

JOY DOLO: Hey, Buddy.

BUDDY: Hi, Joy. Welcome to the auditions for the guitar-chestra. It's going to be the most epic guitar-only band ever.

[GUITAR STRUM]

I was so glad to see that you were trying out.

JOY DOLO: Thank you. I have to admit, I'm a little nervous. But I've been practicing a lot.

BUDDY: I'm sure you'll be awesome. But where's your guitar?

JOY DOLO: It's right here.

BUDDY: Where? I don't see it.

JOY DOLO: Well, of course you can't see it, silly. It's an air guitar. I can play other types of guitar, too. But I like this one, because it's so versatile. Check it out. Acoustic.

[MOCK GUITAR SOUNDS]

Metal.

[MOCK GUITAR SOUNDS]

Power cord. Power cord. Power cord. Jazz.

[MOCK GUITAR SOUNDS]

Oh, let's not forget kitty-cat.

[MOCK GUITAR SOUNDS]

BUDDY: OK. Thanks, Joy. That's enough.

JOY DOLO: Now freestyle.

BUDDY: Joy. Thank you. I think I've heard all I need to hear.

JOY DOLO: Oh, sure. I guess I'm just so good, you can tell that I'm in right away. I'll probably be first chair in the air guitar section, right, Buddy?

BUDDY: Yeah, I think you'll be the only chair in the air guitar section.

JOY DOLO: Awesome. Well, do you need help with the rest of the auditions?

BUDDY: Sure, but we better get started. The concert is tonight.

JOY DOLO: Let's hit it.

[MUSIC PLAYING]

Hello, and welcome to *Forever Ago* from APM Studios. I'm Joy Dolo, and I'm here today with Buddy.

BUDDY: And we're holding auditions for our guitar-chestra.

JOY DOLO: OK. How are these auditions going to work?

BUDDY: Well, I hired a casting agent to help find some talent. Oh, and there she is. Joy, meet reporter/guitar talent, scout Grace Tatter.

GRACE TATTER: Hey, everybody. So happy to be here. So tell me a little bit more about this guitar-chestra What sound are we going for?

BUDDY: It's going to be so epic.

[GUITAR STRUM]

Tons of guitars.

[GUITAR STRUM]

All different styles and sounds.

[GUITAR STRUM]

And the goal is to rock.

[GUITAR STRUM]

[GUITAR STRUM]

OK, got it. That's super helpful. You know, rock and roll almost didn't exist, at least not how we know it today. Rock is all about the guitar. But for a long time, the guitar was hard to hear and not that popular. If it weren't for a few key innovations, the guitar might still be a background player, not the showstopper we know and love.

BUDDY: how does an electric guitar sound different from just a guitar?

JOY DOLO: mean an acoustic guitar? The kind that's big and has that hole in the middle?

BUDDY: Yeah, I think so. I guess I don't know the differences between all types of guitars.

GRACE TATTER: Why don't we bring in my first guitarist from the 1600s, which was 100 years before the United States even became a country. So there was no electricity. She plays one of the first guitars that ever existed. And I think you're going to love her.

LEONORE: Hello.

JOY DOLO: I'd like your rough collar. It looks like your head is being served on a platter of tissues.

LEONORE: Thank you, I think.

GRACE In Leonora's time, the guitar was brand new. But people all over the world have played stringed instruments long before that. There were stringed instruments that were played with bows in Central Asia by the 10th century, more than 1,000 years ago. And the kora, a stringed instrument made out of the gourd, that could possibly have been played in Mali as early as the 1300s.

JOY DOLO: Ooh, I want to learn to play the air kora next. Big gourd fan.

GRACE The Spanish guitar, a lot like the guitars we play today, was plucked with fingers, not played with a bow. Back then, the guitar was mainly an instrument for amateurs. People didn't get paid to play it. But there were still some wonderful players, including Leonore. Leonore, will you play us something?

LEONORE: It would be my honor. I shall begin.

[GUITAR PLAYING]

BUDDY: Oh, that's lovely. Let's hear how you sound with the air guitar section. 1, 2, 3, 4. Psst, Joy, that's you.

JOY DOLO: Sorry. I just got mesmerized by this beautiful music. But yes. Yes, let me just tune up here. OK, I'm ready.

BUDDY: 1, 2, 3, 4.

- [MIMICKING
GUITAR
PLUCKING]

BUDDY: Grace, Leonore is really great. But I don't know if we're going to be able to hear her over Joy's air guitar playing.

GRACE OK. I'll bring in someone who plays the electric guitar.

TATTER:

BUDDY: The what? The kinetic cigar?

GRACE No, the--

TATTER:

BUDDY: Hold on. Joy, Leonore, you can stop playing now. Phew, thank you. OK. Sorry, Grace. What were you saying?

GRACE I think we're going to need the electric guitar. Of course, people still play the acoustic guitar, like Leonore is today, in many genres. From classical, to folk, to pop. But the electric guitar is louder, and it's easier to hear it over other instruments.

LEONORE: I totally understand it. I'm curious to see this elect-- elect-- electric electric guitar myself. I have never heard of such a thing.

GRACE Hmm, OK. To find some electric guitarist, we're going to have to skip quite a few centuries.

TATTER:

[ZAPS]

After all, we didn't really start using electricity every day until the 19th century. And most homes in the United States didn't have electric power even 100 years ago. But don't worry. I have connections all throughout history. And I think I have just the person for you. We'll call him and now. His name is Charlie, Charlie Christian. Let's bring him in.

CHARLIE Hello. Hello. Charlie Christian. Nice to meet you.

CHRISTIAN:

BUDDY: Where are you in from, Charlie?

CHARLIE Oklahoma, originally. But if you're a musician, you travel a lot. I'm coming to you from 1939, the Jazz age.

CHRISTIAN:

[JAZZ MUSIC]

JOY DOLO: Ooh, the Jazz age. I love it. Some people call me Jazzy Joy.

BUDDY: They do?

JOY DOLO: Well, no. But they could. I'm full of snazz and pizzazz. Why not jazz?

BUDDY: Anyway, Charlie, how long have you been playing this electric guitar?

CHARLIE Not that long, actually. In my time, it was still super new. The first patent for the electric guitar was back in the
CHRISTIAN: 19th century, before people even use electricity all that much. So the electric guitar didn't become well known for many years. Not to brag, but I'm kind of credited with making the electric guitar a big thing.

JOY DOLO: You should brag. That's very cool.

BUDDY: Yes. So How'd it happen?

CHARLIE Well, in my day, jazz was the bee's knees.

CHRISTIAN:

[JAZZ MUSIC]

Really popular, you know, especially big band jazz.

BUDDY: What's that?

GRACE It's exactly what it sounds like, a big band with lots of instruments. Loud ones, like trumpets and drums. And so
TATTER: guitar is playing in big bands kind of have the same problem as Leonore just did. No one could hear them.

CHARLIE Exactly. To be heard over the trumpet, the clarinet, the bass, the drums, the piano, the trombone, guitars had to
CHRISTIAN: play really hard, so hard their fingers would bleed. That all changed around 1931 when stores started selling electric guitars. I picked one up just a few years later. It was expensive but worth it.

JOY DOLO: That's another great thing about the air guitar. It's free.

CHARLIE My investment paid off. One day, somebody heard me playing and asked me to audition for the Benny Goodman
CHRISTIAN: sextet.

JOY DOLO: Benny Goodman? No way. Who's that?

GRACE Benny Goodman was one of the most famous musicians of his time, a real celebrity.
TATTER:

CHARLIE For the first part of my audition, I played an old fashioned acoustic guitar. But Benny wasn't too impressed. Then
CHRISTIAN: he asked me to play this song called Rose Room on the electric guitar. It was a trick. He thought I wouldn't know it, but I absolutely knew it.

[ELECTRIC GUITAR PLAYING]

So I played that song for 40 minutes straight on my electric. I knocked their socks off. The fellow who brought me into play said that he'd never seen Benny so impressed.

BUDDY: Wow. Nice going.

CHARLIE And that's how I got the gig. It was a big deal too because I'm Black and Benny is white. You didn't see people like
CHRISTIAN: us playing together that often.

GRACE In the 1930s, there was legal segregation, laws passed by white people that discriminated against Black people
TATTER: and other people of color by keeping them out of certain spaces.

CHARLIE Right. So being in Benny's band helped me cross some of those barriers. And boy did we swing. Here's us playing
CHRISTIAN: in Carnegie Hall in 1939.

BENNY Our new discovery, Charles Christian of the electric guitar.
GOODMAN:

[JAZZ MUSIC]

GRACE So splendid playing.
TATTER:

BUDDY: Wow. That was so good.

JOY DOLO: Yeah, you can really rock that guitar.

CHARLIE No idea what you mean. But yeah, I can bop. Before me and my electric, guitarist really didn't solo. But I did. And I
CHRISTIAN: made it look easy. Lots of people started soloing after me.

JOY DOLO: Wow. To think if you and the electric guitar didn't show people what the instrument could do, rock bands might be full of trumpet players.

[TRUMPETS PLAYING]

And like heavy metal would be all tubas.

[TUBAS PLAYING]

And punk would be clarinets.

[CLARINETS PLAYING]

BUDDY: Charlie, your guitar doesn't look all that different from Leonore's.

CHARLIE That's right. I play at a Gibson Spanish guitar. It's hollow just like Leonore's. But it was made especially so you can
CHRISTIAN: plug it into this amplifier.

JOY DOLO: That's an amplifier? It looks like a box.

CHARLIE Yeah. That's the key to my loud sound. It's basically a big speaker. Here's how it works. You see, there are coils
CHRISTIAN: underneath the strings of my guitar that create an electronic magnetic field. Those coils pick up the vibrations of my strings and turn them into electronic signals. Those signals are sent like a message through this cable to the amplifier. Then the amplifier reads the signals and turns them back into sounds but louder. All that in no time flat.

[ELECTRIC GUITAR PLAYING]

BUDDY: Cool. OK, Charlie. I think we've heard all we needed to hear. You're in.

CHARLIE Amazing. Me and my guitar are ready.
CHRISTIAN:

JOY DOLO: Before we hear our next audition, Grace, we need to take five and play a little--

INTERVIEWER First Things First.

1:

JOY DOLO: This is the game where we try to put things in order from oldest to newest. Today's objects are record players, headphones, and pianos. So what do you think, Buddy?

BUDDY: Pianos came first.

JOY DOLO: Pianos. Why do you say that?

BUDDY: They just seemed like some old things.

JOY DOLO: [LAUGHS] You play piano too, right?

BUDDY: Yeah.

JOY DOLO: Yeah, so when they were invented, huh?

BUDDY: Yeah.

JOY DOLO: [LAUGHS] So pianos seem like the most oldest thing. So what do you think came next then?

BUDDY: Record player?

JOY DOLO: You know, I buy that. Because I feel like that's '50s maybe? '50s, something like that.

BUDDY: Oh, yeah. I think headphones came last.

JOY DOLO: Why do you think that?

BUDDY: It just seems like some new thing that was made like 2000-- like in the 2000s or maybe 1990.

JOY DOLO: Yeah, something that's really early. I actually agree with you. I definitely think headphones were the most recent in history.

BUDDY: Yeah.

JOY DOLO: So we'll be back with the answers right after this. If you have ideas for First Things First or topics you'd like to hear us cover on the show, please send them to us. Go to foreverago.org/contact. History is everywhere. What do you want to explore? Tell us. Again, that's foreverago.org/contact.

INTERVIEWER 2: Did you know that movie trailers were originally shown after movies? Nowadays, movie trailers are essentially short commercials for movies that will be released in the future. You buy a ticket for a movie, you sit down in the theater. But before you get what you came for, you get some commercials or trailers.

But about 100 years ago, motion pictures, also known as movies, were new. Up to that point, people had still pictures to look at. Or they could go see live theater, actors on a stage. A lot of these early movies were short and just chapters in a longer story, kind of like TV shows today.

So in order to show audiences what would be coming in the next chapter, they'd show a little preview of it at the end of the movie. In other words, it trailed behind the movie. But now, trailers come before the movie and should be called firsters. At least they give us time to get popcorn before the movie starts.

Will this narrator come back next time with more fascinating history facts? Will his voice sound even deeper and more charming? Will he finally get this popcorn kernel unstuck from his teeth? Come back for next week's thrilling chapter.

[MUSIC PLAYING]

BUDDY: You're listening to Forever Ago. I'm Buddy.

JOY DOLO: And I'm Joy. OK, Buddy. Are you ready to hear the answers to First Things First?

BUDDY: Yes.

JOY DOLO: Great. So you said pianos, record players, headphones. Guess what, Buddy.

BUDDY: Yeah.

JOY DOLO: You were absolutely right.

BUDDY: [GIGGLES]

JOY DOLO: All the way. Smart guy. So the first thing was piano. The piano was invented by Bartolomeo Cristofori in 1655 to 1731 of Italy. Cristofori was unsatisfied by the lack of control that musicians had over the volume level of the harpsichord.

He is credited for switching out the earlier harpsichord's plucking mechanism with a hammer to create the modern piano around 1700s. Did you know that, Buddy?

BUDDY: No.

JOY DOLO: Next up is record player. The earliest version of a record player, the phonograph, was invented in 1877 at Thomas Edison's Menlo Park Lab. Sound was recorded as grooves in aluminum foil made by a tiny needle that vibrated when sound waves hit it. And last and not least, and Buddy is correct, the most recent in history is headphones.

In 1891, a French engineer named Ernest Mercadier patented what he called a bi-telephone. This would prove to be the first recorded version of an in-ear headphone. American engineer Nathaniel Baldwin invented the first pair of audio headphones resembling modern day pairs at his kitchen table in 1910.

The US Navy ordered 100 pairs not knowing that Baldwin was making them by hand. So there you go. Now you know a little bit about headphones, pianos, and record players. Can you believe that about the headphones? I thought they would be more recent, like 2000. But they started 1891.

BUDDY: That's crazy.

JOY DOLO: I know. And it's having them in the ear, that was like a whole thing, right?

BUDDY: Yeah.

[MUSIC PLAYING]

OK, Grace. Hope you had a nice break. But we still need some more players for our epic guitar-chestra. We have Leonore on acoustic.

[ACOUSTIC GUITAR PLAYING]

Charlie's early electric guitar.

[ELECTRIC GUITAR PLAYING]

JOY DOLO: And my air guitar. [MIMICKING GUITAR]

BUDDY: Yeah, how could we forget? I also want real rock and roll energy. Why don't we get to that?

GRACE TATTER: OK, I have someone great for you. I think you should see my friend Les Paul and his solid body guitar, the first of its kind. Les, come on in.

JOY DOLO: What is he carrying? That looks like a broomstick with strings. No way that thing can rock.

LES PAUL: You're doubting my guitar based on appearances? Aren't you playing an air guitar?

JOY DOLO: Fair point.

GRACE I know it doesn't look like much, but the advantage of Les's guitar is that it's solid. So no echo from inside it.

TATTER:

LES PAUL: I call it the log.

BUDDY: Um.

GRACE OK, look. I get it. The big guitar manufacturers were also skeptical of Les's creation. He tried to sell it to this

TATTER: company Gibson in 1946, but they passed on it.

LES PAUL: Well, I was just ahead of my time. A genius. A visionary. A guy with a log shaped guitar. You see, the thing about a solid body is that the notes you play ring out clearer and longer. Like this.

[GUITAR STRUM]

That's a sound that sparkles if you ask me. The guitar companies eventually got wise, and even Gibson started using my designs. Well, not the log design. I added wings.

JOY DOLO: Oh, my guitar has wings too. It flies all over the place. Once, I even found it on the roof. True story.

LES PAUL: Ah, not actual wings. I just mean the shape. They look more like shoulders than wings. But wings sound cooler, don't you think? They help my guitars look more guitarish and less loggish.

GRACE Les's guitars are still really popular. People still play them even today.

TATTER:

LES PAUL: And they still make that crystal clear Les Paul sound.

JOY DOLO: Yeah, but isn't rock and roll kind of like fuzzy and distorted? Because these new solid guitars do that?

GRACE They definitely can. But for a while, people didn't want it. At first, it mostly happened by accident. There's a

TATTER: famous song called Rocket 88 by a group called Ike Turner and the Kings of Rhythm. Legend has it in 1951, the guitarist, his name was Willie Kizart broke his amplifier on the way to a recording studio. They didn't have time to get a new one, so they recorded it anyway. And it ended up sounding like this.

[MUSIC PLAYING]

LES PAUL: Oh, that's a slick sound there.

CHARLIE Wowee.

CHRISTIAN:

BUDDY: No, that's rocky.

GRACE Yeah. No one had ever heard a sound like this before. Some people think Rocket 88 was the first rock and roll song

TATTER: ever. And people loved the sound so much that guitar makers made it easier to add fuzz to your guitar sound without having to bust up your equipment.

They made little pedals you step on that can add that fuzz and even amplifiers that could switch between clear and distorted notes. Pretty soon, this fuzzy rock and roll sound was everywhere. And people loved it, especially teenagers. Something about it just clicked with them.

WOLLY: Oh, life is so hard. No one has ever felt the way I, a teenager, feel right now. It's like I'm angsty yet full of energy, but also kind of dangerous. And also fun loving and nothing like my parents. If only there was some form of popular entertainment that understood me, a teenager.

[MUSIC PLAYING]

What is this music? It's cool, and tough, and full of emotion, just like me, a teenager.

INTERVIEWER Wolly? What is that noise? Turn that off right now.

3:

WOLLY: Wait. Hold up. My parents don't like this music? I love it!

GRACE Guitar was no longer the supporting instrument. Now, it was the star of the show.

TATTER:

BUDDY: Now, I see. Les help pave the way for rock and roll. Awesome work, dude. You on the log are in.

LES PAUL: Hot diggity dog.

BUDDY: But I feel like we're missing something, something now, something new, something fresh.

GRACE Funny you should mention that. I do have one more person waiting to audition.

TATTER:

SIMA Hi. My name is Sima Cunningham. I'm from Chicago. And I play in a band called OHMME, O-H-M-M-E.

CUNNINGHAM:

BUDDY: Awesome. Sima, tell us about your guitar.

SIMA I play a white Fender Stratocaster. It's got a couple cool hot rail pickups, which I really like because it kind of gives

CUNNINGHAM:the guitar a real, beefy, heavy sound.

BUDDY: Does it have a name?

JOY DOLO: A name?

GRACE A lot of musicians name their guitars. It's a thing.

TATTER:

SIMA Sometimes I just call it my guy, my guitar guy.

CUNNINGHAM:

JOY DOLO: I call my air guitar Lima Bean. No, Penny. No, Alfonso. No.

BUDDY: So Sima, what drew you to the electric guitar?

SIMA I started playing guitar when I was about 12 years old. And I really liked the guitar because it's such a mobile
CUNNINGHAM: instrument. You can kind of carry it on your back. And you can make sound. And you can make chords just with the
one instrument. I mean, I think that's one of the great things about the guitar is that it's this sort of infinite noise
box.

GRACE Can you show us the range of sounds you can get from your guitar?
TATTER:

SIMA Yeah. Well, the guitar itself, sometimes I do all different kinds of things. Sometimes I play power chords.
CUNNINGHAM:

[GUITAR PLAYING]

Sometimes I play more open chords that are a little bit more pretty and a little more broken up with like a little
more fingerpicking.

[GUITAR PLAYING]

Sometimes I'm kind of doing like scratching along the neck or along the frets and kind of making really choppy
noises with it.

[GUITAR PLAYING]

You know, so that's what I do with a guitar. But then a lot of the other noises I make through pedals. So one of my
favorite pedals is I have an analog delay pedal. And what that does is essentially, it gives you an echo. And you
can make that echo really short. So it can be da-dat. Or it can be da, da, da, da, da. Or it can be doo, doo, doo, doo,
doo, doo, doo, doo, doo, doo. And it kind of lets you dance around with the time.

[GUITAR PLAYING]

JOY DOLO: Wow. OK. That is so cool. I need to get some air pedals for my air guitar.

BUDDY: This is what I was looking for. It must feel cool to be able to do so much with just one instrument.

SIMA Yeah, you just feel kind of magical and alive. And you feel like your amplifier is kind of pushing you from behind.
CUNNINGHAM: And you're pushing back onto your guitar. And the audience is responding to you. And you're kind of getting lost in
your guitar and also controlling it. And it's just sort of this wonderful dance that makes you feel really powerful and
excited.

JOY DOLO: OK, you're in. She's in, right? Tell me she's in.

BUDDY: Totally. Yeah, of course she's in.

GRACE Well, it looks like you've found your last player. So my work here is done. Good luck with the guitar-chestra. Break
TATTER: a leg.

BUDDY: Awesome. I think we're ready. Leonore, Charlie, Les, Sima, and Joy, shall we do this?

LES PAUL: Let's rock and roll.

JOY DOLO: Yeah.

LEONORE: All right.

[PEOPLE CHEERING]

JOY DOLO: Get ready for the show of a lifetime. Guitars will shred. Faces will melt. Hearts will beat in four four time. Here we go!

BUDDY: 1, 2, 3, 4.

[GUITARS PLAYING, JOY MIMICKING GUITAR]

JOY DOLO: Wow! What a concert. The audience loved it. They kept trying to cram more of the music into their ears.

BUDDY: I'm pretty sure they were covering their ears.

JOY DOLO: Hmm, could be. We were very loud.

BUDDY: Yeah. But it was so fun. And to think the guitar might have never caught on, if it weren't for people like Charlie Christian, pioneering new ways to play and Les Paul helping make new sounds.

JOY DOLO: Yeah. We'd all be listening to pianos, or violins, or horns. Music would be totally different. And you know what else would have never happened without these pioneers?

BUDDY: What?

JOY DOLO: No air guitar. Come on. Solo with me, Buddy.

[JOY MIMICKING GUITAR]

Where are you at, Buddy?

BUDDY: Oh.

[JOY AND BUDDY MIMICKING GUITAR]

JOY DOLO: I'm going to do your piano. That's a flute. Yeah, rock on.

[MUSIC PLAYING]

This episode was written by Grace Tatter, sound designed and engineered by Rachel Breeze and mixed by Eric Romani. It was produced by Tara Anderson, Molly Bloom, Anna Goldfield, Marc Sanchez, Kalaisha Totty, Anna Weggel, and Menaka Wilhelm. Fact checking by Erika Janik.

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We had special guitar shredding by Johnny Vince Evans and voice acting by Vernon Neal and Rosie DuPont. And special thanks to Annie Lesser and Amanda Jackson. We'll be back next week with more explorations of the history that's all around us. This time, what's the deal with lines? Until next time.

[MUSIC PLAYING]