



Siskiyou Corporation MC1000e Motion Controller User Manual

[Home](#) » [Siskiyou Corporation](#) » Siskiyou Corporation MC1000e Motion Controller User Manual 

Siskiyou Corporation MC1000e Motion Controller User Manual



Contents

- [1 Introduction](#)
- [2 Specifications](#)
- [3 Description](#)
- [4 Installation](#)
- [5 Interface](#)
- [6 Related Products](#)
- [7 EU Declaration of Conformity](#)
- [8 Service Information](#)
- [9 Product Warrant](#)
- [10 Warranty Repairs](#)
- [11 Contact Information](#)
- [12 Documents / Resources](#)
 - [12.1 References](#)
- [13 Related Posts](#)

Introduction

This manual describes the operation of Siskiyou's Model MC1000e micromanipulator motion controller.

Specifications

- **Input Power Requirements:** 90-264VAC, 47-63Hz via included power supply adapter
- **Output:** 18VDC / 2.5A

Inspection / Items Included:

Siskiyou products are shipped in sturdy, cushioned boxes. Please inspect the instrument immediately and notify the carrier if damage is obvious. Remove all items from packing materials and confirm that all items listed in the table below are available.

DESCRIPTION	QUANTITY
MC1000e 4 AXIS PUSH BUTTON CONTROLLER	1
MC1000e 4 AXIS JUNCTION BOX with mounting hardware	1
POWER SUPPLY ADAPTER	1
POWER CABLE	1

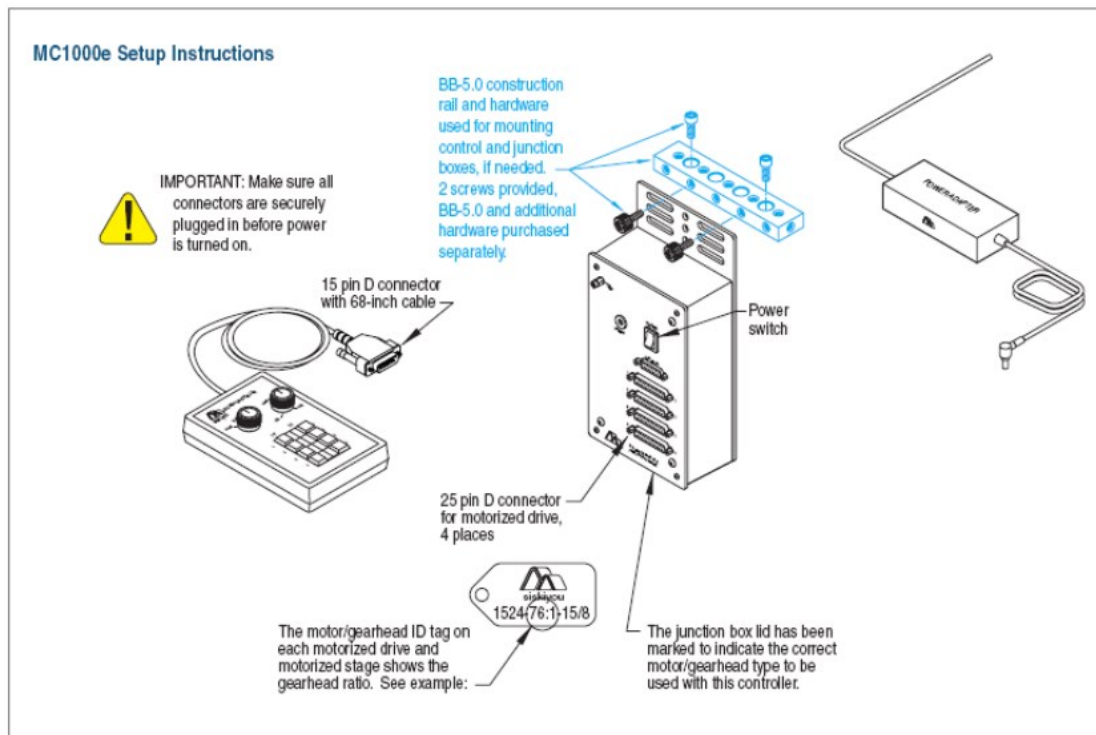
Description

The MC1000e is a simple push-button controller with submicron positioning capability that is compatible with our 800 and 7000 series actuators, manipulators, and stages.

The MC1000e 4-axis controller has two preset speed settings: rapid (1.7 mm/second) and medium (300 $\mu\text{m}/\text{second}$). The third speed selector (slow) has a variable 330° potentiometer that enables settings from high speed (50 $\mu\text{m}/\text{second}$) to low speed (2 $\mu\text{m}/\text{second}$). With the speed selector set at the slowest settings consistent 0.2 μm moves are easily made by the simple bump of an axis button. The controller uses encoder feedback from

the motor to drive the device. This encoder coupling enables the use of the DR1000 digital readout for repeated positioning requirements.

The MC1000e uses a universal switching power supply adapter as its source for clean DC power. All cables are shielded and a central ground lug is located on the junction box to ensure noise-free operation during sensitive electrophysiology experiments.



Installation



CAUTION: MAKE SURE ALL CONNECTORS ARE SECURELY PLUGGED IN BEFORE POWER IS TURNED ON. DO NOT REMOVE CONNECTORS WHILE POWER IS ON. FAILURE TO DO SO CAN RESULT IN A SHORT CIRCUIT AND PERMANENT DAMAGE TO THE SYSTEM.

To install the MC1000e, please refer to Figure 1: Interface or the supplied set up instructions. Supplied with the MC1000e are two ¼-20 screws that can be used to secure the junction box to the work station. It is also possible to use cable ties (not included) to mount the junction box.



It is advised to place the controller away from the experiment area. Any liquid that may come in contact with the controller can cause permanent damage to the system. It is also advised to add a ground wire onto the junction box and attach the free end of the wire to a metal surface outside of the system. The lug to use



is labeled by the electrical symbol for “ground”

Interface

Junction Box

Power In: Using the supplied power adapter, the user can connect the power adapter to the junction box and supply power to the system.

b: The power switch turns on the junction box and the controller. This is required to be on in order to use the MC1000e. Turning off the power switch will cease all operations with manipulators remaining in place. The same applies to loss of power.

Ground: By attaching a wire from the ground lug to a metal surface (that is not part of the experimental system), the users helps prevent damage from static shock and to ensure noise-free operation while in use. The lug is



represented by the electrical symbol for “ground”:

Controller: The 15 pin, male connector, is used for connecting the controller to the junction box.

1, 2, 3, and 4 Ports: The 25 pin, female connectors, are used for connecting the motor drive cables to the junction box. A motor drive must be plugged into port 1 for the MC1000e to work.

Controller

Drive No. 1, 2, 3, and 4: The eight buttons located by the respective labels of 1, 2, 3, and 4 are used to control the motor drives in both the positive and negative direction of the respective axes plugged into the junction box. Multiple buttons on different axes may be pressed at the same time, but two buttons on the same axis will not have any effect.

Slow/Med/Rapid: This knob is used to change the speed of the motor drives. It has three different speeds: slow, medium, and rapid. This feature sets the speed for all axes. Individual axis speed settings are not available.

The MC1000e 4-axis controller has two preset speed settings: rapid (1.7 mm/sec) and medium (300 $\mu\text{m}/\text{sec}$).

Slow Range: The slow range knob is used during the slow speed of the Slow/Med/Rapid knob. The Slow Range knob has a variable 330° potentiometer that enables settings from high speed (50 $\mu\text{m}/\text{sec}$) to low speed (2 $\mu\text{m}/\text{sec}$). With the speed selector set at the slowest settings, consistent 0.2 μm moves are made by a bump of the axis button. This feature works for all axes.

Operation:

When the MC1000e has been correctly installed, the user can begin use of the system. The operation may be bench tested prior to installing the unit to an experiment.

When the user presses a button for the Drive No. 1, 2, 3, or 4, the motor drive that is plugged into the respective port will also move. For example, if the X axis motor drive is plugged into port 1 on the junction box, when Drive No. 1 is pressed, the X axis will move. The speed will be based on the setting selected from the 3 position speed selection knob.

Maintenance and Service:

There are no user serviceable parts inside the controller or junction box. In the event of the need for service, call Siskiyou Corporation and ask to speak with technical support.

If the problem cannot be solved through telephone or email communication, an RA number will be provided to return the unit to Siskiyou Corporation.

Related Products

Switching Box



ABCD switching box allows control of one to four 4-axis micromanipulators by one controller. The basis of the design is simple and requires only an extra controller junction box for each added micromanipulator or motor drive group (up to four per group). Junction boxes must be purchased separately.

Digital Readout



The DR1000 Digital Readout provides an accurate, highly visible display for axis position. The digital readout may be installed on any of our e series controllers and is connected in series via a double-sided connector between the controller junction box and the device D connector.

EU Declaration of Conformity

In accordance with EN 45014: 1998

Manufacturer: Siskiyou Corporation
Address: 110 SW Booth Street Grants Pass, OR 97526-2410 USA

Declare that:

Equipment	Motion
Controller	Model Name/Number
MC1000e Series Serial Number	N/A

In accordance with the following directives:

2014/35/EU	The Low Voltage Directive and its amending directives
2014/30/EU	The Electromagnetic Compatibility Directive and its amending directives
2006/42/EC	The Machinery Directive and its amending directives
2015/863/EU	Restriction of use of certain hazardous substances (RoHS-3)

I hereby declare that the equipment above has been designed and found to comply with the relevant sections of the above referenced specifications. The unit complies with all essential requirements of the Directives.

Service Information

Please call, email, or fax in your questions to Siskiyou Corporation at:

Telephone (toll free): 1-877-313-6418

E-Mail: service@siskiyou.com

Facsimile: 1-541-479-3314

For a mailing address, refer to page 9.

Product Warranty

Siskiyou Corporation products carry the following warranty, effective for a period of one year from the original invoice date unless otherwise stated in the product literature:

- Siskiyou Corporation products will be free of defects in material and workmanship.
- Siskiyou Corporation products will meet the specifications stated in this catalog.

If you find any defects in material or workmanship, or a failure to meet specifications within the warranty period, return the product to us clearly marked with a Return Authorization (RA) number and we will either repair or replace it at our discretion. Call our toll free telephone number and ask for the service department to request RA numbers.

Our warranty excludes products that have been improperly installed or maintained, modified or misused. Notification of claim must occur within the warranty period. Siskiyou Corporation's liabilities are limited as set forth in our STANDARD TERMS AND CONDITIONS, copies of which are available upon request.

Siskiyou Corporation products unused and undamaged may be returned to Siskiyou Corporation within 30 days of the initial invoice date (60 days outside of the US), but are subject to a 25% restocking fee.

Warranty Repairs

Before shipping a part to Siskiyou Corporation, a Return Authorization (RA) number must be obtained by calling our service department at our toll free telephone number. The product must be shipped prepaid in the original or equivalent packing with the RA number clearly marked on the outside of the box. Pack carefully to prevent damage. Place actuators, stages, manipulators, and controllers in a clean plastic bag to prevent contamination from packing materials. Siskiyou Corporation cannot be responsible for any damage occurring in transit to us. Products are not accepted without a Return Authorization number on the outside of the shipping carton.

Signed by:



Name: John Wingerd

Position: Engineering

Place: USA

Date: February 15, 2019

Contact Information

Mailing Address

Siskiyou Corporation
110 S.W. Booth Street
Grants Pass, OR 97526-2410

Sales and Service

sales@siskiyou.com

service@siskiyou.com

phone (toll free): 1-877-313-6418



Technical Assistance

tech@siskiyou.com

phone: 1-541-479-8697

facsimile: 1-541-479-3314

Website

www.siskiyou.com

webmaster@siskiyou.com

International

please call or visit our website for international contacts


Siskiyou Corporation Phone (toll free): 1-877-313-6418

www.siskiyou.com

Phone: 1-541-479-8697



Documents / Resources

	<p>Siskiyou Corporation MC1000e Motion Controller [pdf] User Manual MC1100e Motion Controller, MC1100e, Motion Controller, Controller</p>
--	---

References

-  [SISKIYOU Corporation Home](#)

[Manuals+.](#)