

Critical Mass Systems

-Patent Protected-

Product Information and Instruction Manual

Read this manual BEFORE you use set up the isolation platform

Allow 160 hours break in

www.criticalmasssystems.com

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PERFORMANCE

To ensure you are getting the best in performance, we use science, materials and applications from aerospace, marine engineering, seismology, automotive engineering, structural engineering, light and heavy rail engineering and deep sea drilling. Years of research and experimentation has proven that tackling vibration in audio is too complex to solve using science from one or two fields. Our research leads us beyond the “old school” concentration on natural frequency into the dynamic realm of sequential filtering.

Sequential filtering employs a controlled progression of narrow, intermediate and wide band frequency filters that convert vibration to low grade heat at a highly accelerated rate. Like drivers in loudspeakers designed to produce energy within defined bandwidths, sequential filters are designed to convert energy in specific narrow, intermediate and broad bandwidths. The result is overlapping energy conversion networks that work in harmony to reduce distortion. The results of sequential filtering are that your components reach their highest performance potential without trade-offs.

RELIABILITY

Critical Mass Systems operate at optimal efficiency regardless of the weight, shape and center of gravity of the component used with them. Our patent protected design completely eliminates the need to custom-make an isolation system for each individual component. Our isolation systems operate at optimal efficiency at up to 130lbs. of load. Higher load capacity is available. This means that you can place an audio component from 0lbs to 130lbs on a Critical Mass System isolation component and be assured of uncompromised isolation performance.

Critical Mass Systems have an indefinite life-expectancy at optimal efficiency. You'll never worry about your isolation system wearing out. You'll get the same great performance day-in and day-out. Furthermore, digital and analog components benefit to the same degree. You'll never worry about a fall-off in performance going from tubes to solid state or audio to video or vice versa.

Critical Mass Systems employ elements, materials, chemicals and additives that are environmentally friendly and each system is sealed, encapsulating the system from environmental contamination. The system must remain sealed to ensure peak efficiency.

Finally, Critical Mass Systems require no adjustments to perform optimally. That's right; no adjustments are required when you change components.

FLEXIBILITY

By designing an isolation component that works at optimal efficiency for any component that weighs up to 130lbs (Higher load capacity available), you get incredible flexibility with your components. You can upgrade from one turntable or CD player or preamp to another without making your isolation investment obsolete. You can use the same platform for an amp or DAC or phonostage. You can experiment to see where the isolation platform does the most good in your application. You are in control!

AESTHETICS

Appearance isn't everything, but a pleasant appearance never hurts. Critical Mass Systems are built by cabinet makers whose work has been displayed in Architectural Digest on numerous occasions. These skilled craftsmen understand the technical aspects of cabinet fabrication, veneer application and clear coat painting. They work tirelessly to make your isolation component the embodiment of your own taste. With Critical Mass Systems, you select the veneer or the paint color, not us.

The Reference

Critical Mass Systems offers isolation components with 3 distinctly audible levels of performance. All isolation components utilize sequential frequency filtering. Performance differences are attributable to the quantity and type of narrow, intermediate and wide band filters used in the platform; the thicker the platform, the higher the rate of energy conversion. Critical Mass Systems are at the extreme high end of the audio market; our entry-level components outperform most high-end isolation products on the market today.

The Reference is a serious execution of sequential frequency filtering at an entry level price. Cut from the same cloth as the Grand Master and Master, the internal isolation system of the Reference upholds cost-no-object execution specifications of .0001". With 15 sequential frequency filters, the Reference has outperformed passive air bladder devices costing nearly \$1,000 more. The Reference, used on audio and video front end and midstream components and amplifiers, will minimize distortion and provide a wide, deep and holographic soundstage. Who needs anything more? For ultra-high end systems, the Reference will support the clear picture already established by the Grand Master or the Master in perfect harmony.

Details:

Dimensions - Length and width to order. Height 3.125" (not including spikes)

Functional Weight limit - Up to 130lbs. (Greater functional weight limits available).

Isolation - 21 sequential frequency filters

Weight: Approximately 32lbs.

Unpacking the Platform

1. First, decide where you are going to place your isolation component in advance.
2. Move the boxed platform near the set up spot and open the box.
3. Lift the isolation platform out of the box and place it on the floor. If you are unaccustomed to lifting weight up to 50lbs, this should be a 2 person job. Be careful not to drop the platform.

Set Up

1. After you remove the wrapping, lift the platform by sliding your fingers all the way underneath to get a good grip.
2. Locate the spike holes. Most Black Label isolation systems are shipped with spikes and cups. Whether the system is mounted on the floor (cement or wooden) or on a rack, we recommend using spikes and spike cups whenever possible.
3. If you are installing the platform on a rack, place the platform onto the rack. The platform should have spikes and cups for the bottom. If you are installing the platform in a Critical Mass Systems rack, simply center the platform front to back and side to side without using spikes. Always lift and place the platform while centering, never drag or push the platform.
4. If you are installing the platform over concrete or wood floors, place the platform on 2" blocks to protect the floor from the 1 1/2" spikes underneath the platform (thick books work fine). Reach underneath the platform and hand-tighten the spikes until they stop moving. DO NOT OVERTIGHTEN THE SPIKES. Slide the spike cups under each spike and lower the platform so that the spikes insert into the cups.
5. The platform can be leveled by adjusting the spikes, if necessary.
6. Care must be exercised to ensure the top surface of the isolation system is not penetrated or heavily scratched. Sharp points, spikes or cones are not appropriate and will cause damage. Most of the soft OEM equipment feet are fine, but one should exercise care while moving the component. To reduce the risk of damage to the isolation system, interfaces are provided. Have fun and experiment to find what works best for you. The component should be held firmly when plugging in AC cords and interconnects as the interfaces offer little frictional resistance and the component can slide.
7. The component must not touch the outer cosmetic shell of the platform. This could damage the cosmetics and will transfer vibration to the component.

Break-In Period

1. Critical Mass Systems are high end audio components. They utilize cutting edge technologies that require a break in period.
2. Please allow at least 160 hours for break-in while music is playing.
3. During the break-in period, music must be played at normal volume levels; music generates vibration that activates the isolation system. If you notice inconsistent performance during break in, this is normal.
4. Among the last elements to develop during the break in period are high level dynamics and low level dynamic contrast. You will eventually notice a lowering of the noise floor which reveals the blackness between notes and more of the 360° space between instruments and voices.
5. Your soundstage will change slowly over time. The soundstage will open up and images will drop back and spread out.
6. You can add density to images by adjusting the toe of your speakers inward. You can pull images closer by moving your listening chair forward. You can push images away by moving your listening chair backward. Experiment and have fun
7. If you like to experiment, the full realization of system dynamics and overall sonic characteristics requires about 48 hours each time a significant change is made between the isolation system and the component. During this new settling in period, equilibrium is reestablished in the pathways between the component and the isolation system.
8. Please exercise patience before you pass judgment over the affects of experimental changes and changes to new components.
9. **The sweet spot of your system may move forward or backward.** The reason this occurs is that the component atop the isolation system performs more closely to its design potential which is translated through the loudspeakers. Optimal functionality can translate into better on and off axis frequency response. We recommend moving your listening chair or adjusting the toe-in of your loudspeakers should this occur as it will improve sound staging. Audiophiles who do so generally experience a “walk in” sound stage. The greater the number of Critical Mass isolation systems protecting components in the signal chain, the greater the “walk in” effect.
10. **Changing interfaces or lifting the component while music is playing and other changes to the pathways between the component and the isolation system usually translates into re-voicing of the sound field that continues to develop over a 48 hour period.**

Selecting the Correct Interface

There are many interfaces available on the market and we invite you to experiment. Critical Mass Systems provides interfaces at no charge that synch the elastic modulus of the component to the elastic modulus of the isolation system and thereby help reduce stored energy in your electronics. They also offer an extra layer of protection to the resting area.

Critical Mass Systems				
Interface Utilization Table				
Part #	Description		Component Feet Material	INTERFACE
1-101	Square Interface with no covered surfaces		Metal Chassis Bottom	<p>For best results, the edge of the interfaces should line up directly under the edge of the chassis. Round interface (1-103) affixed to a square interface (1-102) with rough side oriented downward and round surface contacting the metal underside of the component.</p> <p>Caution: Always handle interface by the square base. Do not handle the round section. Keep chemicals, oil and dust off of the round section. To remove the interface from the resting area, <u>grip the square base</u> and twist applying increasing force until it decouples.</p>
1-102	Square Interface with 1 soft covered surface		Metal Feet	<p>Round interface (1-103) placed atop square interface (1-102) with rough side oriented downward. Turn rough sides up one at a time to moderate highs, if desired.</p>
1-103	Round Interface with no soft covered surfaces		Rubber	<p>Square interface (1-102) with rough side oriented upward</p>
			Delrin	<p>Square interface (1-101) with 2 slick sides</p>
			Carbon Fiber	<p>Round interface (1-103)</p>
<p>For components with wooden feet or runners, we suggest poplar blocks with approximately 1 square inch of contact with the resting area of the isolation system. The blocks should be tall enough to elevate runners off of the platform surface.</p>				

NEVER

1. Never allow the component to penetrate the top resting area of the platform. Four (4) interfaces are provided which can be inserted between the bottom of the component and the resting area to prevent damage. Most of the soft OEM equipment feet are fine, but one should exercise care while moving the component.
2. Never allow spikes or any material to penetrate the bottom of the platform. Once constructed and sealed, the sequential filters within the isolation system achieve synergy with the exterior chassis and the singular entity should never be disturbed.
3. Never drag or push the component across the platform. This will gouge and scratch the surface.
4. Never ship, transport or store the platform on its side or upside down. The platform should be right side up at all times.
5. Never overload the platform.
6. Never place a component on the platform that extends beyond the outer edge of the isolation system.
7. Never straddle a component between 2 isolation systems.
8. Never expose the platform to corrosive chemicals, excessive heat or an open flame.
9. Never let the component touch the outer cosmetic shell, this will transfer vibration to the component.
10. Never open the Isolation Platform. Opening the isolation system will damage the isolation system and render it inoperable.

Useful Hints

1. Critical Mass Systems are not like other isolation systems on the market. You will find that your component performs much better than you ever thought possible. Be prepared for a new experience. Music, songs, voices etc. will sound the way they were originally intended.
2. The “Great Constant” is that all component chassis are built differently and vibrate and resonate differently. Ultimately, you determine how they sound best on the platform. There is no one answer.
3. If you choose to use the interfaces provided, place the interfaces around the outside perimeter of the component or where the feet will touch the platform. Make sure the interfaces do not touch the outer cosmetic shell of the platform as this will transfer vibration to the component. **Be prepared to moderate the amount of contact between the component and the interfaces. In some cases, only a portion of the component’s feet need to touch the interface; most of the foot may be suspended in air above the platform resting area.**
- 4.
5. Always lift the component clear of the platform top to move it and place it directly down without dragging or pushing.
6. Ensure that the component does not touch the outer cosmetic shell as this could potentially causing damage and transfer vibration to the component.
7. No adjustments are required to make the platform work at optimal performance even when you change components.

Care of Your Platform

1. Under normal conditions, the platform can be cleaned with a soft dry cloth.
2. The paint finishes can be polished using a high grade automotive wax product after 6 months. Take care not to push wet wax onto the logo or into hard to reach areas of the platform as the dry residue is difficult to remove.
3. Never wax the top plate or the bottom of the platform.
4. Never wax the logo.

Environmental Statement

Critical Mass Systems use elements, materials, chemicals and additives that are environmentally friendly. NEVER open the isolation system. Opening the isolation system will damage the isolation system and render the system inoperable.