

# Credit Authorizations in Seconds — Via the

A business telephone set that enables merchants or banks to check and record credit card business transactions in seconds has been designed by engineers in the New Telephone Services Department at Bell Laboratories, Holmdel, N. J. The new instrument—the Transaction Telephone\* set—is a computer input device that may also be used by bank tellers or customers to check balances in bank accounts. In addition, it provides standard telephone services.

The phone is designed to meet the needs of small or medium-sized retail outlets, affiliated with banking or credit associations, whose business volume does not justify the expense of special telephone links. An unusual feature is a sequence of lights to lead users through a series of input procedures. In routine transactions, a clerk or cashier in a store merely slides two cards, the merchant's ID card and the customer's credit card, through a magnetic tape reader in the phone terminal. The clerk

then keys in the sales price on a TOUCH-TONE® dial pad. The terminal automatically dials a central computer at a bank or credit agency and obtains a purchase authorization in the form of a computer-synthesized voice or light signal.

Details of the transaction may be recorded in computer memory for billing and accounting purposes. Unapproved transactions or those requiring special handling can be transferred, either automatically or at the initiation of the clerk, to a credit attendant for personal attention.

The Transaction Telephone set relies on miniature integrated circuits for its memory and logic programs and its card reader components. It can read a variety of major credit cards using the American Bankers Association magnetic stripe standard—and for the non-magnetic cards that it cannot read, information can be entered manually via the Touch-Tone dial pad.

Credit card monitoring systems, operated by banking and credit associations, are expected to permit verifica-

tion of nearly 100 percent of credit cards. These systems will reduce fraudulent use of stolen or lost cards. In the future, similar systems may perform other financial services as well, such as transferring funds and authorizing checks to be cashed.

An early version of the Transaction Telephone set was tested at 13 retail outlets in the Cleveland-Akron area of Ohio in late 1973 and early 1974. The new phone was also demonstrated by AT&T at the Credit Card Conference of the annual meeting of the American Bankers Association in New Orleans in September, and the following week at the National Retail Merchants Association Conference in Los Angeles. A pilot trial began in October 1974 at a bank in Cincinnati, Ohio. Terminals were set up in the bank, permitting customers to use their bank cards to determine the balance in their accounts. The new instrument will be manufactured by Western Electric. It is expected to be offered by some Bell System Operating Companies in late 1975 or early 1976.

\*Trademark of the Bell System.

# Transaction Telephone™ Set



## Western Electric Calls Them “Sweet Sixteen”

Cable splicers will find it particularly easy and convenient to use the Bell System's new 16-type cable closures, referred to in a brochure from Western Electric's Product Information Organization as the “sweet sixteen.” The new designs meet the need for waterproof closures in graduated sizes to accompany the waterproof buried cables now being used in the subscriber loop, the link between a customer's phone and a switching office.

One reason for the convenience is that members of Bell Labs' Sheath Joining and Closures Group and Western Electric Apparatus engineers from the Product Engineering Control Center at Atlanta worked closely with Operating Company craftsmen in designing the closures. The Chemical Engineering and New Materials Group developed a special waterproofing compound that flows even at subfreezing temperatures but does not run out in the heat of summer. The new components and procedures are all easy for people to use. In addition, everything the splicer needs has been included in the package—including instructions, and plastic gloves for handling the compound.

To join two lengths of cable, the splicer simply connects the cables and wires with a tie bar and clamps, injects waterproofing compound into the splice bundle to fill all the voids, and then covers the splice first with a mesh tape and then with the ribbed plastic cover. When the cover has been fastened, more waterproofing compound is pumped or shot inside, and the closure is ready to be buried.

“Sweet sixteen” closures are inexpensive and easy to manufacture. They are also quite versatile—they can be arranged to make straight, branch, or butt splices. Four sizes are available, for use with cables containing from 50 to 900 pairs of wires.