

M&B Machine, Inc.
Adjustable Wall Mount AWM-100 Installation Instructions

Tools needed:

5/32" Allen wrench
2 – 9/16" wrenches
2 – 7/16" wrenches
2 – 7/8" or adjustable wrenches
Drill with 1/4" drill bit
Level

Hardware Kit:

Hardware AWM (Parts)	Qty. for AWM
10-32 x 1 Slotted Machine Screw	2
10-32 Kep Nut	2
1/4 -20 x 1 Hex Bolt	4
1/4 -20 x 2 Hex Bolt	2
1/4 -20 x 2 1/4 Hex Bolt	1
1/4 -20 x 2 3/4 Hex Bolt	4
1/4 -20 x 1/2 Flat Head Socket Head Cap Screw	4
1/4 -20 x 1 Flat Head Socket Head Cap Screw	4
1/4 -20 x 3 1/2 Flat Head Socket Head Cap Screw	2
1/4 Flat Head Washer	8
1/4 Kep Nut	19
3/8 -16 x 1/2 Hex Bolt	2
3/8 -16 x 2 1/2 Hex Bolt	5
3/8 -16 x 3 3/4 Hex Bolt	2
3/8 -16 x 4 Hex Bolt	6
3/8 -16 x 3 Carriage Bolt	10
3/8 Flat Washer	4
3/8 Kep Nut	19
5/8 -11 x 2 3/4 Hex Bolt	1
5/8 -11 Nut	1
5/8 External Star Washer	1
Jack shaft bushing block	1



Included in Packaging:

4 Wall Angles
1 Left / 1 Right Inside Upright
1 Left / 1 Right Outside Upright Tube
2 Upper Adjustment Tubes
2 Cross Tubes
1 Lower Cross Bar
1 Boom Stem Tube
1 Boom Stem
1 Boom
2 Boom Slide Ear
1 Projector Clamp Bracket
1 Projector Pivot Block II
1 Projector Plate (varies by projector mfg.)
1 Jack
1 Jack Extension Tube
1 Jack Replacement Shaft
1 Handle Shaft
1 6" Handwheel
2 Board Mount Rails
1 Boom End Cap
1 Hardware Kit
1 Board Mount Hardware Kit

Installation/assembly steps:



Assemble frame:

1. Locate the left and right upright tube assemblies. Place these on the floor about 4 feet apart. Note: The bottom is the end with the footpad welded on it.
2. Locate the upper tube with foot pad.
3. Insert the upper tube into the upright tube assemblies as shown.
4. Locate four wall angles, four 1/4-20 x 1" hex bolts, four 1/4-20 x 1" flat head socket head bolts, eight washers, eight kep nuts.



Install u-shaped side of the wall angles inside the top and bottom footpad of upright.

For the top wall angle: Install 1/4-20x 1" hex bolts from top, install flat washer and kep nut on bottom through slot in the wall angle.



For the bottom wall angle: Install 1/4-20 x 1" flat head socket head from the bottom to create a flat surface to rest against the floor. Install washer and kep nut on top of slot in wall angle.

Note: There are different hole patterns in the foot pad and slots in the wall angle to accommodate installation over existing chalkboards, whiteboards or other wall obstructions. Please measure obstructions and include enough depth for obstructions during this step before standing wall assembling and fastening to wall surface.



5. Locate cross tubes – lower, middle, upper and six 3/18-16 x 3" carriage bolts and kep nuts. The cross tube with the jack weld tab is the bottom cross tube. Insert bottom cross tube into lower tab on outer left and right upright.



Note: The lower jack weld tab in the center will be offset away from the wall (it should be installed with the weld tab furthest from the wall).

Install carriage bolts and kep nuts to secure cross tube in place. Install middle an upper cross tubes in a similar fashion. Do not tighten bolts at this point, as the assembly will have to be leveled, plumbed and squared once it has been lifted against the wall.



6. At this point stand unit to vertical position against wall (requires more than one person). Plumb, level and square the assembly and tighten all hardware. Secure the unit to the wall.

Please note: hardware for installation into wall surfaces is not included, and must be purchased by the customer depending on the installation application. Customer is responsible for ensuring that unit is secured appropriately to surface. Quantity of 16 screws/bolts are required for each adjustable wall mount to be installed.



Assemble Jack

7. Locate jack, jack extension tube and jack clamp pad. Locate one 3/8-16x4" hex head bolt, kep nut, two 3/8-16 x 3 3/4" hex bolts, 4 flat washers, 2 kep nuts.



Using 3/8-16 x 4" hex head bolt and kep nut, install jack extension tube through center hold of the middle crossbar.



Using two 3/8-16 x 3 3/4" hex bolts, four flat washers and 2 kep nuts, insert bolt with washer through jack clamp pad and through weld tab on bottom cross tube, and fasten loosely with washer and kep nuts.



8. Locate 5/8-11 x 2 3/4" hex bolt, star washer and nut.

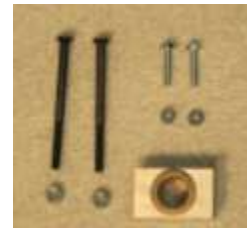
Lift up on middle crossbar to lift upper frame and insert the silver part of the jack up into the jack extension tube. Insert the 5/8" bolt, star washer and nut through the hole to secure. Do not tighten at this time.



Lift up on jack, again lifting middle crossbar and upper frame. Insert lower part of jack into the jack clamping block, loosening bolts if needed to allow it to fit. Do not tighten at this time.

9. Locate jack shaft bearing block, two 1/4-20 x 3 1/2" flat head socket head screws, 2 kep nuts.

Install bearing block through right upright tube using the 1/4-20x 3 1/2" flat head socket head screws and kep nuts. Do not tighten at this time.



10. Locate jack cross shaft, hand wheel and two 10-32x1" machine screw, two kep nuts, one 1/4-20x 2 1/4" hex bolt with kep nut.



Insert jack cross shaft through bearing block, ensuring the end with 2 holes is inserted towards the middle of the frame). Align the cross shaft over the shaft protruding from the jack.

Please note that the jack shaft has multiple holes to accommodate differing board widths, you must determine the location of the handle based on your board width to determine which holes to use.

Insert two 10-32 x 1" machine screws and tighten with kep nuts. Insert hand wheel on end of shaft and insert 1/4-20 x 2 1/4" hex bolt through hand wheel and shaft and tighten with kep nut.

Now that jack and cross shaft are installed, align cross shaft with jack and jack with upright and tighten all hardware.



Note: For left hand installation, turn jack 180 degrees and move bearing block for hand wheel to left side of assembly.

Assemble projector boom:

11. Locate boom stem tube, four 3/8-16 x 3" carriage bolts, four keps nuts, two 3/8-16 x 1/2" hex bolts. Insert 3/8-16 x 1/2" hex bolts into two weld nuts located on the boom stem tube. Only insert 2-3 turns for now.



12. Insert four 3/8-16x3 carriage bolts through tabs in boom stem tube into holes in middle and upper cross bar and fasten with keps nuts. Please Note: Boom tube placement on the upper and middle crossbars should be adjusted to the right, left or middle depending on the projector you are using. Lens offset in the projector will determine the proper mounting placement.

13. Locate boom, boom stem, four 3/8-16 x 2 1/2" hex bolts.



Insert bolts through the boom and thread into the top plate of the boom stem. Insert the boom stem into the boom stem tube. Adjust the height of the boom stem for projector image and tighten 3/8" x 1/2" bolts on the back of boom tube to secure.

Assemble the Projector Mount

14. Locate the following parts:
- Two Boom slide ears
 - Project clamp bracket (u shaped)
 - Projector pivot block
 - Projector mounting plate (the projector mounting plate may look different depending on manufacturer of projector)
 - Projector end cap
 - Five 3/8-16 x 4" hex bolts



- g. One 3/8-16 x 2 1/2" hex bolt
- h. Six 3/8-16 kep nuts
- i. Four 1/4-20 x 1/2 flat head socket head cap screws.

Note: you may want to align projector plate with projector to determine proper projector alignment due to lens offset prior to completely assembling this unit.

15. Mount projector clamp bracket to the projector mounting plate using four 1/4-20 x 1/2" flat head socket head cap screws with a 5/32 Allen wrench. Insert projector pivot block into the projector clamp bracket and secure with 3/8-16 x 2 1/2" hex bolt with kep nut. **DO NOT TIGHTEN AT THIS TIME**, tighten when projector is installed and adjusted properly. Insert 4" bolt through pointed end of boom slide ear, through pivot block and into other boom slide ear. Install kep nut. Insert other four 4" bolts through boom slide ears and secure with kep nuts.



16. Slide projector assembly over end of projector boom, noting direction and offset of projector lens for correct alignment.



17. Install boom end cap at end of projector boom.

Assemble Board Mounting Rails

18. Locate board mounting rails. Locate four 1/4-20 x 2 3/4" hex bolts and kep nuts. Install board mounting rails onto tabs on frame assembly. Note a dimple in the end of the rail indicates the bottom of the rail and ensure both rails are installed with that dimple down for correct board alignment. Secure rails using the multiple holes available to allow for your desired board height.



19. Locate two 1/4-20 x 2" hex bolt and kep nuts. Locate pilot hole at the top of the left and right main tube assemblies. Using 1/4" drill bit, drill hole through the tube assembly main tube and extension tube. Insert 1/4-20 x 2" hex bolt and kep nut and tighten.



20. Ensure all hardware is tightened. Raise and lower the adjustable wall mount using the hand wheel. If binding occurs, the main

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uprights will need to be adjusted for plumb and square. Loosen hardware and retighten as needed to accomplish this

