



Application

# MCP100 Critical Event Reporting (CER) Installation Instructions for Transportation Services

80-J9465-2 Rev. D  
July 2015

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# Contents

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## ***MCP100 Critical Event Reporting (CER) Installation Instructions***

Critical Event Reporting Features .....	1-2
Critical Event Reporting Installation Instructions .....	1-3
Stability Control .....	1-5
Lane Departure .....	1-7
Data Link Verification .....	1-8



# MCP100 Critical Event Reporting (CER) Installation Instructions

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Critical Event Reporting (CER) captures and reports critical event information (e.g., hard braking, vehicle speed, location, stability control (VDC), lane departure warning (LDW) and panic button events). The event information is sent from the MCP100 over the air to the Omnitrac's Network Operations Center (NOC) where it is made available to the customer for analysis via a web application.

This document contains information regarding the CER requirements, installation instructions, and a system verification procedure to ensure the feature is working properly with the MCP100.

The topics in this document include:

<i>CER System Verification</i> . . . . .	3
<i>Stability Control</i> . . . . .	5
<i>Lane Departure</i> . . . . .	7
<i>Data Link Verification</i> . . . . .	8

## **Need Help?**

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If you have technical questions about CER, please contact Omnitrac's Customer Support. Omnitrac's Customer Support is staffed 24 hours a day, 365 days a year: In the United States, call 800-541-7490 In Canada, call 800-863-9191.

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## **Critical Event Reporting Features**

CER captures and reports critical event information such as:

- hard-braking events
- stability control events
- lane departure warning (LDW) events
- panic button events
- manually-triggered events

The CER feature records a set of predefined data for the five minute period before a critical event occurs and the two minute period after a critical event is triggered. The event information is sent from the mobile unit over the air where it is made available to the customer for analysis via a web application.

Text-to-speech (TTS) can be enabled so CER events can be audibly conveyed to the driver. Performance Monitoring does not have to be enabled for the hard brake CER trigger to operate.

For the CER feature to function, the J1708 wires must be connected. Please refer to the MCP100 Accessory and Installation Guide for instructions.

Some feature parameters for hard braking and stability control (VDC) can be customer-configured at the NOC

## Critical Event Reporting Installation Instructions

### CER System Verification

Because the MCP100 is normally upgraded with software by sending it over the air, the MCP100 should always have the current MAS software version installed.

#### **Before you Begin**

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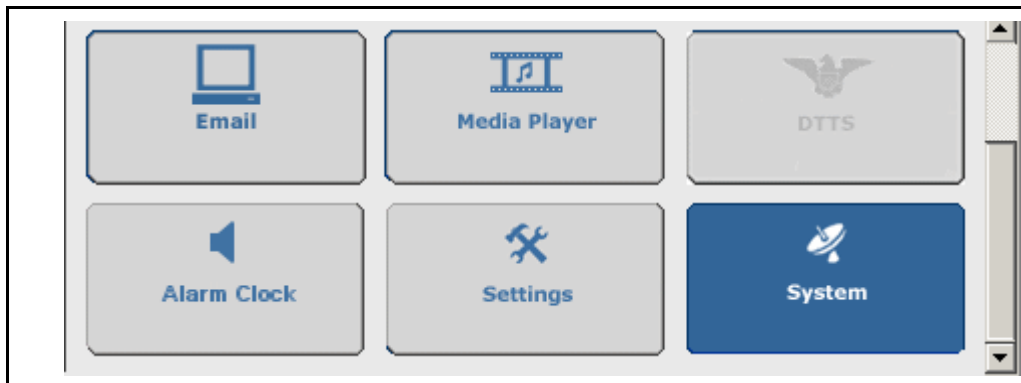
This procedure must be conducted while the vehicle is not in motion or the system won't be accessible.

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Refer to the display screens that follow when performing the system verification.

1. To access CER information, go to the Home screen (see [Figure 1-1](#)).

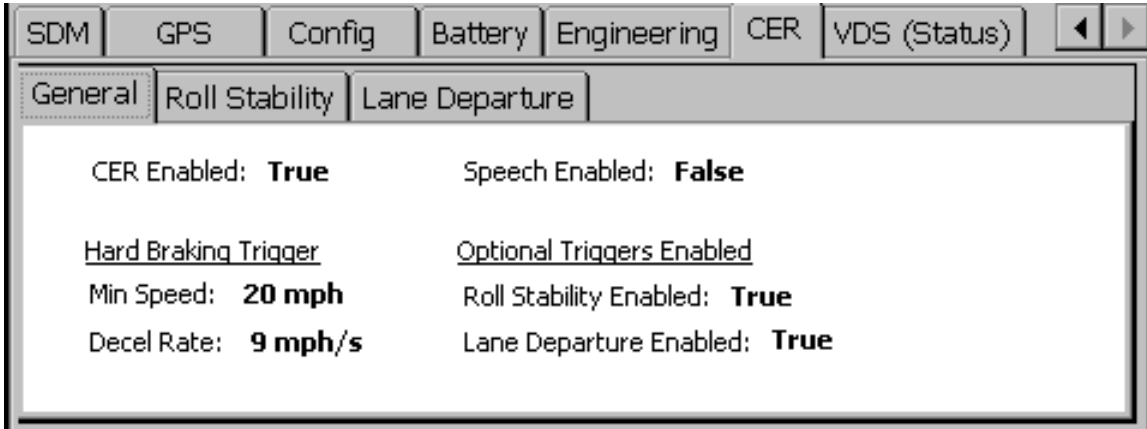
**Figure 1-1. Home Screen**



2. If the System icon is not visible, scroll down until it is. Then tap **System**.

The System screen similar to the one shown in [Figure 1-2](#) appears.

**Figure 1-2. System Screen**



3. Tap the CER tab, then tap **General**.

The General Status screen ( [Table 1](#) ) shows. The various screen fields are described in . If the CER Enabled field shows False, then CER service for the unit must be enabled from iQ. [Table 1](#) lists the field definitions for this screen.

**TABLE 1. General Status Screen Field Definitions.**

<b>Field</b>	<b>Value</b>
CER Enabled	True or False. If true, the MCP100 captures CER events.
Hard Braking Min Speed	The minimum speed at which mobile unit will start to detect hard brake events.
Hard Braking Decel Rate	The rate of deceleration that triggers a hard brake event (Default = 9 MPH/SEC).
Speech Enabled	True or False. If true, the text in the alert pop-ups are spoken.
Stability Control Enabled	True or False. If true, stability control is enabled.
Lane Departure Enabled	True or False. If true, lane departure warning is enabled.



## Stability Control

1. Verify the vehicle is equipped with a stability control system, such as Bendix or Meritor-WABCO before beginning the CER installation.
2. Tap the Roll Stability tab (see [Figure 1-3](#)).

**Figure 1-3. Roll Stability Screen.**

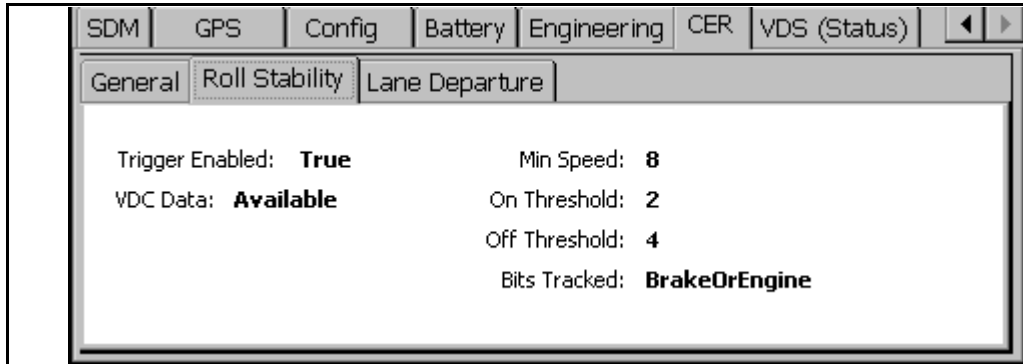


Table 2 shows the definitions for the fields on this screen.

In a correct installation, Trigger Enabled is “True” and VDC Data is “Available.” If there is a problem with stability control, the VDC Data would be “Not seen.”

**TABLE 2. Stability Control Screen Field Definitions**

<b>Field</b>	<b>Description</b>
Trigger Enabled	True or False. If true, stability control events are configured to be recorded. If false, VDC is Not Seen.
VDC Data	Available or Not Seen. If stability control information is provided by the anti-lock brake system (ABS), it shows Available. If it is not provided, shows Not Seen. If stability control is enabled and the truck has ABS, but it shows Not Seen, contact your administrator to apply the correct configurations.
Min Speed	Minimum speed at which mobile unit detects events.
On Threshold	Number of messages from the ABS indicating brake or engine being modulated in a row before an event is considered to be in progress.
Off Threshold	Number of messages from the ABS indicating brake or engine not being modulated in a row before an event is considered to be no longer in progress.
Bits Tracked	Indicates which bits the mobile unit tracks to monitor stability control events mentioned above: <ul style="list-style-type: none"> <li>• Brake only</li> <li>• Engine only</li> <li>• Brake or Engine (Default)</li> <li>• Brake and Engine</li> </ul>

## Lane Departure

1. For LDW installations, verify the vehicle is equipped with a lane departure warning system, such as Iteris box before beginning the CER installation. Also verify if the mobile unit is installed on the correct bus.
2. Tap the Lane Departure tab (see [Figure 1-4](#)).

**Figure 1-4.**  
**Lane Departure Screen.**

		Left/Right	Disablement
Trigger Enabled:	<b>True</b>	Min Speed:	<b>30</b>
Bus:	<b>J1587</b>	On Thresh:	<b>1</b>
LDW Data:	<b>Available</b>	Off Thresh:	<b>1</b>
		Events Count:	<b>3</b>
		Events Time (mins):	<b>5</b>
			<b>60</b>

In a correct installation, Trigger Enabled is “True” and LDW Data is “Available.” [Table 3](#) lists the field definitions for the Lane Departure screen.

**TABLE 3. Lane Departure Screen Field Definitions.**

<b>Field</b>	<b>Description</b>
Trigger Enabled	True or False. If true, LDW is being recorded.
Bus	J1587 or J1939. Should be J1939 unless a converter box is installed for using J1587
LDW Data	Available or Not Seen. If LDW data information is provided, it shows available. If it is not provided, shows Not Seen. If LDW is enabled and the truck has an LDW system, but it shows Not Seen, contact your administrator to apply the correct configurations
Min Speed	Minimum speed at which mobile unit detects events.
On Threshold	Number of messages from LDW that indicate a departure that must be seen in a row before an event is considered to be in progress.
Off Threshold	Number of messages from LDW that do not indicate a departure that must be seen in a row before an event is considered to be not in progress.
Events Count	[Events Count] LDW events within [Events Time (min)] that will result in notifications by CER.
Events Time (min)	

## Data Link Verification

- To access vehicle data services (VDS) information, go to the **System** screen and tap the **VDS (Status)** tab. You may need to scroll to see the **VDS (Status)** tab. The VDS (Status) screen displays (see [Figure 1-5](#)).

**Figure 1-5.**  
**VDS**



[Table 4](#) describes the fields found on the VDS screens.

**TABLE 4. VDS Field Definitions.**

<b>Field</b>	<b>Value</b>
RCV	These are the packets of data being received on the data bus.
XMT	These are the packets of data being sent on the data bus as requested (transmitted) packets.
MSG	These are the packets of data being received on the data bus that are of longer length than the normal data packet size.

- With the ignition turned ON, verify the following:

Check that the J1587 light is green. This indicates you are receiving data on the J1708 data link wires. This value should be a constantly increasing number when the ignition is ON. If the number is rapidly increasing, you are receiving J1708 messages. If the number is not rapidly increasing, you are not receiving J1708 messages, and you need to recheck the installation.

If the J1587 light is red, there is an error.

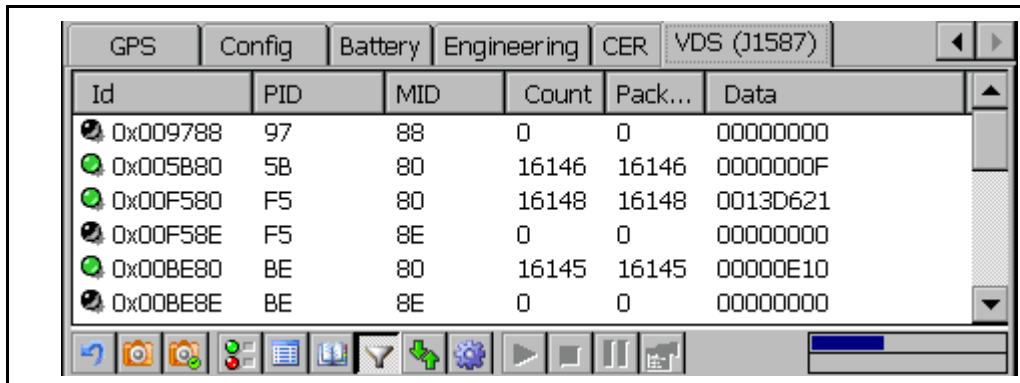
If the J1587 light is dark, you are not enabled for J1587 data.

3. To check what data is missing, tap the data icon

Then tap the filter icon  and choose J1587.

A screen similar to the one shown in [Figure 1-6](#) appears.

**Figure 1-6.**  
**Filtered VDS Data Screen.**

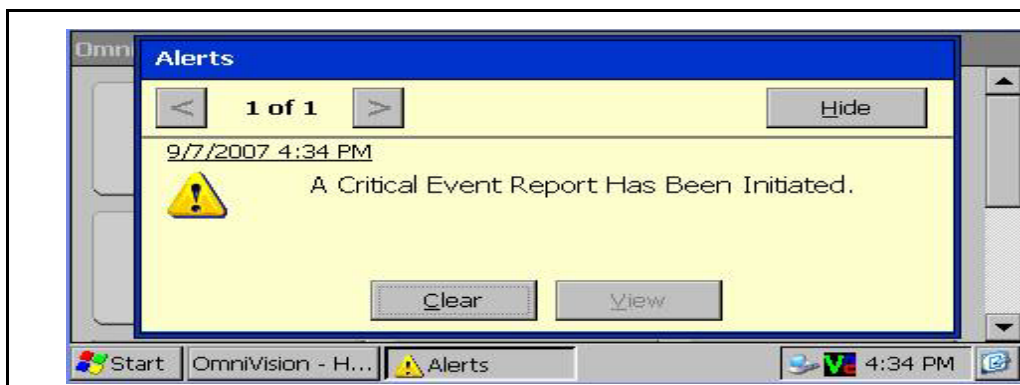


Id	PID	MID	Count	Pack...	Data
0x009788	97	88	0	0	00000000
0x005B80	5B	80	16146	16146	0000000F
0x00F580	F5	80	16148	16148	0013D621
0x00F58E	F5	8E	0	0	00000000
0x00BE80	BE	80	16145	16145	00000E10
0x00BE8E	BE	8E	0	0	00000000

4. Check the field where the PID hex value is 97 and MID hex value is 88. If the Count, and Packet fields are not incrementing the VDC trigger feature is not working.
5. With the MCP100 powered on, create a CER event: From the Home screen press the “Shift” and “T” keys on the MDU.

The screen shown in [Figure 1-7](#) should appear, alerting you that a CER event has just been triggered. The CER message is sent to the NOC.

**Figure 1-7.**  
**CER Alert.**



6. Verify that the host receives the CER event message and that speed data is present. If data is not present, recheck the connections to the J1708 data bus. If the message is not received at the host application, then the NOC account could be set up incorrectly. Call Omnitracs Customer Support. In the United States, call 800-541-7490; in Canada, call 800-863-9191.

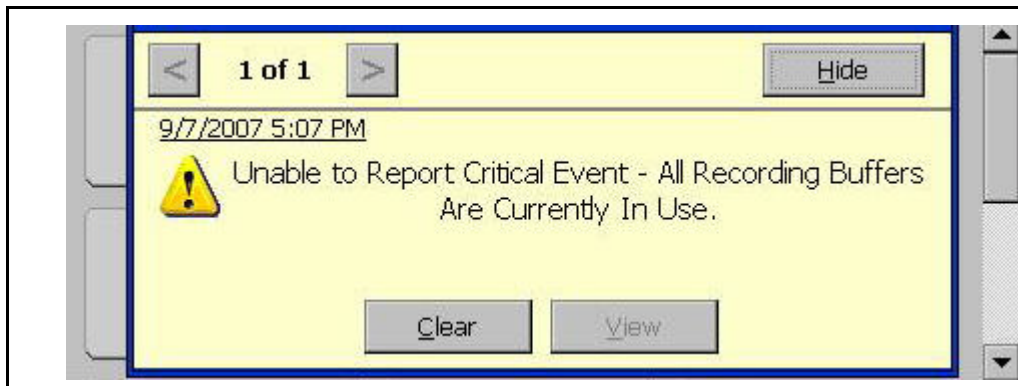
## **By the Way**

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### **Note**

*If a driver tries to initiate more than one manual trigger in less than two minutes, the screen in [Figure 1-8](#) appears.*

**Figure 1-8.  
Unable to Initiate CER Alert.**



## **For more Information**

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### **Note**

*For more information, review the MCP100 Accessory and Installation Guide.*