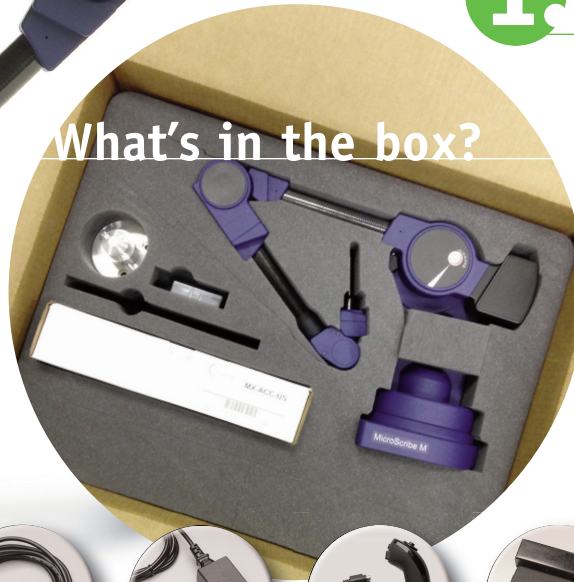


MicroScribe® M

Getting Started



What's in the box?



1

Items included in the box:

- MicroScribe M articulated arm
- One master and one working tip: 3 mm ruby ball, 20 mm length
- Tip calibration fixture
- Certificate of calibration
- Hand switch (foot pedal optional)
- USB cable
- Power supply and IEC cable (varies for country of use)
- User's Guide and MicroScribe Utility Software (MUS) on USB drive



usb cable



power supply



hand switch



foot pedal (optional)



probe tips



tip calibration fixture

2

Proper MicroScribe M handling

The MicroScribe M is a well-built tool with a solid, sturdy feel, but it is also a precision instrument. To ensure years of continued accuracy please handle with care.



Taking it out of the box

Remove the MicroScribe M from the box by grasping it at the "elbow" and at the large opening above the base (as shown). Lift, taking care with the freely moving stylus assembly as you do. **Handle with care. External collisions may affect the calibrated accuracy.**



Carrying the MicroScribe M

Always carry the MicroScribe M with both hands to provide shock absorption for the digitizer's joints. Remove the stylus from the stylus holder, supporting the "wrist" section in one hand. Slip your other hand through the large opening above the base and use it as a handle.

3

Connecting the the MicroScribe M

MicroScribe M is connected via the USB port of the host computer.



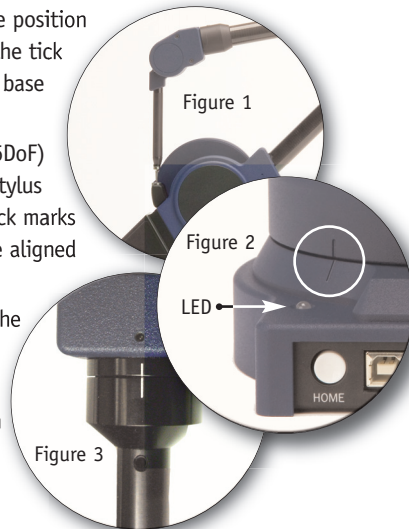
To connect in USB mode:

1. Plug the connector end of the hand switch or optional foot pedal cable into the MicroScribe M "Accessory" port.
2. Insert the power cable connector into the MicroScribe M "Power" port and the cable's power plug into a power outlet. Never use a power supply other than the one provided with your MicroScribe M system, even if the voltage rating seems correct.
3. Plug the appropriate end of the USB cable into the MicroScribe M "USB" port and the other end into a free USB port on the host computer or USB hub.
4. After homing your MicroScribe M as described on the next page, your system is ready for use. The supplied USB drive includes software utilities and test routines for checking communication settings.

Homing the MicroScribe M

Homing the MicroScribe M establishes the coordinate system that enables accurate measurements in three dimensions. To home the MicroScribe M:

1. Place the Master tip (red ring or dot) onto the stylus and securely tighten using the hole located at the base of the tip. Hand tightening is not sufficient, but be careful to avoid over tightening, which could damage the stylus.
2. Place the stylus in the home position (Figure 1) and ensure that the tick marks on the MicroScribe M base are aligned (Figure 2).
3. For six degree of freedom (6DoF) MicroScribe M models, the stylus must be rotated until the tick marks at the base of the stylus are aligned (Figure 3).
4. Press the Home button on the back of the base.
5. The LED on the MicroScribe M base indicates the system state. (See the accompanying chart of LED status messages.)
6. Remove the Master tip and KEEP IN A SAFE PLACE. It should ONLY be used for homing your MicroScribe M and calibrating tips. If the Master tip is damaged, the MicroScribe M system will need to be returned to Revware for recalibration with a new Master tip. (See also Calibrating Tips in the accompanying User's Guide.)



LED STATUS	DEVICE STATE	DETAILS
OFF	Off	The MicroScribe M system is not powered by the external power supply.
RED (Flashing)	Powered	The MicroScribe M system is not homed (the Home button has not been pressed) and not communicating with the CPU.
RED	Not homed	The MicroScribe M system is communicating with the CPU but has not been homed (the Home button has not been pressed).
GREEN (Flashing)	Connection lost	The MicroScribe M system has been homed (the Home button has been pressed), but is not communicating with the CPU.
GREEN	Normal operation	The MicroScribe M system is ready for use.
Rapid Flashing (RED or GREEN)	Low battery or power	The MicroScribe M system power source is low and should be replaced immediately.

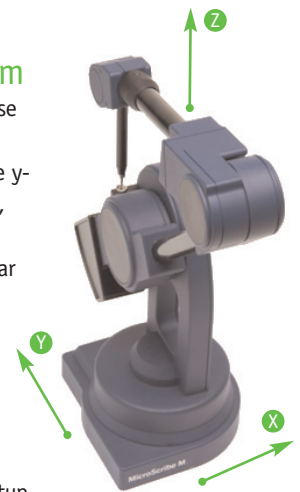
Mounting the MicroScribe M (recommended)

The MicroScribe M system is designed to sit securely on a flat, level, and rigid surface. You may secure it to a work surface using three 10-32 bolts inserted through your work surface and into the MicroScribe M's base. See the User's Guide for the hole pattern specification. Be sure that the bolts do not extend more than 0.375 inches (9.5 mm) above the mounting surface to safely engage the MicroScribe M base.

DO NOT secure the MicroScribe M to an electrically conductive surface unless that surface is grounded and not subject to electrical interference or noise. Revware offers an optional mounting plate for securing your MicroScribe M to a work surface. For more information on MicroScribe M accessories, visit www.revware.net/microscribe or inquire with your local MicroScribe M distributor.

The default coordinate system

The default origin is at the center of the base joint axis and flush with the bottom of the base plate. When in the Home position, the y-axis runs parallel to the black circular joints, with positive Y in the direction of the counterweight. The X-axis runs perpendicular to the black circular joints, with positive X extending towards the right as shown here. The Z-axis is perpendicular to the base with up being the positive direction.



MicroScribe M User's Guide

For more information on the proper care, setup and use of your MicroScribe M, consult the MicroScribe M User's Guide.

Technical Support

You can access information on common MicroScribe M technical questions at the Revware Systems web site:

www.revware.net/microscribe or www.revware.com

or email for technical support at:

microscribe@revware.net

or contact your local MicroScribe M distributor.

4 Setting up the workspace

Position your MicroScribe M for convenience.

MicroScribe M placement relative to computer

Many programs require the use of the host computer keyboard and mouse in addition to the MicroScribe M. For most (right-handed) users it is recommended that the MicroScribe M be placed to the left of the keyboard to maintain comfortable access to the mouse with the right hand. Regardless of where it is placed, make sure the MicroScribe M is able to move freely without hitting other objects.

MicroScribe M placement relative to the object being measured

Before digitizing, test the position of the object to be measured relative to the reach of the arm. Be sure that all data points to be taken fall comfortably within the workspace, allowing measurements without arm strain. The stylus should make contact at right angles to the object being measured. As a work saving precaution, establish reference points that can be used to reestablish part orientation if necessary. See the User's Guide for more information.



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