



http://companyweek.com/?ACT=50&ad_id=80

SUBSCRIBE ([HTTP://COMPANYWEEK.COM/EMAIL-NEWSLETTERS](http://companyweek.com/email-newsletters))

IT'S FREE! WEEKLY PROFILES, CONNECTIONS, ACCESS, ANALYSIS ([HTTP://COMPANYWEEK.COM/EMAIL-NEWSLETTERS](http://companyweek.com/email-newsletters))

LOGIN ([HTTP://COMPANYWEEK.COM/LOGIN](http://companyweek.com/login))



The Voice of the Rocky Mountain Manufacturing Economy

Search...

<http://companyweek.com/>

- | | | | | | | | | |
|--|--|--|--|---|--|--|---|-------------------------------|
| BUILT
ENVIRONMENT
(/ARTICLES
/CATEGORY/BUILT-
ENVIRONMENT) | BIOSCIENCE
& MEDICAL
(/ARTICLES
/CATEGORY
/BIOSCIENCE-
MEDICAL) | ELECTRONICS
& AEROSPACE
(/ARTICLES
/CATEGORY
/ELECTRONICS) | ENERGY
& ENVIRO
(/ARTICLES
/CATEGORY/ENERGY-
ENVIRO) | LIFESTYLE
& CONSUMER
(/ARTICLES
/CATEGORY
/LIFESTYLE) | FOOD
& BEVERAGE
(/ARTICLES
/CATEGORY/FOOD-
BEVERAGE) | INDUSTRIAL
& CONTRACT
(/ARTICLES
/CATEGORY
/INDUSTRIAL-
CONTRACT-
MANUFACTURING) | SUPPLY
CHAIN (/ARTICLES
/CATEGORY/SUPPLY-
CHAIN) | (/ARTICLES/CATEGORY
/UTAH) |
|--|--|--|--|---|--|--|---|-------------------------------|

Airshow

by Gregory Daurer on August 14, 2016, 08:55 am MDT

www.airshowmastering.com
(<http://www.airshowmastering.com>)

Boulder, Colorado

Founded: 1983

Privately owned

Employees: 3



Mastering engineers David Glasser and Anna Frick give a final sheen to audio recordings and restorations, before those sounds ever reach music fans' ears.

David Glasser, Airshow's founder and chief engineer, has mastered Grateful Dead reissues, [Captain Beefheart rarities](https://en.wikipedia.org/wiki/Grow_Fins:_Rarities_1965%E2%80%93931982) (https://en.wikipedia.org/wiki/Grow_Fins:_Rarities_1965%E2%80%93931982), the audio for DVDs by [Adrian Belew & the Bears](https://www.amazon.com/Adrian-Belew-Bears-Live-Region/dp/B002BUOKGC) (<https://www.amazon.com/Adrian-Belew-Bears-Live-Region/dp/B002BUOKGC>) and [Michael Franti & Spearhead](https://www.amazon.com/Power-Peaceful-Festival-Deluxe-Digi-Pak/dp/B0015RB3JE) (<https://www.amazon.com/Power-Peaceful-Festival-Deluxe-Digi-Pak/dp/B0015RB3JE>), and new releases by Pete Seeger, Hot Tuna, [Peter Kater](http://peterkater.com/KaterLoveDigitalBooklet.pdf) (<http://peterkater.com/KaterLoveDigitalBooklet.pdf>), and [Ralph Stanley](https://www.youtube.com/watch?v=KushjAXS2b8) (<https://www.youtube.com/watch?v=KushjAXS2b8>).

But for many outside the world of professional audio (and even some within it), "mastering" remains a mysterious concept.

Working with songs that have already been recorded, Airshow Senior Mastering Engineer and Restoration Center Manager Anna Frick explains what she and Glasser do: "Mastering is the last step before an album goes off to the manufacturer. It's putting all the final tweaks on it: Making sure everything sounds good and balanced and clear. . . . Making sure that once it hits the marketplace, it's going to compete well with the other [recordings] within that genre, and, also, is going to sound great on any system you put it on."



http://companyweek.com/?ACT=50&ad_id=104

MADE + MANUFACTURED

PE Giant Apollo Global Is Betting It Can Build A New Manufacturing Backbone For Nike (<http://companyweek.com/made-manufactured/pe-giant-apollo-global-is-betting-it-can-build-a-new-manufacturing-backbone>)

Skills gap for US manufacturing workers mostly a myth, paper says (<http://companyweek.com/made-manufactured/skills-gap-for-us-manufacturing-workers-mostly-a-myth-paper-says>)

Manufacturing means jobs in Colorado (<http://companyweek.com/made-manufactured/manufacturing-means-jobs-in-colorado>)



QUORA QUESTION: WHY TESLA IS MANUFACTURING IN THE U.S.
 (http://companyweek.com/made-manufactured/quora-question-why-tesla-is-manufacturing-in-the-u.s)

Industry 4.0 Is Enabling A New Era Of Manufacturing Intelligence And Analytics
 (http://companyweek.com/made-manufactured/industry-4.0-is-enabling-a-new-era-of-manufacturing-intelligence-and-a)

FEATURED COLUMNISTS

Resources

Glasser, 63, a two-time Grammy Awards winner, adds, "The best analogy that I've heard is: What we do in audio is similar to what a colorist does in film, where they're taking shots that were done under a huge range of conditions -- you know, light and dark, and cloudy and sunny, and indoors and outdoors -- and making them all fit together, so that it looks like a complete movie. You know, they're tweaking the color and the contrast for each scene -- and we're [tweaking the audio] for every song."

Utilizing a variety of compressors and equalizers, Glasser says, "We can do things like take a mix that is a little flat-sounding and make it punchier, make it more present. A mix that is a good mix, but is maybe a little dull, we could add the sparkle that it needs. We make sure that the level is good -- and that will vary depending on the genre and what the producer wants. Of course, make sure that all the songs hang together. There's a lot that we can do to solve problems and to enhance mixes. . . . EQ is the main tool for shaping the spectrum of the song; so if something has a congested low end, [for example,] by carving out certain frequencies, by emphasizing others, it can bring things out in the mix that you're not hearing otherwise."

Up a dirt road, and mere yards from Glasser's scenic, Boulder mountain home, sits Airshow's new studio, housed within a 24-foot by 28-foot building. It was specially designed and "tuned" by top audio consultant Sam Berkow of SIA Acoustics (<http://static1.1.sqspcdn.com/static/f/487725/26107168/1428024261950/SIA+Brochure+2014.pdf?token=t6MDBw6ELOGR3Zav92hUHkYAv%2Bw%3D>). The space, which opened for business in June 2016, provides Glasser and Frick with what they feel is an ideal listening environment. Frick says of Airshow's move to the hills from their previous location in town, "I'm really excited to work in here. I like it better than the old room. . . . The low end is much tighter, so everything stacks really nicely on it. It's a really good room."

(<http://coloradobeer.org/>)

UTAH
 (<https://www.wcf.com/>)



(<http://camt.com/>)

(<http://co-cama.org/>)

On the way into the studio, gold and platinum records and CDs hang on the wall, in recognition of the work Glasser has done for the [Grateful Dead](http://www.dead.net/store/special-edition-shops/50th-anniversary-shop/30-trips-around-sun-box) (<http://www.dead.net/store/special-edition-shops/50th-anniversary-shop/30-trips-around-sun-box>) and the [Dave Matthews Band](http://davematthewsband.com/music/dmb-remember-two-things) (<http://davematthewsband.com/music/dmb-remember-two-things>). Inside, clients (they occasionally visit during the mastering process) discover a mastering console in the center of the room, facing a couple of Dunlavy speakers towering over six feet; there's also a center channel speaker and two surround speakers. Straight ahead, a video screen, used when doing DVD audio work, is mounted on a tall stand. (Watching the Grateful Dead during one of their [2015 Chicago concerts](http://www.dead.net/store/2000s/fare-thee-well-complete-box-july-3-4-5-2015) (<http://www.dead.net/store/2000s/fare-thee-well-complete-box-july-3-4-5-2015>), while the music unfurls out of the sound system, it's like being right there attending the concert at Soldier Field, maybe even better.) A variety of audio and digital equalizers -- which often different sonic qualities, and are occasionally used in tandem -- are at the ready. So is the specialized equipment used for transferring audio, as well as the software needed to process it.

These days, it's possible to remove distortions like "wow" and "flutter" (https://en.wikipedia.org/wiki/Wow_and_flutter_measurement) from older recordings -- direct artifacts of the analog tape machines that captured sound back in the, say, 1960s or 1970s. Even [long-beloved audio can sing in new ways](http://www.plangentprocesses.com/examples.htm) (<http://www.plangentprocesses.com/examples.htm>) after being given the [Plangent Processes](http://www.plangentprocesses.com/index_save2.htm) (http://www.plangentprocesses.com/index_save2.htm) treatment -- and Airshow is one of the few businesses in the world doing the specialized work (other include Sony Pictures, Redwood Pictures/Neil Young, Queen Ltd, and Warner-Rhino Records).

Airshow's new studio is more remote than its previous location in northeast Boulder -- but Glasser and Frick's reputation has followed the change of address. Glasser says, "We do stuff internationally. I have clients in New Zealand, Australia, and Europe, Japan. The first record that was mastered here was a jazz vocal record for a Japanese label." Around 30 percent of their clients are Colorado-based artists -- such as the work Glasser has done for [Ron Miles](https://www.facebook.com/ronmilesmusic) (<https://www.facebook.com/ronmilesmusic>), [Leftover Salmon](http://leftoversalmon.com/site/) (<http://leftoversalmon.com/site/>), [Gregory Alan Isakov](http://gregoryalanisakov.com/) (<http://gregoryalanisakov.com/>), [Big Head Todd & The Monsters](http://bigheadtodd.com/) (<http://bigheadtodd.com/>), and [Otis Taylor](http://www.otistaylor.com/) (<http://www.otistaylor.com/>). (Airshow also has an affiliated East Coast studio (<http://airshowmastering.com/takoma-park-studios/>) in Takoma Park, Maryland.)



Glasser and Frick worked together on *The Rise and Fall of Paramount Records, Volume 1* (<http://thirdmanstore.com/the-rise-and-fall-of-paramount-records-1917-1932-volume-1>) & *Volume 2* (<http://thirdmanstore.com/the-rise-and-fall-of-paramount-records-volume-2>), transferring, restoring, and mastering the historic, old blues recordings. Frick says, "We've got lots of tools in our toolbox to take out tape hiss, the crackle of a record . . . and make the audio as clear as possible." Frick, 35, also does audio digitization work for the [Clyfford Still Museum](https://clyffordstillmuseum.org/) (<https://clyffordstillmuseum.org/>) and [Naropa University](https://www.naropa.edu/) (<https://www.naropa.edu/>) (which includes hundreds of hours of poet Allen Ginsberg's readings and lectures). She says, "[With spoken word and lectures,] the goal is to make the audio as clear as possible, so you can understand what's being said. With music, it's more a matter of making it musically pleasing to whoever's listening."

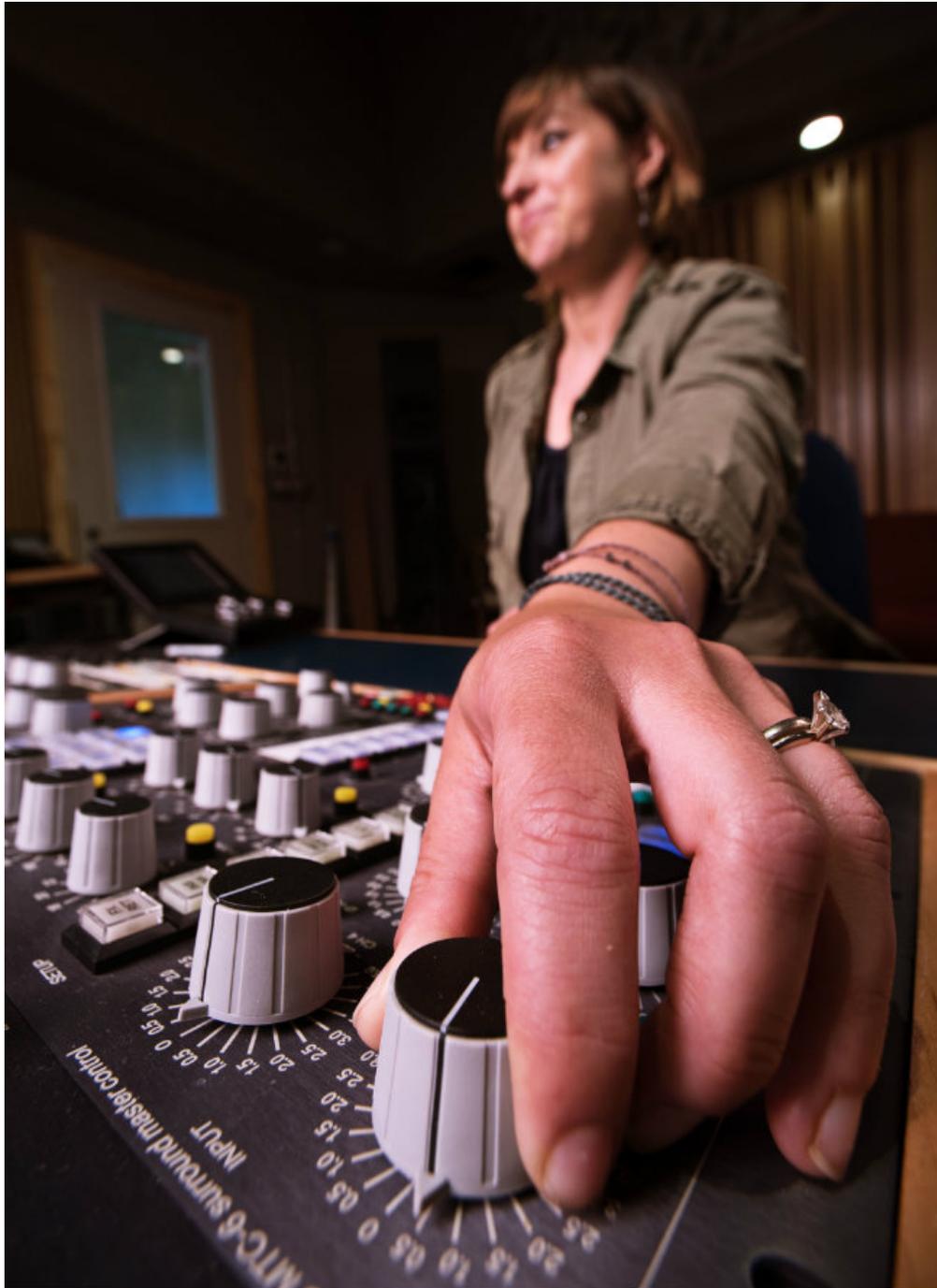
One can term what they occasionally do as "cleanup jobs." Jokes Glasser, "Sometimes we're audio janitors."

For Glasser and Frick, mastering reissues of historically-significant audio can be as thrilling as it can be

intimidating. Glasser says, "It can feel a little scary – [such as] when I was working on [reissues of] the [Grateful Dead studio albums](http://www.dead.net/features/complete-studio-albums-collection/grateful-dead-complete-studio-albums-collection-available) (<http://www.dead.net/features/complete-studio-albums-collection/grateful-dead-complete-studio-albums-collection-available>). The music and the sound of those records are imprinted onto people's brains, so it's a pretty hairy responsibility."

What's the biggest compliment they receive from clients?

Glasser answers, "Whenever somebody comes back after the session and says, 'I just love this. This sounds so great.' That makes me feel so good. A huge compliment is when clients return, year after year. That's huge because there's so many places they could go, but I have clients that I've been working with for 25 years, mastering."



Glasser looks over to where his two Grammy Awards sit on a nearby table and adds, "The ultimate industry compliment is one of those." Glasser received the awards, presented within the musical category of "Best Historical Album," for his mastering work on the [Anthology of American Folk Music](http://www.folkways.si.edu/anthology-of-american-folk-music/african-american-music-blues-old-time/music/album/smithsonian) (<http://www.folkways.si.edu/anthology-of-american-folk-music/african-american-music-blues-old-time/music/album/smithsonian>) (1997 Edition Expanded) and [Screamin' and Hollerin' the Blues: The Worlds of Charley Patton](http://revenantrecords.com/musics/products/screamin-and-hollerin-the-blues/) (<http://revenantrecords.com/musics/products/screamin-and-hollerin-the-blues/>) (released in 2002).

Frick laughs as she points out the coffee holder that a satisfied client presented to Glasser as a gift.

The imprinting says, "I don't know what it is you do, but keep on doing it."

Challenges: Glasser, who transitioned from recording live radio broadcasts (hence the company's name, which is a play on "shows on the air") to mastering in the early '90s, speaks to the primary challenge involved in running Airshow: "The financial part of it: making sure that's all healthy."

Frick -- who started engineering at Airshow seven years ago, before beginning to master recordings herself -- adds: "Adapting to a very evolving business, industry. You know, the music business changes overnight. And so, learning to adapt to those changes, and knowing which trends are going to last -- and which aren't -- is very challenging."

Opportunities: Who knows? Musicians or record producers might choose Airshow, partially, just to get away from L.A. or New York, and grab a few deep breaths of Colorado mountain air while overseeing important audio business. One reason for Airshow's move: Frick laughs and asks, "Have you seen the view?"

Glasser says, "This is a nice location. We're hoping people will want to come here, that people won't be scared away because it's an uphill drive. . . . We've always had people attend sessions. We'll see if there's a buzz about coming up here."

Needs: At this point, Glasser says Airshow doesn't need additional audio equipment: "Now and then, we'll swap out a piece of gear and add something new. But, in general, this is the set-up that works. I've been using these monitors for 18 years, and I dread the day I'll have to change that, because it will be having to get used to something all over again."

Glasser says, "We could always use more clients. That's the goal: to work with as many people as we can."

They try to accommodate a variety of budgets. And they offer potential clients a free opportunity to listen to their music on Airshow's equipment, before the mastering ever gets scheduled. Glasser says, "It just makes for a better project. Sometimes people come in and hear stuff and say, 'Oh, I guess I need to tweak some things in [the mix].' It ends up being a real good thing."

35

0

0

Google +

0

37

2

From This Week



PARKER, COLORADO

Tag Team Manufacturing

August 22, 2016, 12:52 pm MDT

President and CEO Terry Taggart and Senior VP and Plant Manager Charlie Dittrick are taking big strides with robotic automation -- and the world's best billiards rack.

(<http://companyweek.com/company-profile/tag-team-manufacturing>)



MANCOS, COLORADO

Alpaca Raft

August 21, 2016, 01:12 pm MDT

Mom-and-son duo Sheri and Thor Tingey launched a unique product more than 15 years ago that put them in the vanguard of a new sport.

(<http://companyweek.com/company-profile/alpaca-raft>)



MURRAY, UTAH

Monnit

August 20, 2016, 02:11 pm MDT

Brad Walters taps Utah's leading manufacturing workforce to reimagine remote technology built in the U.S.

(<http://companyweek.com/company-profile/monnit>)

POST YOUR COMMENT:

Leave a comment

Name:

Email:

Location:

URL:

Comment:

Remember my personal information

Notify me of follow-up comments?

Submit

THIS WEEK

BUILT ENVIRONMENT
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/BUILT-ENVIRONMENT](http://companyweek.com/articles/category/built-environment))

ELECTRONICS & AEROSPACE
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/ELECTRONICS](http://companyweek.com/articles/category/electronics))

LIFESTYLE & CONSUMER
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/LIFESTYLE](http://companyweek.com/articles/category/lifestyle))

FOOD & BEVERAGE
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/FOOD-BEVERAGE](http://companyweek.com/articles/category/food-beverage))

SUPPLY CHAIN
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/SUPPLY-CHAIN](http://companyweek.com/articles/category/supply-chain))

BIOSCIENCE & MEDICAL
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/BIOSCIENCE-MEDICAL](http://companyweek.com/articles/category/bioscience-medical))

ENERGY & ENVIRO
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/ENERGY-ENVIRO](http://companyweek.com/articles/category/energy-enviro))

BREWING & BEVERAGE
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/BREWING-BEVERAGE](http://companyweek.com/articles/category/brewing-beverage))

INDUSTRIAL & CONTRACT
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/INDUSTRIAL-CONTRACT-MANUFACTURING](http://companyweek.com/articles/category/industrial-contract-manufacturing))

UTAH ([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/UTAH](http://companyweek.com/articles/category/utah))

FASHION & ARTS
([HTTP://COMPANYWEEK.COM/ARTICLES/CATEGORY/FASHION-ARTS](http://companyweek.com/articles/category/fashion-arts))

INFORMATION

ABOUT US
([HTTP://COMPANYWEEK.COM/ABOUT-US](http://companyweek.com/about-us))

CONTACT US
([HTTP://COMPANYWEEK.COM/CONTACT-US](http://companyweek.com/contact-us))

SUBSCRIPTION
([HTTP://COMPANYWEEK.COM/EMAIL-NEWSLETTERS](http://companyweek.com/email-newsletters))

NEWSLETTERS
([HTTP://COMPANYWEEK.COM/EMAIL-NEWSLETTERS](http://companyweek.com/email-newsletters))

JOB BOARD
([HTTP://COMPANYWEEK.COM/JOB-BOARD](http://companyweek.com/job-board))

PRIVACY POLICY/TERMS OF USE
([HTTP://COMPANYWEEK.COM/PRIVACY-POLICY-TERMS-OF-USE](http://companyweek.com/privacy-policy-terms-of-use))

MORE

EVENTS ([HTTP://COMPANYWEEK.COM/EVENTS](http://companyweek.com/events))

ADVERTISE
([HTTP://COMPANYWEEK.COM/ADVERTISE](http://companyweek.com/advertise))

AFFILIATE SPONSOR RESOURCES
([HTTP://COMPANYWEEK.COM/AFFILIATE-SPONSOR-RESOURCES](http://companyweek.com/affiliate-sponsor-resources))

ARCHIVES ([HTTP://COMPANYWEEK.COM/ARTICLES](http://companyweek.com/articles))

COMPANYWEEK TV
([HTTP://COMPANYWEEK.COM/COMPANYWEEK-TV](http://companyweek.com/companyweek-tv))

CONNECTIONS
([HTTP://COMPANYWEEK.COM/CONNECTIONS](http://companyweek.com/connections))