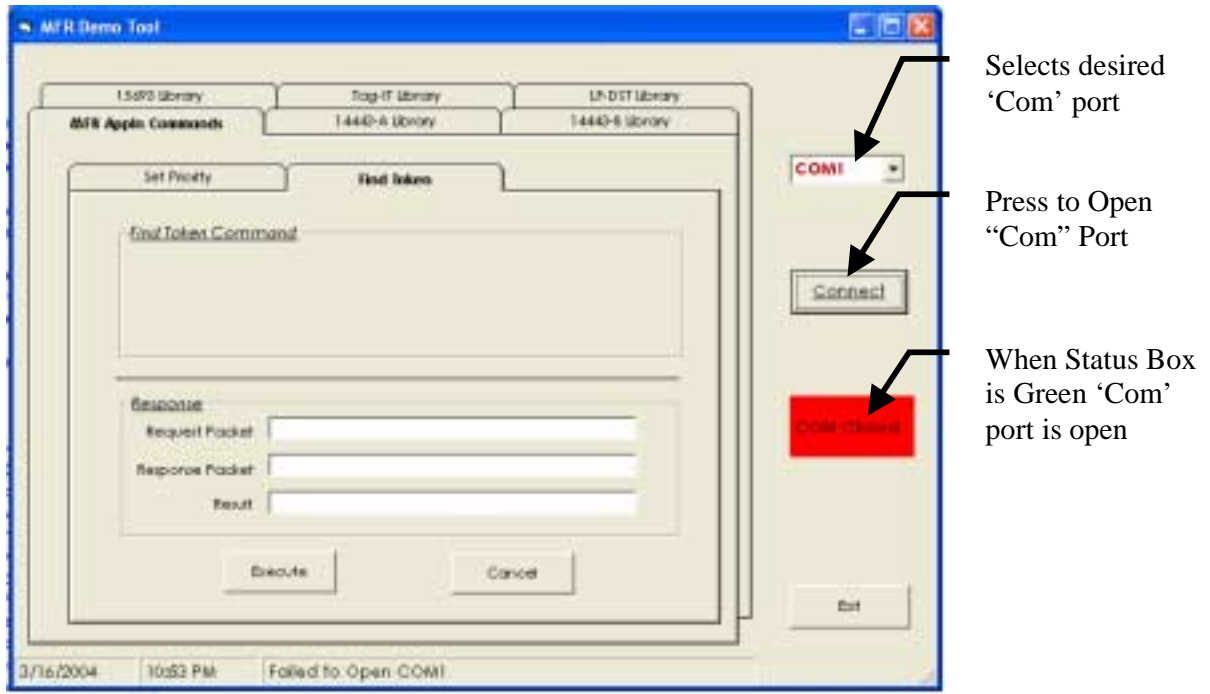


Figure 5: Initial Start Screen

3.2 Connection to RS232 Communications (Com) Port

- 1) Click on 'Connect' button to open the COM port. You'll see the red indicator box with 'COM Closed' text change color to GREEN and read 'COM Opened' for successful connection.
- 2) If red indicator box stays red and reads 'Com Closed', the COM port did not open successfully.

3.2.1 Communications Port Choices

- 1) If the default Com Port of Com1 is not the desired Com Port, use Com Port selection arrow to select desired Com Port; from the following choices 1) Com1, 2) Com2, 3) Com3, 4) Com4.

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- 2) Click on 'Connect' button to open the COM port. You'll see the red indicator box with 'COM Closed' text change color to GREEN and read 'COM Opened' for successful connection.
- 3) If red indicator box stays red and reads 'Com Closed', the COM port did not open successfully.

Use Com Port Select
Arrow to select
desired Com Port

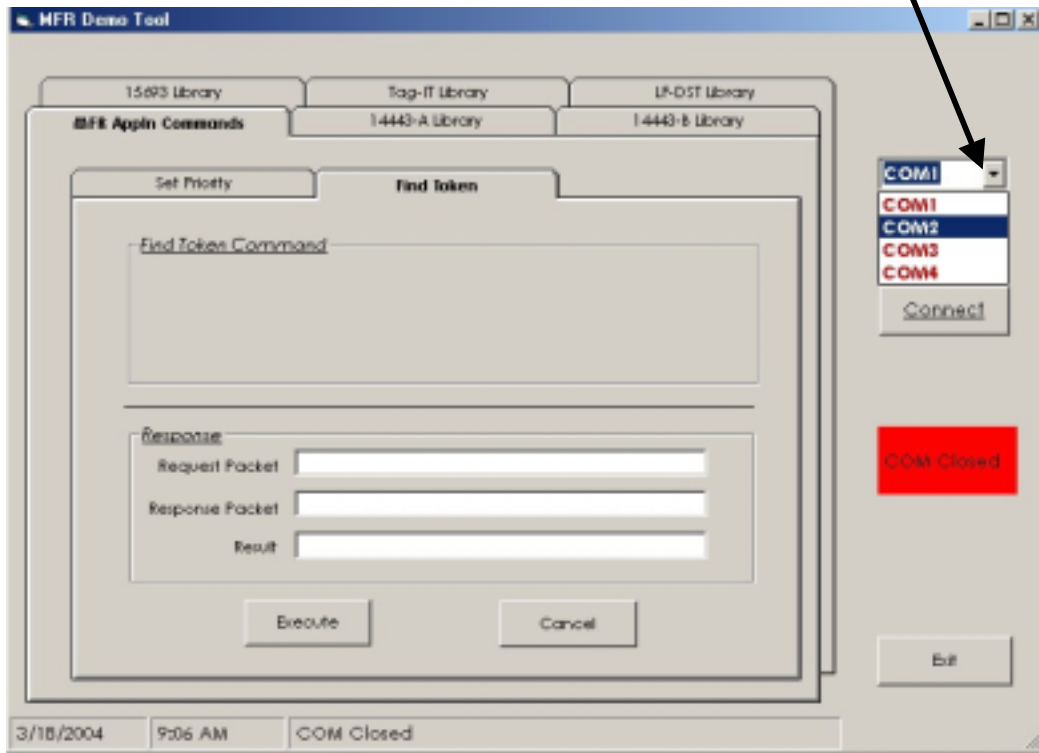


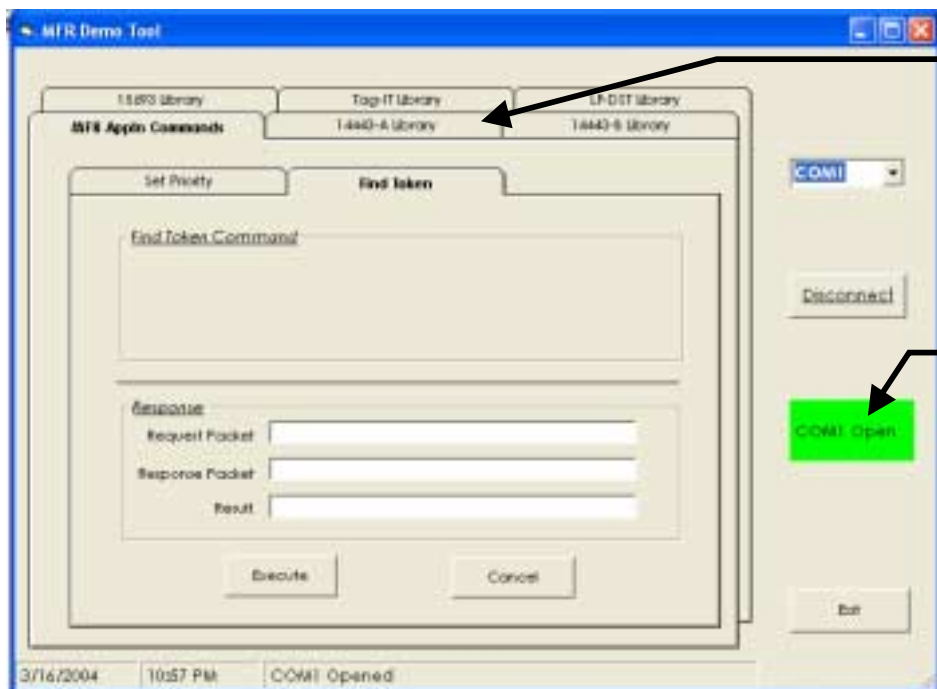
Figure 6: Com Port Choices supported

3.3 Turn On HF Transmitter

To Turn on the HF Transmitter:

- 1) Select 14443A Library folder Tab
- 2) Under 14443A Library folder Tab select Transmitter On
- 3) Click on 'Execute' button to issue a HF- Transmitter ON Command.
- 4) If successful, you would see the Green indicator with 'TRANSMITTER ON – 14443A' text.

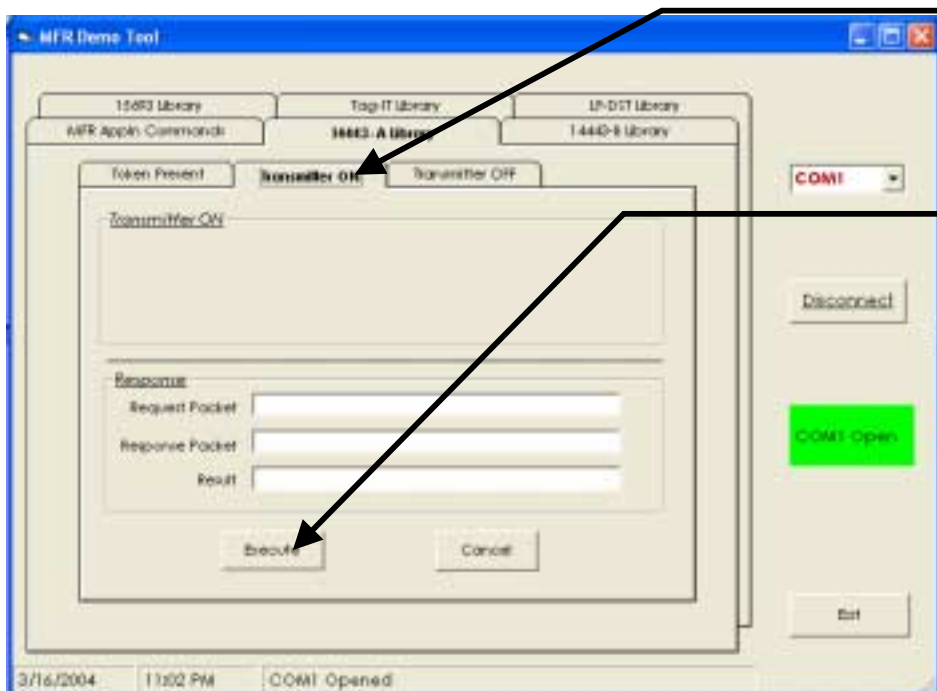
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Select Folder for 14443-A Library to start HF transmitter turn on procedure

When Status Box is Green 'Com' port is open

Figure 7: Successful "Com" Port Connection



HF Transmitter On Folder Tab

Press to turn on HF (13.56 MHz) Transmitter

Figure 8: Turn On HF Transmitter

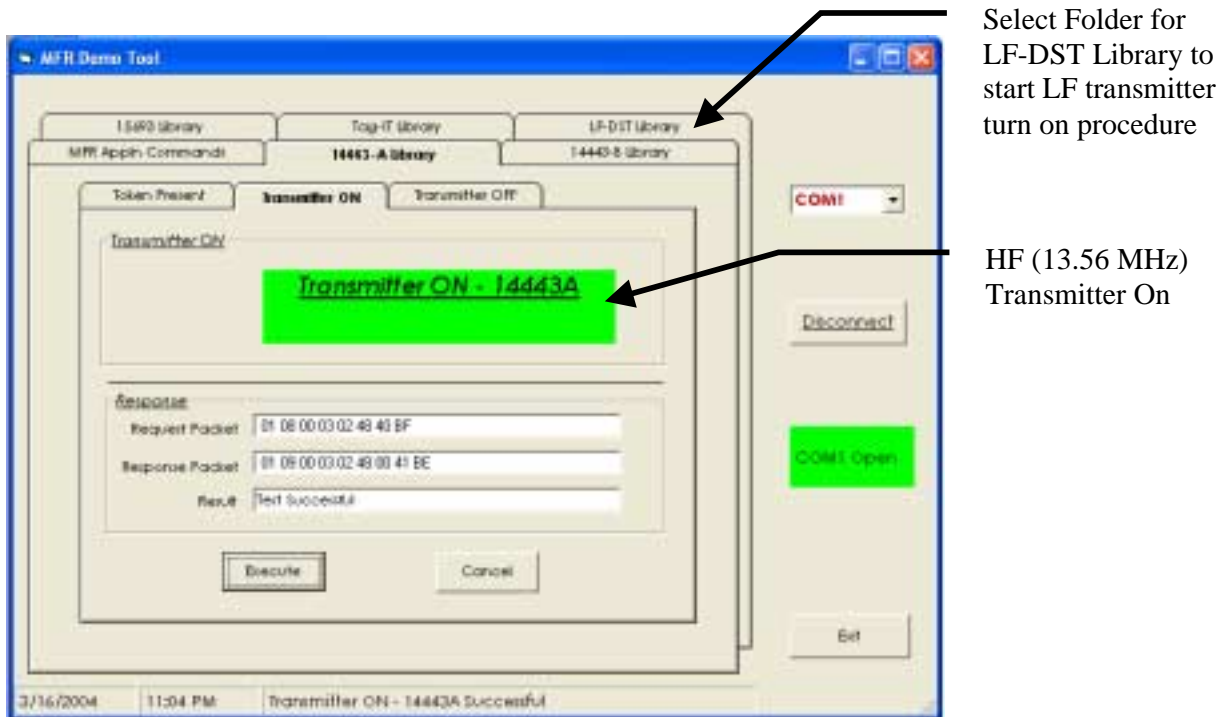


Figure 9: Successful "Turn On " of HF Transmitter

3.4 Turn On LF Transmitter

To Turn on the LF Transmitter:

- 1) Select LF-DST Library folder Tab
- 2) Under LF-DST Library folder Tab select Transmitter On
- 3) Click on 'Execute' button to issue a LF- Transmitter ON Command.
- 4) If successful, you would see the Green indicator with 'TRANSMITTER ON – LF-DST' text.

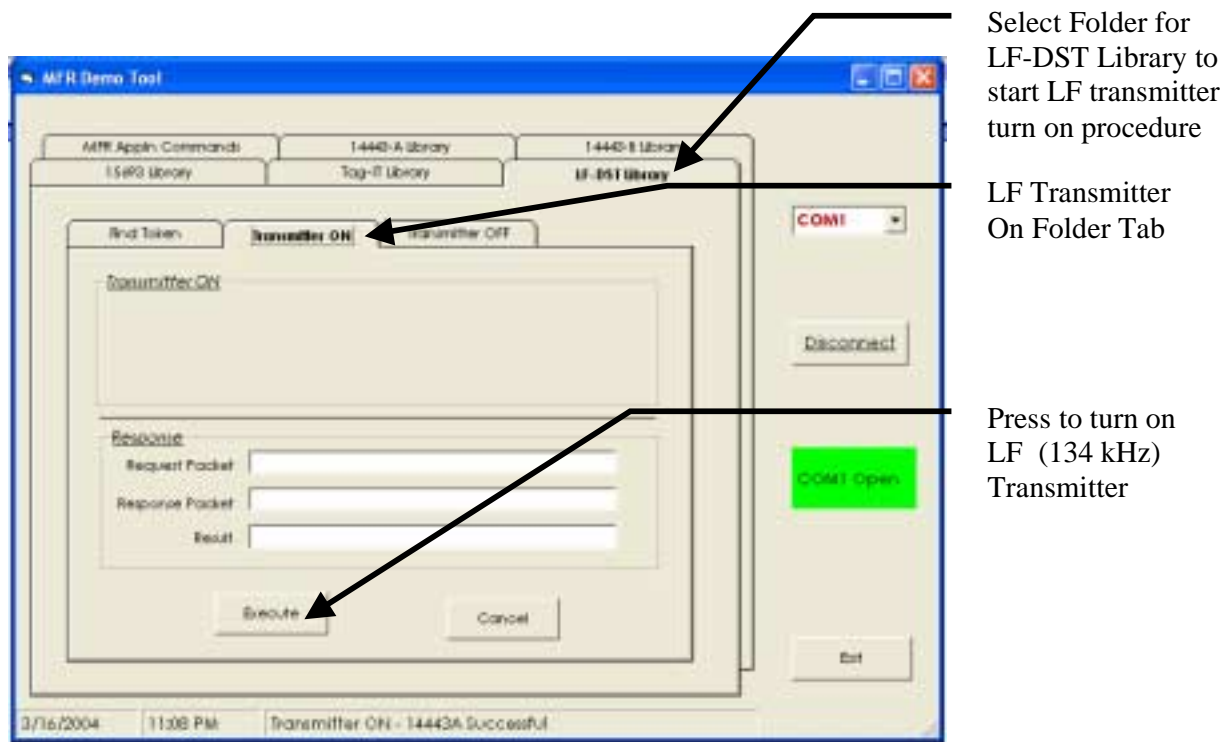


Figure 10: Turn On LF Transmitter

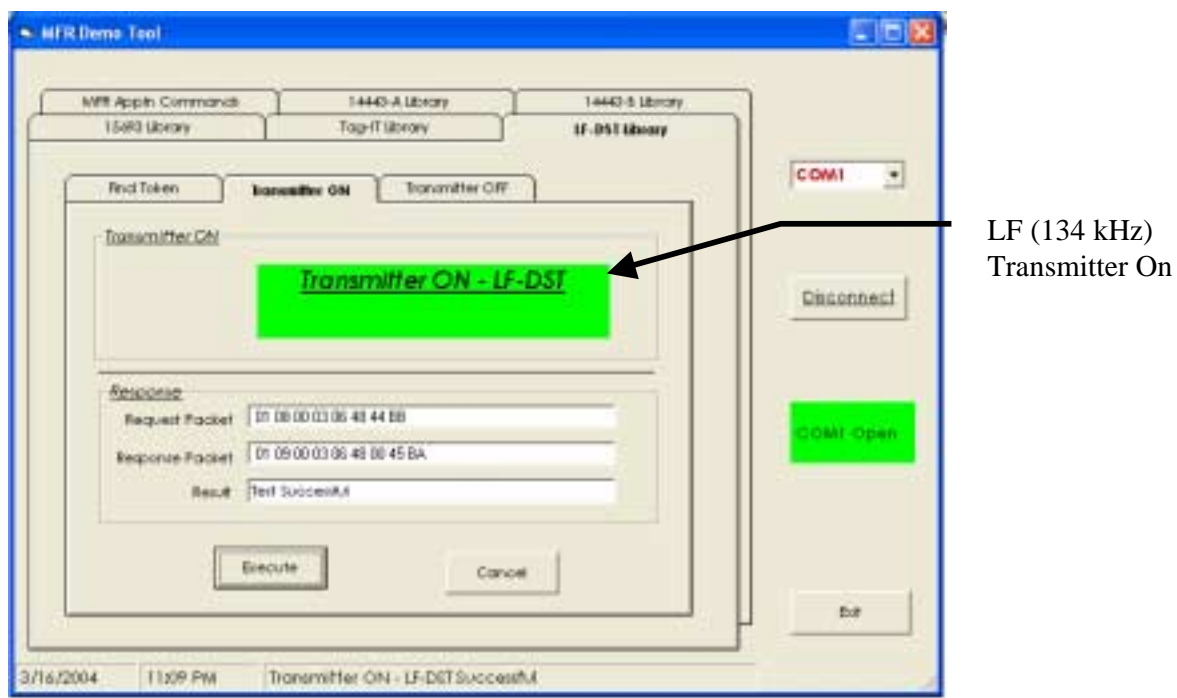


Figure 11: Successful “Turn On” of LF Transmitter

3.5 Turn Off HF Transmitter

To Turn Off the HF Transmitter:

- 1) Select 14443A Library folder Tab
- 2) Under 14443A Library folder Tab select Transmitter Off
- 3) Click on 'Execute' button to issue a HF- Transmitter Off Command.
- 4) If successful, you would see the Green indicator with 'TRANSMITTER OFF - 14443A' text.

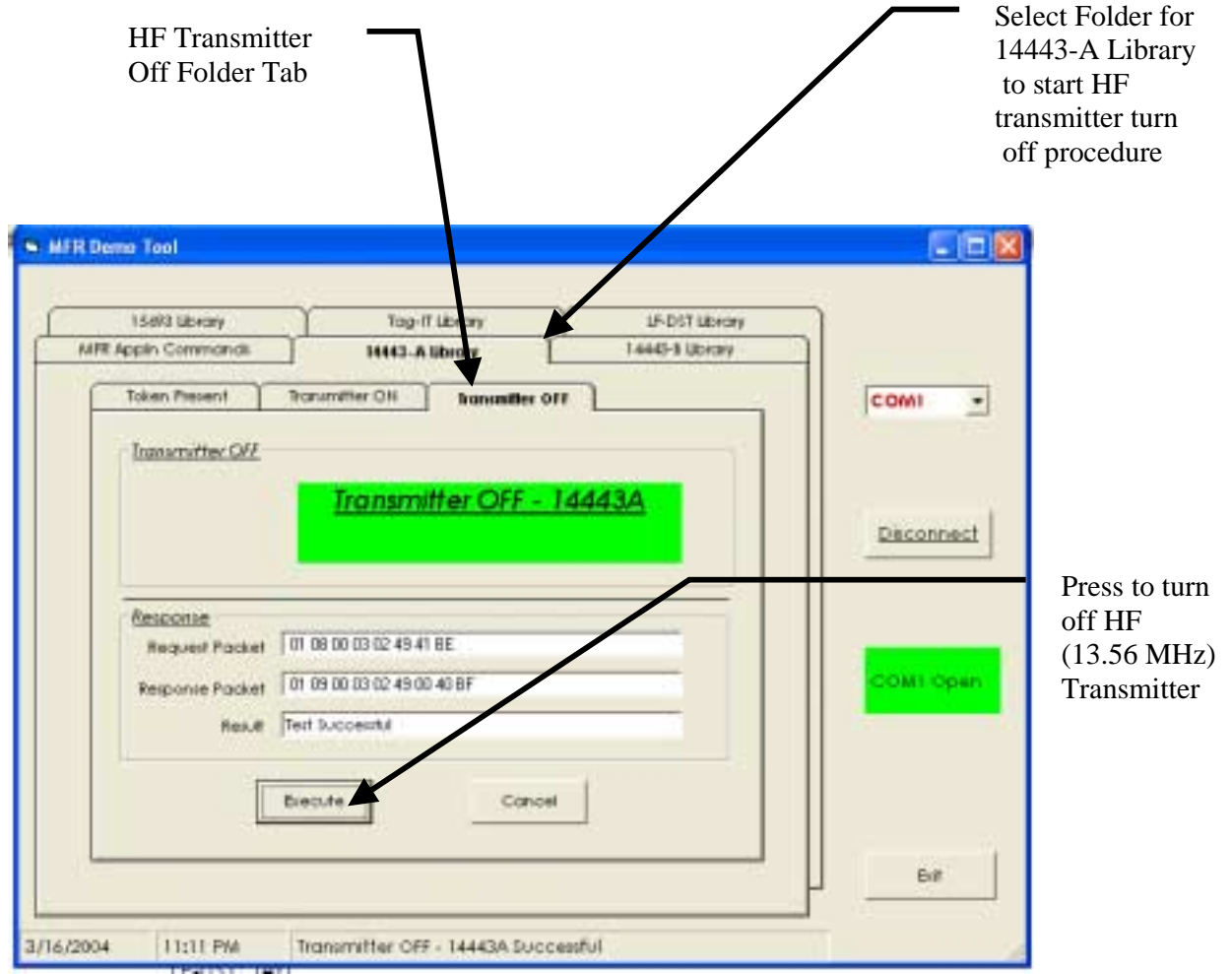


Figure 12: Turn Off HF Transmitter

3.6 Turn Off LF Transmitter

To Turn off the LF Transmitter:

- 1) Select LF-DST Library folder Tab
- 2) Under LF-DST Library folder Tab select Transmitter OFF
- 3) Click on 'Execute' button to issue a LF- Transmitter OFF Command.
- 4) If successful, you would see the Green indicator with 'TRANSMITTER OFF – LF-DST' text.

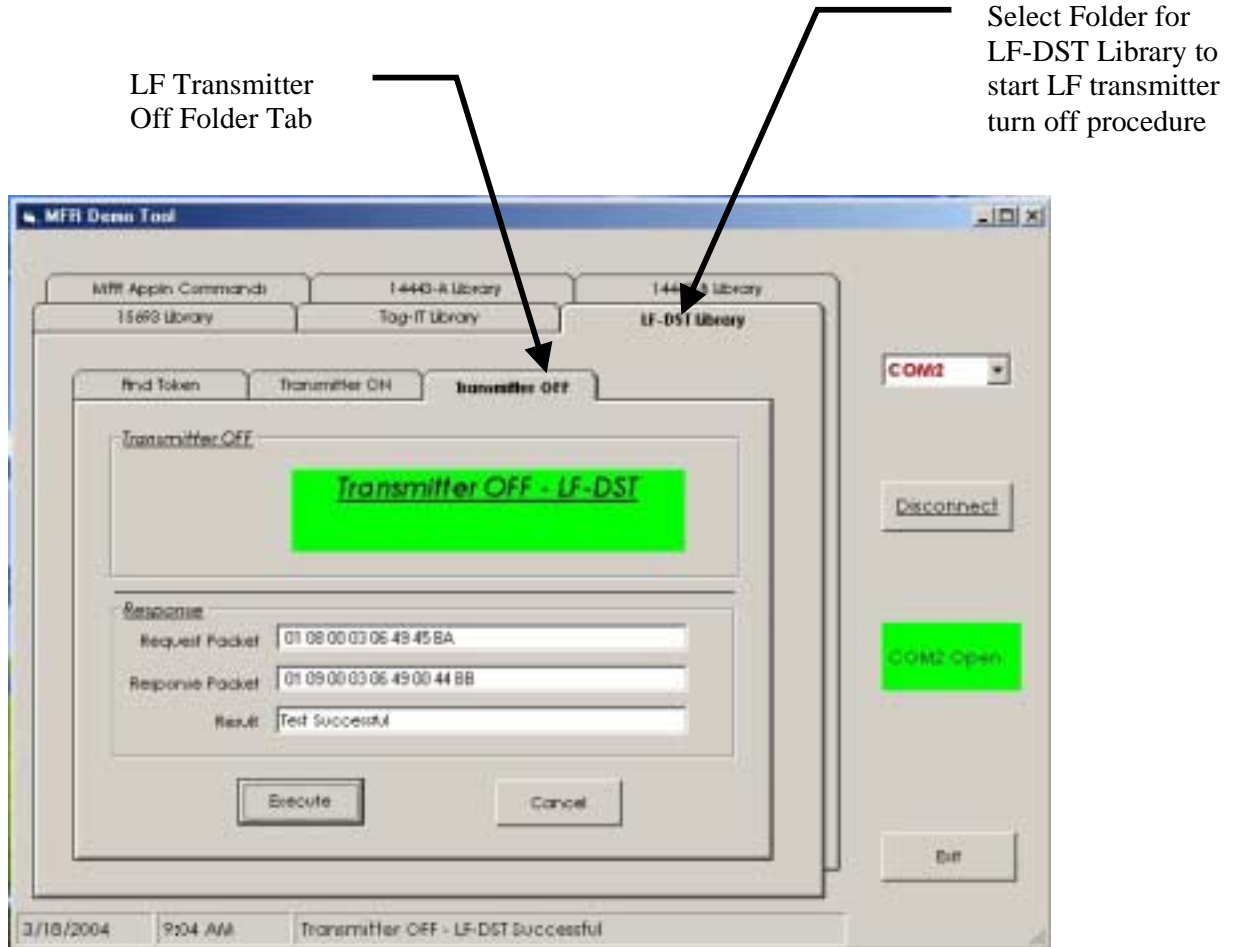


Figure 13: Turn Off LF Transmitter

3.7 Close Com Port

- 1) Close the COM port by clicking on 'Disconnect' button.
- 2) You will see the Green Status Indicator with 'COM Open' text, change color to RED with a text change to 'Com Closed' to indicate successful closure of the COM port.

Press "Disconnect"
Button to Close
'Com Port'

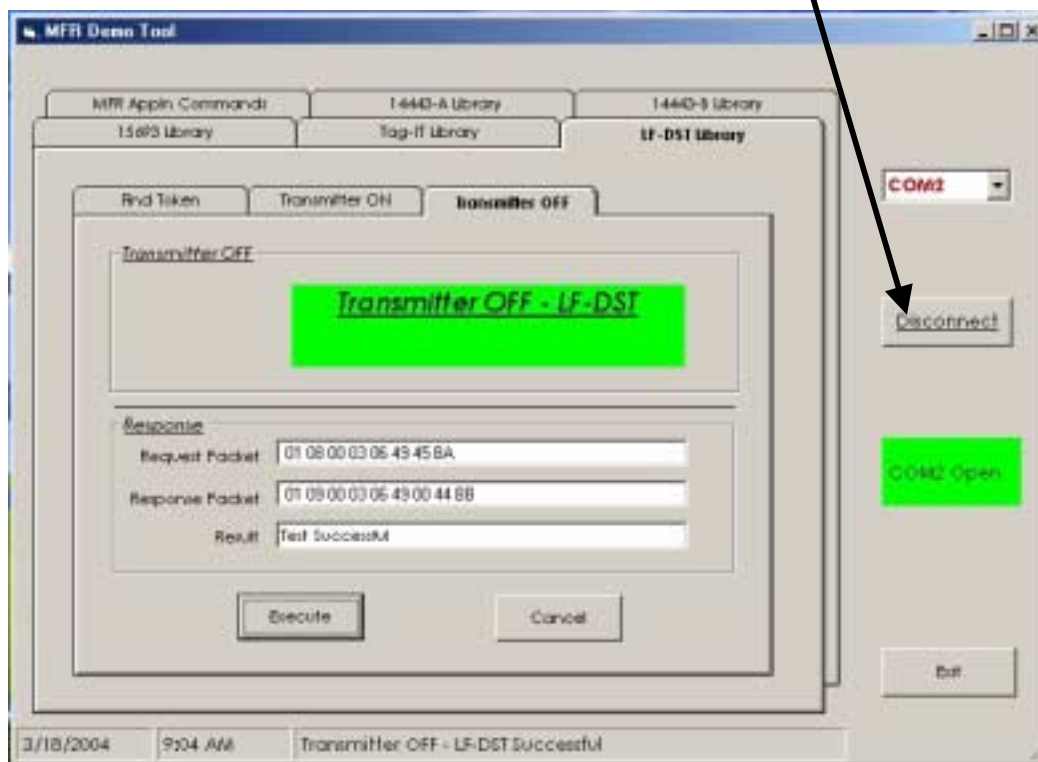


Figure 14: Com Port Closure

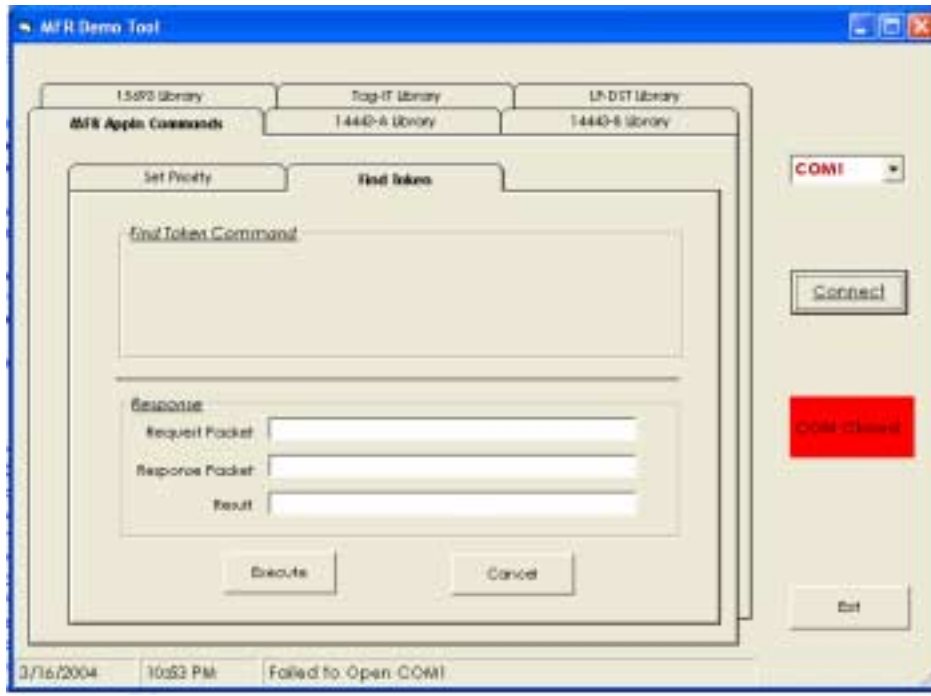


Figure 15: Successful Com Port Closure

3.8 Close Application

- 1) Click EXIT button to close the application.

4. Installation Guide S4110R MFR Evaluation Kits as shipped from factory

The Box unit and SDK unit configurations of the S4110 MFR Evaluation Kit as shipped from the factory are compliant with FCC Part 15 Rules.

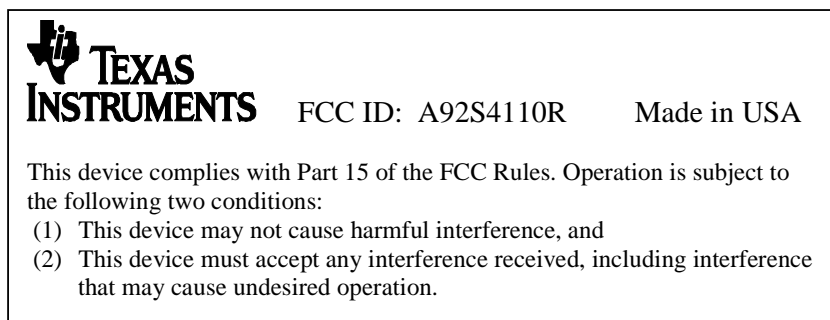


Figure 16: FCC Label for S4110R MFR Evaluation Kit

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4.1 Box Unit S4110 MFR Evaluation Kit as shipped from factory

4.1.1 Placement of FCC Label on Box Unit



Figure 17: Placement of FCC Label on S4110R Evaluation Kit Box Unit

4.2 SDK Unit S4110 MFR Evaluation Kit as shipped from factory

4.2.1 Placement of FCC Label on Box Unit

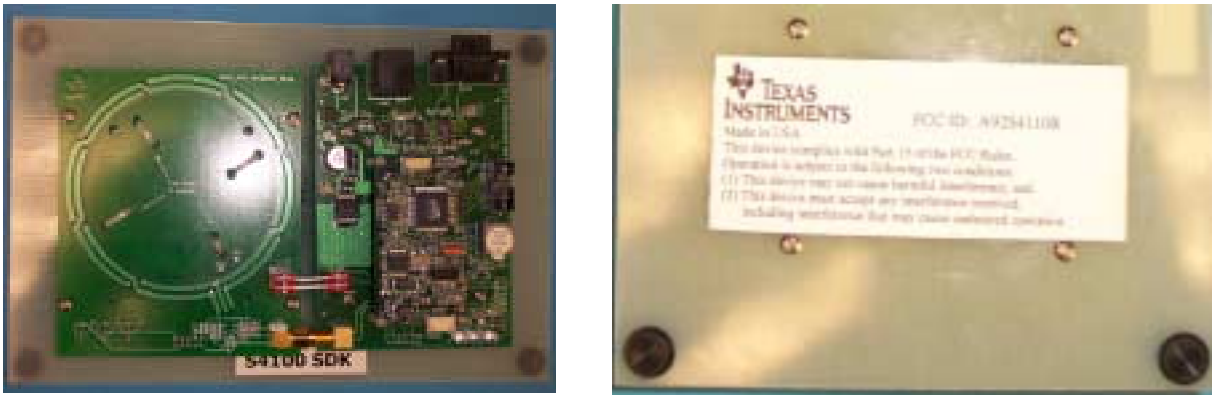


Figure 18: Placement of FCC Label on S4110R Evaluation Kit SDK Unit

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NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

5. Revision History

Rev.	SCN	Description of Change	Date submitted	By
0		New Issue	04/20/2004	C.Bohren