



## Alessandro Volta

1745-1827

Electric circuit theory had its real beginning on March 20, 1800, when the Italian physicist Alessandro Volta announced his invention of the electric battery. This magnificent device allowed Volta to produce current electricity, a steady, continuous flow of electricity, as opposed to static electricity, produced in bursts by previous electrical machines such as the Leyden jar and Volta's own *electrophorus*.

Volta was born in the Italian city of Como, then a part of the Austrian Empire, and at age 18 he was performing electrical experiments and corresponding with well-known European electrical investigators. In 1782 he became professor of physics at the University of Padua, where he became involved in controversy with another well-known electrical pioneer, Luigi Galvani, professor of anatomy at Bologna. Galvani's experiments with frogs had led him to believe that current electricity was animal electricity caused by the organisms themselves. Volta, on the other hand, maintained that current electricity was metallic electricity, the source of which was the dissimilar metal probes attached to the frogs' legs. Both men were right. There is an animal electricity, and Galvani became famous as a founder of nerve physiology. Volta's great invention, however, revolutionized the use of electricity and gave the world one of its greatest benefits, the electric current. Volta was showered with honors during his lifetime. Napoleon made him a senator and later a count in the French Empire. After Napoleon's defeat, the Austrians allowed Volta to return to his Italian estate as a citizen in good stead. Volta was rewarded 54 years after his death when the unit of electromotive force was officially named the *volt*.

(Source: D. Johnson, J. Johnson and J. Hilborn, *Electric Circuit Analysis*, Prentice-Hall, 1989)