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## Kato 3076-1

# Kato N Gauge 3076-1 ED79 Single Arm Pantograph Instruction Manual

Model: 3076-1 | Brand: Kato

## 1. INTRODUCTION

This manual provides essential information for the proper handling, setup, operation, and maintenance of your Kato N Gauge 3076-1 ED79 Single Arm Pantograph. The ED79 Single Arm Pantograph is a detailed component designed for N-scale model railway locomotives, enhancing realism and functionality where applicable.

Kato is a renowned Japanese manufacturer of high-quality railroad models, known for their realistic designs and robust construction. This pantograph is designed to integrate seamlessly with compatible N-scale models.



Image: The Kato N Gauge 3076-1 ED79 Single Arm Pantograph, a detailed model component for N-scale locomotives.

## 2. SAFETY INFORMATION

- This product contains small parts and is recommended for ages 8 and above. Keep out of reach of younger children to prevent choking hazards.
- Handle the pantograph with care. It is a delicate model component.
- Ensure all electrical connections (if applicable for powered catenary systems) are made correctly to avoid short circuits or damage to your model.
- Do not expose the product to extreme temperatures or direct sunlight for prolonged periods.

## 3. PACKAGE CONTENTS

The package typically includes:

- One (1) Kato N Gauge 3076-1 ED79 Single Arm Pantograph unit.
- Any necessary small attachment parts (e.g., screws, clips) if included by the manufacturer.

Please check all contents upon opening the package. If any parts are missing or damaged, contact your retailer or Kato customer support.

## 4. SETUP AND INSTALLATION

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The ED79 Single Arm Pantograph is designed for installation on compatible N-scale ED79 locomotives. Installation typically involves careful attachment to the locomotive's roof.

1. **Preparation:** Ensure your locomotive is clean and free of dust. Work on a stable, well-lit surface.
2. **Identify Mounting Points:** Locate the designated mounting points on the roof of your N-scale ED79 locomotive. These are usually small holes or slots.
3. **Gentle Attachment:** Carefully align the pantograph's base with the mounting points. Depending on the locomotive model, the pantograph may clip into place or require small screws for secure attachment. Refer to your locomotive's specific manual for precise attachment instructions.
4. **Check Stability:** Once attached, gently test the stability of the pantograph. It should be firmly in place but still allow for vertical movement if designed to articulate.
5. **Electrical Connection (Optional):** If your layout uses an overhead catenary system for power collection, ensure any necessary electrical connections from the pantograph to the locomotive's internal wiring are made according to the locomotive's instructions. For most N-gauge models, pantographs are primarily for aesthetic realism.

**Note:** Always handle the pantograph by its base to avoid bending or damaging the delicate arms.

## 5. OPERATING THE PANTOGRAPH

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Once installed, the ED79 Single Arm Pantograph functions as a static or articulating detail on your N-scale locomotive.

- **Aesthetic Function:** The primary role of this pantograph on most N-gauge models is to replicate the appearance of a real electric locomotive's power collection system.
- **Articulation:** The single arm pantograph is designed to be raised and lowered manually or, in some advanced models, can be set to a specific height. When operating on a layout without overhead catenary, it is typically kept in the lowered position or slightly raised for display.
- **Catenary Operation (Advanced):** If your model railway features an operational overhead catenary system, the pantograph can be raised to make contact with the overhead wire to draw power. Ensure the pantograph is properly aligned and adjusted to avoid snagging or damage to the catenary or the pantograph itself.

Avoid forcing the pantograph's movement beyond its natural range of motion.

## 6. MAINTENANCE

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Proper maintenance ensures the longevity and appearance of your pantograph.

- **Cleaning:** Use a soft, dry brush or a lint-free cloth to gently remove dust and debris from the pantograph. Avoid using harsh chemicals or abrasive materials.
- **Inspection:** Periodically inspect the pantograph for any signs of damage, bending, or loose parts.
- **Lubrication (if applicable):** If the pantograph's articulation points become stiff, a tiny amount of specialized model

lubricant (e.g., plastic-safe silicone grease) can be applied with a toothpick. Avoid over-lubrication.

- **Storage:** When not in use, store your locomotive and pantograph in a dust-free environment, preferably in its original packaging or a dedicated model storage case.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Pantograph is loose or detached.	Improper installation; mounting points worn.	Re-attach carefully, ensuring it clicks or screws into place. If mounting points are worn, consider a small amount of model-safe adhesive or contact Kato for replacement parts.
Pantograph arms are bent or damaged.	Rough handling; accidental impact.	Gently attempt to straighten bent parts using fine tweezers. If severely damaged, replacement may be necessary.
Pantograph does not articulate smoothly.	Dust accumulation; lack of lubrication; bent pivot.	Clean pivot points. Apply a tiny drop of model lubricant if needed. Check for any bent parts obstructing movement.

For issues not listed here, or if solutions do not resolve the problem, please contact Kato customer support or your retailer.

## 8. SPECIFICATIONS

- **Model Number:** 3076-1
- **Product Dimensions:** 1.18 x 7.48 x 1.57 inches (approximately)
- **Item Weight:** 4.7 ounces (approximately)
- **ASIN:** B00CM29WP8
- **Manufacturer:** KATO
- **Recommended Age:** 8 years and up

## 9. WARRANTY AND SUPPORT

Kato products are manufactured to high standards. For specific warranty information, please refer to the documentation included with your purchase or visit the official Kato website. Warranty terms may vary by region and retailer. For technical support, replacement parts, or further assistance, please contact:

- Your authorized Kato retailer.
- Kato Customer Service (contact information typically available on the official Kato website:[www.katomodels.com](http://www.katomodels.com)).

When contacting support, please have your model number (3076-1) and proof of purchase readily available.

