

# Openbve Central Line Manual

## Installation instructions

To begin with ensure that you have installed and are running the most recent version of Openbve. Download it from [openbve-project.net](http://openbve-project.net) and follow the installation instructions.

Next download the 1992 tube stock train and route file. Either extract the contents of the files, or unzip the files and manually place the contents in to the correct file directory.

Depending on where you installed Openbve, the files need to go in: Openbve/UserData/Legacy/Content..

The files are already correctly named, however you may need to create a folder called Train. This is where the 1992 tube stock should be placed.

***To anyone using Linux or Mac, it is highly likely that the train and route will not function properly. This is mainly due to the inefficient older plugin that the 1992 stock currently uses. When the train is updated soon the new plugin should resolve this issue.***

## The 1992 stock train

Your rolling stock on the line will be the 8 car 1992 stock train, capable of speeds of 62mph or as the speed readout states 100KPH. This train is not like the current LUL rolling stock available for BVE. It has been programmed and designed to behave like the real train. This route and train are from the year 2002 and as such have been designed that way.

Please do not try loading this on any other bve route, you would only be able to drive the train in Restricted Manual rather like life...

## Driving the 1992 stock

This 1992 stock train features mutiple methods of driving:

**Restricted Manual:** In this mode the train can be driven forwards or backwards, ATP is disabled and the motor will not exceed 14KPH. (After contacting the line controller use this in the event you lose code, and continue moving forward until you pick up the code from the next block marker.)

**Coded Manual:** This is the normal way to drive manually. ATP is enabled and the train will be limited to the **Target speeds** picked up by the ATP. In this mode you receive audible chimes to tell you when to slow down and speed up. (Note do not use the chimes as a guide of when to brake or you will most certainly overrun!) In order to prevent speeding the 1992 stock train features an overspeed of 5kph. Unofficially you can drive faster than the **target**

speed but only by 5 and then you get checked down. It is advisable not to as this can also cause an overrun!

If you also remember in the briefing at Hainault I said that the 1992 stock trains have two modes of braking, **ATO** and **CM**.

**ATO** is 100%, and **CM** is only 85%. When driving manually remember that you need to brake considerably earlier. However do also remember that when entering or exiting sidings, to switch to coded manual.

It is always useful to remember the braking and motoring arcs of the TBC. P1 to P3 being Shunt to Parallel motoring, N being coast, and in the sake of this route Stow for ATO.

B1 to B3 minimum to maximum braking, B4 does nothing in manual, it is only the ATO that uses it. Unfortunately due to bve limitations you can't make it invisible.

Button 1, or taking the the TBC out of stow is the **emergency stop** but try not to need it.

**ATO**: This is by far the most easiest way to drive the 1992 stock, and it is little wonder why most drivers prefer it. In **ATO** mode all you need to do is open and close the doors at stations, and then press the two start buttons for 3 seconds. The train will then drive to the next station and you don't have to do anything until arriving at the next **PAC** loop (stop marker).

Whatever you do don't take the TBC out of stow when the train is in motion, even knocking it accidentally will cause an emergency

brake application! This is useful for one unders but when the service is running smoothly don't do it. However... in the event this should happen, simply reset the trains round circuit by applying full brake, put it back in to the N position, and then press start again to resume your journey.

## Countdown to Departure

The 1992 stock train features a countdown to departure display below the pilot, and red auxiliary lights. This is used to tell the driver when to depart the station.

At present it is still something of a work in progress, however a basic countdown is functioning.

You will now no longer need to refer to F10, and can instead use this to tell you when to depart a station.

## Controls

The ingame controls are as follows unless you have changed any:

ATO start - press and hold 5 and 8 simultaneously for a few seconds.

PA - press 4 to make a pa, and again to turn it off.

Reverser switch - F and V (Reverse can only be used in Restricted manual mode!)

Mode selection - Page Up and Page Down

Whistle – Enter

6 – Cab air con on/off (Cab must be turned on)

7 – Cab light. (Will only work when a driving mode has been selected).

Delete – Insert/ remove RKL 220 key.

Spacebar - Twist TBC handle. (In order to drive the train manually you need to twist the handle so it can be moved backwards or forwards. Please ensure you are in either B3 or B4 before twisting the handle, otherwise nothing will happen.

Left and right side door buttons - F5 and F6 (Press either 5 for left, or 6 for the right, this opens or closes the passenger doors).

Motoring and Braking - Z and Q/ whichever you have set to accelerate and brake.

Just like any other bve train use Z and Q to brake and accelerate. Pressing Z and Q whilst in ATO will take the TBC out of stow and cause an emergency brake application.

Emergency Brake - 1

## Signalling

The Central Line predominantly uses white marker boards with a red line across it as standard signals. Due to engineer trains, and the ability to drive manually the line also features conventional colour light signals, these are found at the start of the stations, or sometimes in between longer sections.

Green - Clear signals and code you are clear to proceed in either ATO or CM.

White - Proceed but train ahead, this will usually be accompanied by a slower than usual target speed which will increase as the train

in front gets further away.

## Red - Stop

The Block markers behave like the signals with some being designated Automatic, and some being semi automatic. The **target speed** will tell you what the signal is saying. If it is 0 then the block ahead is on red, if it is on 65 or whatever the line speed is in the area it is clear.

Always remember that when braking for a slower **target speed** you don't actually have to be at that **target speed** until you get to the marker. If however you don't brake in time, you will get checked down by the ATP. This is known as a Speed Trip Event.

The only other type of signal on the line in this demo, is the **shunt signal** at the end of the Liverpool St Eastbound platform. When it illuminates you are clear to depart, when it is off consider it a Red aspect. When it clears Simply follow the **target speed** from this point.

## Driving Tutorial WHC - SHB

The train has since been enhanced to make the experience yet even more realistic.

To begin with switch the cab on by pressing Delete to Insert your RKL key. Next switch the train to **Restricted Manual** by pressing Page down; the cab light will extinguish if the cab light is set to off, and the CCTV and Speedo should now illuminate. As before press it once more for **CM**, or another for **ATO**. Or if you want to switch

back to **RM** switch it back by pressing Page Up.

If in **ATO**, first make sure the brake is set to N, and after confirming a **blue** pilot light above the cctv, press and hold down the two start buttons for 3 seconds. These are 5 and 8.

If driving in **Coded Manual**:

Providing you have a **pilot light** and a **Target Speed** of **35kph** then depart in full motoring.

Provided that the chimes sound and **Train Speed** steps up to **50kph** continue motoring.

At the tunnel mouth select coast.

When the chimes sound and **TS** steps down apply the standard braking technique to reduce train speed to between **30** to **35kph**, then select coast.

When necessary apply a light brake to limit speed between **30** and **35kph**.

When the chimes sound and the **Target Speed** steps down apply the standard braking technique to reduce train speed to **25kph**.

When the train speed has reached **25kph** select coast.

When the chimes sound again entering SHB reduce the **TS** to **20kph** and select coast. About 2 car lengths before the stop mark apply the standard braking technique to stop at the stop mark.

When driving manually always remember to apply the standard braking technique and stop the train within the green area of the

**PAC** loop. In the case of the offside markers, line the corner of the right hand side window seal up with the green.

After stopping at SHB, simply open the doors on the right, and then after ensuring no one is getting on or off, close the doors. After confirming a **pilot light** continue your journey to the next station.

## FAQS

### Why isn't my train moving?

Are your doors closed and have you confirmed a **blue pilot light**? Sometimes the doors won't close properly due to a passenger caught in a set of doors, or the interlock has failed to clear. Simply re open and close the doors and you should then get a doors closed **blue light**.

If you are in **ATO** remember to make sure your TBC is set to N before pressing the two start buttons for 3 seconds, 5 and 8.

If you are in **CM** ensure that you have twisted the handle before moving the TBC.

Check the mode the train is set to. If there is no **target speed** then it means your master controller is set to **Restricted Manual**. Simply switch it back to either **CM** or **ATO**.

If you have taken the TBC out of stow for what ever reason, reset the train round circuit by applying full brake, and then putting it back to N and press start.



## Why do I keep overrunning in Manual?

As I said in the briefing when driving manually remember the braking in manual is significantly reduced. You need to apply the standard braking technique slightly earlier and in some locations allow the track gradients to slow the train down. One of the best ways to learn to drive effectively is to watch the ATO brake and then simply modify your braking technique accordingly.

If for example you're entering a platform at 35kph you are going to want to brake roughly half way down the platform. Any later than that will most definitely result in an **Overrun!**

## ATO OVERRUN!

I think that the atp system is now fool proof. However should this happen then apply the following rule:

**Make a PA to your passengers and inform them of the overrun. Switch to Restricted Manual, and select reverse mode B by pressing V. Shunt the train backwards to the PAC marker and then open the doors as usual.**

This is not something that should ever be done in normal service. It makes you look like a bad driver, and it gives the DMT extra paper work!

## Troubleshooting

I am aware of there being only two glitches in this route. In the event that the plugin doesn't fire up properly which sometimes can very rarely happen, you will see some white boxes in the bottom right of the screen. Simply exit and reload Open bve and this should disappear. In the event they don't disappear then try reinstalling the route and train or resetting your machine.

Unfortunately there seems to be a glitch with Open not loading plugins, and I think it is mostly down to the amount of RAM available. What can also help is to close any extra programs running in the background. Another issue i've found is that occasionally your virus scanner may remove the vital .dll files from the train folder, this too can cause the plugin not to fire up.

It is advisable not to jump stations, it can sometimes mess the signalling up.

If you find the route a bit laggy in places, this is probably due to your lack of RAM. I myself have only 2 GB. I find that if you tweak the viewing distance it makes a difference in performance. Ideally it is advisable to run this route with at least 3 or more GB.

In the event you do find any other glitches then report them to the BVE Worldwide forum.

You may want to adjust your gamma/brightness settings to obtain optimum visual display.

## Acknowledgements

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In the interest of copyright infringement the only objects this route uses that are not originally created by myself or any of the above are borrowed from Network West Midlands, and per the request still have appropriate headers.