

**NATIONAL TRANSPORTATION SAFETY BOARD**  
Vehicle Recorder Division  
Washington, DC 20594

July 20, 2021

## **Onboard Image Recorder**

**Specialist's Summary Factual Report**  
**By Sean Payne**

### **1. EVENT**

Location: Destrahan, LA  
Date: January 26, 2020  
Vessel: *Cooperative Spirt*  
Flag State: United States  
Official Number: 569226  
Operator: American River Transportation Co.  
NTSB Number: DCA20FM012

### **2. GROUP**

A group was convened at National Transportation Safety Board (NTSB) headquarters on June 17, 2021. The group consisted of the following members:

Chairman: Sean Payne  
Sr. Mechanical Engineer/Investigator  
National Transportation Safety Board

Member: Michael Karr  
Investigator-In-Charge  
National Transportation Safety Board

Member: Capt. Les Ledet  
Investigator  
United States Coast Guard (USCG)

Member: Matt French  
Territory Operations Manager – Lineboats  
American River Transportation Co.

Member: Capt. Craig Creppel  
Captain  
Elite Towing

### 3. DETAILS OF INVESTIGATION

On May 21, 2021, the National Transportation Safety Board (NTSB) Vehicle Recorder Division received a request from the IIC to evaluate the following video file:

Recorder Model: Blue Box IP 8-16ch  
Filename: "CSP\_ch13\_20200126042959\_20200126062955  
Camera Throttle.mp4"

#### 3.1 VDR Carriage Requirements

Chapter V of the International Convention for the Safety of Life at Sea (SOLAS), regulation 20, specifies Voyage Data Recorder (VDR) carriage requirements. Cargo ships larger than 3,000 gross tons, and all passenger ships regardless of tonnage, must be equipped with a VDR. The vessel must need to be on an international voyage to be required to carry a VDR. The VDR for a cargo ship larger than 3,000 gross tons, constructed before July 2002, may be an Simplified VDR.

The *Cooperative Spirit* was not a cargo ship, was constructed in 1975, was less than 3,000 gross tons and was not on an international voyage, therefore the vessel was not required to be equipped with any type of VDR. The operator of this vessel elected to install an optional piece of equipment, the Blue Box IP system, discussed in the report, in place of a VDR.

#### 3.1. Recorder Description

The Blue Box IP is a recording system marketed toward the vessel installations in the marine industry. The device can be configured to record up to 16 channels of video information. This video information can consist of traditional IP style cameras, as well as capture other video inputs such as marine radar displays. The unit has an optional module that allows recording of many styles of VHF radio systems, as well as a provision to record AIS information. Another module allows recording of the vessels NMEA 0183 stream, and records GPS information.

#### 3.2. Video Files

The video was provided at a resolution of 1920 x 1080 pixels and at a frame rate of 25 frames per second (fps).

#### 3.3. Timing and Correlation

The timestamps used in this report are expressed as local time. The video filename contained a title consistent with the display of the time stamp at the start of the recording and at the end of the recording. This timing information was assumed to be true and was utilized as the authoritative time source for this report, as well as for the *Voyage Data Recorder (VDR) Audio Transcript Report – Glory First*, which can be found in the public docket for this accident.

Timing in the summary report is expressed as HH:MM:SS, where HH stands for hours, MM stands for minutes, and SS stands for seconds. The timestamp is given in local time, central standard time (CST).

### **3.4. Summary of Recording Contents**

In agreement with the Investigator-In-Charge, a group was convened, and the following summary was created by the group members.

#### **Camera Field of View:**

The camera provided a view of a portion of the wheelhouse. The camera's view is shown in figure 1. The figure is annotated to show some of the controls that are referenced in the summary.

The camera was mounted above the pilot's position. In general, the control panel was visible. The vessel's tillers for the flanking rudders and steering rudders were visible at the tiller control root (where the tillers attached to the control panel) from the camera's point of view. The camera also showed the position of each of the vessel's three engine throttles. The camera showed the rate of turn indicator (swingmeter) as well as the rudder position indicator. The needle position on the rudder position indicator's needle was not visible to the camera and therefore was not included in the summary transcription. Most buttons on the control panel were visible and are called out and defined in the text below, if necessary.

The pilot was sitting in the pilothouse chair which was in front of the control panel. The pilot house chair was only visible in the reflection area in the vessel's windscreen. In general, only the pilot's hands were visible when they were placed either on the engine controls, or forward of the engine controls. When the pilot's head was visible in the recording, it was from above and behind. The pilot was wearing a baseball cap and a Bluetooth style headset in his right ear. Otherwise, the pilot was generally not visible. It was not possible to tell from the reflection where the pilot was looking. Post processing of the video file allowed portions of the pilot to become visible in a reflection from the vessel's windscreen. To enhance the reflection, an unsharp mask was used in combination with varying crop, brightness, and contrast settings. In general, the unsharp mask was set between 400 and 500 units of intensity with a radius of about 12 units in Adobe Premiere.

The pilot's personal phone was visible on the control panel in various places during the recording. The times at which the pilot's personal phone was visible are documented in the summary transcript below.

For purposes of review, the vessel's starboard radar display was synced to the wheelhouse video. At times, the summary transcript below will describe radar images provided during the playback.

The video contained an audio track containing VHF information. At times, a hot mic recording of intra-pilothouse conversation was recorded. The circumstances of the system recording hot mic information is described in the summary transcript below, where appropriate.

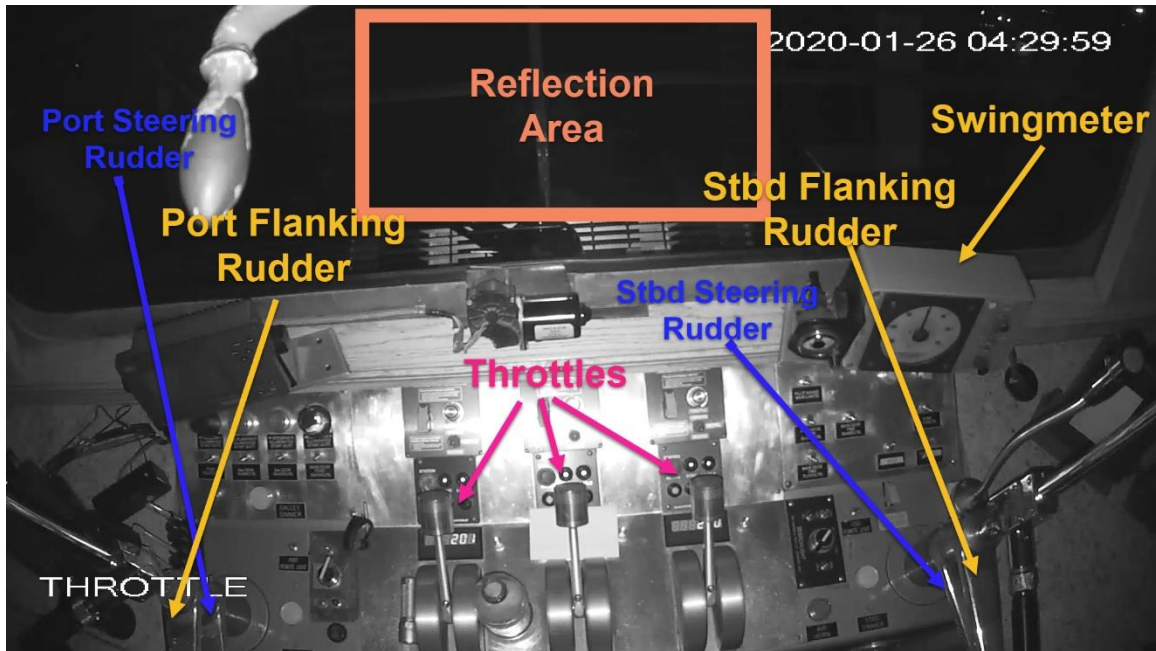


Figure 1. The field of view from the camera installed above the operator's position on the *Cooperative Spirit*. The operator's reflection is not apparent at this time.

### Summary:

**05:02:33** – The pilot was seated in the pilothouse chair facing forward. The pilot's right leg was actively moving up and down. The pilot turned on the galley lights with the galley dimmer switch. The reflection in the windshield showed an area behind the pilot was illuminated. Another crew member was visible in the reflection in the gallery area of the pilot house behind the pilot.

All three throttles were in the full ahead position. The port and starboard shaft RPM indicators showed around 200 rpms. The swingmeter showed 0 degrees per minute. The operator appeared to have an active input on the tillers. The reflection suggested the pilot was moving the starboard tiller with his right hand. His left hand was on his left thigh. The pilot's personal phone was visible on the control panel to the right of the starboard throttle sitting screen side up.

**05:03:40** – The crew member previously visible near the galley in the reflection had seated himself in an area consistent with the settee, behind the pilot. The pilot was seated in the pilothouse chair facing forward. The pilot's right leg was actively moving up and down. The throttles, the swingmeter, and tillers were as previously described.

**05:04:01** – The pilot turned the galley dimmer off. The pilot was seated in the pilothouse chair facing forward. The pilot's right leg was actively moving up and down. The throttles, the swingmeter, and tillers were as previously described.

**05:04:01 – 05:06:31** – The pilot was seated in the pilothouse chair facing forward. The pilot's right leg was actively moving. The pilot's left hand was generally near his left thigh. The tillers were actively moving, and when any significant vessel motion occurred, the swingmeter responded in accordance with the tillers at this time.

**05:06:31** – The pilot's personal phone lit up and the screen indicated an incoming phone call from "Mom Cell." The phone indicated 05:06 local time. The pilot did not interact with the phone at this time.

**05:06:54** – The pilot's personal phone indicated a missed call. The pilot did not interact with the phone. The pilot was seated in the pilothouse chair facing forward. The pilot's right leg was actively moving. The pilot's left hand was generally near his left thigh. The phone screen went dark on its own.

**05:08:31** – The pilot's personal phone lit up and the screen indicated a second notification. At this time, the starboard radar showed the head of the tow at Luling Bridge. The phone screen went dark on its own.

**05:08:47** – The reflection of the pilot's upper body indicated upper body motion. The upper body motion suggested the pilot turned his torso to the right briefly and then returned to a forward-facing position.

**05:09:00** – The reflection indicated the pilot picked up what was determined to be his personal phone (phone mentioned previously) with his right hand. The reflection indicated the pilot was manipulating an object with both hands near his lap. The steering tiller's positions indicated they were set near midship. During this time, the swingmeter had been around zero degrees per minute.

**05:09:00 – 05:09:46** – The pilot appeared to be holding an object with both hands near his lap. The pilot's fingers were visible in the vicinity of the object and were moving around the vicinity of the object. At one moment in this time interval, the tiller moved approximately 5 degrees starboard, the reflection was consistent with the pilot having had moved his right arm quickly near the starboard tiller, and then back to his lap and the object near his lap. As the tiller was moved approximately 5 degrees starboard, the swingmeter remained around 0 degrees per minute indication for about 40 seconds. At this time, the starboard radar indicated the tow was under the Luling Bridge, in a straight portion of the Mississippi River. The pilot had later increased the tiller further to starboard and the swingmeter responded slightly to starboard.

**05:09:46** – The reflection no longer displayed evidence of a device being manipulated near the pilot’s lap. The reflection showed the pilot’s right hand go upward, out of sight in the reflection, and his left hand was in a position consistent with the port tiller.

**05:10:02** – The pilot stood up from the pilothouse chair. The reflection indicated the pilot moved away from the pilothouse chair, although it was not apparent how far away from the pilothouse chair he moved.

**05:10:30** – The pilot was standing back near the pilothouse chair. The pilot placed the phone on the control panel with his left hand. The phone screen was lit but on the home screen. The phone screen did not show the phone was on a call at this time.

**05:10:45** – The pilot returned to a forward-facing seated position in the pilothouse chair.

**05:10:48** – The pilot picked the phone up and then the reflection showed the pilot holding an object with both hands near his lap. During these actions, the pilot moved the tiller back to midship. The swingmeter showed approximately 4 degrees per minute to starboard.

**05:10:57** – The pilot placed the phone on the control panel. The phone indicated “Mom Cell” and indicated a Bluetooth connection was active. The pilot’s left hand was on the port tiller around this time.

**05:12:02** – The phone screen went dark on its own.

**05:12:02** – The pilot was steering with his right hand on the starboard tiller and his left hand was in his lap.

**05:14:05** – The pilot received a VHF call from NOBRA 49. The pilot’s reflection showed him picking up the VHF ship’s radio microphone. In this installation, when the ship’s radio microphone is picked up (is raised from the cradle), a hot microphone is activated. This means that internal conversation on the *Cooperative Spirit*’s bridge is recorded when the ship’s radio microphone is picked up (is raised from the cradle), as well as VHF radio traffic, which is recorded regardless of if the unit is picked up. The pilot is heard saying first, “hang on [external conversation]” and then responds to the call from NOBRA 49. The *Cooperative Spirt* and NOBRA 49 made overtaking passing arrangements on one whistle. The VHF ship’s radio microphone was put down at 05:14:38 when the exchange with NOBRA 49 ended.

**05:14:38** – The pilot was seated in the pilothouse chair facing forward. The pilot’s right leg was actively moving up and down. The pilot’s personal phone was still on the control panel.

**05:15:27** – The pilot picked up the personal phone from the control panel.

**05:15:27 – 05:21:00** – During this time, the reflection suggested both of the pilot's hands were visible near the center of his body, in the area of his lap. At times, the reflection suggested individual fingers were visible moving in the area of his lap.

At **05:20:28**, the reflection suggested hand movement consistent with handling an object. At 05:20:40, a lighted object, consistent with a phone was visible in the center of the pilot's body, near his lap.

During this time, the pilot made some small tiller movements with his right hand on the starboard tiller. The tiller movements were consistent with steering the vessel.

**05:21:00 – 05:22:21** – During this time interval, the pilot moved his hands, and it was not conclusive if the pilot was holding an object.

**05:22:21** – At this time the *RC Creppel* announced on VHF that they were "southbound, two strung out." It was apparent that the pilot didn't have the phone in his left hand, but instead had picked up the VHF ship's radio microphone. The pilot had picked up the VHF ship's radio microphone with his left hand and responded to the *RC Creppel* with passing arrangements. The two vessels agreed to pass port to port.

**05:22:21 – 05:28:18** – During this time interval, the pilot was seated in the pilothouse chair facing forward. At various times, the pilot made steering inputs to both steering tillers with each hand. At other times, the pilot's left hand was visible near his left knee. The pilot's right hand wasn't always visible, but he had used his right hand to make steering commands to the starboard tiller during this time interval.

**05:28:40** – NOBRA 49 contacted the *RC Creppel*. The vessels made meeting passing arrangements and agreed on the one whistle.

**05:28:43** – The rudder was in the midship position. The swingmeter was indicating 0 degrees per minute.

**05:29:23** – The rudder had been moved slightly starboard. The swingmeter was around 0 degrees per minute.

**05:29:40** – The swingmeter had moved slightly port. The steering tiller was commanded slightly more starboard. The pilot was seated, his left hand was facing down in the vicinity of his left knee and his ring was visible on his ring finger. At this time, the rudder had moved to slightly starboard.

**05:30:30** – The rudder was midship. The swingmeter showed three degrees per minute to port. The starboard radar showed the *Cooperative Spirit* alongside the

fleet on the left descending bank. The *RC Creppel* was also visible in the radar image on the half mile radar range.

**05:30:41** – The rudder was slightly starboard. The swingmeter showed about 5 degrees per minute to port.

**05:30:57** – The rudder was moved more starboard. The swingmeter showed about 5 degrees per minute to port.

**05:31:00** – The pilot's left hand was visible palm down in the vicinity of his left knee and crotch. At this time, the rudder was still slightly starboard.

**05:31:27** – The steering tiller was moved in varying degrees of starboard command between 15 and 20 degrees. At this time, the swingmeter started moving from port toward 0 degrees per minute (neutral) indication. The pilot had moved his left hand near the left tiller area.

**05:31:41** – The swingmeter crossed from port to 0 degrees per minute. The rudder input was still approximately 15 to 20 degrees starboard command. The pilot had moved his left hand back to his left knee/crotch area. Moments later the pilot's left hand returned to the port tiller area.

**05:32:05** – The swingmeter continued to travel starboard, at this time around 5 degrees per minute to starboard. The steering tiller input was reduced to a lesser degree, but still to starboard.

**05:32:29** – The swingmeter showed 10 degrees per minute to starboard. The steering tiller input was still to starboard.

**05:33:04** – Other data indicated that the collision had occurred at this time.

**05:33:09** – The swingmeter displayed approximately 16 degrees per minute to starboard. The rudder input was still between approximately 15 and 20 degrees starboard. The pilot brought the throttles to idle, starting with the port-most throttle, then the center throttle and then the starboard throttle. To perform this action, the pilot's left hand became visible moving from the left tiller area toward the throttles. At the same time, the pilot's right hand was not visible in the reflection, but the starboard tiller was being actively manipulated. The RPM indications dropped after the throttle command was input. The steering tiller input was brought to the midship position.

**05:33:20** – The pilot stood up from the pilothouse chair and picked up the VHF ship's radio microphone. The reflection showed the pilot's right hand come from the vicinity of the starboard tiller. The steering tiller input was changed from neutral to approximately 10 degrees starboard. The pilot stated, "everything look alright out there 'cap?" The pilot then placed the VHF ship's radio microphone down.



**05:33:42** – The pilot turned on the console light and flipped the switch to sound the vessel’s general alarm with his right hand.

**05:33:50** – The pilot brought all three throttles to reverse. The general alarm strobe was visible.

**05:34:20** – The pilot made a VHF call to the *RC Creppel*. The audio track recorded the pilot making comments related to port string of barges separating from the rest of the tow. The pilot continued to comment, “I don’t know what he was doin’.” Another voice was heard on the bridge discussing with the pilot making a VHF call to other vessels in the fleet (the fleet’s channel, 65) to assist.

**05:35:00** – The pilot was audible on the VHF radio stating to NOBRA 49, “Over. I can’t find this boat up here in front of me. I think he’s ran up over under the head of our tow.”

**05:35:24** – The pilot commanded the throttles further astern. The captain reported over VHF that he had a collision and requested assistance.

**05:35:49** – The pilot reported to the captain that the *RC Creppel* may be under the head of his tow. The engines were being brought to idle. The port engine was brought to idle, the center engine was clutch astern, and the starboard engine was approximately full astern. Both flanking rudders were brought to port. The steering rudder input was around neutral.

**05:36:05** – The captain reported to “any vessel in the vicinity” that he had a collision over the VHF. The pilot then stated on the hot mic, “he is under the head of that tow ‘cap.” The pilot stated on the hot mic, “I think that damn boat just sank.” The pilot stated, “I don’t know what to do, do you?”

**05:36:14** – The pilot engaged the center and starboard engines in to clutch ahead, and moments later he commanded more ahead rpm to the center engine and engaged ahead to the port engine.

**05:36:40** – The pilot manipulated the port search light handle. The captain stated on the hot mic, “(do) what you can just don’t land it on that other fleet.” The pilot stated on the hot mic, “Let’s see I’m going down the river pretty fast.” The pilot then stated on the hot mic, “I mean I was right on that point he slid right across and we already talked.”

**05:36:42** – The pilot increased ahead throttle on all three engines. Moments later the pilot gave additional ahead command to all three engines.

No further summary was documented from the video or audio recording. Transcription group members viewed video, showing the throttle and tiller

movements as well as potential phone usage. No pertinent throttle and tiller usage was documented by the group. There were no phones visible in a review of the remainder of the recording. The group also listened to the remaining audio for pertinent conversations from the *Cooperative Spirit's* crew leading up to the follow-on collision between the *Cooperative Sprit* tow and the *Glory First*. No pertinent *Cooperative Spirit* bridge conversation was documented. Any pertinent VHF transmission were documented in a separate transcript for the *Glory First*, available in the public docket for this accident as *Voyage Data Recorder (VDR) Audio Transcript Report – Glory First*.