APPENDIX D

Glossary

AC—Alternating current.

Abrasion resistance—Ability of material or cable to resist surface wear.

Accessories—Mechanical devices, such as cable clamps, added to connector and junction shells.

AD 123—An aluminum alloy used for making electric wire.

Adapter—An intermediate device to provide for attaching special accessories or to provide special mounting means.

Ambient temperature—The temperature of the environment, usually air, surrounding a termination, conductor, cable or other device.

Arc resistance—The characteristic of insulating materials to resist breakdown by passage of current on the surface between contacts and between contacts and ground.

Aspect ratio—Length divided by width or diameter.

Back-mounted—A termination assembly mounted from the inside of a panel or box with its mounting flange inside the equipment.

Barrel—(1) Conductor barrel: The section of the terminal, splice or contact that accommodates the stripped conductor, or (2) Insulation barrel: The section of the terminal, splice or contact that accommodates the conductor insulation.

Barrel chamfer—The bevel at the end of the conductor barrel providing for easier conductor entry.

Basis metal—Metal from which components are made and on which one or more metals or coatings may be deposited.

Bayonet coupling, rotary—A quick coupling device for mating connectors utilizing pins or projections on a connector and ramps on the mating connector. Mating and unmating is accomplished by rotating the coupling ring.

Belled mouth (bellmouth)—The flared or wide entrance of a terminal, splice or contact barrel to permit easier insertion of the conductor.

Bifurcated contact—Describes lengthwise slotting of a flat spring contact as used in a printed circuit edge connector.

Body, connector—The main portion of a connector to which contacts and other components are attached. (This term is not used with connectors incorporating non-integral shells in their construction.)

Bonded assembly, electrical—An assembly whose supporting frame and metallic non-circuit elements are connected so as to be electrically shorted together.

Boot—A protective covering over any portion of a cable, wire termination or termination assembly in addition to normal jacketing or insulation. Also a form for a container holding potting compound.

Braid—(1) Flexible conductor made of a woven or braided assembly of fine wires, or (2) A fibrous or metallic group of filaments interwoven in cylindrical form to form a protective covering over one or more wires.

Braid angle—The angle of the braided filaments or fibers in relationship to the axis of the cable core being braided.

Breakout—The separation of a conductor or group of conductors from a cable or laced harness assembly.

Bunch strand—Any number of conductor strands twisted together in one direction with the same lay length.

Bus—A solid, uninsulated wire or bar, which serves as a common electrical terminus for several circuits.

Bused—The joining of two or more circuits.

Butt splice—A device for joining two conductors end to end with their axes in line, and not overlapping.

Butting die—A crimping die so designed that the nest and indentor touch at the end of the crimping cycle (also called bottoming die).

Cable—A standard conductor (single conductor cable) or a combination of conductors insulated from one another (multiple conductor

cable). Also, in common parlance, a group of cables that are laced together or have a common insulating covering as a cable.

Cable, coaxial—A cable in which one conductor is accurately centered inside another. Used primarily for the transmission of RF signals.

Cable, shielded—One or more insulated conductors covered with a metallic outer conductor.

Cable clamp—A mechanical clamp attached to the cable side of the termination assembly to support the cable or wire bundle, provide strain relief, and absorb vibration and shock which would otherwise be transmitted by the cable to the contact/wire connection.

Cable clamp adapter—A mechanical adapter that attaches to the rear of a termination assembly to allow the attachment of a cable clamp.

Cable sealing clamp—A device consisting of a gland nut and sealing member designed to seal around a single jacket cable.

Cable shielding clamp—A device consisting of a sealing member and cable support designed to terminate the screen (shield) of an electrical cable.

Circumferential crimp—The type of crimp where the crimping dies completely surround a barrel resulting in symmetrical indentations in the barrel.

Closed entry—A contact or a contact cavity design in the insert or body of the termination assembly which limits the size and position of the mating contact or printed circuit board to a predetermined dimension.

Color coding—A system of identifying terminals, conductors, contacts, and related devices by means of colors.

Common connecting devices—All of the devices that make up the common termination system.

Common termination system (CTS)—An electrical interconnection system utilizing MIL-C-39029/22 contacts to terminate all conductors.

Concentric stranding—A group of uninsulated wires twisted so as to contain a center core with one or more distinct layers of spirally wrapped, uninsulated wires laid overall to form a single conductor. When more than one layer is present, each layer must have a different lay length.

Conductor—A bare or insulated wire or combination of wires not insulated from one another, suitable for carrying an electric current.

Conductor stop—A device on a terminal, splice, contact or tool used to prevent excessive extension of the conductor beyond the conductor barrel.

Conduit—A tubular raceway for holding wires or cables designed and used expressly for this purpose.

Configuration control—The discipline providing for uniformity in manufactured items: materials, processes, geometry and performance.

Connector, electric—A device, either a plug or receptacle, used to terminate or connect the conductors of single-conductor or multiple-conductor cables, and provide a means to continue the conductors to a mating connector or printed circuit board.

Connector assembly, electric—Two or more separate connectors, such as a plug connector and receptacle connector, designed to be mated together; or one connector plug and one dummy connector feedthru receptacle and one dummy connector plug.

Connector classes—Categories based on shape, function and smallest size contact in the series. Shapes are: cylindrical, rectangular and keystone, etc. Functions are: hermetic, rack-and-panel, pendant, bulkhead, firewall, feedthru, etc. Sizes include Standard (size-16 contacts), Miniature (size-20 contacts), Subminiature or High-Density (size-22 contacts), and Microminiature (size-24 contacts).

Connector-junction—Any connector meeting the requirements of the common termination system whose attached wires are terminated in MIL-C-39029/22 contacts.

Contact—The conductive element in a termination assembly which mates with a corresponding element for the purpose of transferring electrical energy.

Contact, bellows—A contact in which a multileaf spring is folded. This provides more uniform spring rate over the full tolerance range of the mating unit.

Contact, button-hook—A curved, hook-like contact often located at the rear of hermetic headers to facilitate soldering or desoldering of leads.

Contact, crimp—A contact whose conductor barrel is a hollow cylinder accepting the conductor. After a bared conductor is inserted, a crimping tool is applied to swage or form the contact metal firmly against the conductor. An excellent mechanical and electrical contact results. Often referred to as a solderless contact.

Contact, dressed—A contact with a permanently attached contact retaining member.

Contact, female—A contact into which the mating contact is inserted. Similar in function to a socket contact.

Contact, fixed—A contact permanently included in the insert material. It is mechanically locked, cemented or embedded in the insert.

Contact, insertable/removable—A contact that can be mechanically joined to or removed from an insert. Usually, special tools lock the contact in place or remove it for repair or replacement.

Contact, male—A contact of design to make contact by insertion into a mating contact. Similar in function to a pin contact.

Contact, nude—A contact with a contact retainer that remains in the insert at all times.

Contact, open entry—A socket whose engaging end is split and therefore vulnerable to distortion or damage from test probes or other wedging devices.

Contact, pin—Male-type contact designed to slip inside the mating female contact member.

Contact, sheet-metal—Contacts made by stamping and bending sheet metal rather than by the machining of metal stock.

Contact, socket—A female-type contact (usually completely surrounded by insert material).

Contact, solder—A contact has a cup, hollow-cylinder eyelet or hook to accept a conductor and retain the applied solder.

Contact, spade—A contact with fork-shaped female members designed to dovetail with spade-shaped male members. (Alignment in this type of connection is very critical if good conductivity is to be achieved.)

Contact, two-piece—A contact made of two or more separate parts joined by swaging or brazing to form a single contact. Provides the mechanical advantage of two metals but has the inherent electrical disadvantage of differences in conductivity.

Contact area—The area in contact between two conductors, two contacts, or a conductor and a contact permitting the flow of electricity.

Contact arrangement—The number, spacing and arrangement of contacts in a termination assembly.

Contact engaging and separating force—Force needed to either engage or separate mating contacts.

Contact float—The overall side play and/or angular displacement of contacts within the insert cavity.

Contact inspection hole—A hole in the cylindrical rear portion of contact used to check the depth to which a conductor has been inserted. Crimp-type contacts usually have inspection holes; solder-types seldom do, except larger sizes in which the hole's function is to allow solder and air to bleed out during soldering.

Contact resistance—Electrical resistance of a pair of engaged contacts. Resistance may be measured in ohms or millivolt drop at a specified current over the engaged contacts.

Contact retainer—A device either on the contact or in the insert to retain the contact in an insert or body.

Contact retention—The axial load in either direction which a contact can withstand without being dislodged from its normal position within an insert or body.

Contact shoulder—The flanged portion of the contact which limits its travel into the insert.

Contact size—An assigned number denoting the size of the contact.

Contact spacing—The spacing between the centers of contacts within an insert.

Contact spring—The spring placed inside the socket-type contact to force the pin into position of positive intimate contact. Depending on the application, various types are used, including leaf, cantilever, napkin ring, squirrel cage, and "chinese-finger" springs. All perform the function of wiping and establishing good contact. Various metal alloys are used. For example, beryllium copper is used where high conductivity and long life are required. Stainless steel, while its conductivity is only about two percent, is used in high temperature applications.

Contact wipe—The distance of travel (electrical engagement) made by one contact with another during its engagement or separation or during mating or unmating of the connector halves.

Corona—A luminous discharge of electricity due to ionization of the air, appearing on the surface of a conductor when the potential gradient exceeds a certain value.

Coupling ring—That portion of a plug which aids in the mating and unmating of a plug and receptacle and which holds the plug to the receptacle.

Cover, electrical connector—An item which is specifically designed to cover the mating end of a connector for mechanical and/or environmental protection.

Creep distance—The shortest distance on the surface of an insulator separating two electrically conductive surfaces.

Creepage path—The path across the surface of a dielectric between two conductors. (Lengthening the creepage path reduces the possibility of arc damage or tracking.)

Crimp—The physical compression (deformation) of a contact barrel around a conductor to make an electrical and mechanical connection to the conductor.

Crimping—A pressure method of mechanically securing a terminal, splice or contact to a conductor.

Crimping die—Portion of the crimping tool that shapes the crimp.

Crimping tool—Mechanism used for crimping.

Current-carrying capacity—The current a conductor of given size and length is capable of carrying safely without exceeding its temperature limitations.

DC—Direct current.

Elastomer—Any elastic, rubberlike substance, such as natural or synthetic rubber.

Electromagnetic Interference (EMI)—The frequency spectrum of electromagnetic radiation extending from subsonic frequency to X-rays. This term should not be used instead of the term RFI. (See Radio Frequency Interference.) Shielding materials for the entire EMI spectrum are not readily available.

End bell—An accessory similar to a cable clamp which attaches to the back of a plug, receptacle, or junction. It serves as an adapter for the rear of termination assemblies. Some angular end bells have built-in cable clamps. Angular end bells up to 90 degrees are available.

Engaging and separating force—Force required to either engage or separate mating contacts or connectors.

Environment resistant—(See Environmentally sealed.)

Environmentally sealed—Provided with gaskets, seals, grommets, potting or other means to keep out moisture, dirt, air or dust which might reduce its performance. (Does not include nonphysical environments such as RF and radiation.)

Eutectic alloy—As applied to solder, the composition of metals that change rapidly from a solid to a liquid state without a plastic stage.

Extraction tool—A device used for extracting removable contacts from a termination assembly.

Feedback module—A module having one face containing contact cavities. It is used for general purpose interconnection and busing. (See Terminal junction module.)

Feedthru (feedthrough)—The use of special connectors or junctions to pass conductors through bulkheads or panels. Contacts can be male on one side, female on the other, or can be male on either side or female on either side. Feedthru connectors differ from rack-and-panel types in that connection can be made on both sides of the panel to which they are attached.

Ferrule—A short tube used to make solderless connections to shielded or coaxial cables. Also used in connectors to reduce transmission of torque to grommet.

Flag terminal—Terminal having a tongue protruding from the side of the barrel.

Flange—A projection extending from or around the periphery of a connector or junction, usually for mounting the termination assembly to a panel.

Flange spade terminal—A terminal whose tongue edges are turned at an angle to the plane of the tongue.

Flat conductor—A wire manufactured in a flattened form, (as opposed to round or square.)

Flex life—A measure of the resistance of a conductor or other device to failure due to fatigue from repeated bending.

Flux—A material used to promote fusion or joining of metals in soldering, brazing or welding.

Follower—A sleeve used to compress the grommet, thus tightening the seal around the conductors entering the termination assembly.

Frame—(See Rail).

Front mounted—A termination assembly mounted on the outside of a panel or box with its mounting flange outside the equipment.

Full cycling control—Control placed on the crimping cycle of a crimping tool forcing the tool to be closed to its fullest extent so as to complete the crimping cycle before the tool can open.

Gang disconnect—A connector that permits the rapid and simultaneous connection and disconnection of two or more electrical circuits.

Ganged Contact Release (GCR)—A system whereby all contacts in an assembly are locked simultaneously. They are also unlocked simultaneously.

General purpose—Expression used to describe a low-cost, heavy-duty connector (termination assembly) designed to withstand rough handling.

Grid spaced—The arrangement of contacts in a multiple contact termination assembly by spacing in a geometric pattern.

Grommet—An insulator that covers the rear portion of the contacts and a short length of the incoming conductor.

Grommet, connector—An elastomeric seal used on the cable side of a connector to seal the connector against moisture, dirt and air.

Grope free—A connector coupling system which can be easily mated and locked, usually with one hand. A coupling ring held in the proper position to start the mating cycle while uncoupled.

Ground, electrical—A point of common potential in an electric circuit used for common connections and reference voltage.

Guide pin—A pin or rod extending beyond the mating faces of a connector designed to guide the closing or mating of the connector to ensure proper engagement of contacts.

Harness—An assembly of insulated conductors formed to a predetermined pattern or configuration.

Header—A feedthru device which introduces a conductive path through an insulating plate.

Hermaphroditic connector—A connector design which utilizes pin and socket contacts in a balanced arrangement such that both mating connectors are identical.

Metered solder cup—A term used when the cylindrical portion of the contact (in which the conductor is inserted) is partially filled with a specific amount of solder before assembly of the connector. Thus the conductor can be soldered into the contact by the simple addition of heat and without additional solder.

Mold, electric connector potting—An item, solid or split, designed to be used as a hollow form into which potting compound is injected and allowed to cure or set to seal the back of an electrical termination. The potting may eliminate the need for a back shell on the connector. The form may or may not be removable after potting.

Monomer—A chemical (usually a liquid or a gas) of low molecular weight used as a starting material for polymerization to produce solid or heavy liquid materials of larger molecular weight, called polymers.

Nest—The portion of a crimping die which supports the barrel during crimping.

Nick (notch)—A cut or notch in conductor strands or insulation.

Offset terminal—Terminal whose tongue is forward of, and whose stud hole is offset from, centerline of terminal barrel.

Operating temperature—The maximum internal temperature-resistant capabilities of a connector in continuous service.

Original Equipment Manufacturer (OEM)—The organization that assembles a complete functioning device, e.g., airplane, missile, satellite, truck, automobile, etc.

Panel—The side or front of a piece of equipment, usually metal, on which terminations and termination assemblies are mounted.

Parallel splice—(See Lap joint.) A device for joining two or more conductors in which the conductors lie parallel and adjacent.

Pendant—(See In-line.) The type of plug or receptacle that is not mounted in a fixed position or attached to a panel or side of equipment.

Pigtail—A short conductor extending from an electrical or electronic device to serve as a jumper or ground connection.

Interface, electrical—Common boundary shared by individual components where they are joined electrically, e.g., conductor to contact, pin to socket, contact to bus.

Interfacial gap—Any gap between the faces of mated inserts.

Interfacial seal—A sealing of mated connectors over the whole area of the interface to provide sealing around each contact.

Jacket—The outermost layer of insulating material of a cable or conductor.

Jackscrew—A screw attached to one half of a two-piece multiple contact connector used to draw and hold both halves together and to separate them.

Junctions—All of the connecting devices used in a system less the connectors. Examples: Terminal junctions, feedthru junctions, component junctions, etc.

Key—A short pin or other projection which slides in a mating slot, hole, groove or keyway to guide two parts being assembled, generally used in shell-enclosed connectors to obtain polarization.

Keyway—The slot or groove in which a key slides.

Lanyard—A device attached to certain quick-disconnect connectors which permits uncoupling and separation of connector halves by a pull on a wire or cable.

Lap joint—(See Parallel splice.) Two conductors joined by placing them side by side so that they overlap.

Locator—(See Stop plate.) Device for positioning terminals, splices or contacts in crimping dies.

Locking spring—(See Contact retainer.)

Lug—(See Terminal lug.) A wire terminal.

Mate—The joining of two connectors.

Maximum Conductor Operating Temperature (MCOT)—Ambient temperature plus temperature rise due to passage of electric current.

Insert, electrical—An insulating element, with or without a contact(s), designed to position and support contacts in a termination assembly.

Insertion tool—(1) A device used to insert contacts into a connector or junction. (2) A device used to insert taper pins into taper pin receptacles.

Inspection hole—A hole placed at one end of a barrel to permit visual inspection to see that the conductor has been inserted to the proper depth in the barrel prior to crimping. (See Contact inspection hole.)

Insulated terminal—Terminal having its barrel and insulation support or grip, if used, covered with a dielectric material.

Insulation crimp—(1) The physical deformation of an insulation sleeve covering a terminal or splice and the adjacent conductor insulation to hold the sleeve in place. (2) Shape combination of insulation sleeve to terminal or splice and conductor insulation after crimping.

Insulation grip—The portion of the barrel which is closed or compressed around the conductor insulation.

Insulation piercing terminal—A terminal with a device which punctures the insulation of the conductor and makes contact with or enters into the conductor.

Insulation support—The portion of a barrel corresponding to an insulation grip except that it is not compressed around the conductor insulation.

Integrated Termination System (ITS)—A technique by which any type of device may be terminated using standard processes, tooling, connectors and junctions.

Integrated Wire Termination System (IWTS)—(See Integrated Termination System.)

Interface—The two surfaces on the contact sides of mating connectors, or plug-in component (e.g., relay) and receptacle, which face each other when mated.

Hermaphroditic contact—A contact design which is neither pin nor socket and which mates with another contact of the same design. The contacts may be arranged as male and female contacts as for pins and sockets. Hermaphroditic contacts may also be used in a manner such that one half of each contact mating surface protrudes beyond the connector interface and both mating connectors are identical.

Hermetic connector—Usually a multiple-contact connector in which the contacts are bonded to the connector by glass or other materials permitting a maximum leakage rate of gas through the connector of 0.01 Micron cubic foot per hour at 14.7 psig.

Hook terminal—Terminal with a hook-shaped tongue.

Housing, electrical connector—Connector, less insert, but with insert-retaining and positioning hardware required by standard construction.

Impedance—The total opposition (resistance and reactance) a circuit offers to the flow of electric current. It is measured in ohms and its reciprocal is admittance, usually expressed in mhos.

Individual Contact Release (ICR)—A system whereby each contact in an assembly can be individually unlocked and removed without unlocking the other contacts. They are also locked individually.

Indentor—That part of a crimping die, usually the moving part, which indents or compresses the contact barrel.

In-line—(See Pendant.) A term used to describe a termination that has no structural mounting provisions and joins conductors end to end.

Insert—The part of the termination assembly that holds the contacts in position and electrically insulates them from each other and the shell.

Insert arrangement—The number, spacing and arrangement of contacts in a termination assembly.

Insert, closed entry—One having openings that restrict the entry of devices larger than the specified contact.

Plating—The overlaying of a thin coating of metal on components to improve conductivity, provide for easy soldering or prevent rusting or corrosion.

Plug connector—An electrical fitting or termination assembly with male, female, or male and female contacts, constructed to be affixed to the end of a cable, conduit, coaxial line, cord or conductor for convenience in joining with another electrical connector(s), and not designed to be mounted on a bulkhead, chassis or panel. The part of a connector which is normally "removable" from the permanently mounted part.

Polarization—A mechanical arrangement of inserts or the shell configuration (referred to as clocking in some instances) which prohibits the mating of mismatched plugs and receptacles. This allows connectors of the same size to be lined up side by side with no danger of making the wrong connection. Coded arrangements of contacts, keys, keyways, and insert position are used. In rectangular connectors, the shells are so designed that mating usually is possible in only one way.

Polarize—To arrange mating connectors such that they can be mated in only one way.

Polarizing pin, key or keyway—A device or feature incorporated in a connector to accomplish polarization.

Polymer—A structural material having molecules of high molecular weight, formed by polymerization of monomers.

Post-insulate—To insulate a connection after assembly.

Potting—The permanent sealing of the cable end of a termination with a compound or material to exclude moisture and/or to provide a cable strain relief.

Pre-insulate—The insulation of a connector prior to assembly of the contact or terminal on the conductor.

Pressure differential—The difference in pressure between one side of a termination and the other as in a bulkhead mounting, or the pressure difference between the inside and outside of a sealed termination assembly.

Pre-tinned—Solder applied to either or both the contact and conductor prior to soldering.

Pre-tinned solder cup—Solder cups whose inner surfaces have been precoated with a small amount of tin-lead solder.

Pull-out force—Force necessary to separate a conductor from a contact or terminal, or a contact from a termination assembly, by exerting a pull along the axis of the conductor and the termination.

Quick disconnect—A type of connector or splice which permits relatively rapid locking and unlocking of mating parts.

Rack—A type of structure used to house electronic components which permits convenient removal of portions of the equipment.

Rack-and-panel—The type of connector that is attached to a panel or side of equipment so that when these two members are brought together, the connector is engaged.

Radio Frequency (RF)—The frequency spectrum from 15kHz to 100 GHz.

Radio Frequency Interference (RFI)—Electromagnetic radiation in the radio frequency spectrum from 15kHz to 100GHz. The best shielding materials against RFI are copper and aluminum alloys. The term "EMI" should not be used in place of RFI since shielding materials for the entire electromagnetic frequency spectrum are not available.

Rail (Track or Frame)—A device to contain and retain a number of modules.

Ram—The moving portion in the head of a crimping tool.

Range, wire—The sizes of conductors accommodated by a particular barrel. Also the diameters of insulated conductors accommodated by a sealing grommet.

Ratchet control—A device to ensure the full crimping cycle of a crimping tool.

Receptacle connector—An electrical fitting or termination assembly with contacts constructed to be electrically connected to a cable,

coaxial line, cord, or conductor to join with another electrical connector(s), and designed to be mounted on a bulkhead, wall, chassis, or panel.

Rectangular terminal—Terminal whose tongue is rectangular in shape.

Removal tool—(See Extraction tool.)

Ring-tongue terminal—Round-end tongue terminal with hole to accommodate screw or stud.

Scoop-proof—The feature that prevents connector mates from experiencing contact bending from the nose of one entering at an angle into the other's insert area.

Screwlock—(See Jackscrew.)

Sealing Plug—A plug which is inserted to fill an unoccupied contact aperture in a termination assembly. Its function is to seal all unoccupied apertures in the assembly, especially in environmental connectors or junctions.

Seamless terminal or splice—Terminal or splice conductor barrel made without an open seam.

Semi-rigid—A cable containing a flexible inner core and a relatively inflexible sheathing material, such as a metallic tube, but which can be bent for coiling, spooling, or placing in a duct or cable run.

Serration—Deformation of the inside surface of a conductor barrel to provide better gripping of the conductor or on the outside of the connector body to provide better gripping of the connector.

Service life—A period of time during which a device is expected to perform satisfactorily.

Service loop—The extra cable required at a breakout to facilitate maintenance and servicing.

Service rating—The maximum voltage or current which a termination is designed to carry continuously.

Shell—The outside case of a termination assembly into which the dielectric material and contacts are assembled.

Shield, electrical—An item especially designed to be placed around that portion of a connector or junction which contains the elements for attaching conductors or cables. It is used for shielding against electrical interference or mechanical injury and usually has provisions for passage of the conductor or cable.

Shielded cable—Cable surrounded by a separate conductor (the "shield") intended to minimize the effects of internal or external electrical circuits.

Shielding—The metal sleeving surrounding one or more of the conductors in a circuit to prevent interference, interaction, RF or current leakage. Usually grounded, the shielding is carried through the connector shell or through a special internal shell in the case of individual coaxial contacts.

Shroud, insulation—(See Insulation support.)

Sintered Aluminum Powder (SAP)—A material composed of aluminum or an aluminum alloy in which there is dispersed aluminum oxide. The material is used to improve the temperature stability of aluminum products, e.g., electric wire.

Slotted tongue—A tongue that slides onto the screw or stud so that neither screw nor nut needs removing.

Socket contact sleeve—A sleeve that holds the contact spring in the correct position within the socket contact and provides a smooth exterior surface.

Solder—One metal or a metallic alloy used for the purpose of joining metal surfaces together. Rosin core 60-40 (60% tin, 40% lead) is normally used for soldering electronic assemblies. (Soldering is a wet process.)

Solder cup—The end of a terminal or contact in which the conductor is inserted prior to being soldered.

Solder eye—A solder type contact provided with a hole at its end through which a conductor can be inserted prior to being soldered.

Solderless connection—The joining of two metals by pressure without the use of solder, braze or any method requiring heat.

Solderless wrap—A technique of connecting stripped solid wire to a terminal post containing a series of sharp edges by winding the wire around the terminal.

Spade tongue terminal—Slotted tongue terminal designed to slip around a screw or stud without removing the nut.

Splice—(See Wire splice.) Device used to join two or more conductors to each other.

Stop plate—(See Locator.) A device attached to a crimping tool to properly locate a terminal, splice or contact in the tool prior to crimping.

Strand—A single uninsulated wire.

Strand lay—The distance of advance of one strand spirally stranded conductor, in one turn, measured axially.

Stranded conductor—A conductor composed of a group of wires, or of any combination of groups of wires.

Strain relief clamp—(See Cable clamp.)

Strip—To remove insulation from a conductor.

Stud—A post for connecting wire, similar to a binding post.

Stud hole—The hole or opening in the tongue of a terminal to accommodate a screw or stud.

Swedging—A term for crimping.

Tape wrap—Denotes a spirally or longitudinally applied tape material wrapped around the insulated or uninsulated wire, and used as an insulation or mechanical barrier.

Taper pin—A pin-type terminal having a tapered end designed to be impacted into a tapered hole to form a connection.

Taper tab—A flat terminal having tapered sided designed to receive a mating tapered female terminal.

Temperature coefficient of resistivity—The change in resistance (electrical) per degree change in temperature. (It is usually signified by the symbol for alpha, α.)

Terminal—A device designed to terminate a conductor to be affixed usually to a post, stud, chassis, or other conductor or the like in order to establish electrical connection.

Terminal junction module—(See Feed-back module.) A termination assembly having multiple contacts interconnected in parallel to form a circuit. It may contain one or more circuits.

Terminal junction system—A system consisting of modules, tracks and splices, and which is used for interconnecting electrical components and equipment in an electrical or electronic system, usually referred to as an integrated termination system.

Terminal lug—A device designed to be affixed, usually at one end, to a post, stud, chassis, or the like, and with provision for attachment of an electrical conductor(s) in order to establish an electrical connection.

Terminal strip—An insulating base equipped with one or more terminal connectors for the purpose of making electrical connections thereto.

Terminal style—The tongue design of the terminal (flag, flanged spade, offset, rectangular, ring, slotted, spade, etc.).

Termination assembly—Device for making contact with the ends of electrical conductors, e.g., connectors and junctions.

Thermal shock—The effect of heat or cold applied at such a rate that non-uniform thermal expansion or contraction occurs within a given material or combination of materials. The effect can cause inserts and other insulation material to pull away from metal parts.

Thermocouple contact—Contacts of special material used in connectors employed in thermocouple applications. Materials used are often iron, constantan, copper, chromel, alumel or others.

Threaded coupling—A way to couple mating connectors by engaging threads in a coupling ring with threads on a receptacle shell.

Tinning—The application of a thin coat of solder to the metallic surface to be soldered.

Track—(See Rail.)

Tracking—The formation of contaminants on the surface of insulating material due to arcing. Tracking can leave either a conductive or nonconductive path after the arcing stops.

Transverse conductance—A measure of the flow of electrical current from strand to strand in a multistrand conductor.

Triaxial—A cable construction, having three coincident axes, such as conductor, first shield, and second shield, all insulated from one another.

True concentric—A twisted cable, in which each successive layer has a reversed direction of lay from the preceeding layer.

Tubular adapter—An accessory attached to the rear of a termination assembly, usually metallic, used to extend the shell far enough to support a sealing gland or to give mechanical support for a cable or conductor harness.

Umbilical connector—A connector used to connect cables to a rocket or missile prior to launching and which is unmated from the missile at the time of launching.

Ultrasonic bond—A bond made by a process in which the wire is pressed against a bonding pad, and the pressing mechanism ultrasonically vibrated at a frequency above 10kHz. High-frequency vibrations break down and disperse the oxide films present on the conductor surfaces. As these surface films are removed, diffusion of the conductor materials occurs at the interface. The joints formed are metallurgically sound diffusion bonds.

Uni-directional concentric stranding—Stranding in which each successive layer has a different lay length, thereby retaining a circular form without migration of strands from one layer to another.

Uni-directional stranding—A term denoting that in a stranded conductor all layers have the same direction of lay.

Unilay stranding—A bunched construction having 19, 27, 37, or any number of strands, which might be found in a concentric stranding.

Voltage stranding-wave ratio—The ratio of the maximum effective voltage to the minimum effective voltage measured along the length of a mismatched radio-frequency transmission line.

Wet process—One in which a fluid is used, e.g., adhesives, inks, solder, potting materials, etc. Strict process controls are required making it difficult to perform wet process when installing or maintaining electrical assemblies.

Wetting action—The forming of a new alloy by intermolecular attraction between the solder and the base metal and plating.

Wicking—The flow of solder along the strands of multistrand conductors.

Wiping action—(See Contact wipe.) Action of two electrical contacts which come in contact by sliding against each other.

Wire—Technically, a slender rod or filament of drawn metal. Common usage: A solid or stranded group of solid cylindrical conductors, together with any associated insulation. *NOTE: For the purpose of these definitions the term "wire" is used according to its technical definition. For the purposes of discussion in the text of the book, the term "wire" is used according to its common usage.*

Wire damage curves—Electric current plotted against time required at each current to cause the conductor to be damaged. (Such curves are used to establish the circuit protection device: fuse, circuit breaker, limiter, etc., that will prevent conductor damage.)

Wire dress—The arrangement of wires and laced harnesses in an orderly manner.

Wire splice, removable contacts—Contacts of a main body accommodating a removable contact at each end.

Wire wrap—(See Solderless wrap.)

Work curve—A graph which plots the pull-out force, indent force and relative conductivity of a crimp joint as a function of various depths of crimping.

Working voltage—(See Service rating.) Voltage at which a connector is rated to operate.

Zero-force connector—A connector in which the contact surfaces do not mechanically touch until it is completely mated, thus requiring no insertion force. After mating, the contacts are actuated in some fashion to make intimate electrical contact.