

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

2

TJ: Okay why don't we continue. We had left off in the last reel. Not that we're gonna do this chronologically. But we had left off in the last reel talking about Bob Putnam ...

CM: Bill.

TJ: Bill Putnam! And he's in Chicago.

CM: Oh I think I mentioned something about ... well, first I got to know his reputation in the business. He was one of the preeminent music engineers in the country. I had the opportunity because a friend of mine had brought in some European recording equipment to swap things with him; a cutterhead and some stuff like that. Which were really at the time pretty much state-of-the-art for people who weren't locked into the American Telephone, RCA, General Electric, Westinghouse cartel.

TJ: [Laughs] Was that kind of a ...

CM: Oh, it was a cartel! The government broke it up! That was the first time they broke up something. They didn't break up the individual companies. But what they did to survive ... it shows you how things were back then. Westinghouse, General Electric, RCA, the Telephone Company, Bell Laboratories and a company called ... which was a division of the phone company, also called Electrical Research Products, Incorporated; ERPI; it was the one that was predominantly developing ... and Western Electric, developed professional quality sound equipment. Motion picture sound, they were involved in, and microphones, and disk cutterheads. And what all of the giant companies did was get together and form what literally was a cartel. And if you built anything that used even one of their patents, you paid five percent of the wholesale price of the equipment sitting on your shipping dock in the crate, ready to ship to the customer. You paid five percent of that as the privilege of using any of the patents they had. Now they knew damn well that if you were building a sewing machine, for instance, you didn't need any of Westinghouse's electrical generating patents. But you still, if you wanted it you know, you could do it. You could have a sewing machine on your hydroelectric dam or something, I guess. But the idea was that they literally controlled the commercial use of a host of every kind of technical patent almost that

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

3

you could think of. And the government finally broke that up.

TJ: Yeah. I mean they had to ... legally.

CM: Yeah. The government said you guys can't do this after many years of 'em abusing the privilege. It got to where they just, and that was in the middle or early thirties, I guess, something like that. Then they proceeded to be monopolistic, each in his own field then. General Electric was into the DC electrical thing, which was the basic Edison patents. Westinghouse was into alternating current electricity. What was the little short cigar smoking guy? [Steinmetz] was their genius in residence, like Edison was at General Electric. In fact, Westinghouse had signs all over everywhere in Westinghouse, "No Smoking! Except Steinmetz." [Laughs] And he was a little Toulouse Lautrec type guy with a big cigar and they weren't about to tell him he couldn't smoke. He was the reason they were making all that money. And o'course Bell Labs had just a brain factory! Bell Laboratories in those days had some of the most preeminent scientists in every field you could imagine. And the impact o' that you feel even 'til today! Bell Labs, for instance, invented the transistor and things like that. Discovered it, I should say. They didn't invent it as such. They found out that things work that way. Mother Nature invented it, and they discovered it. [Laughs] And in any event, to make a long story short, the Western Electric cutterhead, you had to pay a royalty to use it. Including on every record you sold! Yeah! Every record you sold! Record companies paid a royalty; RCA, Columbia, and Decca in those days. And there was a kind of a mutual exclusivity thing because, by then, using the patent and paying the royalty, little guys didn't have a chance to use it unless they had a lotta money.

TJ: Was this, in other words, prohibitive to small companies?

CM: Yeah, yeah, yeah. You needed twenty-five hundred dollars, up front, to lease the cutterhead. You put a deposit, you didn't own it. You put a deposit on it.

TJ: You leased it?

CM: Yeah. You leased the cutterhead. And you put a

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

4

deposit on it which would cover their cost of making the thing. And a profit probably. And then you paid a royalty on its use; every time you use it and on every record you sold. It was a nominal royalty; like a tenth of a cent, or something like that. But if you figure on millions o' records. Oh yeah. Let's put it this way. A cutterhead that you should have been able to buy for five thousand dollars, you probably paid twenty thousand dollars a year in royalties and didn't really own it. Well, that kind o' thing. Anyway, some German and English guys invented feedback cutterheads which is what this was. The latest electronic technology which Bell Labs also developed. And used these ideas to make cutterheads that were competitive and much cheaper. I bought three ... a Grampion cutterhead made in England. A friend o' mine, on a Esso supertank, an engineer on an Esso supertank, bought three of 'em for three hundred dollars. A hundred dollars apiece. They were selling in the United States for three-fifty [\$350], because only one guy in the United States had 'em. He had, you know, a franchise, or whatever. And he brought 'em to the United States. We paid ten dollars apiece, duty on 'em. And I sold one to Bill Putnam, and I kept two. And we set 'em up. He helped me get mine set up. He was a much better engineer than I was.

TJ: In what way was he better?

CM: Well, he was more experienced. He was more trained. He was an amazingly brilliant man. I think he's still alive. So I shouldn't say "was", he "is". And that was how I got to know him in those days and got exposed to big time recording studios. His Universal Studios in Chicago was the studio.

TJ: Yeah, wouldn't you say Universal at that time was kind of state-of-the-art?

CM: uhm-huhm, uhm-huhm. Yeah. Well you gotta remember that "art" is the correct word because even 'til today, the technology, you know, has grown, and is still growing by leaps and bounds. But certain few creative people advanced the "art" which is different than the technology.

TJ: So you saw Putnam as doing this?

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

5

- CM: Yeah. Oh yeah. For instance, he's the first guy that used artificial echo; reverberation in a theatrical way. I think I told you about it in the last tape. It was a song called "Peg-O'-My-Heart" that the Harmonicats, a harmonica band had done; and he uses extreme amount of reverberation, especially on the bass harmonica. And you hear it in that Peg-O'-My-Heart. And it's a theatrical effect rather than ... original reverberation was used to recreate a "natural" ambiance. What he did was use so much reverberation that it was artificial; nothing hardly real. But the effect was dynamic, you know. And today they use all kinds o' reverb.
- TJ: Yeah right. Because usually most of what I hear in records is artificial.
- CM: Yes. Oh yeah, there's almost no real ambiance in recording anymore. Except for a few classical things and one or two live things where they were done in good venues where the room sounds good; and the engineer took advantage of it. 'Cause you gotta have both! You gotta have both a room that sounds good and a engineer who wants to capture that.
- TJ: Yeah, but then when you're dealing with a studio the size of what you had on Rampart street, I mean, there wasn't ...
- CM: There was no reverberation. No, and in fact, without getting into the technology of it, the numbers of it, the first-order reverberation, which means the first sound you hear that's not the original sound; which means the one that goes to the nearest flatted place and bounces back to, which is off the floor. It's so close that nobody ever notices the reverb off the floor. So the next one you hear is the one off the nearest wall. And then the last one you hear of the first-order is from the farthest wall. And then you hear what amounts to repetitions of that; as the sound waves bounce back and forth and diminish. Well, in a room the size I had, which was about sixteen by seventeen, the last distance, the farthest wall, the time it took for the sound to go over to the wall and come back, was still so close you couldn't perceive ... you can't perceive the fact that it's a separate sound.
- TJ: Well did you have any artificial ...?



Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

6

CM: At first, no. At first, no. It was a long time before I had any.

TJ: Okay. So those first records, those early records in '47 [1947] were ...

CM: Totally flat.

TJ: ...totally flat.

CM: Totally flat. No ... they sound okay.

TJ: They sounded real flat.

CM: Well yeah, they are; because they are. There was no artificial reverb, no ambient reverb in the room. And because the room was small the microphone positioning generally was close which even further limited your hearing. It took the ratio of direct versus indirect sound so far down you wouldn't even notice it.

TJ: Yeah, 'cause I hear really ... it seemed dry; Fats Domino, Roy Brown ...

CM: Yeah. If you play a few of those records where there at least one microphone of some distance from whatever sound it was picking up, and if that sound, for instance, maybe over horns; maybe there might have been a microphone over horns. And they wouldn't be playing at some point in the record. You could then hear; you can perceive the effect that that microphone has on other instruments that are playing; and it's picking up the sound from a distance plus the room tone. Then you could hear it. And in a room that size, the room tone is terrible. It accentuates ... for instance, let's see. Sound goes what? Eleven hundred feet a second. So an eleven foot ceiling, which I didn't even have that, would only take a tenth of a second for the sound to come back to you.

TJ: Well it's sort of boxy.

CM: Yeah. So you get a tubby, not good, not a nice tight sound. So that room ... well it was damped pretty well; so it wasn't too bad.

TJ: Would you say it was a live room or a dead room?

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

7

- CM: It was a dead room, but it's almost impossible to deaden a room at the low end, and the low frequencies. And so what you got was a dead room that's deader in the mid range and upper range than it is at the bottom end. So it effects the sound in a not nice way. Okay. So the room sound there was not good wherever you perceived it.
- TJ: Were there things that you could do?
- CM: Yeah. Well the main thing is to keep the microphones as close to sound sources as possible. And if it was possible to duck that microphone when whoever was playing at it wasn't playing.
- TJ: You mean fade that pot down?
- CM: Fade that pot down, yeah, yeah. Now I, philosophically, am against doing that, although it's done all the time now. In fact, now they do it electronically by putting a gate on that microphone so that whenever they sound below a certain level; is it electronically shuts it off so that the engineer doesn't even have to shut it off. They keep shutting themselves; be about maybe eight, ten, twelve, fifteen microphones going now.
- TJ: So you had to constantly be watching the board.
- CM: Yeah you had to watch for that. Right. Yeah, well since I only had four inputs it wasn't a whole lotta watchin' to do. And then generally would be a matter of ducking it rather than turning it off.
- TJ: We were talking about reverb; once you start using reverb, what type of reverb do you use?
- CM: Okay. The first reverb I used was a spring device, the thing that was invented for the Hammond organ. That device got used, distributed commercially; and I tried that and they sound terrible. They're okay to put on a guitar maybe or something; and even then ... uhm-uhm. But on other things, no. And then I was able to buy a steel plate reverberation unit. Now that's a big box; its about four feet high and about eight feet long; and there's a large steel plate inside of it. And what you've got is a driver on that steel plate; sort of of like the thing that moves the cone in a loudspeaker;

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

8

but it's actually connected to a thing that's welded to the steel plate. And what you get is a two-dimensional echo. Remember in a room you'd get a three dimensional echo; 'cause you had length, width, and height. But this steel plate was only like a sixteenth of an inch thick; so what you got was a two-dimensional echo along its width and along its length. Because sound in that plate; now remember, you're gonna activate the plate perpendicular to its surface. And the sound waves propagate through the plate, hit the edges and get bounced back. So what you get is two-dimensions of echo, and most people can't tell the difference; but the so-called "golden ears" can. You know they can hear it; they say 'that's a plate, that's not a room.' You know.

TJ: Because there are acoustical ...

CM: Yeah, acoustic, yeah, right. But I had no place big enough to do that.

TJ: Now some of the bigger studios had that.

CM: Well, the first people ...

TJ: Because that actually takes another extra room, right?

CM: Right, that takes another space. They use stairwells, toilets, you know. Toilets were great because they were tiled so they were very alive. And alot of 'em had these partitions in 'em which helped to break up the reverb and smooth out its characteristics; so that you couldn't tell the dimensions of the room so well. And then people started building echo chambers. And then they would build 'em, you know, with tapered walls and non-parallel walls so that the reverberation characteristics were nice and smooth as it died out.

TJ: Well, was this becoming popular in the industry.

CM: Oh yeah, yeah, yeah.

TJ: Now what year did you buy this.

CM: Oh God, I don,t remember. I was still on Rampart Street. So it was pretty early on I guess.

TJ: I mean, what I'm driving at, is maybe, there's a

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

9

certain record that we could tell ...

CM: Oh! Uhmm ... gee. Let's see. It had to be in the early fifties. Somewhere in there. It had to be 'cause I had it out ... you remember that hallway? If you remember that hallway? It was out there in that hallway.

TJ: Oh okay. You really didn't even have room?

CM: Oh no. There was no place, no place to put it. But you could run wires to it, so it was no big deal. And it was adjustable.

TJ: It was adjustable?

CM: Yeah, you can adjust its decay, how long ... And the way that's done, is the plate is damped acoustically. There's a soft pad, looks like insulation material. And it's close to the plate but it doesn't touch it. And there was a hand crank on top that adjusted the distance of that. And it acoustically damped the plate; so that the echoes died down quicker or less quickly. And that's how you ... get a ping ... a pinnnnnnnnnng. Yeah.

TJ: You sound like you're in the Grand Canyon.

CM: Oh yeah, yeah, yeah. And the only problem I had with that; is that it being out in the hall; if somebody came in and tapped it there was this tremendous boom, you know. But generally, that didn't happen, but it could.

TJ: Well now that we're on technical stuff, once you start using it do you think, 'Oh my God, I've got this, now I can really ...'

CM: Well I don't think I did 'cause, you remember, I had this feeling, I'm not supposed to intrude on the ...

TJ: But I mean, once you tell producers, 'hey we can really do more!'

CM: Oh yeah, oh yeah, do more, yeah sure. It's like you watch people with pepper sauce, you know? If on shake is good, three times is good, you know? Well, some people overdo everything.

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

10

TJ: So you see alot more.

CM: Sure! I saw it. And probably some of the things I did, it probably had injudicious amount of ... [laughs]. But you know that's a producer's call. I mean you know, you can't say it's wrong, you know? You know it's like clothing. You may not like it but if the guy wants to wear it it's okay for him. Or as I always say; it's a free country. You got a right to be wrong like anybody else. [Laughs] And in a lot of things, I guess I was wrong, or just "green", or immature or untutored about. 'Cause you gotta remember, I learned as I went.

TJ: Well I was gonna say, I 've got an engineer textbook. Did you have any kind of textbook?

CM: Oh yes. Well, you gotta remember I came from a university background. I un derstood how you did things. So I bought books like The Theory of Sound by Lord Rayleigh. Which it dealt with all the mathematical bases for sound. The makeup of the harmonics of instruments and the human voice; frequency ranges and distrubutions; echo and its effect. 'Cause all of that, you know, in scientific language you can write about natural things in equations.

TJ: You can take time [Can't hear]

CM: And Lord Rayleigh was one of the earliest of the truly scientific acousticians. And then others; Bell Labs put out a couple of; well they put out hundreds of great books; of which I bought two or three. There was one which was great; Motion Picture Sound Engineering, which dealt with the early development of sound and technology in the motion picture industry, which was the leading place. Not the record business, but the motion picture business was where the leading work was being done with sound. And that was one of my favorites, Motion Picture Sound Engineering, because it so ... and there were a couple written about the theory of microphones, that I bought. And I sort of self-taught my ... and I came back here to Tulane and I took some courses in math that I hadn't had yet. 'Cause you remember I dropped out. And so I came back and took some courses in differential equations; which you need; and some things like that.



Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

11

TJ: But how does it actually help you when you're in a session.

CM: Because I understood the physical basis of what was going on. In other words when somebody said 'this is a cardioid microphone', I knew what its pickup pattern was and could then take advantage of it, okay? Those kinds of things.

TJ: I understand. Okay. I'm just thinking, you're in the middle of Fats Domino's and I'm wondering, 'Gee, I'm thinking about this mathematical equation' [Laughs].

CM: Well, okay! I'll tell you how, for instance. I'll tell you how for instance. Let's say, I got a group like a Fats recording, which involves eight people. Alright. And I got a room in which I can't physically separate them, and in fact I can't even build [Gobos] to separate them. I can't even put big boards between 'em 'cause I don't have room for that.

TJ: No baffles.

CM: Right. So positioning; placement in the room, positioning of the musicians and the microphones was all I had. So what I would do for instance, is use a ribbon microphone over the piano; horizontal, parallel to the floor. Okay. A ribbon microphone has a figure eight pattern; which means it picks up from its front and its back. So the microphone was picking up looking down at the piano and looking up at the ceiling; but it was rejecting sound coming at it, parallel to the floor from the other people around it. Now of course it picked up the second order of sound; when it bounces off the walls and ceilings; and that's that tubbiness that you can notice that I'm telling you about sometimes. You can hear it. And then later on; that was a 44BX microphone; the big square one. That's the big square one, okay? And then I got hold of a 77DX, which is a microphone that you can make unidirectional. And what it had was a half cylinder that slid up behind the ribbon on the back side; effectively cutting off the back. So then if you stuck that over the piano; it picked up looking down at the piano; not from the sides as much and not as much from the back. Now remember, none of these things are absolutes. Every microphone that doesn't pick up from the back picks up from the back, some.

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

12

TJ: Right. Some. A little. There's leakage.

CM: Yeah, right. Also to understand how the technology helped, and I don't usually talk about these kinds of things, but okay. Alright.

TJ: Yeah! That's what I want.

CM: 'Cause alot of people thought I was just a dummy with luck about this. You know, and I never disabused them of that 'cause you can work it to your advantage at times.

TJ: [Laughs]

CM: But the microphones that were made directional also created phase problems. So that ...

TJ: There's something I was gonna ask you. Did you have alot of that in the studio?

CM: Yes. And again, by acquiring over the years some technology, understanding, and some understanding of the physics involved; I could minimize the phase problems.

TJ: Why don't you stop and explain what phasing is?

CM: Okay. Well, for instance, everybody has seen a drawing of a sound wave, you know, that up and down kinda thing. That's not exactly correct because that only shows you two dimensions; or it's a plot of velocity and pressure, you know. But that's a good enough representation to understand what I'm talking about. You can imagine that same wave going off and hitting the wall and coming back; and arriving out of phase with the original one. So now what you've got is a hump where there should be a hollow; or where there's a hollow in the original thing; and a hollow where there's a hump in the original thing. So they started cancelling each other out. And since nothing is perfect, they don't cancel out perfectly; they merely distort each other. For instance, even 'til today there's a place where you can notice this very well. If there're two people at a podium speaking into two microphones close to each other, and the engineer who's using 'em doesn't watch; every now and then you'll hear one of 'em sound bad. And it's because the other

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

13

microphone is picking him up; and mixing in the sound of his voice out of phase. So every now and then ... 'cause generally the low frequencies are what get distorted the most or are noticeable. So the guys voice might sound tinny in spots. All of a sudden he doesn't sound as full as before. Or if the, like you see a lotta times, they'll set up two microphones on a podium for one person; hopefully not to lose 'em, you know, if they turn away? Well what happens, the guy gets right in the middle and these things start cancelling each other out, you know? That kind of thing can happen and a knowledgeable engineer knows about it. And what he does, he ducks one microphone. You know.

TJ: So getting back, we were on the Fats Domino thing.

CM: Thankyou, alright. So now you got the horns right? So you take, again, a figure of eight microphone or a directional microphone. I use a figure of eight 'cause I had three of these ribbon microphones; which, incidentally, ...

TJ: Are those the pill mikes?

CM: The big square job or the one that looks like a big capsule.

TJ: Right.

CM: Right, yeah, right. That's a 77DX. I had one of those and two of the 44BX, the big square job. And I used the 44BX for the horns because I could put horns on either side of it and face its "dead" side to; say the drums, for instance. And things like that. So if you see pictures that weren't just staged; there aren't many unfortunately, and I'm as much to blame as anybody for that. But if you see pictures of 'em actually set up, just shooting candid, you'll see that kind of set up. You'll see the horns facing each other with their side, their shoulders to the drums or to maybe a guitar amp or something; depending on which was the offending, the most offending [Laughs]. It was always a matter of trade-offs, you know? Nothing, and especially the stuff I did, nothing was perfect. [Laughs]

TJ: Could you give me a general description of the room [On Rampart Street at J & M.]

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

14

CM: Okay. It was almost square which is a no-no these days they tell you. 'Cause what's happening is both resonances are very close to each other; so they're much more pronounced. If you could have a room which is much longer than it is wide; and that the height, the width, and the length, are not integral multiples of each other. In other words, you wouldn't want a room ten feet high, twenty feet wide, and thirty feet long. Because what's happening is the ten foot wide ones second harmonic is the same as the first harmonic of the twenty foot wide one, and on. So they would tend to boost each other and make things worse instead of better. So if you had a room thirteen feet high and, what, ... say thirty-one feet long, and something odd in between that as the width; so that none of these things were even integral multiples of each other; these basic dimensions, you know. And then if you could have non-parallel walls and ceilings and all; which, you see, there are more ways than one to do that. You've seen splays where the ceiling is a bunch of things at an angle; and that was so that the sound would go up and bounce off at an angle instead of coming right back at wherever it came from. So it had to make a trip around the room before it got back. That kinda thing.

TJ: What about the floors; did you do anything to the floors?

CM: Yeah. Well the floor was a floating floor. Remember that this room was designed by August Perez, Architects; in 1944. In 1944 the technology of building recording spaces was fairly well advanced. The materials weren't the same as they are today, but the technology, the physics of it, was pretty well understood. And you have two problems. One is isolation; you keeping the noise you make out, away from the outside world; but more importantly, keeping the outside world's noise away from you. Isolation. You achieve isolation with two physical parameters: Mass; you know, like you've heard of guys building block walls and filling it with sand and things like that; and decoupling; two walls, one inside the other, not connected to each other; so the sound doesn't telegraph through the way you can put your ear on a railroad track and hear a train twenty miles away. Well sound in steel, incidently, travels about five thousand feet a second, instead of eleven hundred like in air.



Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

15

It's much faster. But anyway, so that room had a floating floor. It had sleepers; wood joists, flat shallow wood joists, sitting on soft pads. In those days they used Seletex. Today they use rubber and spring kinda things, generally. But again, like I say, the technology, the science was developed pretty well, the technology was catching up with the science. But so these pads are on sleepers; I mean the sleepers are on pads and the floors are attached to that; and it's not connected to the walls. So you've got this, literally, there was a floating floor. Alright? And it had a pad on top of the wood and a carpet on top of that. The walls were, there were two walls; an inner and an outer wall, and they were built with what's called staggered studs, to keep from having to take up that much space 'cause I didn't have space to waste. They had the walls close to each other; using a common sleeper, which is not the best way to do; but in my case was the best that I could do. And then the studs for the walls were staggered; so the wall on this side had the studs here and here and here; and on this side they were here and here. So they could be close; be almost, you know, past each other; but they weren't like this, they were like that. And then there was fiberglass sort of skittered between 'em to give some acoustic differentiation. The walls were plaster. In those days people still could afford plaster; today you wouldn't plaster. You'd use sheetrock and two or three thicknesses of it. But the walls were plaster on the upper part and then there was a wood stripping; furring, thin wood strips; and an acoustic tile on that. And the reason for the stripping was so that the acoustic tile could flex when low frequency sound hit it. Because sound is dissipated by converting it to heat energy by friction in the material it hits. So the upper walls that's what it was. The lower walls from about the wainscoating; the chair molding, down; the front was transite; which is a hard, asbestos and plaster board. Very hard (he knocks on the table), almost like marble; full o' holes. And the airspace behind that was greater, about three inches. And it was a two inch thick pad of acoustic material in that space, to absorb low end even more. And then about, oh I guess, two or three years before I left there, I got to understand about what's called bass traps. Which are devices you can build which resonate inside to certain frequencies or certain bands of frequencies. And they got a lotta acoustic material in 'em and they



Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel I

16

can literally absorb sounds that they're tuned to and you're tuned into too. What most studios would do is take whatever their primary resonances were; with those frequencies that the room boosted unnecessarily; too much; and they would build bass traps for those frequencies; so to flatten the room's frequency response, physically, by absorbing that small range of frequencies more. And now they can build with just like a casket, with a linoleum face on it. And the casket volume inside tunes to whatever the dimensions and volume you've created; and the linoleum vibrates and dissipates that sound energy again by creating heat through friction in its particles.

TJ: I mean I was kind of led to believe that Rampart and Dumaine, I mean J & M, was kind of ... that you threw up a wall [Laughs].

CM: No, it wasn't. It was State-of-the-Art except that it was built at a time when the State-of-the-Art was changing tremendously every year; right after World War II. So it was built State-of-the-Art for 1945.

TJ: But you couldn't keep up with the times.

CM: No, no. Well I didn't have the financial resources; for one thing and I didn't have the space either. But there were a coupla, few things I did as ... I gradually changed. I went to more mixer inputs and got the reverb; finally wound up with some E Q; those kinds of things.

TJ: You did go up to four inputs?

CM: To eight. The original machine only had three. But quickly I went to four. And then I bought a small portable and this allowed me eight. And I had the original four; so I could give up one of the eight, have seven direct, and then I could take that four input mixer and use it, say, on the drums; and feed it into the eighth position as a drum sub master. So I could control kick, snare ....

Interview with

COSIMO MATASSA

Interviewer: Tad Jones

Location: Tulane University

William R. Hogan Jazz Archive

July 17, 1993

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

2

TJ: Okay so you went from a four mixer to ...?

CM: ...to an eight.

TJ: What capacity did that give you?

CM: Well it allowed me, number one, to mike more things independently and get a little better balance that wasn't physical by placement of the people in the room; because that was always difficult and if you had more than five players, it was really difficult!

TJ: Did you often have more than five?

CM: Oh sure! I mean I did Dooky Chase's band; seventeen pieces in that room!

TJ: Ooooh!

CM: [Laughs] Can you imagine?! Now that's a name you don't hear; come to think of it. And Dave's big band.

TJ: Yeah, that's right. You had to do all those side things for Dave Bartholomew's big band. So when you only had four how would you do it?

CM: Well by then I think I had, let me see; by then I had the eight. Again, you'd have to group people. For instance; group reeds, say. Say if you had two reeds or three, you had to group 'em. And then move 'em physically to balance 'em, level-wise. Inotherwords, if you had two tenors and one guy was just louder than the other; you'd have to move him back a little bit and listen until you ...

TJ: And then you would say, step back two. So you blamed the alto guy, just because of the nature of the instrument.

CM: Yeah, right! That kinda thing, yeah. It got to the point that sometimes you were tryin' to give 'em hand signals to back off a little bit or come up a little bit or whatever. You know? But that was in the early days and I didn't know what the audience was. I still didn't appreciate who the audience were.

TJ: Did you realize that this was gonna be a record; that

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

3

people were gonna listen to this. People are gonna buy it.

CM: Yeah I did that. But we were generally thinkin'; until the guys started comin' in and demandin' stuff that they could sell in Iowa [Laughs], you know. It was more of, 'we're gonna sell this from here to Pensacola.' Yeah, I had a very provincial attitude, I think, in that sense.

TJ: But that's understandable. I think a lot of people did. You're gonna sell a record to somebody's kid.

CM: Oh yeah, well I'd get the opposite of that for instance. You know you'd get guys who'd come here maybe from the West Coast; where they were used to hearing the bands out there play a certain way; and at first be a little put off by what they hear in New Orleans. 'Til you could watch 'em and see 'em change! You know the old thing about, you know, guys snapping their fingers or moving their ...; you could actually see 'em get into it. Because New Orleans bands move people. You know. If I took a guy to a club and he listened; after a while, if he was sensitive at all, if he just let his hair down, he was into it. And so, in fact, I forget the guys name now, one of 'em; I forget who it was, but one of the guys said that he didn't want me takin' him to clubs anymore; he wanted to bring the guys to the studio. Yeah! And he said, and I remember it like it was yesterday; he says, 'look,' he says, 'man, with a cool drink and a warm girl they all sounded good.' [Laughs] You know?!

TJ: Let's level this out.

CM: Yeah, right!

TJ: I wanna be sober.

CM: Inotherwords ... and he had a point! And the point was that the people who bought the record weren't gonna be in the ambiance of a club, weren't gonna be there with a date or girlfriend "du jour" or "de soire" [Laughs]; or whatever you wanna call it.

TJ: [Can't hear]... don't buy a live experience; they buy canned experience. Right!

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

4

- CM: And it had to be entirely in what they heard. Since they weren't gonna be seeing anything, hearing anything, feeling any ambiance, smelling any whatever, you know. And he was correct of course. So, I don't know who it was.
- TJ: It was not Jerry Wexler or Lew Chudd?
- CM: No they were more ... well, Chudd was a eternal cynic. But Wexler was, you know, New York Jew turned Atheist. Hard, sharp, experienced; you know, all the things Jerry Wexler is. You know. And I don't mean to demean him by that, although it's okay. That was what he brought to the room. So, you didn't have to tell Ahmet Ertegun, for instance, or Jerry Wexler, what to do; or suggest anything. 'Course I always suggested things. I always ... I would make a suggestion once and then never repeat it. Because I learned that's the best way to deal with it. But they were a great team, incidently. One of the few, where they'd fight like dogs about something. 'Do it this way, do it that way!' You know, 'change it!' Da- da -da! And then somewhere along the way one or the other would say, 'okay, your way!' And that was the end of it. There was no more; like at the end of the session, 'nyaa, we shoulda done ...' You know that ... I never heard that. Now maybe they did it back at home when they heard the tapes [Laughs]. I don't know. But I'll say that I appreciated that in 'em. And since I'm not a Jerry Wexler fan, I would presume that was Ahmet who brought that to the thing. Besides Ahmet was a very, how would you say, very strong individual. He is; I shouldn't say he was; in that he had certain ideas about things and that's what he wanted. But he would defer to Jerry or to an arranger or somebody if they said, you know, 'Try this, listen to this.' He'd say, 'yeah, that's it!' You know, 'good, go with it.' And he was the major partner; they were not equals.
- TJ: [Distortion]
- CM: Oh yeah, you could see. It was obvious. Oh, all the time, yeah. All the time.
- TJ: And you said you're not a Jerry Wexler fan. Is there anything ...?
- CM: Well I think he's a terrible human being but, you know,



Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

5

and I don't mind being on tape about it. But that's another story and I don't wanna rehash that.

TJ: Is it something he said; something he did?

CM: It's things he said and things he did. For instance, I'll give you a for instance! He showed up at Professor Longhair's funeral and did a eulogy?

TJ: Right.

CM: I could have thrown up! Here was a guy who'd never, ever did anything for Longhair; and stood up there like he had been his bosom buddy, standin' by him with his hand on his shoulder and, you know, the wind beneath his wings kind o' thing. And he never was any of those things.

TJ: What didn't he do?

CM: Nothing! If there was anything he might have done; he didn't. It didn't happen. Whether he was aware and could've and didn't; I don't know.

TJ: Well he keeps saying he did the Tipitina's session.

CM: [Cries out in frustration] But he didn't do anything for Longhair! You know what I'm sayin'?

TJ: Right.

CM: In fact, did you know I'm a co-writer of "Tipitina"?

TJ: No.

CM: Okay, all right.

TJ: Well how does that come about?

CM: Well because, 'cause it was disorganized. You know, "Tipitina" was disorganized. It was a bunch of little one line things between a bunch of piano playin'. And I helped organize it into a beginning, middle, and end; and like that. Cleaned up, clarified some of the word; you don't clarify much with Fess; but clarified some of the words; and gave it some structure. It was Fess's original thing; I didn't create it as such; but I helped make that record. Okay?

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

6

TJ: Do you have a credit on there?

CM: I used to be co-writer; I don't take the money though. It's supposed to be going to them.

TJ: Okay, I thought you had a name on there.

CM: Oh no, no. Like I say I was co-writer on it, but I don't take money for the song, though. I presume it's goin' to them; it's supposed to.

TJ: Well I think he gets his royalties from it. The copyrights been sold, I think to Warner Chappell, I think.

CM: And those packages are goin' two or three steps now; one to the other. The Golden Rule, "He who has the gold makes the rules."

TJ: [Laughs] So you didn't see Jerry as a great producer?

CM: Oh, he was a good producer; he was a very good producer! Oh, I don't have any problem with his work. I have a problem with him as a person!

TJ: Oh, okay.

CM: Okay?

TJ: Taking credit for things that maybe he didn't do?

CM: Well it wasn't so much like taking credit; but acting in this fashion that was totally inappropriate for what history was. You know. And I think that's terrible! You know, I would hope I would never do a thing like that. And if I ever did it inadvertently, I hope some friend o' mine would grab my coat and say, 'Are you crazy?!' You know, 'Cut that out!' You know, because it's not a nice thing to do! So I don't think he's a nice person; let's put it that way.

TJ: Okay. Well, I want to get back to some technical stuff. You'd mentioned E Q; which is equalization.

CM: Right, yeah.

TJ: On you're first board you had at J & M, there was no E Q. There was nothing?

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

7

CM: Nothing! Absolutely nothing!

TJ: Explain equalization; what it means.

CM: Okay. Well, there are a couple of major areas where equalization is used. Okay. One is in the mid to upper range, to increase or decrease presence or brightness. In the low mid range, you increase presence; 2500K, 2K, 3K; a thousand hertz. Okay. And the upper from 5, 7[K], up like that; the brightness. Okay, so if you could increase that you would increase ... say like; cymbals. If you bumped 5 or 7K up a little bit; or these days, 10K, maybe; you'd get the cymbals brighter and more incisive; cutting more; and more sizzle; the after ring. A voice, if you bumped up 2500 or 3000; you know, 2.5, 3K; you get more presence. If you bump up the low end, and there again you might get more "balls", okay. More of that low end, full sound, that's so good. And at the very low end; you can roll off alot of low-frequency garbage that's bouncing around; that's just muddying up the recording. Unfortunately, to do that, you need a filter, rather than an equalizer. Now a filter is like an equalizer, except the curves of the response are much sharper. Inotherwords, if a filter would say; whack everything from 40 hertz down, out, pretty good; where a equalizer would just taper it off so you'd still have something of the harmonic below it; say 20 hertz; you'd still have a fair amount of 20, when you're affecting 40 with an equalizer. But with a filter, you could take 40 down a couple o' DB, and have 20 almost gone; because a response curve is so much sharper.

TJ: But in those early records you had nothing?

CM: I had nothing. Absolutely nothing. And then, like I say, through this digging into the motion picture thing; I got a hold of; there was a company called Cinema, that used Western Electric, and ERPI, [Electrical Research Products, Incorporated] patents, and built equalizers for the motion picture industry. And the motion picture industry used equalizers like this; presence, which would be 3 and 5K. Booster dip; if somebody had a tinny sounding voice, you could actually dip that a little bit; and make 'em maybe sound more rounded. A low end for, generally, music, not voices. Very few people, you wanna boost the low end. There was a way to do that, incidentally, without

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

8

E Q, and I did that before I had E,Q; is that the ribbon microphones are a velocity microphone. They detect the velocity of the air particles.

TJ: That's why they have ribbons.

CM: That's why ... yeah. The ribbon does that. There's very light ribbon being flooded by the ...

TJ: Yeah, that's very sensitive, as well.

CM: Yes. Right. Well, since they're a velocity microphone; if you got up close to it; it would accentuate the low end. And the old time radio operators used to do it. They'd get right up close to a microphone and don't talk right into it, 'cause it would pop, you know? And they'd get that big old time radio announcer sound, you know. And I found out about that; so I used it, you know, by getting vocalists to be up close if they needed some low end bump or that kinda thing. And then, like I say, I sorta got ahold of a coupla cinema equalizers and a filter. And that helped things. But then I could only use it after the mix; or what I finally did was buy a separate microphone pre-amp for the vocalists. So I could use it; 'cause I'd have to bring it up to line level to use. These are line level things. They couldn't use 'em on microphones the way consoles do, you know. Single microphone inputs, you could take that one microphone and do things. Well, so I had this one microphone pre-amp for the vocalists. And then I got up line level. I could do things with the equalizer and filters on the vocal. Again, minimally. These filters were very good for the quality of 'em. Filters and equalizers also introduce phase shift. So you have to be careful there too.

TJ: But still, I mean, you said something about mixing. You were going directly to mono.

CM: No. Right. There was no second chance. Let's put it that way. You either did it then, or you didn't do it. I couldn't ... you couldn't do it. Now I'll say this. There was a guy, Bunny Robyn, who was the mastering engineer for Imperial and all of the independents, just about; on the West Coast at Master Recorders. Bunny Robyn, that's spelled R-O-B-Y-N, incidentally, Bunny Robyn was the mastering engineer that did the transfers

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

9

from tape to disk, and disk to disk, and things like that. And he was excellent; very, very good. And he probably, you know, saved my chestnuts when stuff I did was fairly poor; and he made it sound better before it came out. "Giving credit where credit is due," as they say.

TJ: Did you find he did that alot. Inotherwords, made not mistakes, but just improve ...?

CM: Well, I think he improved everything that I sent him. Yeah, no question about that. Some of it, dramatically.

TJ: Right.

CM: But then of course, there were other things that ... sometimes the effect was good and sometimes it was bad. Like speeding up tapes.

TJ: Right. They would do that?

CM: Yeah. Yeah, that was one of the things they did. In those days, the way they did it, if you remember the old tape recorder had this big spindle; about the size of a thumb. And they would wrap tape, splicing tape, on that to make the capstan bigger. To make it literally have a wider diameter and drive the tape faster; so you could incrementally raise the tape. So what they did; was, if you had to put on songs, and there wasn't enough; they put on some more. If it was too much; they peeled off some. You know. Very ... still developing the art as opposed to the science of the thing. And then later on they developed electronic controls on the tape recorder; so you could just speed it up and slow it down electrically. And it was repeatable and highly controllable and all of that.

TJ: That was, of course, up to the record company.

CM: Yeah, the record companies, yeah, yeah. Well, I think alot of 'em put their faith in Bunny.

TJ: Well, obviously, yeah.

CM: Yeah, and by that time ...

TJ: The art of mastering is ...



Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

10

- CM: Yeah, and not long after that, Bill Putnam moved from Chicago. He sold Universal in Chicago, and moved to the West Coast and became a force out there too, because of his ability, you know.
- TJ: I mean, we've touched on this before. Was there a specific style; this was still on Rampart Street; the way you approached a session? Was there a standard way that you approach a session as far as setup? In general?
- CM: Yeah, yeah, yeah. Yeah, that was when once they started playing; was the going and listen to 'em in the studio; and then try to make 'em sound in the control room like they sounded in the studio.
- TJ: Okay. Were the mikes placed already?
- CM: No, no, no. This is the process now of placing the microphones. 'Cause you gotta remember; these sessions; alot of 'em were done as head sessions. There were no arrangers on. So they're rehearsing and working on the stuff. And as soon as they got into that, then I could start doing my thing. Which is; while they're practicing, I could ask 'em, 'would you move here?'; and that. And then I go out and listen and come back in and check it and go out and listen and come back in. I had the facility to do that; they allowed me because of the time they took.
- TJ: Okay. But did you always have the drums in the same place? Were the horn players always standing in the same place? Basically, was the bass player always in the same place?
- CM: Oh well, there were a coupla three patterns that were constantly repeated; because of the limitations of the size of the room. For instance, the piano, was at the far side from the control room window. And it was turned so that the elbow of the harp was looking at the diagonal corner of the room. Inotherwords, what you had was the piano sitting there with the lid on the long stick; so that the lid was protecting the piano from the bounce of the corner behind it. And the microphone was in ... inotherwords, the lid was shielding the microphone itself, from the bounce of it; the immediate corner. But also, that allowed whoever was at the piano to turn slightly to the right, and

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

11

look at me. And that was it; I could see them and they could see me. So eye contact and hand signals meant something. 'Cause generally, a piano player, quite often was a vocalist.

TJ: ... was the leader. He generally was the leader.

CM: Yeah, uhmm-hmmm, uhmm-hmmm. Yeah he was somebody you needed communication with.

TJ: So it was not always where they were standing; it was also physical properties of the room as versus eye contact.

CM: Right! Eye contact, and the physical properties of the room, yeah, right; the mechanics of doing the session necessitated certain things. That meant that, for instance, the guitarist could be opposite the piano and the basses; because you wanted 'em close. See, because you gotta remember, now we're recording without monitors, speakers. You know when bands set up now and everybody's got a monitor so he can hear other people and he can get a mix that helps him? They had to hear each other in the room.

TJ: So no headsets; there's no headsets.

CM: No! It was only later that I got headsets. I started off without headsets.

TJ: The guitar player can't hear the bass.

CM: No, right. He had to be where he could hear it.

TJ: He could only hear the bass live and he could see you.

CM: And it was only later that I built a homemade rig for that to give 'em a headphone cue; later down the ... But it was before I moved from Rampart Street that I has headphone cue.

TJ: So you started having headphones on Rampart Street.

CM: Yeah, uhmm-hmm.

TJ: Oooh. That must have been something light years away.

CM: Yeah, yeah. Well, headphones do two things. They

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

12

facilitate the session. But they do another thing which is, to me, the biggest advantage. Is now the producer could communicate without interfering with the session. 'Cause originally, when he hit that talkback, it came out on a loudspeaker in the studio. So whatever we were doing was ruined at that point. So now he could hit the button and talk into the microphone; the talkback mike, and be heard only in the headphones. So now he could talk to people without stopping that particular cut.

TJ: The whole session, yeah. Which I'm sure happened a great deal.

CM: Oh yeah. Yeah. Oh yeah. Because what you have is people who didn't work efficiently and they would stop things unnecessarily. You know? Inopportune maybe would be the thing. Maybe the thing they heard that they didn't like should have been ... at least finish the take and maybe this is the best take we ever get? You know what I'm sayin'? But especially in those days when I couldn't edit or remix.

TJ: Yeah.

CM: But then again, that's a part of what went on.

TJ: So you said you couldn't edit. Couldn't you edit take one with take thirteen.

CM: When I finally got the tape, yeah. When I got the tape; remember I started off putting it on disk. Yeah. Yeah. But when I got the tape, yeah ... Oh yeah! ... lemme tell ya, as soon as it was discovered ... Wow! ... everybody jumped on it. 'I like intro five'...'I like first chorus here, first one there, and I want the other ending, but I want two of 'em.' So you'd have to copy it. You know, the guy wanted to extend the ending. Alot of times like we would do fades, and sometimes the guys would stop playing too soon. You know, either the producer would stop 'em, or somebody really goofed up or somethin' or somethin', you know? And you'd copy something and tag it on the end so then it could be faded when it was mastered; and give it another six seconds or somethin'.

TJ: Oh yeah. So that was another way to cheat. I mean, so to speak [Laughs].

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

13

- CM: Yeah, right. Oh, I consider it cheating! I don't consider it creative! Except on the part of the producers; it certainly isn't creative on the part of the musicians. Which I ... because of when I started, I'm probably too sold on how creative musicians should be, you know; performers I should say; and in performers I include the arrangers and the leaders.
- TJ: We talked about microphones. Once you started, you had the group there, and you started arranging microphones; did you have specific microphones you used for horns, specific for bass ...?
- CM: Yeah. Yeah. I had certain favorites, yeah. Yeah.
- TJ: Okay, well, horns. What do you use? What are your horn mikes? We touched on it.
- CM: Well, yeah. Horns; I sometimes used this one Telefunken microphone I got. The Neumann as they're known as today; which is the correct name for 'em. I use ribbon mikes because of the extreme, smooth, wide frequency response.
- TJ: And 77's?
- CM: The 77's and that kind o' thing, yeah.
- TJ: The pill mike; I call 'em.
- CM: And for vocals; the early Shure microphones. Some of the best vocal microphones even today are those Shures. But now, you know, it's the close hand held ones. But the first ones stand mounted. You may have seen them. The original birdcage, and then there was a 56. It was a directional, cardioid, dynamic microphone. A dynamic microphone is one that's got a voice coil in a magnetic field. And the voice ... the sound of your voice ...the sound vibrates a diaphragm which moves the voice coil that creates it. That's a dynamic ... it's like a little generator.
- TJ: Why was that so great for recording?
- CM: Well, because it had a natural roll off on the low end. And generally what you wanted was more presence and more top end; more definition on vocalists. There were a few that you needed bottom in; but mostly you had to

Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

14

roll it off. And this microphone had a built in roll off; which meant it also rolled off the other stuff that it picked up.

TJ: Right. Yeah, okay. Because if you're recording live then you're picking up everything else.

CM: Right. Right. I'm picking up everything else. So it's rolling off not just the vocalists.

TJ: Even though the vocalist is very close to the mike.

CM: Right. Right. It's still rolling off what it hears of the other stuff. So in a way, it was a built in E Q.

TJ: Was it the same mike for a male as a female?

CM: No. Not always. No. No.

TJ: Like Fats Domino and Irma Thomas.

CM: Well early on, as soon as I got the Telefunken; I guess we probably used either that Shure, or the Telefunken on Fats.

TJ: For a female you'd use?

CM: Females ... well, number one; there weren't alot of females. And, number two, the few we did get were, because of the times, were powerful singers. There weren't many that were lightweights. You know, I think back to people like Annie Laurie, you know, who would stand back, you know, two feet from the microphone; and still not get drowned out by the band when she let go.

TJ: Oh, really?

CM: Yeah! She was skinny like this!

TJ: She was that powerful?

CM: Oh, wonderful voice, I mean, she ... you know, just great. And others, you know; back then. And I experimented for a while. I got ahold of a couple of really good dynamic microphones made by a couple of other companies that are gone now. I'm tryin' to remember the names of 'em now. And a couple of capacitor microphones. They weren't the same; they



Interview w/ Cosimo Matassa  
July 17, 1993  
Interviewer: Tad Jones  
Reel II

15

didn't function, technically, the same way the [Telefunken] did. They were FM microphones. The diaphragm had a little coil on it. And they changed the tuning of an oscillator in the microphone; by the movement of the thing. And then they detect it, just like a radio detector picked up that change in the frequency of this oscillator; and recreated the original audio wave form. And they were very good. They still had a noise level higher than a dynamic microphone; the self noise, the noise due to the electronics and stuff. A little bit higher than dynamic microphones; so you wouldn't have used it to do a symphony orchestra; where you had to hang the thing fifteen, eighteen feet in the air. Okay. But things that were close up on the ... very, very good. But they weren't stable, which meant that they needed to be worked on alot. And so I eventually quit using those. In fact, everybody quit usin' 'em; they went out of vogue because they were a pain in the behind. I mean, you know, it's not enough that they wouldn't work; but for them to decide to not work in the middle of somethin' is when, you know, you can't have that.

TJ: In the middle of a session, yeah.

CM: I'll tell you somethin' about microphones. There always was a microphone I lusted after.

TJ: You lusted after a microphone?

CM: Yeah. But never had. Telefunken, Neumann made another microphone. And if you see.....