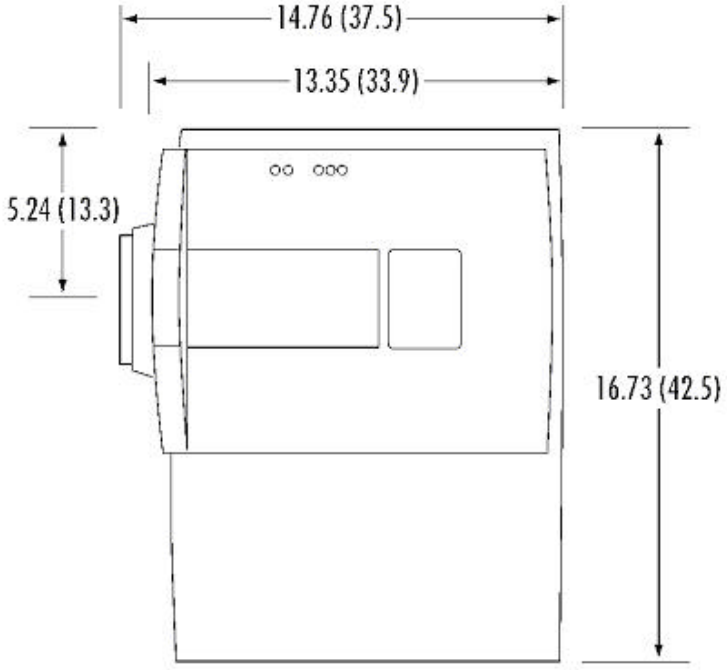
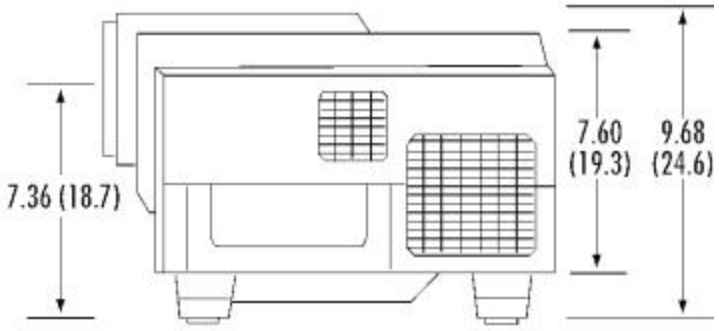
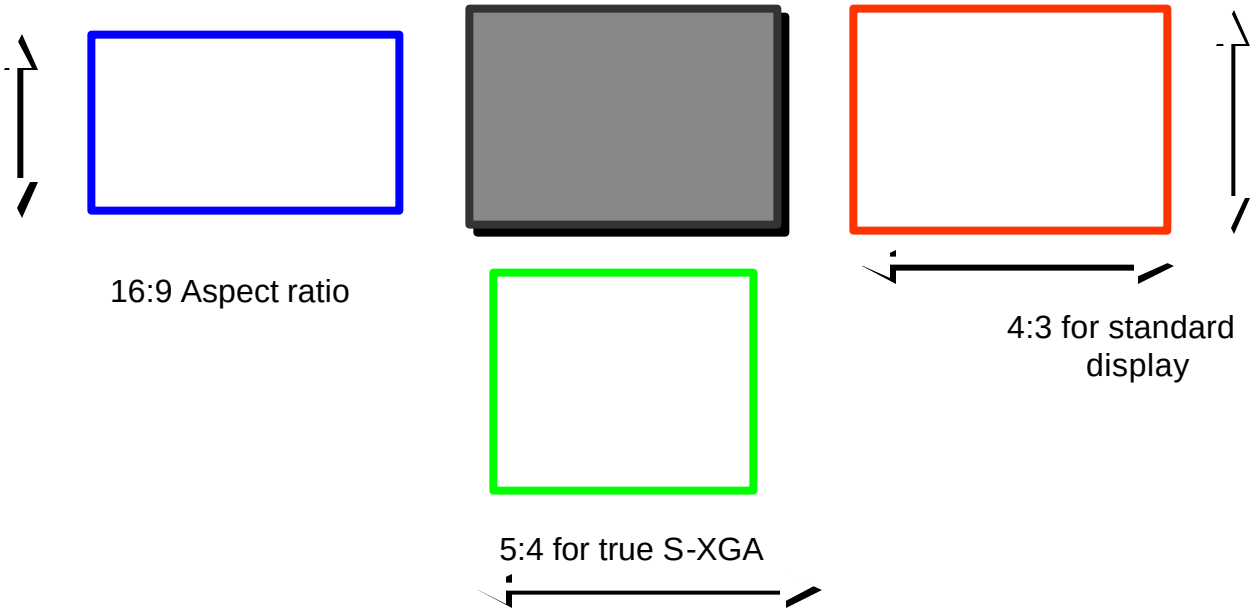
MP-D1 Spec Sheet



Dimensions:
The dimensions listed here are in both inches and centimeters. There are no controls on the top of the projector, only indicator lights.



Resolution:
The resolution of the MP-D1 is true S-XGA capable (1365 x 1024). The D-ILA chip is designed to accommodate multiple aspect ratios from computer displays to HDTV.



The MP-D1 can accept the following frequencies:

15.625 kHz - PAL Video
15.750 kHz - NTSC Video
31.5 kHz - VGA (Typically 640 x 480)
35 kHz - XVGA (Typically 800 x600)
48 kHz - XGA Indigo (Typically 1024 x 768)
64 kHz - SXGA Onyx (Typically 1280 x 1024)

Also the following DTV standards: 480i, 480p, 720p and 1080i

Aspect Ratio Control:
The MP-D1 has a 4:3 chip design and can display a 16:9 image onto a 4:3 screen but cannot place a 4:3 display within a 16:9 screen. If the MP-D1 is to be installed into a theater with a 16:9 screen, aspect ratio control is best done with an external scaler such as the Proceed PVP option for the PMDT DVD/CD Transport. All current two-piece video systems are based on a 4:3 raster or panel. The maximum light output and resolution is only obtainable when you use the full panel. With the MP-D1, the resolution with 4:3 is 1365 x 1024. With a 16:9 screen, the resolution used is only 1365 x 768. This resolution is still capable of showing 720p with no loss. Putting a 4:3 inside the 16:9 will give you 1024 x 768 or S-VGA, which happens to be the maximum resolution that DLP technology offers.

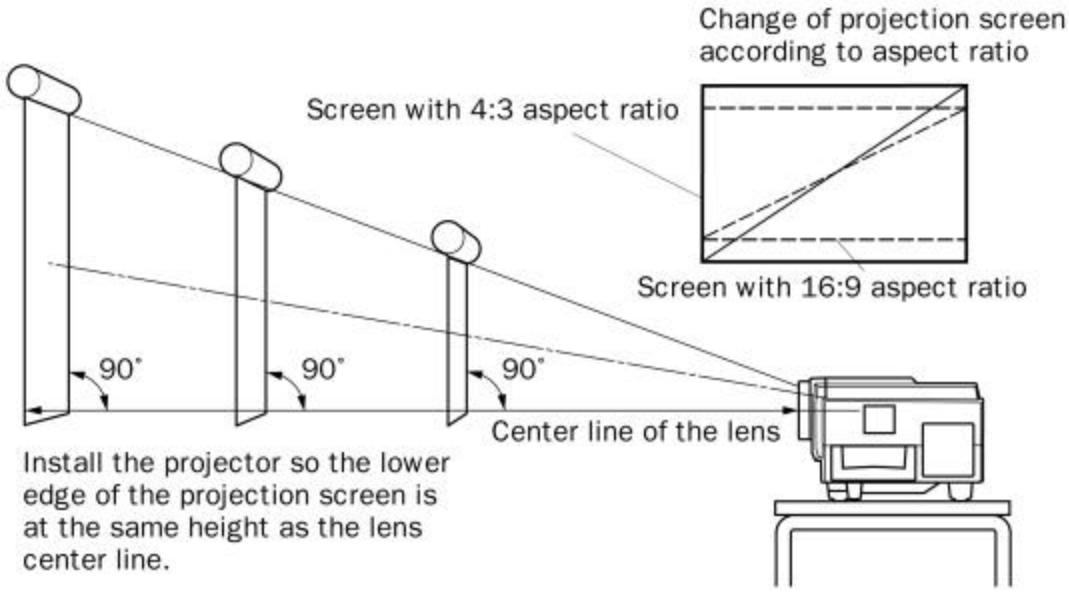
Connections:
The MP-D1 has one of each of the following connections:

1) Y/C (S-Video) input (Mini DIN 4 pin)
2) Composite Video (BNC)
3) Component Video (Y, B-Y, R-Y) input on BNC
4) RGBHV on BNC
5) Computer in for RGB (DB15)
6) RS-232C terminal for external control

Light output and Heat:
The Madrigal Imaging MP-D1 uses a 420-watt Xenon light source. This is the same light source used by the Motion Picture Industry in theaters. The light from this lamp is almost identical to natural sunlight (D6500) and is instrumental in giving the MP-D1 the ability to produce lifelike colors. White light is all colors combined and you need to start with the correct white if you wish to have accurate, natural colors.

While it would have been possible to use other light sources for the MP-D1, these other light sources have color temperatures that are inaccurate by *thousands* of degrees and as they age, the red color degrades much more rapidly than the blue and green. Madrigal places the picture quality first and foremost. **The Xenon light produces D6500 color temperature and stays at that color as it ages.** This light source will provide a beautiful film-like picture throughout its life.

Throw Distance:
The MP-D1 has a zoom lens with a throw distance of 2:1 to 3:1, providing a great deal of flexibility for installation. The center of the MP-D1's lens must be level with the bottom or the top of a 4:3 screen. The next diagram shows the manner in which an image is displayed.



By keeping the centerline, you can be assured of proper placement of the picture. The screen width can vary from as small as 42" to as large as 478".

Many home theater systems will have a 16:9 screen. This requires that the MP-D1 be located either above or below the top or bottom of the screen. To calculate the distance, the following formula applies:

((Width of screen /4) x 3) –((width of screen /16) x 9) x .5

For example: A 100" 16:9 screen would need the projector mounted 9.4 inches above or below the screen.

100" divided by 4, multiplied by 3, equals 75"

100" divided by 16, multiplied by 9 equals 56.25"

75" minus 56.25 = 18.75" x .5 = 9.375"

In essence, we've created a virtual 4:3 screen in this example and placed the projector at the virtual screen and placed the actual 16:9 screen in the middle of it.

Specifications

Projection Lens	2:1 – 3:1 (Throw distance:Screen width)
Resolution	1,365 x 1,024 pixels
Contrast ratio	More than 550:1
Scan Frequency	
Horizontal	15-82 kHz
Vertical	50-78 Hz
Throw Distance	8.2ft to 65.6ft
Lamp	420 watts, Xenon
Power Consumption	660 Watts
Dimensions (inches)	16.73W x 9.68H x 13.35D
Weight	32.5 lb