

Mini-guide to Finland

The Network

Finland has a population of 5.4 million with 1 million living in the greater Helsinki area. The other major cities are Tampere, Turku and Oulu. There are 3,678 miles of railway in the national rail network of which only 300 miles are not single track. 1,983 miles are electrified.

The first line opened in 1862 between Helsinki and Hämeenlinna via Riihimäki and the second between Riihimäki and St. Petersburg (Russia) via Vyborg in 1870. At the time Finland was effectively under the control of Russia so these and all future lines were built to 5ft gauge. By the time of the Russian revolution in 1917, when Finland declared independence, most of the rail network was complete. In WW2 Finland lost territory to Russia which included Vyborg, which had been its second city. The rail network around Vyborg reflected this and it resulted in some routes in the east of Finland being severed. It was not until 40 miles of new railway were completed in 1966 that a direct eastern route between Helsinki and Joensuu was re-established. Today there are four border crossings with Russia. The busiest by far is at Vainikkala, which is the only one to see passenger services. There is also a freight-only border crossing with Sweden which employs dual-gauge tracks between Tornio (Finland) and Haparanda (Sweden) freight yards.

Rolling stock

All passenger services in Finland are operated by VR (Valtion Rautatie) which translates as State Railways. Freight services are now open to competition but VR still enjoy a near monopoly.

There are two classes of 25kV electric Bo-Bo locomotives.

Sr1 of which 110 were built in Russia and 2 were assembled in Finland from spares. They were delivered between 1973 and 1985 and VR is currently looking to replace some of this fleet.

Sr2 a class of 46 built to the Swiss loco 2000 design and assembled in Finland with locally made bodies. Both classes are used on passenger and freight trains.

There are 3 classes of mainline Diesels.

Dv12 a B-B Diesel-hydraulic built in Finland from 1964 to 1984 in 3 series. 192 were built in total, some have been scrapped recently. They are used on freight trains (often in multiple of up to 3) and a few regional passenger services.

Dr14 a B-B Diesel-hydraulic built in Finland from 1969 to 1972. There are 24 in the class and are used for heavy shunting and short freight trips.

Dr16 a Bo-Bo Diesel-electric with 3-phase motors built in Finland from 1985 to 1993. There were 23 in the class some having been scrapped. Used mainly around Oulu until lines in the area were electrified, they can now be seen more widely on passenger and freight trains.

There are 6 classes of EMU.

Sm1 and Sm2 are very similar both having 2 cars. 50 Sm1 built in Finland from 1968 to 1973 and 50 Sm2 built 1975 to 1981 to an improved design. Introduced for the electrification of suburban lines around Helsinki, they can work in multiple with each other.

Sm3 a class of 18 having 6 cars to a Fiat Ferroviaria (later Alstom) design which tilt and are often referred to as Pendolinos. The first 2 assembled in Finland and were introduced to service in 1975 after much testing. The remaining 16 were built in Italy and introduced from 2000 to 2006. They have a top speed of 220km/h, but this is only achieved on Finland's single high-speed line between Kerava and Lahti. Elsewhere they are limited to 200km/h. They provide flagship services between Helsinki and major cities and have an S designation in the timetable.

Sm4 a class of 30 having 2 cars and built by CAF in Spain. Introduced from 1999 to 2005 and used on outer-suburban services from Helsinki.

Sm5 a class of 41 having 4 articulated cars built by Stadler in Switzerland to their low-floor FLIRT design. They are still being introduced in 2012. The first one entered service in 2009, they will gradually replace older class Sm1.

Sm6 a class of 4 having 7 cars owned by Karelian Trains (a VR & Russian Railways joint venture) and used between Helsinki and St. Petersburg on Allegro branded services. Built by Alstom in Italy and introduced between 2010 and 2011 they are a dual-voltage updated version of the Sm3. Vainikkala to St. Petersburg is 3000V dc.

There is just one class of DMU.

Dm12 a class of 16 built by ČKD Vagonka in the Czech Republic. A single car design introduced from 2005 to 2006 with a capacity of 63 seats and used on regional services.

There are 4 types of passenger coach, all built in Finland.

Double-deck InterCity with air-conditioning, still being introduced from 1998, when all current orders are complete VR will have 219. Built to 4 design variations, passenger, sleeper and still to be introduced (in 2012) restaurant and driving trailer (for push-pull services). Top speed is 200km/h on the high-speed line and 160km/h elsewhere. If a train consists entirely of double-deck coaches it has an IC2 designation in the timetable.

InterCity with electric heating, 50 introduced 1988 to 1992 with a top speed of 160km/h. Always used on trains with one or more double-deck coaches, these have an IC designation in the timetable.

Blue Express with electric heating, some also with oil fired heating for use with Dv12 which have no electric train heating supply. Introduced from 1961 and being phased out, there is a sleeper version. These have a P designation in the timetable.

Commuter with electric heating, 57 introduced from 1982 to 1987. Used on rush hour suburban services in Helsinki and in the past to strengthen weekend trains of Blue Express coaches.

There are also two types of double-deck car transporters used on overnight trains to the north. One is an open top-deck design contemporary with Blue Express coaches and the other is a newer design totally enclosed contemporary with double-deck coaches.

Russian coaches are used on the Helsinki – Moscow service (and also on excursions from Russia to Finland). N.B. you cannot use this train or the Allegro services for journeys within Finland. Vainikkala is only served by trains to and from Russia. However you can visit the station area by bus from Lappeenranta, access to the platforms is at the discretion of the Finnish border guards.

Freight

VR markets its freight services under the name of Transpoint. Traffic is dominated by the “forest industry” i.e. trains of timber and wood chips, home grown and Russian, to paper and saw mills. Paper and sawn timber are carried in vans most of which is exported by sea. Other domestic trains carry scrap, steel, chemicals and various metal concentrates. Oil, iron-ore pellets, chemicals, fertilizer and containers from the far-east arrive from Russia for domestic consumption and onward connections by sea. Cars and agricultural machinery bound for Russia are imported via Finland. Cross border traffic almost exclusively uses Russian wagons, the Russian locomotives do not venture beyond the border stations. You can see Russian dual-voltage electrics and the occasional diesel at Vainikkala.

Freight to and from Sweden consists mainly of containers transferred by crane between wagons on adjacent tracks (one of each gauge). Likewise general goods are transferred on pallets between vans on adjacent tracks. There are also bogie changing facilities for through running of wagons. Swedish T44 and Td diesels can be seen at Tornio and Finnish Dv12 diesels at Haparanda.

Trams & Metro

Helsinki has an extensive tram network. There is also a basic one line Metro (underground) to the western suburbs serving two termini. The line is currently being extended to the eastern suburbs.

Preservation & Museums

Helsinki has a Tram Museum.

Hyvinkää, easily reachable by suburban train from Helsinki, is the location of the Finnish Railway Museum Both are open all year round but check before travelling for any closed days.

All the following may have very limited opening / operational days even in high summer. Their websites often seem to change so it's best to Google them.

Porvoo Museum Railway runs trains on summer Sundays from Kerava (suburban train from Helsinki) to the old town of Porvoo. You can also catch a boat between Helsinki and Porvoo so a round trip is possible.

Haapamäki is home to a Steam Locomotive Park and a separate preservation society located in an adjacent roundhouse. They can be reached by train from Tampere, Jyväskylä and Seinäjoki.

Pieksämäki is home to The Savo Railway Museum.

Suolahti has the Keitele Museum with some railway interest, the nearest mainline station is at Jyväskylä.

Toijala at the junction of Turku - Tampere and Helsinki –Tampere lines has a museum in a preserved roundhouse

Jokioinen Museum Railway (JMR) run narrow-gauge trains from Humppila (on the Turku – Tampere line) to Minkiö. (A visit here is easily combined with a visit to Toijala.)

Nykarleby Jernväg run narrow-gauge trains from Nykarleby to Kovjoki, the nearest mainline station is at Pännäinen.

There are various excursions with preserved locomotives (steam and diesel) and Dm7 DMUs, check locally.