



Work Instruction - Operations	<b>HITACHI</b>
<b>LOSS OF CAB SIGNAL</b>	 <b>Hitachi Rail Honolulu JV</b>

<b>Work Description:</b> This work instruction describes the handling of loss of cab signal		
<b>Scope:</b> This work instruction is written specifically for the OCC and train operating staff of Honolulu Rail Transit.		
<b>References:</b> <ul style="list-style-type: none"> <li>HNL- 09406 AF-902 Track Circuit Failure</li> <li>HNL-09433 Vehicle ATC System (Microcab II) failure</li> <li>HNL- 09416 Handling Train Failures</li> <li>HNL-09100 Roadway Worker Protection Manual</li> </ul>		
<b>PPE and precautions</b>	<b>Competencies or qualifications</b>	<b>Licenses or permits required</b>
Nil	Train Controller, Engineering and Fault Controller, OCC Supervisor, Information Controller, Train Operator, Maintenance Team	Nil
<b>Tools and equipment required</b>		
Nil		

Handling Loss of Cab Signal	
<i>Train Controller</i>	<p>On detecting the Loss of Cab Signal alarm for a train, determine whether it is due to wayside or vehicle ATC failure:</p> <ul style="list-style-type: none"> <li>Check to see if any wayside alarm indicates the track circuit has failed causing the loss of Cab Signal</li> <li>If the Track Circuit has failed, handle the Track Circuit Failure according to HNL- 09406 AF-902 Track Circuit Failure such as moving the train out of the failed track circuit and recover the failure</li> <li>If the Track circuit has not failed, check to see if it is vehicle related failure (pick up coil, etc.) causing the loss of Cab Signal (check the “On status” in the “Train Detail” ATC menu to identify that the train is reporting Loss of Cab Signal)</li> </ul>
	<div>  <div> <b>Note</b> <p><i>If the “On Status” is not reporting a Loss of Cab Signal, the Train Controller must attempt to identify the reason why the train is not moving by following HNL-09433 Vehicle ATC System (Microcab II) failure or HNL- 09416 Handling train failures</i></p> <p><i>In some cases, a temporary loss of Cab Signal may occur due to a temporary loss of communications and the train will continue without intervention by the Train Controller.</i></p> </div> </div>
	<ul style="list-style-type: none"> <li>If the Cab Signal does not automatically recover after 30 seconds, activate the “Search for Next Frequency” command via the ATS Data Radio Menu</li> <li>If the “Search for Next Frequency” does not recover a Cab Signal: <ul style="list-style-type: none"> <li>Tell all OCC operating staff of the failure</li> <li>Check that there is no condition that impedes the use of Limited Radio Release command</li> <li>Confirm that the train is required to move in the original direction of travel</li> </ul> </li> </ul>
	<div>  <div> <b>Warning</b> <p><i>The Limited Radio Release command is intended as immediate recovery from loss of cab signal without personnel onsite. This command is a part of the ATS Radio Control command to move a stranded (and unattended) train in the original direction of travel towards the next station platform at 3mph to recover from the loss of Cab Signal. For each attempt of executing this command, it will move a train:</i></p> <ul style="list-style-type: none"> <li><i>No more than 33 feet (10m) and</i></li> <li><i>No longer than 10 seconds</i></li> </ul> </div> </div>

<b>Approved By:</b>	<input type="checkbox"/> Director, Operations and Maintenance	<input type="checkbox"/> Department Manager	<input type="checkbox"/> Manager, HSE (Operations and Maintenance)
<b>Signature:</b>			
<b>Date:</b>			

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## LOSS OF CAB SIGNAL

**Warning**

While the Limited Radio Release command is being executed, the train will not be protected by a Cab Signal and will not stop short of any obstruction such as an incorrectly positioned switch, another train, the end of the track or a Work zone. Therefore, the Train Controller must identify whether any such condition exists causing a hazard. If so, this command shall NOT be used.

**Note**

The train for which the Limited Radio Release command is activated on, will move forward in the original direction of travel at 3mph for 33 feet or 10 seconds and will come to a stop.

**Warning**

In the following situations the Limited Radio Release shall **NOT** be used:

- The concerned train is at terminal station
- The route to next station cannot be set, or
- One or more switches along the route cannot be blocked, or
- There is a train along the route, or
- The Train must be moved in the opposite direction, or
- The train lost orientation, or
- Any other obstacle is present on the route

- If there is **NO** condition preventing the use of Limited Radio Release, then:
  - Set a route for the train to the next station
  - If a route cannot be set, tell the Engineering and Fault Controller to arrange maintenance team to set, and block all switches between the train and the next station - block/clamp all switches as applicable or apply appropriate protections. Protect the maintenance team fouling the track and/or establishing a work block limit following the HNL-09100 Roadway Worker Protection Manual
  - If required, wait until the maintenance team has returned to the station then activate the "Limited Radio Release" command via the ATS Radio Control
- If the Cab Signal is recovered, the train can continue in AUTO or ATP Modes without further intervention from the Train Controller
- If the train does not recover Cab Signal after one attempt, or if there is at least one condition preventing the use of Limited Radio Release, then:
  - Report the situation to the OCC Supervisor
  - Dispatch a Train Operator to access the train
  - If the train is in between stations, protect the Train Operator fouling the track following the HNL-09100 Roadway Worker Protection Manual
  - Ensure a safe path ahead of the train to the next station then authorize the Train Operator to operate the train in ATP STOP & PROCEED mode to berth at the next station platform for passenger detrainment
  - If the train still does not recover Cab Signal, seek OCC Supervisor authorization to remove the train from revenue service then on OCC Supervisor's authorization, authorize the Train Operator to operate the train in ATP STOP & PROCEED mode to the Yard.
- Log the event in the Train Controller Log

Engineering & Fault  
Controller

You must:

- On request from the Train Controller, arrange a maintenance team to the site to secure and block/clamp the switch(es) required
- On request from the Train Controller, arrange a maintenance team to the site to remove all previously applied point clamps, and locks on switches

OCC Supervisor

You must:

- Once informed of a Loss of Cab Signal not recoverable by the command "Search for Next Frequency", instruct the Information Controller to make public announcement to the affected trains and stations regarding service delay

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<i>Information Controller</i>	<ul style="list-style-type: none"> <li>Follow the fault recovering progress closely</li> <li>If the use of Limited Radio Release command cannot recover the Cab Signal, authorize the removal of the train from revenue service</li> <li>Instruct the Information Controller to make regular public announcements on service delays to trains and stations affected</li> <li>Based on the confirmation/recommendation from the Engineering &amp; Fault Controller and the maintenance team, instruct the Train Controller to resume normal train service and instruct the Information Controller to make public announcements on service resumptions to trains and stations</li> <li>Log the event in the OCC Supervisor Daily Report</li> </ul>
	<p>You must:</p> <ul style="list-style-type: none"> <li>On instructions from the OCC Supervisor: <ul style="list-style-type: none"> <li>Make public broadcast announcements on service delays to trains and stations affected</li> <li>Make regular announcements to update trains and stations affected</li> <li>Monitor crowd conditions on affected platforms</li> <li>Make public announcements on resumption of normal train service to trains and stations</li> </ul> </li> <li>Log the event in the Information Controller Log</li> </ul>
	<p>You must:</p> <ul style="list-style-type: none"> <li>Coordinate with the Train Controller to establish the required protection measures for on-track protection following the HNL-09100 Roadway Worker Protection Manual – before and during the fouling of the track and/or the need to establish a work block limit if the emergency track possession is required for securing/blocking/clamping the required switches</li> <li>Block/clamp the switch(es) as applicable or apply appropriate protections</li> <li>If a restriction has been applied, handle the restriction in accordance with the procedure HNL-09404 Equipment Out of Service/Restrictive Service.</li> <li>Once the problem is solved, update and close the associated work order with all relevant details. Work order updates will be supporting documents for the removal of the restriction.</li> </ul>
<i>Train Operator</i>	<p>You must:</p> <ul style="list-style-type: none"> <li>Coordinate with the Train Controller to establish the required protection measures for on-track protection following the HNL-09100 Roadway Worker Protection Manual – before and during the fouling of the track to reach and access the train safely</li> <li>Operate the train in the Train Operating Mode specified by the Train Controller to reach the station platform for detrainment and to remove the train from service.</li> </ul>