

# How Smart Watches Work

Contributed by admin  
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It is not hard to understand how smart watches work. The backend of the watches is powered by Smart Personal Object Technology (SPOT), a technology introduced by Microsoft in 2002, while the content is transmitted through FM broadcasting. This allows smart watch owners to access news, weather, sports, horoscopes, Microsoft Outlook, MSN Instant Messenger, etc on their watches.

The content is transmitted over the Microsoft DirectBand Network which is a leased radio spectrum that Microsoft has built in partnership with Infinity Broadcasting and ClearChannel to broadcast data over a wide area. The content, which is moved over 200 channels of information to smart watches and other SPOT-enabled objects, can be received in 100 metropolitan areas in the US and five major cities in Canada.

MSN Direct can be used by people to buy, activate and administer smart watches. To activate a smart watch, you need to create a profile using a free .NET account. Once the account is set up, you can select the channels that will be sent to your smart watch.

Presently SPOT-enabled watches are produced by four companies. These companies are Tissot, Fossil, Suunto and Swatch. They come in many different sizes and styles, but they all contain the same basic components. These include:

- The PCB (Printed Circuit Board), which is a multi-layered fiberglass board that directs electricity to the various components in the watch.
- The Piezo (piezoelectric ceramic crystal), which acts as a tiny speaker driver that enables the smart watch to create sound.
- ARM 7 TDMI, which works as the central processor, and literally forms the brains of the smart watch.
- The DirectBand radio receiver chip, which is at the heart of SPOT technology and is used by MSN Direct to connect with the watch.

Further, the smart watch needs memory, like all computers, and uses 384 KB of RAM and 512 KB of ROM. The smart watch uses a rechargeable battery. How long the charge lasts, depends on the model and how much channel surfing you do.

The charging is done through an inductive charging coil that is attached to the contact surface on the back of the watch. The smart watch battery is charged through induction, when this surface comes into contact with the charging plate on the watch stand.

SPOT technology is being developed to create new smart objects, and is expected to become a part of our everyday lives in the coming years.{mosgoogle left}