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Readers will doubtless have seen reference in manufacturers information and magazines to Eras (Epochen in German). Just what these eras are seems to be confusing, judging from remarks I have heard, and this article will try to explain what they are all about, using the data contained in the NEM standards.

In their development, the railways went through various stages, from the earliest beginnings to the networks of today. Each of these stages constitutes an era (Epoche) and had its own set of characteristics which made it different from the other stages, an important consideration in the modelling world. The European railways developed in a broadly similar way, with similar dates separating the eras. Each era is designated by Roman numerals.

Table 1, below, shows the general European dates and characteristics of each era. The eras are not sharply defined, and the dates are an indication only of major changes. Inevitably, there are overlaps from one era into the next.

Each country has its own more definitive table, within which each era is subdivided into periods. Periods serve to break down an era into sections in which are described events that may not, in themselves, be sufficient to prompt an era change, but which are important enough to be noted. In maintaining a fairly standard breakdown of the dates of eras across Europe, it has been necessary to be flexible in terms of what is important, and the degree of importance. For example, the nationalisation of the Swiss railways was a milestone event, yet it does not constitute an era change date.

Table 2 shows the situation in Switzerland specifically.

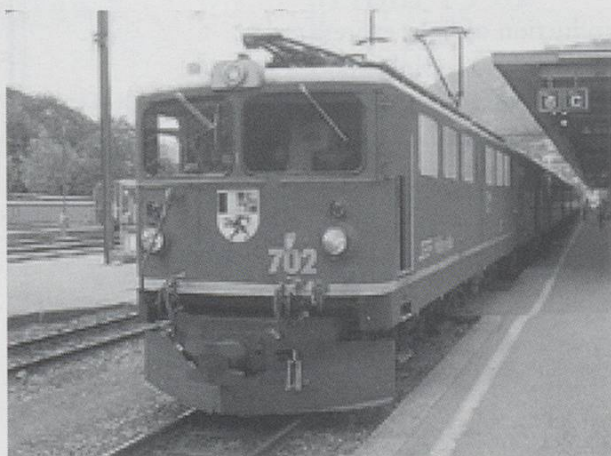
Very definitely from the modern Era. Zürich S-Bahn loco no.450.096 carries advertising for the recently introduced 9 hour ticket. It is seen on Rte.S5 at Rapperswil en route to Pfaffikon in June 1999

Photo. John Jesson



TABLE ONE
General European eras

Era	Approximate Period	Characteristics
Era I	To 1925	<p>Period of railway building, from the beginnings to the completion of a connected network.</p> <p>Origin of many state and private networks mainly of a regional nature.</p> <p>Development of the steam locomotive to the end of its basic form. Colourful appearance of rolling stock. The heyday of the railways, through their monopoly of transport and communications.</p>
Era II	1925-1945	<p>Development of large state railway companies in several countries.</p> <p>Extensive standardisation of building and operational rules, also standardisation in the building of rolling stock.</p> <p>Introduction of electric train services.</p>
Era III	1945-1970	<p>Reconstruction and new organisation following the war.</p> <p>Beginning of traction changes through the extension of electric and diesel working and gradual reduction of steam locomotive requirements.</p> <p>Development of a modern rolling stock fleet and new signalling technology.</p>
Era IV	1970-1990	<p>Widespread completion of the changeover of traction to electric and diesel.</p> <p>Introduction of an internationally agreed inscription scheme for passenger and freight vehicles.</p>
Era V	From 1990	<p>The coming into being of high speed lines.</p> <p>Fundamental revision of the international inscriptions for vehicles.</p> <p>Advertising liveries.</p>



Two digital views on the RhB from August 1999, left at Chur, below at St Moritz.

Both photos. Jonathan Plotnek



TABLE 2
Swiss eras in detail

Era	Approximate Period	Characteristics
Era I	To 1920	<p>Period of railway building from the beginnings to the virtual completion of the network. End of steam locomotive development. Beginnings of electric working.</p>
Period a/b	1844-1882	<p>First individual lines, and their combination into the backbone of the Swiss railway network through regional private companies (NOB, VSB, SCB, BSB, SO, JBL, GB). From 1874, building of narrow-gauge lines.</p>
Period c	1882-1902	<p>Opening of the Gotthardbahn. First 4-axle express train coaches. Introduction of through trains over the larger regional private railways (but without through locomotive working). Fusion of the railways of Western Switzerland into the JS.</p>
Period d	1902-1920	<p>Formation of the SBB on 1st January 1902. 1903 - Repurchase of the JS. Heyday of steam working. 1909 Nationalisation of the GB. 1913 Opening of the BLS and Engadine line (RhB) with electric traction. Building of narrow gauge, electric country railways.</p>
Era II	1920-1945	<p>Electrification of most lines. Steam and electric working side-by-side on the SBB.</p>
Period a	1920 1928	<p>Electrification of all SBB main lines. SBB electric locos painted brown.</p>
Period b	1928 1937	<p>Second stage electrification (important connecting lines and many narrow-gauge lines). SBB electric locos painted green from 1928.</p>
Period c	1937 1945	<p>1937 Introduction of light express trains. Wartime electrification using wooden masts. 1944 First high-power bogie locomotive (BLS Ae 4/4).</p>

TABLE 2 - continued
Swiss eras in detail

Era	Approximate Period	Characteristics
Era III	1945-1970	<p>Completion of electrification. Large-scale introduction of high-power bogie locomotives and railcars. Replacement of steam shunting locomotives by diesels.</p>
Period a	1945-1956	<p>Series building of light steel coaches. Beginning of SBB modernisation after a standstill since about 1933.</p>
Period b	1956-1970	<p>1956 Abolition of 3rd class. Freight wagon livery changes from grey to red-brown (bauxite). 1958 First standard coaches (EW-I). 1964 UIC inscriptions on freight vehicles. End of service of 2- and 3-axle passenger coaches on the SBB. SBB shunting locomotives painted red-brown instead of green.</p>
Era IV	1970-1990	<p>Train services formed of standardised rolling stock. UIC inscriptions on passenger vehicles. Introduction of Type "R" overhead line equipment.</p>
Period a	1970-1980	<p>From 1970, UIC inscriptions on passenger vehicles. Freight wagons finished in galvanised grey or unpainted aluminium. Large-scale renewal of rolling stock by private lines, both standard and narrow gauge. 1975 Introduction of "Swiss Express" rolling stock (EW-III).</p>
Period b	1980-1990	<p>Introduction of Type IV standard coaches (EW-IV). 1980 Basic revision of UIC inscriptions for freight vehicles. 1984 SBB bogie locomotives painted red.</p>
Era V	From 1990	<p>New numbering scheme for SBB locomotives (at first, only for new build). Livery for SBB local trains changed to blue / light grey. 1990 Introduction of the Zürich S-Bahn with double-deck stock. Colourful freight vehicles. Eurocity trains. Start of building work for "Bahn 2000" and "Alpentransit" (Gotthard and Lötschberg base tunnels)</p>