

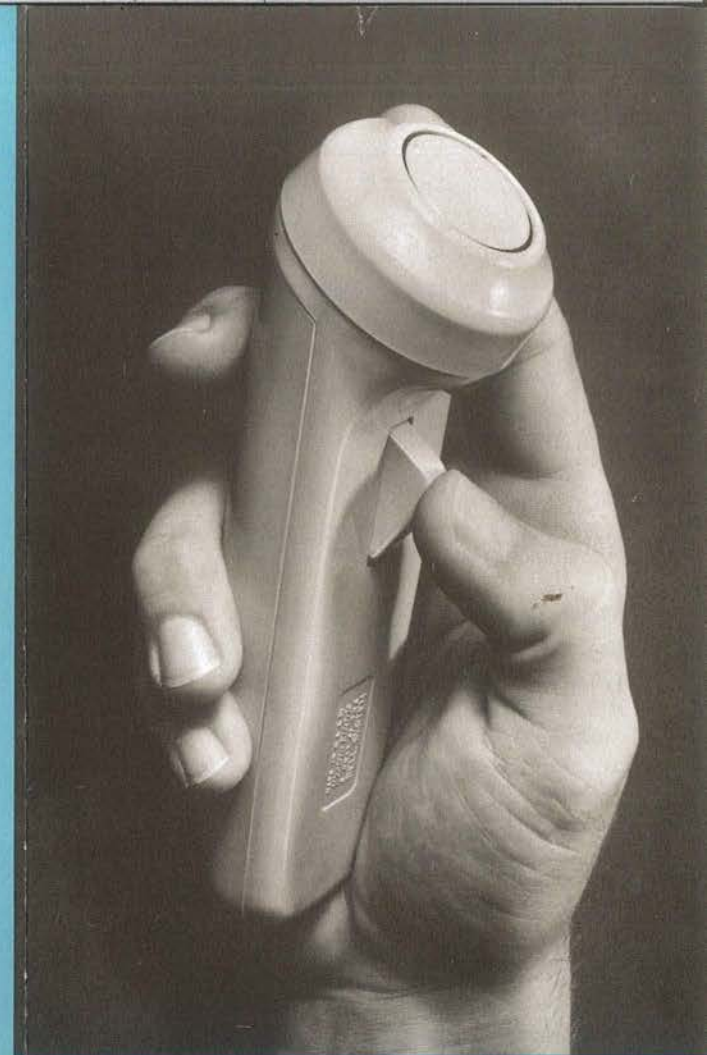
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Northern Counties Area
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BELL TELEPHONE SYSTEM

Further information about the new electronic larynx may be obtained from your local Bell Telephone Company business office.

VF artificial Larynx
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Bell System

**ELECTRONIC
LARYNX
TYPE 5**

THE TYPE 5 ELECTRONIC LARYNX

AN IMPROVED DEVICE TO PROVIDE A VOICE FOR THE VOCALLY HANDICAPPED

The new electronic larynx is a development of the Bell Telephone System to provide a voice for vocally handicapped persons by producing a substitute for the sound of the vocal cords.

Some persons who have lost their voices are able to communicate by means of esophageal speech—that is, speaking with air which is first forced into the esophagus and then released in a controlled manner. This is considered by medical authorities to be the method of choice. However, many cannot do this, and they may be helped by an artificial larynx.

The Bell System has for many years provided artificial larynges to laryngectomized persons who are unable to master esophageal speech. Developed by Bell Telephone Laboratories and made by Western Electric, the manufacturing subsidiary of the Bell System, the devices are distributed by the local Bell Telephone companies on a non-profit basis as a public service. The new electronic larynx supersedes the earlier models, although parts for the older models will continue to be available.

USING THE NEW ELECTRONIC LARYNX

The electronic larynx transmits vibrations through the flesh of the throat into the lower end of the vocal tract (the pharynx).

These vibrations are formed into voiced sounds of speech by the use of the tongue, lips and teeth in the same manner that the normal talker reproduces speech sounds. With a minimum amount of training and practice, a vocally handicapped individual can use the electronic larynx to speak conversationally.

It is small, contoured in shape to fit the hand, and is designed to be held against the throat while operated by a finger-actuated switch. It may be held in either hand and the conveniently located control lever can be operated by either the thumb or a finger. The diaphragm of the unit is pressed against the throat at a point about two inches below the jaw. It may be pressed against either side—or in front of—the throat. The best position of the device varies with patients and will depend upon the individual.

Because no flow of air is required through the vocal tract, a laryngectomized person can speak with the electronic larynx while exhaling, inhaling, or while holding his breath. The vibrations of the diaphragm in the end of the unit are transmitted into the pharynx to make speech sounds when the control lever is pressed. As the control lever is pressed slightly, the larynx is activated. Depressing the lever further causes the pitch to rise.

There are two models of the larynx: one of lower pitch range for men and one of higher range for women.

CONTROLLING THE SPEECH

The pitch control lever enables the user to simulate the natural inflection of the voice. This new feature helps obtain intelligibility and naturalness. The quality of the sounds is somewhat mechanical, but this mechanical quality can be made less noticeable by skillful use of the pitch control. Users of the new artificial



larynx can achieve sentence intelligibility scores up to 97 percent or more, depending on their experience.

Speech volume is equal to that of a normal talker speaking at a conversational level.

REQUIRES LITTLE MAINTENANCE

The transistorized artificial larynx is practically trouble-free and the life of the batteries extends over a period of weeks or even months in normal conversational use. The easily obtained batteries may be replaced by the user by merely removing the back cover of the unit.

A guarantee against defects of manufacture is included at the time of purchase, and repair service is provided through the business offices of the local Bell System Company that distributes the unit. A nominal service fee is charged for repairs, when such service is not covered by the guarantee.