



Trainsimming Modern Austrian Railways

February 2004



A 1044 on the Semmering. Model: Protrain Semmering

- Background
- Routes
- Engine classification
- Color schemes
- Rolling stock
- Resources

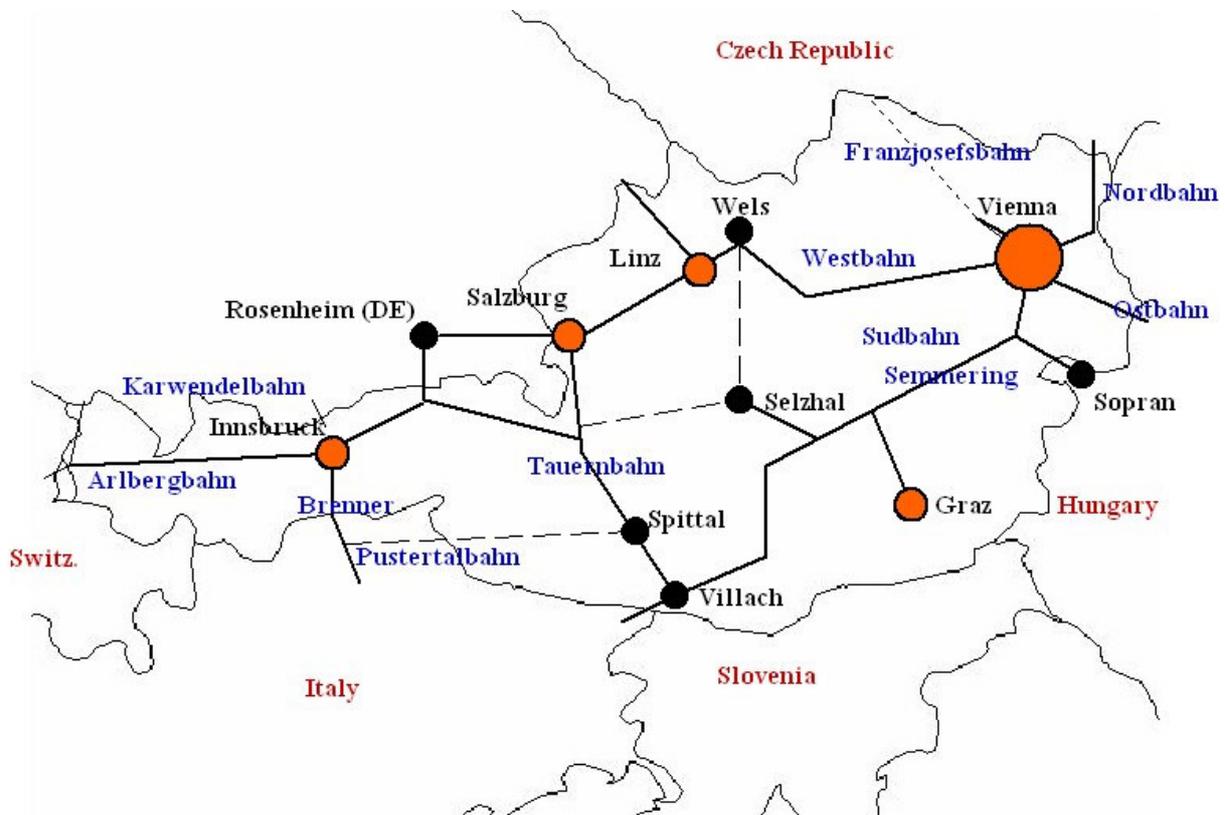
Austria is a Alpen Country twice the size of Switzerland, with some 6000 Km of lines, of which 5683km, are run by the ÖBB, the Austrian Federal Railways, the remainder by some 19 Private companies.

Austrian Trainsimmers, have produced some very fine models of locomotives, EMUs and DMUs and coaching stock, with coverage of almost all existing Austrian locomotives in all the color schemes, as well as a number of high standard routes, particular mountain routes, available either as Freeware or Payware (through Protrain).

As with all the European rail administrations Austrian locomotives have a look unique to Austria, although with the increasing emphasis on Trans-European freight, and the merger of manufacturers the latest locos (Taurus electric locomotive, the Hercules Main line diesel and the Hector diesel shunter) are pan European Designs,

As before this is an introduction to What locomotives are used, where, when, for what purpose, in what color scheme.

Geography



Outline Map of Major Austria Railway Lines

Austria is a long pear shaped country, 600 km long, twice the size of Switzerland, and approximately the size of Maine.

The Western part is a narrow corridor between Germany and Italy, and Austria is also surrounded by Slovenia to the South, the former Austro-Hungarian states of the Czech and Slovak Republics, Hungary, and Switzerland (and Liechtenstein).

Austria has just over eight million German-speaking people, with the capital Wien (Vienna) with 1.5m on the Danube. The next largest is Graz to the South with 219,000. The other large cities are Salzburg, Linz and Innsbruck.

Most of the country is alpine or sub-Alpine and is heavily wooded, with the plains around Vienna, which are the edge of the Hungarian plains, and the Danube valley in the Northeast the only lowland areas and contain most of the population.

The Danube flows eastwards and is a working river, which also connects by canal to the Rhine. There are three ranges of Alps, and they are lower to the East with four passes:

The **Brenner** Pass, located in the West is the lowest alpine pass and provides the most direct routes between Germany and Italy.

The **Tauern** and **Phryn** pass provides North West- south East links between the Alps.

The **Semmering** Pass connects the Viennese basin with valleys going south, and providing northeast –southwest passage to Stria, Slovenia and Italy.

The first steam railway in Austria was in 1837 from Floridsdorf (Vienna) to Deutsch-Wagram, a length of 13 Km. The locomotive 'Austria' built by Stephenson's work in Newcastle took 21 Minutes.

The Railway structure then evolved, from terminal stations in Vienna, and named after the direction.

The **Nordbahn** (Northern railway) goes from Vienna to Prague), Warsaw (Poland) and Brunn. The Nordbahnhof was completely rebuilt in 1965, and is now a through station linked to the Südbahn

The First part of the **Südbahn** was built in 1841. The first loco came from the USA, named Philadelphia, is commemorated in the Philadelphia-Bridge in Meidling. The Südbahn goes south from Wien Südbahnhof to Wiener Neustadt, then through the **Semmering** pass, with its 15 Tunnels und 16 Viaducts and eventually to Trieste on the Adriatic coast, which served as Austria's port. There is also a branch to Graz. The Semmering is a UNESCO World Culture listed structure.

In 1859 a link was made between the Südbahn and the Nordbahn, and in 1961 this formed the backbone of the newly opened **Vienna S Bahn** system.

The **Westbahn**, originally known as the **Kaiserin-Elisabeth-Bahn** was built from 1856-58 from Wien to Linz, 1860 to Salzburg, where it branches to go to Munich, or straight on to Innsbruck, Liechtenstein and Switzerland.

In Vienna they are currently constructing a link from the Westbahn to the Südbahn – the **Lainzer Tunnel**, and making part of the Westbahn four track from Vienna to Wels, with construction started on a completely new **Wien St Pölten high speed line**.

The term Westbahn now generally includes the Giselabahn (Salzburg- Zell am See- Wörgl), the Nordtiroler Bahn (Kufstein- Innsbruck) and the **Arlbergbahn**. The Westbahnhof in Wien was heavily

damaged in the war and in 1952 was completely rebuilt when the Westbahn was electrified.

The **Arlbergbahn** links Innsbruck westwards and was completed in 1883, with the 10.2 Km Arlbergtunnel the longest in Austria. It was electrified in 1925.

The **Karwendel-Bahn** opened in 1912 from Innsbruck to the German border was electrified from opening and has 16 Tunnels and 14 bridges, and is a shorter link from Innsbruck and München, than over Kufstein and Rosenheim.

The **Brenner-Bahn** links Innsbruck with Bozen in Italy and was built between 1864 und 1867, and electrified in 1928. Bozen was part of Austria until the end of WWI. The Italian part was electrified a year later with a different electrical system so until the recent introduction of multi-system locomotives they were changed at Brenner

The **Tauernbahn**, opened in 1909, is part of the line from Salzburg to Triest, and was opened in 1909 with 17 Tunnels and 47 large bridges and viaducts. It was electrified in 1935, and has been considerably improved in recent years

The **FranzJosefsBahn** goes from Vienna to Prague (Czech republic) and was built from 1867

Eurocity (EC) trains now come into Westbahnhof, or Südbahnhof (with Ost Bahnhof) for trains to Berlin, Italy and Eastern Europe. Franz Josefs Bahnhof, Wien Mitte and Wien Nord now handle mostly local suburban and regional trains.

Austria has two important **Corridor trains**, that is a train traveling between two parts of one country through the territory of another, which do not stop and with special customs arrangements for certain through passengers. These are from Salzburg to Innsbruck via Germany and the **PustertalBahn** forming the link from Innsbruck to Villach via Brenner and Lienz through Italy, which is electrified at 3000 V DC.

The state took over the Railways in 1873, with the mountain lines electrified as above. After WWII the Westbahn, Südbahn and the Wien S Bahn system were electrified, and all the major lines are now electrified.

The **ÖBB Österreichischen Bundesbahnen** or Austrian Federal railways (then known as BBÖ) were formed in 1922/3. From 1938-45 it was part of the Deutschen Reichsbahn. Since 1993 it has been a State owned company, with a separate Infrastructure and Service Company. It has 5600 Km of track and approximately 720 electric engines, 470 diesel, 355 EMUs or DMUs and 3300 Passenger wagons and 19500 freight wagons. It also has some steam engines on track mountain railways and operates buses.

There are also a number of private railways

In recent years the ÖBB has considerably invested in rolling stock with in 1997 a contract with Siemens for 75 high performance Taurus electric locomotives (and an option for a further 275), with delivery scheduled from 2000. In 1998, ÖBB placed a contract with the then Siemens subsidiary, Vossloh Verkehrstechnik, for 60 Hector diesel shunters. The first locomotive was delivered in December 2000. In 2001 the OBB ordered Hercules mainline diesels for the freight division from Siemens.

240 double deck carriages have been introduced in the province of Vienna.

MSTS Routes



Wien West Bhf (Wienerwald)

Wienerwald By SimRudi

<http://members.chello.at/simrudi/>

This is the Westbahn from Wien Westbahnhof to St Pölten, a distance of 60 km. The route is double track or more, but there are tight speed limits on the track. The Route is exquisitely made, with fine depictions of Wien West Bhf and the entire route. It is however FPS hungry. It is the major passenger route to the West of Austria and Germany and DB rolling stock including ICE's use the route.

The route is available from the author on a CD and comes with activities by Speedy and freeware rolling stock

Protrain Semmering and Semmering 3.1 by SimRudi

With the exception of the MSTS standard routes, it is rare to find the same route modeled commercially and by a freeware author. What makes this particularly interesting is that that the team that produced Semmering for Protrain originally released earlier versions of the rolling stock as freeware, which are still available.

The Semmering is quite a short route 70km, and the Protrain has a silent cab-ride video (there and back) to make up for it. Prior to SimRudi's release of version 3 I felt that that Protrain had the edge, as it had correct signaling, better scenery and was slightly longer, but the latest version by SimRudi closes the gap.

Protrain Tauernbahn

A far more substantive offer from Protrain, and it takes two hours to travel from Villach to Salzburg over the Tauernbahn. In contrast to ProTrain's DB offerings where the rolling stock is very weak, both ProTrain's Austrian offerings have very fine stock, and it is a pleasure to drive this over a route that combines double track, with some single track in the center area.

The route is major one for cargo and in particular RoLa Rolling highway trains.

Arlbergbahn Version 2.0 by Kami Kiafar

An electrification of the Innsbruck - St Anton route that comes with MSTTS, but retaining the mechanical signals. The Author has announced a Version 3.0 with correct signals

The following are or will be available, but I do not have them:

Protrain Karwendelbahn

The Route from Munich to Innsbruck. Due to appear in H1 2004.

Gesäusestrecke by SimRudi on CD from Author

Single-track line from Amstetten on the Westbahn to Selzthal, an important Rail junction in the center of Austria

Franz Josef- Donauufer Bahn V1.1 Freeware by P.H.Koppi

A 200 km Double track electrified line from Wien in the direction of Prague.

ÖBB numbering/classification scheme

Since 1986 the ÖBB has used an 8 letter numbering system, where the first four numbers are the class, the next three the number of the loco in the class and the last a check digit eg 1116 001-7 is the first loco of the 1116 class (Taurus dual voltage). Subclasses are often

done by restarting the series numbers at 500, and rebuilds often by a second 1, eg class 1042, with a subclass 1042.5, which were rebuilt and reclassified as 1142.

Thousand	Hundred	Tens
0 Steam		
1 Electric	0-7 AC 8 Dual Voltage AC and DC 9 DC	09 –19 Fast passenger 20 –39 Heavy goods 40 –59 Mixed traffic 60 –69 Shunting 70 –89 Historic 90 –99 narrow gauge
2 Diesel		01 –19 Fast over 2000 PS 20 –39 Freight over 2000 PS 40 –59 Mixed 1000 –2000 PS 60 –64 2 axel less 1000 PS 65 –67 3 axel less 1000 PS 68 –69 4axel shunter over 1000 PS 70 –79 4 axel under 1000 PS 80 –89 rack 90 –99 Narrow gauge
3 Steam motor unit		
4 EMU		01 – 19 Fast 20 –2 9 Passenger MU 60 –79 Baggage or goods MU 80 –89 Railbus 90 –99 Narrow gauge
5 DMU		As EMU
6 Driving cabs for EMUs/DMUs	000 – 499 For EMU 500 – 999 For DMU	
7 Intermediate Car for EMUs/DMUs		
8 Departmental vehicles		

Color scheme

The schemes for Electric and diesel locomotives are similar.

- To 1970 Fir green. Some Engines earmarked for museums retained this color
- From 1970 Blood-orange with ivory stripes, ivory roof and black frame
- From 1985 Umbrian gray roof and frame replaced ivory or white aluminum roof and black frame.
 "Pflatsch" Logo replaces the Flying wheel logo
 Reverse Red scheme only on 1012, 1014/1114, 1822 and 1163. The 1822 have an oversized logo.
- From 1990 Traffic red with gray-white strips replaced Blood orange and ivory.
 Wider white skirts replace the stripes this is known to modelers as the Epoch V scheme.
- From 2000 On 1016, 2070, 2016
 Traffic Red with large logo, or ÖBB in large letters



Class:	1010	1110
Number	20	30
Built:		
Built:	1955-1965	1959-61
Speed:	130	110
	Km/h	Km/h
Multi:		
Number in Use:	Ret 2003	Ret 2003
Color schemes	(Green); Blood Orange; Traffic Red; Ep V traffic Red	



Use: Originally Fast Passenger and freight on the Westbahn and Südbahn over Semmering, ending their lives in heavy Freight mainly in West Austria, including trips into Germany.

A Co-Co loco, designed at the time to meet the requirements for high speed, with 20 built for 130 Km/hr (1010) to be used from Salzburg, and 30 for 110 Km/hr on the Western mountains (1110). Ten 1110 were rebuilt with Electric brakes, and can be recognized by the additional housing on the top. There were reclassified as 1110.5.

An 1110 015 going through Linz July 2003 with a RoLa. Model Kami Kiafer

1012 Three 230 Km/hr locomotives were built for the rebuilt 200 Km/hr West Bahn in 1997 as prototypes of a larger series, but because of a change in administration the cheaper Eurosprinter design 1016 was purchased. The Three locomotives are used on the Brenner Pass for Rolling Highway trains. They have the White/Red scheme

Class: **1014/1114**
 Number **18**
 Built:
 Built: **1993/94**
 Speed: **170 Km/h**
 System **15 kV 16
 2/3 Hz/
 25 kV 50
 Hz**
 Multi: **Yes**
 Push-
 Pull: **Yes**
 Number
 in Use: **17**



Color schemes **Reverse Red; some with Rail Cargo logo**

Use: Passenger and freight eastwards from Vienna, into Czech and Slovak Republics and Hungary, and on the Süd Bahn to Graz

A Fast dual voltage locomotive built partly for the opening trade east of Austria following the fall of the iron curtain, particularly to Hungary for a planned 1995 exhibition, but also to pull a proposed pendulum train. Two locomotives had some ballast weight removed and were Reclassed as 1142

Model: Stefan Pufler

Class: **1016** **1116**
 Taurus
 Number **1999 -** **1999**
 Built: **-**
 Built: **50** **163**
 Voltage **Single** **Dual**
 Speed: **230 Km/h**
 Multi: **Yes**
 Push **Yes**
 Pull
 Color schemes **Traffic Red,
 Some with
 large logo,
 others with
 large ÖBB.**



Use: Fast Passenger and heavy freight, but now also on Regional push pull trains. On trains into Germany, where it takes EC as far as Cologne, because DB took back its driving trailers the trains are topped and tailed by a 1016. From mid nineties the ÖBB started to completely modernize its Electric locomotive fleet, and after considering the Adtranz DB 101 and the Alstom BB 36000, choose a design based on the Siemens Eurosprinter, similar to the DB 152, but with a streamlined front. faster speed and less adhesion.

The initial 50 (Class 1016) are single voltage, the next 350 ordered are dual voltage 15kV 16 2/3 Hz and 25kV 50 Hz (Class 1116) capable of running into Hungary. This has now (December 2003) been changed and the last 68 of the order will now be 50 multi-system locomotives with 3000 V DC capable of running into Italy and Slovenia. It will be based on the DB189 with the Taurus front.

DB has also bought some of these to run trains into Austria, as the Austrians considered the DB 152 to be overweight, and the Hungarian Railways (MAV), and private railways also have them.

Today's Railways, believes that OBB may have bought too many of these locomotives for its needs, and is considering leasing some to DB, and has leased some back to Siemen's Dispolok.

Class: **1040**
 Number **16**
 Built:
 Built: **1950 -1953**
 Speed: **90 Km/hr**
 Multi: **No**
 Number **Ret 2003**
 in Use:
 Color **(Green);**
 schemes **Blood**
Orange;
Traffic
Red



Use: Original Passenger and freight on the Westbahn, now shunting in Selzthal.

The 1040 was the Austrian post war design for Electric locomotive based on the prewar 1245, built for the electrification of the Westbahn from Salzburg to Wien, then moved to the West Bahn, until used for shunting at Selzthal.

Based on the pre war design, they were essential an interim step while the 1041 was developed.

The ÖBB has announced that it will withdraw the last examples next year.

Model: Lokzug

Class:	1041	1141
Number	25	30
Built:		
Built:	1951	1955 -
	1953	1958
Speed:	90 /110	110
Multi:		
Number	Ret	Ret.
in Use:	2002	2003
Color	(Green);	(Green);
schemes	Blood	Blood
	Orange	orange;
		Traffic
		red/gray



Use: 1041 Regional trains and Trip freight working on the Westbahn. The have lost their diagramed work in December 2002.

1141 Originally fast trains on the Süd and Westbahn, now Regional Trains in Oberösterreich. They are due to be replaced by 1116 at the end of 2003.

The 1041 is actually a development of the 1040, although longer with a different suspension, but with the same performance characteristics. Some rebuilt to go at 110 Km/hr, renumbered as 1041.2.

The 1141, is a further development to go at 110 Km/hr originally used for pulling fast Trains
 A 114 1 with a Selzthal to Bischofshofen train July 2003 Model Protrain Tauernbahn

Class:	1042.0/5	1142
Number	257	162 R
Built:		
Built:	1963 - 1977	R 1995/96
Speed:	130 Km/150 Km/hr	150 Km/hr
Multi:	No	Yes
Push	No	Yes
Pull		
Number in Use:	-0 40 -5 14	162
Color schemes	Blood orange; red; Red Ep v	Blood orange, red, red Ep V



Use: 1042 Passenger and traffic Austria wide
 1142 Push pull regional trains, and freight traffic Austria wide
 The "Standard" Austrian locomotive

Developed in the mid 50's when a Bo-Bo design could perform as well as a Co-Co design, and with better performance on tight curves such as the Semmering. There are differences in the power and the brakes in the series, with the ones having a top speed of 150 Km/hr being classed as 1042.5.

The last series was rebuilt for multi-traction and push pull, with door controls, a new engine and better brakes and reclassified as the 1142.

They originally had a corner window in the cab, which was filled in from 1990.

An 1142 with a very short Regional train Salzburg Hbf May 2003. Model: Protrain Semmering

Class:	1043
Number	10
Built:	
Built:	1971 - 74
Speed:	135 Km/hr
Multi:	No
Number in Use:	Sold to Sweden in 2001
Color schemes	Blood Orange



Use: Goods traffic on the Tauern route between Villach and Tarviso (Italy)

The first thyristor locomotives for the ÖBB, built in Sweden by ASEA based on the on the SJ (Swedish Railways) design Rc2.

Model: Mats Olson und Mats Strid Repaint: Riker

Class:	1044/1144
Number	1044 126
Built:	1044.2 90
Built:	1976 –1987
	1989 - 1995
Speed:	160 Km/hr
Multi:	
Number in Use:	1044: 119
	1044.2: 49
	1144 42
Color schemes	Blood orange;
	Red
	Red Ep V;



Use: Universal Locomotive used for light and heavy passenger and freight in all parts of the ÖBB net

Pleased with the success of the 1033 the ÖBB decided to buy a more powerful faster version, with a speed of 160 km/h.

This time decided to buy closer to home with a development of led by Swiss manufacturers, and after some initial problems caused by cold air and snow getting into the engine 126 were built, plus another 90 of the series 1044.2.

Those modified with push pull and multi traction are renumbered as 1144. They are compatible the class 1142 and 1016/1116

A 1044 going through Salzburg May 2003 Model Protrain Semmering

Class:	1046
Number	25
Built:	
Built:	1956 -
	1959
Speed:	125 km/hr
Multi:	
Number in Use:	Ret 2003
Color schemes	Blood Orange;
	Traffic red;
	Traffic red Ep V



Use: Passenger trains on lines North of Wien.

Built as a Motor cab with a baggage car for an EMU (as the 4061), they were converted into pure locomotives in 1976.

Two were converted in dual system locomotives for Hungary and reclassified as 1146 and retired in 1999.

Model: lokzug

Class:	1063	1064	1163	Use:
Number Built:	50	10	20	1063 Shunting and trip work in Wien, Linz, Graz and Villach
Built:	1979 -91	1984 -90		
Speed:	80 Km/100 Km/hr from .06	80 km/hr	120 Km/hr	1064 Villach and Wien Kledering Freight yards
Power Multi:	1520/2000 No		1600 No	1163 Shunting, trip and some passenger trains at Wien Süd and Salzburg
Push Pull			No	
Number in Use:	50	10	20	
Color schemes	Blood orange; Red	Red	Reverse Red	

Developed to meet the need for a medium Electric shunter from a design used by RuhrKohl AG. The three series of the 1063 have minor differences and from 06 onwards the speed is 100 Km/hr.

The first 37 1063 are twin system locomotives with ability to use 25kV 50 Hz.

The 1064 is a Co-Co version of the 1063 built for use at Villach and Wien Kledering Freight yards

The 1163 is a longer, more powerful development of the 1063



1063 shunting at Villach May 2004 Model: Protrain Tauernbahn



Signaling

The ÖBB signaling has Distant and Main signals. The distant signals are square, and have been copied from the Swiss system, the main signals are oblong.

See Roland Smiderkal's pages (in English) for a guide to Swiss signaling. <http://www.8ung.at/smi/asr/ensigch.html>

Class:	1822
Number	5
Built:	
Built:	
Speed:	140 km/hr
Multi:	Yes
Number in Use:	5
Color schemes	Reverse Red



Use: The Brenner Loks - Five Twin system 15kV/16.7Hz and 3000V DC that can use the Italian system. The concept was not taken further by the OBB, and no more were built.

Originally used freight trains, but now used for Korridor trains between Lienz and Graz

1822 can be distinguished from the 1014 by its length. Model: Stefan Pufler

Diesels

Class:	2016 Hercules
Number	70 ordered
Built:	
Built:	2002 -
Speed:	140 Km/hr
Multi:	
Trans	Electric
Number in Use:	
Color schemes	Traffic Red, most with new logo



Use: To replace older diesels like the 2050 on non-electrified lines, with the first ones based in Wiener Neustadt.

The **2016 Hercules** is essentially a diesel version of the Europrinter design, like the Taurus (1016), although with a cab front more like the DB 152, and is designed to replace all the mainline diesels.

They are having a lot of teething problems, including insufficient braking power.

Model: Simon Hellekalek

Class:	2043	2143
Number	77	77
Built:		
Built:	1962 -	1965
Speed:	100	100
	Km/h	Km/h
Multi:		34
Trans:	Hydraulic	
Number in Use:		
Color schemes	(Green) Blood Orange; Traffic Red; Traffic red with skirt; One has been repainted Green	



Use: Passenger and Goods on Non Electrified lines

Built to replace steam on non Electrified lines, the 2043 were built by Jenbacher and the 2143 by SGP, at the same time, and there are differences between the two, in particular the 2143 is lighter, with a more powerful motor. Some 2043 were modified for the Erzberg with magnetic brakes and are renumbered in the 2043.5 series.

A 2043 Model: H.shob

Class:	2048
Number	34 ex DB
Built:	
Built:	
Speed:	100 Km/hr
Multi:	
Number in Use:	Withdrawn in 2003
Color schemes	Traffic Red



Use: Used for shunting and maintenance trains

34 ex DB V 100 (DB 211) remotorised with Caterpillar engines and bought between 1991 and 1993. Replaced by the 2070.

2048 at St Pölten Model: MadMike Repaint Newtech

Class:	2050
Number:	18
Built:	1958 and 1962
Speed:	100 Km/h
Multi-Trans:	Yes Electric
Number in Use:	10
Color schemes:	Green (Some left); Blood orange; Traffic red



2050 Model:

Use: Originally Passenger until the lines were electrified, now Heavy Freight based in Wien Nord.

Designed by General Motors and built by Henschel, and bought by the OBB who required a more powerful design than the first post war diesel the 2045.

Will be replaced by the 2016 once the latter's teething problems have been resolved.

Class:	2060	2062
Number:	100	65
Built:	1954-1962	1958-1966
Speed:		
Multi-Trans:		
Number in Use:	11	43
Color schemes:		



Use: Shunting

The 2060 are used for shunting and stations, as are the more powerful, and longer 2062 developed from it. Being replaced by the 2070.

Although being withdrawn there was still a 2060 shunting in Wien West in Oct 2003 Model: Günther Grund

Class: **2067/2167**
 Number **111**
 Built:
 Built: **1959 -1978**
 Speed: **65 Km/hr**
 Multi: **Some**
 Number **109**
 in Use:
 Color **All now**
 schemes **Traffic Red**



Use: Shunting plus light trip

The largest class of diesels. The 2167 is an adaptation for radio control

Model: Viper

Class: **2068**
 Number **60**
 Built:
 Built: **1989 -1994**
 Speed: **100**
Km/hr
 Multi: **No**
 Number **60**
 in Use:
 Color **Traffic**
 schemes **Red**



Use: Shunting in all major location.

The ÖBB were looking for a shunter capable of doing 100 Km/hr and therefore a four-axle arrangement. The first five prototypes were built in 1989/90 and later adapted to work in oil refineries/storage areas. Their success meant 55 further were ordered.

2068 At Salzburg Dec 2003 Model: Roby

Class:	2070 Hector	
Number:	90 ordered	
Built:		
Built:	2000 -	
Speed:	100 Km/hr	
Power:	738 kW	
Multi:	To be fitted latter	
Trans:	Hydraulic	
Number in Use:	90 ordered	
Color schemes:	Traffic Red	
Use:	Shunting in all major location.	

The ÖBB ordered in 2000 sixty Vossloh (Mak) locomotives of the Type G800BB, which is a development of the G1204, to replace the entire small and medium shunting locomotives "Verschubloks" in service, for example the 2048, 2060 and 2062. They are fitted with automatic coupling and radio control, with Multi-traction capability to be fitted later.

"Hector" was the oldest son of the king of Troy and means "Hector" meant "support", and there is a small hector symbol on the tank.

2070 at St Pölten July 2003 Model Cas Kramer Repaint: Roby

Class:	4010	An EMU designed for long distant journeys, including cross border into Switzerland. Consists of a Motorcar, four coaches with various arrangement of 1st and 2 nd class, open and compartment, and a driving trailer.	
Number:	29		
Built:			
Built:	1965 -78		
Speed:	150 Km/h		
Multi:	Yes		
Number in Use:	23		
Color schemes:	Ivory/Blue; From the 90's, the refurbished ones are in the EC Red/gray/Gray-white design, when the corner windows in the cab were covered.		
Used:	Used FJB, Südbahn, Tauernbahn, and some other minor reoutes.		



Model: 4010 in refurbished in the EC livery Salzburg 2003. Model Protrain Tauernbahn

Class:	4020	With the success of the Wiener S Bahn the ÖBB needed new EMU's. The 4020 is a three set EMU comprising a motor trailer, coach and driving trailer, that borrows many of the concepts of the ET 420 introduced by DB for the Munich S Bahn. Used for S Bahn and regional work in Wien, but also in the Tirol and VorAlberg.
Number	120	
Built:		
Built:	1978 - 1987	
Speed:	120 Km/h	
Multi:	Yes	Colour schemes Ivory/Blue, later Off white/blue with a revised pattern on the ones that have had their heavy maintenance.
Number	120	
in Use:		



Model: 4020 in the older Livery Model Kami Kiafer

Class:	4030	No Model available
Number	72	
Built:		
Built:	1956 - 1976	
Speed:	100 Km/Hr	
Multi:		
Number	54	
in Use:		
Color schemes	Ivory/Blue	
Use:	Originally S Bahn and regional passenger service in Wien, Salzburg and Villach, now mainly Regional service only. often without the middle cars, although a shortage of 4020's means they are still used for S Bahn work.	

A Four set EMU with a Motor cab, two trailers and a driving cab for regional work and the then new Vienna S Bahn.

Talent 4023/4024 Talent

The first EMU version of Bombardier's Talent, used as a DMU by DB and other operators.

An initial order for 11 3-car sets for use around Salzburg. A second batch of 60 four car sets has been ordered, of which 20 will be equipped with 25 kV Ac for workings into Czech republic, Slovak and Hungary, and 10 will have a different interior and 1st class to replace the 4010.

Class:	5047	5147	By the mid 80's the ÖBB had invested in new carriage stock and EMU's but not Rails cars or DMUs. In order to offer the same level of comfort, and to reduce costs on branch lines by using one man operated designs they invested in Single car rail cars built in Austria but based on the DB VT 627. This is the 5047 series.
Number	100	10	
Built:			Later on they bought ten single cabbed versions to form five two set DMUs (5147 series).
Built:	1987-1995	1992 - 1993	
Transmission	Voith Hydraulic Turbo		Both types are in use by Private Austrian railways.
Speed:	120 Km/hr	120 Km/hr	
Multi:	Yes	Yes	The 5047 are widely seen in Austria, the 5147 are based only at Wiener Neustadt.
Number in Use:	100	10	
			Color: Both types are in the scheme below, Ivory, blue and Red, with the ivory replaced with off white in later models.



5147 Two car sets St Pölten April 2003. Model Kami Kiafar

5022 Desiro

The ÖBB have ordered 20 Desiro DMUs (used by DB and private operators) from Siemens with 2 * 315 kW Power rating, and mechanical transmission (to save costs against hydraulic transmission).

Other stock

The ÖBB has Diesel and Electric locomotives and EMUs for use on the narrow gauge Mariazeller Bahn. It also has some small rack steam locomotives for mountain railways, and has a museum fleet of retired locomotives

Coaching stock

UIC - Z



An EC Train with UIC-Z carriages in the old and new three tone gray scheme Salzburg September 2003

Built from 1977 for EC trains. The initial stock was leased from the Eurofirma stock built to the Eurofirma specification, with similar stock being leased to other European Rail Administrations. The stock was originally in Eurofirma orange, but changed to a red and Umbrian gray scheme. Speed is 160 km/hr with some modified for 200 km/hr

They are being refurbished from 2002 with a three tone gray scheme with a red roof, and also used on what the OBB call internal EC trains.

There are variations in the design and some are not RIC compliant, although can be used in Germany and Switzerland by convention (agreement).

See <http://www.uncia.de/oebb-wagen/> for details (in German)

Lange Schlierenwagen



1161 with a local train with Lange Schlierenwagen in CityShuttle livery Semmering July 2003

Introduced in 1982 for inland traffic, based on the Swiss Design, and also used on routes into Germany and Switzerland.

Originally in an orange and ivory scheme (Jaffa scheme), they are being converted to Push pull

operation with driving cabs, with a red and gray scheme. The OBB is now fully refurbishing them, and the refurbished stock has the silver gray and red CityShuttle scheme.

Double deck stock CityShuttle



A 2067 shunting out a set of Double deck stock from Wien West June 2001

The ÖBB has recently invested in Double deck stock with driving trailers for use in Niederösterreich and around Wien. These have a silver grey and red scheme with the ones for Niederösterreich a picture of a Weasel on the side, while those for Vienna have a logo 'Wiener Szene'.

The ÖBB is now using doubledeck stock on the S bahn with class 1142 and 1166 locos to reduce pressure on the aging Class 4030.

They are also being introduced refurbished Double deck on the new Airport service, in the City Airport Train green scheme. CAT is jointly owned by ÖBB and Vienna airport, and the line has recently been completely rebuilt.

Sleeping Wagons and Couchettes



A Sleeping Car and a couchette wagon on EN 325 at Wien West July 200

The ÖBB has a full range of sleeping wagons and couchettes, including TEN wagons, and double deck carriages that were part of the CityNight line services. They have also purchased carriages from NS (Netherlands) and SBB (Switzerland).

RoLa Rollende Landstrasse - Rolling Highway



A RoLa going through Linz July 2003 with the couchette wagon in its special livery.

As a major route between Germany and Italy, the Austrian net has several major routes used for Rolling Highways. The economics were discussed in the review of Italian railways. All Austria routes except the Semmering have been modified to take lorries of 4m corner heights, on rail wagons with small wheel. All RoLa trains have a couchette for the drivers, and OBB is updating these, with a special scheme. Currently because of a shortage of couchettes some hired NS ones are also used.

The Routes are:

Manching (Germany) to Brennersee on the Italian border via Brenner

In Austria Wels is the major terminus with routes to
 Wels – Villach on the Tauern
 Wels – Sopron in Hungary
 Wels – Szeged (Hungary)

There are some other less frequented routes.

Resources

ÖBB-Fahrzeuge Markus Inderst Geramond 2002

Austrian Railway pictures at <http://www.eisenbahn-bilder.com/>

Number in use from <http://www.elektrolok.de/Statistik/beheimatungenoebbaktuell.htm> at Nov 2003, or a list by Markus Inderst for Dec 2001, updated for retirements.

Photo-essay on the Semmering (in German) at http://www.ebepe.com/html/semmering_1.html

MSTS Sites

You can find most trains on www.thetrain.de, which perhaps inevitably has now introduced a registration system, or

Tainsim Austria Community <http://trainsim.netshadow.net/>, which has a registration system.

From Philip.Chesters@trainsimming.com

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Also in this series:

Modern German Railways (Three parts)

Modern French Railways (Three parts) Also in French at <http://www.trainsimfrance.net/>

Modern Swiss railways

Modern Italian railways (Three parts) Also in Italian at www.trenomania.it

From: <http://www.train-sim.com/>