American Railway Signaling Principles and Practices

CHAPTER XIV

DEFINITIONS

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ADDENDUM

A.A.R. SIGNAL SECTION DEFINITIONS.

TECHNICAL TERMS USED IN SIGNALING

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Aligning.

Adjusting the mounting of a light unit so as to direct the projected beam toward a specified point.

Back Light, Signal.

The light from a signal electric lamp, visible through a small opening in the back of a light signal, used for checking the operation of the signal lamp.

Bare Illuminant.

See definition for Illuminant, Bare.

Brake Shoe, Retarder.

See definition for Shoe, Brake; Retarder.

Car Retarder System.

A system designed to control car movements comprising car retarders together with such yard switch machines, skate machines, hump signals, and trimmer signals as may be required and necessary control facilities.

Classification Yard.

See definition for Yard, Classification.

Controller, Hump Signal.

A device located at the hump which includes the hump signal control lever and may also include the trimmer signal control lever and signal repeater lights.

Double-Winding Relay.

See definition for Relay, Double-Winding.

Filter, Band Elimination.

A wave filter which has a single attenuation band, in which the critical or cut-off frequencies are neither zero nor infinite.

Filter, Band Pass.

A wave filter which has a single transmission band, in which the critical or cut-off frequencies are neither zero nor infinite.

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Filter, Code.

See definition for Filter, Low Pass Code.

Filter, Direct Current and Voice Pass.

A low pass filter that passes direct current and voice frequencies and attenuates the frequencies above the voice range.

Filter, Direct Current, Voice and Type H Pass.

A low pass filter that passes direct current, voice frequencies and Type H carrier frequencies, and attenuates frequencies above the Type H range.

Filter, Electric Wave.

A wave filter designed to separate electric waves of different frequencies.

Filter, High Pass.

A wave filter having a single transmission band extending from some critical or cut-off frequency, not zero, up to infinite frequency. (A.I.E.E.)

Filter, Low Pass.

A wave filter having a single transmission band extending from zero frequency up to some critical or cut-off frequency, not infinite. (A.I.E.E.)

Filter, Low Pass Code.

A low pass filter connected between coding equipment and line to pass direct current code impulses and prevent code equipment from shunting carrier and communication circuits. It prevents line coding contacts from introducing undesired high frequency currents into the line.

Filter, Receiving.

A band pass filter associated with the input circuit of a carrier receiver or repeater.

Filter, Transmitting.

A band pass filter associated with the output circuit of a carrier transmitter or repeater.

Filter, Voice and Carrier Pass.

A high pass filter that passes voice frequencies and carrier frequencies and attenuates frequencies below the voice range.

Filter, Voice and Type C Pass.

A band pass filter that passes voice and Type C carrier frequencies and attenuates frequencies below the voice range and above the Type C range.

Filter, Voice and Type H Pass.

A band pass filter that passes voice and Type H carrier frequencies and attenuates frequencies below the voice range and above the Type H range.

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Filter, Voice Pass.

A band pass filter that passes voice frequencies and attenuates frequencies above and below the voice range.

Filter, Wave.

A device for separating waves on the basis of their frequency. It introduces relatively small insertion loss to waves in one or more frequency bands and relatively large insertion loss to waves of other frequency.

Focusing.

Adjusting the position of an electric lamp so as to locate its filament at the focus of a lens or reflector system.

Head Block Signal.

A home signal governing entrance into the block between sidings on single track.

Hump Signal.

See definition for Signal, Hump.

Hump Signal Controller.

See definition for Controller, Hump Signal.

Illuminant, Bare.

The light produced by a kerosene flame or electric lamp.

Indicator, Leave Siding.

An indicator used to convey instructions for a train to leave siding.

Indicator, Shove.

A track indicator usually used in a classification yard to indicate that cars have occupied a particular section or sections of a track.

Leave Siding Indicator.

See definition for Indicator, Leave Siding.

Light, Lunar White.

A term referring to the color of the light, sometimes called "Lunar Light" or "Lunar," from a light unit using a lunar white lens or roundel having a color in accordance with the chromaticity limits of Specification 69, Manual Part 136, for colored signal glasses.

Light, White.

A term referring to the color of the light from a light unit using a clear uncolored lens or roundel in combination with a kerosene or electric illuminant.

Lunar.

See definition for Light, Lunar White.

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Lunar Light.
See definition for Light, Lunar White.

Lunar White.
A term applied to one of the six standard colors used in railroading signaling established by Specification 69, Manual Part 136, viz.: red, yellow, green, blue, purple, lunar white.

Lunar White Light.
See definition for Light, Lunar White.

Machine, Control; Car Retarder System.
See definition for Machine, Control.

Machine, Skate.
A mechanism electrically controlled and electrically or pneumatically operated, for placing a skate on, or removing it from, the rail.

Machine, Switch; Yard.
A quick acting device electrically controlled and electrically or pneumatically operated, for positioning track switch points, and so arranged that accidental trailing of the switch points does not cause damage.

Overlap System.
See definition for System, Overlap.

Polyphase Relay.
See definition for Relay, Polyphase.

Receiver, Carrier.
An electronic device for receiving predetermined carrier frequencies and converting them to suitable form for operation of associated devices.

Relay, Double-Winding.
A relay having two separate windings.

Relay, Single-Winding.
A relay having a single winding.

Relay, Triple-Winding.
A relay having three separate windings.

Repeater, Carrier.
An electronic device inserted in a carrier circuit, usually to amplify carrier voltages to compensate for losses occurring in transmission.

Retarder Shoe.
See definition for Shoe, Brake; Retarder.

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Shoe, Brake; Retarder.

The expendable wearing part of a car retarder for applying braking pressure to car wheels.

Shoe, Retarder.

See definition for Shoe, Brake; Retarder.

Shove Indicator.

See definition for Indicator, Shove.

Signal, Head Block.

See definition for Head Block Signal.

Signal, Hump.

A signal located near the summit in a hump yard which gives indication concerning movement to the classification tracks and indicates to the engineman the desired direction and speed of movement of his train.

Signal, Trimmer.

A signal located near the summit in a hump yard, which gives indication concerning movements from the classification tracks toward the summit.

Single-Winding Relay.

See definition for Relay, Single-Winding.

Skate.

A sliding device placed on a rail to engage with a car wheel so as to provide continuous braking by sliding friction.

Skate Machine.

See definition for Machine, Skate.

Switch Machine, Yard.

See definition for Machine, Switch; Yard.

Switching, Automatic.

A term generally used to describe a system of controls for the automatic operation of track switches whereby routes that are established by preliminary manual selection are automatically completed by the progress of cars or trains.

System, Overlap.

A block signal system in which the control of a signal, or signals, extends into the territory which another signal, or signals, governs, so that one or more opposing signals display an aspect indicating Stop.

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Terminal, Carrier.

A group of carrier apparatus at the initiating or terminating end of a carrier system.

Transmitter, Carrier.

An electronic device for generating predetermined carrier frequencies.

Transformer, Impulse.

A transformer whose primary is connected in series with a direct current code line circuit and whose secondary actuates a device, usually a polar relay, in response to changes of the code line current.

Transformer, Matching.

A transformer used for coupling two electrical circuits in such a manner that the impedance of either circuit, as it appears through the transformer, is substantially equal to the impedance of the other circuit.

Trimmer Signal.

See definition for Signal, Trimmer.

Triple-Winding Relay.

See definition for Relay, Triple-Winding.

Unit, Application; Control Office.

A group of relays and circuits in a code system which in conjunction with the control levers forms the control code characters, and which stores the information received from indication codes.

Unit, Auxiliary Line.

See definition for Unit, Code Converter.

Unit, Code Converter.

A group of relays and circuits used in conjunction with field carrier apparatus for conversion and coordination between a carrier circuit and a remotely controlled direct current line.

Unit, Decoding.

See definition for Decoder.

Unit, Field Application.

A group of relays and circuits in a code system which applies control code information to the proper function control relays and assists in the transmission of indication codes.

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Unit, Field Line Coding.

See definition for Unit, Field Stepper.

Unit, Field Stepper.

A group of relays and circuits in a code system that receives and interprets the control codes and generates indication codes from the field to the office.

Unit, Field Storage.

See definition for Unit, Field Application.

Unit, Master; Control Office.

A group of relays and circuits in a code system that generates the control codes and receives and interprets the indication codes.

Unit, Office Line Coding.

See definition for Unit, Master; Control Office.

Unit, Office Storage.

See definition for Unit, Application; Control Office.

Unit, Remote Line.

See definition for Unit, Code Converter.

Unit, Telephone Coupling Capacitor.

A device consisting of high-voltage capacitors, inserted between telephone and line, to prevent faults that may occur in the telephone apparatus and wiring from affecting direct current codes on the line.

Unit, Telephone Coupling Reactor.

A device to prevent faults that may occur in the telephone apparatus and wiring from causing excessive loss to carrier frequencies where telephones are coupled to a code line.

White Light.

See definition for Light, White.

Winding.

See definition for Winding, Electrical.

Yard, Classification.

A yard in which cars are classified or grouped in accordance with requirements. (A.R.E.A.)

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A.A.R. SIGNAL SECTION DEFINITIONS.

TECHNICAL TERMS USED IN SIGNALING

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A

A.A.R.
The abbreviation for Association of American Railroads.

Aberration, Chromatic.
A condition encountered when parallel rays of light impinged upon a prism or lens are grouped into different distinct colors due to the varying degree of refraction as between them.

Absolute Block.
See definition for Block, Absolute.

Absolute Permissive Block.
See definition for System, Absolute Permissive Block.

Absolute Permissive Block System.
See definition for System, Absolute Permissive Block.

A.C.
a.c.
The abbreviation for alternating current.

A.C. Floating Storage Battery System.
A combination of alternating current power supply, storage battery and rectifying devices so constructed as to continuously charge storage battery and at the same time furnish power for the operation of signal devices.

A.C. Relay.
See definition for Relay, A.C.

Acknowledger, or Forestalling Switch.
See definition for Device, Acknowledging.

Acknowledging.
Operation by enginemen of acknowledging device.

Acknowledging Device.
See definition for Device, Acknowledging.

Acknowledging Time.
See definition for Time, Acknowledging.

Acknowledging Whistle.
See definition for Whistle, Acknowledging.

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Acknowledgment Circuit.
See definition for Circuit, Acknowledgment.

Acute Angle Crank.
See definition for Crank, Acute Angle.

Adapter.
A device which serves the purpose of fitting one piece of apparatus to another.

Adapter, Base.
A device for mounting a ground mast base for signal on a foundation designed for an instrument or mechanism case, or for mounting a single mechanism case on a double case foundation, or vice versa.

Adapter, Lamp.
A device to permit an electric lamp equipped with one style base to be used in another style socket.

Adapter, Pipe.
A device for mounting apparatus of a given size on pipe of a larger or smaller diameter.

Adapter, Staff Tip.
A device mounted on the tip of a staff of a switch stand for applying switch lamp to the stand.

Adjustable Capacitor.
See definition for Capacitor, Adjustable.

Adjustable Link.
See definition for Link, Adjustable.

Adjusting Screw.
See definition for Screw, Adjusting.

Adjustment, Bracket Switch.
See definition for Bracket, Switch Adjustment.

A.E.R.A.
The abbreviation for American Electric Railway Association.

Aerial Cable.
See definition for Cable, Aerial.

A.H.
The abbreviation for ampere hour.

A.I.E.E.
The abbreviation for American Institute of Electrical Engineers

Air Buffer.
See definition for Buffer, Air.

Air Compressor.
See definition for Compressor, Air.

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Air Condenser.
See definition for Condenser, Air.

Air Gage.
See definition for Gage, Air.

Air Gap Lightning Arrester.
See definition for Arrester, Lightning; Air Gap.

Air Gap, Magnetic.
The space occupied by air between two adjacent parts of a magnetic circuit prior to the application of protective coating.

Air Gap, Physical.
The space occupied by air between two adjacent parts of a magnetic circuit after the application of protective coating.

Air Governor.
See definition for Governor, Air.

Air Pipe Line.
See definition for Pipe Line, Air.

Alternating Current.
See definition for Current, Alternating.

Alternating Current Period.
See definition for Period, Alternating Current.

Alternator.
A synchronous alternating current generator, either single-phase or polyphase.

Alternator, Tuned.
A direct current device, contacts of which operate to interrupt a direct current at a frequency predetermined by the mechanical tuning of its component parts, to produce alternating current.

Ammeter.
An instrument for indicating in amperes the current in a circuit.

Amp.
amp.
The abbreviation for ampere.

Ampere.
The practical unit of electric current; it is the current produced by an electromotive force of 1 volt in a circuit having a resistance of 1 ohm.

Ampere Hour.
The practical unit of current consumption; it is the quantity of electricity passed by 1 ampere of current in 1 hour or equivalent.

Ampere-hour Capacity.
See definition for Capacity, Ampere-hour.

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Ampere-hour Meter.
See definition for Meter, Ampere-hour.

Ampere Turns.
A measure of the magnetizing power, or magneto-motive force developed by a current of electricity in a conducting coil. It is equal to the product of the number of turns in the coil by the current in amperes.

Amplifier.
A device by means of which the result produced by the energy in a circuit may be intensified or increased by use of local energy.

Anchor.
A device used in connection with rods, wires, ropes, bolts, or other connecting supports, for giving stability to the whole or part of a structure, or apparatus, or to secure it to a foundation.

Angle Bar.
See definition for Bar, Angle.

Anode.
The electrcde by which current enters an electrolytic cell when it is on discharge.

A.P.B.
The abbreviation for absolute permissive block.

Apparent or Volt-ampere Power.
See definition for Power, Apparent or Volt-ampere.

Application, Brake; Full Service.
An application of the brakes resulting from a continuous or a split reduction in brake pipe pressure at a service rate until maximum brake cylinder pressure is developed. As applied to an automatic or electro-pneumatic brake with speed governor control, an application other than emergency which develops the maximum brake cylinder pressure, as determined by the design of the brake equipment for the speed at which the train is operating. (I.C.C.)

Approach Circuit.
See definition for Circuit, Approach.

Approach Indicator.
See definition for Indicator, Approach.

Approach Lighting.
See definition for Lighting, Approach.

Approach Locking.
See definition for Locking, Approach.

Approach Signal.
See definition for Signal, Approach.

A.R.A.
The abbreviation for American Railway Association.

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A.R.E.A.
The abbreviation for American Railway Engineering Association.

Arm, Radial.
A device used for making turns in pipe line where the angle is less than 30 degrees.

Arm, Rocking Shaft.
The arm connected to a rocking shaft by means of which motion is transmitted between the down rod and a pipe line.

Arm, Semaphore.
The part of a semaphore signal displaying an aspect. It consists of a blade fastened to a spectacle. (I.C.C.)

Armature.
A piece of steel, soft iron or a coil so placed as to be acted upon by an electromagnet or a permanent magnet; or that part of an electric generator in which electricity is generated, or that part of a signal motor which rotates.

Armored Cable.
See definition for Cable, Armored.

Arrester, Lightning.
A device for protecting circuits and apparatus against lightning or other abnormal potential rises of short duration.

Arrester, Lightning; Air Gap.
An arrester consisting of a spark gap between terminal plates in which the discharge is allowed to spread over a number of minute discharge points.

Arrester, Lightning; Choke Coil.
An arrester containing several turns of low-resistance wire wound into a coil so as to effect a relatively high impedance.

Arrester, Lightning; Compression Type.
An arrester consisting of series resistance with air gaps inside of a sealed tube.

Arrester, Lightning; Electrolytic.
An arrester consisting of a horn gap device and a system of nested metallic cup-shaped trays suitably supported and arranged in a sluice tank containing an electrolyte which forms insulating films on the surface of the trays.

Arrester, Lightning; Gas Tube.
An arrester consisting of a gap between electrodes maintained in a tube filled with a special gas.

Arrester, Lightning; Horn Gap.
An arrester consisting of an air gap between two knee-shaped horns.

Arrester, Lightning; Pin Point.
An arrester consisting of an air gap between multiple pin points surrounded by glass tubes.

Arrester, Lightning; Vacuum.
An arrester consisting of a gap between electrodes maintained in a vacuum.

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Arrester, Lightning; Valve Type.

An arrester containing a series of paths through material which has the property of checking further discharge after the high-voltage surge has been dissipated.

A.S.A.

The abbreviation for American Standards Association.

A.S.C.E.

The abbreviation for American Society of Civil Engineers.

A.S.M.E.

The abbreviation for American Society of Mechanical Engineers.

Aspect, False Restrictive.

The aspect of a signal that conveys an indication more restrictive than intended.

Aspect, Phantom Signal.

An aspect displayed by a light signal, different from the aspect intended, caused by a light from an external source being reflected by the optical system of the signal. (I.C.C.)

Aspect, Signal.

The appearance of a fixed signal conveying an indication as viewed from the direction of an approaching train; the appearance of a cab signal conveying an indication as viewed by an observer in the cab. (Standard Code)

A.S.T.M.

The abbreviation for American Society for Testing Materials.

Attachment, Train Staff Pusher.

An attachment to electric train staff apparatus, designed to protect, in addition to the regular train movement, the movement of a pusher engine when, after being detached from the rear of train, it is to be run back to its starting point.

Audible Cab Indicator.

See definition for Indicator, Cab; Audible.

Audible Signal.

See definition for Signal, Audible.

Auto.

The abbreviation for automatic.

Auto-manual.

See definition for Signal, Semi-automatic.

Auto-manual Control.

See definition for Control, Semi-automatic.

Automatic.

A term applied to devices which function through the exercise of inherent power, as distinguished from those in which the changes are made manually.

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Automatic Block Signal System.
See definition for System, Automatic Block Signal.

Automatic Cab Signal System.
See definition for System, Automatic Cab Signal.

Automatic Circuit Breaker.
See definition for Breaker, Circuit; Automatic.

Automatic Interlocking.
See definition for Interlocking, Automatic.

Automatic Protection.
See definition for Interlocking, Automatic.

Automatic Signal.
See definition for Signal, Automatic.

Automatic Train Control System.
See definition for System, Automatic Train Control.

Automatic Train Stop System.
See definition for System, Automatic Train Stop.

Auto-transformer.
A transformer containing only one coil tapped at intervals so that some of the turns may be used as a primary and some as a secondary winding to change the ratio between the impressed voltage and the voltage delivered.

A.W.G.
The abbreviation for American Wire Gage. (Old Brown & Sharpe Gage.)

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B

Back Contact.
See definition for Contact, Back.

Back Light, Highway Crossing Signal.
An auxiliary signal light used for indication in a direction opposite to that provided by the main unit.

Bag-staff.
A receptacle for receiving staff from engineman.

Bakelite.
A trade-name for an insulating material.

Ballast.
Selected material placed on the roadbed for the purpose of holding the track in line and surface. (A.R.E.A.)

Ballast Leakage.
See definition for Leakage, Ballast.

Ballast Resistance.
See definition for Resistance, Ballast.

Banner.
The actuated part of a disc or wig-wag signal.

Bar, Angle.
One of two bars used to couple two rails together to form continuous track.

Bar, Bus.
The common terminus used to distribute or collect current from various circuits.

Bar, Deflecting.
A device used for making a turn in pipe line in lieu of a crank.

Bar, Locking.
A bar in an interlocking machine to which the locking dogs are attached. (I.C.C.)

Base Adapter.
See definition for Adapter, Base.

Base-of-mast Mechanism.
See definition for Mechanism, Base-of-mast.

Battery.
A combination of two or more galvanic cells electrically connected to work together to produce electrical energy. (Common usage permits this designation to be applied also to a single cell used independently.) (A.I.E.E.)

Battery Boost Charge.
See definition for Charge, Battery Boost.

Battery Box.
See definition for Box, Battery.

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Battery Charge.
See definition for Charge, Battery.

Battery Chute.
See definition for Chute, Battery.

Battery Element.
See definition for Element, Battery.

Battery Elevator.
See definition for Elevator, Battery.

Battery, Floating.
A storage battery which is kept in operating condition by a continuous charge at a low rate or primary battery coupled with a rectifier to provide a supplementary source of energy.

Battery, High-voltage.
Usually refers to a 110-volt battery.

Battery House.
See definition for House, Battery.

Battery Jar.
See definition for Jar, Battery.

Battery, Low-voltage.
Usually refers to a battery of 30 volts or less.

Battery, Portable.
A battery mounted in a carrying case for handling.

Battery, Stationary.
A battery designed to remain in a fixed location.

Battery Vault.
See definition for Vault, Battery.

Battery Well.
See definition for Well, Battery.

B.B.
The abbreviation for Best Best.

Beam, Light.
A collection of nearly parallel rays of light.

Bearing, Semaphore.
A device which supports the pivot of a semaphore arm.

Bed, Locking.
That part of an interlocking machine that contains or holds the tappets, locking bars, cross-locking, dogs, and other apparatus used to interlock the levers. (I.C.C.)

Bell Code.
See definition for Code, Bell.

Bell, Highway Crossing.
An audible signal at a highway grade crossing to give warning of the approach of trains.

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Bell, Single Stroke.
An audible signal produced by one stroke as distinguished from a vibrating bell.

Bell, Vibrating.
An audible signal which, when once started, continues automatically until the circuit is opened.

Biased Relay.
See definition for Relay, Biased.

Binding Post.
See definition for Post, Binding.

Blade-grip.
That part of a semaphore arm or spectacle to which the blade is secured.

Blade, Semaphore.
The extended part of a semaphore arm which shows the position of the arm. (I.C.C.)

Block.
A length of track of defined limits, the use of which by trains and engines is governed by block signals, cab signals, or both. (Standard Code.)

Block, Absolute.
A block in which no train is permitted to enter while it is occupied by another train. (I.C.C.)

Block, Absolute Permissive.
See definition for System, Absolute Permissive Block.

Block Indicator.
See definition for Indicator, Block.

Block, Latch.
The lower extremity of a latch rod which engages with a square shoulder of the segment or quadrant to hold the lever in position. (I.C.C.)

Block, Lever Latch.
See definition for Block, Latch.

Block, Permissive.
A block in manual or controlled manual territory, based on the principle that a train other than a passenger train may be permitted to follow a train other than a passenger train in the block.

Block Signal.
See definition for Signal, Block.

Block Station.
See definition for Station, Block.

Block System.
See definition for System, Block.

Block System, Absolute Permissive.
See definition for System, Absolute Permissive Block.

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Block System, Manual.
See definition for System, Manual Block.

Block System, Manual; Controlled.
See definition for System, Controlled Manual Block.

Blocking-device.
A device for blocking a lever so that it cannot be operated.

Board, Frost.
A cover beneath the main cover in a battery shelter for more effectively preventing the battery from freezing.

Board, Terminal.
A slab or board on which wire terminals are mounted.

Bolt Lock.
See definition for Lock, Bolt.

Bond, Cable.
An electrical connection across a joint in the armor or lead sheath and the earth, or between the armor or sheath of adjacent cables.

Bond, Cable; Continuity.
A bond used for bonding cable sheaths and armor across joints between contiguous lengths of cable. (A.I.E.E.)

Bond, Cable; Cross.
A bond used for bonding between the armor or lead sheath of adjacent cables. (A.I.E.E.)

Bond, Cable; Gounding.
A bond used for connecting the armor or lead sheath of a cable to earth. (A.I.E.E.)

Bond, Impedance.
An iron core coil of low resistance and relatively high reactance, used on electrified railroads to provide a continuous path for the return propulsion current around insulated joints and to confine the alternating current signaling energy to its own track circuit.

Bond, Plug.
A bond wire to which plugs are welded and used instead of channel pins.

Bond, Propulsion.
A conductor of low resistance providing a path for the return propulsion current at non-insulated joints.

Bond, Rail.
A metallic connection attached to adjacent rails to insure electrical conductivity.

Bond, Rail Joint.
A metallic connection attached to adjoining rails to insure electrical conductivity. (I.C.C.)

Bond, Reactance.
See definition for Bond, Impedance.

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Bond, Welded.
A bond which is welded to the rails.

Bond Wire.
See definition for Bond, Rail.

Booster, Electrical.
A source of energy inserted in series in a circuit to raise its voltage.

Booster, Transformer.
A transformer inserted in series in a circuit to raise its voltage.

Bootleg.
A protection for track wires where the wires leave the conduit or ground near the rail.

Box, Battery.
A shallow receptacle for housing batteries.

Box, Crank; Water-tight.
A water-tight device for housing a crank.

Box, Deflecting Bar; Water-tight.
A water-tight device for housing a deflecting bar.

Box, Junction.
A housing for wires at junction points in wire and cable runs.

Box, Lightning Arrester.
A housing for lightning arresters.

Box, Relay.
A housing for relays.

Box, Stuffing.
A device used to prevent the escape of oil from a pipe through which a pipe passes.

Box, Terminal.
A housing for terminating wires and cables.

Brace, Rail.
A device used at switches, movable point frogs, etc., in combination with switch, tie or gage plates for holding the rail in place.

Bracket, Lamp.
A support so designed that the proper alignment of lamp can be maintained.

Bracket, Locking.
That part of a locking bed which is a support for the mechanical locking.

Bracket Mast.
See definition for Mast, Bracket.

Bracket Post.
See definition for Post, Bracket.

Bracket, Switch Adjustment.
A device attached to the No. 1 rod to which the operating rod is connected and which permits the adjustment of a switch, derail or movable point frog.

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Braided Cable.
See definition for Cable, Braided.

Braiding.
The interwoven covering of wires or cables.

Brake Application, Full Service.
See definition for Application, Brake; Full Service.

Brake Application Valve.
See definition for Valve, Brake Application.

Braking, Dynamic.
A method of braking in which the motor is used as a generator and the kinetic energy of the apparatus is employed as the actuating means of exciting a retarding force.

Breakdown.
Failure of apparatus or materials to function as specified.

Breaker, Circuit.
A device (other than a fuse) constructed primarily for the interruption of a circuit.

Breaker, Circuit; Automatic.
A circuit breaker designed to operate automatically under any predetermined condition of the circuit, such as underload or overload of current or voltage.

Bridge Mast.
See definition for Mast, Bridge.

Bridge, Movable.
That section of a structure bridging a navigable waterway so designed that it may be displaced to permit passage of traffic on the waterway. (I.C.C.)

Bridge, Signal.
A structure which spans one or more tracks for the purpose of supporting signals.

Bridge, Wheatstone.
An instrument for measuring resistance.

Bridle Ring.
See definition for Ring, Bridle.

Brush (Generator or Motor).
The electrical connection between the stationary and rotating parts of a generator or motor.

B.t.u.
The abbreviation for British thermal unit.

Buffer, Air.
An air cylinder with a piston valve in which the escape of the air is checked by the valve assisting in lessening the shock.

Buffer, Oil.
An oil cylinder with a piston valve in which the escape of the oil is checked by the valve assisting in lessening the shock.

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Bulb, Lamp.
See definition for Lamp, Electric.

Bus Bar.
See definition for Bar, Bus.

Butt End.
See definition for End, Butt.

Butt Strap.
See definition for Strap, Butt.

Button, Push.
A circuit controller operated by pushing a button, to open or close a circuit.

B.W.G.
The abbreviation for Birmingham Wire Gage.

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C

C.
The abbreviation for Centigrade.

Cab.
The compartment of a locomotive from which the propelling power and power brakes of the train are manually controlled. (I.C.C.)

Cab Indicator, Audible.
See definition for Indicator, Cab; Audible.

Cab Signal.
See definition for Signal, Cab.

Cab Signal System, Automatic.
See definition for System, Automatic Cab Signal.

Cabin.
A common name for an interlocking or block station.

Cabinet, Machine.
A protection for an interlocking machine.

Cabinet, Relay.
A housing for relays located in buildings.

Cable.
Either a stranded conductor (single-conductor cable) or a combination of conductors insulated from one another (multiple-conductor cable). (A.I.E.E.)

Cable, Aerial.
A cable used for aerial service.

Cable, Armored.
A cable with an armor usually consisting of helically laid galvanized steel wires.

Cable Bond.
See definition for Bond, Cable.

Cable Bond, Continuity.
See definition for Bond, Cable; Continuity.

Cable, Bond; Cross.
See definition for Bond, Cable; Cross.

Cable, Bond; Grounding.
See definition for Bond, Cable; Grounding.

Cable, Braided.
A cable consisting of one or more insulated wires covered with a braided fabric.

Cable, Concentric Lay.
A single-conductor cable composed of a central core surrounded by one or more layers of helically laid wires.

Cable, Lead Sheathed.
A cable consisting of one or more insulated wires covered with a lead sheath.

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Cable, Metal Taped.
A cable consisting of one or more insulated wires, either with or without a lead sheath, upon which is wrapped one or more layers of metal tape for protection against mechanical injury.

*Cable, n.Conductor.**
A combination of n.conductors insulated from one another.

*Cable, n.Conductor; Concentric.**
A cable composed of an insulated central conductor core with (n minus 1) tubular stranded conductors laid over it concentrically and separated by layers of insulation.

Cable, Non-metallic Sheathed.
An assembly of one or more insulated conductors in an outer sheath of non-conducting material.

Cable, Parkway.
See definition for Cable, Metal Taped.

Cable Post.
See definition for Post, Cable.

Cable, Rope Lay.
A single-conductor cable composed of a central core surrounded by one or more layers of helically laid groups of wires.

Cable, Submarine.
An armored cable used for underwater service.

Cable Tracer.
See definition for Tracer, Cable.

Cable, Twin.
Two insulated single-conductor cables laid parallel, having a common covering.

Cable, Underground.
A cable used for underground service.

Cam.
A rotating piece, either non-circular or eccentric, used to convert rotary into reciprocating motion.

Candlepower.
Luminous intensity expressed in candles. (A.I.E.E.)

Cantilever.
A vertical structure with a top projecting horizontal structure used to support a signal mast.

Cantilever Mast.
See definition for Mast, Cantilever.

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* n used in the algebraic sense of any given number.

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Capacitance.
That property of a system of conductors and dielectrics which permits the storage of electricity when potential differences exist between the conductors. (A.I.E.E.)

Capacitor (Condenser).
A device, the primary purpose of which is to introduce capacitance into an electric circuit. (A.I.E.E.)

Capacitor, Adjustable.
A capacitor, the capacitance of which can be readily changed. (A.I.E.E.)

Capacitor, Variable.
An adjustable capacitor in which the capacitance can have every possible value within its range. (A.I.E.E.)

Capacity.
The load which, when carried by a machine, apparatus or device, will, under specified conditions of test, cause it to reach any one of its physical limitations, such, for example, as operating temperature or ability to maintain required voltage.

Capacity, Ampere-hour.
The number of ampere hours which can be delivered by a cell under specified conditions as to temperature, rate of discharge and final voltage.

Capacity, Condenser.
The quantity of electricity which a condenser is able to store.

Capping.
The covering for trunking.

Car Retarder.
See definition for Retarder, Car.

Carrier, Pipe.
A device used to support, guide and facilitate the longitudinal movement of a pipe line.

Carrier, Pipe; Transverse.
A device to guide and support signal pipe across tracks.

Case, Mechanism.
The housing for a signal mechanism.

Cathode.
The electrode by which the current leaves an electrolytic cell when it is on discharge.

Caustic Soda Cell.
See definition for Cell, Caustic Soda.

Cell.
Battery elements with electrolyte and container.

Cell, Caustic Soda.
A Lalande cell using a solution of caustic soda and having copper oxide for the negative electrode and metallic zinc for the positive electrode.

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Cell, Dry.

A primary cell using zinc as the positive electrode, carbon as the negative electrode and ammonium chloride for the electrolyte.

Cell, Electrolytic.

A cell consisting of separated anode and cathode electrodes immersed in electrolyte.

Cell, End.

A cell of a storage battery which may be cut in or out of the circuit for the purpose of adjusting the battery voltage. (A.I.E.E.)

Cell, Exhausted.

A cell which has lost its power to generate an electromotive force.

Cell, Pilot.

A selected cell of a storage battery whose temperature, voltage and specific gravity are assumed to indicate the condition of the entire battery. (A.I.E.E.)

Cell, Primary.

A device for the direct transformation of chemical energy into electrical energy.

Cell, Secondary.

Any combination of two metals or metalloids immersed in an electrolyte which in itself will not produce electricity without first having the metallic portion of the element decomposed by the passage of electric current.

Cell, Storage.

A secondary cell used primarily for storing electrical energy at one time for use at another.

Center Line.

See definition for Line, Center.

Centers, Track.

The distance, measured at right angles, between center lines of parallel tracks.

Centigrade.

The name of a thermometer scale having zero as the freezing point and 100 degrees as the boiling point of water.

Centralized Traffic Control.

See definition for Control, Centralized Traffic.

Centralized Traffic Control Machine.

See definition for Machine, Centralized Traffic Control.

Centralized Traffic Control System.

See definition for Control, Centralized Traffic.

Centrifugal Relay.

See definition for Relay, Centrifugal.

Changer, Pole.

A device by which the direction of current flow in an electrical circuit may be changed. (I.C.C.)

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Channel Pin.

See definition for Pin, Channel.

Characteristics, Operating.

As applied to electrical apparatus, the measure of the electrical values at which the apparatus operates. (Drop-away, pick-up, working value, etc.) (I.C.C.)

Charge, Battery.

The restoration of the active materials in a battery by passing a unidirectional current through it in the opposite direction to that of the discharge.

Charge, Battery Boost.

A partial charge, usually at a high rate for a short period. (A.I.E.E.)

Charge, Constant-current.

A charge in which the current is maintained at a constant value. (A.I.E.E.)

Charge, Constant-voltage.

A charge in which the voltage at the terminals of the battery is held at a constant value. A modified constant-voltage charge is one in which a fixed resistance is installed in the charging circuit to limit the initial current.

Charge, Equalizing.

An extended charge which is given to a storage battery to insure the restoration of the active material in all the cells.

Charge, Floating.

A continuous input of current to a storage battery.

Charge, Initial.

A term used in expressing the first charge given a storage battery after it has been set up, also to designate the recommended current applied to electrical apparatus at the beginning of a series of tests.

Charge, Taper.

A charge in which the charging current tapers from a high to a low value as the charge progresses and the voltage of the battery rises.

Charge, Trickle.

A continuous input of current to a storage battery to compensate for internal losses only

Charging Rate.

See definition for Rate, Charging.

Chart, Dog.

A diagrammatic representation of the mechanical locking for an interlocking machine, used as a working plan in making up, assembling and fitting locking. (I.C.C.)

Chart, Manipulation.

A statement in tabulated form showing the sequence in which levers or other devices must be operated.

Chart, Track; Indicator.

A maplike reproduction of railway tracks controlled by track circuits so arranged as to indicate automatically, for defined sections of track, whether or not such sections are occupied.

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Chase, Wire.
A casing used to protect electrical conductors in a building.

Check Lever.
See definition for Lever, Traffic.

Chemical Element.
See definition for Element, Chemical.

Choke Coil.
See definition for Coil, Choke.

Choke Coil Lightning Arrester.
See definition for Arrester, Lightning; Choke Coil.

Chromatic Aberration.
See definition for Aberration, Chromatic.

Chute, Battery.
A small cylindrical receptacle for housing track batteries and set in the ground below the frost line.

Circuit, Acknowledgment.
A circuit consisting of wire or other conducting material installed between the track rails at each signal in territory where an automatic train stop system or cab signal system of the continuous inductive type with two-indication cab signals is in service, to enforce acknowledgment by the engineman at each signal displaying an aspect requiring a stop. (I.C.C.)

Circuit, Approach.
A term applied to a circuit generally used in connection with announcing the approach of trains at block or interlocking stations.

Circuit Breaker.
See definition for Breaker, Circuit.

Circuit Breaker, Automatic.
See definition for Breaker, Circuit; Automatic.

Circuit, Clearing.
A term applied to a circuit used in connection with the operation of a signal in advance of an approaching train.

Circuit, Closed.
See definition for Principle, Closed Circuit.

Circuit, Common Return.
A term applied where one wire is used for the return of more than one electric circuit. (I.C.C.)

Circuit, Control.
An electrical circuit between a source of electric energy and a device which it operates. (I.C.C.)

Circuit Controller.
See definition for Controller, Circuit.

Circuit, Cut-in.
A roadway circuit at the entrance to automatic train stop, train control or

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cab signal territory by means of which locomotive equipment of the continuous inductive type is actuated so as to be in operative condition. (I.C.C.)

Circuit, Electric.
The path for an electric current.

Circuit, Line.
A term applied to signal circuit on an overhead or underground line.

Circuit, Line; Double-wire.
An electric circuit not employing a common return wire; a circuit formed by individual wires throughout. (I.C.C.)

Circuit, Magnetic.
The path through which magnetic flux passes.

Circuit, Multiple.
A circuit in which the separate sources or separate electro-receptive devices or both are so connected that only a part of the total current produced or flowing passes through the entire unit.

Circuit, Multiple-series.
A circuit in which two or more series circuits are connected in multiple.

Circuit, Non-vital.
Any circuit the function of which does not affect the safety of train operation.

Circuit, Open.
An incomplete electric circuit.

Circuit, Polarized.
A path in which the direction of flow of an electric current is reversed under certain conditions.

Circuit, Polyphase.
A circuit of more than a single phase.

Circuit, Separate Return.
See definition for Circuit, Line; Double-Wire.

Circuit, Series.
A circuit in which the separate sources or separate electro-receptive devices or both are so placed that the current produced in it or going through it passes successively through the entire circuit.

Circuit, Series-multiple.
A circuit in which two or more multiple circuits are connected in series.

Circuit, Short.
A shunt circuit abnormally applied.

Circuit, Shunt.
A low-resistance connection across the source of supply, between it and the operating unit.

Circuit, Shunt Fouling.
The track circuit in the fouling section of a turnout, connected in multiple with the track circuit in the main track. (I.C.C.)

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Circuit, Single-phase.
A circuit energized by a single alternating electromotive force.

Circuit, Stick.
A term applied to a circuit used to maintain a relay or similar unit energized through its own contact.

Circuit, Switch Shunting.
A shunting circuit which is closed through contacts of a switch circuit controller. (I.C.C.)

Circuit, Three-phase.
A combination of circuits energized by alternating electromotive forces which differ in phase by one-third of a cycle; *i.e.*, 120 degrees. (A.I.E.E.)

Circuit, Track.
An electrical circuit of which the rails of the track form a part. (I.C.C.)

Circuit, Track; Coded.
A track circuit in which the energy is varied or interrupted periodically. (I.C.C.)

Circuit, Trap.
A term applied to a circuit used at locations where it is desirable to protect a section of track but where it is impracticable to maintain a track circuit.

Circuit, Vital.
Any circuit the function of which affects the safety of train operation.

Circular Mil.
See definition for Mil, Circular.

Clearance.
The term applied to the space provided between two objects.

Clearance Point.
See definition for Point, Clearance.

Clearing Circuit.
See definition for Circuit, Clearing.

Clip, Rail.
A device bolted or clamped to a rail, for supporting and guiding a detector bar.

Clip, Roundel.
A device made of rubber, felt or similar material for holding a roundel in place in the bezel rings of a signal.

Clockwise.
A direction of travel as of the hands of a clock.

Clockwork Time Release.
See definition for Release, Time.

Closed Circuit.
See definition for Principle, Closed Circuit.

Closed Circuit Principle.
See definition for Principle, Closed Circuit.

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Closed Contact.
See definition for Contact, Closed.

c.m.
The abbreviation for circular mil.

Code, Bell.
A code in which the strokes of a bell have a predetermined significance.

Code Following Relay.
See definition for Relay, Code Following.

Code, Standard.
The operating, block signal and interlocking rules of the Association of American Railroads.

Code System.
See definition for System, Code.

Code Transmitter.
A device to vary periodically an electrical circuit at a definite predetermined code frequency.

Coded Track Circuit.
See definition for Circuit, Track; Coded.

Coder.
See definition for Code Transmitter.

Coil, Choke.
A form of stationary induction apparatus to supply reactance and used commonly in connection with signal lightning arresters.

Coil, Impedance.
A term sometimes applied to a choke coil or reactor.

Coil, Magnet.
A conducting coil of insulated wire wound around the core of an electromagnet.

Coil, Selector.
A coil which, when energized, will attract and hold in place an armature which in turn will permit a predetermined movement to be made.

Color Light Signal.
See definition for Signal, Color Light.

Color Position Light Signal.
See definition for Signal, Color Position Light.

Common Return Circuit.
See definition for Circuit, Common Return.

Compensator.
A device for counteracting the expansion and contraction caused by changes of temperature in a pipe line, thereby maintaining a constant length of line between units.

Compression Type Lightning Arrester.
See definition for Arrester, Lightning; Compression Type.

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Compressor, Air.
A device used for compressing air.

Concentric Lay Cable.
See definition for Cable, Concentric Lay.

Concentric n.Conductor Cable.
See definition for Cable, n. Conductor; Concentric.

Condenser.
See definition for Capacitor.

Condenser, Air.
A device used for removing moisture from compressed air by cooling the air.

Condenser Capacity.
See definition for Capacity, Condenser.

Condenser, Electric.
A group of conductors separated by insulation and constructed to have capacitance.

Condenser, Manifold.
A device made up of a number of small pipes for condensing the water which is precipitated from the hot air that leaves the air compressor.

Conductance.
See definition for Conductivity.

Conductivity.
The quality or power of conducting or giving passage to some molecular action, as of heat, light or electricity.

Conductor, Electrical.
Any material provided for carrying an electric current.

Conduit.
A passageway for electrical conductors.

Conflicting Movements.
See definition for Movements, Conflicting.

Conflicting Routes.
See definition for Routes, Conflicting.

Connection, Multiple.
Two or more pieces of electrical apparatus connected across two main leads from a source of supply, part of the current flowing through each unit.

Connection, Multiple-series.
A connection in which two or more series connections are connected in multiple.

Connection, Series.
An electric circuit in which the same current flows through each unit in the circuit.

Connection, Series-multiple.
A connection in which two or more multiple connections are connected in series.

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Connector.
A device for connecting the ends of two or more conductors.

Connector, Track Circuit.
A device used for connecting one or more wires to a rail.

Constant Current.
See definition for Current, Constant.

Constant-current Charge.
See definition for Charge, Constant-current.

Constant-voltage Charge.
See definition for Charge, Constant-voltage.

Contact.
A conducting part which co-acts with another conducting part to open or close an electric circuit.

Contact, Back.
A part of a relay against which, when the relay is de-energized, the current-carrying portion of the movable neutral member rests so as to form a continuous path for current.

Contact, Closed.
A current-carrying member which is closed when the operating unit is in the normal position.

Contact, Dependent.
A contacting member designed to complete any one of two or three circuits, depending on whether a two or three-way device is considered.

Contact, Electrical.
A surface common to two conducting parts, united by pressure, for the purpose of carrying current.

Contact Element.
See definition for Receiver.

Contact, Front.
A part of a relay against which, when relay is energized, the current-carrying portion of the movable neutral member is held so as to form a continuous path for current.

Contact, Independent.
A contacting member designed to complete one circuit only.

Contact, Normal.
A term used to designate a current-carrying member when the operated unit is in the normal position.

Contact, Open.
A current-carrying member which is open when the operating unit is in the normal position.

Contact, Polar.
A part of a relay against which the current-carrying portion of the movable polar member is held so as to form a continuous path for current.

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Contact Resistance.
See definition for Resistance, Contact.

Contact, Reverse.
A term used to designate a current-carrying member when the operated unit is in the reverse position.

Contact, Sliding.
An electrical contact obtained by a sliding motion of one conductor over another.

Contact, Spring.
An electrical contact that is actuated by a spring.

Contactor.
A device for repeatedly establishing and interrupting an electric power circuit. (A.I.E.E.)

Continuity Cable Bond.
See definition for Bond, Cable; Continuity.

Continuous Control.
A type of control in which the locomotive apparatus is constantly in operactive relation with the track elements and is immediately responsive to a change of conditions in the controlling section which affects train movement.

Continuous Lighting.
See definition for Lighting, Continuous

Control, Auto-manual.
See definition for Control, Semi-automatic.

Control, Centralized Traffic.
A term applied to a system of railroad operation by means of which the movement of trains over routes and through blocks on a designated section of track or tracks is directed by signals controlled from a designated point without requiring the use of train orders and without the superiority of trains.

Control Circuit.
See definition for Circuit, Control.

Control, Continuous.
See definition for Continuous Control.

Control, Dual.
A term applied to signal appliances provided with two authorized methods of operation.

Control, Intermittent.
See definition for Intermittent Control.

Control Machine.
See definition for Machine, Control.

Control Machine, All-relay Interlocking.
See definition for Machine, Control.

Control Operator.
See definition for Operator, Control.

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Control, Remote.
A term applied to a method of operating outlying signal appliances from a designated point.

Control, Semi-automatic.
A control which is operated both manually and automatically.

Control Station.
See definition for Station, Control.

Controlled, Manual Block System.
See definition for System, Controlled Manual Block.

Controlled Point.
See definition for Point, Control.

Controller, Circuit.
A device for opening and closing electric circuits. (I.C.C.)

Controller, Circuit; Movable Bridge.
A device for opening and closing electric circuits between the stationary and movable bridge spans.

Controller, Circuit; Switch.
A device for opening and closing electric circuits, operated by a rod connected to a switch, derail or movable point frog. (I.C.C.)

Controller, Circuit; Tappet.
A device attached to a tappet for opening and closing electric circuits.

Controlling Section.
One or more track circuit sections governing approach to or movement within a block.

Converter, Rotary.
A machine which employs mechanical rotation to change electric energy from one form into another.

Copper Loss.
See definition for Loss, Copper.

Core, Iron.
A mass of iron on which are placed magnetizing coils of an electromagnet.

Core Loss.
See definition for Loss, Core.

Cotter.
A piece of soft metal usually of half round section which is bent back upon itself in shape of a pin and used to hold parts of apparatus in position.

Cotter Pin.
See definition for Cotter.

Counter-clockwise.
A direction of travel reverse to that of the hands of a clock.

Counter Electromotive Force.
See definition for Force, Electromotive; Counter.

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Counter, Signal.
A device for registering the number of signal operations.

Counterweight, Semaphore.
A weight so connected that in case of breaking of the pipe controlling the signal the weight will fall and pull the signal to its most restrictive position.

Counterweight, Tail Lever.
A weight applied to a tail lever of an interlocking machine which makes it easier to move the lever to the desired position.

Coupler.
A connector between two devices which can be joined or disconnected at will.

Coupler, Movable Bridge.
A device for engaging and disengaging signal or interlocking connections between the shore and movable bridge span.

Coupling, Pipe.
A device by which two lengths of pipe may be connected.

Cover, Frost.
See definition for Board, Frost.

Cover Glass.
See definition for Roundel.

cp.
The abbreviation for candlepower.

Crane, Staff.
A structure for supporting train staff for delivery to a train.

Crank.
A lever, the arms of which form an angle, with the fulcrum at the vertex of the angle, which is used to transmit motion from one part of a line to another part.

Crank, Acute Angle.
A two-arm crank, the arms of which subtend an angle of less than 90 degrees.

Crank, Escapement.
A special device used both to operate and lock switch and signal devices.

Crank, Obtuse Angle.
A two-arm crank, the arms of which subtend an angle of more than 90 degrees.

Crank Pin.
See definition for Pin, Crank.

Crank, Right-angle.
A two-arm crank, the arms of which subtend an angle of 90 degrees.

Crank Stand.
See definition for Stand, Crank.

Crank, Straight-arm.
A two-arm crank, the arms of which subtend an angle of 180 degrees.

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Crank, Three-arm.
A crank with three arms, one of which is at right angles with the other two arms.

Cross-arm.
An arm, usually fastened at right angles to a pole, designed to carry the pins and insulators to which wires may be attached.

Cross Cable Bond.
See definition for Bond, Cable; Cross.

Cross, Electrical.
An interference due to contact or similar causes between circuits.

Crossing, Grade; Highway.
An intersection of a highway with a railroad track at the same elevation.

Crossing, Grade; Railroad.
An intersection of two or more railroad tracks at the same elevation.

Crossing Lever.
See definition for Lever, Traffic.

Crossover.
Two turnouts with the track between the frogs arranged to form a continuous passage between two nearby and generally parallel tracks. (A.R.E.A.)

Cross Protection.
See definition for Protection, Cross.

csk.
The abbreviation for countersunk.

C. T. C.
The abbreviation for centralized traffic control.

Current, Alternating.
A current, the direction of which reverses at regularly recurring intervals.

Current, Constant.
A current whose value does not vary with changes of conditions in the circuit.

Current, Direct.
A unidirectional current. As ordinarily used, the term designates a practically non-pulsating current.

Current, Eddy.
A local current in an iron core caused by the electromotive force generated by moving the core in a magnetic field.

Current, Electric.
The flow of electricity.

Current, Exciting.
The current applied to the windings of the field magnets of a dynamo or motor in order to produce magnetization.

Current, Foreign.
A term applied to stray electric currents which may affect a signaling system, but which are not a part of the system. (I.C.C.)

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Current, Induced.

A current produced in a secondary circuit by change in the current of a primary circuit.

Current, Leakage.

A stray electric current of relatively small value which flows through or across the surface of insulation when a voltage is impressed across the insulation. (I.C.C.)

Current of Traffic.

The movement of trains on a main track, in one direction, specified by the rules. (Standard Code.)

Current or Series Transformer.

See definition for Transformer, Current or Series.

Current, Pulsating.

A periodic current, the values of which are always positive (or always negative). (A.I.E.E.)

Current Relay.

See definition for Relay, Current.

Cut-in Circuit.

See definition for Circuit, Cut-in.

Cut-out.

An electrical device to interrupt the flow of current through any particular apparatus or instrument, either automatically or by hand.

Cut-out, Primary.

A safety cut-out installed in a circuit leading to the primary coil of a transformer.

Cut-out, Thermal.

An over-current protective device that contains a heater element in addition to and affecting a fusible member which opens the circuit.

Cut-section.

A location other than a signal location where two adjoining track circuits end within a block. (I.C.C.)

Cut-section, Relayed.

A cut-section where the energy for one track circuit is supplied through front contacts or through front and polar contacts of the track relay for the adjoining track circuit. (I.C.C.)

cu. yd.

The abbreviation for cubic yard.

Cycle.

One complete set of positive and negative values of an alternating current.

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D

Dash-pot.
See definition for Buffer, Air or Buffer, Oil.

D.C.
d.c.
The abbreviation for direct current.

D.C. Relay.
See definition for Relay, D.C.

Dead Ending.
The terminating of a line wire at an insulator.

Dead Section.
See definition for Section, Dead.

Decoder.
A device adapted to control apparatus in a manner corresponding to the code to which the track or line circuit is subjected.

De-energize.
To deprive an electro-receptive device of its operating current.

De-energized Position.
See definition for Position, De-energized.

Deflecting Bar.
See definition for Bar, Deflecting.

Deg.
deg.
The abbreviation for degree or degrees.

Delay Time.
See definition for Time, Delay.

Dependent Contact.
See definition for Contact, Dependent.

Depolarization.
The removal of free hydrogen or other gas which tends to form on the negative element of a cell.

Depreciation.
The drop in value of a piece of apparatus.

Derail.
A device designed to cause rolling equipment to leave the rails.

Derailed.
A term used when rolling equipment leaves the rails.

Describer, Train.
An instrument used to give information regarding the origin, destination, class or character of trains, engines or cars moving or to be moved between given points.

Detector, Ground.
A device for indicating a ground on an electrical circuit.

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Detector Lever.
See definition for Lever, Traffic.

Detector, Point.
A circuit controller which is part of the switch operating mechanism and operated by a rod connected to a switch, derail or movable point frog to indicate that the point is within a specified distance of the stock rail. (I.C.C.)

Detector, Point (with Latch-out Device).
See definition for Device, Latch-out (Point Detector).

Device, Acknowledging.
A manually operated electric switch or pneumatic valve by means of which, on a locomotive equipped with automatic train stop or train control device, an automatic brake application can be forestalled, or by means of which, on a locomotive equipped with an automatic cab signal device, the sounding of the cab indicator can be silenced. (I.C.C.)

Device, Blocking; Lever.
A device for blocking a lever so that it cannot be operated.

Device, Focusing.
An instrument used to locate the filament of an electric lamp at proper focal point of lens or reflector systems.

Device, Latch-out (Point Detector).
A device, applied to a point detector, that will operate when the switch points are opened by means other than the operation of switch operating mechanism, to hold the circuit controller in the position indicating that the point has not remained within a specified distance of the stock rail.

Device, Reset.
A device whereby the brakes may be released after an automatic train control brake application. (I.C.C.)

Dielectric.
A medium having the property that the energy required to establish an electric field is recoverable, in whole or in part, as electric energy. (A.I.E.E.)

Dielectric Strength.
The maximum potential gradient that unit thickness of the material can withstand without rupture. (A.I.E.E.)

Differential Relay.
See definition for Relay, Differential.

Direct Current.
See definition for Current, Direct.

Disc Signal.
See definition for Signal, Disc.

Distance, Stopping.
The maximum distance on any portion of any railroad which any train operating on such portion of railroad at its maximum authorized speed, will travel during a full service application of the brakes, between the point where such application is initiated and the point where the train comes to a stop. (I.C.C.)

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Dog Chart.
See definition for Chart, Dog.

Dog, Locking.
A steel block attached to a locking bar or tappet of an interlocking machine, by means of which locking between levers is accomplished. (I.C.C.)

Dog, Swing.
A locking dog mounted in such a manner that it is free to rotate on a trunnion which is riveted to a locking bar. (I.C.C.)

Double Refraction Reflector Unit.
See definition for Reflector Unit, Double Refraction.

Double-slip Switch.
See definition for Switch, Double-slip.

Double-wire Line Circuit.
See definition for Circuit, Line; Double-wire.

Dowel Pin.
See definition for Pin, Dowel.

Down Rod.
See definition for Rod, Down.

Drawbridge.
See definition for Bridge, Movable.

Driving Piece.
See definition for Piece, Driving.

Drop-away.
See definition for Value, Release.

Drop, Voltage.
The decrease in voltage in a current-carrying conductor.

Dry Cell.
See definition for Cell, Dry.

Dual Control.
See definition for Control, Dual.

Duct.
A term sometimes applied to conduit.

Dwarf Signal.
See definition for Signal, Dwarf.

Dynamic Braking.
See definition for Braking, Dynamic.

Dynamotor.
A machine which combines both motor and generator action in one magnetic field, either with two armatures, or with one armature having two separate windings. (A.I.E.E.)

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E

E.B.B.
The abbreviation for Extra Best Best.

Eddy Current.
See definition for Current, Eddy.

Efficiency.
The ratio of the net power output of an apparatus to its gross power input.

Efficiency, Battery; Storage.
The ratio of the output of a battery to the input required to restore the initial state of charge.

Electric Circuit.
See definition for Circuit, Electric.

Electric Condenser.
See definition for Condenser, Electric.

Electric Current.
See definition for Current, Electric.

Electric Generator.
See definition for Generator, Electric.

Electric Indication Lock.
See definition for Lock, Indication; Electric.

Electric Indication Locking.
See definition for Locking, Indication; Electric.

Electric Interlocking Machine.
See definition for Machine, Interlocking; Electric.

Electric Lamp.
See definition for Lamp, Electric.

Electric Light Unit.
See definition for Light Unit, Electric.

Electric Lock.
See definition for Lock, Electric.

Electric Locking.
See definition for Locking, Electric.

Electric Motor.
See definition for Motor, Electric.

Electric Movable Bridge Lock.
See definition for Lock, Movable Bridge; Electric.

Electric Polarization.
See definition for Polarization, Electric.

Electric Potential.
See definition for Voltage.

Electric Pulsation.
See definition for Pulsation, Electric.

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Electric Switch Lever Lock.
See definition for Lock, Switch Lever; Electric.

Electric Switch Lever Locking.
See definition for Locking, Switch Lever; Electric.

Electric Switch Lock.
See definition for Lock, Switch; Electric.

Electric Valve.
See definition for Valve, Electric.

Electrical Booster.
See definition for Booster, Electrical.

Electrical Conductor.
See definition for Conductor, Electrical.

Electrical Contact.
See definition for Contact, Electrical.

Electrical Cross.
See definition for Cross, Electrical.

Electrical Thermostat.
See definition for Thermostat, Electrical.

Electrical Winding.
See definition for Winding, Electrical.

Electricity.
An imponderable and invisible force producing light, heat, chemical decomposition and other physical phenomena.

Electro.
Prefix denoting electricity as the motive power or operating force.

Electrode.
The anode or cathode of an electric cell.

Electrolysis.
Act or process of chemical decomposition by the action of electric current.

Electrolyte.
The fluid surrounding the elements of an electrolytic cell.

Electrolytic Cell.
See definition for Cell, Electrolytic.

Electrolytic Lightning Arrester.
See definition for Arrester, Lightning; Electrolytic.

Electromagnet.
A device comprising one or more coils of insulated wire wound around an iron or steel core, and depending for its magnetic action upon the passage of an electric current through the wire.

Electromagnetic Yoke.
See definition for Yoke, Electromagnetic.

Electro-mechanical Interlocking Machine.
See definition for Machine, Interlocking; Electro-mechanical.

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Electromotive Force.
See definition for Force, Electromotive.

Electronics.
That branch of science and technology which relates to the conduction of electricity through gases or in vacuo. (A.I.E.E.)

Electro-pneumatic Interlocking Machine.
See definition for Machine, Interlocking; Electro-pneumatic.

Electro-pneumatic Relay.
See definition for Relay, Electro-pneumatic.

Electro-pneumatic Switch.
See definition for Switch, Electro-pneumatic.

Electro-pneumatic Valve.
See definition for Valve, Electro-pneumatic.

Element, Battery.
The positive and negative electrodes with separators where required.

Element, Chemical.
One of a number of distinct varieties of matter which, singly or in combination, compose every material substance.

Element, Contact.
See definition for Receiver.

Element, Roadway.
That portion of the roadway apparatus of automatic train stop, train control or cab signal system, such as electric circuit, inductor, magnet, ramp or trip arm to which the locomotive apparatus of such system is directly responsive. (I.C.C.)

Element, Track.
See definition for Element, Roadway.

Elevator, Battery.
An arrangement of shelves in a supporting frame by means of which batteries may be lowered into, held in position, and raised out of a battery chute.

E.M.F.
e.m.f.
The abbreviation for electromotive force.

End, Butt.
A term applied to the end of a jaw without tang or thread.

End Cell.
See definition for Cell, End.

End, Tang.
See definition for Tang End.

Engine.
A unit propelled by any form of energy, or a combination of such units operated from a single control, used in train or yard service. (Standard Code.)

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Equalizer.
A term sometimes applied to a straight-arm crank.

Equalizing Charge.
See definition for Charge, Equalizing.

Escapement Crank.
See definition for Crank, Escapement.

Evaporation.
The conversion of water or other liquids to the gaseous state.

Exciter.
An auxiliary generator which supplies power for the field excitation of another electrical machine. (A.I.E.E.)

Exciting Current.
See definition for Current, Exciting.

Exhausted Cell.
See definition for Cell, Exhausted.

Eyelet, Wire.
A device in the form of an eye, usually used for securing the end of a stranded conductor.

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F

F.
Fahr.
The abbreviation for Fahrenheit.

Face, Locking.
The locking surface of a locking dog, tappet or cross-locking of an interlocking machine. (I.C.C.)

Facing Movement.
See definition for Movement, Facing.

Facing Point Lock.
See definition for Lock, Facing Point.

Facing Point Lock Plunger.
See definition for Plunger, Facing Point Lock.

Facing Point Switch.
See definition for Switch, Facing Point.

Fahrenheit.
The name of a thermometer scale having 32 degrees as the freezing point and 212 degrees as the boiling point of water.

Failure.
A term used when a device does not perform its intended function.

False Restrictive Aspect.
See definition for Aspect, False Restrictive.

False Restrictive Position.
See definition for Aspect, False Restrictive.

Farad.
The practical unit of electric capacity.

Feature, Restoring.
An arrangement on a power-operated switch movement by means of which power is applied to restore the switch movement to full normal or to full reverse position, before the driving bar creeps sufficiently to unlock the switch, with control lever in normal or reverse position. (I.C.C.)

Fibre.
An insulating material.

Field, Magnetic.
A term applied to the space occupied by electric or magnetic lines of force.

Fifth Voltage Range.
See definition for Voltage Range, Fifth.

Filament.
A slender wire used as the incandescent conductor of an electric lamp.

First Voltage Range.
See definition for Voltage Range, First.

Fixed Resistance Unit.
See definition for Resistance Unit, Fixed.

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Fixed Signal.
See definition for Signal, Fixed.

Flasher Relay.
See definition for Relay, Flasher.

Flashing Light Signal.
See definition for Signal, Flashing Light.

Flexible.
Capable of being readily flexed or bent.

Floating Battery.
See definition for Battery, Floating.

Floating Battery System.
See definition for A.C. Floating Storage Battery System.

Floating Charge.
See definition for Charge, Floating.

Floor Push.
A circuit controller mounted in the floor so that a circuit may be made by pressing on a plunger.

Flux, Magnetic.
The number of lines of magnetic force that pass through a magnetic circuit.

Flux, Soldering.
A substance used to cleanse the surface of articles to be soldered.

Focal Length.
The distance from the optical center of a mirror or lens at which parallel rays are brought to a focus.

Focus.
A point where all the rays of light coming from a lens or mirror either meet or seem to meet.

Focusing Device.
See definition for Device, Focusing.

Foot-pound.
A unit of energy or work: The amount of work required to raise 1 pound a distance of 1 foot against the force of gravity.

Force, Electromotive.
The force which starts and maintains a current of electricity.

Force, Electromotive; Counter.
An opposing electromotive force which resists the current in a circuit.

Force, Magnetic.
The force by which attraction and repulsion are exerted by the poles of a magnet.

Forced-drop Electric Lock.
See definition for Lock, Electric; Forced-drop.

Foreign Current.
See definition for Current, Foreign.

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Forestall.
As applied to an automatic train stop or train control device, to prevent an automatic brake application by operation of an acknowledging device or by manual control of the speed of the train. (I.C.C.)

Forestalling Switch, Acknowledger or.
See definition for Device, Acknowledging.

Forward Resistance.
See definition for Resistance, Forward.

Fouling Point.
See definition for Point, Fouling.

Fouling Section.
See definition for Section, Fouling.

Foundation.
A fixed support, usually set in the ground, for signal devices.

Fount, Oil.
A receptacle for housing the oil in a lamp.

Four-position Signal.
See definition for Signal, Four-position.

Fourth Voltage Range.
See definition for Voltage Range, Fourth.

F.P.L.
The abbreviation for facing point lock.

Frame, Machine.
The support for the units of an interlocking machine.

Freq.
The abbreviation for frequency.

Frequency.
The number of cycles through which an alternating current passes per second.

Frequency Relay.
See definition for Relay, Frequency.

Friction Tape.
See definition for Tape, Friction.

Frog, Movable Point.
A frog equipped with points which are movable in the same manner as the points of a switch.

Frog, Track.
A track structure used at the intersection of two running rails to provide support for wheels and passageways for their flanges, thus permitting wheels on either rail to cross the other. (A.R.E.A.)

Front Contact.
See definition for Contact, Front.

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Front Rod.

See definition for Rod, Front.

Frost Board.

See definition for Board, Frost.

Frost Cover.

See definition for Board, Frost.

Ft.
ft.

The abbreviation for foot or feet.

Full Service Brake Application.

See definition for Application, Brake; Full Service.

Full-wave Rectification.

See definition for Rectification, Full-wave.

Fuse.

An electrical conductor inserted in a circuit to open the circuit by melting when the current exceeds the value which the fuse is capable of carrying.

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G

Gage, Air.
An instrument for indicating the pressure of compressed air.

Gage, Air; Recording.
An instrument which records graphically, upon time-charts, the air pressure it measures.

Gage Line.
See definition for Line, Gage.

Gage (of Track).
The distance between the gage lines, measured at right angles thereto. (The standard gage is 4 feet 8½ inches.) (A.R.E.A.)

Gage Plate.
See definition for Plate, Gage.

Gage, Wire.
An instrument for determining the size of a given piece of wire.

Gain.
A notch cut in the side of a pole to receive a cross-arm.

Gal.
The abbreviation for gallon.

Galvanometer.
An instrument or apparatus for measuring the intensity of an electric current, as well as detecting its presence or direction.

Gap, Spark.
The space through which a disrupted discharge passes.

Gas Tube Lightning Arrester.
See definition for Arrester, Lightning; Gas Tube.

Gassing, Battery; Storage.
The liberation of gases from one or more of the electrodes during the process of chemical reaction caused by the action of electric current.

Gauze, Wire.
See definition for Wire Gauze.

Generator, Electric.
A machine which transforms mechanical power into electrical power. (A.I.E.E.)

Gin Pole.
See definition for Pole, Gin.

Glass, Cover.
See definition for Roundel.

Governor, Air.
A device used on an air compressor for determining the range in air pressure over which the compressor operates.

Ground.
A connection of an electrical conductor to the earth.

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Ground Detector.
See definition for Detector, Ground.

Ground Lamp.
See definition for Lamp, Ground.

Ground Mast.
See definition for Mast, Ground.

Ground Wire.
See definition for Wire, Ground.

Grounding Cable Bond.
See definition for Bond, Cable; Grounding.

Guide, Pipe.
An arrangement usually made of a bar of iron which is securely fastened in place for the purpose of guiding the movements of a pipe which is connected to some part of an interlocking.

Guy.
A rod, wire or other appliance for stiffening a pole, or for steadying a system of overhead wires.

Guy Wire.
See definition for Wire, Guy.

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H

Half-wave Rectification.
See definition for Rectification, Half-wave.

Hand-operated Switch.
See definition for Switch, Hand-operated.

Hand Screw Release.
See definition for Release, Time.

Handle, Latch; Lever.
A device attached to the lever for operating the lever latch.

Head Rod.
See definition for Rod, Head.

High-voltage Battery.
See definition for Battery, High-voltage.

Highway Crossing Bell.
See definition for Bell, Highway Crossing.

Highway Crossing Signal.
See definition for Signal, Highway Crossing.

Highway Grade Crossing.
See definition for Crossing, Grade; Highway.

Hold Clear.
A term used to designate a device for holding a signal in any position other than its most restrictive.

Home Signal.
See definition for Signal, Home.

Horn Gap Lightning Arrester.
See definition for Arrester, Lightning; Horn Gap.

Horse Power.
A unit of power equivalent to 33,000 foot-pounds per minute or 746 watts.

House, Battery.
A building used for housing batteries.

h. p.
The abbreviation for horse power.

Hump.
See definition for Yard, Hump.

Hump Yard.
See definition for Yard, Hump.

Hydrometer.
An instrument for measuring the specific gravity of liquids.

Hysteresis.
The tendency of a magnetic substance to persist in any state of magnetization.

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I

Impedance.
The apparent resistance in an electric circuit to the flow of an alternating current, analogous to the actual electrical resistance to a direct current, being the ratio of electromotive force to the current.

Impedance Bond.
See definition for Bond, Impedance.

Impedance Coil.
See definition for Coil, Impedance.

Impulse.
Any sudden change of brief duration produced in the current of a circuit.

in.
The abbreviation for inch.

In Advance of a Signal.
A term used in defining the territory beyond a signal as seen from an approaching train.

In Approach of a Signal.
A term used in defining the territory to which a signal indication is conveyed

In Rear of a Signal.
See definition for In Approach of a Signal.

Incandescent.
White or glowing with intense heat.

Independent Contact.
See definition for Contact, Independent.

Indication, Lever.
The information conveyed by means of an indication lock that the movement of an operated unit has been completed.

Indication Locking.
See definition for Locking, Indication.

Indication, Signal.
The information conveyed by the aspect of a signal. (Standard Code.)

Indicator, Approach.
An indicator used to indicate the approach of a train.

Indicator, Block.
An indicator used to indicate the condition of a block.

Indicator, Cab; Audible.
A device (usually air whistle) located in cab equipped with cab signals designed to sound when cab signal changes and continues to sound until acknowledged.

Indicator, Switch.
An indicator used at a non-interlocked switch to indicate the condition of a block.

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Indicator, Take Siding.
An indicator generally used to convey instructions to approaching trains to take siding.

Indicator, Track.
An indicator used to indicate the condition of a given track section.

Indicator Track Chart.
See definition for Chart, Track; Indicator.

Induced Current.
See definition for Current, Induced.

Inductance.
That property which an electric circuit has for producing induction within itself and causing the current to lag behind the electromotive force.

Induction.
The influence exerted by a varying or changing electrical charge in a body, or in a magnetic field, on a neighboring body, but not necessarily in actual contact.

Induction Load.
See definition for Load, Induction.

Inductor.
See definition for Element, Roadway.

Initial Charge.
See definition for Charge, Initial.

Initial Terminal.
See definition for Terminal, Initial.

Installation.
The placing, arranging or erecting of material and apparatus for use.

Instantaneous.
Without any perceptible duration of time.

Instrument, Track.
A device in which the vertical movement of the rail or the blow of the wheel operates a contact to open or close an electrical circuit.

Insulated Rail Joint.
See definition for Joint, Rail; Insulated.

Insulated Rod.
See definition for Rod, Insulated.

Insulated Wire.
See definition for Wire, Insulated.

Insulating Transformer.
See definition for Transformer, Insulating.

Insulation.
A non-conducting material.

Insulation, Pipe.
See definition for Rod, Insulated.

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Insulation Resistance.
The resistance offered by the insulation on any current-carrying part or conductor.

Insulator.
A material of such low conductivity that the flow of current through it can usually be neglected. (A.I.E.E.)

Insulator Pin.
See definition for Pin, Insulator.

Interlocked Route.
See definition for Route, Interlocked.

Interlocked Switch.
See definition for Switch, Interlocked.

Interlocking.
An arrangement of signals and signal appliances so interconnected that their movements must succeed each other in proper sequence and for which interlocking rules are in effect. It may be operated manually or automatically. (Standard Code.)

Interlocking, Automatic.
An arrangement of signals, with or without other signal appliances, which functions through the exercise of inherent powers as distinguished from those whose functions are controlled manually, and which are so interconnected by means of electric circuits that their movements must succeed each other in proper sequence, train movements over all routes being governed by signal indication. (I.C.C.)

Interlocking Limits.
See definition for Limits, Interlocking.

Interlocking Machine.
See definition for Machine, Interlocking.

Interlocking Machine, Electric.
See definition for Machine, Interlocking; Electric.

Interlocking Machine, Electro-mechanical.
See definition for Machine, Interlocking; Electro-mechanical.

Interlocking Machine, Electro-pneumatic.
See definition for Machine, Interlocking; Electro-pneumatic.

Interlocking Machine, Mechanical.
See definition for Machine, Interlocking; Mechanical.

Interlocking Machine, Table.
See definition for Machine, Interlocking; Table.

Interlocking, Manual.
An arrangement of signals and signal appliances operated from an interlocking machine and so interconnected by means of mechanical and/or electric locking that their movements must succeed each other in proper sequence, train movements over all routes being governed by signal indication. (I.C.C.)

Interlocking Relay.
See definition for Relay, Interlocking.

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Interlocking Signals.
See definition for Signals, Interlocking.

Interlocking Station.
See definition for Station, Interlocking.

Intermittent.
Not continuous.

Intermittent Control.
A type of control in which the locomotive apparatus is affected only at certain designated points, usually at signal locations.

Iron Core.
See definition for Core, Iron.

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J

Jar, Battery.
A container for the solution and elements of an electric cell.

Jaw.
A forked attachment used for making a pivotal connection.

Jaw Pin.
See definition for Pin, Jaw.

Jaw, Screw.
A threaded jaw by means of which adjustments may be made to signal or interlocking units.

Jaw, Solid.
A jaw which does not permit of adjustments to signal or interlocking units.

Jaw, Wide.
A wide forked attachment commonly used to span a solid or screw jaw.

Joint.
The connection of two or more pieces of material.

Joint, Rail; Insulated.
A joint in which electrical insulation is provided between adjoining rails. (I.C.C.)

Journal.
The portion of a rotating shaft, spindle, etc., that turns in a bearing.

Journal, Plain; Rocking Shaft.
A journal used for supporting a rocking shaft.

Journal, Thrust; Rocking Shaft.
A journal used for supporting and securing a rocking shaft.

Jumper.
A comparatively short and usually removable connection commonly used to preserve the continuity of circuits.

Junction Box.
See definition for Box, Junction.

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K

Key, Strap.
A push button circuit controller which has a spring metal strip for momentarily opening or closing a circuit.

Kilo.
A prefix meaning one thousand.

Kilo-ampere.
1,000 amperes.

Kilovolt.
1,000 volts.

Kilovolt Ampere.
1,000 volt-amperes.

Kilowatt.
1,000 watts.

Kilowatt Hour.
The energy expended when 1 kilowatt of power is used for 1 hour or its equivalent.

kv.
The abbreviation for kilovolt.

kv-a.
The abbreviation for kilovolt ampere.

K.W.
k.w.
The abbreviation for kilowatt.

K.W.H.
k.w.h.
The abbreviation for kilowatt hour.

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L

Lag and Lead (Phase Difference).
See definition for Phase Difference.

Lamp.
A generic term for an artificial source of light. (A.I.E.E.)

Lamp Adapter.
See definition for Adapter, Lamp.

Lamp Bracket.
See definition for Bracket, Lamp.

Lamp Bulb.
See definition for Lamp, Electric.

Lamp, Electric.
A light source consisting of a glass bulb, containing a filament electrically maintained at incandescence and equipped with suitable base for mounting.

Lamp, Ground.
A lamp used for detecting grounds on circuits.

Lamp Life, Useful.
The number of burning hours the lamp will function effectively in the service to which applied.

Lamp Receptacle.
See definition for Receptacle, Lamp.

Lamp, Switch; Electric.
A mechanically rotated electric light unit, supplementing the switch target, for indicating position of switch or derail.

Lamp, Switch; Reflector Type.
A switch lamp equipped with colored reflectors to indicate the position of a switch.

Latch Block.
See definition for Block, Latch.

Latch, Lever.
A spring actuated mechanical device attached to the lever of an interlocking machine to hold it in the normal or reverse position.

Latch Locking.
See definition for Locking, Latch.

Latch-operated Locking.
See definition for Locking, Latch-operated.

Latch-out Device (Point Detector).
See definition for Device, Latch-out (Point Detector).

Latch Rod.
See definition for Rod, Latch.

Latch Shoe.
See definition for Shoe, Latch.

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Layout, Track.
An assemblage of tracks.

lb.
The abbreviation for pound.

Leadout.
A term applied to the mechanical connections of an interlocking between the machine and outside pipe lines.

Lead Sheathed Cable.
See definition for Cable, Lead Sheathed.

Leakage, Ballast.
The leakage of current from one rail of a track circuit to the other through the ballast, ties, etc.

Leakage Current.
See definition for Current, Leakage.

Leakage, Surface.
The passage of current over the boundary surfaces of an insulator rather than through its volume. (A.I.E.E.)

Lens.
A glass or similar product, usually circular in shape, designed to collect the rays of light directly from a light source and focus them into a beam of definite shape depending upon the design. It may be clear or colored as required.

Lever.
A device for transmitting motion.

Lever Blocking Device.
See definition for Device, Blocking; Lever.

Lever, Check.
See definition for Lever, Traffic.

Lever, Crossing.
See definition for Lever, Traffic.

Lever, Detector.
See definition for Lever, Traffic.

Lever Indication.
See definition for Indication, Lever.

Lever Latch.
See definition for Latch, Lever.

Lever Latch Block.
See definition for Block, Latch.

Lever Latch Handle.
See definition for Handle, Latch; Lever.

Lever Light.
See definition for Light, Lever.

Lever Locking.
See definition for Locking, Lever.

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Lever, Master.
A lever in an interlocking machine used to lock or unlock a group of levers.

Lever-operated Locking.
See definition for Locking, Lever-operated.

Lever, Route.
See definition for Lever, Traffic.

Lever, Spare.
A lever in an interlocking machine which performs no function.

Lever, Tail.
That part of an interlocking machine to which the operating pipe or other units may be connected.

Lever, Traffic.
A lever, or equivalent controlling device, used as a check lever, crossing lever, detector lever, master lever, route lever, also to control another lever, group of levers or functions to establish traffic direction.

Leverman.
A title sometimes applied to the operator of an interlocking machine.

Life, Lamp; Useful.
See definition for Lamp Life, Useful.

Light, Back.
See definition for Back Light.

Light Beam.
See definition for Beam, Light.

Light, Lever.
One or more lights located in or adjacent to a lever in an interlocking, car retarder or centralized traffic control machine to indicate information.

Light, Marker.
A light which by its color or position, or both, qualifies the signal aspect.

Light Signal.
See definition for Signal, Light.

Light Unit, Electric.
An assembly of one or more signal lenses, roundels or reflectors, arranged in a suitable frame or case with fixtures and an electric lamp or lamps from which a light beam or beams can be projected and controlled.

Lighting, Approach.
A method of lighting signals upon the approach of a train.

Lighting, Continuous.
A method of lighting signals continuously.

Lightning Arrester.
See definition for Arrester, Lightning.

Lightning Arrester Box.
See definition for Box, Lightning Arrester.

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Limited Speed.
See definition for Speed, Limited.

Limits, Interlocking.
The tracks between the home signals of an interlocking. (Standard Code.)

Line, Center.
A line adopted to be the center from which measurements may be taken.

Line Circuit.
See definition for Circuit, Line.

Line, Gage.
A line 5/8 inch below the top of the center line of head of running rail or corresponding location of tread portion of other track structures along that side which is nearer the center of the track. (A.R.E.A.)

Line, Open Wire.
An overhead wire line consisting of single conductors as opposed to multiple-conductor cables. (I.C.C.)

Line Relay.
See definition for Relay, Line.

Link, Adjustable.
A device commonly used in a pipe line and so designed that its length can be varied.

Link, Rocker.
That portion of an interlocking machine which transmits motion between the latch and the universal link. (I.C.C.)

Link, Universal.
The connection by means of which motion is transmitted from the rocker link to the mechanical locking in an interlocking machine.

Load, Induction.
A reactive load in which the current lags behind the voltage across the load.

Local Action.
Any non-productive internal chemical reaction tending to decompose the elements in a cell.

Lock and Block.
A term commonly used for the controlled manual block system.

Lock, Bolt.
A mechanical lock so arranged that if a switch, derail or movable point frog is not in the proper position for a train movement, the signal governing that movement cannot display an aspect to proceed; and that will prevent a movement of the switch, derail or movable point frog unless the signal displays its most restrictive aspect. (I.C.C.)

Lock, Electric.
A device to prevent or restrict the movement of a lever, a switch, or a movable bridge, unless the locking member is withdrawn by an electrical device, such as an electromagnet, solenoid, or motor. (I.C.C.)

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Lock, Electric; Forced-drop.

An electric lock in which the locking member is mechanically forced down to the locked position. (I.C.C.)

Lock, Facing Point.

A mechanical lock for a switch, derail or movable point frog, comprising a plunger stand and a plunger which engages a lock rod attached to the switch point to lock the operated unit. (I.C.C.)

*Lock, Indication; Electric.**

An electric lock connected to a lever of an interlocking machine to prevent the release of the lever or latch until the signals, switches or other units operated, or directly affected by such lever, are in the proper position.

Lock, Movable Bridge.

A device used to insure that a movable bridge is in proper position for the movement of trains.

Lock, Movable Bridge; Electric.

An electric lock used in connection with a movable bridge to prevent its operation until released.

Lock Nut.

See definition for Nut, Lock.

Lock, Rail; Movable Bridge.

A mechanical device used to insure that the movable bridge rails are in proper position for the movement of trains.

Lock Rod.

See definition for Rod, Lock.

Lock, Switch; Electric.

An electric lock connected with a switch or switch movement to prevent its operation until released.

Lock, Switch Lever; Electric.

An electric lock connected to a lever of an interlocking machine to prevent the movement of lever or latch until released.

Locking, Approach.

Electric locking effective while a train is approaching, within a specified distance, a signal displaying an aspect to proceed, and which prevents, until after the expiration of a predetermined time interval after such signal has been caused to display its most restrictive aspect, the movement of any interlocked or electrically locked switch, movable point frog, or derail in the route governed by the signal, and which prevents an aspect to proceed from being displayed for any conflicting route. (I.C.C.)

Locking Bar.

See definition for Bar, Locking.

Locking Bed.

See definition for Bed, Locking.

* For the sake of brevity, the word "electric" is commonly omitted when a particular kind of electric lock or electric locking is mentioned.

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Locking Bracket.

See definition for Bracket, Locking

Locking Dog.

See definition for Dog, Locking.

Locking, Electric.

The combination of one or more electric locks and controlling circuits by means of which levers of an interlocking machine are locked, or the equivalent using circuits only, so that switches, signals, or other units operated in connection with signaling and interlocking, are secured against operation under certain conditions, such as:

1. Approach locking.*
2. Indication locking.*
3. Switch lever locking.*
4. Time locking.*
5. Traffic locking.*

Locking Face.

See definition for Face, Locking.

Locking, Indication.

Electric locking which prevents manipulation of levers that would result in an unsafe condition for a train movement if a signal, switch, or other operative unit fails to make a movement corresponding to that of its controlling lever, or which directly prevents the operation of a signal, switch, or other operative unit, in case another unit which should operate first fails to make the required movement. (I.C.C.)

Locking, Latch.

See definition for Locking, Latch-operated.

Locking, Latch-operated.

The mechanical locking of an interlocking machine which is actuated by means of the lever latch. (I.C.C.)

Locking, Lever.

See definition for Locking, Lever-operated.

Locking, Lever-operated.

The mechanical locking of an interlocking machine which is actuated by means of the lever. (I.C.C.)

Locking, Mechanical.

An arrangement of locking bars, dogs, tappets, cross-locking and other apparatus by means of which the interlocking is effected between the levers of an interlocking machine and so interconnected that their movements must succeed each other in a predetermined order. (I.C.C.)

Locking, Movable Bridge.

The rail locks, bridge locks, bolt locks, circuit controllers, and electric locks used in providing interlocking protection at a movable bridge. (I.C.C.)

Locking, Preliminary.

Mechanical locking so arranged that the locking of the lever to prevent it from being moved in conflict with another lever, which is about to be moved, is fully effected before the second lever begins to perform its function.

* For the sake of brevity, the word "electric" is commonly omitted when a particular kind of electric lock or electric locking is mentioned.

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Locking, Route.

Electric locking, effective when a train passes a signal displaying an aspect for it to proceed, which prevents the movement of any switch, movable point frog, or derail in advance of the train within the route entered. It may be so arranged that as a train clears a track section of the route, the locking affecting that section is released. (I.C.C.)

Locking, Section.

Electric locking effective while a train occupies a given section of a route and adapted to prevent manipulation of levers that would endanger the train while it is within that section.

Locking Sheet.

See definition for Sheet, Locking.

Locking, Switch Lever; Electric.

A general term for route or section locking.

Locking, Time.

A method of locking, either mechanical or electrical, which, after a signal has been caused to display an aspect to proceed, prevents, until after the expiration of a predetermined time interval after such signal has been caused to display its most restrictive aspect, the operation of any interlocked or electrically locked switch, movable point frog, or derail in the route governed by that signal, and which prevents an aspect to proceed from being displayed for any conflicting route. (I.C.C.)

Locking, Traffic.

Electric locking which prevents the manipulation of levers or other devices for changing the direction of traffic on a section of track while that section is occupied or while a signal displays an aspect for a movement to proceed into that section. (I.C.C.)

Locomotive.

See definition for Engine.

Loss, Copper.

A term applied to the energy lost in the copper conductors of a dynamo, motor, transformer or conducting system.

Loss, Core.

A term applied to the energy lost by hysteresis or eddy currents in the core of an armature, transformer or similar device.

Losses, No-load.

The losses which occur in a transformer when connected to the source of power, which losses are substantially independent of the load. No-load losses include core losses, copper losses in the winding due to exciting current and dielectric losses in the insulation.

Lower Quadrant.

See definition for Quadrant, Lower.

Low-voltage Battery.

See definition for Battery, Low-voltage.

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Lubrication.

The application of a substance to reduce friction.

Lug, Point.

A lug bolted to the web of a switch point rail, to which the switch circuit controller rod is attached.

Lug, Switch Point.

A device attached to a switch point to which the front, head, or switch rod may be fastened.

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M

M.
The abbreviation for 1,000.

Machine Cabinet.
See definition for Cabinet, Machine.

Machine, Centralized Traffic Control.
A control machine for operation of a specific type of traffic control system of signals and switches.

Machine, Control.
An assemblage of manually operated levers or other devices for the control of signals, switches or other units, without mechanical interlocking, usually including a track diagram with indication lights.

Machine, Control; All-relay Interlocking.
See definition for Machine, Control.

Machine Frame.
See definition for Frame, Machine.

Machine, Interlocking.
An assemblage of manually operated levers or equivalent devices, for the control of signals, switches or other units, and including mechanical or circuit locking or both to establish proper sequence of movements.

Machine, Interlocking; Electric.
An interlocking machine for the control of electrically operated functions.

Machine, Interlocking; Electro-mechanical.
An interlocking machine for the control of both power and mechanically operated functions.

Machine, Interlocking; Electro-pneumatic.
An interlocking machine for the control of electro-pneumatically operated functions.

Machine, Interlocking; Mechanical.
An interlocking machine for the control of mechanically operated functions.

Machine, Interlocking; Table.
An interlocking machine for the control of power-operated functions and designed for mounting on a table or desk.

Machine Quadrant.
See definition for Quadrant, Machine.

Machine, Switch.
See definition for Movement, Switch-and-Lock.

Magnet.
A body which possesses the property of attracting magnetic substances.

Magnet Coil.
See definition for Coil, Magnet.

Magnet, Permanent.
A magnet which retains a nearly constant value of magneto-motive force for an indefinite period.

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Magnet, Track.
See definition for Element, Roadway.

Magnetic Air Gap.
See definition for Air Gap, Magnetic.

Magnetic Circuit.
See definition for Circuit, Magnetic.

Magnetic Field.
See definition for Field, Magnetic.

Magnetic Flux.
See definition for Flux, Magnetic.

Magnetic Force.
See definition for Force, Magnetic.

Magnetic Lines of Force.
Certain lines or directions in which magnetic induction takes place through a magnetic substance.

Magnetic Stick Relay.
See definition for Relay, Magnetic Stick.

Magnetic Unit.
See definition for Unit, Magnetic.

Magnetism, Residual.
The magnetism remaining in an electromagnet after the magnetizing current has ceased to flow.

Magneto.
A small generator using permanent magnets for field poles.

Main Track.
See definition for Track, Main.

Manhole.
The entrance to a chamber at a junction point in a conduit or cable system.

Manifold Condenser.
See definition for Condenser, Manifold.

Manipulation Chart.
See definition for Chart, Manipulation.

Manual Block System.
See definition for System, Manual Block.

Manual Interlocking.
See definition for Interlocking, Manual.

Marker Light.
See definition for Light, Marker.

Marline.
A treated stranded cord.

Mast, Bracket.
A signal mast for mounting on the crosspiece of a bracket post.

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Mast, Bridge.
A signal mast for mounting on a bridge above the track.

Mast, Cantilever.
A signal mast for mounting on a cantilever bridge above the track.

Mast, Ground.
A signal mast for mounting on a foundation at or near the track level.

Mast, Signal.
An upright support from which signals are displayed.

Master Lever.
See definition for Lever, Master.

Max.
The abbreviation for maximum.

Mechanical Interlocking Machine.
See definition for Machine, Interlocking; Mechanical.

Mechanical Locking.
See definition for Locking, Mechanical.

Mechanical Pipe Line.
See definition for Pipe Line, Mechanical.

Mechanism.
A term used for any mechanical or power-operated device for operating a signal or interlocking unit.

Mechanism, Base-of-mast.
A mechanism housed at the base of a signal mast.

Mechanism Case.
See definition for Case, Mechanism.

Mechanism, Top-of-mast.
A mechanism generally located at the top of, or clamped to the side of a signal mast.

Medium Speed.
See definition for Speed, Medium.

Meg.
The abbreviation for megohm.

Megohm.
One million ohms.

Messenger Wire.
See definition for Wire, Messenger.

Metal Taped Cable.
See definition for Cable, Metal Taped.

Meter.
A measuring instrument which indicates or records the value of the quantity under observation.

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Meter, Ampere-hour.
A meter that registers in ampere hours.

Meter, Watt-hour.
See definition for Watt-hour Meter.

mg.
The abbreviation for milligram.

Mil.
One one-thousandth of an inch.

Mil, Circular.
The area of a circle whose diameter is one mil.

Min.
The abbreviation for minimum or minute.

mm.
The abbreviation for millimeter.

m. m. f.
The abbreviation for magneto-motive force.

Motor, Electric.
A machine which transforms electrical power into mechanical power. (A.I.E.E.)

Motor-generator Set.
A machine which consists of one or more motors mechanically coupled to one or more generators. (A.I.E.E.)

Motor Type Relay.
See definition for Relay, Motor Type.

Movable Bridge.
See definition for Bridge, Movable.

Movable Bridge Circuit Controller.
See definition for Controller, Circuit; Movable Bridge.

Movable Bridge Coupler.
See definition for Coupler, Movable Bridge.

Movable Bridge Lock.
See definition for Lock, Movable Bridge.

Movable Bridge Locking.
See definition for Locking, Movable Bridge.

Movable Point Frog.
See definition for Frog, Movable Point.

Movement, Facing.
The movement of a train over the points of a switch which face in a direction opposite to that in which the train is moving. (I.C.C.)

Movement, Switch-and-lock.
A device, the complete operation of which performs the three functions of unlocking, operating, and locking a switch, movable point frog, or derail. (I.C.C.)

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Movement, Trailing.
The movement of a train over the points of a switch which face in the direction in which the train is moving. (I.C.C.)

Movements, Conflicting.
Movements over conflicting routes. (I.C.C.)

M. P.
The abbreviation for milepost.

M. P. F.
The abbreviation for movable point frog.

M. P. H.
m. p. h.
The abbreviation for miles per hour.

Multiple Circuit.
See definition for Circuit, Multiple.

Multiple Connection.
See definition for Connection, Multiple.

Multiple-series Circuit.
See definition for Circuit, Multiple-series.

Multiple-series Connection.
See definition for Connection, Multiple-series.

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N

Name Plate.
See definition for Plate, Name.

n.Conductor Cable.
See definition for Cable, n.Conductor.

N. E. C.
The abbreviation for National Electric Code.

Negative Plate.
See definition for Plate, Negative.

N. E. S. C.
The abbreviation for National Electrical Safety Code.

Neutral Relay.
See definition for Relay, Neutral.

No.
The abbreviation for number.

No-load Losses.
See definition for Losses, No-load.

Non-automatic Signal.
See definition for Signal, Non-automatic.

Non-metallic Sheathed Cable.
See definition for Cable, Non-metallic Sheathed.

Non-vital Circuit.
See definition for Circuit, Non-vital.

Normal Clear System.
See definition for System, Normal Clear.

Normal Contact.
See definition for Contact, Normal.

Normal Position.
See definition for Position, Normal.

Normal Stop System.
See definition for System, Normal Stop.

Number Plate.
See definition for Plate, Number.

Nut, Lock.
A supplementary nut to prevent loosening.

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O

O.
The abbreviation for zero.

Obtuse Angle Crank.
See definition for Crank, Obtuse Angle.

Ohm.
The unit of electrical resistance.

Ohmmeter.
An instrument for measuring resistance in ohms.

Ohm's Law.
The fundamental law of flow of electricity in a circuit. The rate of flow in amperes is equal to the electric pressure in volts divided by the resistance in ohms. $I = \frac{E}{R}$

Oil Buffer.
See definition for Buffer, Oil.

Oil Fount.
See definition for Fount, Oil.

One-to-one Transformer.
See definition for Transformer, Insulating.

Open Circuit.
See definition for Circuit, Open.

Open Contact.
See definition for Contact, Open.

Open Wire Line.
See definition for Line, Open Wire.

Operated Unit.
A switch, signal, lock or other device, which it is the function of a lever or other operating means to operate.

Operating Characteristics.
See definition for Characteristics, Operating.

Operating Rod.
See definition for Rod, Operating.

Operator, Control.
An employee assigned to operate the control machine of a traffic control system. (I.C.C.)

Opposing Signals.
See definition for Signals, Opposing.

Opposing Train.
See definition for Train, Opposing.

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OS.
A term used in reporting the time trains pass designated points.

Output.
The useful work performed by a machine.

Overlap.
The distance the control of one signal extends into the territory which another signal, or signals, governs.

Overload.
A load greater than that which a device is designed to carry.

Overload Relay.
See definition for Relay, Overload.

Overthrow.
The excess stroke of a switch operating rod.

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P

Parkway Cable.
See definition for Cable, Metal Taped.

Period, Alternating Current.
The period in alternating current is the time required for the current to pass through one cycle.

Permanent Magnet.
See definition for Magnet, Permanent.

Permeability.
A term used to express the ability of a substance, such as iron or steel, to carry magnetic lines of force.

Permissive Block.
See definition for Block, Permissive.

Permissive Block, Absolute.
See definition for System, Absolute Permissive Block.

Permissive Block System, Absolute.
See definition for System, Absolute Permissive Block.

P. F.
p. f.
The abbreviation for power factor.

Phantom Signal Aspect.
See definition for Aspect, Phantom Signal.

Phase.
The point or stage in the period to which the rotation, oscillation or variation has advanced, considered in its relation to a standard position or assumed instant of starting. This relation is commonly expressed in angular measure, one cycle or period being 360 degrees.

Phase Angle.
The angle expressing phase difference.

Phase Difference.
When corresponding cyclic values of two sinusoidal alternating quantities such as two alternating currents or electromotive forces or of a current and an electromotive force, of the same frequency, occur at different instants, the two alternating quantities are said to differ in phase, their phase difference being the same interval, expressed in degrees or as a fraction of a cycle, between the occurrence of their corresponding values; e.g., their ascending zeros or their positive maxima.

Polyphase is the general term applied to any alternating system with more than a single phase.

Quarter phase, also called two phase. A term characterizing the combination of two circuits energized by alternating electromotive forces which differ in phase by a quarter of a cycle; *i.e.*, 90 degrees.

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Phase Difference—Continued.

Single phase. A term characterizing a simple alternating current circuit energized by a single alternating electromotive force. Such a circuit is usually supplied through two wires. The currents in these two wires, counted positively outwards from the source, differ in phase by 180 degrees or half a cycle.

Three phase. A term characterizing the combination of three circuits energized by alternating electromotive forces which differ in phase by one-third of a cycle; *i.e.*, 120 degrees.

Phase Difference Lag and Lead.
See definition for Phase Difference.

Phase Relation.
See definition for Phase Difference.

Photometric Value.
See definition for Value, Photometric.

Physical Air Gap.
See definition for Air Gap, Physical.

Pick-up.
The electrical value which, when applied to an electromagnetic instrument, will cause the moving member to move to the position which will just close the front contacts or visually indicate its energized position.

Piece, Driving.
A crank secured to a locking shaft by means of which horizontal movement is imparted to a longitudinal locking bar. (I.C.C.)

Piece, Driving; Detector Bar.
A device secured to a detector bar to which the driving rod is attached.

Pilot Cell.
See definition for Cell, Pilot.

Pin, Channel.
A tapered metal plug with one or two grooves used to fasten one or two bond wires to a rail.

Pin, Cotter.
See definition for Cotter.

Pin, Crank.
The pin used to secure a crank to a crank stand and forms a pivot.

Pin, Dowel.
A pin used to accurately maintain the proper alignment between two parts.

Pin, Insulator.
A threaded device designed to support an insulator.

Pin, Jaw.
The pin used to connect a jaw to another device and forms a pivot.

Pin Point Lightning Arrester.
See definition for Arrester, Lightning; Pin Point.

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Pinnacle.
A casting which is placed on top of a mast or post.

Pipe Adapter.
See definition for Adapter, Pipe.

Pipe Adjusting Screw.
See definition for Screw, Pipe Adjusting.

Pipe Carrier.
See definition for Carrier, Pipe.

Pipe Carrier Stand.
See definition for Stand, Pipe Carrier.

Pipe Coupling.
See definition for Coupling, Pipe.

Pipe Guide.
See definition for Guide, Pipe.

Pipe Insulation.
See definition for Rod, Insulated.

Pipe Line, Air.
A pipe line installed for the purpose of conducting compressed air.

Pipe Line, Mechanical.
A connection made with pipe with its supporting apparatus from the operating lever to the operated unit.

Pipe Plug.
See definition for Plug, Pipe.

Pipe Roller.
See definition for Roller, Pipe.

Pipe Run.
See definition for Run, Pipe.

Pipe Union.
See definition for Union, Pipe.

Plate, Gage.
A metal plate, extending from rail to rail, used to maintain gage of track.

Plate, Name.
A plate affixed to a device giving the manufacturer's name and other information.

Plate, Negative.
The grid and active material to which the current flows from the external circuit when the battery is discharging. (A.I.E.E.)

Plate, Number.
A device fastened to signal apparatus for the purpose of identification.

Plate, Positive.
The grid and active material from which the current flows to the external circuit when the battery is discharging. (A.I.E.E.)

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Plate, Riser.
A plate attached to a gage or tie plate used to support and raise a switch point above the base of rail and maintain minimum gage.

Plate, Tie.
A plate interposed between a rail or other track structure and a tie. (A.R.E.A.)

Plate, Top. (Mechanical Locking)
A metal plate secured to a locking bracket to prevent the cross-locking from being forced out of the bracket. (I.C.C.)

Plate, Top; Relay.
That portion of a shelf or wall type relay to which the magnetic structure and contact elements are attached and which forms a part of the relay enclosure.

Plug Bond.
See definition for Bond, Plug.

Plug, Pipe.
A short section of rod, which is inserted in and riveted to the contiguous ends of pipe in a pipe line.

Plunger, Facing Point Lock.
That part of a facing point lock which secures the lock rod to the plunger stand when the switch is locked. (I.C.C.)

Plunger Stand.
See definition for Stand, Plunger.

Point, Clearance.
The location on a turnout at which the carrier's specified clearance is provided between tracks. (I.C.C.)

Point, Controlled.
A location where signals or other functions or both of a traffic control system are controlled from the control machine. (I.C.C.)

Point Detector.
See definition for Detector, Point.

Point Detector (with Latch-out Device).
See definition for Detector, Point (with Latch-out Device).

Point, Fouling.
The location on a turnout back of the frog at which insulated joints or derails are placed at or beyond clearance point.

Point Lug.
See definition for Lug, Point.

Point, Stop Indication.
As applied to an automatic train stop or train control system without the use of roadway signals, a point where a signal displaying an aspect requiring a stop would be located. (I.C.C.)

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Point, Switch.
A movable tapered track rail, the point of which is designed to fit against the stock rail.

Polar.
Of or pertaining to a magnetic pole.

Polar Contact.
See definition for Contact, Polar.

Polar Relay.
See definition for Relay, Polar.

Polarity.
An electrical condition determining the direction in which current tends to flow. (A.I.E.E.)

Polarization, Electric.
The condition of having free ions liberated at the electrodes whereby a counter electromotive force is set up.

Polarized Circuit.
See definition for Circuit, Polarized.

Polarized Relay.
See definition for Relay, Polarized.

Polarized Retained Neutral Relay.
See definition for Relay, Polarized Retained Neutral.

Pole Changer.
See definition for Changer, Pole.

Pole, Gin.
An upright used in connection with raising or moving heavy weight.

Pole Piece.
That part of the core of an electromagnet which projects beyond the coil.

Polyphase Circuit.
See definition for Circuit, Polyphase.

Polyphase Relay.
See definition for Relay, Two-element

Portable Battery.
See definition for Battery, Portable.

Position, De-energized.
The position assumed by the moving member of an electromagnetic device when the device is deprived of its operating current. (I.C.C.)

Position, False Restrictive.
See definition for Aspect, False Restrictive.

Position Light Signal.
See definition for Signal, Position Light.

Position, Normal.
The predetermined position in which a device is set.

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Position, Reverse.
The opposite to normal position.

Positive Plate.
See definition for Plate, Positive.

Post, Binding.
A device to which electrical conductors may be terminaled conveniently.

Post, Bracket.
A post with a top crosspiece used to support a signal mast.

Post, Cable.
An upright designed for supporting a cable.

Post, Relay Box.
A post for supporting a relay or instrument housing.

Pot Signal.
See definition for Signal, Pot.

Potential, Electric.
See definition for Voltage.

Potential Transformer.
See definition for Transformer, Potential.

Potentiometer.
An instrument for measuring electromotive force galvanometrically.

Power.
The rate of transferring or transforming energy. (A.I.E.E.)

Power, Apparent or Volt-ampere.
Apparent power of a single-phase two-wire circuit is equal to the product of the current multiplied by the potential.

Power Factor.
The ratio of active power to apparent power. (A.I.E.E.)

Power House.
A building provided for housing power equipment.

Power Off Relay.
See definition for Relay, Power Transfer.

Power Plant.
A power house with equipment for the production, control and distribution of energy.

Power Relay.
See definition for Relay, Power.

Power Transfer Relay.
See definition for Relay, Power Transfer

Preliminary Locking.
See definition for Locking, Preliminary.

Primary Cell.
See definition for Cell, Primary.

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Primary Cut-out.
See definition for Cut-out, Primary.

Primary Winding.
See definition for Winding, Primary.

Principle, Closed Circuit.
The principle of circuit design where a normally energized electric circuit which, on being interrupted or de-energized, will cause the controlled function to assume its most restrictive condition. (I.C.C.)

Propulsion Bond.
See definition for Bond, Propulsion.

Protection, Automatic.
See definition for Interlocking, Automatic.

Protection, Automatic; Railroad Grade Crossing.
See definition for Interlocking, Automatic.

Protection, Cross.
An arrangement to prevent the improper operation of a signal, switch, movable point frog, or derail as the result of a cross in electrical circuits. (I.C.C.)

Pulsating Current.
See definition for Current, Pulsating.

Pulsation, Electric.
A variation or oscillation in an electric circuit.

Push Button.
See definition for Button, Push.

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Q

Q.
The abbreviation for quadrant.

Quadrant.
A fourth part of a circle.

Quadrant, Lower.
One of the quarters of a vertical circle below its horizontal axis.

Quadrant, Machine.
The part of an interlocking machine with which the latch block engages.

Quadrant, Upper.
One of the quarters of a vertical circle above its horizontal axis.

Quick Drop-away Relay.
See definition for Relay, Quick Drop-away.

Quick Pick-up Relay.
See definition for Relay, Quick Pick-up.

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R

Radial Arm.
See definition for Arm, Radial.

Rail Bond.
See definition for Bond, Rail.

Rail Brace.
See definition for Brace, Rail.

Rail Clip.
See definition for Clip, Rail.

Rail Joint Bond.
See definition for Bond, Rail Joint.

Rail, Stock.
The rail against which the point of a switch, derail or movable point frog rests.

Railroad Grade Crossing.
See definition for Crossing, Grade; Railroad.

Railroad Grade Crossing Automatic Protection.
See definition for Interlocking, Automatic.

Ramp. (Train Control)
See definition for Element, Roadway.

Rate, Charging.
The charging rate of a storage battery is the current expressed in amperes at which a battery is charged. (A.I.E.E.)

Reactance.
The ohmic effect due to induction in an alternating current circuit.

Reactance Bond.
See definition for Bond, Reactance.

Reactor.
A device in an alternating current circuit used to increase its reactance.

Receiver. (Train Control)
A device on a locomotive, so placed that it is in position to be influenced inductively or actuated by an automatic train stop, train control, or cab signal roadway element. (I.C.C.)

Receptacle, Lamp.
A lamp holder or socket for supporting an electric lamp mechanically and connecting it electrically.

Recording Air Gage.
See definition for Gage, Air; Recording.

Recording Voltmeter.
See definition for Voltmeter, Recording.

Rectification, Full-wave.
Rectification in which both halves of the alternating current cycle are transmitted as unidirectional current. (A.I.E.E.)

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Rectification, Half-wave.

Rectification permitting only one-half of the alternating current cycle to be transmitted as unidirectional current. (A.I.E.E.)

Rectifier.

A device which converts alternating current into unidirectional current by virtue of a characteristic permitting appreciable flow of current in one direction only. (A.I.E.E.)

Ref.

The abbreviation for reference.

Reflector Unit.

A device designed to reflect, in the direction of the light source, a substantial amount of the light impinged upon it.

Reflector Unit, Double Refraction.

A type of reflector unit in which the light to be reflected passes through and beyond the refracting medium thereby changing its direction when entering and again when leaving.

Reflector Unit, Single Refraction.

A type of reflector unit in which the light to be reflected passes through but not beyond the refracting medium thereby changing its direction only when entering.

Relay.

A device that is operative by a variation in the conditions of one electric circuit to affect the operation of other devices in the same or another electric circuit.

Relay, A. C.

A relay designed to respond to alternating current.

Relay, Biased.

A relay which will operate to its energized position by current of one polarity only, and will return to its de-energized position when current is removed.

Relay Box.

See definition for Box, Relay.

Relay Box Post.

See definition for Post, Relay Box.

Relay Cabinet.

See definition for Cabinet, Relay.

Relay, Centrifugal.

An alternating current frequency selective relay in which the contacts are operated by a fly ball governor or centrifuge driven by an induction motor.

Relay, Code Following.

A relay which will follow or reproduce a code without distortion within practical limits.

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Relay, Current.

A relay which functions at a predetermined value of current. It may be an over-current relay, an under-current relay, or a combination of both. (A.I.E.E.)

Relay, D. C.

A relay designed to respond to direct current.

Relay, Differential.

A relay having windings operating in opposition.

Relay, Electro-pneumatic.

A relay, the contacts of which are operated by air pressure.

Relay, Flasher.

A relay so designed that, when energized, its contacts open and close at predetermined intervals.

Relay, Frequency.

A relay designed to respond to alternating current of a predetermined frequency.

Relay, Interlocking.

A relay having two independent magnetic circuits with their respective armatures so arranged that the dropping away of either armature prevents the other armature from dropping away to its full stroke.

Relay, Line.

A relay receiving its operating energy through conductors of which the track rails form no part.

Relay, Magnetic Stick.

A relay, the armature of which remains at full stroke in its last energized position when its control circuit is opened.

Relay, Motor Type.

A relay which operates on the principle of a motor.

Relay, Neutral.

A relay which operates in response to a predetermined change of the current in the controlling circuit, irrespective of the direction of the current.

Relay, Overload.

A relay which operates to open contacts when the current through its control coils exceeds a predetermined value.

Relay Plate Top.

See definition for Plate, Top; Relay.

Relay, Polar.

A relay which operates in response to a change in the direction of current in its controlling circuit and the armature of which may or may not remain at full stroke when its control circuit is interrupted.

Relay, Polarized.

A neutral relay equipped with polar armatures and contacts.

Relay, Polyphase.

An alternating current relay having two or more windings, operating on an induction motor principle, all windings of which must be properly energized to cause the relay to operate.

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Relay, Power.
A relay which functions at a predetermined value of the power.

Relay, Power Off.
See definition for Relay, Power Transfer.

Relay, Power Transfer.
A relay so connected to the normal source of power supply that the failure of such source of power supply causes the load to be transferred to another source of power supply.

Relay, Quick Drop-away.
A relay which, when the controlling circuit is opened or completely shunted, will release quicker than an ordinary relay.

Relay, Quick Pick-up.
A relay which, when energy is applied, will pick up quicker than an ordinary relay.

Relay, Retained Neutral.
A neutral relay, the armature of which is retained in the energized position for a predetermined interval of open circuit during the reversal of current in the control coils.

Relay, Retained Neutral Polarized.
A polarized relay, the neutral armature of which is retained in the energized position for a predetermined interval of open circuit during the reversal of current in the control coils.

Relay, Rotor Type.
See definition for Relay, Motor Type.

Relay, Single-element.
A relay, usually alternating current, having a single winding.

Relay, Slow Drop-away.
A relay which, when the controlling circuit is opened or completely shunted, will release slower than an ordinary relay.

Relay, Slow Pick-up.
A relay which, when energy is applied, will pick up slower than an ordinary relay.

Relay, Sun.
A term commonly applied to a device, the contacts of which are actuated by light and darkness.

Relay, Thermal.
A timing relay whose contacts are actuated by the heating effect of current flowing through its controlling element.

Relay, Three-position.
A relay which operates in three positions.

Relay, Time Element.
See definition for Relay, Timing.

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Relay, Timing.
A relay which will not close its front contacts or open its back contacts, or both, until the expiration of a definite time interval after the relay has been energized. (I.C.C.)

Relay, Track.
A relay receiving all or part of its operating energy through conductors of which the track rails are an essential part.

Relay, Transformer.
A relay in which the coils act as a transformer.

Relay, Two-element.
A relay, usually alternating current, having two separate windings, both of which must be properly energized to cause the relay to operate.

Relay, Two-position.
A relay which operates in two positions.

Relay, Vane Type.
A type of alternating current relay in which a light metal disc or vane moves in response to a change of the current in the controlling circuit.

Relay, Voltage.
A relay which functions at a predetermined value of the voltage.

Relayed Cut-section.
See definition for Cut-section, Relayed.

Release, Hand Screw.
See definition for Release, Time.

Release, Time.
A device used to prevent the operation of an operative unit until after the expiration of a predetermined time interval after the device has been actuated. (I.C.C.)

Release, Time; Clockwork.
See definition for Release, Time.

Release Value.
See definition for Value, Release.

Reluctance.
The magnetic resistance offered by a magnetic circuit to the passage of the lines of force.

Remote Control.
See definition for Control, Remote.

Repeater.
A device conveying information as to the condition of an operated unit.

Reset.
See definition for Device, Reset.

Reset Device.
See definition for Device, Reset.

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Residual Magnetism.
See definition for Magnetism, Residual.

Resistance.
The opposition offered by a substance or body to the passage through it of an electric current.

Resistance, Ballast.
The resistance offered by the ballast, ties, etc., to the flow of leakage current from one rail of a track circuit to the other.

Resistance, Contact.
The resistance produced by the contact of two surfaces.

Resistance, Forward.
The direct current resistance in the low-resistance direction of a rectifier element or assembly.

Resistance, Insulation.
See definition for Insulation Resistance.

Resistance, Reverse.
The direct current resistance in the high-resistance direction of a rectifier element or assembly.

Resistance, Train Shunt.
The actual resistance in ohms from rail to rail through wheels and axles of a train, engine or car. This resistance will vary with rail and wheel surface conditions and with weight of equipment.

Resistance Unit.
A device used in a circuit to increase its resistance.

Resistance Unit, Fixed.
A non-adjustable resistance unit.

Resistance Unit, Variable.
An adjustable resistance unit.

Resistor.
A resistance unit.

Restoring Feature.
See definition for Feature, Restoring.

Restricted Speed.
See definition for Speed, Restricted.

Retained Neutral Polarized Relay.
See definition for Relay, Polarized Retained Neutral.

Retained Neutral Relay.
See definition for Relay, Retained Neutral.

Retarder, Car.
A braking device, usually power-operated, built into a railway track to reduce the speed of cars by means of brake-shoes which, when set in braking position, press against the sides of the lower portions of the wheels. (A.R.E.A.)

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Reverse Contact.
See definition for Contact, Reverse.

Reverse Position.
See definition for Position, Reverse.

Reverse Resistance.
See definition for Resistance, Reverse.

r. h.
The abbreviation for right hand.

Rheostat.
An adjustable resistor so constructed that its resistance may be changed without opening the circuit in which it may be connected. (A.I.E.E.)

Right-angle Crank.
See definition for Crank, Right-angle.

Ring, Bridle.
A ring with or without insulating bushing used for supporting suspended wires.

Ring, Roundel.
A device by means of which a roundel is held in place.

Riser Plate.
See definition for Plate, Riser.

r.m.s.
The abbreviation for root mean square.

Roadway Element.
See definition for Element, Roadway.

Roadway Signal.
See definition for Signal, Fixed.

Rocker.
See definition for Link, Rocker.

Rocker Link.
See definition for Link, Rocker.

Rocking Shaft.
See definition for Shaft, Rocking.

Rocking Shaft Arm.
See definition for Arm, Rocking Shaft.

Rocking Shaft Plain Journal.
See definition for Journal, Plain; Rocking Shaft.

Rocking Shaft Thrust Journal.
See definition for Journal, Thrust; Rocking Shaft.

Rod, Down.
A rod used for connecting an interlocking lever to a rocking shaft or crank.

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Rod, Front.

A rod connecting the points of a switch or movable point frog, by means of which the relative location of the points is maintained and to which the lock rod is attached.

Rod, Head.

A rod connecting the points of a switch or movable point frog, by means of which the relative location of the points is maintained and to which the operating rod is attached.

Rod, Insulated.

A metal rod in which an insulation has been inserted between its abutting ends to prevent passage of current through the rod.

Rod, Latch.

The connection between the latch handle and the latch block on the lever of an interlocking machine.

Rod, Lock.

A rod, attached to the front rod or lug of a switch, movable point frog, or derail, through which a locking plunger may extend when the switch points or derail are in the normal or reverse position. (I.C.C.)

Rod, Lock.

A rod, attached to the front rod or lug, through which a locking plunger may extend when the points or derail are in the normal or reverse position.

Rod, No. 1.

See definition for Rod, Head.

Rod, Operating.

The rod by means of which motion is transmitted to apparatus.

Rod, Switch.

A rod connecting the two points of a switch or movable point frog, by means of which the relative distance between the points is maintained.

Rod, Throw.

See definition for Rod, Operating.

Rod, Up-and-down.

A rod used for connecting the semaphore arm to the operating mechanism of a signal. (I.C.C.)

Roller, Pipe.

A device for eliminating friction in a pipe line.

Rope Lay Cable.

See definition for Cable, Rope Lay.

Rotary Converter.

See definition for Converter, Rotary.

Rotor.

The rotating member of motors, generators or motor type relays.

Rotor Type Relay.

See definition for Relay, Motor Type.

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Roundel.

A glass or similar product, usually circular in shape, used in lens or reflector assemblies for producing color or for mechanical protection of critical parts, or for spreading or deflecting the projected light beam into a pattern, dependent upon the design. It may be clear or colored as required.

Roundel Clip.

See definition for Clip, Roundel.

Roundel Ring.

See definition for Ring, Roundel.

Route.

The course or way which is, or is to be, traveled.

Route, Interlocked.

A route within interlocking limits. (I.C.C.)

Route Lever.

See definition for Lever, Traffic.

Route Locking.

See definition for Locking, Route.

Routes, Conflicting.

Two or more routes, opposing, converging, or intersecting, over which movements cannot be made simultaneously without possibility of collision. (I.C.C.)

r.p.m.

The abbreviation for revolutions per minute.

R.R.

The abbreviation for railroad.

R.S.A.

The abbreviation for Railway Signal Association.

Rubber Tape.

See definition for Tape, Rubber.

Rule.

A law or order authoritatively governing conduct or action.

Run, Pipe.

An assemblage of pipe lines with their carriers and foundations in a common course.

Ry.

The abbreviation for railway.

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S

S.A.E.
The abbreviation for Society of Automotive Engineers.

S. & F.
The abbreviation for Saxby and Farmer.

Sand Tray.
See definition for Tray, Sand.

Screw, Adjusting.
A threaded device by means of which adjustments may be made to signal or interlocking units.

Screw Jaw.
See definition for Jaw, Screw.

Screw, Pipe Adjusting.
A device for changing the length of a pipe in a pipe line.

Screw, Set.
A screw for holding in place part of an apparatus with relation to another part.

Sec.
The abbreviation for secondary, second and section.

Second Voltage Range.
See definition for Voltage Range, Second.

Secondary Cell.
See definition for Cell, Secondary.

Secondary Winding.
See definition for Winding, Secondary.

Section, Controlling.
See definition for Controlling Section.

Section, Dead.
A section of track, either within a track circuit or between two track circuits, the rails of which are not part of a track circuit. (I.C.C.)

Section, Fouling.
The section of track between the switch points and the fouling point in a turnout.

Section Locking.
See definition for Locking, Section.

Sectionalizing Switch.
See definition for Switch, Sectionalizing.

Selector.
A device by means of which power may be transmitted selectively.

Selector Coil.
See definition for Coil, Selector.

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Semaphore Arm.
See definition for Arm, Semaphore.

Semaphore Arm Spectacle.
See definition for Spectacle, Semaphore Arm.

Semaphore Bearing.
See definition for Bearing, Semaphore.

Semaphore Blade.
See definition for Blade, Semaphore.

Semaphore Counterweight.
See definition for Counterweight, Semaphore.

Semaphore Signal.
See definition for Signal, Semaphore.

Semi-automatic Control.
See definition for Control, Semi-automatic.

Semi-automatic Signal.
See definition for Signal, Semi-automatic.

Semi-automatic Stick Signal.
See definition for Signal, Stick; Semi-automatic.

Separate Return Circuit.
See definition for Circuit, Line; Double-Wire.

Separator, Battery; Storage.
A partition of insulating material introduced between the plates of a storage battery to prevent short circuiting.

Series Circuit.
See definition for Circuit, Series.

Series Connection.
See definition for Connection, Series.

Series-multiple Circuit.
See definition for Circuit, Series-multiple.

Series-multiple Connection.
See definition for Connection, Series-multiple.

Series or Current Transformer.
See definition for Transformer, Current or Series.

Set Screw.
See definition for Screw, Set.

Shaft, Rocking.
A shaft in a mechanical leadout which transmits motion from a down rod to the pipe line through rocking shaft arms.

Sheet, Locking.
A description in tabular form of the locking operations in an interlocking machine. (I.C.C.)

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Shoe.

See definition for Receiver.

Shoe, Latch.

The casting by means of which the latch rod and the latch block are held to a lever of a mechanical interlocking machine. (I.C.C.)

Short Circuit.

See definition for Circuit, Short.

Shunt.

A by-path in an electrical circuit. (I.C.C.)

Shunt Circuit.

See definition for Circuit, Shunt.

Shunt Fouling Circuit.

See definition for Circuit, Shunt Fouling.

Shunt Wire.

See definition for Wire, Shunt.

Shunting Sensitivity.

Shunting sensitivity of a track circuit is:

1. Non-coded track circuit.

   The maximum resistance in ohms which will cause the relay contacts to open when this resistance is placed between the rails at the most adverse shunting location.

2. Coded track circuit.

   The maximum resistance in ohms which will prevent the code responsive track relay from following the code when this resistance is placed between the rails at the most adverse shunting location.

Siding.

A track auxiliary to the main track for meeting or passing trains. (Standard Code.)

Sig.

The abbreviation for signal.

Sig. Sec.

The abbreviation for Signal Section.

Signal.

A means of conveying information.

Signal, Approach.

A fixed signal used in connection with one or more signals to govern the approach thereto. (Standard Code.)

Signal Aspect.

See definition for Aspect, Signal.

Signal, Audible.

A sound-producing device used for attracting attention.

Signal, Automatic.

A signal controlled automatically.

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Signal, Block.

A fixed signal at the entrance of a block to govern trains and engines entering and using that block. (Standard Code.)

Signal Bridge.

See definition for Bridge, Signal.

Signal, Cab.

A signal located in engineman's compartment or cab, indicating a condition affecting the movement of a train or engine and used in conjunction with interlocking signals and in conjunction with or in lieu of block signals. (Standard Code.)

Signal, Color Light.

A fixed signal in which the indications are given by the color of a light only.

Signal, Color Position Light.

A fixed signal in which the indications are given by color and the position of two or more lights.

Signal Counter.

See definition for Counter, Signal.

Signal, Disc.

A signal in which a colored disc is displayed behind a glass front in a closed case.

Signal, Dwarf.

A low home signal. (Standard Code.)

Signal, Fixed.

A signal of fixed location indicating a condition affecting the movement of a train or engine. (Standard Code.)

Signal, Flashing Light.

A highway crossing signal, the indication of which is given by two horizontal red lights flashing alternately at predetermined intervals, or a fixed signal in which the aspects are given by color and by the flashing of one or more of the signal lights.

Signal, Four-Position.

A light signal unit arranged to provide four aspects.

Signal, Highway Crossing.

An electrically operated signal used for the protection of highway traffic at railroad-highway grade crossings.

Signal, Home.

A fixed signal at the entrance of a route or block to govern trains or engines entering and using that route or block. (Standard Code.)

Signal Indication.

See definition for Indication, Signal.

Signal, Light.

A fixed signal in which the indications are displayed by the color or position of a light or lights, or both.

Signal Mast.

See definition for Mast, Signal.

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Signal, Non-automatic.
A signal controlled manually.

Signal, Position Light.
A fixed signal in which the indications are given by the position of two or more lights.

Signal, Pot.
A small revolving fixed signal used as a substitute for a dwarf signal.

Signal, Roadway.
See definition for Signal, Fixed.

Signal, Semaphore.
A signal in which the day indications are given by the position of a semaphore arm.

Signal, Semi-automatic.
A signal which is controlled both manually and automatically.

Signal, Slotted Mechanical.
A mechanically operated signal with an electromagnetic device inserted in its operating connection to provide a means of controlling the signal electrically as well as mechanically. (I.C.C.)

Signal, Smashboard.
A signal so designed that the arm will be broken when passed in the Stop position.

Signal, Stick; Semi-automatic.
A signal so controlled that after automatically assuming a more restrictive position it will not clear until the lever is restored to the normal position and reversed.

Signal, Switch.
A low two-indication horizontal color light signal with electric lamps, for indicating position of switch or derail.

Signal, Three-Position.
A semaphore arm or a light signal unit arranged to provide three aspects.

Signal, Train Order.
A signal used to indicate to a train whether or not it will receive orders.

Signal, Two-Position.
A semaphore arm or a light signal unit arranged to provide two aspects.

Signal, Wig-wag.
A highway crossing signal, the indication of which is given by a horizontally swinging disc with or without a red light attached.

Signals, Interlocking.
The fixed signals of an interlocking. (Standard Code.)

Signals, Opposing.
Roadway signals which govern movements in opposite directions on the same track. (I.C.C.)

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Single-element Relay.
See definition for Relay, Single-element.

Single-phase Circuit.
See definition for Circuit, Single-phase.

Single Refraction Reflector Unit.
See definition for Reflector Unit, Single Refraction.

Single-slip Switch.
See definition for Switch, Single-slip.

Single Stroke Bell.
See definition for Bell, Single Stroke.

Sliding Contact.
See definition for Contact, Sliding.

S.L.M.
The abbreviation for switch-and-lock movement.

Slot.
A disconnecting device inserted in the connection between a signal arm and its operating mechanism.

Slotted Mechanical Signal.
See definition for Signal, Slotted Mechanical.

Slow Drop-away Relay.
See definition for Relay, Slow Drop-away.

Slow Pick-up Relay.
See definition for Relay, Slow Pick-up.

Slow Speed.
See definition for Speed, Slow.

Smashboard Signal.
See definition for Signal, Smashboard.

Socket.
See definition for Receptacle, Lamp.

Soldering Flux.
See definition for Flux, Soldering.

Solenoid.
An electromagnet, the core of which is a movable plunger.

Solid Jaw.
See definition for Jaw, Solid.

Solid Wire.
See definition for Wire, Solid.

Space, Spare.
A lever space in an interlocking machine in which there is no lever.

Spare Lever.
See definition for Lever, Spare.

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Spare Space.
See definition for Space, Spare.

Spark Gap.
See definition for Gap, Spark.

Spectacle.
That part of a semaphore signal which holds the roundels and to which the blade is fastened.

Spectacle, Semaphore Arm.
That part of a semaphore arm which holds the roundels and to which the blade is fastened. (I.C.C.)

Speed, Limited.
A speed not exceeding ---*--- miles per hour. (Standard Code.)

Speed, Medium.
A speed not exceeding ---*--- miles per hour. (Standard Code.)

Speed, Reduced.
Proceed prepared to stop short of train or obstruction. (Standard Code.)

Speed, Restricted.
Proceed prepared to stop short of train, obstruction, or switch not properly ined and to look out for broken rail, not exceeding ---*--- miles per hour. (Standard Code.)

Speed, Slow.
A speed not exceeding ---*--- miles per hour. (Standard Code.)

Speed, Yard.
A speed that will permit stopping within one-half the range of visicn. (Standard Code.)

Spring Contact.
See definition for Contact, Spring.

Spring Switch.
See definition for Switch, Spring.

SS Protection.
An arrangement of circuits whereby proceed aspects of a signal cannot be displayed unless the switch and its controlling lever or equivalent device are in corresponding position.

Staff.
The part of the apparatus used in a train staff system, the possession of which gives the train permission to enter a block.

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* Railroads may insert in definitions where asterisk is shown, suitable speed in miles per hour not exceeding 20 MPH for Restricted Speed and/or Slow Speed, 40 MPH for Medium Speed, and 60 MPH for Limited Speed. (Standard Code.)

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Staff Crane.
See definition for Crane, Staff.

Staff Tip Adapter.
See definition for Adapter, Staff Tip.

Stand, Crank.
A device used to support one or more cranks.

Stand, Pipe Carrier.
The supporting frame of a pipe carrier.

Stand, Plunger.
That part of a facing point lock through which the plunger and lock rod move.

Standard Code.
See definition for Code, Standard.

Station.
A place designated on the time-table by name. (Standard Code.)

Station, Block.
A place at which manual block signals are displayed. (Standard Code.)

Station, Control.
The place where the control machine of a traffic control system is located. (I.C.C.)

Station, Interlocking.
A place from which an interlocking is operated. (Standard Code.)

Stationary Battery.
See definition for Battery, Stationary.

Stator.
The stationary member of motors, generators or motor type relays.

Std.
The abbreviation for standard.

Stick Circuit.
See definition for Circuit, Stick.

Stick Signal, Semi-automatic.
See definition for Signal, Stick; Semi-automatic.

Stock Rail.
See definition for Rail, Stock.

Stop. (Mechanical Locking)
As applied to mechanical locking, a device secured to a locking bar to limit its movement. (I.C.C.)

Stop Indication Point.
See definition for Point, Stop Indication.

Stopping Distance.
See definition for Distance, Stopping.

Storage Battery Efficiency.
See definition for Efficiency, Battery; Storage.

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Storage Battery Gassing.
See definition for Gassing, Battery; Storage.

Storage Battery Separator.
See definition for Separator, Battery; Storage.

Storage Cell.
See definition for Cell, Storage.

Straight-arm Crank.
See definition for Crank, Straight-arm.

Stranded Wire.
See definition for Wire, Stranded.

Strap, Butt.
A metal block attached to the tie or gage plate to provide a bearing for a rail brace.

Strap Key.
See definition for Key, Strap.

Strength, Dielectric.
See definition for Dielectric Strength.

Stuffing Box.
See definition for Box, Stuffing.

Submarine Cable.
See definition for Cable, Submarine.

Sun Relay.
See definition for Relay, Sun

Surface Leakage.
See definition for Leakage, Surface.

Swing Dog.
See definition for Dog, Swing.

Switch, Acknowledger or Forestalling.
See definition for Device, Acknowledging.

Switch Adjustment Bracket.
See definition for Bracket, Switch Adjustment.

Switch-and-lock Movement.
See definition for Movement, Switch-and-lock.

Switch Circuit Controller.
See definition for Controller, Circuit; Switch.

Switch, Double-slip.
A combination of a crossing and two connecting tracks, located within the limits of the crossing, each being made up of a right-hand switch from the one track and a left-hand switch from the other track, which unite to form the respective connecting tracks without additional frogs.

Switch (Electric).
A device by means of which an electric circuit may be opened or closed.

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Switch, Electro-pneumatic.
A track switch operated by an electro-pneumatic switch-and-lock movement.

Switch, Facing Point.
A track switch, the points of which face traffic approaching in the direction for which the track is signaled.

Switch, Hand-operated.
A non-interlocked switch which can only be operated manually. (I.C.C.)

Switch Indicator.
See definition for Indicator, Switch.

Switch, Interlocked.
A track switch within the interlocking limits, the control of which is interlocked with other functions of the interlocking.

Switch Lamp, Electric.
See definition for Lamp, Switch; Electric.

Switch Lamp, Reflector Type.
See definition for Lamp, Switch; Reflector Type.

Switch Machine.
See definition for Movement, Switch-and-lock.

Switch Point.
See definition for Point, Switch.

Switch Point Lug.
See definition for Lug, Switch Point.

Switch Rod.
See definition for Rod, Switch.

Switch, Sectionalizing.
A switch for disconnecting a section of an electrical circuit from the source of energy. (I.C.C.)

Switch Shunting Circuit.
See definition for Circuit, Switch Shunting.

Switch Signal.
See definition for Signal, Switch.

Switch, Single-slip.
A combination of a crossing and a single connecting track, located within the limits of the crossing, and made up of a right-hand switch from the one track and a left-hand switch from the other track, which unite to form the connecting track without additional frogs.

Switch, Spring.
A track switch equipped with a spring device which forces the points to their original position after being trailed through and holds them under spring compression.

Switch Target.
See definition for Target, Switch.

Switch Target, Reflector Type.
See definition for Target, Switch; Reflector Type.

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Switch (Track).

A pair of switch points with their fastenings and operating rods providing the means for establishing a route from one track to another.

Switch, Trailing Point.

A track switch, the points of which face away from traffic approaching in the direction for which the track is signaled.

Symbol.

A letter, sign or character representing something.

Synchronize.

To bring two or more operating devices into step with respect to time and phase.

System, Absolute Permissive Block.

A block signal system under which the block is usually from siding to siding for opposing movements and the fixed signals governing entrance into the block display an aspect indicating Stop when the block is occupied by an opposing train. For following movements the section between sidings is divided into two or more blocks and train movements into these blocks, except the first one, are governed by intermediate fixed signals, cab signals, or both. The intermediate fixed signals usually display an aspect indicating Stop; then Proceed at Restricted Speed, and the cab signal displays an aspect indicating Proceed at Restricted Speed, as their most restrictive indications.

System, Automatic Block Signal.

A series of consecutive blocks governed by block signals, cab signals, or both, actuated by a train, or engine, or by certain conditions affecting the use of a block. (Standard Code.)

System, Automatic Cab Signal.

A system which provides for the automatic operation of cab signals.

System, Automatic Train Control.

A system so arranged that its operation will automatically result in the following:

A full service application of the brakes which will continue either until the train is brought to a stop, or, under control of the engineman, its speed is reduced to a predetermined rate.

When operating under a speed restriction, an application of the brakes when the speed of the train exceeds the predetermined rate and which will continue until the speed is reduced to that rate. (I.C.C.)

System, Automatic Train Stop.

A system so arranged that its operation will automatically result in the application of the brakes until the train has been brought to a stop. (I.C.C.)

System, Block.

A series of consecutive blocks.

System, Block Signal.

A method of governing the movement of trains into or within one or more blocks by block signals or cab signals. (I.C.C.)

System, Centralized Traffic Control.

See definition for Control, Centralized Traffic.

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System, Code.

A system of control in which electric currents of suitable character are supplied to apparatus in different manners, each function being controlled by its own distinctive code.

System, Controlled Manual Block.

A series of consecutive blocks governed by block signals, controlled by continuous track circuits, operated manually upon information by telegraph, telephone or other means of communication, and so constructed as to require the cooperation of the signalmen at both ends of the block to display a Clear or a Permissive block signal.

System, Manual Block Signal.

A block or a series of consecutive blocks, governed by block signals operated manually, upon information by telegraph, telephone or other means of communication. (Standard Code.)

System, Normal Clear.

A term used to express the normal indication of the signals in an automatic block system in which an indication to proceed is displayed except when the block is occupied.

System, Normal Stop.

A term used to express the normal indication of the signals, in an automatic block system in which the indication to proceed is given only upon the approach of a train to an unoccupied block.

System, Traffic Control.

A block signal system under which train movements are authorized by block signals whose indications supersede the superiority of trains for both opposing and following movements on the same track. (I.C.C.)

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T

Table Interlocking Machine.
See definition for Machine, Interlocking; Table.

Tag.
A label used to identify wires, wire connections, or parts of apparatus.

Tail Lever.
See definition for Lever, Tail.

Tail Lever Counterweight.
See definition for Counterweight, Tail Lever.

Take Siding Indicator.
See definition for Indicator, Take Siding.

Tang End.
A projection on the end of a rod used to strengthen the joint between the pipe and the rod.

Tape, Friction.
A strip of fabric impregnated with rubber compound used to protect the insulation on electrical conductors.

Tape, Rubber.
A strip of unvulcanized rubber used to replace insulation which has been removed from electrical conductors.

Taper Charge.
See definition for Charge, Taper.

Tappet.
A device which actuates the mechanical locking of an interlocking machine by the movement of the latch or lever.

Tappet Circuit Controller.
See definition for Controller, Circuit; Tappet.

Target, Switch.
A device mechanically actuated by a switch stand, or a switch point, to indicate the position of the switch.

Target, Switch; Reflector Type.
A switch target equipped with reflector units to display indications by night through the medium of reflected light.

T-crank.
See definition for Crank, Three-arm.

Telephone.
A device for electrical transmission of sound.

Terminal.
See definition for Post, Binding.

Terminal Board.
See definition for Board, Terminal.

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Terminal Box.
See definition for Box, Terminal.

Terminal, Initial.
The starting point of a locomotive for a trip.

Thermal Cut-out.
See definition for Cut-out, Thermal.

Thermal Relay.
See definition for Relay, Thermal.

Thermostat, Electrical.
A device by which an electrical circuit is controlled by temperature changes.

Third Voltage Range.
See definition for Voltage Range, Third.

Three-arm Crank.
See definition for Crank, Three-arm.

Three-phase Circuit.
See definition for Circuit, Three-phase.

Three-position Relay.
See definition for Relay, Three-position.

Three-position Signal.
See definition for Signal, Three-position.

Throw Rod.
See definition for Rod, Operating.

Tie Plate.
See definition for Plate, Tie.

Tie Wire.
See definition for Wire, Tie.

Time, Acknowledging.
As applied to an intermittent automatic train stop system, a predetermined time within which an automatic brake application may be forestalled by means of the acknowledging device. (I.C.C.)

Time, Delay.
As applied to an automatic train stop or train control system, the time which elapses after an automatic brake application is initiated until the brakes start to apply. (I.C.C.)

Time Element Relay.
See definition for Relay, Timing.

Time Locking.
See definition for Locking, Time.

Time Release.
See definition for Release, Time.

Timing Relay.
See definition for Relay, Timing.

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Tolerance.
The allowable variation from dimensions specified.

Top-of-mast Mechanism.
See definition for Mechanism, Top-of-mast.

Top Plate. (Mechanical Locking)
See definition for Plate, Top.

Torpedo.
An explosive cap to be fastened to the top of rail and exploded by pressure to give an audible indication.

Torque.
That which produces or tends to produce rotation.

Tracer, Cable.
One of the wires in a cable marked in such a manner as to be readily distinguished from the other wires.

Track Centers.
See definition for Centers, Track.

Track Circuit.
See definition for Circuit, Track.

Track Circuit, Coded.
See definition for Circuit, Track; Coded.

Track Circuit Connector.
See definition for Connector, Track Circuit.

Track Element.
See definition for Element, Roadway.

Track Frog.
See definition for Frog, Track.

Track Indicator.
See definition for Indicator, Track.

Track Indicator Chart.
See definition for Chart, Track; Indicator.

Track Instrument.
See definition for Instrument, Track.

Track Layout.
See definition for Layout, Track.

Track Magnet.
See definition for Element, Roadway.

Track, Main.
A track extending through yards and between stations, upon which trains are operated by time-table or train order, or both, or the use of which is governed by block signals. (Standard Code.)

Track Relay.
See definition for Relay, Track.

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Traffic Control System.
See definition for System, Traffic Control.

Traffic Lever.
See definition for Lever, Traffic.

Traffic Locking.
See definition for Locking, Traffic.

Trailing Movement.
See definition for Movement, Trailing.

Trailing Point Switch.
See definition for Switch, Trailing Point.

Train.
An engine or more than one engine coupled, with or without cars, displaying markers. (Standard Code.)

Train Control System, Automatic.
See definition for System, Automatic Train Control.

Train Describer.
See definition for Describer, Train.

Train, Opposing.
A train, the movement of which is in a direction opposite to and toward another train on the same track. (I.C.C.)

Train Order Signal.
See definition for Signal, Train Order.

Train Shunt Resistance.
See definition for Resistance, Train Shunt.

Train Staff Pusher Attachment.
See definition for Attachment, Train Staff Pusher.

Transformer.
A stationary inductive device generally used for changing the ratio between voltage and current in an alternating current circuit or for insulating one part of the circuit from another.

Transformer Booster.
See definition for Booster, Transformer.

Transformer, Current or Series.
A transformer, generally used to energize ammeters or the current coil of watt-meters, in which the primary winding, consisting of relatively few turns of low resistance, is in series with one of the line wires so that the secondary winding delivers a voltage proportional to the current flowing in the line circuit.

Transformer, Insulating.
A transformer having the same number of turns in the primary and secondary windings and used to insulate a portion of a circuit from the main circuit without changing the ratio between current and voltage.

Transformer, One-to-one.
See definition for Transformer, Insulating.

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Transformer, Potential.
A transformer, generally used to energize voltmeters or the potential coil of watt-meters, in which the primary winding consists of a relatively high number of turns of high resistance and which will deliver only a small current at a voltage proportional to the voltage impressed.

Transformer Relay.
See definition for Relay, Transformer.

Transmitter, Code.
See definition for Coder.

Transverse Pipe Carrier.
See definition for Carrier, Pipe; Transverse.

Trap Circuit.
See definition for Circuit, Trap.

Tray, Sand.
A tray containing sand in which a storage battery cell is placed.

Trickle Charge.
See definition for Charge, Trickle.

Trip.
The movement of an engine over all or any portion of automatic train stop, train control, or cab signal territory between the terminals for that engine; a movement in one direction.

Trip Arm.
See definition for Element, Roadway.

Trunking.
A casing used to protect electrical conductors. (I.C.C.)

Trunnion.
A cylindrical projection supporting a revolving part. (I.C.C.)

Tuned Alternator.
See definition for Alternator, Tuned.

Turnbuckle.
That portion of a pipe or wire adjusting screw which may be turned to effect adjustments.

Turnout.
An arrangement of a switch and a frog with closure rails by means of which rolling stock may be diverted from one track to another.

Twin Cable.
See definition for Cable, Twin.

Two-element Relay.
See definition for Relay, Two-element.

Two-position Relay.
See definition for Relay, Two-position.

Two-position Signal.
See definition for Signal, Two-position.

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U

Underground Cable.
See definition for Cable, Underground.

Unidirectional.
In one direction.

Union, Pipe.
A device by which two lengths of pipe may be connected without turning the pipe.

Unit.
A determinate amount or quantity taken as a standard of measurement.

Unit, Magnetic.
A unit based on the force exerted between magnetic poles.

Unit, Reflector.
See definition for Reflector Unit.

Unit, Reflector; Double Refraction.
See definition for Reflector Unit, Double Refraction.

Unit, Reflector; Single Refraction.
See definition for Reflector Unit, Single Refraction.

Universal Link.
See definition for Link, Universal.

Up-and-down Rod.
See definition for Rod, Up-and-down.

Upper Quadrant.
See definition for Quadrant, Upper.

Useful Lamp Life.
See definition for Lamp Life, Useful.

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V

v.
The abbreviation for volt.

v.a.
The abbreviation for volt-ampere.

Vacuum Lightning Arrester.
See definition for Arrester, Lightning; Vacuum.

Value, Photometric.
The relative amount of light given by a source of predetermined value.

Value, Release.
The electrical value at which the movable member of an electromagnetic device will move to its de-energized position. (I.C.C.)

Value, Working.
The electrical value which, when applied to an electromagnetic instrument, will cause the moving member to move to its full energized position to provide maximum front contact pressure.

Valve.
A device which, by its action in opening or closing an aperture, permits or prevents passage, as of a fluid.

Valve, Brake Application.
An air valve through the medium of which brakes are automatically applied.

Valve, Electric.
A valve which will permit or prevent passage of an electric current.

Valve, Electro-pneumatic.
A valve electrically operated which, when operated, will permit or prevent passage of air. (I.C.C.)

Valve Type Lightning Arrester.
See definition for Arrester, Lightning; Valve Type.

Vane Type Relay.
See definition for Relay, Vane Type.

Variable Capacitor.
See definition for Capacitor, Variable.

Variable Resistance Unit.
See definition for Resistance Unit, Variable.

Vault, Battery.
An arched receptacle for housing batteries.

Velocity.
The rate of change of position measured in the distance passed over in one unit of time.

Vibrating Bell.
See definition for Bell, Vibrating.

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Vital Circuit.
See definition for Circuit, Vital.

Volt.
The unit of electromotive force that, when impressed on an electrical conductor whose resistance is 1 ohm, will produce a current of 1 ampere.

Voltage Drop.
See definition for Drop, Voltage.

Voltage Range, First.
Thirty volts or less.

Voltage Range, Second.
Over 30 volts to and including 175 volts.

Voltage Range, Third.
Over 175 volts to and including 250 volts.

Voltage Range, Fourth.
Over 250 volts to and including 660 volts.

Voltage Range, Fifth.
Over 660 volts.

Voltage Relay.
See definition for Relay, Voltage.

Volt-ammeter.
A voltmeter and an ammeter combined in one instrument.

Volt-ampere or Apparent Power.
See definition for Power, Apparent or Volt-ampere.

Volt-amperes.
The product of volts times amperes; a term used in connection with alternating current circuits in which the apparent power represented by volt-amperes usually differs from the effective power measured in watts.

Voltmeter.
An instrument for measuring in terms of volts the electromotive force of an electric current.

Voltmeter, Recording.
An instrument which graphically records upon a time-chart the voltage it measures.

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W

w.
The abbreviation for watt.

Water-tight Crank Box.
See definition for Box, Crank; Water-tight.

Water-tight Deflecting Bar Box.
See definition for Box, Deflecting Bar; Water-tight.

Watt.
The unit of power due to a current of 1 ampere flowing under an electromotive force of 1 volt with unity power factor.

Watt-hour.
A unit of electrical work equal to a rate of 1 watt expended for 1 hour.

Watt-hour Meter.
A meter for determining the amount of electrical energy consumed in watt-hours.

Watt-meter.
A meter for measuring electrical energy, indicating in watts.

Weatherproof Wire. (Weather resisting)
See definition for Wire, Weatherproof. (Weather resisting)

Welded Bond.
See definition for Bond, Welded.

Well, Battery.
A housing, usually of concrete, set in the ground for housing batteries below the frost line.

w.h.
The abbreviation for watt-hour.

Wheatstone Bridge.
See definition for Bridge, Wheatstone.

Whistle, Acknowledging.
An air-operated whistle which is sounded when the acknowledging device is operated or when a more restrictive cab signal is displayed.

Wide Jaw.
See definition for Jaw, Wide.

Wig-wag Signal.
See definition for Signal, Wig-wag.

Winding, Electrical.
Insulated wire wound in a coil.

Winding, Primary.
The winding on the input side, whether the transformer is of the step-up or step-down type. (A.I.E.E.)

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Winding, Secondary.
The winding on the output side, whether the transformer is of the step-up or step-down type. (A.I.E.E.)

Wire, Bond.
See definition for Bond, Rail.

Wire Chase.
See definition for Chase, Wire.

Wire Eyelet.
See definition for Eyelet, Wire.

Wire Gage.
See definition for Gage, Wire.

Wire Gauze.
Wire woven into gauze having a fine mesh.

Wire, Ground.
A wire connected to a ground.

Wire, Guy.
A wire used as a guy.

Wire, Insulated.
A wire covered with insulation.

Wire, Messenger.
A wire used to support a cable.

Wire, Shunt.
A wire forming part of a shunt circuit. (I.C.C.)

Wire, Solid.
A slender rod or filament of drawn metal. (A.I.E.E.)

Wire, Stranded.
A group of small wires twisted together and used as a single conductor.

Wire, Tie.
A short piece of wire used to tie a line wire to an insulator.

Wire, Weatherproof. (Weather resisting)
A metallic conductor, either solid or stranded, having two or more separate fibrous coverings saturated with a weather-resisting compound of comparatively low dielectric strength, usually of an asphaltic type.

Working Value.
See definition for Value, Working.

WP Protection.
See definition for SS Protection.

W. P. D. B.
The abbreviation for weatherproof double braid

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Y-Z

Yard.

A system of tracks within defined limits provided for the making up of trains, storing of cars and other purposes, over which movements not authorized by time-table, or by train order, may be made, subject to prescribed signals and rules, or special instructions. (Standard Code.)

Yard, Hump.

A railroad classification yard in which the classification of cars is accomplished by pushing them over a summit, known as a hump, beyond which they run by gravity.

Yoke, Electromagnetic.

A piece of soft iron used to connect two iron cores at one end.

Zero.

The point from which the graduation of a scale is measured.

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