Interview with Jason - Part Five Transcript

Cam:
Now we come to the fifth part of my interview with Jason Lim from Instruō Modular based in Glasgow. And this part did not reach the radio broadcast because I was running out of time to fit the whole interview in. And it really is mainly Jason and I talking about modular stuff, which is the Eurorack modules that Jason and his team think up and make into a reality at their workshop in Glasgow. So a very nerdy talk that may only be of interest to people who use these electronic instruments, these Eurorack modules to create music. But you never know if you listen on, you might become interested yourself and go down that particular rabbit hole. So please don't say I didn't warn you.

It's interesting, thinking about traditional instruments and acoustic instruments, you know, where you've got an exciter and a resonator, whether it be strings and the body of a guitar or a violin or the membrane of a drum and the drum body ...and then you go across to where the sound is produced by an electronic circuit, oscillating and then you play with the frequencies and the responses and shaping the sounds that way. But it's still knowing what to expect when you patch an oscillator, say through a wave folder and then through a filter and sort of there's interesting parallels, but there's an interesting separation from physical instruments such as a piano or a guitar or a violin and using electronic instruments.
The thing I love about modular, I started off with synthesisers. I think I' might have said to you that he first synthesiser round was in MS-20, a Korg MS-20. And that was semi modular, but I didn't realise what I had at the time. And then, you know, I got other hardware since a very fixed architecture, oscillator, filter, envelope generator, voltage control amplifier. And when I went to modular, fully appreciating what it can do, that sort of opened up horizons for sound generation and sound production and haven't looked back. It's thanks to companies like Instruō.
And gee the Eurorack universe has expanded incredibly, hasn't it?

Jason:
Yeah. It's when I was getting into, you know, learned of Eurorack and was getting into modern modular since it was, it was pretty much about the same time that I Dream of Wires came out, the documentary. Yeah. So that was wild because I sort of learned of this instrument. I was like, okay, I need to buy all the Make Noise modules and like, watch that documentary. And, you know, because there were two versions. There was the radio edit that was like a normal documentary. And then there was like the full unabridged one that was like three hours long or something and yeah, I just devoured that. I was like, this is incredible. Like not just the instruments or the creativity there, but like just the communications I had where with a lot of the companies that were based in Portland at that time, I think some of them still are.
So like 4MS, so like Dan Green at 4MS, like he, he was maybe one of the first manufacturers, designers that I spoke to. And he was so generous with his

advice, sharing it like he was like sharing part numbers. Oh yeah, try, try, try this potentiometer, like this is, this is the one that we use it just like it's panel mount, snap in, so you don't need to do point to point wiring. And because I'd, yeah, early modules that I'd built from kits, like, you know, there's the 4MS PEG and learn from that. So I got that, like was oh right. That's how they've constructed it. It's faceplate. And then it's, it's, it's parallel boards mesh together versus doper modules that are all perpendicular and like right angled parts and stuff.

Cam:
Very deep modules…

Jason:
So it was just, yeah. Yeah. And just sort of seeing these different approaches and chatting to them and then like meeting them at Knobcon or at different, you know, synth events, like there's an expo in Brooklyn that I went to at one point. And yeah, just, like it was, it was weird. It was, it was meeting them, being like, I know you from that documentary! That's, this is weird. But like they were, everyone was so helpful and open. So I think that like from the get go, I was like, this is, this is a community I want to be part of.
So I've kind of, I've tried to, that's, that's been a big inspiration for how I've wanted to operate myself as a manufacturer or as, as, as I've sort of become more experienced in the field is, you know, I try to be as generous with my knowledge as, as it was shown to me, like in those early days.

Cam:
So that's… you know, even the name, even the name, sorry to interrupt, even the name Instruō is sort of like a reflection of that because it's sort of "Instruōuctional" I love your, you know, you're, you're teaching people your, whenever Jason releases a module and we've talked about this in the past, it is actually harder to, to get a shorter (video)…

Jason:
Oh, it's, it's, it's easy. It's easier. Yeah.

Cam:
It's… you're very, you're very generous with your time. And like if, if someone doesn't understand their module, it's just because they haven't, you know, they haven't taken the time to watch your videos because you go through every aspect because you've designed them and you've built them, you know, you know what they do. Yeah. You're very, you're very really do share. You're not, you're not one of these module manufacturers that release these esoteric statements about like almost alchemic properties of your modules. And I'm, I'm thinking of one module manufacturer in particular, but I'll not mention them. There are some modular manufacturers that sort of leave you guessing of it, which is part of the journey as well.
But if you want to make the most of things, it's good to not read the manual.

Yeah. So you, you, you just seem to keep producing modules. The Glock, where that come from? You didn't tell me about that last time I saw you?.

Jason:
Oh, that's, that's one of Murdo's. That's, it was a, it's a funny one.
So like we were still sitting on a surplus of eight bit microcontrollers that were in stock at one point mid lockdown during the chip short-transit. I was like, okay, I'm not actively using that part. They're in stock. They're clearly not particularly, they've got a tiny amount of program memory. So they're very limited, but I'll just buy a reel of that just so that if need be, we could design something with it. Just stockpiling what components were available at the time and Murdo pitched the idea of doing some sort of clock divider, clock multiplier using it. I was like, we've got these eight bit controllers that should be more than capable of doing what you've suggested.
The design evolved. We ended up going with a much, much faster, more sophisticated processor that just opened the doors.
But I think like that early, that early iteration, restricted memory, restricted, you know, CPU speed kind of got in focus.
But I think I remember, I remember in pitching the ideas and it's a lot of them were familiar because it's things that I've sketched out or dabbled with at times in terms of clock processing.
But then the biggest hurdle in designing is feature creep. It's working around, yeah, like designs can collapse in on themselves because you start somewhere and say, oh, if I just add that, or if I keep this open, the worst thing is when you like just add more buttons or LEDs, okay, well, these can have different colors. So I can bury modes in it after the fact.
But it's inevitable. That's the constant battle is fighting feature creep when designing. And I'd already gone through a few attempts of something that was a clock-based processor that the designs imploded because I just kept adding more things. I was like, this isn't working. This is too much.
So Murdo came with a clear pitch of like, yeah, what about this? Something that does, you know, these, these spread of divisions. And I kind of just left him left him to it. And once, once we sort of landed on something, I was able to put together an interface design, a panel design layout.
And we came up with some ideas and we kind of it was just a back and forth and they're like, you just have to weigh up building firmware of it. And we went through a few sort of cycles of like flurries of activity, things came together and I was okay, this is working. We've got a functional prototype and patching with it.
Actually, I think there's one in it's maybe it's maybe the sort of performance that I did before that signal sounds one, like a previous set. I had an early prototype of the Glock at that stage, like it's, it's years old. But it's, it's, yeah, it kind of has gone in cycles of like having lots of activity on it.
And then we hit a point where it's like, oh, this, this is cool. But if we just add that and we like discover something, it's like, okay, that's, that means it's an entire, we need to just, I say we murder the one that rolled the firmware for it. So it was like, okay, start again, start from scratch. Like we've learned a lot from

this iteration, but it's a case that like nothing, if we want to add this feature set, it's completely incompatible with the framework that came before.

So it was a case of like start again. And that's, that's really, that's the hard part. It's, it's a, it can be very demoralising. You get to a point it's like, oh, shit. I know what it needs to do, but I need to rebuild the entire code base from the ground up and he's done it several times.

Yeah. Like what we've landed on is it's brilliant. Like what, like the probabilistic engine and some of the limitations, because there used to be like full controls for being able to rotate everything or lock certain things and things would rotate around it.

But really like rotating clock dividers, that's, that's not a new thing. There, there've been various modules out there. It's a really logical, really good idea. But musically, if you're rotating around, you're going from like a faster, you're 16th note, 32nd note division. If it rotates round and you flip up, you then go down to like double whole notes and it's such a, such a jump in time base that it's musically, it's very hard to work with.

So like realising if we keep it a bit more limited and then add ability to modulate and modify the, the patterns, like that's, that's where it like when you pitch that, yeah.

Cam:
It's going to replace PAMs in my Instruō case. And I'm very grateful to you for that. Cause it's all black and my black and brass gold look is coming together. Cause yeah, I'm very much about functionality, but I also love the aesthetics of that whole system looking. It plays a big part.

Jason:
I mean, like it's, it's very easy to, to sort of try and explain away the, the superficiality of the essay. It's like, well, it's all about how it sounds, which ultimately, yes, it's, it's resulting in music, but you need to enjoy playing the thing and, and, and looking at the thing.

I think it is a big part of it, but it's really, that's the, that's one of the bigger subjective elements of instrument design. It's a, yeah, but it's, that's, that's the fun part.

Yeah. Like I've found a, I've found a, a style that I've sort of got into the, the rhythm of. So it's like, it, it doesn't feel, it's, it's a nice challenge every time I'm coming up with a new interface design and like how to tie things together.

Cam:
Thank you very much, Jason for your time. I think there's so much more I could talk to you about and hopefully maybe in the future, if you get the time, we can do this again.

Jason:
Oh, definitely. Yeah.

Cam:

Thank you very much.

You've been listening to me talking to Jason Lim from Instruō Instruments in Glasgow and he's generously given his time and I'm really looking forward to playing this music to the