

Magnetic recordings are boon to lecture courses

By Dave Hirsch

This modern age is crammed with all sorts of amazing innovations, ranging from the omnipotent H-bomb to controversial be-bop. A technological "golden boy" is the device capable of reproducing sound by means of magnetized wire or tape. Credited with the development of this amazing electronic mechanism is the Armour Research Foundation.

For the deep thinker, lengthy library research and laboratory work might reveal the theoretical aspects of magnetic reproduction of sound. The following explanation however may satisfy the less curious person. A specimen of hard steel can be magnetized in small areas. The retained magnetism is to a large degree independent of the magnetism of adjacent parts. The record medium can be of any shape convenient to the purpose at hand; flat steel tape, plastic film coated with a thin layer of iron dust, round steel wire, or, if the need arises, the rim of a steel chamber pot may be used.

The basic idea of magnetic recording is not new. In 1898, Valdemar Poulsen, a Danish physicist, made the first working model of a magnetic recorder. His machine utilized a steel tape in the form of a loop stretched between two wheels and driven by a small motor. The tape was saturated magnetically by an erasing magnet which removed the old record and left the wire in a uniform magnetic state, after which it passed under a recording pole piece whose magnetic strength varied according to the nature of the sound entering the microphone. The tape now carried waves of magnetism which induced voltages in a third magnet that actuated a telephone receiver. The device, known as a "Telegraphone," was not considered as having any commercial value.

In 1924, Dr. Stelle, in Germany, revived Poulsen's experiments and showed that round wire didn't perform as well as flat tape where the same surface was always presented to the reproducing magnet. The wire had a tendency to twist about its axis, causing poor reproduction.

The basic ideas involved in the design of magnetic recording equipment have changed but little. Refinements are in the form of better amplifiers, special alloys for magnets, tape, and wire, and improved circuit design.

Marvin Camras, an IIT graduate who is presently associated with the ARF, was instrumental in bringing the magnetic recorder to its present stage of commercial practicability. Mr. Camras holds 38 patents in the field of magnetic recording and has applied for 87 more. In addition he has numerous foreign patents and patent applications.

According to Mr. Camras, the magnetic recorder offers no direct competition to the phonograph, since one is not a sub-

stitute for the other. Magnetic recording is superior to disc-type recording in a number of ways. The sound quality of magnetic recording is excellent, as are the fidelity and naturalness of reproduction. Background noise is practically inaudible. Magnetic recordings are adapted for longer playing times, a distinct advantage for classical and high quality music works, since the entire selection can be played without interruption. The broadcasting industry is rapidly replacing disc-type transcription with magnetic recording, a possible indication in the trend of general recording where emphasis is placed on high quality reproduction.

Most magnetic recorders on the market today are designed for "home recording." They are used in recording radio programs, for parties, etc. A full hour of recording may be had from a single spool. The records do not wear out or deteriorate rapidly and require little storage space. Magnetic recording equipment is low in cost and can be operated by persons possessing a minimum of technical skill.

Illustrated talk tops ASME meet

The student branch of the ASME will hold its first meeting of the semester Tuesday at 1 p.m. in the MC auditorium. High point of the meeting will be an illustrated lecture by O. J. Seeds, direct representative of Cerro De Pasco Copper corporation. Topic of his lecture will be "Low Melting Temperature Metals and Their Use." After a discussion of business matters and future field trips, the meeting will close with refreshments.

During the final meeting of last semester officers for this semester were elected after the selection of a new honorary chairman. Stotho Kozios succeeds Professor Rusinoff in this office. The new officers are: Ed Sebastian, chairman; Ed Fenel, vice-president; Morris Franks, secretary; Bob Lindgren, treasurer; Gene Rezaeck, by-laws chairman; and Bernard Kunka, publicity chairman.

Cunningham gets annual award for engineering

James D. Cunningham, chairman of the board of trustees of Illinois Tech, will be awarded the Chicago Technical Societies council 1950 merit award for "outstanding engineering, administrative and civic service," it was announced February 23 by Robert H. Bacon, president of the Council.

Mr. Cunningham is president of the American Society of Mechanical Engineers and president of Republic Flow Meters company. He has been chairman of the board of trustees since the formation of the Institute in 1940.

The 1950 award will be made at a dinner Tuesday, May 9, in the Furniture club. Mr. Cunningham will speak on "Technical Know-How—Not Enough."

Mr. Cunningham's award will be presented by Dr. Gustav Egloff, director of research, Universal Oil Products company, past president of the technical societies council, and chairman of the award committee.

Dear Sir:

I am a third year student [redacted] Eng. at Illinois Inst. of Tech. I desire further information on a business career with your firm.

Sincerely [redacted]

EMPLOYMENT INQUIRIES sent by Illinois Tech students are reproduced here in facsimile. Styles of writing are followed closely. Letter at left was written in pencil on scratch-pad paper, while letter at right was written in ink. Both letters were addressed to the proper personnel men. Luckily, they got no further than those friendly with Tech's placement counselor.

Dear Sir;

The placement department here at I.I.T. informs me that you are interested in a graduate [redacted] engineer. I am hereby enclosing my resume in application for the position and for your consideration.

Thank you [redacted]

Letter writing is stumbling block for job-hunting students from Tech

By Hal Bergen

See those "letters?" If you were the recipient of one of those epistles, what would you think of the writer?

It so happens that in these two instances, the receivers of these letters were on good terms with the IIT placement office and sent them to H. L. Minkler, director of placement, hoping that some-

graduates," stated Mr. Minkler recently, "but we make every effort to place everyone who is interested in going to work."

How will you act when you leave

the campus? Will you be a case history in the "dead-beat" file? Or will you really be an ambassador of good-will for the Institute and for yourself?

The identity of these two writers is unimportant. The point is could you have sent such "letters" in the mail as representative of yourself and Illinois Tech?

IIT students are not the only ones who have sent out such correspondence. Other colleges are gravely concerned about the blemishment of their reputations as a result of poor conduct on the part of their students in the business world. And poor letter writing is not the only offense. It might be well to investigate a few examples.

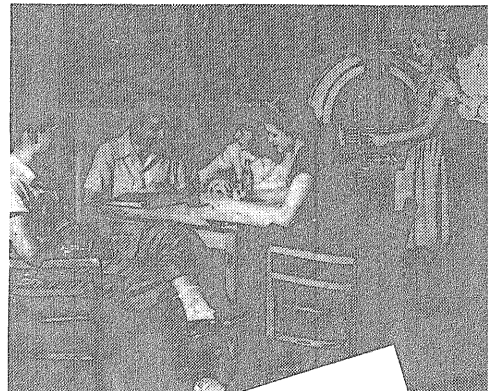
Let us consider the case of a recent graduating class which indicated, at commencement, that only 25 per cent had jobs. When the placement office went about getting job leads and filling them, it found that 14 out of 17 men called did have employment, but did not notify the placement office of this fact. The placement office thus was forced to waste time and job leads on men who didn't really need jobs at all.

Then there is the case of the know-it-all who told his prospective employers, during an interview, that if hired he would set the company right. He would, that is, if he was kept happy on the job. Of course he never got the job. A letter from the company is on file in the placement office confirming this episode.

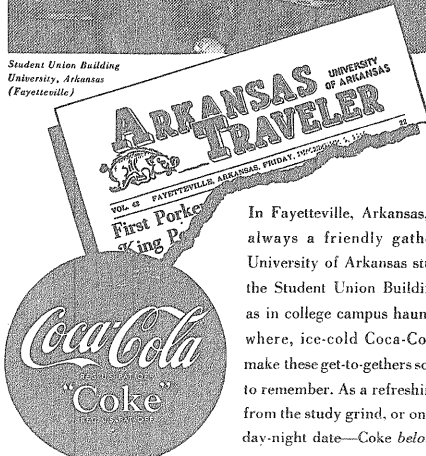
So it is that these "ambassadors of good-will" are leaving the campus, undoing the good impressions left by our more considerate brethren. There are many more men of excellent caliber who give Illinois Tech the good reputation it enjoys. But the few who are not so bright make it tough for those who will follow them as IIT men.

They make it tough for the placement office, which is forced to waste phone calls and letters on men who have jobs but who let the office think they still need work. In this way they take opportunities which should rightly go to those who actually need them. And then they render grossly inaccurate the statistics with which the office guides its work.

"We know it is impossible to produce top-notch jobs for all our



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Class schedules to be changed for Junior Week

A decision was made at the last general faculty meeting to rearrange the class schedule for Junior Week, May 4 to 6. This change has been formulated to minimize absences during the spring semester.

Since the power conference, spring vacation, and Junior Week-Open House all require dismissal of classes in the latter part of the week, it is planned during Junior Week to hold the classes normally scheduled for Thursday, Friday and Saturday, May 4 to 6, on Monday, Tuesday and Wednesday, May 1 to 3. The classes normally scheduled for Monday, Tuesday and Wednesday will be dismissed. This arrangement will provide some equalization of class periods and laboratories for the semester.