Cello-IQ Offline DEMO User Manual

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1 Introduction

1.1 About this Document

The Cello-IQ Offline DEMO User Manual is a comprehensive guide that provides information required by sales personnel to run an offline demo of the Cello-IQ for customers.

For additional information about the Cello-IQ unit, please refer to the documents listed in the *References* section below.

1.2 Abbreviations and Terminology

Abbreviation	Description
Cello-IQ	Cellocator Safety and Eco-driving monitoring device
ACK	Acknowledge
DB	Database
FMS	Fleet Management System
OTA	Over the Air
DFD	Driver Feedback Display
TIP	Traffic Injection Product

1.3 References

All the reference documents listed in the following table can be downloaded from the support section of the Cellocator website (www.Cellocator.com).

#	Reference	Description
1	Cello-IQ Product Overview	The document provides high-level information required by service providers considering the integration and operation of Cello-IQ devices with their fleet management applications.

1.4 Revision History

Version	Date	Description
1.0	August 8, 2013	Initial version

2 Overview of the Cello-IQ Offline DEMO

The Cello-IQ Offline DEMO Kit enables you to watch a video of a real driving scenario, while simultaneously monitoring the driver behaviour via the included DFD. Since the video is a recording, the DEMO is, of course, "offline".

In the video, you can view the vehicle's trip and driver's real-time dashboard (in the lower right corner of the video), as shown in the image below.

The DFD actually provides the driver behavior UI synchronized to the recorded trip, with LEDs, sounds, and voice alerts indicating specific maneuvers performed by the driver.

The Demo main components are the TIP Injector application, the TIP device and other hardware located in the Demo case, and the DFD. The TIP injector displays the video and simultaneously sends the trip data to the TIP. The TIP receives the trip data, processes it and sends the appropriate information to the DFD and thus simulates the Cello-IQ operation. The DFD provides the driver behavior UI.

Figure 1: Driving scenario video

The Cello-IQ Offline DEMO Kit includes a dedicated case, which contains the TIP hardware that also includes a power ond communication circuits, and an external charger. The components that are included in the dedicated case are described in the following section.

See *Charging the Cello-IQ Offline DEMO Battery Pack* for details about working with the charger.

2.1 Cello-IQ Offline DEMO Case Description

This section describes the Cello-IQ Offline DEMO components included in the dedicated case.

Figure 2: Cello-IQ Offline DEMO case

The case includes the following:

◆ **TIP** – The TIP device receives trip data from the TIP Injector application, processes it and provides the appropriate data to the DFD. the information is received via dedicated communication channel with the PC which host the TIP Injector application. The TIP device supports also changing its PL, which is identical to the Cello-IQ PL. this is done via dedicated communication channel with the Cellocator Programmer application. The TIP is located below the Panel and is therefore not visible (the Panel is shown in Figure 3).

◆ **Battery pack** – This rechargeable battery pack provides 20 hours of Demo sessions when fully charged. It is also located below the Panel.

◆ **DFD** - Provides the driver behaviour UI synchronized with the trip video.

◆ **USB cable** – Used for connecting the TIP to a PC/laptop.

◆ **Allen key** – Used for setting the DFD stand position. It is located behind the DFD in the lid of the case.

◆ **Communication circuit** - Supports the connection of the TIP to the TIP Injector or the Cellocator Programmer.

◆ **Power circuit** - Supports powering via internal batteries and external power supply. It also supports charging the internal batteries.

The following images show the inside of the Cello-IQ Offline DEMO case.

Figure 3: Inside the Cello-IQ Offline DEMO case (1)
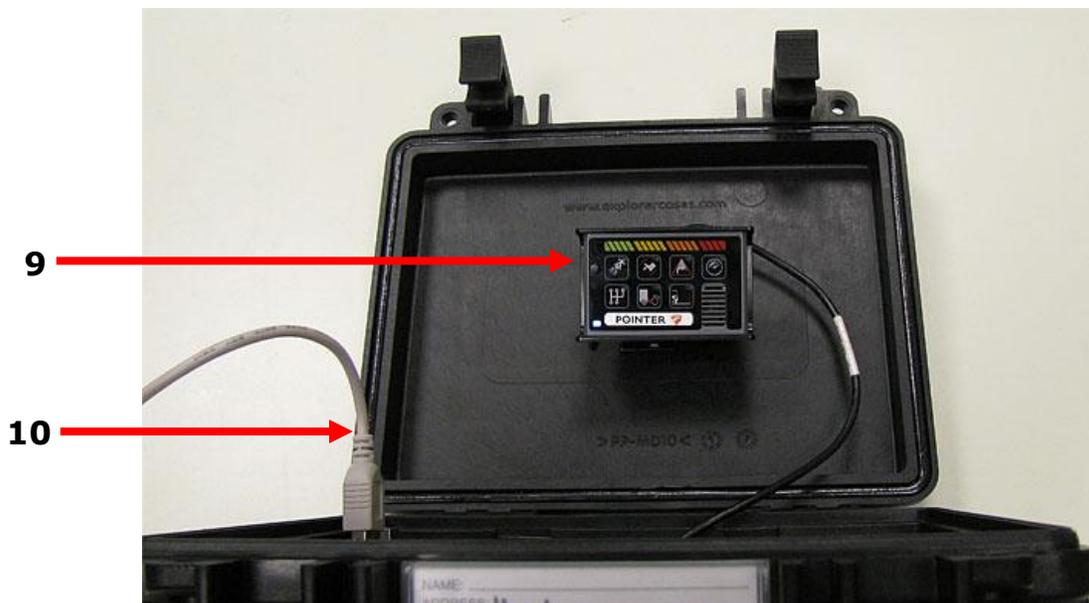
Figure 4: Inside the Cello-IQ Offline DEMO case (2)

1. Cello-IQ USB connector – enables USB connection from the TIP to a Cellocator Programmer application, for programming the Cello-IQ parameters, updating PL files, and updating the Cello-IQ FW.

2. TIP USB connector **–** enables the transferring of the trip parameters from the TIP Injector application on the PC/laptop to the TIP in the Cello-IQ Offline DEMO case.

3. COM switch (DFD or COM) **–** enables the TIP to communicate with either the DFD when the Demo movie is running (and the switch is in the **DFD** position) or with the Cellocator Programmer via the Cello-IQ USB connector when maintaining the TIP PL (by switching to **COM**).

4. Panel – below this panel, the TIP and internal battery pack are located.

5. Cello-IQ Offline DEMO sticker.

6. Charger connector **–** enables connection to an external charger for charging the internal batteries of the Cello-IQ Offline DEMO. See also Charging the Cello-IQ Offline DEMO Battery.

7. 12V (external power source connector) **–** enables connection to an external power source (12V only) to bypass the internal batteries of the Cello-IQ Offline DEMO (when the power switch is switched to **EXT POWER/CHARGER**). See also Using an External Power Source.

8. Power switch **–** enables you to use the internal batteries (by switching to **ON**) or an external power source (by switching to **EXT POWER/CHARGER**).

9. DFD unit – provides the driver interface synchronized with the trip video. The DFD is supplied in the lid of the case.

10. USB cable – enables communication between the TIP device in the case and the PC/laptop.

3 Preparing for a Demo

3.1 Prerequisites

The following prerequisites are required for working with the Cello-IQ Offline DEMO.

- PC with winXP / Win7
- DotNet4 framework:
  http://www.microsoft.com/enus/download/confirmation.aspx?id=17851

3.2 Installing the Cello-IQ Offline DEMO Package

The following procedure describes how to install and prepare the Cello-IQ Offline DEMO package for a real-case demo scenario.

➢ **To install the Cello-IQ Offline DEMO package:**

1. Download the **Cellocator Cello-IQ Offline Demo** file from Cellocator knowledgebase web site http://www.cellocator.com/knowledgebase/ and extract it to **C:/Cellocator Cello-IQ Offline Demo** folder. The folder content is shown below.

Name	Date modified	Type
Movie	08/08/2013 17:12	File folder
PL Files	02/07/2013 10:42	File folder
TIP Injector	06/08/2013 19:57	File folder
USB Adaptor driver	06/08/2013 19:56	File folder
Video Codec Install	06/08/2013 19:54	File folder
Tip Injector - Shortcut	08/08/2013 16:46	Shortcut
Tip	08/08/2013 15:14	Registration Entries

2. Copy the TIP injector shortcut to the desk top.

3. From the **Video Codec Install** folder, run the two installation files (both files are required to run the driver movie correctly):

   - **dxwebsetup**: Double-click to run the installation for the latest version of DirectX (Microsoft DirectX is a group of technologies designed to make Windows-based computers run and display applications rich in multimedia elements such as full-color graphics, video, 3D animation, and rich audio). Follow the onscreen wizard to complete the installation.

   - **GoProCineFormDecoders**: Double-click to run the installation for version 1.2 of the GoPro CineForm decoders. Follow the onscreen wizard to complete the installation.

4. From the **USB Adaptor driver** folder, double-click the **UC232A_Windows_Setup.exe** file. In the displayed window, select **English** as the chosen language and then follow the onscreen wizard to complete the installation.

   This installation ensures that your computer has the compatible drivers to enable connection with the included USB cable.

5. From the root folder, double-click the **TIP.reg** file. This file includes default registry settings for the TIP Injector software.

The next step is to run the TIP Injector software itself on the PC/laptop to be used in the demo, as explained in the following section.

3.3 Setting Up the TIP Injector

This section describes how to setup and launch the TIP Injector application on the chosen PC/laptop. The Tip Injector application sends the relevant trip data to the TIP installed in the Cello-IQ Offline DEMO case.

➤ **To setup and launch the TIP Injector:**

1. Ensure that all of the steps listed in the Installing the Cello-IQ Offline DEMO Package section have been completed.

2. Double-click on the TIP Injector icon on the desktop, or from the **TIP Injector** folder, double-click on the **TIP Injector** application. The following window is displayed.
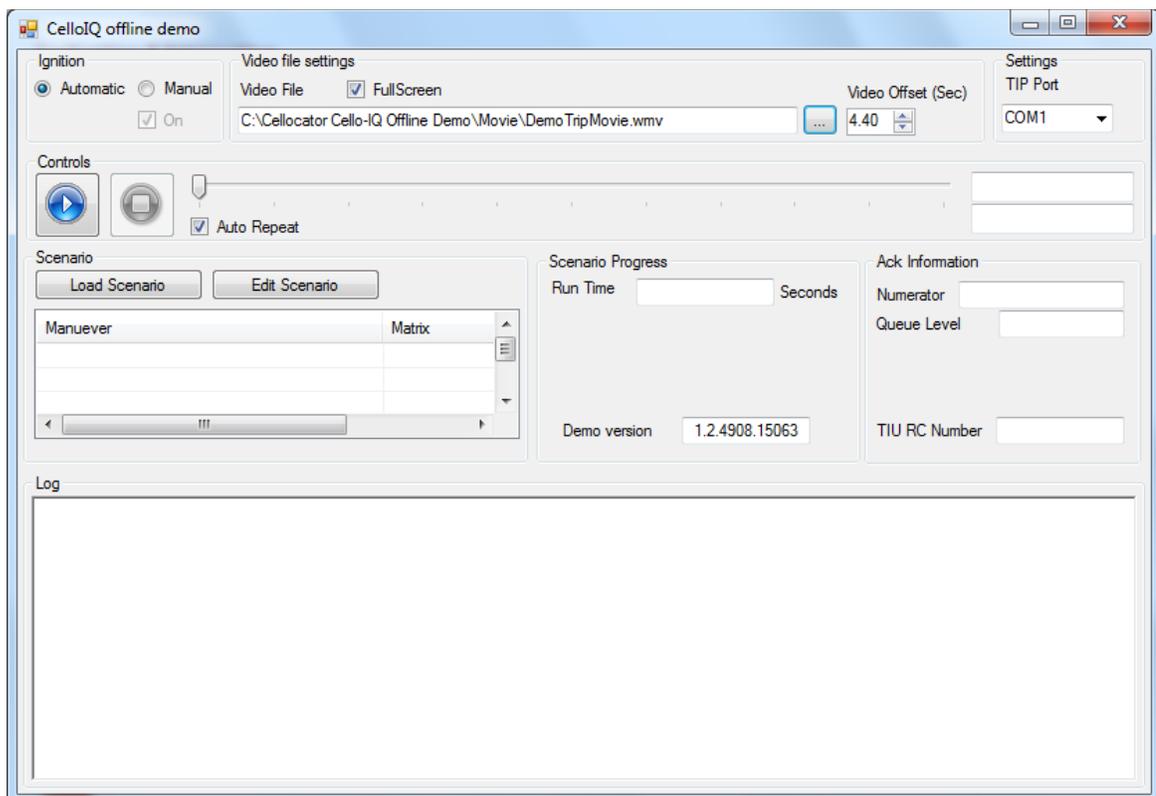
Figure 5: TIP Injector main window

The window displays the default settings, as defined by the **Tip.reg** file you activated when installing the Cello-IQ Offline DEMO package. Make sure that the window matches the picture above.

NOTE: The **Video Offset** setting (the synch between the video and the TIP Injector) is set by default to 4.40 seconds. Depending on your computer, this setting can be modified (for most new computers, this setting will suffice).

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3. In the *Scenario* section, click **Load Scenario**. The following window is displayed:
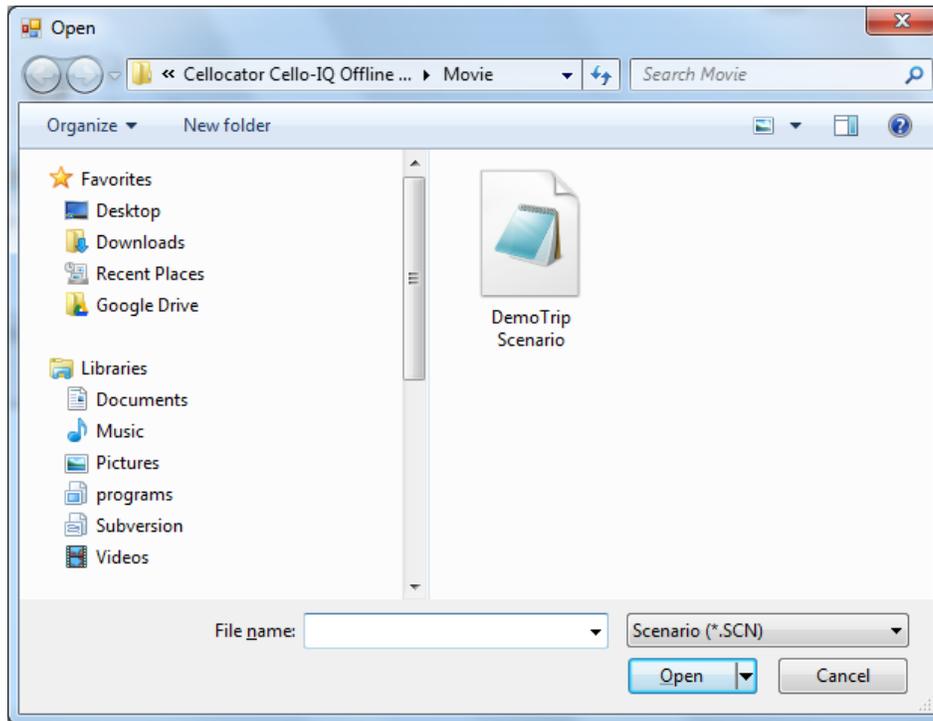
Figure 6: Scenario Loading

4. Double-click on the DemoTrip scenario.scn file to select it as the scenario file for the Demo. The demotrip.txt file is now displayed in the *Scenario* section of the main window, as shown below.
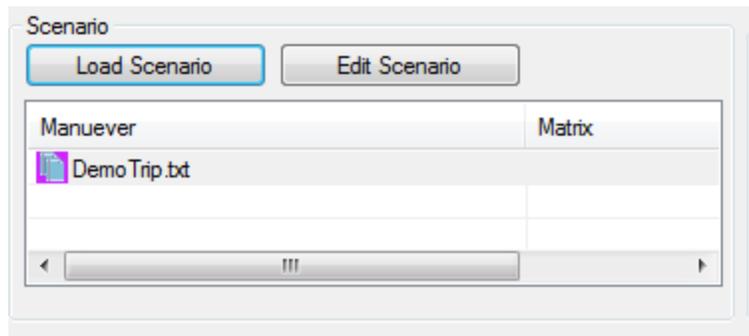
Figure 7: Scenario loaded

The TIP Injector application setup is complete and you may close the application.

4 Demo Operating Instructions

This section describes how to operate the Cello-IQ Offline DEMO during a typical demo scenario.

➤ **To run a demo using the Cellocator Cello-IQ Offline DEMO package:**

1. Ensure that all of the steps listed in the Preparing for a Demo section have been completed.

2. Connect the TIP USB connector in the Cello-IQ Offline DEMO case to a USB connector on the PC/laptop.

3. Switch the COM Switch to the **DFD** position.

4. Switch the power switch to **ON** to power the TIP and DFD from the internal battery pack. After two or three seconds, the System LED on the DFD will switch on.

5. Place the DFD in a more convenient location/better angle. Use the included Allen key (located behind the DFD in the lid of the Cello-IQ Offline DEMO case) to alter the angle of the DFD stand fitting and place the DFD on the panel, as shown below.

Figure 8: Allen Key located in case lid

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Figure 9: Adjusting the angle of the DFD fitting stand

Figure 10: New location of DFD

6. Double-click on the TIP Injector icon on the desktop. The TIP Injector main window is displayed.

Note: the PC should be connected to the TIP before the TIP injector is activated

7. Find the port the TIP is defined with: access your Device Manager (from the Control Panel) and look for the USB port listed as ATEN USB to Serial Bridge (COM3 in the example below).
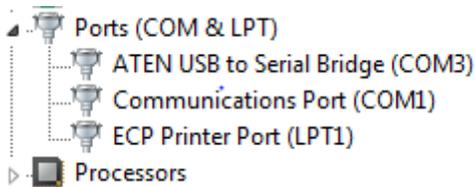
8. Program the com port associated with the ATEN USB port in the setting TIP port field of the TIP injector application.
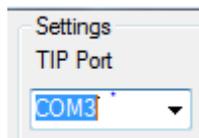
9. Run the demo by clicking .

The demo will start, and the DFD will be in-synch with the trip video being played on the PC/laptop.

NOTE: The Stop icon does not function in appropriate way.

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10. To stop the Demo press ALT+TAB, exit the TIP Injector application and switch the power switch to **EXT POWER/CHARGER**. The DFD (System LED) turns off.

11. When finished, make sure that the power switch is switched to **EXT POWER/CHARGER** in order to shut down the TIP and the DFD and save the internal battery pack.

    In addition, return the DFD stand to its original angle and place both it and the Allen key in the lid of the case.

5 Charging the Cello-IQ Offline DEMO Battery Pack

This section describes how to charge the Cello-IQ Offline DEMO internal battery pack.

➤ **To charge the Cello-IQ Offline DEMO battery pack:**

1. In the Cello-IQ Offline DEMO case, switch the power switch to **EXT POWER/CHARGER**.

2. Connect the included power charger to the Charger connection, as shown below.

3. Connect the charger to a power source of 15v 2A.

   It is recommended that the 15V power source provides indication of when the battery pack is fully charged. Note that the charging of a fully drained battery pack may take up to 8 hours.
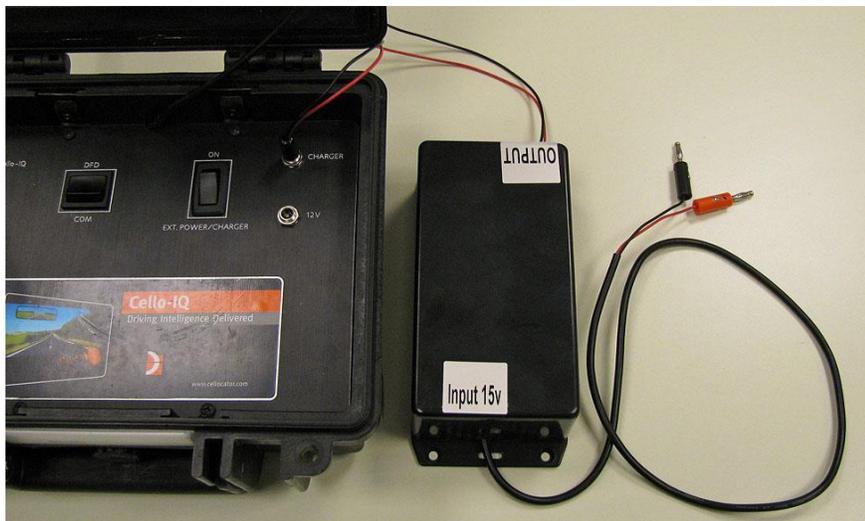
Figure 11: Connecting the external power charger

6 Using an External Power Source

This section describes how to use an external power source to bypass use of the Cello-IQ Offline DEMO internal battery pack.

➤ **To use an external power source:**

1. In the Cello-IQ Offline DEMO case, switch the power switch to **EXT POWER/CHARGER**.

2. Connect the external power source (not included in the Cello-IQ Offline DEMO package) to the 12V connector. The DFD System LED should light up.

3. Continue with the demo, as described in the Demo Operating Instructions section.