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DULUTH--A device that can chart hearing trouble in as young as a year-old baby has been installed at the University of Minnesota, Duluth, (UMD) Speech and Hearing Clinic.

Shortly after receiving the psychogalvanometer, clinic Director Dr. Robert F. Pierce detected hearing loss in a 19-month old patient. The youngster now has an auditory hookup to the family television set and with the use of earphones is getting daily exercises from his parents.

The psychogalvanometer tests skin resistance to estimate hearing of children too young to respond to routine testing procedures. It can also measure the hearing capacity in retarded children and adults, stroke patients, the hysterically deaf, and malingering.

A pure tone of a given loudness and pitch is presented, followed very shortly by a slight shock. The response is based upon reaction to the tone and shock by electrodes attached to palms, fingers or feet, where perspiration gathers due to the stimuli.

Following three or four sound-shock stimuli, the shock is withheld and only the sound presented. The results of the stimuli with, and without the shock are recorded graphically and can be interpreted.

"We can tell if the patient hears the sound even without the graph, usually," Pierce said, "by his look of expectancy after the familiar tone."

But the psychogalvanometer can play a greater role than simple hearing detection. It can, by certain human reactions to the instrument, assist in the differentiation between mentally retarded, brain damaged and hearing loss patients.

"A lot of children formerly thought retarded had only hearing defects," Pierce said. "They were unable to learn and respond as normal children and so were confined to institutions and treated as mentally retarded."

"The psychogalvanometer, which is less than a dozen years old, is figuring in the release of many of these so-called retarded, re-routing their training to that which is given hearing-defective but otherwise normal children."

The testing and research device, a rather ordinary looking console, was made available by donations of parents in the 1960 summer Speech Clinic program (see photo). As it is the only one of its kind in Duluth and the northern half of the state, "the machine is wonderfully efficient in meeting the needs of pediatricians and family physicians when they suspect a hearing loss," Pierce said.

Once hearing trouble is discovered and treatment prescribed, the patient will not be without his newfound gift, whatever the hearing device. Pierce remembered the junior high student who hesitated to have his family buy him a hearing aid but made the move when his grades faltered. He was so enthusiastic with his new world of hearing that he slept with the hearing aid on for four nights.

When a hearing loss was confirmed in the 19-month-old patient, a transistor amplifier with long and short extension cords was

constructed for him. With the long extension he is able to hear as well as see some of his favorite television programs. At other specific periods of the day, his parents give him auditory exercises by means of a short hookup and earphones. These exercises are carefully prescribed by the Speech Clinic.

Some 1,958 patients have gone through the clinic in its short 10-year history. Presently headquartered in Humanities 130, it was established in Old Main as office and clinic in half the space of Pierce's present office.

With its modern equipment and facilities, the UMD Speech and Hearing Clinic now functions as a popular new-campus treatment center staffed by Pierce, Pacy Friedman, instructor in speech, and students enrolled in UMD's speech correction program.