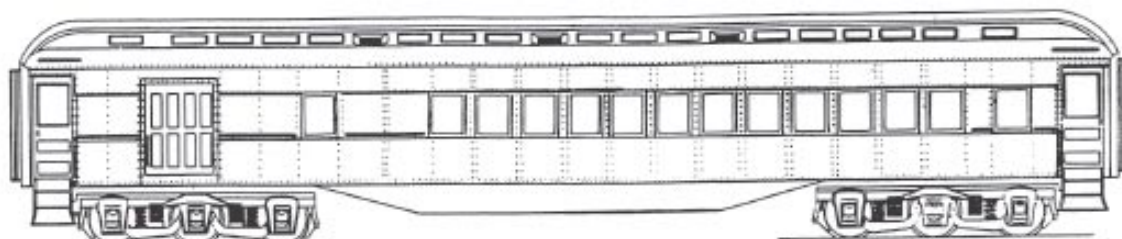
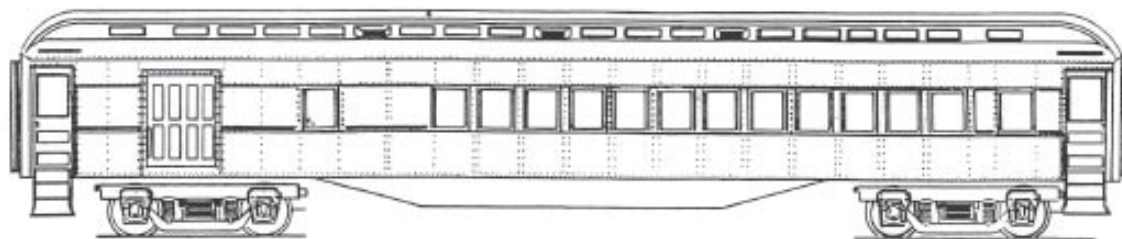




STANDARD HEAVYWEIGHT PASSENGER COMBINE

ART-31700 SERIES

INSTRUCTION MANUAL



Dear Model Railroader,

This product is a highly detailed #1 GAUGE, 1/29th Scale model railroad STANDARD HEAVYWEIGHT COMBINE CAR. Suitable for both indoor and outdoor operation, it realistically replicates a North American prototype COMBINE.

Should you have any questions regarding operation, proper usage or maintenance required for this or any other ARISTO-CRAFT TRAINS products, please contact us at the following address:

ARISTO-CRAFT TRAINS / Polk s Modelcraft Hobbies, Inc.

698 South 21st Street

Irvington, NJ 07111 USA

Tel: (973) 351-9800 Fax: (973) 351-9700

e-mail: aristo@mindspring.com

Our customer service department phones are open from 10:00 AM to 5:00 PM Eastern time, Monday through Friday.

Visit our web site: www.aristocraft.com

STANDARD HEAVYWEIGHT PASSENGER COMBINE

The passenger car is based upon a design of the Bethlehem Shipbuilding Company and built for the Central Railroad of New Jersey/CNJ in the early 1920's. An interesting feature of this design is the use of vestibules with end steps on both ends of the COMBINE Car, unlike some railroads that did not use a vestibule on the 'Baggage' end. Actual prototype CNJ examples of this type passenger coach are still in use today (1995) on North American Railroads, mainly tourist or museum operations such as the Strasburg RR (PA) and the Black River & Western RR (NJ) or other modernized versions on AMTRAK (USA) and VIA RAIL/ALGOMA CENTRAL RWY. (CANADA).

FEATURES:

- Operating AAR-design knuckle couplers.
- Detailed passenger car trucks/wheelsets with Metal Wheels.
- Moveable Vestibule Doors.
- Sliding Baggage Section Doors.
- Solid-State electrical circuit.
- Removable Roof.
- Operating interior lights.
- BRASS grab-railings. - Many versions blackened or painted
- Fully detailed interior with seats, bag racks, and lavatory.
- Realistic painting and authentic detailing.
- Full Underframe, including Air Brake System components.
- Clear Plastic Windows with ~~Brightwork Trim~~
- replaced with simulated wood trim

NOTE: Heavyweights are available with 4 or 6 wheel trucks depending on production run, prototype, and road name of particular Heavyweight

OPERATION:

1. Operation on the small radius ART-11100/ART-30100 curve track is not recommended. However, caution should be taken regarding switch-tracks and side clearance during operation on any radius curve track. For better model railroad operation, it is suggested that, at least, the ART-11500/ART-30110 medium radius curve track be utilized. Another option would be to use the ART-11800/ART-30120 X-wide (10 foot Diameter) or the ART-11820/ART-30125 XX-wide (20 foot Diameter) curve track that allows realistic and improved operation for maximum enjoyment of all ARISTO-CRAFT TRAINS Standard Heavy-weight Passenger Cars.

TRUCK BEARINGS:

2. The truck sideframes are molded of a thermal plastic which reproduces all details and, for durability, a special bearing has been permanently inserted in each journal box end. These bearings are designed to operate properly WITHOUT lubrication. However, you MAY lubricate, if desired, using either a dry lubricant of powdered graphite or an oil-based paste lubricant/ART-29602 but ONLY in very small amounts. It is not necessary to dis-assemble passenger railcar trucks to properly lubricate. Turn passenger railcar upside down and apply lubricant to axle ends at truck sideframe.

TRUCK SPRINGS:

3. The trucks/wheelsets (ART-29110/ART-29111) on this model are designed exactly like the trucks used on prototype railroads, and use springs for equalization to act as a shock absorber and cushion the ride.

WHEELS:

4. The HEAVYWEIGHT PASSENGER CAR BLACK Metal Wheels are designed for constant electrical power pickup through an electrical connection onto each METAL Wheel axle end through the Truck Sideframe. Specially BLACK-plated to insure good electrical conductivity, corrosion resistance, and extended wear, the METAL wheels will give normal service during usage of any HEAVYWEIGHT PASSENGER CAR.

4A. However, over a period of time, these wheels may require cleaning. Dirty wheels will cause sporadic electrical pickup and possibly electrical flashover which may cause discoloring on affected surfaces of wheel and/or brass track.

4B. A good indication of dirty wheels is flickering lights (or non-functioning sound unit on locomotives). To clean properly, remove HEAVYWEIGHT PASSENGER CAR from any electrical contact and turn upside down exposing METAL wheels. Using ART-29601 SMOKE FLUID/TRACK CLEANER is recommended for application to METAL wheel surface with clean/soft fabric (rag). DO NOT USE ABRASIVE because resulting metallic particles may enter Locomotive electric motor/gearing and cause operational problems.

ELECTRICAL PICKUP:

5. Each axle makes contact with a brass bushing inserted into truck/wheelset sideframe. Continuous electrical pickup is possible over switch-tracks and irregular trackage. A brass collar attaches to the bushing and transmits electrical current from the wheels to the Solid State Circuit Board underneath the floor that allows electrical features to function.

5A. If dis-assembly of 4/6-wheel truck is attempted, first un-screw the truck/wheelset from underbody. DO NOT DAMAGE OR LOOSEN wires attached to underbody through the brass collar.

5B. **NOTE:** These trucks ARE AVAILABLE as replacements - see Parts Listing Section.

COUPLERS:

6. Loop-style couplers (ART-29200-69) are enclosed as a spare accessory. The operating knuckle couplers (ART-29200) on all ARISTO-CRAFT TRAINS passenger railcars are designed based upon the AAR-style knuckle coupler used on all major North American Railroads.

6A. **NOTE:** However, these knuckle couplers may not operate automatically on curves or when attempting to couple ARISTO-CRAFT TRAINS products to knuckle couplers used by other model railroad manufacturers. Knuckle Couplers may have to be manually closed on each car and then lifting one end knuckle coupler and inserting the closed non-ARISTO-CRAFT TRAINS knuckle coupler onto the closed ARISTO-CRAFT TRAINS knuckle coupler.

6B. This type knuckle coupler works equally well from either end of the passenger railcar and can be uncoupled automatically by using an LGB* designed uncoupling device. The knuckle couplers may also be operated manually by pressing upward on the small tab below each

*LGB is a registered trademark of the Ernst Paul Lehmann Patentwerk.

knuckle coupler assembly. The knuckle coupler can be pushed away to any side if you wish the railcar not to couple automatically when the railcars come together. However, DO NOT attempt to operate in train without the knuckle couplers properly aligned and fully coupled to opposite railcar/locomotive. Otherwise, railcar(s) may derail on curves or switch tracks.

6C. Should you prefer to use the Loop-style coupler, this conversion can be made easily and quickly by unscrewing the single screw that holds the AAR-style knuckle coupler to the truck arm and attaching the Loop-style coupler using the same screw. Both style couplers are attached to truck arm at a swivel base. When operating railcar, this enables coupler(s) to articulate when encountering small radius curves or switches (see section OPERATIONS for suggested curve radius).

6D. All ARISTO-CRAFT TRAINS Couplers will center automatically while railcar is in motion. Manual centering is accomplished by exerting light pressure on knuckle/Loop coupler at articulated joint and returning knuckle/Loop coupler to center.

INTERIOR LIGHTING:

7. The detailed interior is illuminated by decorative ceiling lamp fixtures which utilize soldered-base incandescent 14v light bulbs, ART-29502 (wired in parallel), that may require replacement after extended usage. To replace, disconnect HEAVYWEIGHT PASS. railcar from electrical supply, remove Roof (see section ROOF REMOVAL), and unsolder bulb. CAUTION: Check first to ascertain that inoperative bulb has not become loose.

7A. Interior lighting is controlled by On-Off slide switch located underneath railcar near center.

NOTE: See section PULSE WIDTH CONTROL for power supply requirements.

ELECTRICAL CIRCUIT BOARD:

8. The product is equipped with a Solid-State Circuit Board that distributes the electrical current to various operating components. This Circuit Board is completely SOLID STATE and CANNOT WEAR OUT, and is a part of subfloor which SHOULD NOT be removed. If your HWT. PASS. railcar requires service due to malfunction of electrical Circuit Board, return to factory-authorized repair facility ONLY. See WARRANTY INFORMATION for service/repair instructions.

ROOF:

9. To remove roof, loosen and remove Phillips Head screws located above each end step assembly and vestibule sidedoor. Two screws per railcar end. Access through hole in UNDERFRAME near each END.

9A. Then lift roof section off body.

9b. When replacing roof, align screw holes properly on body ends.

9C. Press down on roof until it 'snaps' in place, then reinsert screws at end.

9D. **NOTE:** Roof is NOT 'position-changeable' - certain interior body partitions must align with roof for proper fit. The REAR is body section with lavatory (if used) and matches roof section with ventilator stack.

9E. The roof must fit properly against the body.

SERVICE NOTES:

10. All parts contained in the STANDARD HEAVYWEIGHT PASSENGER COMBINE are available for replacement or repair by contacting ARISTO-CRAFT TRAINS. If you have any questions, please refer to INTRODUCTION for method of contacting our office.

PULSE WIDTH CONTROL:

11. All ARISTO-CRAFT TRAINS locomotives, tenders, railcars with operating features, and electrical accessories are designed to operate at proper capacity ONLY with ARISTO-CRAFT TRAINS Power Supply Units featuring "Pulse Width Control" (P.W.C.).

11A. P.W.C. allows a continuous voltage to flow to the operating accessories such as interior lighting during operation REGARDLESS of the speed OR direction of passenger railcar.

11B. DO NOT CONFUSE PULSE WIDTH CONTROL with Pulse Power, a feature provided by some other (non-ARISTO-CRAFT TRAINS) power packs. It may seem that when operating with Pulse Power, the features on ARISTO-CRAFT TRAINS products are operating properly, but, in fact they ARE NOT. Sufficient voltage may not be available to activate the unit(s) and underload/overload damage to components may result.

11C. Also, the TRAIN POWER PACK 7000 - 3.5AMP FOR G AND HO previously manufactured (in 1988/1989) by Polk's Modelcraft Hobbies under the Aristocraft Tradename DOES NOT HAVE P.W.C. To properly operate your #1 Gauge ARISTO-CRAFT TRAINS WITH P.W.C., use ARISTO-CRAFT TRAINS ART-5400 (1.8AMP) or ART-5450 (3.5AMP) Power Supply Units.

11D. If it is not possible to operate your #1 Gauge 1/29 Scale ARISTO-CRAFT TRAINS product with our P.W.C. equipped Power Supply, do not worry. Our Electrical Engineers have developed the ART-5401 CONTROL PACK ADAPTOR which can be easily attached to your present power supply, UP TO 5 AMPS, of another manufacturer and allow PULSE WIDTH CONTROL to be applied to your Indoor/Outdoor model railroad. The ART-5401 CONTROL PACK ADAPTOR is available separately from your dealer.

11E **NOTE:** The P.W.C. feature of the ARISTO-CRAFT TRAINS Power Supply is not compatible with LIONEL LARGE SCALE* Locomotives equipped with 'Rail-Sounds'*. However, these locomotives may be operated with the sound unit turned OFF.

ASSEMBLY INSTRUCTIONS:

12. No assembly required, STD. HWT. PASS. COMBINE is ready-to-run.

Refer to Exploded Parts Diagram/Parts List for part descriptions, part numbers, and prices. Do not use part descriptions, part numbers, and prices listed in the Instruction Manual

LIMITED WARRANTY

All ARISTO-CRAFT TRAINS products are under warranty for five (5) years from the date of purchase against defects in workmanship and/or materials. Proof of purchase *may be required* by ARISTO-CRAFT TRAINS.

This warranty is void and does not apply to any product and/or parts and components which have been improperly installed by the purchaser/owner, abused or damaged in any way through improper operation such as but not limited to derailment, repairs or modifications performed by non-authorized service centers or technicians.

SERVICING

Should your ARISTO-CRAFT TRAINS product require warranty service, please return it in the original box, if possible, protected by a proper shipping carton. Send the product fully insured and prepaid. ARISTO-CRAFT TRAINS will not be responsible for any loss or damage incurred during shipping. Be sure to include a brief, but thorough explanation of the problem, together with your name, street address (no Post Office box please), city state or province and country, if outside of the United States. Also include a daytime telephone number so that we may contact you if necessary. Your return address should be clearly marked on the outside of the shipping carton.

Payment for shipping and handling, in U.S. funds, ~~is \$20.00 and~~ should be included. Your check or money order should be made payable to: Polk's Modelcraft Hobbies, Inc. Do not send cash. If your item is not covered by warranty service, you will be contacted and a repair estimate given before any work commences. Warranty covers manufacturer defects, not normal wear and tear.

The shipping address to be used for returns is as follows:

ARISTO-CRAFT TRAINS / Polk's Modelcraft Hobbies, Inc.
Customer Service Department
698 South 21st Street
Irvington, NJ 07111 USA
Tel: (973) 351-9800

PHONE: 973-351-9800
FAX: 973-351-9700
EMAIL: aristo@mindspring.com
www.aristocraft.com

CALL FOR CURRENT SHIPPING COSTS

Written confirmation of receipt of returned items will be sent with estimated repair time by the ARISTO-CRAFT TRAINS Customer Service Department.