Mounting Solutions for Simple to Complex Mounting Needs

It's essential for a person's physical and psychological well being to be able to readily and independently access food, drinks, technology and other items in their environment. People need access to their phones, iPads, tablets, cameras, speech devices and trays to make this possible. Positioning and securing these ever-evolving items for access can be a challenge for people with major and even minor mobility limitations. Mounting systems help stabilize and position devices for optimal access on wheelchairs, tables, beds and floor stands through every stage of a condition or disease over a lifetime. With the wide variety of mounting options available, it's important to be familiar with feature considerations to determine the best mounting recommendation possible and address the access needs of individuals with disabilities and their caregivers.

Due to the progressive nature of some diseases like ALS, MS, SMA and MD, it becomes important to maintain a client's ability to access technology and initiate control as the disease progresses and motor skills decline. This typically results in an increase in use of technology to address communication and environmental control needs. Adding to the challenge, access methods, technology and positioning need to adapt to keep up with the changes in physical abilities. They may start with simple systems and need to move to more complex systems as their needs change. This becomes increasingly important when using speech devices and mobile devices to communicate via speech, email, etc. Many people with disabilities are effectively using these devices to access social media and other programs to connect with their support networks, build relationships and stay productive and safe. Providing an effective mounting solution

is critical for success.

There are many mounting solutions on the market. Fixed, single-position mounts do not offer the end user the independence of moving his/her own device to a different position without help from another person. Movable mounts offer an alternative to stationary mounts and trays and provide benefits that go beyond access to the device for both the client and the professional. Family members and caretakers appreciate the safe, quick and easy repositioning of devices for transferring, eating, toileting, changing devices and pulling up to tables or sinks.

Individuals with limited use of their upper extremities can move their device to a position that facilitates independence performance. Individuals using a movable mounting system experienced functional gains and psychosocial benefits resulting from increases in their independence and self-esteem (Kinney, Gitlow, Goodwin, 2014). It's recommended to review the advantages and limitations of mounting devices. Identify mounting needs and take a holistic approach considering the person, their goals, activities, devices and the environment in which it's used. Off-the-shelf mounts cost less, but may not hold position under the weight of the device and user's touch, especially if they have high muscle tone.

Mount'n Mover movable systems offer unique features specifically designed to promote independence and access. Making it possible to mount mobile devices, speech devices, and trays on wheelchairs, tables, beds and floor stands.



MARY KAY WALCH, COTA, Director of Sales and Marketing at BlueSky Designs, has worked in the assistive technology industry for more than 30 years. Improving product design and life for individuals with disabilities. Her specialty is accessibility and independence with optimal positioning and stability through mounting solutions.





Movable Mounting Systems Available

MOUNT'N MOVER SIMPLE MOUNTS

Available with two sizes of tray, small 3.5" x 7" x .25" and large 9" x 11.5" x .375" or with a Quick Connect Receiver. The tray or Quick Connect Receiver is attached to a variable angle hinge. The hinge is available in either a high or low resistance. Mounts come attached to either 8", 12", 18" or 24" post. A 36" post available at additional cost. Lip Supports attach with adhesive tape and allows for custom supports to accommodate device size and access.

The Small and Large trays tilt, rotate and fold down to the side for easy storage. Clear trays swivel 360 degrees, lay horizontal, tilt at a variety of angles (0-90 degrees) and fold down. Simple Mounts can be combined with the Single and Dual Arm Mount'n Mover to create a double decker to hold multiple devices.

Consider the Simple Mount when:

- A simple, stable, cost effective and versatile mount is needed for tablets, phones, remotes, eating, writing, etc.
- You want a simple support that rotates in or away, and tilts at different angles.
- Tray stowage needs to be streamlined. If a device is slim or removed, Small and Large Tray Simple Mounts can be flipped down alongside the post for compact storage.
- You want a support in front of and inside your armrest, for your arm, switch or mouse.
- You want to access multiple devices at the same time. Create a Double Decker using a Simple Mount in combination with a Single or Dual Arm.

User example: (See Image #1)

Cindy uses a Simple Mount with a Large Tray to use her mouse and support her arm when needed. She also uses a Dual Arm Mount and a Laptop Tray to hold her Laptop and phone mounted on the opposite side of her wheelchair. She can now access her laptop from anywhere in her house, not just her office.

Another option for multiple device access is a Double Decker. This is done by combining two mounts on one post. One possible combination is a Dual Arm and Simple Mount Small Tray as shown in above image and also in the user example of Nicole.



Image 1: Cindy and Double Decker

MOUNT'N MOVER EASY MOVERS

The Easy Mover is available as a Dual Arm or Single Arm and offers non-locking, movable joints and tilt that easily glide to a desired position. It's available with either a Quick Connect Receiver or Tilt Plate making it easy to remove and change out multiple trays or devices. The hinge on the Quick Connect Receiver and Tilt Plate is available with either low or high resistance and with or without locks. Custom locking Tilt Plate is ideal when accessing a heavy device in a reclined position.

Joints can be adjusted from low to high resistance, changing the effort to move the mount. Its sleek simple design makes it easier and more intuitive for multiple caregivers to adjust. The new Quick Connect Receiver is compatible with other mounts and devices on the market.

Consider Easy Mover Non-locking Arms when:

- Locked positions are not needed.
- A lightweight device is used.
- A person does not tilt in space with their device attached, and they do not press too hard when using their device.
- A simpler mount is easier and more intuitive for multiple caregivers or school staff to adjust, requires less training and reduces frustration or damage due to misuse.
- A need to change joint resistance as a person's muscle strength changes, making it easier or harder to move.
- A client is very rough on equipment; a non-locking arm has fewer parts to potentially break or come out of adjustment.





Image 2: Albert and Greta

 Two things to remember: Tilt resistance cannot be changed and lower joint resistance makes it more likely to move when it is used.

User examples: (See Image #2)

Albert recently purchased a new Easy Mover Dual Arm mount to hold his communication device. The Easy Mover was a good choice for Albert because he is very rough with his equipment and having less mechanical parts mean less to break.

As a very curious girl, Greta LOVES to learn and create. Greta uses eye gaze access for communication, learning, creating art and making music. Her iPad and Easy Mover Dual Arm allows her to look into things more closely. She will often search anything from maps (especially satellite model), to eBooks and learning videos on her iPad, then talk about them using her speech device. Both devices need to be carefully positioned for her to use eye gaze access and for others to use during teachable moments. Her family often uses the iPad to take photos, and will write on it like a chalkboard to annotate information to Greta. They find the Easy Mover is excellent for easy control and re-positioning.

"It's the best thing we have bought in a long time - works so well and gives Greta a lot more independence when using her iPad"

- Thea, Greta's mom

Check out Greta's artwork created with eye gaze at: http://studiogreta.co.uk

MOUNT'N MOVER SINGLE AND DUAL ARMS AND TILT'N TURNER

The Dual Arm, Single Arm and Tilt'n Turner mount with locking joints offer customizable lock-setters (24 per joint) that provide secure locks and repeatable user-specific positioning. The built-in locking Tilt Plate (location where device or tray is attached) adjusts from 0 to 110 degrees and anywhere in between. Slight forward tilt aids in eye gaze access from a reclined position. Offers easy-access, one-handed operation. Press the white hoop to unlock the shoulder and elbow. The black paddle unlocks the wrist joint. The mount will support 15 pounds.

The Tilt'n Turner has one locking joint and is often used to create a double decker to allow mounting two devices or trays at the same time.

Consider Mount'n Mover Locking joints when:

- Individual uses wheelchair's tilt feature while accessing device.
- Strong athetoid movements would cause unintentional movement of the mount.
- You require low effort to move it, but stability in a "use" position.
- When you need the device to lock at a specific tilt angle.
- Active, powered chair users need mount locked in position for storage or use when out and about.
- Consistent and stable positioning of device is needed for optimal access, such as eye gaze access.
- Mounting a heavy device.

User examples: (See Image #3)

Brylee likes the precise positioning capabilities for her Dual Arm Moun't Mover and that she can set locked positions for her ideal position needed to access her speech device with eye gaze technology.

As a college student Nicole needs to multitask – reading, writing and use a laptop. She uses a Tilt'n Turner, a Dual Arm Mount'n Mover, Laptop Tray and 12" x 16" Tray with Lip to use her laptop and read at the same time.



Image 3: Brylee and Nicole





Image 4: Anthony, Catalina and Universal Access Station

TABLE OPTIONS: MOUNT'N TILTER AND TABLE CLAMP

Made for surface mounting, the Mount'n Tilter is lightweight and portable. Compatible with the Quick Release Plate for quickly switching out devices. Tilt plate locks securely.

The Table Clamp secures to any desk, table or tray with a $\frac{1}{2}$ " to 3" edge with a swivel screw. Requires a Mount'n Mover Post that slips into the clamp slot. Attach desired mount to end of Post. The Cam Lever allows for easy height adjustability.

User examples: (See Image #4)

Anthony needs access to several speech generating devices for his job as a Technical Support Technician for an AAC company. He uses the Mount'n Tilter at his desk to assist him when doing his tech support with customers and is able to swap out different devices independently. The Mount'n Tilter provides a simple, yet secure mounting solution when at his desk. Anthony also uses a Mount'n Mover Dual Arm for his wheelchair and a custom mount from BlueSky Designs for his phone and camera.

Catalina uses a Mount'n Tilter to access her eye-gaze device when she is at a table. Her parents like that it fits in her backpack when they go out to eat.

The Universal Access Station Kit consists of a Table Clamp, Easy Mover Dual Arm, Post and iTab Tray and provides optimal and flexible positioning for access in the classroom. This student demonstrated improved upright posture as a result of the iPad positioning higher off the table.

POW!R MOUNTS: HYBRID DUAL ARM WITH POW!R SHOULDER OR TILT

The next generation of mounting technology for individuals with complex needs is now available. An accessible motorized mounting system used to support and move devices up to 15 pounds to a person's preferred position using a switch. The Hybrid Pow!r mounts combine a Dual Arm Mount'n Mover with a single power joint. The powered joint can be controlled via switches, either alternating directions in a momentary mode; or going between two target positions, stopping anywhere in between. Target positions are programmed for quick and easy

movement to specific locations. Two switches may be used, with one switch for either direction. A Pow!r Mount app, either controlled directly via a smart phone or through switches, is under development.

The Hybrid Dual Arm with Pow!r Shoulder has a range of movement of 360 degrees. The Hybrid Dual Arm with Pow!r Tilt has a tilt range of movement of 180 degrees. They mount to wheelchairs, beds or table and you can attach trays, speech devices, camera, laptop, suction tube and more. The built-in keypad is used for attendant control. It's powered by a rechargeable battery, wall outlet or wheelchair battery. The automatic back-off feature provides safety.

A third Pow!r system, the Pow!r Joint, may be used to build a custom solution for whatever purpose you need, such as moving a backpack or joystick from one positions to another.

See videos at: https://www.mountnmover.com/products/powr-mounts



Video: Pow!r Mount Shoulder Hybrid





Image 5: Scott and Brea

User examples of power mounting needs: (See Image 5)

Scott lives fairly independently, with part time attendants. He enjoys playing games and socializing with friends on the computer. The Pow!r Shoulder makes it possible for him to independently suction himself. He uses a switch and the Pow!r Shoulder to move the suction tube into position (his mouth) and another switch to activate the suction machine. Using the Pow!r Mount has resulted in a decrease in frequency of respiratory illness, re-



Video: Use a Pow!r Mount Joint for Independent Suctioning

duced anxiety and increased engagement with friends.

Brea accesses her speech generating device using eye gaze technology. Using her Mount'n Mover with a Pow! Shoulder she is able to move her device into position whenever she has something to say and doesn't have to wait for someone to assist her. She is also able to move her device out of the way when she pulls up to a table.

DEVICE AND TRAY ATTACHMENTS

More and more people want access to their mobile devices at all times, and often to multiple devices at the same time. The Mount'n Mover readily attaches to speech generating devices, laptops, iPads, tablets, phones, trays and cameras. Device plates are designed for device compatibility and can be used with accessories like the Universal Rotator or Stand +90 to add rotation angle adjustment or downward tilt. Both are great for eye-gaze systems. The Universal Rotator angle adjustment is great for eye-gaze systems or iPads and tablets that can move from landscape to portrait. The Stand +90 is ideal for accessing devices from a bed or reclined position.

User examples: (See Image 6)

Sophia uses the Stand +90 and the Universal Rotator on her Speech Device when she is in her wheelchair and bed. This al-

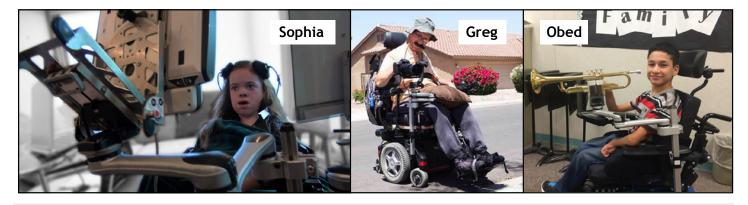


Image 6: Sophia, Greg and Obed



lows her device to be accurately positioned for eye-gaze access and adjusted as her position changes. Watch Sohpia's video to see how she uses her devices to communicate, learn and interact with her classmaes remotely: (See Video of Sophia Doebbert ABOVE) https://www.mountnmover.com/community/sophia-doebbert-and-her-mountn-mover-video

Greg Wickenburg's Mount'n Mover Dual Arm and Camera Plate provides him the accessibility he needs to do the thing he loves most - photography! He quit photography years ago out of frustration, but advances in technology now make it possible for him to take photos again! It wasn't long before he was winning awards for his double exposure technique using silhouettes of a subject's profile and filling them with texture to create unique one of a kind image. He likes this because it's one of the few things he can do totally independently.

It's important to recognize other ways mounting systems can



Video of Sophia Doebbert

be used to solve access challenges. Obed, a 6th grade student, wanted to play the trumpet. The call for help came because the student only has functional use of one arm and is in a wheel-chair, adding a bit of a challenge to holding up the trumpet and manipulating its buttons. But, where there is a will (and the right mounting system), there is a way. Matthew Press, the assistive technology coordinator for the school campus came over with the Dual Arm mount and worked with the student and band teacher to get the trumpet placed in the right position, adding a little Velcro to secure the trumpet to the mounting plate. Now, Obed is learning to play the trumpet for his band elective.

FLOOR STANDS

A floor stand can position devices for access from a bed, chair, reclined or standing position. They are also useful when devices need to be moved from room to room, protecting it from being dropped.

ADDRESSING MOUNTING NEEDS IN AN ACADEMIC SETTING

The classroom, library and common areas need to provide the least restrictive environment to support students' performance and participation to foster learning and social well-being. Educators need to address the wide range of abilities of their student's assistive technology and give them the tools to provide a more accessible learning environment for the students in need of these devices day to day, room to room. A flexible, movable mount allows quick adjustments that can be tailored to a variety of student's physical needs. Mobile devices and trays can be attached to a rolling Floor Stand providing portability and accessibility. It also helps keep expensive technology safe from being dropped or stolen, an added investment benefit for the school. For the therapist, a movable mount can be quickly attached to a variety of surfaces, easily moved, and provide a stable, yet flexible set up for evaluation.

School examples: (See Image #7)

Providing students with as many communication opportunities as possible throughout the day is critical for success. A school in Delaware can testify to this. They had everything - seating systems, speech devices, software, switches and adapted curriculum. What they lacked was a good way to provide stable, flexible and optimal access to these tools in every environment. Their mounting approaches were not portable, and provided limited, less than optimal access to communication. After discovering the Mount'n Mover, they got to work attaching speech devices to gait trainers, adapted classroom chairs, wheelchairs, high/low standers, beds and more. According to Julie, an OT in an elementary school, the Mount'n Mover was key in improving their students' communication success.

Julie said, "If I had to pick the single game changer that brought it all together for our students, it would be the Mount'n Mover!"

"We started to notice that when students had access throughout the ENTIRE day, in any and every piece of equipment, this constant access led to increased communication. There were no more sabotaged "speech" sessions. The set-up time significantly decreased, and anyone could do it! It was a total game changer!"

"What separates the Mount'n Mover from other mounting systems is its versatility, forgiveness, the ability to "hack it" - attaching different devices and moving to countless access positions and their outstanding customer service."

As a result of some very creative thinking, Special Education Teacher Breanna Martins at the Robbinsdale Transition Center in Minnesota was able to position and secure a dust mop on a student's Rifton Gait Trainer by using the Mount'n Mover post extension kit and hardware. Now the student can participate in various jobs around the school while getting their steps in, providing both therapeutic and vocational benefits!





Image 7: Activity chair, Stander, and Rifton Gait Trainer

EVALUATION

Understanding the features and benefits of simple to complex mounting solutions will help professionals, parents and consumers be proactive in creating a more accessible environment to support performance and participation, resulting in a better quality of life for the individual. An important part of the assessment process for professionals is determining the functional needs, goals and preferences of their client. It's equally essential for professionals to have in-depth awareness of assistive technology and its use, preparing them to recommend the correct match between the person and the assistive technology.

Knowing what key questions to ask during the evaluation process will help determine the best alternatives for mounting and positioning devices.

- Does the mounting system need to allow for daily adjustments for: daily changes in positioning, growth, fatigue, setting and the ability to see and interact with others?
- Can the user move the mount independently?
- Does the mount allow access to a variety of items such as books, phones, keyboards, a computer, toys or recreational equipment?
- Can it provide multiple operating positions without the use of tools?
- Does it enable independent access to a communication device in all situations and environments?
- Can the device be moved out of the way (i.e., for transfers, eating, pulling up to a table, toileting) rather than removing it entirely, protecting the device from being vulnerable from damage and loss?
- Does the mount provide consistent positioning with lock positions for specific locations? Does it provide easy set up for both the user and the caregiver?
- Can the mount move from wheelchair to bed, eliminating the need for two different mounts?

Designed with the end user in mind, new mounting solutions

facilitate independence and participation in meaningful activities for individuals of all ages and abilities.

Goodwin, D., Gitlow, L., Kinney, A., Chapman, S., 2014. Functional and Psychosocial Impact of Accessible Mounting Technology

Company website: www.mountnmover.com

Mount'n Mover Comparison Chart: Download a copy here: https://www.mountnmover.com/sites/default/files/Spec%20 Table%20All%20Mounts_5.pdf

If you are interested in scheduling a webinar or in-service to learn more about mounting solutions please contact Mary Kay Walch at mkwalch@blueskydesigns.us or 888-724-7002.

SUMMARY

Positioning and securing devices and trays for access can be a challenge for people with major and minor mobility limitations. Mounting systems help stabilize and position devices on wheelchairs, tables, beds and floor stands. While static mounts position a device, a movable mount can enhance a person's abilities to do more. Understanding the features and benefits of simple to complex mounting solutions will help create a more accessible environment and facilitate independence and participation.

