

TRAIN DRIVING MODES

Work description: Setting Trains in different modes

Scope: The purpose of this document is to describe the different train driving modes.

References:

HNL-09547 Manual Train Operation

PPE and precautions

Nil

Competencies or qualifications

Train Attendant

Licenses or permits required

Train Driver

Tools and equipment required

Train Key

Train Driving Modes

The trains have three modes of operation plus a “bypass mode”:

- AUTO: Train operation is under fully automatic driving mode.
- ATO/ATP: Train movement is under fully automatic driving mode with the exclusion of the door closing and release command which has to be performed by the Train Driver.
- ATP Manual: The train is driven manually with under ATP protection.
 - ATP Stop and Proceed: Stop and Proceed is a special command to be activated by the Driver with the train in ATP mode
- BYPASS: The train is driven manually without the ATP protection.

Train Attendant



Note

If the Train Attendant cannot get the train into the intended driving mode, he/she must inform the Train Controller/Yard Controller. When authorized by the OCC, he/she can try changing to another driving mode. When the train has correctly arrived at the other driving mode, it can then be changed back to the intended driving mode. If this is not successful, this must be reported to the Train Controller/Yard Controller for further instructions. For details in driving trains manually, please refer to HNL-09547 Manual Train Operation.



Warning

*All changes in the train's driving mode must be made while the train is at a standstill with brakes activated. **Changes must NOT be made to the train's driving mode while the train is in motion.***

Auto Driving Mode

Auto Mode

This driving mode is the normal driving mode for passenger service.

- to stop a train driving in AUTO drive mode, activate the emergency push-button on the Emergency Drive Console

Manual Driving Modes

For detailed instruction for driving trains manually, please refer to HNL-09547 Manual Train Operation.

Approved By:

☐ Director, Operations and Maintenance

☐ Department Manager

☐ Manager, HSE (Operations and Maintenance)

Signature:

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ATO / ATP

The ATO/ATP driving mode is not a normal mode for passenger service but can be used during degraded or emergency situations.

Train motion is automatic, but train doors closing, and releasing are handled by the driver (Train Attendant) through the Emergency Drive Console. The train driver must remain at the open driver panel at all times to prevent passenger access to control of the train.



Note

To ensure that the train will follow the programmed schedule of the ATS, the train driver must wait for "DWELL EXPIRED" indication to light up before closing the doors.

ATP Manual

The ATP driving mode is not a normal mode for passenger service but can be used during degraded or emergency situations, e.g. train evacuations or removal of faulty trains.

In addition to the train doors closing and release, the train driver (Train Attendant) controls train movement and speed by means of the Master Controller on the Emergency Drive Console. The ATC panel will beep if the train driver exceeds the speed limit imposed by the ATP system. The train driver has 2 seconds to slow the train to a speed below the limit. Otherwise, the train will automatically be brought to a halt with an emergency brake.

ATP Stop and Proceed

Stop and Proceed is a special command when the train is operating in ATP mode and can be used to avoid stranding the train due to a loss of valid speed limit data from a track circuit (e.g. track circuit failure). This function vitally limits the train speed so that it does not exceed 10 mph while the speed commands received by the ATP are zero for both line and target speed or no cab present at all.

During train movement, while in the stop-and-proceed command, the train is continuously searching for the track circuit frequency. During Stop and Proceed command, the movement of the train is maintained until one of the following events occurs:

- A valid speed code (other than 0 mph) is received through the track circuit.
- Over speed is detected.
- The train driver uses the joystick to stop the movement.
- The ATP fails or loses power.

Bypass

The bypass driving mode is not normally used for passenger operations due to lack of ATP protection. It may be solely used in limited emergency operations as directed by and closely coordinated with the Train Controller. Extreme caution must be observed when driving a train in bypass mode.

The BYPASS driving mode may only be used to drive a train when ATP driving mode is not possible.

The driver fully controls and is fully responsible for the operation of the train. The train is provided with a traction control that avoids driving faster than 10 mph.

It is therefore recommended that the traction should always be applied during up-hill movement on the ramps.

Work Instruction - Operations	
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Off Position	<p>It is used on trains which have been stopped for short- or long-term maintenance. The train can be switched on using battery current or by means of collector shoes in contact with energized third rail. All the train's systems will be on, with the exception of the ventilation system and interior lighting (although the emergency lights will be on). The train cannot be driven manually or automatically until the Train Mode Switch has been turned to an operational driving mode.</p>
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