

ProjectorCentral.com

NEC M353WS Short Throw Projector



Performance



Features



Ease of Use



Value

Intended Use:
Education

NEC M353WS

[\(add to Compare List\)](#)
[Go to My Compare List](#)

10000:1 Contrast Ratio

3500 Lumens

PC 3D Ready

\$1,069 Street Price

\$1,299 MSRP

[NEC M353WS merchants](#)

NEC M353WS Short Throw Projector

Allan Abbott, April 22, 2016

[ProjectorCentral.com](#)

If you are looking for a short-throw projector and check our database, you will find about ten projectors that are comparable in terms of brightness and resolution to the new **NEC M353WS** (3500 lumens, 1280x800). However, many of its competitors are cheaper, smaller, and lighter than the M353WS, so why should it interest you? The short answers are image quality and networking. If you just need to put up a 3,500-lumen image, there are less expensive choices, but if you are an educator or businessman who engages in networked, interactive, and/or white board presentations where image quality is paramount, the M353WS is definitely on the short list for consideration.

At a little over 8 pounds, the M353WS is not for the road warrior, but since it is most likely going to be placed on a tabletop or a cart, weight is not really a consideration. With a street price of \$1,069, the M353WS is at the top of the price range for comparable projectors, but that money gets you dual HDMI inputs (one of which is MHL compatible), gorgeous images, extensive picture quality adjustments, and networking options that are at the top of their class.

Picture Quality

Classroom Projectors

The M353WS does an excellent job with both data and video images. While the High Bright setting has a green bias to boost brightness, the Presentation setting has a more natural color balance and does a great job with data images. The image is focused from corner-to-corner, and there are no visible noise artifacts. Even with maximum keystone correction, small typeface text and spreadsheets were displayed clearly. The focus and zoom controls are positive with no overshoot.



Video images are excellent, even in the preset modes. Flesh tones are natural in Movie mode with good shadow and highlight rendering. Color is well balanced and images in all presets were clear, sharp, and noise free. Photos were stunning in Natural mode.

The M353WS offers seven picture mode choices with individual color and brightness biases, and they offer a quick way to get a good image on the screen. The M353WS does exhibit the DLP rainbow effects that some viewers are sensitive to, so a demo is probably worth it to see if these artifacts are a problem for you.

Key Features

Brightness Adjustment. Along with the brightness variations that are associated with the seven preset picture modes, the M353WS has two Eco settings that provide a lot of flexibility for setting brightness. Normal Eco reduces brightness by 18% and Full Eco reduces it by 43%. Since the M353Ws we tested put out 4,355 lumens, these two Eco settings can extend lamp life while still putting up a very bright image.

Image Adjustment. There are seven picture mode presets on the M353WS. They include High Bright for maximum brightness and Presentation, Video, Movie, Graphic, sRGB, and Natural for specific applications where different settings for brightness, contrast, saturation, sharpness, and hue are called for. Unlike most projectors in this class, color temperature can be set to specific Kelvin temperatures in four steps from 5,000° (warm tones) to 9,000° (cool tones), and all image adjustments can be applied to HDMI images.

Network Control. The M353WS has an extensive variety of networking options all the way from local computer control to remote projection of the screen image.

Using the Virtual Remote Tool, you can control certain projector functions from the computer via its VGA cable connection to the M353WS. The same functionality can be achieved using a USB connection once the Image Express Utility Lite application has been installed. When connected to your computer via a USB cable, you can mimic certain mouse actions using keys on the remote control although some movements are rather cumbersome. For better projector control, you can utilize a Web browser and make many projector adjustments normally confined to the remote control.

Projector control can also be done over a LAN. The software utility Pro 4 is installed for PCs and Pro 5 for Macs. Using Image Express Utility Lite, you can send your projector image over a LAN to remote locations.



NEC M353WS Rear Connection Panel

Wireless Image Utility. A wireless image utility (optional Wireless LAN adapter required) can project images from Android or IOS mobile devices, and up to four simultaneous image can be projected in the four corners of the image using the Image Express Utility Lite

application. Finally, the M353WS is compatible with Crestron's RoomView utility for multiple projector control.

3D Capability. The M353WS is PC 3D ready, so some 3D material can be presented. Viewing will require the use of an extra cost RF emitter that plugs into the M353WS as well as DLP Link LCD shutter eyeglasses which are available from several commercial sources. NEC recommends products from Xpand (X105-RF-X2 emitter and AD025-RF-x1 glasses) that meet the VESA standard.

Menus and Remote Control. The M353WS has the most extensive on-screen menu system we have encountered. The good news is that there are settings for every imaginable function, but the bad news is that it can take some searching to find those settings. The further good news is that many of the settings are only done once, and the ones that you may adjust more frequently are confined to two menus.

The remote control is full-sized so you are not likely to misplace it. Source selection and menu navigation are properly placed at the top of the remote while little-used functions like aspect ratio or digital zoom are at the bottom and a bit harder to reach using one hand.

Warranty. NEC warrants the M353WS for two years, and the original lamp is warranted for one year or 500 hours of usage, whichever occurs first. Replacement lamps are warranted for 90 days or 500 hours of usage.

Performance

Brightness. It is rare when we test a projector that exceeds its brightness specification, and it is unheard of when our test measurements are 25% higher than specified. But that is exactly what we found with our test unit. NEC specifies brightness at 3,500 lumens, but in the High Bright setting, we measured light output at 4,355 lumens. Here are the other readings:

NEC M353WS ANSI Lumens

MODE	Normal/Full Lamp
High Bright	4355
Presentation	3170
Video	1890
Movie	2020
Graphic	1890
sRGB	1445
Natural	2180

Color Brightness. The M353WS's color brightness measured 62% of its white brightness in Natural mode, which is the highest reading among the various presets. High Bright measured 29%, Presentation was 45%, and Movie, 57%.

Brightness Uniformity. As with most short-throw projectors, brightness uniformity was a bit low at 71%. However, the brightness increased smoothly from the top to the bottom of the image, and the difference was unnoticeable for video projections although some viewers might detect the difference on data projections with lots of white space.

Eco Modes. There seems to be a trend toward multiple Eco settings, and the M353WS is no exception. Normal Eco reduces brightness by 18% and Full Eco by 43%.

Audio. The M353WS is head and shoulders above its competition when it comes to audio performance. Unlike its 10-watt brethren, the M353WS sports a 20-watt speaker that can easily handle a medium-sized room. It is also buzz- and rattle-free over its entire range.

Input Lag. While gaming may not be the prime application for the M353WS, it has a Bodnar lag reading of only 33.2 milliseconds which means it will keep up with fast-changing source material.

Fan Noise. One advantage of the M353WS's relatively large case size is that it suppresses fan noise. The fan noise is also restricted to the low- and mid-frequency range, so it is not intrusive even for viewers sitting next to the projector. At altitudes over 5,500 feet, you must set the fan to high altitude mode which increases fan speed and noise substantially.

Lamp Life. The lamp in the M353WS is rated at 5,000 hours for full brightness. In Eco modes, lamp life is extended to 8,000 hours, and fan noise is reduced. The replacement lamp on this model is listed at \$299 from NEC.

Set Up

For a 120" diagonal image, the M353WS's lens centerline is about 9" below the bottom of the screen image which suggests tabletop or cart mounting. To get a 120" 16:10 image the unit needs to be set back from the screen about 46 inches. See our [Projection Calculator](#) for throw distances required for your screen size. The Calculator functions based on throw specifications provided by the vendors, the accuracy of which can vary somewhat. So do not plan precise placements for a particular screen until you have the unit in hand and can match the actual image to the screen. Since this projector has no zoom lens there is no leeway for image size adjustment other than to reposition the projector.

The M353WS can be ceiling mounted, but a long extension tube may be required to get the image properly placed on the screen.

Installation Considerations

Angular projection surfaces. Generally, the M353WS should face the screen squarely to project an undistorted image. However, there are times when the projection surface is not orthogonal to the projector. For those situations, the Image Express Utility Lite supplication can make individual corner corrections to square up the image.

Screen Flatness. Short-throw projectors like the M353WS project upward at about a 40° angle to the screen. Any waviness in the screen surface (as you will find in a pop-up screen) will cause a distortion in the image. If the waviness is minimal, the distortion will only be



noticed at the edges of the screen, but if it is severe (e.g., projecting on a sheet tacked to a wall), the distortion will affect the entire image.

Lamp life and brightness. As with all lamp-based illumination systems, the M353WS's lamp will grow dimmer with time. One way to mask this drop in brightness is to run the projector in one of its two Eco modes during its early life, and switch to full power later in the lamp's life. The overall effect is a relatively constant brightness over the life of the lamp. Of course, this approach depends on the ambient light conditions allowing reduced brightness in the first place, but our test unit suggests that the M353WS is a good candidate for this method since it is initially brighter than its specification.

Limitations

Complex Menus. Many settings are available that allow the purist to squeeze out every ounce of performance from the M353WS. However, that flexibility comes at the cost of a multi-level menu grid that takes some time to get used to. The most common settings are in the Image menu, but others are buried in sub-menus that are sometimes four levels deep.

Rainbow Artifacts. As with most DLP-based designs, the M353WS exhibits rainbow artifacts in certain high contrast scenes especially when the image pans slowly. Not all viewers are sensitive to these artifacts, and it is typically only a concern if you plan to use the projector for a lot of video presentation.

Size and Weight. There are smaller and lighter short-throw projectors available, but if low fan noise and extensive networking capability is a factor, these limitations may be unimportant.

Conclusion

NEC has introduced a short-throw projector that has it all. The M353WS puts up excellent data and video images and gives the presenter full control over the image settings. Virtually all inputs are accommodated including HDMI/MHL, and multiple networking options are provided. The projector is larger and heavier than some of its competitors, but size and weight tend to fall out of the equation when projectors are mounted on tabletops or carts. All in all, the M353WS is a top-notch projector for short-throw applications, and we give it our highest value and performance rating.

(04/25/16 - 08:50 AM PST)

Copyright © 1999-2016 ProjectorCentral All Rights Reserved.