

# RoadRunner™

RsPlayer™ Mobile Digital Video Systems

User Guide and Instruction Manual, Version 2.10.0



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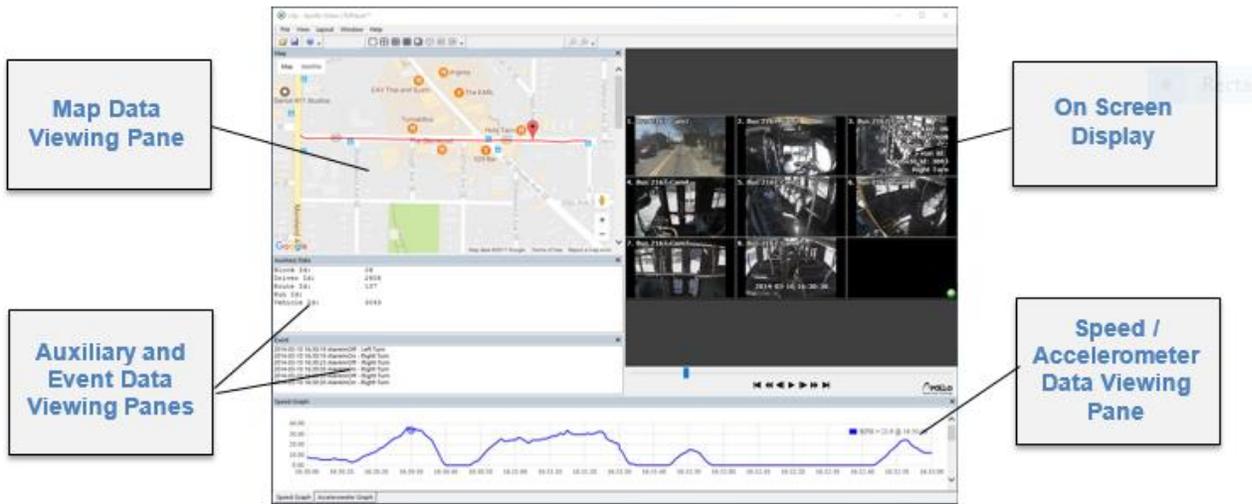
## 1.0 Introduction

Apollo Video Technology’s RoadRunner™ Secure Player (RsPlayer™) provides a secure method of playing video clips downloaded from the Roadrunner line of recorders. While the downloaded clips have a built-in self-player, RsPlayer enhances the playback experience by adding map and speed graph information as well as auxiliary (Accelerometer and Meta) data embedded in the clip. Event and Auxiliary data is viewable both in the data panes and with On Screen Display of data synchronized with the video.

RsPlayer utilizes the GPS data embedded in each video clip to display the appropriate map from the downloaded clip. The route the vehicle traversed is displayed by a red line and an icon indicating the current location. As the clips are played the vehicle locator icon will move across the map synchronous with the video. The times displayed on the video playback pane and on the X axis of the graphs is the recorder’s local time.

A Speed Graph shows the speed of the vehicle from the video clip at any point on the route. A cursor indicates the current speed and traverses the graph synchronous with video playback.

Figure 1 - RsPlayer Viewing Windows



### 1.1 Recommended System Requirements

Performance may be significantly affected for multi-camera playback containing 360° or 4K cameras while in high quality format. Users can improve performance by viewing video clips in long-term quality or by viewing cameras in single camera mode. Hardware acceleration functionality to improve playback performance will be provided in a future update.

Figure 2 - System Requirements

CPU (or equivalent)	RAM	OS Version	Storage	Graphics Card
Intel® Core i7 2.6GHz	16GB	Windows® 7/8.1/10 64-bit Professional	100GB	ATI Radeon™ HD 7700 or NVIDIA GeForce® GTX650 (1280x1024, 32bpp), supporting multiple monitors

## 2.0 Using RsPlayer

### 2.1 Menu Bar

The Menu Bar, located at the top of the window, allows a user to open video clips, select active windows, change camera layouts and obtain assistance:

Figure 3 - Menu Bar



- File: Open files, Save as a Clip, Print, Print Preview, Print Setup, and/or exit the application.
- View: Change the display options including the menus, map, speed graph, and event panes.
- Options: Turn on and off the options that will be available when running RsPlayer. Activate On Screen Display for Events and Auxiliary Data, Print with or without metadata, and Audio Mute Button on/off.
- Layout: Change the desired Camera layout.
- Window: Save or reload a custom layout; reset to default configuration, display frame information.
- Help: Displays version information and provides a link to [www.apollovideo.com](http://www.apollovideo.com) where tech tips, updates, and manuals will be posted.

### 2.2 View a Clip

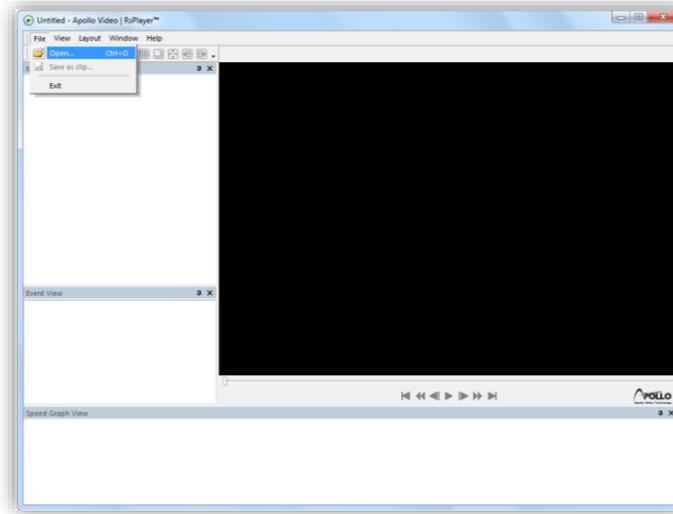
- Double click the RsPlayer icon to start RsPlayer.

Figure 4 - RsPlayer Icon



- Select **File**, then **Open** to select the desired video clip file.

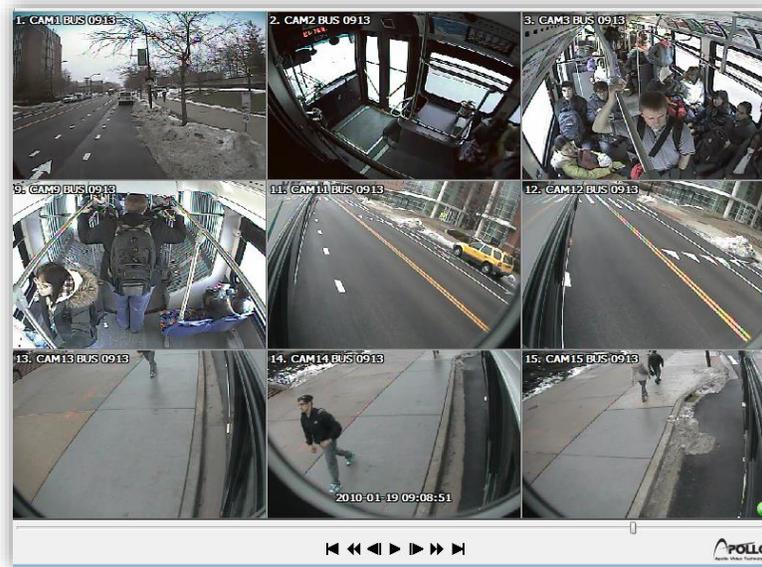
Figure 5 - Open Video Clip File



- Once a video clip has been opened in the RsPlayer format, the video clip can be saved in this format to open again automatically in RsPlayer, refer to section 2.5 Save as a Clip.

## 2.3 Video Display Window

Figure 6 - Video Display Window



The video display window shows the cameras as selected by the layout. Standard controls allow the user to:

- ▶ Go to the beginning of the recorded video clip
- ◀◀ Fast reverse
- ◀ Previous frame
- ▶ Play
- ▶ Next frame
- ▶▶ Fast forward
- ▶▶ Go to the end of the recorded video clip

The scroll bar (shown below), allows users to ‘point and click’ and/or drag the indicator to view specific video.

Figure 7 - Scroll Bar



The control bar (shown below), allows users to indicate the **fast forward speed** through a drop down. Choose the fast forward speed you desire between 2x and 1024x. An Audio Button Mute toggle button is also available on the control bar.

Figure 8 - Control Bar



**NOTE: If video decoding is slower than real-time due to performance limitations of the user’s machine, a pop-up window notifying a user will be displayed and prevent video playback until the user clicks OK. See section 1.1 Recommended System Requirements.**

**ALSO NOTE: The pop-up window may be hidden behind RsPlayer or other applications that are open. In such cases, an additional tab on the RsPlayer application icon will be displayed on the Windows taskbar. To view the pop-up window, hover or click on the RsPlayer application icon.**

Figure 9 - Slow Decoding Pop-up Window

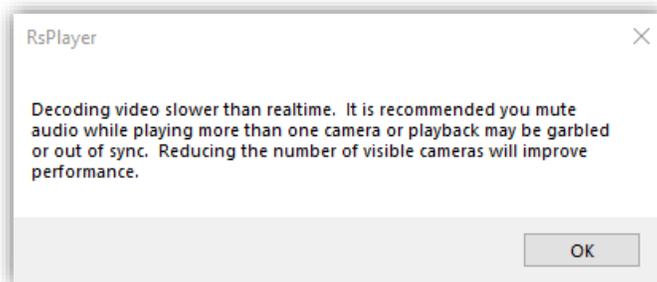
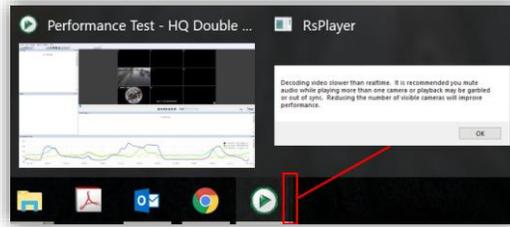


Figure 10 - Hidden Pop-up Window



## 2.4 View a Single Camera

Double-click on any image to view as a single camera. Double-click again to return to multi-camera view.

When in single camera view mode, the magnifying glass buttons on the menu bar can be used to zoom in and out on the video image.

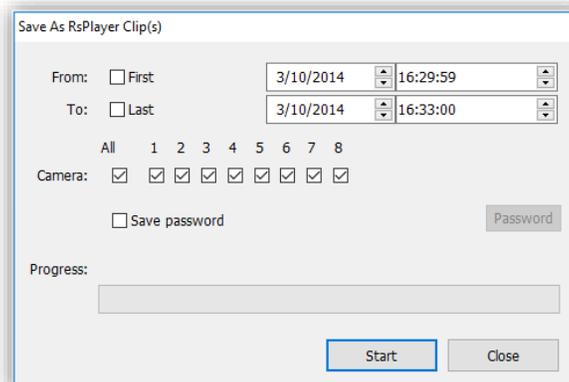
Figure 11 - Zoom Controls



## 2.5 Save as a Clip

- Click the disk icon on the menu bar.
- Right-clicking the playback pane will also access a drop-down menu that provides the option to “Save as Clip” selection to allow making a self-playing clip from the clip being played. Click the disk icon on the menu bar.
- A menu (Figure 12 - Save as a Clip) allows the user to select the time range and number of cameras to be selected and add a password if desired to protect the clip
- The resulting clip will include all text data and display the map and speed graph
- Select **Start** to open a file save dialog box to allow saving the clip with a user defined name and location

Figure 12 - Save as a Clip



## 2.6 Save an Image

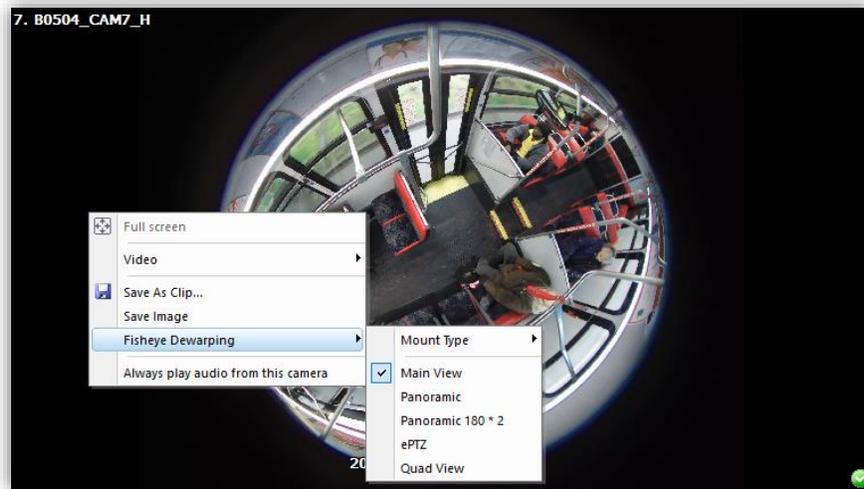
- Right-click the playback pane to access a drop-down menu that provides the option to “Save as Image” selection to allow saving the image to a file.
- A standard Save As file menu will appear.
- Available image formats will be available. The default is .jpg format or .bmp; .tif is also available.
- Enter a filename then select **Save** and hit enter to save the image to a file.

## 2.7 360° Camera Viewing Options

Right-click the playback pane on a 360° camera to access a drop-down menu for “Fisheye Dewarping” that provides viewing options specific to that 360° camera.

**NOTE: 360° cameras require firmware version 1.5.0 or higher for image dewarping functionality.**

Figure 13 - Fisheye Dewarping



**Mount Type:** Changes the camera orientation to match the mount type used for installation (Wall, Ceiling, Desktop).

**Main View:** Default 360° camera view with warped image.

**Panoramic:** Dewarped and stitched into a single horizontal pane with 360° field of view.

**Panoramic 180 \* 2:** Dewarped and stitched into two horizontal panes with 180° field of views each.

Left-click + Move Left/Right to change camera positioning.

**ePTZ:** Single viewing pane with manual control to Pan, Tilt and Zoom.

Mouse Scroll Up/Down to Zoom In/Out and dewarp the image.

Left-click + Move Left/Right/Up/Down to change camera positioning.

Quad View: Four viewing panes with individual ability to Pan, Tilt and Zoom on each (hover over desired pane and use PTZ controls).

Mouse Scroll Up/Down to Zoom In/Out and dewarp the image.

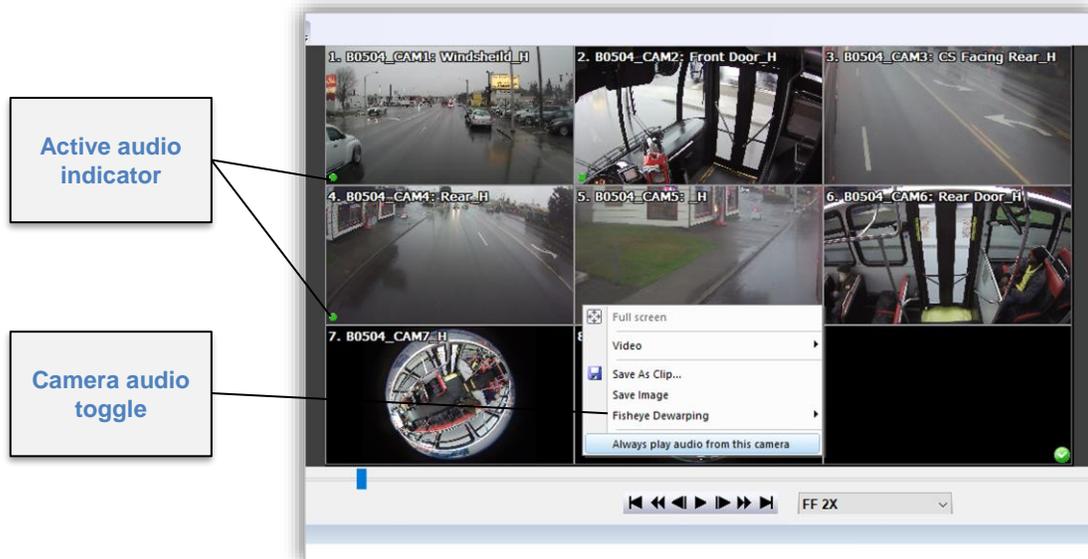
Left-click + Move Left/Right/Up/Down to change camera.

## 2.8 Combine Audio From Multiple Cameras

Right-click the playback pane to access a drop-down menu that provides the “Always play audio from this camera” option to toggle audio for this camera during multi-camera playback.

A green dot will be displayed in the bottom-left corner for each camera where audio has been enabled.

Figure 14 - Multiple Camera Audio



## 2.9 Print, Print Preview and Print Setup

- From the File menu, the standard print options are available.
- Print will bring up a print menu.
- Print Preview will allow you to view the image to be printed with or without metadata as well as allow you to zoom in or out prior to printing. To print the image with metadata check “Print with Metadata” from Options menu.
- Print Setup allows you to change printers and printer settings.

### 3.0 Data Viewing Panes

Each Data Viewing Pane (map, event, auxiliary, speed, accelerometer, and metadata depending on availability of data in clip) can be un-docked and re-docked. By selecting and dragging the title bar of any pane, the pane can be separated from the main video window and displayed on their own, or repositioned for a custom view.

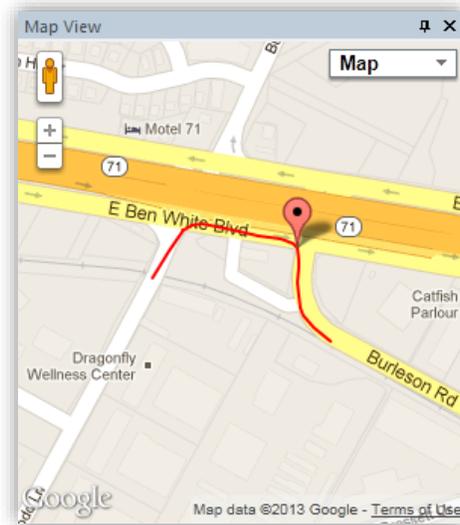
Custom views can be created and recalled using the Window menu. To restore to the default view, use the “Reset Window Layout” selection in the Window menu.

#### 3.1 Map

The Map Viewing Pane displays the route the vehicle traveled over the duration of the clip as well as the current location (in relation to video and speed playback) of the vehicle.

- The red marker (pip) on the map shows the location of the vehicle and moves synchronous with video playback.
- A user can also ‘point and click’ to drag the pip along the route to update the video to that location.

Figure 15 - Map Pane



- The zoom level of the map can be adjusted using the + and – indicators on the map.
- The view can be changed from “Map” to “Satellite” by selecting the Map drop-down menu in the upper right-hand portion of the pane.

#### 3.2 Events

The Event Viewing Pane displays the events as they occur during playback. Any event that is configured on the vehicle to display on the Recorder will display in this window.

Figure 16 - Event Viewing Pane

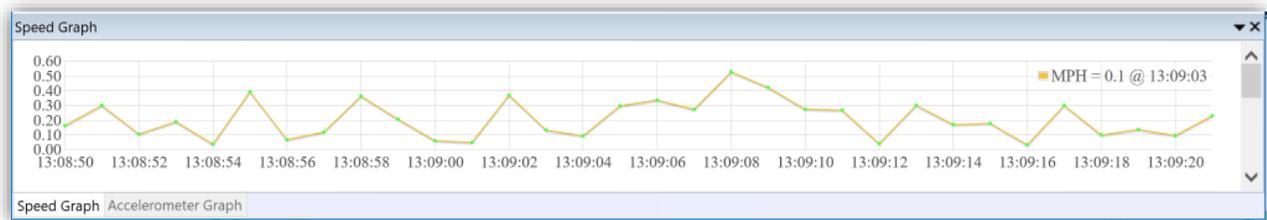


### 3.3 Speed

The Speed Viewing Pane displays the speed of the vehicle.

- The circle indicator on the graph indicates the current speed based on the time being displayed.
- “Point and click” on the circle indicator to drag it along the graph to view video at a specific speed.
- The Speed and Accelerometer viewing panes can be docked into tabbed panes by clicking and dragging the title bar over the other pane. Click and drag the tab option to un-tab and re-dock either pane.
- Speed is indicated by color on the speed graph. 0 – 25, Green; 25 – 45, blue; 45 – 55, orange; and 55 and above, red.

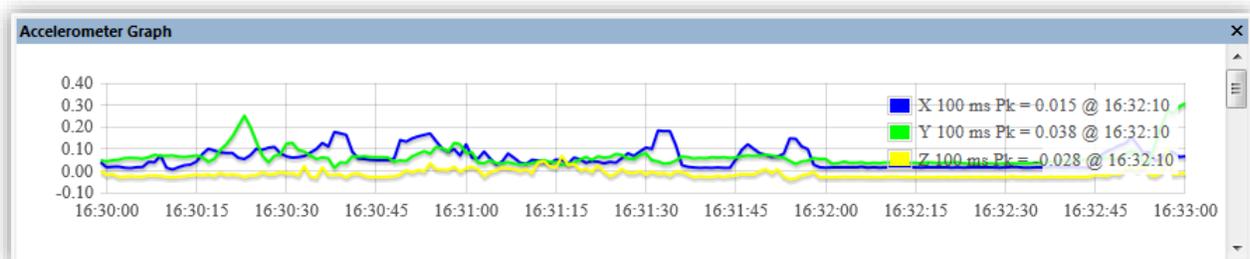
Figure 17 - Speed Graph



### 3.4 Accelerometer

The Accelerometer Graph Viewing Pane displays X, Y and Z Accelerometer values recorded in the clip. This graph will only display if there is accelerometer data in the clip.

Figure 18 - Accelerometer Graph



### 3.5 Auxiliary Data

The Auxiliary Data Viewing Pane displays metadata recorded in the clip. This graph will only display if there is metadata in the clip. The data labels will display on the left and the data will update as the video is played.

**NOTE: The visibility of the optional Auxiliary Graph Window can be toggled from the Auxiliary Graph item in the Window menu on the main viewing window.**

Figure 19 - Auxiliary Data Viewing Pane

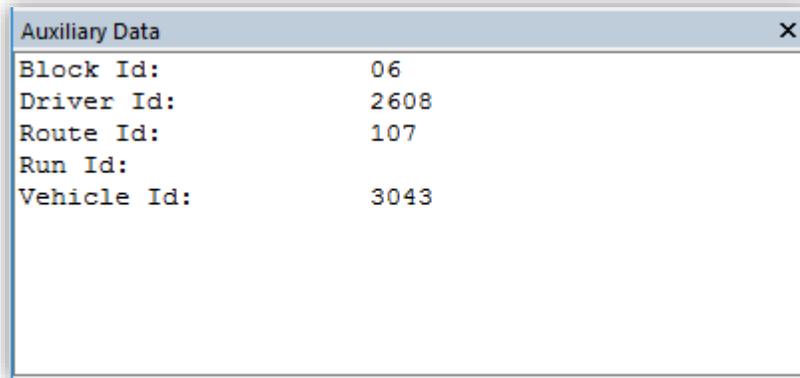


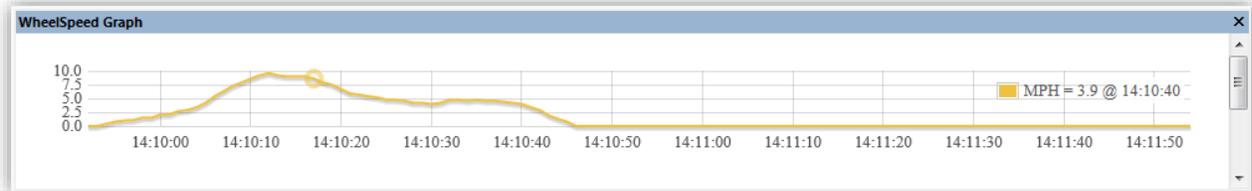
Figure 20 - Auxiliary Graphs



### 3.5.1 Strip Charts

If available, RsPlayer graphs the following data into strip charts: Wheel Speed, Dynamic Brake, Air Brake (BC Pressure and BP Pressure), Current (Load), Throttle and Reverser. Each of these graphs display a cursor which moves synchronized with video playback.

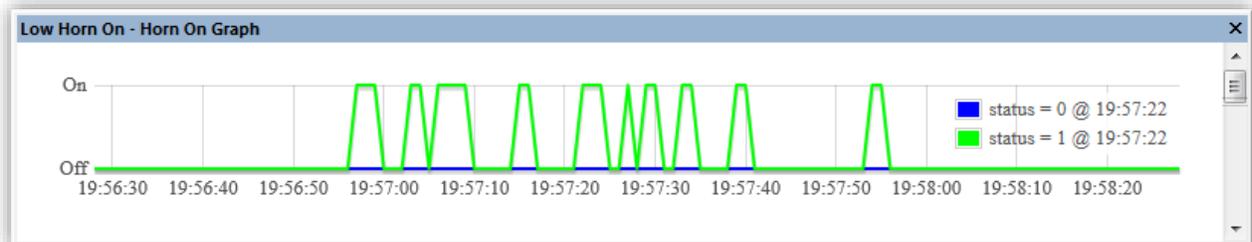
Figure 21 - Wheel Speed Strip Graph



### 3.5.2 Boolean Strip Charts

If available, RsPlayer graphs the following Boolean values into Boolean strip charts: Horn (Horn On, Low Horn On), Bell On, PCS\_Open, Engineer Initiated Emergency and Trainline Emergency. Each of these graphs displays a cursor which moves synchronized with video playback.

Figure 22 - Horn Boolean Strip Graph



**Please contact technical support at: 888-AVT-USA1 (425-483-7100) or email: [tech@apollovideo.com](mailto:tech@apollovideo.com) for further information or assistance.**

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