

A COMPARISON OF ELECTRICAL SERVICES AROUND THE WORLD

Several issues are involved in how electrical service differs in countries around the globe:

Voltage, or the amount of pressure used to drive the electric current.

The number of cycles per second, given in Hertz.

The type of plug used to connect consumer electronics to single-phase power. Three-phase power differs greatly, even within a single country.

Historically speaking, many different power distribution systems were used in the past in various countries, but a global economy has made standardization more important. Power generation in most countries follows one of two models, European or United States. Countries in the Western hemisphere tend to use the American system, while Europe and most of Asia use the European model. Australia, New Zealand, and a number of other southern Pacific nations use the European power generation model, but have their own methods of distribution.

THE AMERICAS

Virtually all locations in the Americas generate power at 110 to 120 volts and 60 Hz, although 50 Hz is also popular. Just about any device designed to work at the low end of that voltage scale will work at the high end of it, and the reverse is also true. The difference in the pressure is very slight. The speed of an AC motor is dependent on the number of cycles per second, so slowing the CPS from 60 to 50 will make the motor turn a bit more slowly. Most countries that use the American-style electrical service also use the Edison or parallel blade plug.



AMERICAN

EDISON OR
PARALLEL BLADE

Countries using American distribution methods include:

Bahamas	Mexico
Belize	Nicaragua
Bermuda	Panama
Brazil (some areas use European system)	Peru (uses the Schuko plug)
Canada	Philippines (uses the Schuko plug)
Colombia	Suriname
Cuba	Taiwan
Ecuador	United States
Guyana (uses the Schuko plug)	Venezuela
Jamaica	

EUROPEAN

The European model distributes power at 220 to 230 volts at 50 Hz, and is used by virtually all other countries. The voltage difference between the services in various countries is negligible, and any device designed to work with European voltages should be fine with any pressure in that range. A device intended for use at 120 VAC will *not* work without a transformer to lower the voltage pressure. A device designed to be used at 230 VAC will *not* work in the Americas unless the voltage is stepped up.

Most countries using the European model use the Schuko plug. Note that the ground pin on this connector sticks out from the surface of the female, wall-mount type, which is very different from the American style.



UNITED KINGDOM

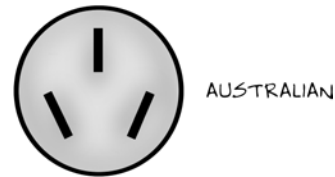
Countries in the United Kingdom use their own type of connector, usually called the “UK” type. Some former members use a combination of Schuko and UK.

Botswana (combination)	Kenya (combination)
Burma (combination)	Kuwait (combination)
Cyprus (combination)	Malaysia
Falklands	Malta (combination)
Ghana (combination)	Nigeria (combination)
Gibraltar (combination)	Oman (combination)
Granada (combination)	Qatar (combination)
Great Britain	St. Vincent (combination)
Hong Kong	Singapore (combination)
(combination)	South Africa (combination)
India (combination)	Yemen (combination)
Ireland	Zambia (combination)
Jordan (combination)	Zimbabwe (combination)



AUSTRALIA

Australian connectors are similar to the UK type, but the blades are at an angle. They are used in several South Pacific nations.



Australia
China (Schuko more prominent)
Fiji
New Zealand