

“Highly Recommendable” Products for Patch Clamp Recording

For use with Olympus IX71

In recent years, motorized manipulators have come into wide use, while its automatic manipulation system is not easily adaptable to diverse objects. To the contrary, hydraulic and manually controlled manipulators permit precise maneuver by the operator’s hand, which contributes to increased success rate and keeps the operator from missing target cells. That’s exactly the technology Narishige has proven over the years.

Water Hydraulic System MHW-3

Remote controlled water hydraulic system free from hands movement. Reducing drift occurrence to a minimum by applying the principle of leverage

Manually-Operated NMN-21

Free from drift occurrence and electrical noise. Albeit manually operated, the special mechanism makes hand vibration hardly detectable. Available at an affordable price.

Typical Combinations

	Example 1 Standard Combination	Example 2 Reasonable Combination	Example 3 Drift-free Combination
Mounting Adaptor	NO-WIX-2 x 1	NO-WIX-2x 1 NO-TIX-2x 1	NO-TIX-2 x 1
Micromanipulator for recording	MHW-3	MHW-3	NMN-21
Micromanipulator for stimulating	MHW-3	NMN-21	NMN-21
Patch Clamp Headstage Holder	For connecting to a patch amplifier, use a separately available patch clamp headstage holder adaptable to each headstage model.		

MHW-3

1. Using water in place of oil reduces the expansion factor to approx. 1/4 \searrow
2. Replacing the 1:1 cartridge with the 1:5 cartridge reduces drift to around 1/5 \searrow

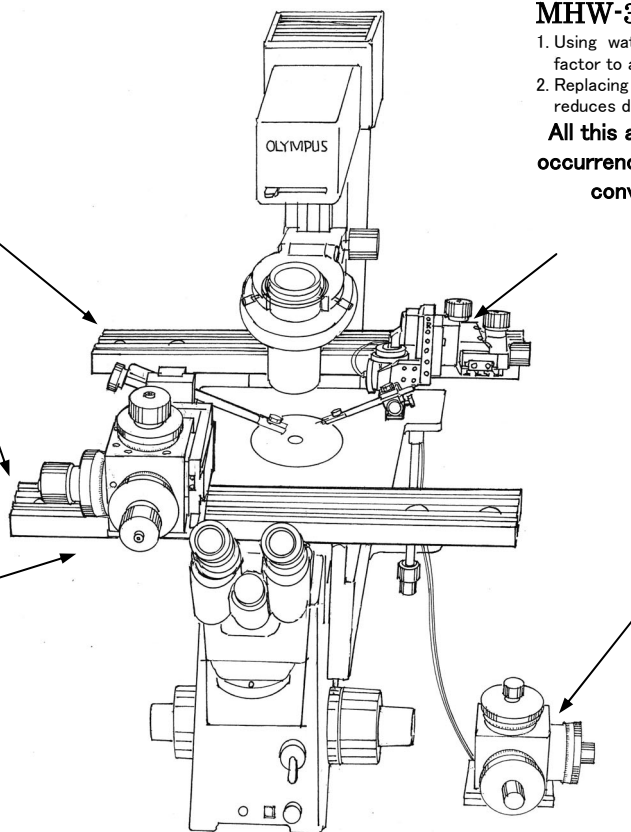
All this adds up to reduce the rate of drift occurrence to about 1/20 \searrow as compared to conventional oil hydraulic system.

MHW-3 Controller

Remote control system allows hand vibration-free operation without having to touch the microscope. Controllers can be placed in an easy-to-operate position.

**Stage Rear Mount
NO-WIX-2**
Double-railed mounting adaptor to install the remote-control MLW-3

**Stage Front Mount
NO-TIX-2**
To make NMN-21 easy to operate



NMN-21

Drift-free manual control. The special mechanism helps absorb hands shaking into the main body and thus hand vibration is hardly detectable even under high magnification.