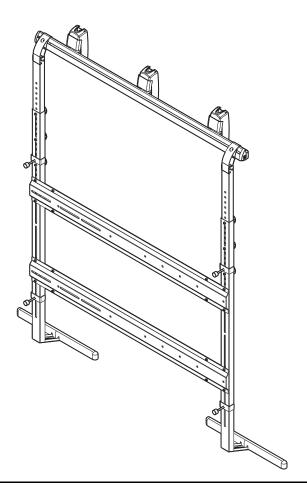
# INSTALLATION INSTRUCTIONS



**Interactive Flat Panel Over Whiteboard Mount** 



WBM4E

#### **DISCLAIMER**

Milestone AV Technologies and its affiliated corporations and subsidiaries (collectively "Milestone"), intend to make this manual accurate and complete. However, Milestone makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without notice or obligation of any kind. Milestone makes no representation of warranty, expressed or implied, regarding the information contained herein. Milestone assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

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#### **DEFINITIONS**

**MOUNTING SYSTEM:** A MOUNTING SYSTEM is the primary Chief product to which an accessory and/or component is attached.

**ACCESSORY:** AN ACCESSORY is the secondary Chief product which is attached to a primary Chief product, and may have a component attached or setting on it.

**COMPONENT:** A COMPONENT is an audiovisual item designed to be attached or resting on an accessory or mounting system such as a video camera, CPU, screen, display, projector, etc.

**WARNING:** A WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.



**CAUTION:** A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.



# IMPORTANT SAFETY INSTRUCTIONS

WARNING: Failure to read, thoroughly understand, and follow all instructions can result in serious personal injury, damage to equipment, or voiding of factory warranty! It is the installer's responsibility to make sure all mounting systems are properly assembled and installed using the instructions provided.

WARNING: Failure to provide adequate structural strength for this mounting system can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this mounting system is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the mounting system. The wall to which the mounting system is being attached may have a maximum drywall thickness of 5/8" (1.6cm) on wood studs only. Concrete walls may not have any drywall covering.

**WARNING:** Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components attached to mounting system does not exceed 310 lbs (140.6 kg).

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**WARNING:** Use this mounting system only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.



**WARNING:** Never operate this mounting system if it is damaged. Return the mounting system to a service center for examination and repair.



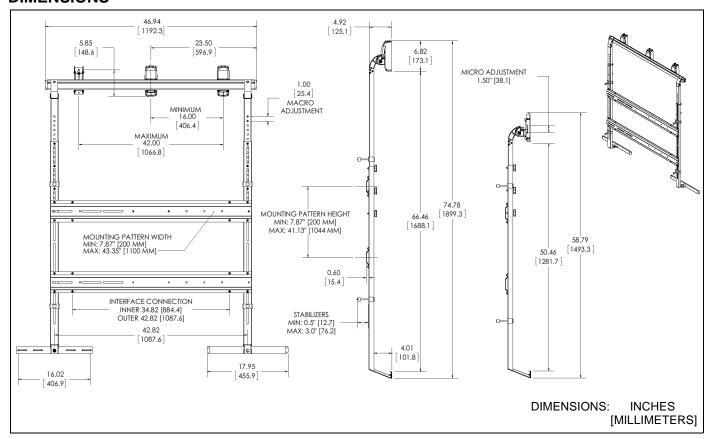
WARNING: Do not use this mounting system outdoors.

**IMPORTANT!:** The WBM4E is designed to be mounted to a:

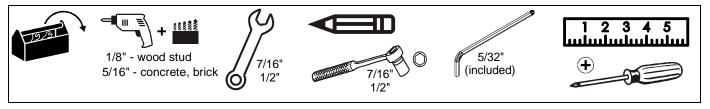
- bare 8" thick solid concrete or 8" x 8" x 16" concrete block wall: or
- 2" x 4" wood stud (16" on center) wall covered with drywall having a maximum thickness of 5/8".

--SAVE THESE INSTRUCTIONS--

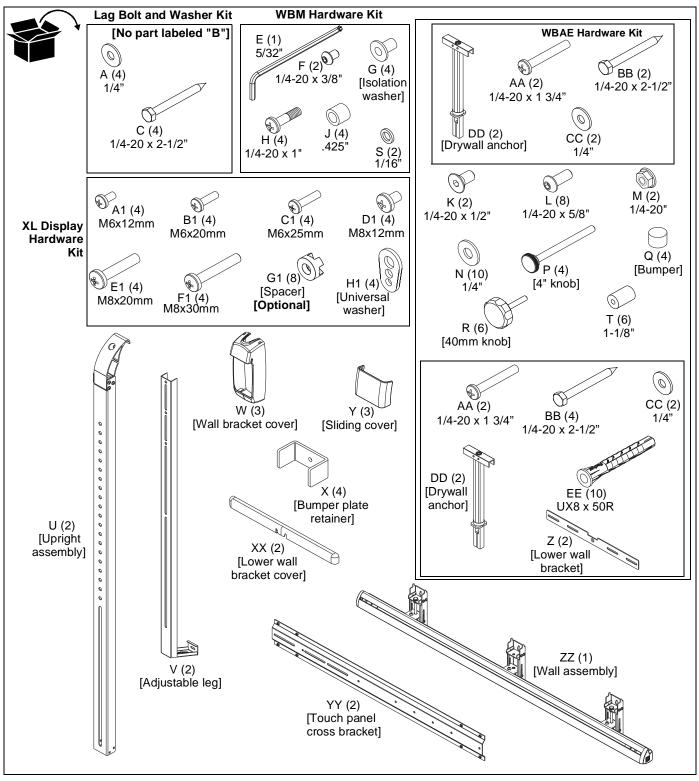
# **DIMENSIONS**



# TOOLS REQUIRED FOR INSTALLATION



#### **PARTS**



#### **ASSEMBLY AND INSTALLATION**

The WBM4E will allow an interactive flat panel display to be installed over an existing chalkboard/whiteboard. The WBM4E has telescoping legs which allows it to be anchored above and below the existing chalkboard/whiteboard.

#### **Assembling WBM4E Legs**

- Slide adjustable leg (V) up over bottom of upright assembly (U). (See Figure 1)
- Adjust leg (V) as necessary to set the correct length of entire leg assembly. (See Figure 1)

**IMPORTANT!**: Both adjustable legs MUST be fastened through at least one hole in the upright assembly, not only through mounting slots.

3. Fasten adjustable leg (V) in place using three knobs (R) and three 1-1/8" spacers (T). (See Figure 1)

**NOTE:** Three knobs and spacers should be used on each leg assembly.

Repeat Steps 1 through 3 on the other upright assembly (U).

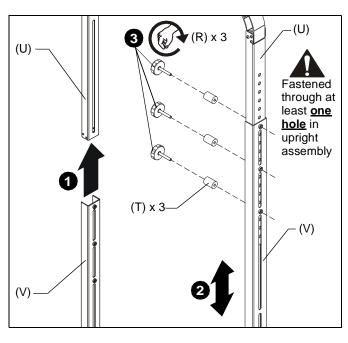


Figure 1

### **Locate Mounting Site**

WARNING: IMPROPER INSTALLATION CAN LEAD TO MOUNT FALLING CAUSING SEVERE PERSONAL INJURY OR DAMAGE TO EQUIPMENT! It is the installers responsibility to make certain the structure to which the mount is being attached is capable of supporting five times the weight of the WBM4E and all attached equipment not to exceed 310 lbs (140.6 kg).

WARNING: ELECTRICAL SHOCK, EXPLOSION AND FIRE HAZARD! CUTTING OR DRILLING INTO ELECTRICAL CORDS, CABLES OR GAS PLUMBING CAN CAUSE DEATH OR SERIOUS PERSONAL INJURY! ALWAYS make certain area behind mounting surface is free of electrical wires, cables, gas, water, waste, or any other plumbing before drilling or installing fasteners.

#### Adjusting Wall Brackets for Installation

NOTE: The two outside wall brackets on the wall assembly may be adjusted to suit installation needs, but each must be spaced a minimum of 16" from the center wall bracket, AND the two outside wall brackets may only be a maximum of 42" apart (outside bracket to outside bracket).

**NOTE:** The center wall bracket must remain in the center of the wall assembly (ZZ).

- Slide outside wall brackets along wall assembly (ZZ), as required, for the wall substrate. (See Figure 2)
- Tighten button head cap screw on each wall bracket to secure wall brackets to wall assembly. (See Figure 2)

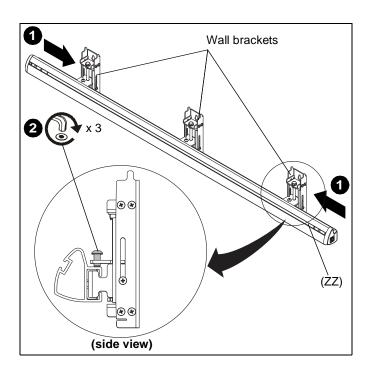


Figure 2

NOTE: Proceed to the Installing to a Wood Stud Wall section, or the Installing to a Concrete or Concrete Block Wall section, as appropriate.

#### Installing to a Wood Stud Wall

- 1. Determine the center of the chalkboard/whiteboard.
- Locate the closest 2" x 4" wood stud to the left and right of the selected location.

**NOTE:** The two outside WBM4E wall brackets on the wall assembly (ZZ) may be mounted a **maximum** of 42" apart.

**NOTE:** The center wall bracket must remain in the center of the wall assembly (ZZ) **AND** a **minimum** of 16" from both outside wall brackets.

- Using a level, mark the wall on each stud above existing chalkboard/whiteboard through mounting holes in each bracket on the wall assembly (ZZ). (See Figure 3)
- 4. Drill one 1/8" pilot hole at each mark. (See Figure 3)
- Use six 1/4-20 x 2-1/2" lag bolts (BB or C) and six 1/4" flat washers (A or CC) to attach wall assembly (ZZ) to wall. (See Figure 3)
- 6. Proceed to Assembling Cross Brackets/Lower Brackets section.

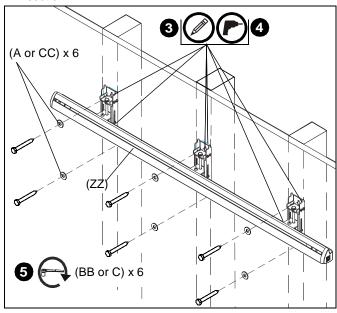


Figure 3

# Installing to a Concrete or Concrete Block Wall

**NOTE:** The WBM4E may be attached to an 8" concrete wall or an 8" x 8" x 16" concrete block wall.

Determine the center of the chalkboard/whiteboard.

**NOTE:** The two outside WBM4E wall brackets on the wall assembly (ZZ) must be mounted a **maximum** of 42" apart.

**NOTE:** The center wall bracket must remain in the center of the wall assembly (ZZ) **AND** a **minimum** of 16" from both outside wall brackets.

- Using a level, mark the wall above existing chalkboard/ whiteboard through mounting holes in each bracket on the wall assembly (ZZ). (See Figure 4)
- Drill one 5/16" x 2-3/4" pilot hole at each marking. (See Figure 4)

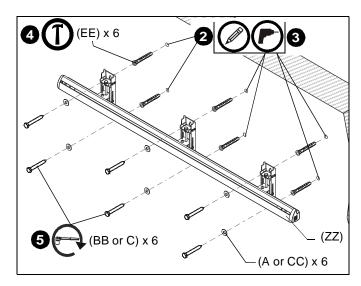


Figure 4

- Install an anchor (EE) into each pilot hole using a hammer. (See Figure 4)
- 5. Use six 1/4-20 x 2-1/2" lag bolts (BB or C) and six 1/4" flat washers (A or CC) to attach wall assembly (ZZ) to anchors in wall. (See Figure 4)

### **Assembling Cross Brackets/Lower Brackets**

 Loosely assemble the cross brackets (YY) to the upright legs using eight 1/4-20 x 5/8" button head cap screws (L) and 1/4" washers (N) through the uprights and into either the inner or outer set of mounting holes in the cross brackets. (See Figure 5)

**IMPORTANT!**: At least one cross bracket connection point MUST be located through one <u>hole</u> in the upright assembly, not only through mounting <u>slots</u>.

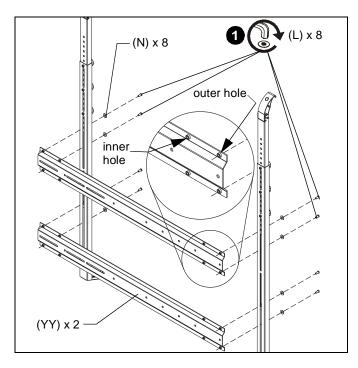


Figure 5

 Attach one lower wall bracket (Z) to each of the leg assemblies using one 1/4-20 x 1/2" flat head cap screw (K) and one 1/4-20" hex nut (M) on each lower wall bracket. (See Figure 6)

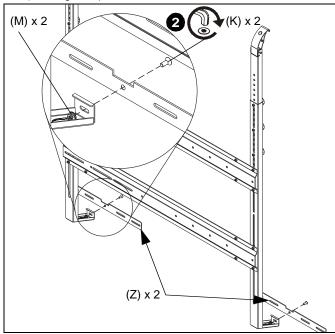


Figure 6

- Hang uprights/cross brackets assembly on the wall assembly (ZZ). (See Figure 7)
- 4. The mounting system may be laterally shifted by loosening the button head cap screw on each wall bracket and moving wall assembly within wall brackets, or by shifting the uprights assembly laterally along the wall assembly (ZZ) to the desired location. (See Figure 7)
- 5. Tighten any loosened button head cap screws on the wall brackets to fasten the wall assembly in place.

**NOTE:** Additional lateral shift is available when using the **inner holes** on cross brackets. (See Figure 5)

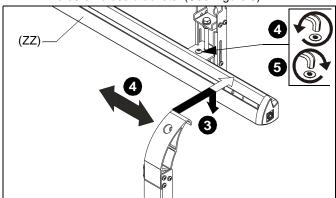


Figure 7

# **Attaching Interactive Flat Panel**

- Carefully place interactive flat panel face down on a soft, non-abrasive surface.
- Remove uprights/cross brackets assembly from wall assembly and align mounting holes in upper cross bracket with upper mounting holes in flat panel.

**NOTE:** If necessary, adjust the upper cross bracket so that interactive flat panel will be at the desired height.

If necessary, loosen or remove hardware to slide the lower cross bracket to align with the lower mounting holes in flat panel.

WARNING: IMPROPER INSTALLATION CAN LEAD TO DISPLAY FALLING CAUSING SERIOUS PERSONAL INJURY OR DAMAGE TO EQUIPMENT! Using screws of improper size may damage your display. Properly sized screws will easily and completely thread into display mounting holes. If spacers are required, be sure to use longer screws of the same diameter.

 Select correct screws, spacers (optional) and universal washers (if required) from the XL display hardware kit (A1-H1).

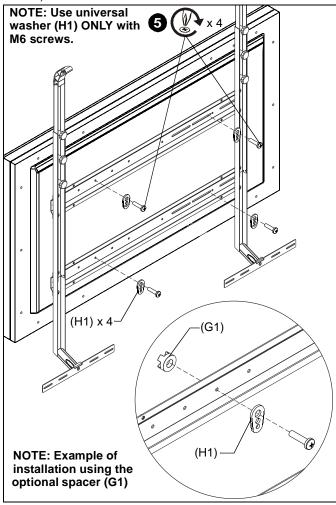


Figure 8

**IMPORTANT!**: The M8 screws do **NOT** require a washer. Use the universal washer (H1) only with M6 screws.

- Attach flat panel to the uprights/cross brackets assembly through the cross brackets using selected hardware. (See Figure 8)
- OPTIONAL: Loosen hardware and reposition the uprights on the cross brackets if adjustment of the display height is necessary.

### **Attaching Uprights Assembly to Wall Assembly**

 Move the slide nut to the outer most position on the wall assembly (ZZ). (See Figure 9)

# **IMPORTANT!: USE TWO PEOPLE FOR LIFTING!** The uprights/cross brackets assembly is heavy.

- Hook flat panel with attached uprights assembly onto the wall assembly (ZZ). (See Figure 9)
- 3. Move the slide nut behind the upright (U). (See Figure 9)
- Fasten upright in place using one 1/4-20 x 3/8" button head cap screw (F) and one 1/16" nylon spacer (S) [from WBM Hardware kit] into slide nut. (See Figure 9)
- 5. Repeat for other side of wall assembly.

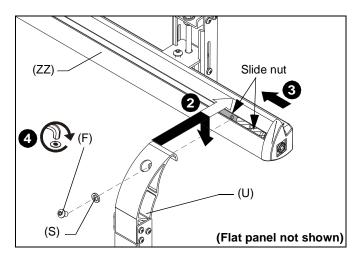


Figure 9

- Attach two bumper plate retainers (X), 4" knobs (P), and bumpers (Q) through each leg assembly, one just below top of flat panel and one just above bottom of flat panel. (See Figure 10)
- Adjust 4" knobs (P) so that flat panel is supported evenly by each of the four bumpers. (See Figure 10)

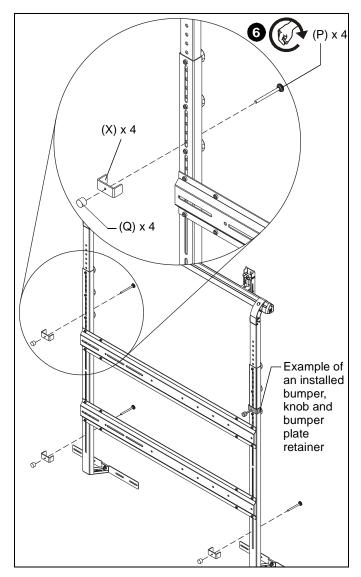


Figure 10

#### **Adjustments**

#### Micro Height Adjust and Leveling

 The wall assembly (ZZ) can be adjusted or leveled by turning the hex head bolt in the wall brackets. (See Figure 11)

- Turn clockwise to raise wall assembly
- Turn counterclockwise to lower wall assembly.

**IMPORTANT!:** Height-adjust each side equally and in small increments to prevent the wall assembly from binding at the center wall bracket.

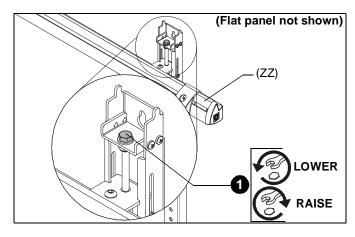


Figure 11

### **Completing Attachment to Wall**

**IMPORTANT!**: See **Adjustments** section to make any necessary adjustments **BEFORE** completing attachment to wall.

**NOTE:** The lower part of the WBM4E must be attached to the wall using the correct hardware for the wall type. It may be attached to a wood stud wall or to a concrete or concrete block wall. Proceed to appropriate section for instruction.

**NOTE:** If installing to a wood stud wall, drywall anchors (DD) are required if the lower wall brackets do not align with the wood studs.

# Wood Stud Wall (if lower wall brackets are aligned with studs)

- Mark the wall over wood stud through the lower wall bracket
  (Z) on each upright assembly. (See Figure 12)
- 2. Drill one 1/8" pilot hole at each mark. (See Figure 12)
- Use two 1/4-20 x 2-1/2" lag bolts (BB or C) and two 1/4" flat washer (A or CC) to attach each lower wall bracket (Z) to wall. (See Figure 12)

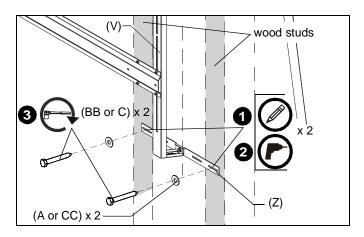


Figure 12

# Wood Stud Wall (if lower wall brackets are NOT aligned with studs)

- Mark the wall through the lower wall bracket (Z) on each upright assembly. (See Figure 13)
- Loosen and rotate the lower wall bracket to allow drilling of the pilot hole.
- 3. Drill a 1/2" pilot hole at each marked location. (See Figure 13)

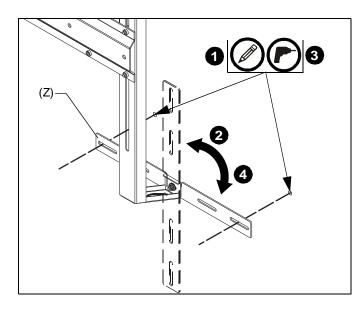


Figure 13

- Rotate the lower wall bracket back into place.
- Hold metal channel on drywall anchor (DD) flat alongside plastic straps and slide channel through hole. (See Figure 14)

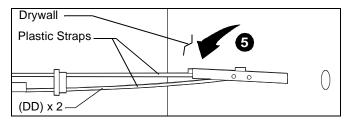


Figure 14

 Holding plastic straps on drywall anchor (DD), pull anchor away from wall until channel rests flush behind wall. (See Figure 15)

Slide plastic cap on anchor (DD) towards wall until flange of cap is flush with wall. (See Figure 15)

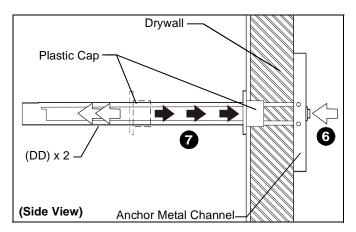


Figure 15

- Snap off plastic straps on anchor at wall by pushing side to side, snapping off straps level with flange of plastic cap. (See Figure 16)
- 9. Repeat Steps 5 through 8 for remaining mounting holes.

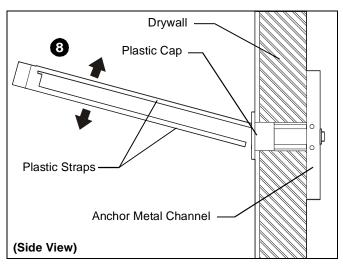


Figure 16

10. Use two 1/4-20 x 1 3/4" Phillips pan machine screws (AA) and two 1/4" flat washers (A or CC) to attach each lower wall bracket (Z) to anchors in wall. (See Figure 17)

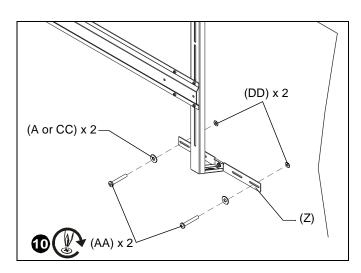


Figure 17

#### **Concrete or Concrete Block Wall**

 Mark the wall through the lower wall bracket (Z) on each upright assembly (U). (See Figure 18)

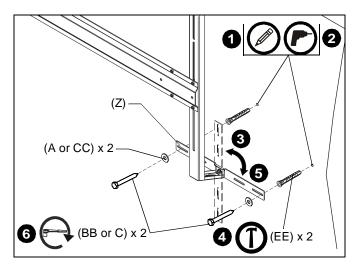


Figure 18

- 2. Drill one 5/16" x 2-3/4" pilot hole at each marking. (See Figure 18)
- 3. Loosen and rotate the lower wall bracket to allow installation of the UX8 x 50R anchors (EE). (See Figure 18)
- Install one anchor (EE) into each pilot hole using a hammer. (See Figure 18)
- 5. Rotate the lower wall bracket back into place.
- Use two 1/4-20 x 2-1/2" lag bolts (BB or C) and two 1/4" flat washers (A or CC) to attach each lower wall bracket (Z) to anchors in wall. (See Figure 18)

### **Adding Covers**

- Open the lower flaps of the wall bracket cover (W) outward. (See Figure 19)
- 2. Slide the cover downward, hooking the top of the wall bracket covers (W) onto the tabs on top of wall assembly brackets. (See Figure 19)
- Slide the lower flaps of the wall bracket cover (L) under the bottom of the wall assembly brackets (K). (See Figure 19)

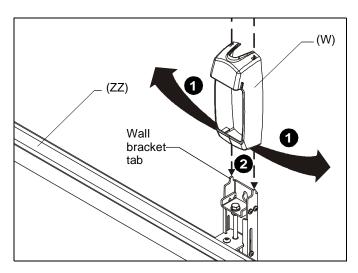


Figure 19

4. Slide the sliding cover (Y) down over the wall bracket cover (W) on both wall assembly brackets. (See Figure 20)

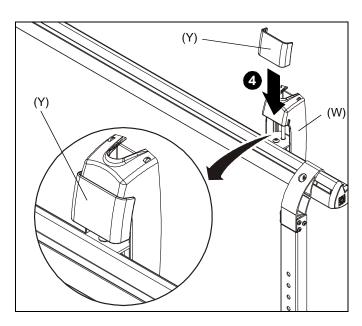


Figure 20

#### **Lower Bracket Cover**

- Lower the lower bracket cover (XX) over the lower wall bracket (Z), centering front tab over adjustable leg (V). (See Figure 21)
- 2. Repeat with other lower wall bracket.

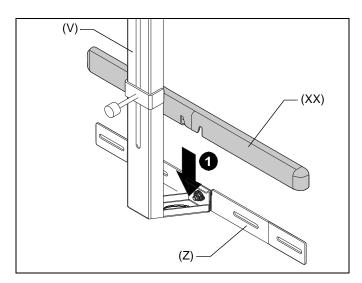


Figure 21



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