

IPC Irwin

Group: IPC Imaginative, Innovative & Inspiring Products & Training to Education www.ipcirwin.com

Irwin, Design and Manufacturing, UK & International Sales, CPD Science, Teacher & Technician Training, XL Data Loggers, mobilesciencebenches.com



MOBILE SCIENCE BENCH INSTRUCTIONS



Contact Details:

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INTRODUCTION.

Thank you for purchasing the IPC Irwin Mobile Science Bench (MSB). The MSB is manufactured in the UK to the highest standards. It is factory assembled for quality purposes as flat pack assembly would compromise the standard of the build. The following notes are provided as a guide to ensure that you prepare the MSB properly prior to use.



Bench shown with Monitor and Stand (both additional accessories).

INSTALLATION NOTES.

- Remove all packaging.
- Lock the two front castors to secure the MSB.
- Keys for cupboards are taped together and located in the sink.

Water.

NOTE: The water system is factory tested before despatch and may contain a small amount of water. Before use for the first time, it is recommended that you flush the system with clean water.

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Remember to keep the clean water tank filled and to empty the wastewater tank regularly, preferably after each use.

The water pump is a pressure pump and will only function correctly when the system is filled with water. Once the clean water tank is filled then you may use pump.

Water tanks are placed one at the back, sideways on, with the other at right angles to the other one.

Water pump electrical connections.

These are ready assembled and fitted by a qualified electrician.

NOTE: only qualified and experienced Technicians should test, or fault find on all electrical fittings and installations.

RETORT ROD

➤ These are simply screwed into the pre-located holes

GAS SUPPLY.

NOTE: gas cylinders and regulators are not supplied.



These should be purchased from your local approved Gas Supplier who will also provide local support, advice, regular testing and installation advice.

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The Gas cylinder should always, without exception, be turned off at the cylinder and locked in the cabinet. The keys must always be in either the Teacher, Technician or authorised operator's possession at all times or locked in the authorised key safe.

Gas Regulations stipulate the size of cylinder that can be stored in buildings, please refer to, appraise yourself of and comply with the British Compressed Gases Association Code of Practice:

<http://www.bcga.co.uk/assets/publications/CP44.pdf>

A small Butane or Propane gas cylinder can be used with an approved regulator. A 3.5KG or 4.5KG is most appropriate. Should a larger cylinder be used this must conform with all storage regulations in buildings and expert advice should be sought before use. Contact your local approved Calor gas agent who will be able to assist and supply approved parts.

Installation of the Cylinder.

1. The cylinder is placed at the rear of the lower central cupboard on the left-hand side as you face the cupboard.



- **NOTE:** The cylinder shown here is the Red Propane cylinder, make sure you are aware of the storage and use of Propane before purchase. **We recommend Butane** for ease of compliance with storage regulations, as shown below.

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Butane Cylinder (recommended)



2. Standard connections are made to the gas regulator from the gas rubber tubing. This must be carried out by the Approved Calor Gas Agent.

➤ **NOTE:** The Rubber tubing supplied is approved and conforms to current regulations. Under no circumstances must this be replaced by an unqualified person.

Using Gas in the MSB.

- Gas cabinet to be locked at all times.
- No flammable liquids to be stored in bench if gas is being used.
- Always turn off gas taps immediately at end of use, switch off at the cylinder and lock the cupboard.
- Allow Bunsen and Gauze time to cool before storage.
- ***The Gas cylinder should always, without exception be turned off at the cylinder.***
- Remove gas cylinder to safe location after use. Propane must be stored outside in a locked cage.
- Always check with your approved Gas Agent if in doubt about use or storage of gas cylinders, routine and servicing testing, repairs.
- It is the user's responsibility to appraise themselves of current regulations for storing Gas in buildings.
- The keys must always be in either the Teacher, Technician, or authorised operator's possession at all times or locked in the authorised key safe.

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A **Gas Leak Detector** is provided as standard. This is connected to the power within the bench and so will only work once the bench is connected to the mains power. It is positioned in the compartment housing the gas cylinder and must be left plugged in at all times.



Once connected the POWER LED illuminates green and the alarm gives a 'DiDi' sound plus the ALARM LED flashes twice. The LED display will initially flash "--" and after approx. 4 minutes it will change to a steady "0", the alarm is now in its monitoring state.

While in the monitoring state the detector displays the level of gas detected depending on its concentration, "0" being none and "9" being the highest. If the display is showing between 3 and 9 the central STATE LED will illuminate red.

In addition, the alarm will either give a slow 'DiDi' sound when the concentration of gas is between 3 and 5 and a quick 'DiDiDi—DiDiDi' sound when between 6 and 9.

When the concentration of gas reaches the preset alarm level the display will show "A", the alarm will sound, the STATE LED will illuminate red and the ALARM LED will also illuminate. When the concentration of gas is below the preset level the alarm returns to the normal monitoring state.



<https://www.gassaferegister.co.uk/>



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Please be aware that the regulations for the purchase, fitting, use of and storing of Gas is for the responsibility of the user. The manufacture or supplier cannot accept any responsibility for the misuse or storage of Gas which is not supplied by IPC Irwin.

BUNSEN BURNERS.

- **NOTE:** The correct Bunsen Burner must be used for the gas to be used. There is a specialist Bunsen Burner for Butane, Propane and Natural Gas. Check you have the correct one before use. ***Use of the incorrect Burner is dangerous, check before use.***

ELECTRICITY.

- A 4-gang socket is supplied and is placed at the rear of the computer cupboard (opposite end to sink). It can be passed through the outer wall in the MSB via the cable port to a mains socket. ***Do not plug into the mains until installation is complete.***
- All cables from a computer, monitor or other accessories can be passed through the cable port on the bench surface or via the extended cable port between the front and rear cupboards.



There are both mains and low voltage electric sources available on the bench. All electrical safety standards and practices must be observed by the users. The operator and supervisor must be qualified, experienced personnel and take responsibility for the use of electricity in respect of their own and student's safety. The bench must always be supervised when in use and when not in use the connection to the mains must be locked in the cabinet.

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Electrical Tests should be routine, please consult your adviser as to your specific guidelines or regulations.

Portable Appliance Tests (**PAT**) should be carried out for all portable equipment.

Portable Appliance Testers, Test Labels and calibration services are available from IPC Irwin.



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