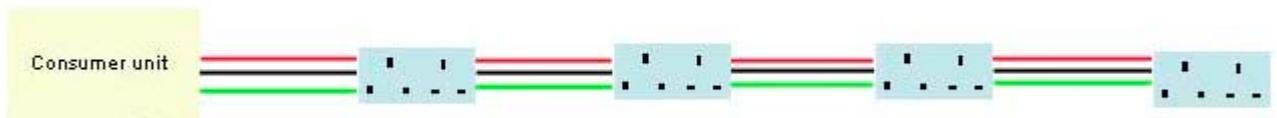


RADIAL CIRCUIT

Make sure you have isolated any circuit you are working on

A radial circuit is a mains power circuit found in some homes to feed sockets and lighting points. It is simply a length of appropriately rated cable feeding one power point then going on to the next. The circuit terminates with the last point on it. It does not return to the **consumer unit** or fuse box as does the more popular circuit, the **ring main**. To see the wiring at the back of the socket please go to the ring main project.



The descriptions below apply only to a circuit for power sockets. **Lighting circuits** are dealt with in a separate project.

There is no limit to the number of sockets used on a radial circuit and, just like a ring main, **spurs**, or extra sockets, can be added. The number of spurs must not exceed the number of existing sockets. The images below are all rated for use with a radial circuit and can be bought by clicking on them.

Two types of radial circuit are permitted for socket outlets.

20 Amp fuse or miniature circuit breaker protection with 2.5 mm² cable can feed a floor area of not more than 50 m². The maximum length of cable is 33m

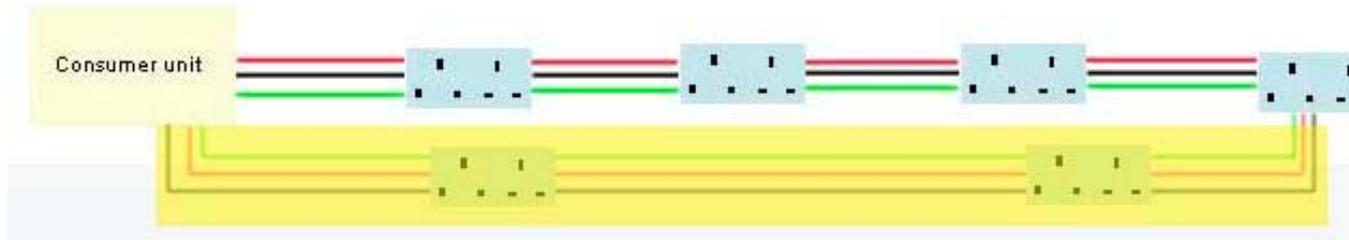
30 Amp cartridge fuse to B888 or miniature circuit breaker of 20amp with a 4 mm² cable can supply a floor area no greater than 75m². The maximum length of cable to be used is cable is 38m when used with a cartridge **fuse** and only 33m when used with an **MCB**

Radial circuits are generally used in larger buildings where, to return the cable back to the consumer unit can effectively double the cost of the installation.

As with a ring main, units and appliances which draw large amounts of current such as showers and electric cookers nut be installed on their own circuit.

Additional wiring can be added to a radial circuit to turn it into a ring main.

Radial circuit made into a ring main. Additions are in shaded area.



Please also check the rules very carefully for ring mains and radial circuits. You are limited in the length of cable you are allowed to use in both circuits and long spurs could make you exceed the limit. If this is the case you are asking the circuit to use much more energy than the circuit is designed for. More energy = more heat and cables can catch fire. Part P of the new building regulations could involve a check on any additional circuitry by qualified electricians when you sell your home. This can affect your sale, you could be breaking the law and your house insurance may not be valid. Please be absolutely sure you know what you are doing and get all of your work checked by a qualified electrician.