Mhub855 – Card Reader Integration

Scope Technologies

Contents

1. Introduction.

This documents explain the process to successfully connect a card reader to the Mhub855 as well as the MHub configuration required for this solution. The card reader used is a MagTek produced reader, any model selected should work fine.

This card reader integration is Thailand specific, as these card reader is used to determine if a driver has the required license to transport dangerous goods.

2. Requirements.

The following are the requirements needed to use this card reader with the MHub855:

- Firmware version 5.027 RC16 (September 15) onwards.
- 14 way loom cable.
- COMS converter cable
- MHub Diagnostic Utility version 1.33.19 or later.

3. Connection of the card reader to the Mhub855.

The card reader is connected to the Mhub855 via the 14 way loom with the coms converter cable connecting to the 6 pin Molex connector.

Note: The MHub855 **does not provide power to the card reader**, an external 12v power supply must be used as illustrated below:

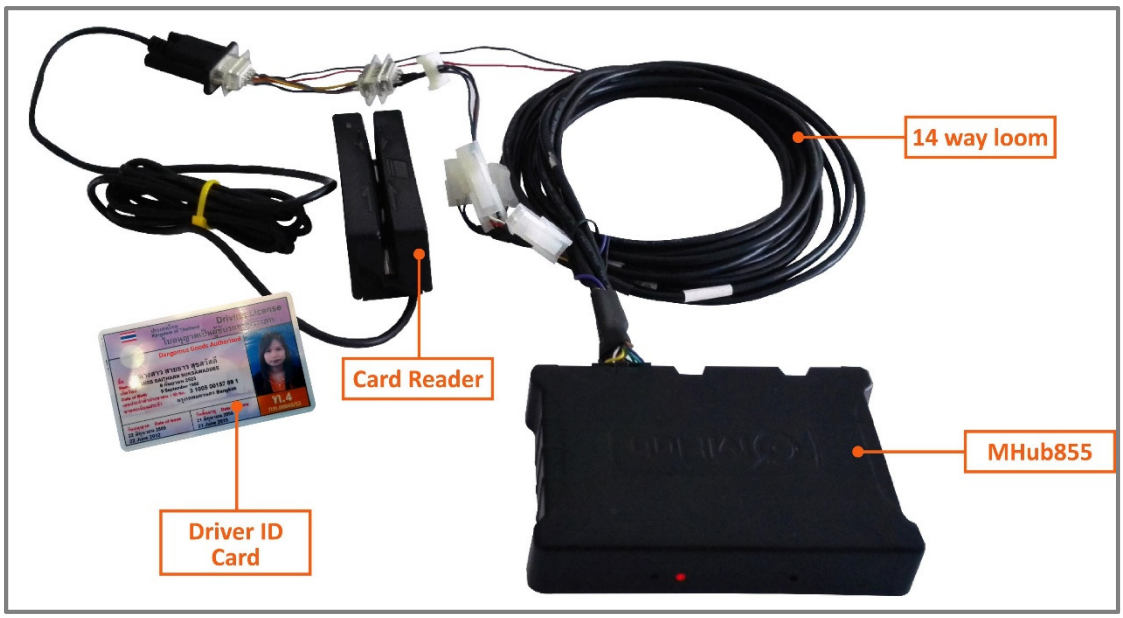


Figure 1. Card reader installation.

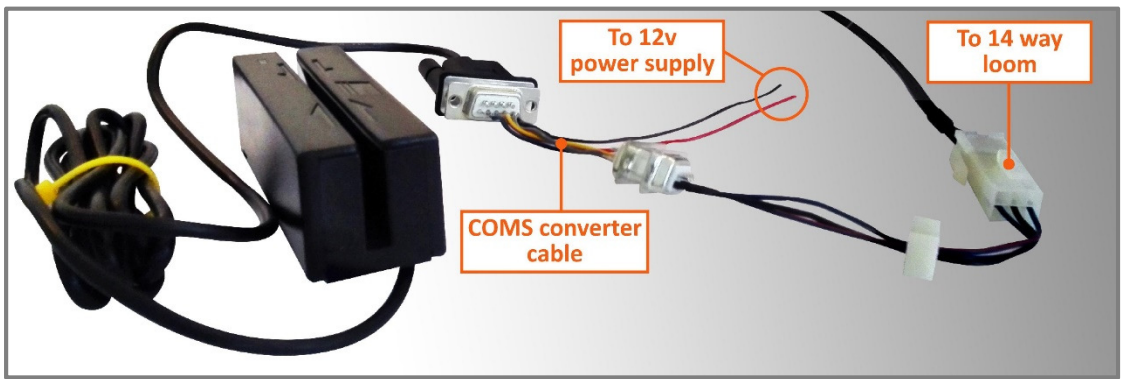
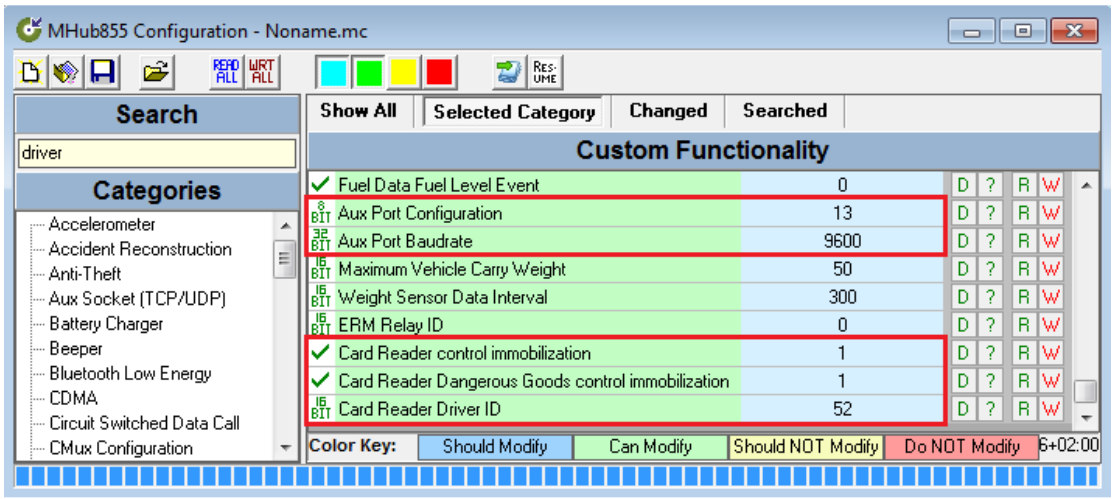


Figure 2. Card reader installation – the card reader requires its own power supply.

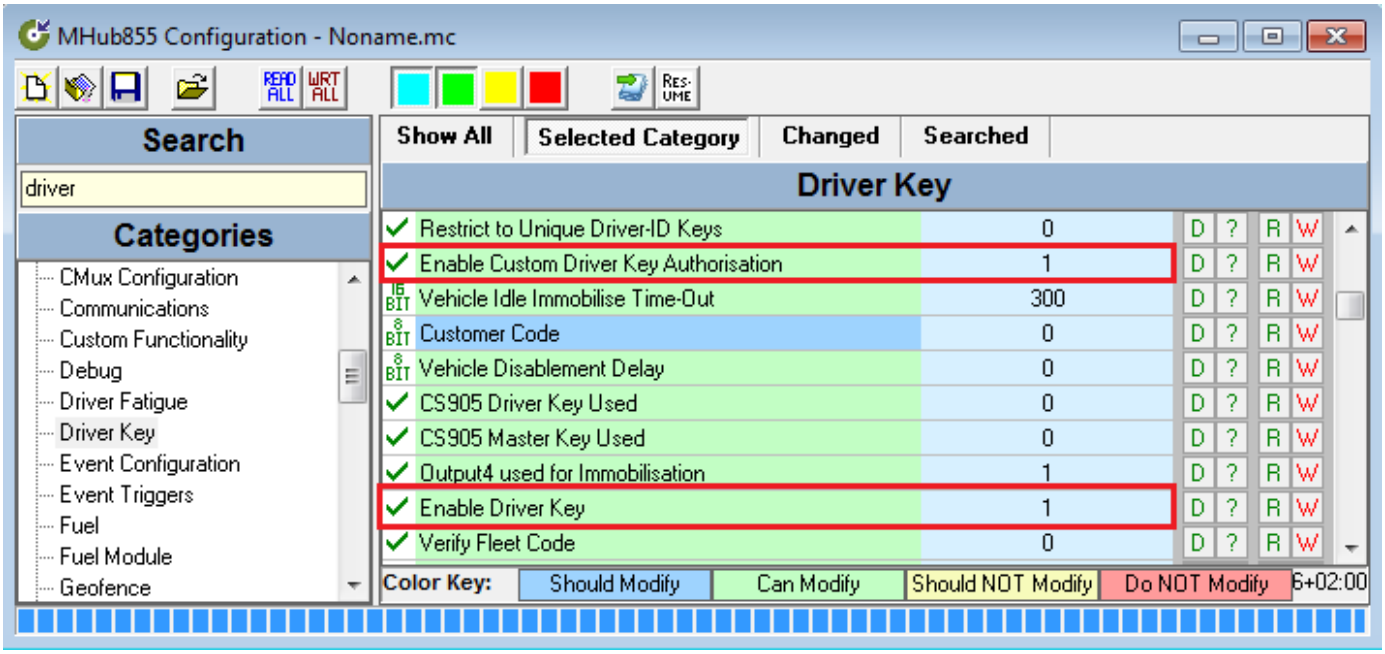
4. MHub configuration.

To configure the Mhub855 the following parameters must be completed:

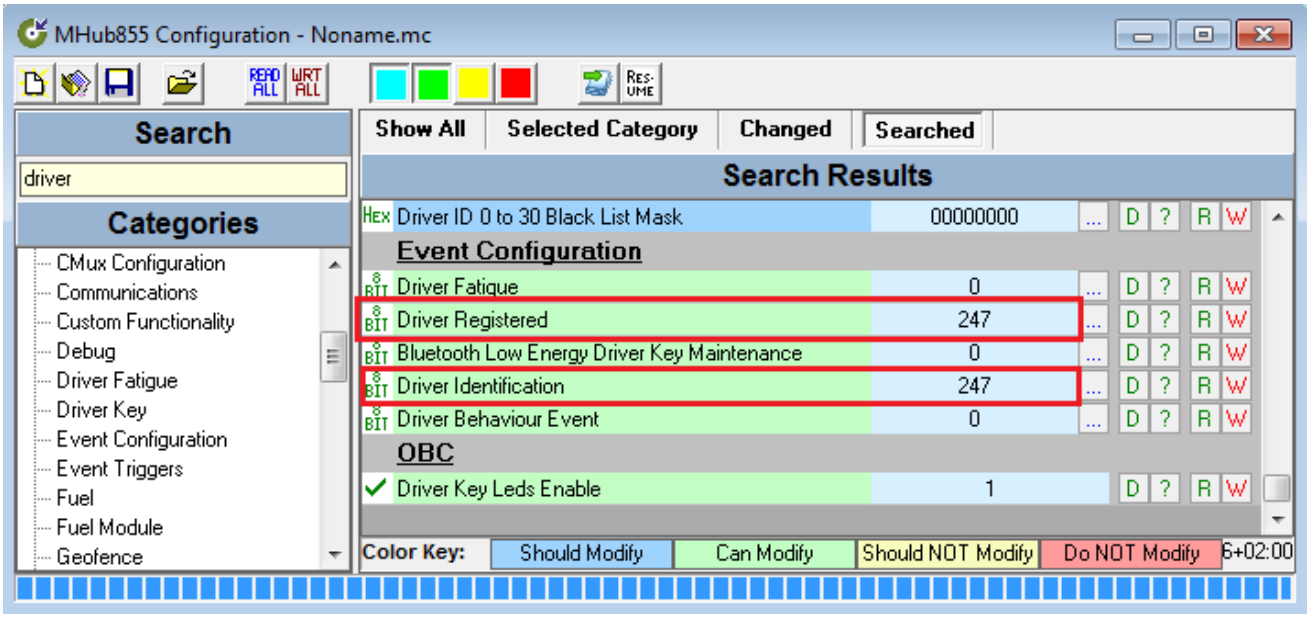
Category	Parameter	Parameter description	Value
Custom Functionality	Card Reader Control immobilization	When a valid card is read the vehicle is de-immobilized	1 to enable 0 to disable
Custom Functionality	Card Reader Dangerous Goods control immobilization	When a valid card is read and the license type indicate dangerous goods the vehicle is de-immobilized	1 to enable 0 to disable
Custom Functionality	Card Reader Driver ID	Driver ID to be used when de-immobilizing a vehicle with a card	Insert a value to register the driver
Custom Functionality	Aux Port Configuration	Aux Port Configuration Parameter	13
Custom Functionality	Aux Port Baud rate	The rate at which information is transferred	9600



Category	Parameter	Parameter description	Value
Driver Key	Enable Custom Driver Key Authorisation	Enables a custom device to send through Driver ID data	1 to enable 0 to disable
Driver Key	Enable Driver Key	If the driver key is used, then this parameter must be set to 1	1 to enable 0 to disable
Driver Key	Output4 used for Immobilisation	If the driver key is intended to control the immobilizer connection to the vehicle, then this parameter must be set to 1.	1 to enable 0 to disable



Category	Parameter	Parameter description	Value
Event Configuration	Driver Identification	This event is generated when the card is read, additional information can be retrieved from the API using this event.	247
Event Configuration	Driver Registered	This event is generated when the card is read and allows the creation of drivers in MZone	247



5. Functionality.

Below is shown how the card reader integration works.

- When the engine is off the vehicle remains immobilized.

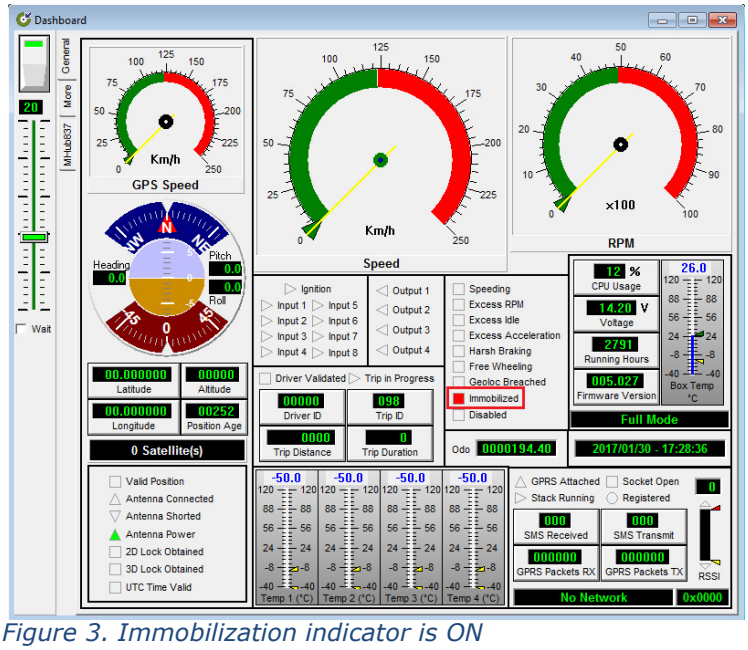


Figure 3. Immobilization indicator is ON

- Once the Driver ID card is presented the vehicle is de-mobilized, Output 4 is enabled so that the trip can start.

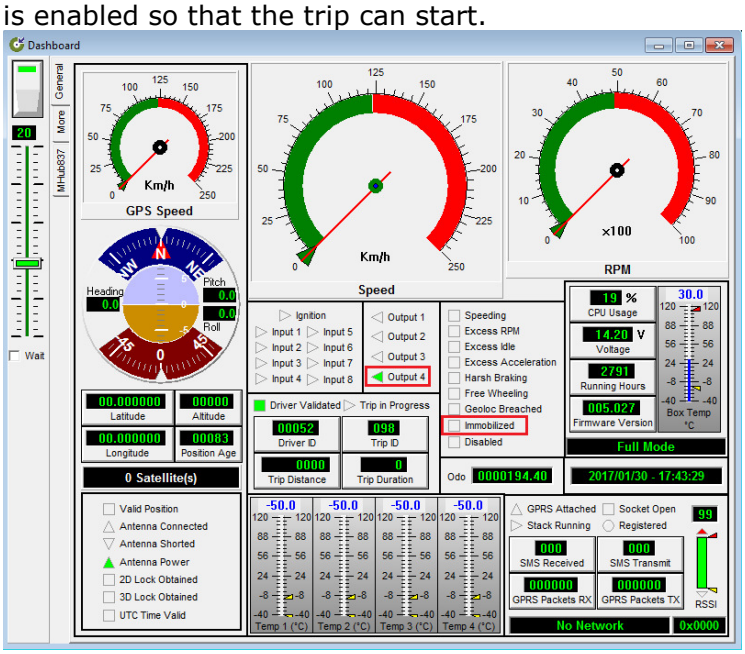


Figure 4. Immobilization indicator is OFF and Output 4 is enabled.

- Once the vehicle is no longer immobilized the trip can start.

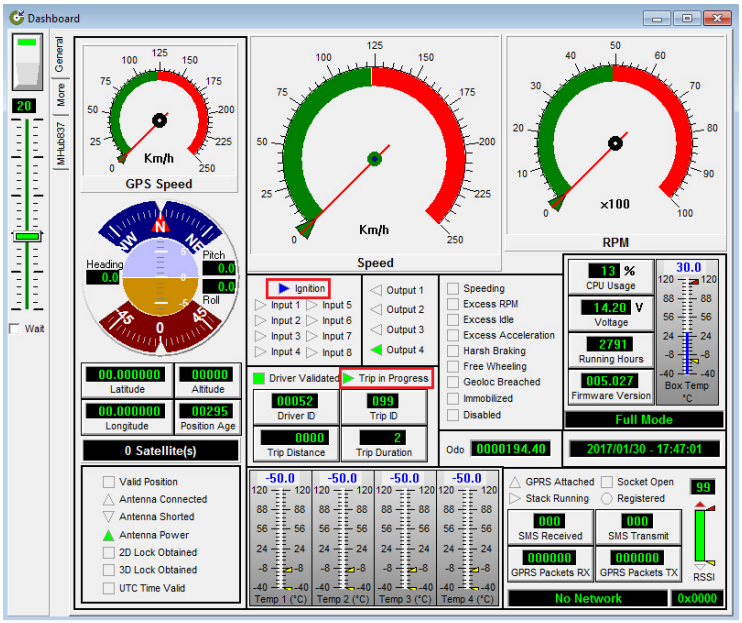


Figure 5. Ignition and Trip indicators are ON.

- Note that if the parameter *Card Reader Dangerous Goods control immobilization* is enabled, the vehicle will be de-mobilized only if the Driver ID card is authorised for dangerous goods.

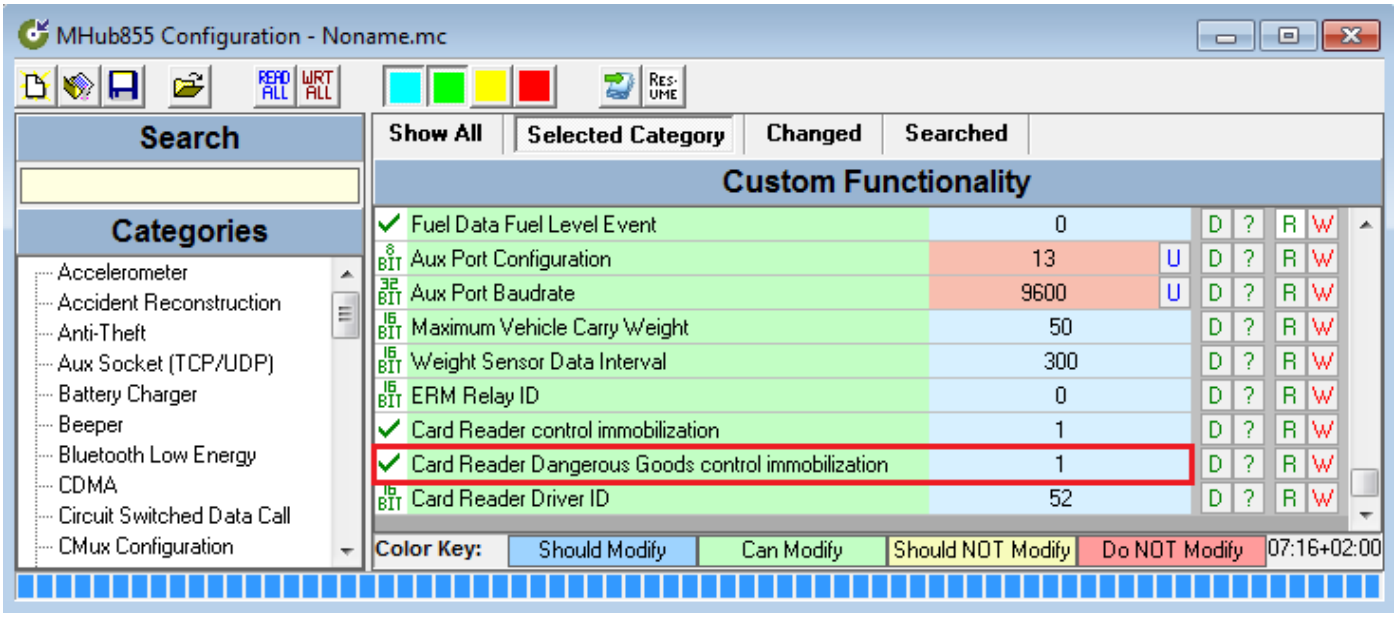


Figure 6. Card Reader Dangerous Goods control immobilization enabled.

- A Special Flag has been introduced with this card integration. This flag is used in the creation of triggers. To view this special flag the file *SpecialDash.xml* must be opened in the MHub Dashboard by pressing the folder icon on the top-right corner.
-

  Download this file from the following URL:
  http://www.mediafire.com/view/nv6c4au3sgvy24h

  By default the status of the Special Flag is OFF, the status changes to ON once the Driver ID Card is presented. Note that the status of the Special Flag changes back to OFF only after a trip.

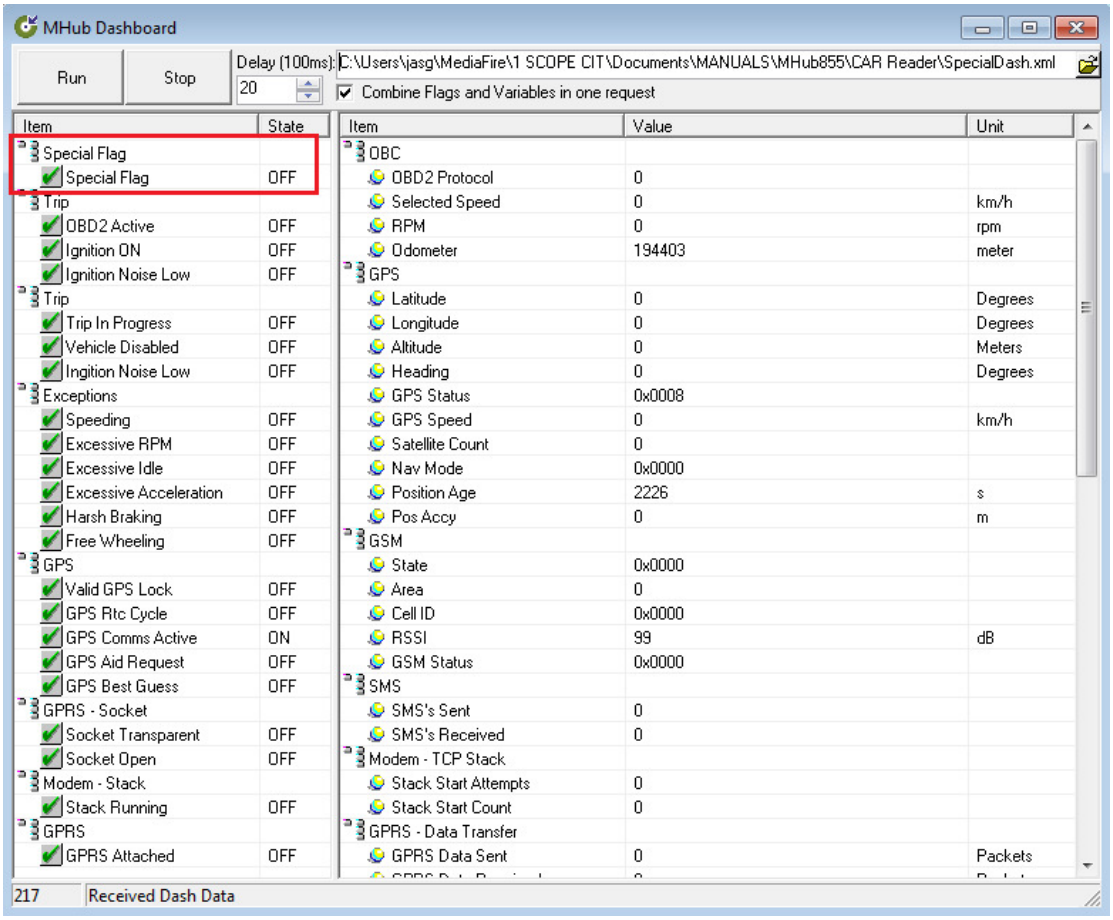


Figure 7. By default the status of the Special Flag is OFF.

- After the Driver ID card is presented and the vehicle is de-mobilized the status of the Special Flag changes to ON

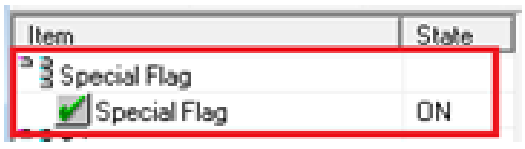


Figure 8. Status changes to ON after a valid Driver ID card is presented.

- When creating a trigger the Special Flag condition can be found as Special as seen in the below image. This can now be used to trigger any additional notifications as needed.

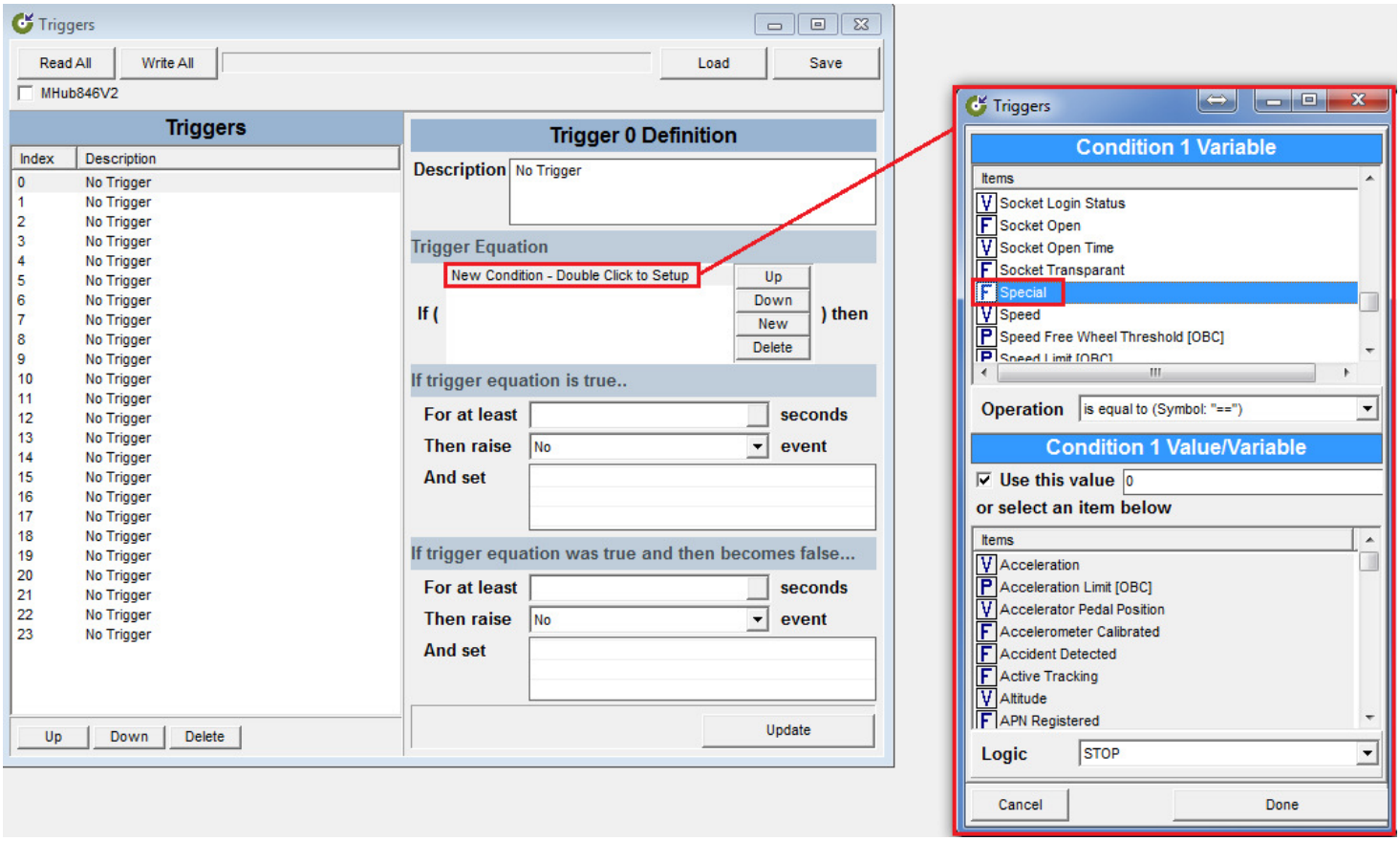


Figure 9. Special flag condition under triggers.

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