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THE SIMULATION COMPANY

OMSI 2 Add-on

Citybus i280

SERIES



MANUAL



Developed by: BusTrainz
Manual: BusTrainz, Aerosoft



Citybus i280 Series

Manual

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Airport Paderborn/Lippstadt
D-33142 Büren, Germany

Tel: +49 (0) 29 55 / 76 03-10

Fax: +49 (0) 29 55 / 76 03-33

E-Mail: info@aerosoft.de

Internet: www.aerosoft.de
www.aerosoft.com



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Add-on for

OMSI 2 - The Omnibus Simulator



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Introduction

Greetings from the BusTrainz developers team! This document is the manual for the add-on that includes 5 modifications through the different years of production:

- Ikarus 280.02 / beginning of 1984
- Ikarus 280.02 / end of 1984
- Ikarus 280.02 / 1985
- Ikarus 280.02 / 1986
- Ikarus 280.02 / 1987

From the authors



Back in the mid-80s! A completely new Hungarian bus, adapted to work in Germany, gets under your control. Take a ride on it through the streets of Berlin and other cities and towns of Eastern Germany.

The bus has a length of 16.5 meters, with its engine located under the floor in the truck. A thruster rear axle makes it comfortable to move around the narrow streets of the big cities.

The bus has a six-cylinder diesel engine D2156HM6U, which allows it to reach a top speed of 60 km/h. All buses have a 6-speed manual transmission. The bus is adapted to work in Germany, so it has no road train sign and head parking lights. Also, it is distinguished by the almost complete absence of window leafs (4 per section).

Ikarus 280.02 is presented in different versions. They all differ in appearance and in the interior, depending on:

- year of release (1984-1987)
- repainting (both German and re-export buses that were supplied to the CIS countries at the turn of the 1990s and 2000s are realised). They have different types of driver partition, ticket sales system, etc.
- maintenance condition of the bus selected in the game (implemented changes in driving performance)

In the future, the Ikarus 280.03 – a suburban version of this bus – will be added to this add-on.

Bustrainz, 2017





In the Game

IKARUS 280.02: general description of the series

The history of the model and the main differences between modifications through the years

The prototype of the articulated city bus Ikarus-280 was released in 1970. Serial production of the new model began in late 1973. This model has immediately replaced the previous articulated model, Ikarus-180, which in the late 1960s conquered the markets of most COMECON membership countries. But the greatest popularity in the markets of Eastern Europe was won by the Ikarus-280 with its successful modular design that enabled efficient producing, reliable running gear, low cost of buses and a warranty service program. More than 60,000 cars produced in 30 years of serial production made this model the most massive articulated bus series in the world.

Dimensions:	16500 mm x 2500 mm x 3200 mm;
Engine:	Raba-MAN D2156H, 10.349 l, 192 kW at 2200 RPM
Gearbox:	Czepel (licensed ZF S6-90U)
Seats:	35
Standing places:	107

The Ikarus-280.02 is a modification that was produced for the German Democratic Republic since 1974. The main external features were the almost complete lack of ventilation windows and only one formula of the doors - 4 + 4 + 4 + 4 (roll doors).

- Early 1984: simplified trauma-safety seats, diskless wheels, decorative hood moldings and no forced ventilation of the driver cab.

- End of 1984: forced ventilation of the driver cab and its operational button
- 1985: disk wheels and improved seats.
- 1986: no hood moldings.
- 1987: changed lateral moldings (window, wheel and rear), highlighted separated alarm button, a few rearranged buttons, and increased right-hand mirror

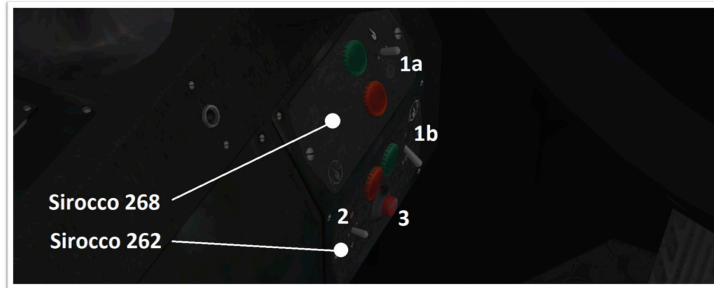
The first bus launch



At the first start of the bus, there is no air in the pneumatic system and the door drives do not work. You can get into the cab by opening the door manually. When the pneumatic system is full, the driver's door is controlled by buttons 1 and 3, located next to the neck of the expansion tank of the cooling system. Button 2 duplicates the "mass" button and is pressed together with buttons 1 and 3. Depending on the maintenance condition selected in the game menu, the bus engine has to be started in different ways. With a good normal maintenance condition, press and hold the engine start button. With a bad and very bad maintenance condition, it is necessary to hold the gas pedal at the same time with different probability (be sure to turn off the automatic clutch in the game settings). After the successful start of the engine, it is necessary to wait for the pressure to set in the pneumatic system which is optimal for the demount bus's brakes. Only after this is it possible to set the bus in motion.



Sirocco 268, Sirocco 262. Part I



Sirocco 268 is an autonomous liquid heater used to accelerate the start of the engine in the winter. It is located in the truck under the driver. The one toggle switch is at the disposal of the driver (1a):

- upper position – switching on the heater and the circulation pump
- lower position – switching on only the circulation pump (the liquid will be heated only by the engine)
- The middle position is 0

Indicators:

- Green lamp indicates functioning of the device (passenger cabin heating or circulating pump)
- Red indicates the burning mode

Sirocco 262 is an autonomous air heater of the trailer, located in the trailer on the left side behind the hatch with bars – it has two toggle switches (1b, 2) and one button (3):

Toggle switch (1b) – fan speed adjustment (depends on the efficiency of heating or ventilation).

Toggle switch (2) – heating and ventilation modes control

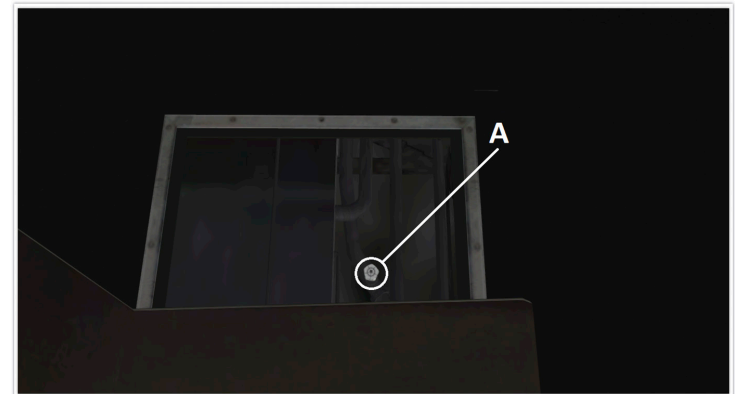
- Upper position – heating mode

- Lower position – ventilation mode
- The middle position is 0

The button in the middle (3) is the glow plug button (Sirocco 262). If the temperature in the passenger cabin is below -15°C , you need to first press this button (in the settings it is displayed on the I key), sustain it a certain time (at least 30s, the colder, the longer), then, without releasing it, turn the toggle switch (2) to the upper position.

Indicators:

- Green lamp indicates functioning of the device
- Red lamp indicates the ignition and acceleration mode, goes out when the burning mode is reached



Also there is a heating valve, which is located under the floor in the radiator compartment (closest hatch to the driver).

It is necessary to open this valve in the following cases:

- It is necessary to start the heaters «Thermal» for heating (both in the passenger cabin and in the driver's cabin)
- It is necessary to switch the preheating of the engine by the Sirocco 268 heater

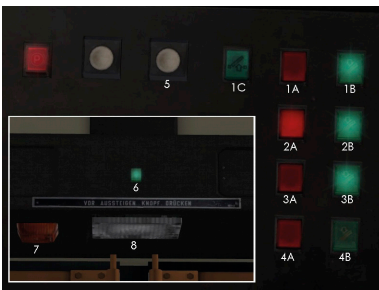


Description of Common Controls

To control the doors, you must wait for air to enter the pneumatic system of the bus. After the air is pumped in both tanks to a value of 7.5 Bar, the green door buttons are illuminated.



The bus has full control of all 4 doors. In re-export versions there is a button for a separate door opening to the driver's seat (1C). When the doors are closed, the green button (1B, 2B, 3B, 4B) is on by default. When the red button (1A, 2A, 3A, 4A) is pressed, the green button goes out and the doors open. The red buttons can be lit when the stop request button (6) is pressed. Opening the door removes the backlight of the red button. Pressing the green button (1B, 2B, 3B, 4B) closes the doors and highlights the buttons. Button 5 is the button for closing doors. When it is pressed, if the door is open, the lamp 7 lights up and the bell rings. After 2 seconds, the doors will close, the lamp 7 will turn off and the bell will stop ringing. Lighting 8 works from the presence of lighting in the cabin.

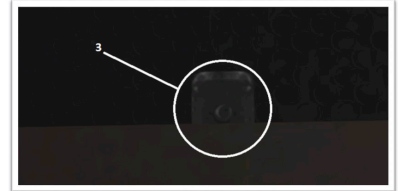


In re-export versions, the air filter lamp is replaced with the driver's door control button (1).

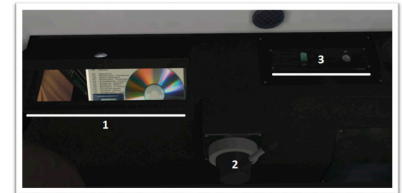
In some versions, there may be additional buttons for opening / closing all bus doors (2)



The following picture (3) shows the button for the motor brake (located under the driver's seat in every version of the bus for braking on gradients – works only if there is air in the pneumatic system). This button is displayed on the keyboard – the K button.



1. Trunk with additions
2. Parking brake lever
3. Sound Amplifier



Car radio is available in the bus, the function of which is fully implemented (radio, CD player).

Also in some modifications there is an extended "Informatik" informant.

Controls:

1. Button for switching between informer (pressed) and microphone modes (not pressed)
2. Cassette eject button
3. "Start" button (or the default Q key)
4. "Stop" button



Informatik works as an informer if two conditions are met:

- The amplifier is on, the button (1) is pressed
- When it is installed (or when you press the button (2)), an audiocassette appears on the left of the instrument panel, on which, as in IBIS, you need to enter a line and route, then, by clicking on the cassette, insert it into Informatik. This operation only provides playback of the stop names. The waypoints are set in the corresponding game menu

In the cabin of the bus you can find route signs (working like a rollband) and animated hammers for breaking the windows for emergency exits. Under the hatches you can also have a look at the animated suspension, engine, gearbox and other bus units.



In the driver's cab you can find curtains, a disk (for car radio), an audio cassette (for the extended informant), a set of wheel hub caps, timetables and route codes, a digital clock with illumination (with functions for displaying the current temperature on the street, in the cabin and Driver's cabin, as well as lagging behind / being ahead of the schedule), etc.



To work as an informer, the files should be located in the folder:

[Your OMSI2 folder] \ Vehicles \ Announcements \ [Map folder]

The front door and dividing wall

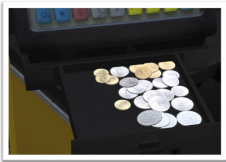
There is a difference between the usual German and re-export versions of the bus. The main difference is the presence of a wall between the driver and passengers. Also it changes the payment systems. For example, repainting with the prefix BVB or BVG have a common driver's seat with a salon and a standard ticket printing system or a repaints with the prefix MTA or OBN have a dividing wall and a roll system of tickets. Read more about creating your own repaints and modifications you can read in the **Details in repainting** section.



Ticket sales systems

Ticket printer (German version)





It works the same as in standard MAN buses.
Money compartment is down to the side.

Roll tickets (re-export version)



It appears when you press the button 1. Supports all 5 types of tickets accepted in the game with a price display.

To sell tickets, you need to open window 2.

Controlling the buses

IKARUS 280.02 1984 (I): description of the controls



1. Left wiper key
2. Right wiper key
3. Mirror heating button
4. Parking light button (only the lower left parking light works)
5. Two-speed fan switch "Thermal" of the passenger compartment (the valve must be opened and the circulation pump must be operating for heating)
6. Two-speed fan switch "Thermal" for blowing the windshield (the same cabin heater) (the valve must be opened and the circulation pump must be operating for heating)
7. Alarm key



- 8. Not set
- 9. The light button in the driver's cab
- 10 - 12. The light button of the passengers' cabin
- 13. Key 12V (activated when the car stereo is installed)
- 14. The fog light button (not in all versions)
- 15. Engine start button
- 16. Parking light / low beam key
- 17. The "mass" button
- 18. Emergency switch
- 19. Parking brake warning lamp
- 20. Washing fluid supply button
- 21. Button to turn the bell on and close all doors
- 22. Air filter lamp (in re-export versions: the driver's door opening button)
- 23 - 26. Buttons for opening/closing the bus doors.

IKARUS 280.02 1984 (II): description of the controls



- 1. Left wiper key
- 2. Right wiper key
- 3. Mirror heating button
- 4. Parking light button (only the lower left parking light works)
- 5. Two-speed fan switch "Thermal" of the passenger compartment (the valve must be opened and the circulation pump must be operating for heating)
- 6. Two-speed fan switch "Thermal" for blowing the windshield (the same cabin heater) (the valve must be opened and the circulation pump must be operating for heating)
- 7. Alarm key
- 8. The key for forced ventilation of the driver (the hatch above the driver must be open)



- 9. The light button in the driver's cab
- 10 - 12. The light button of the passengers' cabin
- 13. Key 12V (activated when the car stereo is installed)
- 14. The fog light button (not in all versions)
- 15. Engine start button
- 16. Parking light / low beam key
- 17. The "mass" button
- 18. Emergency switch
- 19. Parking brake warning lamp
- 20. Washing fluid supply button
- 21. Button to turn the bell on and close all doors
- 22. Air filter lamp (in re-export versions: the driver's door opening button)
- 23 - 26. Buttons for opening/closing the bus doors.

In subsequent modifications until 1987, the dashboard elements were identical.

IKARUS 280.02 1987: description of the controls



- 1. Left wiper key
- 2. Right wiper key
- 3. Mirror heating button
- 4. Parking light button (only the lower left parking light works)
- 5. Two-speed fan switch "Thermal" of the passenger compartment (the valve must be opened and the circulation pump must be operating for heating)
- 6. Two-speed fan switch "Thermal" for blowing the windshield (the same cabin heater) (the valve must be opened and the circulation pump must be operating for heating)
- 7. Alarm key
- 8. The key for forced ventilation of the driver (the hatch above the driver must be open)

- 9. Not set
- 10. The light button in the driver's cab
- 11 - 13. The light button of the passengers' cabin
- 14. Key 12V (activated when the car stereo is installed)
- 15. The fog light button (not in all versions)
- 16. Engine start button
- 17. Parking light / low beam key
- 18. The "mass" button
- 19. Emergency switch
- 20. Parking brake warning lamp
- 20. Washing fluid supply button
- 21. Button to turn the bell on and close all doors
- 23. Air filter lamp (in re-export versions: the driver's door opening button)
- 24 - 27. Buttons for opening/closing the bus doors.



Preparing audio files for the stereo

To add your own track:

1. Convert the selected track to the format (WAV);
2. The file name may contain only basic Latin letters (without diacritical marks). Rename it, if necessary.
3. Place the prepared file in the folder [Your OMSI2 folder] / Vehicles / music
4. In the music folder, open the file playlist_cd.osc
5. At the beginning of the file, find the following line:
[some number] (S.L.mp3_max_number_track)
Instead of [some number] write your own number of tracks (in this case there will be [some number + 1]).
6. Add the following block at the end, instead of [some number] put the track number (starting with 0), instead of [some name of your file] write the track name (WAV file) without specifying its format, instead of [some duration] write the duration of this track in seconds.

Required block:

```
L0 [some number] =  
{if}  
"[some name of your file]" (S$.mp3_track_name)  
[some duration] (S.L.mp3_track_time)  
{endif}
```

7. Save the changes in the playlist_cd.osc file

Details in repainting

The bus supports the modification of parts in each individual repainting. These parts can be state number, side plates, bumpers, moldings, partitions and etc. For example, repainting with the prefix BVB or BVG



have a common driver's seat with a salon and a standard ticket printing system or a repaints with the prefix MTA or OBN have a dividing wall and a roll system of tickets. The parts list is in the file [Your OMSI2 folder] \ Vehicles \ Citybus_by_Bustrainz \ Texture \ Repaints_02\ Colorscheme.cti . Below is a detailed description of the variables:

[Your OMSI2 folder]\Vehicles\Citybus_by_Bustrainz\Texture\Repaints_02\Colorscheme.cti

'Assignments setvar:

'Gos_DDR - the font of the GDR state numbers (without the character on the dash 1 - DIN, 2 - early, 0 or Missing - off)

'Gos_DE - font of Germany's state numbers (with a symbol on the dash 1 - on, 0 or missing -Off)

'Gos_z - two-line back state number (1 - German, 0 or missing -One-line, 2 - no two-line and one-line)

'Gos_p - standard front number service (1 - off, 0 or absent - on)

'Gos_RU - font of state numbers of the standard Russia 1997 (1 - on, 0 or missing - off)

'Gos_RU_dub - the presence of a backup double rear license plate on the rear sheet of the body (with Presence of the corresponding repainting Region, 1 - on, 0 or absent - off)

'Gos_RU_dub_red - the presence of a double red county redoubt on the back sheet

Body (if there is an appropriate repainting of the Region, 1 - on, 0 or missing - off)

'Gos_BY - state number Belarus (1 - on, 0 or absent - off)

'Wagennummer_BVB - Inv. Number BVB (above the right front arch 1 - on, 0 or Missing - off)

'Wagennummer_BVG - Inv. Number BVG (on the right front corner and the upper right on the Rear trailer sheet 1 - on, 0 or absent - off)

'Wagennummer_DVB - Inv. Number DVB (front on the bonnet and upper right on the back Trailer sheet 1 - on, 0 or absent - off)

'Wagennummer_Ryazan - Inv. Number of Ryazan PATP (on the right and on the left in small digits On tractor 1 - on, 0 or absent - off)

'Wagennummer_Kursk - Inv. The number of the Kursk PDPs (on the right and left, large red Digits on tractor 1 - on, 0 or absent - off)

'Wagennummer_MTA - Inv. Number Mostransavto (in front on the hood and upper left on Rear trailer sheet 1 - on, 0 or absent - off)

'Bamper_visible - bumper with fog lights (1 - on, 0 or missing - Off)

'Cp_obruch_1_AI - hoop on the right front wheel of the AI (1 - on, 0 or absent - off)

'Cp_obruch_2_AI - hoop on the left front wheel of the AI (1 - on, 0 or absent - off)

'Cp_obruch_5_AI - hoop on the right rear wheel of the AI (1 - on, 0 or missing - Off)

'Cp_obruch_6_AI - hoop on the left rear wheel of the AI (1 - on, 0 or missing - Off)

'Katafot - factory reflectors under the rear bumper (1 - on, 0 or missing - Off)

'Door_kr - overhauled steps (1 - on, 0 or missing - Off)

'Kant_kr - decorative trim in the cabin without a brown sticker (1 - on, 0 or Missing - standard with a sticker)

'Molding_A, molding_B, molding_C, molding_D, molding_E, molding_F - types of moldings respectively, the upper, the window, the wheel, the lower, the front on the hood, Trailer on the trailer (0 or missing - standard factory, 1 - factory, Painted in the color of the body, 2 - factory, painted together with the body (for Advertising, only for moldings B and C), 3 - overhaul (without black inserts, only For moldings B, C and F), 4 - overhauled, painted in body color (only for Moldings B, C and F), 7 - lack of molding)

'Dv_shirm - door fringing and edge edging (0 or missing - factory, 1 - painted in body color)

'Bort_b_nom - the lath above the rear lights (0 or missing - factory, 1- painted in the color of the body, 2 - the lack of a bar)

'Door_pokr1, door_pokr2, door_pokr3, door_pokr4 - presence above the doors (Respectively 1, 2, 3, 4) of the rubber visors (0 or missing - no, 1 - is Black, 2 - have painted body color)

'Peregorod_visible - presence of driver's cabin partition (0 or missing - no, 1 - is)

'Rearbryzg - the presence of a large mudguard under the rear bumper (0 or missing - No, 1 - is)

'Fasch_rad_rep - the presence of a repainted falshradiator grating (0 or Missing - no, 1 - is, 2 - black grille with black headlamps)

'Ikarus_side_tab - the presence of the name plate above the right front wheel (0 or Missing - no, 1 - is)

'Steklo_vod_antisun - presence of a sun-protective sticker on the right driver's window (0 or missing - no, 1 - is)

'Steklolob_antisun - the presence of a sunscreen sticker on the windshield (0 or Missing - no, 1 - is)



Credits

Team:

Anton-EEP - modeling, textures, testing.

Moskur - modeling, textures, scripts, converting.

Teeta - modeling, textures, scripts, converting, sounds.

Alexey_62 - scripts, testing, description (manual).

Special thanks to:

DarkWolf - model sounds

The BusTrainz team expresses their gratitude for the help in the implementation the entire Aerosoft GmbH team.





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