



## MAN ÜL 242, ÜL 272, ÜL 292 and ÜL 312, Version 1.1, August 2014

*Translation by O530 Citaro*

In addition to the standard interurban buses MAN always offered a bus model derived from the current coach series, usable for standard service as well as coach service. While the RÜ 240 was mostly unsuccessful (as an alternative to the much more common SÜ 240) its successor called “ÜL” surprisingly turned out to be very successful – not only at private operators but also at operators of suburban/interurban bus networks. Introduced in 1989 the MAN ÜL could be ordered until 1997.<sup>1</sup> Beside some optical details it was mainly the engine that changed over these years and thus lead to different designations of the buses. The following engine types are driveable in OMSI:

MAN ÜL 242, from 1989 on: Inline-six engine D 2866 LUH, 245 PS

MAN ÜL 292, from 1989 on: Inline-six engine D 2866 TUH, 290 PS

MAN ÜL 272, from 1992 on: Inline-five engine D 2865 LUH 02, 270 PS

MAN ÜL 312, from 1992 on: Inline-five engine D 2865 LUH 08, 310 PS

MAN ÜL 312, from 1996 on: Inline-five engine D 2865 LUH 07 (Emission standard: Euro 2), 310 PS

The company “Regionalverkehr Kurhessen” (RKH) - one of the interurban bus operators of the German railroad operator “Deutsche Bahn” (DB) – ordered 40 MAN ÜL buses between 1990 and 1996 (always the current series) and mainly used them in the area of Kassel. The vehicles were equipped with 6-speed manual transmissions and single front doors. The buses 629 (ÜL 292), 530 and 533 (ÜL 272) were exceptions as they were bought to be used on the suburban line between Kassel and Vellmar and therefore were equipped with automatic transmissions made by ZF and double front doors.

A very special thanks goes to:

- Rolf Westphalen** for the permission to use the O 305 add-on as the base of the model
- Morphi** for the automatic transmission
- mbcitarofan** for the high-quality sound recordings of the inline-five engine and many interior sounds
- PoweredByCNG** for the permission to integrate his O 305 sound update
- Marc1972** for the stop request sound
- maxo3** for sounds and pictures of the ticket printer
- Julian** for dashboard indicators
- and Busfanat** for his big help concerning the scripts (e.g. the matrix display and the door mechanisms)
- Rüdiger Hülsmann** for the permission to use textures, sounds and scripts from the OMSI standard buses
- fw-online** for providing photorealistic textures
- Sabian** for textures for seats
- MR-Software** for the simulation itself
- DÜWAG** for helping to decrypt the meaning of some indicators and buttons on the dashboard
- neuewelt81** for many hints straight from the operation
- to my Beta-testers, especially **neuewelt81** und **Tristan98**
- O530 Citaro** for the translation of this readme-file
- and to many supportive and motivating users of the OMSI forum who kept the project alive by giving tips, hints, suggestions and motivating commendations.

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<sup>1</sup> All information without guarantee as the sources are very ambiguous concerning model years and engines.

## Credits:

**Model:** Perotinus

**Textures:** MR-Software, fw-online, Sabian, Perotinus

**Scripts:** Rolf Westphalen, MR-Software, Busfanat, Julian, Morphi, „ChuraKrüger“, Perotinus

**Sound recordings:** mbcitarofan, O405N (Youtube), MR-Software, PoweredByCNG, Morphi, maxo3, Perotinus

**Sound processing:** Perotinus, Morphi (automatic transmission)

One or more textures on this 3D model have been created with images from CGTextures.com. These images may not be redistributed by default, please visit [www.cgtextures.com](http://www.cgtextures.com) for more information.

## Modifications:

**The scripts are part of the payware add-on “City Bus O 305“ and are subject to the copyright of the creator Rolf Westphalen as well as MR-Software. Thus it is FORBIDDEN to edit them. The sounds are subject to the copyright of mbcitarofan, Morphi and MR-Software.**

The model itself and the textures of the bus made by me (Perotinus) may be changed without any restrictions. Self-written .bus files and modified model.cfg files also may be created and spread for the realization of own variants. Feel free to write a private message in the forum if there are questions about this.

## Installation:

**To run the MAN ÜL the add-on „City Bus O 305“ has to be installed **TOGETHER WITH ITS OMSI 2 PATCH!**** The path of the O 305 has to be OMSI → Vehicles → MB\_O305. It is not enough to have the AI O 305 which is included in OMSI 2.

The content of the zip file simply has to be unpacked into the OMSI main folder.

## Usage:

In the real bus the engine brake is activated by a separate footswitch but it can also be connected to the break pedal by pressing a switch on the dashboard. To be able to use the separate switching of the engine brake I recommend to assign the key “A” to the command “Retarder Direct Mode On/Off” in the options and to activate the “continuous” mode.

The retarder included in the variants with automatic transmission can be activated by a lever with four levels on the steering wheel. Therefore two keys have to be assigned to the commands “retarder\_aufschalten” and “retarder\_abschalten” (Unfortunately the English names of the commands are unknown) - I recommend the keys Y/Z (depending on your keyboard – the one on the left of X) and A.

The MAN ÜL is equipped with an AEG/Adtranz AFR 200 ticket printer with integrated IBIS device. The functionality is not completely as it is in real life but is based on the IBIS 2 and ticket printer scripts of the M&R standard buses. The line is entered by pressing the button “Linie Wechsel” (Line change) while the route is entered by pressing the button “Kurs Wechsel” (Route change). The destination can be changed manually by pressing the button “Z1”. Selling tickets mainly explains itself; the full rate ticket is directly sold by pressing the button “Drucken” (Print) without having to select a ticket button before.

The external door opener is located on the fuel filler flap on the door side of the bus.

## Matrix display

### ANNAX:

The early-built (until 1992) MAN ÜL of RKH had single-lined AEG Annax displays which were able to display 15 characters. The according entry in the .hof file is located on an additional 8<sup>th</sup> string. The rear display only shows the line number which has to be entered on the 9<sup>th</sup> string. At first the string count has to be changed:

```
stringcount_terminus
10 → 10 instead of 8 due to the two additional entries

.....

[addterminus]
108
Nordspitze → Name of the entry
BHF. NORDSPITZE → IBIS 1 display
    BAHNHOF → Matrix display, 1st line
    NORDSPITZE → Matrix display, 2nd line
BHF. NORDSPITZE → MAN SD 200 door side display
Gru_Bhf Nordspitze.tga → Destination blind texture
Bhf. Nordspitze → IBIS 2 display (and AFR 200!)
                → Destination plate texture (if available)
                → Krüger bitmap (if available)
76 BHF NORDSP. → 15-character ANNAX, destination with or without line number
 76 → 15-character ANNAX, line number

.....
```

### Krüger+ full-matrix display

From 1993 on RKH equipped its buses with AEG-Krüger full-matrix displays. To provide a better flexibility compared to the standard Krüger matrix of M&R the MAN ÜL uses the "Krüger+" system, thus not only upper case and lower case letters are possible but also formatings like bold and inverted characters. The display is able to read and render standard .hof files but to use the possibilities the optimal way additional entries have to be written into the .hof file. The best way to do this is to copy the complete terminus list and add it to the existing one. One entry has to look like this:

```
.....

[addterminus]
200108 → A 200 has to be added in front of the actual destination code
Nordspitze → Name of the entry
BHF. NORDSPITZE → IBIS 1 display
Bahnhof*B → Matrix display, 1st line, *B = bold, *I = inverted
Nordspitze → Matrix display, 1st line, *B = bold, *I = inverted
BHF. NORDSPITZE → MAN SD 200 door side display
Gru_Bhf Nordspitze.tga → Destination blind texture
Bhf. Nordspitze → IBIS 2 display (and AFR 200!)
                → Destination plate texture (if available)
                → Krüger bitmap (if available)
76 BHF NORDSP. → 15-character ANNAX, destination with or without line number
 76 → 15-character ANNAX, line number

.....
```

To learn more about the possibilities of the Krüger+ display system please have a look at its styling guide made by the creator of the mod: <https://www.omsi-webdisk.de/index.php?page=EntryFile&fileID=388>

## Repaints

The MAN ÜL for OMSI is completely repaintable and uses the repaint tool developed by M&R. It can be found in the folder OMSI 2 → SDK → RepaintTool. With default settings the repaint templates of the MAN ÜL are unpacked into this folder as well.

There are five repaint sets (.rpc files):

1. MAN\_UEL.rpc → for ÜL 242, 292, 272 and 312
2. MAN\_UEL\_ok.rpc → for ÜL 242, 292, 272 und 312 without luggage space
3. MAN\_UEL\_312.rpc → for ÜL 312 Facelift
4. MAN\_UEL\_VM.rpc → for ÜL 292 and 272 with double front doors
5. MAN\_UEL\_VM\_oK.rpc → for ÜL 292 and 272 with double front doors without luggage space  
(Attention: The headlight edges use the same color as the rest of the bus!)

Only the main texture of the chassis can be repainted but it also contains rims, wheel caps and seat cushions. Due to technical reasons unfortunately the handrails can not be repainted.

Additionally to the repaint the .cti file can also be used to set...

-...if the bus has wheel caps (ÜL 242 does not have them by default, the others do)...

-...and if the bus has top-hung windows on the rear and in the middle (ÜL 242 does have them by default, the others do not).

Therefore the entries...

```
[setvar]
vis_klappfenster
1
```

...and...

```
[setvar]
vis_radkappe_invisible
0
```

...have to be added. With these entries e.g. an ÜL 272 would get top-hung windows but would lose its wheel caps while it would be exactly the other way around at the ÜL 242.

Other adjustments can not be done by repainting but by changing parts of the model and .bus files:

-The interior lights and their shadows on the ceiling have their own .o3d files

-...just like the "Wagen Hält" (Stop request) display and the bus stop display

-Annax and Krüger displays can be swapped as their files consist of the display itself and the lateral display box (Attention: The Krüger display box is a bit bigger!). Still it has to be minded that the entries for text textures in the model.cfg files then have to be changed as well.

This bus was made with much support from the official OMSI forum and may stand as a sign for the fact that the community is better than its reputation suggests. Many thanks to all persons who contributed to this and will continue to do so!

Have a lot of fun with the sub- and interurban bus of the 1990s!

August 2014, **Perotinus**

