



Application

CER Collision Warning System Installation and Diagnostic Guide

80-JB114-2 Rev. C
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Introduction

CER Overview

CER captures and reports critical event information such as:

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

On the mobile unit, CER is constantly recording information from the vehicle's sensors, but if no critical event occurs, older information is erased to make room for newer information. When a critical event occurs, the system saves the information for the five minutes previous to the incident. CER continues recording during the incident and for two minutes after the incident.

The mobile unit then sends this event information over the air to a central, host computer, which makes it available to the customer for analysis via a web application.

For some event types, CER also alerts the vehicle's driver with an auditory and/or visual signal.

Collision Warning (FCW/FTV) Overview

The collision warning triggers for CER include:

- Forward Collision Warning (FCW), which warns when a forward collision is imminent, and
- Following Time Violating (FTV), which warns when a driver is following too closely behind another vehicle.

About this Manual

This manual explains how to install and diagnose basic problems with the collision warning system features(FCW and FTV) on the MCP100, MCP110, and MCP200.

For information on installing and diagnosing other CER triggers, see the following guides.

MCP200 & MCP110	MCP200 Diagnostic Guide	DCN: 80-J9969-1 Rev. A
MCP100	MCP100 Installation Guide	DCN 80-J4866-2 Rev B

CER Hardware Installation

The mobile computing unit captures event data from the vehicle data bus. The vehicle itself posts some event types to the bus, so once the mobile computing unit is correctly installed, no further installation is required for some CER events. For example, most modern trucks supply vehicle speed information, so the mobile unit can easily compute the vehicle's acceleration and

de-celeration. If a sudden de-celeration occurs, the mobile unit can then report a hard-braking event.

Capturing other CER events, for example lane departure or a roll instability, requires third-party hardware. In these cases, refer to the documentation from the hardware vendor for instructions on how to connect the hardware to the vehicle data bus.

Enabling CER on the Host

Some features, including FCW and FTV, must be enabled on the host system; if they are not, some aspects of the CER web application may not work with them. To enable FCW and FTV, the Omnitrac's Customer Service Representative should contact Omnitrac's hub administration.

Enabling CER on the Mobile Unit

CER can capture a variety of event types, also called *triggers*. Some triggers are included with basic pricing plan, others require the customer to purchase *CER Deluxe*, and still others require a separate contract. FCW/FTV require a separate contract.

To use triggers requiring CER Deluxe or a separate contract, the user must create an operational profile that includes these features, then assign the appropriate mobile units to that profile.

Verifying CER Installation

For Collision Warning to work, the vehicle must be equipped and configured with a collision-warning system, such as the Mobileye collision alert system. To verify that the collision warning system is properly installed, follow the steps below.

1. Tap the *Collision Warning* tab.

The Collision Warning screen displays.

2. Verify the values displayed on the Collision Warning screen.

CER Collision Warning Screen Field Definitions

Field Type	Field Value	Field Description
FCW Trigger Enabled	True or False	If true, FCW events are configured to be recorded. If false, ACC1 Data may still be available.
FCW Min Speed (mph)	numeric (mph)	Shows the minimum speed at which mobile unit detects FCW events.
FTV Trigger Enabled	True or False	If true, FTV events are configured to be recorded. If false, ACC1 Data may still be available.
FTV Min Speed (mph)	numeric (mph)	Shows the minimum speed at which the mobile unit detects FTV events.
FTV Follow Time Min (s)	numeric (seconds)	Minimum following time, in seconds, from the forward vehicle the driver must maintain in order to avoid a following time violation. A following time below this threshold will result in the accumulation of 'following time violation' time.
FTV Time Max (s)	numeric (seconds)	Maximum time driver is allowed to be within the Follow Time Min threshold before a following time violation event will be recorded and reported.
Collision Warning Data [Source]	Available [Headway Controller or LaneDepartureWarningSystem] or Not Seen	If ACC1 (Adaptive Cruise Control) data is available from either the headway controller or in some cases the lane departure warning system, this field will show Available along with the Source. Otherwise it will show Not Seen and Null for the Source.

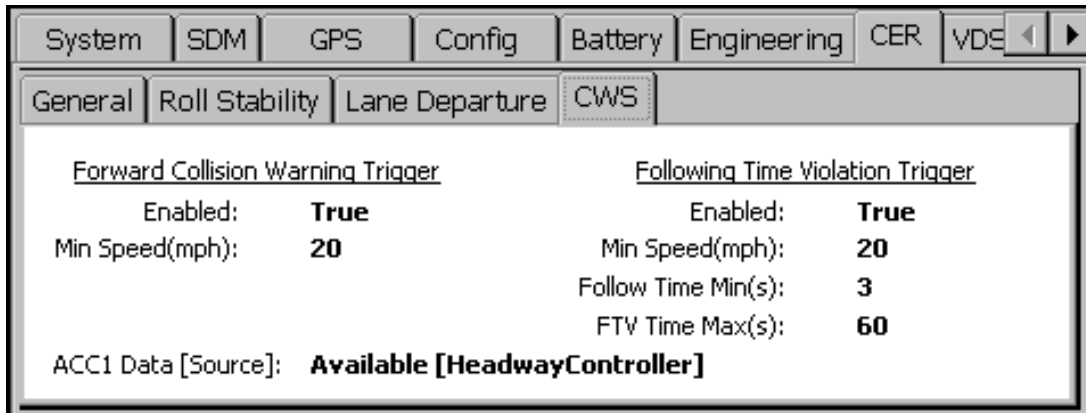


Figure 1. MCP100 CWS Screen.

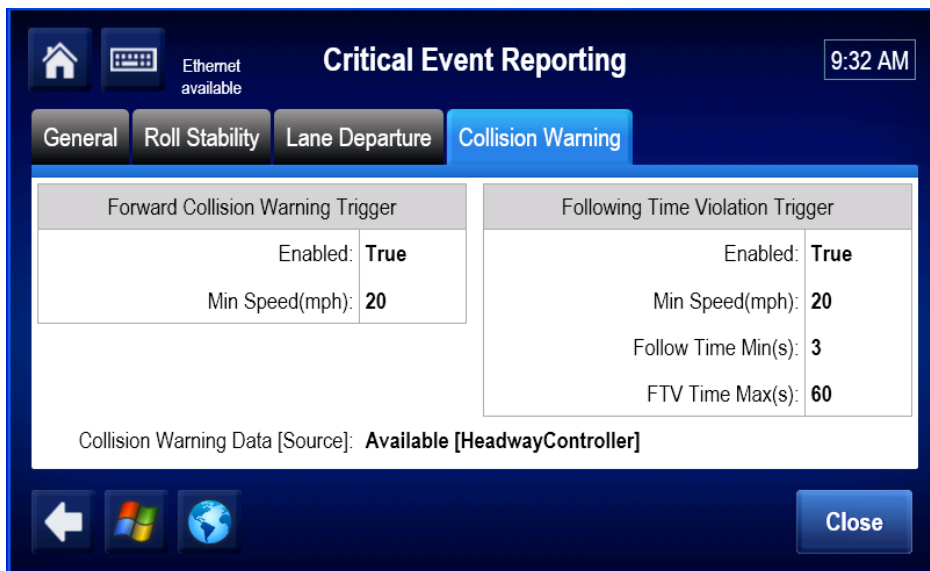


Figure 2. MCP200 Collision Warning Screen.

Troubleshooting the Collision Warning System

On the CER Collision Warning Screen, the Collision Warning Data Source field indicates if data is available from the collision warning system. If the field shows *Not Seen*, follow the steps below to diagnose the problem.

1. From the MCP System/VDS Screen, verify that J1939 is enabled (for MCP200, see MCP200 Diagnostic Guide, DCN: 80-J9969-1 Rev. A; for MCP100, see MCP100 Installation Guide, DCN 80-J4866-2 Rev B.). If it is not enabled, enable it through VDC.
2. Verify that other J1939 CER options are receiving data.
3. If J1939 is enabled and working, but Collision Warning Data is still not available, check the MCP data link. (For MCP200, see MCP200 Diagnostic Guide, DCN: 80-J9969-1 Rev. A; for MCP100, see MCP100 Installation Guide, DCN 80-J4866-2 Rev B.)
4. Cycle ignition (OFF, then ON), wait 30 seconds, then re-check Collision Warning Data Source field.
5. If Collision Warning Data Source still shows that data is not available, check the physical connections to the collision warning system on the vehicle.