

## Roco 70788

# Roco 70788 NS 2400 Diesel Locomotive IV (DCC Sound) Instruction Manual

## 1. INTRODUCTION

The Roco 70788 NS 2400 Diesel Locomotive is a detailed model of the Dutch State Railways' Class 2400 locomotive. Introduced in 1954, these locomotives primarily transported freight trains and were used for shunting, in addition to some passenger services. This model features a brown livery and includes original Dutch lighting functions such as blue flashing lights and taillights. In digital mode, switchable shunting lights and individually switchable headlights or taillights are available.

**Important Note:** This item is NOT a toy and is intended for modeling purposes only.



A detailed side view of the Roco 70788 NS 2400 Diesel Locomotive, showcasing its brown livery, blue flashing lights on the roof, and the NS logo on the side. The model features intricate details including handrails and bogies.

## 2. SAFETY INFORMATION

Please read all safety instructions before operating the model.

- Not recommended for children under 3 years due to small parts that can be detached and swallowed.
- This model contains small, delicate parts. Handle with care to avoid damage or injury.
- Ensure the model is operated on a stable surface to prevent accidental falls.

## 3. SETUP

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1. **Unpacking:** Carefully remove the locomotive from its packaging. Retain the packaging for future storage or transport.
2. **Track Placement:** Gently place the locomotive on a clean, level model railway track. Ensure all wheels are correctly seated on the rails.
3. **Digital System Connection:** This model is equipped with a PluX22 digital decoder (MX645P22) and an electrical interface for traction units. Connect your digital control system (DCC) according to its manufacturer's instructions. The locomotive is ready for digital operation.
4. **Power Supply:** Ensure your digital control system is properly connected to a suitable power supply.

## 4. OPERATING INSTRUCTIONS

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The Roco 70788 locomotive is designed for digital operation (DCC) and offers various functions:

- **Movement Control:** Use your DCC controller to adjust speed and direction.
- **Headlights and Taillights:** The model features light changeover true to the Dutch original, including LED headlights. Headlights and taillights can be individually switched in digital mode.
- **Blue Flashing Lights:** The model includes blue flashing lights, characteristic of the original Dutch prototype.
- **Shunting Lights:** Switchable shunting lights are available for realistic shunting operations.
- **Sound Functions:** The integrated DCC sound module provides realistic locomotive sounds. Refer to your DCC controller's manual for activating specific sound functions.
- **Additional Light Functions:** The model supports additional light functions, which can be controlled via your digital system.

## 5. MAINTENANCE

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Regular maintenance ensures optimal performance and longevity of your model locomotive.

- **Cleaning:** Keep the wheels and track clean from dust and debris. Use a soft, lint-free cloth for cleaning the locomotive body. Avoid abrasive cleaners.
- **Lubrication:** Periodically lubricate moving parts such as gears and axles with specialized model railway lubricant. Refer to the manufacturer's recommendations for specific lubrication points and frequency.
- **Storage:** When not in use, store the locomotive in its original packaging or a protective case to prevent dust accumulation and damage.

## 6. TROUBLESHOOTING

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If you encounter issues with your Roco 70788 locomotive, consider the following:

- **No Movement/Intermittent Power:**
  - Check all track connections and ensure they are clean.
  - Verify that your digital control system is powered on and functioning correctly.
  - Inspect the locomotive wheels for dirt or obstructions.
- **Lights Not Working:**
  - Ensure the locomotive is receiving power.

- Check your DCC controller for correct function commands for lighting.

- **Sound Not Working:**

- Confirm the sound function is activated via your DCC controller.
- Check the volume settings on your DCC system or decoder.

- **Derailment:**

- Ensure tracks are properly laid and free of kinks or uneven sections.
- Check the locomotive's wheels for any damage or misalignment.

If problems persist, consult the Roco website or contact their customer support.

## 7. SPECIFICATIONS

Detailed technical specifications for the Roco 70788 NS 2400 Diesel Locomotive:

Feature	Detail
Model Number	70788
Brand	Roco
Product Dimensions (L x W x H)	29.24 x 10.9 x 5.46 cm
Weight	589.67 g
Material Type	Plastic
Coupling	Digitally controllable
Minimum Radius	358 mm
Flywheel	Yes
Number of Driven Axles	4
Number of Axles with Traction Tyres	1
Epoch	IV
Railway Company	NS (Nederlandse Spoorwegen)
Motor	5-pole motor
Headlight	Light changeover true to the Dutch original
LED Headlight	Yes
Additional Light Function	Yes
Control	2L - Digital
Interface	Electrical interface for traction units PluX22
Digital Decoder	PluX22 MX645P22
Decoder Type	MX645P22

Feature	Detail
Sound	Yes
Buffer Capacitor	Yes
Length over Buffer	143 mm
Power Source	Electric Cord
Operating Mode	Automatic
Assembly Required	No

#### General data

Coupling	Digitally controllable
Minimum radius	358 mm
Flywheel	yes
Number of driven axles	4
Number of axles with traction tyres	1
Scale	294
Epoch	IV
Article number	70788
Railway Company	NS

#### Electrical

Motor	5-pole motor
Head light	Light changeover true to the Dutch original.
LED head light	yes
Additional light function	yes
Control	2L - Digital
Interface	Electrical interface for traction units PluX22
Digital decoder	PluX22
Decoder-Type	MX645P22
Sound	yes
Buffer capacitor	yes

#### Measurements

Length over buffer	143 mm
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This image displays a table outlining the general data, electrical features, and measurements of the Roco 70788 NS 2400 Diesel Locomotive. Key specifications include digitally controllable coupling, 358mm minimum radius, 5-pole motor, PluX22 digital decoder with sound, and a length of 143mm over buffers.

## 8. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided with your purchase or visit the official Roco website. If you require technical support or have questions regarding your Roco 70788 locomotive, please contact Roco customer service directly.

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### Related Documents - 70788

	<p><a href="#">Roco MX645P22 DCC Diesel Locomotive Decoder - Functional Data Sheet</a></p> <p>Detailed functional data sheet for the Roco MX645P22 DCC diesel locomotive decoder, outlining function key assignments and configuration variables (CVs) for digital model train operation.</p>
	<p><a href="#">Roco HO Electric Locomotive E 412 Mercitalia Rail - Operating Manual</a></p> <p>Comprehensive operating and maintenance manual for the Roco HO scale electric locomotive E 412, operated by Mercitalia Rail. Includes starting procedures, technical specifications, and maintenance guidelines.</p>
	<p><a href="#">Roco MX658N18 DCC Decoder Functional Data Sheet</a></p> <p>Functional data sheet for the Roco MX658N18 DCC/Motorola sound decoder, designed for steam locomotives (BR 44). Details function key assignments and configuration variables (CVs) for digital model train operation.</p>
	<p><a href="#">Roco HO Electric Locomotive 1116 ÖBB Operating Manual and Maintenance Guide</a></p> <p>Comprehensive operating manual for the Roco HO scale 1116 ÖBB electric locomotive, covering unpacking, running-in, maintenance, and decoder interface details. Includes multilingual instructions and technical specifications.</p>
	<p><a href="#">Roco MS450P22 DCC/AC Decoder for Electric Locomotive BB 26000 - Functional Data Sheet</a></p> <p>Detailed functional data sheet for the Roco MS450P22 DCC/AC decoder, designed for electric locomotives like the BB 26000. Includes function mapping (F0-F25) and CV settings.</p>



[Roco MS490N DCC Decoder for BR 120 Locomotive - Functional Data Sheet](#)

Technical specifications and function key mapping for the Roco MS490N DCC decoder, compatible with BR 120 diesel locomotives, detailing CV parameters and operational functions.