WILLIAM EATON

JIM HATLO

William Eaton built his 16-string lyre with a burlwood top that he bookmatched to create a natural soundhole. Below the bridge, the strings are an octave higher than they are above it.

COURTESY WILLIAM EATON

Two sets of seven auxiliary strings round out the 26-string guitar.

Instruments For The New Age

By Ed Schilling

SOMETIMES IT'S ENOUGH to make even veteran acoustiphiles drop their picks. Through the years, they've seen people play everything from autoharps to hurdy-gurdies, and they figure they've heard just about everything a man can string up. But when William Eaton rolls into town and starts picking an instrument with piano tuning pegs, two necks, and 31 strings, they sit up and take notice.

Actually, they've got nothing to fear — Eaton isn't after their home town gigs. As a matter of fact, he only performs on a limited basis. He's just demonstrating the exotic stringed instruments he's designed and built himself over the last six years. Chances are, he's simply stopping on his way to the next concert, where he'll be performing his own music for another audience of luthiers and inquisitive musicians.

When he isn't on the road performing his own compositions and giving demonstrations, Eaton is an instructor at the Roberto-Venn School of Lutherie [5445 E. Washington, Phoenix, AZ 85003]. Since it was first established in 1975, the school has played a large part in his musical creations. All of the instruments have been built with the school's facilities, and most of Eaton's training took place there during the '70s.

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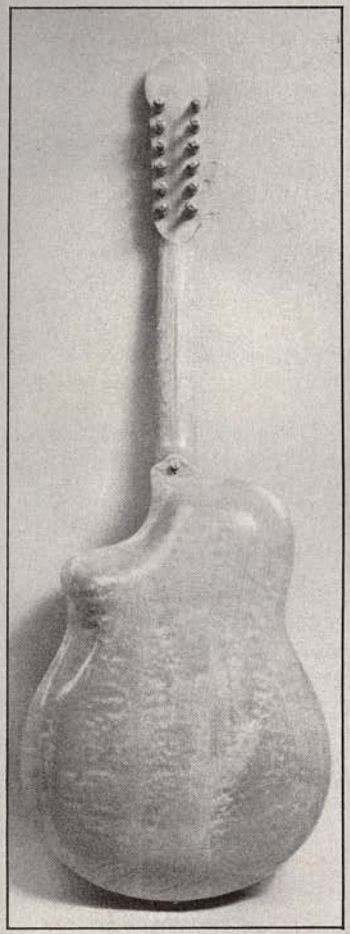
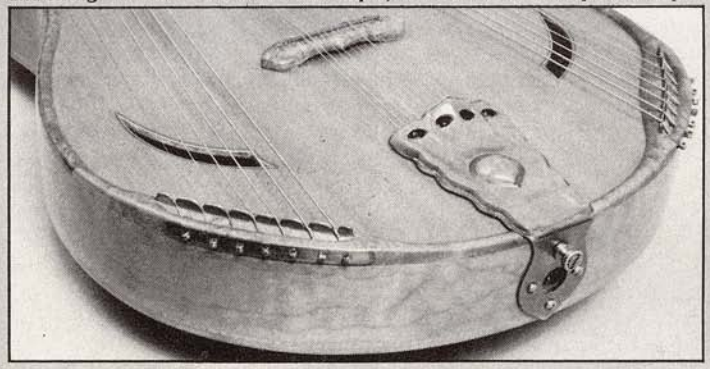
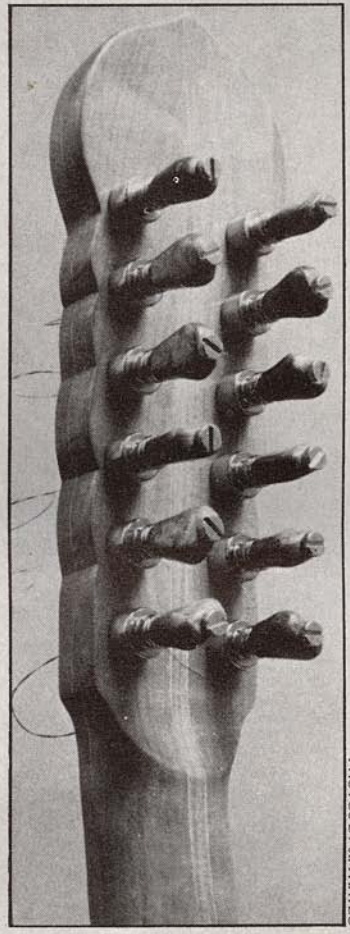


Clockwise from above: piano-type tuning pins secure the auxiliary strings, banjo tuners with hand-carved buttons secure the main strings; the tailpiece and string harnesses are brass and maple; the carved back is quilted maple.





PHOTOS BY JIM HATLO

COURTESY WILLIAM EATON

Eaton's interpretation of a harp guitar features an eye-catching — but highly functional — crossed strings design.

Eaton's experience as an instrument maker dates back to 1971, when he first met the school's co-founder, Phoenix luthier John Roberts. Eaton was living in Tempe, a small city just outside Phoenix, when a student of Roberts' came door-to-door, selling a guitar he had made. Up until that time Eaton had been playing an old Goya guitar, but after the student's visit, his interest was piqued. He visited Roberts' shop in the city, and not long afterwards completed his first guitar under the luthier's tutelage.

After earning an MBA degree at Stanford University, Eaton returned to Tempe in 1975. By this time Roberts and an associate named Bob Venn were ready to establish a school, and Eaton signed on as an administrator and instructor. With full access to the school's equipment, the first of his unique instruments soon began to take shape.

The philosophy behind these instruments actually is more simple than one might imagine. Eaton explains, "In everyday life I find myself surrounded by natural and man-made objects from which I can draw inspiration. Sometimes a sound in my head is the basis for a design. Other times, it's initially a shape or motif that catches my eye.

"From this inspiration, I make ten or twenty sketches, which I then transfer to full-size plans. This conception and visualization stage is very important. Often I spend as much time designing and revising my plans as I do in actually constructing the instrument," he says.

The "O'ele'n Strings" (pronounced *o-ay-lin*) is a perfect example. The inspiration for the ornate instrument came from a piece of furniture Eaton chanced across. "I immediately noticed this engraved design on an *armoire*, and the concept of the double-necked instrument came very quickly after that. I traced the design out on a piece of paper. The rest of the details then fell into place around that basic design."

The concept finally emerged from his shop nearly a year and a half later as a highly original 31-string instrument. Its name is derived from the eleven strings looped around the bridge in the center of the instrument. Eaton uses these strings to sound the basic drone note, and can also sound the octave above it by plucking the same string between the bridge and the tailpiece. Each of the two necks can accommodate five pairs of strings, although Eaton currently uses only two pairs on the lower neck. These fretted strings are tuned in varying intervals dictated by the individual composition being played.

His 26-string guitar is a bit more conventional. It was actually the first of his experimental instruments, and features a carved maple back, maple sides and neck, and a cedar top with a brass rosette.

The six pairs of strings are arranged in standard 12-string tuning, except for a few alterations: The fourth course is actually tuned *D-E*, and the tuning of the second and first courses is *B-C* and *D-E*. The sympathetic strings located above and below the main strings are tuned diatonically to the key of the composition being played. Eaton plucks or strums these strings accordingly as a background to the primary melody.

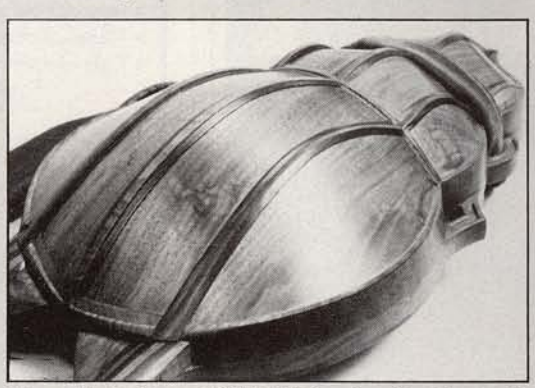
His 16-String Lyre is made of burlwood, and is designed after the instrument used by the ancient Greeks and Romans. There is no radical departure from the tried-and-true models that have survived the last 2,000 years. "I basically wanted to experiment with the traditional design," he explains.

Like the O'ele'n Strings, the octave of each main string on the lyre can be sounded by plucking behind the bridge. The tuning used on this instrument is basically a random chromatic series that ascends until the center, then descends toward the opposite side. The specific pitches change from time to time, depending on the compositions being played on the instrument.

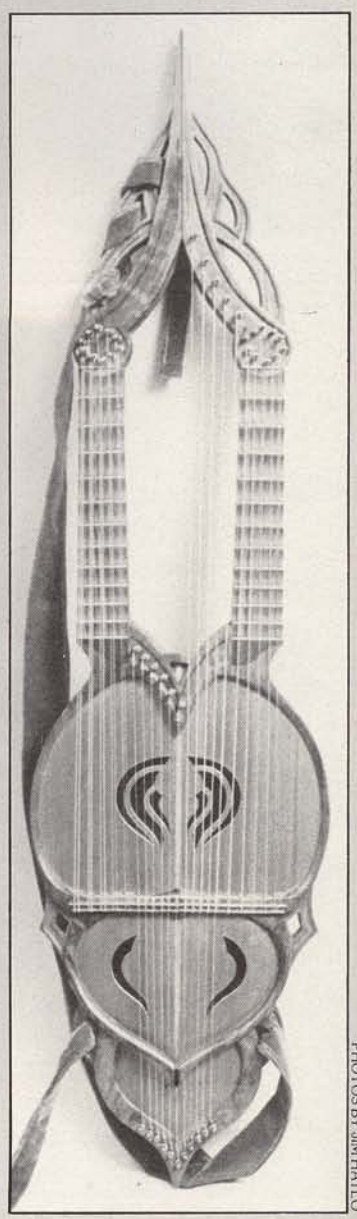
The unorthodox tuning he uses actually is the end result of the same intuitive process followed in creating the instruments. During the course of construction, Eaton begins to sense what kinds of strings should be used, and to what pitch each should be tuned. Some of the physical factors that help him determine the tunings are the size of the cavity, the kind of wood used, and the pattern of the bracing. By the time the instrument is finished, Eaton has "heard" it in his head so often that he feels as though he has already played it.

Up until a year and a half ago, Eaton devoted all of his time to building and teaching. Feeling the need to do more performing and composing, he took a leave of absence from the school to tour the country, giving concerts and demonstratons. Now he has resumed teaching, but on a part-time schedule that allows him to concentrate more on playing and performing in the Phoenix area.

In case you missed his performances on the road, recordings of Eaton's music are available through the En Esumus Foundation, Box 670, Tempe, AZ 85281.



The exotic double-neck O'ele'n Strings has 31 strings in all, scalloped ebony fretboards, and a body of carved walnut ribbed with walnut-ebony-walnut laminates. The multiple curving soundholes in the cedar top are bound with brass.



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