Alternative Designs

Dynavox Computer Travel Mount

TEAM 3:
Kelly Valentine, Blaine Ericson and Caitlin Martin
Project for NSF

Client Contact:
Brenda Stenglein
Ashford, CT
Design 3: Dynavox Computer Mount – Attached to the Rails under the Seat

The Dynavox travel computer mount design will allow the user to attach the mount via a heavy metal clamp to the rail underneath the seat in the rear of the car. This will give a backseat passenger full access to the device, while allowing him the freedom to reposition the mount to optimize the viewing angle. The space efficient design will also allow the user to easily fold the mount to lie on the floor of the car while it is not in use.

The mount design will utilize the rails underneath the back seat of the car as a point of attachment. The mount will be secured to the rails with a vice-like clamp that will make attaching and detaching the mount easy. The clamp will be fixed to a metal arm that lies along the floor of the car, which is attached to a vertical metal arm via a hinge joint. The vertical metal arm will house a telescoping pole that connects to a cylindrical rod that holds the Daessy Quick Release Base for attaching the Dynavox. Figure 1 shows the device installed in a vehicle.

Two sliding links attach the horizontal and vertical arms of the mount. The links will slide in grooves in each of the arms and then lock into place at notches along each groove. The sliding joints allow the user to lift the mount so that it is perpendicular with the floor of the car during use, and to lie the mount flat while not in use. Figure 3 shows the mount in the folded position.

The telescoping poles allow the user to adjust the height of the mount in order to achieve the optimum viewing angle. The poles will be locked in the desired position with a spring-loaded pin. Springs will also be incorporated into the design to absorb shock in the joints of the mount. The poles are shown in figure 2.

The cylindrical rod holding the Daessy Quick Release Base will fit into tight rubber tubing attached to the vertical arm. This rubber tubing will allow the user to reposition the angle of the device via the rod, but will provide enough friction to maintain the mount position in the moving vehicle.

Finally, the Daessy Quick Release Base attached to the cylindrical rod will allow the user to quickly attach and detach the Dynavox. The base fits into the back of the Dynavox and is secured with a spring-loaded pin.

This design therefore satisfies all of the project specifications and should be further investigated.
Figure 1: The Dynavox computer mount on the floor between the passenger seat and the back seat of the vehicle.

Figure 2: (Left) Side view of the Dynavox Mount. The dashed lines represent the alternate positions of each respective link. (Right) The mount from the front, or the view of the passenger.
Figure 3: Dynavox mount in the folded position.