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Magnet

A magnet is an object that has a magnetic field. It can be in the form of a permanent magnet or an electromagnet.
Magnet

Matrix

Wikipedea's Matrix entry
Main article available to MERG Members only.

Memory Wire

Wire made from a special alloy which changes its molecular structure at a certain temperature causing it to shrink. This effect can usefully be applied to point and signal actuation. Some types require a tension spring to pull it back to its original length while others will return unaided, although a spring is still required to keep the wire tight, it can only pull when shrinking, it cannot push.
Wikipedia's entry
See also TBs: G19/01, G19/02, G22/01, G23/01 & G23/02.

Microprocessor

A microprocessor (sometimes abbreviated µP) is a programmable digital electronic component that incorporates the functions of a central processing unit (CPU) on a single semiconducting integrated circuit (IC).
Microprocessor

microprocessor is a general-purpose name. Specialised devices:
A digital signal processor (DSP) is specialized for signal processing.
Graphics processing units (GPU) for rendering of images.
Microcontrollers integrate a microprocessor with peripheral devices in embedded systems..
System On Chip (SoC) often integrate one or more microprocessor cores with bus controllers.

Mobile decoder

A DCC decoder intended for fitting in a loco.

Modulation

Is the process of superimposing information onto a pure sine wave (Carrier wave), this process can be achieved by any of four methods, amplitude (AM), frequency (FM), Phase (PM) or Pulse (PAM, PWM, or PPM)

MOMS

MERG Online Membership System - MERG's membership management system - used by Members to manage their contact details and renew membership and by the Membership Secretary for administration purposes. Available via the MERG Forum Membership, Digest & Renewal

Monostable

An electronic circuit that has a single (mono) stable state and an unstable state, an input will cause the circuit to assume the unstable state, when the input signal is removed and after a predictable delay the circuit will return to the stable state. This behaviour is the basis of most timer circuits.

MOSFET Metal-Oxide-Semiconductor Field-Effect Transistor

A MOSFET is a type of transistor with a Gate, Source and Drain terminals. WMOSFET. They are the dominant type of transistor in electronics.
The resistance between Source and Drain (D-S) is controlled by the Voltage applied across the Gate and Source. A Voltage across D-S causes a current to flow in the D-S resistance. There are several sub-types...
- N channel uses positive Voltages or P channel uses negative Voltages
- Depletion mode uses increasing Gate Voltage to increase D-S resistance or Enhancement mode uses decreasing Gate Voltage to decrease D-S resistance
For MERG, the common type is N channel Enhancement mode.
Compapared to a Bipolar transistor, Gate = Base, Source = Emitter, Drain = Collector.

The Gate exhibits a very high resistance (insulation) to the Source or Drain.
There being an insulation, the Gate has capacitance to the other pins and needs to be driven by a low impedance (AC resistance) input signal. A high impedance input signal will make the device slow. An open circuit Gate can build up a charge and results in the D-S going low resistance (turns 'ON').

MSAG

MERG **S**omerset **A**rea **G**roup

Multiplexor

A communications device that multiplexes (combines) several signals for transmission over a single medium. A demultiplexor completes the process by separating multiplexed signals from a transmission line. Frequently a multiplexor and demultiplexor are combined into a single device capable of processing both outgoing and incoming signals.
A multiplexor is sometimes called a mux and also spelled as multiplexer.
http://www.webopedia.com/TERM/M/multiplexor.html