Optimus Maximus
User’s Manual

www.artlebedev.com
**Components**

Optimus Maximus Keyboard  
USB cable  
512 MB SD card for layout storage  
DC adapter  
2 power cords with a European and a North American plug  
Key remover

**Connection**

**Installation**

Go to our website optimus.artlebedev.com to download Optimus Configurator Software.

Install Optimus Configurator. Plug in the power cord and the USB cable, then follow Optimus Configurator instructions.
## Specification

<table>
<thead>
<tr>
<th>Keyboard size</th>
<th>Each of the 113 displays</th>
</tr>
</thead>
<tbody>
<tr>
<td>width</td>
<td>technology</td>
</tr>
<tr>
<td>537 mm (21.1 in)</td>
<td>organic light emitting diode</td>
</tr>
<tr>
<td>breadth</td>
<td>visible area</td>
</tr>
<tr>
<td>173 mm (8.8 in)</td>
<td>10.1×10.1 mm (0.4 in)</td>
</tr>
<tr>
<td>height</td>
<td>resolution</td>
</tr>
<tr>
<td>38 mm (1.5 in)</td>
<td>48×48 pixels</td>
</tr>
<tr>
<td>key</td>
<td>min frame rate</td>
</tr>
<tr>
<td>20.2×20.2 mm (0.8×0.8 in)</td>
<td>10 fps</td>
</tr>
<tr>
<td></td>
<td>colors</td>
</tr>
<tr>
<td></td>
<td>65,536</td>
</tr>
<tr>
<td></td>
<td>viewing angle</td>
</tr>
<tr>
<td></td>
<td>160°</td>
</tr>
</tbody>
</table>

## Compatibility and system requirements

Windows XP or Vista OS, Mac OS X 10.4.8 or higher

USB 1.1 (2.0 preferable)

At least 20 MB of hard drive free space

At least 256 MB of RAM

## Display lifetime

Optimus Maximus OLED screen have 20,000 hours of lifetime for average brightness level (default setting). After that the brightness might decrease with displays still reliable for a significant amount of time. If a screen continually displays one and the same image (i.e. only a part of OLED is active) its outlines may appear on the display as dark shades.
## Safety and maintenance

Disregard of the safety precautions and improper operation can result in breaking the keyboard or injuries to users and other people. Study the following safety rules carefully before use.

### Warnings

- Avoid contact with liquids; do not use the keyboard in high humidity (e.g. bathroom) as it creates risk of fire or electric shock.
- Do not disassemble and reassemble the keyboard as it may cause fire or electric shock. Contact the sellers or the producer if repair is needed.
- Do not interfere with the power cord as it creates risk of fire or electric shock. Never attempt to repair the cord on your own. Do not stretch the cord. Do not put heavy objects on the cord. Contact the sellers or the producer if repair is needed.

### Precautions

- Do not touch power source with wet hands.
- Do not expose the keyboard to direct sunlight or heat to avoid damage and fire.
- Wipe the keyboard regularly with a piece of cloth. Built-up of dust and filth on the equipment, especially in case of permanent operation, may cause overheating and inflammation.
- Unplug the power cord when not in use for long.
- Make sure the keyboard is placed securely. Choose stable surface for placing to prevent falls and damage.
- Use of a keyboard may cause carpal tunnel syndrome and other conditions. The factors leading to musculoskeletal disorders include the amount of time the device is used and personal neglect to individual medical contra-indications. If you experience symptoms such as persistent or recurring discomfort, do not ignore these warning signs and promptly see a qualified health professional.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.
Cleaning

Unplug before cleaning. Rub the shell with dry cloth. In case of significant dirt accumulation use wet cleaning cloth for displays.

To clean the transparent key caps use special cleaning cloth for displays. If dirt appeared inside the cap, you can use alcohol-containing liquids for cleaning displays. Slightly moisten the cloth and clean the caps.

Do not use solvents, gasoline or alcohol to clean the keyboard as they can spoil its surface.
Producer’s warranty

Art. Lebedev Studio warrants the product against defects in materials and workmanship for a limited period not to exceed one year from the date of purchase. If Art. Lebedev Studio is notified within warranty period of the discovery of defects, it shall repair or replace the product at its sole discretion free of charge (transportation and insurance costs excluded).

The warranty does not cover the defects resulting from use of the product with foreign devices, software or accessories. Art. Lebedev Studio does not warrant any defects other than defects in material and workmanship.

Art. Lebedev Studio shall not be liable for accidental or circumstantial damage caused in operation.
Troubleshooting

Important! If any of the displays is defective or inadequately installed, you will not be able to turn on the keyboard.

If the following recommendations do not help you to solve the trouble you are experiencing contact the producer at support@artlebedev.com. You will be offered qualified assistance.

The keyboard is USB connected, but doesn’t work
Check if you have plugged in the power cord. If it is plugged in, make sure it is plugged in tightly.

The keyboard doesn’t work after the keys were replaced
If any of the key displays is defective or inadequately installed, you will not be able to turn on the keyboard. Try taking out the newly installed keys one by one in reverse order. Perform this with the keyboard turned off, you do not need to unplug the USB cable. Upon taking each key out turn on the keyboard to check if it works. If you were able to turn it on, it is likely that the key you took out last was either defective or inadequately installed.

The images have become faded. I can see outlines of the previous images on light backgrounds
If the keyboard or a single display were in operation with average brightness level for 20,000 hours they might need replacing. They are still reliable, but the brightness is permanently lost.

I have trouble with one-and-a-half/double keys/space bar
If you have removed them before that, it is likely that they are inadequately installed. Consult the instruction at optimus.artlebedev.com. Pay attention to explanations concerning the keys in question.

There is noise when I press one-and-a-half/double keys/space bar
When installing these keys make sure to have enough grease on the pin. Read the instruction at optimus.artlebedev.com and follow the recommendations.
There are greasy spots under the key caps

If you took out the keys, you could stain them with silicone grease. You can try to clean it off by rubbing the surface with weak alcohol. Be very careful doing this—do not let the alcohol on the inner electronic side of the key. Before putting the key in let the liquid dry a few minutes.

There are significant image distortions on the key display

The key or the keyboard may be defective.

Try placing an efficient key instead of that one. If the distortions remain, it is likely that the keyboard is defective.

If the distortions remain when you install that key into other places, it is likely that that key is defective. It needs to be replaced by another one.

I can't remove the keys

You need to apply some effort to remove the keys using the special tool enclosed with the keyboard. Before doing this study the instruction at optimus.artlebedev.com

I have bent a pin contact when installing a key

Before installing keys study the instruction at optimus.artlebedev.com. It also contains recommendations on your problem.

Brightness auto adjustment fails

This mode is program activated. If it is activated but fails, it is likely that there is dust built-up on the light sensor in the right upper corner near the logo. Clean it.

The keyboard doesn't work after I changed firmware

You can always go back to the first version. Read how to do this at optimus.artlebedev.com.

The keyboard fell and no longer works

The keyboard can withstand light shocks, but the key displays are likely to get damaged if it falls.
One or several keys could have been damaged which is why you can not turn on the keyboard. Try removing the keys one by one checking each time whether the keyboard works. the damaged keys need replacing.

**I spilt coffee/tea/water/alcohol/etc. on the keyboard**

Quickly turn off the keyboard, remove all the keys or at least the keys from the wet part. Carefully dry the keyboard and do not turn it on for a few days as it may cause damage if there is still liquid left inside.

When the keyboard is completely dry turn it on with several keys. If it works, install more keys having turned it off to do so. Keep installing the keys by parts up to the last one. Even if the keyboard works, the pressing of the keys may be impaired.