

Contributors to This Issue

W. G. ALBERT, Bell Telephone Laboratories, 1951—. Mr. Albert was first involved with the physical design of terminal equipment for the L-3 coaxial system and microwave transmission systems. He has also worked on the A4 and A5 Channel Banks, L-Multiplex and L-4 coaxial system line repeaters. He is now engaged in the physical design of the L-5 coaxial system at Merrimack Valley. Member, IEEE.

ROBERT E. ANDERSON, B.S.E.E., 1940, University of Wisconsin; E. I. duPont de Nemours and Co., 1940-43; Radio Research Laboratory, Harvard University, 1943-45; Bell Telephone Laboratories, 1945—. At Bell Laboratories, Mr. Anderson has worked on the development of video transmission systems for television, the L-3 carrier, automatic-restoral alarm circuits for N-2 and N-3 carrier, and most recently, on the equalizer remote control system for L-4 carrier. Member, IEEE, Eta Kappa Nu.

J. D. BISHOP, B.S.E.E., 1953, Ohio University; Bell Telephone Laboratories, 1953—. Until recently Mr. Bishop was responsible for the development of power conversion equipment for microwave radio systems, PBX systems, wire and coaxial cable systems, data systems, and undersea cable systems. He is now a supervisor in the Electromechanical Laboratory responsible for development of underground cable tunneling equipment.

FRANKLIN H. BLECHER, B.E.E., 1949, M.E.E., 1950, and D.E.E., 1955, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories, 1952—. His early work concerned the design of transistor circuits for application in analog and digital computers; design of wideband feedback amplifiers for application in carrier systems; and development of active filters, IF amplifiers, and wideband video amplifiers. He later headed a group in developing solid-state short-haul carrier circuits and millimeter wave networks. From 1961 to 1967, Mr. Blecher was director of the Carrier Transmission Laboratory and was responsible for the development of short-haul and long-haul carrier systems using wire pair and coaxial cable transmission media. In May 1968 he was appointed Director of the Electron Device Laboratory. Fellow, IEEE; member, Tau Beta Pi, Eta Kappa Nu.

R. C. BOYD, B.S.E.E., 1947, M.S.E.E., 1948, University of Michigan; Bell Telephone Laboratories, 1948—. He was first concerned with systems engineering studies of Bell System and military transmission systems and with initial installations of N-1 carrier. He later worked on systems engineering of exchange, short haul, and long haul carrier systems which utilize analog and digital technologies, and is now Head, Wire Systems Engineering Department. Senior member, IEEE; member, Tau Beta Pi, Phi Kappa Phi.

NORMAN J. CHAPLIN, B.A.Sc., 1949; M.A.Sc., 1950, University of Toronto (Canada); Bell Telephone Laboratories 1956—. Mr. Chaplin has been active in the development of transistors for the Bell System. He is currently engaged in developing large scale integrated circuit arrays. Member, IEEE.

C. R. CRUE, E. E. Assoc., 1959, Wentworth Institute; B.S.E.E., 1965, Newark College of Engineering; Bell Telephone Laboratories, 1959-1969. Mr. Crue developed circuits for use in pulse code modulation timing noise studies. Since 1965 he has been engaged in the development of circuits for the L-4 equalizer remote control system.

GRAYDON A. DODSON, M.S. (physics) 1951, University of Arkansas; Bell Telephone Laboratories, 1957—. He has been engaged in semiconductor device development, including studies of semiconductor device reliability, and he supervises an integrated circuits group. Member, American Institute of Physics, IEEE, IEEE Professional Technical Group on Electron Devices.

GEORGE H. DUVALL, B.S. in M.E., 1963, Johns Hopkins University; Bell Telephone Laboratories, 1956—. He began work in the Bell System in 1942 as a draftsman and designer for the Western Electric Company. His initial Bell Laboratories work in the apparatus group concerned engineering improvements in splice cases and cable terminals. His current responsibility includes gas-tight cylindrical apparatus housings and outside cabinets to house carrier equipment.

JAMES B. EVANS, JR., Sc.B., 1947, Brown University; M.S.E.E., 1949, Worcester Polytechnic Institute; Bell Telephone Laboratories, 1949—. Mr. Evans' first assignment was the development of filters for coaxial carrier systems; he also worked on the design of thermistors and on developing short-haul carrier systems. He later supervised groups de-

veloping frequency-division multiplex equipment and L-4 coaxial terminals. Mr. Evans supervises a group concerned with CATV systems, special data transmission projects, and T-1 PCM terminals.

J. L. GARRISON, B.E.E., 1934, and M.E.E., 1936, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories 1936—. Mr. Garrison worked in the design of transmission transformers and the final development of transistors before turning to work on Bell Laboratories technical publications. In 1956 he transferred to Merrimack Valley, where he now supervises a group engaged in development of transmission networks. Member, Sigma Xi, Tau Beta Pi; registered professional engineer in New Jersey and New Hampshire.

THOMAS J. HALEY, B.A., 1954, University of Notre Dame; B.S. (E.E.), 1959, Michigan State University; M.S. (E.E.), 1961, Northeastern University; Bell Telephone Laboratories, 1959—. Mr. Haley was first involved in designing carrier frequency supplies for the LMX-2 frequency division terminal. Later he was responsible for designing the transmission and transmission switching circuits for the MMX-2 mastergroup multiplex terminal and the design of the L-4 line connecting circuits. Now he is involved in continuing work on the L-4 system and in preliminary work on the L-5 coaxial system. Member, Tau Beta Pi, Eta Kappa Nu.

F. J. HALLENBECK, E.E., 1936, Polytechnic Institute of Brooklyn; Western Electric Co., 1923-25; Bell Telephone Laboratories, 1925—. For many years he was involved in developing transmission networks for Bell System and military communication facilities. In 1958 he assumed responsibility for L-Carrier terminal development and later for the L-4 Coaxial System. He is Head of the Carrier Equipment Department. Senior member, IEEE; member, Tau Beta Pi, Eta Kappa Nu.

FRED J. HERR, B.S.E.E., 1942, Cooper Union Institute of Technology; M.S., 1952, Stevens Institute of Technology; Bell Telephone Laboratories, 1936—. He was first engaged in the development of measuring equipment for coaxial transmission systems; during World War II he worked on the development and testing of proximity fuses. Later Mr. Herr was concerned with broad-band coaxial systems and long- and short-haul carrier, participated in laying submarine cables, and did system design analysis and terminal maintenance planning for

the SD submarine cable system. Mr. Herr has also been concerned with analysis of video transmission equipment; he supervises a coaxial systems analysis group. Member, IEEE, Tau Beta Pi.

RICHARD M. JACOBS, B.S. (chem.), 1954, Brooklyn College; B.S.(E.E.), 1959, University of Wisconsin; M.S.(E.E.), 1961, Lehigh University; Bell Telephone Laboratories, 1959—. Mr. Jacobs has worked on designing and developing high-frequency germanium and silicon transistors and integrated circuits. He is Head of the Unipolar Device Department. Member, IEEE, Eta Kappa Nu, Tau Beta Pi.

F. C. KELCOURSE, B.S.E.E., 1959, M.S.E.E., 1962, Northeastern University; Bell Telephone Laboratories 1959—. Mr. Kelcourse has worked on frequency division multiplex terminals, designing amplifiers, modulators, and other equipment. He has done systems planning and analysis, and has worked on designing wideband negative feedback amplifiers for the L-4 system. He is supervisor of the L-4 Equalizing Repeater Group, which is responsible for the equalization and remote control systems of the L-4 coaxial cable system. Member, Tau Beta Pi.

LEO P. LABBE, B.S.E.E., 1959, University of New Hampshire; M.S.E.E., 1961, Northeastern University; Bell Telephone Laboratories 1959—. He worked on transistorized L-1860 multiplex group and supergroup regulators. He was involved in the design of baseband video amplifiers for the TL-2 radio system and in the design of line repeaters for the L-4 system. He is supervisor of the Systems Coordination Group working on both L-4 and L-5 coaxial systems. Member IEEE, Tau Beta Pi.

THOMAS B. MERRICK, B.S.E.E., 1959, M.S.E.E., 1962, University of New Hampshire; Bell Telephone Laboratories, 1961—. Mr. Merrick contributed to the design of short haul carrier repeaters and participated in several portions of the L-4 system design, including the terminal facilities and peripheral equipment such as alarm, switching, and order wire. Member, Tau Beta Pi.

SAMUEL MOTTEL, B.S.M.E., 1950, City College of New York; M.S. in Eng., 1968, Newark College of Engineering; Bell Telephone Laboratories, 1952—. He has been continuously concerned with physical design and currently supervises a group responsible for power equipment for transmission systems, key telephone systems, ringing and tone supplies, submarine cable and military systems. Member, American Society of Mechanical Engineers, Tau Beta Pi, Pi Tau Sigma.

LAWRENCE M. RACKSON, B.S. in E.E., 1962, Johns Hopkins University; Bell Telephone Laboratories, 1956—. His earliest assignment concerned design, specification requirements, and testing of toll and PIC cable at Baltimore. Work with the disk insulated, serrated-seam coaxial cable began shortly before the introduction of the 12-coaxial transcontinental cable. He is now working on coax 20 and other aspects of coaxial cable development.

C. CARROLL ROCK, B.S.E.E., 1942, Newark College of Engineering; Bell Telephone Laboratories, 1935—. Mr. Rock has worked on contact protection studies for No. 1, No. 4, and No. 5 crossbar switching systems. He has been concerned with designing and developing equipment for L-3 line switching, L-type wire line entrance links, Project Caesar, L-type multiplex, and the L-4 Coaxial System. He is concerned with equipment design and development on the L-4 and L-5 coaxial systems.

WILLIAM G. SCHEERER, B.E.E., 1959, Syracuse University; M.S.E.E., 1960, California Institute of Technology; Bell Telephone Laboratories, 1960—. Mr. Scheerer's first assignment included wideband amplifier design and PCM system analysis. From 1964 through 1968 he supervised a group concerned with device modeling and measurement, digital and hybrid computing, network design, and the application of computers to the postelectrical design process. He is head of the Computer-Aided Analysis Department. Member, IEEE, Association for Computing Machinery, Tau Beta Pi, Sigma Xi, Eta Kappa Nu.

T. H. SIMMONDS, JR., B.S.E.E., 1954, University of Virginia; M.S.E.E., 1961, Northeastern University; Active Naval Reserve, 1954-1958; Bell Telephone Laboratories, 1954 and 1958—. Mr. Simmonds did his early work on a variety of filters and networks for long- and short-haul carrier transmission systems. As supervisor of a networks group in the Transmission Systems Networks Department he is responsible for work on transmission filters and networks for carrier and radio transmission systems.

R. J. WIRTZ, B.S. (M.E.), 1950, Brown University; Bell Telephone Laboratories, 1956—. He has worked on resistor development, and design of N-3 carrier system equipment. He is supervisor of the L-4 Equipment Design Group, which is now working on physical designs for the L-5 coaxial carrier system.

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