Legend of CE Woolman for Delta

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Commercial

Delta Airlines commissioned this piece to help celebrate the spirit of aviation through the immortalization of its founder, CE Woolman. Woolman witnessed the very beginning of aviation at a Paris airshow in 1909 and was forever enraptured with it's possibilities. From that moment on, he sought to push aviation's boundaries, and eventually, he founded Huff Daland Dusters, an airline that would grow into Delta Airlines.

Write-Up

Director Ryan Shove, a frequent collaborator, asked me to come onboard and bring my Amira. We wanted to create a timeless, classically cinematic image but with some more modern visual aesthetics.

We had two days to pull it off. Ryan found the perfect airfield south of Atlanta complete with classic period airplanes and running cars. The budget wasn't the largest one, especially for a period piece, so I knew that my camera budget was going to be limited.

Making Anamorphic Lenses

I knew right away that I wanted to use anamorphic glass. The central idea of the piece was to immortalize CE Woolman. And nothing else in cinema is so closely paired with grandeur than cinemascope.

That decision was obvious, but the next not so much.

At the same time as I got the call, I happened to be working to repurpose old 35mm anamorphic projector lenses for capture. It's something I've been thinking about for years, but as optical designers will tell you, it's not easy to do. There is really only one issue: focus. Anamorphic projection lenses are two parts: the anamorphic front element and a rear spherical "taking lens". Both have to be individually focused. This is fine in a projector that's never adjusted. But on a camera, focus needs to be adjusted constantly.

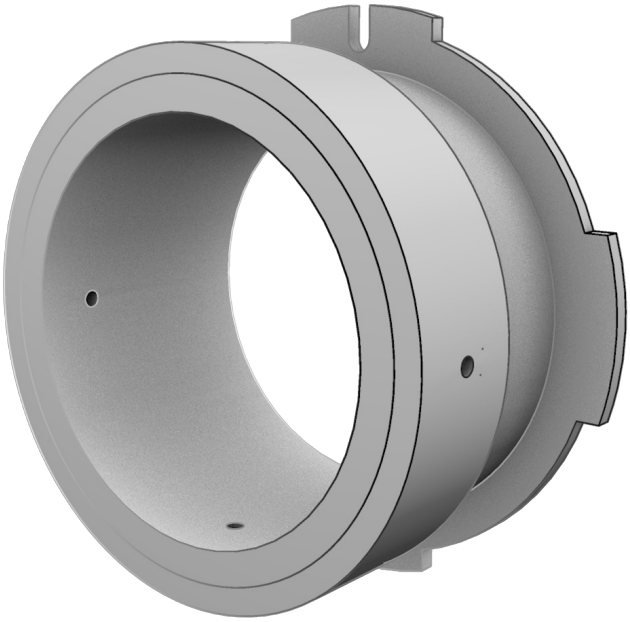
A few days before I'd stumbled upon an elegant solution. Some guys in Lithuania, calling themselves Anamorphic Shop, realized they could add variable diopter elements on the front of projector lenses to make them focus as one. I ordered one of their FM Lenses.

I wanted to pair their element with Schneider Cinelux Anamorphics. These are modern high-performance lenses for theatrical projection, but are widely available/affordable as theaters are phasing out film projectors for new digital projectors use a totally different kind of lens. And their rear spherical taking lenses come in a range of matched focal lengths from 42mm to 100.

You can even see gold housing of the Cinelux Anamorphic inside the FM Lens

One odd caveat I should mention is that projector lenses don't have apertures. They're fixed at a T2. This wasn't a huge concern to me as T2 is my favorite stop anyway. My AC lovingly referred to them as the *WFOmorphics*, a title that I find perfect for this style of shooting.

With the focusing down, I just needed to be able to mount the lenses in a PL mount so the flange depth lined up every time. For this I turned to the fastest solution I knew how to, 3D printing. And as the spherical elements only weighed a few ounces each, I knew the plastic mounts would perform well.



Once the PL Mounts came in, I was finally able to see how the lenses really performed. Here are some test shots:

In the end, I mounted 42.5mm, 70mm, and 95mm spherical elements. The anamorphic element and FM Lens focusing element were mounted to the rails and we swapped out the rear spherical element when we changed lenses. The Amira's unique sliding dovetail system made this easy.

They performed well in our real life shooting environment and helped us achieve a look the director and client loved.

Although, I should mention here that we did pack with us a set of Zeiss Super Speeds as a backup (you never know) and for VFX shots.

Understanding Optics

Why go through all this trouble?

Not but a few years ago, you could arrive at your lens choice with a 3 question questionnaire. PL or

PV? Anamorphic or spherical? T1.3 or 2.0?

As more and more lens options are available to filmmakers, it's no longer an A or B, simple decision. There is a now a multi-dimensional spectrum of lens options.

Rather than testing/noting the characteristics every single lens option, understanding the fundamental design choices that makes lenses act a certain way allows you to understand the spectrum. Which design factors make them soft or sharp, contrasty or milky?

At the end of the day, nothing works better than taking two sets of lenses out for a test drive with some actors, but being able to skillfully and intentionally narrow it down to 2 or 3 sets of lenses is a huge benefit in today's world.

Credits

Client

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Delta

Production Company

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Retro8Films

Director

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Ryan Shove

Producers

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Lance Smith

Co-Producer

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Daniel Draddy

Line Producer

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Heather Breslin

1st AD

|

Michael Monty

CE Woolman

|

Ty Lane Miller

Score

|

Davis Harwell

Sound Design

|

Sean Hines

1st AC

|

Taylor Case

Gaffer

|

Kevin Hamm

Key Grip

|

Danny Eckler

Art Director

|

Jeff Matthews

Set Dresser

|

Gray Matthews

Make-up

|

Claudia Mejerle Rogers

Make-up

|

Roanna Akin

Wardrobe Stylist

|

Lauren Driskill

Key Costumer

|

Zoie Johnson

More info

For more information on the FM Lens, visit Anamorphic Shop on Facebook. For a focus gear for the FM lens, visit RAFCAMERA.

I'd also like to thank Hans Punk for answering questions about the FM Lens while I was waiting to get mine from Lithuania.

3D Printing, visit Shapeways.