

SHORT COMMUNICATION:
RECEIVER SYSTEMS FOR OBJECT MOUNTS:
A DESIGN CONCEPT FOR SAFE INSTALLATION AND
DISPLAY FLEXIBILITY

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ABSTRACT—The installation of an object in a museum exhibition may require the use of a custom mount to properly support the object and to securely attach it to the display substrate. The connection of the object to the substrate often can be done simply and directly using a post or structure that is integral to the mount. However, in situations where the object must be held for seismic stabilization or when other needs must be addressed, the use of a two-component mount/post design can allow the safe installation of the mount onto the object and the post to the display wall or deck. The mounted object is then joined to the post to complete the installation in a predictable fashion. This two-component system was termed a *receiver* by the Mountmaking Department at the Seattle Art Museum and has proven to be a valuable concept for the safe installation of museum objects. This article discusses the advantages and disadvantages of the receiver system in various applications.

TITRE—Système ‘récepteur’ pour les supports d’objets: un concept de design pour une installation sécurisée et une flexibilité accrue lors de l’exposition **RÉSUMÉ**—L’installation d’un objet au sein d’une présentation muséale peut nécessiter l’utilisation d’un support fabriqué sur mesure afin de le soutenir adéquatement et de le retenir de façon sécuritaire sur l’infrastructure de présentation. Le contact entre l’objet et l’infrastructure s’effectue souvent simplement au moyen d’un montant ou d’une structure intégrée au support. Dans certains cas, lorsque l’objet doit être sécurisé en cas de possibles tremblements de terre ou d’autres raisons, un support en deux sections permet une installation sécuritaire au point de contact avec l’objet et aussi entre le montant et la plate-forme ou mur d’exposition. L’objet et son support sont ensuite déposés sur le montant pour compléter son installation de façon prévisible. Ce système en deux parties est désigné sous le nom de ‘récepteur’ à l’atelier de fabrication des supports du *Seattle Art Museum* et se révèle être un concept intéressant pour la présentation sécuritaire des objets de musées. Cet article présente les avantages et les inconvénients du système ‘récepteur’ dans divers projets.

TÍTULO—Sistemas recibidores para soportes de objetos: un concepto de diseño para la instalación segura y flexibilidad en la exposición **RESUMEN**—La instalación de un objeto en una exposición de museo puede necesitar de un soporte hecho a medida para sostener la pieza apropiadamente y para asegurarla a la superficie de la vitrina. La conexión del objeto a la superficie puede lograrse de modo simple y directo utilizando un poste o estructura que sea integral al soporte. Sin embargo, en situaciones en las que el objeto deba ser asegurado por estabilización sísmica o cuando otras necesidades deban ser atendidas, el uso de un diseño de dos componentes con poste permite una instalación segura del soporte al objeto, y del poste a la pared de la vitrina. El objeto montado de esta manera se une entonces al poste para complementar la instalación de manera predecible. Este sistema de dos componentes ha sido denominado *recibidor* por el departamento de fabricación de soportes del *Seattle Art Museum* (Museo de Arte de Seattle) y ha demostrado ser un concepto valioso para la instalación segura de piezas de museo. Este artículo discute las ventajas y desventajas de este sistema en varias aplicaciones.

TÍTULO—Sistemas recetores para montagem de objetos: Um conceito de design para a instalação segura e para a flexibilização de exposição **RESUMO**—A instalação de um objeto numa exposição de um museu pode requerer a utilização de uma montagem personalizada que suporte de forma apropriada o objeto e que o fixe, firmemente, ao substrato de exposição. A junção entre o objeto e o substrato pode ser feita muitas vezes simples e diretamente utilizando um suporte ou estrutura integrada para a montagem. No entanto, em situações em que o objeto deve ser mantido para estabilização sísmica ou quando outras necessidades precisam de ser abordadas, o uso de dois componentes de montagem/suportes desenhados especificamente para o efeito podem permitir uma montagem segura da montagem no objeto e do suporte na parede ou na superfície de exposição. O objeto montado é então ligado ao suporte para completar a instalação de uma forma previsível. Este sistema de dois componentes foi denominado por receber

(receptor) pelo Departamento de Montagens do *Seattle Art Museum* (Museu de Arte de Seattle) e provou ser um conceito válido para a instalação segura de objetos museológicos. Este artigo discute as vantagens e desvantagens do sistema receptor em diversas aplicações.

1. INTRODUCTION

When planning a museum exhibition, display methods must be tailored to the characteristics of the items being displayed. An object that is not robust or stable enough to stand unassisted may require a custom mount, both as a preventive conservation measure and to display the object in the best possible manner. The object must be analyzed for its strengths and vulnerabilities, the mode of support determined, and appropriate materials chosen to meet the structural and aesthetic conditions for placing it on display. The spatial and interpretive objectives of the exhibit designer and the curator and the norms of current conservation practice help determine the final mount design. A necessary consideration is how the mount will connect to the display substrate to support the object being displayed. This linkage is an integral part of the effective functionality of the mount and thus the safety of the object.

Traditionally, most object mounts have been built as a single unit, with the supporting structure joined directly to the substrate and the object then placed into the mount. This structure is entirely suitable in situations in which gravity and object position provide the stability needed to hold the object safely and when the loading of the object into the mount is straightforward. However, when the installation of an object into its mount becomes more complex, another technique may be preferable. Objects that are fragile, heavy, or awkward or need seismic stabilization are prime candidates for a two-part receiver system. This article discusses the concept of using a receiver system for object display.

2. RECEIVER SYSTEMS

2.1 DEFINITION

A receiver system is a two-part device typically composed of a fitting attached to the object mount and a second receiving structure fastened to the display substrate. The two components interlock to form a stable connection. A simple example of a receiver system is a picture wire (fitting) attached to the frame

around a painting (object mount) that is hung over a nail (receiving structure) pounded into a wall (display substrate). This basic system allows the object mount and receiver to be prepared in advance for a safe and predictable installation. Positive aspects include simple hardware, easy installation, ready adjustability, relative security, and an easily reversible intrusion on the display substrate. The most negative aspect is the lack of firm control over the orientation of the object, with the plane of the wall providing a general vertical orientation but the single hanging point allowing relatively easy displacement of the painting (object) from its desired orientation (level). This system is generally used for planar objects, such as paintings.

For more three-dimensional objects, a receiver system is often designed with a socket of sturdy metal tubing as the fitting(s) attached to a custom object mount and will connect to an appropriately sized rod(s) secured to the display surface. It is a simple and versatile male/female-type connection that allows great flexibility in use.

2.2 ATTRIBUTES

The nature of the object being supported determines the mount and receiver system design, with factors of size, weight, desired attitude, balance, and installation context all contributing to the choices to be made. A superior receiver system will exhibit some or all of the following attributes.

2.2.1 Safety

Traditionally, object mounts have been fabricated with a round support post integrated into the structure. The post is then forced into a hole drilled into the substrate that is precisely sized to ensure a tight fit. In this situation, the object must be affixed to the mount after it has been installed. Loading an object into an inconveniently placed mount or securing the object to the mount after loading can lead to difficulties that can be detrimental to the object. Alternatively, if the post is inserted into the substrate hole with the object already on the mount, undue forces can easily be placed on the object. In a mount design where a receiver system is used, the mount can be affixed to the object at rest on a stable, padded, and well-lit surface with minimal risk to the object. The receiving post or support can be installed to the substrate as a separate action. The object can then be safely joined to the receiving post in a straightforward

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and deliberate manner, with only minor additional actions required, such as tightening a fastener to fully secure the assembly. Deinstallation is also predictable, and the removal of the mount from the object should be performed on an appropriate surface.

2.2.2 Flexibility

Exhibit layout is often subject to changes at the time of installation for aesthetic, conservation, or many other reasons. A receiver system allows supports to be substituted or modified to change object position or orientation without endangering the object or mount. In a traveling exhibition, the provision of a variety of supports can offer the borrowing institution's design and preparation staff the opportunity to customize a show to better fit the spatial situation and interpretive objectives unique to that institution.

In the 1998 exhibition "Native Visions," the mountmakers of the Seattle Art Museum built all mounts with receivers. The masks and other objects were crated for shipment with the mounts in place to provide support to the objects. This design also reduced wear to sensitive surfaces by eliminating the need for repeated installation of the mount to the object. The receivers were likewise used as a component of the crating system to securely fasten the object in place within the packing (Brown 1998).

2.2.3 Emergency Preparedness and Security

Receiver systems can allow museum staff to quickly and safely deinstall objects in the event of an emergency, such as rising water or approaching fire. The object-and-mount unit can be readily detached from its support and removed from the danger zone. This same feature may make an object less secure if the installation method is obvious or known. That said, mounts are generally not considered a true security measure. Mounts that capture an object for seismic stabilization can deter casual theft, but an attachment system robust enough to stop a determined theft attempt will likely be aesthetically unacceptable and may cause damage to the object during an incident.

2.2.4 Reinstallation

A traveling exhibit is subjected to multiple installation cycles at various venues. Integrated support posts that are reinstalled in the same hole will gradually loosen and cease to function as originally



Fig. 1. Mexican sun mask. Private collection. Courtesy of Blair Clark.



Fig. 2. Mexican sun mask verso shown with mount fabricated of brass strip. The protruding steel socket connects to the brass rod anchored to the display substrate. The final orientation of the mask is secured by tightening the set screw against the rod inside the tube. Private collection. Courtesy of Blair Clark.

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designed. By contrast, a receiver system can withstand the rigors of this sort of treatment. When a support system is properly designed, the number of times that the object can be installed onto the support system should be unlimited.

3. EXAMPLES

A Mexican sun mask was chosen to illustrate the concepts involved in a mount using a receiver system (fig. 1). The wooden mask was relatively lightweight (150 g [5.5 oz.]) and structurally sound. This mount was made of 1.5 × 12-mm ($\frac{1}{16}$ × $\frac{1}{2}$ -in.) brass strips with the metal parts joined together by silver brazing (fig. 2). The mount was fitted to the interior contours of the mask to help support the weight of the mask, and the mount was secured to the mask with brass pins placed through existing holes, where the cords used in the wearing of the mask would have been tied. Contact surfaces were padded with sueded polyethylene fabric. The mount was equipped with a socket-and-post-style receiver system. The socket was composed of a 6.5-mm internal diameter × 12-mm ($\frac{1}{4}$ -in. internal diameter × $\frac{1}{2}$ -in.) round steel tube brazed to the mount to be used with a 6-mm ($\frac{1}{4}$ -in.) post. The socket was placed slightly above the center of mass of the mask, so a greater portion of the weight of the mask was suspended below the socket to increase its stability while remaining relatively balanced. This design allowed the mask to be rotated to a position chosen for maximum expressive effect without exerting strong forces on the mask or post. The socket was equipped with an M4 (8-32) setscrew to secure the post and socket together once the mask was in its final position.

A contrasting example is provided in Philip R. Ward's classic work on mountmaking *In Support of Difficult Shapes*. The work describes a mount created for Squamish carver Walter Joseph's Grouse Man mask, owned by the Royal British Columbia Museum. The grouse feather crest adorning the mask posed difficulties for packing the mask for shipment because any contact would deform or degrade the feathers. The solution was a wooden mount that integrated into the shipping crate so that the mask was supported away from all contact with the crate interior. The mount also served as a means to display and store the object. The system was designed in such a way that the mount was directly fastened to the substrate with screws and then the mask secured to the mount with wooden pegs (Ward 1978). Although the design serves

its purpose well and is beautifully executed, a weakness of this system is that the mask must be removed from the mount each time it is moved, thereby exposing fragile surfaces to increased wear. The use of a receiver system for securing the mount and mask would make such removal unnecessary and allow the object to be handled primarily by the mount, thus reducing contact and wear.

4. CONCLUSION

The use of mounts is an accepted practice in the display of museum objects. They serve many purposes, including providing support for preventive conservation and optimizing the aesthetic display of the object. The use of two-part receiver systems in conjunction with custom mounts can increase their adaptability and resolve many issues. The examples discussed in this article are but a few of the possible designs that can be tailored to the unique parameters of each object and installation. The receiver concept represents a significant tool in the art of mountmaking.

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This article is an excerpt from
The Journal of the American Institute for Conservation,
Spring/Summer 2012, Volume 51, Number 1,

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published by the
American Institute for Conservation
of Historic & Artistic Works,
1156 15th Street, NW, Suite 320,
Washington, DC 20005.

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www.conservation-us.org