

SOFTWARE & PRINTED TEXTS FOR THE "PIONEERS" EXHIBITION

In addition to a 15 page section on the exhibition in the ARS ELECTRONICA catalogue there will be produced three major formats for the software/information specific to the exhibition:

## BARCODE INTEGRATED SOFTWARE &amp; PRINTED TEXT

1. Laserdiscs (30 minutes each) with still and short , sequence moving images, stored and retrieved interactively. with a BarCode light pen.
  - a. Laserdisc programs with information on the audio/video instruments - one on audio and one on video.
    - 1) The audio program will contain sequences of sound, photos, and some moving images that will present the audio origins related to the instruments on exhibit.
    - 2) The video instrument information programs will contain images of the instruments, their inventors, and other available data related to the hardware. Each program will be dubbed so that there are multiple copies - one for each large gallery where the instruments themselves are on display.
  - b. Five laserdisc programs with short audio/video works, or excerpted works composed on the instruments exhibited (or related instruments). The selections in these compilations will have a particular relationship to the development of the electronic image. They will be grouped by the dominant processes used to generate and manipulate the images electronically, e.g. keying, colorizing, scan processing, switching, etc. The various audio/video laserdisc programs are being prepared for exhibition in the smaller galleries we have designated as Nanoteaters.
2. Printed catalogue - a traditional paper format - with BarCodes (to access images on the laserdiscs) printed and integrated into the text.

The composition of the catalogue and the laserdiscs are related through the BarCodes. The printed descriptions and photographs of the audio/video instruments in the exhibition will be directly related to the laserdisc instrument information programs. As for the contextual essay by David Dunn, BarCodes will be integrated throughout this overview at appropriate points in order to access

audio/video, including still and moving images.

#### SPECIAL PROGRAM VIDEOTAPES

3. Videotape programs that can accommodate last minute programming. These programs are being prepared for viewing on a daily schedule in the space we have designated as the "Endotheater".

- a. Programs of full length video pieces
- b. A special program on the early computer animation work of Lee Harrison

(Half Title Page)

ARS ELECTRONICA 1992 EIGENWELT  
DER APPARATE WELT PIONERE DER  
ELEKTRONISCHEN KUNST

(Title Page)

ARS ELECTRONICA 1992

This catalog has been published on the occasion of the  
exhibition:

EIGENWELT DER APPARATE WELT PIONERE DER ELEKTRONISCHEN KUNST

JUNE 22 - July 9, 1992

Museum Francisco Carolinum 4020 Linz, Oberosterreich

VASULKAS, INC.

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#### ACKNOWLEDGEMENTS

This exhibition and catalog were initiated and realized because of the enthusiasm and support of Peter Weibel, Artistic Director. We are also completely indebted to Ralph Hocking and Sherry Miller Hocking of the Experimental Television Center, Binghamton, for their extraordinary generosity in the assembly of the majority of the hardware and their careful attention to the myriad details of both hardware and archival information. Their professionalism and humor have been an inspiration and a pleasure.

Of course, we are especially grateful for the special efforts and cooperation of those inventors who personally excavated their past by agreeing to be interviewed, and by digging up schematics, photos, and dormant documents and, in many cases, by resuscitating their own machines. Thank you Stephen Beck, David Behrman, Don Buchla, Bob Diamond, Lee Harrison, Bill Hearn, David Jones, Don McArthur, Nam June Paik, Steve Rutt, Dan Sandin, Jeff Schier, Eric Siegel, Glen Southworth, and Aldo Tambellini. We deeply regret that during this process we were never able to locate Shuya Abe and George Brown.

We also wish to acknowledge Steve Anderson, Michael Czajkovsky, Gary Hill, Norman Lowrey, and Sara Seagull for their extra efforts and assistance in lending significant audio/video instruments to the exhibition.

The success of this venture has relied on the contributions of the team we have assembled: David Dunn, catalog editor and essayist, David Muller, technical supervisor, Jeff Schier, technical advisor and author of technical descriptions and block diagrams, Michael Sumner, catalog designer, Melody Sumner, managing editor, Bill Heckel, computer hacker, Dave Stafford, interview transcriptions and typing, and Pavel Skryja, indefatigable driver and handyman.

None of this would have been possible without the funding of Ars Electronica and their dedicated staff, especially Dr. Katharina Gsollpointner, Director, and Wolfgang Dorninger, Technical Director. In addition, we appreciate the attentions of Eichinger oder Knechtel, the designers of the exhibition installation at the Landesmuseum - Francisco Carolinum, Linz, Austria.

In addition to the subject of the interviews transcribed for this catalog, we acknowledge the following authors, editors and publications of the writings we have selected to print and reprint for this catalog:

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1973): 15-24.

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Tambellini, Aldo. Statement on BLACK SPIRAL. Flier for exhibition *TV as a Creative Medium* (May 17 - June 14, 1969). New York: Howard Wise Gallery.  
Yalkut, Jud. Excerpts from "PART THREE: OPEN CIRCUITS: The

Woody Vasulka  
Steina Vasulka  
Curators

MaLin Wilson  
Coordinator &  
Contributing Editor

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Don Buchla. Courtesy of Don *Buchla*.

Robert A. Moog at conference on Electronic Art Tools, 1977, at the State University of New York (SUNY), Buffalo.

Robert A. Moog's MOOG MODULAR AUDIO SYNTHESIZER, 1968-69. Courtesy of Norman Lowrey, Professor of Music. Collection of Drew University, *Madison*, New Jersey. Donated by CBS (Columbia Broadcasting System).

Bill Hearn's VIDUUM, 1968-69. Photo: Steve Anderson.

Bill Hearn, ca. 1969, San Francisco. Courtesy of Bill Hearn.

PUTNEY, MODEL VCS 3, 1968.

Aldo Tambellini with BLACK SPIRAL prepared television set, 1969. Courtesy of *Aldo Tambellini*. Photo: Don Snyder.

Eric Siegel, 1971, from a video tape made at the Howard Wise Gallery, New York City.

Eric Siegel's DUAL COLORIZER, 1972. Courtesy of Eric Siegel.

Eric Siegel's DUAL COLORIZER, 1972.

Stephen Beck in his California studio. Courtesy of *Stephen Beck*.

Stephen Beck with BECK VIDEO WEAVER, 1974. Courtesy of *Stephen Beck*.

Glen Southworth, inventor and founder of CVI/Colorado Video, Inc. Self Portrait with first experiments on direct CRT copying with original XEROX color machine. Courtesy of Glen *Southworth*.

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Nam June Paik visiting Buffalo, 1979. Photo: *Woody Vasulka*.

(? Shuya Abe, ca. 19 , from a video tape made

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George Brown's VIDEO SEQUENCER, 1971. Collection of *the Vasulkas, Santa Fe, New Mexico*.

George Brown's MULITKEYER, 1973. Collection of the *Vasulkas, Santa Fe, New Mexico*.

Dan Sandin with the IP (IMAGE PROCESSOR), 1972, Chicago.

*Courtesy of Phil Morton.*

Dan Sandin's IP in studio with other instruments. *Courtesy of Phil Morton.*

Steve Rutt and Bill Etra's RUTT/ETRA SCAN PROCESSOR, MODEL RE-4, 1973. *Collection of the Experimental Television Center, Ltd. & The State University of New York, Binghamton.*

(? Bill Etra, ca. 19 , from a video tape made

(? Steve Rutt, ca. 19 , ?

Left to right - Kit Galloway, Dave Jones, Jack Henry Morre, founders of VIDEOHEADS, at the Melk weg, Amsterdam, 1972.

*Courtesy of Dave Jones.*

David Jones's JONES FRAME BUFFER, 1976. *Collection of Gary Hill, Seattle, Washington.*

Don McArthur's SAID, 1976. *Collection of the Experimental Television Center, Ltd. & The State University of New York, Binghamton.*

Don McArthur in the Vasulka's loft, 1976, Buffalo, New York.

*Photo: Woody Vasulka.*

Don McArthur (right) and Woody Vasulka (left), 1976, Buffalo, New York. *Photo: Steina Vasulka.*

Don McArthur (middle) and Woody Vasulka (left) and Lou James (right), 1976, Buffalo, New York. *Photo: Steina Vasulka.*

Jeff Schier in the Vasulka's loft, 1977, Buffalo, New York.

*Photo: Woody Vasulka.*

(? Woody - Don McArthur and Jeff Schier's DIGITAL IMAGE GENERATOR. *Collection of the Vasulkas, Santa Fe, New Mexico.*)

*(Illustrations for Special installations)*

Skip Sweeney, ca. 1983, with feedback set up at the Exploratorium, San Francisco, California. HW: Setchell-Carlson Television. *Courtesy of Skip Sweeney. Photo by Susan Schwartzberg.*

Skip Sweeney, black and white feedback images photographed from a video monitor. *Courtesy of Skip Sweeney.*



Steina and Woody Vasulka with portapack equipment, San Francisco, 1972. Photo: Warner Jepson.

David Behrman's diagram and summary of CLOUD MUSIC, ca. 1975. Courtesy of Sara Seagull & David Ehrman.

CLOUD MUSIC monitor with image of 6 crosshairs amidst lively cloudscape. Courtesy of Sara Seagull.

First public installation, Electric Gallery, Toronto, 1974. Courtesy of Sara Seagull.

Bob Diamond with CLOUD MUSIC, work in progress, ca. 1976. Video analyzer (rear left) and music synthesizer (foreground). Courtesy of Sara Seagull.

(Assorted illustrations)

Conference on Electronic Art Tools, 1977, at the State University of New York (SUNY), Buffalo. First row - Wendy Clark, Jean-Pierre Boyer; second row - Taka Imura, Woody Vasulka, Nam June Paik, Dr. Gerald O'Grady; third row - Bill Viola, Ed Emshwiller, Kit  
Jean-Pierre Boyer in the Vasulka's loft, ca. 1975, Buffalo, New York. Photo: Woody Vasulka.

Nam June Paik and Shuya Abe's SCAN MODULATOR, ca. 1971. Right-wave form input; left - output on monitor. Collection of the Experimental Television Center, Ltd. & The State University of New York, Binghamton. Photo: Susan Rothstein.

Gene Youngblood in the Vasulka's loft, ca. 1975, Buffalo, New York. Photo: Woody Vasulka.

Left to right - unidentified, unidentified, Jack Henry Moore, Kit Galloway, Dave Jones, unidentified, VIDEOHEADS, at the Melk Weg, Amsterdam, 1972. Courtesy of Dave Jones.

Electronic Audio/Video Instrument Descriptions

1962

Lee Harrison      **ANIMAC (Hybrid graphic animation computer)**  
Associates      *Destroyed, documented on film*

1964

Don Buchla      **BUCHLA PRE-100 SERIES (Audio synthesizer) ,**  
*Collection of Michael Czajkowsky, New York City`.*

1968 - 1969

Robert Moog      **MOOG MODULAR AUDIO SYNTHESIZER**  
*Courtesy of Norman Lowrey, Professor of Music  
Collection of Drew University, Madison New Jersey  
Donated by CBS (Columbia Broadcasting System)*

1968 - 1969

Bill Hearn      **VIDIUM (Analog XYZ driver sequencer)**  
*Courtesy of Steve Anderson, Physics Department,  
Sonoma Sate University, Rohnert Park,  
California  
Collection of Bill Hearn*

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Industrial      **PUTNEY, MODEL VCS 3 (Audio synthesizer)**  
*Collection of the Experimental Television Center,  
Ltd. & The State University of New York,*

*Binghamton*

1969

& Tracy Kinsel      **(Awaiting restoration)**  
& Hank Reinbold      *Collection of the Everson Museum of Art,  
Syracuse, New York*

1969 & 1970

Glen South-      **CVI (COLORADO VIDEO INC) QUANTIZER (Colorizer)**  
worth      &  
                 **CVI DATA CAMERA (Camera scan processor)**  
*Collection of the Experimental Television Center,  
Ltd. & The State University of New York,  
Binghamton*  
**Ubiquitous**

1970 & 1974

**(Awaiting restoration)**  
**BECK DIGITAL VIDEO WEAVER (Synthesizer)**

- 1970 & 1972  
Eric Siegel **EVS (Analog ELECTRONIC VIDEO SYNTHESIZER)**  
*Whereabouts unknown, last in the possession of Al Phillips, documented in photographs*  
**DUAL COLORIZER (Analog)**  
*Collection of the Vasulkas, Santa Fe, New Mexico*
- 1971  
Nam June Paik  
& Shuya Abe **PAIK/ABE SYNTHESIZER (Keyer & colorizer)**  
& **SCAN MODULATOR (a.k.a. as the "Wobbulator")**  
*Collection of the Experimental Television Center, Ltd. & The State University of New York, Binghamton*
- 1971 & 1973  
George Brown **VIDEO SEQUENCER (a.k.a. FIELD FLIP/FLOP SWITCHER, with digital control)**  
**MULTIKEYER (Analog with digital control)**  
*Collection of the Vasulkas, Santa Fe, New Mexico*
- 1971  
Dan Sandin **IP (Analog IMAGE PROCESSOR)**  
*Collection of Phil Morton, West Yellowstone, Montana*
- 1973  
Bill Etra &  
Steve Rutt **RUTT/ETRA SCAN PROCESSOR (Analog)**  
*Collection of the Experimental Television Center, Ltd. & The State University of New York, Binghamton*
- 1976  
David Jones **JONES FRAME BUFFER (Digital buffer)**  
*Collection of Gary Hill, Seattle, Washington*
- 1976  
Don McArthur **SAID (SPATIAL AND INTENSITY DIGITIZER)**  
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- 1976  
Don McArthur **DIGITAL IMAGE GENERATOR**

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