HOME THEATER
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Carada Masquerade

BY Kris Deering

Make off like a bandit with a masked home theater.

I'm always on the lookout for new and innovative improvements to make to my home theater. One of the best I've seen to date is from screen manufacturer Carada, which directly sells its products online and over the phone. The company's Masquerade screen-masking system features motorized panels that eliminate those obnoxious black bars that appear when you watch a "scope" movie on a 16:9 screen. The system accommodates any projected aspect ratio between 1.78:1 and 2.70:1. It also provides a big increase in perceived contrast and depth. Additionally, Carada's innovative, motorized system costs less than most motorized masking systems on the market. Since you can mount it over your existing fixed-screen frame, you won't need to invest in a new frame or screen.

The Design

Carada designed the Masquerade specifically for the 16:9 screens that have been popular for a long time. This is opposed to most current masking systems, which are geared toward 2.35:1 screens for constant-height setups. (See Thomas J. Norton's feature on constant height on page 50). The frame is made of aluminum that's wrapped in Carada's Black Hole trim. It looks similar to the black velvet you see on many deluxe screen frames. The frame's transitions are completely seamless, and when the frame is assembled, you can't see any of the hardware. The frame bevels as it nears the screen surface. Honestly, I could barely tell the difference between the Masquerade and the Stewart Deluxe VeLux frame I installed it over. The only real difference is a very small IR sensor on the bottom right-hand corner that controls the motorized masks.

The Masquerade uses a single motor that is quiet and moves at a nice pace. Carada didn't skimp with its motor selection and went with an ultra-quiet Somfy Sonesse. Many high-end masking systems use Somfy motors, so it was nice to see Carada include this level of performance. I never felt that the system was sluggish. Also, the transitions are very smooth, which gives the system an elegant look when you use it.

A small IR remote controls the masking panels, with preset buttons for 16:9 (1.78:1) and 2.35:1. Nearly every film has one of three common aspect ratios: 1.85:1, 2.35:1, and 2.40:1. With the mask completely open, the image perfectly zooms on a 1.78:1 (16:9) screen with no overscan in the projector. However, you will see some very small black bars on the top and bottom of your screen with 1.85:1 material. A lot of people zoom their image out slightly, so they may not see these bars at all. The Masquerade's Jog feature can also compensate for them. The Jog control lets you adjust it with very small movements, so you can dial it in perfectly. This also works well with 2.40:1 material. The Jog function supports aspect ratios from 1.78:1 all the way to 2.70:1. With the preset masking, the bars with 1.85:1 and 2.40:1 material were so thin that I didn't even feel the need to use the Jog control. Unless I *really* looked for them, I couldn't tell that the bars were there.

Installation

Since Carada is a factory-direct, online dealer, you'll have to install the Masquerade system on your own. Carada made this procedure painless, and installation doesn't take very long at all. The instructions guide you step by step through the process, which involves very little labor. The biggest key to installation is that you must ensure that the frame is level with your existing frame. You may also want to shim your existing frame to put the masking material as close to the existing screen as possible. This prevents shadowing on the image.

While Carada offers a 30-day return policy for most of its screens, that policy doesn't apply to the Masquerade. When you order a Masquerade, Carada custom makes it for your exact screen.

It's not reasonable to expect Carada to resell a returned unit. The company spends a lot of time with each prospective customer. They make sure the Masquerade is the right product for each customer and that the consumer can perform a smooth and easy install. The Masquerade comes with a one-year warranty for defects in material and workmanship.

Sizing Up Your Image

Without a doubt, the most invaluable tweak I've made to my home theater room is making it as light controlled as possible. I'm one of those people who has a "bat cave" theater. I can control the light completely at any time of the day. But with wider aspect-ratio movies like 2.35:1 and 2.40:1, the black bars on the top and bottom of the screen do hurt perceptual contrast. The unused space in the image isn't as dark as the black material that surrounds my Stewart screen or my black curtains. So it essentially adds more dark gray to the image instead of black.

While there are certainly some digital projectors with excellent contrast, I haven't seen one that can deliver true black bars around the active image. There are a few options that eliminate those black bars. The most common is unfortunately the worst: electronic video processing. Some consumer display devices offer a zoom option, which enlarges the image to fill a 1.78:1 screen from top to bottom. However, it also crops portions of the image from the left and right. This eliminates the bars, but it's a bad idea for two reasons. The first is obvious: you lose a significant part of the image at the sides. If the director didn't want you to see that information, he or she wouldn't have filmed it. Second, when you zoom an image to eliminate those bars, your projector must perform additional video processing. This generally makes the image look softer, and it can introduce ringing or halos around fine transitions. If you want to make the most of your viewing experience, I strongly suggest that you avoid this option.

Another option that is becoming increasingly popular in the front projection world is a 2.35:1 constant-height setup. Rather than the popular 16:9 standard HDTV screen, you use a wider 2.35:1 screen. In order to use this kind of setup properly, you usually need an anamorphic lens and some kind of video processing. The video processor stretches the image to eliminate the black bars, and then an anamorphic lens unstretches it for proper presentation on a 2.35:1 screen. (You can read more about this on page 50.) When you watch a film with an aspect ratio that's narrower than 2.35:1, there will be black bars on the sides of the image that you can easily mask with curtains or a masking system. (Carada is developing another version of the Masquerade for this type of application.) This venture can be expensive, and it includes a lot of variables. The addition of a second lens in the light path can cause side effects, and extra video processing can produce mixed results. In this case, the display uses all of its vertical pixels to display the image, which is also larger. Executed properly, this method offers undeniable advantages. I've seen it produce outstanding image quality. But it takes a sizeable investment that most people can't afford.

The Masquerade features motorized panels that eliminate those obnoxious black bars when you watch a scope movie on a 16:9 screen.

The last option, and the one I'm focusing on here, is masking. Masking has become more and more popular with screen manufacturers, but it can also be on the expensive side. Most screens include a small frame that anchors the screen material. Some manufacturers offer motorized masking panels that eliminate the black bars associated with various aspect ratios. These solutions typically raise the screen price considerably. But since Carada's system works with your existing screen, and because the company offers its products Internet-direct, the Masquerade masking system changes that. A Masquerade system for a 100-inch-diagonal screen (the most popular size on the market) retails for about $2,500. Although this isn't cheap for an accessory, it's considerably cheaper than a masking system with comparable features from a screen company. Once you see what this type of system can do for your home theater, you'll find out what a bargain this really is.

In Use

During my evaluation, I used the Masquerade with three different projectors: the Planar PD8150, the BenQ W20000, and the JVC DLA-RS2. This allowed me to test the masking system with a variety of contrast ratios to see how much benefit this solution could provide. I was surprised at how well the Masquerade increased the perceived depth and contrast with these projectors. During my tests, I viewed a lot of mixed-contrast program material (material with very bright and very dark elements on screen simultaneously). This material showed a lot more pop and dimensionality when I used the masking. Even my wife, who was extremely skeptical about the system, was floored by how much the masking changed the image perception. When the Masquerade eliminated the negative space around the image, it livened up the image and anchored the blacks. My wife couldn't help but comment about the Masquerade's "cool factor." The system adds to the cinema feel when you engage the masks and see them change your screen's effective aspect ratio like you see in theaters.

When I moved on to the JVC DLA-RS2 projector, I started to wonder how much the masking would help. The DLA-RS2 already has incredible black levels, including the black bars. It didn't seem to need much help from the Masquerade. But when I used the Masquerade, I definitely saw a difference. The image looked a bit brighter when I saw it displayed directly against a true black background. I also saw an increase in the perceived contrast in those mixed-contrast scenes. LCOS projectors don't often provide the high contrast that DLP projectors exhibit with this kind of material. But the DLA-RS2's dimension and pop in mixed scenes looked as good as (if not better than) the DLPs I used with the same mask. Remember, displays do a better job with perceived contrast when there is mixed material on the screen and less black area.

The only place I didn't see a marked improvement with the masking system was pure blackouts. Let's be frank, nothing but a substantially better on/off contrast ratio will significantly help in this department. You can improve blackouts a bit if you eliminate stray light in your home theater, but masking will not make a pure black image look blacker. Since black velvet already frames my screen, the masking system does nothing to enhance this experience more than what I already have. But I expected this.

Conclusion

Rarely do I see an accessory that significantly impacts the video side of home theater. But this product is definitely one of them. It costs less than a standard masking system, and you can use it with most popular fixed-frame screens on the market (check with Carada for compatibility). This makes it a rare standout in price and performance. If you want to make the most of your front-projection system and you can't afford a constant-height setup, put Carada's Masquerade on your short list.

Since Carada's system works with your existing screen, it's cheaper than a masking system with comparable features from another screen company.

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