



Calibration Bench for JRI digital probes 24 & 96 channels

USER GUIDE



References : 14124 / 14031

Non contractual document

JRI, Société par actions simplifiée au capital de 4 000 000 €
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원문: JRI 96-channels calibration bench 96-channels calibration bench · 제조사 원문 자료입니다. 사양은 제조사 사정에 따라
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I. INTRODUCTION

JRI

The JRI calibration benches allow the simultaneous calibration and/or adjustment of up to 24 or 96 JRI digital probes (depending on the selected model) to optimize calibration cycles. They communicate data directly to MySirius via their integrated Wi-Fi and Ethernet communication modules.

a) Contents

- 1 JRI Calibration bench
- 1 Power supply 1.2 5V / 2A
- 1 USB-C cable, 1 m
- 1 Rigid aluminum case 455 × 330 × 152 mm
(Only for the 24-channel calibration bench)



b) Symbols



RECYCLING : Do not dispose of this product in a landfill or household waste container. Follow the applicable regulations for disposal.



POWER SUPPLY : This device is powered by an external power source through a plug-in AC adapter (European plug type) with a regulated output voltage.



CE MARKING : This device is certified to comply with European regulations regarding electrical safety, flammability, electromagnetic emissions, and immunity to environmental electrical disturbances.



NOTE : The dealer is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.



Don't use the device under conditions other than those described in the technical specifications (risk of fire or explosion).
For any use other than those specified, please contact JRI.

II. INSTALLATION RECOMMENDATIONS

a) Positioning

- The Calibration Bench must be installed on a clean, stable, and clear work surface, located less than 1.2 m from a power outlet to facilitate electrical connection.
- Maintain a distance of at least 20 cm from walkways to prevent accidental contact or impact.
- Don't place the bench flat; always use the stand to ensure proper operation of the system and internal components.
- Don't press the bench against a wall or any object to allow free air circulation and to avoid damaging cables or obstructing the LEDs.

b) Prerequisites

It is **essential** to use JRI IP40 overmolded extension cables for Green Digital Sensors (available in 3 m or 8 m lengths).

Using unsuitable, damaged, or non-compliant extension cables may cause malfunction of the bench and could lead to irreversible damage to the electronic components, potentially resulting in destruction of the calibration bench. JRI declines any responsibility in the event of the use of non-approved cables.

Before each use, check the integrity of the extension cables (ensure there are no cuts, twists, or damage to the overmolding).

Two models of JRI IP40 overmolded extension cables are available for Green Digital Sensors:

- Ref. 13870: 3 m extension cable, M/F IP40 overmolded connectors
- Ref. 13871: 12 m extension cable, M/F IP40 overmolded connectors

Use the supplied power adapter (5V DC input).

Position the bench so that you can easily access its ports (USB, Ethernet, Wi-Fi configuration) and all channels without putting strain on the cables.

Ethernet connection

- Ensure there is an Ethernet outlet within 3 meters of the calibration bench, with Internet access if using MySirius Cloud, or on the same network as your MySirius server.
- Make sure that port 13251 is open on your network firewall and accessible to the MySirius server.
- The network can be configured in DHCP or with a fixed IP address. However, DHCP configuration is recommended as it simplifies setup and reduces the risk of configuration errors.

Wi-Fi connection

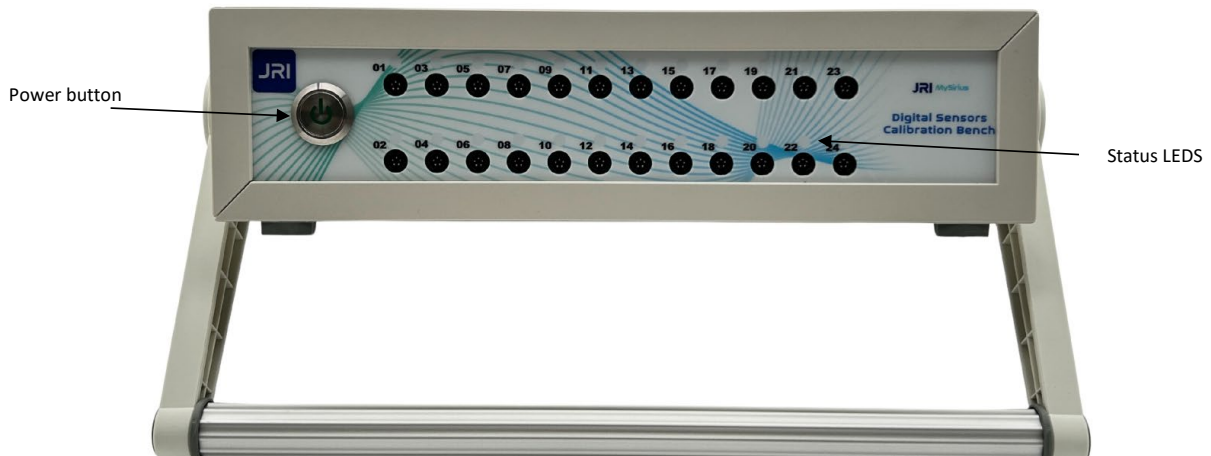
- Make sure you are within Wi-Fi coverage.

III. PRESENTATION

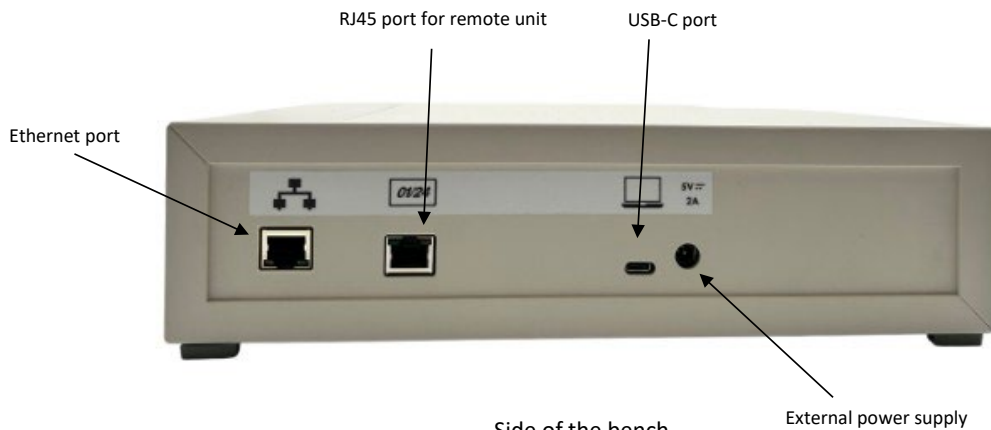
a) Enclosure & Connections

- 24 channels

Front panel



Rear panel

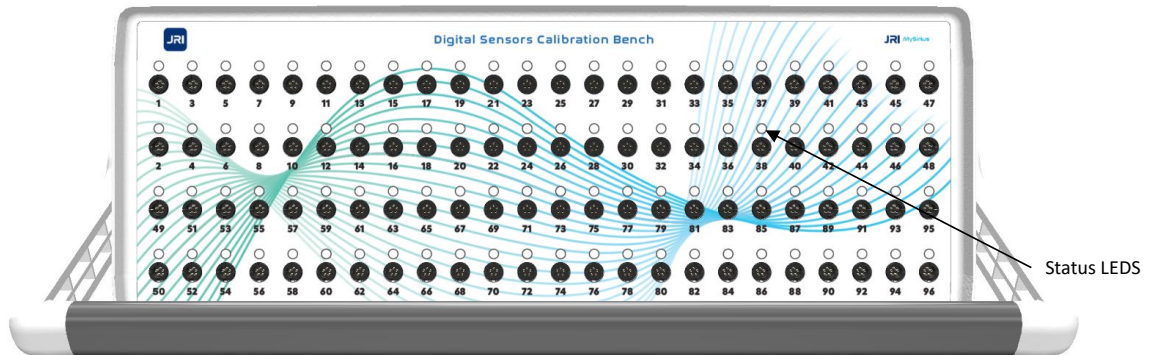


Side of the bench

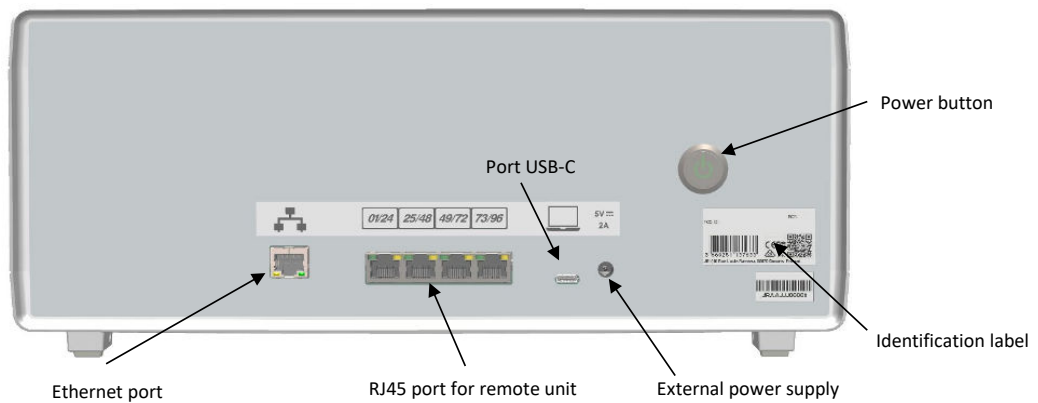


- 96 channels

Front panel



Rear panel

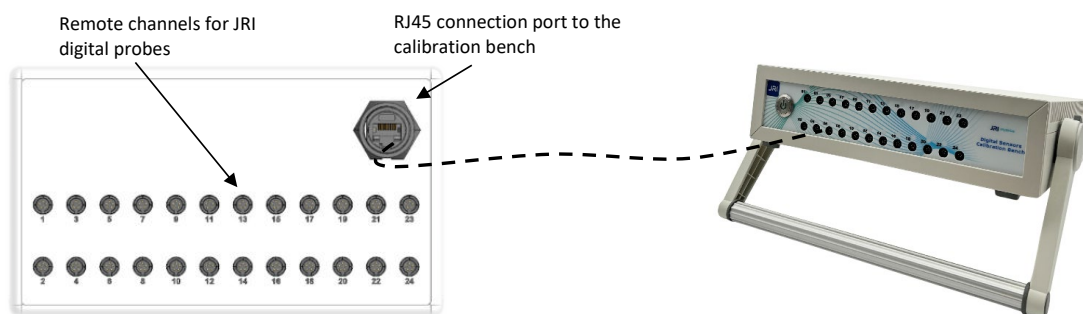


- Remote unit

This is a remote extension designed for using the bench's functionalities inside a climatic chamber, for example during the calibration and/or adjustment of TH channels. This configuration uses 24 channels of the bench, and the peripheral boards are connected to the bench via an RJ45 cable, which allows:

- Protection of data from environmental interference by using shielded cables
- Reduction of the number of individual wires

Note: when using the remote unit, the front-panel inputs of the bench cannot be used.



The 24-channel bench is supplied in a rigid aluminum transport case (455 × 330 × 152 mm), which contains the bench and its power supply block, protective foam, and carrying handle.



b) Description of the HMIs

	Function	Status	Action
	Power supply	ON OFF	Mains power on No power
	Input channel number	ON OFF	See LED status meaning :  No power

IV. CONFIGURATION AND USE OF THE JRI CALIBRATION BENCH

1) Starting of the calibration bench

To start up the calibration bench, proceed as follows :

- **Electrical connection :**

Connect the bench to the mains using the supplied power cable. Ensure that the cable is properly inserted and that the bench is placed on a stable, clear surface, away from walkways.

Power on :

Switch on the bench by pressing the power button. The button is located on the front panel of the 24-channel calibration bench and on the rear panel of the 96-channel calibration bench. The LEDs will light up white for a few seconds, indicating that the system is starting up.

The configuration of your calibration bench is performed using the MyToolBox software : <https://www.jri-mysirius.com/mytoolbox/JRI-MyToolBox-Setup.exe>

2) MyToolBox

The configuration and management of the calibration bench are carried out using the MyToolBox software developed by JRI. This application brings together all the tools needed to :

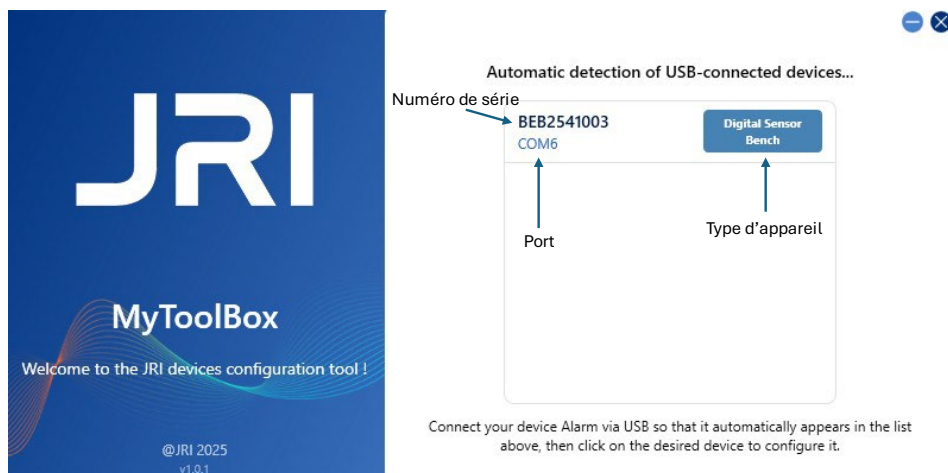
- automatically detect connected calibration benches
- view their technical specifications and parameters
- configure the network connection (Ethernet or Wi-Fi)
- update the firmware..

Technical prerequisites for installing MyToolBox :

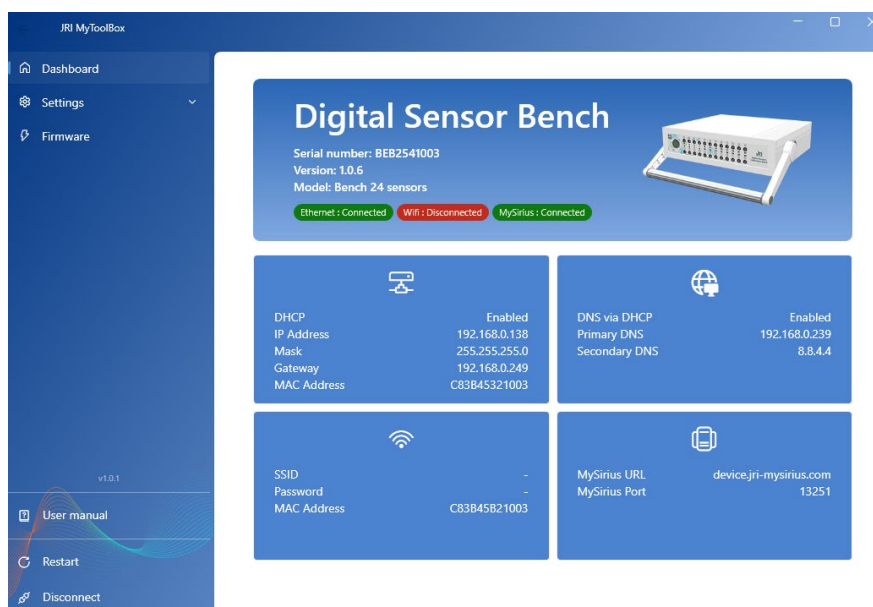
- Compatible with benches running firmware version $\geq 1.0.5$

To configure the calibration bench, launch the MyToolBox application from your computer. The following interface will appear.

At startup, the application automatically detects the calibration bench(es) connected to the computer via USB. Identification is based on the serial number and the associated COM port, allowing the user to select the device to configure. Click on the desired device to continue.

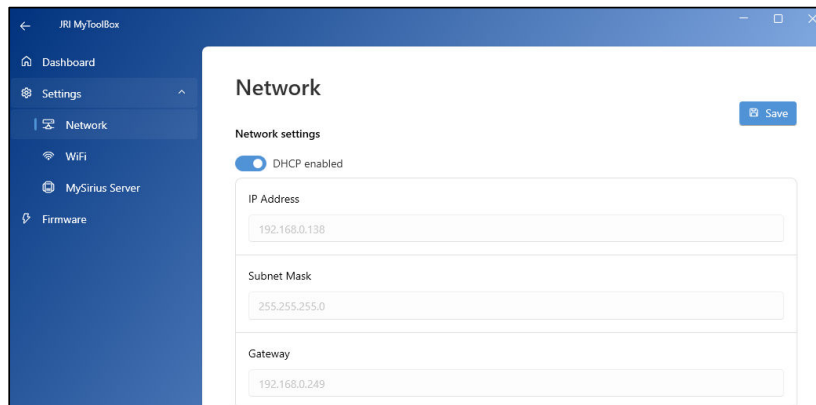


Once the device to be configured has been selected, you will access the following interface. It includes: a dashboard displaying connection information, a tab dedicated to device configuration (network, Wi-Fi, server), a tab for installing new firmware, and a direct link to the user manual.



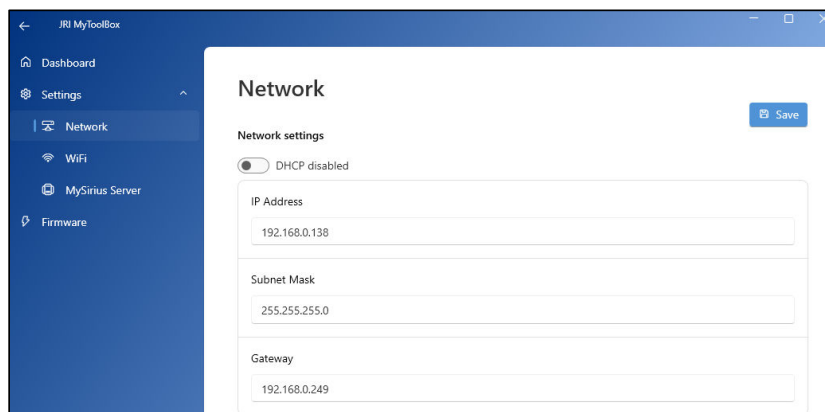
3) Calibration bench configuration via Ethernet

The calibration bench can be configured through an Ethernet connection directly from the MyToolBox software, in the *Configuration > Network* menu. When the bench is connected via Ethernet, the DHCP mode is enabled by default. In this mode, the network configuration (IP address, subnet mask, gateway, and DNS servers) is automatically assigned by the local server.



If the network does not have a DHCP server, or if a specific address must be assigned to the bench, it is possible to disable DHCP mode and switch to manual configuration (static IP). The user can then manually enter :

- IP Address
- Subnet mask
- Gateway
- and, if necessary, the DNS servers (primary and secondary)



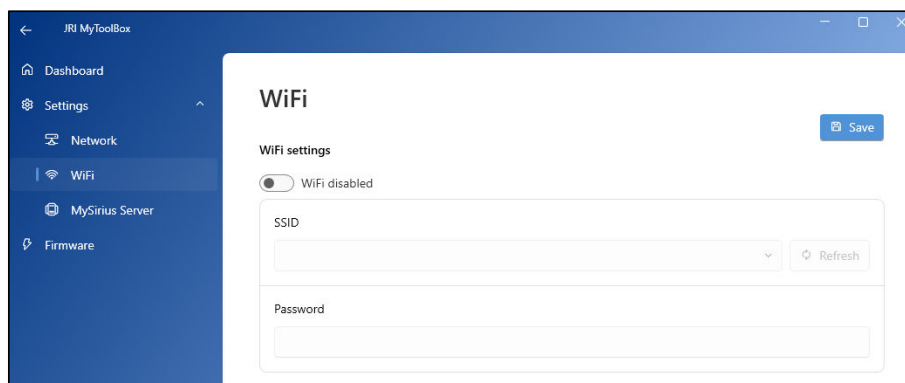
In addition, the software includes an automatic validation check for the entered values: if a formatting error occurs (for example, an invalid IP address), a warning message appears and prevents invalid parameters from being submitted.

Once the configuration is saved, the bench is ready to communicate with the MySirius platform via the Ethernet network.

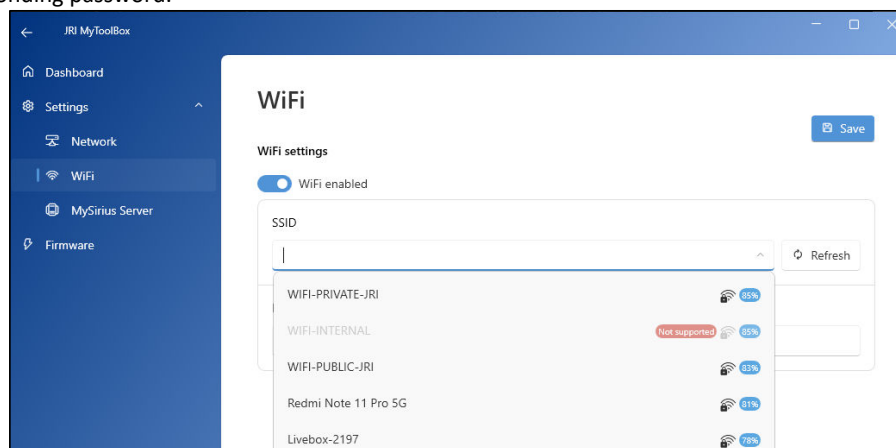
4) Configuration du banc d'étalonnage par Wi-Fi

The calibration bench can also be configured via Wi-Fi directly through the MyToolBox software, after being connected to the PC using a USB cable.

This USB connection allows the software to communicate directly with the bench and transmit the required network parameters.



This allows scanning for Wi-Fi networks visible to the PC, selecting one from the list, and entering the corresponding password.



If the Wi-Fi network does not appear in the list, it can be entered manually by typing its name (SSID) and password.

The software interface displays the following information for each detected network :

- the radio signal strength, expressed as a percentage
- a padlock icon indicating whether the network is password-protected
- and, when applicable, the option to enter the password

Open (unsecured) networks can be used without a password, although this configuration is not recommended for security reasons.

Please note that certain types of networks are not supported by the calibration bench :

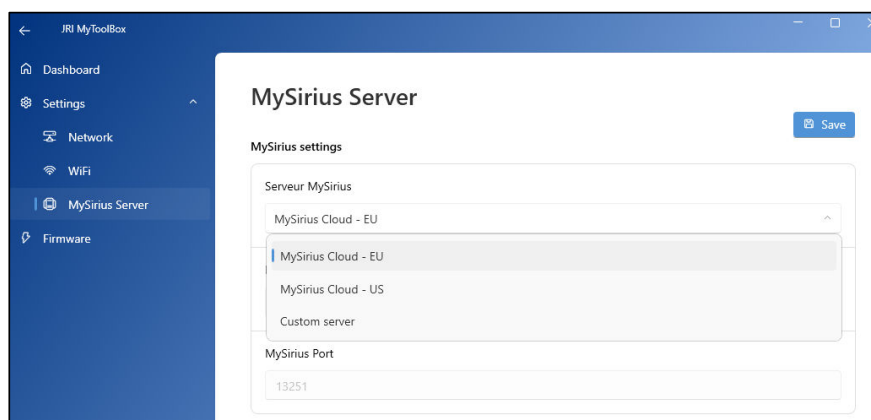
- enterprise Wi-Fi networks (certificate-based authentication)
- and WEP networks, which are obsolete and insecure.

In terms of operation, by default, the bench first attempts to establish an Ethernet connection at startup. If it fails to communicate with MySirius within 1 to 2 minutes, it automatically switches to Wi-Fi mode. This delay is normal during Wi-Fi configuration and does not indicate a malfunction.

5) MySirius server configuration

During the calibration bench setup, several connection options to the MySirius server are available :

- **MySirius Cloud - EU (Europe) et MySirius Cloud US** : these two options correspond to the cloud servers. The connection information (URL and port) is already preloaded and does not require any modification.
- **Custom server** : this option should be selected only in the case of a MySirius Server installation. In this mode, the server URL and port can be manually modified.

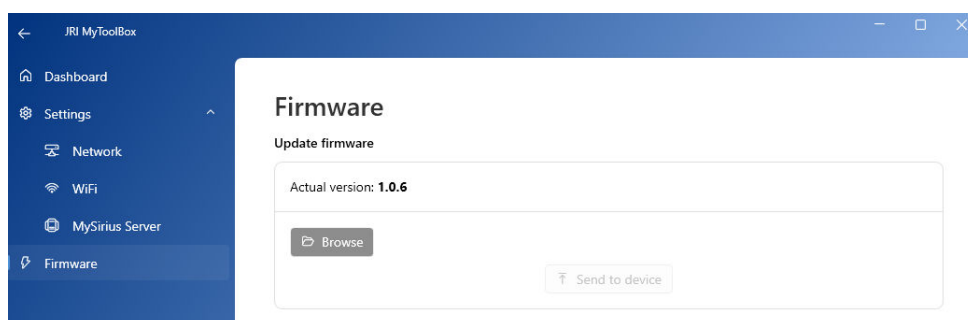


6) Other MyToolBox features

- **Firmware**

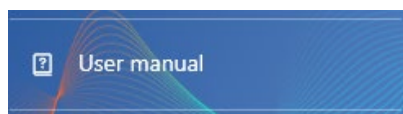
The Firmware tab allows you to update the device's internal software by selecting, via the "Browse" button, the new version previously saved on your computer.

Note : During the download of a new firmware version, it is essential not to leave the page or make any changes to your calibration bench to avoid interrupting the process.



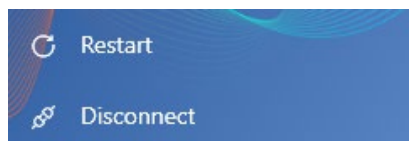
- **User manual**

A user manual for the application is also accessible directly from the MyToolBox interface. To open it, simply click on the "User manual" tab.



- **Disconnect / Restart**

From the left-hand menu, it is possible to restart the bench or disconnect to select another device by clicking on “Restart” or “Disconnect.”.



The Restart button should be used after modifying a configuration on your bench so that the changes are applied.

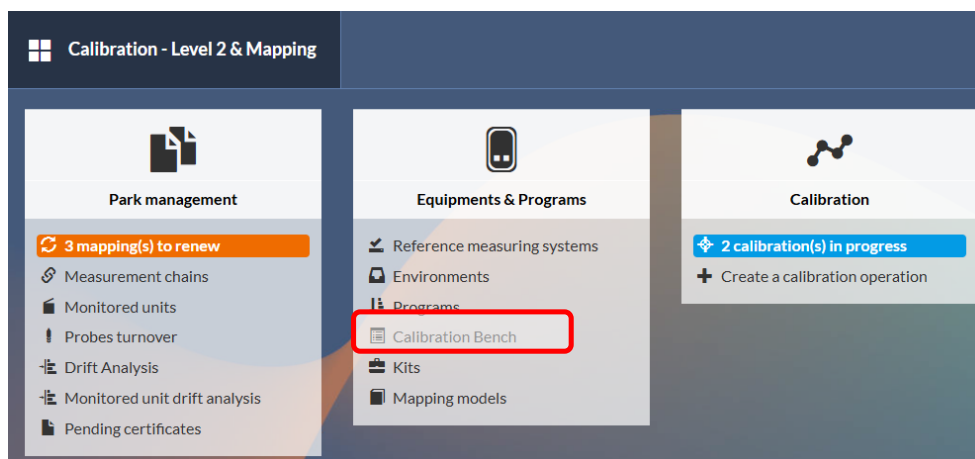
If network parameters are changed, the same action must be repeated as indicated above.

For more information about using the MyToolBox software, please refer to the MyToolBox user manual.

7) Declaring the bench in MySirius

Next, register the bench in MySirius using its serial number.

To do this, in MySirius, click on the “Metrology” tab, then in the “Equipment & Programs” tile, click on “Calibration bench”



- Once this page is open, click on :
- Enter the name of the calibration bench, its serial number, and the number of channels used, then click on “SAVE”

ADD OF A CALIBRATION BENCH

Name

Bench user guide !

Serial number

BEB2541003

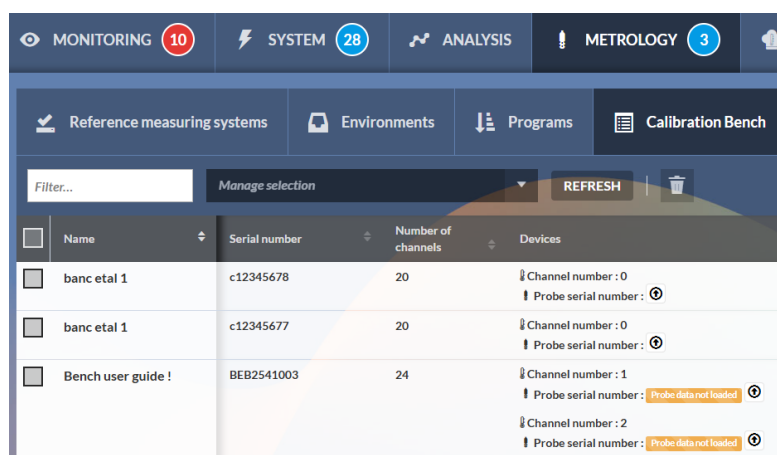
Number of channels

24

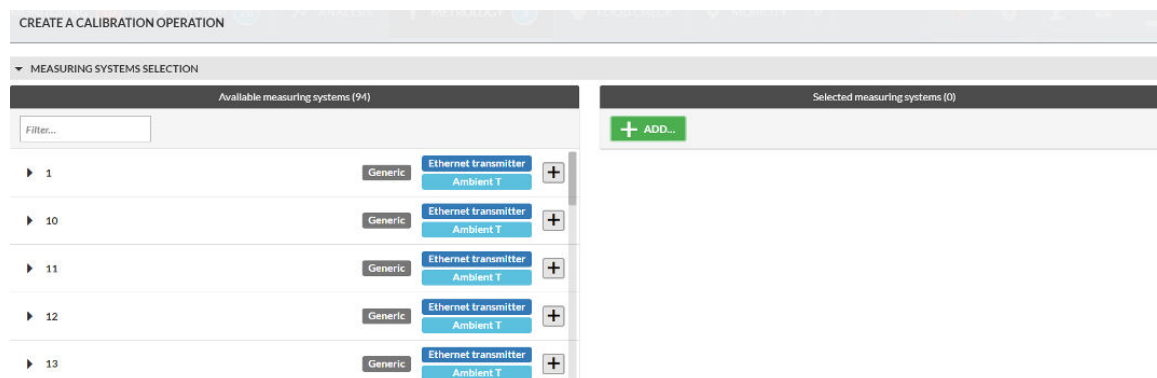
CANCEL

SAVE

Connect the digital probes to your Calibration Bench, then select the bench by clicking the checkbox next to its name. Click on “Manage selection”, then “Reload configuration.” Confirm by clicking “Reload configuration” again



During calibration, the connected probes automatically appear in the available measurement channels list, just like any other probes. Those associated with the calibration bench all start with “BC”, corresponding to part of the bench’s serial number. This makes them easy to identify by typing “BC” in the search field.



Once the bench is configured, you can control your Calibration Bench directly from the MySirius Calibration module to perform the calibration of your digital probes. (See the Calibration Module User Manual for more details) – [MySirius - MySirius Calibration User Guide](#)

V. PROBES CONNECTION :

Connect the digital probes to the front-panel connectors. Ensure that each probe is properly inserted and that the associated LED lights up green, indicating that the probe has been detected and is functioning correctly. Once the installation is complete, the bench is ready for calibration operations via the MySirius software.





When adding or replacing probes, it is necessary to reload the configuration as previously explained, to refresh all the serial numbers of the bench.

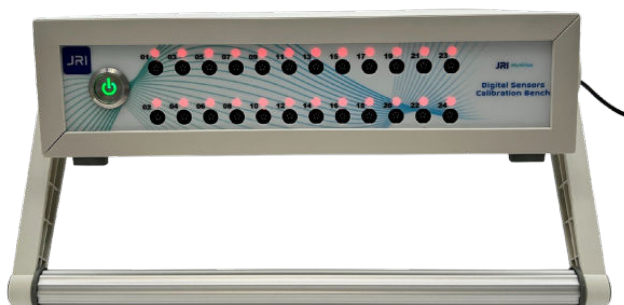
If only one probe has been changed, you can click the checkbox next to its serial number to reload that probe only.

• Calibration status visualization

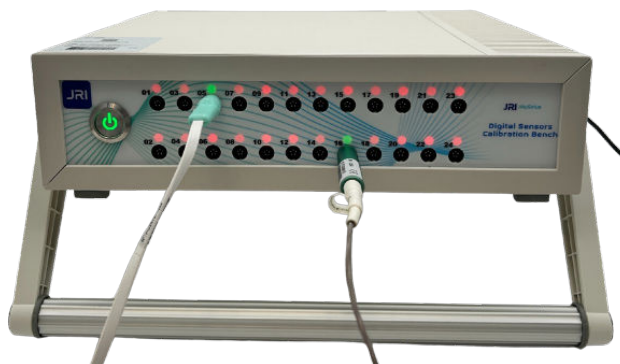
The design of these benches allows for easy visualization of the calibration status of each probe, indicated by an LED located above the connector.

- If the probe is not connected : RED LED (steady)
- If the probe is connected and operational : GREEN LED (steady)
- If the probe is connected but has a connection fault : BLUE LED (steady)
- If the probe is currently being calibrated : WHITE LED (blinking)
- If the bench is being updated : PURPLE LED (all LEDs transition from white to purple to indicate the update progress — all white: 0%, half white/half purple: 50%, all purple: 100%)

Below, the 24-channel bench is powered on with no probes connected, which explains why all the LEDs are displayed in red.



When a probe is properly connected and functioning, the corresponding LED turns green, as shown below.



VI. CARATÉRISTIQUES

Banc d'étalonnage 24 et 96 voies

	24 channels	96 channels
INTERFACE		
References	14124	14131
Buttons	On/Off button	
Channels	24 or 96 connectors for JRI digital probes	
LED	24 or 96 status LEDs	
Operating temperature	Ambient temperature	
Communication	Wi-Fi or Ethernet	
Configuration	Via USB + MyToolBox software	
Software compatibility	MySirius 5.1 – Calibration Module level 1 and 2	
ELECTRICAL SPECIFICATIONS		
Power supply	Input: 5V DC (power supply included)	
Probe compatibility	JRI digital probes (Ranges: Evolution, X ² , Green)	
MECHANICAL SPECIFICATIONS		
Dimensions (excluding carrying case)	290x260x74 mm	367x250x143 mm
Weight	1.8 kg	3.3 kg
SAFETY / COMPLIANCE		
Standards	CE, FCC, RoHS	
Protecting rating	IP 40	

VII. MAINTENANCE

Clean the device with a soft, dry cloth or one slightly dampened with water. To remove stubborn dust, use a cloth moistened with a diluted, non-abrasive detergent, then wipe carefully with a soft, dry cloth.

Never use benzene, thinner, alcohol, or any type of solvent, as these may cause discoloration or deformation of the surfaces

VIII. WARRANTY

Our equipment is guaranteed for one year, parts and labor included, against any manufacturing defects, malfunction, or abnormal wear. This warranty covers only the replacement of defective parts and the repair of the affected equipment, which must be returned to our workshops with prepaid shipping. It excludes any damages or incidental expenses.

The warranty period starts from the product's invoice date. The purchase invoice must be provided with any warranty claim. Repairs carried out under warranty do not extend the original warranty period granted at the time of sale. Damage resulting from abnormal use or outdoor storage is excluded from the warranty.

IX. MAINTENANCE CONTRACT

The maintenance contract allows you, for a minimum period of two years, to benefit from various services such as :

- Annual or biannual equipment inspection
- Warranty extension
- Remote maintenance
- Telephone support : **+33 (0) 892 680 933 (0,282 € excl. VAT/min)**
- Equipment replacement on-site or via return to the factory
- Verification of measurement accuracy (metrological certificate)
- Access to the latest software versions
- A 48-hour response time after defect identification by our experts

X. ENVIRONMENTAL PROTECTION

JRI recommends that customers dispose of their measurement and recording equipment that is unusable and/or irreparable in an environmentally responsible manner. When waste generation cannot be avoided, reuse or recycling should be carried out in the most appropriate way for the materials concerned and for environmental protection.

RoHS Directive

The European RoHS Directive regulates and limits the presence of hazardous substances in electrical and electronic equipment (EEE).

The scope of this Directive excludes, in Article 2, "Monitoring and control instruments," which include the products manufactured by JRI. However, JRI has chosen to apply all the provisions of this Directive to its new electronic products, which will comply with Directive 2011/65/EU.