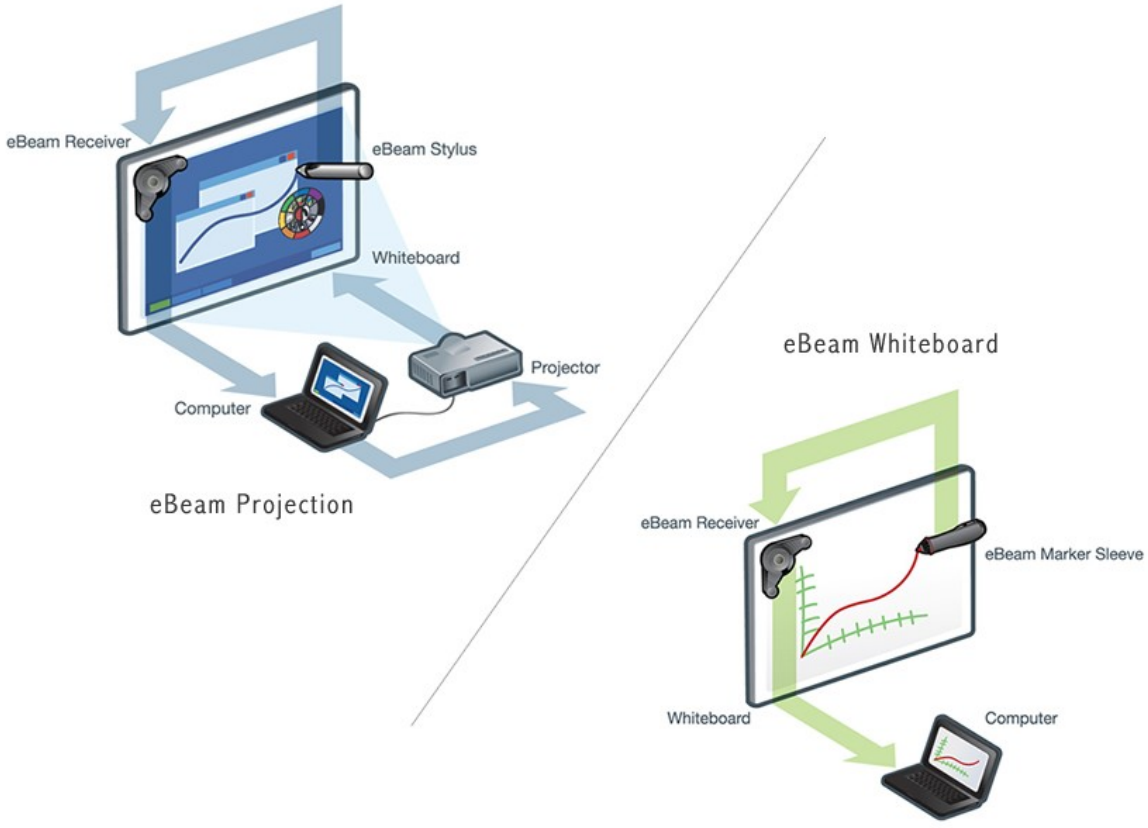

Welcome to a new world of interactivity through eBeam. Our interactive whiteboard system is very easy to use and support. This guide has been designed to make the implementation and support of eBeam as simple as possible. In this guide you will find the proper eBeam setup procedures, common support issues and additional resource information.

**eBeam Setup Procedures:**

The most common support issues are related to connectivity and users proficiency with the system. The key to minimizing these issues is correct setup and training.

*General Setup Prep:*

1. Download and install the appropriate/latest versions of the software here: http://www.adamsbiz.com/downloads/
2. Setup your eBeam hardware per the appropriate diagram below:



3. Your ability to connect via Bluetooth or USB will be determined by the eBeam package purchased:

   eBeam Projection, Whiteboard and Complete USB packages – only use USB

   eBeam Projection, Whiteboard and Complete Bluetooth packages – use either USB or Bluetooth

*USB Setup:*

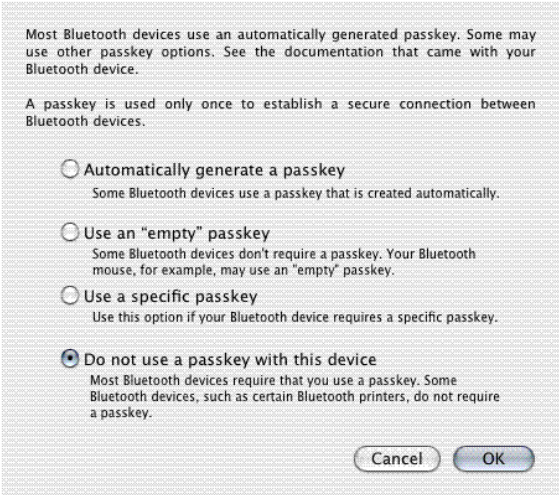
To configure eBeam for USB connectivity follow these steps:

1. Connect the eBeam to your MAC via USB
2. MAC OS X will automatically configure the connection (hardware light should be green)
3. Setup complete, eBeam is now ready to use via USB

*Bluetooth Setup:*

To configure eBeam for Bluetooth connectivity follow these steps:

1. Connect the eBeam to a wall outlet, make sure the light glows blue
2. Click on the Bluetooth icon by the clock (upper-right of screen)
3. Make sure Bluetooth is turned 'On' and 'Discoverable' is selected
4. Select 'Setup a Bluetooth device'
5. Click 'continue'
6. Select 'Any device' and 'continue'
7. MAC OS X should find the eBeam hardware and list it…click 'passkey options'
8. Select 'Do not use a passkey with this device' and OK
   a. Note: Existing eBeam setups may be set to "Use a specific passkey", the eBeam passkey = 1234



9. Click ‘continue’ twice
10. You should get message saying ‘Congratulations! Your computer is now set up…’
11. Click ‘Quit’
12. Now open the eBeam Interact software and the device should automatically be connected
13. Setup complete, eBeam is now ready to use via Bluetooth

Note: Launching the software from the Interact versus Scrapbook icons will result in similar outcomes. The Interact icon will launch the software (icon at top right) and activate the eBeam connection. The Scrapbook icon will do the same as well as launch the Scrapbook application.

*Placement and Calibration:*

Ultrasound Reflections: Overview

An often-encountered source of environmental interference when using the eBeam system is ultrasound reflections from reflective surfaces. The eBeam technology is based on detecting the time it takes for ultrasound to travel from the pen transmitter to the eBeam receiver. Reflective surfaces that send extra ultrasound toward the eBeam receiver can create major problems with how the eBeam receiver interprets the ultrasound data. Ultrasound can reflect from nearly any surface, including a whiteboard tray, a frame around a whiteboard or projection area, or other surfaces near the device such as file cabinets, shelves, or an office door.

Every installation of the eBeam system includes some reflective surface, and the eBeam receiver is designed to handle most types of reflections. However, by following a few simple installation guidelines while installing a portable eBeam receiver, or by designing an embedded system to minimize reflections, your customers will have the best possible experience with the eBeam system.

Installing a Portable eBeam Receiver

The portable version of the eBeam receiver is meant to retrofit any whiteboard or projection surface. However, some whiteboard/projection surface installations may cause ultrasound reflections.

The following guidelines should help you avoid ultrasound reflections when using a portable system.

- Make Sure the whiteboard/projection surface is not warped or curved.
- Avoid installing a portable eBeam receiver on a recessed whiteboard/display surface, such as those surfaces contained in cabinets. Often the cabinet enclosure provides a high frame perpendicular to the display surface that causes ultrasound signals to reflect back to the eBeam receiver.
- Always install the portable eBeam receiver on the same place as your whiteboard or projection surface. Avoid allowing the ultrasound and IR signals from the pen to the eBeam receiver to be obstructed.

Motion Sensors: Overview

This section is specific to the new generation of eBeam receiver, including:

- eBeam Mini-System Receiver
- eBeam System 3 (shipping after November 2005)

Motion sensors are used in many conference rooms and classrooms to automatically turn lights on and off. These products sometimes generate ultrasound signals that interfere with the eBeam receiver. Earlier versions of the eBeam receiver could filter a limited range of interference from motion sensors with limited options for positioning the eBeam receiver relative to the motion sensor in the room. The new generation of eBeam receiver provides:

- Much better filtering of a wider range of ultrasound interference, and
- Much more flexibility in the placement of the eBeam receiver relative to the motion sensor.

Guidelines

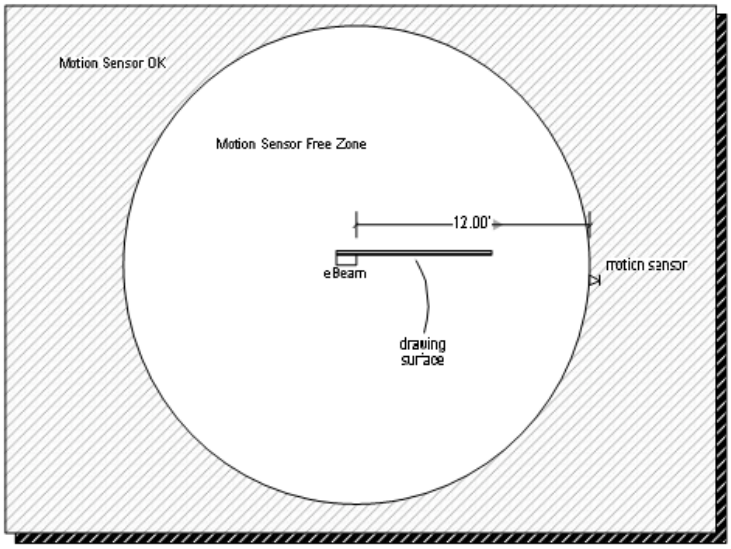
This note provides guidelines for placement of the eBeam receiver relative to motion sensors generating ultrasound. The basic guidelines are very simple:

1. General proximity guideline – A distance of 12 feet (approximately 4 meters) between the motion sensor and the eBeam receiver will normally allow good performance with the maximum board size. See figure 1. The maximum board size currently supported for the eBeam receiver is 8’ x 4’.
2. In-plane guideline – A minimum proximity of 14 feet is required if the motion sensor is in or near the drawing plane.

If these constraints cannot be satisfied, it may be possible to reduce the drawing area or place the eBeam receiver such that the effect of the interference is reduced:

1. Smaller board guideline – The eBeam receiver can tolerate closer proximity to the motion sensor when used on smaller boards.
2. Receiver sensitivity guidelines
    a. The eBeam receiver can tolerate closer proximity to the motion sensor if the motion sensor is placed to the rear of the eBeam receiver (the direction opposite the IR lens).
    b. The eBeam receiver can tolerate closer proximity to the motion sensor if the line between the eBeam receiver and the motion sensor is orthogonal (or nearly orthogonal) to the board surface.

Figure 1 illustrates the general proximity guideline. This placement will normally yield excellent system performance in the presence of motion sensors.




Fluorescent Lights: Overview

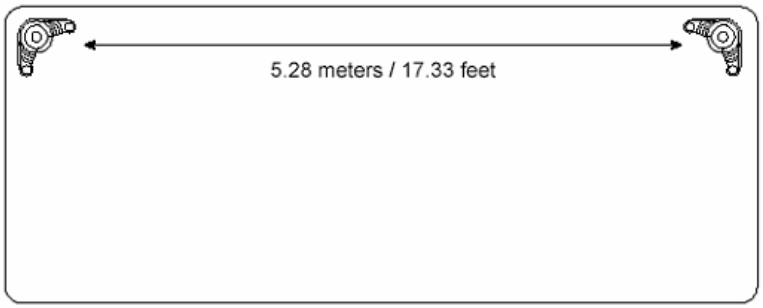
Fluorescent lights flicker, usually far too fast for the human eye to detect. However, the eBeam receiver's infrared sensor sees these flickers, and they can interfere with its ability to detect the pen's infrared signal. While we are constantly working to improve our product's robustness, interference from certain types of fluorescent lights remain a concern for the system, so we recommend designing embedded eBeam systems to minimize the likelihood that your customers will experience problems from IR.

The simplest way to reduce infrared interference is to install the eBeam receiver in the top left or right corner of the whiteboard/display surface, with all sensors pointed downward. Because most lights are on the ceiling, pointing the infrared receiver toward the floor greatly reduces the potential for interference.

eBeam Multiple Receiver Distance Configuration: Overview

Luidia has tested many different configurations for installing multiple eBeam receivers in a single room. The following diagrams show recommended configurations.

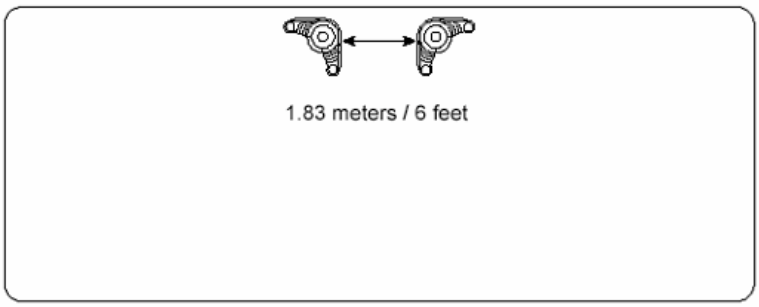
- Top Left and Right Corners (Not Recommended)




Test distance: Up to 5.28 meters (17.33 feet)

It is not recommended to mount two separate systems facing one another on the same place. The two systems are very likely to experience signal interference during simultaneous use.

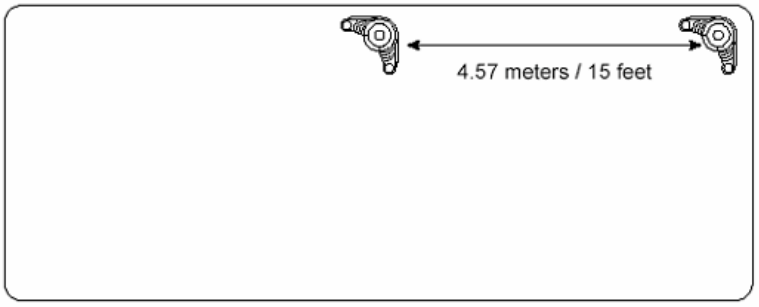
- Back to Back In Center (Recommended)




Test distance: Minimum distance of 1.83 meters (6 feet).

A recommended configuration is to set the two eBeam receivers with the backs facing each other in the middle of the whiteboard. At a distance of 1.83 meters (6 feet), it is less likely that the two systems will experience signal interference during simultaneous use.

- Facing Same Direction (Recommended)




Test distance: Minimum distance of 4.57 meters (15 feet).

A recommend configuration is to set the two eBeam receivers facing the same direction. At a distance between the receivers of 4.57 meters (15 feet), it is less likely that the two systems will experience signal interference during simultaneous use.

**Common Support Issues:**

*USB Connectivity:*

**Issue:** Device is not recognized.


**Solution:** Try the following to determine what is causing the connectivity issue.

- Make sure your hardware is glowing green
- Restart your computer
- Try another USB port
- Reinstall the eBeam Interact Software (be sure the original install is completely removed before installing the software again)
- Try another USB cable
- Try another MAC

**Issue:** USB connection when starting or using software is not reliable. (Software unresponsive to input/wheel disappears)

**Solution:** Try the following to determine what is causing the connectivity issue.

- Make sure your hardware is glowing green
- Restart your computer
- Try another USB port
- Reinstall the eBeam Interact Software (be sure the original install is completely removed before installing the software again)
- Try another USB cable
- Try another MAC

*Bluetooth Connectivity:*

**Issue:** Device is not found.

**Solution:** Try the following to determine what is causing the connectivity issue.

- Make sure your hardware is glowing blue
- Make sure Bluetooth is turned on and discoverable is selected ( turning Bluetooth hardware off and back on may help )
- Reconfigure and connect the hardware per the *Bluetooth Setup* instructions in this document

Note: All modern MACs include Bluetooth connectivity. The included ioGear Bluetooth dongle should not be used unless it has been confirmed a MAC system does not have Bluetooth hardware built-in.

**Issue:** Bluetooth connection when starting or using software is not reliable. (Software unresponsive to input/dropped connection)

**Solution:** Try the following to determine what is causing the connectivity issue.

- Make sure your hardware is glowing blue
- Re-pair eBeam with computer – see *Bluetooth Setup*
- Restart computer
- Reinstall the eBeam Interact Software (be sure the original install is completely removed before installing the software again)
- Test eBeam on another MAC to ensure not a hardware issue

*Screen Calibration:*

**Issue:** Unable/difficult to calibrate eBeam with stylus.

**Solution:** Try the following to determine what is causing the calibration issue.

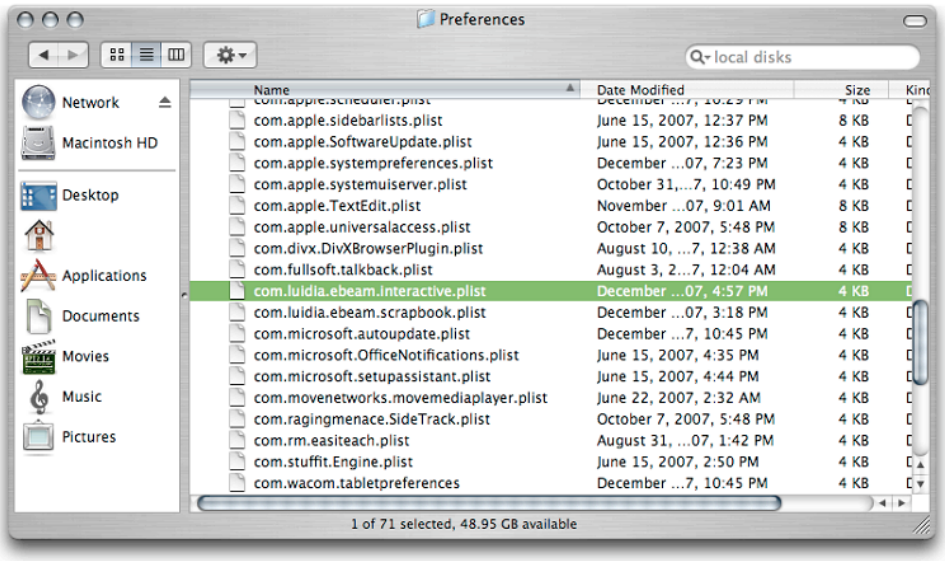
- Check the stylus battery (Ensure the stylus buzzes when the tip is pressed)
- Position the eBeam unit at one of the top corners of the interactive area at a right angle
- Make sure the environment in which you are using the eBeam does not have excessive lighting, motion sensors, etc. A firmware update can be applied to the hardware to deal with environmental issues. ( See the *Placement and Calibration* section for more information )
- Be sure the eBeam unit remains stationary and does not move (Moving the eBeam, projector or whiteboard may cause calibration to offset and require recalibration)
- If the video quality being projected is very poor (artifacts and grainy) this can interfere with the eBeam sensors used to calibrate and determine the styluses board position
- If the problem persists, as aforementioned, a firmware update is available which tweaks the eBeam pod's sensor settings which may improve responsiveness in certain environments (please contact us for firmware update access)

Note: It is important that the software is properly closed after every use. Failing to do so has been known to cause calibration issues. Close the software by closing all open Interact/Scrapbook windows and right-click on the icon at the top of the screen or the middle of the click wheel ( mouse/stylus icon ) and select 'exit'.

**Issue:** Calibration is not retained.

**Solution:** Calibration should be retained between uses. Be sure the unit is stationary and the software is closed correctly after use. Reference the *Placement and Calibration* section for more details. Occasional recalibration, especially if the unit has been accidentally moved, is normal. If calibration is still not consistently retained try the following:

- eBeam Interact stores the calibration settings in the com.luidia.ebeam.interactive.plist file. Verify this file is located in (computer name)/library/preferences. If not, attempt to calibrate the eBeam. Check if the plist file is now in the path indicated.




  - If plist file is not seen skip the next point
  - If plist file is now seen: Test the calibration retention by restarting the software, restarting the eBeam and restarting the computer in random order. After each restart test the calibration. If still not retained go to the next step
- Remove the plist file (if seen) and completely remove eBeam Interact software. Reboot the MAC and install the latest version of eBeam Interact. Attempt to calibrate and do the same plist and calibration retention check.
- On very rare occasions we have found some software to interfere with calibration retention. Please contact us at this point.

**If issues persist and if you have not already we recommend you completely uninstall the software, restart your MAC and reinstall the latest version from www.adamsbiz.com/downloads.**

**Additional Resources**

For additional assistance that may not be provided within the scope of this document see the AdamsBIZ.com SupportDesk and Knowledgebase at www.adamsbiz.com/support.

If you are still encountering problems and/or think you have a defective cable, stylus, etc. please contact us: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