UMTC SMS Sender User Guide

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Technologies Used:

- VB.Net (Windows Form)
- MySQL
- GSM Modem

Description:

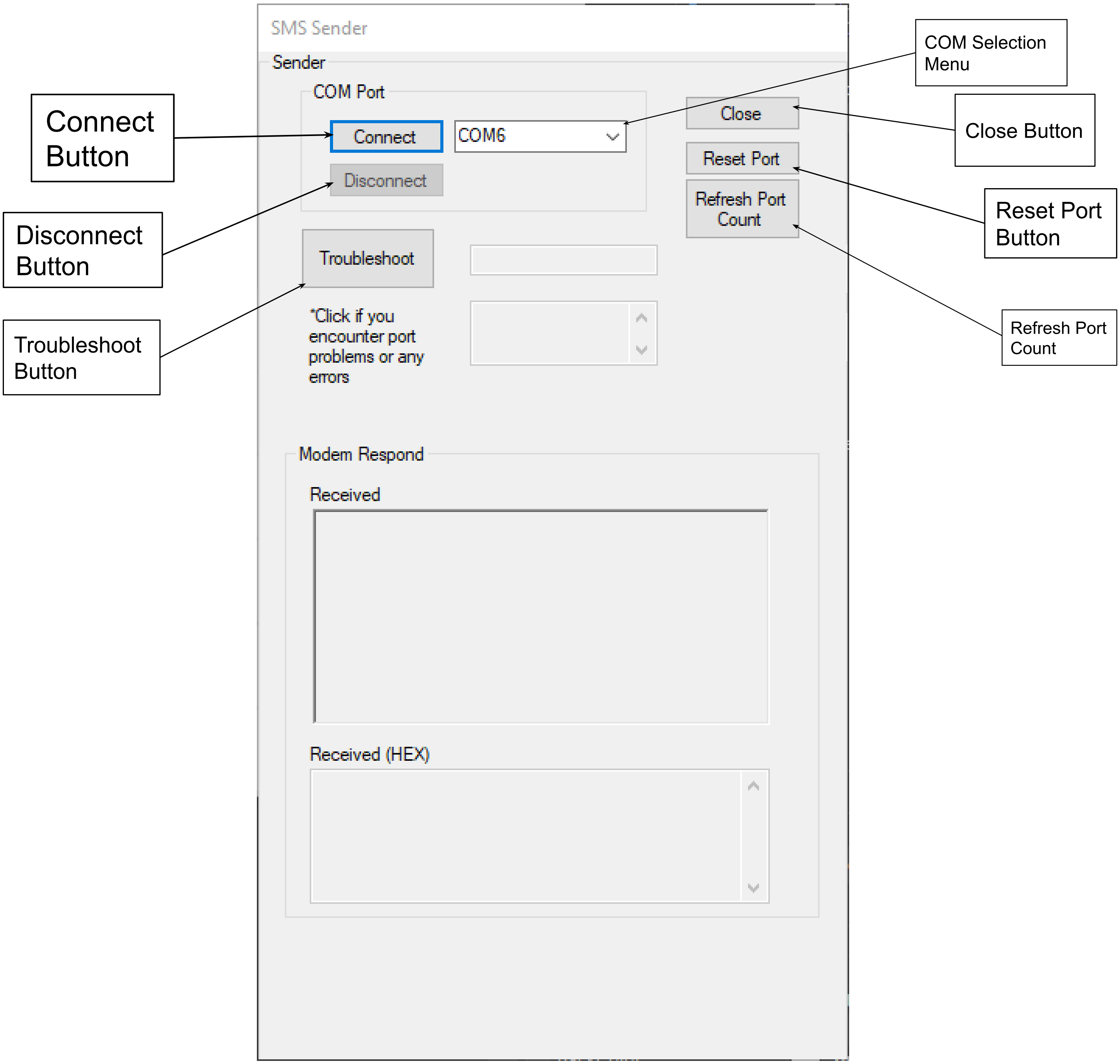
UMTC SMS Sender is a windows form application that allows sending of messages directly from the database. The application can be opened multiple times and can accommodate multiple ports.

The user will have to manually register the SIM card to be used in the database. After declaring it in the database, the system will recognize which SIM card is being used. If the SIM card is not in the database, the system will show a response stating that the SIM card is not recognized and disconnect from the port.

The system automatically picks up pending messages from the database and processes said messages.

The system will initiate a countdown timer if the system detected 2 failed messages or if there are no pending messages in the database. After the countdown timer has finished, the system will automatically rerun.

Messages which failed to send will be set to pending to allow the next Port to pick it up. If the buttons Close and Reset Port are clicked, the current message will also be set to pending.



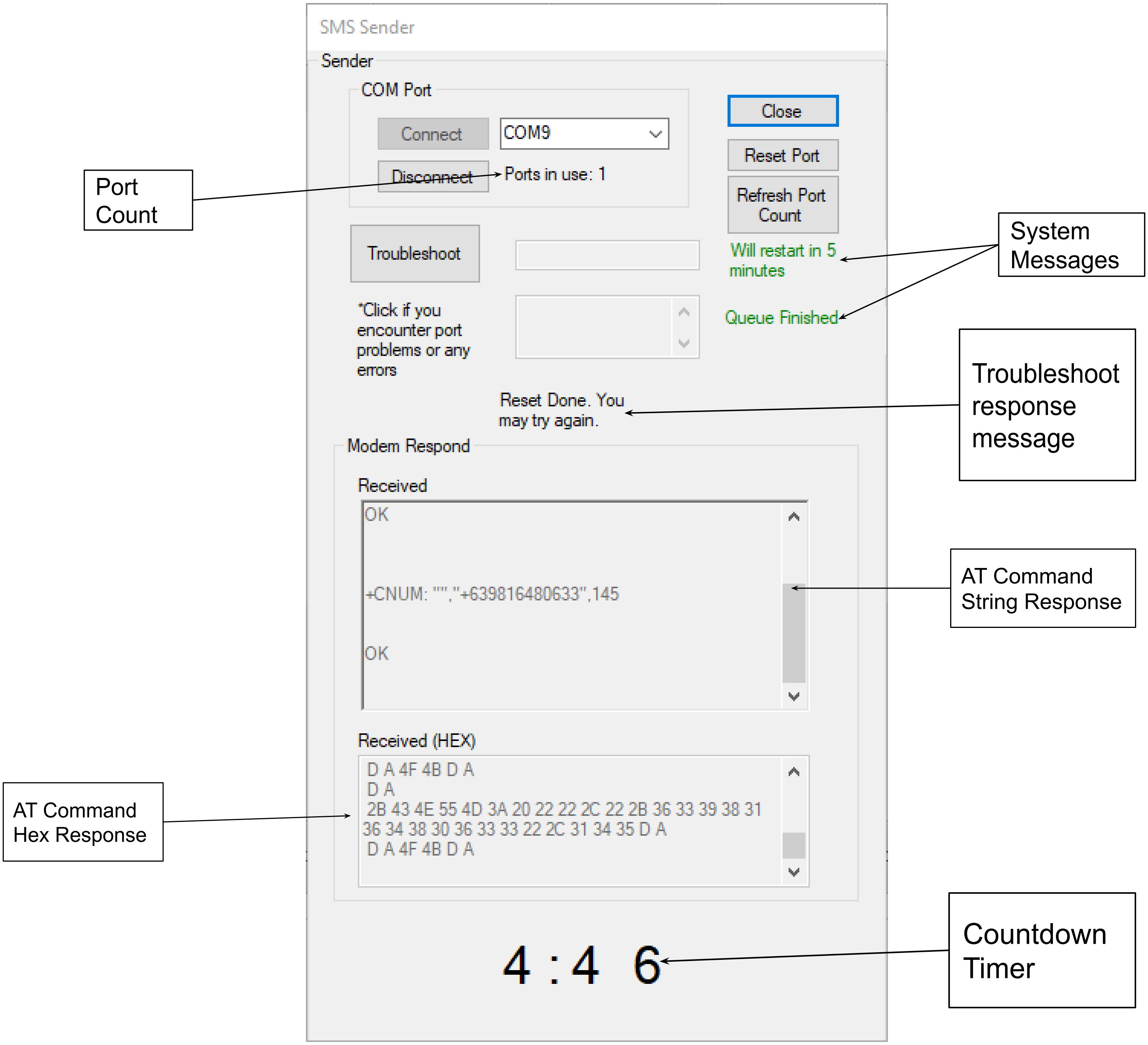
*Click if you encounter port problems or any errors

Figure 1. Initial UI Form Load

Figure 1, shows the initial state of the system upon opening.

- **Connect Button**
    - Start the program.
    - Automatically finds Baud Rate and detects which SIM card in use.
    - Automatically finds pending messages from the database and executes messages
- **Disconnect Button**
    - Disconnects from port
    - Resets the SIM Card (currently being used) Status in the Database
    - Sets the current message being processed to pending
- **Troubleshoot Button**
    - Resets **ALL** SIM Card status back to available
    - Sets port count back to 0
    - Only click when Errors are encountered or as a safety measure before using the system
- **COM Selection Menu**
    - Automatically detects available ports
    - Dropdown List where the user can select which COM to use
    - Won't be able to connect if port selected is currently in use
    - System Message stating that the port is in use will be shown
- **Close Button**

    - Closes the system
    - Has a 2 second delay to allow system to set status of the message being processed
    - Resets the SIM Card (currently being used) Status in the Database
    - Resets port count
    - Sets the current message being processed to pending
- **Reset Port Button**
    - Restarts the system
    - Resets the SIM Card (currently being used) Status in the Database
    - Resets port count
- **Refresh Port Count Button**
    - Shows the updated port count



Ports in use: 1

Will restart in 5 minutes

Queue Finished

*Click if you encounter port problems or any errors

Reset Done. You may try again.

```
OK


+CNUM: "","+639816480633",145

OK
```

```
D A 4F 4B D A
D A
2B 43 4E 55 4D 3A 20 22 22 2C 22 2B 36 33 39 38 31
36 34 38 30 36 33 33 22 2C 31 34 35 D A
D A 4F 4B D A
```

4 : 4 6

Figure 2. UI when Queue is Finished

Figure 2, shows the state of the system when all of the status of messages from the database are set to Sent.

After all the messages have been sent, the system will initiate a 5 minute countdown.

After the countdown has finished, the system will check the database for pending messages.

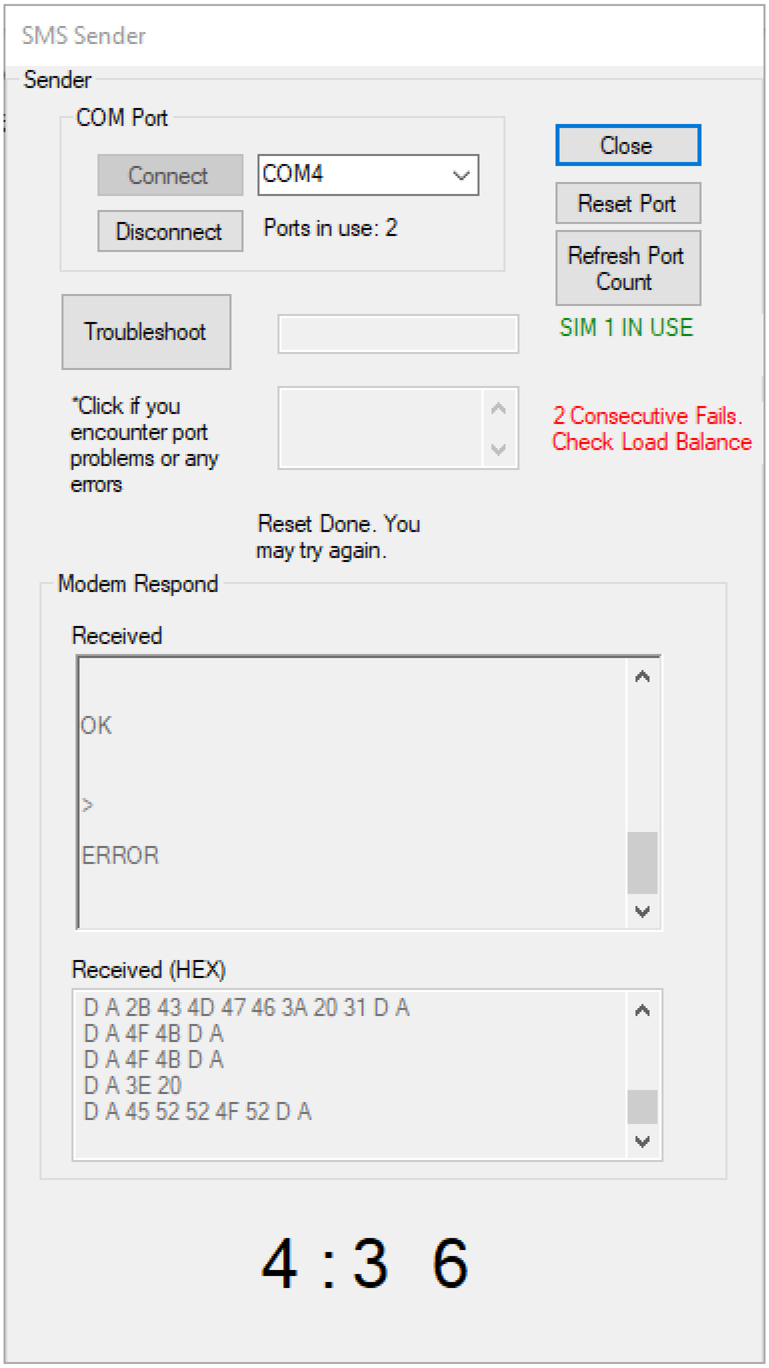
If there are still no pending messages found, the system will initiate the 5 minute countdown again. If there are any pending messages, the system will pick it up and process said messages automatically.

The user may choose to end the timer by clicking the Disconnect button thus enabling the Connect button.

- **Port Count**
  - Counts the number of ports in use.
  - Port Count is based on the number of SIM cards with the status of 'In-Use'
  - Will reset back to zero when the buttons **Close**, **Reset Port**, and **Troubleshoot** are clicked.
- **Troubleshoot Response Message**
  - Will show a message stating that the reset/troubleshoot is done and the user may try again.
  - Troubleshoot is done by resetting the sim card status of all sim cards in the database.

- **AT Command Hex Response**
    - AT Command response from the device in Hex form
    - Shows the commands sent and data received from the device

- **AT Command String Response**
    - AT Command response from the device in String form
    - Shows the commands sent and data received from the device
- **Countdown Timer**
    - Timer is limited to 5 minutes
    - The system will check the database for pending messages after timer runs out
- **System Messages**
    - Will show varied messages as response from the system



COM Port: COM4

Ports in use: 2

SIM 1 IN USE

*Click if you encounter port problems or any errors

2 Consecutive Fails. Check Load Balance

Reset Done. You may try again.

Received

```
OK

>
ERROR
```

Received (HEX)

```
D A 2B 43 4D 47 46 3A 20 31 D A
D A 4F 4B D A
D A 4F 4B D A
D A 3E 20
D A 45 52 52 4F 52 D A
```

4 : 3 6

Figure 3, UI when messages failed to send 2 consecutive times

Figure 3, shows the state of the system when 2 messages failed to send consecutively.

Upon failing the 2nd time, the system will initiate a 5 minute countdown timer.

After the countdown has finished, the system will check the database for pending messages.

If there are still no pending messages found, the system will initiate the 5 minute countdown again. If there are any pending messages, the system will pick it up and process said messages automatically.

The user may choose to end the timer by clicking the Disconnect button thus enabling the Connect button.