

MORTON SUBOTNICK INTERVIEW w/ Woody & Steina & D. Dunn on 2/25/92

At some point Buchla conceptualized what is called the Buchla Colorizer for video. Have you ever heard of this?

No. I say that because there was somebody who did that but as soon as Buchla knew that somebody did it he said that he (Buchla) did it.

Who did it?

Well, there were a number of people working on things like that.

Do you remember any names?

Well, there was one guy you all know, Steve Beck who did it quite early. And then in '69, the guy that Nam June brought over from Japan.

So you have never had a conversation with Don Buchla on the topic of video.

Oh, yes we've talked about video.

What was the conversation like? When did you meet?

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Probably 1961 or '62.

Steina: And what were the circumstances?

Ramon Sender and I had formed the tape center in 1960 and we were in a building on Russian Hill in San Francisco but it was a house that had been given to us and it was illegal that we were having concerts and we had our studio there.

Who are we?

Ramon and I. It was the Tape Center. It included Lee Brewer who did his first show there. Ron Davis from the Mime troop did the first wild event. There was a lot of things going on. A lot of visual things, happenings, various kinds of things. The place burned down in place of our last concert and we moved it to Divisadero Street which was where the Tape Center was for a long time and decided that neither Ramon and I having read the Navy manual on electricity knew enough to really go much further than we'd already gone. So we were looking for an engineer and we passed the word around that we were looking for an engineer. We had a design for a synthesizer that was based on light that Ramon and I had designed. We were trying to get some engineer to build it for us. It was something like the Wurlitzer organ where the disks go around and by placing holes in different patterns and

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the speed and the pattern breaking a light beam going to a photo cell would then cause different wave forms. Our idea was to take photographic material, punch holes in it in outlines and then by swinging this thing around we'd get different sounds as the results of different visual materials.

You would take actual images and you would outline . . .

We never got that far but that was the original idea. In addition to making synthesized sounds it would be a way to cross over into . . . at least as an experiment. We didn't know what it would sound like. We got a group of engineers, must have six or seven different people came and each one wackier than the previous one. It was an amazing array of people who came in. One of them was Don Buchla and he came in and we presented him with this thing and he said okay. Two days later he came back with this long object with a flashlight battery on it and the whole thing worked. We were just dumbfounded. This thing actually worked. It made sound. You could change the pitch by changing the speed of this thing and it actually worked. After it was done Ramon and I were really thrilled. But Don said, "But this isn't the way to do it." He was our man then. And we started designing what's at Mills College now.

So you didn't put an ad into the paper?

I don't think we put an ad in the paper. I think we just let the word go round.

Would you give us some idea of the development from this first tool that you and Buchla . . . how did it evolve into Buchla 100 or 200 or 300 or 500. . .

That was the beginning of the Buchla 100. This was 1962 by this time and he then began to work on a synthesizer. In 1962 Moog had made some modules. I don't know if there was a keyboard but there was a voltage controlled envelope generator, a voltage controlled oscillator but basically the idea was that it would be part of the classical studio and you'd have some voltage controlled things to add to it. Our idea was to build the black box that would be a palette for composers in their homes. It would be their studio. Like we now have. The idea was to design it so that it was like an analog computer. It was not a musical instrument but it was modular. The idea, for instance, of the envelope generator was not to produce the loudness of the note but rather to produce a control voltage that was changing in time that you could use to pan things across the room to change filters, well at the time there weren't any filters but to change pitches, to change pulsations and speed and things of that sort. That was the concept. It was also built in with a touch plates because there was a keyboard that was a ten key keyboard because we had

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acquired ten loop machines from some kind of a store that sold sound that burned down and the insurance company called because they heard that we were looking for stuff and if you come, we'll give you the entire remains of the store for \$600. We didn't have any money but we rented a truck and went and picked up all this stuff and said we'll take it for three days and see if we like it or not. It was great. We got these loop machines and speakers and intercoms. So we gave them a bad check for \$600 and then sold the intercoms for two weeks until we had \$600 to put back into the account. We had these ten, I think they were Viking loop machines. Don built this ten position keyboard so that with the loops going you could actually play music concrete by (?) sounds.

What happened to that machine?

Well, the ten loop machines are probably still at the tape center at Mills College. All of that went to Mills College. But the ten key keyboard is part of that first instrument. That was the reason for that. A lot of people don't understand what that was doing but that was the reason that was designed to be able to play music concrete off of loop machines because if you'd hit it you could make an envelope and there would be a decay so you wouldn't just be playing it but you could shape the envelopes as you went from one to the other.

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What was the name of it? Loop machine.

Well, there were ten loop machines that were used for commercials on the radio.

What was the name of the instrument?

Well, that was the 100. This was the 100. This was the design of the 100. It was not a synthesizer. It was a collection of modules of voltage controlled envelope generators and it had sequencers in it right off the bat.

What the name of the instrument that he performed first? Was there a name to it?

Instrument?

The one you were just describing.

Oh, you mean the one he designed for us. We didn't have a name for it. We didn't call it anything. It didn't have a name but the idea was that it was a light synthesizer. It never went beyond that stage. I still think it would be a nice thing to have.

So it's "Light Synthesizer" in quotes?

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Yes.

So what you are telling me is that the Buchla 100 has very little to do with the module Buchla later . . .

No, that was it. The concept of it was that it was never a synthesizer. It never became one. It was a series of modules that you could collect so if anyone wanted to buy a 100 they would call me on the telephone. This went on for years, six or seven years. They would call me on the telephone and say, "What modules should I put together?" It was a collection of modules that you would put together. There were no two synthesizers the same until CBS bought it in 1969-70.

How do you define a synthesizer?

Well, the "synthesizer" in quotes is the thing that happened later which was done by the analog companies. Even the Moog was not a so-called synthesizer until 1967-68.

This is not a devious question because we are debating this in media all the time. What's a synthesizer and what's not?

There were two synthesizers. One was the RCA Synthesizer which was at Princeton, Columbia Studio which was a synthesizer. Its

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design was to synthesizer sound.

Is that like generate?

It was to synthesize sound. It was to make instrumental sounds through synthesis. That was never our idea. It was never our concept to synthesize sound. It was to create new sound. It wasn't to synthesize some other. When the commercial companies came on the market at the end of the sixties they created synthesizers. It's very interesting that the Columbia/Princeton studio with Milton Babbitt and all the commercial companies produced the idea of a synthesizer. The rest of us were concerned with making new sounds. The name I wanted to use was the "Electronic Music Easel." It was a palette of sound that you could mix and blend.

We used to call it as a protest "analyzers." But still going back to those magnetic tape loops. How did it write again to the Buchla 100?

The Buchla 100 was not a thing. It was a collection of objects. The collection of objects was designed originally to satisfy all the needs of composers in his/her studio at home. It was an upright. It was a series of shelves and you filled it with modules. There were a number of input devices. There was 10 keyed

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input device which was designed to be able to play music concrete from loops. Then there was a 12-keyed touch plate keyboard which was designed with three knobs on each key in order to be able to produce the twelve tones in music. But you could control simultaneously a pitch, an amplitude and one other thing. There was no tuning to the keys. You just had knobs and you tuned them to whatever you wanted. In fact, the first demonstration we did at one of the concerts when the thing was first done was that I programmed the keys so that if you went in one direction it played a series of tunes. So instead of going dudurlurl it would go da dee da dot dot dee or whatever. It was a programmable keyboard and the third keyboard was designed for David Tudor and it was a series of circles with plates on them so that you could pan sound or do various things in real time. These were the input devices.

The tape loops, was it like an arrangement behind an instrument?

The tape was part of the tape center. They weren't part of the Buchla. It was a long rod and it had ten of these tape loops and we had an additional loop.

Was that two meters?

Each of the boxes were about this big and about so wide and they

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were placed next to each other. They were cartridges and you could replace the cartridges on the inside and then there was a device that went around the room with little rollers so that you could do a loop up to around 150 feet with springs and various things.

Would they also be echo loops or were they strictly . . .

These were not echo loops. These were actually just straight loops.

Like a sampler.

Yes, then we got a hold of the Chamberlain organ which was designed just like our tape loops. It was designed with tapes. You could record flutes and you could play it. It was like an organ. Our idea was that was to get rid of all the tapes and then each composer would have this rod with 88 or more tapes and with each tape you could have four different sounds. You could record your own sound, stick this rod in and be able to play on this organ which was an extension of the ? at Mills College.

At what point does CBS . . .

Now wait, there's another step inbetween here. If you want to understand something about the Buchla concept, this was made for

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the Tape Center, I went to the Rockefeller Foundation and raised \$500 for Buchla to build that first one for the Tape Center. I wasn't thinking business. I was thinking of this object for the Tape Center and so the thing arrives and it's already mass produced. It's got plates and it doesn't say Buchla 100. It says "San Francisco Tape Music Center Inc. According to Don, we were now in business. We were going to sell this synthesizer called the "San Francisco Tape Music Center Inc. and I said, "No way! I don't want be in business. I don't want any part of that." So if you look at the next Buchla synthesizer that was sold went to Princeton/Columbia. The Princeton alumni still have a copy of it somewhere and the Princeton Alumni News has a picture and we were really being raked over the coals by all these people by then, you know. The Alumni News had a picture of someone's hand and the new electronic device, not the Babbitt Synthesizer but this device which says "San Francisco Tape Music Center, Inc." And then we insisted that he change the name, that we didn't want to be part of a business and he changed it to the Buchla 100 after that.

That was the name.

And it became Buchla Associates.

Who has that first one?

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That's at Mills College.

Has the thing called "San Francisco Tape Music Center"?

So does Princeton and so does NYU.

Which was the one that went to the Smithsonian?

It didn't. That would have been the one.

It was bought by the French recently. You could recall like three instruments under that name. Do you think there were more units than three?

You mean the Chamberlain organ and the . . . is that what you mean?

His production, his original . . . did he do it at home? In the basement?

He did it in his home.

How many did he produce in that period?

He actually got a kind of an assembly line. He had silkscreens

made for the front and by then there were already printed circuits so he had to wire everything but the circuits were designed. He had shelves full of this stuff. The interesting thing is that he never built a prototype. It came all silkscreened.

What happened then? He sold it to . . .

Yeah, then people began to know about it and Princeton, uh, what's his name, Vladimir Yousefchesky people came out. People would come to the Tape Center and they'd see this object and then I think he made a brochure and mailing and he sold them all over the world. I don't how many he sold. He could probably tell you if he told you the truth. Maybe 50 of them. I don't know.

From that moment on did you have any input into his instruments?

Well, we had a lot of input into that one and I stayed as probably the major source of input until the electronic music easel because he stole my name. I had called him . . . I don't want this . . .this is not in there, okay. He had input from me up until a certain point and then I couldn't do it anymore. There's still a little bit of input even to this day but it was major up until around '72, '73, '74 something like that. About ten or twelve years.

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What were the major influences on your thinking? Your group thinking?

About?

About the system.

There were a number of influences. A number of strategies or a number of strings. One of them had to do with a very, very heavy involvement with McLuhan thinking. The whole concept of media, the home and the kind of revolution that was going to happen when individuals no longer . . . I mean it was absolutely and still is to this day just a devastating notion to have to go into M.I.T. or a university of any sort and sit there and compose music. I mean that is so outside of whatever I thought it was and the ideal was the studio or the home or the place where someone lived and worked. It's hard for me to even think of myself alone at that point because Ramon Sender and I were like brothers and we almost didn't spend any time except together in thinking and doing but it was our notion that things were going to change radically and that the radical change was going to be in the fact that everything was going to be individualized. The idea of the modular synthesizer or whatever you want to call it . . . I don't doubt that Buchla had this in his mind all along but one of the reasons that he was attractive to us is that it was not a musical

instrument. It was a collection of things that could be personalized and that was very attractive to me. That whole concept. It also had to be very cheap. The notion of tuning, for instance. Moog was building a . . . there was the guy who built the pitch shifter . . . Bodi. He built an oscillator. Hewlett Packard had an oscillator. These were in 1958, '59 dollars were anywhere from \$400-\$500 which was a lot of money for a single oscillator that was not voltage controlled. The reason is that they were test instruments and they could hold their pitch. My criteria for Buchla . . . you know how much it would a pitch . . . we timed a violin, how long a violin stayed in tune in a normal concert hall situation and I decided that no oscillator had to stay in tune longer than a violin stayed in tune and so it became very cheap to build this object. For \$400 you could make ten of them because it didn't have to hold the tune and so it that concept that it had to . . .

That was the sixties. Now violins hold their tune much longer. There's too many strings now . . .

Well, no it's the result of not the mechanism but the room. The string stretches . . .

The catgut stretches but modern strings don't stretch.

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Well, Buchla's things stay in tune longer. The idea was that it should be cheap and our goal was that it should be under \$400 for the entire instrument and we came very close. That's why the original instrument I fundraised for was \$500. There was one other influence here was that it had to be able to be used, not just in the studio, in one studio as a palette but it had to be useful in terms of live performance.

Tell me about it. What would early performances look like?

Well, the performances were almost all multimedia from 1961 on. Even from the earliest days the voltages were used not just to control the sound but to control light as well with silicon rectifiers taking the bulbs of slide projectors. In fact, one of my students later at CalArts, a film student, won some award for animation because he used the same apparatus that I showed him how to do with sequencers and keys and had something like fifteen slide projects on a single place and could make it move all around. This was built-in at the very beginning. It was part of the whole notion of performances at that time.

Roger Kent did those for you.

We're going to dig this guy up somewhere but I don't know.

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So what kind of music was performed?

Well, a typical concert at the Tape Center would be a new piece by someone like Ramon or myself or Pauline Oliveros, the earliest concerts. And a new piece by Bob Ashley, a new piece by Gordon Mumma, a new piece by Stockhausen which would not be performed. That would be tape. Stockhausen came to the concerts back in 1962, '63. He was living in Los Angeles and heard about the Tape Center and flew up in a private airplane. And then there would be a traditional work. For example, I remember one concert where we did Ives' "General Booth Enters Into Heaven" and picked up footage of the Pope and did a multimedia thing with a live performance of this Charles Ives' piece. Schumann melodramas done in multimedia and then there'd be a big improvisation that would include the synthesizer or whatever you want to call it and all kinds of instruments that people were making. We had an arrangement with the local automobile graveyard that would call us whenever there was an object that looked like it might sound good and we would go down and get coil springs or . . . Coil springs started at the Tape Center. They moved all over Europe and everywhere but they started . . . They were San Francisco Cable Car coil springs and Luchan Vario was at one of the concerts where we used one and took it to Europe and it spread all over the world from that point on.

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Do you recall any video involvement in those performances?

No, I'm talking '62-'63.

Before, up to about '65.

No, we had film and . . .

In the Bay Area?

You're talking about San Francisco.

What year did Pauline get involved?

She got involved around the year we went to Divisadero Street so it was '62 or '63. She was not involved with Buchla. That was Ramon and I. She became involved with the Center, maybe '63. I'm not sure. Became very heavily involved at that point.

So the instrument itself, that first version of . . .

Well, we started working with Buchla in '62. My time frame is not perfect. It was at the edge of 1964, 63-'64 when it was actually premiered as an instrument.

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That would jive with some of the other dates that I have.

I know this because I left in '65.

You went to New York?

Yeah. And I took one with me.

Which one?

It was still the 100. But it was a new configuration. There were all these different configurations.

Where is it now?

That's at NYU. It goes to Aspen every summer.

There's no way you could get hands on it for . . .

Well, we could call Michael.

So it's still in use. Still in regular use. So it would not be complicated to borrow this one for a short time?

I would think you could from Michael. He teaches at Juilliard.

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You see, our problem here is as it relates to our exhibit, what we're trying to do is to maintain the continuity from the musical instrument to video instruments. In fact, the front panels, if you look at early Buchla or Moog and if you look at seventies instruments of video. They look very similar. Almost identical. And the whole voltage control system was inherited completely into the video. Our dilemma is to track down the crossovers. This is basically what we're trying to do. I understand that you and Buchla and your group at the Tape Center actually weren't interested or were not connected to any kind of visual or visualization process.

We were.

Slides?

Yeah, slides, film, light shows. It was the first light show.

But there's no electronic interface except the lights. Light was the only electronic relationship between the synthesizers and the environment?

Yes.

You see, there were certain crossovers like Beck who actually

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came from the musical group in SalMar. He was the tech. So there's a total legacy there and Buchla claims of course . . . we searched his house, his garage found no trace and he said, "I have it" but we searched his first floor. He said "I have schematics" but we couldn't trace any. So it's kind of disappointing.

I don't know. I can tell you that to my knowledge I never saw anything like that from him but that doesn't mean he didn't do it but I never saw it.

I heard one term called "Buchla Colorizer." Was it true when we examined that statement? Did we find it actually true? There was this one link we were trying to get which is Roger Kent who actually built one under the auspices of (?).

That's possible.

According to Don, this guy Roger Kent was helping him to do the actual assembly.

I know Roger. I know who Roger is. I didn't know who Roger Kent but Roger was Don's assistant.

Yeah, well you know what happened to him.

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He got into a big automobile accident.

Oh, really. When?

A woman friend of Morton's: That wasn't Roger. His name was something else.

That wasn't Roger?

The Roger that were looking for ended up smuggling cocaine under the State department's nose by doing hot air balloon shows in S.E. Asia. He was smuggling hundreds of pounds.

Well, that's not the same guy then.

Eventually he was run out of Bolinas.

Woody: It was the same guy. If he ever worked with Don Buchla this is the right . . .

I do remember a Roger that worked with Buchla.

They all remember him in San Francisco so, I mean the group, we went to the Exploratorium and the three guys said, "Oh, we know Roger." But it ended tragically because he became an addict and

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his girlfriend O.D. in the bathroom and he was run out of Bolinas.

Steina: Irrelevant.

Subotnick: There was not a lot of involvement with video. The things that we were heavily involved with in the early days, from 1965, there were a number of groups. There was dance, the whole thing with Ann Halpern, the Actors' Workshop, Ann Halpern had myself and Terry Riley and Pauline working for her. I also worked for the Actors' Workshop but out of that came the San Francisco Mime Company. Lee Brewer, all of those people came out of that particular scene. Things like light shows and the San Francisco version of "Happenings" and events and all of that were the kinds of things that were going on very heavily at the time.

Relationship between jazz, poetry, film. Bruce Conner was around. It was a very large network of people but video was not . . . the closest we came to video was that Brakhage was there for a year. But it wasn't video. That was the orientation.

Steina: That was the furthest you ever got from video.

Woody: Have you ever met Sal Bartlett.

I remember Sal Bartlett.

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What about Tom DeWitt?

Tom DeWitt, I didn't know.

Would you be able to comment on Chattabee's operation?

I could comment but you have to ask me questions though. Which operation are you talking about?

In his studio in Albany there was an involvement of Tom DeWitt and Viveca Sorenson and they actually did some video work but it was in, I would say, '74-'75. Would you have any insight?

No. Not on what they did because I didn't see what they did but the Chattabee approach remains pretty much the same. The reason I know it is that he visited my studio in New York when I was working on "Silver Apples of the Moon" and completely mistook what I was doing. And developed a whole concept based on what he thought I was doing and as a result of that bought hundreds of sequencers, an array of sequencers and the idea was you would get everything going automatically and make choices as the automatic procedure went by. That has outlined his work whether it's M or that procedure of letting things go in motion and just editing on the fly as you go. But what they did visually I really don't know.

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Were you involved in Automation House?

Oh, yeah.

Would you summarize a little bit of the audio program there?

Tice Latham ran that program and Tice Latham just had a heart attack by the way. She's in the hospital in New York. Before Automation House there was the "Electric Circus." That was the beginning of that whole movement there. "Electric Circus" must have been, what '66. No '67 because I used "Silver Apples of the Moon" for the opening of the "Electric Circus." It was 1967. I was in my studio in New York on Bleecker Street and rock bands like The Mothers of Invention and Magic Hands or something like that. A lot of groups would come by at night and Andy Warhol's

Mother Mallerd? That group.

No, that was later. No, this was somebody's Magic Hands. Anyway, UltraViolet from Andy Warhol's group, and the whole thing was like, people would just walk in at two o'clock in the morning, one person after another. It was a wonderful time. Among the people who walked in was the guy who was the head of Nonesuch who commissioned "Silver Apples of the Moon" at two o'clock in the

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morning. And another time three guys came in and they had this idea for a thing that they had just bought the name from the guy who did the Whole Earth Book, Stewart Brand. They bought the name "Electric Circus" from him. He evidently trademarked it and they bought the name. They heard about this guy from everybody who was up in this place who was me, who was a kind of electric circus and could I tell them what an electric circus was. So they'd come by once a week or so and we'd talk about an electric circus. They said, "We'll give you \$4,000 if you will do a number of presentations." Just like I was doing for them. I'd show them lights and the different things I could do and I so I did this and actually raised money for the "Electric Circus" without realizing that's what I had done. Then as soon as we got into the "Electric Circus," it opened, they got their money, we started a series called the "Electric Ear." You must remember that. On Monday nights. Which involved everybody, the theatre groups, there was a lot of money to do those things so it was pretty big.

Where did that money come from?

It comes from the "Electric Circus." It was part of my legacy there. I had raised all this money and in return asked for a contract. I got \$4,000 a year for doing nothing and a night with a certain budget to do whatever I wanted. They were making a fortune at that place. So we had the "Electric Circus" and Tice

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Latham was the manager for the concerts that we were doing. I don't remember why but people got greedy and they wanted Monday night for something else or whatever it was and so she knew the guy who was the labor czar. Theodore Keel. Who had started "Automation House." So she moved the series to "Automation House" at that point.

Were you involved in "Automation House"? Programming?

I did concerts there.

Did you recommend some concerts or how did she get this very good selection of programs.

She worked with people like Sal and myself for years and years and years. She really kept in close contact.

Where did she come from?

I never knew where she came from. She just popped up. She volunteered. She didn't take money. She volunteered to run the "Monday Night Concerts." She then did a series with the guy I don't like, Eric Saltzman. She did the series with him at Hunter College and then the . . .

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Were you involved in EAT?

No, I went to them but . . .

What about Nine Evenings? Do you have any recollection of that.

No.

So Latham was involved with Saltzman when he was doing that series . . .

That series at NYU. Not NYU. At Hunter College.

But there was something at NYU that involved Pierre Boulez.

That I don't know about.

Was Lowell Cross ever involved with Mills?

No, not that I know of. Lowell Cross was involved with lots of stuff and was on the scene with Tudor a lot. We had him at the Tape Center. We had a whole week of Tudor and Cage and all of those people and Japanese composers, Ichinagi and those people, their first appearances in the United States it turns out. He may of, at some point after I was gone (I left Mills College in '65

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and I don't know a whole lot about what happened after that,) done some things after that.

Do you know where he is now?

Yeah, he's in Iowa.

What about David Rosenbloom?

David came to New York in 1968 and at that point Serge, (?) MaryAnn Amersshade, Charlemine Palestine, Ingram, Marshall, David Rosenbloom, Michael Saul were all part of my studio. I would get work and pass the work around. We used to do this in the Tape Center in San Francisco. We'd get work and whoever needed money would take part and we'd divide the work up whatever it was. Sometimes it might be a commercial, sometimes it was transcribing something. Whatever anyone had that could help keep everyone alive and that stayed with me in New York. Michael Saul was the disc jockey at the "Electric Circus" for about three nights and finally couldn't take it anymore because he couldn't get the hang of the thing on the record so they finally got rid of him. But David Rosenbloom worked there at the "Electric Circus" and at my studio.

Who else would make instruments? Was there offshoots of clients?

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First of all there were three worlds, actually four worlds. There was the art world and that's where EAT came out of. It really came out of the galleries. It didn't come out of the music world. The gallery world brought in Cunningham and people who really had not worked with technology and then took them to that other world which was the Bell Labs world. Max Matthews and Billy Cleaver was the first main person for EAT. But that was the connection for bringing the artists to the technology people. They bypassed all the people except David Tudor and that was only because of Cunningham. They bypassed all the people who were actually involved in technology. The artists. There were a lot of artists involved in technology but they bypassed them because of the kind of gallery/high tech relationship that existed. So there was that world, the high-tech world which was Bell Labs and at Illinois, what's his name, the Illiac. Hiller. And of course on the other side, the Milton Babbitt's who were dealing with high-tech and science. Then on the other side of the fence there was the beginnings of what David Tudor was doing and all of these people building little objects that sometimes worked and sometimes didn't work. That was part of the art. To make the object. When I came to New York I came from this McLuhan world that I had been living in which was neither of those. This was the world of media. I was involved in the world of home media. I really believed in that. That's why I did the "Electric Circus" because I believed in public art. I believed in everybody getting

involved and making art out of discotechs and art out of the television set and the radio and all of that stuff. It was a whole different atmosphere. So my needs at that time weren't to develop electronics for a particular piece but . . .I'm still doing that. I'm working on this thing with the kids. I've never gotten over doing this kind of stuff where I look at something where I look at something and I say, "Hey, that's a possible medium for . . .what if everybody got their hands on this thing. What would that mean to the world?" So Serge came into the scene in that sense and when I moved to California again I brought Serge to CalArts and the idea was that Serge was going to build a synthesizer that would cost under \$200 and every student who graduated would get a board free and they would go off and make their thing and the requirement was that the total cost would not exceed \$200. And he did it. Of course, he took apart all the Buchla's to find out how to do it. But that was the concept. So it was another kind of world altogether.

What year did Serge start building?

Well, I went out there in 1970 and that was his entire job. That's pretty visionary. His entire job was not to teach anyone and not to be a techie or anything else, just to design a synthesizer. And he had a room and all the equipment to do it so that in exchange for which the students would get free boards

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when we left. That never worked. He took all the boards with him.

He came on to fix Buchlas?

No, no, no. He came on to do exactly what I'm saying. We hired someone else to fix the Buchlas.

He most definitely never charged \$200 for a complete system after that either.

No, well you could at those days if you bought the kit which was around \$200.

He inflated that awfully fast though.

We met Serge in New York of January of 1970. What was he doing then?

No, 1969 it was. It wasn't 1970 because he came out to CalArts. . maybe it was '71. No, it was '70 with Nam June. It was '69 when we left. It might have been January 1970. It was probably the '69-'70 season.

Was he already building his own instruments at that time?

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No. He was working for me. I was dreaming and he was building objects that came out of my dreams like I'm doing with Mark Caniglio now. Nothing worked. I loved the guy but nothing he built ever worked. He's got such a fantastic mind that it was . . . there's only certain people you can work with. Well, things did work but they didn't work very well. And also there was no one using that space so he just took the space. He and Mary Ann moved in there.

Together?

Yes.

Gossip! That's a relationship I never knew about.

Yeah, that was the earliest one I knew about.

Why did you call it the Tape Center?

Well, it's actually a timely question for that time, not for now. The music world was very sharply divided between music concrete and it's hard to imagine this but computer music and electronics. The Cologne studio, if you went in to record something you had to go to another building. You could not have a microphone at Cologne studio. That wasn't Stockhausen. He used them but there

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was Babbitt on one side and Yousechefskey on the other side and the whole world was divided between these two worlds. We decided to avoid electronic music, music concrete and we called it a generic thing, tape music. It was called the Tape Music Center and gradually became know as the Tape Center and we started getting calls for Scotch tape from all over the world. But we were a separate entity. We were not interested in the purity of electronic music. Built in to the thing right from the beginning, including the Buchla, was the idea of more than one . . . it was a control center, it was not the instrument, it was not a musical instrument that someone played. You could play it but it would be whatever you wanted it to be. Everything was neutralized. The whole concept was neutralized.

Going back to the numbers. What did it mean? 100, 200, 300.

Well, this is a really amazing human being, this Don Buchla. He conceived at that time that you never start with one so it was one hundred. So he conceived the 700 at the beginning when he did the 100 and so he knew what the 100, the 200, the 300, the 400, the 500, the 600, the 700 were going to be. At least, he claims. I believe it to some extent because he actually at one point jumped a number. He went to the 300 and then came back to the 200. The 300 was this hybrid computer that actually was a computer. It controlled analog stuff. It never worked. CalArts

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bought one. The studio in Oslo bought one. DeKalb, Illinois bought one. None of the three ever worked. They cost a fortune and none of them ever worked but it was part of his whole strategy. So they were model numbers based on descendants. Generations. And when CBS bought him, they took the 100 and he sold his name. And immediately started building the 200, 300 or whatever it was that competed with the 100 and that's what actually kiboshed the deal eventually. I think.

What about Richard Maxfield?

Richard was around Berkeley at first and then New York and that was, he did essentially music concrete but . . .

I was curious about him because I don't know that much about him. I just know some of the music which I thought was . . .

Well, he was a very fascinating person and I thought probably did, at that time, the best music of anybody using music concrete I'd have to hear again now to know but at the time I thought it was the most, again back to the media thing, he more than anyone else, using that particular media. . . I mean, Yousechevskky's as nice as that was sort of regular music with feedback but this was sort of getting to a cough and doing a whole piece from coughs and things like that. Then he went to New York and I went to

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visit him just before he committed suicide and we spent practically a whole day and evening together and he had reached a point where he believed that he could, he really believed that he had become Jesus or that he was living with Jesus and that was wearing off on him and he'd become pretty nuts at a certain point. At least by my standards and being a good Jew that seemed silly. I mean, why not be Moses. But he believed that he could communicate with a group of musicians on the stage and so his concerts would consist of putting a group of musicians on the stage and sitting in the front row and thinking and they would improvise and he would be sure that they were playing only the thoughts that he sent to them and it was within a few months of that that he actually committed suicide.

That'd be a pretty good sign that . . .

. . . there wasn't much further to go.

How are your archives?

Terrible.

Are there any other photos for example of you, Buchla and the machine?

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I'm sure there are.

Where are they?

Ramon may have some.

Is he accessible?

Oh, yeah. Ramon and I are going to do a history as soon as I finish this other CD ROM were going to do a CD ROM history of the Tape Center and he collects and he's held on to stuff.

Did Buchla patent any of these things?

I doubt it. Patenting was expensive. I doubt any of that was patentable anyway. That's not the kind . . .I really don't know.

So he would have photos, he would have documents of certain purchases. We have a problem with dating unless we have a check that's cancelled.

We got the founding from the Rockefeller Foundation. They might have a record of it.

But you don't have a correspondence with the Rockefeller

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Foundation for example?

I did have a correspondence but I didn't keep it.