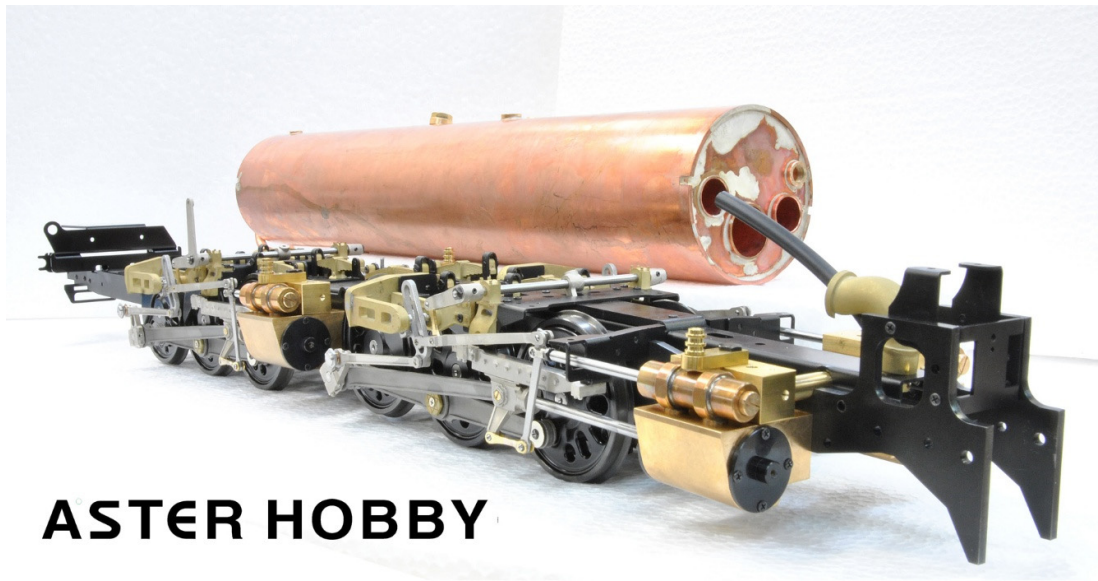


# Union Pacific Challenger



**ASTER HOBBY**





## **Some technical details of the Aster model.**

The locomotive is modeled in 1/32 scale Gauge One and features a alcohol fired C-type boiler, working cylinder drain cocks on all four cylinders, battery powered headlight, and all the necessary appliances featured on the latest Aster locomotives.

The standard Aster design will be Union Pacific Challenger # 3985 in black, as preserved today in Cheyenne WY. The grey UP Passenger is engine # 3977.

A black version without cab numbers and tender lettering (undecorated) was also be made available by advanced reservation only. This provided an opportunity to decorate the locomotive kit in Rio Grande or Clinchfield lettering or kit bash it into a Great Northern Z-Class

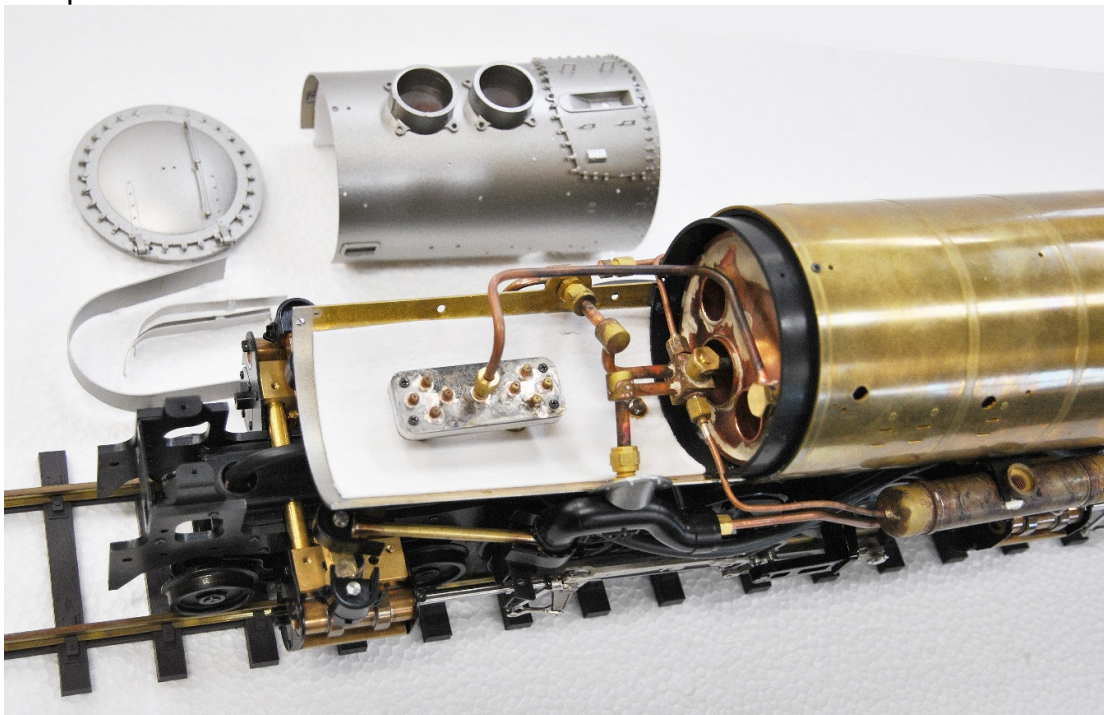
The Challengers ordered by Union Pacific from ALCO were numbered 3950-3999. Aster Hobby Co. Inc. is modeling the only operational example # 3985 still owned and operated by Union Pacific Railroad in

Cheyenne, WY. Some of the UP Challengers were used in Passenger service and painted grey with yellow striping (pictured in color above). Both Challengers # 3985 and # 3977 have been preserved as oil burners and will be modeled by Aster Hobby Co. Inc. in "as preserved condition".

The Rio Grande operated several Challenger locomotives purchased from Baldwin. In 1943, five more were purchased from ALCO on a war order. They were identical to the UP Challengers. The ALCO engines # 3800 - 3805 did not match with the Railroads operations and maintenance system and were later sold to the Clinchfield.

The Clinchfield Railroad purchased their Challengers from the Rio Grande. Besides converting them to single smoke stack they remained identical in appearance to the UP Challengers.

The Great Northern operated two ALCO Challengers which were originally owned by SP&S Railroad. They differed from the UP Challengers from the engine pilot arrangement, compound pump location, single smoke stack, slanted crew cab, cosmetic detail and a totally different tender. With some "kit bashing" skills a Aster UP Challenger kit may be converted to resemble this great looking GN class Z to compliment Aster's Great Northern S2







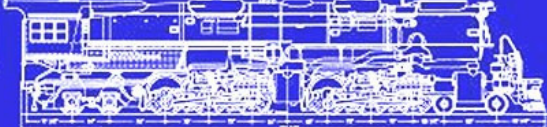
## 4-6-6-4 Challenger











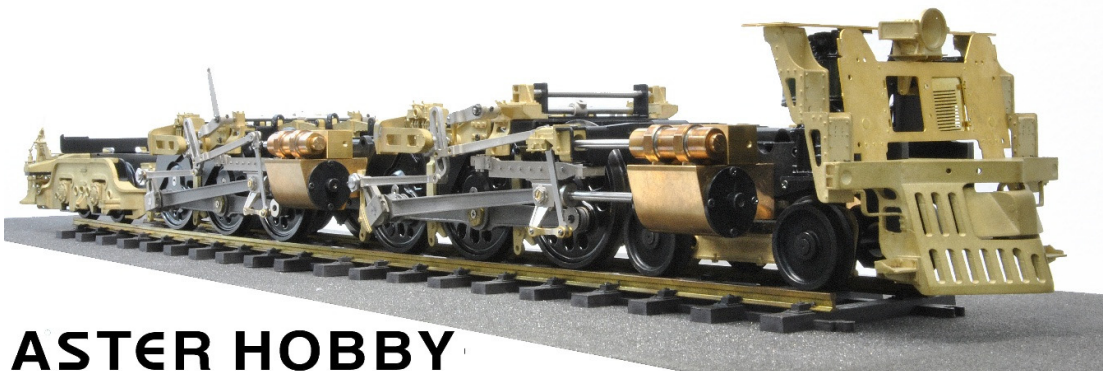
The 4-6-6-4 class, original Challenger, was designed by Olin Johnson of the Union Pacific and first built for the Union Pacific by Alco in 1940. The Challenger was built in three classes: the first class, built between 1940 and 1942, numbered 3985-4000; the second class, built between 1943 and 1945, numbered 4001-4015; and the third class, built between 1946 and 1948, numbered 4016-4030. The original Union Pacific Challengers were numbered from 3985 to 4030 when they came from Alco, but were renumbered to 3985 to 4030 in 1964 to honor the class's name for its own engines.

Also noted for the Challenger starting in 1940 production in 1944, maximum speed of 100 mph. The Challenger was built in three classes: the first class, built between 1940 and 1942, numbered 3985-4000; the second class, built between 1943 and 1945, numbered 4001-4015; and the third class, built between 1946 and 1948, numbered 4016-4030. The original Union Pacific Challengers were numbered from 3985 to 4030 when they came from Alco, but were renumbered to 3985 to 4030 in 1964 to honor the class's name for its own engines.

The engine was numbered in three classes: 3985 to 4000, 4001 to 4015, and 4016 to 4030, with the latter numbered under other names.

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Power Type:	Steam
Fuel Type:	Soft Coal
Builder:	Baldwin Locomotive Works
Configuration:	2-6-6-4
Loc Class:	FTB 6C
Height:	96.9 inches
Driver Size:	63 inches
Water Pressure:	240 psi
Wheelbase:	836 inches (69' 8")
Total Engine Weight:	680,750 lbs
Years Built:	1941 - 1943

**ASTER HOBBY**

## Specifications of UP Challenger

<b>Gauge</b> <b>Wheel Arrangement</b>	1/32 Gauge One (45mm) 4-6-6-4
<b>Total Length</b> <b>Width</b> <b>Height</b> <b>Weight Dry</b>	1140 mm 105 mm 154 mm Locomotive 14.3 kg (28.6 lbs.)+ Tender 4.3 kg (8.6 lbs.)
<b>Cylinders</b> <b>Main Driving Wheel</b> <b>Pilot / Trailing Truck Wheel</b> <b>Valve Gear</b> <b>Lubrication</b> <b>Twin Axle Driven Pumps</b>	4 Cylinders with functional Drain Valves Cylinder Bore 15 mm × Stroke 24 mm ϕ 52.5 mm ϕ 27.0 mm Walschaert type Roscoe displacement type (two oil tanks) Bore / Stroke 5 x 10 mm
<b>Boiler</b> <b>Boiler Capacity</b> <b>Normal Working Pressure</b> <b>Burner</b>	Φ70 mm C type boiler with 11 smoke tubes 750 ml (at 80% full) 3.5 kg/ cm <sup>2</sup> 15 tube ceramic wick burner
<b>Tender Fuel Tank Capacity</b> <b>Tender Water Tank Capacity</b> <b>Tender Hand Water Pump</b> <b>Tender Truck Wheels</b>	500 ml 1000 ml Bore ϕ 11 mm × Stroke 12 mm ϕ 32.0 mm
<b>Operating Devices</b>	Regulator Valve, Blower Valve, Reverser Handle, 2x Cylinder drain valve handles, Fire Box Door, By-pass Valve, Whistle Valve, Water Level Gauge, Pressure Gauge, 2× Safety Valves, Tender Water Tank Drain Plug, Tender hand pump, Electric Headlight, Blow down valve, Tender fuel shut off valve
<b>Minimum Turning Radius</b>	3 m

