

A DAY IN THE LIFE LONG REMEMBERED:

THE MAKING OF PRINCESS LEIA'S STOLEN DEATH STAR PLANS

by Dan Amrich, Jude Kelley, and Katrin Auch





SO MAY I INTRODUCE TO YOU...

DAN AMRICH: Jude and I both auditioned for a Bay Area 80s cover band, Fast Times, in the late 90s. Jude played keytar and I was one of the two singers, though I occasionally played rhythm guitar. Jude gave me a ride home from rehearsal every week, and we'd talk about sci-fi movies, arcade games (which Jude collects and restores), and other geek stuff. One day we found ourselves discussing song parodies, and we decided if we ever did video game parodies, we'd want a name that only gamers would even understand. For whatever reason, the *Mortal Kombat* reference "palette-swap ninja" made us both giggle the most. When Jude later relocated to the Boston area, we missed working together, and in 2007 we decided to make good on that giggle. Our first song was about the Xbox 360 game *Viva Piñata* being a guilty pleasure for "serious" gamers.

JUDE KELLEY: After we had done 10 singles, Dan and I started to think about releasing a whole album's worth of material. We felt our best songs were the ones that centered on characters and told little stories—the collector in "Arcade Gaming Shrine," the guilty pleasures of "The Viva Piñata Song," the Xbox hotshot in "Halo ((All I Play-Oh))." We thought, what if we parodied an entire album at once and told a larger story with it?

DAN: The first idea we chased stayed closer to our gaming roots. We'd both seen and loved the documentary *The King of Kong*, which turned into a great David-vs-Goliath story

between competitive *Donkey Kong* players Billy Mitchell and Steve Wiebe. I latched onto The Who's *Tommy* and thought it might fit – both tell the story of an amazingly skilled arcade player struggling to overcome unusual obstacles. A few lyrics popped into my head — "See me, feel me, touch me, Wiebe" made me laugh, so I said I'd work on that. But a year later, that's all I had.

DAN: Jude lives outside Boston, and my wife Katrin Auch and I went to lunch with him during PAX East in 2012. I mentioned that I couldn't get the "Tommy Kong" project in gear. Kat was the one who blurted out the answer: "You're doing this all wrong," she said. "Sorry, I know you guys like them, but *Tommy* and *The King of Kong* aren't ubiquitous or beloved enough for this to really make an impact. You need to find two huge, landmark things that people are fanatical about and combine them – really big stuff like, say, *Sgt. Pepper* and *Star Wars*. Something like that." I looked at Jude, he looked at me and I swear we both saw little cartoon light bulbs over each other's heads. Yeah — something exactly like that!

JUDE: By the end of that meal we'd sketched out a rough structure and realized there were enough pillars to support the story. Luke gets off Tatooine around the point of "She's Leaving Home;" the Mos Eisley cantina and the off-the-rails circus vibe of "Being For the Benefit of Mr. Kite" are both total freakshows; Ben teaches Luke about the mystical Force on the Falcon during the mystical "Within You Without You;"

both works conveniently end with giant explosions. We only had a few concrete jokes in place – Kat says we came up with the title pretty quickly, and I think “Luke is in the Desert and Whining” was mentioned over lunch – but we knew there was enough there to move forward. That was spring 2012.

READING AND WRITING

DAN: I spent a full 18 months chipping away at the lyrics, working in as much direct dialogue from the film as possible while preserving the cadence of the Beatles lyrics. There were a few places we had to stretch or rush the film’s plot to fit the songs, but working a little at a time let me be really picky.

We were living in Los Angeles for a few years, so when we’d drive up to see friends in the San Francisco Bay Area, I’d spend five hours each way in the passenger seat, watching the film on my phone and writing lyrics on an iPad while bouncing ideas off Kat while she drove. Sometimes I’d get two verses of a song done in one leg of the trip if I was lucky. Jude would then chime in with ideas when I sent him drafts. We all decided the lyrics were finally done in December 2013.

KATRIN AUCH: I love my husband with all of my heart, but I don’t think he can possibly know how annoying it is to drive six hours and have listened to the same 15 seconds of “When I’m Sixty Four” thousands of times.

DAN: To research how the album was created, I hit the books. *The Beatles Anthology*, Geoff Emerick’s *Here, There and Everywhere*, Mark Lewisohn’s *The Beatles Recording Sessions*, *Beatles Gear* by Andy Babiuk, and *Beatlesongs* by William Downling were particularly helpful, even if they didn’t always agree with each other. I created little profiles on each song that noted what instruments were used, including specific guitar models and amplifiers, and if Geoff Emerick used any special recording techniques that we’d want to simulate. The internet filled in various other details, like YouTube fans breaking down three-part harmonies on “Lovely Rita” and drummers arguing over whether Ringo used a double-bass pedal on “Good Morning Good Morning.” Fan forensics is impressive stuff.

JUDE: For better or worse, Dan and I played all the instruments ourselves on the entire album. (The two exceptions: My sister Casey played a few clarinet notes on “AA Twenty-Three” and Kat added some hand claps to “Never Better.”) We were willing to work with other people, but since this was a labor of love, we weren’t hiring anybody — our only expenditures were gear we absolutely needed. The old maxim of “Fast, good, cheap — pick two” was very true; we went for good and cheap, and that meant slowly learning how to do and play everything ourselves, one way or another.

DAN: Most of the guitar parts used on the original recording were recorded with Epiphone Casinos, with a few Fender Stratocasters here and there, plus Paul used a Fender Esquire on “Good Morning Good Morning.” Getting tones in the ballpark was important to me, so I’d already found a used



Fast Times live at Slim’s in San Francisco, 2007

Line 6 Variax 500, which digitally models about two dozen expensive vintage guitars, including the Casino (and it could be programmed to think it was an Esquire). To complement that, I decided I wanted to get a violin bass like Paul’s, to do this justice. Real Hofner 500/1 hollowbody basses are pretty pricey one-trick ponies — nothing sounds like a Hofner, but a Hofner sounds like a Hofner and nothing else. Plus, I quickly learned that Paul didn’t play the Hofner at all on *Pepper*; he used a Rickenbacker 4001, which was his newest toy in 1967. This, too, was expensive. The solution was a used Line 6 Variax 500 Bass, which digitally models a bunch of classic basses, including both an early-’60s Hofner and a late ’60s Rickenbacker — crucially, both with flatwound strings, which gives Paul’s bass its distinctive warm thuddy sound. So yay for technology; those two modern instruments got me close enough to the Beatles’ guitars and basses for relatively cheap.

VIDEOS: PLAN B

DAN: We knew we’d need videos to help people find what we were doing — that’s how music is shared in the modern era. So early on, we were hoping to get some cosplayers to act out the stories of one or two songs.

KAT: When Dan and Jude started to make music, they didn’t do videos. Instead, a random person online would grab the MP3, make a video, put up inaccurate lyrics and sometimes not even credit the band. I decided at some point that every song needed at least a lyric video.

Up to this point, our biggest video project was “Arcade Gaming Shrine.” We made plans to film it at California Extreme, a Bay Area video game and pinball expo that Jude and Dan love. Dan and I lived in LA, and Jude lived outside



"Arcade Gaming Shrine," 2011

of Boston, so I had limited time to shoot when we would all be in the same place. I spent a couple months storyboarding the video, breaking down all the lines and points. I worked closely with Dan, and we disagreed several times, but the end product was pretty solid for something shot in 24 hours.

Because I was surrounded by it, and because I am a visual person, I spent years storyboarding potential videos in my head. I knew that this project would take off, and it needed videos to do that properly. I also knew that we didn't have the budget or ability to make them the way I saw them in my head; we would have needed Jude for at least a week, and all kinds of actors and costumes — plus the post-production would be way beyond my skills. So we decided to try and have other people do it, and I tried to mentally prepare for seeing someone else's vision of these videos.

DAN: We figured the best way to go about doing that was to work with a website that already had a lot of sci-fi content. Our friend Rob Smith was one of the first people we told about this project, and he voluntarily worked for several months to try to find us a partner who could make a video for the album while we focused on the music. We didn't expect anybody to make a video for every song, but we figured there'd be some value to someone out there who profits from web traffic. Our approach was, "There are two big pop-culture anniversaries coming up: *Star Wars* is turning 40 and *Sgt. Pepper* is turning 50 a week later. We're giving the music away for free, so do you want to make a video of our thing and monetize that for yourself?" After two or three months of knocking on some very prominent geek-culture doors, the answer turned out to be no, for reasons ranging from scheduling to resources to corporate politics.

KAT: That plan never found the right partner, so it was time for Plan B. I knew we had to be on YouTube, and we had to have the lyrics as part of it. It only made sense to use the footage from the movies. Some of them came together really quick, some of them were a real fight. But I am very happy with the way they came out.

DAN: We based the final mixes on the 2009 stereo remaster of *Sgt. Pepper* before realizing that the Beatles themselves didn't care about stereo — the mono mixes were the "real"



"Arcade Gaming Shrine," 2011

record to them, and stereo was a gimmicky fad, so they didn't even stick around to approve those mixes. But where possible, I matched the placement of instruments in the stereo field — bass hard left here, keys mid-right there, so it would recall what people were used to hearing. I didn't stick to it as law if the song benefitted from something different; like, I'd sometimes put vocals in the middle instead of off to the side. We felt the vocals should sit high in the mix throughout since we were telling a story; a parody song where you cannot make out all the lyrics is not an effective one, so we committed to that early on.

It also sounds more like an album from 1967 than 2017, which is due to a mix of intent and ignorance. I felt pretty good about my mixing skills, but I was learning about mastering as I went. When I tried to apply a lot of modern mastering techniques to it, I didn't really like the way it sounded — too thunderous, not subtle. Pro-audio friends offered to master it for really reasonable fees, but I really wanted it to sound more like the classic record and I figured I would be less likely to overdo it simply by not knowing how to overdo it! So if it sounds a bit soft or humble compared to modern, professional productions, that's absolutely my fault but I'm okay with it. 🎧



TRACK 01

PRINCESS LEIA'S STOLEN DEATH STAR PLANS

JUDE: We recorded the album pretty much in order. That way, we'd be able to build on any jokes or references we put in early on, but mostly we were overwhelmed and figured the beginning was as good a place to start as any.

DAN: At some point I brainstormed alternate song titles, just in case. Some of the ones in my notes were "R2-D2's Secret Contraband," "Grand Moff Tarkin Blows Up Alderaan," and "Princess Leia's Pastry-Shaped Headband," which I rather liked. But since the plans for the Death Star really are the MacGuffin that holds the story together, the title wasn't really in much danger.

The Beatles started with the sounds of an orchestra preparing to play and some general ambience of an impending concert; we wanted to do something similar, so we found some Creative Commons sound effects of people in a movie theater before a show starts. We originally used the 20th Century Fox fanfare because that's what kicked off all our *Star Wars* viewings, but at the last minute we took it out.

Jude came up with the idea to quote some John Williams in the first instrumental break. We both wanted to establish early on that this was going to have a foot in both worlds, and so we took every opportunity to quote melodies from the film as little musical Easter eggs.

JUDE: I had initially recorded the horns as the Beatles had them, and wasn't too happy with the way they came out.

Just for fun, I decided to try a bit of John Williams' score, and settled on "May the Force Be With You." I had to play with the key a bit in order to shoehorn it into the Beatles' French horn break, and shifted back to the Beatles' instrumentation for about a bar so the song could pick up from it as usual. I sent the track to Dan and he was really excited about what I had done. This also laid down the gauntlet for Dan to include more bits of the *Star Wars* orchestral score throughout the album.

DAN: Knowing the chords is one thing; being able to mimic the style of George and John's guitar playing was trickier. I'm not a confident or competent lead guitarist, so I really sweat the phrasing and took a lot of time working on each riff.

The screaming girls at the end are taken from a 1964 newsreel. That's what Beatlemania actually sounded like.

KAT: "I'll just make a *Star Wars* crawl — how hard can that be?" The answer is a lot harder than I expected. I should say at this point that I had just switched from Mac to PC, and in doing that, I moved from Final Cut Pro to Adobe Premiere. It's not all that different, but it was enough to throw me off. Also I am not skilled in After Effects, but luckily my brother Ian was able to help me enough to create the opening logo and the crawl. Once I got to the actual film footage, I wound up altering the playback speed several times to make the action match the lyrics. 🌀

TRACK 02



DAN: Ringo is not a singer, but he can sing – sort of how neither of Jude nor I are drummers, but we made drum tracks. Jude had handled plenty of backup vocals on stage with our 80s cover band, so there was no doubt that he could carry a tune – but could he carry a song?

JUDE: At one point, early in the project, Dan told me: “By the way, you’re doing the Ringo part on ‘With a Little Help From My Friends.’” I was a bit worried about how it would turn out, but I also knew that the song would benefit from another voice on the call-and-response for the song. To prep for this vocal, I listened to Ringo’s singing a lot in my car for about two weeks. I also sucked on a lemon before laying down the track. A singer friend from a previous band told me lemons improved his voice, so I figured what the heck.

DAN: Jude nailed Ringo’s vocal and only needed two takes to get the big ending note, with no studio fixes. It’s really fantastic. We briefly considered putting a very heavy Darth Vader voice filter on top, but that would have ruined it; a subtle flange made it sound just otherworldly enough while letting Jude’s natural tonality shine through.

JUDE: We spent a few weeks considering whether “I want those plans in my glove” should be singular or plural.

DAN: I thought “I want those plans in my glove” was not optimal for a long time, and I tried “I want those classified plans” – but getting it to rhyme with Ringo’s “I want somebody to love” wound up winning out. I’m still like 55/45 on this!

KAT: Dan is crazy. “I need those plans in my glove” was totally the right choice, but Jude and I still had to really strong-arm him into it.

I had to run the scene where the Imperial troops cut through the bulkhead door at about double speed. It’s super slow and dramatic in the movie, but I really wanted the moment when the smoke clears and you see Vader to appear to match the part of the song where you hear the Vader breaths, right before Jude starts singing. This involved moving around a lot of small clips from a small amount of time in the film in order to create that moment. I was super happy with Vader throwing Antilles’ lifeless body in time with the drum hits. 🌀



TRACK 03

LUKE IS IN THE DESERT

DAN: Early in the planning stages, Jude said “I can’t wait for ‘Lucy’ – I own the same model of organ the Beatles used.” Which is a very Jude thing to say.

JUDE: My first band played a lot of Doors music, which heavily featured a lot of late 60’s “combo organs” played by Ray Manzarek. When I was in that band, I had pretty junky gear, and after I was out of that band, I ended up chasing down more accurate Doors keyboard gear, just for the fun of it. One of those keyboards was a 1968 Gibson G-101 Portable Organ. It was built by the Thomas Organ Company for Gibson. It’s not actually the identical model to the Thomas that the Beatles used, but it shares some of the same circuitry, and that’s what really matters. This organ is all solid state, and it really nails that “Lucy” organ sound. I ended up

playing it directly into my recording setup via a ¼” jack, with no effects applied other than the built in effects of the organ itself (notably vibrato and sustain). To my surprise, this almost 50-year-old organ is probably the cleanest sounding instrument I have ever plugged into my recording setup. Given that these organs have become quite rare (and expensive!) over the years, we really lucked out on this one.

DAN: This is the first track with a tanpura on it, which (I learned) is an Indian instrument that sounds similar to the drones of a sitar. Unsurprisingly neither of us owned a tanpura, so I found a decent 15-second sample online and pitch-shifted it. This approach would come in handy on several other tracks.

The Beatles applied much heavier effects to John’s vocals on the original, but we went easy on the Leslie rotating speaker effect for the sake of narrative clarity. I was very happy I could make the background “aaah” parts into actual bratty whines.

We added more to the third verse of this song, which seemed like blasphemy, but it served our narrative needs. When I was writing the lyrics, I forgot that the original third verse is really a half-verse, but then once I’d written it as a full verse, I didn’t want to cut the blue milk reference or Luke walking away from that scene with “and you’re gone.” It’s one of the only times we took liberty with song structure.

KAT: Not my favorite song, but I was super happy with the timing on “They both lock eyes.” 🔄



TRACK 04



NEVER BETTER

DAN: George Lucas needed time to set up the character development for the hero quest. That meant we had to find ways to make Luke's immaturity and dissatisfaction span several songs.

JUDE: One of my first goals when starting a new track is accuracy, and I spent a considerable amount of time "auditioning" and tweaking various keyboard patches to get things right. (I had a lot of practice doing this in cover bands over the years.) There is a subtle electric piano in this track, played by George Martin. The particular model of this instrument is a

the two types of instruments, but it came together quickly. The addition of that subtle (but accurate) pianet sound still makes me smile when I hear that track.

DAN: This was my first time recording guitars direct and dry, then adding digital amp simulations within Logic Pro X, and I thoroughly enjoyed it. This was the track that really showed me how much control I had, tweaking the exact amount of treble boost and reverb and re-amping to my heart's content. Between the Variax's Casino setting and some of Logic's stock pedalboard effects, I got a sound a really liked.

KAT: This one was hard because the flow of events don't really match up with the lyrics perfectly. The kindly old man shows up several lines after he is first mentioned, and I had to really drag out Luke playing with the lightsaber to make it sync with the lyrics. 🔄



Hohner Planet N, which is quite a rare and expensive piece, so I started out with some Wurlitzer electric piano patches, which are much easier to come by. The track sat this way for months, but later on in the project, I updated my keyboard rig to include Native Instruments' Komplete 11 package, which includes the "Scarbee" Hohner Planet — pretty much a dead ringer for what the Beatles used. I had to adjust my performance a bit to account for the differences in attack between



TRACK 05



IMPERIAL HOLES

DAN: This scene is really short in the film but we knew we needed to do a narrative cutaway – a sort of “Meanwhile, back on the Death Star...” without actually throwing in a narrator (which was considered for a hot second but quickly rejected). I couldn’t get a handle on how to tell the story.

JUDE: Dan mentioned some trouble deciding on a perspective on this one, and asked me to take a shot at it. This was a rare occurrence, as I thought it was my job to simply read over Dan’s drafts of vocals, laugh, and say “These are great!” At one point he was thinking about track five for Han’s back story, but ended up zeroing in on the board room in the Death Star. It was my idea to use the perspective of one of the unnamed guys at the board table who doesn’t say anything.

DAN: Jude suggested that rather than present the meeting from Tarkin’s or Vader’s perspective, it would be funnier to tell the scene from the view of one of the nameless guys at the table who find themselves stuck in this incredibly awkward meeting. Like, think about the worst office meeting you’ve ever endured. Was it a really bad PowerPoint presentation, or did a guy get choked by space magic? Yeah.

JUDE: At one point, I had a vocal line that referred to the total number of people in the board room. I needed to know how many were in there, so I ended up drawing a diagram (and also figured out how many cameras/angles they were using to compose the scene). We ultimately ended up dropping that line, but it was fun to deconstruct the movie a bit for the sake of accuracy.

DAN: That harpsichord! Jude never met a vintage keyboard he didn’t love. The harpsichord and descending melody lines really gives the whole song an air of cultured dreariness – just like the Empire.

KAT: I overheard Dan working on the solo and actually thought he was trying to work out a John Williams reference. So I popped my head into his room and said “Oh, you’re going to quote the Imperial theme there? That’s cool.” But he wasn’t; he admitted he was just having trouble playing George’s part. So it wound up being a happy accident.

DAN: I appreciated the suggestion, since I obviously wasn’t doing a good job on the real solo! And thanks to Kat, it’s become my favorite part of this song.

KAT: This scene in the film is not as long as the song, so there was some footage reuse. It doesn’t have the best ending, but it works. 🔄



TRACK 06



HE'S LEAVING HOME

DAN: The timing of this one matched the narrative well — Luke's literally leaving home at this point in the story. But while we're sitting there making jokes and geeky references with all the other songs, we suddenly realized...uh, we've got to interrupt this silly project with this serious, sad song where people die and the instrumentation is delicate and heart-breaking. How can we make this funny? It was better for the story if we didn't, so we ultimately decided to play it straight.

Relatively, anyway. The only intentional joke attempt in this song is a dark one — "smoking and charred at the top of the stairs." It was intended as a dash of sick humor but in the final presentation, it doesn't necessarily sound funny because we didn't play anything else for laughs.

JUDE: I had a lot to bite off and chew on this track. Recording the harp was a bit of a challenge. I had some orchestral score to work off of, but if you can't play a harp patch the same way you would play a piano patch. Many chords had to be arpeggiated, which took some getting used to. Typically you start with a low note on a chord, a little bit before the beat, and successively add higher notes. This meant the performances couldn't be digitally enhanced in terms of timing. Getting the harp to sound a bit ethereal was a fun challenge.

DAN: The strings featured this really nice, subtle vibrato section on the final verse — you'll hear it in the right channel — but the first pass was not even remotely subtle. It was like this icepick staccato, with the computer playing a violin with





a jackhammer, shouting “I’m totally doing this right! Right?” Jude then used a MIDI command designed specifically to add a vibrato effect to certain notes, and that made it absolutely perfect.

JUDE: Initially, I laid down the strings with Logic X sounds, but ended up converting/redoing them with the Native Instruments Complete strings patches. This made a big difference, as Complete has more capability to do things like tremolos and whatnot. Trying to get the strings on this one to sound “human” was tricky.

One of the most fun parts of recording the strings on this track came when I was having a hard time with my (rather poor) score for the aggressive string part right after the line “now that his family’s gone.” It just didn’t match what I was hearing on the album. I mentioned this issue to Dan, and he sent

me a file where he sang a guide vocal for the string part in question in perfect cadence with the track. I focused on and played along with his guide and made my way through what would have been a difficult recording session with ease.

DAN: I recorded this vocal after being sick for a few days. There’s a tiny bit of gravel in my voice and I liked the result — you can hear my voice break on one or two syllables. Congestion became emotion.

KAT: I love this song, but it presented a significant problem for the video: Should we use footage of Owen and Beru from *Revenge of the Sith*? In a project that strictly blends one film

and one album, is dipping into the prequel trilogy thematically allowed? Ultimately we decided it would add emotional resonance. I figured the fact that it echoed the end of the video for “Luke is in the Desert” — Luke standing in front of the twin suns, and then Owen and Beru holding him as an infant years earlier in front of those same twin suns — worked well.



DAN: I noted that some YouTube commenters said this video made them tear up, especially when they saw the Owen and Beru flashback. So I think Kat deserves special acknowledgement for making someone cry with a comedy album. 🥹

TRACK 07

BEING FROM THE SPACEPORT OF MOS EISLEY

DAN: The uneasy, dangerous feeling of the Mos Eisley cantina seemed like the perfect fit for the uneasy, dangerous feeling of “Being for the Benefit of Mr. Kite.” The bar is full of aliens and the music sounds similarly strange and a little menacing. And I didn’t intentionally do imitations on the album, but I do tend to naturally mimic stuff when I sing, so you can hear a little Alec Guinness inflection on some of these lyrics.

JUDE: Late in the recording of this track, I still didn’t feel like this track had the energy it needed. For a while we were using a digital accordion on the track (and there is still some in there), but I eventually ended up adding a live recorded accordion later on. The accordion really upped the ante, giving the track more energy and that carnival feel we were going for.

DAN: I’m fond of this song, but my favorite part of this track is Jude playing a real accordion.

JUDE: The accordion I used was a red Hohner Bravo III 120 Bass. I recorded it directly into my vocal mic, as this accordion has no output jack or pickup.

DAN: For the scary circus solo, the Beatles and their engineers recorded calliope music, cut up the tape, threw the pieces up in the air, and spliced them back together in random order, some of them backwards. I found a piece of software that did the same thing, and I used John Williams’ “Cantina Band #2” instead — that’s the clarinet piece you hear underneath the conversation between Han and Ben.

There’s one phrase that makes it particularly recognizable, and I placed that very deliberately in the mix so people would have an “I see what you did there” moment.

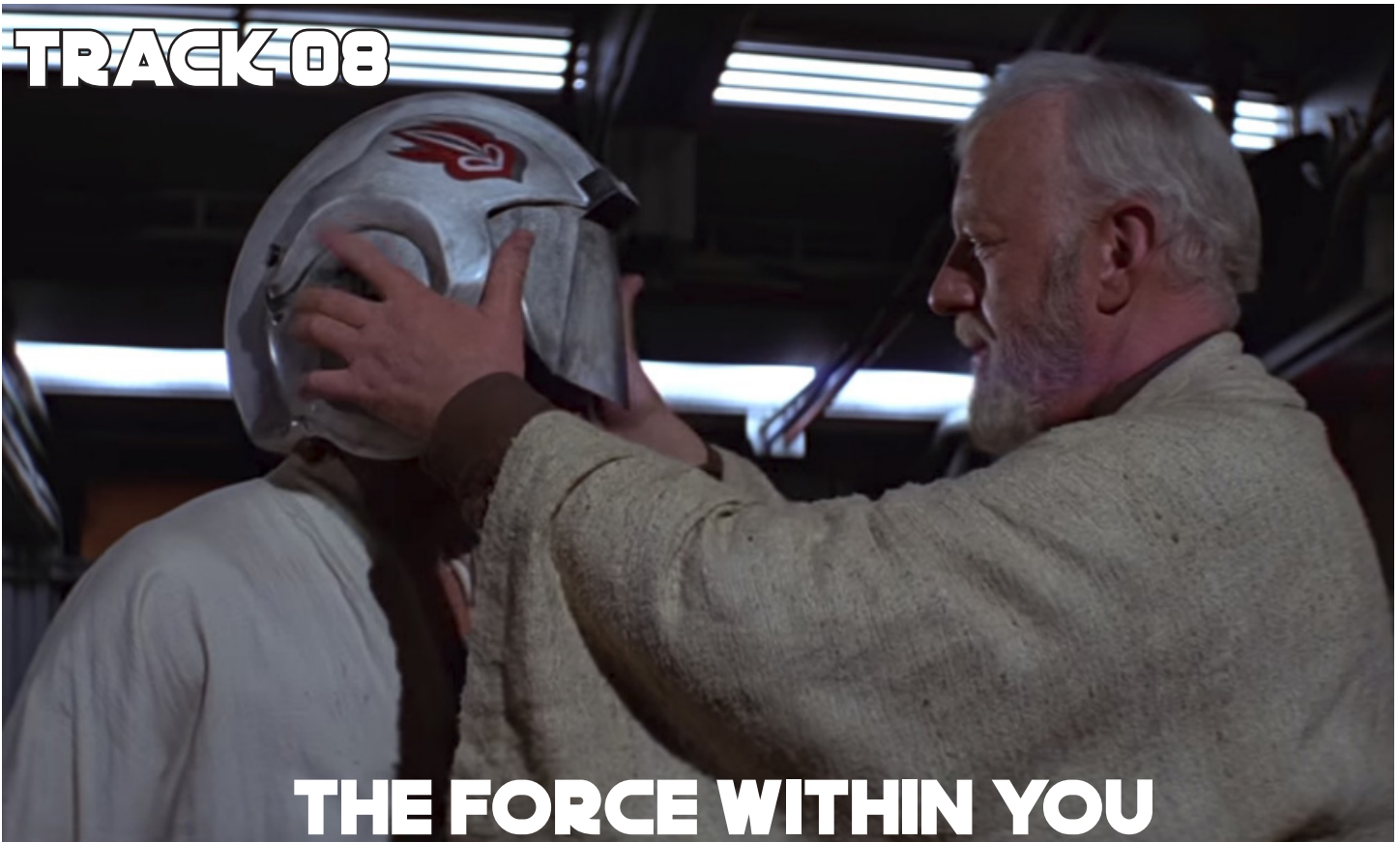
For years in our cover band, Jude would soundcheck with the “Cantina Band” theme on his keytar, so I’m glad he finally had an excuse to record it! Rather than repeat the random-order-calliope-edit thing at the end of the song, we just used it as a coda.

JUDE: To incorporate the “Cantina Band” coda, we ended up adding in some digital steel drums, but we did keep a lot of the instrumentation that the Beatles used throughout the original track. One thing that I am specifically proud of is the incorporation of little accordion stabs on the off beats during “Cantina Band.” These notes are not typically this prominent in John Williams’ arrangement, but it’s a way for the accordion to say “Hey, I’m still here!” as the song concludes.

DAN: We specifically based this project on the 1977 theatrical version of *Star Wars*, but we were never able to overtly work “Han shot first” into the lyrics. It was not for lack of trying; I spent about two hours during the writing just trying to find a way to do it verbally, but it just didn’t fit. So, the last sound on this track is Han shooting and Greedo’s corpse slumping on the table.

KAT: We knew we had to have Han shoot first, and the video helps make that final sound effect very clear. I also included as many of the cantina monsters as I could — more aliens made everything feel more alien. 🐉

TRACK 08



THE FORCE WITHIN YOU

DAN: During the writing phase, I suggested we cut most of the solo. Not only did I not know how to do a call and response between a string section and a sitar, but I figured people would be bored — “We can’t tell jokes without lyrics,” I remember thinking. Neither Jude nor I particularly liked the song anyway, but we knew we had to do it in the spirit of being complete, so we figured this was a good time to trim — let’s do a short version and get it over with. Then we wound up doing the whole song anyway.

When we got this far in recording, I was kind of hoping I could convince Jude to record it himself, and I think he was hoping I would take it. His plate was full when it came up, so I said I’d give it a try. I really didn’t know what I was going to do when I started recording.

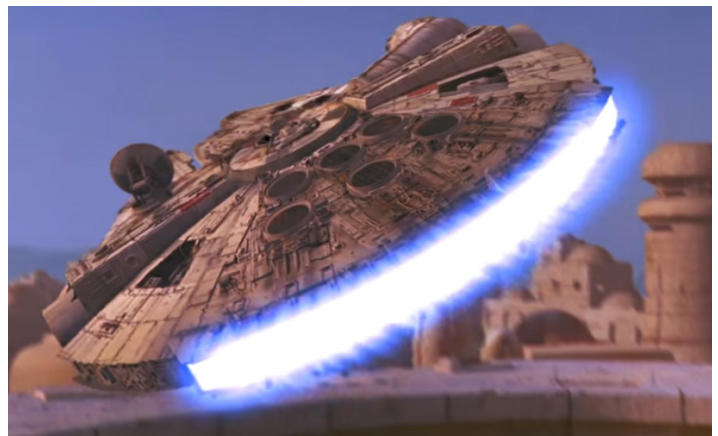
JUDE: Dan was going to have the hum of a lightsaber run through this song, but I suggested it should be the engine of the Falcon, to help establish that the scene was taking place in transit. There’s one sound from the film where the Falcon is speeding away, and the engine flanges in a very sitar-like manner, so I thought that would be a good transition.

DAN: I found that flanged engine sample and crossfaded it with the tanpura sample, which had been graciously pitch-shifted to the correct key by our friend Travis Kindred. After building the blastoff collage, the scene became pretty clear.

We could not find a sitar player, and the electric sitar setting on the Variax wasn’t giving me what I wanted, so I decid-

ed to create a heavily effected guitar part instead. This is the only electric part I didn’t play with the Variax; I used an ESP XJ-6 with mini-humbuckers and ran it through a compressor, two chorus pedals, a Digitech Whammy, a delay, and reverb, then plugged a cable straight from the pedals into the audio interface. I also played with an eBow, which creates a magnetic field to vibrate the string; hold it in your hand instead of a pick and you get infinite sustain. I’d never used one before, but it gave me the weird “swoopy” sound I was chasing.

Weirdly, I wound up replacing the original song’s string parts with the fake-sitar guitar lines, and replaced the sitar responses with R2-D2 chirps instead, courtesy of the starwars.com soundboard. Using Artoo sounds didn’t even occur to me until I’d been recording for a while. And then I realized, oh yeah, *that’s* how you can tell jokes without lyrics.





JUDE: We had initially thought of incorporating some holographic chess game sounds, or maybe shortening the solo, but then Dan struck comedy gold on the R2-D2 call and response. So in true fashion, Dan took what we worried would be one of the duller points of the album and turned it into one of the comedic high points.

DAN: The droning instrument in the background is a tanpura — I thought it was just the drone strings on the sitar, but that's one of the many things I wound up learning as we went. I found a short tanpura sample in the key of A and once again Travis Kindred kindly shifted the pitches to C# and G#.

JUDE: Since we knew we'd never be in the same room working together on this, we built workstations that contained the same gear — we both used Macs, we both bought Logic Pro X, we got matching studio monitors, and we both picked up Native Instruments Komplete 6 audio interfaces. This gave me the MIDI connections I needed and the microphone and ¼-inch guitar inputs Dan needed, plus it came with a sampler pack of NI's Kontakt digital instruments. One of those instruments turned out to be tabla. I helped find and audition a suitable tabla patch, and Dan ran with it. His performance sounds great.

DAN: Growing up in the suburbs of New Jersey, I never got around to learning how to play tabla, but I was very aware of the sounds on the original record, and had strong feeling about when you should hear a “TOK!” and when a “ba-WOOP” should appear. I wound up creating several small blocks of tabla beats on a MIDI keyboard, then connected them in random order like Lego bricks until it sounded right to me — or at least sounded plausible.

JUDE: I was behind the scenes on this one, mostly because I was putting out fires on tracks 7 and 9 while Dan was slugging this one out. I'm not a big fan of the Beatles' original version of this song, but Dan's take on this track is one of my favorites on our album.

DAN: I'm still amazed this song turned out okay.

KAT: This was a hard video to create, but there are moments that really work. I love the Han and Chewie opening and the fact that they jump to hyperspace just as the drums kick in. At the first I thought I would do something psychedelic and have color swirls during the solo, but then I tried to make the holo-chess game take the full solo. I did have to repeat a shot or two, but not that much, so that worked out. I also love that I got Ben saying “that's no moon” at the same time as the lyrics. 🌀

TRACK 09



DAN: Thankfully, this is the section of the film with the most numbers in the dialogue. “Here it is — 2187.” “Prisoner transfer from cell block 1138.” When R2 plugs into the Death Star’s computer network, C-3PO says he’s found Princess Leia — “Level 5, detention block AA-23.” If anybody can explain the Empire’s numbering system, drop me a line.

When Paul recorded this, he wanted to sound like a 16-year-old singing to his young girlfriend. To do that he sped up the tape — so much so that the pitch went up by a half-step (less so on the mono edition, we realized too late). We decided to record everything to the pitch of the stereo album version, thinking it would be easier that way, but that caused us some complications. Jude had to transpose everything digitally, and since Paul is already just out of my natural vocal range, I had to sing everything even higher. I recorded the vocals three times, trying to get a take with more confidence

and less wavering on notes, but they all sounded the same. Kat suggested adding character affectations where I could, like the little sarcastic lilt on “this is some rescue.”

JUDE: Dan told me, “In, you must go.” I asked him, “What’s in there?” His response: “A digital clarinet.” Out of all the songs on this album, this one worried me the most. I have a fair amount of experience with keyboard sounds and synthesizers, and it’s pretty widely accepted that the woodwinds are a weak point...and this track contains a ton of clarinet. From what I can hear, they used two “normal” clarinets and a bass clarinet to boot. My initial attempts at playing digital clarinet were pretty dreadful. I even ended up buying a “wind to MIDI converter,” a device that allows you to blow into a tube in order to modulate the woodwind sound, but it still sounded awful.

I enlisted my sister Casey to help. She rented a clarinet, practiced, and when we were together on a family vacation, I brought a laptop and a microphone. Unfortunately, we did the recording session in my parents’ kitchen, and the noise of their refrigerator in the background unknowingly messed up most of the takes. We had a hard time filtering it out, and very little of Casey’s great performance ended up being usable because of this situation. I reached out to another great woodwind player friend who had access to recording gear, but our schedule for completing the project ended up being incompatible with her availability. That being the case, I upgraded my sound selection from Logic X to Native Instruments Komplete and took another crack at it. I ended up





meticulously massaging the notes, measure by measure, and ended up building something that started sounding better and better. Complete lets you play MIDI notes in different “modes” — some hold the notes, others aggressively squeak out the notes, etc. For this song I ended up pushing those capabilities and patches to the limit. I introduced a lot of little quirks to make the performance sound more “real,” and sprinkled in a bit of actual “real” from Casey’s surviving takes.



Chatting with real clarinet players helped me get through this one, as woodwind players approach music a lot differently than piano players do.

The drums in the original track are very subtle. For a time I didn’t notice them at all, but as you give these tracks a deep

listen, things start to emerge. One thing that made the drums subtle was Ringo’s use of brushes instead of sticks on this track. That presented a problem, as the Native Instruments Abbey Road 60s Drummer software we were using to record our drum performances didn’t have a brush setting! As it turned out, by dramatically lowering the MIDI velocity of the drum hits we recorded, almost as though someone were lightly dropping the drum stick on the head of the drum from about a centimeter away, you get something that sounds a lot like brushes. I transformed the appropriate MIDI notes to get their velocity way down, and voila, we had a drum performance that sounded brushesque.

DAN: This track was probably in development the longest. I think I did the bassline at least a year before the rest of the track got sorted out.

JUDE: This track also takes the cake for being recorded in the most keys. Sometimes we were recording in the “sheet music key” and pitch shifting, and other times we were recording instruments in the “on the record” key. It got pretty confusing at times.

KAT: This song had some fun small moments in it for me. As the troopers are leaving in the ship in the intro, one of them does the proper two-steps-to-a-halt soldier move, while the other blunders along, but I was able to match the “step-step” to the music. 🔄

TRACK 10

DIANOGA

DAN: This gets my vote for the silliest song on the album; giving this minor monster character its own love song is inherently funny to me. I also think this song holds up on its own, outside of them main narrative — *Star Wars* fans know this scene and you don't need to hear the rest of the album to appreciate this one joke.

JUDE: This song was one that, early on, Dan and I thought might be a nugget of the album that people might latch on to. It's silly, fairly self-contained and light-hearted. Looking at things now, it's far from a break-out "hit," having the fewest views on YouTube.

DAN: To get the funny buzzing sound, the Beatles played combs with toilet paper on them. It's the 21st century, so I multitracked kazooes instead. They all had slightly different sounds. My favorite is a lovely metal one that videogame

composer and Video Games Live creator Tommy Tallarico gave me at E3 in the mid-90s.

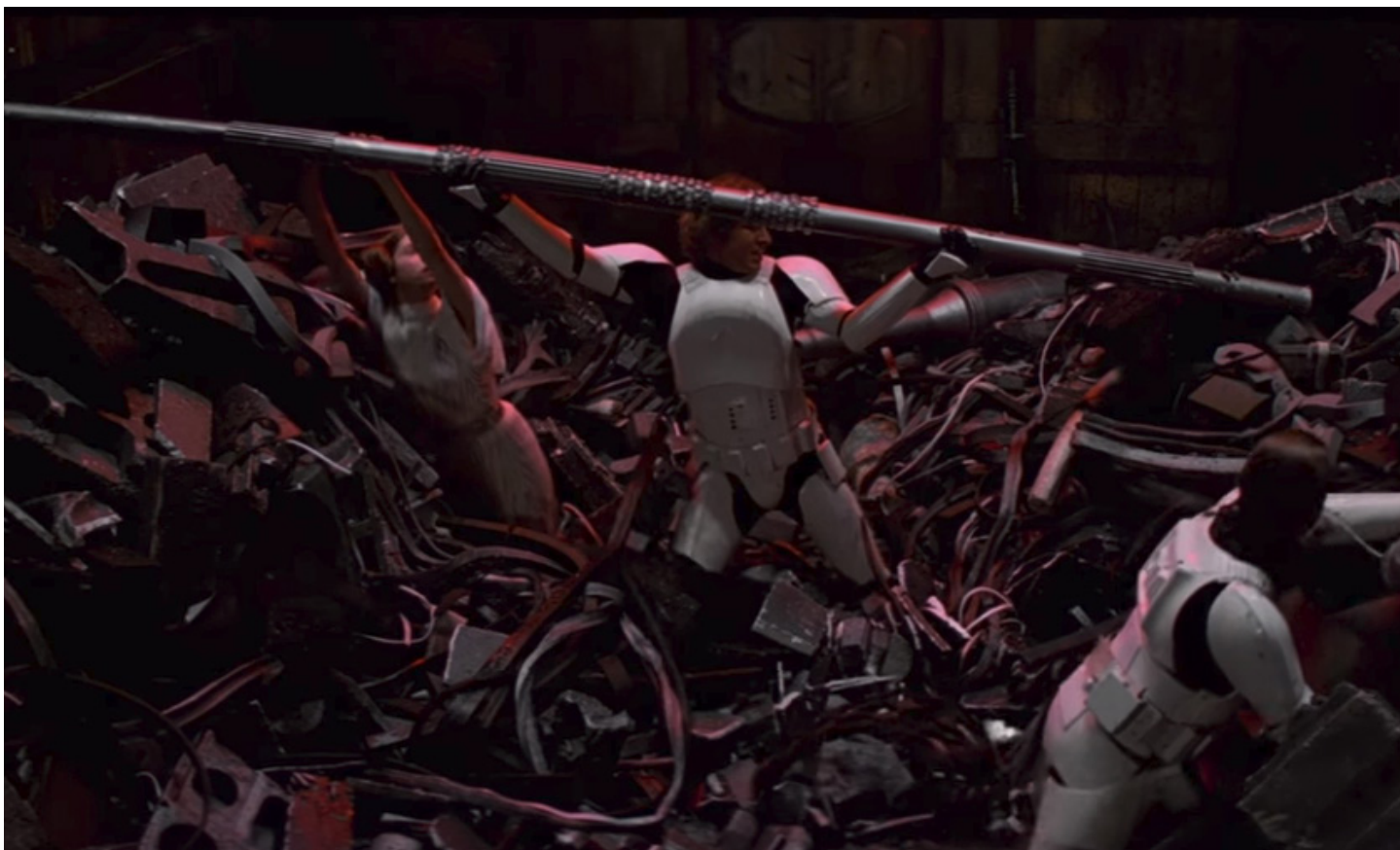
JUDE: I actually recorded most of the keyboard on this in Michigan, when I was visiting my in-laws. I packed up my Mac, my trusty Roland AX-7 keytar, and worked through the keyboard lines late at night during one of my summer vacations. At the time, we had suspended drum tracking at this song because we were still actively on the search for a human drummer, so this one existed on the hard drive without drums for a very long time. I enjoyed the option to just plow ahead with the keys on this one.

Incidentally, I once had this song memorized years ago just for the opportunity to play George Martin's awesome keyboard solo. I wish I could still play it from memory, but nevertheless it was a lot of fun for me to return to this one.

DAN: The acoustic guitar is my beloved Taylor 410ce L1, recorded direct. The Beatles got a very harsh, rackety sound out of their Gibson J-160Es; I played the downstrokes really hard but couldn't quite capture the same aggressive tone. I also snuck in the Imperial March as the dialogue montage begins, just for fun.

Most of the dialogue and sound effects appear pretty much in film order, but Han's "Yahoo!" is one of the exceptions. It's lifted from the end of the film, but it fit the cadence of Paul's "Rita!" really well. I tried using other sounds directly from this scene but none of them had the right cadence or spirit.





JUDE: My favorite part of this song is when Dan channels his inner Mark Hamill with his “Where could he be?” line. Han Solo’s “Yahool!” is a close second.

DAN: I thought John’s goofy vocal outro (he liked to hear his voice echo in his headphones) wasn’t going to hold up in our context, so we figured we’d use the space for narrative instead. The soundboard at starwars.com is a treasure trove



— all these famous lines and effects, perfectly isolated without any background music or ambience from the scenes. I connected a small digital recorder to my computer’s headphone jack, recorded all the isolated sounds I needed (which took several hours over several sessions), then layered them in on three tracks to build a compressed version of the scene. I was picky about making the voices appear in the

stereo field roughly where they appear on screen — Luke’s on the left, and Leia moves to the right as the song goes on.

JUDE: The outro piano line was something that I hadn’t thought about that much before, and it has a really, really weird groove. I read somewhere that the Beatles added it in order to lengthen the song and make it a potential single. The piano is quite funky with a really dark vibe — very different than the rest of the song. It took me quite a few takes to get through it. Even though it’s buried in the mix a bit, it does a nice job of adding to the tension created with the layering of the trash compactor sounds (increasing in frequency) and movie dialogue. The final build meshes well with the impending doom in the trash compactor, right up until that final piano glissando coinciding with the moment of relief when the compactor stops.

KAT: I love this song, but I had one problem. It’s a love song to a monster that is barely shown. I found and used every small frame in which it appeared! Part of me would have loved to see this as an animated video, where we could see much more of the monster.

Some people thought that I added the vocal clips in over the music. I wish — the film footage I was editing had no sound at all, and Dan had added quotes based on what worked best for him in the music, not necessarily where they appeared in the film. Usually I tried to match them up, but I struggled here and ultimately just did my best. 🌀

TRACK II

KEEP MOVING KEEP MOVING

DAN: This was really difficult to write, because we had to compress about 15 minutes of the movie into a song without a lot of lyrics. We had to squeeze in iconic scenes like the Han and Chewie rampage, the chasm swing, the lightsaber duel, the dogfight, and the witty banter in the cockpit – all in a song with a boring title. But really, “Keep Moving” is what both the characters and our project had to do at this point.

JUDE: It needs to be stated that at the start of recording this track, I sent Dan the most embarrassingly bad guide track of the entire project. It sounded horrible, with horns that sounded like they came out of an early 1990s PC sound card. Good-sounding horns would end up being quite elusive throughout the recording of this track.

This song benefited immensely from an upgrade to our sound generating software. While I was trying to get the horns right, I switched from Logic X horns to Komplete 11. We did some researching on the instrumentation, and Dan found some references indicating that the horns were actually saxophones rather than some of the orchestral stuff I was trying. (It really sounded to me like there was a trombone in there somewhere!) Once I committed to saxophones, things started coming together. Ultimately, I layered in baritone, tenor and alto saxes, all from Komplete 11. Then, Dan went to town with effects. When this track was about 95% dialed in, we entered into one of the most intense periods of back and forth file swapping on the entire project. I’d change phrasing a bit, send it to Dan, get feedback, change it again, rinse and repeat. I ended up having to step away from this one for a

while. Listening to a track over and over within a very short and intensive period of time can really have a numbing effect; you start to lose an appreciation for what sounds good, what sounds bad, and which direction you want to go. But we eventually got this one dialed in; given that so much of the plot was condensed in on this song, we decided that this one really needed to be polished.



DAN: We were late in mixing when Jude pointed out that there was a distinctive trill sound that we’d missed, and while we could both hear it, neither of us could figure out what made that sound. Still can’t! For our version, it’s an electric guitar. That was sort of my all-purpose answer: “If we don’t can’t figure it out, I’ll just try to do it on guitar.”

At first I recorded the guitar solo to be the same as the



Beatles version, but I heard a few similar notes that reminded me of John Williams' main theme, so I tried it that way too. When Jude heard that alternate take, he was super happy; we hadn't been able to work in the iconic "Main Title" anywhere else. So it's only a few notes, but hopefully it's enough.

Beatles legend states that John Lennon wanted the outro sound effects to be a string of creatures, each being chased by something predatory that frightened it: birds, cat, dog, horse, lion, and a foxhunt. And then a chicken, because ostensibly the foxhunt passed a farm, and that's where the listener remained after it rode away. Originally my plan was to do the same but with *Star Wars* creatures and characters: droids, Jawas, Tusken Raiders, Ben's Krayt Dragon howl, Stormtroopers, TIE Fighters, and Darth Vader. Once we got going, I realized the rushed narrative could probably use the help more than that obscure reference, so most of

the sounds simply retell that large chunk of the movie — Stormtroopers chasing the heroes, Darth Vader and Ben Kenobi's lightsaber duel, Luke seeing Ben die, the Falcon taking off, the dogfight, the cockpit, and even some of the rebels landing on Yavin IV and the little transport coming to meet Leia. It gave me the chance to get a few lines like "Run, Luke, run" and "Great kid, don't get cocky" back in there after I was unable to fit them into the lyrics. I was also looking for some place to feature the Wilhelm scream, so I finally snuck it in there.

Every time I hear Leia say "It's not over yet," I smile. It's one of my favorite moments of the whole album.

JUDE: I agree. It's still tough for me to stomach that the world lost Carrie Fisher, and I'm really happy when I hear her voice on this track.

DAN: The montage ends with Artoo plugging into the Rebel computers, and by dumb luck, the beeping noise gave me the transition into the guitar note. According to Geoff Emerick, the whole chicken-guitar thing was also a happy accident for the Beatles, so this felt appropriate.

KAT: "Hey, Kat, halfway through this song, we're going to recap everything that has occurred in the song's plot, but this time with dialogue and sound effects from the film." I loved this when Dan made the song; I loved it a lot less when I had to make the video. I settled on making in black and white, as if Luke is watching a mental highlight reel of all the events before the Falcon arrives at Yavin IV. 🍷



TRACK 12

PRINCESS LEIA'S STOLEN DEATH STAR PLANS (REPRISE)

DAN: The MacGuffin that starts the film shows up again at the end, just when that musical theme repeats. How lucky are we? And the count-in joke occurred to me when I was recording it, so I hoped Jude would find it a funny surprise too.

JUDE: I thought it was awesome. Dan hadn't mapped it out beforehand, so I got to enjoy it by just listening to one of his near-final vocal tracks. If you're not with us by now, you've been listening to the wrong album.

DAN: I had several alternate lines for the rushed lyric line "Princess Leia's droid is holdin' stolen Death Star Plans." Among the rejects for the four syllables in the middle: "So-lo-owin'," "only-hopin'," "Vader-trollin'," and "Luke-beholden." I think we chose the right one.

This was one of the vocal harmonies I had trouble figuring out. Turns out there's a fellow named Galeazzo from Italy with a YouTube channel called "The Beatles Vocal Harmony" — he's a vocal coach who specializes in Beatles harmonies. His breakdown was better than mine, so his arrangement is what I used. Thanks, Galeazzo!

JUDE: I'm a bit embarrassed to admit that I hadn't realized that there was actually keyboard on this track! I typically pride myself on being able to pick out and identify classic keyboards on albums, and before Dan asked me "When are you going to add the organ?" I didn't know it was in there. It's a

bit subtle, backing and mimicking the guitar chord stabs, but if you listen for it, it is clearly there. Popping in and adding this "stealth" keyboard was a lot of fun. I was able to just roll up my sleeves and add some good old fashioned rock organ — in this case, an overdriven Hammond/Leslie combo supplied by Logic Pro X. It sounds to me that Dan gave it a bit more prominence in the mix that the Beatles did with their organ on the classic album, which allows the two of us to rock out as a band a bit. Incidentally, the recent anniversary re-release/re-mastering of *Sgt. Pepper* ups the prevalence of the organ on this track as well — keyboardists rejoice!

DAN: On the original, Paul's guide vocal bled through on one of the takes, so he's barely heard saying something along the lines of "you're a wonderful crowd, thanks for coming" — live banter you'd hear at the end of a live concert, but pretty indistinct. I wanted to do something as a nod to that, too, so I quoted some of General Dodonna's briefing room dialogue.

KAT: I thought this was a fun little video. My favorite bits were speeding up and then doubling the "explosion" illustration of the Death Star core to make it fit the music, and the fact that all of the pilots stand up for the key change.

JUDE: This song was a breath of pure joy before the deep dive we had ahead of us on the final track. 🎧

TRACK 13

A DAY IN THE LIFE OF RED FIVE

DAN: We intentionally recorded this last because we figured we would need to use everything we'd learned up to this point to pull it off. Jude gave me a guide piano track, I did vocals, bass, and acoustic guitar, and then Jude did the rest — which was the impressive, impossible part.

JUDE: This was our Mt. Everest on this project, and we deliberately saved it for last, so that we might approach it with the most refined tool set possible. I'm pretty sure it was a good two to three songs' worth of effort to get through this one. At one point, Dan channeled Ender Han Solo from *Return of the Jedi* and told me something along the lines of "This whole album will be for nothing if we don't get this one right." This was one of the holy relics on one of the most iconic albums of all time. So yeah — we had to do it right.

DAN: I knew Jude was really concerned about this — he knew from the start that this track's orchestral stuff all fell on his shoulders. He sent me his first early mix, with just the strings that support the climb, and I just started to get misty-eyed. I mean, I cry at TV commercials too, but it really felt like the right foundation and it stirred all the right emotions. That's when I knew that musically, this track was going to pay off.

JUDE: When I heard that I had inspired tears from the west coast, I figured that all of the hard work throughout the album was starting to pay off. As it turned out, a very short portion of "He's Leaving Home" required learning how to get my MIDI orchestra to do realistic sounding trills, and I used them

extensively throughout this track. I really felt like the small investments made in getting things right earlier in the album paid big dividends when we got to this track.

I ended up making extensive use of Korg Pad Kontrol on this one. It's a MIDI/USB drum pad controller, which ended up being a necessity for trying to match Ringo's rapid and inspired fills throughout this track. Ringo's fills were tough throughout the album, and at times it felt like this entire track was composed of fills.



JUDE: One small tidbit that I'm a bit proud of is the targeting trill that we used to replace the alarm clock sound. Apparently, the Beatles used the original alarm clock purely for timing on the song, and had planned on removing it. Ultimately it



couldn't be removed, so they worked it in. We had thought about using an alarm clock, but I really latched on to using a TIE fighter targeting trill there instead. I did an exhaustive search of the internet in order to find a nice, clean isolated sample of that sound, and came up empty. Even the one from *The Force Awakens* couldn't be cleanly isolated, so I ended up recreating the trill in a software synthesizer suite known as Massive. I haven't done much synthesis lately, so it was a fun trip down memory lane.



This track has some fun stealthy additions of John Williams' soundtrack during some of the orchestral builds. I'm not going to say what parts are there, but there is a smattering from various portions of the movie. These were

orchestral parts that I re-recorded and are not clips lifted from the soundtrack.

KAT: This video was one of the hardest for me to build, since I had to match up so much dialogue. I also made a decision that after the line "I went into a dream," I wouldn't show anyone on the screen talking during that section of the song. I really feel like it adds to the tension.

Dan and I played with timing to the ending explosion so much — forward half a frame, back a frame, lots of fiddling to get it just right. We felt it had to be spot-on, as it was the payoff of not just the track but the entire project to anyone watching on YouTube.

DAN: Some YouTube commenters complained that we didn't include the lock groove, but anyone who downloads the album knows it's there. Since the lock groove is just a collage of a few seconds of repeating audio — an artifact of vinyl record players without automatic shutoffs — there was no good way to show it on video, so Kat decided to end on what felt like the obvious end of the story. But I had ideas about what I wanted to put in the lock groove from the earliest days of the project, so there was no way I was leaving it out. I settled on Han saying "Great shot, kid, that was one in a million," a few seconds of John Williams' ceremony march, and an edited-for-time sample of Ben saying "The Force will be with you, always." 🍷



DAN: The album doesn't strike me as a laugh-out-loud comedy album; it's not intended to be that kind of parody. Except for a few well-worn cheap shots about Luke's early immaturity, the album's comedy footprint is more like a sly smile with a few "I see what you did there" moments. Our real focus was on accuracy.

JUDE: While Dan was frantically spending every free hour mixing and mastering the final tracks, I spent a lot of time watching and rewatching Kat's videos. Every time she put a new one up on our private YouTube channel, it would be like Christmas morning. It started to dawn on me that her videos were going to be even more popular than we had imagined the live-action videos might have been.

I didn't need to recommend anything to Kat – she hit everything I might have imagined to do with the original film and more. She worked in a lot of little Easter eggs too. I'm really glad that she had full control over the videos without any backseat driving from me or Dan, and I really appreciate Kat's contributions to this project. I know that without her, this project would only have received a small fraction of the attention it has garnered.

I also really, really appreciate Rob Smith for being an early believer in and advocate for this project. He put himself and his reputation out there to shop the project around to various outlets. If we ever throw a wrap party for this album, his name should be first on the invite list.

DAN: It's such a cliché to say "this is a labor of love," but you don't spend five years doing something like this unless you're

absolutely devoted to the subject matter. The Beatles and *Star Wars* shaped me; it was critical that we treat each half with the respect they deserved.

JUDE: We really believed in this idea. We took our time with it right up to the point that we realized that we couldn't – and then we were off to the races for a final push to complete this thing in time for the dual anniversaries. It was one heck of a ride, and if I had it to do over again, I would do it in an instant.

KAT: I am super happy with the way it turned out, and was glad to be as much a part of it as I was. I may have come up with an accidental idea, but Jude and Dan did the heavy lifting to make it the magic that it is, and I am super proud of them.

DAN: We put an insane amount of effort into every second of this album. Incorporating dialogue in the lyrics and the samples, matching guitar tones, using period-correct organs, calling out key *Star Wars* story moments, trying to replicate the Beatles mixes...I don't know how much of that process is considered by the average listener. Different people are going to dig into different layers, but I figure most people will just say "Okay, Beatles meets *Star Wars* — so that's a thing" and never try to deconstruct it. And that's fine — thank you for listening! But from our side, it was understood that we'd be diving deep from the start of the project, and we never wavered. It was worth taking our time to do it right. 🍷

PALETTE-SWAP

PRINCESS LEIA'S STOLEN DEATH STAR PLANS

    NINJA

Download the full album for free at <http://paletteswapninja.com>

Watch the video playlist at bit.ly/starwarsbeatles

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