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NEWS

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Technology and tools create a spectrum of sophisticated music

By **KURT KNAUS**
Collegian Science Writer

From the drum circles of the world's first inhabitants to the repetitive, beat-driven music of today's dance scene, music is undergoing a transformation.

Advanced technology and sophisticated tools have pushed music into the future, creating a spectrum of innovative, high-quality sounds and bringing new life to teaching, learning, playing and composing.

"New technology is allowing us to visualize music," said Gene Aitken, director of the jazz studies program at the University of Northern Colorado in Greeley, Colo.

In an electronic lab filled with keyboards and computers, composers flirt with musical sequences, mix them with sampled sounds and add a full orchestral arrangement to the background, said Aitken, who began experimenting with music programming in the late '60s.

The style, rhythm and tempo can be transposed to another key or quickly recorded on a cassette tape to take home, Aitken said. Striking a single key can

transform a composition.

Mistakes that slipped by on paper become apparent when the arrangements are played back by a computer, allowing the composer to see the error through bouncing waves and graphics displayed on the screen.

"Computers enable the manipulation of information," said Aitken, who composes his own music. "It adds a whole new dimension to composing."

Besides using the latest technology to supplement creativity, these new tools have found their way into school curricula and have brought a fresh tone to teaching and learning music.

Students must be exposed to the latest in music technology --which has become a fact of life in the commercial music profession -- to be prepared for a career in music education, production or performance, said Burt Fenner, professor of music at the University.

"Computers will be in music from now on," said Fenner, who composes his own music. "This is something that's very useful to student composers."

Computers enhance the learning process because they allow students to experience a concept that is reinforced when it is accompanied by an audible or visible example, Fenner said.

Located on the first floor of the Music Building, the University's electronic music laboratory --equipped with keyboards, computers and mixing boards, among other items -- provides students and faculty the opportunity to experiment with sounds and hear a computer-generated playback that provides a realistic rendition of a musical piece.

Aside from the ability to professionally reproduce printed music at a cheaper cost and in less time, the laboratory also lets students proofread their music by listening to it and makes errors more identifiable, Fenner said.

"It just means the end result is better," Fenner said.

But as technology begins to flourish in the music industry, it forces a collaboration between man and machine that bends the fine line between composing and programming.

"If the computer can do something better than the person . . . great," Fenner said. "It's just a question of how much is on the computer side and how much is on the human side."

David Alvaro (senior-electrical engineering), a music student who frequently uses the laboratory, said computers allow music to be composed in new and striking ways.

Music has been transformed from guitar harmonies to repetitive beats and sequential loops that originated from computers, said Alvaro, bassist for Dogtown Road. But the music still holds the basic underlying essentials -- the human input.

"The computer can't make music for you," Alvaro said. "You have to have the ideas. That's the big misconception."



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