



EXPOSITION SPACE
TEMPORARY EXHIBITION

SOUNDS OF EARTH



THE RECORD THAT WENT TO SPACE



EXHIBITION AUDIO PRODUCED BY NASA
PROVIDED BY OZMA RECORDS



In 1977, NASA launched a golden record into the stars. The records onboard the Voyager I and II spacecraft are now in interstellar space, so far the only objects made by human hands to reach beyond our own star system. The records – made of gold, designed to last for a billion years – contain sounds, music, and pictures from Earth.

A small group of people were responsible for their creation: **Carl Sagan, Linda Sagan, Tim Ferris, and Ann Druyan** were the initiators of the project in 1974. The sound engineer for the records was **Russ Payne**. John Lennon suggested adding his own producer **Jimmy Iovine** to the project, who twiddled some knobs during the mixing sessions but mostly hung out on the beach.

The project involved a lengthy search for sounds from archives and libraries, with assistance and contributions from many people, such as Smithsonian field recordist **Alan Lomax** and whale recordist **Roger Payne**.

But it was Ann Druyan who served as the project's overall creative director, and whose own EEG readings are heard at the end of the 12-minute sound essay she compiled entitled *The Sounds of the Earth* – a montage of sounds intended

to represent the Earth's entire history in a logarithmic rather than historical sequence, so that the contribution of humans to the acoustic environment of the Earth would not be compressed to a single blip since our time on the planet has been relatively short compared to its entire lifespan.

This exhibition presents Druyan's sound essay in its entirety. The team behind the Golden Record project published a book together in 1978, *Murmurs of Earth*, which details the making and contents of the records.



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One of the Voyager Golden Records.

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Voyager I.

All images courtesy of NASA.



THE SOUNDS OF EARTH ANN DRUYAN'S VOYAGER GOLDEN RECORD PLAYLIST

00.00 - 00.45	Kepler's Harmony of the Worlds : Laurie Spiegel	
00.45 - 01.16	Volcanoes, Earthquake, Thunder	
01.16 - 01.30	Mud Pots	<i>As you listen, think about these questions:</i>
01.30 - 02.45	Wind, Rain, Surf	
02.45 - 04.00	Crickets, Frogs	
04.00 - 05.10	Birds, Hyena, Elephant	<i>Do you think these sounds represent our whole planet?</i>
05.10 - 05.22	Chimpanzee	
05.22 - 05.50	Wild Dog	
05.50 - 06.22	Footsteps, Heartbeat, Laughter	
06.22 - 06.27	Fire, Speech	<i>Which of these sounds would you leave off?</i>
06.27 - 06.42	The First Tools	
06.42 - 06.47	Tame Dog	
06.47 - 07.25	Herding Sheep, Birds, Blacksmith, Sawing	
07.25 - 07.44	Tractor, Riveter	
07.44 - 08.12	Morse Code ("Ad astra per aspera"*), Ships	
08.12 - 08.56	Horse and Cart	<i>What other sounds would you add?</i>
08.56 - 09.19	Train	
09.19 - 09.56	Tractor, Bus, Automobile	
09.56 - 11.00	F-111 Flyby, Saturn 5 Lift-off	
11.00 - 11.23	Kiss, Mother & Child	
11.23 - 12.19	EEG/Life Signs, Pulsar	

*Latin expression meaning "A rough road leads to the stars",
more commonly phrased "Per aspera ad astra".