

## Product Note P23



### MUX32 User Guide

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To facilitate the connection of a single channel Ivium potentiostat to a Multi Electrode Assembly (MEA) or multiple electrodes sharing a single counter and reference electrode, a multiplexer is available: the MUX32.

The MUX32 set includes:

- 1 x MUX32 32 channel multiplexer
- 1 x connection cable: 50cm M/F HD15
- 1 x MUX 32 cell cable
- 1 x TestCell

When installed the system allows control of up to 32 (multiplexed) channels (working electrodes).

### Specifications

#### System

Max Current:	Protected with 100 Ohm in Series with CE.
Max Voltage:	10V.
Bandwidth:	10 kHz.
Interfacing/connectivity:	HD15, connects to the potentiostat cell connector. Use only i.c.w. Ivium potentiostats.

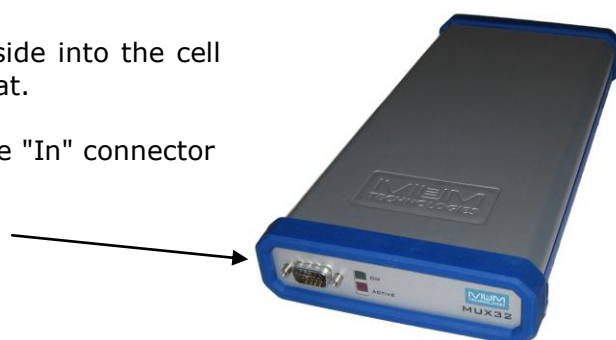
#### MUX32

Size:	w x d x h = 13 x 27.5 x 2.5 cm		
Weight:	0.5 kg		
Front indicators:	'ON'	:	Lights up when correctly powered via IviumStat
	'Active'	:	Lights up when one of the 32 channels is selected.

### Installation

To assemble the set-up:

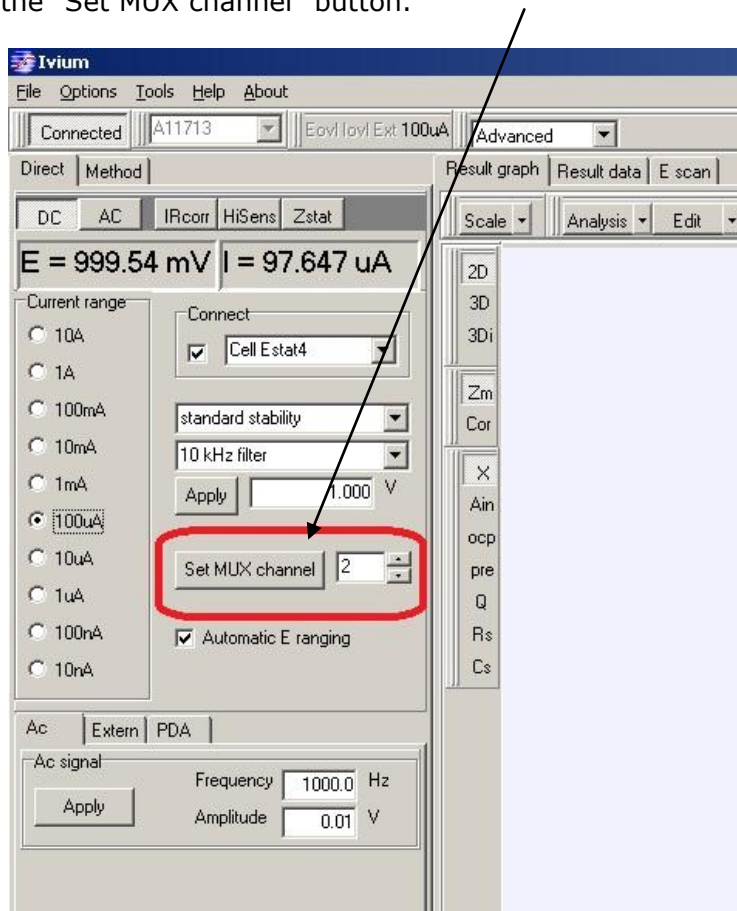
- 1- Install the Ivium potentiostat as instructed in the Manual.
- 2- Take the connection cable and insert the M-side into the cell connector at the front of the Ivium potentiostat.
- 3- Insert the F-side of the connection cable in the "In" connector of the MUX 32.



- 4- Connect the cell cable to the DB37 connector at the back of the MUX32.

## Operation

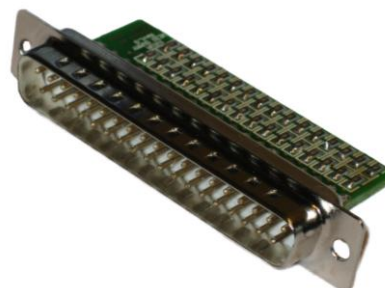
- a- Power up the Ivium potentiostat. The MUX32 devices should indicate "ON" and "Active" at the front.
  - b- Open the IviumSoft software and connect the Ivium potentiostat in the software (see also "Quick install manual").
  - c<sup>1</sup>- In the menu bar, go to "Options>Options" and check the box in front of "MEA".
  - d<sup>1</sup>- Disconnect the potentiostat in the software and connect it again to synchronize the hardware.
  - e- Now you can select the desired channel/electrode by using the "Set MUX channel" option in the "Direct" mode tab in the IviumSoft, or use the relevant function in the IviumSoft batch programming mode.
- To select a channel, insert the desired channel number, and activate this by clicking on the "Set MUX channel" button.



Note: to operate the Ivium potentiostat as a stand alone single channel instrument, remove the check from the box "MEA" in the options menu, and restart the instrument.

## Test cell

A test cell for the MUX32 is included in the delivery. This test cell consists of 32 10k resistors. The dummy can be inserted at the back of the MUX32. When a relevant channel is selected, the 10k resistor can be used to verify the correct operation of that MUX32 and channel.



<sup>1</sup> Actions c and d only need to be carried out once at first installation.

## MultiWE32 cable assembly

MultiWE32 cable assignment		
Electrode	Color	HD37 Pin number
CE	black	21
CE shield/Ground	green	3
RE	blue	20
RE shield	<i>white (not external lead)</i>	<i>1</i>
RE shield	<i>brown (not external lead)</i>	<i>2</i>
WE1	brown-blue	22
WE2	yellow	4
WE3	white-red	23
WE4	pink	5
WE5	brown-red	24
WE6	grey	6
WE7	white-black	25
WE8	red	7
WE9	brown-black	26
WE10	violet	8
WE11	yellow-grey	27
WE12	grey-pink	9
WE13	green-grey	28
WE14	red-blue	10
WE15	yellow-pink	29
WE16	green-white	11
WE17	green-pink	30
WE18	green-brown	12
WE19	yellow-blue	31
WE20	white-yellow	13
WE21	green-blue	32
WE22	yellow-brown	14
WE23	yellow-red	33
WE24	white-grey	15
WE25	green-red	34
WE26	brown-grey	16
WE27	yellow-black	35
WE28	white-pink	17
WE29	green-black	36
WE30	pink-brown	18
WE31	pink- blue	37
WE32	white-blue	19

Note: both RE shield leads are present in the cable as shielding for the RE, but they are not carried out to a banana plug.



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