Setting up an Affordable Home Composition Studio Webinar
April 23, 2020
Closed Caption Transcript

11:01:16 > JP: Well I am here, it's 11 o'clock,
11:01:20 my name is James Patrick and if not seems like an okay time for me
11:01:24 to start this cool little hangout we will do some education
11:01:27 and maybe some edutainment around the idea
11:01:31 of setting up your own home composition studio.
11:01:39 I've been making music my whole life, I founded the Academy with [can't understand]
11:01:43 seven or eight years ago after working in education and audio
11:01:48 my whole life, I started as a DJ and I was a DJ for many years
11:01:52 and then got into composition and I have been producing and arranging my own
music
11:01:55 for 20 years now and doing a lot of it from home.
11:02:00 I will show off a lot of the tricks I have learned to make this whole thing fun and easy
11:02:04 and I will get your ideas down, especially during this
11:02:08 kind of time where we are all stuck at home anyway.
11:02:14 So it might be a really good time to refine that home studio workflow
11:02:18 so I've got a little slideshow put together we will go through,
11:02:21 and I'm going to be doing my best to watch the chat too
11:02:27 so if anyone wants to ask any questions I'm into making this is interactive as possible.
11:02:30 Let's call this your class and you can direct it however you would like.
11:02:33 I love questions and I love being interrupted.
11:02:36 Especially if it's about music.
11:02:40 So I guess I will share my screen
11:02:42 and pull up my little slideshow.
11:02:47 >> VANESSA ROSE: I am going to say hi first before you go to the slides.
11:02:51 I Vanessa Rosalie President and CEO of the American composers forum.
11:02:56 Thank you so much for joining us and for offering this to everybody today.
11:02:59 This is one of a series of different webinars we are doing together
11:03:04 with our friends at slam Academy and also springboard for the arts.
11:03:08 If you see our list of webinars and you see things that are not there
11:03:11 that you think would be really helpful for you and others,
11:03:13 please let us know.
11:03:20 You can write us at -- let's see, we can do membership at composers forum dot org
11:03:23 that will reach us really quickly and we will put it together
11:03:26 and find somebody to help share their expertise.
11:03:30 We really want to be here to both of you support at this time,
11:03:33 community and connection when you are all at home
11:03:38 and trying to be creative and trying to sustain yourselves at this time.
11:03:42 So however we can help, we would love to hear from you.
11:03:45 Really pleased to offer an introduction
11:03:49 to my colleague Yan Pang was here too
11:03:53 will go over a few housekeeping items for today,
11:03:58 and thank you again to James for joining us today.
11:04:06 >> YAN PANG: Hi everyone,
11:04:11 this will be recorded and posted to our website.
11:04:17 Please keep your phone or computer muted during the session to minimize background noise.
11:04:20 When James Patrick is ready for questions you can type them into the chat
11:04:27 and we will take questions up to an hour or so.
11:04:27 If any of his questions are not finance and we will follow-up you off-line.
11:04:30 I will be back at the end of session to wrap things up
11:04:33 and share details about upcoming webinars and topics.
11:04:38 So let's welcome James Patrick [can't understand] to get us started.
11:05:00 >> VANESSA ROSE: Is anybody else having trouble hearing James Patrick?
11:05:03 I am not hearing you.
11:05:09 > JP: Will have to please forgive me for that.
11:05:13 I was following the instructions and I muted my microphone.
11:05:16 So I wanted to take a moment to thank
11:05:19 American composers forum and springboard,
11:05:24 also of course the slam Academy for helping to put these things together during this time.
11:05:30 Anything we can do to stay connected and stay friends feels great
11:05:37 and I'm really honored to be here something for hosting to everyone.
11:05:37 And even more importantly thanks to everyone for showing up today.
11:05:40 It sounds like we have had a nice registrations
11:05:44 and there's maybe a couple of names on the list that I recognize
11:05:49 so hello if I have not talked to you for a while.
11:05:49 For those of you that don't know me my name is James Patrick
11:05:53 and I come with about 25 years of making music experience.
11:05:58 I was the founder of slam Academy along with the founder Dr. Jay Allen
11:06:06 as well as having a lot of expense working for cool people.
11:06:06 A lot of my mentors were like Prince's engineers and bass players and stuff
11:06:12 and I grew up with Jan [can't understand] so there is something that got connected there pretty early on for me
11:06:17 and now I am here, around the slam Academy, I'm the chief content officer.
11:06:21 We are primarily an electronic music school.
11:06:23 We teach people how to build their home studio.
11:06:27 And compose and arrange, but we do a lot of production
11:06:29 and sound design is stuff like that.
11:06:34 So a quick plug there if anyone is looking to learn more about electronic music production
11:06:38 definitely hit up slam Academy, we are the best place to learn
11:06:41 how to make your own electronic music.
11:06:43 But that's not what we are here to talk about today.
11:06:48 Today we're going to talk about how to set up your own home composition studio.
This is a really good perfect time for this class because everyone is stuck at home and all the better recent and also probably want to do say money so we will try to keep this affordable and I got a slideshow put together to cover I think pretty much anything you are going to want to know. If you’re going to want to start composing and arranging your original music at home which many of you probably are maybe will be able to uncover some tips. We will go through hardware needs, software needs, how to save money on a budget and I will give you a lot of recommendations for different types of equipment to maybe use or not use as well as we will go through Signal flow and signal management in your home studio and you get a chance to talk about acoustic treatment and how to make sure you’re getting the best recordings of your microphones and also your mixes we want to make sure you have a nice quiet room to work in, all of the stuff we will talk about now.

I cannot get eChat up and I will keep an eye on for any questions. One thing I mentioned earlier is that this is your class, so please any questions you have for anytime you feel so inspired to interrupt me please do it because I am really into the discourse aspect of this. Some nice links up there in the chat too and also for slam Academy, thanks for that, Vanessa. I can go ahead and give myself a little more gain. I'm pretty loud on my end. I saw James saying I was a little quiet. Yes, I am watching my meters, I will make sure I am nice and loud on my end. If you crank your end up little bit, cool. Thank you for the input though, if anyone can't hear me or anything gets word on the technology aspect please hit me up.

To set up a home affordable composition studio the biggest thing is you want to make sure you understand as far as technology is concerned is the hardware. If everyone can see my screen now I will go ahead and talk about some basic things were going to want to make sure we cover today and hang out. I will start at the top. To set up a home affordable composition studio the biggest thing is you want to make sure you understand as far as technology is concerned is the hardware. Let's take a few minutes to discuss the essential hardware ingredients required to build a home composition studio. Some of these things are probably review,
but I would like to take a few minutes to make sure everyone has a good grip
on which kind of microphones you probably want, what kind of instruments
I would recommend at least as far as best practices for sampling and recording of
instruments.
Also do you need mixers and microphones, microphone preamps and all of the
classic analog technology?
Some of that stuff is valuable but in modern times a lot of it is unnecessary.
So let's just take a few minutes to talk about some of the hardware things.
A lot of people, you know, part of being a home composer
really is having a good grip on your sound sources.
Whether it's vocals or your guitars or your amplifiers or anything
that you are actually going to be capturing for your performance
having a great microphone or having a decent microphone
is becoming a lot more affordable than it used to be.
Even when I grew up having a nice microphone would've cost
hundreds and hundreds of dollars and you usually needed a nice microphone preamp
and this scenario gets pretty extensive quickly.
The microphone industry has complete me change in the last five years
and nowadays there were really great microphone you can get for $150.
And in the condenser department.
Let's talk really quickly about a condenser versus a dynamic microphone.
I will go really briefly here but
there are really two different kinds of mics.
There are mics made to be on the stage, those are dynamic microphone.
Then the raw microphones made to be the studio.
The condenser microphone is what you want use of the studio.
Generally for vocals and other studio applications a large diaphragm condenser
microphone is what you will end up using for that.
Is a really popular company called blue microphones that makes
all different kinds of microphones for under 200 or $250
and many of them are even US-made so I have a soundcard built right in
that will convert the center digital
and you can send it straight into your laptop or computer
and that will handle all of the technology and you will save money on the microphone
preamp and on the mic cable even
and also getting into a pretty solid large diaphragm condenser.
Again blue is a company that I recommend
for really affordable options, but then also
if you are looking at
just a nice, solid, non-USB microphone
there's an microphone company called Cascade and they make a microphone
called the fathead that I think you get for 150 or $200.
For an analog microphone that is not USB the cascade fathead
is a microphone I really love for the money and for recording vocals
11:12:29 and all sorts of home recording stuff.
11:12:30 A large diaphragm condenser of any variety will be great in the microphone industry
11:12:36 has become really competitive.
11:12:36 If I was going on a real budget I would get a USB large diaphragm condenser microphone
11:12:41 from blue and I would probably spend $200 on it, or $150
11:12:48 and all of my recording needs would probably be pretty much handle.
11:12:48 I also believe everyone at home being a composer
11:12:54 should have a dynamic microphone as well.
11:12:55 There was one industry-standard dynamic Mike that you have probably all use before
11:13:01 called a short SM 58, they make an instrument version of that cold a short SM 57
11:13:05 and it's a $90 microphone and you can defend yourself with it
11:13:11 in the middle of an outbreak, they are pretty much impossible to break and that is
11:13:14 why they are made for the stage.
11:13:19 Dynamic microphones in general have a mechanical transducer
11:13:25 so instead of a little thin sheet of mylar that can pick a very sensitive frequencies
11:13:30 like in a large diaphragm condenser, it's really great for recording sensitive subtle
11:13:33 articulations at such.
11:13:39 I dynamic microphone is harder to move so it does not pick up the high frequencies
11:13:41 But again for being on a stage and also
11:13:42 and keeping feedback the dynamic microphone is great.
11:13:45 Another reason why you might want a dynamic microphone on home in the studio
11:13:50 is if you are recording guitars or guitar hang amplifiers
11:13:55 hanging a microphone over a speaker cabinet is kind of a rock 'n' roll practice.
11:13:55 Dynamic microphones can be really good for that too are moving on from the
11:13:59 I generally think that every home composer needs to have a nice
11:14:05 sound module of some sort this is just basically a fancy word for a keyboard
11:14:08 that has a bunch of sounds in it.
11:14:12 Really popular keyboards for this kind of stuff,
11:14:15 Roland makes one called the Phantom
11:14:25 and a lot of composers prefer having waited keys because you are familiar with the
11:14:33 feel of a real piano.
11:14:38 The Phantom six or Phantom eight, they are not super cheap
11:14:41 but if you want to have one singular keyboard that feels like a real piano that has an
11:14:42 entire orchestra's
11:14:43 worth of sounds and at this is another invaluable composer tool I feel.
11:14:47 For us in the studio we use a role in Phantom 08 and a Roland Jupiter
11:14:50 which is a more synthesizer feeling on the keys but billions of amazing sounds built-in.
11:14:55 The nice thing about having sounds built into a keyboard is
11:15:03 MID I as you may be familiar with, MID I with its articulations and stuff,
11:15:10 I am not sure if you ever tried to play in MIDI trombone on a keyboard but it doesn’t sound very real at all
11:15:15 because of nature MIDI, it cannot articulate those gestures the same way
11:15:18 that a real musician cannot a real instrument of course,
11:15:24 but when you have sounds built into a keyboard they are capable of articulating at a much higher resolution level
11:15:27 and if you are just connecting a mini keyboard to a computer.
11:15:30 So just something to consider.
11:15:33 A lot of people find that home composers find that the ceiling
11:15:37 is pretty low for how good they can make their own music sound,
11:15:41 and I found that having a sound module like a keyboard with sounds built in
11:15:46 really goes a long way.
11:15:46 Back in the 1990s and early 2000s
11:15:51 the court Triton was the industry-standard instrument, if you guys remember those.
11:15:56 Morels may be the Yamaha motif which took over around the year 2000.
11:16:01 Those became the industry-standard sound module keyboard for home composers.
11:16:06 Nowadays I would probably get a Jupiter or Phantom by Roland myself.
11:16:12 Instruments.
11:16:12 You want to have access to the world of sounds.
11:16:15 Having a nice sound module goes a long way.
11:16:23 I wrote mixers and microphone preempts.
11:16:23 A lot of people especially if you are over 40 years old
11:16:28 when you think about a studio the first thing you think about is a big mixing console in
11:16:33 the middle-of-the-road.
11:16:33 I myself took a while to get over this but basically we don't really need those anymore.
11:16:37 There are a couple of different ways to read your home studio.
11:16:40 Like I was saying before with so many things integrated nondigitally
11:16:45 with USB and such the need for microphone preempts is kind of unnecessary really.
11:16:52 Same with the big mixer.
11:16:53 If you were a recording engineer and this was about recording bands and stuff
11:17:02 we would be talking more about mixers but for composers we don't need any of that stuff.
11:17:02 Save the money, save the time.
11:17:06 The other thing about cables, I just put this on here and it may sound simple but again
11:17:13 if this was an audio engineering class
11:17:13 we would be talking a lot more about these different variables and I'm happy to
11:17:19 answer questions about balanced versus unbalanced etc.
11:17:24 But in general like I said most peripherals are connected to the computer with USB nowadays.
11:17:24 So we are able to save a lot of money and not spend much money on Xers and cables and
11:17:29 even audio interfaces are all built into the equipment nowadays.
11:17:33 So if you're familiar offhand about how audio and MIDI I
11:17:37 interfaces work they are basically be ears and mouth of the computer.
If you're going to be recording anything or playing anything back, you usually end up with a party audio interface. Most common for composers is probably [can't understand] or universal audio. The suppressor really like and I recommend. You can get into a universal audio stereo sound card, they are kind of expensive, about 800 or 900. and that will basically have the same ins and outs that you have in your laptop. Again since we're talking about a home composer studio that is affordable, I would honestly slay until you are recording bands and stuff or recording yourself doing a lot of life instrumentation. One exception is a lot of composers really enjoy working in surroundsound. If you are going to be going that route it's not going to be super affordable no matter how you cut it but you will need an audio interface with 405 or maybe eight outputs to distribute the sound around the room and such. So composers that are ready music for film have to do that because maybe you are just arranging the notes most of the time, but when it comes down to actually placing the sounds in the surroundsound field if you are working on that level doing it all on your own, I have scored a lot of films and only on the very big ones do I get to have the stems off to a mixing engineer. Usually if I'm scoring it and it's an independent film I'm also doing the sound design also mixing it because you get a zero budget or a low-budget scenario. In that case having a surroundsound interface or an interface that can handle multichannel audio is going to be pretty important. Again for brands that I recommend, [can't understand] I really like and universal audio is the other brand that is really, really awesome. So moving on and again I am totally here for questions that everyone should know I think. The next thing a lot of people ask about is the computer obviously and Do I need a Mac or PC for home composition. They are all perfectly good, you will get some people saying Macs are better and ultimately that is not true. A computer is a computer. It's all about how you use it. Most modern audio software does work best on a Mac. I'm dissing that as far as the weather is integrated for creating art and designed to be doing that. That's great but nowadays I know a lot of composers
that run PCs or limit boxes at home and they are able to do a lot. So it's kind of what you are comfortable with is really what matters. It's all about workflow, it's not about the brand. You get workflow just by picking one and using it all the time. I think most people are on Macs in the audio environment.

IV condenser mics good for spoken words and podcasts too? JP: Yes, absolutely. Any sort of podcasts or dialogue recording, a large die from condenser Mike with USB and you will get once with the audio interface built in with one mic cable. I think for podcasting and stuff that is definitely the best choice because you don't want to worry about all the cables and monkeying around, you just want to plug in and start talking over the case of spoken word when the news hits or whatever you just want to go. So large diaphragm condenser that is USB. Again brands, you know, nothing at the $150 price point is going to be serviceable. So keep in mind that anything you buy at that price point, don't drop it or break it because no one will ever repair those kinds of things, they just go in the garbage. So watch out for that. I have thrown several blue microphones away because it gets knocked over and the capsule cracks or something weird happens and there is no servicing things that are built at that price point. They are all glued together on the inside unfortunately. That's what you get for the money so do whatever that. Yes, blue makes a really nice one, I can't remember what it's called for podcasts but announcement on the table and it has a volume knob that mute switch right on it, it's black, LLC USB and I can't remember the model number but check on the website. Thanks for the question though. Last little hardware note I wanted to mention is everyone of course if you are a composer you need to have a keyboard nearby. I definitely think that having a nice 61 key many keyboard is kind of essential. As far as makes and models a MID I keyboard is pretty much a keyboard. They are all the same and for about $100 you can get a [can't understand] keyboard that has no buttons or knobs or anything just a whole bunch of keys and that is going to be pretty essential. For people who are using the able to live software which is probably the most advanced composition software out there nowadays there is a device called the Bush which is a really great composition tool as well. You will know if you need one of those. But a mini keyboard I recommend the T station 61 it's $100
11:23:09 and that's a great way to get your hands on some keys and for a little bit more money
11:23:14 I might recommend novation makes a nice line of keyboards,
11:23:22 they have a line called novation key station they are called.
11:23:23 The 61 key is I think about $240 or $250
11:23:29 and it has a bunch of knobs and buttons that you can use to control parameters in
your software which can be really nice.
11:23:35 I think on a total budget you get yourself a USB large diaphragm condenser mic
11:23:39 and you plug it into your Mac or your PC
11:23:43 and you have an M1 D keyboard also connected.
11:23:46 So once you record your sounds you can then
11:23:50 sequence and arrange them with the keyboard.
11:24:00 >> YAN PANG: Jennifer is wondering about a blue yeti pro.
11:24:06 > JP: I'm sorry I'm not remembering the model number
11:24:12 but I think yeti sounds right.
11:24:12 I haven't seen the probe one and that is probably something I'm not familiar with
11:24:17 but yeti was the one, the tabletop I really liked
11:24:21 it was nice and it felt solid and it never broke on us by the way.
11:24:25 Something about it being tabletop mounted there is less chance of dropping it
11:24:30 because it's got a nice heavy metal base and it sitting on your desk all the time so
11:24:34 less chance of it getting fumbled around on.
11:24:40 Thanks for letting me know when the chat happens
11:24:46 I am trying to stay full-screen and navigate the zoom environment.
11:24:46 I will move on past hardware.
11:24:52 Those ability essential hardware things you need.
11:24:52 The other hardware thing I would recommend guys is a really comfortable chair.
11:24:55 You are going to be sitting in that thing a lot.
11:25:00 Beyond the hardware needs anyone who is composing at home
11:25:04 is going to have to have a pretty good grip on software options obviously
11:25:08 if nothing else just for recording and arranging notes and such.
11:25:12 A lot of you probably use a bilious or finale or something like that
11:25:16 or maybe you are familiar with logic or ProTools
11:25:21 these are standard digital audio workstations
11:25:24 but let's take a look at some of the other options out there.
11:25:28 I pretty sure audacity has been covered in a couple of these
11:25:31 ACF springboard hangouts.
11:25:38 Audacity is a really great tool for just home recording.
11:25:38 It's basically ProTools free.
11:25:44 Which is pretty slick.
11:25:44 Also ProTools which is the industry standard for audio recording,
11:25:49 they have a free version they put out about six months ago,
11:25:54 perfect timing before the pandemic.
11:25:54 They put out a free version of ProTools.
11:25:58 It's very limited of course but either audacity or ProTools free
11:26:02 would be free options for you to get into for home recording.
And it definitely if I was doing podcasts or spoken word you've got to have an audio editor and a software that you can remove all of the lights and stuff and condense it and polish it up and put some effects on your voice, you will be able to do that with all of the software is. Those top two RV free options I would recommend. Looking into software that is not free but pretty affordable, logic X. This used to be a $1000 software application recommend a prolonged time and now it is $99 at the app store on your Mac. It is Mac only but for composers I am willing to bet at least a few of you are already using logic. I say for composers it's the most popular software in the world still. Mostly because it comes with an amazing library of virtual sounds. So back to the holding of was talking about about buying a sound module keyboard like event tomorrow Jupiter, those things are released $1000 or more. With logic X it's $99 and you get an entire universe of sounds with that program. So if you wanted to arrange ethnic music or Balinese [can't understand] you've got the sounds loaded up and it's pretty amazing. The other thing that's right about logic and also ProTools, there is a score editor. ProTools I think links up with finale and you run them side-by-side. Logic has its own built-in score editor. So for people who are again traditional composers who are writing on staff paper you can facilitate some translation there between your scores and your actual software sequences. So that can be a major timesaver. Logic. On the more advanced level queue base. Cabazon logic are advanced and key bases a little more expensive I think, but if you wanted to get into advanced MID I editing and sound processing and stuff queue base is a really popular choice. Less people use it then they used to probably because of these next two options in particular and the last one. Another really popular tool especially from like the early 2000s that is still rocking is called reason. I am pretty sure at least a few of you have used reason before. Reason is a virtual rack of software instruments. So if you were to say I really need some synthesizer sounds and some guitar sounds and I need a bunch of sounds, reason is a great choice. If you were running audacity or ProTools free that did not
11:28:55 have a lot of sounds you could get reason and run them side-by-side and actually connect
11:28:57 in real time under the hood.
11:29:02 So if F are really common -- in fact when I was doing
11:29:07 studying composition I used an MID I keyboard and a reason rack
11:29:16 for all of my sounds and I recorded it right into ProTools or logic.
11:29:16 So they can be a handshake that happens there and that technology is called B wire
11:29:25 allowing different applications to connect under the hood and share their signals.
11:29:25 Reason is a great add-on if any of you out there are comfortable with audacity
11:29:28 but you want someone sound check out reason.
11:29:30 Cool.
11:29:34 And then last but not least, I saved the best for last.
11:29:41 Abelson life is the ultimate software for making music on your computer.
11:29:44 There is no comparison for anyone that wants to unlock
11:29:49 a little bit of a Realtime improvisational aspect in your home compositions,
11:29:59 there is nothing like ableton.
11:30:00 If you imagine dragging yourself to play music live
11:30:05 it’s coli for reason, it was originally designed to be a performance tool.
11:30:14 But composers like working quickly just like a performer, just like life performance do.
11:30:15 So be able to live software is taken the entire world by storm
11:30:20 over the past 10 years and is the ultimate all music making software.
11:30:26 By far.
11:30:26 Honestly creatively it kind of destroys all of the other options.
11:30:28 Is more of a learning curve though.
11:30:34 >> YAN PANG: Two quick questions.
11:30:34 Actually three now.
11:30:39 Allen asks does reason allow you to score 2 video, that is the first question.
11:30:42 > JP: That’s an awesome question.
11:30:45 Reason natively does not support that.
11:30:50 But again since reason can rewire into just about any other DAW
11:30:52 like for me I do a lot of scoring
11:30:56 and I will run my main DAW
11:31:03 in my case it would be to able to live but it could be ProTools or logic or queue base,
11:31:08 and then I run reason at the same time and it types the audio right into tracks in the
other software.
11:31:12 So I would be able to have any of these larger DAW
11:31:16 running with the video and then reason would essentially be an instrument rack
11:31:21 on a track or on a variety of tracks in that same session, if that makes sense.
11:31:30 >> YAN PANG: And Gail asks to the sounds and logic replace the need for a nice
keyboard with sounds like Roland?
11:31:35 > JP: I love that question, that’s a great question.
11:31:38 In some ways it does because
11:31:43 the sound library within logic is absolutely immense
11:31:50 and very, very robust and beautiful sounding.
11:31:51 But the limitation you might run into especially with certain acoustic instruments
11:31:56 that are really expressive, I frequently use brass instruments in this case,
11:32:00 like a trombone again is the perfect example of the way if you imagine articulating
11:32:05 between notes on a trombone and then all of a sudden trying to realize that same
kind of motion
11:32:08 on a keyboard it's kind of like impossible
11:32:12 because you are stuck to these chromatic scales
11:32:17 and it's on off of notes, there is no real legato portmanteau
11:32:22 capabilities per se. You can fine-tune your logic instruments
11:32:26 with a keyboard to sound like a real trombone or whatever,
11:32:34 but that is one thing that maybe would be lost a little bit compared to having a sound
module.
11:32:36 The sound modules that are built and are not reliant on the resolution MID I signal
11:32:41 for which notes to play and went, they are internally controlled by their own native
keyboard.
11:32:43 So for instance,
11:32:46 if you have a trombone patch up on a sound module
11:32:51 and you play a couple of notes legato, say you play an active,
11:32:55 it will naturally sense how long you are overlapping those notes
11:32:59 and give you a nice portmanteau into the notes because it is able
11:33:03 to listen on a higher resolution level to the keyboard versus
11:33:07 just MID I, MID I was invented in 1982
11:33:11 and it is really relatively extremely low resolution
11:33:15 so the equivalent to just on off, on off,
11:33:19 versus really gentle articulation resolution that you can get
11:33:22 with an internal keyboard.
11:33:29 In 99 percent of the time, logic with a $100 any keyboard
11:33:31 will be more than good enough.
11:33:35 I have seen a lot of composers complain about how certain acoustic instruments
11:33:40 are impossible to properly sequence with an MID I keyboard,
11:33:47 and I think this is a big reason why Pro composers end up going with the big
keyboards with the built in sounds sometimes.
11:33:52 When it's time to play the brass section and you want to play a Chordin have it sound
like a brass section
11:33:57 once dabbles sound find with a MID I keyboard
11:34:01 but when it comes to articulating a whole composition with different subtle nuances
11:34:10 you will have to do a lot of editing with a pencil tool to get it to be just right.
11:34:10 That's a long answer for a short question but hopefully I touched on that for you.
11:34:20 >> YAN PANG: Another question popped up, Jason asked is able to live good for live
loops and playing over them?
11:34:23 > JP: That is what able to live does.
11:34:29 >> YAN PANG: Michael asks does able to live have any tool similar to the logic's score
editor?
11:34:36 This is kind of a great question, this is a dividing line
11:34:39 between people use able to live entirely
11:34:42 versus people that use it a little bit.
11:34:46 But then they do most of their have your work in a program that has a score editor.
11:34:51 One of my closest composer friends ones ProTools
11:34:54 for all of his scoring stuff and then runs able to
11:34:57 for all of his live looping and
11:35:00 improvisation stuff.
11:35:04 The nice thing is that able to live and ProTools also do rewire.
11:35:11 So if you were running both of those at the same time, any of these programs and in
11:35:16 fact everything on this list
11:35:16 supports rewire.
11:35:16 So you have a $100 version of able to live
11:35:20 and a free version of ProTools you can run the both of the same time
11:35:25 and they would share audio signals in real time to the same mixer so they become one
11:35:26 which is really cool.
11:35:32 Cool, awesome, thank you for the really great questions, I appreciate that a lot.
11:35:36 If you guys want to know more about any of this stuff my name is James Patrick
11:35:42 and my email address is JPS slam Academy dot com and really I am helping you guys
11:35:45 have fun
11:35:45 during this kind of unfortunate time.
11:35:51 And I'm into making the most of it.
11:35:51 Personally my creative output really stopped for a while
11:35:57 when the outbreak kicked when I was like I don't know if I'm going to make any art
now this is so weird.
11:36:00 After a week or two I opened up the computer and it was like
11:36:03 a whole new flow happening.
11:36:06 The world has changed and it's a great time to compose music.
11:36:09 Was there another chat I saw pop in there?
11:36:15 >> YAN PANG: Allen asked again have you used to studio one at all?
11:36:17 > JP: Thanks so much for asking that.
11:36:22 I probably should have included pre-Sony studio one and is less.
11:36:25 As a matter of fact I think that's a great catch.
11:36:30 That is a software I personally do not use.
11:36:32 Use all of the other was quite a bit.
11:36:38 But studio one is really affordable and it's a really powerful recording and editing software
11:36:42 and I have seen some really great works created and that even recently.
11:36:45 So people using that more and more.
11:36:49 I have been meaning to pick that backup and tinker around with it.
11:36:52 Persona studio one I think you could get a $100,
11:36:58 $90 or $100 and it's a really powerful recording and editing software.
11:37:02 It also supports MID I so you can put virtual instruments in their
11:37:08 and I'm pretty sure it is also rewire compatible and eight you can connect real software to it in real time
11:37:13 so persona studio one, next time I give the slideshow I will have that on the list
11:37:16 and thanks for the check in on that.
11:37:21 >> VANESSA ROSE: James, can you put your email in the chat box?
11:37:36 The slam Academy project real quick, it's Dr. Jay Allen who was on the board at ACF or something and probably friends with a couple of you.
11:37:40 >> VANESSA ROSE: He was on our staff at one point too.
11:37:47 We are so opposite, him and I.
11:37:50 Everyone who knows him and I are like how are you guys friends?
11:37:55 But we are more than friends, we are total brothers that he is a wonderful guy.
11:38:01 He is part of the reason why we are all connecting right now.
11:38:01 I brought him up for some reason, I don't remember why.
11:38:04 L, the slam Academy, right.
11:38:09 Slam Academy is a DJ person and producer and sound designer, that is what I do.
11:38:15 And [can't understand] is a composer.
11:38:15 So we are a good pair, yin and yang
11:38:19 and so we are able to feel all sorts of cool questions.
11:38:24 Any questions you guys have about music or anything please shoot it to me in an email, that would be awesome.
11:38:28 >> VANESSA ROSE: Thank you so much, and I added a few links in the chat box
11:38:32 from the organizations that have co-presented here.
11:38:37 That is one link and I hope you will find other resources that each of those websites as well.
11:38:40 We are all offering what we can in terms of resources
11:38:45 and information at this time.
11:38:45 But again please let us know at ACF
11:38:53 if we can work on some more of these.
11:38:54 I hope this has been really helpful, thank you so much, James Patrick, for your time today.
11:38:58 If there are any other questions?
11:39:00 It looks like there are.
11:39:09 >> YAN PANG: Yes, Allen asks if you are starting out looking for film scoring projects is one DAW really advised?
11:39:17 If you are going to get started on doing scoring to film
11:39:22 then I would avoid
11:39:27 -- I would not use cube base or reason.
11:39:31 And if you were going to do a lot of MID I work
11:39:34 when you are sequencing and arranging virtual instruments,
11:39:40 honestly ProTools is okay but not that great.
11:39:40 I would probably do logic or able to.
If I imagined making my own sounds at all where the sounds that I am creating are actually -- I am able to get in close intimately on the sounds themselves, Abelson is by far the best choice. Logic is also for composition and again with the score editor function that is still why I think a lot of composers just use logic because of the score editor capability. And again having a massive sea of virtual beautiful sound. GarageBand is a software that a lot of people have seen in everyone has already on their computers. Logic is basically GarageBand on steroids. So for people who have tinkered around and GarageBand, is a nice learning curve that slides right into logic nicely. If I was just getting started on that I would maybe tinker around and GarageBand a little bit. It's free and it's on your computer and if you decide you like it get into logic. If you are not feeling get that check out a version of able to. Like to point out that the able to live software, you can download the full version for free for 90 days. It's normally a 30 day trial but during the outbreak they have extended into 90. If you hit up able to dot com and downloaded that software there was built in lessons and tutorials built right in their and for making sounds to visual imagery it is totally profound. So I would do logic or able ton, that's the best answer. Resume H 6 you can get into for around 240 or $250.
and maybe $300 if you want all of the cases and stuff.
For mobile concert recording I think it's a best choice.
Otherwise if you don't do that you do a laptop and a mobile interface.
If you are in a situation where you need more than 4 or 6 microphones
like maybe you were actually going to record a concert for real
and be able to mix it later when you have individual isolated tracks reach instrument
like if you're going to mix or produce the concert and postproduction,
you would want to have more than six lines, you probably want a couple of signals for each band member.
In that case that's when you bring a laptop and an audio interface.
So this is where I really recommend Mo to
mode to makes a device called the mode to ultralight.
They also have one called the 828 and another one called the traveler.
These are boxes with a million jacks in the back for all sorts of microphones
and inputs and outputs and those things start at around 600 or $700 for the box.
Then you've got to get your microphone.
This is where the H6
for $250 is a really nice choice.
It's really great and everyone I know who makes music has an H6 honestly.
Not to say everyone but in the slam Academy realm where people are creating their own sounds
going out and recording sounds of the hardware store or whatever,
the H6 is awesome for that.
And it works as an interface as I'm using it right now.
I have it connected with a USB cable and is like having a was be microphone on my deck just like we were talking about
but I'm doing it all inside of the H6.
That's a great question.
Cool, all right, so let's take a look at the next little chapter, we are going to talk about signal flow.
This may be sounds a little nerdy at first
but you've got to know your signal flow because this is how your studio operates.
There are really two different big picture standards
for how you're going to run your home studio.
If you are a musician
or say you play alive instrument
and especially if you play live instruments with other people,
the analog studio configuration is pretty attractive.
This is where you're going to, like we were talking about before,
probably have a mixer and be able to walk in your garage or recording environment
hit the power switch and start playing in here yourself.
The pros of the analog studio configuration when you were running errands terms into a mixer is that
there is no need to connect the computer but all when you are displaying.
11:45:21 You want to sit down and play scales, cool, don't have to turn on your computer you can just start playing.
11:45:27 The downside of having the mixing console in the analog studio environment 11:45:30 is that there is a lot more noise.
11:45:33 So if you get your recordings,
11:45:36 you have a really good taken that was awesome and I really nailed that,
11:45:43 then you look at the recording and there is this grip on the bottom of it and it is all dirt from the mixer.
11:45:47 Even if you have a really nice new mixer and will still introduce a little bit of noise.
11:45:53 So that noise is desirable if you are like in Abbie recording studio.
11:45:58 But if you are recording a podcast you do not month that noise in there at all and that would suck.
11:46:04 The digital studio configuration though is much more common for home composers.
11:46:07 That is best for solo artists too.
11:46:10 Your use instruments directly into the audio interface.
11:46:18 No mixer and this is the configuration I was talking about before.
11:46:18 The big Pro as I mentioned is that there is no noise.
11:46:22 You record straight into the audio interface and there is no additional crud
11:46:30 being introduced into the signal which is crucial.
11:46:30 The downside is you've got to fire up all of the robots before you can just jam.
11:46:36 I keep an acoustic piano around selected to sit and play piano
11:46:42 and there is something really nice about not needing to turn on the computer.
11:46:48 That is where the analog studio is sweet.
11:46:48 It's kind of a trade-off.
11:46:48 I think 99 percent of the people who are composers nowadays
11:46:53 just go straight into the interface and essentially that means that there mixer is the computer.
11:46:58 So you've got to have the computer open to do anything and I can be kind of alienating at times.
11:47:03 But assuming that we are going to do a digital studio configuration for most of you
11:47:09 were you have a nice soundcard and you are connecting your interfaces to your instruments
11:47:14 Straight into it, another thing to mention about this configuration 11:47:18 is usually wind up getting a multichannel interface for the scenario
11:47:22 because you maybe have a piano and you have maybe a vocal microphone
11:47:26 and maybe a guitar and you don't want to
11:47:31 necessarily have to plug and unplug all of the cables when switching between instruments.
11:47:33 You want to have them all connected all the time.
11:47:37 So in that case you might consider maybe one of those audio interfaces.
11:47:42 I'm going to take a quick moment to head over to my web browser to make sure this works.
11:47:45 I'm going to look at mode to ultralight.
11:47:50 For those of you are considering a new audio interface this is a really solid one for the money
11:47:54 is about 500 to 600 bucks and it's got a bunch of jacks on the back
11:48:01 and a couple of two Mike pre-and maybe eight or 10 analog balanced ins and outs.
11:48:05 I use one of these and I keep one of these around
11:48:09 and I just am instruments connected to it and you can even wire that up to a patch bay
11:48:13 if you were really feeling nerdy but for the most part it's a nice desktop box
11:48:19 that records lots of different signals and send them all back out in really nice resolution.
11:48:21 They make a smaller version
11:48:25 although here is $300 for a used one, that's awesome.
11:48:28 I would just by that.
11:48:31 But you know,
11:48:35 lots of great music is made without any sort of antitechnology.
11:48:40 Hold on a second.
11:48:43 There go, cool.
11:48:46 Sorry you had to see that big mess for the second.
11:48:49 So the signal flow.
11:48:54 In general with the signal flow path you always want to visualize your sound source
11:48:59 heading right into your recording device and that is when it gets converted to digital
11:49:02 and now it is in the work station.
11:49:08 Yan Pang a quick request, can you share the screen of the product?
11:49:16 I will have to get out of full-screen mode, that is what screwed me up last time.
11:49:25 So this is a nice picture of the box
11:49:32 but the link I saw here, [can't understand] if you are buying any gear
11:49:35 and for around $300 they will give you a used version
11:49:41 and they come with a really nice warranty too.
11:49:42 Talking about things that are serviceable, mode to
11:49:51 has an awesome refund policy that they don't publish but if anything goes wrong with it you send them $100 and they will send you a new one.
11:49:55 >> YAN PANG:  We are still not seeing the product screen, I think is the setting.
11:49:59 > JP:  I apologize, that is my own zoom screwup.
11:50:02 Just a second, that was my fault.
11:50:04 Thank you very much for your help with that.
11:50:08 I should be in it now, can you see it now?
11:50:13 Great.
11:50:16 Yes, the mode to ultralight.
11:50:19 I apologize, I was focusing on my slideshow.
11:50:23 Yes, these are around $600 new.
11:50:29 I was excited about this reverb link.
11:50:33 Reverb dot com is where you can get one for cheap or if you want.
YAN PANG: A question, Gail asks what mic would you recommend to record an acoustic instrument?

JP: Great.

In general with acoustic instruments you also use a large diaphragm condenser microphone. The big thing that you are really going to need because it could be the same exact microphone is that the microphone placement is actually more important then you may be would think because the distance the microphone is and its axis in relation to the soundwave is a drastic impact on the quality of the recording. So you could use that same large diaphragm condenser microphone but guess what, not the tabletop blue podcast one that we were talking about, the yeti would be so great for recording acoustic instruments because it sitting on the table all the time.

For acoustic instrumentation the prohibitively challenging factor that keeps people from getting great acoustic recordings at home is not so much the microphone because again you can use the same Mike as you use for your dialogue, is the placement of the mic. This is where you need to get a shock mount and a boom mic stand that is pretty nice. Don't buy the cheap boom stand, by the nice one. A good boom stand will be $80. But it's going to be heavy and strong and able hold your $200 microphone nice and solid right in front of the sound whole of your heart poor acoustic guitar or whatever. And that is going to facilitate the positioning of that large diaphragm condenser because the thing you may or may not realize is that with a large diaphragm condenser Michael Rainey condenser Mike you cannot touch the thing like basically ever.

Especially if you are recording but it's got a B position right over the sound all. So this is why recording engineers still exist in the modern world, because that person that put the mic in the perfect position and make sure nobody touches it and also make sure that the guitar player feels comfortable and because obviously if you were like trying to lean over to get in front of the mic your performance is going to be jacked.

So the performer has got to feel like they are in their flow and here is a little tip I can give you I'm holding my hand up like this. This is the distance that the microphone should be from the sound source with an acoustic instrument.
So if you went ahead and put your hand --
like here is the sound whole and here is the microphone, you could just barely get your hand in between there,
that is the great distance.
And the other thing is you don't want the capsule parallel with the sound whole,
you wanted a little bit of an angle.
Again this is not a recording arts class but
I'm very happy to answer this question I would say get forefingers away from the sound hole
antipathy Mike at a little bit of an angle and have a nice boom stand with a shock mount.
Since we are sitting here looking at the Internet, let's Google mic stand.
I will make a recommendation
they have these 14 elements, do not get those.
There is B and K, a brand I really like.
It's been a while since I have bought one of these things.
It's a German brand.
Watch for a nice weighted base boom mic stand.
There is a brand B and K.
This one, the base is three different legs, get one with a circular weighted base and you will have a nice mic stand.
It doesn't seem like is that important but like we were talking about with acoustic microphones,
or acoustic instruments, they are not very loud
so you've got to get the mic right close, it's important.
The other thing that is really important with home recording
is to get the trim up nice and loud, as loud as you can without being in the red.
That is kind of an acoustic instrument recording workflow
vaguely at least.
Does that help?
Cool, thanks.
Great, so I am more than happy to answer any other questions, otherwise I will probably just keep on moving through this.
We are moving on to chapter 4, I think we are right on time part the studio, how to position your equipment
and acoustically treat the room to get the best results.
This is another thing that is outside of the realm of composers but honestly
you want to have a nice quiet room not only for your recordings obviously
to not be able to hear traffic in the background and stuff
but when it comes to postproduction and balancing your arrangement and getting all of the levels just right
having a really quiet room can go a long way, makes a big difference.
Especially when mixing base instruments like cellos and stuff
it's hard to hear the low end if you've got a weird sounding room.
The room size and shape. Important.
The worst sounding rooms are square or rectangular, which is unfortunate because chances are you are in a square or rectangular room. If you do happen to have any rooms that break the rules are right angles or parallel surfaces those are always going to sound the best. Any chance you can have two distort the shape of the room with physical objects is great. For instance a closet is a square, but not when it is all full of clothes. So these are ways that you can essentially just distort the reflective surfaces in the rooms so they are not necessarily in parallel with each other. When two walls are parallel with each other there becomes what is called a standing wave where you have phase cancellation because of frequencies that are building up in between the two parallel walls as a bounce back and forth. It's an essential principle of acoustics. Phase cancellation due to parallel services. The tips I wrote here is that smaller rooms, let me see if I can -- smaller rooms have more reflections, but bigger rooms sound boomy. This a really called thing called golden ratios and sacred geometry And basically if you look that up for a fun reading sometime especially if you are a nerd, the greatest studios in the world are all built using this golden ratio which is making sure that the walls and ceiling height are not -- that those numbers are not the same, they are all different by a certain ratio. You can read more about on the Internet I'm sure. That's the thing about the room. Speaker placement is another really important thing. There is a rule you can remember called the equilateral triangle rule. A lot of you probably already know this and this is just saying that however far away you are from the speakers is how far apart they should be. So if you were sitting in your sweet spot and your speakers are 5.5 feet away from you, they should be 5.5 feet apart. Is that simple and is not a big deal. But beyond that you generally want to have your speakers opposite the farthest wall with the most absorption. What I mean by that is if you look in your room and you see that you've got a bookshelf on the one wall, that is the one wall you want the speakers to be pointing at. So you would want to set your speakers up opposite the bookshelf.
The room I'm in right now with the wall behind me would be an awful place for an actual studio environment. But if I turned around and the whole big room was behind me and there was a couch back there, it's going to be great.

The couch in the back of the studio is not just for your fans to sit and watch you. It's a big base trap. So generally in fact if you look behind the control room of any real studio, in other words like directly behind the mixer where the person is sitting, the couch in the back of the studio is not just for your fans to sit and watch you. It's a big base trap.

The idea is that the sound travels over your head and does not bounce back at you, it gets absorbed directly behind you and that is really important.

The other coprincipal I can mention is that Justin play offsetting the angle little bit on the speakers can really help acoustics too. There is a tendency because we love symmetries to put the speakers right in the middle so it is all symmetrical in the room and acoustically that is usually the worst place to do it.

Sometimes I will move the desk to the left a little and angle the speakers a little and now imagine that soundwave shooting over my head and instead of advancing right back at me it gets killed, terminated by going into a corner.

So you are trying to terminate those reflections ideally is really what you were trying to do with the speaker placement.

Some really nice monitors, studio monitors will have boom modes that will allow the speaker to contour the output based on where it is in the room.

That's a higher price point option. For most intents and purposes I think offsetting the room a little bit and trying to shoot them at the most diffused service possible.

On the note the last tip I will give you here is about acoustic treatment. This is advice that one of my mentors from acoustics told me years ago. Sit right in the mix position, right where you want to be making music but imaginal the flat surfaces in the room are covered in mirrors.

Anywhere you can see the speakers in the mirror, that is where you need to absorb the most.

That straight line of sight is the same line of -- the same pathway the sound waves will travel on.

So parallel walls on the side of you if those were members you could see the speakers and that is where you get heavy treatment.

So directly behind the speakers in the middle
12:01:21 that is always an accumulation area between the two speakers.
12:01:24 So directly behind the speakers, directly opposite the speakers
12:01:31 always needs heavy treatment. Sidewalls as well.
12:01:31 And the best tip I was going to give you is mineral fiber.
12:01:35 You can build your own acoustic panels for insanely cheap.
12:01:39 I found a set on the Internet last night for $45.
12:01:47 It was 23 foot by four foot panels three inches thick
12:01:54 and it would cost hundred dollars to make them on the cheap.
12:01:54 You can buy them on the Internet now.
12:01:56 There's a place -- here we go again I've got to do this.
12:02:18 Owens Corning acoustic panel kit.
12:02:24 If I find it right away, that would be so cool.
12:02:32 I don't think this is the one.
12:02:38 Look, these are the panels, $67 for this
12:02:45 and you are getting four-inch thick, a six pack of -- I don't know what the dimensions are
12:02:51 but you just wrap these in black cloth and hang them on the wall
12:02:55 and these are the very best sound payment channels you can get anywhere.
12:02:59 Owens Corning 703 mineral fiber fiberglass.
12:03:03 If you go to Paisley Park, this is the stuff that's on the walls.
12:03:07 But you can bite and build it yourself are wicked cheap.
12:03:12 That's going to be a great choice.
12:03:13 Another fun place to check out if you are going mega cheap
12:03:22 is foam by mail dot com, I love this website.
12:03:22 They have tons of foam stuff and you can get acoustic treatment stuff
12:03:24 for crazy cheap.
12:03:30 Like -- this website is so much bigger than it used to be, I have not been here a long time
12:03:35 but you can find acoustic foam, look at all of these acoustic treatment panels.
12:03:38 They have acoustic wave foam.
12:03:44 This stuff is not anywhere near as good of absorption as the Owens Corning option,
12:03:48 but we hang the stuff around slam Academy and you can get a super cheap.
12:03:52 They have is really nice bass traps, they are really cool.
12:03:56 Base absorbers, these things are really nice and they are cheap.
12:04:01 Like this corner base solution, this guy here.
12:04:05 They are cheap and you can stack them up in the corners of your room.
12:04:12 High frequencies get distorted from B-flat services on the walls when they reflect,
12:04:15 but low frequencies get distorted when they build up.
12:04:21 You don't really hear base with your ears, you feeling with your body so it's a different physical beast
12:04:26 we are dealing with with the low end.
12:04:27 Base gets built up in the corners of the room
12:04:30 and what happens is you can't hear the base as well.
12:04:33 You are trying to blend of the low end instruments together
and they are all swelling up and it sounds money.

It's because your room has base accumulation in the corners of the room.

So these little corner base traps are cheap and awesome, you can throw them in the corners of your room.

They still won't work as well as a cardboard box full of socks though.

So another tip from my mentor is they said cardboard box or a poster tube,

punch it with a bunch of holes and fill it with old T-shirts and socks, it sounds very ghetto.

But it totally sounds great and it really absorbs the base better than these foam things do.

So if you are feeling creative and you are not embarrassed by this idea

go really on the cheap and take your old sock drawer and flip through it and throw it in a cardboard box

and punch some holes in it because the more diverse thicknesses and densities of materials,

the wider spectrum of frequencies it will absorb.

So this foam thing is cool but it's all one density

so really there is only one frequency that it is optimally isolating.

If this was made of four different kinds of foam and had dense foam in the middle

or maybe a bunch of socks and T-shirts and it, it would absorb better.

Anyway, I had better keep moving because we are just about out of time.

In fact we are but I'm going to finish up my little spiel if it's okay with you guys.

Because we're just about there.

We talked about acoustic treatment and that stuff is super fun.

The other thing I wanted to mention is that those mineral fiber pain is that you're going to build maybe

hangs from the ceiling, hang one from the ceiling like a cloud and let it swing around.

We are getting out of low-budget studio but that is really classy and really helps the sound quality of a room too

having one floating cloud directly over your head.

I mentioned the mineral panels.

The other thing I would like to mention his vocals.

The closet. Lots of great albums have been made with vocals recorded in a closet.

And don't take the clothes out of there.

When they say closets are great, keep the clothes in the closet and run a cable and microphones into the closet.

Honestly a closet full of clothes is a great vocal recording area

especially if there are no surfaces exposed.

Going to mention that tip just because I know a lot of you are recording vocals.

It might seem like your room is really quiet but when you record the vocals and listen met closely

you will hear the air conditioner.

Even right now in my room I can hear subtle things

and in the recording it seems really jump out at you.
12:07:19 So those are my tips for getting a successful home recording and composition, I guess a home recording studio is kind of in some ways what it turned into set up for you guys.
12:07:23 I am super excited about getting any questions from you in email or anything.
12:07:28 And again I am honored to be presented here with ACF and springboard and slam Academy.
12:07:32 So thank you guys for asking such great questions and listening.
12:07:44 >> YAN PANG: A pop up question would be what about headphones
12:07:49 for mixing and recording and what should we look for?
12:07:53 And there was another one, will your slides be made available?
12:07:56 So while --
12:08:00 I think we will just take these last two questions.
12:08:06 > JP: Great, the slideshow no problem, email me I guess.
12:08:19 Or if ACF or springboard wants to distributed, just let me know when I will totally send the slideshow over, no problem.
12:08:19 The question about headphones is a critical question.
12:08:23 Frankly that's another slide I should slide into the slideshow for next time.
12:08:28 I want to point out that having a nice set of headphones has always been really important.
12:08:35 But it has become a little less important recently because of this amazing technology that you can get for free right now
12:08:39 during the outbreak, it's called sonar works.
12:08:43 I am not sure if any of you have actually experienced sonar works.
12:08:49 Essentially it's a headphone EQ calibration software
12:08:56 you can run in the background on your computer.
12:08:56 It's insanely high-tech and it's beautiful.
12:09:00 I will open my nap quick and share my screen.
12:09:11 If I open up the sonar works systemwide software
12:09:14 this is some amazing stuff.
12:09:19 I can tell it which kind of headphones I'm currently wearing.
12:09:25 It will compensate the EQ curve for the make and model of headphones I am wearing.
12:09:33 You can even send your specific set of headphones to them and they will design and EQ curve
12:09:35 just for that single physical set.
12:09:40 Right now this software called reference 4 is a $100 software package
12:09:44 that is free during the outbreak. Sonar works,
12:09:48 and all you need to do is create a profile for the certain kind of headphones you have.
12:09:53 Right now I am working [can't understand] HD 25 which I highly recommend.
12:09:58 They are expensive but they do have a little bit of a base pump, look at that.
12:10:02 I turn this on and hit this button now I am hearing it like it was sent to anyone else
12:10:04 not using my headphones.