

Errata

1. Legend figure 2.3:
"mammalian cochlea" should be replaced with "guinea pig cochlea"
2. The following sentence should be added to the end of the first paragraph of Chapter 2, section 2.2.4 on page 18:
This is because the model is a purely resistive model and because of the change in the distance between the stimulation electrodes and the target neural elements. Also refer to Errata 4 and Chapter 2, section 2.2.5.
3. Legend Figure 2.4:
The following sentence should be added at the end of the legend: "Note that the location of the modelled spiral ganglion corresponds with the location of the spiral ganglion in Figure 2.3."
4. The following paragraph should be added after the first line on page 24:
Scaling of the resistivity to compensate for increased membrane thickness is based on the equation

$$\mathbf{J} = \frac{1}{\rho} \mathbf{E} = \frac{1}{\rho} \frac{V}{\mathbf{d}} \quad (\text{E1})$$

where \mathbf{d} is a distance vector from the source \mathbf{J} to the location where the potential V is to be calculated. Equation E1 shows that when the product of ρ and $|\mathbf{d}|$ is kept constant, V will be unique for a specific \mathbf{J} . This principle is also used to scale the resistivities of the perilymph to simulate tapering of the cochlea (Chapter 3, section 2.2.1).

5. The following sentence should be added before the sentence starting on line 5 on page 22:
This observation is based on equation E1 that shows that, given a fixed distance and a fixed resistivity of the tissues between the electrode and the nerve fibres, lower current density (for the larger electrode) will result in a lower potential at the target neural elements (and therefore an increase in threshold current relative to the threshold current of the other electrode in the pair).
6. Legend Table 2.3:
Add the following reference to the legend: (Schwartz & Eikhof, 1987)
7. Table 2.4
The symbols and units for the parameters *Faraday's constant* and *Gas constant* are interchanged.