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**Autor:** Hitchen, David  
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# ***DIMINISHING STANDARDS* - Part 1**

## **David Hitchen**



VBZ 715+1375 Hauptbahnhof, 01/01/1986.

ALL PHOTOS: Neil Wheelwright

As iconic forms of transport or individual types of vehicle, have disappeared from use in their conventional environments, it has been usual for some form of celebratory form of organised tour for enthusiasts, or a public farewell, to take place. Books have been written, or magazines have featured articles, either leading up to their demise or as a valedictory after their withdrawal. However, one such icon has almost slipped away from its homeland with little or none of the commemoration that it should have justly deserved. This is the Swiss Standard bogie tramcar.

First produced in 1940 it was designed for use on all Swiss tramways that were operating at that time. A number of the smaller systems that could not finance their own upkeep, let alone new trams, closed completely during this period leaving the Swiss Standard trams to the larger and more prosperous tramway undertakings. Apart from a few bogie trams developed from the

original Swiss Standard range still in use in Basel, and a small number of officially preserved examples, there are not any of these trams now in daily service within Switzerland. As of mid-2009, only the last batch of standard cars built for Basel some time after the rest remain in service. However, as these are now over 40 years old, they will not be around for much longer.

The story really starts much earlier than 1940 when most Swiss tram systems were still relying on a very mixed selection of four-wheeled trams and trailers with very limited passenger capacity, although there were a few bogie cars such as the centre entrance Elephant trams from the 1930's in use in Zürich. Operators cast their eyes towards the U.S. where the newly developed PCC cars were being heralded as the future for urban streetcar design although their generous dimensions would not be suitable for the limited clearances of the metre gauge systems in Switzerland. However, certain





TOP: VBZ "Karpfen" bogie cars 1419+779 at Irchel. Note the odd central window on the leading car designed for an abortive plan to insert an offside door for running in tunnels with central platforms, 08/12/1985.

MIDDLE: VBZ 1549+769 stabled outside Hard depot by Escher-Wyss Platz, 08/12/1985.

BOTTOM: VBZ trailer 749 interior, 01/01/1986.



features were worthy of consideration such as modern, powerful traction motors, resilient wheels, pedal control, interior design, etc., so a number of equipment trials were conducted on existing trams in both Bern and Zürich. A more thorough test involved Biel-Meinisberg-Bahn (BMB) Ce4/4 No.1 which subsequently went to the Lugano-Cadro-Dino Bahn in 1941 upon closure of the BMB and was withdrawn in 1970 on the closure of its adopted line.

When the tests were completed the approved components were incorporated into a very pleasing body design agreed by manufacturers and operators alike and the Swiss Standard (VST Typ 1) tram was born.

Zürich took a leading role in the development of the type as in 1940/1 it placed two orders to be built concurrently. One for 20 trams (351-370) with conventional hand operated controllers, and one for 18 trams (401-418) with pedal control gear. Both batches were to be built by Schweizerische Waggon- und Aufzugfabrik AG, Schlieren, (SWS). The 351-series had Maschinenfabrik Oerlikon (MFO) electrical equipment whilst most of the 401-series had Brown Boveri & Cie, Baden, (BBC) electrics. In practice 406-408 were constructed by Schweizerische Industriegesellschaft, Neuhausen-am-Rheinfall, (SIG) with BBC equipment. Nos.351-370 subsequently became 1351-1370. The first nine were rebuilt in 1980-2 into works cars/snow ploughs, renumbered to 1921-1929 (and still exist today) whilst 1360-1370 remained in passenger service.

Nos.401-418, were also renumbered to 1501-1518 between 1947 and 1954. The first of this series to be withdrawn was 1502 in June 1978, and the last 1517 in November 1982. This was bought for preservation at



Uster, whilst 1501 still exists on the BVB at Bex radically altered into a snow plough.

More hand controlled Swiss Standards (1371-1375) were delivered from 1947 by SWS/BBC/MFO. These lasted until the 1977-1987 period, being withdrawn earlier in part because they were less powerful than the other 13xx series cars. Later in 1947 a much larger batch (1376-1415) started to be delivered by SWS/MFO and many of these lasted in Zurich service right up until the late 1990s. 1392 has been preserved by the Zurich tram museum (TMZ).

Between 1949 and 1952 pedal control was back in favour and SWS/BBC delivered Nos.1519-1550. The 15xx series cars, being considerably less powerful than the 13xx cars, only lasted until the 1978-1987 period with 1538 being withdrawn, first due to accident damage and 1541 being the last in September 1987, with 1530/1 being preserved. Two additional pedal control trams (1651/2) were built by SWS/MFO in 1949 and renumbered to 1551/2 in 1963. No.1551 lasted until the September 1987 withdrawal, whilst 1552 left passenger service in 1979 to become an instruction vehicle.

In addition to the powered Swiss Standards Zürich also invested in matching bogie trailers. The first batch (711-720) were delivered by SIG in 1946/7. As the popularity of this type of tram increased, more of these trailers (721-770) arrived from SIG between 1947 and 1953.

Whilst ostensibly built to a standard design, the two series of cars were distinguishable, the 15xx cars having small ventilators at the top of the side windows and having a slightly squarer look than the 13xx series cars.



TOP: VBZ 1551 at Central, 01/02/1986.

MIDDLE: VBZ snowplough 1929 at Central, a conversion from a Swiss Standard, 23/02/1986.

BOTTOM: VBZ 1367 interior. Note the plaques on the bulkhead behind the driver - builders plates in the centre and the full revision history on the left, 01/01/1986.







TOP: VBZ 1400+753 Susenberg Strasse in a livery advertising the Zoo, 01/06/1986.

MIDDLE: VBZ 1387+ trailer at Neumarkt, 23/02/1986.

BOTTOM: Preserved VBZ 1392+732 Hegibachplatz. Preserved cars in their original livery, 26/05/2007.



In the early 1990s a revision of the whole network of tram routes in Zürich resulted in a large scale withdrawal programme. The delivery during the 1980s of around 170 Tram 2000 family cars saw the withdrawal of Swiss Standards even though they were still in excellent condition after nearly 50 years of hard service, such as the high standard of Zürich's maintenance. At this time a new tramway was being developed in Pyongyang, North Korea, and a deal was struck for the purchase of eighteen power cars and matching trailers which were shipped off with almost immediate effect. These may still be operating in this secretive country! The last three routes in Zürich using Swiss Standards appear to be Nos. 5, 6 and 10, all three of which involved these sturdy vehicles hauling the deadweight of their unpowered trailers up steep inclines.

The story in Zürich would not be complete without mention of the Karpfen (Carp) series of bogie trams and trailers as these were an

updated version of the hand controlled Swiss Standards. They were built in 1959/60, the power cars (1416-1430) by SWS/MFO and the matching trailers (771-786) by SIG. These too have now been withdrawn. One set has been preserved in the Zürich Tram Museum and all the rest have been acquired by the tramway in Vinnitsa, Ukraine. Similar additional trailers (787-801) were built by Flug und Fahrzeugwerke A.G., Altenrhein, (FFA) in 1962/3 and 1973. Some of these were coupled to some of the 1600 series "Mirage" articulated trams, but these trams and trailers are now being replaced at the present time by the ever growing fleet of modern Cobra trams.