SIEMENS DESIRO HC

BY TEAM ENDSTATIONZUGSYNDROM & FRIENDS

TEAM EZY (DIJONSENF)

x

ALEXANDER L.

x

DENNYS FAHRZEUGHALLE

x

HANNAH

x

RAPH

FOREWORD

First, I want to thank everyone that participated in this Project so far. There is no way, that I could have get here on my own. I can only thank you endlessly for putting this fantastic project together with me.

Above all **Denny, Alex, Hannah** and **Raph** contributed the most to this project.

Denny has been the motivation for the whole project, as he already had the idea to combine the Desiro ML and Twindexx for his old RRX-Repaint. Together we worked in the new RRX version. He gave me some repaint templates and his link for the .5-end car

Alex scripted the new lights and dynamic numbering, which are essential for the external appearance.

Hannah gave us a wonderful cab and interior update, so that the inside of the Desiro HC now looks as much like a Desiro HC as possible. Also, she did a very good update of the FIS textures, making the FIS look a lot more real.

And last but not least, **Raph** gave the DHC a real sound update that perfectly rounds off the whole project and was simply indispensable. He also helped out with the redesign of the cab.

But there are other people I don't want to leave unmentioned:

Ludwig	fot motivation and the idea, to build the correct model für the Desiro HC, as well as pictures and advice
Jypsilon	for the coupling fix on the Twindexx wagons
linusf	for permission to use his Desiro HC sounds from Zusi3
Bastian Railway	for permission to use his sound files

Also many thanks to **Kroneheit, Aaron, StrgV, Giaramses** and **MS3LM/Nicklas** for pictures, advice and beta testing.

Without you, none of this would have been possible, thank you so much!

One year ago, I startet combining the ÖBB Cityjet by SHG/RWA with the Twindexx Vario from Railtraction, to create a new vehicle. The motivation for this was coming from the RRX repaint fo DennysFahrzeughalle, who also combined these both addons. I had the plan to get as close as possible to the real Desiro HC. At that point I had no idea what was possible.
And so, the first version of the Desiro HC was created, which contained mostly external changes, but it looked not that much like a real DHC, but a Desiro ML. I was confident, that It will never be possible to replicate the real model and place it on the ML. A good friend of mine, Ludwig, convinced me then to just try it. That was when a month-long journey began, which is finally finding its ending.

The Siemens Desiro High Capacity is our biggest project yet, apart from our routes. There have been so much changes to the original vehicles, that I do not want to talk about a “Repaint” anymore, as it’s just more than that. I was so lucky to receive a lot of help for this project by a dozen of different people, each of whom contributed their parts to it so that the Desiro HC could get to the point where it is now. That’s the reason, why we published it under the name "Team EZY & Friends", to show everyone that I wasn't the only one working on this. It is my goal, to bring something new to this community that can be used on a lot of routes – as the Desiro HC already can be found in many places in Germany – and even abroad.

I really hope for a lot of scenarios being release for this project, especially for the ODEG design, as it’s the one everything began with and is also my favorite from then on. (And the only one I see and ride on a regular basis).

More sweat, time and lack of sleep flowed into this project than almost any other before. The fast completion of the first version, but still having as few errors as possible, was very important to me and I believe that this was also successful. Nevertheless, a next version is already planned, in which we want to add more things and fix as many bugs as possible.

Alongside the BR1440, the Desiro HC will be the first of two projects in which we will convert an existing vehicle into another. Due to the immense effort involved, I have no plans to do this with another vehicle and will no longer respond to such requests.
Likewise, I will not go into detail about questions/issues that are clearly addressed in this ReadMe. Unfortunately, I don't have all day to provide support, which is why I want to deal with all possible problems, errors and the somewhat more complex installation in as much detail as possible in this document. So if I see someone having a problem that is due to not reading this document, I'll just link them to this readme.

WHAT DID WE CHANGE?

There is a large number of things that have changed, so a rough overview:

- Customization of the external appearance via child objects
- Changes on the script and the driving physics
- Sound update with original sounds from Zusi3 (by LinusF)
- FIS update (new display textures)
- Extensive cab update
- Adjustment of interior textures
- Extended destinations list (over 600 destinations)
- All 6 variations found in DE + one neutral variation
    - Elbe-Spree Network / Ostdeutsche Eisenbahn GmbH (ODEG)
    - Augsburg E-Network / Go Ahead Bavaria (GABY)
    - RheinRuhrExpress / Abellio/NationalExpress (RRX)
    - Bwegt / Deutsche Bahn (Bwegt)
    - Franconia-South Thuringia-Express / Deutsche Bahn (DB FSE)
    - Danube-Isar-Express / Deutsche Bahn (DB DIE)
    - Neutral / Deutsche Bahn (DB Neutral)

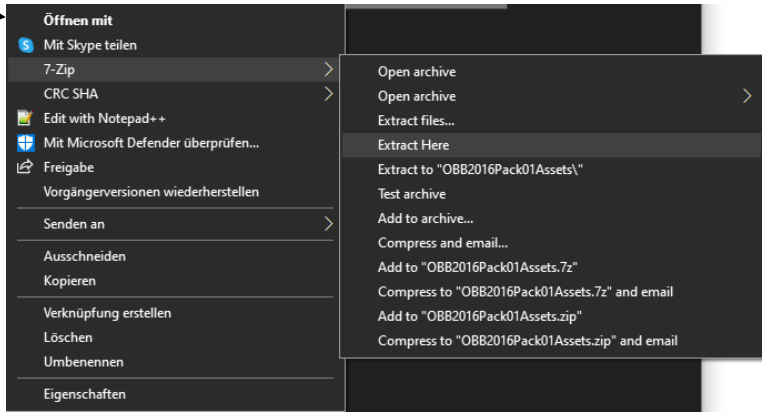
Important: The DB, ODEG, GoAhead and bwegt variants are built in such a way that only the 4744 version OR the 4746 version can be installed. Both use the same folder to store the .bin files. This makes it possible for scenarios to be played and created with both versions without having to switch between the versions, as the TS "swaps" it itself. Unfortunately, this comes with a few disadvantages, which are listed further down in the document under "Known errors and problems/solutions". There are also important notes on setting up scenarios and operating the vehicle in the quick game.
This is not the case with the RRX variant, here 4744 and 4746 are separated from each other.

INSTALLATION

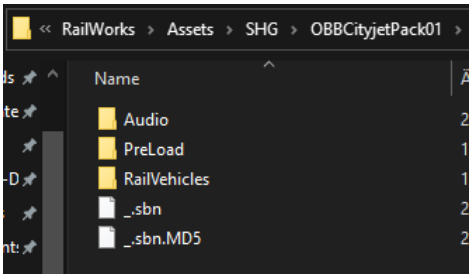
Installing the package is a little more challenging. That's why I tried to describe in as much detail as possible how to do it.
Note: The Utilities program is not required for the installation.

Step 1: Before installing, backups of the following folders should be made:
RailWorks\Assets\SHG**OBBCityjetPack01**
RailWorks\Assets\SHG**OBBCityjetPack02**
Railworks\Assets\Railtraction**Twindexx**

Step 2: First it must be checked whether the ap files of the SHG/RWA Cityjet in the folder was unzipped. You can find these under
(For the ÖBB4744) …\RailWorks\Assets\SHG\OBBCityjetPack01
(For the ÖBB4746) …\RailWorks\Assets\SHG\OBBCityjetPack02
If both Cityjet variants are owned, this must of course be checked under both folders. If the AP-File is still there, right-click on them and unpack with an unpack program of your choice. With 7zip it would look like this:



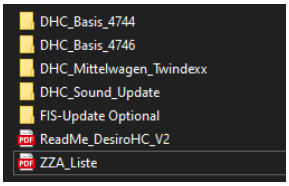
The resulting folder should then look like this in the best case:



(As example for OBBCityjetPack01)

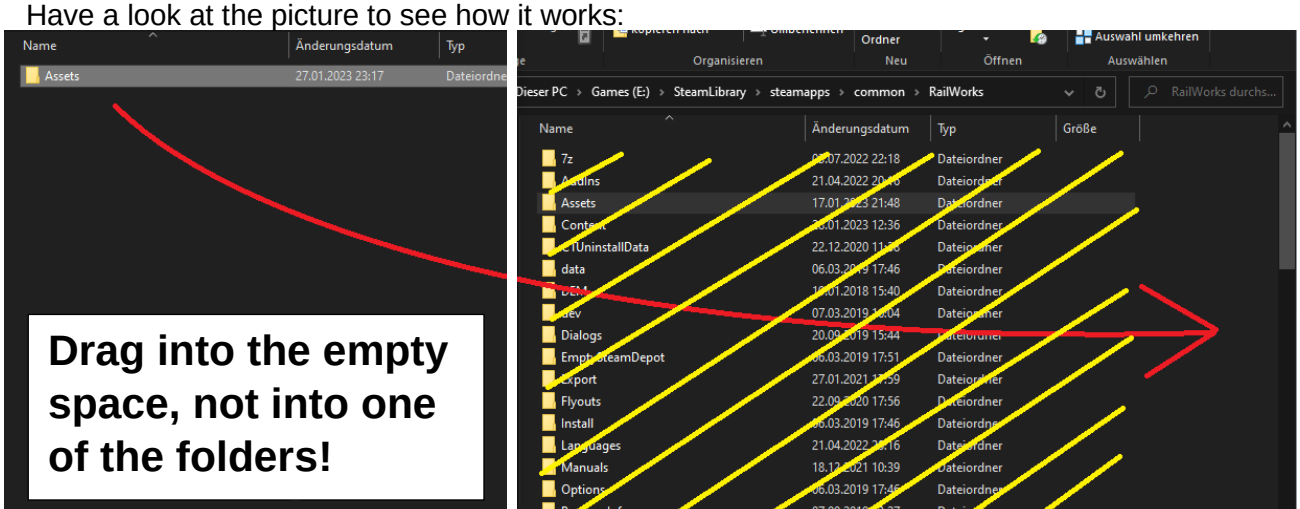
Unpacking is urgently required, otherwise the installer (Step 6) will not be able to find and copy the required model and script files, which means that the vehicle cannot be installed.

Step 3: Now we can install the Desiro HC.
The base folder must be selected for this. This should happen according to which version of the ÖBB Cityjet you own.
The complete download includes the following files:



If you own the RWA/SHG ÖBB**4744** Cityjet, you select „**DHC_Basis_4744**“.
If it’s the RWA/SHG ÖBB**4746** Cityjet, you choose „**DHC_Basis_4746**“.

The selected base folder must be opened now. There should be an „Assets”-folder, that has to be moved into the Railworks directory. (…\steamapps\common\RailWorks)
Have a look at the picture to see how it works:

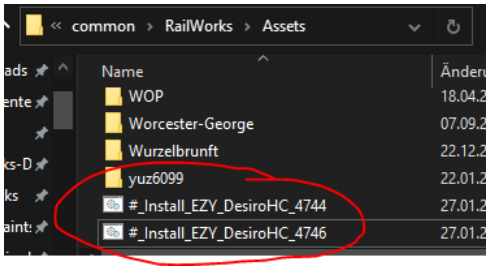


If Windows asks you whether you want to replace files, then have them replaced, otherwise the Desiro HC will not work. The following will be replaced: The FIS file and the old files of the first version of the Desiro HC (if it was installed).

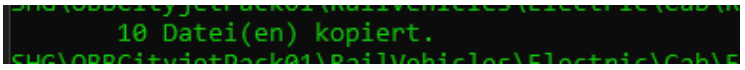
Step 4: Now weg et tot he middle waggons. The folder is also opened here (**DHC_Mittelwagen_Twindexx**) and the contained Assets folder moved into the Railworks directory in the same way as in Step 3.
Again, you have to have everything replaced when Windows asks for it. Only the old files of the first Desiro HC version (if installed) and two sound files are replaced here, which have no noticeable effect on the normal Twindexx.

Step 5: This procedure is also repeated in the 5th step. Now the sound update will be installed. I left this separately so that it does not exist twice in the base folder and thus saved about 55mb of data.
The folder of the sound update is called „**DHC_Sound_Update**“.
This will be opened and the "Assets" folder will be copied to the Railworks directory again, as was done in Step 3. Here 4 (or 8) Desiro ML sound files are replaced. These relate to the cab and change the voice output, Sifa and PZB sound, as well as the activation of the cab. Unfortunately, there was no other way to do this.

Step 6: Now the model files (GeoPcDx) and scripts (.out) have to be copied.
This is done by a small file that can be found under …\RailWorks\Assets.
If you have installed the 4744 base, it is the file **„#_Install_EZY_DesiroHC_4744“**, if you have the 4746 base the file name is **„#_Install_EZY_DesiroHC_4746“**.

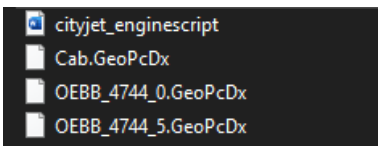


This must now be executed by double-clicking.
A small program will now open, which should show in a few seconds that the Desiro HC is now installed.
Before closing the program, however, you should check if she could really copy all the files. To do this, you have to scroll up in the program. The following should now appear everywhere:

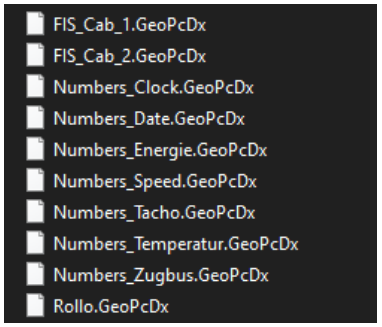


If this is not the case, it must be checked why the file could not be copied.
Common reasons are:
- Wrong basic version installed
- AP file not extracted or not extracted correctly
- Desiro HC folder not inserted correctly
- When unpacking the AP file, the files to be copied were not unpacked by the system

It should be checked whether all files are copied in the correct folder:
First of all, it must be checked whether the files are actually present in the main folder:
common\RailWorks\Assets\SHG\OBBCityjetPack0X\RailVehicles\Electric:



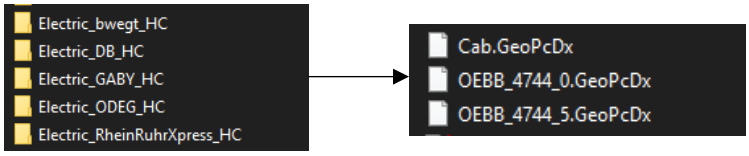
and RailWorks\Assets\SHG\OBBCityjetPack0X\RailVehicles\Electric\Cab:



If this is the case, then there shouldn't be any problems running it of the installer. If so, the files must be manually added to the be copied to the correct folder.

Now it must be checked whether in the CommonFiles folder the file Cityjet_enginescript.out is located.

There must now be 3 GeoPcDx files in all 5 folders of the Desiro HC.



*In the 4746 version you can find the RRX under Electric\RheinRuhrXpress_BR462

The said GeoPcDx files must now also be located in all cab folders of the HC variants.

Step 7 (Optional):

The optional FIS update improves the existing ZZA outside the train.

Old: 

New: 

The update is also installed as in the other steps by moving the assets folder from "FIS-Update Optional" to the Railworks directory (see Step 3).

Step 8 (Optional):

This step is only interesting for those who own both the ÖBB4744 and the ÖBB4746.
All variants use the same basic folder in which the bin files are placed, except for the RRX variant.
It is therefore possible to install both the RRX for the ÖBB4744 and ÖBB4746.
This requires an extra step that is inserted between steps 3 and 4.
The Assets folders are moved from both base folders to the Railworks directory. (See step 3)

However, the following must be observed: The version in which you want to run DB, GoAhead, ODEG and bwegt must be installed second.

Example: If you want to have the 4 variants mentioned above as a 4746 version, you must first install the assets folder from "DHC_Basis_4744" and then that from "DHC_Basis_4746".
When asked by Windows whether files should be replaced: Yes!

Step 4 can now be continued as usual.

THE SIEMENS DESIRO HIGH CAPACITY

Now we come to the vehicle itself. The Desiro High Capacity is a 4- to 6-part double-deck multiple unit. In contrast to conventional double-deck trains, only the middle cars have two floors, while the end cars have one. A special feature is the atypical height for a one-story car, which gives the HC its distinctive appearance. The engine and most of the technology are in the end cars, where there is enough space due to the lack of a second floor. The Desiro HC combines the advantages of both variants, but also has their disadvantages, which leads to a balance in comparison to fully single- or double-decker trains. It can now be found in many parts of Germany, with Bavaria and the Ruhr area having the largest amounts of Desiro HC fleets.

Real Values*:

Producer:	Siemens Mobility
Max Speed:	160km/h (6-Teiler DB Franken-Südth.: 189km/h)
Length:	105,25m / 131,00m / 157,25m
Width:	2,82m
Short-term Power:	6000KW
Hourly Power:	4000KW
Continuous Power:	3290KW
Traction:	300kN
Braking Power:	240kN
Safety Systems:	PZB (alle), LZB (Bwegt), ETCS (Bwegt, DB FSE, Israel)
Electric System:	15kV/16,7Hz; 25kV/50Hz (Israel)
Seats:	400 bis 655

Start:		Number:	Class:
- RRX:	**2018**	**84 (4t) (+ 1x4t 462 083)**	**0462**
- Israel:	2019	24 (6x4t, 18x6t) (Opt. to 60)	40xx/60xx
- Bwegt:	**2020**	**15 (4t)**	**1462**
- GoAhead:	**2022**	**12 (5t)**	**2462**
- ODEG:	**2022**	**29 (15x6t, 14x4t)**	**3462**
- DB FSE:	**2023/24**	**26 (18x4t, 8x6t)**	**1462/4462**
- DB DIE:	**2024**	**25 (4t)**	**4462 (?)**
- Egypt:	2024(?)	94 (4t)	(?)

The marked variants are the ones reproduced in the TS.

* The values in the TS differ from the real values!

THE LINE NETWORK (IN GERMANY)

Rhein-Ruhr-Express (Abellio/NationalExpress)
Since 2018, the first built Desiro HC have been running in the Rhine-Ruhr network between Aachen, Dortmund, Kassel, Minden, Osnabrück and Koblenz. A total of 84 4-car trains were built, which have been operated by NationalExpress (since 2018) and Abellio (2018 – February 2022). A special feature is 462 083, which serves as a presentation and test train for Siemens and does not have any inscriptions or logos of the transport authorities or operators. It is nevertheless used in passenger service under NationalExpress. However, this was not reproduced in the TS.

Augsburg Network (GoAhead)
Since 2022, 12 5-part Desiro HC will be running under GoAhead in the Augsburg network (Los1) between Munich and Ulm. Donauwörth, Treuchtlingen and Aalen with a white and blue design. The curved white stripe that runs along the entire train is particularly striking.
Some of the Desiro HC from GoAhead drive in double or triple traction with the technically similar Siemens Mireo.

Rhine Valley Network (DB)
Since 2020, 15 4-part HC have been on the track in the Rhine Valley between Karlsruhe and Basel, via Baden-Baden, Offenburg and Freiburg. These are equipped with the typical white-black-yellow Bwegt color scheme. They are mainly found on the RE7 and run in single or double traction. Together with the RRX, the bwegt variant still has a cab similar to the Desiro ML and its own software. All later variants received the Mireos cab and software.

Elbe-Spree Network (ODEG)
14 4-car and 15 6-car HC units are operating under the flag of Ostdeutsche Eisenbahn GmbH since 2022. These were primarily ordered by the ODEG for the takeover of the most important RE line in the Berlin-Brandenburg area, the RE1, but are also to be used on other lines, such as the RB17 and allegedly a single 4-section train on the RE9/10. They drive in the typical ODEG livery white-orange-green.

Danube – Isar Network (DB)
25 four-car trains run under the DB between Munich and Passau on the RE3 and the RB33 as the Donau-Isar-Express with beginning in 2024. It will probably get the normal red and white DB color scheme and operate in combination with the also ordered Mireo. Not much is known about this variant yet, as it is the only one not yet shipping. (as of January 2023)

Franconia-South Thuringia Network (DB)
The network between Nuremberg, Coburg, Würzburg, Sonneberg, Saalfeld (and Leipzig) is to be driven from 2023 with 18 four-car and 8 six-car Desiro HC trains from 2024. These also get the typical red and white appearance. However, there are two special features to be noted here: The 8 6-section trains with a max speed of 189 km/h are to be approved for operation on the VDE8 on the Nuremberg – Coburg section. In contrast to all other variants, these do not have double doors, but rather single doors, similar to the KISS-IC2. However, we were not able to reproduce both for the TS.

DRIVABLE ROUTES IN TS
(Reality)

ODEG-Version:
RB17: Wismar – Schwerin – Ludwigslust – Wittenberge
RE1: Magdeburg – Brandenburg – Potsdam – B-Zool- Garten – Berlin Hbf – B-Ostbahnhof – Erkner – Fürstenwalde – Frankfurt (Oder) – Eisenhüttenstadt – Cottbus
RE4*: Stendal – Rathenow – B-Spandau – Berlin Hbf – B-Südkreuz – Ludwigsfelde – Jüterbog
RE8a: Wismar – Schwerin – Ludwigslust – Wittenberge – Nauen – B-Spendau – B Hbf – B-Südkreuz – Airport BER
RE8b: Berlin Hbf – B-Südkreuz – Elsterwerda/Finsterwalde
RE8: Wismar – Schwerin – Ludwigslust – Wittenberge – Nauen – B-Spendau – B Hbf – B-Südkreuz – Elsterwerda/Finsterwalde
RE8V: Nauen – B-Spendau – Berlin Hbf – B-Südkreuz – Airport BER – Wünsdorf-Waldstadt

RE9 Rostock - Ribnitz-Damgarten - Velgast - Stralsund - Bergen/Rügen - Binz/Sassnitz
RE10 (Rostock - Ribnitz-Damgarten - Velgast -) Stralsund - Greifswald - Züssow
(The ODEG is said to be planning to use one of the 4-car DHCs on the Rostock-Rügen-Greifswald route network)

Routes in TS:
1. Berlin – Leipzig/Wittenberg (vT)
2. Knotenpunkt Hamburg (Hamburg – Ludwigslust)
3. S25 Hennigsdorf – Teltow and Ringbahn Berlin (WIP)
4. Stadtbahn Berlin (von Mumpfi)
5. Inselbahn Rügen (DTG)

*In November/December, ODEG tested its Desiro HC for the first time on the RE4 in passenger service.

Bwegt-Version:
RB26: Offenburg – Lahr – Freiburg
RB27: Freiburg – Müllheim (- Neuenburg) – Weil am Rhein – Basel Bad. Bf.
RE7: Karlsruhe – Rastatt – Baden-Baden – Offenburg – Lahr – Freiburg – Müllheim – Weil am Rhein – Basel Bad. Bf. – Basel SBB

Routes in TS:
1. Freiburg – Basel (PAD-Labs)
2. Karlsruhe – Straßburg/Offenburg (DTG)
3. Mannheim – Karlsruhe (DTG)

DB-Version
(Danube – Isar)
RE3: Munich Hbf – Freising – Landshut – Plattling - Passau

Routes in TS:
1. Munich – Augsburg/Rosenheim/Garmisch-P. (DTG)
2. Passau – Linz (RSSLO)
3. Regensburg – Passau (RSSLO)

(Franconia-South Thuringia)
RB25: Bamberg – Lichtenfels - Kronach
RE14: Nuremberg – Erlangen – Bamberg – Lichtenfels – Kronach – Saalfeld
RE19: Nuremberg – Erlangen – Bamberg – Coburg – Sonneberg(Thür)
RE20: Nuremberg – Erlangen – Bamberg – Schweinfurt – Würzburg
RE42: Nuremberg – Erlangen – Bamberg – Lichtenfels – Kronach – Saalfeld – Jena – Naumburg (Saale) - Leipzig
RE49: Nuremberg – Erlangen – Bamberg – Lichtenfels – Coburg – Sonneberg(Thür)

Routes in TS:
4. Nuremberg – Regensburg
5. Berlin – Leipzig
6. Pegnitztalbahn: Nuremberg - Bayreuth
7. Nebenbahnen Oberfrankens/Rodachtalbahn (von Schienenbus)

GABY-Version

RE9: (München – Mering –) Augsburg – Neusäß – Gessertshausen – Dinkelscherben – Günzburg – Ulm
RE80: München – Mering – Augsburg – Donauwörth – Treuchtlingen – Ansbach – Würzburg
RB86: München – Mering – Augsburg – Neusäß – Gessertshausen – Dinkelscherben
RB87: München – Mering – Augsburg – Gersthofen – Meitingen – Mertingen – Donauwörth
RE89: München – Mering – Augsburg – Donauwörth – Nördlingen – Aalen

Routes in TS:
1. München – Augsburg/Rosenheim/Garmisch-P. (DTG)
2. Geislinger Steige Stuttgart - Augsburg

RRX-Version

RE1: Hamm – Dortmund – Bochum – Essen – Mülheim an der Ruhr – Duisburg – Düsseldorf-Flgh – Düsseldorf – Cologne Messe/Deutz – Cologne – Düren – Aachen
RE4: Dortmund – Witten – Hagen – Ennepetal – Wuppertal – Düsseldorf – Neuss – Mönchengladbach – Erkelenz – Geilenkirchen – Herzogenrath – Aachen
RE5: (Emmerich –) Wesel – Oberhausen – Duisburg – Düsseldorf Airport – Düsseldorf – Cologne – Bonn – Remagen – Andernach – Koblenz
RE6: Minden – Herford – Bielefeld – Gütersloh – Hamm – Dortmund – Bochum – Essen – Mülheim – Duisburg – Düsseldorf Airport – Düsseldorf – Neuss – Cologne – Cologne/Bonn-Airport
RE11: Kassel-Wilhelmshöhe – Warburg – Altenbeken – Paderborn – Lippstadt – Soest – Hamm – Dortmund – Bochum – Essen – Mülheim/Ruhr – Duisburg – Düsseldorf-Flgh. – Düsseldorf

Routes in TS:
1. Cologne – Koblenz (DTG, Solin (V2))
2. Cologne – Düsseldorf (Aerosoft)
3. Cologne Airport-Link (Cologne -Troisdorf) (DTG)
4. Projekt Ruhrgebiet (d_ccaa1948, Alexander Brand)
5. Hagen – Siegen (Kuju, Doctorgep (v3.1.4))
6. Münster – Bremen* (vT)
7. Frankfurt – Koblenz (DTG)
8. Koblenz – Trier (Aerosoft)
9. Erftbahn Bedburg – Horrem (alias203)

* By 2030, the RRX should be operating on an extensive network in the Ruhr area, including as far as Osnabrück

(Fictional)

Fiction offers us no limits. Of course, you can use the Desiro HC wherever you like.

It can also be found on our routes in the ODEG version:
Nachteburg – Rannstadt: RE1 (Nachteburg – Brandenburg - …)
Bad Altburger Streckennetz: RE4* (Bad Altburg – Stendal – Rathenow - …)
RE19 (Stendal – Bad Altburg – Ufern – Brens – Schwerin)

But also, for example, the Köblitzer Bergland, the Brennitzer Linienstern or the Kerbestrecke are perfect as fictitious routes to drive it, even if the last one is located in the 90s.

KNOWN ERRORS AND PROBLEMS/SOLUTIONS

The Desiro HC is a very sensitive vehicle. Before it can be driven, you should be aware of the possible complications and known errors.

A. General information on operating the Desiro HC

For scenarios, it is extremely important to always activate all providers so that no loading errors can occur. Above all, both Desiro ML folders must be activated, even if you only have one of the two addons, because on the one hand the 4746 variant has to access both folders and on the other hand the players who have the other version also have no problems with the scenario.

The following Providers are affected:

EZY\Repaints
Railtraction\Twindexx
SHG\OBBCityjetPack01
SHG\OBBCityjetPack02
DFH_Productions\OBBCityjetPack01 (Only for RRX 4744)
DFH_Productions\OBBCityjetPack02 (Only for RRX 4746)

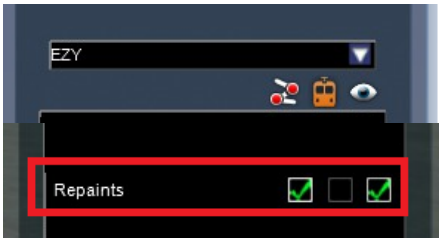
These must be activated in the editor in each scenario.

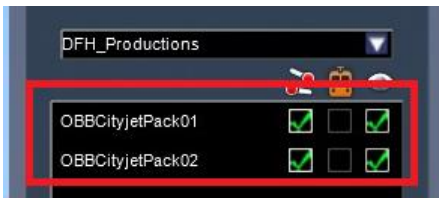
B. Unable to load vehicle in quick drive/ There is no sound in quick drive

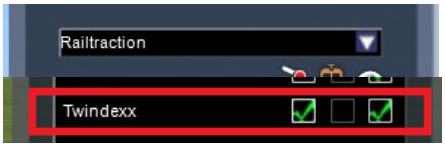
If you try to load one of the train sets in Quick Drive, the loading process may be aborted and you will be returned to the menu. This error finds its cause in the many provider folders that the vehicle needs. For the 4746 version alone, 4 providers have to be activated on the TS side, for the RRX even 5, which often causes problems for the TS.

There are two ways to work around this:
1. Adding the providers via the editor - The route on which the DHC is to be driven must be loaded in the editor.
A backup of the RouteProperties.xml should be created before.
You can find these under ...\Railworks\Content\Routes\[Code of the route]\
It is enough to copy them and save them as RoutePropertiesBACKUP.xml.

The following folders are now searched for and activated via the provider manager on the right:

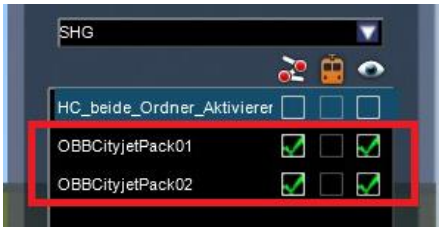






For the 4744 variant:
EZY\Repaints
Railtraction\Twindexx
SHG\OBBCityjetPack01

Additionally if 4746 variant is used:
SHG\OBBCityjetPack02



And if you want to drive the RRX:
DFH_Productions\OBBCityjetPack01 (Only for RRX 4744)
DFH_Productions\OBBCityjetPack02 (Only for RRX 4746)

2. Manually inserting the provider into the RouteProperties.xml
A faster way, which should only be used if you have experience with the TS file system, is to add the provider via RouteProperties.xml.

A backup of the RouteProperties.xml should be created before.
These can be found under ...\Railworks\Content\Routes\[route code]\
It is enough to copy them and save them as RoutePropertiesBACKUP.xml.

The following part is inserted in this file from the `<RBlueprintSetPreLoad>` part:

```
<iBlueprintLibrary-cBlueprintSetID d:id="1917525056">
        <Provider d:type="cDeltaString">EZY</Provider>
        <Product d:type="cDeltaString">Repaints</Product>
</iBlueprintLibrary-cBlueprintSetID>
<iBlueprintLibrary-cBlueprintSetID d:id="1917525064">
        <Provider d:type="cDeltaString">Railtraction</Provider>
        <Product d:type="cDeltaString">Twindexx</Product>
</iBlueprintLibrary-cBlueprintSetID>
<iBlueprintLibrary-cBlueprintSetID d:id="1917525072">
        <Provider d:type="cDeltaString">SHG</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack01</Product>
</iBlueprintLibrary-cBlueprintSetID>
<iBlueprintLibrary-cBlueprintSetID d:id="1917525080">
        <Provider d:type="cDeltaString">SHG</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack02</Product>
</iBlueprintLibrary-cBlueprintSetID>
<iBlueprintLibrary-cBlueprintSetID d:id="1917525088">
        <Provider d:type="cDeltaString">DFH_Productions</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack01</Product>
</iBlueprintLibrary-cBlueprintSetID>
<iBlueprintLibrary-cBlueprintSetID d:id="1917525096">
        <Provider d:type="cDeltaString">DFH_Productions</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack02</Product>
</iBlueprintLibrary-cBlueprintSetID>
```

Example:
Put paragraph here:

```
        <Product d:type="cDeltaString">Sachsen750mm</Product>
    </iBlueprintLibrary-cBlueprintSetID>
    <iBlueprintLibrary-cBlueprintSetID d:id="67778690">
        <Provider d:type="cDeltaString">RLB</Provider>
        <Product d:type="cDeltaString">Freeware_Formsignale</Product>
    </iBlueprintLibrary-cBlueprintSetID>
</RBlueprintSetPreLoad>
<AuthoredLanguage d:type="cDeltaString">de</AuthoredLanguage>
<Version d:type="sFloat32" d:alt_encoding="000000000000F03F" d:precision="string">1</Version>
<TimeZone d:type="sFloat32" d:alt_encoding="0000000000000000" d:precision="string">0</TimeZone>
```

->

```
    </iBlueprintLibrary-cBlueprintSetID>

</RBlueprintSetPreLoad>
<AuthoredLanguage d:type="cDeltaString">de</AuthoredLanguage>
```

Now copy and paste the part from the readme.
In the end it should look like this:

```
        <Provider d:type="cDeltaString">RLB</Provider>
        <Product d:type="cDeltaString">Freeware_Formsignale</Product>
    </iBlueprintLibrary-cBlueprintSetID>
    <iBlueprintLibrary-cBlueprintSetID d:id="1917525056">
        <Provider d:type="cDeltaString">EZY</Provider>
        <Product d:type="cDeltaString">Repaints</Product>
    </iBlueprintLibrary-cBlueprintSetID>
    <iBlueprintLibrary-cBlueprintSetID d:id="1917525064">
        <Provider d:type="cDeltaString">Railtraction</Provider>
        <Product d:type="cDeltaString">Twindexx</Product>
    </iBlueprintLibrary-cBlueprintSetID>
    <iBlueprintLibrary-cBlueprintSetID d:id="1917525072">
        <Provider d:type="cDeltaString">SHG</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack01</Product>
    </iBlueprintLibrary-cBlueprintSetID>
    <iBlueprintLibrary-cBlueprintSetID d:id="1917525080">
        <Provider d:type="cDeltaString">SHG</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack02</Product>
    </iBlueprintLibrary-cBlueprintSetID>
    <iBlueprintLibrary-cBlueprintSetID d:id="1917525088">
        <Provider d:type="cDeltaString">DFH_Productions</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack01</Product>
    </iBlueprintLibrary-cBlueprintSetID>
    <iBlueprintLibrary-cBlueprintSetID d:id="1917525096">
        <Provider d:type="cDeltaString">DFH_Productions</Provider>
        <Product d:type="cDeltaString">OBBCityjetPack02</Product>
    </iBlueprintLibrary-cBlueprintSetID>
```

The second way is only a shortening of the first way, since the entry of new provider folders is normally done by activating them in the editor along the way.

If one of these ways is executed, the TS can access the required files directly without first having to load the provider. As a result, the TS no longer has any difficulties and can load the train in the QD. This approach has worked in most cases. If not, it was usually due to other reasons.

C. Desiro HC is not fully loaded

In other cases, it can happen that instead of a Desiro HC, a Desiro ML suddenly appears when loading a scenario. In this case, the so-called child object, which is responsible for the appearance of the DHC, was not loaded or was loaded incorrectly. This can have two causes: either there were loading problems or - delays or the TS could not find or load the provider folder EZY\Repaints.

The solutions to this would be:
1. Wait. The TS may still have to load the objects, which is why it does not display them at first. If the objects do not appear after 60 seconds at the latest, it is advisable to use a different solution.

2. Activate provider folder EZY\Repaints manually. See point B for this. The provider folders, in which the required objects are located, must be entered manually in the route so that they are always loaded. If that does not solve the problem either, the last point must be considered.

3. The provider folder is incorrectly installed. For this purpose, a new installation must be carried out, which is done exactly according to the instructions so that everything is installed correctly.

If this does not lead to a solution either, all points should be checked again very carefully.
Other possible solutions can also be found in the support thread.
Only then should you submit a support request.

D. Taillight disabled

It may happen that the new light on the rear end wagon does not activate when loading the scenario or selecting the train set in Free roam. However, this problem can be solved with 3 simple steps:
1. At the start of the game, before moving the train for the first time, switch to the rear end car
2. Activate the cab (turn the key)
3. Deactivate the cab again (turn the key back again)

The lights in the end car should now be activated.
This way is not always successful, sometimes this has to be tried several times.

E. Incorrect UIC numbers on the side walls

Currently we also have the problem that the UIC numbers are not displayed correctly on the sides due to the script. For the coming updates it is planned to display new, suitable numbers here as well.

F. Sound stopps in outside view (4746 only)

Unfortunately, it is the case with the 4746 version that when approaching from the outside, the sound breaks off at 4-5 km/h and can no longer be heard. According to Raphael it is not possible to fix this bug. But there is a solution to restore the sound in the outside view. It is enough to switch briefly to the driver's cab and then go straight back to the outside view. The sound should now be heard again.

G. Sifa sounds too early

If the Sifa is activated, you will probably quickly notice that the Sifa voice output tone is emitted as soon as the indicator light lights up. In reality, this only lights up for 2.5 seconds, then the Sifa voice output sounds for 2.5 seconds and then the emergency braking occurs.
Unfortunately, according to Raphael, this delay cannot be implemented.
Possible workarounds for this are: Disable Sifa or get into the habit of resetting Sifa early enough so that the voice output doesn't even come up.

H. New cab for ODEG/GABY/DB

The cabs of the ODEG, GABY and DB differ significantly from those of the RRX and Bwegt variants. These are more like the Desiro ML cabs, while later Desiro HC versions got those of the Mireo.
Theoretically, it would be possible to build a completely new cab model, but this involves enormous effort (probably more than half a year). Since the Desiro HC is just a hobby project and each of us has other things to do, we decided against installing it.

I. Different windows on middle car and end car

The Twindexx and Desiro ML windows have different glass in the TS. While they are almost dark on the ML, they nearly don't seem to exist on the Twindexx.
Unfortunately, this difference is clearly noticeable, but we have not found out whether this can be changed by a texture.
Our wish is to one day put new fake windows on the Twindexx, which firstly resemble the colors of the end car and secondly correspond to the construction of the real HC.

J. 2D plane in the cab / train driver is missing in the cab

When the new front was put on in the Desiro ML, a new wiper had to be built because the old one was hanging too far into the object.
However, since the old wiper cannot be removed, we needed an emergency solution so that not two windscreen wipers are visible on the object. We finally decided on a 2D image of the cab that is clamped in front of these wipers. Unfortunately, this means that the driver is no longer visible. We could have painted this on the 2D image, but it would then always be displayed, even if it is the end of the train or if it is in the siding.
However, we are already working on a solution that should work on the basis of how light works.

Tob e continued…

OTHER

Many thanks to RailworksAustria and SkyhookGames for the development of the OEBB Cityjet / Desiro ML and also many thanks to Railtraction for the Twindexx, whose waggons are best suited as HC cars.
These are of course required in order to be able to use the vehicle:

[SHG/RWA] Desiro ML 4744
[SHG/RWA] Desiro ML 4746
[RT] Twindexx Vario

IMPORTANT! Due to the many different participants, changes to the vehicle, messiness and sensitivity of the Desiro HC, we unfortunately cannot allow repaints from the community, at least not without cooperation and consultation.

The project may not be published on other sites.
I am not responsible for any damage to the PC or the software
could result from this project! (It's pretty unlikely anyway.)
It can be used in scenarios, these may also be uploaded,
as long as the project is not delivered with the scenario.
If you have any questions or problems regarding the project, please DO NOT contact RWA, SHG or Railtraction! They are neither responsible for this project nor for any damage caused by it!

The Twindexx model is copyrighted by **RailTraction**, the 4744/4746 by **SkyHookGames** and **RailworksAustria**.

The copyright of the child objects/sounds used lies with

- **Dion/Dijon-Senf** (Main-Childs)
- **DannysFahrzeughalle** (Link, Childs on the RRX)
- **Alexander L**. (Dynamic Numbering, Lights, related scripts)
- **Hannah** (photo textures for cab, sounds)
- **Raphael** (Sounds)
- **linusf** (Sounds)
- **Bastian Railway** (Sounds)

So, if there are any questions/ideas/suggestions/problems, then let us know.
Please comment in the download area, send a private message or use our Support-Thread on Rail-Sim.de.

TEAM EZY AND EVERYONE ELSE INVOLVED WISHES YOU A LOT OF FUN WITH THE SIEMENS DESIRO HC!