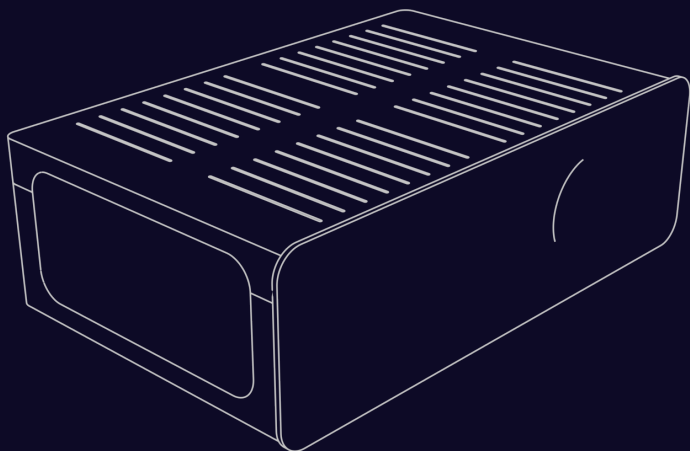


QUICK START GUIDE





mujunction.com/docs/muengineer

FR Ce guide de démarrage rapide est disponible en plusieurs langues. Pour le consulter, rendez-vous sur mujunction.com/docs/muengineer ou scannez le QR code ci-contre.

EN This quick start guide is available in several languages. To view it, visit mujunction.com/docs/muengineer or scan the QR code.

DE Diese Schnellstartanleitung ist in mehreren Sprachen verfügbar. Sie finden sie unter mujunction.com/docs/muengineer oder indem Sie den nebenstehenden QR-Code scannen.

ES Esta guía de inicio rápido está disponible en varios idiomas. Para consultarla, visite mujunction.com/docs/muengineer o escanee el código QR que aparece al lado.

IT Questa guida rapida è disponibile in diverse lingue. Per consultarla, visitare il sito mujunction.com/docs/muengineer o scansionare il codice QR qui accanto.

THANK YOU

Welcome aboard and thank you for your confidence in us.

Our aim with muEngineer and muExpress is to offer you a smoother and more intuitive driving experience. We designed this device with the passion of a model railway enthusiast and the rigour of an engineer, so that every session on your layout is a truly enjoyable experience.

Should you need to contact us, you can reach us:

- by telephone: +33 9 72 63 15 77
- by email: support@mjunction.com

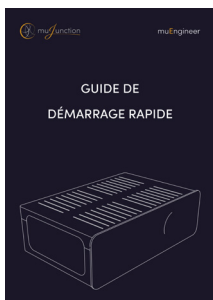
Enjoy your journey with mJunction.

Contents

Thank you.....	3
Before you begin.....	5
Box contents.....	6
Device description	8
Safety instructions.....	10
Getting started	12
Download muExpress.....	13
Install Java (if required)	14
Start muExpress.....	15
Support and assistance.....	16
Appendices.....	17
Technical specifications.....	18
Legal information and compliance	20
Glossary	22

BEFORE YOU BEGIN

BOX CONTENTS



D

E



F

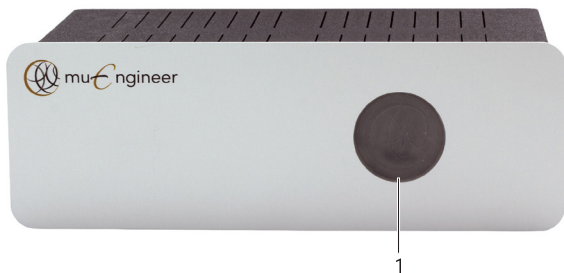
G

BOX CONTENTS

When unpacking, check that the following items are present and in good condition:

- A.** 1 x Quick Start Guide
- B.** 1 x muExpress licence linked to muEngineer (not shown)
- C.** 1 x muEngineer train control interface
- D.** 1 x Power supply
- E.** 1 x Mains cable
- F.** 1 x USB cable
- G.** 2 x Connectors (green terminal blocks)

DEVICE DESCRIPTION



Device Description

Use these diagrams to identify the connectors and indicators on your muEngineer.

Front panel:


- 1.** Backlit muJunction logo: Lights up when the interface is powered on and indicates the status of the device.


Rear panel:


- 2.** Power supply connector.
- 3.** USB-C connector for connection to your computer (PC/Mac).
- 4.** Track power connectors (Track 1 / Track 2)

SAFETY INSTRUCTIONS

This device must be used in strict accordance with the following instructions. Failure to comply with these instructions may result in a hazardous situation and will void the warranty.

 **Age requirement.** This device may only be used by adults and adolescents aged 14 and over. Keep it out of reach of young children.

 **Operating environment.** This device is designed exclusively for indoor use, in a dry environment. For your safety and the longevity of your equipment, never use it outdoors or in a damp environment.

 **Power supply provided.** This device must only be used with the supplied power supply. In accordance with regulations, it is Class II, features double insulation and must never be connected to earth.

Single power supply. Your layout must only be powered by a single power source, except when using this device in booster mode. When booster mode is used, Track 1 and Track 2 outputs must supply completely isolated track sections, separated from each other using insulating rail joiners (plastic).

SAFETY INSTRUCTIONS

If in doubt, and before any use, please contact our support team if you require further information.



Electrical limits. In accordance with regulations, your layout must comply with the following electrical specifications: Maximum voltage 24V, maximum current 10A, maximum power 200W



Layout wiring. All wiring on your layout must comply with applicable safety standards. It must be appropriately rated to safely handle the full power delivered by this device, particularly in the event of a short circuit (derailment, etc.).

Instruction: Ensure adequate ventilation for heat dissipation.

GETTING STARTED

DOWNLOAD MUEXPRESS

1. From your computer, go to www.mujunction.com.
2. Click the "PLAY" button located at the top right of the page.
3. You will be taken to the download page. Select the version corresponding to your system: Windows, Mac or Linux.

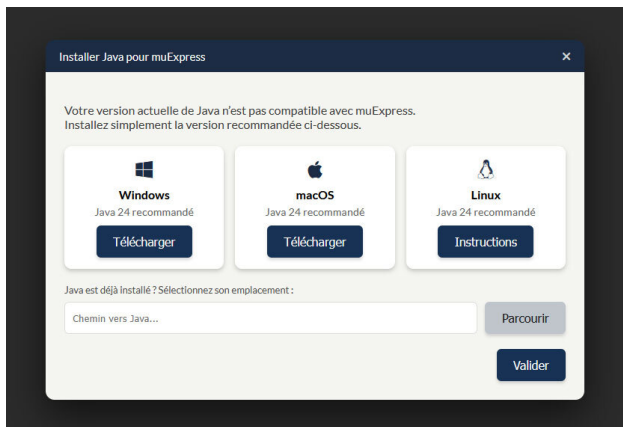
The installation file will begin downloading.
Once completed, open the file to start the installation.

INSTALL JAVA (IF REQUIRED)



muExpress runs on Java.

When you launch the program, if Java is not installed, you will be prompted to install it or locate it



START MUEXPRESS

Once the installation is complete, launch the muExpress application on your computer.

From this point, muExpress will guide you. Visual assistants will appear to take you through each step:

- Electrical and track connections.
- USB connection.
- Adding your first locomotive.

Follow the diagrams and instructions in muExpress carefully to begin your session.

SUPPORT AND ASSISTANCE

If you encounter any issues during the installation or use of this product, you can contact our technical support:

- Email: support@mjunction.com
- Website: www.mjunction.com
- Telephone: +33 9 72 63 15 77

To help us process your request more efficiently, please provide:

- the product involved
- a description of the issue encountered
- how the product is being used
- any relevant information (photos, diagrams, etc.)

This information will enable us to provide you with a prompt and appropriate response.

We will do our utmost to respond as quickly as possible.

APPENDICES

TECHNICAL SPECIFICATIONS

Supported scales

- N, TT, HO, O.

Signal & Traction

- **Protocols:** DCC / RailCom®.
- **SmartDCC technology:** Proprietary optimisation of the command signal flow for improved responsiveness.
- **Train addressing:** 1 to 127 (short addresses) and 1 to 16,384 (extended addresses).
- **Accessory addressing:** 1 to 1,024 (short addresses) and 1 to 4,096 (extended addresses).

Primary track output (Track 1)

- **Operating mode:** Standalone or Master (booster).
- **Output voltage:** Adjustable from 12V to 18.3V (0.1V steps).
- **Maximum available current:** 5A.
- **Protection:** Short circuits and overcurrent.
- **Sensitivity:** Adjustable in 5 levels.

Secondary track output (Track 2)

- **Operating mode:** Standalone or Slave (booster).
- **Output voltage:** Adjustable from 12V to 18.3V (0.1V steps).
- **Maximum available current:** 5A.
- **Protection:** Short circuits and overcurrent.
- **Sensitivity:** Adjustable in 5 levels.

USB bus

- **Connection:** Self-powered USB-C (TOTP type).
- **USB TOTP cable supplied.**
- **Isolation:** Full galvanic isolation (>3000 volts).
- **Data rate:** 460 kbit/s.

Power supply

- **Primary:** 110/240V – 50/60Hz.
- **Secondary :** 24V DC / 7.68A.
- **Maximum available power:** 160W (in compliance with the legal limit of 200W for model railways).
- **Safety:** Class II.
- **Energy efficiency:** Class VI (efficiency >94%).

Dimensions

- **muEngineer :** 75 x 220 x 142 mm (overall).
- **Power supply :** 175 x 75 x 37 mm (excluding connectors)

LEGAL INFORMATION AND COMPLIANCE

Manufacturer

MUJUNCTION, SAS with a share capital of €1,165

- **Registered office:** 9 rue Denis Papin, 59147 GONDECOURT, France.
- **SIREN:** 921 753 521 (RCS Lille Métropole).
- **Contact:** www.mujunction.com

Warranty and Liability

- **Warranty:** Your train control interface is covered by a two (2) year warranty from the date of purchase. This warranty covers manufacturing defects but does not apply in the event of improper handling, misuse or if the enclosure is opened.
- **Liability:** MUJUNCTION shall not be held liable for any damage caused to rolling stock, scenery or computer systems resulting from failure to comply with the safety instructions set out in this guide.

Environment and Recycling (WEEE)

This product contains electronic components: Do not dispose of this device with household waste.

Please use local collection points or recycling centres dedicated to electrical and electronic equipment. The eco-contribution paid at the time of purchase helps to fund these recycling schemes.

Certifications and Standards

- This product complies with the requirements of the European directives on electromagnetic compatibility and low voltage safety, as well as the applicable IEC (International Electrotechnical Commission) standards.
- **Use:** Model railway equipment intended for indoor use only and for persons aged over 14.
- **Safety:** The device operates at safety extra-low voltage (Class III / SELV).

Intellectual Property

MUJUNCTION, muEngineer, muExpress and muCommander are registered trademarks. Other brand names mentioned (such as RailCom®) are the property of their respective owners.

GLOSSARY

- **Train control interface:** Device (such as muEngineer) that links the computer to the layout in order to transmit power and commands to the locomotives.
- **Command centre:** Software (muExpress or muCommander) that manages the system logic, the train database and the user interface.
- **DCC (Digital Command Control):** Standard communication protocol that allows multiple trains to be controlled independently on the same track.
- **RailCom®:** Extension of the DCC protocol enabling bidirectional communication, where locomotives can transmit information (address, status) back to the train control interface.

Like hundreds of model railway enthusiasts,

Ask questions and share your experience on

discord.mjunction.com





April 2026