Detroit Music Oral History Project

Detroit, MI

Dr. Ed Wolfrum

Interviewed by

Mike Dutkewych

November 18, 2015

Royal Oak, Michigan

As part of the Oral History Class in the School of Library and Information Science

Kim Schroeder, Instructor

Fall 2015

Brief Biography

Dr. Ed Wolfrum is a recording engineer from Royal Oak, Michigan. He began working in broadcasting as a teenager in the early 1960s, at which time he invented the Direct Box, a piece of equipment that has become an integral production component in concert and studio settings. He soon transitioned from broadcasting into recording after being offered a position at Motown Records. There, he engineered recordings for acts like Marvin Gaye, Stevie Wonder, Martha & The Vandellas, and The Miracles. Later, he moved on to other prominent Detroit recording studios, most notably Golden World and United Sound Systems. During the 1960s and '70s, he collaborated with many of the city's renowned labels, engineers and music makers, contributing to not only hit records, but also a number of innovations in recording technique and technology.

Interviewer

At the time of this interview, Mike Dutkewych is pursuing a Master's Degree from the Wayne State University School of Library & Information Science. He is a music enthusiast and record collector, focusing primarily on 1960s Soul and Rhythm & Blues artists from Detroit.

Abstract

Students in Kim Schroeder's Fall 2015 Oral History class interviewed individuals who have had an impact on the Detroit music scene of the last 50 years. Among them was Dr. Ed Wolfrum, who was interviewed on November 18, 2015 at his home recording studio in Royal Oak, Michigan. Dr. Wolfrum discussed the interest in electronics that led him to a career in broadcasting, and later in audio engineering; working for several Detroit radio stations, including WEXL and WXYZ; working for several Detroit recording studios, including Motown, United Sound Systems and Golden World; his relationships with Jim Siracuse, Bob Fine, Berry

Gordy, Marvin Gaye and James Jamerson; and some of his philosophies for and technical approaches to capturing high fidelity recorded audio.

Restrictions

Restrictions apply.

Original Format

- Audio recording (WAV format); 2:29:07 duration
- Transcript (PDF format); 58 pages

Subject

- Balk, Harry
- Beltz, Bill
- Brokensha, Jack
- D'Orleans, Bob
- Davis, Don
- Detroit (Mich.)
- Field, Artie
- Fine, Bob
- Fortune Records
- Funk Brothers
- Gaye, Marvin
- Gaye, Marvin. What's going on (Album)
- Golden World Records
- Gordy, Berry
- Hayes, Isaac. Hot buttered soul (Album)
- Jamerson, James, 1936-1983

- McClain, Mike
- McLaughlin, Ollie
- Motown Record Corporation
- Pival, John
- Radio broadcasting
- Riser, Paul
- Siracuse, Jim
- Sound engineers
- Sound—Recording and reproducing—Equipment and supplies
- Sound recording industry—United States
- Sound studios
- Standing in the shadows of Motown (Motion picture)
- Terrana, Russ
- Theme Productions
- United Sound Systems
- Van de Pitte, David
- Westbound Records
- WEXL (Radio station : Royal Oak, Mich.)
- WXYZ (Radio station : Southfield, Mich.)

Added Author

- Wolfrum, Ed – interviewee
- Dutkewych, Mike – interviewer

Bibliography and Footnote Citation Forms

Ed Wolfrum oral history interview, Walter P. Reuther Library, Archives of Labor and Urban Affairs, Wayne State University, Detroit, MI.

Detroit Music Oral History Project

Walter P. Reuther Library

Wayne State University

Detroit, MI

Transcript of interview conducted November 18, 2015 with:

Ed Wolfrum, Royal Oak, MI

By: Mike Dutkewych

0:00:00

We are recording, ok.

Ok, this is an oral history interview with Dr. Ed Wolfrum. It is being conducted by Mike Dutkewych on November 18, 2015, at Ed's recording studio in Royal Oak, Michigan.

To begin, I understand you were only about 14-years-old when you started working in recording and broadcasting. How did you get drawn into that world at such a young age?

I always had an interest in electronics. My father told me once that at age, about, 5, I pulled the telephone off the wall, took it apart and then put it back together and plugged it in because I wanted to see how it worked. So, I guess the gift was God given to do it. And what drove me the rest of the way was inspiration from people that I had met and mentors. By the time I was 11-years-old, I had an amateur radio license. And my first transmitter was built from parts from TV sets that people had thrown out. And I got a copy of the *Amateur Radio Handbook* and built a transmitter, and took an old Zenith console radio from in the living room that was in the basement, took it apart and got the IFs to oscillate so I could copy

CW code. I put a gimmick on it to get the IFs to oscillate, backed it around, and I had a receiver. And I worked about five states that way, uh, with one frequency—crystal controlled—and then, my father, who was at that time here with us. My father and parents were divorced later on. But, he bought me an ARC-5, a military surplus transmitter. I used that—it only worked 40 meters—and I used that until I could afford an AT-1, which I bought with money from my paper route. I got that and my dad was a baker and he had once worked for Jacob Sparks. He ran the King David Bakery, so he took me over to WEXL radio when I was about 12, 13. And I was very impressed seeing a broadcast station for the first time. I started reading about broadcasting and got a commercial radio license. By the time I was 13 I had the second class. And at age 14 I had a first class radio telephone license and went over to WEXL and asked them if I could have a job, and I was interviewed by Garnet Sparks. And at age 14, he looked at my license—my commercial license—and he hired me. And it hung on the wall on and off at WEXL 'til the '70s when I came back to help build their studio on 11 Mile with Gordon Sparks, Jr. when he built the studio. So, there was this sort of connection there and that ultimately resulted in my job at Motown, peripherally, because I had worked for other broadcast stations.

What is interesting is that at that time, uh, electronics people were sort of like computer geeks today. We were hard to find. We were the nerds of the day. And most of the young people got in it by way of amateur radio, and so that was nothing, you know. I mean, there were a lot of young people that were interested in it that way. And so Ham Radio was like the gateway to learning electronics hands-on. And uh, so I don't know if I was exceptional at all, because there were a lot of young people. John Dew worked at WXYZ, and when I went to work at XYZ, he'd come at it pretty much the same way. Uh, not by way of Ham Radio, but by way of an interest in electronics and music. So, I don't know if that was—but that's how it started.

And, uh, when I was at WEXL I kind of observed a problem because they used to do a lot of religious broadcasting after, say, about 8 o'clock, uh, in the evenings. And they came from various churches. They'd hire phone lines and they put a transmitter or, I mean, a line amplifier to feed these phone lines and then they'd

just join the church in their service in the middle of it. And the audio is terrible, uh, because they set a microphone down. And I said, "Well, why don't we take it from the PA amplifier that's used in the church?" They said, "Well, there's no way to get a high impedance feed into our mixer, so we'll just put this mic up." And that's how the idea of the Direct Box came. In fact, there's one, a Direct Box, sitting right next to you. The original one is the black one sitting up on top.

I was looking at that and wondering.

Yeah, yeah.

0:05:37

So, you said this was around that age of 14?

That was about 14. Yeah, I can't really remember. So, I made a bunch of them for the radio station, and I think it was Garnett or Jacob who, you know, he was a minister, but he was talking to other people and before long, I got a phone call from some of the other radio stations to build 'em for them. So I think my first sale was probably in about 1960, and it was to WJLB. And then after that, it was WJR bought two or three of them, XYZ bought two or three of them. So the radio stations had them before anybody else.

Can you elaborate a little bit on what this Direct Box was?

Well, the problem is that you're going to feed a moderate level, line level source, into a mic level input, and you want to match the impedances, which in this case is either a low impedance source or a high impedance source. So you had that option. And you can always take a low impedance and bridge it into a higher impedance. These were usually unbalanced inputs. So, they weren't balanced. And I just thought, "Well gosh, the solution to that is take an input transformer, turn it the other way around and use it as a matching device to match to the low impedance." And that's what I did.

The first ones had a built-in pad, a built-in attenuator, 'cause they were coming off this line input rather than like a guitar input. And that was just a T pad in there. And those were the broadcast ones. And then later on, because of another incident that happened when I was working at XYZ, uh, I was doing these record hops. A friend of mine, Dick Kiefer and Jim Mack and I did record hops at the Catholic schools. Because I was going to—by that time I was in high school—and was going to St. Mary's in Royal Oak. Jim went to Catholic Central, and Dick went to Shrine. And we met on Ham Radio. And we got talking about doing this all together. So, we knew there were enough Catholic schools on the weekend doing these record hops that we could make a good living doing it, all three of us. And we could divide our services, the three of us, between three schools. So we could make three times as much money, ok? So, we did record hops all over the city. We called ourselves Imperial Broadcasting Company. And it was quite successful. We basically owned the Catholic schools. If there was a Catholic record hop, it was either going to be one or the three of us doing these hops. And the big one was at the U of D Memorial Building.

I was working in radio at that time. I was working at XYZ and still at EXL, kind of part-time helping them technically. 'Cause I think it was Jacob Sparks who told John Pival at XYZ, "There's this young guy that you should hire. He needs experience and he'd be great." And so I started working over there. And I was doing production for Lee Alan. And we're still friends, Lee and I are. And he was doing these live remotes at the Walled Lake Casino. So I made a Direct Box for that so they could interface from the stage, uh, at the Walled Lake Casino, from the PA to put it on the air if they wanted for sections. So I had made one for them too at that time. And, when we were doing the record hops at the, uh, U of D Memorial Building, because of my association with all of the record promoters in town, I could get these bands to come out and pantomime their records. Well, the big hops like that, it was worth their time to bring a band in. And Motown was just getting its start then. So, they would actually bring The Funk Brothers out to play behind some of their artists at the U of D Memorial Building hops because that was great promotion. All the Catholic schools were there. And it was black kids and white kids and there was no—back then, there was no racial barrier. It

was really interesting. You'd go to these hops and they'd be dancing together. In fact, back when I was working at Motown, you'd go to the Fox and see the Motown Revue, you'd see these kids—black kids and white kids dancing in the aisle together. They didn't care. This was the music, man. Who cares? So, Motown had broken, and the music had broken the racial barrier. There wasn't that problem. And Catholic schools there wasn't a racial barrier as much as there were in the public schools, I don't think. I never saw it going to St. Mary's. And I didn't see it at Shrine either. It was just kids lovin' music together.

0:11:04

So about, uh, going back to the Wolfbox…

The Wolfbox, we'll get back to that. What happened is that when I was at one of these record hops, Jack Brown who owned Fortune Records brought out The Diablos to do one of these hops. And he saw how I was interfacing. I had interfaced our turntables to a system on the stage for people dancing in front and to the big system at the U of D Memorial Building, which I was doing through a Wolfbox. And he wanted to know what I was doing. And I told him what I was doing and he said, "Well, will it work for guitars?" I said, "Oh yeah, yeah. I've recorded bands like that." Because I couldn't afford guitar amps or anything, and I had built a homebrew tape recorder from scratch, probably when I was about 15. I still have the transport downstairs. And it was kind of a cobbled thing, but it worked great. It was a full track recorder.

And anyway, I had recorded a band that I had met by way of these record hops using the Direct Box. And I built three of them for that 'cause it was guitar, bass and piano. It was all mono back then, and it all went in direct. And this was group called The Bishops. And the record charted locally. They went out—I don't know how they did it—but they paid for pressings. Hugh Brae was one of the guys in this band, and we recorded The Bishops live, and it charted, so people sort of knew that I had this little studio in the basement. And plus I was doing the record hops and that. And I told Jack Brown about it, and he'd heard The Bishops' record.

So he wanted one. So I sold him the first one that wasn't used in broadcasting, other than my own, that was used commercially. I don't know how many records he used it on down at Fortune, but he told me to go to United Sound. Well, I sold Jimmy three of 'em. And that's when it began. Everybody started buying Wolfboxes. It basically got me through college.

0:13:18

Were you calling them Wolfboxes or was that later?

Well, that—I didn't call them anything. They were just the interface box. And the way it got called the Wolfbox, it was Eddie Willis or Jamerson. I think it was Jamerson. Jamerson called it the Wolfbox, Eddie called it the Wolfie Box.

Who were these…

What happened was after I sold the Wolfboxes to United, Ron Malo was an engineer at Motown at that time. He'd come in from Chicago. And Motown wasn't even on the Boulevard until the end. They had a little studio on, I think it was one of the streets that crossed in that same area, down a ways. And I went over there and sold them three boxes, three interfaces. And then he bought two more for Chess Records because he was working for them in Chicago, Ron was. So, by that time I had them here and Chicago, at Chess, and when I first came to Motown were still sitting there on the floor at Motown. And those guys, when I started to work there, Eddie and Jamo (Jamerson, Sr.)—Eddie I think called it the Wolfie Box and Jamo shortened it: "Get me a Wolfbox!" And so that's how that name came to be. You know, my name wasn't important. I was making money, who cares?

0:14:50

So, can you discuss the circumstances that led you to work as an engineer at Motown?

Yeah, that was sort of—I had done The Bishops record and I guess Jack Brown told me he knew about the Bishops record, and said it sounded good and it was a good record and how did I do it—that's what got us into the Direct Box, I think, as I remember it. And that was fifty years ago, but he was the reason, Jack Brown was the reason. And, the—I was working at that time at WOMC. I'd worked at XYZ for a little while, and then come back, because they were putting the stereo FM in at EXL. And Mr. Sparks asked if I could come back. Because remember, technical people were a rarity then. I mean it wasn't—this was a new age, you know? So, I had gone back to EXL at the same time that I was working at XYZ at the time. This was during high school, during the summer, I think. And one day, this guy rides up—bearded guy rides up on a motorcycle—big Harley. And he wants to see the stereo FM. And I was the only one there that day, other than the announcers and that, so I took him through. And it was Mike McClain. And he invited me down to see Motown.

So, I went down to Motown and I was impressed. This is my first time in a recording studio. And the gear was—and the quality was, what would I say, magnitudes better than what was in broadcasting. I mean, hearing first generation recordings being played back through, you know, these big Bozak speakers he had in there. And it was startling. And I was just stunned. And at that time, I had not been to United, I don't think at that time. But I came back and Mary Wilson was there. And I knew Mary from the record hops. And Mary kind of buttonholed me and said, "I want you to meet Mr. Gordy." So she brought me over to Mr. Gordy's office, which was two buildings down from there. And she introduced me to Berry Gordy. Well, there wasn't an official job offering at that point, but Berry said, "Would you be interested in working at Motown?" And I said, "Well, let me think about it because I'm working in broadcasting now and I've got to finish up what I've started here with the FM transmitter with Mr. Sparks." And so I was helping putting that in. There was a whole crew of guys over there putting it in. And so I stayed there a little while, and in the meantime, I had perked my interests.

Going to Motown had perked my interests in recording. And there was a man who worked at WEXL named John Weeks. He was the audio guy—really the hot

audio guy at EXL. And Mr. Weeks, he was the chief engineer there and he had worked at a recording studio in upstate New York. And he brought me one of the records he had done. And at that point I was hooked on audio. I wanted to learn everything there was to know about audio. And he was the guy. He taught me about Class A—this was all back in the tube days—Class A tubes, and the problems with designing a Class A amplifier and heat and all that. And I was maybe by that time 16-years-old, 17. Still in high school. And so I was probably a junior or a senior then. Working between EXL and XYZ at the time. And I had this offer pending at Motown.

I wanted to be a recording engineer, but I had these other commitments and my mom was really sick. My parents been divorced then, and my responsibility was, I was pretty much the sole income for my family. So, I had to have a job because Mom was, you know, was dying. And I didn't tell that to anybody. I don't think half the kids at school new what was going on. I really had to grow up fast, telling it very honestly. So I had to keep that job. So I was debating how much money I could make at Motown and thinking what was going on there, because I realized what my budget was to help Mom at the house and my brother and keep that going. And Mom was sick, so that job had to be. So, at that point—and I was hooked on radio, too—I would hear these tapes coming in from the studios that were put on the air as commercials. We'd convert them to carts. Dub 'em over to cart at XYZ. And all the stuff from United Sound was so far superior technically to anything else, that I wanted to go see United Sound.

So, when I first started driving, one of the very first trips that I ever took in a car was to go down to United Sound. I had a '55 Chevy then. It was my mom's car, but she couldn't drive then, so I was driving it. And I didn't drive it but to work and home to take care of Mom, and then to the radio station.

So, uh, I remember I took the bus down to United Sound because I didn't know what the traffic was going to be like. And I went down to the bus stop at the corner of Woodward and the expressway. There was a bus stop there across the street from—right by the Wayne administration building at the time, right by the expressway. And I got off there and I walked down to United Sound and went into

United and this was like another order of magnitude beyond Motown. Here was a three studio operation with film mixing, optical soundtracks and a shop. And there was a guy named Jimmy Siracuse. And so Jimmy right there said that he knew me at that point, and he said, "You did that Bishops recording, didn't you?" And I said, "Yeah, yeah." He said, "Did you use Direct Box on that?" And I said, "Yeah."

So we sat around the famous United Sound coffee table talking. And that table probably had—after I worked there I learned the significance of that place, because there was a kitchen in the corner of United Sound that Jimmy had put there. And I mean a full kitchen. And he used to make the greatest chicken cacciatore in the world. That's another story, but it was important to United Sound because all the announcers, when that word got out that Jimmy had chicken cacciatore, all the guys from WJR, all the announcers, all the talent, all The Funk Brothers, would show up at United. So I think it was a public relations gesture for Jimmy to make chicken cacciatore. Because it was very successful to the business.

Anyway, we came upstairs, I had some coffee with him, we started talking and the phone rang. And Martha, who was the secretary there came in and said to Jimmy, "Bob Fine is down at Orchestra Hall. He's had a microphone failure. Do we have a Schoeps microphone that he can borrow?" And Jimmy said, "Oh yeah, call him back. If you can get ahold of him, call him, tell him I bring right down." And he said to me, "Would you like to go down and see a classical recording session?" And I'm thinking, "Wow, yeah ok." So, at that point I drift down to—or he jumps in the car. If you've ever driven in a car with Jimmy Siracuse, it's better than an e-ticket at Disneyland. He's a madman behind the wheel. So he goes tearing down Cass to get this mic to Fine. And he gets up to, I forget the street that Orchestra Hall is on the corner of, he's tears down there and he almost runs into the back of the Fine recording truck that's parked in the alley behind Orchestra Hall at that time. And my, you know, how do I want to put it, my heart's up in my throat just driving with Jimmy at this point.

So, I go in—and Jimmy goes into the truck first. And I'm waiting in the car, and he flags me to come in to the Orchestra Hall, and in the Orchestra Hall is Bob Fine. He's working with these mics. He's dropped one of them. And he has three microphones across the front of the orchestra: three Schoeps. And the right one is noisy, so Jimmy and he pull it down, and Jimmy puts one of his mics up there, and Jimmy says, "Do you want me to try to fix this?" And Bob Fine says, "Yeah." He knows what Jimmy could do. He says, "Yeah, yeah. If you want to try, yeah." And he said, "Yeah, I'll do that." So he takes it with him and he introduces me to Bob Fine. "This is Ed Wolfrum, he works in broadcasting. He has a little recording studio. He's very interested in audio. And I wanted to take him down here." And so he walks me around at Orchestra Hall and explains the whole concept of minimalist recording for classical music. And I didn't get all that he was telling me, but I got a lot of it, his whole approach to it. Which made a lot of sense to me. And he said, "Go on in the truck and you'll see how we do it. We take it all down to 35-millimeter film, three track." And I had never seen a 35-millimeter magnetic recorder. So here in this truck is this—I remember there was a light bulb up—and here's this 35-millimeter recording kind of cobbled in there, and a homebrew mixer. And Bob Fine comes in and he rolls the film back and hits the playback button. And there are three Ampex 620 loudspeakers sitting there. That's all. Left, right, center. Sitting on the table for the producer, who was from Mercury Records, to listen to. And it was like that was an epiphany moment to me. It was like I was in that hall again, because I had heard them rehearsing in there before. And at that moment I knew that is what I wanted to do.

So, the whole goal was, at that point, how close do you get to real? And that's kind of what Fine had impressed upon me. The essence of great music is always in the performance, in the players. And the closer you get back to that energy, the more you can reproduce it. And Jimmy, on the way home I was talking to him about it, back to the studio, and he said to me, "What does high fidelity mean? It means, faithful to the original. That's what we try to do. That's the goal. Now, we've got limitations: microphones and all this." And he says, "You know it from broadcasting. But the reality is, that's the goal." And at that moment, that's what I knew I wanted to do. So it was a combination of Jimmy and Bob Fine, both of

which became my mentors. And, you know, I've just been so lucky to have all these greats. It was just dumb luck I guess, you know. [laughs]

0:27:41

So you decided in that moment…

At that moment.

…"I want to leave broadcasting. I'm going to see if I can get into recording."

Right. Yeah. That was the decision at that point.

So, right around that time I was graduating from high school, I was still working at WXYZ. I remember this—it was interesting, I was working with Lee Alan at the time, and I would cover his remotes at the Walled Lake Casino on and off, and do the audio for Club 1270, and what's interesting is I don't think any of my high school friends knew I had anything to do with it. I think the first time that they had realized this was happening was when some kids from St. Mary's came to a record hop at the U of D Memorial Building and I was up there doing the record hop and announcing and playing music and doing the sound for it. And at that point, I think some of it kind of hit home. One of the nuns knew. Sister Bernadine Marie. She also knew of the family problem, but this was at the time that Kennedy died, and what happened is they called the—at the Kennedy assassination—they called the high school to ask me if I could come in because they were short people. They needed engineers to pull tapes down. Everybody was, it was a madhouse there. In fact, Lee and I had talked about that. And she let me out of class to go over there. She said to me before I left, she said, "This is history. You will remember this. This is your education." Which kind of spurred my interest in history too, because who would have known it would be history? So, that's the story of that.

When at XYZ, there was a big shake up around that time. They let John Pival go right after that. Mr. Pival was—Lee told me this just yesterday—he was the last person at WXYZ who was the head of WXYZ Radio, Television, and Circle 7

Productions, at the time. He was a very nice man. Everybody called him Mr. Pival 'cause he had this dignity about him. An amazing man. And I was sort of honored, because I was just a punk kid working at WXYZ, you know. Just one of the grunts, and I didn't deserve much more than that. But he showed up at my high school graduation. And that was just like, "Wow, Mr. Pival's here." And my dad was separated then. Mom had died. He was down for it, and some of his friends. And, uh, I didn't have a graduation party or anything like that, but there was a gal who had kind of taken care of Mom from the school, who I really liked. We were close friends. It was really plutonic. And we went out to dinner. [laughs] That's how I celebrated and it was kind of neat, you know?

Mom died in my junior year of high school, so I was the sole support of the family. And Dad sort of showed up back in the picture at that point, but he was working up north. And, uh, so I was making a pretty good living so I could afford to do it. I think I was probably making more than my mom was working at the phone company. Although she had a pretty good job at the phone company. She worked in the switch room. She was a frame girl and that sort of stuff. So, that was instrumental, I think. All that was instrumental in, uh, what I did. And I remember when Mr. Pival left, I didn't show much interest in WXYZ anymore. Because I just saw the instability of broadcasting. And you don't want to tie your horse to wagon that was that unstable. You know, that people could just come and go at a whim, or a rating. And all the people at XYZ, they were wonderful guys. I mean, I learned from that, too. I learned trigonometry at WXYZ! When, I think it was Dick Kernan—Dick was one of the engineers there, I think he was chief engineer. One day, I'm sitting down, and my last part of my shift from 11:30 to midnight, I would stay on transmitter duty, because I had my first class license. So I'd keep the logs on the transmitter. And they were directional at night. WXYZ had kind of a figure-8 pattern. I think it was a 2-tower or 3-tower directional array. I think they were protecting an Ohio station. But, uh, in my junior year of high school I was doing trig. Senior year was calc, but junior year was trig and algebra II. I caught on to it, but one day he was explaining to me, "You want to see the sine over cosine function?" And I said, "What do you mean?" He said, "Watch this." And he shows me the directional array, he draws me all the math, and he says, "Now we're

going to pull this out of the pattern. You watch what happens." You could see that they lagged the phase to one side of the tower, and you could measure that phase angle, and so he's writing this all down as a trig program for me, ok? And he said, "Now we'll swing the array." And this is at night, mind you. This is at 11 o'clock. So he's pulling this whole array—which is now interfering with this station down in Ohio—out to show me how to, you know, a trig problem coming to life. I never thought of it at the time 'til maybe thirty years later what he had done that night.

But this is the kind of mentors that I had. They were extraordinary. They were just wonderful people. And, so, I think to have that kind of thing happen to you is—it's the people that I met that educated me. And so I want to do it to somebody else. I've always learned that that's what you do. So, they don't have to make the same mistakes you did. They'll go make their own. [laughs] But, you don't want them to screw up the same way you did.

0:34:22

What was the environment, around that time, at Motown like? Because they would have had their first success by then, right?

Yeah, at that point, what was interesting is when I left XYZ, I immediately went over to Motown. And Motown was like a family. XYZ was—well, EXL was small enough to be like that. But I never experienced anything like Motown. My dad had been in the food business, so in that business it's very much like the music business: there's no color barrier. And there was a sou chef that my dad worked with when he was at Fox & Hounds and he was a chef over there and so, you know, black people didn't bother me one way or the other. Of course, I was from St. Mary's and we had a basketball team. You know, there was no… So, when I came over to Motown, it was like a big family. I mean, there were a lot of white guys over there too. I mean, the engineering department was primarily white guys. Uh, Lawrence Horn was the only guy I think at that time who was doing sessions that wasn't a white guy. Russ hadn't been there yet so there was Mike

McClain, chief engineer; John Windt; Bob Dennis, who ran the disc lathe room; myself; uh, and Lawrence Horn. That was the engineering staff at Motown. David Clark came later on. And there was a guy who I used to talk to, he was in the Air Force, a black guy on the Ham Radio, named Tom Nixon. And I convinced Tom to come to Motown and get a job, 'cause we needed electronic guys, ok? And he became very successful as an engineer at Motown, too. But at that time, we were all there was, so the atmosphere was family-like for all of us. The Funk Brothers, because I'd known them between the record hops and that, became friends.

There was a camaraderie like I'd never experienced before. Jamerson—and there was no racism. Race was laughed at over there. It was a joke. Example: Jamerson once chased me up the stairs because I had adjusted the bass on the Direct Box—Mike had come up with an electronic Direct Box down there that I helped build, but it was his idea. He took the Wolfbox to the next level. And, Jamo chased me up the stairs saying, "Honky, get your ass up in the Control Room where you white boys belong!" It was always taken like that. We'd call them any word we wanted to. I'd use the n-word and they'd start laughing. It was family. And we just had a lot of fun together. Uh, but very productive fun. Very creative fun. So, the atmosphere was family-like.

Mary Wilson, uh, was precipitous in taking me out for my first decent ribs. I'd had ribs, my dad was a chef. And there was this little place on Woodrow Wilson, down from Motown, maybe had five tables in it. The best ribs in the city. Sinful. Outright sinful, they were so good. And one day, I'm coming out of a session at lunch time and Mary says to me—and I'm going to put this on the tape—"Hey, white boy. I'm going to pop your cherry today. We're going out for ribs." [laughs] And she said it just like that. And I didn't know exactly what she meant then. I was too innocent. [laughs] But, we went out for the greatest ribs I'd ever had. I knew where these guys were getting them. Well, I didn't know where they were getting them, but I knew they were good. So she took me down there, and they had these French fries, natural cut fries, with the skins still on them, and green beans with a little bacon in it, and these ribs that were to die for, ha! I'll never forget that. When I was working at United Sound, I took my dad out there to the same place with Jimmy to go have real ribs. And they were thoroughly convinced. My dad, at that

time, went back and found the couple that owned it, this black couple that owned it, and he just—my dad made ribs. He had a little place in Lewiston that he ran too, called the Quickie Chickie, and he did ribs, but he outright said these were the greatest ribs he'd ever had in his life. Mary, if you ever get to hear this tape, thank you for that. I now know what ribs are.

0:39:57

So, take me through a typical Motown session. You mentioned that there were multiple engineers employed there. How many would work on a given session?

One.

Just one?

And, first—let me give you—everybody had their own style. You had to kind of learn their style. Smokey was hands off. He didn't want to get near the board. And the console at United was McClain's homebrew. The engineering department, we built that console from the ground up.

And, you have to remember that the tradition of engineering excellence was always something that was definitely Detroit. And I never knew this until Rob Moss had written an article about—it was about me, but I told him it shouldn't be, it should be about the whole recording thing. You probably saw it. I think I sent it to you. But, Rob wrote this article, and he found out that Detroit was the, was the great mover and shaker, as it were, in the player piano business. Which makes sense when you think about all the mechanical engineers that were here, and the labor pool from the, uh, auto industry. So you had all these great machinists, you had all this great labor that had come up here, that were skilled trades. And so, people like Grinnell's tapped into that. And I didn't know it, but Grinnell's made, OEM'd 90% of the player pianos which, at the turn of the century, up until the 1920s, was the means of entertainment for the home. Other than playing the piano yourself. This is before the phonograph. And this is why Jimmy Siracuse came to Detroit in the first place. And Jimmy told me this story:

that he had been working in New York, he was a luthier, and he had been playing in the speakeasies and the society bands, because he played violin. And so he made violins and he played them. He was eking out a living doing that in New York. And his brother—they were both precision machinists from Italy, so they found work that way when they first came over. But, they saw the beginnings of the phonograph industry in New York and knew that all the player pianos were in Detroit, and all these great jazz players were coming to Detroit to punch piano rolls. So, he saw this as a market. That's why United Sound came. So when he first came, the other thing was, if you were going to make records in that era, you only had two choices: you're going to be with RCA which owned Red Bird, which was their race label, or Columbia, who had the Scully lathes—RCA made their own lathe—and Columbia had Black & White Records. So, if you were an independent artist, you were going to be put off on one of their labels because that's the only place that you could cut a disc or cut wax. There was no tape back then, it went right to disc.

Jimmy came to Detroit and built his own lathe. "I'm a machinist, I'll build my own." Interestingly, those lathes were sitting in United Sound right up until the '70s. And they were still working and he had converted them to cut 33s, 45s, 78s. All he had to do was move it with, you know, very low wow and flutter, and with his machine that was just a natural. So, uh, the history was sitting at United Sound there right up 'til the new owners bought it, and then they tossed those lathes out, sadly. Uh, sad situation. Makes me hurt deep in my soul, because I know that was a piece of the whole industry of Detroit that got thrown away. Uh, the long and short of all that is that, that industry came here because of it. So that engineering excellence was part of Detroit. So, you would assume United Sound, being the top of the heap, they'd have the best of guys. That was like the mothership for everybody else. Motown got their start there, Tera Shirma bought their first board; the line amplifiers and mic preamps that were put into Tera Shirma was the second version of the line amps that Les Cooley had built for United that Bill Beltz and I had taken to the next level that went into Tera Shirma's console. And Jimmy allowed us to sell them to Tera Shirma. That was the camaraderie that went on in the music industry in Detroit. And that engineering

excellence kind of just permeated the whole city. So, uh, that's really what precipitated this whole Motown thing. The whole concept of great engineering, everybody in Detroit just naturally pushed it to the limit.

0:45:23

Did you get that sense very quickly once you moved from broadcasting to recording?

Oh yes. I saw it at Motown, I saw it at—I mean, here's a studio that had GenRad test equipment, that calibrated their monitors, that the recorders were aligned every morning. Uh, and the console at Motown, getting back to why we got into this discussion, that McClain had built, uh, was, as I discovered as I started going out to the West Coast, and working at United—what we had in Detroit was orders of magnitude better than what was going on in either New York or L.A. Because I used to go to the A.E.S. [Audio Engineering Society] conventions to see Bob Fine, and even Bob admitting it. Bob said, "You know, the guys at United, that's like *Star*"—well, he didn't use the word, *Star Wars*, but he said it's way better than anything—he said, "That's a spaceship over there." So, you know, that was the kind of engineering excellence that I got to work around. McClain was an absolute madman. Which was fine, I liked that part. But he was mad in some other ways too, which we won't even get into. [laughs]

0:46:48

Do you remember what your first session was at Motown?

Yeah, I do. And I know about it because Paul Riser reminded me of it. It was a record on Kim Weston called, "A Thrill a Moment." And I remember that we cut the rhythm first and the strings were overdubbed. And I did both sessions with Paul. In fact, they used to call us The Bobbsey Twins because I did a lot of the orchestration, which is what he did, and we became real close friends. Still are. That's back to this camaraderie again. That after thirty years, when we met again

at *Standing in the Shadows* [*of Motown*], it was like all the guys got together for the first time in maybe thirty years then. Because they had left Detroit in the ’70s and came back in 2001 to do that, and it was like just the next day. It just all started back up again. I mean, the friendships were all there.

***Standing in the Shadows* [*of Motown*] is the documentary about…**

That was a documentary about the history of The Funk Brothers, and I sort of was lassoed into that. I had no idea it was happening but the producer who they were working with wanted somebody who knew something about the Motown sound. And The Funk Brothers told them, “Get Wolfie.” And so I get this call from these people—’cause I had been talking to them about the problems in the acoustics at the Royal Oak Threatre. Because there’s a dome there and there’s all sorts of problems with it. They were talking about how to control it. So, I get a call from this woman who The Funk Brothers, I believe, had put up to it. And the company was called Nobody in Particular that owned that theater. That was the name of the corporation at the time. And this woman calls me up and says, “Karen from Nobody in Particular—could you come over here. We want to talk about the stage.” I said, “Alright.” “But come in the stage entrance because it’s cold in the theater.” So, I walk in the stage entrance, back there, and as I walk around the door, The Funk Brothers start going, “Wolfie, Wolfie, Wolfie, Wolfie, Wolfie…” on the stage and it was just like, ah! We all got together again and it was a wonderful, emotional experience.

And then they told me what they were going to do. And Kooster McAllister brought the truck in for that. And so I had to kind of let them know what the Motown sound was all about technically. And, uh, Paul Prestopino was his end technical guy. And Paul plays mandolin with Peter, Paul & Mary, too. So, the three of us, I’ve got a picture of us, which I’ll give to you for the archives, the three of us in the truck together. And we’re still real good friends. But that kind of tied it all together again. It was just a wonderful, like, homecoming.

0:49:49

How do you feel about that production being done to kind of honor The Funk Brothers, who were to that point, unsung by all accounts?

Well, not maybe by all accounts. The British knew about them long before we did. Every record producer worth his salt knew about them. Uh, I mean, they were the antithesis to The Wrecking Crew out on the West Coast. And The Wrecking Crew knew about them too. [laughs] Ok? They didn't want to recognize them, but they knew about them. Because when I'd go out to the coast, like with The Association sessions that I'd go out—they all knew about them, and they were asking questions about them too. So yeah, I thought it was long time. I think—look—I was lucky enough to be at the right place at the right time. And I had a requisite amount of skill to do it. But I was just one of many extraordinary people who were in this city at that time.

Look at Russ Terrana. I said to you earlier that I'm not—to use the words of John the Baptist—I'm not worthy of tying his shoes. Probably the greatest pop music engineer to ever walk the face of the Earth, Russ. An extraordinary—just gifted. Ken Sands, Tommy Nixon, Michael Grace, uh, late era guys, you know. Uh, Bob Olhsson, late era at Motown. All these guys were just ridiculously talented. And each one added something to that Motown, or Detroit sound experience. Because there was more than Motown going on. I mean, Motown was just one of many record companies in that area. You had Westbound here, you had Golden World, I mean, they were just one of many. But Motown, I think, had the great marketing arms going for it, which is what made them. Uh, it was an amazing company to work for. And I kind of saw, later on, they got "corporatitis" and it killed them.

You know, I think it kills a lot of things. Particularly in the music business, or any creative business. You can't run a creative business like that like a corporation. It's like trying to corporatize Michelangelo. It just ain't going to happen. And I think that is a misnomer that hurts us all. And I've observed it for fifty years and anytime you get to that point, be it in broadcasting or recording, you kill it. And, you know, maybe it's good that we're seeing the music industry go back to a cottage industry, but the problem with the way it is today is, uh, they haven't got

a historical perspective. And without the historical perspective they're going to keep making mistakes because they don't know what happened. You know, all you have to do is listen to the music today and the lack of dynamic range and the whole sampling, you know, it's just lost its soul. But as long as it makes money, that's cool.

0:53:30

So, you discussed your first session at Motown. What were some other…

That was a good session! You know what's interesting? Rob Moss—I don't know how he got them—he got ahold of those tracks. And I played them for Paul the other day. Rob gave them to me, and I played them, and it was not a bad session. I mean, it was one of the first things I ever did over there, but it wasn't bad.

What were some other notable sessions that stick out to you that you worked on?

Awesome stuff with Mary Wilson. I did a tune that Mary had written—I'll play it for you later—that was just wonderful. Uh, the *What's Going On* album, which was done at United, because it was an "Area 51" session, a dark session. Berry did not like social commentary. And Harry Balk was the A&R Director at the time. Remember, I said I'd remember his name. And Harry was hired to—'cause he had run Impact Records, he had discovered—well, Ollie discovered Del Shannon, he put Del Shannon on the map—he was a very famous guy. And really, talk about somebody who knew the record industry from a production standpoint, it was Harry Balk. I got to work with him a couple of times at Golden World. And just, a record guy. Understood it fully. And, Harry was the A&R Director at the time when we were working on it. Marvin was driven—stepping back about *What's Going On*, I did a lot of Marvin Gaye sessions. Paul said that I did most of them. Maybe, I don't know. I don't know what many other guys did, but I did a lot of Marvin Gaye sessions.

And Marvin and I became pretty close friends. His nickname was "Gates." How people get nicknames—mine you can see: Wolf or Wolfie, yeah, alright. But everybody called him Gates that knew him real well.

So anyhow, Marvin was an absolute genius musically. He wrote, he produced, he heard the arrangements in his head. And what a singer. He did some big band stuff I worked on with him at United that was just amazing. I don't even know what happened to those tapes. They were just great. He could out-Sinatra Sinatra. Or he could do it almost as well. An amazing talent. But he felt driven by God to produce *What's Going On*. And I think part of it was he'd lost his brother in Nam, as we all lost people in Nam. I mean, my classmates at St. Mary's were right in the midst of it. I lost a lot of them, in a lot of different ways. Either to the drugs that came out of it or just died there. But, he was very much, uh, injured by that, emotionally. I would think that's what drove it. But, more than that, I think he had a mission to make that record. Harry Balk fully understood that Berry did not like social commentary records. But he didn't—at that point he was living back in the Motown, the happy days—and everybody was making social commentary records. And Marvin felt committed to do that. So, Harry said, "Look, do it at United. Wolfie's over there." So, we did. Most of those sessions were done—some of those sessions were done at Hitsville later on, but Berry found out about it and that's when they came back to Motown. But, uh, I did a mix on it. I heard it entirely different. I heard it more as a jazz record, which kind of makes sense. Russ did the final mix I think. Again, it was a smash hit. [laughs]

Think about this: here's one guy with 91 top ten records. Never been touched. No other engineer has had 91 number one records—or top ten records. I mean, talk about a gift. Terrana is amazing. Uh, another crudism from Wolfrum: you could fart and Russ would make it a hit record.

0:58:30

So you think he saw that pop potential in the *What's Going On* album where you saw it more as a jazz record?

Right, yeah. And he knew precisely what he was doing. He went for the jugular. And not only did he open the jugular, he cut it up into ribbons. It was just amazing.

So, about *What's Going On*, we discussed in a previous conversation, Berry got wind of…

Berry got wind of *What's Going On* and I was at United. Jimmy came down. I was doing another session and he said, "You've got to go over to Motown this afternoon. Call them, call Harry." So, I went upstairs and made the phone call and that's when he told me that Berry had got wind that all this was going on. And I had done a rough mix of what we had done up to that point, which was most of the album, by that time. Uh, Dave Van de Pitte did all those charts. By the way, another Wayne teacher and grad. And, uh, Van de Pitte, in fact, he and I gave a talk at Wayne together about that record. Al Yungton was teaching over there at the time. The cover was—because The Funk Brothers were allowed to play on jingles, uh, even though they were under contract with Berry, Berry would let them do commercials for Artie or film scores for Brokensha, because he had that little film thing. And Van de Pitte was Brokensha's arranger. He did a lot of arrangments for—so when they—if one of the Motown spies would come around, find them poking around, they'd see The Funk Brothers over at United in the evening with Brokensha playing vibes and Van de Pitte arranging and as far as they were—and these were not typical Motown songs, so if they were to hear it, it sounded like film music. I don't think they had any idea what was going on. And one day, Green from the union came in on one of those sessions and just walked around like there was nothing to it. And, uh, he assumed—Brokie was there and here's this music, this was marked whatever the chart was, uh, in typical Van de Pitte style. So, yeah man, they're doing film music over there. Uh, little did they know, we were doing an album. And, uh, so that's how that came about.

So, when we had that meeting, I had to go over there at two o'clock in the afternoon and he had all the mucky-mucks around Motown in that boardroom upstairs in the third building. I can't remember the address of it. We sat down

there, I remember it was Marvin and I walked in there alone and we thought it was the end of it all. And…

Because Berry was not a fan of social commentary music…

Right, yeah.

…and you thought he was going to put an axe in the whole thing?

That was going to be the end of it, right there. We thought there's the axe in it. But most of it was done, but he wasn't going to let that out. So, Harry comes in a little bit later and Berry sits at one end of the table and Harry sits at the other end of the table. And Esther Edwards is sitting next to me. And I think Russ came and Ralph came. You can see—I think Ralph tells the story from his perspective up on the Northern Soul site. But, he was there. And Seltzer was there, Ralph Seltzer I think. And, Berry's first words to Harry Balk is, "What the blank is going on?" And Harry, very calmly, says, "I'm making a record." [laughs] And he says, "Isn't that what you hired me to do?" He says, "Well, you're supposed to tell me." He says, "No, I'm the A&R Director. I'm doing my job." "Well, you know how I—" He says, "Berry, I'm the A&R Director. This is a record that will be a big record." "Well it can't—" Now there's words between them and I can't remember what they were, maybe I don't want to. But there were, not strong words, but there was quite an argument. At which point Berry says, "Well, let me hear this thing."

So, I put the master up. We had a 350 machine in his office and I think a pair of AR-3s or AR-4s up there. And I was kind of scared because, you know, what is he going to think? And this is a rough mix that I had kind of put together. It sounded pretty good. It was like a jazz mix. And it was tails out, so I wind it back to the head of the reel, hit the play button, and everybody sits there for 40-whatever, 43 minutes. And nobody says a word. And I'm scared. I'm thinking, "Man, ok." And we had still not cut the—you know how it flows? We hadn't done any of that. It was all leadered off. And, that I think was Russ's idea, because all these were, were just the songs. And the long and short of all this is, at the end of the playback, the leader rolls off and the arm of the Ampex 350 drops down and it was the longest two seconds I ever—it was like I'm thinking, "Holy shit." Nobody

says a word. No one said anything at that point. Until Esther Edwards starts. [claps] And the whole place starts. Even Berry starts to clap. And he smiles. And all he says is, "Alright, you win." And Harry Balk says, "Well, that's good 'cause I ordered a hundred thousand copies already." [laughs] Unheard of at Motown. And they're glad they did, I think, because the record took off. I mean, that hundred thousand was probably gone in the first month.

It was an amazing record. I never did anything like that in my life. I did not expect that record to do what it did. I had done *Hot Buttered Soul* previous to that, which shows that I don't know what a record is, maybe, but that took off too. And that's another Russ Terrana mix, by the way.

1:05:25

So, do you think that most of the people that worked on *What's Going On* expected it to do well, but maybe not be this masterpiece?

Well you know, Jamo, Jr. told me that his dad said that that's the only record that he was ever really proud of. That's the stuff he was making money with, but that record—he came home excited about it. And around that house, Jamo will tell you, they didn't play Motown. You could hear all the great jazz artists, from Ellington to Kenton to whoever, but you'd never hear a Motown record at the Jamerson home. Ella or, uh, Peggy Lee or any of that, that's all there, but uh, you know, not the rest of it. So, that one I think he was proud of. I was too.

You know, my dad once said something that's kind of a funny story connected with it. My dad was with us in home hospice care, with Sue and I, and Artie Field and dad would get into these big discussions about the big band era and I learned a lot from my father. But one day, Paul came over. And we're sitting around the back room and Sue had made lunch, and Paul and my dad are talking. And my dad asks Paul, he said, "Paul, did you have any idea that this stuff was going to be historic?" Paul says, "Hell no." He said, "We were just making music, making a living. Ask your son. You know, it was a living." Uh, it was pop music. And Dad said, "So, all you thought you were doing"— and only a chef could says this—"was

punching out cookies and doughnuts?" [laughs] And he was right. None of us at the time—every now and then there was something artistic. Well, all the arrangements were artistically significant. What's interesting is nobody ever hears them. You, yourself, were listening downstairs to some of those tracks and heard the stuff and your jaw just dropped. Uh, and, the caliber of the writing, the caliber of the playing is just frightening. Uh, the reality of the matter is, that was daily for us. And it didn't, you know—I can play you later, up here because it isn't downstairs, some film tracks that were done with these guys. And they don't sound like The Funk Brothers, the greatest chameleons in the world. "See the U.S.A…" [singing] That was cut at Artie Field's. Who are the players? The Funk Brothers. It's always The Funk Brothers. Like Martha [Reeves] said, they were the key players in Detroit. And so if there was a jingle done here, or a pop session, it was those cats. That was the base. And it changed, because as it grew they brought more guys into it, and we had a horn section equal to The Funk Brothers.

And of course, we had the DSO. And, you know, Dave Ireland, a viola player, told me that if it wasn't for Paul Paray, who was the conductor in the '60s of the DSO, you wouldn't have the string players who could play the feel. Because Paray, himself, was a drummer. He was one of the drummers at French Pathe playing with Django Reinhardt on those Django Reinhardt sessions. So he was a jazz lover. And Dave Ireland said that when the DSO would go to New York, he'd be out trolling the pubs with Ireland trying to find jazz around New York. Paray would, ok? Because he was a jazz lover. So, that, if you look at it, if you listen to the Paray second symphony, which I recorded with Father Perrone—I'll play it for you when we get done—you can hear this. He writes right in there, "This should swing!" Ok? So here he is, and when the string section played it when we did the recording—the second symphony's never been out. It's out on Gratto's label. But, it swings. And it sounds like funk.

So, I mean, all of this came together, why? Providential. Providential. I mean, where do you find a bunch of white boys from the suburbs, engineers, and the talent from The Funk Brothers, great jazz musicians, and arrangers from all over the country, and producers from all over the country, arrangers from Cass Tech and all over, working together, producing this music? It just doesn't happen like

that. That's the Detroit story. Not just a Motown story, because Golden World tapped into it, Armen at Westbound tapped into it, Jack Brown discovered it, uh, it was all here. But it just flourished at that time. And it will never happen again. And I just was lucky enough to be in it at the time I was. So, you know, I had a rudimentary skillset, like I say, but the other guys all participated in it. You know, I guess, now I look back at it. It was just being in the right place at the right time.

1:11:15

You said that you guys didn't really have a sense of the historical importance of the work you were doing at the time…

No.

…do you…

I thought, in fact, interestingly—excuse me for interrupting—when I do film stuff with Brokie, or jazz stuff, I felt that that stuff was far more artistically important than anything I was doing. In fact, the Motown, those music sessions, they were a living for me. And they were good and I put my heart and soul into them because I put my heart and soul into whatever I do, but I mean, that's our responsibility with the skills God gives us. But, to have any significant historical value, no. No.

But you do feel now that, uh, they have historical value I'm guessing?

Yeah. They were a piece of pop culture. And pop culture reflects culture. I mean, Mozart wrote pop music of his day. I mean, that's the reality of it. So yeah, that was culturally significant. It was technically significant too. I mean, some of the things that we were doing—I mean, the Wolfbox was just one drop in the bucket compared to some of the things that were going on. Artie Field was probably the first guy to use tight micing technique. You know, multiple mics—and he was doing low level mixing over there. Uh, the Class A console that Les Cooley designed for United was ten years ahead of Rupert Neve's Class A designs, ok? And maybe 10 dB quieter, ok? 10, 15 dB quieter. 'Cause I worked on those Neve consoles. Had better headroom. We used to tease, Beltz and I, you could weld

with that thing, it had such current capability. It was just an amazing console. Uh, the, uh, acoustics at United, the room, just had a character with it. It was just a wonderful space. Why? Jimmy knew how it was supposed to sound. Uh, the live chamber at United was an extraordinary space. Artie used the theater as a live chamber. Think about that for a while. Uh, we were way ahead of almost everything that we did, and never knew it. When I went out to the coast for the first time, I kept thinking to myself, "My gosh, these guys are getting this great sound out of these crappy consoles?" And it was only because of the engineers out there. They were great. But, technically, I can tell you we were orders of magnitude ahead of them.

1:14:14

What were some of, what were some of the techniques that you employed in the studio that you thought were remarkable or, um, you know, ones that maybe other studios were…

Well, at that time, everybody was trying to use a lot of microphones. Having worked with Bob Fine, and listened to all these great jazz recordings that I had, I was a minimalist. I very seldom used more—in fact, to this day, I've never used more than four microphones on a drum set. Uh, carefully placed, knowing what I was doing, but that was my technique. I'm a minimalist. But I know enough about the acoustics to know where to place it and make it sound good and make it work. Nothing wrong with—everybody has their own techniques. And if they make records and people like them, they're good records.

On the other hand, my goal was this elusive high fidelity, as it were. And I think, uh, that's been lost today. Like Jamo called me, "Well, you're the last of the Mohicans." And, you know, now Terrana, Terrana was kind of an innovator, but he was a minimalist in micing, like me. Most of us "vintage"—that means "old farts"—from that era learned that technique. United's console was only twelve inputs. Most of the Motown hit records, in the first era of Motown, were three-track. You had to learn how to mix. You had to be good. You couldn't do it any

other way. So, that was sort of demanded of you. Uh, Golden World was never more than four-track until Motown bought and they put an eight-track in there.

So what I'm saying to you is, the technology of that day demanded that you be good. Because it wasn't as good as it is today. It really wasn't. I mean, all this crap about analog is just mythology because the technology is measurably better by orders of magnitude today. And God only knows where it's going to go. But what I think has destroyed what we call today's music, is the misuse of the technology. It's been—and that's because no one knows the history. And that's what this is all about in reality. They don't know that the reason we used the limiter was because of the limitation of tape saturation. We didn't want the sound of the limited. We wished it would go away. We wanted it transparent. I mean, think about this: the Fairchild 600 series limiters are legendary. We used them as the doorstop at United. Danny and I hated that thing. Why? It got in the way. You could hear it. It was not transparent. It was not elegant. It had a sound. We didn't want that. We wanted to capture without that. That was the whole idea of the Wolfbox. Get rid of those amplifiers, they get in the way, ok? And they're not representative of what's coming out of the instrument. Especially when you are minimal micing and you're putting other microphones up in the space where you're going to get phase shift from that environment. That's where you kill the goose that laid the golden egg.

So that was the whole idea of the Wolfbox to begin with. Particularly in recording. Uh, the Wolfbox I'm building now, which I'll show you later, is totally electronic because it's even more totally transparent. It's a measurement device. So, what that goal was has changed. It's a philosophical thing, I think.

1:19:00

Wrapping up the Motown era for you, can you discuss the circumstances that led to your leaving?

At Motown?

At Motown.

McClain. Two things: Mike is a real strong-willed guy. So am I. I'm opinionated. But I like opinionated people. It shows they know something. In order to have an opinion you have to know something. And so, opinions are good as long as you can discuss them and do something better when you both have differing opinions. That's why I think the American system works. People say, "Well, nobody gets anything done in government. They fight all the time." No, no, no, no, no. That's what they should do. That's precisely what should happen because with that you find compromise with intelligent people. Maybe that's what's missing, but you can argue, and you see one another's viewpoint, and you then start coming to a consensus where you can refine this thing and make it even better. McClain I don't think ever understood when I was saying something like, "No, no, we don't want to do it like that. Here's why…" He always took it as a personal affront. It wasn't a personal affront. It was, "How can we refine this?" A whole different thing when I worked at United. I could argue with Jimmy and he realized what we were doing, and we just massaged this thing to the point where we got it so good. Beltz and I would fight—not fight, discuss. "Well, do we want to do this?" "No, no, no, no, no, no, no."

Interestingly, we found out—we saw how Scully—this is an aside. Stream of consciousness, which should be part of this, which shows more, which jumps back to this philosophical thing of the Detroit engineering community. We'd seen Scully had, in their 280B recorder, you could do punch-ins on it and you couldn't hear the punch-in when the bias came up. So, Beltz and I were looking at that circuit one day and we saw that the bias would ramp up slowly just to the point where the—it would ramp up precisely in the time that it took it to reach the record head, when the record head bias—the erase head bias would come up, the record head bias would ramp up and then slowly into it, and you didn't get a click. And we had built all of our own film recorders at United from scratch. Jimmy machined them and they were home built down at United. And we thought, "Man, we can do punch-in in film." So we kept refining this idea and we built a punch-in film recorder—mono film recorder, this is all mono at the time—for motion picture sound, for both 16- and 35-millimeter motion pictures. And we

used a ramp up system that we'd gotten the idea from Scully, and ramped it up for the punch-in. Well, McClain, he went out to the West Coast and was working for Glen Glenn, he told me they didn't have that until the '70s out on the West Coast. Middle-'70s, maybe '80s, ok? And we had it here in 1966-'67, ok? And didn't know it. We thought everybody did it. Uh, that's the kind of thing that I saw happening around Detroit. And it wasn't just me. It Dick Becker down at PAC-3 who was doing stuff. He was the first guy I think to use op-amps. We caught on to them a little bit later. But, McClain, we've talked since then and I still think McClain is a positive genius, but we didn't get along. That's what drove me away. And he didn't like me, he did not like my religious perspective on things, he hated Catholics—in fact, he drove me, basically, to look at the seminary. He's the reason I left and went into the seminary. My job at Golden World when I came back into the industry was because I needed some money for the seminary.

1:23:28

So what year did you leave Motown?

I left Motown in '65, and in '66, '67, I was at St. Charles going to school, came back up in late '65, '66, took a job at Golden World, sold them some Wolfboxes, got hired by D'Orleans. I needed some money. I'd stopped making them. Sold them some Wolfboxes. D'Orleans hired me. Wingate hired me. And I was just a technical guy. And then they found out I had done sessions at Motown. So the next thing I know I'm doing sessions. And then I spotted Terrana playing with The Sunliners and I went into Wingate, because the session load—see, D'Orleans, he was a brilliant engineer, worked at Mirror Sound in New York, did all the Sammy Davis sessions there. Amazing man. Taught me a lot. But, he loved the horses. He was making more money—he owned some racehorses. He was making more money with his racehorses and playing the ponies than he ever did working as a recording engineer, though he was being very well-paid by Wingate.

One day, he came in with money, lots of money. Walked into the engineering room where Russ and I were standing around over there, 'cause I had convinced

Wingate ’cause the workload came on to me. John Reiss and I, who was a producer, were doing the sessions, ’cause he would go play the ponies. I can’t say I can blame him. He walked in and says, “Guys, you want to see why I play the ponies?” And he throws hundred dollar bills into the air. And so, I understood very well what was going on at that point. Uh, funny man, but I think it was self-preservation and the fact that I saw this raw talent in Russ right at the beginning when he was playing with the—he walked in when I had done that Sunliners session and mixed it. He put a mix together in about three seconds. And I’m thinking, “Holy shit, this guy is just a natural.” And so I went in the very next day and told Wingate, “You’ve got to hire Terrana.” And he did. [laughs]

1:25:45

At the time that you joined Golden World, did they have any notable records out?

They’d had some stuff on Edwin Starr, Rose Batiste, I think, a couple things. And when I was there I did the “Romeo and Juliet” session.

That was The Reflections?

Yeah, Reflections. And so that charted. And then from then on, that took off. And Russ finished the rest of those sessions. Uh, those were all Sonny Sanders arrangements. Sonny would come in from Chicago. He worked a lot for Brunswick in Chicago. Uh, San Remo Strings, Detroit Emeralds, they were all—The Andantes, Pat Lewis, Rose Batiste, Barbara Mercer, we just go on and on. They all charted R&B and some in pop. Golden World, I think, became kind of a threat to Berry. That’s why he bought them.

What do you know about that transaction?

Uh, I don’t know all the dirty details, but I know it was in ’66, late ’66. And by that time I was still driving back and forth to the seminary, working there.

Kind of an interesting story connected with that: I got a call from, uh, Joanne Bratton, who was Wingate's wife, to come in to the studio, that Bob D'Orleans wasn't going to make a session. So I came in and I didn't notice anything different about the session. Funks were there. It was an afternoon session, I think, about one o'clock. McGregor was on it, Don Davis was playing guitar on it, I remember that. Ray Monette, uh, Bobbye Hall was playing congas 'cause I think Eddie was out with Marvin, Eddie "Bongo." Uh, and Johnny was the keyboard player. And that's the session for "Cool Jerk." And Ollie McLaughlin produced it. And I had worked with Ollie before, but always with D'Orleans behind me. So here I am cold. And I wasn't afraid. By that time I was pretty confident of myself. And at the end of that session, Don Davis gets up—and George McGregor reminded me of this before he died, he said, "Do you remember it?" I certainly do, once he reminded me. Don Davis gets up and he says, "You guys have just done your first session in Berry Gordy's new studio." That's how I found out that Berry had bought Golden World.

Now, prior to that, I was there on a Saturday doing technical maintenance and cutting some lacquers in the disc lathe room in the back, and in walks Berry Gordy. And he walks down and he says to me, "Ed, what are you doing here?" And I said, "Well, I work here." Now, what surprised me is Berry then says to me, "Well, aren't you working for me?" And I said, "No, Mr. Gordy, it's been months. About a year, maybe a year-and-a-half. I'm going to the seminary and I'm coming up here." "What?" He was that removed by that time from it. And he said, "Well, what happened?" And I explained to him, "Well, McClain and I didn't get along. We're two strong personalities and it was just best that I left." And I didn't get into the gory details of why, and he says, "Well, that's not good! Why don't you come back and work?" I said, "Well, McClain and I just aren't going to get along." I said, "It's not going to work. McClain and I, you know, we're two different personalities." And he said, "Well, I'll tell you what: you'll work for me. I'm your boss. You'll freelance for me." So, when I came to work for Jimmy, and for any place else, I had to tell them, "Look, I have a contract, an arrangement with Motown. I still freelance over there. Can I do that?" And Jimmy had no problem because they were already doing sessions at United and he and Berry were

friends, so that was no problem with him. The Theme Productions people, they didn't quite like it, but there was nothing they were going to do about it if they wanted me to come and help them build that studio. And, uh, so that was always there from the time of Golden World, all the way to the time that they left. I was working as a contractor for Motown freelancing. So…

How frequently would you say that occurred?

Oh, at least—I was mixing at least—when they moved to the Donovan Building, I was in there three, four times a week, ok? And I was doing sessions at Golden World, and at Hitsville. I think what may have tipped Berry off is that I wasn't coming around a lot, 'cause Ralph, he booked the studio. Ralph was Studio Manager. He knew what was going on with Harry, of course. So he didn't book me to do anything, ok, 'cause I was doing it over at United. So I think that may have tipped Berry off, if he was that close to it at all. That's a supposition, but I know that that was a, uh—I mean, it was the best thing that ever happened to me.

And the other interesting thing about Motown is there were no egos. We were just as excited—maybe with the producers there were because they all wanted to get in—but the engineers always got excited when somebody else had a hit record. It just made us all feel good, ok?

So, that was another interesting thing: if you—in Detroit here, if a studio owner messed with an engineer, one of the real good guys, he'd never hire another one. There were many studios that came and gone in Detroit because they couldn't hire engineers because they messed with one of us. Uh, there was a place called Magic City that messed with Ken Sands and they could never hire another engineer. I wonder why?

1:32:47

So, you discussed some of this…

Oh, I got a funny story connected with that…

Sure, go ahead.

…that was interesting, having to do with Motown. Mike McClain had a boat called The Penelope. I've got pictures of this. And all the engineers, we were all friends, 'cause we'd all worked at a lot of the studios, and we'd go out on McClain's boat on Saturdays. McClain would invite us out on the boat. Even after I had left. So, we'd all get out on McClain's boat. One day, we had Jim Bruzzese, who owned Pampa Recordings. And Jim, forgive me. Jim has passed. This guy was huge. He must have weighed 300 pounds. Great big band drummer too, by the way. Amazing big band drummer. And he was a good mixer. And, Bruzzese, we got him up on skis one day on the back of McClain's boat. And when he hit the water, we all swore that the river was rising two or three inches. But we got McClain out on the—or, Bruzzese out on the boat on water skis. We just had a good time together. We enjoyed one another's company, a lot of technically information was shared. Well, we had been out—we used to call it—McClain named it The Detroit Recording and Drinking Society. We'd get a keg of beer, we'd go out on the boat, we'd have lunch, do hotdogs out on Peche Island or some place, get up on skis, ride around, have a good time, come back.

One day, we were all feeling pretty good after finishing off maybe a keg-and-a-half out in the boat, and McClain pulls up into Sinbad's, which is on the river in Detroit at the time, one of the clubs. And we're going to have lunch to see if we can get our buzz off. 'Cause we were all feeling pretty good and we were going to drive. So we were going to go eat something in there and, you know, see if we could sober up a little bit. And McClain was, you know, he was feeling pretty good too. And he looks at the boat next to us and it's Ralph Seltzer's boat. And Ralph is in there. And he tips his hat and says, "Hi, Ralphy boy," or something like that, 'cause he's feeling pretty good. And I walk by, and on this boat is, as I remember, and I could be wrong here, but I know Russ was on there with me, and Milan Bogdan from Tera Shirma and Ralph probably, Ralph Terrana, uh, Beltz, Bill Beltz, McClain, Dave Clark, literally half, maybe three-quarters of the Detroit engineers.

Next day, there's a memo. The Monday. There's a memo from Ralph Seltzer's office that's posted at Motown. And McClain copies it and he sends it to me at

United. “Attention”—“It comes to my attention…” that’s it, “that the Detroit engineers are in camaraderie together, in conditions that we don’t like to see, on a boat. What they don’t realize is if this boat went down under the skipperage of a certain engineer, there would be no Detroit sound. Motown engineers are forbidden from participating in this any longer.” So, I showed that memo to Jimmy Siracuse and Jimmy wrote a scathing letter back about camaraderie in the industry, and addressed it to Seltzer. It was a real, I mean, it was breathing fire and brimstone as it rolled out of the Motown fax machine, ok? I mean, you’re not going to mess that up. We were friends, and he said it’s none of his business what went on there. That, “We all have good times together and that’s what we will continue to do. Would you like to argue?” And I think Berry got wind of it and it never stopped, but that kind of stuff was the corporatitis again, ok? And, yes that would have—but it would have survived. It was the players. It wasn’t us. I mean, we were good at what we did. All of us were. But damn, I mean, what made Motown was The Funk Brothers, and the arrangers, and I can’t—yeah, we were good but we didn’t make it.

So don’t let the players out on a boat together is the takeaway?

They were doing other things that were just as dangerous. [laughs]

So…

I mean, you know, the story about the, uh, drinking going on at the funeral parlor was very true.

This is in the movie, *Standing in the Shadows*...

Yeah, those guys would just slip into there and they’d come back three sheets to the wind. And could play! I mean, there was a guy around here, Gary Schunk, off the record—[REDACTED]

1:38:28

There's another story that's captured in that movie about Jamerson coming in for…

What's Going On.

…an overdub on *What's Going On*, yeah, do you want to tell that story maybe?

Yeah, this is after—he had already laid that part down at United. In fact, before you go, I'll let you hear the original part, which I thought was better, but Marvin didn't like it. He's producing the record, that's cool. And so I ended up at Motown that night. And they may have even done it another time. But the night that he came in—and he'd been over at The Chit Chat, and he was three sheets to the wind. And so, Marvin drives over to get him because he knows he's not going to be sober enough to—because he calls over there and Earl warns him. He says, "He's drunk, man. He's out of it." So, he comes into the studio and he normally had this little stool, he'd sit up in the corner on it at Motown. And he was—he started to lean back and just fell over. So, I came out in the studio and Gates and I laid him down on the floor up against the wall. He put the bass on himself and did the overdubs.

One try?

One try. Jamerson, you know. Staggered out, Gates drove him home. His car was still at the, you know—but he could drive home from The Chit Chat, I guess, using the braille method or something, but whatever, he would get home. Jamo said that he never saw him in that condition as a kid. 'Cause he worked those weird hours, so the kids are asleep. But we sure did. He was—that was a problem. He was a drinker. And it certainly didn't hurt him. He could play anywhere, any time, any place. And what a musician.

1:40:34

Can we transition now—you were recording at Golden World. Eventually you end up working at United Sound…

Well, there was one in between there.

Oh, was there?

When I left Golden World, I was debating the seminary. I had to see that. A vocation is the realization that God may want you for something. And I was good as a recording engineer, but I always felt this tug to the priesthood. Philosophical. I couldn't ignore it. When you get—it is spiritual. You just have to know. Well, I was praying all the time because I was divided. I really loved audio. I liked what I was doing. But I also still have a very strong faith. It's intellectual, it's all these things. But the church was right in the middle of Vatican II then, in turmoil. And that summer, or that fall, when I came back, Don Davis had connected me up with these guys named Carl Porter and Jim Panagos who owned a place called Theme Productions. They were going to do jingles. And they hired Quincy Jones to do jingle sessions. I'll let you hear these too. And they were going use The Funk Brothers and record these jingle sessions, but they hadn't got a studio. They were going to build a studio on the corner of Dexter and Davison to do this in. And I'd never built a studio from the ground up, and here's an opportunity. And I'd known a lot about acoustics, not what I do now, but certainly enough to build a studio. I'd seen how Motown was done. I'd seen a lot of studios by this time. Knew about the golden mean. I understood that whole concept of a golden mean room. Uh, and I wanted to do that but I knew it was going to interfere with the seminary.

But even before that offer came, I was sort of in turmoil because of what was going on at Vatican II and what was happening. And I'm praying. I'm saying, "Lord, do you really want me here?" So, I get back and I had a particular interest in the St. Thomas Aquinas in the *Summa Theologica*. And we had the complete *Summa Theologica* in Latin, which I was pretty fluent in at the time, at the seminary. And I was enamored with this mind. I was reading it any time I got. I get back to St. Charles, it's been purged out of the library. We have a new rector at the seminary. The former rector has been made the bishop of Youngstown, Ohio. And I remember—and it's important to the story—walking down to the chapel, and there's these banners hanging up in the chapel. And I'm thinking, "What the hell?

This is not the Catholicism I know." And I'm praying, "Lord, do you really want me here? You have to let me know."

So, classes start the very next week, and I'm in a Philosophy class, and they bring out Pierre Teilhard de Chardin, a French Jesuit. Chardin, a kind of interesting guy. He was involved with the Piltdown Man. Pretty fraudulent, later on I discover. And this is the new theology of the church. And I have read some Chardin. I've read *The Phenomenon of Man*, and that was full of crap to be honest with you. [laughs] And I said—I stood up in the class and I said, "This is not the teaching of the church! We've got two thousand years of history with Aquinas and Augustin and you're going to hand me this crap?" "Mr. Wolfrum, you are excused! Go to the rector's office!" And I walked in and I said, "I'm out of here." I got my answer, a day later. And I was mad at God. I felt rejected, but I felt like a load had been lifted. I prayed a lot about. I still—I talk to my confessors about this, "It's not guilt. You shouldn't feel like that. That was your answer. That's how God does it. Don't like it? Toughen up, ok?"

And so, I took the job at Theme. Kind of interesting. Uh, Jim Panagos was a former Program Director at WCHD, a white guy who was trying to be a black guy. And Carl Porter, he was a black guy trying to be a white guy! [laughs] And there was a guy named Richard Green, a producer, arranger, piano player, who'd done some work for Motown who was working over there too, helping them to work with these jingles things and doing arrangements. They had another little operation called B.A. Starr they were making money with to help to build the studio, where they'd bring in artists and he'd write a chart and they'd play it.

So they made me a deal and it was a pretty good deal that if I brought any major music sessions in there after I built the place, I could keep half the money, and they'd keep the other half. And then, the jingle stuff I'd just be paid my salary, and that was fine. So, they paid me a salary to build the studio, then I had my other little deal on the side, and we did this whole series of jingles called *Cooler Radio*. They also did a thing called *Captain Soul*, which they syndicated. And, uh, it was pretty successful for them.

Uh, I came in one day and they told me, “The deal’s up. We’re going to—you’re not going to make”—and Wingate, I brought Wingate in. Wingate was doing sessions there. Andre Williams was doing sessions there. Ollie McLaughlin was doing sessions there. [laughs] They followed me over. It was great. So I was making a lot of money—or a fair amount of money on the little freelance deal I had on the side: half of the studio time, half of it was mine. And, uh, doing their jingles, getting to work with Quincy Jones. Uh, an amazing experience. One day I come in there and they say, “Gig’s up. We’re not going to work you that deal anymore.” And I said, “Well, it’s in writing.” “Well, sue us.” And they wouldn’t let me get my tools. I had my tools in the studio. And they said, “Either you take this deal and you just work for us, or you’re out of here.” I said, “No, let me get my tools. I’m out of here.” They wouldn’t let me do it, so I called the cops. Told the cops that I want to get my tools. Cop went up with me, got my tools, left. Gone. I was done. Packed my stuff up, walked out the door.

About how long after you started working for Theme did that occur?

Six months. I built the studio in a matter of three months. Four months. I’ve still got pictures. Nice little studio. Built around the Altec 1567 mixers we used at Motown. Uh, AR-3 monitors—AR-2 monitors. Nice little studio. Worked well. You heard sessions from it there. Worked good.

Anyway, uh, Bob Bloom, who was building consoles, went over there and worked for them a while until they played games with him. And he made some improvements on the studio too. Then the riots happened and it got burnt down. And that was the end of Theme. Didn’t last too long. But, they made a number of hit records. A lot of records and jingles and all sorts of stuff came out of it.

Uh, I came home that day and the phone rings. I literally walked out the door. Word had gotten out because Andrew had told—he was on a session at Motown, and he told Jimmy that I got canned at Theme.

Who’s Andrew?

Andrew Smith, who I'd worked with at Golden World. We were—by that time we had connected. We were the closest friends in the business, right 'til he died. He and I were just like this. [crosses fingers]

We'd go fishing together. His dad was a fisherman and my dad was a fisherman, so we'd head up into Canada together, the four of us, and clean out a lake. Just had a ball together.

Anyway, uh, Andrew had talked to Beltz. Beltz, I guess, had mentioned it to Jimmy. Next thing I know, Jimmy's on the phone, "It's about time you joined the big time! Why don't you come over here and talk to me?" So, I came over and got a job offer. And what an opportunity. And I got to work with Bill Beltz and Jim Siracuse and Joe Siracuse, and it was just like this—and then I realized what I didn't know. Man, this was—they were—it was like an epiphany moment to come over there. The best thing I ever did. Extraordinary experience. United was like, like *Star Wars*. Beltz, Cooley, uh—Cooley had left but he was still hanging around. Ex-borough engineer, digital background. Beltz was there. Beltz was a master in control circuitry. I was going to Wayne [State University] then. It was great. Right around the corner from the school. Uh, I could take night classes, come back in, study. An amazing, amazing experience. I couldn't have asked for a better deal.

Uh, the—man, United was, it was the mothership of all the other studios. Jimmy Siracuse was the greatest boss one could ever ask for. Probably the most intelligent man I've ever known. If you read Artie Field's book, which I'm going to give you on the disc, you'll read it and you'll hear reams about Jimmy. They were close friends and whenever Artie's studio would go down he'd send me over to fix his competition. That's how Jimmy was. And he taught me that, uh, in a true business environment, there are no competitors, if you're at that level. There are only people who do the same thing you do. They're your cohorts and you want to see them succeed, because the more success there is in a city, the more money there is in a city, and the more you will succeed. And so you push everybody up. I've never seen that fail. You know, when people step on you, they usually shaft themselves in the end.

1:52:38

What, uh, what were some notable sessions that you did at United?

[laughs]

I'm sure there were many. What were…

Oh my gosh.

Give me a handful that you're most…

Notable sessions? None of them were—oh, *Hot Buttered Soul*.

Well I mean, to you which ones were you…

Oh, the ones that I thought—there was an album I did when Stax was in there, with David Porter. And a Margie Joseph session, which I'm going to play for you before you go. You're going to pee in your pants, you know, when you hear it. Uh, those two as far as great arrangements, extraordinary playing, you just couldn't ask for anything more.

Uh, the jingle sessions for WJR, when they went FM stereo. Uh, Jimmy Clark, who had the band at WJR at the time, came down to United because all the announcers were always down there. He recorded this jingle sessions that all three of us, Danny and Beltz and I worked on. Because it was so big.

Uh, the sessions when Berry came back from the coast. You heard some of those. Because he couldn't get the sound of The Funk Brothers out on the coast. So, he came back to United and recorded a film score at United. Uh, by that time, Jimmy had fired me. [laughs]

How did that happen?

I saw something happening at the time that—there were a lot of remotes happening in Detroit. A lot of jazz stuff. And I wanted to tap into it. And they called United and United would throw something together to get a remote done and I said, "This is stupid." So, I built a console—designed a console and Jimmy

helped me machine. We built it downstairs. I paid for all the time and his time and everything. Built this console. And then I bought an eight-track—no, I bought a four-track and then an eight-track recorder. And I was doing all the remotes in town, but we were doing them through United. And Jimmy said to me, "You know—bring me your books one day. How are you doing with this remote business?"

And by that time I was also doing some freelancing out on the coast, but Jimmy and I had a deal that all the post-production on those West Coast sessions that I was doing—because I had a number of hits by that time and I was pretty popular—I made a deal with Jimmy, I'm going to bring them back here. Because I don't like the noise of those consoles out there, and I'm more comfortable here, so we can both make some money. And he thought that was great and I did too. So, I'd been doing this for maybe eight months or a year and he says, "Show me your books." So I—no one else, Jimmy was like my father or my grandfather almost. I opened the books up to him, he says, "You're fired." And he says, "Now I want to hire you back as a consultant, just like you have at Motown. We'll deduct your Blue Cross from your pay. This will allow you to write-off all your expenses driving down here. This will allow me to write-off more"—it was just the ultimate—it was like the—and from that moment on I've never been employed. I've been self-employed ever since.

But Jimmy, you know—and everybody thought that I was an employee at United Sound, but I wasn't. I was a contract employee, as it were, at that time. And if it wasn't for Jimmy, that would never—that's how—the kind of the boss that he was. The—you know, he knew business inside and out. He knew what the legal ramifications of that were. He knew how it would work, and it worked wonderful for us. For both of us.

That is not how I thought that story was going to go.

Yeah. Uh, however, part two of the story is when he sold the place to Don Davis.

So, Don calls me in one day and he says, "We're going to change the arrangement." By that time, uh, I'd built this studio here.

What year do you think that would have been? Do you know?

’75? ’74-’75.

So, by then you had built your home studio.

Built a home studio here. And Jimmy had sold it to Don, but I still was doing sessions back there when I needed big space. I would mix here. And this is like the third iteration of the studio, but most of the time it isn’t being used. I’ll be honest. And I could probably pick and choose what I wanted to do up here, but nobody’s doing—nobody wants what I have anymore. So, why worry about it, you know? Uh, industries change, I’m having too much fun fixing hi-fi, ok? And, uh, I do some design work and I still have the industrial Wolfbox, which is a measurement device now. And so—I don’t need a lot of money. Hell, you know, God takes care of me. Uh, and I’ve always just been an old shoe. I mean, that’s just me.

Uh, if—the work that I’d done here at that time became a threat to Don. Because sessions were coming here. I would do the big stuff there. But I did a project for A&M that their—an album called *Wings* with Michael Colombier. We did some of it at Orchestra Hall with the remote gear, and did rhythm there. Great record, by the way. Won a Grammy, but only sold three thousand copies. Think about that for a second. That’s when the Grammy’s meant something. Uh, that was a good record. Uh, Larry Levine mixed it out at A&M. I was working a lot, bouncing between A&M, you know. Did a couple of Brasil ’66 records there, finished them here.

Uh, that seemed to be a threat to Don. He didn’t take the same philosophy that Jimmy did. That everybody succeeded when we all succeeded. He comes to me and says, “Well, we’re going to change the deal. You’re going to become an employee. You’re going to work for me, and I’ll give you twenty percent.” And I said, “No, no, Don. Those days have changed. I really don’t need this.” And I had just started building the studio around that time, here. I had stuff in the basement to do mixing and that kind of stuff. And, uh, I talked to Don and told him I wasn’t going to do it and gave him my keys and walked out. And then Jimmy found out.

Jimmy gives Don the riot act. He says, “You know, that was a bad move.” And [Jim] Viti was there, and Viti’s a good engineer. And so he kind of took my place.

And Jim—that was fine for United. Joe [Siracuse] was still working there. So I had kind of an inside—I knew what was going on there because of Joe. And, uh, but it didn’t bother me one way or the other. And then one day Jimmy says, “Well, let’s start building you a studio.” And so Jimmy helped me build this room up there. I got pictures of him, we’re pounding nails and building the room and floating the floor and all the rest of it, and so I said, “Don’t you feel—how do you feel about this?” He said, “Hell no, he stepped on your toes. You just go on, keep on working. That’s all. Don’t get all bent out of shape over it. That’s what God wanted. That’s what’s going to happen. Don’t worry about it.” There again, is a Jimmy-Siracuse-ism, ok? And that was Jimmy’s whole life.

As you can gather, I’m a great Jimmy Siracuse fan. He was like the grandfather I never had. Uh, and just learned tremendous things about life, and about audio from Jim. I mean, he invented the Ampex 350.

Oh yeah?

Yep. That’s in Artie’s book, which you’ll see.

2:01:14

So after he sold it to Don, did he just go into retirement or did he move on to another…

No, he went into retirement. He bought a place down in Florida. And he had a place up where my dad bought a bakery up in Hessel, and he lived in Hessel. So he and my dad had sort of a relationship up there, and I’d go up to see dad and they’d fight over where I was going to stay, at his place—so I’ve got some great pictures of Jimmy and Sue and I up north. We were—Jimmy was, like I say, the grandfather I never had.

One wonderful experience, he had this place right out on the lake, right on Lake—well, Hessel Bay, which feeds into the Lake Michigan side—well actually, they're on the Lake Huron side of the bridge. And he, uh—my father-in-law, I'd been married maybe two years, loved to fish too. So, uh, Sue and I eloped because he couldn't afford another wedding. [laughs] And so, I told him I was going to elope and he said, "Good idea." [laughs] And I said, "That's cool." And so that's what we did. My priest friend of mine married us. It was just wonderful. Forty years' worth, so I guess it works. And, uh, so I brought him up to visit with my father one day and we were going to go see Jimmy. And they were contemporaries. Same era. And so Jimmy and her dad and Joe and I got in this boat together and went out on Hessel Bay and we cleaned out—what a night. Between the four of us we caught fish until they came out our ears. So we were going to—it's getting dark now. It's about—we'd been out until almost nine o'clock and the sun's starting to go down. We figure it's better we get in, because we'd never find the place again on this little boat. So, we head back to the cabin, or the house, and get in there and Jimmy and I and Joe started in the kitchen and the four of us fix this big fish feast. And finally the phone rings. "Do you guys"—it's my dad and my mother-in-law and Pearl, my stepmom on my dad's side—"Do you guys know what time it is? It's one o'clock!" "Yeah, we're going to have a little dinner. Jimmy's got some beer. Just leave us alone. We'll come home when we get home, ok?" And we showed up about two-thirty or three o'clock in the morning, after hearing stories between these two contemporaries of that age, her dad talking about farming and him talking about the war and building the electronics for the Norden bombsight, which I never knew about. Just amazing stuff that Jimmy had done. So, I mean, those are moments in my life that I just treasure. You just learn from other people.

Uh, so Jimmy had been a friend until he died, you know. I was a pallbearer at his funeral, as was half of the Detroit—or half of the whole audio industry. It was really amazing. He was—I never realized how respected he was.

2:04:48

What are your feelings on the recent developments at United Sound, as far as the change in ownership and the renovations, and then also the recent historical designation?

I think the recent historical designation is wonderful. The legacy of Jimmy Siracuse is totally lost. So, what's historic about it? If it wasn't for Jimmy Siracuse it never would have existed. And they took out everything that Jimmy did. They're only interested in the last, recent history.

I mean, think about it, Dizzy Gillespie did his first sessions there. Muddy Waters did sessions there. "Boom Boom Boom" [by John Lee Hooker] was cut there. Uh, Kenton was there. Sammy Davis was there. Uh, my gosh, this is a—and that's forgotten. No, that's not history.

Long before I was there—I mean, George Clinton made some big deal about Wolfie being there. "I was there back in the days when Wolf"—well hell, that's just one little dribble. Danny was there before me!

Sorry, no. I'm upset about. I'm upset that they haven't got the whole picture. Uh, United was paramount to the music industry in Detroit. But not because of anything that happened prior to the '60s—or after the '60s. It was all there because of what happened prior to the '60s. I mean, he was shaving wax. That was the first independent studio in the United States when it was The Siracuse Music House.

Do you think their lack of focus on that earlier era is just an oversight or purposeful omission on the part of…

I think it's a purposeful omission. They want to look at the black history. But I'm sorry, there's no color to music, ok? And if you're going to eliminate the essence and the people—people are the key. It's not the corporate United Sound. It's Jimmy Siracuse that made that studio. And the people who worked there because of Jimmy Siracuse. So yes, I am upset. I make no secret of it. And the arrogance of these people to steal the photos from me, that they're posting without my permission! Yeah, I'm mad. And I have good reason to be.

Have you had much interaction with…

Yeah, I told them to stop posting and put them on notice. And if they did I told them I was going to sue their asses.

Did they have any response to that?

No. Nothing. So—and they want me to come there and bless that? Bullshit! No. No. No. Jimmy's the key to that place and he's not even recognized over there. It's just the Don Davis era forward. I'm sorry, that's a dribble.

2:08:17

Beyond the stuff you've already mentioned, are there any things that you just would like to put on the record that you think United Sound should be associated with or remembered for?

Well, the technological development. The vertical duplicator. The Ampex 350 recorder. The first video disc. The first work of amplifier design with RCA. Where do you want to stop, ok? It's all in Artie Field's book. He does it better than me. Oh, the development of the Norden bombsight in the basement of United Sound. That's a story that I heard from two sides. Do you want to hear that one?

Please.

Great story.

Jimmy had always—Jimmy was humble, too. Never made a big deal about it. I hope I am that humble because blowing your own horn doesn't do you much good at all. It just makes you look like an asshole, ok? It really does. It's all of us that make it all work, ok? And just being in the right place at the right time. What's that—God put you there, he's the one that's in charge. You're just there for the ride, ok? And so, as long as you keep that perspective, everything's wonderful and you can continue to be happy too. Your ego gets in the way otherwise.

Uh, Jimmy—during the war, there were a lot of small—they broke things up so no one knew what anyone was doing so they couldn't put the whole picture together for security reasons. There's a term for that and I can't remember what it is offhand but it's fragmentation.

Jump ahead to 19—late 1980s. Ed's working with the Aachen head, the binaural head, with a guy named Wade Bray. No relation to Hugh Bray, but Wade Bray is the Vice President of Head Acoustics. I was involved in the development of the Aachen head and its use in the automobile industry here. And it was because of Wade Bray. So, I was doing all of the technical support at the time for the Aachen head. That's what the doctoral diss' was on, binaural simulation, because of the work I was doing with Dr. Gneuit. And the fact that it drove back to this whole goal of mine of high fidelity. So, I'm going to let you hear some Aachen head recordings before you go so you can understand why.

Uh, the long and short of all this is, is that during that period of the war, Wade Bray's dad was doing optics. He was a specialist in optics. He was called in as a consultant to the Hubbel. And he told them, "The math's all wrong on your optics. This thing's not going to focus right." And they told him he was crazy. Again, guess who was right. The old fart, ok? And Wade Bray's dad made telescopes, had a little business making telescopes. That's how they discovered him. So, he built the optics, the prototype optics for the Norden bombsight. He designed it. The servo control and the machining for the prototype for the Norden bombsight was built by Jimmy Siracuse at United Sound. Why? Fragmentation.

Now, I'd heard this story from Artie. And Jimmy had this funny looking prototype sitting in the basement of the Norden bombsight. I asked him about it. And he had all these servo motors, which later on we rebuilt that Scully lathe and used those servo motors to drive the automatic variable pitch on the Scully lathe that we built, the two of us. That was the last project I worked on with Jimmy together. We rebuilt the Scully lathe. And it was a direct drive Vitaphone lathe. It was sitting in the basement of United Sound. We got it working. They threw it out, by the way. And stereo lathe. Think about that. They only built three

Vitaphone lathes for the film industry. We had one of them in the basement of United Sound. And they threw it out.

So anyway. So Jimmy and I worked on this project, and he's told me a little bit about when he was working on it that he had—"Yeah, I machined this thing." Then I read in Artie's book—which I'm not going to spoil it for you—about another Jimmy-Siracuse-ism of blowing up—when they displayed this thing out at Selfridge Air Force Base he changed the targets to show how good it was to this other building at the end of it and it was a munitions dump. And oh did the fireworks fly. And I got bits and pieces from Jimmy, but never like Artie told it, ok? And so, here is a man who helped in second World War technology, and I wondered always how he avoided the draft. Now I know why, ok? Because he's building this stuff for the military. Uh, and so he was too valuable.

Uh, and so one day, Artie Field, Wade Bray, who we met here, Wade's mom and dad—this is summer—were having dinner in the back room. Sue's fixed a nice meal for them. They're all over here. And Wade Bray's dad starts talking about the Norden bombsight. And he says to me, "You know, I had to send my optics here to Detroit for the Norden bombsight." And I said, "Really?" He said, "I still remember the address of that place. It was 5840 Second." And it all clicked. I said, "Holy shit! All these stories from Artie and Jimmy, they're true!" Ok? He built the optics, Jimmy mounted them in there, they brought it to Selfridge to test. It's all there.

They threw out the Norden bombsight from United Sound too. That belongs at Wayne.

That's disappointing.

Ok? Now, can I be a little bit, you know, hurt? And my contribution over there is insignificant in reality compared to Jimmy and Joe and Tony Siracuse, who invented the pinball machine. You know, we had the tilt light out of it at, uh, Motown. Did I ever tell the tilt story? Do you want to hear a funny story?

Yeah.

Holland brothers used to mix at the threshold of pain. Way louder than—we were about 100 dB downstairs, and we were there for an hour or so. It's not going to hurt you. They would mix at 120, 125 dB. One day, Fran Herd comes running to the basement—I'm in the shop in the basement—screaming, "The control room's on fire! The control room's on fire at Motown!" So, I come running up and behind me is McClain and I grab the fire extinguisher in the hallway there and I go into the control room and McClain grabs it from me, and he goes in there and here's one of the woofers has burned up, the AR-3s that we had made. We had made a custom designed monitor system, near field, similar to this, uh, long before there were near field monitors. Another McClain idea. This is why I say he's a genius. But we had a GenRad test equipment to flatten the frequency response. It was amazing. But they would listen at such high—I would walk out on them. 'Cause I would, you know, I'd set the—'cause the console there, the whole patch bay was not normal. You know, you had to patch everything in. So the engineer had to set up a session. And you set it up by patching it all together, patch the gear together. You want a limiter here, we put a limiter here. If you want, we'll go direct here. And we used 1567 mic preamps that would come out direct and you could patch them into the bay to make your own sub-bays. It was very versatile, but you had to know how to use it. You had to be an engineer to use it, which was good. It kept the riff raff out of there. And, you know, the knob jockeys couldn't invade us. You had to know how to patch up a studio to do a session. And that was job security, but moreover, you couldn't mess things up. And somebody couldn't show up there at two o'clock in the morning and burn up your room like what happened at Golden World, or pour booze down into your faders and all the problems I used to run into.

Anyway, the long and short of all this is that, uh, the control room's on fire. We take the fire extinguisher, put it out. Now, it made sense because we had a separate 300-watt McIntosh power amp driving the woofer, a 60-watt driving the mid-range. This became sort of the Detroit monitor system which was an AR-3 woofer, a Bozak mid-range, and an Electro-Voice T-35 tweeter, which was probably the finest tweeter every made. That's why Klipsch used in in heresy. Clark brought it over to H-D-H. [Holland-Dozier-Holland] They're all over Detroit.

We had them at United because they were so good. Flat, neutral. They burned this thing up.

And the mixes we were getting were crappy anyway. If you want a mix, you mix it at about 85 dB where the air flattens out. There's a whole thing that Hollywood has discovered about mixing like this. There's papers written on it. And we were doing it twenty years ago because we just found out it worked.

Well, none of the—you always had to remix and H-D-H session because it was mixed too loud. And so we decided that there's a solution to this. And McClain said, "This is costing them. This is billed against their royalties. So we make it cost them money." So he came up with this idea and I built an accumulator and we put a monitor—you'll see a hole sitting right in the back of the rack cabinet, right dead center in the control room, you'll see a hole in there. There was a 635 microphone mounted in there—a 636 omni. It was a monitor microphone. Drove sort of a sound pressure level meter that accumulate the level anything above 85 dB. If you listen to longer than five minutes above 85 dB, we had a little light that we got from United that I got from Jimmy. 'Cause I knew Jimmy then too 'cause I'd gone over there and you know—and he gave me one of these tilt lights from the, uh, pinball machine. The tilt light—you still see the hole in the console, the square hole there in the corner was where the tilt light was. The tilt light would gone on, a buzzer would go off in the monitor system and it would shut down for ten minutes. Give time for the woofer to cool down. And so you wouldn't burn it up again. And you got billed for the time. It stopped. They started mixing at moderate levels, fixed the whole problem. McClain-ism again. Genius.

That is pretty good.

Ok? Uh, so, you know, McClain—despite all the other things, you know, he was a very smart man. He understood that industry. But, you know, he saved the place from burning down, too. But that could have been a disaster at Motown.

2:20:40

So you talked a little bit—well, you talked a lot about what you feel are some of the injustices or misconceptions about United Sound. Do you feel like there are any regarding Motown and its legacy that you'd like to dispel?

Berry Gordy was not a genius in music. Berry Gordy was a genius in choosing people. An orchestrator of people. I wish I had that gift. He could spot great people.

Uh, not everything was wine and roses at Motown. But I've never worked at a place that had a better family atmosphere, that was more productive, and that the friendships lasted thirty years after that because of the creative geniuses that were wandering around that place. And that he could harness to work together. 'Cause I don't know how he did it because there were a lot of egos over there. But he seemed to be able to pick the best of the best to harness them together. And it worked.

Uh, Motown musically was an enigma. I can't explain it. But I look back on it and all I can see is the hand of God there. The whole industry at that time—I mean, Motown was the icon of it, but there was so much more than Motown. So that's the misnomer of Motown. There was Golden World, there was Armen Boladian with Westbound, there was Magic City, there was you name it. Uh, Revilot, there was all of this happening because of United Sound. United was the mothership. Motown was really birthed there.

And so the myth of Motown, although it's an icon of it, is really just part of the story. And that should be corrected. Uh, there was so many other records.

There was so much other—think about this: half the production for—the other day a friend of mine sent me a piece about Hallicrafters Radio. You know who they are? Hallicrafters was a Chicago company that built communications receivers. There were two big ones in the U.S. Well, three. Uh, Hammarlund, National, and Hallicrafters. Uh, Bletchley Park used the Nationals. The radio you see in my front room is an HRO-60. Historic radio. Uh, today nothing touches this thing. It was used at Bletchley Park. Mike [Sheppard, owner of Northern TV & Vacuum] had someone give one to—and he gave it to me and I restored it, got it

working, ok? It works wonderful and it's sitting in the front room. People ask, "What's that?" And I give them a whole spiel about it.

And much the same is the case here. Anyway, Hallicrafters built this SX-28 and a transmitter that was used in the second war. I'll send you this YouTube thing on it. And at the bottom of it it says, "Produced by Jam Handy Corporation." Of course, they were on Grand Boulevard. Who did all the audio for Jam Handy Corporation? United Sound. And I'm listening to this announcer on it and I know the room, the acoustics of the room. It's Jim Hartsell's room up at United Sound, the third floor room that's now the kind of the meeting, conference room area over there up on the third floor. And I'm saying—and you hear it, you'll know it too, if you've ever been in that room. You'll hear the room. Yeah, that was done at United.

All of that was a direct result of that one studio. And he had the respect of guys like Bob Fine in New York. They were friends. All these, uh, pioneers, they all knew one another. They were friends. When we would do jobs for the automobile industry that had to be duplicated quickly for New York, we didn't do them, although we had a duplication operation in the basement of United Sound. We sent them to Bob Fine and he'd duplicate them so we could get them out quicker, ok? When Bob Fine did commercials that had to come to Detroit for the Midwest, he just shipped the master to United and we'd put it up on Jimmy's vertical duplicator and duplicate them. That's how close these studios worked. Bob Fine bought three Wolfboxes from me when he found out how good they were.

This is what I'm talking about. This doesn't happen today. Of course, there's no studios left today. But that—and United and Motown working together like they did. You know the eight-track transport at Motown was built at United Sound. And if you look at it, Ampex never made a vertical transport that mounted this way. You'll see them. Look under there, there's a 350 under there. [motions to covered equipment in the corner of the room] Pull it up. That's an Ampex 350 transport. That's the thing that was invented at United. And Ampex basically stole it. They admitted to it, that they got the idea from Jimmy too. But, interestingly, that's another story, how that happened. But you'll hear about it in Artie's book. I won't spoil it. I can give you the details later.

The transport, not the electronics, but the transport—uh, Jimmy had a complete machine shop of course, so we built all of that stuff there. Jimmy thought you can't handle that wide tape without vibration problems on a small transport, so he machined these, uh, nineteen-by-thirty-four inch deck plates. And that's what we—Motown had the first one and we had the second, ok, that Jimmy had made. In fact, I've got pictures on my iPad of Beltz and Jimmy and myself—I took the picture—and Les Post, who sold us the Ampex electronics for it, down in the basement putting the United one together. And that's what you see in the pictures at United Sound, is that transport. And then we made ours 30 and 15 IPS.

And the other thing, the whole 250 nanoweber reference for Dolby came from Detroit, because we were trading tapes here so much and it came out of those Stax sessions. We had to have a reference level for them all and we chose 250 because it was a nice compromise between elevated level, which gave us lots of headroom, and it became such a standard that everybody's recording at—it came from Detroit. And Ray Dolby told me that story. He said, "Well, you guys forced it!" [laughs]

So, that's the kind of thing that you don't hear about. And that we were—I never realized that we were pioneers at these things until later on.

Detroit was on the cutting edge, technically. And musically, for that matter. Uh, can we ever reach that again? I would like to hope so.

2:29:07

I think that's a good place to stop this session. Ed, I want to thank you for your time and generosity in talking to me.

Yeah well, thank you for doing it.