



Artist Nicolas Reeves poses with 'The Cloud Harp,' his installation at the corner of Penn Avenue and Seventh Street in downtown Pittsburgh.

WARREN L. LEEDER/TRIBUNE-REVIEW

# Artist collaborates with clouds

BY KURT SHAW

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It's a bit ironic that Nicolas Reeves and his assistants spent nearly every day this week installing his outdoor sculpture project in the pouring rain. After all, clouds are his collaborators in the creation of his piece he calls "The Cloud Harp," on exhibit at the corner of Seventh Street and Penn Avenue, downtown Pittsburgh.

"The structure is a meteo-electronical instrument that plays music when there are clouds," says Reeves, a Montreal-based architect, physicist and artist. "The height, density, structure and brightness of the clouds control the sounds that are emitted."

Looking something like a mobile home you might one day find on

Mars, "the structure," as Reeves calls it, shoots an infrared laser beam upward to the sky so a telescope can capture the laser modulations produced by the cloud cover.

"What happens is that laser beam is a pulse beam," Reeves says. "It sends laser pulses every 50 microseconds or so and they bounce off the clouds and come back. Then, there is this acquisition system that measures the traveling time and the strength of the returned (infrared) light."

That in turn is connected to an MIDI musical interface that is used in place of a decoding system. It sounds complicated, but it's actually based on compact-disc technology.

"The CD is the clouds, basically," Reeves says. "It reads the clouds

just like a CD player would read a CD."

Though the Harp can be orchestrated in many different ways, no one can predict the music that it will create. It can play nearly harmonic melodies, then progressively switch to a chaotic or fractal sequence of electro-acoustic sounds. It can produce almost inaudible sounds as well as thunderous ones.

"The density of the cloud controls the velocity of the note," Reeves says. "A very dense cloud, like a thunderstorm cloud, will play like someone playing very hard and a very small cloud will play very lightly."

"The Cloud Harp" can play on 16 channels simultaneously. Each of these channels can play a number of pre-programmed instruments, and each is mapped on a specific al-

titude range between 0 and 25,000 feet, the maximum range of the laser.

"We can probe up to three cloud layers," Reeves says. "Each cloud layer can control a particular arrangement of instruments so the atmosphere becomes like a gigantic musical score."

"The Cloud Harp" is presented in conjunction with The Pittsburgh Cultural Trust's 13-week Quebec Festival, a celebration of the visual and performing arts of Quebec.

Though it can sing 24 hours a day, 365 days a year, by any weather, "The Cloud Harp" will remain Downtown only through June as part of the 45th annual Three Rivers Arts Festival.

Kurt Shaw can be reached at [kshaw@tribweb.com](mailto:kshaw@tribweb.com).