

Software quick start guide

For Hobby-Line, Basic-Line, and Compact-Line with the C1 or C3 controller and Beamicon2 Basic

> MPF.CL.####.01.IMK MPF.BL.####.01.IMK MPF.HL1.####.SET

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Version 1.3.0



1. Connection of control and PC

Connect the PC to the mini controller via the network. When using Beamicon2 as control software, it does not matter whether the connection is made directly or via a switch.

2. Software download and installation

Download the Beamicon2 software installer. The link:

upload.sorotec.de/beamicon2/basic/Beamicon2B_setup.exe

Carry out the installation, switch on the controller and start the software as administrator (right click - "Start as administrator").

3. Selection of the machine type

After starting the program for the first time, a list appears from which you can select your machine (see Fig. 1). The appropriate parameters are then entered automatically.* The previously usual transfer of parameters by means of an .ini file is no longer necessary.

4. Connection of software and control

Also only when the program is started for the first time, the message "Hardware problem" appears. (Fig. 2) Click on "Open dialog".

Predefined p	parameters
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Please select your machine type to load a predefined parameter set or select the default parameter file.

Default_MicroPod	
CompactLine_Basis	
Hobby10560mini	
Hobby4530mini	
Hobby6045mini	
Hobby7545mini	
OK	
UK .	d.

Fig. 1: Selection of the machine type

i Note:

For both the Basic and Compact Line, select the entry "CompactLine_Basis".

* The travel paths of the axes must be entered manually for these types.



Fig. 2: Message after the first start

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In the window that now appears, the mini-controller is available for selection under "recognized hardware" as "MicroPod Benezan Electronics" (Fig. 3). If the list is empty, click on "Search network". The control should now be recognized at the latest. Select the entry in the list and click on "Connect". The entry of the control now changes from the upper to the lower list "connected hardware" (Fig. 4). Click on "Save".

uration User Support Help Toolb 100% E-F+ RESET 0 х elect Controller Hardware 0.000 mm tected Hardware (not used) Spindle 0 Y 0.000 mm 0 z S-100% 0.000 mm S+ RESET G49 01 Jog Speed 0.000 1,0 mm/min J+ Tool Settings module found G54 G55 G53 G56 G57 G58 G59 Connected Hardware (in use Τ1 Hardware connected Startup Macro 0 . Disconnect (T) Hre connected: MicroPod Be Demo mode Startup Macro MDI 10 Save Cancel Alarm 1
Alarm 2 CNC-Pod2 - a cheap way to get the unlimted version of Beamicon2 Visit http://beamicon2basic.com to upgrade or order options. Fig. 3: Control recognized Beamicon2 Mainscreen @1223x816 Configuration User Support Open NC-File.. Recent files 100% F-F+ 0 Create NC-File RESET X 0.000 mm mport Dra 0 Y 0.000 mm 0 z S-100% 0.000 mm RESET Export setting 0 1 G49 0.000 1.0 mm/min J+ ol Setting G53 G54 G55 G56 G57 G58 G59 T1 0 0 (T) H MDI 0 ОК . Alarm 1 Alarm 2

Fig. 4: Controller connected

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5. Functional test

Check that all three axes are running in the correct direction. To do this, try to control the machine with the arrow keys.

i Note:

The Hobby Line has a different axis assignment than usual for Sorotec machines. The company standard is "Long axis is X." Figures 5a (Hobby Line) and 5b (Basic and Compact Line) show the difference in keyboard operation.



Only move the axes a little at a time. Since the first reference run does not take place until the next step, there is a risk of damaging the machine by colliding with a mechanical stop.

6. Reversal of direction

If the direction of movement of an axis turns out to be opposite to the arrow keys, the associated motor does not have to be rewired separately. Beamicon2 offers the possibility to reverse the direction in the settings.

To do this, open the "Machine" item in the "Configuration" menu. In the window that then appears, select the "Axis parameters" tab and then the relevant axis at the top left. You can find the checkbox for reversing the direction in the lower left part of the window (see Fig. 6 on the next page).



Fig. 5a: Assignment of the axes to the arrow keys of the PC-keyboard



Figure 5b: Assignment of the axes of a Basic Line to the arrow keys of the PC keyboard



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General Assign Axes	Axes Config E	xtras	Input/Output	Jogspeed	Special	Safety	Variables	Maintenance	
Select Axis Y	~ U	Jnit	mm/s ∨		Оре	n Calcula	itor		
Resolution	160).0 s	teps/mm	mi	n. Positio	n		-450.0	mm
max. Velocity	83.3333	33 r	nm/s	ma	x. Positic	n		0.0	mm
work Acceleration	750).0 r	nm/s²	ho	ming Velo	ocity		20.0	mm/s
EStop Acceleration	2000).0 r	nm/s²		inching \	elocity/		2.0	mm/s
max. Jerk	1	l.0 r	nm/s	Ho	me Switc	h at	insid	e max. Position	\sim
🛃 Enable Display	🗹 Enable H	andwl	heel and Hotkeys	Ho	me Switc	h Positio	n	-10.0	mm
Backlach								50.0	
Dackiasti	C).0 r	nm	Ho	me Swite	h Toleran	ce	50.0	mm
Output Type	step/dir v).0 r	nm Dir inverted (m	Ho naster) Ho	me Switc me Offse	h Toleran t (master)	1.0	mm
Output Type	step/dir ~	0.0 r	nm Dir inverted (m Dir inverted (sl	naster) Ho ave) Ho	me Switc me Offse me Offse	h Toleran t (master t (slave))	1.0	mm

Fig. 6: Reversal of the direction of movement in the machine configuration

7. Z0 height tool length sensor

First measure the switching height of your tool length sensor with a caliper. To do this, press the sensor with the caliper until you hear the trigger click. Read the height and write down the value. In the "Configuration - Machine" menu, select the "Variables" tab. Enter the measured release height in point #953 "tool length probe height for Z0 finder". (see Fig. 7).

d finder	-137.0 500.0 40.7 250.0 5.0 20.0 20.0		□ lov □ up □ lov	ver Limit X per Limit X ver Limit Y	0.0 600.0 -1050.0	mn mn mn
d finder	-137.0 500.0 40.7 250.0 5.0 20.0 20.0		Uov	ver Limit X per Limit X ver Limit Y	0.0 600.0 -1050.0	mn mn
d finder	500.0 40.7 250.0 5.0 20.0 20.0		up lov	per Limit X ver Limit Y	600.0	mr mr
finder	40.7 250.0 5.0 20.0 20.0		Up	per Limit X ver Limit Y	600.0 -1050.0	mr mr
	250.0 5.0 20.0 20.0		lov	ver Limit Y	-1050.0	mr
	5.0 20.0 20.0		lov	ver Limit Y	-1050.0	mr
	20.0 20.0					
	20.0				0.0	
			up	per Limit Y	0.0	mr
	10.0			ver Limit 7	-138.0	mr
	20.0				10010	
	0.0		up 🗌	perLimit Z	0.0	mr
	0.0					
	0.0		Optio	ns		
ion	100.0		@ Ev.		re enhuence	
ion	100.0		U EXC	ecute startup mac	to only once	
	0.0	\sim	OExe	ecute each time ES	Stop is released	
	>		ATC K			
	ion ion	ion 100.0 ion 100.0 0.0 ion 200.0 0.0	ion 100.0 0.0 0.0 0.0 0.0 0.0 •	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	ion 100.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0

Fig. 7: The tool length probe height for Z0 finder



8. Reference run

In the menu under "Toolbar" select the entry "Show Toolbar" to display the normal user interface.

Click on the Reference run button in the "Functions" field. The machine now moves all axes until the reference switch is triggered. The zero point of the machine coordinates is thus determined.

Everything else, for example loading the milling data, can be found in the software manual.