



Driving on Harlon: The Official Guide

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Introduction

Harlon boasts an extensive transit network featuring metro, buses, trams, and heavy rail, handling many trains on a day-to-day basis. To ensure the safety and comfort of passengers and railway personnel, and to improve network efficiency, the network features a selection of trackside signage, disciplines, and rules that all train drivers must take knowledge of.

1. Signage

1.1. Trackside signage



Speed sign

The front of the train must pass this sign with the corresponding speed, as displayed in the white circle. If a black arrow on a white background is displayed, the limit applies to the diverging track in that direction.



Warning sign

The warning sign displays the braking distance between the train and the next (mandatory) speed sign. When the front of the train passes this sign, the driver must start braking at not less than throttle B2 to ensure timely braking.



Platform indication sign

Indication of the approach to a passenger platform within braking distance. This sign is not valid for freight trains and loose locomotives, and special trains such as maintenance vehicles.



Numbered train length sign

Commonly known as the stop marker sign, the numbered train length sign indicates the place where the front of the train, consisting of at most the number of rail vehicles indicated by the number, must stop for proper service.



Train length sign

Indication of the place where the front of the train must stop for proper service. If no number is indicated, or all previous numbers are lower than the consist of this train, the train must stop here.



Whistle sign

Drivers must blow the whistle (horn) in accordance with a "long, moderate tone" when the front of the train passes this sign. Repeated whistling and high-low (in trains with a multitone whistle) whistling is prohibited.



Stopping board

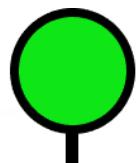
Stop before the board. After contacting and receiving permission from the official listed on the sign, you may pass the board. This sign is used in a *Not Centralised Traffic Controlled Area* (NCTCA), in which there are no signals.



Arrow sign

Indicates for which track the corresponding sign order is meant. This sign is placed on the post of another sign. Used in places where two or more tracks run parallel. Two interconnected arrows indicate the sign is meant for both tracks.

1.2. Main signals and signal beacons



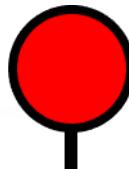
Green main signal

Passing is permitted at the local speed. If the local speed is unknown upon departure, driving is permitted at a speed of no more than 40 kilometres per hour, until having fully passed a speed sign permitting a higher maximum speed.



Yellow main signal

Limit speed to 40 kilometres per hour or lower, to stop for a potential subsequent red main signal.



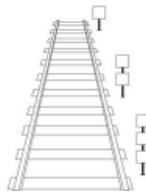
Red main signal

Stop before the signal, passing is prohibited. Red always means “STOP”.



White main signal

Signal disabled by network operator. Passing is permitted whilst following the order of the preceding main signal yellow or green. Within depots, NCTCA, and sidings, this signal may be passed with the locally permitted speed.



Reflector beacons

Indication of an approaching main signal, used in route sections where the permitted line speed exceeds 40 kilometres per hour. These beacons are used to inform drivers of an approaching main signal when visibility is limited due to adverse weather conditions.



Signal code board

Indicates the operational code of the corresponding signal. This board is placed on the post of a signal.



Two-digit signal code board

Indicates the operational code of the corresponding signal. This board is used in signal areas with more than 9 unique signal codes. This board is placed on the post of a signal.

2. Operational disciplines and driving with safety systems

2.1. Operational disciplines

Drivers must always take into account the following operational disciplines:

- Drivers must stop at all scheduled station stops according to the service timetable. Deliberately and/or repeatedly skipping scheduled station stops is not allowed and will lead to major consequences, including not receiving payment or being permanently suspended from driving.
- Drivers must follow instructions and respond to an on-duty signaller at all times. Repeatedly failing to follow the instructions given by a signaller, or not responding to calls made by them, will cause you to be suspended from driving.
- Deliberately attempting to exceed speed limits or break safety systems is, while difficult to do, strictly prohibited. If a network official takes notice of you not following trackside signage and signals properly, they may give you a warning and/or suspend you from driving.
- ATS-P does not directly enforce speed restrictions given by yellow and red signal aspects. Because of this, it is the driver's full responsibility to acknowledge these signal aspects and respond according to regulations. Failing to do so may lead to being suspended from driving.
- Remain respectful during communication with signallers and network enforcement. At the start of calling a signaller, always identify yourself, your current location and the reason for your call: "This is HN R21 towards Harlon Southpoint standing at red signal RBT5. I am requesting clearance to continue driving."
- If no signaller is on-duty, drivers may pass red signals with caution, consistently informing other drivers about their current location. This ONLY applies when no signaller is present and the driver has already attempted to establish a connection.
- If a driver receives an alarm call from a signaller, they must immediately come to a full stop using the Emergency Brake, before the reason for the call is even stated. Delaying the use of the Emergency Brake in this situation is not permitted.
- Reversing (by using switchback) as a driver and driving in the backwards direction is NOT permitted unless explicitly told to do so by an on-duty signaller.
- When reaching their scheduled terminus station, drivers may not enter the opposite cab and drive the same train back. You must always leave the train and press the "*Finish Shift*" button on the platform.
- Do not be stopped at a station for longer than 1 minute, unless the signal aspect is not clear and there is a signaller on-duty. Does not apply to freight.
- You must be stopped at a station for at least 5 seconds. Does not apply to freight.

2.2. Driving with safety systems

Driving with UTS & ATS-P Interventions

UTS Introduction

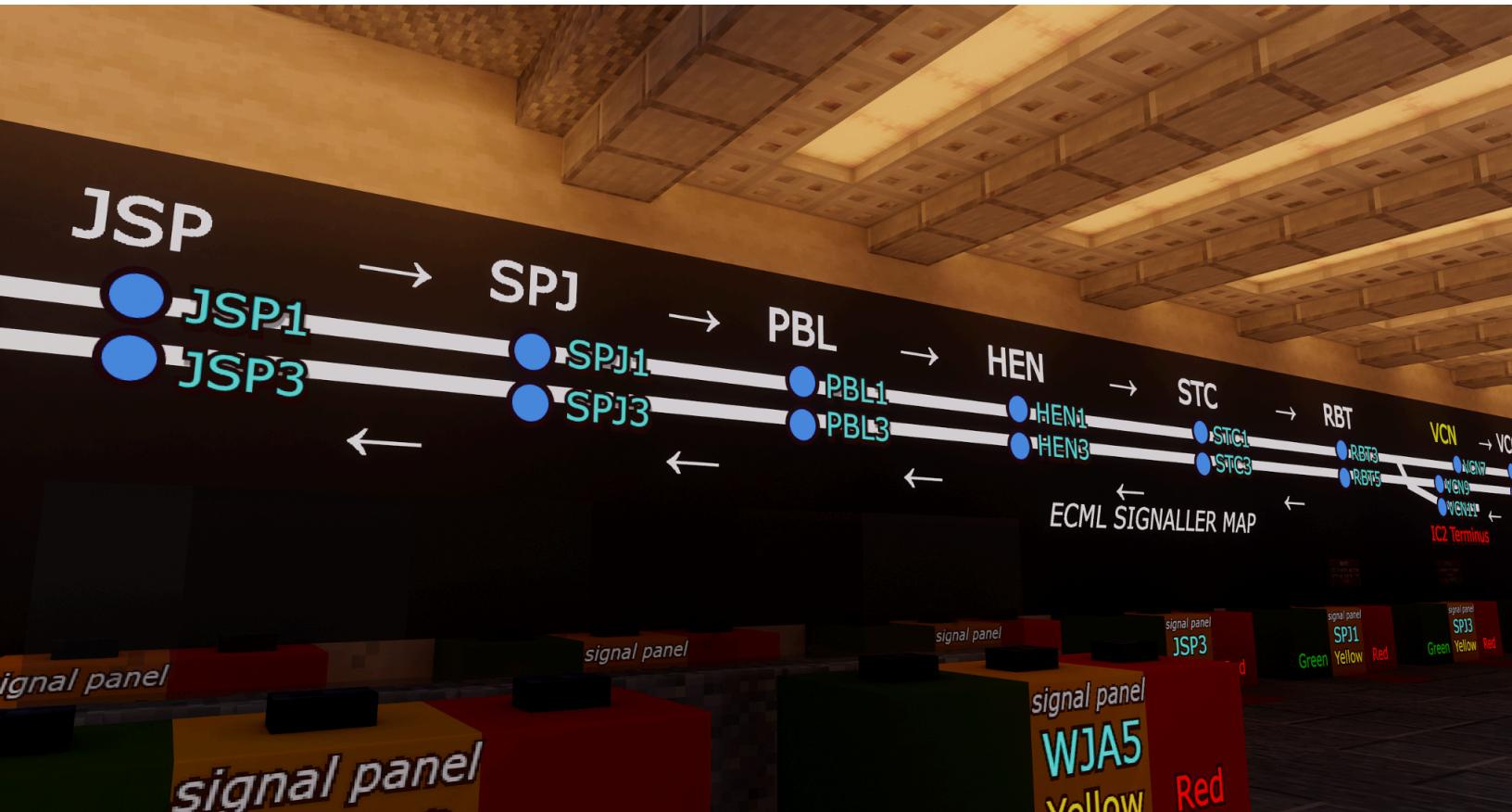
UTS is the primary safety system used on the Harlonian Railways, the system operates with beacons between the rails sending speed limit information to your train. These beacons are placed at warning signs and speed signs. When passing a warning sign, UTS will display a speed restriction warning in the driver's cab for the corresponding speed displayed on the warning sign. The driver must respond to this by starting to brake at not less than throttle B2 to ensure reaching the restricted speed before the next speed sign. When passing the next speed sign, ATS-P will immediately start enforcing the corresponding speed, if the driver has not slowed down in time, ATS-P will perform a braking intervention.



ATS-P Interventions: how they work & how to respond

Drivers must obey trackside signage, signals and speed limits at all times. While UTS, by itself, is designed to alert the driver of current and approaching speed limits, it does not directly enforce them. Because human error can occur at times, ATS-P (Automatic Train Stop Pattern Renewal Transponder) is a JR-inspired system designed to correct errors the driver may make while operating the train. ATS-P reads the maximum permitted speed from UTS and consistently monitors the train's current speed. When a driver hits the maximum permitted speed, the cab will display the message "ATS-P Pattern Approaching". This message means you must not gain any more speed or ATS-P will intervene. If you exceed the permitted line speed by 3 km/h or more, (e.g. driving 83 km/h in an 80 km/h section) ATS-P will start a Brake Run, initiating an Emergency Brake which overrides the cab controls. When the train has reached the permitted speed again, the ATS-P Brake Run can be released by setting the Throttle to Neutral. Excess speed violations will cause ATS-P to shut down your train completely, you must restart your service in this case.

Note: beyond this point is the signaller handbook. Drivers are not required to know this information. If you wish to become a signaller, you must fully read through this before starting signaller training.



3. Signalling operations

The signaller has the responsibility to safely guide all train traffic to its destination, and to undertake appropriate and swift safety measures during incidents. To ensure this heavy task runs smoothly, this handbook features the procedures and disciplines which all signallers must know and follow.

3.1. Station codes

Signallers must take note of the following station codes for a safe and smooth operation:

***Please note Mainline station codes differentiate from HT station codes.** Mainline operational areas do not fully align with regional borders. Drivers are not expected to know station codes.

East Coast Mainline (ECML) Station Codes:

- Harlon Southpoint (HSP)
- Johnson Park (JSP)
- Seaporte Junction (SPJ)
- Pont-Blanc (PBL)
- Hennebont Marsh (HEN)
- St. Charles-on-the-Sea (STC)
- Rabat Junction (RBT)
- Victoria North (VCN)
- Victoria Observatory (VCO)
- West Jaffa (WJA)

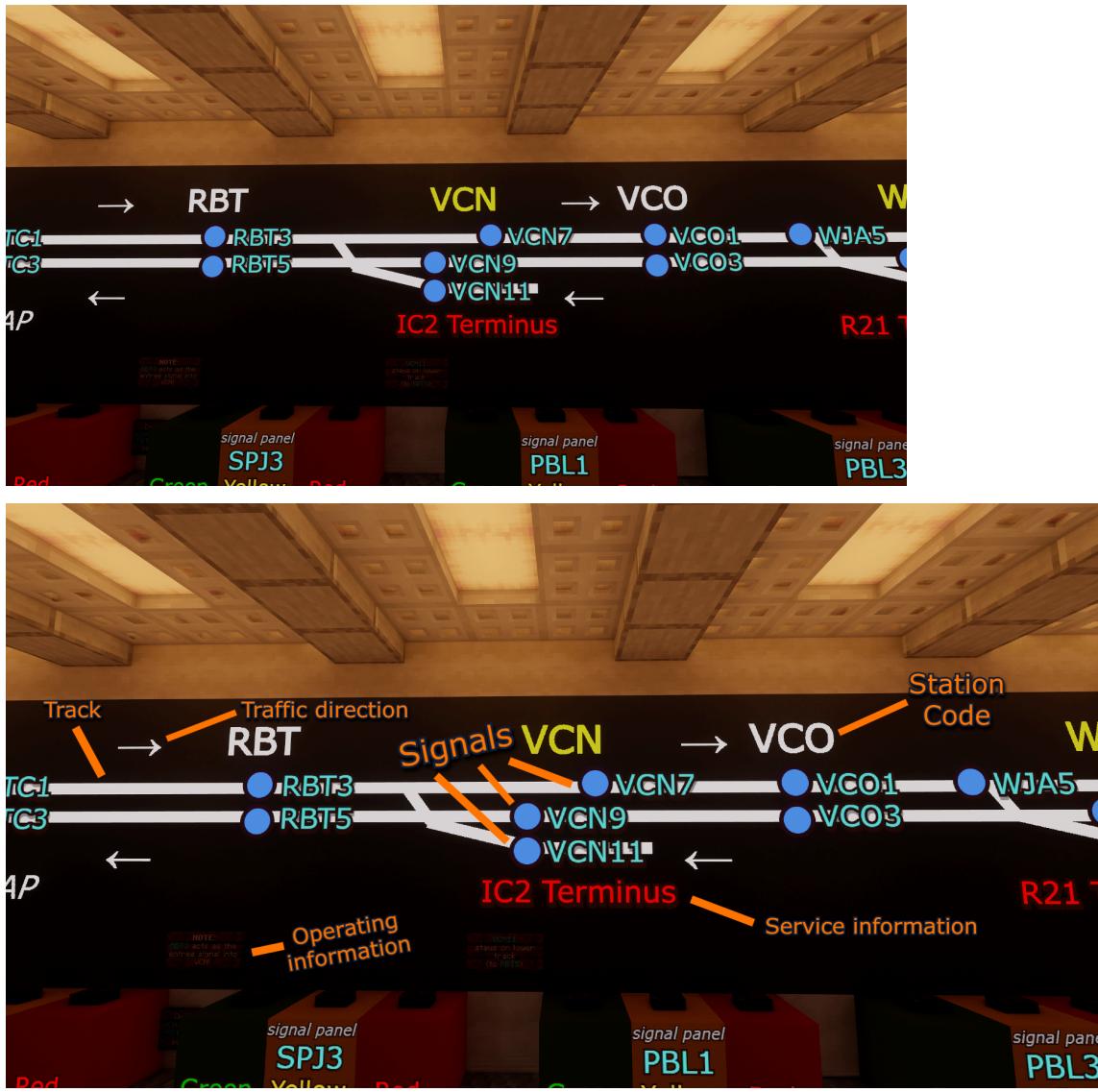
Capital Region Mainline (CRML) Station Codes:

- Harlon Capital (HCA)
- Harlon Eastside (HEA)
- Harlon Expo (HXP)
- Sergels Square (SES)
- Elstree Junction (ELS)

Tryon Mainline (TRML) Station Codes:

- Harlon Airport (HAR)
- Tryon Junction (TRY)
- Eastaros Central (EAS)

3.2. Signalling panel



The signaller map displays core information about the corresponding signalling area, including stations, tracks, signal locations and service pattern information. This helps the signaller guide train traffic as efficiently as possible. The signaller must always take all the information displayed on the map into account when performing their duties.



The signaller panels are used by the signaller to control signals within a signaller area, each signal has its own panel (as displayed in the photo above) with a Green, Yellow, and Red toggle. The coloured block on the floor in front of each panel indicates the current signal state. (example, the panels displayed in the picture are all set to Red) When pressing a toggle, the signal will change to the corresponding colour. If the coloured block on the floor does not change when pressing a different toggle, the signal is currently outside of simulation distance, meaning the signaller has to wait for a train to come closer to it so the location gets rendered. When the coloured block on the floor changes, it means the signal was successfully toggled to the corresponding colour. All signals will automatically fall back to red when a train passes over them, meaning, if the coloured block on the floor changes to red without the signaller pressing the Red toggle, a train has just passed the signal.



3.3. Starting/ending signalling shift and alarm calls

Starting shift

At the start of every shift, the signaller must press the (pictured above) “*Start shift*” button to activate the signaller panel. They will receive confirmation the signaller panel has been activated, after which they may start their shift. It is extremely important there are NO trains in the entire signaller area when this happens! The signaller must confirm there are no trains present on the entire route when activating or deactivating the signaller panel!

Ending shift

When ending a shift, several steps have to be undertaken before the “*End shift*” button may be pressed. First, the signaller must request all drivers to not spawn new trains and wait until the entire route is clear. When this is done, the signaller must set ALL signals on the route to the Red aspect. If this has been done and double checked, you may press the “*End shift*” button. You will first receive a message asking you to double check if you have set all signals to Red, when you have confirmed this, you may press the button again which will deactivate the signaller panel. When you receive confirmation the panel has been deactivated, you may leave and your shift has ended.

Alarm call

As pictured in the photo above, the signaller has an “*Alarm Call*” option. Pressing this button sends an emergency alert to all trains and plays an audible alarm sound for both the signaller and all drivers. This will force all trains within the signaller area to immediately stop. Using this feature is ONLY permitted during impending critical safety incidents, such as two trains being within the same block due to a SPAD (Signal Passed At Danger) or signalling error. Issuing these calls will always prompt a staff investigation into the validity of the call. If you are found to have misused this feature, you may be suspended from signalling.

3.4. Signalling disciplines

To ensure a smooth and safe operation, all signallers have to strictly take note of and always follow the following disciplines:

- When setting a certain signal to Green, the subsequent (next) signal must be set to at least Yellow too. A train may never pass a Green and approach a Red immediately afterwards, before Red must always come Yellow first. If you cannot set the next signal to Yellow yet because it is not yet in simulation distance, you must wait for the train to come closer and set it to Yellow before the train passes it. Not following this procedure may lead to permanent suspension from signalling.
- Signallers pose as a leading example of proper call discipline. As a signaller, you must follow professional call discipline at all times. When calling or receiving a call, you must: state your function, state which train the call is directed towards and state your reason for calling. The following is an example of proper call discipline: “This is Victoria North ECML Signaller speaking, I am calling HN R21 standing outside Harlon Southpoint in front of Red signal HSP6. You will receive clearance once a departing train has left the area.”

- Do not communicate to drivers using station codes, as they are not expected to know these. Use full station names, e.g: during communication, say Hennebont Marsh instead of HEN.
- In the case of a driver having performed a SPAD, (Signal Passed At Danger) the signaller may use the Alarm Call feature forcing all trains to perform an Emergency Stop. If the SPADed train ignores the Alarm Call and keeps driving, the signaller must inform staff about this train, the driver will then be permanently suspended from driving. Because staff often cannot be instantly available, you are asked to ignore this train until they are suspended. If an incident occurs because of this, the driver is held fully accountable.
- Drivers are expected to know proper call discipline, if they repeatedly communicate using flawed call discipline, you may instruct them to follow call discipline and rephrase their message.
- Unlike HT, within Mainline procedures, up to two signallers may be on-duty within one signaller area at the same time. You must efficiently divide tasks and communicate to ensure you do not perform conflicting actions, which may cause incidents. Despite up to two signallers being allowed, in the case of one signaller already being present and a second one requesting to join, the already-present signaller may deny the second signaller entry.
- You may never toggle a Green or Yellow signal back to Red, unless not doing so would cause an imminent incident or the train in front of the signal has despawned.