

Slatwall Consoles: The solution for Current and Future Deployment Challenges

by Mitch Herrick, Russ Bassett Corp



SLATWALL

The Answer for Current and Future Technology Deployment

 russbassett

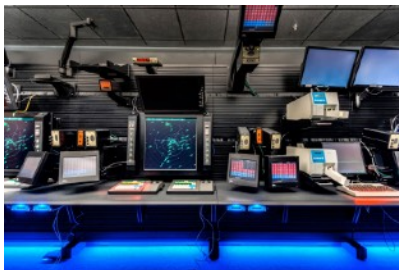
8189 Byron Street, Whittier, CA 90606 • telephone: 855.719.8954 • fax: 855.719.8955 • www.russbassettconsoles.com

Slatwall Consoles

Technology evolves quickly and in the ever-changing world of air traffic control technology it is often difficult for the infrastructure or “brick and mortar” to transform with the changing times. Projects often require expensive and complicated remodeling just to accommodate the new equipment. In your home, how many times have you purchased something at the hardware store for a home improvement project only to get 80% completed and then come to realize that things don’t quite fit the way you planned? That sinking feeling is that of the realization that an expensive “do-over” may be heading your way.

The planning and development of new technologies for the air traffic control environment often happen on an engineer’s computer or in a lab where everything fits perfectly. Unfortunately, no two air traffic control facilities are alike and many are challenged for space or require unique configurations because the operational environment dictates it through ergonomics or physical necessity.

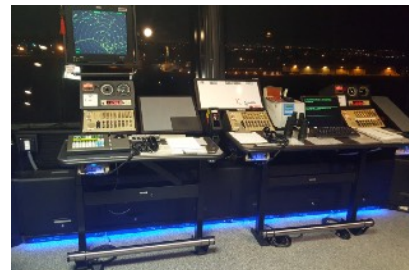
The evolution of slatwall into air traffic control facilities is not only making those challenges much easier to overcome, it also creates opportunities for future innovations to be deployed with few encumbrances or obstacles. This should result in great cost savings into the future because the need will no longer exist for those costly modifications to buildings. No screws, no saws, no nails and no problems.



Easily mounted and moveable



Room to relocate or add new equipment



Reclaiming space in older towers

What is slatwall? Slatwall is a universal mounting system that enables you to hang equipment in locations where you want it, which is unlike the existing consoles where a hard faced-panel dictates where it should be mounted. Components can be mounted individually in front of the controller while having the processors or “guts” of the systems located elsewhere. The hardware that drives equipment is normally located in the base of the console or on the back side of the wall where it is accessible and configuration management is visible and easily verifiable. Processors can also be in a remote location such as an equipment room either below a tower cab or elsewhere in the building of an approach control or enroute traffic control center.

Russ Bassett's sturdy, patented slatwall frame¹ and mounts² allow equipment to be fastened and nested in a position that is not only ergonomically friendly, but also easier to access. This is important if the equipment fails or needs to be upgraded. As the FAA implements new technologies and systems, custom holes and panels are not needed for the installation and implementation of the new equipment. The old equipment can simply be removed from the slatwall, and new equipment can be housed and mounted to the slatwall in a desired location.

By individually mounting each piece of equipment with sturdy and easily adjustable and detachable hardware you gain the ability to change the location and configuration for any and all positions in the operation. Positions can thereby be uniform or subtly different. Relocating, removing and adjusting equipment can be accomplished by Tech Ops personnel in a matter of minutes and, in some cases, individual controller adjustments are readily accessible and easy so that the positioning of certain pieces of equipment can be done according to individual "controller preference."

Benefits of slatwall across all of Air Traffic Control Concerned Parties

It is indeed rare that something hardware related like slatwall could provide across the board benefits to Air Traffic, Tech Ops, Engineering Services and Management. This is exactly what you get with slatwall.

Benefits to Air Traffic:

Operational advantages of transitioning to a slatwall environment are universal to all air traffic control environments. The flexibility to easily change the configuration of a position, relocate any position's unique equipment³ or dramatically reconfigure the operation because of a change in traffic patterns, new runways, airways and procedure changes can be accomplished with relative ease and without major disruption.

Incorporating recent changes or new equipment has traditionally required a very elaborate plan based on the difficulties encountered with relocating equipment. Those difficulties have often been the result of a need to dramatically alter the operational air traffic control work space through traditional engineering and invasive build outs. These alterations often require sawing, cutting, nailing, bolting, rewiring and any manner of carpentry and electrical work that are quite loud and disruptive. Scheduling of these events and the aligning of departments and resources can be difficult, time consuming and costly.

¹Slatwall Frame: US Patent # 9,161,622B1 Dated October 20, 2015

² Slatwall Mount: US Patent # 9,182,076B2 Dated November 10, 2015

³Many facilities use position unique equipment specific to a function only accomplished during certain times of year (Super bowl, Daytona 500, Fourth of July celebrations, etc.) as well as Range Control or National Security related functions that are only accomplished occasionally or specifically from an individual position with the operation.

Slatwall flexibility can alleviate many of these challenges because equipment can easily be added, subtracted or relocated with only minor disruption. With slatwall the equipment is “modular” and the mounts slide or detach to relocate every piece of equipment as an individual entity. This eliminates the need to tear apart a facility; no screws, nails, sawing or facility engineering required. Simply move the equipment with little impact on day to day operations.

Recent use of slatwall as a refurbishment option in older air traffic control towers has resulted in significantly reducing the console and equipment footprint in the tower cab⁴ and can be configured to accommodate CPU and no CPU as well as lower the profile. This gives controllers more workable area and brings them closer to the windows.

Benefits to Tech Ops:

In today’s world of electronics systems and subsystems it is imperative that the Tech Ops community have the ability to access and change components and systems without interruption to the operation.

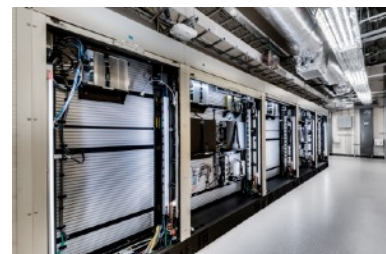
By taking the components out of the old mobile radar cabinets (TCW) and placing the individual components on the back side of the wall and placing the display monitors on the front of the wall for controllers, slatwall gives both air traffic and tech ops autonomy of working space. This creates incredibly easy access to equipment for tech ops without causing a disruption in the operation for air traffic, because the actual functioning equipment is behind the wall it can be accessed without having to enter the control room or turn on lights.

The size of the US air traffic control system and the numbers of facilities make configuration management of the equipment essential. Having a defined layout that is uniform across like type facilities is essential. With the components removed from the inside of the TCW, configuration management is considerably easier and all components’ location and access are easy and visible.

Moving equipment and components in both the operational area and the tech ops area becomes much easier with individually mounted items in both areas.



Easy Equipment Access



⁴ Russ Bassett’s new Vertex product installed at Santa Monica, CA (SMO) resulted in nearly 20% more of the floor area being available to controllers.

Easily Mounted Equipment



Closed Tambour Doors

Benefits to Management:

A necessary part of any facility is the interface between the managers and labor. Because slatwall makes it easier to move equipment and design either uniform or unique positions, discussions between air traffic management, controllers and tech ops can be broader and open minded as they relate to the location of equipment. There are few cost drivers in the discussion pertaining to relocating and moving things so ideas can be far more open, robust and forward thinking.

Having the ability to create uniformity or design “position unique” configurations can help create a more dynamic operational environment for current and future deployment challenges.

Benefits to Facilities and Engineering for current and future equipment deployment:

Whether planning new buildings or sustainment and modernization projects (specifically refurbishing older facilities in the National Airspace System (NAS) the use of slatwall innovations will make an already dynamic environment even more so by introducing a more flexible way of managing the placement of equipment in both the operational and tech ops environments.

Eliminating the need to tear apart or modify a facility for every modernization project, piece of equipment or new program, will also eliminate costly engineering studies as well as the need to develop transition plans for new products. We’ve already seen that slatwall introduction in tower refurbishment projects results in increased space and gets controllers closer to the windows.

Future technology and equipment becomes easier to deploy because you could reduce the “form, fit and function” requirements from many of the programs. Requiring each program to develop their product knowing that mounting and physical transition challenges will be minimal can help them focus on other things.

Long term benefits as a result of employing slatwall concepts now....

By converting air traffic control facilities to slatwall the Federal Aviation Administration can gain flexibility for current and future projects. By eliminating the costly need to modify existing

structures and consoles every time a NextGen product is introduced to the air traffic control environment the Agency could focus on developing those technologies without the worry of how to install or mount it. Slatwall makes the deployment of NextGen as simple as, “Where do I mount it on the wall?”