Alternative Designs

Dynavox Computer Travel Mount

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**Design 2: Dynavox Computer Mount – Back of the Passenger Seat**

This design for the travel computer mount will use the passenger seat of a car as a point of attachment. The mount will allow for adjustment of the viewing height of the computer. This design will also allow for a secure attachment which will withstand the forces necessary to keep the computer stable during car travel. This device will be designed specifically for the Dynavox Vmax.

The metal attachment rings seen in figure 1 will attach the rest of the travel mount to the metal posts of the head rest of the passenger’s seat. The metal rings will be strong to ensure proper function of the device since they will not bend or break. The rings will be easily detach and reattach and will work in any vehicle since head rests are a common feature in all vehicles. The attachment rings will then be attached to the adjustable upper straps. The straps will be a strong fabric material which will have adjustable buckles. The top end of the straps will have a reinforced loop which will allow the metal rings to fit through it. This part of the device will be responsible for bearing the load of the computer and therefore must be strong enough to support it. There will also be the component which allows for the adjustment of the viewing height. The lower end of these straps will be securely attached to the mounting bar base and will also be responsible for securing the mounting bar. There will be slots between the straps and the mounting bar base which will be approximately the diameter of the mounting bar.

The mounting bar base will serve the purpose of holding key components of the computer mount. The base will be made out of a stiff material in the middle such as a metal or a high-density plastic. This will then be surrounded by padding and fabric, which will take care of any safety concerns associated with the strong-stiff interior. The lower ends of the upper straps will be attached to the front of the base as well as the mounting bar. The lower straps will also be attached to this component. The mounting bar base will be a key component in the device in that it will serve as a point for attaching all of the other device components.

One other key component which will be attached to the backside of the mounting bar base will be springs as seen in figure 2. The springs will act as a shock absorber for the device. The springs will have to be the appropriate strength for the device and will be selected accordingly. They will have to be attached to the interior of the base and not the fabric to ensure a secure connection. There will be more than one spring and there will be a block on the side of the springs facing the seat which will allow the springs to act as one unit and not individually. There will also be padding on the seat side of the block to protect the seat and further absorb vehicle vibrations.

The adjustable lower straps will be crucial in securing the entire device. Without these straps the mount would swing toward and away from the seat. The straps will made of the same type of fabric as the upper straps and will also have a reinforced loop, which will be at the bottom of the straps as opposed to the top. The loops will allow for attachment of hooks which will be able to attach to the bottom of the seat. The hooks will be chosen since they will allow for easy attachment to the underside of the seat. The
adjustable straps on the bottom will allow for securing of the mount without changing the viewing height. This strap adjustment will also allow for adjustment of the force on the springs, which will allow the user to secure the computer mount in an optimal manner for withstanding vehicle vibrations.

The mounting bar is vital to the proper functioning of the device. This bar will be metal and will have to have a diameter which will be compatible for attachment of the Daessy quick release base. The bar will need to be strong enough to hold up to the weight of the Dynavox Vmax and should not bend or deform due to regular use. The quick release base will attach to the Daessy mounting plate, which is attached to the back side of the Dynavox Vmax. These two components will allow for the attachment of the Vmax to the mounting bar and consequentially to the rest of the mount. These parts will be purchased from Daessy. The quick release base will remain on the mounting bar and allow for a quick and easy removal and reattachment of the Vmax upon leaving and entering the vehicle. The quick-release system is featured in figure 3.

![Figure 1. Frontal View of Travel Mount](image)
Figure 2. Side View of Mounting Bar Base.

Figure 3. Daessy Quick Release Base and Mounting Plate