



HIGH-CURRENT ADAPTER AVAILABLE

For measuring high-powered semiconductor devices which exceed the current capabilities of a Type 575, your Tektronix Field Engineer can put the Type 175 High-Current Adapter. Not intended for separate use, the Type 175 depends upon the oscilloscope and crt of a Type 575 to provide 200-ampere collector displays, three ranges of collector supply, and 12-ampere base supply—for calibrated displays with Collector Current on the Vertical Axis and Base Collector Voltage or Base Voltage on the Horizontal Axis.

**Type 175 Transistor-Curve Tracer
High-Current Adapter . . . \$1425**



HIGH-VOLTAGE TYPE 575 AVAILABLE

Supplied on order from your Tektronix Field Engineer is a special model of the Type 575 Transistor-Curve Tracer. Although similar to the Type 575, the special model provides much higher diode breakdown voltage (variable from zero to 200 volts at a maximum current of milliamperes) and also much higher collector supply (up to 400 volts, at 100 milliamperes).

For complete specifications of this special model—call your Tektronix Field Engineer.

Type 575 Mod 122C . . . \$1175
(prices f.o.b. factory)

For more information about evaluating semiconductor devices with a Type 575 or other Tektronix test equipment, call your Tektronix Field Engineer. He will be glad to assist you.

CAREER OPPORTUNITIES now exist at Tektronix in the following fields: Instrument design, Circuit design and engineering, Cathode-ray tubes, Electron physics, Solid state and semiconductor devices. For information write to: Mr. J. H. Altman, Professional Placement.

Calendar

Material for inclusion in the calendar and meeting sections should be received 6 weeks prior to the date of the issue in which it is to appear. Further information can be obtained by writing to the addresses indicated in parentheses.

March

- 17 Am. Astronautical Soc. mtg. on Interaction of Satellites & Space Vehicles with the Ionosphere, Sheraton-Park Hotel, Washington, D. C. (F. F. Martin, AAS, 516 Fifth Ave., New York 36, N. Y.)
- 20-22 American Physical Society, US Naval Postgraduate School, Monterey (W. A. Nierenberg, U. of Calif., Berkeley 4, Calif.)
- 20-22 APS Division of Solid-State Physics, US Naval Postgraduate School, Monterey, Calif. (E. Burstein, U. of Pa., Philadelphia 4, Pa.)
- 20-23 Inst. of Radio Engineers, internat'l conv., Waldorf-Astoria Hotel & NY Coliseum, NYC (IRE, 1 East 79 St., New York 21, N. Y.) (See Feb. PT, p. 94)
- 21 OSA Rochester Section (Mechanical Translation of Russian by Ida Rhodes), Rochester Museum of Arts & Sciences (J. H. Altman, Kodak Research Lab, Rochester 4, N. Y.)
- 21-23 APS Division of High-Polymer Physics, Monterey, Calif. (D. W. McCall, Bell Telephone Labs, Murray Hill, N. J.)
- 21-23 Am. Meteorological Soc., Chicago (K. C. Spengler, 45 Beacon St., Boston 8, Mass.)
- 23-24 Electron Beam Technology Symp. organized by Alloy Electronics Corp., Boston (R. Bakish, 37 Cambridge Parkway, Cambridge 42, Mass.)
- 23-25 Quantum Electronics, internat'l conf. spon's'd by ONR at Berkeley (J. R. Singer, U. of Calif., Berkeley 4, Calif.) (See Feb. PT, p. 94)
- 24-29 Nat'l Science Teachers Assoc. ann. conv., Hotel Sherman, Chicago, Ill. (NSTA, 1201 16th St., NW, Washington 6, D. C.) (See Feb. PT, p. 94)
- 27-31 Temperature—Its Measurement & Control in Science & Industry, nat'l symp. spon's'd by AIP, ISA, NBS, at Veteran's Memorial Hall & Deshler-Hilton Hotel, Columbus, Ohio (C. M. Herzfeld, Nat'l Bureau of Standards, Washington 25, D. C.) (See July '60 PT, p. 74 & Jan. '61 PT, p. 108)
- 28-29 Nucleonics in Flight, symp. spon's'd by ANS N. Tex. Sect. at Statler-Hilton Hotel, Dallas (E. L. Burkhard, Convair, Fort Worth, Tex.) (See Feb. PT, p. 94)
- 29-31 Am. Power Conf., Sherman Hotel, Chicago (R. A. Budenz, Ill. Inst. of Technology, Chicago 16, Ill.)
- 4 SAS New York Sect. mtg. on Recent Developments in Spectrophotometry, Hotel New Yorker, NYC (P. Lublin, General Telephone & Electronics Labs, Bayside, N. Y.)
- 4-6 Electromagnetics & Fluid Dynamics of Gaseous Plasma, Polytechnic Inst. of B'klyn symp. spon's'd by IRE, IAS, US Defense Research Agencies at Engineering Soc. Bldg., NYC (M. Bloom, PIB, 55 Johnson St., B'klyn 1, N. Y.) (See Dec. '60 PT, p. 79)
- 4-6 Lifting Re-entry Vehicles: Structures, Materials, & Design, Am. Rocket Soc. conf., Riviera Hotel, Palm Springs, Calif. (R. Hohl, ARS, 500 Fifth Ave., New York 36, N. Y.)
- 4-8 Nat'l Council of Teachers of Mathematics, ann. mtg., Conrad Hilton Hotel, Chicago (F. A. Janacek, J. S. Morton H. S., Cicero 50, Ill.)
- 5-7 Inst. of Environmental Sciences mtg. on Global & Space Environments as a Challenge to Industry, Sheraton Park Hotel, Washington, D. C. (H. Sanders, P. O. Box 191, Mt. Prospect, Ill.)
- 5-7 Materials & Electron Device Processing Symp. spon's'd by ASTM Comm. F-1 on Materials for Electron Tubes & Semiconductor Devices at Benj. Franklin Hotel, Phila. (Am. Soc. for Testing Materials, 1916 Race St., Phila. 3, Pa.)
- 8 APS New England Section, Mt. Holyoke Col., S. Hadley, Mass. (P. J. Bray, Brown U., Providence 12, R. I.)
- 10-11 The Combustion Inst. Western States Sect., Aeronutronic, Newport Beach (G. S. Bahn, 16902 Bollinger Dr., Pacific Palisades, Calif.) (See Feb. PT, p. 94)
- 10-12 Inter-Society Color Council, ann. mtg., Sheraton Hotel, Rochester (R. M. Evans, B-65, Eastman Kodak Co., Rochester 4, N. Y.)
- 11-13 Ultrapurification of Semiconductor Materials Conf., New England Mutual Hall, Boston (Electronics Research Directorate, L. G. Hanscom Field, Bedford, Mass.) (See Jan. PT, p. 108)
- 14-15 APS New York State Section symp. on Atomic & Molecular Amplifiers, LeMoine Col., Syracuse (O. E. Miller, B-65, 1669 Lake Ave., Rochester 4, N. Y.)
- 15 AAPT Chesapeake Section, Trinity Col., Washington, D. C. (R. A. Regalbutto, Georgetown U., Washington 7, D. C.)
- 15-24 Photography, Cinematography, & Optics, internat'l biennial, Paris (J. d'Autrevaux, Syndicat Général d'Industrie Photo & Cinéma, 94 rue de Rennes, Paris 6, France)
- 17 Physics Club of Chicago (Organic Semiconductors by D. Fox), Younker's Restaurant, Chicago (E. L. Bussell, The Welch Scientific Co., 1515 Sedgewick St., Chicago 10, Ill.)
- 18 OSA Rochester Section (Contemporary Problems in Colorimetry by G. Wyszecki), Rochester Museum of Arts & Sciences (J. H. Altman, Kodak Research Lab, Rochester 4, N. Y.)

April

- 3-8 Problems of Scientific & Engineering Education, internat'l conf. (Apr. 3-6), plenary session (Apr. 7), discussion panels (Apr. 8) at Mass. Inst. of Technology (MIT, Cambridge 39, Mass.)
- 4 OSA Rochester Section, (A Nat'l Science Policy by W. R. Brode), Rochester Museum of Arts & Sciences (J. H. Altman, Kodak Research Lab, Rochester 4, N. Y.)

1961

- 18-19 Organic Semiconductors, conf. spons'd by Armour Research Found. & Electronics mag., at Morrison Hotel, Chicago (J. J. Brophy, ARF, 10 W. 35 St., Chicago 16, Ill.) (See Feb. PT, p. 96)
- 18-20 Chemical Reactions in the Lower & Upper Atmosphere Symp. spons'd by Stanford Research Inst., at Mark Hopkins Hotel, San Francisco (R. D. Cadle, SRI, Menlo Park, Calif.) (See Aug. '60 PT, p. 62)
- 19 Welding Res. Council, Ann. University Res. Conf., Hotel Commodore, NYC (WRC, 29 W. 39 St., New York 18, N. Y.)
- 20-21 British Soc. of Rheology mtg. on Theoretical Rheology, Reading, England (M. F. Culpin, 8 The Broadway, Pontypool, Monmouth, Wales)
- 20-22 Am. Meteorological Soc. with Am. Geophysical Union, Washington, D. C. (K. C. Spengler, 45 Beacon St., Boston 8, Mass.)
- 20-22 Ohio Academy of Science, U. of Cincinnati in Cincinnati (K. B. Hobbs, 505 King Ave., Columbus 1, Ohio)
- 21-22 APS Ohio Section, U. of Cincinnati, Cincinnati (L. E. Smith, Denison U., Granville, Ohio)
- 24-26 Nat'l Academy of Sciences, ann. mtg., Washington, D. C. (NAS, 2101 Constitution Ave., Washington 25, D. C.)
- 24-27 American Physical Society, Sheraton-Park Hotel, Washington, D. C. (K. K. Darrow, 538 W. 120 St., New York 27, N. Y.)
- 26-27 High-Temperature Materials, technical conf. spons'd by Metallurgical Soc. of AIME, Carter Hotel, Cleveland, Ohio (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18, N. Y.)
- 26-28 Propellants, Combustion & Liquid Rockets, Am. Rocket Soc. mtg., Palm Beach Biltmore, Palm Beach, Fla. (R. Hohl, ARS, 500 Fifth Ave., New York 36, N. Y.)
- 30-4 Nat'l Aero-Space Instrumentation Symp., Adolphus Hotel, Dallas (W. J. Gabriel, Convair Div., General Dynamics Corp., Ft. Worth, Tex.)
- ? Radiofrequency Spectroscopy Group, conf. on Free Radicals & Nuclear Magnetic Resonance, St. Andrews (P. A. Rushworth, St. Salvator's Col., U. of St. Andrews, St. Andrews, Scotland)
- May**
- 3-5 Nuclear Applications in Space, Am. Rocket Soc.-Oak Ridge Nat'l Lab conf., Gatlinburg, Tenn. (R. Hohl, ARS, 500 Fifth Ave., New York 36, N. Y.)
- 4-5 Human Factors in Electronics, symp. spons'd by PGHFE of IRE, Marriott-Twin Bridges Motor Hotel, Arlington, Va. (H. P. Birmingham, US Naval Res. Lab., Washington 25, D. C.)
- 6 Graph Theory Workshop, U. of Ill., Urbana (M. E. Van Valkenburg, U. of Ill., Urbana, Ill.)
- 8-9 Topology in Circuit Theory, 5th Midwest Symp. at Allerton Pk. in Monticello, & U. of Ill. in Urbana (M. E. Van Valkenburg, U. of Ill., Urbana, Ill.) (See May '60 PT, p. 73)
- 8-9 Titrimetric Methods of Analysis Symp. spons'd by Chem. Inst. of Canada Analytical Chem. Div. in Cornwall, Ont. (J. R. McCallum, c/o Courtaulds Ltd., Cornwall, Ont., Canada)
- 8-10 Nat'l Aerospace Electronics Conf. (NAECON), Biltmore & Miami Hotels, Dayton (Inst. of Radio Engineers, 1 E. 79 St., New York 21, N. Y.)
- 11-13 Acoustical Society of America, Bellevue-Stratford Hotel, Philadelphia, Pa. (M. E. Hawley, RCA, Moorestown, N. J.)
- 12-13 Midwest Theoretical Physics Conf., U. of Minn. (W. B. Cheston, U. of Minn., Minneapolis 14, Minn.)
- 22-24 Nat'l Telemetering Conf. spons'd by AIEE, ARS, IAS, IRE, ISA at Sheraton Towers Hotel, Chicago, Ill. (J. Becker, Dept. 32-29, AC Spark Plug Div., General Motors Corp., Milwaukee 1, Wisc.) (See Feb. PT, p. 96)
- 22-24 Global Communications, nat'l symp. spons'd by AIEE & PGCS of IRE, Hotel Sherman, Chicago (D. C. Campbell, ITT-Kellogg, 5959 S. Harlem Ave., Chicago 38, Ill.)
- 23-25 Large Capacity Memory Techniques for Computing Systems, symp. spons'd by ONR Information Systems Branch, in Dept. of Interior Auditorium, Washington, D. C. (Miss J. Leno, Code 430A, Office of Naval Research, Washington 25, D. C.)
- 29-2 Effects of Ionizing Radiation at the Molecular Level, IAEA symp., Brno, Czechoslovakia (Internat'l Atomic Energy Agency, 11 Kärntner Ring, Vienna 1, Austria)
- 29-2 Property Changes in Reactor Materials & Radiation Damage Conf., Bristol (A. T. Churchman, Berkeley Nuclear Labs, 7 St. Stephen's Ave., Bristol 1, England)
- ? Biophysical Cong., 1st, Tatranská Lomnica (V. Slouka, Czechoslovak Medical Soc., Juan Evangelista, Biophys. Sect., Prague, Czechoslovakia)
- June**
- 4-9 ASTM Comm. E-14 on Mass Spectrometry, Chicago, Ill. (G. Crable, Gulf Research Center, P. O. Box 2038, Pittsburgh 30, Pa.) (See Dec. '60 PT, p. 80)
- 5-10 Spectroscopy, internat'l conf., Lyons (Groupe pour l'Avancement des Méthodes Spectrographiques, 1, rue Gaston-Boissier, Paris 15, France)
- 7-10 Canadian Assoc. of Physicists, ann. cong., Sir George Williams U., Montreal (G. D. Scott, U. of Toronto, Toronto 5, Ont., Canada)
- 12-15 Physics of Electronic & Atomic Collisions, internat'l conf., U. of Colo., Boulder (B. Bederson, New York U., New York 53, N. Y.) (See July '60 PT, p. 75)
- 12-16 Molecular Structure & Spectroscopy Symp., Dept. of Physics & Astronomy, Ohio State U. (R. A. Oetjen, Ohio State U., Columbus 10, Ohio)
- 13-16 Whole Body Counting, IAEA symp., Vienna (IAEA, 11 Kärntner Ring, Vienna 1, Austria)
- 14-16 Semiconducting Compounds Conf. spons'd by AFOSR & GE Res. Lab at GE Res. Lab. Schenectady (H. Ehrenreich, GE Res. Lab., P. O. Box 1088, Schenectady, N. Y.)
- 18-21 American Astronomical Society, Nantucket (A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass.)
- 19-23 Carbon Conf., biennial, spons'd by Am. Carbon Comm. & Penn State U. at Penn State U. (D. S. Coleman, Penn State U., University Park, Pa.) (See Jan. PT, p. 110)
- 19-30 Holloman Summer Scientific Seminars on Astrophysics spons'd by AF Missile Dev. Center & U. of N. M., in Cloudcroft (J. R. Foote, P. O. Box 1053, Holloman AFB, N. M.)
- 20-22 Am. Meteorological Soc. with AAAS Pacific Div., Davis, Calif. (K. C. Spengler, 45 Beacon St., Boston 8, Mass.)
- 20-24 Vacuum Techniques, internat'l cong., Paris (P. Fleury, Institut d'Optique, 3 blvd. Pasteur, Paris 15, France)
- 22-24 American Physical Society, U. of Mexico, Mexico City (K. K. Darrow, 538 W. 120 St., New York 27, N. Y.)
- 25-1 Internat'l Measurements & Instruments Conf., Budapest (IMEKO Secretariat, P. O. Box 3, Budapest 5, Hungary)
- 26-27 Vacuum Metallurgy, ann. conf. spons'd by Am. Vacuum Soc. & New York U. at NYU University Heights Campus (R. F. Bunshah, NYU, New York 53, N. Y.) (See Feb. PT, p. 96)
- 26-28 European Symp. on Space Technology, at Federation of British Industries, London (British Interplanetary Soc., 12 Bessborough Gardens, London S. W. 1, England)
- 26-30 Soc. of Physical Chemistry, ann. mtg., Col de Voza, Haute-Savoie (G. Emschwiller, Soc. de Chimie Physique, 10, rue Vauquelin, Paris 5, France)
- 29-1 American Association of Physics Teachers, Stanford U., Palo Alto, Calif. (F. Verbrugge, U. of Minnesota, Minneapolis 14, Minn.)
- ? Earth Satellites & Re-entry Trajectories, internat'l symp., Paris (A. R. Weiller, Internat'l Academy of Astronautics, 12, rue de Gramont, Paris 2, France)
- July**
- 3- (through Aug. 26) Summer School for Theoretical Physics of the U. of Grenoble on Low-Temperature Physics, Les Houches, France; for application forms write to C. DeWitt, U. of North Carolina, Chapel Hill, N. C. Deadline for application is Apr. 1
- 5-8 Optical Materials, Internat'l Comm. for Optics mtg., Paris (A. Maréchal, Institut d'Optique, 3 blvd. Pasteur, Paris 15, France) (See Jan. PT, p. 110)
- 6-7 Free Radicals, internat'l symp., Uppsala (Symp. Secretariat, c/o Inst. of Phys. Chem., Uppsala, Sweden)
- 16-21 Internat'l Conf. on Medical Electronics & Ann. Conf. on Electrical Techniques in Medicine & Biology spons'd by ISA, IFME, AIEE, IRE, at Waldorf-Astoria, NYC; send abstracts by Apr. 1 to H. P. Schwan, U. of Pa., Phila. 4, Pa. (J. T. Farrar, Veterans Administration Hospital, 1st Ave. & 24 St., New York, N. Y.) (See Feb. PT, p. 99)
- 18-21 Inorganic Polymers, internat'l symp., Nottingham (Gen. Sec'y, Chemical Soc., Burlington House, London W. 1, England)
- 31-4 American Crystallographic Association, U. of Colorado, Boulder (W. M. Macintyre, U. of Colo., Boulder, Colo.)
- 31-4 Internat'l Congress of Biophysics, Stockholm (B. Lindström, Karolinska Institutet, Stockholm 60, Sweden) (See Oct. '60 PT, p. 88)
- August**
- 2-12 Aug. 2-5, IUPAC Conf. (R. Morf, Hoffmann-Larache, S.A., Grenzacherstr. 124, Basel 2, Switzerland); Aug. 6-12, Internat'l Congress of Pure & Applied Chem. (L. Marion, Nat'l Research Council, Ottawa 2, Ont., Canada) & High Temperature Chem. & Thermodynamics Symp. (N. F. H. Bright, NRC, Ottawa 2, Ont.) in Montreal, Canada

- 6-26 Nuclear Physics Summer Course spons'd by Italian Physical Soc., at Varenna (G. Polvani, Via Saldini 50, Milan, Italy)
- 14-17 Internat'l Calorimetry Conf., Ottawa, Canada (J. E. Kunzler, Bell Telephone Labs, Murray Hill, N. J.)
- 15-24 Internat'l Astronomical Union, Berkeley, Calif. (D. H. Sadler, Royal Greenwich Observatory, Herstmonceux Castle, Sussex, England)
- 16-18 Hypersonics, internat'l conf., Mass. Inst. of Technology, Cambridge, Mass. (R. Hohl, Am. Rocket Soc., 500 Fifth Ave., New York 36, N. Y.)
- 21-24 Photoconductivity, internat'l conf., spons'd by IUPAP, APS, ONR, at Cornell U., Ithaca, N. Y.; send abstracts by March 31 to A. R. Hutson (A. R. Hutson, Bell Telephone Labs, Murray Hill, N. J.) (See Feb. PT, p. 99)
- 21-31 New (Nonnuclear) Energy Sources, UN conf. (A. G. Katsin, United Nations, N. Y.) and Equipment & Services Exhibition (Rassegna Internazionale Elettronica, Via della Scrofa 14, Rome, Italy) in Rome, Italy
- 23-25 Gas Dynamics Symp. spons'd by Am. Rocket Soc. & Northwestern U. Gas Dynamics Lab at Northwestern U. (Gas Dynamics Symp., Mech. Eng. Dept., Northwestern U., Evanston, Ill.)
- 23-26 Electron Microscope Soc. of Am., Pittsburgh Hilton Hotel, Pittsburgh, Pa.; send abstracts by May 1 to A. R. Taylor (A. R. Taylor, Parke, Davis & Co., Detroit 32, Mich.) (See Feb. PT, p. 101)
- 28-31 Spectral Line Shape & Molecular Interactions Conf., Rehovoth (J. H. Jaffe, Weizmann Inst., Rehovoth, Israel)
- 28-1 Ionization Phenomena in Gases, internat'l conf., Munich (Conf. Secretariat, P. O. Box 463, Munich 1, Germany)

September

- 4-8 Plasma Physics & Controlled Nuclear Fusion Research, IAEA Conf., Vienna (Internat'l Atomic Energy Agency, 11 Kärntner Ring, Vienna 1, Austria)
- 4-9 Low-Energy Nuclear Physics, internat'l IUPAP conf., Manchester (B. H. Flowers, Manchester U., Manchester 13, England)
- 4-15 Internat'l Conf. on Cosmic Rays & the Earth Storm spons'd by IUGG, URSI, IAU, IUPAP, incl.: Sept. 4-6, Internat'l Symp. on the Earth Storm (R. Nagata, Science Council of Japan, Ueno Park, Tokyo, Japan); Sept. 11-15, Internat'l Conf. on Cosmic Rays (Y. Sekido, Science Council of Japan, Ueno Park); & Sept. 7-9, joint sessions, all in Kyoto, Japan
- 6-8 Midwestern Conf. on Fluid Mechanics & Solid Mechanics, Michigan State U. (J. E. Lay, Michigan State U., East Lansing, Mich.)
- 11-21 Cloud Physics Conf., internat'l, spons'd by Australian Acad. of Sciences & CSIRO in Canberra & Sydney (E. G. Bowen, CSIRO, University Grounds, Sydney, Australia)
- 23-30 Magnetism, internat'l IUPAP conf. & Electron & Neutron Diffraction, internat'l IUCr symp., Kaikan Assembly Center, Kyoto (T. Nagamiya, Science Council of Japan, Ueno Park, Tokyo, Japan) (See Oct. '60 PT, p. 90)

March 1961



and the
universe shall
talk back...

Not necessarily in words and syllables but in electronic impulses, relayed by orbital, lunar and interplanetary communications systems.

Scientific advancement depends upon the ability of man to overcome the limitations of current knowledge. These limitations are being pushed aside at the Amherst Laboratories by new concepts for aerospace communication and instrumentation systems.

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All inquiries will be acknowledged promptly.

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