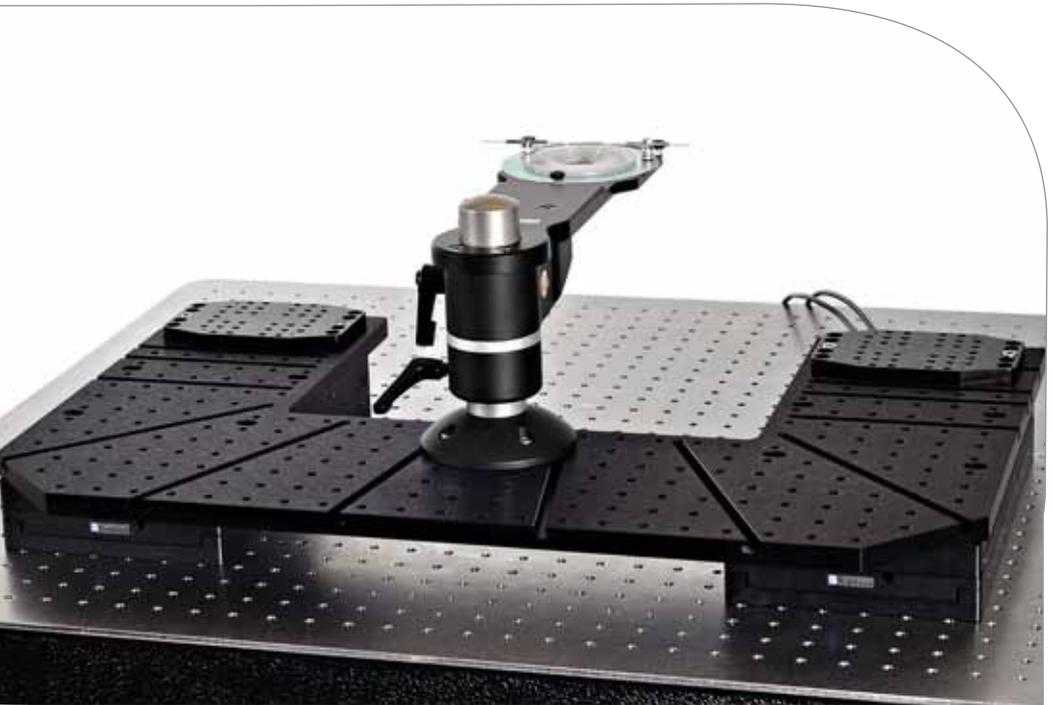




Scientifica
Experts in Electrophysiology & Imaging

Mounting equipment

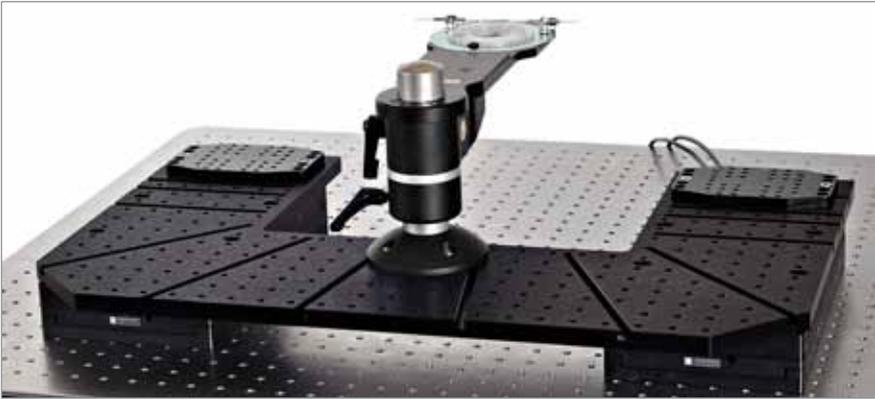


Motorised Movable Base Plate (MMBP)

Motorised Movable Base Plate

Our Motorised Movable Base Plate (MMBP) is a large, low-level translation surface for electrophysiology and imaging. It offers smooth movement of the sample and manipulator. It has been designed to suit applications where the microscope must remain stationary and is ideal for users wishing to switch between *in vitro* and *in vivo* studies.

Our MMBP overcomes space limitations imposed by *in vivo*, multi-photon or confocal equipment. A range of top plate sizes ensures trouble-free capability with all major microscope manufacturers.



Large Mounting Area

Our MMBP features a large mounting surface, offering plenty of space for manipulators, sample and other equipment. Either the tapped hole pattern on the surface or sliding carriages can be used to position your equipment, offering convenience and complete stability.

Samples are usually mounted on a height adjustable post and platform. For easier access and exchange, the platform can be rotated out and returned to a repeatable 'home' position.

In vivo and *in vitro* experiments

As well as gaining valued space around your microscope, the MMBP can be used for both *in vivo* and *in vitro* experiments.

As studies (on either sample type) can take place on the same workstation, this saves the space and cost of requiring a secondary rig.

We offer an extensive accessory range enabling the integration of stereotaxic equipment and sample plates.

Low Profile

With the top plate barely more than 60 mm above the surface of the anti-vibration table, the MMBP can solve many of the problems encountered with taller 'platform' style mounting systems.

Access to the microscope is easy and the surface translates underneath detectors or other side mounted equipment that can interfere with travel or mounting.

50 mm of smooth movement

Electrically quiet in operation, the MMBP features 50 mm of smooth motorised travel in X and Y axes, at a resolution of 20 nm. This low-noise translation enables the user to roam to other areas of interest while retaining established patches.

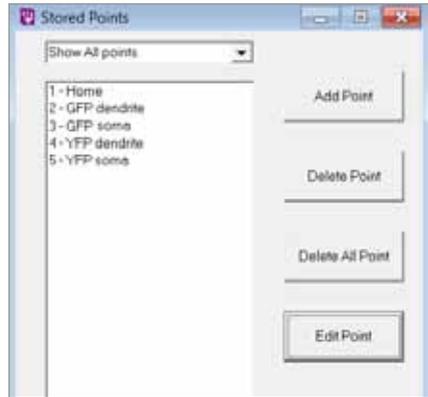
The MMBP is ideal for long-term electrophysiological recordings and imaging techniques which require the utmost stability.

The MMBP in an *in vivo* setup including the LBM-7 and IVM, a PatchStar Micromanipulator and *in vivo* mounting plate.



Benefits

A unique innovation developed in close collaboration with electrophysiologists, the MMBP is designed to be versatile and intuitive. It is simple to operate, but is packed with features that will improve your research efficiency and the quality of your recordings.



Compatibility

Our MMBP is designed to be compatible with upright microscopes from all major manufacturers. As detailed on page 9, differing sized top plates can be requested enabling trouble-free operation when using microscopes from; Olympus, Nikon, Zeiss and Leica.

Our MMBP is frequently employed with the Scientifica SliceScope, benefiting from the SliceScope's ability to convert to *in vivo* configuration; for unrivalled sample access.

Intelligent motorisation

Our MMBP has been carefully engineered to guarantee utmost stability and smooth motion. With high-precision stepper motors, crossed roller bearings and anti-backlash lead screws, you can be confident that translating around samples will be smooth and predictable.

The Linlab software (used to customise the MMBP and other motorised products), includes the unique 'Follow' function proving a significant time saver. It enables you to virtually 'link' multiple manipulators to the movement of the MMBP and the focus of your microscope.

Additionally, points of interested can be tagged and returned to at the click of a mouse, making the system very easy to use.



Convenient sliding carriages

As well as featuring a tapped hole pattern (for attaching equipment around your sample) the MMBP's slots accept lockable sliding carriages (three supplied) - usually used for mounting micromanipulators.

This unique mounting system offers unrestricted freedom of movement in order to precisely position and fix your manipulators. This ensures you make the most of your manipulator's travel range by starting in an ideal 'home' position.

In addition, equipment mounted onto the sliding carriages can be quickly removed from the recording area for additional sample or microscope access.



Future Proof Accessories

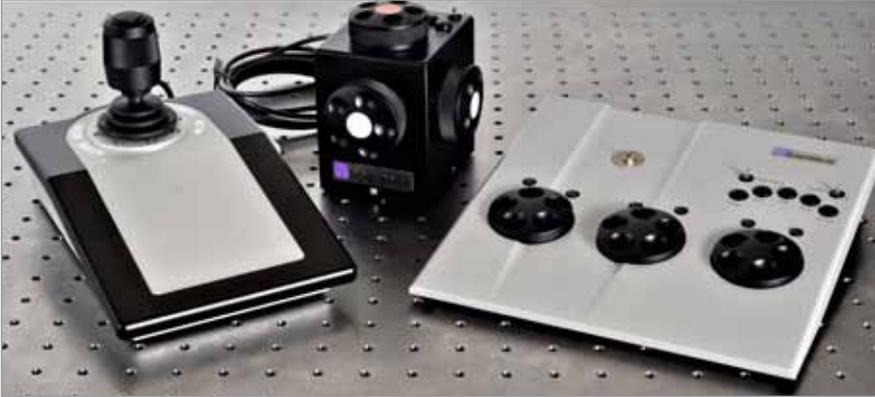
For *in vitro* use, the MMBP is shipped with a short post and platform sample plate holder with perfusion accessories. Accepting standard 108 and 110 mm chamber adaptors, this provides excellent flexibility of positioning and sample height.

The post and platform can be exchanged for an *in vivo* variant, featuring tapped holes to accept a wide range of stereotaxic restraint accessories. The MMBP can be ordered with one of these options, or both for fast and simple exchange.

Other accessories are available ensuring that every experimental requirement can be accommodated. Speak to your sales representative for advice on your individual requirements.

Control Options

To fulfil our ambition of making our equipment as accessible and easy to use as possible; Scientifica offers a series of control options which are configurable with the entire range of manipulation and translation products.



Joystick, Control Cube and PatchPad (left to right)

Control Cube

Compact and comfortable to use, this popular wheeled design gives fingertip control and excellent functionality.

An array of buttons and switches gives fast access to a variety of functions; activating the "approach" axis, adjusting speed, setting and recalling memory positions and more.

The three wheels, each corresponding to an axis of movement, can be converted by the user between left and right handed use and customised to your preferences.

Joystick

An alternative to the control cube is our joystick with its ergonomic design that offers intuitive directional control in all three axes. With movement speed proportional to the amount of deflection applied, a speed change button enables you to customise the device to your preference.

This functionality enables you to comfortably and naturally use the joystick whilst concentrating entirely on the experiment taking place.

The PatchPad

With this flat panel design, each axis of movement can be allocated a wheel on the panel, adding flexibility of control to suit your spatial and personal requirements.

Additionally a touch screen variant of the PatchPad can be used to switch between more than two devices.

The PatchPad features the same easy access buttons and switches as the Control Cube; allowing you to store memory positions, activate the "approach" axis and adjust speed.

LinLab Software

While all our equipment can be operated without connection to a PC, some users prefer to customise their systems. Each motorised Scientifica product includes the free Scientifica LinLab software. LinLab will allow you to set the speed and direction of movement, step sizes, positional display and memory positions.

You can accurately read approach angles from the manipulators, use the "Follow" function to virtually link the movement of multiple motorised products and take advantage of other unique capabilities.

Complete setups

SliceScope Pro 6000 & PatchPro 6000

The 6000 systems cost-effectively integrates with the MMBP into a complete patch clamping solution, including micromanipulators and control hardware.



SliceScope Pro 6000

The SliceScope Pro Series has been developed by us in close collaboration with world-leading researchers, creating an electrophysiology friendly motorised microscopy system.

It provides a very stable, compact platform with outstanding Olympus optics. Full motorisation ensures no manual intervention is required, minimising risk of disrupting a patch or losing your seal. The compact frame of the SliceScope allows more equipment to be easily mounted around your sample; allowing you to add more manipulators in the future, or upgrade to other techniques.

Advantages

Narrow profile offers more space for equipment around your sample

Motorised focus offers fine control

Motorised condenser control for optimal Koehler illumination

Compatible with a full range of accessories, light sources and contrasting techniques



Patch Pro 6000

The PatchPro systems are integrated patch clamping solutions that work in conjunction with fixed-stage nosepiece focussing microscopes from Olympus, Zeiss, Nikon and Leica.

The system allows you to control manipulators, microscope translators and temperature equipment, all from two neat, easy to use consoles. Additionally, a Z-Focus module is available for a range of microscopes should it be required.

Advantages

Future-proof modular system allows you to add or subtract equipment at a later date

Ample space for sample movement or substage detection units

Software control and storage of memory positions for quick easy navigation to areas of interest

Unique "Follow" function, virtually linking devices for faster simple navigation

Technical Specifications

Specifications	
Number of Axes	2
X Travel:	50 mm
Y Travel:	50 mm
Electronic Resolution:	20 nm
Speed (Minimum):	0.1 μm per second
(Maximum):	4 mm per second
Mechanical Resolution:	100 nm

Ordering Information

Product Option	Order number
MMBP, with <i>in vitro</i> sample plate holder (Metric)	MMBP-7000-00
MMBP, with <i>in vitro</i> sample plate holder (English)	MMBP-7000-50
MMBP, with <i>in vivo</i> sample plate holder (Metric)	MMBP-7200-00
MMBP, with <i>in vivo</i> sample plate holder (English)	MMBP-7200-50
Additional mounting carriage (Metric)	MTP-3600-00
Additional mounting carriage (English)	MTP-3600-50
Set of 4 riser blocks to increase height of MMBP by 50 mm	MMBP-7000-RB

All MMBPs include the following as standard: 3 mounting carriages, Slice Recording Chamber Kit (containing 2 Bath Plate tools, Cover Slips, Perspex Bath Chamber, Ferromagnetic Ring & RTV sealant), 2 protective splash covers, 1U Control Rack and Linlab Software for Windows.

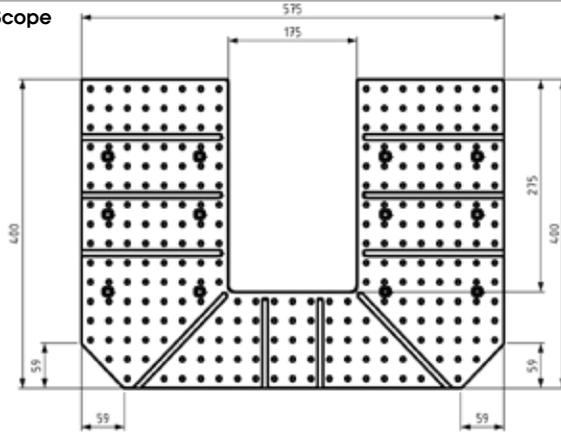
These order numbers should be appended with the following codes to designate your choice of control option:

C = Control Cube P = PatchPad
 J = JoyStick PT = PatchPad Touch

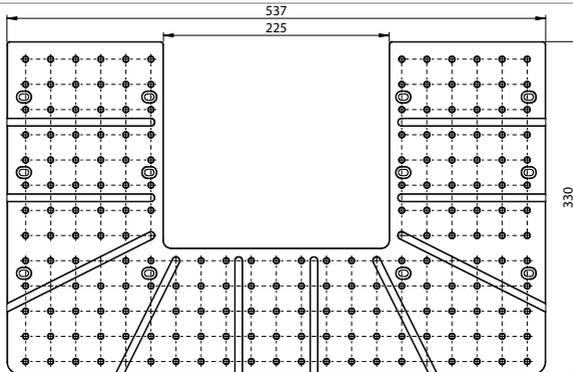
Please speak to a member of our product specialist team if you need assistance in selecting the most appropriate equipment for your requirements.

Schematics - (mm)

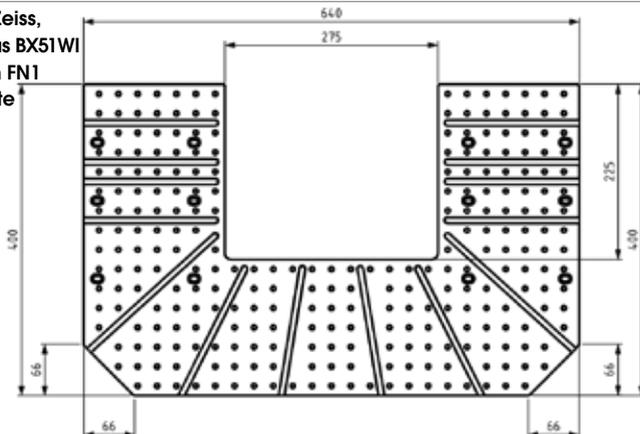
MMBP SliceScope
Top Plate



MMBP Leica
Top Plate



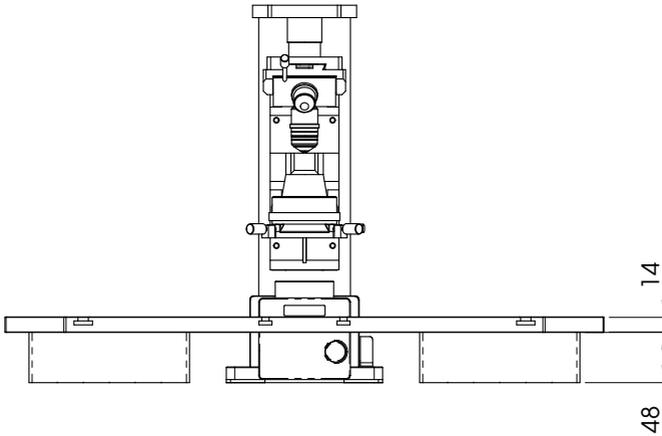
MMBP Zeiss,
Olympus BX51WI
& Nikon FN1
Top Plate



Schematics

MMBP height

Please note: the height from bench surface to the mounting surface is the same for all top plate models. Please see diagrams on the previous page for horizontal clearances.



Warranty

Scientifica's success has been founded on supplying the very best support and application of significant experience in manufacturing and distributing within the electrophysiology and imaging fields. We would therefore really value the opportunity to understand your applications better and to offer no obligation advice on equipment, configurations and compatibility.

All Scientifica instruments are sold with a two year warranty giving you complete peace of mind. This covers all defects in manufacturing and materials. In this unlikely event, Scientifica will remedy either by repair or replacement.

Our team of customer support engineers is dedicated to providing you with the very best advice and support, should you experience any difficulties with our products.

A guide to Scientifica's mounting range

Movable Microscope



Universal Motorised Stage

OR



Manual XY Stage

+

One of the following platform systems



SlicePlatform



Post & Platform



Inverted SlicePlatform

The Post & Platform, SlicePlatform and Inverted SlicePlatform are combined with our Universal Motorised Stage (UMS) for smooth microscope movement.

Fixed Microscope

Movable Top Plate



Movable Top Plate Motorised Movable Top Plate

Motorised Movable Base Plate



Inverted Movable Top Plate



Inverted Movable Top Plate Inverted Motorised Movable Top Plate

Complete Systems

All of the mounting options above are available as a package with Manipulators and a Microscope (either SliceScope or most major upright and inverted Microscopes) - a complete turnkey solution for your research.



Revision 1.2

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Find out more about the Scientifica range of products and interviews on our channel, including a full demonstration of our MMBP.

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