

- LOAD DESPATCHER** : An official in a special office connected by telephone to all parts of a large power distribution system, traction system, etc., who is responsible for the distribution of the load in various parts of the system according to requirements.
- LOADED CABLE** : A cable, such as a submarine telephone cable, provided with extra inductance to counteract the effect of its capacitance and thus to diminish attenuation. See **LOADING COIL**, **CONTINUOUS LOADING**, etc.
- LOADED CIRCUIT or LINE** : A telephone circuit containing extra inductance to improve its transmission efficiency. See **LOADING COILS**.
- LOADER** : A program that places a translated computer program in primary memory before its execution.
- LOAD FACTOR** : The ratio of the maximum to the average load during a given period.
- LOAD IMPEDANCE** : The impedance presented by a load to the driver circuit that supplies power to it. The effect of variations in the load impedance on the performance of an oscillator is seen in a load impedance diagram in which the oscillator output is plotted against load impedance.
- LOADING** : The addition of inductance to telephone lines or cables to counteract the effect of capacitance in order to diminish Distortion.
- LOADING COIL** : (1) An inductance coil with an iron core for insertion in a telephone line or cable to lessen the effect of its capacitance and to reduce distortion. (Also called Pupin Coil.) (2) Inductance added to a radio aerial.
- LOAD ROUTINE** : A routine which causes a computer to read a program into storage, some times punched a load card.
- LOCAL AREA NETWORK (LAN)** : A communications network connecting devices in a local area, such as on one floor of a building. Used for communications and to share common devices such as a printer. A group of computers connected through cables, able to transfer files to other computers connected through the cables. CF: **WAN**.
- LOCAL BATTERY** : A battery in a local circuit such as that opened and closed by a Relay.
- LOCAL BATTERY TELEPHONE SYSTEM** : A system employing a

is low, and low if all the inputs are high.

**NOR gate.** A circuit with two or more inputs and one output, whose output is *high* if and only if all the inputs are *low*.

**OR gate.** A circuit with two or more inputs and one output whose output is *high* if any one or more of the inputs are *high*.

**Exclusive OR gate.** A circuit with two or more inputs and one output whose output is high iff one input is high.

**LOGIC DIAGRAM :** A schematic diagram using logic symbols.

**LOGIC GATE :** See AND, OR, NAND, NOR, NOT, and Exclusive-OR.

**LOGIC OPERATIONS :** The operations of comparing selecting extracting etc.

**LOGIC PROGRAMMING (LP) :** Is the use of logic as a programming language, in which programs consist of axioms and control is exercised by a theorem proving algorithm.

**LOGIC SYMBOL :** A symbol used to represent a logic element graphically.

**LONGITUDINAL VOLTAGE :** A term used in connection with Interference in communication circuits for a voltage induced between different parts of the sameline, or between a conductor and earth. Cf. TRANSVERSE VOLTAGE.

**LONG WAVES :** A term formerly in common use for wave-lengths over 1,000 metres, but lately limited to waves over 3,000 metres (below 100 kcs.) See also KILOMETRIC and MYRIAMETRIC Waves.

**LOOP :** A series of computer instruction that are executed repeatedly until a desired result is obtained or a predetermined condition is met. The ability to loop and reuse instructions eliminates countless repetitious instructions and is one of the most important attributes of stored programs. An interative routine, usually subject to instruction modification in a progressive manner unit an exit condition is reached. A set of instructions that causes the same set of action to be repeated a specific number of times. (1) In a radio direction finder: one of the two aerial systems used at right angles to each other. (2) See ANTINODE. (3) Of an armature coil: the sharp bend at the end of the end connection portion particularly in a Former Wound Coil.

- MAGNETIC MODULATOR** : A Modulator for radio-transmitting stations in which the variations of the microphone current cause changes in the inductance of iron-cored coils in a circuit in parallel with the aerial inductance. No amplifying valves are employed.
- MAGNETIC REED RELAY** : A coil wound around a glass envelope containing fixed contacts and a centrally placed reed contact in the form of a thin flat metal strip. When the coil is energized the reed is deflected and can either make or break contact with the fixed leads. See REED RELAY.
- MAGNETIC TAPE** : Tape made of plastic (rarely metal) coated with magnetic material on which information may be stored as a small polarised spots.
- MAGNETIC TAPE UNIT** : A sequential storage medium that operates as does a home tape recorder.
- MAGNETO BELL** : A telephone bell constructed to work with the current, usually alternating, from a magneto generator; with a vibrating armature which causes the hammer to strike two gongs alternately.
- MAGNETOPHONE** : (1) One form of Moving Coil Microphone. (2) An instrument similar in construction to a telephone receiver for producing a loud sound when supplied with an undulatory current. (3) A sound recording instrument similar in purpose to the "Dictaphone," but Magnetophone employing the principle of the Blattnerphone or Telegraphone.
- MAGNETO RINGER** : A magneto generator for ringing telephone bell; sometimes also applied to the bell itself.
- MAGNETO RINGING** : The ringing of telephone bells by current from a magneto generator. Cf. BATTERY RINGING.
- MAGNETOSTRICTION FILTER** : A Frequency Filter depending on the principles of the Magnetostriction Oscillator.
- MAGNETO TELEPHONE SYSTEM** : A telephone system in which the call signals are actuated by magneto generators at the subscribers' stations.
- MAGNETRON** : Syn. *magnetron oscillator*. A crossed-field microwave tube that produces radio frequency (v.f.) oscillations in the microwave region. An early magnetron was used as a rectifier—the rectifier magnetron—but all modern magnetrons are designed as oscillators. (1) A Thermionic Valve in which the stream of the electrons is controlled by a magnetic field. In large

**MASS SPECTRUM** : A spectrum obtained by deflecting a beam of positive rays emitted from a tube, containing a residual gas to be investigated, by electric or magnetic fields. The extent of the deflection depends upon  $m/e$  (the ratio of the mass of the projected positively charged particles of which rays are composed to the atomic charge). Thus, every element has its characteristic spectrum lines like those of the light spectrum. Isotopes were discovered by investigations into mass spectra, which are now applicable to ionised metallic atoms as well as to gases.

**MASTER DISK** : The floppy disks that store programs you buy from a company.

**MASTER FILE** : A data file composed of records having similar characteristics that rarely change. A good example of a master file would be an employee name and address file that also contains social security numbers and hiring dates.

**MASTER TAPE** : A paper tape or magnet tape carrying semi-permanent information (such as a file of information).

**MASTER SLAVE** : A flip-flop which contains two flip-flops, a master flip-flop and a slave flip-flop. The master flip-flop receives its information during the leading edge of a clock pulse, and the slave or output flip-flop receives its information from the master during the trailing edge of the pulse.

**MASTER SLAVE FLIP-FLOP** : A flip-flop composed of two internal FF'S one to receive the inputs (the master) and one to drive the outputs (the slave).

**MATRIX** : An array of arrangement having properties that depends on the ordering of the elements and upon the nature of the elements.

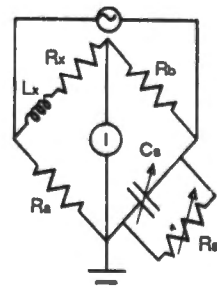
**MAXTERM** : An OR of single-lettered terms that includes all the variables

**MAXWELL BRIDGE** : A four-arm bridge for measuring inductance in terms of a capacitance and resistances (*see diagram*). At balance, as indicated by a null response on the instrument I.

**MBQ** : Modified Biquinary Code.

**MC** : Magnetic Core.

**MCP** : Master Control Program



Maxwell bridge

$$R_s R_x = R_b R_a$$

$$L_x = R_b R_a C_s$$