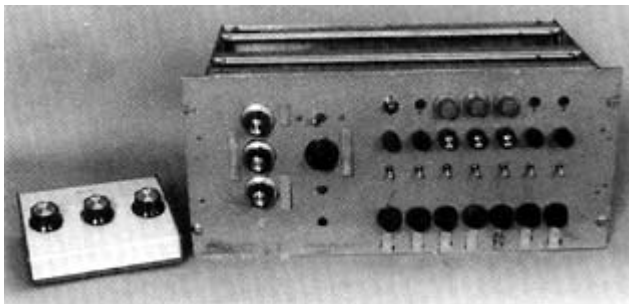


**Paik/Abe Video Synthesizer (Keyer & Colorizer) & Scan Modulator (a.k.a. "the Wobbulator"), 1970**  
**NAM JUNE PAIK & SHUYA ABE**



Shuya Abe and Nam June Paik.



Paik/Abe Synthesizer with Interface.



Paik/Abe Scan Modulator. Collection of ETC.

WITH THE PASSAGE of time, the understanding of Paik does not get easier. In our own time slit, his presence assumes a lonely and therefore much larger proportion. His work in the sixties, luckily, is the most relevant for our show. As a practitioner looking back on that period, I realize (maybe for the first time) the scope of the homework he has done. Once you get over his early Fluxus furniture pieces, there is a naked man with his metaphysical struggle. There is a testimony and revelation of many principles and the materials to come. Even after he could afford all the help he could buy, a substantial body of work, experiments, manifestos and personal interventions remains for all of us to see!

W.V.

NAM JUNE PAIK WAS BORN in 1932 in Seoul, Korea. He graduated in 1956 from the University of Tokyo, Japan. Studies in music, art history, and philosophy were subsequently pursued from 1956 to 1958 at the University of Munich, Freiburg Conservatory and the University of Cologne. From 1958 to 1961 he worked at the Studio for Electronic Music of Radio Cologne. Paik is without a doubt the most famous living video artist. He lives in New York City.

**BINGHAMTON LETTER**  
**Nam June Paik, Jan 8, 1972**

Dear friends at Radical Software:

Westerners pretend to be younger than their age ... we Asians often pretend to look older ... MY mother used to say, "I cannot wear such thing. . . it would look too young." People compliment to Bucky Fuller ... he is only 70 years young ... Koreans express "I have eaten 40 years, or so." John Cage, who has out-asianized himself more than any Asians ... certainly more than powerconscious Indian politicians, prestige-conscious Chinese cadres, GNP conscious Japanese businessmen, and super-chauvinistic Koreans ... (is it not about time for Hippies to quit their Pseudo-Hindu cult?) ... has managed to pretend to be older than his age.

**COMMERCIAL BREAK, NO. 1**

Nam June Paik is making a tribute to John Cage (a non documentary) for WGBH (with David Atwood) for John Cage's 60th birthday.

Now video makes our Time consciousness radically different. Between the 20's and the 30's there is a gulf, a huge demarcation line more striking than the turn of the century line. It is more like A.D. and B.C. in the Christian calendar. The 1930's is alive everyday in our home screen as late late shows, and it will be so for centuries to come ... where as 1920's is gone and gone ... with wind but without video. While watching many mediocre paintings of the 17th century at Reij's Museum at Amsterdam, I suddenly realized that minor master's still-life and landscape were not an artwork but merely a visual environment of that day ... and so is our daytime shows and latenight talkshows ... . We don't watch them ... they are just there ... ... TV to live with ...

**COMMERCIAL BREAK NO. 2**

Some cable or public TV should air "TV to sleep with". What comes after waterbed???

Video-bed.

Ralph Hocking and I are making a video-bed to sleep on.

The word "history" came into being, because our events were told and written down thereafter. Now history is being recorded in image or video. Therefore from now on there is no more "History", but only "Imagery" or "Videory." Eg: Universities should change their course name from "Contemporary American History" to "Contemporary American Videory". White snow at Binghamton made me nostalgic about cold cold night snow at Rose Art Museum (1970), when Phyllis Gershuny, very tall and pregnant, first told me about "videonewsletter," which she started with you ... few people took it seriously ... many even did not bother to answer your questionnaires ... but, lo, behold ... it is now a world-famous-Radical-Software ... . Last June Phyllis Gershuny, with her baby, crawling and crying, came up to Cal Arts (L.A.) to give a lecture full of authority. Students admired her as a revolutionary, who MADE it. It was an unforgettably beautiful scene ... sorry, we could pay her only \$30 from Disney Emperium ... I felt like a pig ... a small one.

It is about time that somebody writes a decent review on "Vision and Television" (organized by Russel Connor at Rose Art) ... the most important fact ... it is the first art show, which attracted many dogs. Everyday quite a few dogs were waiting at the door to get into the museum ... and it was not a meat-Happening a la 1960's Happening era ... but a cold, cool video show in 1970 January ... . The reason was clear later ... . About 100 TV sets were humming and zumming their 15,000 cycles horizontal Oscillation frequencies ... and it is, though hardly audible to human ears, the most attractive frequency range for dog's ear. Therefore 100 TV sets at Rose Art Museum must have sounded like Beatles at Shea Stadium

and Mohhamed Ali at Madison Square Garden combined ... to all unsophisticated country-dogs of Waltham, Mass.

There must be a channel for dog on Cable ... to soothe down the irritated dog's nerve living in small Manhattan apartment ... I will compose many "ultrasonic lullabies" for dogs. And we will see as many commercials for video cassettes for dogs, as we see of cat-food commercials. When communication satellite enables global TV in full swing, will CBS carry cat-food commercials to hungry Bengali people?

### COMMERCIAL BREAK NO. 3

John Cage comes up on the screen and says "This is the newest Pill from FLUXUS Chemical Company ... you swallow it ... it tastes like nothing ... smells like nothing ... and does nothing."

John refused to do it on his program.

We are hearing so much about "Broadcast standard" in video. But the more important the content is, the technical standard tends to be less perfect ... e.g., CBS report on the dissenters in Soviet ... and many satellite relays, which tends to lose color sync often ... and finally MOON LANDING.

Moon landing's picture was way way below the FCC broadcast standard. Why did FCC not forbid the broadcasting of Moon landing? ... it was a double standard. Moon landing killed so-said FCC standard in video technology for good ... . This fact is as important as a very competent chief engineer at Cal Arts video studio.

### COMMERCIAL BREAK NO. 4

skip

Difference of the 50's liberal and 60's radical is that the former was serious and pessimistic, the latter was optimistic and loved fun. Who changed the society more??? I think the latter. John Cage's refusal to accept "Serious" continental aesthetics, and the rise of Happening, pop art, Fluxus movement signaled the beginning of the sixties ... . What will signal the seventies??? needless to say. . . "video." Video-Videa-Vidiot-Videology.

Currently there is a danger that video becomes like "poetry" ... one guy writes, and only his immediate friends appreciate ... . I don't know how many un-edited dull tapes I had to sit through politely ... . We should be more conscious of the situation that we are in the era of information overload and it means information retrieval is more tricky than information recording ... . Therefore one of Binghamton experiments of Ralph Hocking, Ken Dominick, Bob Diamond, Shierry Miller is how to compete with Walter Cronkite with half-inch tape??? Here I think my endeavor with video synthesizer becomes also important in seemingly pure information age.

Geisha is the oldest Time-sharing device of male chauvinism.

Marriage is an instant Sex-access system.

Telephone is point to point communication system.

Radio-TV is a point to space communication system like fish egg.

Ultimate goal of video revolution is the establishment of space to space, or plain to plain communication without confusion and interference of each other.

How to achieve this goal? it will need decades of experiments. Douglas Davis' Hokkaidim event at Corcoran Gallery (last June) was so far the most ambitious endeavour to touch this home base at one shot. Nobody expected a hole-in-one, but it showed vividly that our direction was right, workable ... and many more experiments should be done toward this very end.

What is art?

Is it the moon?

or

the fingertip, which points to this moon?

Avantgarde art is the finger-tip and Hokkadim was a sharp finger-tip.

I am A Korean ... I tend to pretend to look old ... I am almost 39 and a half years old, still I am sloppy like hell ... I hate perfectionist. Yukio Mishima was a "perfectionist" . his death was a "perfect" mistake.

COMMERCIAL BREAK NO. 5 I am selling my loft at Canal Street. \$2000 fixture. \$145 rent.

Paul Valery wrote in the thirties that a middle class French young man can enjoy more material pleasure than Louis the Fourteenth. On the same logic, our brother in disadvantaged neighborhood can enjoy more visual pleasure than a middle-class young man in the thirties ... Nowadays anybody can see 20 movies a week, which nobody did in the thirties ... The poorer people are, the richer is their visual life ... . Is it progress? Am I a pig?

Dear Radical Software:

It is only two and half years, since we all met at Howard Wise Gallery ... and in video calendar, it looks like a century. It means that we covered a huge terrain ... Not any other discipline did so well as we did ... . it is a time for congratulation ... For myself, I re-lived the excitement of the early sixties, when we made various Fluxus events and publication. I am deeply grateful for that ... and I am lucky to have had the youth twice. And it is just a beginning ... when we get "wall to wall TB," video cassettes, cable TV, 3-D color TV all tried up ... . where will we be?

Let us live long ... .. as Marcel Duchamp did.

njp

## **PAIK-ABE VIDEO SYNTHESIZER**

The Paik-Abe Video synthesizer was a collaboration between Nam June Paik and video engineer Shuya Abe. The basic synthesizer is a colorizer, but in keeping with Nam June Paik's method to create a "smorgasbord of video art", a scan modulator was often found adjacent to the colorizer. Combining video feedback, magnetic scan modulation, and non-linear mixing followed by colorizing, generated its novel style of imagery.

The basic Paik-Abe is a colorizer unit with seven external video inputs and corresponding gain controls. Each of the seven inputs drive various nonlinear processing amplifiers. The amplifier passes low level signals but folds over or inverts the polarity of higher level signals. High brightness components are turned into "negative" video while low brightness components can pass through without change. The output of the seven distorted amplifiers drive (depending on the version) a patch panel, a bank of switches or are "hard-wiring" to a resistive matrix. Of the seven signals, Shuya Abe believed that "Channel 6 should have the weaker signal, to maintain a sense of balance in the instrument."

The matrix adds proportions of the seven signals to the Red, Blue and Green signals that drive an RGB to NTSC color encoder. The NTSC color encoder is constructed from a printed circuit board pulled from a Sony or Shibaden Color Camera with a variety of video sync signals supplied to it from a sync processor deriving Color Burst, Subcarrier, Sync and Blanking. A large multi-turn Hue knob is present to rotate the overall hue of the colorized

picture. The knob adjusts the phase of the chroma subcarrier feeding the NTSC encoder while keeping the Burst phase constant.

A common matrix configuration is to cross-wire the order of the inputs to other colors. This causes overlapping colors to add together forming new colors. An example is to tie: Input 1 to PED, Input 2 to Green, Input 3 to Blue, Input 4 to RED and GREEN (yellow), Input 5 to RED and Blue (magenta), Input 6 to Green and Blue (cyan), and Input 7 to Red, Green and Blue for a monochrome mix. The input gain controls overdrive the non-linear amps and the multiple cameras create additive color mixes of their input signals. Some of the input cameras could be pointed in a video feedback loop. Other cameras would point at a "magnetically scan processed" monitor modulated by audio signals. The magnetic scan processing is achieved through extra deflection yokes placed on top of an existing black-and-white monitor yoke. The extra yoke is supplemented with additional coils wound around the neck of the picture tube, all driven by high power audio amplifiers. The deformed magnetic image is re-scanned off the face of the tube and fed into the colorizer. This forms color spaces that can be superimposed upon other synthetic image sources. The combination of signals by an external video keyer joins the colorized collage with other video backdrops, forming a rich video landscape.

J.S.

