The Unauthorised History of ASTER

LOCOMOTIVES THAT CHANGED THE LIVE STEAM SCENE

fredlub |SNCF231E | 8 februari 2021

1 Content

2 Introduction

Aster Hobby Co., Inc. from Yokohama, Japan was established in 1975. In 2016 a collaboration with Accucraft, a company from the USA with manufacturing in China, began which started a new future for ASTER. This can be considered also as the end of an era, so I decided to compile a "history of ASTER" from 1975 until 2016. This booklet is a history based on the products of ASTER and not of the company. Although I have met some ASTER staff members and have visited ASTER in Yokohama I do not know much about the history of the company and its employees. I however do know about the ASTER products based on hand-on experience with building ASTER locomotives from kits and running these on gauge 1[1] tracks at different places, but lately mainly on the Driehuis Junction railway in my own garden. I call this an unauthorised history but it could also be called a personal history since it is made by me and not discussed with the ASTER company or any previous or current ASTER distributer, re-seller or customer (except Tamme).

The book is organised on date of issue of the locomotives[2]. For each decennium a chapter is included and for each locomotive type a paragraph[3]. Further there is a chapter on related products from ASTER and other suppliers, a chapter on the qualities of an ASTER locomotive and a chapter reviewing the total ASTER production. A final chapter lists the concise specifications of all locomotives.

Much is available in print about ASTER and their models, especially in the catalogues and leaflets issued by ASTER or their distributors. Further, on the internet not only the ASTER website (http://www.asterhobby.com/) but also websites like https://www.southernsteamtrains.com/reference.htm present a lot of information.

Acknowledgements

Thanks to Tamme, Jacques and Ludo for proofreading and tips. Thanks to Ludo for designing and building the Driehuis Junction railway.

Cover page

The picture on the cover page shows my ASTER NYC Hudson blowing off steam on my garden layout.

End page

The picture on the end page shows an ASTER tie with ASTER tie pin.

Remarks

Any remarks or comments are welcome, they can be given via fred.van.der.lubbe at planet.nl.

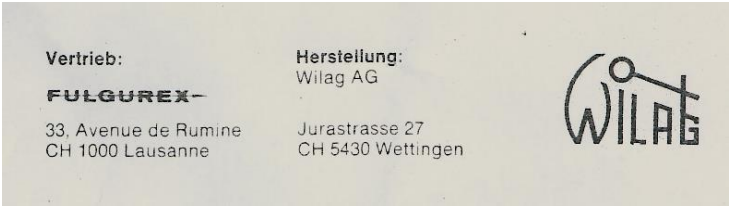
[1] Gauge 1 is a track gauge (i.e. the width between the two rails in a track) of 45 mm. 1-gauge or gauge 1 or "Spur I" was the smallest gauge when standard gauges were introduced by Märklin in 1891. Nowadays it is generally considered the largest gauge for model trains. In the beginning only toy trains were made, but when trains modelled to a prototype started to be introduced a scale of 10 mm to the foot (in the UK) or 1:30 (in continental Europe) was used, both about the same at 5% too large for the gauge. In the USA 1-gauge had some popularity until the nineteen twenties. In the thirties 1-gauge also virtually disappeared from the European scene being pushed aside by the popularity of 0-gauge. In the fifties in the UK the G1MRA (Gauge 1 Model Railway Association) kept using the gauge, mainly for running live steam. In the late sixties Märklin re-introduced the gauge in their product range. Märklin used the (correct) scale of 1:32 and this scale is used now generally outside the UK. In the UK both 1:32, especially for ready-made products, and 10 mm to the foot, for scratch building and some kit building, is used.

[2] The release date of a locomotive is not exactly known; sources like pricelists and catalogues differ sometimes in the order that the locomotives became available.

[3] The name given to the locomotive type i.e. the paragraph is sometimes divergent from the name ASTER used.

3 1975 - 1985

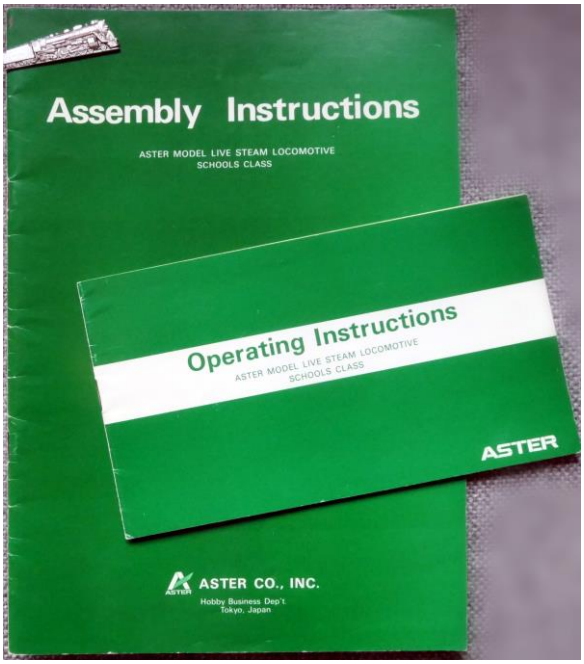
In the summer of 1976 Hans Willeboordse, founder of the Swiss firm Wilag, visited the location of the miniature railway of the SWZ (a local hobbyist group in The Hague) to deliver some Wilag products. I was present at the moment running my miniature steam locomotive when Hans showed a kit he had for sale. I assume he had this kit exchanged with Fulgurex for some of his products which were sold by Fulgurex. It was an ASTER Schools Class locomotive in kit which I immediately bought and with it started a long and happy involvement with ASTER locomotives.



3.1 Southern Railway Schools Class

As far as I know ASTER did not start with making one type of engine but introduced two engines at the same time into the market, i.e. the Schools Class and the JNR 8550 Mogul. The Schools Class was a popular locomotive type from the Southern Railway and because of its rather simple looks and 4-4-0 wheel arrangement a well-chosen prototype. The real Schools was a 3-cylinder engine and of course ASTER made a 2-cylinder version with simplified but still good-looking valve-gear. The real Schools Class locomotive had a lifetime of 30 years, although 3 examples are preserved. As can be seen in the picture my Schools Class is still looking good without any major maintenance after more than 40 years in 2019.

More than 3000 Schools Class model locomotives were made in RTR (Ready to Run) or kit form, all with the name Winchester. While the later ASTER packaging were large and sturdy carton boxes in one colour, the earlier locomotives, like the Schools Class, were delivered in good-looking colourful printed boxes with a handle such that the box could be carried like a suitcase. A similar change of looks was found with the Assembly and Operating Instructions of which the later ones looked less like a purpose made booklet as the ones for the Schools Class, shown right, do. Noticeable on the instructions was a mention of an address in Tokyo and not in Yokohama. The first catalogue also had an address in Tokyo printed inside the cover.



As mentioned, the locomotive has two cylinders. These were fed with steam by slide valves which received their motion via slip-eccentric valve gear. The boiler is of the Smithies type with a content of 170 cc which is enough for a run of about 10 to 15 minutes. There is no pressure gauge or water gauge but a provision has been made with a clack valve to feed the boiler. But the tender does not have a pump or water space. The tender holds the alcohol tank with its chicken-feed system. None of the wheels have any springing, but the bogie does have some. The finish of the

locomotive might not be prototypical completely correct, it is however of a high quality and can stand normal (and even some abnormal) handling. The scale of the locomotive is the correct scale associated with gauge 1, i.e. 1:32.

The leaflet shown left mentions the distributor Fulgurex. From the speech (the text of which is reprinted in later ASTER catalogues) held at the Golden Jubilee exhibition of G1MRA in 1997 by John van Riemsdijk titled: "Notes on the development of the ASTER Marque" one might assume that Fulgurex initiated the manufacturing of live steam locomotives by ASTER. Other sources mention that ASTER was already in the process of a change from their cash register production to live steam locomotive production. Anyway, in the realization of their range of locomotives the collaboration between Fulgurex and ASTER was an important factor not least by the advice of John van Riemsdijk (JvR).

3.2 JNR 8550

In the first four ASTER catalogues all locomotives have been given a four-digit (catalogue) number which seems to be a higher number for every new release. The number of the JNR 8550 2-6-0 Mogul is lower than the number of the Schools. Further the two-sided leaflet with the Schools Class on one side and the JNR 8550 on the other (shown right) shows some Japanese characters which according to my nephew Gijs (doctor in Japanology) stands for first series on the JNR 8550 side, while the characters on the Schools side of the leaflet mention second series. So, the JNR 8550 was made earlier or at least meant as the first product of ASTER. One thing for sure: this locomotive was not commissioned by Fulgurex and aimed at the Japanese home market.

Since the Japanese Railways, except for the later high-speed lines, used a narrow gauge of 1,067 mm, the scale for a train running on 45 mm (1 gauge) should be about 1:24; ASTER used however for most of their Japanese models, including the 8550, a scale of 1:30.

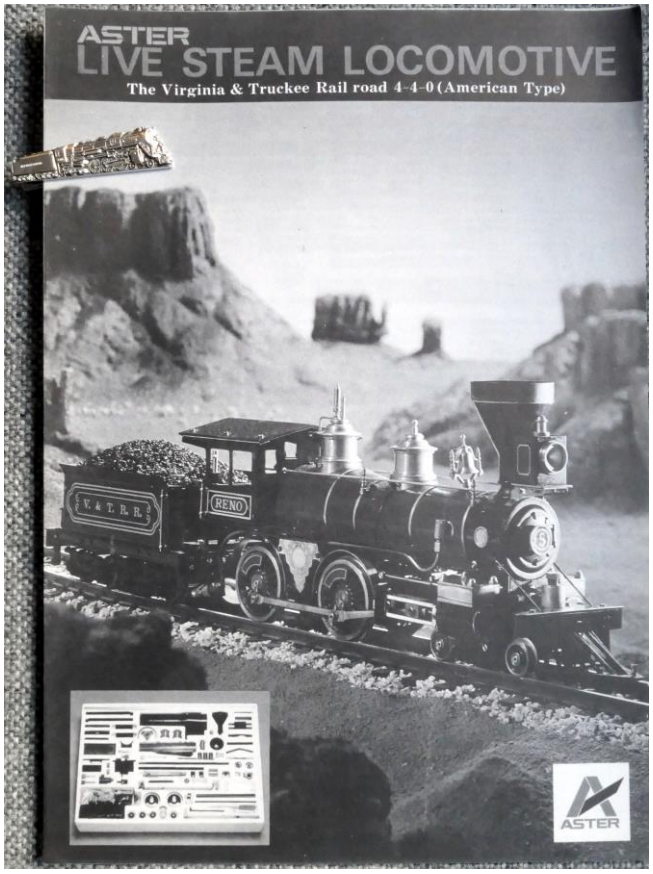
The JNR 8550 was simpler than the Schools Class since it had only one cylinder and slide valve; the valve movement was taken from a slip-eccentric between the frame. The one cylinder was located at the left; at the right side the displacement lubricator was located in the cylinder space; the cylinder and driving rod moved as dummies. The boiler content was also smaller (150 ml against 170 ml for the Schools Class).

A total of some 2000 JNR 8550's was made in kit or RTR. Later ASTER locomotives were not made in these numbers anymore. Apparently to use up stock of parts ASTER re-issued the JNR 8550 some 7 years later with extra parts like a bell to make an Americanised version. The biggest change was that this version had 2 working cylinders and an 8-wheel tender. When trying to find the price difference between the two versions I noticed that the Americanized Mogul was not sold via Fulgurex and not present on any of their pricelists. The catalogue picture of this Americanized model still shows a cab number of JNR 8550.

3.3 V&T RR Reno

In 1976 ASTER introduced an American outline steam locomotive. It had the same wheel arrangement as the Schools Class (4-4-0) but was not to the scale used previously. This locomotive, the Virginia & Truckee Railroad "Reno", is based on a standard gauge prototype. However, it was made to a scale of 1:28 instead of 1:32. I assume this was done, since the boiler of these American old-time 4-4-0 locomotives was rather small. By using a larger scale, a boiler with a content of 150 ml, i.e. of a size similar to the JNR 8550 could be used. When seen next to a 1:32 locomotive the wrong scale is very obvious (the Reno is 2 centimetres higher than the ASTER Big Boy!), but I have never heard of seen a complaint about it. The Reno is a very colourful locomotive with its red boiler and brass details and looks good next to an LGB narrow gauge passenger car.

The Reno had a couple of improvements that makes it easier to run. The first ASTER locomotives were made to be filled, fired and then run until alcohol (or water) was used up completely. After cooling off one could again fill and fire for another run. The Reno was the first to have a water tank in the tender with a hand pump and a water gauge at the boiler. So, it was possible to extend the run by pumping extra water in the boiler and add alcohol (and of course not forgetting to refill the oil tank). Further, before a run one did not have to unscrew a filler plug from the boiler to fill it with water, one could just fill the boiler with the hand pump. The specification in the ASTER catalogue mentions the presence of a pressure gauge but that was not included. Since I bought the Reno built up (it was expertly built by Willem van der Heiden, known for making miniature locomotives in the larger gauges up to 15 Inch gauge) it came without the instruction's manuals, I do not know whether the instructions mention the pressure gauge. The black and white leaflet shown right had a description of the specifications in French, German and English at the backside. This does mention the water gauge but not the pressure gauge. This multi-language leaflet was printed for or by Fulgurex and mentions that Fulgurex was the distributor of ASTER for Europe.



3.4 Old Faithful

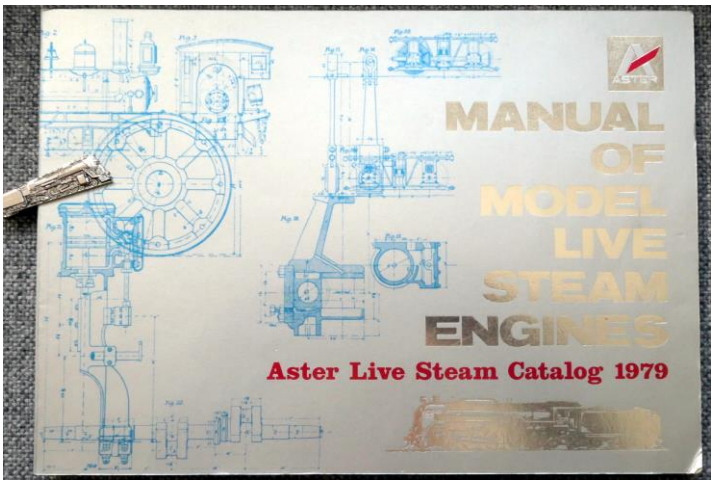
Also, in 1976 the simple 0-4-0 “Old Faithful” was issued. In the early ASTER catalogues, it has a number assigned which is lower than that of the Reno, so it may have been introduced even before the Reno. The leaflet shown below mentions for Minimum Radius: L.G.B. system. The Old Faithful has however not to do with the later ASTER for LGB production (see 4.3). The leaflet is the first, as far as I know, that shows ASTER rolling stock.

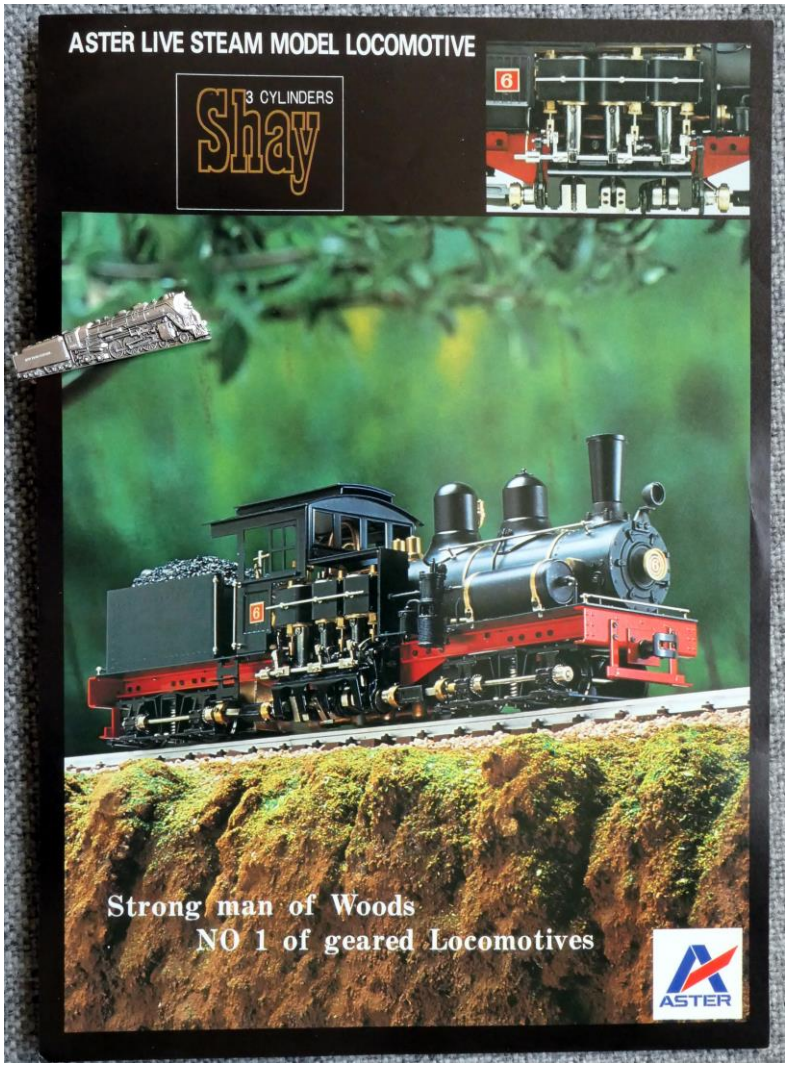
This locomotive was introduced as a simple type for the beginners in live steam. It was not based on a prototype and no scale was mentioned. Although it had a minimum number of parts, it had some extra parts to build it as an American or European outline locomotive. At the time of introduction, I was not very interested in this simple item, but later I found (and bought) made up examples of both types.

It has 2 oscillating cylinders which are positioned at 180 degrees, necessitating a strange looking crank at the left front wheel. Since it had a boiler with three smoke tubes there is need for a draught ventilator when firing it. When run without any or just a light load it runs very fast. I do not know why the locomotive is called Old Faithful; Old Faithful is also the name of a cone geyser, located in Yellowstone National Park in Wyoming, which spouts at regular intervals columns of boiling water.

3.5 Shay Class B

The first years of ASTER were very fruitful, in 1977 three new locomotives were introduced. In the sixties and seventies Japanese made brass logging locomotives were made in a large number of types for the American market, commissioned by importers like PFM. This might have influenced ASTER to make a Shay locomotive. From a live steam engineering point of view a Shay locomotive is of course very interesting. The front page of the first ASTER catalogue of 1979 shows this interest with engineering drawings of a Shay locomotive.





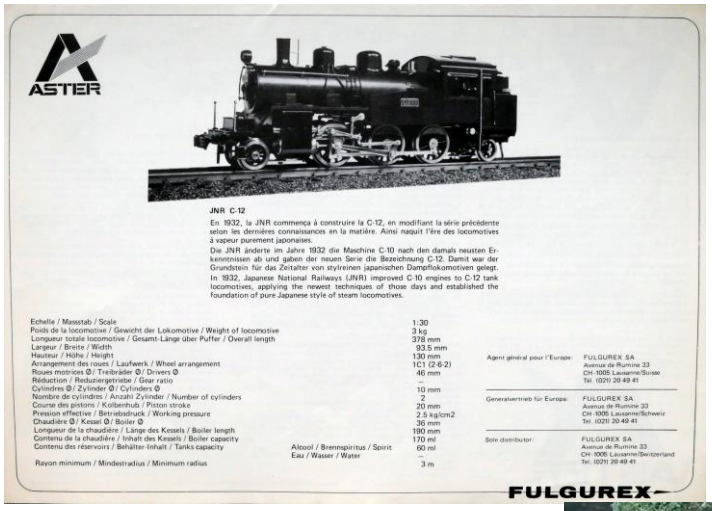
ASTER made a model of a Class B Shay. Shay locomotives were a product of the Lima Locomotive Works in Ohio, USA. Their Class B was a 3-cylinder Shay with two trucks, which ASTER modelled correctly. The catalogue mentions that it is based on a Shay for the Alishan Railroad from Taiwan. This railroad had a gauge of 2 foot, 6 inch, so a model to be run on 45 mm gauge 1 rail should be made to a scale of 1:17. According to the leaflet shown left the Shay is made to a scale of 1:28 and according to the catalogue the scale is 1:22.5 As we have seen before ASTER used often incorrect scales when modelling non-standard gauge locomotives. Further, Lima would build any Shay locomotive for any gauge that the customer wanted.

The specifications mention that the Shay had a pressure gauge and as far as I know it did, as a first for an ASTER locomotive, have a pressure gauge. It also has a water gauge and water reservoir with handpump, so it has quite complete specs.

As a real Shay the model Shay also can cope with small radii, the minimum radius mentioned in the specification is 80 cm, while the previous Schools Class and JNR 8550 needed 3 meters.

Almost 35 years after this alcohol fired Shay ASTER re-issued the type B Shay, but now butane gas fired and with an axle driven feed water pump.

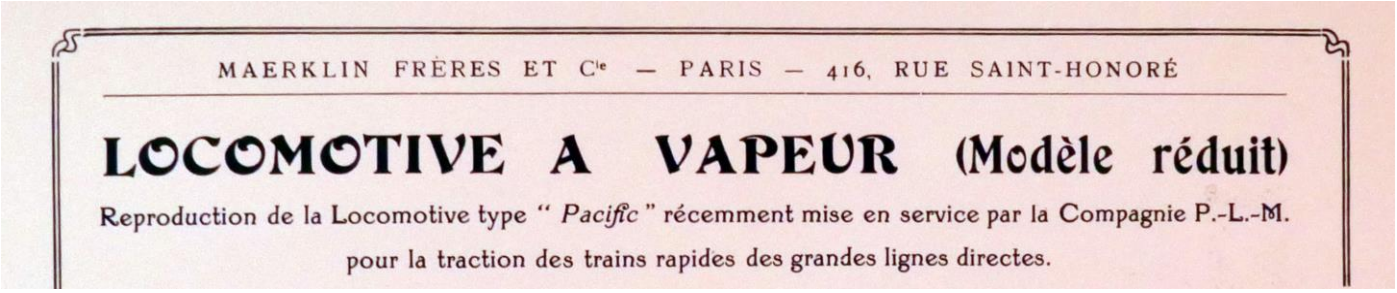
3.6 JNR C12



The second model in 1977 was based on a Japanese prototype, the JNR C12 2-6-2 tank locomotive. The C12 was a popular locomotive in Japan. It was a simple model with slip-eccentrics and a Smithies boiler with the same size as the Schools Class. It was a very good-looking model when compared to the prototype and can be considered the first ASTER scale model although in general the PLM 231A is considered to be that. It did have a water gauge as well as a pressure gauge and the model I have, which I bought not too long ago in build-up form even has a whistle and whistle valve. Although Fulgurex had nothing to do with the design they did sell it as the leaflet left shows.

The C12 was a good match with the ASTER large brown No 43 passenger coach. These locomotives had according to the ASTER catalogue the nickname “tiny (or little) star”. When trying to find more information about this an explicit mention was found that these locomotives did not have a nickname.

3.7 PLM 231A



MAERKLIN FRÈRES ET Cie — PARIS — 416, RUE SAINT-HONORÉ

LOCOMOTIVE A VAPEUR (Modèle réduit)

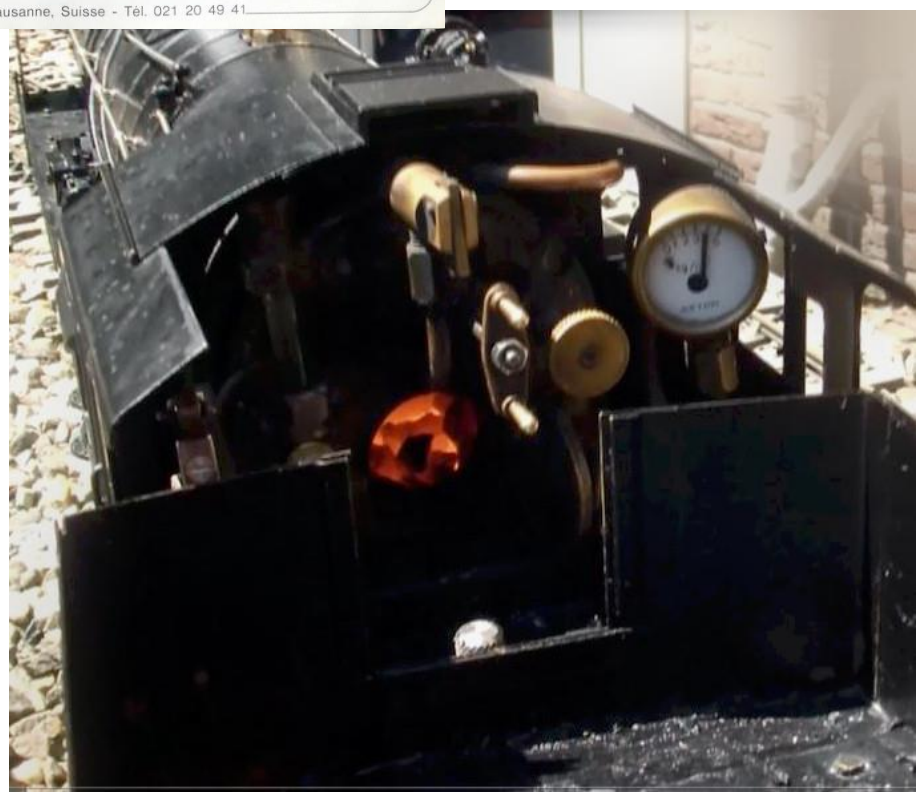
Reproduction de la Locomotive type " *Pacific* " récemment mise en service par la Compagnie P.-L.-M. pour la traction des trains rapides des grandes lignes directes.

A model of the PLM 231A 4-6-2 Pacific was made by Märklin already more than a century ago. The Fulgurex leaflet, of which a part is shown above and which is further shown in paragraph 4.2.2, that announced the ASTER French Pacific locomotive was apparently stating that ASTER followed in the footsteps of this old reputable company. Of course, it is difficult to compare products which are made in very different eras. The ASTER PLM 231A was a remarkable product when it appeared on the market in 1977 with specifications that Märklin couldn't even think of before. This was the first model that was commissioned by Fulgurex and a beautiful model it was. It was the first to use Walschaerts valve gear with the possibility with a screw reverser to not only reverse but also to operate the steam engine in a continuous range of settings from maximum economy to maximum power by changing cut-off. Although the real PLM Pacific was a 4-cylinder locomotive the live steam model had 2 outside cylinders only. This was as designed by JvR and ASTER might not then be technical advanced enough to make a 4-cylinder version. With the 300 ml Smithies type boiler a reasonable long run could be made and since the tender had a hand water pump after a stop to supply also some alcohol a further run could be made. Besides the Wilag PLM coaches, a Blue train of J&M stock also made a good-looking combination with this locomotive as shown in the picture right of a fast running 231A. My PLM231A was sold to me, like the Reno, out the inheritance of Willem van der Heiden and was dirty but expertly build.

The Fulgurex leaflet mentions: radio-control will be available later. As far as I know radio-control did not become available. Of course, some hobbyist added radio control to this and other ASTER locomotives, but it never was made available by ASTER. Some later ASTER locomotives were more suitable for radio control by having more room and by having controls which were more suitable.

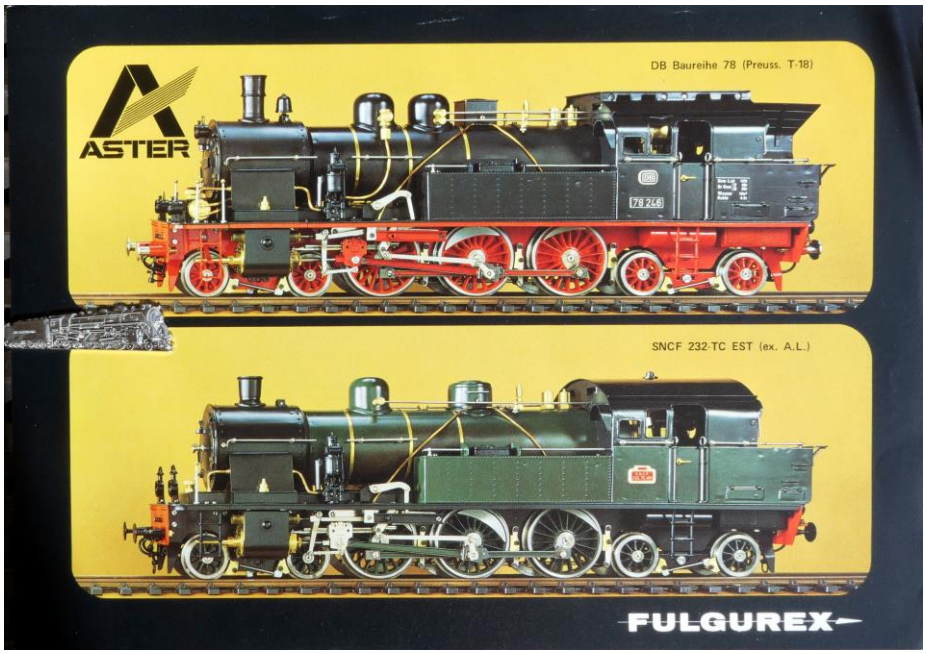
3.8 JNR C62

The first ASTER catalogue appeared in 1979 and the JNR C62 4-6-4 Hudson was the first locomotive shown in this catalogue. I remember well reading and re-reading these catalogue pages but the engine did not seem to be available at that time in Europe, apparently it was released in 1978. Only a few years later I saw the Fulgurex leaflet shown left and found a kit at a shop in Germany. The C62 has many extras like a coal fired locomotive type boiler, a mechanical oil pump, an axle pump to feed water in the boiler and a whistle. The JNR C62 is Japans largest and fastest steam locomotive and its popularity in Japan was the reason ASTER made this model. ASTER designed this model with a heavy frame giving the model quite some weight which adds to the pulling power. I only have 3 Japanese coaches, but I assume the locomotive can pull a multiple of that. It is the first and only ASTER locomotive that can only be fired with coal. Later ASTER locomotives with a coal fired boiler also had the possibility to be fired with either alcohol or gas. It is my only ASTER locomotive that runs successfully on coal; I tried with the Big Boy and failed and did not even try to run the SNCF U1 on coal. It takes some careful firing and patience to start a good fire in the small firebox (see right), but when the fire is built up it is quite easily maintained and a long run is possible. The ASTER instruction mentions the use of charcoal. I do not know what type of charcoal is available in Japan, in the Netherlands however the available charcoal I can use for starting the fire but not for maintaining it. So I use small anthracite (nootjes 5 called over here) to maintain the fire.

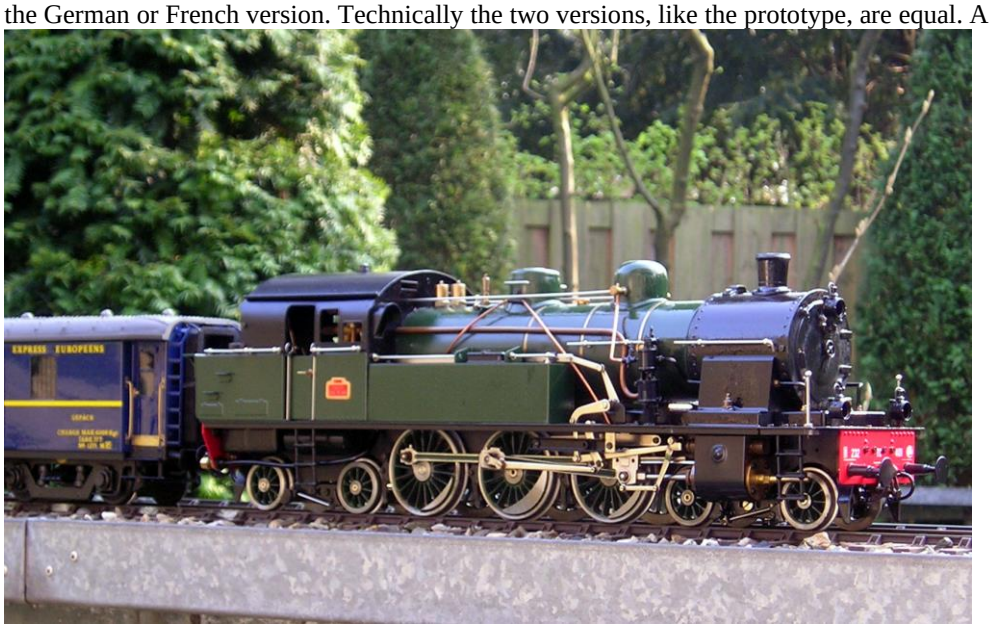


The popularity of this locomotive in Japan is such that ASTER made twice a re-run, in 1991 and in 2003. The 1991 version could be fired with coal or alcohol, while the 2003 version could be run with coal or gas.

3.9 DB Baureihe 78 – SNCF 232TC



Of course, it is now difficult, without the possibility to consult the ASTER or Fulgurex archives, to know why the ASTER range of locomotives was made in the order it was done. Using the available information in catalogues and the booklet Metal Model Trains (Rudolf E. Ritter) an assumption can be made that Fulgurex assembled information about a prototype and used this information to have locomotives made in different scales or gauges for their different market niches at about the same time. The German Baureihe 78 4-6-4 tank locomotive was made in Deutsche Bundesbahn livery but also as a French SNCF 232TC version in gauge 1 by ASTER and at the same time, commissioned by Fulgurex, made by the Japanese company Micro Cast Mizuno in 0 gauge. ASTER had previously issued a locomotive in two version, i.e. the Old Faithful (see 3.4) had some extra parts to build it as an American or European outline locomotive. In this case however the livery of the two versions was also very different, so the buyer had to choose beforehand for the German or French version. Technically the two versions, like the prototype, are equal. A first on this locomotive (and not repeated as far as I know) was a combined regulator/blower valve (three-way cock) which did not allow to have the blower and regulator open at the same time. In 1993 a small rerun of kits was made by ASTER (and not agreed upon by Fulgurex); as far as I know it was initiated by Roy Scott of Tenmille fame. Anyway, my SNCF 232TC is from this rerun and bought from Roy Scott. The rerun did not have the awkward three-way cock. Apparently, ASTER did have a large number of Baureihe 78 wheels, my locomotive has green wheels but it does show some red behind the green.



ASTER did not use the side tanks to hold water, so a track-side water pump had to be used to feed water while the locomotive was under pressure. I tried to use the utility car, which was made for the Glaskasten (see 4.2.1), to feed water during the run but that would not really work. Mechanically this locomotive was not unlike the PLM 231A but instead of the screw reverser a much easier to use reverser-handle was available.

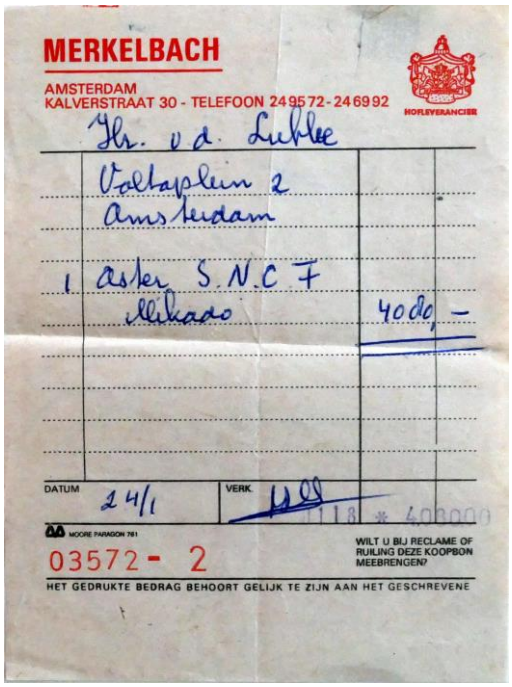
3.10 Southern Railway King Arthur

The King Arthur 4-6-0 shares some parts with the Schools Class 4-4-0. Apparently, the King Arthur was made by ASTER since a large number of parts of the Schools were still available in the factory. The number of King Arthur models is a tenth of the total number of Schools made by ASTER; so one can imagine that indeed it was made to use left-over parts stock. As can be seen on the picture left of a Schools Class in front of the King Arthur ASTER used anyway the same green paint. The boiler is larger but the boiler fittings and the mechanism (slip-eccentric valve gear) and wheels are the same. The King Artur was the last ASTER locomotive with a separate tender which did not include a handpump in the tender. Swiss G1MRA member Markus Neeser made accessory kits to add a tender pump to either a Schools Class or the King Arthur. I added one of these pumps to a King Arthur owned by Tamme which added to the play value.

3.11 SNCF 141R

The ASTER SNCF 141R 2-8-2 Mikado came with a Mistral headboard, however, suitable Mistral rolling stock is not available in gauge 1. The headboard can only be removed (or fitted) by removing the smokebox door; this however necessitates also to remove the smoke deflectors. So, many ASTER 141R's run with the Mistral headboard while pulling anything but a Mistral train, like even a freight train, with lots of steam, in the picture right.

The 141R was a first in a number of areas.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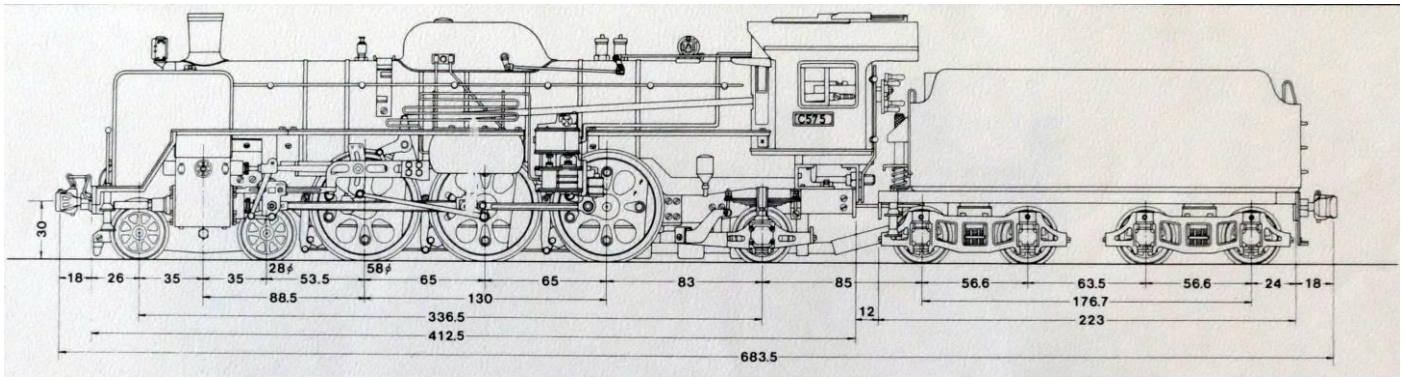
WILT U BIJ RECLAME OF RUILING DEZE KOOPBON MEEBRENGEN?
HET GEDRUKTE BEDRAG BEHOORT GELIJK TE ZIJN AAN HET GESCHREVENE

The 141R Mikado was the first ASTER locomotive with four coupled driving axles. This locomotives and all previous ASTER locomotives had a back-to-back (the distance between the back of both wheels on an axle at the flange) of 41 mm. Further ASTER locomotives used a back-to-back of 40 mm, which is also the current G1MRA standard. The 141R is the only ASTER locomotive which, because of its long wheel base and larger back-to-back, seems to have some difficulty on my garden track when it (the track) is not in good maintained condition. The specified minimum radius is anyway 3 meters. The 141R has a fire tube boiler with 5 tubes as "hockey sticks" running from above the alcohol burner to the front. This so-called Type B boiler was also used on the next ASTER locomotive (JNR C57) and on the much later American Mikado. The Old Faithful 0-4-0 also has a fire tube boiler but with only three short tubes. The 141R was more than 40 years ago the first of a number of ASTER locomotives that I ordered at the now defunct large toyshop Merkelbach in Amsterdam (see receipt left; the delivery date is 24 January; I assume the year was 1980). In my memory I just put it together according to the instructions and it ran. I did add the optional available whistle and whistle valve which had to be bought separately (I lost the receipt of that purchase).

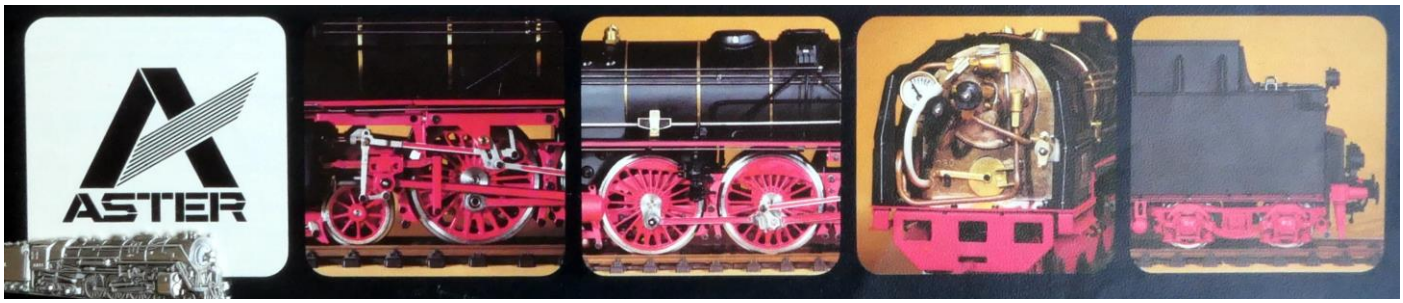
The 141R could be had in two different liveries. A green oil-fired version with running number 1244 and a black coal-fired version with running number 1264. The instructions mention correctly that the Mistral headboard only has to be attached on the green version. The green version has been made in larger numbers and is seen more than the black version. The real 141R 1244 is preserved and is operating condition in Switzerland. Fulgurex has issued through the years models of the 141R in many gauges (1, 0, H0 and N), I assume all based on the same appearance as the ASTER for Fulgurex model.

3.12 JNR C57



Although the ASTER JNR C57 was available outside Japan, I do not think a lot of these were actually sold outside Japan. This Japanese Pacific 4-6-2 locomotive is very good looking and not only in my opinion; the Japanese gave it the Lady nickname. The alcohol fired boiler of the model is of the same type as that of the SNCF 141R. 20 years later a re-run of the C57 but now with axle driven water pump, was made.

3.13 DB Baureihe 01



A year (and 21 days) after I bought the SNCF 141R another a similar sized ASTER locomotive came my way, i.e. the Baureihe 01 4-6-2 Pacific. The kit included different cab numbers such that an epoch 3 or epoch 4 model could be made. The specification of this locomotive is similar to the 141R; however, it has (again) a Smithies type boiler and not a fire tuber boiler. The whistle and whistle valve were not an option, but were included standard. By the way: I have never heard a convincing whistle sound from any of the ASTER whistles. The burner of the Baureihe 01 had four wicks. According to JvR it was a poor steamer, but I just build the kit according to instructions and have had numerous successful runs with this locomotive during almost 40 years. But I did have to do some maintenance and repair.

First a serious accident occurred. I was squatting near my gauge 1 track to see my 01 with Wilag Rheingold coaches pass by on eye level when, for still unknown reasons, the locomotive left the track and came, with the coaches, my way and fell to the ground. I was shocked, but no serious damage was done. After some light repairs the train looked again as new.

A more serious problem that also a couple of other 01 owners had, had to do with the (Smithies) water pipes under the boiler. These water pipes have a tendency after much use to wear down and had to be renewed.

Like many German ASTER models, they can perfectly be combined with Märklin (and KM1) rolling stock as the picture below shows.

3.14 GER / ETAT / Ouest 0-6-0 Tank

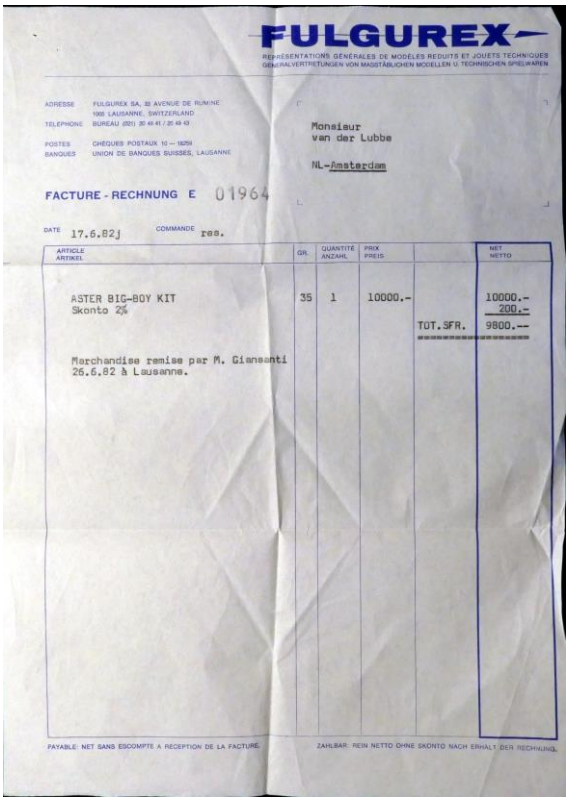
Already 100 years ago makers like German Bing made so called Kraftlokomotive, i.e. toy steam locomotives that used a fast running oscillating cylinder with gearing and flywheel to run a train at a reasonable speed. The ASTER 0-6-0 tank locomotive is based on the same principle. It is a very simple pot boiler locomotive which does have a water gauge as only boiler fitting. The exterior design is based on a French tank locomotive, but also an English version in stunning GER colour was issued.

The simple but attractive layout of these locomotives give them a tinplate style look which shows at the right were the GER version is pulling a Bing tinplate passenger car. These locomotives appeared in 1980 and since high numbers were made, they soon were available at discount prices. By the time however I was looking for a "new old stock" GER version in kit, prices had gone up again. I found one in a shop in Dusseldorf. A couple of years ago I ran into a well-used ETAT build-up version. For unknown reasons my GER version runs much better than the ETAT version.

The design was made by JvR who made a prototype 030 Ouest locomotive (in green and black). This prototype (see left) is now owned by Tamme and has had runs on my garden track.

3.15 UP Big Boy

On Friday June 25 1982 my brother Jos and me went by car in the direction of Lausanne where we arrived on Saturday morning June 26. We were at 10 o clock at the Fulgurex address on the Avenue the Rumine to pick-up a kit for the Union Pacific 4-8-8-4 Big Boy. Count Antonio Giansanti Coluzzi welcomed us and invited us to see his magnificent collection. After an enjoyable guided tour by the Count we left with the Big Boy kit (leaving behind a sum of money in Swiss francs).



FULGUREX

REPRÉSENTATIONS GÉNÉRALES DE MODÈLES REDUITS ET JOUETS TECHNIQUES
GENERALVERTRETUNGEN VON MASSTÄBLICHEN MODELLEN U. TECHNISCHEN SPIELWAREN

ADRESSE FULGUREX SA, 33 AVENUE DE RUMINE
1005 LAUSANNE, SWITZERLAND
TELEPHONE BUREAU (021) 20 49 41 / 20 49 43
POSTES CHEQUES POSTAUX 10 – 18259
BANQUES UNION DE BANQUES SUISSES, LAUSANNE

Monsieur
van der Lubbe
NL-Amsterdam

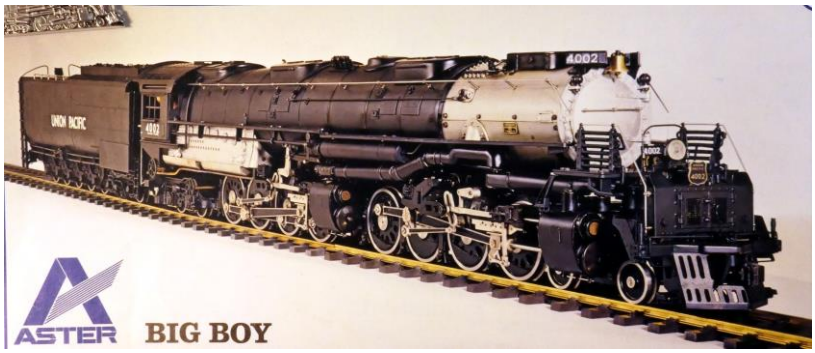
FACTURE - RECHNUNG E 01964

DATE 17.6.82j COMMANDE res.

ARTICLE ARTIKEL	GR.	QUANTITÉ ANZAHL	PRIX PREIS		NET NETTO
ASTER BIG-BOY KIT	35	1	10000.-		10000.-
Skonto 2%					200.-
				TOT.SFR.	9800.--

Marchandise remise par M. Giansanti
26.6.82 à Lausanne.

PAYABLE NET SANS ESCOMPTE A RECEPTION DE LA FACTURE. ZAHLBAR: REIN NETTO OHNE SKONTO NACH ERHALT DER RECHNUNG.



It took about a half year in spare time to build the kit. The Big Boy could be built as a gas or a coal fired model and I choose for the latter. After many tries of getting a good fire I decided that the fire hole was not at a correct position and gave up. I added the gas tank to the tender and ran the Big Boy on gas. On the internet one can find now reports on successful coal firing of the Big Boy with some advice on changes to be made, but I decided to stay with gas.

The Big Boy is, apart from the coal firing, a very good design. This large engine does not seem to have any trouble with bad-laid track. The tender holds lots of water and the gas tank is large, the Big Boy is not very efficient (well, it should not when being prototypical) but it can run some 45 minutes without attention. Of course, it needs a long train, but since the length of my track is only 30 meters, I only use some 15 freight cars with it. The 1981 Big Boy wears running number 4002; in 1986 ASTER issued again a series of Big Boys, this time with running number 4024, which is the number of the last built Big Boy.

Like the JNR C62 is has an axle driven oil pump. The C62 pump is a bit problematic, its position in front of the smokebox might be the problem. The Big Boy oil pump which is located between the frame, works fine.

A funny story: There was a tool shop in Amsterdam that also traded in second hand 1-gauge railway items. The owner, Mr G., had a pair of Wilag CIWL cars for sale and I went there to ask whether a deal with exchange of 2 Wilag Rheingold cars that I had, would be possible. It was not, but he asked why I wanted to get rid of 2 Rheingold cars, so I mentioned that my Baureihe 01 would not pull the 6 cars I had so I needed only 4. He replied that the 01 should easily pull 6 cars and said to me that I should ask that young guy that ran with an ASTER Big Boy at steam meets in Netherlands. That guy would certainly help me to solve this performance problem. He went on mentioning that the young guy was really clever with ASTER locomotives, but of course needed some help from him, Mr G., to build that complicated Big Boy kit. Well, I was then still a young guy but also the only one, young or old, that had a Big Boy at steam meets in Netherlands. So, without knowing I had not built my Big Boy alone, I had had help from Mr G.!

The picture above shows me and my Big Boy at a steam meet at The Hague, Netherlands. The traces of coal firing attempts are visible on the outer firebox. Notice the JNR coaches behind the Big Boy; I might as well have put the 6 Rheingold cars behind it!

3.16 Baldwin Rear Tank

After the Shay (see 3.5) this was again a logging railroad locomotive to a larger scale, ASTER mentioned 1;20 and 1:22.5, and suitable for smaller radii. It was available in two different versions, both at the same price. A rather dull black Japanese version and a better-looking American version with a Russian Iron boiler and green cab.

It has a rather small fire tube boiler which holds only just a bit more water than the toy-like Old Faithful. The boiler seemed to be problematic to fire, but I have never had a run with one of these myself. Almost 40 years later ASTER reissued the Baldwin 0-4-2 but with an extended technical specification. The later version had for instance an axle driven feed water pump.

3.17 Bavarian S2/6

The Bavarian 4-4-4 S2/6 locomotive looks very good at the front of a Wilag Rheingold train. This locomotive with the Bavarian lettering has in reality however never been at the front of the Rheingold since the Bavarian Railway was already merged in the German Reichsbahn when the Rheingold appeared in 1928.

The S2/6 was explicitly advertised by Fulgurex as being available in green and violet and also as an RTR green electric version.

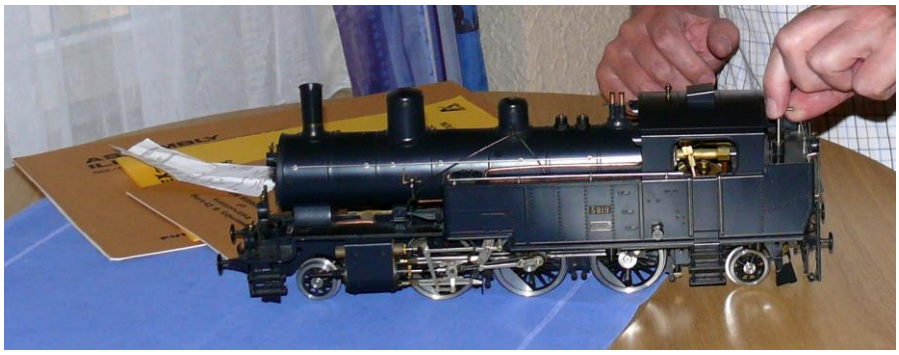
The violet version appeared a year later and seems to be made in small quantities. The S2/6 has beautiful large (68 mm) driving wheels that are only surpassed by the 76 mm driving wheels of the Stirling Single. Being gas fired ASTER did include an axle pump, an option that ASTER included from then on in almost every larger tender locomotive. The prototype was a 4-cylinder locomotive but it would take ASTER another couple of years before they modelled multi-cylinder locomotives conform the prototype. As with other ASTER locomotives commissioned by Fulgurex, the S2/6 was issued in the same period in 0 gauge and H0 gauge (as seen right).

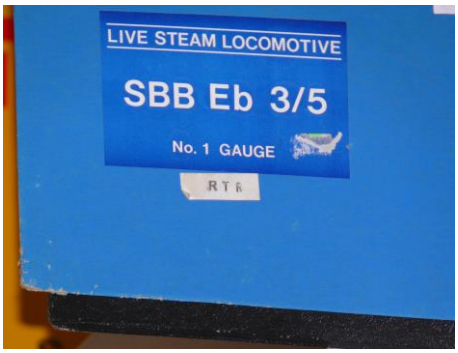
3.18 C&N Climax

From the three types of geared logging locomotives ASTER has made two. They did not make a Heisler but they have made a Climax and 2-truck and 3-truck Shays. The Climax was the first ASTER locomotive that was explicitly mentioned to be suitable for R/C (Radio Control) operation. ASTER however did not supply the electronics and hardware for this, so the owner had to find out himself how to do this, but some space and holes were available to install R/C components. The live steam Climax was gas fired. A 2-rail DC electric version was also available, which of course did have remote control but not radio control. The catalogue mentioned that it was to a scale of 1:24 which was close to the scale used by LGB, so LGB rolling stock could be used with this locomotive. The LGB R3 radius track (and larger) can be used for this locomotive.

3.19 SBB Eb3/5

In 2010 at the Gauge 1 meet in Sinsheim Germany I saw (and bought) an RTR SBB Eb 3/5 2-6-2 tank locomotive at the booth of a German shop. This by then 27-year-old item was still in the original box, as were the accessories and the instruction booklets. In the hotel room I had a closer look and it looked like the locomotive had never left the box.





At the first run it showed that ASTER RTR locomotives, well at least this one, are performers right out of the box. It has the same technical layout as the Baureihe 78 (or 232TC) but a somewhat smaller boiler and a cylinder bore of 11 mm against 13 mm. It makes a fine train with the Ameba passenger cars.

3.20 NYC Hudson

Shown here are two versions of the New York Central Hudson 4-6-4 locomotive that ASTER made in three versions. These are the electrical versions, both of running number 5344, a J1e Hudson with Baker valve gear. The real 5344 was chosen to be streamlined and given the name Commodore Vanderbilt, so a picture like above could not have been made in reality. This was the first ASTER locomotive with Baker valve gear, but of course only dummy since these models are electrically powered. The leaflet below shows the live steam version, which was a J1c Hudson with running number 5265. The J1c Hudsons had Walschaerts valve gear.

The NYC Hudsons were not commissioned by Fulgurex, but were the first to be commissioned by Gauge One America. This was a Pennsylvanian company that commissioned also other Gauge 1 models, like American rolling stock from J&M Models and a 0-6-0 switcher, available in a number of road names like B&O and Pennsylvania, from the English company DJH. Left the DJH 0-6-0 switcher stands beside Hudson 5344. The live steam version was gas fired; the fire was rather problematic to light until I found out that using the suction fan did help. As far as I know the NYC Hudson was the first ASTER model which had piston rings, made of Rulon, instead of graphite yarn to seal the pistons in the cylinders.

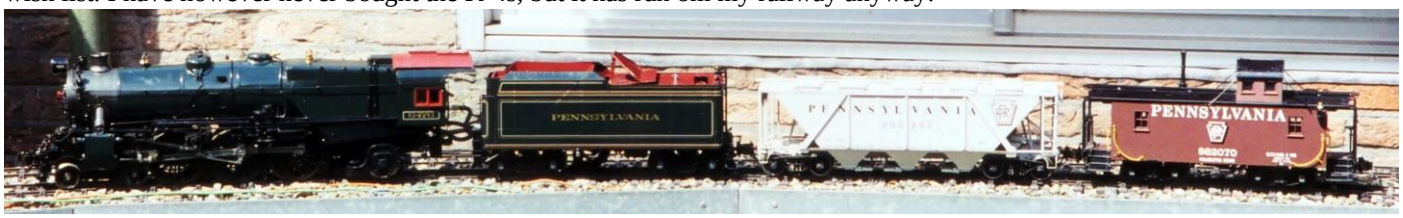
With a tender full with water a rather long run can be made with a 4 car 20Th Century Limited train by J&M Models. The same passenger cars can be used with the 5344 and the streamlined Commodore Vanderbilt; the Commodore Vanderbilt always ran with a non-streamlined train. When later the NYC railroad acquired streamlined passenger cars 5344 had already lost its Commodore Vanderbilt streamlined shroud and received a different (Dreyfuss) shroud. I always wondered why ASTER only made an electric version of the Commodore Vanderbilt, a live steam version would have been great.

3.21 Western Maryland Shay

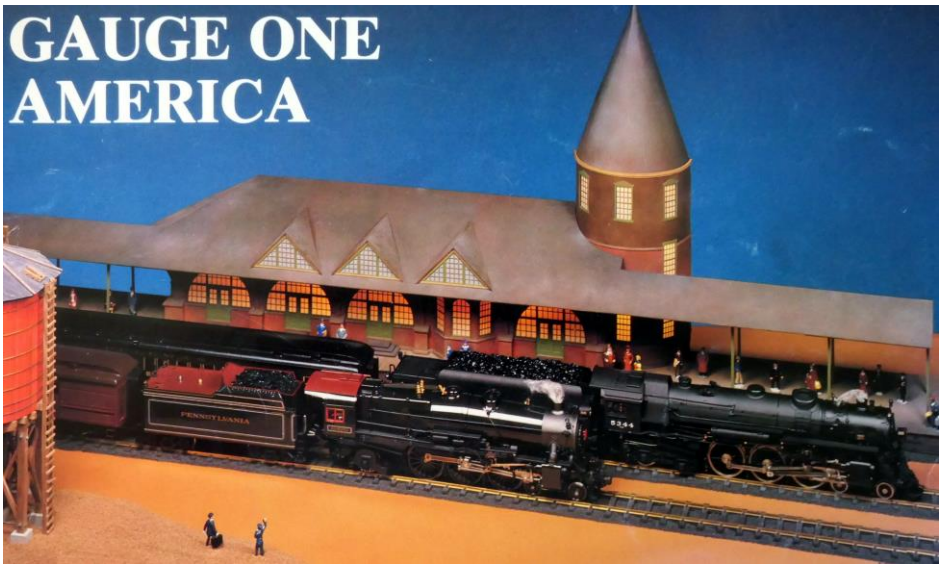
The Western Maryland Shay, a Class C Shay, is a much larger model than the Class B Shay (see 3.5), its weight is almost twice as large. The Western Maryland version is based on a standard gauge prototype. The model is gas fired and has an axle driven water feed pump. Some years after issuing the Western Maryland Shay ASTER issued a version which had some minor detailed changes which was lettered for the Greenbrier, Cheat & Elk railroad, a railroad that connected with the Western Maryland railroad. That Shay, which was only made in a small number of 80 pieces while 500 examples of the Western Maryland version were made, has visited my garden railway a couple of times and can be seen at the right.

3.22 Pennsylvania K-4s

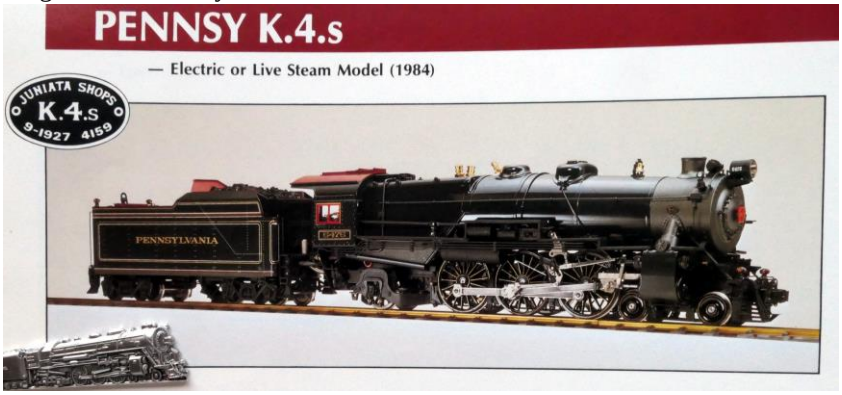
The Pennsylvania K-4s 4-6-2 Pacific is one of my favourite locomotives, so when it was announced by ASTER it was put on my wish list. I have however never bought the K-4s, but it has run om my railway anyway.



The K-4s was, like the NYC Hudson, commissioned by Gauge One America and the front of their catalogue shows the NYC 20Th Century Limited next to the PRR Broadway Limited. J&M Models made heavyweight cars matching both locomotives. The routes of these trains were parallel to each other for only a few miles between Englewood, Illinois and Gary, Indiana, but it must be a great sight to re-enact that.

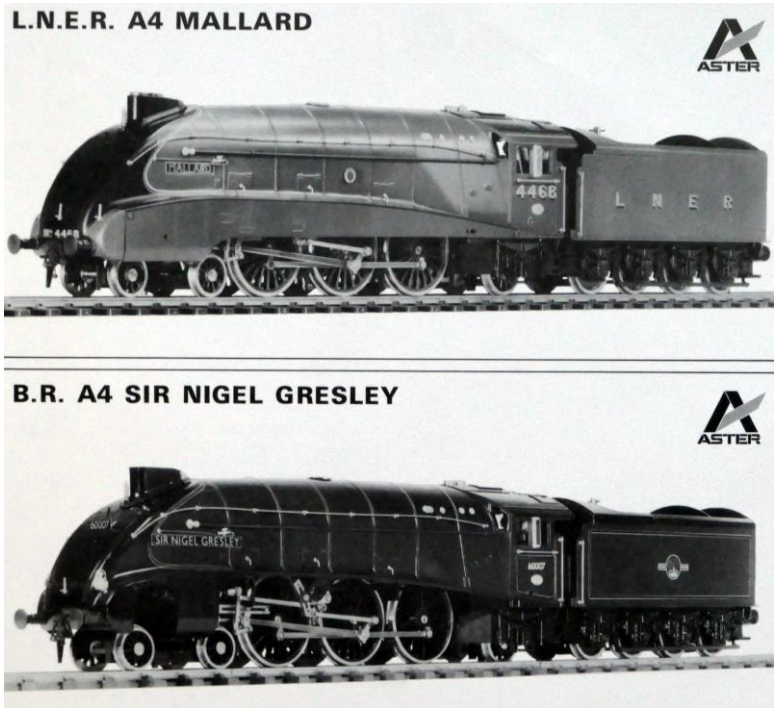


The K-4s was, like the Hudson, gas fired. Also, an electric version was available. Both the live steam and the electric version wore the same running number 5475 and a striking full-lined livery.



3.23 LNER A4

The choice of prototypes for ASTER locomotives was also based on popularity world-wide, so the Mallard, i.e. the LNER A4 4-6-2 Pacific, was an obvious choice. Since the real locomotive is a 3-cylinder type ASTER made, with advice from John van Riemsdijk, the model also with 3 cylinders. The outside cylinders had the Walschaerts valve gear, for the inside cylinder a slip-eccentric gear was chosen. With the inside cylinder there was less space for an axle pump. ASTER made as an option an axle pump working on two of the tender axles available. A first with this model was the use of a type C boiler. After this first use of a type C more than half of the next ASTER models did have a type C boiler.



The A4 was made as LNER 4468 Mallard with valances or as British Railways Sir Nigel Gresley without valances. A few years later also a silver-grey version of the first LNER A4 2509 Silver Link was made. While the Mallard and Sir Nigel Gresley had a double chimney, Silver link had a single chimney and had caused by this apparently, as a model, different running characteristics.


MERKELBACH & CO. N.V.

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NOTA

1 Adler Mallard 4950 -
Rudi Willeboordse 3% 500
4450

Being Dutch I always tried to pay an as low as possible price when I bought an ASTER locomotive. The price quoted to me by Fulgurex was 4650 Swiss francs, so the total cost for me would be 6700 guilders since the VAT was about 20% and the value of a Swiss franc was about 1,20 guilders. So, I went to my local toy store, Merkelbach in Amsterdam, and I had to pay 4950 guilders. I have never asked Mr. Willeboordse of Merkelbach how he could sell at this price.

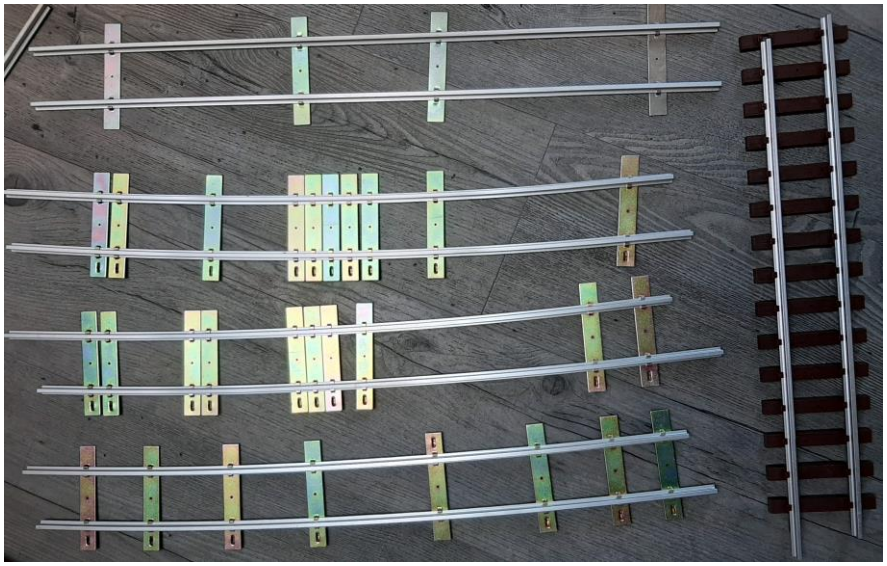
4 Related products

A locomotive is not a train and a train not a model railway. ASTER made a small range of rolling stock and track, but other companies also made related products. This chapter gives an overview of related products that is not intended to be complete.

4.1 Track

4.1.1 ASTER track

All ASTER locomotives were delivered with a piece of straight display track. This consisted of 6 mm high flat bottom rail and plastic sleeper mats each having a maximum length of 30 cm. The total length which came with a locomotive was of course depending on the locomotive length.



The first track pictured, with a very small picture, in the first ASTER catalogue is metal track with metal sleepers which was available in straights and in curves with a radius of 3 meter. Mentioned in the catalogue is: Insulated Tracks (sic) are available too. In the next catalogues only isolated track with plastic sleepers and brass rail is mentioned. The picture left shows this original metal track which according to the catalogue had 5 sleepers per length. On the right of the picture shows a display track. One of the later catalogues also shows turnouts with brass rails. Later ASTER also catalogued turnouts and a treadmill to test a locomotive in situ.

4.1.2 Other track makers

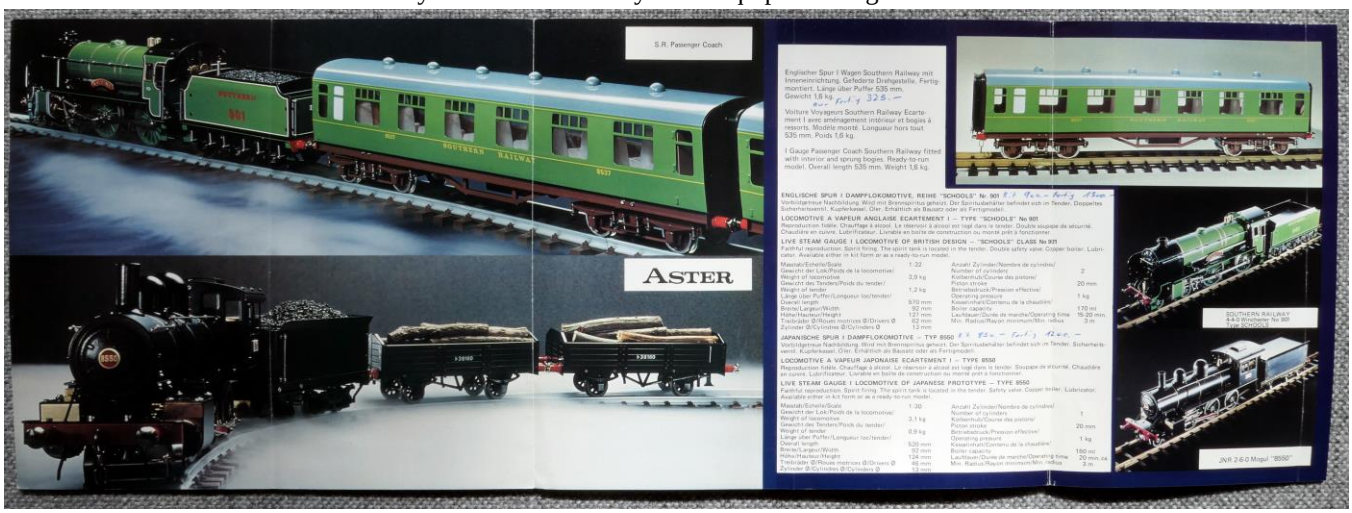
As mentioned before, the Old Faithful locomotive (see 3.4) could run on LGB system track. Most ASTER locomotives however need a larger radius. Märklin made proper gauge 1 track, at the time ASTER started to make locomotives, but not with larger radii; only later they introduced flexible track or what they call “Gleisbausatz”. Often ASTER locomotives are run on garden railways in which case track suitable for outdoor use is needed. G1MRA member Roy Scott started Tenmille Products in 1979 to make a suitable gauge 1 track for outdoors, also to get some progress on his own garden railway, since not much commercial items like track were available. The success of Tenmille was certainly influenced by the availability of ASTER live steam locomotives. Later other manufacturers, like Peco, also introduced gauge 1 track.

4.2 Rolling stock

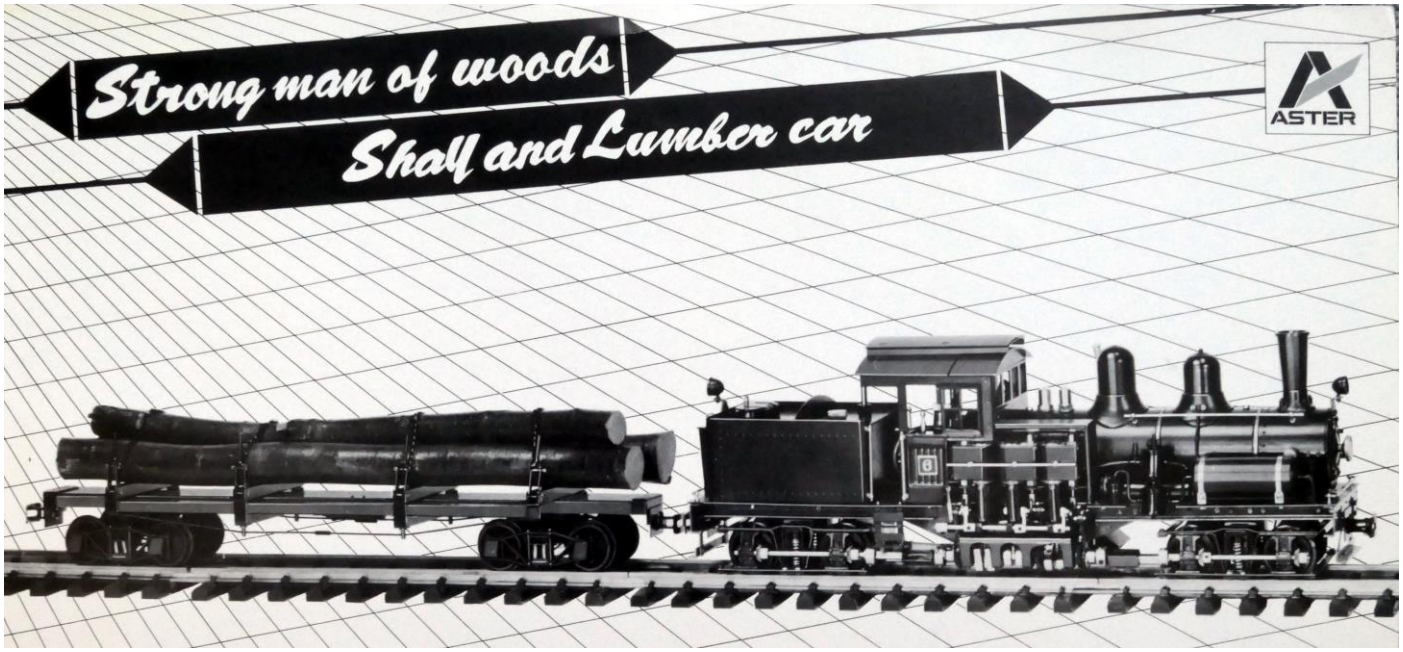
Many ASTER fanciers have one or more locomotives which they display or run on its own, e.g. on a tread mill. It is however possible to not just run a locomotive, but run a train with rolling stock supplied by various companies.

4.2.1 ASTER rolling stock

As can be seen on this undated but early ASTER leaflet they made equipment to go with their first two locomotives.



Their Southern Railway coach, which looked good behind their Schools Class locomotive, was a simple metal model but had interior and sprung bogies. It was not based on an actual prototype. For the JNR 8550 they introduced metal 4-wheel open wagons with buffers. Note that they introduced a smaller open wagon without buffers to go with the Old Faithful and for the Shay truss log cars (or lumber cars) were available. Much later some more detailed 4-wheel JNR freight cars with knuckle couplers were added to the range: a box car, tank car, gondola and hopper car.



A curious item in the ASTER rolling stock range is the Pennsylvania caboose. It was introduced around the same time as the Pennsylvania K-4s locomotive, but that locomotive was explicitly advertised in the catalogue as a locomotive for passenger trains, which it also was in reality. The caboose has a construction wich is very different from the other rolling stock. The sides and ends are wood. Anyway, it is a nicely detailed item.

Apart from Japanese freight stock also a number of different passenger cars were available. In the second catalogue, which was

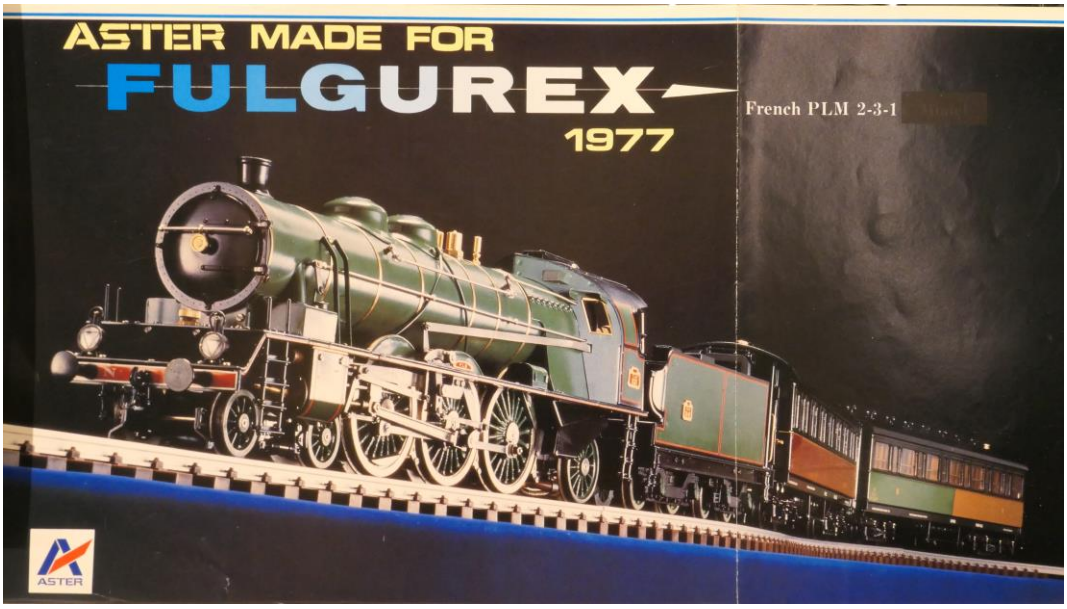
issued in the early eighties, 2 coaches are presented. The large brown No 43 passenger coach and a small narrow-gauge type of coach running on log car trucks. The No 43 coach is a realistic metal model with interior on a scale of 1:30 which fits nicely with

the JNR C62 and other JNR locomotives. In the fourth catalogue from 1988 a more modern outlined blue coach No 20-1 was introduced which was even larger than the No 43 coach.

In the later loose leaflet catalogue from the end of the nineties yet another passenger coach was shown; this was an older type 4 axle brown car with clerestory roof called type 22000. In the new century ASTER made some more detailed Japanese passenger cars which were fitting for a Japanese electric outline locomotive they made. I do not think these later products were much sold outside Japan; I have never seen examples in reality.

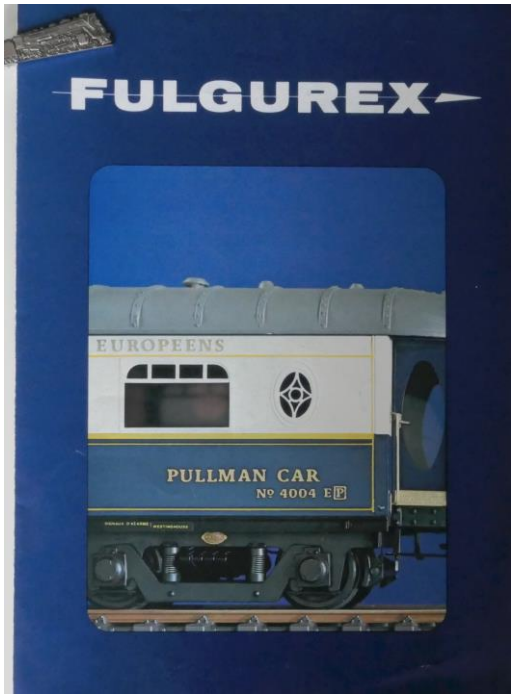
Besides normal rolling stock ASTER also made what they called utility cars. These were cars, which were available in Kit or RTR, held extra water and fuel for smaller locomotives and included a pump and by-pass valve to supply water to the boiler. The first of these were made for the Baureihe 98 Glaskasten, but could also of course be used for other locomotives like the Baureihe 89 T3. The wagon body represented a small German passenger car as can be seen at the right. A similar car was made for the Swiss Tigerli 0-6-0; however, this was made as a freight car of the Swiss K2 type. The German car had an electric, battery driven, water pump while the Swiss car had a handpump and an axle pump. Amongst others to go with the JNR B20 and the B-Class Shay (2011 Edition) a utility car holding also gas, beside water and alcohol, was available; as far as I know this car did not include a wagon body.

4.2.2 Wilag passenger cars

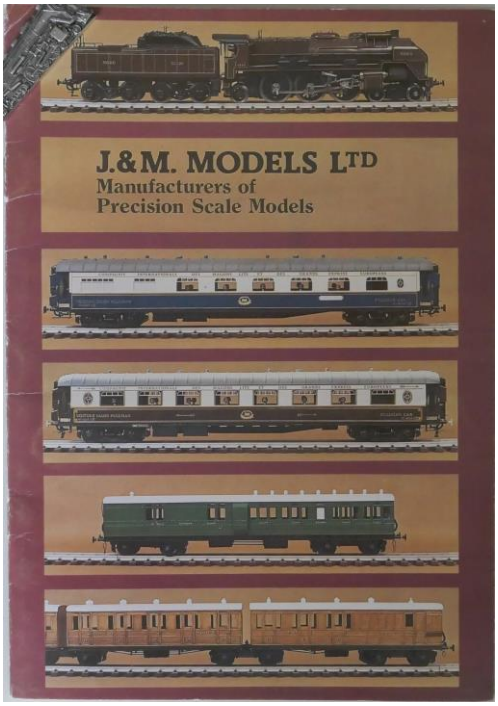


One of the favourite locomotives of Count Coluzzi of Fulgurex was the PLM Pacific. So, the first ASTER locomotive commissioned by Fulgurex was a model of the PLM Pacific. To have a complete PLM train Fulgurex commissioned matching PLM cars from Wilag. Wilag had already made a large number of different 1 Gauge cars in tinplate style, being replicas or “in the style of” Märklin pre-war larger passenger cars. The PLM cars however are not replicas and are a scale like and a fitting match with the ASTER PLM. Of course, other Wilag cars can be run with ASTER locomotives, like I run Wilag Rheingold cars with my ASTER Baureihe 01 (which I know is wrong).

4.2.3 J&M Models



The British firm J&M Models was started by John Waggott (J) & Mike May (M). Soon Mike May started a business in buying and selling gauge 1 items (called Premier Gauge Railways) but the name J&M Models stayed while John Waggott went on and produced with a small crew, including some family members, a large range of 1 gauge rolling stock, most of these rolling stock for luxury trains. Fulgurex commissioned a range of CIWL (Compagnie Internationale des Wagons-Lits et des Grands Express Européens) cars from J&M Models to go with the ASTER locomotives, but also with other 1-gauge locomotives they marketed like those of Bockholt. The Fulgurex leaflet left shows a J&M CIWL Pullman car. Commissioned by Gauge One America J&M Models made a range of New York Central and Pennsylvania passenger cars to go with the ASTER NYC Hudson and PRR K-4s and a range of American boxcars. The J&M Models range included further British Pullman cars, cars for the German Rheingold train and, for the ASTER Stirling Single from the late nineties, a set of matching GNR 3-axle coaches (see leaflet left).



J&M Models also made a locomotive which could be had in kit or RTR, i.e. a model of the Midland Compound 4-4-0. I do not know the number produced, but I do not think it was competitive with ASTER.

After John Waggott sold his business in the beginning of the century to Bram Hengeveld of Exclusive Models in Netherlands some models were issued by Exclusive Models with some improvements. Recently previous J&M Models are re-issued by Accucraft.

4.2.4 Some other rolling stock

Many former and recent small and large manufacturers of gauge 1 products make rolling stock which can be run with ASTER locomotives. For instance, Märklin and Märklin Maxi cars can be seen with (German) ASTER locomotives. The Swiss firm Ameba made some Swiss rolling stock which matches with the Swiss Eb 3/5 and A 3/5. Further freight cars made from Tenmille or Northern Finescale kits are a good match with English prototype ASTERs. A British company making passenger cars but also locomotives, mostly electrical driven, was the Finescale Locomotive Company. They made a range of British cars and also some cars based on US and French prototypes. I assume their range of L&NWR rolling stock was made to match with the ASTER Precedent Class. In the late eighties David Leech from Canada started to make a range of "Gauge One Passenger Cars - Designed to be Used"; after ten years of production he quit. He first made simple streamlined "modern" American passenger car sets; a set in Daylight colours was made to match with the ASTER GS-4 Daylight locomotive, see the leaflet left. Later some British types and European CIWL cars were made which were a bit more detailed. All were made with aluminium bodies and were a bit simpler but also more economic than the J&M Models cars, but as stated designed to be used. I do not know the quantities that were made. Some 25% of the production was exported to Europe, most being British coaches to the UK.

4.3 Other ASTER products and Aster for LGB

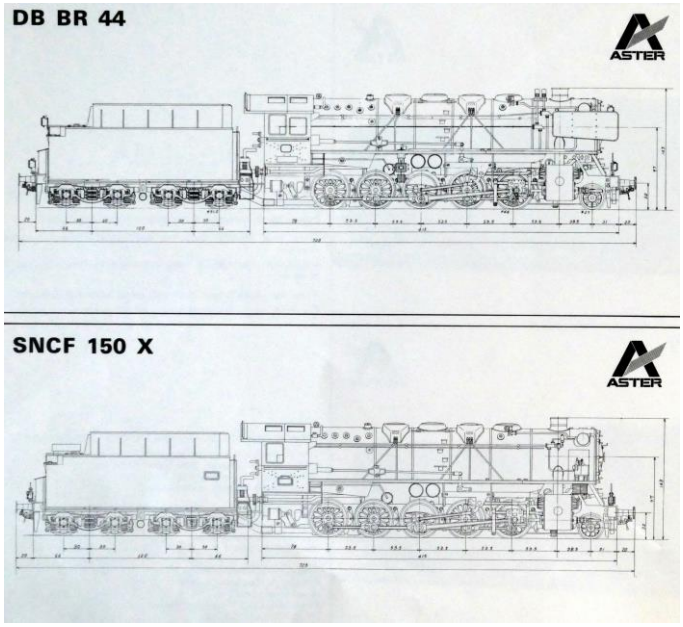
The first catalogues of ASTER show 2 and 3- cylinder marine steam engines with boiler and burner and the tugboat Perseverance which could be powered with these marine steam engines. These items were later not catalogued anymore. Items catalogued to be used with the ASTER locomotives were a suction fan, pressure gauges and a (trackside) water pump.

The German garden railway manufacturer LGB commissioned a number of ASTER locomotives in limited editions. Most of these were electric driven model all running on gauge 1 track and in general to an incorrect scale. One of the ASTER/LGB products was a live steam locomotive, the Frank S.

ASTER also issued this tie-pin; I do not know who was the manufacturer of the pin. Train shop/manufacturer and jeweller Tenshodo from Tokyo also issued pins like this with locomotives, so maybe it is a Tenshodo product. The back of the pin has ASTER HOBBY embossed.

5 1986 - 1995

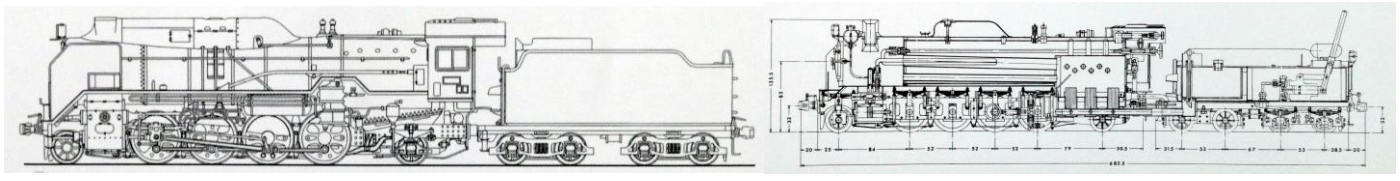
5.1 DB Baureihe 44 – SNCF 150X



The German Baureihe 44 2-10-0 heavy freight locomotive has, like the LNER A4, 3-cylinders, so ASTER used a similar layout, but with a bit larger boiler, as with the Mallard for this big German locomotive. The Baureihe 44 was a popular freight engine in Germany of which large numbers were build. In WW 2 a number of similar engines was built in France and after WW 2 these were used by the SNCF in France under the type name 150X. ASTER made both versions, i.e. the DB Baureihe 44 and the SNCF 150X. There are only some cosmetic differences between the two including the absence of smoke deflectors on the French engine. Personally, I appreciate more the green French livery with black wheels than the black with red livery of the German engine, but the number of German engines made by ASTER was 5 times greater than that of the French engine.

5.2 JNR D51

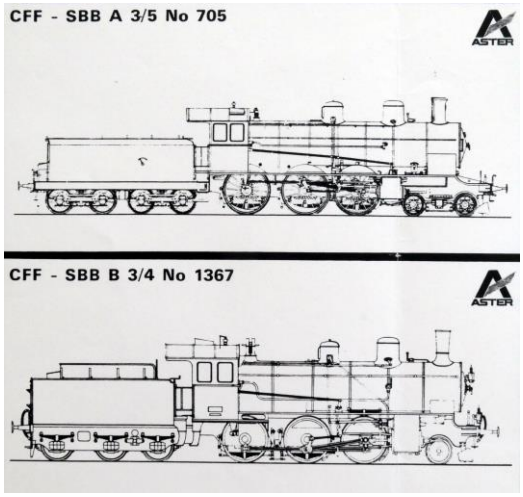
Like many of the Japanese steam locomotive models made by ASTER also the D51 was re-issued after a first version was made.



The first types had a locomotive type boiler while later a C-type boiler was used. A number of different versions were made, all conventional 2-cylinder 2-8-2's but some had a streamlined boiler top connecting chimney and dome. Although available from European and US importers I assume that the majority of these D51 locomotives was sold in Japan.

5.3 SBB A3/5

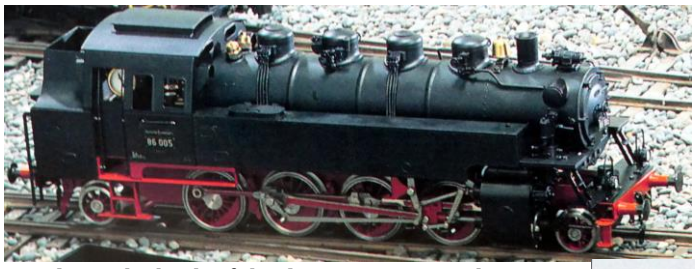
At the Nürnberg toy fair of 1986 the SBB A3/5 was shown. I asked Mr. Willeboordse, owner of the toy shop Merkelbach in Amsterdam, who had gone to the fair, about this most interesting 4-cylinder 4-6-0 compound engine. I remember well he told me that ASTER had gone too far now. What he especially disliked from a (toy-train) manufacturers point of view was that none of the valve gear parts were easily made stamped metal. ASTER had of course gone far, but not too, by making the first commercially available compound steam locomotive in gauge 1.



This model of a rather small prototype must have been a challenge for the ASTER designers with the 4 cylinders and valves. I however do not remember having any difficulty building the kit. It is an interesting locomotive to run. Unlike a large locomotive like the Daylight, which you just can let run round after round for a long time, the A3/5 has to be watched closely when running.

It was about time for another Swiss model after the Eb3/5 commissioned by the Swiss firm Fulgurex, who has commissioned a large range of Swiss locomotives from various suppliers. The same A3/5, with the same running number 705, was commissioned by Fulgurex in another gauge just a couple of years before, so the external characteristics were known. A Fulgurex leaflet of the period shows also an SBB B3/4. This was however never made by ASTER, but was made by the Swiss company Spring in a live steam version. I always expected a C5/6 to be made by ASTER; it now is going to be made by the Swiss ASTER distributor Twerenbold.

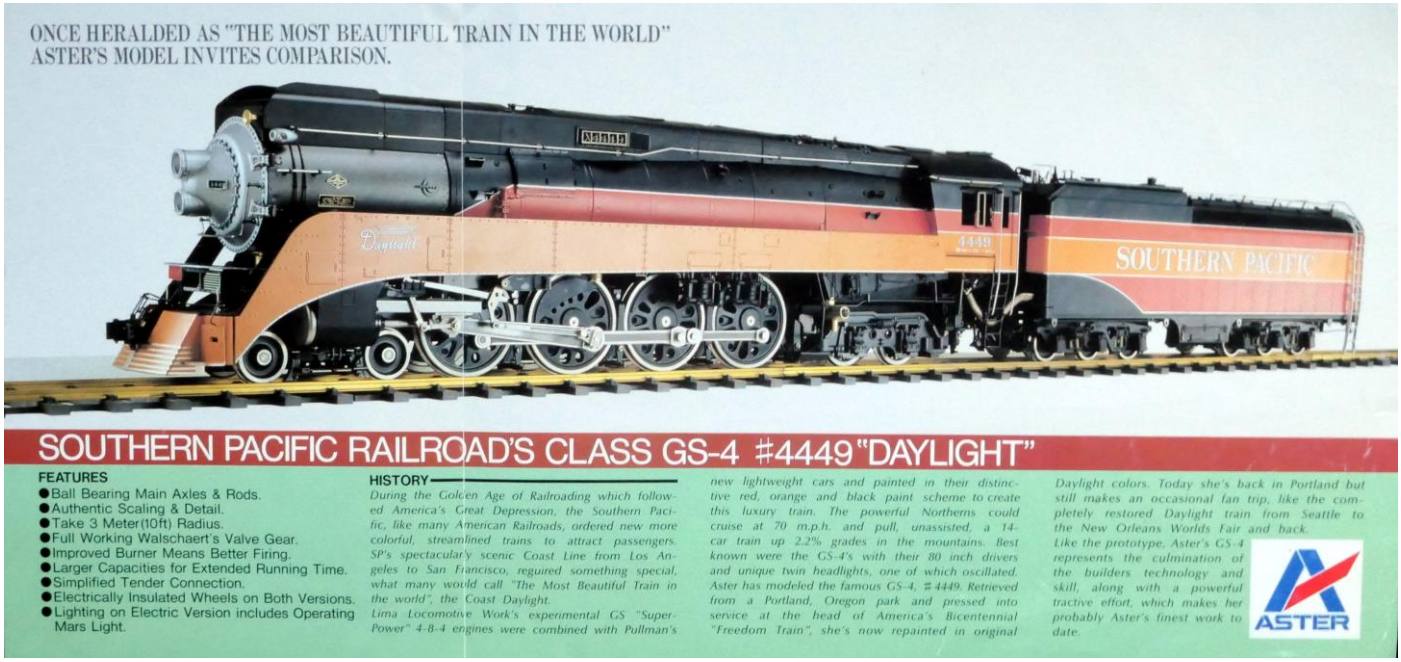
5.4 DB Baureihe 86



The German Baureihe 86 was a simpler and less expensive model. This two-cylinder 2-8-2 tank locomotive had slip-eccentric valve gear and a vaporising alcohol burner. With this burner, which is similar to burners of pre-war 0 and 1-gauge locomotives as made amongst others by Bassett-Lowke and Märklin, it is not necessary to use a suction fan when raising steam. The specification mentions the provision for a Märklin coupler at the back of this locomotive. So, this locomotive can be considered to be targeted at another group of enthusiasts.

In the eighties a number of model railway companies rediscovered the use of photo grey for their German models, which had some following. So, ASTER also made a photo grey version of the Baureihe 86 which looks very attractive.

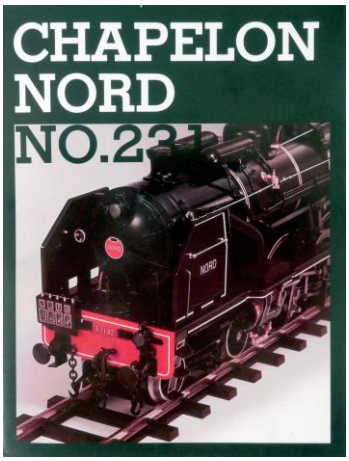
5.5 SP GS-4



When ASTER announced the Southern Pacific 4-8-4 Daylight locomotive, I knew I had to have one. So, in February 1988 I went again to Merkelbach at the Kalverstraat in Amsterdam to order one. This time I was told that an order could only be taken with a pre-payment of about half of the price of the locomotive, with which I agreed. Normally when collecting an ASTER locomotive, I was led into one of the store rooms and between racks full of toys my stack of banknotes was counted and I took the very large box with my toy home. In May 1988 the Daylight had arrived and I went, on my own, to pick it up. Again, I was led into a store room and was surprised of the emptiness of this room. It seems that all toys in stock were present in the shop area; the storerooms were empty. Anyway, I paid the remaining amount and left with the Daylight kit. It was not much later that the Merkelbach shop relocated to much smaller premises and again later was declared bankrupt. Luckily this didn't happen while my prepayment was waiting for the order to be fulfilled. By the way, I remember well that I had not expected the package of this kit to be that large. The Daylight kit, like the RTR model, was delivered in a very large wooden box with a length of 120 cm. Those who know the Kalverstraat know that you cannot park in front of the shop. So, I had parked my car on the Rokin and was walking carrying this giant wooden box through the Spaarpotsteeg (Piggy bank alley); well, my piggy bank was empty then.

The ASTER Daylight is, with its large boiler and large water and alcohol tanks, a very easy locomotive to run for a longer period. The burner is of a type called Manger, which as far as I know is only used in this locomotive; it is not as easy lighted as the normal wick burners. David Leech made a Daylight train which matches quite well with the locomotive as can be seen in the picture above; since my track is not very long, I only have a 4-car train.

5.6 Chapelon Nord 231



At the time ASTER announced the Chapelon 4-6-2 Pacific in Nord livery J&M Models announced a Fleche d'Or container luggage car (see picture left) to go with their brown/creme CIWL Pullman cars. I wrongly thought that these cars and the locomotive would make a perfect combination so, a bit late, ordered a set of cars at J&M Models and tried to order a Chapelon Pacific. The Chapelon was not available any more, but I did find out that the cars in the brown/crème livery had never run with the Nord Chapelon. I should have a Nord Super Pacific, which was announced by ASTER for 1996/97 but was never made.

The Chapelon Nord was the second 4-cylinder compound by ASTER. As far as I understand there were some difficulties experienced when building the kit. But by now many ASTER locomotives became more and more complex. The inside cylinders valves had slip-eccentrics, while the outer had Walschaerts gear. This was different from their first 4-cylinder compound, the A3/5, where the inner valves were actuated by rockers from the outer Walschaerts valve gear. The locomotive was also available in an electric version, but was not available in SNCF green or black livery.

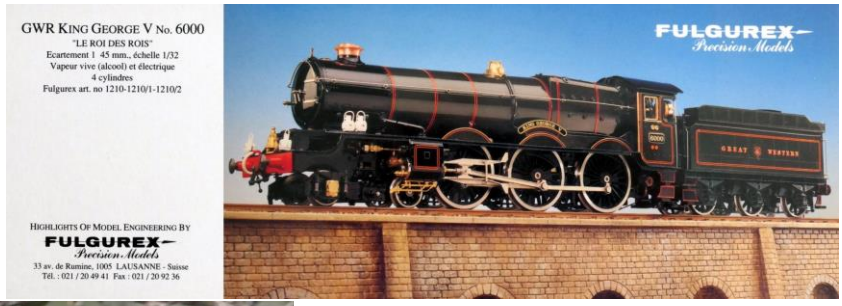
5.7 Baureihe 96

Another 4-clyinder compound locomotive was the Baureihe 96 0-8-8-0 Mallet large tank locomotive. This was made in a green Bavarian and a black Reichsbahn version. In general, I do not mind about engines running fast and ASTER live steam engines are sometimes running at a fast pace. High speed is however not very fitting for this Mallet tank locomotive and I have never seen an example running at a speed that was fitting. It is still a very good-looking model and a rather complex locomotive with water holding side tanks and axle driven- and hand-pump.

One buyer from Belgium got his Baureihe 96 kit on a Friday and by the end of the weekend the locomotive was running. This means he had very condensed building fun; I always spread the fun of the building of an ASTER kit over a couple of weeks or months.

5.8 GWR King Class

Another 4-cylinder but not compound locomotive is the ASTER Great Western King Class 4-6-0 locomotive. It was made as King George V with running number 6000, but was also made to special order for collector Robert Head with other name and numbers. Fulgurex issued a postcard (see right) with this model which strangely does not mention ASTER at all.



Like the real locomotive it has inside Walschaerts valve gear with rocking levers operating the outside valves. It is one of the few ASTER locomotives with only one safety valve. I do not know whether it is per design, but my example has a very nice exhaust beat when running. As far as I know it was also successfully sold in England, but I have seen and heard quite some remarks on the livery, amongst other the paint is apparently much to gloss to taste of GWR (Great Western Railway) fans.

5.9 JNR C11

At the Japanese railways the C11 2-6-4 tank locomotive was the forerunner of the C12 2-6-2 tank locomotive. ASTER made the C12 first in 1977 and made the C11 in 1990. The C11 had like the C12 a Smithies boiler, but it had real Walschaerts valve gear instead of slip-eccentric gear. Although ASTER apparently made 500 C11's they are seldom seen outside Japan. They were not attractively priced outside Japan being much more expensive than the same sized Baureihe 86.

5.10 C&S Mogul

The Colorado & Southern Railroad narrow gauge 2-6-0 mogul was made to the scale also used by LGB (1:22.5) and was a good match with LGB rolling stock as shown left while getting a gas refill when visiting my track many years ago. Although gas-fired it did strangely enough not have an axle driven water pump. This locomotive was also available as an electric version, which I assume was popular with LGB afficionados.

5.11 SNCF 232U1

Fulgurex advertised “The European Collection” with the ASTER locomotives GWR King and SNCF U1 against a flag of the European Union (and a Swiss electric locomotive in the background). I think that at least half of the British customers did not like this ad. This ad was made when the U1 became available around 1992.

The SNCF U1 4-6-4 is by many considered as the greatest ASTER locomotive; I agree completely but must mention that I do not have experience with the ASTER SNCF 241P.

The SNCF 232 U1 is again a four-cylinder compound locomotive. It has a locomotive boiler that can be used for coal or alcohol firing. After my not too good experiences with coal firing the ASTER Big Boy, I decided to build my U1 for alcohol. I have seen videos of successfully running coal fired U1, so it can be done. Because of its size and weight, the U1 is easier to run than the lighter compound A3/5 and makes a wonderful sight with a train of J&M Models CIWL cars. As an ASTER first the U1 has draincocks on the outside (low pressure) cylinders, but I seldom use this when starting since the actuating rod is a bit fiddly to use. The next horror story also proves the ease of starting of the U1.

At a steam meet someone brought a RC controlled U1. He had raised steam while his RC controller was lying on a chair which stood inside the gauge 1 track oval. His wife wanted to sit and took the controller of the chair and laid it somewhere, not noticing that she moved the controls doing that. The U1 started to run and soon at high speed turned over at the third curve. I saw it happening (but could not intervene). There was some damage (to the locomotive, I do not know about the wife) and the run was prematurely ended.

5.12 Pannier Tank

The ASTER 0-6-0 Pannier tank has 2 inside cylinders and slip eccentric valve gear. It was made in 2 different versions (with minor detail differences like the cab window form) and a total of 6 liveries. Three Great Western liveries (all green but with different lettering and numbers), two British Railways liveries, a black and a green one and the red London Transport livery. Although I ordered from Fulgurex the black British Railways version I received the green version, which I however like very much.

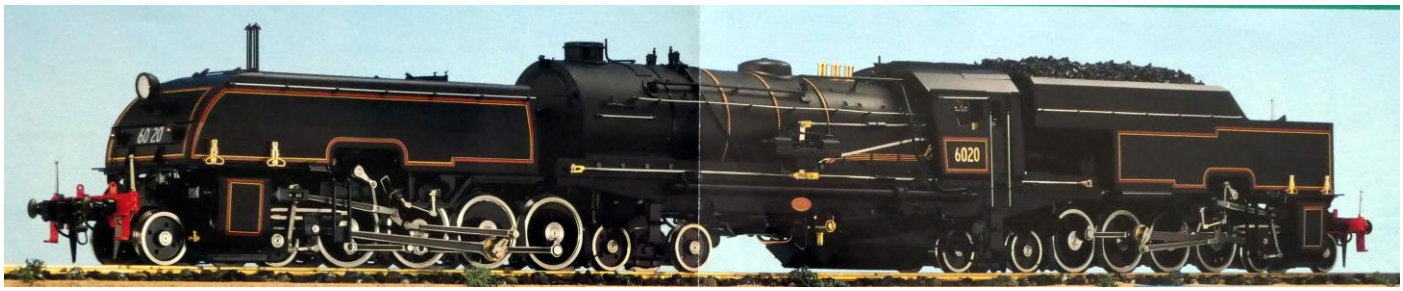
It has a kind of draincock or drain valve which has to be operated by pushing a loose rod, like a for instance a pump handle, between the frame from the front. I do not think this is a very smart and workable solution, since you cannot see what you are doing. It is a good runner with enough power, but you have to watch the water level. When the water is gone and there is still alcohol the fire of most locomotives will just go out by lack of draught. The Pannier however will find air anyway and a Pannier in flames will result.

5.13 Glaskasten

This 0-4-0 locomotive is small but very detailed. Since the protype is very small, ASTER made it to a scale of 1:30 instead of 1:32 to allow for a bit larger boiler. It was made in a number of liveries: a green Bavarian Ptl 2/2, a green Prussian T2, a black Austrian (ÖBB) series 688 and two black Baureihe's 98 being a pre-war Reichsbahn and a post-war Bundesbahn version. Since the boiler as well as the alcohol reservoir are small only a short run of 5 or 7 minutes can be made with the Glaskasten. To make it possible to have larger runs ASTER made a so-called utility car (see 4.2.1) that could hold extra alcohol and extra water. The water could be pumped from the reservoir in the utility car into the boiler with a battery driven electric pump. However, in my experience the battery driven pump was not powerful enough to pump the water against the pressure in the boiler; the utility car did not have a hand pump. So, I run my Glaskasten with the utility car but do not use it at all. ASTER made it possible to control this locomotive with the roof, and the remainder of the glass case, in place. The controls of the blower and regulator are a kind of antennas protruding through the roof which makes the locomotive even more look like an insect.

5.14 AD 60 Beyer Garratt

For the steam locomotive fan ASTER made a wide range of different types of large and small locomotives from around the world and illustrating the history of the steam locomotive. So, a Beyer Garratt had to be included in the range. ASTER choose a standard gauge prototype from the Australian New South Wales Railway. This AD60 4-8-4+4-8-4 locomotive model is 104 cm long and cannot be easily be handled to put on a track. It has more working safety valves (three) than any other ASTER locomotive (the Big Boy has 4, but two of these are dummy) and has even two axle pumps. The boiler is coal or alcohol fired and I assume it is not too difficult to fire with coal, since the grate area is rather large.



5.15 B&O Grasshopper

To prove again the wide range of different steam locomotives produced by ASTER here is this small “old-time” 0-4-0 locomotive from the beginning of the railroads in 1832. Since the Grasshopper is a rather small locomotive it is again made to a scale of 1:30. A first is that the locomotive came with a coach. Extra coaches were available separately in kit.

The specification of the boiler describes a working pressure of only 15 PSI, less than a third of other ASTER locomotives and half of that of a pot boiler type like the GER 0-6-0 tank locomotive. Of course, not much power is needed since it just has to move itself and a very light coach around the layout. The boiler of this locomotive is the smallest of all ASTER boilers.

6 The ASTER qualities

When seeing, building and running ASTER locomotives[4] a number of generic characteristics can be noticed. Since ASTER made a high-quality product, I call this the ASTER qualities.

6.1 Design

During the years it became clear that an ASTER live steam locomotive is designed as a model locomotive and not as a miniature locomotive. With this I mean that an ASTER locomotive is designed based on the prototype and looks like the prototype and also as much as possible has the technical layout and properties of the prototype. A miniature locomotive is based on some general principles from the model engineering world as published in the Model Engineer and thought out by Greenly, LBSC and Evans where the resemblance to a real locomotive is of less importance. As mentioned in the ASTER 5th edition catalogue, the ASTER models are designed to be as faithful to the prototype as possible. But of course, a mere 1:32 reduction would not make a working model, which is taken into account by the ASTER designers and their advisors. One of these advisors was John van Riemsdijk (JvR), he made a large number of innovative designs for ASTER including the design for workable 4-cilinder compound locomotives. From some of the results one could notice that JvR was partly still at the miniature locomotive world. The ASTER A4 for instance, which was co-designed by JvR, had a slip-eccentric middle cylinder while the later A3, which appeared when JvR was less involved with ASTER, has the prototypical Gresley valve gear. Another advisor was Seiichi Watanabe, a Japanese model engineer considered in Japan as the greatest small-scale live steamer. Already before WW2 he was working on design and build of miniature locomotives and he trained the ASTER mechanical engineers in the basics of model locomotive design.

6.2 Kit or Ready to Run

All ASTER live steam locomotives, but not the electric versions, were issued in kit form and as Ready to Run (RTR) locomotive.

6.2.1 Kit

Since I am not a model engineer but I do like to mess around with materials to build something, I have made many different kits from various materials of various different models. The best kits in my experience are the ASTER kits. The instructions are clear and the parts are organised very well to be used in sequential steps in bags and boxes with a clear numbering system. Only simple tools are needed and some of these are even included in the kit (I now have about 20 ASTER screwdrivers ;-). Also, some extra small parts (screw and nuts) are included which might prevent crawling around searching on the floor of your hobby room. When building carefully such that the finish is not damaged, one does not have to paint or decal anything. It is a pleasure building an ASTER locomotive and there are more builders like me that can spend quite some time by first looking at the parts, checking these and then very sedate building these together. I spent half a year (elapsed time) to build my Big Boy kit but I have heard from someone who built a Baureihe 96 4-cilinder compound locomotive in a weekend. ASTER kits included everything to complete a locomotive; I know of only a few locomotives where optional parts could be bought and then added to the locomotive. For the SNCF 141R one could buy a set of parts to add a whistle, including a whistle valve; for the LNER A4 an optional axle pump to be installed on the tender rear axles could be bought separately.

6.2.2 RTR

The RTR models of course do not give the pleasure of building a model. Apparently, there are model train lovers that assume they cannot build an ASTER kit themselves or they do not have the time for that. The RTR models are some 10 to 20% more expensive. They are delivered with the same tools and building and instruction manuals as the kits. I do not know whether many RTR models are ever run or that they spend their lives in a glass case or box in a collection. I found and bought in 2010 an untouched “new old stock” SBB Eb3/5 (see 3.19) RTR locomotive made in 1983. It performs very well and I also have never seen or heard any complaints about other ASTER build-up models.

Beside RTR models from ASTER there are also RTR models that are made from a kit by a kit builder for a customer. I do not think that this is done a lot but I know of some kit builders in England. I doubt whether building ASTER kits is a money generating business.

6.2.3 Electric

From around 1980 some of the larger ASTER models were also made in an electric version. The electric versions were only available RTR. In most cases the electric version was exactly the same model as the live steam version. However, one locomotive, the New York Central Hudson with number 5344, was only available in electric versions, see 3.20. The electric versions are 2-rail DC for 12 Volts and some do have electric lights and a smoke unit. Since these are heavy models a transformer of large amperage is needed to run these locomotives. One seldom sees an electric ASTER running; the 2 electric ones I have do run well. As far as I

[4] The three pleasures described by ASTER are: (1) Putting Together, (2) Driving and (3) Using as a Home or Office Decoration

could deduct from catalogues only the larger models were available in an electric version. Until the fourth catalogue with some models is mentioned: “Electric version also available”. From the fifth catalogue the specification includes details about electric versions; some models had not one but 2 motors.

6.3 Scale and Detailing

ASTER uses the correct 1:32 scale related with 1 gauge 45 mm track for most of their models of standard gauge prototypes, a notable exception is the scale of the Reno (see 3.3). For their Japanese (JNR) locomotives they used in general a scale of 1:30, only for the small B20 switcher they used the correct scale of 1:24. In the live steam narrow gauge world scale is not considered an important quality and the scale of the ASTER Narrow gauge models seems appropriate.

The first ASTER locomotives did look correct but were not very detailed. In the 0-gauge world they would be called “Coarse Scale”. But soon detailing was added to the locomotives like correct grips, dummy brakes and brake-rodding, pumps and generators. Of course, these parts might make a model more vulnerable, but ASTER in general used strong materials and good fixings such that accidental damage is minimised. The detailing of the later models like for instance the SNCF 241P is on par with the detailing of the more expensive brass models.

6.4 Materials

ASTER locomotives are completely made of metal. The choice of metal depends on the specific part. All boilers are copper, the cylinders are bronze, most wheels are stainless steel and for detail parts brass is used. The metal used is of high quality and fit for purpose. With normal handling the ASTER locomotives can give many years of pleasure and with proper maintenance an ASTER locomotive keeps its good looks. In an ASTER kit the only plastic is used for the plastic bags holding the small parts and some plastic tubing for alcohol or water. Other materials supplied are wick material, ceramic sheet to line the fire box and boiler barrel and compound to be used to make connections steamtight. Further some simple tools are included and, depending on the livery of the locomotive, one or more tins of touch up paint.

6.5 Livery

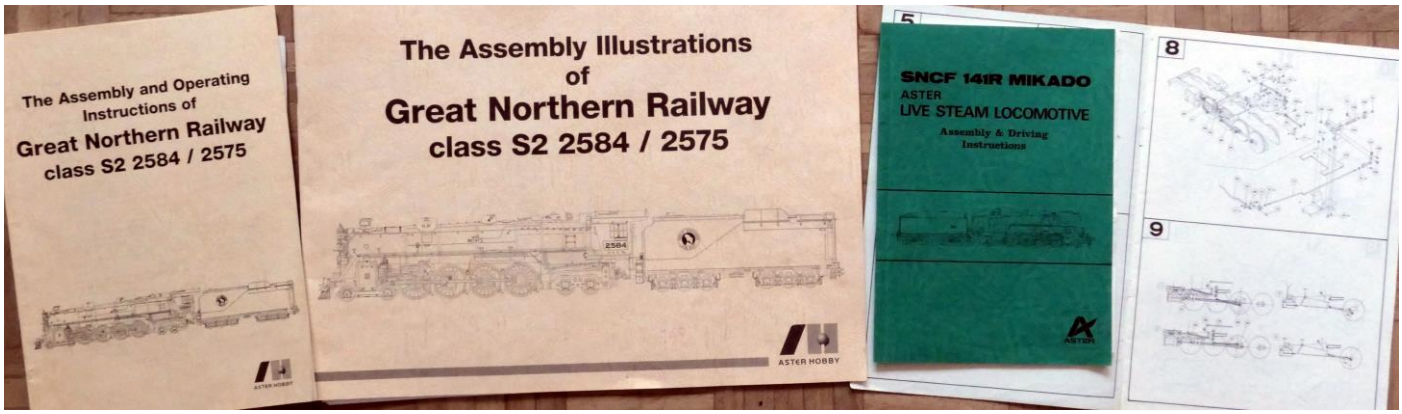
There are at least two aspects important for livery: the prototypical correctness and the durability.

For durability ASTER has a very good score. When being not too wild with running out of water (dry boiling) or transporting without provision against scratching the livery will continue to look good in your display case. Further I have not noticed decolourisation by (sun)light of any of my ASTER locomotives standing in my display cases.

With regard to prototypical correctness there are always naggers who think the livery is wrong. I will not make the slightest comment that this is probably jealousy. Any ASTER locomotive has attractive looks as can be seen above. ASTER would not make the obvious error that I noticed at another Gauge 1 live steam model: a model of LNER A4 Quicksilver in grey with the fox of Silverfox on the side of the boiler. And what to think about a model of 2512 Silverfox with the fox looking backwards; to be seen also in my collection.

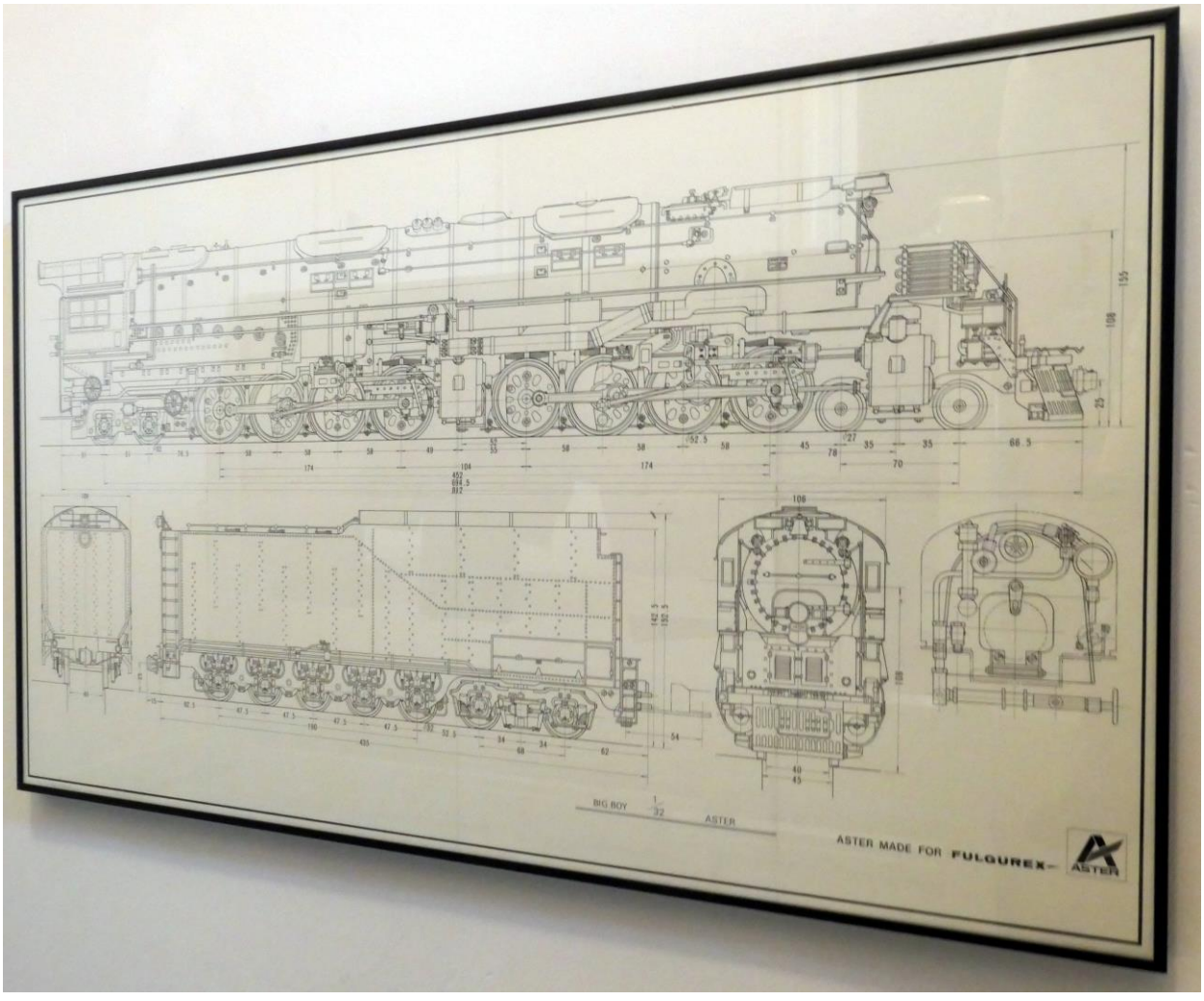
6.6 Instructions

Each ASTER locomotive kit came in general with two booklets being a set of instructions and a set of exploded view diagrams.



The instructions (Assembly and Operating Instructions) give a description of the model; a parts list; running instructions and a step by step description how to build the kit. The steps give a logical order of assembly and each step is illustrated with a diagram; of course, the order of steps has to be followed. The instructions are easy to follow and, in general, no special tools are needed. With locomotives with a separate tender I always started to build the tender first; this was an exception to the order which proved to cause no problems. Instructions supplied by ASTER are in the English language; I assume that for their home market also Japanese language instructions are available. Locomotives supplied via a European distributor like Fulgurex also included an instruction booklet in French or German or even both. The multilingual issue might be the reason for a separate text and drawing booklet.

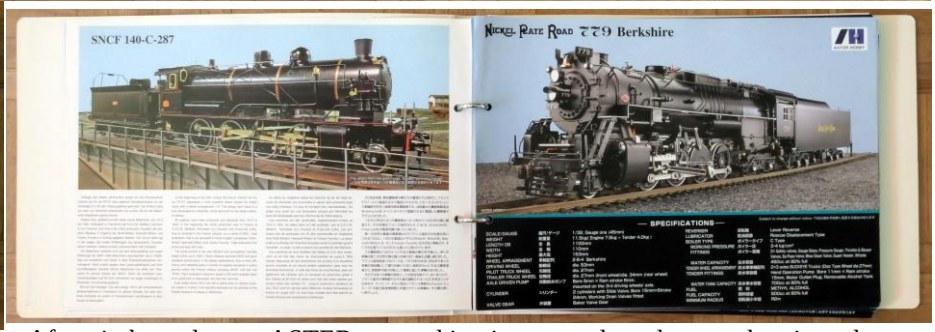
Some kits also included a full-size picture of the model like the Big Boy drawing sized 90 by 50 cm shown below which I framed and hung on the landing.



6.7 Catalogues

For many model railway afficionados browsing catalogues is a pleasant pastime. ASTER catalogues are very browsable. They have in general good quality pictures of the models, an interesting description of the prototype the model is based upon and a full set of technical specifications. Moreover, at the back off all but the third catalogue a “Manual of ASTER model steam locomotives” of some 30 pages is present describing the technicalities of (running) ASTER models and including explainable drawings. This is not specific to a certain model but describes ASTER live steam locomotives and how to use them in general. When ASTER introduced new technicalities to their models, like for instance cylinder drain cocks, the Manual was enhanced with a general description of these. Thus, the latest catalogue contains the most complete manual.

ASTER issued between 1979 and 1995 six catalogues (see right). These showed of course the new and planned models, but also all models made previously. The last 3 catalogues (bottom row of the picture) described the previous models as part of a history of railways of the different countries the locomotives on which the models were based originated from.



After sixth catalogues ASTER stopped issuing normal catalogues; they issued a loose leaflet binder (see above). It contained the latest version of the “Manual of ASTER model steam locomotives” and a print of a talk made by John van Riemsdijk on the G1MRA Golden Jubilee in 1997 titled “Notes on the development of the ASTER marque”. Further it held a number of leaflets, similar like ASTER and/or Fulgurex had issued before. What leaflets were included depended on when you acquired the binder called “Manual & Catalog”. And of course, extra leaflets could be included in the binder when you could get hold of these via an ASTER distributor.

There were some other catalogues with ASTER content like the Gauge One America catalogue (see 3.22); a few catalogues of Fulgurex (see left) containing the whole Fulgurex range including ASTER and a few 8 page catalogues issued by ASTER EUROPA/Twerenbold (right)).

6.8 Where to buy an ASTER locomotive

While considering these 40 years of ASTER locomotives I noticed that in these 40 years the way you buy your model railway equipment has changed. In the seventies and eighties there still were large (toy &) hobby shops that stocked and sold a large range of equipment also in the larger gauges. Nowadays more expensive larger gauge equipment has to be pre-ordered, generally at a distributor, and might even not be produced when not enough pre-orders are given. ASTER distributors not only distribute, but also look at the market they serve and discuss with ASTER the locomotives they think would sell and/or commission a model at ASTER.

For second hand ASTER locomotives the internet is a large marketplace where pre-owned ASTER locomotives can be found now. There are also, at least in the UK, some traders that specialise in, amongst others, second hand ASTER locomotives.

I do not know much about the Japanese market, but when in Japan one could buy a locomotive directly at the ASTER premises. At ASTER in Yokohama a showroom showing many models was present, but I assume it could only be visited by appointment. My Japanese speaking nephew and me went there in 2003 having an appointment with Mr. Inoue who received us hospitably and showed us around at ASTER. Apart from direct sales at ASTER, locomotives could be bought at hobby shops like Tenshodo at Ginza in Tokyo (worth a visit!).

The first European ASTER distributor was Fulgurex, who supplied the European market from the very beginning until 2001. After 2001 for a couple of years a Spanish distributor, ASTER EUROPA S.L. from Barcelona, did the European distribution but not to the satisfaction of the ASTER company as Mr. Inoue told me (even suggesting whether I would be interested). A few years later father and son Twerenbold became the new European Distributors with Exclusive Models (Bram Hengeveld) as local distributor for Netherlands and Belgium. As mentioned in the beginning hobby shops held some stock or at least would order ASTER items for their customers. To mention a few: In Amsterdam, Netherlands there was Merkelbach; in Paris, France Trans Europ in de Rue de Douai and in Hamburg, Germany Markscheffel & Lennartz. For the last years even a large Gauge 1 supplier like Modellbahn Seyfried in Germany has not one ASTER locomotive in stock. As far as I know Fulgurex was also the distributer of ASTER products for Britain. One of the shops selling ASTER in Britain was Hadley Hobbies; Graham Colover of Hadley Hobbies announced the ASTER Owners Club (AOC) in 1986. For practical reasons and expense membership was limited to UK ASTER owners but I was anyway allowed to join and received an ASTER tie as membership token. Around 1998 ASTER UK (Andrew Pullen) became the distributor for Great Britain. Andrew was not supposed to sell to Netherlands but I did order and receive some items, funny enough amongst others for Bram Hengeveld[5], from ASTER UK.

I assume that the first distributor for the USA was John Gummo from Gauge 1 America. Later distributors were Hyde Out Mountain and Aster Hobby USA LLC. There is of course more to tell about ASTER in the USA, but I just do not know much about it.

6.9 Guarantee and service

In my experience one does not need often to request any guarantee or service when building ASTER kits or running ASTER locomotives. But when needed service is smoothly given. A few examples handled by Fulgurex: The boiler of my GER 0-6-0 after some usage had a leak in the steam pipe running to the cylinder. Fulgurex sent a replacement for free after I send the leaking boiler to Lausanne. Caused by an accident on a public steam meet the running board valance of my new Daylight 4-8-4 was scratched; this time also a replacement was sent for free by Fulgurex.

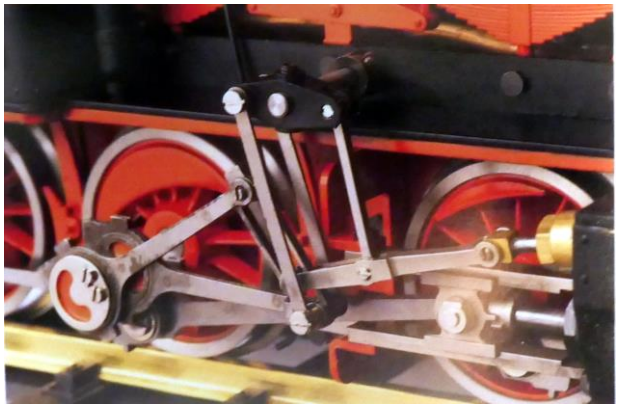
In July 1997 I went to the G1MRA Golden Jubilee and brought my just finished SNCF 232TC to have a run at this event or the GTG's (Get -To-Getters) I would be attending. Although I had done a test run at home it did not really run great at these GTG's. Mr. Inoue and one of the ASTER technicians were also attending the Golden Jubilee. The ASTER technician took a look at the locomotive and concluded that one of the crossheads/piston rod combinations was not completely straight. He advised to dismantle it at home and look for any incorrect parts which would be replaced by ASTER if necessary. So, some weeks later I sent a request to Japan for some replacement parts (crosshead and cylinder cover if I remember well) which I received within weeks at no charge and my SNCF 232TC was running again well.

[5] More fun: when I contacted ASTER EUROPA (Twerenbold) in 2008 to buy the Great Northern S2 they said they could not supply to me. I should go to Bram Hengeveld to buy this locomotive (which I did).

7 1996 – 2005

7.1 KPEV T3 - Baureihe 89

After 20 years of making increasingly complicated live steam locomotives, ASTER made another first; a working Allan straight link valve gear. The Prussian T3 with this gear was not only made in the green Prussian (KPEV) livery but also as Baureihe 89 in Deutsche Reichsbahn livery. This 0-6-0 tank locomotive is technically far away from the ETAT/GER 0-6-0 and also more sophisticated than the Pannier tank. The utility car of the Glaskasten can be used also for this locomotive.



But without this car the Prussian T3 looks very good running with a couple of Märklin freight cars of the correct era; the run is of course then rather short. The T3 is the last ASTER locomotive that I acquired. In 2018 I noticed a Dutch auctioneer trying to sell a pre-owned built up T3 to the USA market. There was no interest so I had a bargain.

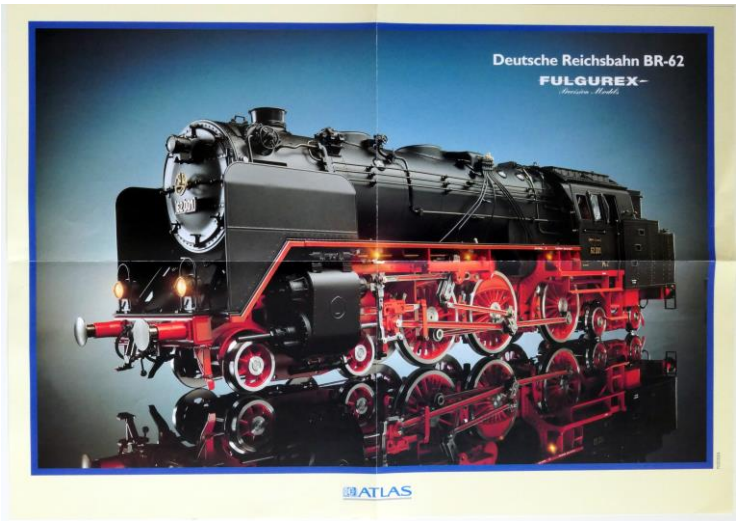
7.2 JNR C56

The JNR C56 2-6-0 was a locomotive with tender derived from the C12 tank locomotive. I doubt however that the ASTER C56 has any part in common with the ASTER C12. Almost 20 years of ASTER development had passed and that is noticeable not only in the technical specification but also in the detailing and finish, i.e. the looks. I would have expected however with a locomotive with separate tender that by now also an axle pump would be present. It is not on the C56 however.

The Fulgurex pricelists do only mention a built-up model and no kit. I assume not many of these models were imported in Europe.

7.3 Baureihe 62

Surprisingly the poster shown right was issued by Editions Atlas, a company that commercialised collectible products accompanied by printed booklets. The poster, which came with an Atlas collectible (but I do not remember which one) does mention Fulgurex, but does not mention ASTER. Clearly shown on the poster are the electric lights, not only at the front but also lighting up the driving gear. Electric lights in a live steam model was a first with the Baureihe 62. There was no steam driven generator however, the lights were powered by on board batteries.

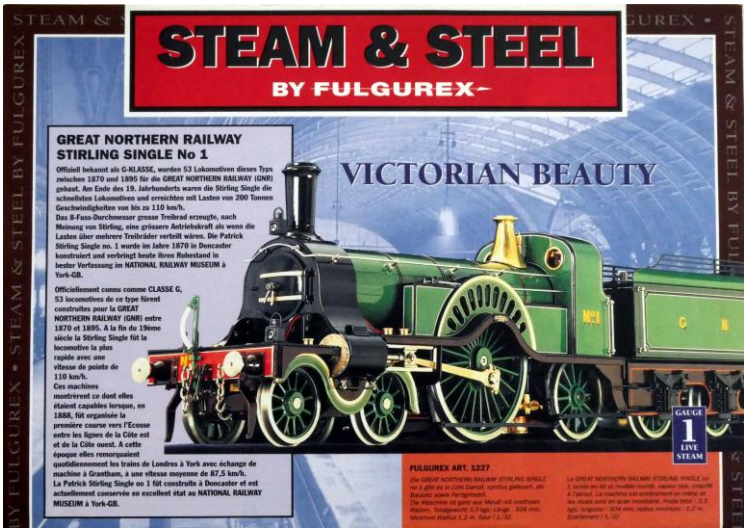


The Baureihe 62 4-6-4, which was supplied with parts to make a pre-war Deutsche Reichsbahn or a post-war Deutsche Bundesbahn version, is not very popular with model companies. The ASTER version is one of the few models in any gauge. The ASTER model is very nicely detailed and was because of this much more expensive than John van Riemsdijk, who designed the steam innards, expected.

7.4 GNR Stirling Single

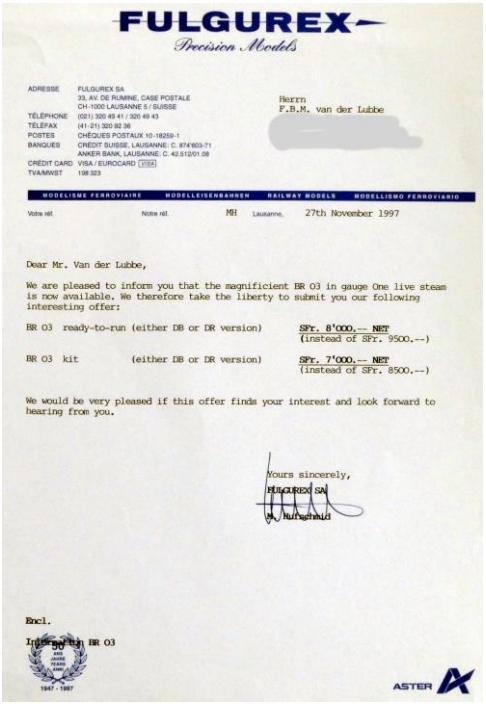
In January 1996 Mr Inoue and Mr Fujii from ASTER came to the Nurnberg Toy Fair to show the Stirling Single 4-2-2 at the booth of Fulgurex. On their return to Japan they flew via Schiphol Airport, Netherlands and Dutch live steam enthusiast and ASTER collector Ruud (famous for being pictured on page 37 of the sixth edition of the ASTER catalogue) had arranged for them to visit some collectors in the Netherlands. So, after a joint meal in a restaurant in Haarlem we went to my house and I showed my trains. Most memorable of the evening was that Mr. Inoue had brought the prototype of the Stirling Single as cabin luggage and brought it with him. So, there it was standing on the table in my living room. Of course, I could not resist to order one, that I picked up the next year at the Nurnberg Toy Fair. I went to visit the fair to collect the Stirling Single and a set of J&M Models GNR coaches from John Waggott and his wife at their booth.

ASTER has surpassed itself with the Stirling Single. Not only is it a beauty to look at, a Victorian beauty according to Fulgurex, the running characteristics are also excellent. With the large driving wheel running at speed still looks good. JvR mentioned that it might not withstand frequent use due to wear; my Single is still in very good condition.



Last year I tried to re-enact the races to the North with the GNR Single and the LNWR Precedent Class. It turned out to be difficult to have two locomotives under steam at the same time. So, at a certain moment the fire under the Single was lighted with a ventilator in the chimney and no water in the boiler. No serious harm was done, but when checked later the gauge glass packings were leaking and the pressure gauge had given up. After some repairs it runs again like it should.

7.5 Baureihe 03



FULGUREX
Precision Models

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CH-1000 LAUSANNE 5 / SUISSE

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CRÉDIT CARD VISA / EUROCARD
TVA/MWST 198 323

Herrn
F.B.M. van der Lubbe

MODELISME FERROVIAIRE MODELLEISENBAHNEN RAILWAY MODELS MODELLISMO FERROVIARIO

Votre réf. Notre réf. MH Lausanne, 27th November 1997

Dear Mr. Van der Lubbe,

We are pleased to inform you that the magnificient BR 03 in gauge One live steam is now available. We therefore take the liberty to submit you our following interesting offer:

BR 03 ready-to-run (either DB or DR version) SFr. 8'000.-- NET (instead of SFr. 9500.--)

BR 03 kit (either DB or DR version) SFr. 7'000.-- NET (instead of SFr. 8500.--)

We would be very pleased if this offer finds your interest and look forward to hearing from you.

Yours sincerely,
FULGUREX SA

Encl.
Inserat BR 03

1947 - 1997

ASTER

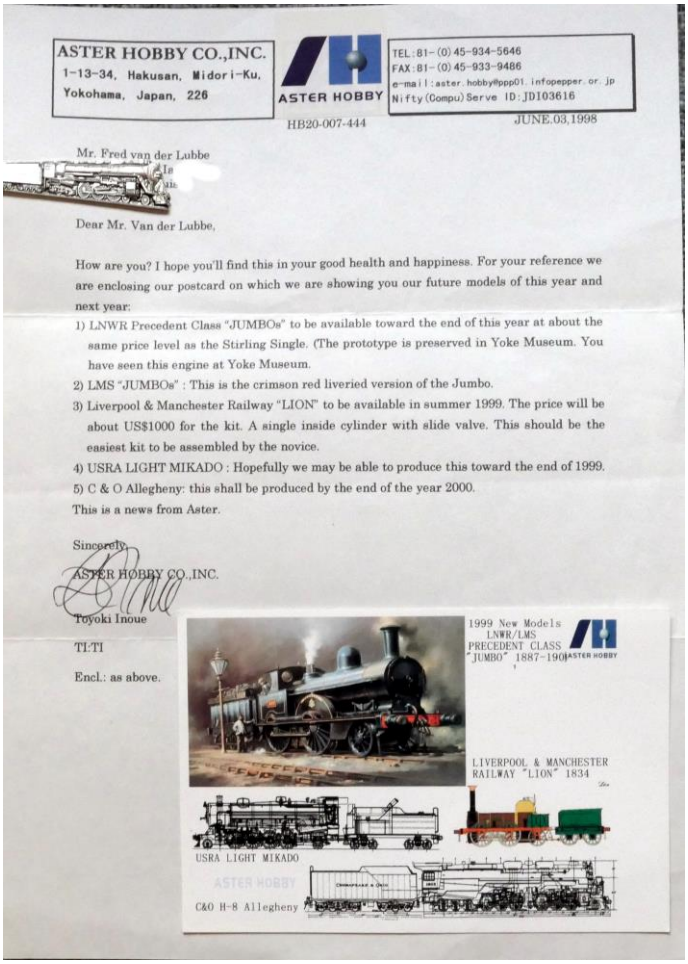
The German Baureihe 03 4-6-2 Pacific could be built as a Deutsche Reichsbahn version with large (Wagner) smoke deflectors or a Deutsche Bundesbahn version with smaller (Witte) smoke deflectors. At the time the Baureihe 03 appeared Fulgurex started direct marketing actions; I was offered the locomotive at a discount of more than 15% (see left) but did not buy one. Of course, the 03 was much more detailed than the 01 of some 20 years earlier, but I still prefer the 01. The 03 was a bit “more of the same” and did not introduce anything new or original. The 03 also became available as an electric driven model. At that time however companies like Kiss and KM1 introduced to the German market many electric driven Gauge 1 models of German locomotives at much lower price range, so the electric version of this ASTER model might not have been a successful model sale wise.

7.6 JNR 9600

Most Japanese locomotives in the ASTER range are rather elegant. The JNR 9600 2-8-0 Consolidation however has the looks of a workhorse like for instance the German Baureihe 58 2-8-0. It is made to a scale of 1:30 even when the real locomotive type was not only made for the Japanese narrow gauge but also made for standard gauge track. The model has a rather full specification with whistle and cylinder draincocks and was priced accordingly.

7.7 LNWR Precedent Class

In June 1988 I received a letter from Mr. Inoue announcing the Precedent Class in LNWR and LMS versions as the next ASTER locomotive. This rather small 2-4-0 is an attractive locomotive, I remember I have seen it in its LNWR livery at the Rocket 150 celebrations where it was running in the cavalcade. Although Fulgurex was still working together with ASTER, the Precedent Class was commissioned by ASTER UK who also supported the design. One of the choices they made was to have a cab layout which looked uncluttered, since the cab is rather open. This was the reason for not having a water gauge. From experience I have no problem at all with this locomotive not having a water gauge; the good working axle pump supplies enough water and when I notice from the chimney that the boiler is quite full, I just open the by-pass valve for a couple of rounds.



ASTER HOBBY CO.,INC.
1-13-34, Hakusan, Midori-Ku,
Yokohama, Japan, 226

ASTER HOBBY

TEL:81-(0)45-934-5646
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e-mail:aster.hobby@ppp01.infopepper.or.jp
Nifty(Compu)Serve ID:JD103616

HB20-007-444

JUNE.03,1998

Mr. Fred van der Lubbe

Dear Mr. Van der Lubbe,

How are you? I hope you'll find this in your good health and happiness. For your reference we are enclosing our postcard on which we are showing you our future models of this year and next year:

1) LNWR Precedent Class "JUMBOs" to be available toward the end of this year at about the same price level as the Stirling Single. (The prototype is preserved in Yoke Museum. You have seen this engine at Yoke Museum.
2) LMS "JUMBOs" : This is the crimson red liveried version of the Jumbo.
3) Liverpool & Manchester Railway "LION" to be available in summer 1999. The price will be about US$1000 for the kit. A single inside cylinder with slide valve. This should be the easiest kit to be assembled by the novice.
4) USRA LIGHT MIKADO : Hopefully we may be able to produce this toward the end of 1999.
5) C & O Allegheny: this shall be produced by the end of the year 2000.

This is a news from Aster.

Sincerely,

ASTER HOBBY CO.,INC.

Toyoki Inoue

TI:TI

Encl.: as above.

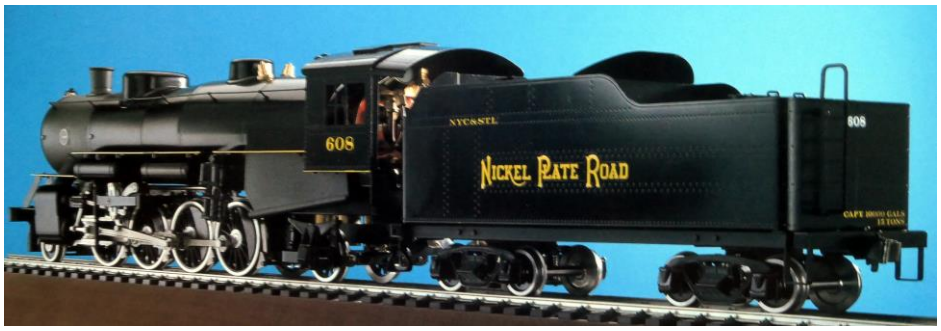
1999 New Models
LNWR/LMS
PRECEDENT CLASS
"JUMBO" 1887-190
LIVERPOOL & MANCHESTER RAILWAY "LION" 1834
USRA LIGHT MIKADO
C&O H-8 Allegheny

At the Spur 1 Treffen in Sinsheim in 2006 a seller offered a kit built Precedent Class. It looked expertly built and unrun; instructions, spare parts and tools were all present, so I bought it. Indeed, it was well built and proved to run very well. The seller also had, from the same builder, an ASTER JNR B20 which, although attractively priced was not sold. A few months later I bought it anyway from this seller, see 7.11.

The LNWR version called Hardwicke with running number 790, like the preserved locomotive, has a very nice LNWR blackberry black livery; the LMS version however in maroon called Novelty is also very good looking. A third version, Snowdon in LMS black, was also available.

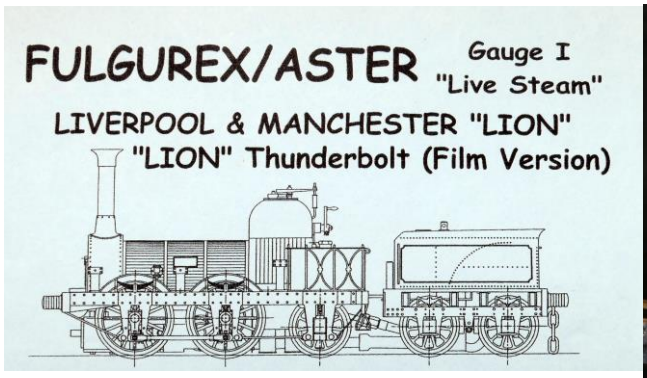
7.8 USRA Mikado

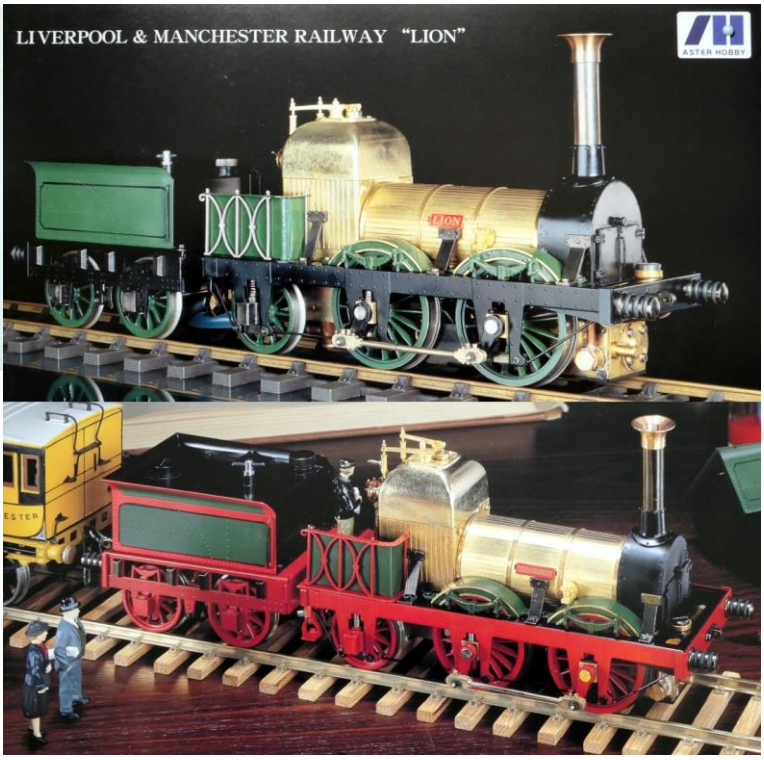
The USRA Mikado 2-8-2 was issued in two separate versions, a black version without any lettering and a beautiful Southern green version. The black version had less detailing and no hand or axle pump; an extra detail set and pump set were available as options from ASTER. A third supplier made the necessary lettering for a large number of railroads. The Southern version was a model of locomotive 4501; a USRA Mikado that was saved from the torch and already in 1966 was one of the first preserved engines. It was then given the green passenger livery; it is one of the few single locomotives that has a book dedicated solely to it: Locomotive 4501 by David P. Morgan. This ASTER model had extra detailing and both pumps. ASTER delivered the first kits of course to the USA. In June 2000 the green Mikado arrived in Europe and Fulgurex brought a few kits to their booth at the Spur 1 Treffen in Sinsheim where I bought one. The USRA Mikado has the same boiler type as the SNCF 141R and has never a shortage of steam. A first (I think) was the placement of blower and regulator controls perpendicular to the boiler back head. I never get used to this and always move the controls in the wrong direction, but when the loco is running it runs great.



To have access to the controls in the cab ASTER locomotives often have a removable (part of the) cab roof. Some ASTER owners run their trains without this cab roof (and with the pump handle sticking out of the tender). With the USRA Mikado however ASTER made the back of the cab roof hinged. As can be seen on the official ASTER picture left this does not look good; The hinged part hangs down a bit messy. I permanently attached this hinged part on my locomotive.

7.9 L&M Lion



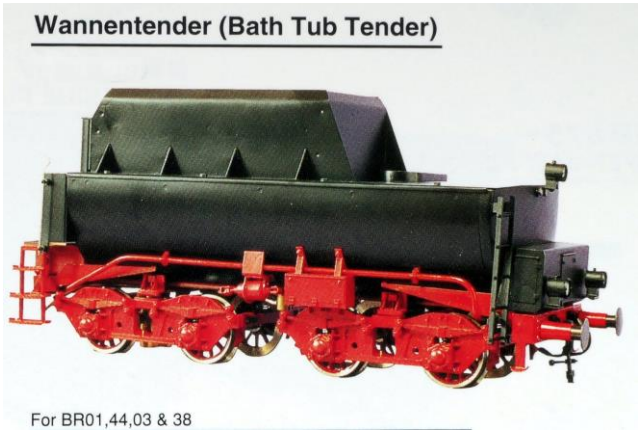


The 1840's locomotive known as "Lion" was made by ASTER in two liveries. The livery in which it is preserved and kept in the Museum of Liverpool and in the livery it acted in in the movie "The Titfield Thunderbolt". The small 0-4-2 locomotive has a C-type boiler which is just a bit larger than the boiler of the Grasshopper (see 5.15). The locomotive has one cylinder only, the movement of which is geared to the driving wheels, making it possible to have sedate running. It has slip eccentric valve gear. The tender does keep the alcohol. Water can be fed to the boiler using a syringe from an inlet in the tender, no hand pump is present.

7.10 Baureihe 38

The last locomotive in the range announced by ASTER in 1998 (see 7.7) was the Allegheny. Before the Allegheny was issued however, ASTER first issued another German locomotive, the Baureihe 38. Whether this was commissioned by Fulgurex I do not know, it was advertised (in black & white, see left) by Fulgurex and as far as I know it was the last ASTER locomotive distributed by Fulgurex. It was available in a green Prussian P8 version and as a Reichsbahn or Bundesbahn black Baureihe 38 version. The P8/Baureihe 38 4-6-0 is popular in Germany and models are available in many gauges. Märklin already made a Gauge 1 version in 1978. The ASTER version has the rectangular 8-wheel tender.

ASTER issued an 8-wheel bath tub tender somewhat later which was suitable for the Deutsche Bundesbahn version of the Baureihe 38. ASTER mentioned that this tender could be used also for the Baureihe 01 and 03, I do not think a 01 or 03 ever ran with this type of tender.



The P8 Prussian version is very good looking in green with the red lining as shown right. The ASTER Baureihe 38 was made in large numbers and was available for a very long period, even appearing on distributors pricelists more than 10 years after introduction and RTR models are apparently still available now.

7.11 JNR B20

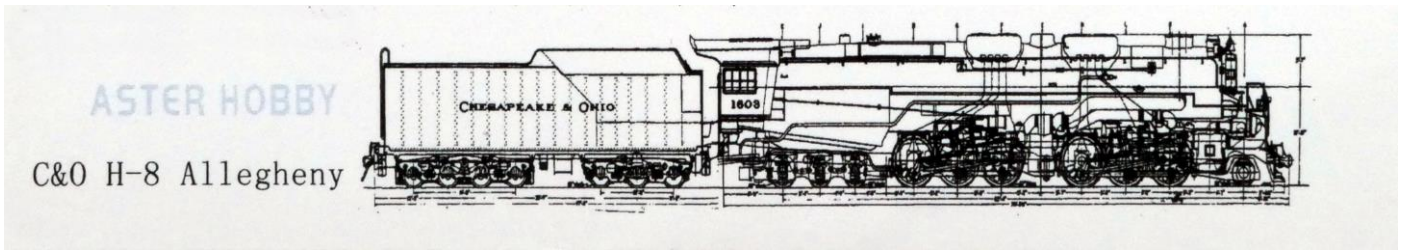
The only Japanese steam locomotive of which ASTER made a model and that I have seen in reality in steam is the B20 (see right). The 0-4-0 B20 is made to a scale of 1:24 instead of 1:30, which is used for all other ASTER Japanese locomotives. So, it is out of scale with other ASTER Japanese products, but when running in the snow with a 1:30 JNR coach (see below) it still looks not too bad.

The B20 is gas fired and has a centre flue boiler. Since there is no axle or hand pump one should be very careful and close the gas valve the moment the locomotive runs out of water, or better still, set a kitchen timer which gives an advance warning. The locomotive runs very well and for quite some time on a full boiler. ASTER made a separate utility car which could hold extra gas and water with an electric pump.

At the Nürnberg toy fair of 2003 a German version of the B20 as a Krupp “Werkslokomotive” was announced (see above). I assume it did not go into production.

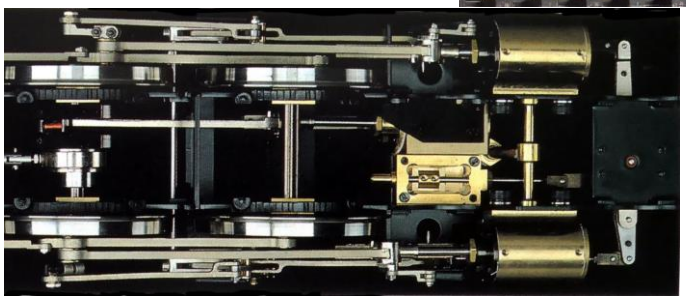
7.12 C&O H-8 Allegheny

When discussing large steam locomotives, the Big Boy and Allegheny are always mentioned, so one could expect that ASTER would also make a model of this 2-6-6-6 articulated locomotive with its 14-wheel tender. A first with this locomotive was the working Baker valve gear. The Allegheny was, after the Big Boy, again a locomotive that was made in small numbers. The Big Boy had a rerun and was also made in an electric version, a total of some 300 were made; of the Allegheny only 120 were made. Some 10 years later Accucraft also made an Allegheny, but that was gas fired, while the ASTER locomotive had a choice of coal or alcohol firing for its locomotive type boiler.



7.13 LNER A3

Almost twenty years after the LNER A4 “Mallard” ASTER made the LNER A3 4-6-2 Pacific “Flying Scotsman”. Built up versions of this locomotive wore the correct LNER livery and name and number for “Flying Scotsman”. Kits could also be had without name or number such that you could model your own favourite A3. A year later ASTER also made in small numbers a darker green version in British Railways livery with smoke deflectors.



As can be seen left, the 3 cylinder A3 has the correct Gresley conjugated valve gear; ASTER design and manufacturing was advanced enough to make this prototypical correct. Also, in contrast to the A4, an axle pump was placed between the frame. As the A4 the A3 has a C-type boiler.

7.14 Baureihe 52

Although I have never seen them side by side, I assume that the bath tub tender made by ASTER for the Baureihe 38 is the same as the bath tub tender of the Baureihe 52. Later also a normal (T28) tender was available for the Baureihe 52. I do not know who commissioned this locomotive since as far as I know it was designed before Twerenbold took over the ASTER distribution for Europe. The prototype for this 2-10 Decapod locomotive was because of the war of simplified design, so the model also has simple detailing. It was made in a black Reichsbahn or Bundesbahn version or in a grey “war” version. Apparently, it was made with a wrongly designed cab roof, so later versions sold by Twerenbold had a correct roof profile.

8 Reviewing the ASTER production

8.1 The legendary ASTER locomotives

The poster (see right) is called “The legendary Locomotives”. It pictures 24 “legendary” steam locomotives and ASTER made models of 14 of these locomotives. The choice of locomotives that ASTER made was of course influenced by the popularity of these locomotives, not only in the country the real locomotive ran but also worldwide (or at least in the countries ASTER locomotives were sold). Many locomotives were proposed or commissioned by ASTER distributors (see 6.8). An inventory per country of ASTER locomotives shows that 18 American, 16 British, 13 German, 9 Japanese, 6 French, 3 Swiss and 1 Australian locomotive were made. The large number of Japanese locomotives has of course to do with the home market of ASTER; the large number of German locomotives is a bit surprising, since the live steam hobby is not that large in Germany. German locomotives are apparently popular in other markets and two of the German locomotives were also available in a French version.

The range of locomotives made by ASTER is interesting for many steam locomotive lovers since it includes a variation of large and small types for passenger and freight trains from the history of the steam locomotive and a range of technically specialities like compound locomotives, articulated and geared locomotives. One can wonder whether the range is complete. In my view the number of streamlined locomotives might have been higher, but that is of course a remark based purely on personal taste. A real omission is however the absence of an Atlantic type of locomotive. In correspondence I had in the nineties with Mr. Toyoki Inoue of ASTER this Atlantic issue was also discussed as can be seen below with my question followed by his answer:

Looking at the complete range of models ASTER has made through the years I cannot refrain from mentioning that a certain type is missing. I think an Atlantic (4-4-2) type would be great. This type is sometimes mentioned ‘elegance on rail’ (Eleganz auf Schienen). There are lots of beautiful Atlantic type locomotives worth being modelled:

- American: PRR E6s, Milwaukee Hiawatha, SP A6 Daylight
- England: GNR C1 Ivatt-Atlantic
- Germany: Bavarian S2/5, Pfalzbahn P4
- France: Nord de Glehn Atlantic
- Austria: kkOSB Gölsdorf atlantic
- Belgium: type 12

I certainly would like to add such a type to my collection.

3) ATLANTICS: Thank you for your suggestion for5 this type of locomotives. Yes, this type is missing in our products. Just after our introduction of the NYC Hudson we had studied the Milwaukee “Hiawatha” as our next engine after the K-4. However, a Korean manufacturer had done this loco before us. Thus we had to postpone this engine. However, when our American market will be stronger enough we may have a chance to introduce this locomotive. As for the Nord “de Glehn Atlantic, she is so famous and we think FULGUREX will ask us to introduce it in the future, though we are not sure. We can see these Atlantic type of locomotives in a book called “the illustrated Encyclopedia od the world’s Steam passenger Locomotives”, which I’m sure you have. We are having the same opinion as you do on the Atlantic type locos. As a manufacturer of gauge One live steam, we must introduce this type of engine.

4) You are always welcomed to Aster. When you’ll plan to visit Japan, kindly be noted that on every 2nd and 4th Sundays the Yokohama live steamers get together at their club layout, where is near to our place. I’d like to take you to their layout if you’ll be interested in seeing how the Japanese live steamers enjoy steaming.

Thank you very much again for your nice suggestion and you are always invited to Aster.

Sincerely,

ASTER HOBBY CO., INC.

ASTER never made an Atlantic type; things might have been different when the connection between Fulgurex and ASTER had not come to an end. Anyway, I had to cheat by buying an Accucraft locomotive to get a live steam Pennsylvania E6s Atlantic in my collection (right). And the Korean manufacturer "Hiawatha" in my collection is an electric version (left).

There are some locomotives mentioned in catalogues or flyers that were never made. A Fulgurex/ASTER flyer of the eighties shows besides the announcement of an SBB A3/5 that was made, also the SBB B3/4 to be delivered in 1985/86. Further in the ASTER sixth catalogue of the mid-nineties a NORD Super Pacific and an SNCF 240P are shown as in development and planning. John van Riemsdijk also mentions that he delivered a design for these. I would have been very interested in the NORD Super Pacific, so when I met Toyoki Inoue when he visited the Netherlands (see 7.4) I asked about these. As you might remember in 1995 the French did some nuclear test in the Pacific. The protest against these were, for understandable reasons, very strong in Japan. Mr. Inoue said to me that ASTER was not going to make any French locomotive because of this. It took indeed another ten years before ASTER made another French locomotive.

8.2 Production figures from Schools Class to Tigerli

From the first ASTER locomotive, the Southern Railways Schools Class, until the last[6], the Swiss 0-6-0 Tigerli, a total of 66 different model steam locomotives are made, not counting the different liveried versions of a number of locomotive types. The number of kits and RTR locomotives made for each type are not generally published. I tried to make a count by searching on the internet and using the numbers mentioned in the book Metal Model Trains. My total count adds up to 36.066 locomotives (total of Kit and RTR) made by ASTER in this 41-year period. Since I divided the history in four 10-year eras I looked at the figures through these eras seeing whether a trend can be found. The table below presents the figures and trend.

Era	Types	Complexity	Average number per type	Totals (Kit and RTR)
1975-1985	23	8	892	20,523
1986-1995	15	8.2	343	6,714
1996-2005	14	7.9	326	5,245
2006-2016	14	9.7	218	3,487
Totals	66			35.969

The column **Types** shows the number of different locomotives made per 10-year period. Generally, it shows that ASTER issued 5 models every two years in the first period and 3 models every two years in the following periods.

Complexity (of a locomotive) is completely arbitrary defined by me by counting the number of axles. As can be seen the complexity of the first three periods are about the same and the last period brought some extra-large locomotives. Of course, one could also include number of cylinders and different fittings include in complexity; I have not tried to do that.

As mentioned before the production numbers of the first models were much larger than the later ones. The **Average number per type** column shows that the number of kits and RTR's per type were getting lower through the years. Note however that some types were re-made, in general in low quantities in a later period. In my count all locomotives are added to the period the first of a type was issued.

The column **Totals (Kit and RTR)** shows that production numbers were getting lower each period where the last period is even 11 year instead of 10 year.

In my own collection the majority of locomotives is from the period until 2002. In that year I added a 0 Gauge track to my garden railway and since then my train budget is also spent on 0 Gauge items.

[6] In the scope of the history of ASTER described here.

9 2005 – 2016

9.1 LMS Duchess Class

As a model railway manufacturer, one should not only have a LNER A4 but also an LMS Duchess in your catalogue, so it is no surprise that ASTER made the LMS Duchess. ASTER choose to model the non-streamlined version of the Duchess in 2 different liveries: the maroon LMS 6233 “Duchess of Sutherland” and the green British Railways 46232 “Duchess of Montrose”.

As the real Duchess locomotive, the ASTER model has 4-cylinders. It has a C-type alcohol fired boiler. It is, when correctly built, a very good runner. I remember one running in my garden, which even went much too fast, but that was the choice of the owner/driver who liked fast cars and fast locomotives.

A couple of years later 46231 “Duchess of Atholl” in British Railways experimental blue livery was issued by ASTER

9.2 NKP Berkshire

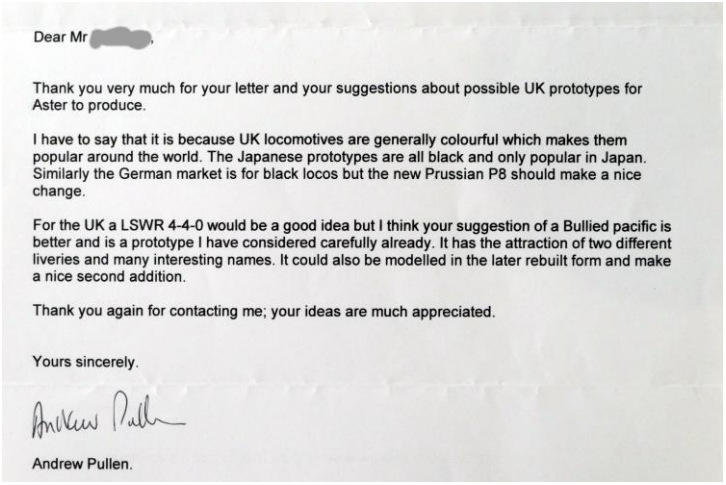
When visiting ASTER in Japan in 2003 (see 6.8) Mr. Inoue told me that a next locomotive being designed was the NKP 2-8-4 Berkshire. Because I have a soft spot for the reverse wheel arrangements like 2-6-4 and 2-8-4 and because the Berkshire has Baker valve gear, I decided then to buy one when it became available. When these locomotives arrived at the distributor at the end of 2005 my personal economic situation did not allow this purchase.

The ASTER leaflet mentions a C type boiler. The boiler of the Berkshire is however a hybrid type between a locomotive boiler and a C-type. The firebox is quite long with dry sides and a wet top. I do not know the advantages of this type of boiler; I assume it is efficient, but it does not look as strong as a real C type or a locomotive type boiler. The Baker valve gear on the Berkshire is not a first since it is also used on the Allegheny. ASTER choose the lettering and number (779) of the preserved Berkshire but also some unlettered/unnumbered kits were available.

I have not seen a Berkshire running; I assume that not many were sold in Europe, but it was available from the European distributor.

9.3 Bulleid Light Pacific

In the G1MRA newsletter for Spring 2001 the UK distributor Andrew Pullen welcomed thoughts from customers about what types of British models ASTER should make. He mentioned that colourful models not only would be attractive for British customers but also for customers around the world. Tamme gave some suggestions and as you can see at the right his suggestion of a Bulleid Pacific agreed with the plans of ASTER UK. So, 30 years after the first ASTER Southern Railway Schools Class ASTER made the original air smoothed version of the light Bulleid 4-6-2 Pacific in Southern Railway livery and also in a British Railways version.



Dear Mr [redacted],

Thank you very much for your letter and your suggestions about possible UK prototypes for Aster to produce.

I have to say that it is because UK locomotives are generally colourful which makes them popular around the world. The Japanese prototypes are all black and only popular in Japan. Similarly the German market is for black locos but the new Prussian P8 should make a nice change.

For the UK a LSWR 4-4-0 would be a good idea but I think your suggestion of a Bullied pacific is better and is a prototype I have considered carefully already. It has the attraction of two different liveries and many interesting names. It could also be modelled in the later rebuilt form and make a nice second addition.

Thank you again for contacting me; your ideas are much appreciated.

Yours sincerely.

Andrew Pullen.

Like the original the ASTER model is a 3-cylinder engine, however they did not copy the chain driven valve gear of the original locomotive. ASTER installed 3 sets of what they called modified Walschaerts valve gear and an axle driven pump between the frames.

The RTR version were 21C166 Spitfire in Southern green and 34051 Winston Churchill in British Railways green. Note the modified tender of the British Railways version. A third version was the Southern Railway model (with the high-side model tender) but in British Railways livery with the lion-over-wheel emblem. Kits could also be had with a choice of numbers and there are British suppliers that make appropriate name plates. The Bulleid Pacific was quite successful and sold well in the UK; a large number of these locomotives can be seen at G1MRA steam meets.

9.4 SNCF 140C

After the SNCF U1 of 1991 it was about time for another French ASTER locomotive. ASTER Europa commissioned the SNCF 140C 2-8-0 in a green and a black version. Apart from the colour there was also a difference in detailing between these two versions. The most

obvious being the Dabeg pump at the right side of the green version. The 140C has a C-type boiler for alcohol firing. After a few years ASTER Europa introduced a conversion kit for the black 140C to allow for coal firing. Further a detail kit to install a (dummy) ACFI feedwater system became available. Whether these extras were introduced to boost sales I do not know. Anyway, end of 2016 ASTER UK had a sale of black 140C kits and of course I made use of it like a real Dutchman.

Building the kit went easy but during the first run I noticed a shortage of fuel flow; I suspected the alcohol tank and without any fuss Andrew Pullen had a new one sent to me which completely solved the problem and my 140C287 is running great.

9.5 British Railways 9F

According to information I found more than 300 models of the British Railways 9F 2-10-0 were made by ASTER. It is surprising that a year after issuing the model it was already sold out. ASTER made a green version named Evening Star with number 9220 and a black version which could be given the number wanted by the kit builder. An ASTER first were the piston valves instead of slide valves that were used on all ASTER locomotives until then. The boiler of this 2-cylinder engine was a C-type fired by alcohol. The radius the locomotive can cope with is 2 meter which is quite surprising with its 10 driving wheels.

9.6 Great Northern S2

When reading the American Model Railroader magazine in the seventies and eighties I always was impressed by the advertised Great Northern locomotives, including the S2 with its Vanderbilt tender, made in H0 by Tenshodo and imported by PFM (Pacific

Fast Mail) in a factory painted Glacier Park green, grey, black and oxide red livery. So, when ASTER announced this 4-8-4 locomotive, I decided I needed to have one.

ASTER not only made this Glacier Park version with running number 2584 but also much less interesting black version with number 2575 (see right).

The S2 has a (battery powered) electric headlight (which is on in the picture left).

This large 2-cylinder engine with its large water and alcohol supplies in its tender is an easy locomotive to run. It can easily be run for hour after hour. I do not know whether it is a first: the tender has an easy plug to drain the water from the tender after the run so the particularly unrealistic inverted shaking of the tender is no longer necessary.

9.7 GWR Castle Class

The real Great Western Railway 4-6-0 Castle Class has some similarities with the just a bit larger King Class. The ASTER model of the Castle Class however has some improvements when compared to by then 20-year-old model of the King Class. One of the improvements is the much less gloss, more correct, livery; personally, I prefer the livery of the King Class, but I also do like toy trains.

The Castle also has 4-cylinders with the outside valves operated through rockers from the inside Walschaerts valve gear. The boiler is just a tiny bit smaller, but also of the C-type. The ASTER Castle Class locomotive has the name Kingswear Castle and was available in British Railways or Great Western Railway livery.

9.8 British Railways 5MT

The UK market was insatiable, so after the Castle Class the next ASTER locomotive was again a British locomotive commissioned by ASTER UK. Earlier ASTER UK was convinced that an ASTER model should have worldwide appeal, but apparently there were enough UK customers for a locomotive like this 4-6-0 Standard Class 5MT, which I imagine has no appeal outside the UK. Like the British Railways 9F 2-10-0 the 5MT also had piston valves with Walschaerts valve gear. The 5MT was available in green as well as black British Railways livery.

9.9 Krauss Tank

One might think that the Kraus Tank 0-4-0 locomotive is German, well the original was built in Germany but exported to Japan. This small tank locomotive is very popular in Japan, so this model was made for the Japanese market. The scale of this locomotive is according to the specification 1:21 so the gauge of the original would be about 700 mm, however the railway where it is running now as a touristic train has the normal Japanese gauge of 1067 mm.

The locomotive is gas fired and has outside Stephenson valve gear. Because of its small size and wheelbase, it can easily run on small radius LGB track. A red-lined green and an all-black version was available.

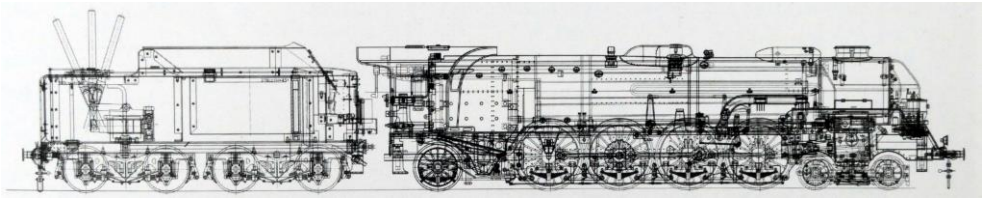
9.10 UP Challenger

The Union Pacific 4-6-6-4 Challenger articulated locomotive was commissioned by ASTER USA. It was made in small quantities and most were pre-ordered. Soon after delivery the range was sold out. The technical layout of the model differs from that of the ASTER Big Boy. The boiler is a C-type and made for alcohol firing. The four cylinders have drain cocks and the valves are of the piston type. It has a normal Roscoe displacement lubricator and two axle pumps. It was available in black or grey liveries and represented an oil fired locomotive.

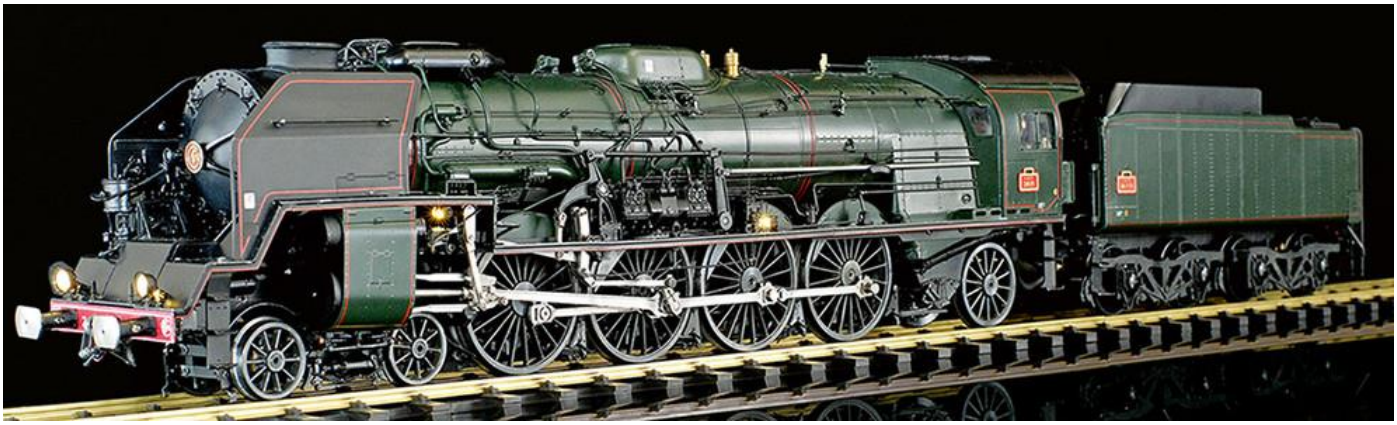
After the Challenger was delivered and before the next UP locomotive (see 9.13) ASTER issued an extra tender. These auxiliary water tenders are used by the Union Pacific Heritage Fleet behind their excursion locomotives (Big Boy, Challenger and FEF). Two versions were available with number 809 and 814. 809 had a USA flag on its sides. An electronic water gauge was available so the water level could be checked without looking in the tender.

9.11 SNCF 241P

A catalogue of ASTER Europa for 2009 (see right) mentions the delivery of a new SNCF model. The SNCF 241P 4-8-2 Mountain locomotive would arrive in Spring 2010. It took a bit longer, but the 241P was worth waiting for.



The 241P is considered to be the most detailed ASTER model. It is a 4-cylinder compound locomotive that can be fired with coal or alcohol. I have seen it running at the Spur 1 Treffen in Sinsheim and was very impressed. It is made in small numbers and was quite expensive but sold out soon anyway.



As can be seen in the picture it has not only front lights but also lights showing the mechanism which was used in reality for maintenance.

9.12 Rebuilt Merchant Navy

Another locomotive commissioned by ASTER UK was another Bulleid 4-6-2 Pacific. Bulleid designed a light and a heavy version of his Pacific. The light version is modelled by ASTER as originally built (see 9.3), the heavy version, called Merchant Navy Class, is modelled as it was rebuilt by British Railways. The locomotive is modelled after the preserved Bulleid Pacific “Clan Line” with number 35028 with the help of the Merchant Navy Locomotive Preservation Society, owners of the preserved locomotive. Kits without numbers were however available. Like the light Pacific is it a 3-Cylinder locomotive but in the rebuild version the valve gear for the two outside cylinders is not inside but outside.

9.13 UP FEF-3

After the Big Boy and the Challenger there were apparently enough enthusiasts, especially in the USA, to also have a model of the Union Pacific 4-8-4 FEF-3 locomotive. ASTER USA commissioned this locomotive so one could complete his Union Pacific collection when space and money allowed. The three UP locomotives all have the same type of so-called centipede 7-axle tender, but as expected from ASTER there are detail differences between these three tenders in accordance with the real ones.

The FEF-3 was advertised as equal or better in detail, performance and appeal compared to any earlier released Aster US prototype model.

With its large boiler and tender supplies and 2 large cylinders I assume it indeed can be run for hours, more so when using one of the auxiliary water tenders (see 9.10). The FEF-3 was available in black and grey versions.

9.14 SBB E3/3 Tigerli

Another first with this last, in the context of this history, ASTER locomotive was that it was available in a Dutch livery as NS (Nederlandse Spoorwegen) 7851. The Swiss E3/3 0-6-0 tank locomotive, of which a few went to the Netherlands after WW2, was commissioned by ASTER Europa. A not very surprising choice, many Tigerli, the nickname of this type, were made as electric models in a number of gauges by the various Swiss companies like Fulgurex and Lemaco. The ASTER live steam model was available in a number of liveries such as: brown, black boilered with a green cab, black with red lining and black with a Russian Iron coloured boiler. ASTER made a utility car for the Tigerli with an extra alcohol supply and a water tank with handpump; this car had the body of a Swiss K2 closed van in grey livery. Separately ASTER also made closed vans in brown to add as rolling stock to the Tigerli. Further some extra detailing like lamps (see below) was available as a separate option.

10 All Locomotives Specifications

The table below gives an extract of the specification of all ASTER locomotives in the order they appear in the previous chapters. The columns of this table have the following explanation:

Year: The (approximate) year that the model became available. The release date of a locomotive is not exactly known; sources like pricelists and catalogues differ sometimes in the order that the locomotives became available.

Locomotive: Name given to the locomotive type in this book, sometimes divergent from the name ASTER used.

Size: W: Weight in kilograms, **L:** Length in centimetres

Wheels/Cyl: Wheel arrangement conform the Whyte notation and number of cylinders

Valve: Valve gear used as follows: All = Allan straight link; Bkr = Baker; Gre = Gresley conjugated; Osc = Oscillating cylinders; Slip = Slip eccentric; Step = Stephenson; Wal = Walschaerts; W/S = Walschaerts outside, Slip eccentric inside;

Boiler: Boiler type and boiler content in cc/ml.

Fuel: A = Alcohol; C = Coal; G = Gas.

Pump: A = Axle pump fitted; Ao = Axle pump Optional; At = Axle pump on tender; H = Hand pump fitted;

Radius: Minimum radius the locomotive needs for running; the ASTER specification is sometimes ambiguous, especially for the smaller locomotives.

Qnty: Total number of kits and RTR versions. The number of kits and RTR locomotives made for each type are not generally published. I tried to make a count by searching on the internet and using the numbers mentioned in the book Metal Model Trains.

Remarks: Remarks

Year	Locomotive	Size		Wheels/Cyl	Valve	Boiler	Fuel	Pump	Radius	Qnty	Remarks
		W	L								
1975	Southern Railway Schools Class	3.9	56.3	4-4-0/2	Slip	Smithies 170 cc	A	-	3 m	3024	
1975	JNR 8550	3.1	52	2-6-0/1	Slip	Smithies 150 cc	A	-	3 m	2200	Remade 1982 with 2 Cyl
1976	V&T RR Reno	4	58.9	4-4-0/2	Slip	Smithies 150 cc	A	H	3 m	750	
1976	Old Faithful	1.2	19	0-4-0T/2	Osc	Smoke Tube 95 cc	A	-	0.6 m	1000	US version 23 cm
1977	Shay Class B	3.4	43.5	4-4/3	Step	Pot Type 140 cc	A	H	0.8 m	1450	Remade 2011
1977	JNR C12	3	38,6	2-6-2T/2	Slip	Smithies 170 cc	A	-	2 m	1230	
1977	PLM 231A	5.5	74,5	4-6-2/2	Wal	Smithies 300 cc	A	H	3 m	800	
1978	DB Baureihe 78 – SNCF 232TC	4.2	46.4	4-6-4T/2	Wal	Smithies 200 cc	A	-	3 m	770	
1978	JNR C62	7.2	72.7	4-6-4/2	Wal	Locomotive 400 cc	C	H, A	3 m	783	Remade 1991, 2003
1979	Southern Railway King Arthur	4.2	64.2	4-6-0/2	Slip	Smithies 200 cc	A	-	3 m	300	
1979	SNCF 141R	6	75.6	2-8-2/2	Wal	Smoke Tube 350 cc	A	H	3 m	520	
1979	JNR C57	6	68.3	4-6-2/2	Wal	Smoke Tube 270 cc	A	H	2 m	650	Remade 1999
1980	DB Baureihe 01	6.1	77.6	4-6-2/2	Wal	Smithies 350 cc	A	H	3 m	850	
1980	GER / ETAT / Ouest 0-6-0 Tank	1.6	31	0-6-0T/1	Osc	Pot Type 150 cc	A	-	0.6 m	1000	
1981	UP Big Boy	19	122.4	4-8-8-4/4	Wal	Locomotive 800 cc	G&C	H, A	3 m	330	Remade 1986
1981	Baldwin Rear Tank	2	29.8	0-4-2T/2	Slip	Pot Type 110 cc	A	-	1.25 m	1125	Remade 2009
1981	Bavarian S2/6	6	67	4-4-4/2	Wal	Center Flue 220 cc	G	H, A	3 m	581	
1982	C&N Climax	5.5	58	4-4-4/2	Step	Center Flue 180 cc	G	H, A	1.25 m	500	
1983	SBB Eb3/5	3	40	2-6-2T/2	Wal	Smithies 160 cc	A	-	2 m	350	
1983	NYC Hudson	9	93.4	4-6-4/2	Wal	Center Flue 350 cc	G	H, A	3 m	600	2 Electric versions made
1984	Western Maryland Shay	6.4	64	4-4-4/3	Step	Center Flue 340 cc	G	H, A	2 m	580	Remade 1990
1984	Pennsylvania RR K-4	7.6	83.1	4-6-2/2	Wal	Center Flue 300 cc	G	H, A	3 m	580	
1984	LNER A4	5.8	69.1	4-6-2/3	W/S	Type C 280 cc	A	H, Ao	3 m	550	Remade 1987
1985	DB Baureihe 44 – SNCF 150X	6.9	72.3	2-10-0/3	W/S	Type C 300 cc	A	H, A	3 m	300	
1986	JNR D51	6.9	69.1	2-8-2/2	Wal	Type C 300 cc	A	H, A	3 m	560	Remade 1992, 2007
1986	SBB A3/5	4.8	59.1	4-6-2/4	Wal	Type C 140 cc	A	H, At	3 m	364	
1987	DB Baureihe 86	3.5	43.2	2-8-2T/2	Slip	Pot Type 230 cc	A	-	2 m	620	
1987	SP GS-4	19.4	104.4	4-8-4/2	Wal	Locomotive 460 cc	A	H, A	3 m	300	
1988	Chapelon Nord 231	6.9	74.4	4-6-2/4	Wal	Type C 250 cc	A	H, A	2 m	300	
1989	Baureihe 96	6.8	55.5	0-8-0+0-8-0T/4	Wal	Type C 360 cc	A	H, A	3 m	400	
1990	GWR King Class	6	66.4	4-6-0/4	Wal	Type C 270 cc	A	H, A	3 m	400	
1990	JNR C11	4.5	43.6	2-6-4T/2	Wal	Smithies 180 cc	A	H	3 m	500	
1991	C&S Mogul	5.8	64.3	2-6-0/2	Wal	Center Flue 180 cc	G	H	1.65 m	480	

1991	SNCF 232U1	9.3	80.3	4-6-4/4	Wal	Locomotive 250 cc	C&A	H, A	3 m	370	
1992	Pannier Tank	2.7	30.8	0-6-0T/2	Slip	Type C 165 cc	A	-	1.5 m	750	
1993	Glaskasten	1.9	24.1	0-4-0T/2	Wal	Saddle Type 110 cc	A	-	0.6 m	450	
1994	AD 60 Beyer Garratt	10.8	104.4	4-8-4+4-8-4/4	Wal	Locomotive 320 cc	C&A	H, 2A	3 m	220	
1994	B&O Grasshopper	0.9	17.2	0-4-0T/2	Slip	Vertical 45 cc	A	-	0.55m	700	
1995	KPEV T3 / Baureihe 89	2.2	27.1	0-6-0T/2	All	Type C 110 cc	A	-	0.6 m	400	
1995	JNR C56	4.9	53.6	2-6-0/2	Wal	Type C 150 cc	A	H	2 m	250	
1995	Baureihe 62	5.5	53.5	4-6-4T/2	Wal	Type C 280 cc	A	H, A	2 m	260	
1996	GNR Stirling Single	3.3	50.4	4-2-2/2	Step	Type C 90 cc	A	H, A	2 m	300	
1997	Baureihe 03	7	74.3	4-6-2/2	Wal	Type C 300 cc	A	H, A	2 m	370	
1997	JNR 9600	5.1	53.3	2-8-0/2	Wal	Hybrid 230 cc	A	H, A	2 m	300	
1999	LNWR Precedent Class	2.6	45.7	2-4-0/2	Slip	Type C 80 cc	A	H, A	1 m	500	
1999	USRA Mikado	7.5	77	2-8-2/2	Wal	Smoke Tube 400 cc	A	H, Ao	2 m	400	
2001	L&M Lion	1.6	32.5	0-4-2/1	Slip	Type C 60 cc	A	-	1.25 m	800	
2001	Baureihe 38	5.6	58.8	4-6-0/2	Wal	Smoke Tube 270 cc	A	H, A	2 m	500	Optional bath tub tender
2002	JNR B20	2.8	30.2	0-4-0T/2	Wal	Center Flue 120 cc	G	-	0.55 m	300	
2002	C&O H-8 Allegheny	18.9	129	2-6-6-6/4	Bkr	Locomotive 800 cc	C&A	H, A	3 m	120	
2002	LNER A3	5.9	68.7	4-6-2/3	Gre	Type C 250 cc	A	H, A	2 m	450	Remade 2003
2003	Baureihe 52	6.6	73.9	2-10-0/2	Wal	Type C 300 cc	A	H, A	2 m	295	
2005	LMS Duchess Class	6.2	71.1	4-6-2/4	Wal	Type C 250 cc	A	H, A	2 m	400	Remade 2012
2005	NKP Berkshire	11.5	110	2-8-4/2	Bkr	Hybrid 450 cc	A	H, A	3 m	300	
2006	Bulleid Light Pacific	6	64.9	4-6-2/3	Wal	Type C 255 cc	A	H, A	2 m	480	
2007	SNCF 140 C	5.2	60.5	2-8-0/2	Wal	Type C 220 cc	A	H, A	2 m	250	Optional Coal fired
2007	British Railways 9F	5.5	62.7	2-10-0/2	Wal	Type C 255 cc	A	H, A	2 m	315	
2008	Great Northern S2	10.4	98.5	4-8-4/2	Wal	Type C 670 cc	A	H, A	3 m	257	
2009	GWR Castle Class	5.4	62.8	4-6-0/4	Wal	Type C 255 cc	A	H, A	2 m	285	
2010	British Railways 5MT	4.5	62.3	4-6-0/2	Wal	Type C 210 cc	A	H, A	2 m	170	
2011	Krauss Tank	2.5	30	0-4-0T/2	Step	Center Flue 88 cc	G	-	0.55m	200	
2012	UP Challenger	16.1	114	4-6-6-4/4	Wal	Type C 750 cc	A	H, 2A	2 m	100	
2014	SNCF 241 P	9	85.6	4-8-2/4	Wal	Locomotive 380 cc	C&A	H, A	2 m	100	
2014	Rebuilt Merchant Navy	6.8	68	4-6-2/3	Wal	Type C 255 cc	A	H, A	3 m	200	
2015	UP FEF-3	14	110	4-8-4/2	Wal	Type C 800 cc	A	H, A	3 m	130	
2016	SBB E3/3 Tigerli	1.5	27.2	0-6-0T/2	Wal	Type C 100 cc	A	-	1.5 m	300	

ASTER Tie as membership token of the AOC with ASTER NYC Hudson tie-pin