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Image Diagnostics, Inc.



# Compass Flex

## *Installation and Setup Manual*

The text of this manual was originally written, approved, and published by the manufacturer in English.

*Made in the USA*

*L280-1186 REV A*

## Overview

This manual is used for installation of the device only. Instructions for use can be found in document L280-1185 supplied with the device or found on the [imagediagnostics.com](http://imagediagnostics.com) website. Additionally, for quick access scan the following barcode to access online operator's manual.



Image Diagnostics, Inc.  
310 Authority Drive  
Fitchburg, MA 01420 USA  
Made in the USA

Contents

**1. Safety**..... 4

**2. Safety Hazards** ..... 5

**3. Column Adjustment and Monitor(s) Installation**..... 6

    Column Height Adjustment ..... 7

    Monitors ..... 7

    Mounting Monitors ..... 8

    Transport Mode..... 10

    Moving and Positioning the cart ..... 10

**4. Initial System Check Prior to Use** ..... 11

**5. Monitor Setup** ..... 16

    FSN Monitor ..... 16

## 1. Safety



- All persons using this equipment must fully understand its operation instructions, emergency procedures, capabilities, and be aware of all potential safety hazards.
- This manual should be accessible to all personnel installing, operating, or servicing this equipment.

- Only a qualified technician may install or service this equipment.



***Failure to follow safety precautions may result in serious injury to patient or user or damage to equipment.***

It is imperative that all personnel operating the Compass Flex be familiar with the equipment operation, transport and all documentation supplied by IDI.

- The Compass Flex is intended to be used in typical clinical or research environments in accordance with national standards.
- When transporting the Compass Flex from room to room, it is imperative that the device be moved in the transport position. Transport position is achieved by lowering the upper column assembly to its lowest point, inserting the safety pin and folding the spring arms and equipment into the column into their designated storage locations.
- When transporting Compass Flex, it is required that the device be moved by two personnel.
- To ensure proper grounding, a medical grade electrical outlet must be used to provide power to the monitor stand.
- The Compass Flex does not have any essential performance functions that pose a risk due to failure or degradation of the unit or any of its components.

**Comments and questions regarding safety should be addressed to:**

	Customer Support Image Diagnostics, Inc. 310 Authority Drive Fitchburg, MA 01420 USA		Or call IDI at (978) 829-0009
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## 2. Safety Hazards



***WARNING!***  
Do NOT jump any curbs or steps over 3/8" (10mm) in height with this equipment. Approach all obstacles slowly. Operator must use a ramp to allow the casters to roll up and over the vertical edge for over 3/8" (10mm).



***WARNING!***  
It is the user's responsibility to make sure the equipment is safe and operates properly prior to use.



***WARNING!***  
Do not modify this equipment without authorization of the manufacturer.



***CAUTION!***  
Caution should be used when moving the system over uneven or sloped surfaces.

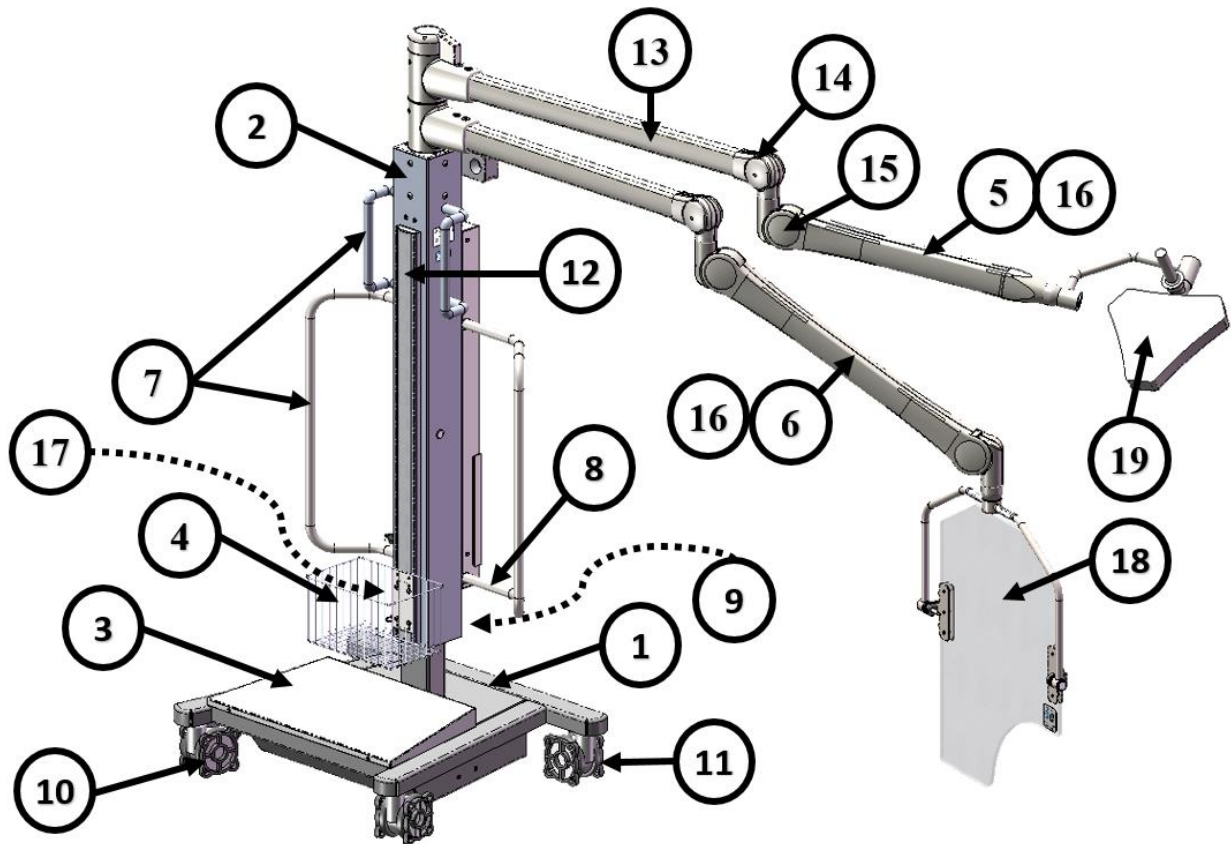


***WARNING!***  
To avoid the risk of electric shock, this equipment must only be connected to a supply main with protective earth.



***WARNING!***  
Use caution when adjusting the height of the column. Verify no objects are under or above the monitor, light or shield when adjusting the column height.

**3. Column Adjustment and Monitor(s) Installation**



Item	Description	Qty
1	Base	1
2	Upper Column	1
3	Base Cover	1
4	Cable Storage	1
5	Light Head Spring Arm	1
6	Spring Arm	2
7	Push Handle	2
8	Lifting Handle	2
9	Brake Mechanism	1
10	Total Lock Casters	3

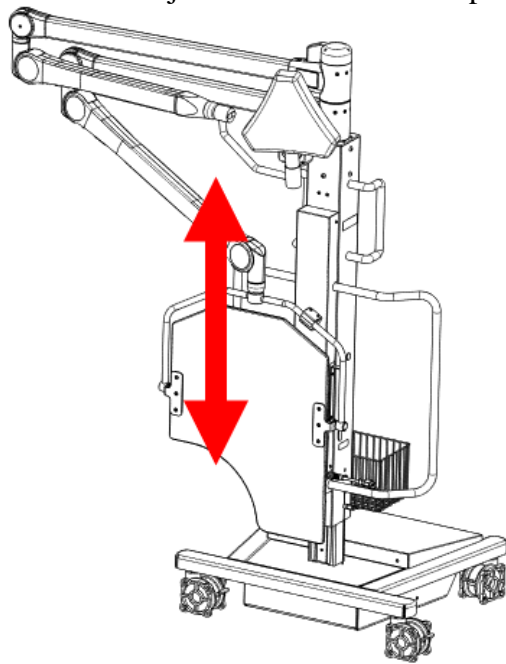
Item	Description	Qty
11	Steer Lock Caster	1
12	VESA Mount (not shown)	0,1,2*
13	Horizontal Arm	2
14	Clam Shell Cover	2
15	Circular Cover	6
16	Spring Arm Clam Shell	2
17	Safety Pin	1
18	Compass Contour Radiation Shield	1
19	Light Head	1

\*Qty depends on model purchased

For a complete list of instructions please reference the instruction manual, L280-1185. The following instructions are only to assist with initial setup only.

## Column Height Adjustment

The height of the column can be adjusted with the assistance of the internal gas springs. A combination of brake pressure and lifting of the column is required to move the column up or down. A brake knob is equipped on the rear of the column to lock the column at a desired height. To tighten the brake, turn the knob in a clockwise motion until the column does not move. To unlock the brake, turn the knob in a counterclockwise position until the column is free to move. When adjusting the height of the column, ensure no devices or objects are below or above the column that may cause a collision. Occasionally the friction in the spring arm may require the user to push up to release the initial pressure, then the gas spring will assist with lowering or raising the entire column. Each of the spring arms allows for additional height adjustments. These adjustments are manually done by pushing or pulling on the spring arms of the system. Take care not to crash into other objects in the room when positioning devices.



To move the column, loosen the brake mechanism and grasp the rear handle and either push up or pull down to desired height. Hold the column at the desired height and turn the brake handle clockwise to tighten and hold the column in position.

A safety pin is utilized for transportation mode. The safety pin is located on the right-hand side of the column as viewed from the rear of the device. The safety pin must be removed to adjust the height. When transporting device, the safety pin must be installed to move device to another location.

The recommended height for usage is between 88” and 98” (maximum system height) measured from the floor to the top of the column cap.



**WARNING!**  
Use caution when adjusting the height of the device. Verify no collisions will occur while adjusting the height of the device.

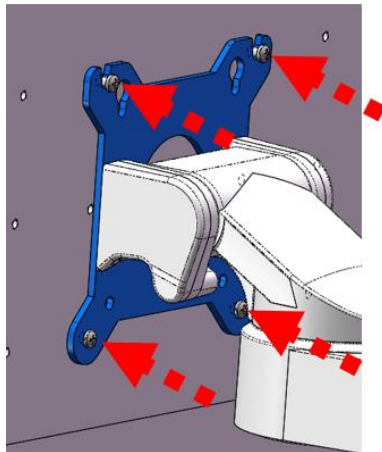
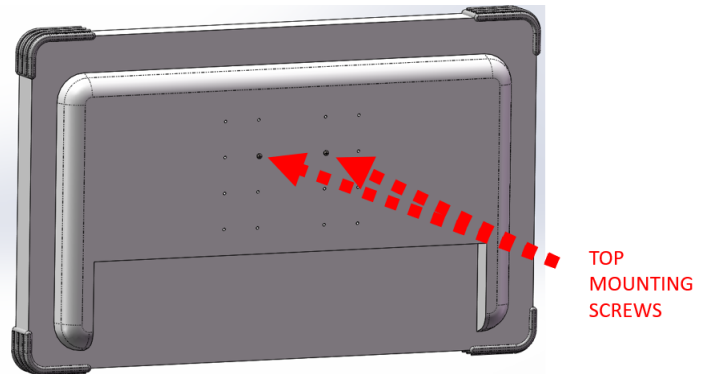
## Monitors

Monitors may vary depending on configuration purchased, for exact specifications of the monitor please refer to instructions for use documentation from the monitor manufacturer. Each unit is shipped with instructions or can be obtained by contacting Image Diagnostics, Inc. Please have serial number available when calling. Serial number can be found on the bottom part of the column.

# Installation and Setup Manual Compass Flex

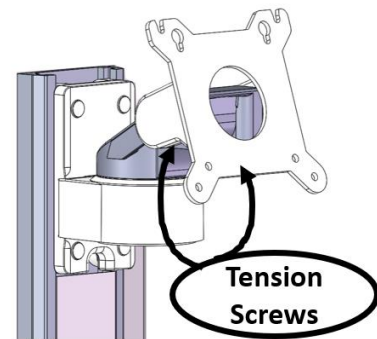
## Mounting Monitors

For devices that have monitors, they must be mounted prior to use of the device. To mount the monitor, locate the monitor, and remove from box, leaving foam inserts on while handling. Verify that the two screws are installed on the top holes of the VESA pattern. These screws should be sticking out about 3/16" [4.7mm] to allow the screw to pass over the VESA mount.



Locate the remaining two screws, which are in the box shipped with the monitor. Using two hands grab the left- and right-hand side of the monitor, then slide the monitor down onto the VESA mount. Install the two additional screws, then tighten all four screws at the same time.

If needed adjust the tension of the VESA mount using the provided Allen key. Remove the thumb screws on the rear of the monitor to



gain access to the video panel. Save hardware and sheet metal for reinstallation.

Insert video cables into the designated video inputs. Each input will be labeled with a color strip and will have a mating cable with the same color strip. Match the color strips on the video input panel with the colors on the video cables. Lastly the power cable should be installed. Take care to orient the plug in the correct orientation. Insert and then turn the nut clockwise to tighten.



Re install rear monitor cover. Adjusting cables as required to fit in the designated cable routing.



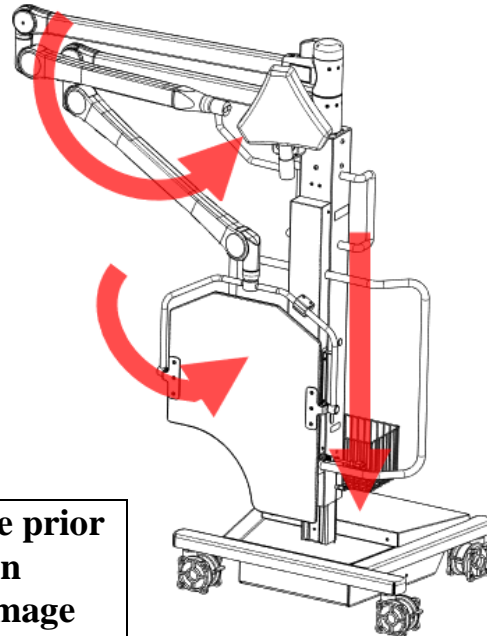
## Adjusting Monitor Height


Each monitor has a variable height configuration. For adjusting the height of the monitor, a second person is required. To adjust the height of the monitor, one person should hold the monitor, while the second person loosens the four screws on the rail mount. Slide the monitor to the desired position and then retighten the four set screws to secure the monitor in place. The cover may need to be cut down if the monitor is moved more than 1", this can be cut with a hacksaw.



## Transport Mode

The device must be placed in the transport mode prior to moving around the facility. Unit is in transport mode when the two spring arms are folded completely back in towards the column, with the shield's top tube is stored in the clip mechanism on the back of the column and the light's handle is stored in its bracket hole. The column must then be lowered to its lowest position, and the safety pin, located on the lower part of the column, must be inserted to ensure device is ready for transport. The device should look like the image to the left when ready for transport.





	<p><b>Device must be in transport mode prior to moving. Failure to put device in transport mode may result in damage to equipment or injury to personnel.</b></p>
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## Moving and Positioning the cart

The device is equipped with 3 locking casters that can be individually locked to prevent the device from moving. The fourth caster is a steer caster and is identified by the label on the rear channel. The device has push handle mounted on the rear of the upper column assemblies. The device should be pushed rather than pulled when transported around the facility. Verify the overall height of the device is less than 79.5" [200cm] prior to moving between rooms.

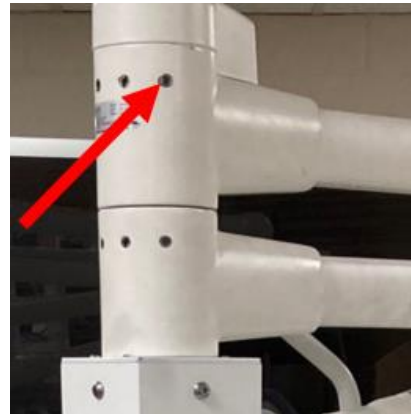
To move the device, unlock all 4 casters by gently pulling up on the lever of each caster with your foot. Locate the steer caster, marked with the label, and press the locking lever to lock in steer caster. The caster will be free to rotate until it becomes parallel with the rear channel. At this point when the lever is activated the caster will lock in this position, allowing for steering of the device. Use the rear push handles to move the stand. The same handles may be used to move the device closer or further away from procedure table. Note: locking of the steer caster will only allow the device to move laterally. If required unlock the steer caster to move in any direction.

	<p><b>Do NOT move cart over cords or uneven, soft or sloping surfaces. Failure to comply may result in cart instability leading to equipment damage or personal injury.</b></p>
	<p><b>Use handles to move cart with the help of an assistant to avoid collision with other equipment and walls</b></p>

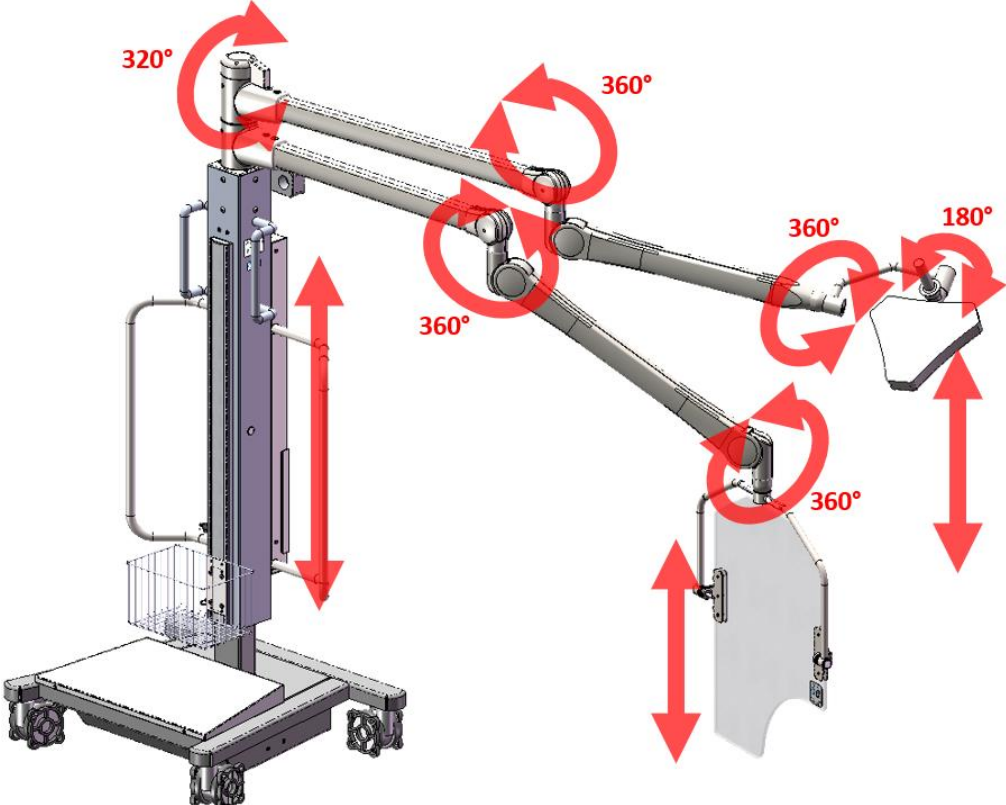
#### 4. Initial System Check Prior to Use

Once the system has been removed from the packing crate, the system should be checked for movement. An area of 10 feet by 10 feet will be required to setup the system. Take care not to collide with objects in the surrounding area when moving components of the system.

At the top of the column there are 4 sets screws on each arm, these are rotation brake screws. Using a 6mm Allen key (included), all 4 set screws should be loosened to allow the arms to move. Each arm has a set of brake screws, so both arms will need to be adjusted. Once arms are moving freely, screws should be tightened equally, until the arms do not freely spin but will spin with light pressure. To confirm the brake screw is tensioned correctly, grab the arm and rotate it 10 to 15 degrees, then let go, if the arm moves more than 3 degrees after release, then the screws should be tightened again and retested. Both arms are independent of one another so this must be completed on both arms.



After the brake screws have been set, the rest of the unit should be checked to verify functionality. The central axis should be allowed to rotate 320 degrees with stops in the rear. The joint between the horizontal and spring arm should allow for 360-degree rotation. The radiation shield should be able to rotate 360 degrees about its axis, and the light should also be able to rotate 360 degrees about the axis joint. Lastly both spring arms should be able to be moved up and down vertically.



## Installation and Setup Manual      Compass Flex

A second set of brakes is on the end of the horizontal arms. To gain access to the brake screws, the clam shell cover will need to be removed. Remove the two screws, then using a wide blade screwdriver gently pry the clamshell apart. Working around the perimeter of the shell until both pieces come apart from one another.



On the front side there is two brake screws. Screws should be adjusted to allow the spring arm and devices to move freely, however equipment should not be able to move on its own. Equipment should take about 5lbs of force to move, which is approximately the force required to push or pull with a hand, with little to no effort. Once the adjustment is complete the clam shell covers can be reinstalled by locking the front part in first then working around clamshell until fully secure. Reinstall two screws to secure in place.



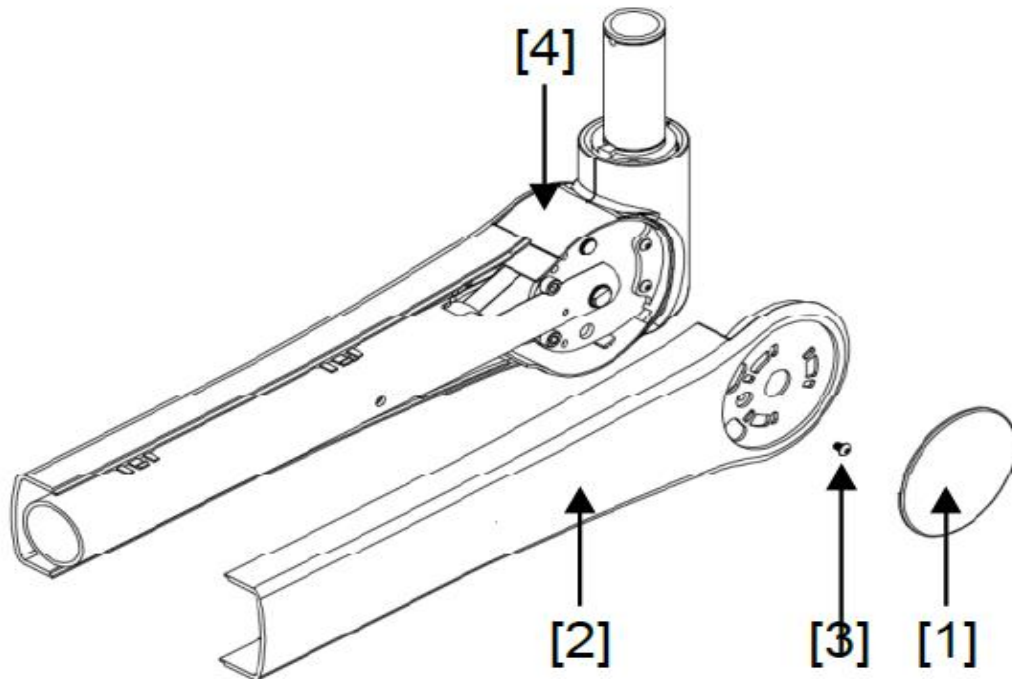
Another point of adjustment is the spring arm load adjustment, each spring arm has been set at the factory and should not require additional adjustment. To verify spring force, grab the shield and move it up and down. Hold for 1 second then release the shield. If properly set the shield should not move more than 1 inch. Repeat near the upper and lower limit of the spring arm. Repeat on the light spring arm. If either spring arm moves more than 1 inch, the spring tension must be adjusted. The following are steps to adjust the weight requirement.



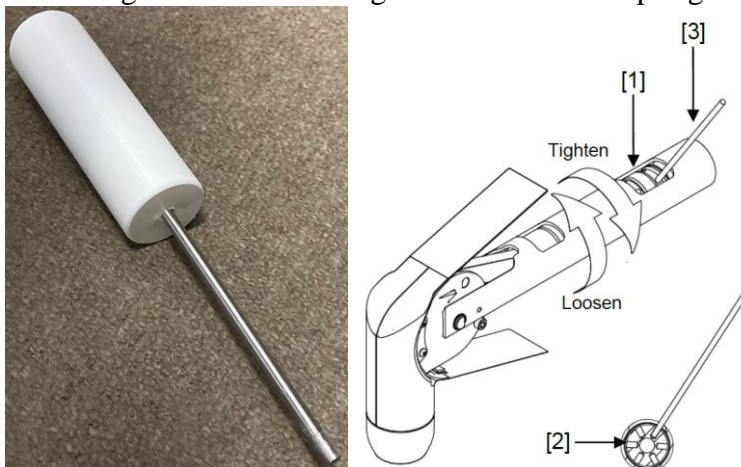
Adjust the spring arm tension of the spring arms. Remove the circular outer covers by pressing in and rotating counterclockwise.

# Installation and Setup Manual Compass Flex

Remove the outer clam shell of the spring arm by removing the screws on each end of the spring arm. There will be one screw on each end of each long clam shell. (On the light head spring arm there will only be one side with screws, the other side slides into the end nearest the light head. Using a wide blade screwdriver pry the shell apart taking care not to damage the plastic. Save all parts for reinstallation later.



Locate the spring adjustment tool and look for the spring tension adjustment slot. Place the tool in the slot and rotate the tool clockwise to increase tension or rotate counterclockwise to reduce tension. Repeat as needed until the shield and light can be placed anywhere in the range of motion without moving. For the best results hold the light or compass shield parallel to the ground while adjusting. Adjustment may take 30 or more adjustments (slot only allows for 1/16th turn per adjustment), as the nut is a fine thread to get a specific range of motion with the weight on the end. Once the load is almost balanced it still may take 5 or 6 adjustment turns to get the correct balance throughout the entire range of motion of the spring arm.



# Installation and Setup Manual Compass Flex

Repeat tension adjustment for both light and shield spring arm.  
Reinstall clamshell covers. On the ends of the spring arm are flexible safety covers. Verify they are seated properly one side prior to installing the other side. Do not try to make it flex around the clam shell yet, instead leave the flexible part on the outside of the clam shell covers.



Once the clam shells are inserted properly, secure in place with bolts on either end (4 bolts total). Move the spring arm to the maximum angle and slide the flexible cover into the designated slot, repeat on the other side. Move the spring arm to the lowest possible angle and install the remaining flexible cover. If done correctly, the safety covers should slide in easily, do not exert a large force as the covers will crack or break. Additional covers are provided with each spring arm in case one does break or crack and should be replaced. If a replacement is needed, then the spring arm clam shell must be removed again by repeating previous steps.



Reinstall the circular covers by putting into the slots and rotating clockwise to lock into position.

Before moving unit, verify that the monitor VESA screws are tight. Additionally, check caster lock and unlock functionality by pressing on each of the caster levers.



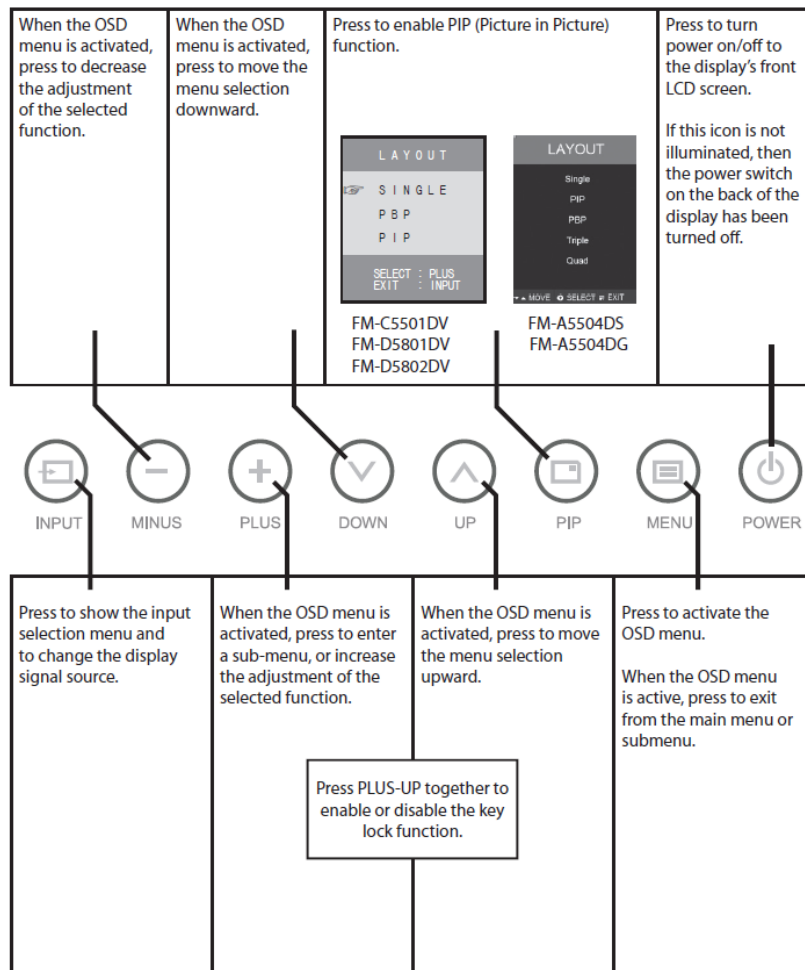
5. Monitor Setup

For devices with monitors, please refer to the manufacturer’s instructions for use which are provided with the Compass Flex. To assist with determining which monitor is equipped locate the serial tag typically located on the rear of the monitor. Other quick references may include the following.

- FSN monitor will have menu buttons on the front bezel.
- Barco Monitor will have logo in the center part of the screen
- LG monitor will have logo in center part of screen

FSN Monitor

(from monitor’s user guide, #FSN1995-10/2019), menu buttons on front panel of monitor.



For additional features and options, please consult monitor operator guide provided with the device, or contact IDI for further assistance.

For initial setup, use the provided video input cables supplied with the device. Typical functions include changing the input by pressing input button. A list of possible inputs will appear on



screen and the highlighted one is the current active input. To change input either press input again or press up and down arrows to highlight the required input, then press “+” button to activate that particular input.

Another typical function is the PIP function which will take two or more inputs and display them simultaneously on the screen. PBP is picture by picture, or side by side image, and PIP is picture in picture, where the main input is full screen, but a second smaller image is overlaid on top of that image, typically in the top right corner of the screen. Single is just a single active image at one time. To adjust PIP settings press PIP multiple times, or press PIP then press up or down keys to highlight desired layout. Then press “+” button to activate the highlighted PIP option.

For further assistance or additional information please contact Image Diagnostics at 978-829-0009. Please have the serial number of the device ready when calling. The serial number for the Compass Flex is on the lower part of the upper column assembly.

This concludes the initial setup of the compass flex product.