



**NemaMetrix**

# ScreenChip system set-up guide

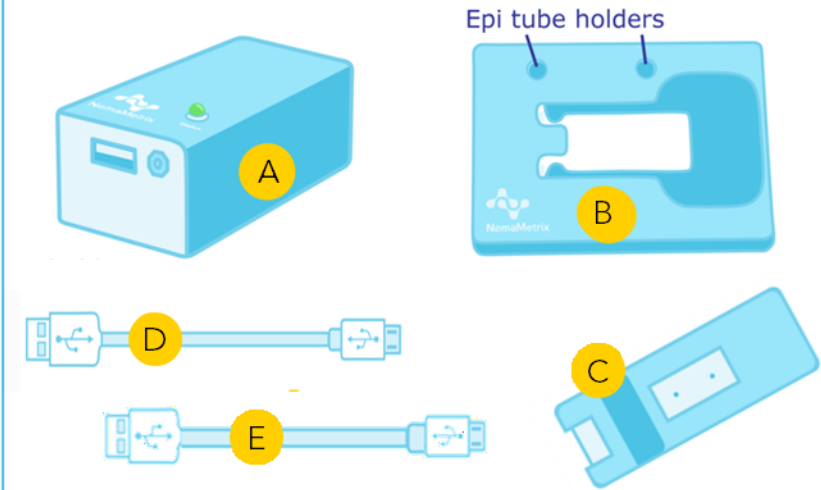
Revised April 25 2017



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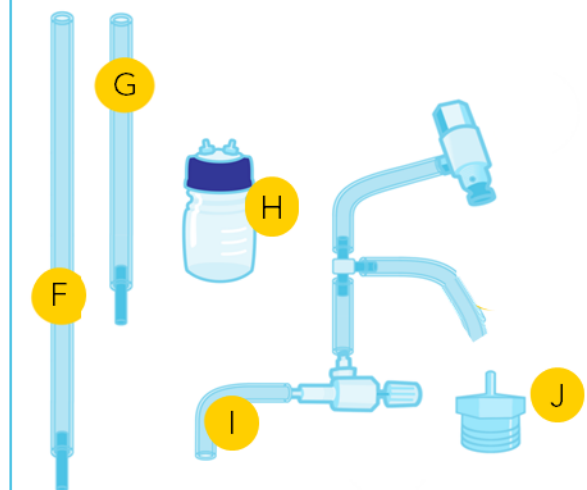
# What's in the box?

## Electrical components



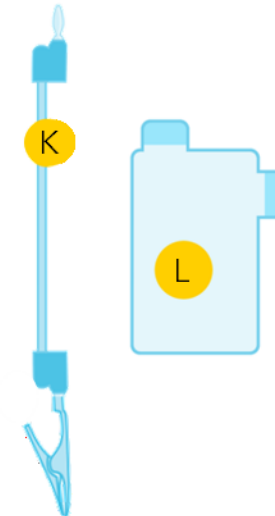
- A Amplifier
- B ScreenChip Dock
- C ScreenChip (10)
- D Dock-to-amplifier USB Cable
- E Amplifier-to-computer USB cable

## Tubing set



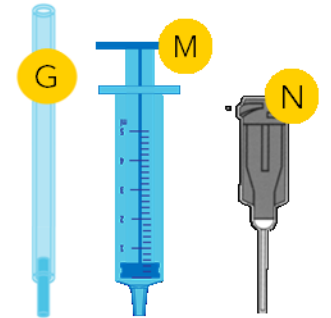
- F Waste Tubing
- G Inlet Tubing
- H Liquid Trap
- I Tubing assembly
- J Vacuum Adapter

## Additional components



- K Banana clip
- L Grounding Sheet

## Syringe assembly



- M 5 ml syringe
- N 17G needle stub
- G Short tubing

# Set up your system

1

Download  
NemAcquire



[Download and install the NemAcquire software](#) on your computer.  
**Windows 10 / Mac OS X 10.11 or later version required.**

2

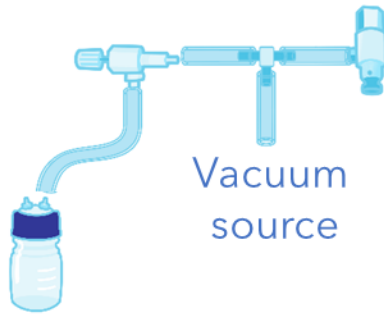
Connect  
electrical  
components



Connect the amplifier to the computer and to the dock using the USB cables.  
Snap a ScreenChip in the dock.

3

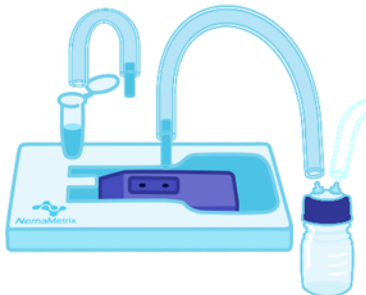
Connect  
tubing set



Fill the bottle with water and connect it to the shortest end of the valves and tubing assembly.  
Connect the longest end to the vacuum source.

4

Connect inlet and  
outlet tubing

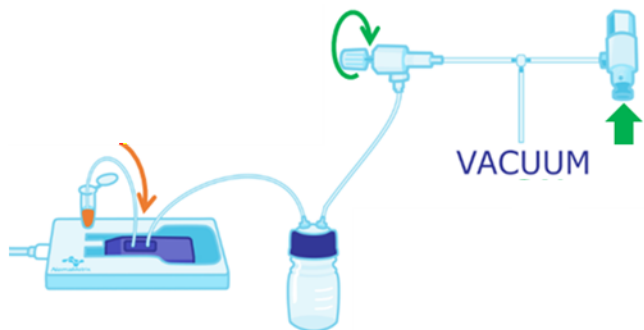


Fill a microcentrifuge tube with the desired saline solution.  
Connect the inlet (small) and outlet (long) tubes to the chip.

# Run a system check

1

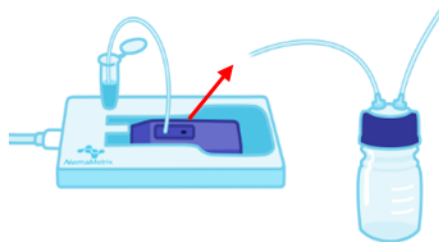
Fill chip with M9



Use the vacuum to fill the chip with buffer. Make sure that there are no air bubbles in the central channel in the chip. Adjust the flow rate using the Flow Regulator if necessary. See the [ScreenChip Experiment Guide](#) for more details.

2

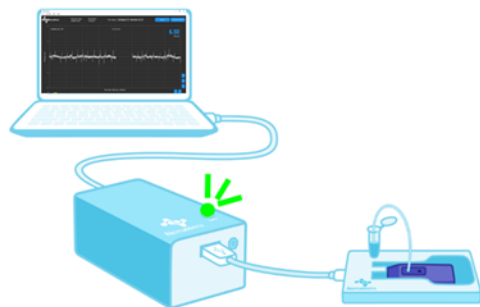
Remove tubing



Remove the waste tubing from the exit port.

3

Open NemAcquire



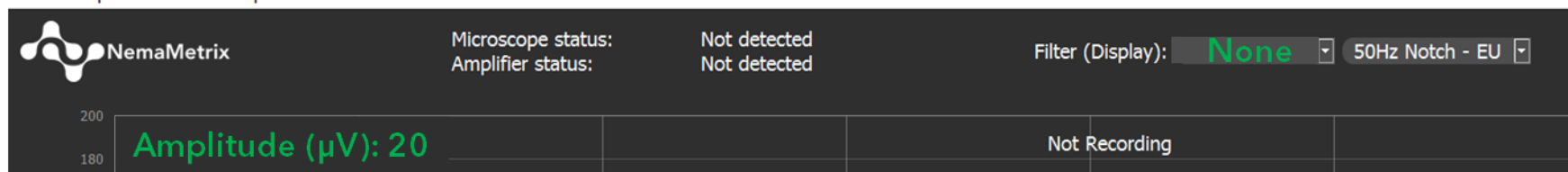
The status LED on the amplifier will light up green and a wave form will appear on your screen when the amplifier automatically connects to NemAcquire.

4

Check noise level

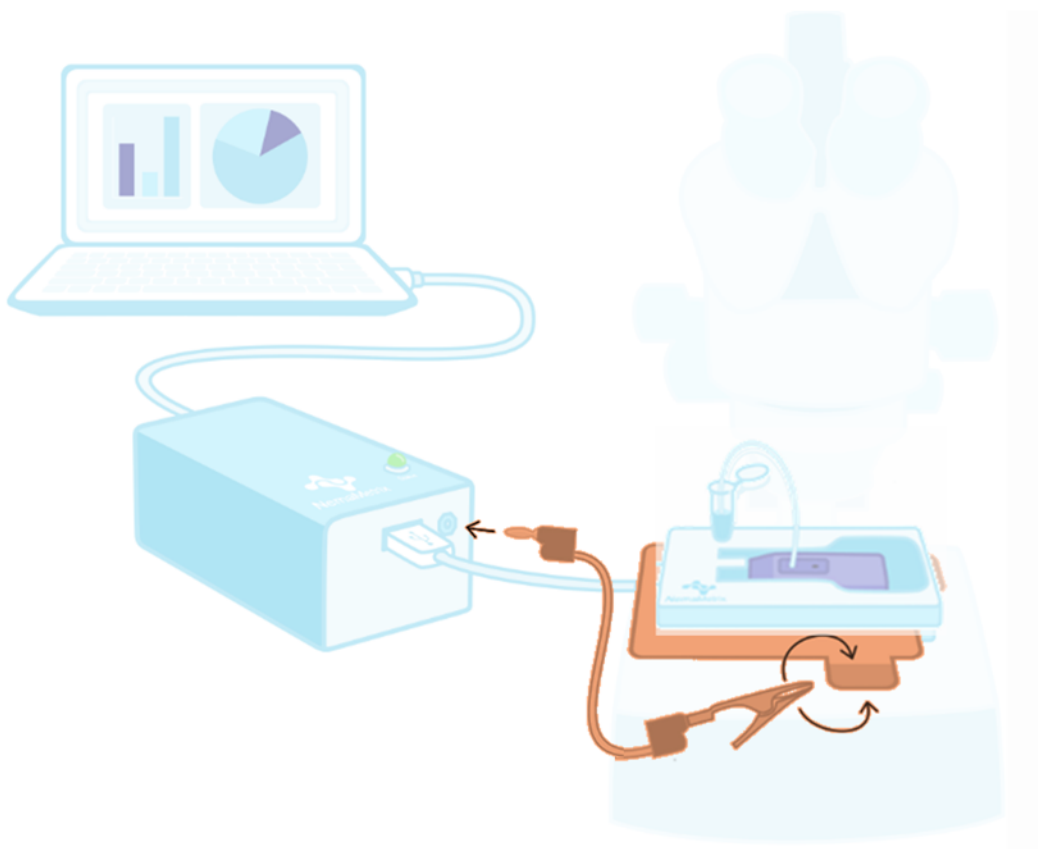
NemAcquire

File Amplifier View Help



The amplitude should be  $\leq 20\mu\text{V}$ .

# Noise Abatement Procedure



1. Place the **grounding sheet** on the microscope stage
2. Place the dock on top of the grounding sheet.
3. Connect the amplifier to the grounding sheet using **the banana clip**.
4. Check that the noise amplitude on NemAcquire is  $\leq 20\mu\text{V}$ .

NemAcquire

File Amplifier View Help

NemaMetric

Microscope status:  
Amplifier status:

Not detected  
Not detected

Filter (Display): **None** 50Hz Notch - EU

200  
180

Amplitude ( $\mu\text{V}$ ): 20

Not Recording