



studio
polygon

Regional **User Manual**

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Manual:

Studio Polygon

Developers Foreword

Welcome to our regional variants. In this handbook, you can find instructions on how to Sign On, Sign Off, and more.

If you want to get started as quickly as possible, the Ticketer Driver Number is **207854** and the PIN is **9810**.

This manual outlines every feature of our Ticketer rendition. It also goes into complete depth on how to use the machine as intended.

As well as the Ticketer, this manual also has instructions for all our regional equipment. Guides on how to use the DG3 controller and formatting display blinds are also in here.

Ticketer Guide

If you want to get started as quickly as possible, the Ticketer Driver Number is **207854** and the PIN is **9810**.

Booting up and logging on

To turn on the Ticketer, you need to turn on the battery master of the bus, the Ticketer will then proceed to boot. The booting process takes around 30 seconds. The bootup screens look like so:





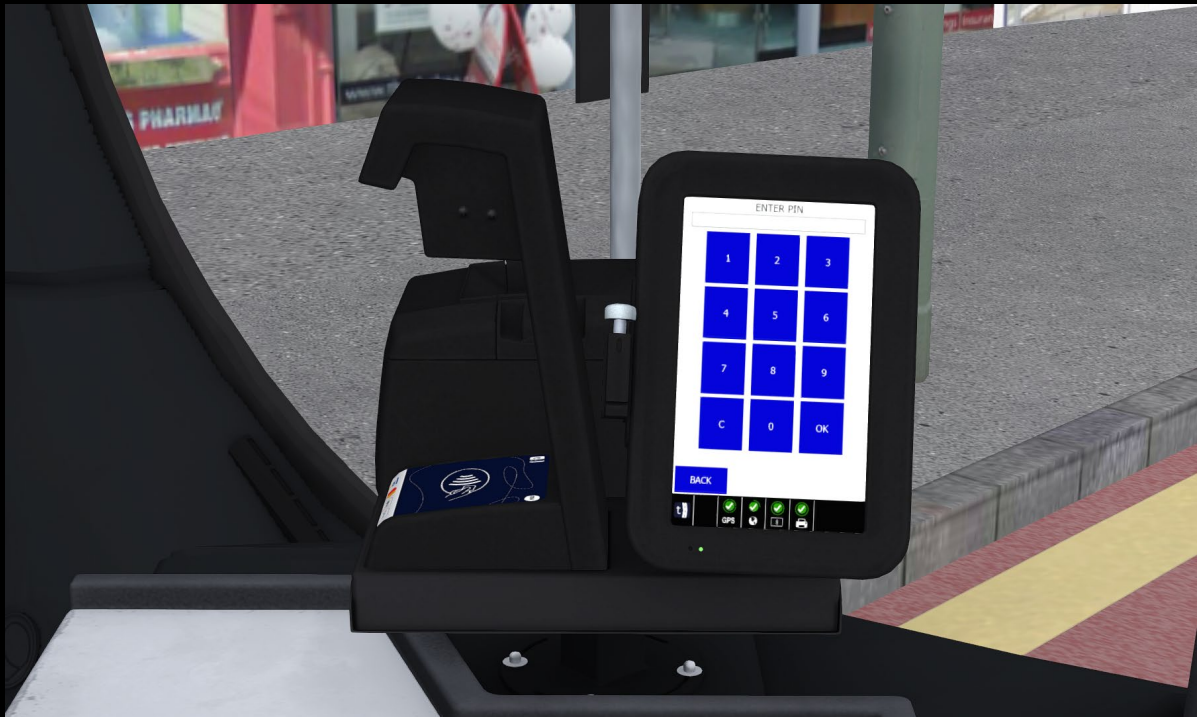
Once the Ticketer has booted, you'll see this screen:



Now you can log into the Ticketer. Enter the Driver ID which is 207854 then press OK. You will then be presented with the duty totals screen.

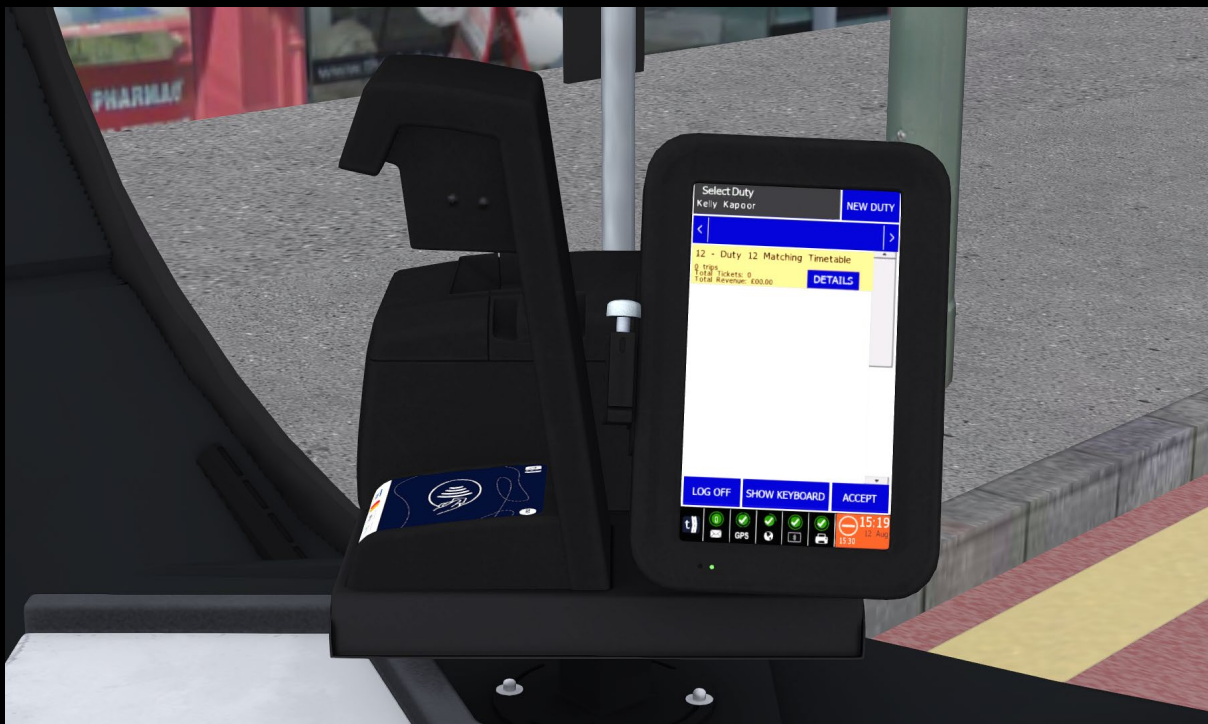


You can either press the SKIP button or click the driver card that is stored in the cubby below, you will then be presented with this screen.



Enter the PIN which is 9810 and then press OK.

If you have a timetable selected, you will be presented with this screen:



If you do not have a timetable selected, you will be presented with this screen:



Whichever screen you are on, press the ACCEPT button. You will be taken to this screen if you have a timetable:



Or this screen if you don't have a timetable:



Again, whichever screen you are on, press the ACCEPT button. You will be taken to the passenger occupancy screen, which looks like this:



You can adjust the occupancy now as you desire, depending if you have passengers on, but if not, press CONTINUE.

After a short loading bar, you will be presented with this screen, which is the main ticket selling screen:



You are now logged on and have access to the Ticketer and its full functionality.

Ticket Selling

To sell a ticket, from the ticket selling screen select the desired ticket by clicking it.



The border of the screen will turn green, and the issue button will turn green.

There are now two ways to issue the ticket:

- 1) By clicking the green ISSUE button.
- 2) Clicking the CALC button, which is next to the red CLEAR button. By clicking this button, you are presented with this screen:



From this screen, you can use the keypad to enter the amount of money the passenger has given to you, it will then calculate the change that you are required

to give to the passenger from the ticket currently selected. If you wish to give a £5 or a £10 note in change, you can click either the large blue or red boxes at the bottom and this will deduct £5 or £10 respectively from the change required. Once you are ready to issue the ticket, you can do so from this screen by clicking the green ISSUE button, else pressing CANCEL will return to the main ticket selling screen cancelling the sale, or pressing BACK will return to the main ticket selling screen while keeping the ticket selected for sale.

If the map you are playing has more than six tickets, a MORE button will appear in the bottom right where you will be able to view more available tickets to sell.

Options Menu

From the main ticket selling page, click the **OPTIONS** button in the bottom left to open the options menu, you will be presented with this screen:



Functionality of each button of this screen from top right to bottom left:

LOCK: Locks the ticket machine preventing all input and will require the pin of the driver to unlock again.

PASSENGER OCCUPANCY: Brings up the passenger occupancy screen as seen when logging in, explained more in detail later on.

END TRIP: Ends the current trip, usually done at the end of the route and will reset trip totals for the current trip and will take you back to the trip selection screen.

DUTY SUMMARY: Brings up the screen which outlines all tickets sold during the current duty.

TRIP SUMMARY: Brings up the screen which outlines all tickets sold during the current trip, ending the trip will reset these.

LOG OFF: Log off from the Ticketer, taking you back to the log on screen.

BACK: Takes you back to the ticket selling screen.

MORE: Shows the second page of options.

Pressing the **MORE** button will present you with this screen:



Currently, only the MESSAGES and BACK buttons are operational on this screen, more will be available in future updates. Pressing BACK will take you back to the previous options screen.

Pressing MESSAGES will present you with this screen:



Messages

Throughout your trip, there's a chance you can receive a random message to your Ticketer ETM. When this happens, you will hear a sound and the notification at the bottom of your screen will turn red with 1 in it.

To access the messages from the ticket selling screen, click the messages icon at the bottom of the screen and you will be presented with this popup:



Then press the MESSAGES button, you will then be presented with the messages screen. If you have no received messages, the screen will look like this:



However, if you have received a message, the screen will look like this:



To open a message, click the message that has been received then click the READ button. The message will open and you will be presented with a screen that looks similar to this:



Once you are done reading the message, press the BACK button and you will be taken back to the main messages page and the received message will disappear.

Clock

If you wish to view a bigger clock, one with complete with seconds, click the clock in the bottom right corner and a popup with the clock will appear like this:



To get rid of this popup, click anywhere on the screen.

Passenger Occupancy

To bring up the passenger occupancy screen, click the PASSENGER OCCUPANCY button in settings.



Clicking any of the ALIGHT buttons on the left will remove that many number of passengers from the total currently on the bus.

Clicking the ADD 1 button on the right will add one person to the total that's currently on the bus.

Clicking the RESET TO ZERO button will reset the current total to 0.

Clicking the OCCUPY button will set the wheelchair space to currently being occupied, this will turn into an EMPTY button. Click this same button to set the wheelchair space as empty.

The more the total number increases, the green box will turn amber and then red depending on how full the bus is.

DG3 Quick Start Guide

The DG3 controller is used to control the exterior destination displays.

To turn the DG3 on, turn the battery master on and wait for it to boot. To turn it off, turn off the battery master.

Once booted, you will be presented with a screen that looks like this:



To change your destination, press the FE button (first button on the left) and you will be presented with this screen:



For this example, we will use the 35 to Paignton. First, enter the digit 3 by pressing the up arrow button until you get to 3.



Then, press the left arrow button.



Then keep pressing the up arrow button until you get to 5, which then gives you 35.



Press the FE button.



You will then get a destination that is listed as route 35 in the database. Use the up and down arrows to scroll through the routes until you find the desired destination.

Once you have found the destination, press the FE button to select the display or wait 5 seconds.



The screen will then say Please wait, and then will update to show the destination.



Your display is now set.

If you wish to change the destination but under the same route number, you can use the up and down arrows from the main screen to cycle through destinations that are stored under the same route number.

Hanover Destination Displays Formatting Guide

Studio Polygon have in-house developed a fully customisable destination display system which is compatible with Hanover's Helen software. If you are unfamiliar with how to use this software, it is not covered in this manual but there are plenty of guides online.

Helen is not essential to using formatting the destination displays, but it is incredibly helpful in speeding up the process as you are able to edit the look of the displays live rather than loading into OMSI every time you test a screen edit.

As Studio Polygon have developed these fully custom displays, they are not currently compatible with other display systems. For that reason, it is recommended that you familiarise yourself with the formatting and values to use for editing the HOF.

For ease of editing, it is recommended you use software such as HOF Suite which makes it easier to edit HOF files. If you use this software, it is also recommended that you use with 'Mask for supported strings' disabled as it will allow you to fit in the formatting for the displays.

HOF Structure

Index	Name*	Use in Studio Polygon displays
0	IBIS 1	Destination (Shown in the ALT selection menu)
1	ANNAX (1)	Top line on front display.
2	ANNAX (2)	Second line on front display.
3	ANNAX (side)	Text to show on the side display.
4	RLB texture	Unused
5	IBIS 2	Route number. IMPORTANT: If using multi page, this is to only be filled in on the first page, for other pages, this field must be left blank.
6	Add Plate texture	Unused
7	Krueger texture	The name of the image to use as a custom display. Explained further below.
8	ANNAX front	Top line on rear small display.
9	ANNAX rear	Bottom line on rear small display.
10	Reverse route	Unused

11	Full Display (1)	Top line on rear large display.
12	Full Display (2)	Bottom line on rear large display.

*Note on name: These are the names that HOF Suite use, these are not relevant to the use with Studio Polygon displays.

Route number

Setting the route number through the destination controllers supports letters in the number. For the DG3 and G3 controller, selecting a route number with a letter in is the same, just without selecting the letter. The lettered route numbers will show on the main selection page with the rest. For example, to get a route with number X35, enter 35 into the controller.

For letters to work correctly in the controllers, you must fill in index 5 (IBIS 2) in the HOF file. If you do not do this, it will default to the route number defined in the IBIS code.

IBIS code

There is a specific formatting used in the IBIS code to allow it to work with the Studio Polygon destination controllers. If the formatting is not set correctly, you will still be able to select a destination through the ALT selection menu but will not be able to select one through the destination controllers built into the bus.

The format consists of four digits, all of which are outlined below:

Example code: 1010

1: Page number

010: Destination number.

Digit 1 (1-9)	The number of the page to be displayed on the front destination. This number must be between 1 and 9, therefore there can be a maximum number of 9 pages per destination.
Digits 2-4 (0-9)	The destination number. This number must be unique for each terminus. If you are using a multi-page setup, these three digits must be the same for each of your pages and you will just change digit 1 to correspond to each page. See below for clarification.

It's good practice to use lower destination numbers to aid performance on the DG3 controller.

To set multi-page up correctly you must set the code correctly.

For this example we will use one route with two termini and three pages for each. Route 35 with Paignton and Totnes being termini.

Create your first display and set the page number to be 1 and create a unique destination number. Let us use 001 – this gives an IBIS code of 1001. Do not forget to set the IBIS 2 field (index 5 as outlined in the HOF structure above) to the route number, so this will be set to “35”.

Next create your second display for this terminus. So, the page number will now be 2, but as this is the same terminus we use the same destination number – meaning this second page IBIS code will be 2001. And finally for your third page, it will be 3001. For the second and third page, make sure you leave the IBIS 2 (index 5) field blank.

Moving onto the Paignton terminus. As this is a new terminus, we need a new destination number, so now we will use 002. Set the first page to 1002 and set IBIS 2 to 35. You will then get your second and third pages as 2002 and 3002.

If you need a visual aid, look at the HOF files included with the bus to get an idea for how they should be formatted.

If you are using HOFs from older versions of the 400MMC, they will work with slight modifications to the IBIS code and the IBIS 2 (index 5) field.

An example HOF can be found below.

1000: Empty
1001: Not in Service
1002: Special
1003: Contract
1004: Bus on Road Test
1005: Rail Replacement
1006: Staff Bus
1007: NHS Thank You
1008: Bus Full
1009: 35 Totnes
2009: 35 Totnes
3009: 35 Totnes
1010: 35 Paignton
2011: 35 Paignton
3012: 35 Paignton
1013: X35 Totnes
1014: X35 Paignton

+

Name

35 Totnes

☐ Mask for supported strings

IBIS code

1009

☐ No passengers

0

IBIS 1

35 Totnes

1

ANNAX (1)

2

ANNAX (2)

3

ANNAX (side)

4

RLB texture

5

IBIS 2

35

6

Add Plate texture

```

[addterminus_list]
{ALLEX} 1000    Empty    Empty    0
{ALLEX} 1001    Not in Service
1002    Special    Special    0
1003    Contract    Contract
1004    Bus on Road Test    Bus on Road Test    0
1005    Rail Replacement    Rail Replacement    0
1006    Staff Bus    Staff Bus    0
1007    NHS Thank You    NHS Thank You    0
1008    Bus Full    0
1009    35 Totnes    35 Totnes    35
2009    35 Totnes    Totnes
3009    35 Totnes    Totnes
1010    35 Paignton    35 Paignton    35
2011    35 Paignton    Paignton
3012    35 Paignton
1013    X35 Totnes    X35 Totnes    X35
1014    X35 Paignton    X35 Paignton    X35
[end]

```

Multi-Page Displays

The Studio Polygon displays now support multiple pages. This means for one destination; you can have different via points that will change automatically. There is support of up to 9 pages for each destination. You can set the page number using the IBIS code, as explained in the section above. You should also fill in index 0, “IBIS 1” in HOF Suite. This will ensure the pages are properly detected.

If you wish to disable this functionality, then you can do so by navigating to:

400MMC: Vehicles\[DLC] Studio Polygon

400MMC\Script\SP_Core\Hanover\Hanover_constfile.txt

Lite: Vehicles\[SP] Studio Polygon

Lite\Script\SP_Core\Hanover\Hanover_constfile.txt

and changing the Hanover_MultiPageEnabled variable to 0.

You can change the speed at which the pages cycle by changing the Hanover_PageDuration variable to how long you desire, this value is in seconds.

Multi-Line Displays

Some displays, such as the front and rear displays, can use two lines. If a second line is not set, the top line will fill the entire display height.

The small rear display can also display text instead of route numbers, if index 8 is set, this text will show on the display rather than the route number. Index 9 will then add a second line to this.

Custom Textures

The Studio Polygon displays have the ability to show a custom texture. There are templates available for this in your 'Vehicles/SP_CustomDisplays' folder. Save your image in the SP_CustomDisplays folder then add the file name (and any sub directory) to index 7 of the HOF.

For reference, one pixel for the displays is equal to 8 square pixels on the template.

When scaling your images, it is important to use the "Nearest Neighbour" method of scale and not "Bicubic". If you are not sure how to do this in your chosen program, there is plenty of guides on Google for this.

To show the correct colours on the displays: make the background transparent and the text black (or any colour) to show just the text. The inverse will work also for a coloured background on blank text.

IMPORTANT NOTE: These images **MUST** be saved in png format to work with the custom displays. If you experience displays which are solid in colour, you likely have not saved in png format.

Customising Fonts

As the displays are compatible with the Helen software, you're able to define each line to use a specific font by appending the font name to the end of the line.

For example, if you wanted the line "Paignton" to use the font "0808B2E1" as shown in Helen, you would format this line in the HOF as "Paignton*0808B2E1".

These custom fonts are available for every line.

If you wish to format the route number, it is the same but just with an N in front, so for example "Paignton*N1910N3E1". You are also able to combine the line font with the route number font to create "Paignton*0808B2E1*N1910N3E1". Note: the route number formatting is only available in indexes 1, 3 and 8.

A full list of compatible fonts is shown below.

0505C1E1	0907C1E1	1205C1E1	1608C2E1
0505N1E1	0908B2E1	1207N1E1	1610N2E1
0605C1E1	0908N1E1	1210B2E1	1613B3E1
0605N1E1	1005C1E1	1310C2E1	1708C2E1
0705C1E1	1005N1E1	1311B3E1	1710N2E1
0705N1E1	1007B1E1	1310C2E1	1713B3E1
0708B2E1	1007B2E1	1311B3E1	1910N3E1
0806C1E1	1105C1E1	1410C2E1	1912B3E1
0806N1E1	1107N1E1	1508C2E1	1410N2E1
0806NC1E1	1107N2E1	1510N2E1	1411B3E1
0808B2E1	1110B2E1	1513B3E1	

Customising Positioning

Route Number Positioning

You can choose which side of the front display to have the route number on, left or right. By default, the route number is on the right. To move the route number to the left, simply add *NL to index 1 of the HOF (the top line on the front display). An example of this in the HOF would be "Paignton*N1910N3E1*NL"

Row Positioning

If the displays in-game do not match what you have created in HELEN where the positioning of lines is slightly off, you can move the lines to make them match. To do this, you can edit the HOF for the lines you wish to move. All lines on all display variants are supported. See the table below for formatting for this. Movements up to 9 pixels in each direction are supported.

	Move Left	Move Right	Move Up	Move Down
Prefix	*L	*R	*U	*D
Example	*L1	*R2	*U1	*D3
Example output	Will shift the entire row left one pixel.	Will shift the entire row right two pixels.	Will shift the entire row up one pixel.	Will shift the entire row down three pixels.

An example of how this would show in the HOF alongside font formatting can be seen below:

“Paignton*0808B2E1*D1*L5” will set the font for this row to be 0808B2E1, shift the entire row down one pixel and shift the entire row left one pixel.

Helen Setup

There is plenty of videos online to teach you how to setup Hanover’s Helen software.

However, to get the most out of the software for the Studio Polygon displays, it is recommended to use the following display sizes:

Front display: 144x19

Side display: 96x8

Small rear display: 32x17

Large rear display: 128x17