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The name Electric Lady Studios has long had a fascination well beyond the inner circles of the audio industry. Of the many illustrious names connected with Electric Lady, the famed studio in lower Manhattan, New York, we're bringing you interviews with two engineers who, each in his own time, have become household names among audio people and musicians. The "Then" is represented by Eddie Kramer, who mostly talks about his background before he and Jimi Hendrix began working at Electric Lady. The "Now" is represented by mixing engineer Michael Brauer who currently occupies Studio B at Electric Lady.

But let's begin by visiting for a brief moment with the man who built the place, John Storyk of Walters-Storyk Design Group.

**ELECTRIC LADY**

Connections

Interviews by Fernando Curiel with Lorenz Rychner

At the last minute, and due to the advice given to Jimi by Eddie Kramer, it was decided to abandon the plans for a club and, instead, build a recording studio in that location. I was hugely disappointed, thinking, "There goes my first major gig," but they kept me on. I drew up the plans for what became Electric Lady, and I learned a lot about acoustics from the specialist they contracted for that side of the project.

**But Electric Lady wasn't just another studio...**

No, it cost way more than a "regular" studio would have cost, and it had so many design features that were, let's say, "different", mostly to suit Jimi's whims. Just one of them: An elaborate theatrical lighting system that could flood each wall individually in a multitude of colors, to create any mood to inspire creativity...

**Is that how your dual-track career started, combining acoustics and studio design?**

Yes, even while the construction of Electric Lady was still going on, which took longer than initially planned, I got involved in the construction of two other studios at the time, and thousands of studios later I'm still at it...

John Storyk offers a generous amount of helpful articles and items on his website, at www.wsdg.com — look for the Technology link, and especially for the Library sublink with its many resources for Measurement and Analysis tools.
Eddie Kramer

When the Beatles recorded “All You Need Is Love”, when Led Zeppelin recorded “Whole Lotta Love”, and when Jimi Hendrix recorded “Purple Haze”, the man at the console was Eddie Kramer. The list of bands and artists who have Eddie Kramer’s credits on their records is long: The Rolling Stones, Kiss, David Bowie, Eric Clapton, Joe Cocker, Peter Frampton, Buddy Guy, Jeff Beck, Brian May, Carlos Santana... As if that wasn’t enough, in 1969 Eddie Kramer recorded at the historic Woodstock festival.

Jimi Hendrix died soon after the opening of Electric Lady in 1970, but Eddie Kramer worked there until 1975. Although he’s best known for his contributions to Classic Rock, he nevertheless has worked on recordings like Disturbing The Peace by Albatross, the album that introduced Steve Vai before he played with David Lee Roth and Whitesnake, or recordings like Among The Living by Anthrax.

Where did it all start for you?

Eddie Kramer: I grew up in South Africa, and luckily my family loved music. I listened, from Bach to Bartok, and my ears were always open to new sounds. I studied classical piano, at one stage I was going to be a concert pianist. Unfortunately I was never very studious, but I still love classical music, I listen to it every day when I’m in the gym.

As a teenager I fell in love with the Jazz of the day, especially Bebop, artists like Charlie Parker, Miles Davis, Oscar Peterson. From there it was natural to get into Rock n’ Roll because in the ’50s, in South Africa, we grew addicted to shortwave radio that played the music of North America, like Elvis Presley and especially Little Richard who rocked so hard on the piano...

At the beginning of the ’60s I went to England, just before the Beatles became famous, and in addition to music I took an interest in electronics, then I finally figured out how to take my then minimal talents into the recording studio.

Is it time to look back?

In 2012 I’ll have my 50th year in this industry, which seems ridiculous to me, and I’ll be 70, which seems even more ridiculous. Jimi Hendrix also would be 70—hard to imagine what he would have done!

I’m finishing a book called From The Other Side Of The Glass, as well as a documentary movie based on my photographs, with which I focus on what I call the Golden Years of Rock ‘n Roll, meaning from about 1967 to 1972. I have an extensive collection of photos of the bands with which I was working, like Led Zeppelin, The Stones, Hendrix, Traffic, etc... For the moment I have a temporary website, www.kramerarchives.com, where many of them can be seen.

How did you start working as a sound engineer?

I started as what they called a “tea boy”, basically a messenger, toilet cleaner, and served a lot of tea to various clients, really learning from the ground up. In those days there were no schools for audio engineers like they have them now. In the US there are about 400 music schools! I have lectured in many of them, like Berklee, Full Sail, Expression Center for the New Media, and I continue to tour all over the the US. But as you can imagine, you had to start at the bottom and work your way up to the top of the profession, in various studios.

The first was Advision Studios, where I learned to make mono recordings, cut discs, run a 35mm projector, etc. Then I went to Pye Studios, then I briefly had my own little studio, before I went to Olympic Sound. That’s where my “real” work began, I think of what came before as a preparation.

I was fortunate that in each of those studios there was an engineer who mentored me, Bob Auger at Pye, and Keith Grant at Olympic—I owe a lot to both of them. When I got to Olympic, in 1966, the studio moved from the center of London to a new studio across the river Thames where they built a whole new studio, which was a big jump, and as soon as we opened the doors, in 1967, we were in great demand, especially by rock bands. Jimi Hendrix was one of our first clients. Jimi and I got on very well, right from January of 1967, and the rest is history.

How did you record Jimi’s guitars?

Do you have a few days? [laughs] There is so much to talk about, but let’s see if we can be brief.

Hendrix came to the studio all prepared, with a clear understanding and vision of what he wanted the final product to be. My job was to interpret what he played, maybe enhancing it a bit, making it more exciting, expanding the sounds he gave me. But it all starts with the musician. The producer and engineer are only as good as what they’re given.

When you listen to Hendrix with a 100 W amp, flat out, then you hear him play at low volume achieving a different tone, the fact is that he is a master at manipulating those sounds from the same amp. The guitar is like a toy in his hands—he had complete command of the instrument, the tone, the technique. There was no separation between what was going on in his mind and what came out of the guitar. So our job was to capture that and all the other sounds, drums, bass, on only four tracks, and make it big, full, interesting. I believe we achieved this, with a fabulous Helios console at Olympic in what was one of the best sounding rooms in the history of recording.

The quality of his songs, maybe even more than his ability on the guitar, has allowed the transcendence of his music. What do you remember about Hendrix’s focus on songwriting?

Chas Chandler, Jimi’s producer, was used to making pop records, due to his background as the bassist of the Animals. He left the Animals and became a record producer. He was looking for talent and happened to find Jimi in New York, brought him to England, put a band together, and made the charts within a few months. Very impressive.
I started working with Jimi after his first single, "Hey Joe". Before that, Jimi and Chas were unhappy with their working conditions, but once at Olympic they felt much better. Chas was the guiding light, he encouraged Jimi to write, which he hadn't done, he had only played cover songs. Jimi responded beautifully, they sat up nights working on songs, and when Jimi came to

requires being creative. It's easy to use a plug-in, but there's nothing like the sound of the real thing. Then again, these days in 2011 the best analog gear can be compatible with the best digital. I've set out to find a seamless way to combine the best of these two worlds, and I think I've got it. One has to adapt. Use the best of analog, tube equipment, and the best of the digital.

Let's talk plug-ins.

Waves appears to me to be the best plug-in company, the sonic quality of its products is amazing. We've just launched the MPX plug-in, the third in my Eddie Kramer Collection. I started off with emulation of the Helios console that I used to record Hendrix, The Beatles, and The Stones. We've also got the Pye limiter and then the Ampex tape machine. I use these plug-ins in combination with analog gear.

How do you work with tape and transfers to digital while maintaining sonic integrity?

When I record contemporary groups, I record on multi-track tape, but at 15ips, that has the punch, the bump at the bottom end. I don't like the sound of 30ips, it sounds wimpy to me. Then I transfer to Pro Tools at 24 bit/96kHz, using Burl Audio converters, the best for Rock 'n Roll, and I mix on an analog console, I don't like the digital ones. Then I use a lot of my analog outboard gear, and from there I send the signal back to tape, and from the tape machine's output again through the Burl converters back to Pro Tools. A signal chain of analog -> digital -> analog -> digital—I think the results speak for themselves.

Let's talk about your work with the Beatles.

I only worked with them twice, to record "All You Need Is Love" and "Baby You're A Rich Man". I remember that at the time they couldn't get into Abbey Road and were looking for another studio that was cutting-edge, and Olympic was such an independent studio. It wasn't attached to a particular label, like Abbey Road was to EMI, and Decca and Philips had their own studios. Olympic had a terrific reputation for great gear.

When the Beatles chose Olympic I was thrilled, because, well, they were The Beatles! It was like working with royalty... I enjoyed my time with them very much. I remember them as being very pleasant, professional and disciplined.

The list of artists with whom you've worked is not only huge but varied. What's it like to work with Hendrix who used all that distortion, then years later with Anthrax, who also use distortion but in a much different genre?

There are some similarities. The truth is that I don't think anyone has been such a master of using distortion for tone and color as Jimi was. Anthrax and such bands use distortion in more modern styles, as an extension of what Jimi had come up with.

What advice can you give to those who are looking to improve their low-budget home recordings?

One has to know the basics. If you don't know how to record analog, don't even bother, you're gonna be screwing yourself. You have to have great grounding. You have to know where to put the microphone, but, even before that, before anything else, ask yourself if the song is good. If not, forget it. Then ask yourself, can the band play, or the individual? They have to be able to play well, in tune, and with good time without a click—click annoys me. It stumps the feel. Sure, quite a few drummers have learned to play with a click and pull the time ahead or behind the beat, it's a technique that can be learned, but not many do it well.

Let's say you're somebody who has some gear at home and wants to record a band. Where? In a box? Not good. Find a cheap studio with an old tape machine, place the mics in the right spots, record to tape if you can, and if that's too expensive, at least use great mic pres. Make sure the musicians can hear themselves and each other and that they can play together. Don't record one instrument at a time, it kills the vibe. I want the energy of a band that plays together, where they see and hear one another, that's the sound I want. That's the raw inspiration I'm after. But it's a matter of practice to play the instrument to the point of being able to express yourself with subtlety, intensity and clear emotion.

What's your opinion about voices, have they become better or worse?

The vocal performances suffer from the "we can fix it in Auto-Tune" syndrome. It's a terrible excuse. Learn how to sing, learn to play in tune and in time and with great feeling; I'd prefer to record a performance where the execution is a bit sloppy, but with lots of feeling and emotion, rather than one that's perfect but sounds like it's coming from a computer.

How did you get to record with Led Zeppelin?

I was fortunate to have known Jimmy Page since early in his career. I remember being the assistant engineer on a session in the early '60s where Jimmy Page did an overdub on a Kinks single. Then in '67
he was a session musician and at Olympic we recorded an album for Donovan, Hurdy Gurdy Man, and Jimmy recorded an incredible guitar solo. So I knew him, but not very well at all.

The one I knew very well was drummer John Paul Jones who was at Olympic every day, we became great friends. He played me the first recordings of Led Zeppelin and asked for my opinion, and I remember that I thought it was incredible, very heavy. In '69 they came to America and started touring. I worked on Led Zeppelin II, their second studio album, and I mixed it—in two days? [laughs]

What's the secret of the John "Bono" Bonham drum sound?

Just as one couldn't imagine the Rolling Stones without Mick or Keith, I can't imagine Led Zeppelin without Bonzo. His drumming style was so unique. He hit the drums very hard and he tuned them beautifully. That's why they were easy to record, just put the mic in the right place on his kit, and you got the Bonham sound. So in answer to your question that a lot of people ask me, I say, "Get John Bonham and put the mics in the right place."

Were there any projects where you were especially satisfied, and some where you weren't?

In this way he treats drums and bass differently from guitars, and from keys and vocals, to give each segment of the overall sound its own compression where compressors are acting at least as much as tonal shapers as they act as dynamic tools. His racks contain about 40 different high-end compressors...

Can we talk about the term "brauerize"—you trademarked it?

Michael H. Brauer: Well, I had to, just in case. There was an individual who was using my name to promote himself. And I don't know if a company decides to use my name or initials—it's not that "I'm so cool" [laughs] but more like a safety device, in case somebody uses my name to make money, I want to have a cut of that—we all have to make money...

But the reason I came up with the name wasn't for me, it started with Guy Berryman from Coldplay. They had mixed the third record with someone else, the X&Y record, and they listened and decided it wasn't there yet. So the band said "What should we do?" and Guy said "Let's brauerize it." They came here and he kept saying that, in here, like "brauerize it some more."

In the audio industry Michael H. Brauer has gained a name for a technique that he trademarked, called brauerize. It involves multibus and parallel compression, and it has been the topic of debates and the subject for imitators for at least ten years. In essence, it involves four stems for four buses A, B, C, and D, that serve to send different parts of the mix to different compressor chains. His console, an SSL J9000, allows for that routing that then goes to the summing amp and stereo mixdown.

How did it all begin?

But before the name itself, and me trademarking it, it took about 30 years to slowly develop the process for me. In the beginning it was two things, very basic: Multibus compression, and my send/return which was the 1176s—that glued everything together.

Multibus compression in itself is not parallel compression. Just because—if you send the drums to B and the guitars to C they’re going on parallel paths but...
Do you ever prefer to receive just the audio files and put them in Pro Tools and start from there, with the raw tracks?

Well, what is the raw track today? Without any plug-ins? That would not make sense in today's world. They're not making the sounds out in the studio, the sounds are made in the box. The plug-ins—the eq, the compressor, the delays—they are part of the sound they are hearing.

I don't care where it came from, analog, digital, with plug-ins, or not—as long as it sounds good and it's what they wanted to hear. If they spend six hours getting a great guitar sound and then don't let me hear it... It happened once, many years ago, in the early days of Pro Tools, when I got a session with nothing but direct guitar sounds, and I couldn't make sense of them—turns out that the guy had taken the plug-ins out before sending me the session. Just removed them.

What's the biggest number of compressors you've used, five or something, on one signal?

It's usually four to five, but they each have a completely different job. It's the combination of those; it's not, you know, five of the same, that would be stupid.

And is each one on its own channel?

Well it's on a bus [demonstrates board moves], and they return on five different channels, they feed the stereo bus, and that's the control for the send/return.

So it's all about having options?

That's how the brainierize came to be—it gives you so many options, and you take from it what you need, and you discard what doesn't work for you. It just depends on the style of music you do; I just have as many options, it can work for anybody who does anything, in film, TV, mixing, guys who are just doing ads... That's not to say that the traditional way doesn't work great also, because 98 percent of people don't do it this way; it's slowly growing, but it's not to say that this is a better way, it's an alternative way, with many many more options.

At times I go back to the traditional way. A is my traditional, A is the way I started, A is a [Neve] 33609 going into two Pultecs, so anytime I'm in the other fancy stuff I can always revert back to A.

What about the top, middle and bottom of the mix as you see it?

A lot of people misunderstand the multibus as top/middle/bottom eq-ing or something
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it's not. When I say the bottom end of the record, the bottom end of the record has just as much top end as the top end of the record—cymbals have top end! It's just the bottom end of the record meaning drums and bass, so I'll compress that differently than I would the guitars that, to me, is the middle of the record, and the way the guitars are hitting the compressor, the attacks and release, shouldn't be the same as the drums. So if you have them sharing, and you push the compressor for the sake of the guitars, you'd lose the sweet spot of the sound of the drums and the bass.

By sending the guitars to another sub-stereo with a different compressor you can get your cool things going on, and the interplay between the two, and then you can do the two together if you want by adding some send and returns that share all the instruments, there's no rule on this.

A, the traditional way, I tend to do for the top end of the record, or the depth things like the synths, backing vocals. But now lead vocals I used to do to A, now lead vocal is the send/return where I send it to four or five compressors and they're completely independent of anything else.

Will you apply the brauer technique to doubles, maybe the lead vocal as a double

Well, if the lead vocal has a double I float them all to the same processor. I do this even with harmonies. I go to two buses, I always bring my lead vocal back up to two channels. The reason I have two is, one is generally for the verses and one is for the chorus, because the verse is usually a different feel, a different approach than the chorus.

Quite often you have an intimate verse, he or she is singing in a low register, that might sound really muddy with a certain compressor setting, so you clean up the bottom end of the midrange and you get the kind of compressor that just brings out that quiet tone of the voice. And then on the chorus they might be belting it out. For a female, when she belts it, cleaning up that lower part of the voice, the way you did for the verse, will make the chorus really hard and stringent and just unappealing, or maybe she's hitting high notes and it's just a bit shrill because you had treated it for something low; and the reverb might be different, maybe there should be delays, you don't know, it just depends on the song. So more often than not the chorus is treated differently than the verse.

So, again, it's about options...

What works on one song may not work on another song, that's why I have such an arsenal here. Why the difference, I don't know, one might have been recorded at a different time, maybe she wasn't feeling great, maybe she had a little cold, so I find a compressor that clears all that out; maybe she should have sung it with a bit more intensity, or he, and it's not coming across that way, so I find a compressor that does that. At the end of the day the voice has to lead the song, assuming that's the function of the voice. It's either that or it's a groove maker, or both; you have to determine what's the function of the vocal. If it's a funk thing and it's just part of the groove, there's no message, really, that's fine, but if there is a message, an important message that drives the song, you have to be sure that the vocal is really bright and touching you. I put a lot of emphasis on that approach.

Most of the time these are ongoing masters, these roughs, they've been tweaking it for months, if it feels good to me that's where I'm gonna start. But all these facers start at zero, I'm building my mix up here with what's going on in there, and if I see that automation in there is counterproductive, if it keeps falling out of the pocket, I always know that feeling and I go "Ryan, is there automation on this thing?", and then I ask him what it is and I go "OK, that's the trouble, and from here on in keep it at that level" if whatever they were doing isn't working for me.

I mix a song in probably around three or four hours, so I don't need to suffer through things they've already suffered through.

What's your creative process when you get a song for the first time, do you sit down and listen to it first to see what's been done...

I always want the client here. I ask a lot of questions. If it sounds like the story is important, I ask them to tell me what the story is about. I can hear the lyrics, but what's the story behind the lyrics? Then I can get a better idea. I might ask "Why do you have a bridge? What happens at that point in the story? Is this where, you know, things are now being forgiven, or...?" Sometimes you can put too much hope in a song, or you can make it too dark when there should be more hope, so these are all important things when I ask these questions. It's all a feel thing anyway. You can give it too much movement, too much excitement when it's really still about stress. You can go to the instrument to give it more of a minor feel or a more positive feel, and by asking these questions you can get to it a lot quicker.

I also need to know an important other thing: What do they like about their rough mix? I'm not judging what they did, they don't know what I think yet, I'm not interested in giving them my opinion because I don't know what their opinion is. It's their song. If they explain things in a certain way, I might change, for example, my thoughts about the drum sound. It might make sense why they have the drums sound the way they do. But I won't know that until I ask the question. It's important to listen before starting to talk. So I generally shut up, I don't say much.

There are times when they're embarrassed to say this, but within the scope of an album they go "We really love this mix so much, it feels so great, that we weren't gonna mix it anyway, we've been living with this for so long, if you could make it just a little bit better" and then they tell me which. That's fine, what I'll do there, I'll match that mix, so it feels the same, and then I'll get going, then I'll make the little changes that I really feel improve it, and allow it to fit in the album a bit better. But they'll never tell you that if you're not open to that, if they feel they're stepping "on your art" or something.

What's the maximum number of tracks you like to sit down and actually mix?

Just about what you see here—47 or so, sometimes it gets a bit more, but Ryan (Gilligan, assistant engineer) makes the stems for me, he knows how far to go, he can determine what has to be opened up because he's been working with me long enough. I don't need to have eight backing vocals that are all in harmony, I need two, blended properly. And a lot of that stuff is already being done in the original session, they've already blended those, that's the way they've heard it, I don't need to change that if that's what they're living with and it sounds good. I'm not gonna re-invent all those kinds of balances, I have enough of a job just to get the thing feeling right, I don't re-do their comps.
Then there are times when the roughs are just bad, and they’re in agreement. But I’ll still want to listen to them, there might be one ingredient in there that is pretty good and that I can bring out.

Can we talk about mixing John Mayer’s guitar? It sounds so big, direct, like there’s nothing too fancy going on...

There’s not all that much that I do to it, he spends a lot of time getting his sound. I’ve been in the room where he tracked—he has six or seven amps all set up, he’s got thirty guitars all set up, he’s got a hundred pedals, and between him and Chad (Franzoi), his engineer, who also does the live sound, they spend all that time to get the right sound, so it comes to me like that. I just make sure it feels good, maybe I add one of my delays here or there, or a reverb that punches up something, but it sounds great when I first get it.

For guitars like John Mayer’s, or John Petrucci from Dream Theater, how many tracks do you normally get, just for the guitars?

Let me think, that was a while ago... I might have had probably a few options but they would have already been comped, already blended because they listened to it like that, so I wouldn’t pay close attention to how many there were. I would just do things like bring down the room sound if it was a bit too roomy for example.

Your approach to a mix is like playing an instrument, looking for feel or groove?

What I need to do is find the essence of the song as quickly as possible, so I start looking for what feels great to me immediately, what are the two or three ingredients that I can actually just start with. It could be acoustic and vocal, and if that feels really good I look for what’s missing; oh yes, maybe the keyboard, now you have maybe the essence of the song as it would work in a club.

If the essence is not in the drums, why start with the drums? Drums is a support factor. Look for what they wrote the song on. If they wrote it on a piano, you find yourself with a piano and a vocal, and a guitar to start with. Maybe I’ll add a bass under that, maybe the bass is very melodic and important to the song, so I’ll make that very loud and eq it so it plays an important part. Then I go “What’s missing here?” and maybe at that point I’ll add the drums. You should quickly decide what the sound of the drums should be.

If you do it the other way around, you may not realize that the drums don’t fit the rest of the song until the main ingredients are in. If you start with the main ingredients, everything else falls into place a lot easier.

Michael H. Brauer not only archives articles on his website where his methods and techniques are explained, but he personally has answered many questions from visitors to his site. Check out www.mbrauer.com