The EVOM was the first instrument designed specifically to perform routine Trans Epithelial Electrical Resistance (TEER) measurement in tissue culture research. EVOM² is the next generation, redesigned for ease of use. The EVOM² not only qualitatively measures cell monolayer health, but also quantitatively measures cellular confluence. The unique electronic circuit of the EVOM² and the included STX2 electrode detect the confluence of the cellular monolayer. When combined with WPI's Endohm chamber, the EVOM² can also be used to perform more accurate quantitative measurements or lower resistance measurements like transendothelial electrical resistance measurements.

The isolated power source of the EVOM² was specifically designed to avoid adverse effects on tissue and the formation of electrode metal deposits, even when it is plugged into a standard wall outlet.

Now, the EVOM² is always on when you need it. In addition, its rechargeable battery allows up to 10 hours of mobile use. The four and a half digit readout provides a range of 1-9,999 Ω. The included test electrode lets you calibrate the resistance measurements for an accurate reading every time. An analog BNC output is standard with the EVOM², providing an output port for recording data or remote display of the EVOM² output.

EVOM² comes complete with the popular STX2 “chopstick” electrodes, 4 mm wide and 1 mm thick. Each stick of the electrode pair contains a silver/silver-chloride pellet for measuring voltage and a silver electrode for passing current. The small size of each electrode is designed to facilitate placement of the electrodes into a variety of standard cell culture wells.
Trans Epithelial Electric Resistance (TEER) Measurements

During the last two decades TEER measurements have become universally established as the most convenient, reliable and non-destructive method to evaluate and monitor the growth of epithelial tissue cultures in vitro. The confluence of the cellular monolayer is quickly determined by a sharp increase in TEER. First introduced by WPI in the mid-1980’s, TEER measurement technology has since been perfected and expanded to include a range of TEER related manual and automatic instrumentation.

Features

**Rechargeable Battery** — EVOM², which plugs into a standard wall outlet, comes with an internal NiMH 6V 2200 mAH rechargeable battery backup. The battery charges whenever the unit is plugged in. If the battery runs low, the EVOM² automatically shuts down.

**Tilt Bail** — EVOM² is free standing, making it easier to read.

**4½-Digit Display** — The range of 1-9,999 eliminates the need for a Range toggle switch.

**Analog Output** — BNC connection provides a port for recording or remote display of the EVOM² output.

**Test Resistor** — Testing the measuring circuit and the input jack is as simple as inserting the 1,000Ω test resistor (included) and observing the display.

**Hands-Free Operation** — When the power is on, EVOM² displays a readout. You never have to push a button to see the reading.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membrane Voltage Range</td>
<td>±200 mV</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 mV</td>
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<tr>
<td>Resistance Range</td>
<td>0 to 9999 Ω</td>
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<tr>
<td>Resistance Resolution</td>
<td>1 Ω</td>
</tr>
<tr>
<td>AC Square Wave Current</td>
<td>±10 µA nominal at 12.5 Hz</td>
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<tr>
<td>Power</td>
<td>Internal rechargeable 6V NiMH</td>
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<td></td>
<td>2700 mAH battery with external 12 VDC</td>
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<td></td>
<td>supply for recharging</td>
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<tr>
<td>Nominal Battery Run Time</td>
<td>10 hours</td>
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<tr>
<td>BNC Output</td>
<td>1-10 V (1 mV/ohm)</td>
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<tr>
<td>Dimensions</td>
<td>19 x 11 x 6 cm (7.25” x 4.25” x 2.30”)</td>
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<tr>
<td>Weight</td>
<td>1.4 kg (3 lb)</td>
</tr>
<tr>
<td>Electrode Connection</td>
<td>RJ-11 connector (telephone style)</td>
</tr>
<tr>
<td>Test Resistor</td>
<td>External, 1000 Ω</td>
</tr>
<tr>
<td>Environmental Range</td>
<td>10-38°C (50-100°F)</td>
</tr>
<tr>
<td></td>
<td>0-90% non-condensing relative humidity</td>
</tr>
</tbody>
</table>

**STX2**

**STX3**
The EVOM was the first instrument designed specifically to perform routine Trans Epithelial Electrical Resistance (TEER) measurement in tissue culture research. EVOM² is the next generation, redesigned for ease of use. The EVOM² not only qualitatively measures cell monolayer health, but also quantitatively measures cellular confluence. The unique electronic circuit of the EVOM² and the included STX2 electrode detect the confluence of the cellular monolayer. When combined with WPI’s Endohm chamber, the EVOM² can also be used to perform more accurate quantitative measurements or lower resistance measurements like transendothelial electrical resistance measurements.

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EVOM² comes complete with the popular STX2 “chopstick” electrodes, 4 mm wide and 1mm thick. Each stick of the electrode pair contains a silver/silver-chloride pellet for measuring voltage and a silver electrode for passing current. The small size of each electrode is designed to facilitate placement of the electrodes into a variety of standard cell culture wells.
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Features

Rechargeable Battery — EVOM², which plugs into a standard wall outlet, comes with an internal NiMH 6V 2200 mAh rechargeable battery backup. The battery charges whenever the unit is plugged in. If the battery runs low, the EVOM² automatically shuts down.

Tilt Bail — EVOM² is free standing, making it easier to read.

4½-Digit Display — The range of 1-9,999 eliminates the need for a Range toggle switch.

Analog Output — BNC connection provides a port for recording or remote display of the EVOM² output.

Test Resistor — Testing the measuring circuit and the input jack is as simple as inserting the 1,000Ω test resistor (included) and observing the display.

Hands-Free Operation — When the power is on, EVOM² displays a readout. You never have to push a button to see the reading.

SPECIFICATIONS

MEMBRANE VOLTAGE RANGE .... ±200 mV
RESOLUTION ................... 0.1 mV
RESISTANCE RANGE ............ 0 to 9999 Ω
RESISTANCE RESOLUTION .... 1 Ω
AC SQUARE WAVE CURRENT .... ±10 µA nominal at 12.5 Hz
POWER ........................ Internal rechargeable 6V NiMH 2700 mAh battery with external 12 VDC supply for recharging
NOMINAL BATTERY RUN TIME .... 10 hours
BNC OUTPUT .................... 1-10 V (1 mV/ohm)
DIMENSIONS .................... 19 x 11 x 6 cm (7.25" x 4.25" x 2.30")
WEIGHT .......................... 1.4 kg (3 lb)
ELECTRODE CONNECTION .... RJ-11 connector (telephone style)
TEST RESISTOR ............... External, 1000 Ω
ENVIRONMENTAL RANGE ....... 10-38°C (50-100°F)
0-90% non-condensing relative humidity