

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



RRD23FR001

EVENT DATA RECORDER

Specialist's Factual Report

March 22, 2023

A. ACCIDENT

Location: Camden, New Jersey
Date: October 14, 2022
Time: 2121 eastern daylight time (EDT)
Vehicle: PATCO passenger train, Train 106

B. EVENT DATA RECORDER SPECIALIST

Specialist: W. Deven Chen
National Transportation Safety Board (NTSB)
Washington, DC

C. DETAILS OF THE INVESTIGATION

The NTSB Vehicle Recorder Division received the following event data recorder (EDR) data files from the PATCO passenger train electronically:

Data File #1: LOG_1091_TDP A_RTDM_2022-10-16_21-15-28_1.csv

Data File #2: LOG_1092_TDP B_RTDM_2022-10-16_21-18-58_1.csv

1.0 Event Data Recorder Data Files Description

No details were obtained of the make and model of the event data recorder. The two data files received were both associated with Train ID: 106, and one was associated with Car ID 1091, while the other one was associated with Car ID 1092. Only the data from Car ID 1092 are discussed in this report.

The file contained data recorded from 00:00:40 EDT on October 14 to 20:55:52 EDT on October 17, 2022. The file contained series of data strings. Each string came with the description of the triggered event, the timestamp of the event, and the value of the parameter associated with the event. The data corresponding to the speed of the train, the emergency brake status, and the horn status from 21:00 EDT to 21:22 EDT on October 14, 2022, were extracted. The accident occurred around 21:21 EDT on October 14, 2022.

1.1 Parameters

Table 1 lists the parameters verified and provided in this report.

Table 1. EDR data file parameters provided.

Parameter Name (unit)	Parameter Description (unit)
Actual Speed (mph)	Speed of the train (miles per hour)
Emergency Brake from MC B-Car (discrete)	Status of the emergency brake from the master controller (0 = Off, 1 = On)
Horn Activated (discrete)	Status of the horn (0 = Off, 1 = On)

1.2 Time Correlation

The data were recorded in both Coordinated Universal Time (UTC) and EDT. The times in the report are presented in EDT, the local time of the accident.

D. FIGURES AND TABULAR DATA

Figure 1 contains data recorded from 21:02 to 21:22 on October 14, 2022. The data show that the train was travelling at 33.2 mph at 21:21:13. The operator placed the master controller into emergency brake at 21:21:15 and sounded the horn at 21:21:16. The train came to a complete stop around 21:21:22.

The corresponding tabular data used to create figure 1 are provided in electronic comma separated value (CSV) format as attachment 1 to this report.

Submitted by:

W. Deven Chen
Electrical Engineer - Recorder Specialist

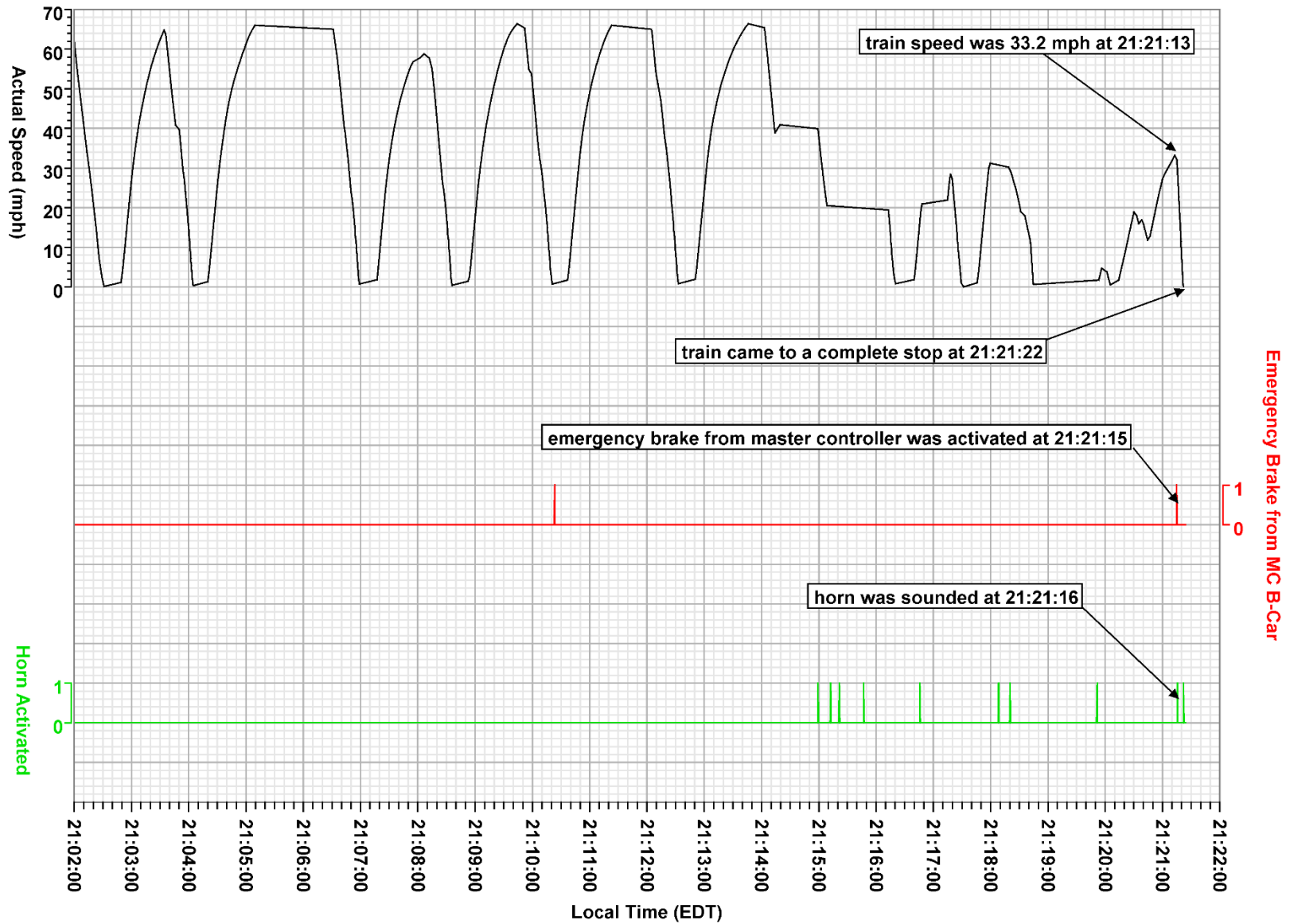


Figure 1. Plot of data parameters from 21:02 to 21:22 on October 14, 2022.