

**Automatic Computer**

# \$300 Thousand PENNSTAC Solves Complicated Problems

By PAT EVANS

Housed in the basement of Electrical Engineering is an awesome machine called PENNSTAC, or Pennsylvania State Automatic Computer.

It is used to solve computational problems which arise at the University and also to train graduate students in the field of computer engineering.

The machine can perform in a few hours the same amount of work which would take mathematicians several months to do.

PENNSTAC took two-and-one-half years to build and was completed last July. Its value is estimated at \$300 thousand.

The equipment was designed and constructed at the University by members of the Department of Electrical Engineering assisted by graduate students. H. I. Tarpley, professor of electrical engineering, is now in charge of the project.

The amazing apparatus can be made to perform 1400 additions of 10-digit numbers in one second. Its magnetic drum "memory" can store 2.5 thousand 10-digit figures and produce them for future use.

**Human Brains Oversee**

Human brains, however, oversee the work. An operator's console, the size and shape of the organ in Schwab Auditorium, sits in front of PENNSTAC, and contains a complicated-looking control panel.

Answers to the problems solved by the machine are punched out on paper tape and typed by an electric typewriter. These are checked by the operator.

The main piece of equipment is a big, double cabinet with glass windows. The cabinet contains, among other things, 1500 vacuum tubes and about 2000 tiny flashing lights, which act as trouble shooters.

**Has Air Unit**

PENNSTAC even has its own air-conditioner to remove the excess heat it generates. Auxiliary equipment nearly fills 6 Electrical Engineering, where the machine is located.

The computer is kept in good repair by the engineering staff. Research work is being done to enable it to work faster and perform more operations. Students may take courses on how to run the machine.

Various computational problems have been solved by PENNSTAC. A group of agricultural staff members used it to determine which mixture of cattle feed containing the necessary ingredients would cost least.

The apparatus aids the Department of Meteorology in spectrum analyses and in finding changes in wind velocity.

It was used by the Department of Mineralogy to determine the correlation of uranium with the presence of other minerals in sample rocks.

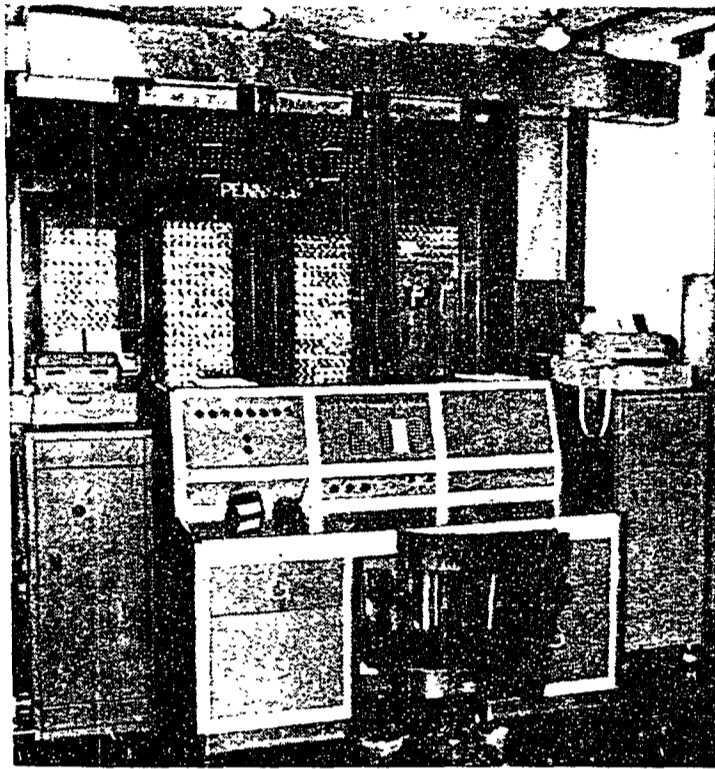
Dr. Donald T. Laird, assistant professor of electrical engineering, is in charge of preparing problems for solution on the computer.

A non-credit seminar to acquaint faculty and staff members with the possible uses of the computer has been planned.

**Ag Group Will Meet**

Alpha Tau Alpha, agricultural education fraternity, will hold an election of officers at 7:30 tonight in 102 agriculture education.

A film, "The Supervisor as a Leader," will be shown.



—Daily Collegian Photo by Bob Thompson.  
PENNSTAC, an automatic computer housed in the basement of Electrical Engineering, took two-and-one-half years to build and is used to solve computational problems that arise at the University.

## Forestry Group Nominates 27

Twenty-seven students have been nominated for offices in the Forestry Society.

Those nominated for president are Robert Slagle, Louis Shain, Charles Hollenbaugh and Paul Felton; for vice president, Blain Stutzman and Edward Browning.

Nominated for recording secretary are William McCafferty and Kerry Schell; for corresponding secretary, Philip Newmann, Carl Wolfe and Ralph Heilig; for treasurer, Ralph Peace, Paul Kersavage and Charles Strauss.

Agriculture Student Council representative nominees are Charles Glidden, Walter Knapp, Jess Clarke, John Marker, Donald Oaks, Joseph Astleford, Kenneth Polser, Robert LaBar, Robert Stroh, John Hall, John Mikulecky, James Crates and Loring Huislander.

Elections will be held at the next meeting.

**BX Candidates to Meet**

Candidates for the Book Exchange will meet at 6:30 tonight in 214 and 215 Hetzel Union.

*Co-Edits*

Phi Delta Theta has pledged Cooper Bishop, Robert Brown, Donald Book, Walter Cottom, Richard Engelbrink, William Forker, David George, Richard Gaskell, Paul Richardson and Paul Snyder.

New initiates at Theta Delta Chi are John Sopko, Harvey Eckert, David Cernea, Arthur Bell, Samuel Kartalis, Louis Prato, Daniel Shoulberg, Clare Ross and George Tselepis.

New pledge at Theta Delta Chi is Dennis Hunsberger.

Delta Chi has initiated Robert Erickson, John Friday, Jerry Hammaker, James Hepler, Robert Schiffner and Michael Stollmeyer. Newly-elected officers of Delta Chi are house manager, Newton Ruffing, caterer, Richard Dagle; treasurer, Robert Erickson; recording secretary, Robert Schiffner; corresponding secretary, Jerry Hammaker and pledge master, Jacob Engle.

Delta Chi has pledged David Anderson, Kent Carpenter, James Ditzler, Edward Halbert, Walter Heiler, David Kreh, Robert Manners, Ronald Martino, Philip Mullin, Richard Poust, Robert Staiger, Anthony Stillson and Louis Van Refelghen.

# Westminster Choir To Sing in Schwab

The Westminster Choir, on its 35th consecutive season of touring, will appear at 8:30 p.m. Wednesday in Schwab Auditorium.

John Williamson, founder of the Choir, has directed the group for the past 35 years. So far as is known, this constitutes a record. No other choral group has sung so long leadership of one man.

The choir has twice toured Europe and will start its first tour of Asia this Fall.

The Choir was first organized to serve as the volunteer choir of the Westminster Presbyterian Church of Dayton, Ohio. The members of the first choir were businessmen and housewives who devoted their leisure hours to singing under the direction of Williamson.

**Fame Spread**

The fame of the group spread and people began visiting Dayton to hear it. Called upon to sing at an increasing number of meetings and gatherings, the Choir was placed with a concert, and in 1921 undertook its first tour.

Today the Choir is the touring concert unit of Westminster Choir College, Princeton, N.J. Williamson, founder and conductor of the Choir, is also founder and president of Westminster Choir College. Recognized as one of today's outstanding authorities on choral techniques, Williamson is also credited with being a pioneer in the development of American choral singing.

**Orchestral Appearances**

The Choir has made 190 orchestral appearances in the last 17 years with symphony orchestras including the Philadelphia Orchestra, The New York Philharmonic Symphony Orchestra, The NBC Symphony of the Air and others throughout the United States, under the direction of such conductors as the late Arturo Toscanini, Sergei Rachmaninoff, Bruno Walter, Eugene Ormandy and Leopold Stokowski.

In addition to his knowledge of choral tone and balance, Williamson has a flair for program building. Concerts by the Choir offer numbers by such composers as Palestrina and Bach to represent works by modern composers and many examples of popular folk music.

**Selective Service Picks Osborn for Committee**

Dr. Elbert F. Osborn, dean of the College of Mineral Industries, has been named to the Scientific Advisory Committee of the Pennsylvania Selective Service System.

He succeeds President Eric A. Walker on the committee.

## Scholarship Open For Frosh Coed

Scrolls, senior women's hat society, will provide a \$100 scholarship for a second semester freshman coed.

The scholarship, named in honor of Mary Jane Wyland, advisor to Scrolls will be presented in April. The money for the award was collected in the annual cookie sale sponsored by the society.

Scrolls has also decided to donate \$10 to the drive for the Hungarian Student Assistance Fund.

## Riding Group to View Livestock Show Slides

Herman Purdy, instructor in animal husbandry, will present slides of his recent trip to the Perth Livestock Show in Scotland at the Block and Bridle Club meeting at 7:30 tonight in 206 Armsby.

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